

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Pace Analytical, West Columbia, SC							
Antimony	16C1	2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Arsenic	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.1	J	2.1	J	10	Result < QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	2	J	2	J	10	Result < QL. Field duplicate submitted blind for 16WC1A.
Barium	16C1	170		170		10	No action taken.
	16MW8	150		150		10	No action taken.
	16MW9	610		610		10	No action taken.
	16WC1A	360		360		10	No action taken.
	16WC1B	130		130		10	No action taken.
	16WC2B	120		120		10	No action taken.
	16-2	200		200		10	No action taken.
	16-3	770		770		10	No action taken.
	16-5	170		170		10	No action taken.
	16SPRING	170		170		10	No action taken.
	16WDUP	350		350		10	No action taken. Field duplicate submitted blind for 16WC1A.
Beryllium	16C1	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.25	J	0.25	J	1	Result < QL.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the DL or QL.

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Method: 6020B							
Laboratory: Pace Analytical, West Columbia, SC							
Beryllium	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Cadmium	16C1	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		1	Analyte not detected at or above the DL or QL. Originally reported as <QL (0.2 J ug/l) due to laboratory rounding error.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	1.4	J	1.4	J	5	Result < QL.
	16MW9	5	U	U		5	Analyte not detected at or above the DL or QL.
Chromium	16WC1A	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2.7	J	2.7	J	5	Result < QL.
	16MW9	7.1		7.1		5	No action taken.
Cobalt	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2.7	J	2.7	J	5	Result < QL.
	16MW9	7.1		7.1		5	No action taken.

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Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Pace Analytical, West Columbia, SC							
Cobalt	16WC1A	18		18		5	No action taken.
	16WC1B	4.7	J	4.7	J	5	Result < QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	18		18		5	No action taken. Field duplicate submitted blind for 16WC1A.
Copper	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	6.6		6.6		5	No action taken.
	16MW9	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	1.4	J	1.4	J	5	Result < QL.
	16WC1B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
Lead	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	3	U	U		3	Analyte not detected at or above the DL or QL.
	16MW8	3	U	U		3	Analyte not detected at or above the DL or QL.
	16MW9	3	U	U		3	Analyte not detected at or above the DL or QL.
	16WC1A	3	U	U		3	Analyte not detected at or above the DL or QL.
	16WC1B	3	U	U		3	Analyte not detected at or above the DL or QL.
Nickel	16WC2B	3	U	U		3	Analyte not detected at or above the QL.
	16-2	3	U	U		3	Analyte not detected at or above the QL.
	16-3	3	U	U		3	Analyte not detected at or above the QL.
	16-5	3	U	U		3	Analyte not detected at or above the QL.
	16SPRING	3	U	U		3	Analyte not detected at or above the QL.
	16WDUP	3	U	U		3	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	4.2	J	4.2	J	10	Result < QL.
	16MW8	4.7	J	4.7	J	10	Result < QL.

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Method: 6020B							
Laboratory: Pace Analytical, West Columbia, SC							
Nickel	16MW9	17		17		10	No action taken.
	16WC1A	15		15		10	No action taken.
	16WC1B	3.3	J	3.3	J	10	Result < QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	15		15		10	No action taken. Field duplicate submitted blind for 16WC1A.
Selenium	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Silver	16C1	2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Thallium	16C1	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Vanadium	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.

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Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory	Validated	Q	QL	Validation Notes	
		Result	Result		(ug/L)		
Method: 6020B							
Laboratory: Pace Analytical, West Columbia, SC							
Vanadium	16WC2B	10	U	U	10	Analyte not detected at or above the QL.	
	16-2	10	U	U	10	Analyte not detected at or above the QL.	
	16-3	10	U	U	10	Analyte not detected at or above the QL.	
	16-5	10	U	U	10	Analyte not detected at or above the QL.	
	16SPRING	10	U	U	10	Analyte not detected at or above the QL.	
Zinc	16WDUP	10	U	U	10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.	
	16C1	30	U	U	30	Analyte not detected at or above the DL or QL.	
	16MW8	30		30	30	No action taken.	
	16MW9	30	U	U	30	Analyte not detected at or above the DL or QL.	
	16WC1A	19	J	19	J	30	Result < QL.
	16WC1B	30	U	U	30	Analyte not detected at or above the DL or QL.	
	16WC2B	30	U	U	30	Analyte not detected at or above the QL.	
	16-2	30	U	U	30	Analyte not detected at or above the QL.	
	16-3	30	U	U	30	Analyte not detected at or above the QL.	
	16-5	30	U	U	30	Analyte not detected at or above the QL.	
	16SPRING	30	U	U	30	Analyte not detected at or above the QL.	
	16WDUP	18	J	18	J	30	Result < QL. Field duplicate submitted blind for 16WC1A.
Method: 7470A							
Laboratory: Pace Analytical, West Columbia, SC							
Mercury	16C1	2	U	U	2	Analyte not detected at or above the DL or QL.	
	16MW8	2	U	U	2	Analyte not detected at or above the DL or QL.	
	16MW9	2	U	U	2	Analyte not detected at or above the DL or QL.	
	16WC1A	2	U	U	2	Analyte not detected at or above the DL or QL.	
	16WC1B	2	U	U	2	Analyte not detected at or above the DL or QL.	
	16WC2B	2	U	U	2	Analyte not detected at or above the QL.	
	16-2	2	U	U	2	Analyte not detected at or above the QL.	
	16-3	2	U	U	2	Analyte not detected at or above the QL.	
	16-5	2	U	U	2	Analyte not detected at or above the QL.	
	16SPRING	2	U	U	2	Analyte not detected at or above the QL.	
		16WDUP	2	U	U	2	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

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Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Acetone	16C1	0.9	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.75	J	3.75	J	10	Verification event conducted June 22, 2020 was reported as final result.
	16MW9	0.9	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.9	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%).
	16WC1B	0.9	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.9	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.9	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%).
	Trip_Blank_2	0.9	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%).
Acetonitrile	16C1	31.7	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	31.7	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	31.7	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	31.7	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	31.7	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	31.7	U	U		100	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	31.7	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	31.7	U	U		100	Analyte not detected at or above the DL or QL.
Acrolein	16C1	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
	16MW8	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
	16MW9	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
	16WC1A	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
	16WC1B	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
	16WDUP	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
	Trip_Blank_2	3.4	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH was <2.
Acrylonitrile	16C1	0.47	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.47	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.47	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.47	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.47	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.47	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.47	U	U		10	Analyte not detected at or above the DL or QL.

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Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Acrylonitrile	Trip_Blank_2	0.47	U	U		10	Analyte not detected at or above the DL or QL.
Allyl chloride	16C1	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.82	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.82	U	U		10	Analyte not detected at or above the DL or QL.
Benzene	16C1	0.316	J	0.316	J	1	Result < QL.
	16MW8	0.0827	J	0.0827	J	1	Result < QL.
	16MW9	0.375	J	0.375	J	1	Result < QL.
	16WC1A	0.206	J	0.206	J	1	Result < QL.
	16WC1B	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.244	J	0.244	J	1	Result < QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.088	U	U		1	Analyte not detected at or above the DL or QL.
Bromodichloromethane	16MW8	0.088	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.088	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.088	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.088	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.088	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.088	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.088	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.106	U	U		1	Analyte not detected at or above the DL or QL.
Bromoform	16MW8	0.106	U	U		1	Analyte not detected at or above the DL or QL.

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Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8260C						
Laboratory: ELLE, Lancaster, PA						
Bromoform	16MW9	0.106	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.106	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1B	0.106	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.106	U	U	1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.106	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.106	U	U	1	Analyte not detected at or above the DL or QL.
2-Butanone	16C1	0.6	U	U	10	Analyte not detected at or above the DL or QL.
	16MW8	0.6	U	U	10	Analyte not detected at or above the DL or QL.
	16MW9	0.6	U	U	10	Analyte not detected at or above the DL or QL.
	16WC1A	0.6	U	U	10	Analyte not detected at or above the DL or QL.
	16WC1B	0.6	U	U	10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U	10	Analyte not detected at or above the QL.
	16-2	10	U	U	10	Analyte not detected at or above the QL.
	16-3	10	U	U	10	Analyte not detected at or above the QL.
	16-5	10	U	U	10	Analyte not detected at or above the QL.
	16SPRING	10	U	U	10	Analyte not detected at or above the QL.
	16WDUP	0.6	U	U	10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.6	U	U	10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.6	U	U	10	Analyte not detected at or above the DL or QL.
Carbon disulfide	16C1	0.37	U	U	10	Analyte not detected at or above the DL or QL.
	16MW8	0.37	U	U	10	Analyte not detected at or above the DL or QL.
	16MW9	0.37	U	U	10	Analyte not detected at or above the DL or QL.
	16WC1A	0.37	U	U	10	Analyte not detected at or above the DL or QL.
	16WC1B	0.37	U	U	10	Analyte not detected at or above the DL or QL.
	16WDUP	0.37	U	U	10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.37	U	U	10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.37	U	U	10	Analyte not detected at or above the DL or QL.
Carbon tetrachloride	16C1	0.16	U	U	1	Analyte not detected at or above the DL or QL.
	16MW8	0.16	U	U	1	Analyte not detected at or above the DL or QL.
	16MW9	0.16	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.16	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1B	0.16	U	U	1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Carbon tetrachloride	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.16	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.16	U	U		1	Analyte not detected at or above the DL or QL.
Chloroethane	16C1	4.02		4.02		1	No action taken.
	16MW8	0.156	J	0.156	J	1	Result < QL.
	16MW9	1.94		1.94		1	No action taken.
	16WC1A	1.37		1.37		1	No action taken.
	16WC1B	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1.59		1.59		1	No action taken. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.09	U	U		1	Analyte not detected at or above the DL or QL.
Chloroform	16MW8	0.09	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.09	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.09	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.09	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.09	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.09	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.09	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.46	U	U		10	Analyte not detected at or above the DL or QL.
Chloroprene	16MW8	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.46	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloroprene	16WC1A	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.46	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.46	U	U		10	Analyte not detected at or above the DL or QL.
Dibromochloromethane	16C1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.07	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.07	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dibromo-3-chloropropane	16C1	0.204	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.204	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.204	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.204	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.204	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.204	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.204	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.204	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dibromoethane	16C1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.06	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.06	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dichlorobenzene	16C1	0.082	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.082	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.082	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2-Dichlorobenzene	16WC1A	0.082	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.082	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.082	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.082	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.082	U	U		1	Analyte not detected at or above the DL or QL.
1,3-Dichlorobenzene	16C1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.06	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.06	U	U		1	Analyte not detected at or above the DL or QL.
1,4-Dichlorobenzene	16C1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.07	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.07	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,4-Dichloro-2-butene	16C1	0.97	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.97	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%).
	16MW9	0.97	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.97	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%).
	16WC1B	0.97	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.97	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.97	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%).
	Trip_Blank_2	0.97	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%).
Dichlorodifluoromethane	16C1	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.148	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dichlorodifluoromethane	16WC1A	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.148	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.148	U	U		1	Analyte not detected at or above the DL or QL.
1,1-Dichloroethane	16C1	6.15		6.15	J	1	MS/MSD recovered high (129/128%).
	16MW8	0.396	J	0.396	J	1	Result < QL. MS/MSD recovered high (129/128%).
	16MW9	6.17		6.17	J	1	MS/MSD recovered high (129/128%).
	16WC1A	2.98		2.98	J	1	MS/MSD recovered high (129/128%).
	16WC1B	0.135	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
1,2-Dichloroethane	16WDUP	3.51		3.51	J	1	MS/MSD recovered high (129/128%). Field duplicate submitted blind for 16WC1A
	Trip_Blank_1	0.135	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.135	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.147	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.147	U	U		1	Analyte not detected at or above the DL or QL.
1,1-Dichloroethene	Trip_Blank_2	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.232	J	0.232	J	1	Result < QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethene	16MW8	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.223	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
trans-1,2-Dichloroethene	Trip_Blank_1	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.162	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.162	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dichloropropane	16C1	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.107	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.107	U	U		1	Analyte not detected at or above the DL or QL.
1,3-Dichloropropane	16C1	0.091	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.091	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.091	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.091	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,3-Dichloropropane	16WC1B	0.091	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.091	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.091	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.091	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,3-Dichloropropene	16C1	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.097	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.097	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	43		43		13	Analyzed in dilution (1:2). Actual QL 31.3 ug/L.
	16MW8	23.2	J	23.2	AJ	13	Result < adjusted QL. Sample diluted 1:2 Adjusted QL 25 ug/l
Diethyl ether	16MW9	74.1		74.1		13	Analyzed in dilution (1:4). Actual QL 50 ug/L.
	16WC1A	15.4		15.4		13	No action taken.
	16WC1B	1.17	J	1.17	J	13	Result < QL.
	16WC2B	13	U	U		13	Analyte not detected at or above the QL.
	16-2	13	U	U		13	Analyte not detected at or above the QL.
	16-3	13	U	U		13	Analyte not detected at or above the QL.
	16-5	13	U	U		13	Analyte not detected at or above the QL.
	16SPRING	13	U	U		13	Analyte not detected at or above the QL.
	16WDUP	16.4		16.4		13	No action taken. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	1.11	U	U		13	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1.11	U	U		13	Analyte not detected at or above the DL or QL.
	16C1	10.6	J	10.6	J	13	Result < QL.
	16MW8	0.918	J	0.918	J	13	Result < QL. CV %D > +/-20% (21%).
	16MW9	1.81	J	1.81	J	13	Result < QL.
Dimethyl ether	16WC1A	1.21	J	1.21	J	13	Result < QL. CV %D > +/-20% (21%).
	16WC1B	0.303	J	0.303	J	13	Result < QL.
	16WC2B	13	U	U		13	Analyte not detected at or above the QL.
	16-2	13	U	U		13	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dimethyl ether	16-3	13	U	U		13	Analyte not detected at or above the QL.
	16-5	13	U	U		13	Analyte not detected at or above the QL.
	16SPRING	13	U	U		13	Analyte not detected at or above the QL.
	16WDUP	1.35	J	1.35	J	13	Result < QL. CV %D > +/-20% (21%). Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.04	U	U	J	13	Analyte not detected at or above the DL or QL. CV %D > +/-20% (21%).
	Trip_Blank_2	0.04	U	U	J	13	Analyte not detected at or above the DL or QL. CV %D > +/-20% (21%).
1,4-Dioxane	16C1	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16MW8	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16MW9	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1A	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1B	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16WDUP	45.5	U	U		200	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16C1	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.079	U	U		1	Analyte not detected at or above the DL or QL.
Ethylbenzene	16MW9	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.079	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.079	U	U		1	Analyte not detected at or above the DL or QL.
Ethyl methacrylate	Trip_Blank_2	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.81	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Ethyl methacrylate	16WDUP	0.81	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.81	U	U		10	Analyte not detected at or above the DL or QL.
Hexachlorobutadiene	16C1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.07	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.07	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.07	U	U		1	Analyte not detected at or above the DL or QL.
2-Hexanone	16C1	0.6	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.6	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.6	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.6	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.6	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.6	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.6	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.6	U	U		10	Analyte not detected at or above the DL or QL.
Isobutyl alcohol	16C1	3.6	U	U		200	Analyte not detected at or above the DL or QL.
	16MW8	3.6	U	U		200	Analyte not detected at or above the DL or QL.
	16MW9	3.6	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1A	3.6	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1B	3.6	U	U		200	Analyte not detected at or above the DL or QL.
	16WDUP	3.6	U	U		200	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	3.6	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	3.6	U	U		200	Analyte not detected at or above the DL or QL.
Methacrylonitrile	16C1	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	9.75	U	U		100	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Methacrylonitrile	16WDUP	9.75	U	U		100	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	9.75	U	U		100	Analyte not detected at or above the DL or QL.
Bromomethane	16C1	0.542	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.542	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.542	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.542	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.542	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.542	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.542	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.542	U	U		1	Analyte not detected at or above the DL or QL.
Chloromethane	16C1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL. CV %D > +/-20% (25%).
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.06	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.06	U	U		1	Analyte not detected at or above the DL or QL.
Iodomethane	16C1	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.58	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.58	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Methyl methacrylate	16C1	3.58	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.58	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.58	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	3.58	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	3.58	U	U		10	Analyte not detected at or above the DL or QL.
4-Methyl-2-pentanone	16C1	0.91	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.91	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.91	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.91	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.91	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.91	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.91	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.91	U	U		10	Analyte not detected at or above the DL or QL.
Dibromomethane	16C1	0.065	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.065	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.065	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.065	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.065	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.065	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.065	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.065	U	U		1	Analyte not detected at or above the DL or QL.
Methylene chloride	16C1	1.2		1.2		1	No action taken.
	16MW8	0.182	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.182	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.182	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.182	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Methylene chloride	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.182	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.182	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.182	U	U		1	Analyte not detected at or above the DL or QL.
Naphthalene	16C1	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. MS/MSD/LCS recovered low (74/72%).
	16MW8	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). MS/MSD/LCS recovered low (74/72/71%).
	16MW9	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. MS/MSD/LCS recovered low (74/72/71%).
	16WC1A	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). MS/MSD/LCS recovered low (74/72/71%).
	16WC1B	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. MS/MSD/LCS recovered low (74/72/71%).
	16WDUP	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). MS/MSD/LCS recovered low (74/72/71%). Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). MS/MSD/LCS recovered low (74/72/71%).
	Trip_Blank_2	0.126	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). MS/MSD/LCS recovered low (74/72/71%).
	16C1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.8	U	U		10	Analyte not detected at or above the DL or QL.
Pentachloroethane	16MW9	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.8	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16C1	18	U	U		100	Analyte not detected at or above the DL or QL.
2-Propanol	16MW8	18	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	18	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	18	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	18	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	18	U	U		100	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Propionitrile	16C1	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	10.2	U	U		100	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Propionitrile	16MW9	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	10.2	U	U		100	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10.2	U	U		100	Analyte not detected at or above the DL or QL.
Styrene	16C1	0.05	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.05	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.05	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.05	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.05	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.05	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.05	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.05	U	U		1	Analyte not detected at or above the DL or QL.
1,1,1,2-Tetrachloroethane	16C1	0.08	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.08	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.08	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.08	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.08	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.08	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.08	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.08	U	U		1	Analyte not detected at or above the DL or QL.
1,1,2,2-Tetrachloroethane	16C1	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.184	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.184	U	U		1	Analyte not detected at or above the DL or QL.
Tetrachloroethene	16C1	0.222	J	0.222	J	1	Result < QL.
	16MW8	0.06	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Tetrachloroethene	16MW9	0.066	J	0.066	J	1	Result < QL.
	16WC1A	0.101	J	0.101	J	1	Result < QL.
	16WC1B	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.132	J	0.132	J	1	Result < QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.06	U	U		1	Analyte not detected at or above the DL or QL.
Tetrahydrofuran	Trip_Blank_2	0.06	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	19.7	J	19.7	J	25	Result < QL.
	16MW8	3.7	J	3.7	J	25	Result < QL.
	16MW9	2	U	U		25	Analyte not detected at or above the DL or QL.
	16WC1A	2.21	J	2.21	J	25	Result < QL.
	16WC1B	2	U	U		25	Analyte not detected at or above the DL or QL.
	16WC2B	25	U	U		25	Analyte not detected at or above the QL.
	16-2	25	U	U		25	Analyte not detected at or above the QL.
	16-3	25	U	U		25	Analyte not detected at or above the QL.
	16-5	25	U	U		25	Analyte not detected at or above the QL.
Toluene	16SPRING	25	U	U		25	Analyte not detected at or above the QL.
	16WDUP	2	U	U		25	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	2	U	U		25	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	2	U	U		25	Analyte not detected at or above the DL or QL.
	16C1	0.093	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.093	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.093	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.093	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.093	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Toluene	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.093	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.093	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.093	U	U		1	Analyte not detected at or above the DL or QL.
1,2,4-Trichlorobenzene	16C1	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.13	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.346	J	0.346	J	1	Result < QL.
	16MW8	0.13	U	U		1	Analyte not detected at or above the DL or QL.
1,1,1-Trichloroethane	16MW9	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.13	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.13	U	U		1	Analyte not detected at or above the DL or QL.
1,1,2-Trichloroethane	Trip_Blank_2	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.079	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1,2-Trichloroethane	Trip_Blank_1	0.079	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.079	U	U		1	Analyte not detected at or above the DL or QL.
Trichloroethene	16C1	0.185	J	0.185	J	1	Result < QL.
	16MW8	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.177	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.177	U	U		1	Analyte not detected at or above the DL or QL.
Trichlorofluoromethane	16C1	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.176	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.176	U	U		1	Analyte not detected at or above the DL or QL.
1,2,3-Trichloropropane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2,3-Trichloropropane	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,1,2-Trichloro-1,2,2-Trifluoroethane	16C1	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.12	U	U		1	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.12	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.29	U	U		10	Analyte not detected at or above the DL or QL.
Vinyl acetate	16WC1A	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.29	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16C1	0.153	U	U		1	Analyte not detected at or above the DL or QL.
Vinyl chloride	16MW8	0.153	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.153	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.153	J	0.153	J	1	Result < QL. MS recovered high (127%). Result confirmed by verification event conducted June 22, 2020.
	16WC1B	0.153	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.174	J	0.174	J	1	Result < QL. MS recovered high (127%). Result confirmed by verification event conducted June 22, 2020. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Vinyl chloride	Trip_Blank_1	0.153	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.153	U	U		1	Analyte not detected at or above the DL or QL.
Xylenes (Total)	16C1	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16MW8	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16MW9	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16WC1A	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16WC1B	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16WC2B	3	U	U		3	Analyte not detected at or above the QL.
	16-2	3	U	U		3	Analyte not detected at or above the QL.
	16-3	3	U	U		3	Analyte not detected at or above the QL.
	16-5	3	U	U		3	Analyte not detected at or above the QL.
	16SPRING	3	U	U		3	Analyte not detected at or above the QL.
	16WDUP	0.208	U	U		3	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	Trip_Blank_1	0.208	U	U		3	Analyte not detected at or above the DL or QL.
Trip_Blank_2	0.208	U	U		3	Analyte not detected at or above the DL or QL.	
Method: 8260D							
Laboratory: Pace Analytical, West Columbia, SC							
Acetone	16MW8	10	U	U		10	Verification event performed June 22, 2020. Analyte not detected at or above the DL or QL.
Vinyl chloride	16WC1A	0.2	J	0.2	J	0.5	Verification event performed June 22, 2020. Result < QL.
	16WDUP	0.21	J	0.21	J	0.5	Verification event performed June 22, 2020. Result < QL. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270C							
Laboratory: Microbac, Marietta, OH							
Hexachloroethane	16C1	2.72	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2.5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2.5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2.55	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	2.5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2.78	U	U		5	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Hexachlorophene	16C1		U	U	J	50	Reported by laboratory as estimated. Single point only calibration performed.
	16MW8		U	U	J	50	Reported by laboratory as estimated. Single point only calibration performed.
	16MW9		U	U	J	50	Reported by laboratory as estimated. Single point only calibration performed.
	16WC1A		U	U	J	50	Reported by laboratory as estimated. Single point only calibration performed.
	16WC1B		U	U	J	50	Reported by laboratory as estimated. Single point only calibration performed.
	16WDUP		U	U	J	50	Reported by laboratory as estimated. Single point only calibration performed. Field duplicate submitted blind for 16WC1A.
Sulfotep	16C1	1.09	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.11	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Acenaphthene	16C1	0.354	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.353	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.351	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.353	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.353	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.353	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Acenaphthylene	16C1	0.486	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.484	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.482	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.484	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.484	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.484	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Acetophenone	16C1	4.05	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	4.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	4.03	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
2-Acetylaminofluorene	16C1	10.1	U	U		21	Analyte not detected at or above the DL or QL.
	16MW8	10.1	U	U		21	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		21	Analyte not detected at or above the DL or QL.
	16WC1A	10.1	U	U		21	Analyte not detected at or above the DL or QL.
	16WC1B	10.1	U	U		21	Analyte not detected at or above the DL or QL.
	16WDUP	10.1	U	U		21	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
4-Aminobiphenyl	16C1	5.06	U	U		11	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		11	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Aniline	16C1	3.04	U	U	J	10	Analyte not detected at or above the DL or QL. MS recovered low (36%).
	16MW8	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. MS recovered low (36%).

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Aniline	16MW9	3.01	U	U	J	10	Analyte not detected at or above the DL or QL. MS recovered low (36%).
	16WC1A	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. MS recovered low (36%).
	16WC1B	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. MS recovered low (36%).
	16WDUP	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Anthracene	16C1	0.526	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.522	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.524	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	5.06	U	U		15	Analyte not detected at or above the DL or QL.
Aramite	16MW8	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		15	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Benzo[a]anthracene	16C1	0.455	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.454	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.452	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.454	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.454	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.454	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Benzo[b]fluoranthene	16C1	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.2	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.21	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Benzo[k]fluoranthene	16C1	1.62	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.61	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.61	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.61	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Benzo[k]fluoranthene	16WC1B	1.61	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.61	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Benzo[ghi]perylene	16C1	0.425	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.422	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.423	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Benzo(a)pyrene	16C1	1.52	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.51	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.51	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.51	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.51	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.51	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
1,4-Benzenediamine	16C1	75.9	U	U	J	300	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (1/1%).
	16MW8	75.6	U	U	J	300	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (1/1%).
	16MW9	75.3	U	U	J	300	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (1/1%).
	16WC1A	75.6	U	U	J	300	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (1/1%).
	16WC1B	75.6	U	U	J	300	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (1/1%).
	16WDUP	75.6	U	U	J	300	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (1/1%). Field duplicate submitted blind for 16WC1A.
Benzyl alcohol	16C1	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW8	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1A	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1B	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WDUP	10.1	U	U		30	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
bis(2-Chloroethoxy)methane	16C1	0.506	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		2	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
bis(2-Chloroethyl)ether	16C1	0.506	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		2	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
bis(2-Chloro-1-methylethyl)ether	16C1	0.506	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		2	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
bis(2-Ethylhexyl)phthalate	16C1	5.06	U	U		11	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		11	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
4-Bromophenyl phenyl ether	16C1	0.567	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.565	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.562	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.565	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.565	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.565	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Butyl benzyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
p-Chloroaniline	16C1	4.05	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	4.03	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
p-Chloroaniline	16MW9	4.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	4.03	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Chlorobenzilate	16C1	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	1.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.02	U	U		10	Analyte not detected at or above the DL or QL.
p-Chloro-m-cresol	16MW9	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%).
	16WC1B	1.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	1.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
	16C1	0.496	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.494	U	U		10	Analyte not detected at or above the DL or QL.
2-Chloronaphthalene	16MW9	0.492	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.494	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.494	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.494	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	0.992	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (33/40%).
	16MW8	0.988	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (33/40%).
2-Chlorophenol	16MW9	0.984	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (33/40%).
	16WC1A	0.988	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11/<10%). MS/MSD recovered low (33/40%).
	16WC1B	0.988	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (33/40%).
	16WDUP	0.988	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (33/40%). Field duplicate submitted blind for 16WC1A.
	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
4-Chlorophenyl phenyl ether	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Chrysene	16C1	0.314	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.313	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.311	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.313	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.313	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.313	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Diallate	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.01	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Dibenz(a,h)anthracene	16C1	0.385	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.382	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.383	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Dibenzofuran	16C1	0.587	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.582	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.585	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Di-n-butyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Di-n-butyl phthalate	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
3,3'-Dichlorobenzidine	16C1	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
2,4-Dichlorophenol	16C1	1.61	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (29/31%).
	16MW8	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (29/31%).
	16MW9	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (29/31%).
	16WC1A	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11/<10%). MS/MSD recovered low (29/31%).
	16WC1B	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (29/31%).
	16WDUP	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (29/31%). Field duplicate submitted blind for 16WC1A.
2,6-Dichlorophenol	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11%, <10%).
	16WC1B	0.504	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	0.504	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
Diethyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Diethyl phthalate	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
O,O-Diethyl O-2-pyrazinyl	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Dimethoate	16C1	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
p-(Dimethylamino)azobenzene	16C1	5.06	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
7,12-Dimethylbenz[a]anthracene	16C1	5.06	U	U		11	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		11	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
3,3'-Dimethylbenzidine	16C1	25.3	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16MW8	25.2	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16MW9	25.1	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16WC1A	25.2	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16WC1B	25.2	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16WDUP	25.2	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
a,a-Dimethylphenethylamine	16C1	5.06	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (4/3%).
	16MW8	5.04	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (4/3%).
	16MW9	5.02	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (4/3%).
	16WC1A	5.04	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (4/3%).
	16WC1B	5.04	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (4/3%).
	16WDUP	5.04	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (4/3%). Field duplicate submitted blind for 16WC1A.
2,4-Dimethylphenol	16C1	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%)..
	16WC1B	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
Dimethyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
m-Dinitrobenzene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
4,6-Dinitro-o-cresol	16C1	8.1	U	U		21	Analyte not detected at or above the DL or QL.
	16MW8	8.06	U	U		21	Analyte not detected at or above the DL or QL.
	16MW9	8.03	U	U		21	Analyte not detected at or above the DL or QL.
	16WC1A	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%)..
	16WC1B	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
2,4-Dinitrophenol	16C1	14.2	U	U		30	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,4-Dinitrophenol	16MW8	14.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW9	14.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1A	14.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%).
	16WC1B	14.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	14.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
2,4-Dinitrotoluene	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	1.01	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
2,6-Dinitrotoluene	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Di-n-octyl phthalate	16C1	5.06	U	U		11	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		11	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Di-n-octyl phthalate	16WDUP	5.04	U	U		11	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Diphenylamine	16C1	0.709	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.703	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.706	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Disulfoton	16C1	25.3	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	25.2	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	25.1	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	25.2	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1B	25.2	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	25.2	U	U		50	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Ethyl methanesulfonate	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Famphur	16C1	25.3	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (20/11%).
	16MW8	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (20/11%).
	16MW9	25.1	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (20/11%).
	16WC1A	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (20/11%).
	16WC1B	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (20/11%).
	16WDUP	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS/LCSD recovered low (20/11%). Field duplicate submitted blind for 16WC1A.
Fluoranthene	16C1	0.425	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.422	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.423	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Fluorene	16C1	0.385	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Fluorene	16MW8	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.382	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.383	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Hexachlorobenzene	16C1	0.881	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.877	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.873	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.877	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.877	U	U		10	Analyte not detected at or above the DL or QL.
Hexachlorocyclopentadiene	16WDUP	0.877	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	5.06	U	U		11	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		11	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		11	Analyte not detected at or above the DL or QL.
Hexachloropropene	16WC1B	5.04	U	U		11	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		11	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
Indeno[1,2,3-cd]pyrene	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	0.152	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.151	U	U		10	Analyte not detected at or above the DL or QL.
Isodrin	16MW9	0.151	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.151	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.151	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.151	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Isodrin	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Isophorone	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Isosafrole	16C1	4.05	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	4.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	4.03	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Kepone	16C1	25.3	U	U	J	50	Analyte not detected at or above the DL or QL. CV %D > +/-20% (49%).
	16MW8	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. CV %D > +/-20% (49%).
	16MW9	25.1	U	U	J	50	Analyte not detected at or above the DL or QL. CV %D > +/-20% (49%).
	16WC1A	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. CV %D > +/-20% (49%).
	16WC1B	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. CV %D > +/-20% (49%).
	16WDUP	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. CV %D > +/-20% (49%). Field duplicate submitted blind for 16WC1A.
Methapyrilene	16C1	15.2	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	15.1	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	15.1	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	15.1	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1B	15.1	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	15.1	U	U		50	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
3-Methylcholanthrene	16C1	4.05	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	4.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	4.03	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
3-Methylcholanthrene	16WDUP	4.03	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Methyl methane sulfonate	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.01	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
2-Methylnaphthalene	16C1	0.294	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.292	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.291	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.292	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.292	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.292	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Methyl parathion	16C1	5.06	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	5.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	5.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	5.04	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	5.04	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
2-Methylphenol	16C1	0.972	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.968	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.964	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.968	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%).
	16WC1B	0.968	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%).
	16WDUP	0.968	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
3 & 4-Methylphenol	16C1	2.5	U	U		20	Analyte not detected at or above the DL or QL.
	16MW8	2.49	U	U		20	Analyte not detected at or above the DL or QL.
	16MW9	2.48	U	U		20	Analyte not detected at or above the DL or QL.
	16WC1A	2.49	U	U	J	20	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%).
	16WC1B	2.49	U	U	J	20	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	2.49	U	U	J	20	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
1,4-Naphthoquinone	16C1	25.3	U	U	J	60	Analyte not detected at or above the DL or QL. LCS/LCSD did not recover.
	16MW8	25.2	U	U	J	60	Analyte not detected at or above the DL or QL. LCS/LCSD did not recover.
	16MW9	25.1	U	U	J	60	Analyte not detected at or above the DL or QL. LCS/LCSD did not recover.
	16WC1A	25.2	U	U	J	60	Analyte not detected at or above the DL or QL. LCS/LCSD did not recover.
	16WC1B	25.2	U	U	J	60	Analyte not detected at or above the DL or QL. LCS/LCSD did not recover.
	16WDUP	25.2	U	U	J	60	Analyte not detected at or above the DL or QL. LCS/LCSD did not recover. Field duplicate submitted blind for 16WC1A.
1-Naphthylamine	16C1	8.1	U	U	J	21	Analyte not detected at or above the DL or QL. MS recovered low (28%).
	16MW8	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. MS recovered low (28%).
	16MW9	8.03	U	U	J	21	Analyte not detected at or above the DL or QL. MS recovered low (28%).
	16WC1A	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. MS recovered low (28%).
	16WC1B	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. MS recovered low (28%).
	16WDUP	8.06	U	U	J	21	Analyte not detected at or above the DL or QL. MS recovered low (28%). Field duplicate submitted blind for 16WC1A.
2-Naphthylamine	16C1	7.09	U	U		21	Analyte not detected at or above the DL or QL.
	16MW8	7.06	U	U		21	Analyte not detected at or above the DL or QL.
	16MW9	7.03	U	U		21	Analyte not detected at or above the DL or QL.
	16WC1A	7.06	U	U		21	Analyte not detected at or above the DL or QL.
	16WC1B	7.06	U	U		21	Analyte not detected at or above the DL or QL.
	16WDUP	7.06	U	U		21	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
o-Nitroaniline	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
m-Nitroaniline	16C1	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
p-Nitroaniline	16C1	0.911	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
p-Nitroaniline	16MW8	0.907	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.904	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.907	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.907	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.907	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Nitrobenzene	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
o-Nitrophenol	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11%, <10%).
p-Nitrophenol	16WC1B	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	3.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
	16C1	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW8	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		30	Analyte not detected at or above the DL or QL.
4-Nitroquinoline-1-oxide	16WC1A	10.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11%, <10%).
	16WC1B	10.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%).
	16WDUP	10.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
	16C1	20.2	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/-30% (52%).
	16MW8	20.2	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/-30% (52%).
N-Nitrosodi-n-butylamine	16MW9	20.1	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/-30% (52%).
	16WC1A	20.2	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/-30% (52%).
	16WC1B	20.2	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/-30% (52%).
	16WDUP	20.2	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/-30% (52%). Field duplicate submitted blind for 16WC1A.
	16C1	12.1	U	U		25	Analyte not detected at or above the DL or QL.
	16MW8	12.1	U	U		25	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
N-Nitrosodi-n-butylamine	16MW9	12	U	U		25	Analyte not detected at or above the DL or QL.
	16WC1A	12.1	U	U		25	Analyte not detected at or above the DL or QL.
	16WC1B	12.1	U	U		25	Analyte not detected at or above the DL or QL.
	16WDUP	12.1	U	U		25	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
N-Nitrosodiethylamine	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
N-Nitrosodimethylamine	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	0.709	U	U		10	Analyte not detected at or above the DL or QL.
N-Nitrosodiphenylamine	16MW8	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.703	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.706	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	0.709	U	U		10	Analyte not detected at or above the DL or QL.
N-Nitrosodipropylamine	16MW8	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.703	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.706	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.706	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
N-Nitrosomethylethylamine	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
N-Nitrosomethylethylamine	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
N-Nitrosomorpholine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
N-Nitrosopiperidine	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
N-Nitrosopyrrolidine	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
5-Nitroso-o-toluidine	16C1	4.05	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	4.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	4.03	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Parathion	16C1	7.09	U	U		12	Analyte not detected at or above the DL or QL.
	16MW8	7.06	U	U		12	Analyte not detected at or above the DL or QL.
	16MW9	7.03	U	U		12	Analyte not detected at or above the DL or QL.
	16WC1A	7.06	U	U		12	Analyte not detected at or above the DL or QL.
	16WC1B	7.06	U	U		12	Analyte not detected at or above the DL or QL.
	16WDUP	7.06	U	U		12	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Pentachlorobenzene	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Pentachloronitrobenzene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Pentachlorophenol	16C1	2.96	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (18/11%).
	16MW8	2.94	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (18/11%).
	16MW9	2.93	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (18/11%).
	16WC1A	2.94	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11/<10%). MS/MSD recovered low (18/11%).
	16WC1B	2.94	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (18/11%).
	16WDUP	2.94	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (18/11%). Field duplicate submitted blind for 16WC1A.
Phenacetin	16C1	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.502	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.504	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Phenanthrene	16C1	0.526	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.522	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.524	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Phenol	16C1	0.779	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Phenol	16MW8	0.776	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.773	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.776	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11% <10%)
	16WC1B	0.776	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%)
	16WDUP	0.776	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). Field duplicate submitted blind for 16WC1A.
Phorate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
2-Picoline	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Pronamide	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.01	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Pyrene	16C1	0.415	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.413	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.412	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.413	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.413	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.413	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Pyridine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Pyridine	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
Safrole	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
1,2,4,5-Tetrachlorobenzene	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	4.05	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (13/11%).
	16MW8	4.03	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (13/11%).
2,3,4,6-Tetrachlorophenol	16MW9	4.02	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (13/11%).
	16WC1A	4.03	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11/<10%). MS/MSD recovered low (13/11%).
	16WC1B	4.03	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (13/11%).
	16WDUP	4.03	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (13/11%). Field duplicate submitted blind for 16WC1A.
	16C1	4.05	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	4.02	U	U		10	Analyte not detected at or above the DL or QL.
o-Toluidine	16WC1A	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	4.03	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	4.03	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
	16C1	0.82	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26/27%).
	16MW8	0.817	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26/27%).
	16MW9	0.813	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26/27%).
	16C1	0.82	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26/27%).

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,4,5-Trichlorophenol	16WC1A	0.817	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11/<10%). MS/MSD recovered low (26/27%).
	16WC1B	0.817	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (26/27%).
	16WDUP	0.817	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (26/27%). Field duplicate submitted blind for 16WC1A.
2,4,6-Trichlorophenol	16C1	0.638	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (10/11%).
	16MW8	0.635	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (10/11%).
	16MW9	0.633	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (10/11%).
	16WC1A	0.635	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (11/<10%). MS/MSD recovered low (10/11%).
	16WC1B	0.635	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (10/11%).
	16WDUP	0.635	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (<10%). MS/MSD recovered low (10/11%). Field duplicate submitted blind for 16WC1A.
O,O,O-Triethyl phosphorothioate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.02	U	U		10	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.
sym-Trinitrobenzene	16C1	98.2	U	U		200	Analyte not detected at or above the DL or QL.
	16MW8	97.8	U	U		200	Analyte not detected at or above the DL or QL.
	16MW9	97.4	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1A	97.8	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1B	97.8	U	U		200	Analyte not detected at or above the DL or QL.
	16WDUP	97.8	U	U		200	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2020

Analyte	Sample ID	Laboratory	Validated	QL	Validation Notes
		Result	Result		
		(ug/L) Q	(ug/L) Q	(ug/L)	
Method: 9012B					
Laboratory: Pace Analytical, West Columbia, SC					
Cyanide	16C1	20 U	U	20	Analyte not detected at or above the DL or QL.
	16MW8	20 U	U	20	Analyte not detected at or above the DL or QL.
	16MW9	20 U	U	20	Analyte not detected at or above the DL or QL.
	16WC1A	20 U	U	20	Analyte not detected at or above the DL or QL.
	16WC1B	20 U	U	20	Analyte not detected at or above the DL or QL.
	16WDUP	20 U	U	20	Analyte not detected at or above the DL or QL. Field duplicate submitted blind for 16WC1A.

Definitions:

Appendix IX monitoring events and compliance monitoring wells:

For Appendix IX monitoring events, all compliance well results evaluated to the project detection limit.

See separate table for Appendix IX monitoring event detection limits.

QL Denotes permit quantitation limit.

Q Denotes data qualifier.

U Denotes analyte not detected at or above laboratory detection limit (DL) or QL.

J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation limit/detection limit is estimated.

UA Denotes analyte not detected at or above adjusted sample detection limit /QL.

UN Denotes analyte concentration is less than the quantitation limit and five times the blank concentration. Analyte was not reliably detected due to blank contamination.

R Denotes result rejected.

Laboratory Data Qualifiers,

"U" and "<", denote not detected at or above the detection limit or QL.

B or J denote result detected between DL and QL, associated value should be considered an estimated concentration.

Appendix IX monitoring events:

Third Quarter 2003, Second Quarter 2004, Second Quarter 2005, Third Quarter 2006, Second Quarter 2007, Second Quarter 2008, Second Quarter 2009, Second Quarter 2010, 2Q 2011, 2Q 2012, 2Q 2013, 2Q 2014, 2Q 2015, 2Q 2016, 2Q 2017

Definitions for Non-Appendix IX Monitoring Events and plume monitoring wells:

QL Denotes permit quantitation limit.

Q Denotes data qualifier.

U Denotes analyte not detected at or above QL.

UA Denotes analyte not detected at or above adjusted sample QL. See data validation report for further explanation.

UN Denotes analyte concentration is less than five times the blank concentration. Analyte was not reliably detected due to blank contamination.

J Denotes analyte reported at or above QL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated.

When used with "UA" (i.e., "UAJ"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated.

R Denotes result rejected. See data validation report for further explanation.

Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the QL.

SW-846 METHODS 6020B and 7470A INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 15-16, 2020 groundwater monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16SPRING. Sample 16WDUP was submitted to the laboratory as a blind sample duplicate for sample 16WC1A. Sample 16-3 (VOCs only) was resampled on May 7, 2020. Validation of other required methods is presented on separate reports.

Samples 16C1, 16MW8, 16MW9, 16WC1A and 16WC1B (compliance wells) were analyzed for fifteen (15) metals by SW-846 Method 6020B and mercury by SW-846 Method 7470A. Samples 16-2, 16-3, 16-5, 16WC2B and 16SPRING (plume wells) were analyzed for eleven (11) metals by SW-846 Method 6020B and mercury by SW-846 Method 7470A. The following information and attached table summarize the inorganic data validation results.

Techniques used for metals analysis include inductively coupled plasma Mass Spectrometry (ICP-MS) and cold vapor atomic absorption (CVAA). Samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B were analyzed for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium and zinc by ICP-MS Method 6020B and mercury by CVAA Method 7470A. The remaining plume monitoring well samples were analyzed for arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc by ICP-MS Method 6020B and mercury by CVAA Method 7470A. Total (T) concentrations were determined for the inorganic (metal) analytes.

Draper Aden Associates sent samples to Pace Analytical Services (Pace) (formerly Shealy Environmental Services) of West Columbia, South Carolina. Pace performed the Method 6020B and 7470A analyses. On behalf of RFAAP, Pace submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results. Pace is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the above analytes, methods and matrix.

The evaluation of Pace's compliance with the method and validation of results presented here are based upon a review of quality assurance/quality control (QA/QC) information including chain-of-custody, case narrative, holding time, preservation procedures, instrument calibration, tuning, blank (method, calibration and other blanks), interference check sample, matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution data. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

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Pace received the samples on ice and in good condition, with custody seals intact, except as noted. Applicable holding time and preservation criteria were met. The chain of custody was appropriately signed and dated by field and laboratory personnel.

Method 6020B (ICP-MS)

The revised (plume wells) certificate of analysis was received May 11, 2020 and the revised (compliance wells) certificate of analysis was received on July 24, 2020. The certificate of analysis appeared complete in their presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL).

The original certificate of analysis for the compliance wells was revised to report the re-digested and reanalyzed antimony and thallium results for 16WDUP as requested by Draper Aden Associates and to include raw data (cyanide) that was inadvertently omitted from the original data package. The original certificate of analysis for the plume wells was revised to correct the sample well name from 16-4 to 16-5. No other revisions were requested.

QC documentation criteria were met. Applicable instrument tune, calibration and calibration verification requirements were met. Blank, interference check samples, pre-digestion MS/MSD, LCS, internal standard and serial dilution results were within control limits, except where noted below. Deviations from QA/QC control limits that were identified during the data review process are summarized below.

The laboratory reported total cadmium at the detection limit and <QL in project sample 16MW8; however, inspection of the instrument data showed the cadmium result was actually less than the detection limit of 0.2 ug/l and that the reported result was incorrectly rounded up to the detection limit. The correct result (0.2 U) was reported; however, a revision was not requested. No other rounding errors were noted.

Field duplicate/sample results exhibited acceptable precision, where applicable.

Target analytes detected at or above the permit detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The reported concentration for target analytes detected less than the QL should be considered estimated.

For this Appendix IX groundwater monitoring event, results for samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, and 16WDUP were reported to at or above the laboratory detection limit. Sample results unaffected by the data validation process, and not detected at or above the detection limit or QL, were validated and reported as "U." The reported concentration for target analytes detected less than the QL were validated and qualified "J" to note that the reported concentration should be considered estimated.

Sample results for 16-2, 16-3, 16-5, 16WC2B, and 16SPRING were reported at or above the permit required QL. Sample results unaffected by the data validation process, and not detected at or above the permit QL, were validated and reported as "U." No results were rejected based on the data validation criteria. QLs were at or below the applicable groundwater protection standard (GPS).

Method 7470A (CVAA)

The original (plume wells) certificate of analysis was received May 11, 2020 and the revised (compliance wells) certificate of analysis was received on June 9, 2020. The certificates of analysis appeared complete in their presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit QL or DL for mercury.

QC documentation criteria were met. Instrument calibration and calibration verification criteria were met. QL standards, blank samples, MS/MSD, and LCS were analyzed as required and applicable criteria were met unless noted below. No deviations from QA/QC control limits were identified during the data review process.

Field duplicate/sample results exhibited acceptable precision, where applicable.

Mercury results detected at or above the permit detection limit or QL and/or mercury data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

For this Appendix IX groundwater monitoring event, mercury results for samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B were reported to at or above the permit detection limit. For samples 16-2, 16-3, 16-5, 16WC2B and 16SPRING, results were reported at or above the permit required QL. Sample results unaffected by the data validation process, and not detected at or above the detection limit or QL, were validated and reported as "U." No results were rejected based on the data validation criteria.

INORGANIC DATA EVALUATION BY SW-846 ICP-MS METHOD 6020B

Pace Analytical Services, West Columbia, South Carolina; Lot Numbers: VD17091 (5/11/20), VD17087 (7/24/2020)

☑ - denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTATION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Instrument detection limit (IDL) less than QL
- ☑ VELAP accredited within 12 months

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ IDOC for analysts BNW and BNK submitted previously

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion method: 3005A

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO₃)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) <=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration <=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ A single point calibration or a multi-point calibration with a calibration blank and at least 3 standards (low standard at or below the QL)
- ☑ Linear curve fit with correlation coefficient $r \geq 0.995$
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ Daily following initial calibration - Independent/second source used for standard
- ☑ ICV recovery 90-110% - concentration near mid-point of calibration curve

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- ☒ Low level ICV (LLICV) – prior to sample analysis, at QL concentration, 80-120% recovery
- I. INITIAL CALIBRATION BLANK CRITERIA:**
Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation
- ☒ Daily following ICV
- ☒ Interference free ($< \pm 1/2$ the QL concentration)
- J. QL/LOQ CHECK STANDARD CRITERIA:**
Data Quality Objective: Laboratory Analytical Sensitivity
- ☒ Standard analyzed at or below the QL (LLQC), digested, mean of 7 replicates with RSD $< 5\%$, analyzed after MDL determination and analyzed at least quarterly
- ☒ QL standard recovery 80-120%
- K. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:**
Data Quality Objective: Laboratory Analytical Accuracy
- ☒ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☒ CCV recovery within 90-110%, mid-point of curve concentration
- L. CONTINUING CALIBRATION BLANK CRITERIA:**
Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation
- ☒ Immediately after the CCV and after each group of 10 samples
- ☒ Interference free ($< QL$)
- M. BLANK CRITERIA:**
Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation
- N/A Trip Blank (check only if analyzed)
- ☒ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☒ Interference free ($< 1/2$ LLOQ), where applicable
- N. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:**
Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections
- ☒ At beginning of analytical run or once every 12 hours of continuing sample analysis
Results for elements not spiked in solution should be < 2 times the LLOQ. (Ti and Mo are spiked in addition to alkali metals)
- O. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:**
Data Quality Objective: Method Precision in Sample Matrix
- ☒ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☒ Spiked prior to sample preparation
- ☒ RPD ≤ 20 between MS & MSD results or sample & duplicate results, where applicable
- P. MATRIX SPIKE (MS) CRITERIA:**
Data Quality Objective: Method Accuracy in Sample Matrix
- ☒ All analytes, one MS per digestion batch of 20 samples
- ☒ Spiked prior to sample preparation
- ☒ Recovery: 75-125%, post-digestion spike analyzed for failed analytes, recovery 75-125%
- Q. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:**
Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance
- ☒ 1 LCS per 20 samples, all analytes, Recovery: 80-120%
- ☒ LCS solution same concentration as MS/MSD solution

R. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☒ IS added to each sample and QC sample
- ☒ Relative intensity (RI) should be within 70-125%
- ☒ If RI of CCB is <30%, terminate run and recalibrate

S. SERIAL DILUTION TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☒ <20% Difference (applicable when concentration >25X LLOQ)

T. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☒ Sample results reported within instrument calibration range
- ☒ Sample results reported to the method detection limit

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

**INORGANIC DATA EVALUATION FOR MERCURY
BY COLD VAPOR AA SW-846 METHOD 7470A**

Pace Analytical Services, West Columbia, South Carolina; Lot Numbers: VD17091 (5/11/20), VD17087 (7/24/2020)

☑ - denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:

- ☑ Specific detection limits/quantitation limit (QLs) for target analyte
- ☑ Standard analyzed at the QL (70-130% Recovery)
- ☑ VELAP accredited
- ☑ IDOC for analyst JNH submitted previously

B. METHOD INFORMATION DOCUMENTATION:

- ☑ Mercury analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

- ☑ 28 day holding time
- ☑ Adjust pH <2 w/ HNO₃

D. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 3 standards, correlation coefficient >0.995
- ☑ Instrument calibrated for every analytical sequence for every method

E. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120%

F. BLANK SAMPLE CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:

- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:

- ☑ Recovery within 75-125% range
- ☑ One MS per batch of 20 samples
- ☑ MS added prior to digestion

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ LCS for mercury
- ☑ Recovery within 80-120%
- ☑ Independent source for LCS

J. SAMPLE RESULTS CRITERIA:

- ☒ Results reported within instrument calibration range
- ☒ Results reported to laboratory detection limit (compliance wells)
- ☒ Results reported to laboratory quantitation limit (plume wells)

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

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SW-846 METHOD 8260C VOLATILE ORGANICS DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 15-16, 2020 monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16Spring. Groundwater sample 16WDUP was submitted to the laboratory as a blind field duplicate for 16WC1A.

Samples 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B (compliance monitoring wells) were analyzed for 66 volatile organic target analytes and samples 16-2, 16-3, 16-5, 16WC2B, and 16Spring (plume wells) were analyzed for 20 volatile organic target analytes per USEPA SW-846 Method 8260C. The following information and attached table summarize the Method 8260C data validation results.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania. ELLE performed the SW-846 Method 8260C volatile analysis. ELLE is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificate of analysis. ELLE submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results (SDGs# RAF59 report date 5/29/2020, RAF64 report date 5/23/2020).

The evaluation of ELLE's compliance with Method 8260C and validation of the results were based on a review of the following items: QC deliverables package, QC history documentation, technical holding times and preservation requirements, instrument performance (tune) check, instrument calibration and calibration verification data, blank, surrogate spike, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standards recovery, and/or target analyte identification and quantitation. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody (COC) was appropriately signed and dated by field and laboratory personnel. Technical holding time and preservation criteria were met, except where noted below.

The laboratory stated that the original results for sample 16-3 were generated from a sample vial with headspace. Since monitoring well 16-3 is a shared well with SWMU 353, sample 16-3 was collected on May 7, 2020 when that unit was sampled. Final results for well 16-3 for HWMU 16 are reported under SDG#RAF64 collected on May 7, 2020.

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The original certificates of analysis were received on June 8, 2020 and June 11, 2020 (Sample 16-3). The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the quantitation limit (QL) and method detection limit/detection (MDL/DL) for each target analyte, unless noted below.

QC deliverables package requirements were met. QC history documentation and instrument performance check criteria were met. Tuning, initial calibration, calibration verification, blanks, surrogates, MS/MSD, LCS, internal standards, identification and quantitation criteria were met, except where noted below. A minimum ten percent of the sample results were verified through calculations from instrument data and no transcription errors were observed.

Acrolein was analyzed using a sample aliquot adjusted to pH <2 SU. Acrolein was not detected at or above the detection limit or QL in any sample. Acrolein sample results were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. Acrolein is not a target analyte for the plume well samples.

Acetone, dimethyl ether, naphthalene, and trans-1,4-dichloro-2-butene did not meet the continuing calibration verification (CV) standard percent difference/drift requirement ($\pm 20\%$) for the CV associated with the compliance monitoring wells 16MW8, 16WC1A, and 16WDUP. Acetone, naphthalene and trans-1,4-dichloro-2-butene were not detected at or above the detection limit or QL in any associated samples and associated sample results for these target analytes were validated and qualified "UJ" due to the observed QC deficiency. Dimethyl ether was detected above detection limit and associated sample results for this analyte were validated and qualified "J" due to the observed QC deficiency. Chloromethane exceeded the QC criteria for the CV standard percent difference/drift requirement ($\pm 20\%$) associated with sample 16-3 only. Chloromethane was not detected at or above the detection limit or QL in 16-3 and the 16-3 chloromethane result was validated and qualified "UJ" due to the observed QC deficiency. The remaining CV standard criteria were met.

Naphthalene recovered low in the MS/MSD and in the LCS associated with the compliance monitoring wells. Naphthalene was not detected at or above the DL or QL in any project sample and sample results for this analyte were validated and qualified "UJ" due to the observed QC deficiencies. 1,1-Dichloromethane and vinyl chloride also recovered high in the MS and/or MSD; detections above the detection limit for these two analytes were validated and qualified as estimated "J" due to the observed QC deficiency. The remaining MS/MSD and LCS criteria were met.

For samples 16C1, 16MW8, and 16MW9, the initial results for diethyl ether exceeded the instrument calibration range. These samples were reanalyzed in dilution and diethyl ether results from the dilution analysis were reported for these samples. The QL and DL for the reported diethyl ether results were adjusted accordingly for dilution. Diethyl ether was reported below the adjusted QL in 16MW8 and qualified as "AJ."

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A verification event was performed on June 22, 2020 to confirm or refute the acetone detection in 16MW8 and the vinyl chloride detection in sample 16WC1A. A sample and blind duplicate were collected and submitted to Pace Analytical (Pace) of West Columbia, South Carolina. The acetone detection in 16MW8 was not confirmed and the final result for acetone in 16MW8 is reported as not detected at or above the detection limit. The vinyl chloride detection in 16WC1A was confirmed and the original vinyl chloride result was reported as the final result. It should be noted that a split sampling for vinyl chloride in 16WC1A was sent to Eurofins TestAmerica Canton (ETAC) of North Canton, Ohio; however, final results were reported from PACE.

Laboratory analysis was performed using a 25 ml purge volume for all analytes except 2-propanol. 2-Propanol analysis was performed using a 5 ml purge volume.

Field duplicate/sample results for 16WC1A exhibited acceptable precision, where applicable. A trip blank was submitted and analyzed for each day of sampling.

For compliance well samples 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, and 16WC1B, results were reported to at or above the permit detection limit for this Appendix IX monitoring event. Where permit MDLs were lower than the laboratory's current MDL study, results were reported to the laboratory MDL. For the remaining samples (plume wells), target analytes were reported to at or above the permit QL.

Target analytes detected at or above the detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The reported concentration for target analytes detected less than the QL or adjusted QL should be considered estimated.

Results for samples unaffected by the data validation process, and not detected at or above the detection limit and/or QL, were validated and reported as "U." No results were rejected based on the data validation criteria.

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SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS DATA VALIDATION

Comments: Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 5ml or 25ml water sample (SW-846 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).

A. QC DELIVERABLES PACKAGE:

- | | | |
|----|---|---|
| 1. | Was the case narrative present/signed by a lab representative? | ☒ YES ☐ NO |
| 2. | Was the Chain of Custody present/signed by a lab representative? | ☒ YES ☐ NO |
| 3. | Were the sample results included for the sample locations? | ☒ YES ☐ NO |
| 4. | Did the results correspond to the project specific analyte list? | ☒ YES ☐ NO |
| 5. | Were the analyte QLs reported on sample summary sheets in agreement with the MDL study? | ☒ YES ☐ NO |
| 6. | Were sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)? | ☒ YES ☐ NO |
| 7. | VELAP accredited? | ☒ YES ☐ NO |

Comments: QC deliverables package requirements were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Was an instrument specific MDL study provided which included DL and QL values for the target analytes? | ☒ YES ☐ NO |
| 2. | Was the instrument calibration range provided? | ☒ YES ☐ NO |
| 3. | Were the instrument specific check sample data provided for the target analytes? | ☒ YES ☐ NO |

Comments: Except as noted above, QC history documentation was provided and met criteria. The laboratory analyzed the MDL check sample at 1 µg/l (5 ml purge) and at 0.1 µg/l (25 ml purge) for most target analytes.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Was the 14-day sample collection to analysis holding time met? | ☒ YES ☐ NO |
| 2. | Were the samples received at ≤6°C, zero headspace? | ☒ YES ☐ NO |
| 3. | Were the sample pHs adjusted to <2 with HCl? | ☒ YES ☐ NO |
| 4. | Were the sample pHs adjusted to 4-5 with HCl? (Acrolein only) | ☐ YES ☒ NO |
| 5. | Were samples analyzed unpreserved (2-chloroethyl vinyl only) | ☒ NA ☐ YES ☐ NO |

Comments: Technical holding time and sample preservation criteria were met for final reported results.

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D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1. Was the instrument performance check solution analyzed at the beginning of each 12-hour period prior to standards/samples analysis? ☒ YES ☐ NO
2. Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)? ☒ YES ☐ NO
3. Were the ion abundance criteria met? ☒ YES ☐ NO
4. Were calibration, blank, and sample analyses performed within 12 hours of tuning? ☒ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Was the internal standard (IS) which was selected for target analyte RF calculation the IS which had the closest retention time? ☒ YES ☐ NO
2. Were the target analytes included in the ICAL? ☒ YES ☐ NO
3. Were any calibration levels removed from the curve that would negatively influence the data integrity? ☐ YES ☒ NO
4. Did the ICALs consist of a minimum of 5 calibration levels? ☒ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL? ☒ YES ☐ NO
6. Was the calibration curve developed using the same purge volume as that used for the sample analysis? ☒ YES ☐ NO
7. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs ☒ YES ☐ NO
8. Was each target analyte %RSD $\leq$ 20%? ☒ YES ☐ NO
9. Was the correlation coefficient >0.99 for target analytes with ≥ 20 % RSD? *(System recalibrated if $>10\%$ analytes fail above condition)* ☒ NA ☐ YES ☐ NO
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☒ YES ☐ NO
11. Was the recovery within 70-130%? ☒ YES ☐ NO
12. Was the ICV standard prepared from a different source than that used for the ICAL? ☒ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs $> 20\%$ have ≥ 0.99 correlation coefficient or coefficient of determination? ☒ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within $\pm 30\%$? ☒ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☒ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

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F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☒ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs ☒ YES ☐ NO
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within $\pm 20\%$? ☐ YES ☒ NO
If criteria not met for more than 20% of analytes in the initial calibration, then corrective action must be taken prior to the analysis of samples.
If "NO", list analytes that exceed these criteria: See data validation report

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within $\pm 20\%$? ☐ YES ☒ NO

Comments: The CV standard criteria were met except where noted above.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12-hour period beginning with the injection of BFB? ☒ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☒ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☒ YES ☐ NO
4. Was the level of blank contamination less than 5% of the regulatory limit associated with an analyte or less than 5% of the sample result for the same analyte, whichever is greater? ☒ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks:
6. Did any result exceed the calibration range? ☐ YES ☒ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☐ YES ☒ NO

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☒ YES ☐ NO
 - dibromofluoromethane (80-120%)
 - 4-bromofluorobenzene (80-120%)
 - toluene-d8 (80-120%)
 - 1,2-dichloroethane-d4 (80-120%)
2. Were recoveries within specified ranges? ☒ YES ☐ NO

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If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted

3. Were samples with surrogates outside the QC window reanalyzed as required? ☒ NA ☐ YES ☐ NO

Comments: Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:
(MS/MSD Requirements - CLP Guidelines)

<u>Analyte</u>	<u>% R Water</u>	<u>% RPD Water</u>
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13
chlorobenzene	75-130	13

1. Was a matrix spike and matrix spike duplicate (MS/MSD) analyzed per sample batch or every 20 samples, whichever may occur first? ☒ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☒ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☒ YES ☐ NO
4. MS/MSD acceptance range: 75-125%; 70-130% poor purge analytes; RPD $\leq$ 20
5. Were analytes qualified as estimated due to MS/MSD criteria? ☒ YES ☐ NO
 - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met except where noted above.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample batch analysis? ☒ YES ☐ NO
2. Did the LCS contain the required target analytes? (No TICs) ☒ YES ☐ NO
3. List the LCS acceptance criteria: 80-120%; 70-130% for poor purge analytes
4. Were any analytes qualified as estimated? ☒ YES ☐ NO

Comments: LCS criteria were met except where noted above.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards (IS) used? ☒ YES ☐ NO
t-butyl alcohol-d₁₀, fluorobenzene, chlorobenzene-d₅, 1,4-dichlorobenzene-d₄
2. Were the IS areas within - 50% to + 100% of the last CV? ☒ YES ☐ NO
3. Were the IS RTs within $\pm$ 30 seconds of the last CV? ☒ YES ☐ NO
4. Were samples failing Items 2 and/or 3 above reanalyzed as required by the method? ☒ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

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L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☒ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
 - * Characteristic ions maximize in the same scan or within one scan of each other
 - * Characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL
 - * Relative intensities of the ions between the standard and sample spectra within $\pm 30\%$
3. Were the reported analytes confirmed? ☒ YES ☐ NO

Comments: Target analyte identification criteria were met. See attached table for detected analytes. Identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

- * If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
 - * If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points. (6 calibration points for 2nd order).
1. List the detected analytes whose %RSD was $> 20\%$: *None*
 - Was quantitation based on a linear regression fit? ☒ NA ☐ YES ☐ NO
 2. Did the initial analysis of any sample have a concentration of an analyte which exceeded the initial calibration range? ☒ YES ☐ NO
 - If so, was the sample reanalyzed at a higher dilution? ☒ YES ☐ NO
 3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☒ YES ☐ NO
 4. Were field sample duplicate RPDs < 20 where applicable? ☒ YES ☐ NO

Comments: Target analyte quantitation criteria were met, where applicable.

N. LIBRARY SEARCHES: Library searches were not requested with this data set.

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

The initial demonstration of capability (IDOCs) for analysts J. Howe, M. Campbell, and K. Sposito were submitted previously by the laboratory. No corrective action was taken.

SW-846 METHOD 8270D SEMIVOLATILE DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 15-16, 2020 groundwater monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16Spring. Groundwater sample 16WDUP was submitted to the laboratory as a blind sample duplicate for 16WC1A.

Samples 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B (compliance monitoring wells) were analyzed for 114 semivolatile target analytes. Samples 16-2, 16-3, 16-5, 16WC2B, and 16Spring (plume wells) were analyzed for three semivolatile target analytes per USEPA SW-846 Method 8270D. The following information and attached table summarize the Method 8270D data validation results. Validation of other required methods is presented on separate reports.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania and to Microbac Laboratories (Microbac), of Marietta, Ohio. Each laboratory is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificates of analysis. Both laboratories submitted results to Draper Aden Associates in a final certificate of analysis that included sample analytical results as well as relevant QA/QC and method performance criteria documentation to verify and validate the results. Microbac analyzed hexachloroethane, hexachlorophene and sulfotep (Report Number: MOD1189). ELLE reported the remaining target analytes (SDG# RAF59 report date 5/29/2020).

The evaluation of each laboratory's compliance with Methods 8270D and 8270C and validation of the results was based on a review of the following items: QC deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD) analyses, laboratory control sample (LCS) data, and internal standard requirements. A review of the transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

Each laboratory received the samples on ice and in good condition, with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Technical holding time and sample preservation were met.

The original certificate of analysis was received on June 11, 2020 (ELLE) and May 1, 2020 (Microbac). Each certificate of analysis appeared complete and the data were of acceptable quality, except where noted below. The data set demonstrated the laboratory's ability to

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achieve the reported permit required quantitation limit (QL) or detection limit (DL), unless noted below.

QC history documentation, instrument performance check (tuning) criteria, calibration, blank, surrogate, MS/MSD, LCS and internal standard requirements were met, except where noted below. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

4-Nitroquinoline-1-oxide exceeded initial calibration verification (ICV) percent difference/drift requirement ($\pm 30\%$). 4-Nitroquinoline-1-oxide was not detected at or above the detection limit or QL in any project sample and sample results for this analyte were validated and qualified "UJ" due to the observed QC deficiency. The remaining ICV criteria were met.

Kepone exceeded the percent difference/drift requirement ($\pm 20\%$) for the continuing calibration verification (CV) standard. Kepone was not detected at or above the detection limit or QL in any project sample and sample results for this analyte were validated and qualified "UJ" due to the observed QC deficiency. The remaining CV criteria were met.

Two acid surrogates recovered low in compliance samples 16WC1A, 16WC1B, and 16WDUP (field duplicate of 16WC1A). The acid fraction analytes were not detected at or above the detection limit or QL in these three samples and associated results were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. The remaining surrogate criteria were met.

Aniline, 2-chlorophenol, 2,4-dichlorophenol, 1-naphthylamine, pentachlorophenol, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol recovered low in the MS and/or MSD; 3,3'-dimethylbenzidine did not recover from the MS/MSD. These analytes were not detected at or above the detection limit or QL in any project sample and sample results for these analytes were validated and qualified "UJ" due to the observed QC deficiency.

1,4 Naphthoquinone did not recover from the LCS/LCSD and a,a-dimethylphenethylamine, famphur and 1,4-phenylenediamine recovered low in the LCS/LCSD. These analytes were not detected at or above the detection limit or QL in any project sample and sample results for these analytes were validated and qualified "UJ" due to the observed QC deficiency.

The remaining MS/MSD/LCS/LCSD criteria were met or no data qualifications were required.

Hexachlorophene was reported by the laboratory via a single point calibration and results were considered estimated by the laboratory. Hexachlorophene was not detected in any

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sample and hexachlorophene results were validated and qualified as estimated, "UJ" to note that the detection limit and QL are estimated due to the observed QC deficiency.

Microbac analyzed and reported hexachloroethane, hexachlorophene, and sulfotepp by SW-846 Method 8270C.

Due to analytical limitations, 3-methylphenol and 4-methylphenol cannot be analyzed separately. 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The results reported for 3-methylphenol and 4-methylphenol represent the combined total for both compounds. N-Nitrosodiphenylamine decomposes during analysis to form diphenylamine. The results reported for diphenylamine represent the combined total for both compounds.

For this Appendix IX monitoring event, results for compliance wells (16C1, 16MW8, 16MW9, 16WC1A and 16WC1B) were reported to at or above the detection limit. The detection limit was based on the current laboratory MDL study. For plume wells (16-2, 16-3, 16-5, 16WC2B, and 16Spring), results were reported to at or above the permit required QL. The sample results unaffected by the data validation process, and not detected at or above the detection limit and/or QL, were validated and reported as "U."

For this sampling event, no target analytes were detected. No results were rejected based on the data validation criteria.

SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Comments: Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using SW-846 Method 3510C. The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).

A. QC DELIVERABLES PACKAGE:

- | | | |
|----|--|---|
| 1. | Was the case narrative present/signed by a lab representative? | ☒ YES ☐ NO |
| 2. | Was the Chain of Custody present/signed by a lab representative? | ☒ YES ☐ NO |
| 3. | Were the sample results included for the sample locations? | ☒ YES ☐ NO |
| 4. | Did the data correspond to the project specific analyte list? | ☒ YES ☐ NO |
| 5. | Were target analyte QLs reported on sample summary sheets in agreement with the instrument specific MDL study? | ☒ YES ☐ NO |
| 6. | VELAP accredited? | ☒ YES ☐ NO |

Comments: QC deliverables package criteria were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Were instrument specific detection limits provided for the analytes? | ☒ YES ☐ NO |
| 2. | Were instrument specific QLs for target analytes provided? | ☒ YES ☐ NO |
| 3. | Was calibration range specified for the target analytes? | ☒ YES ☐ NO |

Comments: QC history documentation criteria were met.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- | | | |
|----|---|---|
| 1. | Was the 7-day sample collection to extraction holding time met? | ☒ YES ☐ NO |
| 2. | Was the 40-day extraction to analysis holding time met? | ☒ YES ☐ NO |
| 3. | Were the samples received at $\leq 6^{\circ}\text{C}$? | ☒ YES ☐ NO |

Comments: The sample collection to extraction/analysis holding times and preservation criteria were met except where for re-extractions as noted.

D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

- | | | |
|----|---|---|
| 1. | Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period of standard and/or sample analysis? | ☒ YES ☐ NO |
| 2. | Was there documentation of the injection of 50 ng of DFTPP? | ☒ YES ☐ NO |
| 3. | Were ion abundance criteria met? | ☒ YES ☐ NO |
| 4. | Was the injection port inertness verified by analysis of 4,4'-DDT? | ☒ YES ☐ NO |
| 5. | Was the degradation of DDT to DDE and DDD <20%? | ☒ YES ☐ NO |

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- If no, does associated data require qualification? ☒ NA ☐ YES ☐ NO
- Was the injection port inertness check acceptable? ☒ YES ☐ NO
- 6. Was column performance checked through the analysis of peak tailing (<2 tailing factor) of pentachlorophenol and benididine? ☒ YES ☐ NO
- If no, does associated data require qualification? ☒ NA ☐ YES ☐ NO
- Was column performance check acceptable? ☒ YES ☐ NO

Comments: Instrument performance check criteria were met. The lab extracted 250 ml of sample and used 12.5 ng of DFTPP. Laboratory tune criteria windows are within those specified by 8270D.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☒ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D and the RFP? ☒ YES ☐ NO
3. Were target analytes included in the ICAL? ☒ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? ☒ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☒ YES ☐ NO
6. Were calibration standards dropped to meet calibration criteria? ☐ YES ☒ NO
7. Were 8270D minimum RRF criteria met?
Relative Response Factor-range (RRF 0.010-0.900) ☒ YES ☐ NO
**Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*
8. Was each target analyte %RSD ≤ 20%? ☒ YES ☐ NO
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with > 20% RSD? ☒ YES ☐ NO
**System recalibrated if >10% analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☒ YES ☐ NO
11. Was the recovery within 70-130%? ☐ YES ☒ NO
12. Was the ICV standard prepared from a different source from the ICAL? ☒ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☒ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☒ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☒ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met except where noted above.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☒ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met? ☒ YES ☐ NO
Refer to Table 4- SW-846 Method 8260C (Rev4 2/07) for specific analyte RRFs
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within $\pm 20\%$? ☐ YES ☒ NO
If criteria not met for more than 20% of analytes in the initial calibration, then corrective action must be taken prior to the analysis of samples.
If "NO", list analytes that exceed these criteria: Kepone

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within $\pm 20\%$? ☐ YES ☒ NO

Comments: The CV standard criteria were met except where noted above.

G. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system used for sample analysis? ☒ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☒ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☒ YES ☐ NO
4. Was the level of blank contamination > 5% of the MCL? ☒ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the following surrogates used? ☒ YES ☐ NO
 - phenol - d₆ (10%-94%)
 - 2-fluorophenol (21%-100%)
 - 2,4,6-tribromophenol (10%-123%)
 - nitrobenzene - d₅ (43%-108%)
 - 2-fluorobiphenyl (43%-116%)
 - p-terphenyl - d₁₄ (33%-141%)
2. Were recoveries within the specified ranges? ☐ YES ☒ NO
3. Were any two base/neutral or acid surrogates out of specification or did any one base/neutral or acid extractable surrogate have a recovery of less than 10%? ☒ YES ☐ NO
If yes, was a re-extraction and reanalysis performed to confirm that the non-compliance was due to sample matrix effects rather than laboratory deficiencies? ☐ YES ☒ NO

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Comments: Surrogate recovery criteria were met except where noted above.

I. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	% R Water	% RPD Water
Phenol	12-110	42
2-Chlorophenol	27-123	40
N-Nitroso-di-n-propylamine	41-116	38
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pyrene	26-127	31

1. Was a MS/MSD analyzed per sample batch or every 20 samples, whichever may occur first? ☒ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☒ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☒ YES ☐ NO
4. List MS/MSD target analytes not within laboratory recovery ranges:
See semivolatile certificate of analysis
5. Was a LCS analyzed to address failed MS spike criteria? ☒ YES ☐ NO
6. Did the LCS for the failed MS analyte(s) fall within the recovery ranges and was the problem identified as matrix interference? ☒ YES ☐ NO
7. Were analytes qualified as estimated due to MS/MSD criteria? ☒ YES ☐ NO
 - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met except where noted above.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☒ YES ☐ NO
2. Did the LCS contain the required target analytes? ☒ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range.
See semivolatile certificate of analysis.
4. Were any analytes qualified as estimated due to LCS criteria? ☒ YES ☐ NO

Comments: LCS criteria were met except where noted above.

K. INTERNAL STANDARDS CRITERIA:

1. Were the following internal standards (IS) used? ☒ YES ☐ NO
 - 1,4-Dichlorobenzene-d₄
 - Naphthalene-d₈
 - Acenaphthene-d₁₀
 - Phenanthrene-d₁₀

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- Pyrene-d₁₀ (Chrysene-d₁₂-TestAmerica)
 - Perylene-d₁₂
2. Were the IS areas within $\pm 50\%$ of last CV? ☒ YES ☐ NO
3. Were the IS RTs within ± 30 seconds of last CV? ☒ YES ☐ NO

Comments: Internal standard criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☒ NA YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met: ☒ NA YES ☐ NO
- * Did characteristic ions maximize in the same scan or within one scan of each other?
 - * Were the characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL?
 - * Were the relative ion intensities between the standard and sample spectra within $\pm 30\%$?
3. Were the reported analytes confirmed? ☒ NA YES ☐ NO

Comments: Target analyte identification criteria were met. No target analytes were detected at or above the detection limit or permit QL (compliance samples) or the permit QL (plume samples).

M. TARGET ANALYTE QUANTITATION:

- * If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
 - * If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).
1. List the analytes detected above the QL whose %RSD was $>20\%$: *None*
- a. Was quantitation based on a linear regression fit? ☒ NA ☐ YES ☐ NO
 - b. Was the curve forced through the origin? ☒ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☐ YES ☒ NO
- If so, was the sample reanalyzed at a higher dilution? ☒ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☒ YES ☐ NO

Comments: Target analyte quantitation criteria were met. No target analytes were detected at or above the detection limit or permit QL (compliance samples) or the permit QL (plume samples).

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: The initial demonstration of capability (IDOCs) for analysts SLB (Microbac) and K. Beck (ELLE) were submitted previously. No corrective action was taken.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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This Report has been subjected to technical and quality review by:

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Kathy Olsen, Senior Project Environmental Scientist	Date:
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SW-846 METHOD 9012B DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 15-16, 2020 monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B. Sample 16WDUP was submitted to the laboratory as a blind field sample duplicate for 16WC1A.

The samples were analyzed for cyanide by SW-846 Method 9012B. The following information summarizes the data validation results. Validation of other required methods is presented on separate reports.

Draper Aden Associates sent samples to Pace Analytical Services (Pace) (formerly Shealy Environmental Services) of West Columbia, South Carolina. On behalf of RFAAP, Pace submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results. Pace is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the above analyte, method and matrix.

The evaluation of Pace's compliance with the method and validation of results presented here are based upon a review of quality assurance/quality control (QA/QC) information including chain-of-custody, case narrative, holding time, preservation procedures, instrument calibration, blank (method, calibration and other blanks), matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution data. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

Pace received the samples in good condition with custody seals intact. Technical holding time and preservation criteria were met.

The revised certificate of analysis appeared complete in its presentation and the data were of acceptable quality. Documentation was provided to demonstrate the ability of the laboratory to achieve the reported project quantitation limit (QL) or detection limit (DL) for cyanide. The original certificate of analysis was completed on June 8 2020. The revised certificate of analysis was received July 24, 2020.

QC history documentation, holding time, sample preservation, instrument calibration and calibration verification criteria were met. Blank, MS/MSD, and LCS samples were analyzed as required and results were within control limits, unless noted below. The blanks were

Radford Army Ammunition Plant (HWMU-16)
Second Quarter 2020 Annual Groundwater Monitoring Event
Draper Aden Associates Job Number: B03204-20A
Page 2 of 5

interference free. No deviations from QA/QC control limits were identified during the data review process.

The certificate of analysis was revised to include the cyanide raw data which was inadvertently omitted from the original certificate of analysis.

Field duplicate/sample results exhibited acceptable precision, where applicable.

For this Appendix IX monitoring event, cyanide results were reported to at or above the detection limit. Cyanide was not detected at or above the laboratory detection limit or permit defined QL in any sample and sample results for cyanide were validated and reported as "U." No results were rejected based on data validation criteria.

INORGANIC DATA EVALUATION FOR CYANIDE BY SW-846 METHOD 9012B

Pace Analytical Services, West Columbia, South Carolina; Lot Number: VD17087 rev 7/24/2020;

☑ - denotes items reviewed. See Data Validation Summary for additional comments.

Preparation Method: 9012B

A. QC DOCUMENTATION CRITERIA:

- ☑ Specific detection limit for target analyte
- ☑ Specific QLs for target analyte
- ☑ VELAP accredited
- ☑ IDOC for analysts MSG-KFE submitted previously

B. METHOD INFORMATION DOCUMENTATION:

- ☑ Cyanide analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

- ☑ 14 day holding time
- ☑ Cool $\leq 6^{\circ}$ C
- ☑ Adjust pH > 12 w/ NaOH

D. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 3 standards; correlation coefficient ≥ 0.995

E. INITIAL / CONTINUING CALIBRATION VALIDATION CRITERIA:

- ☑ ICV, recovery 85-115%
- ☑ 10 sample frequency for CCV, recovery 85-115%

F. BLANK SAMPLE CRITERIA:

- ☑ Interference free
- ☑ ICB, then 10 sample frequency for CCB
- ☑ One preparation blank per sample batch

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:

- ☑ One MSD or sample duplicate for every 20 samples
- ☑ RPD ≤ 20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:

- ☑ One MS sample for every 20 samples
- ☑ MS recovered within 75-125%
- ☑ Spike added prior to distillation

I. LABORATORY CONTROL SAMPLE (LCS) SAMPLE CRITERIA:

- ☑ One LCS sample for every 20 samples
- ☑ LCS recovered within 80-120%

Radford Army Ammunition Plant (HWMU-16)
Second Quarter 2020 Annual Groundwater Monitoring Event
Draper Aden Associates Job Number: B03204-20A
Page 4 of 5

- ☒ Spike added prior to distillation

J. SAMPLE RESULTS CRITERIA:

- ☒ Sample results reported within calibration range
- ☒ Sample results reported to the method detection limit

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria were available. Validation of this data set is limited to the items detailed in this report.

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7-31-2020

Date:

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7-31-2020

Date:

Summary of Quantitation Limits and Detection Limits
 Radford Army Ammunition Plant (RFAAP), Radford, VA
 HWMU 16 - Appendix IX Monitoring Event
 Monitoring Event: **Second Quarter 2020**

Analyte	2020 Lab Quantitation Limit/QL (ug/L)	2020 Lab Detection Limit/DL (ug/L)
Method: 6020B		
Laboratory: Pace Analytical, West Columbia, SC		
Antimony	2	0.5
Arsenic	10	2
Barium	10	1.3
Beryllium	1	0.2
Cadmium	1	0.2
Chromium	5	1.3
Cobalt	5	1.3
Copper	5	1.3
Lead	3	1
Nickel	10	2
Selenium	10	3
Silver	2	0.3
Thallium	1	0.2
Vanadium	10	2.5
Zinc	30	7.3
Method: 7470A		
Laboratory: Pace Analytical, West Columbia, SC		
Mercury	2	0.2

Summary of Quantitation Limits and Detection Limits
Radford Army Ammunition Plant (RFAAP), Radford, VA
HWMU 16 - Appendix IX Monitoring Event
Monitoring Event: **Second Quarter 2020**

Analyte	2020 Lab Quantitation Limit/QL (ug/L)	2020 Lab Detection Limit/DL (ug/L)
Method: 8260C		
Laboratory: ELLE, Lancaster, PA		
Acetone	10	0.9
Acetonitrile	100	31.7
Acrolein	25	3.4
Acrylonitrile	10	0.47
Allyl chloride	10	0.82
Benzene	1	0.07
Bromodichloromethane	1	0.088
Bromoform	1	0.106
2-Butanone	10	0.6
Carbon disulfide	10	0.37
Carbon tetrachloride	1	0.16
Chloroform	1	0.09
Chloroprene	10	0.46
Dibromochloromethane	1	0.07
1,2-Dibromo-3-chloropropane	1	0.204
1,2-Dibromoethane	1	0.06
1,2-Dichlorobenzene	1	0.082
1,3-Dichlorobenzene	1	0.06
1,4-Dichlorobenzene	1	0.07
trans-1,4-Dichloro-2-butene	10	0.97
Dichlorodifluoromethane	1	0.148
1,1-Dichloroethane	1	0.135
1,2-Dichloroethane	1	0.147
1,1-Dichloroethene	1	0.223
trans-1,2-Dichloroethene	1	0.162
1,2-Dichloropropane	1	0.107
1,3-Dichloropropane	1	0.091
trans-1,3-Dichloropropene	1	0.097
Diethyl ether	13	2.78
Dimethyl ether	13	0.04
1,4-Dioxane	200	45.5
Ethylbenzene	1	0.079
Ethyl methacrylate	10	0.81
Hexachlorobutadiene	1	0.07
2-Hexanone	10	0.6
Isobutyl alcohol	200	3.6
Methacrylonitrile	100	9.75
Bromomethane	1	0.542
Iodomethane	10	0.58

Summary of Quantitation Limits and Detection Limits
Radford Army Ammunition Plant (RFAAP), Radford, VA
HWMU 16 - Appendix IX Monitoring Event
Monitoring Event: **Second Quarter 2020**

Analyte	2020 Lab Quantitation Limit/QL (ug/L)	2020 Lab Detection Limit/DL (ug/L)
Method: 8260C		
Laboratory: ELLE, Lancaster, PA		
Methyl methacrylate	10	3.58
4-Methyl-2-pentanone	10	0.91
Dibromomethane	1	0.065
Methylene chloride	1	0.182
Naphthalene	1	0.126
Pentachloroethane	10	0.8
2-Propanol	100	18
Propionitrile	100	10.2
Styrene	1	0.05
1,1,1,2-Tetrachloroethane	1	0.08
1,1,2,2-Tetrachloroethane	1	0.184
Tetrachloroethene	1	0.06
Tetrahydrofuran	25	2
Toluene	1	0.093
1,2,4-Trichlorobenzene	1	0.13
1,1,1-Trichloroethane	1	0.13
1,1,2-Trichloroethane	1	0.079
Trichloroethene	1	0.177
Trichlorofluoromethane	1	0.176
1,2,3-Trichloropropane	1	0.1
1,1,2-Trichloro-1,2,2-Trifluoroethane	1	0.12
Vinyl acetate	10	3.29
Vinyl chloride	1	0.153
Xylenes (Total)	3	0.208
Method: 8270C		
Laboratory: Microbac, Marietta, OH		
Hexachloroethane	5	2.5
Hexachlorophene	50	
Sulfotep	10	1

Summary of Quantitation Limits and Detection Limits
Radford Army Ammunition Plant (RFAAP), Radford, VA
HWMU 16 - Appendix IX Monitoring Event
Monitoring Event: **Second Quarter 2020**

Analyte	2020 Lab Quantitation Limit/QL (ug/L)	2020 Lab Detection Limit/DL (ug/L)
Method: 8270D		
Laboratory: ELLE, Lancaster, PA		
Acenaphthene	10	0.354
Acenaphthylene	10	0.486
Acetophenone	10	4.05
2-Acetylaminofluorene	21	10.1
4-Aminobiphenyl	11	5.06
Aniline	10	3.04
Anthracene	10	0.526
Aramite	15	5.06
Benzo[a]anthracene	10	0.455
Benzo[b]fluoranthene	10	1.21
Benzo[k]fluoranthene	10	1.62
Benzo[ghi]perylene	10	0.425
Benzo(a)pyrene	10	1.52
1,4-Benzenediamine	300	75.9
Benzyl alcohol	30	10.1
bis(2-Chloroethoxy)methane	2	0.506
bis(2-Chloroethyl)ether	2	0.506
bis(2-Chloro-1-methylethyl)ether	2	0.506
bis(2-Ethylhexyl)phthalate	11	5.06
4-Bromophenyl phenyl ether	10	0.567
Butyl benzyl phthalate	10	2.02
p-Chloroaniline	10	4.05
Chlorobenzilate	10	3.04
p-Chloro-m-cresol	10	1.02
2-Chloronaphthalene	10	0.496
2-Chlorophenol	10	0.992
4-Chlorophenyl phenyl ether	10	0.506
Chrysene	10	0.314
Diallate	10	1.01
Dibenz(a,h)anthracene	10	0.385
Dibenzofuran	10	0.587
Di-n-butyl phthalate	10	2.02
3,3'-Dichlorobenzidine	10	3.04
2,4-Dichlorophenol	10	1.61
2,6-Dichlorophenol	10	0.506
Diethyl phthalate	10	2.02
O,O-Diethyl O-2-pyrazinyl	10	2.02
Dimethoate	10	3.04
p-(Dimethylamino)azobenzene	10	5.06

Summary of Quantitation Limits and Detection Limits
 Radford Army Ammunition Plant (RFAAP), Radford, VA
 HWMU 16 - Appendix IX Monitoring Event
 Monitoring Event: **Second Quarter 2020**

Analyte	2020 Lab Quantitation Limit/QL (ug/L)	2020 Lab Detection Limit/DL (ug/L)
Method: 8270D		
Laboratory: ELLE, Lancaster, PA		
7,12-Dimethylbenz[a]anthracene	11	5.06
3,3'-Dimethylbenzidine	75	25.3
a,a-Dimethylphenethylamine	50	5.06
2,4-Dimethylphenol	10	3.04
Dimethyl phthalate	10	2.02
m-Dinitrobenzene	10	2.02
4,6-Dinitro-o-cresol	21	8.1
2,4-Dinitrophenol	30	14.2
2,4-Dinitrotoluene	10	1.01
2,6-Dinitrotoluene	10	0.506
Di-n-octyl phthalate	11	5.06
Diphenylamine	10	0.709
Disulfoton	50	25.3
Ethyl methanesulfonate	10	0.506
Famphur	50	25.3
Fluoranthene	10	0.425
Fluorene	10	0.385
Hexachlorobenzene	10	0.881
Hexachlorocyclopentadiene	11	5.06
Hexachloropropene	10	2.02
Indeno[1,2,3-cd]pyrene	10	0.152
Isodrin	10	0.506
Isophorone	10	0.506
Isosafrole	10	4.05
Kepone	50	25.3
Methapyrilene	50	15.2
3-Methylcholanthrene	10	4.05
Methyl methane sulfonate	10	1.01
2-Methylnaphthalene	10	0.294
Methyl parathion	10	5.06
2-Methylphenol	10	0.972
3 & 4-Methylphenol	20	2.5
1,4-Naphthoquinone	60	25.3
1-Naphthylamine	21	8.1
2-Naphthylamine	21	7.09
o-Nitroaniline	10	2.02
m-Nitroaniline	10	3.04
p-Nitroaniline	10	0.911
Nitrobenzene	10	0.506

Summary of Quantitation Limits and Detection Limits
 Radford Army Ammunition Plant (RFAAP), Radford, VA
 HWMU 16 - Appendix IX Monitoring Event
 Monitoring Event: **Second Quarter 2020**

Analyte	2020 Lab Quantitation Limit/QL (ug/L)	2020 Lab Detection Limit/DL (ug/L)
Method: 8270D		
Laboratory: ELLE, Lancaster, PA		
o-Nitrophenol	10	3.04
p-Nitrophenol	30	10.1
4-Nitroquinoline-1-oxide	60	20.2
N-Nitrosodi-n-butylamine	25	12.1
N-Nitrosodiethylamine	10	0.506
N-Nitrosodimethylamine	10	2.02
N-Nitrosodiphenylamine	10	0.709
N-Nitrosodipropylamine	10	0.709
N-Nitrosomethylethylamine	10	2.02
N-Nitrosomorpholine	10	2.02
N-Nitrosopiperidine	10	0.506
N-Nitrosopyrrolidine	10	0.506
5-Nitroso-o-toluidine	10	4.05
Parathion	12	7.09
Pentachlorobenzene	10	0.506
Pentachloronitrobenzene	10	2.02
Pentachlorophenol	10	2.96
Phenacetin	10	0.506
Phenanthrene	10	0.526
Phenol	10	0.779
Phorate	10	2.02
2-Picoline	10	2.02
Pronamide	10	1.01
Pyrene	10	0.415
Pyridine	10	2.02
Safrole	10	2.02
1,2,4,5-Tetrachlorobenzene	10	2.02
2,3,4,6-Tetrachlorophenol	10	4.05
o-Toluidine	10	4.05
2,4,5-Trichlorophenol	10	0.82
2,4,6-Trichlorophenol	10	0.638
O,O,O-Triethyl phosphorothioate	10	2.02
sym-Trinitrobenzene	200	98.2
Method: 9012B		
Laboratory: Pace Analytical, West Columbia, SC		
Cyanide	20	5

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU-16

Monitoring Event: Second Quarter 2020



Analyte	Sample ID	Laboratory Result (ug/L)	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B						
<i>Laboratory: Pace Analytical, West Columbia, SC</i>						
Barium	16WC1A	360	360		10	No action taken.
	16WDUP	350	350		10	No action taken.
Cobalt	16WC1A	18	18		5	No action taken.
	16WDUP	18	18		5	No action taken.
Nickel	16WC1A	15	15		10	No action taken.
	16WDUP	15	15		10	No action taken.
Method: 8260C						
<i>Laboratory: ELLE, Lancaster, PA</i>						
Chloroethane	16WC1A	1.37	1.37		1	No action taken.
	16WDUP	1.59	1.59		1	No action taken. Field duplicate submitted blind for 16WC1A.
1,1-Dichloroethane	16WC1A	2.98	2.98	J	1	MS/MSD recovered high. Result is estimated.
	16WDUP	3.51	3.51	J	1	MS/MSD recovered high. Result is estimated. Field duplicate submitted blind for 16WC1A
Diethyl ether	16WC1A	15.4	15.4		13	No action taken.
	16WDUP	16.4	16.4		13	No action taken. Field duplicate submitted blind for 16WC1A.

Definitions:

Data Validation Qualifiers:

QL Denotes permit quantitation limit. Q Denotes data qualifier.

J Denotes analyte reported at or above quantitation limit and associated result is estimated.

Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater and Water Samples
Collected on 04/15/20-04/16/20

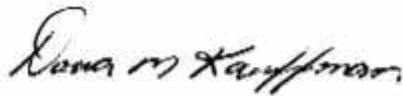
SDG# RAF59

GROUP	SAMPLE NUMBERS
2096666	1300794-1300808

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-20-35
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:



Date: 06/08/2020

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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**Sample Reference List for SDG Number RAF59
with a Data Package Type of I**

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
1300794	16C1	04/16/2020 12:05	04/17/2020 10:20
1300795	16MW8	04/15/2020 11:05	04/17/2020 10:20
1300796	16MW9	04/16/2020 11:05	04/17/2020 10:20
1300797	16WC1A	04/16/2020 09:25	04/17/2020 10:20
1300798	16WC1A MS	04/16/2020 09:25	04/17/2020 10:20
1300799	16WC1A MSD	04/16/2020 09:25	04/17/2020 10:20
1300800	16WDUP	04/16/2020 09:50	04/17/2020 10:20
1300801	16WC1B	04/16/2020 08:35	04/17/2020 10:20
1300802	16-2	04/15/2020 10:20	04/17/2020 10:20
1300803	16-3	04/15/2020 12:00	04/17/2020 10:20
1300804	16-5	04/15/2020 08:45	04/17/2020 10:20
1300805	16WC2B	04/15/2020 09:40	04/17/2020 10:20
1300806	16SPRING	04/15/2020 09:00	04/17/2020 10:20
1300807	Trip Blank_1	04/15/2020 00:00	04/17/2020 10:20
1300808	Trip Blank_2	04/15/2020 00:00	04/17/2020 10:20

Sample pH Log

SDG: RAF59

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1300794	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300794	038D	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:32PM	29284
1300794	038E	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300794	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:45PM	30458
1300794	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:40PM	30458
1300795	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:10AM	9052
1300795	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300795	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300795	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:55PM	30458
1300795	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:51PM	30458
1300796	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300796	038D	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300796	038E	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300796	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:31PM	30458
1300796	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:26PM	30458
1300797	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:08AM	9052
1300797	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300797	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:36PM	30458
1300797	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:31PM	30458
1300798	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:08AM	9052
1300798	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:08AM	9052
1300798	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300798	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:46PM	30458
1300798	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:37PM	30458
1300799	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:08AM	9052
1300799	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:08AM	9052
1300799	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300799	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:23PM	30458
1300799	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:19PM	30458
1300800	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:09AM	9052
1300800	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300800	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:11PM	30458
1300800	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:06PM	30458
1300801	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300801	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/29/2020 12:58:44PM	10203
1300801	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:42PM	30458
1300801	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:26:00PM	30458
1300802	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284

<u>LLI Sample</u> <u>Number</u>	<u>Bottle</u> <u>Code</u>	<u>Actual</u> <u>pH</u>	<u>Exp.</u> <u>pH</u>	<u>*pH Check</u> <u>Code</u>	<u>Adj.</u> <u>pH</u>	<u>Adjusted</u> <u>Date</u>	<u>Adjusted</u> <u>Time</u>	<u>Preservative</u> <u>Added</u>	<u>Preservative</u> <u>Lot #</u>	<u>LLI</u> <u>Supplied</u> <u>Bottle?</u>	<u>Sulfide</u> <u>Present?</u>	<u>Corrective</u> <u>Substance</u>	<u>CS Lot #</u>	<u>**Chlorine</u> <u>Present?</u>	<u>Corrective</u> <u>Substance</u>	<u>CS Lot #</u>	<u>Record Date</u>	<u>Employee</u>
1300802	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:14PM	30458
1300802	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:25:10PM	30458
1300803	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300803	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:24:37PM	30458
1300803	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:24:32PM	30458
1300804	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300804	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:24:18PM	30458
1300804	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:24:27PM	30458
1300805	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300805	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:23:51PM	30458
1300805	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:23:57PM	30458
1300806	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:35:30PM	29284
1300806	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:24:14PM	30458
1300806	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/18/2020 12:24:23PM	30458
1300807	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:09AM	9052
1300808	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/28/2020 8:55:09AM	9052

<u>*pH Check Code Key</u>	<u>**Chlorine Present Code Key</u>
PK = Original container checked - pH is within the correct range. (No preservative was added) PA = Original container checked - pH adjusted to correct range. (Preservative was added) PV = Volatile container checked PC = pH checked (unpreserved container) SPK = Subsampled from an original container. Original container checked - pH is within correct range SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range. SPC = Subsampled from an original container. pH checked (unpreserved container). SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample. UP = Unable to preserve due to matrix of the sample. NA = Not applicable	NA = Chlorine Not Checked Y = Chlorine Present N = Chlorine Not Present

01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C/D**11997 VOCs- 5ml Water by 8260C/D**

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

14241 SVOAs 8270D/E MINI

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

Analysis Reports / Field Chain of Custody



REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 29, 2020 17:56

Project: RAAP - Radford, VA - HWMU16

Account #: 11200
Group Number: 2096666
SDG: RAF59
State of Sample Origin: VA

Electronic Copy To Draper Aden Associates, Inc.
Electronic Copy To Draper Aden Associates, Inc.

Attn: Janet Frazier
Attn: Kathy Olsen

Respectfully Submitted,



Barbara A. Weyandt
Specialist

(717) 556-7264

A previous version of this report was generated on 04/29/2020 21:20.

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
16C1 Grab Groundwater	04/16/2020 12:05	1300794
16MW8 Grab Groundwater	04/15/2020 11:05	1300795
16MW9 Grab Groundwater	04/16/2020 11:05	1300796
16WC1A Grab Groundwater	04/16/2020 09:25	1300797
16WC1A MS Grab Groundwater	04/16/2020 09:25	1300798
16WC1A MSD Grab Groundwater	04/16/2020 09:25	1300799
16WDUP Grab Groundwater	04/16/2020 09:50	1300800
16WC1B Grab Groundwater	04/16/2020 08:35	1300801
16-2 Grab Groundwater	04/15/2020 10:20	1300802
16-3 Grab Groundwater	04/15/2020 12:00	1300803
16-5 Grab Groundwater	04/15/2020 08:45	1300804
16WC2B Grab Groundwater	04/15/2020 09:40	1300805
16SPRING Grab Groundwater	04/15/2020 09:00	1300806
Trip Blank_1 Water	04/15/2020	1300807
Trip Blank_2 Water	04/15/2020	1300808

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: RAAP - Radford, VA - HWMU16
ELLE Group #: 2096666

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260C 25mL purge, GC/MS Volatiles****Sample #s: 1300807, 1300808**

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

Sample #s: 1300797, 1300800

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Dimethyl Ether.

Sample #s: 1300794, 1300796, 1300801

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

Sample #s: 1300795

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Acetone, Dimethyl Ether.

The concentration reported for Ethyl Ether is estimated since it exceeds the calibration range of the instrument in the initial determination, but is less than the quantitation limit in the further dilution. The result reported is from the further diluted determination.

Sample #s: 1300803

Due to the need for reanalysis of the sample, the requirement for no headspace was not met. This analysis was performed from a previously opened container with headspace.

Batch #: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808 UNSPK: 1300797)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Chloroethane, Trichlorofluoromethane, 1,1-Dichloroethane, Trichloroethene, 1,2-Dichloropropane, Ethyl ether, Chloromethane, Vinyl Chloride, Methylene Chloride, Chloroform, Benzene

Batch #: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806 UNSPK: 1300797)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Chloroethane, Trichlorofluoromethane, 1,1-Dichloroethane, Trichloroethene, 1,2-Dichloropropane, Ethyl ether, Chloromethane, Vinyl Chloride, Methylene Chloride, Chloroform, Benzene

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1300798

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

The GC/MS semivolatile surrogate recoveries are outside of QC limits. The unspiked background and matrix spike duplicate samples were analyzed and surrogate recoveries are again outside of QC limits, indicating a matrix effect.

Sample #s: 1300799

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

The GC/MS semivolatile surrogate recoveries were outside of QC limits. The unspiked background and matrix spike samples were analyzed and surrogate recoveries are again outside of QC limits, indicating a matrix effect.

Sample #s: 1300794, 1300795, 1300796

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

Sample #s: 1300797

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

The GC/MS semivolatile surrogate(s) is outside QC acceptance limits. The associated matrix spike and matrix spike duplicate samples were analyzed and the recovery for the surrogate(s) is again outside of QC limits, indicating a matrix effect.

Sample #s: 1300800, 1300801

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

Batch #: 20112WAH026 (Sample number(s): 1300794-1300806 UNSPK: 1300797)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Methyl parathion

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
1,4-Naphthoquinone, 1,4-Phenylenediamine, a,a-Dimethylphenethylamine, Famphur

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Chlorobenzilate, Dimethoate, 1,3,5-Trinitrobenzene, Famphur, Kepone

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
2,3,4,6-Tetrachlorophenol, 3,3'-Dimethylbenzidine, 2,4,5-Trichlorophenol, 2-Chlorophenol,
2,4-Dichlorophenol, 2,4,6-Trichlorophenol, Pentachlorophenol, Aniline, 1-Naphthylamine

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Pentachlorophenol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1300797, 1300798, 1300799, 1300800, 1300801, MS, MSD

REVISED

Sample Description: 16C1 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300794
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 12:05
SDG#: RAF59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l N.D.	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.316 J	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	4.02	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	6.15	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	0.232 J	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	10.6 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	43.0	2.78	31.3	2.5
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16C1 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300794
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 12:05
SDG#: RAF59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	1.20	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.222 J	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	19.7 J	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	0.346 J	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	0.185 J	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.354	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.486	10.1	1
14241	Acetophenone	98-86-2	N.D.	4.05	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.3	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.06	11.1	1
14241	Aniline	62-53-3	N.D.	3.04	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16C1 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300794
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 12:05
SDG#: RAF59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	Anthracene	120-12-7	N.D.	0.526	10.1	1
14241	Aramite	140-57-8	N.D.	5.06	15.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.455	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.52	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.425	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.62	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.4	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.567	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	4.05	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.04	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.506	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.506	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.506	10.1	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.	0.496	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.992	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.506	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.506	2.02	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	Chrysene	218-01-9	N.D.	0.314	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.385	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.587	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	3.04	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.61	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.506	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.04	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.06	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	5.06	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.3	75.9	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.06	50.6	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16C1 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300794
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 12:05
SDG#: RAF59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	2,4-Dimethylphenol	105-67-9	N.D.	3.04	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	8.10	21.3	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	14.2	30.4	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.506	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.3	50.6	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.506	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.06	11.1	1
14241	Famphur	52-85-7	N.D.	25.3	50.6	1
14241	Fluoranthene	206-44-0	N.D.	0.425	10.1	1
14241	Fluorene	86-73-7	N.D.	0.385	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.881	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.06	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.152	10.1	1
14241	Isodrin	465-73-6	N.D.	0.506	10.1	1
14241	Isophorone	78-59-1	N.D.	0.506	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.05	10.1	1
14241	Kepone	143-50-0	N.D. K4	25.3	50.6	1
14241	Methapyrilene	91-80-5	N.D.	15.2	50.6	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.06	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.05	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.294	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.972	10.1	1
14241	4-Methylphenol	106-44-5	N.D.	2.50	20.2	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.3	60.7	1
14241	1-Naphthylamine	134-32-7	N.D.	8.10	21.3	1
14241	2-Naphthylamine	91-59-8	N.D.	7.09	21.3	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.709	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	2-Nitroaniline	88-74-4	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16C1 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300794
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 12:05
SDG#: RAF59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	3-Nitroaniline	99-09-2	N.D.	3.04	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.911	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.506	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.05	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	3.04	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.4	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D. K3	20.2	60.7	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.506	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.3	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.709	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.709	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.506	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.506	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	5.06	11.1	1
14241	Parathion	56-38-2	N.D.	7.09	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.506	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.96	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.506	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.526	10.1	1
14241	Phenol	108-95-2	N.D.	0.779	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.9	304	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1
14241	Pyrene	129-00-0	N.D.	0.415	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	4.05	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	4.05	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.820	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.638	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16C1 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300794
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 12:05
SDG#: RAF59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	98.2 ug/l	203 ug/l	1
The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.						
The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.						
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.						

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 00:51	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AB	04/28/2020 13:57	Jennifer K Howe	1
		purge					
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AB	04/28/2020 14:18	Jennifer K Howe	2.5
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 13:56	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H201181AB	04/28/2020 14:17	Jennifer K Howe	2.5
01163	GC/MS VOA Water Prep	SW-846 5030C	3	Y201192AA	04/29/2020 00:50	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 16:39	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l N.D.	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	3.75 J	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.0827 J	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	0.156 J	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	0.396 J	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	0.918 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	23.2 J	2.22	25.0	2
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	3.70 J	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	0.110 J	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Acetone, Dimethyl Ether.					

The concentration reported for Ethyl Ether is estimated since it exceeds the calibration range of the instrument in the initial determination, but is less than the quantitation limit in the further dilution. The result reported is from the further diluted determination.

GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.353	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.484	10.1	1
14241	Acetophenone	98-86-2	N.D.	4.03	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.2	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.04	11.1	1
14241	Aniline	62-53-3	N.D.	3.02	10.1	1
14241	Anthracene	120-12-7	N.D.	0.524	10.1	1
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	4.03	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.504	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.504	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.504	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.504	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.504	2.02	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	Chrysene	218-01-9	N.D.	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.383	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	3.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.04	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	5.04	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	3.02	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	8.06	21.2	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	14.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.04	11.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	N.D.	0.423	10.1	1
14241	Fluorene	86-73-7	N.D.	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.04	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	N.D.	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.03	10.1	1
14241	Kepone	143-50-0	N.D. K4	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.04	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.03	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.292	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.968	10.1	1
14241	4-Methylphenol	106-44-5	N.D.	2.49	20.2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1
14241	1-Naphthylamine	134-32-7	N.D.	8.06	21.2	1
14241	2-Naphthylamine	91-59-8	N.D.	7.06	21.2	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.706	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	2.02	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	3.02	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.907	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.03	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	3.02	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D. K3	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.2	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.706	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.706	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	5.04	11.1	1
14241	Parathion	56-38-2	N.D.	7.06	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.524	10.1	1
14241	Phenol	108-95-2	N.D.	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1
14241	Pyrene	129-00-0	N.D.	0.413	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	4.03	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	4.03	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	97.8	203	1

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 01:13	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AA	04/27/2020 23:21	Miranda Campbell	1
		purge					
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AB	04/28/2020 13:35	Jennifer K Howe	2
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/27/2020 23:20	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW8 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300795
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 11:05
SDG#: RAF59-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H201181AB	04/28/2020 13:34	Jennifer K Howe	2
01163	GC/MS VOA Water Prep	SW-846 5030C	3	Y201192AA	04/29/2020 01:12	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 17:08	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW9 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300796
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 11:05
SDG#: RAF59-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l N.D.	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.375 J	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	1.94	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	6.17	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	1.81 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	74.1	4.44	50.0	4
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW9 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300796
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 11:05
SDG#: RAF59-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.0660 J	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.351	10.0	1
14241	Acenaphthylene	208-96-8	N.D.	0.482	10.0	1
14241	Acetophenone	98-86-2	N.D.	4.02	10.0	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.0	21.1	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.02	11.0	1
14241	Aniline	62-53-3	N.D.	3.01	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW9 Grab Groundwater
2Q 2020 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300796
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 11:05
SDG#: RAF59-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	Anthracene	120-12-7	N.D.	0.522	10.0	1
14241	Aramite	140-57-8	N.D.	5.02	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.452	10.0	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.0	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.20	10.0	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.422	10.0	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.0	1
14241	Benzyl alcohol	100-51-6	N.D.	10.0	30.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.562	10.0	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.01	10.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.01	10.0	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.01	10.0	1
14241	4-Chloroaniline	106-47-8	N.D.	4.02	10.0	1
14241	Chlorobenzilate	510-15-6	N.D.	3.01	10.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.502	2.01	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.502	2.01	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.502	10.0	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.	0.492	10.0	1
14241	2-Chlorophenol	95-57-8	N.D.	0.984	10.0	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.502	10.0	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.502	2.01	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	Chrysene	218-01-9	N.D.	0.311	10.0	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.00	10.0	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.382	10.0	1
14241	Dibenzofuran	132-64-9	N.D.	0.582	10.0	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	3.01	10.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.0	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.502	10.0	1
14241	Diethylphthalate	84-66-2	N.D.	2.01	10.0	1
14241	Dimethoate	60-51-5	N.D.	3.01	10.0	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.02	10.0	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	5.02	11.0	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.1	75.3	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.02	50.2	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW9 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300796
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 11:05
SDG#: RAF59-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	2,4-Dimethylphenol	105-67-9	N.D.	3.01	10.0	1
14241	Dimethylphthalate	131-11-3	N.D.	2.01	10.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	8.03	21.1	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.01	10.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	14.1	30.1	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.00	10.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.502	10.0	1
14241	Disulfoton	298-04-4	N.D.	25.1	50.2	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.502	10.0	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.02	11.0	1
14241	Famphur	52-85-7	N.D.	25.1	50.2	1
14241	Fluoranthene	206-44-0	N.D.	0.422	10.0	1
14241	Fluorene	86-73-7	N.D.	0.382	10.0	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.873	10.0	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.02	11.0	1
14241	Hexachloropropene	1888-71-7	N.D.	2.01	10.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.0	1
14241	Isodrin	465-73-6	N.D.	0.502	10.0	1
14241	Isophorone	78-59-1	N.D.	0.502	10.0	1
14241	Isosafrole	120-58-1	N.D.	4.02	10.0	1
14241	Kepone	143-50-0	N.D. K4	25.1	50.2	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.2	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.00	10.0	1
14241	Methyl parathion	298-00-0	N.D.	5.02	10.0	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.02	10.0	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.291	10.0	1
14241	2-Methylphenol	95-48-7	N.D.	0.964	10.0	1
14241	4-Methylphenol	106-44-5	N.D.	2.48	20.1	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.1	60.2	1
14241	1-Naphthylamine	134-32-7	N.D.	8.03	21.1	1
14241	2-Naphthylamine	91-59-8	N.D.	7.03	21.1	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.703	10.0	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	2-Nitroaniline	88-74-4	N.D.	2.01	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16MW9 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300796
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 11:05
SDG#: RAF59-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	3-Nitroaniline	99-09-2	N.D.	3.01	10.0	1
14241	4-Nitroaniline	100-01-6	N.D.	0.904	10.0	1
14241	Nitrobenzene	98-95-3	N.D.	0.502	10.0	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.02	10.0	1
14241	2-Nitrophenol	88-75-5	N.D.	3.01	10.0	1
14241	4-Nitrophenol	100-02-7	N.D.	10.0	30.1	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D. K3	20.1	60.2	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.502	10.0	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.01	10.0	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.0	25.1	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.703	10.0	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.703	10.0	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.01	10.0	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.01	10.0	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.502	10.0	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.502	10.0	1
14241	Di-n-octylphthalate	117-84-0	N.D.	5.02	11.0	1
14241	Parathion	56-38-2	N.D.	7.03	12.0	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.502	10.0	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.01	10.0	1
14241	Pentachlorophenol	87-86-5	N.D.	2.93	10.0	1
14241	Phenacetin	62-44-2	N.D.	0.502	10.0	1
14241	Phenanthrene	85-01-8	N.D.	0.522	10.0	1
14241	Phenol	108-95-2	N.D.	0.773	10.0	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.3	301	1
14241	Phorate	298-02-2	N.D.	2.01	10.0	1
14241	2-Picoline	109-06-8	N.D.	2.01	10.0	1
14241	Pronamide	23950-58-5	N.D.	1.00	10.0	1
14241	Pyrene	129-00-0	N.D.	0.412	10.0	1
14241	Pyridine	110-86-1	N.D.	2.01	10.0	1
14241	Safrole	94-59-7	N.D.	2.01	10.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.01	10.0	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	4.02	10.0	1
14241	Thionazin	297-97-2	N.D.	2.01	10.0	1
14241	o-Toluidine	95-53-4	N.D.	4.02	10.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.813	10.0	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.633	10.0	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.01	10.0	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16MW9 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300796
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 11:05
SDG#: RAF59-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	97.4	202	1
The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.						
The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.						
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.						

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 01:35	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AB	04/28/2020 14:40	Jennifer K Howe	1
		purge					
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AB	04/28/2020 15:02	Jennifer K Howe	4
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 14:39	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H201181AB	04/28/2020 15:01	Jennifer K Howe	4
01163	GC/MS VOA Water Prep	SW-846 5030C	3	Y201192AA	04/29/2020 01:34	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 17:38	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300797
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l N.D.	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.206 J	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	1.37	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	2.98	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	1.21 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	15.4	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300797
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.101 J	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	2.21 J	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	0.153 J	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300797
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Dimethyl Ether.						
GC/MS Semivolatiles	SW-846 8270D		ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.353	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.484	10.1	1
14241	Acetophenone	98-86-2	N.D.	4.03	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.2	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.04	11.1	1
14241	Aniline	62-53-3	N.D.	3.02	10.1	1
14241	Anthracene	120-12-7	N.D.	0.524	10.1	1
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	4.03	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.504	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.504	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.504	10.1	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.504	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.504	2.02	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	Chrysene	218-01-9	N.D.	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.383	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300797
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	Dibenzofuran	132-64-9	N.D.	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	3.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.04	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	5.04	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	3.02	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	8.06	21.2	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	14.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.04	11.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	N.D.	0.423	10.1	1
14241	Fluorene	86-73-7	N.D.	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.04	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	N.D.	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.03	10.1	1
14241	Kepone	143-50-0	N.D. K4	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.04	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.03	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.292	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.968	10.1	1
14241	4-Methylphenol	106-44-5	N.D.	2.49	20.2	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300797
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1
14241	1-Naphthylamine	134-32-7	N.D.	8.06	21.2	1
14241	2-Naphthylamine	91-59-8	N.D.	7.06	21.2	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.706	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	2.02	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	3.02	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.907	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.03	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	3.02	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D. K3	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.2	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.706	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.706	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	5.04	11.1	1
14241	Parathion	56-38-2	N.D.	7.06	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.524	10.1	1
14241	Phenol	108-95-2	N.D.	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16WC1A Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300797
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Pyrene	129-00-0	N.D.	0.413	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	4.03	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	4.03	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	97.8	203	1

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

The GC/MS semivolatile surrogate(s) is outside QC acceptance limits. The associated matrix spike and matrix spike duplicate samples were analyzed and the recovery for the surrogate(s) is again outside of QC limits, indicating a matrix effect.

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/28/2020 23:45	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AA	04/27/2020 23:43	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/27/2020 23:42	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y201192AA	04/28/2020 23:44	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 13:12	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MS Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300798
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l 130	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	31.9	0.900	10.0	1
11996	Acetonitrile	75-05-8	37.9 J	31.7	100	1
11996	Acrolein	107-02-8	35.4	3.40	25.0	1
11996	Acrylonitrile	107-13-1	27.7	0.470	10.0	1
11996	Allyl Chloride	107-05-1	5.48 J	0.820	10.0	1
11996	Benzene	71-43-2	6.40	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	5.98	0.0880	1.00	1
11996	Bromoform	75-25-2	4.72	0.106	1.00	1
11996	Bromomethane	74-83-9	5.82	0.542	1.00	1
11996	2-Butanone	78-93-3	40.5	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	6.19 J	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	6.20	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	6.03 J	0.460	10.0	1
11996	Chloroethane	75-00-3	7.47	0.0700	1.00	1
11996	Chloroform	67-66-3	6.18	0.0900	1.00	1
11996	Chloromethane	74-87-3	6.24	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	5.11	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	5.10	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	5.16	0.0600	1.00	1
11996	Dibromomethane	74-95-3	6.11	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	21.3	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	4.83	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	4.88	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	4.99	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	5.65	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	9.43	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	5.95	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	6.25	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	5.98	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	6.54	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	5.18	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	4.76	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	6.22 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	139 J	45.5	200	1
11996	Ethyl ether	60-29-7	21.4	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	4.31 J	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MS Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300798
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	4.98	0.0790	1.00	1
11996	Freon 113	76-13-1	6.53	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	5.04	0.0700	1.00	1
11996	2-Hexanone	591-78-6	26.7	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	126 J	3.60	200	1
11996	Methacrylonitrile	126-98-7	41.0 J	9.75	100	1
11996	Methyl Iodide	74-88-4	5.73 J	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	5.36 J	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	26.2	0.910	10.0	1
11996	Methylene Chloride	75-09-2	6.18	0.182	1.00	1
11996	Naphthalene	91-20-3	3.71	0.126	1.00	1
11996	Pentachloroethane	76-01-7	4.59 J	0.800	10.0	1
11996	Propionitrile	107-12-0	40.8 J	10.2	100	1
11996	Styrene	100-42-5	5.07	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	4.91	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	4.71	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	5.45	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	28.5	2.00	25.0	1
11996	Toluene	108-88-3	5.15	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	4.29	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	5.86	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	5.24	0.0790	1.00	1
11996	Trichloroethene	79-01-6	6.17	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	6.87	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	4.90	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	13.8	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	6.52	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	10.4	0.100	2.00	1
11996	o-Xylene	95-47-6	4.85	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	15.3	0.208	3.00	1
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	42.7	0.353	10.1	1
14241	Acenaphthylene	208-96-8	43.3	0.484	10.1	1
14241	Acetophenone	98-86-2	40.4	4.03	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.2	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.04	11.1	1
14241	Aniline	62-53-3	18.3	3.02	10.1	1
14241	Anthracene	120-12-7	43.4	0.524	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MS Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300798
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	47.0	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	39.7	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	43.9	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	41.1	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	43.3	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	39.6	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	41.2	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	46.4	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	44.3	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	40.3	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	25.4	4.03	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	44.7	0.504	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	40.4	0.504	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	39.7	0.504	10.1	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	37.0	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	16.7	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	44.7	0.504	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	39.5	0.504	2.02	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	Chrysene	218-01-9	43.9	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	44.1	0.383	10.1	1
14241	Dibenzofuran	132-64-9	42.9	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	28.1	3.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	14.7	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	45.2	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.04	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	41.4	5.04	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	33.3	3.02	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MS Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300798
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	Dimethylphthalate	131-11-3	43.0	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	47.3	8.06	21.2	1
14241	1,3-Dinitrobenzene	99-65-0	49.9	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	94.4	14.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	46.3	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	48.1	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	46.5	5.04	11.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	45.2	0.423	10.1	1
14241	Fluorene	86-73-7	43.8	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	41.1	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	43.8	5.04	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	43.5	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	43.1	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.03	10.1	1
14241	Kepone	143-50-0	N.D.	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.04	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.03	10.1	1
14241	2-Methylnaphthalene	91-57-6	41.1	0.292	10.1	1
14241	2-Methylphenol	95-48-7	36.1	0.968	10.1	1
14241	4-Methylphenol	106-44-5	30.3	2.49	20.2	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1
14241	1-Naphthylamine	134-32-7	28.1	8.06	21.2	1
14241	2-Naphthylamine	91-59-8	24.0	7.06	21.2	1
14241	NDPA as diphenylamine	n.a.	41.9	0.706	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	2-Nitroaniline	88-74-4	45.1	2.02	10.1	1
14241	3-Nitroaniline	99-09-2	41.3	3.02	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MS Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300798
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	4-Nitroaniline	100-01-6	37.2	0.907	10.1	1
14241	Nitrobenzene	98-95-3	39.1	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.03	10.1	1
14241	2-Nitrophenol	88-75-5	41.3	3.02	10.1	1
14241	4-Nitrophenol	100-02-7	23.6 J	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	25.2	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.2	1
14241	N-Nitroso-di-n-propylamine	621-64-7	43.9	0.706	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	42.2	0.706	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	3.27 J	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	47.8	5.04	11.1	1
14241	Parathion	56-38-2	N.D.	7.06	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	9.21 J	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	43.5	0.524	10.1	1
14241	Phenol	108-95-2	15.5	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	29.6	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1
14241	Pyrene	129-00-0	43.4	0.413	10.1	1
14241	Pyridine	110-86-1	13.8	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	35.2	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	6.39 J	4.03	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	22.6	4.03	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	12.9	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	5.27 J	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	97.8	203	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16WC1A MS Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300798
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.					
	The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.					
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.					
	The GC/MS semivolatle surrogate recoveries are outside of QC limits. The unspiked background and matrix spike duplicate samples were analyzed and surrogate recoveries are again outside of QC limits, indicating a matrix effect.					

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 00:07	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AA	04/28/2020 00:05	Miranda Campbell	1
		purge					
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AA	04/28/2020 00:48	Miranda Campbell	1
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/28/2020 00:04	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H201181AA	04/28/2020 00:47	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	Y201192AA	04/29/2020 00:06	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 13:41	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300799
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l 140	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	31.1	0.900	10.0	1
11996	Acetonitrile	75-05-8	38.2 J	31.7	100	1
11996	Acrolein	107-02-8	31.8	3.40	25.0	1
11996	Acrylonitrile	107-13-1	24.2	0.470	10.0	1
11996	Allyl Chloride	107-05-1	5.31 J	0.820	10.0	1
11996	Benzene	71-43-2	6.17	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	5.81	0.0880	1.00	1
11996	Bromoform	75-25-2	4.48	0.106	1.00	1
11996	Bromomethane	74-83-9	5.71	0.542	1.00	1
11996	2-Butanone	78-93-3	36.3	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	5.87 J	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	5.98	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	5.86 J	0.460	10.0	1
11996	Chloroethane	75-00-3	7.53	0.0700	1.00	1
11996	Chloroform	67-66-3	5.91	0.0900	1.00	1
11996	Chloromethane	74-87-3	6.21	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	4.42	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	4.80	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	4.94	0.0600	1.00	1
11996	Dibromomethane	74-95-3	5.93	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	19.2	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	4.67	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	4.72	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	4.77	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	5.55	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	9.39	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	5.61	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	6.00	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	5.74	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	6.22	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	4.96	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	4.57	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	6.21 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	136 J	45.5	200	1
11996	Ethyl ether	60-29-7	21.8	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	4.13 J	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300799
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	4.75	0.0790	1.00	1
11996	Freon 113	76-13-1	6.29	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	4.79	0.0700	1.00	1
11996	2-Hexanone	591-78-6	23.9	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	115 J	3.60	200	1
11996	Methacrylonitrile	126-98-7	36.3 J	9.75	100	1
11996	Methyl Iodide	74-88-4	5.49 J	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	4.82 J	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	23.2	0.910	10.0	1
11996	Methylene Chloride	75-09-2	5.95	0.182	1.00	1
11996	Naphthalene	91-20-3	3.59	0.126	1.00	1
11996	Pentachloroethane	76-01-7	4.56 J	0.800	10.0	1
11996	Propionitrile	107-12-0	37.5 J	10.2	100	1
11996	Styrene	100-42-5	4.81	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	4.74	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	4.67	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	5.18	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	25.5	2.00	25.0	1
11996	Toluene	108-88-3	4.96	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	4.14	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	5.59	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	5.02	0.0790	1.00	1
11996	Trichloroethene	79-01-6	6.12	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	6.91	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	4.85	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	13.3	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	6.35	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	9.91	0.100	2.00	1
11996	o-Xylene	95-47-6	4.68	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	14.6	0.208	3.00	1
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	39.7	0.354	10.1	1
14241	Acenaphthylene	208-96-8	40.8	0.486	10.1	1
14241	Acetophenone	98-86-2	41.8	4.05	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.3	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.06	11.1	1
14241	Aniline	62-53-3	22.5	3.04	10.1	1
14241	Anthracene	120-12-7	43.2	0.526	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300799
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	Aramite	140-57-8	N.D.	5.06	15.2	1
14241	Benzo(a)anthracene	56-55-3	42.5	0.455	10.1	1
14241	Benzo(a)pyrene	50-32-8	39.0	1.52	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	42.9	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	40.8	0.425	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	42.0	1.62	10.1	1
14241	Benzyl alcohol	100-51-6	39.8	10.1	30.4	1
14241	4-Bromophenyl-phenylether	101-55-3	40.4	0.567	10.1	1
14241	Butylbenzylphthalate	85-68-7	42.0	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	44.3	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	39.3	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	28.1	4.05	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.04	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	44.7	0.506	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	41.3	0.506	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	40.3	0.506	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	38.3	0.496	10.1	1
14241	2-Chlorophenol	95-57-8	20.2	0.992	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	41.7	0.506	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	40.2	0.506	2.02	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	Chrysene	218-01-9	40.3	0.314	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	43.1	0.385	10.1	1
14241	Dibenzofuran	132-64-9	40.2	0.587	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	29.2	3.04	10.1	1
14241	2,4-Dichlorophenol	120-83-2	15.9	1.61	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.506	10.1	1
14241	Diethylphthalate	84-66-2	42.4	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.04	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.06	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	40.1	5.06	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.3	75.9	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.06	50.6	1
14241	2,4-Dimethylphenol	105-67-9	32.8	3.04	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300799
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	Dimethylphthalate	131-11-3	41.6	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	46.7	8.10	21.3	1
14241	1,3-Dinitrobenzene	99-65-0	46.5	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	92.1	14.2	30.4	1
14241	2,4-Dinitrotoluene	121-14-2	44.3	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	44.9	0.506	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.3	50.6	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.506	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	42.2	5.06	11.1	1
14241	Famphur	52-85-7	N.D.	25.3	50.6	1
14241	Fluoranthene	206-44-0	43.9	0.425	10.1	1
14241	Fluorene	86-73-7	40.0	0.385	10.1	1
14241	Hexachlorobenzene	118-74-1	39.8	0.881	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	40.9	5.06	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	42.6	0.152	10.1	1
14241	Isodrin	465-73-6	1.58 J	0.506	10.1	1
14241	Isophorone	78-59-1	41.4	0.506	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.05	10.1	1
14241	Kepone	143-50-0	N.D.	25.3	50.6	1
14241	Methapyrilene	91-80-5	N.D.	15.2	50.6	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.06	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.05	10.1	1
14241	2-Methylnaphthalene	91-57-6	39.8	0.294	10.1	1
14241	2-Methylphenol	95-48-7	36.4	0.972	10.1	1
14241	4-Methylphenol	106-44-5	32.4	2.50	20.2	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.3	60.7	1
14241	1-Naphthylamine	134-32-7	33.3	8.10	21.3	1
14241	2-Naphthylamine	91-59-8	27.9	7.09	21.3	1
14241	NDPA as diphenylamine	n.a.	43.7	0.709	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	2-Nitroaniline	88-74-4	44.0	2.02	10.1	1
14241	3-Nitroaniline	99-09-2	40.3	3.04	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300799
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D						
14241	4-Nitroaniline	100-01-6	35.7	0.911	10.1	1
14241	Nitrobenzene	98-95-3	38.9	0.506	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.05	10.1	1
14241	2-Nitrophenol	88-75-5	41.3	3.04	10.1	1
14241	4-Nitrophenol	100-02-7	23.6 J	10.1	30.4	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.7	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.506	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	26.3	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.3	1
14241	N-Nitroso-di-n-propylamine	621-64-7	45.1	0.709	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	43.9	0.709	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	3.18 J	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.506	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.506	10.1	1
14241	Di-n-octylphthalate	117-84-0	46.9	5.06	11.1	1
14241	Parathion	56-38-2	N.D.	7.09	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.506	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	5.39 J	2.96	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.506	10.1	1
14241	Phenanthrene	85-01-8	43.8	0.526	10.1	1
14241	Phenol	108-95-2	17.6	0.779	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.9	304	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	30.8	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1
14241	Pyrene	129-00-0	41.0	0.415	10.1	1
14241	Pyridine	110-86-1	16.8	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	33.4	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	5.74 J	4.05	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	28.1	4.05	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	13.9	0.820	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	5.43 J	0.638	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	98.2	203	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300799
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:25
SDG#: RAF59-04MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.					
	The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.					
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.					
	The GC/MS semivolatle surrogate recoveries were outside of QC limits. The unspiked background and matrix spike samples were analyzed and surrogate recoveries are again outside of QC limits, indicating a matrix effect.					

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 00:29	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AA	04/28/2020 00:26	Miranda Campbell	1
		purge					
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201181AA	04/28/2020 01:10	Miranda Campbell	1
		purge					
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/28/2020 00:25	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H201181AA	04/28/2020 01:09	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	Y201192AA	04/29/2020 00:28	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 14:11	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WDUP Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300800
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:50
SDG#: RAF59-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	67-63-0	N.D.	50 ug/l	100 ug/l	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge				
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.244 J	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	1.59	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	3.51	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	1.35 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	16.4	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WDUP Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300800
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:50
SDG#: RAF59-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.132 J	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	0.174 J	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WDUP Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300800
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:50
SDG#: RAF59-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Dimethyl Ether.						
GC/MS Semivolatiles	SW-846 8270D		ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.353	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.484	10.1	1
14241	Acetophenone	98-86-2	N.D.	4.03	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.2	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.04	11.1	1
14241	Aniline	62-53-3	N.D.	3.02	10.1	1
14241	Anthracene	120-12-7	N.D.	0.524	10.1	1
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	4.03	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.504	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.504	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.504	10.1	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.504	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.504	2.02	1
Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	Chrysene	218-01-9	N.D.	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.383	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WDUP Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300800
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:50
SDG#: RAF59-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	Dibenzofuran	132-64-9	N.D.	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	3.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.04	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	5.04	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	3.02	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	8.06	21.2	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	14.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.04	11.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	N.D.	0.423	10.1	1
14241	Fluorene	86-73-7	N.D.	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.04	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	N.D.	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.03	10.1	1
14241	Kepone	143-50-0	N.D. K4	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.04	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.03	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.292	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.968	10.1	1
14241	4-Methylphenol	106-44-5	N.D.	2.49	20.2	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WDUP Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300800
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:50
SDG#: RAF59-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1
14241	1-Naphthylamine	134-32-7	N.D.	8.06	21.2	1
14241	2-Naphthylamine	91-59-8	N.D.	7.06	21.2	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.706	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	2.02	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	3.02	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.907	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.03	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	3.02	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D. K3	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.2	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.706	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.706	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	5.04	11.1	1
14241	Parathion	56-38-2	N.D.	7.06	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.524	10.1	1
14241	Phenol	108-95-2	N.D.	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1

*=This limit was used in the evaluation of the final result

Analysis Report

REVISED

Sample Description: 16WDUP Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300800
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 09:50
SDG#: RAF59-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	Pyrene	129-00-0	N.D.	0.413	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	4.03	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	4.03	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	97.8	203	1

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 01:57	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AA	04/28/2020 01:31	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/28/2020 01:30	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y201192AA	04/29/2020 01:56	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 18:08	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300801
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 08:35
SDG#: RAF59-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
11997	2-Propanol	SW-846 8260C 67-63-0	ug/l N.D.	ug/l 50	ug/l 100	1
GC/MS Volatiles						
		SW-846 8260C 25mL purge	ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	0.303 J	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	1.17 J	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300801
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 08:35
SDG#: RAF59-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.353	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.484	10.1	1
14241	Acetophenone	98-86-2	N.D.	4.03	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	10.1	21.2	1
14241	4-Aminobiphenyl	92-67-1	N.D.	5.04	11.1	1
14241	Aniline	62-53-3	N.D.	3.02	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300801
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 08:35
SDG#: RAF59-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS	Semivolatiles	SW-846 8270D	ug/l	ug/l	ug/l	
14241	Anthracene	120-12-7	N.D.	0.524	10.1	1
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	4.03	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.504	2.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.504	2.02	1
14241	bis(2-Chloroisopropyl)ether ¹	39638-32-9	N.D.	0.504	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.504	10.1	1
14241	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.504	2.02	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	Chrysene	218-01-9	N.D.	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.383	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	3.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	5.04	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	5.04	11.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300801
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 08:35
SDG#: RAF59-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	2,4-Dimethylphenol	105-67-9	N.D.	3.02	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	8.06	21.2	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	14.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5.04	11.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	N.D.	0.423	10.1	1
14241	Fluorene	86-73-7	N.D.	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.04	11.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	N.D.	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	4.03	10.1	1
14241	Kepone	143-50-0	N.D. K4	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	5.04	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	4.03	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.292	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.968	10.1	1
14241	4-Methylphenol	106-44-5	N.D.	2.49	20.2	1
3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1
14241	1-Naphthylamine	134-32-7	N.D.	8.06	21.2	1
14241	2-Naphthylamine	91-59-8	N.D.	7.06	21.2	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.706	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	2-Nitroaniline	88-74-4	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300801
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 08:35
SDG#: RAF59-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D ug/l ug/l ug/l						
14241	3-Nitroaniline	99-09-2	N.D.	3.02	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.907	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	4.03	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	3.02	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D. K3	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	12.1	25.2	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.706	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.706	10.1	1
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	5.04	11.1	1
14241	Parathion	56-38-2	N.D.	7.06	12.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.524	10.1	1
14241	Phenol	108-95-2	N.D.	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	2.02	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	1.01	10.1	1
14241	Pyrene	129-00-0	N.D.	0.413	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	4.03	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	4.03	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC1B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300801
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/16/2020 08:35
SDG#: RAF59-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles						
	SW-846 8270D		ug/l	ug/l	ug/l	
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	97.8	203	1
The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.						
The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.						
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.						

Sample Comments

¹ = This analyte was not on the laboratory's VELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	Y201192AA	04/29/2020 02:19	Kevin A Sposito	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AB	04/28/2020 11:25	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 11:24	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y201192AA	04/29/2020 02:18	Kevin A Sposito	1
14241	SVOAs 8270D/E MINI	SW-846 8270D	1	20112WAH026	04/23/2020 18:37	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16-2 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300802
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 10:20
SDG#: RAF59-07

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Benzene	71-43-2	< 1.0	1.0	0.05	1
11996	2-Butanone	78-93-3	< 10	10	0.6	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.07	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.07	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.06	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.05	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.07	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.06	1
11996	Dimethyl ether	115-10-6	< 13	13	0.04	1
11996	Ethyl ether	60-29-7	< 13	13	0.05	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.06	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.06	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.07	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.06	1
11996	Tetrahydrofuran	109-99-9	< 25	25	0.8	1
11996	Toluene	108-88-3	< 1.0	1.0	0.07	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.06	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.06	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.05	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AB	04/28/2020 11:47	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 11:46	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	20112WAH026	04/23/2020 19:07	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16-3 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300803
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 12:00
SDG#: RAF59-08

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Benzene	71-43-2	< 1.0	1.0	0.05	1
11996	2-Butanone	78-93-3	< 10	10	0.6	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.07	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.07	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.06	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.05	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.07	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.06	1
11996	Dimethyl ether	115-10-6	< 13	13	0.04	1
11996	Ethyl ether	60-29-7	< 13	13	0.05	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.06	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.06	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.07	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.06	1
11996	Tetrahydrofuran	109-99-9	< 25	25	0.8	1
11996	Toluene	108-88-3	< 1.0	1.0	0.07	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.06	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.06	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.05	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1

Due to the need for reanalysis of the sample, the requirement for no headspace was not met. This analysis was performed from a previously opened container with headspace.

GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AB	04/28/2020 12:08	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 12:07	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	20112WAH026	04/28/2020 09:55	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16-5 Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300804
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 08:45
SDG#: RAF59-09

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Benzene	71-43-2	< 1.0	1.0	0.05	1
11996	2-Butanone	78-93-3	< 10	10	0.6	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.07	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.07	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.06	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.05	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.07	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.06	1
11996	Dimethyl ether	115-10-6	< 13	13	0.04	1
11996	Ethyl ether	60-29-7	< 13	13	0.05	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.06	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.06	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.07	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.06	1
11996	Tetrahydrofuran	109-99-9	< 25	25	0.8	1
11996	Toluene	108-88-3	< 1.0	1.0	0.07	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.06	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.06	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.05	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AB	04/28/2020 12:30	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 12:29	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	20112WAH026	04/28/2020 10:25	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16WC2B Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300805
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 09:40
SDG#: RAF59-10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Benzene	71-43-2	< 1.0	1.0	0.05	1
11996	2-Butanone	78-93-3	< 10	10	0.6	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.07	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.07	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.06	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.05	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.07	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.06	1
11996	Dimethyl ether	115-10-6	< 13	13	0.04	1
11996	Ethyl ether	60-29-7	< 13	13	0.05	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.06	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.06	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.07	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.06	1
11996	Tetrahydrofuran	109-99-9	< 25	25	0.8	1
11996	Toluene	108-88-3	< 1.0	1.0	0.07	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.06	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.06	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.05	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AB	04/28/2020 12:52	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 12:51	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	20112WAH026	04/28/2020 10:55	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 16SPRING Grab Groundwater
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300806
ELLE Group #: 2096666
Matrix: Groundwater

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020 09:00
SDG#: RAF59-11

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Benzene	71-43-2	< 1.0	1.0	0.05	1
11996	2-Butanone	78-93-3	< 10	10	0.6	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.07	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.07	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.06	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.05	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.07	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.06	1
11996	Dimethyl ether	115-10-6	< 13	13	0.04	1
11996	Ethyl ether	60-29-7	< 13	13	0.05	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.06	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.06	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.07	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.06	1
11996	Tetrahydrofuran	109-99-9	< 25	25	0.8	1
11996	Toluene	108-88-3	< 1.0	1.0	0.07	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.06	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.06	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.05	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1
GC/MS Semivolatiles		SW-846 8270D	ug/l	ug/l	ug/l	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AB	04/28/2020 13:13	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AB	04/28/2020 13:12	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	20112WAH026	04/28/2020 11:24	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	20112WAH026	04/22/2020 08:53	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank_1 Water
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300807
ELLE Group #: 2096666
Matrix: Water

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020
SDG#: RAF59-12TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
	purge					
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	N.D.	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	N.D.	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank_1 Water
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300807
ELLE Group #: 2096666
Matrix: Water

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020
SDG#: RAF59-12TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank_1 Water
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300807
ELLE Group #: 2096666
Matrix: Water

Project Name: RAAP - Radford, VA - HWMU16

Submittal Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020
SDG#: RAF59-12TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AA	04/27/2020 22:38	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/27/2020 22:37	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank_2 Water
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300808
ELLE Group #: 2096666
Matrix: Water

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020
SDG#: RAF59-13TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
	purge					
11996	Acetone	67-64-1	N.D.	0.900	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	3.40	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	0.470	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.0700	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.0880	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	0.600	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.370	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.0700	1.00	1
11996	Chloroform	67-66-3	N.D.	0.0900	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.0600	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.0700	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.0600	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.0650	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	0.970	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.0820	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.0600	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.0700	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.0910	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0970	1.00	1
11996	Dimethyl ether	115-10-6	N.D.	0.0400	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	N.D.	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1
11996	Ethylbenzene	100-41-4	N.D.	0.0790	1.00	1
11996	Freon 113	76-13-1	N.D.	0.120	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.0700	1.00	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank_2 Water
2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

Draper Aden Associates, Inc.
ELLE Sample #: WW 1300808
ELLE Group #: 2096666
Matrix: Water

Project Name: RAAP - Radford, VA - HWMU16

Submission Date/Time: 04/17/2020 10:20
Collection Date/Time: 04/15/2020
SDG#: RAF59-13TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	2-Hexanone	591-78-6	N.D.	0.600	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	3.60	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	0.910	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.182	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.0740	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.0800	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.0600	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.0930	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.0790	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.100	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	m+p-Xylene	179601-23-1	N.D.	0.100	2.00	1
11996	o-Xylene	95-47-6	N.D.	0.125	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

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2Q 2020 Annual Groyndwater Monitoring Event
RAAP - Radford, VA - HWMU16

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SDG#: RAF59-13TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H201181AA	04/27/2020 23:00	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201181AA	04/27/2020 22:59	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	MDL** ug/l	LOQ ug/l
Batch number: H201181AA	Sample number(s): 1300795,1300797-1300800,1300807-1300808		
Acetone	N.D.	0.900	10.0
Acetonitrile	N.D.	31.7	100
Acrolein	N.D.	3.40	25.0
Acrylonitrile	N.D.	0.470	10.0
Allyl Chloride	N.D.	0.820	10.0
Benzene	N.D.	0.0700	1.00
Bromodichloromethane	N.D.	0.0880	1.00
Bromoform	N.D.	0.106	1.00
Bromomethane	N.D.	0.542	1.00
2-Butanone	N.D.	0.600	10.0
Carbon Disulfide	N.D.	0.370	10.0
Carbon Tetrachloride	N.D.	0.160	1.00
2-Chloro-1,3-butadiene	N.D.	0.460	10.0
Chloroethane	N.D.	0.0700	1.00
Chloroform	N.D.	0.0900	1.00
Chloromethane	N.D.	0.0600	1.00
1,2-Dibromo-3-chloropropane	N.D.	0.204	1.00
Dibromochloromethane	N.D.	0.0700	1.00
1,2-Dibromoethane	N.D.	0.0600	1.00
Dibromomethane	N.D.	0.0650	1.00
trans-1,4-Dichloro-2-butene	N.D.	0.970	10.0
1,2-Dichlorobenzene	N.D.	0.0820	1.00
1,3-Dichlorobenzene	N.D.	0.0600	1.00
1,4-Dichlorobenzene	N.D.	0.0700	1.00
Dichlorodifluoromethane	N.D.	0.148	1.00
1,1-Dichloroethane	N.D.	0.135	1.00
1,2-Dichloroethane	N.D.	0.147	1.00
1,1-Dichloroethene	N.D.	0.223	1.00
trans-1,2-Dichloroethene	N.D.	0.162	1.00
1,2-Dichloropropane	N.D.	0.107	1.00
1,3-Dichloropropane	N.D.	0.0910	1.00
trans-1,3-Dichloropropene	N.D.	0.0970	1.00
Dimethyl ether	N.D.	0.0400	12.5
1,4-Dioxane	N.D.	45.5	200
Ethyl ether	N.D.	1.11	12.5
Ethyl Methacrylate	N.D.	0.810	10.0
Ethylbenzene	N.D.	0.0790	1.00
Freon 113	N.D.	0.120	1.00
Hexachlorobutadiene	N.D.	0.0700	1.00

*- Outside of specification

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(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
2-Hexanone	N.D.	0.600	10.0
Isobutyl Alcohol	N.D.	3.60	200
Methacrylonitrile	N.D.	9.75	100
Methyl Iodide	N.D.	0.580	10.0
Methyl Methacrylate	N.D.	3.58	10.0
4-Methyl-2-pentanone	N.D.	0.910	10.0
Methylene Chloride	N.D.	0.182	1.00
Naphthalene	N.D.	0.126	1.00
Pentachloroethane	N.D.	0.800	10.0
Propionitrile	N.D.	10.2	100
Styrene	N.D.	0.0740	1.00
1,1,1,2-Tetrachloroethane	N.D.	0.0800	1.00
1,1,2,2-Tetrachloroethane	N.D.	0.184	1.00
Tetrachloroethene	N.D.	0.0600	1.00
Tetrahydrofuran	N.D.	2.00	25.0
Toluene	N.D.	0.0930	1.00
1,2,4-Trichlorobenzene	N.D.	0.130	1.00
1,1,1-Trichloroethane	N.D.	0.130	1.00
1,1,2-Trichloroethane	N.D.	0.0790	1.00
Trichloroethene	N.D.	0.177	1.00
Trichlorofluoromethane	N.D.	0.176	1.00
1,2,3-Trichloropropane	N.D.	0.100	1.00
Vinyl Acetate	N.D.	3.29	10.0
Vinyl Chloride	N.D.	0.153	1.00
m+p-Xylene	N.D.	0.100	2.00
o-Xylene	N.D.	0.125	1.00
Xylene (Total)	N.D.	0.208	3.00
Batch number: H201181AB			
Sample number(s): 1300794-1300796,1300801-1300806			
Acetone	N.D.	0.900	10.0
Acetonitrile	N.D.	31.7	100
Acrolein	N.D.	3.40	25.0
Acrylonitrile	N.D.	0.470	10.0
Allyl Chloride	N.D.	0.820	10.0
Benzene	N.D.	0.07	1.0
Bromodichloromethane	N.D.	0.0880	1.00
Bromoform	N.D.	0.106	1.00
Bromomethane	N.D.	0.542	1.00
2-Butanone	N.D.	0.6	10
Carbon Disulfide	N.D.	0.370	10.0
Carbon Tetrachloride	N.D.	0.2	1.0
2-Chloro-1,3-butadiene	N.D.	0.460	10.0
Chloroethane	N.D.	0.07	1.0
Chloroform	N.D.	0.0900	1.00
Chloromethane	N.D.	0.06	1.0

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
1,2-Dibromo-3-chloropropane	N.D.	0.204	1.00
Dibromochloromethane	N.D.	0.0700	1.00
1,2-Dibromoethane	N.D.	0.0600	1.00
Dibromomethane	N.D.	0.0650	1.00
trans-1,4-Dichloro-2-butene	N.D.	0.970	10.0
1,2-Dichlorobenzene	N.D.	0.0820	1.00
1,3-Dichlorobenzene	N.D.	0.0600	1.00
1,4-Dichlorobenzene	N.D.	0.0700	1.00
Dichlorodifluoromethane	N.D.	0.1	1.0
1,1-Dichloroethane	N.D.	0.1	1.0
1,2-Dichloroethane	N.D.	0.147	1.00
1,1-Dichloroethene	N.D.	0.2	1.0
trans-1,2-Dichloroethene	N.D.	0.162	1.00
1,2-Dichloropropane	N.D.	0.107	1.00
1,3-Dichloropropane	N.D.	0.0910	1.00
trans-1,3-Dichloropropene	N.D.	0.0970	1.00
Dimethyl ether	N.D.	0.04	13
1,4-Dioxane	N.D.	45.5	200
Ethyl ether	N.D.	1.1	13
Ethyl Methacrylate	N.D.	0.810	10.0
Ethylbenzene	N.D.	0.08	1.0
Freon 113	N.D.	0.1	1.0
Hexachlorobutadiene	N.D.	0.0700	1.00
2-Hexanone	N.D.	0.600	10.0
Isobutyl Alcohol	N.D.	3.60	200
Methacrylonitrile	N.D.	9.75	100
Methyl Iodide	N.D.	0.580	10.0
Methyl Methacrylate	N.D.	3.58	10.0
4-Methyl-2-pentanone	N.D.	0.910	10.0
Methylene Chloride	N.D.	0.2	1.0
Naphthalene	N.D.	0.126	1.00
Pentachloroethane	N.D.	0.800	10.0
Propionitrile	N.D.	10.2	100
Styrene	N.D.	0.0740	1.00
1,1,1,2-Tetrachloroethane	N.D.	0.0800	1.00
1,1,2,2-Tetrachloroethane	N.D.	0.184	1.00
Tetrachloroethene	N.D.	0.06	1.0
Tetrahydrofuran	N.D.	2.0	25
Toluene	N.D.	0.09	1.0
1,2,4-Trichlorobenzene	N.D.	0.130	1.00
1,1,1-Trichloroethane	N.D.	0.1	1.0
1,1,2-Trichloroethane	N.D.	0.0790	1.00
Trichloroethene	N.D.	0.2	1.0
Trichlorofluoromethane	N.D.	0.2	1.0
1,2,3-Trichloropropane	N.D.	0.100	1.00

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Client Name: Draper Aden Associates, Inc.
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Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Vinyl Acetate	N.D.	3.29	10.0
Vinyl Chloride	N.D.	0.153	1.00
m+p-Xylene	N.D.	0.100	2.00
o-Xylene	N.D.	0.125	1.00
Xylene (Total)	N.D.	0.2	3.0
Batch number: Y201192AA	Sample number(s): 1300794-1300801		
2-Propanol	N.D.	18	100
Batch number: 20112WAH026	Sample number(s): 1300794-1300806		
Acenaphthene	N.D.	0.350	10.0
Acenaphthylene	N.D.	0.480	10.0
Acetophenone	N.D.	4.00	10.0
2-Acetylaminofluorene	N.D.	10.0	21.0
4-Aminobiphenyl	N.D.	5.00	11.0
Aniline	N.D.	3.00	10.0
Anthracene	N.D.	0.520	10.0
Aramite	N.D.	5.00	15.0
Benzo(a)anthracene	N.D.	0.450	10.0
Benzo(a)pyrene	N.D.	1.50	10.0
Benzo(b)fluoranthene	N.D.	1.20	10.0
Benzo(g,h,i)perylene	N.D.	0.420	10.0
Benzo(k)fluoranthene	N.D.	1.60	10.0
Benzyl alcohol	N.D.	10.0	30.0
4-Bromophenyl-phenylether	N.D.	0.560	10.0
Butylbenzylphthalate	N.D.	2.00	10.0
Di-n-butylphthalate	N.D.	2.00	10.0
4-Chloro-3-methylphenol	N.D.	1.01	10.0
4-Chloroaniline	N.D.	4.00	10.0
Chlorobenzilate	N.D.	3.00	10.0
bis(2-Chloroethoxy)methane	N.D.	0.500	2.00
bis(2-Chloroethyl)ether	N.D.	0.500	2.00
bis(2-Chloroisopropyl)ether	N.D.	0.500	10.0
2-Chloronaphthalene	N.D.	0.490	10.0
2-Chlorophenol	N.D.	0.980	10.0
4-Chlorophenyl-phenylether	N.D.	0.500	10.0
2,2'-oxybis(1-Chloropropane)	N.D.	0.500	2.00
Chrysene	N.D.	0.310	10.0
Diallate trans/cis	N.D.	1.00	10.0
Dibenz(a,h)anthracene	N.D.	0.380	10.0
Dibenzofuran	N.D.	0.580	10.0
3,3'-Dichlorobenzidine	N.D.	3.00	10.0
2,4-Dichlorophenol	N.D.	1.59	10.0
2,6-Dichlorophenol	N.D.	0.500	10.0
Diethylphthalate	N.D.	2.00	10.0
Dimethoate	N.D.	3.00	10.0

*- Outside of specification

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Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
p-Dimethylaminoazobenzene	N.D.	5.00	10.0
7,12-Dimethylbenz[a]anthracene	N.D.	5.00	11.0
3,3'-Dimethylbenzidine	N.D.	25.0	75.0
a,a-Dimethylphenethylamine	N.D.	5.00	50.0
2,4-Dimethylphenol	N.D.	3.00	10.0
Dimethylphthalate	N.D.	2.00	10.0
4,6-Dinitro-2-methylphenol	N.D.	8.00	21.0
1,3-Dinitrobenzene	N.D.	2.00	10.0
2,4-Dinitrophenol	N.D.	14.0	30.0
2,4-Dinitrotoluene	N.D.	1.00	10.0
2,6-Dinitrotoluene	N.D.	0.500	10.0
Disulfoton	N.D.	25.0	50.0
Ethyl methanesulfonate	N.D.	0.500	10.0
bis(2-Ethylhexyl)phthalate	N.D.	5.00	11.0
Famphur	N.D.	25.0	50.0
Fluoranthene	N.D.	0.420	10.0
Fluorene	N.D.	0.380	10.0
Hexachlorobenzene	N.D.	0.870	10.0
Hexachlorocyclopentadiene	N.D.	5.00	11.0
Hexachloropropene	N.D.	2.00	10.0
Indeno(1,2,3-cd)pyrene	N.D.	0.150	10.0
Isodrin	N.D.	0.500	10.0
Isophorone	N.D.	0.500	10.0
Isosafrole	N.D.	4.00	10.0
Kepone	N.D.	25.0	50.0
Methapyrilene	N.D.	15.0	50.0
Methyl methanesulfonate	N.D.	1.00	10.0
Methyl parathion	N.D.	5.00	10.0
3-Methylcholanthrene	N.D.	4.00	10.0
2-Methylnaphthalene	N.D.	0.290	10.0
2-Methylphenol	N.D.	0.960	10.0
4-Methylphenol	N.D.	2.47	20.0
1,4-Naphthoquinone	N.D.	25.0	60.0
1-Naphthylamine	N.D.	8.00	21.0
2-Naphthylamine	N.D.	7.00	21.0
NDPA as diphenylamine	N.D.	0.700	10.0
2-Nitroaniline	N.D.	2.00	10.0
3-Nitroaniline	N.D.	3.00	10.0
4-Nitroaniline	N.D.	0.900	10.0
Nitrobenzene	N.D.	0.500	10.0
5-Nitro-o-toluidine	N.D.	4.00	10.0
2-Nitrophenol	N.D.	3.00	10.0
4-Nitrophenol	N.D.	10.0	30.0
4-Nitroquinoline-1-oxide	N.D.	20.0	60.0
N-Nitrosodiethylamine	N.D.	0.500	10.0

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Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
N-Nitrosodimethylamine	N.D.	2.00	10.0
N-Nitrosodi-n-butylamine	N.D.	12.0	25.0
N-Nitroso-di-n-propylamine	N.D.	0.700	10.0
N-Nitrosodiphenylamine	N.D.	0.700	10.0
N-Nitrosomethylethylamine	N.D.	2.00	10.0
N-Nitrosomorpholine	N.D.	2.00	10.0
N-Nitrosopiperidine	N.D.	0.500	10.0
N-Nitrosopyrrolidine	N.D.	0.500	10.0
Di-n-octylphthalate	N.D.	5.00	11.0
Parathion	N.D.	7.00	12.0
Pentachlorobenzene	N.D.	0.500	10.0
Pentachloronitrobenzene	N.D.	2.00	10.0
Pentachlorophenol	N.D.	2.92	10.0
Phenacetin	N.D.	0.500	10.0
Phenanthrene	N.D.	0.520	10.0
Phenol	N.D.	0.770	10.0
1,4-Phenylenediamine	N.D.	75.0	300
Phorate	N.D.	2.00	10.0
2-Picoline	N.D.	2.00	10.0
Pronamide	N.D.	1.00	10.0
Pyrene	N.D.	0.410	10.0
Pyridine	N.D.	2.00	10.0
Safrole	N.D.	2.00	10.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.00	10.0
2,3,4,6-Tetrachlorophenol	N.D.	4.00	10.0
Thionazin	N.D.	2.00	10.0
o-Toluidine	N.D.	4.00	10.0
2,4,5-Trichlorophenol	N.D.	0.810	10.0
2,4,6-Trichlorophenol	N.D.	0.630	10.0
O,O,O-Triethylphosphorothioate	N.D.	2.00	10.0
1,3,5-Trinitrobenzene	N.D.	97.0	201

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: H201181AA	Sample number(s): 1300795,1300797-1300800,1300807-1300808								
Acetone	37.5	29.04			77		60-146		
Acetonitrile	37.5	35.27			94		51-160		
Acrolein	37.5	32.21			86		45-140		
Acrylonitrile	25	24.12			96		64-139		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Allyl Chloride	5.00	4.89			98		51-126		
Benzene	5.00	5.36			107		80-120		
Bromodichloromethane	5.00	5.46			109		73-124		
Bromoform	5.00	4.84			97		49-144		
Bromomethane	5.00	5.23			105		60-136		
2-Butanone	37.5	35.53			95		59-141		
Carbon Disulfide	5.00	5.00			100		67-130		
Carbon Tetrachloride	5.00	5.14			103		64-141		
2-Chloro-1,3-butadiene	5.00	5.01			100		60-128		
Chloroethane	5.00	5.20			104		63-120		
Chloroform	5.00	5.44			109		80-120		
Chloromethane	5.00	5.36			107		56-124		
1,2-Dibromo-3-chloropropane	5.00	4.10			82		56-148		
Dibromochloromethane	5.00	4.98			100		64-138		
1,2-Dibromoethane	5.00	4.92			98		80-120		
Dibromomethane	5.00	5.85			117		80-122		
trans-1,4-Dichloro-2-butene	25	18.16			73		10-172		
1,2-Dichlorobenzene	5.00	4.54			91		80-120		
1,3-Dichlorobenzene	5.00	4.40			88		80-120		
1,4-Dichlorobenzene	5.00	4.55			91		80-120		
Dichlorodifluoromethane	5.00	4.61			92		43-123		
1,1-Dichloroethane	5.00	5.39			108		74-120		
1,2-Dichloroethane	5.00	5.55			111		69-122		
1,1-Dichloroethene	5.00	5.03			101		80-131		
trans-1,2-Dichloroethene	5.00	4.98			100		80-122		
1,2-Dichloropropane	5.00	5.81			116		80-120		
1,3-Dichloropropane	5.00	4.91			98		80-120		
trans-1,3-Dichloropropene	5.00	4.58			92		61-129		
Dimethyl ether	5.00	5.30			106		70-130		
1,4-Dioxane	125	129.78			104		65-169		
Ethyl ether	5.00	5.89			118		72-121		
Ethyl Methacrylate	5.00	4.21			84		55-133		
Ethylbenzene	5.00	4.34			87		80-120		
Freon 113	5.00	5.06			101		75-133		
Hexachlorobutadiene	5.00	4.30			86		72-132		
2-Hexanone	25	23.41			94		52-140		
Isobutyl Alcohol	125	115.97			93		57-154		
Methacrylonitrile	37.5	35.57			95		60-145		
Methyl Iodide	5.00	5.00			100		77-120		
Methyl Methacrylate	5.00	4.61			92		55-139		
4-Methyl-2-pentanone	25	22.94			92		55-140		
Methylene Chloride	5.00	5.38			108		80-120		
Naphthalene	5.00	3.54			71		64-122		
Pentachloroethane	5.00	4.35			87		68-134		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Propionitrile	37.5	39.02			104		63-145		
Styrene	5.00	4.62			92		80-120		
1,1,1,2-Tetrachloroethane	5.00	4.59			92		71-134		
1,1,2,2-Tetrachloroethane	5.00	4.86			97		75-123		
Tetrachloroethene	5.00	4.54			91		80-120		
Tetrahydrofuran	25	22.74			91		67-137		
Toluene	5.00	4.50			90		80-120		
1,2,4-Trichlorobenzene	5.00	3.98			80		68-122		
1,1,1-Trichloroethane	5.00	4.84			97		78-126		
1,1,2-Trichloroethane	5.00	5.07			101		80-120		
Trichloroethene	5.00	5.13			103		80-120		
Trichlorofluoromethane	5.00	5.64			113		62-136		
1,2,3-Trichloropropane	5.00	4.97			99		80-125		
Vinyl Acetate	12.5	13.17			105		38-145		
Vinyl Chloride	5.00	5.23			105		60-125		
m+p-Xylene	10	9.04			90		80-120		
o-Xylene	5.00	4.35			87		80-120		
Xylene (Total)	15	13.38			89		80-120		
Batch number: H201181AB	Sample number(s): 1300794-1300796,1300801-1300806								
Acetone	37.5	31.88	37.5	32.41	85	86	60-146	2	30
Acetonitrile	37.5	42.79	37.5	43.65	114	116	51-160	2	30
Acrolein	37.5	34.07	37.5	34.19	91	91	45-140	0	30
Acrylonitrile	25	24.53	25	25.26	98	101	64-139	3	30
Allyl Chloride	5.00	4.65	5.00	4.56	93	91	51-126	2	30
Benzene	5.00	4.93	5.00	4.93	99	99	80-120	0	30
Bromodichloromethane	5.00	4.99	5.00	4.98	100	100	73-124	0	30
Bromoform	5.00	4.80	5.00	4.80	96	96	49-144	0	30
Bromomethane	5.00	4.96	5.00	4.84	99	97	60-136	3	30
2-Butanone	37.5	36.88	37.5	37.74	98	101	59-141	2	30
Carbon Disulfide	5.00	4.58	5.00	4.55	92	91	67-130	1	30
Carbon Tetrachloride	5.00	4.84	5.00	4.81	97	96	64-141	1	30
2-Chloro-1,3-butadiene	5.00	4.68	5.00	4.61	94	92	60-128	2	30
Chloroethane	5.00	5.04	5.00	4.93	101	99	63-120	2	30
Chloroform	5.00	5.01	5.00	4.96	100	99	80-120	1	30
Chloromethane	5.00	5.19	5.00	5.14	104	103	56-124	1	30
1,2-Dibromo-3-chloropropane	5.00	4.39	5.00	4.47	88	89	56-148	2	30
Dibromochloromethane	5.00	5.08	5.00	4.97	102	99	64-138	2	30
1,2-Dibromoethane	5.00	5.05	5.00	4.92	101	98	80-120	3	30
Dibromomethane	5.00	5.04	5.00	5.01	101	100	80-122	1	30
trans-1,4-Dichloro-2-butene	25	18.98	25	19.82	76	79	10-172	4	30
1,2-Dichlorobenzene	5.00	4.85	5.00	4.81	97	96	80-120	1	30
1,3-Dichlorobenzene	5.00	4.78	5.00	4.77	96	95	80-120	0	30
1,4-Dichlorobenzene	5.00	4.79	5.00	4.85	96	97	80-120	1	30

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dichlorodifluoromethane	5.00	4.54	5.00	4.37	91	87	43-123	4	30
1,1-Dichloroethane	5.00	5.01	5.00	4.98	100	100	74-120	0	30
1,2-Dichloroethane	5.00	4.99	5.00	4.90	100	98	69-122	2	30
1,1-Dichloroethene	5.00	4.62	5.00	4.58	92	92	80-131	1	30
trans-1,2-Dichloroethene	5.00	4.70	5.00	4.69	94	94	80-122	0	30
1,2-Dichloropropane	5.00	5.26	5.00	5.27	105	105	80-120	0	30
1,3-Dichloropropane	5.00	5.05	5.00	5.03	101	101	80-120	1	30
trans-1,3-Dichloropropene	5.00	4.61	5.00	4.61	92	92	61-129	0	30
Dimethyl ether	5.00	5.06	5.00	5.04	101	101	70-130	0	30
1,4-Dioxane	125	137.38	125	134.43	110	108	65-169	2	30
Ethyl ether	5.00	5.41	5.00	5.26	108	105	72-121	3	30
Ethyl Methacrylate	5.00	4.24	5.00	4.17	85	83	55-133	2	30
Ethylbenzene	5.00	4.59	5.00	4.65	92	93	80-120	1	30
Freon 113	5.00	4.74	5.00	4.80	95	96	75-133	1	30
Hexachlorobutadiene	5.00	4.69	5.00	4.74	94	95	72-132	1	30
2-Hexanone	25	24.48	25	25.1	98	100	52-140	3	30
Isobutyl Alcohol	125	122.06	125	119.56	98	96	57-154	2	30
Methacrylonitrile	37.5	37.11	37.5	38.45	99	103	60-145	4	30
Methyl Iodide	5.00	4.51	5.00	4.41	90	88	77-120	2	30
Methyl Methacrylate	5.00	4.78	5.00	5.05	96	101	55-139	5	30
4-Methyl-2-pentanone	25	23.46	25	23.86	94	95	55-140	2	30
Methylene Chloride	5.00	4.93	5.00	4.94	99	99	80-120	0	30
Naphthalene	5.00	3.77	5.00	3.78	75	76	64-122	0	30
Pentachloroethane	5.00	4.78	5.00	4.68	96	94	68-134	2	30
Propionitrile	37.5	39.63	37.5	39.72	106	106	63-145	0	30
Styrene	5.00	4.79	5.00	4.81	96	96	80-120	0	30
1,1,1,2-Tetrachloroethane	5.00	4.76	5.00	4.73	95	95	71-134	1	30
1,1,2,2-Tetrachloroethane	5.00	4.95	5.00	4.83	99	97	75-123	2	30
Tetrachloroethene	5.00	4.83	5.00	4.89	97	98	80-120	1	30
Tetrahydrofuran	25	24.07	25	25.43	96	102	67-137	6	30
Toluene	5.00	4.72	5.00	4.77	94	95	80-120	1	30
1,2,4-Trichlorobenzene	5.00	4.27	5.00	4.29	85	86	68-122	0	30
1,1,1-Trichloroethane	5.00	4.63	5.00	4.60	93	92	78-126	1	30
1,1,2-Trichloroethane	5.00	5.17	5.00	5.08	103	102	80-120	2	30
Trichloroethene	5.00	4.90	5.00	4.92	98	98	80-120	0	30
Trichlorofluoromethane	5.00	5.56	5.00	5.46	111	109	62-136	2	30
1,2,3-Trichloropropane	5.00	4.95	5.00	5.08	99	102	80-125	3	30
Vinyl Acetate	12.5	11.95	12.5	11.76	96	94	38-145	2	30
Vinyl Chloride	5.00	5.11	5.00	5.08	102	102	60-125	0	30
m+p-Xylene	10	9.49	10	9.57	95	96	80-120	1	30
o-Xylene	5.00	4.57	5.00	4.64	91	93	80-120	2	30
Xylene (Total)	15	14.05	15	14.22	94	95	80-120	1	30

Batch number: Y201192AA

Sample number(s): 1300794-1300801

*- Outside of specification

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Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Propanol	150	140			93		52-144		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 20112WAH026	Sample number(s): 1300794-1300806								
Acenaphthene	50	43.2			86		52-114		
Acenaphthylene	50	42.84			86		56-127		
Acetophenone	50	45.75			92		61-114		
2-Acetylaminofluorene	50	46.94	50	46.16	94	92	59-135	2	30
4-Aminobiphenyl	50	27.44	50	22.11	55	44	11-128	21	30
Aniline	50	27.05			54		45-87		
Anthracene	50	45.33			91		67-116		
Aramite	50	7.40	50	8.34	15	17	10-122	12	30
Benzo(a)anthracene	50	48.89			98		68-123		
Benzo(a)pyrene	50	44.69			89		71-117		
Benzo(b)fluoranthene	50	47.26			95		69-121		
Benzo(g,h,i)perylene	50	47.91			96		60-119		
Benzo(k)fluoranthene	50	47.39			95		69-122		
Benzyl alcohol	50	46.11			92		56-115		
4-Bromophenyl-phenylether	50	41.12			82		60-114		
Butylbenzylphthalate	50	37.26			75		40-133		
Di-n-butylphthalate	50	44.54			89		58-125		
4-Chloro-3-methylphenol	50	45.73			91		60-118		
4-Chloroaniline	50	34.33			69		45-111		
Chlorobenzilate	50	24.29	50	16.46	49	33	10-133	38*	30
bis(2-Chloroethoxy)methane	50	47.57			95		63-116		
bis(2-Chloroethyl)ether	50	43.67			87		58-108		
bis(2-Chloroisopropyl)ether	50	42.75			86		44-108		
2-Chloronaphthalene	50	38.69			77		51-107		
2-Chlorophenol	50	43.72			87		57-107		
4-Chlorophenyl-phenylether	50	45.69			91		57-110		
2,2'-oxybis(1-Chloropropane)	50	42.75			86		48-105		
Chrysene	50	44.59			89		65-121		
Diallate trans/cis	50	45.31	50	47.47	91	95	66-114	5	30
Dibenz(a,h)anthracene	50	48.65			97		63-128		
Dibenzofuran	50	44.32			89		60-112		
3,3'-Dichlorobenzidine	50	30.82			62		42-107		
2,4-Dichlorophenol	50	43.36			87		65-110		
2,6-Dichlorophenol	50	42.95	50	43.59	86	87	50-113	1	30
Diethylphthalate	50	38.78			78		42-126		
Dimethoate	50	21.15	50	14.1	42	28	10-80	40*	30
p-Dimethylaminoazobenzene	50	49.04	50	47.84	98	96	75-144	2	30
7,12-Dimethylbenz[a]anthracene	50	45.21			90		61-121		
3,3'-Dimethylbenzidine	100	18.98			19		10-60		
a,a-Dimethylphenethylamine	50	1.87	50	1.52	4*	3*	70-130	20	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dimethylphenol	50	36.4			73		53-93		
Dimethylphthalate	50	28.07			56		10-134		
4,6-Dinitro-2-methylphenol	50	45.9			92		63-129		
1,3-Dinitrobenzene	50	48.1			96		73-114		
2,4-Dinitrophenol	100	94.67			95		44-134		
2,4-Dinitrotoluene	50	45.34			91		66-122		
2,6-Dinitrotoluene	50	49.67			99		71-120		
Disulfoton	100	103.64	100	104.67	104	105	50-135	1	30
Ethyl methanesulfonate	50	47.23	50	46.22	94	92	55-119	2	30
bis(2-Ethylhexyl)phthalate	50	48.99			98		61-129		
Famphur	100	19.62	100	11.13	20*	11*	70-130	55*	20
Fluoranthene	50	45.79			92		63-122		
Fluorene	50	43.23			86		56-115		
Hexachlorobenzene	50	41.98			84		60-117		
Hexachlorocyclopentadiene	100	23.82			24		10-91		
Hexachloropropene	50	19.01	50	18.36	38	37	10-92	3	30
Indeno(1,2,3-cd)pyrene	50	47.39			95		59-123		
Isodrin	50	42.71	50	42.86	85	86	55-118	0	30
Isophorone	50	43.98			88		63-120		
Isosafrole	50	43.19	50	42.58	86	85	62-129	1	30
Kepone	100	37.28	100	27.41	37	27	10-92	31*	30
Methapyrilene	400	217.25	400	246.29	54	62	45-155	13	30
Methyl methanesulfonate	50	34.45	50	34.99	69	70	46-98	2	30
Methyl parathion	50	43.54	50	44.06	87*	88*	30-77	1	30
3-Methylcholanthrene	50	50.72	50	52.38	101	105	69-162	3	30
2-Methylnaphthalene	50	41.54			83		51-107		
2-Methylphenol	50	43.91			88		53-107		
4-Methylphenol	50	38.53			77		49-108		
1,4-Naphthoquinone	100	N.D.	100	N.D.	0*	0*	70-130	0	30
1-Naphthylamine	100	48.07			48		30-97		
2-Naphthylamine	100	40.79			41		22-91		
NDPA as diphenylamine	50	43.26			87		70-130		
2-Nitroaniline	50	45.58			91		66-126		
3-Nitroaniline	50	44.25			89		55-121		
4-Nitroaniline	50	37.7			75		55-113		
Nitrobenzene	50	39.5			79		59-109		
5-Nitro-o-toluidine	50	46.54	50	43.04	93	86	57-109	8	30
2-Nitrophenol	50	46.12			92		63-111		
4-Nitrophenol	50	28.82			58		23-89		
4-Nitroquinoline-1-oxide	500	538.66	500	548.5	108	110	56-156	2	30
N-Nitrosodiethylamine	50	43.7	50	46.12	87	92	63-106	5	30
N-Nitrosodimethylamine	50	28.82			58		17-101		
N-Nitrosodi-n-butylamine	50	43.09	50	44.13	86	88	49-104	2	30
N-Nitroso-di-n-propylamine	50	48.33			97		58-120		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
N-Nitrosodiphenylamine	50	43.26			87		60-126		
N-Nitrosomethylethylamine	50	40.98	50	42.93	82	86	53-105	5	30
N-Nitrosomorpholine	50	37.05	50	37.32	74	75	52-102	1	30
N-Nitrosopiperidine	50	45.89	50	44.91	92	90	68-110	2	30
N-Nitrosopyrrolidine	50	49.05	50	51.12	98	102	65-115	4	30
Di-n-octylphthalate	50	52.65			105		60-136		
Parathion	50	51.74	50	53.21	103	106	68-133	3	30
Pentachlorobenzene	50	41.35	50	37.52	83	75	36-109	10	30
Pentachloronitrobenzene	50	42.88	50	43.25	86	87	60-112	1	30
Pentachlorophenol	50	40.49			81		54-131		
Phenacetin	50	46.26	50	48.17	93	96	67-128	4	30
Phenanthrene	50	44.61			89		65-113		
Phenol	50	24.18			48		19-79		
1,4-Phenylenediamine	1000	5.28	1000	6.18	1*	1*	70-130	16	30
Phorate	50	47.87	50	46.44	96	93	37-143	3	30
2-Picoline	50	32.64			65		43-95		
Pronamide	50	48.44	50	50.19	97	100	73-117	4	30
Pyrene	50	44.95			90		65-115		
Pyridine	50	18.81			38		23-64		
Safrole	50	42.39	50	43.06	85	86	62-104	2	30
1,2,4,5-Tetrachlorobenzene	50	36.02			72		40-102		
2,3,4,6-Tetrachlorophenol	50	47.99			96		64-124		
Thionazin	50	46.47	50	43.56	93	87	66-121	6	30
o-Toluidine	50	33.17			66		45-104		
2,4,5-Trichlorophenol	50	43.66			87		66-118		
2,4,6-Trichlorophenol	50	45.51			91		69-117		
O,O,O-Triethylphosphorothioate	50	44.91	50	45.97	90	92	59-117	2	30
1,3,5-Trinitrobenzene	50	34.08	50	23.54	68	47	10-111	37*	30

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H201181AA										
Sample number(s): 1300795,1300797-1300800,1300807-1300808 UNSPK: 1300797										
Acetone	N.D.	37.5	31.87	37.5	31.12	85	83	60-146	2	30
Acetonitrile	N.D.	37.5	37.91	37.5	38.16	101	102	51-160	1	30
Acrolein	N.D.	37.5	35.37	37.5	31.84	94	85	45-140	11	30
Acrylonitrile	N.D.	25	27.65	25	24.19	111	97	64-139	13	30
Allyl Chloride	N.D.	5.00	5.48	5.00	5.31	110	106	51-126	3	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Benzene	0.206	5.00	6.40	5.00	6.17	124*	119	80-120	4	30
Bromodichloromethane	N.D.	5.00	5.98	5.00	5.81	120	116	73-124	3	30
Bromoform	N.D.	5.00	4.72	5.00	4.48	94	90	49-144	5	30
Bromomethane	N.D.	5.00	5.82	5.00	5.71	116	114	60-136	2	30
2-Butanone	N.D.	37.5	40.5	37.5	36.27	108	97	59-141	11	30
Carbon Disulfide	N.D.	5.00	6.19	5.00	5.87	124	117	67-130	5	30
Carbon Tetrachloride	N.D.	5.00	6.20	5.00	5.98	124	120	64-141	3	30
2-Chloro-1,3-butadiene	N.D.	5.00	6.03	5.00	5.86	121	117	60-128	3	30
Chloroethane	1.37	5.00	7.47	5.00	7.53	122*	123*	63-120	1	30
Chloroform	N.D.	5.00	6.18	5.00	5.91	124*	118	80-120	4	30
Chloromethane	N.D.	5.00	6.24	5.00	6.21	125*	124	56-124	0	30
1,2-Dibromo-3-chloropropane	N.D.	5.00	5.11	5.00	4.42	102	88	56-148	14	30
Dibromochloromethane	N.D.	5.00	5.10	5.00	4.80	102	96	64-138	6	30
1,2-Dibromoethane	N.D.	5.00	5.16	5.00	4.94	103	99	80-120	4	30
Dibromomethane	N.D.	5.00	6.11	5.00	5.93	122	119	80-122	3	30
trans-1,4-Dichloro-2-butene	N.D.	25	21.34	25	19.23	85	77	10-172	10	30
1,2-Dichlorobenzene	N.D.	5.00	4.83	5.00	4.67	97	93	80-120	3	30
1,3-Dichlorobenzene	N.D.	5.00	4.88	5.00	4.72	98	94	80-120	3	30
1,4-Dichlorobenzene	N.D.	5.00	4.99	5.00	4.77	100	95	80-120	5	30
Dichlorodifluoromethane	N.D.	5.00	5.65	5.00	5.55	113	111	43-123	2	30
1,1-Dichloroethane	2.98	5.00	9.43	5.00	9.39	129*	128*	74-120	0	30
1,2-Dichloroethane	N.D.	5.00	5.95	5.00	5.61	119	112	69-122	6	30
1,1-Dichloroethene	N.D.	5.00	6.25	5.00	6.00	125	120	80-131	4	30
trans-1,2-Dichloroethene	N.D.	5.00	5.98	5.00	5.74	120	115	80-120	4	30
1,2-Dichloropropane	N.D.	5.00	6.54	5.00	6.22	131*	124*	80-120	5	30
1,3-Dichloropropane	N.D.	5.00	5.18	5.00	4.96	104	99	80-120	4	30
trans-1,3-Dichloropropene	N.D.	5.00	4.76	5.00	4.57	95	91	61-129	4	30
Dimethyl ether	1.21	5.00	6.22	5.00	6.21	100	100	70-130	0	30
1,4-Dioxane	N.D.	125	139.35	125	135.93	111	109	65-169	2	30
Ethyl ether	15.38	5.00	21.42	5.00	21.82	121	129*	72-121	2	30
Ethyl Methacrylate	N.D.	5.00	4.31	5.00	4.13	86	83	55-133	4	30
Ethylbenzene	N.D.	5.00	4.98	5.00	4.75	100	95	80-120	5	30
Freon 113	N.D.	5.00	6.53	5.00	6.29	131	126	75-133	4	30
Hexachlorobutadiene	N.D.	5.00	5.04	5.00	4.79	101	96	72-132	5	30
2-Hexanone	N.D.	25	26.74	25	23.92	107	96	52-140	11	30
Isobutyl Alcohol	N.D.	125	126.25	125	114.64	101	92	57-154	10	30
Methacrylonitrile	N.D.	37.5	41.01	37.5	36.32	109	97	60-145	12	30
Methyl Iodide	N.D.	5.00	5.73	5.00	5.49	115	110	77-120	4	30
Methyl Methacrylate	N.D.	5.00	5.36	5.00	4.82	107	96	55-139	10	30
4-Methyl-2-pentanone	N.D.	25	26.24	25	23.23	105	93	55-140	12	30
Methylene Chloride	N.D.	5.00	6.18	5.00	5.95	124*	119	80-120	4	30
Naphthalene	N.D.	5.00	3.71	5.00	3.59	74	72	64-122	3	30
Pentachloroethane	N.D.	5.00	4.59	5.00	4.56	92	91	68-134	0	30

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Propionitrile	N.D.	37.5	40.82	37.5	37.53	109	100	63-145	8	30
Styrene	N.D.	5.00	5.07	5.00	4.81	101	96	80-120	5	30
1,1,1,2-Tetrachloroethane	N.D.	5.00	4.91	5.00	4.74	98	95	71-134	4	30
1,1,2,2-Tetrachloroethane	N.D.	5.00	4.71	5.00	4.67	94	93	75-123	1	30
Tetrachloroethene	0.101	5.00	5.45	5.00	5.18	107	101	80-120	5	30
Tetrahydrofuran	2.21	25	28.54	25	25.46	105	93	67-137	11	30
Toluene	N.D.	5.00	5.15	5.00	4.96	103	99	80-120	4	30
1,2,4-Trichlorobenzene	N.D.	5.00	4.29	5.00	4.14	86	83	68-122	3	30
1,1,1-Trichloroethane	N.D.	5.00	5.86	5.00	5.59	117	112	78-126	5	30
1,1,2-Trichloroethane	N.D.	5.00	5.24	5.00	5.02	105	100	80-120	4	30
Trichloroethene	N.D.	5.00	6.17	5.00	6.12	123*	122*	80-120	1	30
Trichlorofluoromethane	N.D.	5.00	6.87	5.00	6.91	137*	138*	62-136	1	30
1,2,3-Trichloropropane	N.D.	5.00	4.90	5.00	4.85	98	97	80-125	1	30
Vinyl Acetate	N.D.	12.5	13.77	12.5	13.32	110	107	38-145	3	30
Vinyl Chloride	0.153	5.00	6.52	5.00	6.35	127*	124	60-125	3	30
m+p-Xylene	N.D.	10	10.43	10	9.91	104	99	80-120	5	30
o-Xylene	N.D.	5.00	4.85	5.00	4.68	97	94	80-120	4	30
Xylene (Total)	N.D.	15	15.28	15	14.6	102	97	80-120	5	30
Batch number: H201181AB Sample number(s): 1300794-1300796,1300801-1300806 UNSPK: 1300797										
Acetone	N.D.	37.5	31.87	37.5	31.12	85	83	60-146	2	30
Acetonitrile	N.D.	37.5	37.91	37.5	38.16	101	102	51-160	1	30
Acrolein	N.D.	37.5	35.37	37.5	31.84	94	85	45-140	11	30
Acrylonitrile	N.D.	25	27.65	25	24.19	111	97	64-139	13	30
Allyl Chloride	N.D.	5.00	5.48	5.00	5.31	110	106	51-126	3	30
Benzene	0.206	5.00	6.40	5.00	6.17	124*	119	80-120	4	30
Bromodichloromethane	N.D.	5.00	5.98	5.00	5.81	120	116	73-124	3	30
Bromoform	N.D.	5.00	4.72	5.00	4.48	94	90	49-144	5	30
Bromomethane	N.D.	5.00	5.82	5.00	5.71	116	114	60-136	2	30
2-Butanone	N.D.	37.5	40.5	37.5	36.27	108	97	59-141	11	30
Carbon Disulfide	N.D.	5.00	6.19	5.00	5.87	124	117	67-130	5	30
Carbon Tetrachloride	N.D.	5.00	6.20	5.00	5.98	124	120	64-141	3	30
2-Chloro-1,3-butadiene	N.D.	5.00	6.03	5.00	5.86	121	117	60-128	3	30
Chloroethane	1.37	5.00	7.47	5.00	7.53	122*	123*	63-120	1	30
Chloroform	N.D.	5.00	6.18	5.00	5.91	124*	118	80-120	4	30
Chloromethane	N.D.	5.00	6.24	5.00	6.21	125*	124	56-124	0	30
1,2-Dibromo-3-chloropropane	N.D.	5.00	5.11	5.00	4.42	102	88	56-148	14	30
Dibromochloromethane	N.D.	5.00	5.10	5.00	4.80	102	96	64-138	6	30
1,2-Dibromoethane	N.D.	5.00	5.16	5.00	4.94	103	99	80-120	4	30
Dibromomethane	N.D.	5.00	6.11	5.00	5.93	122	119	80-122	3	30
trans-1,4-Dichloro-2-butene	N.D.	25	21.34	25	19.23	85	77	10-172	10	30
1,2-Dichlorobenzene	N.D.	5.00	4.83	5.00	4.67	97	93	80-120	3	30
1,3-Dichlorobenzene	N.D.	5.00	4.88	5.00	4.72	98	94	80-120	3	30

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,4-Dichlorobenzene	N.D.	5.00	4.99	5.00	4.77	100	95	80-120	5	30
Dichlorodifluoromethane	N.D.	5.00	5.65	5.00	5.55	113	111	43-123	2	30
1,1-Dichloroethane	2.98	5.00	9.43	5.00	9.39	129*	128*	74-120	0	30
1,2-Dichloroethane	N.D.	5.00	5.95	5.00	5.61	119	112	69-122	6	30
1,1-Dichloroethene	N.D.	5.00	6.25	5.00	6.00	125	120	80-131	4	30
trans-1,2-Dichloroethene	N.D.	5.00	5.98	5.00	5.74	120	115	80-120	4	30
1,2-Dichloropropane	N.D.	5.00	6.54	5.00	6.22	131*	124*	80-120	5	30
1,3-Dichloropropane	N.D.	5.00	5.18	5.00	4.96	104	99	80-120	4	30
trans-1,3-Dichloropropene	N.D.	5.00	4.76	5.00	4.57	95	91	61-129	4	30
Dimethyl ether	1.21	5.00	6.22	5.00	6.21	100	100	70-130	0	30
1,4-Dioxane	N.D.	125	139.35	125	135.93	111	109	65-169	2	30
Ethyl ether	15.38	5.00	21.42	5.00	21.82	121	129*	72-121	2	30
Ethyl Methacrylate	N.D.	5.00	4.31	5.00	4.13	86	83	55-133	4	30
Ethylbenzene	N.D.	5.00	4.98	5.00	4.75	100	95	80-120	5	30
Freon 113	N.D.	5.00	6.53	5.00	6.29	131	126	75-133	4	30
Hexachlorobutadiene	N.D.	5.00	5.04	5.00	4.79	101	96	72-132	5	30
2-Hexanone	N.D.	25	26.74	25	23.92	107	96	52-140	11	30
Isobutyl Alcohol	N.D.	125	126.25	125	114.64	101	92	57-154	10	30
Methacrylonitrile	N.D.	37.5	41.01	37.5	36.32	109	97	60-145	12	30
Methyl Iodide	N.D.	5.00	5.73	5.00	5.49	115	110	77-120	4	30
Methyl Methacrylate	N.D.	5.00	5.36	5.00	4.82	107	96	55-139	10	30
4-Methyl-2-pentanone	N.D.	25	26.24	25	23.23	105	93	55-140	12	30
Methylene Chloride	N.D.	5.00	6.18	5.00	5.95	124*	119	80-120	4	30
Naphthalene	N.D.	5.00	3.71	5.00	3.59	74	72	64-122	3	30
Pentachloroethane	N.D.	5.00	4.59	5.00	4.56	92	91	68-134	0	30
Propionitrile	N.D.	37.5	40.82	37.5	37.53	109	100	63-145	8	30
Styrene	N.D.	5.00	5.07	5.00	4.81	101	96	80-120	5	30
1,1,1,2-Tetrachloroethane	N.D.	5.00	4.91	5.00	4.74	98	95	71-134	4	30
1,1,2,2-Tetrachloroethane	N.D.	5.00	4.71	5.00	4.67	94	93	75-123	1	30
Tetrachloroethene	0.101	5.00	5.45	5.00	5.18	107	101	80-120	5	30
Tetrahydrofuran	2.21	25	28.54	25	25.46	105	93	67-137	11	30
Toluene	N.D.	5.00	5.15	5.00	4.96	103	99	80-120	4	30
1,2,4-Trichlorobenzene	N.D.	5.00	4.29	5.00	4.14	86	83	68-122	3	30
1,1,1-Trichloroethane	N.D.	5.00	5.86	5.00	5.59	117	112	78-126	5	30
1,1,2-Trichloroethane	N.D.	5.00	5.24	5.00	5.02	105	100	80-120	4	30
Trichloroethene	N.D.	5.00	6.17	5.00	6.12	123*	122*	80-120	1	30
Trichlorofluoromethane	N.D.	5.00	6.87	5.00	6.91	137*	138*	62-136	1	30
1,2,3-Trichloropropane	N.D.	5.00	4.90	5.00	4.85	98	97	80-125	1	30
Vinyl Acetate	N.D.	12.5	13.77	12.5	13.32	110	107	38-145	3	30
Vinyl Chloride	0.153	5.00	6.52	5.00	6.35	127*	124	60-125	3	30
m+p-Xylene	N.D.	10	10.43	10	9.91	104	99	80-120	5	30
o-Xylene	N.D.	5.00	4.85	5.00	4.68	97	94	80-120	4	30
Xylene (Total)	N.D.	15	15.28	15	14.6	102	97	80-120	5	30

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Y201192AA	Sample number(s): 1300794-1300801 UNSPK: 1300797									
2-Propanol	N.D.	150	134.74	150	135.82	90	91	52-144	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 20112WAH026	Sample number(s): 1300794-1300806 UNSPK: 1300797									
Acenaphthene	N.D.	50.4	42.73	50.61	39.72	85	78	52-114	7	30
Acenaphthylene	N.D.	50.4	43.29	50.61	40.82	86	81	56-127	6	30
Acetophenone	N.D.	50.4	40.4	50.61	41.77	80	83	61-114	3	30
Aniline	N.D.	50.4	18.28	50.61	22.54	36*	45	45-87	21	30
Anthracene	N.D.	50.4	43.37	50.61	43.2	86	85	67-116	0	30
Benzo(a)anthracene	N.D.	50.4	46.97	50.61	42.5	93	84	68-123	10	30
Benzo(a)pyrene	N.D.	50.4	39.66	50.61	39.04	79	77	71-117	2	30
Benzo(b)fluoranthene	N.D.	50.4	43.94	50.61	42.9	87	85	69-121	2	30
Benzo(g,h,i)perylene	N.D.	50.4	41.11	50.61	40.76	82	81	60-119	1	30
Benzo(k)fluoranthene	N.D.	50.4	43.33	50.61	41.99	86	83	69-122	3	30
Benzyl alcohol	N.D.	50.4	39.61	50.61	39.82	79	79	56-115	1	30
4-Bromophenyl-phenylether	N.D.	50.4	41.21	50.61	40.44	82	80	60-114	2	30
Butylbenzylphthalate	N.D.	50.4	46.36	50.61	42.03	92	83	40-133	10	30
Di-n-butylphthalate	N.D.	50.4	44.3	50.61	44.28	88	87	58-125	0	30
4-Chloro-3-methylphenol	N.D.	50.4	40.29	50.61	39.34	80	78	60-118	2	30
4-Chloroaniline	N.D.	50.4	25.43	50.61	28.11	50	56	45-111	10	30
bis(2-Chloroethoxy)methane	N.D.	50.4	44.7	50.61	44.75	89	88	63-116	0	30
bis(2-Chloroethyl)ether	N.D.	50.4	40.39	50.61	41.29	80	82	58-108	2	30
bis(2-Chloroisopropyl)ether	N.D.	50.4	39.74	50.61	40.31	79	80	44-108	1	30
2-Chloronaphthalene	N.D.	50.4	36.97	50.61	38.34	73	76	51-107	4	30
2-Chlorophenol	N.D.	50.4	16.67	50.61	20.24	33*	40*	57-105	19	30
4-Chlorophenyl-phenylether	N.D.	50.4	44.7	50.61	41.74	89	82	57-110	7	30
2,2'-oxybis(1-Chloropropane)	N.D.	50.4	39.52	50.61	40.24	78	80	48-105	2	30
Chrysene	N.D.	50.4	43.92	50.61	40.32	87	80	65-121	9	30
Dibenz(a,h)anthracene	N.D.	50.4	44.06	50.61	43.11	87	85	63-128	2	30
Dibenzofuran	N.D.	50.4	42.94	50.61	40.2	85	79	60-112	7	30
3,3'-Dichlorobenzidine	N.D.	50.4	28.05	50.61	29.18	56	58	42-107	4	30
2,4-Dichlorophenol	N.D.	50.4	14.75	50.61	15.87	29*	31*	65-110	7	30
Diethylphthalate	N.D.	50.4	45.25	50.61	42.36	90	84	42-126	7	30
7,12-Dimethylbenz[a]anthracene	N.D.	50.4	41.39	50.61	40.09	82	79	61-121	3	30
3,3'-Dimethylbenzidine	N.D.	100.81	N.D.	101.21	N.D.	0*	0*	10-60	0	30
2,4-Dimethylphenol	N.D.	50.4	33.28	50.61	32.77	66	65	53-93	2	30
Dimethylphthalate	N.D.	50.4	43.03	50.61	41.58	85	82	10-134	3	30
4,6-Dinitro-2-methylphenol	N.D.	50.4	47.26	50.61	46.74	94	92	63-129	1	30
1,3-Dinitrobenzene	N.D.	50.4	49.89	50.61	46.51	99	92	73-114	7	30
2,4-Dinitrophenol	N.D.	100.81	94.42	101.21	92.11	94	91	44-134	2	30
2,4-Dinitrotoluene	N.D.	50.4	46.27	50.61	44.28	92	87	66-122	4	30

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2,6-Dinitrotoluene	N.D.	50.4	48.1	50.61	44.92	95	89	71-120	7	30
bis(2-Ethylhexyl)phthalate	N.D.	50.4	46.51	50.61	42.18	92	83	61-129	10	30
Fluoranthene	N.D.	50.4	45.19	50.61	43.93	90	87	63-122	3	30
Fluorene	N.D.	50.4	43.8	50.61	40.05	87	79	56-115	9	30
Hexachlorobenzene	N.D.	50.4	41.14	50.61	39.77	82	79	60-117	3	30
Hexachlorocyclopentadiene	N.D.	100.81	43.77	101.21	40.85	43	40	10-91	7	30
Indeno(1,2,3-cd)pyrene	N.D.	50.4	43.5	50.61	42.57	86	84	59-123	2	30
Isophorone	N.D.	50.4	43.1	50.61	41.44	86	82	63-120	4	30
2-Methylnaphthalene	N.D.	50.4	41.11	50.61	39.84	82	79	51-107	3	30
2-Methylphenol	N.D.	50.4	36.09	50.61	36.43	72	72	53-107	1	30
4-Methylphenol	N.D.	50.4	30.29	50.61	32.41	60	64	49-108	7	30
1-Naphthylamine	N.D.	100.81	28.05	101.21	33.32	28*	33	30-97	17	30
2-Naphthylamine	N.D.	100.81	23.95	101.21	27.88	24	28	22-91	15	30
NDPA as diphenylamine	N.D.	50.4	41.86	50.61	43.74	83	86	70-130	4	30
2-Nitroaniline	N.D.	50.4	45.09	50.61	43.97	89	87	66-126	3	30
3-Nitroaniline	N.D.	50.4	41.3	50.61	40.34	82	80	55-121	2	30
4-Nitroaniline	N.D.	50.4	37.23	50.61	35.73	74	71	55-113	4	30
Nitrobenzene	N.D.	50.4	39.08	50.61	38.87	78	77	59-109	1	30
2-Nitrophenol	N.D.	50.4	41.3	50.61	41.34	82	82	63-111	0	30
4-Nitrophenol	N.D.	50.4	23.65	50.61	23.59	47	47	23-89	0	30
N-Nitrosodimethylamine	N.D.	50.4	25.2	50.61	26.31	50	52	17-101	4	30
N-Nitroso-di-n-propylamine	N.D.	50.4	43.86	50.61	45.09	87	89	58-120	3	30
N-Nitrosodiphenylamine	N.D.	50.4	42.24	50.61	43.92	84	87	60-126	4	30
Di-n-octylphthalate	N.D.	50.4	47.81	50.61	46.93	95	93	60-136	2	30
Pentachlorophenol	N.D.	50.4	9.21	50.61	5.39	18*	11*	54-131	52*	30
Phenanthrene	N.D.	50.4	43.46	50.61	43.84	86	87	65-113	1	30
Phenol	N.D.	50.4	15.48	50.61	17.63	31	35	19-79	13	30
2-Picoline	N.D.	50.4	29.64	50.61	30.84	59	61	43-95	4	30
Pyrene	N.D.	50.4	43.37	50.61	40.99	86	81	65-115	6	30
Pyridine	N.D.	50.4	13.75	50.61	16.76	27	33	23-64	20	30
1,2,4,5-Tetrachlorobenzene	N.D.	50.4	35.22	50.61	33.36	70	66	40-102	5	30
2,3,4,6-Tetrachlorophenol	N.D.	50.4	6.39	50.61	5.74	13*	11*	66-124	11	30
o-Toluidine	N.D.	50.4	22.58	50.61	28.1	45	56	45-104	22	30
2,4,5-Trichlorophenol	N.D.	50.4	12.9	50.61	13.91	26*	27*	66-118	8	30
2,4,6-Trichlorophenol	N.D.	50.4	5.27	50.61	5.43	10*	11*	69-117	3	30

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control SummaryClient Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)

Batch number: H201181AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1300795	112	111	91	95
1300797	113	111	90	95
1300798	107	107	92	99
1300799	107	108	92	98
1300800	113	111	91	96
1300807	111	114	91	95
1300808	112	114	91	95
Blank	111	110	91	96
LCS	106	107	93	99
MS	107	107	92	99
MSD	107	108	92	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 8260C (25 ml)

Batch number: H201181AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1300794	104	107	98	92
1300796	104	107	97	92
1300801	104	107	97	92
1300802	104	109	98	93
1300803	104	108	97	92
1300804	105	109	97	92
1300805	105	110	98	92
1300806	106	112	97	92
Blank	105	108	97	94
LCS	101	105	98	95
LCSD	101	106	98	95
MS	107	107	92	99
MSD	107	108	92	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 2-Propanol

Batch number: Y201192AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1300794	101	104	97	95
1300795	103	102	96	95
1300796	102	102	96	94
1300797	104	103	96	94

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/29/2020 17:56

Group Number: 2096666

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 2-Propanol
Batch number: Y201192AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1300798	102	103	97	98
1300799	101	101	96	98
1300800	103	103	96	94
1300801	103	102	96	95
Blank	101	104	96	95
LCS	100	102	97	98
MS	102	103	97	98
MSD	101	101	96	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SVOAs 8270D/E MINI
Batch number: 20112WAH026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1300794	43	44	86	72	71	104
1300795	40	35	77	76	75	95
1300796	48	47	79	75	74	99
1300797	22	6*	11*	76	72	37
1300798	32	12	12*	77	77	74
1300799	35	15	13*	74	74	65
1300800	19	4*	7*	70	66	42
1300801	9*	3*	6*	68	63	44
Blank	32	44	89	71	65	94
LCS	50	61	99	79	78	102
LCSD	47	60	86	79	76	98
MS	32	12	12*	77	77	74
MSD	35	15	13*	74	74	65
Limits:	10-67	10-84	18-141	38-113	44-102	34-128

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1300802	60	57	85
1300803	76	73	99
1300804	75	73	104
1300805	78	73	100
1300806	67	62	97
Limits:	38-113	44-102	34-128

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

11200/2096666/1300794-808

jcf 4-14-2020

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Client: 0 Attn: 0 Address: 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RFAAP, Radford, Virginia Location: HWMU16 Event: 2Q 2020 Annual Groundwater Monitoring Event DAA JN: B03204-20A Lab JN:	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES Carrier: 12-75Y-02X-70-5597-1466 Tracking Number: 12-75Y-02X-70-5771-9271
Box 1: Matrix SW Surface Water GW Groundwater L Leachate S Soil T Trip Blank E Equipment Blank P Product O Other	Box 2: Preservative A HCL B HNO ₃ C H ₂ SO ₄ D Na ₂ S ₂ O ₃ E NaOH F ZnAc G Other (Specify) H None	Box 3: Filtered/Unfiltered F Filtered U Unfiltered Box 5: Sample Container Type P Plastic AG Amber Glass V VOA CG Clear Glass	Box 4: Sample Type G Grab C Composite Invoice Copy to Consultant: YES Bill: CLIENT OTHER Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G	G	GENERAL NOTES:				
Box 3 - Filtered/Unfiltered					U	U	U	U	1. Report results to detection limit, with J flags, for italicized wells. 2. Report results at or greater than QL for non-italicized wells. 3. VELAP accreditation required. 4. FULL Deliverable with EDD and ERIS EDD. 5. For 2- propanol report to QL 100 ug/l and DL of 50 ug/l.				
Required pH of Sample					<2	<2		<2					
Box 2 - Preservative					A	A	H	A					
Box 5 - Sample Container Type					3-40mL V	3-40mL V	2-250mL AG	3-40mL VOA					
Sample ID	Date: 2020	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge volume	8260C/5030C 5 ml purge volume for 2-propanol ONLY	8270D/3510C (Semivolatiles)	Additional Aliquot 8260C/5030C 25 ml purge volume					
16C1	4/16	1205	GW	11	X	X	X	X	Additional VOA Aliquot if dilution is required.				
16MW8	4/15	1105	GW	8	X	X	X						
16MW9	4/16	1105	GW	11	X	X	X	X	Additional VOA aliquot if dilution is required.				
16WC1A	4/16	0925	GW	24	X	X	X		USE FOR QC				
16WDUP	4/16	0950	GW	8	X	X	X						
16WC1B	4/16	0835	GW	8	X	X	X						
16-2	4/15	1020	GW	5	X		X						
16-3	4/15	1200	GW	5	X		X						
16-5	4/15	0845	GW	5	X		X						
16WC2B	4/15	0940	GW	5	X		X						
16SPRING	4/15	0900	GW	5	X		X						
Trip Blank 1	4/15	-	T	2	X								
Trip Blank 2	4/15	-	T	2	X				one trip blank required per day per permit. Delete if not required.				
Trip Blank 3			T	2	X				DID NOT NEED - JSC 4/16/2020				

Clients Special Instructions: level 1 with edd, See attached target analyte list.

Received by lab in Good Condition Yes No Custody Seal Intact Yes No Temperature upon arrival Received on Ice Yes No
Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 4/15/2020	#1 Relinquished by (Signature): <i>[Signature]</i>	Date: 4/16/2020	#2 Relinquished by (Signature): <i>[Signature]</i>	Date:	Sample Storage
Sampler Signature: <i>[Signature]</i>	Time: 0700	Company: DAA	Time: 1700	Company:	Time:	Time Requested:
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature): <i>[Signature]</i>	Date: 4/17/20	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company:	Time:	Company: ELLE	Time: 10:20	
		Name:		Name: Chel Welfig		

2/7

HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING

1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13.	Chloroethane	75-00-3	1
14.	Diethyl ether	60-29-7	12.5
15.	Dimethyl ether	115-10-6	12.5
16.	Methylene chloride	75-09-2	1
17.	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18.	Benzene	71-43-2	1
19.	1,1-Dichloroethene	75-35-4	1
20.	Tetrahydrofuran		25

Notes

13-16 added 10/03. JCF
Revised 10/31/03 JCF

17 added 0704. Revised 7/28/2004
10/2008 JCF

18 added 04 2011. JCF

19 added 04 2014. KPO, location 16-1 removed 2014

20 added 04 2016 JCF

Report to at or above the QL for these wells and
analytes. JCF 3-25-2020

25 ml purge volume

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jcf 3-26-2020

t/c
3/3

HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

Report to at or above the QL.
10/13- diethylphthate added 10/13.

Report to at or above the QL for these wells and
analytes. JCF 3-25-2020

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HWMU16

Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 8260C/ GCMS/ Volatile (1 of 2 pages)

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B & QC

Analyte	CAS#	SecondaryName	TertiaryName
1. Acetone	67-64-1		
2. Acetonitrile	75-05-8		
3. Acrolein	107-02-8		
4. Acrylonitrile	107-13-1		
5. Allyl chloride	107-05-1		
6. Benzene	71-43-2		
7. Bromodichloromethane	75-27-4		
8. Bromoform	75-25-2	Tribromomethane	
9. Carbon disulfide	75-15-0		
10. Carbon tetrachloride	56-23-5		
11. Chloroethane	75-00-3	Ethyl chloride	
12. Chloroform	67-66-3	Trichloromethane	
13. Chloroprene	126-99-8		
14. Dibromochloromethane	124-48-1		
15. 1,2-Dibromo-3-chloropropane	96-12-8	DBCP	
16. 1,2-Dibromoethane	106-93-4	EDB	Ethylene dibromide
17. 1,2-Dichlorobenzene	95-50-1	o-Dichlorobenzene	
18. 1,3-Dichlorobenzene	541-73-1	m-Dichlorobenzene	
19. 1,4-Dichlorobenzene	106-46-7	p-Dichlorobenzene	
20. trans-1,4-Dichloro-2-butene	110-57-6		
21. Dichlorodifluoromethane	75-71-8		
22. 1,1-Dichloroethane	75-34-3		
23. 1,2-Dichloroethane	107-06-2		
24. 1,1-Dichloroethene	75-35-4		
25. trans-1,2-Dichloroethene	156-60-5		
26. 1,2-Dichloropropane	78-87-5		
27. 1,3-Dichloropropane	142-28-9		
28. trans-1,3-Dichloropropene	10061-02-6		
29. Diethyl ether	60-29-7		
30. Dimethyl ether	115-10-6		
31. 1,4-Dioxane	123-91-1		
32. Ethylbenzene	100-41-4		
33. Ethyl methacrylate	97-63-2		
34. Hexachlorobutadiene	87-68-3		
35. Hexachloroethane	67-72-1		
36. 2-Hexanone	591-78-6	Methyl butyl ketone	MBK
37. Isobutyl alcohol	78-83-1		
38. Methacrylonitrile	126-98-7		
39. Bromomethane	74-83-9	Methyl bromide	
40. Chloromethane	74-87-3	Methyl chloride	
41. 2-Butanone	78-93-3	Methyl ethyl ketone	MEK
42. Iodomethane	74-88-4	methyl iodide	
43. Methyl methacrylate	80-62-6		
44. 4-Methyl-2-pentanone	108-10-1	Methyl isobutyl	
45. Dibromomethane	74-95-3	Methylene bromide	
46. Methylene chloride	75-09-2		
47. Naphthalene	91-20-3		
48. Pentachloroethane	76-01-7		

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For these wells and analytes, report to permit MDL (or lab mdl if higher) with J flag.

jcf 3-26-2020

For 2-propanol report to QL Page 96 of 1506
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and DL at 50 ug/l.

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

49. 2-Propanol	67-63-0	Isopropanol	
50. Propionitrile	107-12-0		
51. Styrene	100-42-5		
52. 1,1,1,2-Tetrachloroethane	630-20-6		
53. 1,1,2,2-Tetrachloroethane	79-34-5		
54. Tetrachloroethene	127-18-4	Tetrachloroethylene	
55. Tetrahydrofuran	109-99-9		
56. Toluene	108-88-3		
57. 1,2,4-Trichlorobenzene	120-82-1		
58. 1,1,1-Trichloroethane	71-55-6	Methylchloroform	
59. 1,1,2-Trichloroethane	79-00-5		
60. Trichloroethene	79-01-6	Trichloroethene	
61. Trichlorofluoromethane	75-69-4		
62. 1,2,3-Trichloropropane	96-18-4		
63. 1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	Freon-13	
64. Vinyl acetate	108-05-4		
65. Vinyl chloride	75-01-4		
66. Xylenes (Total)	1330-20-7		

Rev per July 2014 permit renewal. JCF 4-2015

For these wells and analytes, report to permit MDL (or lab mdl if higher) with J flag.

For 2-propanol report to QL 100 ug/l and DL at 50 ug/l.

JCF 3-26-2020

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jcf 3-26-2020
Page 5 of 7

For these wells/analytes, report to permit MDL (or lab MDL if higher) - jcf
3-25-2020

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HWMU16

Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 8270D/ GCMS/ Semivolatile

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B & QC

Analyte	CAS#	SecondaryName	TertiaryName
1. Acenaphthene	83-32-9		
2. Acenaphthylene	208-96-8		
3. Acetophenone	98-86-2		
4. 2-Acetylaminofluorene	53-96-3		
5. 4-Aminobiphenyl	92-67-1		
6. Aniline	62-53-3		
7. Anthracene	120-12-7		
8. Aramite	140-57-8		
9. Benzo[a]anthracene	56-55-3		
10. Benzo[b]fluoranthene	205-99-2		
11. Benzo[k]fluoranthene	207-08-9		
12. Benzo[ghi]perylene	191-24-2		
13. Benzo[a]pyrene	50-32-8		
14. 1,4-Benzenediamine	106-50-3	p-Phenylenediamine	
15. Benzyl alcohol	100-51-6		
16. bis(2-Chloroethoxy)methane	111-91-1		
17. bis(2-Chloroethyl)ether	111-44-4		
18. bis(2-Chloro-1-methylethyl)ether	108-60-1		
19. bis(2-Ethylhexyl)phthalate	117-81-7		
20. 4-Bromophenyl phenyl ether	101-55-3		
21. Butyl benzyl phthalate	85-68-7		
22. p-Chloroaniline	106-47-8	4-Chloroaniline	
23. Chlorobenzilate	510-15-6		
24. p-Chloro-m-cresol	59-50-7	4-Chloro-3-methylphenol	
25. 2-Chloronaphthalene	91-58-7		
26. 2-Chlorophenol	95-57-8		
27. 4-Chlorophenyl phenyl ether	7005-72-3		
28. Chrysene	218-01-9		
29. Diallate	2303-16-4		
30. Dibenz(a,h)anthracene	53-70-3		
31. Dibenzofuran	132-64-9		
32. Di-n-butyl phthalate	84-74-2		
33. 3,3'-Dichlorobenzidine	91-94-1		
34. 2,4-Dichlorophenol	120-83-2		
35. 2,6-Dichlorophenol	87-65-0		
36. Diethyl phthalate	84-66-2		
37. O,O-Diethyl O-2-pyrazinyl	297-97-2	Thionazin	
38. Dimethoate	60-51-5		
39. p-(Dimethylamino)azobenzene	60-11-7		
40. 7,12-Dimethylbenz[a]anthracene	57-97-6		
41. 3,3'-Dimethylbenzidine	119-93-7		
42. a,a-Dimethylphenethylamine	122-09-8		
43. 2,4-Dimethylphenol	105-67-9		
44. Dimethyl phthalate	131-11-3		
45. m-Dinitrobenzene	99-65-0	1,3-Dinitrobenzene	
46. 4,6-Dinitro-o-cresol	534-52-1	4,6-Dinitro-2-methylphenol	
47. 2,4-Dinitrophenol	51-28-5		
48. 2,4-Dinitrotoluene	121-14-2		
49. 2,6-Dinitrotoluene	606-20-2		
50. Di-n-octyl phthalate	117-84-0		
51. Diphenylamine	122-39-4		
52. Disulfoton	298-04-4		
53. Ethyl methanesulfonate	62-50-0		
54. Famphur	52-85-7		
55. Fluoranthene	206-44-0		
56. Fluorene	86-73-7		

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For these wells/analytes, report to permit MDL (or lab MDL if higher) - jcf 3-25-2020

t/c

HWMU16

Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

57. Hexachlorobenzene	118-74-1		
58. Hexachlorocyclopentadiene	77-47-4		
59. Hexachlorophene	70-30-4	To be analyzed by alternate lab	3-25-2020
60. Hexachloropropene	1888-71-7		
61. Indeno[1,2,3-cd]pyrene	193-39-5		
62. Isodrin	465-73-6		
63. Isophorone	78-59-1		
64. Isosafrole	120-58-1		
65. Kepone	143-50-0		
66. Methapyrilene	91-80-5		
67. 3-Methylcholanthrene	56-49-5		
68. Methyl methane sulfonate	66-27-3		
69. 2-Methylnaphthalene	91-57-6		
70. Methyl parathion	298-00-0		
71. 2-Methylphenol	95-48-7	o-Cresol	
72. 3 & 4-Methylphenol	m 108-39-4 p	m-/p-Cresol	
73. 1,4-Naphthoquinone	130-15-4		
74. 1-Naphthylamine	134-32-7		
75. 2-Naphthylamine	91-59-8		
76. o-Nitroaniline	88-74-4	2-Nitroaniline	
77. m-Nitroaniline	99-09-2	3-Nitroaniline	
78. p-Nitroaniline	100-01-6	4-Nitroaniline	
79. Nitrobenzene	98-95-3		
80. o-Nitrophenol	88-75-5	2-Nitrophenol	
81. p-Nitrophenol	100-02-7	4-Nitrophenol	
82. 4-Nitroquinoline-1-oxide	56-57-5		
83. N-Nitrosodi-n-butylamine	924-16-3		
84. N-Nitrosodiethylamine	55-18-5		
85. N-Nitrosodimethylamine	62-75-9		
86. N-Nitrosodiphenylamine	86-30-6		
87. N-Nitrosodipropylamine	621-64-7		
88. N-Nitrosomethylethylamine	10595-95-6		
89. N-Nitrosomorpholine	59-89-2		
90. N-Nitrosopiperidine	100-75-4		
91. N-Nitrosopyrrolidine	930-55-2		
92. 5-Nitroso-o-toluidine	99-55-8		
93. Parathion	56-38-2		
94. Pentachlorobenzene	608-93-5		
95. Pentachloronitrobenzene	82-68-8		
96. Pentachlorophenol	87-86-5		
97. Phenacetin	62-44-2		
98. Phenanthrene	85-01-8		
99. Phenol	108-95-2		
100. Phorate	298-02-2		
101. 2-Picoline	931-19-1		
102. Pronamide	23950-58-5		
103. Pyrene	129-00-0		
104. Pyridine	110-86-1		
105. Safrole	94-59-7		
106. Sulfotep	3689-24-5	To be analyzed by alternate lab	3-25-2020
107. 1,2,4,5-Tetrachlorobenzene	95-94-3		
108. 2,3,4,6-Tetrachlorophenol	58-90-2		
109. o-Toluidine	95-53-4		
110. 2,4,5-Trichlorophenol	95-95-4		
111. 2,4,6-Trichlorophenol	88-06-2		
112. O,O,O-Triethyl phosphorothioate	126-68-1		
113. sym-Trinitrobenzene	99-35-4	1,3,5-trinitrobenzene	

114. HEXACHLOROETHANE TO BE ANALYZED BY 8260 JCF 3-20-2020

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Sample Administration Receipt Documentation Log

Doc Log ID: 282241



Group Number(s): 2096666

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	<u>UPS</u>	Arrival Date:	<u>04/17/2020</u>
Number of Packages:	<u>2</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>VA</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	HCI
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	No		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Katherine Metzger

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	0.3	DT	Wet	Y	Bagged	N
2	DT131	0.7	DT	Wet	Y	Bagged	N

Samples Not Intact Details

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
16MW8	40 ml glass vial (GC/MS) - HCI	1	N	
16-3	40 ml glass vial (GC/MS) - HCI	1	N	

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
16MW9	8	11	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix		Comments
		Liquid	Solid	
1300794	16C1	X		
1300795	16MW8	X		
1300796	16MW9	X		
1300797	16WC1A	X		Unspiked
1300798	16WC1A MS	X		Matrix Spike
1300799	16WC1A MSD	X		Matrix Spike Duplicate
1300800	16WDUP	X		Field Duplicate Sample
1300801	16WC1B	X		
1300802	16-2	X		
1300803	16-3	X		
1300804	16-5	X		
1300805	16WC2B	X		
1300806	16SPRING	X		
1300807	Trip Blank_1	X		Trip Blank
1300808	Trip Blank_2	X		Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808, UNSPK: 1300797)

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Benzene, Chloroform, Chloromethane, Methylene Chloride, Vinyl Chloride

The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias: Ethyl ether

The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethane, 1,2-Dichloropropane, Chloroethane, Trichloroethene, Trichlorofluoromethane

SAMPLE ANALYSIS:

Samples	2-Propanol	8260C (25 ml)
1300794	DF1	DF2.5; DF1
1300795	DF1	DF2; DF1
1300796	DF1	DF4; DF1
1300797	UNSPK/ DF1	UNSPK/ DF1
1300798	MS/ DF1	MS/ DF1
1300799	MSD/ DF1	MSD/ DF1
1300800	DF1	DF1
1300801	DF1	DF1
1300802		DF1
1300803		DF1
1300804		DF1
1300805		DF1
1300806		DF1
1300807		DF1
1300808		DF1

(Sample number(s): 1300803: Analysis: 11996)

Due to the need for reanalysis of the sample, the requirement for no headspace was not met. This analysis was performed from a previously opened container with headspace.

(Sample number(s): 1300795: Analysis: 11996)

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

A Report Limit Verification (RLV) standard is analyzed to confirm

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Volatiles

Fraction: Volatiles by GC/MS

sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:

Acetone, Dimethyl Ether.

The concentration reported for Ethyl Ether is estimated since it exceeds the calibration range of the instrument in the initial determination, but is less than the quantitation limit in the further dilution. The result reported is from the further diluted determination.

(Sample number(s): 1300794, 1300796, 1300801: Analysis: 11996)

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

(Sample number(s): 1300797, 1300800: Analysis: 11996)

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Dimethyl Ether.

(Sample number(s): 1300807-1300808: Analysis: 11996)

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

A targeted library search was performed yielding the following results:
Hexachloroethane is non-detect.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

Quality Control Reference List GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
2-Propanol	Y201192AA	VBLKY37	04/28/2020 21:56
		LCSY37	04/28/2020 21:11
		1300794	04/29/2020 00:51
		1300795	04/29/2020 01:13
		1300796	04/29/2020 01:35
		1300797 UNSPK	04/28/2020 23:45
		1300798 MS	04/29/2020 00:07
		1300799 MSD	04/29/2020 00:29
		1300800	04/29/2020 01:57
		1300801	04/29/2020 02:19
8260C (25 ml)	H201181AA	VBLKH54	04/27/2020 22:13
		LCSH54	04/27/2020 20:25
		LCSH55	04/27/2020 21:30
		1300795	04/27/2020 23:21
		1300797 UNSPK	04/27/2020 23:43
		1300798 MS	04/28/2020 00:05
		1300798 MS	04/28/2020 00:48
		1300799 MSD	04/28/2020 00:26
		1300799 MSD	04/28/2020 01:10
		1300800	04/28/2020 01:31
		1300807	04/27/2020 22:38
		1300808	04/27/2020 23:00
8260C (25 ml)	H201181AB	VBLKH59	04/28/2020 11:02
		LCSH59	04/28/2020 09:35
		LCDH59	04/28/2020 09:56
		LCSH60	04/28/2020 10:18
		LCDH60	04/28/2020 10:40
		1300794	04/28/2020 13:57
		1300794	04/28/2020 14:18
		1300795	04/28/2020 13:35
		1300796	04/28/2020 14:40
		1300796	04/28/2020 15:02
		1300801	04/28/2020 11:25
		1300802	04/28/2020 11:47
		1300803	04/28/2020 12:08
		1300804	04/28/2020 12:30
		1300805	04/28/2020 12:52
		1300806	04/28/2020 13:13

Fraction: Volatiles by GC/MS

H201181AA / VBLKH54 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	04/27/20	N.D.	ug/l	0.1	1.0
Chloromethane	04/27/20	N.D.	ug/l	0.06	1.0
Vinyl Chloride	04/27/20	N.D.	ug/l	0.2	1.0
Bromomethane	04/27/20	N.D.	ug/l	0.5	1.0
Chloroethane	04/27/20	N.D.	ug/l	0.07	1.0
Trichlorofluoromethane	04/27/20	N.D.	ug/l	0.2	1.0
Ethyl ether	04/27/20	N.D.	ug/l	1.1	13
Acrolein	04/27/20	N.D.	ug/l	3.4	25
1,1-Dichloroethene	04/27/20	N.D.	ug/l	0.2	1.0
Freon 113	04/27/20	N.D.	ug/l	0.1	1.0
Acetone	04/27/20	N.D.	ug/l	0.9	10
Methyl Iodide	04/27/20	N.D.	ug/l	0.6	10
Carbon Disulfide	04/27/20	N.D.	ug/l	0.4	10
Acetonitrile	04/27/20	N.D.	ug/l	32	100
Allyl Chloride	04/27/20	N.D.	ug/l	0.8	10
Methylene Chloride	04/27/20	N.D.	ug/l	0.2	1.0
Acrylonitrile	04/27/20	N.D.	ug/l	0.5	10
trans-1,2-Dichloroethene	04/27/20	N.D.	ug/l	0.2	1.0
1,1-Dichloroethane	04/27/20	N.D.	ug/l	0.1	1.0
Vinyl Acetate	04/27/20	N.D.	ug/l	3.3	10
2-Chloro-1,3-butadiene	04/27/20	N.D.	ug/l	0.5	10
2-Butanone	04/27/20	N.D.	ug/l	0.6	10
Propionitrile	04/27/20	N.D.	ug/l	10	100
Methacrylonitrile	04/27/20	N.D.	ug/l	9.8	100
Tetrahydrofuran	04/27/20	N.D.	ug/l	2.0	25
Chloroform	04/27/20	N.D.	ug/l	0.09	1.0
1,1,1-Trichloroethane	04/27/20	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	04/27/20	N.D.	ug/l	0.2	1.0
Isobutyl Alcohol	04/27/20	N.D.	ug/l	3.6	200
Benzene	04/27/20	N.D.	ug/l	0.07	1.0
1,2-Dichloroethane	04/27/20	N.D.	ug/l	0.1	1.0
Trichloroethene	04/27/20	N.D.	ug/l	0.2	1.0
1,2-Dichloropropane	04/27/20	N.D.	ug/l	0.1	1.0
Dibromomethane	04/27/20	N.D.	ug/l	0.07	1.0
Methyl Methacrylate	04/27/20	N.D.	ug/l	3.6	10
1,4-Dioxane	04/27/20	N.D.	ug/l	45	200
Bromodichloromethane	04/27/20	N.D.	ug/l	0.09	1.0
4-Methyl-2-pentanone	04/27/20	N.D.	ug/l	0.9	10
Toluene	04/27/20	N.D.	ug/l	0.09	1.0
trans-1,3-Dichloropropene	04/27/20	N.D.	ug/l	0.1	1.0
Ethyl Methacrylate	04/27/20	N.D.	ug/l	0.8	10
1,1,2-Trichloroethane	04/27/20	N.D.	ug/l	0.08	1.0
Tetrachloroethene	04/27/20	N.D.	ug/l	0.06	1.0
1,3-Dichloropropane	04/27/20	N.D.	ug/l	0.09	1.0
2-Hexanone	04/27/20	N.D.	ug/l	0.6	10

Fraction: Volatiles by GC/MS

H201181AA / VBLKH54					
Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dibromochloromethane	04/27/20	N.D.	ug/l	0.07	1.0
1,2-Dibromoethane	04/27/20	N.D.	ug/l	0.06	1.0
1,1,1,2-Tetrachloroethane	04/27/20	N.D.	ug/l	0.08	1.0
Ethylbenzene	04/27/20	N.D.	ug/l	0.08	1.0
m+p-Xylene	04/27/20	N.D.	ug/l	0.1	2.0
o-Xylene	04/27/20	N.D.	ug/l	0.1	1.0
Xylene (Total)	04/27/20	N.D.	ug/l	0.2	3.0
Styrene	04/27/20	N.D.	ug/l	0.07	1.0
Bromoform	04/27/20	N.D.	ug/l	0.1	1.0
1,1,2,2-Tetrachloroethane	04/27/20	N.D.	ug/l	0.2	1.0
trans-1,4-Dichloro-2-butene	04/27/20	N.D.	ug/l	1	10
1,2,3-Trichloropropane	04/27/20	N.D.	ug/l	0.1	1.0
Pentachloroethane	04/27/20	N.D.	ug/l	0.8	10
1,3-Dichlorobenzene	04/27/20	N.D.	ug/l	0.06	1.0
1,4-Dichlorobenzene	04/27/20	N.D.	ug/l	0.07	1.0
1,2-Dichlorobenzene	04/27/20	N.D.	ug/l	0.08	1.0
1,2-Dibromo-3-chloropropane	04/27/20	N.D.	ug/l	0.2	1.0
1,2,4-Trichlorobenzene	04/27/20	N.D.	ug/l	0.1	1.0
Hexachlorobutadiene	04/27/20	N.D.	ug/l	0.07	1.0
Naphthalene	04/27/20	N.D.	ug/l	0.1	1.0
Dimethyl ether	04/27/20	N.D.	ug/l	0.04	13

H201181AB / VBLKH59					
Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	04/28/20	N.D.	ug/l	0.1	1.0
Chloromethane	04/28/20	N.D.	ug/l	0.06	1.0
Vinyl Chloride	04/28/20	N.D.	ug/l	0.2	1.0
Bromomethane	04/28/20	N.D.	ug/l	0.5	1.0
Chloroethane	04/28/20	N.D.	ug/l	0.07	1.0
Trichlorofluoromethane	04/28/20	N.D.	ug/l	0.2	1.0
Ethyl ether	04/28/20	N.D.	ug/l	1.1	13
Acrolein	04/28/20	N.D.	ug/l	3.4	25
1,1-Dichloroethene	04/28/20	N.D.	ug/l	0.2	1.0
Freon 113	04/28/20	N.D.	ug/l	0.1	1.0
Acetone	04/28/20	N.D.	ug/l	0.9	10
Methyl Iodide	04/28/20	N.D.	ug/l	0.6	10
Carbon Disulfide	04/28/20	N.D.	ug/l	0.4	10
Acetonitrile	04/28/20	N.D.	ug/l	32	100
Allyl Chloride	04/28/20	N.D.	ug/l	0.8	10
Methylene Chloride	04/28/20	N.D.	ug/l	0.2	1.0
Acrylonitrile	04/28/20	N.D.	ug/l	0.5	10
trans-1,2-Dichloroethene	04/28/20	N.D.	ug/l	0.2	1.0
1,1-Dichloroethane	04/28/20	N.D.	ug/l	0.1	1.0
Vinyl Acetate	04/28/20	N.D.	ug/l	3.3	10
2-Chloro-1,3-butadiene	04/28/20	N.D.	ug/l	0.5	10

Fraction: Volatiles by GC/MS

H201181AB / VBLKH59 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Butanone	04/28/20	N.D.	ug/l	0.6	10
Propionitrile	04/28/20	N.D.	ug/l	10	100
Methacrylonitrile	04/28/20	N.D.	ug/l	9.8	100
Tetrahydrofuran	04/28/20	N.D.	ug/l	2.0	25
Chloroform	04/28/20	N.D.	ug/l	0.09	1.0
1,1,1-Trichloroethane	04/28/20	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	04/28/20	N.D.	ug/l	0.2	1.0
Isobutyl Alcohol	04/28/20	N.D.	ug/l	3.6	200
Benzene	04/28/20	N.D.	ug/l	0.07	1.0
1,2-Dichloroethane	04/28/20	N.D.	ug/l	0.1	1.0
Trichloroethene	04/28/20	N.D.	ug/l	0.2	1.0
1,2-Dichloropropane	04/28/20	N.D.	ug/l	0.1	1.0
Dibromomethane	04/28/20	N.D.	ug/l	0.07	1.0
Methyl Methacrylate	04/28/20	N.D.	ug/l	3.6	10
1,4-Dioxane	04/28/20	N.D.	ug/l	45	200
Bromodichloromethane	04/28/20	N.D.	ug/l	0.09	1.0
4-Methyl-2-pentanone	04/28/20	N.D.	ug/l	0.9	10
Toluene	04/28/20	N.D.	ug/l	0.09	1.0
trans-1,3-Dichloropropene	04/28/20	N.D.	ug/l	0.1	1.0
Ethyl Methacrylate	04/28/20	N.D.	ug/l	0.8	10
1,1,2-Trichloroethane	04/28/20	N.D.	ug/l	0.08	1.0
Tetrachloroethene	04/28/20	N.D.	ug/l	0.06	1.0
1,3-Dichloropropane	04/28/20	N.D.	ug/l	0.09	1.0
2-Hexanone	04/28/20	N.D.	ug/l	0.6	10
Dibromochloromethane	04/28/20	N.D.	ug/l	0.07	1.0
1,2-Dibromoethane	04/28/20	N.D.	ug/l	0.06	1.0
1,1,1,2-Tetrachloroethane	04/28/20	N.D.	ug/l	0.08	1.0
Ethylbenzene	04/28/20	N.D.	ug/l	0.08	1.0
m+p-Xylene	04/28/20	N.D.	ug/l	0.1	2.0
o-Xylene	04/28/20	N.D.	ug/l	0.1	1.0
Xylene (Total)	04/28/20	N.D.	ug/l	0.2	3.0
Styrene	04/28/20	N.D.	ug/l	0.07	1.0
Bromoform	04/28/20	N.D.	ug/l	0.1	1.0
1,1,2,2-Tetrachloroethane	04/28/20	N.D.	ug/l	0.2	1.0
trans-1,4-Dichloro-2-butene	04/28/20	N.D.	ug/l	1	10
1,2,3-Trichloropropane	04/28/20	N.D.	ug/l	0.1	1.0
Pentachloroethane	04/28/20	N.D.	ug/l	0.8	10
1,3-Dichlorobenzene	04/28/20	N.D.	ug/l	0.06	1.0
1,4-Dichlorobenzene	04/28/20	N.D.	ug/l	0.07	1.0
1,2-Dichlorobenzene	04/28/20	N.D.	ug/l	0.08	1.0
1,2-Dibromo-3-chloropropane	04/28/20	N.D.	ug/l	0.2	1.0
1,2,4-Trichlorobenzene	04/28/20	N.D.	ug/l	0.1	1.0
Hexachlorobutadiene	04/28/20	N.D.	ug/l	0.07	1.0
Naphthalene	04/28/20	N.D.	ug/l	0.1	1.0
Dimethyl ether	04/28/20	N.D.	ug/l	0.04	13

Fraction: Volatiles by GC/MS

Y201192AA / VBLKY37					
Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Propanol	04/28/20	N.D.	ug/l	18	100

Fraction: Volatiles by GC/MS

H201181AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH54	110	80 - 120	96	80 - 120	111	80 - 120	91	80 - 120
LCSH54	107	80 - 120	99	80 - 120	106	80 - 120	93	80 - 120
1300795	111	80 - 120	95	80 - 120	112	80 - 120	91	80 - 120
1300797 UNSPK	111	80 - 120	95	80 - 120	113	80 - 120	90	80 - 120
1300798 MS	107	80 - 120	99	80 - 120	107	80 - 120	92	80 - 120
1300799 MSD	108	80 - 120	98	80 - 120	107	80 - 120	92	80 - 120
1300800	111	80 - 120	96	80 - 120	113	80 - 120	91	80 - 120
1300807	114	80 - 120	95	80 - 120	111	80 - 120	91	80 - 120
1300808	114	80 - 120	95	80 - 120	112	80 - 120	91	80 - 120

H201181AB	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH59	108	80 - 120	94	80 - 120	105	80 - 120	97	80 - 120
LCSH59	105	80 - 120	95	80 - 120	101	80 - 120	98	80 - 120
LCDH59	106	80 - 120	95	80 - 120	101	80 - 120	98	80 - 120
1300794	107	80 - 120	92	80 - 120	104	80 - 120	98	80 - 120
1300796	107	80 - 120	92	80 - 120	104	80 - 120	97	80 - 120
1300801	107	80 - 120	92	80 - 120	104	80 - 120	97	80 - 120
1300802	109	80 - 120	93	80 - 120	104	80 - 120	98	80 - 120
1300803	108	80 - 120	92	80 - 120	104	80 - 120	97	80 - 120
1300804	109	80 - 120	92	80 - 120	105	80 - 120	97	80 - 120
1300805	110	80 - 120	92	80 - 120	105	80 - 120	98	80 - 120
1300806	112	80 - 120	92	80 - 120	106	80 - 120	97	80 - 120

Y201192AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKY37	104	80 - 120	95	80 - 120	101	80 - 120	96	80 - 120
LCSY37	102	80 - 120	98	80 - 120	100	80 - 120	97	80 - 120
1300794	104	80 - 120	95	80 - 120	101	80 - 120	97	80 - 120
1300795	102	80 - 120	95	80 - 120	103	80 - 120	96	80 - 120
1300796	102	80 - 120	94	80 - 120	102	80 - 120	96	80 - 120
1300797 UNSPK	103	80 - 120	94	80 - 120	104	80 - 120	96	80 - 120
1300798 MS	103	80 - 120	98	80 - 120	102	80 - 120	97	80 - 120
1300799 MSD	101	80 - 120	98	80 - 120	101	80 - 120	96	80 - 120
1300800	103	80 - 120	94	80 - 120	103	80 - 120	96	80 - 120
1300801	102	80 - 120	95	80 - 120	103	80 - 120	96	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1300797 MS: 1300798 MSD: 1300799	Batch: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808)								
	Batch: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806)								
Analyte	Spike Added ug/l	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Dichlorodifluoromethane	5.00	N.D.	5.65	5.55	113	111	43-123	2	30
Chloromethane	5.00	N.D.	6.24	6.21	125 *	124	56-124	0	30
Vinyl Chloride	5.00	0.153	6.52	6.35	127 *	124	60-125	3	30
Bromomethane	5.00	N.D.	5.82	5.71	116	114	60-136	2	30
Chloroethane	5.00	1.37	7.47	7.53	122 *	123 *	63-120	1	30
Trichlorofluoromethane	5.00	N.D.	6.87	6.91	137 *	138 *	62-136	1	30
Ethyl ether	5.00	15.38	21.42	21.82	121	129 *	72-121	2	30
Acrolein	37.5	N.D.	35.37	31.84	94	85	45-140	11	30
1,1-Dichloroethene	5.00	N.D.	6.25	6.00	125	120	80-131	4	30
Freon 113	5.00	N.D.	6.53	6.29	131	126	75-133	4	30
Acetone	37.5	N.D.	31.87	31.12	85	83	60-146	2	30
Methyl Iodide	5.00	N.D.	5.73 J	5.49 J	115	110	77-120	4	30
Carbon Disulfide	5.00	N.D.	6.19 J	5.87 J	124	117	67-130	5	30
Acetonitrile	37.5	N.D.	37.91 J	38.16 J	101	102	51-160	1	30
Allyl Chloride	5.00	N.D.	5.48 J	5.31 J	110	106	51-126	3	30
Methylene Chloride	5.00	N.D.	6.18	5.95	124 *	119	80-120	4	30
Acrylonitrile	25	N.D.	27.65	24.19	111	97	64-139	13	30
trans-1,2-Dichloroethene	5.00	N.D.	5.98	5.74	120	115	80-120	4	30
1,1-Dichloroethane	5.00	2.98	9.43	9.39	129 *	128 *	74-120	0	30
Vinyl Acetate	12.5	N.D.	13.77	13.32	110	107	38-145	3	30
2-Chloro-1,3-butadiene	5.00	N.D.	6.03 J	5.86 J	121	117	60-128	3	30
2-Butanone	37.5	N.D.	40.5	36.27	108	97	59-141	11	30
Propionitrile	37.5	N.D.	40.82 J	37.53 J	109	100	63-145	8	30
Methacrylonitrile	37.5	N.D.	41.01 J	36.32 J	109	97	60-145	12	30
Tetrahydrofuran	25	2.21 J	28.54	25.46	105	93	67-137	11	30
Chloroform	5.00	N.D.	6.18	5.91	124 *	118	80-120	4	30
1,1,1-Trichloroethane	5.00	N.D.	5.86	5.59	117	112	78-126	5	30
Carbon Tetrachloride	5.00	N.D.	6.20	5.98	124	120	64-141	3	30
Isobutyl Alcohol	125	N.D.	126.25 J	114.64 J	101	92	57-154	10	30
Benzene	5.00	0.206 J	6.40	6.17	124 *	119	80-120	4	30
1,2-Dichloroethane	5.00	N.D.	5.95	5.61	119	112	69-122	6	30
Trichloroethene	5.00	N.D.	6.17	6.12	123 *	122 *	80-120	1	30
1,2-Dichloropropane	5.00	N.D.	6.54	6.22	131 *	124 *	80-120	5	30
Dibromomethane	5.00	N.D.	6.11	5.93	122	119	80-122	3	30
Methyl Methacrylate	5.00	N.D.	5.36 J	4.82 J	107	96	55-139	10	30
1,4-Dioxane	125	N.D.	139.35 J	135.93 J	111	109	65-169	2	30
Bromodichloromethane	5.00	N.D.	5.98	5.81	120	116	73-124	3	30

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1300797 MS: 1300798 MSD: 1300799 Analyte	Batch: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808) Batch: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806)								
	Spike Added ug/l	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
4-Methyl-2-pentanone	25	N.D.	26.24	23.23	105	93	55-140	12	30
Toluene	5.00	N.D.	5.15	4.96	103	99	80-120	4	30
trans-1,3-Dichloropropene	5.00	N.D.	4.76	4.57	95	91	61-129	4	30
Ethyl Methacrylate	5.00	N.D.	4.31 J	4.13 J	86	83	55-133	4	30
1,1,2-Trichloroethane	5.00	N.D.	5.24	5.02	105	100	80-120	4	30
Tetrachloroethene	5.00	0.101 J	5.45	5.18	107	101	80-120	5	30
1,3-Dichloropropane	5.00	N.D.	5.18	4.96	104	99	80-120	4	30
2-Hexanone	25	N.D.	26.74	23.92	107	96	52-140	11	30
Dibromochloromethane	5.00	N.D.	5.10	4.80	102	96	64-138	6	30
1,2-Dibromoethane	5.00	N.D.	5.16	4.94	103	99	80-120	4	30
1,1,1,2-Tetrachloroethane	5.00	N.D.	4.91	4.74	98	95	71-134	4	30
Ethylbenzene	5.00	N.D.	4.98	4.75	100	95	80-120	5	30
m+p-Xylene	10	N.D.	10.43	9.91	104	99	80-120	5	30
o-Xylene	5.00	N.D.	4.85	4.68	97	94	80-120	4	30
Xylene (Total)	15	N.D.	15.28	14.6	102	97	80-120	5	30
Styrene	5.00	N.D.	5.07	4.81	101	96	80-120	5	30
Bromoform	5.00	N.D.	4.72	4.48	94	90	49-144	5	30
1,1,2,2-Tetrachloroethane	5.00	N.D.	4.71	4.67	94	93	75-123	1	30
trans-1,4-Dichloro-2-butene	25	N.D.	21.34	19.23	85	77	10-172	10	30
1,2,3-Trichloropropane	5.00	N.D.	4.90	4.85	98	97	80-125	1	30
Pentachloroethane	5.00	N.D.	4.59 J	4.56 J	92	91	68-134	0	30
1,3-Dichlorobenzene	5.00	N.D.	4.88	4.72	98	94	80-120	3	30
1,4-Dichlorobenzene	5.00	N.D.	4.99	4.77	100	95	80-120	5	30
1,2-Dichlorobenzene	5.00	N.D.	4.83	4.67	97	93	80-120	3	30
1,2-Dibromo-3-chloropropane	5.00	N.D.	5.11	4.42	102	88	56-148	14	30
1,2,4-Trichlorobenzene	5.00	N.D.	4.29	4.14	86	83	68-122	3	30
Hexachlorobutadiene	5.00	N.D.	5.04	4.79	101	96	72-132	5	30
Naphthalene	5.00	N.D.	3.71	3.59	74	72	64-122	3	30
Dimethyl ether	5.00	1.21 J	6.22 J	6.21 J	100	100	70-130	0	30

UNSPK: 1300797 MS: 1300798 MSD: 1300799 Analyte	Batch: Y201192AA (Sample number(s): 1300794-1300801)								
	Spike Added ug/l	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
2-Propanol	150	N.D.	134.74	135.82	90	91	52-144	1	30

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

SDG: RAF59
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSH54	Batch: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808)							
	Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD
Dichlorodifluoromethane	5.00	4.61	NA	92	NA	43-123	NA	NA
Chloromethane	5.00	5.36	NA	107	NA	56-124	NA	NA
Vinyl Chloride	5.00	5.23	NA	105	NA	60-125	NA	NA
Bromomethane	5.00	5.23	NA	105	NA	60-136	NA	NA
Chloroethane	5.00	5.20	NA	104	NA	63-120	NA	NA
Trichlorofluoromethane	5.00	5.64	NA	113	NA	62-136	NA	NA
Ethyl ether	5.00	5.89 J	NA	118	NA	72-121	NA	NA
Acrolein	37.5	32.21	NA	86	NA	45-140	NA	NA
1,1-Dichloroethene	5.00	5.03	NA	101	NA	80-131	NA	NA
Freon 113	5.00	5.06	NA	101	NA	75-133	NA	NA
Acetone	37.5	29.04	NA	77	NA	60-146	NA	NA
Methyl Iodide	5.00	5.00 J	NA	100	NA	77-120	NA	NA
Carbon Disulfide	5.00	5.00 J	NA	100	NA	67-130	NA	NA
Allyl Chloride	5.00	4.89 J	NA	98	NA	51-126	NA	NA
Methylene Chloride	5.00	5.38	NA	108	NA	80-120	NA	NA
Acrylonitrile	25	24.12	NA	96	NA	64-139	NA	NA
trans-1,2-Dichloroethene	5.00	4.98	NA	100	NA	80-122	NA	NA
1,1-Dichloroethane	5.00	5.39	NA	108	NA	74-120	NA	NA
2-Chloro-1,3-butadiene	5.00	5.01 J	NA	100	NA	60-128	NA	NA
2-Butanone	37.5	35.53	NA	95	NA	59-141	NA	NA
Propionitrile	37.5	39.02 J	NA	104	NA	63-145	NA	NA
Methacrylonitrile	37.5	35.57 J	NA	95	NA	60-145	NA	NA
Tetrahydrofuran	25	22.74 J	NA	91	NA	67-137	NA	NA
Chloroform	5.00	5.44	NA	109	NA	80-120	NA	NA
1,1,1-Trichloroethane	5.00	4.84	NA	97	NA	78-126	NA	NA
Carbon Tetrachloride	5.00	5.14	NA	103	NA	64-141	NA	NA
Isobutyl Alcohol	125	115.97 J	NA	93	NA	57-154	NA	NA
Benzene	5.00	5.36	NA	107	NA	80-120	NA	NA
1,2-Dichloroethane	5.00	5.55	NA	111	NA	69-122	NA	NA
Trichloroethene	5.00	5.13	NA	103	NA	80-120	NA	NA
1,2-Dichloropropane	5.00	5.81	NA	116	NA	80-120	NA	NA
Dibromomethane	5.00	5.85	NA	117	NA	80-122	NA	NA
Methyl Methacrylate	5.00	4.61 J	NA	92	NA	55-139	NA	NA
1,4-Dioxane	125	129.78 J	NA	104	NA	65-169	NA	NA
Bromodichloromethane	5.00	5.46	NA	109	NA	73-124	NA	NA
4-Methyl-2-pentanone	25	22.94	NA	92	NA	55-140	NA	NA
Toluene	5.00	4.50	NA	90	NA	80-120	NA	NA
trans-1,3-Dichloropropene	5.00	4.58	NA	92	NA	61-129	NA	NA
Ethyl Methacrylate	5.00	4.21 J	NA	84	NA	55-133	NA	NA
1,1,2-Trichloroethane	5.00	5.07	NA	101	NA	80-120	NA	NA
Tetrachloroethene	5.00	4.54	NA	91	NA	80-120	NA	NA
1,3-Dichloropropane	5.00	4.91	NA	98	NA	80-120	NA	NA

SDG: RAF59
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSH54		Batch: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808)						
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
2-Hexanone	25	23.41	NA	94	NA	52-140	NA	NA
Dibromochloromethane	5.00	4.98	NA	100	NA	64-138	NA	NA
1,2-Dibromoethane	5.00	4.92	NA	98	NA	80-120	NA	NA
1,1,1,2-Tetrachloroethane	5.00	4.59	NA	92	NA	71-134	NA	NA
Ethylbenzene	5.00	4.34	NA	87	NA	80-120	NA	NA
m+p-Xylene	10	9.04	NA	90	NA	80-120	NA	NA
o-Xylene	5.00	4.35	NA	87	NA	80-120	NA	NA
Xylene (Total)	15	13.38	NA	89	NA	80-120	NA	NA
Styrene	5.00	4.62	NA	92	NA	80-120	NA	NA
Bromoform	5.00	4.84	NA	97	NA	49-144	NA	NA
1,1,2,2-Tetrachloroethane	5.00	4.86	NA	97	NA	75-123	NA	NA
trans-1,4-Dichloro-2-butene	25	18.16	NA	73	NA	10-172	NA	NA
1,2,3-Trichloropropane	5.00	4.97	NA	99	NA	80-125	NA	NA
Pentachloroethane	5.00	4.35 J	NA	87	NA	68-134	NA	NA
1,3-Dichlorobenzene	5.00	4.40	NA	88	NA	80-120	NA	NA
1,4-Dichlorobenzene	5.00	4.55	NA	91	NA	80-120	NA	NA
1,2-Dichlorobenzene	5.00	4.54	NA	91	NA	80-120	NA	NA
1,2-Dibromo-3-chloropropane	5.00	4.10	NA	82	NA	56-148	NA	NA
1,2,4-Trichlorobenzene	5.00	3.98	NA	80	NA	68-122	NA	NA
Hexachlorobutadiene	5.00	4.30	NA	86	NA	72-132	NA	NA
Naphthalene	5.00	3.54	NA	71	NA	64-122	NA	NA

LCS: LCSH55		Batch: H201181AA (Sample number(s): 1300795, 1300797-1300800, 1300807-1300808)						
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Acetonitrile	37.5	35.27 J	NA	94	NA	51-160	NA	NA
Vinyl Acetate	12.5	13.17	NA	105	NA	38-145	NA	NA
Dimethyl ether	5.00	5.30 J	NA	106	NA	70-130	NA	NA

LCS: LCSH59 LCSD: LCDH59		Batch: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806)						
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Dichlorodifluoromethane	5.00	4.54	4.37	91	87	43-123	4	30
Chloromethane	5.00	5.19	5.14	104	103	56-124	1	30
Vinyl Chloride	5.00	5.11	5.08	102	102	60-125	0	30
Bromomethane	5.00	4.96	4.84	99	97	60-136	3	30
Chloroethane	5.00	5.04	4.93	101	99	63-120	2	30
Trichlorofluoromethane	5.00	5.56	5.46	111	109	62-136	2	30
Ethyl ether	5.00	5.41 J	5.26 J	108	105	72-121	3	30
Acrolein	37.5	34.07	34.19	91	91	45-140	0	30

SDG: RAF59
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH59 LCSD: LCDH59 Analyte	Batch: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,1-Dichloroethene	5.00	4.62	4.58	92	92	80-131	1	30
Freon 113	5.00	4.74	4.80	95	96	75-133	1	30
Acetone	37.5	31.88	32.41	85	86	60-146	2	30
Methyl Iodide	5.00	4.51 J	4.41 J	90	88	77-120	2	30
Carbon Disulfide	5.00	4.58 J	4.55 J	92	91	67-130	1	30
Allyl Chloride	5.00	4.65 J	4.56 J	93	91	51-126	2	30
Methylene Chloride	5.00	4.93	4.94	99	99	80-120	0	30
Acrylonitrile	25	24.53	25.26	98	101	64-139	3	30
trans-1,2-Dichloroethene	5.00	4.70	4.69	94	94	80-122	0	30
1,1-Dichloroethane	5.00	5.01	4.98	100	100	74-120	0	30
2-Chloro-1,3-butadiene	5.00	4.68 J	4.61 J	94	92	60-128	2	30
2-Butanone	37.5	36.88	37.74	98	101	59-141	2	30
Propionitrile	37.5	39.63 J	39.72 J	106	106	63-145	0	30
Methacrylonitrile	37.5	37.11 J	38.45 J	99	103	60-145	4	30
Tetrahydrofuran	25	24.07 J	25.43	96	102	67-137	6	30
Chloroform	5.00	5.01	4.96	100	99	80-120	1	30
1,1,1-Trichloroethane	5.00	4.63	4.60	93	92	78-126	1	30
Carbon Tetrachloride	5.00	4.84	4.81	97	96	64-141	1	30
Isobutyl Alcohol	125	122.06 J	119.56 J	98	96	57-154	2	30
Benzene	5.00	4.93	4.93	99	99	80-120	0	30
1,2-Dichloroethane	5.00	4.99	4.90	100	98	69-122	2	30
Trichloroethene	5.00	4.90	4.92	98	98	80-120	0	30
1,2-Dichloropropane	5.00	5.26	5.27	105	105	80-120	0	30
Dibromomethane	5.00	5.04	5.01	101	100	80-122	1	30
Methyl Methacrylate	5.00	4.78 J	5.05 J	96	101	55-139	5	30
1,4-Dioxane	125	137.38 J	134.43 J	110	108	65-169	2	30
Bromodichloromethane	5.00	4.99	4.98	100	100	73-124	0	30
4-Methyl-2-pentanone	25	23.46	23.86	94	95	55-140	2	30
Toluene	5.00	4.72	4.77	94	95	80-120	1	30
trans-1,3-Dichloropropene	5.00	4.61	4.61	92	92	61-129	0	30
Ethyl Methacrylate	5.00	4.24 J	4.17 J	85	83	55-133	2	30
1,1,2-Trichloroethane	5.00	5.17	5.08	103	102	80-120	2	30
Tetrachloroethene	5.00	4.83	4.89	97	98	80-120	1	30
1,3-Dichloropropane	5.00	5.05	5.03	101	101	80-120	1	30
2-Hexanone	25	24.48	25.1	98	100	52-140	3	30
Dibromochloromethane	5.00	5.08	4.97	102	99	64-138	2	30
1,2-Dibromoethane	5.00	5.05	4.92	101	98	80-120	3	30
1,1,1,2-Tetrachloroethane	5.00	4.76	4.73	95	95	71-134	1	30
Ethylbenzene	5.00	4.59	4.65	92	93	80-120	1	30
m+p-Xylene	10	9.49	9.57	95	96	80-120	1	30
o-Xylene	5.00	4.57	4.64	91	93	80-120	2	30
Xylene (Total)	15	14.05	14.22	94	95	80-120	1	30

SDG: RAF59
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH59 LCSD: LCDH59	Batch: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806)							
	Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD Limits
	Styrene	5.00	4.79	4.81	96	96	80-120	0 30
	Bromoform	5.00	4.80	4.80	96	96	49-144	0 30
	1,1,2,2-Tetrachloroethane	5.00	4.95	4.83	99	97	75-123	2 30
	trans-1,4-Dichloro-2-butene	25	18.98	19.82	76	79	10-172	4 30
	1,2,3-Trichloropropane	5.00	4.95	5.08	99	102	80-125	3 30
	Pentachloroethane	5.00	4.78 J	4.68 J	96	94	68-134	2 30
	1,3-Dichlorobenzene	5.00	4.78	4.77	96	95	80-120	0 30
	1,4-Dichlorobenzene	5.00	4.79	4.85	96	97	80-120	1 30
	1,2-Dichlorobenzene	5.00	4.85	4.81	97	96	80-120	1 30
	1,2-Dibromo-3-chloropropane	5.00	4.39	4.47	88	89	56-148	2 30
	1,2,4-Trichlorobenzene	5.00	4.27	4.29	85	86	68-122	0 30
	Hexachlorobutadiene	5.00	4.69	4.74	94	95	72-132	1 30
	Naphthalene	5.00	3.77	3.78	75	76	64-122	0 30

LCS: LCSH60 LCSD: LCDH60	Batch: H201181AB (Sample number(s): 1300794-1300796, 1300801-1300806)							
	Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD Limits
	Acetonitrile	37.5	42.79 J	43.65 J	114	116	51-160	2 30
	Vinyl Acetate	12.5	11.95	11.76	96	94	38-145	2 30
	Dimethyl ether	5.00	5.06 J	5.04 J	101	101	70-130	0 30

LCS: LCSY37	Batch: Y201192AA (Sample number(s): 1300794-1300801)							
	Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD Limits
	2-Propanol	150	140	NA	93	NA	52-144	NA NA

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.1	1.0	ug/l
Chloromethane	0.06	1.0	ug/l
Vinyl Chloride	0.2	1.0	ug/l
Bromomethane	0.5	1.0	ug/l
Chloroethane	0.07	1.0	ug/l
Trichlorofluoromethane	0.2	1.0	ug/l
Ethyl ether	1.1	13	ug/l
Acrolein	3.4	25	ug/l
1,1-Dichloroethene	0.2	1.0	ug/l
Freon 113	0.1	1.0	ug/l
Acetone	0.9	10	ug/l
Methyl Iodide	0.6	10	ug/l
Carbon Disulfide	0.4	10	ug/l
Acetonitrile	32	100	ug/l
Allyl Chloride	0.8	10	ug/l
Methylene Chloride	0.2	1.0	ug/l
Acrylonitrile	0.5	10	ug/l
trans-1,2-Dichloroethene	0.2	1.0	ug/l
1,1-Dichloroethane	0.1	1.0	ug/l
Vinyl Acetate	3.3	10	ug/l
2-Chloro-1,3-butadiene	0.5	10	ug/l
2-Butanone	0.6	10	ug/l
Propionitrile	10	100	ug/l
Methacrylonitrile	9.8	100	ug/l
Tetrahydrofuran	2.0	25	ug/l
Chloroform	0.09	1.0	ug/l
1,1,1-Trichloroethane	0.1	1.0	ug/l
Carbon Tetrachloride	0.2	1.0	ug/l
Isobutyl Alcohol	3.6	200	ug/l
Benzene	0.07	1.0	ug/l
1,2-Dichloroethane	0.1	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l
1,2-Dichloropropane	0.1	1.0	ug/l
Dibromomethane	0.07	1.0	ug/l
Methyl Methacrylate	3.6	10	ug/l
1,4-Dioxane	45	200	ug/l
Bromodichloromethane	0.09	1.0	ug/l
4-Methyl-2-pentanone	0.9	10	ug/l
Toluene	0.09	1.0	ug/l
trans-1,3-Dichloropropene	0.1	1.0	ug/l
Ethyl Methacrylate	0.8	10	ug/l
1,1,2-Trichloroethane	0.08	1.0	ug/l
Tetrachloroethene	0.06	1.0	ug/l
1,3-Dichloropropane	0.09	1.0	ug/l
2-Hexanone	0.6	10	ug/l
Dibromochloromethane	0.07	1.0	ug/l
1,2-Dibromoethane	0.06	1.0	ug/l

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
1,1,1,2-Tetrachloroethane	0.08	1.0	ug/l
Ethylbenzene	0.08	1.0	ug/l
m+p-Xylene	0.1	2.0	ug/l
o-Xylene	0.1	1.0	ug/l
Xylene (Total)	0.2	3.0	ug/l
Styrene	0.07	1.0	ug/l
Bromoform	0.1	1.0	ug/l
1,1,2,2-Tetrachloroethane	0.2	1.0	ug/l
trans-1,4-Dichloro-2-butene	1	10	ug/l
1,2,3-Trichloropropane	0.1	1.0	ug/l
Pentachloroethane	0.8	10	ug/l
1,3-Dichlorobenzene	0.06	1.0	ug/l
1,4-Dichlorobenzene	0.07	1.0	ug/l
1,2-Dichlorobenzene	0.08	1.0	ug/l
1,2-Dibromo-3-chloropropane	0.2	1.0	ug/l
1,2,4-Trichlorobenzene	0.1	1.0	ug/l
Hexachlorobutadiene	0.07	1.0	ug/l
Naphthalene	0.1	1.0	ug/l
Dimethyl ether	0.04	13	ug/l

11997: 2-Propanol Analyte Name	Default MDL	Default LOQ	Units
2-Propanol	18	100	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ya21t04.d BFB Injection Date: 04/21/20
 Instrument ID: HP09355 BFB Injection Time: 21:21
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.26
75	30.0 - 60.0% of mass 95	44.59
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.91
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	81.64
175	5.0 - 9.0% of mass 174	6.02 (7.37)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.63 (97.54)1
177	5.0 - 9.0% of mass 176	5.16 (6.48)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ya21i01.d	04/21/20	21:54
02	VSTD100	ya21i02.d	04/21/20	22:16
03	VSTD50	ya21i03.d	04/21/20	22:38
04	VSTD20	ya21i04.d	04/21/20	23:00
05	VSTD10	ya21i05.d	04/21/20	23:22
06	VSTD4	ya21i06.d	04/21/20	23:44
07	VSTD1	ya21i07.d	04/22/20	00:06
08	YLGICV	ya21v01.d	04/22/20	00:49

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ya28t41.d BFB Injection Date: 04/28/20
 Instrument ID: HP09355 BFB Injection Time: 20:16
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.25
75	30.0 - 60.0% of mass 95	45.29
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.41
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.76
175	5.0 - 9.0% of mass 174	5.92 (7.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.40 (97.14)1
177	5.0 - 9.0% of mass 176	5.48 (6.81)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ya28c41.d	04/28/20	20:49
02	LCSY37	ya28s41.d	04/28/20	21:11
03	VLKY37	ya28b41.d	04/28/20	21:56
04	RLVY37 - RLVY37	ya28r41.d	04/28/20	22:18
05	1302603	ya28s42.d	04/28/20	22:40
06	1303134	ya28s43.d	04/28/20	23:02
07	1303135	ya28s44.d	04/28/20	23:24
08	1300797	ya28s45.d	04/28/20	23:45
09	1300798MS	ya28s46.d	04/29/20	00:07
10	1300799MSD	ya28s47.d	04/29/20	00:29
11	1300794	ya28s48.d	04/29/20	00:51
12	1300795	ya28s49.d	04/29/20	01:13
13	1300796	ya28s50.d	04/29/20	01:35
14	1300800	ya28s51.d	04/29/20	01:57
15	1300801	ya28s52.d	04/29/20	02:19
16	1303132	ya28s53.d	04/29/20	02:41
17	1303133	ya28s54.d	04/29/20	03:03
18	1303136	ya28s55.d	04/29/20	03:25
19	1303137	ya28s56.d	04/29/20	03:46
20	1303138	ya28s57.d	04/29/20	04:09
21	1300555	ya28s58.d	04/29/20	04:31
22	1300556	ya28s59.d	04/29/20	04:53

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ya28t41.d BFB Injection Date: 04/28/20
 Instrument ID: HP09355 BFB Injection Time: 20:16
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.25
75	30.0 - 60.0% of mass 95	45.29
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.41
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	82.76
175	5.0 - 9.0% of mass 174	5.92 (7.15)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.40 (97.14)1
177	5.0 - 9.0% of mass 176	5.48 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1300557	ya28s60.d	04/29/20	05:15
24	1300558	ya28s61.d	04/29/20	05:37
25	1301539	ya28s62.d	04/29/20	05:59
26	1301875	ya28s63.d	04/29/20	06:21
27	1302629	ya28s64.d	04/29/20	06:43
28	1302629MS	ya28s65.d	04/29/20	07:05

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: hj06t01.d BFB Injection Date: 01/06/20
 Instrument ID: HP19094 BFB Injection Time: 10:35
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.27
75	30.0 - 60.0% of mass 95	46.81
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.87 (1.05)1
174	Greater than 50.0% of mass 95	83.57
175	5.0 - 9.0% of mass 174	6.30 (7.54)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.22 (98.38)1
177	5.0 - 9.0% of mass 176	5.38 (6.54)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hj06i11.d	01/06/20	11:19
02	VSTD10	hj06i12.d	01/06/20	11:41
03	VSTD5	hj06i13.d	01/06/20	12:02
04	VSTD2	hj06i14.d	01/06/20	12:24
05	VSTD1	hj06i15.d	01/06/20	12:46
06	VSTD.5	hj06i16.d	01/06/20	13:07
07	VSTD.2	hj06i17.d	01/06/20	13:29
08	ICVH01	hj06v11.d	01/06/20	13:51
09	VSTD25	hj06i01.d	01/06/20	14:34
10	VSTD10	hj06i02.d	01/06/20	14:56
11	VSTD5	hj06i03.d	01/06/20	15:18
12	VSTD2	hj06i04.d	01/06/20	15:39
13	VSTD1	hj06i05.d	01/06/20	16:01
14	VSTD.5	hj06i06.d	01/06/20	16:23
15	VSTD.2	hj06i07.d	01/06/20	16:44
16	ICVH00	hj06v01.d	01/06/20	17:06

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ha27t01.d BFB Injection Date: 04/27/20
 Instrument ID: HP19094 BFB Injection Time: 19:06
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.20
75	30.0 - 60.0% of mass 95	47.15
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.02
173	Less than 2.0% of mass 174	0.96 (1.04)1
174	Greater than 50.0% of mass 95	91.58
175	5.0 - 9.0% of mass 174	6.35 (6.93)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.55 (95.60)1
177	5.0 - 9.0% of mass 176	5.71 (6.53)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ha27c01.d	04/27/20	19:41
02	VSTD10	ha27c02.d	04/27/20	20:03
03	LCSH54	ha27l01.d	04/27/20	20:25
04	LCSH56	ha27l31.d	04/27/20	20:25
05	LCSH58	ha27l61.d	04/27/20	20:25
06	LCDH56	ha27l32.d	04/27/20	20:46
07	LCDH58	ha27l62.d	04/27/20	20:46
08	LCSH57	ha27l33.d	04/27/20	21:08
09	LCSH55	ha27l34.d	04/27/20	21:30
10	RLVH54 - RLVH54	ha27r01.d	04/27/20	21:51
11	RLVH58 - RLVH58	ha27r61.d	04/27/20	21:51
12	VBLKH54	ha27b01.d	04/27/20	22:13
13	VBLKH56	ha27b31.d	04/27/20	22:13
14	VBLKH58	ha27b61.d	04/27/20	22:13
15	1300807	ha27s02.d	04/27/20	22:38
16	1300808	ha27s03.d	04/27/20	23:00
17	1300795	ha27s04.d	04/27/20	23:21
18	1300797	ha27s05.d	04/27/20	23:43
19	1300798MS	ha27s06.d	04/28/20	00:05
20	1300799MSD	ha27s07.d	04/28/20	00:26
21	1300798MS1	ha27s08.d	04/28/20	00:48
22	1300799MSD1	ha27s09.d	04/28/20	01:10

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ha27t01.d BFB Injection Date: 04/27/20
 Instrument ID: HP19094 BFB Injection Time: 19:06
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.20
75	30.0 - 60.0% of mass 95	47.15
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.02
173	Less than 2.0% of mass 174	0.96 (1.04)1
174	Greater than 50.0% of mass 95	91.58
175	5.0 - 9.0% of mass 174	6.35 (6.93)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.55 (95.60)1
177	5.0 - 9.0% of mass 176	5.71 (6.53)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1300800	ha27s10.d	04/28/20	01:31

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ha28t01.d BFB Injection Date: 04/28/20
 Instrument ID: HP19094 BFB Injection Time: 08:15
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.53
75	30.0 - 60.0% of mass 95	47.45
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.91
173	Less than 2.0% of mass 174	0.49 (0.55)1
174	Greater than 50.0% of mass 95	89.86
175	5.0 - 9.0% of mass 174	6.36 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.19 (98.14)1
177	5.0 - 9.0% of mass 176	5.85 (6.63)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ha28c01.d	04/28/20	08:51
02	VSTD10	ha28c02.d	04/28/20	09:13
03	LCSH59	ha28l01.d	04/28/20	09:35
04	LCSH61	ha28l31.d	04/28/20	09:35
05	LCDH59	ha28l02.d	04/28/20	09:56
06	LCDH61	ha28l32.d	04/28/20	09:56
07	LCSH60	ha28l03.d	04/28/20	10:18
08	LCDH60	ha28l04.d	04/28/20	10:40
09	VBLKH59	ha28b01.d	04/28/20	11:02
10	VBLKH61	ha28b30.d	04/28/20	11:02
11	1300801	ha28s02.d	04/28/20	11:25
12	1300802	ha28s03.d	04/28/20	11:47
13	1300803	ha28s04.d	04/28/20	12:08
14	1300804	ha28s05.d	04/28/20	12:30
15	1300805	ha28s06.d	04/28/20	12:52
16	1300806	ha28s07.d	04/28/20	13:13
17	1300795DL	ha28s08.d	04/28/20	13:35
18	1300794	ha28s09.d	04/28/20	13:57
19	1300794DL	ha28s10.d	04/28/20	14:18
20	1300796	ha28s11.d	04/28/20	14:40
21	1300796DL	ha28s12.d	04/28/20	15:02
22	1301157	ha28s31.d	04/28/20	15:24

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ha28t01.d BFB Injection Date: 04/28/20
 Instrument ID: HP19094 BFB Injection Time: 08:15
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.53
75	30.0 - 60.0% of mass 95	47.45
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.91
173	Less than 2.0% of mass 174	0.49 (0.55)1
174	Greater than 50.0% of mass 95	89.86
175	5.0 - 9.0% of mass 174	6.36 (7.07)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.19 (98.14)1
177	5.0 - 9.0% of mass 176	5.85 (6.63)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1299788	ha28s32.d	04/28/20	15:45
24	1299789DL	ha28s34.d	04/28/20	16:29
25	1301162	ha28s35.d	04/28/20	16:51
26	1301163	ha28s36.d	04/28/20	17:12
27	1301175	ha28s46.d	04/28/20	17:56
28	1301175DL	ha28s47.d	04/28/20	18:17
29	1299788DL	ha28s48.d	04/28/20	18:39
30	1301158	ha28s37.d	04/28/20	19:01
31	1301158DL	ha28s38.d	04/28/20	19:23
32	1301159	ha28s39.d	04/28/20	19:44
33	1301159DL	ha28s40.d	04/28/20	20:06

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Instrument ID: HP09355 Calibration Date(s): 04/21/20 04/22/20
Heated Purge: (Y/N) Y Calibration Times: 21:54 00:06
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:	RRF 1 = ya21i07.d	RRF 4 = ya21i06.d	RRF 10= ya21i05.d	RRF 20= ya21i04.d	RRF 50= ya21i03.d	RRF100= ya21i02.d	RRF300= ya21i01.d				
COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2587	0.3121	0.3463	0.3435	0.3554	0.3508	0.3206	0.3268	10	AVG	#
Chloromethane	#0.2969	0.2960	0.3100	0.3078	0.3043	0.3190	0.2663	0.3000	6	AVG	#
1,3-Butadiene	0.2298	0.2547	0.2409	0.2504	0.2424	0.2621	0.2239	0.2435	6	AVG	
Vinyl Chloride	#0.2757	0.2989	0.3143	0.3086	0.3093	0.3201	0.2675	0.2992	7	AVG	#
Bromomethane	#0.2079	0.2161	0.2166	0.2174	0.2148	0.2048	0.1700	0.2068	8	AVG	#
Chloroethane	#0.1586	0.1736	0.1738	0.1756	0.1719	0.1653	0.1416	0.1657	7	AVG	#
Dichlorofluoromethane	0.4238	0.4529	0.4690	0.4518	0.4438	0.4460	0.4001	0.4410	5	AVG	
n-Pentane	0.4892	0.4036	0.3800	0.3928	0.3765	0.3913	0.3367	0.3957	12	AVG	
Trichlorofluoromethane	#0.2990	0.3494	0.3523	0.3508	0.3564	0.3573	0.3341	0.3427	6	AVG	#
Ethyl ether	0.2618	0.2758	0.2738	0.2584	0.2584	0.2916	0.2550	0.2678	5	AVG	
Freon 123a	0.2873	0.3265	0.3153	0.3330	0.3181	0.3265	0.3043	0.3158	5	AVG	
Acrolein	2.0635	2.0505	2.1830	2.0205	2.1812	2.0606	1.8264	2.0551	6	AVG	
1,1-Dichloroethene	#0.3370	0.2906	0.2683	0.2700	0.2537	0.2606	0.2453	0.2751	11	AVG	#
1,1-Dichloroethene(2)	#0.1053	0.1197	0.1227	0.1275	0.1238	0.1288	0.1206	0.1212	6	AVG	#
Acetone	#0.8581	0.9970	1.0479	0.9713	0.9642	0.9714	0.8996	0.9585	7	AVG	#
Freon 113	#0.2029	0.2434	0.2505	0.2650	0.2555	0.2658	0.2537	0.2481	9	AVG	#
2-Propanol	0.7627	0.7148	0.6719	0.7275	0.7142	0.7168	0.6775	0.7122	4	AVG	
Methyl Iodide	0.3829	0.4324	0.4423	0.4592	0.4400	0.4562	0.4366	0.4357	6	AVG	
Carbon Disulfide	#0.8198	0.9000	0.8879	0.9316	0.8921	0.9248	0.8743	0.8901	4	AVG	#
Allyl Chloride	0.4302	0.4501	0.4310	0.4399	0.4307	0.4531	0.4157	0.4358	3	AVG	
Methyl Acetate	#0.4194	0.3796	0.3895	0.3870	0.3925	0.4086	0.3806	0.3939	4	AVG	#
Methylene Chloride	#0.2753	0.2888	0.2978	0.3090	0.2959	0.3064	0.2895	0.2947	4	AVG	#
t-Butyl alcohol	1.2735	1.2517	1.2351	1.2553	1.2549	1.2354	1.1857	1.2416	2	AVG	
Acrylonitrile	0.1878	0.2157	0.2395	0.2145	0.2307	0.2295	0.2100	0.2182	8	AVG	
trans-1,2-Dichloroethene	#0.3111	0.3104	0.3054	0.3089	0.2935	0.3008	0.2835	0.3019	3	AVG	#
Methyl Tertiary Butyl Ether	#0.9617	0.8692	0.8624	0.8843	0.8450	0.8663	0.7966	0.8694	6	AVG	#
n-Hexane	0.3668	0.4286	0.4395	0.4724	0.4577	0.4789	0.4456	0.4414	8	AVG	
1,1-Dichloroethane	#0.4575	0.5064	0.5197	0.5396	0.5189	0.5392	0.5030	0.5120	5	AVG	#
di-Isopropyl ether	0.8431	0.9170	0.9493	0.9971	0.9691	0.9986	0.9040	0.9397	6	AVG	
2-Chloro-1,3-butadiene	0.3399	0.3924	0.4068	0.4375	0.4304	0.4591	0.4339	0.4143	9	AVG	
Ethyl t-butyl ether	0.7859	0.8202	0.8547	0.8933	0.8607	0.8802	0.7937	0.8412	5	AVG	
cis-1,2-Dichloroethene	#0.3493	0.3489	0.3392	0.3486	0.3327	0.3428	0.3221	0.3405	3	AVG	#
2-Butanone	#0.2818	0.2843	0.3121	0.2853	0.3086	0.3097	0.2790	0.2944	5	AVG	#
2,2-Dichloropropane	0.3378	0.3834	0.3882	0.4024	0.3924	0.4086	0.3870	0.3857	6	AVG	
Propionitrile	1.4888	1.5063	1.4884	1.5285	1.4973	1.4582	1.3887	1.4794	3	AVG	
Methacrylonitrile	0.2063	0.2159	0.2264	0.2298	0.2257	0.2325	0.2149	0.2217	4	AVG	
Bromochloromethane	0.1447	0.1598	0.1588	0.1630	0.1575	0.1660	0.1568	0.1581	4	AVG	
Tetrahydrofuran	1.2312	1.3089	1.4407	1.3486	1.4894	1.4204	1.3344	1.3677	6	AVG	
Chloroform	#0.4469	0.4856	0.4938	0.5147	0.4948	0.5169	0.4883	0.4916	5	AVG	#
1,1,1-Trichloroethane	#0.3771	0.4169	0.4173	0.4389	0.4250	0.4454	0.4293	0.4214	5	AVG	#
Cyclohexane	#0.4411	0.5084	0.5248	0.5589	0.5460	0.5714	0.5324	0.5261	8	AVG	#
Cyclohexane(2)	#0.3573	0.4217	0.4376	0.4668	0.4527	0.4769	0.4482	0.4373	9	AVG	#
Cyclohexane(3)	#0.1246	0.1561	0.1598	0.1731	0.1690	0.1759	0.1662	0.1607	11	AVG	#
1,1-Dichloropropene	0.3546	0.3988	0.4129	0.4309	0.4164	0.4366	0.4119	0.4089	7	AVG	
Carbon Tetrachloride	#0.3004	0.3444	0.3510	0.3739	0.3645	0.3846	0.3745	0.3562	8	AVG	#
Isobutyl Alcohol	0.4610	0.4482	0.4323	0.4483	0.4500	0.4513	0.4280	0.4456	3	AVG	
Benzene	#1.1850	1.2491	1.2427	1.2949	1.2419	1.2894	1.1939	1.2424	3	AVG	#
1,2-Dichloroethane	#0.4108	0.3983	0.3970	0.4018	0.3874	0.4053	0.3893	0.3986	2	AVG	#
1,2-Dichloroethane(2)	#0.0261	0.0363	0.0379	0.0399	0.0390	0.0404	0.0390	0.0369	13	AVG	#<-
t-Amyl methyl ether	0.8135	0.8449	0.8665	0.8912	0.8597	0.8800	0.7854	0.8487	4	AVG	
n-Heptane	0.4523	0.4745	0.4763	0.5006	0.4874	0.5070	0.4719	0.4814	4	AVG	
n-Butanol	0.3690	0.4041	0.4147	0.4393	0.4493	0.4482	0.4127	0.4196	7	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Instrument ID: HP09355 Calibration Date(s): 04/21/20 04/22/20
Heated Purge: (Y/N) Y Calibration Times: 21:54 00:06
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:	RRF 1 = ya21i07.d	RRF 4 = ya21i06.d	RRF 10= ya21i05.d	RRF 20= ya21i04.d	RRF 50= ya21i03.d	RRF100= ya21i02.d	RRF300= ya21i01.d		%	CAL.
COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RSD	METHOD
Trichloroethene	#0.2703	0.3025	0.3072	0.3231	0.3109	0.3265	0.3142	0.3078	6	AVG #
Methylcyclohexane	#0.4637	0.5544	0.5509	0.5762	0.5595	0.5913	0.5328	0.5470	8	AVG #
Methylcyclohexane(2)	#0.2067	0.2405	0.2412	0.2520	0.2462	0.2622	0.2394	0.2412	7	AVG #
1,2-Dichloropropane	#0.2897	0.3127	0.3217	0.3352	0.3251	0.3386	0.3042	0.3182	5	AVG #
Dibromomethane	0.1771	0.1971	0.1999	0.2107	0.2047	0.2151	0.2080	0.2018	6	AVG
1,4-Dioxane	0.0856	0.0990	0.1010	0.1032	0.1032	0.1111	0.1030	0.1009	8	AVG
Methyl Methacrylate	0.2579	0.2812	0.3075	0.3345	0.3414	0.3575	0.3504	0.3186	12	AVG
Bromodichloromethane	#0.2931	0.3363	0.3557	0.3842	0.3787	0.4057	0.3962	0.3643	11	AVG #
2-Nitropropane	0.1135	0.1207	0.1367	0.1287	0.1426	0.1444	0.1349	0.1316	9	AVG
2-Chloroethyl Vinyl Ether	0.1965	0.2315	0.2490	0.2687	0.2723	0.2878	0.2733	0.2541	12	AVG
cis-1,3-Dichloropropene	#0.4167	0.4523	0.4921	0.5261	0.5247	0.5562	0.5291	0.4996	10	AVG #
4-Methyl-2-pentanone	#0.4408	0.5063	0.5918	0.5552	0.6008	0.6139	0.5312	0.5486	11	AVG #
Toluene	#0.9915	1.0344	1.0426	1.0989	1.0532	1.0996	1.0205	1.0487	4	AVG #
trans-1,3-Dichloropropene	#0.5241	0.5651	0.6107	0.6557	0.6591	0.7011	0.6655	0.6259	10	AVG #
Ethyl Methacrylate	0.4922	0.5697	0.6494	0.7264	0.7507	0.8011	0.7514	0.6773	17	AVG
1,1,2-Trichloroethane	#0.3822	0.3999	0.4081	0.4276	0.4167	0.4388	0.4146	0.4126	4	AVG #
Tetrachloroethene	#0.3921	0.4168	0.4246	0.4514	0.4227	0.4560	0.4320	0.4279	5	AVG #
1,3-Dichloropropane	0.6627	0.6819	0.6991	0.7277	0.7131	0.7429	0.6919	0.7028	4	AVG
2-Hexanone	#0.4670	0.5368	0.6378	0.5999	0.6517	0.6568	0.5610	0.5873	12	AVG #
Dibromochloromethane	#0.3291	0.3719	0.3934	0.4319	0.4334	0.4671	0.4613	0.4126	12	AVG #
1,2-Dibromoethane	#0.3836	0.4151	0.4383	0.4651	0.4604	0.4850	0.4669	0.4449	8	AVG #
1-Chlorohexane	0.5707	0.5541	0.5699	0.5965	0.5817	0.6134	0.5674	0.5791	3	AVG
Chlorobenzene	#1.1218	1.1903	1.1919	1.2427	1.1876	1.2319	1.1280	1.1849	4	AVG #
1,1,1,2-Tetrachloroethane	0.3245	0.3701	0.3790	0.4098	0.4002	0.4225	0.3939	0.3857	8	AVG
Ethylbenzene	#1.8373	1.9654	2.0274	2.1344	2.0509	2.1446	1.8443	2.0006	6	AVG #
m+p-Xylene	#0.7000	0.7729	0.8069	0.8476	0.8147	0.8480	0.7367	0.7895	7	AVG #
o-Xylene	#0.6927	0.7524	0.7894	0.8332	0.7990	0.8304	0.7375	0.7764	7	AVG #
Styrene	#0.9637	1.1437	1.2528	1.3675	1.3464	1.4231	1.2587	1.2508	12	AVG #
Bromoform	#0.2344	0.2517	0.2822	0.3147	0.3293	0.3568	0.3621	0.3045	16	AVG #
Isopropylbenzene	#1.6722	1.9074	2.0114	2.1232	2.0434	2.1267	1.8136	1.9568	9	AVG #
Cyclohexanone	0.3113	0.3698	0.3853	0.4004	0.4010	0.4503	0.3999	0.3883	11	AVG
Bromobenzene	0.8914	0.9313	0.9516	1.0024	0.9729	1.0155	0.9153	0.9543	5	AVG
1,1,2,2-Tetrachloroethane	#1.2607	1.3458	1.3379	1.4036	1.3782	1.4328	1.2991	1.3512	4	AVG #
1,2,3-Trichloropropane	0.4145	0.4083	0.4299	0.4422	0.4326	0.4534	0.4195	0.4286	4	AVG
trans-1,4-Dichloro-2-butene	0.3892	0.4218	0.4441	0.4572	0.4548	0.4695	0.4040	0.4344	7	AVG
n-Propylbenzene	4.0410	4.4872	4.5759	4.7986	4.6258	4.7615	3.8353	4.4465	8	AVG
2-Chlorotoluene	0.8041	0.8950	0.9341	0.9663	0.9338	0.9769	0.9018	0.9160	6	AVG
4-Chlorotoluene	0.8377	0.9554	0.9762	1.0170	0.9760	1.0285	0.9478	0.9627	7	AVG
1,3,5-Trimethylbenzene	2.7214	3.1267	3.3076	3.4580	3.3466	3.4916	3.0297	3.2116	9	AVG
tert-Butylbenzene	0.5825	0.6313	0.6648	0.7220	0.6975	0.7336	0.6701	0.6716	8	AVG
Pentachloroethane	0.4505	0.4863	0.5063	0.5183	0.5412	0.5671	0.5509	0.5172	8	AVG
1,2,4-Trimethylbenzene	2.8604	3.3013	3.4590	3.6568	3.5484	3.6866	3.1437	3.3795	9	AVG
sec-Butylbenzene	3.6708	4.1065	4.2394	4.4768	4.3204	4.4867	3.6694	4.1386	8	AVG
1,3-Dichlorobenzene	#1.7171	1.7853	1.8471	1.9214	1.8697	1.9490	1.7002	1.8271	5	AVG #
p-Isopropyltoluene	2.9353	3.4414	3.5633	3.8087	3.6973	3.8399	3.1845	3.4958	10	AVG
1,4-Dichlorobenzene	#1.7721	1.8626	1.9133	1.9816	1.9174	2.0017	1.7576	1.8866	5	AVG #
1,2,3-Trimethylbenzene	3.1494	3.3827	3.4122	3.4681	3.3411	3.5074	2.9898	3.3215	6	AVG
Benzyl Chloride	2.1921	2.4301	2.6388	2.9046	2.9432	3.1043	2.7896	2.7147	12	AVG
1,3-Diethylbenzene	1.8531	2.1585	2.1738	2.2390	2.1664	2.2886	2.0140	2.1276	7	AVG
1,4-Diethylbenzene	1.9085	2.2765	2.3182	2.3766	2.2812	2.4114	2.0801	2.2361	8	AVG
1,2-Dichlorobenzene	#1.6571	1.7568	1.7820	1.8584	1.7963	1.8797	1.6914	1.7745	5	AVG #
n-Butylbenzene	1.6552	1.9021	1.9023	1.9960	1.9338	2.0146	1.7592	1.8805	7	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Instrument ID: HP09355 Calibration Date(s): 04/21/20 04/22/20

Heated Purge: (Y/N) Y Calibration Times: 21:54 00:06

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:	RRF 1 = ya21i07.d	RRF 4 = ya21i06.d	RRF 10= ya21i05.d
RRF 20= ya21i04.d	RRF 50= ya21i03.d	RRF100= ya21i02.d	RRF300= ya21i01.d

Average %RSD	6
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# Compounds with required minimum RRF.
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All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09355.i/20apr21a.b/ya21i01.d	VSTD300
/chem2/HP09355.i/20apr21a.b/ya21i02.d	VSTD100
/chem2/HP09355.i/20apr21a.b/ya21i03.d	VSTD050
/chem2/HP09355.i/20apr21a.b/ya21i04.d	VSTD020
/chem2/HP09355.i/20apr21a.b/ya21i05.d	VSTD010
/chem2/HP09355.i/20apr21a.b/ya21i06.d	VSTD004
/chem2/HP09355.i/20apr21a.b/ya21i07.d	VSTD001

Area Summary

File ID:

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Internal Standard Name	ya21i01.d	ya21i02.d	ya21i03.d	ya21i04.d	ya21i05.d	ya21i06.d	ya21i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	381281	388401	393548	390431	407507	386560	376556	389183	3	Yes
Fluorobenzene	1254678	1242825	1312885	1294339	1308564	1291427	1266407	1281589	2	Yes
Chlorobenzene-d5	940346	921611	977085	956851	969376	949078	923376	948246	2	Yes
1,4-Dichlorobenzene-d4	498086	487855	518745	512562	518818	507990	497288	505906	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

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Internal Standard Name	ya21i01.d	ya21i02.d	ya21i03.d	ya21i04.d	ya21i05.d	ya21i06.d	ya21i07.d	Avg. RT
t-Butyl alcohol-d10	4.355	4.343	4.349	4.349	4.356	4.361	4.355	4.353
Fluorobenzene	7.865	7.866	7.866	7.866	7.866	7.865	7.866	7.866
Chlorobenzene-d5	11.303	11.303	11.303	11.303	11.303	11.303	11.303	11.303
1,4-Dichlorobenzene-d4	13.183	13.177	13.177	13.177	13.177	13.176	13.176	13.177

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/22/2020 at 08:06.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09355 ICV Date: 04/22/20 Time: 00:49
 Lab File ID: ya21v01.d Init. Calib. Date(s): 04/21/20 04/22/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3268	0.3006	18.40	20	-8 #
# Chloromethane	0.3000	0.3274	21.83	20	9 #
1,3-Butadiene	0.2435	0.2880	23.66	20	18
# Vinyl Chloride	0.2992	0.3238	21.65	20	8 #
# Bromomethane	0.2068	0.2322	22.45	20	12 #
# Chloroethane	0.1657	0.1812	21.87	20	9 #
Dichlorofluoromethane	0.4410	0.4738	21.49	20	7
n-Pentane	0.3957	0.4139	20.92	20	5
# Trichlorofluoromethane	0.3427	0.4114	24.01	20	20 #
Ethyl ether	0.2678	0.2585	19.30	20	-3
Freon 123a	0.3158	0.3331	21.09	20	5
Acrolein	2.0551	1.9324	141.05	150	-6
# 1,1-Dichloroethene	0.2751	0.2720	19.77	20	-1 #
# Acetone	0.9585	0.9516	148.92	150	-1 #
# Freon 113	0.2481	0.2676	21.57	20	8 #
2-Propanol	0.7122	0.6716	141.46	150	-6
Methyl Iodide	0.4357	0.4327	19.87	20	-1
# Carbon Disulfide	0.8901	0.9011	20.25	20	1 #
Allyl Chloride	0.4358	0.4936	22.65	20	13
# Methyl Acetate	0.3939	0.4234	21.50	20	7 #
# Methylene Chloride	0.2947	0.3071	20.84	20	4 #
t-Butyl alcohol	1.2416	1.2366	199.20	200	0
Acrylonitrile	0.2182	0.2166	99.25	100	-1
# trans-1,2-Dichloroethene	0.3019	0.3041	20.14	20	1 #
# Methyl Tertiary Butyl Ether	0.8694	0.8597	19.78	20	-1 #
n-Hexane	0.4414	0.4747	21.51	20	8
# 1,1-Dichloroethane	0.5120	0.5232	20.43	20	2 #
di-Isopropyl ether	0.9397	0.9712	20.67	20	3
2-Chloro-1,3-butadiene	0.4143	0.4243	20.48	20	2
Ethyl t-butyl ether	0.8412	0.8581	20.40	20	2
# cis-1,2-Dichloroethene	0.3405	0.3569	20.96	20	5 #
# 2-Butanone	0.2944	0.3015	153.63	150	2 #
2,2-Dichloropropane	0.3857	0.4009	20.79	20	4
Propionitrile	1.4794	1.5442	156.56	150	4
Methacrylonitrile	0.2217	0.2267	153.43	150	2
Bromochloromethane	0.1581	0.1677	21.21	20	6

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09355 ICV Date: 04/22/20 Time: 00:49
 Lab File ID: ya21v01.d Init. Calib. Date(s): 04/21/20 04/22/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Tetrahydrofuran	1.3677	1.4191	103.76	100	4
# Chloroform	0.4916	0.4966	20.21	20	1 #
# 1,1,1-Trichloroethane	0.4214	0.4214	20.00	20	0 #
# Cyclohexane	0.5261	0.5387	20.48	20	2 #
# 1,1-Dichloropropene	0.4089	0.4167	20.38	20	2
# Carbon Tetrachloride	0.3562	0.3610	20.27	20	1 #
# Isobutyl Alcohol	0.4456	0.4403	494.00	500	-1
# Benzene	1.2424	1.2352	19.88	20	-1 #
# 1,2-Dichloroethane	0.3986	0.3973	19.94	20	0 #
# t-Amyl methyl ether	0.8487	0.8597	20.26	20	1
# n-Heptane	0.4814	0.4654	19.34	20	-3
# n-Butanol	0.4196	0.4166	992.80	1000	-1
# Trichloroethene	0.3078	0.3050	19.82	20	-1 #
# Methylcyclohexane	0.5470	0.5945	21.74	20	9 #
# 1,2-Dichloropropane	0.3182	0.3287	20.66	20	3 #
# Dibromomethane	0.2018	0.2045	20.27	20	1
# 1,4-Dioxane	0.1009	0.0999	495.29	500	-1
# Methyl Methacrylate	0.3186	0.3362	21.10	20	6
# Bromodichloromethane	0.3643	0.3673	20.17	20	1 #
# 2-Nitropropane	0.1316	0.1255	19.07	20	-5
# 2-Chloroethyl Vinyl Ether	0.2541	0.2575	20.26	20	1
# cis-1,3-Dichloropropene	0.4996	0.5026	20.12	20	1 #
# 4-Methyl-2-pentanone	0.5486	0.5714	104.15	100	4 #
# Toluene	1.0487	1.0498	20.02	20	0 #
# trans-1,3-Dichloropropene	0.6259	0.6163	19.69	20	-2 #
# Ethyl Methacrylate	0.6773	0.6485	19.15	20	-4
# 1,1,2-Trichloroethane	0.4126	0.4238	20.55	20	3 #
# Tetrachloroethene	0.4279	0.4243	19.83	20	-1 #
# 1,3-Dichloropropane	0.7028	0.6965	19.82	20	-1
# 2-Hexanone	0.5873	0.6219	105.90	100	6 #
# Dibromochloromethane	0.4126	0.4199	20.35	20	2 #
# 1,2-Dibromoethane	0.4449	0.4466	20.08	20	0 #
# 1-Chlorohexane	0.5791	0.5612	19.38	20	-3
# Chlorobenzene	1.1849	1.1930	20.14	20	1 #
# 1,1,1,2-Tetrachloroethane	0.3857	0.3899	20.22	20	1
# Ethylbenzene	2.0006	2.0267	20.26	20	1 #

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09355 ICV Date: 04/22/20 Time: 00:49
 Lab File ID: ya21v01.d Init. Calib. Date(s): 04/21/20 04/22/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# m+p-Xylene	0.7895	0.8115	41.11	40	3 #
# o-Xylene	0.7764	0.7888	20.32	20	2 #
# Styrene	1.2508	1.2922	20.66	20	3 #
# Bromoform	0.3045	0.2922	19.20	20	-4 #
# Isopropylbenzene	1.9568	2.0299	20.75	20	4 #
Cyclohexanone	0.3883	0.3701	476.60	500	-5
Bromobenzene	0.9543	0.9433	19.77	20	-1
# 1,1,2,2-Tetrachloroethane	1.3512	1.3462	19.93	20	0 #
1,2,3-Trichloropropane	0.4286	0.4254	19.85	20	-1
trans-1,4-Dichloro-2-butene	0.4344	0.4534	104.38	100	4
n-Propylbenzene	4.4465	4.5963	20.67	20	3
2-Chlorotoluene	0.9160	0.9137	19.95	20	0
4-Chlorotoluene	0.9627	0.9614	19.97	20	0
1,3,5-Trimethylbenzene	3.2116	3.2730	20.38	20	2
tert-Butylbenzene	0.6716	0.6539	19.47	20	-3
Pentachloroethane	0.5172	0.5471	21.15	20	6
1,2,4-Trimethylbenzene	3.3795	3.4015	20.13	20	1
sec-Butylbenzene	4.1386	4.2418	20.50	20	2
# 1,3-Dichlorobenzene	1.8271	1.8474	20.22	20	1 #
p-Isopropyltoluene	3.4958	3.5986	20.59	20	3
# 1,4-Dichlorobenzene	1.8866	1.9156	20.31	20	2 #
1,2,3-Trimethylbenzene	3.3215	3.6350	21.89	20	9
Benzyl Chloride	2.7147	2.4203	17.83	20	-11
1,3-Diethylbenzene	2.1276	2.2561	21.21	20	6
1,4-Diethylbenzene	2.2361	2.3758	21.25	20	6
# 1,2-Dichlorobenzene	1.7745	1.7635	19.88	20	-1 #
n-Butylbenzene	1.8805	1.8589	19.77	20	-1
1,2-Diethylbenzene	1.7916	1.8780	20.97	20	5
# 1,2-Dibromo-3-chloropropane	0.3327	0.3223	19.37	20	-3 #
1,3,5-Trichlorobenzene	1.3225	1.2688	19.19	20	-4
# 1,2,4-Trichlorobenzene	1.2414	1.1931	19.22	20	-4 #
Hexachlorobutadiene	0.5598	0.5205	18.60	20	-7
Naphthalene	4.5409	4.4994	19.82	20	-1
1,2,3-Trichlorobenzene	1.2030	1.1402	18.96	20	-5
2-Methylnaphthalene	2.5091	2.3638	18.84	20	-6

Average %Drift 4

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20

Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hj06i07.d RRF0.5= hj06i06.d RRF 1 = hj06i05.d
 RRF 2 = hj06i04.d RRF 5 = hj06i03.d RRF 10= hj06i02.d RRF 25= hj06i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3097	0.3849	0.3783	0.3762	0.3923	0.3917	0.3909	0.3749	8	AVG #
Chloromethane	#0.3844	0.3706	0.3648	0.3602	0.3703	0.3727	0.3674	0.3700	2	AVG #
Vinyl Chloride	#0.3387	0.3441	0.3484	0.3494	0.3624	0.3634	0.3575	0.3520	3	AVG #
1,3-Butadiene	#0.2904	0.2466	0.2826	0.2753	0.2838	0.2863	0.2813	0.2781	5	AVG
Bromomethane	#0.2624	0.2576	0.2458	0.2474	0.2514	0.2534	0.2470	0.2521	2	AVG #
Chloroethane	#0.2030	0.2012	0.2031	0.2003	0.2060	0.2087	0.2045	0.2039	1	AVG #
Dichlorofluoromethane	#0.5189	0.4924	0.4752	0.4782	0.4800	0.4783	0.4657	0.4841	4	AVG
Trichlorofluoromethane	#0.3499	0.4155	0.4012	0.4126	0.4146	0.4171	0.4009	0.4017	6	AVG #
Ethyl ether	#0.1775	0.1704	0.1750	0.1761	0.1810	0.1853	0.1791	0.1778	3	AVG
Freon 123a	#0.3167	0.2815	0.3200	0.3089	0.3200	0.3184	0.3084	0.3106	4	AVG
Acrolein	#2.2893	2.2311	2.2350	2.1747	2.3312	2.2106	2.2888	2.2515	2	AVG
1,1-Dichloroethene	#0.2463	0.2301	0.2481	0.2428	0.2504	0.2501	0.2423	0.2443	3	AVG #
Freon 113	#0.2400	0.2146	0.2713	0.2610	0.2726	0.2672	0.2610	0.2554	8	AVG #
Acetone	#3.2700	3.4833	3.1681	2.8864	2.9450	2.7454	2.7687	3.0381	9	AVG #
Methyl Iodide	#0.4685	0.4375	0.4809	0.4716	0.4833	0.4821	0.4763	0.4715	3	AVG
Bromoethane	#0.2191	0.2159	0.2059	0.2076	0.2148	0.2163	0.2125	0.2131	2	AVG
Carbon Disulfide	#0.7928	0.6951	0.7570	0.7457	0.7536	0.7497	0.7377	0.7474	4	AVG #
Allyl Chloride	#0.4734	0.4034	0.4117	0.3979	0.4100	0.4070	0.4017	0.4150	6	AVG
Methyl Acetate	#7.4161	9.1355	7.3807	7.4710	7.0045	7.5915	7.6666	7.6666	10	AVG #
Methylene Chloride	#0.2800	0.2558	0.2667	0.2588	0.2602	0.2619	0.2573	0.2630	3	AVG #
t-Butyl Alcohol	#1.0663	1.0365	1.0727	1.0640	1.0491	1.0866	1.0123	1.0554	2	AVG
Acrylonitrile	#3.6438	3.7208	3.7153	3.6754	3.7852	3.6366	3.7748	3.7074	2	AVG
trans-1,2-Dichloroethene	#0.2864	0.2546	0.2680	0.2637	0.2708	0.2705	0.2661	0.2686	4	AVG #
Methyl Tertiary Butyl Ether	#0.5512	0.5319	0.5663	0.5659	0.5663	0.5757	0.5526	0.5586	3	AVG #
n-Hexane	#0.3699	0.3341	0.3889	0.3819	0.3991	0.3915	0.3863	0.3788	6	AVG
1,1-Dichloroethane	#0.4964	0.4403	0.4886	0.4815	0.4974	0.4971	0.4929	0.4849	4	AVG #
di-Isopropyl Ether	#0.8052	0.7480	0.8030	0.7976	0.8161	0.8179	0.8029	0.7987	3	AVG
2-Chloro-1,3-Butadiene	#0.4129	0.3836	0.4208	0.4118	0.4293	0.4264	0.4213	0.4152	4	AVG
Ethyl t-butyl ether	#0.7495	0.7218	0.7503	0.7485	0.7595	0.7704	0.7486	0.7498	2	AVG
cis-1,2-Dichloroethene	#0.3007	0.2855	0.3035	0.2938	0.3037	0.3023	0.2996	0.2984	2	AVG #
2,2-Dichloropropane	#0.4256	0.3737	0.4168	0.4103	0.4257	0.4229	0.4132	0.4126	4	AVG
2-Butanone	#5.1154	4.8469	4.7174	4.5786	4.7595	4.5295	4.7056	4.7504	4	AVG #
Propionitrile	#1.3075	1.2477	1.3026	1.2681	1.3494	1.3095	1.3240	1.3013	3	AVG
Methacrylonitrile	#4.4887	4.5935	4.6153	4.5782	4.8968	4.5862	4.8192	4.6540	3	AVG
Bromochloromethane	#0.1274	0.1253	0.1269	0.1251	0.1275	0.1270	0.1229	0.1260	1	AVG
Tetrahydrofuran	#1.3100	1.2888	1.2986	1.3006	1.3566	1.2936	1.3388	1.3124	2	AVG
Chloroform	#0.4667	0.4470	0.4748	0.4828	0.4833	0.4813	0.4767	0.4732	3	AVG #
1,1,1-Trichloroethane	#0.4444	0.4107	0.4449	0.4407	0.4498	0.4454	0.4447	0.4401	3	AVG #
Cyclohexane	#0.4672	0.4316	0.4834	0.4694	0.4843	0.4803	0.4740	0.4700	4	AVG #
Cyclohexane(2)	#0.3806	0.3420	0.4231	0.4091	0.4294	0.4200	0.4139	0.4026	8	AVG #
Cyclohexane(3)	#0.1465	0.1257	0.1545	0.1478	0.1525	0.1493	0.1478	0.1463	7	AVG #
1,1-Dichloropropene	#0.3558	0.3395	0.3774	0.3744	0.3874	0.3848	0.3844	0.3720	5	AVG
Carbon Tetrachloride	#0.3738	0.3438	0.3839	0.3764	0.3884	0.3885	0.3866	0.3773	4	AVG #
Isobutyl Alcohol	#0.4694	0.3757	0.3606	0.3497	0.3405	0.3387	0.3262	0.3658	13	AVG
Benzene	#1.0846	1.0211	1.1054	1.0888	1.1082	1.1041	1.1019	1.0877	3	AVG #
1,2-Dichloroethane	#0.3049	0.2745	0.2857	0.2728	0.2767	0.2762	0.2722	0.2804	4	AVG #
t-Amyl methyl ether	#0.6357	0.6339	0.6616	0.6652	0.6592	0.6697	0.6524	0.6539	2	AVG
n-Heptane	#0.4155	0.3385	0.4126	0.3960	0.4081	0.4090	0.4019	0.3974	7	AVG
n-Butanol	#0.2834	0.2883	0.3017	0.3008	0.3100	0.2997	0.2775	0.2945	4	AVG
Trichloroethene	#0.2904	0.2556	0.2917	0.2844	0.2927	0.2902	0.2918	0.2852	5	AVG #
Methylcyclohexane	#0.4544	0.5019	0.5117	0.5207	0.5375	0.5283	0.5227	0.5110	5	AVG #
1,2-Dichloropropane	#0.2696	0.2531	0.2739	0.2730	0.2707	0.2731	0.2702	0.2691	3	AVG #

Compounds with required minimum RRF.
 All compounds must meet a maximum %RSD of 20.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20

Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID:		RRF0.2= hj06i07.d		RRF0.5= hj06i06.d		RRF 1 = hj06i05.d				
RRF 2 = hj06i04.d		RRF 5 = hj06i03.d		RRF 10= hj06i02.d		RRF 25= hj06i01.d				
									%	CAL.
COMPOUND									RSD	METHOD
=====									=====	=====
Dibromofluoromethane (2)									0	AVG
1,2-Dichloroethane-d4									1	AVG
1,2-Dichloroethane-d4 (2)									1	AVG
1,2-Dichloroethane-d4 (3)									1	AVG
Toluene-d8									0	AVG
Toluene-d8 (2)									0	AVG
4-Bromofluorobenzene									1	AVG
4-Bromofluorobenzene (2)									1	AVG
Average %RSD									4	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/20jan06i.b/hj06i01.d	VSTD025
/chem2/HP19094.i/20jan06i.b/hj06i02.d	VSTD010
/chem2/HP19094.i/20jan06i.b/hj06i03.d	VSTD005
/chem2/HP19094.i/20jan06i.b/hj06i04.d	VSTD002
/chem2/HP19094.i/20jan06i.b/hj06i05.d	VSTD001
/chem2/HP19094.i/20jan06i.b/hj06i06.d	VSTD0.5
/chem2/HP19094.i/20jan06i.b/hj06i07.d	VSTD0.2

Area Summary

File ID:

=====

Internal Standard Name	hj06i01.d	hj06i02.d	hj06i03.d	hj06i04.d	hj06i05.d	hj06i06.d	hj06i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	113987	123863	115826	125392	124021	118243	115841	119596	4	Yes
Fluorobenzene	1932435	1942157	1972661	1989998	1989646	1956262	1935544	1959815	1	Yes
Chlorobenzene-d5	1455879	1453618	1473060	1474389	1476031	1457562	1434543	1460726	1	Yes
1,4-Dichlorobenzene-d4	746931	753053	772144	794109	798465	784772	777924	775343	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	hj06i01.d	hj06i02.d	hj06i03.d	hj06i04.d	hj06i05.d	hj06i06.d	hj06i07.d	Avg. RT
t-Butyl Alcohol-d10	4.476	4.464	4.483	4.458	4.458	4.464	4.470	4.468
Fluorobenzene	7.964	7.964	7.964	7.957	7.958	7.957	7.957	7.960
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.384	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.255	13.255	13.255	13.255	13.255	13.255	13.255

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 01/08/2020 at 10:31.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06
 Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3749	0.3201	4.27	5	-15 #
# Chloromethane	0.3700	0.3393	4.58	5	-8 #
# Vinyl Chloride	0.3520	0.3408	4.84	5	-3 #
1,3-Butadiene	0.2781	0.3046	5.48	5	10
# Bromomethane	0.2521	0.2433	4.82	5	-4 #
# Chloroethane	0.2039	0.2045	5.02	5	0 #
Dichlorofluoromethane	0.4841	0.4759	4.92	5	-2
# Trichlorofluoromethane	0.4017	0.4334	5.39	5	8 #
Ethyl ether	0.1778	0.1796	5.05	5	1
Freon 123a	0.3106	0.3259	5.25	5	5
Acrolein	2.2515	2.2144	36.88	37.5	-2
# 1,1-Dichloroethene	0.2443	0.2488	5.09	5	2 #
# Freon 113	0.2554	0.2674	5.24	5	5 #
# Acetone	3.0381	2.7604	34.07	37.5	-9 #
Methyl Iodide	0.4715	0.4682	4.97	5	-1
Bromoethane	0.2131	0.2262	5.31	5	6
# Carbon Disulfide	0.7474	0.7334	4.91	5	-2 #
Allyl Chloride	0.4150	0.3969	4.78	5	-4
# Methyl Acetate	7.6666	7.4992	4.89	5	-2 #
# Methylene Chloride	0.2630	0.2662	5.06	5	1 #
t-Butyl Alcohol	1.0554	1.0288	48.74	50	-3
Acrylonitrile	3.7074	3.7529	25.31	25	1
# trans-1,2-Dichloroethene	0.2686	0.2708	5.04	5	1 #
# Methyl Tertiary Butyl Ether	0.5586	0.5830	5.22	5	4 #
n-Hexane	0.3788	0.3874	5.11	5	2
# 1,1-Dichloroethane	0.4849	0.5023	5.18	5	4 #
di-Isopropyl Ether	0.7987	0.8120	5.08	5	2
2-Chloro-1,3-Butadiene	0.4152	0.4299	5.18	5	4
Ethyl t-butyl ether	0.7498	0.7685	5.12	5	2
# cis-1,2-Dichloroethene	0.2984	0.3237	5.42	5	8 #
2,2-Dichloropropane	0.4126	0.4213	5.11	5	2
# 2-Butanone	4.7504	4.6847	36.98	37.5	-1 #
Propionitrile	1.3013	1.3348	38.47	37.5	3
Methacrylonitrile	4.6540	4.9263	39.69	37.5	6
Bromochloromethane	0.1260	0.1227	4.87	5	-3
Tetrahydrofuran	1.3124	1.3898	26.47	25	6

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06
 Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
# Chloroform	0.4732	0.4985	5.27	5	5 #
# 1,1,1-Trichloroethane	0.4401	0.4474	5.08	5	2 #
# Cyclohexane	0.4700	0.4695	4.99	5	0 #
# 1,1-Dichloropropene	0.3720	0.3846	5.17	5	3 #
# Carbon Tetrachloride	0.3773	0.3969	5.26	5	5 #
# Isobutyl Alcohol	0.3658	0.3294	112.57	125	-10 #
# Benzene	1.0877	1.1105	5.10	5	2 #
# 1,2-Dichloroethane	0.2804	0.2841	5.07	5	1 #
# t-Amyl methyl ether	0.6539	0.6666	5.10	5	2 #
# n-Heptane	0.3974	0.3827	4.81	5	-4 #
# n-Butanol	0.2945	0.2562	217.49	250	-13 #
# Trichloroethene	0.2852	0.2961	5.19	5	4 #
# Methylcyclohexane	0.5110	0.5002	4.89	5	-2 #
# 1,2-Dichloropropane	0.2691	0.2785	5.17	5	3 #
# Methyl Methacrylate	9.3621	9.9193	5.30	5	6 #
# Dibromomethane	0.1230	0.1261	5.13	5	3 #
# 1,4-Dioxane	0.0710	0.0596	104.88	125	-16 #
# Bromodichloromethane	0.3343	0.3516	5.26	5	5 #
# 2-Nitropropane	3.0750	3.1165	5.07	5	1 #
# 1-Bromo-2-Chloroethane	0.2529	0.2590	5.04	5	0 #
# cis-1,3-Dichloropropene	0.3948	0.4096	5.19	5	4 #
# 4-Methyl-2-Pentanone	11.7080	11.9190	25.45	25	2 #
# Toluene	0.9359	0.9616	5.14	5	3 #
# trans-1,3-Dichloropropene	0.4344	0.4412	5.08	5	2 #
# Ethyl Methacrylate	0.3367	0.3344	4.97	5	-1 #
# 1,1,2-Trichloroethane	0.2351	0.2437	5.18	5	4 #
# Tetrachloroethene	0.4254	0.4467	5.25	5	5 #
# 1,3-Dichloropropane	0.4040	0.4093	5.07	5	1 #
# 2-Hexanone	8.0005	8.4443	26.39	25	6 #
# Dibromochloromethane	0.3011	0.3198	5.31	5	6 #
# 1,2-Dibromoethane	0.2247	0.2335	5.20	5	4 #
# 1-Chlorohexane	0.5642	0.5459	4.84	5	-3 #
# Chlorobenzene	1.0225	1.0544	5.16	5	3 #
# 1,1,1,2-Tetrachloroethane	0.3637	0.3717	5.11	5	2 #
# Ethylbenzene	1.8416	1.8833	5.11	5	2 #
# m+p-Xylene	0.7042	0.7318	10.39	10	4 #
# o-Xylene	0.6924	0.7141	5.16	5	3 #

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06
 Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Styrene	1.1237	1.1749	5.23	5	5 #
# Bromoform	0.1755	0.1814	5.17	5	3 #
# Isopropylbenzene	1.8767	1.9613	5.23	5	5 #
# 1,1,2,2-Tetrachloroethane	0.5221	0.5351	5.12	5	2 #
Bromobenzene	0.7892	0.8162	5.17	5	3
trans-1,4-Dichloro-2-butene	4.3982	4.6890	26.65	25	7
1,2,3-Trichloropropane	0.1398	0.1491	5.33	5	7
n-Propylbenzene	4.1211	4.3318	5.26	5	5
2-Chlorotoluene	0.8131	0.8455	5.20	5	4
1,3,5-Trimethylbenzene	2.9897	3.0960	5.18	5	4
4-Chlorotoluene	0.8115	0.8366	5.15	5	3
tert-Butylbenzene	0.6183	0.6465	5.23	5	5
Pentachloroethane	0.5270	0.5198	4.93	5	-1
1,2,4-Trimethylbenzene	3.0872	3.1484	5.10	5	2
sec-Butylbenzene	3.8735	4.0509	5.23	5	5
# 1,3-Dichlorobenzene	1.5728	1.6190	5.15	5	3 #
p-Isopropyltoluene	3.3337	3.4736	5.21	5	4
# 1,4-Dichlorobenzene	1.5342	1.6011	5.22	5	4 #
1,2,3-Trimethylbenzene	1.2874	1.2871	5.00	5	0
Benzyl Chloride	0.2195	0.1994	4.54	5	-9
n-Butylbenzene	1.6480	1.7077	5.18	5	4
# 1,2-Dichlorobenzene	1.3864	1.4475	5.22	5	4 #
# 1,2-Dibromo-3-chloropropane	2.5084	2.7000	5.38	5	8 #
1,3,5-Trichlorobenzene	1.2309	1.2744	5.18	5	4
# 1,2,4-Trichlorobenzene	1.0322	1.0719	5.19	5	4 #
Hexachlorobutadiene	0.5387	0.5618	5.21	5	4
Naphthalene	1.8013	1.8460	5.12	5	2
1,2,3-Trichlorobenzene	0.8811	0.9152	5.19	5	4

Average %Drift 4

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20
 Heated Purge: (Y/N) Y Calibration Times: 11:19 13:29
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID:		RRF0.2= hj06i17.d		RRF0.5= hj06i16.d		RRF 1 = hj06i15.d					
RRF 2 = hj06i14.d		RRF 5 = hj06i13.d		RRF 10= hj06i12.d		RRF 25= hj06i11.d					
									%	CAL.	
COMPOUND		RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	RSD	METHOD
=====									=====	=====	=====
Dimethyl ether		0.3998	0.3387	0.3320	0.3461	0.3052	0.2862	0.3240	0.3331	11	AVG
Acetonitrile		1.5838	1.4151	1.2242	1.1782	1.0861	1.0648	0.9703	1.2175	18	AVG
Vinyl Acetate		0.3620	0.3800	0.3496	0.3501	0.3394	0.3474	0.3559	0.3549	4	AVG
Methyl Acrylate		0.1129	0.1234	0.1207	0.1259	0.1210	0.1264	0.1276	0.1226	4	AVG
1-Chlorobutane		0.4565	0.5141	0.5084	0.5204	0.5050	0.5218	0.5151	0.5059	4	AVG
Chloroacetonitrile		0.0059	0.0065	0.0067	0.0073	0.0068	0.0068	0.0065	0.0066	7	AVG
2-Chloroethyl vinyl ether		0.0952	0.1188	0.1148	0.1200	0.1189	0.1234	0.1148	0.1151	8	AVG
cis-1,4-Dichloro-2-butene		4.7683	6.0287	5.9725	6.1156	6.4363	7.0066	6.5836	6.1302	11	AVG
Cyclohexanone		0.3507	0.3635	0.3792	0.4300	0.3742	0.3503	0.2508	0.3569	15	AVG

Average %RSD 9

Compounds with required minimum RRF.
 All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/20jan06i.b/hj06i11.d	VSTD025
/chem2/HP19094.i/20jan06i.b/hj06i12.d	VSTD010
/chem2/HP19094.i/20jan06i.b/hj06i13.d	VSTD005
/chem2/HP19094.i/20jan06i.b/hj06i14.d	VSTD002
/chem2/HP19094.i/20jan06i.b/hj06i15.d	VSTD001
/chem2/HP19094.i/20jan06i.b/hj06i16.d	VSTD0.5
/chem2/HP19094.i/20jan06i.b/hj06i17.d	VSTD0.2

Area Summary

File ID:

=====

Internal Standard Name	hj06i11.d	hj06i12.d	hj06i13.d	hj06i14.d	hj06i15.d	hj06i16.d	hj06i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	119574	113216	116853	119527	115307	112993	120535	116858	3	Yes
Fluorobenzene	1935181	1966967	2003060	1969431	1963066	1958073	1930427	1960886	1	Yes
Chlorobenzene-d5	1527614	1484003	1501115	1478019	1468428	1468028	1436470	1480525	2	Yes
1,4-Dichlorobenzene-d4	793148	785939	807265	799344	795533	798270	784103	794800	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	hj06i11.d	hj06i12.d	hj06i13.d	hj06i14.d	hj06i15.d	hj06i16.d	hj06i17.d	Avg. RT
t-Butyl Alcohol-d10	4.458	4.464	4.476	4.458	4.470	4.464	4.476	4.467
Fluorobenzene	7.963	7.964	7.957	7.958	7.957	7.957	7.957	7.959
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.384	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.255	13.255	13.255	13.255	13.255	13.255	13.255

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 01/07/2020 at 19:08.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 13:51
 Lab File ID: hj06v11.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3331	0.3461	5.19	5	4
Acetonitrile	1.2175	1.2646	38.95	37.5	4
Vinyl Acetate	0.3549	0.3129	11.02	12.5	-12
Methyl Acrylate	0.1226	0.1330	27.12	25	8
1-Chlorobutane	0.5059	0.4909	4.85	5	-3
Chloroacetonitrile	0.0066	0.0065	245.98	250	-2
2-Chloroethyl vinyl ether	0.1151	0.1100	4.78	5	-4
cis-1,4-Dichloro-2-butene	6.1302	6.1352	12.51	12.5	0
Cyclohexanone	0.3569	0.3240	113.45	125	-9

Average %Drift 5

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

page 1 of 1

FORM VII VOA

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09355.i/20apr21a.b/ya21i07.d
/chem2/HP09355.i/20apr21a.b/ya21i06.d
/chem2/HP09355.i/20apr21a.b/ya21i05.d
/chem2/HP09355.i/20apr21a.b/ya21i04.d
/chem2/HP09355.i/20apr21a.b/ya21i03.d
/chem2/HP09355.i/20apr21a.b/ya21i02.d
/chem2/HP09355.i/20apr21a.b/ya21i01.d

File /chem2/HP09355.i/20apr21a.b/ya21i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09355.i/20apr28b.b/ya28c41.d

RT Summary

File ID:

=====

Internal Standard Name	ya28c41.d	ICAL RT	In Spec
=====	=====	=====	=====
t-Butyl alcohol-d10	4.343	4.349	Yes
Fluorobenzene	7.860	7.866	Yes
Chlorobenzene-d5	11.303	11.303	Yes
1,4-Dichlorobenzene-d4	13.177	13.177	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	ya28c41.d	ICAL Area	Low Limit	High Limit	In Spec
=====	=====	=====	=====	=====	=====
t-Butyl alcohol-d10	382655	393548	196774	787096	Yes
Fluorobenzene	1234679	1312885	656442	2625770	Yes
Chlorobenzene-d5	969945	977085	488542	1954170	Yes
1,4-Dichlorobenzene-d4	541981	518745	259372	1037490	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/28/2020 at 21:24

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09355 Calibration Date: 04/28/20 Time: 20:49

Lab File ID: ya28c41.d Init. Calib. Date(s): 04/21/20 04/22/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3268	0.2808	42.96	50	-14 #
# Chloromethane	0.3000	0.2157	35.95	50	-28 #<-
1,3-Butadiene	0.2435	0.2397	49.22	50	-2
# Vinyl Chloride	0.2992	0.2312	38.63	50	-23 #<-
# Bromomethane	0.2068	0.1842	44.54	50	-11 #
# Chloroethane	0.1657	0.1340	40.42	50	-19 #
n-Pentane	0.3957	0.2972	37.55	50	-25 <-
# Trichlorofluoromethane	0.3427	0.3392	49.48	50	-1 #
Ethyl ether	0.2678	0.2421	45.19	50	-10
Freon 123a	0.3158	0.3004	47.56	50	-5
Acrolein	2.0551	1.7508	425.97	500	-15
# 1,1-Dichloroethene	0.2751	0.2474	44.97	50	-10 #
# 1,1-Dichloroethene(2)	0.1212	0.1212	50.00	50	0 #
# Acetone	0.9585	0.9183	95.81	100	-4 #
# Freon 113	0.2481	0.2626	52.92	50	6 #
2-Propanol	0.7122	0.6543	229.67	250	-8
Methyl Iodide	0.4357	0.4500	51.65	50	3
# Carbon Disulfide	0.8901	0.8449	47.46	50	-5 #
Allyl Chloride	0.4358	0.3817	43.79	50	-12
# Methyl Acetate	0.3939	0.3649	46.33	50	-7 #
# Methylene Chloride	0.2947	0.2868	48.67	50	-3 #
t-Butyl alcohol	1.2416	1.2970	261.15	250	4
Acrylonitrile	0.2182	0.1996	45.73	50	-9
# trans-1,2-Dichloroethene	0.3019	0.2858	47.33	50	-5 #
# Methyl Tertiary Butyl Ether	0.8694	0.8430	48.48	50	-3 #
n-Hexane	0.4414	0.4079	46.21	50	-8
# 1,1-Dichloroethane	0.5120	0.4862	47.47	50	-5 #
di-Isopropyl ether	0.9397	0.8421	44.81	50	-10
2-Chloro-1,3-butadiene	0.4143	0.4150	50.08	50	0
Ethyl t-butyl ether	0.8412	0.8065	47.94	50	-4
# cis-1,2-Dichloroethene	0.3405	0.3223	47.33	50	-5 #
# 2-Butanone	0.2944	0.2696	91.58	100	-8 #
2,2-Dichloropropane	0.3857	0.4101	53.17	50	6
Propionitrile	1.4794	1.4369	242.81	250	-3
Methacrylonitrile	0.2217	0.2151	121.31	125	-3
Bromochloromethane	0.1581	0.1622	51.31	50	3

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09355 Calibration Date: 04/28/20 Time: 20:49

Lab File ID: ya28c41.d Init. Calib. Date(s): 04/21/20 04/22/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Tetrahydrofuran	1.3677	1.3240	96.81	100	-3
# Chloroform	0.4916	0.4971	50.56	50	1 #
# 1,1,1-Trichloroethane	0.4214	0.4423	52.48	50	5 #
# Cyclohexane	0.5261	0.4886	46.43	50	-7 #
# Cyclohexane(2)	0.4373	0.4296	49.12	50	-2 #
# Cyclohexane(3)	0.1607	0.1543	48.02	50	-4 #
1,1-Dichloropropene	0.4089	0.4026	49.23	50	-2
# Carbon Tetrachloride	0.3562	0.3898	54.73	50	9 #
Isobutyl Alcohol	0.4456	0.4237	594.29	625	-5
# Benzene	1.2424	1.1952	48.10	50	-4 #
# 1,2-Dichloroethane	0.3986	0.4159	52.18	50	4 #
# 1,2-Dichloroethane(2)	0.0369	0.0384	52.04	50	4 # <-
t-Amyl methyl ether	0.8487	0.8614	50.75	50	1
n-Heptane	0.4814	0.4170	43.31	50	-13
n-Butanol	0.4196	0.3802	1132.76	1250	-9
# Trichloroethene	0.3078	0.3110	50.51	50	1 #
# Methylcyclohexane	0.5470	0.5295	48.40	50	-3 #
# Methylcyclohexane(2)	0.2412	0.2401	49.79	50	0 #
# 1,2-Dichloropropane	0.3182	0.3002	47.17	50	-6 #
Dibromomethane	0.2018	0.2075	51.42	50	3
1,4-Dioxane	0.1009	0.0965	598.08	625	-4
Methyl Methacrylate	0.3186	0.3197	50.16	50	0
# Bromodichloromethane	0.3643	0.3815	52.36	50	5 #
2-Nitropropane	0.1316	0.1421	107.96	100	8
2-Chloroethyl Vinyl Ether	0.2541	0.2540	49.98	50	0
# cis-1,3-Dichloropropene	0.4996	0.5003	50.07	50	0 #
# 4-Methyl-2-pentanone	0.5486	0.5202	94.83	100	-5 #
# Toluene	1.0487	0.9913	47.27	50	-5 #
# trans-1,3-Dichloropropene	0.6259	0.6175	49.33	50	-1 #
Ethyl Methacrylate	0.6773	0.6545	48.32	50	-3
# 1,1,2-Trichloroethane	0.4126	0.3953	47.91	50	-4 #
# Tetrachloroethene	0.4279	0.4274	49.94	50	0 #
1,3-Dichloropropane	0.7028	0.6651	47.32	50	-5
# 2-Hexanone	0.5873	0.5410	92.12	100	-8 #
# Dibromochloromethane	0.4126	0.4260	51.63	50	3 #
# 1,2-Dibromoethane	0.4449	0.4434	49.83	50	0 #

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09355 Calibration Date: 04/28/20 Time: 20:49

Lab File ID: ya28c41.d Init. Calib. Date(s): 04/21/20 04/22/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1-Chlorohexane	0.5791	0.5296	45.72	50	-9
# Chlorobenzene	1.1849	1.1615	49.01	50	-2 #
1,1,1,2-Tetrachloroethane	0.3857	0.3951	51.21	50	2
# Ethylbenzene	2.0006	1.9506	48.75	50	-3 #
# m+p-Xylene	0.7895	0.7861	99.57	100	0 #
# o-Xylene	0.7764	0.7608	49.00	50	-2 #
# Styrene	1.2508	1.2913	51.62	50	3 #
# Bromoform	0.3045	0.3282	53.90	50	8 #
# Isopropylbenzene	1.9568	1.9598	50.08	50	0 #
Cyclohexanone	0.3883	0.3584	576.85	625	-8
Bromobenzene	0.9543	0.9343	48.95	50	-2
# 1,1,2,2-Tetrachloroethane	1.3512	1.2169	45.03	50	-10 #
1,2,3-Trichloropropane	0.4286	0.4122	48.08	50	-4
trans-1,4-Dichloro-2-butene	0.4344	0.3494	100.55	125	-20
n-Propylbenzene	4.4465	4.1591	46.77	50	-6
2-Chlorotoluene	0.9160	0.8778	47.92	50	-4
4-Chlorotoluene	0.9627	0.9242	48.00	50	-4
1,3,5-Trimethylbenzene	3.2116	3.0621	47.67	50	-5
tert-Butylbenzene	0.6716	0.6295	46.86	50	-6
Pentachloroethane	0.5172	0.5350	51.72	50	3
1,2,4-Trimethylbenzene	3.3795	3.2495	48.08	50	-4
sec-Butylbenzene	4.1386	3.8621	46.66	50	-7
# 1,3-Dichlorobenzene	1.8271	1.8032	49.34	50	-1 #
p-Isopropyltoluene	3.4958	3.3324	47.66	50	-5
# 1,4-Dichlorobenzene	1.8866	1.8571	49.22	50	-2 #
1,2,3-Trimethylbenzene	3.3215	3.1580	47.54	50	-5
Benzyl Chloride	2.7147	2.7718	51.05	50	2
1,3-Diethylbenzene	2.1276	2.0355	47.83	50	-4
1,4-Diethylbenzene	2.2361	2.1395	47.84	50	-4
# 1,2-Dichlorobenzene	1.7745	1.7381	48.97	50	-2 #
n-Butylbenzene	1.8805	1.6956	45.09	50	-10
1,2-Diethylbenzene	1.7916	1.6994	47.43	50	-5
# 1,2-Dibromo-3-chloropropane	0.3327	0.3288	49.42	50	-1 #
1,3,5-Trichlorobenzene	1.3225	1.2796	48.38	50	-3
# 1,2,4-Trichlorobenzene	1.2414	1.2027	48.44	50	-3 #
Hexachlorobutadiene	0.5598	0.5042	45.03	50	-10

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09355 Calibration Date: 04/28/20 Time: 20:49

Lab File ID: ya28c41.d Init. Calib. Date(s): 04/21/20 04/22/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
Naphthalene	4.5409	4.5389	49.98	50	0
1,2,3-Trichlorobenzene	1.2030	1.1691	48.59	50	-3
2-Methylnaphthalene	2.5091	2.3797	47.42	50	-5
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	0.2271	0.2326	51.21	50	2
Dibromofluoromethane (2)	0.2318	0.2386	51.46	50	3
1,2-Dichloroethane-d4	0.0599	0.0605	50.53	50	1
1,2-Dichloroethane-d4 (2)	0.2671	0.2865	53.62	50	7
1,2-Dichloroethane-d4 (3)	0.0382	0.0386	50.64	50	1
Toluene-d8	1.3056	1.2450	47.68	50	-5
Toluene-d8 (2)	0.8381	0.8027	47.89	50	-4
4-Bromofluorobenzene	0.4947	0.4820	48.72	50	-3
4-Bromofluorobenzene (2)	0.3810	0.4005	52.55	50	5

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

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/chem2/HP19094.i/20jan06i.b/hj06i07.d
/chem2/HP19094.i/20jan06i.b/hj06i06.d
/chem2/HP19094.i/20jan06i.b/hj06i05.d
/chem2/HP19094.i/20jan06i.b/hj06i04.d
/chem2/HP19094.i/20jan06i.b/hj06i03.d
/chem2/HP19094.i/20jan06i.b/hj06i02.d
/chem2/HP19094.i/20jan06i.b/hj06i01.d

```

File /chem2/HP19094.i/20jan06i.b/hj06i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20apr27a.b/ha27c01.d

RT Summary

File ID:

=====

Internal Standard Name	ha27c01.d	ICAL RT	In Spec
=====	=====	=====	=====
t-Butyl Alcohol-d10	4.446	4.464	Yes
Fluorobenzene	7.952	7.964	Yes
Chlorobenzene-d5	11.372	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	ha27c01.d	ICAL Area	Low Limit	High Limit	In Spec
=====	=====	=====	=====	=====	=====
t-Butyl Alcohol-d10	131075	123863	61932	247726	Yes
Fluorobenzene	1680744	1942157	971078	3884314	Yes
Chlorobenzene-d5	1490660	1453618	726809	2907236	Yes
1,4-Dichlorobenzene-d4	820606	753053	376526	1506106	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:

report generated on 04/27/2020 at 20:02

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 Calibration Date: 04/27/20 Time: 19:41
 Lab File ID: ha27c01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3749	0.4127	11.01	10	10 #
# Chloromethane	0.3700	0.4166	11.26	10	13 #
# Vinyl Chloride	0.3520	0.3978	11.30	10	13 #
1,3-Butadiene	0.2781	0.3833	13.79	10	38 <-
# Bromomethane	0.2521	0.2666	10.57	10	6 #
# Chloroethane	0.2039	0.2241	10.99	10	10 #
Dichlorofluoromethane	0.4841	0.5207	10.76	10	8
# Trichlorofluoromethane	0.4017	0.4697	11.69	10	17 #
Ethyl ether	0.1778	0.1831	10.30	10	3
Freon 123a	0.3106	0.3445	11.09	10	11
Acrolein	2.2515	1.9765	438.93	500	-12
# 1,1-Dichloroethene	0.2443	0.2487	10.18	10	2 #
# Freon 113	0.2554	0.2798	10.96	10	10 #
# Acetone	3.0381	2.2386	73.69	100	-26 # <-
Methyl Iodide	0.4715	0.4906	10.41	10	4
Bromoethane	0.2131	0.2108	9.89	10	-1
# Carbon Disulfide	0.7474	0.7729	10.34	10	3 #
Allyl Chloride	0.4150	0.4099	9.88	10	-1
# Methyl Acetate	7.6666	7.1287	9.30	10	-7 #
# Methylene Chloride	0.2630	0.2803	10.66	10	7 #
t-Butyl Alcohol	1.0554	0.8138	154.23	200	-23 <-
Acrylonitrile	3.7074	3.5085	47.32	50	-5
# trans-1,2-Dichloroethene	0.2686	0.2796	10.41	10	4 #
# Methyl Tertiary Butyl Ether	0.5586	0.5687	10.18	10	2 #
n-Hexane	0.3788	0.4408	11.64	10	16
# 1,1-Dichloroethane	0.4849	0.5390	11.12	10	11 #
di-Isopropyl Ether	0.7987	0.9041	11.32	10	13
2-Chloro-1,3-Butadiene	0.4152	0.4432	10.68	10	7
Ethyl t-butyl ether	0.7498	0.7624	10.17	10	2
# cis-1,2-Dichloroethene	0.2984	0.3221	10.79	10	8 #
2,2-Dichloropropane	0.4126	0.4212	10.21	10	2
# 2-Butanone	4.7504	4.4927	94.58	100	-5 #
Propionitrile	1.3013	1.2840	197.35	200	-1
Methacrylonitrile	4.6540	4.4487	95.59	100	-4
Bromochloromethane	0.1260	0.1322	10.49	10	5
Tetrahydrofuran	1.3124	1.1826	90.11	100	-10

Compounds with required minimum RRF.
 All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/27/20 Time: 19:41

Lab File ID: ha27c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Chloroform	0.4732	0.5169	10.92	10	9 #
# 1,1,1-Trichloroethane	0.4401	0.4542	10.32	10	3 #
# Cyclohexane	0.4700	0.5248	11.17	10	12 #
# Cyclohexane(2)	0.4026	0.4351	10.81	10	8 #
# Cyclohexane(3)	0.1463	0.1591	10.88	10	9 #
1,1-Dichloropropene	0.3720	0.4142	11.14	10	11
# Carbon Tetrachloride	0.3773	0.4048	10.73	10	7 #
Isobutyl Alcohol	0.3658	0.3227	441.04	500	-12
# Benzene	1.0877	1.2070	11.10	10	11 #
# 1,2-Dichloroethane	0.2804	0.3118	11.12	10	11 #
t-Amyl methyl ether	0.6539	0.6665	10.19	10	2
n-Heptane	0.3974	0.4900	12.33	10	23 <-
n-Butanol	0.2945	0.2738	929.79	1000	-7
# Trichloroethene	0.2852	0.3088	10.82	10	8 #
# Methylcyclohexane	0.5110	0.5303	10.38	10	4 #
# 1,2-Dichloropropane	0.2691	0.3145	11.69	10	17 #
Methyl Methacrylate	9.3621	8.3667	8.94	10	-11
Dibromomethane	0.1230	0.1404	11.42	10	14
1,4-Dioxane	0.0710	0.0653	459.53	500	-8
# Bromodichloromethane	0.3343	0.3738	11.18	10	12 #
2-Nitropropane	3.0750	2.5077	81.55	100	-18
1-Bromo-2-chloroethane	0.2529	0.3042	12.02	10	20
# cis-1,3-Dichloropropene	0.3948	0.4491	11.37	10	14 #
# 4-Methyl-2-Pentanone	11.7080	11.0422	94.31	100	-6 #
# Toluene	0.9359	0.8725	9.32	10	-7 #
# trans-1,3-Dichloropropene	0.4344	0.4078	9.39	10	-6 #
Ethyl Methacrylate	0.3367	0.3117	9.26	10	-7
# 1,1,2-Trichloroethane	0.2351	0.2254	9.59	10	-4 #
# Tetrachloroethene	0.4254	0.4020	9.45	10	-5 #
1,3-Dichloropropane	0.4040	0.3991	9.88	10	-1
# 2-Hexanone	8.0005	7.6187	95.23	100	-5 #
# Dibromochloromethane	0.3011	0.2925	9.72	10	-3 #
# 1,2-Dibromoethane	0.2247	0.2203	9.81	10	-2 #
1-Chlorohexane	0.5642	0.4995	8.85	10	-11
# Chlorobenzene	1.0225	0.9723	9.51	10	-5 #
1,1,1,2-Tetrachloroethane	0.3637	0.3429	9.43	10	-6

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Instrument ID: HP19094

Calibration Date: 04/27/20

Time: 19:41

Lab File ID: ha27c01.d

Init. Calib. Date(s): 01/06/20

01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# Ethylbenzene	1.8416	1.6859	9.15	10	-8	#
# m+p-Xylene	0.7042	0.6602	18.75	20	-6	#
# o-Xylene	0.6924	0.6370	9.20	10	-8	#
# Styrene	1.1237	1.0772	9.59	10	-4	#
# Bromoform	0.1755	0.1712	9.76	10	-2	#
# Isopropylbenzene	1.8767	1.6848	8.98	10	-10	#
# 1,1,2,2-Tetrachloroethane	0.5221	0.5017	9.61	10	-4	#
Bromobenzene	0.7892	0.7278	9.22	10	-8	
trans-1,4-Dichloro-2-butene	4.3982	3.4039	77.39	100	-23	<-
1,2,3-Trichloropropane	0.1398	0.1319	9.44	10	-6	
n-Propylbenzene	4.1211	3.7207	9.03	10	-10	
2-Chlorotoluene	0.8131	0.7354	9.04	10	-10	
1,3,5-Trimethylbenzene	2.9897	2.6479	8.86	10	-11	
4-Chlorotoluene	0.8115	0.7434	9.16	10	-8	
tert-Butylbenzene	0.6183	0.5659	9.15	10	-8	
Pentachloroethane	0.5270	0.4657	8.84	10	-12	
1,2,4-Trimethylbenzene	3.0872	2.7314	8.85	10	-12	
sec-Butylbenzene	3.8735	3.5088	9.06	10	-9	
# 1,3-Dichlorobenzene	1.5728	1.4590	9.28	10	-7	#
p-Isopropyltoluene	3.3337	3.0090	9.03	10	-10	
# 1,4-Dichlorobenzene	1.5342	1.4271	9.30	10	-7	#
1,2,3-Trimethylbenzene	1.2874	1.1084	8.61	10	-14	
Benzyl Chloride	0.2195	0.2065	9.41	10	-6	
n-Butylbenzene	1.6480	1.5513	9.41	10	-6	
# 1,2-Dichlorobenzene	1.3864	1.2820	9.25	10	-8	#
# 1,2-Dibromo-3-chloropropane	2.5084	2.1063	8.40	10	-16	#
1,3,5-Trichlorobenzene	1.2309	1.1466	9.32	10	-7	
# 1,2,4-Trichlorobenzene	1.0322	0.8912	8.63	10	-14	#
Hexachlorobutadiene	0.5387	0.5085	9.44	10	-6	
Naphthalene	1.8013	1.3938	7.74	10	-23	<-
1,2,3-Trichlorobenzene	0.8811	0.7312	8.30	10	-17	
Dibromofluoromethane	0.2486	0.2668	10.73	10	7	
Dibromofluoromethane(2)	0.2554	0.2708	10.60	10	6	
1,2-Dichloroethane-d4	0.0482	0.0522	10.83	10	8	
1,2-Dichloroethane-d4(2)	0.2223	0.2336	10.51	10	5	

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/27/20 Time: 19:41

Lab File ID: ha27c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2-Dichloroethane-d4 (3)	0.0305	0.0328	10.73	10	7
Toluene-d8	1.3323	1.2145	9.12	10	-9
Toluene-d8 (2)	0.8616	0.7870	9.13	10	-9
4-Bromofluorobenzene	0.4929	0.4850	9.84	10	-2
4-Bromofluorobenzene (2)	0.4218	0.4337	10.28	10	3

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

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/chem2/HP19094.i/20jan06i.b/hj06i17.d
/chem2/HP19094.i/20jan06i.b/hj06i16.d
/chem2/HP19094.i/20jan06i.b/hj06i15.d
/chem2/HP19094.i/20jan06i.b/hj06i14.d
/chem2/HP19094.i/20jan06i.b/hj06i13.d
/chem2/HP19094.i/20jan06i.b/hj06i12.d
/chem2/HP19094.i/20jan06i.b/hj06i11.d

```

File /chem2/HP19094.i/20jan06i.b/hj06i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20apr27a.b/ha27c02.d

RT Summary

File ID:

=====

Internal Standard Name	ha27c02.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.452	4.464	Yes
Fluorobenzene	7.951	7.964	Yes
Chlorobenzene-d5	11.371	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	ha27c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	137938	113216	56608	226432	Yes
Fluorobenzene	1680461	1966967	983484	3933934	Yes
Chlorobenzene-d5	1509673	1484003	742002	2968006	Yes
1,4-Dichlorobenzene-d4	811495	785939	392970	1571878	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:

report generated on 04/27/2020 at 20:35

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/27/20 Time: 20:03

Lab File ID: ha27c02.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Dimethyl ether	0.3331	0.4043	12.14	10	21	<-
Acetonitrile	1.2175	1.1302	371.33	400	-7	
Vinyl Acetate	0.3549	0.4011	11.30	10	13	
Methyl Acrylate	0.1226	0.1545	63.02	50	26	
1-Chlorobutane	0.5059	0.5516	10.90	10	9	
Chloroacetonitrile	0.0066	0.0092	696.18	500	39	
2-Chloroethyl vinyl ether	0.1151	0.1387	12.05	10	20	
cis-1,4-Dichloro-2-butene	6.1302	3.2722	10.68	20	-47	<-
Cyclohexanone	0.3569	0.2892	405.12	500	-19	

Average %Drift 22

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem2/HP19094.i/20jan06i.b/hj06i07.d
/chem2/HP19094.i/20jan06i.b/hj06i06.d
/chem2/HP19094.i/20jan06i.b/hj06i05.d
/chem2/HP19094.i/20jan06i.b/hj06i04.d
/chem2/HP19094.i/20jan06i.b/hj06i03.d
/chem2/HP19094.i/20jan06i.b/hj06i02.d
/chem2/HP19094.i/20jan06i.b/hj06i01.d

```

File /chem2/HP19094.i/20jan06i.b/hj06i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20apr28a.b/ha28c01.d

RT Summary

File ID:

=====

Internal Standard Name	ha28c01.d	ICAL RT	In Spec
=====	=====	=====	=====
t-Butyl Alcohol-d10	4.458	4.464	Yes
Fluorobenzene	7.951	7.964	Yes
Chlorobenzene-d5	11.371	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	ha28c01.d	ICAL Area	Low Limit	High Limit	In Spec
=====	=====	=====	=====	=====	=====
t-Butyl Alcohol-d10	132945	123863	61932	247726	Yes
Fluorobenzene	2048561	1942157	971078	3884314	Yes
Chlorobenzene-d5	1598245	1453618	726809	2907236	Yes
1,4-Dichlorobenzene-d4	858159	753053	376526	1506106	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/28/2020 at 09:29

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/28/20 Time: 08:51

Lab File ID: ha28c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3749	0.3623	9.67	10	-3 #
# Chloromethane	0.3700	0.3753	10.14	10	1 #
# Vinyl Chloride	0.3520	0.3602	10.23	10	2 #
1,3-Butadiene	0.2781	0.3827	13.76	10	38 <-
# Bromomethane	0.2521	0.2515	9.97	10	0 #
# Chloroethane	0.2039	0.2042	10.02	10	0 #
Dichlorofluoromethane	0.4841	0.4762	9.84	10	-2
# Trichlorofluoromethane	0.4017	0.4246	10.57	10	6 #
Ethyl ether	0.1778	0.1635	9.20	10	-8
Freon 123a	0.3106	0.3124	10.06	10	1
Acrolein	2.2515	2.1373	474.62	500	-5
# 1,1-Dichloroethene	0.2443	0.2263	9.26	10	-7 #
# Freon 113	0.2554	0.2503	9.80	10	-2 #
# Acetone	3.0381	2.7511	90.55	100	-9 #
Methyl Iodide	0.4715	0.4527	9.60	10	-4
Bromoethane	0.2131	0.1926	9.03	10	-10
# Carbon Disulfide	0.7474	0.6987	9.35	10	-7 #
Allyl Chloride	0.4150	0.3665	8.83	10	-12
# Methyl Acetate	7.6666	7.3734	9.62	10	-4 #
# Methylene Chloride	0.2630	0.2546	9.68	10	-3 #
t-Butyl Alcohol	1.0554	0.8920	169.04	200	-15
Acrylonitrile	3.7074	3.7684	50.82	50	2
# trans-1,2-Dichloroethene	0.2686	0.2547	9.48	10	-5 #
# Methyl Tertiary Butyl Ether	0.5586	0.5220	9.34	10	-7 #
n-Hexane	0.3788	0.3852	10.17	10	2
# 1,1-Dichloroethane	0.4849	0.4903	10.11	10	1 #
di-Isopropyl Ether	0.7987	0.8214	10.28	10	3
2-Chloro-1,3-Butadiene	0.4152	0.4012	9.66	10	-3
Ethyl t-butyl ether	0.7498	0.6957	9.28	10	-7
# cis-1,2-Dichloroethene	0.2984	0.2928	9.81	10	-2 #
2,2-Dichloropropane	0.4126	0.3841	9.31	10	-7
# 2-Butanone	4.7504	4.7682	100.37	100	0 #
Propionitrile	1.3013	1.4163	217.69	200	9
Methacrylonitrile	4.6540	4.7838	102.79	100	3
Bromochloromethane	0.1260	0.1202	9.54	10	-5
Tetrahydrofuran	1.3124	1.2681	96.63	100	-3

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/28/20 Time: 08:51

Lab File ID: ha28c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Chloroform	0.4732	0.4717	9.97	10	0 #
# 1,1,1-Trichloroethane	0.4401	0.4140	9.41	10	-6 #
# Cyclohexane	0.4700	0.4644	9.88	10	-1 #
# Cyclohexane(2)	0.4026	0.3884	9.65	10	-4 #
# Cyclohexane(3)	0.1463	0.1398	9.56	10	-4 #
1,1-Dichloropropene	0.3720	0.3741	10.06	10	1
# Carbon Tetrachloride	0.3773	0.3679	9.75	10	-3 #
Isobutyl Alcohol	0.3658	0.3456	472.36	500	-6
# Benzene	1.0877	1.1094	10.20	10	2 #
# 1,2-Dichloroethane	0.2804	0.2753	9.82	10	-2 #
t-Amyl methyl ether	0.6539	0.6071	9.28	10	-7
n-Heptane	0.3974	0.4251	10.70	10	7
n-Butanol	0.2945	0.3052	1036.31	1000	4
# Trichloroethene	0.2852	0.2846	9.98	10	0 #
# Methylcyclohexane	0.5110	0.4676	9.15	10	-8 #
# 1,2-Dichloropropane	0.2691	0.2868	10.66	10	7 #
Methyl Methacrylate	9.3621	9.1657	9.79	10	-2
Dibromomethane	0.1230	0.1256	10.21	10	2
1,4-Dioxane	0.0710	0.0666	468.53	500	-6
# Bromodichloromethane	0.3343	0.3367	10.07	10	1 #
2-Nitropropane	3.0750	2.6464	86.06	100	-14
1-Bromo-2-chloroethane	0.2529	0.2759	10.91	10	9
# cis-1,3-Dichloropropene	0.3948	0.4070	10.31	10	3 #
# 4-Methyl-2-Pentanone	11.7080	11.8848	101.51	100	2 #
# Toluene	0.9359	0.9051	9.67	10	-3 #
# trans-1,3-Dichloropropene	0.4344	0.4156	9.57	10	-4 #
Ethyl Methacrylate	0.3367	0.3197	9.50	10	-5
# 1,1,2-Trichloroethane	0.2351	0.2324	9.88	10	-1 #
# Tetrachloroethene	0.4254	0.4181	9.83	10	-2 #
1,3-Dichloropropane	0.4040	0.4111	10.18	10	2
# 2-Hexanone	8.0005	8.1640	102.04	100	2 #
# Dibromochloromethane	0.3011	0.3002	9.97	10	0 #
# 1,2-Dibromoethane	0.2247	0.2280	10.15	10	1 #
1-Chlorohexane	0.5642	0.5113	9.06	10	-9
# Chlorobenzene	1.0225	1.0023	9.80	10	-2 #
1,1,1,2-Tetrachloroethane	0.3637	0.3536	9.72	10	-3

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/28/20 Time: 08:51

Lab File ID: ha28c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Ethylbenzene	1.8416	1.7583	9.55	10	-5 #
# m+p-Xylene	0.7042	0.6858	19.48	20	-3 #
# o-Xylene	0.6924	0.6662	9.62	10	-4 #
# Styrene	1.1237	1.1163	9.93	10	-1 #
# Bromoform	0.1755	0.1763	10.04	10	0 #
# Isopropylbenzene	1.8767	1.7569	9.36	10	-6 #
# 1,1,2,2-Tetrachloroethane	0.5221	0.5193	9.95	10	-1 #
Bromobenzene	0.7892	0.7750	9.82	10	-2
trans-1,4-Dichloro-2-butene	4.3982	3.5736	81.25	100	-19
1,2,3-Trichloropropane	0.1398	0.1367	9.78	10	-2
n-Propylbenzene	4.1211	3.9082	9.48	10	-5
2-Chlorotoluene	0.8131	0.7811	9.61	10	-4
1,3,5-Trimethylbenzene	2.9897	2.8007	9.37	10	-6
4-Chlorotoluene	0.8115	0.8000	9.86	10	-1
tert-Butylbenzene	0.6183	0.6066	9.81	10	-2
Pentachloroethane	0.5270	0.4921	9.34	10	-7
1,2,4-Trimethylbenzene	3.0872	2.9149	9.44	10	-6
sec-Butylbenzene	3.8735	3.6866	9.52	10	-5
# 1,3-Dichlorobenzene	1.5728	1.5524	9.87	10	-1 #
p-Isopropyltoluene	3.3337	3.1490	9.45	10	-6
# 1,4-Dichlorobenzene	1.5342	1.4967	9.76	10	-2 #
1,2,3-Trimethylbenzene	1.2874	1.1506	8.94	10	-11
Benzyl Chloride	0.2195	0.2207	10.05	10	1
n-Butylbenzene	1.6480	1.6074	9.75	10	-2
# 1,2-Dichlorobenzene	1.3864	1.3514	9.75	10	-3 #
# 1,2-Dibromo-3-chloropropane	2.5084	2.3633	9.42	10	-6 #
1,3,5-Trichlorobenzene	1.2309	1.1632	9.45	10	-5
# 1,2,4-Trichlorobenzene	1.0322	0.9180	8.89	10	-11 #
Hexachlorobutadiene	0.5387	0.5198	9.65	10	-3
Naphthalene	1.8013	1.4335	7.96	10	-20
1,2,3-Trichlorobenzene	0.8811	0.7355	8.35	10	-17
Dibromofluoromethane	0.2486	0.2543	10.23	10	2
Dibromofluoromethane(2)	0.2554	0.2592	10.15	10	1
1,2-Dichloroethane-d4	0.0482	0.0499	10.36	10	4
1,2-Dichloroethane-d4(2)	0.2223	0.2279	10.25	10	3

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/28/20 Time: 08:51

Lab File ID: ha28c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
1,2-Dichloroethane-d4 (3)	0.0305	0.0301	9.87	10	-1
Toluene-d8	1.3323	1.2886	9.67	10	-3
Toluene-d8 (2)	0.8616	0.8349	9.69	10	-3
4-Bromofluorobenzene	0.4929	0.4723	9.58	10	-4
4-Bromofluorobenzene (2)	0.4218	0.4235	10.04	10	0

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem2/HP19094.i/20jan06i.b/hj06i17.d
/chem2/HP19094.i/20jan06i.b/hj06i16.d
/chem2/HP19094.i/20jan06i.b/hj06i15.d
/chem2/HP19094.i/20jan06i.b/hj06i14.d
/chem2/HP19094.i/20jan06i.b/hj06i13.d
/chem2/HP19094.i/20jan06i.b/hj06i12.d
/chem2/HP19094.i/20jan06i.b/hj06i11.d

```

File /chem2/HP19094.i/20jan06i.b/hj06i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20apr28a.b/ha28c02.d

RT Summary

File ID:

=====

Internal Standard Name	ha28c02.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.446	4.464	Yes
Fluorobenzene	7.952	7.964	Yes
Chlorobenzene-d5	11.372	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	ha28c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	133766	113216	56608	226432	Yes
Fluorobenzene	2047875	1966967	983484	3933934	Yes
Chlorobenzene-d5	1605277	1484003	742002	2968006	Yes
1,4-Dichlorobenzene-d4	850681	785939	392970	1571878	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:

report generated on 04/28/2020 at 09:36

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 04/28/20 Time: 09:13

Lab File ID: ha28c02.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3331	0.3435	10.31	10	3
Acetonitrile	1.2175	1.2596	413.82	400	3
Vinyl Acetate	0.3549	0.3668	10.33	10	3
Methyl Acrylate	0.1226	0.1390	56.71	50	13
1-Chlorobutane	0.5059	0.5051	9.98	10	0
Chloroacetonitrile	0.0066	0.0080	603.60	500	21
2-Chloroethyl vinyl ether	0.1151	0.1287	11.18	10	12
cis-1,4-Dichloro-2-butene	6.1302	4.2799	13.96	20	-30
Cyclohexanone	0.3569	0.3072	430.29	500	-14

Average %Drift 11

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ya28c41.d Date Analyzed: 04/28/20
 Instrument ID: HP09355 Time Analyzed: 20:49
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	382655	4.343	1234679	7.860	969945	11.303	541981	13.176
	UPPER LIMIT	765310	4.843	2469358	8.360	1939890	11.803	1083962	13.676
	LOWER LIMIT	191328	3.843	617340	7.360	484972	10.803	270990	12.676
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	LAB SAMPLE ID								
	=====	=====	=====	=====	=====	=====	=====	=====	=====
01	LCSY37	439144	4.349	1317458	7.859	1005331	11.303	553618	13.176
02	VBLKY37	417034	4.343	1252113	7.859	954161	11.303	517365	13.176
03	RLVY37 - RL	399996	4.362	1211275	7.866	926306	11.303	511951	13.177
04	1302603	391997	4.355	1192883	7.860	912984	11.303	500243	13.176
05	1303134	382222	4.355	1180594	7.866	905811	11.303	494215	13.177
06	1303135	389719	4.343	1174733	7.859	895936	11.303	489067	13.176
07	1300797	379678	4.349	1155959	7.860	885846	11.303	481248	13.177
08	1300798MS	377479	4.349	1204515	7.860	936193	11.303	522302	13.177
09	1300799MSD	406785	4.355	1264556	7.859	974810	11.303	538157	13.176
10	1300794	414873	4.349	1254890	7.860	952357	11.303	515992	13.177
11	1300795	396574	4.368	1202512	7.866	916483	11.303	502049	13.176
12	1300796	396332	4.355	1203493	7.866	916703	11.303	497339	13.176
13	1300800	392761	4.362	1170701	7.866	899182	11.303	488171	13.177
14	1300801	389773	4.355	1157930	7.860	887934	11.303	486756	13.176
15	1303132	385600	4.356	1132416	7.866	874120	11.303	479661	13.177
16	1303133	380893	4.343	1127438	7.860	870087	11.303	475303	13.177
17	1303136	372826	4.361	1116221	7.866	861440	11.303	470241	13.176
18	1303137	371675	4.356	1114753	7.866	853912	11.303	468949	13.177
19	1303138	362665	4.349	1085912	7.860	839342	11.303	456900	13.176
20	1300555	351530	4.349	1090242	7.860	840074	11.303	461339	13.177
21	1300556	344249	4.355	1073598	7.859	825721	11.303	451709	13.176
22	1300557	350205	4.349	1074571	7.860	827802	11.303	450019	13.177

IS1 (TBA)=t-Butyl alcohol-d10 UPPER LIMIT = + 100%
 IS2 (FBZ)=Fluorobenzene of internal standard area.
 IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
 IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ya28c41.d Date Analyzed: 04/28/20
 Instrument ID: HP09355 Time Analyzed: 20:49
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	382655	4.343	1234679	7.860	969945	11.303	541981	13.176
	UPPER LIMIT	765310	4.843	2469358	8.360	1939890	11.803	1083962	13.676
	LOWER LIMIT	191328	3.843	617340	7.360	484972	10.803	270990	12.676
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	LAB SAMPLE ID								
	=====	=====	=====	=====	=====	=====	=====	=====	=====
23	1300558	341485	4.343	1057725	7.859	820065	11.303	447777	13.176
24	1301539	336094	4.355	1049147	7.866	814580	11.303	448898	13.176
25	1301875	331676	4.355	1037405	7.866	809725	11.303	440427	13.177
26	1302629	321258	4.343	1036062	7.859	806744	11.303	454613	13.176
27	1302629MS	312035	4.349	1106570	7.866	875859	11.303	495804	13.176

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.
 page 2 of 2

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ha27c01.d Date Analyzed: 04/27/20
 Instrument ID: HP19094 Time Analyzed: 19:41
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	12 HOUR STD	131075	4.446	1680744	7.952	1490660	11.372	820606	13.243
	UPPER LIMIT	262150	4.946	3361488	8.452	2981320	11.872	1641212	13.743
	LOWER LIMIT	65538	3.946	840372	7.452	745330	10.872	410303	12.743
	LAB SAMPLE ID								
01	LCSH54	134107	4.458	1688805	7.957	1478359	11.371	818477	13.243
02	LCSH56	134107	4.458	1688805	7.957	1478359	11.371	818477	13.243
03	LCSH58	134107	4.458	1688805	7.957	1478359	11.371	818477	13.243
04	LCDH56	142701	4.464	1688481	7.951	1491990	11.371	824759	13.243
05	LCDH58	142701	4.464	1688481	7.951	1491990	11.371	824759	13.243
06	LCSH57	133245	4.464	1666299	7.951	1487857	11.371	806402	13.243
07	LCSH55	128264	4.476	1681141	7.957	1488451	11.371	802725	13.243
08	RLVH54 - RL	136687	4.464	1651487	7.951	1462137	11.372	808880	13.243
09	RLVH58 - RL	136687	4.464	1651487	7.951	1462137	11.372	808880	13.243
10	VBLKH54	129748	4.452	1639074	7.951	1461061	11.371	795566	13.243
11	VBLKH56	129748	4.452	1639074	7.951	1461061	11.371	795566	13.243
12	VBLKH58	129748	4.452	1639074	7.951	1461061	11.371	795566	13.243
13	1300807	126334	4.458	1631605	7.958	1465293	11.371	793549	13.243
14	1300808	122214	4.464	1608355	7.958	1449926	11.372	780861	13.243
15	1300795	110322	4.452	1607154	7.951	1438795	11.371	778989	13.243
16	1300797	94058	4.452	1616831	7.951	1450694	11.371	793994	13.243
17	1300798MS	117364	4.440	1665793	7.952	1477359	11.372	819129	13.243
18	1300799MSD	126983	4.458	1681427	7.958	1498012	11.372	823188	13.243
19	1300798MS1	128193	4.446	1667387	7.951	1489319	11.371	804206	13.243
20	1300799MSD1	121202	4.452	1637474	7.951	1473893	11.372	802307	13.243
21	1300800	127270	4.452	1619878	7.958	1456406	11.371	799926	13.243

IS1 (TBA)=t-Butyl Alcohol-d10 UPPER LIMIT = + 100%
 IS2 (FBZ)=Fluorobenzene of internal standard area.
 IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
 IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ha28c01.d Date Analyzed: 04/28/20
 Instrument ID: HP19094 Time Analyzed: 08:51
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	132945	4.458	2048561	7.951	1598245	11.371	858159	13.243
	UPPER LIMIT	265890	4.958	4097122	8.451	3196490	11.871	1716318	13.743
	LOWER LIMIT	66472	3.958	1024280	7.451	799122	10.871	429080	12.743
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	LAB SAMPLE ID								
	=====	=====	=====	=====	=====	=====	=====	=====	=====
01	LCSH59	141072	4.452	2053328	7.951	1598795	11.372	855425	13.243
02	LCSH61	141072	4.452	2053328	7.951	1598795	11.372	855425	13.243
03	LCDH59	133501	4.464	2060441	7.951	1582424	11.371	851673	13.243
04	LCDH61	133501	4.464	2060441	7.951	1582424	11.371	851673	13.243
05	LCSH60	139833	4.458	2040424	7.951	1577697	11.372	829489	13.243
06	LCDH60	129225	4.458	2032314	7.957	1573880	11.371	825398	13.243
07	VBLKH59	130059	4.458	2012967	7.951	1564031	11.371	819706	13.243
08	VBLKH61	130059	4.458	2012967	7.951	1564031	11.371	819706	13.243
09	1300801	118324	4.464	2001135	7.951	1552103	11.372	822152	13.243
10	1300802	111207	4.446	2039281	7.951	1565329	11.371	825955	13.243
11	1300803	117549	4.452	1998380	7.951	1544969	11.372	809965	13.243
12	1300804	132926	4.452	2023326	7.951	1566021	11.371	818698	13.243
13	1300805	124818	4.458	1974972	7.951	1527994	11.371	801379	13.243
14	1300806	137073	4.464	1979880	7.951	1530318	11.372	798090	13.243
15	1300795DL	121677	4.452	1997585	7.951	1539943	11.371	796493	13.243
16	1300794	115782	4.458	2014985	7.958	1530924	11.372	802018	13.243
17	1300794DL	96765	4.458	2018741	7.951	1541190	11.372	803378	13.243
18	1300796	101854	4.458	2035452	7.951	1554463	11.371	807343	13.243
19	1300796DL	118617	4.446	2003546	7.951	1526615	11.372	793852	13.243
20	1301157	113233	4.452	1974473	7.951	1508558	11.372	790812	13.243
21	1299788	117458	4.452	2031688	7.958	1507687	11.372	783642	13.243
22	1299789DL	104163	4.452	1988093	7.951	1505709	11.371	780780	13.243

IS1 (TBA)=t-Butyl Alcohol-d10 UPPER LIMIT = + 100%
 IS2 (FBZ)=Fluorobenzene of internal standard area.
 IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
 IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ha28c01.d Date Analyzed: 04/28/20
 Instrument ID: HP19094 Time Analyzed: 08:51
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	132945	4.458	2048561	7.951	1598245	11.371	858159	13.243
	UPPER LIMIT	265890	4.958	4097122	8.451	3196490	11.871	1716318	13.743
	LOWER LIMIT	66472	3.958	1024280	7.451	799122	10.871	429080	12.743
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	LAB SAMPLE ID								
	=====	=====	=====	=====	=====	=====	=====	=====	=====
23	1301162	110020	4.452	1999866	7.951	1518171	11.371	784956	13.243
24	1301163	113579	4.458	2047955	7.951	1527522	11.371	790629	13.243
25	1301175	122868	4.452	1987736	7.951	1502917	11.371	779808	13.243
26	1301175DL	120378	4.458	1995100	7.951	1506746	11.372	780716	13.243
27	1299788DL	90362	4.452	2016122	7.951	1489319	11.371	775800	13.243
28	1301158	146369	4.464	2078440	7.951	1534192	11.371	829132	13.243
29	1301158DL	131124	4.464	2084478	7.951	1542540	11.371	826676	13.243
30	1301159	138037	4.458	2116127	7.952	1571775	11.372	848147	13.243
31	1301159DL	139212	4.464	2114777	7.952	1569213	11.372	828869	13.243

IS1 (TBA)=t-Butyl Alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.
 page 2 of 2

FORM VIII VOA

Sample Data

Volatiles by GC/MS

59R01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300794

Data file: /chem2/HP09355.i/20apr28b.b/ya28s48.d

Injection date and time: 29-APR-2020 00:51

Data file Sample Info. Line: 59R01;1300794;1;0;;RAF59;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 01:09 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349 (-0.006)	455	65	414873 (8)	250.00	
66) Fluorobenzene	7.860 (0.000)	1032	96	1254890 (2)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	952357 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	515992 (-5)	50.00	

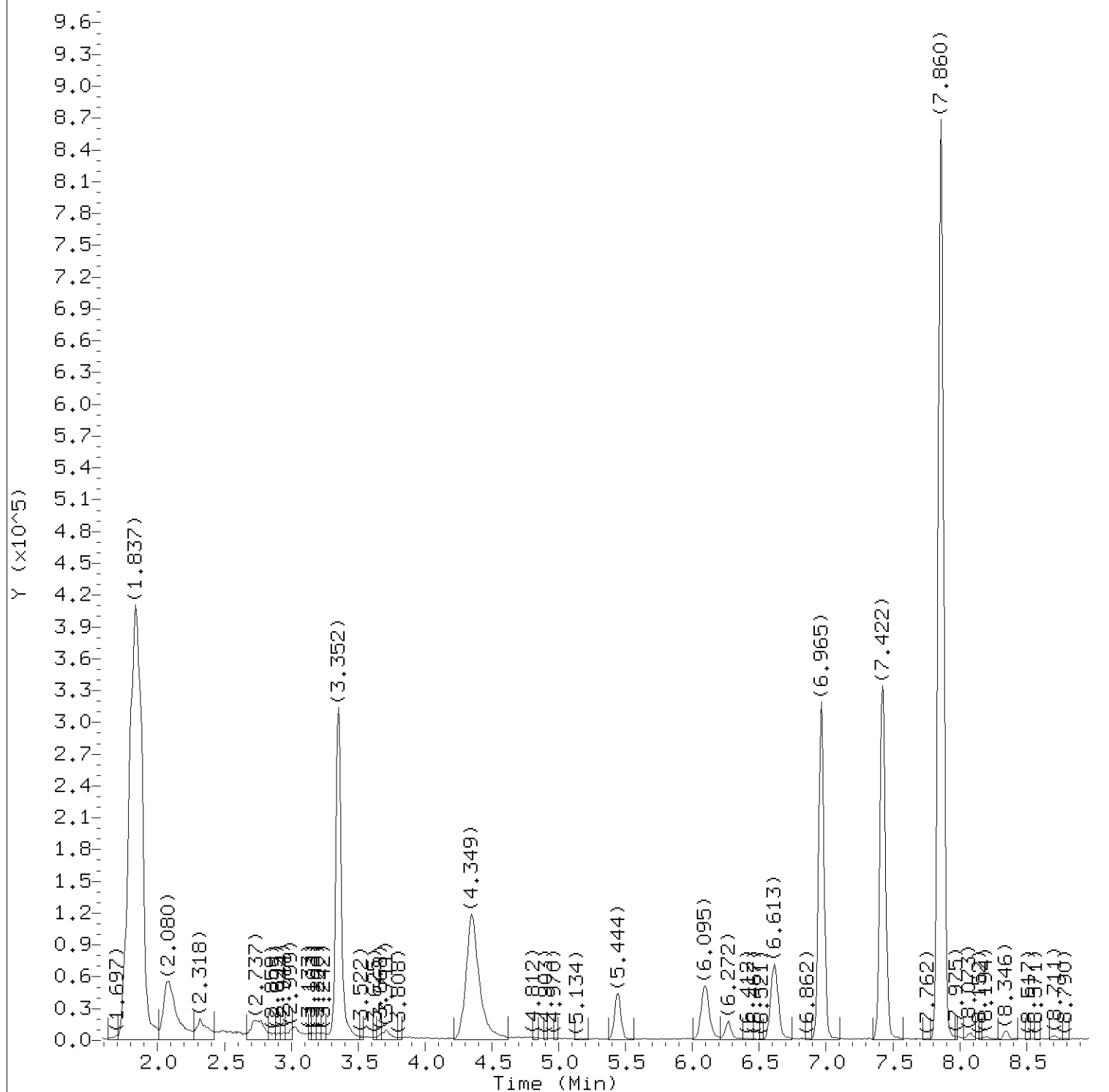
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965 (0.000)	113	289056	50.714	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.422 (0.001)	102	78153	51.994	104%		80 - 120
83) Toluene-d8	(3)	9.855 (0.000)	98	1201957	48.332	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.295 (0.000)	95	448520	47.600	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
21) 2-Propanol	(1)			Not Detected					18 100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:30. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s48.d
Injection date and time: 29-APR-2020 00:51

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

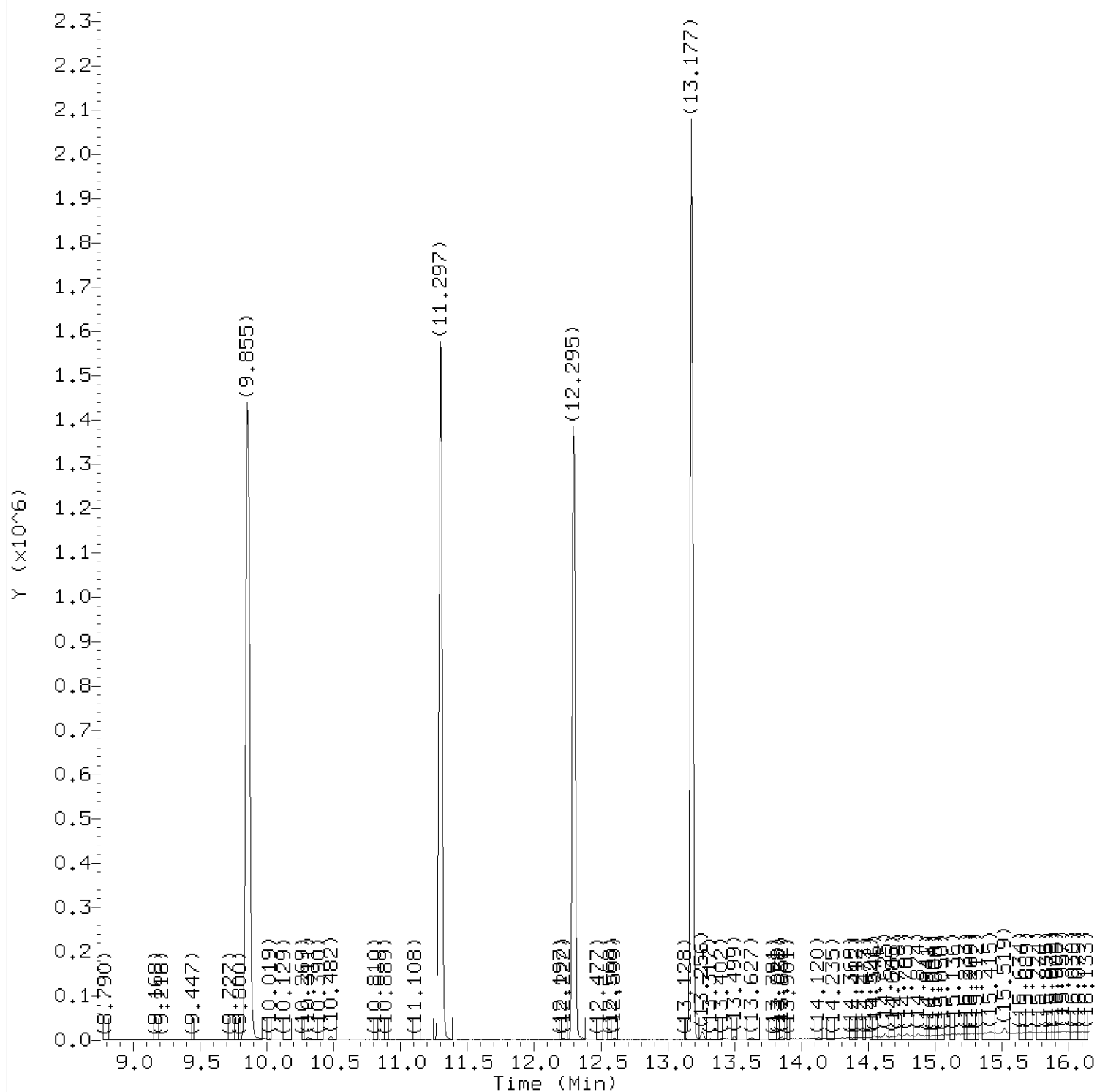
Date, time and analyst ID of latest file update: 29-Apr-2020 01:09 Automation

Sample Name: 59R01

Lab Sample ID: 1300794

Digitally signed by Don V. Viray
on 04/29/2020 at 12:30.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s48.d
Injection date and time: 29-APR-2020 00:51

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 01:09 Automation

Sample Name: 59R01

Lab Sample ID: 1300794

Digitally signed by Don V. Viray
on 04/29/2020 at 12:30.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s48.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 00:51

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 01:09 Automation

Sample Name: 59R01

Lab Sample ID: 1300794

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.349	65	414873	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	289056	50.714
57) \$1,2-Dichloroethane-d4	(2)	7.422	102	78153	51.994
66) *Fluorobenzene	(2)	7.860	96	1254890	50.000
83) \$Toluene-d8	(3)	9.855	98	1201957	48.332
100) *Chlorobenzene-d5	(3)	11.303	117	952357	50.000
114) \$4-Bromofluorobenzene	(3)	12.295	95	448520	47.600
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	515992	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 12:30.

Target 3.5 esignature user ID: dvv10203

59R01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300794

Data file: /chem2/HP19094.i/20apr28a.b/ha28s09.d Injection date and time: 28-APR-2020 13:57
Data file Sample Info. Line: 59R01;1300794;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038D Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	115782 (-13)	50.00	
64) Fluorobenzene	7.958 (-0.006)	1045	96	2014985 (-2)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1530924 (-4)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	802018 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.001)	113	520999	10.401	104%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.001)	102	104047	10.718	107%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1988865	9.751	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	694654	9.206	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					0.1 1
4) Dimethyl ether	(2)	2.154 (0.000)	45	708239	10.551	10.55		J	0.04 13
2) Chloromethane	(2)			Not Detected					0.06 0.5
5) Vinyl Chloride	(2)			Not Detected					0.2 1
7) Bromomethane	(2)			Not Detected					0.5 1
8) Chloroethane	(2)	2.843 (-0.001)	64	164935	4.015	4.02			0.07 0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2 1
11) Ethyl ether	(2)	3.428 (-0.000)	59	1600777	44.689	44.69		E	1 13
13) Acrolein	(1)			Not Detected					3 25
15) 1,1-Dichloroethene	(2)	3.763 (-0.001)	96	11398	0.232	0.23		J	0.2 1
16) Freon 113	(2)			Not Detected					0.1 1
14) Acetone	(1)			Not Detected					0.9 10
17) Methyl Iodide	(2)			Not Detected					0.6 10
19) Carbon Disulfide	(2)			Not Detected					0.4 10
26) Acetonitrile	(1)			Not Detected					32 100
23) Allyl Chloride	(2)			Not Detected					0.8 10
24) Methylene Chloride	(2)	4.458 (-0.000)	84	63713	1.202	1.20			0.2 1
30) Acrylonitrile	(1)			Not Detected					0.5 10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2 1
34) 1,1-Dichloroethane	(2)	5.543 (-0.000)	63	601184	6.153	6.15			0.1 1
37) Vinyl Acetate	(2)			Not Detected					3 10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5 10
39) 2-Butanone	(1)			Not Detected					0.6 10
43) Propionitrile	(1)			Not Detected					10 100
46) Methacrylonitrile	(1)			Not Detected					10 100
49) Tetrahydrofuran	(1)	6.714 (-0.002)	71	59851	19.694	19.69		J	2 25
50) Chloroform	(2)			Not Detected					0.09 1
52) 1,1,1-Trichloroethane	(2)	7.086 (-0.000)	97	30707	0.346	0.35		J	0.1 1
55) Carbon Tetrachloride	(2)			Not Detected					0.2 1
57) Isobutyl Alcohol	(1)			Not Detected					4 200

E = Compound concentration above calibration range.

59R01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300794

Data file: /chem2/HP19094.i/20apr28a.b/ha28s09.d Injection date and time: 28-APR-2020 13:57
Data file Sample Info. Line: 59R01;1300794;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038D Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

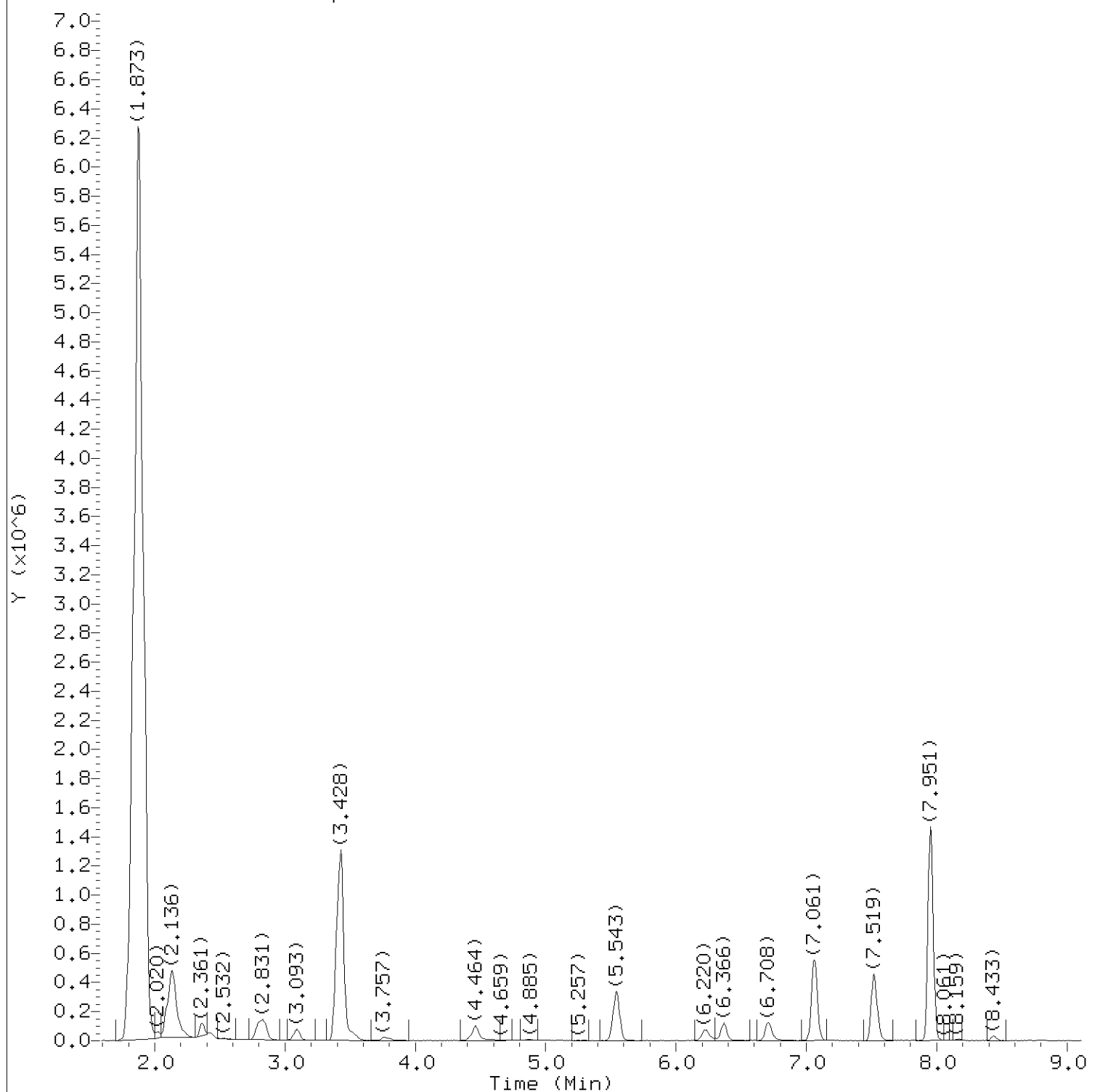
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
59) Benzene	(2)	7.555(-0.000)	78	69365	0.316	0.32		J	0.07	1
60) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
68) Trichloroethene	(2)	8.433(0.000)	95	10635	0.185	0.19		J	0.2	1
71) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
72) Methyl Methacrylate	(1)			Not Detected					4	10
74) Dibromomethane	(2)			Not Detected					0.07	1
73) 1,4-Dioxane	(1)			Not Detected					45	200
75) Bromodichloromethane	(2)			Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)			Not Detected					0.9	10
84) Toluene	(3)			Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
87) Ethyl Methacrylate	(3)			Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)			Not Detected					0.08	1
90) Tetrachloroethene	(3)	10.555(-0.000)	166	14436	0.222	0.22		J	0.06	1
91) 1,3-Dichloropropane	(3)			Not Detected					0.09	1
92) 2-Hexanone	(1)			Not Detected					0.6	10
94) Dibromochloromethane	(3)			Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)			Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.08	1
101) Ethylbenzene	(3)			Not Detected					0.08	1
102) m+p-Xylene	(3)			Not Detected					0.1	2
105) o-Xylene	(3)			Not Detected					0.1	1
106) Xylene (Total)	(3)			Not Detected					0.2	3
107) Styrene	(3)			Not Detected					0.07	1
108) Bromoform	(3)			Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.1	1
127) Pentachloroethane	(4)			Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)			Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)			Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)			Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
147) Hexachlorobutadiene	(4)			Not Detected					0.07	1
148) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Marla S. Brewer on 04/29/2020 at 19:58. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

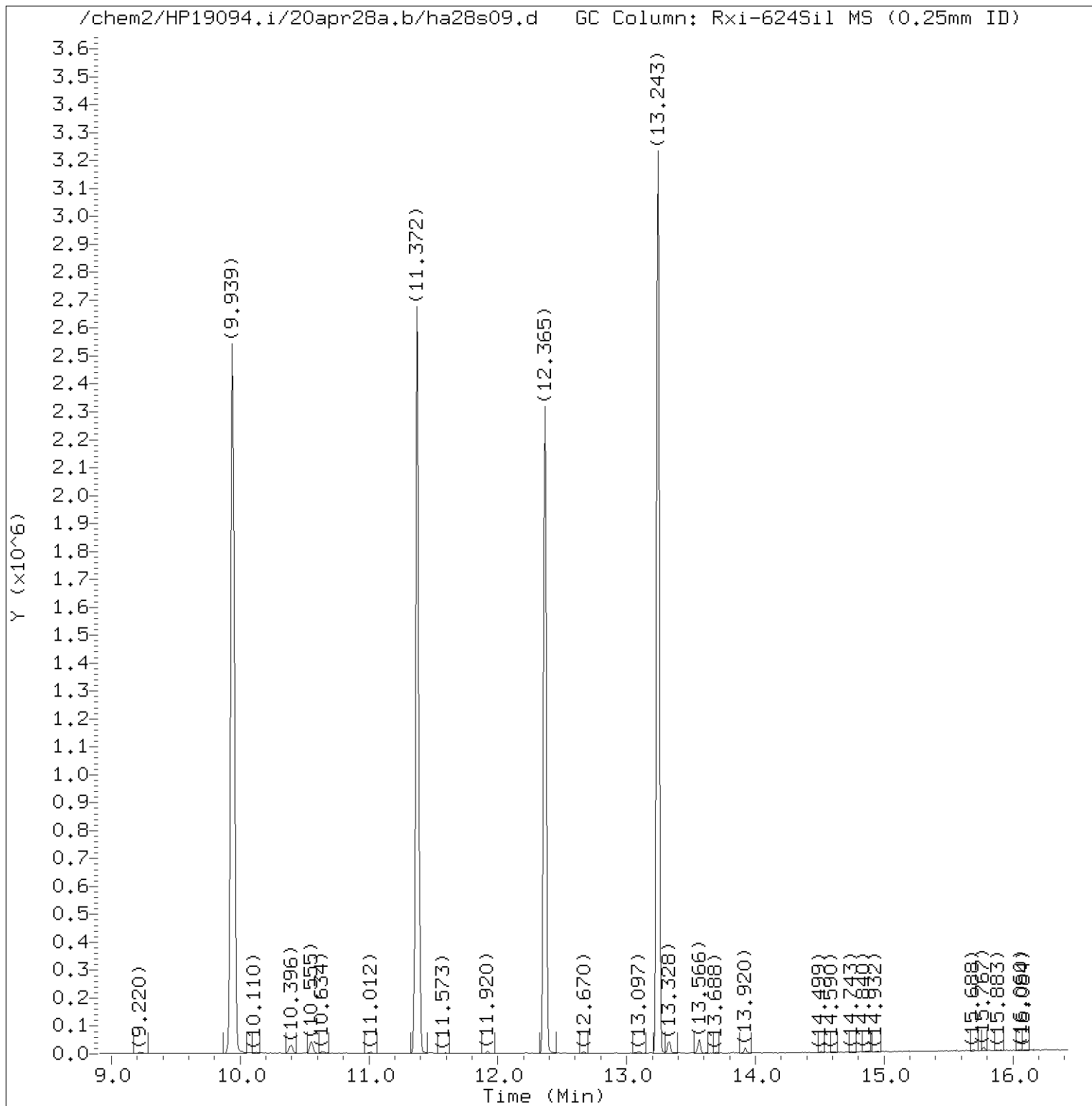
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01

Lab Sample ID: 1300794

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01

Lab Sample ID: 1300794

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01

Lab Sample ID: 1300794

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	708239	10.551
8) Chloroethane	(2)	2.843	64	164935	4.015
11) Ethyl ether	(2)	3.428	59	1600777	44.689
15) 1,1-Dichloroethene	(2)	3.763	96	11398	0.232
27)*t-Butyl Alcohol-d10	(1)	4.458	65	115782	50.000
24) Methylene Chloride	(2)	4.458	84	63713	1.202
34) 1,1-Dichloroethane	(2)	5.543	63	601184	6.153
49) Tetrahydrofuran	(1)	6.714	71	59851	19.694
51)\$Dibromofluoromethane	(2)	7.061	113	520999	10.401
52) 1,1,1-Trichloroethane	(2)	7.086	97	30707	0.346
58)\$1,2-Dichloroethane-d4	(2)	7.519	102	104047	10.718
59) Benzene	(2)	7.555	78	69365	0.316
64)*Fluorobenzene	(2)	7.958	96	2014985	10.000
68) Trichloroethene	(2)	8.433	95	10635	0.185
83)\$Toluene-d8	(3)	9.939	98	1988865	9.751
90) Tetrachloroethene	(3)	10.555	166	14436	0.222
98)*Chlorobenzene-d5	(3)	11.372	117	1530924	10.000
112)\$4-Bromofluorobenzene	(3)	12.365	95	694654	9.206
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	802018	10.000

* = Compound is an internal standard.

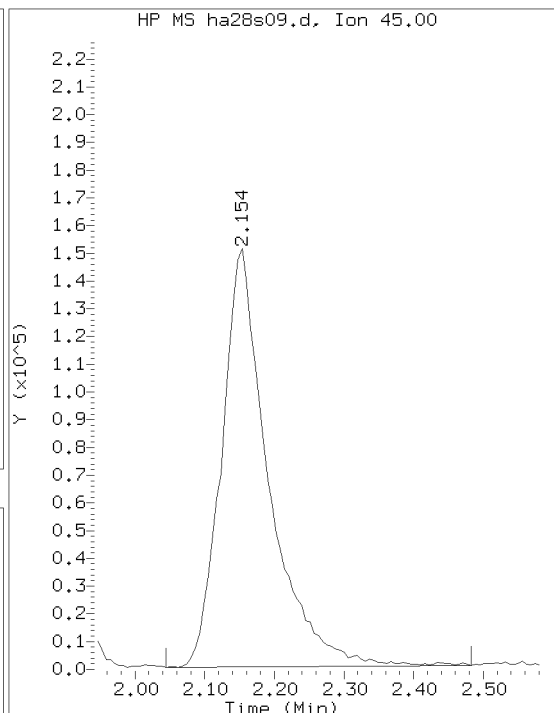
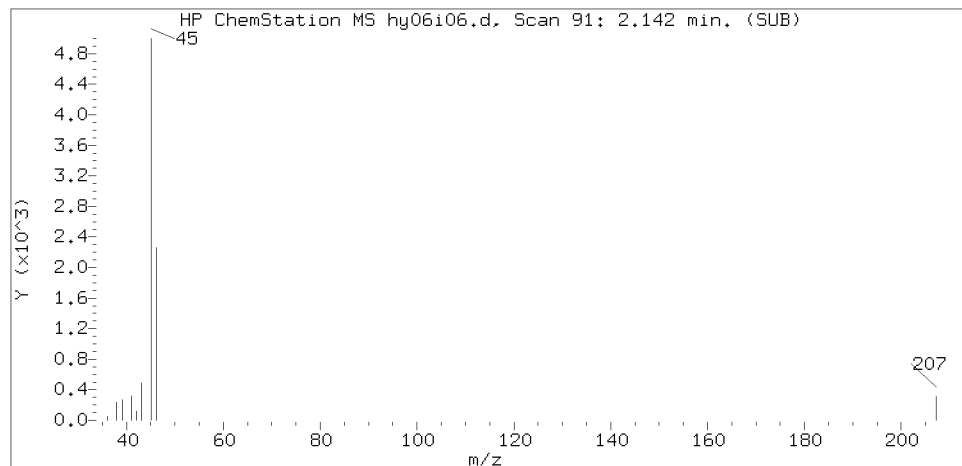
\$ = Compound is a surrogate standard.

page 1 of 1

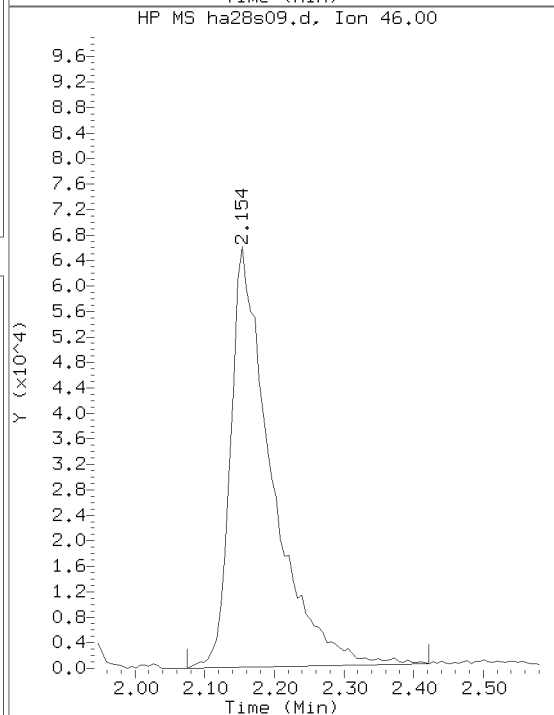
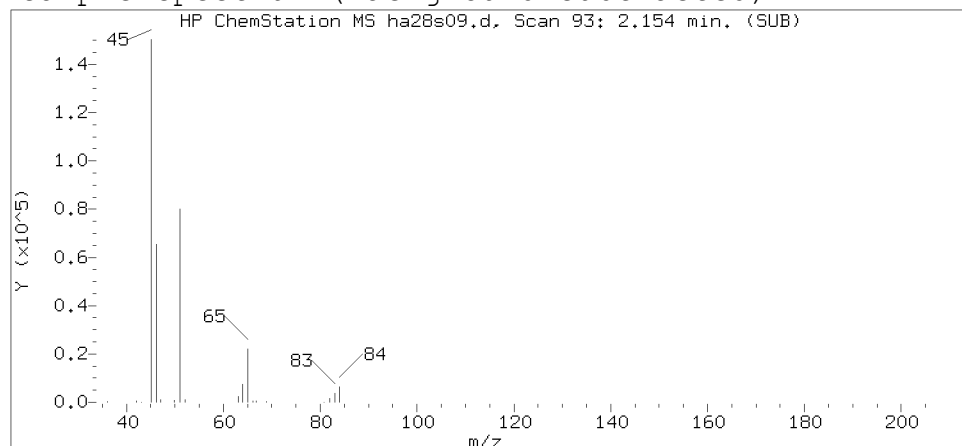
Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

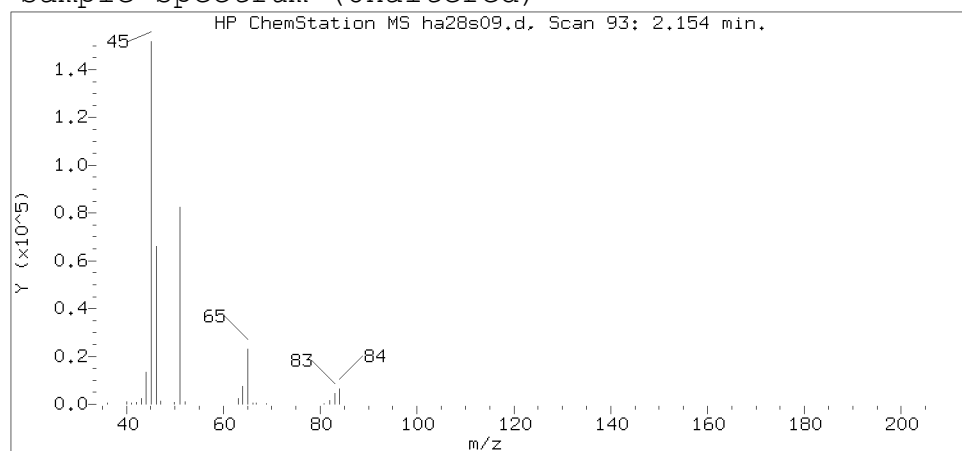
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

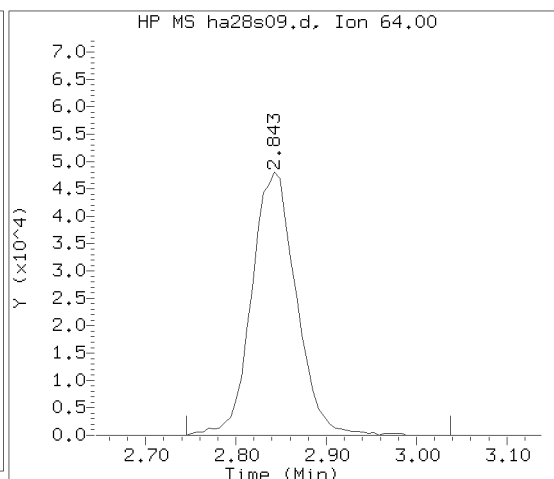
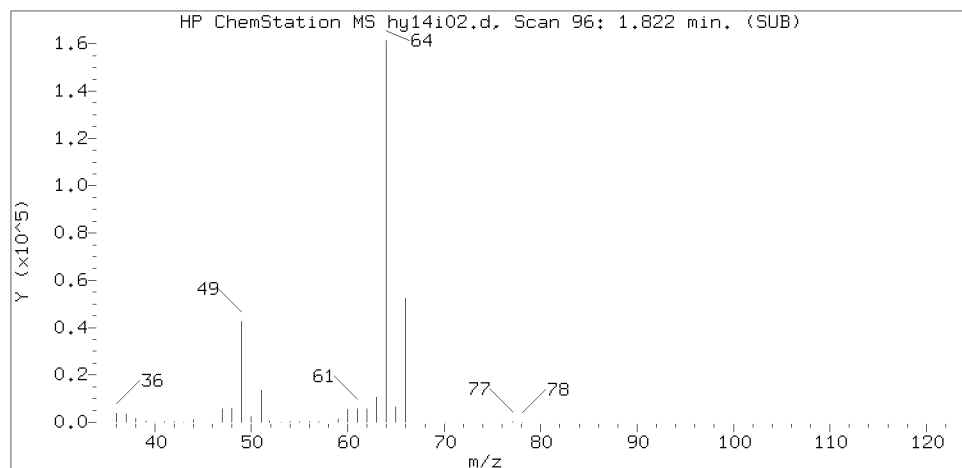
Sample Name: 59R01

Lab Sample ID: 1300794

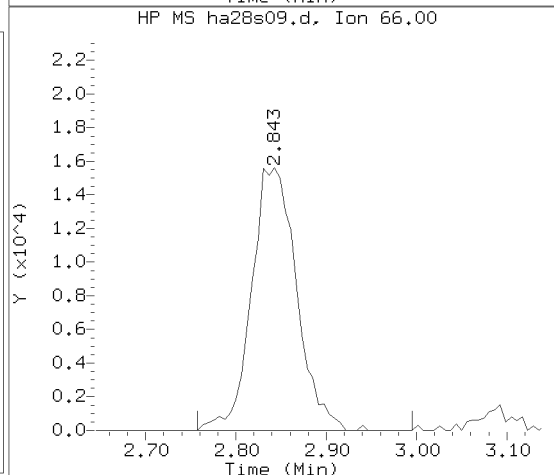
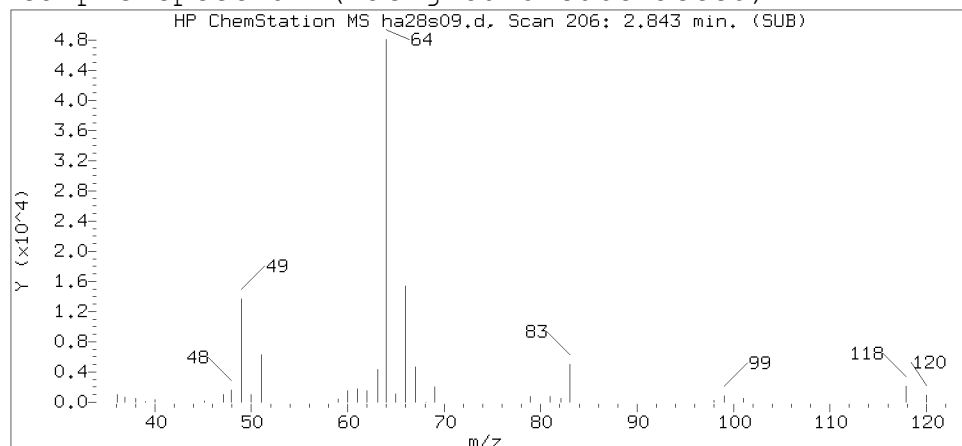
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Relative Retention Time : 0.00022
Quant Ion : 45.00
Area (flag) : 708239
On-Column Amount (ng) : 10.5508

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Target 3.5 esignature user ID: mec29284

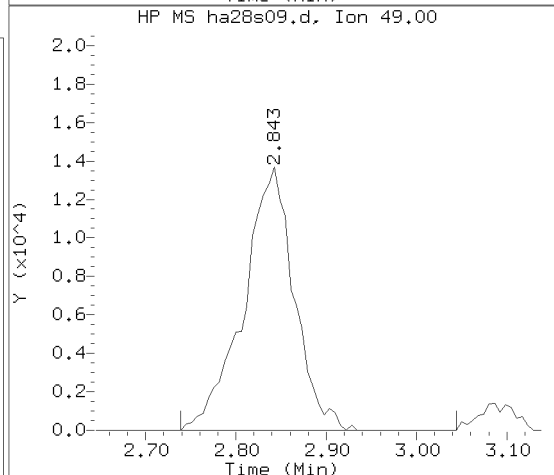
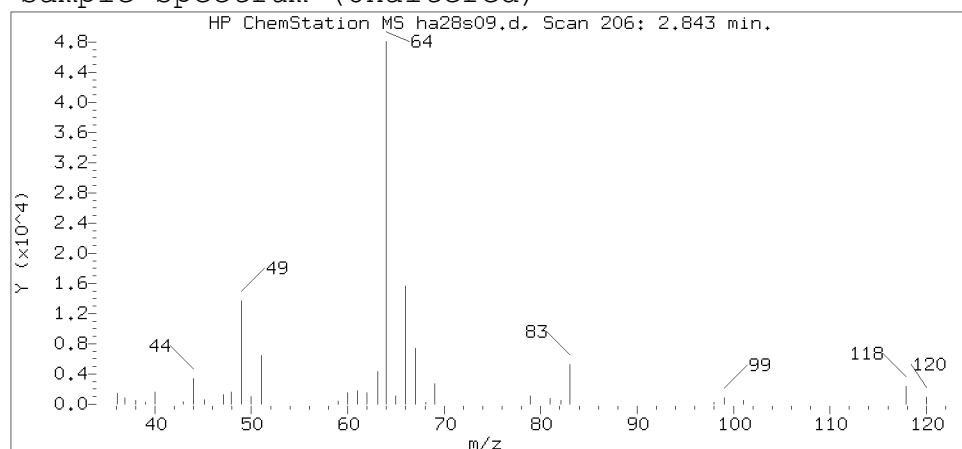
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

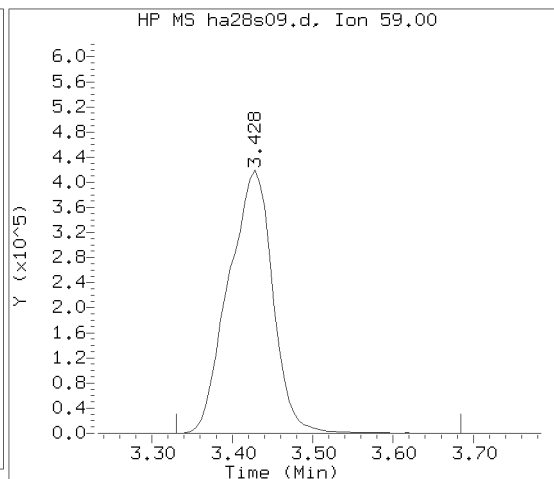
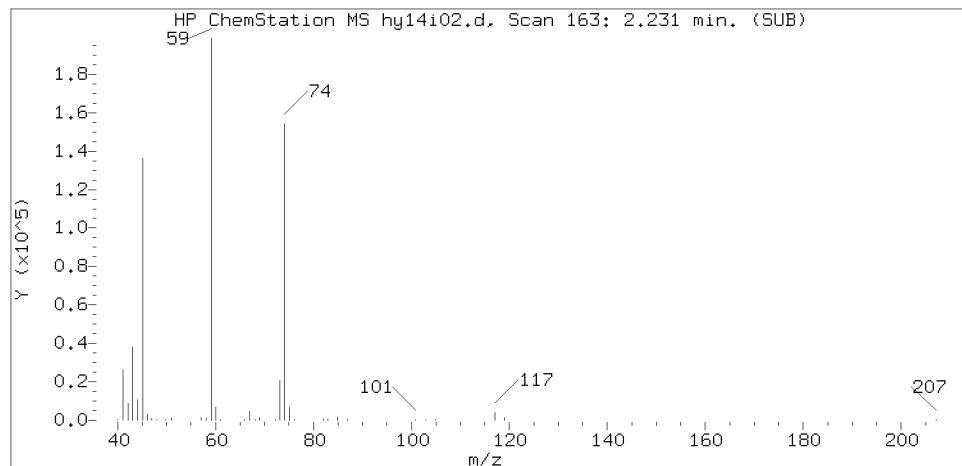
Sample Name: 59R01

Lab Sample ID: 1300794

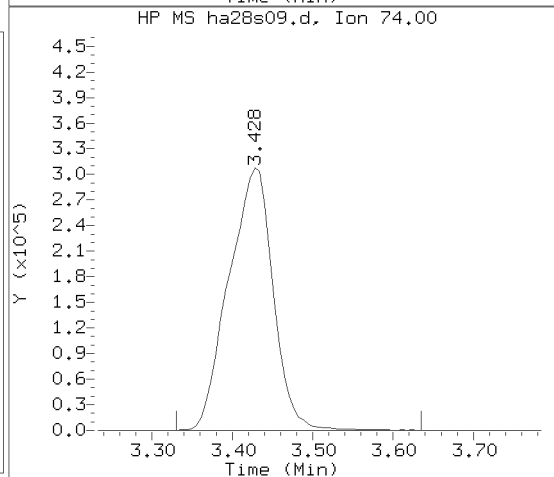
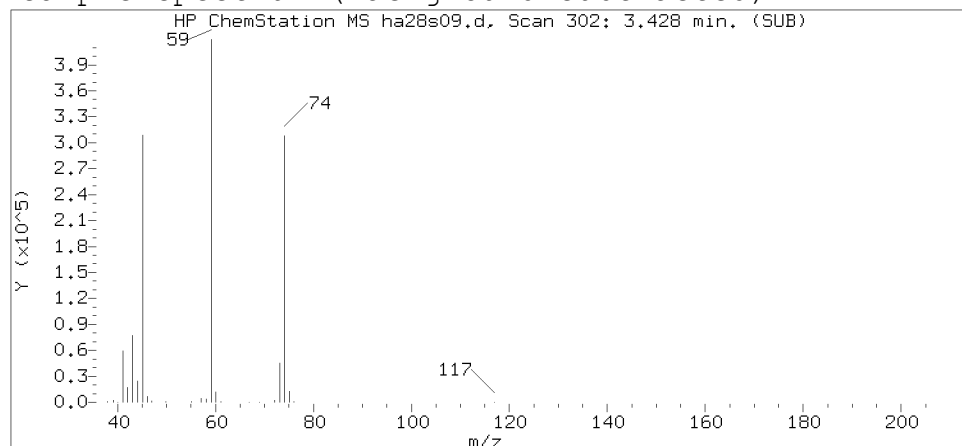
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 206
Retention Time (minutes): 2.843
Relative Retention Time : -0.00127
Quant Ion : 64.00
Area (flag) : 164935
On-Column Amount (ng) : 4.0154

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

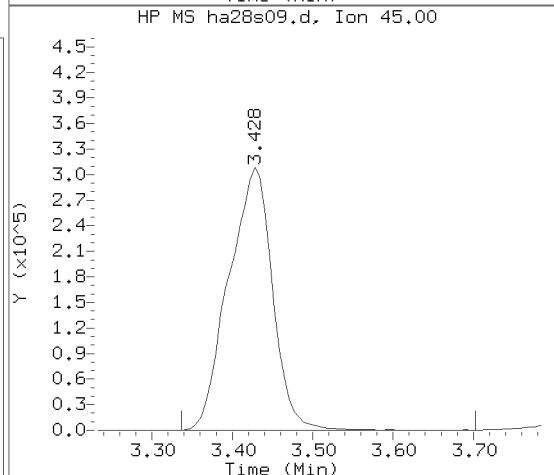
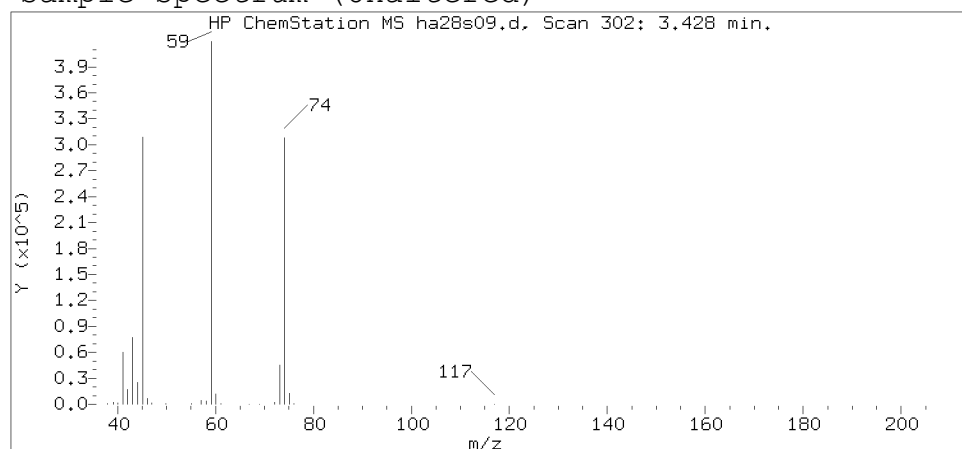
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

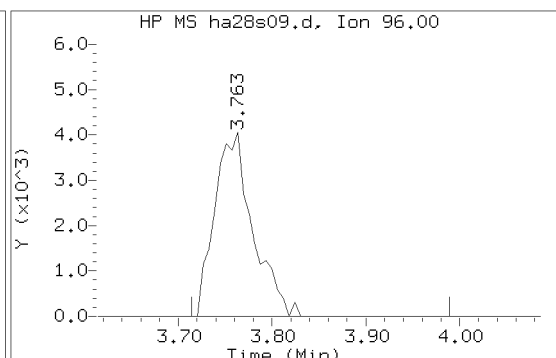
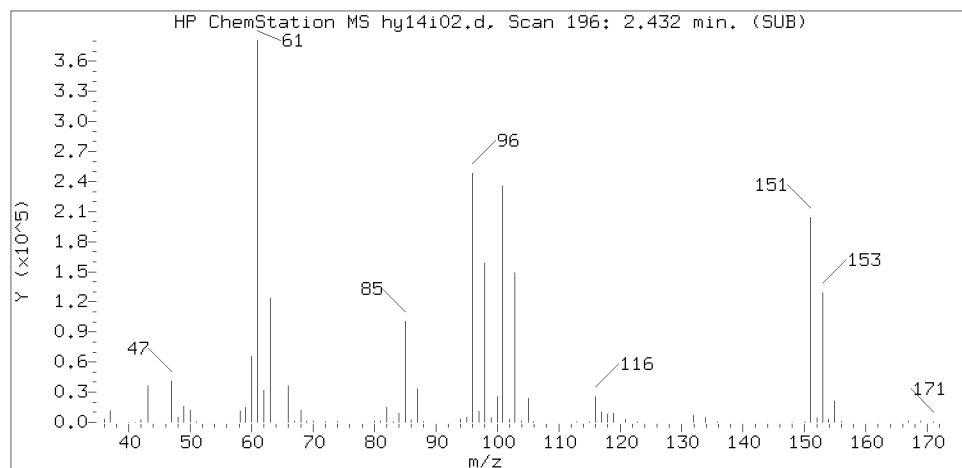
Sample Name: 59R01

Lab Sample ID: 1300794

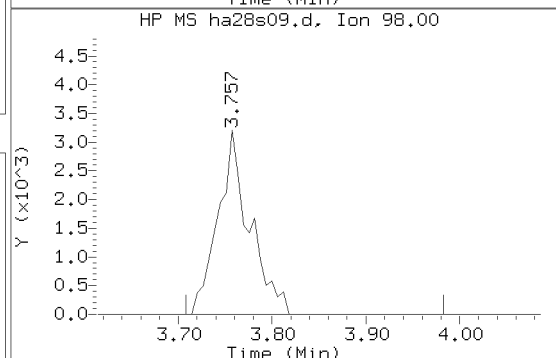
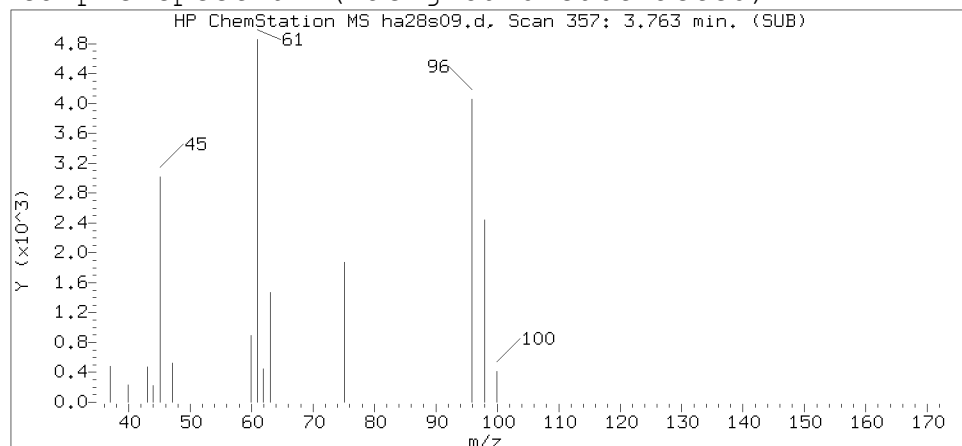
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00045
Quant Ion : 59.00
Area (flag) : 1600777
On-Column Amount (ng) : 44.6894

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Target 3.5 esignature user ID: mec29284

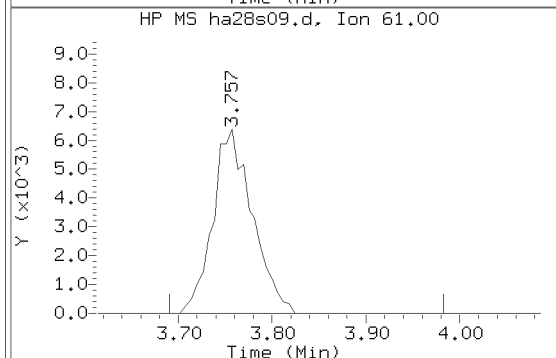
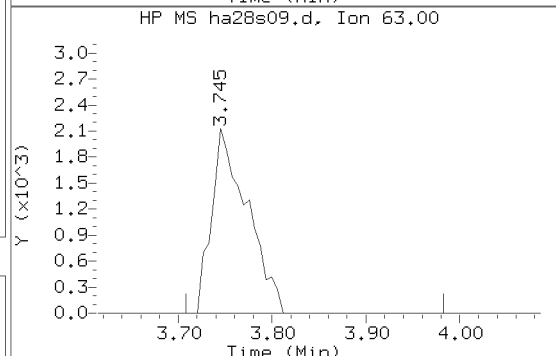
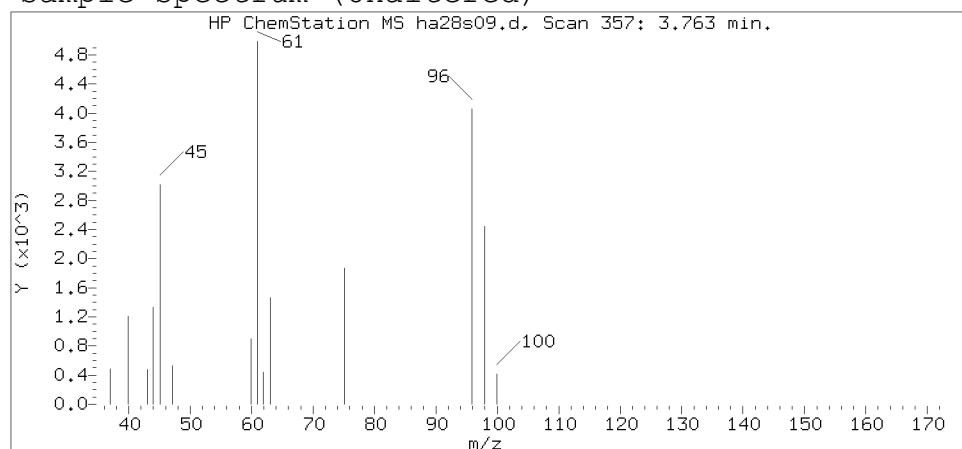
Reference Standard Spectrum for 1,1-Dichloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

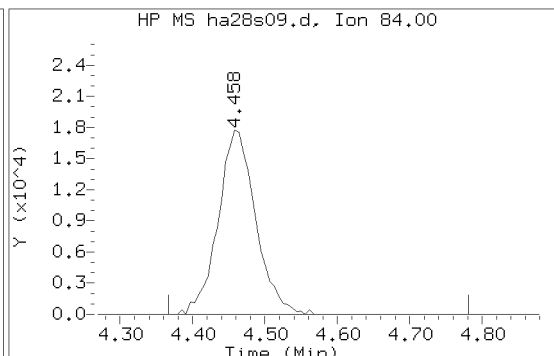
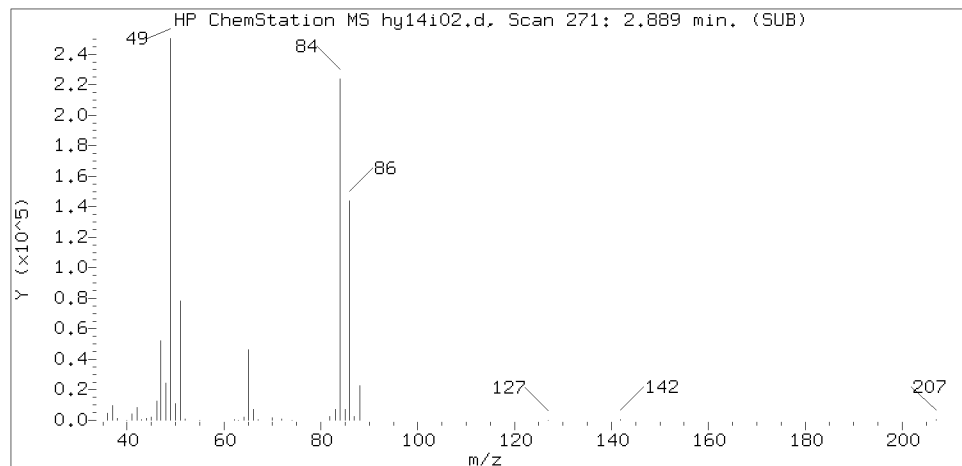
Sample Name: 59R01

Lab Sample ID: 1300794

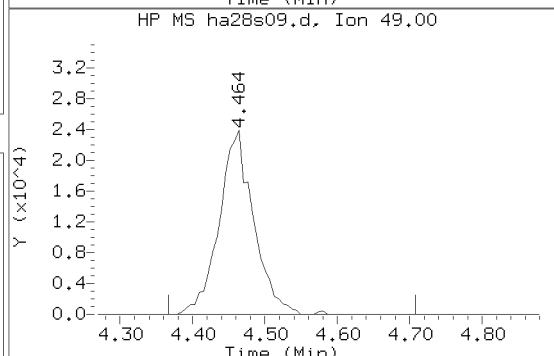
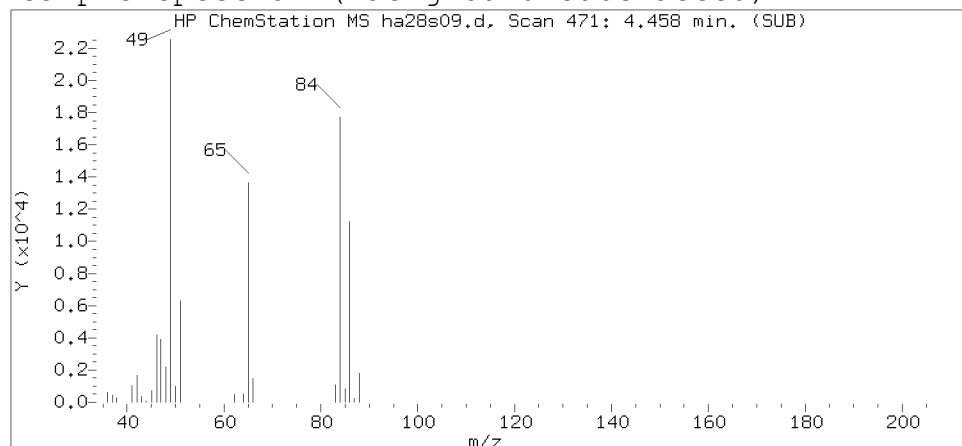
Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 357
Retention Time (minutes): 3.763
Relative Retention Time : -0.00195
Quant Ion : 96.00
Area (flag) : 11398
On-Column Amount (ng) : 0.2315

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

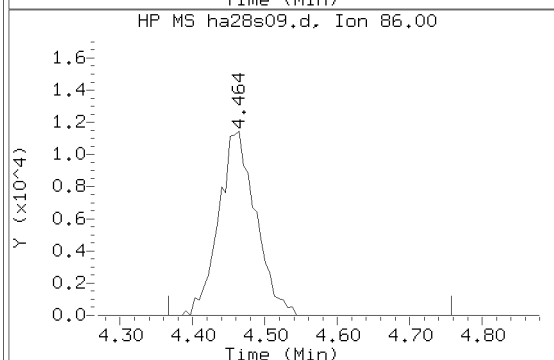
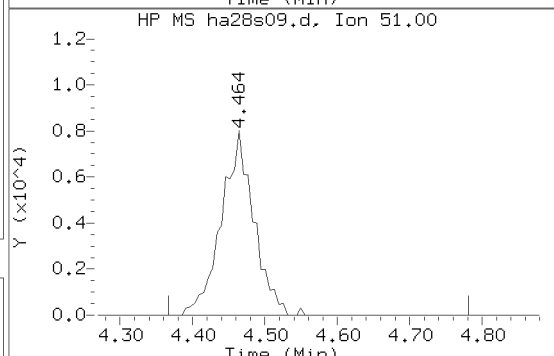
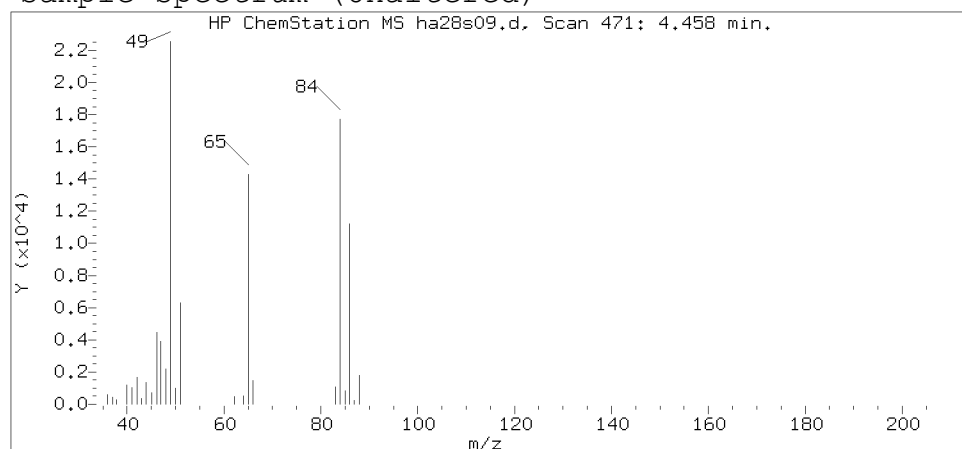
Reference Standard Spectrum for Methylene Chloride



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01

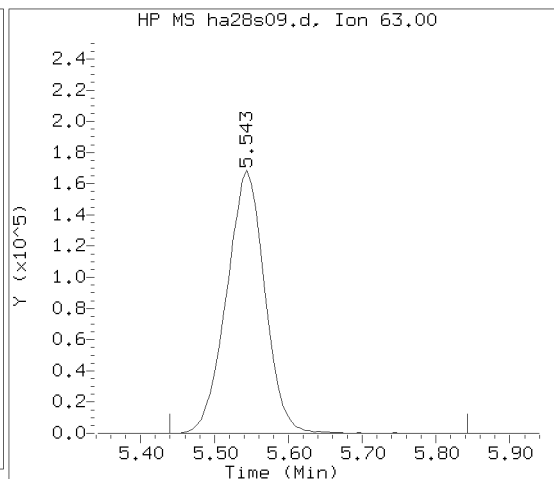
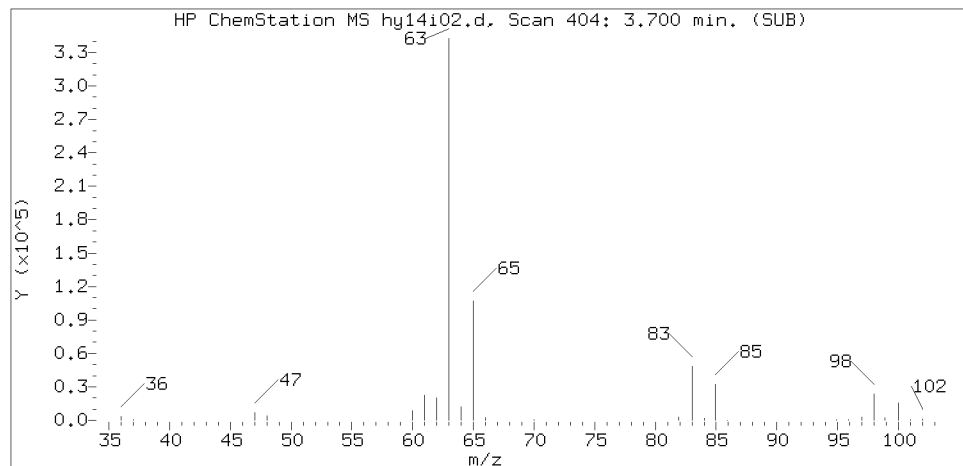
Lab Sample ID: 1300794

Compound Number : 24
Compound Name : Methylene Chloride
Scan Number : 471
Retention Time (minutes): 4.458
Relative Retention Time :-0.00035
Quant Ion : 84.00
Area (flag) : 63713
On-Column Amount (ng) : 1.2025

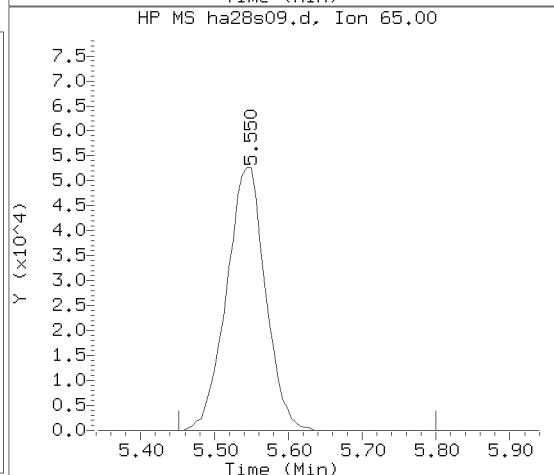
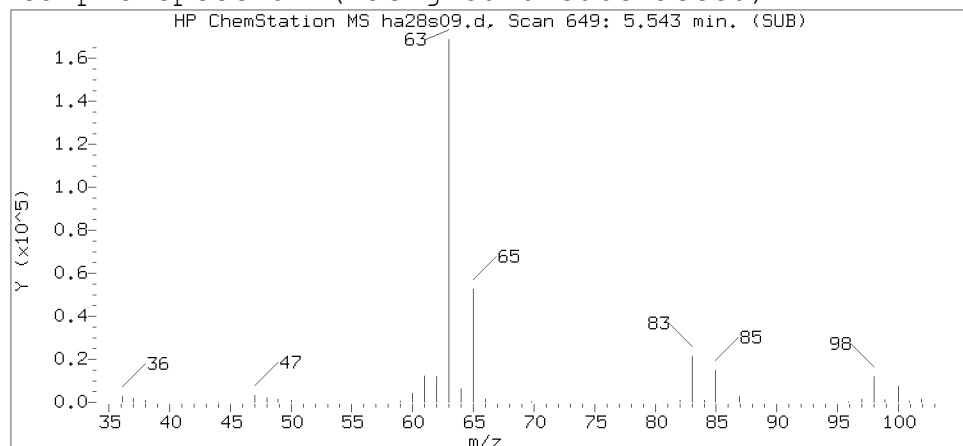
Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284
RAP-59 Page 192 of 1506

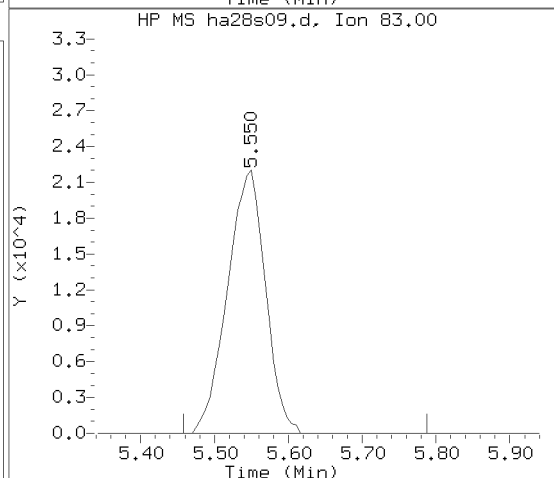
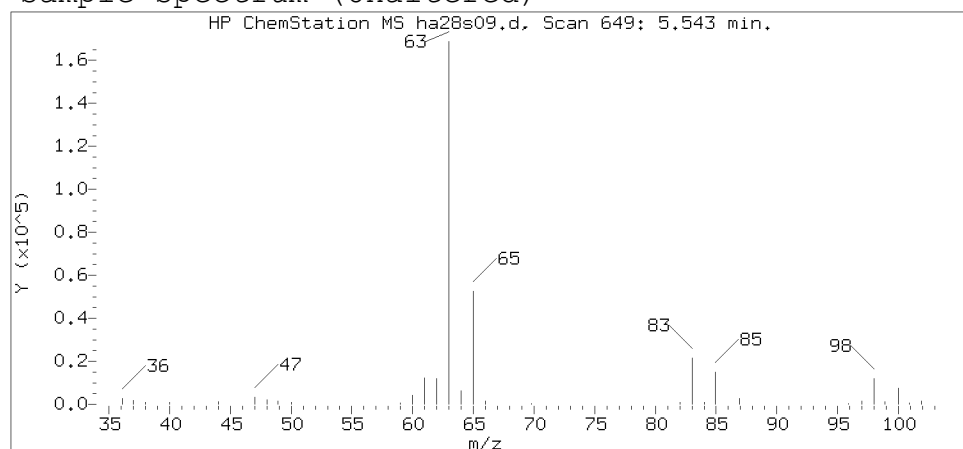
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

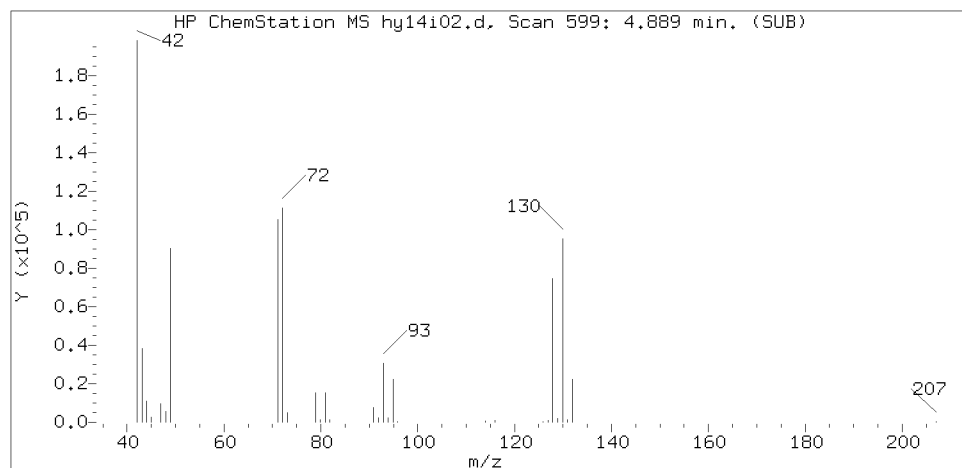
Sample Name: 59R01

Lab Sample ID: 1300794

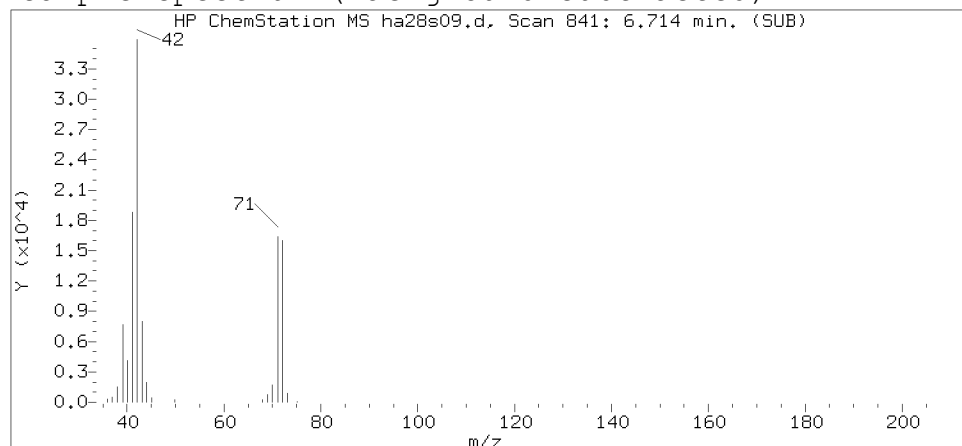
Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Relative Retention Time :-0.00024
Quant Ion : 63.00
Area (flag) : 601184
On-Column Amount (ng) : 6.1531

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

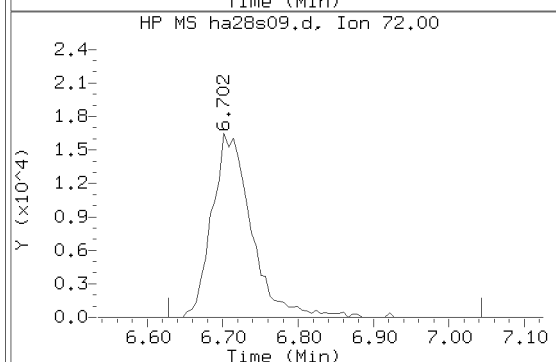
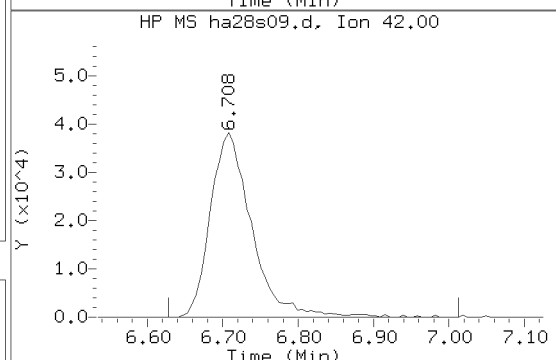
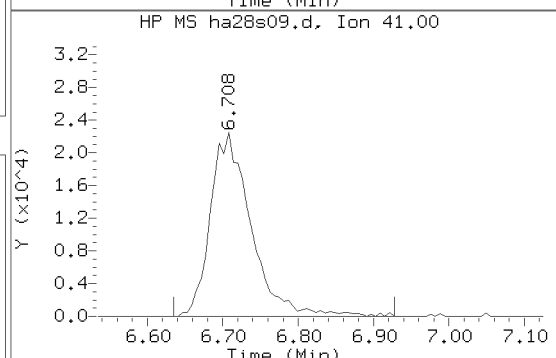
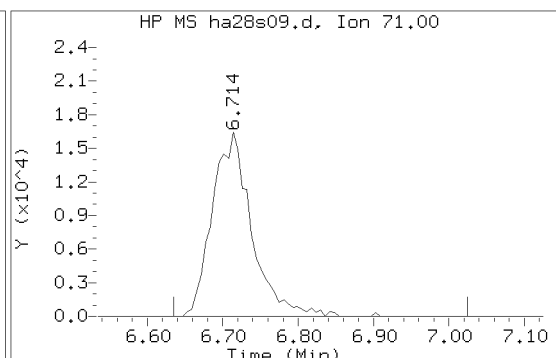
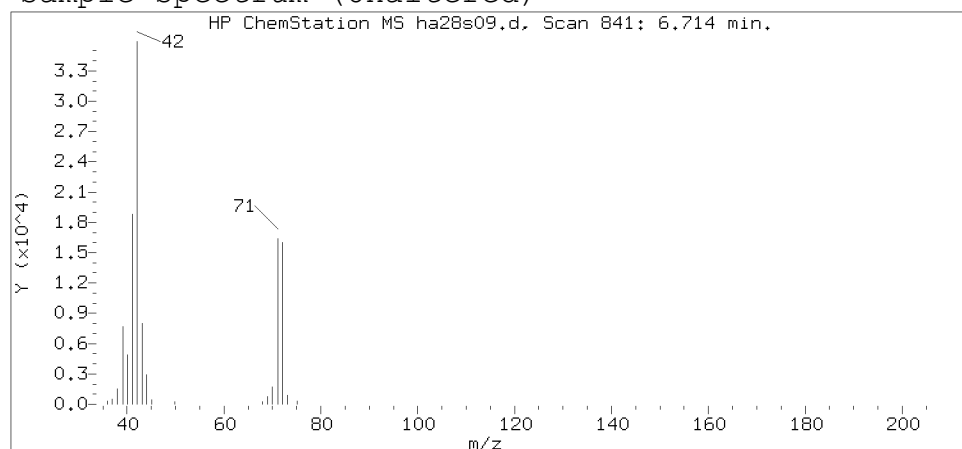
Reference Standard Spectrum for Tetrahydrofuran



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01

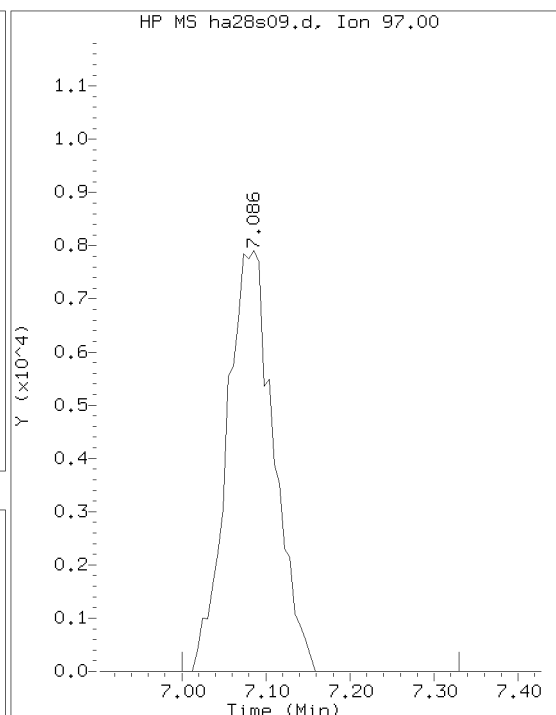
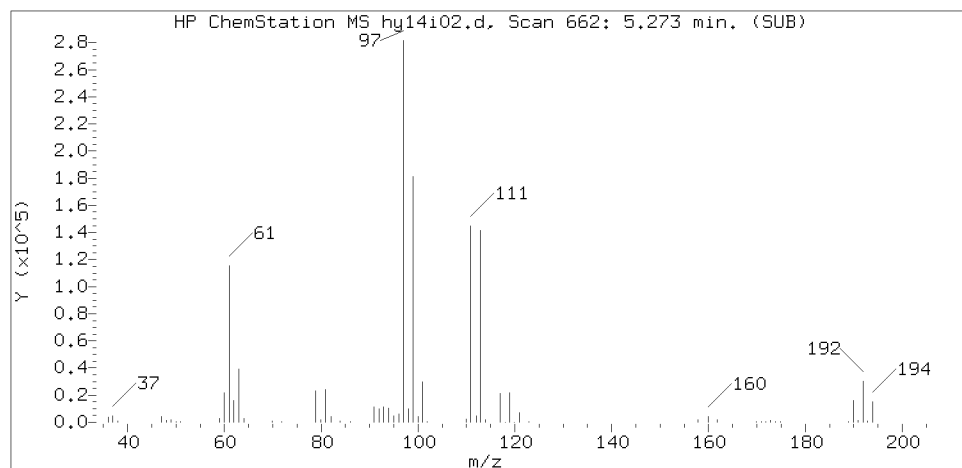
Lab Sample ID: 1300794

Compound Number : 49
Compound Name : Tetrahydrofuran
Scan Number : 841
Retention Time (minutes): 6.714
Relative Retention Time : -0.00271
Quant Ion : 71.00
Area (flag) : 59851
On-Column Amount (ng) : 19.6938

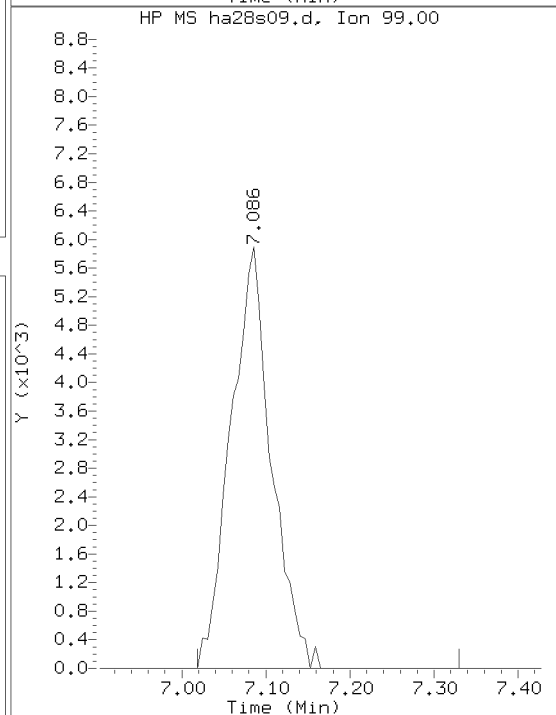
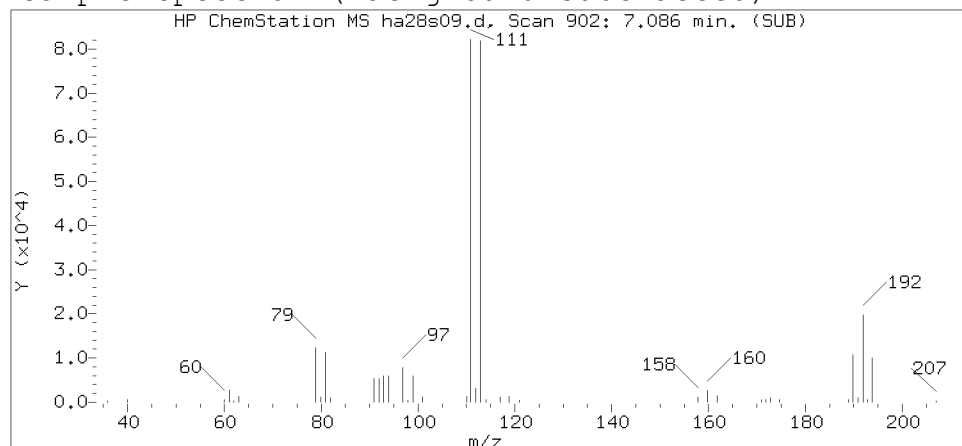
Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284
RAP59 Page 194 of 1506

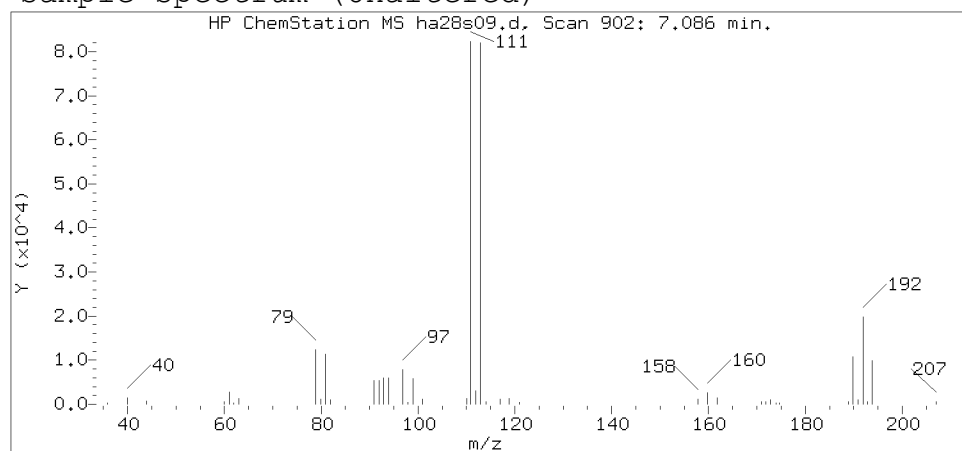
Reference Standard Spectrum for 1,1,1-Trichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

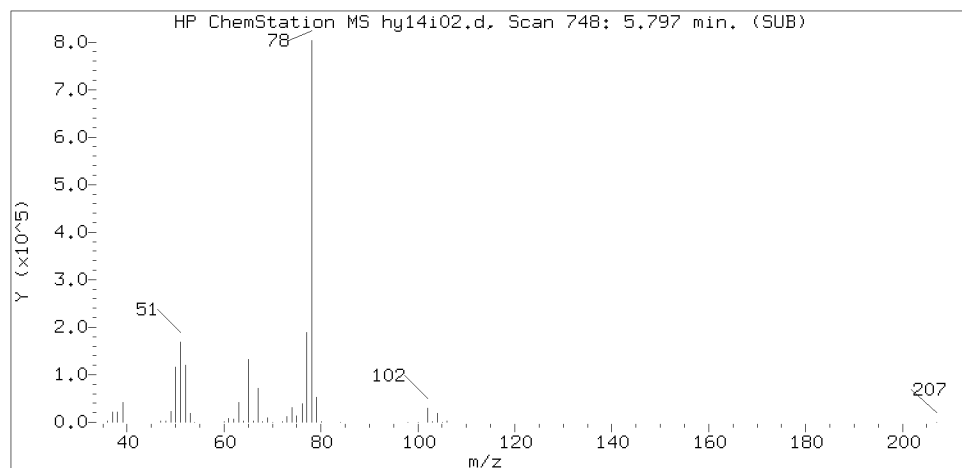
Sample Name: 59R01

Lab Sample ID: 1300794

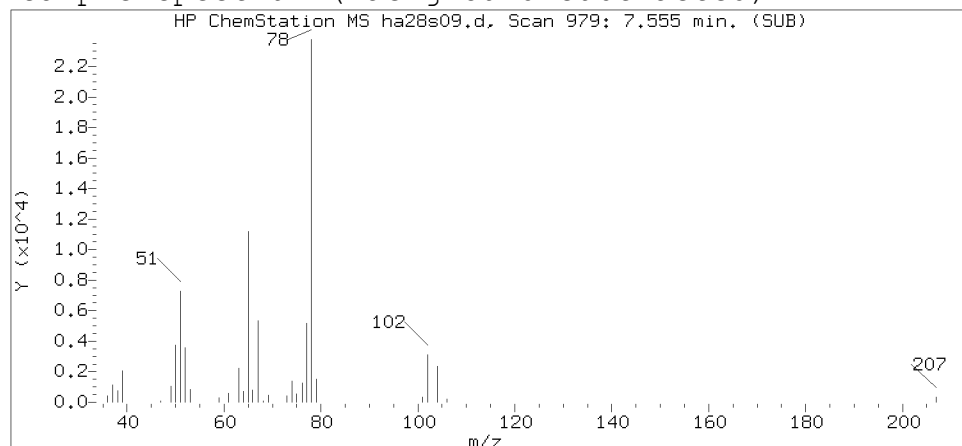
Compound Number : 52
Compound Name : 1,1,1-Trichloroethane
Scan Number : 902
Retention Time (minutes): 7.086
Relative Retention Time : -0.00008
Quant Ion : 97.00
Area (flag) : 30707
On-Column Amount (ng) : 0.3463

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

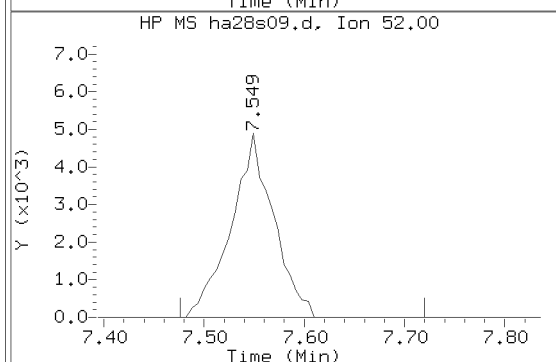
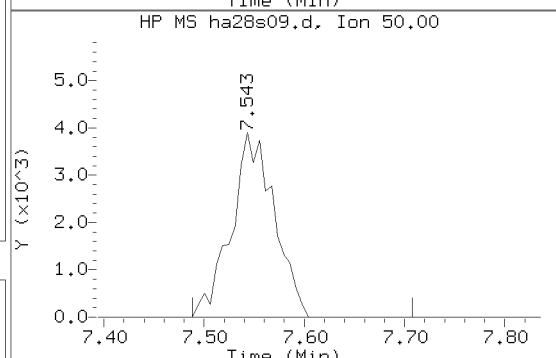
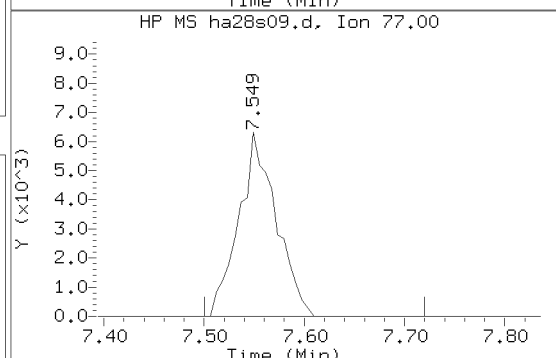
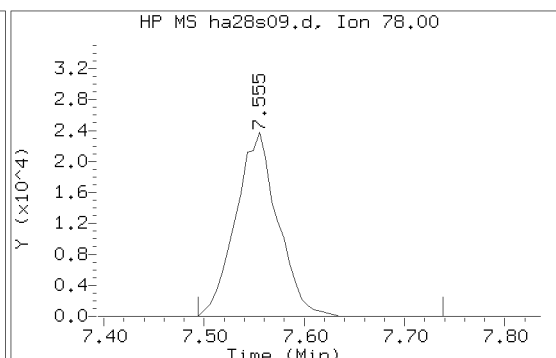
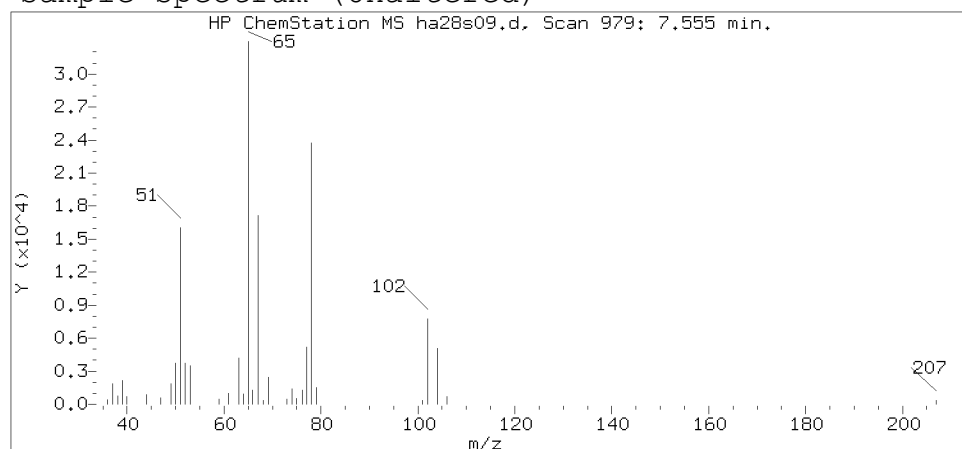
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

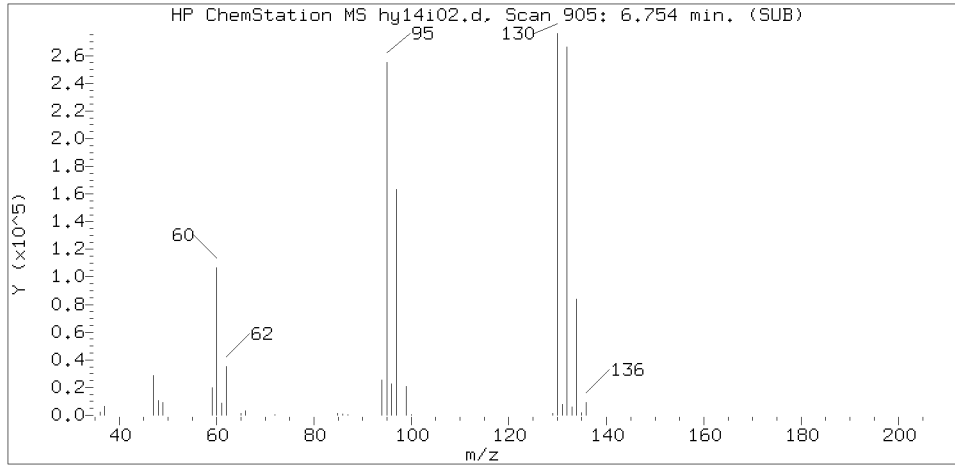
Sample Name: 59R01

Lab Sample ID: 1300794

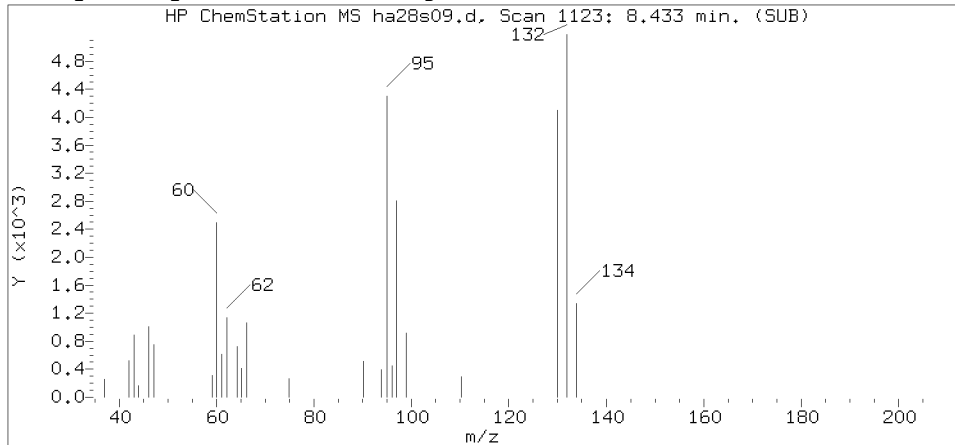
Compound Number : 59
Compound Name : Benzene
Scan Number : 979
Retention Time (minutes): 7.555
Relative Retention Time :-0.00004
Quant Ion : 78.00
Area (flag) : 69365
On-Column Amount (ng) : 0.3165

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Target 3.5 esignature user ID: mec29284

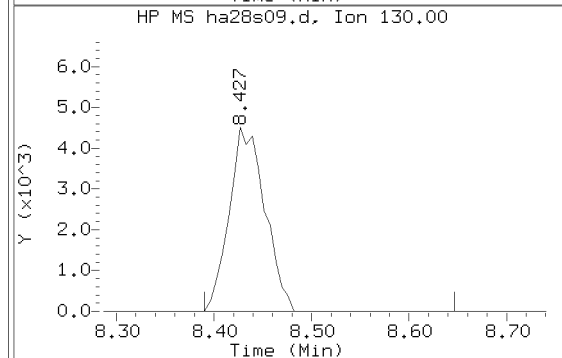
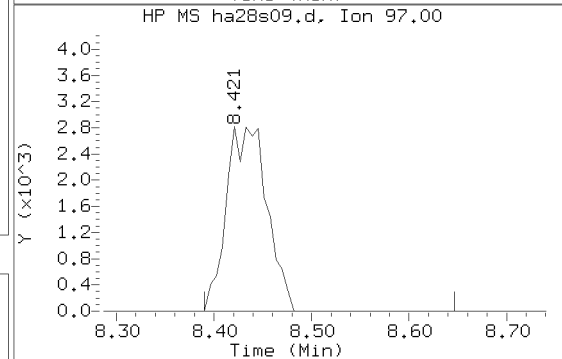
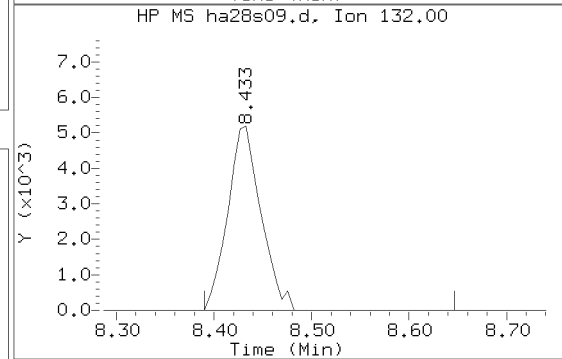
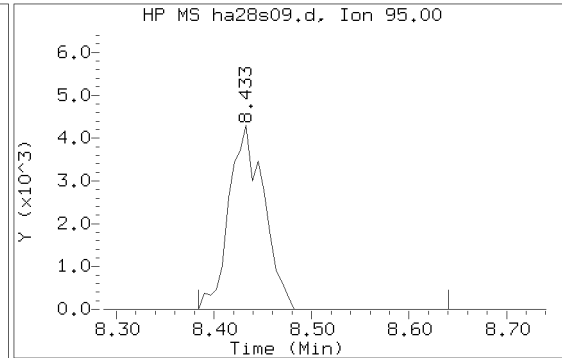
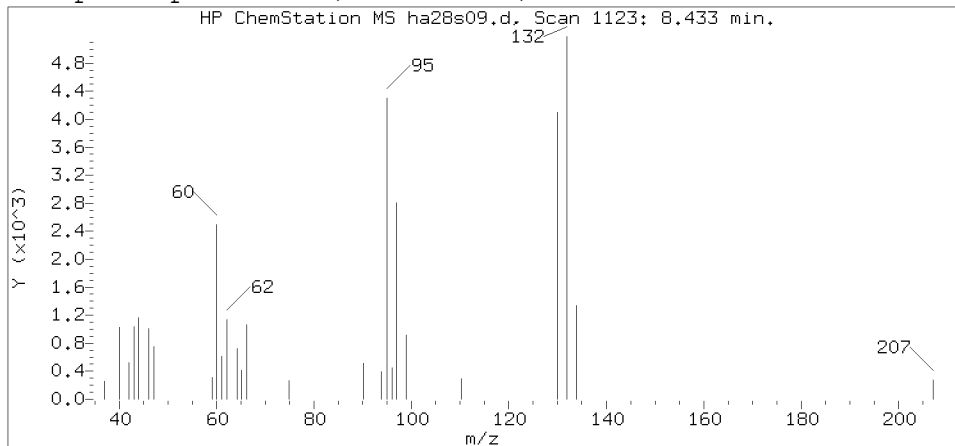
Reference Standard Spectrum for Trichloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

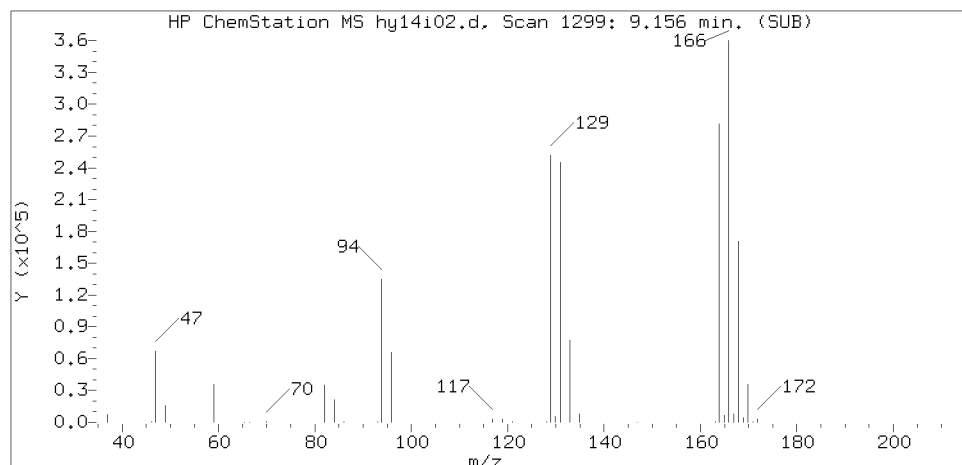
Sample Name: 59R01

Lab Sample ID: 1300794

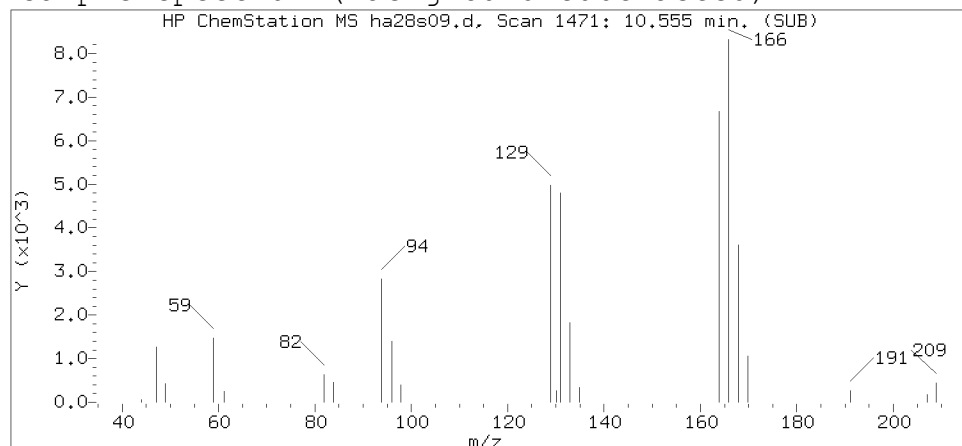
Compound Number : 68
Compound Name : Trichloroethene
Scan Number : 1123
Retention Time (minutes): 8.433
Relative Retention Time : 0.00081
Quant Ion : 95.00
Area (flag) : 10635
On-Column Amount (ng) : 0.1850

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

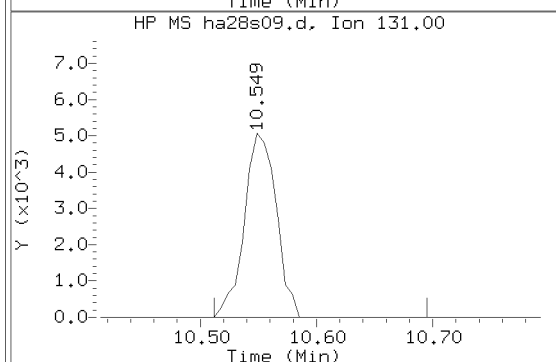
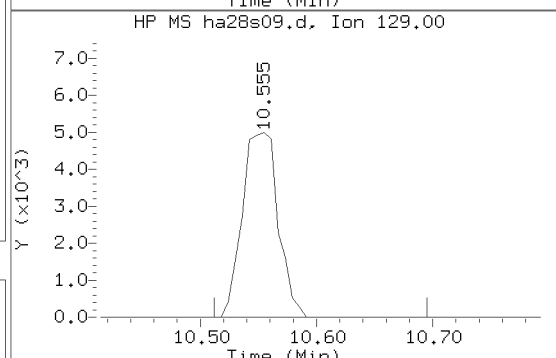
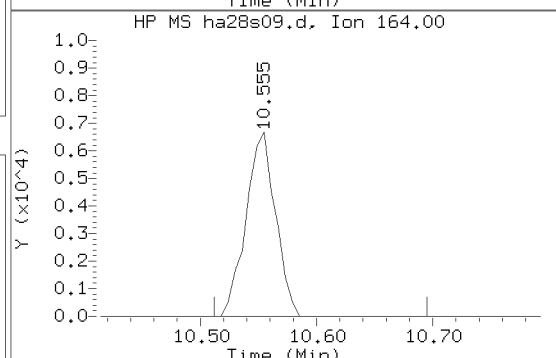
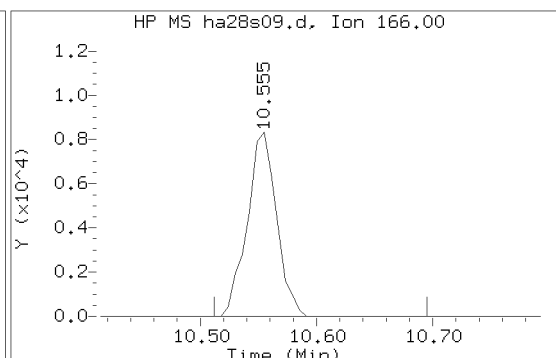
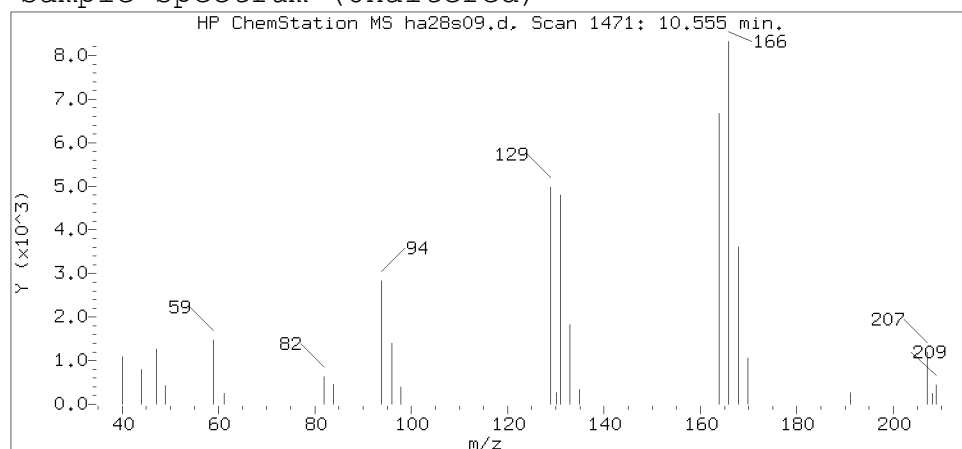
Reference Standard Spectrum for Tetrachloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s09.d
Injection date and time: 28-APR-2020 13:57

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01

Lab Sample ID: 1300794

Compound Number : 90
Compound Name : Tetrachloroethene
Scan Number : 1471
Retention Time (minutes): 10.555
Relative Retention Time : -0.00000
Quant Ion : 166.00
Area (flag) : 14436
On-Column Amount (ng) : 0.2217

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

59R01DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300794DL

Data file: /chem2/HP19094.i/20apr28a.b/ha28s10.d

Injection date and time: 28-APR-2020 14:18

Data file Sample Info. Line: 59R01DL;1300794DL;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038E Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 2.50

Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	96765 (-27)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2018741 (-1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1541190 (-4)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	803378 (-6)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	528190	10.525	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	106781	10.979	110%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2008483	9.781	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	700633	9.223	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.4	3
4) Dimethyl ether	(2)	2.154 (0.000)	45	264328	3.930	9.83		J	0.1	31
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)			Not Detected					0.4	3
7) Bromomethane	(2)			Not Detected					1	3
8) Chloroethane	(2)	2.836 (-0.000)	64	57692	1.402	3.50			0.2	1
10) Trichlorofluoromethane	(2)			Not Detected					0.4	3
11) Ethyl ether	(2)	3.428 (-0.000)	59	616749	17.186	42.96			3	31
13) Acrolein	(1)			Not Detected					9	63
15) 1,1-Dichloroethene	(2)			Not Detected					0.6	3
16) Freon 113	(2)			Not Detected					0.3	3
14) Acetone	(1)			Not Detected					2	25
17) Methyl Iodide	(2)			Not Detected					1	25
19) Carbon Disulfide	(2)			Not Detected					0.9	25
26) Acetonitrile	(1)			Not Detected					79	250
23) Allyl Chloride	(2)			Not Detected					2	25
24) Methylene Chloride	(2)	4.470 (-0.002)	84	24407	0.460	1.15		J	0.5	3
30) Acrylonitrile	(1)			Not Detected					1	25
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.4	3
34) 1,1-Dichloroethane	(2)	5.543 (-0.000)	63	217513	2.222	5.56			0.3	3
37) Vinyl Acetate	(2)			Not Detected					8	25
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					1	25
39) 2-Butanone	(1)			Not Detected					2	25
43) Propionitrile	(1)			Not Detected					26	250
46) Methacrylonitrile	(1)			Not Detected					24	250
49) Tetrahydrofuran	(1)	6.696 (0.001)	71	22102	8.702	21.75		J	5	63
50) Chloroform	(2)			Not Detected					0.2	3
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	3
55) Carbon Tetrachloride	(2)			Not Detected					0.4	3
57) Isobutyl Alcohol	(1)			Not Detected					9	500
59) Benzene	(2)	7.555 (-0.000)	78	25962	0.118	0.30		J	0.2	3

59R01DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300794DL

Data file: /chem2/HP19094.i/20apr28a.b/ha28s10.d

Injection date and time: 28-APR-2020 14:18

Data file Sample Info. Line: 59R01DL;1300794DL;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038E Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 2.50

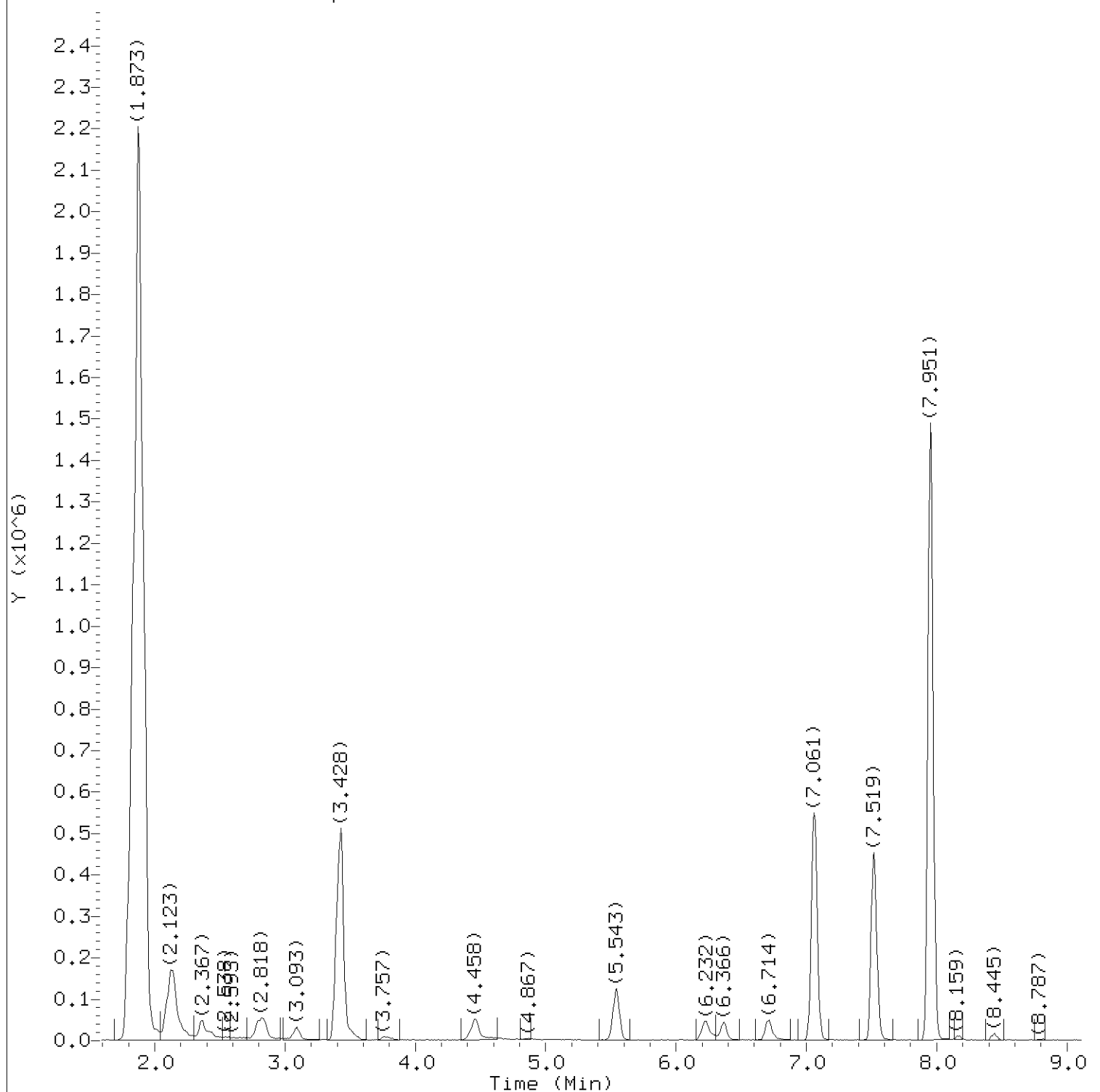
Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
60) 1,2-Dichloroethane	(2)				Not Detected					0.4	3
68) Trichloroethene	(2)				Not Detected					0.4	3
71) 1,2-Dichloropropane	(2)				Not Detected					0.3	3
72) Methyl Methacrylate	(1)				Not Detected					9	25
74) Dibromomethane	(2)				Not Detected					0.2	3
73) 1,4-Dioxane	(1)				Not Detected					110	500
75) Bromodichloromethane	(2)				Not Detected					0.2	3
82) 4-Methyl-2-Pentanone	(1)				Not Detected					2	25
84) Toluene	(3)				Not Detected					0.2	3
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	3
87) Ethyl Methacrylate	(3)				Not Detected					2	25
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	3
90) Tetrachloroethene	(3)	10.554 (-0.000)		166	5307	0.081	0.20		J	0.2	3
91) 1,3-Dichloropropane	(3)				Not Detected					0.2	3
92) 2-Hexanone	(1)				Not Detected					2	25
94) Dibromochloromethane	(3)				Not Detected					0.2	3
96) 1,2-Dibromoethane	(3)				Not Detected					0.2	3
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	3
101) Ethylbenzene	(3)				Not Detected					0.2	3
102) m+p-Xylene	(3)				Not Detected					0.3	5
105) o-Xylene	(3)				Not Detected					0.3	3
106) Xylene (Total)	(3)				Not Detected					0.5	8
107) Styrene	(3)				Not Detected					0.2	3
108) Bromoform	(3)				Not Detected					0.3	3
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	3
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					2	25
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	3
127) Pentachloroethane	(4)				Not Detected					2	25
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	3
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	3
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	3
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.5	3
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	3
147) Hexachlorobutadiene	(4)				Not Detected					0.2	3
148) Naphthalene	(4)				Not Detected					0.3	3

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

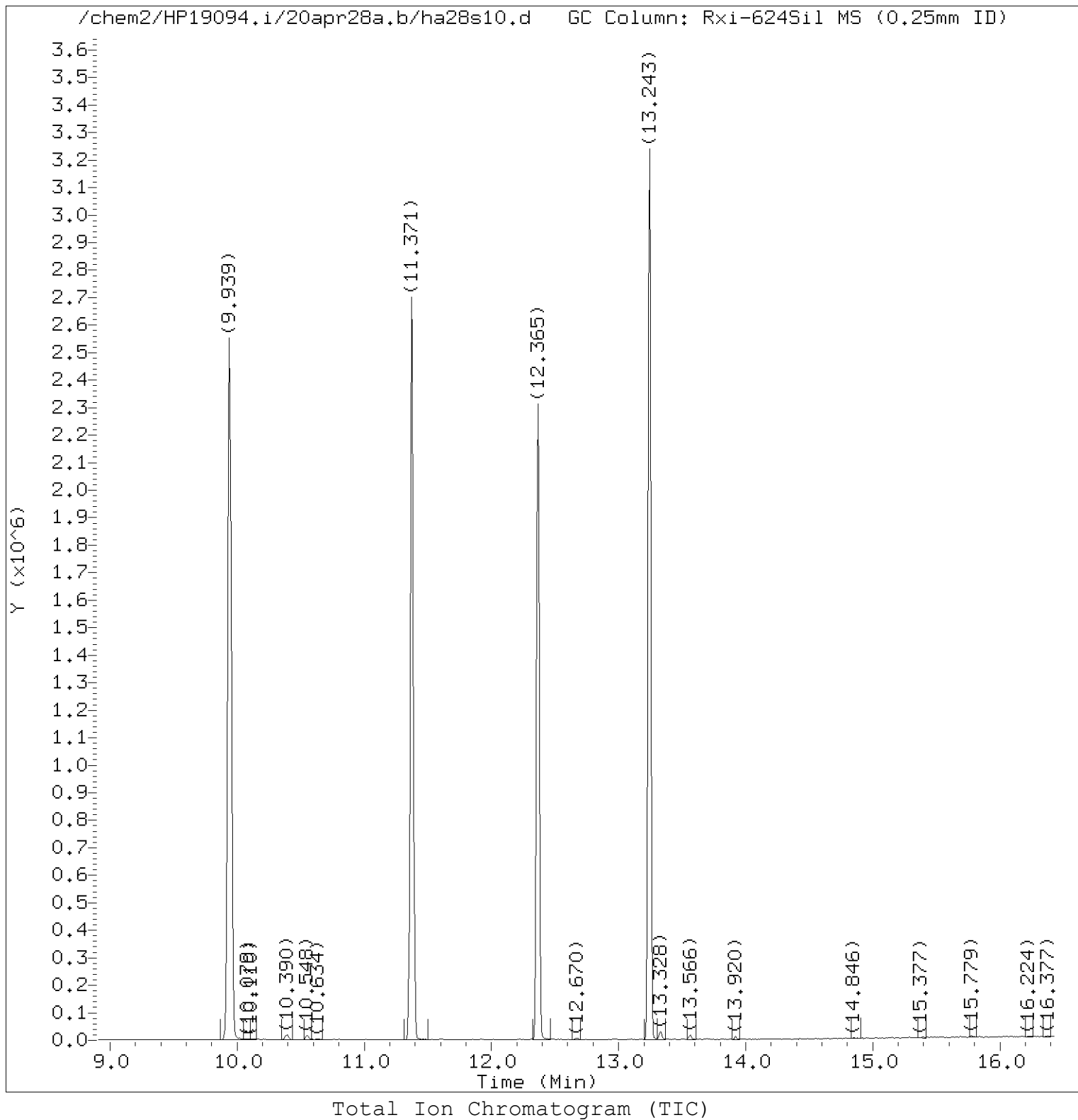
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01DL

Lab Sample ID: 1300794DL

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:52.

Target 3.5 esignature user ID: mec29284



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01DL

Lab Sample ID: 1300794DL

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:52.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 14:18

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01DL

Lab Sample ID: 1300794DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	264328	3.930
8) Chloroethane	(2)	2.837	64	57692	1.402
11) Ethyl ether	(2)	3.428	59	616749	17.186
27)*t-Butyl Alcohol-d10	(1)	4.458	65	96765	50.000
24) Methylene Chloride	(2)	4.470	84	24407	0.460
34) 1,1-Dichloroethane	(2)	5.543	63	217513	2.222
49) Tetrahydrofuran	(1)	6.696	71	22102	8.702
51)\$Dibromofluoromethane	(2)	7.061	113	528190	10.525
58)\$1,2-Dichloroethane-d4	(2)	7.519	102	106781	10.979
59) Benzene	(2)	7.555	78	25962	0.118
64)*Fluorobenzene	(2)	7.951	96	2018741	10.000
83)\$Toluene-d8	(3)	9.939	98	2008483	9.781
90) Tetrachloroethene	(3)	10.555	166	5307	0.081
98)*Chlorobenzene-d5	(3)	11.371	117	1541190	10.000
112)\$4-Bromofluorobenzene	(3)	12.365	95	700633	9.223
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	803378	10.000

* = Compound is an internal standard.

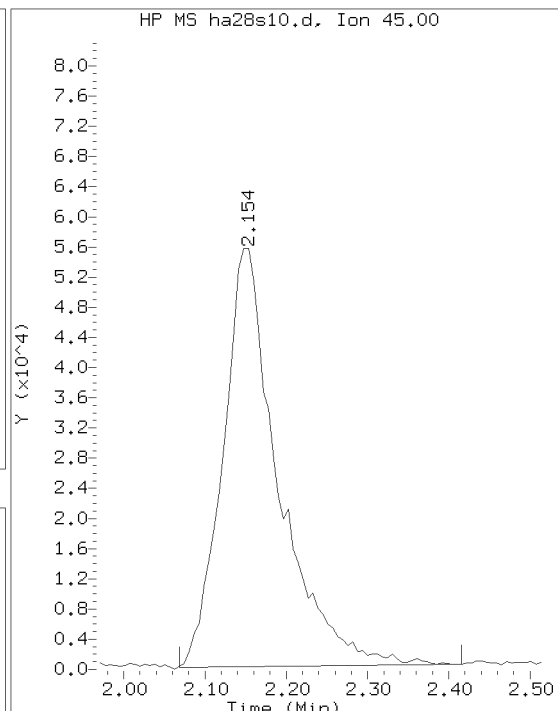
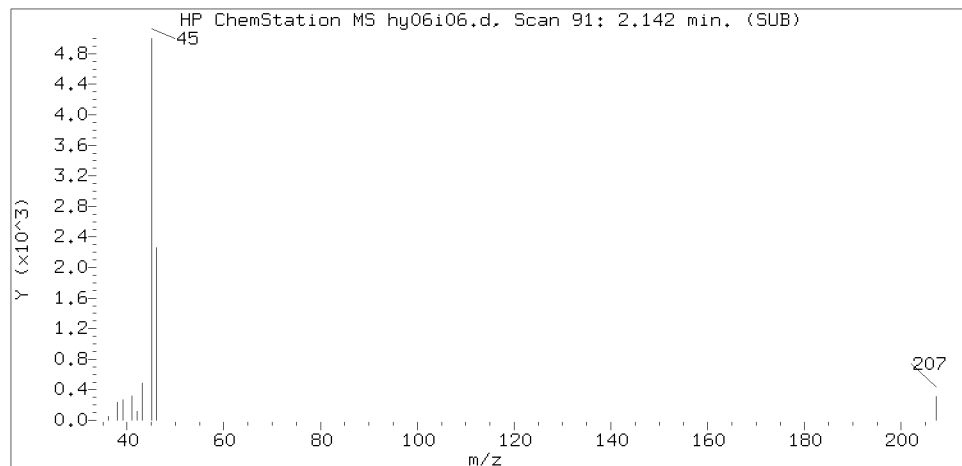
\$ = Compound is a surrogate standard.

page 1 of 1

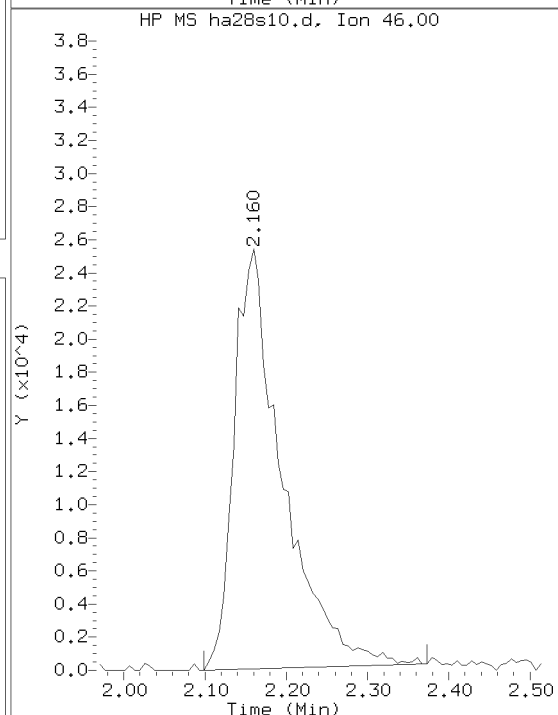
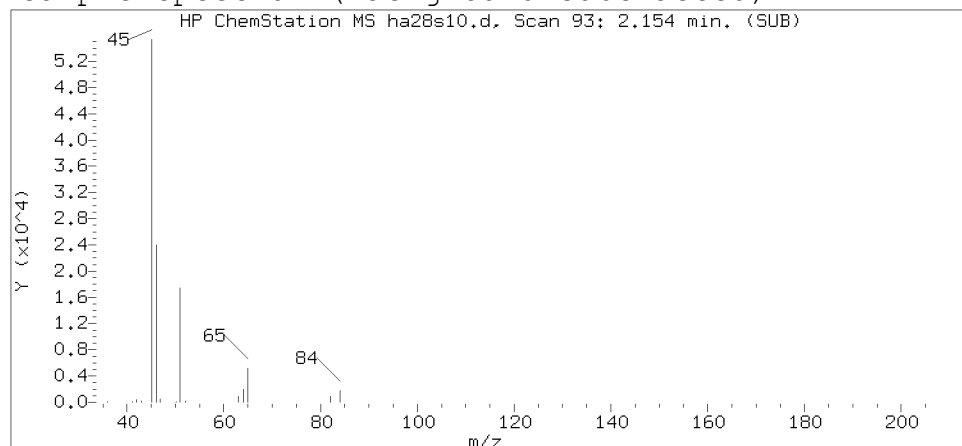
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:52.

Target 3.5 esignature user ID: mec29284

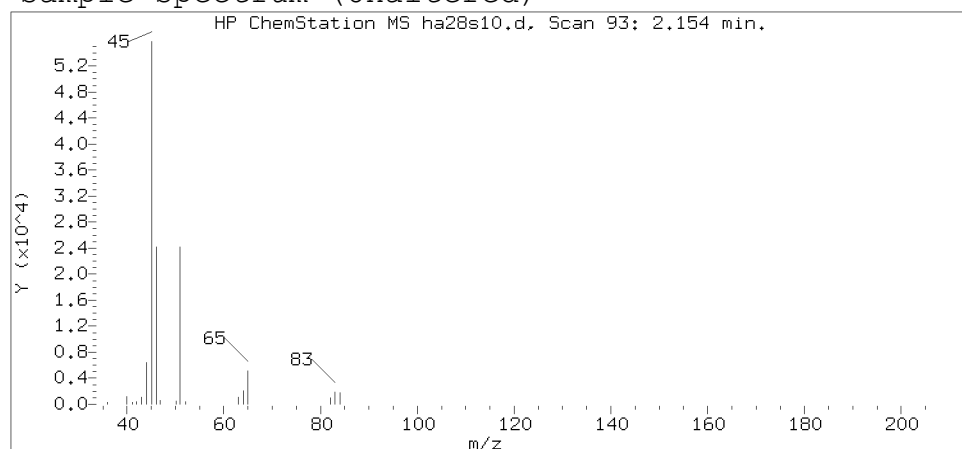
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

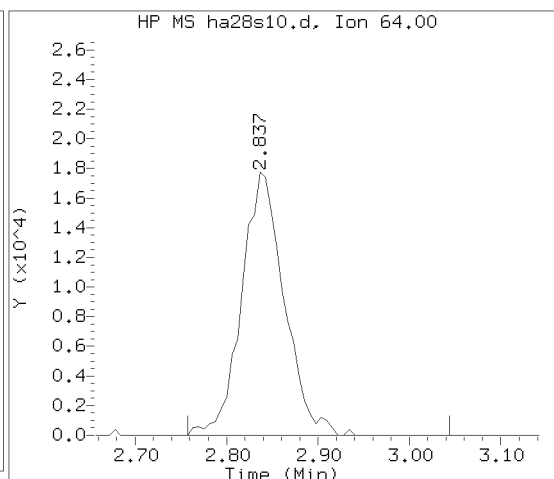
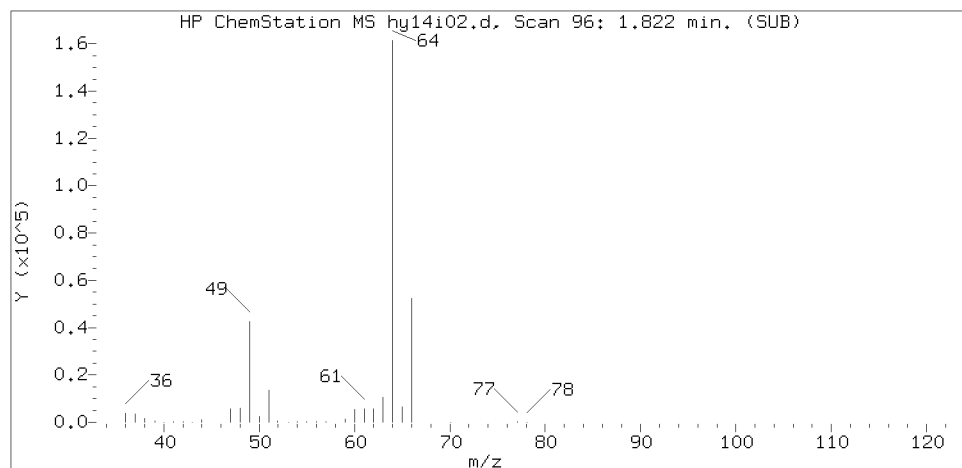
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

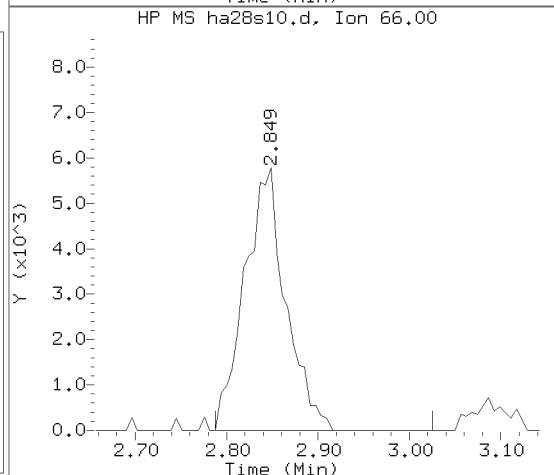
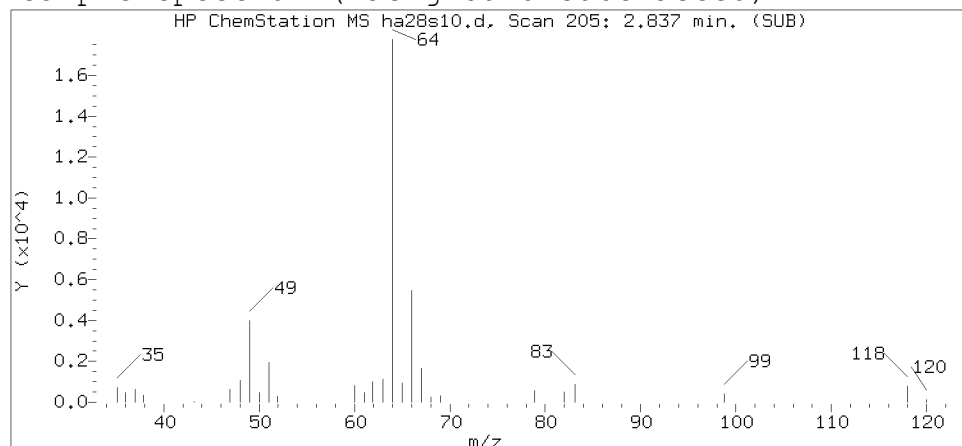
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Relative Retention Time : 0.00002
Quant Ion : 45.00
Area (flag) : 264328
On-Column Amount (ng) : 3.9304

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

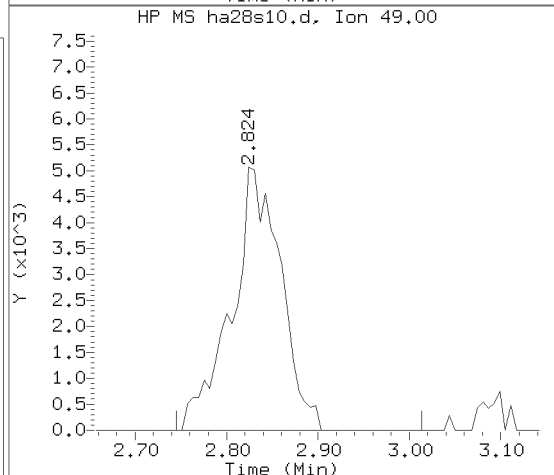
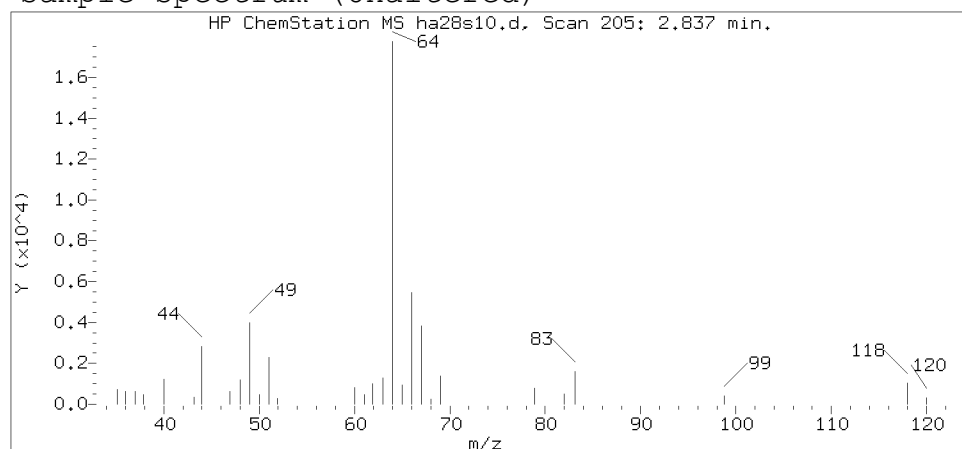
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

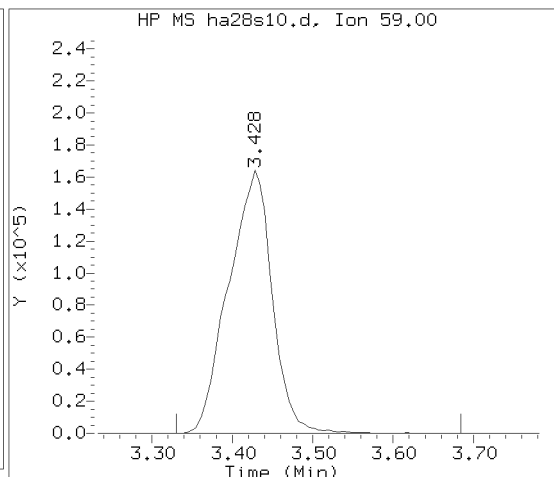
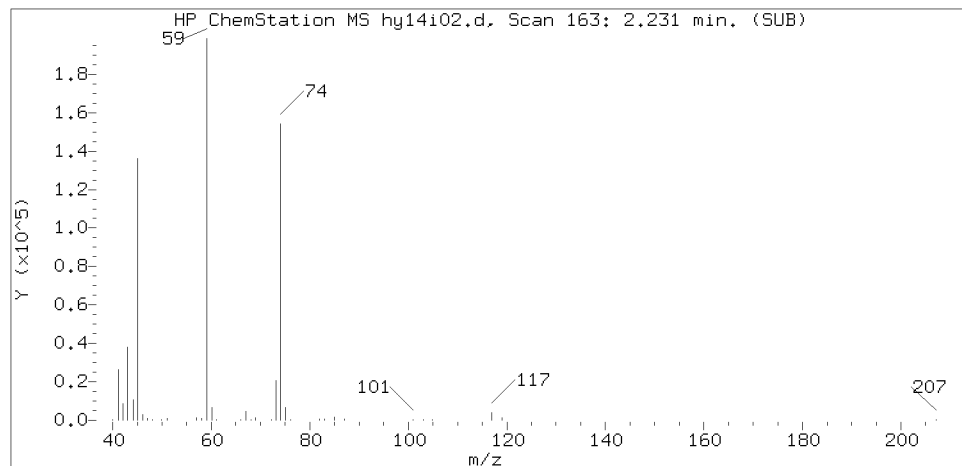
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

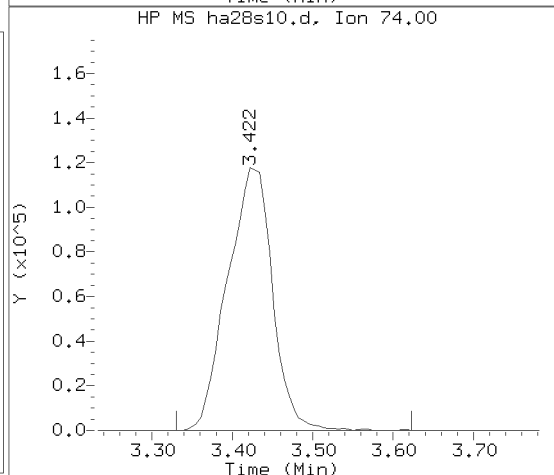
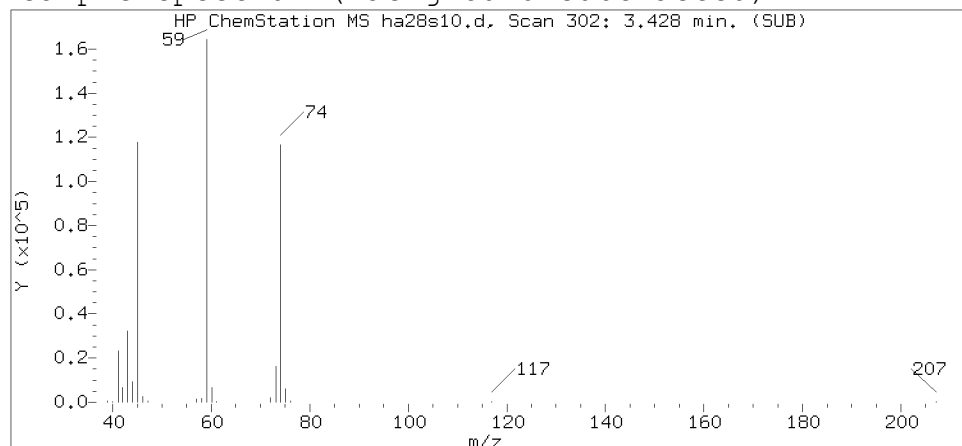
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 205
Retention Time (minutes): 2.837
Relative Retention Time : -0.00078
Quant Ion : 64.00
Area (flag) : 57692
On-Column Amount (ng) : 1.4019

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

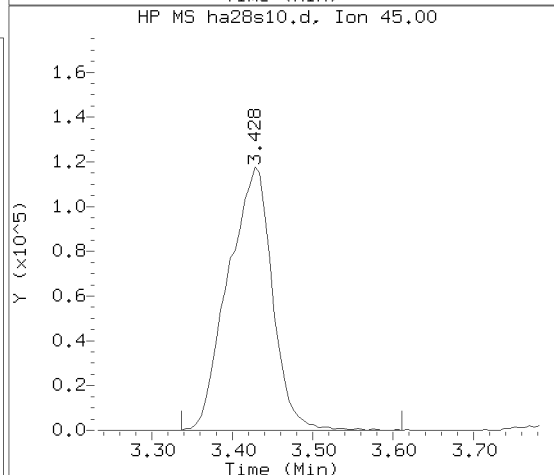
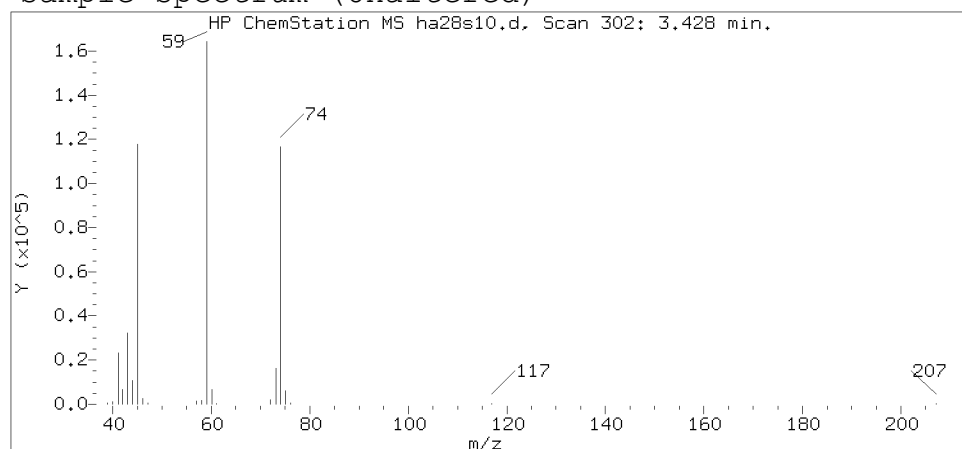
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

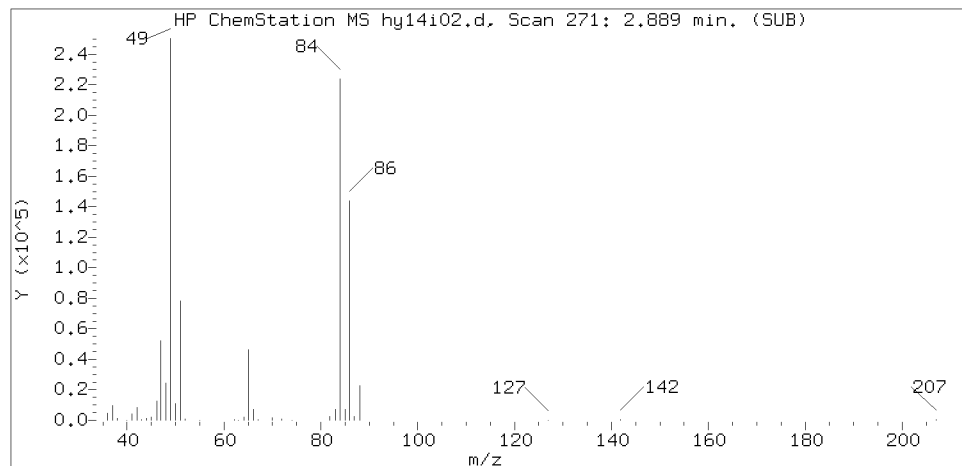
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

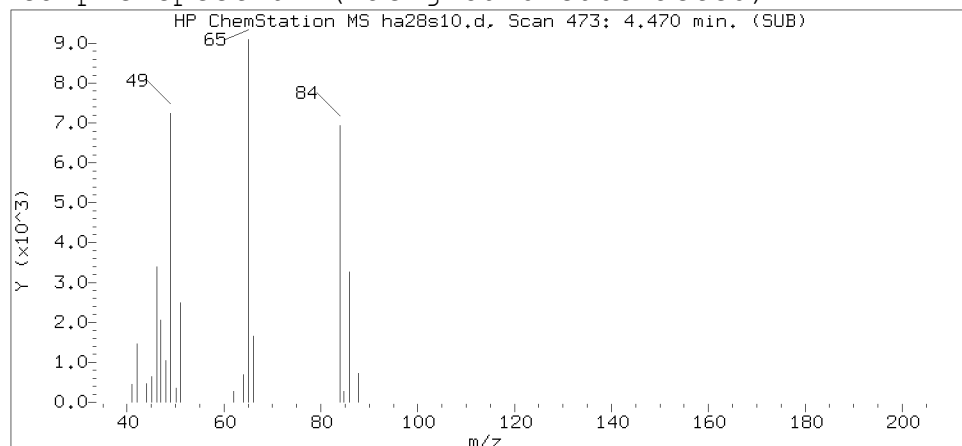
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00078
Quant Ion : 59.00
Area (flag) : 616749
On-Column Amount (ng) : 17.1859

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

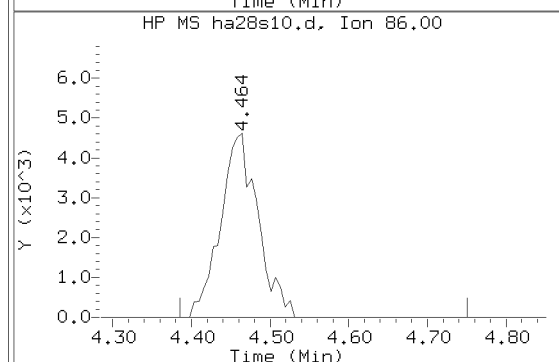
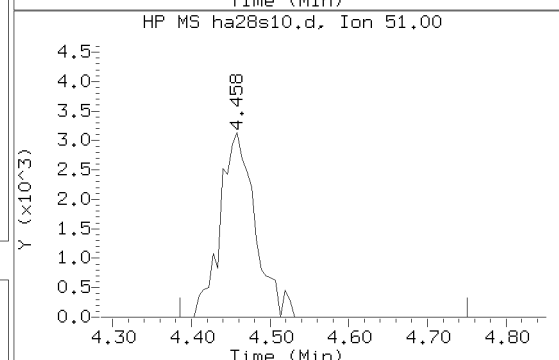
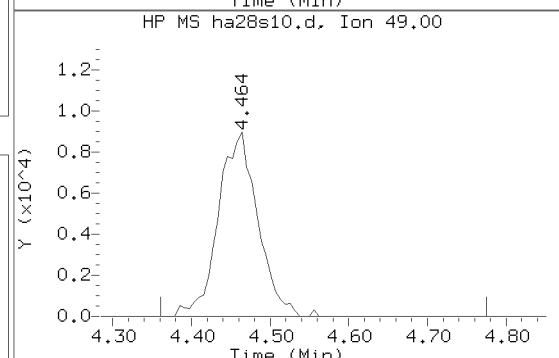
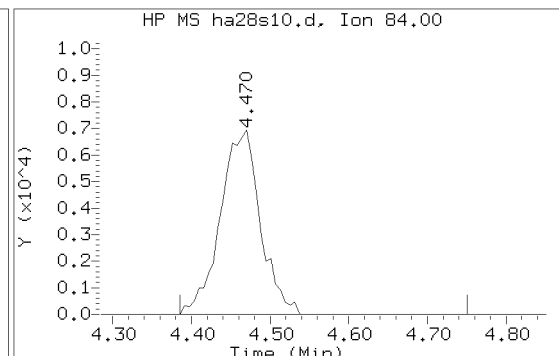
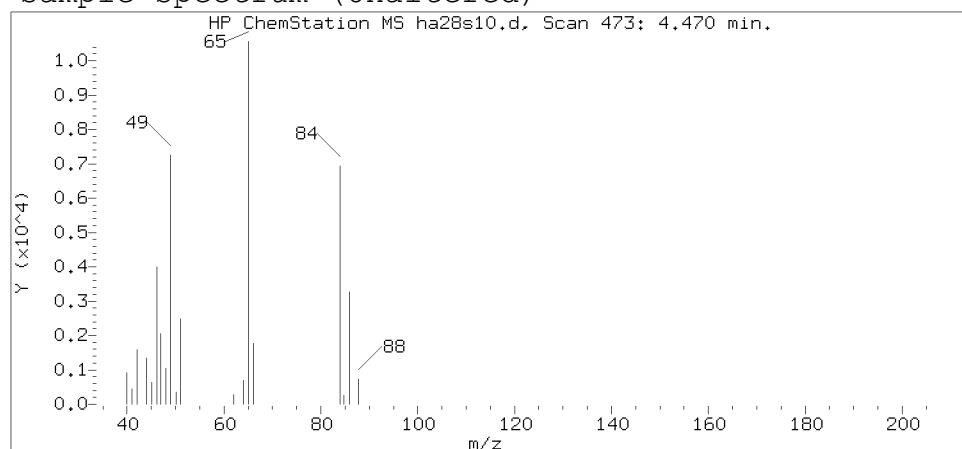
Reference Standard Spectrum for Methylene Chloride



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

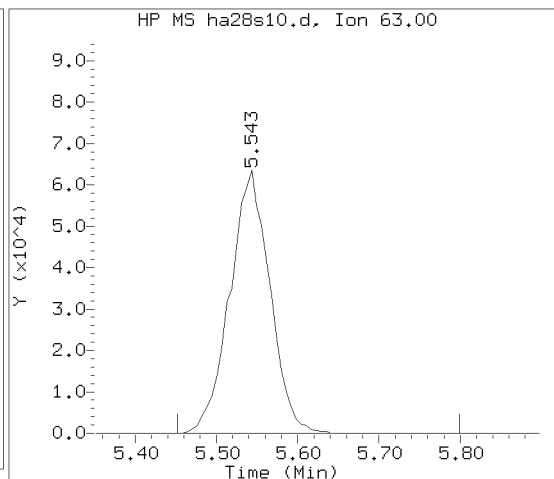
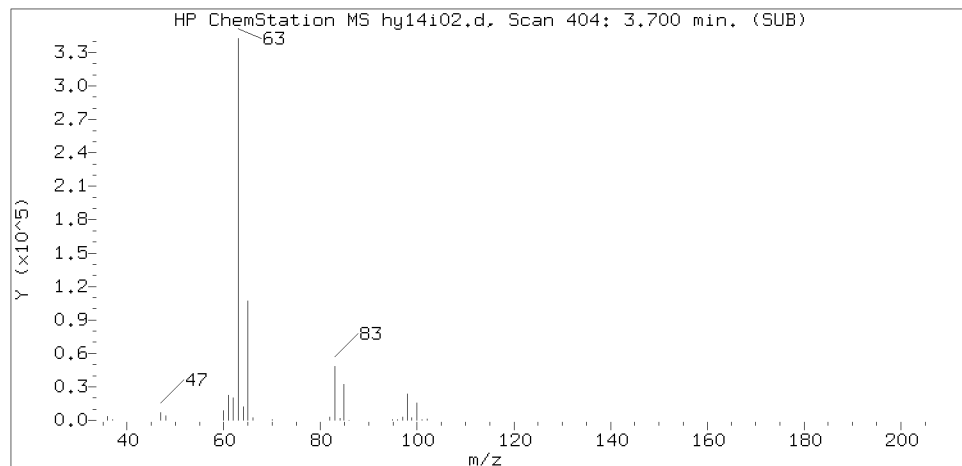
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

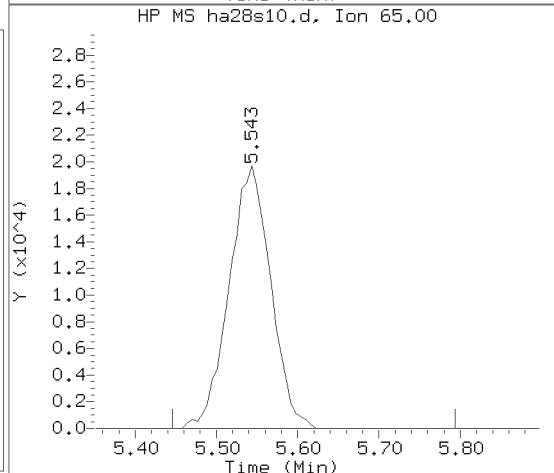
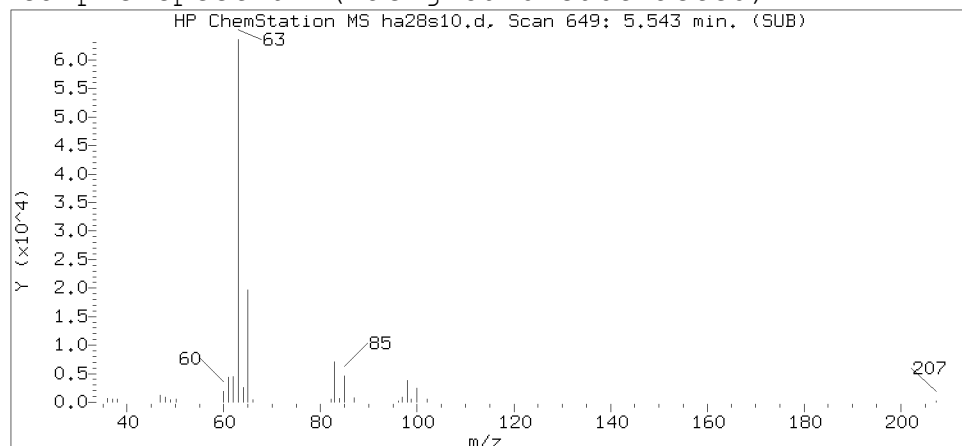
Compound Number : 24
Compound Name : Methylene Chloride
Scan Number : 473
Retention Time (minutes): 4.470
Relative Retention Time :-0.00231
Quant Ion : 84.00
Area (flag) : 24407
On-Column Amount (ng) : 0.4598

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

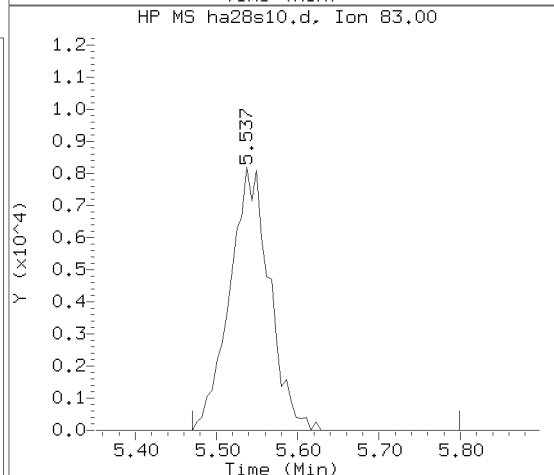
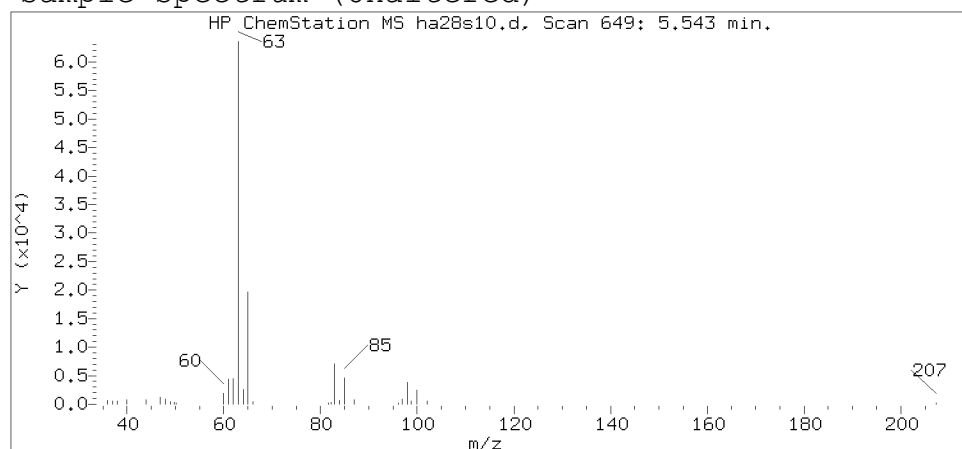
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

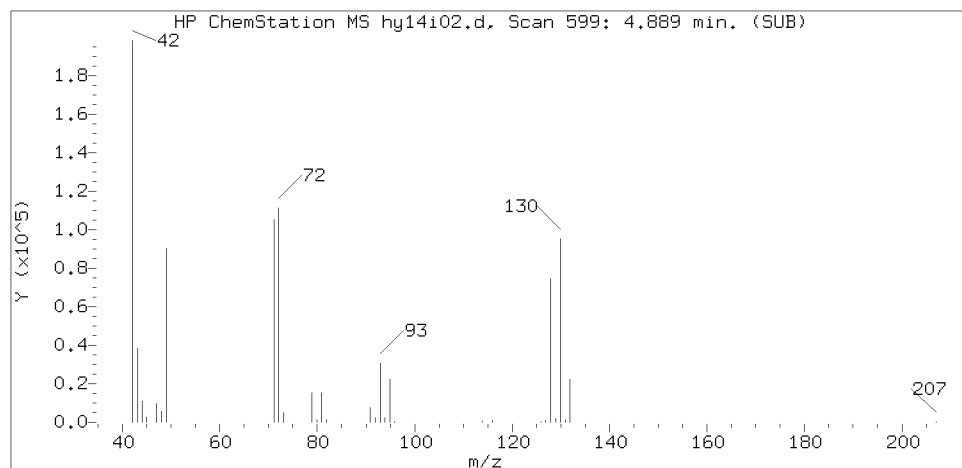
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

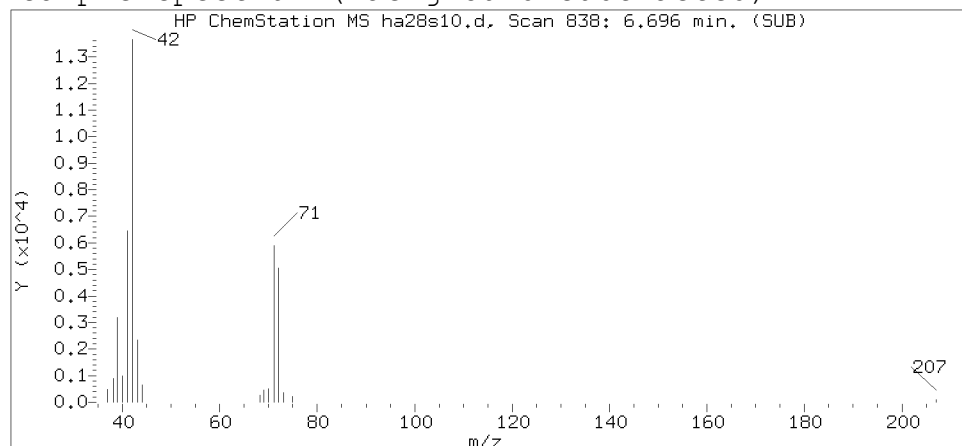
Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Relative Retention Time : -0.00077
Quant Ion : 63.00
Area (flag) : 217513
On-Column Amount (ng) : 2.2221

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

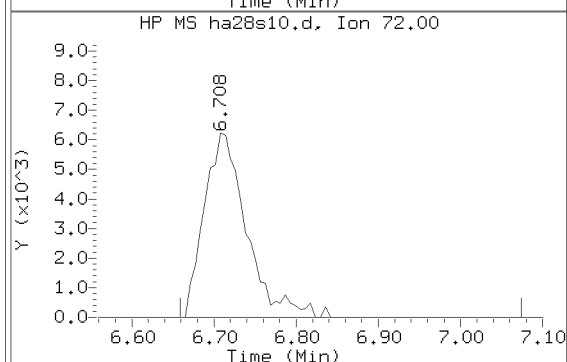
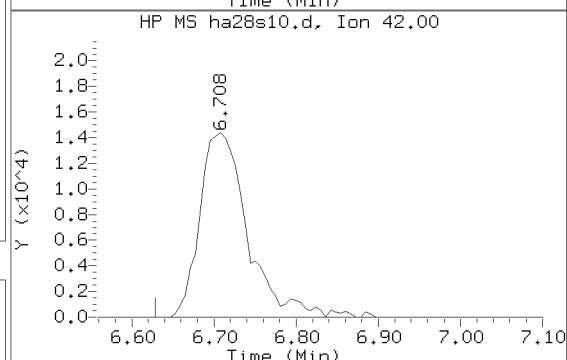
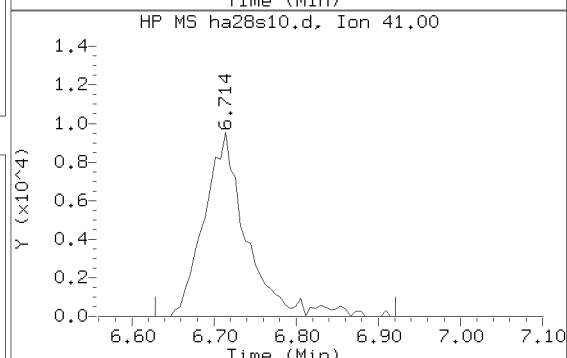
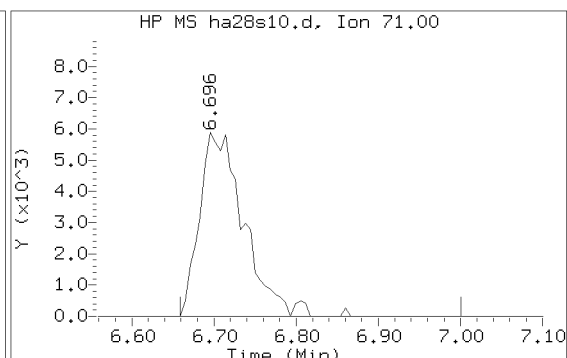
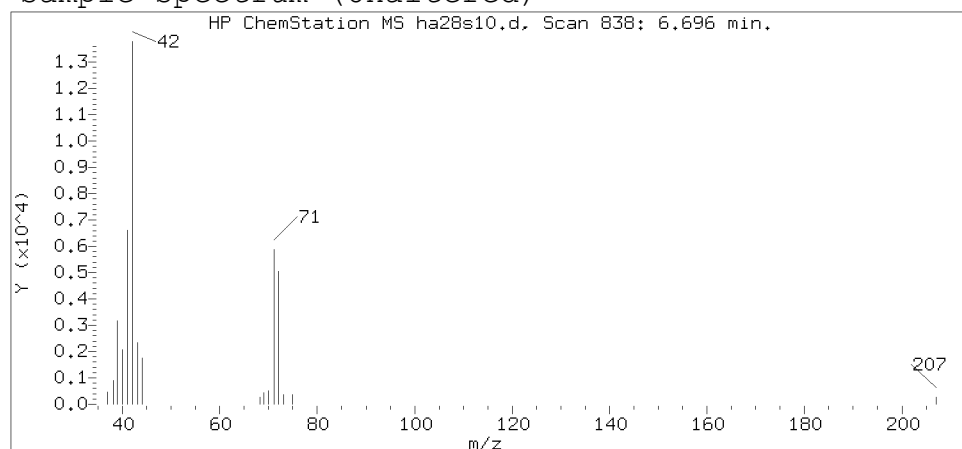
Reference Standard Spectrum for Tetrahydrofuran



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

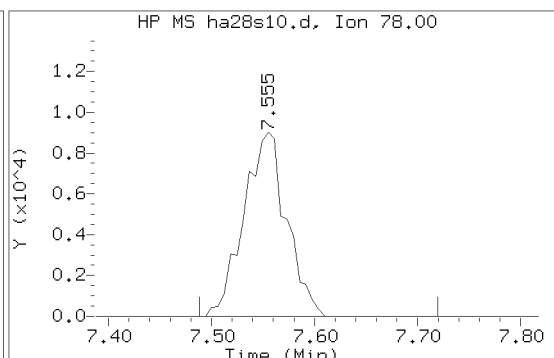
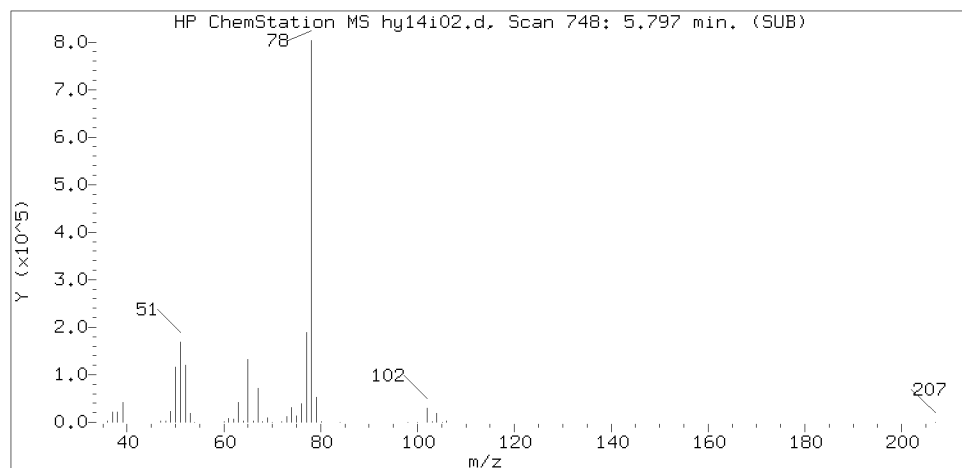
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

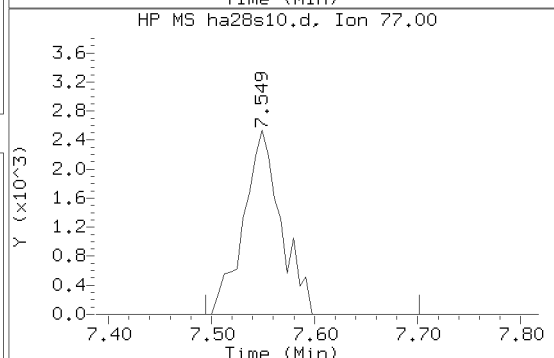
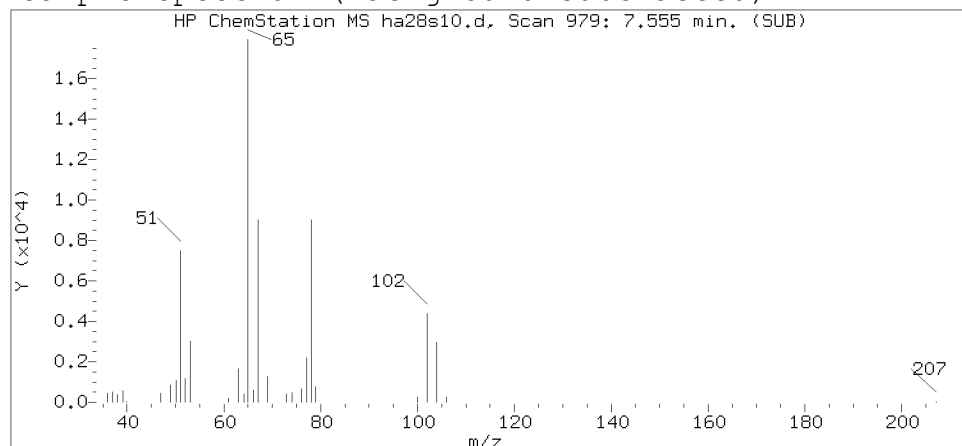
Compound Number : 49
Compound Name : Tetrahydrofuran
Scan Number : 838
Retention Time (minutes): 6.696
Relative Retention Time : 0.00139
Quant Ion : 71.00
Area (flag) : 22102
On-Column Amount (ng) : 8.7019

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

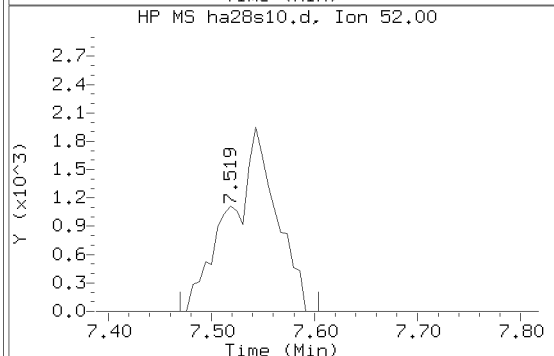
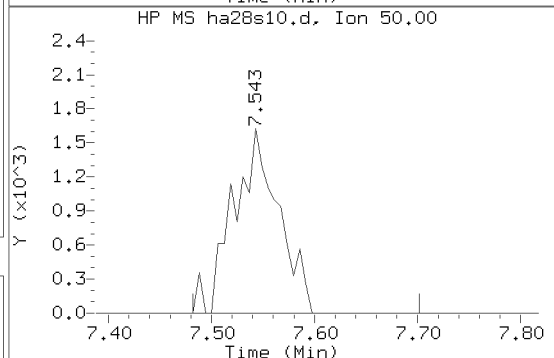
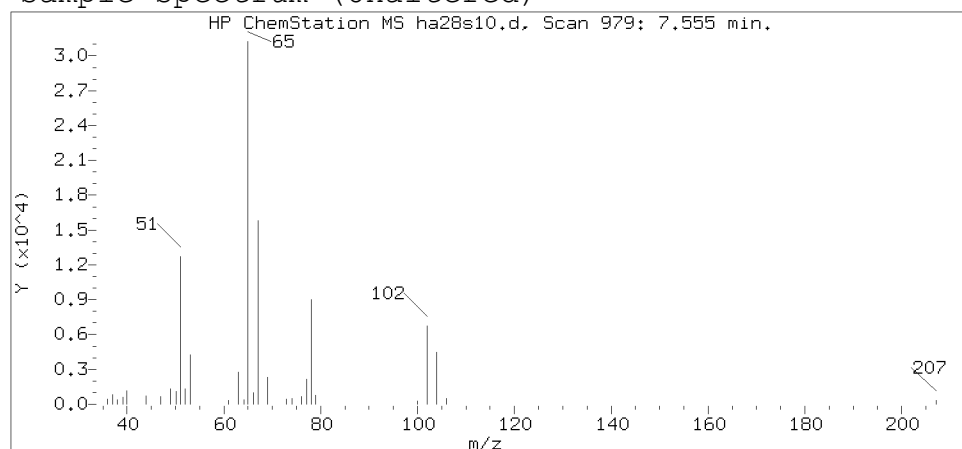
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

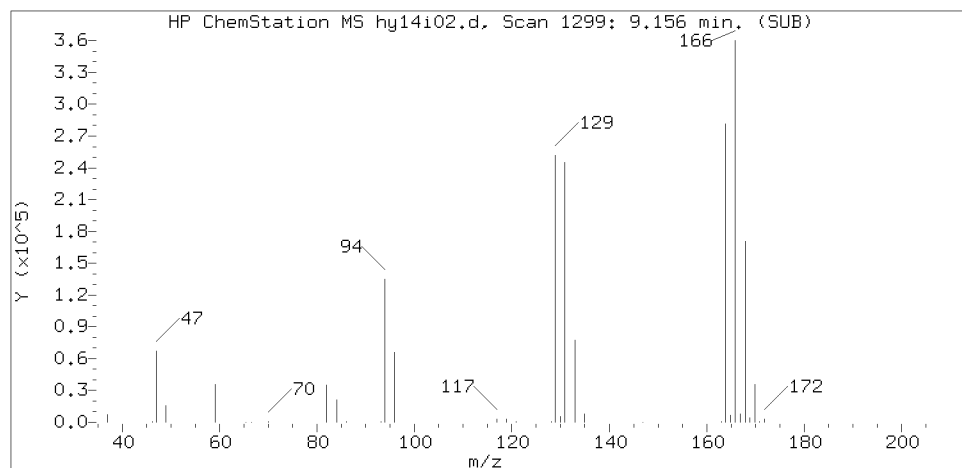
Sample Name: 59R01DL

Lab Sample ID: 1300794DL

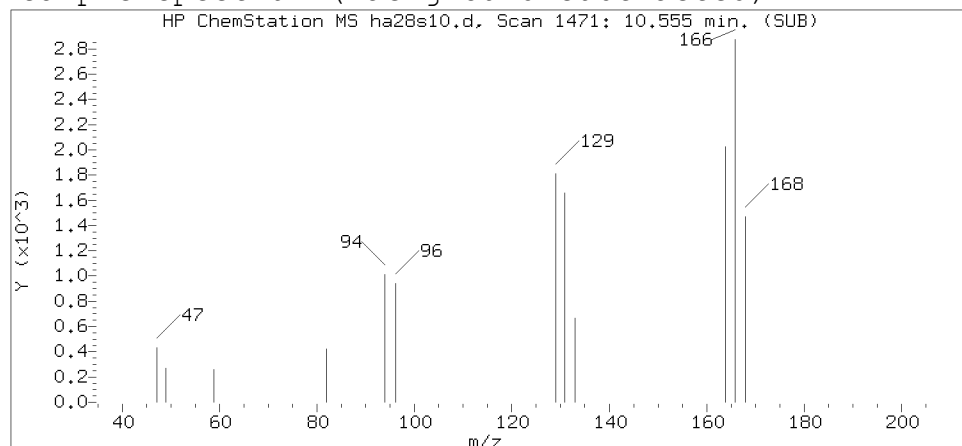
Compound Number : 59
Compound Name : Benzene
Scan Number : 979
Retention Time (minutes): 7.555
Relative Retention Time :-0.00077
Quant Ion : 78.00
Area (flag) : 25962
On-Column Amount (ng) : 0.1182

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.
Target 3.5 esignature user ID: mec29284

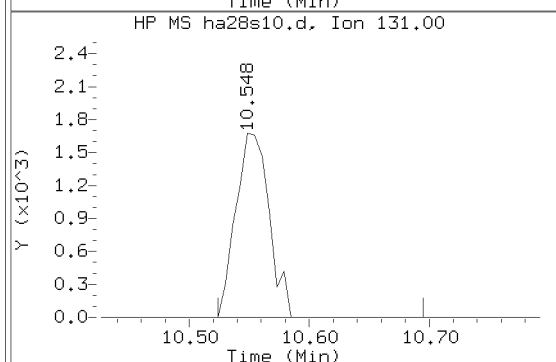
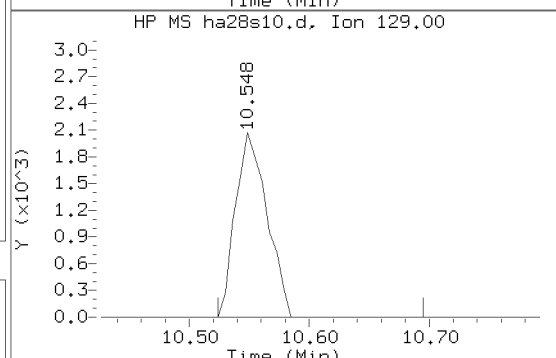
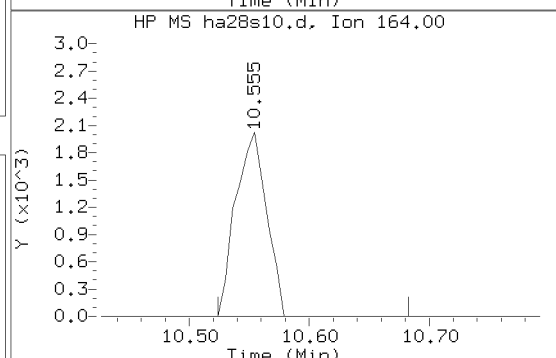
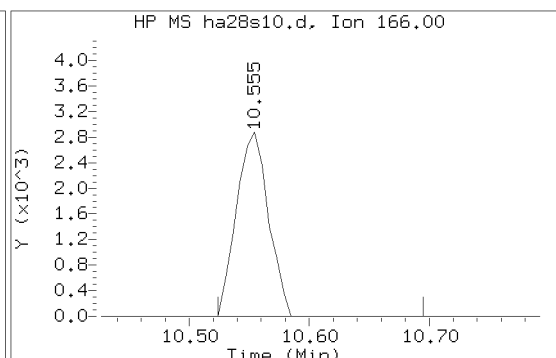
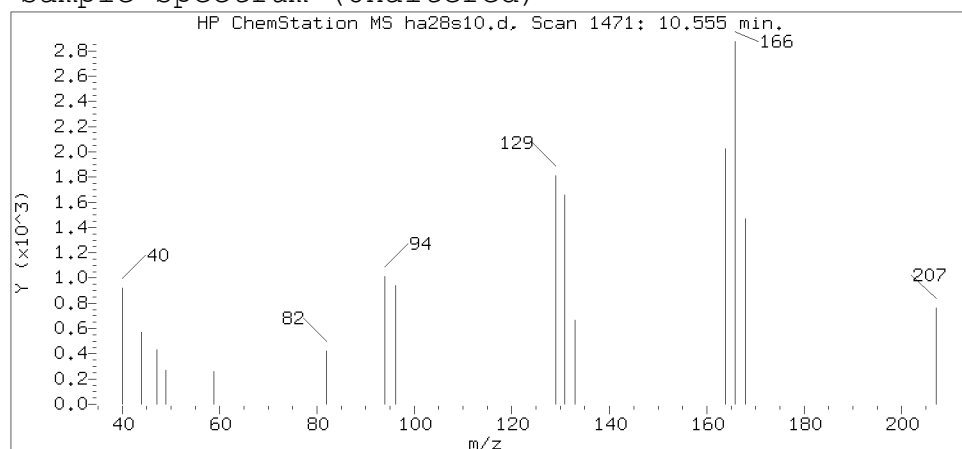
Reference Standard Spectrum for Tetrachloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s10.d
Injection date and time: 28-APR-2020 14:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R01DL

Lab Sample ID: 1300794DL

Compound Number : 90
Compound Name : Tetrachloroethene
Scan Number : 1471
Retention Time (minutes): 10.555
Relative Retention Time : -0.00000
Quant Ion : 166.00
Area (flag) : 5307
On-Column Amount (ng) : 0.0809

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:52.

Target 3.5 esignature user ID: mec29284
RAP59 Page 211 of 1506

59R02

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300795

Data file: /chem2/HP09355.i/20apr28b.b/ya28s49.d

Injection date and time: 29-APR-2020 01:13

Data file Sample Info. Line: 59R02;1300795;1;0;;RAF59;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 01:30 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.368 (-0.024)	458	65	396574 (4)	250.00	
66) Fluorobenzene	7.866 (-0.006)	1033	96	1202512 (-3)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	916483 (-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	502049 (-7)	50.00	

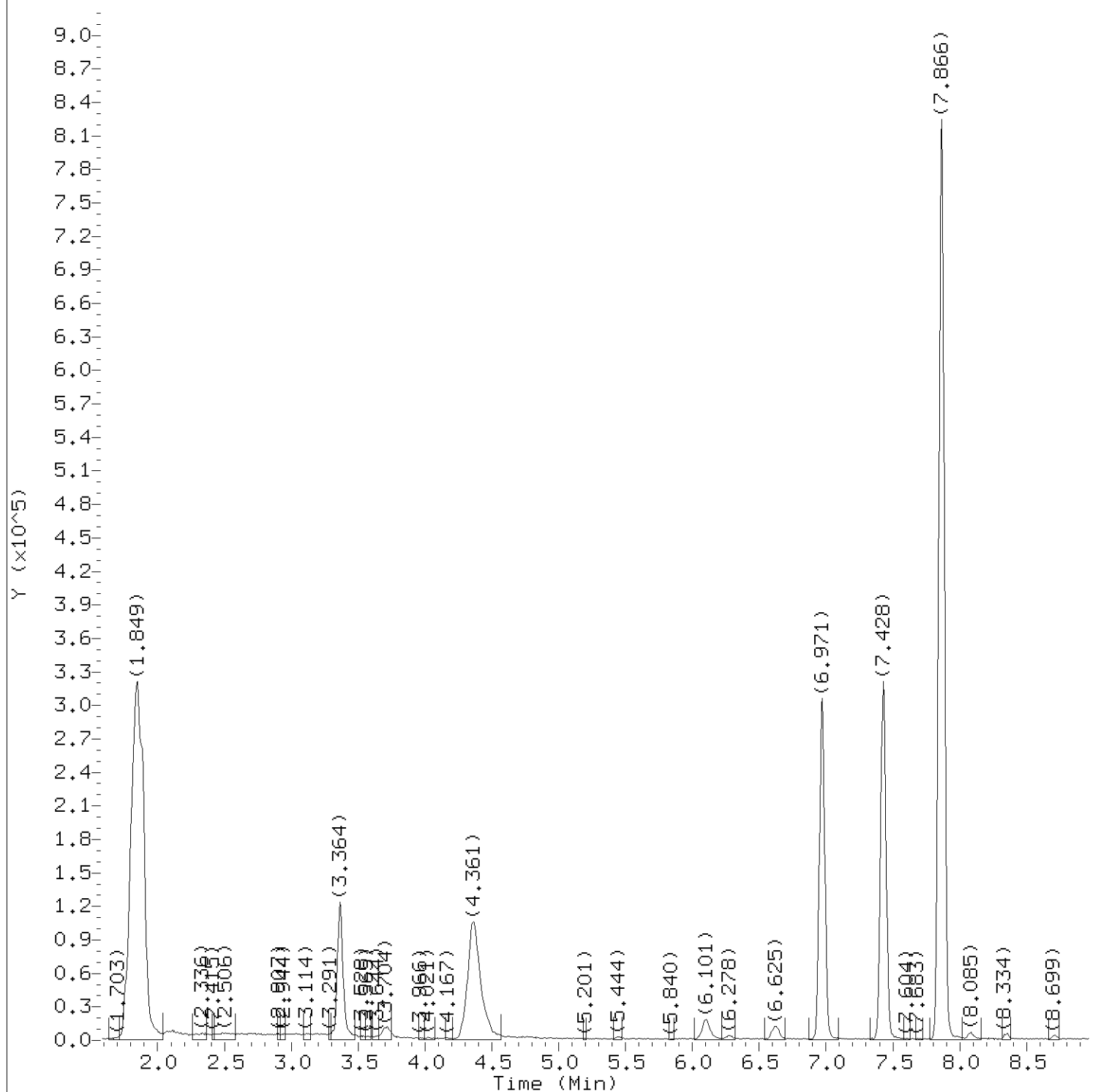
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971 (0.000)	113	280360	51.331	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428 (0.001)	102	73553	51.066	102%		80 - 120
83) Toluene-d8	(3)	9.861 (-0.001)	98	1151374	48.110	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294 (0.000)	95	428501	47.255	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)			Not Detected					18	100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:30. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s49.d
Injection date and time: 29-APR-2020 01:13

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

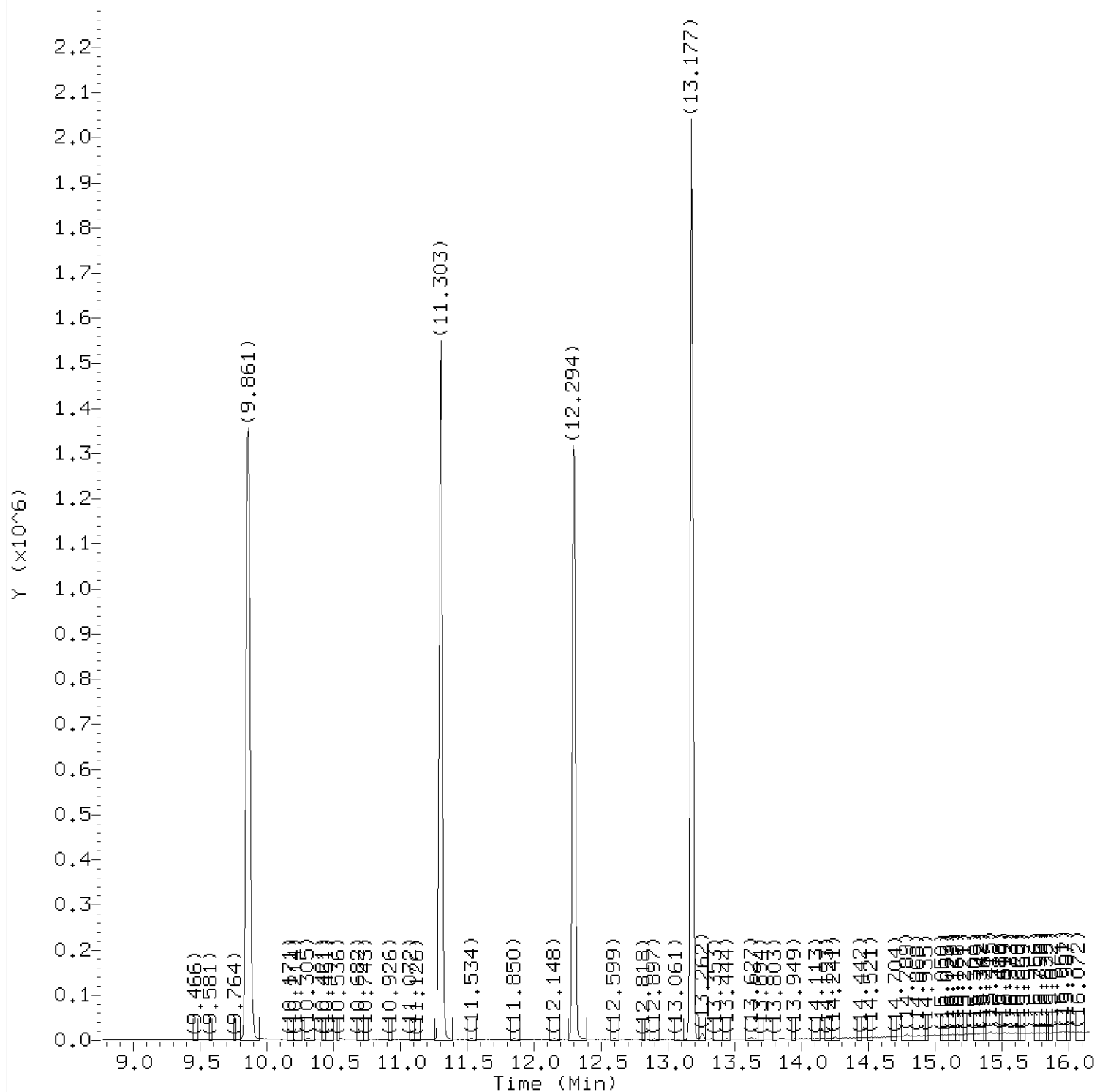
Date, time and analyst ID of latest file update: 29-Apr-2020 01:30 Automation

Sample Name: 59R02

Lab Sample ID: 1300795

Digitally signed by Don V. Viray
on 04/29/2020 at 12:30.

Target 3.5 esignature user ID: dyv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s49.d
Injection date and time: 29-APR-2020 01:13

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 01:30 Automation

Sample Name: 59R02

Lab Sample ID: 1300795

Digitally signed by Don V. Viray
on 04/29/2020 at 12:30.

Target 3.5 esignature user ID: dyv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s49.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 01:13

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 01:30 Automation

Sample Name: 59R02

Lab Sample ID: 1300795

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.368	65	396574	250.000
52) \$Dibromofluoromethane	(2)	6.971	113	280360	51.331
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	73553	51.066
66) *Fluorobenzene	(2)	7.866	96	1202512	50.000
83) \$Toluene-d8	(3)	9.861	98	1151374	48.110
100) *Chlorobenzene-d5	(3)	11.303	117	916483	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	428501	47.255
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	502049	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 12:30.

Target 3.5 esignature user ID: dvv10203

59R02

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300795

Data file: /chem2/HP19094.i/20apr27a.b/ha27s04.d

Injection date and time: 27-APR-2020 23:21

Data file Sample Info. Line: 59R02;1300795;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng

In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml

Sample Volume (Vo): 25 ml

Analysis Comments: 9274; 9159-ND; 9179

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (-0.006)	470	65	110322 (-16)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1607154 (-4)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1438795 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	778989 (-5)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	446152	11.167	112%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (-0.001)	102	85828	11.085	111%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1749616	9.127	91%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	670678	9.457	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.148 (-0.000)	45	49158M	0.918	0.92		J	0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.843 (-0.000)	64	5095	0.156	0.16		J	0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.422 (-0.000)	59	789731	27.642	27.64		E	1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)	3.788 (-0.000)	43	25124	3.748	3.75		J	0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)	5.537 (0.000)	63	30840	0.396	0.40		J	0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)	6.714 (-0.000)	71	10702	3.696	3.70		J	2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

M = Compound was manually integrated. E = Compound concentration above calibration range.

59R02

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300795

Data file: /chem2/HP19094.i/20apr27a.b/ha27s04.d Injection date and time: 27-APR-2020 23:21
Data file Sample Info. Line: 59R02;1300795;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 22:26
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

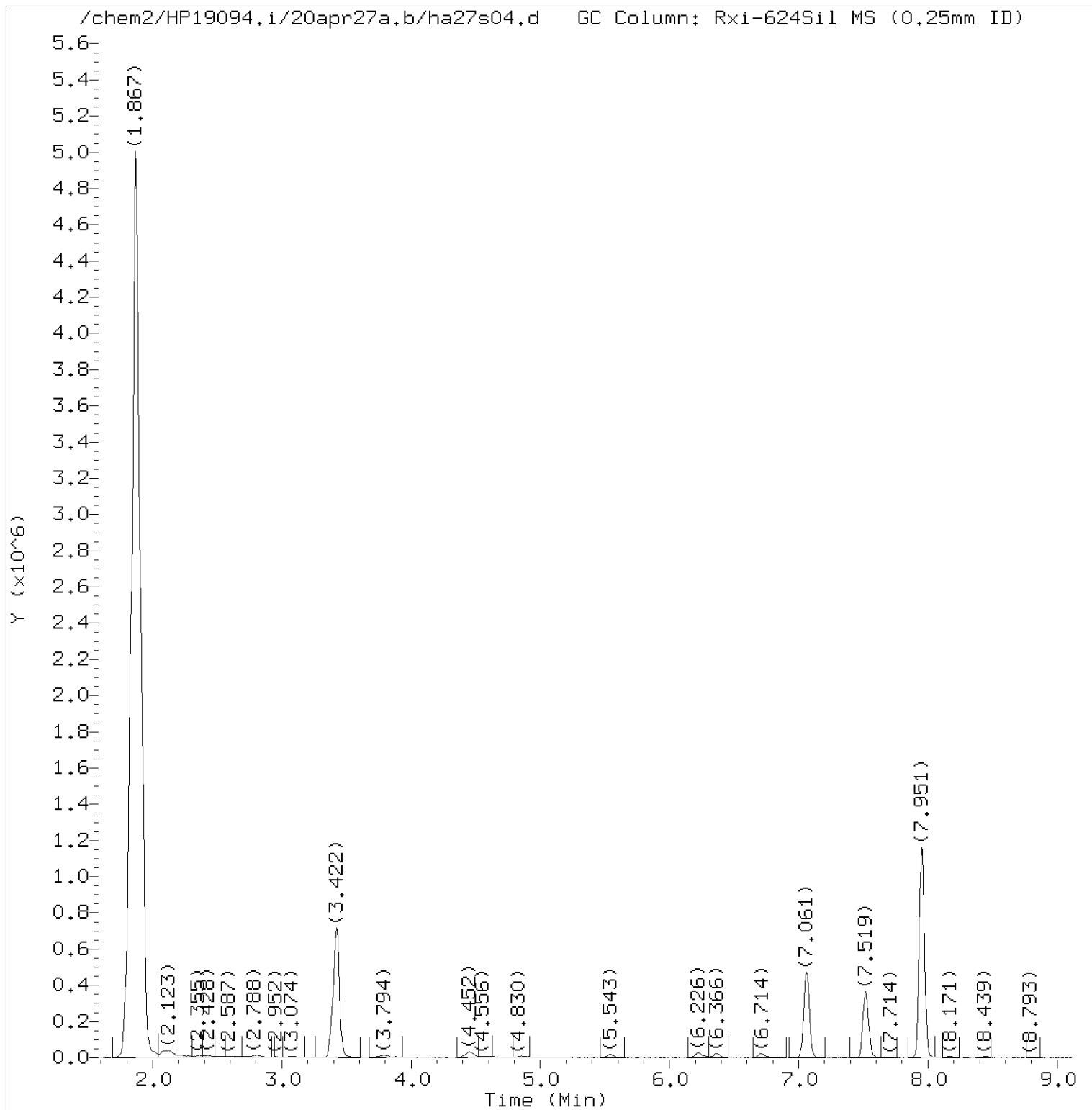
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
59) Benzene	(2)	7.555 (-0.000)	78	14451	0.083	0.08		J	0.07	1
60) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
68) Trichloroethene	(2)			Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
72) Methyl Methacrylate	(1)			Not Detected					4	10
74) Dibromomethane	(2)			Not Detected					0.07	1
73) 1,4-Dioxane	(1)			Not Detected					45	200
75) Bromodichloromethane	(2)			Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)			Not Detected					0.9	10
84) Toluene	(3)			Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
87) Ethyl Methacrylate	(3)			Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)			Not Detected					0.08	1
90) Tetrachloroethene	(3)			Not Detected					0.06	1
91) 1,3-Dichloropropane	(3)			Not Detected					0.09	1
92) 2-Hexanone	(1)			Not Detected					0.6	10
94) Dibromochloromethane	(3)			Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)			Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.08	1
101) Ethylbenzene	(3)			Not Detected					0.08	1
102) m+p-Xylene	(3)	11.603 (-0.000)	106	11107	0.110	0.11		J	0.1	2
105) o-Xylene	(3)			Not Detected					0.1	1
106) Xylene (Total)	(3)			Not Detected					0.2	3
107) Styrene	(3)			Not Detected					0.07	1
108) Bromoform	(3)			Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.1	1
127) Pentachloroethane	(4)			Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)			Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)			Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)			Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
147) Hexachlorobutadiene	(4)			Not Detected					0.07	1
148) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/29/2020 at 14:36. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m
Calibration date and time: 28-APR-2020 22:26

Sublist used: 27091

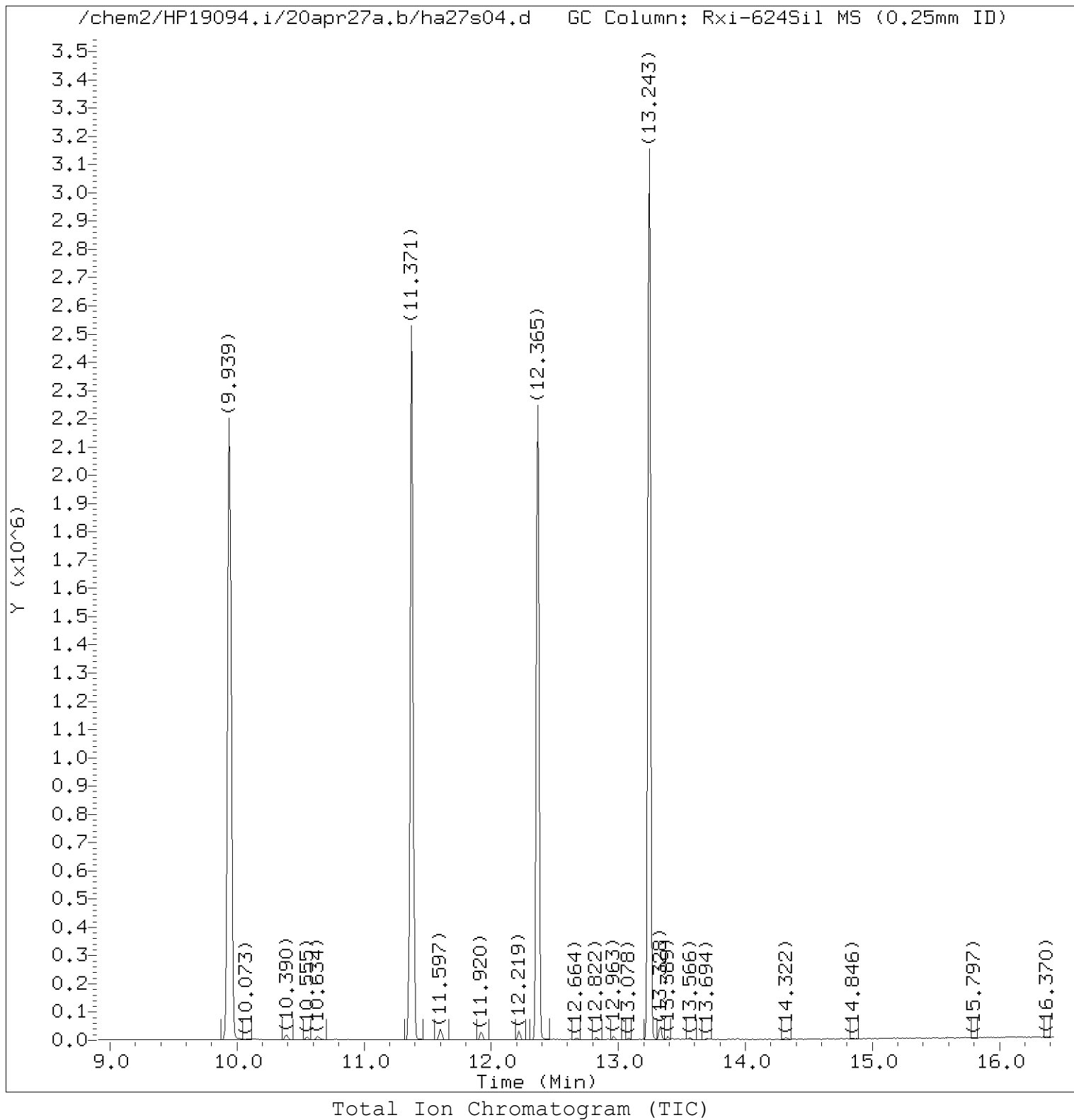
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

Lab Sample ID: 1300795

Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

Lab Sample ID: 1300795

Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 23:21

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

Lab Sample ID: 1300795

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	49158M	0.918
8) Chloroethane	(2)	2.843	64	5095	0.156
11) Ethyl ether	(2)	3.422	59	789731	27.642
14) Acetone	(1)	3.788	43	25124	3.748
27)*t-Butyl Alcohol-d10	(1)	4.452	65	110322	50.000
34) 1,1-Dichloroethane	(2)	5.537	63	30840	0.396
49) Tetrahydrofuran	(1)	6.714	71	10702	3.696
51)\$Dibromofluoromethane	(2)	7.061	113	446152	11.167
58)\$1,2-Dichloroethane-d4	(2)	7.525	102	85828	11.085
59) Benzene	(2)	7.555	78	14451	0.083
64)*Fluorobenzene	(2)	7.951	96	1607154	10.000
83)\$Toluene-d8	(3)	9.939	98	1749616	9.127
98)*Chlorobenzene-d5	(3)	11.371	117	1438795	10.000
102) m+p-Xylene	(3)	11.603	106	11107	0.110
112)\$4-Bromofluorobenzene	(3)	12.365	95	670678	9.457
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	778989	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

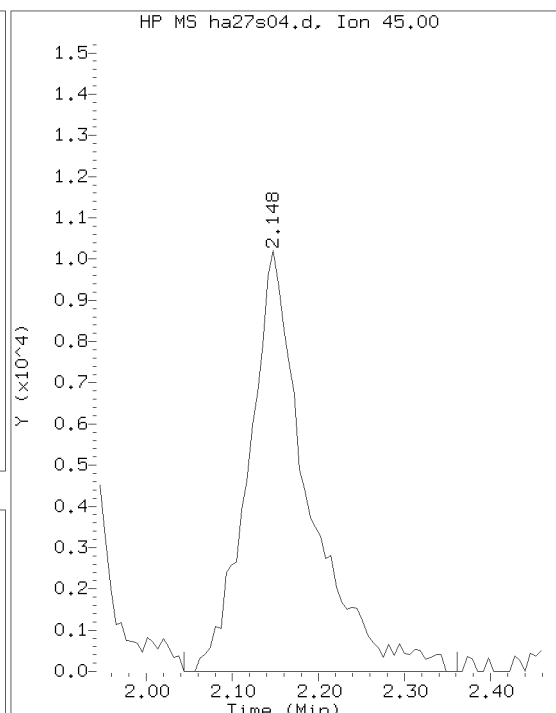
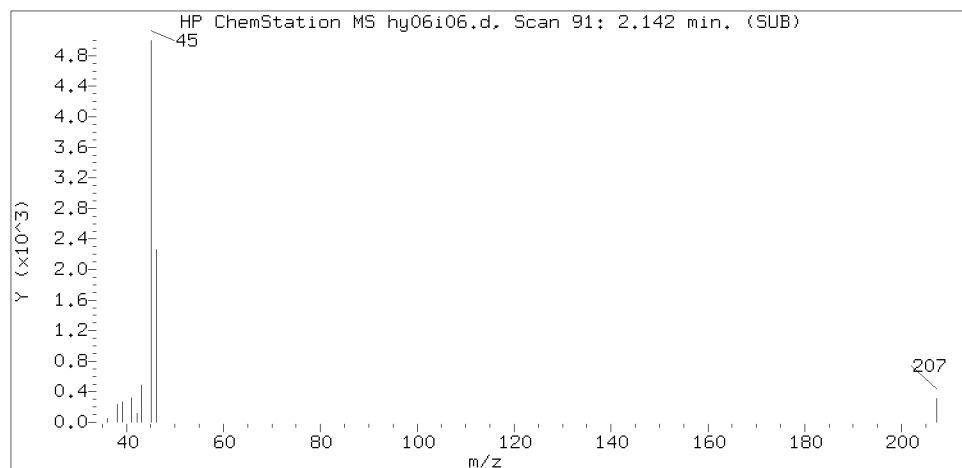
\$ = Compound is a surrogate standard.

page 1 of 1

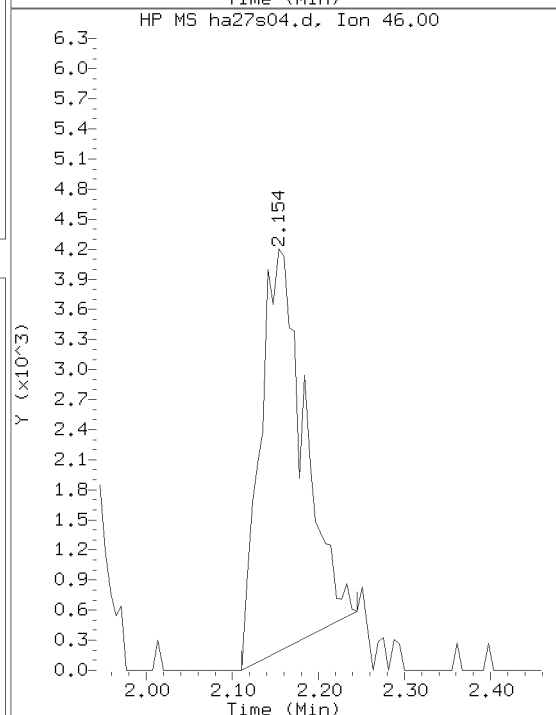
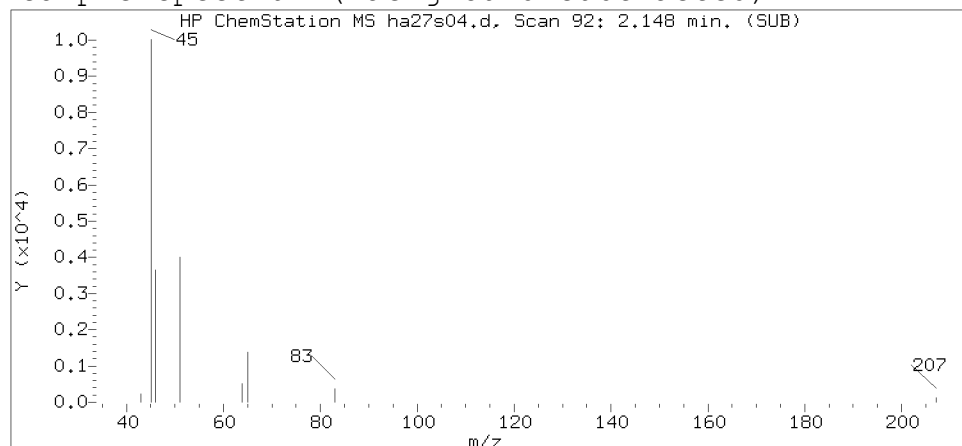
Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

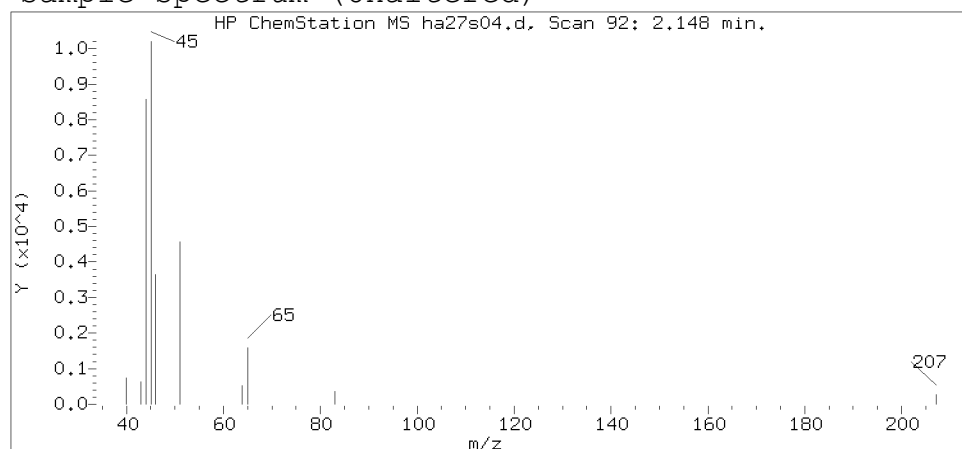
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

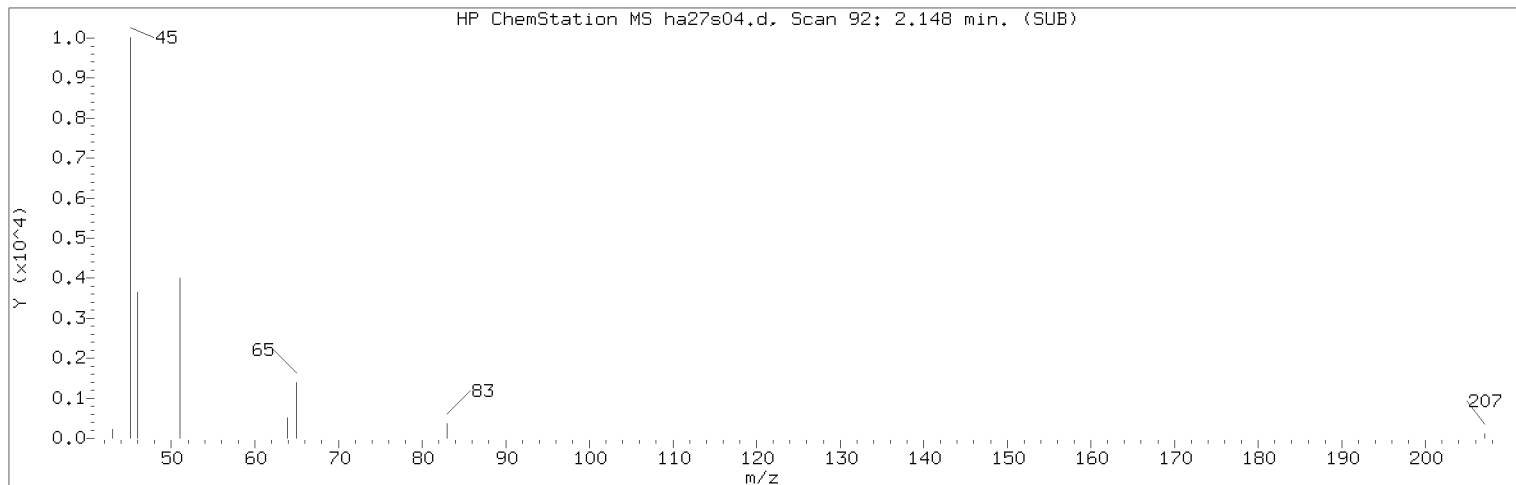
Lab Sample ID: 1300795

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Relative Retention Time : -0.00076
Quant Ion : 45.00
Area (flag) : 49158M
On-Column Amount (ng) : 0.9182

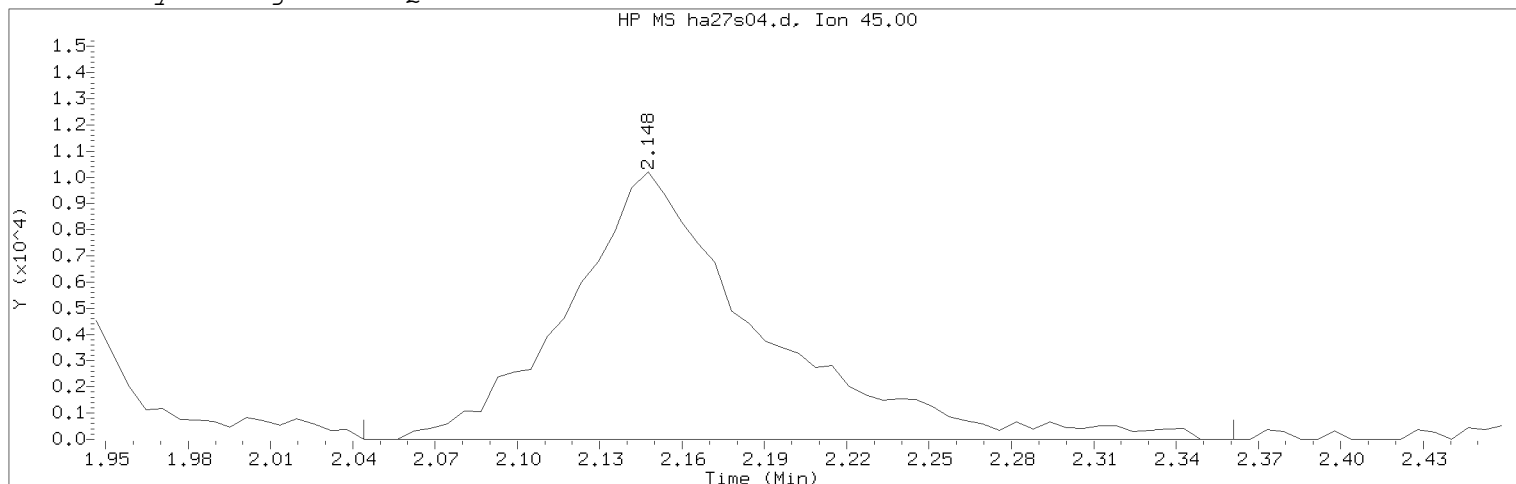
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 23:21 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02 Lab Sample ID: 1300795

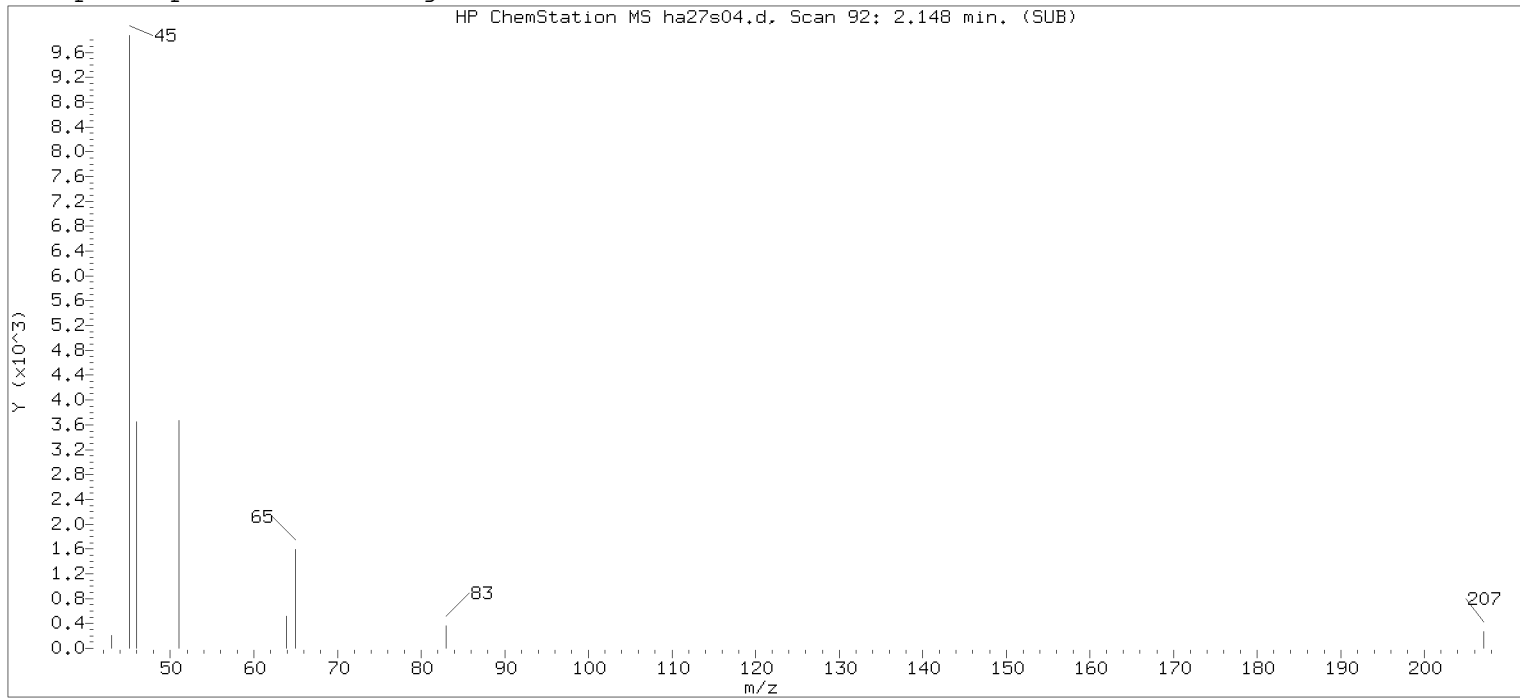
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 49158M
On-Column Amount (ng) : 0.9182
Integration start scan : 74 Integration stop scan: 126
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

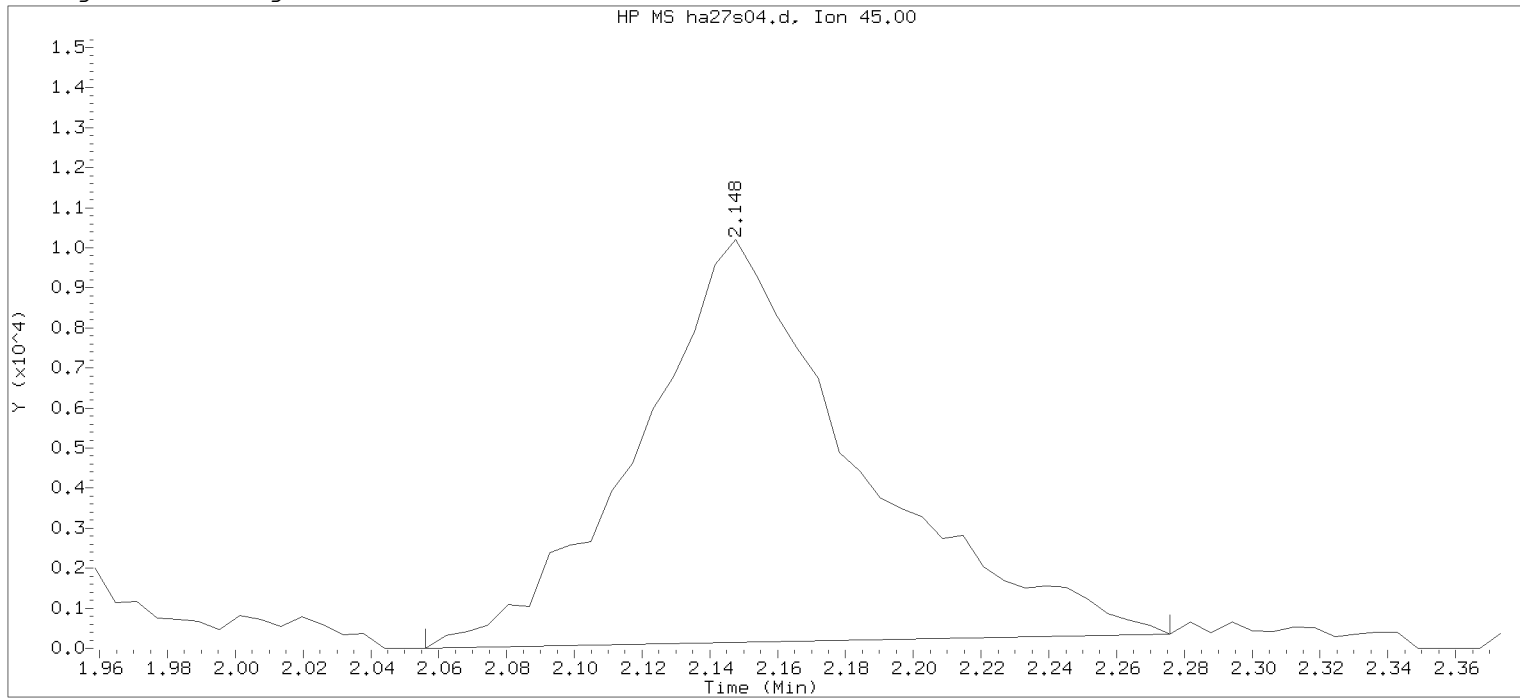
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:22.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/29/2020 at 14:36.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 23:21

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 27-Apr-2020 23:39 Automation

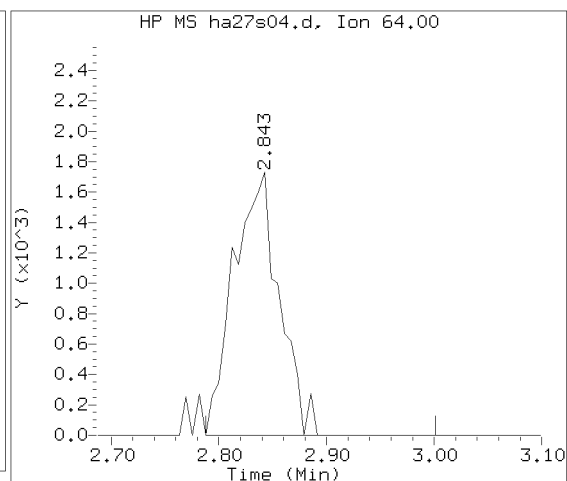
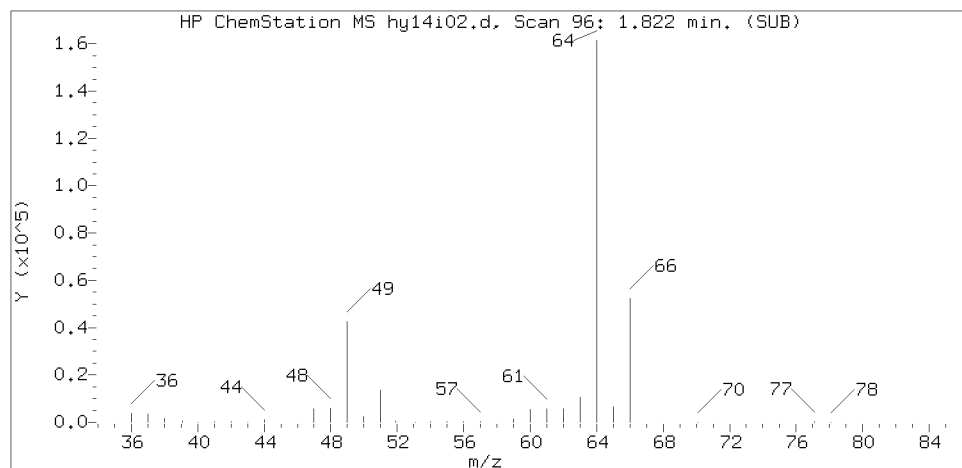
Sample Name: 59R02

Lab Sample ID: 1300795

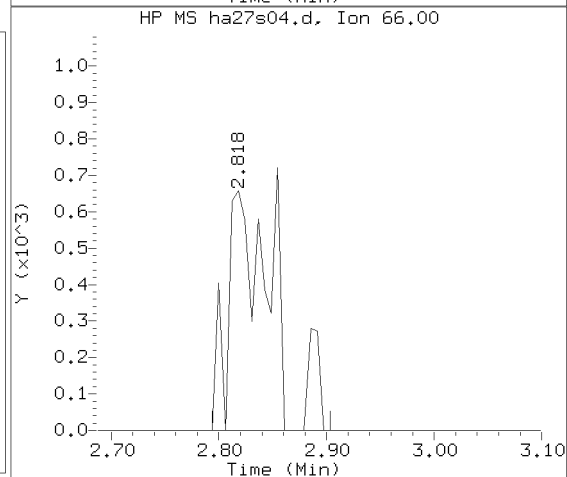
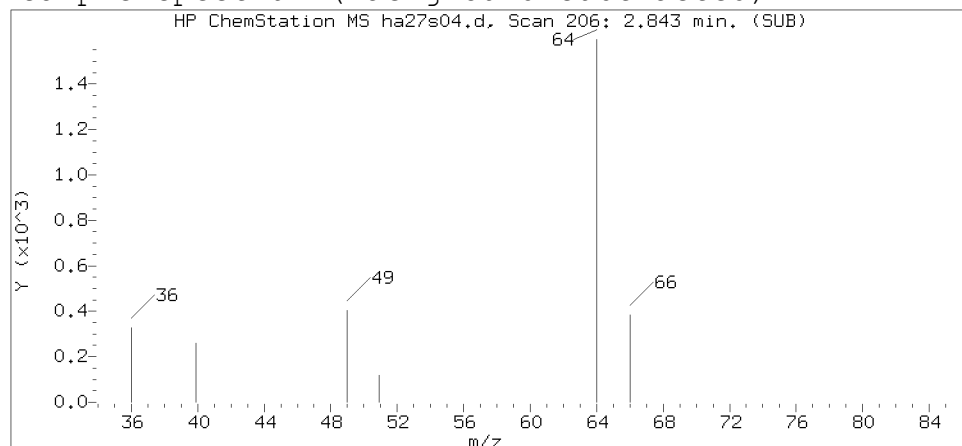
Compound Number : 4
 Compound Name : Dimethyl ether
 Scan Number : 92
 Retention Time (minutes): 2.148
 Quant Ion : 45.00
 Area : 44983
 On-column Amount (ng) : 0.8402
 Integration start scan : 76
 Y at integration start : 0

Integration stop scan: 112
 Y at integration end: 345

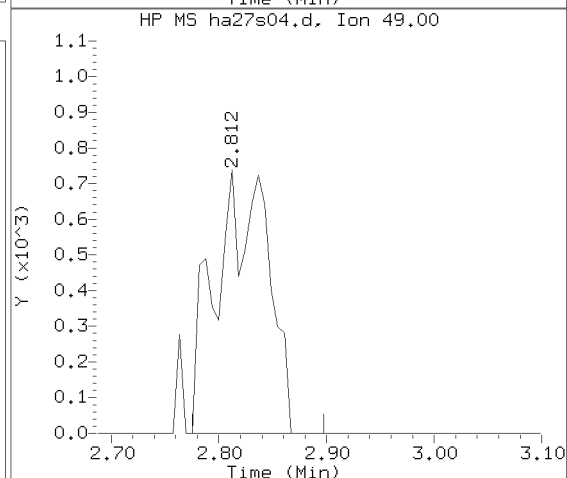
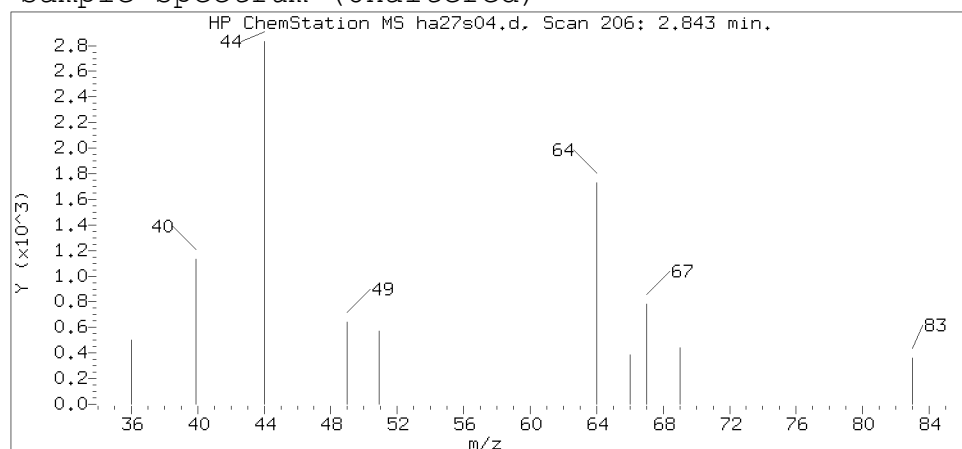
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

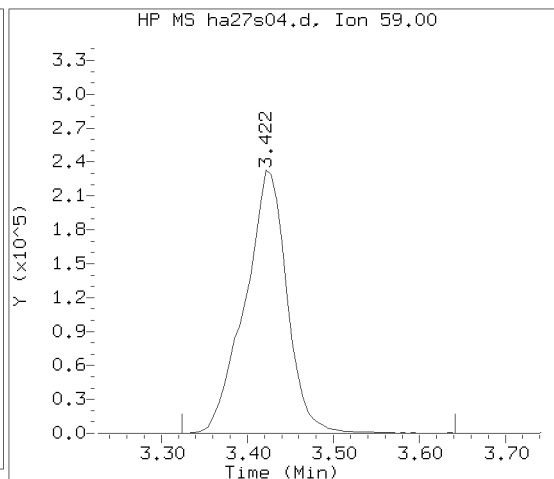
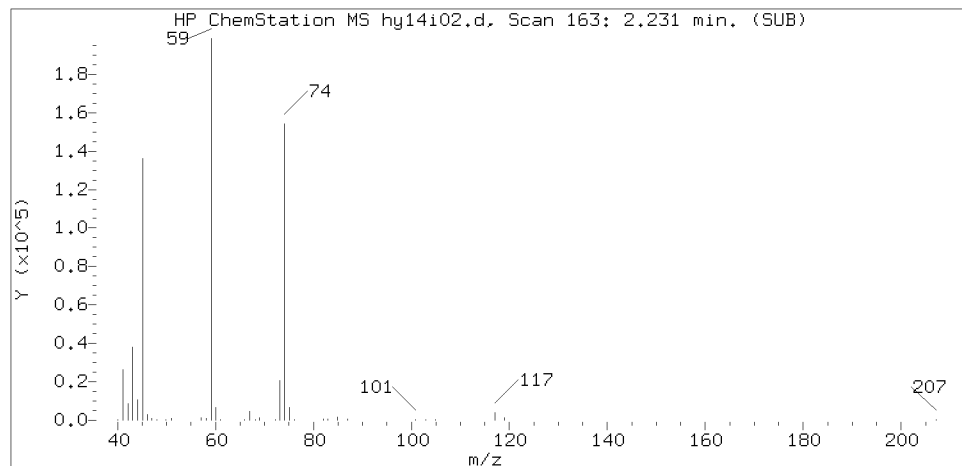
Lab Sample ID: 1300795

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 206
Retention Time (minutes): 2.843
Relative Retention Time :-0.00076
Quant Ion : 64.00
Area (flag) : 5095
On-Column Amount (ng) : 0.1555

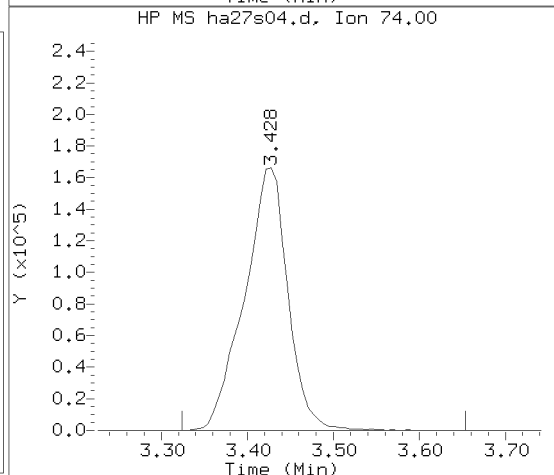
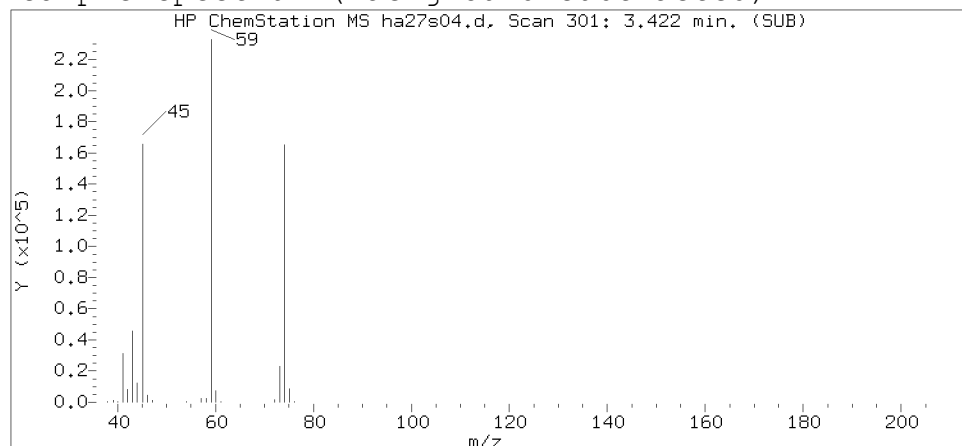
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

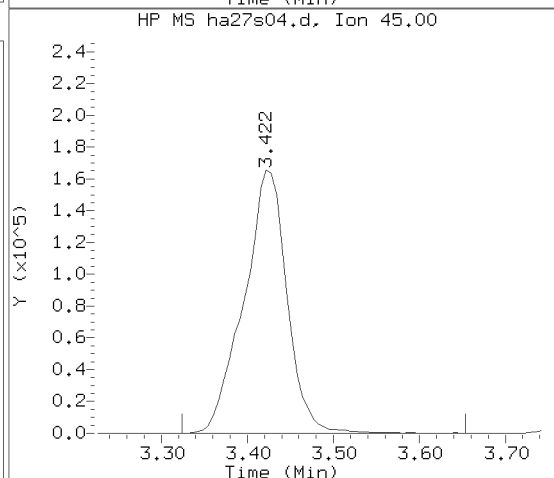
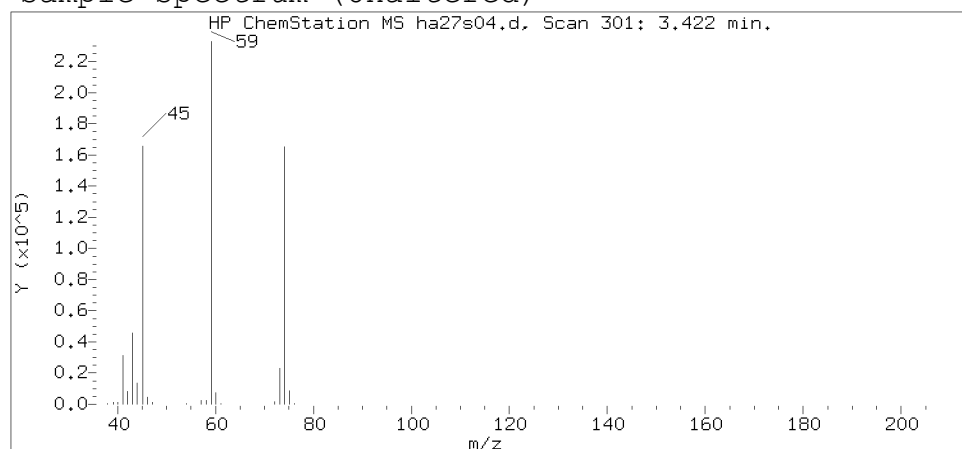
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

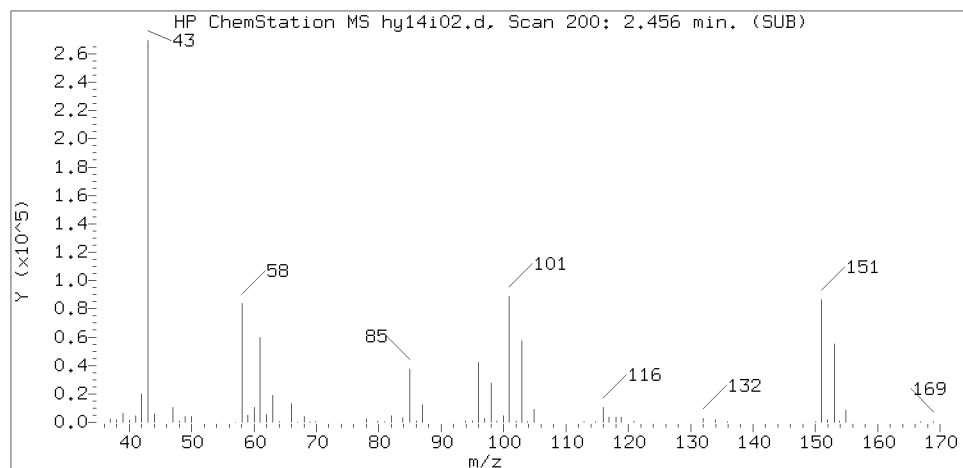
Lab Sample ID: 1300795

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 301
Retention Time (minutes): 3.422
Relative Retention Time :-0.00076
Quant Ion : 59.00
Area (flag) : 789731
On-Column Amount (ng) : 27.6418

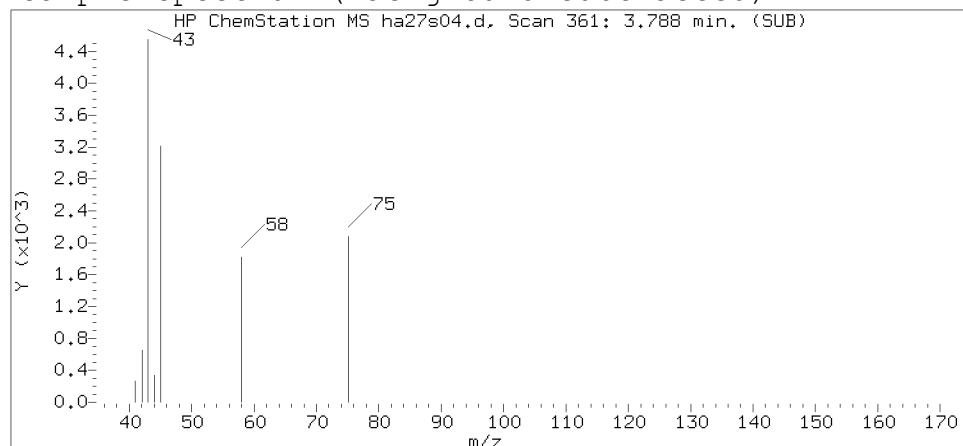
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

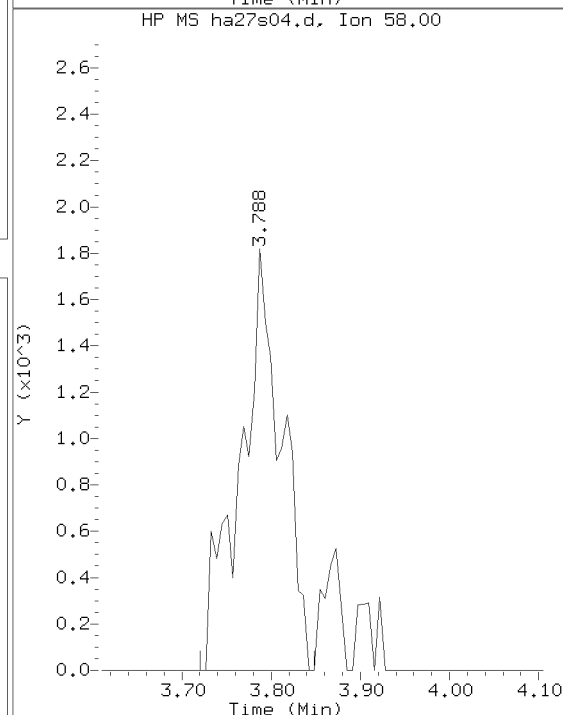
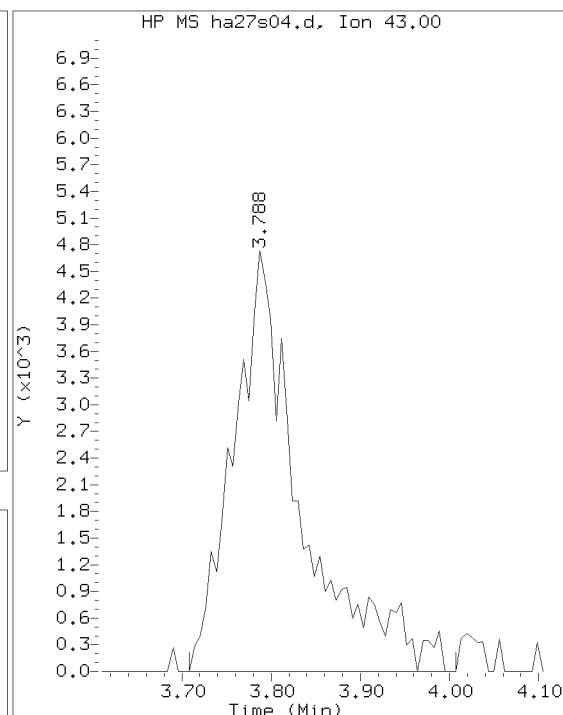
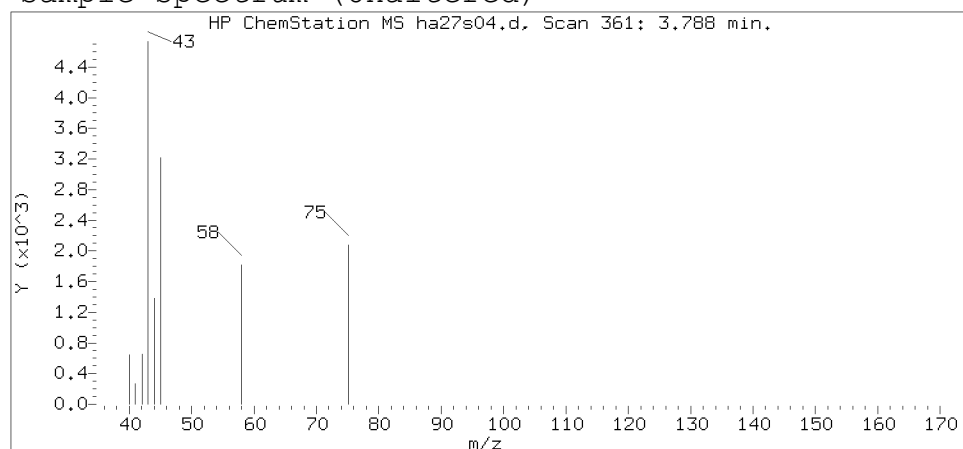
Reference Standard Spectrum for Acetone



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

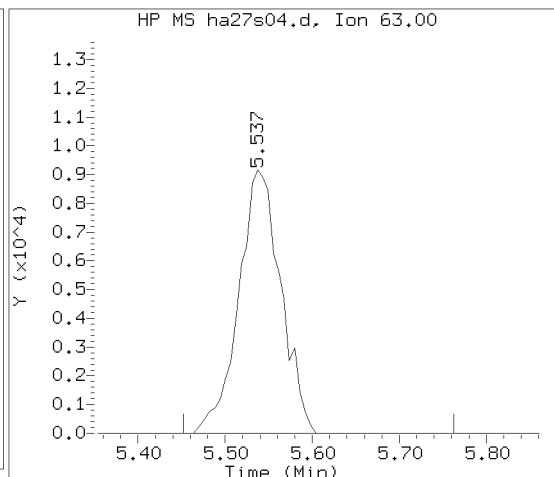
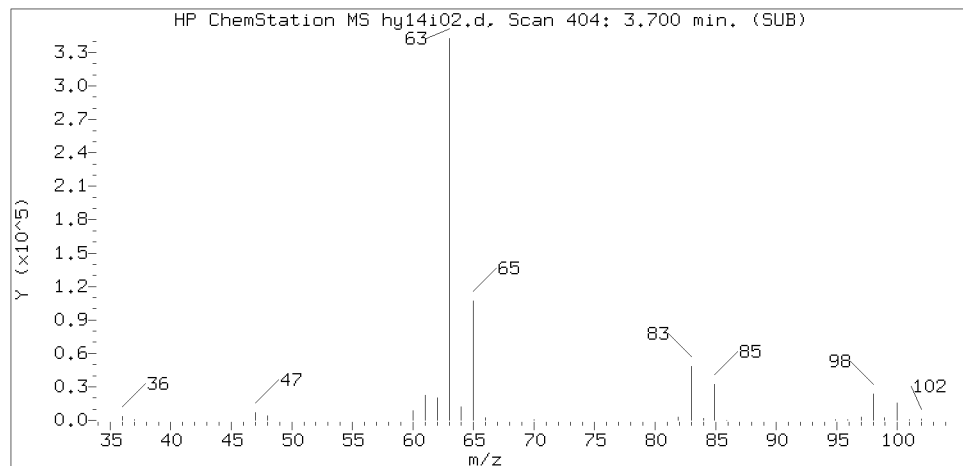
Lab Sample ID: 1300795

Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.788
Relative Retention Time : -0.00020
Quant Ion : 43.00
Area (flag) : 25124
On-Column Amount (ng) : 3.7480

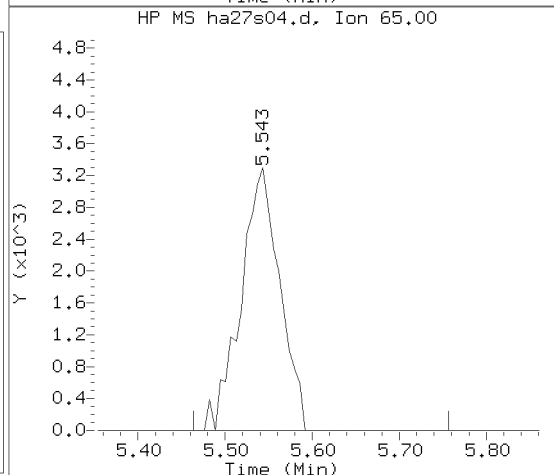
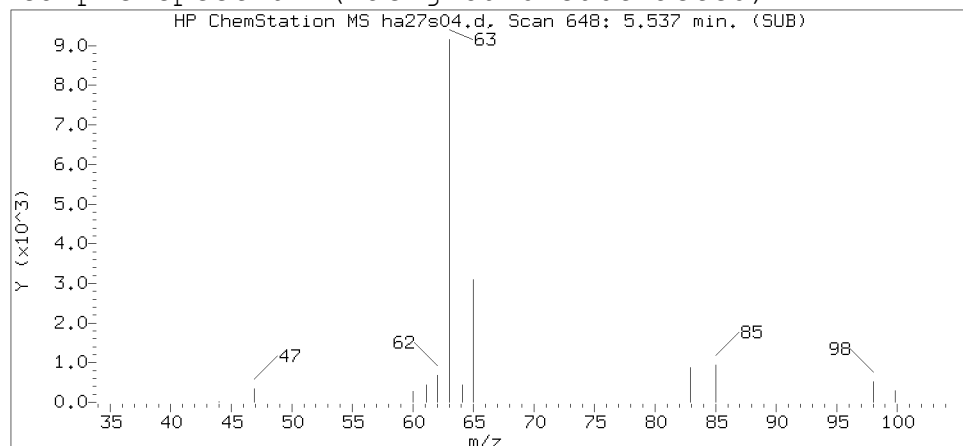
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

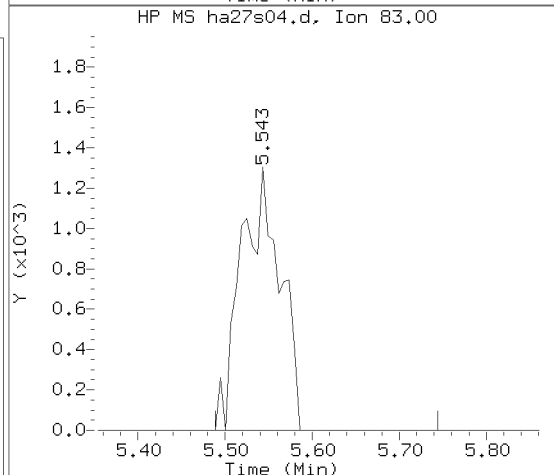
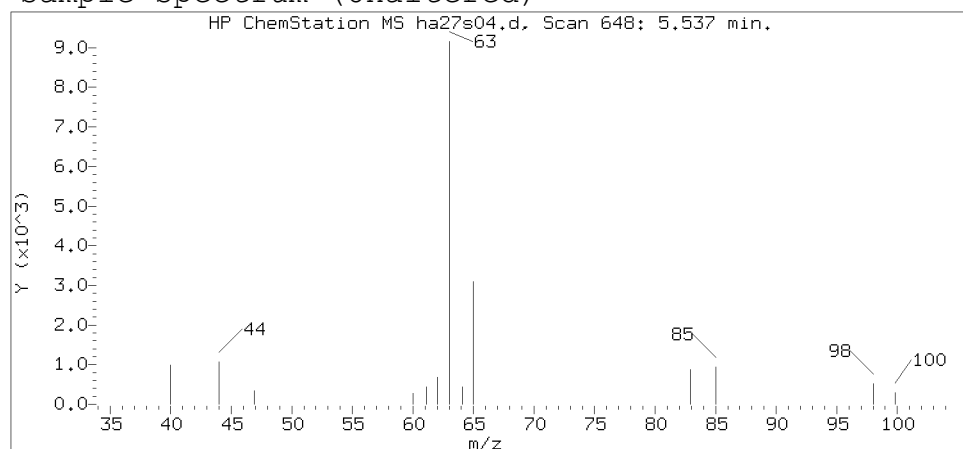
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

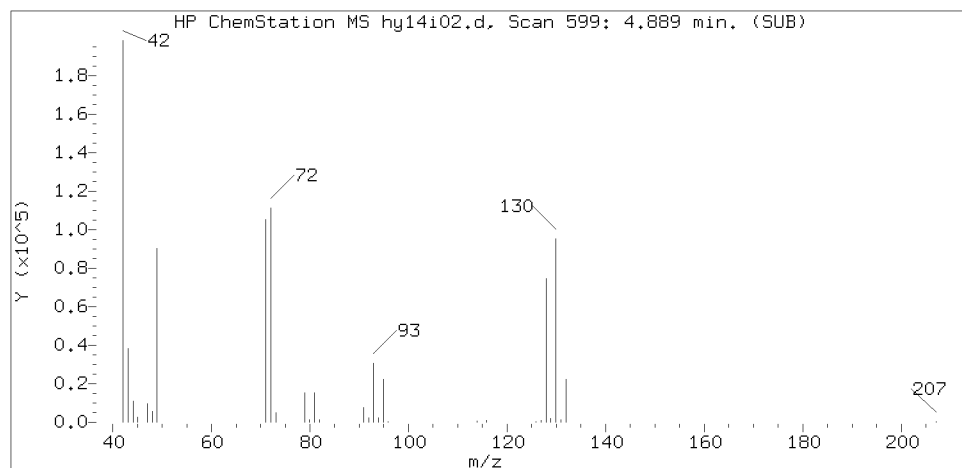
Lab Sample ID: 1300795

Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 648
Retention Time (minutes): 5.537
Relative Retention Time : 0.00001
Quant Ion : 63.00
Area (flag) : 30840
On-Column Amount (ng) : 0.3957

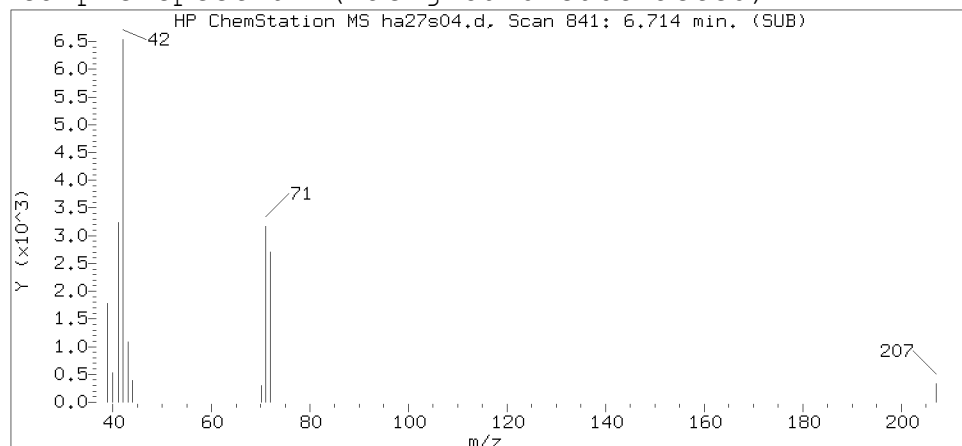
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

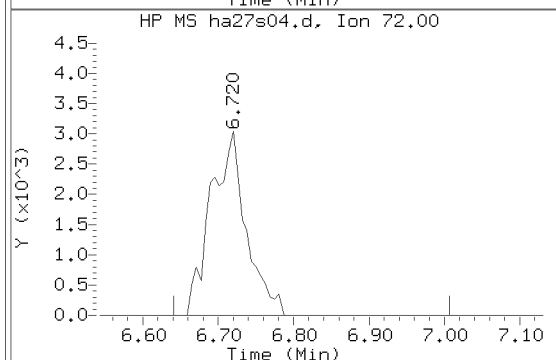
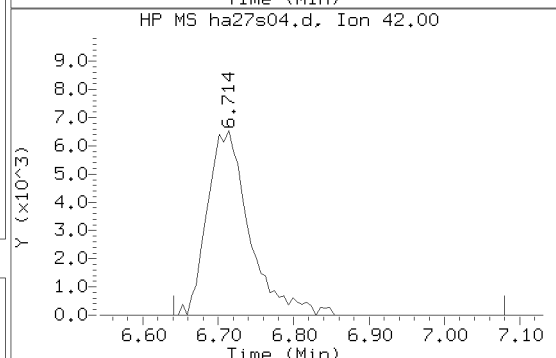
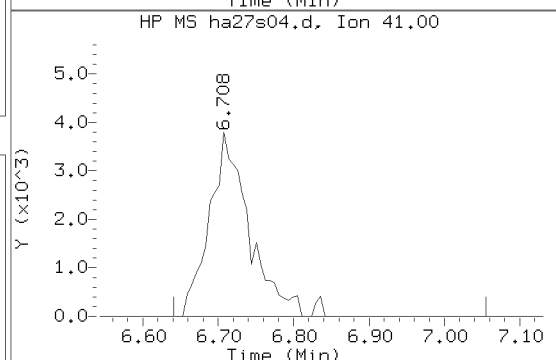
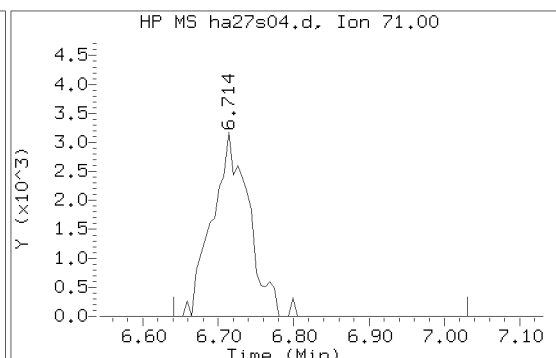
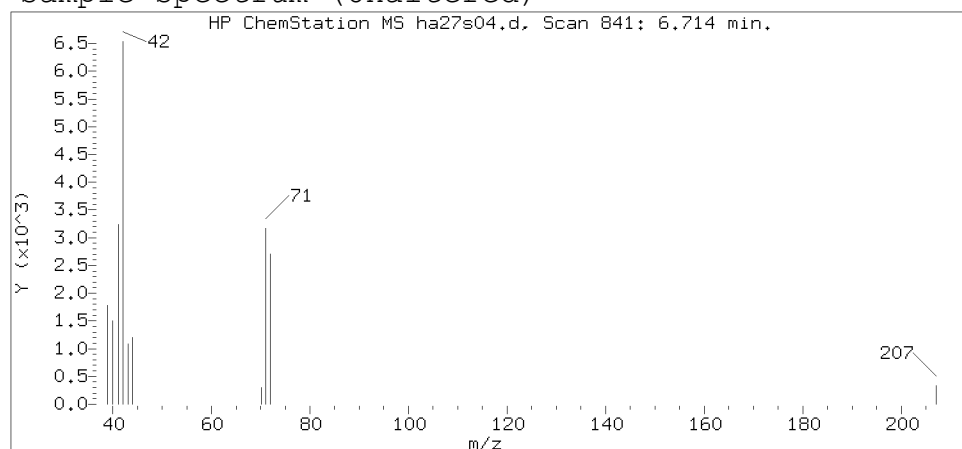
Reference Standard Spectrum for Tetrahydrofuran



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

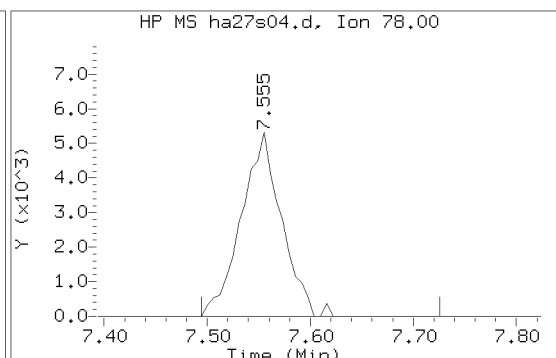
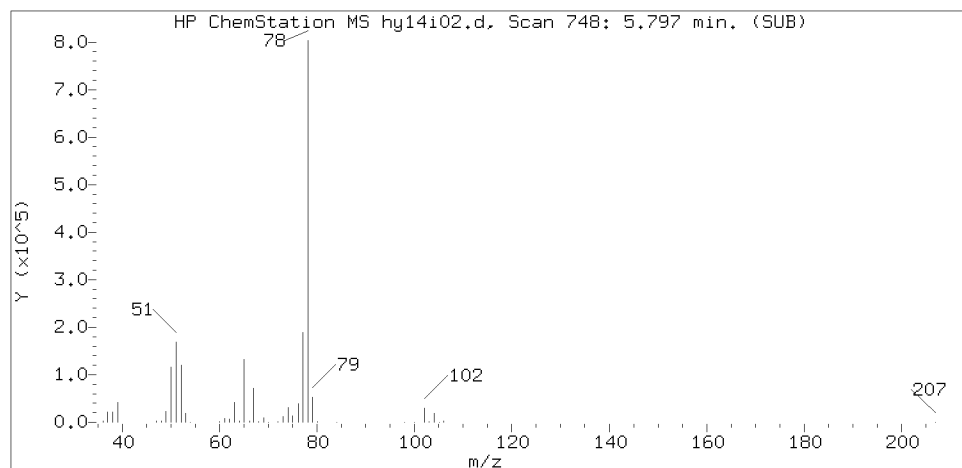
Lab Sample ID: 1300795

Compound Number : 49
Compound Name : Tetrahydrofuran
Scan Number : 841
Retention Time (minutes): 6.714
Relative Retention Time : -0.00069
Quant Ion : 71.00
Area (flag) : 10702
On-Column Amount (ng) : 3.6958

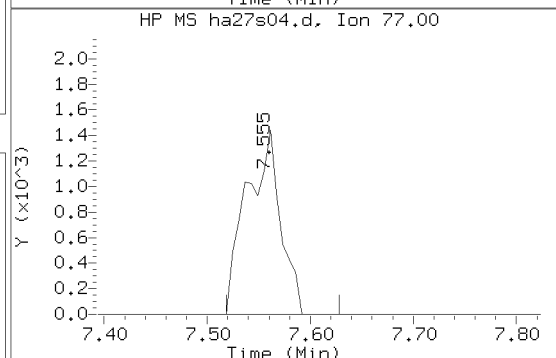
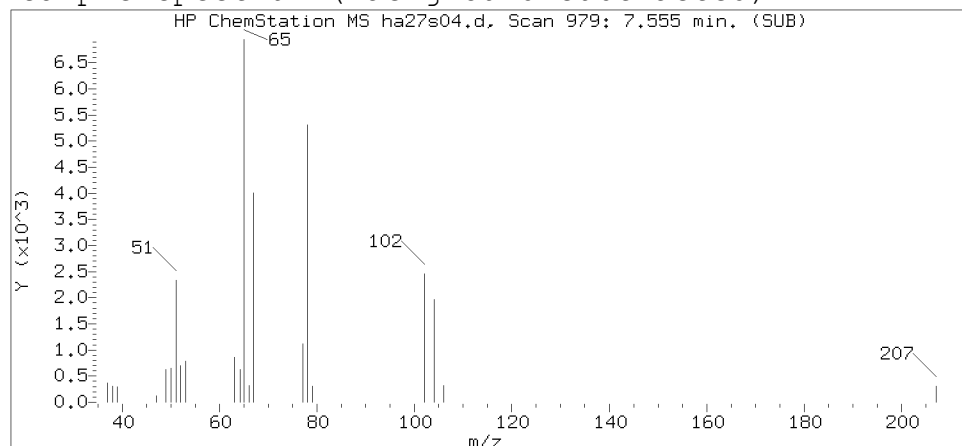
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

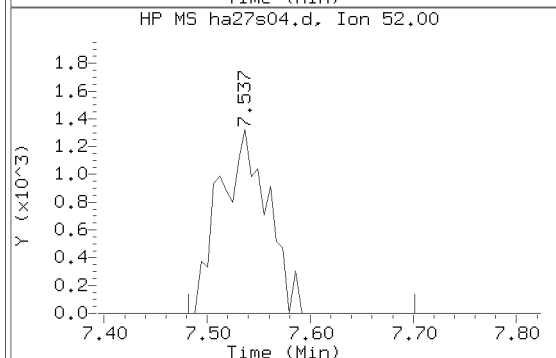
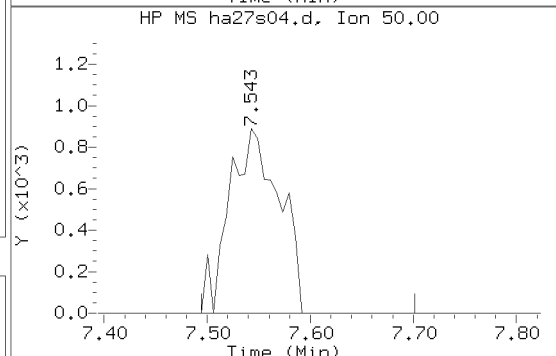
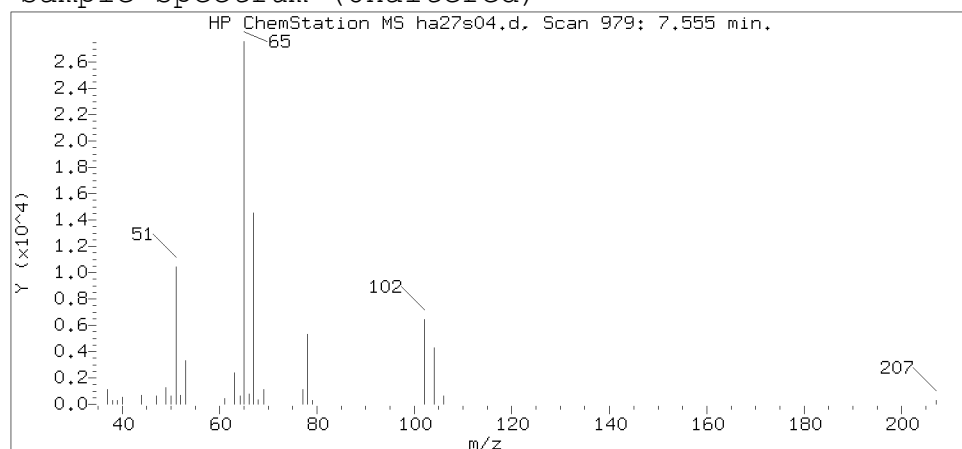
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

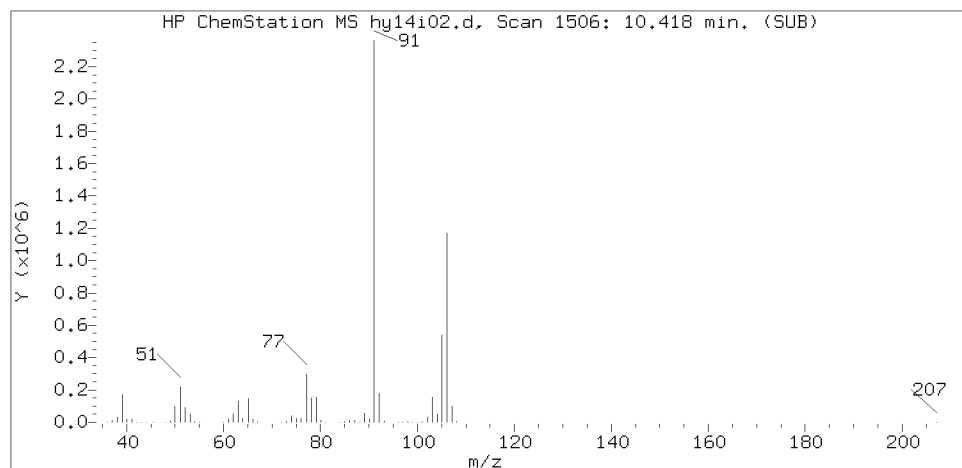
Lab Sample ID: 1300795

Compound Number : 59
Compound Name : Benzene
Scan Number : 979
Retention Time (minutes): 7.555
Relative Retention Time : -0.00077
Quant Ion : 78.00
Area (flag) : 14451
On-Column Amount (ng) : 0.0827

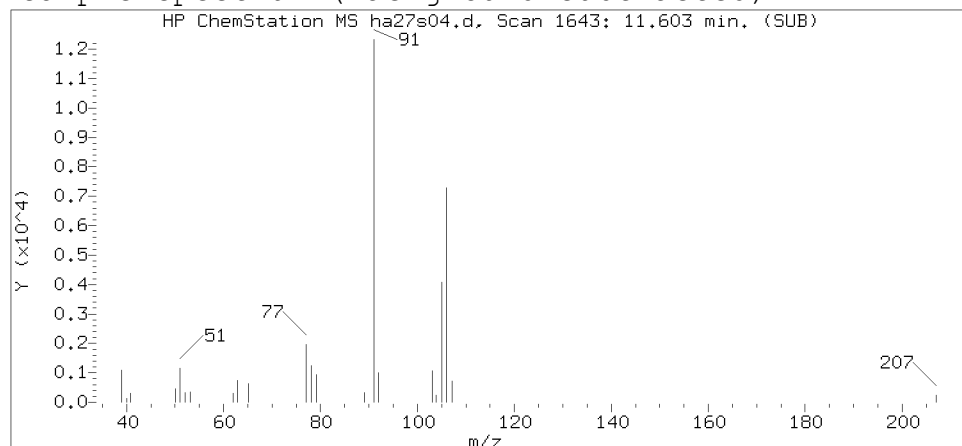
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

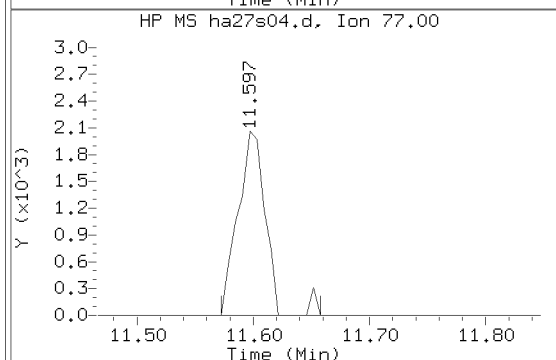
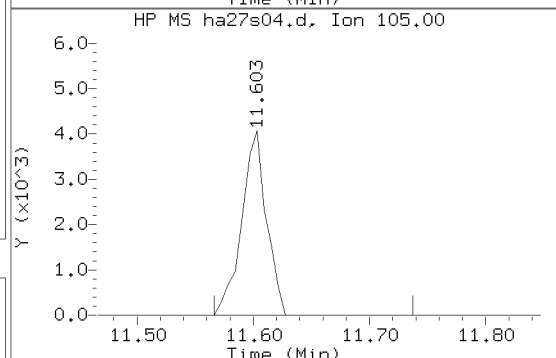
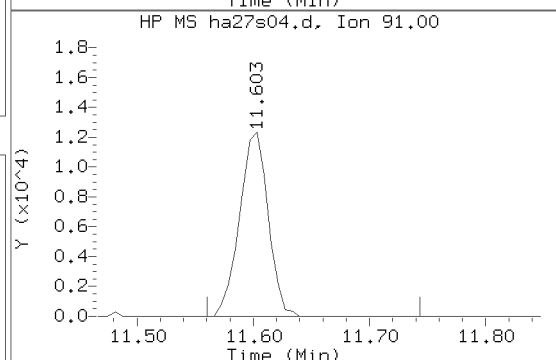
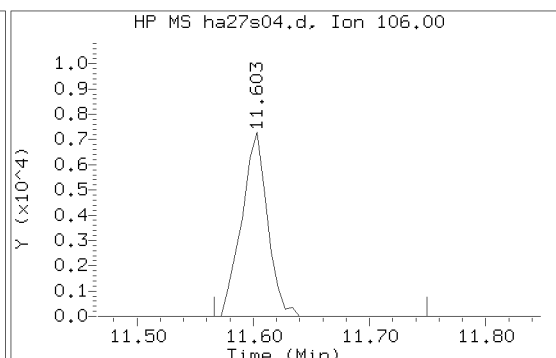
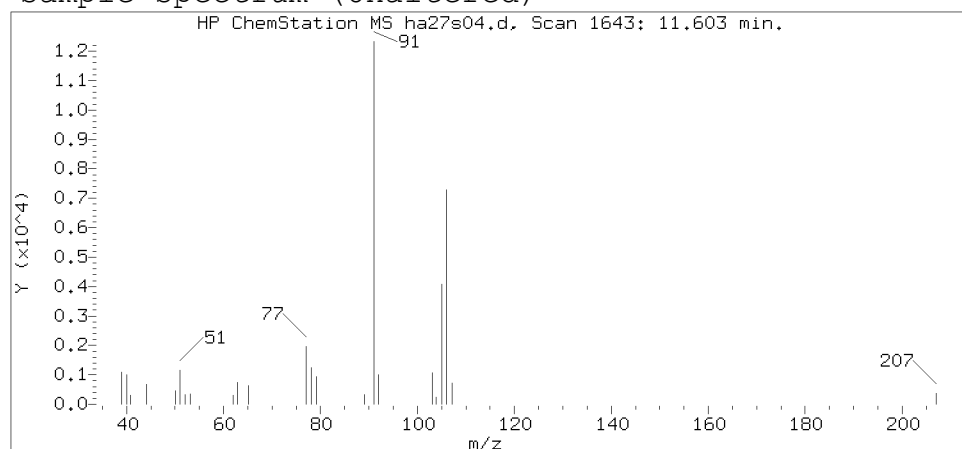
Reference Standard Spectrum for m+p-Xylene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s04.d
Injection date and time: 27-APR-2020 23:21

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R02

Lab Sample ID: 1300795

Compound Number : 102
Compound Name : m+p-Xylene
Scan Number : 1643
Retention Time (minutes): 11.603
Relative Retention Time :-0.00054
Quant Ion : 106.00
Area (flag) : 11107
On-Column Amount (ng) : 0.1096

Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:22.

Target 3.5 esignature user ID: kas02648

59R02DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300795DL

Data file: /chem2/HP19094.i/20apr28a.b/ha28s08.d

Injection date and time: 28-APR-2020 13:35

Data file Sample Info. Line: 59R02DL;1300795DL;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 2.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 12.5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (0.006)	470	65	121677 (-8)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1997585 (-2)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1539943 (-4)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	796493 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	519148	10.455	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512 (0.001)	102	102246	10.624	106%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1983464	9.667	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	699161	9.211	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.3	2
4) Dimethyl ether	(2)	2.142 (0.001)	45	26400	0.397	0.79		J	0.08	25
2) Chloromethane	(2)			Not Detected					0.1	1
5) Vinyl Chloride	(2)			Not Detected					0.3	2
7) Bromomethane	(2)			Not Detected					1	2
8) Chloroethane	(2)	2.830 (-0.000)	64	2986	0.073	0.15		J	0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.4	2
11) Ethyl ether	(2)	3.422 (-0.000)	59	411966	11.601	23.20		J	2	25
13) Acrolein	(1)			Not Detected					7	50
15) 1,1-Dichloroethene	(2)			Not Detected					0.4	2
16) Freon 113	(2)			Not Detected					0.2	2
14) Acetone	(1)	3.775 (-0.001)	43	13910	1.881	3.76		J	2	20
17) Methyl Iodide	(2)			Not Detected					1	20
19) Carbon Disulfide	(2)			Not Detected					0.7	20
26) Acetonitrile	(1)			Not Detected					63	200
23) Allyl Chloride	(2)			Not Detected					2	20
24) Methylene Chloride	(2)			Not Detected					0.4	2
30) Acrylonitrile	(1)			Not Detected					0.9	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.3	2
34) 1,1-Dichloroethane	(2)	5.537 (-0.000)	63	15689	0.162	0.32		J	0.3	2
37) Vinyl Acetate	(2)			Not Detected					7	20
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.9	20
39) 2-Butanone	(1)			Not Detected					1	20
43) Propionitrile	(1)			Not Detected					20	200
46) Methacrylonitrile	(1)			Not Detected					20	200
49) Tetrahydrofuran	(1)			Not Detected					4	50
50) Chloroform	(2)			Not Detected					0.2	2
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	2
55) Carbon Tetrachloride	(2)			Not Detected					0.3	2
57) Isobutyl Alcohol	(1)			Not Detected					7	400
59) Benzene	(2)			Not Detected					0.1	2

59R02DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300795DL

Data file: /chem2/HP19094.i/20apr28a.b/ha28s08.d

Injection date and time: 28-APR-2020 13:35

Data file Sample Info. Line: 59R02DL;1300795DL;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 2.00

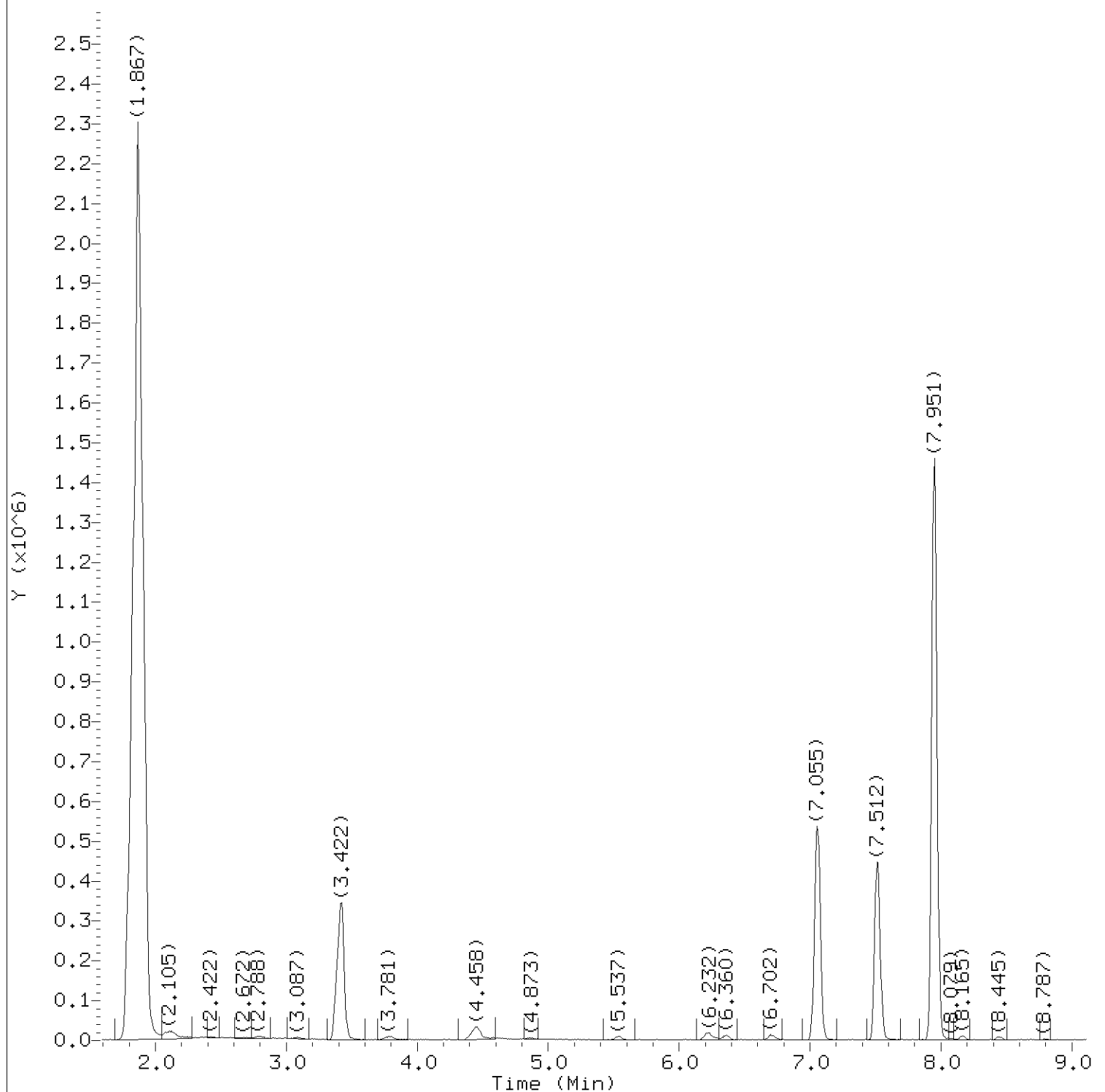
Volume Purged (Vt): 25 ml Sample Volume (Vo): 12.5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
60) 1,2-Dichloroethane	(2)				Not Detected					0.3	2
68) Trichloroethene	(2)				Not Detected					0.4	2
71) 1,2-Dichloropropane	(2)				Not Detected					0.2	2
72) Methyl Methacrylate	(1)				Not Detected					7	20
74) Dibromomethane	(2)				Not Detected					0.1	2
73) 1,4-Dioxane	(1)				Not Detected					91	400
75) Bromodichloromethane	(2)				Not Detected					0.2	2
82) 4-Methyl-2-Pentanone	(1)				Not Detected					2	20
84) Toluene	(3)				Not Detected					0.2	2
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.2	2
87) Ethyl Methacrylate	(3)				Not Detected					2	20
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	2
90) Tetrachloroethene	(3)				Not Detected					0.1	2
91) 1,3-Dichloropropane	(3)				Not Detected					0.2	2
92) 2-Hexanone	(1)				Not Detected					1	20
94) Dibromochloromethane	(3)				Not Detected					0.1	2
96) 1,2-Dibromoethane	(3)				Not Detected					0.1	2
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.2	2
101) Ethylbenzene	(3)				Not Detected					0.2	2
102) m+p-Xylene	(3)				Not Detected					0.2	4
105) o-Xylene	(3)				Not Detected					0.3	2
106) Xylene (Total)	(3)				Not Detected					0.4	6
107) Styrene	(3)				Not Detected					0.1	2
108) Bromoform	(3)				Not Detected					0.2	2
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.4	2
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					2	20
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.2	2
127) Pentachloroethane	(4)				Not Detected					2	20
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	2
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	2
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	2
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.4	2
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	2
147) Hexachlorobutadiene	(4)				Not Detected					0.1	2
148) Naphthalene	(4)				Not Detected					0.3	2

Total number of targets = 66

Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:25. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/29/2020 at 14:35. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

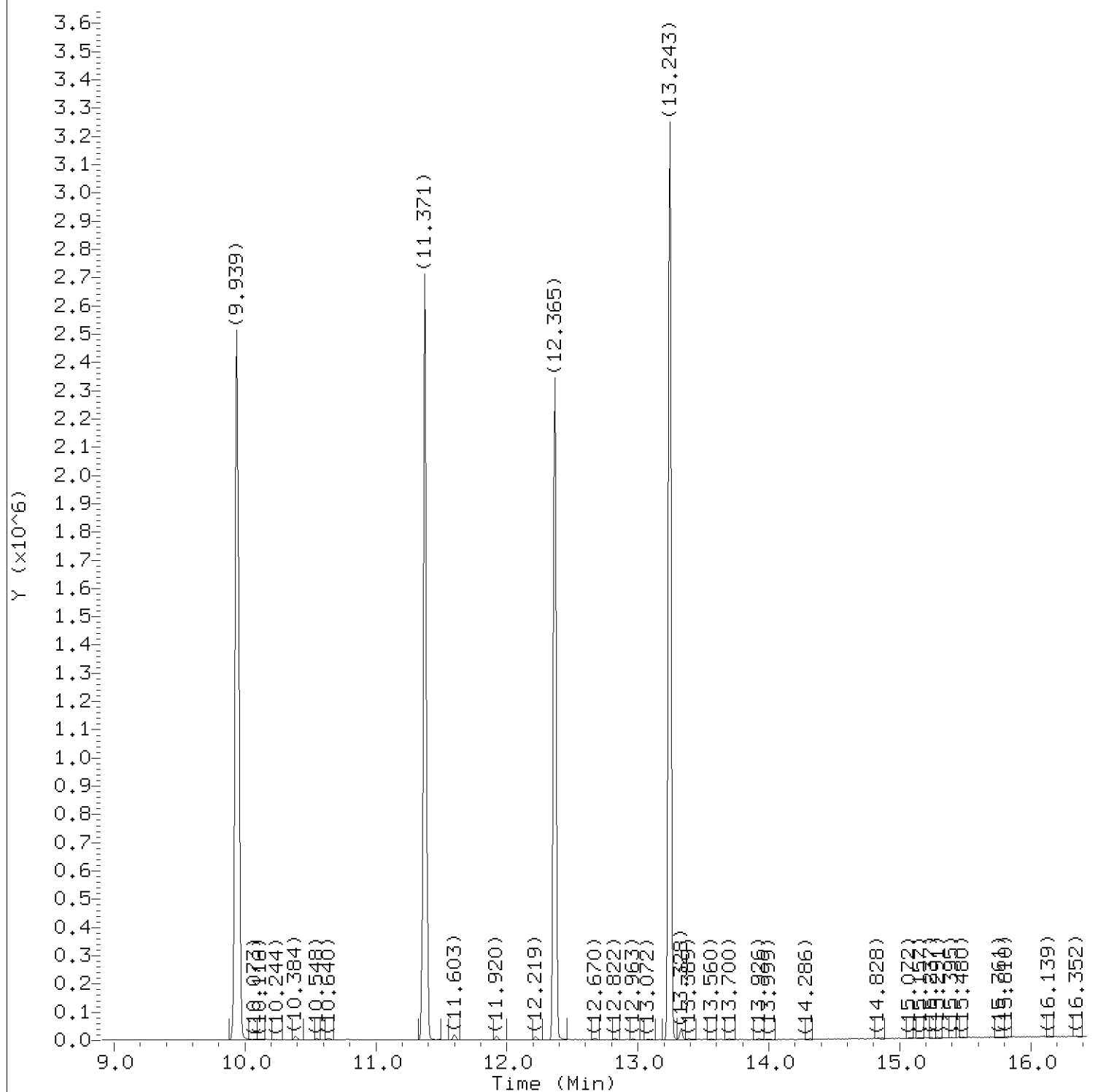
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Sample Name: 59R02DL

Lab Sample ID: 1300795DL

Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:25.

Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 27091

Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Sample Name: 59R02DL

Lab Sample ID: 1300795DL

Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:25.

Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 13:35

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Sample Name: 59R02DL

Lab Sample ID: 1300795DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.142	45	26400	0.397
8) Chloroethane	(2)	2.830	64	2986	0.073
11) Ethyl ether	(2)	3.422	59	411966	11.601
14) Acetone	(1)	3.775	43	13910	1.881
27) *t-Butyl Alcohol-d10	(1)	4.452	65	121677	50.000
34) 1,1-Dichloroethane	(2)	5.537	63	15689	0.162
51) \$Dibromofluoromethane	(2)	7.061	113	519148	10.455
58) \$1,2-Dichloroethane-d4	(2)	7.512	102	102246	10.624
64) *Fluorobenzene	(2)	7.951	96	1997585	10.000
83) \$Toluene-d8	(3)	9.939	98	1983464	9.667
98) *Chlorobenzene-d5	(3)	11.371	117	1539943	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	699161	9.211
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	796493	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

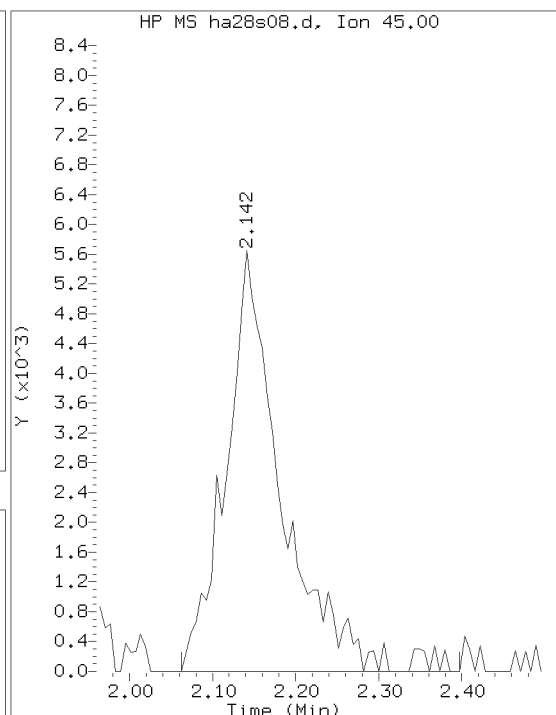
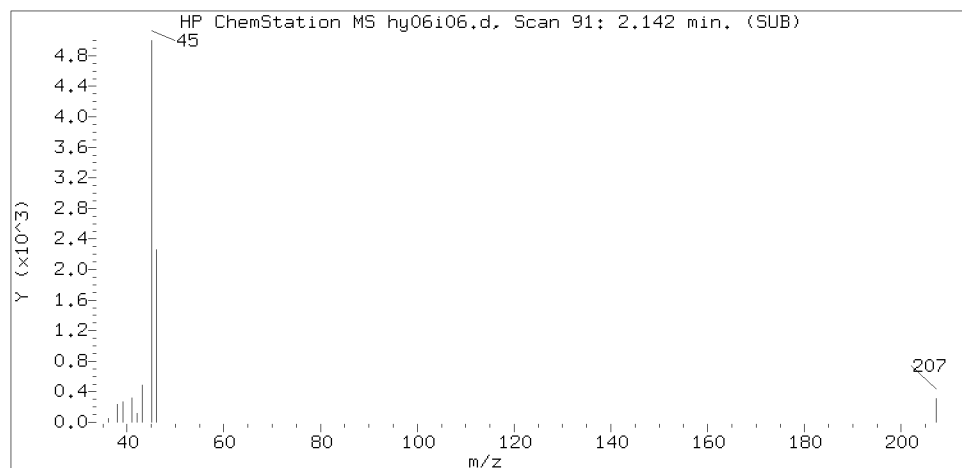
page 1 of 1

Digitally signed by Kevin A. Sposito
on 05/29/2020 at 14:25.

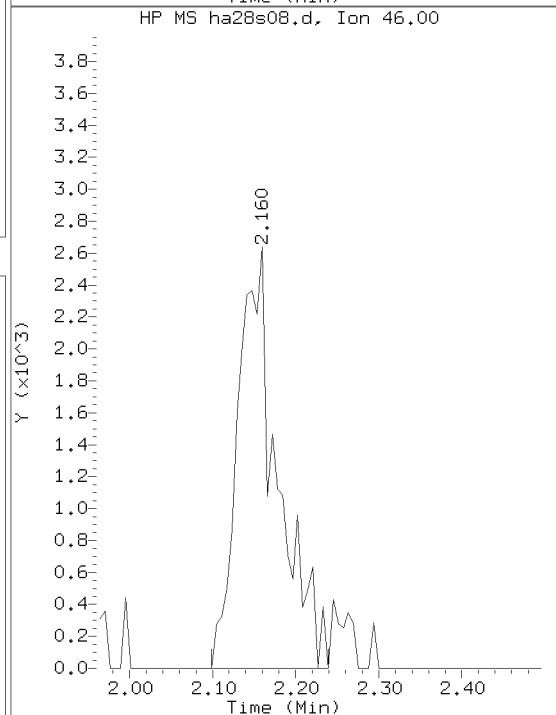
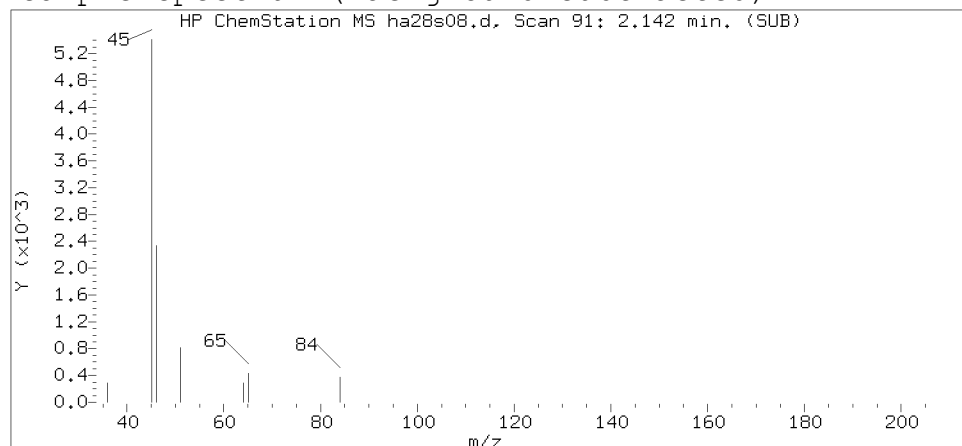
Target 3.5 esignature user ID: kas02648

RAF59 Page 235 of 1506

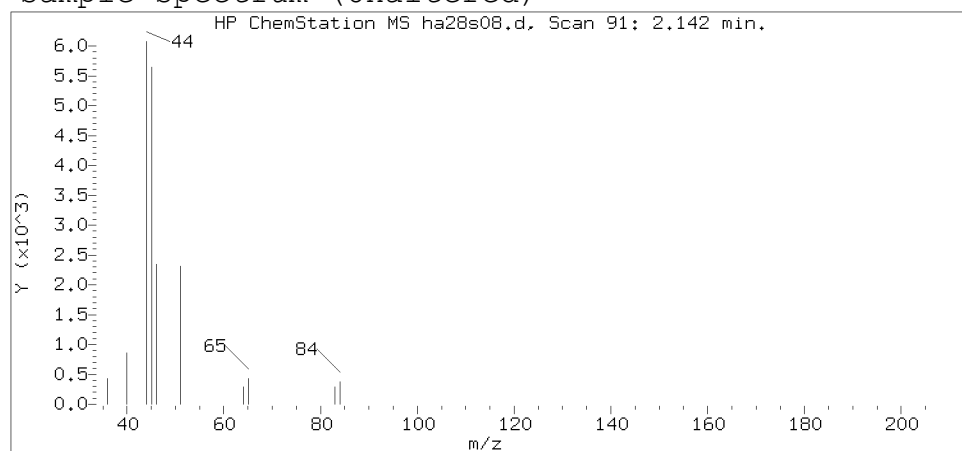
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

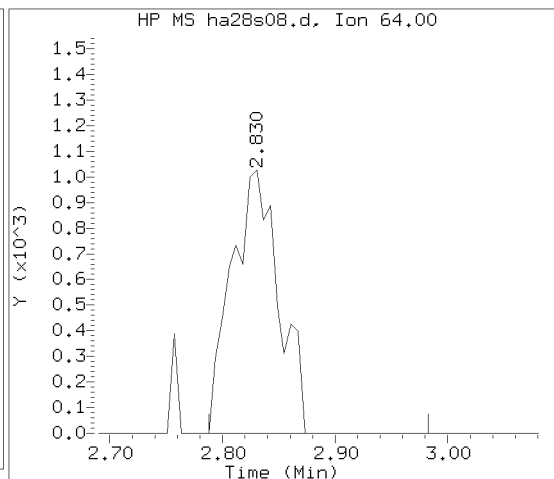
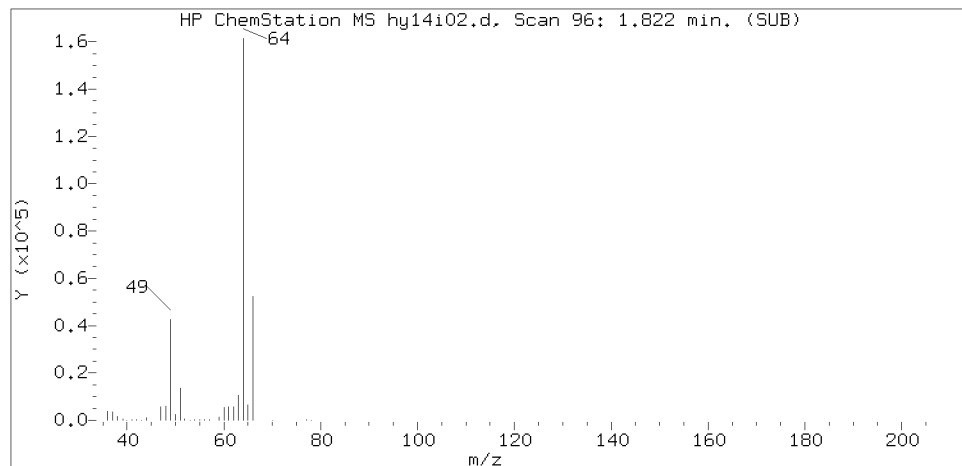
Sample Name: 59R02DL

Lab Sample ID: 1300795DL

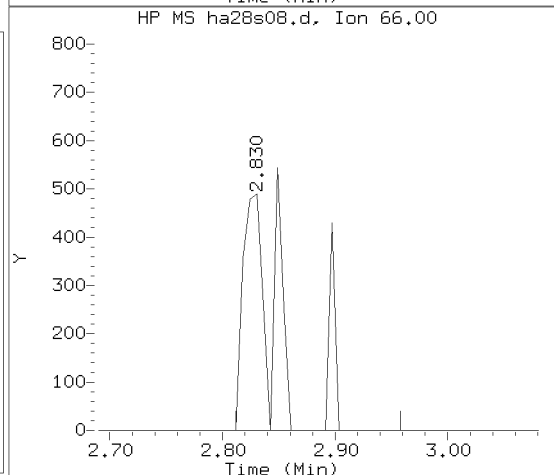
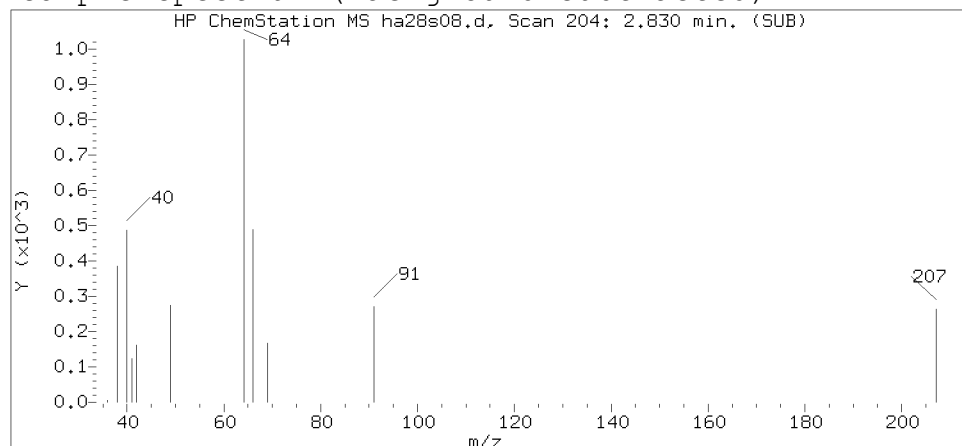
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Relative Retention Time : 0.00155
Quant Ion : 45.00
Area (flag) : 26400
On-Column Amount (ng) : 0.3967

Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:25.
Target 3.5 esignature user ID: kas02648

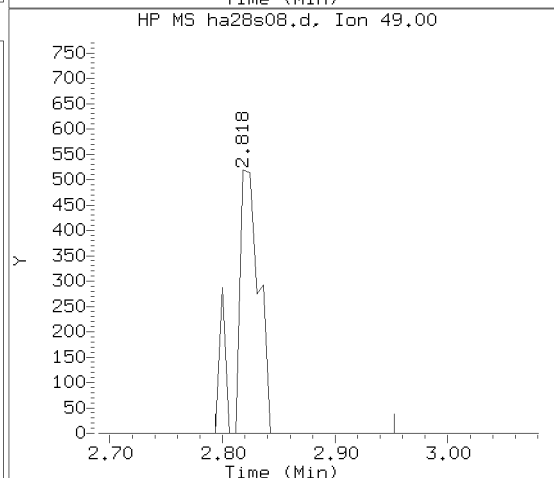
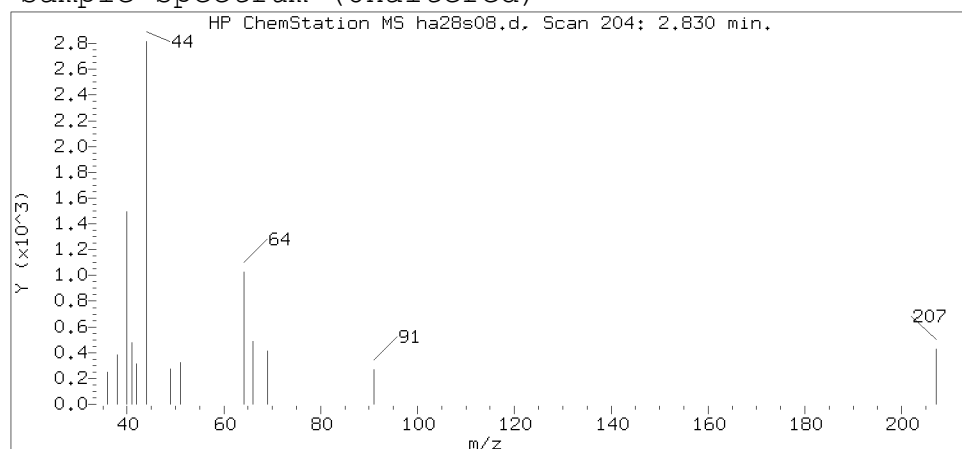
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

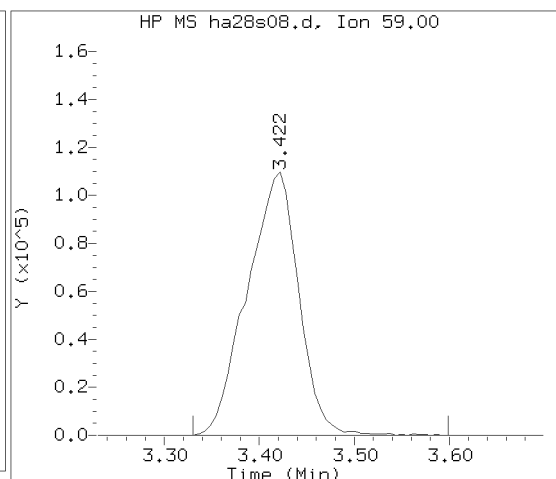
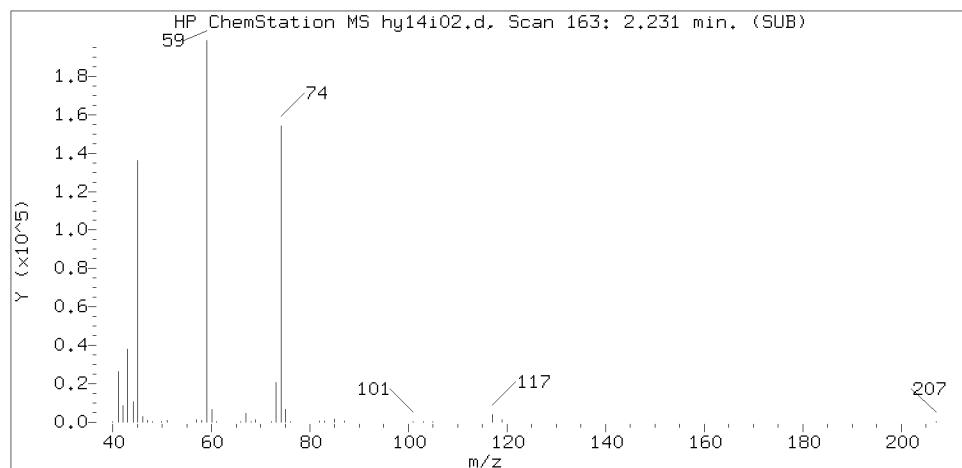
Sample Name: 59R02DL

Lab Sample ID: 1300795DL

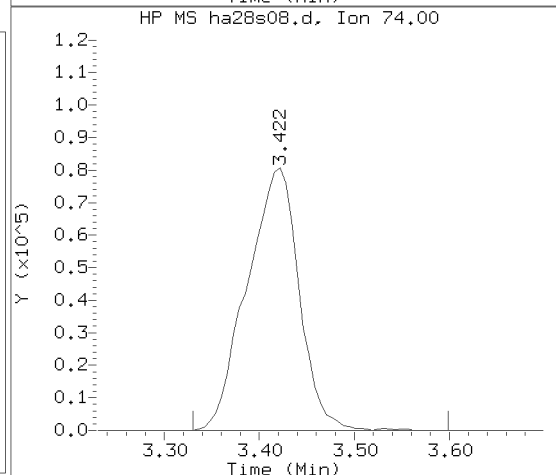
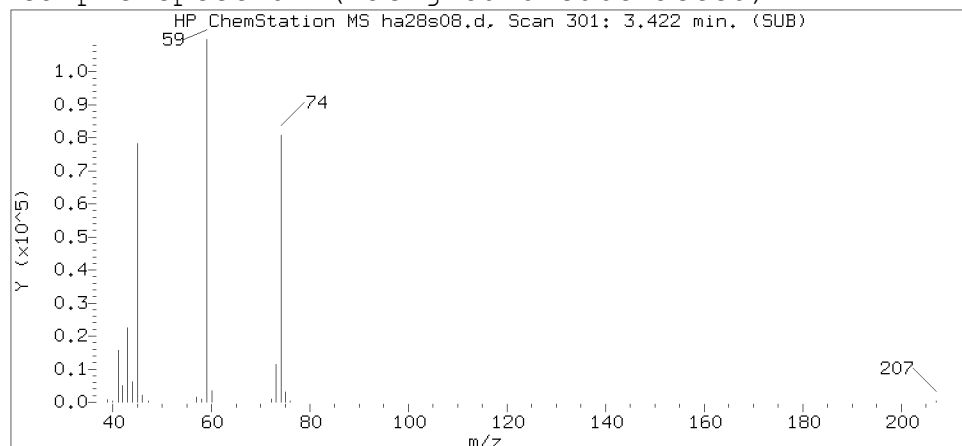
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 204
Retention Time (minutes): 2.830
Relative Retention Time :-0.00001
Quant Ion : 64.00
Area (flag) : 2986
On-Column Amount (ng) : 0.0733

Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:25.
Target 3.5 esignature user ID: kas02648

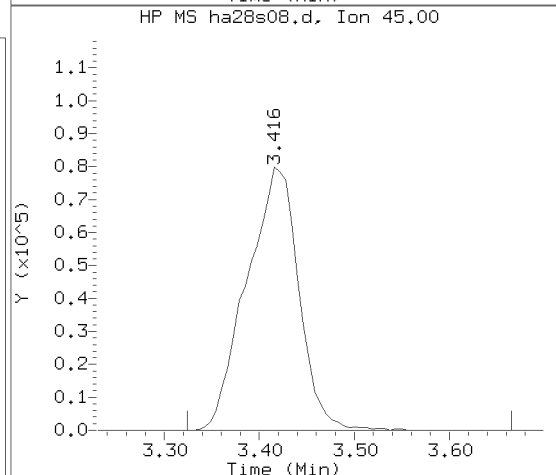
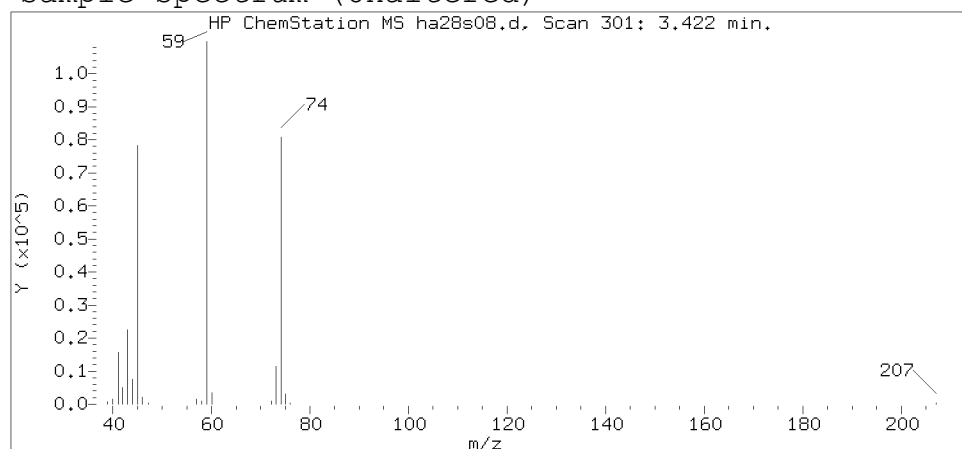
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

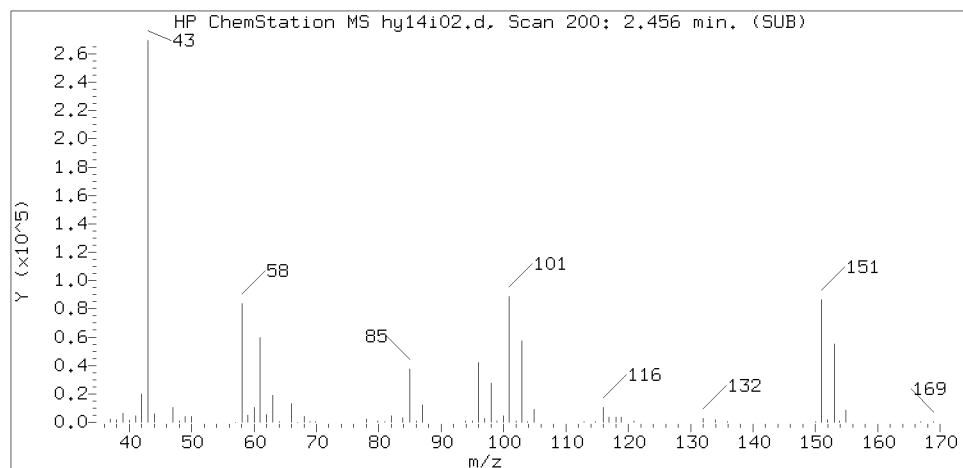
Sample Name: 59R02DL

Lab Sample ID: 1300795DL

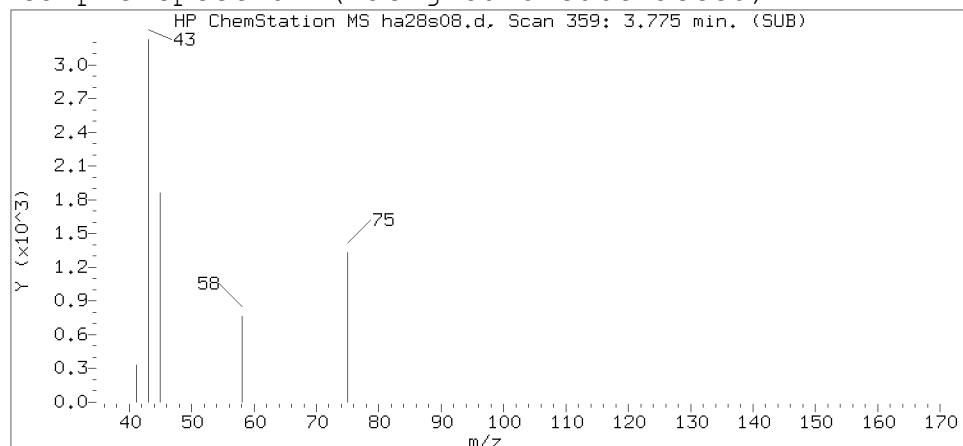
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 301
Retention Time (minutes): 3.422
Relative Retention Time :-0.00001
Quant Ion : 59.00
Area (flag) : 411966
On-Column Amount (ng) : 11.6012

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Target 3.5 esignature user ID: kas02648

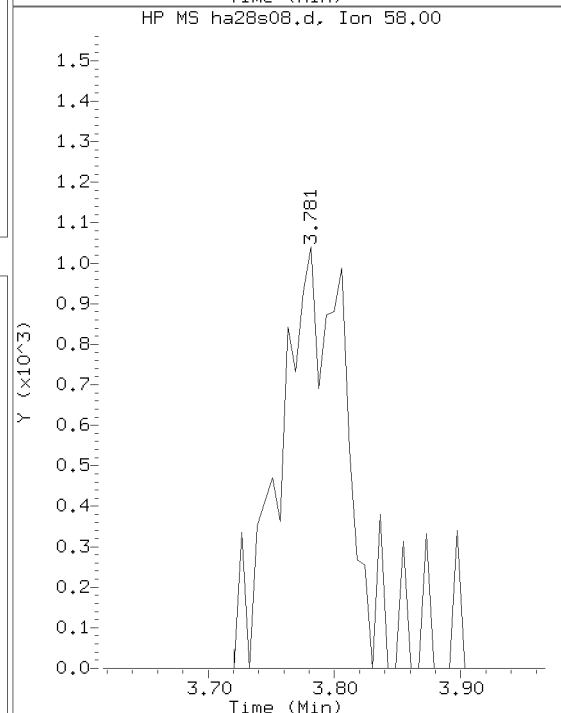
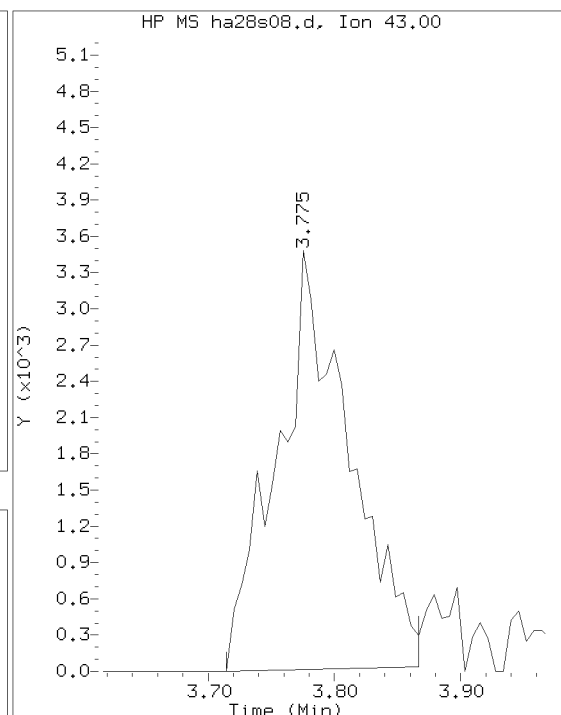
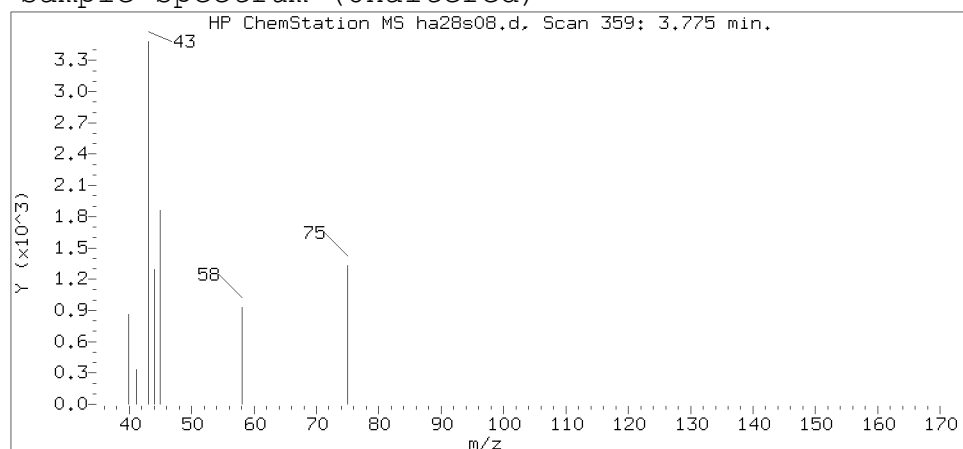
Reference Standard Spectrum for Acetone



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Sample Name: 59R02DL

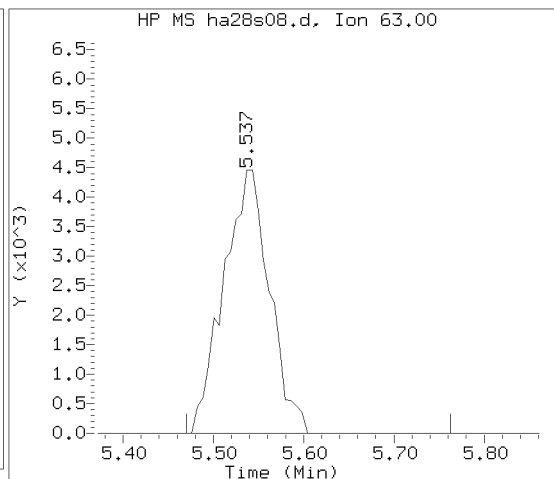
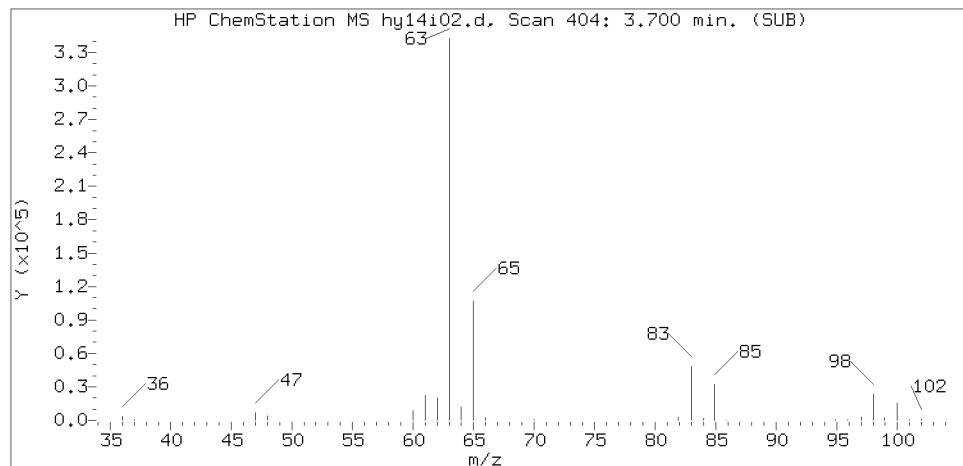
Lab Sample ID: 1300795DL

Compound Number : 14
Compound Name : Acetone
Scan Number : 359
Retention Time (minutes): 3.775
Relative Retention Time :-0.00116
Quant Ion : 43.00
Area (flag) : 13910
On-Column Amount (ng) : 1.8814

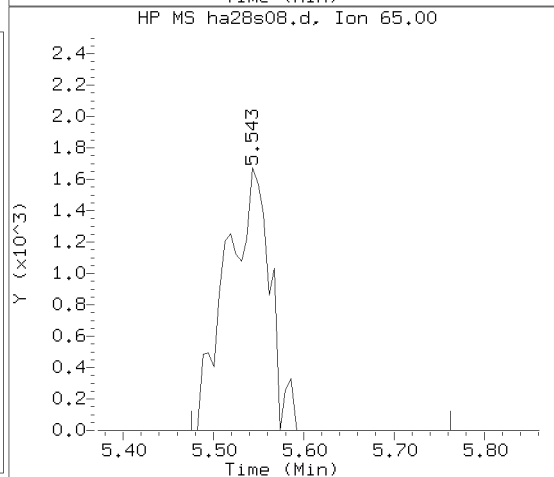
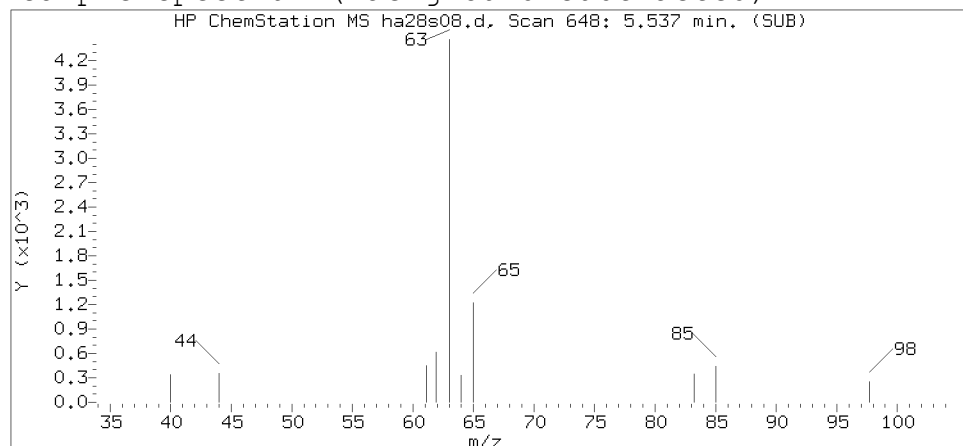
Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:25.

Target 3.5 esignature user ID: kas02648

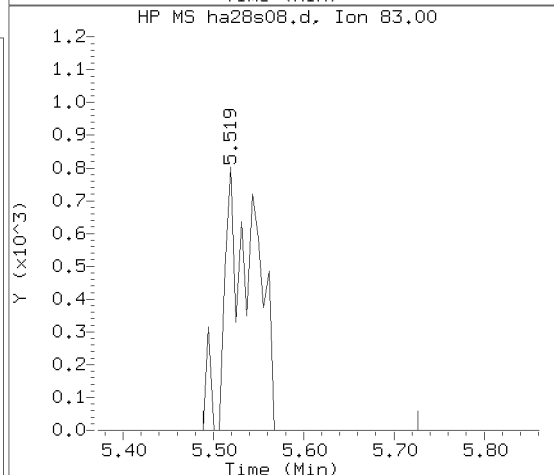
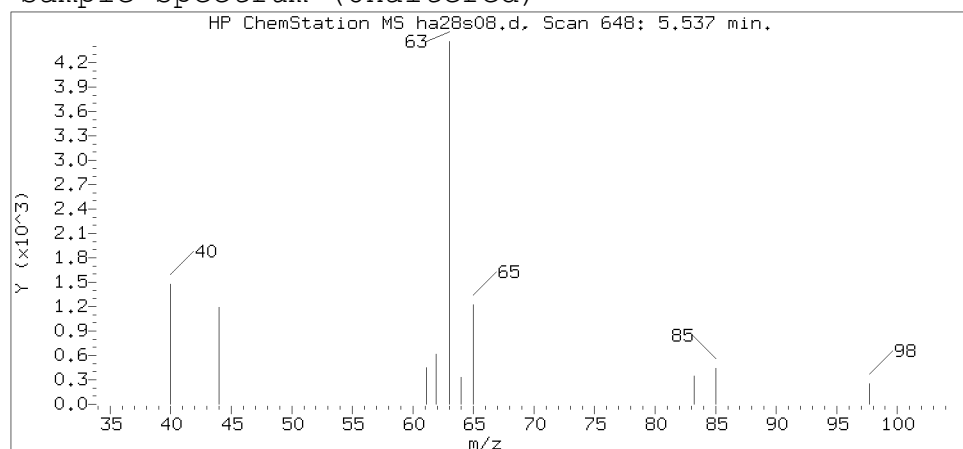
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s08.d
Injection date and time: 28-APR-2020 13:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 29-May-2020 14:25 kas02648

Sample Name: 59R02DL

Lab Sample ID: 1300795DL

Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 648
Retention Time (minutes): 5.537
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 15689
On-Column Amount (ng) : 0.1620

Digitally signed by Kevin A. Sposito on 05/29/2020 at 14:25.

Target 3.5 esignature user ID: kas02648

59R03

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300796

Data file: /chem2/HP09355.i/20apr28b.b/ya28s50.d

Injection date and time: 29-APR-2020 01:35

Data file Sample Info. Line: 59R03;1300796;1;0;;RAF59;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 01:52 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355 (-0.012)	456	65	396332 (4)	250.00	
66) Fluorobenzene	7.866 (-0.006)	1033	96	1203493 (-3)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	916703 (-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	497339 (-8)	50.00	

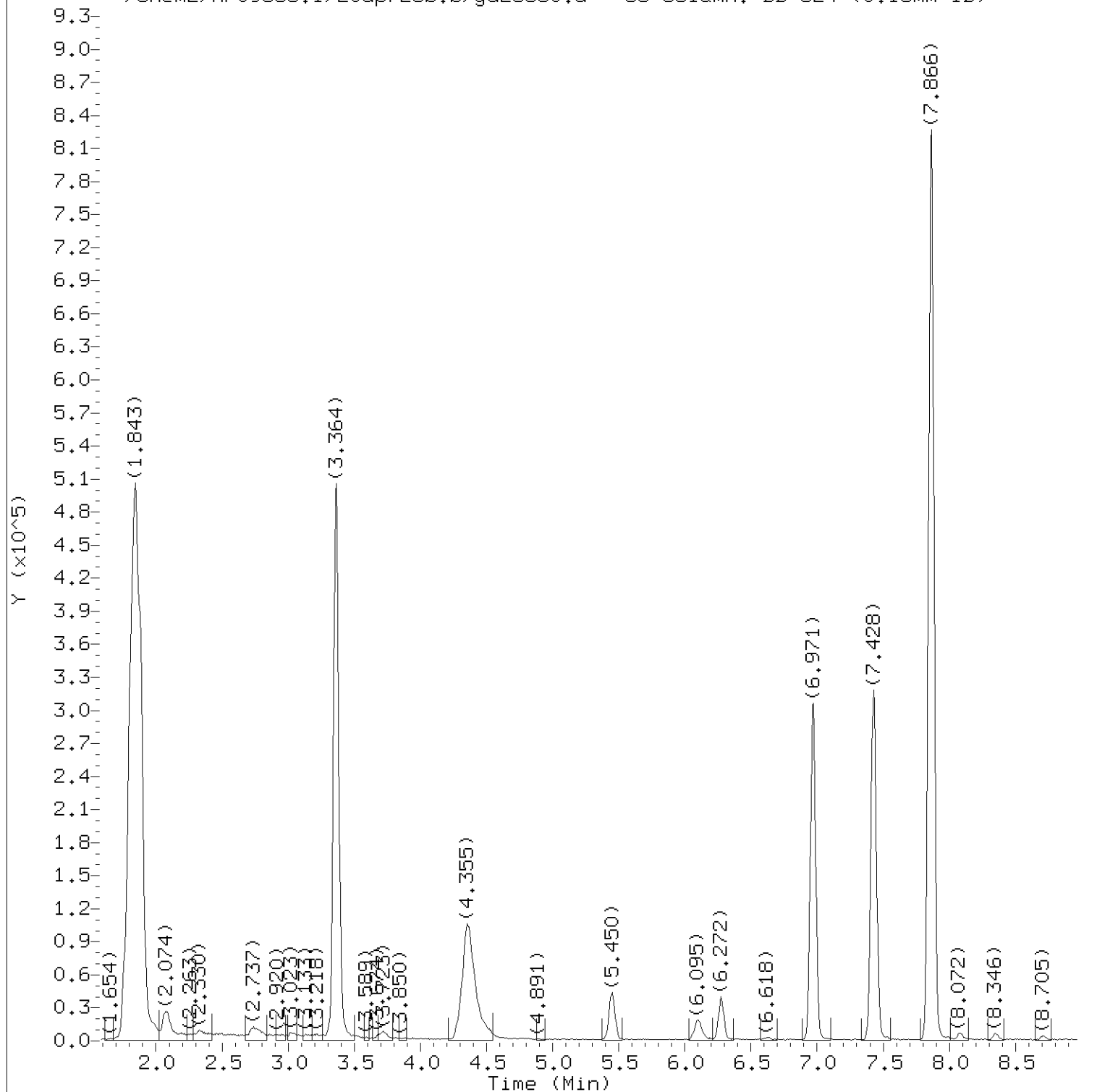
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965 (0.001)	113	279832	51.193	102%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428 (0.001)	102	73258	50.819	102%		80 - 120
83) Toluene-d8	(3)	9.861 (-0.001)	98	1147693	47.945	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294 (0.000)	95	427688	47.154	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)			Not Detected					18	100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:31. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:46. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s50.d
Injection date and time: 29-APR-2020 01:35

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

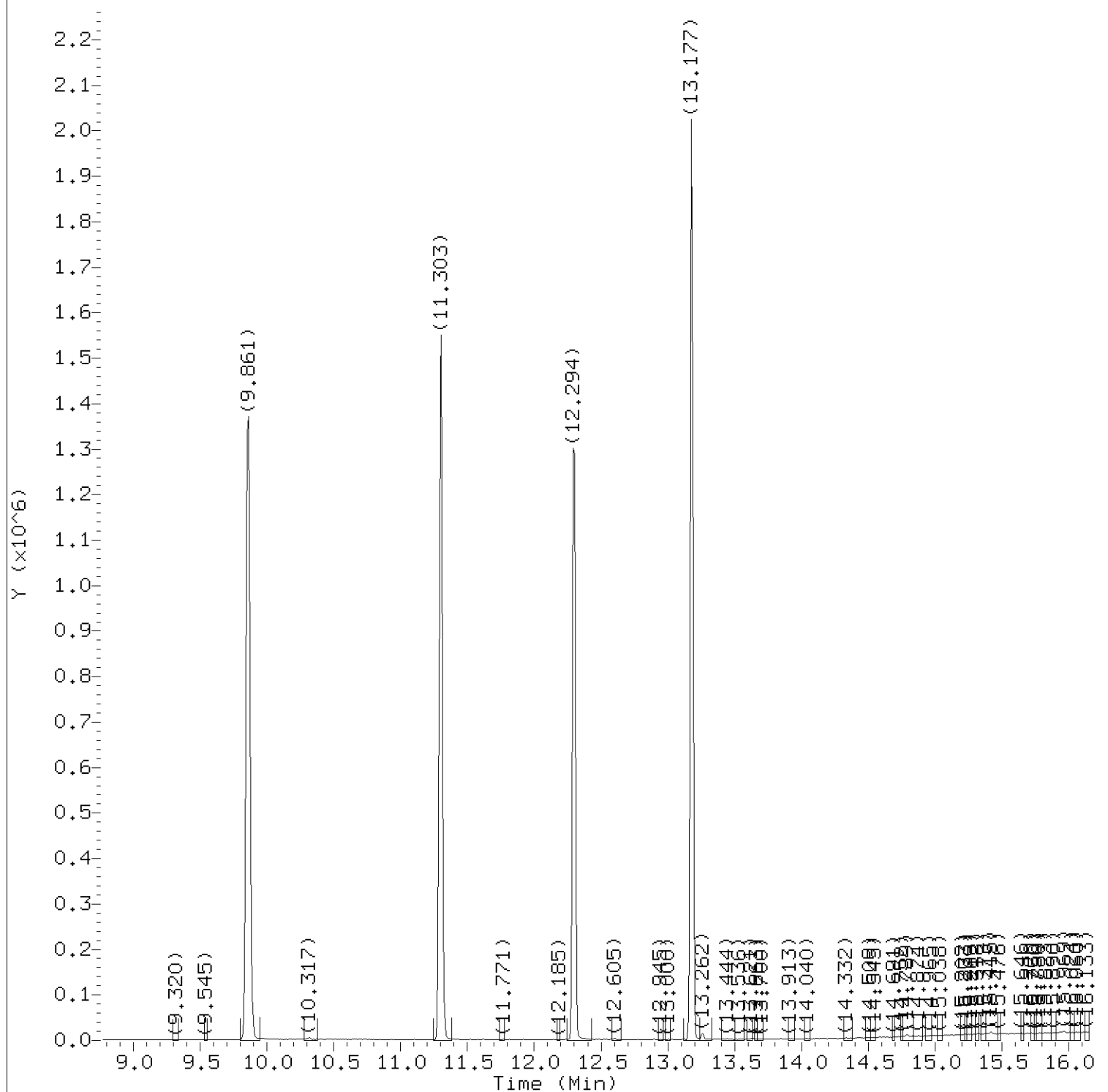
Date, time and analyst ID of latest file update: 29-Apr-2020 01:52 Automation

Sample Name: 59R03

Lab Sample ID: 1300796

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s50.d
Injection date and time: 29-APR-2020 01:35

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 01:52 Automation

Sample Name: 59R03

Lab Sample ID: 1300796

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s50.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 01:35

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 01:52 Automation

Sample Name: 59R03

Lab Sample ID: 1300796

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.355	65	396332	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	279832	51.193
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	73258	50.819
66) *Fluorobenzene	(2)	7.866	96	1203493	50.000
83) \$Toluene-d8	(3)	9.861	98	1147693	47.945
100) *Chlorobenzene-d5	(3)	11.303	117	916703	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	427688	47.154
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	497339	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203

59R03

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300796

Data file: /chem2/HP19094.i/20apr28a.b/ha28s11.d Injection date and time: 28-APR-2020 14:40
 Data file Sample Info. Line: 59R03;1300796;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
 Calibration date and time (Last Method Edit): 28-APR-2020 09:36
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038D Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	101854 (-23)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2035452 (-1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1554463 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	807343 (-6)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	525083	10.377	104%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	105042	10.712	107%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2017132	9.740	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	703178	9.178	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.129 (0.003)	45	122547M	1.807	1.81		J	0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.836 (-0.000)	64	80638	1.943	1.94			0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.428 (-0.000)	59	2801988	77.437	77.44		E	1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)	5.543 (-0.000)	63	608648	6.167	6.17			0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)			Not Detected					2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

M = Compound was manually integrated. E = Compound concentration above calibration range.

59R03

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300796

Data file: /chem2/HP19094.i/20apr28a.b/ha28s11.d Injection date and time: 28-APR-2020 14:40
Data file Sample Info. Line: 59R03;1300796;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038D Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

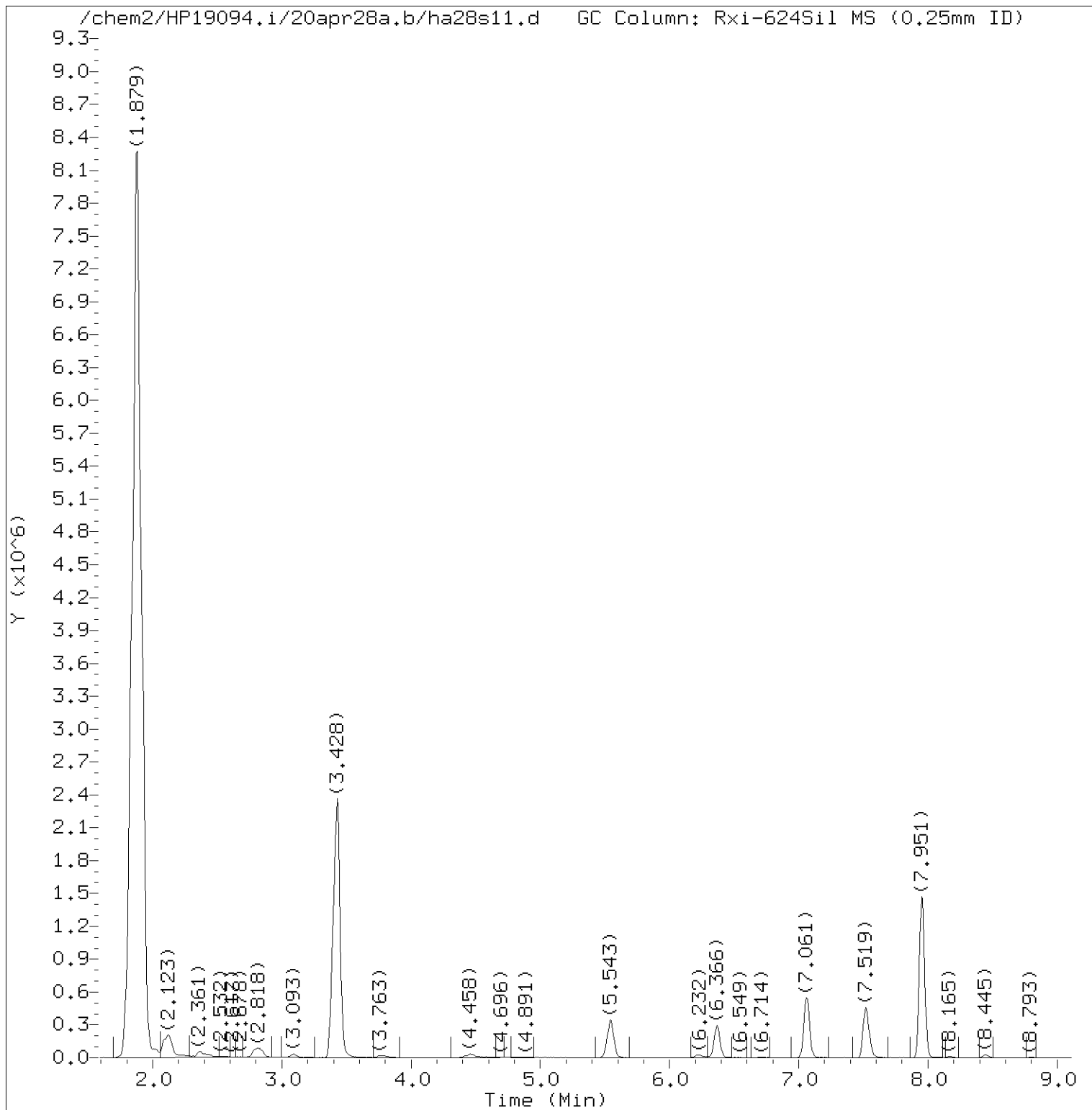
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
59) Benzene	(2)	7.555 (-0.000)	78	83066	0.375	0.38		J	0.07	1
60) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
68) Trichloroethene	(2)			Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
72) Methyl Methacrylate	(1)			Not Detected					4	10
74) Dibromomethane	(2)			Not Detected					0.07	1
73) 1,4-Dioxane	(1)			Not Detected					45	200
75) Bromodichloromethane	(2)			Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)			Not Detected					0.9	10
84) Toluene	(3)			Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
87) Ethyl Methacrylate	(3)			Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)			Not Detected					0.08	1
90) Tetrachloroethene	(3)	10.554 (-0.000)	166	4364	0.066	0.07		J	0.06	1
91) 1,3-Dichloropropane	(3)			Not Detected					0.09	1
92) 2-Hexanone	(1)			Not Detected					0.6	10
94) Dibromochloromethane	(3)			Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)			Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.08	1
101) Ethylbenzene	(3)			Not Detected					0.08	1
102) m+p-Xylene	(3)			Not Detected					0.1	2
105) o-Xylene	(3)			Not Detected					0.1	1
106) Xylene (Total)	(3)			Not Detected					0.2	3
107) Styrene	(3)			Not Detected					0.07	1
108) Bromoform	(3)			Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.1	1
127) Pentachloroethane	(4)			Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)			Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)			Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)			Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
147) Hexachlorobutadiene	(4)			Not Detected					0.07	1
148) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Marla S. Brewer on 04/29/2020 at 19:58. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

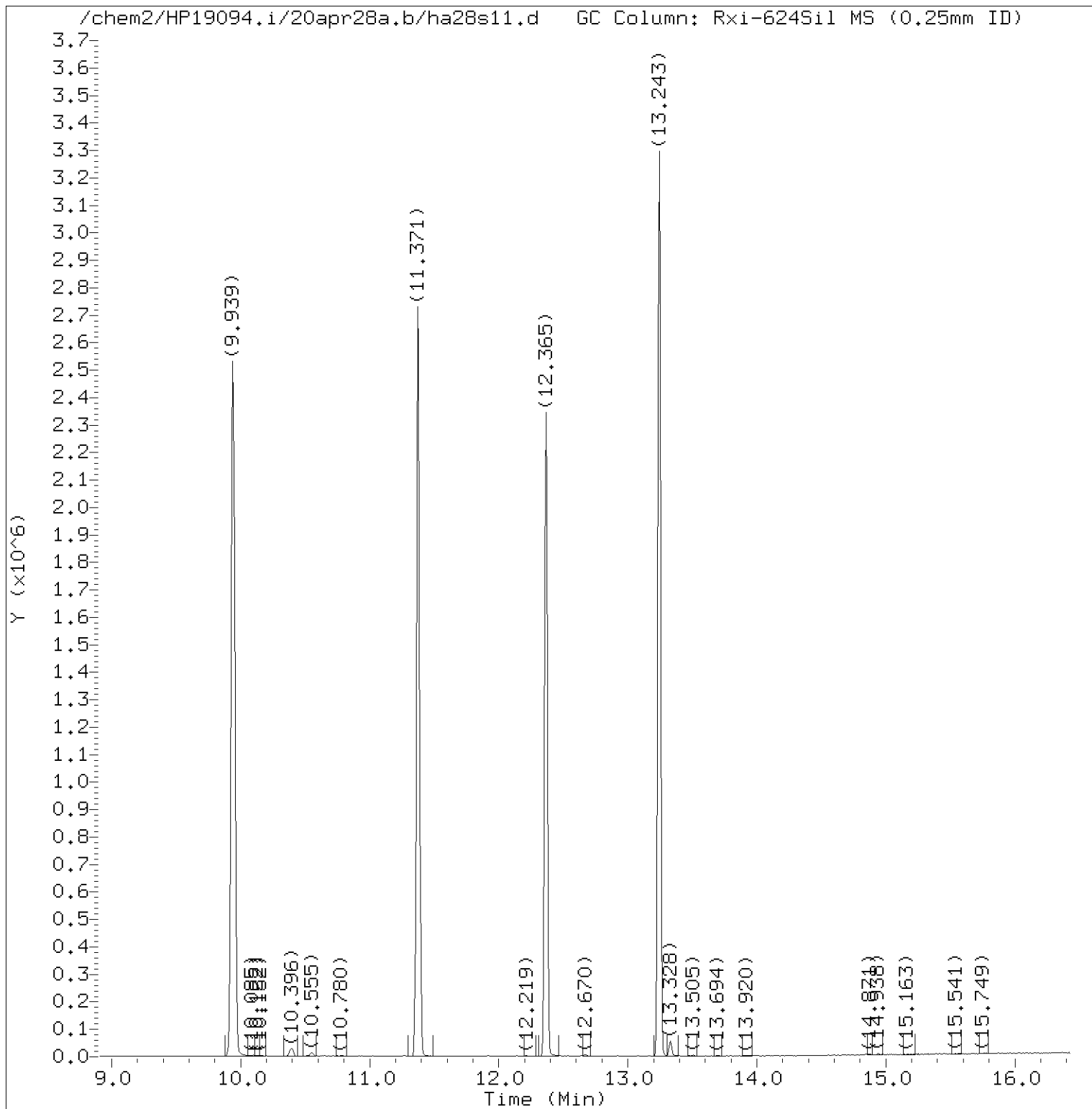
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03

Lab Sample ID: 1300796

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03

Lab Sample ID: 1300796

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 14:40

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03

Lab Sample ID: 1300796

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.129	45	122547M	1.807
8) Chloroethane	(2)	2.837	64	80638	1.943
11) Ethyl ether	(2)	3.428	59	2801988	77.437
27) *t-Butyl Alcohol-d10	(1)	4.458	65	101854	50.000
34) 1,1-Dichloroethane	(2)	5.543	63	608648	6.167
51) \$Dibromofluoromethane	(2)	7.061	113	525083	10.377
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	105042	10.712
59) Benzene	(2)	7.555	78	83066	0.375
64) *Fluorobenzene	(2)	7.951	96	2035452	10.000
83) \$Toluene-d8	(3)	9.939	98	2017132	9.740
90) Tetrachloroethene	(3)	10.555	166	4364	0.066
98) *Chlorobenzene-d5	(3)	11.371	117	1554463	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	703178	9.178
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	807343	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

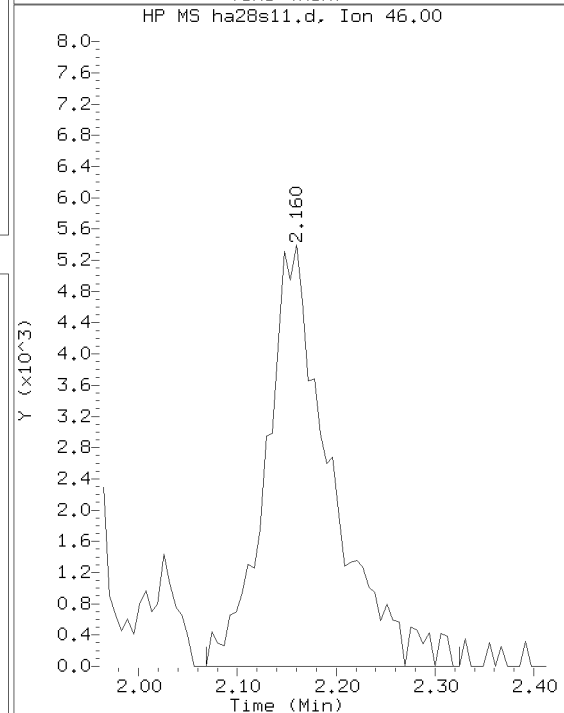
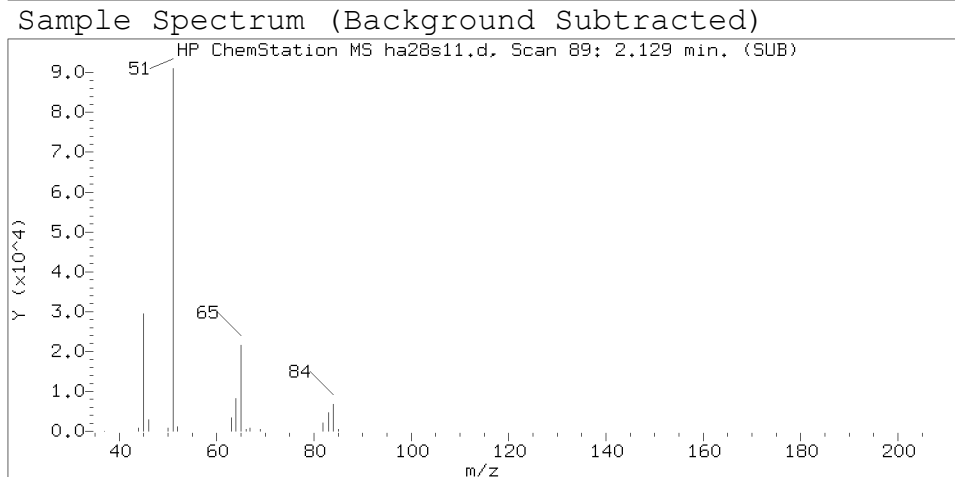
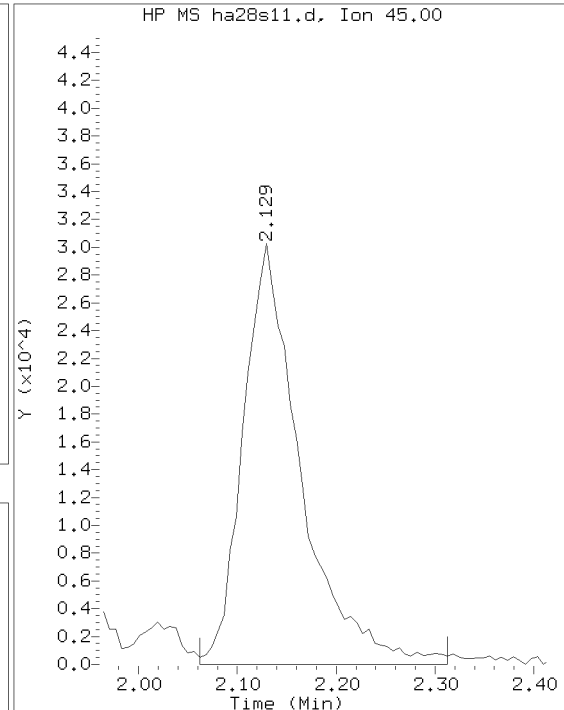
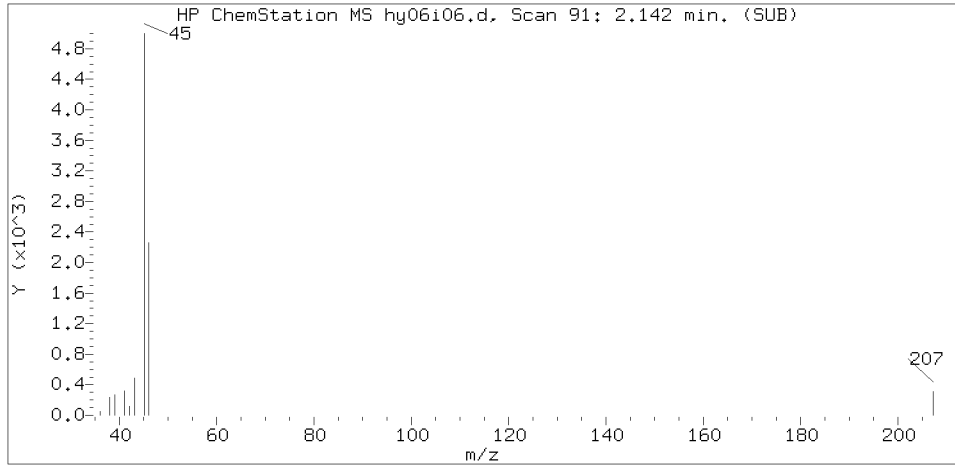
\$ = Compound is a surrogate standard.

page 1 of 1

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on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

Reference Standard Spectrum for Dimethyl ether



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

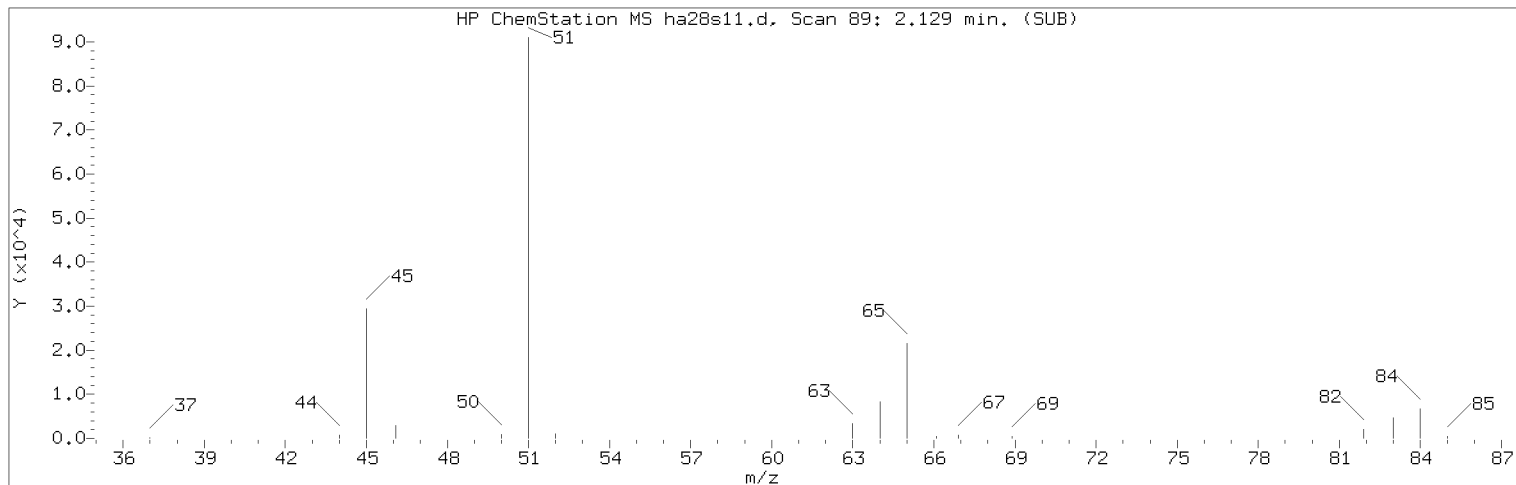
Sample Name: 59R03

Lab Sample ID: 1300796

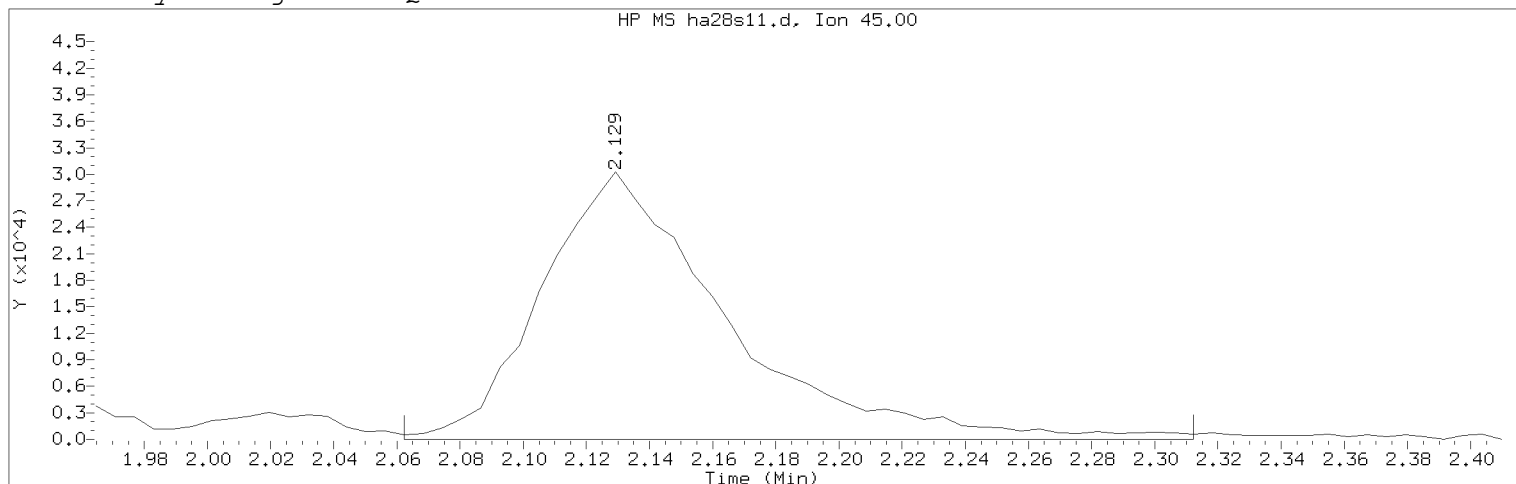
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 89
Retention Time (minutes): 2.129
Relative Retention Time : 0.00309
Quant Ion : 45.00
Area (flag) : 122547M
On-Column Amount (ng) : 1.8073

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 14:40 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03 Lab Sample ID: 1300796

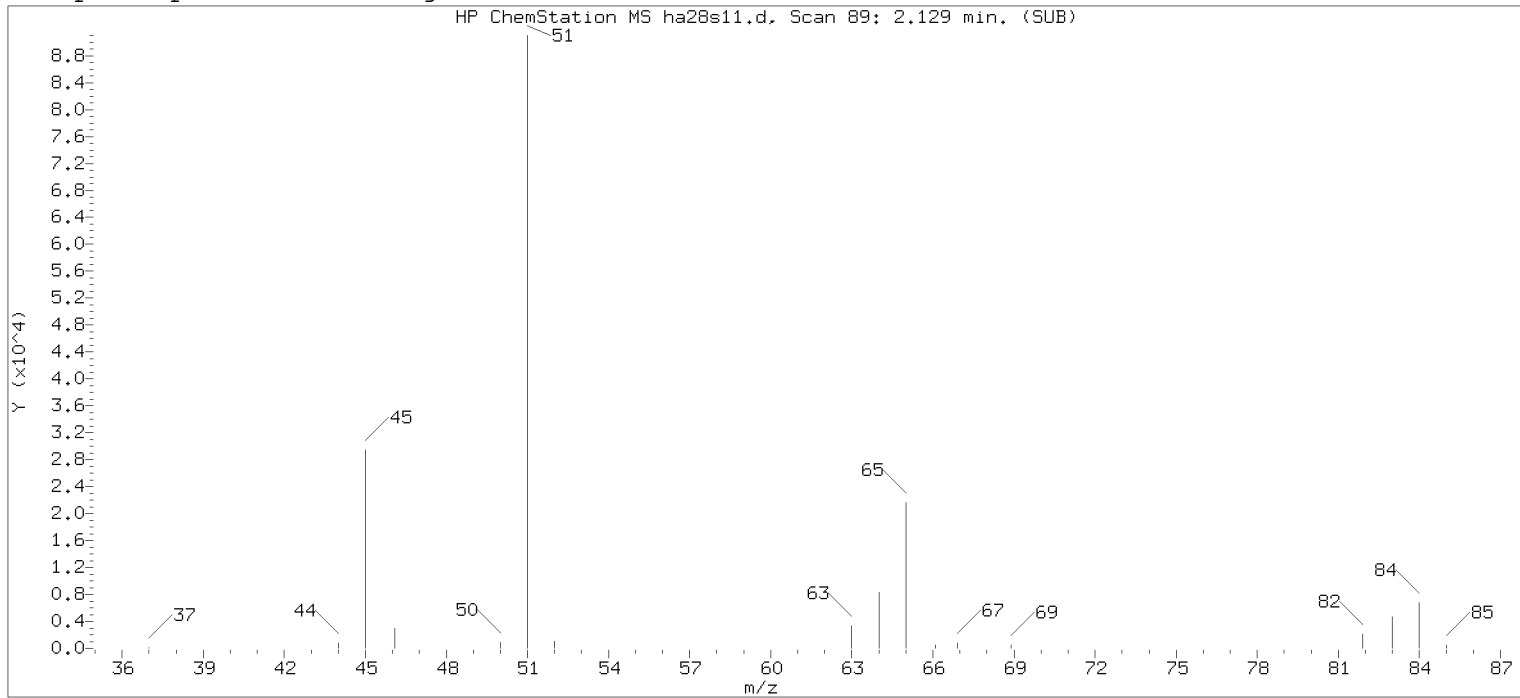
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 45.00
Area (flag) : 122547M
On-Column Amount (ng) : 1.8073
Integration start scan : 77 Integration stop scan: 118
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

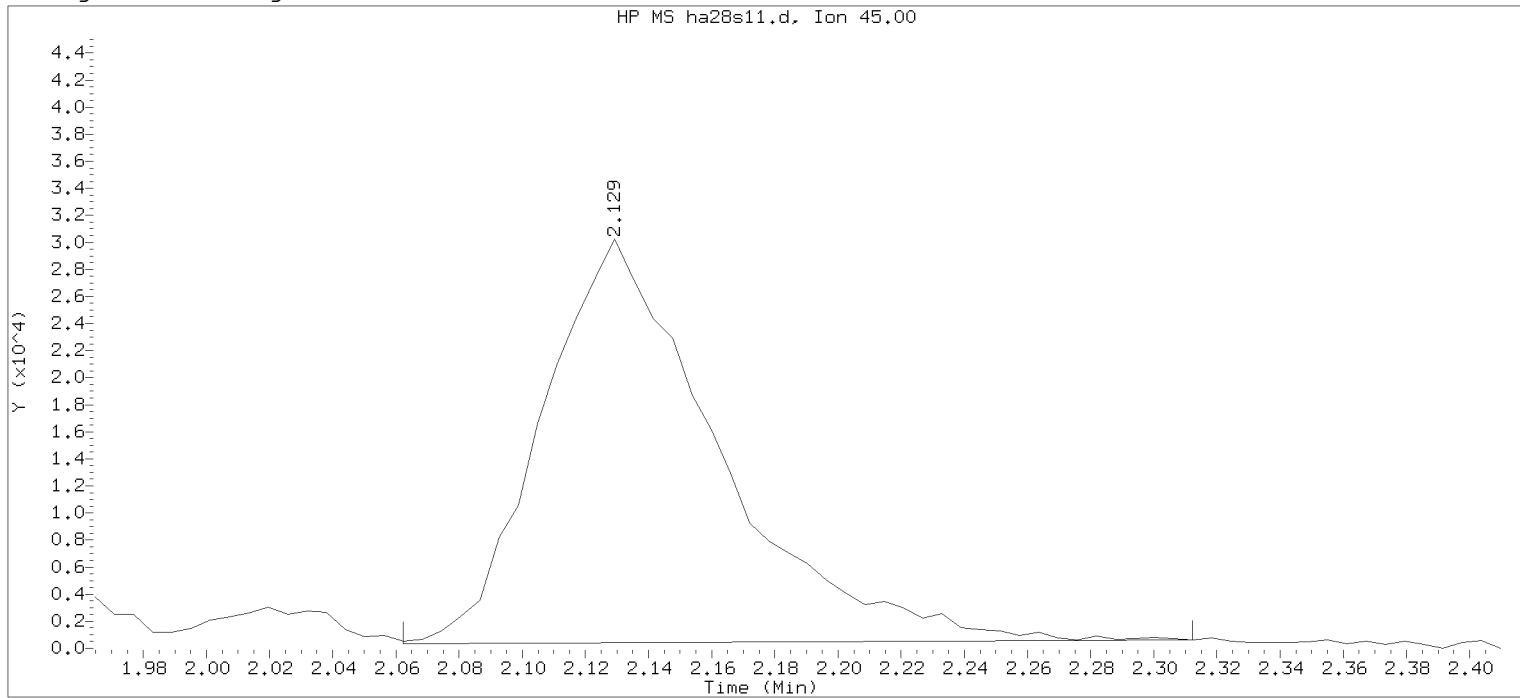
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Marla S. Brewer on 04/29/2020 at 19:58.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



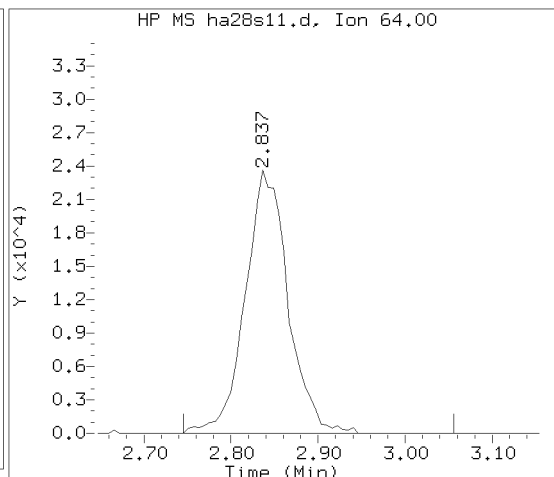
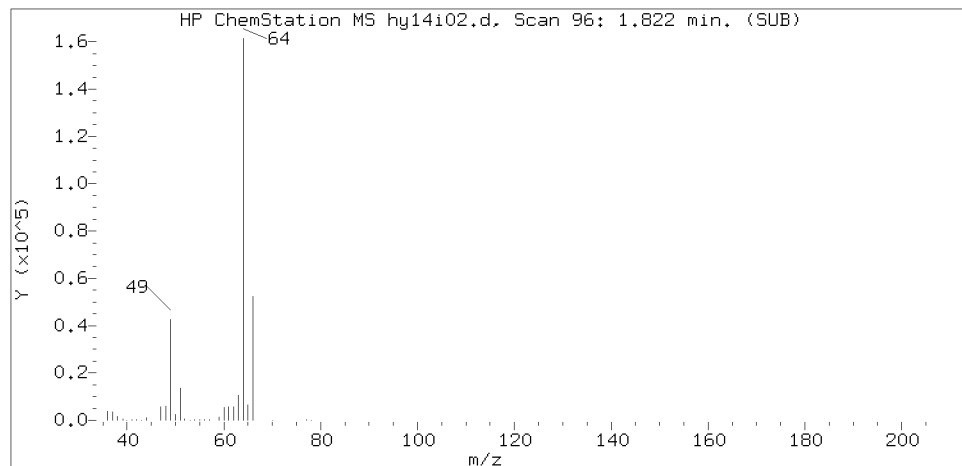
Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 14:40 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 14:58 Automation

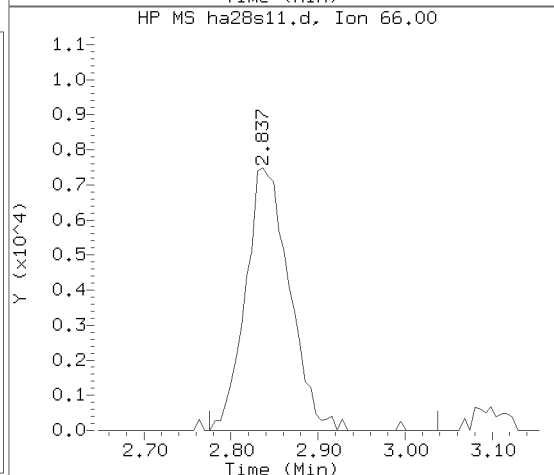
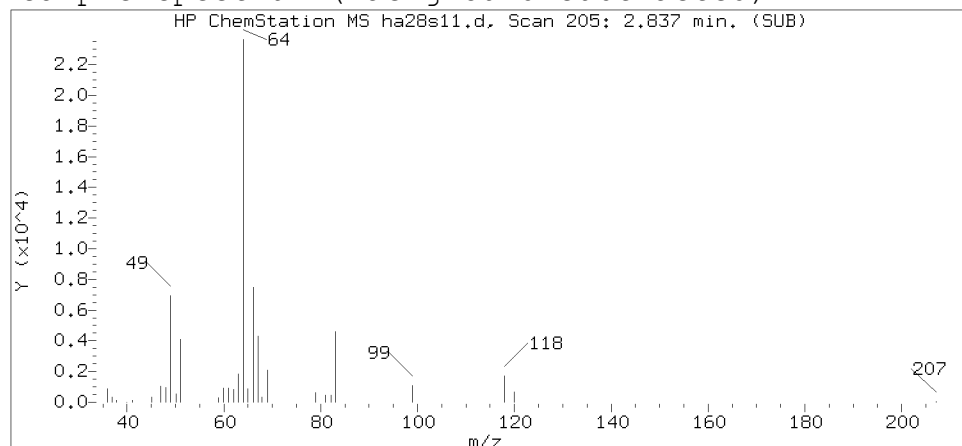
Sample Name: 59R03 Lab Sample ID: 1300796

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 89	
Retention Time (minutes)	: 2.129	
Quant Ion	: 45.00	
Area	: 115198	
On-column Amount (ng)	: 1.6989	
Integration start scan	: 77	Integration stop scan: 118
Y at integration start	: 345	Y at integration end: 608

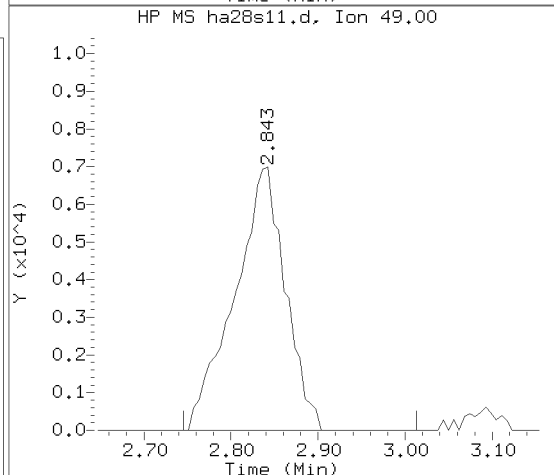
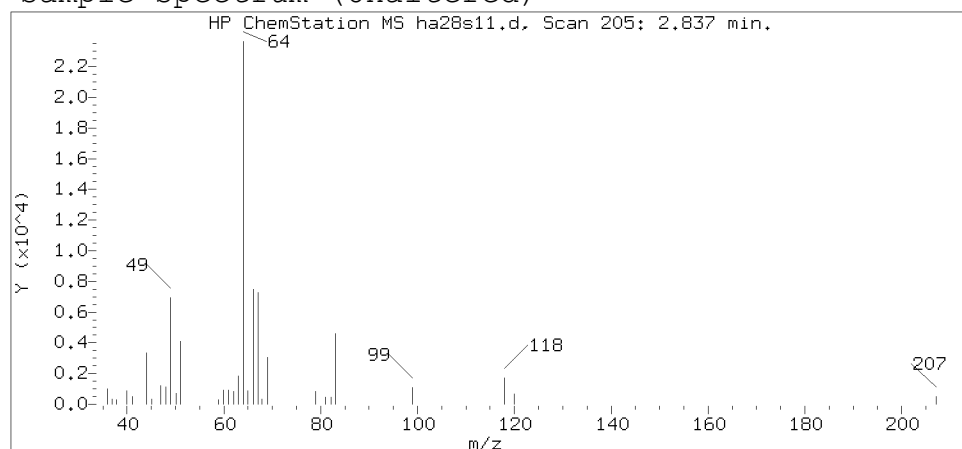
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

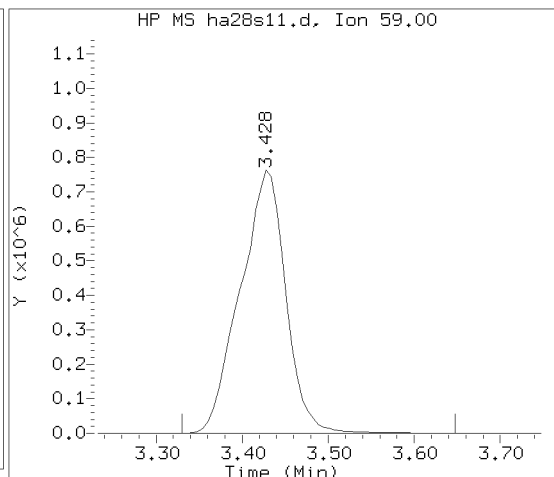
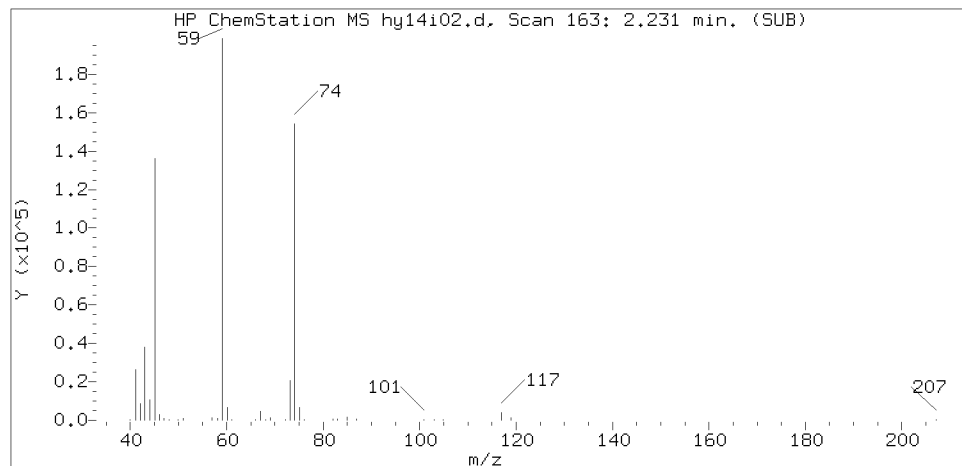
Sample Name: 59R03

Lab Sample ID: 1300796

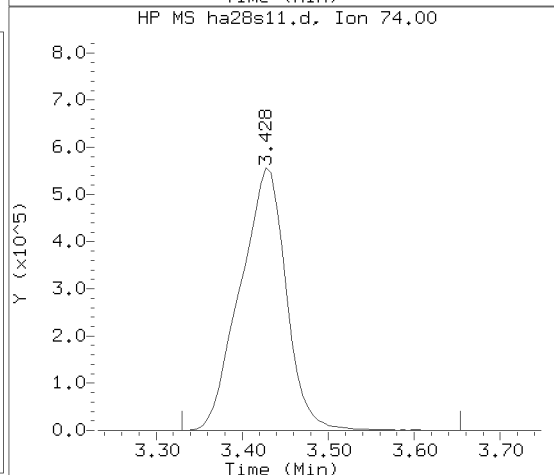
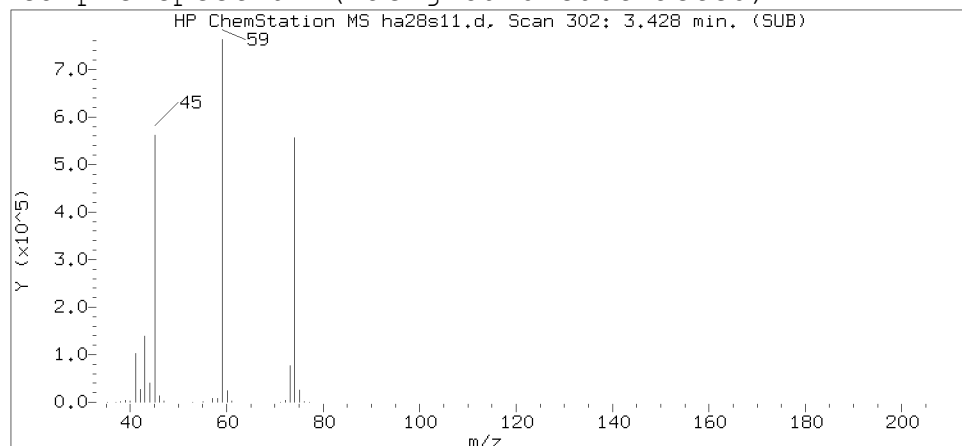
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 205
Retention Time (minutes): 2.837
Relative Retention Time :-0.00077
Quant Ion : 64.00
Area (flag) : 80638
On-Column Amount (ng) : 1.9434

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Target 3.5 esignature user ID: mec29284

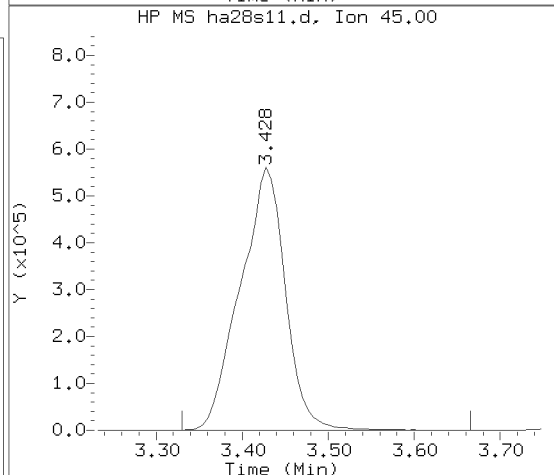
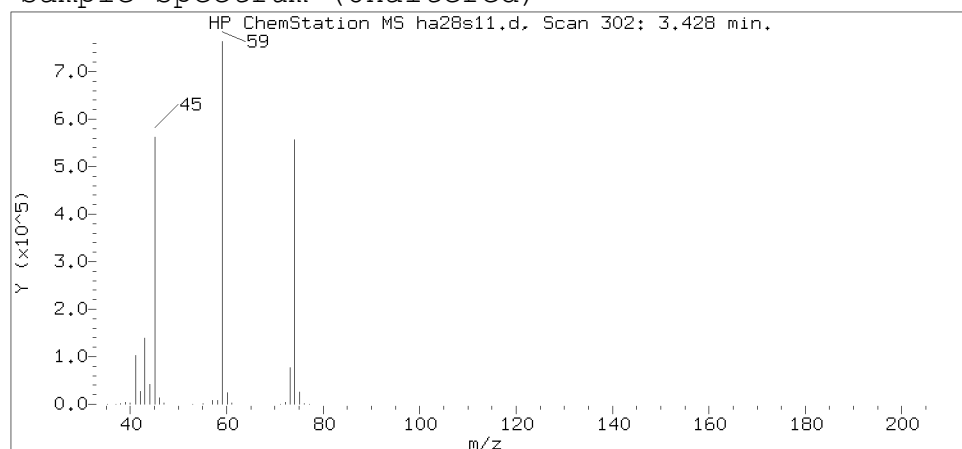
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

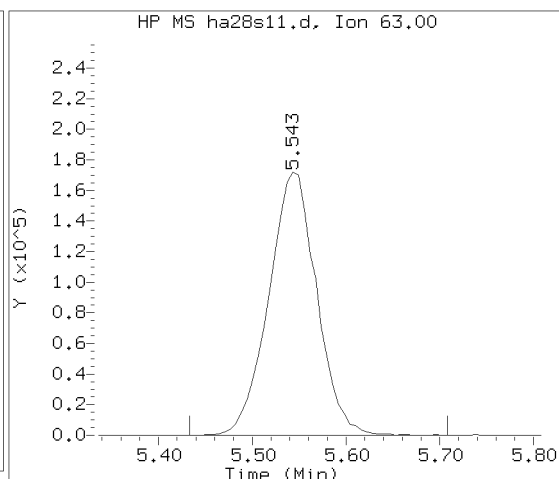
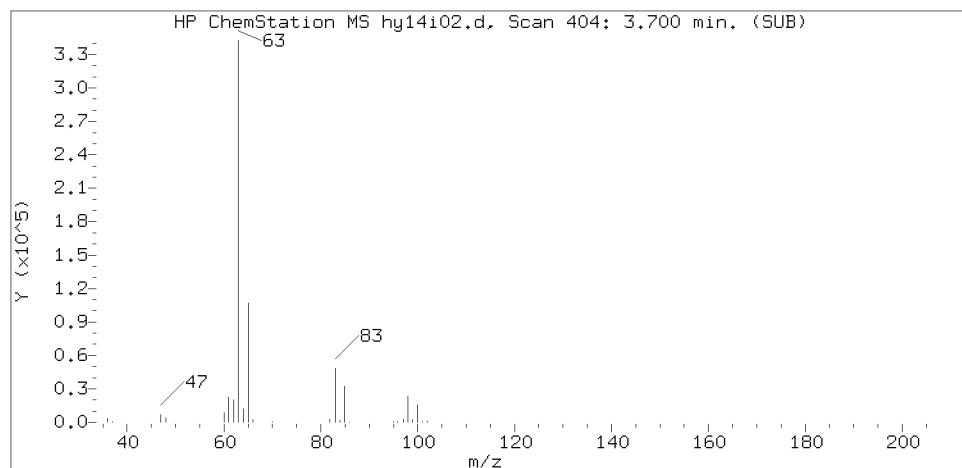
Sample Name: 59R03

Lab Sample ID: 1300796

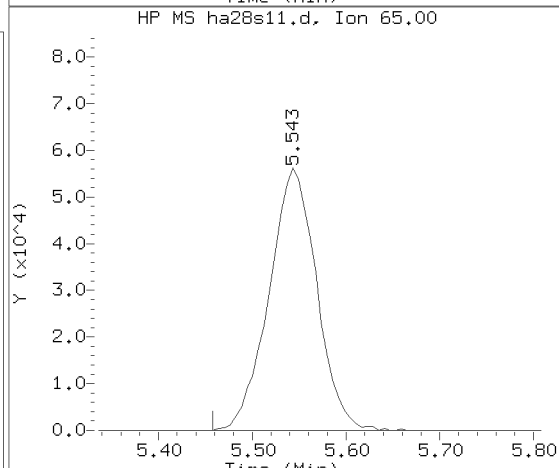
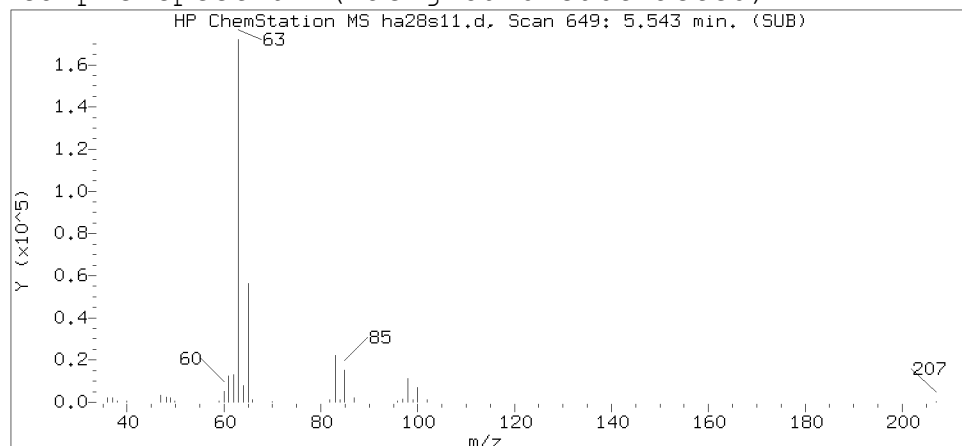
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time : -0.00077
Quant Ion : 59.00
Area (flag) : 2801988
On-Column Amount (ng) : 77.4374

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

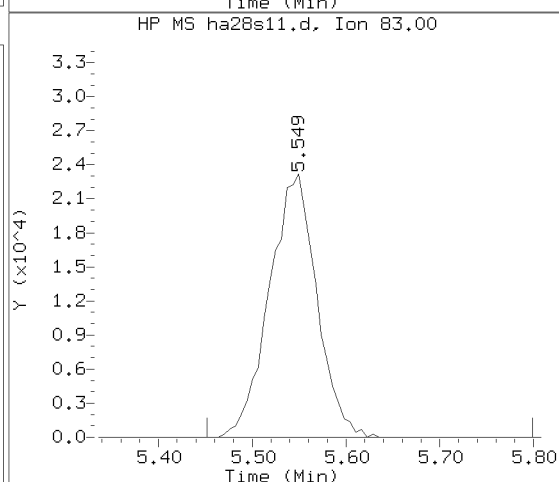
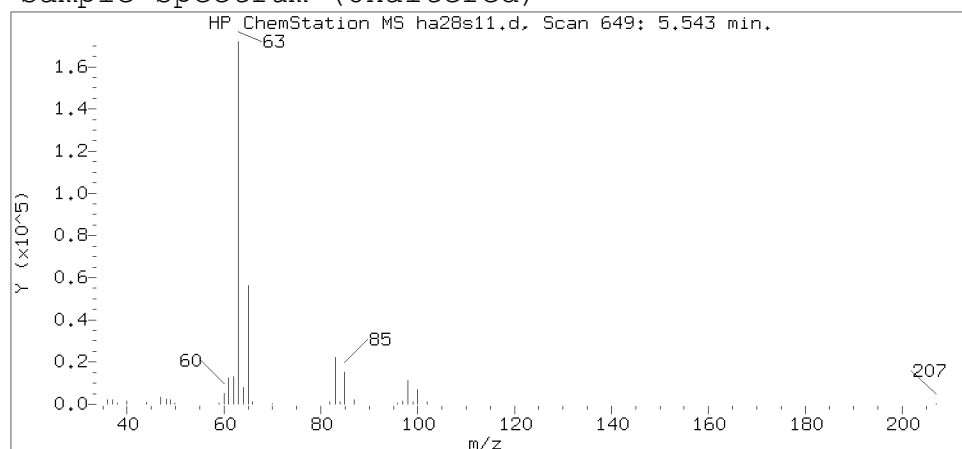
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03

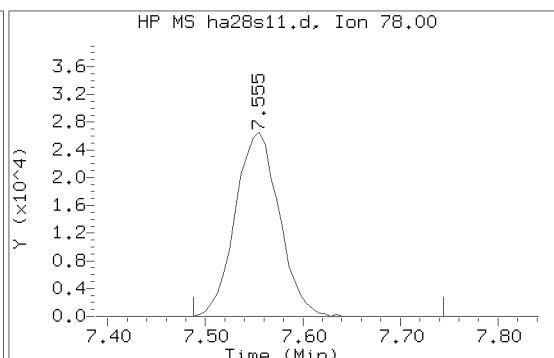
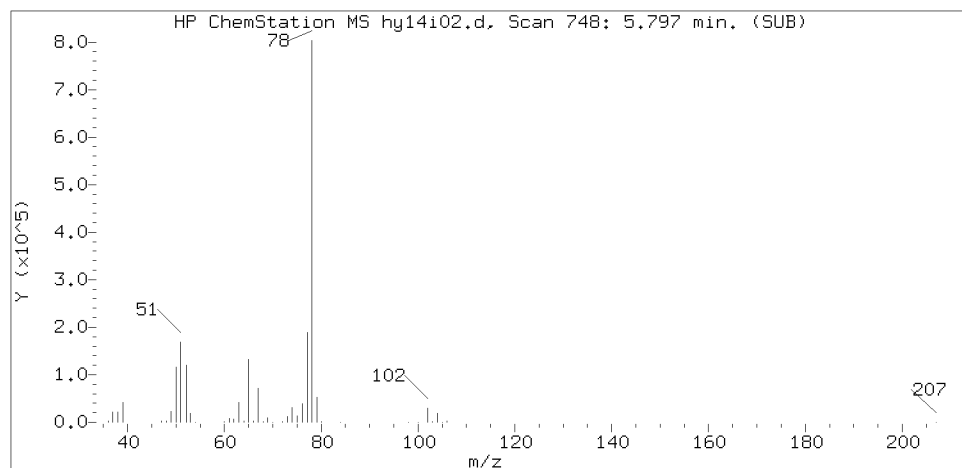
Lab Sample ID: 1300796

Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Relative Retention Time : -0.00077
Quant Ion : 63.00
Area (flag) : 608648
On-Column Amount (ng) : 6.1669

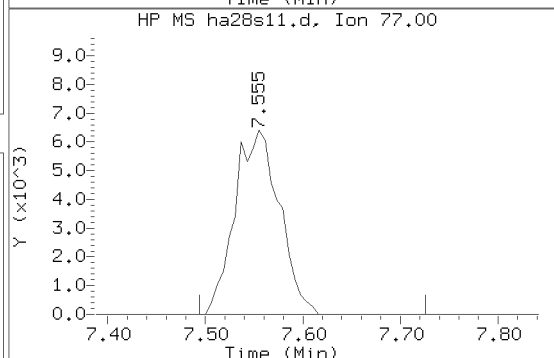
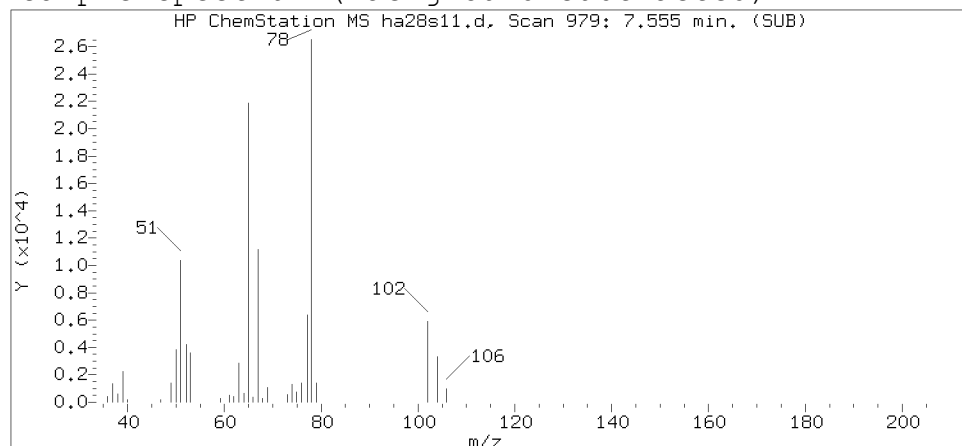
Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284
RAP59 Page 255 of 1506

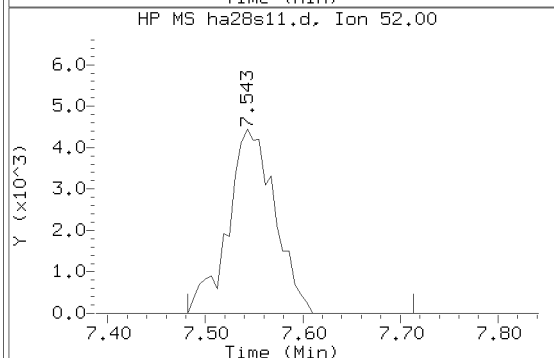
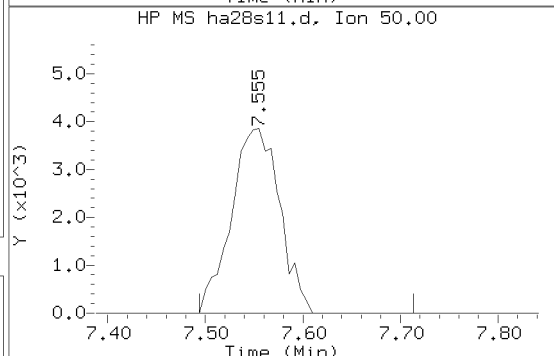
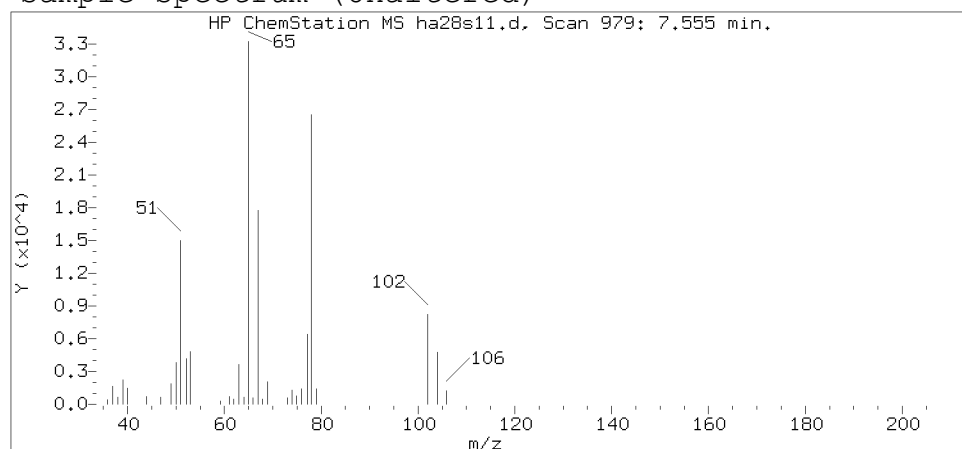
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

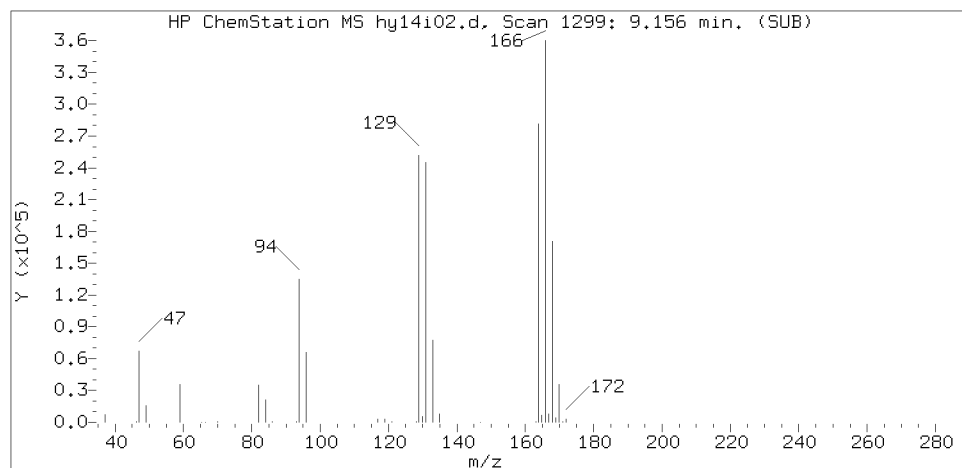
Sample Name: 59R03

Lab Sample ID: 1300796

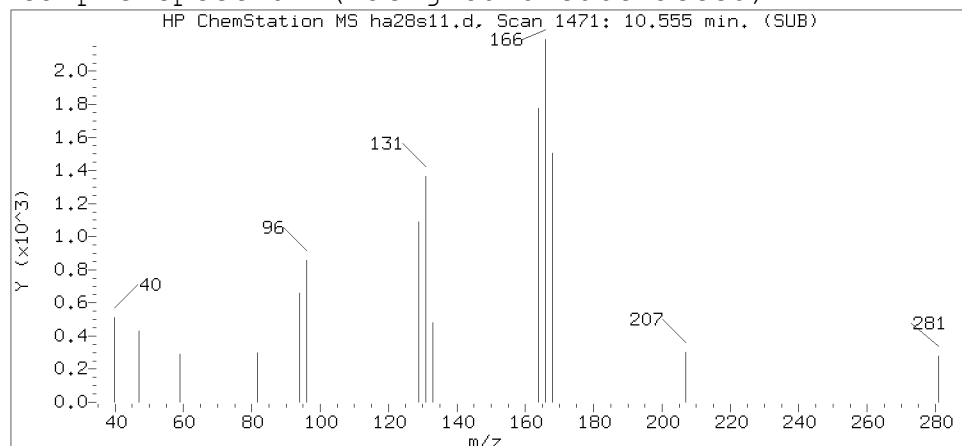
Compound Number : 59
Compound Name : Benzene
Scan Number : 979
Retention Time (minutes): 7.555
Relative Retention Time : -0.00077
Quant Ion : 78.00
Area (flag) : 83066
On-Column Amount (ng) : 0.3752

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

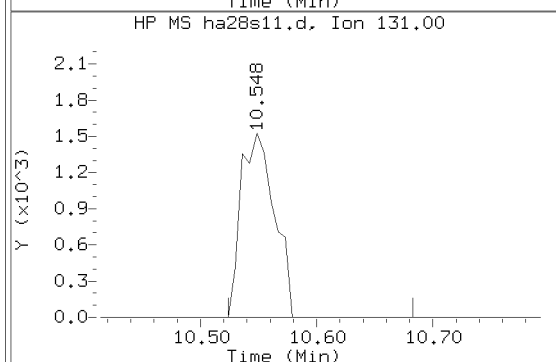
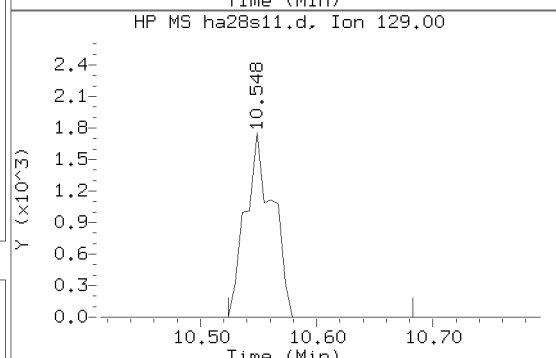
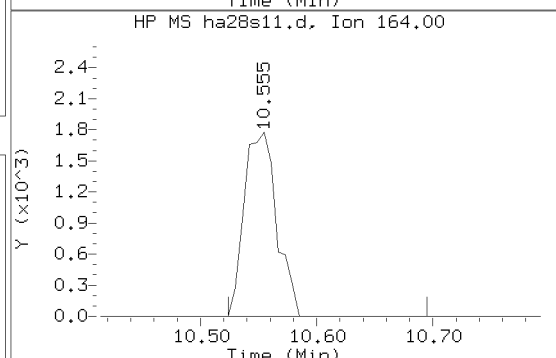
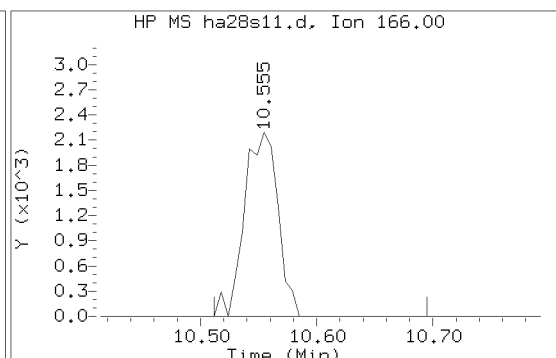
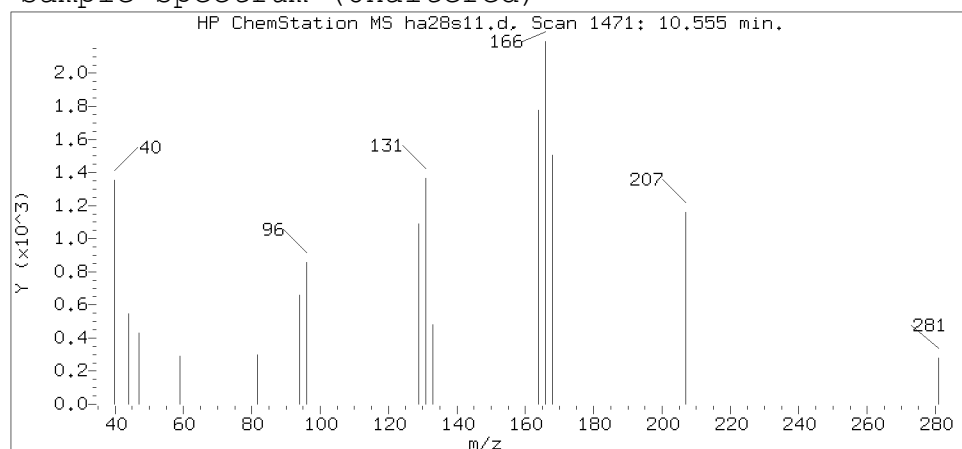
Reference Standard Spectrum for Tetrachloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s11.d
Injection date and time: 28-APR-2020 14:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03

Lab Sample ID: 1300796

Compound Number : 90
Compound Name : Tetrachloroethene
Scan Number : 1471
Retention Time (minutes): 10.555
Relative Retention Time : -0.00000
Quant Ion : 166.00
Area (flag) : 4364
On-Column Amount (ng) : 0.0660

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

59R03DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300796DL

Data file: /chem2/HP19094.i/20apr28a.b/ha28s12.d

Injection date and time: 28-APR-2020 15:02

Data file Sample Info. Line: 59R03DL;1300796DL;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038E Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 4.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 6.25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.446(0.012)	469	65	118617 (-11)	50.00	
64) Fluorobenzene	7.952(0.000)	1044	96	2003546 (-2)	10.00	
98) Chlorobenzene-d5	11.372(0.000)	1605	117	1526615 (-4)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	793852 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055(0.001)	113	523741	10.516	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513(0.001)	102	105722	10.953	110%		80 - 120
83) Toluene-d8	(3)	9.939(0.000)	98	1992576	9.797	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	688517	9.150	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.6	4
4) Dimethyl ether	(2)	2.117(0.004)	45	29955	0.449	1.80		J	0.2	50
2) Chloromethane	(2)			Not Detected					0.2	2
5) Vinyl Chloride	(2)			Not Detected					0.6	4
7) Bromomethane	(2)			Not Detected					2	4
8) Chloroethane	(2)	2.824(0.000)	64	17080	0.418	1.67		J	0.3	2
10) Trichlorofluoromethane	(2)			Not Detected					0.7	4
11) Ethyl ether	(2)	3.416(0.000)	59	660084	18.533	74.13			4	50
13) Acrolein	(1)			Not Detected					14	100
15) 1,1-Dichloroethene	(2)			Not Detected					0.9	4
16) Freon 113	(2)			Not Detected					0.5	4
14) Acetone	(1)			Not Detected					4	40
17) Methyl Iodide	(2)			Not Detected					2	40
19) Carbon Disulfide	(2)			Not Detected					1	40
26) Acetonitrile	(1)			Not Detected					130	400
23) Allyl Chloride	(2)			Not Detected					3	40
24) Methylene Chloride	(2)			Not Detected					0.7	4
30) Acrylonitrile	(1)			Not Detected					2	40
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.6	4
34) 1,1-Dichloroethane	(2)	5.531(0.000)	63	135909	1.399	5.60			0.5	4
37) Vinyl Acetate	(2)			Not Detected					13	40
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					2	40
39) 2-Butanone	(1)			Not Detected					2	40
43) Propionitrile	(1)			Not Detected					41	400
46) Methacrylonitrile	(1)			Not Detected					39	400
49) Tetrahydrofuran	(1)			Not Detected					8	100
50) Chloroform	(2)			Not Detected					0.4	4
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	4
55) Carbon Tetrachloride	(2)			Not Detected					0.6	4
57) Isobutyl Alcohol	(1)			Not Detected					14	800
59) Benzene	(2)	7.537(0.001)	78	20424	0.094	0.37		J	0.3	4

59R03DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300796DL

Data file: /chem2/HP19094.i/20apr28a.b/ha28s12.d

Injection date and time: 28-APR-2020 15:02

Data file Sample Info. Line: 59R03DL;1300796DL;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038E Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 4.00

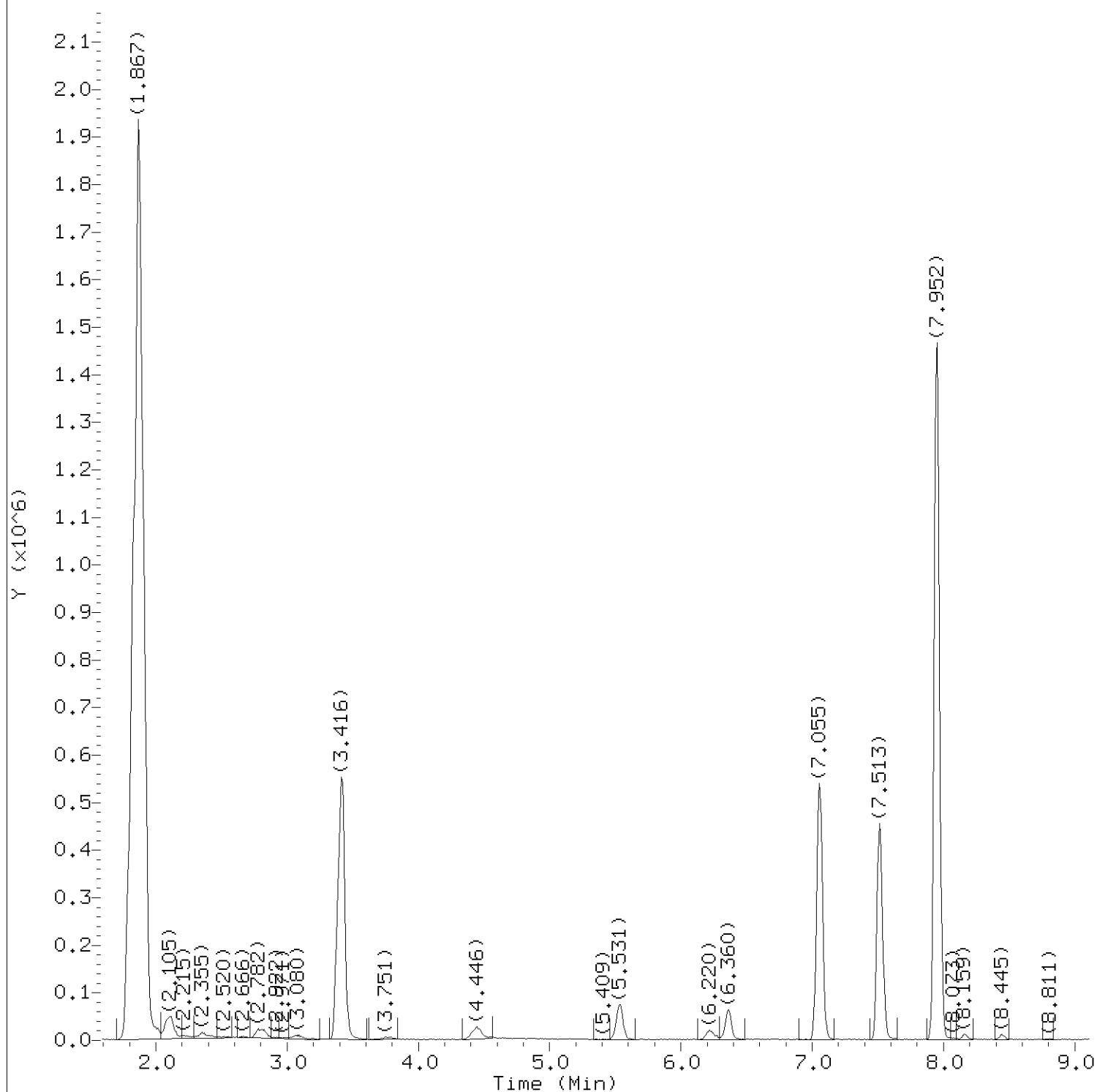
Volume Purged (Vt): 25 ml Sample Volume (Vo): 6.25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
60) 1,2-Dichloroethane	(2)				Not Detected					0.6	4
68) Trichloroethene	(2)				Not Detected					0.7	4
71) 1,2-Dichloropropane	(2)				Not Detected					0.4	4
72) Methyl Methacrylate	(1)				Not Detected					14	40
74) Dibromomethane	(2)				Not Detected					0.3	4
73) 1,4-Dioxane	(1)				Not Detected					180	800
75) Bromodichloromethane	(2)				Not Detected					0.4	4
82) 4-Methyl-2-Pentanone	(1)				Not Detected					4	40
84) Toluene	(3)				Not Detected					0.4	4
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.4	4
87) Ethyl Methacrylate	(3)				Not Detected					3	40
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.3	4
90) Tetrachloroethene	(3)				Not Detected					0.2	4
91) 1,3-Dichloropropane	(3)				Not Detected					0.4	4
92) 2-Hexanone	(1)				Not Detected					2	40
94) Dibromochloromethane	(3)				Not Detected					0.3	4
96) 1,2-Dibromoethane	(3)				Not Detected					0.2	4
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.3	4
101) Ethylbenzene	(3)				Not Detected					0.3	4
102) m+p-Xylene	(3)				Not Detected					0.4	8
105) o-Xylene	(3)				Not Detected					0.5	4
106) Xylene (Total)	(3)				Not Detected					0.8	12
107) Styrene	(3)				Not Detected					0.3	4
108) Bromoform	(3)				Not Detected					0.4	4
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.7	4
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					4	40
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.4	4
127) Pentachloroethane	(4)				Not Detected					3	40
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	4
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.3	4
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.3	4
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.8	4
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.5	4
147) Hexachlorobutadiene	(4)				Not Detected					0.3	4
148) Naphthalene	(4)				Not Detected					0.5	4

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:53. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

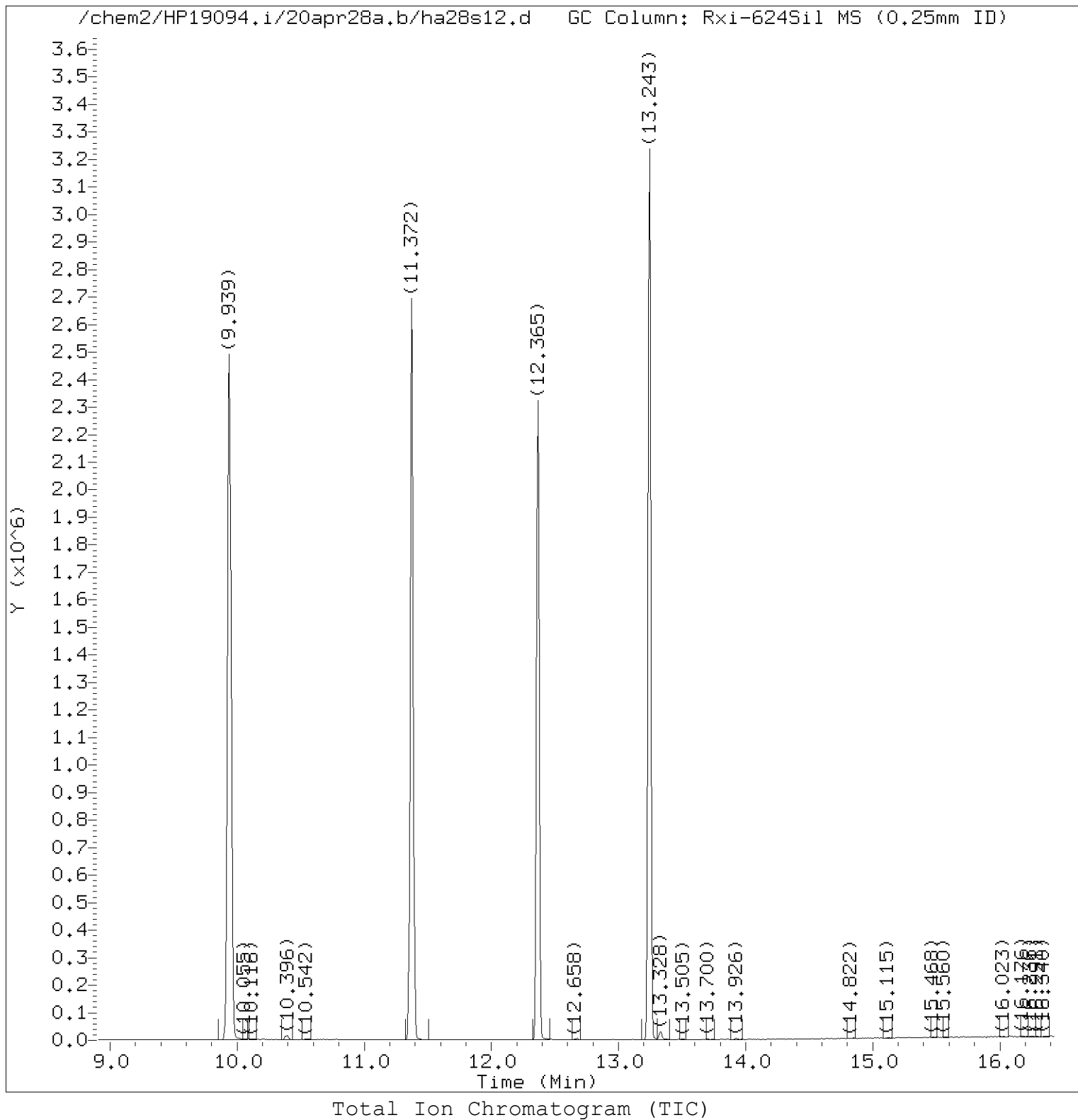
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03DL

Lab Sample ID: 1300796DL

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:53.

Target 3.5 esignature user ID: mec29284



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03DL

Lab Sample ID: 1300796DL

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:53.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 15:02

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03DL

Lab Sample ID: 1300796DL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.117	45	29955	0.449
8) Chloroethane	(2)	2.824	64	17080	0.418
11) Ethyl ether	(2)	3.416	59	660084	18.533
27) *t-Butyl Alcohol-d10	(1)	4.446	65	118617	50.000
34) 1,1-Dichloroethane	(2)	5.531	63	135909	1.399
51) \$Dibromofluoromethane	(2)	7.055	113	523741	10.516
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	105722	10.953
59) Benzene	(2)	7.537	78	20424	0.094
64) *Fluorobenzene	(2)	7.952	96	2003546	10.000
83) \$Toluene-d8	(3)	9.939	98	1992576	9.797
98) *Chlorobenzene-d5	(3)	11.372	117	1526615	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	688517	9.150
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	793852	10.000

* = Compound is an internal standard.

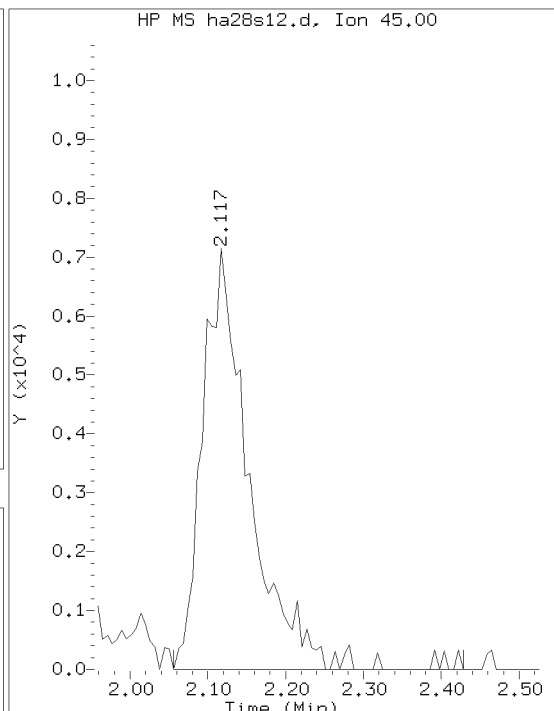
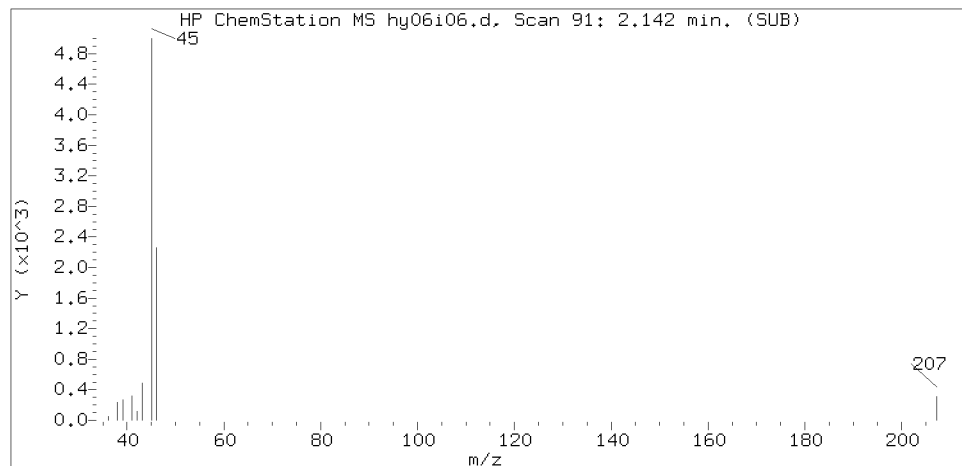
\$ = Compound is a surrogate standard.

page 1 of 1

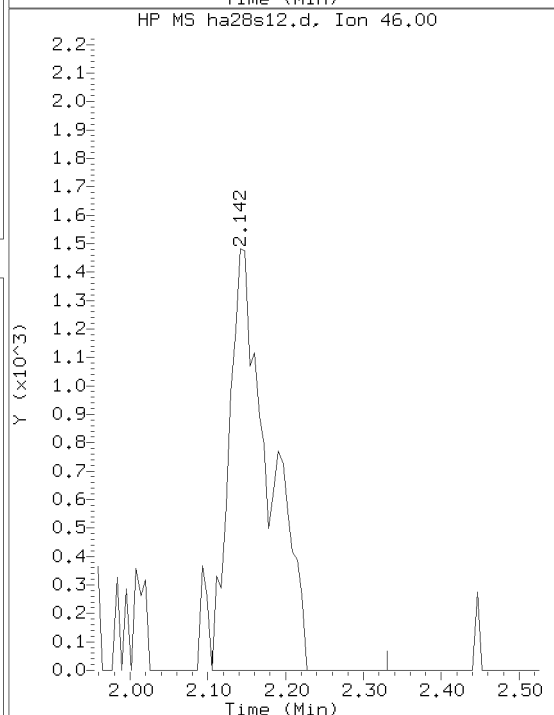
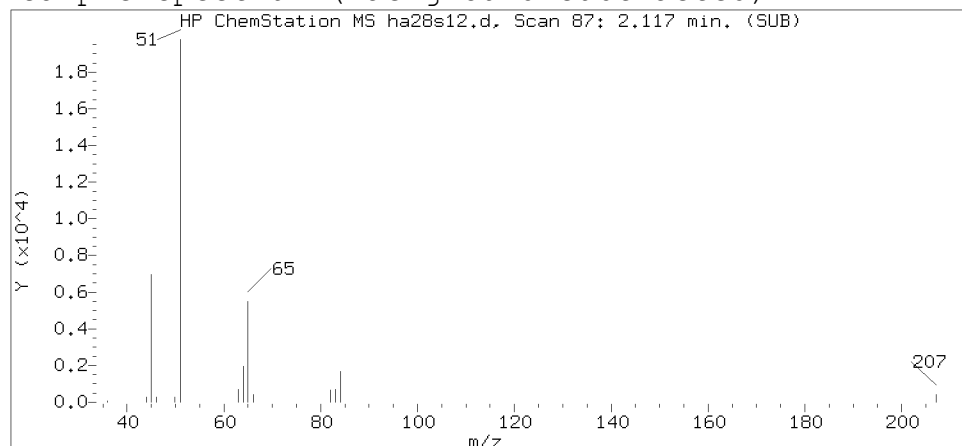
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:53.

Target 3.5 esignature user ID: mec29284

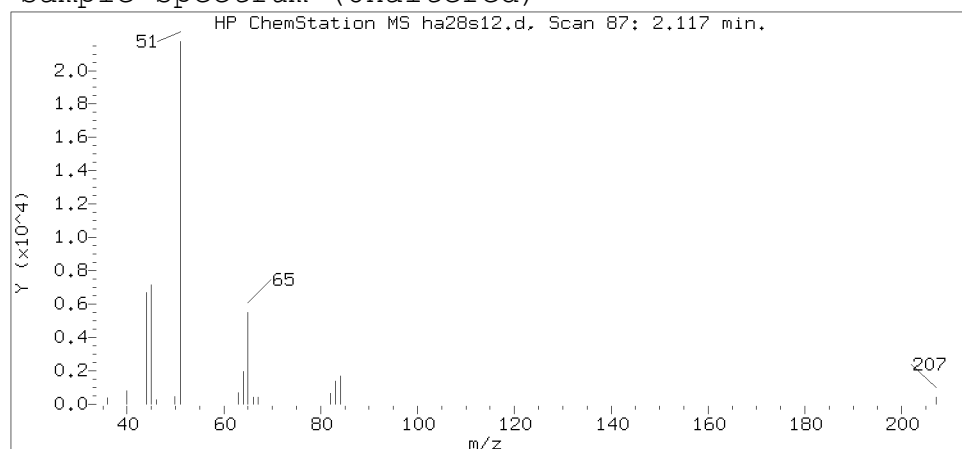
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

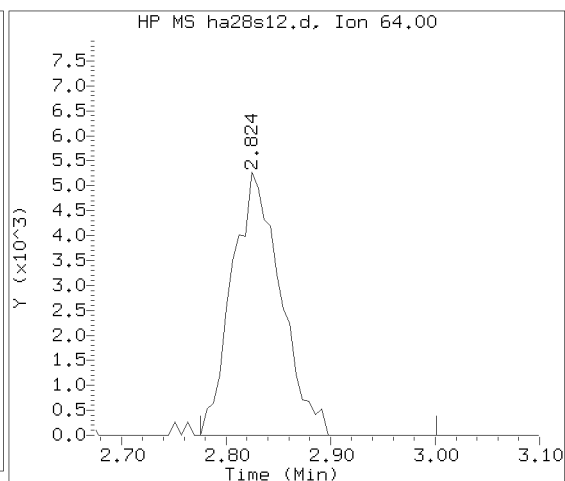
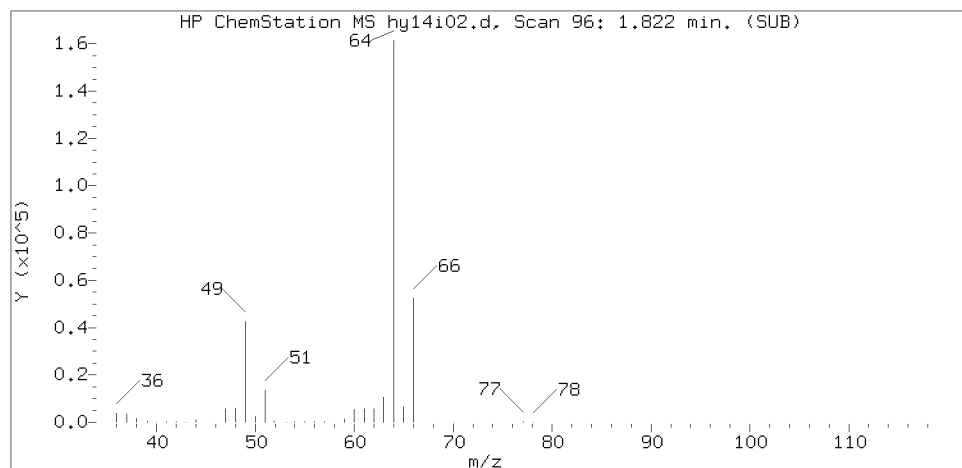
Sample Name: 59R03DL

Lab Sample ID: 1300796DL

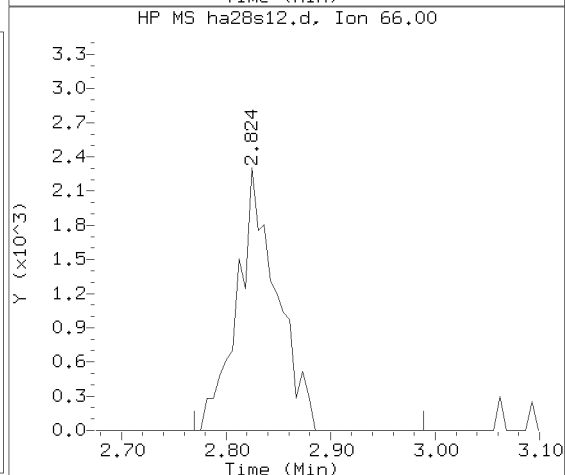
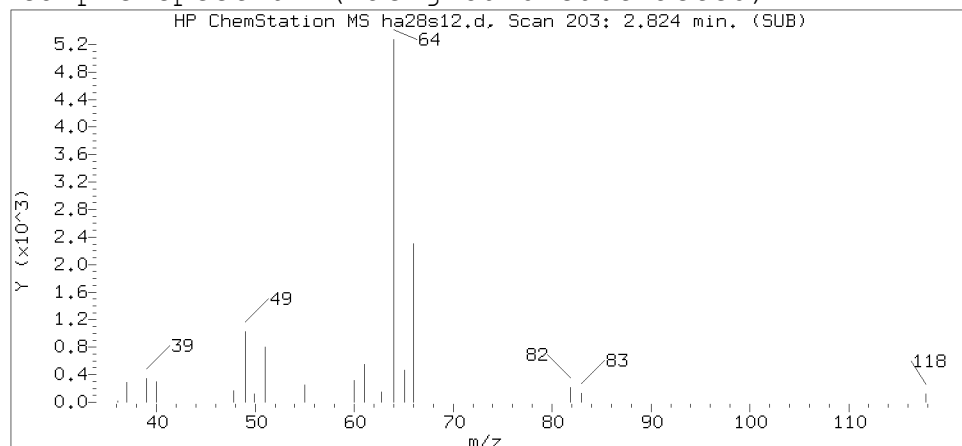
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 87
Retention Time (minutes): 2.117
Relative Retention Time : 0.00461
Quant Ion : 45.00
Area (flag) : 29955
On-Column Amount (ng) : 0.4488

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Target 3.5 esignature user ID: mec29284

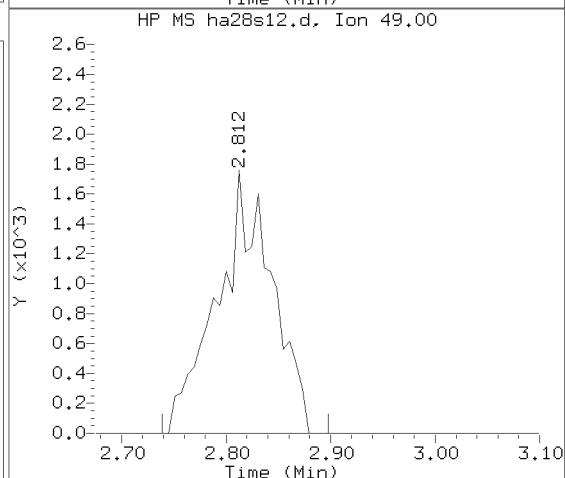
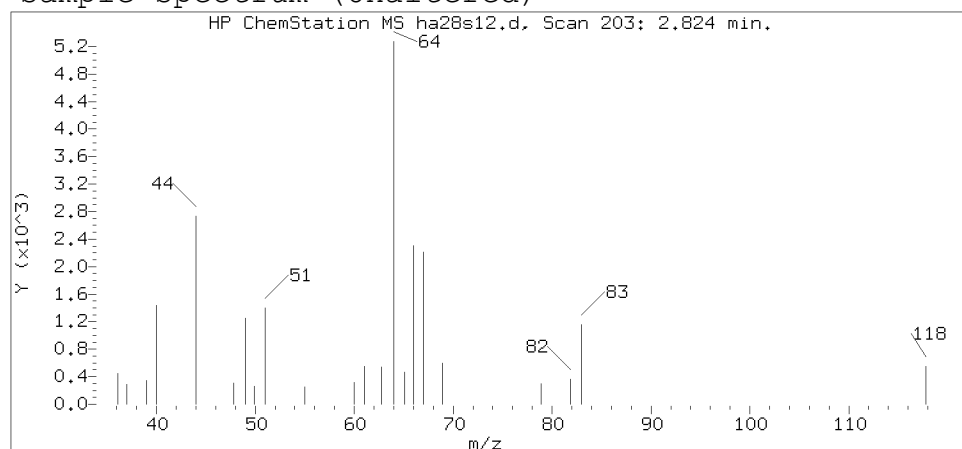
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

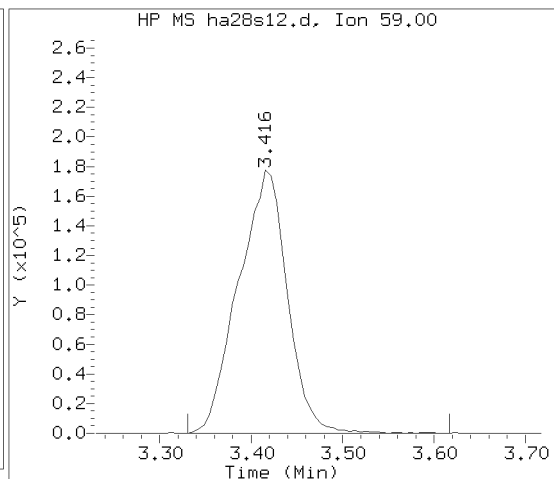
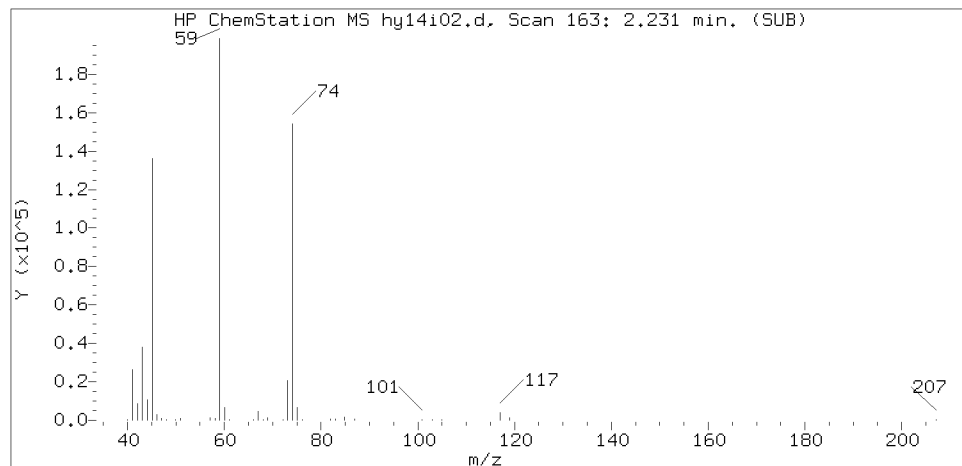
Sample Name: 59R03DL

Lab Sample ID: 1300796DL

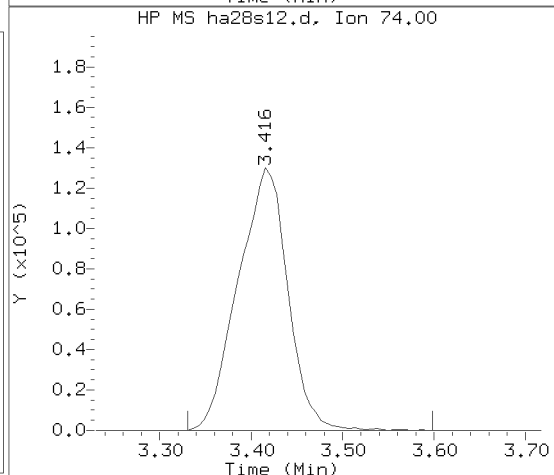
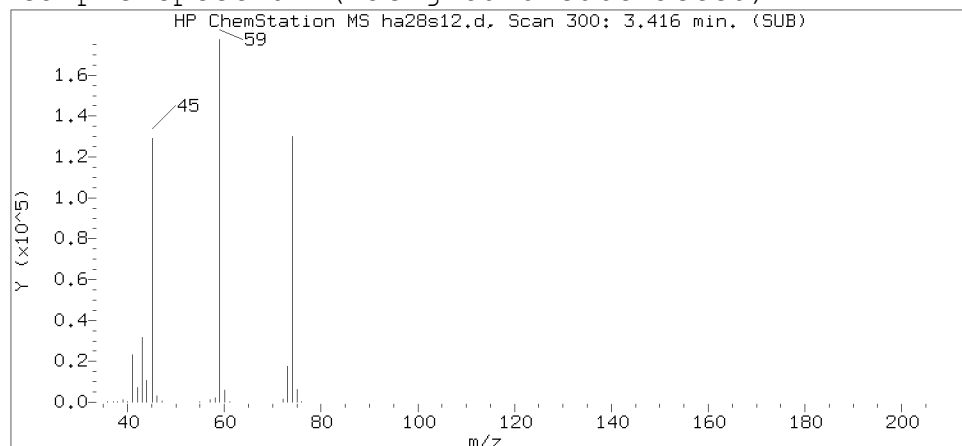
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 203
Retention Time (minutes): 2.824
Relative Retention Time : 0.00075
Quant Ion : 64.00
Area (flag) : 17080
On-Column Amount (ng) : 0.4182

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:53.
Target 3.5 esignature user ID: mec29284

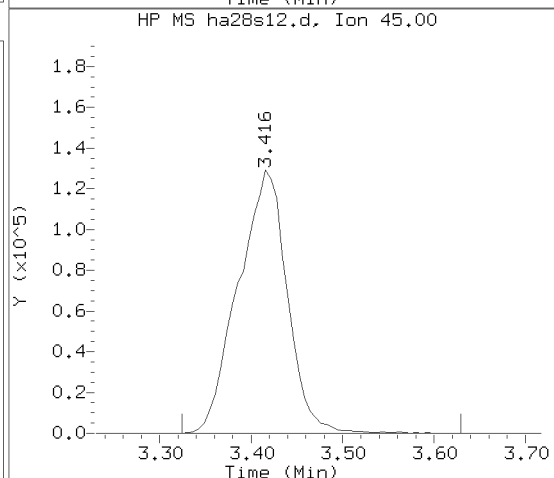
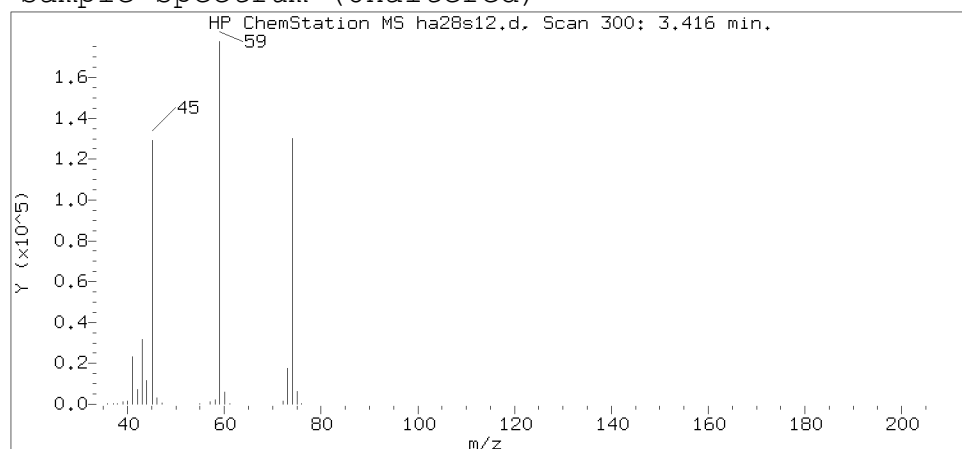
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03DL

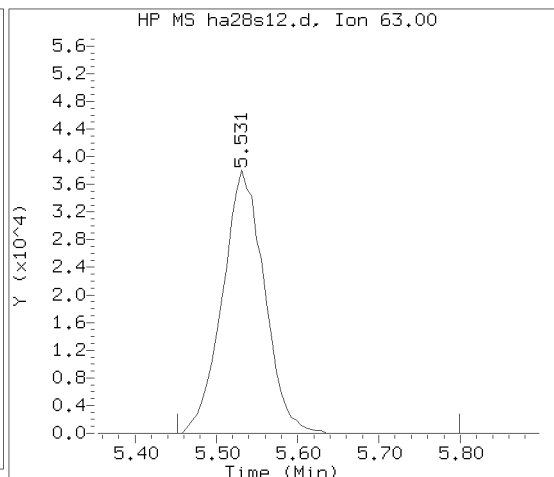
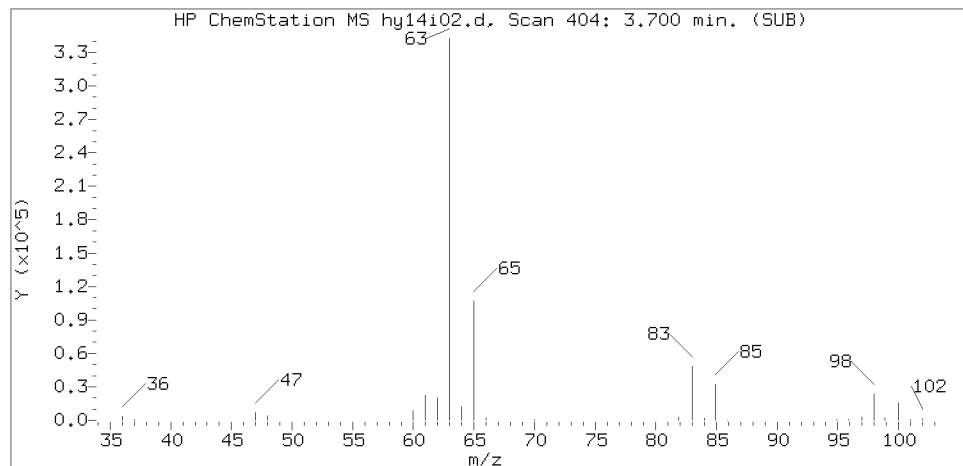
Lab Sample ID: 1300796DL

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Relative Retention Time : 0.00075
Quant Ion : 59.00
Area (flag) : 660084
On-Column Amount (ng) : 18.5330

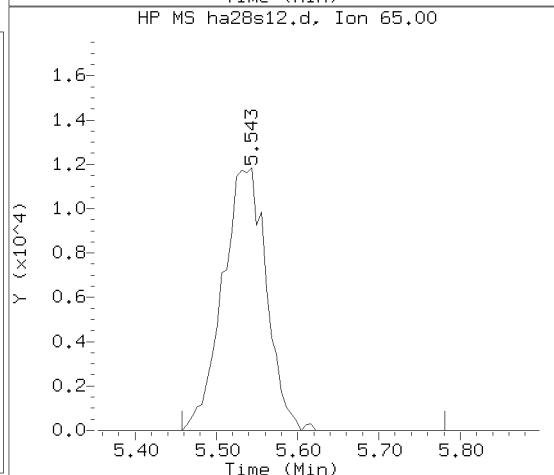
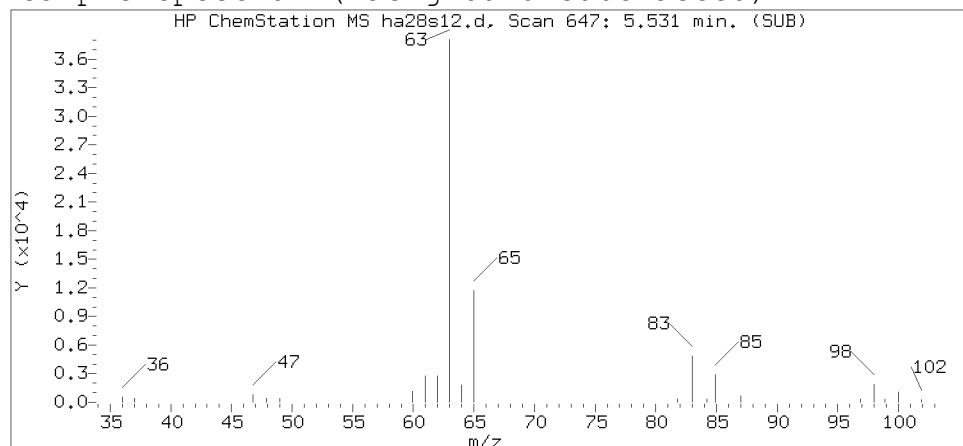
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:53.

Target 3.5 esignature user ID: mec29284
RAP-59 Page 265 of 1506

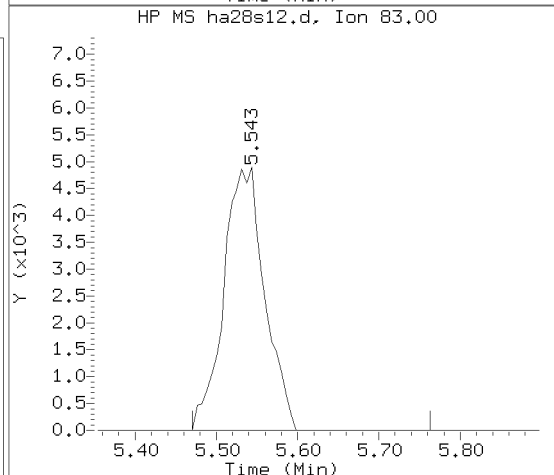
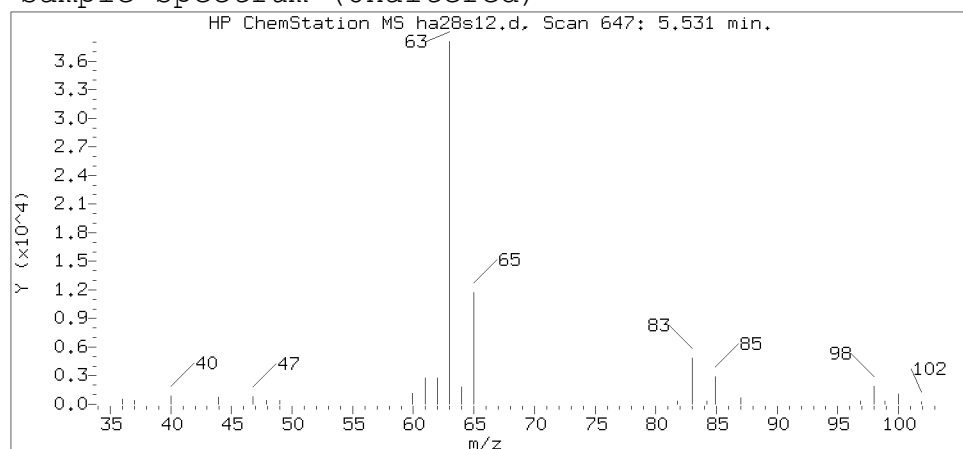
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

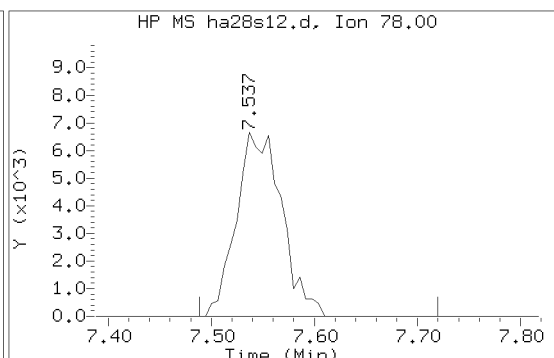
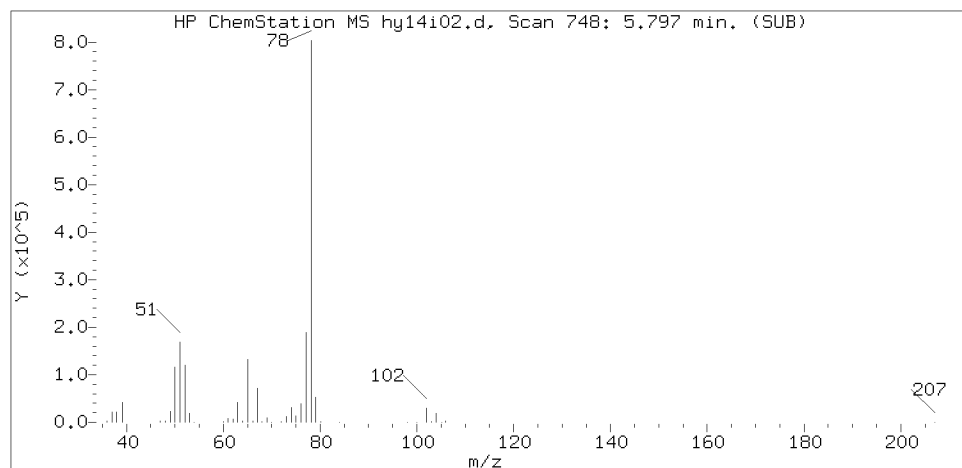
Sample Name: 59R03DL

Lab Sample ID: 1300796DL

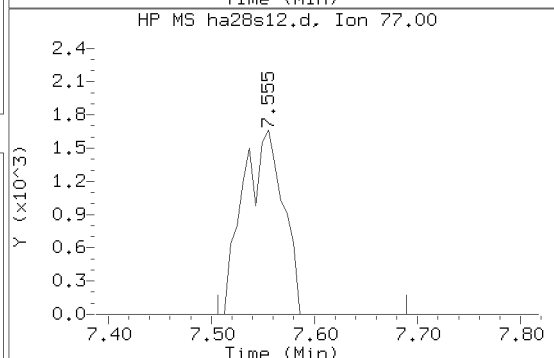
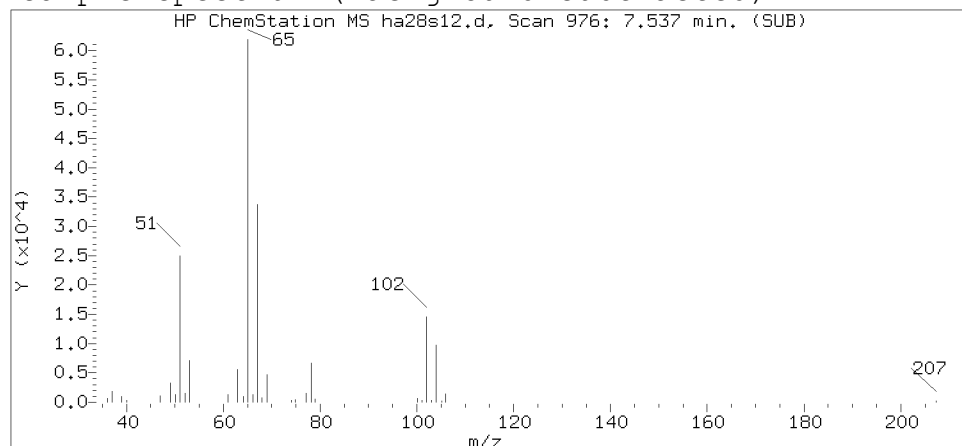
Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 647
Retention Time (minutes): 5.531
Relative Retention Time : 0.00076
Quant Ion : 63.00
Area (flag) : 135909
On-Column Amount (ng) : 1.3990

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:53.
Target 3.5 esignature user ID: mec29284

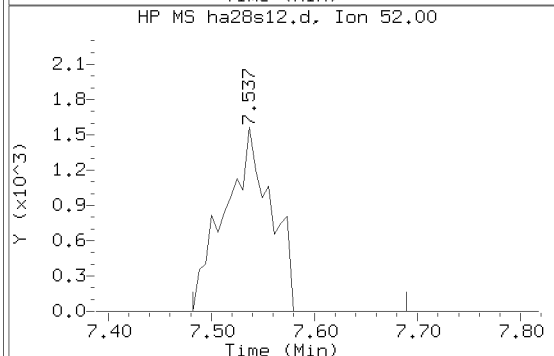
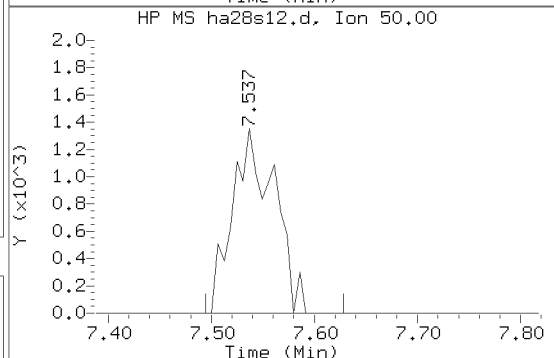
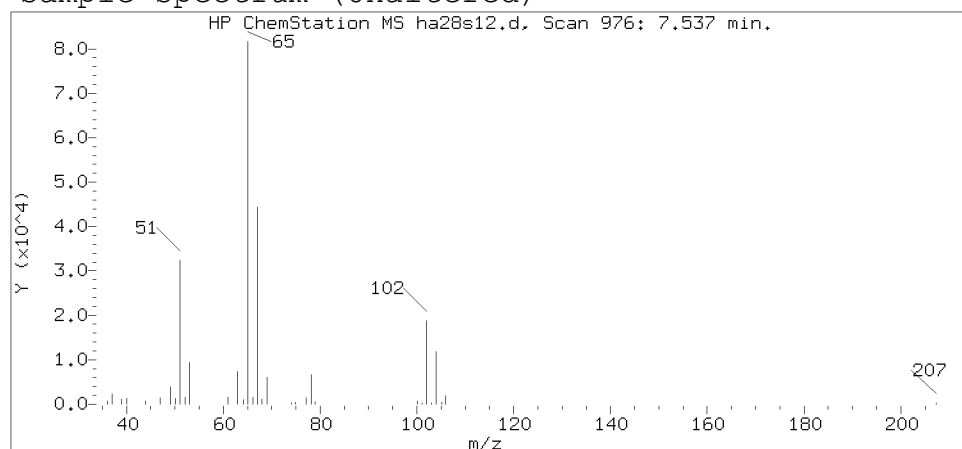
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s12.d
Injection date and time: 28-APR-2020 15:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:46 mec29284

Sample Name: 59R03DL

Lab Sample ID: 1300796DL

Compound Number : 59
Compound Name : Benzene
Scan Number : 976
Retention Time (minutes): 7.537
Relative Retention Time : 0.00153
Quant Ion : 78.00
Area (flag) : 20424
On-Column Amount (ng) : 0.0937

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:53.
Target 3.5 esignature user ID: mec29284

59R04

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300797

Data file: /chem2/HP09355.i/20apr28b.b/ya28s45.d

Injection date and time: 28-APR-2020 23:45

Data file Sample Info. Line: 59R04;1300797;1;0;;RAF59;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349 (-0.006)	455	65	379678M (-1)	250.00	
66) Fluorobenzene	7.860 (0.000)	1032	96	1155959 (-6)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	885846 (-9)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	481248 (-11)	50.00	

M = Internal Standard was manually integrated

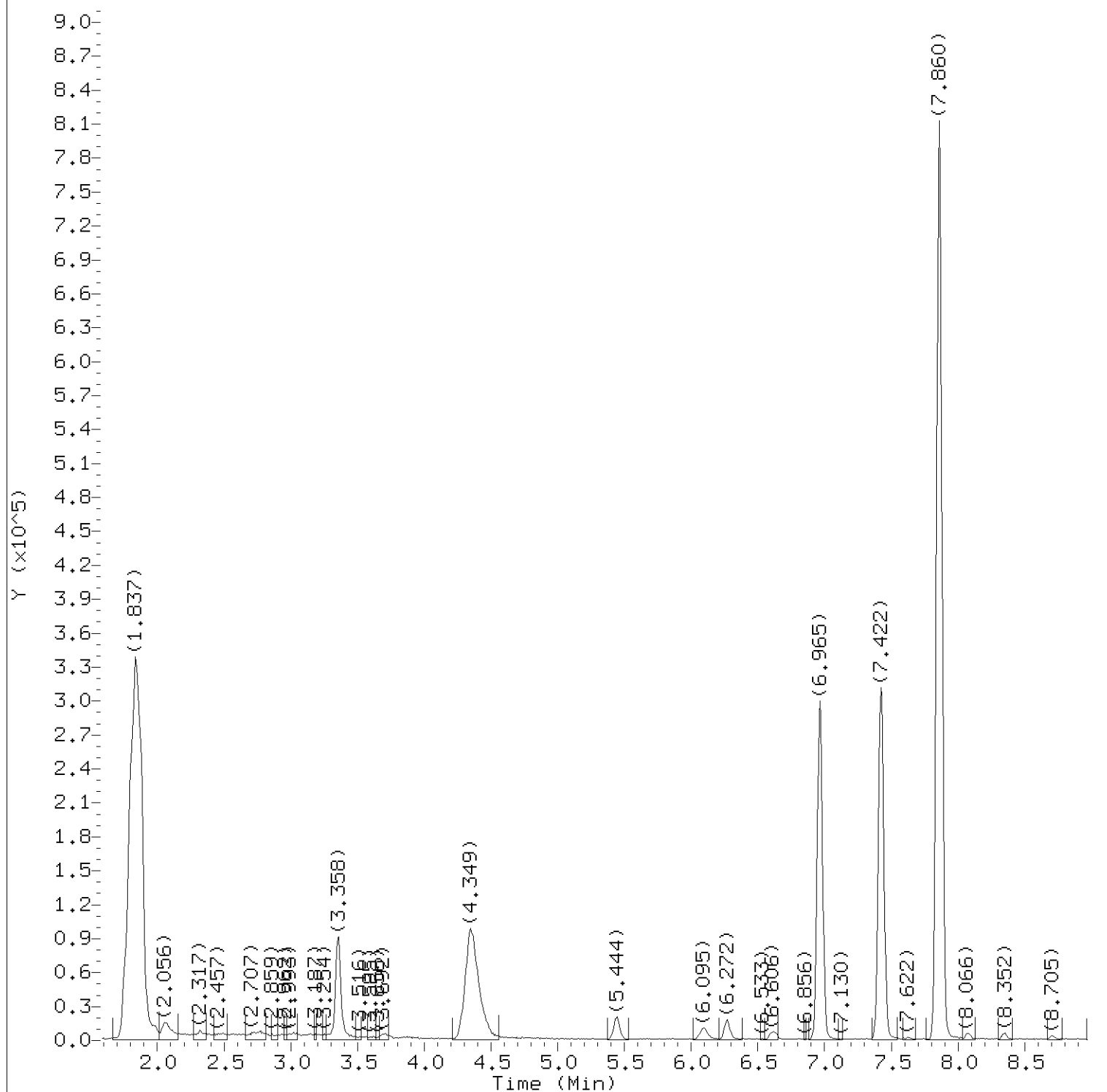
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965 (0.000)	113	273358	52.065	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.422 (0.001)	102	71277	51.478	103%		80 - 120
83) Toluene-d8	(3)	9.855 (0.000)	98	1111247	48.040	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294 (0.000)	95	412890	47.108	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)			Not Detected				18	100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:35. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s45.d
Injection date and time: 28-APR-2020 23:45

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

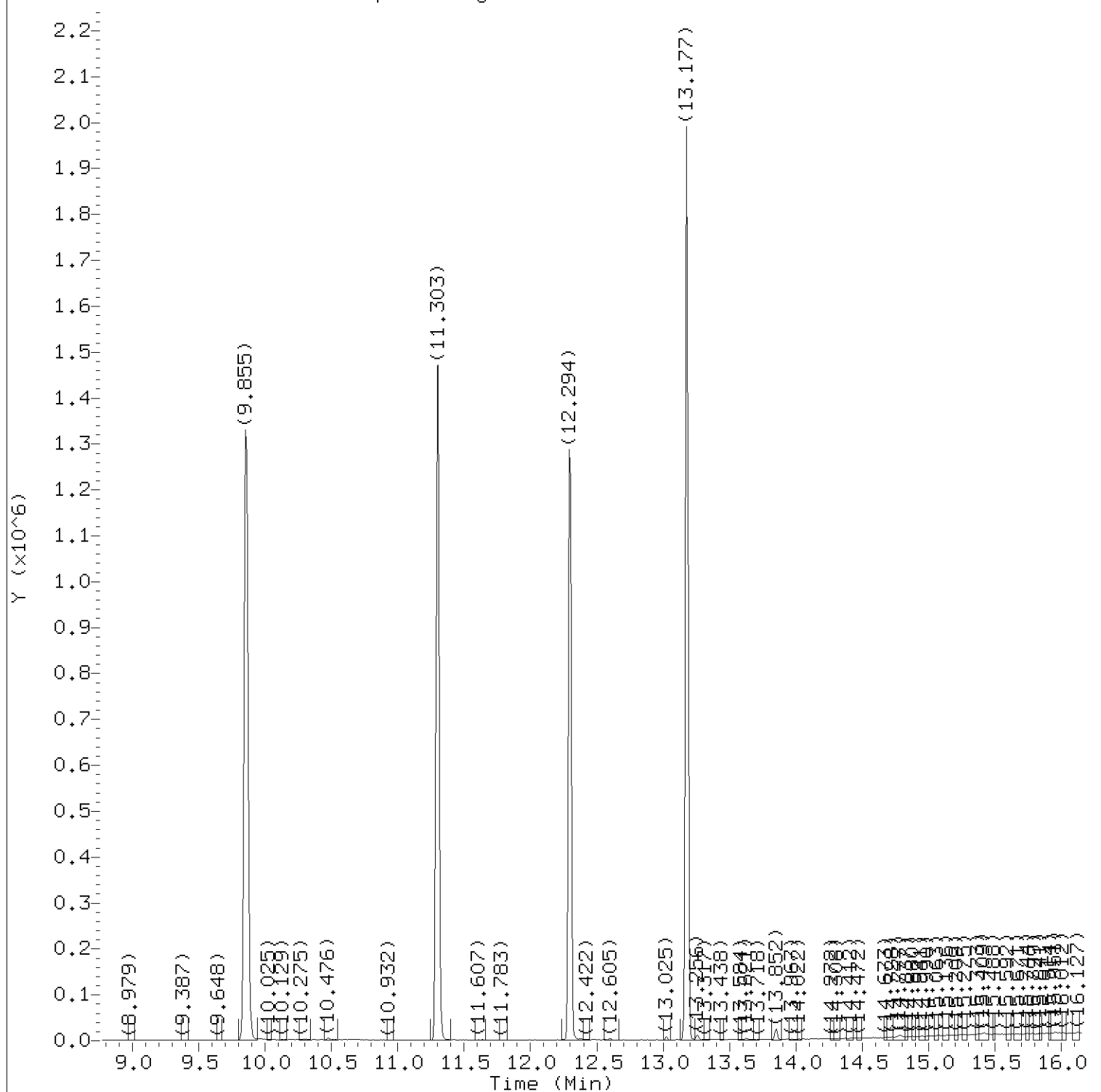
Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04

Lab Sample ID: 1300797

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s45.d
Injection date and time: 28-APR-2020 23:45

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04

Lab Sample ID: 1300797

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s45.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 23:45

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04

Lab Sample ID: 1300797

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.349	65	379678M	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	273358	52.065
57) \$1,2-Dichloroethane-d4	(2)	7.422	102	71277	51.478
66) *Fluorobenzene	(2)	7.860	96	1155959	50.000
83) \$Toluene-d8	(3)	9.855	98	1111247	48.040
100) *Chlorobenzene-d5	(3)	11.303	117	885846	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	412890	47.108
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	481248	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

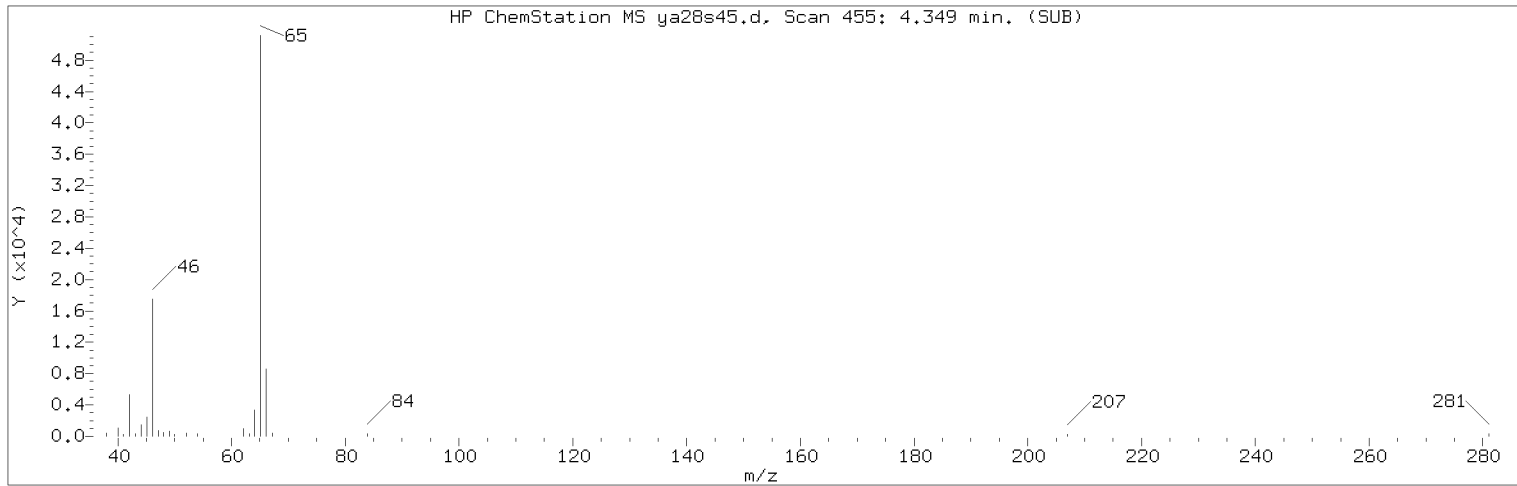
\$ = Compound is a surrogate standard.

page 1 of 1

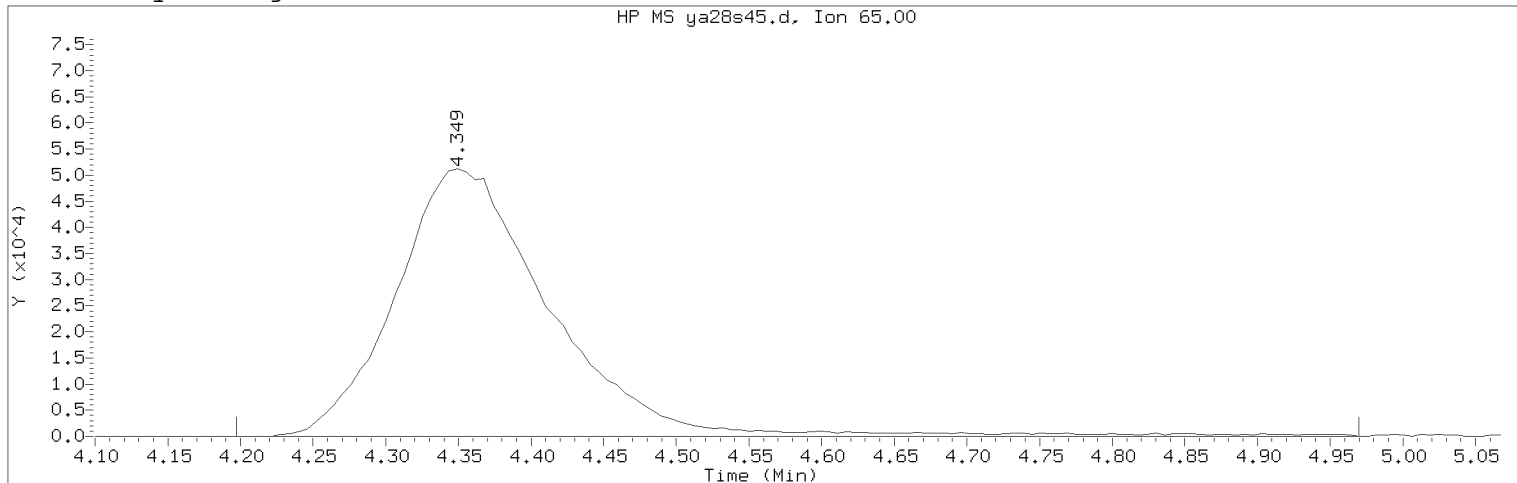
Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s45.d Instrument ID: HP09355.i
Injection date and time: 28-APR-2020 23:45 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342
Calibration date and time: 28-APR-2020 22:06
Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04 Lab Sample ID: 1300797

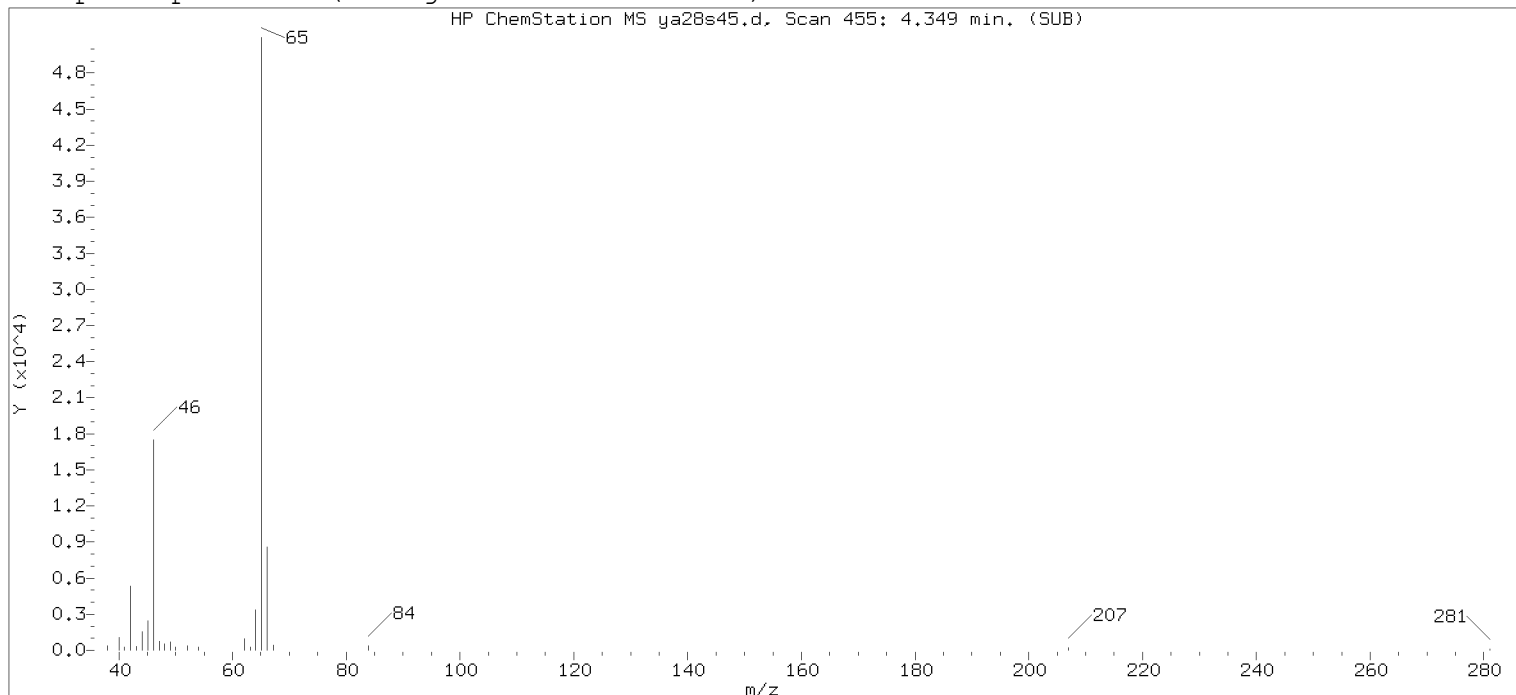
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area (flag) : 379678M
On-Column Amount (ng) : 250.0000
Integration start scan : 429 Integration stop scan: 556
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

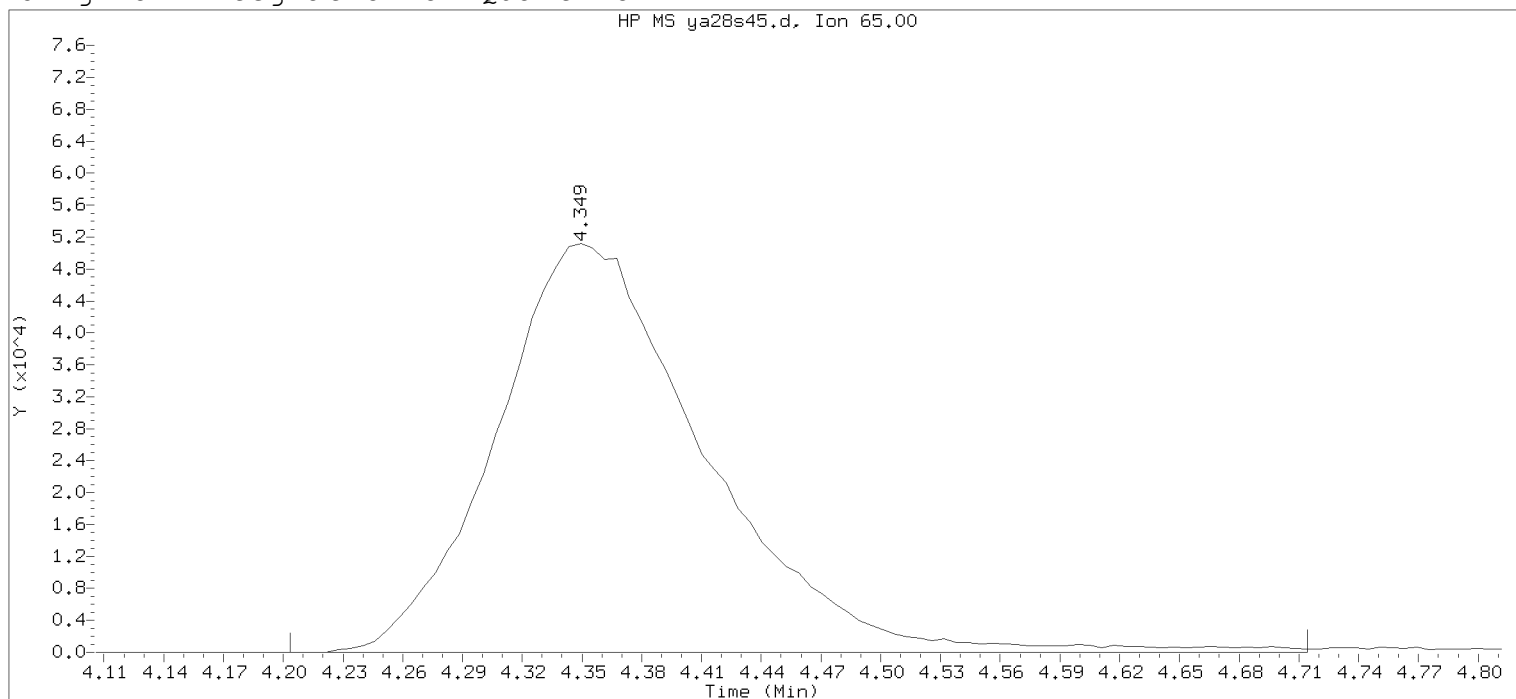
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s45.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 23:45

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 00:03 Automation

Sample Name: 59R04

Lab Sample ID: 1300797

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 455

Retention Time (minutes): 4.349

Quant Ion : 65.00

Area : 373501

On-column Amount (ng) : 250.0000

Integration start scan : 430 Integration stop scan: 514

Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/29/2020 at 12:35.

Target 3.5 esignature user RPF59 Page 273 of 1506

59R04

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300797

Data file: /chem2/HP19094.i/20apr27a.b/ha27s05.d

Injection date and time: 27-APR-2020 23:43

Data file Sample Info. Line: 59R04;1300797;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng

In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml

Sample Volume (Vo): 25 ml

Analysis Comments: 9274; 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (-0.006)	470	65	94058 (-28)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1616831 (-4)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1450694 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	793994 (-3)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	452533	11.259	113%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	86270	11.075	111%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1746576	9.037	90%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	677249	9.471	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.142 (0.000)	45	64948	1.206	1.21		J	0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)	2.398 (-0.000)	62	8724	0.153	0.15		J	0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.842 (-0.000)	64	45074	1.368	1.37			0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.428 (-0.001)	59	442058	15.380	15.38			1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)	5.537 (0.000)	63	233845	2.983	2.98			0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)	6.708 (0.000)	71	5452	2.208	2.21		J	2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

59R04

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300797

Data file: /chem2/HP19094.i/20apr27a.b/ha27s05.d Injection date and time: 27-APR-2020 23:43
Data file Sample Info. Line: 59R04;1300797;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 22:26
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

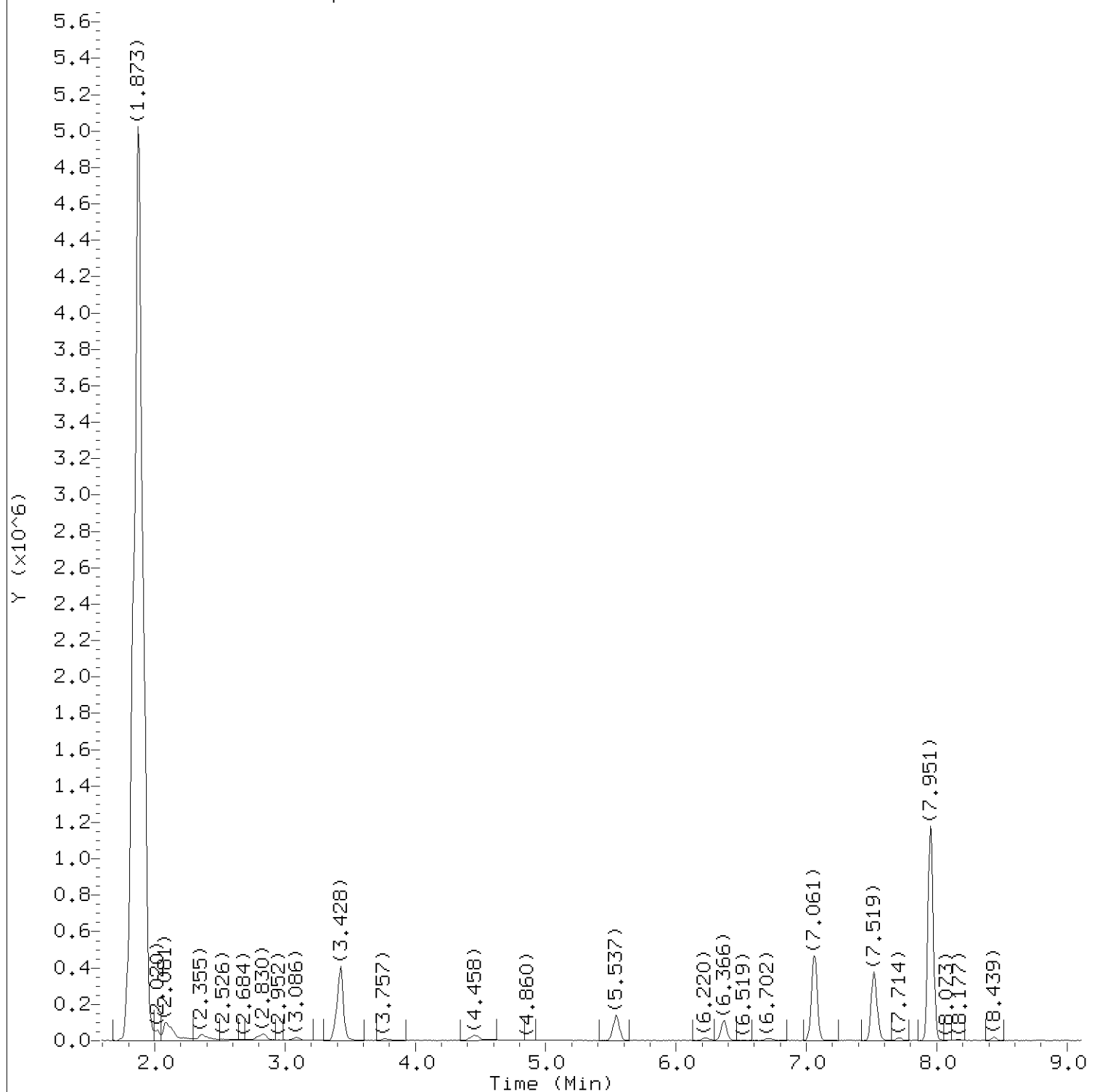
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
59) Benzene	(2)	7.549(0.000)	78	36161M	0.206	0.21		J	0.07	1
60) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
68) Trichloroethene	(2)			Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
72) Methyl Methacrylate	(1)			Not Detected					4	10
74) Dibromomethane	(2)			Not Detected					0.07	1
73) 1,4-Dioxane	(1)			Not Detected					45	200
75) Bromodichloromethane	(2)			Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)			Not Detected					0.9	10
84) Toluene	(3)			Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
87) Ethyl Methacrylate	(3)			Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)			Not Detected					0.08	1
90) Tetrachloroethene	(3)	10.548(0.000)	166	6239	0.101	0.10		J	0.06	1
91) 1,3-Dichloropropane	(3)			Not Detected					0.09	1
92) 2-Hexanone	(1)			Not Detected					0.6	10
94) Dibromochloromethane	(3)			Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)			Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.08	1
101) Ethylbenzene	(3)			Not Detected					0.08	1
102) m+p-Xylene	(3)			Not Detected					0.1	2
105) o-Xylene	(3)			Not Detected					0.1	1
106) Xylene (Total)	(3)			Not Detected					0.2	3
107) Styrene	(3)			Not Detected					0.07	1
108) Bromoform	(3)			Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.1	1
127) Pentachloroethane	(4)			Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)			Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)			Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)			Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
147) Hexachlorobutadiene	(4)			Not Detected					0.07	1
148) Naphthalene	(4)			Not Detected					0.1	1

M = Compound was manually integrated.

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

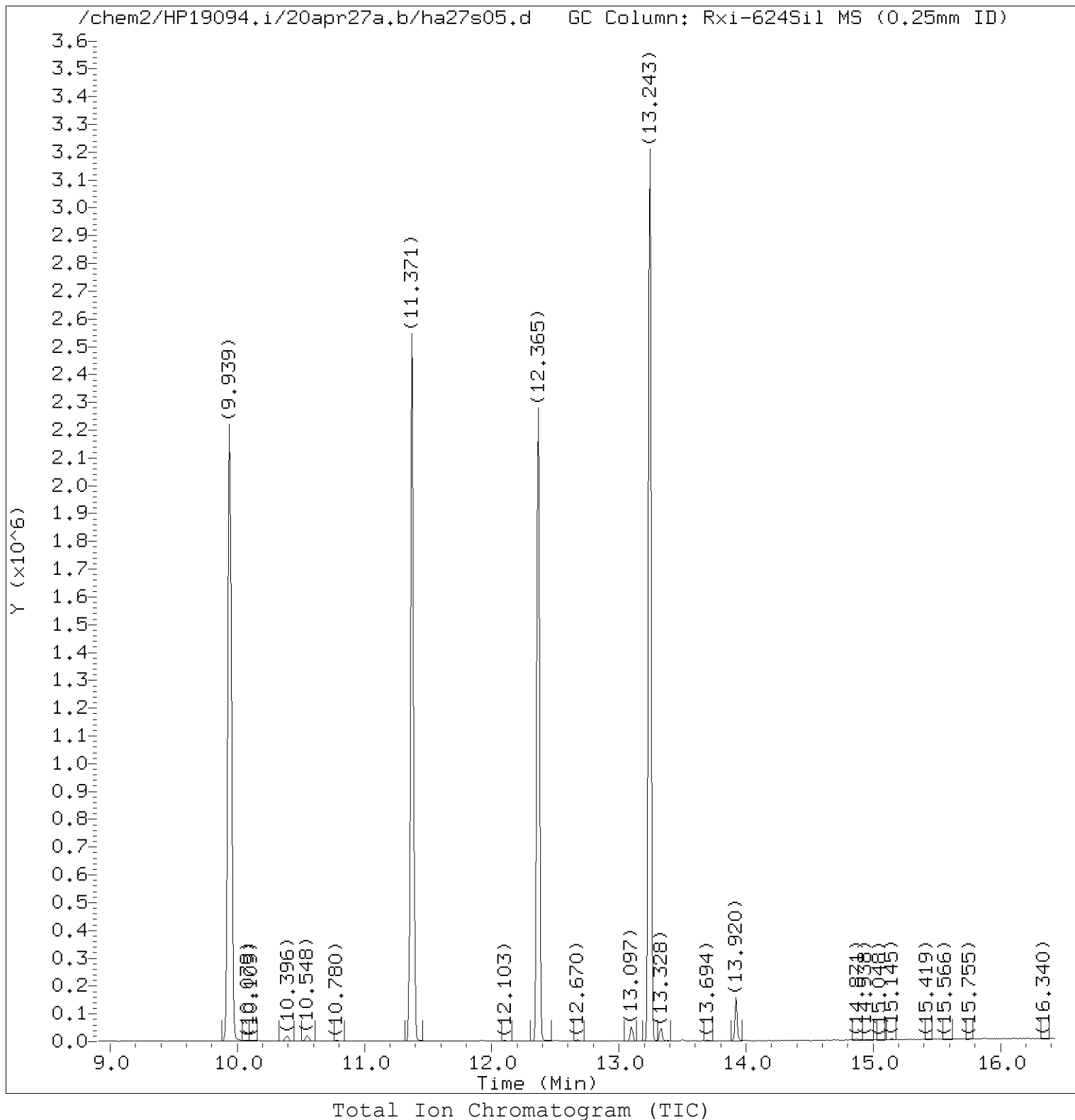
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04

Lab Sample ID: 1300797

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04

Lab Sample ID: 1300797

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 23:43

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04

Lab Sample ID: 1300797

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.142	45	64948	1.206
5) Vinyl Chloride	(2)	2.398	62	8724	0.153
8) Chloroethane	(2)	2.843	64	45074	1.368
11) Ethyl ether	(2)	3.428	59	442058	15.380
27) *t-Butyl Alcohol-d10	(1)	4.452	65	94058	50.000
34) 1,1-Dichloroethane	(2)	5.537	63	233845	2.983
49) Tetrahydrofuran	(1)	6.708	71	5452	2.208
51) \$Dibromofluoromethane	(2)	7.061	113	452533	11.259
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	86270	11.075
59) Benzene	(2)	7.549	78	36161M	0.206
64) *Fluorobenzene	(2)	7.951	96	1616831	10.000
83) \$Toluene-d8	(3)	9.939	98	1746576	9.037
90) Tetrachloroethene	(3)	10.548	166	6239	0.101
98) *Chlorobenzene-d5	(3)	11.371	117	1450694	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	677249	9.471
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	793994	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

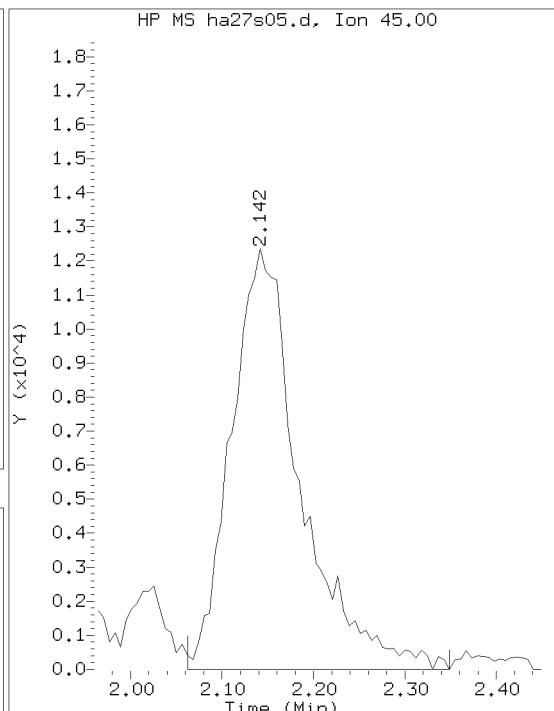
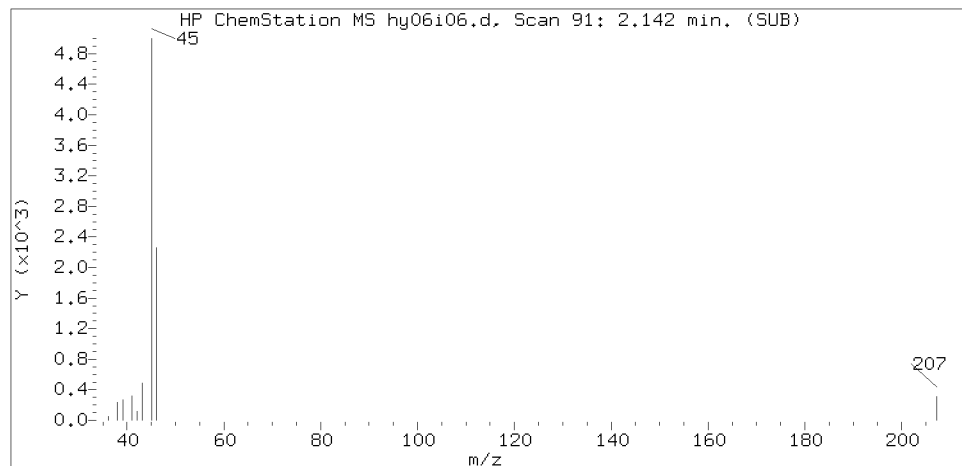
\$ = Compound is a surrogate standard.

page 1 of 1

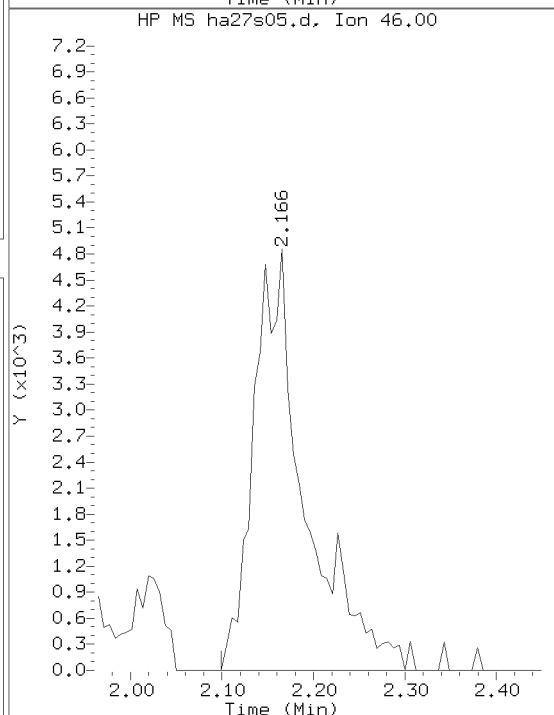
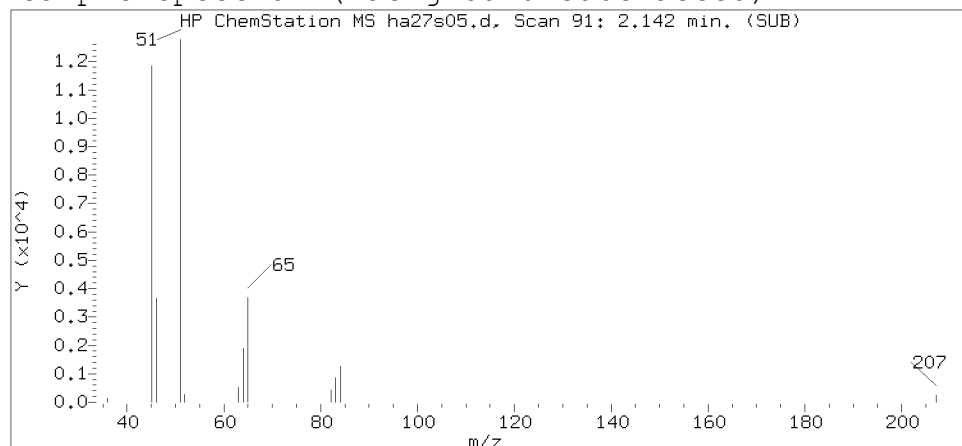
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

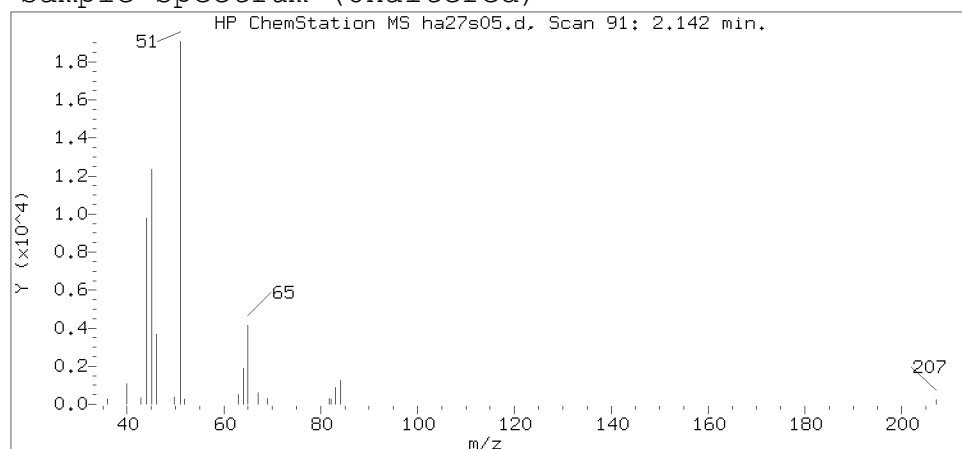
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

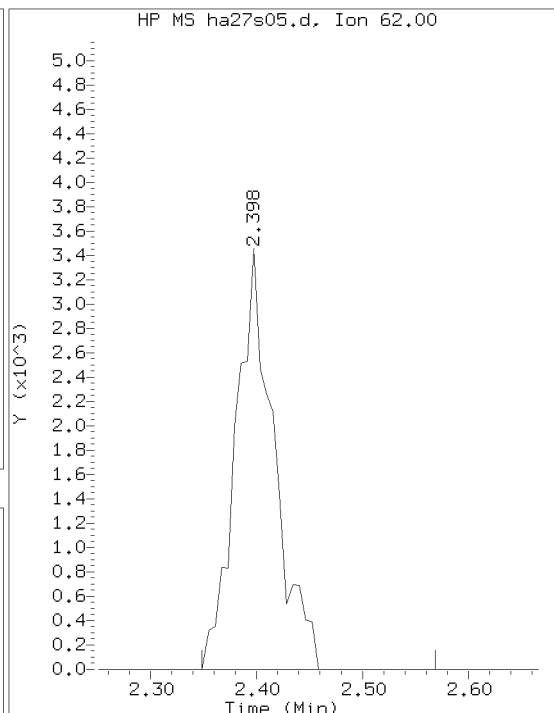
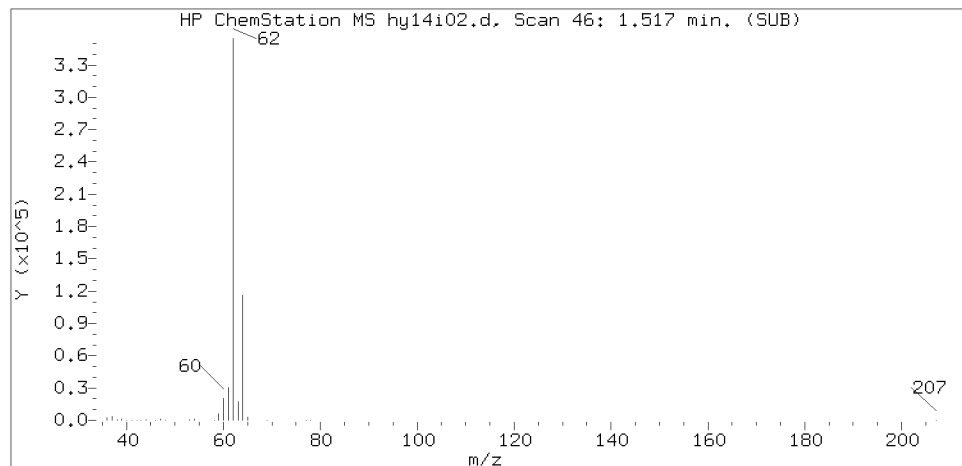
Sample Name: 59R04

Lab Sample ID: 1300797

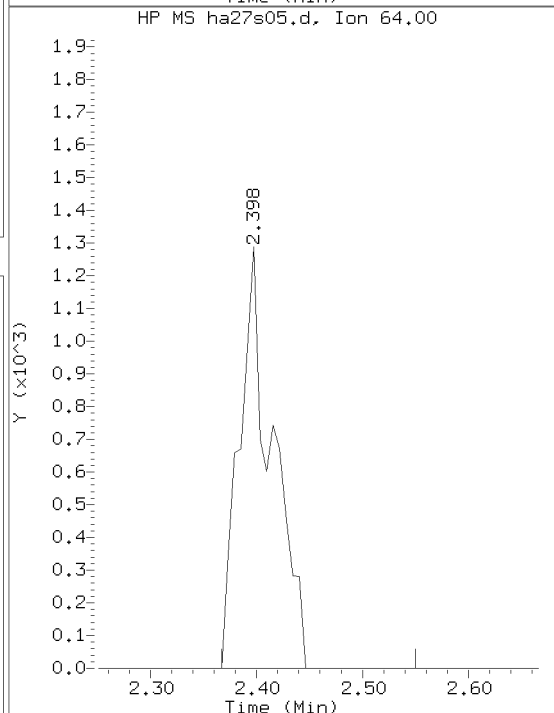
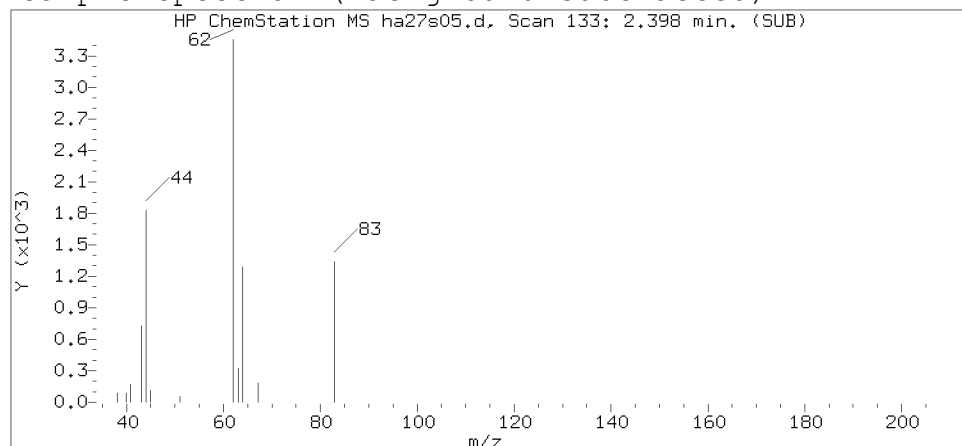
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Relative Retention Time : 0.00001
Quant Ion : 45.00
Area (flag) : 64948
On-Column Amount (ng) : 1.2058

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

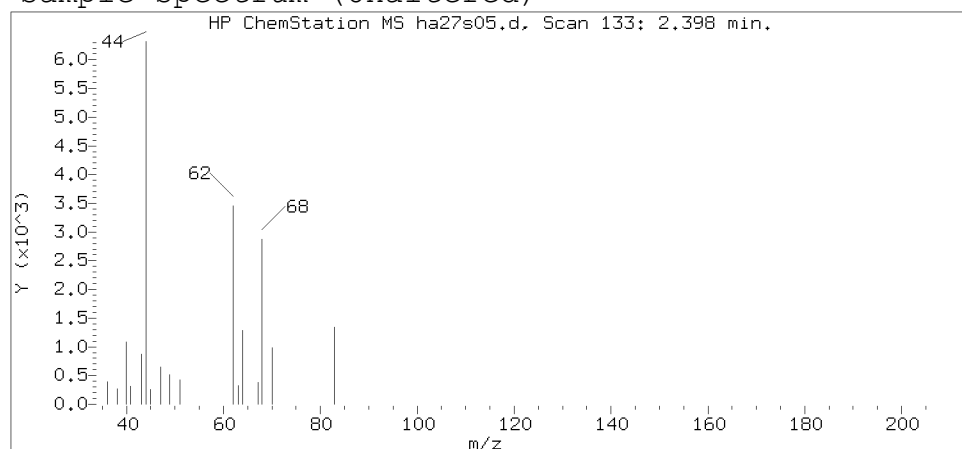
Reference Standard Spectrum for Vinyl Chloride



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

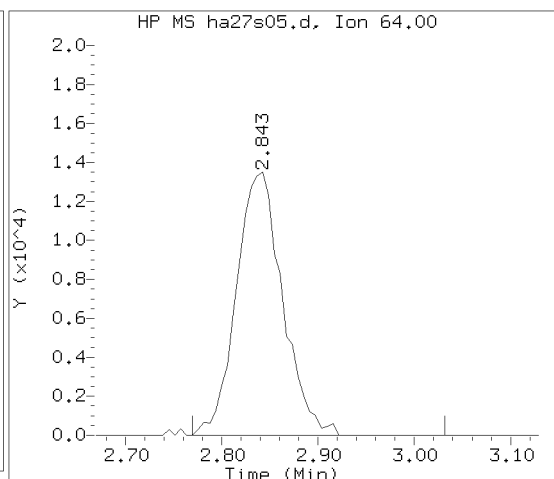
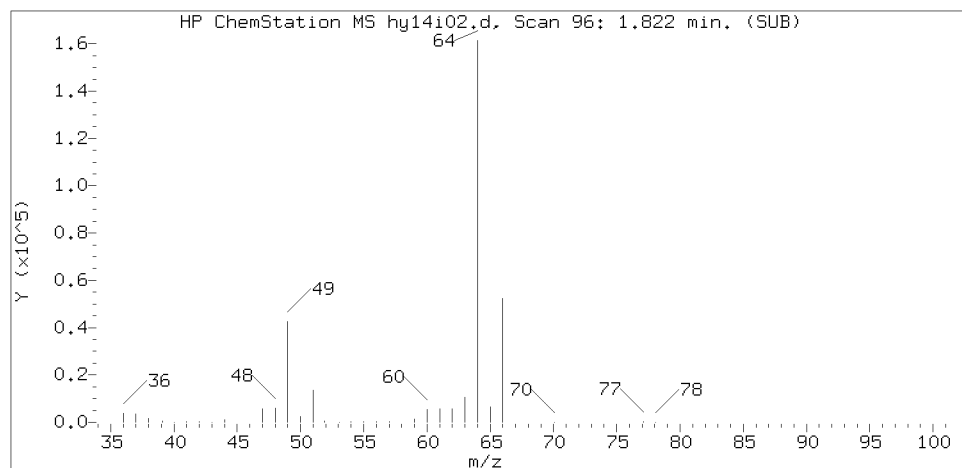
Sample Name: 59R04

Lab Sample ID: 1300797

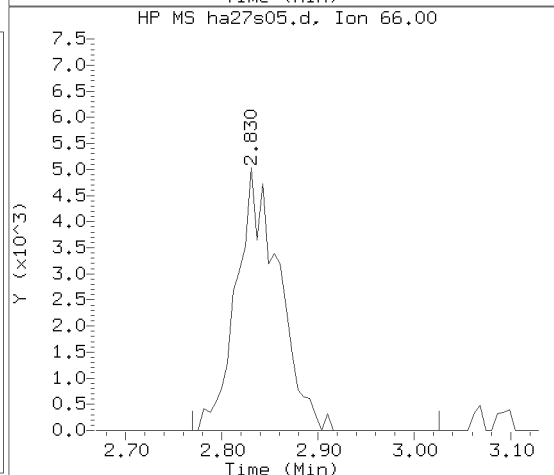
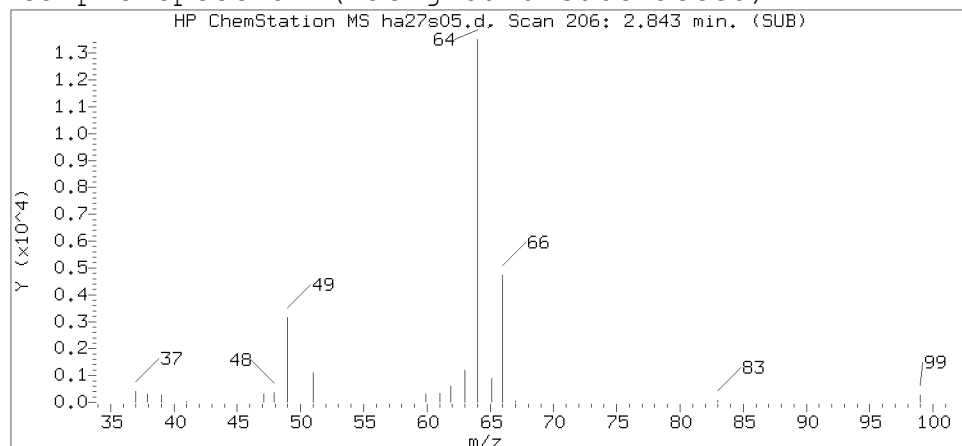
Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 133
Retention Time (minutes): 2.398
Relative Retention Time :-0.00075
Quant Ion : 62.00
Area (flag) : 8724
On-Column Amount (ng) : 0.1533

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

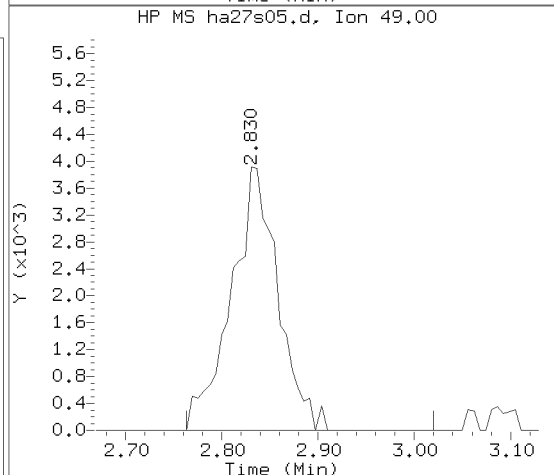
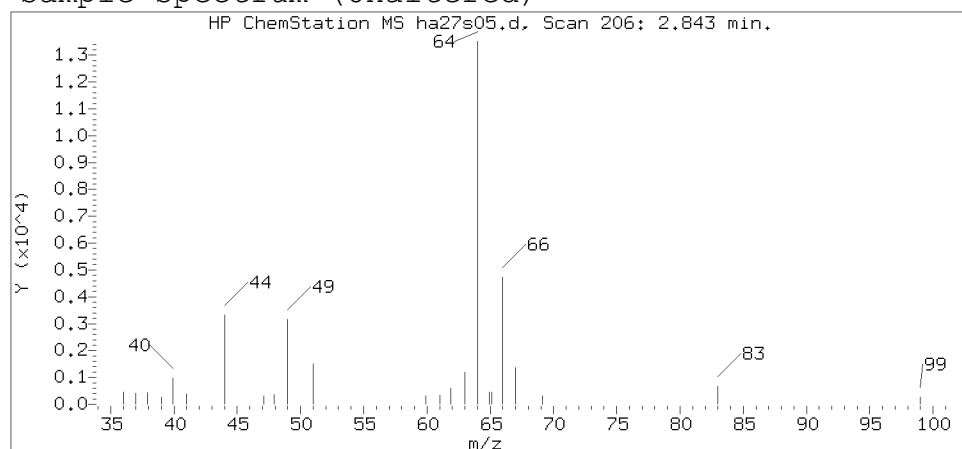
Reference Standard Spectrum for Chloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

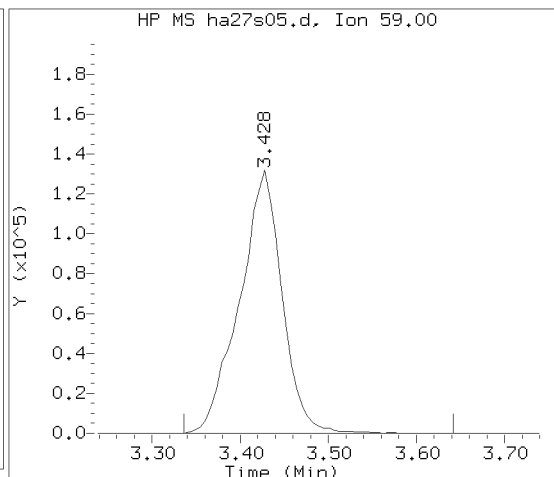
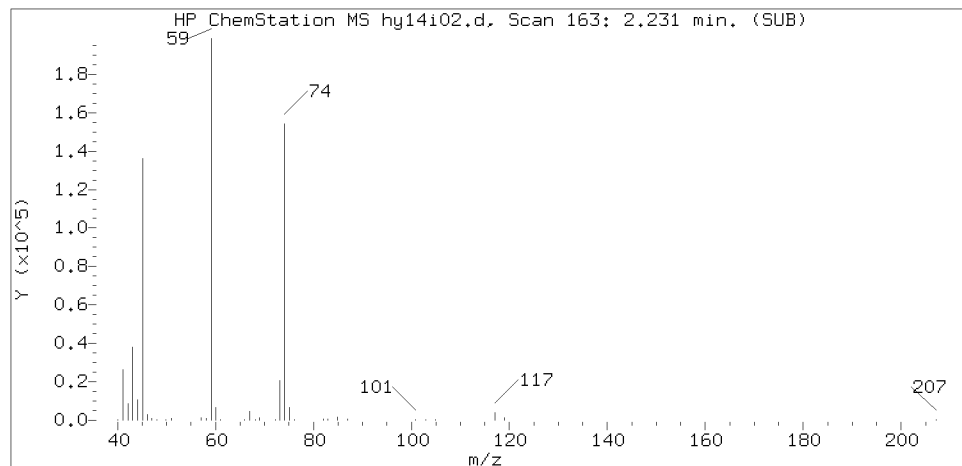
Sample Name: 59R04

Lab Sample ID: 1300797

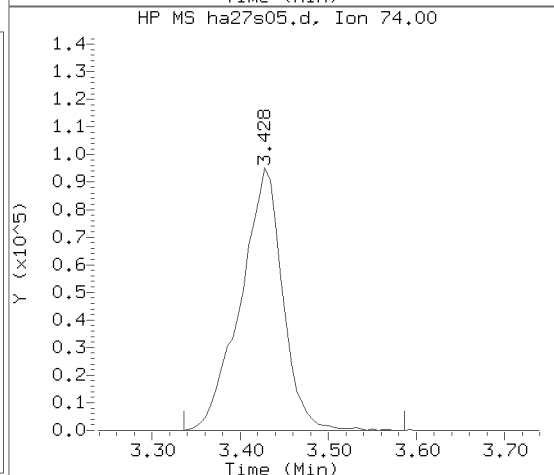
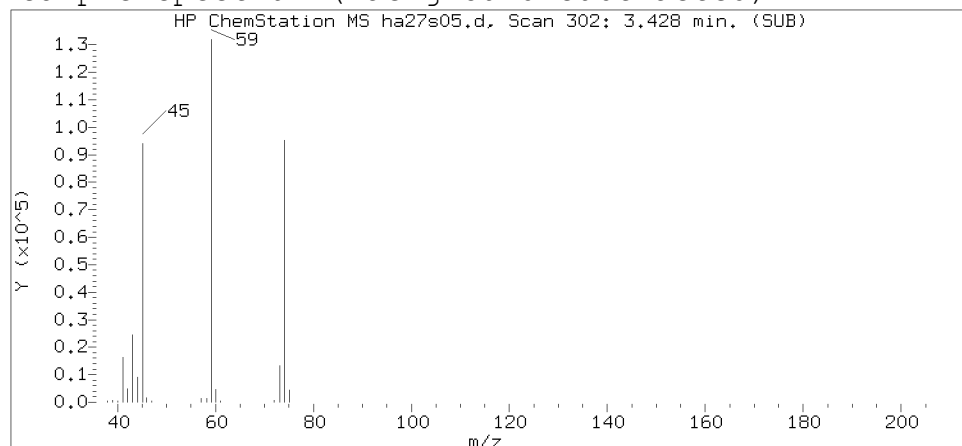
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 206
Retention Time (minutes): 2.843
Relative Retention Time : -0.00075
Quant Ion : 64.00
Area (flag) : 45074
On-Column Amount (ng) : 1.3676

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

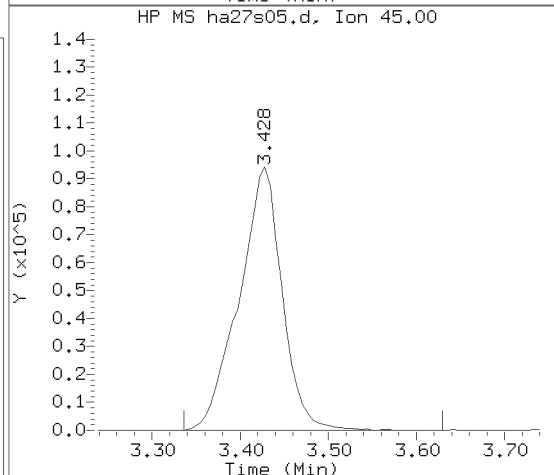
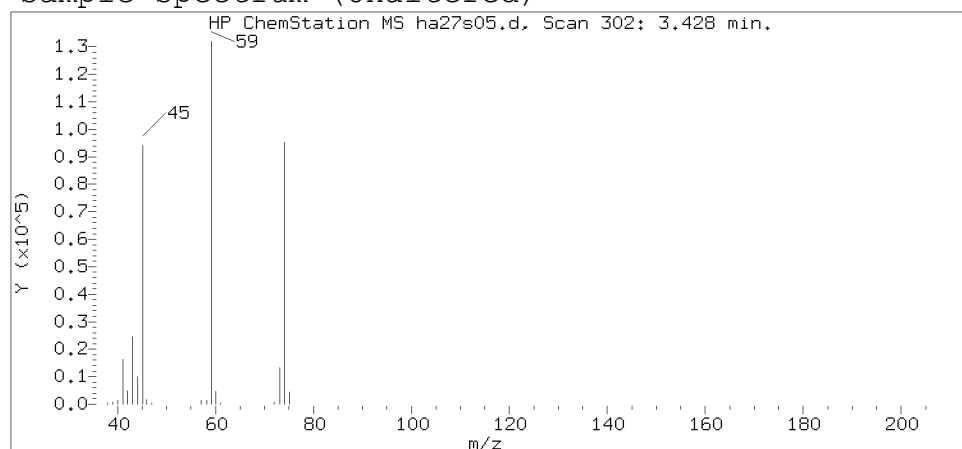
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

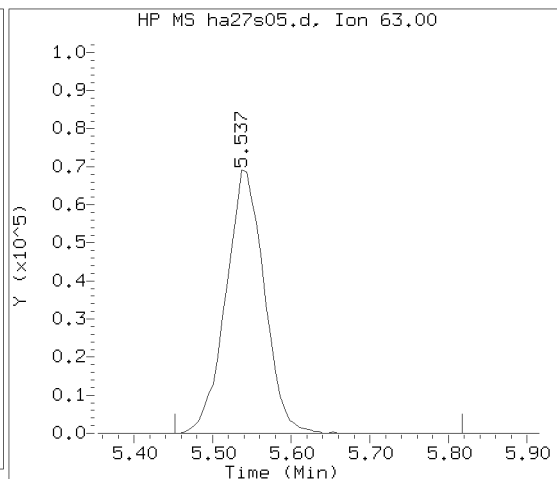
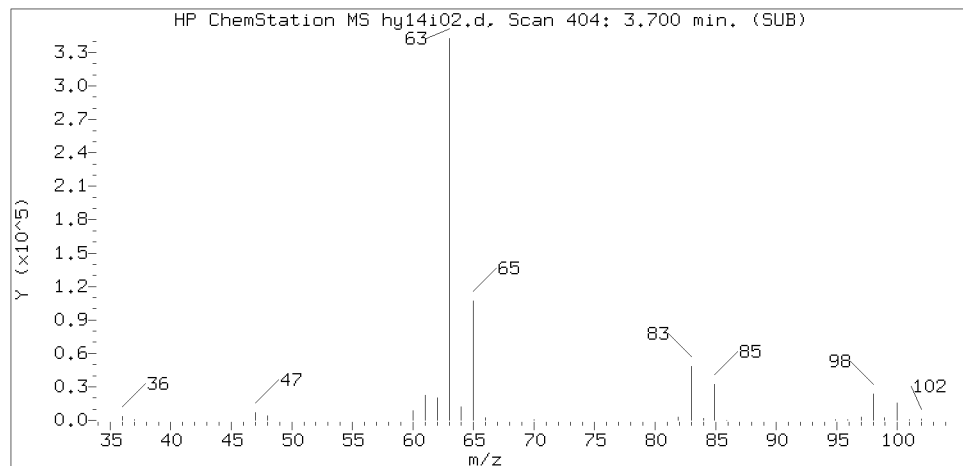
Sample Name: 59R04

Lab Sample ID: 1300797

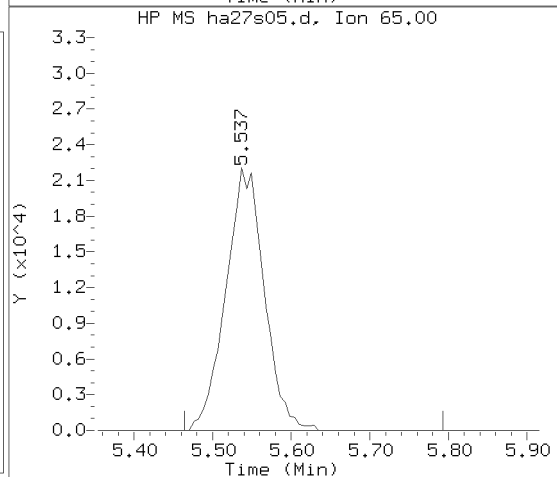
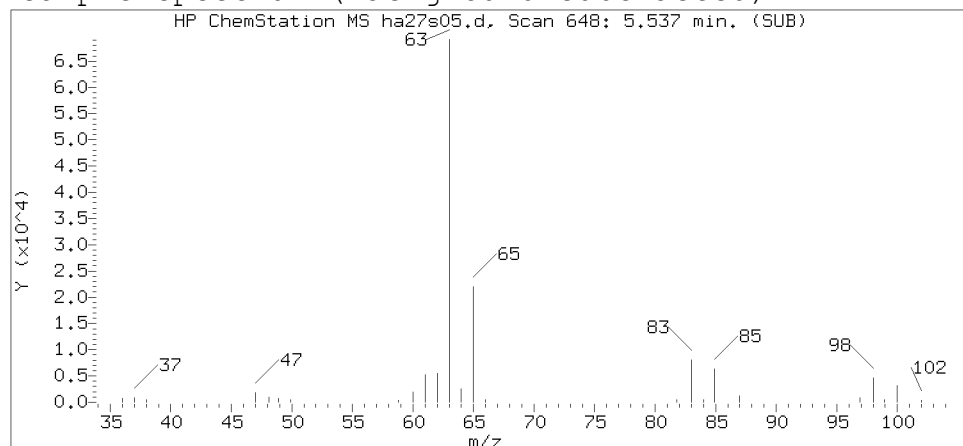
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00152
Quant Ion : 59.00
Area (flag) : 442058
On-Column Amount (ng) : 15.3801

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

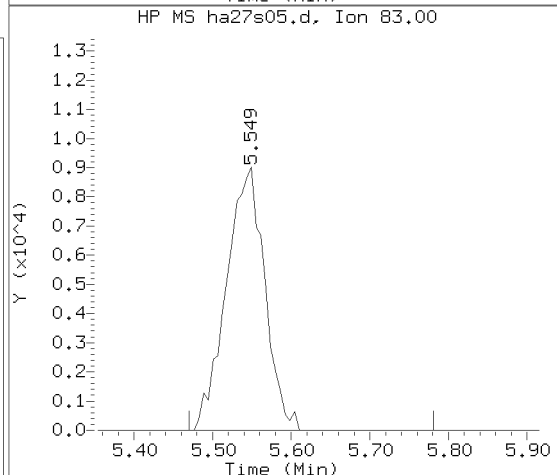
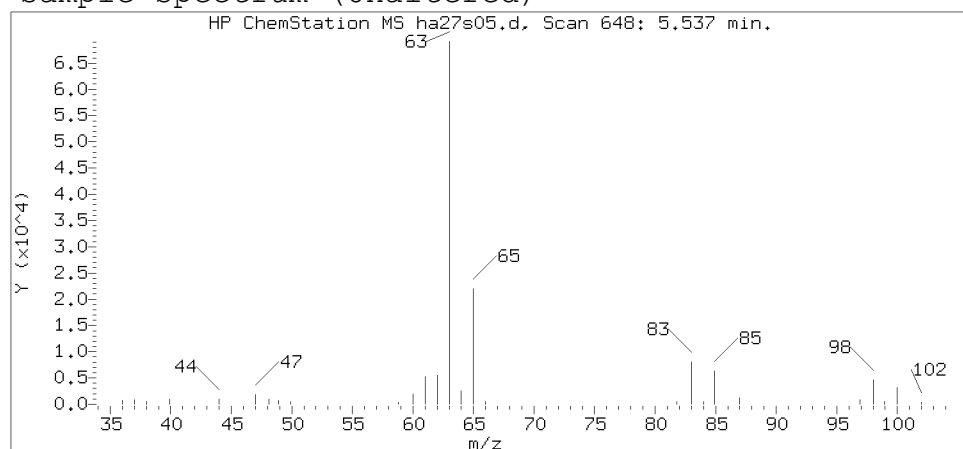
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

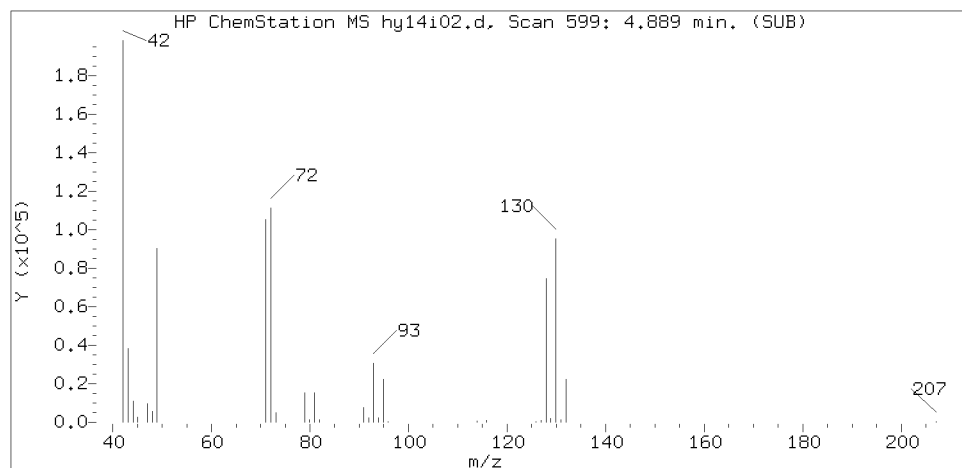
Sample Name: 59R04

Lab Sample ID: 1300797

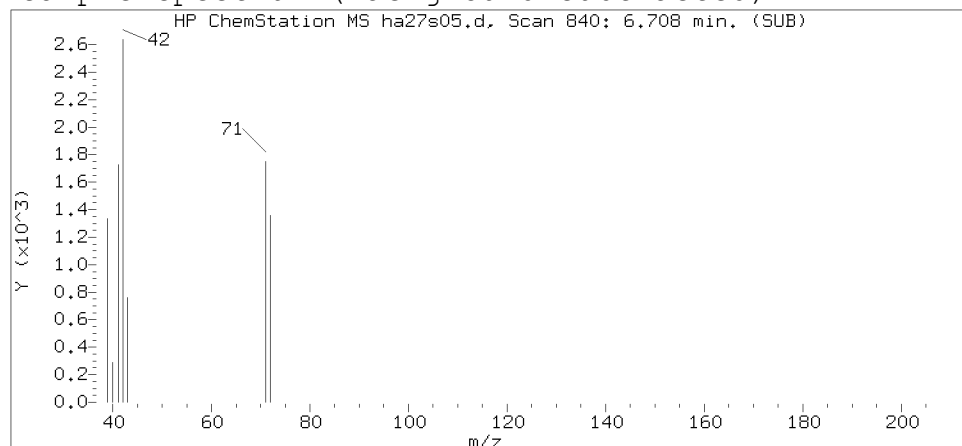
Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 648
Retention Time (minutes): 5.537
Relative Retention Time : 0.00001
Quant Ion : 63.00
Area (flag) : 233845
On-Column Amount (ng) : 2.9828

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

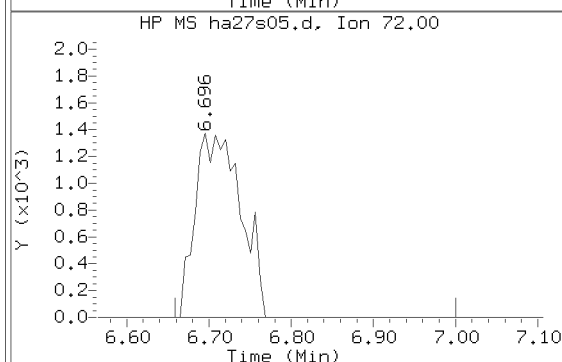
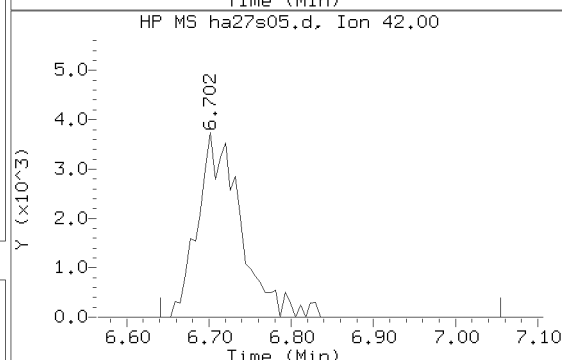
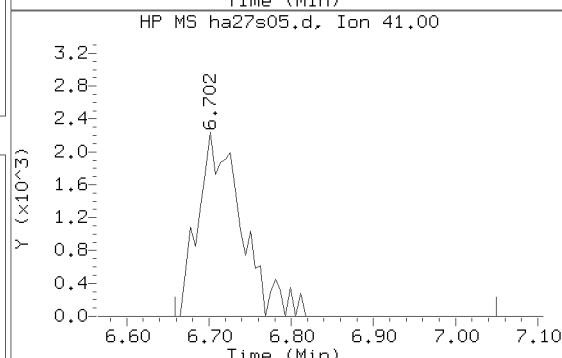
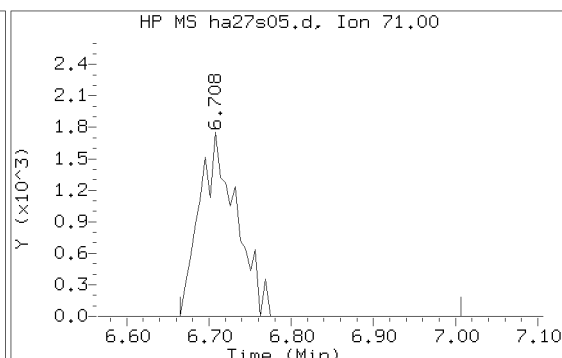
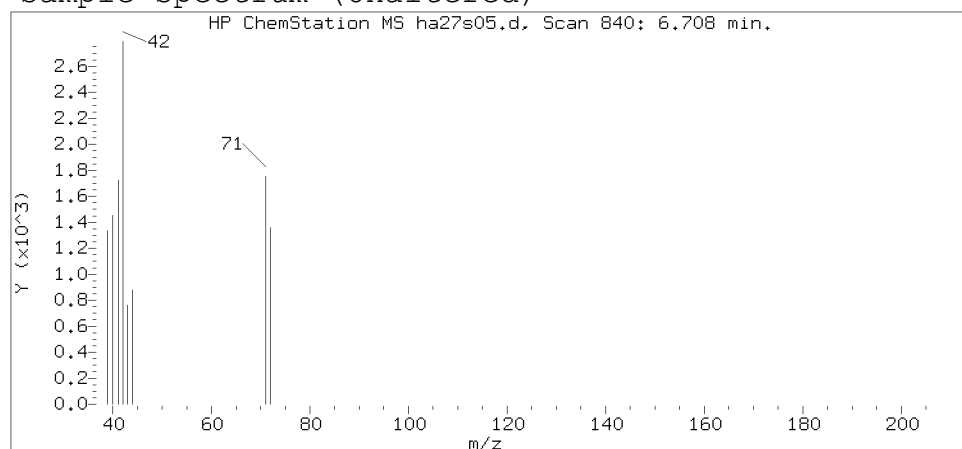
Reference Standard Spectrum for Tetrahydrofuran



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04

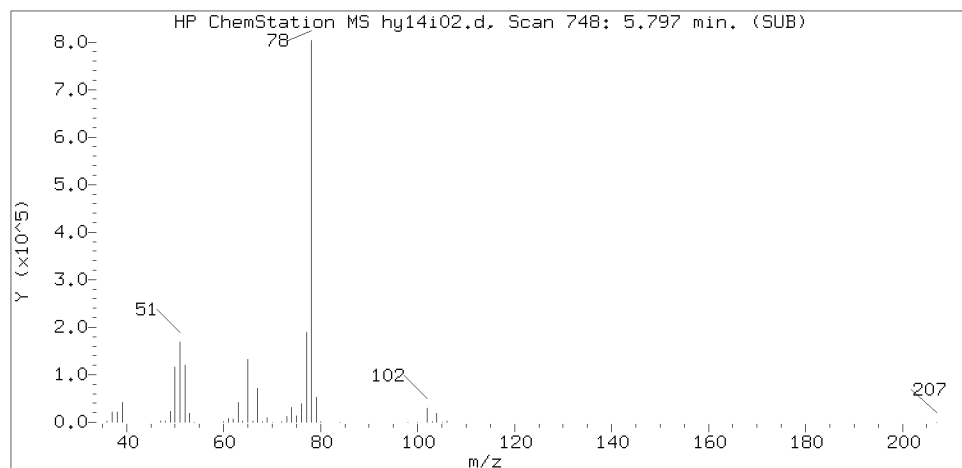
Lab Sample ID: 1300797

Compound Number : 49
Compound Name : Tetrahydrofuran
Scan Number : 840
Retention Time (minutes): 6.708
Relative Retention Time : 0.00068
Quant Ion : 71.00
Area (flag) : 5452
On-Column Amount (ng) : 2.2083

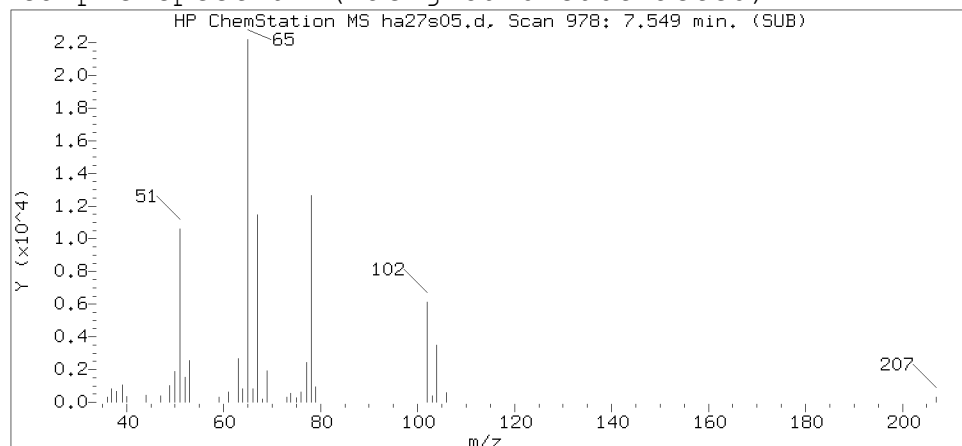
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284
RAP59 Page 284 of 1506

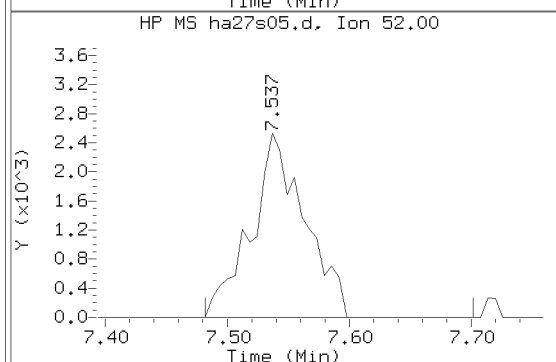
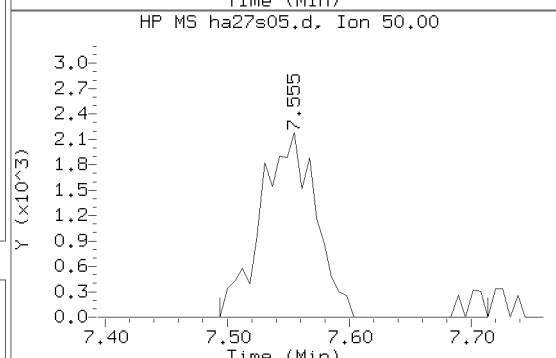
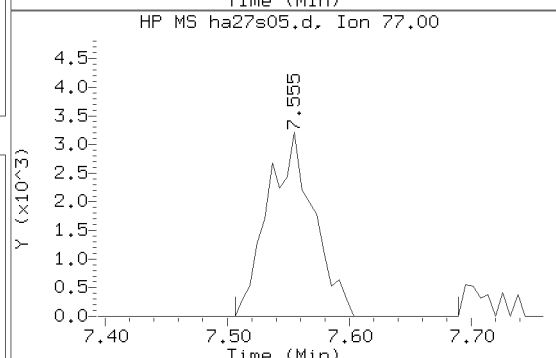
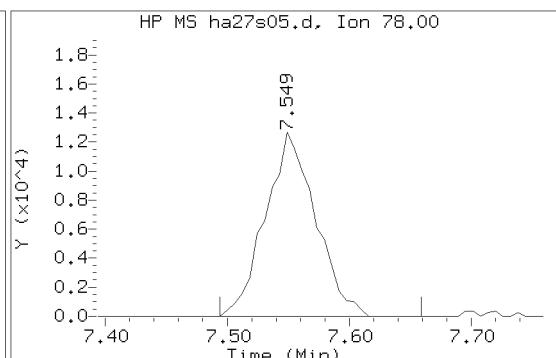
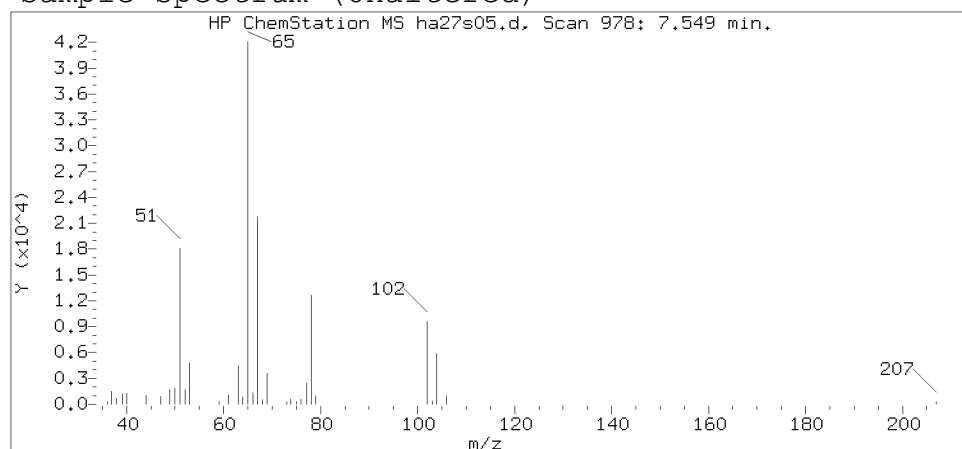
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04

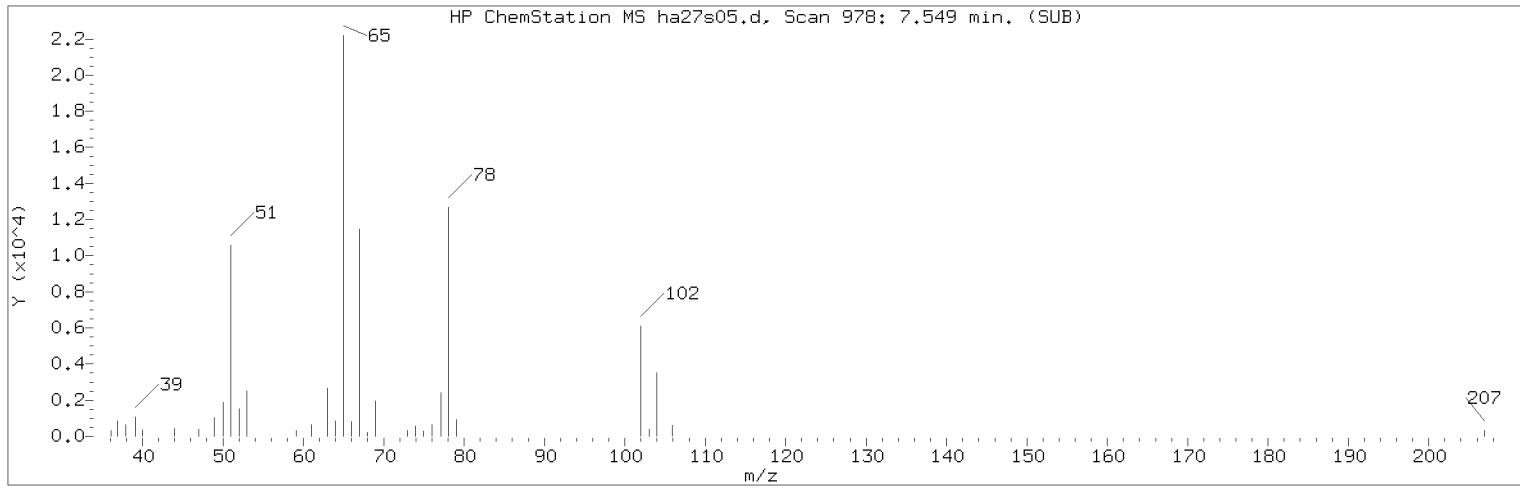
Lab Sample ID: 1300797

Compound Number : 59
Compound Name : Benzene
Scan Number : 978
Retention Time (minutes): 7.549
Relative Retention Time : 0.00000
Quant Ion : 78.00
Area (flag) : 36161M
On-Column Amount (ng) : 0.2056

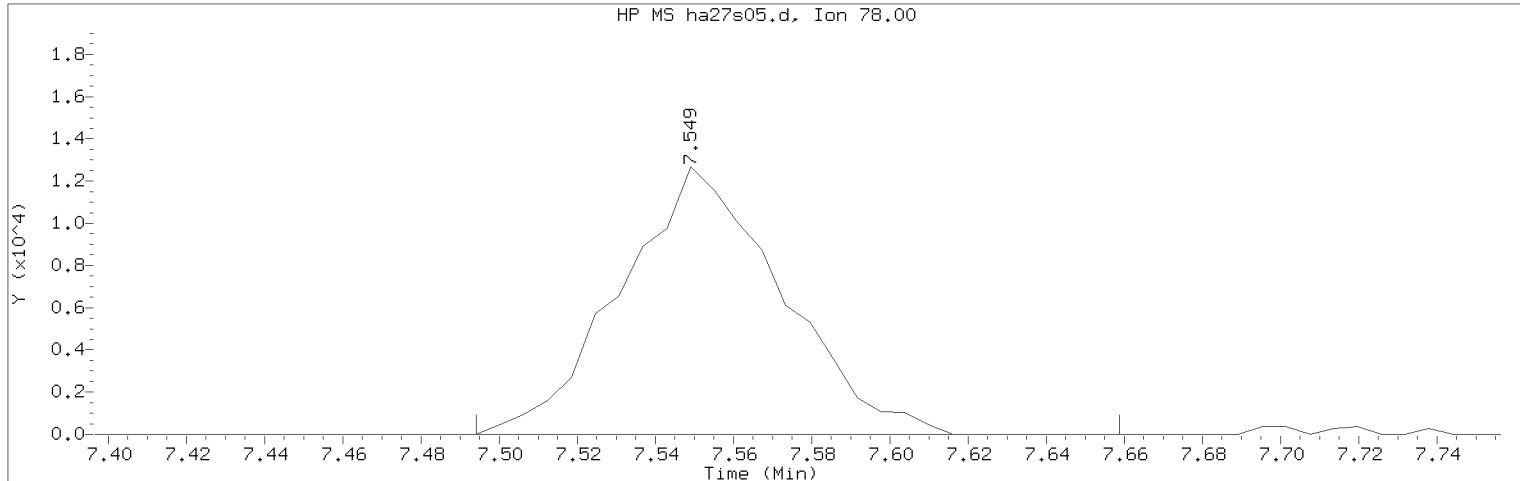
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284
RAP59 Page 285 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 23:43 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04 Lab Sample ID: 1300797

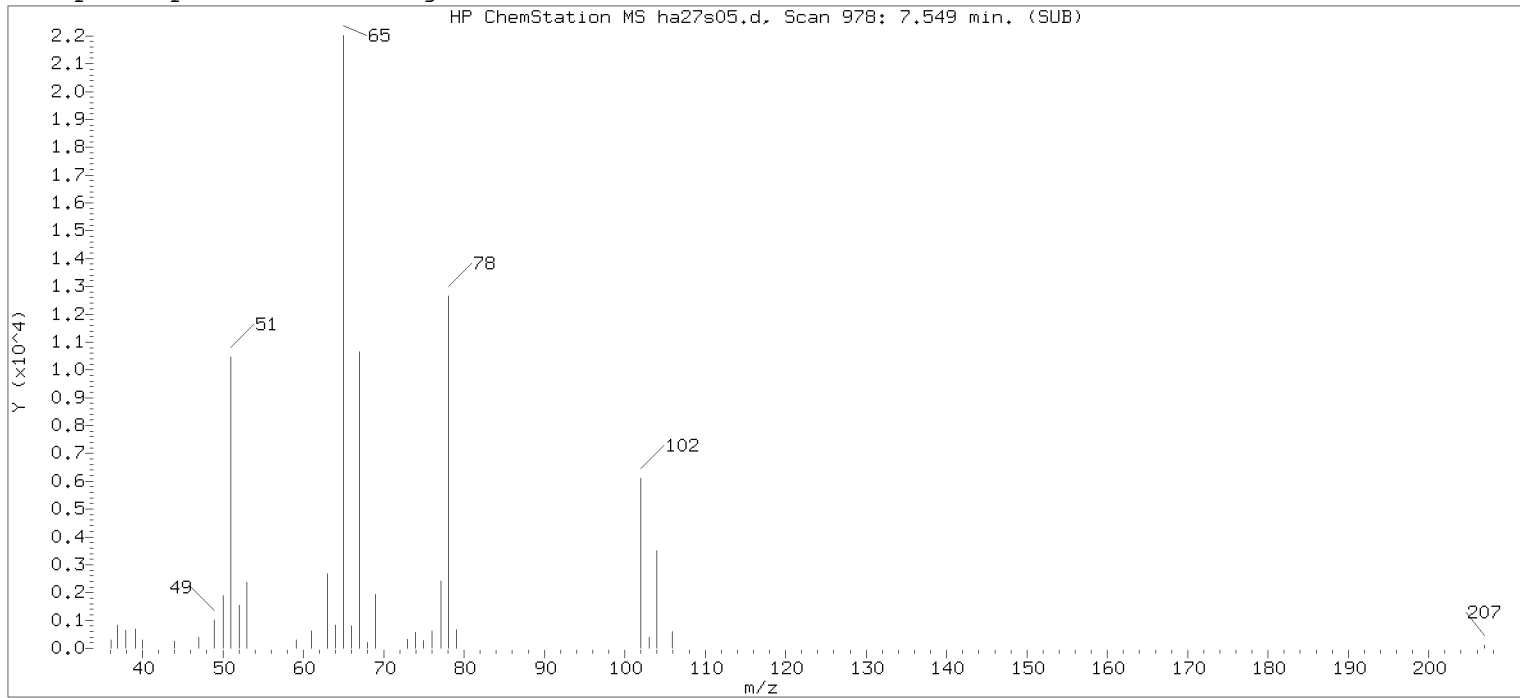
Compound Number	: 59	
Compound Name	: Benzene	
Scan Number	: 978	
Retention Time (minutes)	: 7.549	
Quant Ion	: 78.00	
Area (flag)	: 36161M	
On-Column Amount (ng)	: 0.2056	
Integration start scan	: 968	Integration stop scan: 995
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

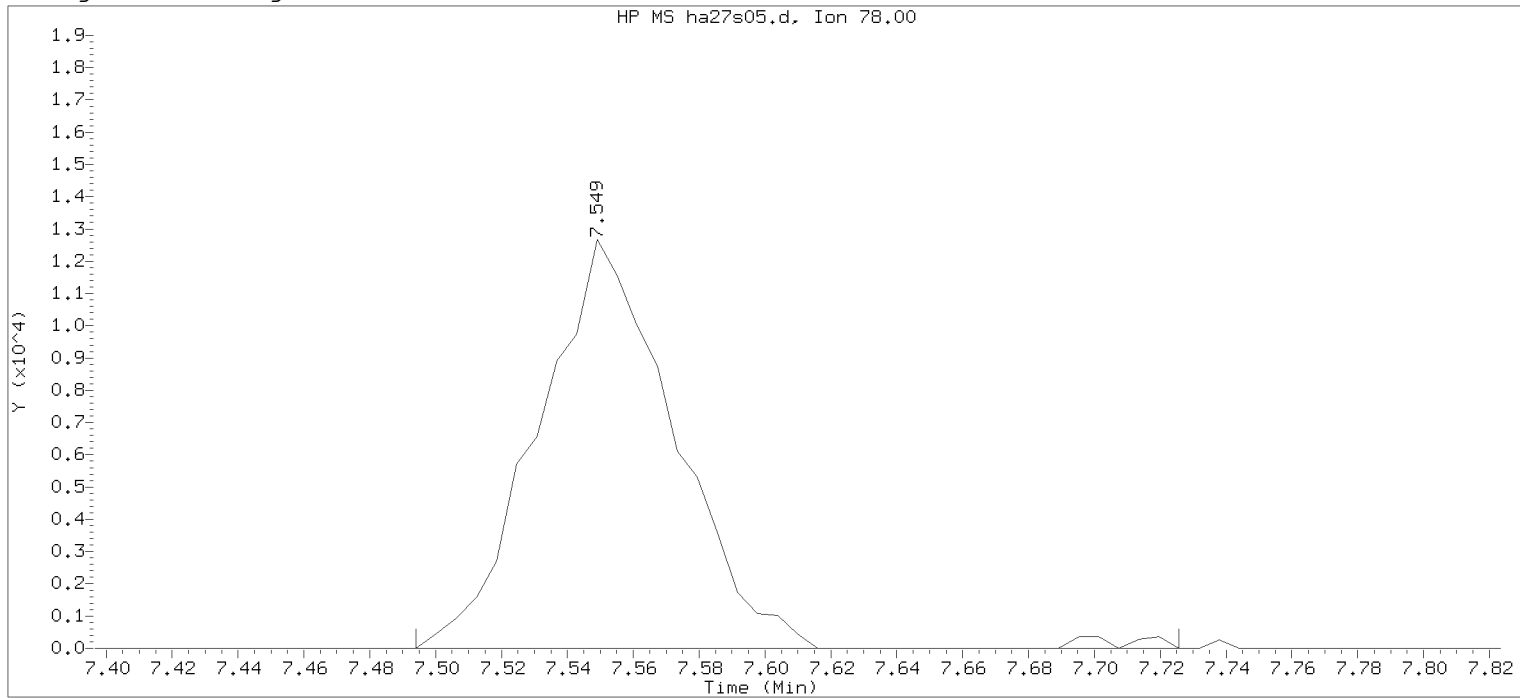
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 23:43

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:01 Automation

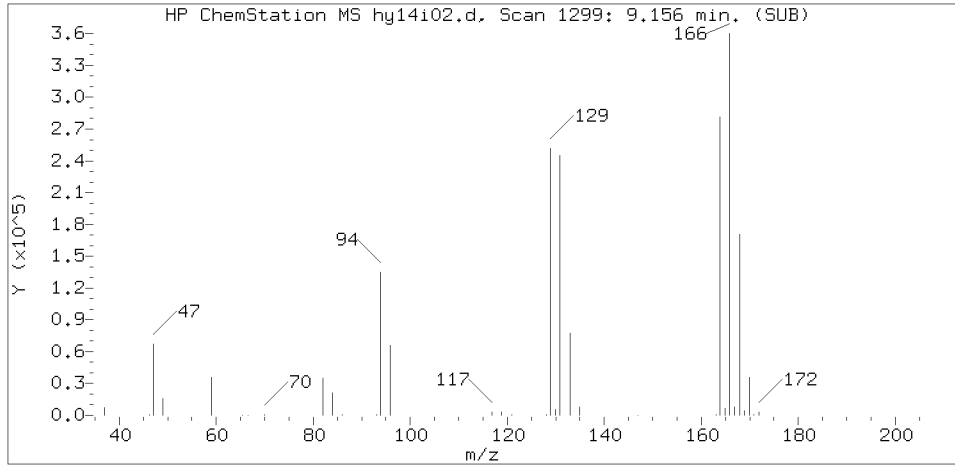
Sample Name: 59R04

Lab Sample ID: 1300797

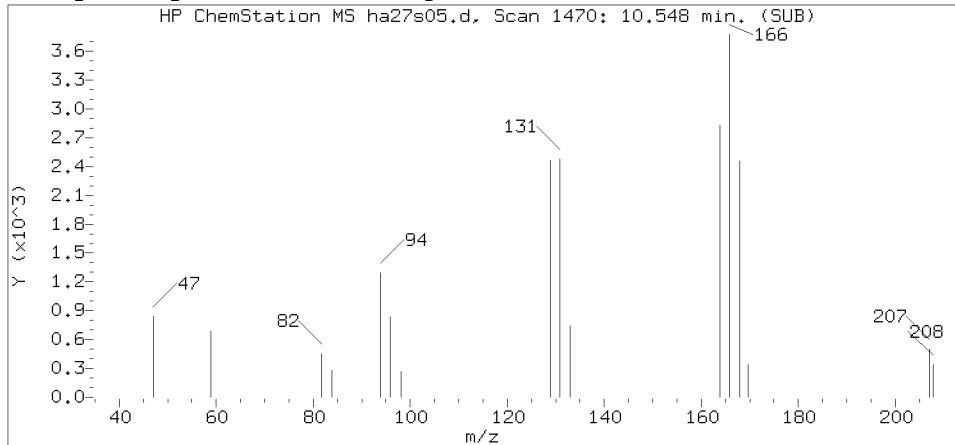
Compound Number : 59
 Compound Name : Benzene
 Scan Number : 978
 Retention Time (minutes): 7.549
 Quant Ion : 78.00
 Area : 36661
 On-column Amount (ng) : 0.2085
 Integration start scan : 968
 Y at integration start : 0

Integration stop scan: 1006
 Y at integration end: 0

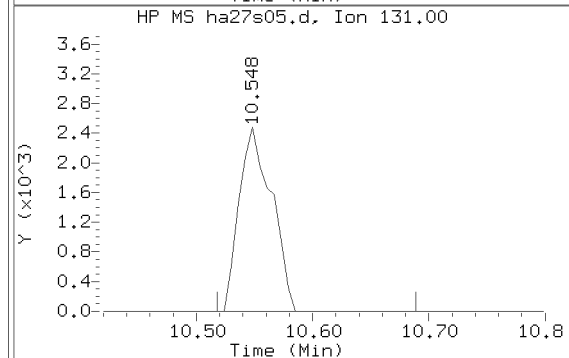
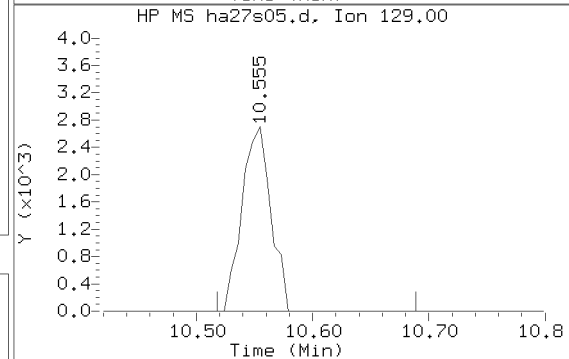
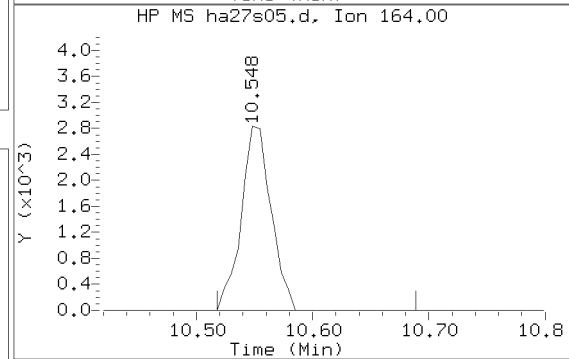
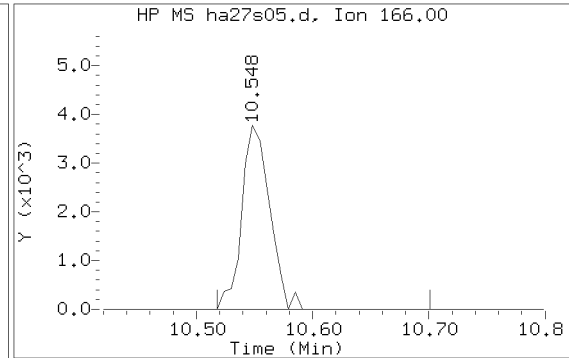
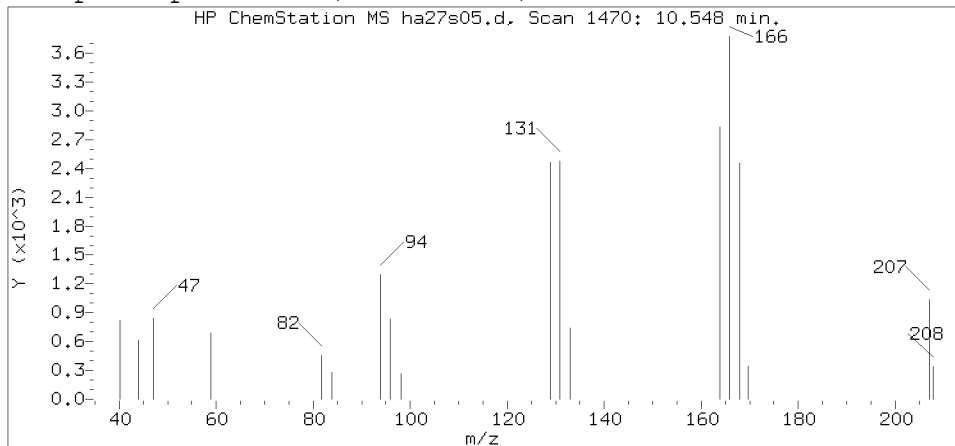
Reference Standard Spectrum for Tetrachloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s05.d
Injection date and time: 27-APR-2020 23:43

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04

Lab Sample ID: 1300797

Compound Number : 90
Compound Name : Tetrachloroethene
Scan Number : 1470
Retention Time (minutes): 10.548
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 6239
On-Column Amount (ng) : 0.1011

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

59R05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300800

Data file: /chem2/HP09355.i/20apr28b.b/ya28s51.d

Injection date and time: 29-APR-2020 01:57

Data file Sample Info. Line: 59R05;1300800;1;0;;RAF59;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 02:14 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.362 (-0.018)	457	65	392761 (3)	250.00	
66) Fluorobenzene	7.866 (-0.006)	1033	96	1170701 (-5)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	899182 (-7)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	488171 (-10)	50.00	

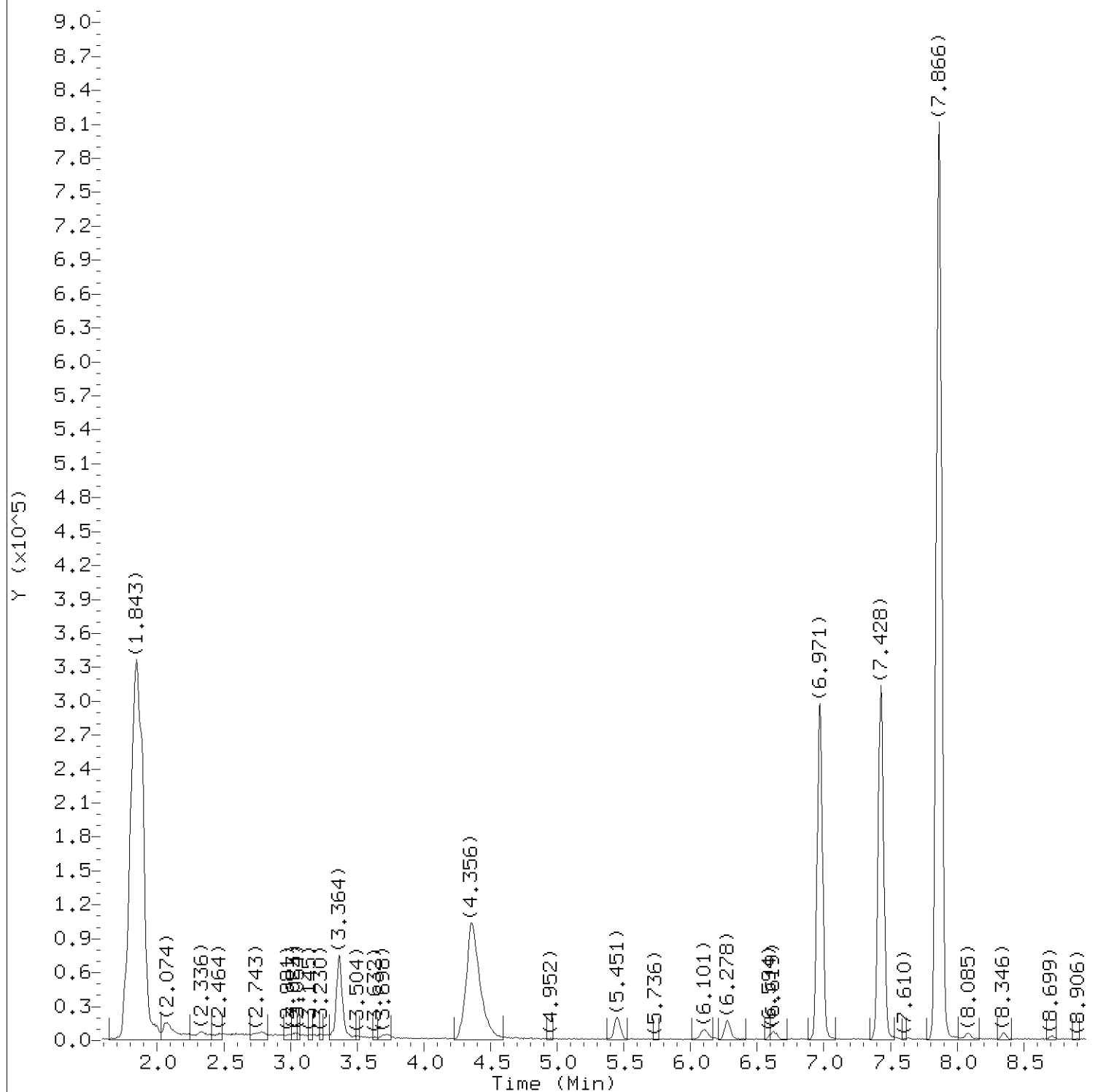
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.971 (0.000)	113	273843	51.500	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428 (0.001)	102	72350	51.595	103%		80 - 120
83) Toluene-d8	(3)	9.861 (-0.001)	98	1126764	47.988	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.295 (0.000)	95	420283	47.241	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
21) 2-Propanol	(1)			Not Detected					18 100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:31. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:46. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s51.d
Injection date and time: 29-APR-2020 01:57

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

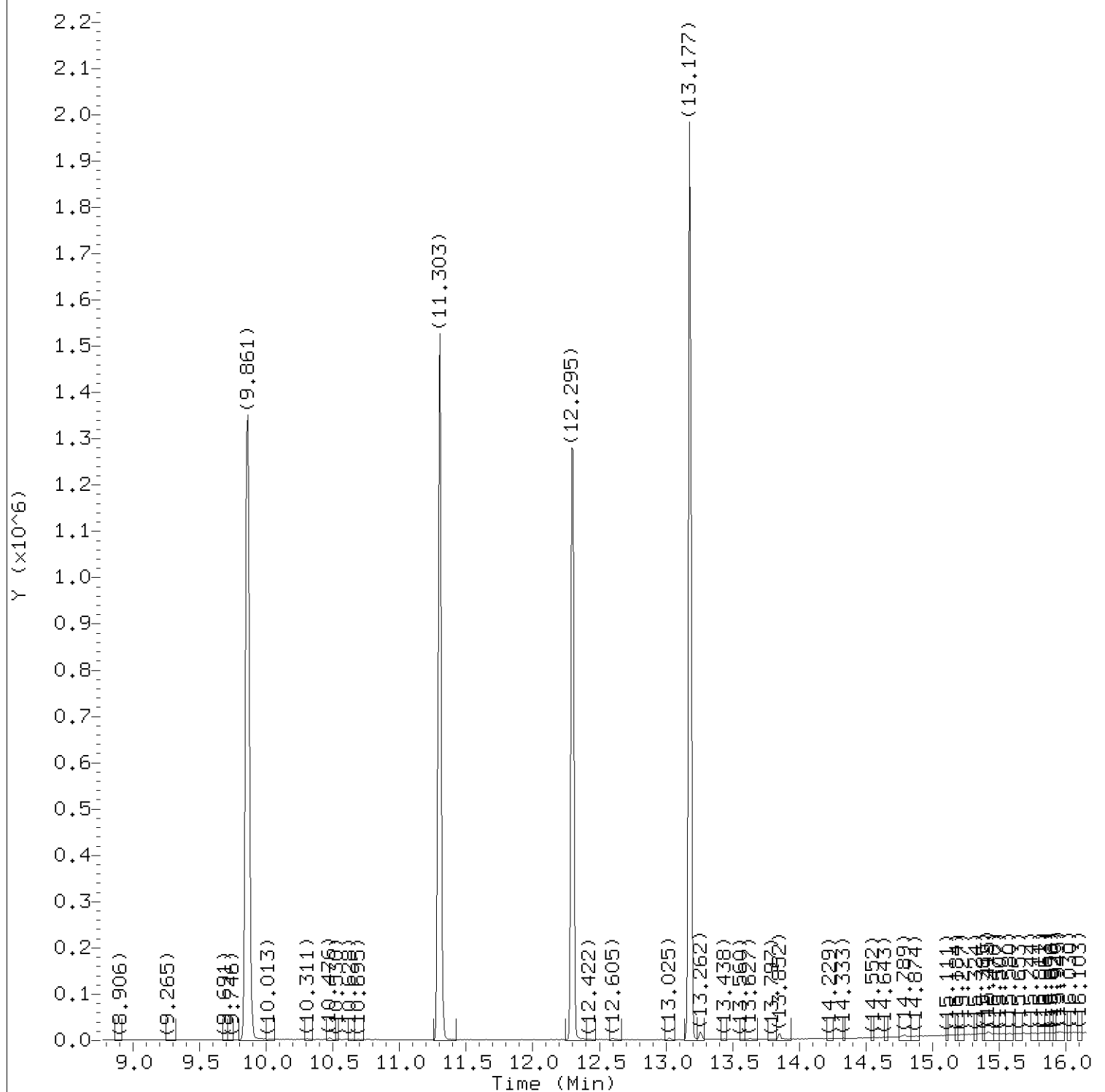
Date, time and analyst ID of latest file update: 29-Apr-2020 02:14 Automation

Sample Name: 59R05

Lab Sample ID: 1300800

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s51.d
Injection date and time: 29-APR-2020 01:57

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 02:14 Automation

Sample Name: 59R05

Lab Sample ID: 1300800

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s51.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 01:57

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 02:14 Automation

Sample Name: 59R05

Lab Sample ID: 1300800

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.362	65	392761	250.000
52) \$Dibromofluoromethane	(2)	6.971	113	273843	51.500
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	72350	51.595
66) *Fluorobenzene	(2)	7.866	96	1170701	50.000
83) \$Toluene-d8	(3)	9.861	98	1126764	47.988
100) *Chlorobenzene-d5	(3)	11.303	117	899182	50.000
114) \$4-Bromofluorobenzene	(3)	12.295	95	420283	47.241
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	488171	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203

59R05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300800

Data file: /chem2/HP19094.i/20apr27a.b/ha27s10.d Injection date and time: 28-APR-2020 01:31
 Data file Sample Info. Line: 59R05;1300800;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
 Calibration date and time (Last Method Edit): 28-APR-2020 22:26
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9274; 9159-ND; 9179

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (-0.006)	470	65	127270M (-3)	50.00	
64) Fluorobenzene	7.958 (-0.006)	1045	96	1619878 (-4)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1456406 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	799926 (-3)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.067 (0.000)	113	453586	11.264	113%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.001)	102	86937	11.140	111%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1757709	9.058	91%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	686052	9.557	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.148 (-0.000)	45	72640M	1.346	1.35		J	0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)	2.392 (0.000)	62	9942	0.174	0.17		J	0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.836 (0.000)	64	52652	1.594	1.59			0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.428 (-0.001)	59	473539	16.444	16.44			1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)	5.549 (-0.000)	63	275844	3.512	3.51			0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)			Not Detected					2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1

M = Compound was manually integrated.

59R05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300800

Data file: /chem2/HP19094.i/20apr27a.b/ha27s10.d Injection date and time: 28-APR-2020 01:31
Data file Sample Info. Line: 59R05;1300800;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 22:26
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

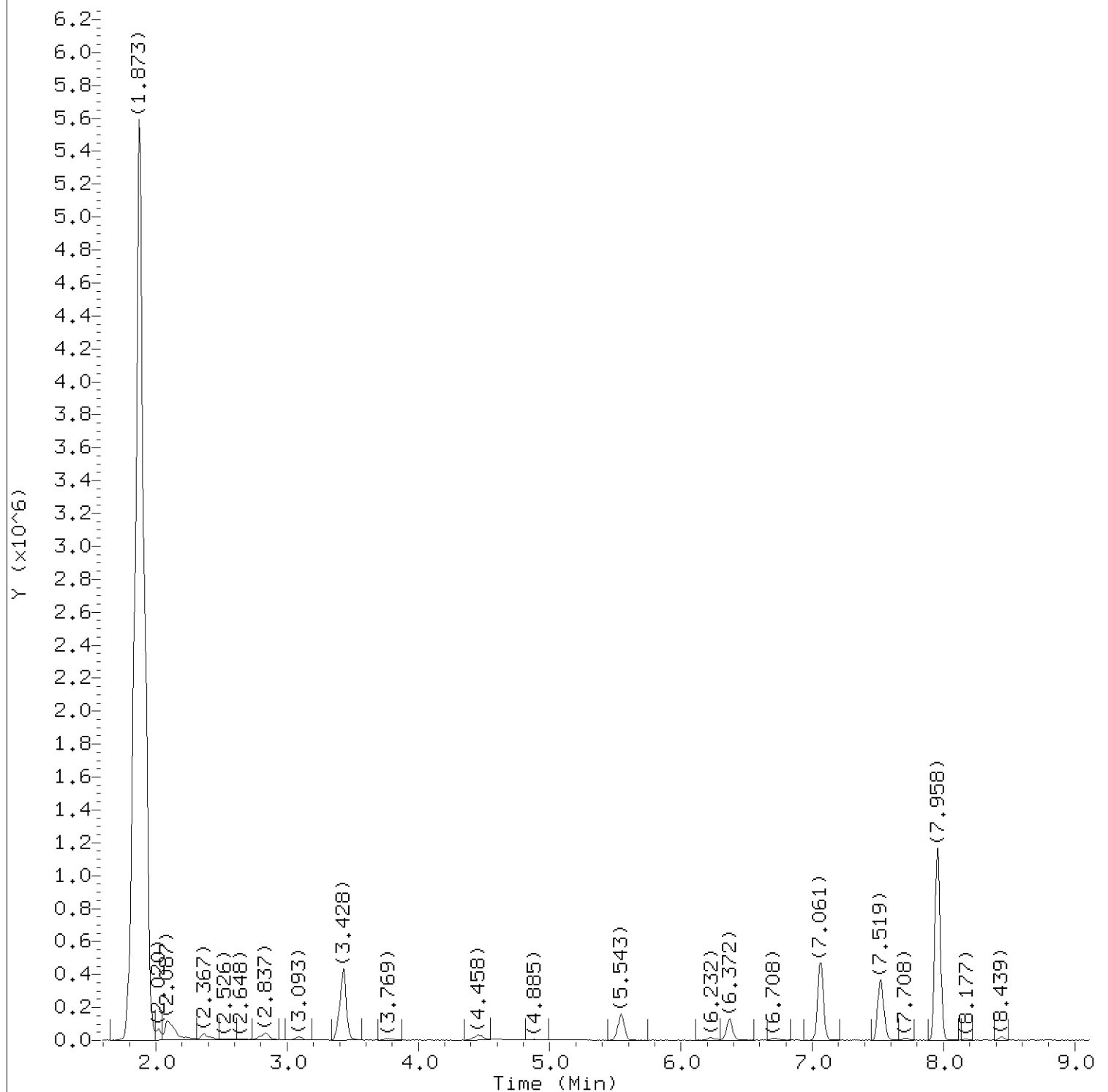
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
57) Isobutyl Alcohol	(1)			Not Detected					4	200
59) Benzene	(2)	7.555 (-0.000)	78	42948	0.244	0.24		J	0.07	1
60) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
68) Trichloroethene	(2)			Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
72) Methyl Methacrylate	(1)			Not Detected					4	10
74) Dibromomethane	(2)			Not Detected					0.07	1
73) 1,4-Dioxane	(1)			Not Detected					45	200
75) Bromodichloromethane	(2)			Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)			Not Detected					0.9	10
84) Toluene	(3)			Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
87) Ethyl Methacrylate	(3)			Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)			Not Detected					0.08	1
90) Tetrachloroethene	(3)	10.554 (-0.000)	166	8173	0.132	0.13		J	0.06	1
91) 1,3-Dichloropropane	(3)			Not Detected					0.09	1
92) 2-Hexanone	(1)			Not Detected					0.6	10
94) Dibromochloromethane	(3)			Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)			Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.08	1
101) Ethylbenzene	(3)			Not Detected					0.08	1
102) m+p-Xylene	(3)			Not Detected					0.1	2
105) o-Xylene	(3)			Not Detected					0.1	1
106) Xylene (Total)	(3)			Not Detected					0.2	3
107) Styrene	(3)			Not Detected					0.07	1
108) Bromoform	(3)			Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.1	1
127) Pentachloroethane	(4)			Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)			Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)			Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)			Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
147) Hexachlorobutadiene	(4)			Not Detected					0.07	1
148) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m
Calibration date and time: 28-APR-2020 22:26

Sublist used: 27091

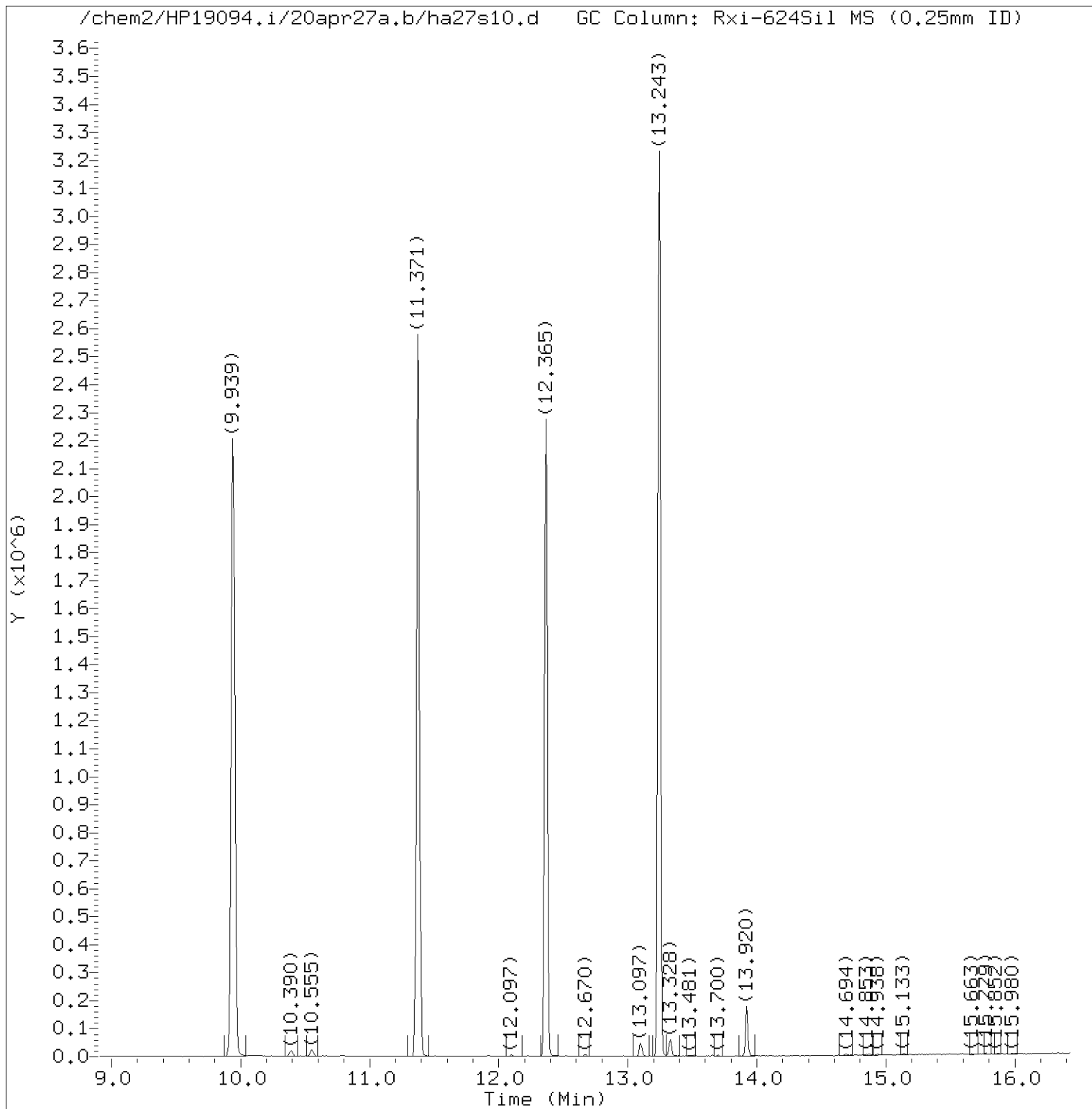
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R05

Lab Sample ID: 1300800

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R05

Lab Sample ID: 1300800

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:31

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R05

Lab Sample ID: 1300800

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	72640M	1.346
5) Vinyl Chloride	(2)	2.392	62	9942	0.174
8) Chloroethane	(2)	2.837	64	52652	1.594
11) Ethyl ether	(2)	3.428	59	473539	16.444
27) *t-Butyl Alcohol-d10	(1)	4.452	65	127270M	50.000
34) 1,1-Dichloroethane	(2)	5.549	63	275844	3.512
51) \$Dibromofluoromethane	(2)	7.067	113	453586	11.264
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	86937	11.140
59) Benzene	(2)	7.555	78	42948	0.244
64) *Fluorobenzene	(2)	7.958	96	1619878	10.000
83) \$Toluene-d8	(3)	9.939	98	1757709	9.058
90) Tetrachloroethene	(3)	10.555	166	8173	0.132
98) *Chlorobenzene-d5	(3)	11.371	117	1456406	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	686052	9.557
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	799926	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

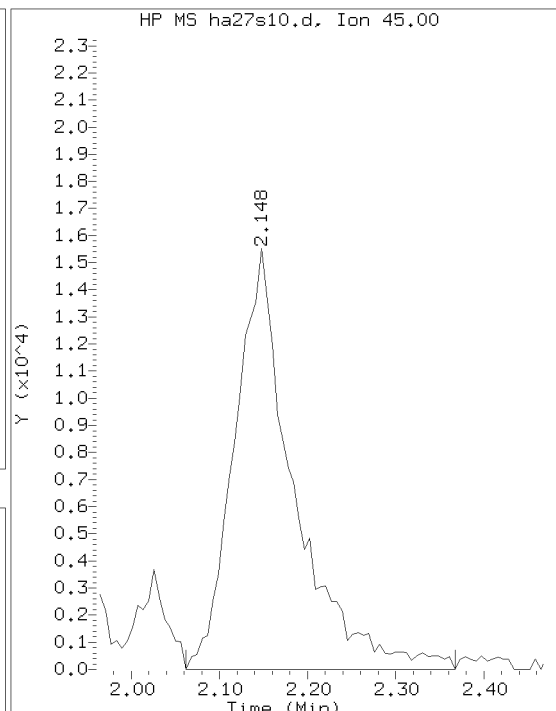
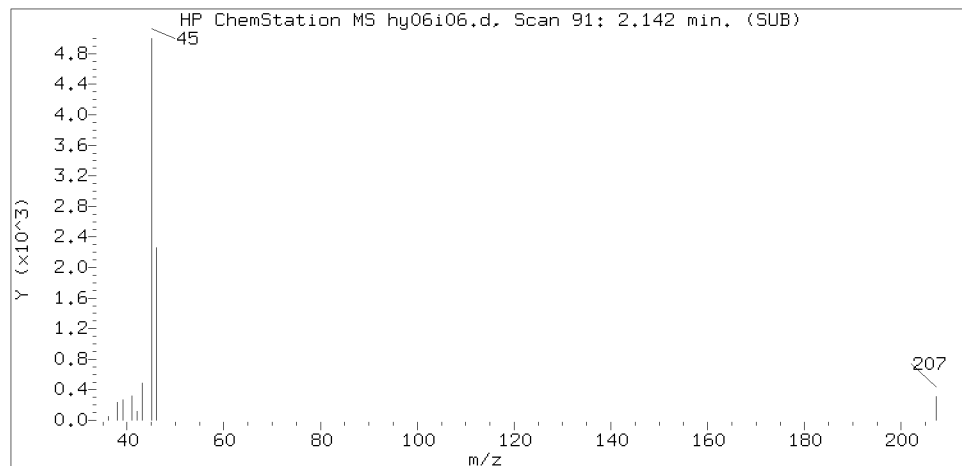
\$ = Compound is a surrogate standard.

page 1 of 1

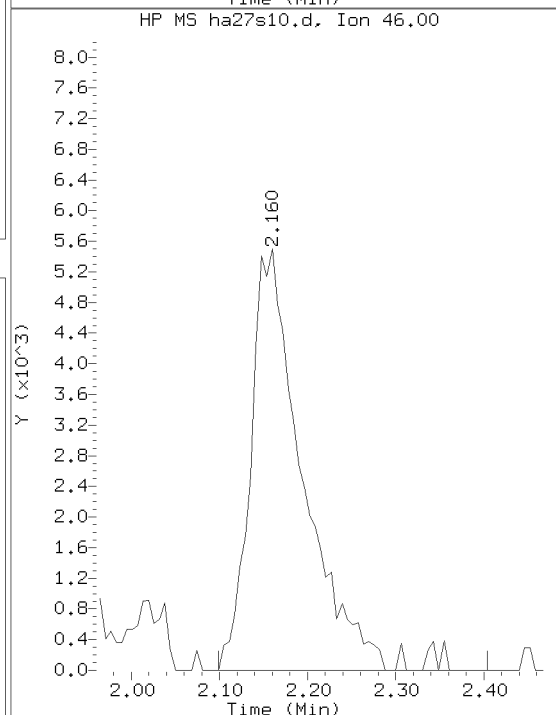
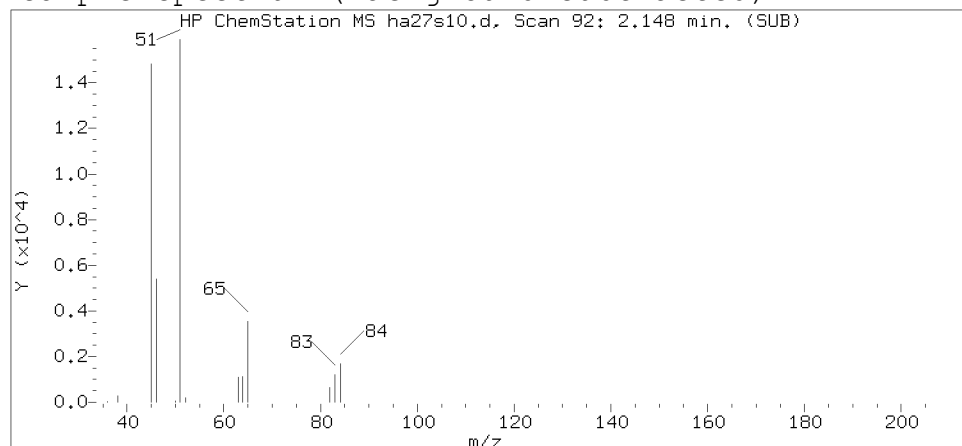
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

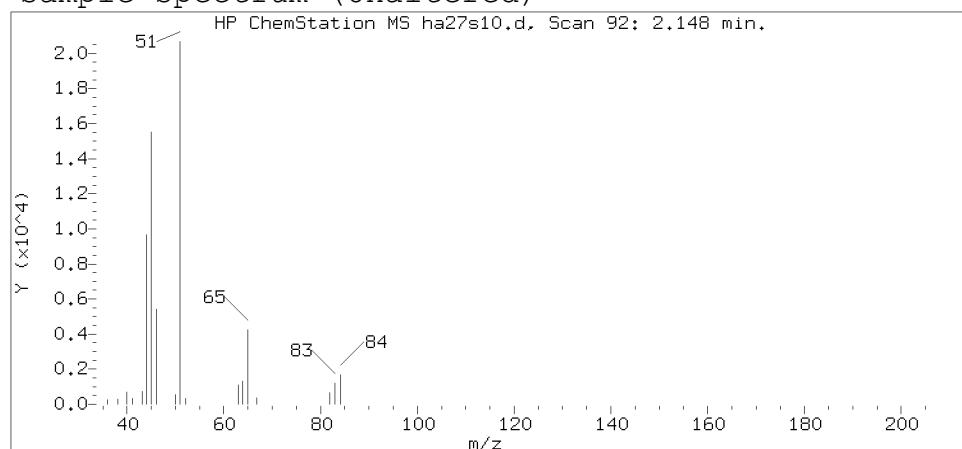
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

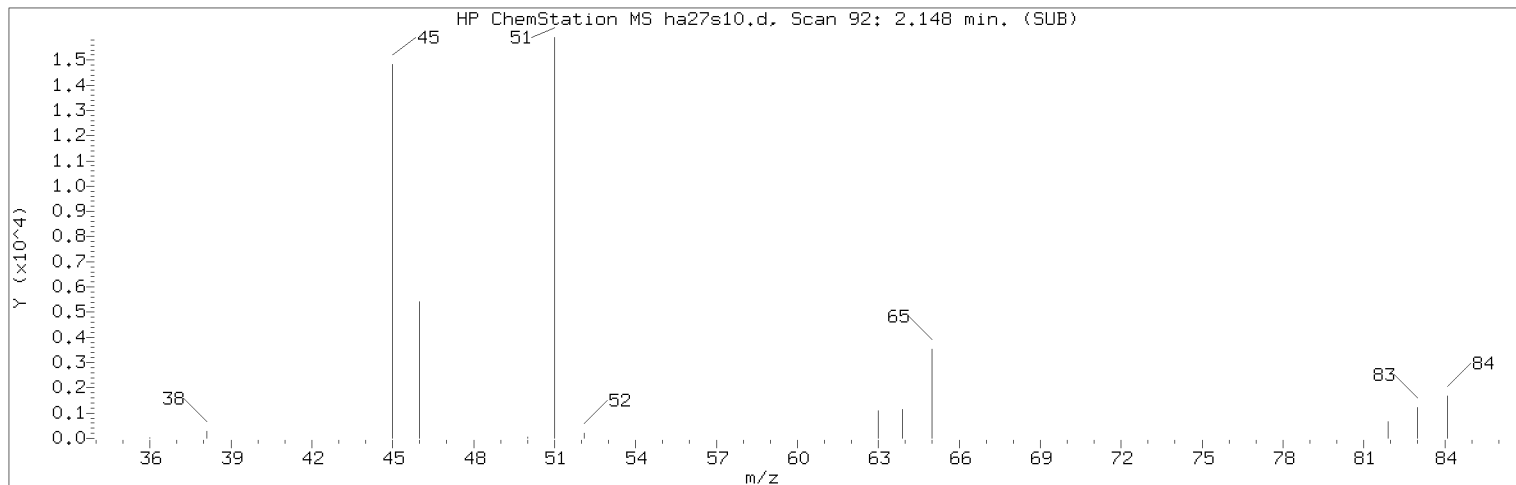
Sample Name: 59R05

Lab Sample ID: 1300800

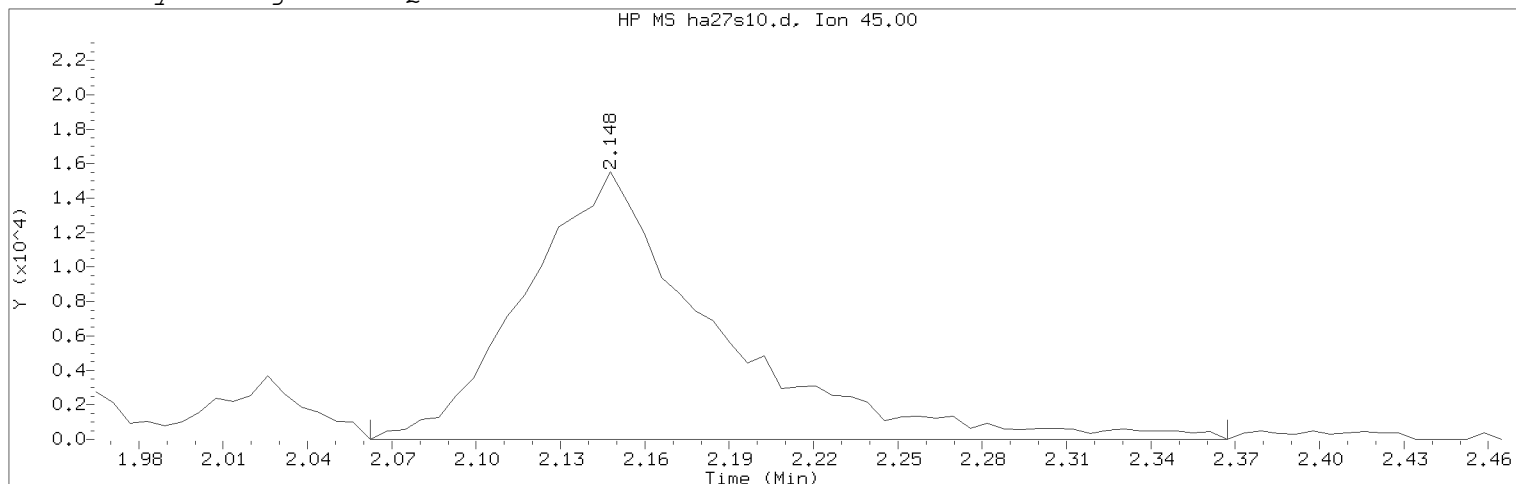
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Relative Retention Time : -0.00056
Quant Ion : 45.00
Area (flag) : 72640M
On-Column Amount (ng) : 1.3461

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:31

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R05

Lab Sample ID: 1300800

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area (flag)	: 72640M	
On-Column Amount (ng)	: 1.3461	
Integration start scan	: 77	Integration stop scan: 127
Y at integration start	: 0	Y at integration end: 0

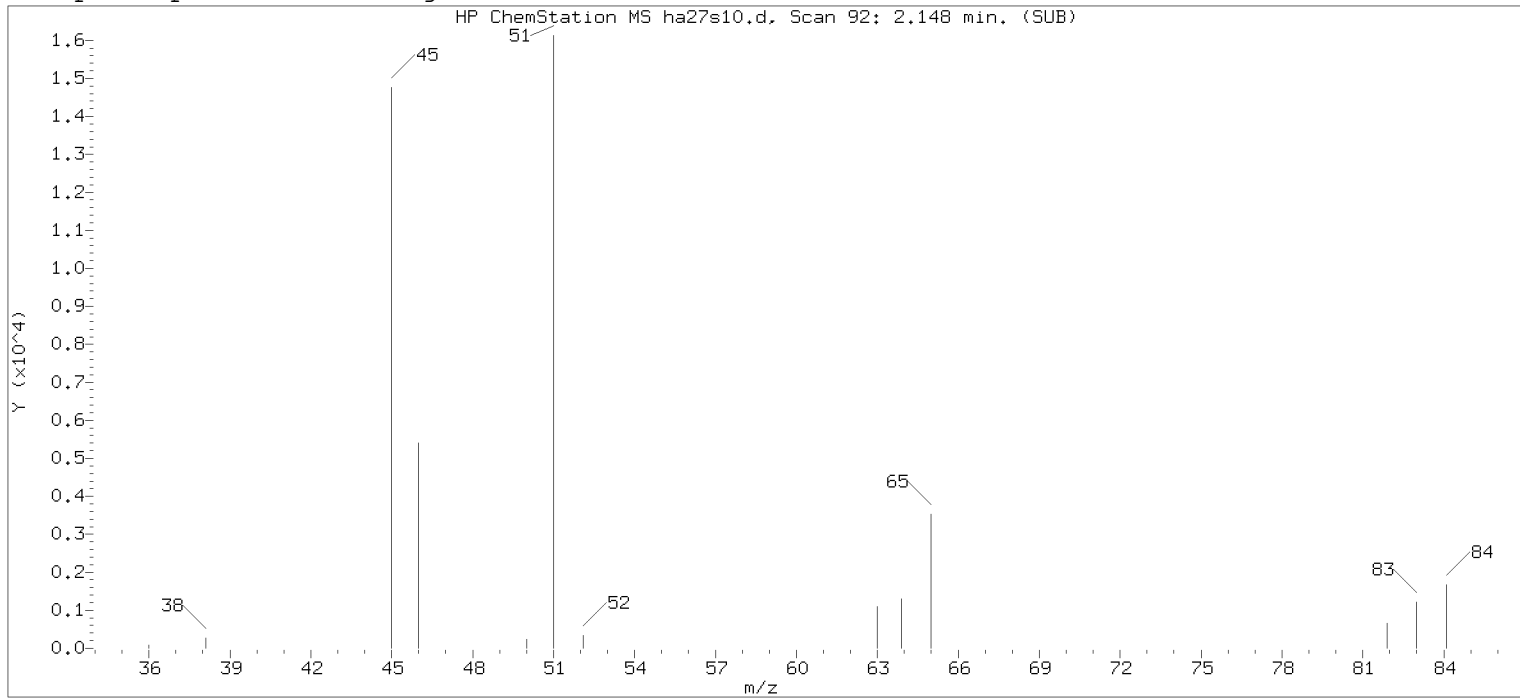
Reason for manual integration: improper integration

Analyst responsible for change:

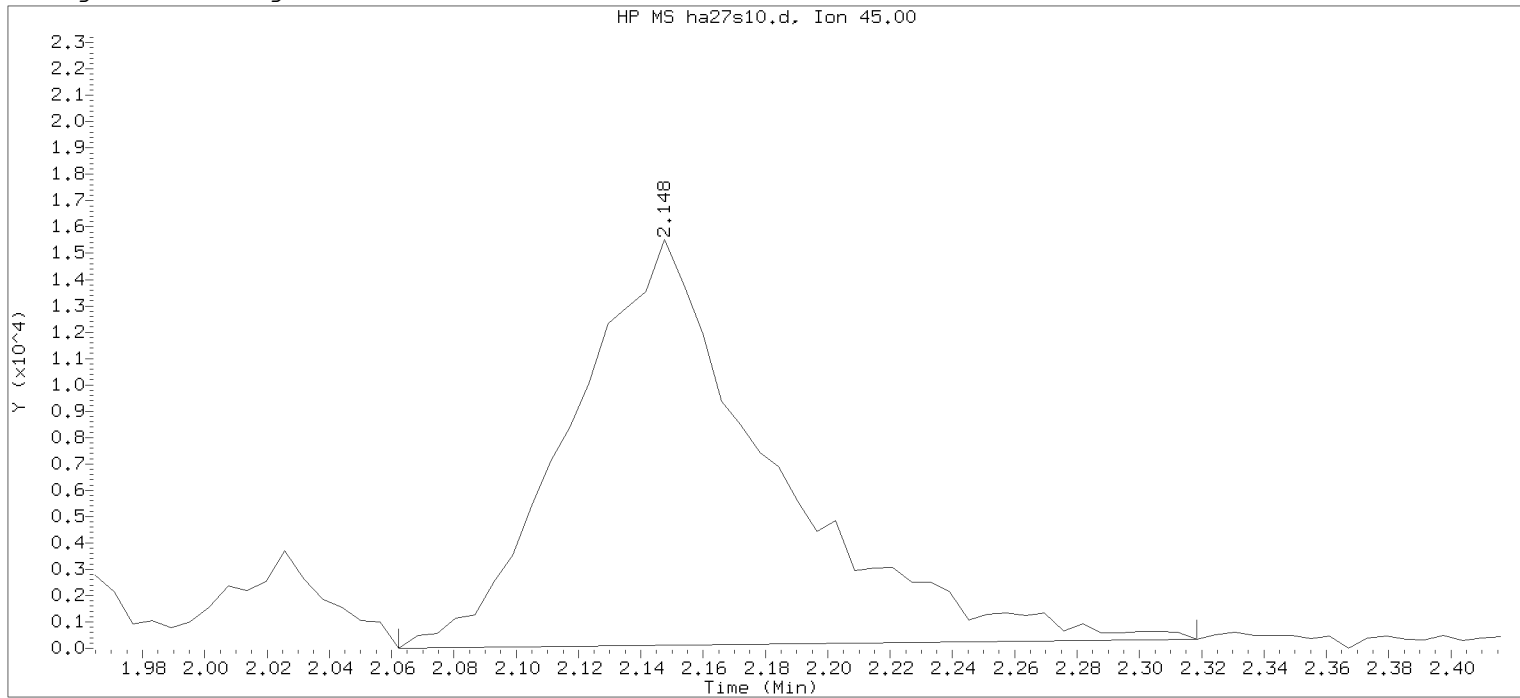
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



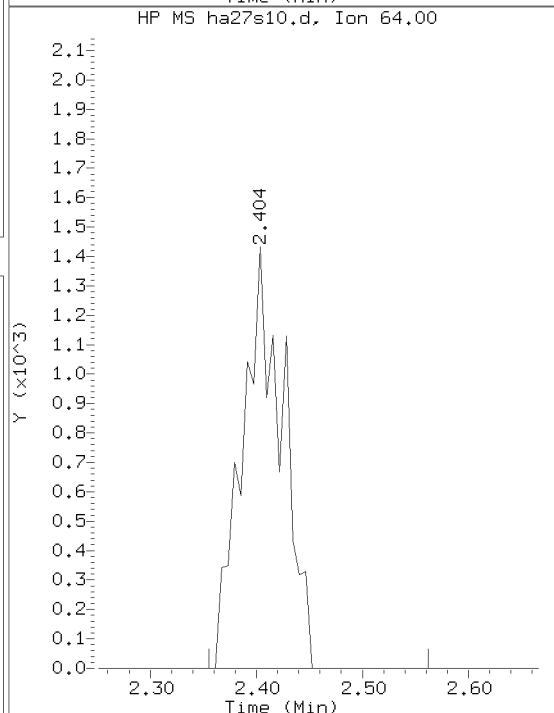
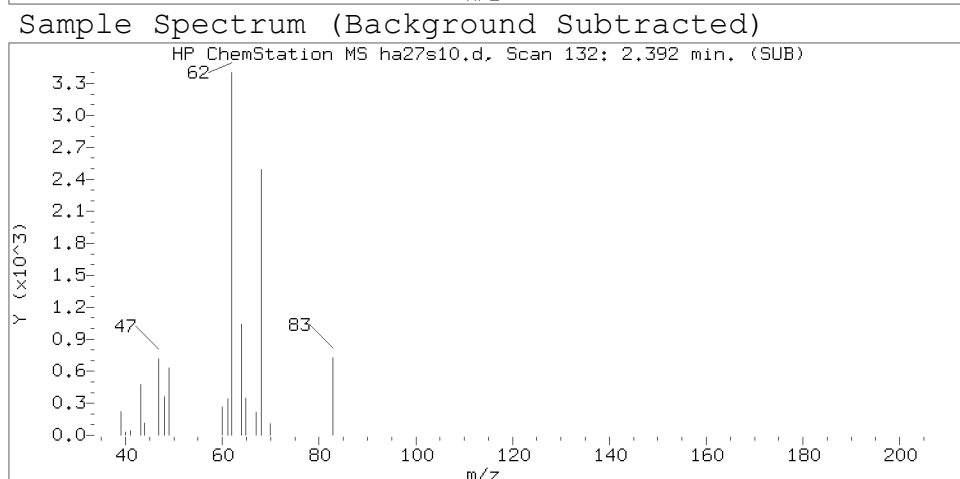
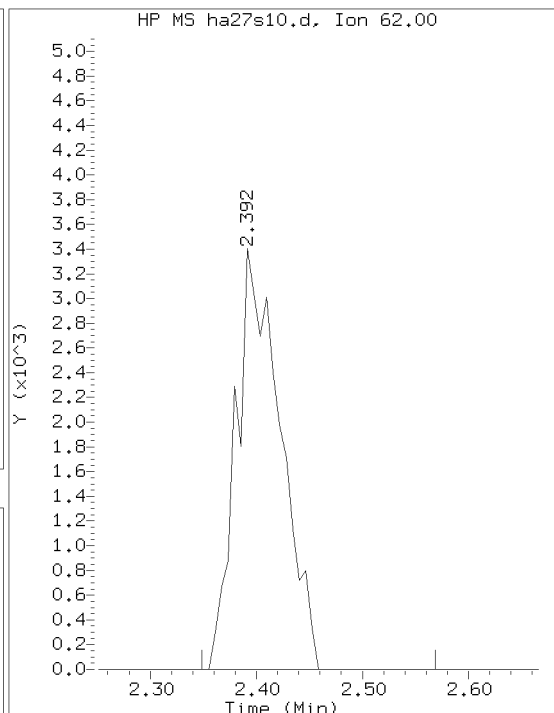
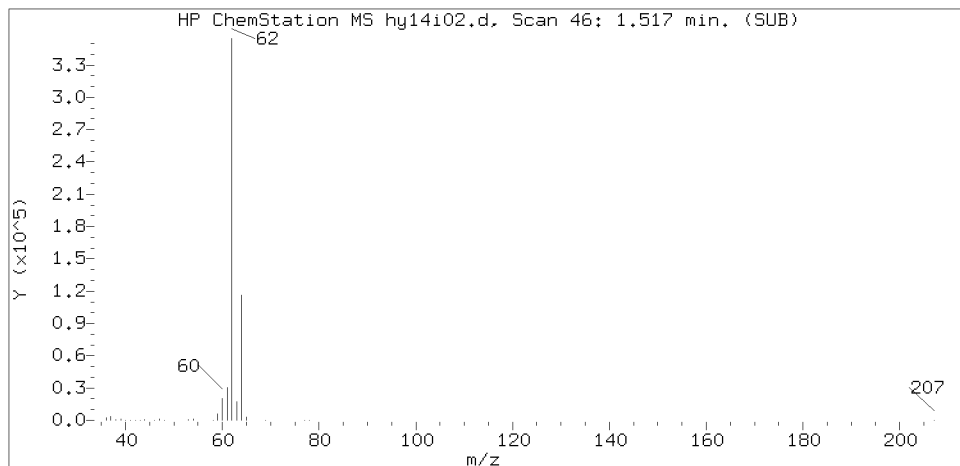
Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 01:31 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 27-APR-2020 22:27
Date, time and analyst ID of latest file update: 28-Apr-2020 01:49 Automation

Sample Name: 59R05 Lab Sample ID: 1300800

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 68698	
On-column Amount (ng)	: 1.2730	
Integration start scan	: 77	Integration stop scan: 119
Y at integration start	: 0	Y at integration end: 342

Reference Standard Spectrum for Vinyl Chloride



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

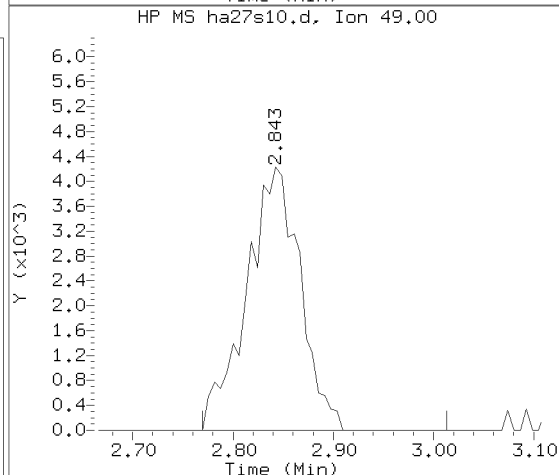
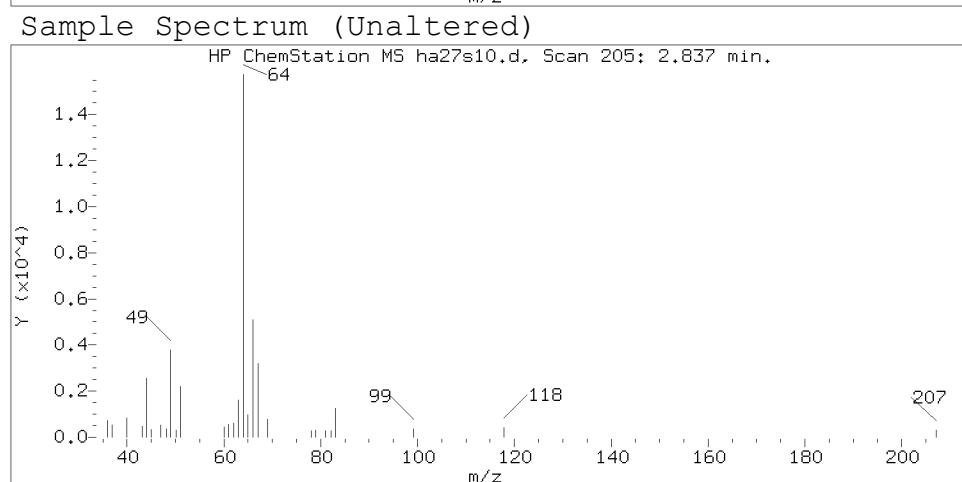
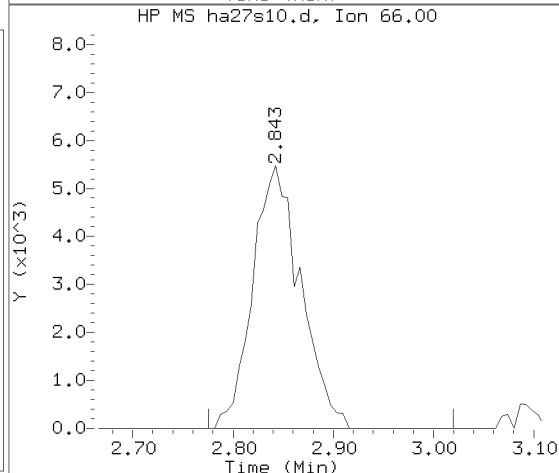
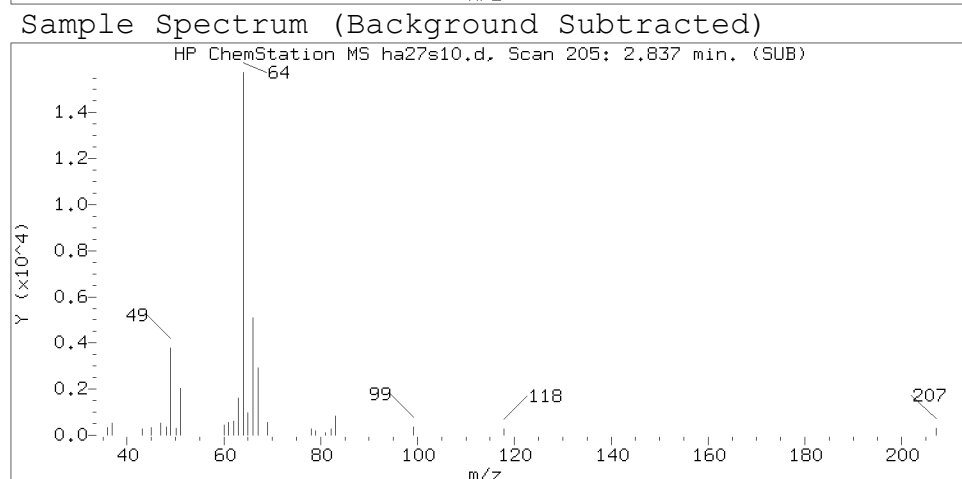
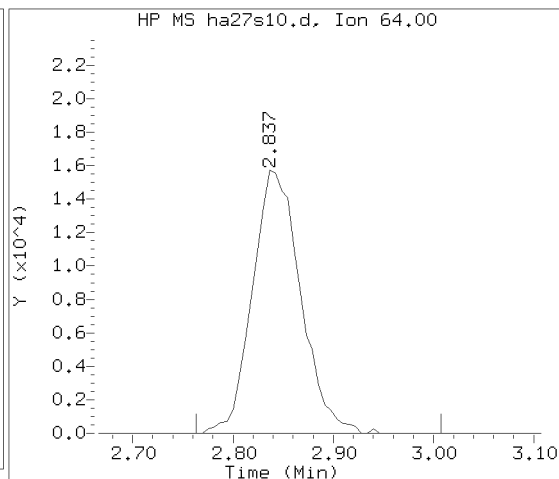
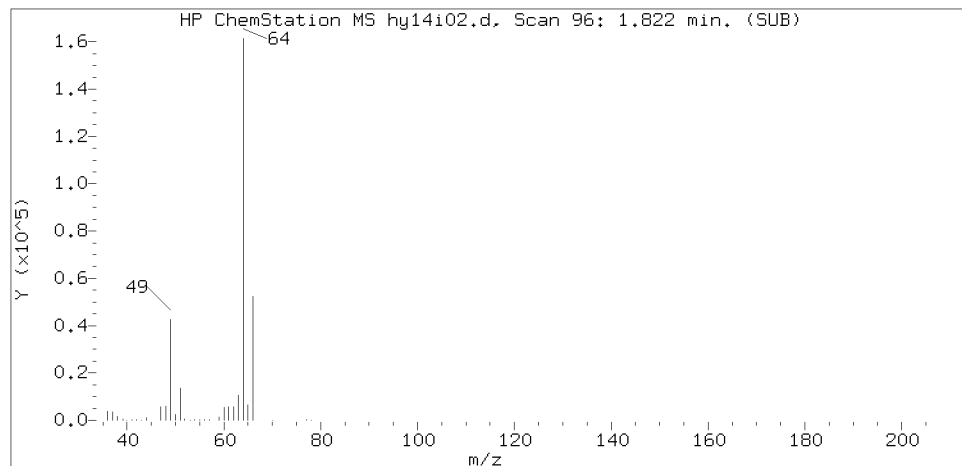
Sample Name: 59R05

Lab Sample ID: 1300800

Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 132
Retention Time (minutes): 2.392
Relative Retention Time : 0.00024
Quant Ion : 62.00
Area (flag) : 9942
On-Column Amount (ng) : 0.1744

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Reference Standard Spectrum for Chloroethane



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

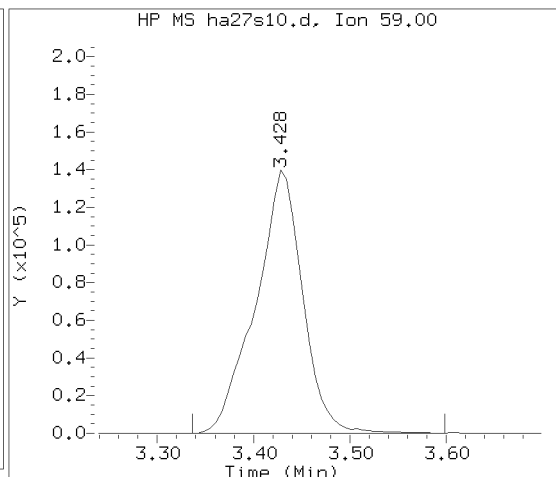
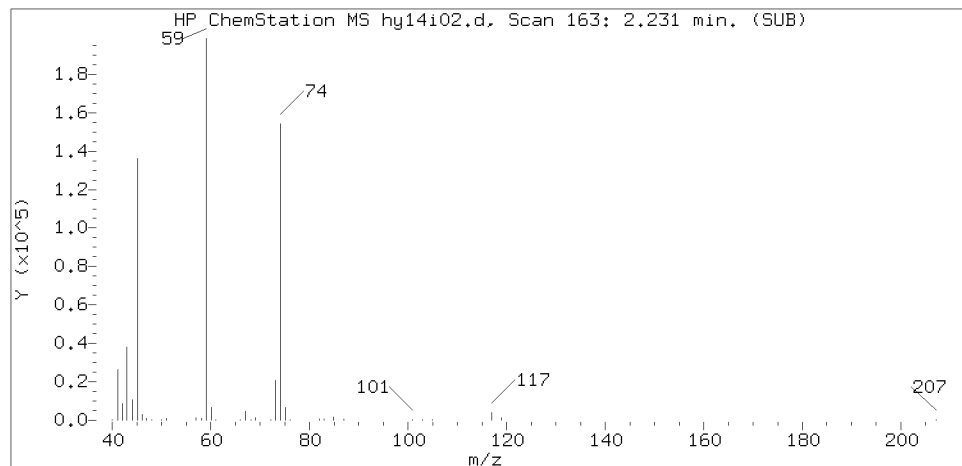
Sample Name: 59R05

Lab Sample ID: 1300800

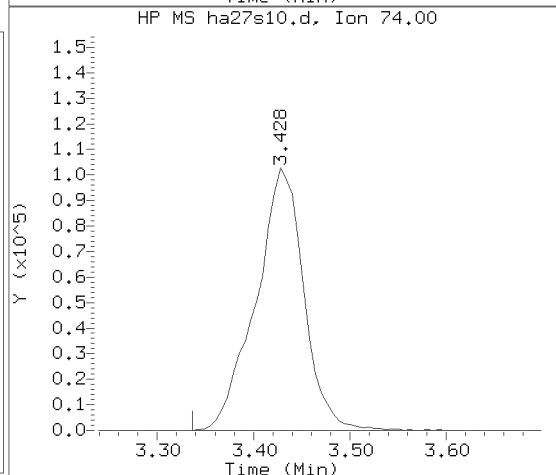
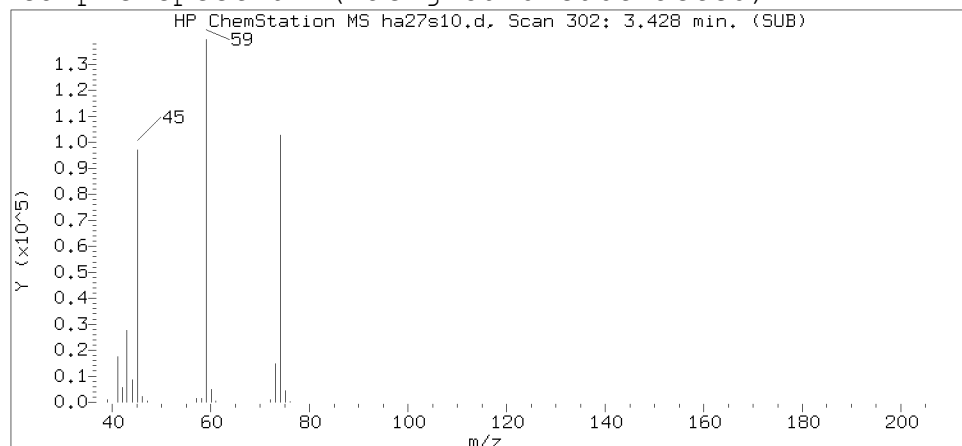
Compound Number : 8
Compound Name : Chloroethane
Scan Number : 205
Retention Time (minutes): 2.837
Relative Retention Time : 0.00028
Quant Ion : 64.00
Area (flag) : 52652
On-Column Amount (ng) : 1.5945

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

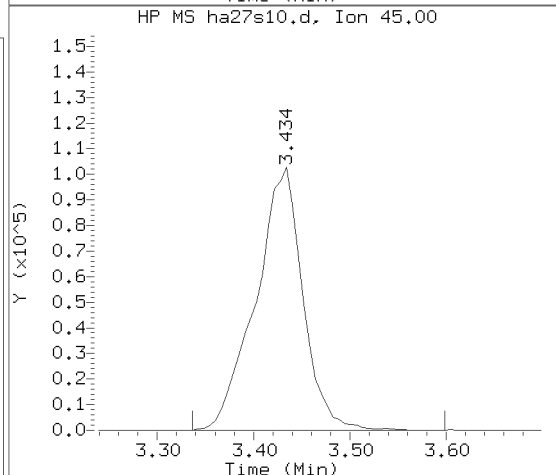
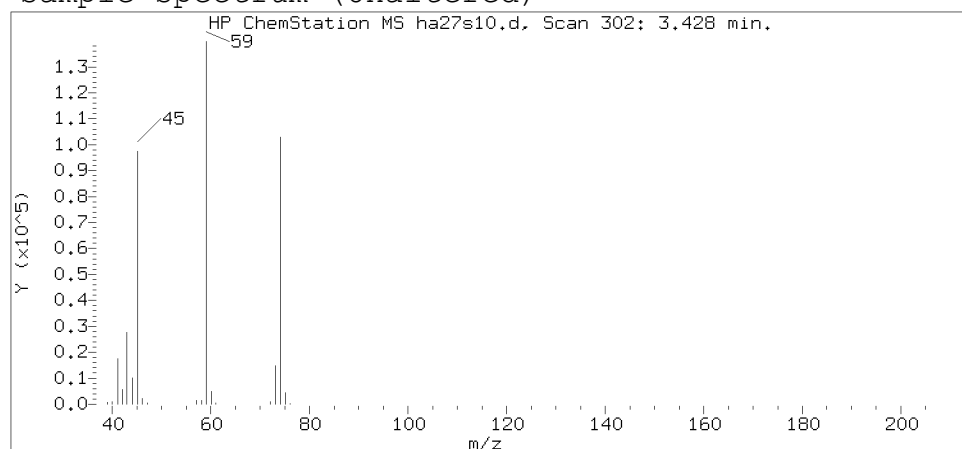
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

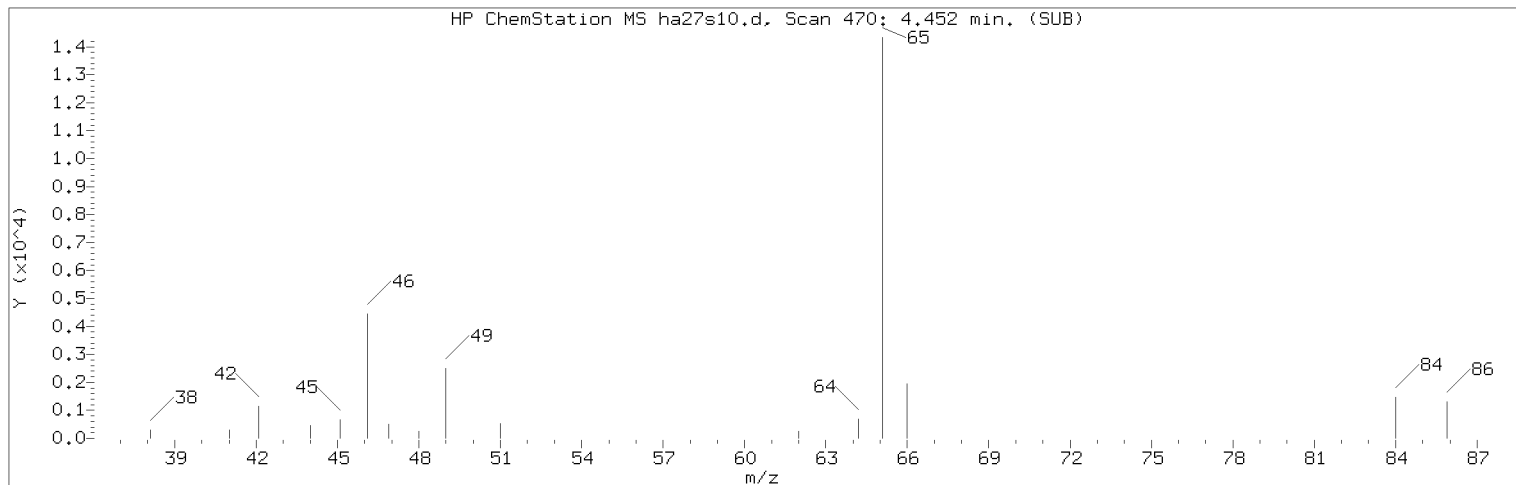
Sample Name: 59R05

Lab Sample ID: 1300800

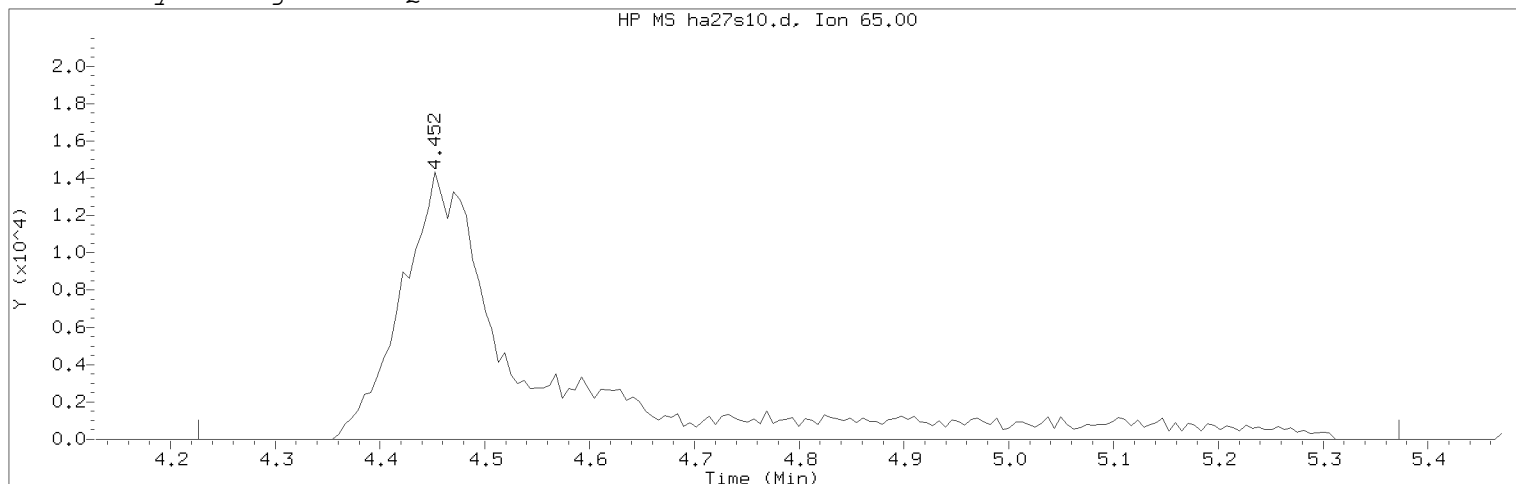
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00120
Quant Ion : 59.00
Area (flag) : 473539
On-Column Amount (ng) : 16.4444

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:31

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R05

Lab Sample ID: 1300800

Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 470	
Retention Time (minutes)	: 4.452	
Quant Ion	: 65.00	
Area (flag)	: 127270M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 432	Integration stop scan: 620
Y at integration start	: 0	Y at integration end: 0

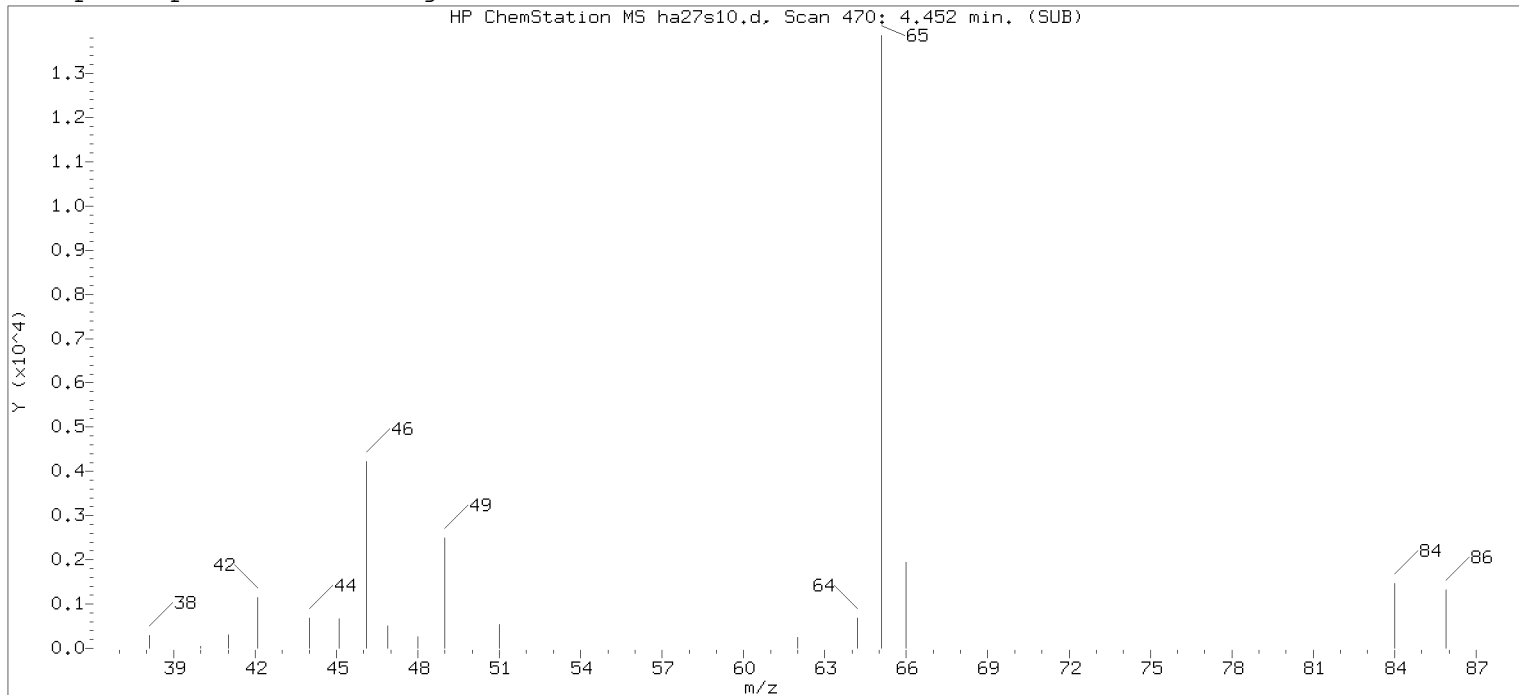
Reason for manual integration: improper integration

Analyst responsible for change:

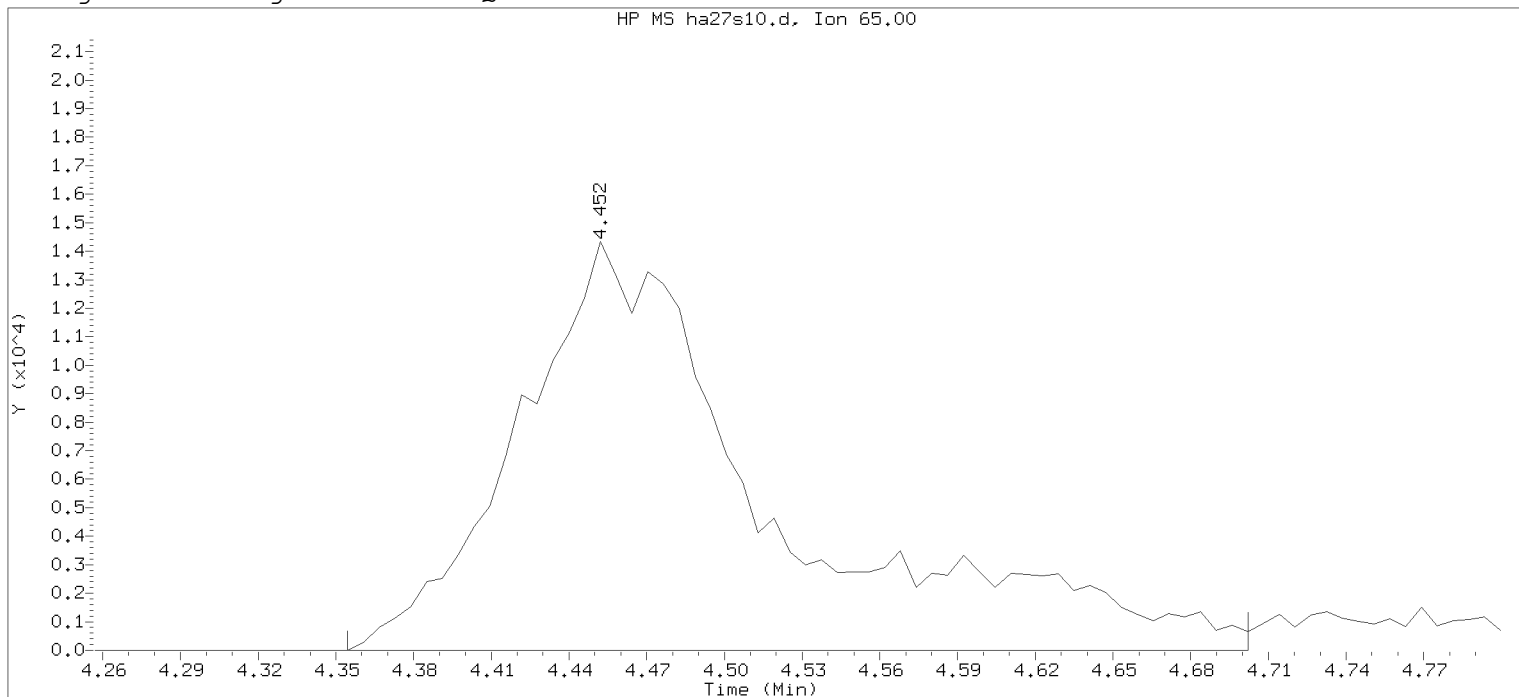
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:31

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 01:49 Automation

Sample Name: 59R05

Lab Sample ID: 1300800

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 470

Retention Time (minutes): 4.452

Quant Ion : 65.00

Area : 96203

On-column Amount (ng) : 50.0000

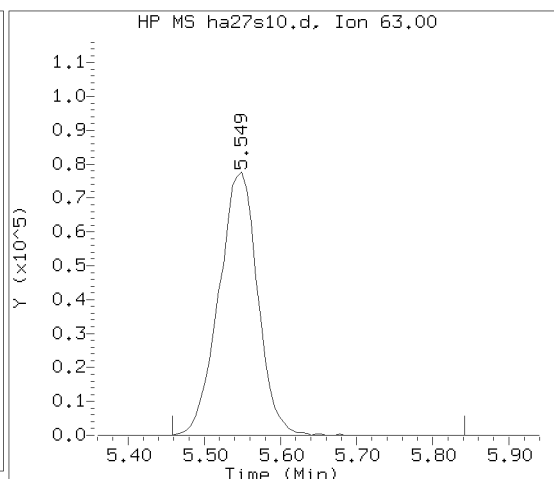
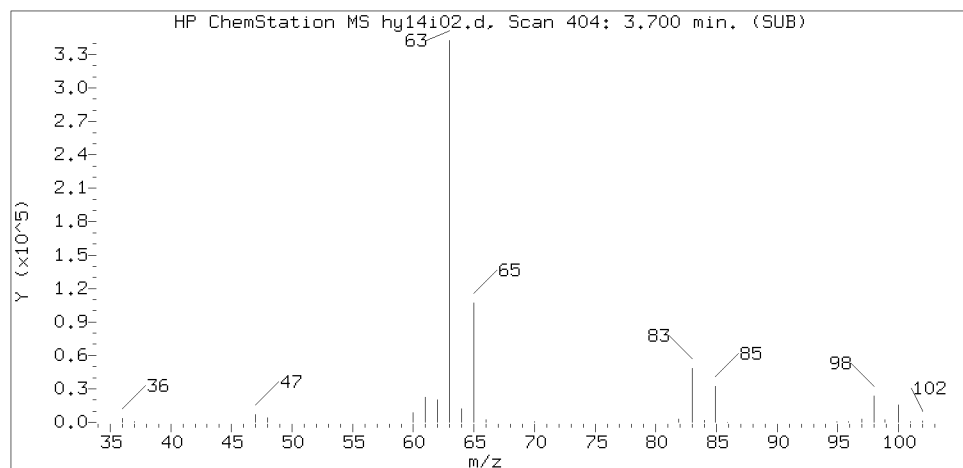
Integration start scan : 453 Integration stop scan: 510

Y at integration start : 0 Y at integration end: 0

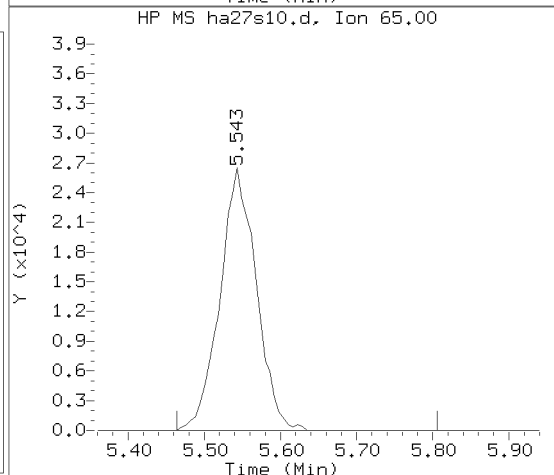
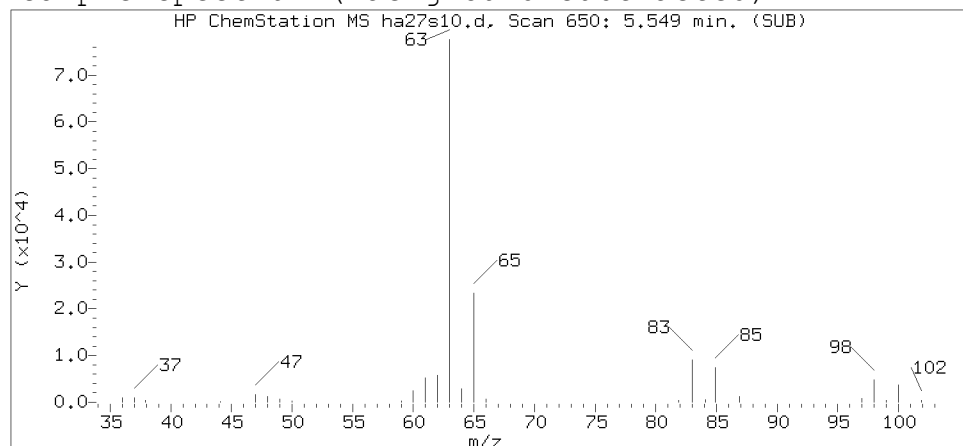
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 305 of 1506

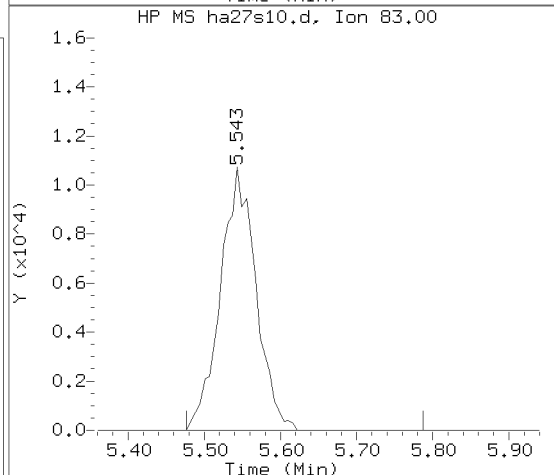
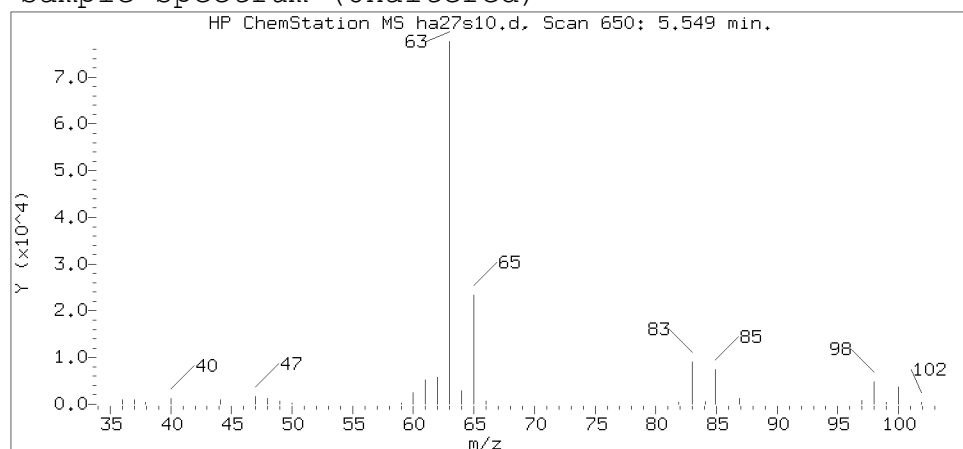
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

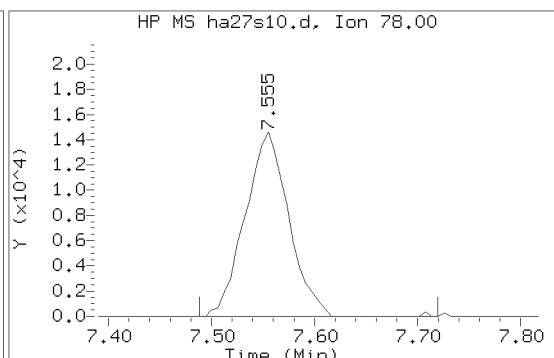
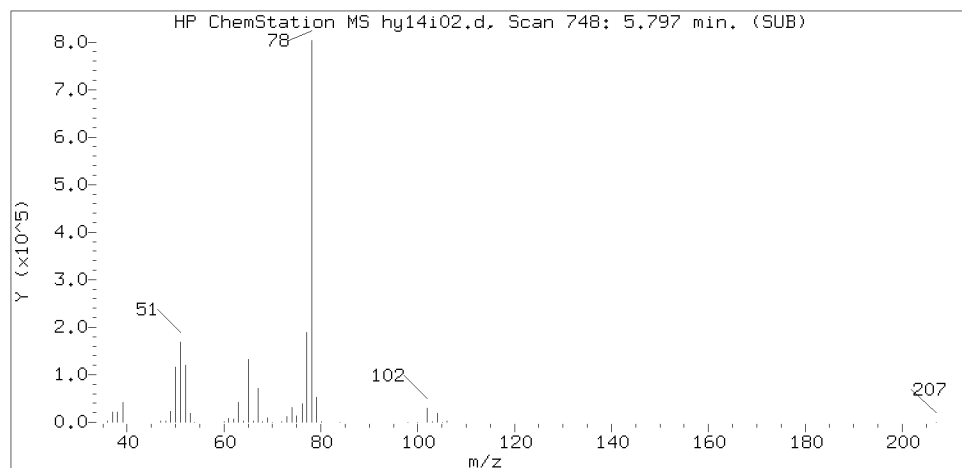
Sample Name: 59R05

Lab Sample ID: 1300800

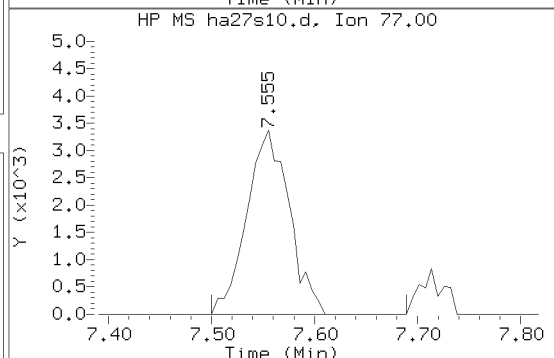
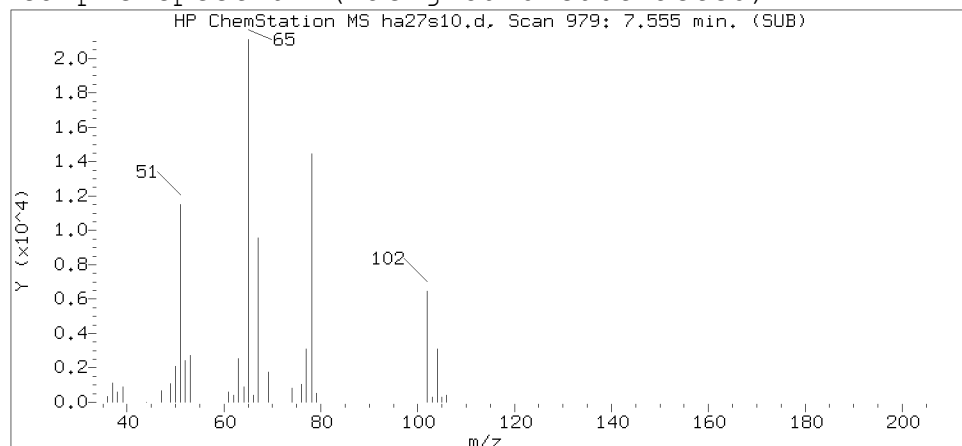
Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 650
Retention Time (minutes): 5.549
Relative Retention Time : -0.00100
Quant Ion : 63.00
Area (flag) : 275844
On-Column Amount (ng) : 3.5119

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

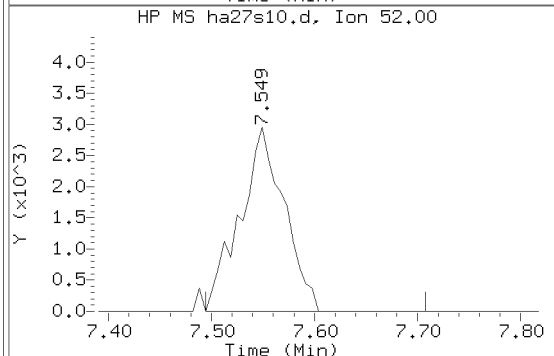
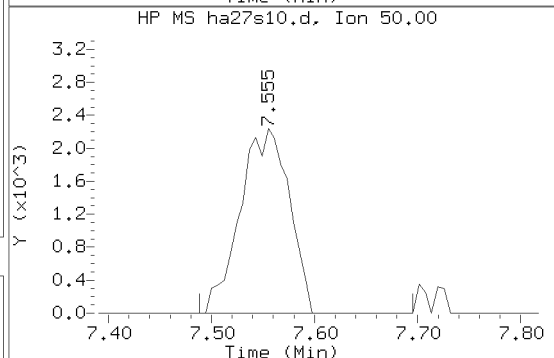
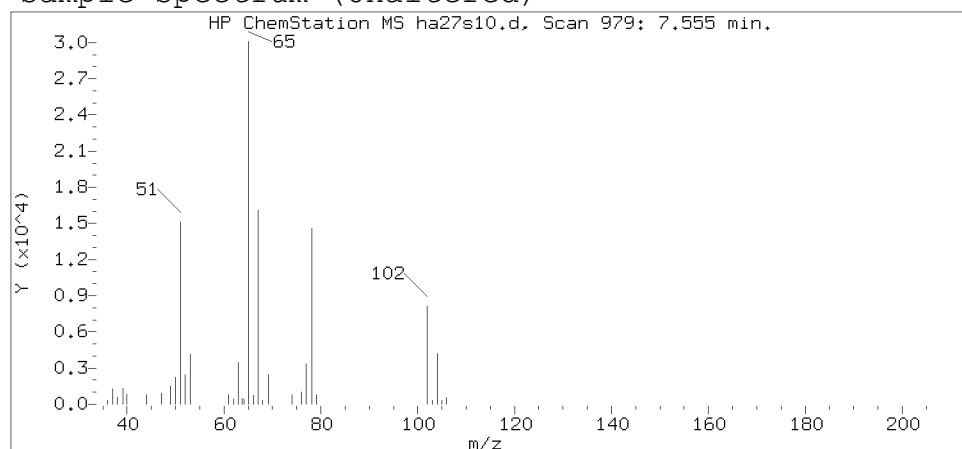
Reference Standard Spectrum for Benzene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

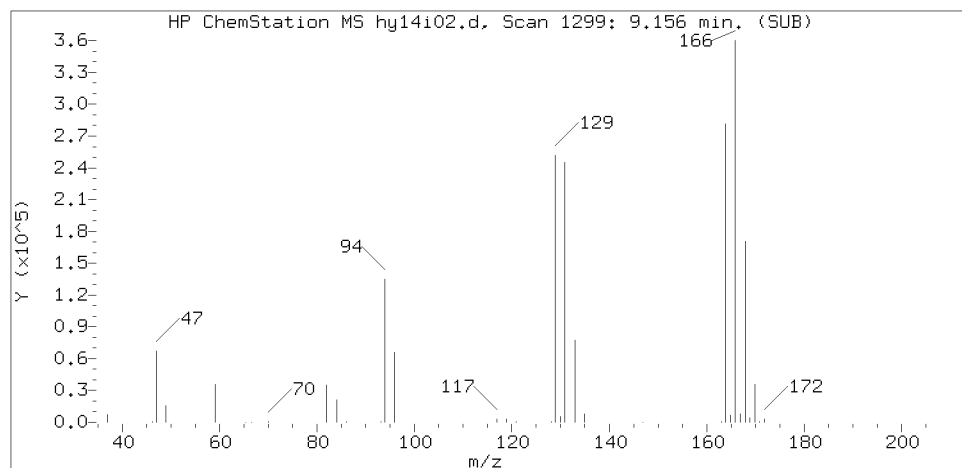
Sample Name: 59R05

Lab Sample ID: 1300800

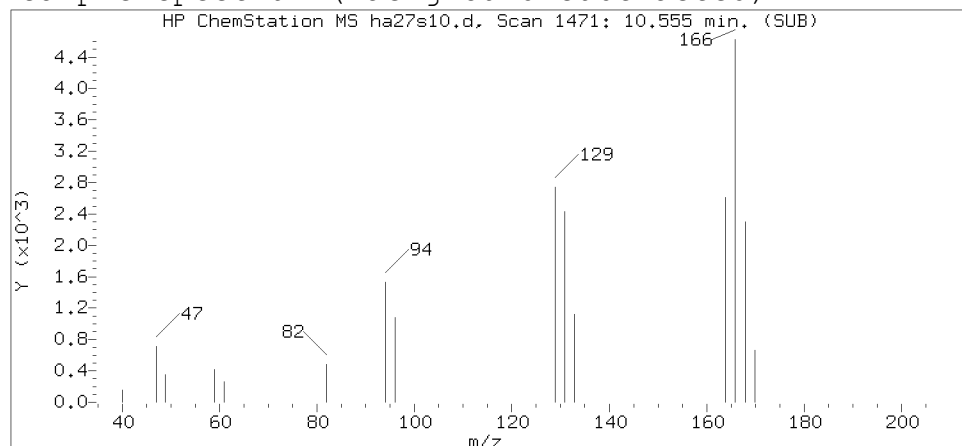
Compound Number : 59
Compound Name : Benzene
Scan Number : 979
Retention Time (minutes): 7.555
Relative Retention Time :-0.00004
Quant Ion : 78.00
Area (flag) : 42948
On-Column Amount (ng) : 0.2437

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

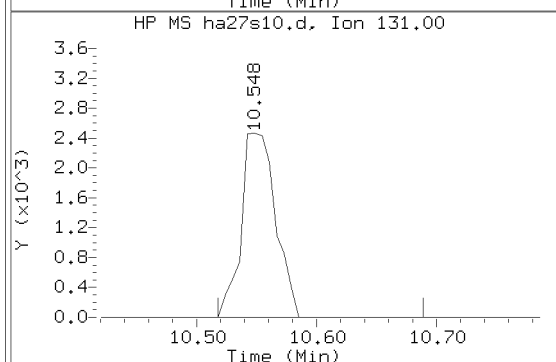
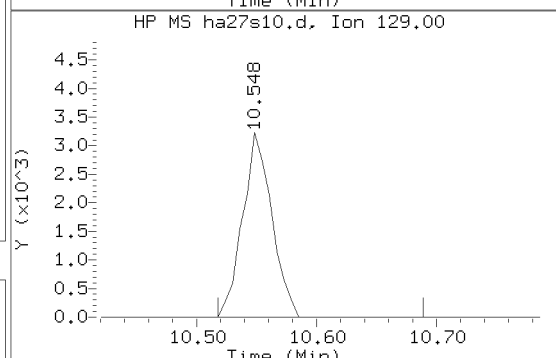
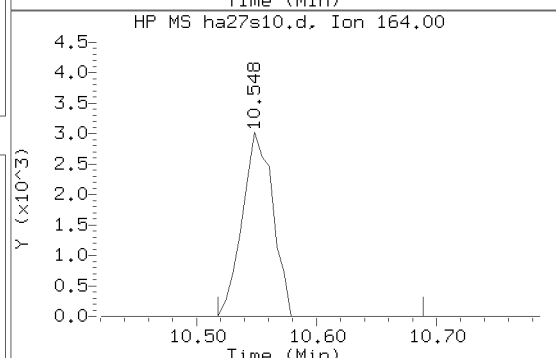
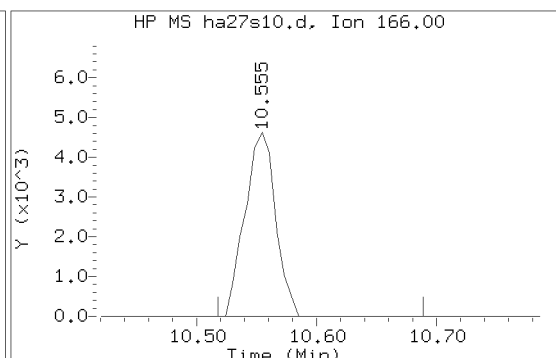
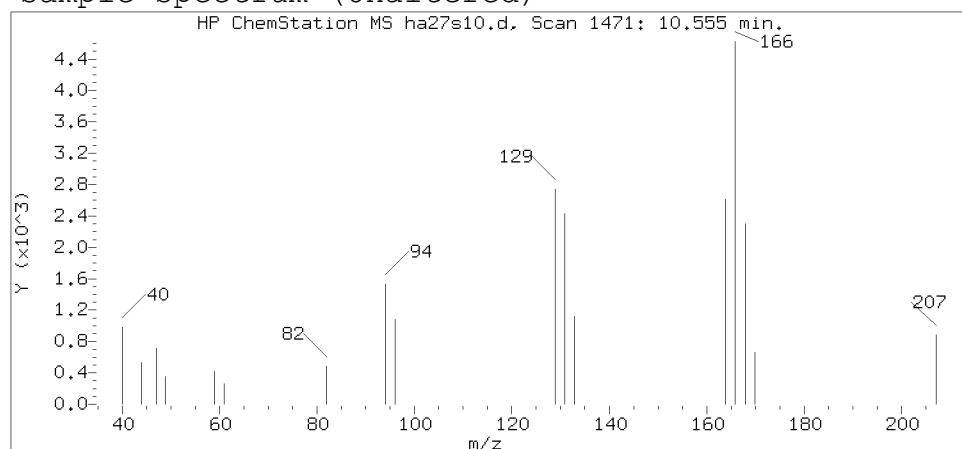
Reference Standard Spectrum for Tetrachloroethene



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr27a.b/ha27s10.d
Injection date and time: 28-APR-2020 01:31

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R05

Lab Sample ID: 1300800

Compound Number : 90
Compound Name : Tetrachloroethene
Scan Number : 1471
Retention Time (minutes): 10.555
Relative Retention Time : -0.00054
Quant Ion : 166.00
Area (flag) : 8173
On-Column Amount (ng) : 0.1319

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

59R06

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300801

Data file: /chem2/HP09355.i/20apr28b.b/ya28s52.d

Injection date and time: 29-APR-2020 02:19

Data file Sample Info. Line: 59R06;1300801;1;0;;RAF59;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 02:36 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355 (-0.012)	456	65	389773 (2)	250.00	
66) Fluorobenzene	7.860 (0.000)	1032	96	1157930 (-6)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	887934 (-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	486756 (-10)	50.00	

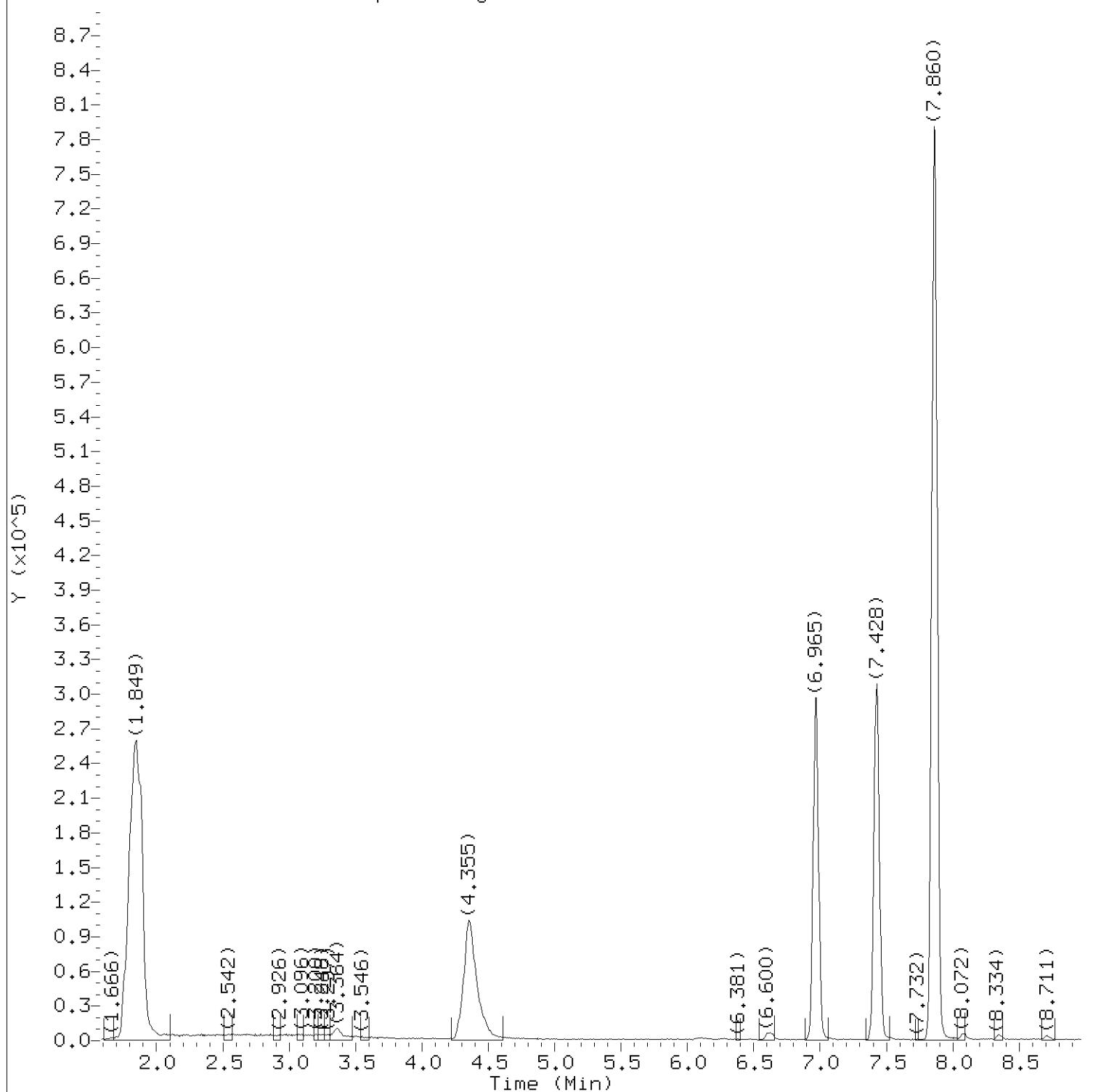
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965 (0.000)	113	271399	51.604	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428 (0.000)	102	70730	50.997	102%		80 - 120
83) Toluene-d8	(3)	9.861 (-0.001)	98	1111278	47.928	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294 (0.000)	95	417632	47.537	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
21) 2-Propanol	(1)			Not Detected					18 100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:31. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:46. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s52.d
Injection date and time: 29-APR-2020 02:19

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 02:36 Automation

Sample Name: 59R06

Lab Sample ID: 1300801

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203

Target Revision 3.5

Instrument ID: HP09355.i
Analyst ID: KAS02648

Sublist used: 16342

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Date, time and analyst ID of latest file update: 29-Apr-2020 02:36 Automation
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Lab Sample ID: 1300801

Target 3.5 esignature user ID: dyv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s52.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 02:19

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 02:36 Automation

Sample Name: 59R06

Lab Sample ID: 1300801

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.355	65	389773	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	271399	51.604
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	70730	50.997
66) *Fluorobenzene	(2)	7.860	96	1157930	50.000
83) \$Toluene-d8	(3)	9.861	98	1111278	47.928
100) *Chlorobenzene-d5	(3)	11.303	117	887934	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	417632	47.537
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	486756	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 12:31.

Target 3.5 esignature user ID: dvv10203

59R06

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300801

Data file: /chem2/HP19094.i/20apr28a.b/ha28s02.d

Injection date and time: 28-APR-2020 11:25

Data file Sample Info. Line: 59R06;1300801;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464 (-0.006)	472	65	118324 (-11)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2001135 (-2)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1552103 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	822152 (-4)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	518550	10.424	104%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	103240	10.708	107%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2009204	9.716	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	706533	9.235	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.142 (0.001)	45	20197	0.303	0.30		J	0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.428 (-0.000)	59	41476	1.166	1.17		J	1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)			Not Detected					2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

59R06

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300801

Data file: /chem2/HP19094.i/20apr28a.b/ha28s02.d Injection date and time: 28-APR-2020 11:25
Data file Sample Info. Line: 59R06;1300801;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

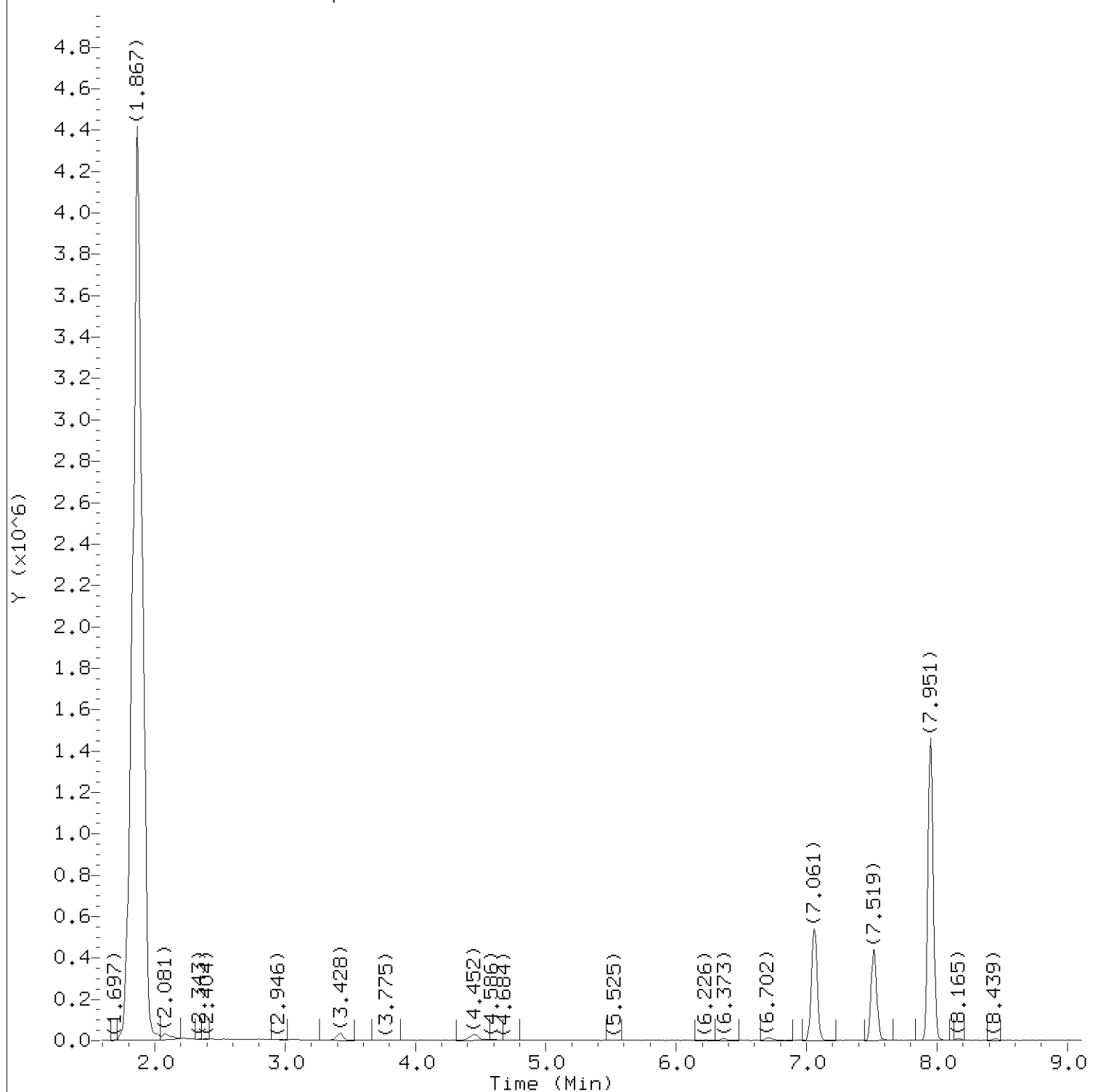
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	LOQ
										Limit (in sample)	
59) Benzene	(2)				Not Detected					0.07	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
72) Methyl Methacrylate	(1)				Not Detected					4	10
74) Dibromomethane	(2)				Not Detected					0.07	1
73) 1,4-Dioxane	(1)				Not Detected					45	200
75) Bromodichloromethane	(2)				Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)				Not Detected					0.9	10
84) Toluene	(3)				Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
87) Ethyl Methacrylate	(3)				Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.08	1
90) Tetrachloroethene	(3)				Not Detected					0.06	1
91) 1,3-Dichloropropane	(3)				Not Detected					0.09	1
92) 2-Hexanone	(1)				Not Detected					0.6	10
94) Dibromochloromethane	(3)				Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)				Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.08	1
101) Ethylbenzene	(3)				Not Detected					0.08	1
102) m+p-Xylene	(3)				Not Detected					0.1	2
105) o-Xylene	(3)				Not Detected					0.1	1
106) Xylene (Total)	(3)				Not Detected					0.2	3
107) Styrene	(3)				Not Detected					0.07	1
108) Bromoform	(3)				Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.1	1
127) Pentachloroethane	(4)				Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
147) Hexachlorobutadiene	(4)				Not Detected					0.07	1
148) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Marla S. Brewer on 04/29/2020 at 19:58. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s02.d
Injection date and time: 28-APR-2020 11:25

Instrument ID: HP19094.i
Analyst ID: jkh09052

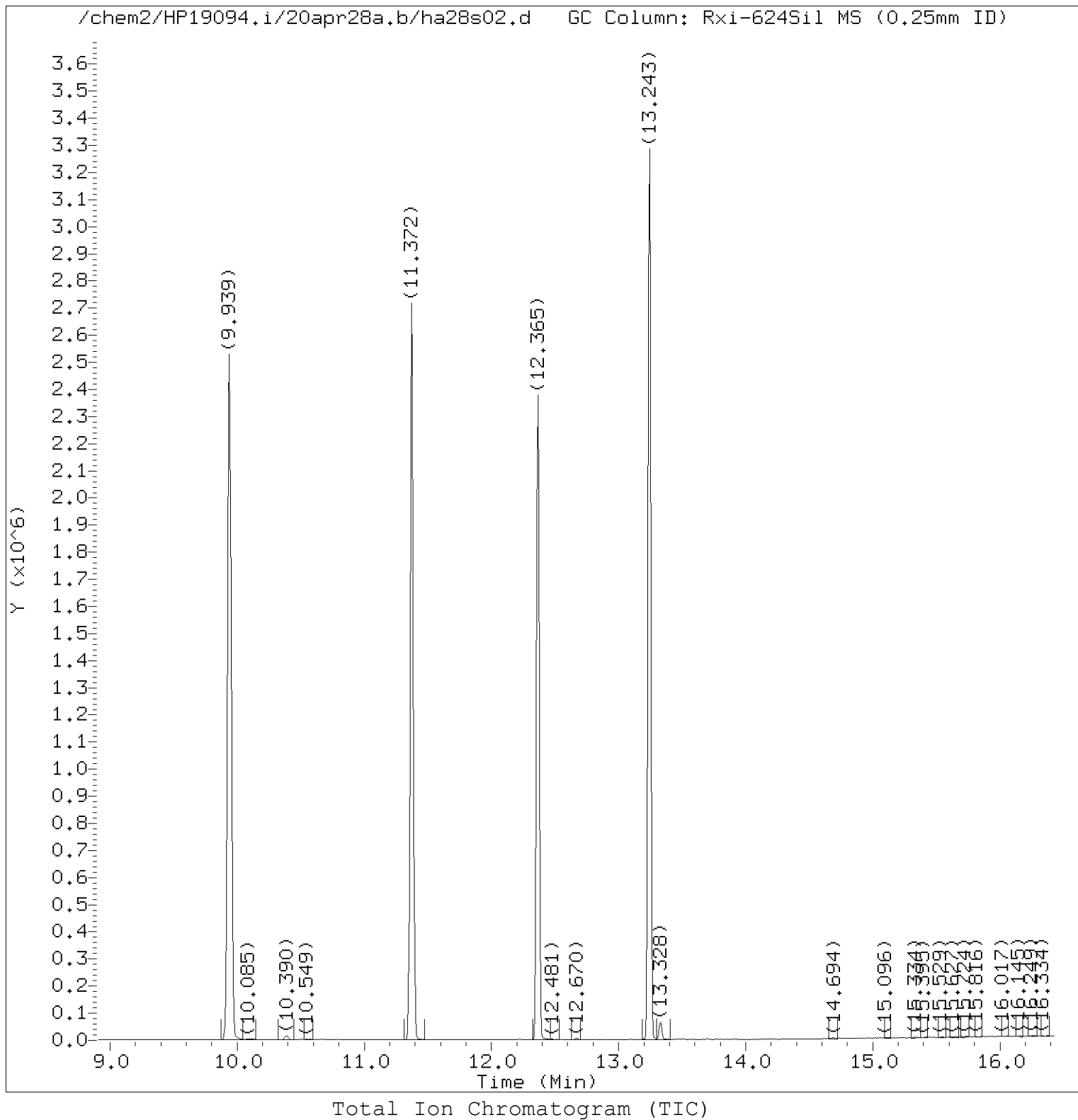
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

Sample Name: 59R06

Lab Sample ID: 1300801

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s02.d
Injection date and time: 28-APR-2020 11:25

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

Sample Name: 59R06

Lab Sample ID: 1300801

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s02.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 11:25

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

Sample Name: 59R06

Lab Sample ID: 1300801

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.142	45	20197	0.303
11) Ethyl ether	(2)	3.428	59	41476	1.166
27) *t-Butyl Alcohol-d10	(1)	4.464	65	118324	50.000
51) \$Dibromofluoromethane	(2)	7.061	113	518550	10.424
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	103240	10.708
64) *Fluorobenzene	(2)	7.951	96	2001135	10.000
83) \$Toluene-d8	(3)	9.939	98	2009204	9.716
98) *Chlorobenzene-d5	(3)	11.372	117	1552103	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	706533	9.235
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	822152	10.000

* = Compound is an internal standard.

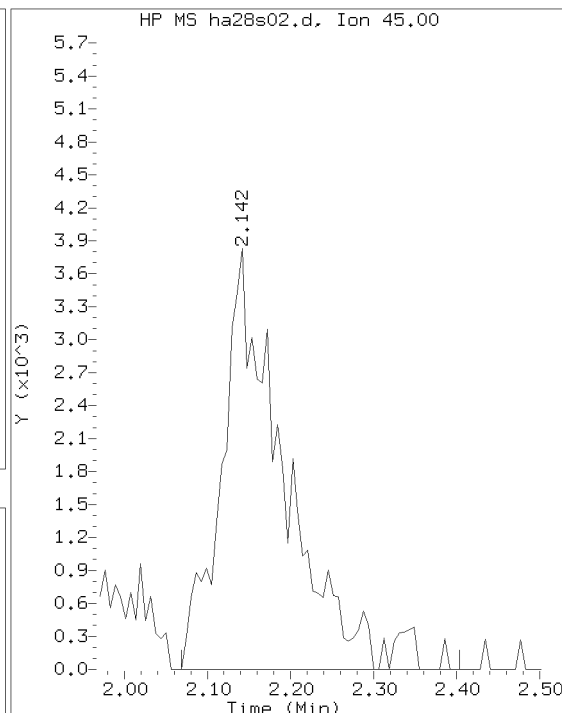
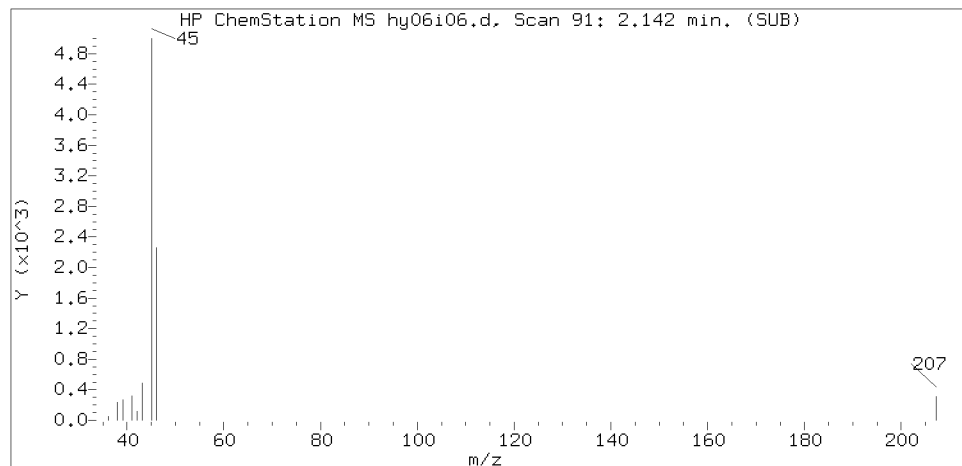
\$ = Compound is a surrogate standard.

page 1 of 1

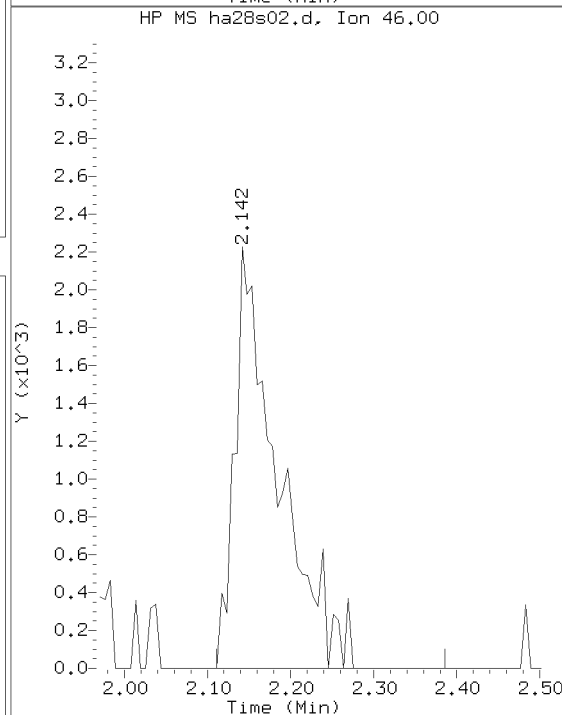
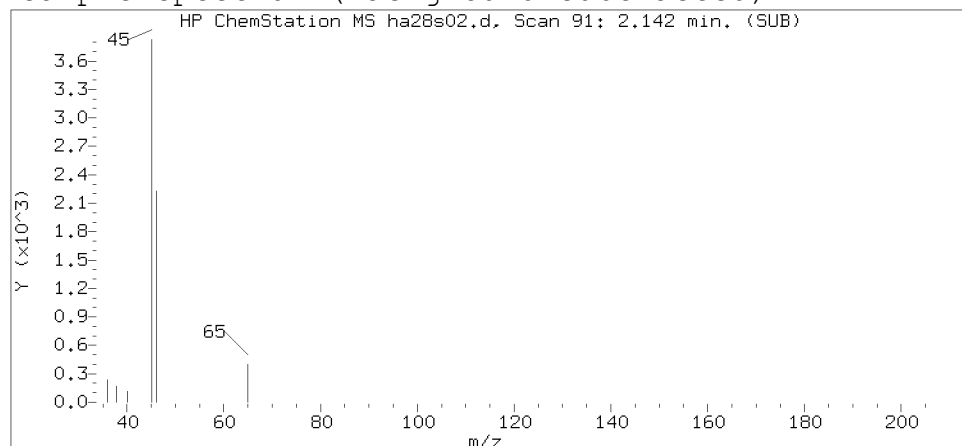
Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

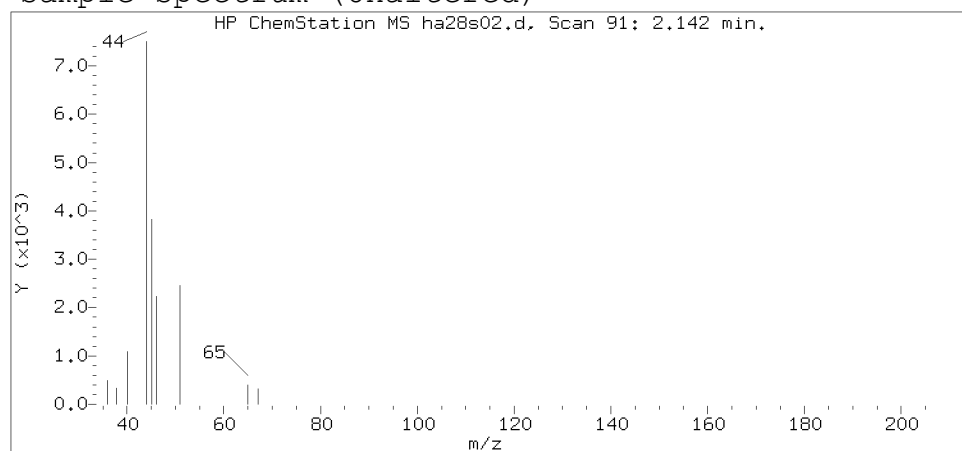
Reference Standard Spectrum for Dimethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s02.d
Injection date and time: 28-APR-2020 11:25

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

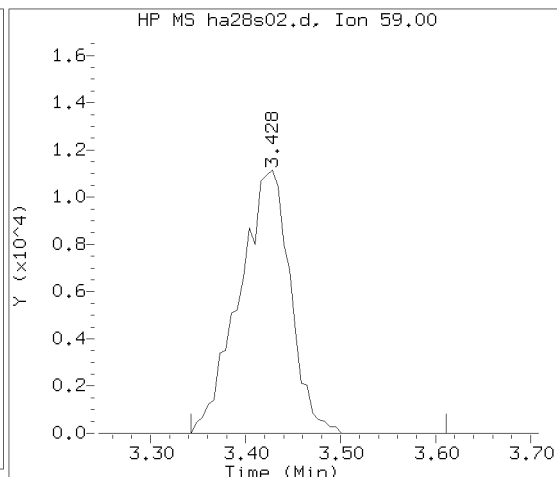
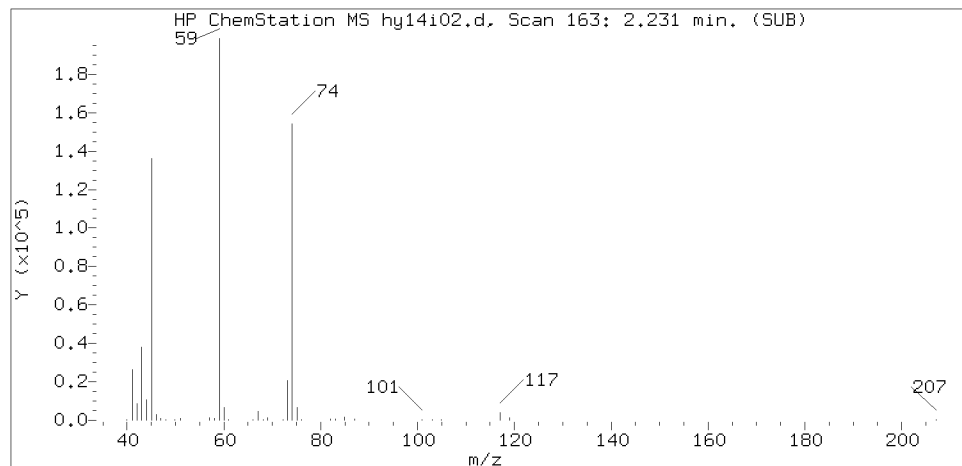
Sample Name: 59R06

Lab Sample ID: 1300801

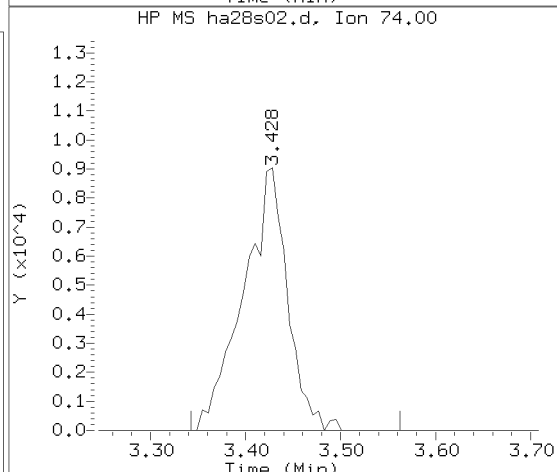
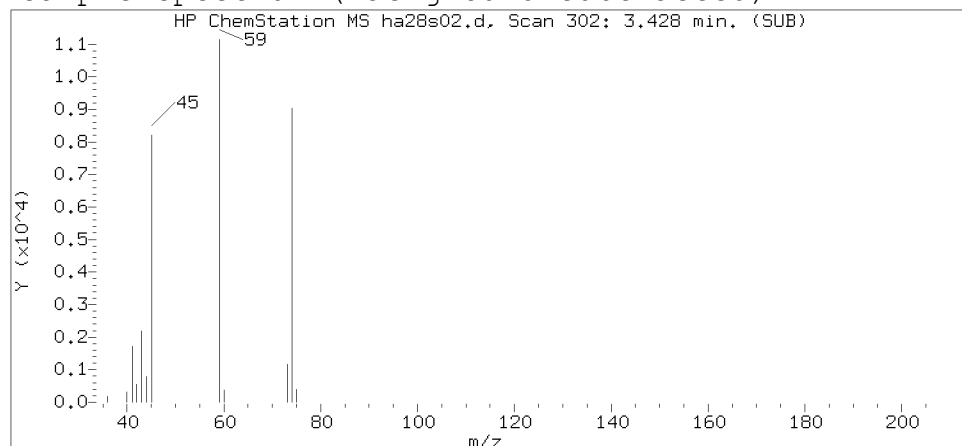
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Relative Retention Time : 0.00155
Quant Ion : 45.00
Area (flag) : 20197
On-Column Amount (ng) : 0.3030

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

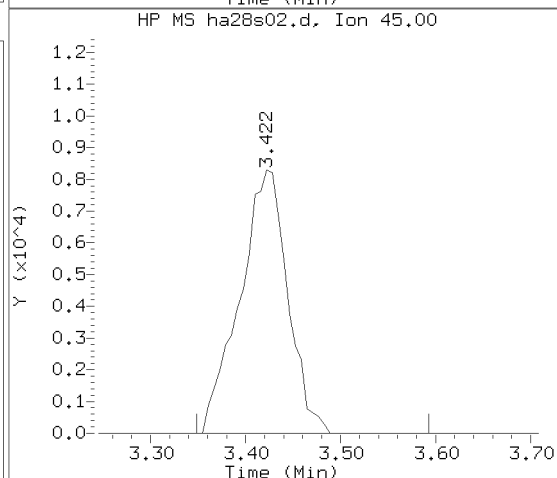
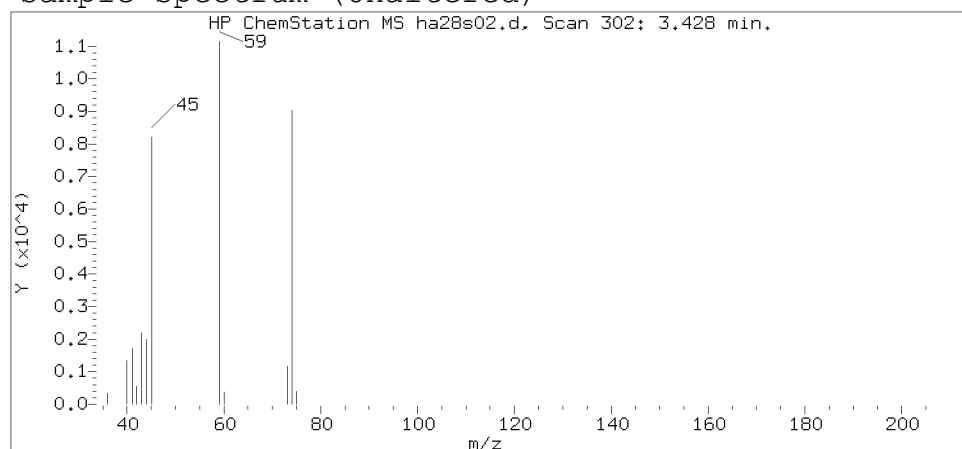
Reference Standard Spectrum for Ethyl ether



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s02.d
Injection date and time: 28-APR-2020 11:25

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:45 mec29284

Sample Name: 59R06

Lab Sample ID: 1300801

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time : -0.00078
Quant Ion : 59.00
Area (flag) : 41476
On-Column Amount (ng) : 1.1659

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53.
Target 3.5 esignature user ID: mec29284

59R07

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300802

Data file: /chem2/HP19094.i/20apr28a.b/ha28s03.d Injection date and time: 28-APR-2020 11:47
 Data file Sample Info. Line: 59R07;1300802;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
 Date, time and analyst ID of latest file update: 28-Apr-2020 12:08 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
 Calibration date and time (Last Method Edit): 28-APR-2020 09:36
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.446 (0.012)	469	65	111207 (-16)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2039281 (0)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1565329 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	825955 (-4)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.001)	113	528818	10.432	104%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.518 (0.000)	102	106857	10.876	109%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2036260	9.764	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	719513	9.326	93%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					0.05 1
4) Dimethyl ether	(2)			Not Detected					0.04 13
2) Chloromethane	(2)			Not Detected					0.06 1
8) Chloroethane	(2)			Not Detected					0.07 1
10) Trichlorofluoromethane	(2)			Not Detected					0.05 1
11) Ethyl ether	(2)			Not Detected					0.05 13
15) 1,1-Dichloroethene	(2)			Not Detected					0.06 1
16) Freon 113	(2)			Not Detected					0.06 1
24) Methylene Chloride	(2)			Not Detected					0.07 1
34) 1,1-Dichloroethane	(2)	5.537 (-0.000)	63	6937	0.070	0.07		J	0.07 1
39) 2-Butanone	(1)			Not Detected					0.6 10
49) Tetrahydrofuran	(1)			Not Detected					0.8 25
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.06 1
55) Carbon Tetrachloride	(2)			Not Detected					0.07 1
59) Benzene	(2)			Not Detected					0.05 1
68) Trichloroethene	(2)			Not Detected					0.06 1
84) Toluene	(3)			Not Detected					0.07 1
90) Tetrachloroethene	(3)			Not Detected					0.06 1
101) Ethylbenzene	(3)			Not Detected					0.06 1
102) m+p-Xylene	(3)			Not Detected					0.1 0.5
105) o-Xylene	(3)			Not Detected					0.05 0.5
106) Xylene (Total)	(3)			Not Detected					0.2 3

59R07

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300802

Data file: /chem2/HP19094.i/20apr28a.b/ha28s03.d Injection date and time: 28-APR-2020 11:47
Data file Sample Info. Line: 59R07;1300802;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 12:08 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

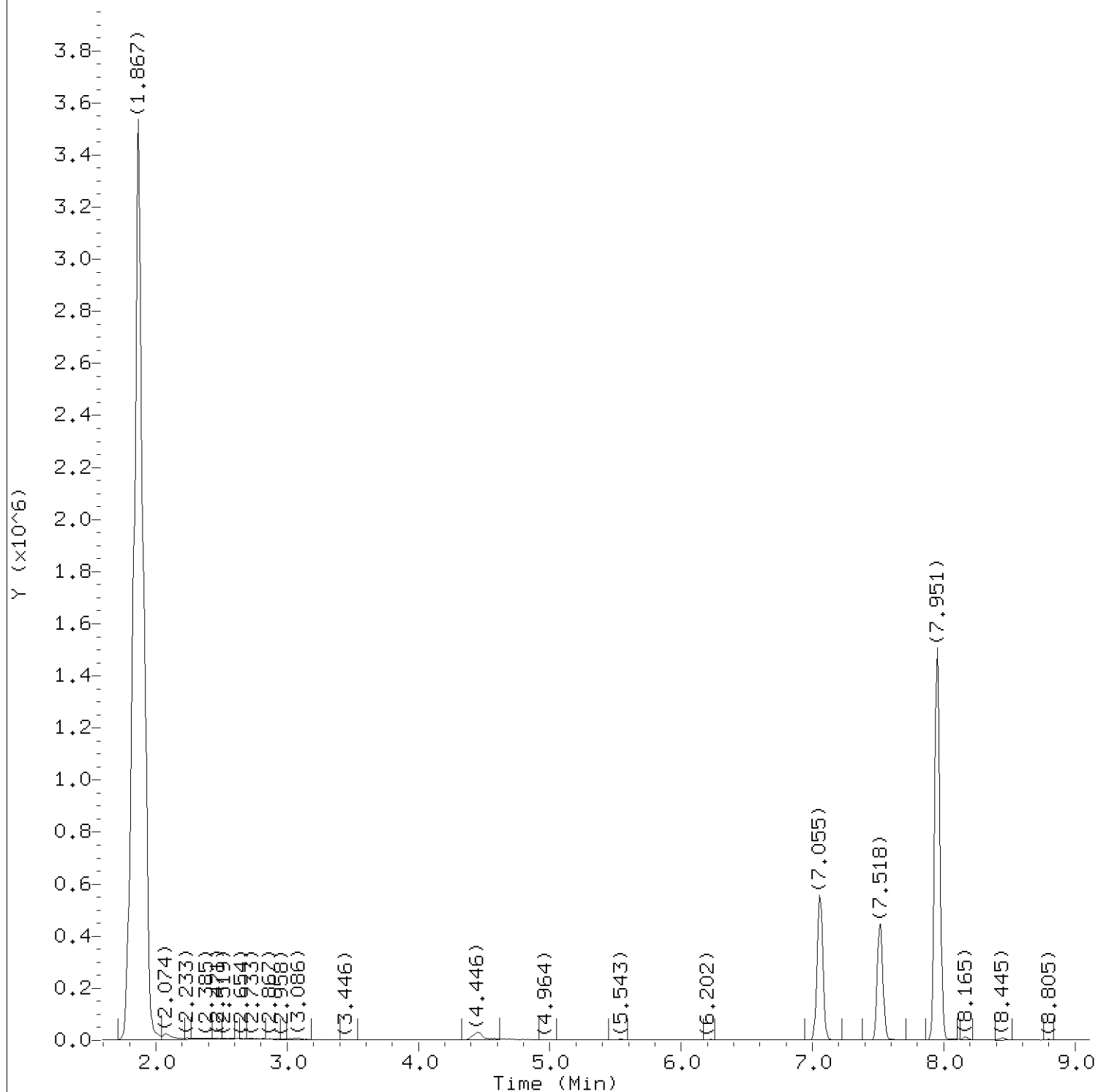
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/28/2020 at 12:09. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s03.d
Injection date and time: 28-APR-2020 11:47

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 22469

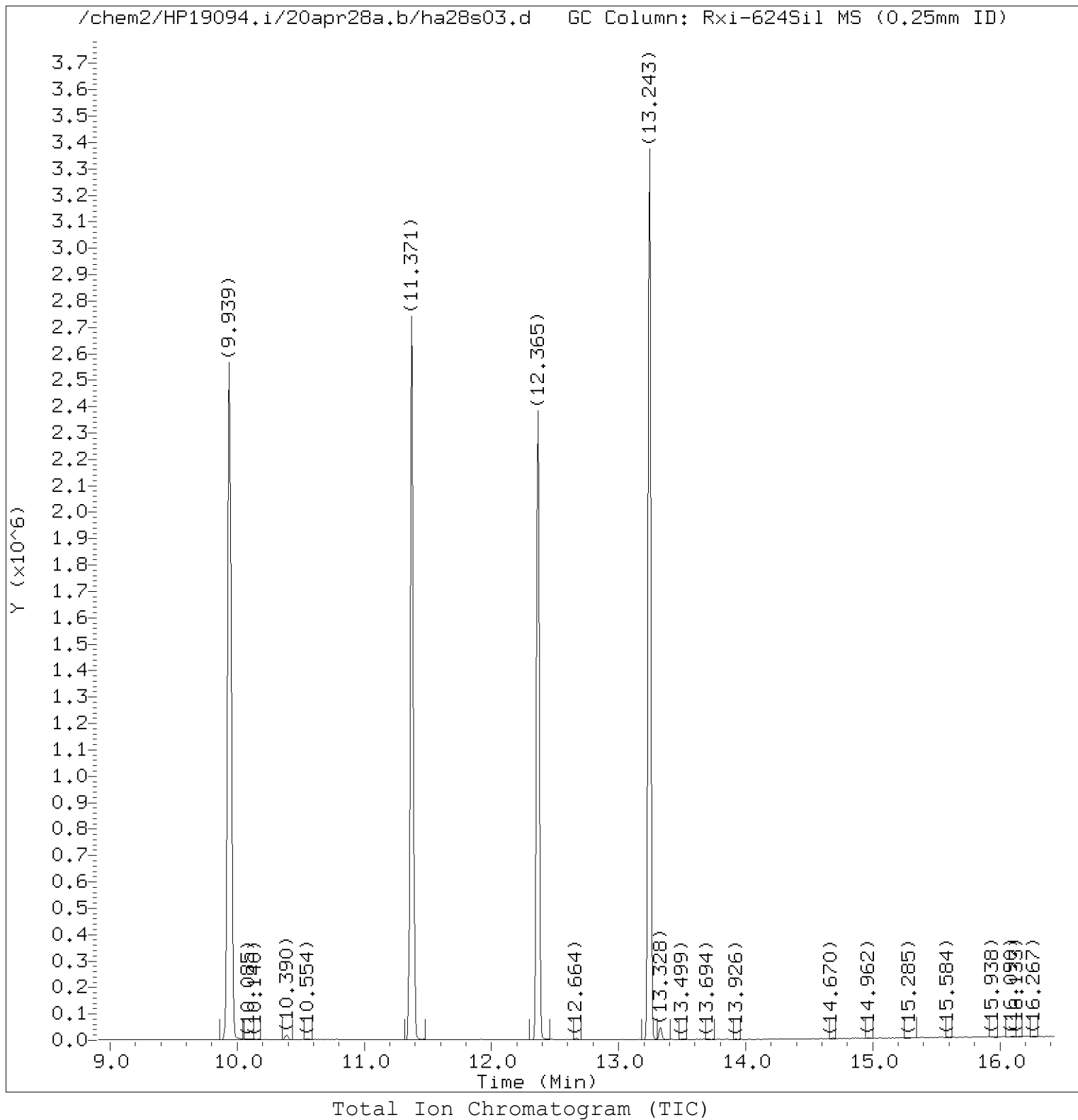
Date, time and analyst ID of latest file update: 28-Apr-2020 12:08 jkh09052

Sample Name: 59R07

Lab Sample ID: 1300802

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 12:09.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s03.d
Injection date and time: 28-APR-2020 11:47

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 12:08 jkh09052

Sample Name: 59R07

Lab Sample ID: 1300802

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 12:09.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s03.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 11:47

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 12:08 jkh09052

Sample Name: 59R07

Lab Sample ID: 1300802

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.446	65	111207	50.000
34) 1,1-Dichloroethane	(2)	5.537	63	6937	0.070
51) \$Dibromofluoromethane	(2)	7.055	113	528818	10.432
58) \$1,2-Dichloroethane-d4	(2)	7.518	102	106857	10.876
64) *Fluorobenzene	(2)	7.951	96	2039281	10.000
83) \$Toluene-d8	(3)	9.939	98	2036260	9.764
98) *Chlorobenzene-d5	(3)	11.371	117	1565329	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	719513	9.326
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	825955	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

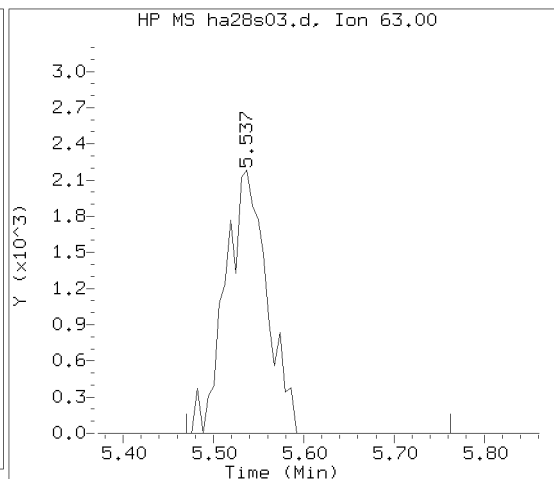
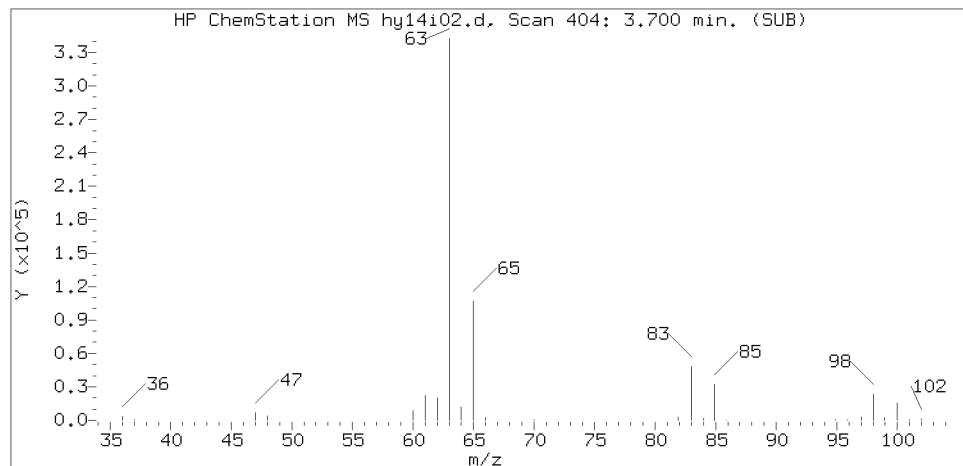
page 1 of 1

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 12:09.

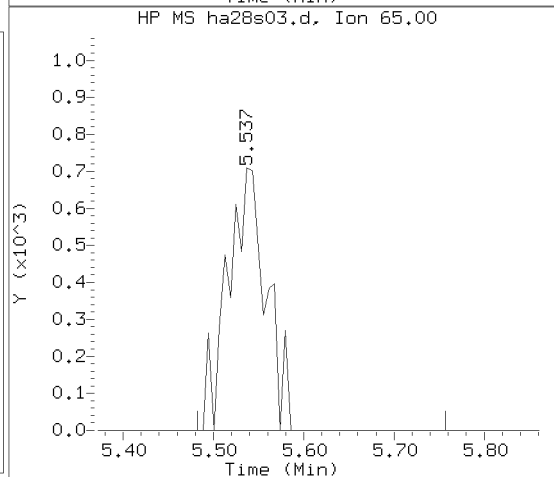
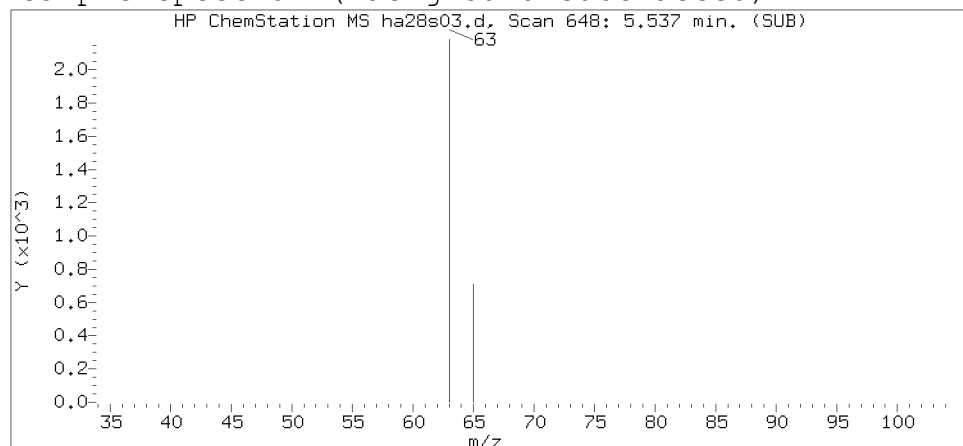
Target 3.5 esignature user ID: jkh09052

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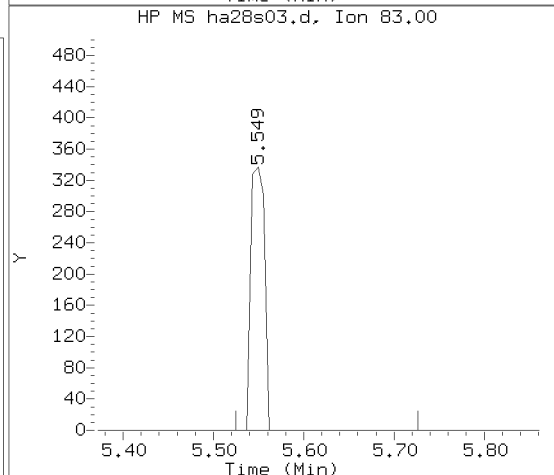
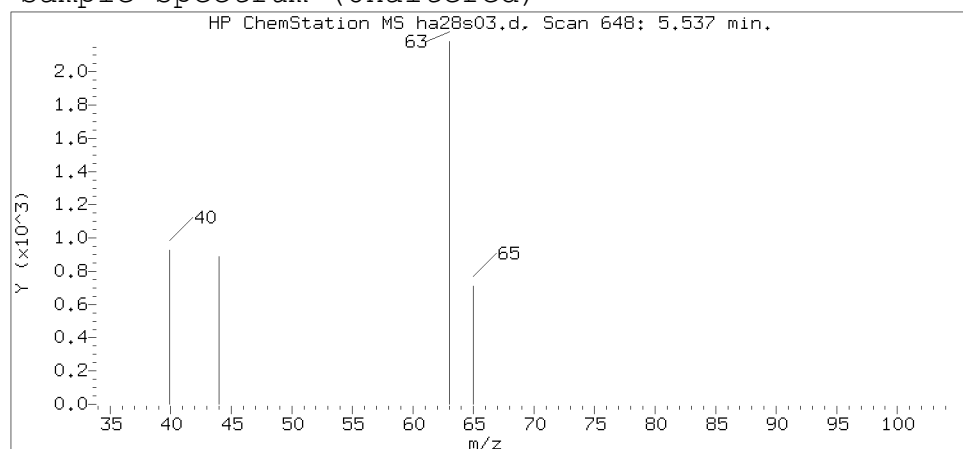
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s03.d
Injection date and time: 28-APR-2020 11:47

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 12:08 jkh09052

Sample Name: 59R07

Lab Sample ID: 1300802

Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 648
Retention Time (minutes): 5.537
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 6937
On-Column Amount (ng) : 0.0702

Digitally signed by Jennifer K. Howe on 04/28/2020 at 12:09.

Target 3.5 esignature user ID: jkh09052

59R08

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300803

Data file: /chem2/HP19094.i/20apr28a.b/ha28s04.d Injection date and time: 28-APR-2020 12:08
Data file Sample Info. Line: 59R08;1300803;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 1511~700uL of headspace

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (0.006)	470	65	117549 (-12)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1998380 (-2)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1544969 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	809965 (-6)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	515553	10.378	104%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	103651	10.766	108%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2006532	9.748	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	701362	9.210	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.074 (-0.001)	85	14524	0.194	0.19		0.05 1
4) Dimethyl ether	(2)			Not Detected				0.04 13
2) Chloromethane	(2)			Not Detected				0.06 1
8) Chloroethane	(2)			Not Detected				0.07 1
10) Trichlorofluoromethane	(2)	3.148 (-0.000)	101	4113	0.051	0.05		0.05 1
11) Ethyl ether	(2)			Not Detected				0.05 13
15) 1,1-Dichloroethene	(2)			Not Detected				0.06 1
16) Freon 113	(2)			Not Detected				0.06 1
24) Methylene Chloride	(2)			Not Detected				0.07 1
34) 1,1-Dichloroethane	(2)			Not Detected				0.07 1
39) 2-Butanone	(1)			Not Detected				0.6 10
49) Tetrahydrofuran	(1)			Not Detected				0.8 25
52) 1,1,1-Trichloroethane	(2)			Not Detected				0.06 1
55) Carbon Tetrachloride	(2)			Not Detected				0.07 1
59) Benzene	(2)			Not Detected				0.05 1
68) Trichloroethene	(2)			Not Detected				0.06 1
84) Toluene	(3)			Not Detected				0.07 1
90) Tetrachloroethene	(3)			Not Detected				0.06 1
101) Ethylbenzene	(3)			Not Detected				0.06 1
102) m+p-Xylene	(3)			Not Detected				0.1 0.5
105) o-Xylene	(3)			Not Detected				0.05 0.5
106) Xylene (Total)	(3)			Not Detected				0.2 3

59R08

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300803

Data file: /chem2/HP19094.i/20apr28a.b/ha28s04.d Injection date and time: 28-APR-2020 12:08
Data file Sample Info. Line: 59R08;1300803;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

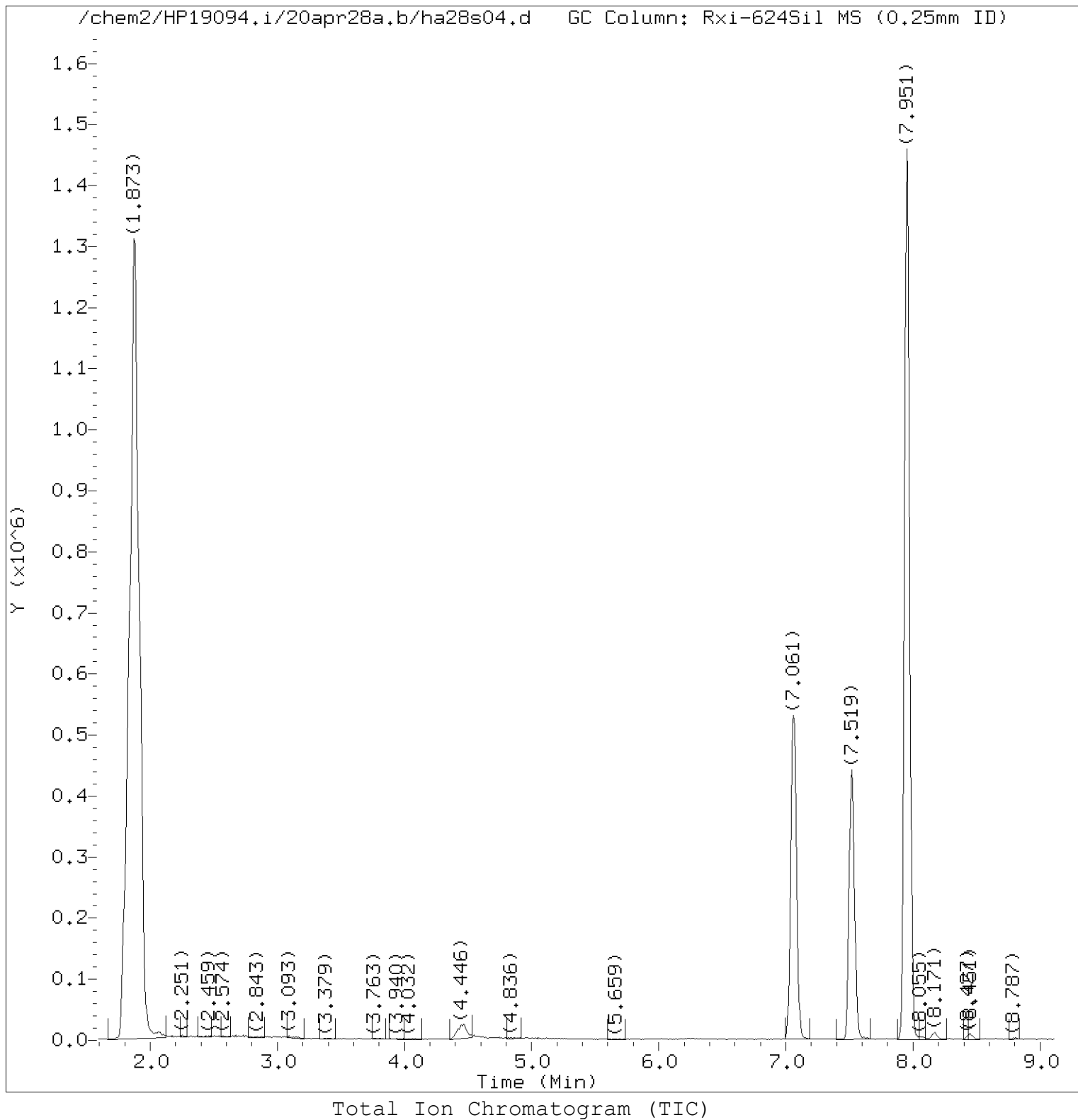
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/28/2020 at 12:29. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s04.d
Injection date and time: 28-APR-2020 12:08

Instrument ID: HP19094.i
Analyst ID: jkh09052

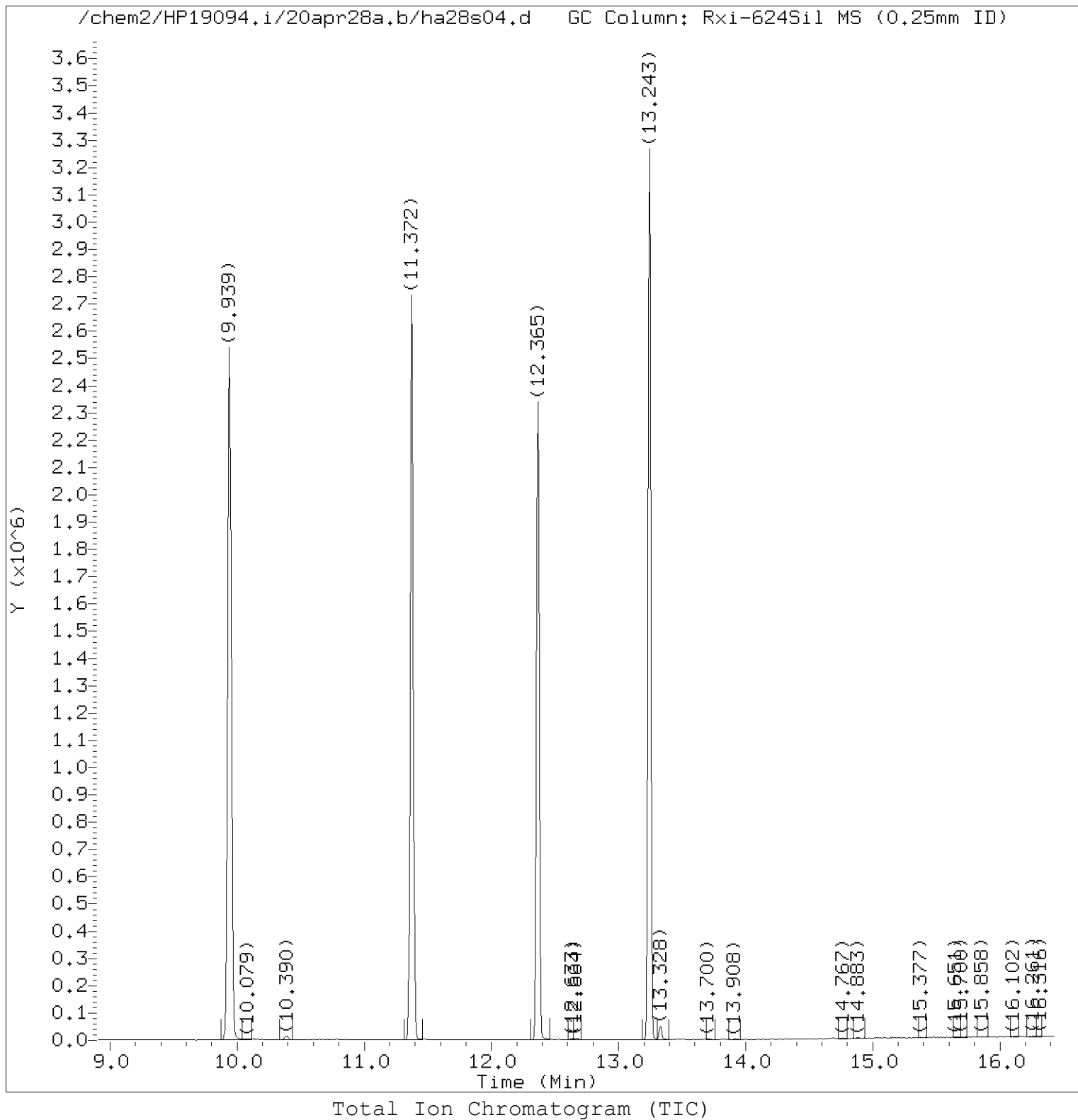
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Sample Name: 59R08

Lab Sample ID: 1300803

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 12:29.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s04.d
Injection date and time: 28-APR-2020 12:08

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Sample Name: 59R08

Lab Sample ID: 1300803

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 12:29.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s04.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 12:08

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Sample Name: 59R08

Lab Sample ID: 1300803

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.075	85	14524	0.194
10) Trichlorofluoromethane	(2)	3.148	101	4113	0.051
27) *t-Butyl Alcohol-d10	(1)	4.452	65	117549	50.000
51) \$Dibromofluoromethane	(2)	7.061	113	515553	10.378
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	103651	10.766
64) *Fluorobenzene	(2)	7.951	96	1998380	10.000
83) \$Toluene-d8	(3)	9.939	98	2006532	9.748
98) *Chlorobenzene-d5	(3)	11.372	117	1544969	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	701362	9.210
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	809965	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

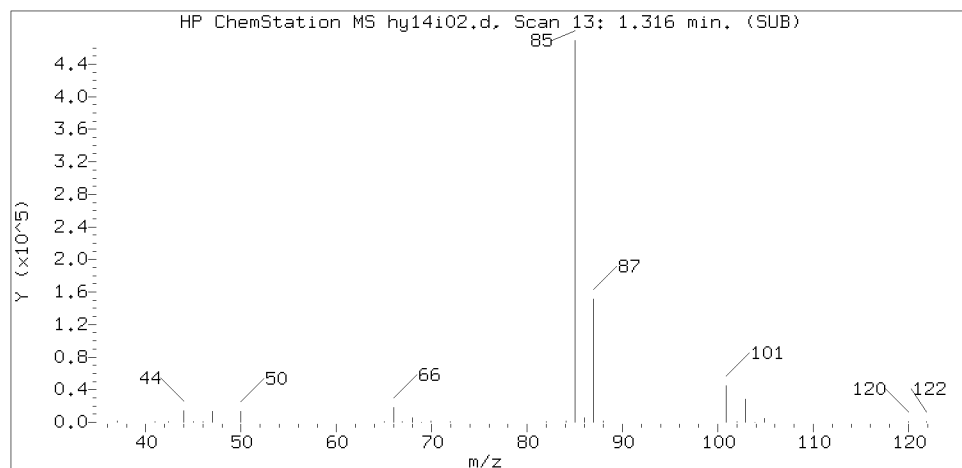
page 1 of 1

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 12:29.

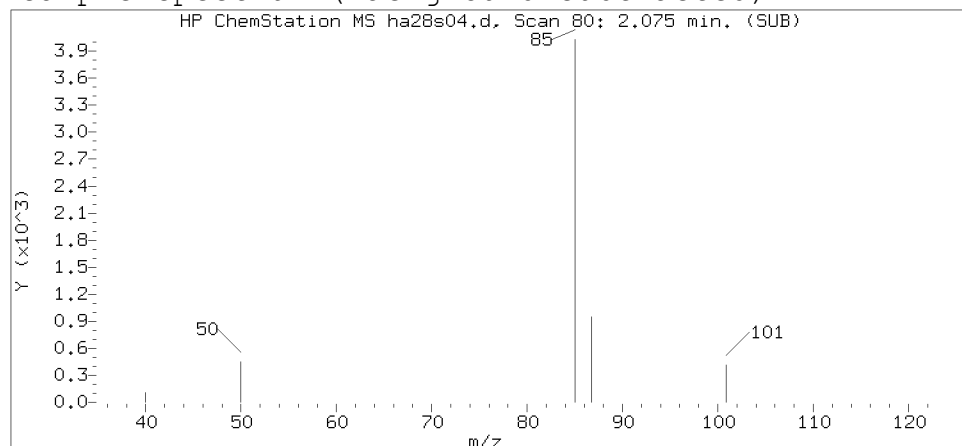
Target 3.5 esignature user ID: jkh09052

RAF59 Page 330 of 1506

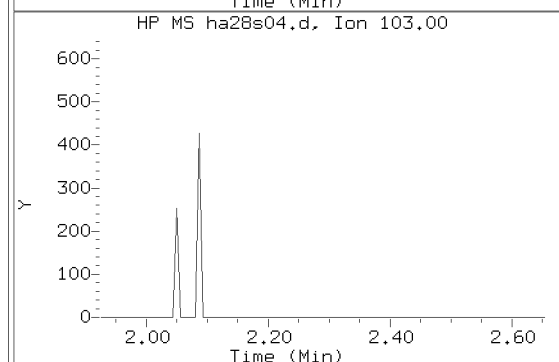
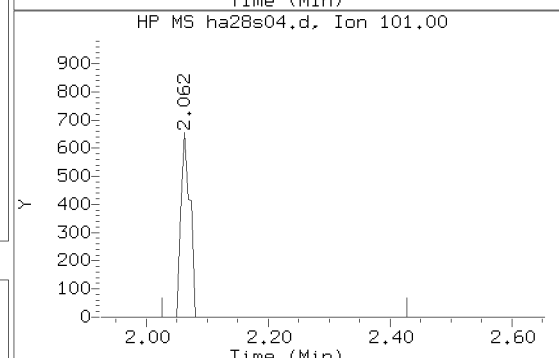
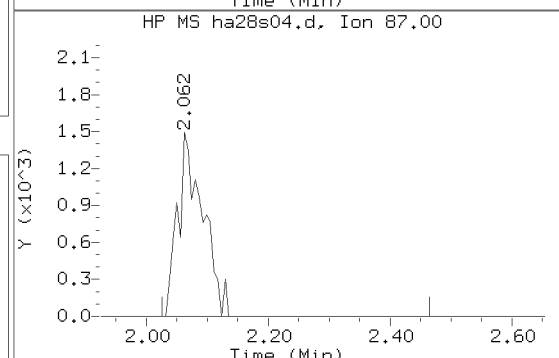
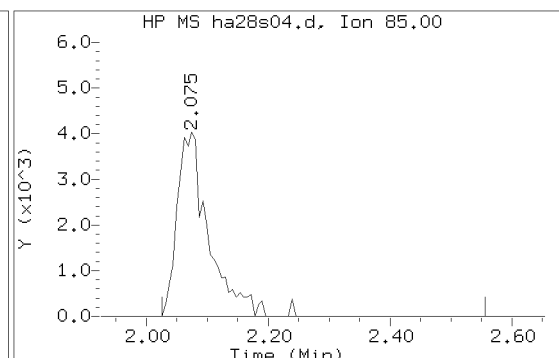
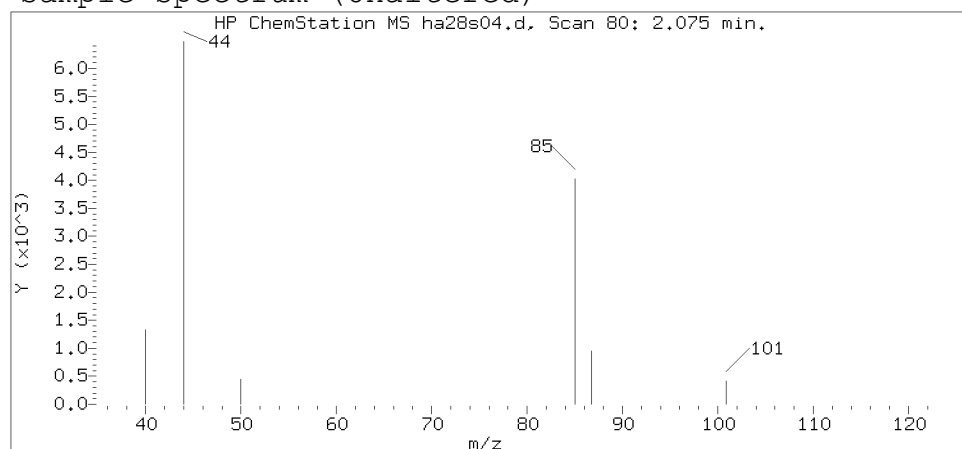
Reference Standard Spectrum for Dichlorodifluoromethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s04.d
Injection date and time: 28-APR-2020 12:08

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Sample Name: 59R08

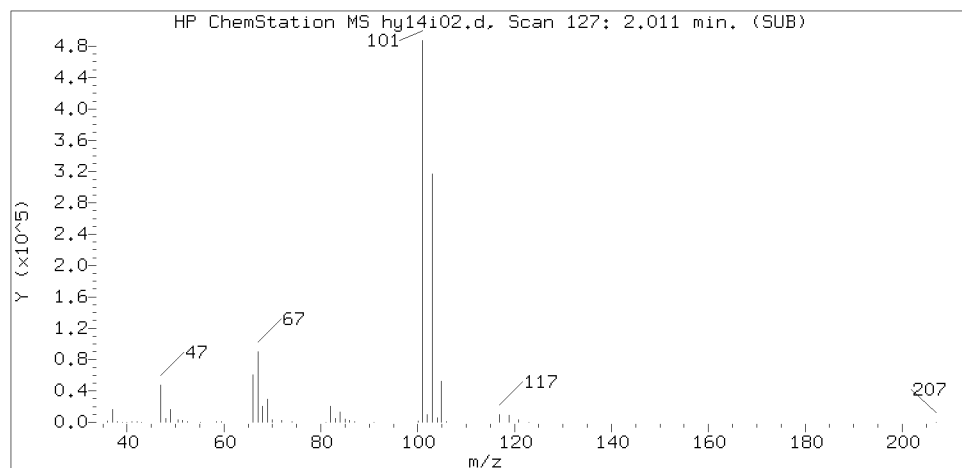
Lab Sample ID: 1300803

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Relative Retention Time : -0.00155
Quant Ion : 85.00
Area (flag) : 14524
On-Column Amount (ng) : 0.1939

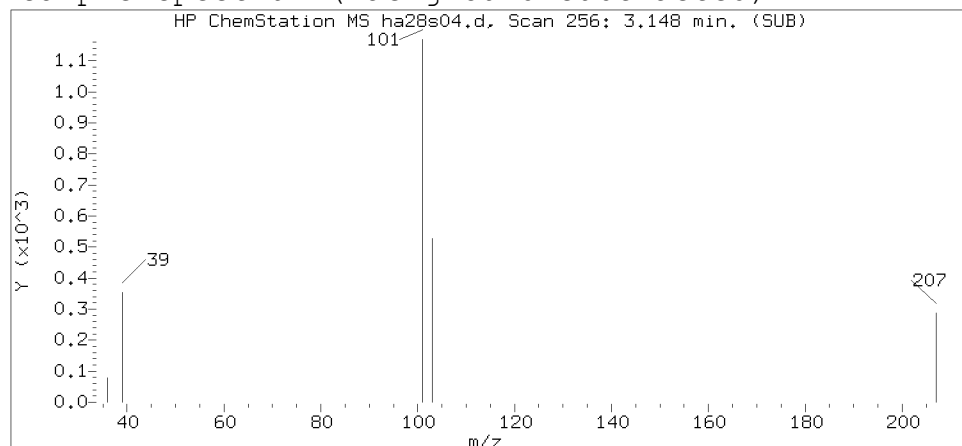
Digitally signed by Jennifer K. Howe on 04/28/2020 at 12:29.

Target 3.5 esignature user ID: jkh09052

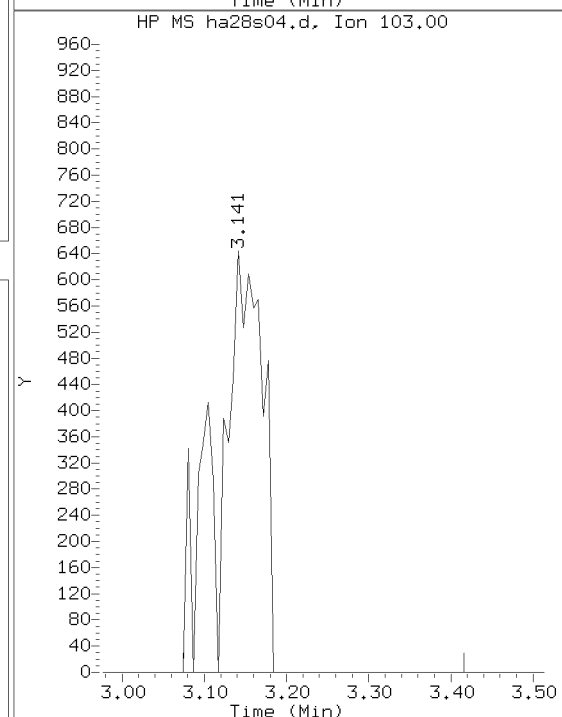
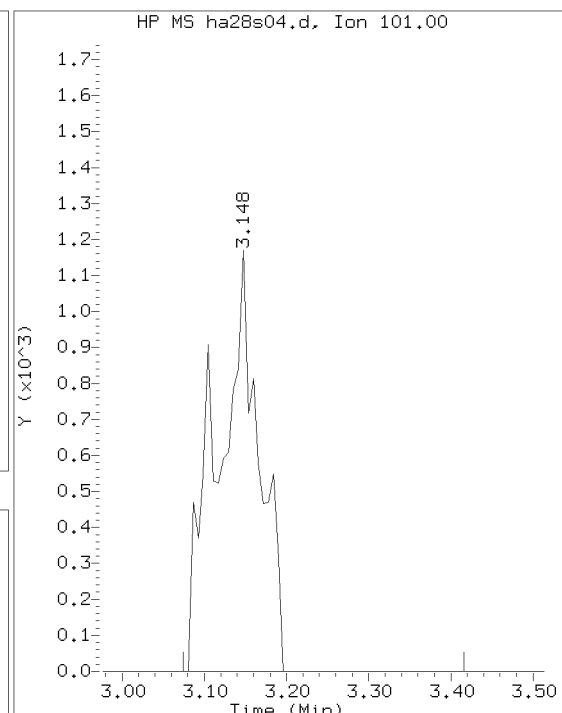
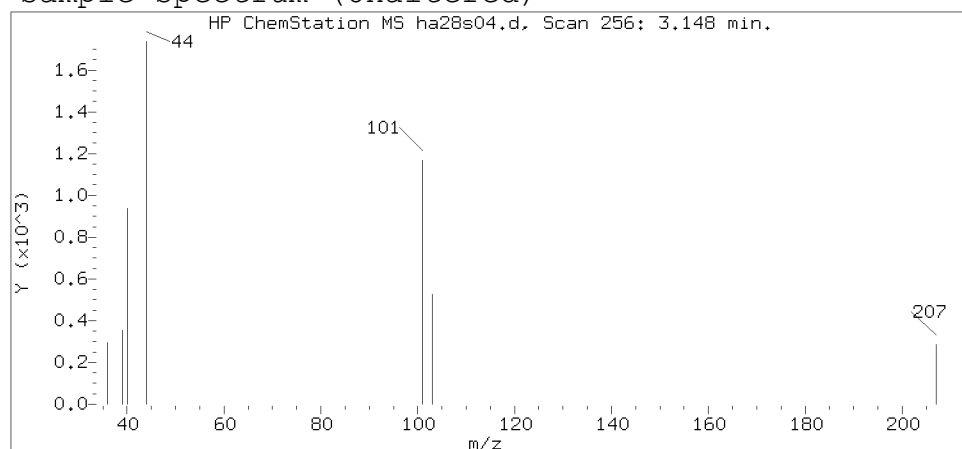
Reference Standard Spectrum for Trichlorofluoromethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s04.d
Injection date and time: 28-APR-2020 12:08

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 12:28 jkh09052

Sample Name: 59R08

Lab Sample ID: 1300803

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 256
Retention Time (minutes): 3.148
Relative Retention Time :-0.00078
Quant Ion : 101.00
Area (flag) : 4113
On-Column Amount (ng) : 0.0512

Digitally signed by Jennifer K. Howe on 04/28/2020 at 12:29.

Target 3.5 esignature user ID: jkh09052

59R09

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300804

Data file: /chem2/HP19094.i/20apr28a.b/ha28s05.d Injection date and time: 28-APR-2020 12:30
 Data file Sample Info. Line: 59R09;1300804;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
 Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
 Calibration date and time (Last Method Edit): 28-APR-2020 09:36
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (0.006)	470	65	132926 (0)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2023326 (-1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1566021 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	818698 (-5)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.001)	113	527311	10.484	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512 (0.001)	102	105834	10.857	109%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2024551	9.703	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	706968	9.159	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.05	1
4) Dimethyl ether	(2)			Not Detected					0.04	13
2) Chloromethane	(2)			Not Detected					0.06	1
8) Chloroethane	(2)			Not Detected					0.07	1
10) Trichlorofluoromethane	(2)	3.086 (0.006)	101	4336	0.053	0.05		J	0.05	1
11) Ethyl ether	(2)			Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.06	1
16) Freon 113	(2)			Not Detected					0.06	1
24) Methylene Chloride	(2)			Not Detected					0.07	1
34) 1,1-Dichloroethane	(2)	5.543 (-0.000)	63	8210	0.084	0.08		J	0.07	1
39) 2-Butanone	(1)			Not Detected					0.6	10
49) Tetrahydrofuran	(1)			Not Detected					0.8	25
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.06	1
55) Carbon Tetrachloride	(2)			Not Detected					0.07	1
59) Benzene	(2)			Not Detected					0.05	1
68) Trichloroethene	(2)			Not Detected					0.06	1
84) Toluene	(3)			Not Detected					0.07	1
90) Tetrachloroethene	(3)			Not Detected					0.06	1
101) Ethylbenzene	(3)			Not Detected					0.06	1
102) m+p-Xylene	(3)			Not Detected					0.1	0.5
105) o-Xylene	(3)			Not Detected					0.05	0.5
106) Xylene (Total)	(3)			Not Detected					0.2	3

59R09

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300804

Data file: /chem2/HP19094.i/20apr28a.b/ha28s05.d Injection date and time: 28-APR-2020 12:30
Data file Sample Info. Line: 59R09;1300804;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

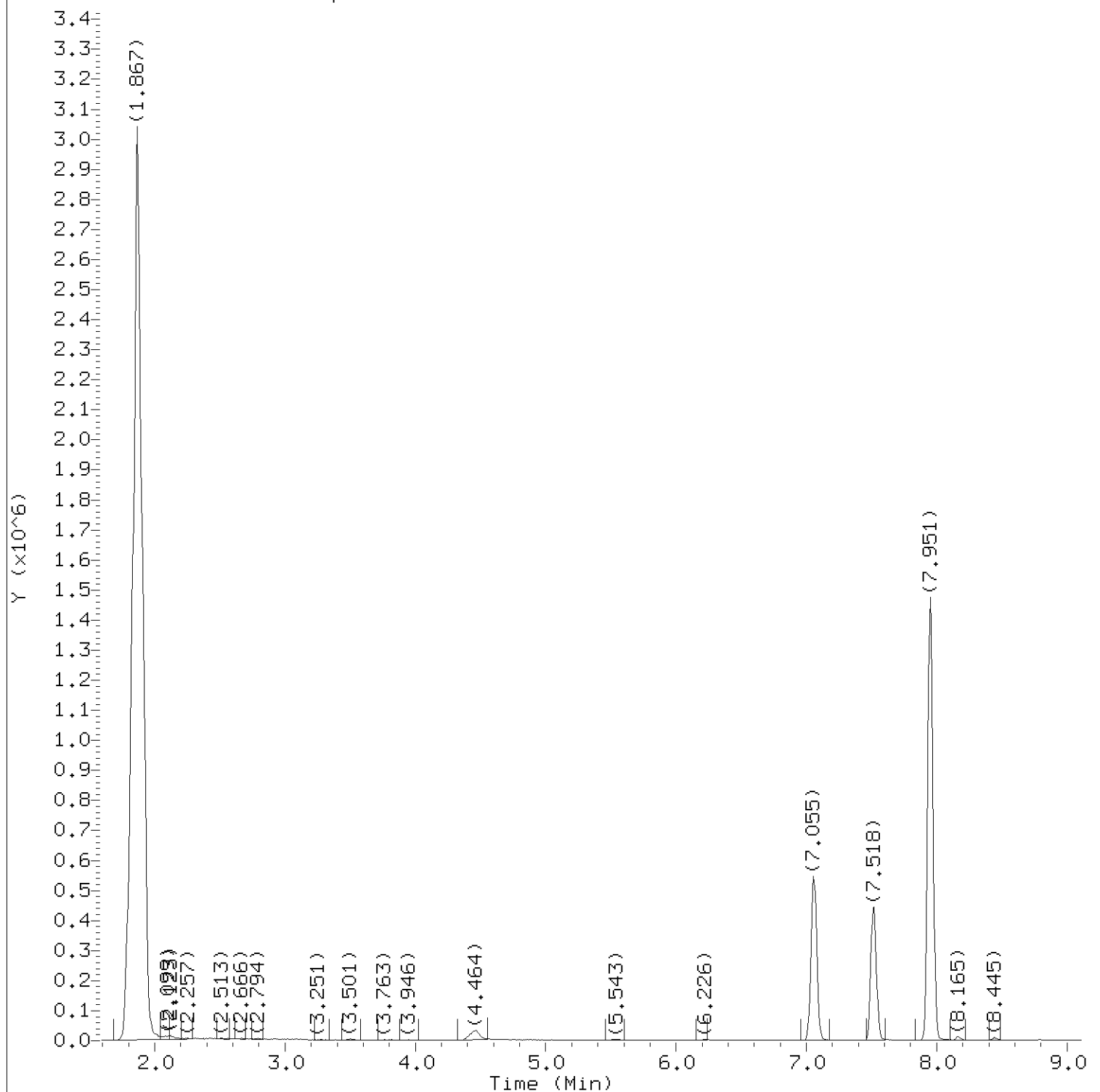
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s05.d
Injection date and time: 28-APR-2020 12:30

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 22469

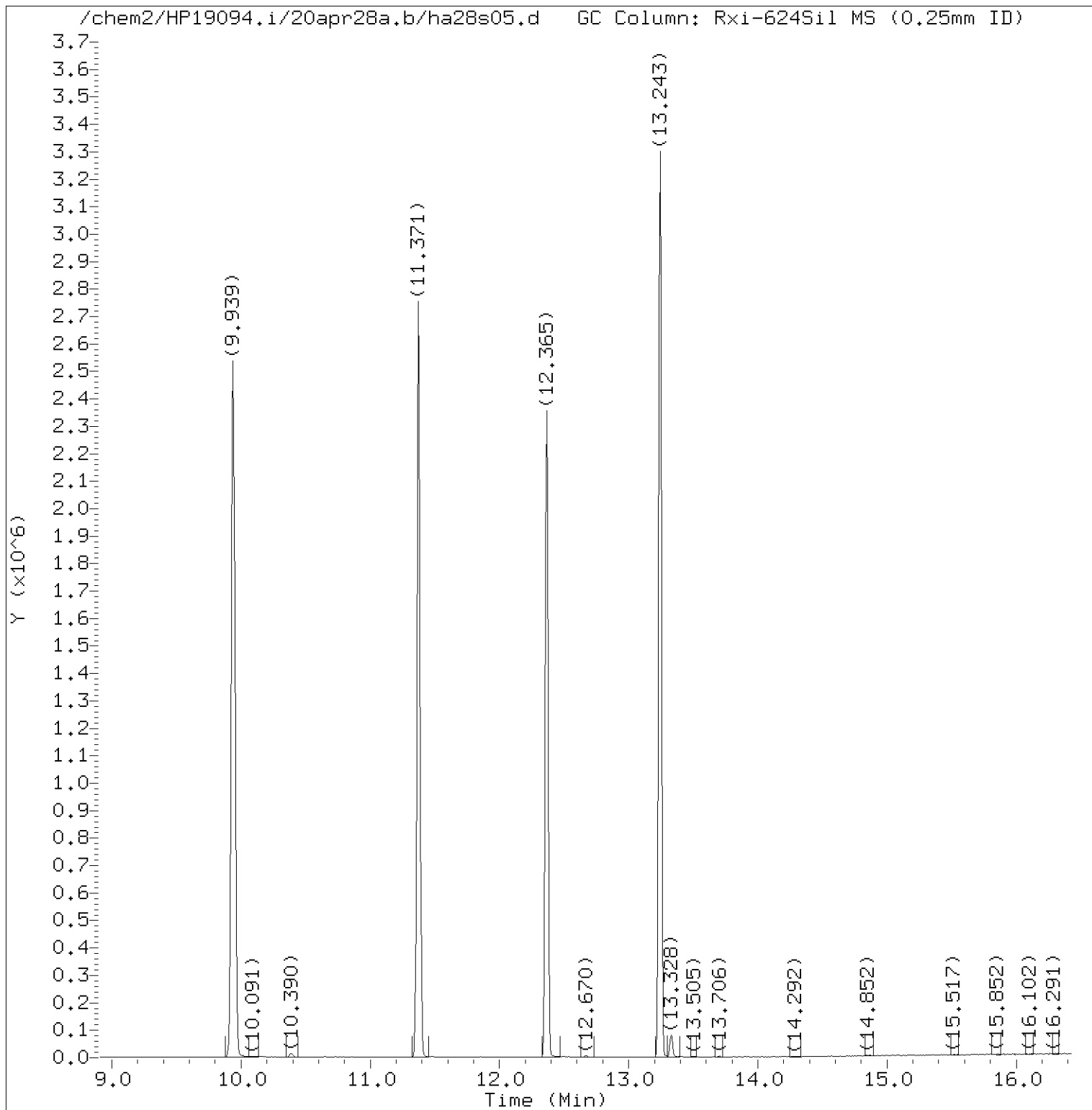
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R09

Lab Sample ID: 1300804

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s05.d
Injection date and time: 28-APR-2020 12:30

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R09

Lab Sample ID: 1300804

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s05.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 12:30

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R09

Lab Sample ID: 1300804

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
10) Trichlorofluoromethane	(2)	3.086	101	4336	0.053
27) *t-Butyl Alcohol-d10	(1)	4.452	65	132926	50.000
34) 1,1-Dichloroethane	(2)	5.543	63	8210	0.084
51) \$Dibromofluoromethane	(2)	7.055	113	527311	10.484
58) \$1,2-Dichloroethane-d4	(2)	7.512	102	105834	10.857
64) *Fluorobenzene	(2)	7.951	96	2023326	10.000
83) \$Toluene-d8	(3)	9.939	98	2024551	9.703
98) *Chlorobenzene-d5	(3)	11.371	117	1566021	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	706968	9.159
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	818698	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

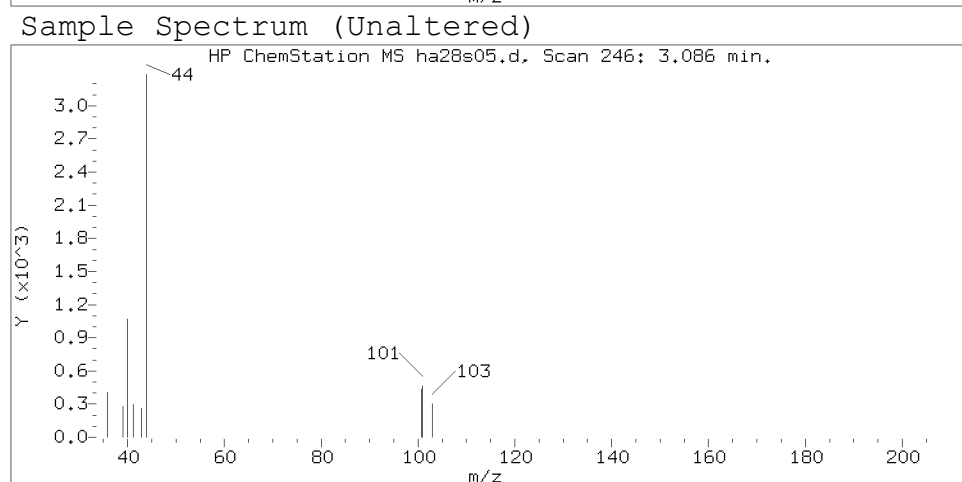
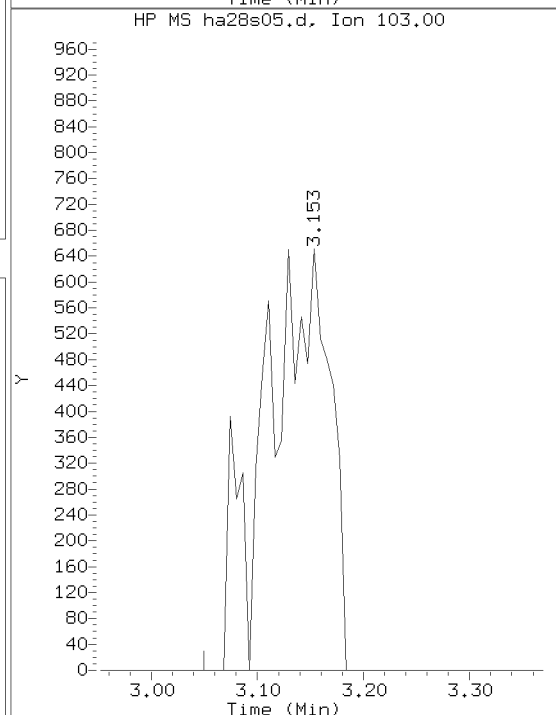
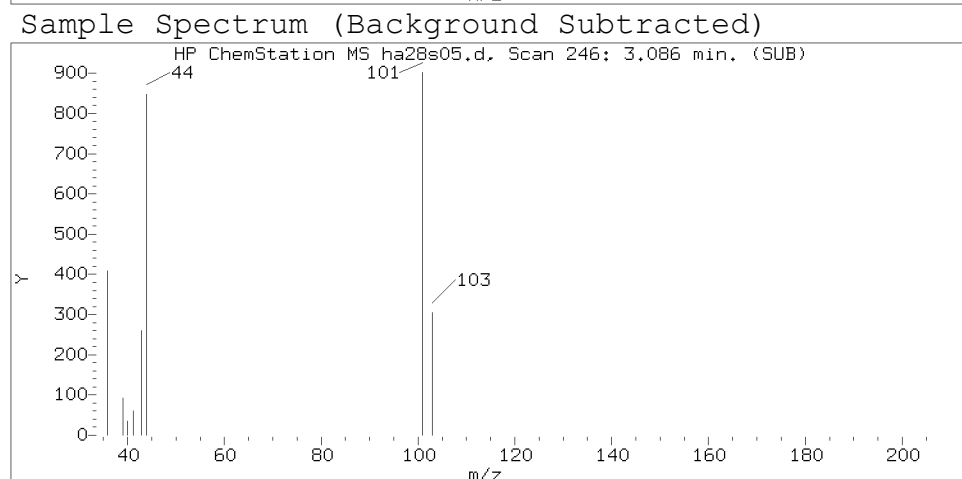
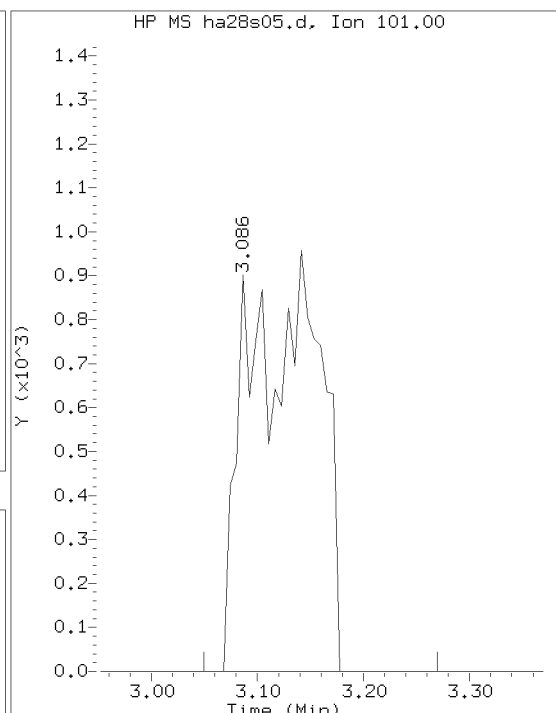
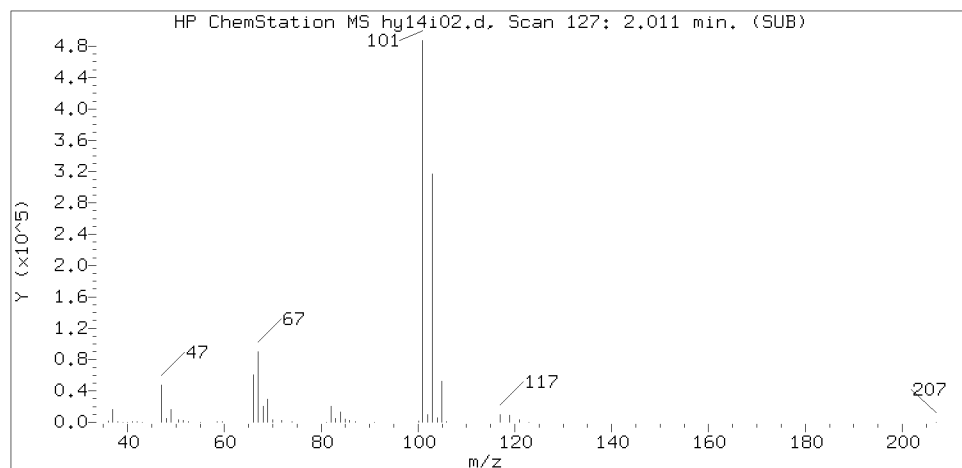
page 1 of 1

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

RAF59 Page 337 of 1506

Reference Standard Spectrum for Trichlorofluoromethane



Data File: /chem2/HP19094.i/20apr28a.b/ha28s05.d
Injection date and time: 28-APR-2020 12:30

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R09

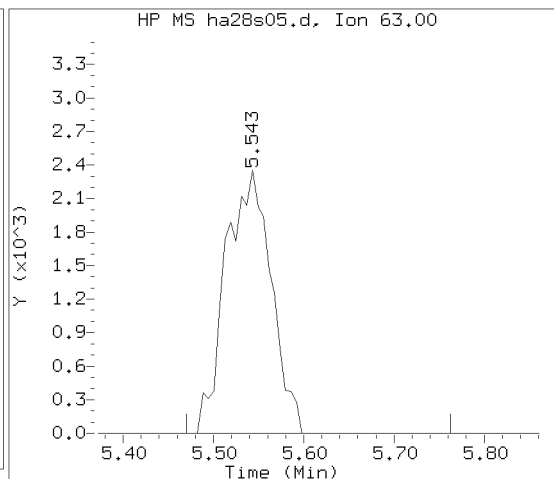
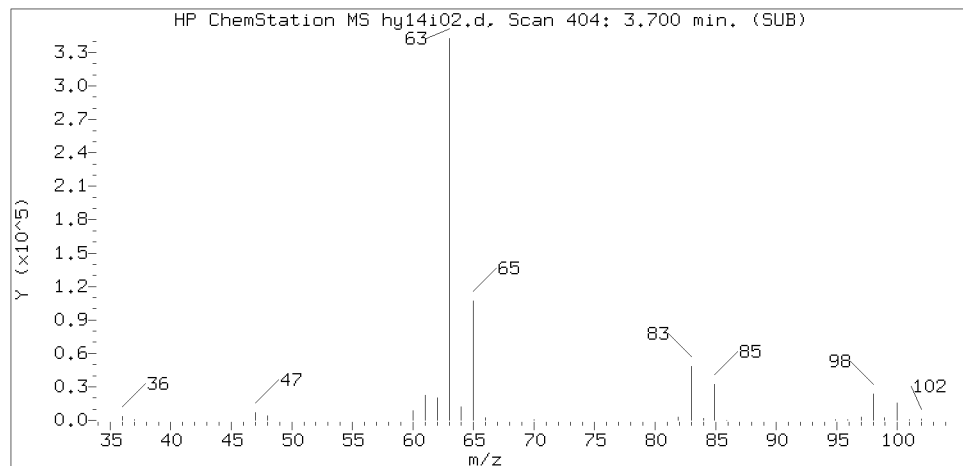
Lab Sample ID: 1300804

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 246
Retention Time (minutes): 3.086
Relative Retention Time : 0.00690
Quant Ion : 101.00
Area (flag) : 4336
On-Column Amount (ng) : 0.0534

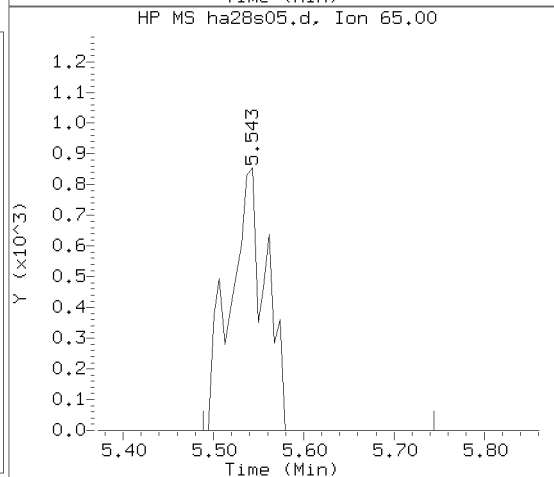
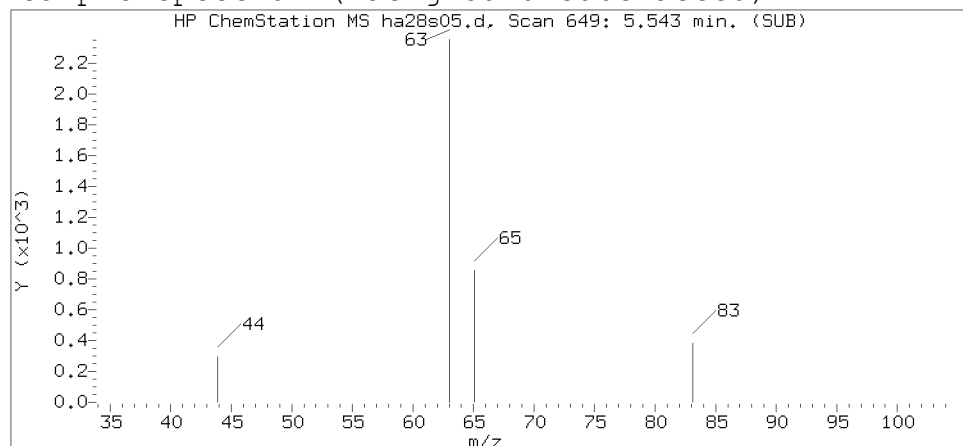
Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

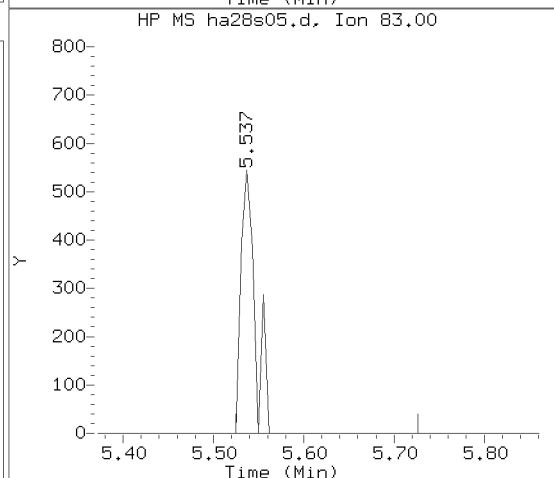
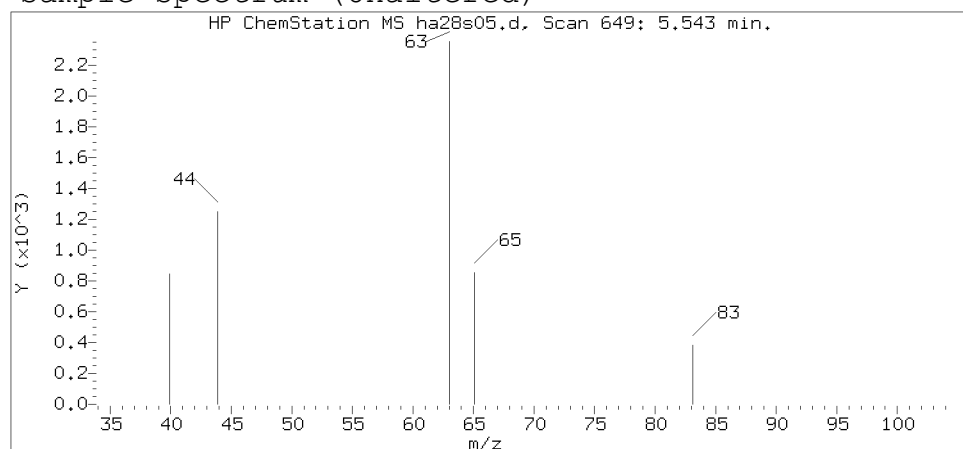
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s05.d
Injection date and time: 28-APR-2020 12:30

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R09

Lab Sample ID: 1300804

Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Relative Retention Time : -0.00077
Quant Ion : 63.00
Area (flag) : 8210
On-Column Amount (ng) : 0.0837

Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

59R10

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300805

Data file: /chem2/HP19094.i/20apr28a.b/ha28s06.d Injection date and time: 28-APR-2020 12:52
 Data file Sample Info. Line: 59R10;1300805;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
 Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
 Calibration date and time (Last Method Edit): 28-APR-2020 09:36
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	124818 (-6)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1974972 (-4)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1527994 (-4)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	801379 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	513999	10.470	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (-0.001)	102	104635	10.997	110%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1991974	9.785	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	695458	9.234	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					0.05 1
4) Dimethyl ether	(2)			Not Detected					0.04 13
2) Chloromethane	(2)			Not Detected					0.06 1
8) Chloroethane	(2)			Not Detected					0.07 1
10) Trichlorofluoromethane	(2)			Not Detected					0.05 1
11) Ethyl ether	(2)			Not Detected					0.05 13
15) 1,1-Dichloroethene	(2)			Not Detected					0.06 1
16) Freon 113	(2)			Not Detected					0.06 1
24) Methylene Chloride	(2)			Not Detected					0.07 1
34) 1,1-Dichloroethane	(2)			Not Detected					0.07 1
39) 2-Butanone	(1)			Not Detected					0.6 10
49) Tetrahydrofuran	(1)			Not Detected					0.8 25
52) 1,1,1-Trichloroethane	(2)	7.092 (-0.001)	97	12605	0.145	0.15		J	0.06 1
55) Carbon Tetrachloride	(2)			Not Detected					0.07 1
59) Benzene	(2)			Not Detected					0.05 1
68) Trichloroethene	(2)			Not Detected					0.06 1
84) Toluene	(3)			Not Detected					0.07 1
90) Tetrachloroethene	(3)			Not Detected					0.06 1
101) Ethylbenzene	(3)			Not Detected					0.06 1
102) m+p-Xylene	(3)			Not Detected					0.1 0.5
105) o-Xylene	(3)			Not Detected					0.05 0.5
106) Xylene (Total)	(3)			Not Detected					0.2 3

59R10

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300805

Data file: /chem2/HP19094.i/20apr28a.b/ha28s06.d Injection date and time: 28-APR-2020 12:52
Data file Sample Info. Line: 59R10;1300805;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

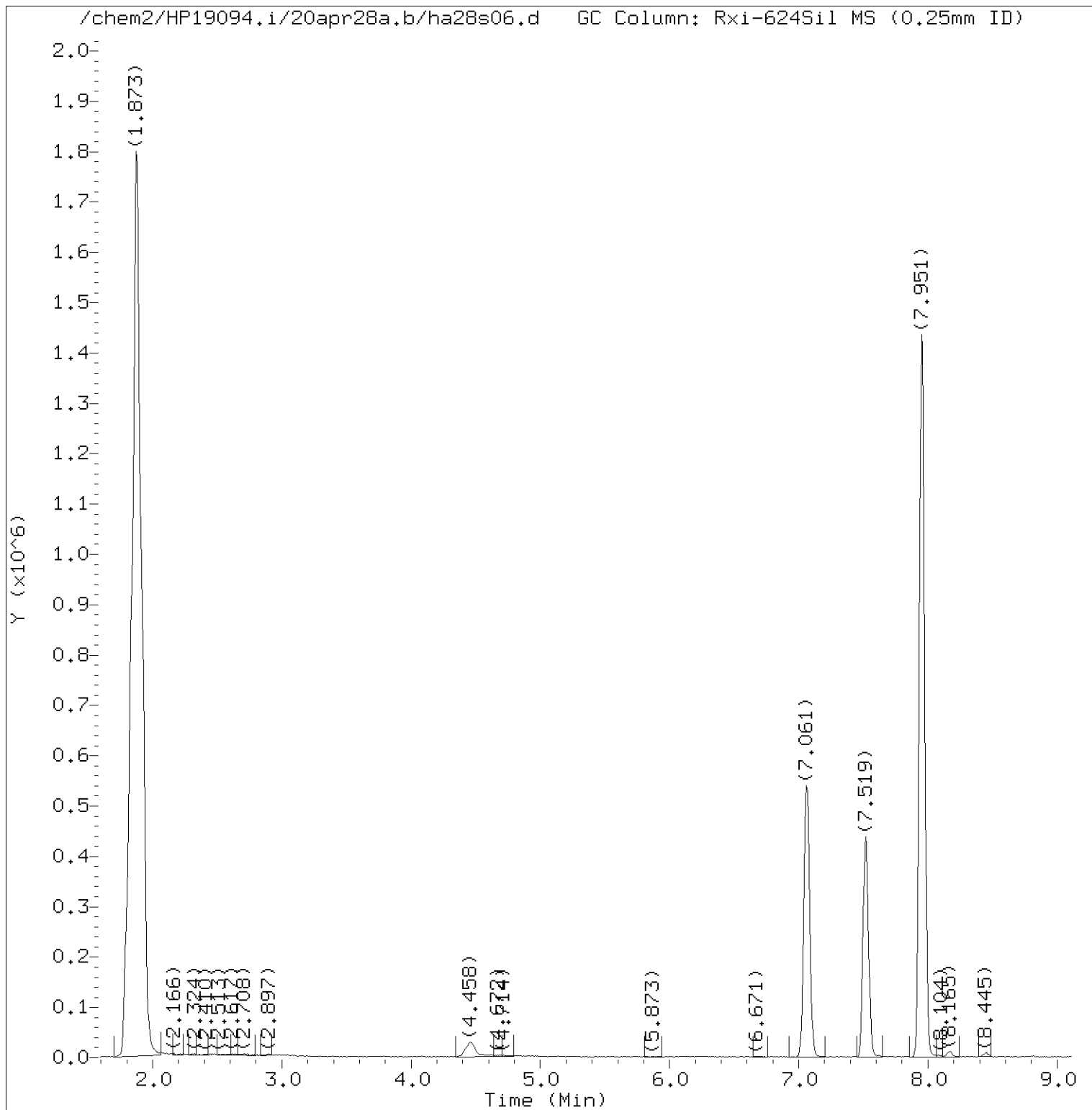
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s06.d
Injection date and time: 28-APR-2020 12:52

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 22469

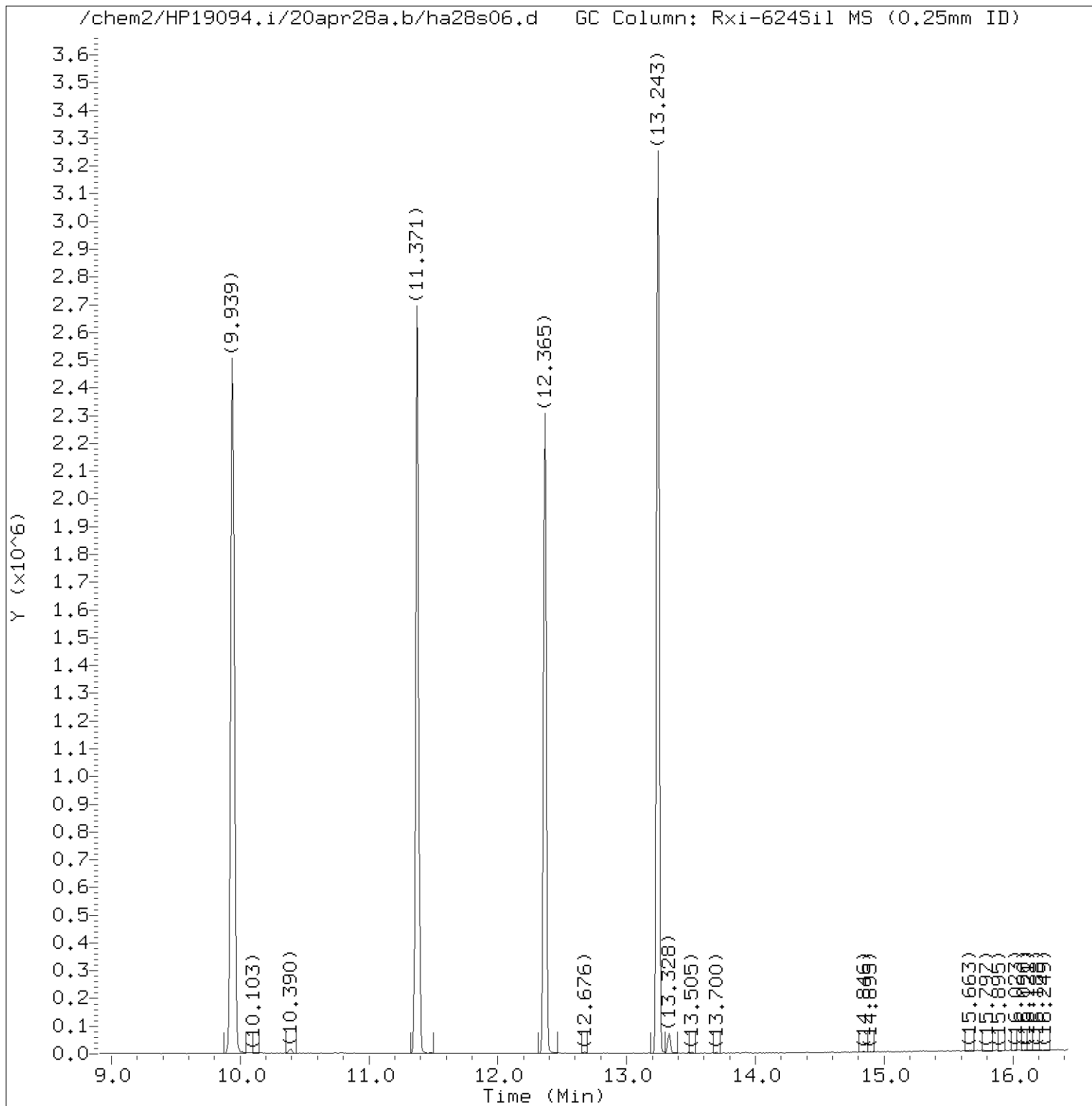
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R10

Lab Sample ID: 1300805

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s06.d
Injection date and time: 28-APR-2020 12:52

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 22469

Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R10

Lab Sample ID: 1300805

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s06.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 12:52

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R10

Lab Sample ID: 1300805

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.458	65	124818	50.000
51) \$Dibromofluoromethane	(2)	7.061	113	513999	10.470
52) 1,1,1-Trichloroethane	(2)	7.092	97	12605	0.145
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	104635	10.997
64) *Fluorobenzene	(2)	7.951	96	1974972	10.000
83) \$Toluene-d8	(3)	9.939	98	1991974	9.785
98) *Chlorobenzene-d5	(3)	11.371	117	1527994	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	695458	9.234
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	801379	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

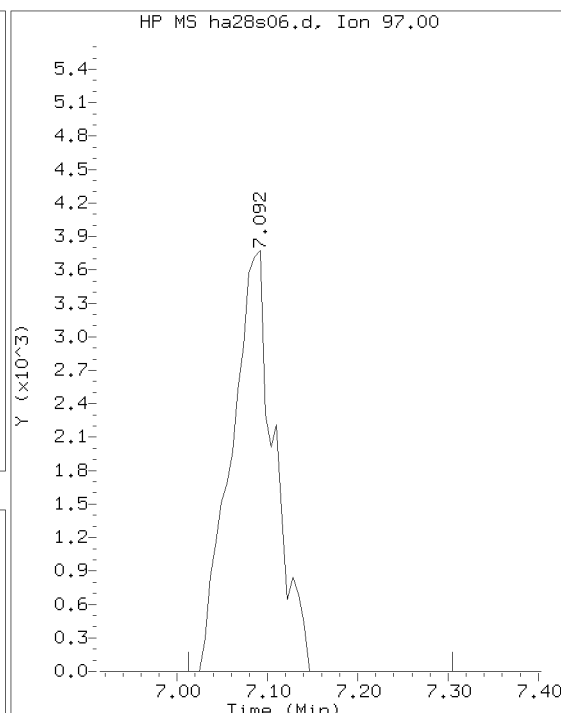
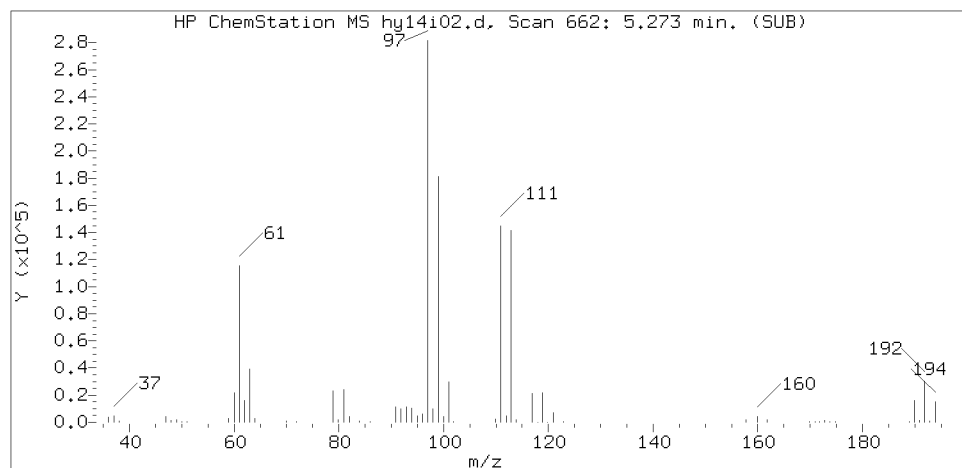
page 1 of 1

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

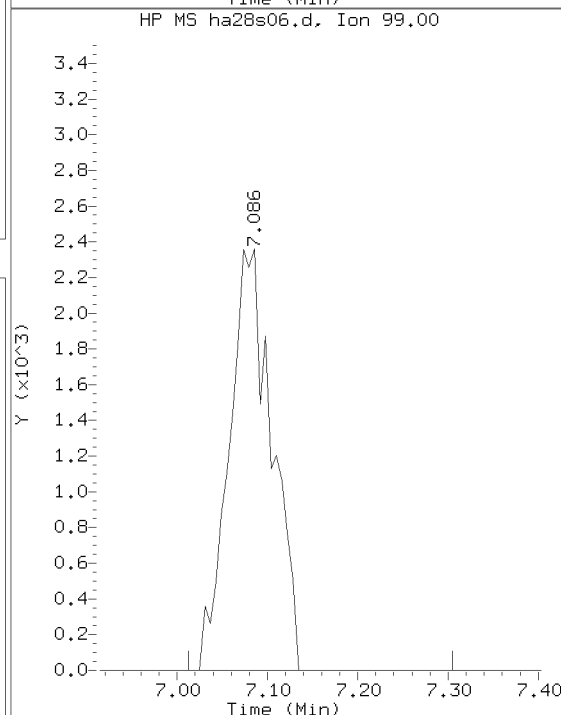
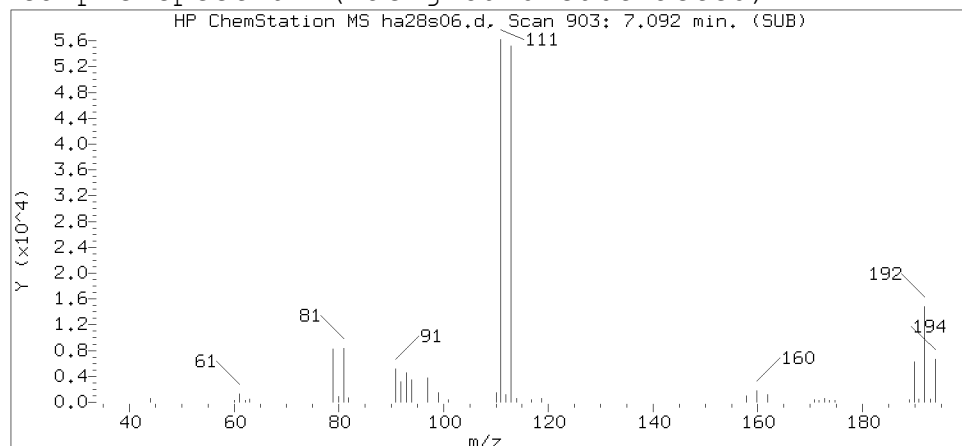
Target 3.5 esignature user ID: jkh09052

RAF59 Page 344 of 1506

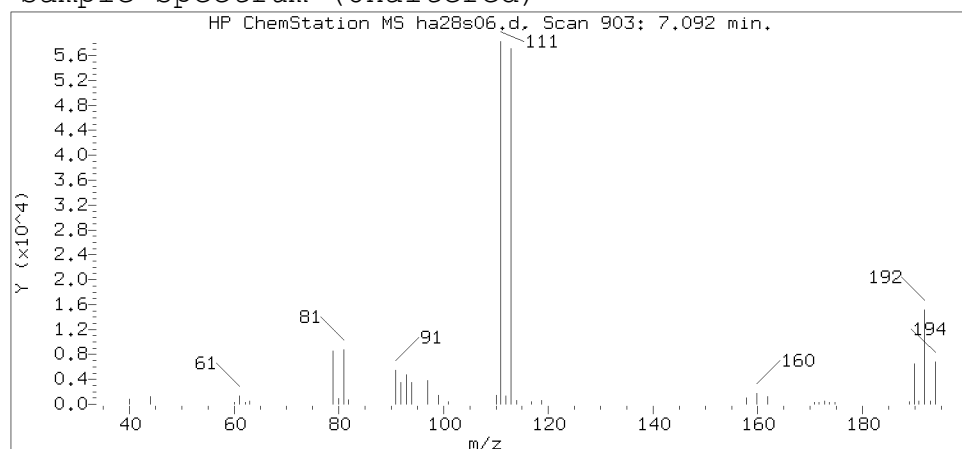
Reference Standard Spectrum for 1,1,1-Trichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s06.d
Injection date and time: 28-APR-2020 12:52

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:49 jkh09052

Sample Name: 59R10

Lab Sample ID: 1300805

Compound Number : 52
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Relative Retention Time : -0.00153
Quant Ion : 97.00
Area (flag) : 12605
On-Column Amount (ng) : 0.1450

Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

59R11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300806

Data file: /chem2/HP19094.i/20apr28a.b/ha28s07.d

Injection date and time: 28-APR-2020 13:13

Data file Sample Info. Line: 59R11;1300806;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 13:50 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464 (-0.006)	472	65	137073 (3)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1979880 (-3)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1530318 (-4)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	798090 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.001)	113	521324	10.592	106%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513 (0.001)	102	106528	11.168	112%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1986664	9.744	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	692351	9.179	92%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.05	1
4) Dimethyl ether	(2)			Not Detected					0.04	13
2) Chloromethane	(2)			Not Detected					0.06	1
8) Chloroethane	(2)			Not Detected					0.07	1
10) Trichlorofluoromethane	(2)			Not Detected					0.05	1
11) Ethyl ether	(2)			Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.06	1
16) Freon 113	(2)			Not Detected					0.06	1
24) Methylene Chloride	(2)			Not Detected					0.07	1
34) 1,1-Dichloroethane	(2)	5.537 (-0.000)	63	26133	0.272	0.27		J	0.07	1
39) 2-Butanone	(1)			Not Detected					0.6	10
49) Tetrahydrofuran	(1)			Not Detected					0.8	25
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.06	1
55) Carbon Tetrachloride	(2)			Not Detected					0.07	1
59) Benzene	(2)			Not Detected					0.05	1
68) Trichloroethene	(2)			Not Detected					0.06	1
84) Toluene	(3)			Not Detected					0.07	1
90) Tetrachloroethene	(3)			Not Detected					0.06	1
101) Ethylbenzene	(3)			Not Detected					0.06	1
102) m+p-Xylene	(3)			Not Detected					0.1	0.5
105) o-Xylene	(3)			Not Detected					0.05	0.5
106) Xylene (Total)	(3)			Not Detected					0.2	3

59R11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300806

Data file: /chem2/HP19094.i/20apr28a.b/ha28s07.d

Injection date and time: 28-APR-2020 13:13

Data file Sample Info. Line: 59R11;1300806;1;0;;RAF59;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 13:50 jkh09052

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

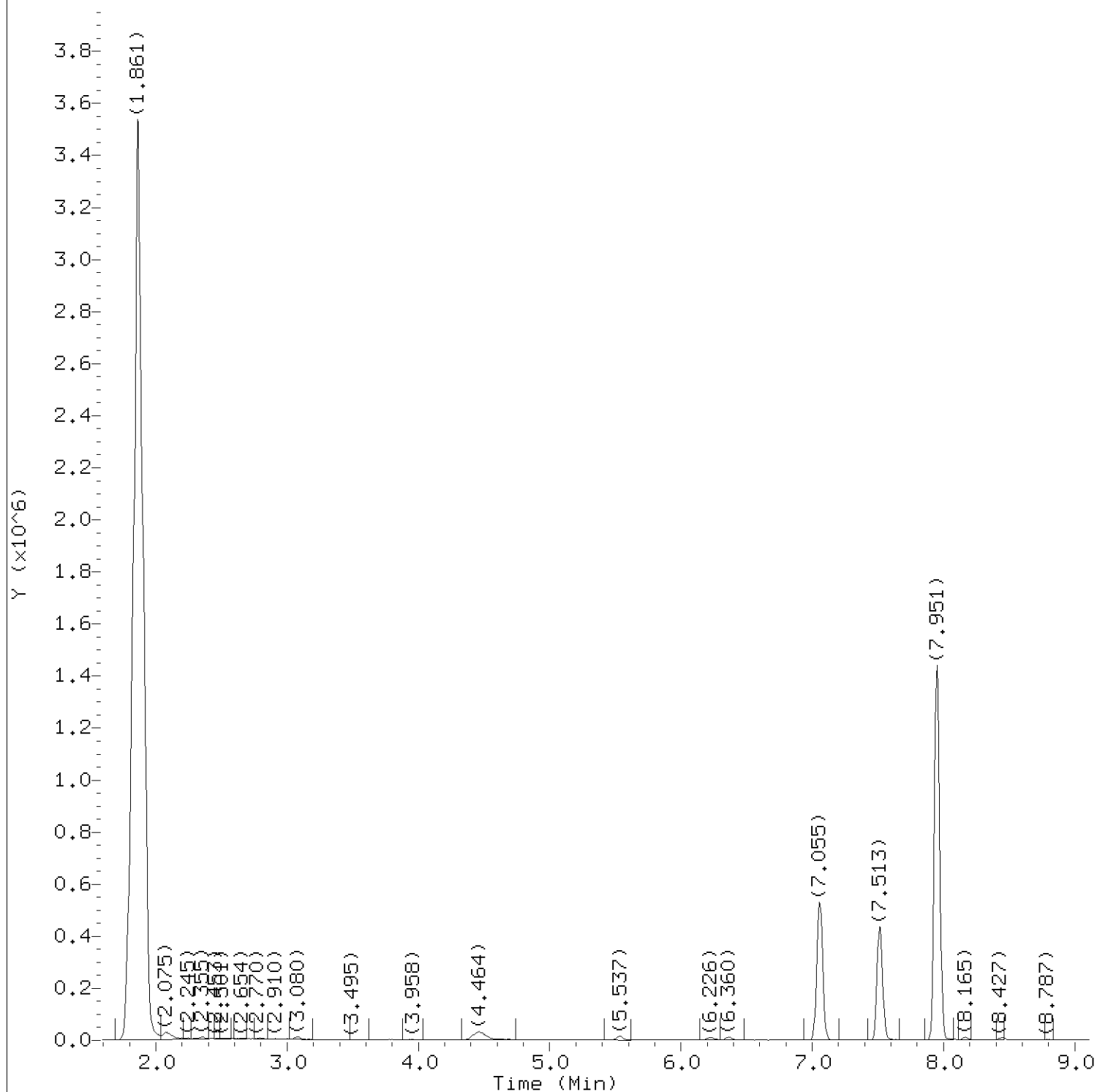
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:49. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s07.d
Injection date and time: 28-APR-2020 13:13

Instrument ID: HP19094.i
Analyst ID: jkh09052

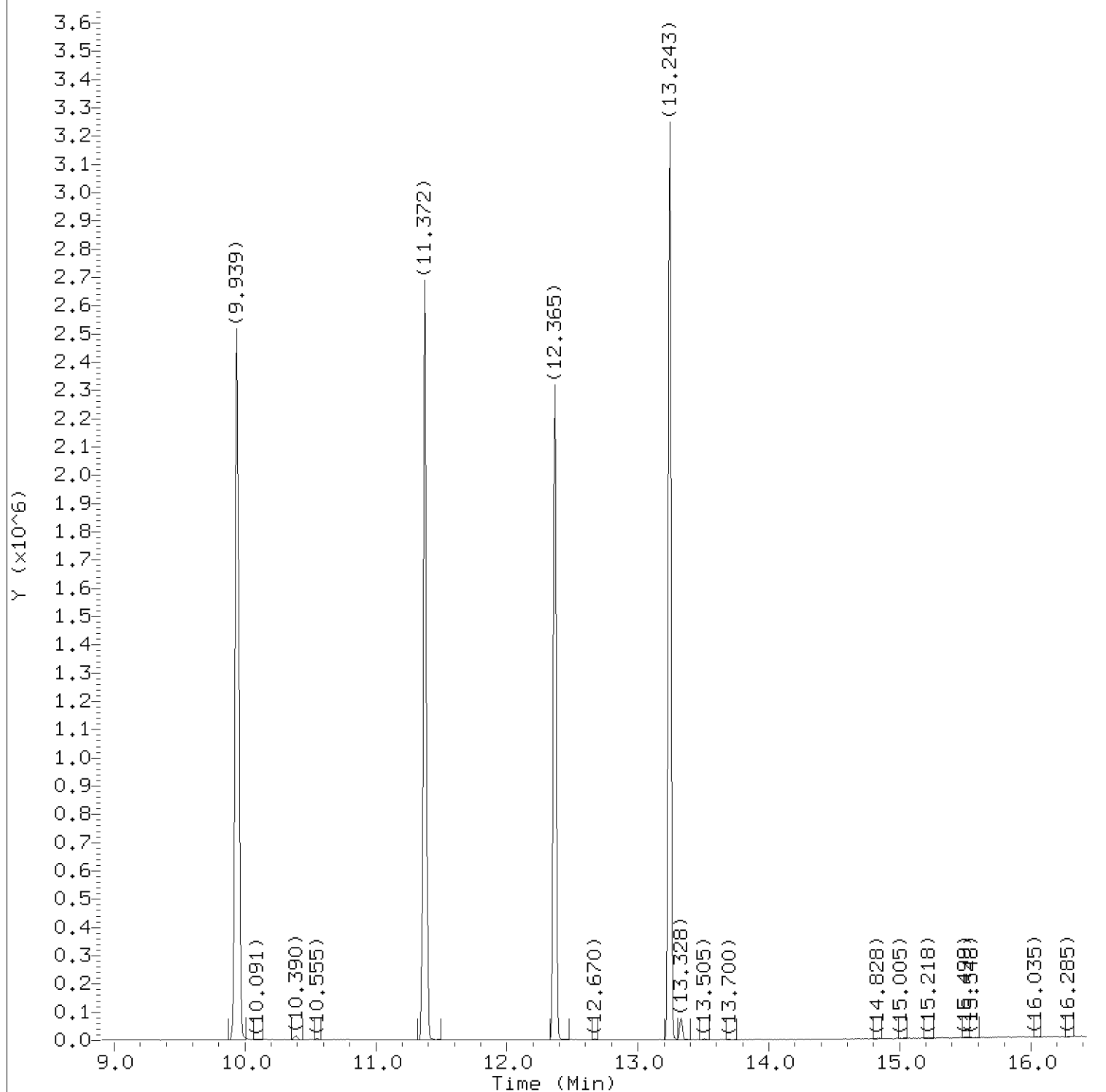
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:50 jkh09052

Sample Name: 59R11

Lab Sample ID: 1300806

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s07.d
Injection date and time: 28-APR-2020 13:13

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:50 jkh09052

Sample Name: 59R11

Lab Sample ID: 1300806

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 13:13

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 13:50 jkh09052

Sample Name: 59R11

Lab Sample ID: 1300806

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.464	65	137073	50.000
34) 1,1-Dichloroethane	(2)	5.537	63	26133	0.272
51) \$Dibromofluoromethane	(2)	7.055	113	521324	10.592
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	106528	11.168
64) *Fluorobenzene	(2)	7.951	96	1979880	10.000
83) \$Toluene-d8	(3)	9.939	98	1986664	9.744
98) *Chlorobenzene-d5	(3)	11.372	117	1530318	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	692351	9.179
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	798090	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

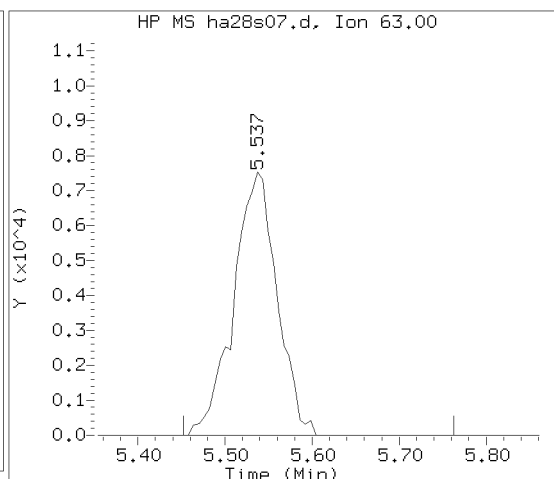
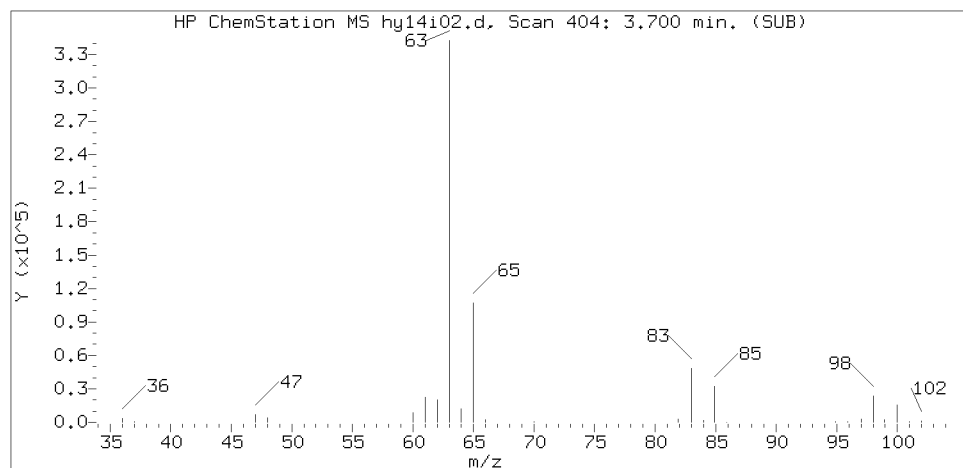
page 1 of 1

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 13:50.

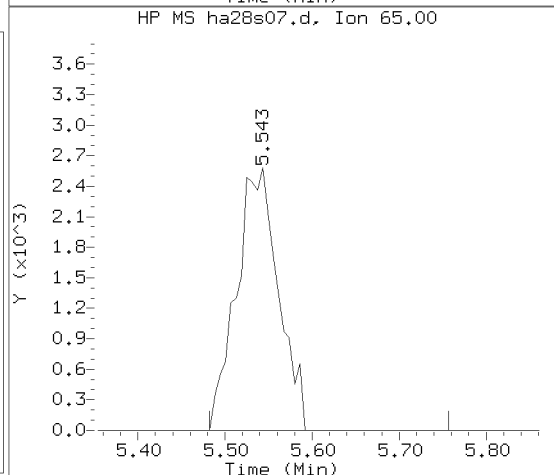
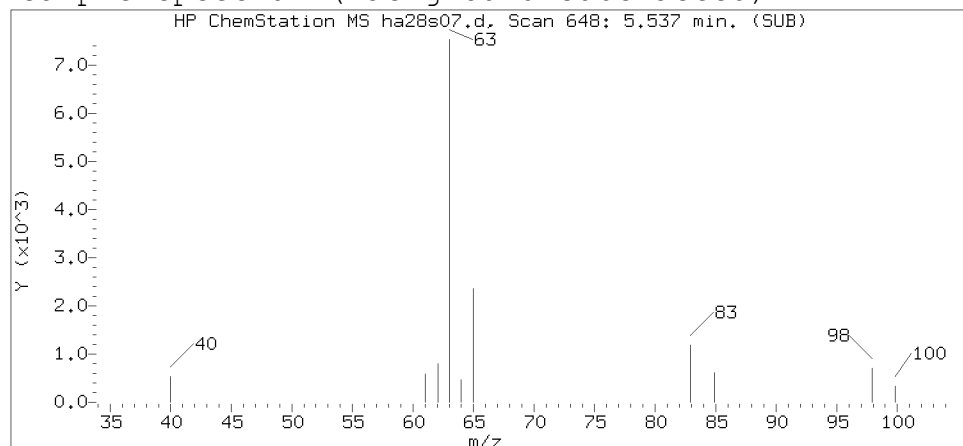
Target 3.5 esignature user ID: jkh09052

RAF59 Page 350 of 1506

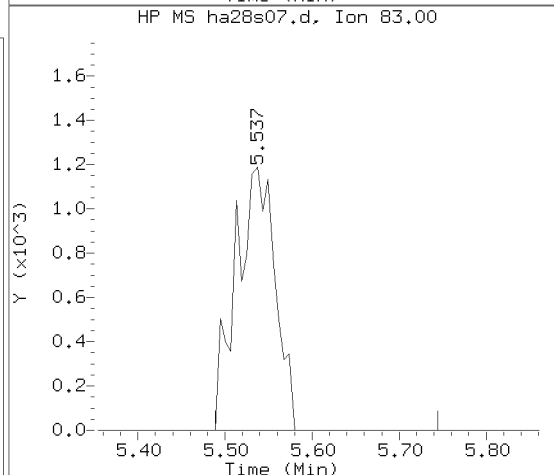
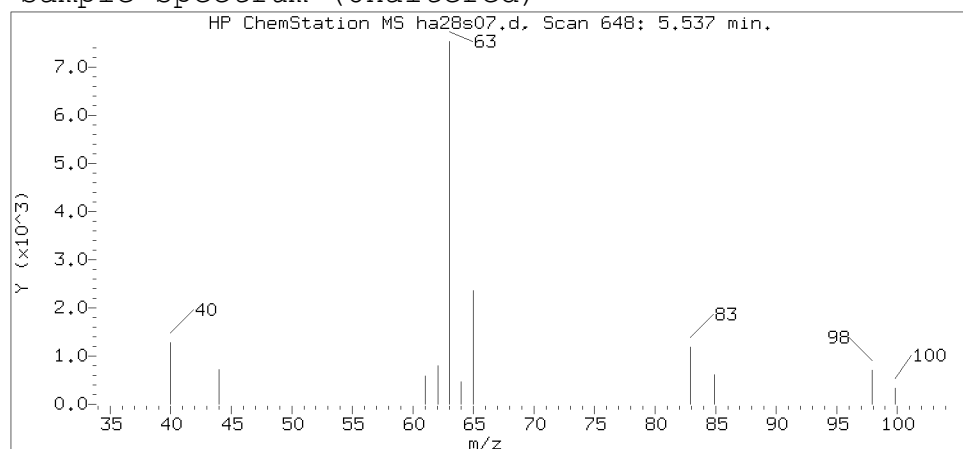
Reference Standard Spectrum for 1,1-Dichloroethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20apr28a.b/ha28s07.d
Injection date and time: 28-APR-2020 13:13

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 13:50 jkh09052

Sample Name: 59R11

Lab Sample ID: 1300806

Compound Number : 34
Compound Name : 1,1-Dichloroethane
Scan Number : 648
Retention Time (minutes): 5.537
Relative Retention Time : -0.00001
Quant Ion : 63.00
Area (flag) : 26133
On-Column Amount (ng) : 0.2722

Digitally signed by Jennifer K. Howe on 04/28/2020 at 13:50.

Target 3.5 esignature user ID: jkh09052

59R12

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300807

Data file: /chem2/HP19094.i/20apr27a.b/ha27s02.d Injection date and time: 27-APR-2020 22:38
 Data file Sample Info. Line: 59R12;1300807;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
 Calibration date and time (Last Method Edit): 28-APR-2020 22:26
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9274;9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (-0.012)	471	65	126334 (-4)	50.00	
64) Fluorobenzene	7.958 (-0.006)	1045	96	1631605 (-3)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1465293 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	793549 (-3)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.067 (0.000)	113	450662	11.111	111%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (0.000)	102	89681	11.409	114%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1770385	9.068	91%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	685668	9.494	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)			Not Detected					2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

59R12

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300807

Data file: /chem2/HP19094.i/20apr27a.b/ha27s02.d Injection date and time: 27-APR-2020 22:38
Data file Sample Info. Line: 59R12;1300807;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 22:26
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

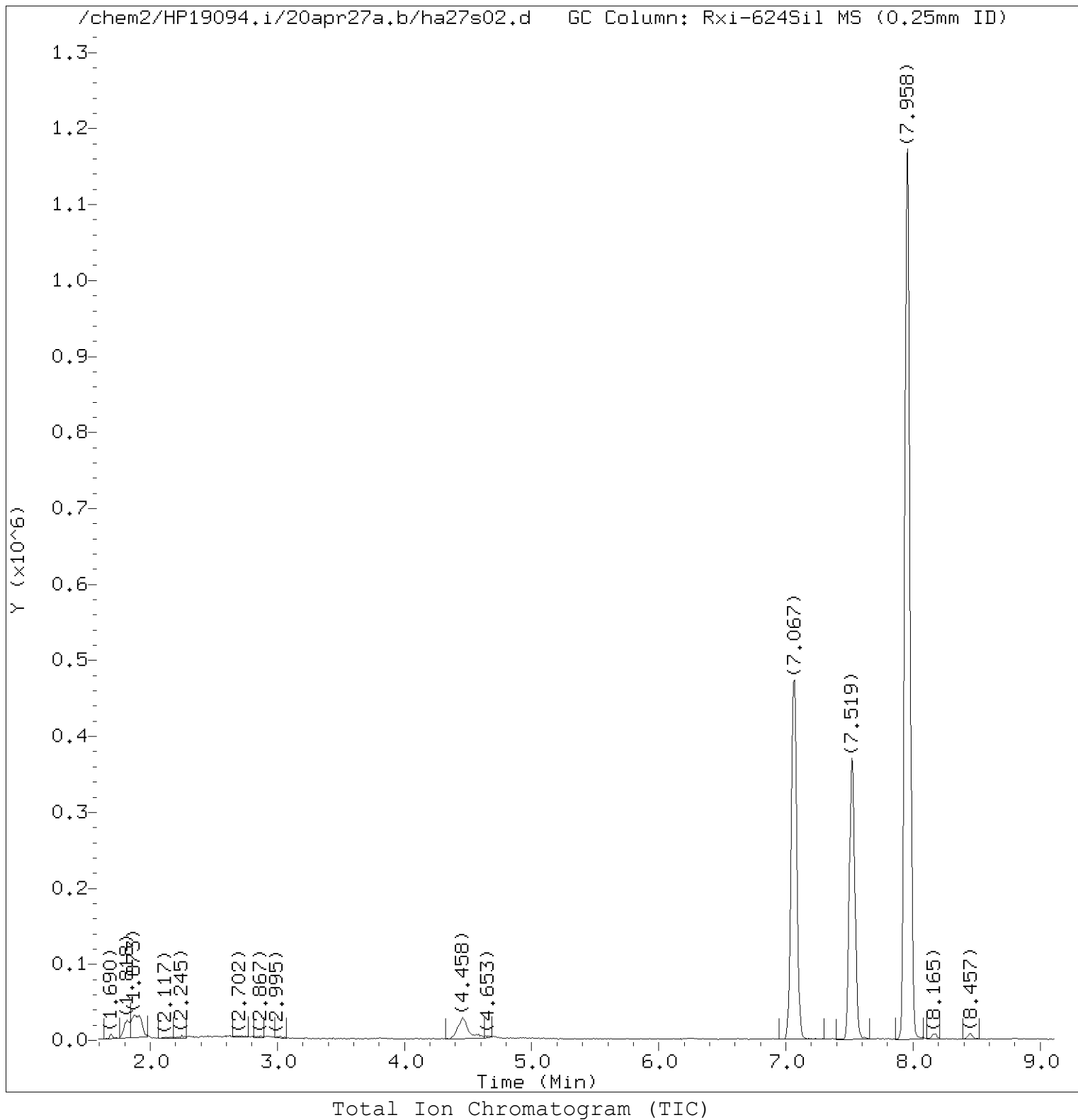
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
59) Benzene	(2)				Not Detected					0.07	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
72) Methyl Methacrylate	(1)				Not Detected					4	10
74) Dibromomethane	(2)				Not Detected					0.07	1
73) 1,4-Dioxane	(1)				Not Detected					45	200
75) Bromodichloromethane	(2)				Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)				Not Detected					0.9	10
84) Toluene	(3)				Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
87) Ethyl Methacrylate	(3)				Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.08	1
90) Tetrachloroethene	(3)				Not Detected					0.06	1
91) 1,3-Dichloropropane	(3)				Not Detected					0.09	1
92) 2-Hexanone	(1)				Not Detected					0.6	10
94) Dibromochloromethane	(3)				Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)				Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.08	1
101) Ethylbenzene	(3)				Not Detected					0.08	1
102) m+p-Xylene	(3)				Not Detected					0.1	2
105) o-Xylene	(3)				Not Detected					0.1	1
106) Xylene (Total)	(3)				Not Detected					0.2	3
107) Styrene	(3)				Not Detected					0.07	1
108) Bromoform	(3)				Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.1	1
127) Pentachloroethane	(4)				Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
147) Hexachlorobutadiene	(4)				Not Detected					0.07	1
148) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s02.d
Injection date and time: 27-APR-2020 22:38

Instrument ID: HP19094.i
Analyst ID: mec29284

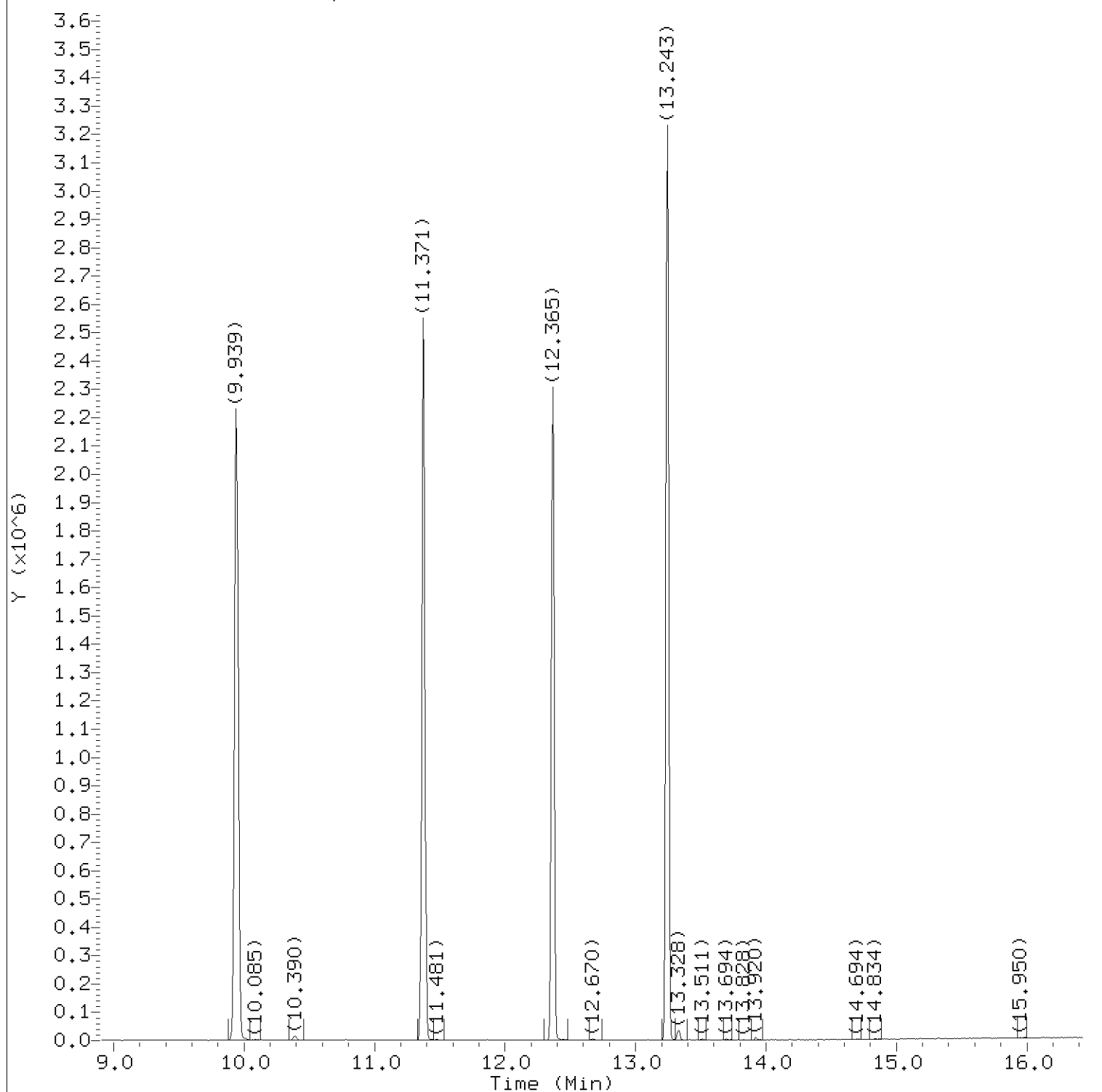
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R12

Lab Sample ID: 1300807

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s02.d
Injection date and time: 27-APR-2020 22:38

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R12

Lab Sample ID: 1300807

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s02.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 22:38

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R12

Lab Sample ID: 1300807

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
27) *t-Butyl Alcohol-d10	(1)	4.458	65	126334	50.000
51) \$Dibromofluoromethane	(2)	7.067	113	450662	11.111
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	89681	11.409
64) *Fluorobenzene	(2)	7.958	96	1631605	10.000
83) \$Toluene-d8	(3)	9.939	98	1770385	9.068
98) *Chlorobenzene-d5	(3)	11.371	117	1465293	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	685668	9.494
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	793549	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

59R13

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300808

Data file: /chem2/HP19094.i/20apr27a.b/ha27s03.d

Injection date and time: 27-APR-2020 23:00

Data file Sample Info. Line: 59R13;1300808;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9274; 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464 (-0.018)	472	65	122214 (-7)	50.00	
64) Fluorobenzene	7.958 (-0.006)	1045	96	1608355 (-4)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1449926 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	780861 (-5)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.001)	113	448739	11.224	112%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (0.000)	102	88148	11.376	114%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1752785	9.073	91%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	675828	9.457	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected				0.1	1
4) Dimethyl ether	(2)			Not Detected				0.04	13
2) Chloromethane	(2)			Not Detected				0.06	0.5
5) Vinyl Chloride	(2)			Not Detected				0.2	1
7) Bromomethane	(2)			Not Detected				0.5	1
8) Chloroethane	(2)			Not Detected				0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected				0.2	1
11) Ethyl ether	(2)			Not Detected				1	13
13) Acrolein	(1)			Not Detected				3	25
15) 1,1-Dichloroethene	(2)			Not Detected				0.2	1
16) Freon 113	(2)			Not Detected				0.1	1
14) Acetone	(1)			Not Detected				0.9	10
17) Methyl Iodide	(2)			Not Detected				0.6	10
19) Carbon Disulfide	(2)			Not Detected				0.4	10
26) Acetonitrile	(1)			Not Detected				32	100
23) Allyl Chloride	(2)			Not Detected				0.8	10
24) Methylene Chloride	(2)			Not Detected				0.2	1
30) Acrylonitrile	(1)			Not Detected				0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected				0.2	1
34) 1,1-Dichloroethane	(2)			Not Detected				0.1	1
37) Vinyl Acetate	(2)			Not Detected				3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected				0.5	10
39) 2-Butanone	(1)			Not Detected				0.6	10
43) Propionitrile	(1)			Not Detected				10	100
46) Methacrylonitrile	(1)			Not Detected				10	100
49) Tetrahydrofuran	(1)			Not Detected				2	25
50) Chloroform	(2)			Not Detected				0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected				0.1	1
55) Carbon Tetrachloride	(2)			Not Detected				0.2	1
57) Isobutyl Alcohol	(1)			Not Detected				4	200

59R13

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300808

Data file: /chem2/HP19094.i/20apr27a.b/ha27s03.d Injection date and time: 27-APR-2020 23:00
Data file Sample Info. Line: 59R13;1300808;1;0;;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time (Last Method Edit): 28-APR-2020 22:26
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

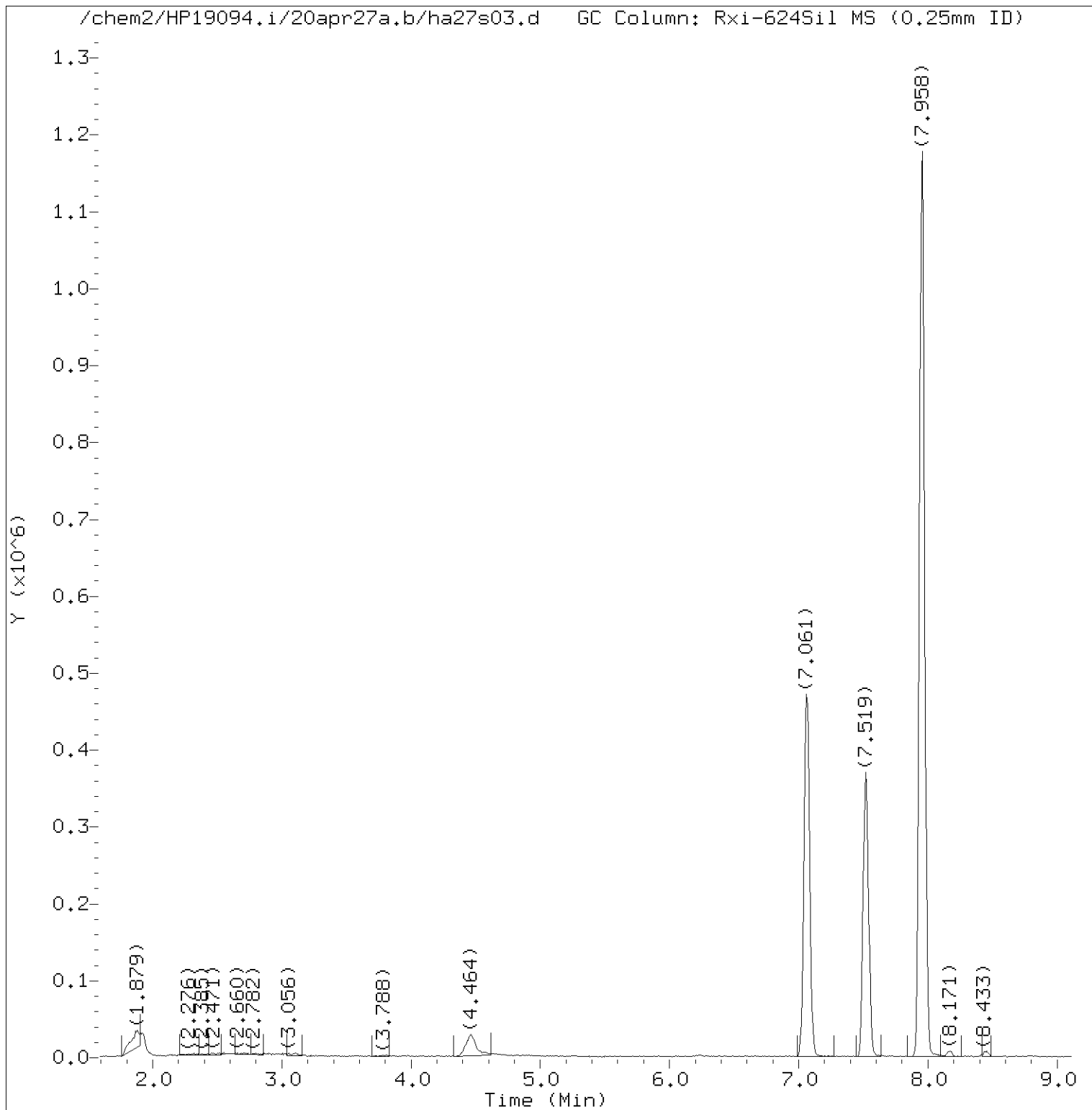
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	LOQ
										Limit (in sample)	
59) Benzene	(2)				Not Detected					0.07	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
72) Methyl Methacrylate	(1)				Not Detected					4	10
74) Dibromomethane	(2)				Not Detected					0.07	1
73) 1,4-Dioxane	(1)				Not Detected					45	200
75) Bromodichloromethane	(2)				Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)				Not Detected					0.9	10
84) Toluene	(3)				Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
87) Ethyl Methacrylate	(3)				Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.08	1
90) Tetrachloroethene	(3)				Not Detected					0.06	1
91) 1,3-Dichloropropane	(3)				Not Detected					0.09	1
92) 2-Hexanone	(1)				Not Detected					0.6	10
94) Dibromochloromethane	(3)				Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)				Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.08	1
101) Ethylbenzene	(3)				Not Detected					0.08	1
102) m+p-Xylene	(3)				Not Detected					0.1	2
105) o-Xylene	(3)				Not Detected					0.1	1
106) Xylene (Total)	(3)				Not Detected					0.2	3
107) Styrene	(3)				Not Detected					0.07	1
108) Bromoform	(3)				Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.1	1
127) Pentachloroethane	(4)				Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
147) Hexachlorobutadiene	(4)				Not Detected					0.07	1
148) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s03.d
Injection date and time: 27-APR-2020 23:00

Instrument ID: HP19094.i
Analyst ID: mec29284

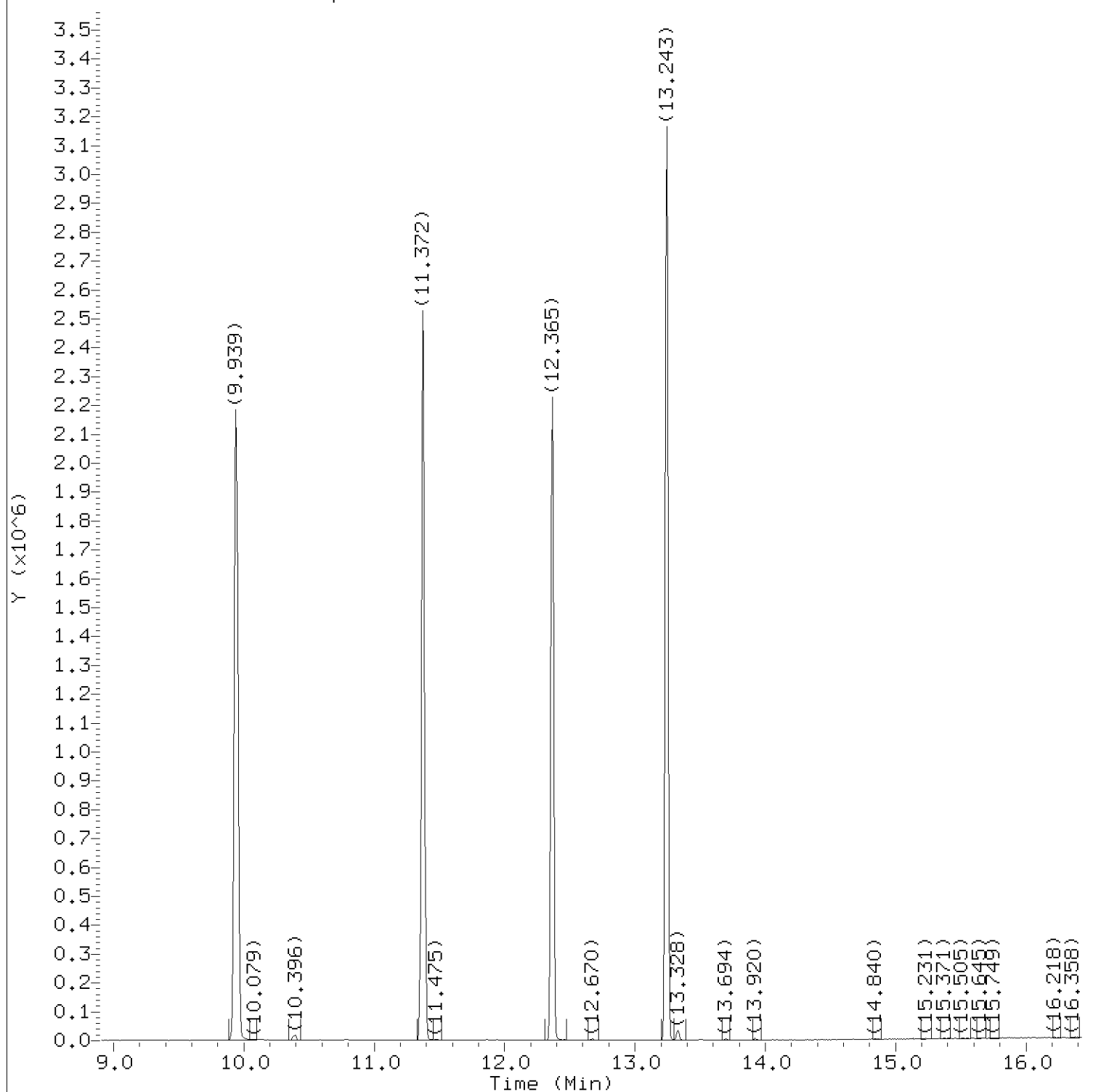
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R13

Lab Sample ID: 1300808

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s03.d
Injection date and time: 27-APR-2020 23:00

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R13

Lab Sample ID: 1300808

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s03.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 23:00

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R13

Lab Sample ID: 1300808

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.464	65	122214	50.000
51) \$Dibromofluoromethane	(2)	7.061	113	448739	11.224
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	88148	11.376
64) *Fluorobenzene	(2)	7.958	96	1608355	10.000
83) \$Toluene-d8	(3)	9.939	98	1752785	9.073
98) *Chlorobenzene-d5	(3)	11.372	117	1449926	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	675828	9.457
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	780861	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\20APR21A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	YA21T01.D	50NGBFB	04/21/2020	20:37		
KAS02648	YA21T02.D	50NGBFB	04/21/2020	20:52		
KAS02648	YA21T03.D	50NGBFB	04/21/2020	21:04		
KAS02648	YA21T04.D	50NGBFB	04/21/2020	21:21		
KAS02648	YA21X01.D	CBLK	04/21/2020	21:31		
KAS02648	YA21I01.D	VSTD300	04/21/2020	21:54		
KAS02648	YA21I02.D	VSTD100	04/21/2020	22:16		
KAS02648	YA21I03.D	VSTD050	04/21/2020	22:38		
KAS02648	YA21I04.D	VSTD020	04/21/2020	23:00		
KAS02648	YA21I05.D	VSTD010	04/21/2020	23:22		
KAS02648	YA21I06.D	VSTD004	04/21/2020	23:44		
KAS02648	YA21I07.D	VSTD001	04/22/2020	00:06		
KAS02648	YA21X02.D	CBLK	04/22/2020	00:28		
KAS02648	YA21V01.D	YLGICV	04/22/2020	00:49		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20jan06i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	HJ06T01.D	BFB AUG 02 2019	01/06/2020	10:35		
JKH09052	HJ06X00.D	blk	01/06/2020	10:57		
JKH09052	HJ06I11.D	VSTD025	01/06/2020	11:19		
JKH09052	HJ06I12.D	VSTD010	01/06/2020	11:41		
JKH09052	HJ06I13.D	VSTD005	01/06/2020	12:02		
JKH09052	HJ06I14.D	VSTD002	01/06/2020	12:24		
JKH09052	HJ06I15.D	VSTD001	01/06/2020	12:46		
JKH09052	HJ06I16.D	VSTD0.5	01/06/2020	13:07		
JKH09052	HJ06I17.D	VSTD0.2	01/06/2020	13:29		
JKH09052	HJ06V11.D	ICVH00	01/06/2020	13:51		
JKH09052	HJ06X01.D	blk	01/06/2020	14:13		
JKH09052	HJ06I01.D	VSTD025	01/06/2020	14:34		
JKH09052	HJ06I02.D	VSTD010	01/06/2020	14:56		
JKH09052	HJ06I03.D	VSTD005	01/06/2020	15:18		
JKH09052	HJ06I04.D	VSTD002	01/06/2020	15:39		
JKH09052	HJ06I05.D	VSTD001	01/06/2020	16:01		
JKH09052	HJ06I06.D	VSTD0.5	01/06/2020	16:23		
JKH09052	HJ06I07.D	VSTD0.2	01/06/2020	16:44		
JKH09052	HJ06V01.D	ICVH01	01/06/2020	17:06		
JKH09052	HJ06X02.D	blk	01/06/2020	17:28		
JKH09052	HJ06B01.D	blk	01/06/2020	17:50		
JKH09052	HJ06M01.D	MDL0.1	01/06/2020	18:11		
JKH09052	HJ06M02.D	MDL0.1	01/06/2020	18:33		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - C:\MSDCHEM\1\DATA\20apr28b\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	YA28T41.D	50NGBFB	04/28/2020	20:16	Y201192AA	
KAS02648	YA28X41.D	BLANK	04/28/2020	20:26	Y201192AA	
KAS02648	YA28C41.D	VSTD050	04/28/2020	20:49	Y201192AA	
KAS02648	YA28S41.D	LCSY37	04/28/2020	21:11	Y201192AA	
KAS02648	YA28X42.D	BLANK	04/28/2020	21:34	Y201192AA	
KAS02648	YA28B41.D	VLKY37	04/28/2020	21:56	Y201192AA	
KAS02648	YA28R41.D	RLVY37	04/28/2020	22:18	Y201192AA	
KAS02648	YA28S42.D	1302603	04/28/2020	22:40	Y201192AA	
KAS02648	YA28S43.D	1303134	04/28/2020	23:02	Y201192AA	
KAS02648	YA28S44.D	1303135	04/28/2020	23:24	Y201192AA	
KAS02648	YA28S45.D	1300797	04/28/2020	23:45	Y201192AA	
KAS02648	YA28S46.D	1300798MS	04/29/2020	00:07	Y201192AA	
KAS02648	YA28S47.D	1300799MSD	04/29/2020	00:29	Y201192AA	
KAS02648	YA28S48.D	1300794	04/29/2020	00:51	Y201192AA	
KAS02648	YA28S49.D	1300795	04/29/2020	01:13	Y201192AA	
KAS02648	YA28S50.D	1300796	04/29/2020	01:35	Y201192AA	
KAS02648	YA28S51.D	1300800	04/29/2020	01:57	Y201192AA	
KAS02648	YA28S52.D	1300801	04/29/2020	02:19	Y201192AA	
KAS02648	YA28S53.D	1303132	04/29/2020	02:41	Y201192AA	
KAS02648	YA28S54.D	1303133	04/29/2020	03:03	Y201192AA	
KAS02648	YA28S55.D	1303136	04/29/2020	03:25	Y201192AA	
KAS02648	YA28S56.D	1303137	04/29/2020	03:46	Y201192AA	
KAS02648	YA28S57.D	1303138	04/29/2020	04:09	Y201192AA	
KAS02648	YA28S58.D	1300555	04/29/2020	04:31	Y201192AA	
KAS02648	YA28S59.D	1300556	04/29/2020	04:53	Y201192AA	
KAS02648	YA28S60.D	1300557	04/29/2020	05:15	Y201192AA	
KAS02648	YA28S61.D	1300558	04/29/2020	05:37	Y201192AA	
KAS02648	YA28S62.D	1301539	04/29/2020	05:59	Y201192AA	20
KAS02648	YA28S63.D	1301875	04/29/2020	06:21	Y201192AA	
KAS02648	YA28S64.D	1302629	04/29/2020	06:43	Y201192AA	20
KAS02648	YA28S65.D	1302629MS	04/29/2020	07:05	Y201192AA	20

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20APR27A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
mec29284	HA27T01.D	BFB JAN 28 2020	04/27/2020	19:06		
mec29284	HA27X00.D	BLK	04/27/2020	19:20	H201181AA	
mec29284	HA27C01.D	VSTD010	04/27/2020	19:41	H201181AA	
mec29284	HA27C02.D	VSTD010	04/27/2020	20:03	H201181AA	
mec29284	HA27L01.D	LCSH54	04/27/2020	20:25	H201181AA	
mec29284	HA27L32.D	LCDH56	04/27/2020	20:46	H201182AA	
mec29284	HA27L03.D	LCSH55	04/27/2020	21:08	H201181AA	
mec29284	HA27L34.D	LCDH57	04/27/2020	21:30	H201182AA	
mec29284	HA27R01.D	RLVH54	04/27/2020	21:51	H201181AA	
mec29284	HA27B01.D	VLKH54	04/27/2020	22:13	H201181AA	
mec29284	HA27S02.D	1300807	04/27/2020	22:38	H201181AA	
mec29284	HA27S03.D	1300808	04/27/2020	23:00	H201181AA	
mec29284	HA27S04.D	1300795	04/27/2020	23:21	H201181AA	
mec29284	HA27S05.D	1300797	04/27/2020	23:43	H201181AA	
mec29284	HA27S06.D	1300798MS	04/28/2020	00:05	H201181AA	
mec29284	HA27S07.D	1300799MSD	04/28/2020	00:26	H201181AA	
mec29284	HA27S08.D	1300798MS	04/28/2020	00:48	H201181AA	
mec29284	HA27S09.D	1300799MSD	04/28/2020	01:10	H201181AA	
mec29284	HA27S10.D	1300800	04/28/2020	01:31	H201181AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20apr28a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	HA28T01.D	BFB jan28 2020	04/28/2020	08:15		
jkh09052	HA28x00.D	VBLKH59	04/28/2020	08:30	H201181AB	
jkh09052	HA28C01.D	VSTD010	04/28/2020	08:51	H201181AB	
jkh09052	HA28C02.D	VSTD010	04/28/2020	09:13	H201181AB	
jkh09052	HA28L01.D	LCSH59	04/28/2020	09:35	H201181AB	
jkh09052	HA28L02.D	LCDH59	04/28/2020	09:56	H201181AB	
jkh09052	HA28L03.D	LCSH60	04/28/2020	10:18	H201181AB	
jkh09052	HA28L04.D	LCDH60	04/28/2020	10:40	H201181AB	
jkh09052	HA28B01.D	VBLKH59	04/28/2020	11:02	H201181AB	
jkh09052	HA28S02.D	1300801	04/28/2020	11:25	H201181AB	
jkh09052	HA28S03.D	1300802	04/28/2020	11:47	H201181AB	
jkh09052	HA28S04.D	1300803	04/28/2020	12:08	H201181AB	
jkh09052	HA28S05.D	1300804	04/28/2020	12:30	H201181AB	
jkh09052	HA28S06.D	1300805	04/28/2020	12:52	H201181AB	
jkh09052	HA28S07.D	1300806	04/28/2020	13:13	H201181AB	
jkh09052	HA28S08.D	1300795DL	04/28/2020	13:35	H201181AB	2
jkh09052	HA28S09.D	1300794	04/28/2020	13:57	H201181AB	
jkh09052	HA28S10.D	1300794DL	04/28/2020	14:18	H201181AB	2.5
jkh09052	HA28S11.D	1300796	04/28/2020	14:40	H201181AB	
jkh09052	HA28S12.D	1300796DL	04/28/2020	15:02	H201181AB	4
jkh09052	HA28S31.D	1301157	04/28/2020	15:24	H201191AA	
jkh09052	HA28S32.D	1299788	04/28/2020	15:45	H201191AA	10000
jkh09052	HA28S33.D	1299789	04/28/2020	16:07	H201191AA	100000
jkh09052	HA28S34.D	1299789DL	04/28/2020	16:29	H201191AA	1e+006
jkh09052	HA28S35.D	1301162	04/28/2020	16:51	H201191AA	
jkh09052	HA28S36.D	1301163	04/28/2020	17:12	H201191AA	
jkh09052	HA28S45.D	1299788	04/28/2020	17:34	H201191AA	10000
jkh09052	HA28S46.D	1301175	04/28/2020	17:56	H201191AA	200
jkh09052	HA28S47.D	1301175DL	04/28/2020	18:17	H201191AA	2000
jkh09052	HA28S48.D	1299788DL	04/28/2020	18:39	H201191AA	100000
jkh09052	HA28S37.D	1301158	04/28/2020	19:01	H201191AA	20
jkh09052	HA28S38.D	1301158DL	04/28/2020	19:23	H201191AA	200
jkh09052	HA28S39.D	1301159	04/28/2020	19:44	H201191AA	20
jkh09052	HA28S40.D	1301159DL	04/28/2020	20:06	H201191AA	200

Page 1

Client ID: BFBJAN28-20

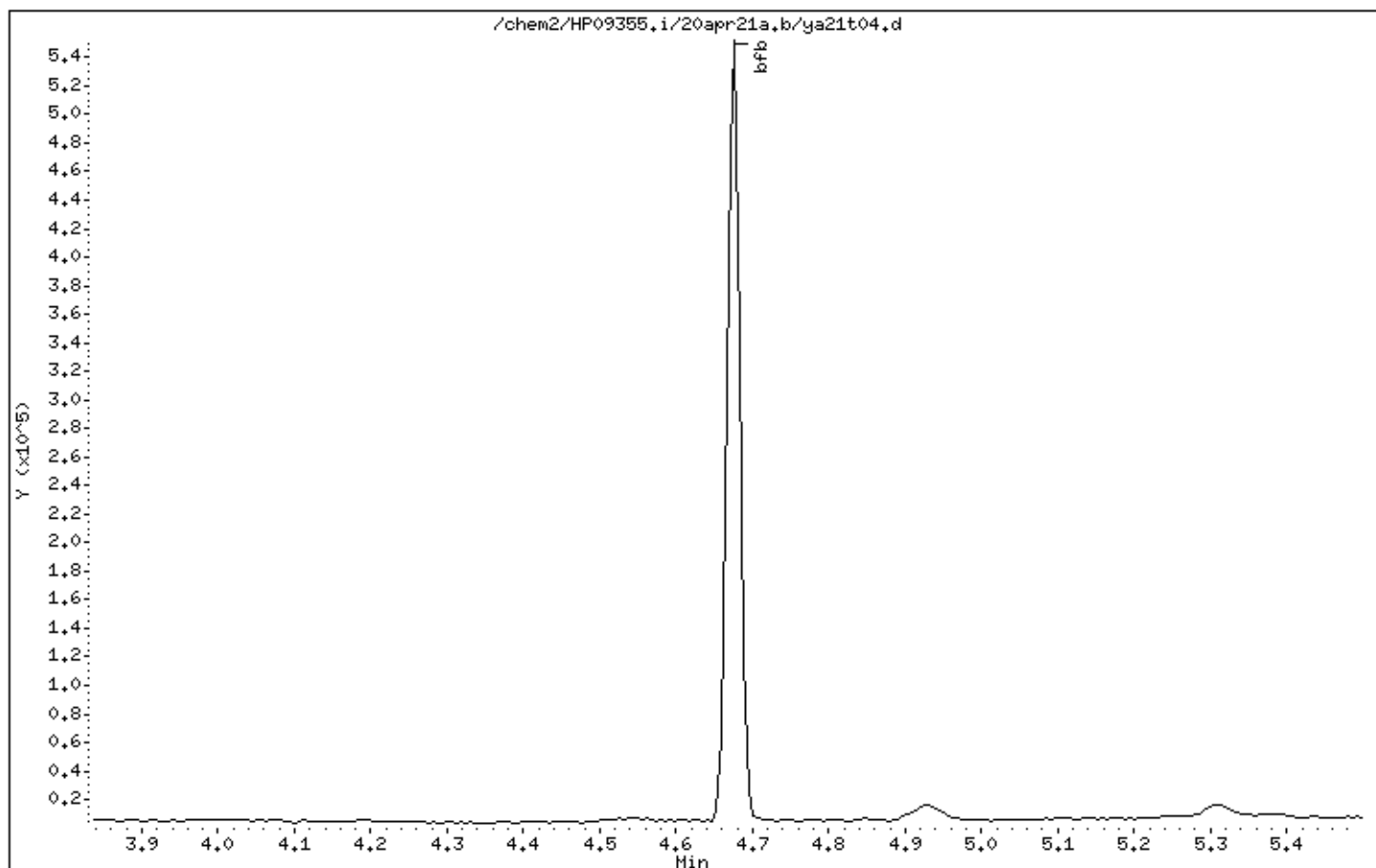
Instrument: HP09355.i

Sample Info: BFBJAN28-20;50NGBFB;1;3; ; ; ; ;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Date : 21-APR-2020 21:21

Client ID: BFBJAN28-20

Instrument: HP09355.i

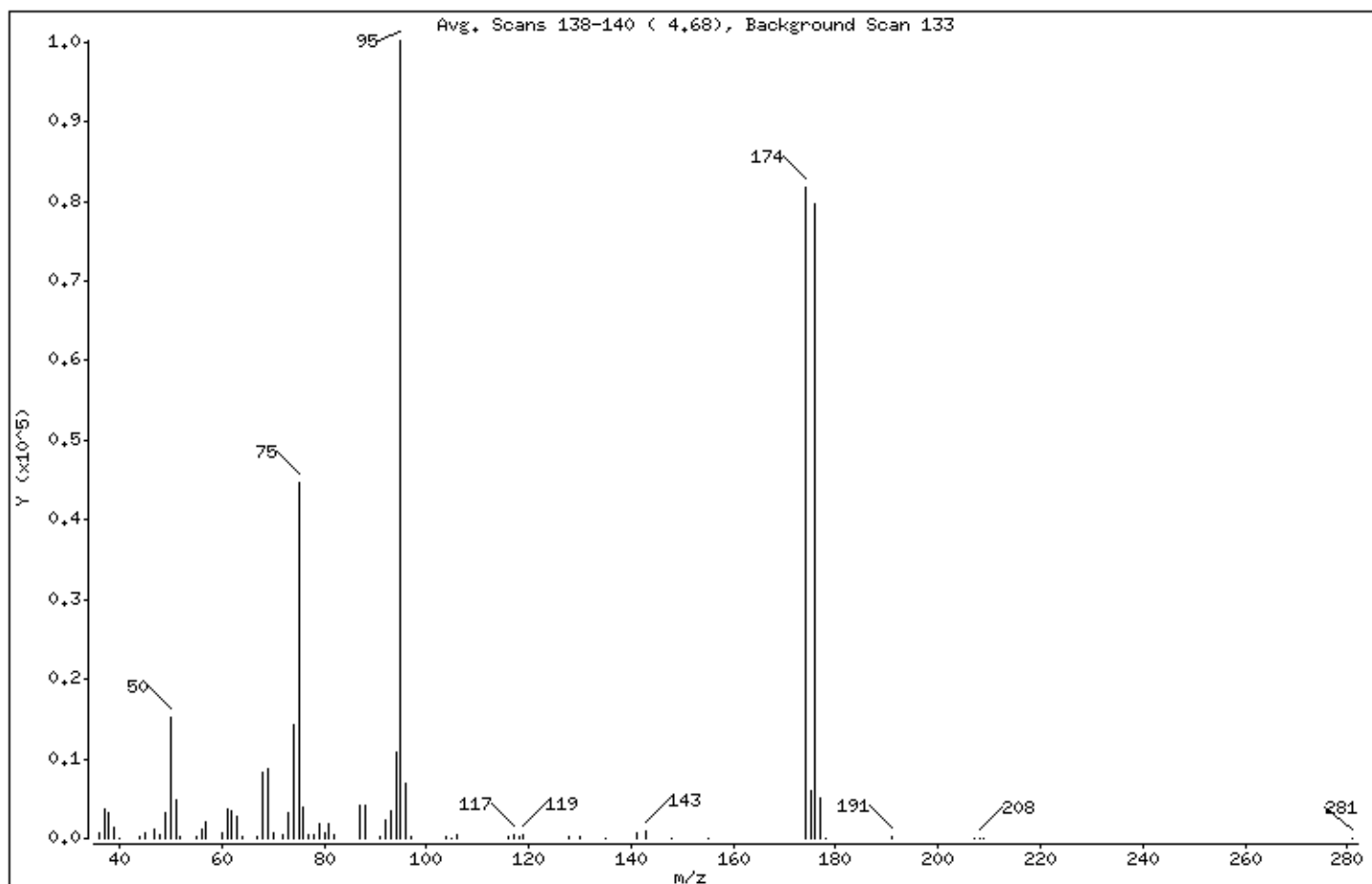
Sample Info: BFBJAN28-20;50NGBFB;1;3;++++;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.26
75	30.00 - 60.00% of mass 95	44.59
96	5.00 - 9.00% of mass 95	6.91
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	81.64
175	5.00 - 9.00% of mass 174	6.02 (7.37)
176	95.00 - 101.00% of mass 174	79.63 (97.54)
177	5.00 - 9.00% of mass 176	5.16 (6.48)

Date : 21-APR-2020 21:21

Client ID: BFBJAN28-20

Instrument: HP09355.i

Sample Info: BFBJAN28-20;50NGBFB;1;3;++++;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0,25

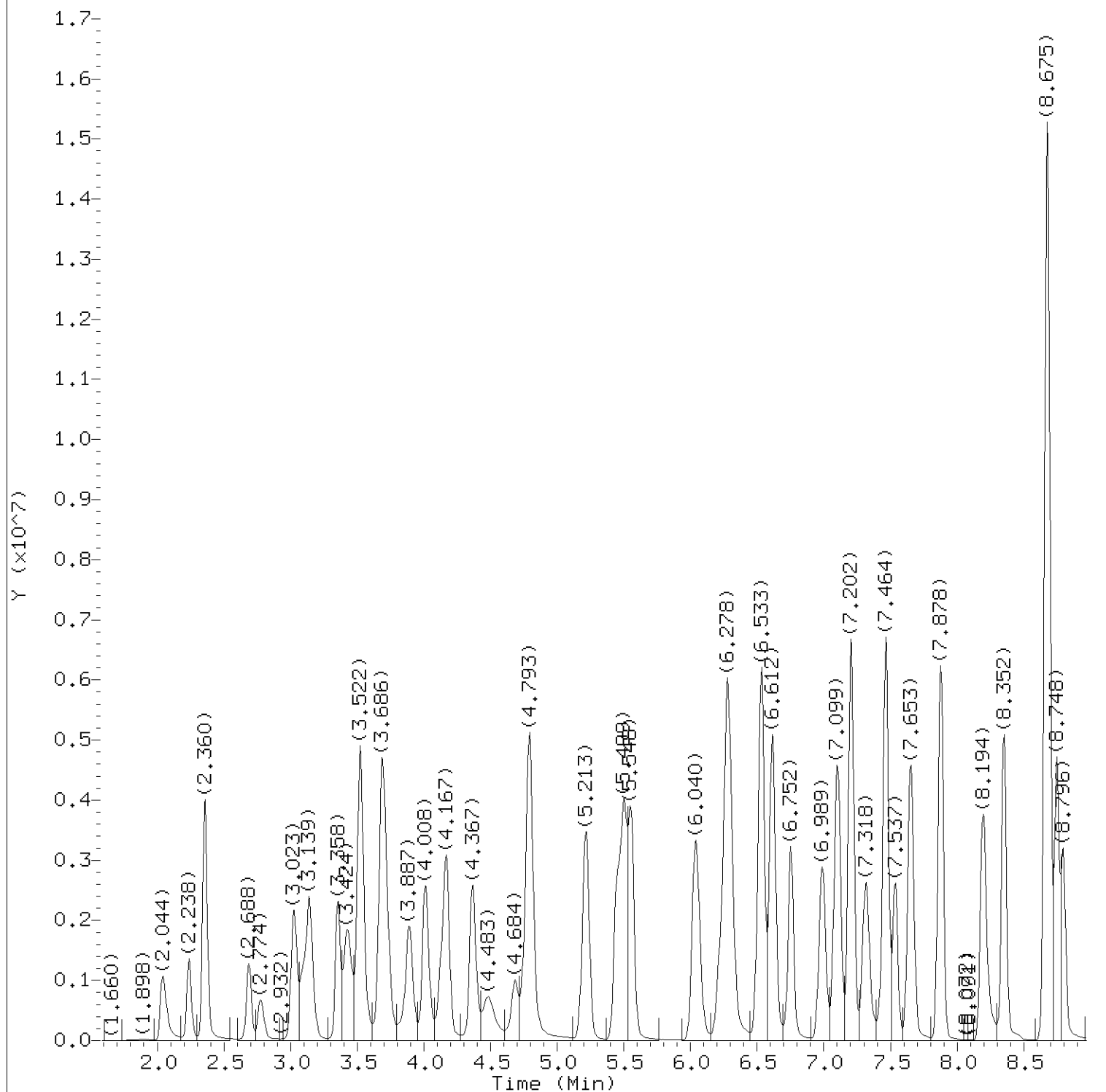
Data File: ya21t04.d

Spectrum: Avg. Scans 138-140 (4.68), Background Scan 133

Location of Maximum: 95,00

Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	589	62,00	3458	87,00	4141	135,00	94
37,00	3683	63,00	2777	88,00	4114	141,00	735
38,00	3218	64,00	233	91,00	325	143,00	828
39,00	1387	67,00	198	92,00	2260	148,00	106
40,00	101	68,00	8256	93,00	3556	155,00	88
44,00	280	69,00	8840	94,00	10710	174,00	81760
45,00	755	70,00	777	95,00	100152	175,00	6025
47,00	1208	72,00	479	96,00	6923	176,00	79752
48,00	501	73,00	3336	97,00	216	177,00	5168
49,00	3145	74,00	14290	104,00	220	178,00	86
50,00	15286	75,00	44656	105,00	90	191,00	123
51,00	4945	76,00	4017	106,00	365	207,00	19
52,00	179	77,00	553	116,00	304	208,00	50
55,00	178	78,00	388	117,00	497	209,00	2
56,00	1115	79,00	1734	118,00	244	281,00	104
57,00	2042	80,00	591	119,00	503		
60,00	733	81,00	1932	128,00	339		
61,00	3775	82,00	481	130,00	288		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d
Injection date and time: 21-APR-2020 21:54

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

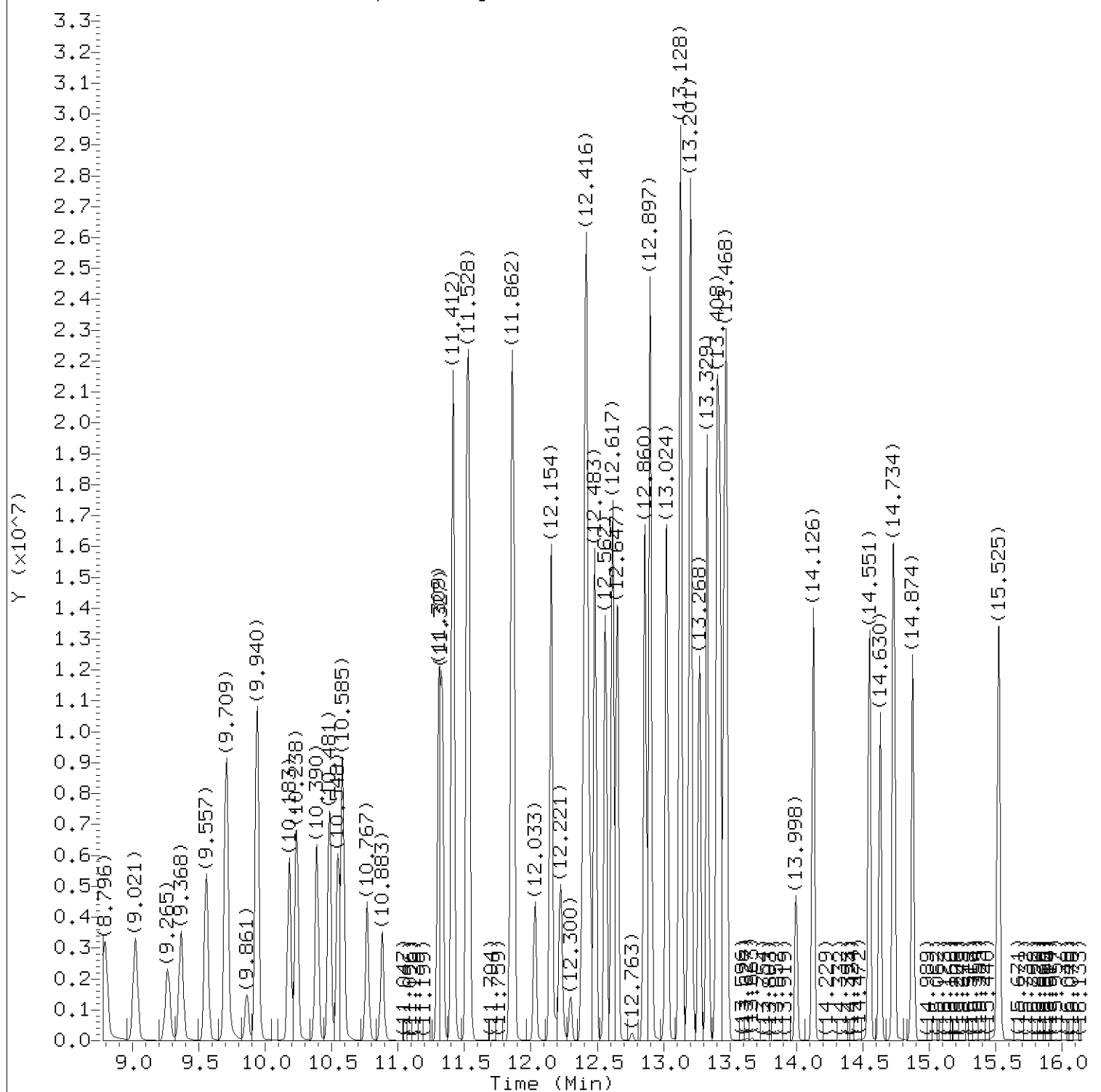
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d
Injection date and time: 21-APR-2020 21:54

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.044	85	2413655M	300.000
4) Chloromethane	(2)	2.238	50	2004732	300.000
5) 1,3-Butadiene	(2)	2.360	39	1685693	300.000
6) Vinyl Chloride	(2)	2.360	62	2013749	300.000
8) Bromomethane	(2)	2.688	94	1279984	300.000
9) Chloroethane	(2)	2.780	64	1065953	300.000
10) Dichlorofluoromethane	(2)	3.023	67	3011703	300.000
12) Trichlorofluoromethane	(2)	3.096	101	2514998	300.000
11) n-Pentane	(2)	3.145	43	2534906	300.000
14) Ethyl ether	(2)	3.351	59	1919688	300.000
15) Freon 123a	(2)	3.431	67	2290667	300.000
16) Acrolein	(1)	3.522	56	8356255	3000.000
17) 1,1-Dichloroethene	(2)	3.680	96	1846867	300.000
17) 1,1-Dichloroethene	(2)	3.680	63	907726	300.000
18) Acetone	(1)	3.692	58	823191	600.000
19) Freon 113	(2)	3.710	101	1909580	300.000
21) 2-Propanol	(1)	3.862	45	1549802	1500.000
22) Methyl Iodide	(2)	3.893	142	3286967	300.000
23) Carbon Disulfide	(2)	4.008	76	6582028	300.000
27) Methyl Acetate	(2)	4.130	43	2865310	300.000
25) Allyl Chloride	(2)	4.167	41	3129336	300.000
29)*t-Butyl alcohol-d10	(1)	4.355	65	381281M	250.000
28) Methylene Chloride	(2)	4.367	84	2179291	300.000
30) t-Butyl alcohol	(1)	4.483	59	2712417	1500.000
31) Acrylonitrile	(2)	4.684	53	1581102	300.000
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	5996926	300.000
32) trans-1,2-Dichloroethene	(2)	4.793	96	2133943	300.000
34) n-Hexane	(2)	5.219	57	3354175	300.000
36) 1,1-Dichloroethane	(2)	5.444	63	3786796	300.000
38) di-Isopropyl ether	(2)	5.499	45	6805444	300.000
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	3266131	300.000
40) Ethyl t-butyl ether	(2)	6.040	59	5974879	300.000
43) 1,2-Dichloroethene (Total)	(2)		96	4558567	600.000
44) 2-Butanone	(2)	6.229	43	4200266	600.000
42) cis-1,2-Dichloroethene	(2)	6.272	96	2424624	300.000
45) 2,2-Dichloropropane	(2)	6.290	77	2913006	300.000
47) Propionitrile	(1)	6.308	54	3176928M	1500.000
48) Methacrylonitrile	(2)	6.533	67	4044708	750.000

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

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Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d
Injection date and time: 21-APR-2020 21:54

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.612	128	1180705	300.000
50) Tetrahydrofuran	(1)	6.624	71	1221112	600.000
51) Chloroform	(2)	6.752	83	3676311	300.000
52) \$Dibromofluoromethane	(2)	6.971	113	288524	50.000
52) \$Dibromofluoromethane	(2)	6.971	111	293225	50.000
53) 1,1,1-Trichloroethane	(2)	6.989	97	3231676	300.000
54) Cyclohexane	(2)	7.099	56	4007858	300.000
54) Cyclohexane	(2)	7.105	84	3373756	300.000
54) Cyclohexane	(2)	7.105	69	1251240	300.000
55) 1,1-Dichloropropene	(2)	7.202	75	3100914	300.000
56) Carbon Tetrachloride	(2)	7.208	117	2819295	300.000
58) Isobutyl Alcohol	(1)	7.318	41	2448069	3750.000
57) \$1,2-Dichloroethane-d4	(2)	7.434	102	74244	50.000
57) \$1,2-Dichloroethane-d4	(2)	7.434	65	334115	50.000
57) \$1,2-Dichloroethane-d4	(2)	7.434	104	47320	50.000
60) Benzene	(2)	7.464	78	8987853	300.000
61) 1,2-Dichloroethane	(2)	7.537	62	2930873	300.000
61) 1,2-Dichloroethane	(2)	7.537	98	293469	300.000
65) t-Amyl methyl ether	(2)	7.653	73	5912386	300.000
66) *Fluorobenzene	(2)	7.865	96	1254678	50.000
67) n-Heptane	(2)	7.878	43	3552600	300.000
69) n-Butanol	(1)	8.194	56	4720547M	7500.000
71) Trichloroethene	(2)	8.352	95	2365386	300.000
72) Methylcyclohexane	(2)	8.669	83	4011266	300.000
72) Methylcyclohexane	(2)	8.669	98	1801966	300.000
73) 1,2-Dichloropropane	(2)	8.681	63	2290141	300.000
76) Methyl Methacrylate	(2)	8.748	69	2637826	300.000
75) 1,4-Dioxane	(1)	8.760	88	588988M	3750.000
74) Dibromomethane	(2)	8.796	93	1565518	300.000
78) Bromodichloromethane	(2)	9.021	83	2982601	300.000
79) 2-Nitropropane	(2)	9.265	41	2031678	600.000
80) 2-Chloroethyl Vinyl Ether	(2)	9.368	63	2057220	300.000
81) cis-1,3-Dichloropropene	(2)	9.557	75	3983408	300.000
82) 4-Methyl-2-pentanone	(2)	9.709	43	7997993	600.000
83) \$Toluene-d8	(3)	9.861	98	1228388	50.000
83) \$Toluene-d8	(3)	9.861	100	792618	50.000
88) Toluene	(3)	9.940	92	5757892	300.000
90) 1,3-Dichloropropene (total)	(3)		100	7738484	600.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d
 Injection date and time: 21-APR-2020 21:54

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.183	75	3755076	300.000
91) Ethyl Methacrylate	(3)	10.238	69	4239202	300.000
92) 1,1,2-Trichloroethane	(3)	10.390	97	2339063	300.000
93) Tetrachloroethene	(3)	10.488	166	2437592	300.000
94) 1,3-Dichloropropane	(3)	10.548	76	3903563	300.000
96) 2-Hexanone	(3)	10.585	43	6330738	600.000
97) Dibromochloromethane	(3)	10.767	129	2602680	300.000
99) 1,2-Dibromoethane	(3)	10.883	107	2634207	300.000
100) *Chlorobenzene-d5	(3)	11.303	117	940346	50.000
101) 1-Chlorohexane	(3)	11.309	91	3201456	300.000
102) Chlorobenzene	(3)	11.333	112	6364106	300.000
103) 1,1,1,2-Tetrachloroethane	(3)	11.412	131	2222421	300.000
104) Ethylbenzene	(3)	11.412	91	10405703	300.000
106) m+p-Xylene	(3)	11.528	106	8312534	600.000
108) Xylene (Total)	(3)		106	12473493	900.000
107) o-Xylene	(3)	11.856	106	4160959	300.000
109) Styrene	(3)	11.868	104	7101709	300.000
110) Bromoform	(3)	12.033	173	2043068	300.000
111) Isopropylbenzene	(3)	12.154	105	10232494	300.000
112) Cyclohexanone	(1)	12.221	55	2286856	3750.000
114) \$4-Bromofluorobenzene	(3)	12.300	95	465729	50.000
114) \$4-Bromofluorobenzene	(3)	12.300	174	360314	50.000
116) 1,1,2,2-Tetrachloroethane	(4)	12.392	83	3882427	300.000
118) trans-1,4-Dichloro-2-butene	(4)	12.416	53	3018157	750.000
115) Bromobenzene	(4)	12.416	156	2735446	300.000
117) 1,2,3-Trichloropropane	(4)	12.440	110	1253671	300.000
119) n-Propylbenzene	(4)	12.483	91	11461870	300.000
120) 2-Chlorotoluene	(4)	12.562	126	2695047	300.000
122) 1,3,5-Trimethylbenzene	(4)	12.617	105	9054231	300.000
121) 4-Chlorotoluene	(4)	12.653	126	2832594	300.000
124) tert-Butylbenzene	(4)	12.860	134	2002497M	300.000
125) Pentachloroethane	(4)	12.897	167	1646477	300.000
126) 1,2,4-Trimethylbenzene	(4)	12.903	105	9394928	300.000
127) sec-Butylbenzene	(4)	13.024	105	10966145	300.000
129) 1,3-Dichlorobenzene	(4)	13.122	146	5080942	300.000
130) p-Isopropyltoluene	(4)	13.128	119	9517000	300.000
131) *1,4-Dichlorobenzene-d4	(4)	13.183	152	498086	50.000
133) 1,4-Dichlorobenzene	(4)	13.201	146	5252495	300.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

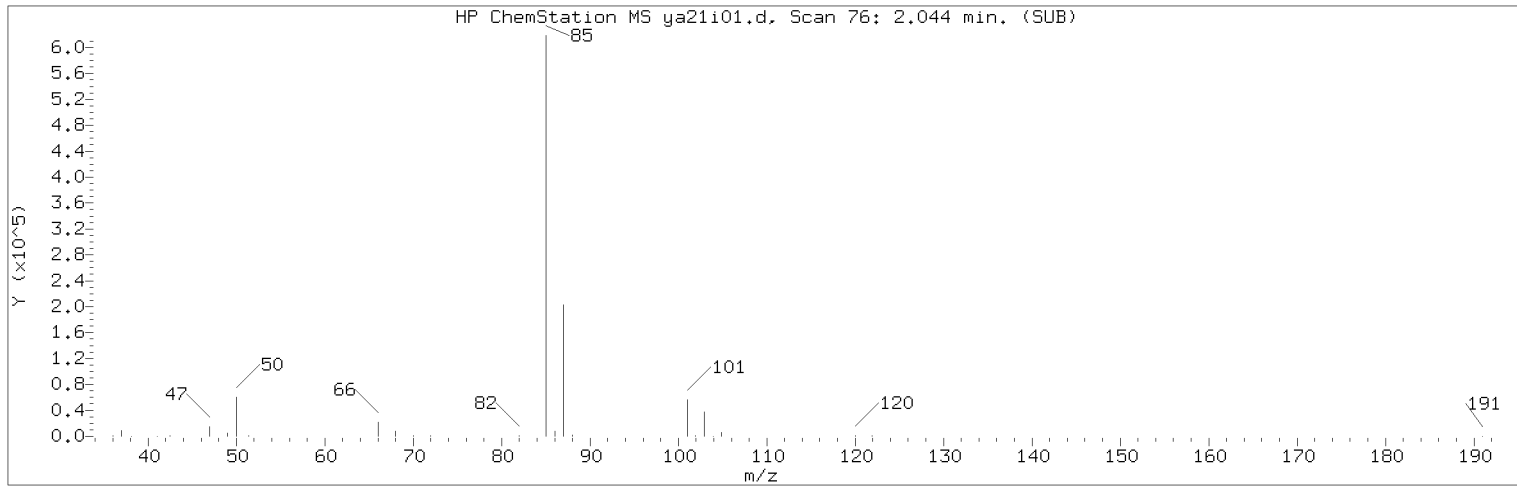
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.207	105	8935182	300.000
135) Benzyl Chloride	(4)	13.268	91	8336682	300.000
136) 1,3-Diethylbenzene	(4)	13.329	119	6018826	300.000
141) Diethylbenzene (total)	(4)		100	17223447	900.000
137) 1,4-Diethylbenzene	(4)	13.402	119	6216498	300.000
139) n-Butylbenzene	(4)	13.420	92	5257466	300.000
138) 1,2-Dichlorobenzene	(4)	13.456	146	5054775	300.000
140) 1,2-Diethylbenzene	(4)	13.475	119	4988123	300.000
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	1096295	300.000
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	4027387	300.000
146) 1,2,4-Trichlorobenzene	(4)	14.551	180	3796477	300.000
147) Hexachlorobutadiene	(4)	14.630	225	1715103	300.000
148) Naphthalene	(4)	14.734	128	11705201	300.000
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	3599223	300.000
150) 2-Methylnaphthalene	(4)	15.525	142	6881775	300.000

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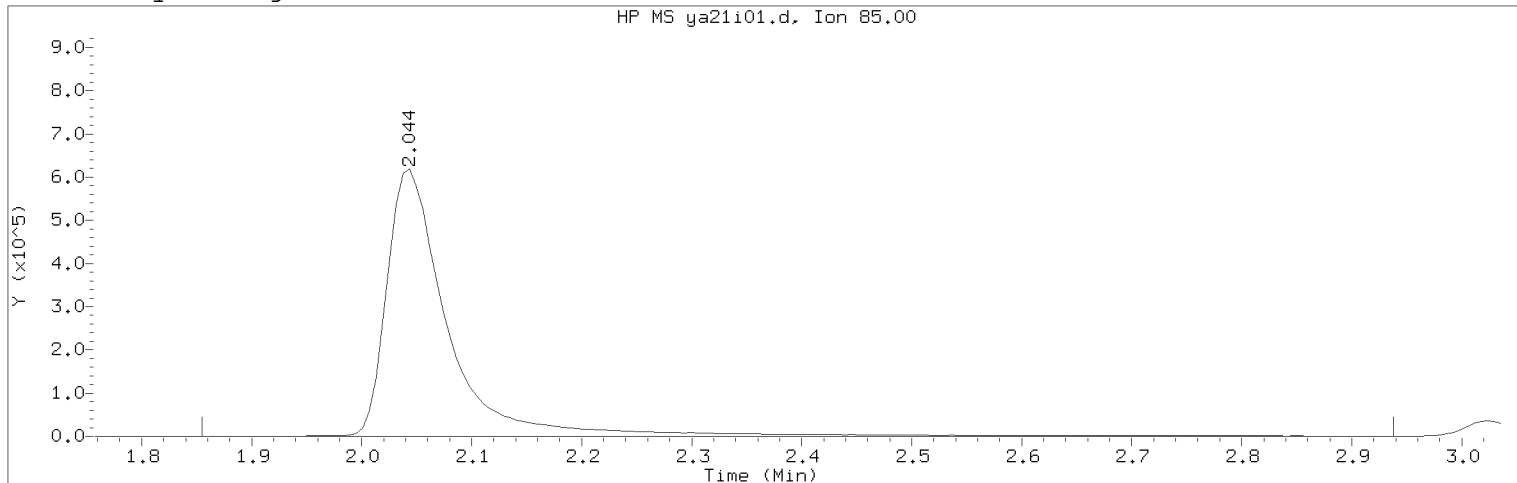
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 21:54 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

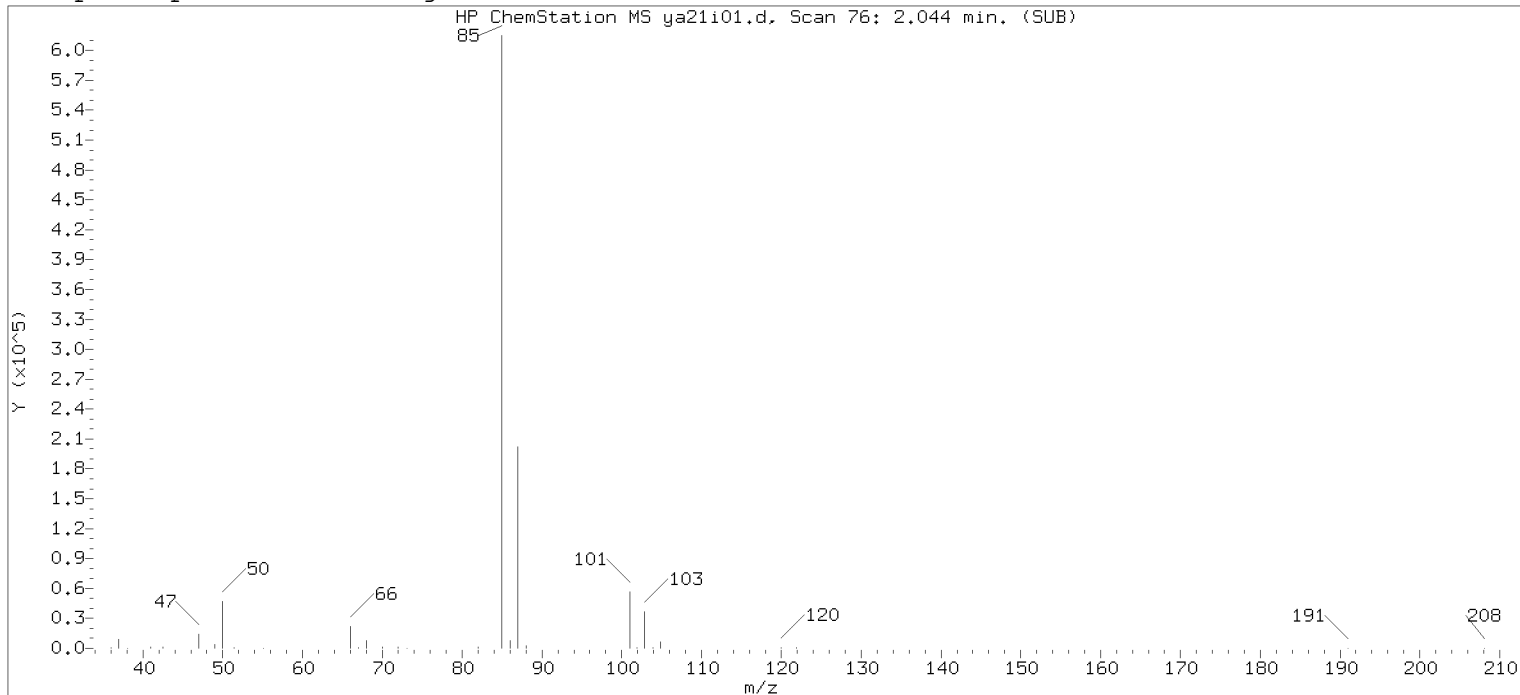
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 76
Retention Time (minutes): 2.044
Quant Ion : 85.00
Area (flag) : 2413655M
On-Column Amount (ng) : 300.0000
Integration start scan : 44 Integration stop scan: 222
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

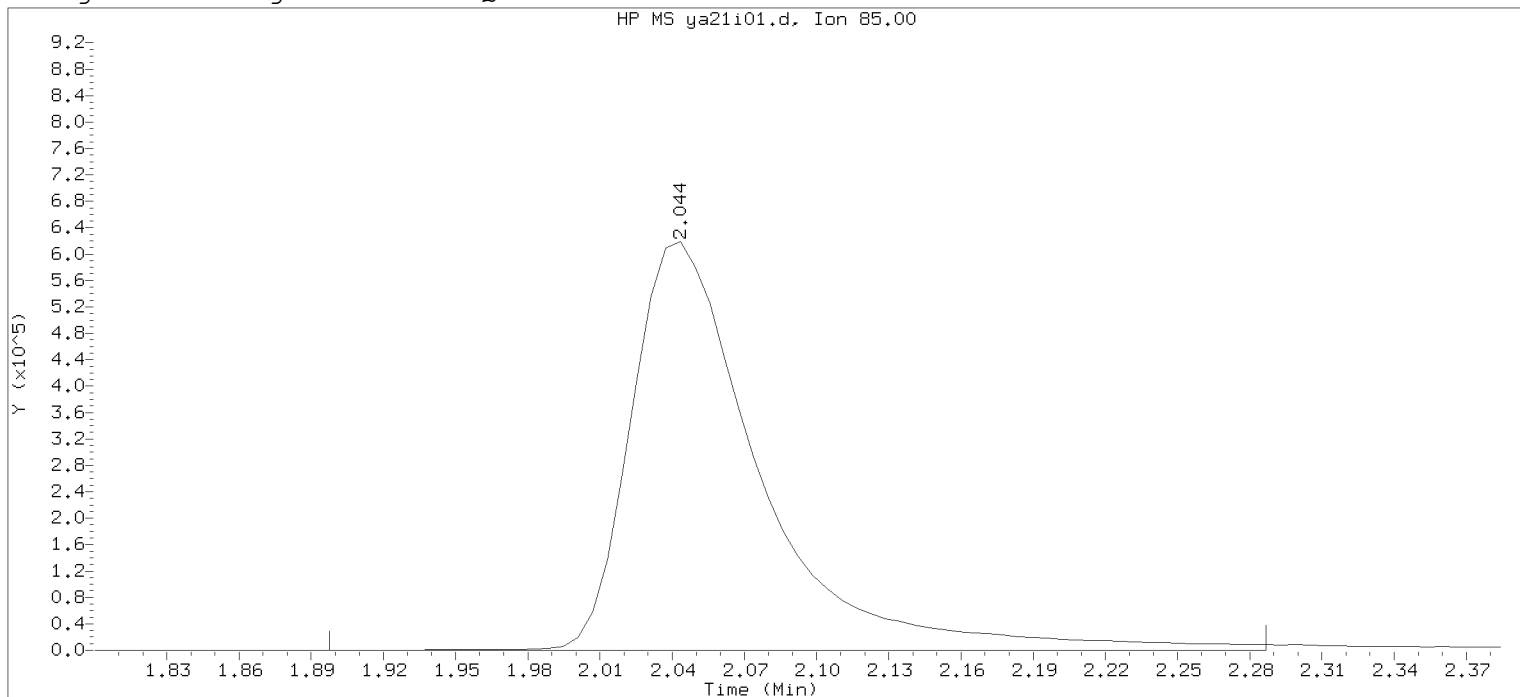
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 76

Retention Time (minutes): 2.044

Quant Ion : 85.00

Area : 2322463

On-column Amount (ng) : 287.7507

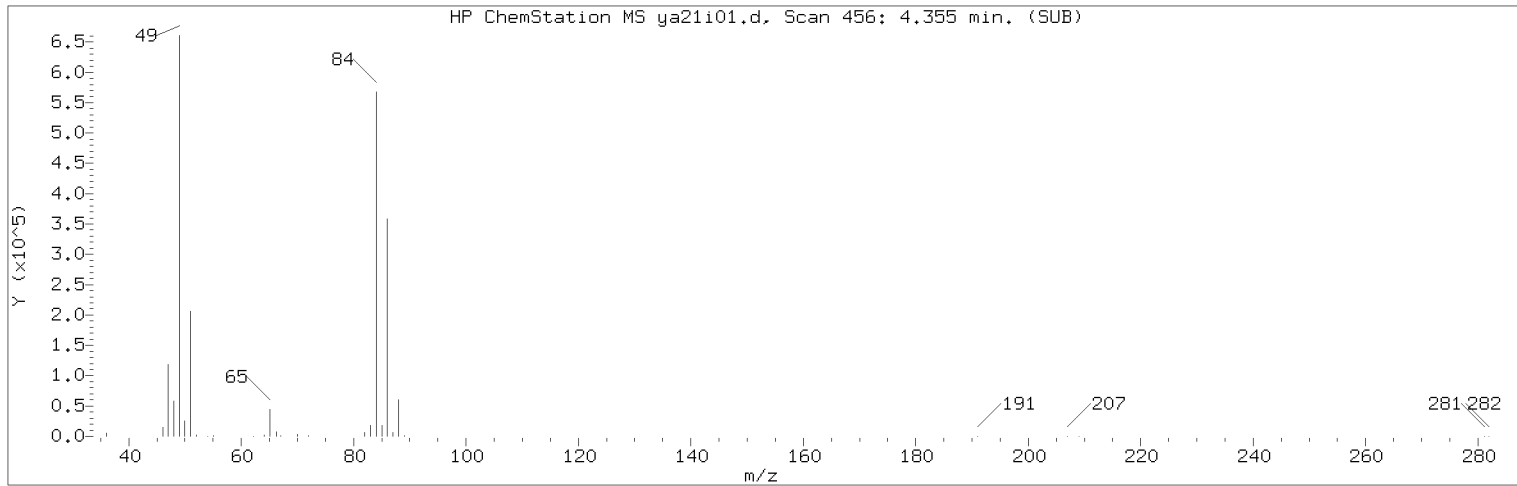
Integration start scan : 51 Integration stop scan: 115

Y at integration start : 0 Y at integration end: 0

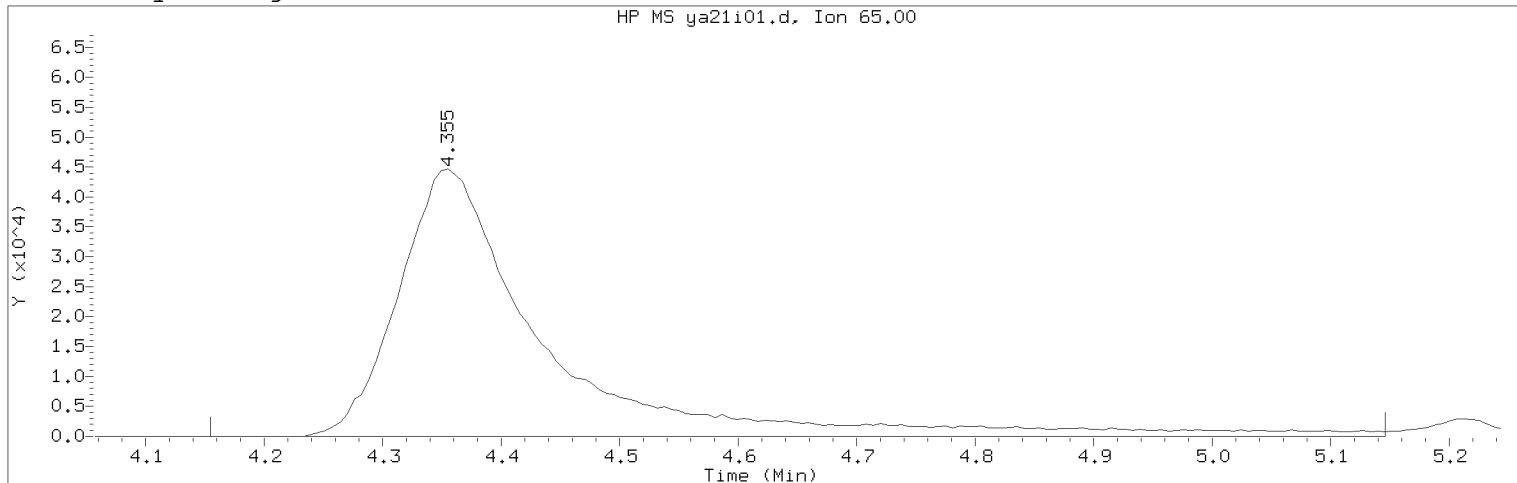
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 378 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 21:54 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300 Lab Sample ID: VSTD300

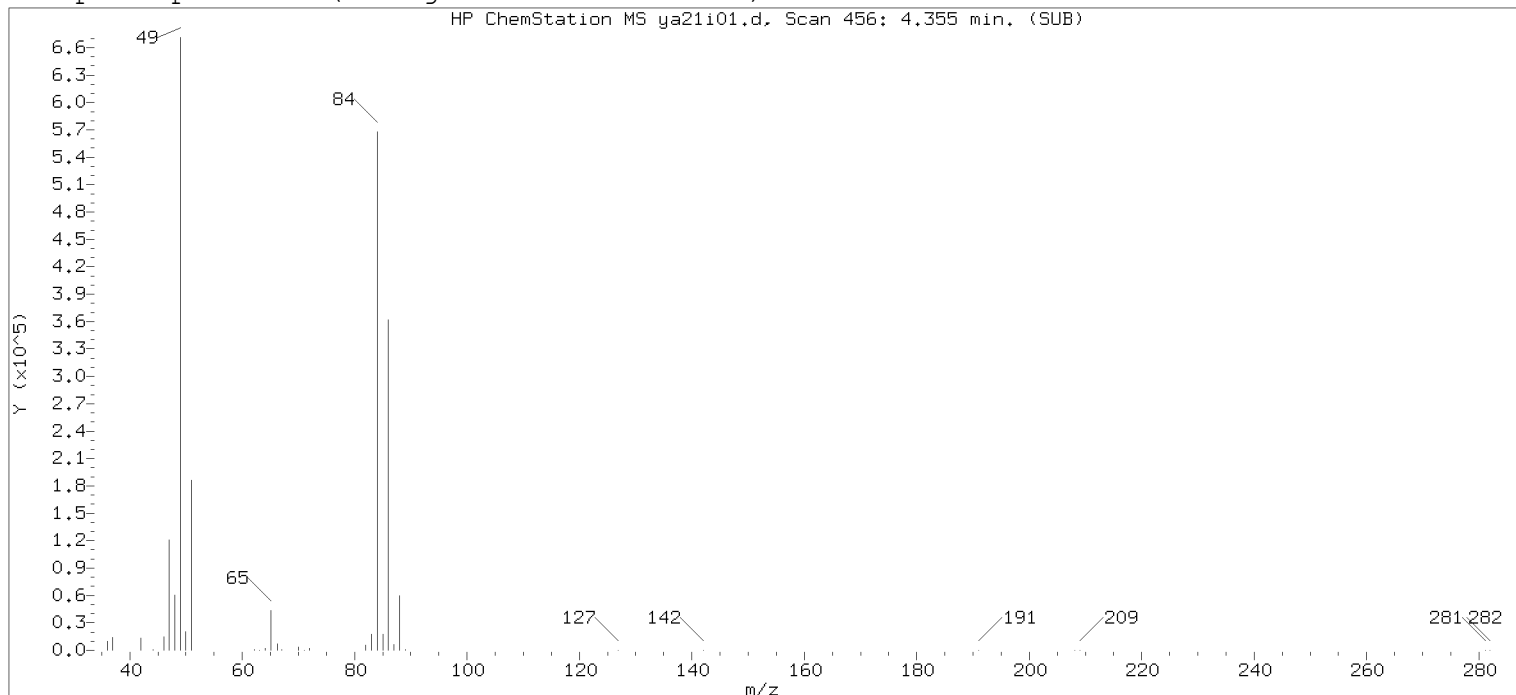
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.355
Quant Ion : 65.00
Area (flag) : 381281M
On-Column Amount (ng) : 250.0000
Integration start scan : 422 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

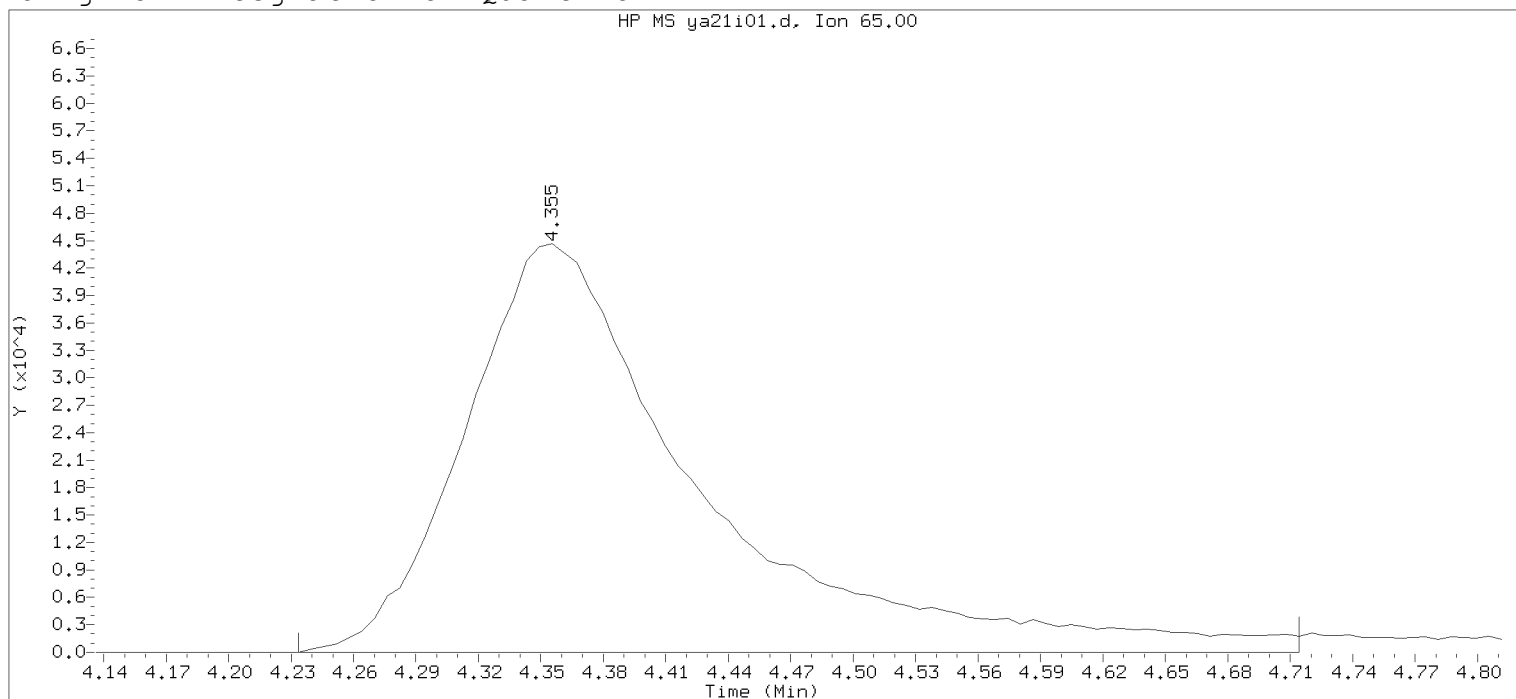
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 456

Retention Time (minutes): 4.355

Quant Ion : 65.00

Area : 350149

On-column Amount (ng) : 250.0000

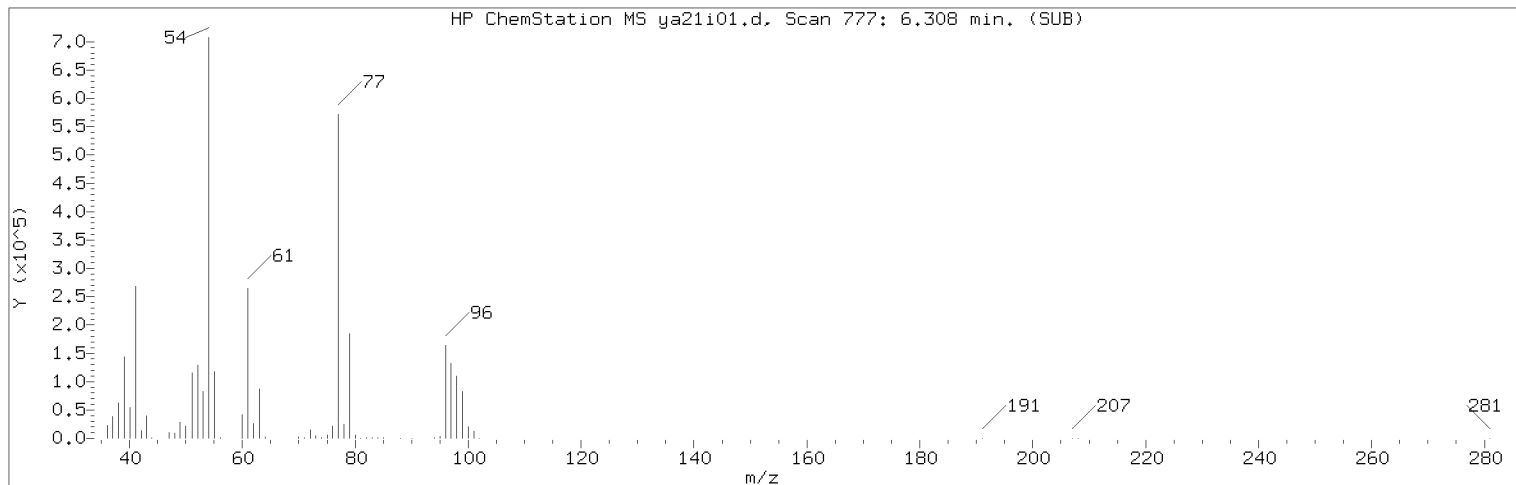
Integration start scan : 435 Integration stop scan: 514

Y at integration start : 0 Y at integration end: 0

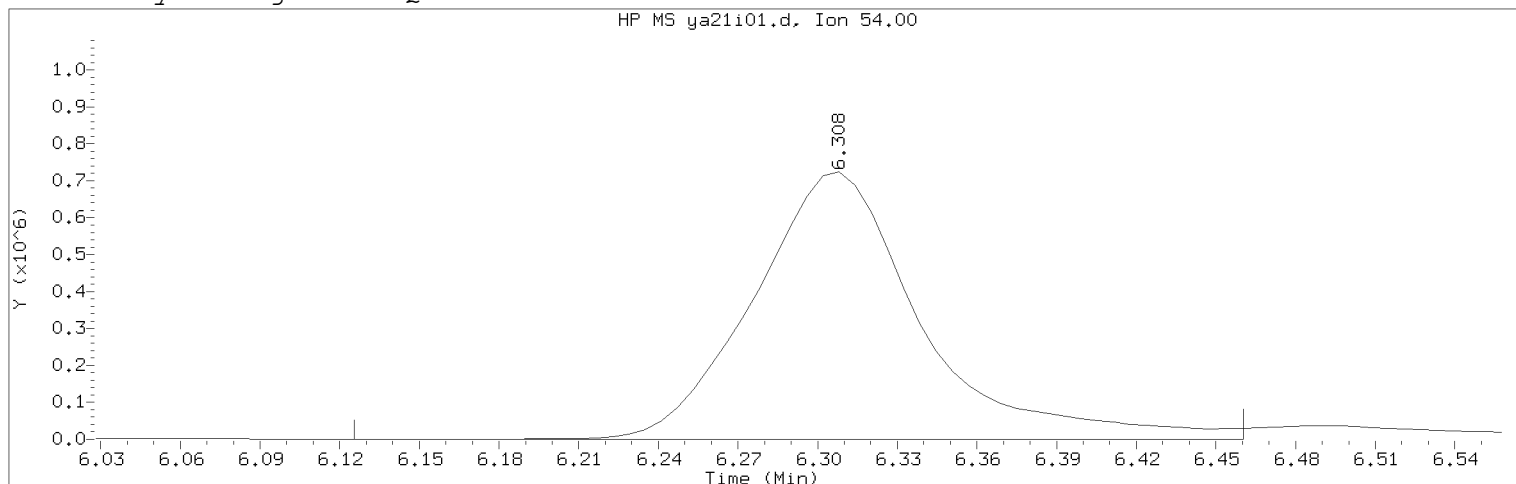
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 380 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 21:54 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

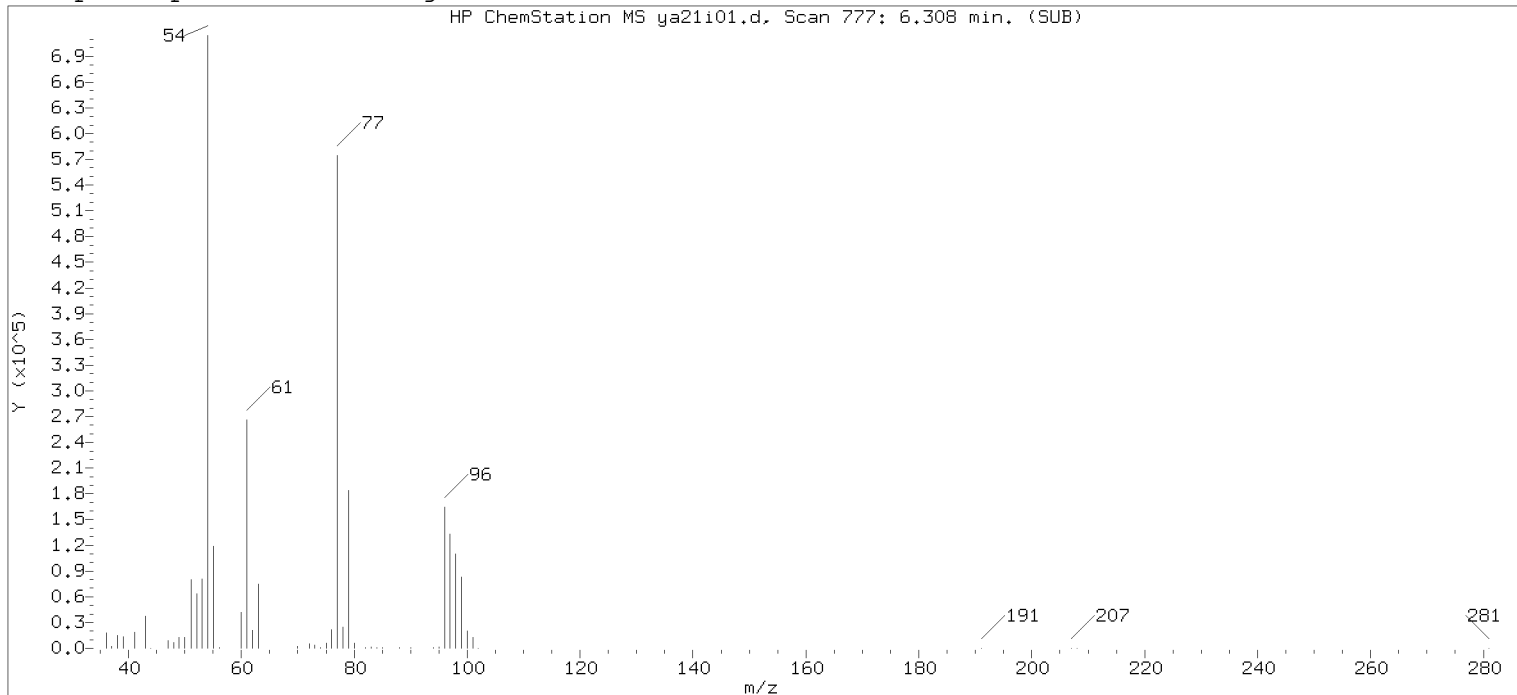
Compound Number : 47
Compound Name : Propionitrile
Scan Number : 777
Retention Time (minutes): 6.308
Quant Ion : 54.00
Area (flag) : 3176928M
On-Column Amount (ng) : 1500.0000
Integration start scan : 746 Integration stop scan: 801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

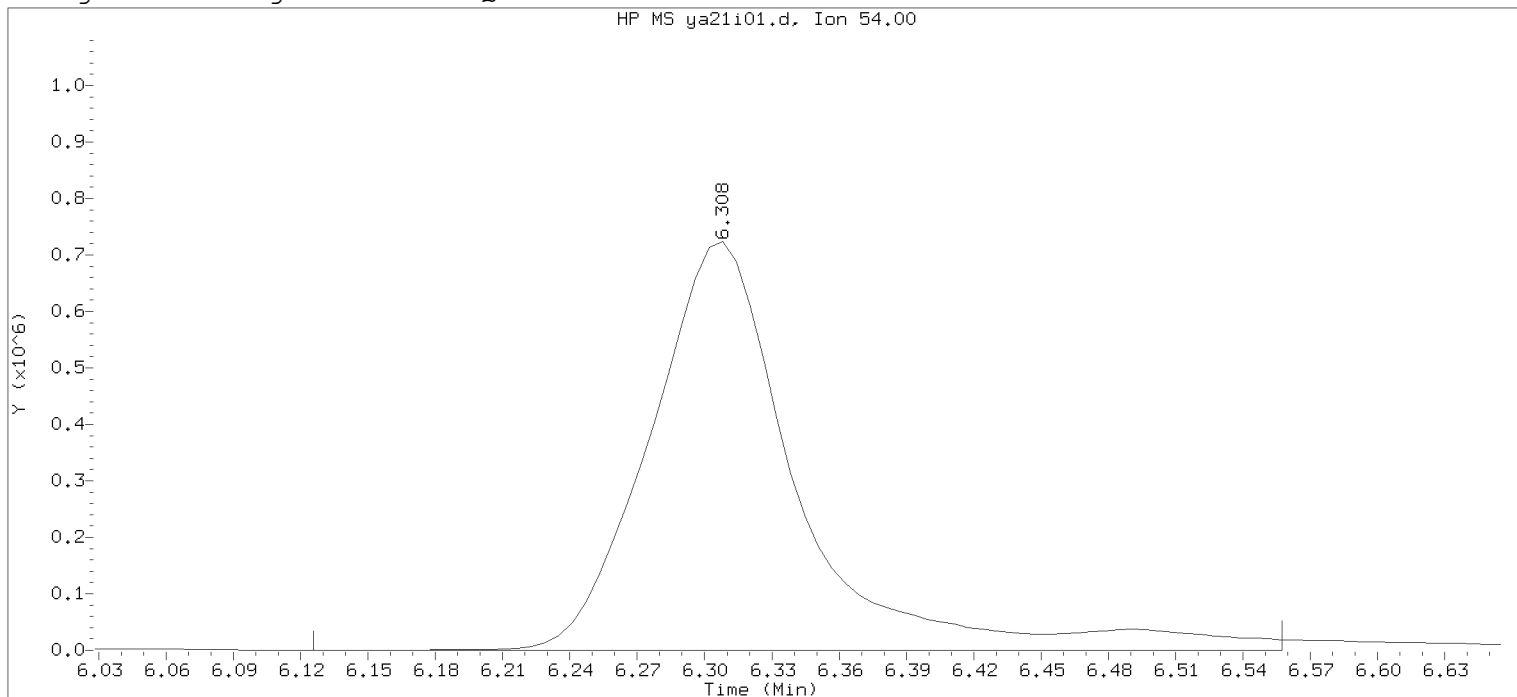
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number : 47

Compound Name : Propionitrile

Scan Number : 777

Retention Time (minutes): 6.308

Quant Ion : 54.00

Area : 3342807

On-column Amount (ng) : 1554.0321

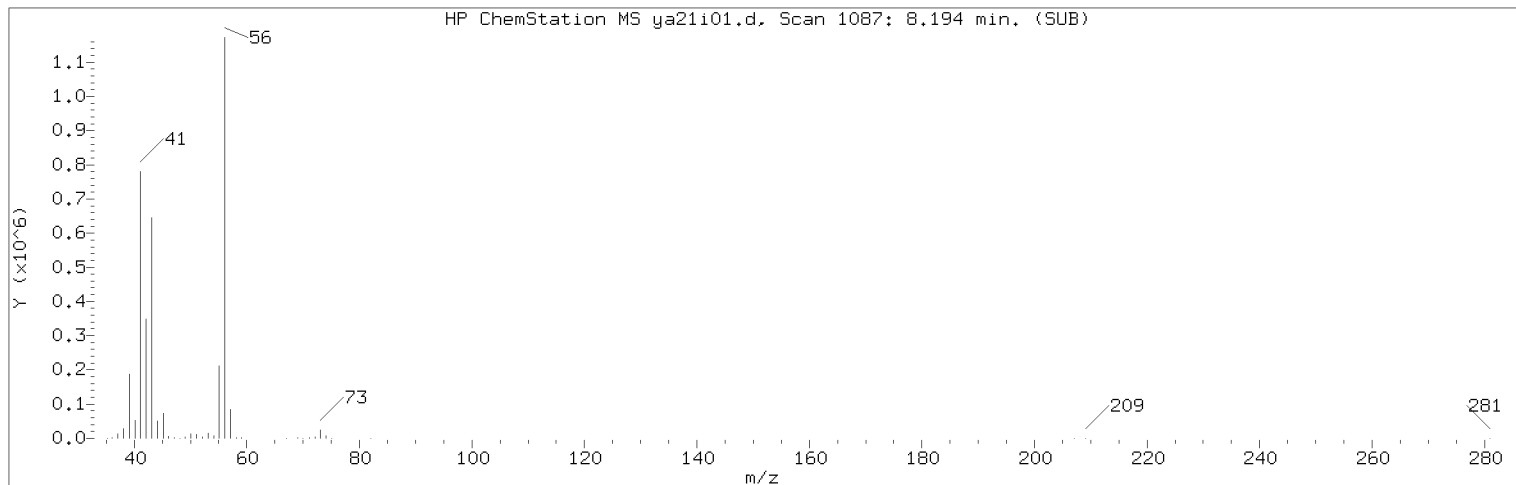
Integration start scan : 746 Integration stop scan: 817

Y at integration start : 0 Y at integration end: 0

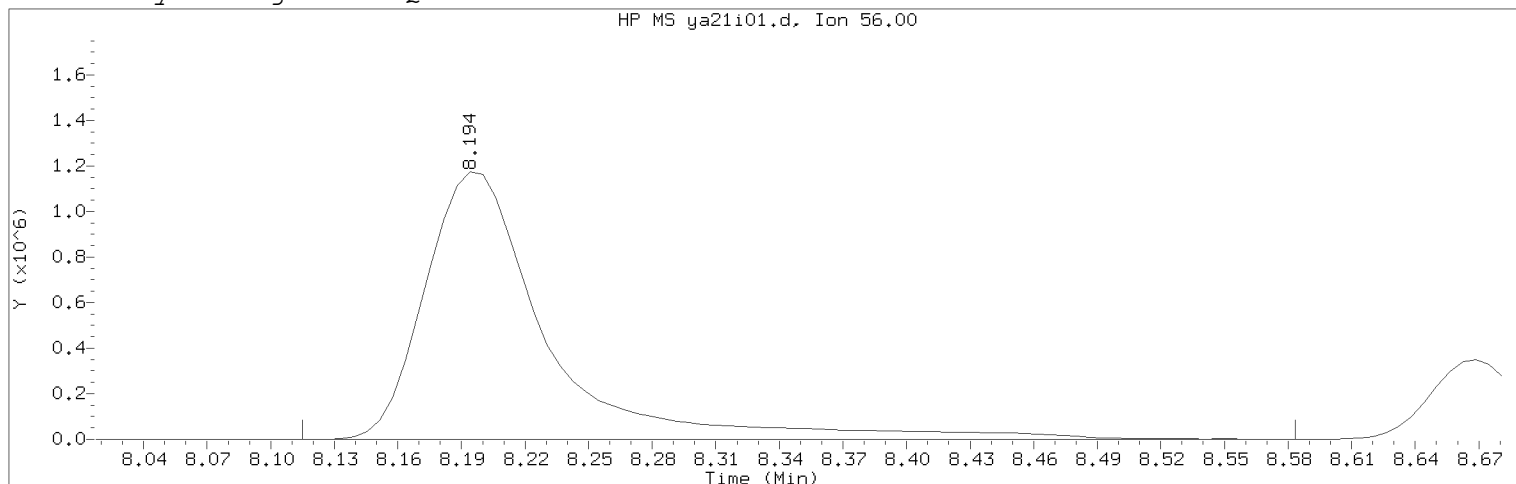
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 382 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

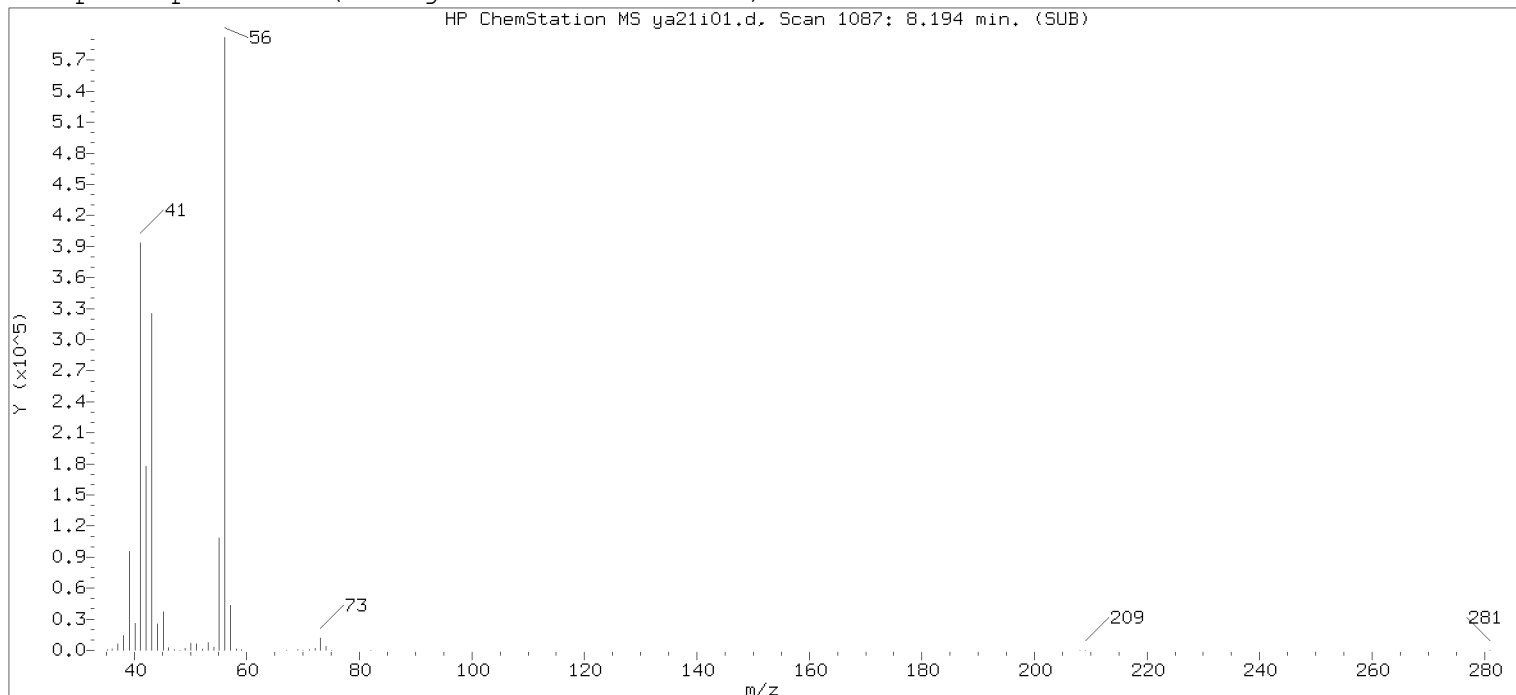
Compound Number	: 69
Compound Name	: n-Butanol
Scan Number	: 1087
Retention Time (minutes)	: 8.194
Quant Ion	: 56.00
Area (flag)	: 4720547M
On-Column Amount (ng)	: 7500.0000
Integration start scan	: 1073
Integration stop scan	: 1150
Y at integration start	: 0
Y at integration end	: 0

Reason for manual integration: improper integration

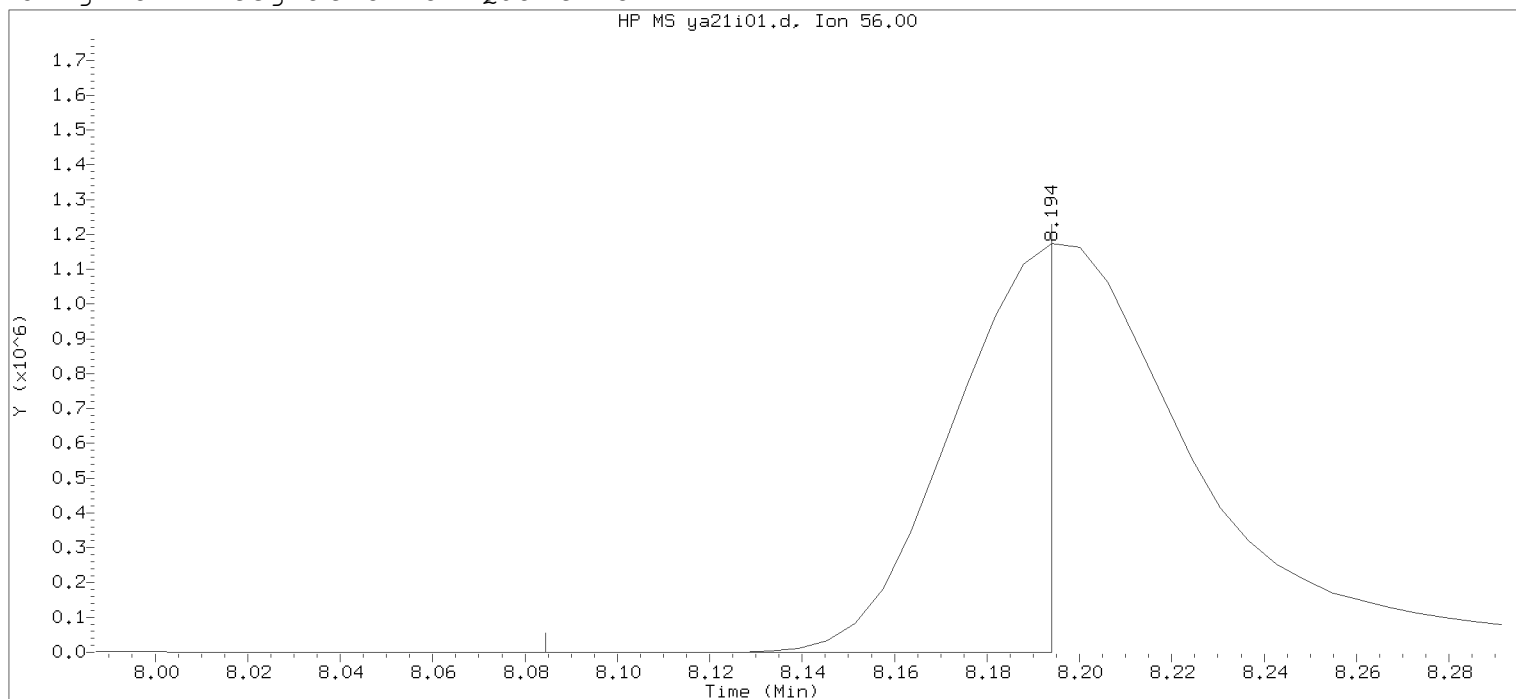
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

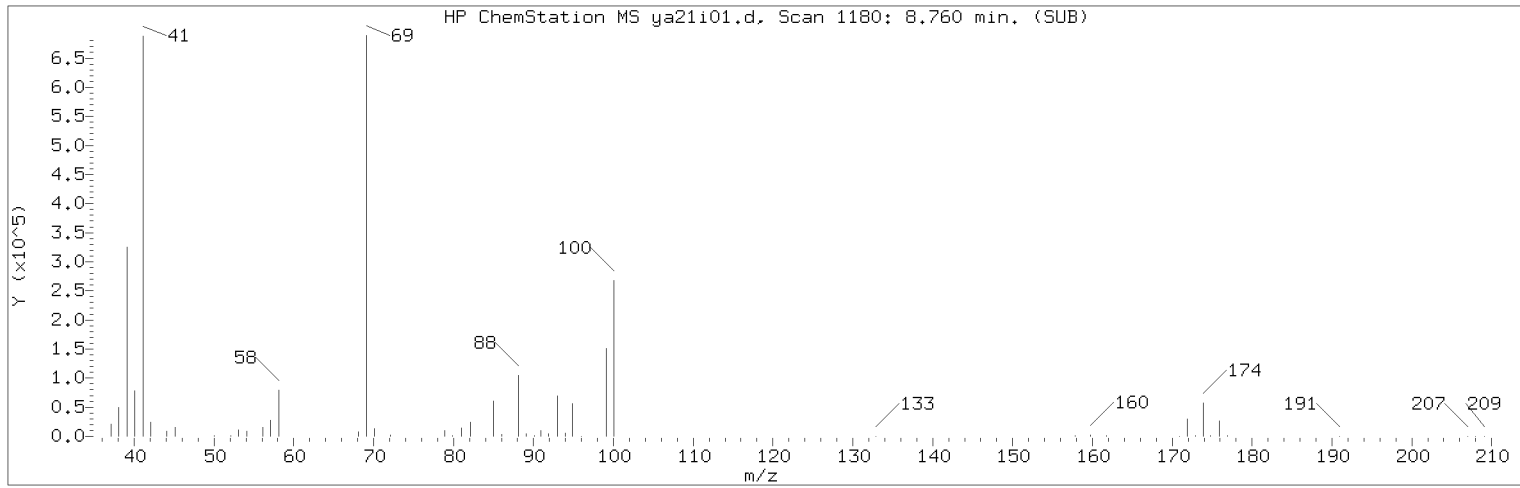
Sample Name: VSTD300

Lab Sample ID: VSTD300

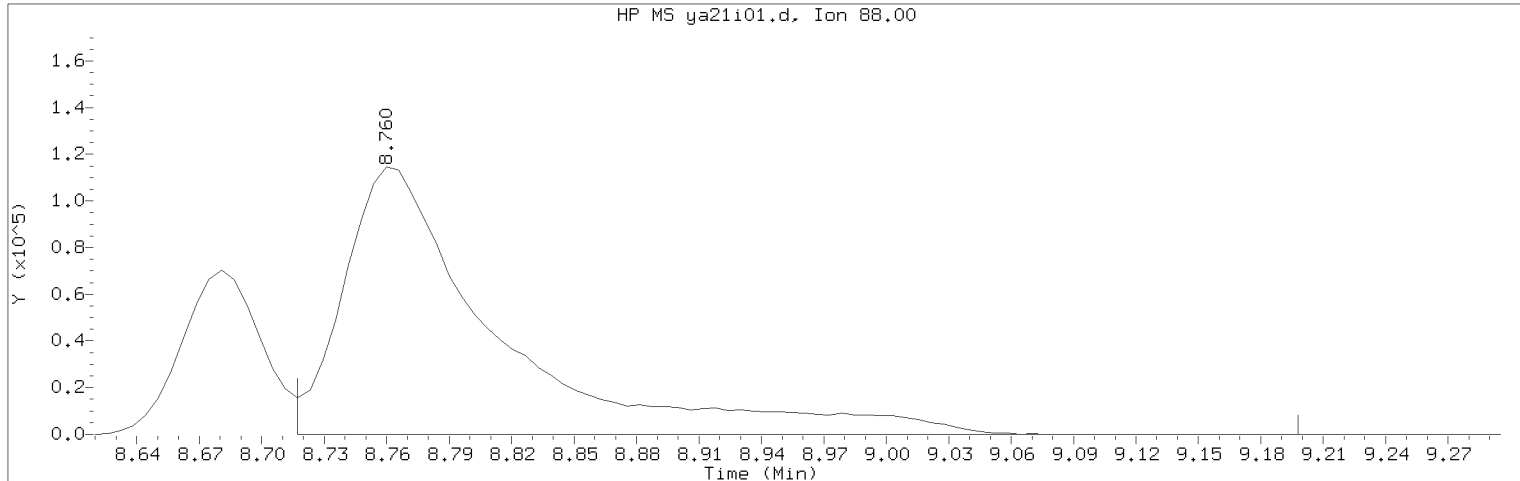
Compound Number : 69
 Compound Name : n-Butanol
 Scan Number : 1087
 Retention Time (minutes): 8.194
 Quant Ion : 56.00
 Area : 1696220
 On-column Amount (ng) : 3106.6950
 Integration start scan : 1068
 Y at integration start : 369

Integration stop scan: 1086
 Y at integration end: 369

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 21:54 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

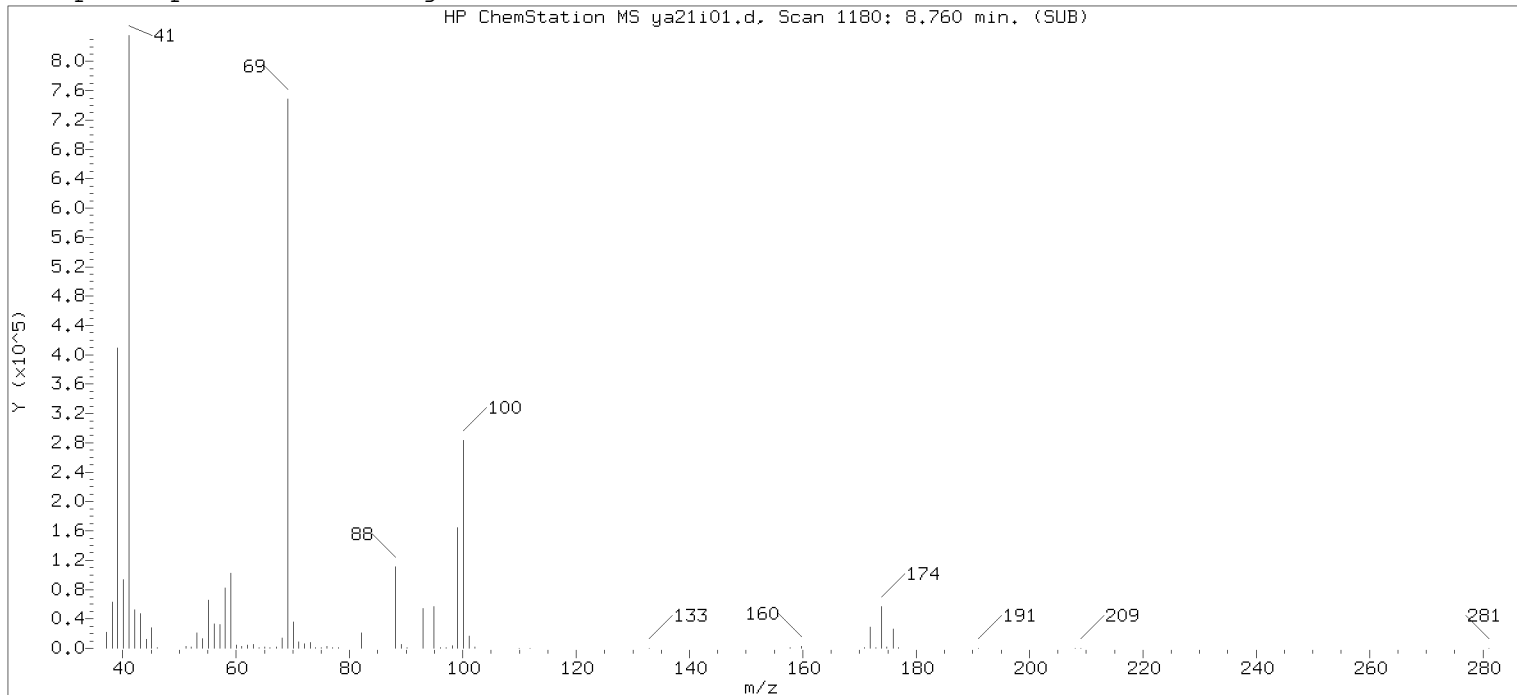
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 588988M
On-Column Amount (ng) : 3750.0000
Integration start scan : 1172 Integration stop scan: 1251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

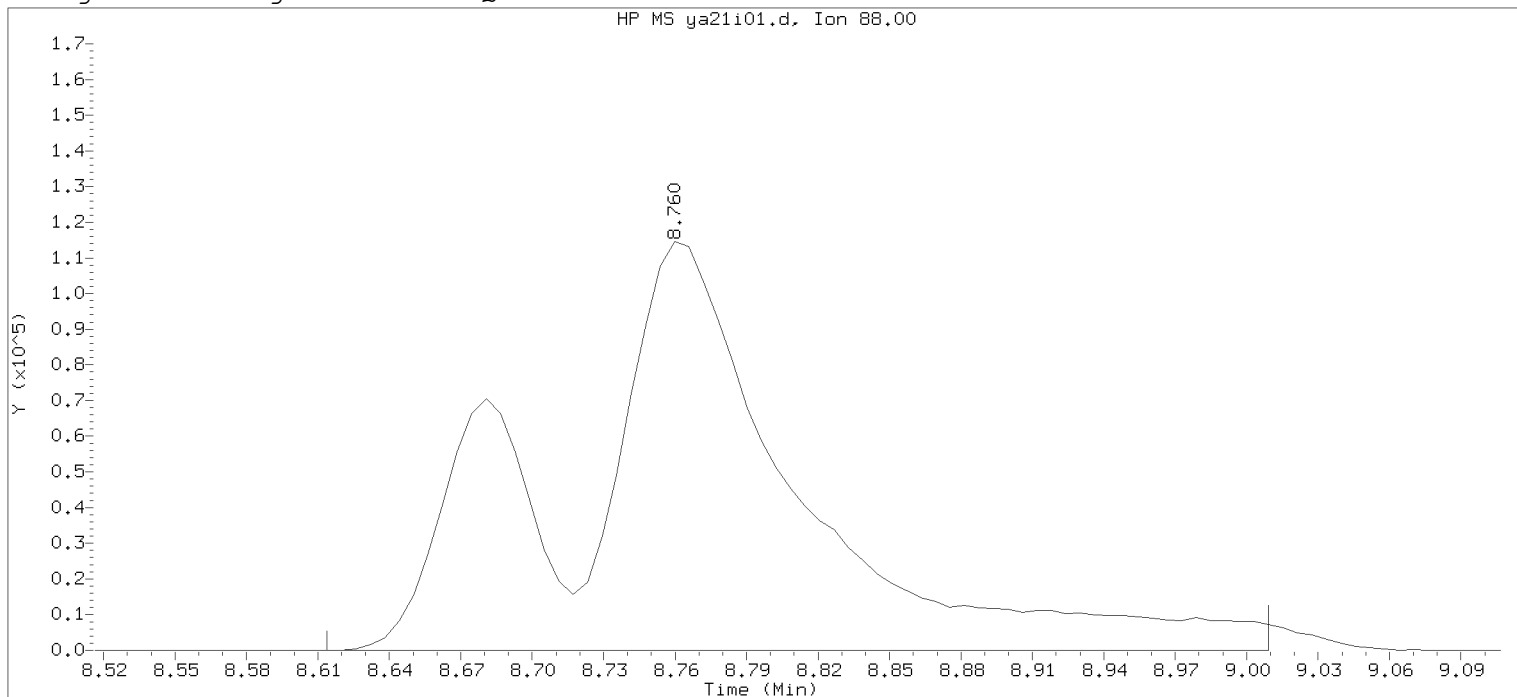
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 21:54

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

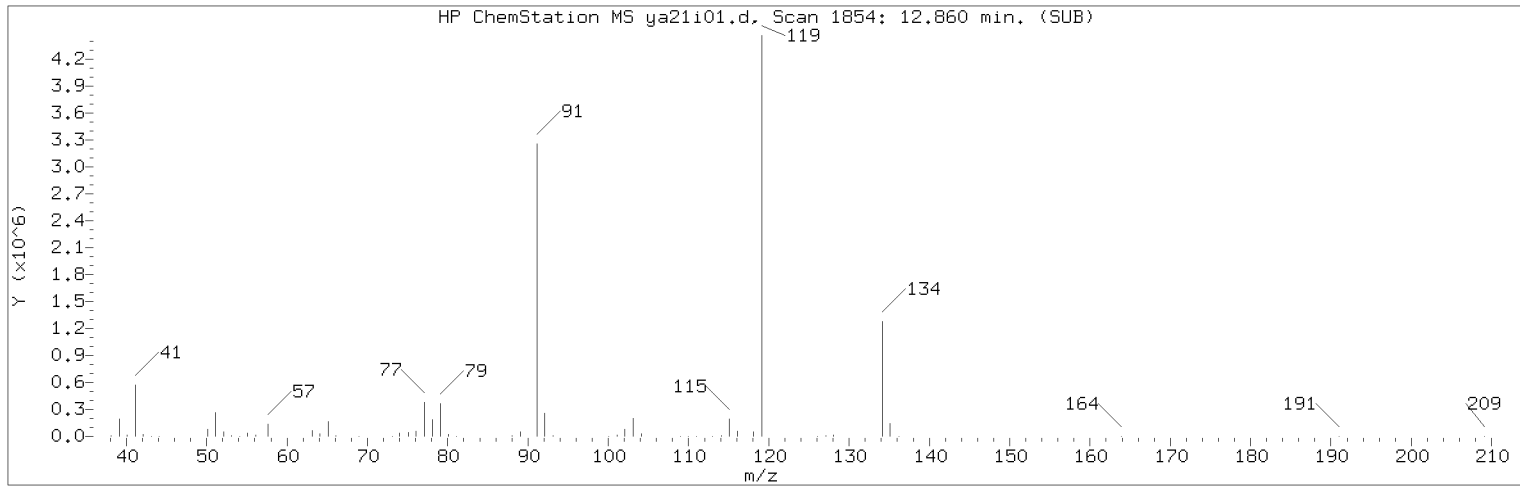
Sample Name: VSTD300

Lab Sample ID: VSTD300

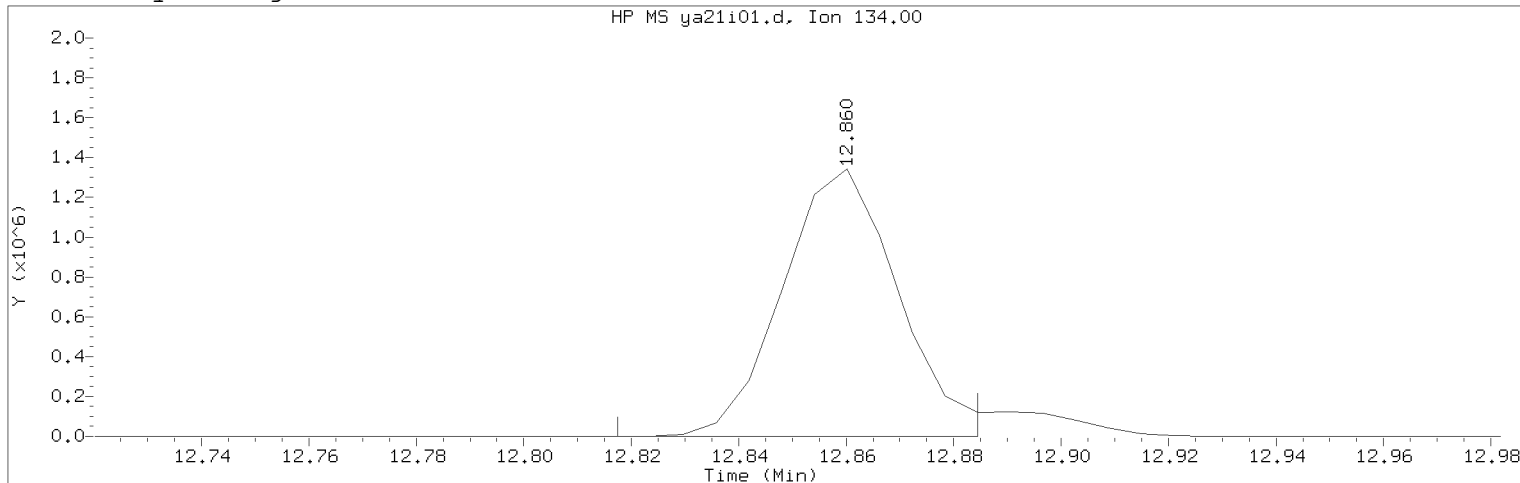
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1180
 Retention Time (minutes): 8.760
 Quant Ion : 88.00
 Area : 762298
 On-column Amount (ng) : 4561.5709
 Integration start scan : 1155
 Y at integration start : 0

Integration stop scan: 1220
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 21:54 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

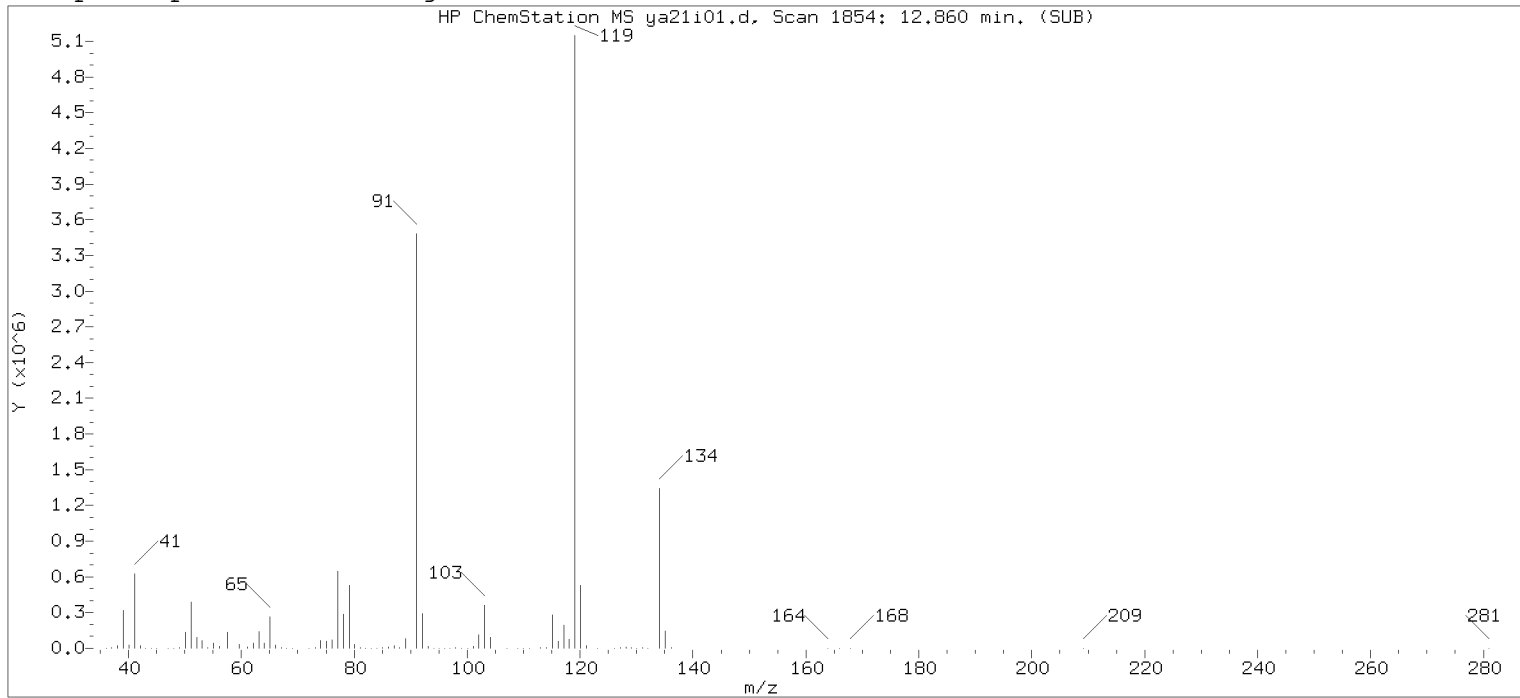
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1854
Retention Time (minutes): 12.860
Quant Ion : 134.00
Area (flag) : 2002497M
On-Column Amount (ng) : 300.0000
Integration start scan : 1846 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

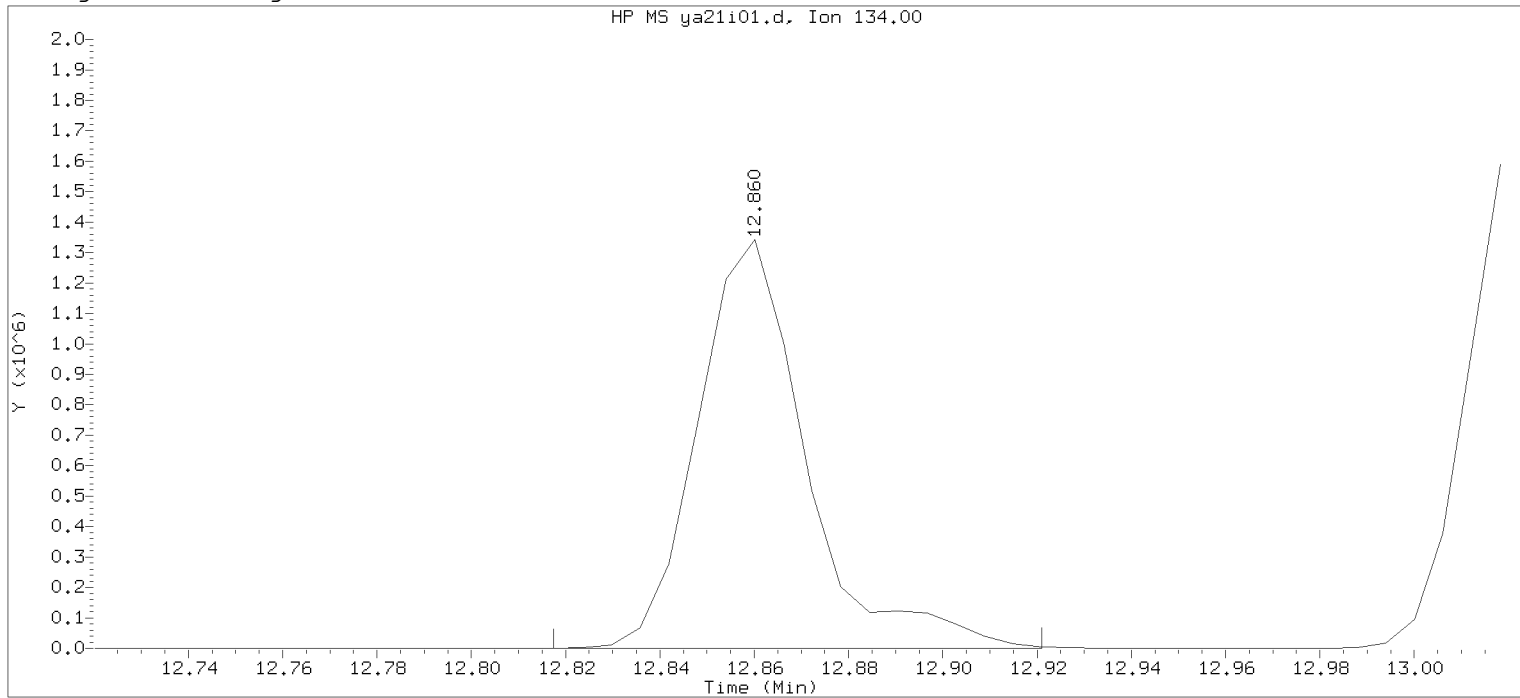
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



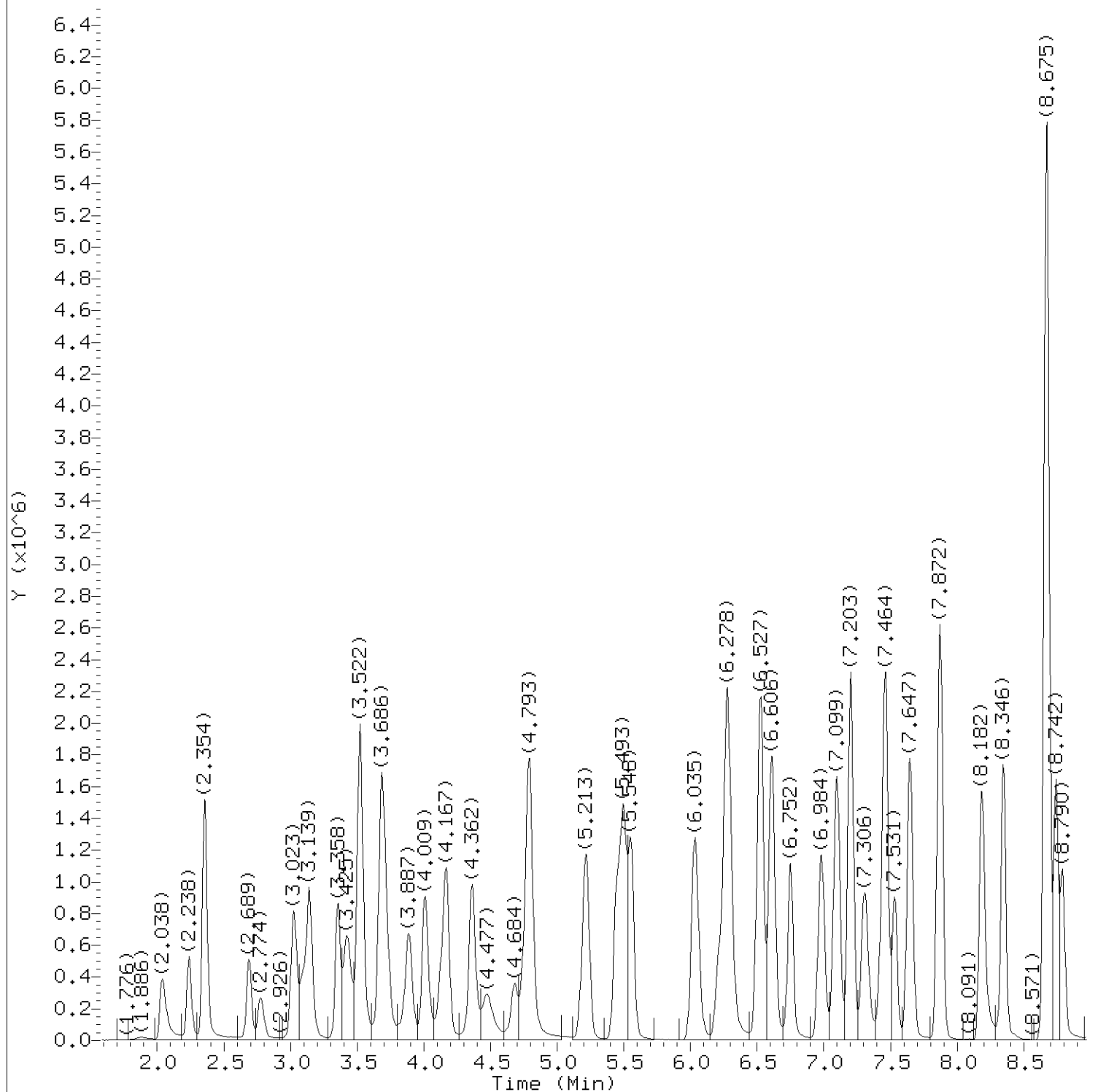
Data File: /chem2/HP09355.i/20apr21a.b/ya21i01.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 21:54 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1854	
Retention Time (minutes)	: 12.860	
Quant Ion	: 134.00	
Area	: 2139549	
On-column Amount (ng)	: 308.2635	
Integration start scan	: 1846	Integration stop scan: 1863
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d
Injection date and time: 21-APR-2020 22:16

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

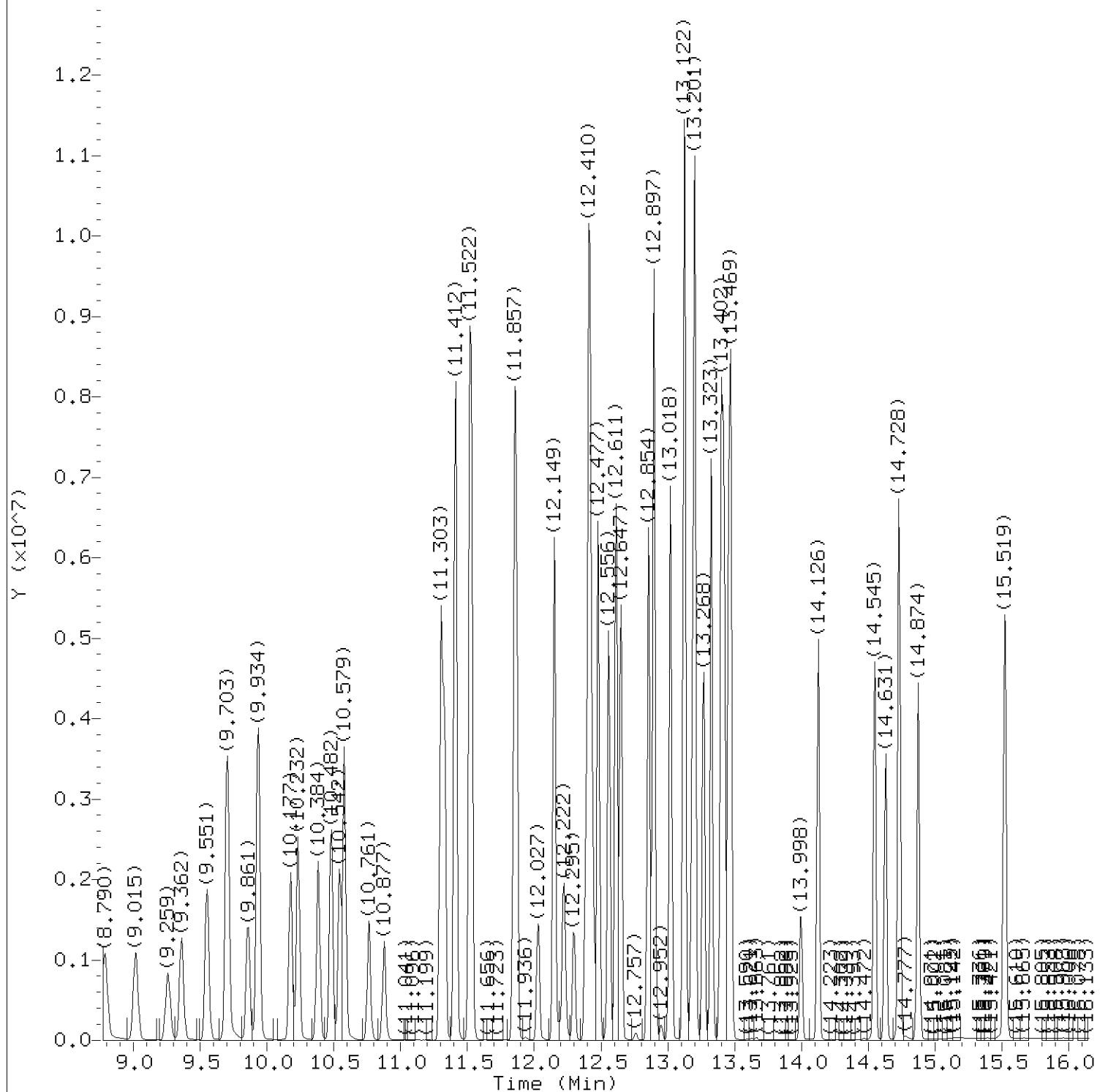
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d
Injection date and time: 21-APR-2020 22:16

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d
Injection date and time: 21-APR-2020 22:16

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.038	85	871843M	104.488
4) Chloromethane	(2)	2.238	50	792851	108.999
5) 1,3-Butadiene	(2)	2.354	39	651500	107.856
6) Vinyl Chloride	(2)	2.360	62	795553	108.945
8) Bromomethane	(2)	2.689	94	509105	109.281
9) Chloroethane	(2)	2.774	64	410801	107.714
10) Dichlorofluoromethane	(2)	3.023	67	1108569	105.428
12) Trichlorofluoromethane	(2)	3.096	101	888187	103.362
11) n-Pentane	(2)	3.139	43	972698	107.499
14) Ethyl ether	(2)	3.358	59	724767	106.692
15) Freon 123a	(2)	3.425	67	811507	103.518
16) Acrolein	(1)	3.522	56	3201292	1060.254
17) 1,1-Dichloroethene	(2)	3.680	96	647724	103.015
17) 1,1-Dichloroethene	(2)	3.680	63	320038	103.279
18) Acetone	(1)	3.686	58	301848	207.681
19) Freon 113	(2)	3.711	101	660719	102.339
21) 2-Propanol	(1)	3.857	45	556804	514.107
22) Methyl Iodide	(2)	3.887	142	1134031	102.196
23) Carbon Disulfide	(2)	4.009	76	2298651	102.803
27) Methyl Acetate	(2)	4.130	43	1015609	103.544
25) Allyl Chloride	(2)	4.167	41	1126229	104.305
29)*t-Butyl alcohol-d10	(1)	4.343	65	388401M	250.000
28) Methylene Chloride	(2)	4.362	84	761550	102.835
30) t-Butyl alcohol	(1)	4.477	59	959628	510.264
31) Acrylonitrile	(2)	4.678	53	570450	104.430
33) Methyl Tertiary Butyl Ether	(2)	4.775	73	2153361	104.192
32) trans-1,2-Dichloroethene	(2)	4.793	96	747582	102.960
34) n-Hexane	(2)	5.219	57	1190364	103.606
36) 1,1-Dichloroethane	(2)	5.444	63	1340313	103.473
38) di-Isopropyl ether	(2)	5.493	45	2482114	104.970
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	1141123	102.825
40) Ethyl t-butyl ether	(2)	6.035	59	2187972	105.171
43) 1,2-Dichloroethene (Total)	(2)		96	1599617	206.074
44) 2-Butanone	(2)	6.223	43	1539611	210.439
42) cis-1,2-Dichloroethene	(2)	6.272	96	852035	103.114
45) 2,2-Dichloropropane	(2)	6.284	77	1015649	102.722
47) Propionitrile	(1)	6.302	54	1132718	512.202
48) Methacrylonitrile	(2)	6.527	67	1444658	259.816

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d
 Injection date and time: 21-APR-2020 22:16

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.606	128	412555	102.830
50) Tetrahydrofuran	(1)	6.619	71	441359	206.243
51) Chloroform	(2)	6.752	83	1284937	102.844
52) \$Dibromofluoromethane	(2)	6.965	113	282528	49.712
52) \$Dibromofluoromethane	(2)	6.965	111	289048	49.879
53) 1,1,1-Trichloroethane	(2)	6.984	97	1107000	101.838
54) Cyclohexane	(2)	7.099	56	1420379	103.537
54) Cyclohexane	(2)	7.099	84	1185508	103.111
54) Cyclohexane	(2)	7.099	69	437286	102.839
55) 1,1-Dichloropropene	(2)	7.203	75	1085319	102.913
56) Carbon Tetrachloride	(2)	7.203	117	955901	101.326
58) Isobutyl Alcohol	(1)	7.306	41	876388	1283.033
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	72869	49.770
57) \$1,2-Dichloroethane-d4	(2)	7.428	65	328108	49.784
57) \$1,2-Dichloroethane-d4	(2)	7.428	104	47057	50.098
60) Benzene	(2)	7.464	78	3205085	103.847
61) 1,2-Dichloroethane	(2)	7.531	62	1007394M	102.008
61) 1,2-Dichloroethane	(2)	7.537	98	100477	101.813
65) t-Amyl methyl ether	(2)	7.647	73	2187346	105.681
66) *Fluorobenzene	(2)	7.866	96	1242825	50.000
67) n-Heptane	(2)	7.878	43	1260112	103.580
69) n-Butanol	(1)	8.188	56	1740853M	2603.143
71) Trichloroethene	(2)	8.346	95	811585	101.920
72) Methylcyclohexane	(2)	8.663	83	1469758	105.200
72) Methylcyclohexane	(2)	8.663	98	651769	104.555
73) 1,2-Dichloropropane	(2)	8.675	63	841648	105.350
76) Methyl Methacrylate	(2)	8.742	69	888565	101.000
75) 1,4-Dioxane	(1)	8.754	88	215840M	1297.628
74) Dibromomethane	(2)	8.790	93	534603	101.683
78) Bromodichloromethane	(2)	9.015	83	1008362	101.182
79) 2-Nitropropane	(2)	9.259	41	718100	206.807
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	715293	102.584
81) cis-1,3-Dichloropropene	(2)	9.551	75	1382534	102.494
82) 4-Methyl-2-pentanone	(2)	9.703	43	3051806	214.440
83) \$Toluene-d8	(3)	9.861	98	1198143	49.880
83) \$Toluene-d8	(3)	9.855	100	771906	49.841
88) Toluene	(3)	9.934	92	2026786	103.729
90) 1,3-Dichloropropene (total)	(3)		100	2674789	205.094

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d
 Injection date and time: 21-APR-2020 22:16

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.177	75	1292255	102.600
91) Ethyl Methacrylate	(3)	10.232	69	1476629	103.205
92) 1,1,2-Trichloroethane	(3)	10.384	97	808898	102.844
93) Tetrachloroethene	(3)	10.482	166	840598	102.704
94) 1,3-Dichloropropane	(3)	10.542	76	1369356	103.558
96) 2-Hexanone	(3)	10.579	43	2421348	215.732
97) Dibromochloromethane	(3)	10.761	129	861019	100.628
99) 1,2-Dibromoethane	(3)	10.877	107	893937	101.902
100) *Chlorobenzene-d5	(3)	11.303	117	921611	50.000
101) 1-Chlorohexane	(3)	11.303	91	1130660	103.895
102) Chlorobenzene	(3)	11.327	112	2270648	104.404
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	778695	103.499
104) Ethylbenzene	(3)	11.412	91	3953011	107.529
106) m+p-Xylene	(3)	11.522	106	3125964	214.048
108) Xylene (Total)	(3)		106	4656566	319.974
107) o-Xylene	(3)	11.850	106	1530602	105.926
109) Styrene	(3)	11.869	104	2623011	106.129
110) Bromoform	(3)	12.033	173	657653	99.260
111) Isopropylbenzene	(3)	12.149	105	3919914	107.945
112) Cyclohexanone	(1)	12.222	55	874577	1324.236
114) \$4-Bromofluorobenzene	(3)	12.295	95	455061	49.924
114) \$4-Bromofluorobenzene	(3)	12.301	174	350168	49.789
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	1397998	104.893
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	1145228	268.755
115) Bromobenzene	(4)	12.416	156	990855	105.190
117) 1,2,3-Trichloropropane	(4)	12.434	110	442369	103.882
119) n-Propylbenzene	(4)	12.477	91	4645891	110.774
120) 2-Chlorotoluene	(4)	12.556	126	953157	103.997
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	3406748	107.083
121) 4-Chlorotoluene	(4)	12.647	126	1003554	104.084
124) tert-Butylbenzene	(4)	12.854	134	715748M	104.524
125) Pentachloroethane	(4)	12.891	167	553279	101.442
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	3597055	107.949
127) sec-Butylbenzene	(4)	13.018	105	4377698	110.020
129) 1,3-Dichlorobenzene	(4)	13.122	146	1901645	106.819
130) p-Isopropyltoluene	(4)	13.128	119	3746632	109.330
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	487855	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	1953039	106.493

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:16

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

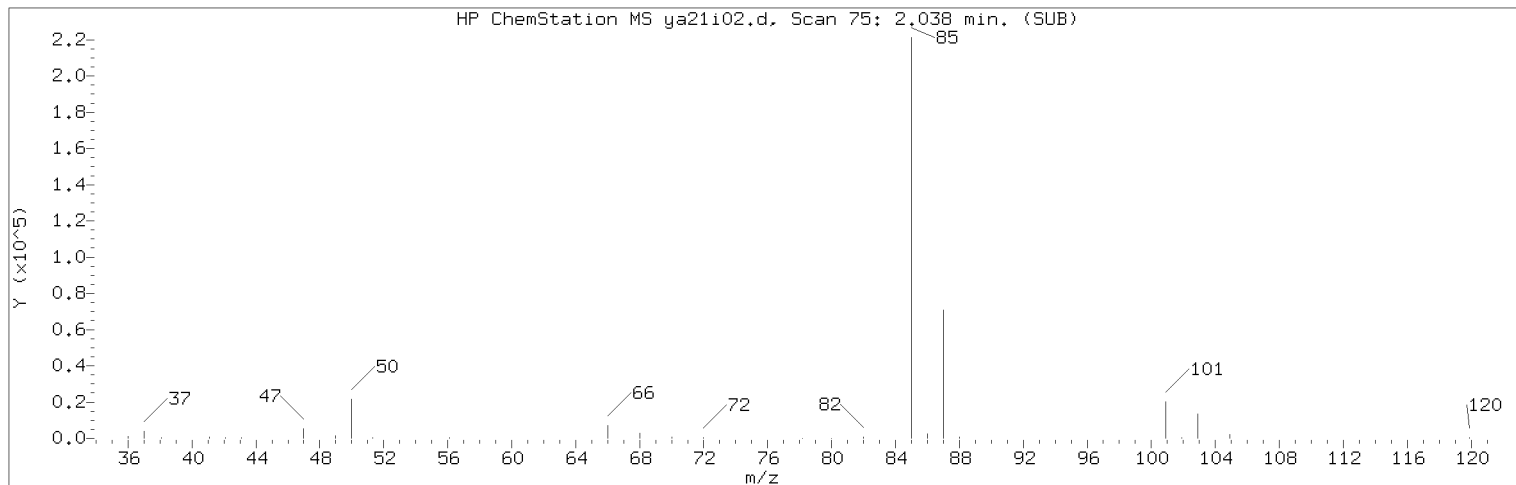
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	3422248	107.966
135) Benzyl Chloride	(4)	13.268	91	3028890	105.340
136) 1,3-Diethylbenzene	(4)	13.323	119	2232962	106.381
141) Diethylbenzene (total)	(4)		100	6439398	320.220
137) 1,4-Diethylbenzene	(4)	13.402	119	2352828	107.375
139) n-Butylbenzene	(4)	13.420	92	1965625	106.766
138) 1,2-Dichlorobenzene	(4)	13.456	146	1834061	105.273
140) 1,2-Diethylbenzene	(4)	13.469	119	1853608	106.463
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	366569	101.193
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	1378529	102.363
146) 1,2,4-Trichlorobenzene	(4)	14.545	180	1303550	102.519
147) Hexachlorobutadiene	(4)	14.631	225	576888	101.489
148) Naphthalene	(4)	14.728	128	4834509	111.702
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	1251933	103.166
150) 2-Methylnaphthalene	(4)	15.519	142	2735396	109.807

page 4 of 4

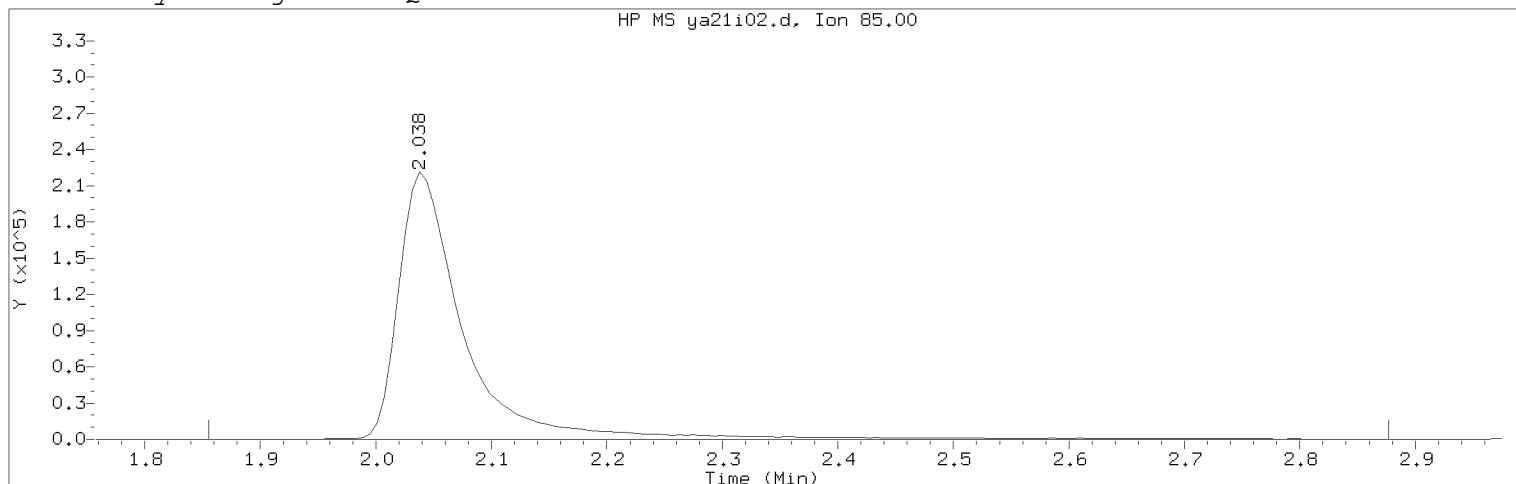
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

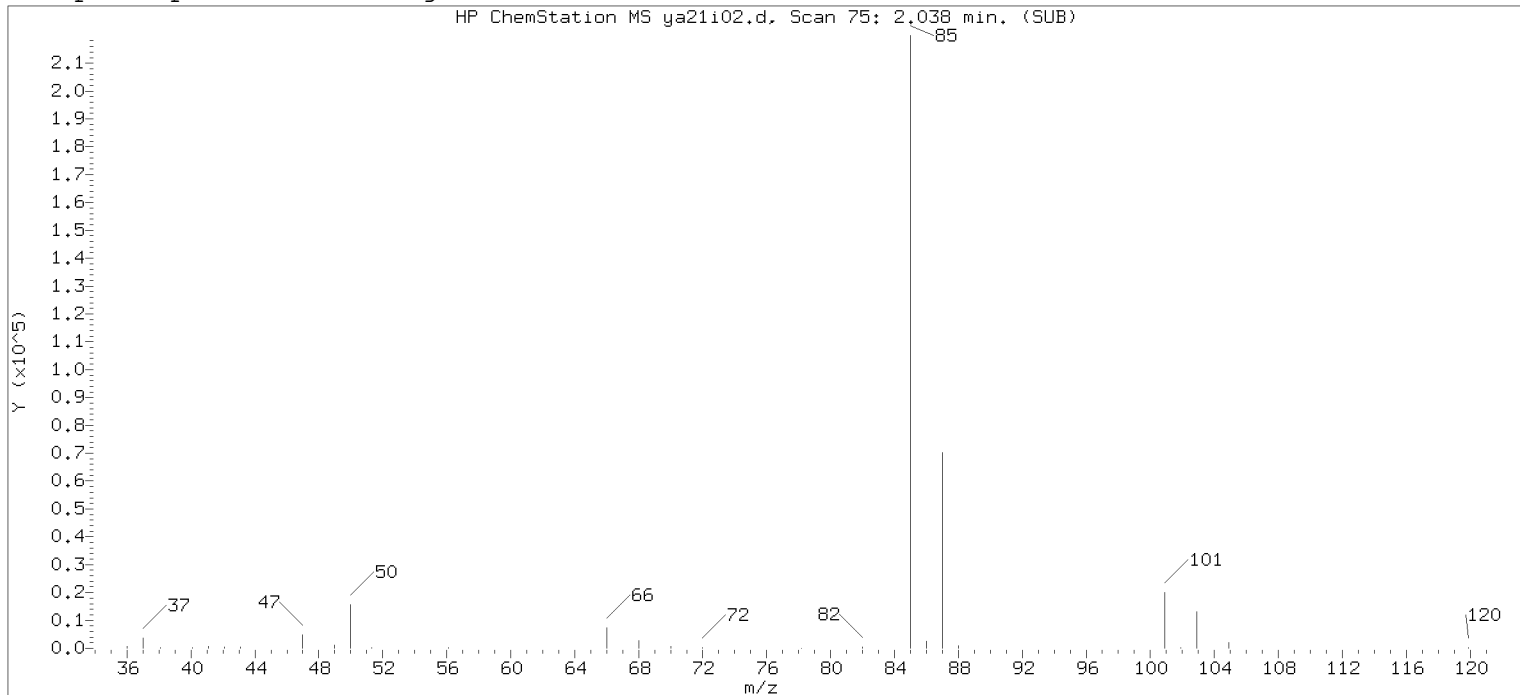
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 75
Retention Time (minutes): 2.038
Quant Ion : 85.00
Area (flag) : 871843M
On-Column Amount (ng) : 104.4878
Integration start scan : 44 Integration stop scan: 212
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

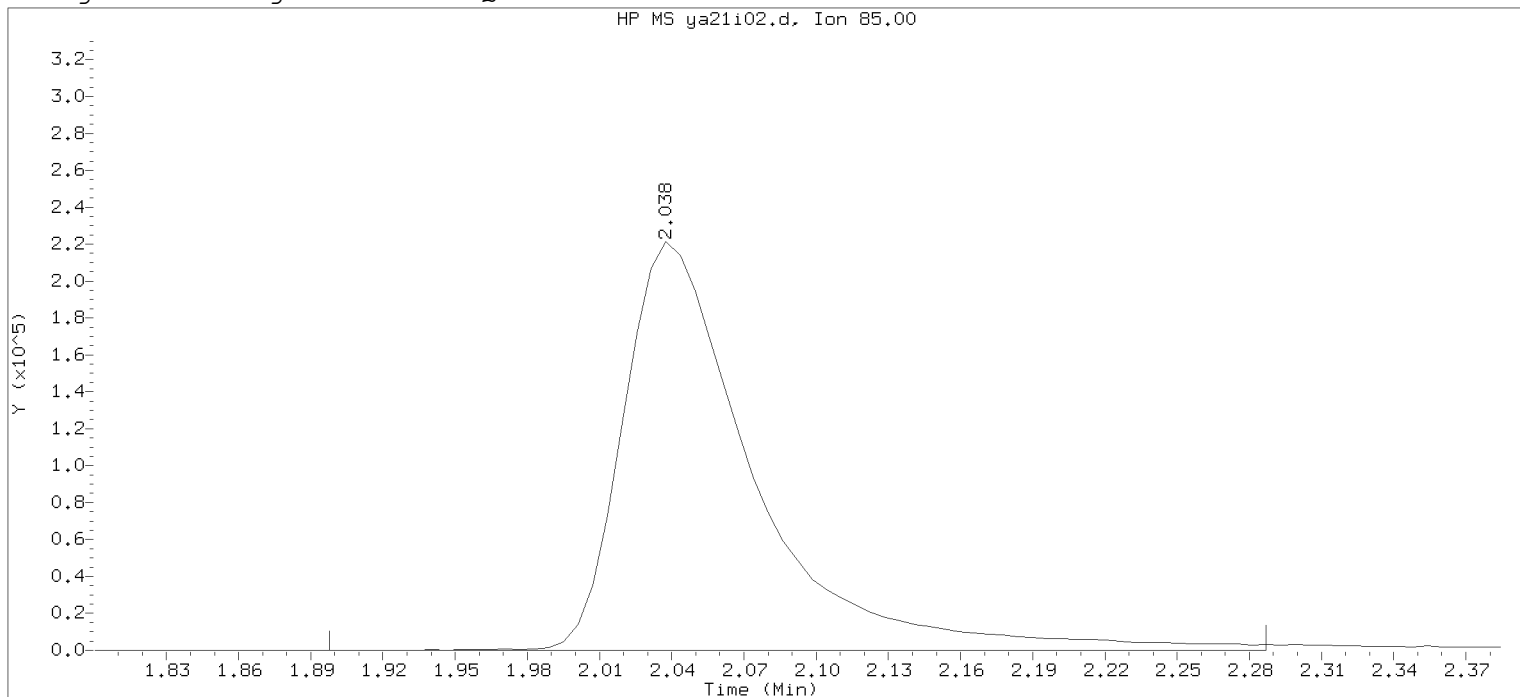
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:16

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

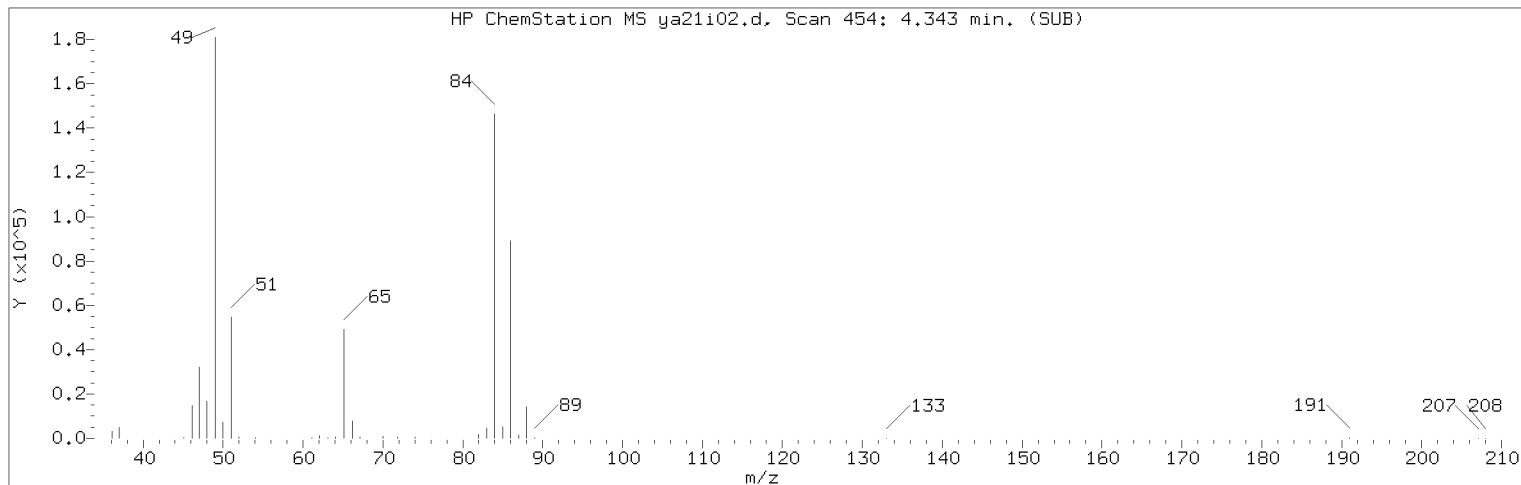
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD100

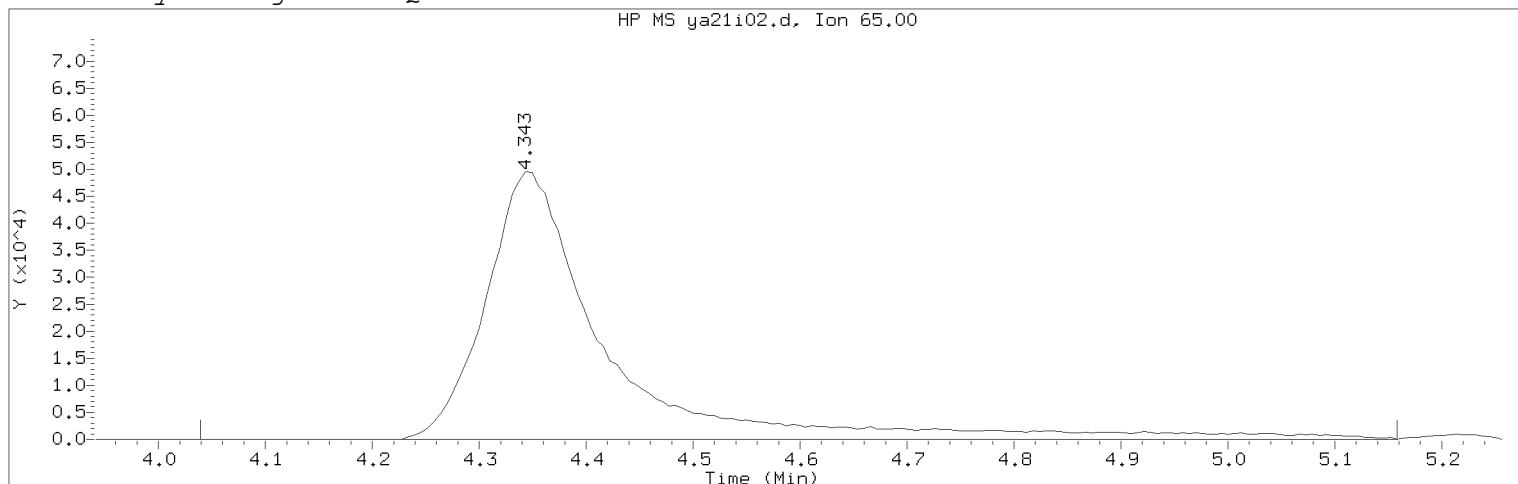
Lab Sample ID: VSTD100

Compound Number	: 3	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 75	
Retention Time (minutes)	: 2.038	
Quant Ion	: 85.00	
Area	: 839923	
On-column Amount (ng)	: 105.0581	
Integration start scan	: 51	Integration stop scan: 115
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

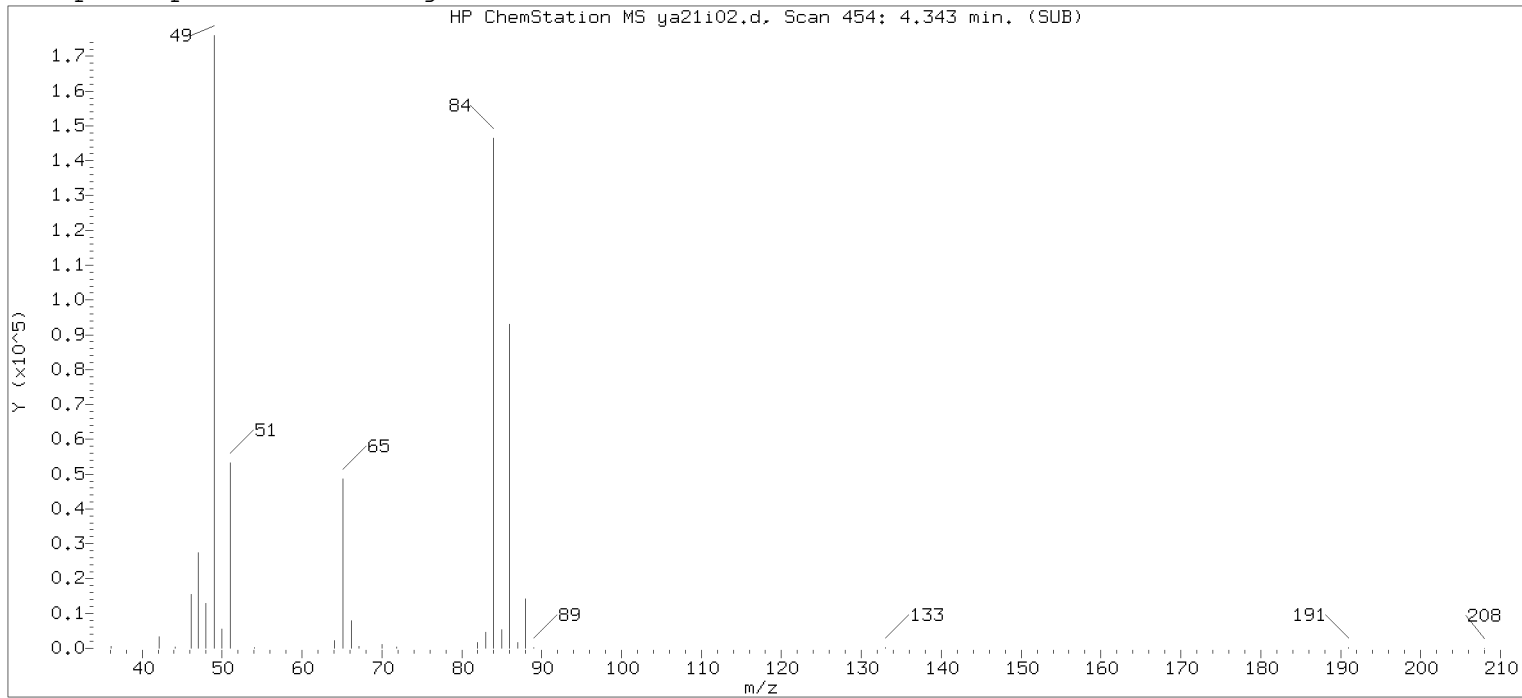
Compound Number	: 29	
Compound Name	: t-Butyl alcohol-d10	
Scan Number	: 454	
Retention Time (minutes)	: 4.343	
Quant Ion	: 65.00	
Area (flag)	: 388401M	
On-Column Amount (ng)	: 250.0000	
Integration start scan	: 403	Integration stop scan: 587
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

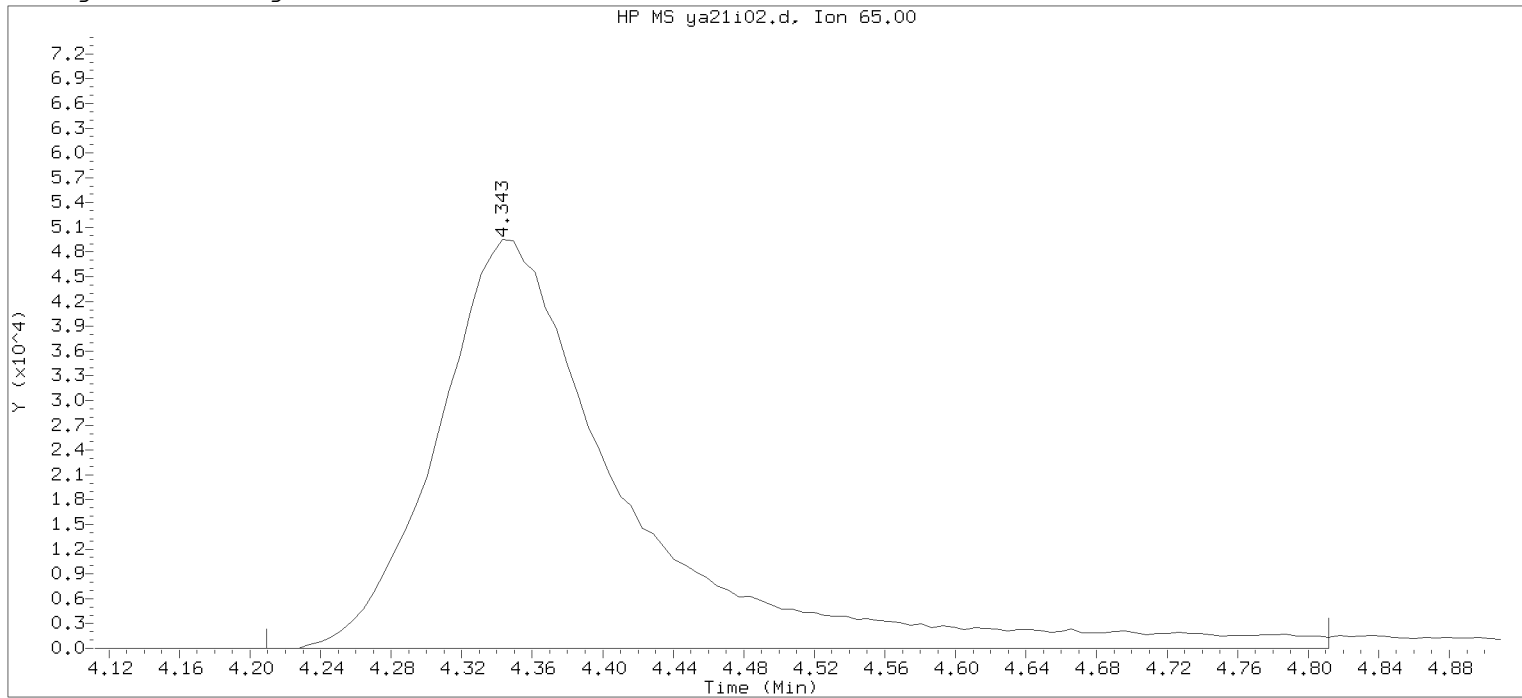
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

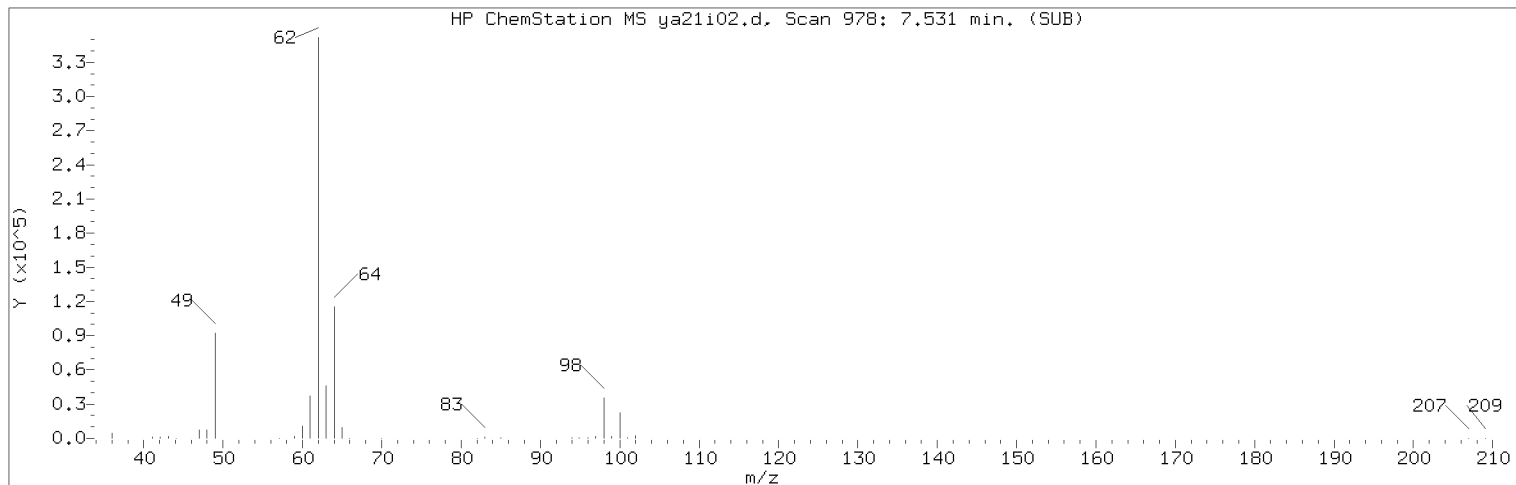
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD100

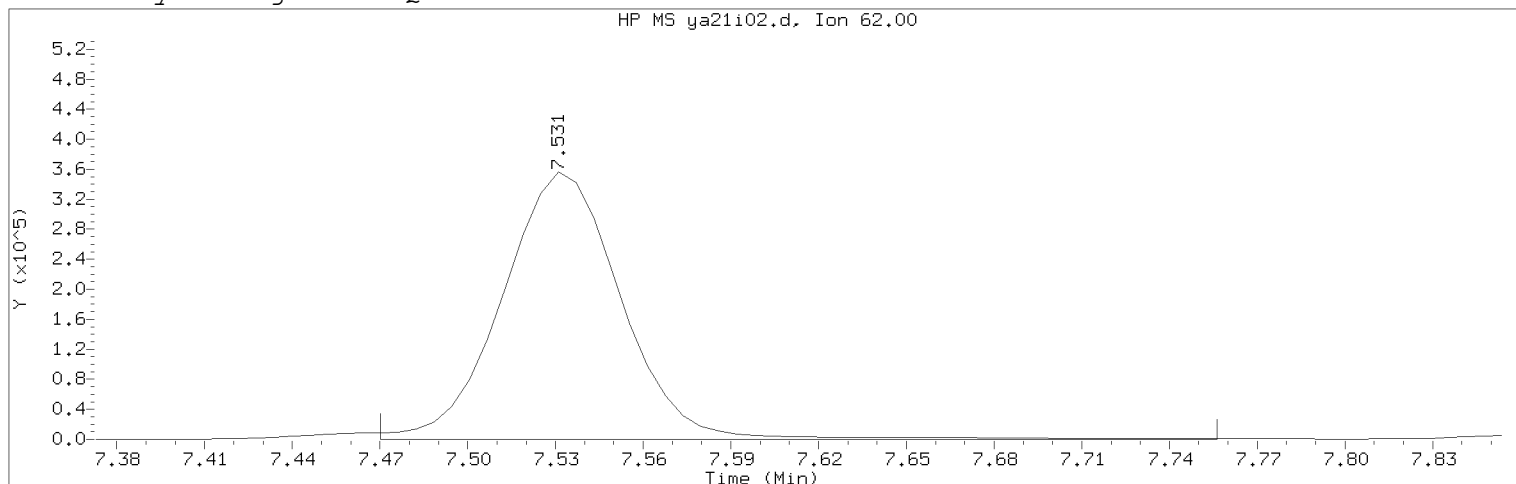
Lab Sample ID: VSTD100

Compound Number	: 29	
Compound Name	: t-Butyl alcohol-d10	
Scan Number	: 454	
Retention Time (minutes)	: 4.343	
Quant Ion	: 65.00	
Area	: 367456	
On-column Amount (ng)	: 250.0000	
Integration start scan	: 431	Integration stop scan: 530
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

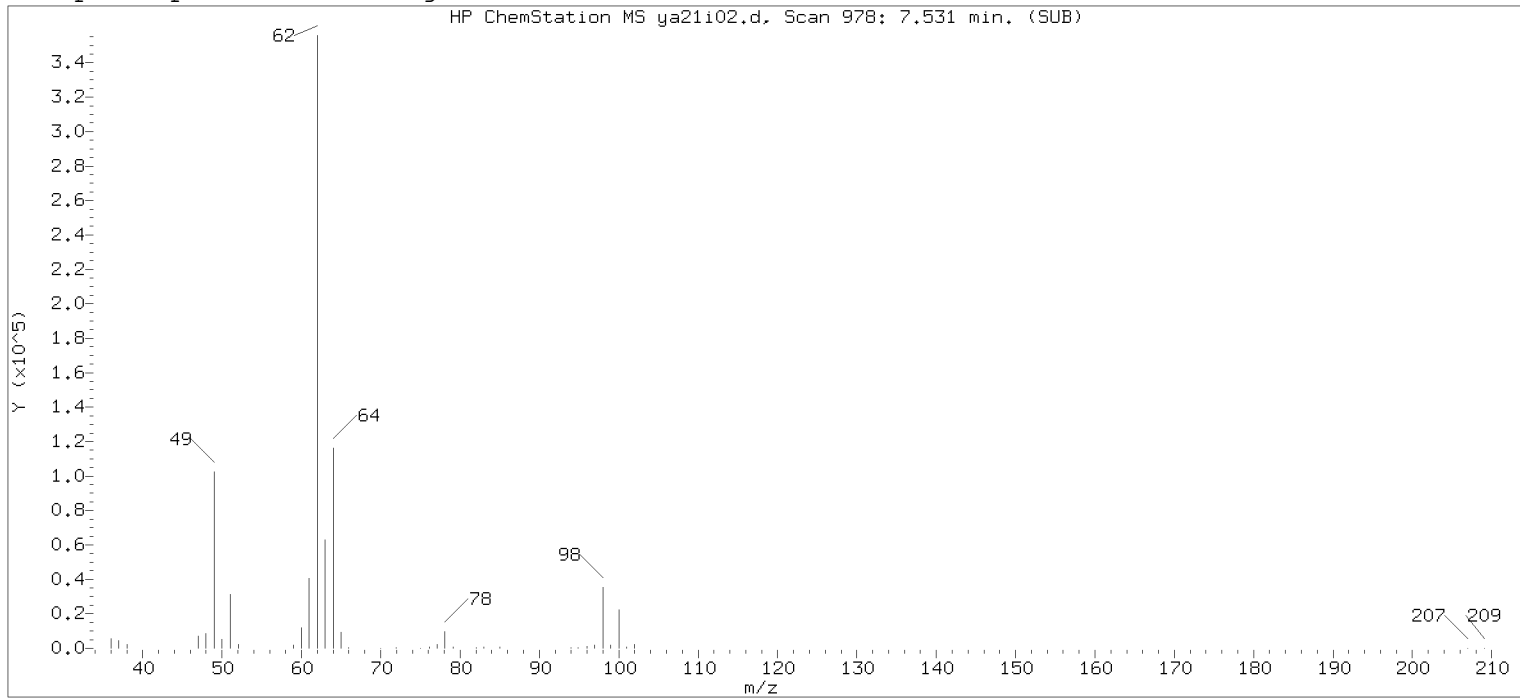
Compound Number	: 61	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 978	
Retention Time (minutes)	: 7.531	
Quant Ion	: 62.00	
Area (flag)	: 1007394M	
On-Column Amount (ng)	: 102.0083	
Integration start scan	: 967	Integration stop scan: 1014
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

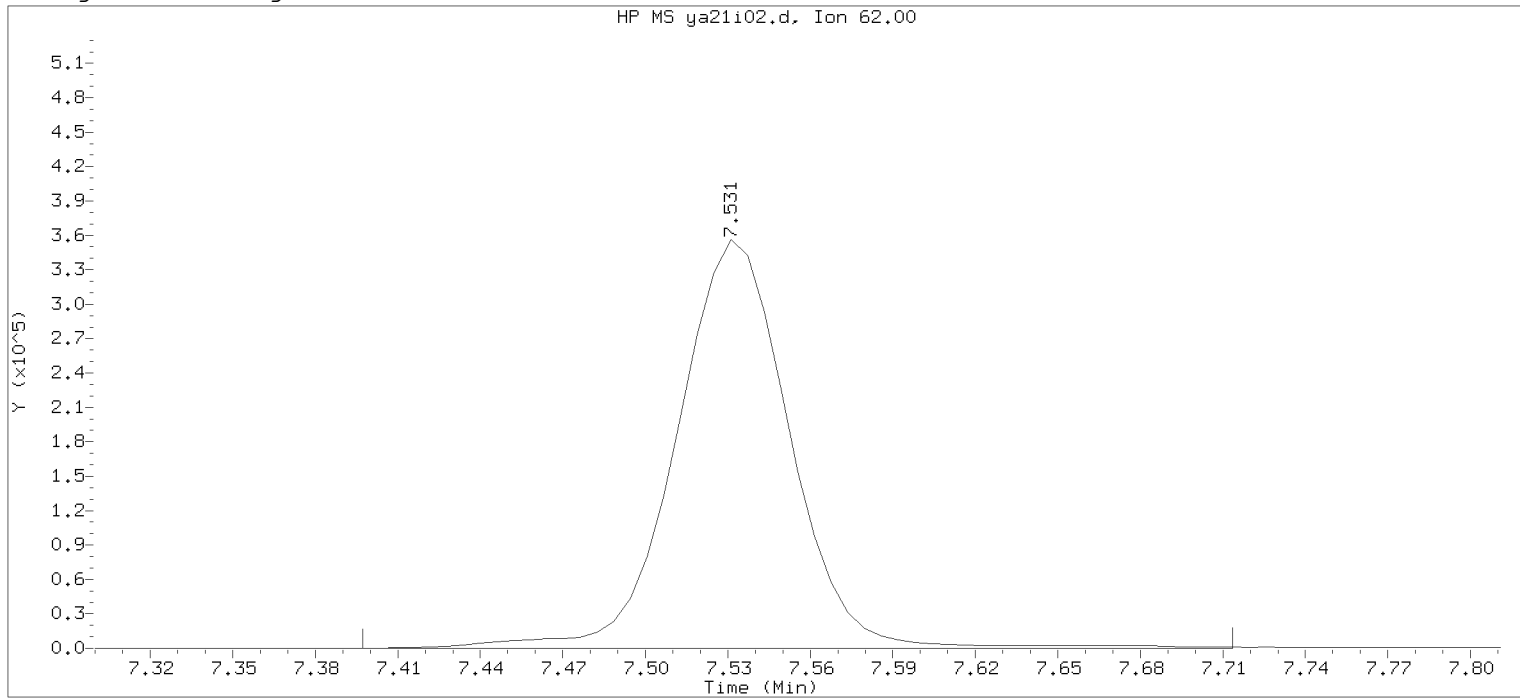
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

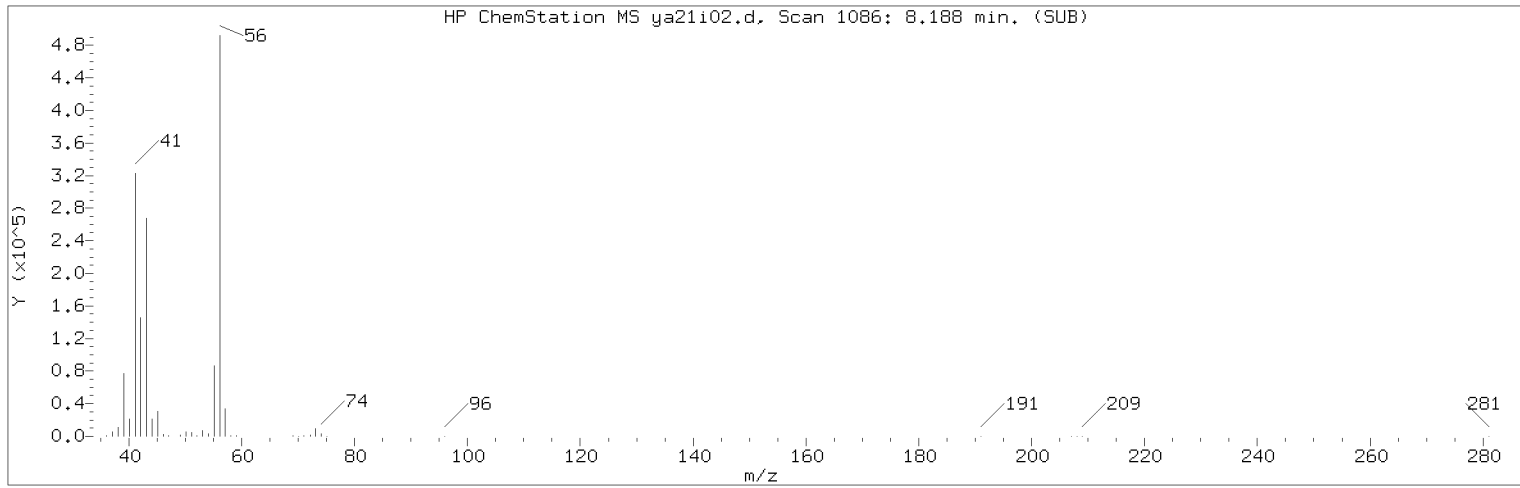
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD100

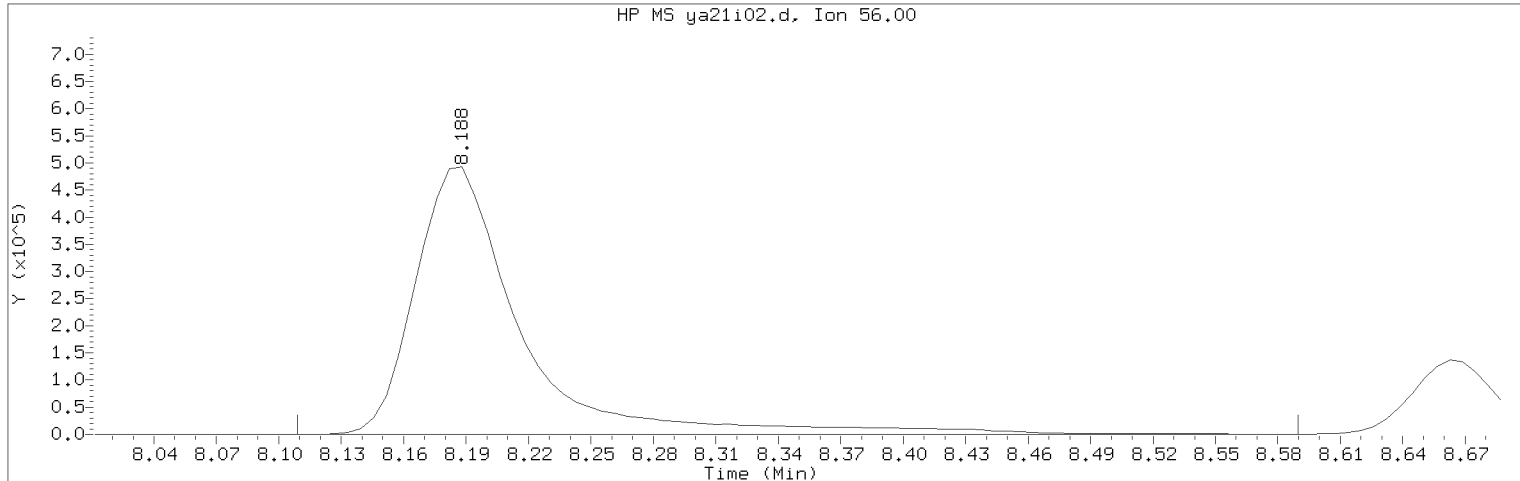
Lab Sample ID: VSTD100

Compound Number	: 61	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 978	
Retention Time (minutes)	: 7.531	
Quant Ion	: 62.00	
Area	: 1019690	
On-column Amount (ng)	: 102.5688	
Integration start scan	: 955	Integration stop scan: 1007
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

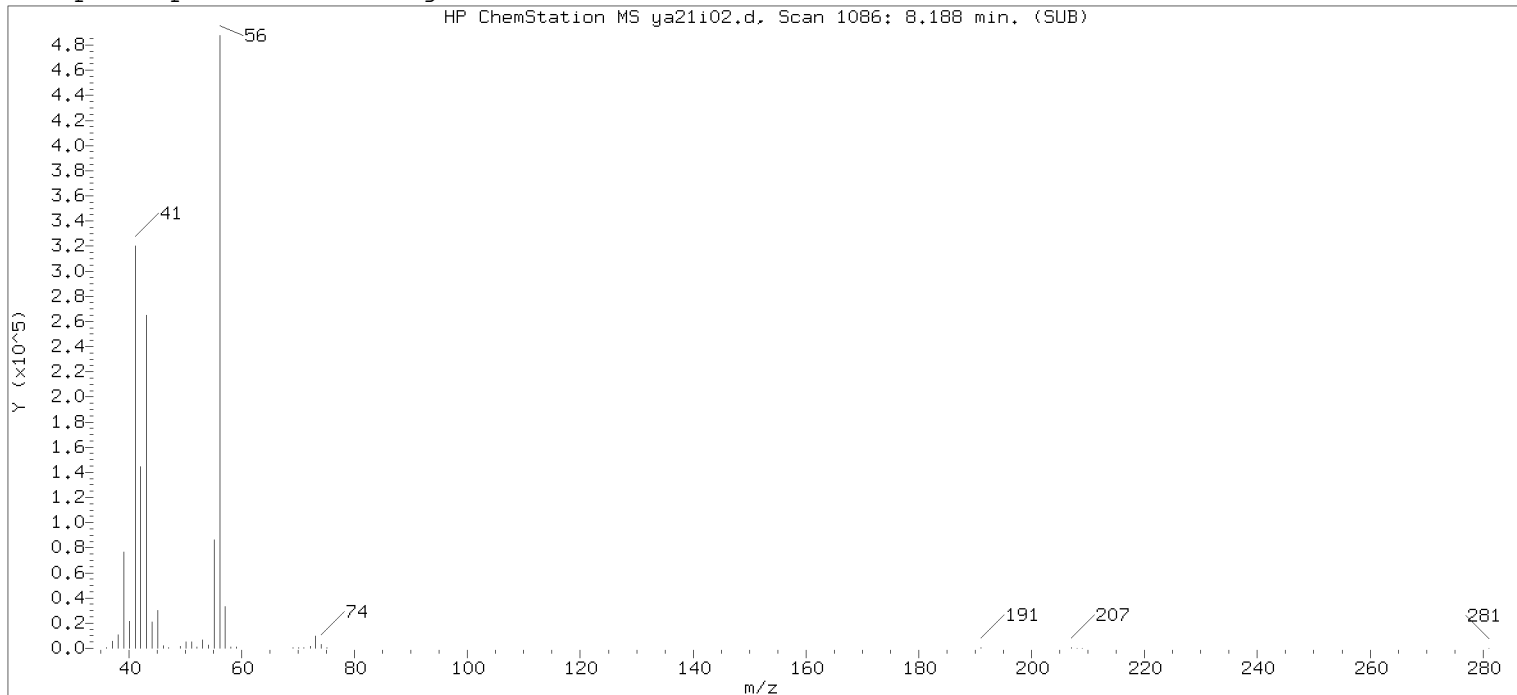
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1086
Retention Time (minutes): 8.188
Quant Ion : 56.00
Area (flag) : 1740853M
On-Column Amount (ng) : 2603.1429
Integration start scan : 1072 Integration stop scan: 1151
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

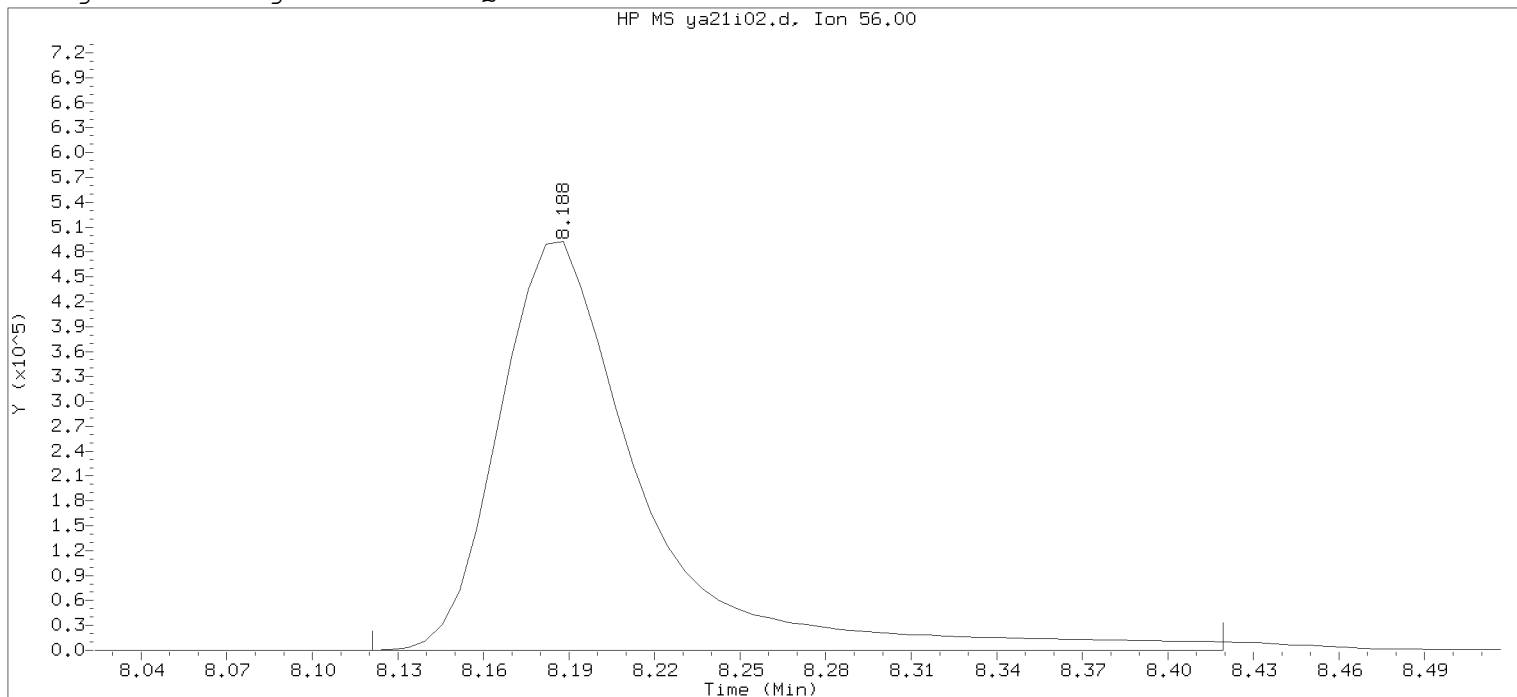
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

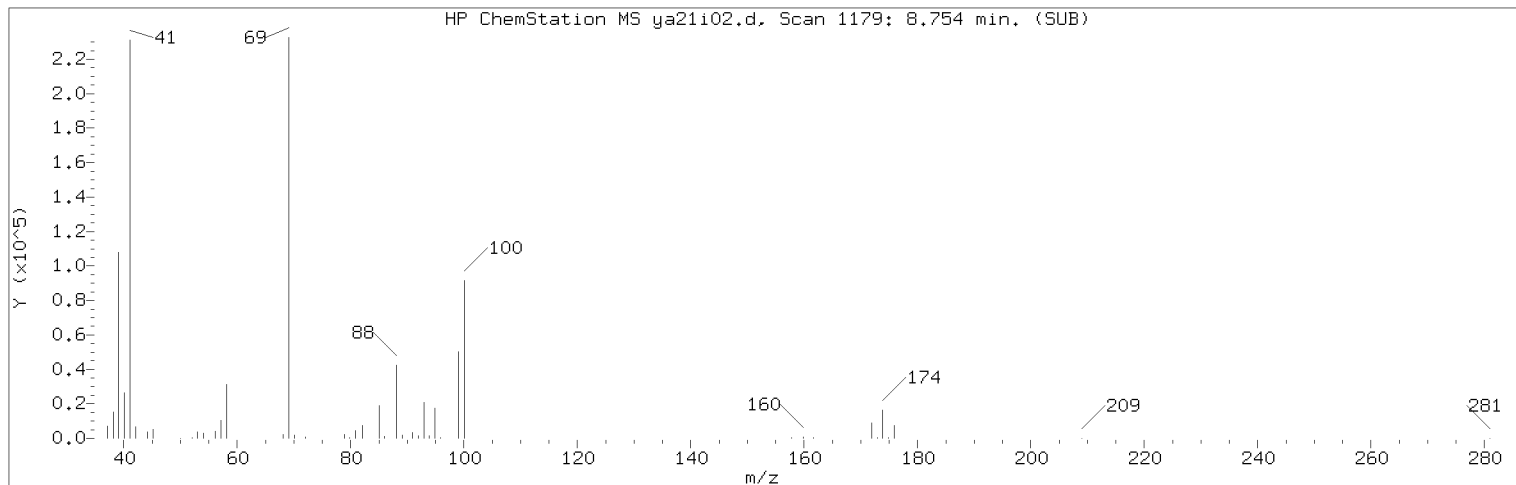
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD100

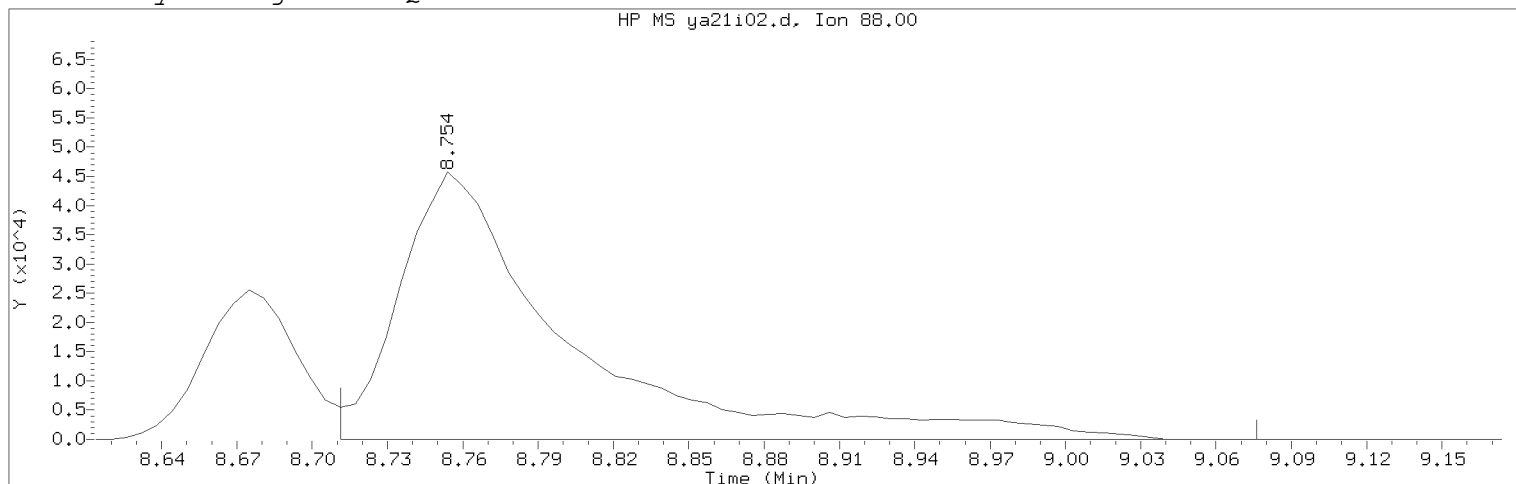
Lab Sample ID: VSTD100

Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1086
Retention Time (minutes): 8.188
Quant Ion : 56.00
Area : 1714670
On-column Amount (ng) : 2993.6531
Integration start scan : 1074 Integration stop scan: 1123
Y at integration start : 0 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

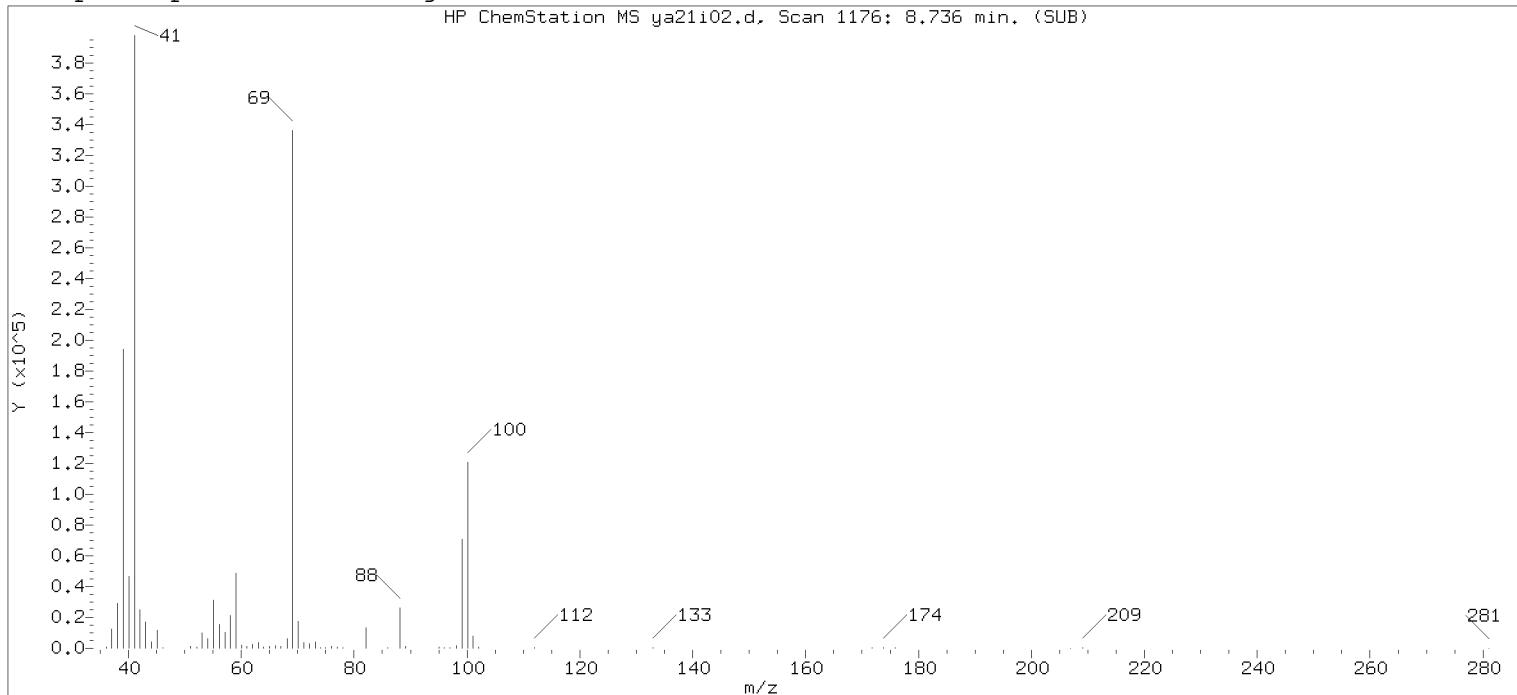
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.754
Quant Ion : 88.00
Area (flag) : 215840M
On-Column Amount (ng) : 1297.6283
Integration start scan : 1171 Integration stop scan: 1231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

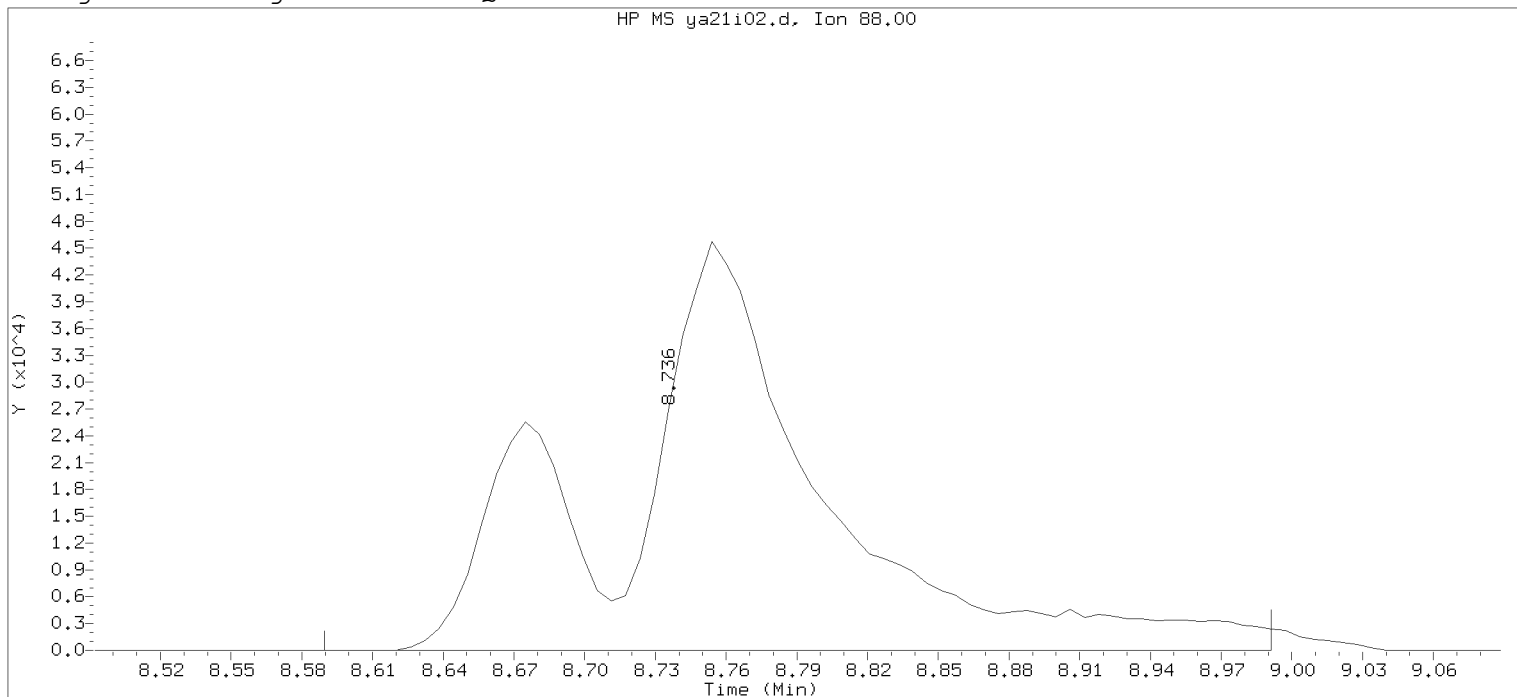
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:16

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

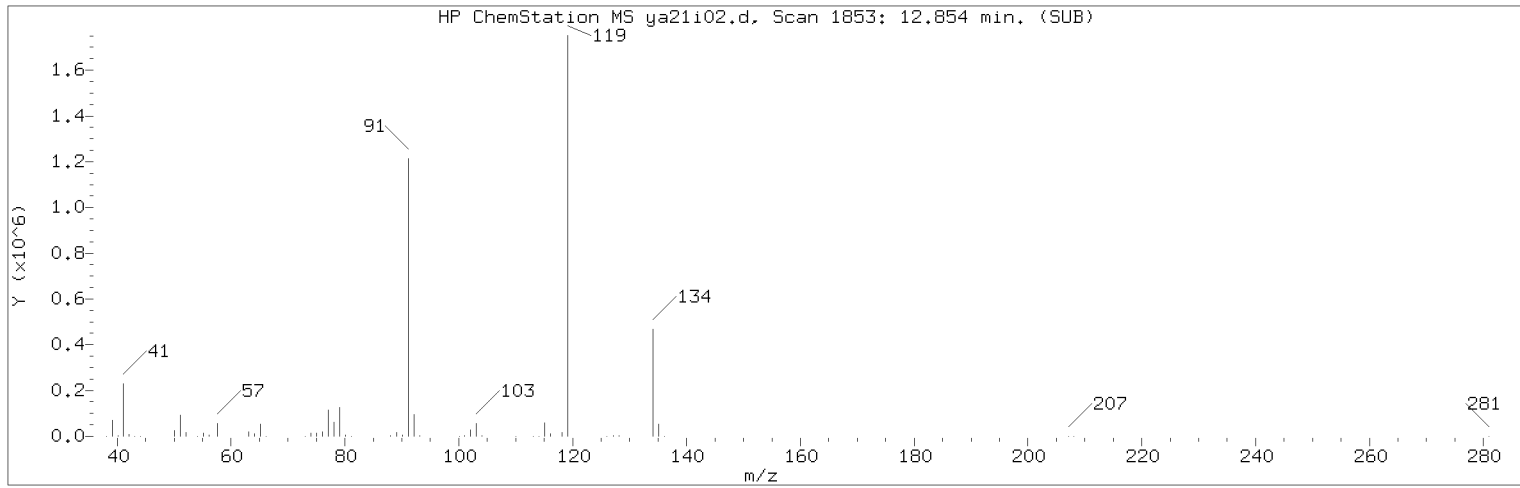
Sample Name: VSTD100

Lab Sample ID: VSTD100

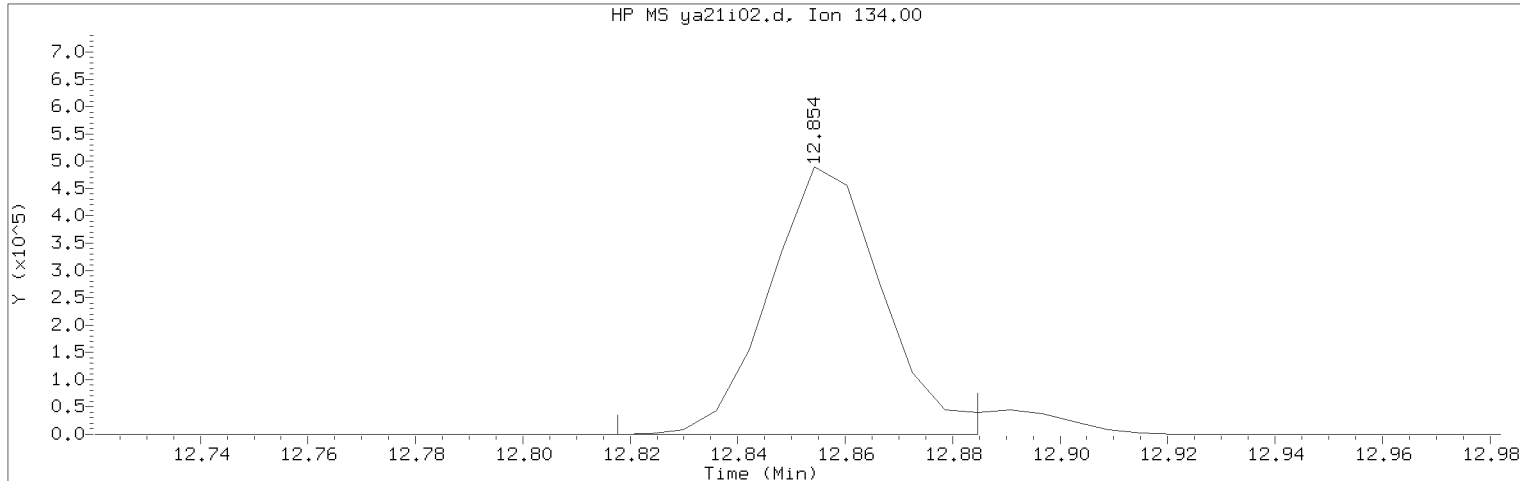
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1176
 Retention Time (minutes): 8.736
 Quant Ion : 88.00
 Area : 277357
 On-column Amount (ng) : 1582.3920
 Integration start scan : 1151
 Y at integration start : 0

Integration stop scan: 1217
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD100 Lab Sample ID: VSTD100

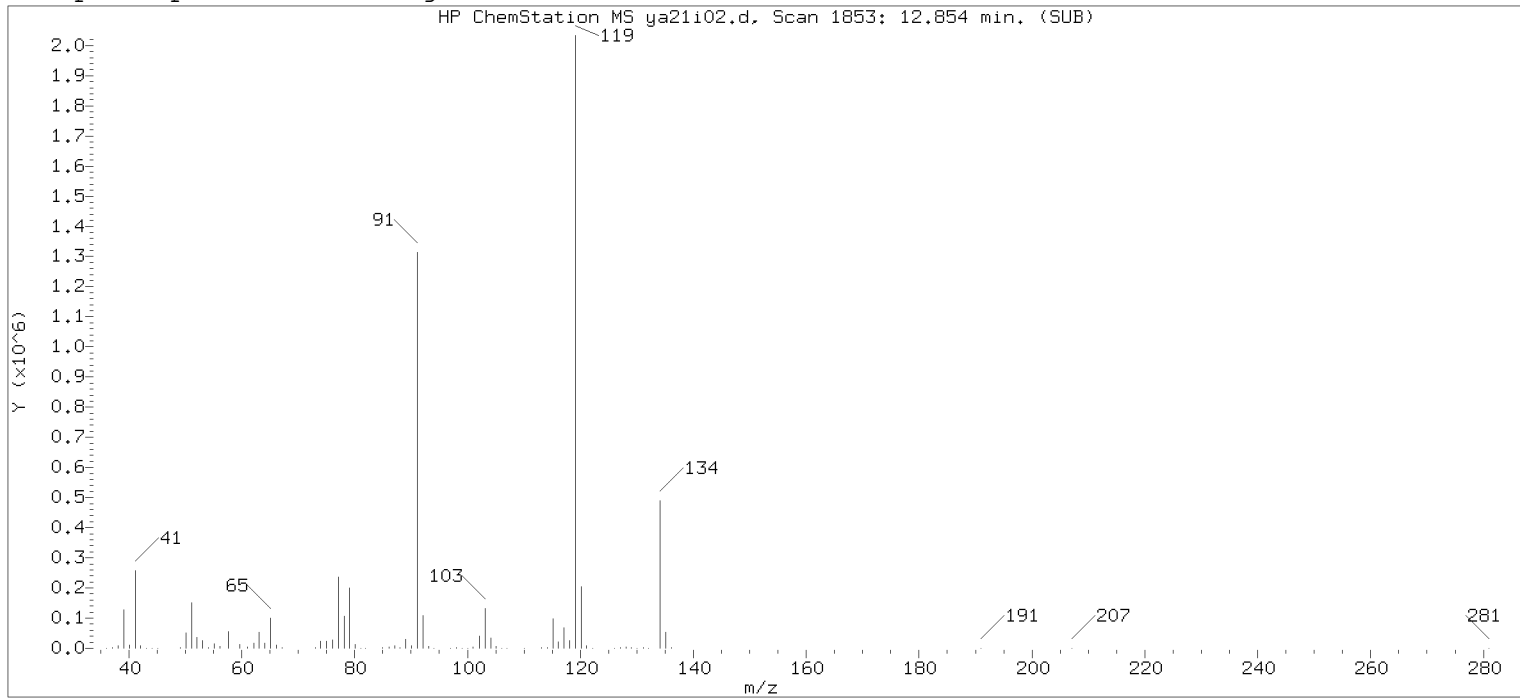
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1853
Retention Time (minutes): 12.854
Quant Ion : 134.00
Area (flag) : 715748M
On-Column Amount (ng) : 104.5241
Integration start scan : 1846 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

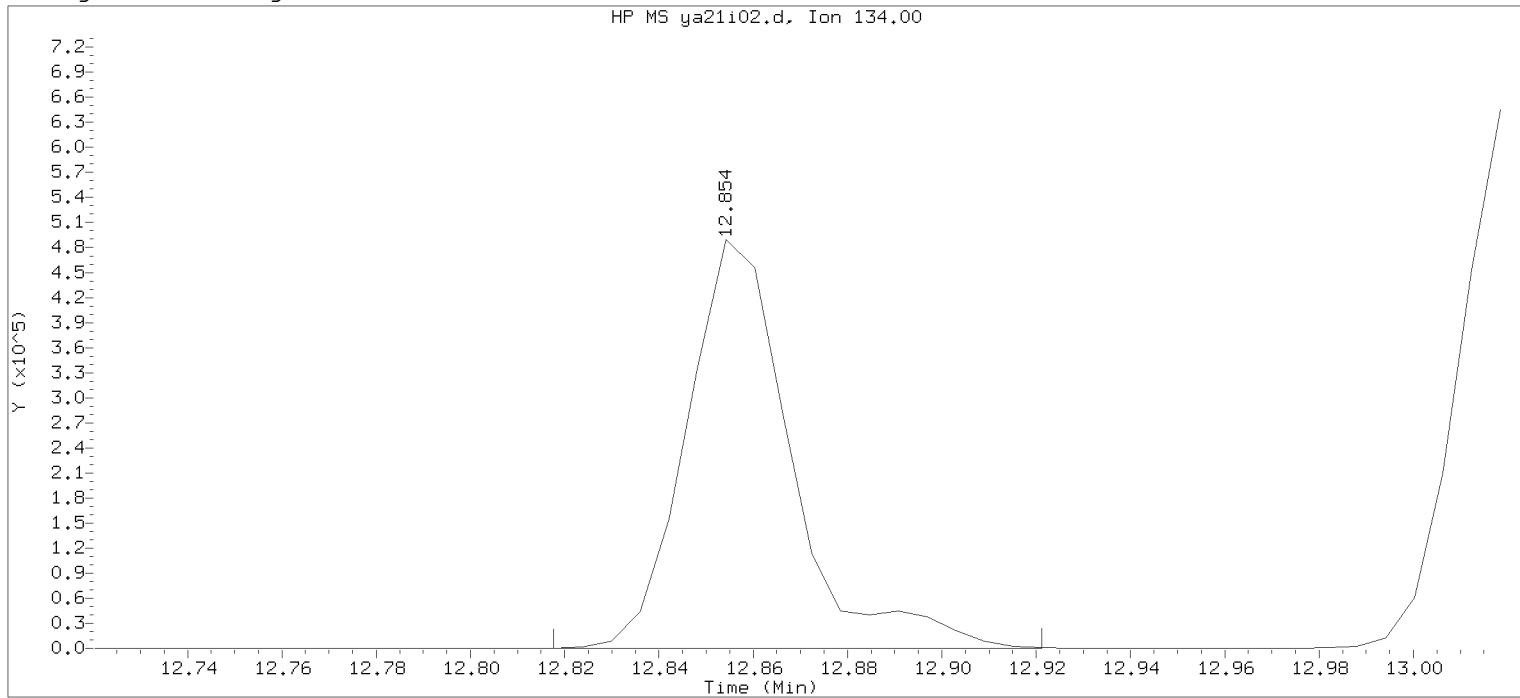
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



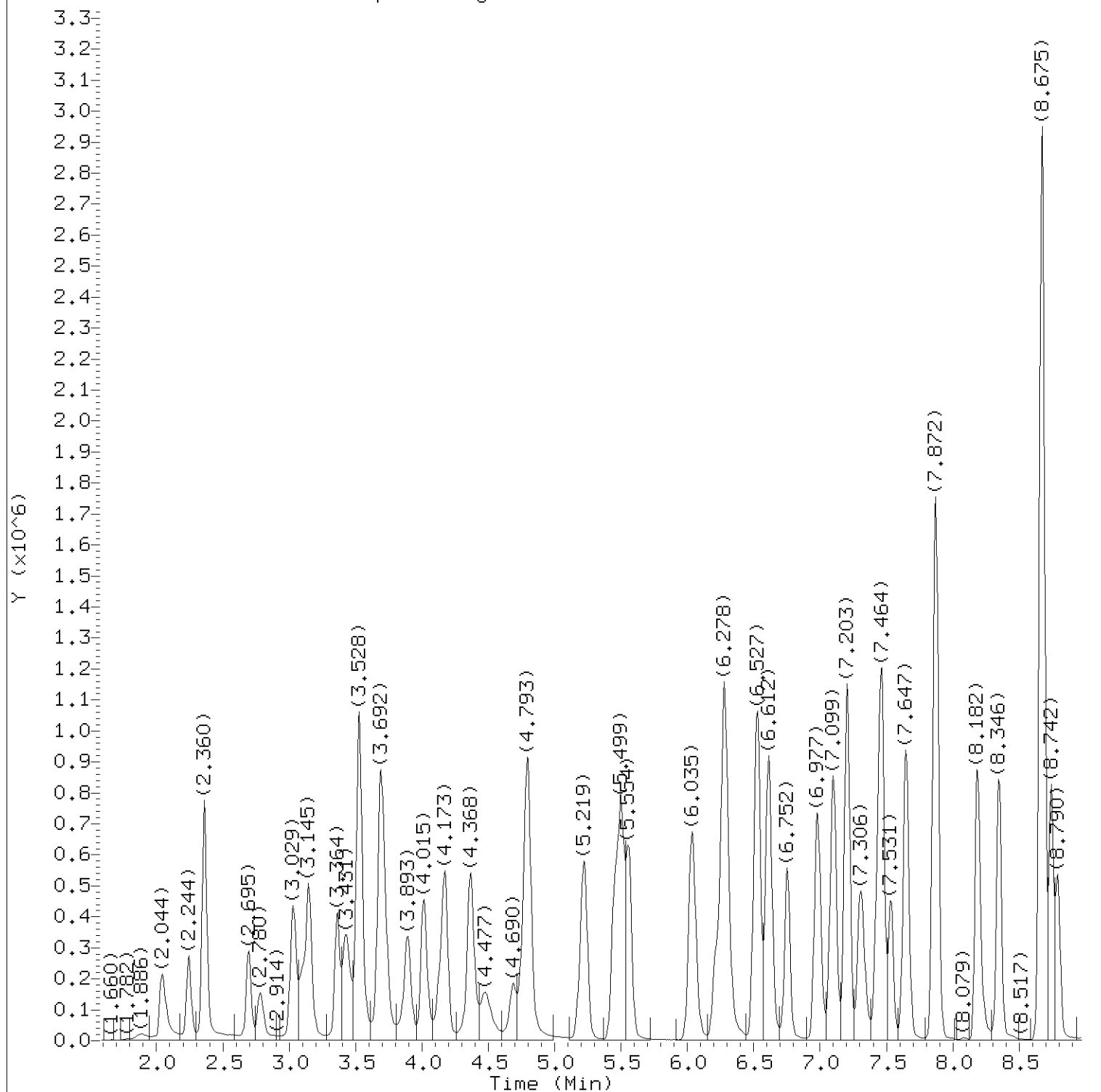
Data File: /chem2/HP09355.i/20apr21a.b/ya21i02.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:16 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1853	
Retention Time (minutes)	: 12.854	
Quant Ion	: 134.00	
Area	: 757828	
On-column Amount (ng)	: 111.4766	
Integration start scan	: 1846	Integration stop scan: 1863
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d
Injection date and time: 21-APR-2020 22:38

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

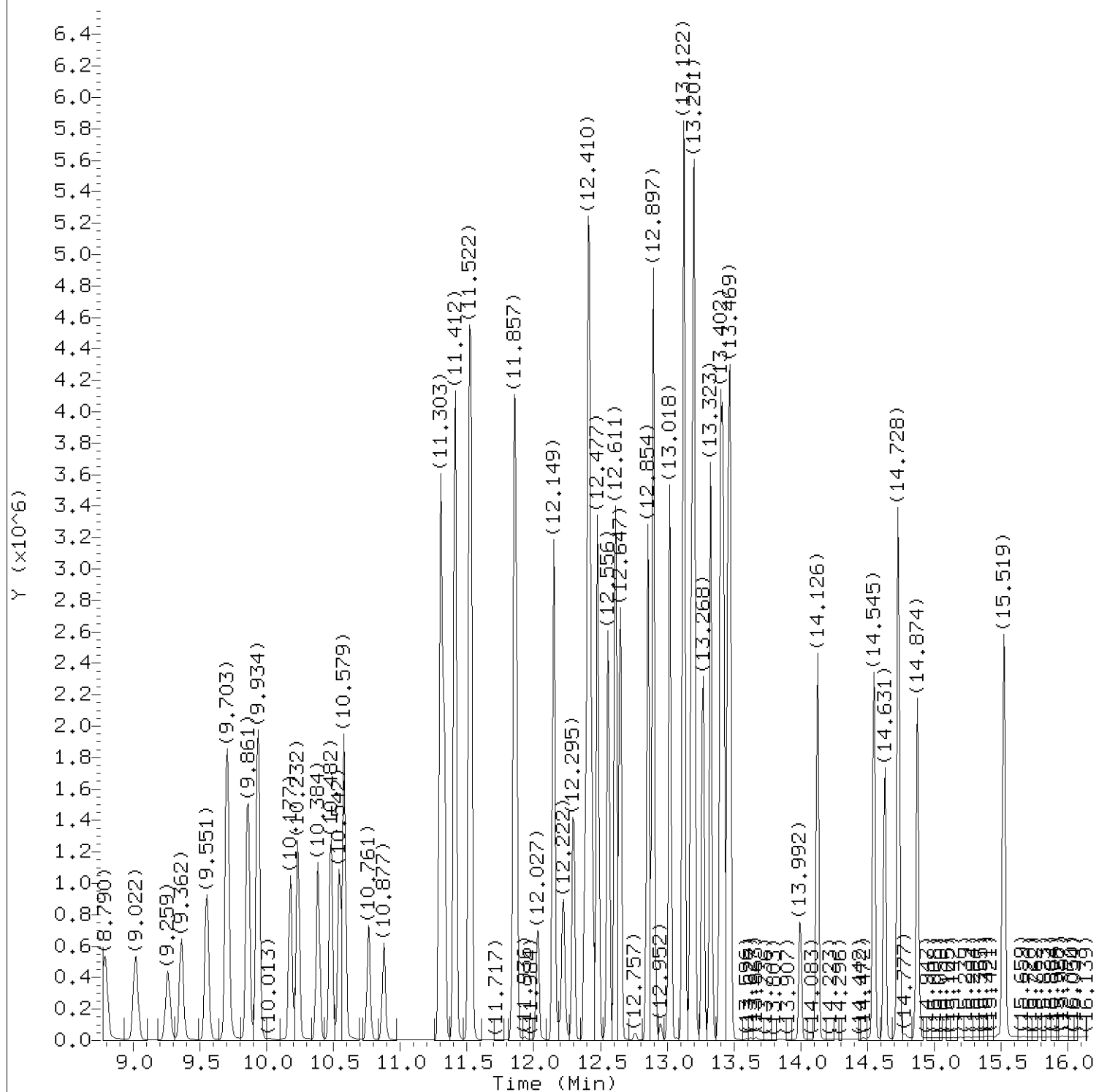
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d
 Injection date and time: 21-APR-2020 22:38

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
 Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Jennifer K. Howe
 on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.044	85	466628M	51.922
4) Chloromethane	(2)	2.244	50	399546	51.314
5) 1,3-Butadiene	(2)	2.360	39	318216	49.913
6) Vinyl Chloride	(2)	2.360	62	406092	51.732
8) Bromomethane	(2)	2.695	94	282069	54.651
9) Chloroethane	(2)	2.780	64	225621	53.847
10) Dichlorofluoromethane	(2)	3.029	67	582697	51.613
12) Trichlorofluoromethane	(2)	3.096	101	467956	51.024
11) n-Pentane	(2)	3.145	43	494364	51.134
14) Ethyl ether	(2)	3.358	59	339295	48.154
15) Freon 123a	(2)	3.425	67	417632M	50.287
16) Acrolein	(1)	3.528	56	1716818	539.180
17) 1,1-Dichloroethene	(2)	3.686	96	333145	50.104
17) 1,1-Dichloroethene	(2)	3.686	63	162549	49.771
18) Acetone	(1)	3.692	58	151777	102.020
19) Freon 113	(2)	3.717	101	335492	49.458
21) 2-Propanol	(1)	3.863	45	281067	254.047
22) Methyl Iodide	(2)	3.893	142	577682	49.518
23) Carbon Disulfide	(2)	4.015	76	1171245	49.724
27) Methyl Acetate	(2)	4.136	43	515289	49.821
25) Allyl Chloride	(2)	4.173	41	565511	49.719
29)*t-Butyl alcohol-d10	(1)	4.349	65	393548M	250.000
28) Methylene Chloride	(2)	4.368	84	388424	49.767
30) t-Butyl alcohol	(1)	4.477	59	493860	256.037
31) Acrylonitrile	(2)	4.684	53	302921	51.636
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	1109339	50.538
32) trans-1,2-Dichloroethene	(2)	4.800	96	385332	50.158
34) n-Hexane	(2)	5.219	57	600865	49.670
36) 1,1-Dichloroethane	(2)	5.450	63	681251	49.857
38) di-Isopropyl ether	(2)	5.499	45	1272310	50.620
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	565084	48.787
40) Ethyl t-butyl ether	(2)	6.035	59	1129947	50.935
43) 1,2-Dichloroethene (Total)	(2)		96	822068	100.181
44) 2-Butanone	(2)	6.223	43	810214	103.171
42) cis-1,2-Dichloroethene	(2)	6.272	96	436736	50.022
45) 2,2-Dichloropropane	(2)	6.290	77	515194	49.548
47) Propionitrile	(1)	6.302	54	589246	258.497
48) Methacrylonitrile	(2)	6.527	67	740934	125.760

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d
 Injection date and time: 21-APR-2020 22:38

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.612	128	206804	49.190
50) Tetrahydrofuran	(1)	6.619	71	234464	105.277
51) Chloroform	(2)	6.752	83	649643	49.478
52) \$Dibromofluoromethane	(2)	6.971	113	297135	49.661
52) \$Dibromofluoromethane	(2)	6.971	111	303724	49.742
53) 1,1,1-Trichloroethane	(2)	6.990	97	557921	49.049
54) Cyclohexane	(2)	7.099	56	716898	49.645
54) Cyclohexane	(2)	7.099	84	594334	49.285
54) Cyclohexane	(2)	7.099	69	221829	49.588
55) 1,1-Dichloropropene	(2)	7.203	75	546645	49.375
56) Carbon Tetrachloride	(2)	7.209	117	478515	48.660
58) Isobutyl Alcohol	(1)	7.306	41	442780	634.758
57) \$1,2-Dichloroethane-d4	(2)	7.434	102	79098	50.755
57) \$1,2-Dichloroethane-d4	(2)	7.428	65	351091	50.285
57) \$1,2-Dichloroethane-d4	(2)	7.428	104	50177	50.378
60) Benzene	(2)	7.464	78	1630471	50.006
61) 1,2-Dichloroethane	(2)	7.531	62	508558M	49.159
61) 1,2-Dichloroethane	(2)	7.537	98	51240	49.430
65) t-Amyl methyl ether	(2)	7.647	73	1128707	51.070
66) *Fluorobenzene	(2)	7.866	96	1312885	50.000
67) n-Heptane	(2)	7.878	43	639949	49.864
69) n-Butanol	(1)	8.188	56	884015	1285.879
71) Trichloroethene	(2)	8.346	95	408172	49.006
72) Methylcyclohexane	(2)	8.663	83	734617	49.850
72) Methylcyclohexane	(2)	8.669	98	323297	49.393
73) 1,2-Dichloropropane	(2)	8.675	63	426799	50.380
76) Methyl Methacrylate	(2)	8.742	69	448184	48.802
75) 1,4-Dioxane	(1)	8.760	88	101511M	609.682
74) Dibromomethane	(2)	8.790	93	268701	48.908
78) Bromodichloromethane	(2)	9.022	83	497131	48.113
79) 2-Nitropropane	(2)	9.259	41	374405	101.372
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	357453	49.009
81) cis-1,3-Dichloropropene	(2)	9.551	75	688869	48.884
82) 4-Methyl-2-pentanone	(2)	9.703	43	1577481	103.233
83) \$Toluene-d8	(3)	9.861	98	1272568	49.980
83) \$Toluene-d8	(3)	9.861	100	817862	49.873
88) Toluene	(3)	9.934	92	1029074	49.784
90) 1,3-Dichloropropene (total)	(3)		100	1332895	97.690

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.177	75	644026	48.806
91) Ethyl Methacrylate	(3)	10.232	69	733523	48.892
92) 1,1,2-Trichloroethane	(3)	10.384	97	407120	49.209
93) Tetrachloroethene	(3)	10.482	166	412985	48.369
94) 1,3-Dichloropropane	(3)	10.542	76	696785	49.801
96) 2-Hexanone	(3)	10.579	43	1273441	104.571
97) Dibromochloromethane	(3)	10.761	129	423492	47.739
99) 1,2-Dibromoethane	(3)	10.877	107	449818	48.898
100) *Chlorobenzene-d5	(3)	11.303	117	977085	50.000
101) 1-Chlorohexane	(3)	11.303	91	568383	49.506
102) Chlorobenzene	(3)	11.327	112	1160386	50.216
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	390995	49.341
104) Ethylbenzene	(3)	11.412	91	2003894	50.934
106) m+p-Xylene	(3)	11.522	106	1592130	101.869
108) Xylene (Total)	(3)		106	2372813	152.505
107) o-Xylene	(3)	11.850	106	780683	50.636
109) Styrene	(3)	11.869	104	1315562	50.137
110) Bromoform	(3)	12.033	173	321736	47.121
111) Isopropylbenzene	(3)	12.149	105	1996583	51.225
112) Cyclohexanone	(1)	12.222	55	394544	600.935
114) \$4-Bromofluorobenzene	(3)	12.295	95	482587	49.958
114) \$4-Bromofluorobenzene	(3)	12.301	174	371585	49.890
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	714936	50.298
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	589860	128.408
115) Bromobenzene	(4)	12.416	156	504690	50.258
117) 1,2,3-Trichloropropane	(4)	12.434	110	224416	49.707
119) n-Propylbenzene	(4)	12.477	91	2399593	52.476
120) 2-Chlorotoluene	(4)	12.556	126	484404	49.803
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	1736011	50.871
121) 4-Chlorotoluene	(4)	12.647	126	506318	49.589
124) tert-Butylbenzene	(4)	12.854	134	361829M	49.795
125) Pentachloroethane	(4)	12.891	167	280749	48.928
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	1840733	51.284
127) sec-Butylbenzene	(4)	13.018	105	2241183	51.942
129) 1,3-Dichlorobenzene	(4)	13.122	146	969878	50.817
130) p-Isopropyltoluene	(4)	13.128	119	1917934	51.726
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	518745	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	994629	50.665

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

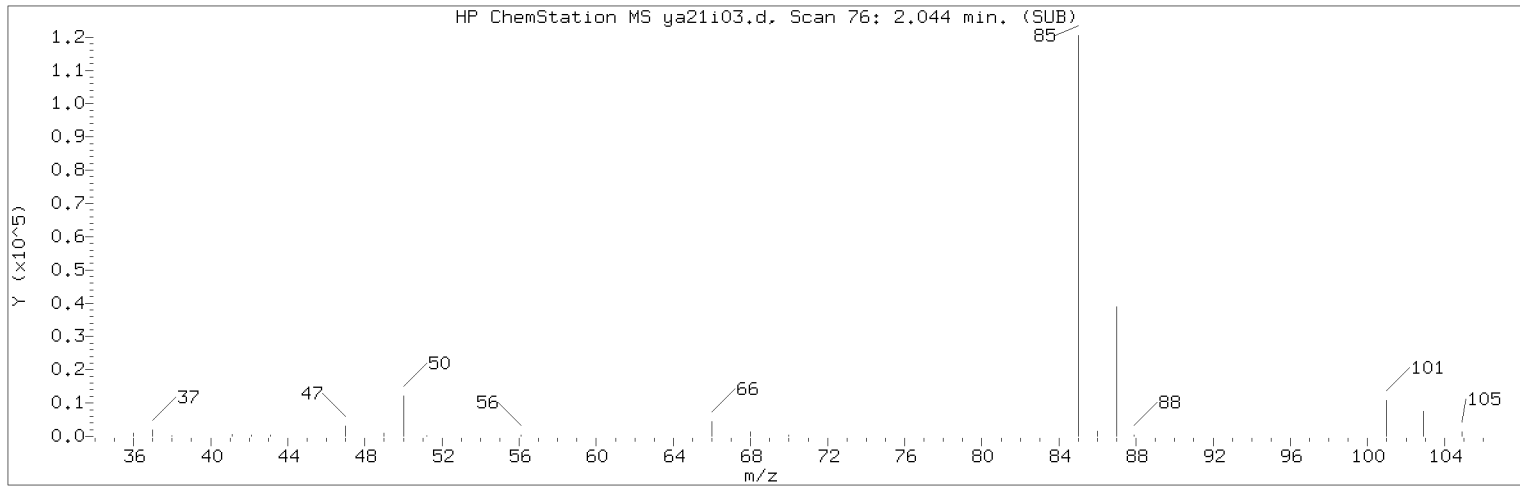
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	1733177	50.940
135) Benzyl Chloride	(4)	13.268	91	1526765	49.958
136) 1,3-Diethylbenzene	(4)	13.323	119	1123827	50.234
141) Diethylbenzene (total)	(4)		100	3237770	150.934
137) 1,4-Diethylbenzene	(4)	13.402	119	1183377	50.524
139) n-Butylbenzene	(4)	13.420	92	1003158	50.822
138) 1,2-Dichlorobenzene	(4)	13.456	146	931814	50.200
140) 1,2-Diethylbenzene	(4)	13.469	119	930566	50.176
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	178649	47.527
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	682630	48.422
146) 1,2,4-Trichlorobenzene	(4)	14.545	180	645687	48.482
147) Hexachlorobutadiene	(4)	14.631	225	284644	48.025
148) Naphthalene	(4)	14.728	128	2451121	52.128
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	617578	48.553
150) 2-Methylnaphthalene	(4)	15.519	142	1304244	49.490

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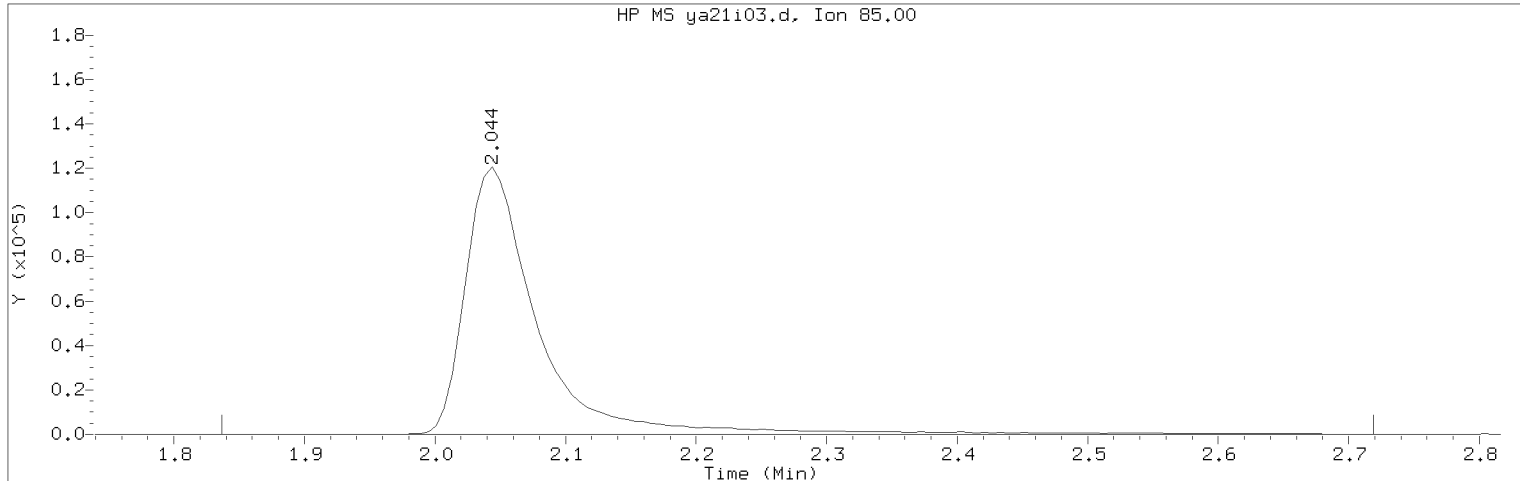
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:38 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050 Lab Sample ID: VSTD050

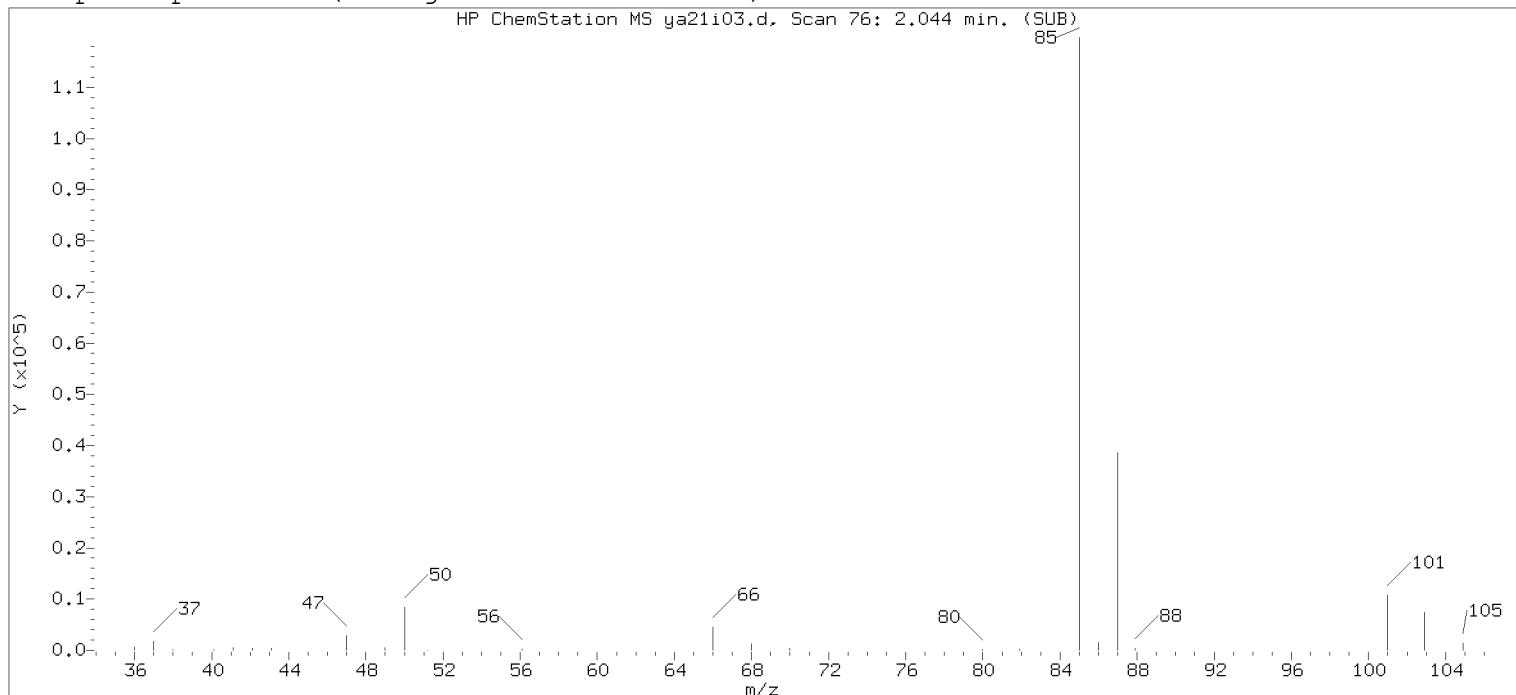
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 76
Retention Time (minutes): 2.044
Quant Ion : 85.00
Area (flag) : 466628M
On-Column Amount (ng) : 51.9221
Integration start scan : 41 Integration stop scan: 186
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

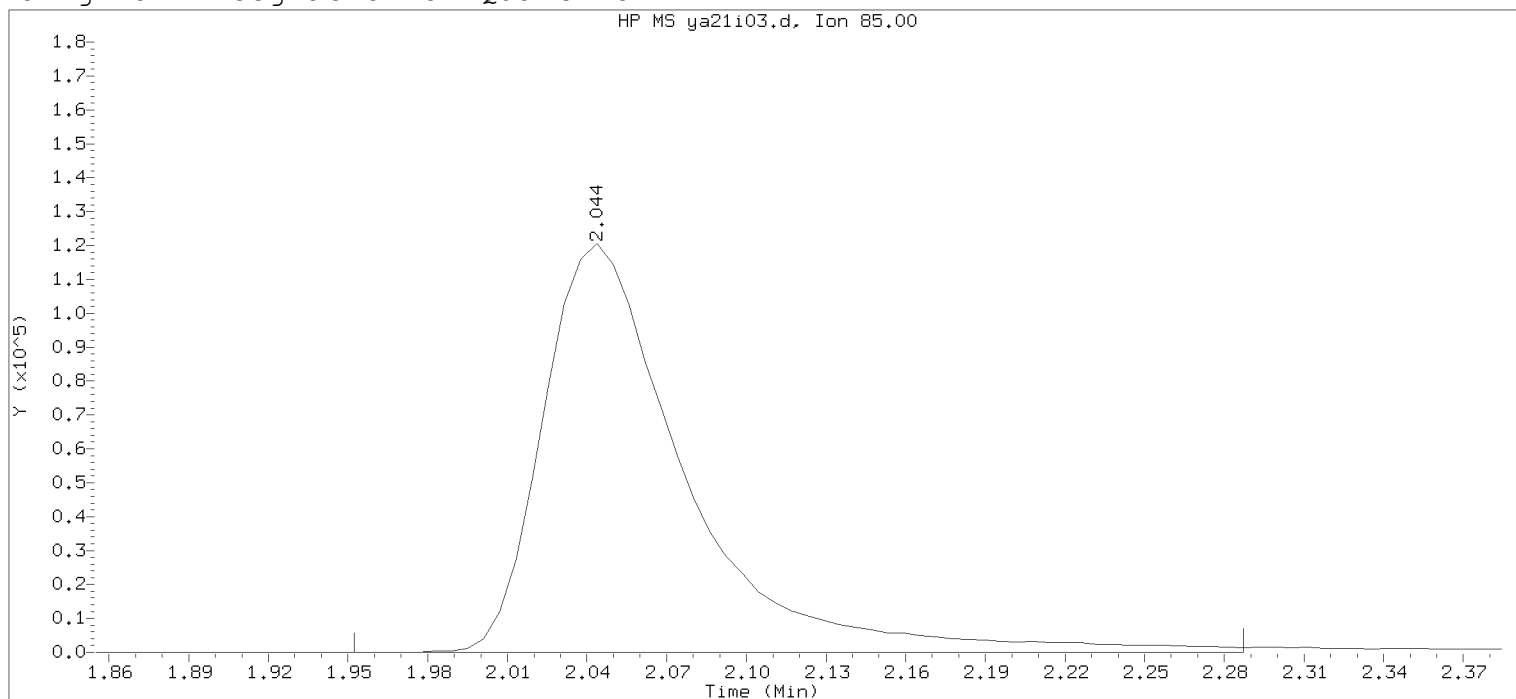
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 76

Retention Time (minutes): 2.044

Quant Ion : 85.00

Area : 450797

On-column Amount (ng) : 45.9246

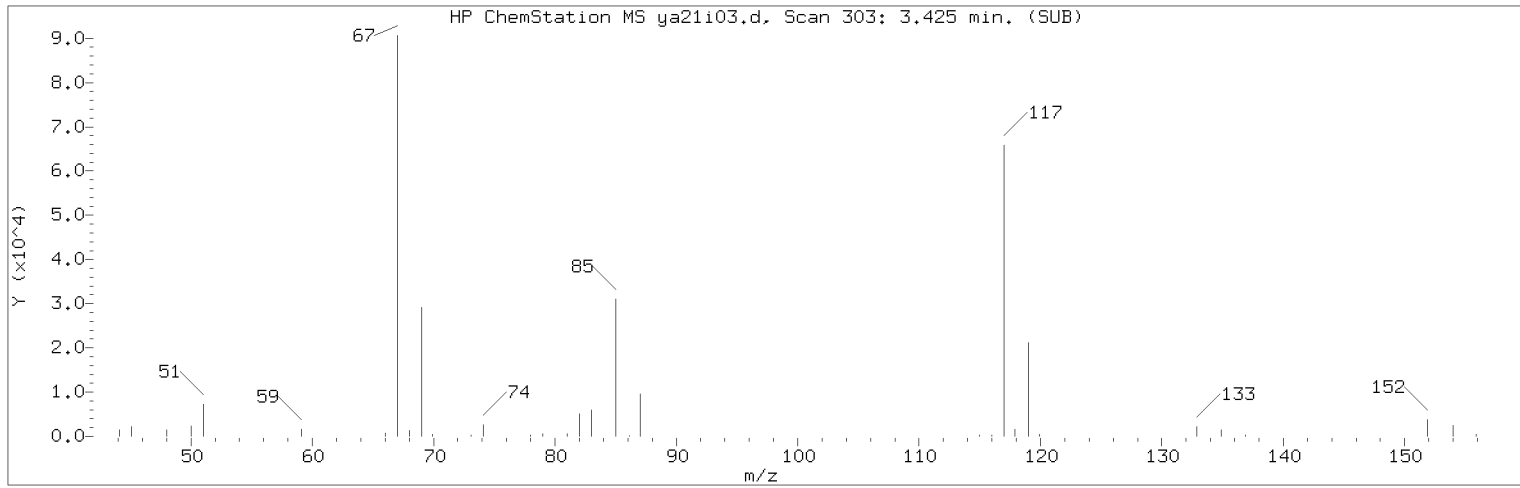
Integration start scan : 60 Integration stop scan: 115

Y at integration start : 0 Y at integration end: 0

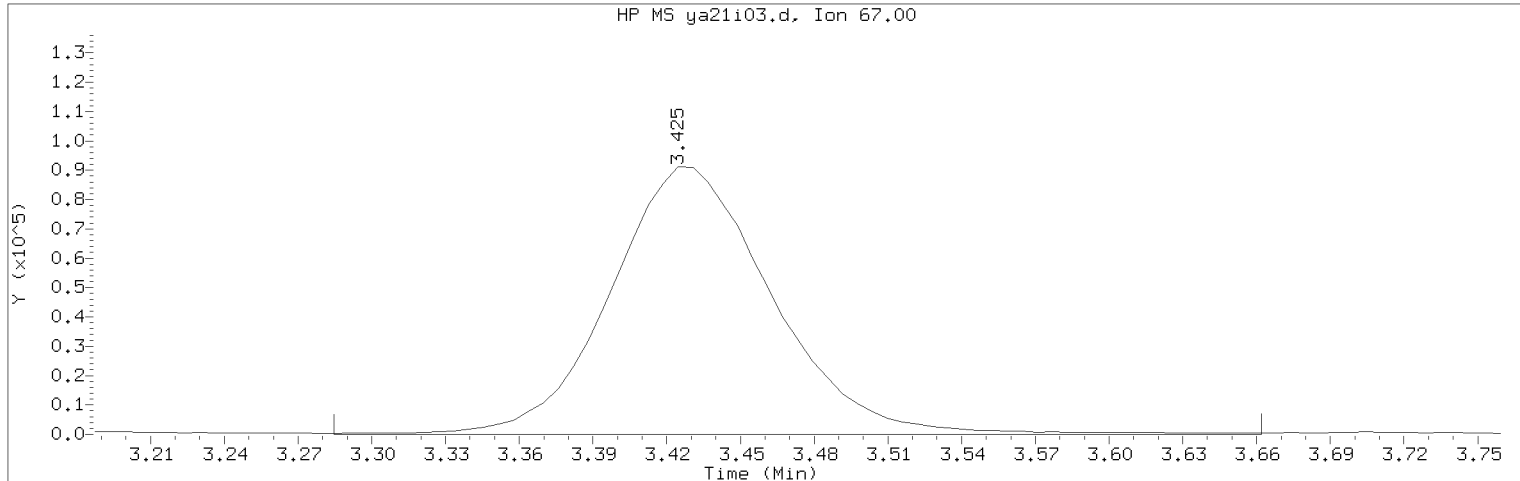
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 414 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:38 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

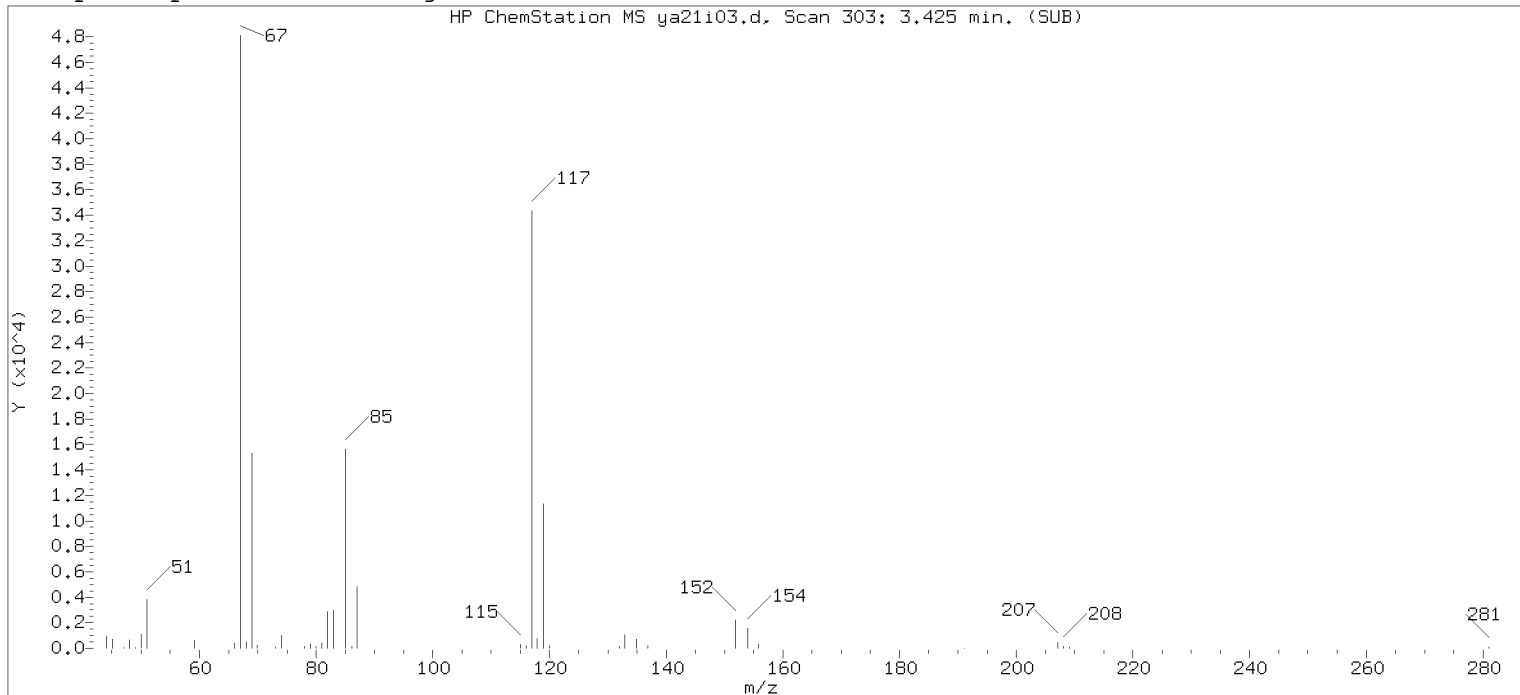
Compound Number	: 15	
Compound Name	: Freon 123a	
Scan Number	: 303	
Retention Time (minutes)	: 3.425	
Quant Ion	: 67.00	
Area (flag)	: 417632M	
On-Column Amount (ng)	: 50.2869	
Integration start scan	: 279	Integration stop scan: 341
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

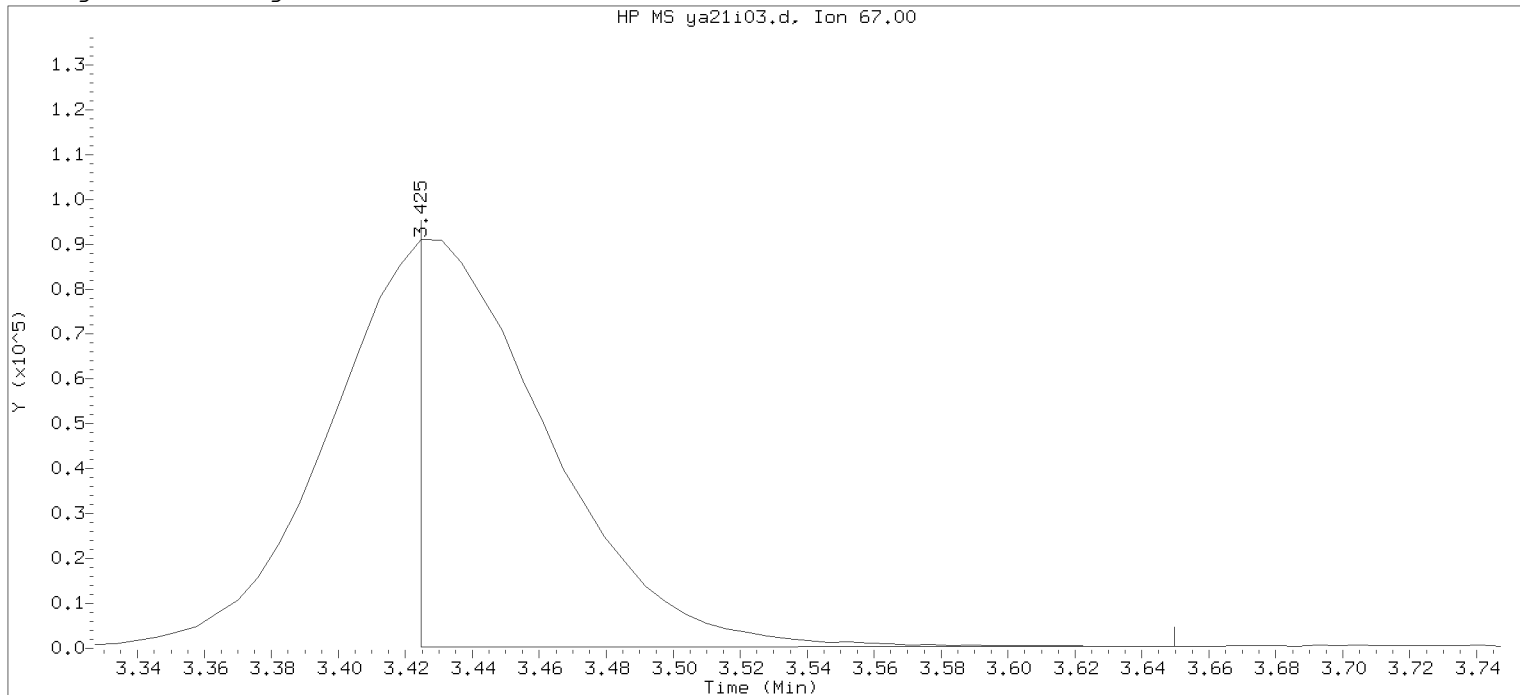
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

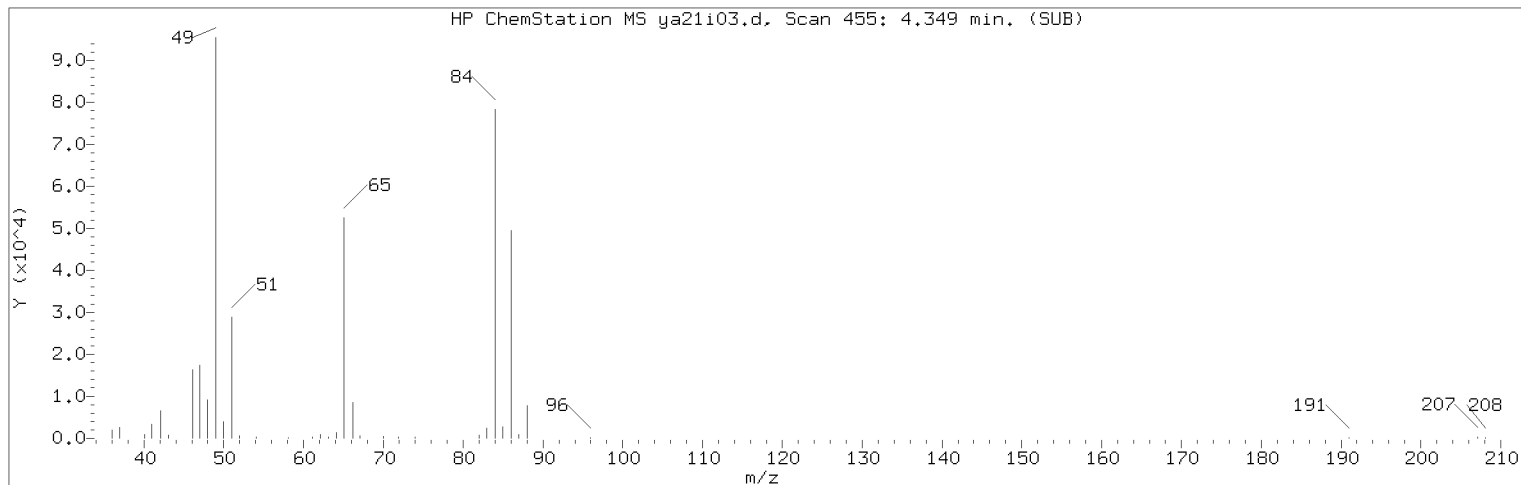
Sample Name: VSTD050

Lab Sample ID: VSTD050

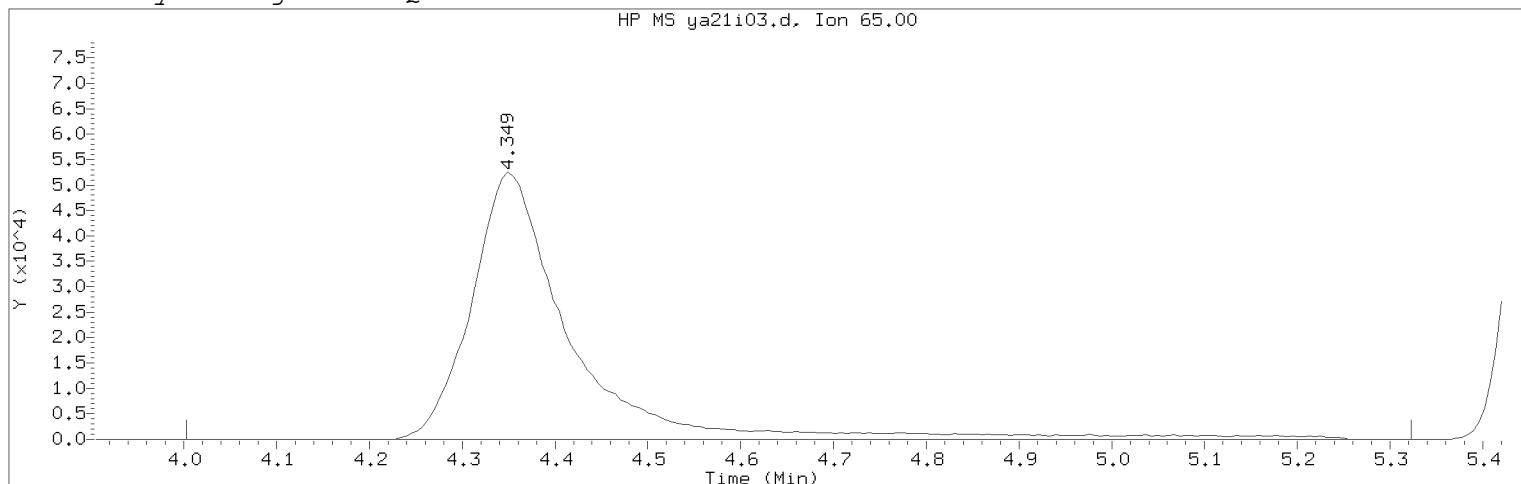
Compound Number : 15
 Compound Name : Freon 123a
 Scan Number : 303
 Retention Time (minutes): 3.425
 Quant Ion : 67.00
 Area : 236932
 On-column Amount (ng) : 32.6616
 Integration start scan : 302
 Y at integration start : 312

Integration stop scan: 339
 Y at integration end: 400

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 29	
Compound Name	: t-Butyl alcohol-d10	
Scan Number	: 455	
Retention Time (minutes)	: 4.349	
Quant Ion	: 65.00	
Area (flag)	: 393548M	
On-Column Amount (ng)	: 250.0000	
Integration start scan	: 397	Integration stop scan: 614
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

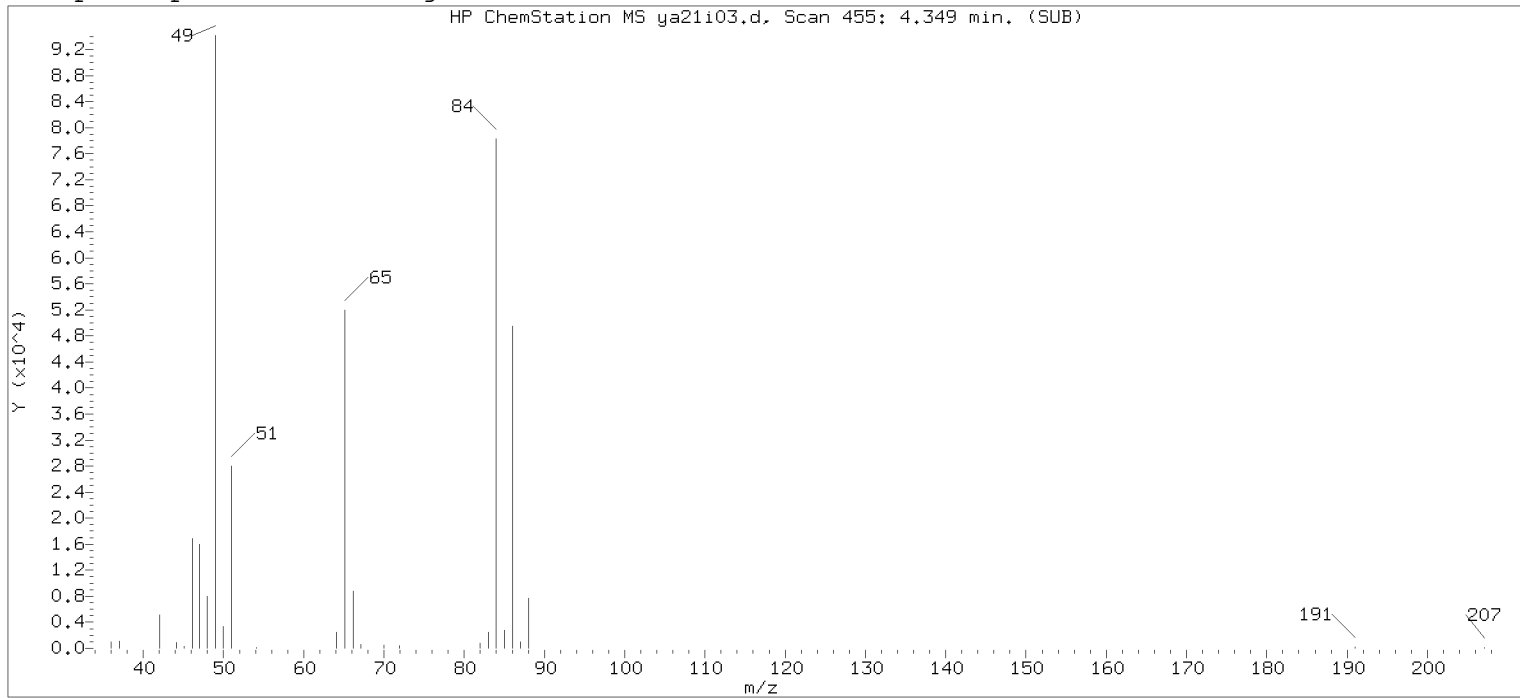
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

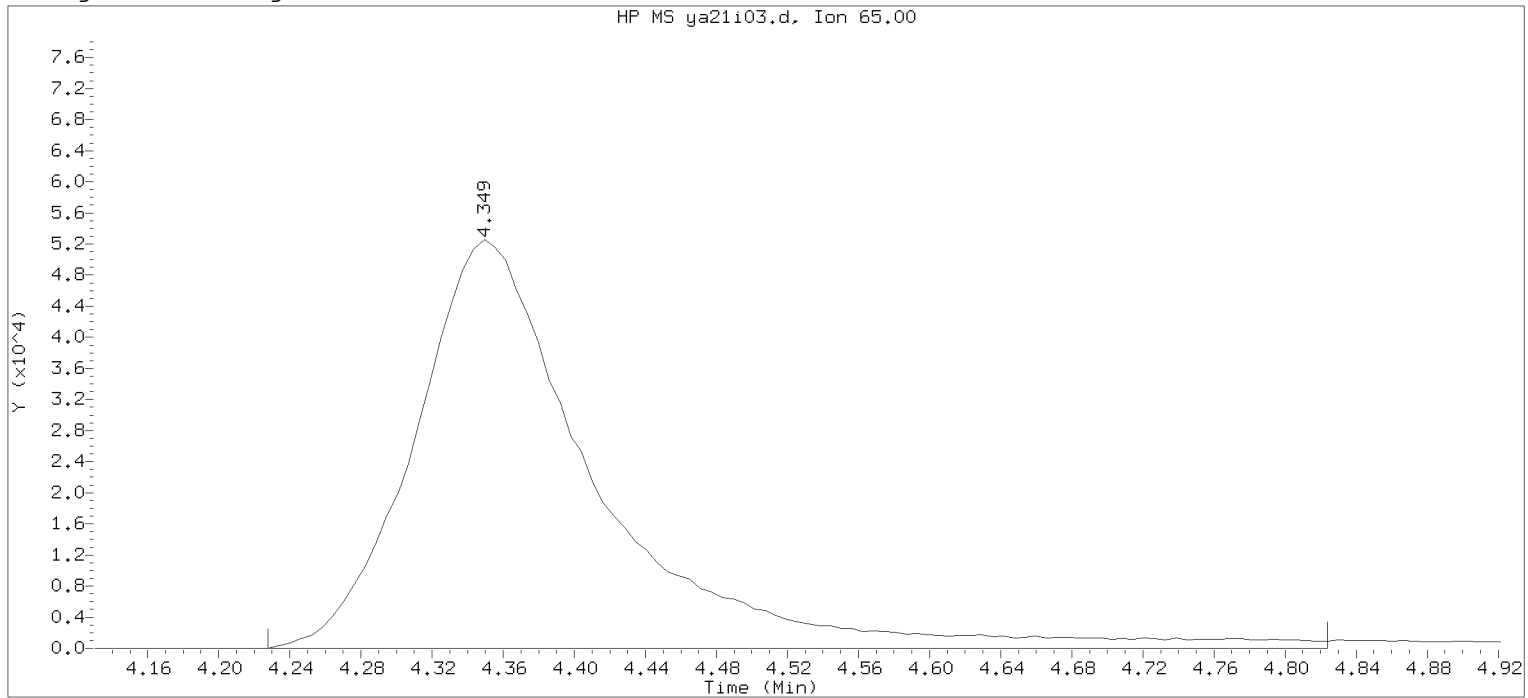
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 455

Retention Time (minutes): 4.349

Quant Ion : 65.00

Area : 374900

On-column Amount (ng) : 250.0000

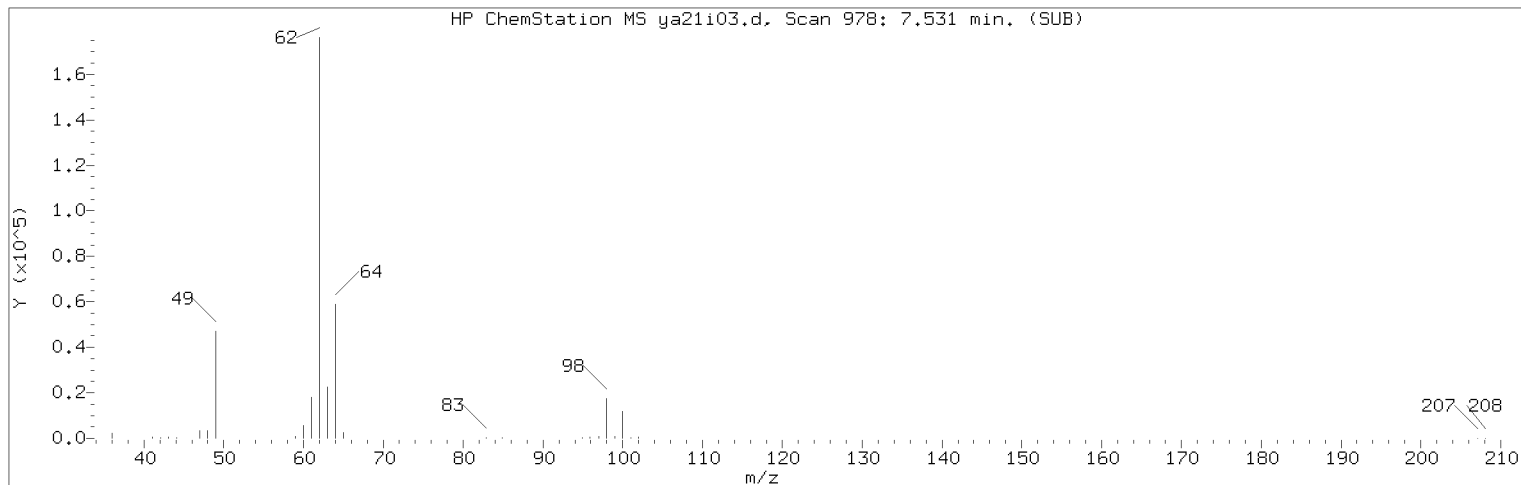
Integration start scan : 434 Integration stop scan: 532

Y at integration start : 0 Y at integration end: 0

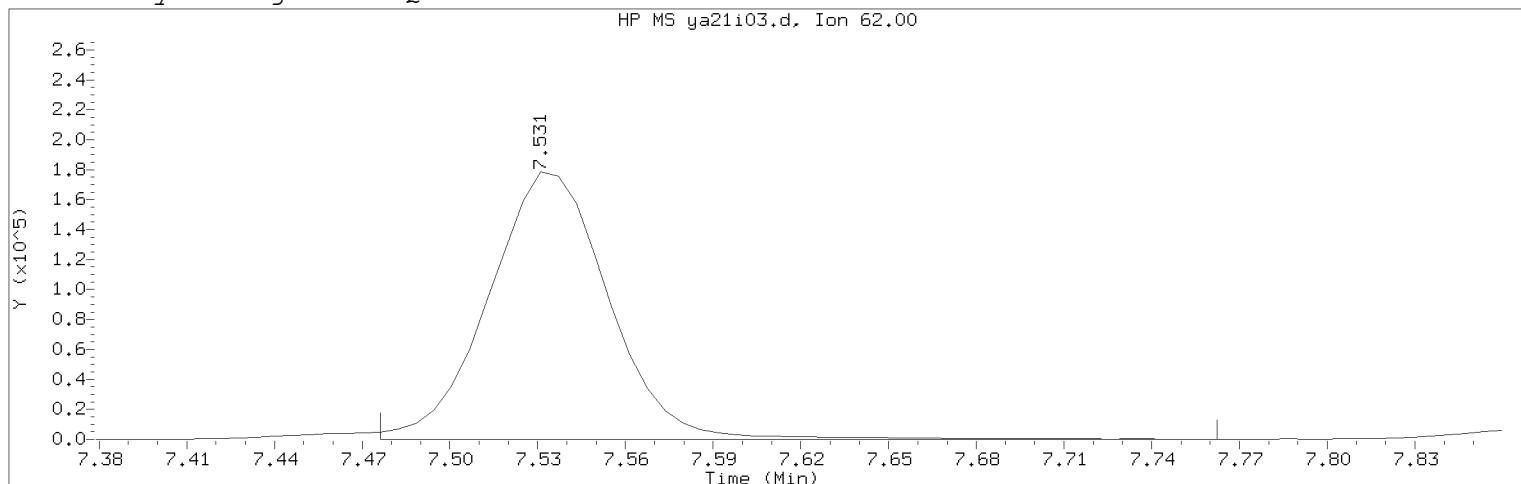
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 418 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:38 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

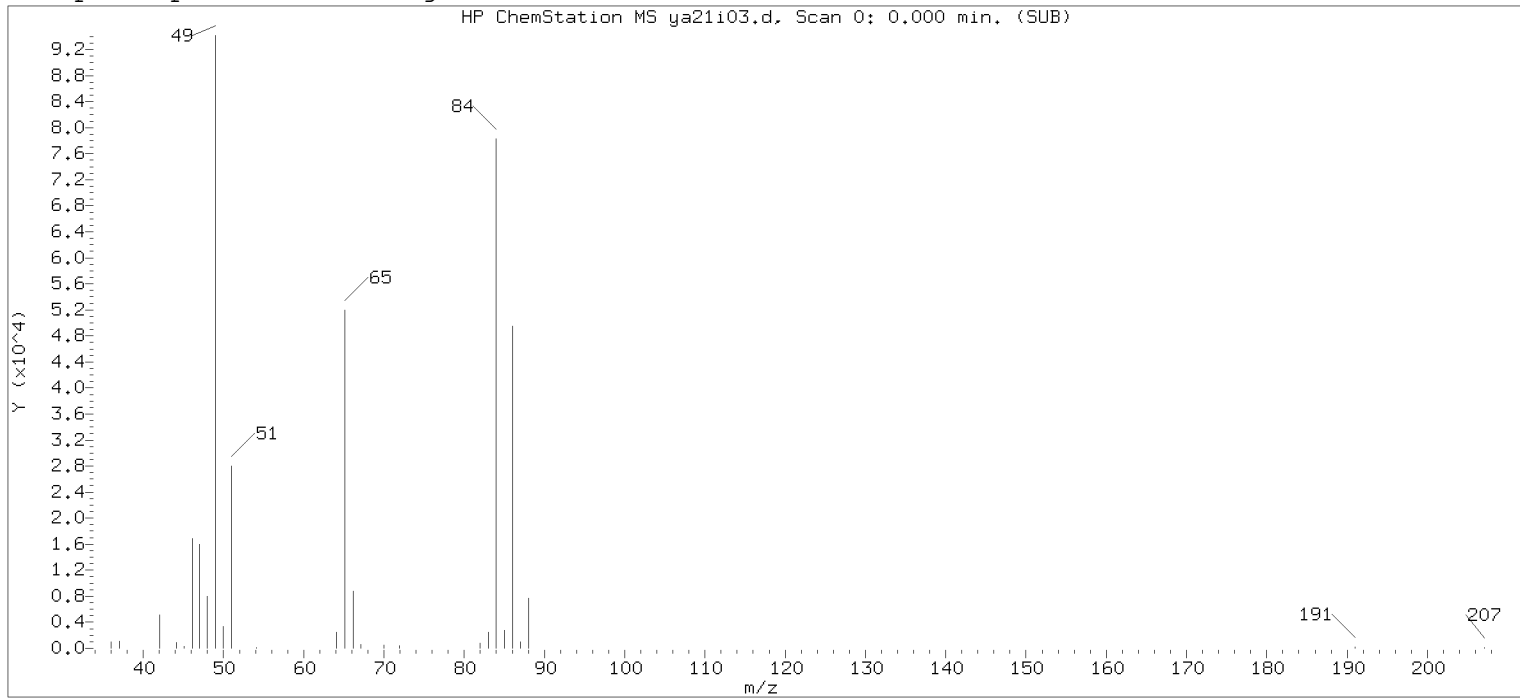
Compound Number : 61
Compound Name : 1,2-Dichloroethane
Scan Number : 978
Retention Time (minutes): 7.531
Quant Ion : 62.00
Area (flag) : 508558M
On-Column Amount (ng) : 49.1585
Integration start scan : 968 Integration stop scan: 1015
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

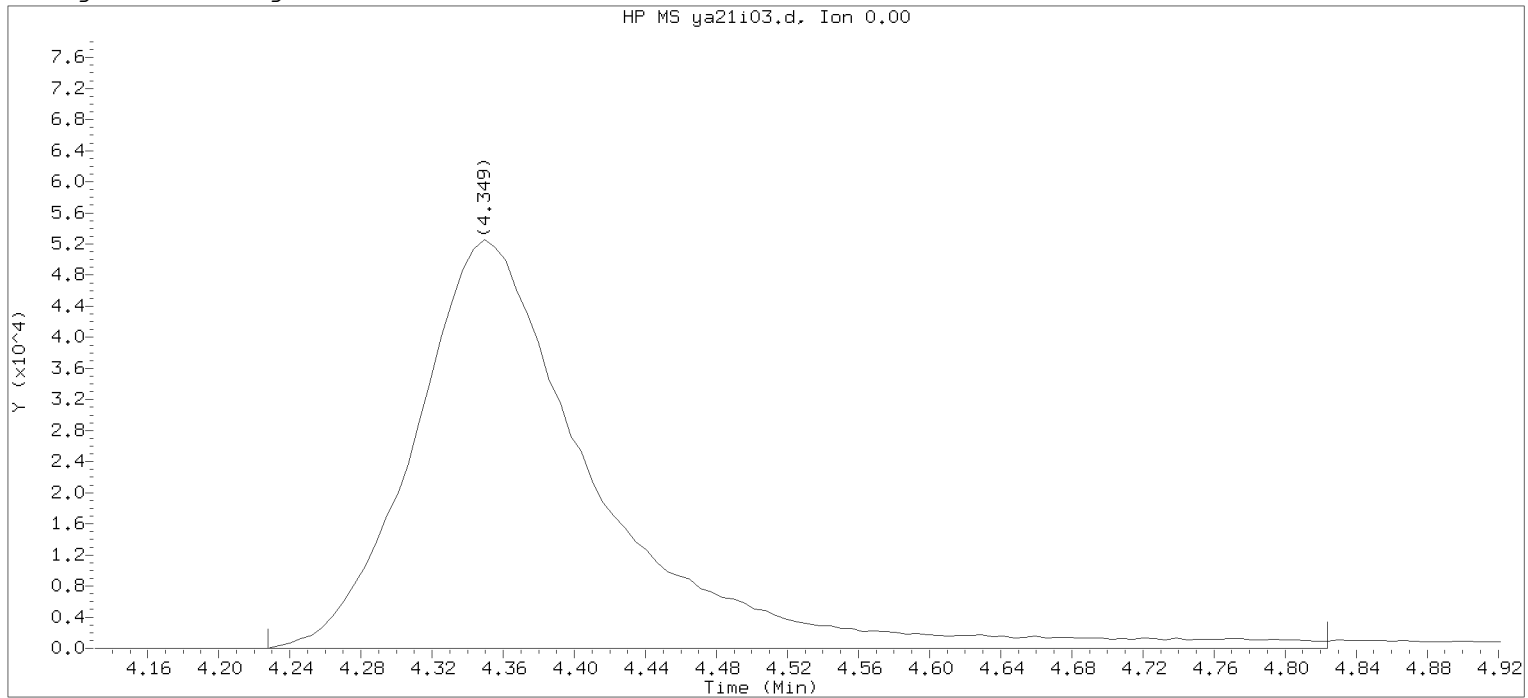
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 0

Compound Name : t-Butyl alcohol-d10

Scan Number : 0

Retention Time (minutes): 0.000

Quant Ion : 0.00

Area : 0

On-column Amount (ng) : 0.0000

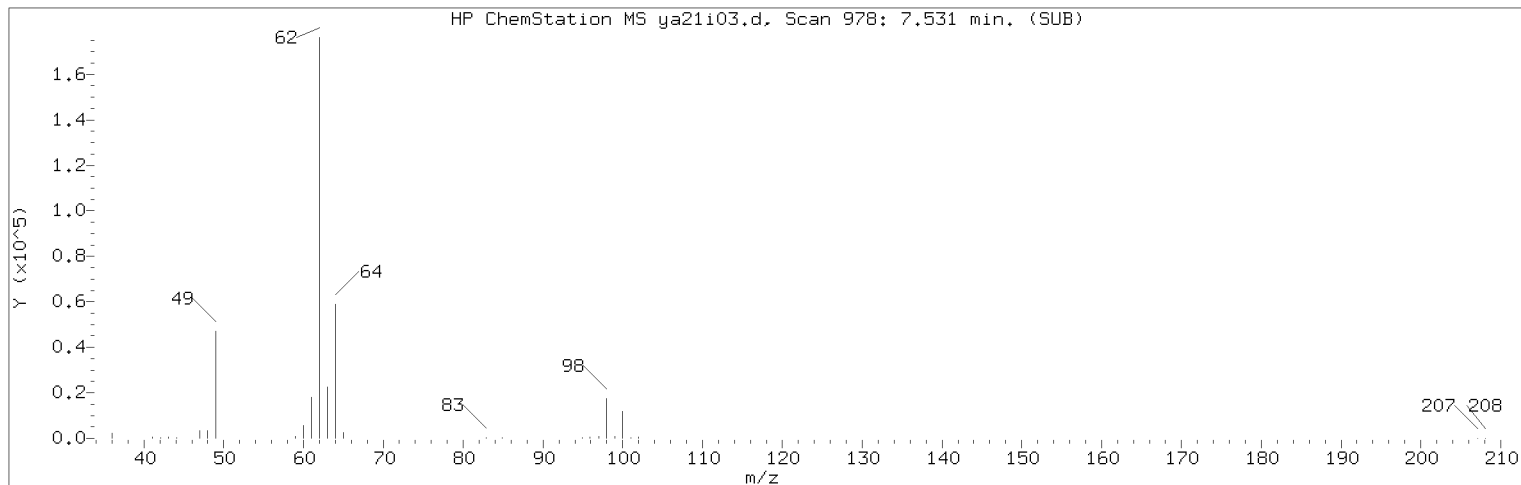
Integration start scan : 0 Integration stop scan: 0

Y at integration start : 0 Y at integration end: 0

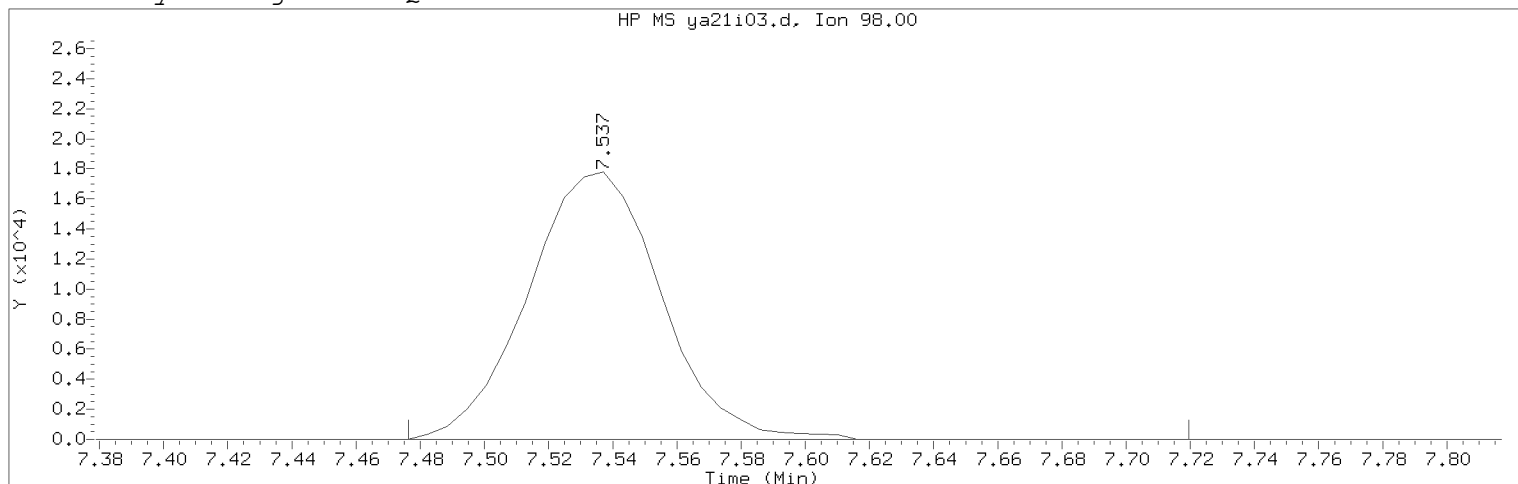
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 420 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 22:38 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

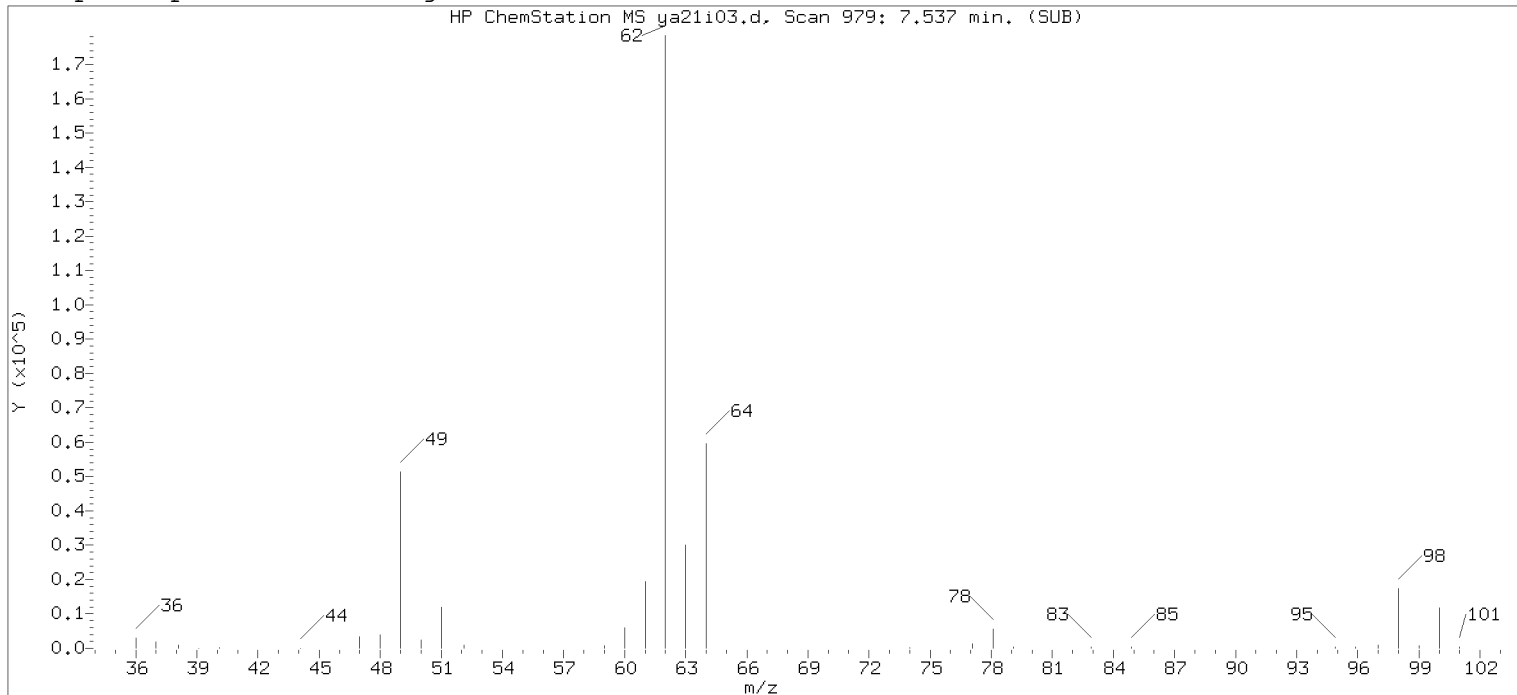
Compound Number : 61
Compound Name : 1,2-Dichloroethane
Scan Number : 979
Retention Time (minutes): 7.537
Quant Ion : 98.00
Area (flag) : 51240M
On-Column Amount (ng) : 49.4305
Integration start scan : 968 Integration stop scan: 1008
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

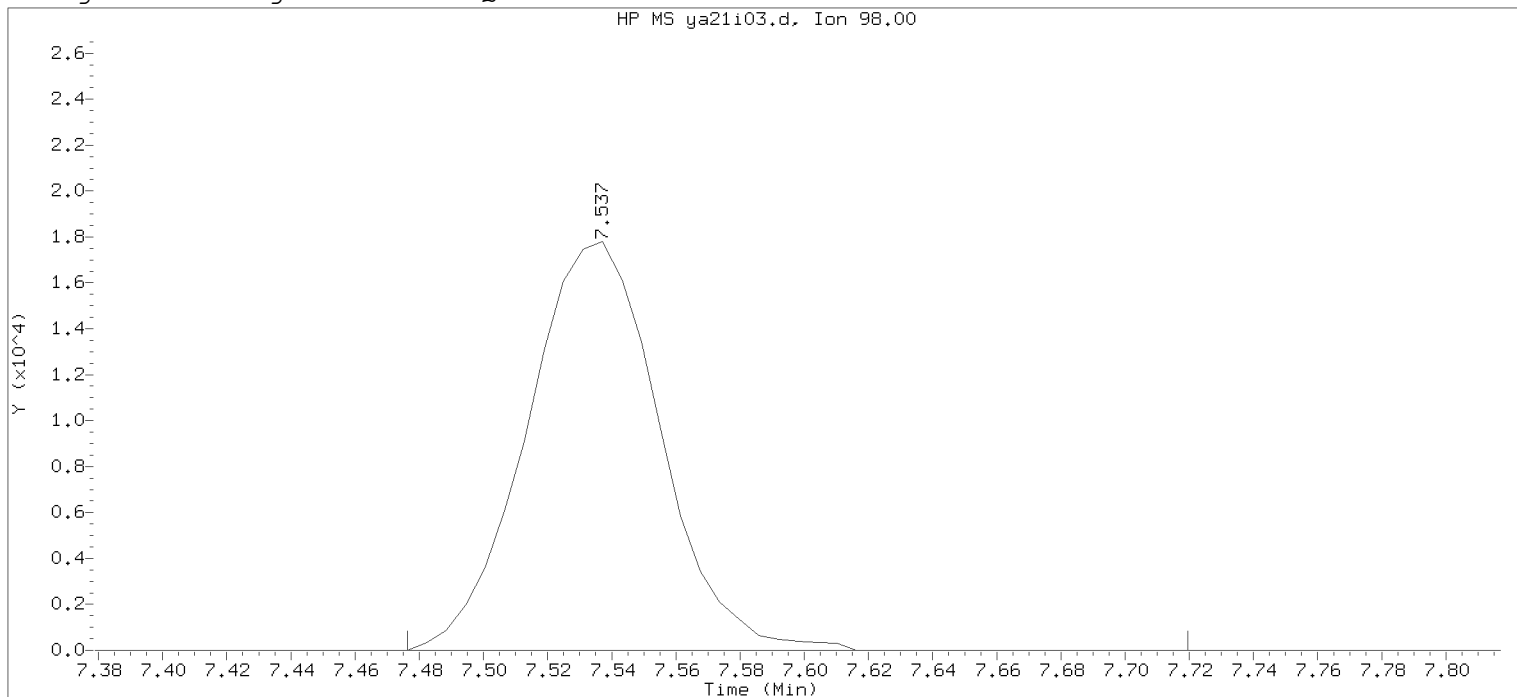
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 61

Compound Name : 1,2-Dichloroethane

Scan Number : 979

Retention Time (minutes): 7.537

Quant Ion : 98.00

Area : 51240

On-column Amount (ng) : 56.3939

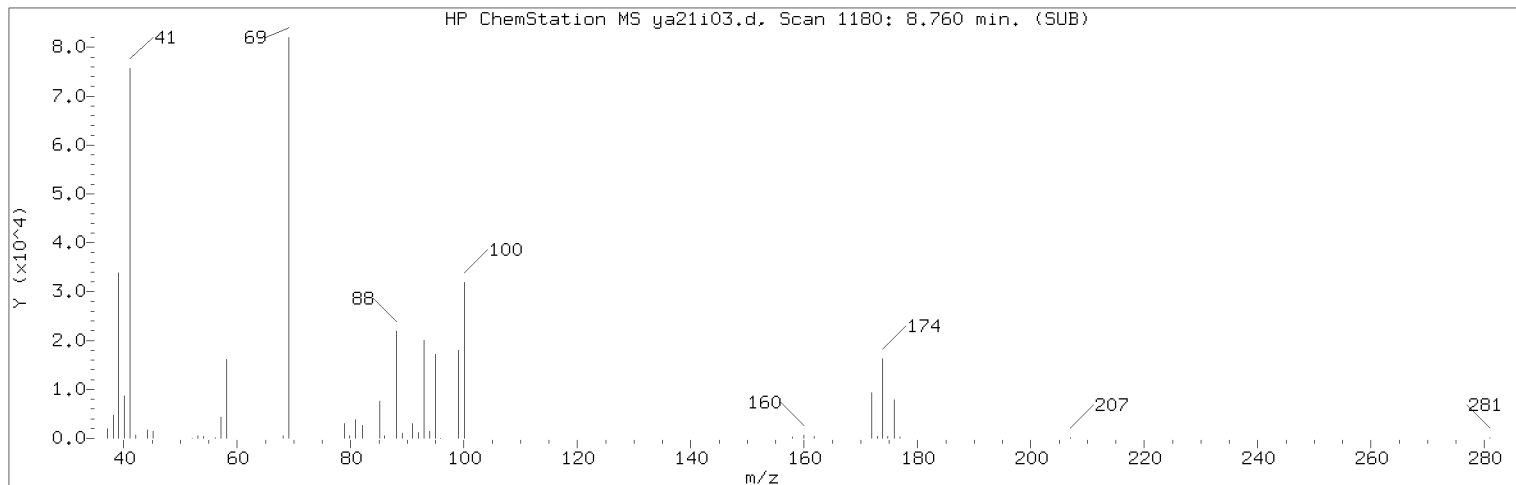
Integration start scan : 968 Integration stop scan: 1008

Y at integration start : 0 Y at integration end: 0

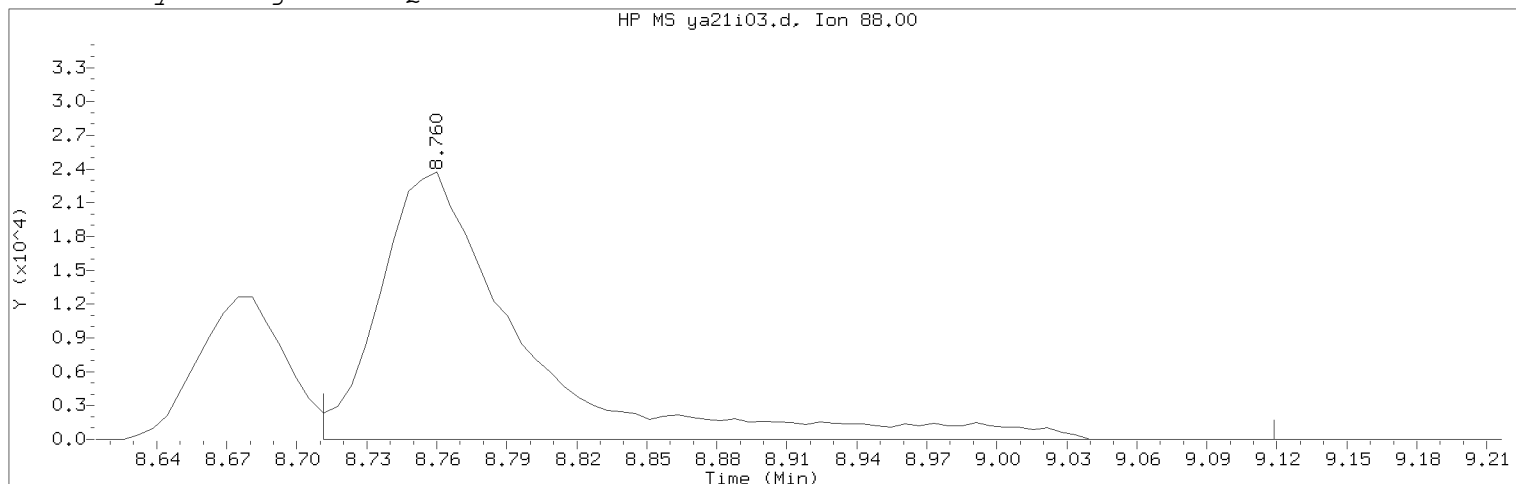
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 422 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1180	
Retention Time (minutes)	: 8.760	
Quant Ion	: 88.00	
Area (flag)	: 101511M	
On-Column Amount (ng)	: 609.6824	
Integration start scan	: 1171	Integration stop scan: 1238
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

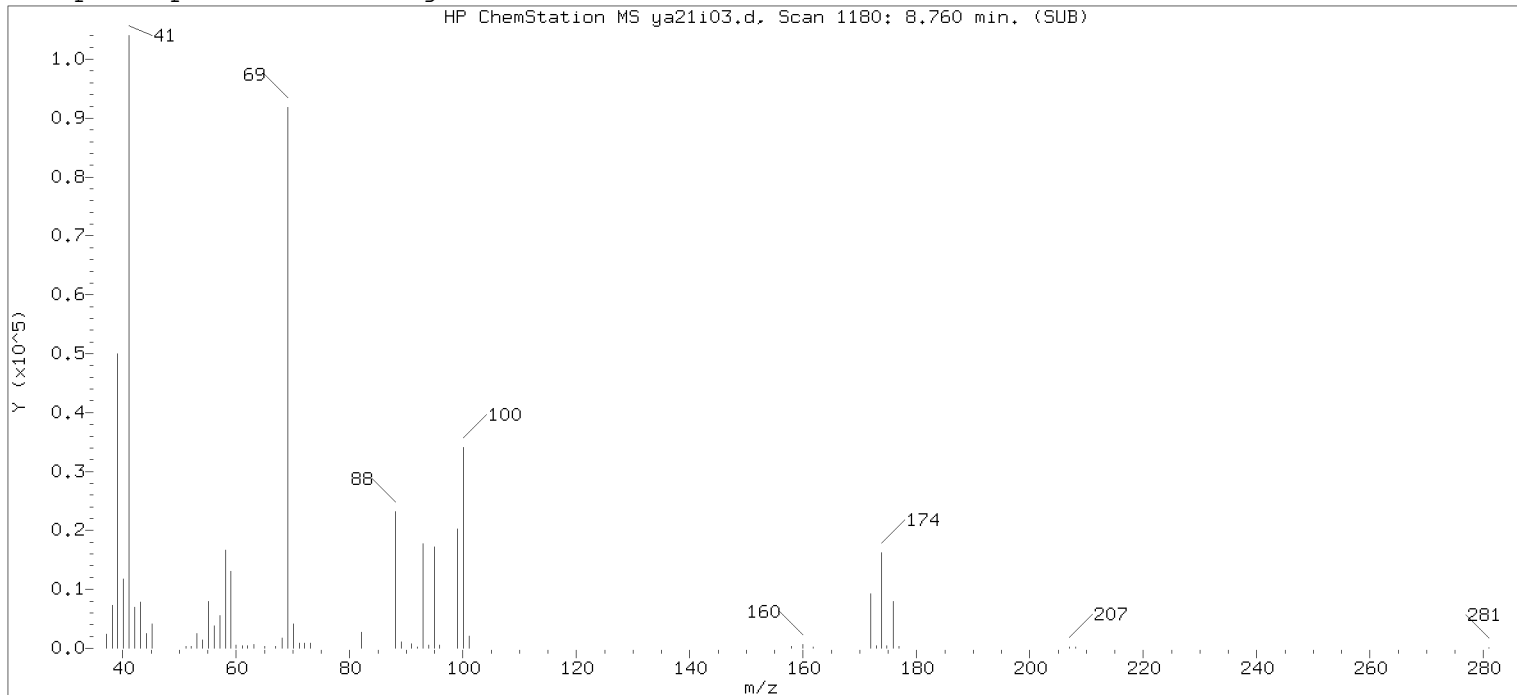
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.

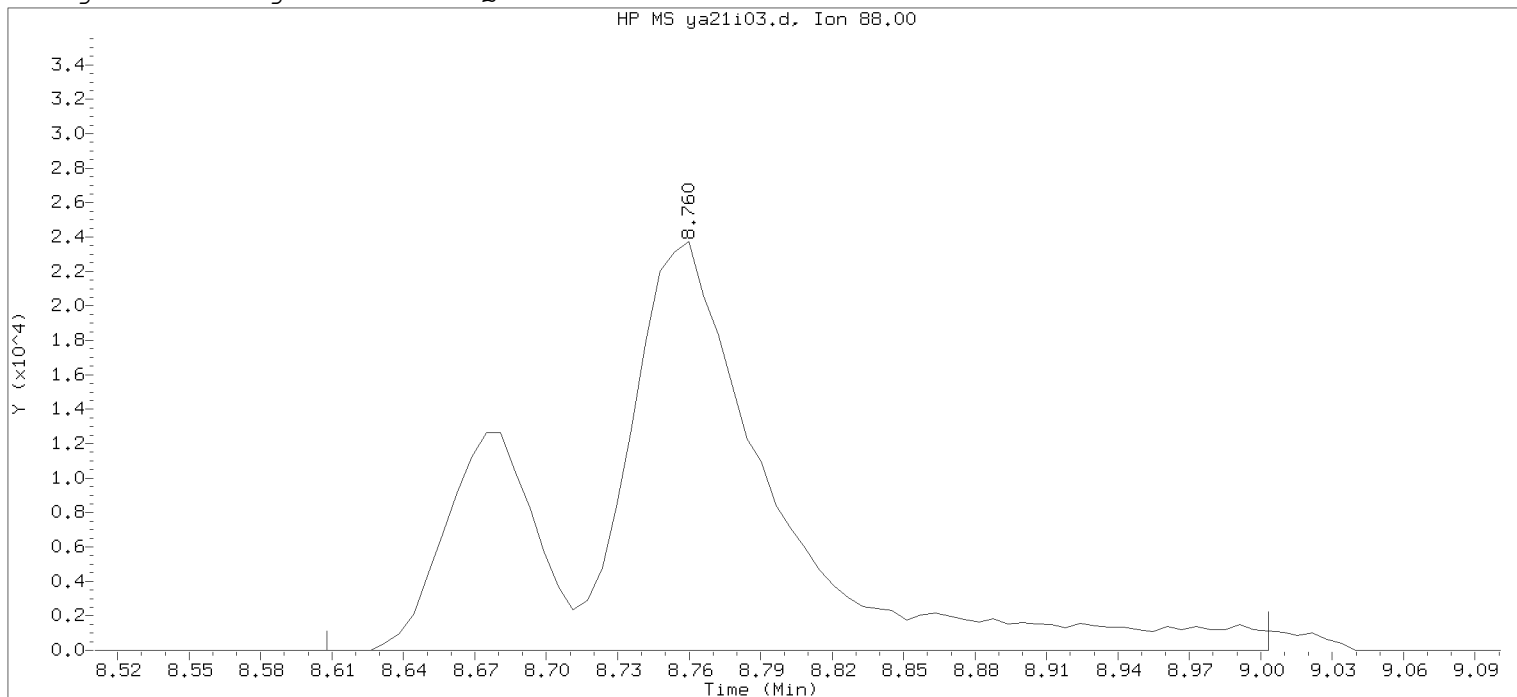
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

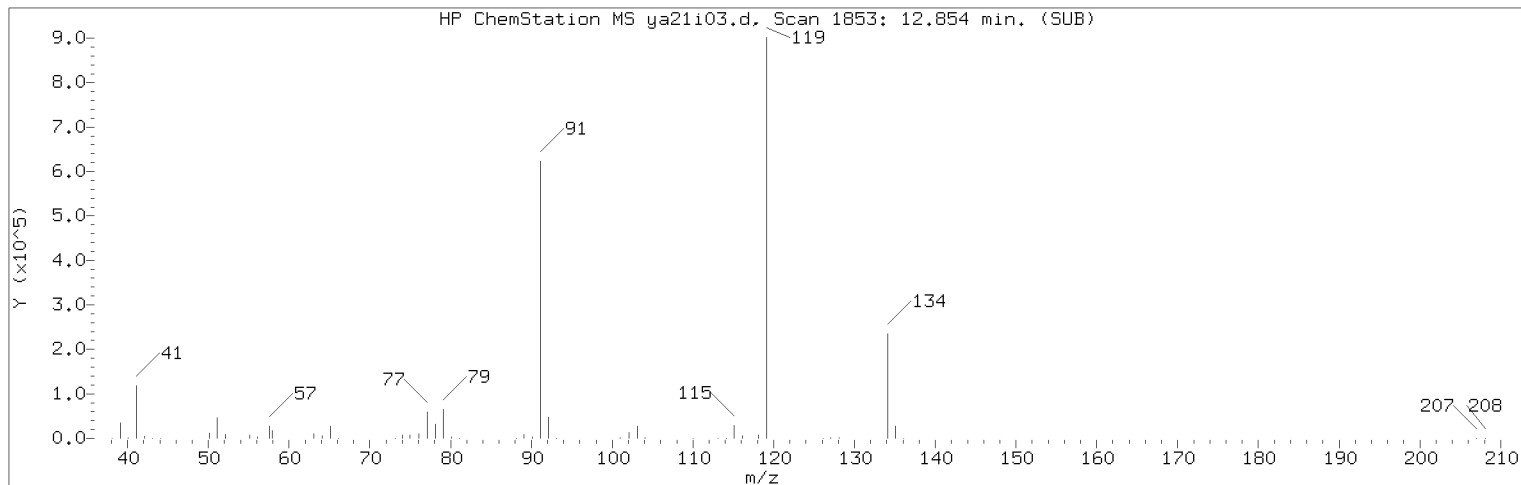
Sample Name: VSTD050

Lab Sample ID: VSTD050

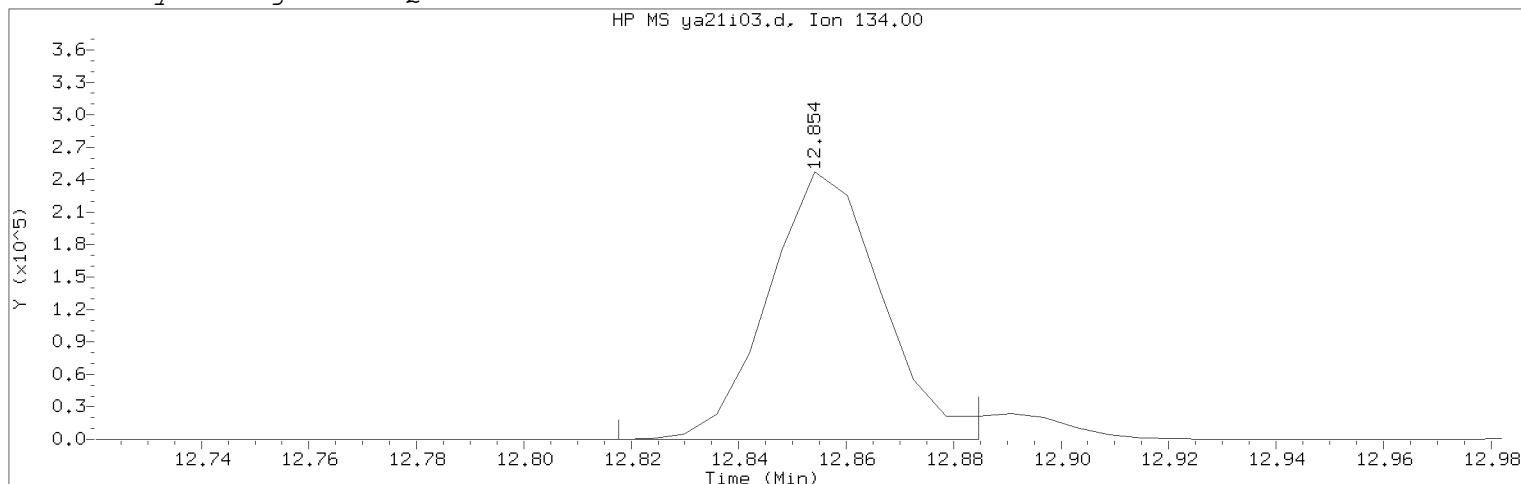
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1180
 Retention Time (minutes): 8.760
 Quant Ion : 88.00
 Area : 132134
 On-column Amount (ng) : 791.0711
 Integration start scan : 1154
 Y at integration start : 0

Integration stop scan: 1219
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD050

Lab Sample ID: VSTD050

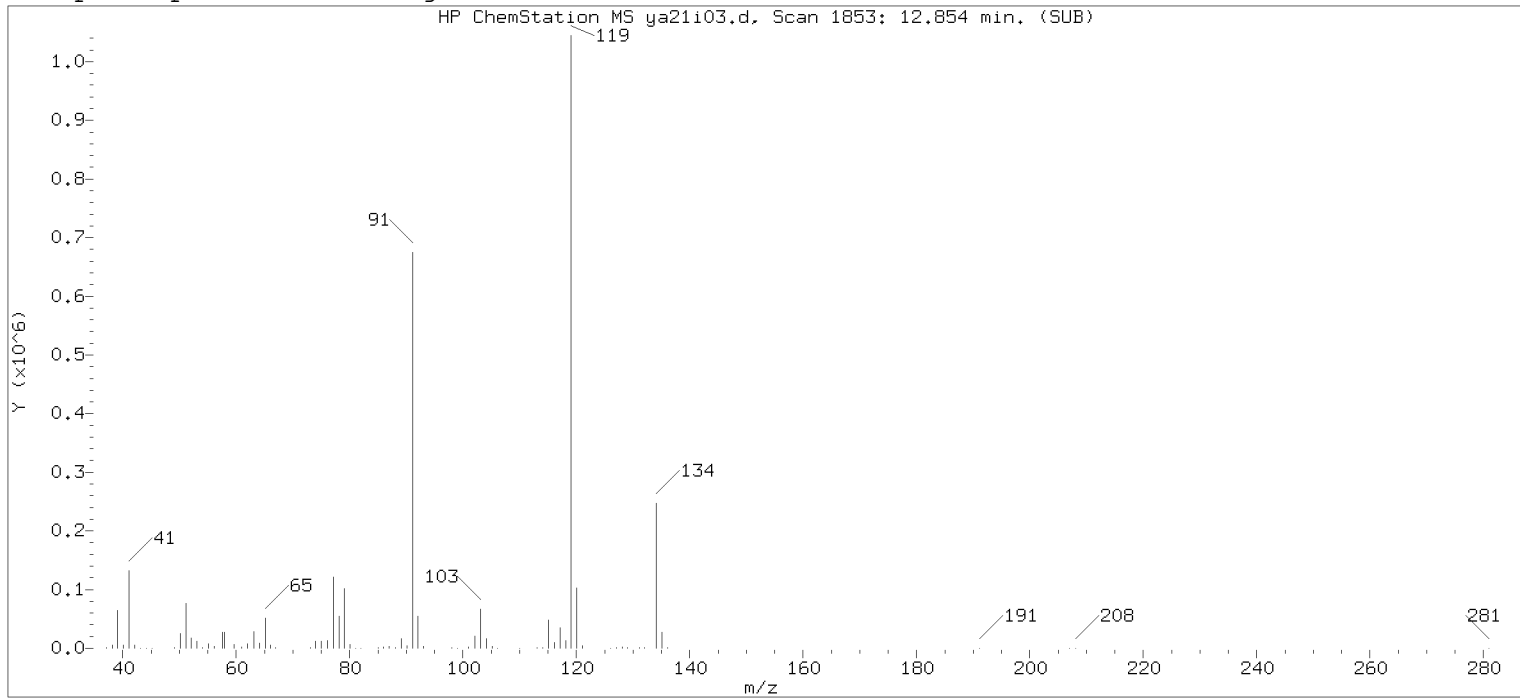
Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1853	
Retention Time (minutes)	: 12.854	
Quant Ion	: 134.00	
Area (flag)	: 361829M	
On-Column Amount (ng)	: 49.7950	
Integration start scan	: 1846	Integration stop scan: 1857
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

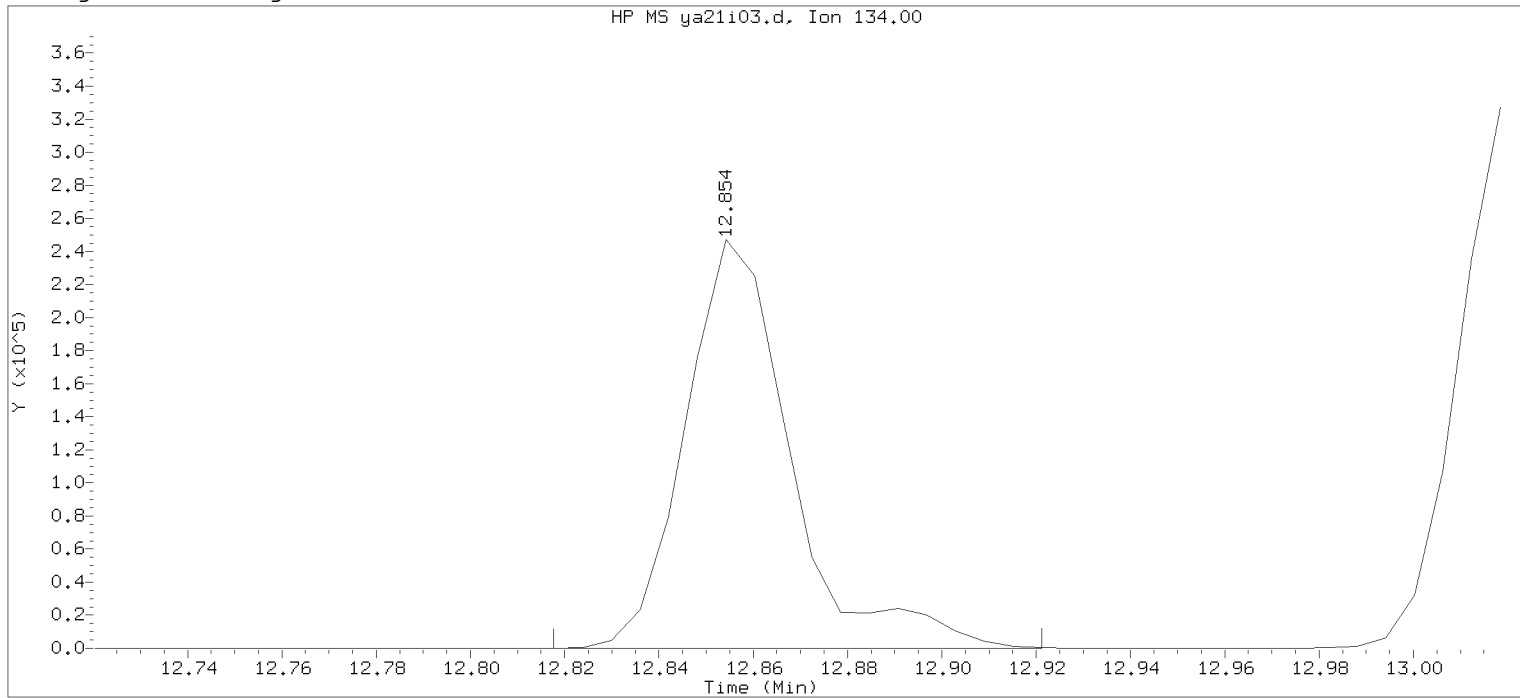
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:06.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i03.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 22:38

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 21-APR-2020 22:55

Date, time and analyst ID of latest file update: 21-Apr-2020 22:55 Automation

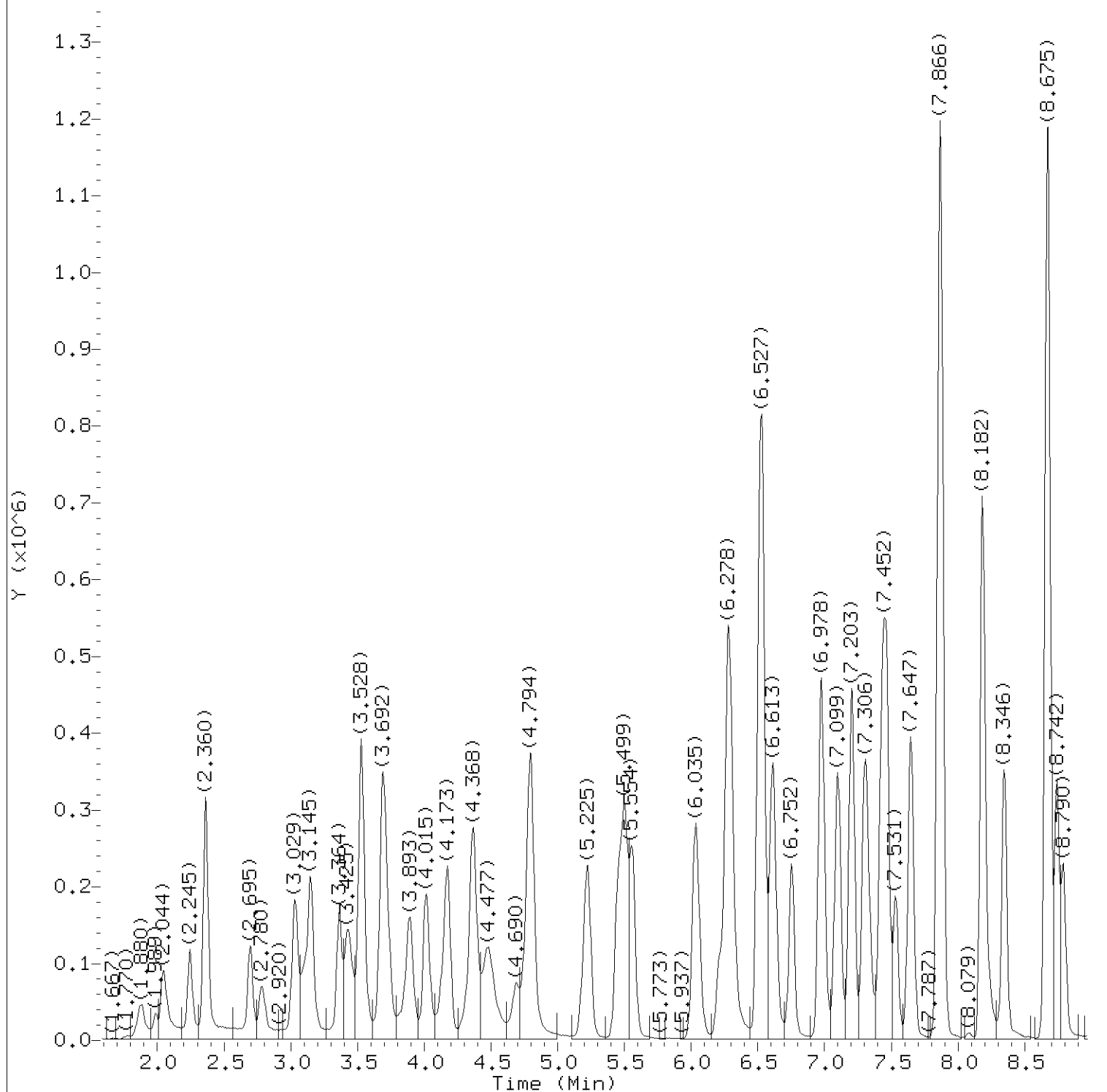
Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1853	
Retention Time (minutes)	: 12.854	
Quant Ion	: 134.00	
Area	: 383826	
On-column Amount (ng)	: 58.5800	
Integration start scan	: 1846	Integration stop scan: 1863
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:06.

Target 3.5 esignature user RAE59 Page 426 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d
Injection date and time: 21-APR-2020 23:00

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

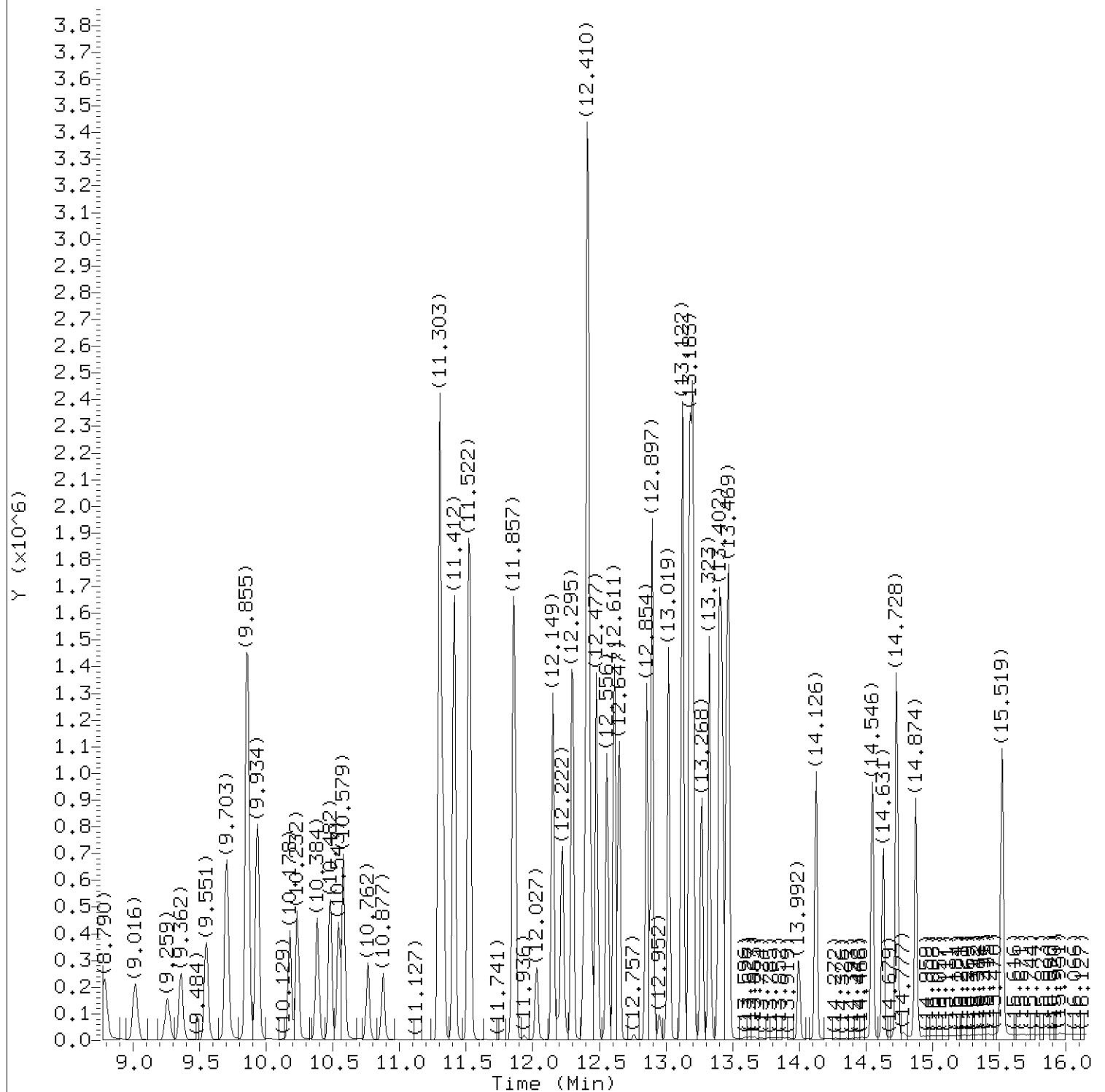
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d
Injection date and time: 21-APR-2020 23:00

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.044	85	177843M	20.054
4) Chloromethane	(2)	2.245	50	159360	20.565
5) 1,3-Butadiene	(2)	2.360	39	129650	20.467
6) Vinyl Chloride	(2)	2.360	62	159759	20.479
8) Bromomethane	(2)	2.695	94	112541	21.547
9) Chloroethane	(2)	2.786	64	90891	21.466
10) Dichlorofluoromethane	(2)	3.029	67	233912	20.752
12) Trichlorofluoromethane	(2)	3.102	101	181598	20.063
11) n-Pentane	(2)	3.145	43	203379	20.987
14) Ethyl ether	(2)	3.364	59	133803	19.441
15) Freon 123a	(2)	3.425	67	172389	20.781
16) Acrolein	(1)	3.528	56	631087	199.835
17) 1,1-Dichloroethene	(2)	3.686	96	139792	20.978
17) 1,1-Dichloroethene	(2)	3.686	63	66032	20.379
18) Acetone	(1)	3.698	58	60675	40.827
19) Freon 113	(2)	3.711	101	137225	20.387
21) 2-Propanol	(1)	3.863	45	227243	205.232
22) Methyl Iodide	(2)	3.893	142	237728	20.498
23) Carbon Disulfide	(2)	4.015	76	482307	20.571
27) Methyl Acetate	(2)	4.136	43	200344	19.735
25) Allyl Chloride	(2)	4.179	41	227767	20.233
29)*t-Butyl alcohol-d10	(1)	4.349	65	390431M	250.000
28) Methylene Chloride	(2)	4.368	84	159958	20.585
30) t-Butyl alcohol	(1)	4.483	59	392097	203.654
31) Acrylonitrile	(2)	4.690	53	111073	19.398
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	457818	20.854
32) trans-1,2-Dichloroethene	(2)	4.800	96	159905	20.823
34) n-Hexane	(2)	5.225	57	244589	20.379
36) 1,1-Dichloroethane	(2)	5.451	63	279345	20.548
38) di-Isopropyl ether	(2)	5.499	45	516228	20.618
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	226522	19.878
40) Ethyl t-butyl ether	(2)	6.035	59	462514	20.849
43) 1,2-Dichloroethene (Total)	(2)		96	340381	41.540
44) 2-Butanone	(2)	6.217	43	295441	38.604
42) cis-1,2-Dichloroethene	(2)	6.272	96	180476	20.717
45) 2,2-Dichloropropane	(2)	6.290	77	208336	20.242
47) Propionitrile	(1)	6.296	54	477405	208.215
48) Methacrylonitrile	(2)	6.527	67	594994	101.816

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d
 Injection date and time: 21-APR-2020 23:00

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.613	128	84378	20.267
50) Tetrahydrofuran	(1)	6.619	71	84246	38.580
51) Chloroform	(2)	6.752	83	266485	20.437
52) \$Dibromofluoromethane	(2)	6.971	113	295200	50.033
52) \$Dibromofluoromethane	(2)	6.971	111	300144	49.895
53) 1,1,1-Trichloroethane	(2)	6.990	97	227228	20.196
54) Cyclohexane	(2)	7.099	56	289388	20.244
54) Cyclohexane	(2)	7.099	84	241656	20.244
54) Cyclohexane	(2)	7.099	69	89633	20.242
55) 1,1-Dichloropropene	(2)	7.203	75	223089	20.327
56) Carbon Tetrachloride	(2)	7.209	117	193561	19.974
58) Isobutyl Alcohol	(1)	7.306	41	350085	504.397
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	77362	50.264
57) \$1,2-Dichloroethane-d4	(2)	7.428	65	344013	49.983
57) \$1,2-Dichloroethane-d4	(2)	7.428	104	49816	50.547
60) Benzene	(2)	7.464	78	670392	20.635
61) 1,2-Dichloroethane	(2)	7.531	62	208042M	20.297
61) 1,2-Dichloroethane	(2)	7.531	98	20635	20.143
65) t-Amyl methyl ether	(2)	7.647	73	461415	20.870
66) *Fluorobenzene	(2)	7.866	96	1294339	50.000
67) n-Heptane	(2)	7.878	43	259184	20.361
69) n-Butanol	(1)	8.182	56	686043M	1004.402
71) Trichloroethene	(2)	8.346	95	167297	20.279
72) Methylcyclohexane	(2)	8.663	83	298309	20.397
72) Methylcyclohexane	(2)	8.663	98	130446	20.161
73) 1,2-Dichloropropane	(2)	8.675	63	173564	20.580
76) Methyl Methacrylate	(2)	8.742	69	173167	19.337
75) 1,4-Dioxane	(1)	8.754	88	80550M	490.681
74) Dibromomethane	(2)	8.790	93	109077	20.104
78) Bromodichloromethane	(2)	9.022	83	198928	19.644
79) 2-Nitropropane	(2)	9.259	41	133277	37.396
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	139110	19.506
81) cis-1,3-Dichloropropene	(2)	9.551	75	272374	19.702
82) 4-Methyl-2-pentanone	(2)	9.703	43	574855	38.603
83) \$Toluene-d8	(3)	9.855	98	1250386	50.111
83) \$Toluene-d8	(3)	9.855	100	801679	49.940
88) Toluene	(3)	9.934	92	420596	20.578
90) 1,3-Dichloropropene (total)	(3)		100	523351	39.266

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d
 Injection date and time: 21-APR-2020 23:00

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.178	75	250977	19.563
91) Ethyl Methacrylate	(3)	10.232	69	278031	19.182
92) 1,1,2-Trichloroethane	(3)	10.384	97	163662	20.150
93) Tetrachloroethene	(3)	10.482	166	172771	20.493
94) 1,3-Dichloropropane	(3)	10.543	76	278527	20.245
96) 2-Hexanone	(3)	10.579	43	459180	38.867
97) Dibromochloromethane	(3)	10.762	129	165318	19.264
99) 1,2-Dibromoethane	(3)	10.877	107	178000	19.818
100) *Chlorobenzene-d5	(3)	11.303	117	956851	50.000
101) 1-Chlorohexane	(3)	11.303	91	228289	20.227
102) Chlorobenzene	(3)	11.327	112	475624	20.754
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	156857	20.159
104) Ethylbenzene	(3)	11.412	91	816914	20.889
106) m+p-Xylene	(3)	11.522	106	648803	41.766
108) Xylene (Total)	(3)		106	967684	62.595
107) o-Xylene	(3)	11.850	106	318881	20.829
109) Styrene	(3)	11.869	104	523406	20.276
110) Bromoform	(3)	12.033	173	120443	18.472
111) Isopropylbenzene	(3)	12.149	105	812641	20.952
112) Cyclohexanone	(1)	12.222	55	312656	484.858
114) \$4-Bromofluorobenzene	(3)	12.295	95	472367	49.951
114) \$4-Bromofluorobenzene	(3)	12.301	174	364207	49.950
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	287764M	20.365
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	468705	102.428
115) Bromobenzene	(4)	12.416	156	205519	20.530
117) 1,2,3-Trichloropropane	(4)	12.434	110	90667	20.242
119) n-Propylbenzene	(4)	12.477	91	983842	21.302
120) 2-Chlorotoluene	(4)	12.556	126	198114	20.457
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	708977	20.760
121) 4-Chlorotoluene	(4)	12.647	126	208513	20.497
124) tert-Butylbenzene	(4)	12.854	134	148019M	20.459
125) Pentachloroethane	(4)	12.891	167	106261	19.042
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	749726	20.843
127) sec-Butylbenzene	(4)	13.019	105	917863	21.125
129) 1,3-Dichlorobenzene	(4)	13.122	146	393932	20.660
130) p-Isopropyltoluene	(4)	13.128	119	780887	20.970
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	512562	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	406267	20.700

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

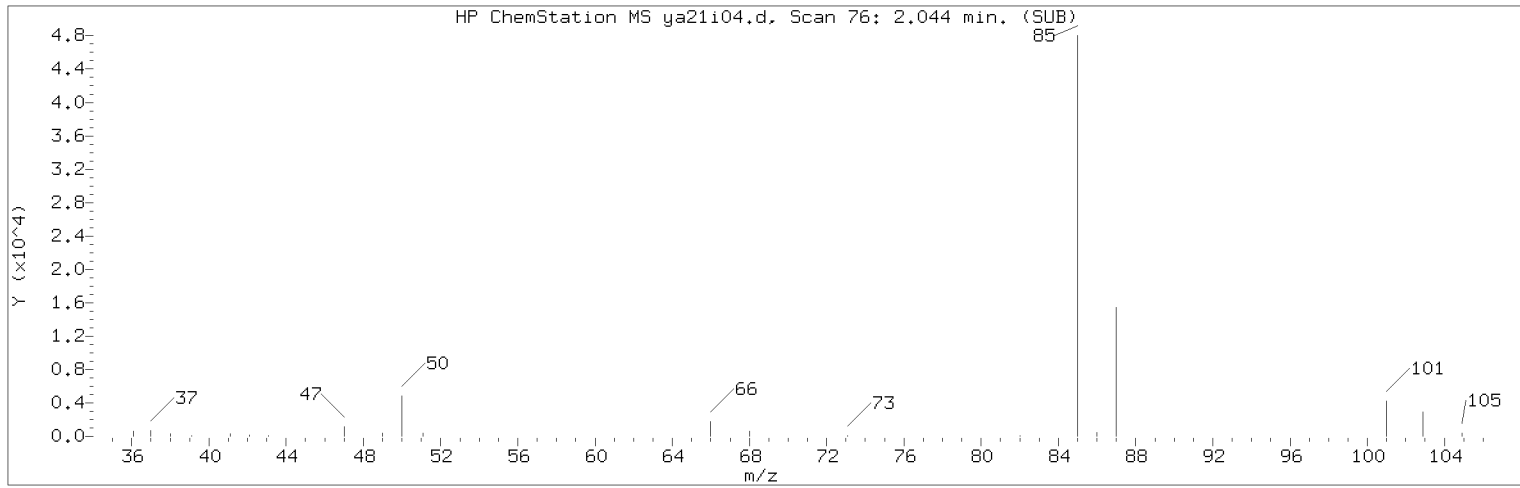
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	711049	20.851
135) Benzyl Chloride	(4)	13.268	91	595505	19.790
136) 1,3-Diethylbenzene	(4)	13.323	119	459056	20.570
141) Diethylbenzene (total)	(4)		100	1331210	62.094
137) 1,4-Diethylbenzene	(4)	13.396	119	487272	20.781
139) n-Butylbenzene	(4)	13.420	92	409236	20.728
138) 1,2-Dichlorobenzene	(4)	13.457	146	381018	20.575
140) 1,2-Diethylbenzene	(4)	13.469	119	384882	20.743
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	70135	19.151
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	280075	20.080
146) 1,2,4-Trichlorobenzene	(4)	14.546	180	261249	19.889
147) Hexachlorobutadiene	(4)	14.631	225	117390	20.034
148) Naphthalene	(4)	14.728	128	998695	21.101
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	251813	20.027
150) 2-Methylnaphthalene	(4)	15.519	142	545468	20.702

page 4 of 4

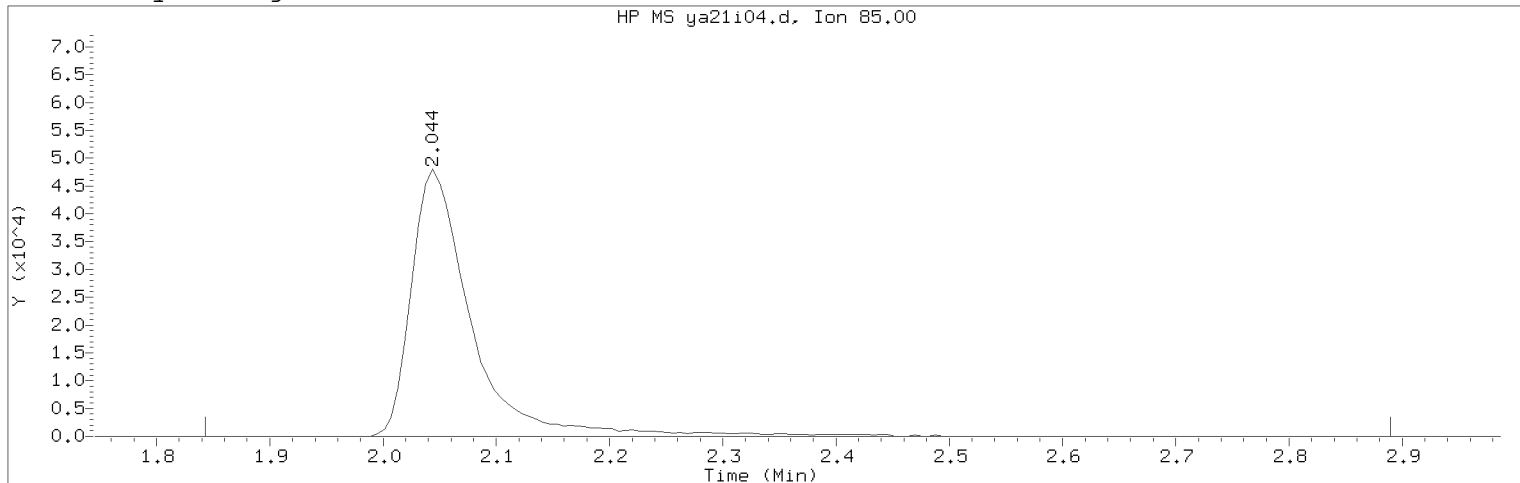
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020 Lab Sample ID: VSTD020

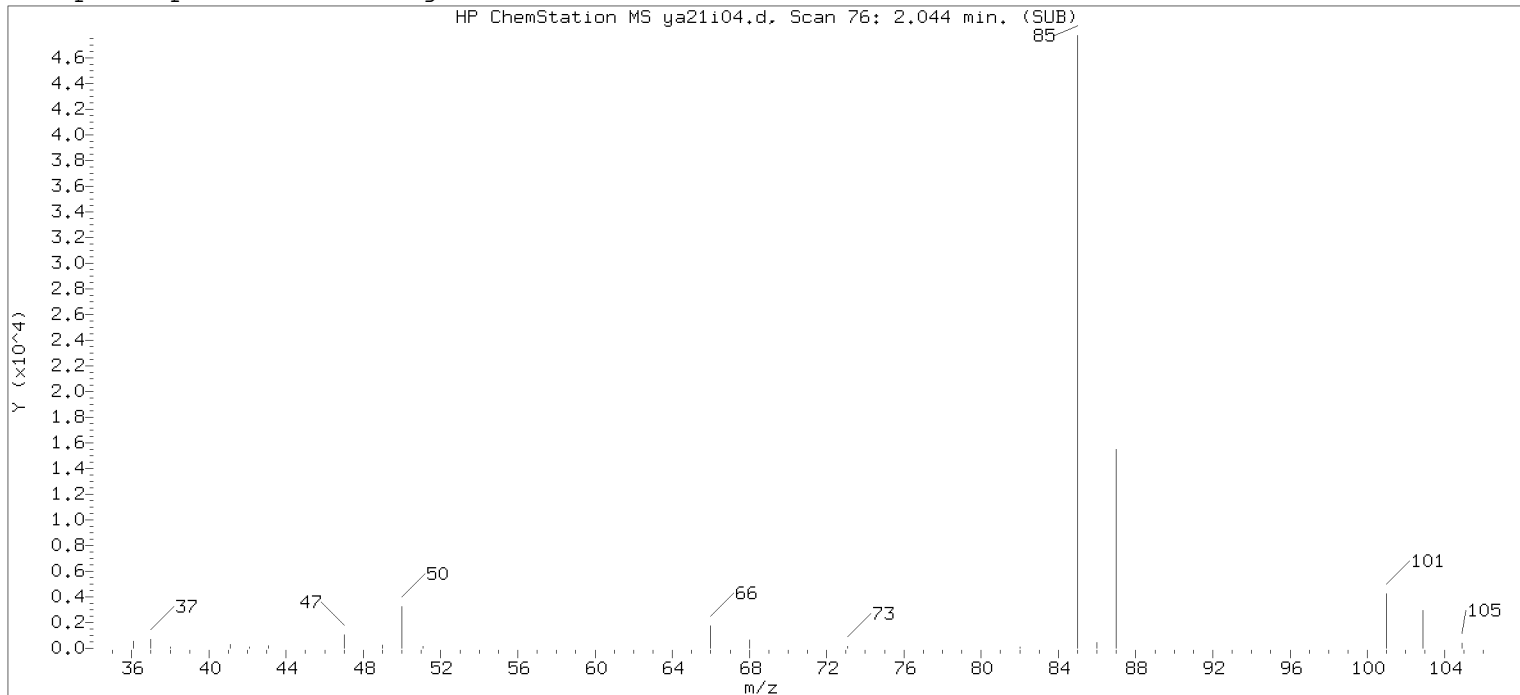
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 76
Retention Time (minutes): 2.044
Quant Ion : 85.00
Area (flag) : 177843M
On-Column Amount (ng) : 20.0542
Integration start scan : 42 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

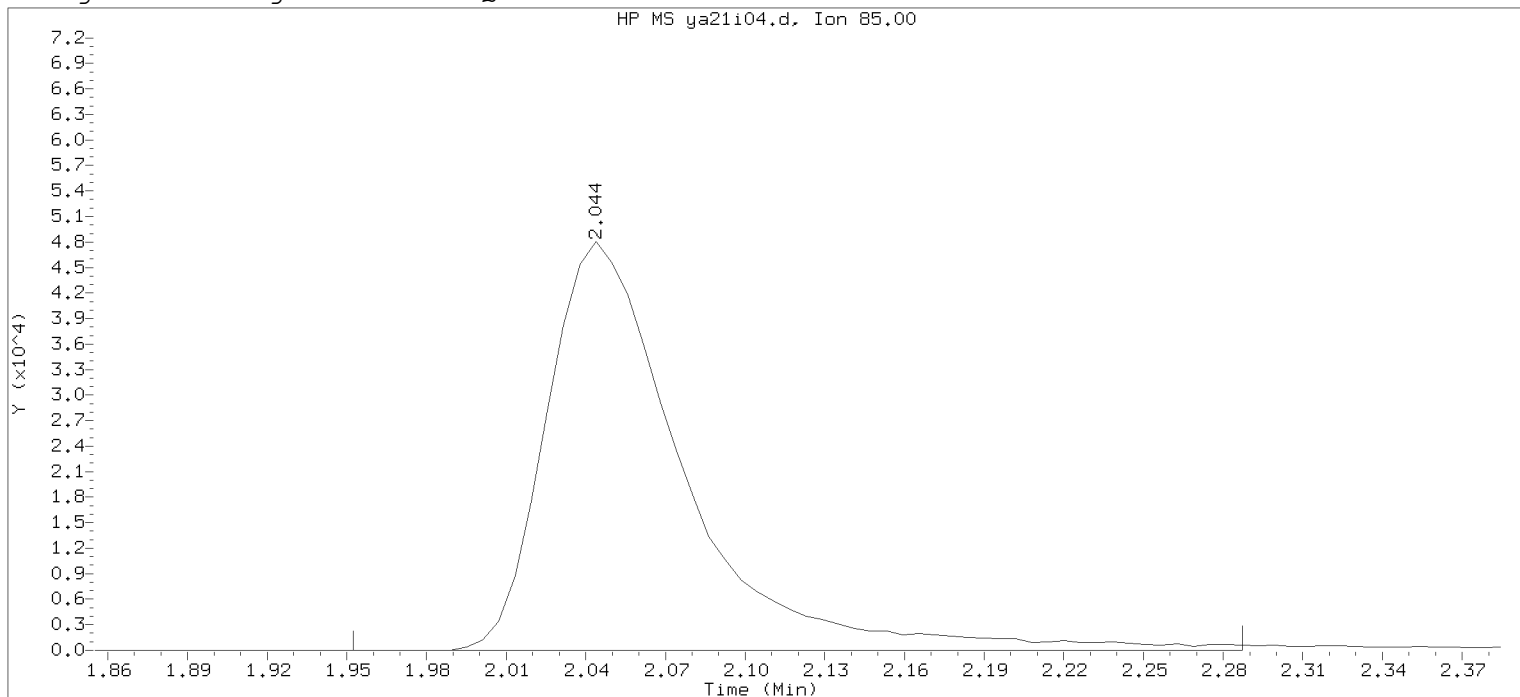
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

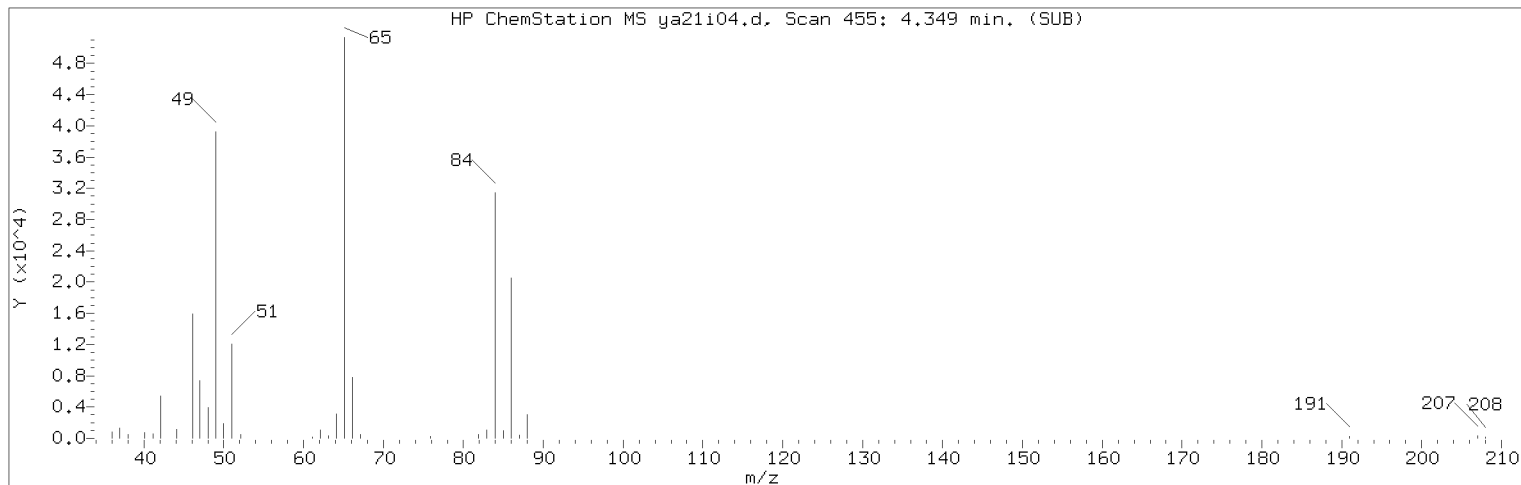
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Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD020

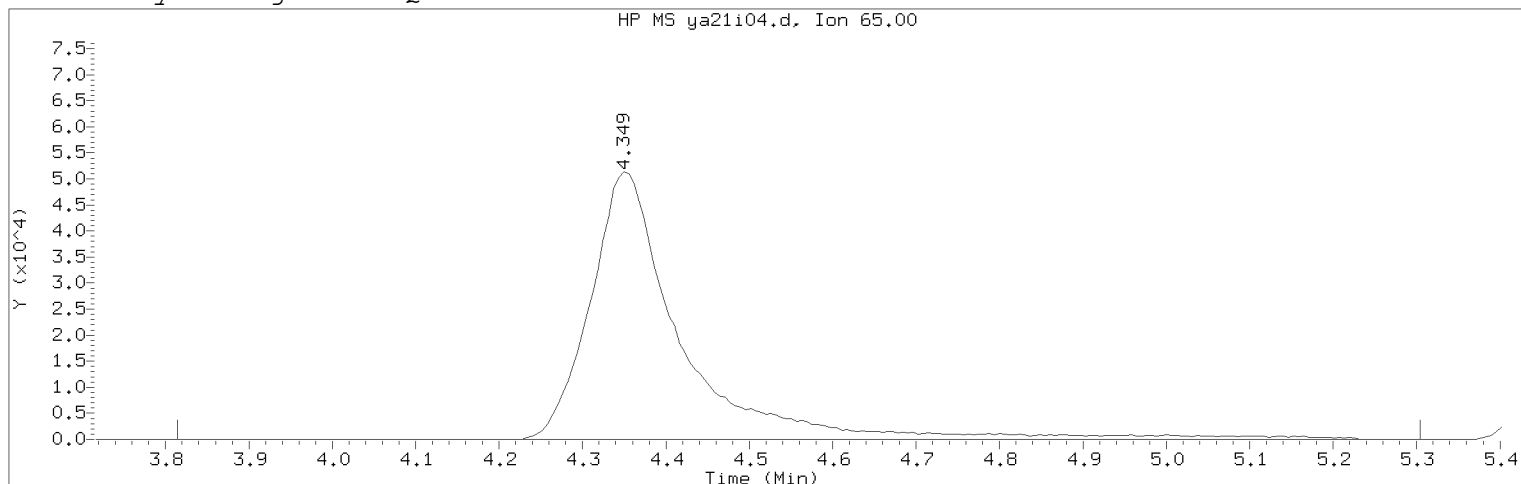
Lab Sample ID: VSTD020

Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 76
Retention Time (minutes): 2.044
Quant Ion : 85.00
Area : 173825
On-column Amount (ng) : 20.8768
Integration start scan : 60 Integration stop scan: 115
Y at integration start : 0 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number	: 29	
Compound Name	: t-Butyl alcohol-d10	
Scan Number	: 455	
Retention Time (minutes)	: 4.349	
Quant Ion	: 65.00	
Area (flag)	: 390431M	
On-Column Amount (ng)	: 250.0000	
Integration start scan	: 366	Integration stop scan: 611
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

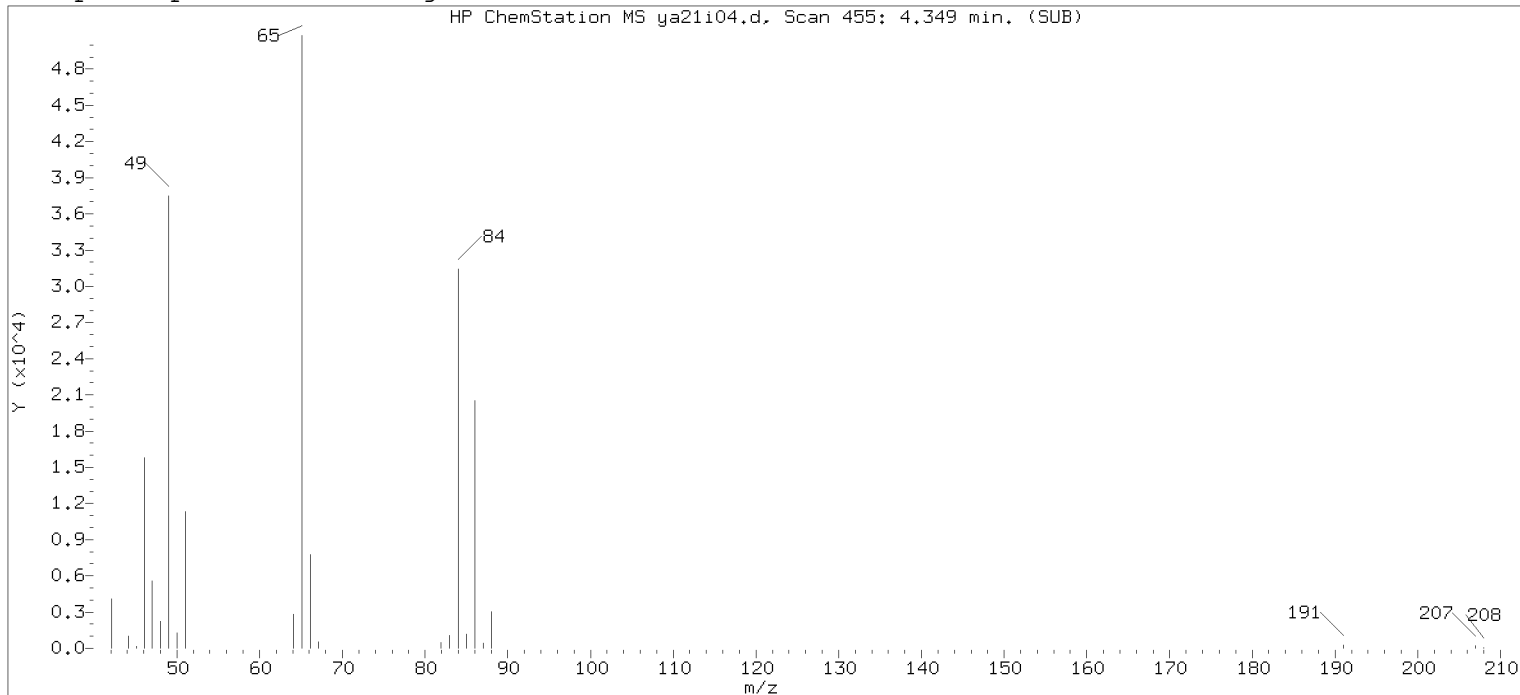
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

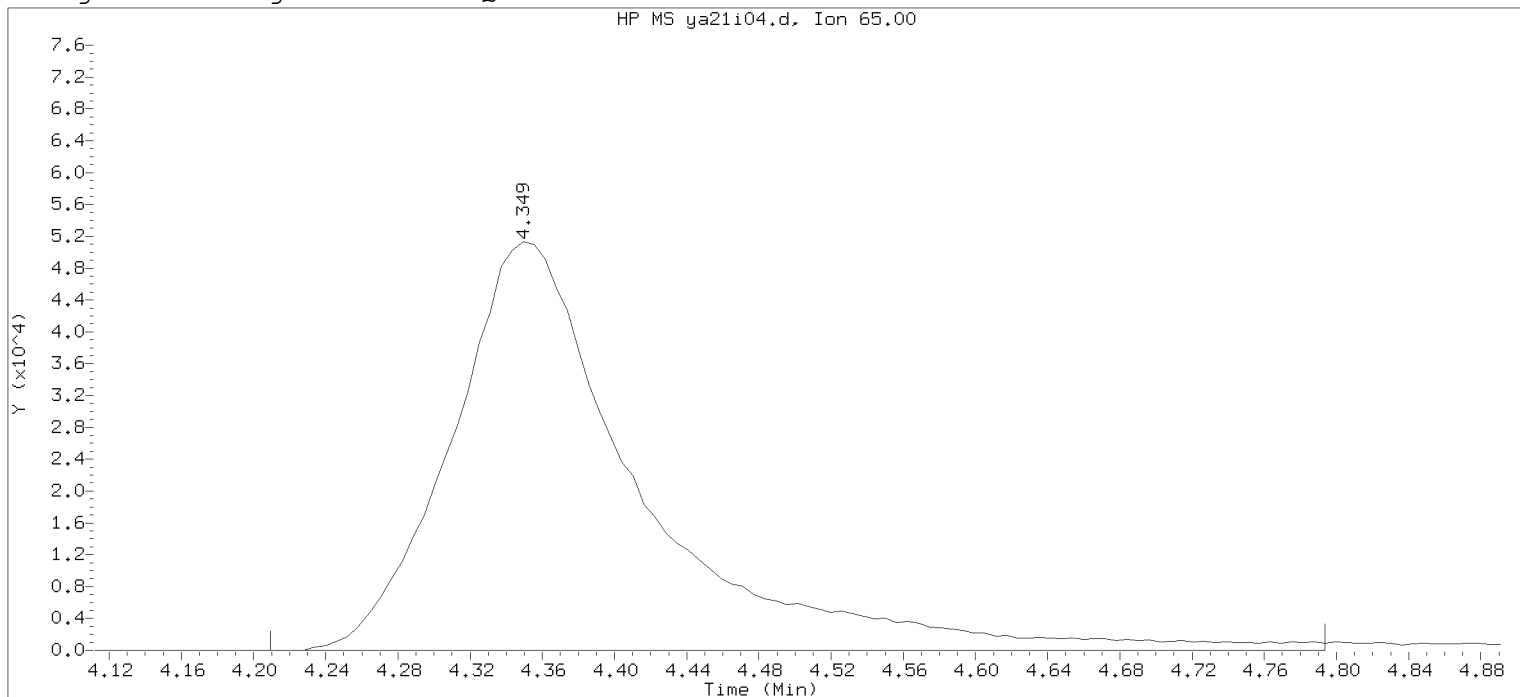
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 455

Retention Time (minutes): 4.349

Quant Ion : 65.00

Area : 373785

On-column Amount (ng) : 250.0000

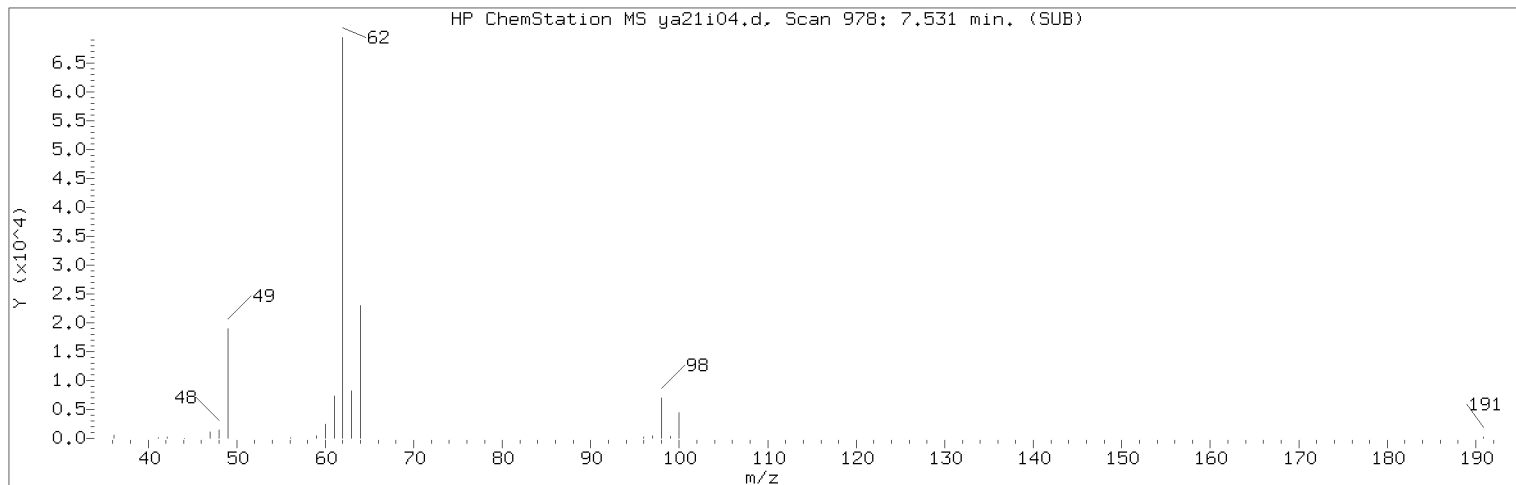
Integration start scan : 431 Integration stop scan: 527

Y at integration start : 0 Y at integration end: 0

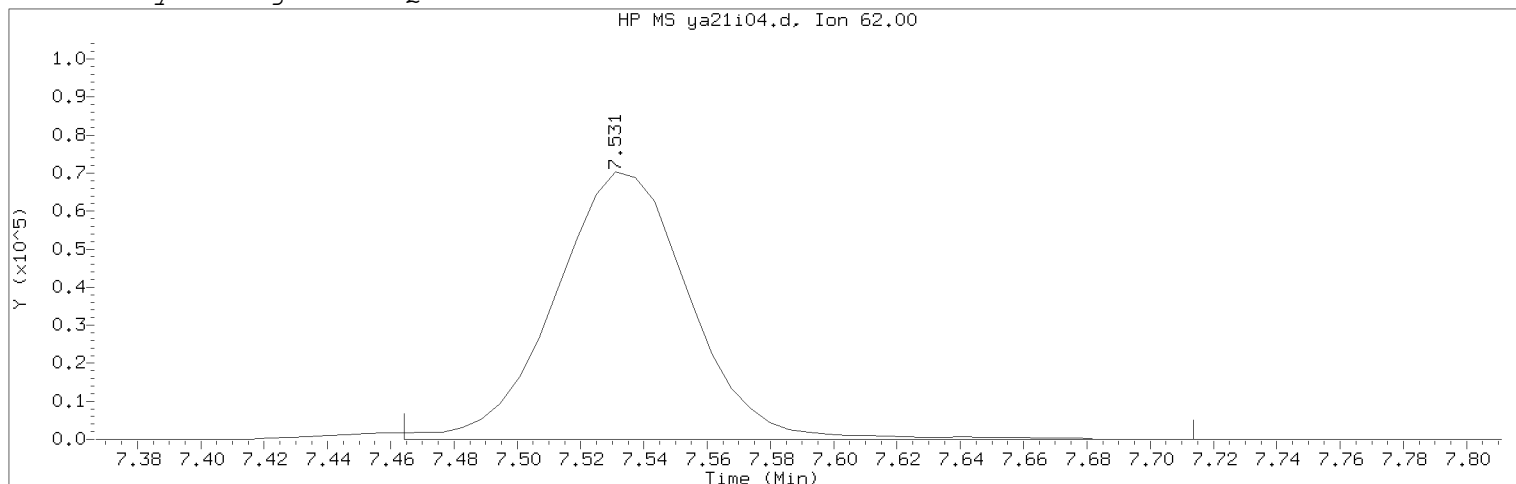
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.

Target 3.5 esignature user RPF59 Page 436 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

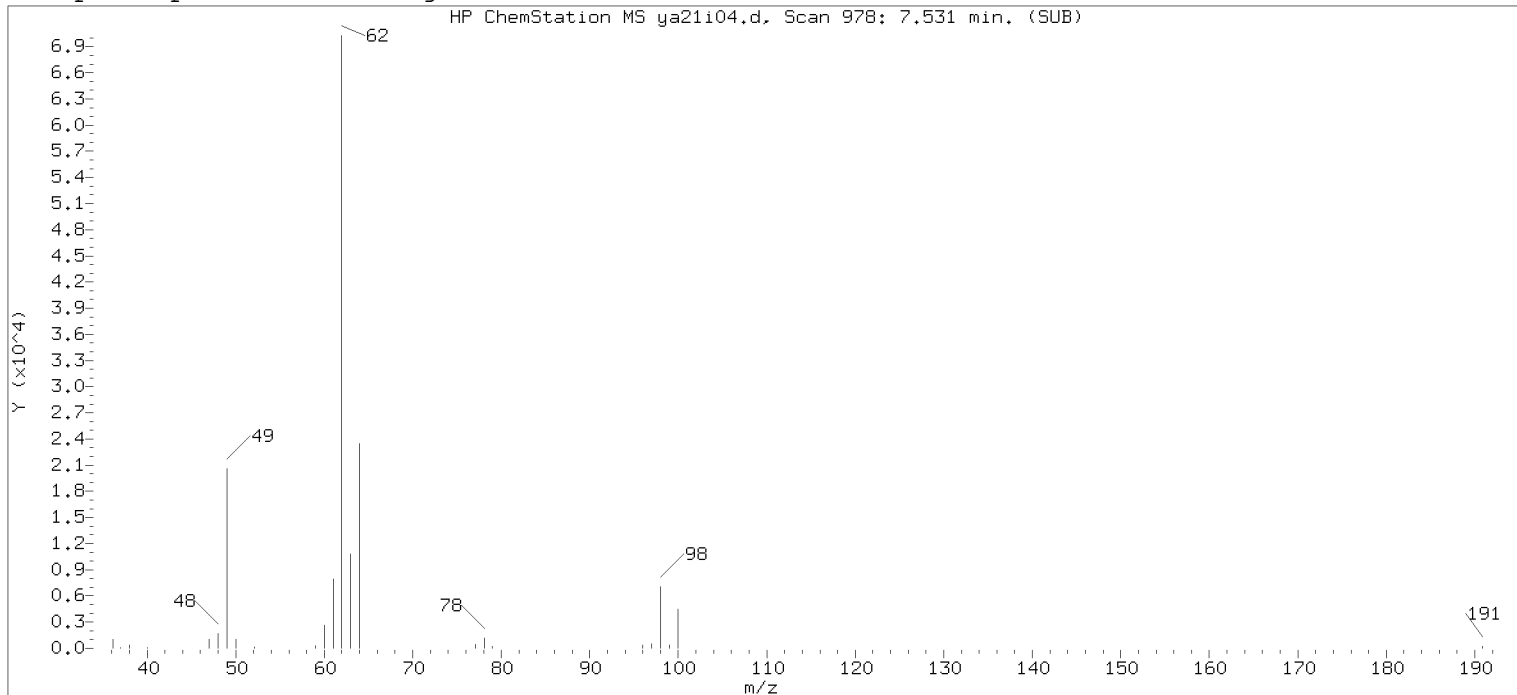
Compound Number : 61
Compound Name : 1,2-Dichloroethane
Scan Number : 978
Retention Time (minutes): 7.531
Quant Ion : 62.00
Area (flag) : 208042M
On-Column Amount (ng) : 20.2970
Integration start scan : 966 Integration stop scan: 1007
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

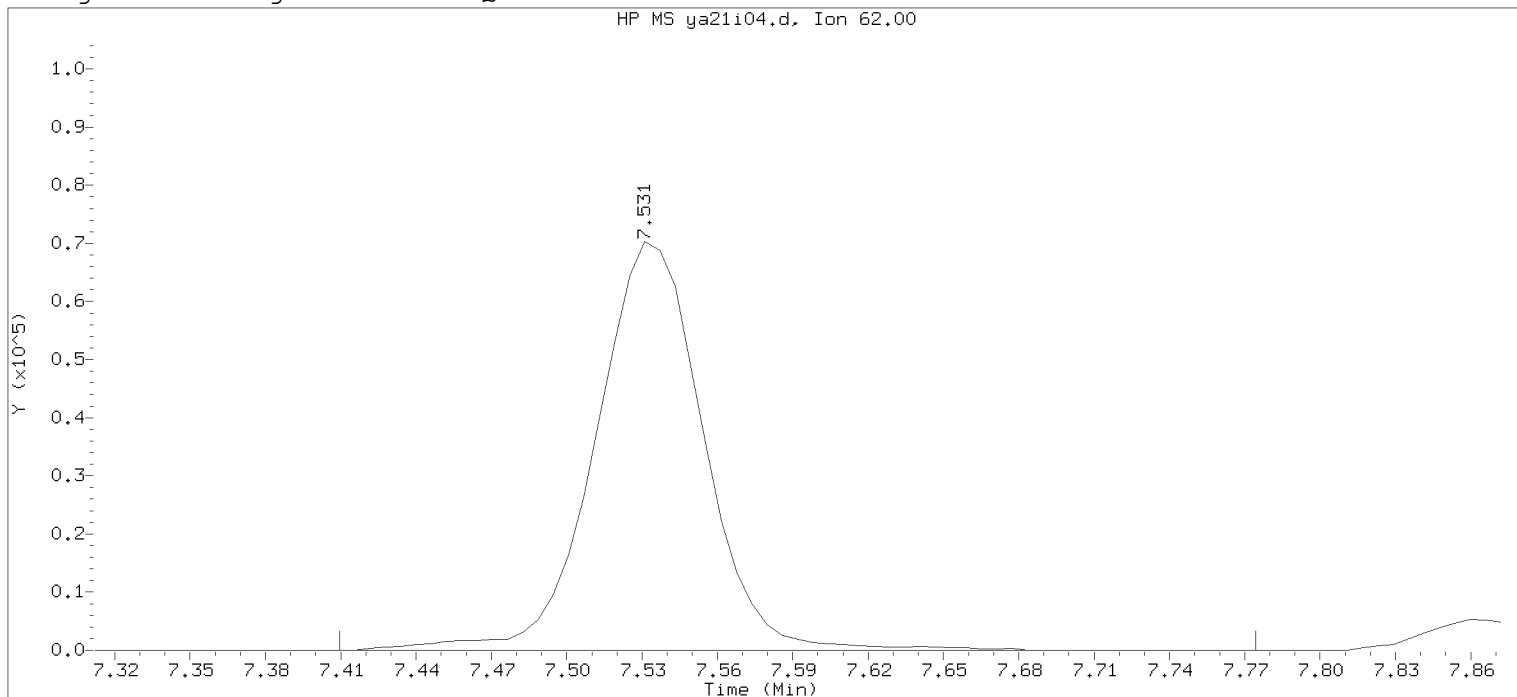
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD020

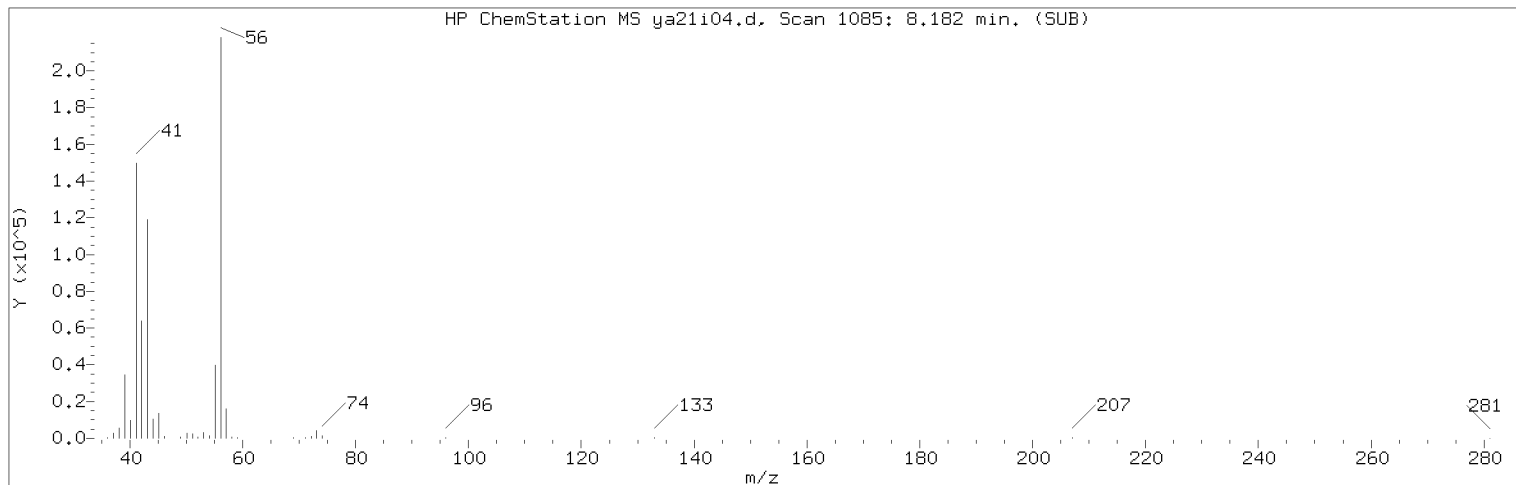
Lab Sample ID: VSTD020

Compound Number	: 61	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 978	
Retention Time (minutes)	: 7.531	
Quant Ion	: 62.00	
Area	: 210519	
On-column Amount (ng)	: 20.3330	
Integration start scan	: 957	Integration stop scan: 1017
Y at integration start	: 0	Y at integration end: 0

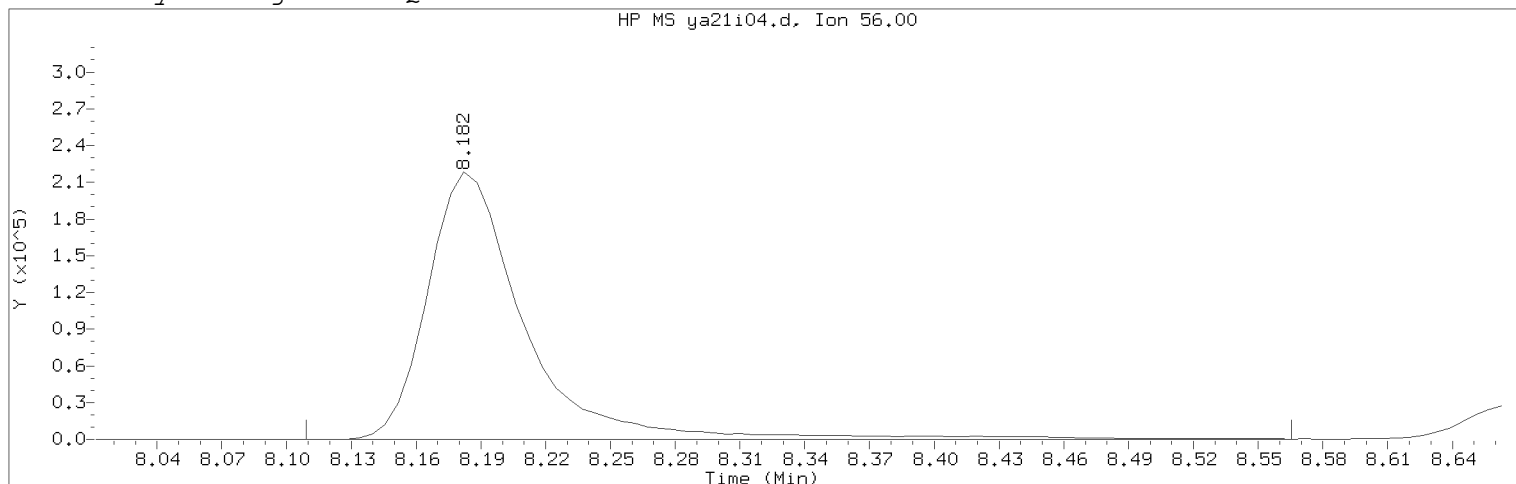
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.

Target 3.5 esignature user RAE59 Page 438 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

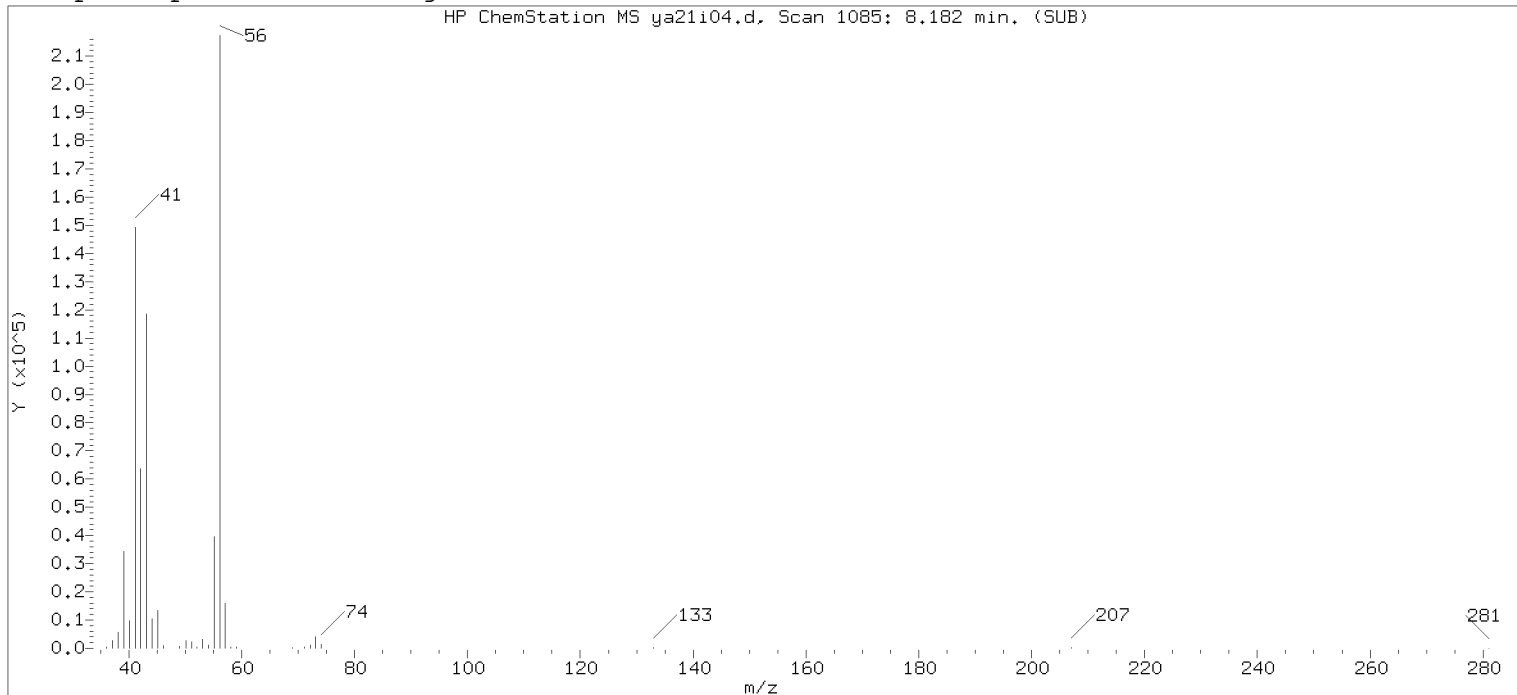
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1085
Retention Time (minutes): 8.182
Quant Ion : 56.00
Area (flag) : 686043M
On-Column Amount (ng) : 1004.4020
Integration start scan : 1072 Integration stop scan: 1147
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

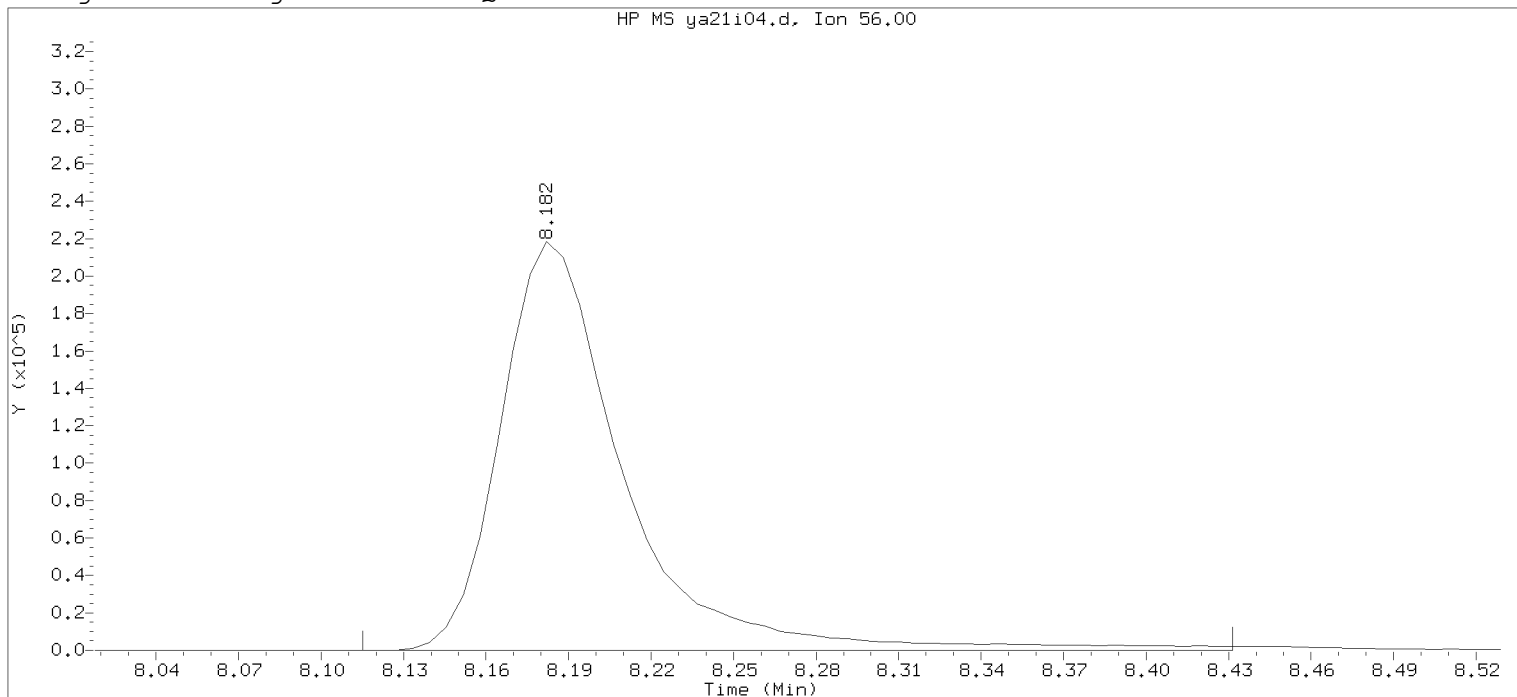
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

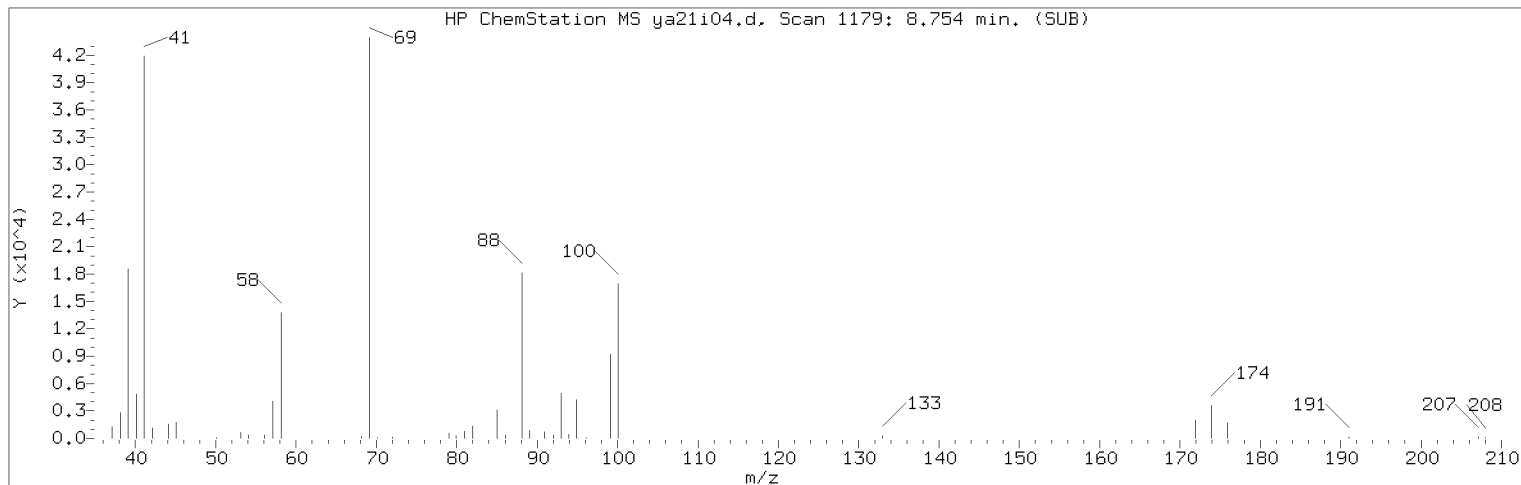
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD020

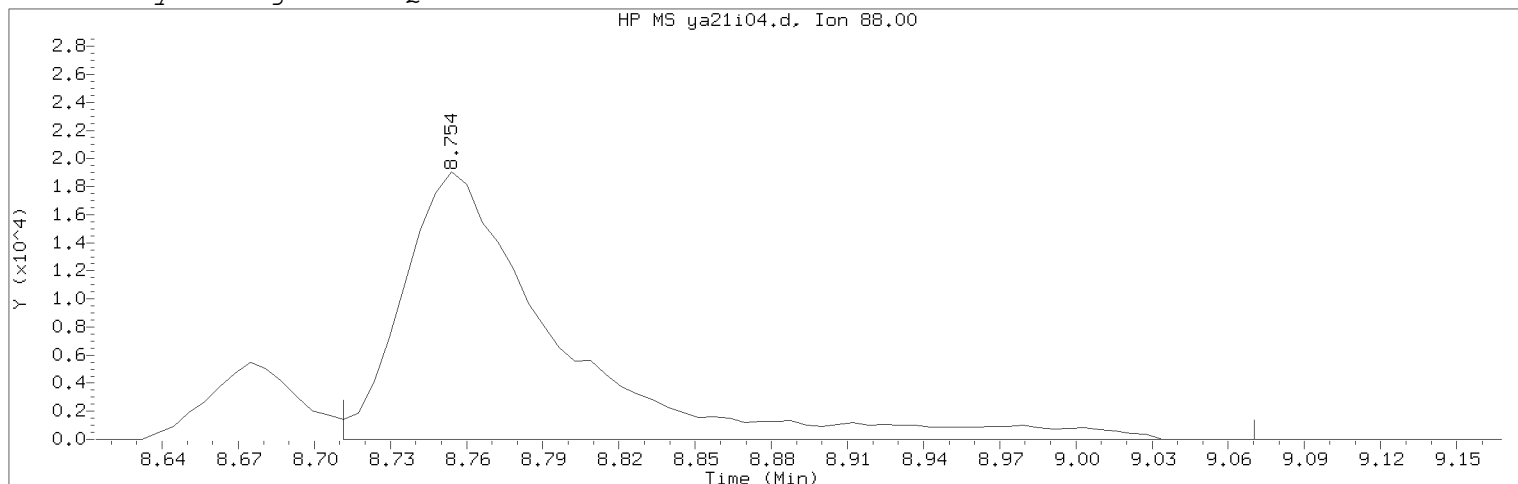
Lab Sample ID: VSTD020

Compound Number	: 69	
Compound Name	: n-Butanol	
Scan Number	: 1085	
Retention Time (minutes)	: 8.182	
Quant Ion	: 56.00	
Area	: 678859	
On-column Amount (ng)	: 1165.1548	
Integration start scan	: 1073	Integration stop scan: 1125
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

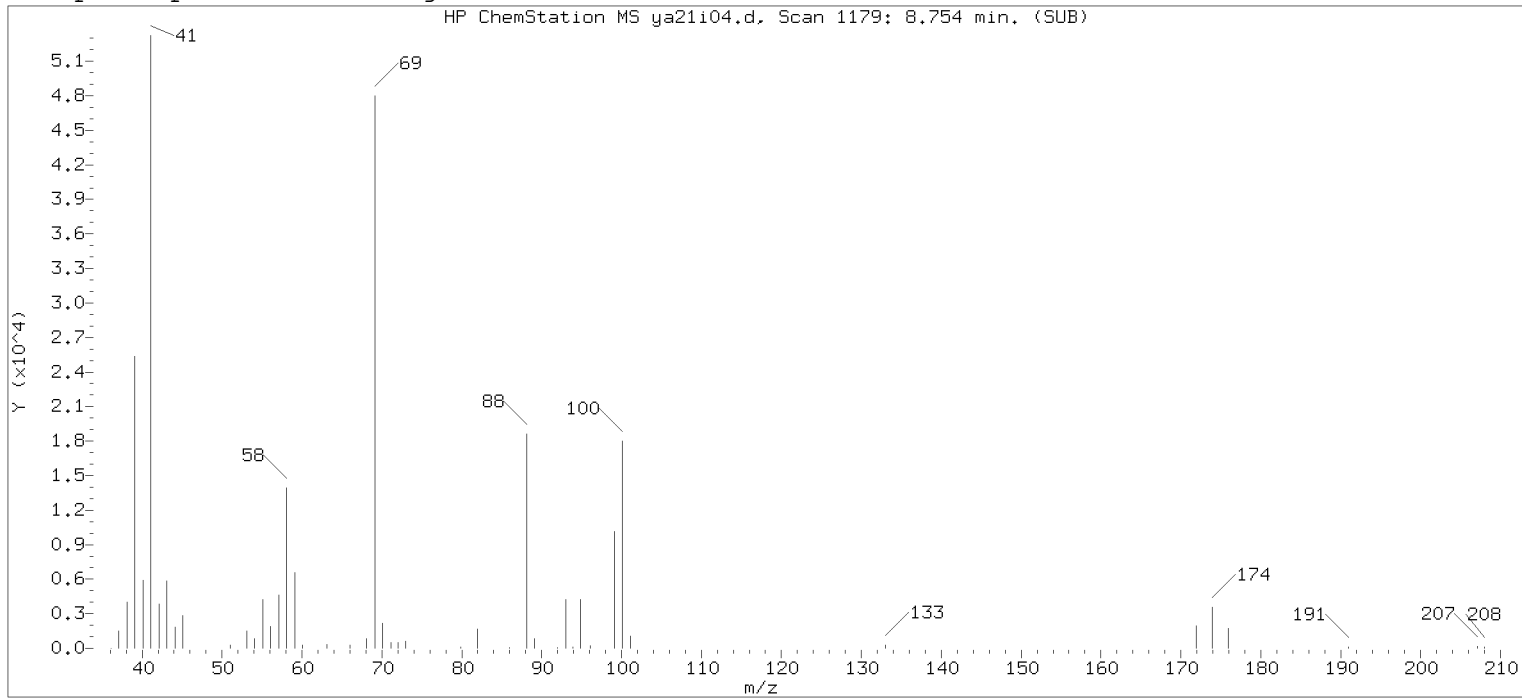
Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1179	
Retention Time (minutes)	: 8.754	
Quant Ion	: 88.00	
Area (flag)	: 80550M	
On-Column Amount (ng)	: 490.6810	
Integration start scan	: 1171	Integration stop scan: 1230
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

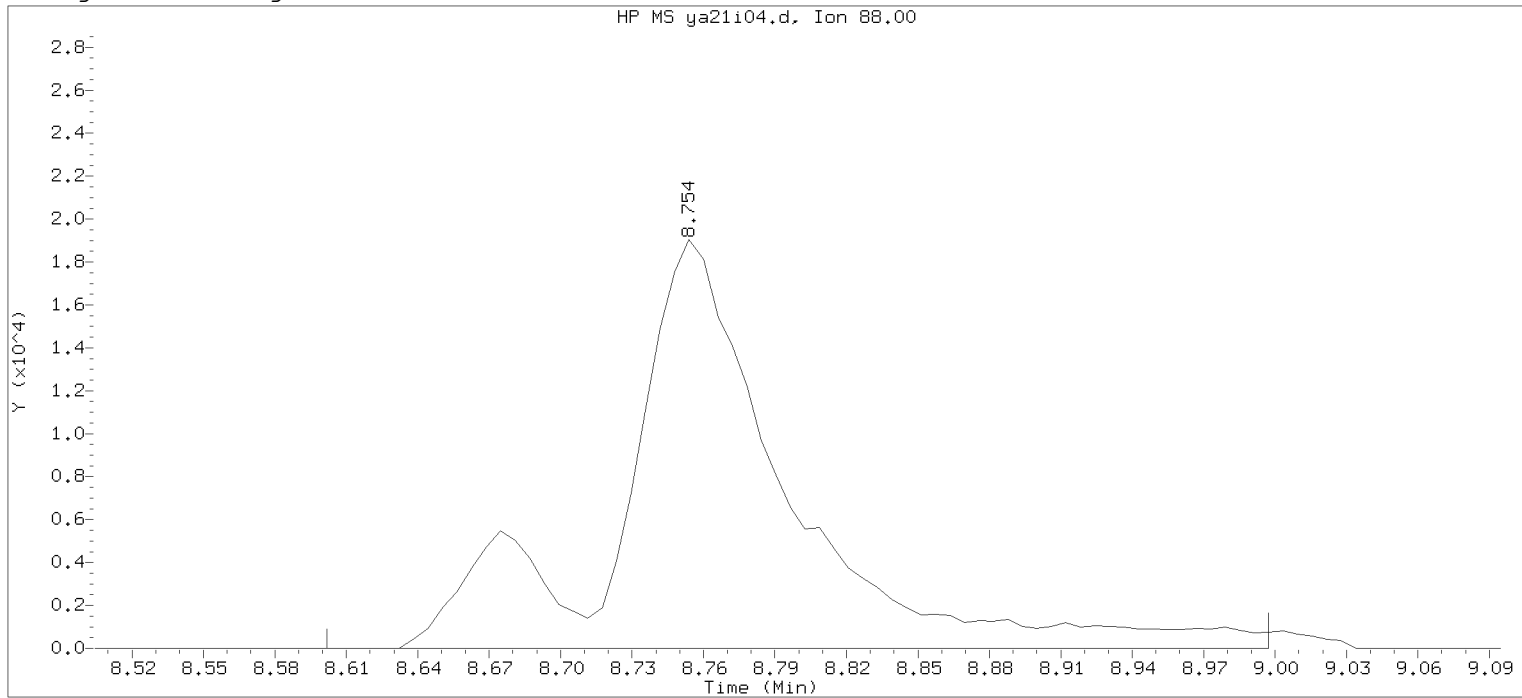
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

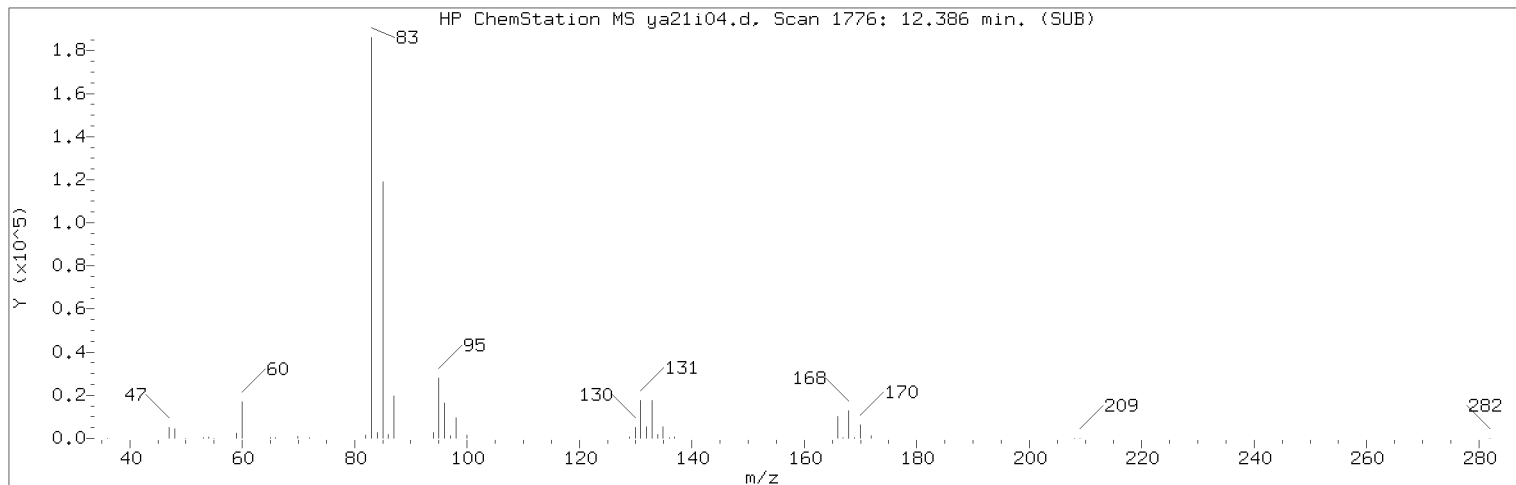
Sample Name: VSTD020

Lab Sample ID: VSTD020

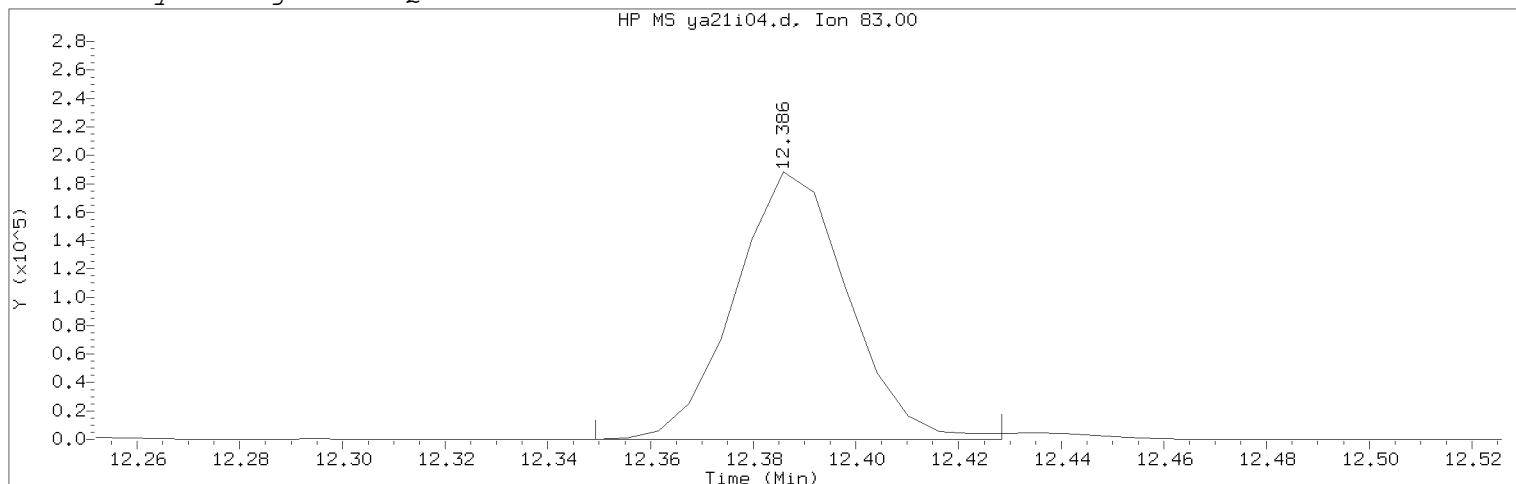
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1179
 Retention Time (minutes): 8.754
 Quant Ion : 88.00
 Area : 92470
 On-column Amount (ng) : 518.6336
 Integration start scan : 1153
 Y at integration start : 0

Integration stop scan: 1218
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

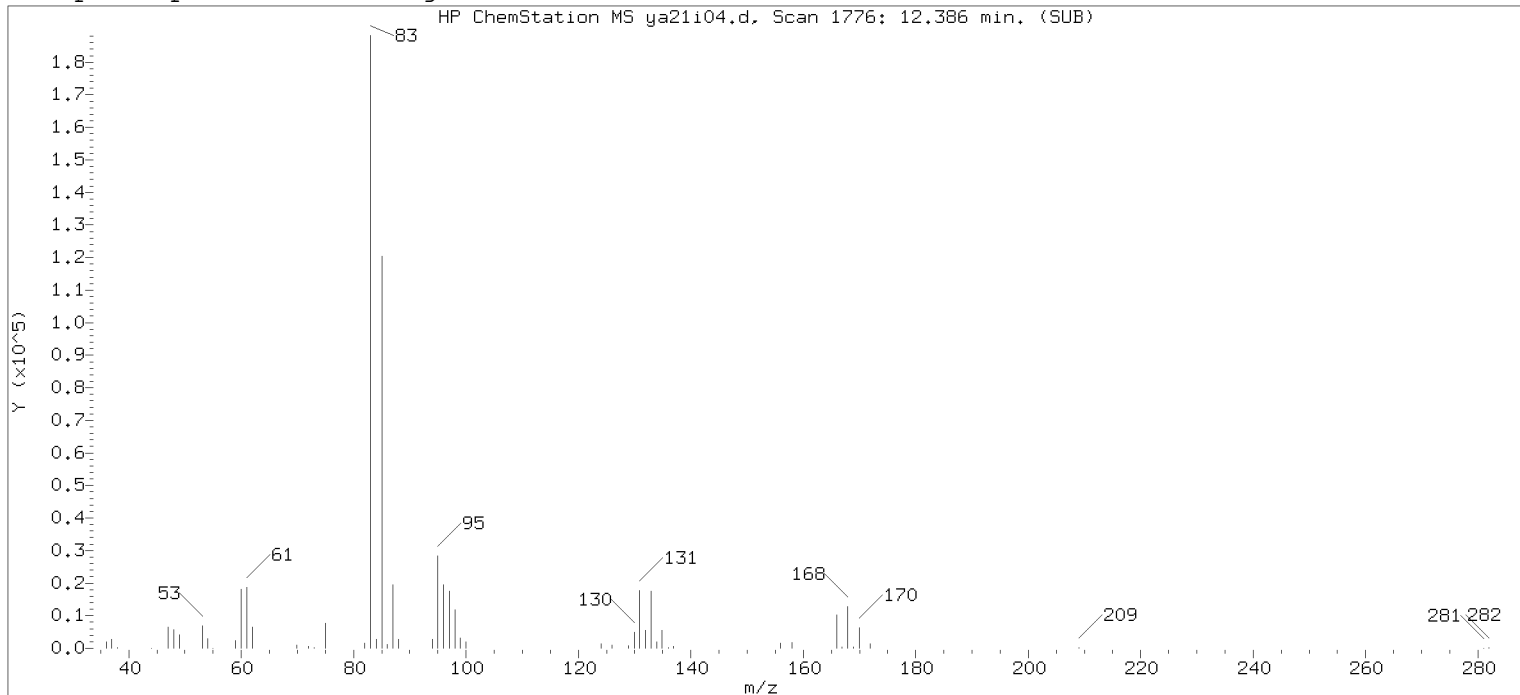
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1776
Retention Time (minutes): 12.386
Quant Ion : 83.00
Area (flag) : 287764M
On-Column Amount (ng) : 20.3647
Integration start scan : 1769 Integration stop scan: 1782
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

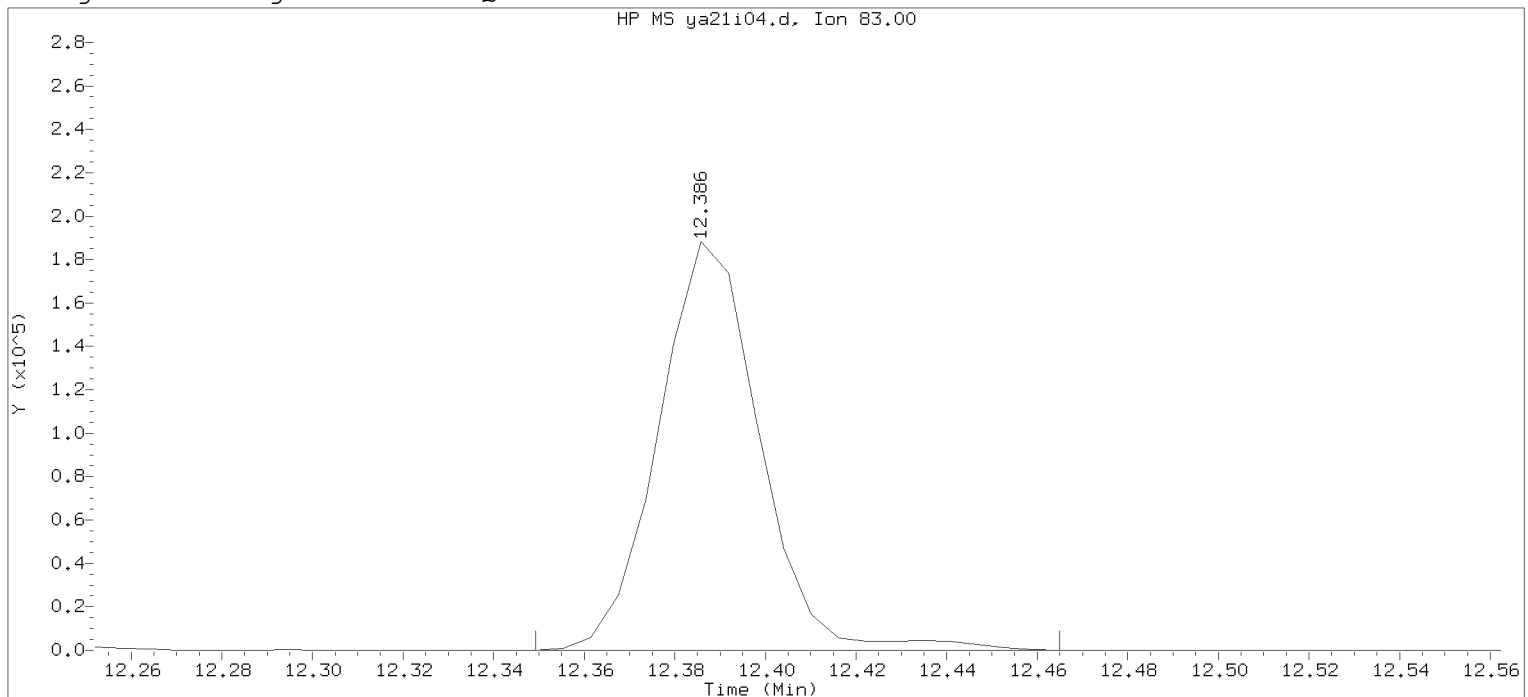
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:00

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD020

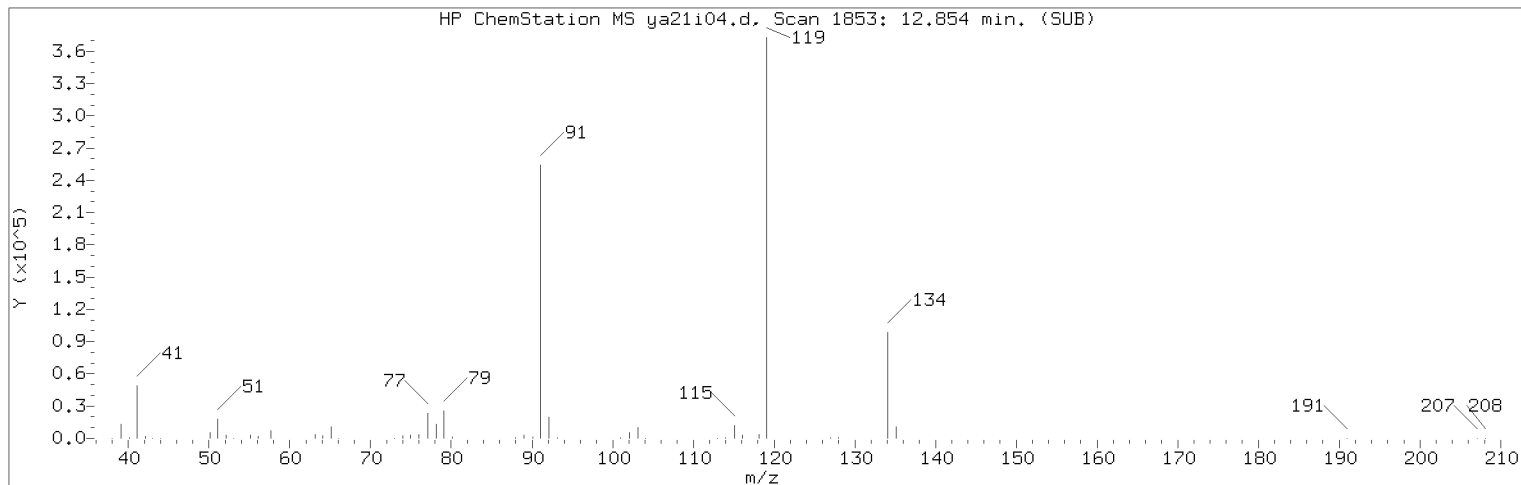
Lab Sample ID: VSTD020

Compound Number	: 116	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1776	
Retention Time (minutes)	: 12.386	
Quant Ion	: 83.00	
Area	: 292432	
On-column Amount (ng)	: 21.0112	
Integration start scan	: 1769	Integration stop scan: 1788
Y at integration start	: 0	Y at integration end: 0

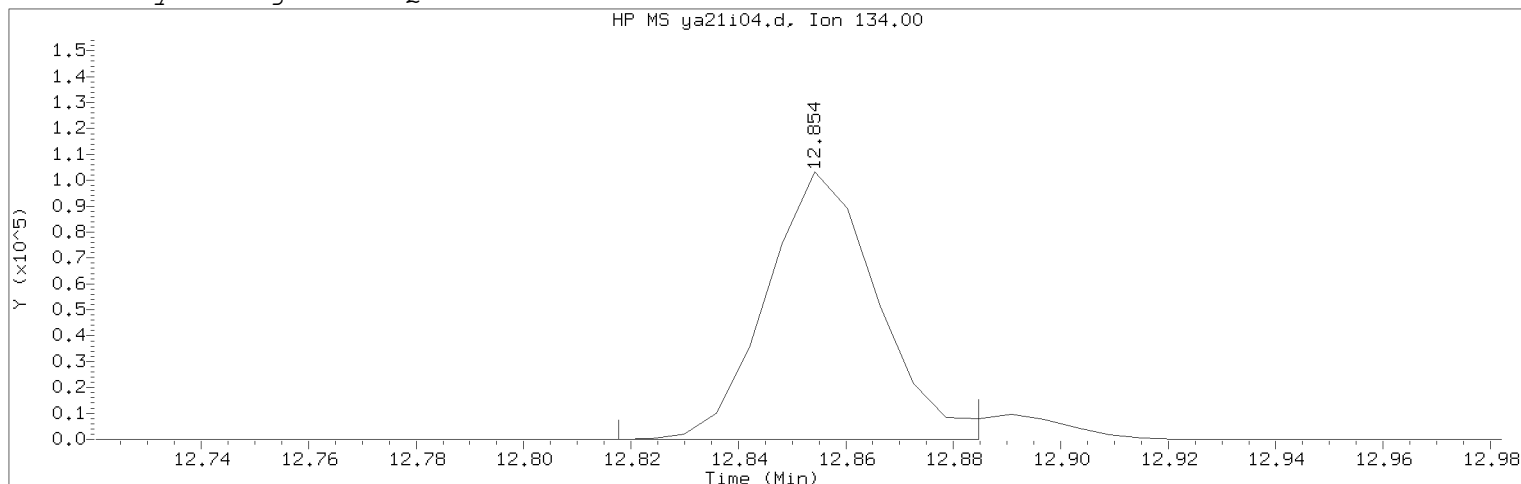
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.

Target 3.5 esignature user RAE59 Page 444 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:04 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

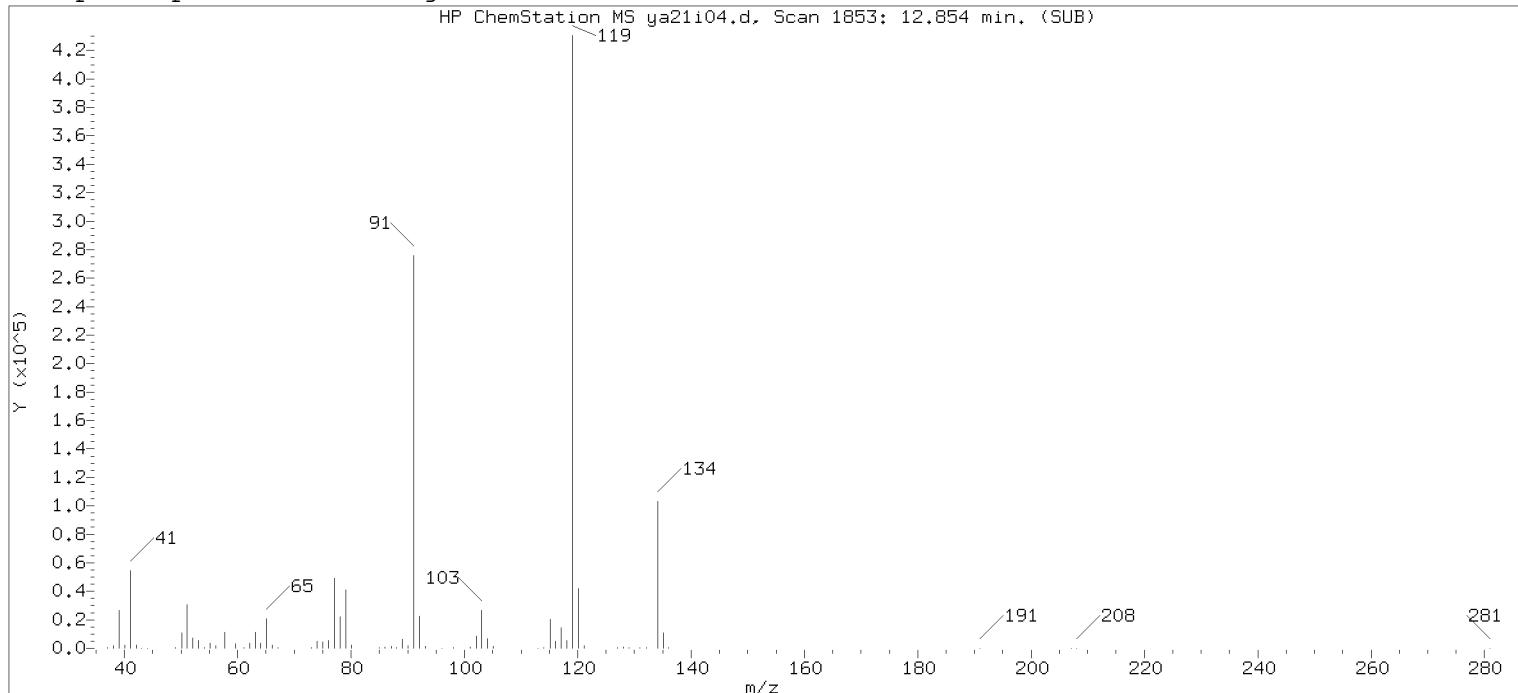
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 1853
Retention Time (minutes): 12.854
Quant Ion : 134.00
Area (flag) : 148019M
On-Column Amount (ng) : 20.4586
Integration start scan : 1846 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

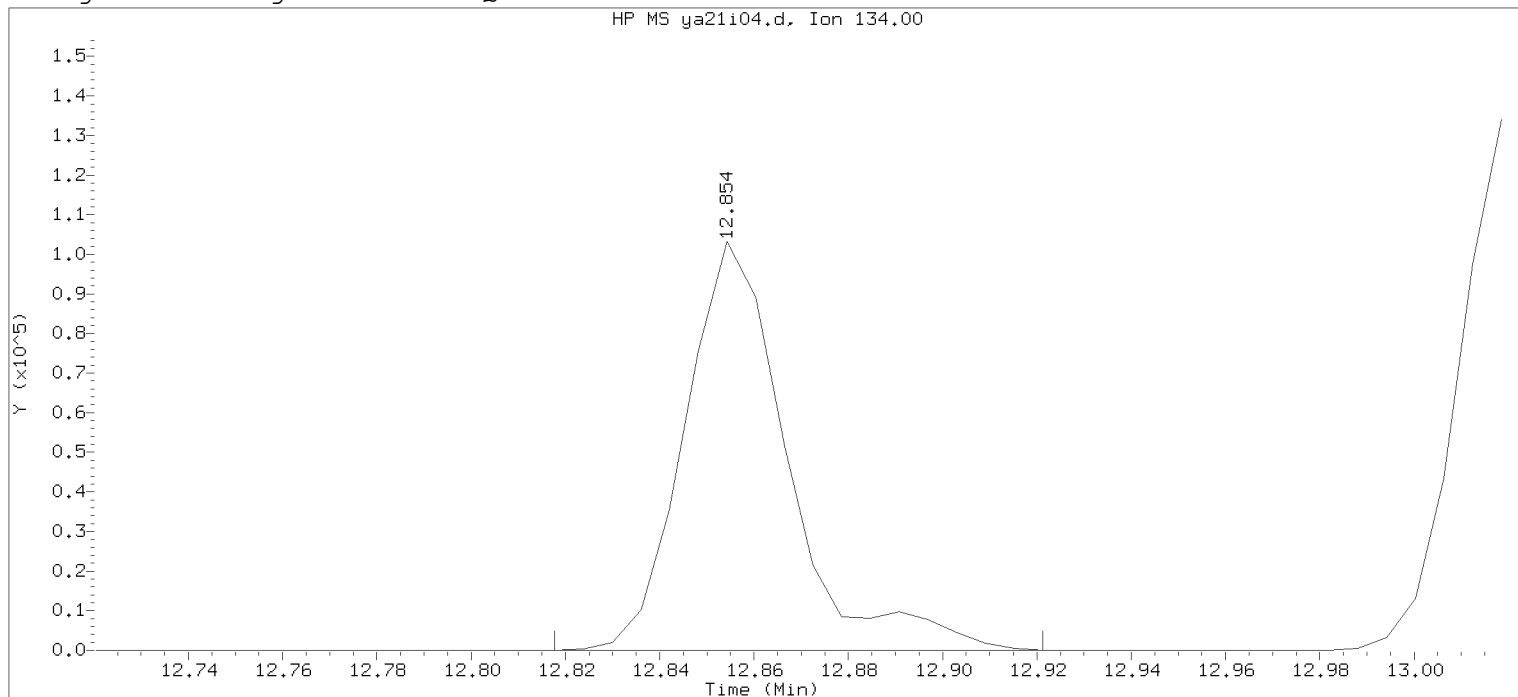
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



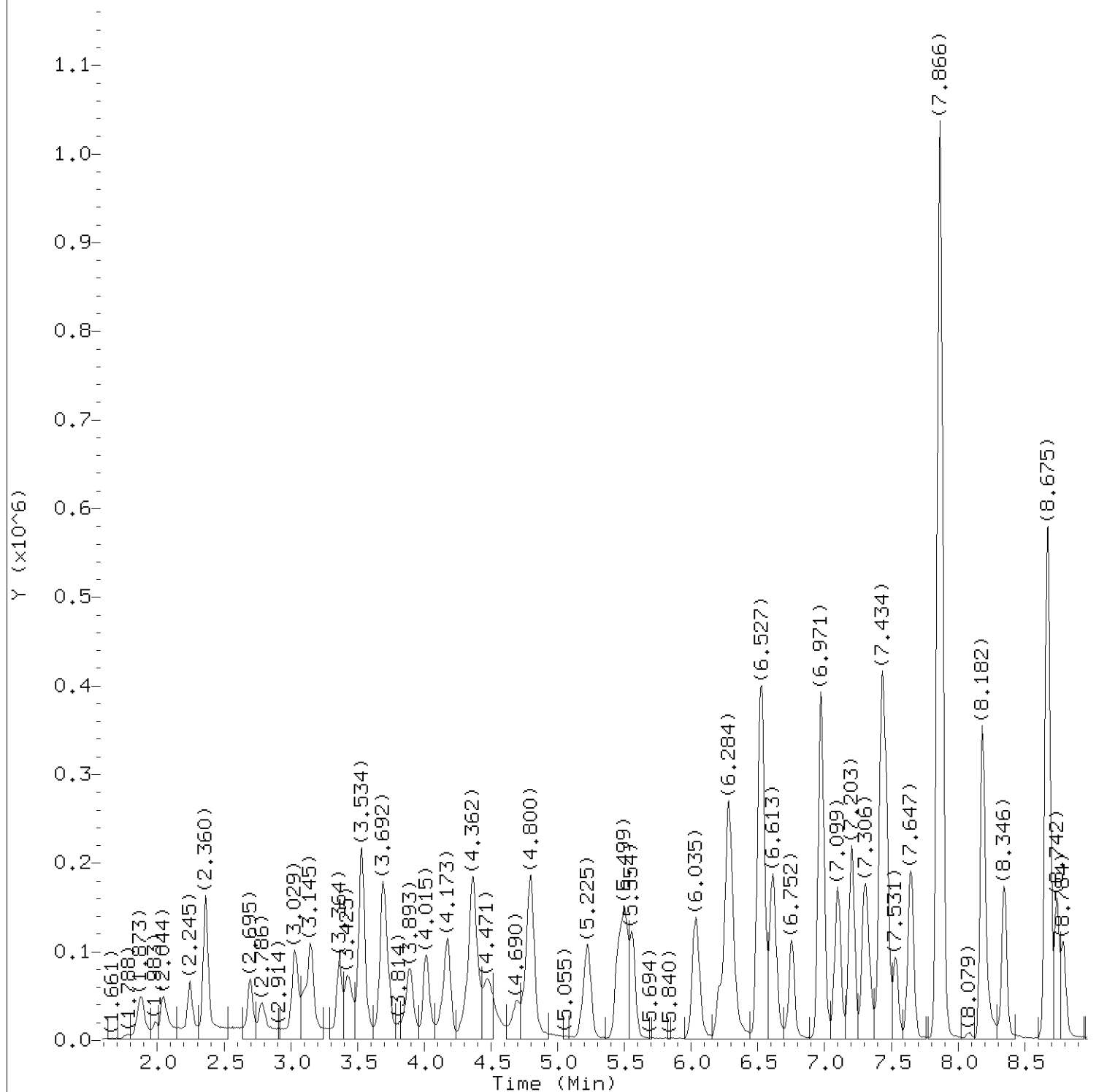
Data File: /chem2/HP09355.i/20apr21a.b/ya21i04.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:00 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1853	
Retention Time (minutes)	: 12.854	
Quant Ion	: 134.00	
Area	: 156893	
On-column Amount (ng)	: 21.9666	
Integration start scan	: 1846	Integration stop scan: 1863
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d
Injection date and time: 21-APR-2020 23:22

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

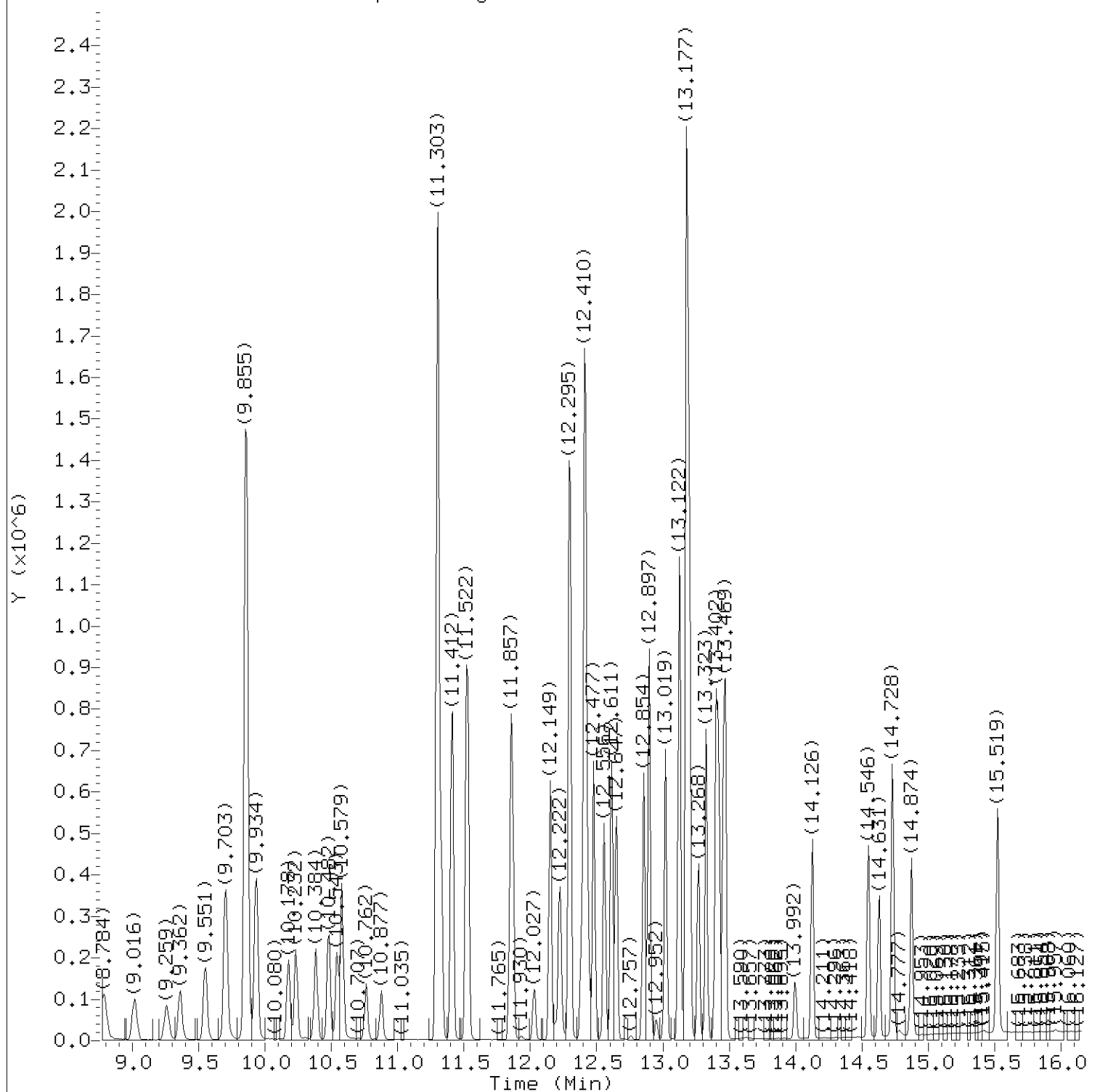
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d
Injection date and time: 21-APR-2020 23:22

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:04

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.044	85	90631M	10.087
4) Chloromethane	(2)	2.245	50	81136	10.283
5) 1,3-Butadiene	(2)	2.360	39	63059	9.877
6) Vinyl Chloride	(2)	2.360	62	82257	10.341
8) Bromomethane	(2)	2.695	94	56696	10.581
9) Chloroethane	(2)	2.786	64	45494	10.496
10) Dichlorofluoromethane	(2)	3.029	67	122740	10.607
12) Trichlorofluoromethane	(2)	3.096	101	92189	10.059
11) n-Pentane	(2)	3.151	43	99451	10.120
14) Ethyl ether	(2)	3.364	59	71656	10.237
15) Freon 123a	(2)	3.425	67	82519	9.871
16) Acrolein	(1)	3.534	56	355841	106.265
17) 1,1-Dichloroethene	(2)	3.686	96	70229	10.337
17) 1,1-Dichloroethene	(2)	3.686	63	32114	9.842
18) Acetone	(1)	3.699	58	34162	21.587
19) Freon 113	(2)	3.711	101	65554	9.704
21) 2-Propanol	(1)	3.863	45	109516	95.766
22) Methyl Iodide	(2)	3.893	142	115763	9.898
23) Carbon Disulfide	(2)	4.015	76	232374	9.842
27) Methyl Acetate	(2)	4.143	43	101944	9.946
25) Allyl Chloride	(2)	4.179	41	112801	9.929
29)*t-Butyl alcohol-d10	(1)	4.356	65	407507M	250.000
28) Methylene Chloride	(2)	4.368	84	77950	9.938
30) t-Butyl alcohol	(1)	4.483	59	201321	100.147
31) Acrylonitrile	(2)	4.696	53	62684	10.652
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	225697	10.135
32) trans-1,2-Dichloroethene	(2)	4.800	96	79939	10.236
34) n-Hexane	(2)	5.219	57	115016	9.579
36) 1,1-Dichloroethane	(2)	5.451	63	136009	9.916
38) di-Isopropyl ether	(2)	5.499	45	248445	9.851
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	106477	9.384
40) Ethyl t-butyl ether	(2)	6.035	59	223683	9.979
43) 1,2-Dichloroethene (Total)	(2)		96	168725	20.301
44) 2-Butanone	(2)	6.217	43	163387	20.884
42) cis-1,2-Dichloroethene	(2)	6.272	96	88786	10.065
45) 2,2-Dichloropropane	(2)	6.284	77	101584	9.809
47) Propionitrile	(1)	6.302	54	242620	101.102
48) Methacrylonitrile	(2)	6.527	67	296300	50.122

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d
 Injection date and time: 21-APR-2020 23:22

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:04
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.613	128	41567	9.900
50) Tetrahydrofuran	(1)	6.625	71	46968	20.483
51) Chloroform	(2)	6.752	83	129227	9.842
52) \$Dibromofluoromethane	(2)	6.971	113	295797	49.671
52) \$Dibromofluoromethane	(2)	6.971	111	304399	50.042
53) 1,1,1-Trichloroethane	(2)	6.990	97	109210	9.678
54) Cyclohexane	(2)	7.099	56	137345	9.599
54) Cyclohexane	(2)	7.099	84	114513	9.587
54) Cyclohexane	(2)	7.099	69	41824	9.467
55) 1,1-Dichloropropene	(2)	7.203	75	108059	9.790
56) Carbon Tetrachloride	(2)	7.209	117	91863	9.495
58) Isobutyl Alcohol	(1)	7.306	41	176160	244.508
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	79352	50.794
57) \$1,2-Dichloroethane-d4	(2)	7.428	65	348757	50.097
57) \$1,2-Dichloroethane-d4	(2)	7.428	104	49984	50.133
60) Benzene	(2)	7.464	78	325223	9.921
61) 1,2-Dichloroethane	(2)	7.531	62	103902	10.021
61) 1,2-Dichloroethane	(2)	7.531	98	9926	9.665
65) t-Amyl methyl ether	(2)	7.647	73	226764	10.116
66) *Fluorobenzene	(2)	7.866	96	1308564	50.000
67) n-Heptane	(2)	7.872	43	124652	9.747
69) n-Butanol	(1)	8.182	56	337962M	479.030
71) Trichloroethene	(2)	8.346	95	80408	9.711
72) Methylcyclohexane	(2)	8.663	83	144186	9.800
72) Methylcyclohexane	(2)	8.669	98	63120	9.717
73) 1,2-Dichloropropane	(2)	8.675	63	84197	9.900
76) Methyl Methacrylate	(2)	8.736	69	80481	9.091
75) 1,4-Dioxane	(1)	8.754	88	41144M	242.043
74) Dibromomethane	(2)	8.790	93	52316	9.626
78) Bromodichloromethane	(2)	9.016	83	93086	9.260
79) 2-Nitropropane	(2)	9.259	41	71530	19.882
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	65168M	9.216
81) cis-1,3-Dichloropropene	(2)	9.551	75	128793	9.362
82) 4-Methyl-2-pentanone	(2)	9.703	43	309755	20.457
83) \$Toluene-d8	(3)	9.855	98	1259927	49.872
83) \$Toluene-d8	(3)	9.855	100	805614	49.629
88) Toluene	(3)	9.934	92	202138	9.809
90) 1,3-Dichloropropene (total)	(3)		100	247197	18.637

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.178	75	118404	9.275
91) Ethyl Methacrylate	(3)	10.232	69	125893	8.825
92) 1,1,2-Trichloroethane	(3)	10.384	97	79117M	9.690
93) Tetrachloroethene	(3)	10.482	166	82317	9.708
94) 1,3-Dichloropropane	(3)	10.543	76	135535	9.778
96) 2-Hexanone	(3)	10.579	43	247307	20.527
97) Dibromochloromethane	(3)	10.762	129	76264	8.993
99) 1,2-Dibromoethane	(3)	10.877	107	84971	9.464
100) *Chlorobenzene-d5	(3)	11.303	117	969376	50.000
101) 1-Chlorohexane	(3)	11.303	91	110492	9.729
102) Chlorobenzene	(3)	11.327	112	231085	9.962
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	73479	9.450
104) Ethylbenzene	(3)	11.412	91	393063	9.937
106) m+p-Xylene	(3)	11.522	106	312867	19.904
108) Xylene (Total)	(3)		106	465904	29.797
107) o-Xylene	(3)	11.851	106	153037	9.893
109) Styrene	(3)	11.869	104	242879	9.421
110) Bromoform	(3)	12.027	173	54717	8.578
111) Isopropylbenzene	(3)	12.149	105	389961	9.939
112) Cyclohexanone	(1)	12.222	55	157017	236.454
114) \$4-Bromofluorobenzene	(3)	12.295	95	478079	49.921
114) \$4-Bromofluorobenzene	(3)	12.301	174	366786	49.722
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	138826M	9.763
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	230393	49.793
115) Bromobenzene	(4)	12.416	156	98744	9.795
117) 1,2,3-Trichloropropane	(4)	12.435	110	44611	9.871
119) n-Propylbenzene	(4)	12.477	91	474810	10.125
120) 2-Chlorotoluene	(4)	12.556	126	96923	9.910
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	343212	9.943
121) 4-Chlorotoluene	(4)	12.647	126	101299	9.870
124) tert-Butylbenzene	(4)	12.854	134	68980	9.530
125) Pentachloroethane	(4)	12.891	167	52540	9.433
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	358919	9.886
127) sec-Butylbenzene	(4)	13.019	105	439894	10.002
129) 1,3-Dichlorobenzene	(4)	13.122	146	191662	9.944
130) p-Isopropyltoluene	(4)	13.128	119	369737	9.847
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	518818	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	198526	9.995

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

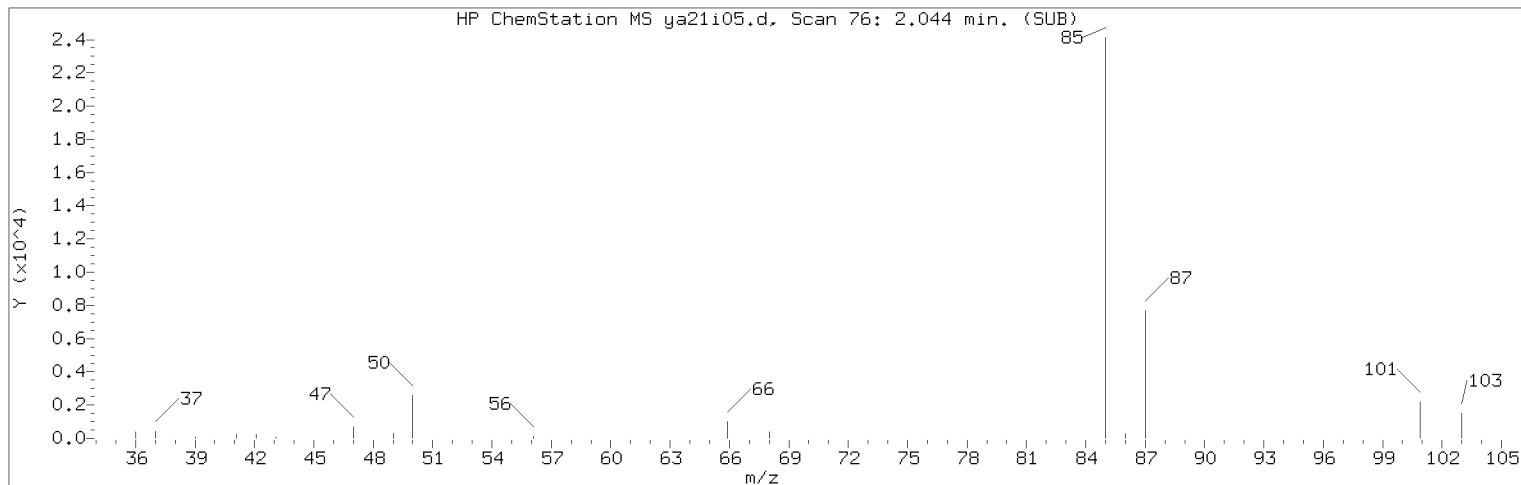
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	354059	10.205
135) Benzyl Chloride	(4)	13.268	91	273815	9.175
136) 1,3-Diethylbenzene	(4)	13.323	119	225558	9.988
141) Diethylbenzene (total)	(4)		100	657615	30.253
137) 1,4-Diethylbenzene	(4)	13.396	119	240544	10.108
139) n-Butylbenzene	(4)	13.420	92	197390	9.902
138) 1,2-Dichlorobenzene	(4)	13.457	146	184911	9.892
140) 1,2-Diethylbenzene	(4)	13.469	119	191513	10.157
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	32913	9.082
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	134976	9.645
146) 1,2,4-Trichlorobenzene	(4)	14.546	180	127390	9.662
147) Hexachlorobutadiene	(4)	14.631	225	56351	9.597
148) Naphthalene	(4)	14.728	128	478924	9.998
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	123175	9.741
150) 2-Methylnaphthalene	(4)	15.519	142	264693	9.940

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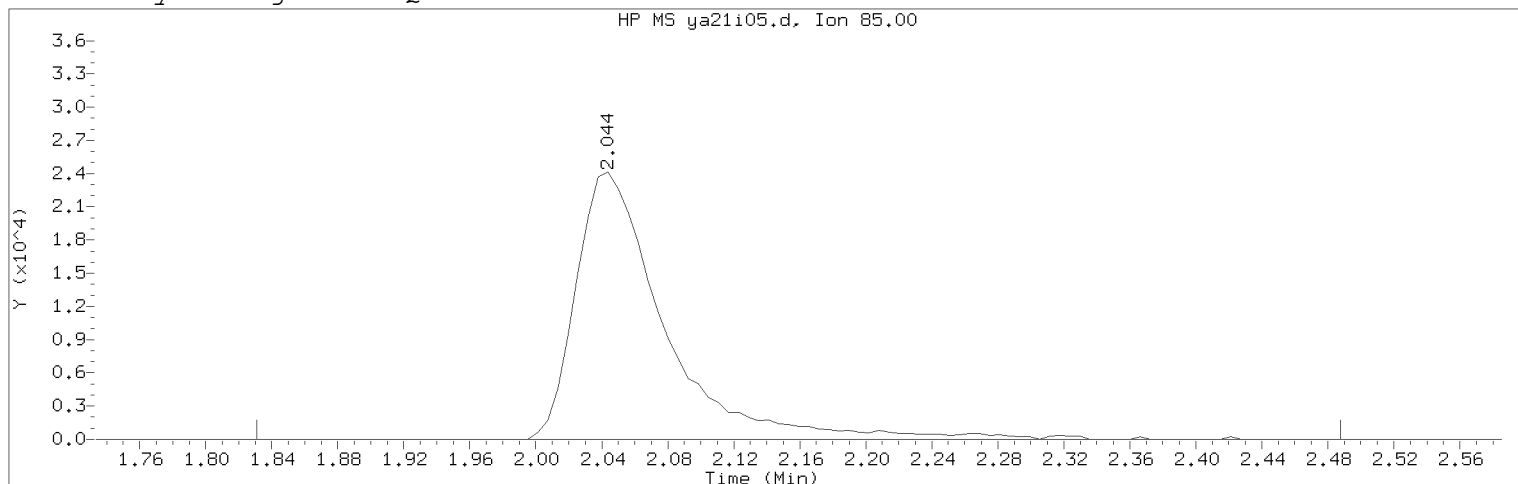
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

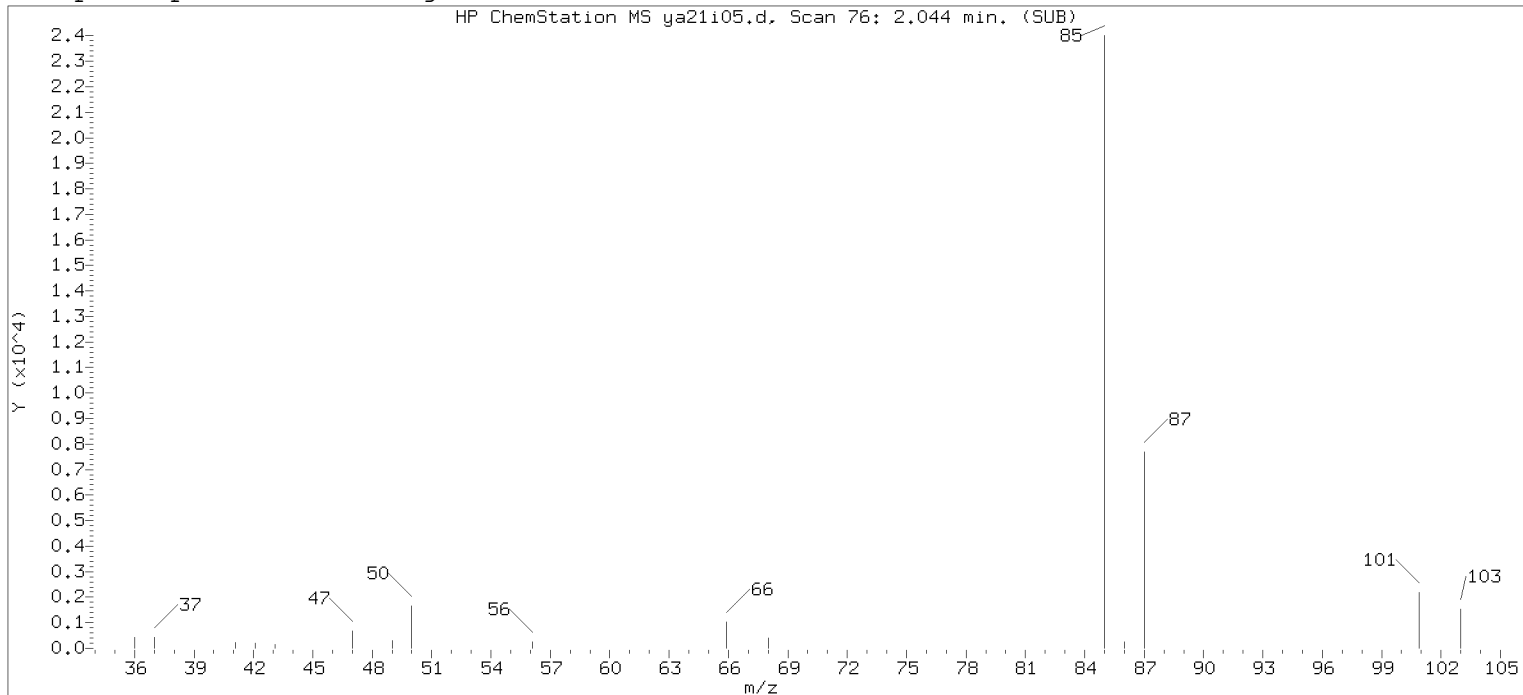
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 76
Retention Time (minutes): 2.044
Quant Ion : 85.00
Area (flag) : 90631M
On-Column Amount (ng) : 10.0868
Integration start scan : 40 Integration stop scan: 148
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

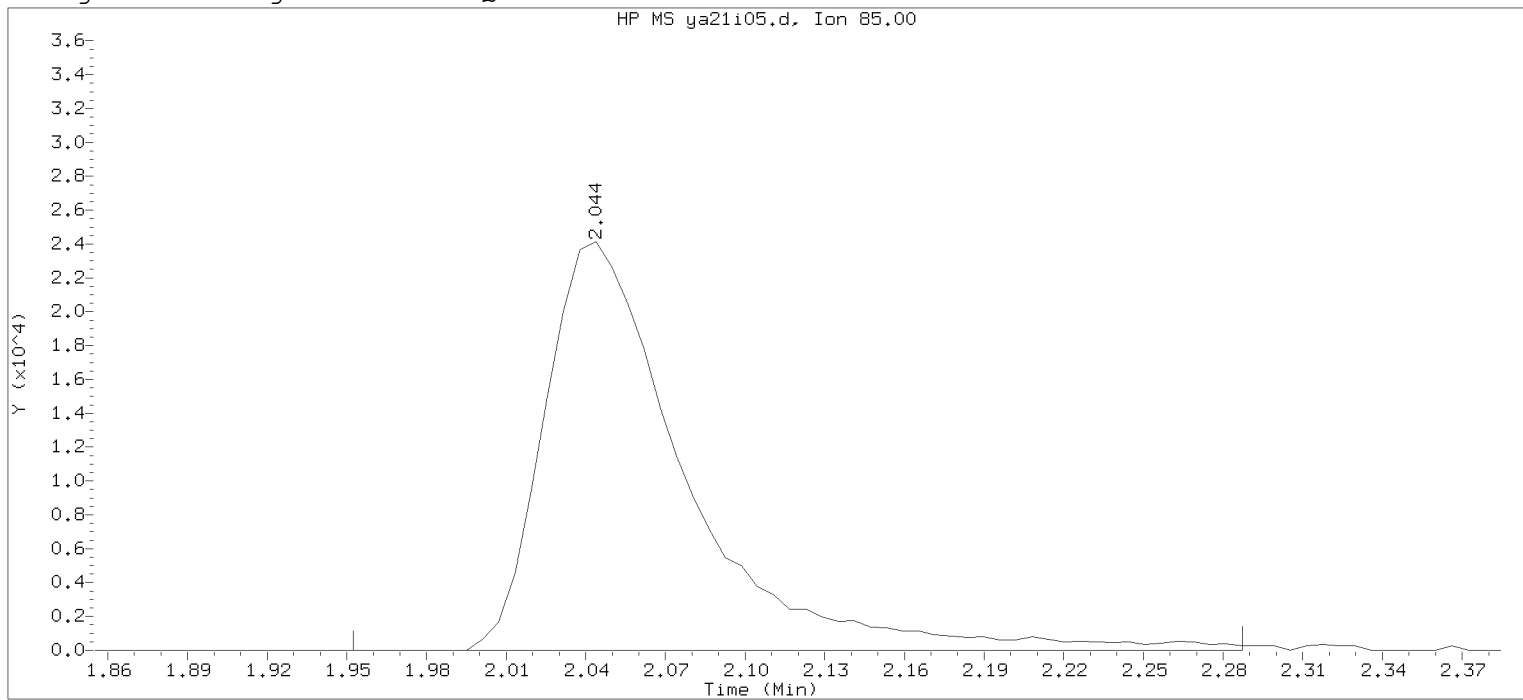
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

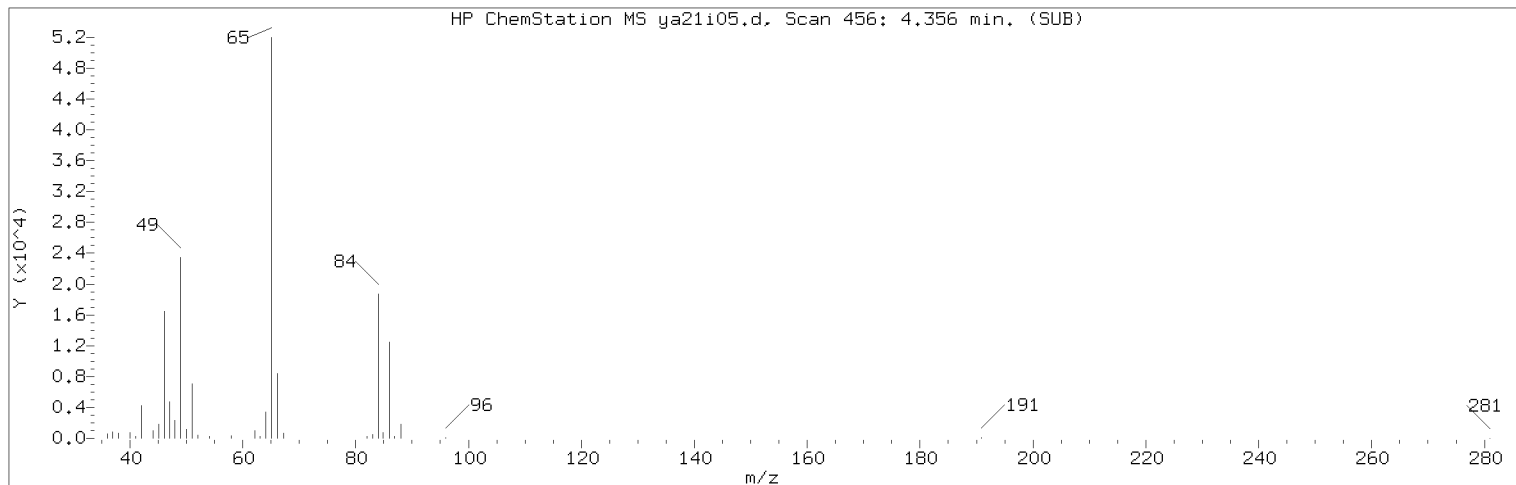
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

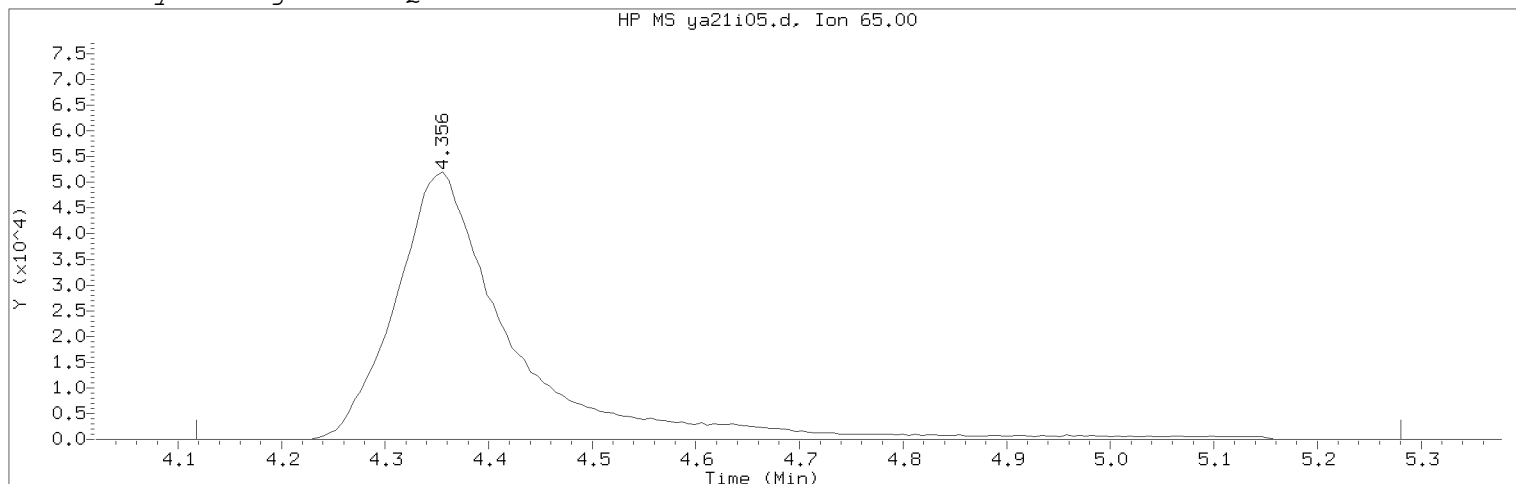
Lab Sample ID: VSTD010

Compound Number	: 3	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 76	
Retention Time (minutes)	: 2.044	
Quant Ion	: 85.00	
Area	: 89786	
On-column Amount (ng)	: 10.6664	
Integration start scan	: 60	Integration stop scan: 115
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

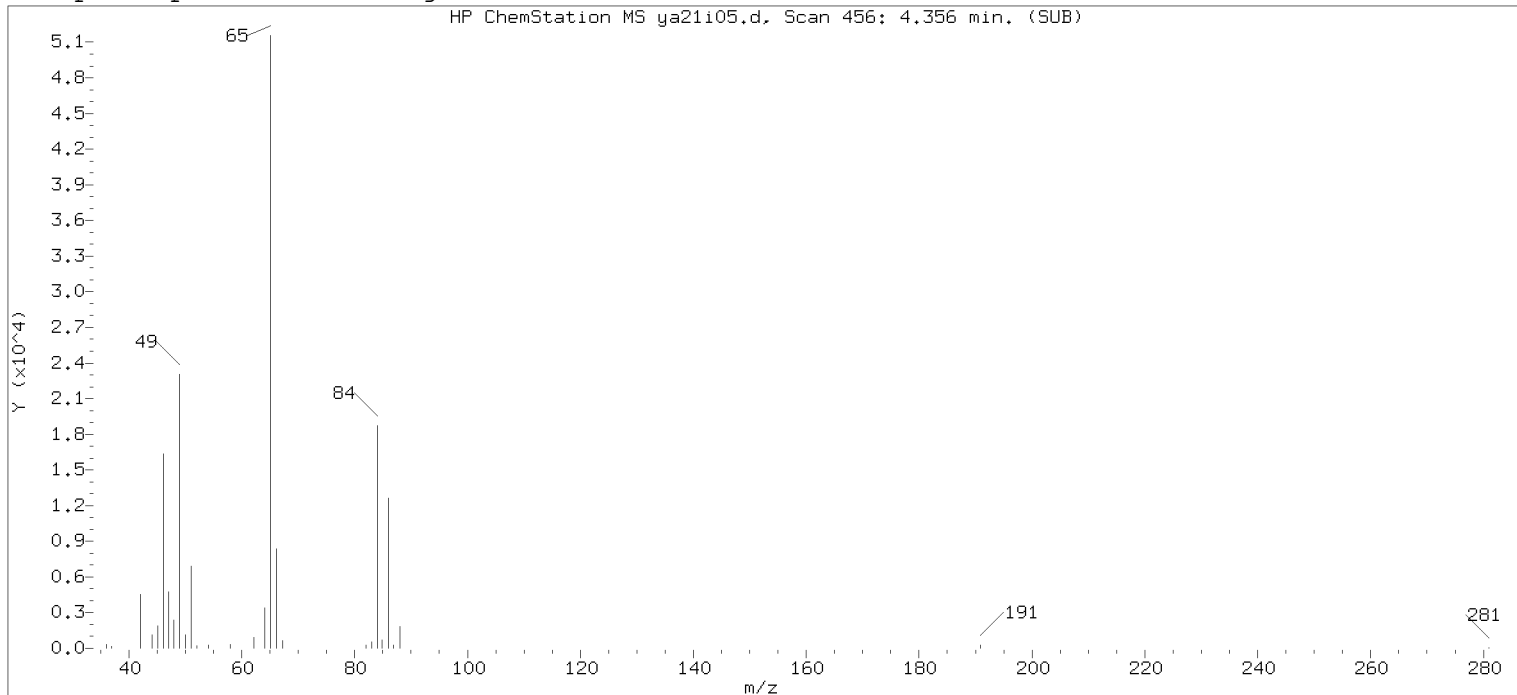
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 456
Retention Time (minutes): 4.356
Quant Ion : 65.00
Area (flag) : 407507M
On-Column Amount (ng) : 250.0000
Integration start scan : 416 Integration stop scan: 607
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

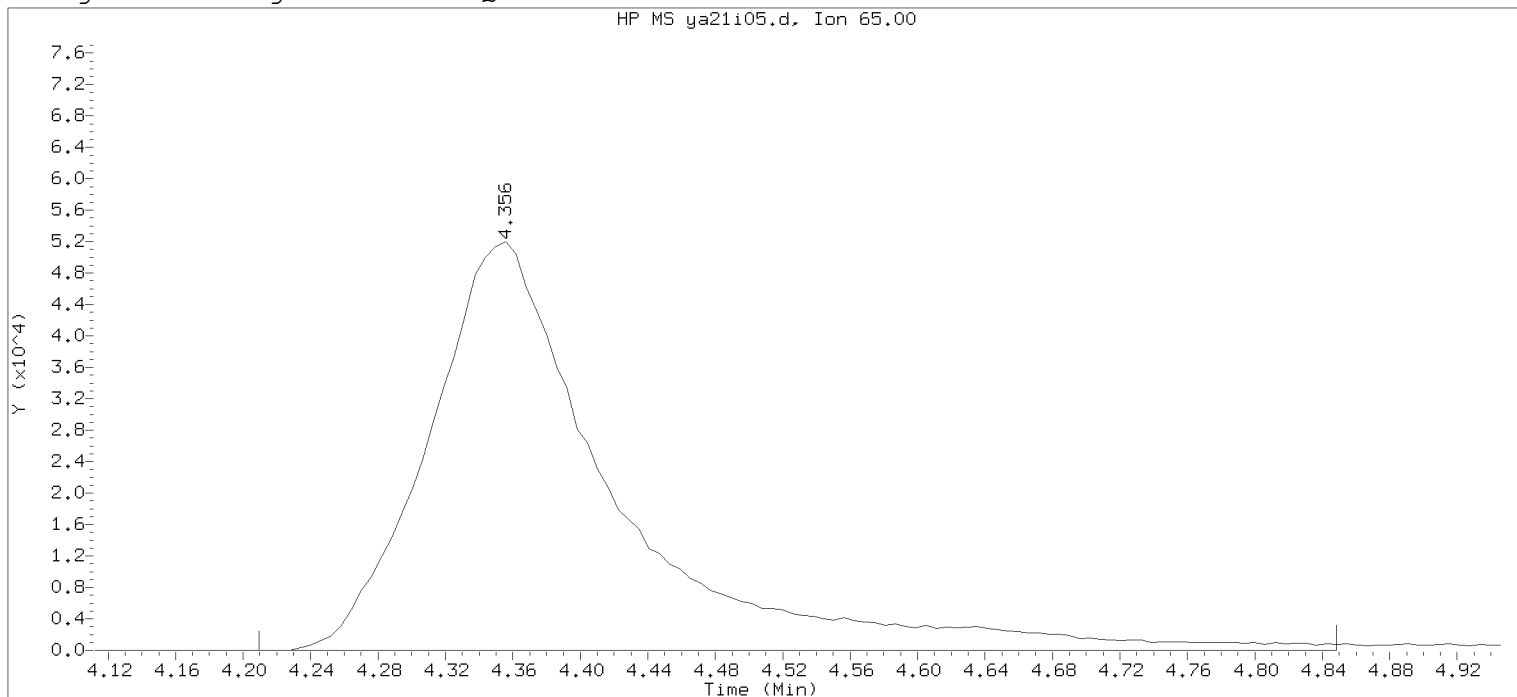
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 456

Retention Time (minutes): 4.356

Quant Ion : 65.00

Area : 396599

On-column Amount (ng) : 250.0000

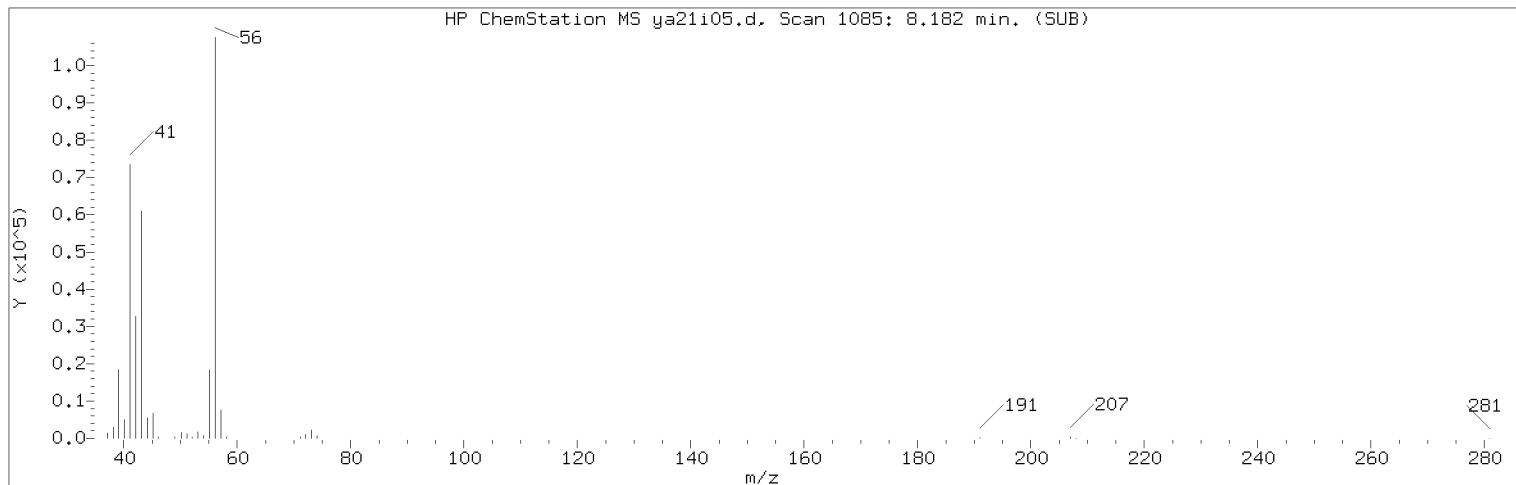
Integration start scan : 431 Integration stop scan: 536

Y at integration start : 0 Y at integration end: 0

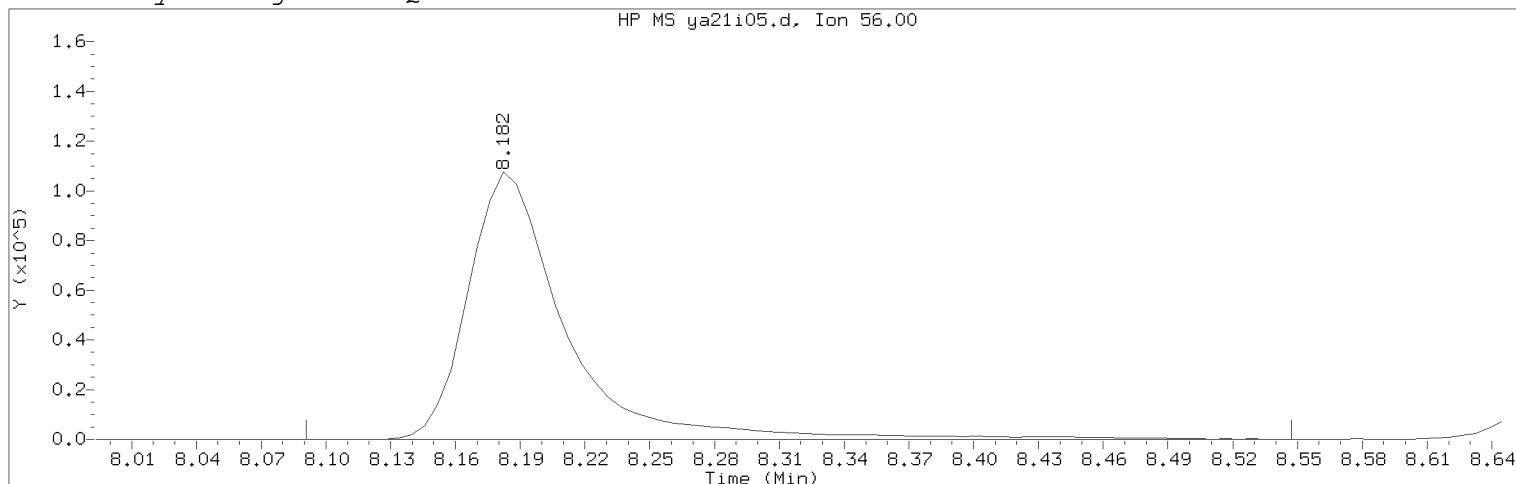
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.

Target 3.5 esignature user RAE59 Page 456 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 69	
Compound Name	: n-Butanol	
Scan Number	: 1085	
Retention Time (minutes)	: 8.182	
Quant Ion	: 56.00	
Area (flag)	: 337962M	
On-Column Amount (ng)	: 479.0304	
Integration start scan	: 1069	Integration stop scan: 1144
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

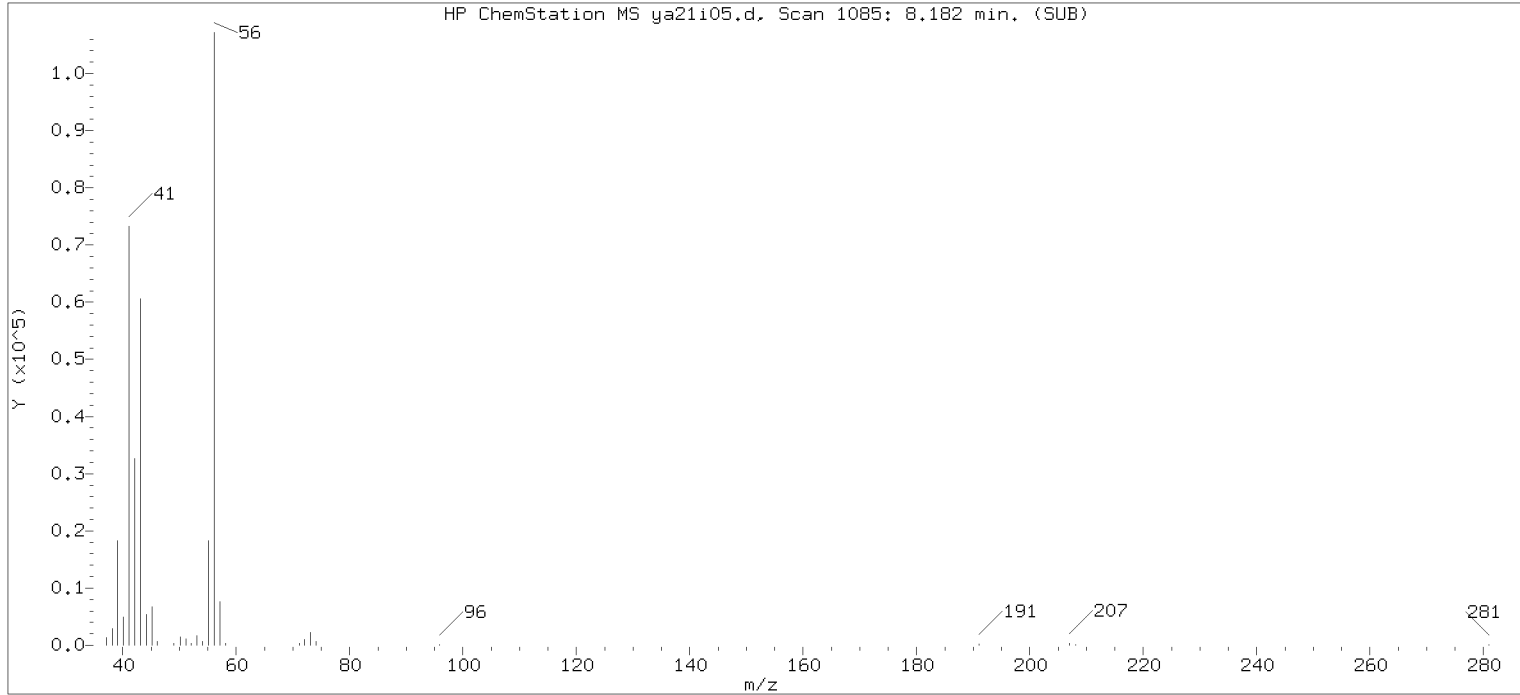
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

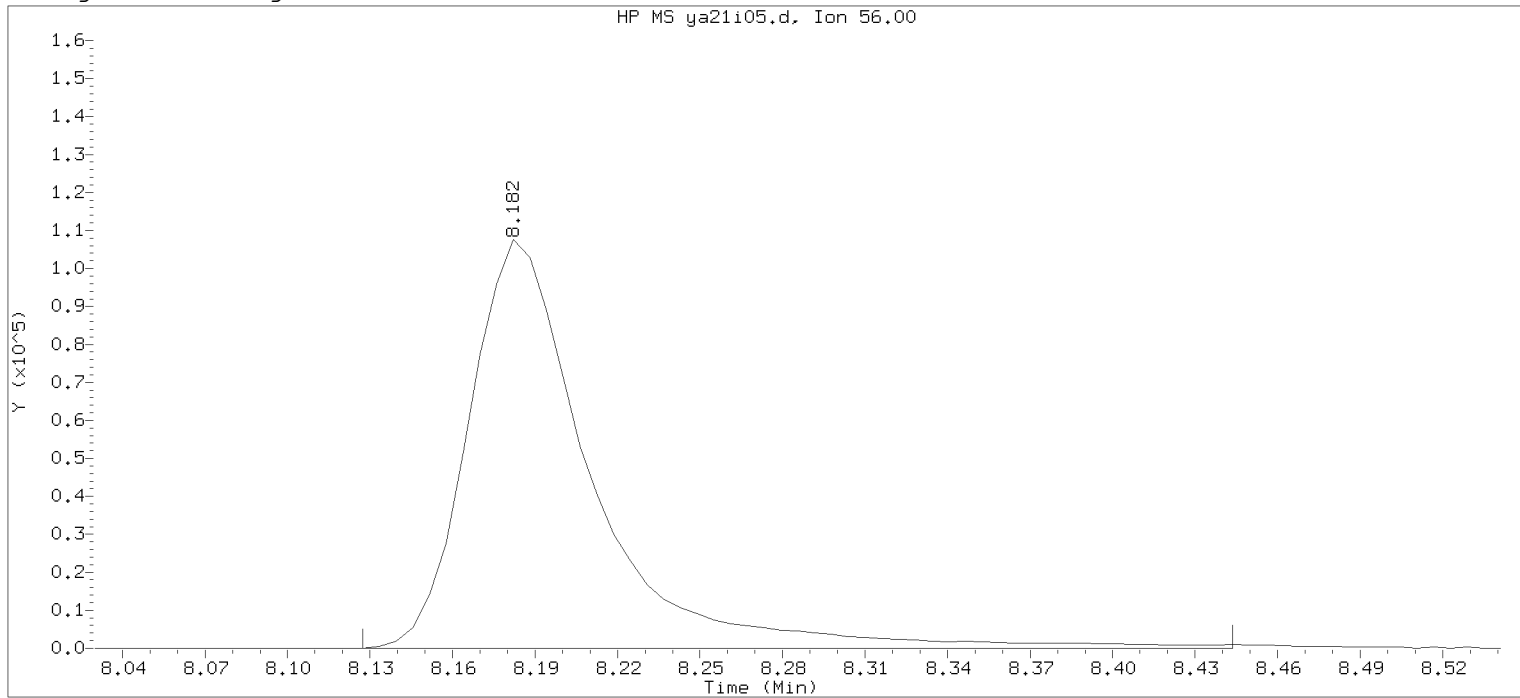
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

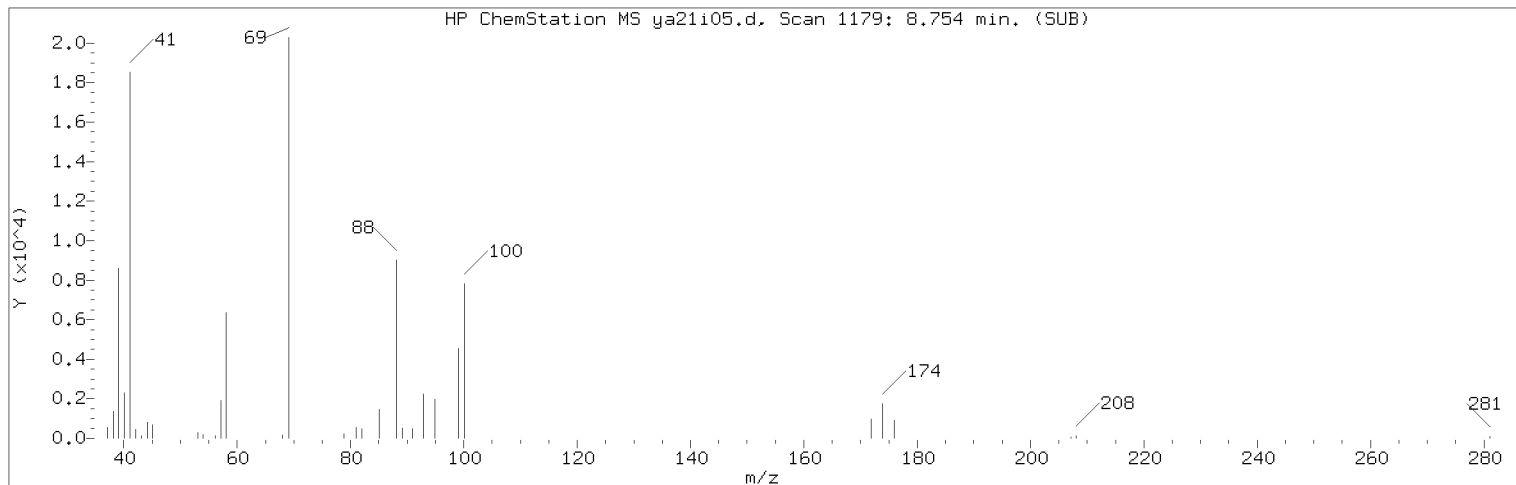
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

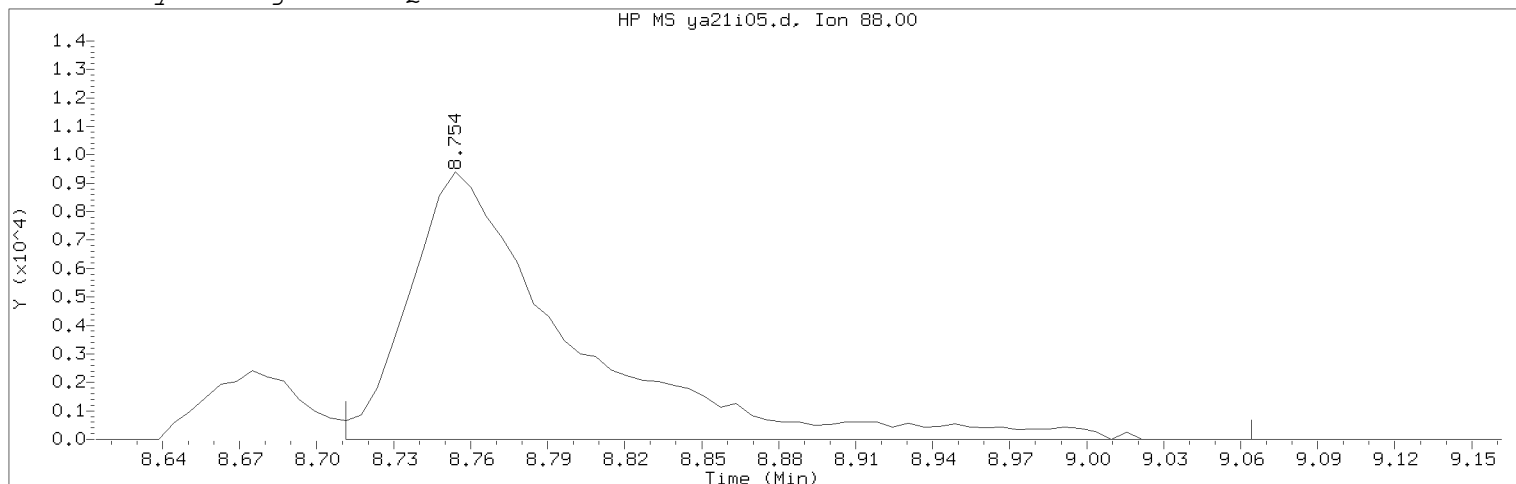
Lab Sample ID: VSTD010

Compound Number	: 69	
Compound Name	: n-Butanol	
Scan Number	: 1085	
Retention Time (minutes)	: 8.182	
Quant Ion	: 56.00	
Area	: 335737	
On-column Amount (ng)	: 543.0931	
Integration start scan	: 1075	Integration stop scan: 1127
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:04

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

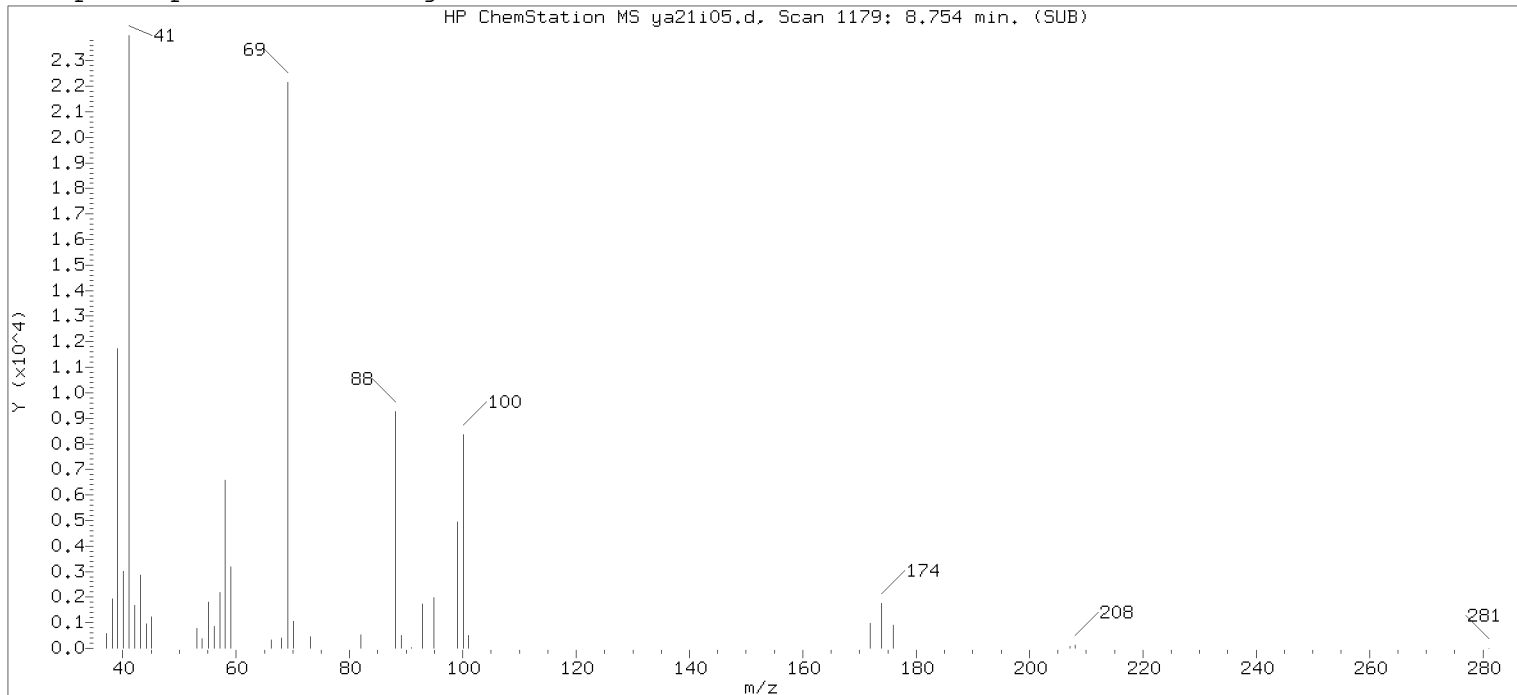
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.754
Quant Ion : 88.00
Area (flag) : 41144M
On-Column Amount (ng) : 242.0425
Integration start scan : 1171 Integration stop scan: 1229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

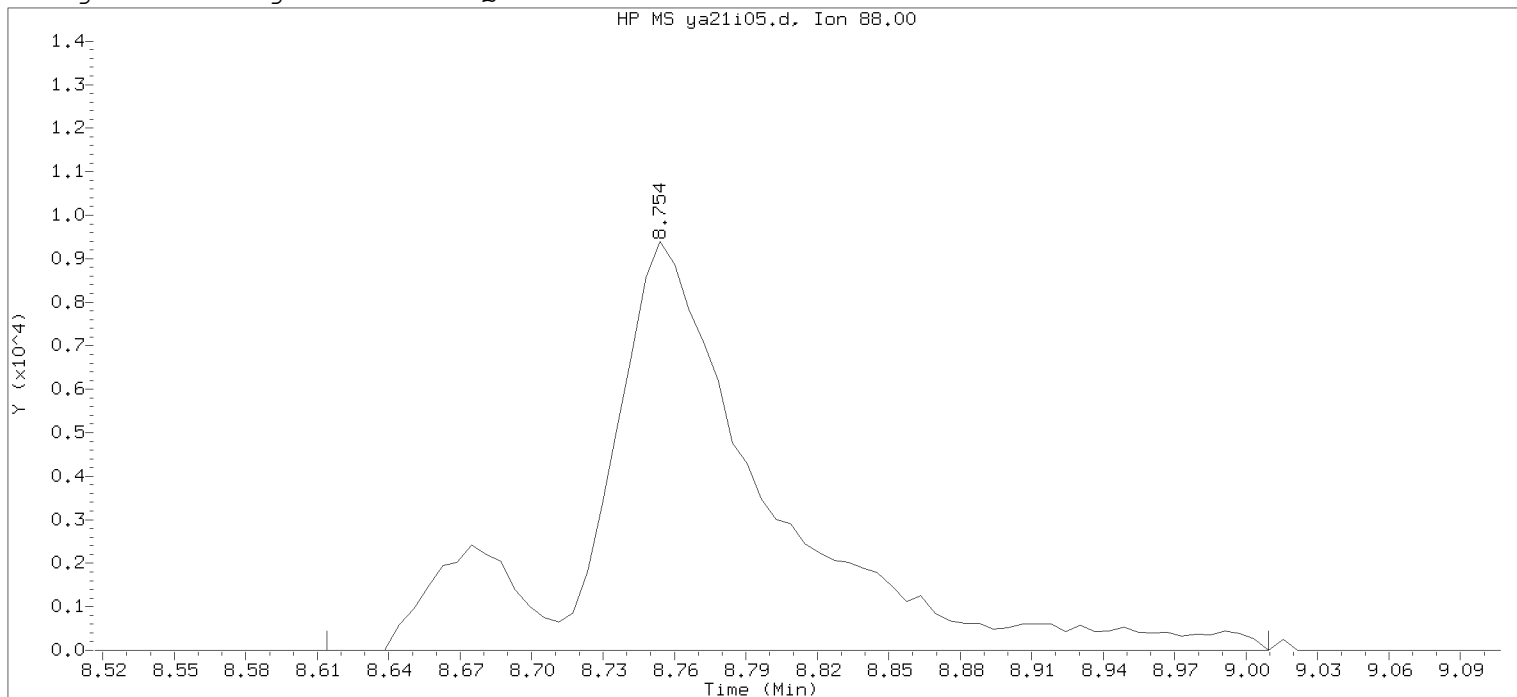
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

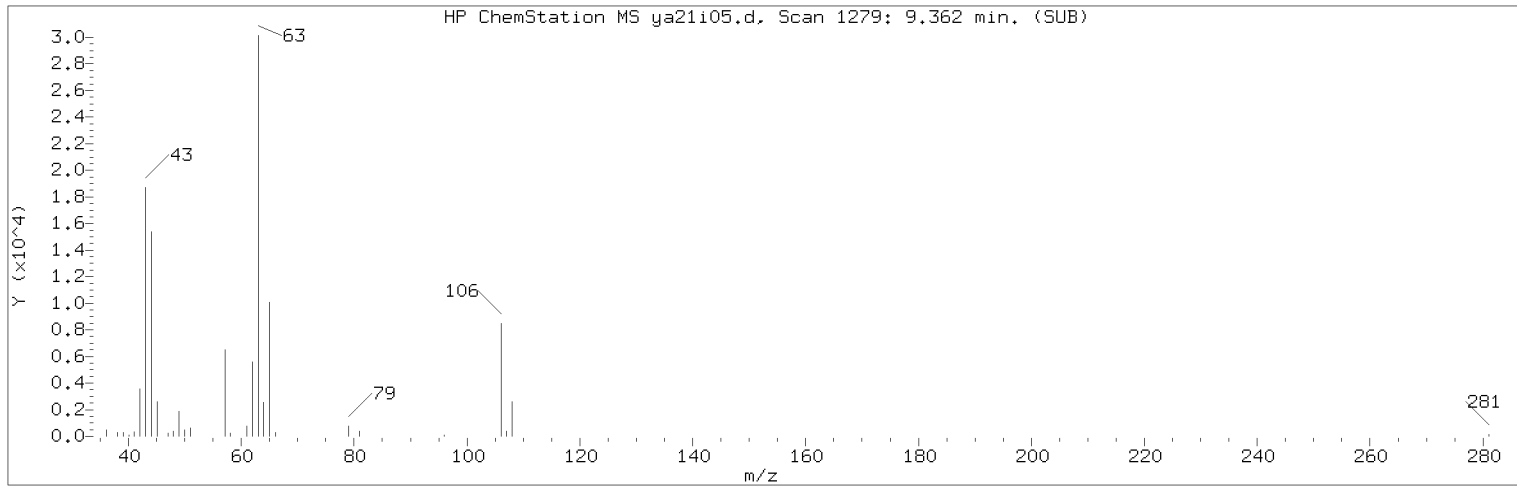
Lab Sample ID: VSTD010

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1179
 Retention Time (minutes): 8.754
 Quant Ion : 88.00
 Area : 47173
 On-column Amount (ng) : 249.3585
 Integration start scan : 1155
 Y at integration start : 0

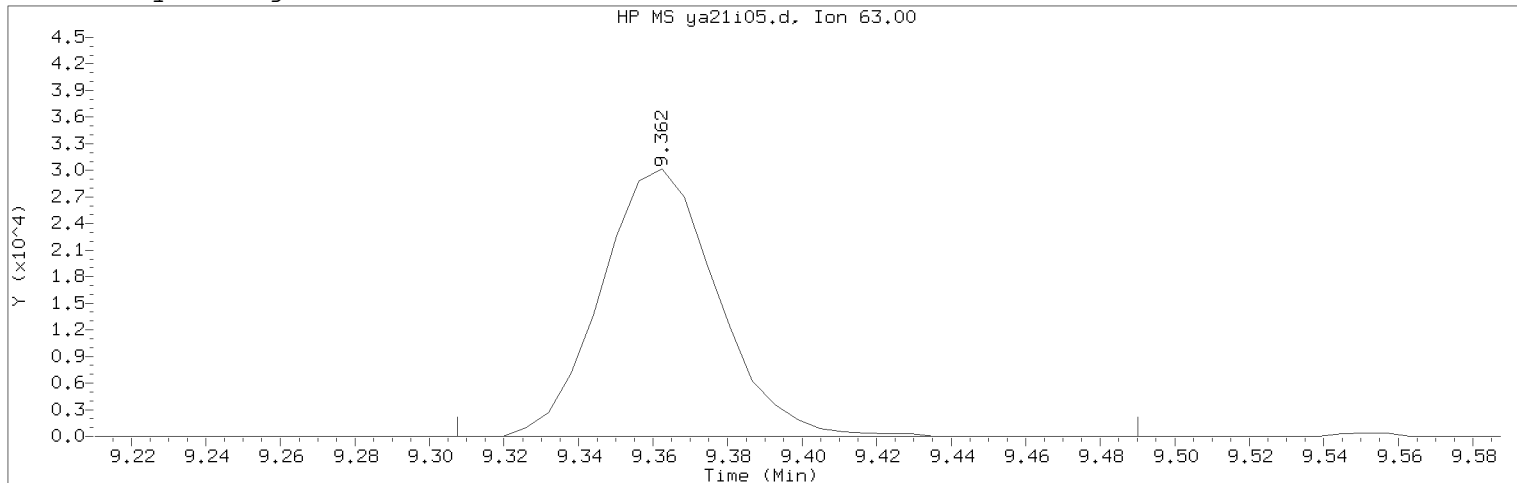
Integration stop scan: 1220
 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.
 Target 3.5 esignature user RAE59 Page 462 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

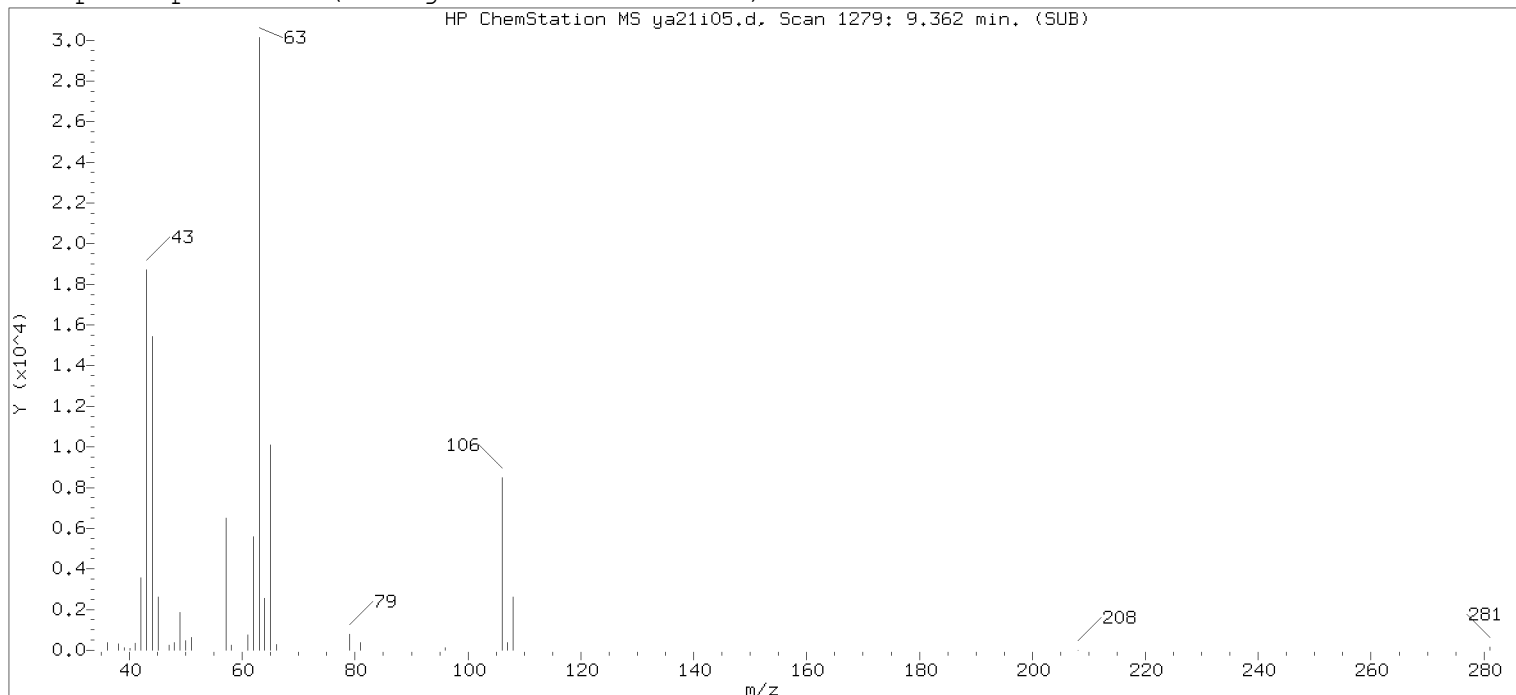
Compound Number	: 80	
Compound Name	: 2-Chloroethyl Vinyl Ether	
Scan Number	: 1279	
Retention Time (minutes)	: 9.362	
Quant Ion	: 63.00	
Area (flag)	: 65168M	
On-Column Amount (ng)	: 9.2156	
Integration start scan	: 1269	Integration stop scan: 1299
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

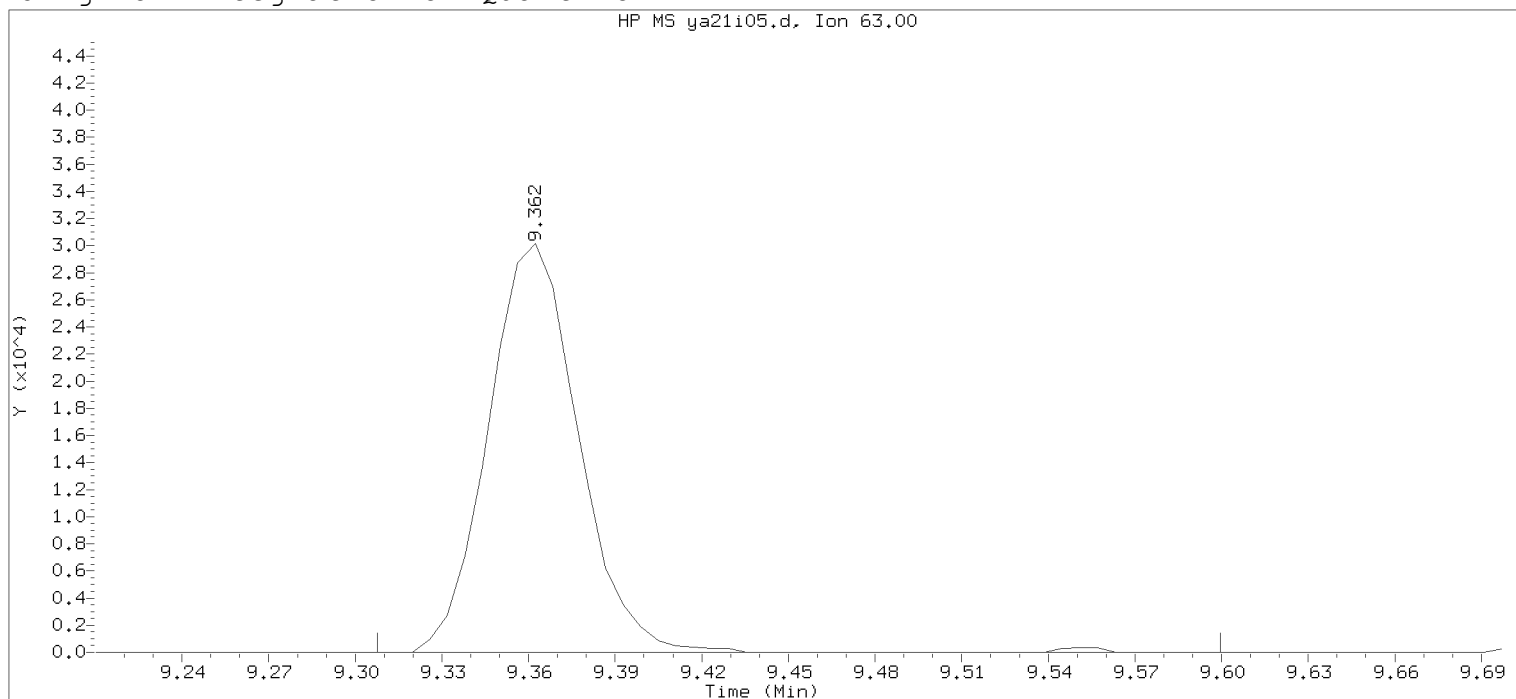
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

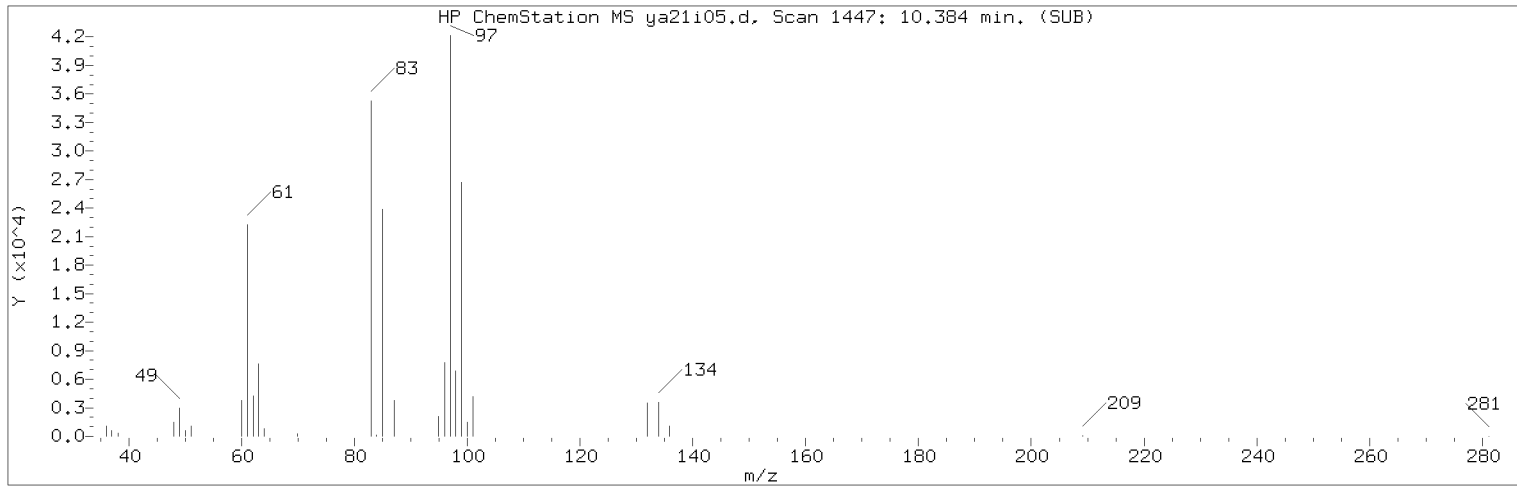
Lab Sample ID: VSTD010

Compound Number	: 80	
Compound Name	: 2-Chloroethyl Vinyl Ether	
Scan Number	: 1279	
Retention Time (minutes)	: 9.362	
Quant Ion	: 63.00	
Area	: 65528	
On-column Amount (ng)	: 9.8446	
Integration start scan	: 1269	Integration stop scan: 1317
Y at integration start	: 0	Y at integration end: 0

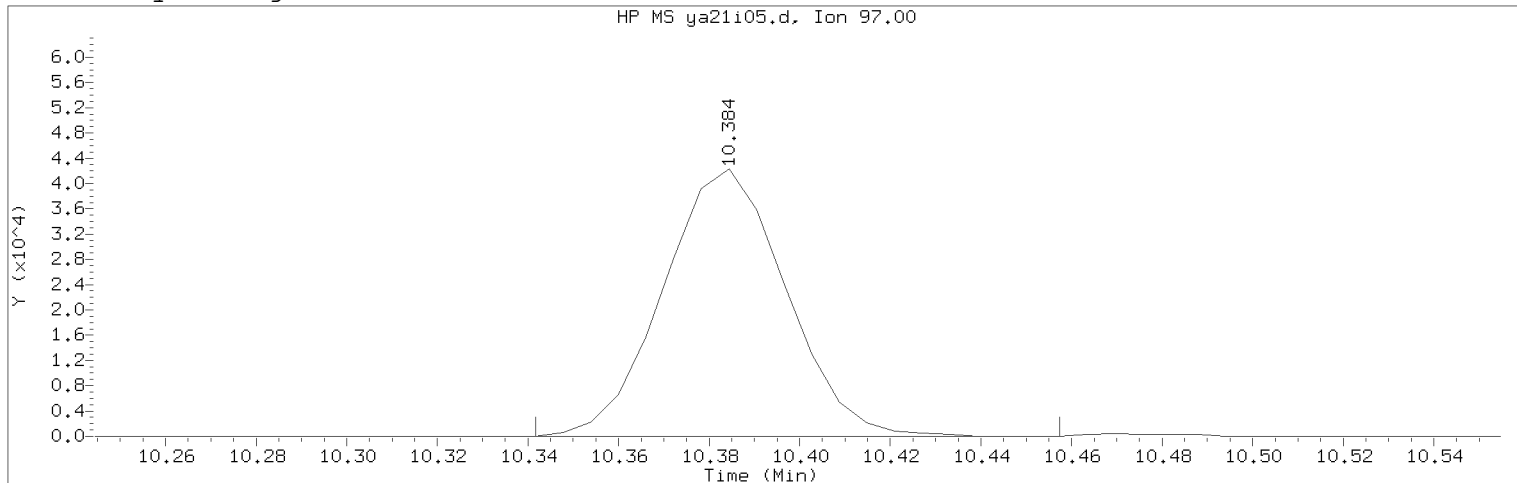
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.

Target 3.5 esignature user RAE59 Page 462 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

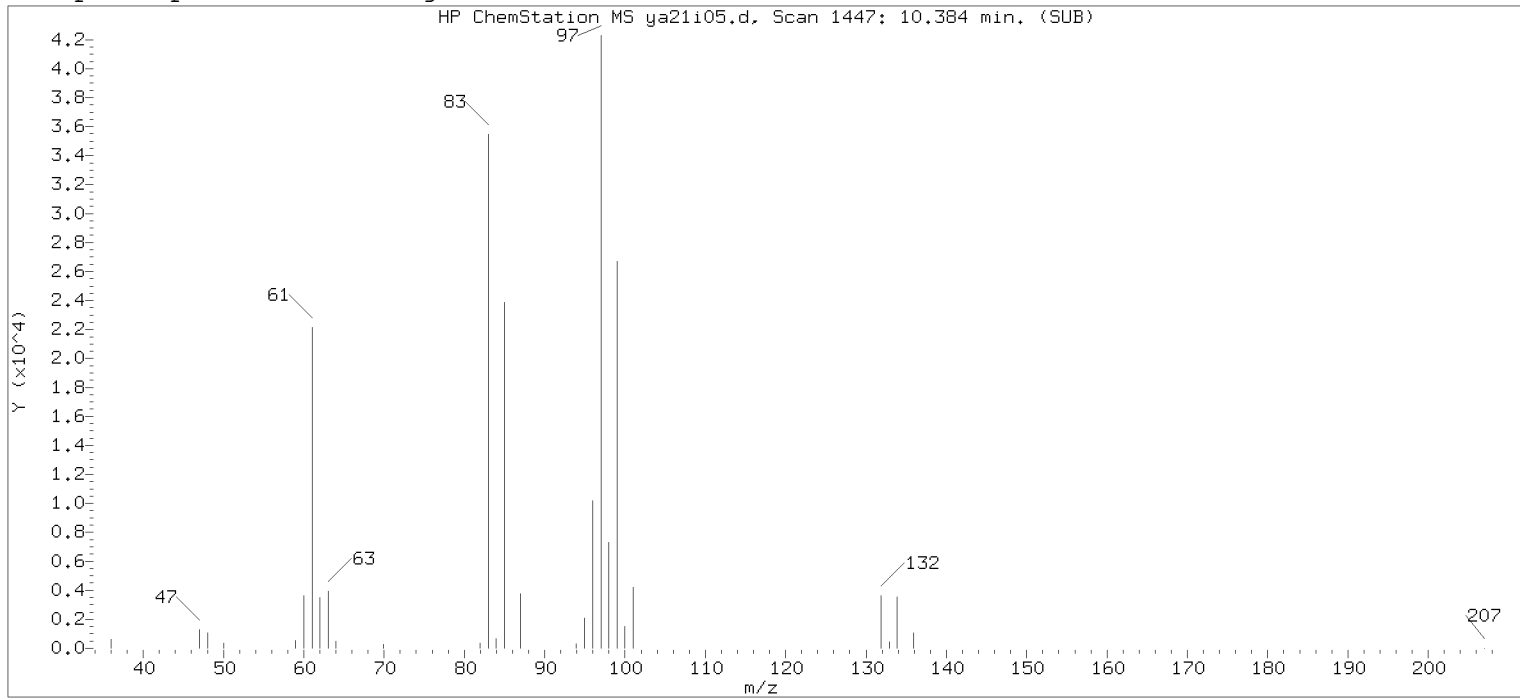
Compound Number : 92
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1447
Retention Time (minutes): 10.384
Quant Ion : 97.00
Area (flag) : 79117M
On-Column Amount (ng) : 9.6896
Integration start scan : 1439 Integration stop scan: 1458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

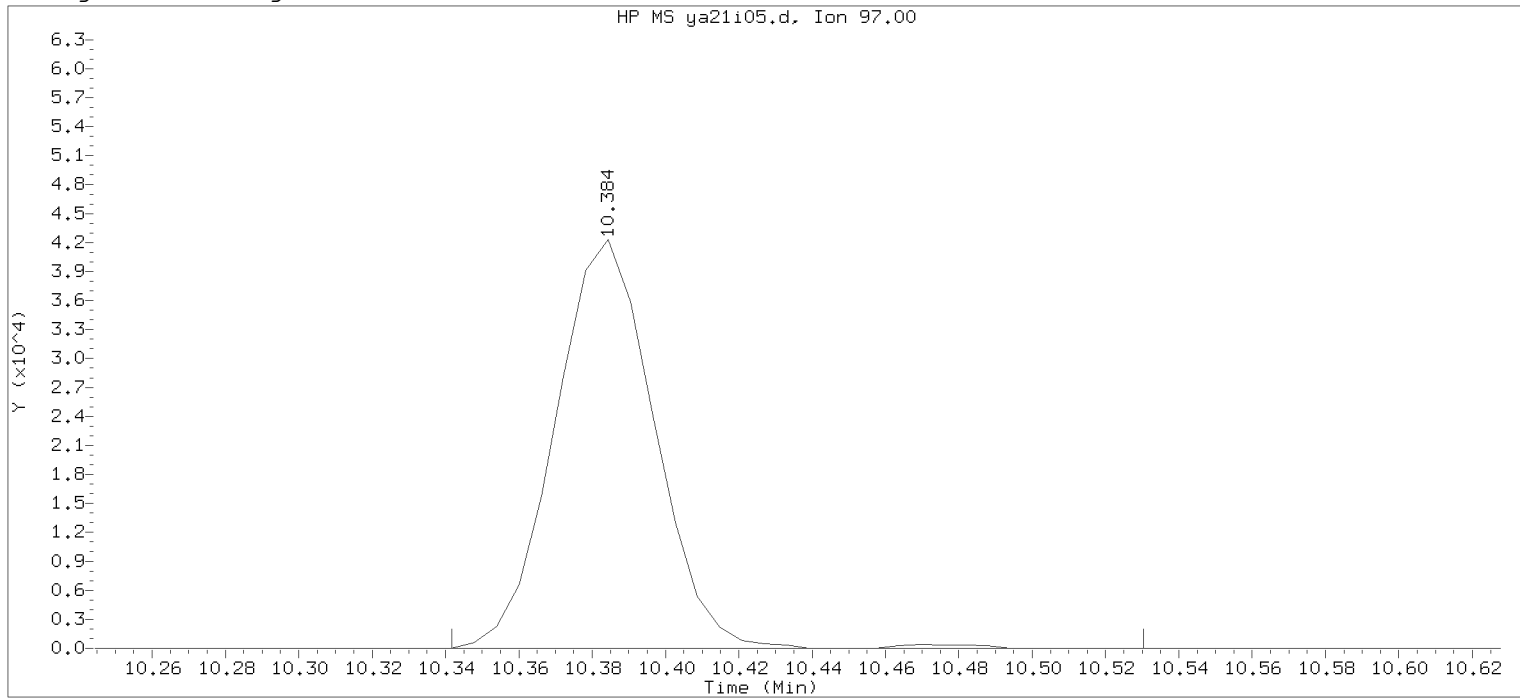
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

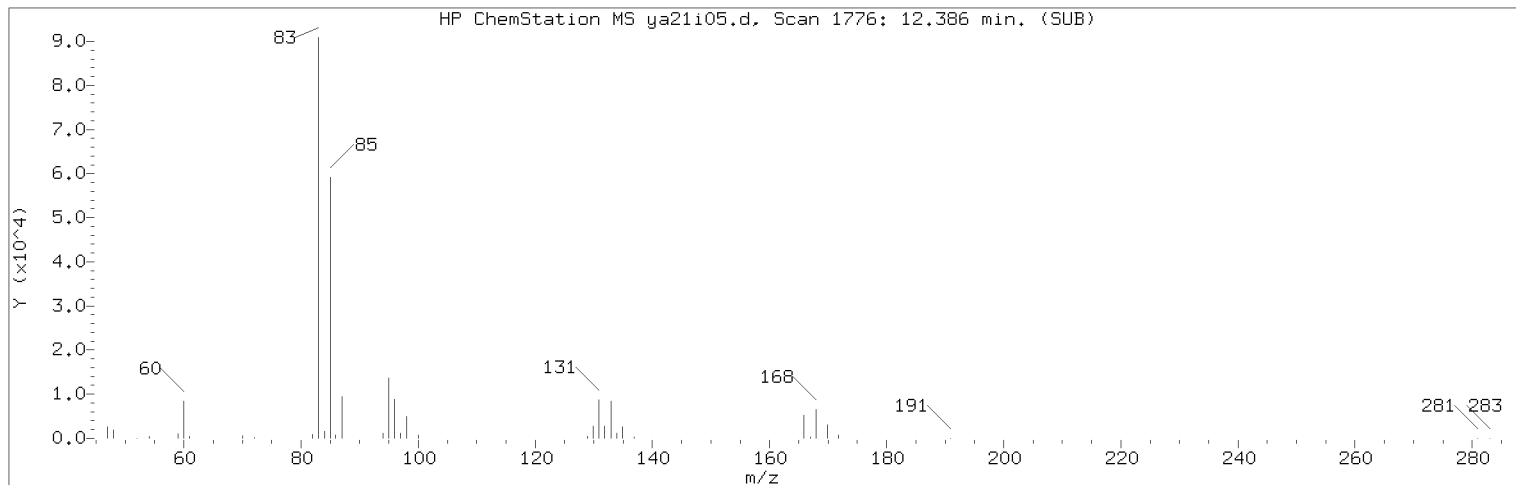
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

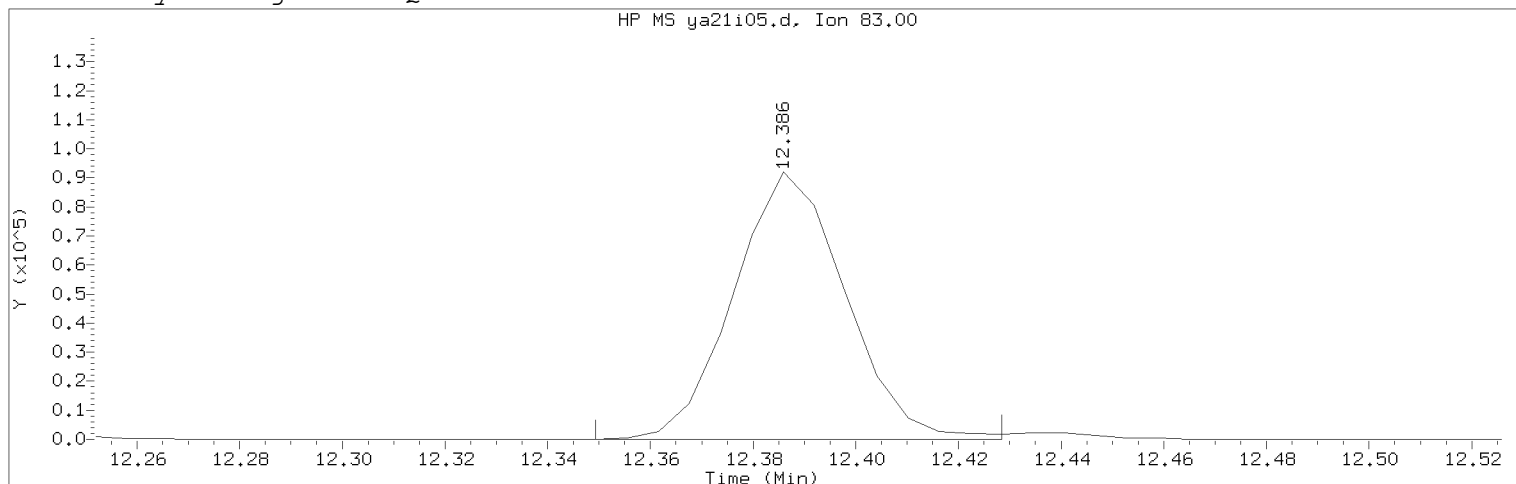
Lab Sample ID: VSTD010

Compound Number	: 92	
Compound Name	: 1,1,2-Trichloroethane	
Scan Number	: 1447	
Retention Time (minutes)	: 10.384	
Quant Ion	: 97.00	
Area	: 79715	
On-column Amount (ng)	: 9.9555	
Integration start scan	: 1439	Integration stop scan: 1470
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:22 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:04
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

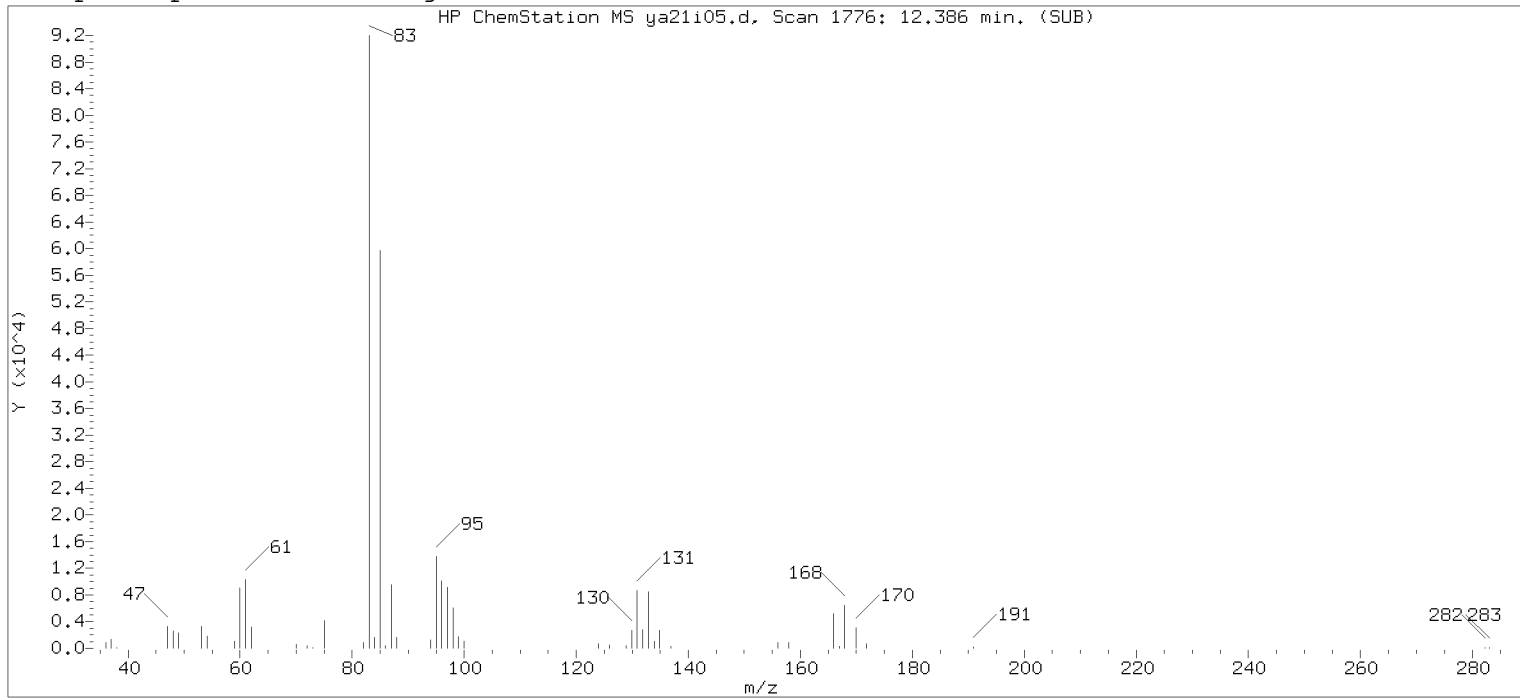
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1776
Retention Time (minutes): 12.386
Quant Ion : 83.00
Area (flag) : 138826M
On-Column Amount (ng) : 9.7635
Integration start scan : 1769 Integration stop scan: 1782
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

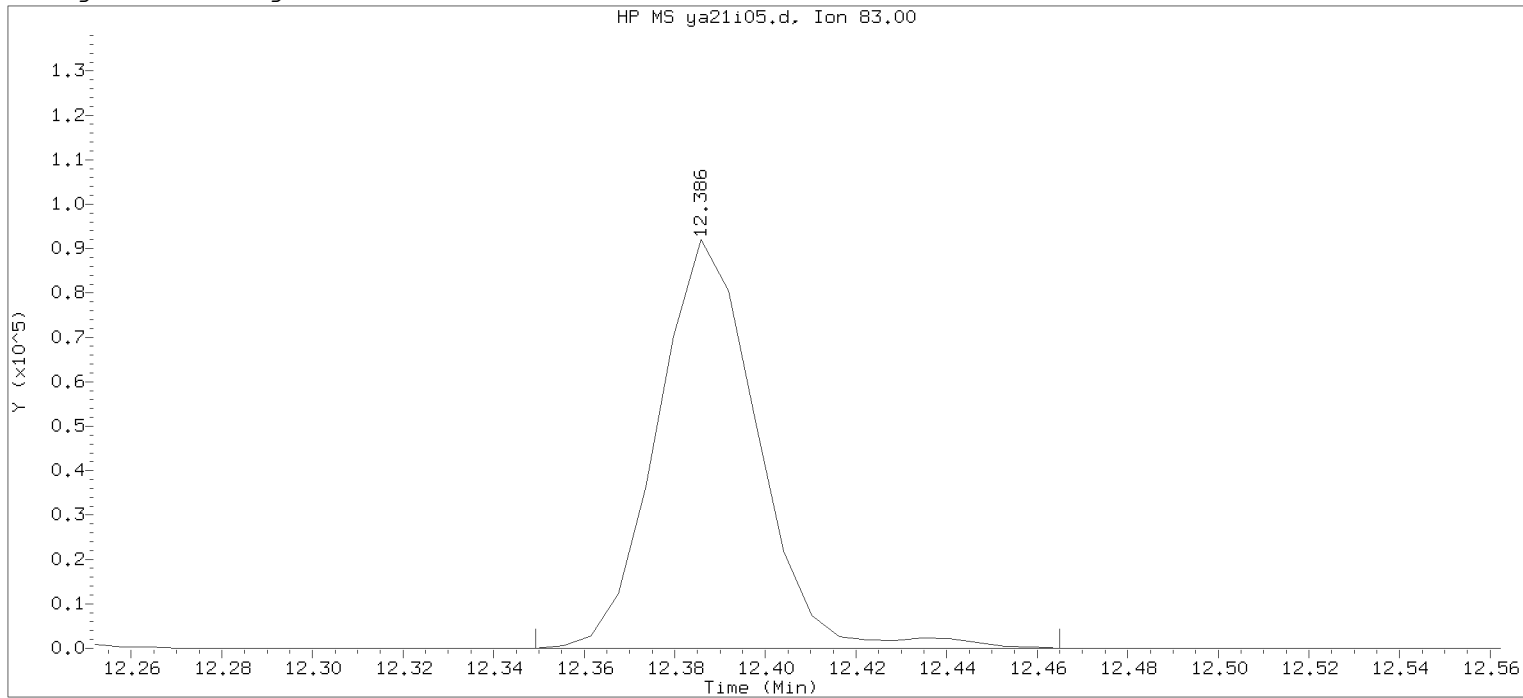
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i05.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:22

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

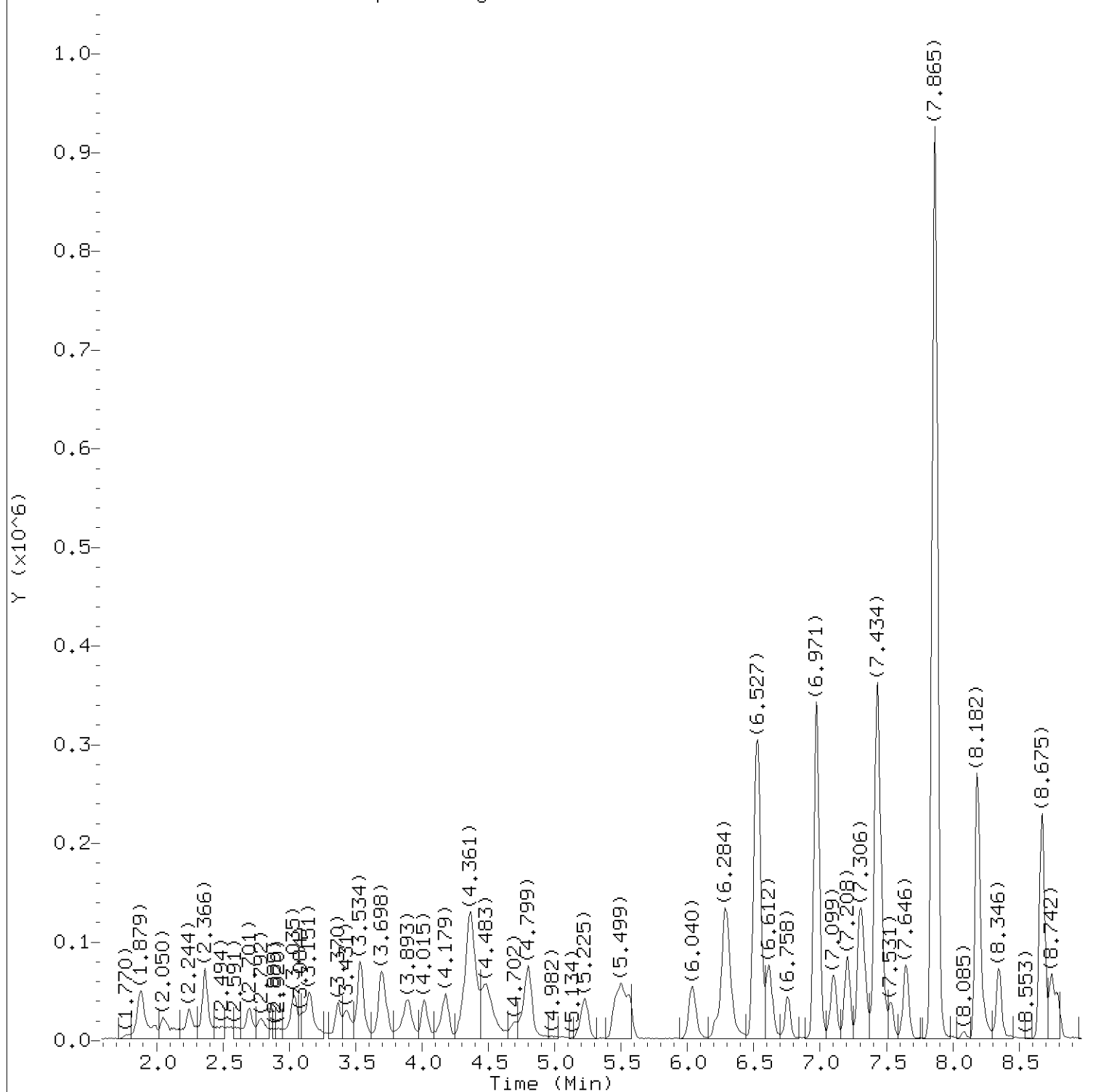
Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 116	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1776	
Retention Time (minutes)	: 12.386	
Quant Ion	: 83.00	
Area	: 141197	
On-column Amount (ng)	: 10.0227	
Integration start scan	: 1769	Integration stop scan: 1788
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d
Injection date and time: 21-APR-2020 23:44

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:05

Sublist used: 8260W

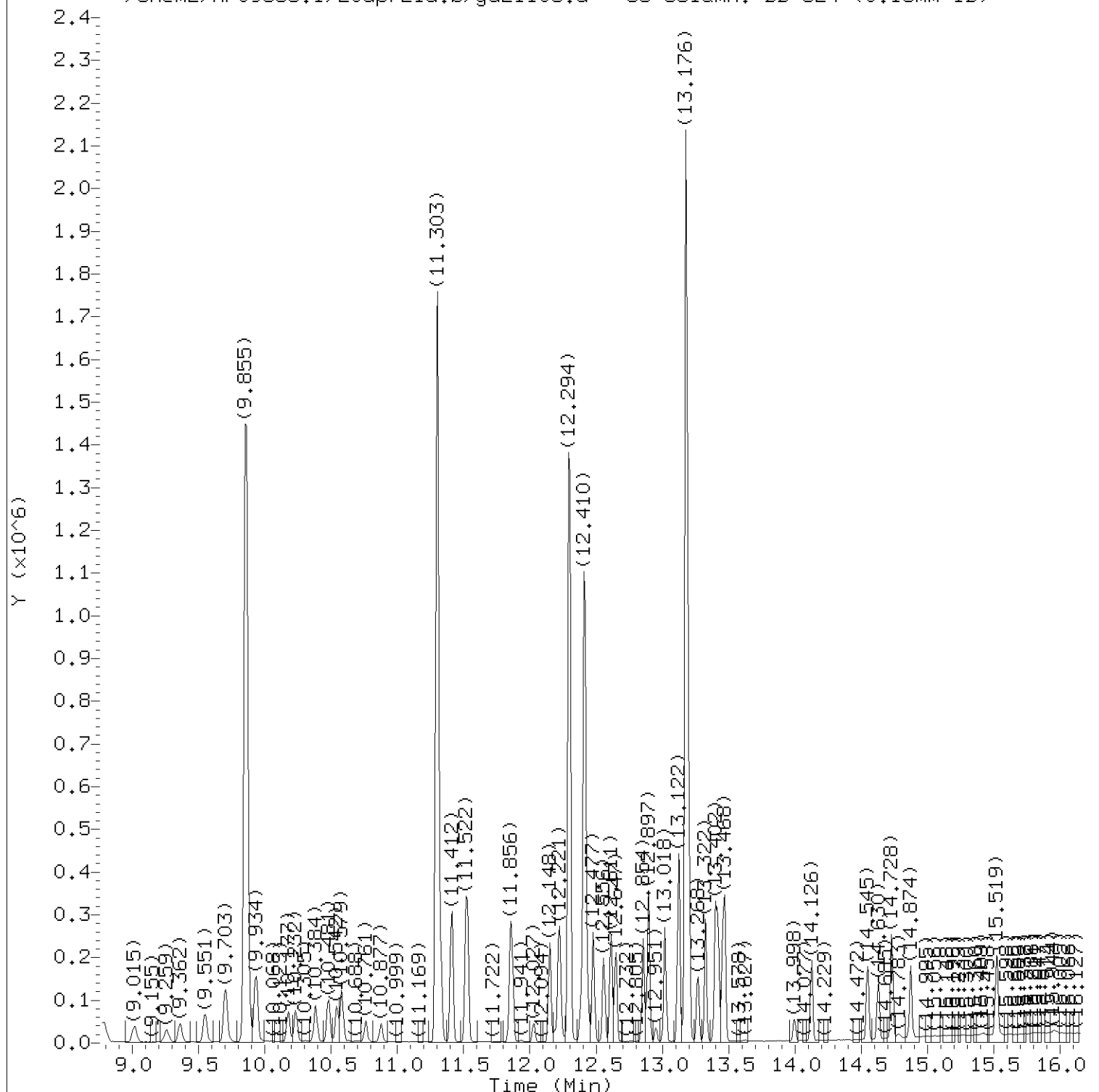
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d
Injection date and time: 21-APR-2020 23:44

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:05

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.050	85	32245	3.692
4) Chloromethane	(2)	2.250	50	30583	3.939
5) 1,3-Butadiene	(2)	2.366	39	26315	4.146
6) Vinyl Chloride	(2)	2.366	62	30882	3.945
8) Bromomethane	(2)	2.701	94	22322	4.183
9) Chloroethane	(2)	2.792	64	17931	4.158
10) Dichlorofluoromethane	(2)	3.029	67	46791	4.081
12) Trichlorofluoromethane	(2)	3.102	101	36093	3.992
11) n-Pentane	(2)	3.151	43	41702	4.247
14) Ethyl ether	(2)	3.364	59	28499	4.104
15) Freon 123a	(2)	3.431	67	33734	4.074
16) Acrolein	(1)	3.534	56	126824	39.938
17) 1,1-Dichloroethene	(2)	3.686	96	30025	4.390
17) 1,1-Dichloroethene	(2)	3.686	63	12363	3.865
18) Acetone	(1)	3.704	58	12333	8.179
19) Freon 113	(2)	3.716	101	25147	3.808
21) 2-Propanol	(1)	3.875	45	88415	81.250
22) Methyl Iodide	(2)	3.899	142	44678	3.892
23) Carbon Disulfide	(2)	4.021	76	92979	3.992
27) Methyl Acetate	(2)	4.148	43	39220	3.897
25) Allyl Chloride	(2)	4.179	41	46502	4.122
29)*t-Butyl alcohol-d10	(1)	4.361	65	386560	250.000
28) Methylene Chloride	(2)	4.374	84	29840	3.878
30) t-Butyl alcohol	(1)	4.489	59	154831	80.993
31) Acrylonitrile	(2)	4.702	53	22280	3.863
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	89798	4.071
32) trans-1,2-Dichloroethene	(2)	4.805	96	32071	4.133
34) n-Hexane	(2)	5.225	57	44284	3.778
36) 1,1-Dichloroethane	(2)	5.456	63	52317	3.887
38) di-Isopropyl ether	(2)	5.499	45	94735	3.837
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	40542	3.679
40) Ethyl t-butyl ether	(2)	6.034	59	84740	3.858
43) 1,2-Dichloroethene (Total)	(2)		96	68117	8.250
44) 2-Butanone	(2)	6.223	43	58737	7.670
42) cis-1,2-Dichloroethene	(2)	6.284	96	36046	4.116
45) 2,2-Dichloropropane	(2)	6.290	77	39611	3.896
47) Propionitrile	(1)	6.302	54	186330	81.538
48) Methacrylonitrile	(2)	6.527	67	223106	38.523

* = Compound is an internal standard.

page 1 of 4

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

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Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.612	128	16505	3.986
50) Tetrahydrofuran	(1)	6.624	71	16191	7.531
51) Chloroform	(2)	6.758	83	50172	3.893
52) \$Dibromofluoromethane	(2)	6.971	113	292092	49.749
52) \$Dibromofluoromethane	(2)	6.971	111	298369	49.751
53) 1,1,1-Trichloroethane	(2)	6.983	97	43076	3.890
54) Cyclohexane	(2)	7.099	56	52524	3.764
54) Cyclohexane	(2)	7.105	84	43569	3.743
54) Cyclohexane	(2)	7.093	69	16128	3.746
55) 1,1-Dichloropropene	(2)	7.202	75	41204	3.817
56) Carbon Tetrachloride	(2)	7.208	117	35581	3.769
58) Isobutyl Alcohol	(1)	7.306	41	138619	202.351
57) \$1,2-Dichloroethane-d4	(2)	7.434	102	78583	50.805
57) \$1,2-Dichloroethane-d4	(2)	7.427	65	348643	50.619
57) \$1,2-Dichloroethane-d4	(2)	7.434	104	49661	50.391
60) Benzene	(2)	7.464	78	129050	3.991
61) 1,2-Dichloroethane	(2)	7.537	62	41151	4.018
61) 1,2-Dichloroethane	(2)	7.531	98	3747	3.744
65) t-Amyl methyl ether	(2)	7.646	73	87291	3.955
66) *Fluorobenzene	(2)	7.865	96	1291427	50.000
67) n-Heptane	(2)	7.878	43	49020	3.903
69) n-Butanol	(1)	8.182	56	249919	377.613
71) Trichloroethene	(2)	8.346	95	31254	3.853
72) Methylcyclohexane	(2)	8.662	83	57273	3.954
72) Methylcyclohexane	(2)	8.669	98	24845	3.896
73) 1,2-Dichloropropane	(2)	8.675	63	32309	3.874
76) Methyl Methacrylate	(2)	8.742	69	29051	3.421
75) 1,4-Dioxane	(1)	8.754	88	30623M	191.522
74) Dibromomethane	(2)	8.790	93	20359	3.828
78) Bromodichloromethane	(2)	9.015	83	34740	3.576
79) 2-Nitropropane	(2)	9.259	41	24931M	7.168
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	23915	3.511
81) cis-1,3-Dichloropropene	(2)	9.551	75	46728	3.524
82) 4-Methyl-2-pentanone	(2)	9.703	43	104618	7.150
83) \$Toluene-d8	(3)	9.861	98	1241534	50.163
83) \$Toluene-d8	(3)	9.861	100	792578	49.892
88) Toluene	(3)	9.934	92	78537	3.910
90) 1,3-Dichloropropene (total)	(3)		100	89634	7.040

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.177	75	42906	3.516
91) Ethyl Methacrylate	(3)	10.232	69	43254	3.218
92) 1,1,2-Trichloroethane	(3)	10.384	97	30366	3.831
93) Tetrachloroethene	(3)	10.481	166	31645	3.842
94) 1,3-Dichloropropane	(3)	10.542	76	51773	3.845
96) 2-Hexanone	(3)	10.579	43	81518	7.071
97) Dibromochloromethane	(3)	10.761	129	28237	3.488
99) 1,2-Dibromoethane	(3)	10.877	107	31520	3.649
100) *Chlorobenzene-d5	(3)	11.303	117	949078	50.000
101) 1-Chlorohexane	(3)	11.303	91	42074	3.818
102) Chlorobenzene	(3)	11.327	112	90372	3.983
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	28097	3.739
104) Ethylbenzene	(3)	11.412	91	149223	3.877
106) m+p-Xylene	(3)	11.522	106	117370	7.686
108) Xylene (Total)	(3)		106	174496	11.495
107) o-Xylene	(3)	11.850	106	57126	3.808
109) Styrene	(3)	11.868	104	86838	3.523
110) Bromoform	(3)	12.027	173	19113	3.185
111) Isopropylbenzene	(3)	12.148	105	144819	3.807
112) Cyclohexanone	(1)	12.221	55	114366	184.392
114) \$4-Bromofluorobenzene	(3)	12.294	95	471205M	50.213
114) \$4-Bromofluorobenzene	(3)	12.300	174	362330	50.141
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	54693	3.940
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	171417	38.181
115) Bromobenzene	(4)	12.416	156	37846	3.861
117) 1,2,3-Trichloropropane	(4)	12.434	110	16593	3.789
119) n-Propylbenzene	(4)	12.477	91	182355	3.976
120) 2-Chlorotoluene	(4)	12.556	126	36373	3.830
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	127067	3.798
121) 4-Chlorotoluene	(4)	12.647	126	38826	3.886
124) tert-Butylbenzene	(4)	12.854	134	25655	3.678
125) Pentachloroethane	(4)	12.891	167	19764	3.682
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	134162	3.810
127) sec-Butylbenzene	(4)	13.018	105	166885	3.896
129) 1,3-Dichlorobenzene	(4)	13.122	146	72555	3.870
130) p-Isopropyltoluene	(4)	13.128	119	139857	3.835
131) *1,4-Dichlorobenzene-d4	(4)	13.176	152	507990	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	75696	3.910

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

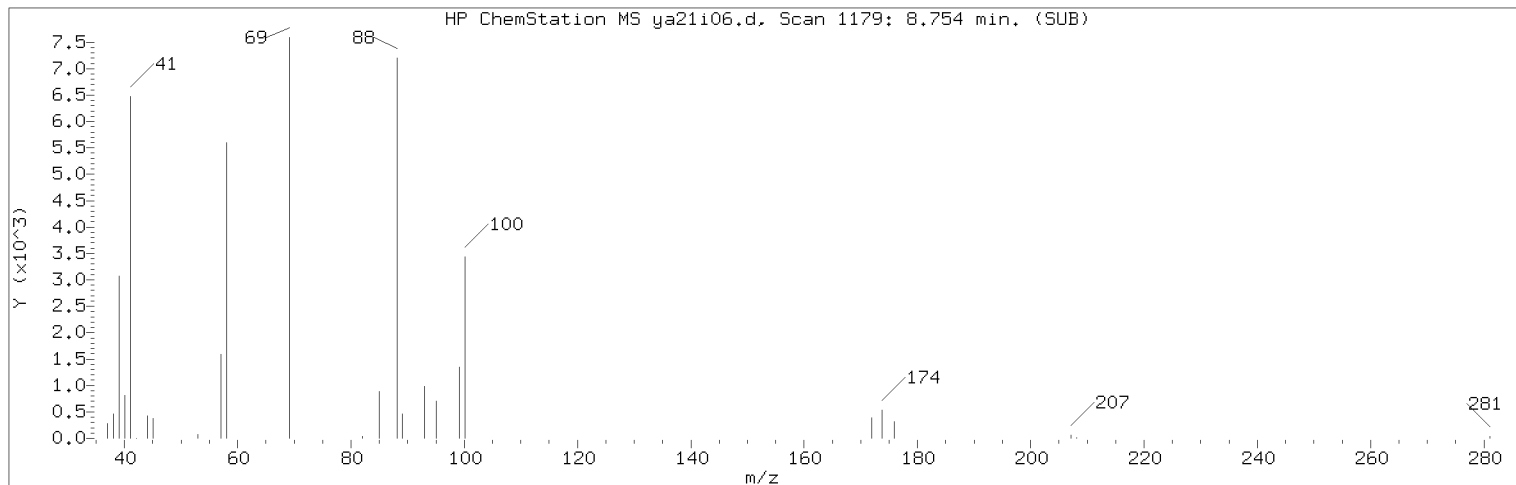
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	137472	4.039
135) Benzyl Chloride	(4)	13.268	91	98757	3.469
136) 1,3-Diethylbenzene	(4)	13.322	119	87721	3.973
141) Diethylbenzene (total)	(4)		100	254934	11.986
137) 1,4-Diethylbenzene	(4)	13.402	119	92516	3.975
139) n-Butylbenzene	(4)	13.420	92	77298	3.967
138) 1,2-Dichlorobenzene	(4)	13.456	146	71394	3.917
140) 1,2-Diethylbenzene	(4)	13.468	119	74697	4.038
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	11861	3.437
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	51983	3.827
146) 1,2,4-Trichlorobenzene	(4)	14.545	180	47706	3.743
147) Hexachlorobutadiene	(4)	14.630	225	22112	3.871
148) Naphthalene	(4)	14.728	128	178292	3.833
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	46987	3.828
150) 2-Methylnaphthalene	(4)	15.525	142	95080	3.701

page 4 of 4

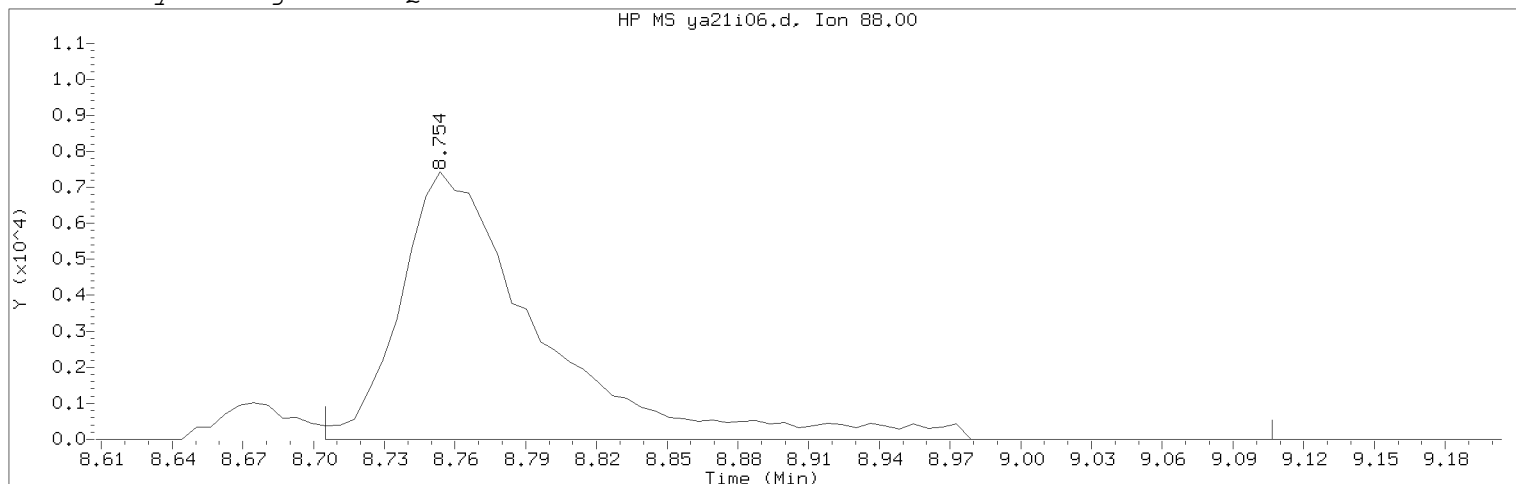
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1179	
Retention Time (minutes)	: 8.754	
Quant Ion	: 88.00	
Area (flag)	: 30623M	
On-Column Amount (ng)	: 191.5216	
Integration start scan	: 1170	Integration stop scan: 1236
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Jennifer K. Howe

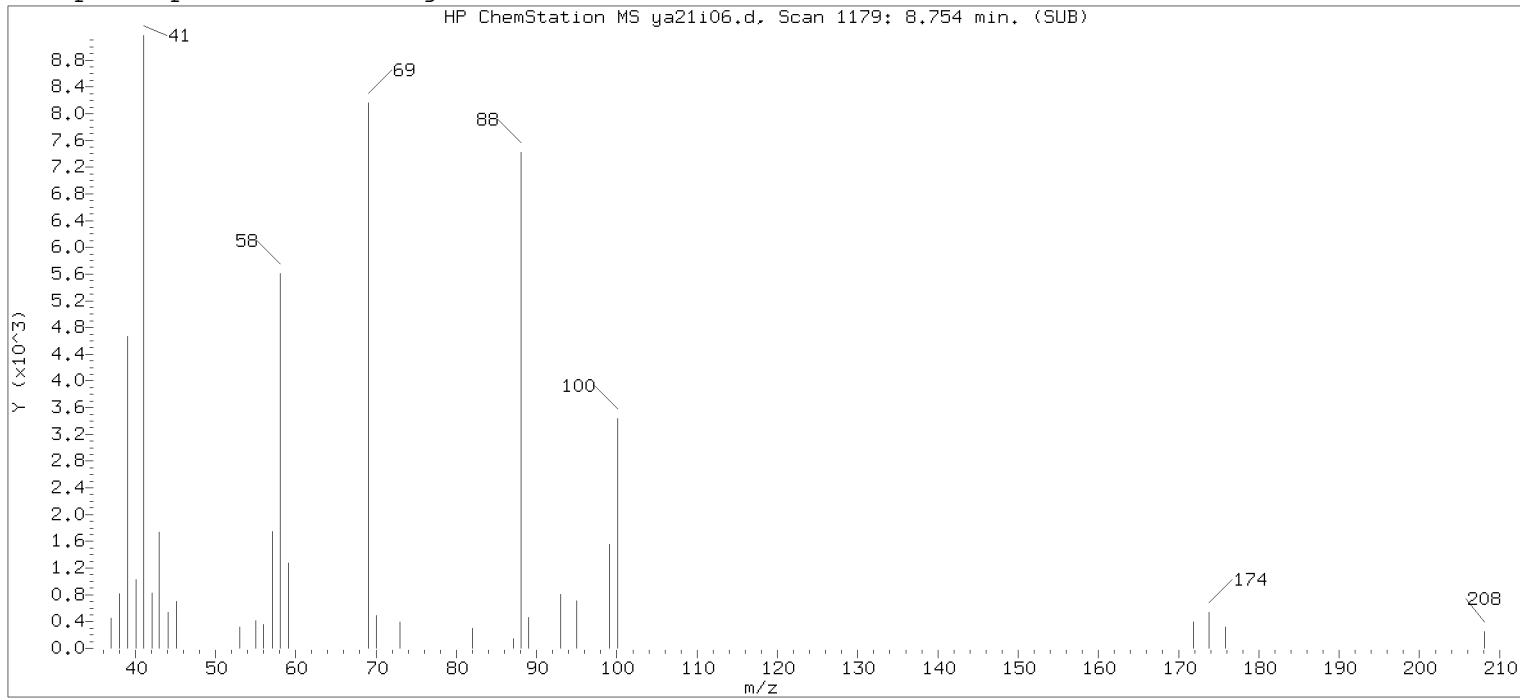
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

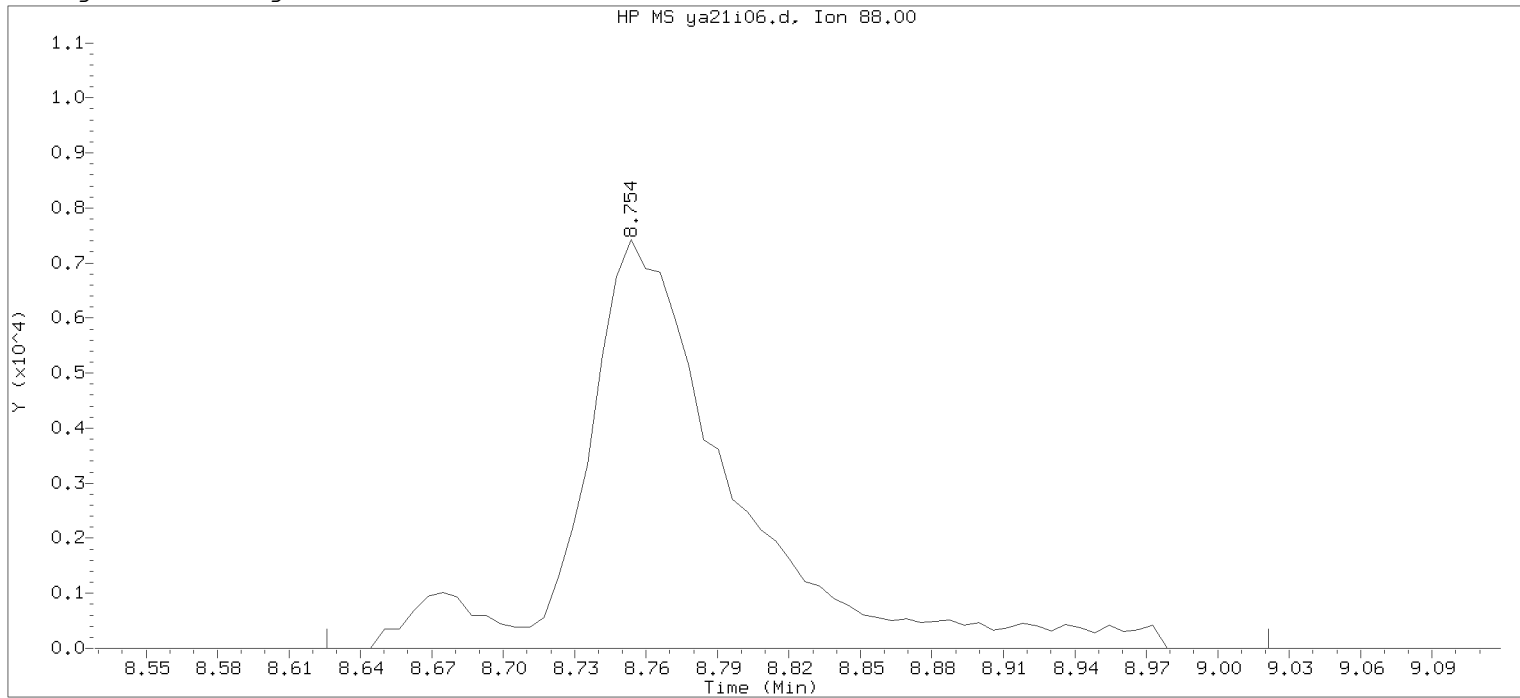
Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD004

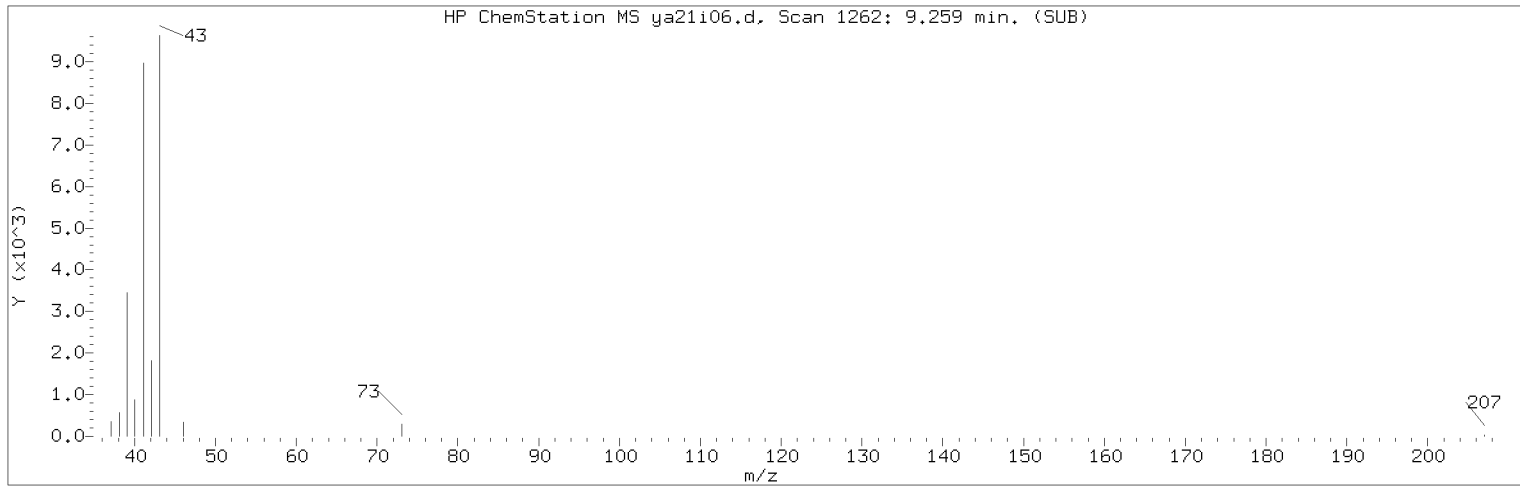
Lab Sample ID: VSTD004

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1179
 Retention Time (minutes): 8.754
 Quant Ion : 88.00
 Area : 32777
 On-column Amount (ng) : 177.7605
 Integration start scan : 1157
 Y at integration start : 0

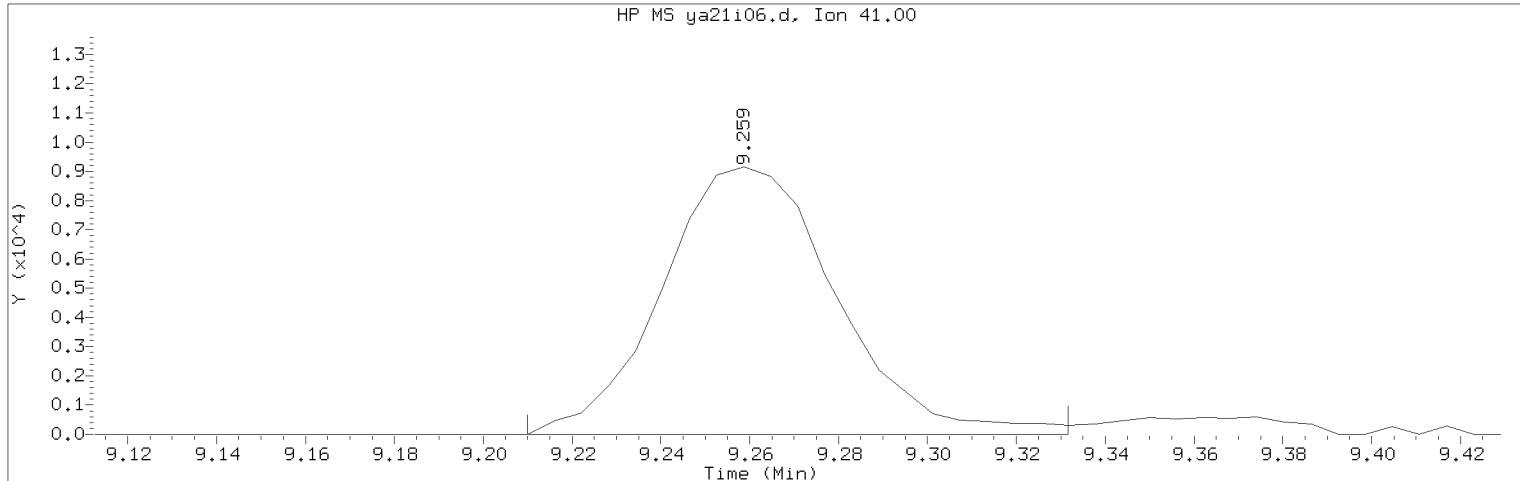
Integration stop scan: 1222
 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.
 Target 3.5 esignature user RAS9 Page 474 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:44 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:05
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

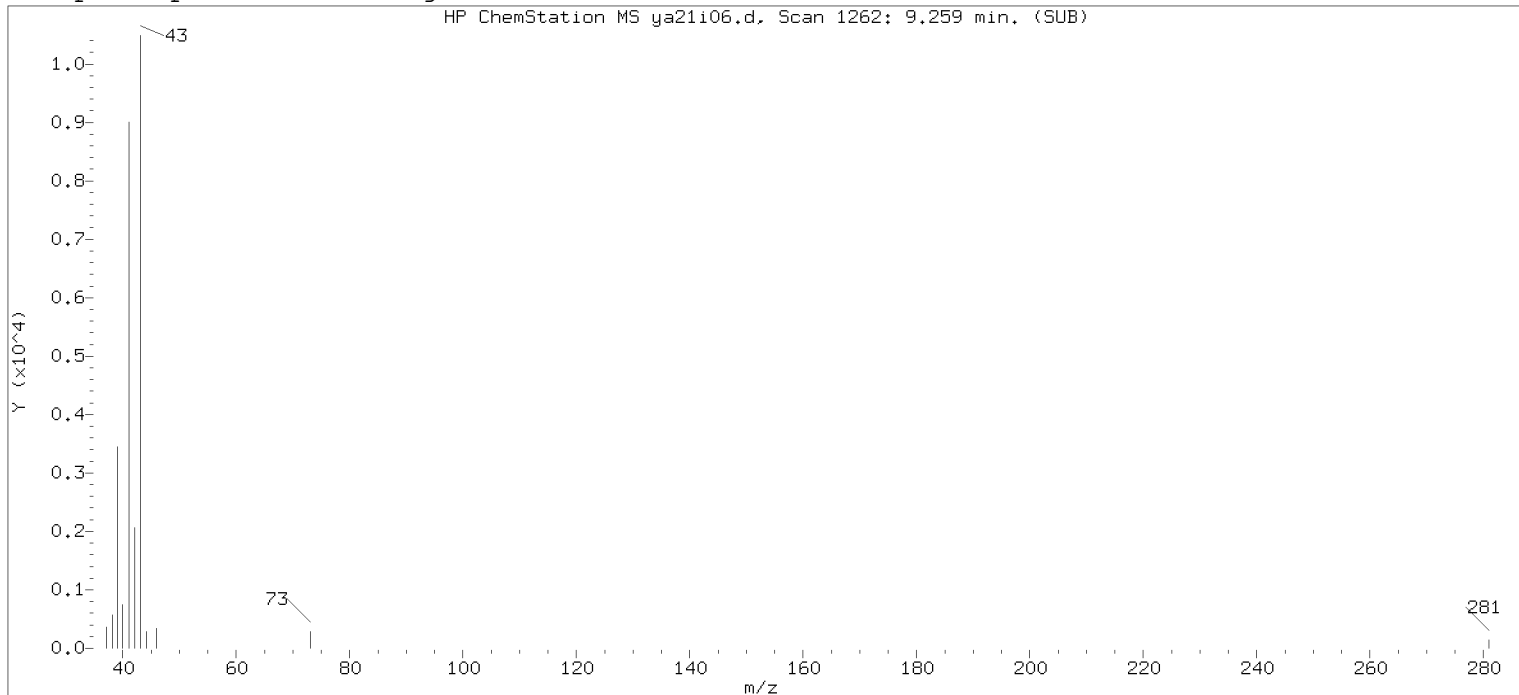
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1262
Retention Time (minutes): 9.259
Quant Ion : 41.00
Area (flag) : 24931M
On-Column Amount (ng) : 7.1677
Integration start scan : 1253 Integration stop scan: 1273
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

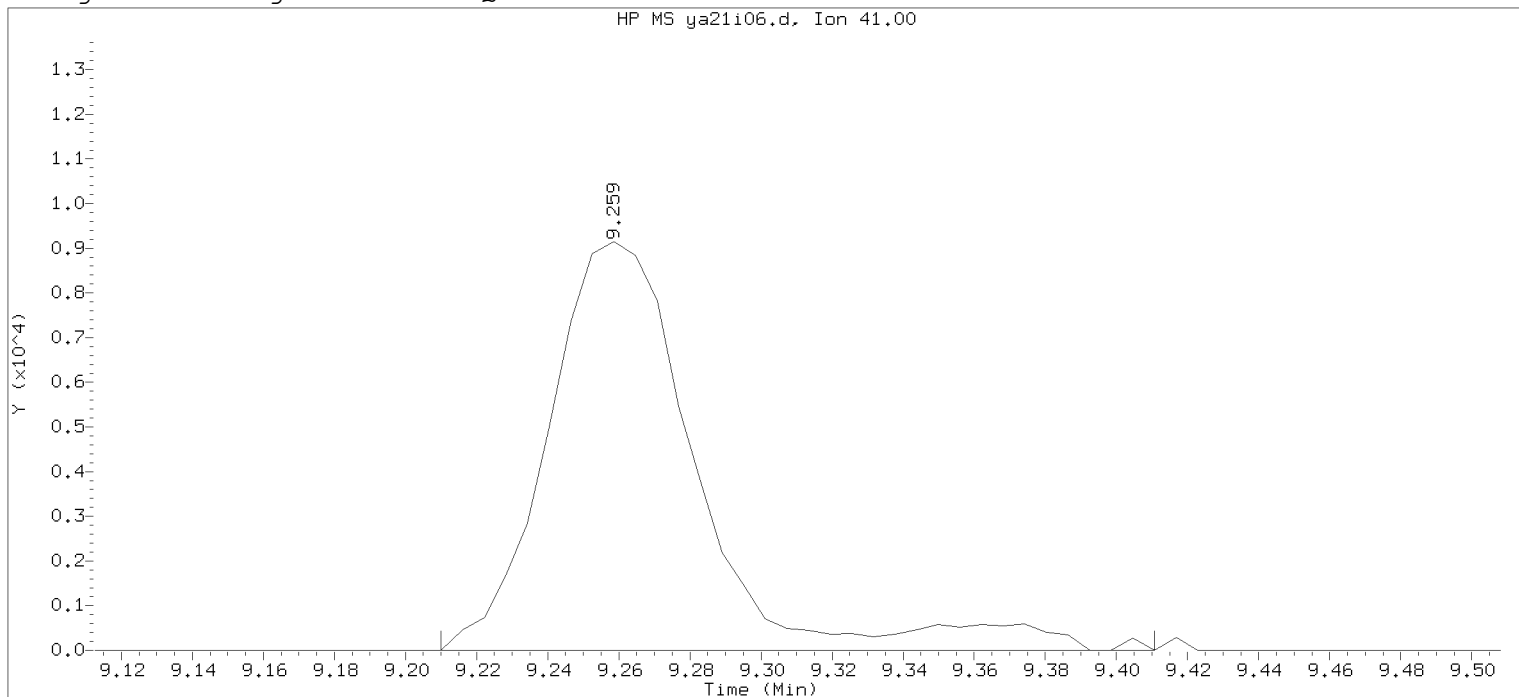
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:44 Analyst ID: KAS02648

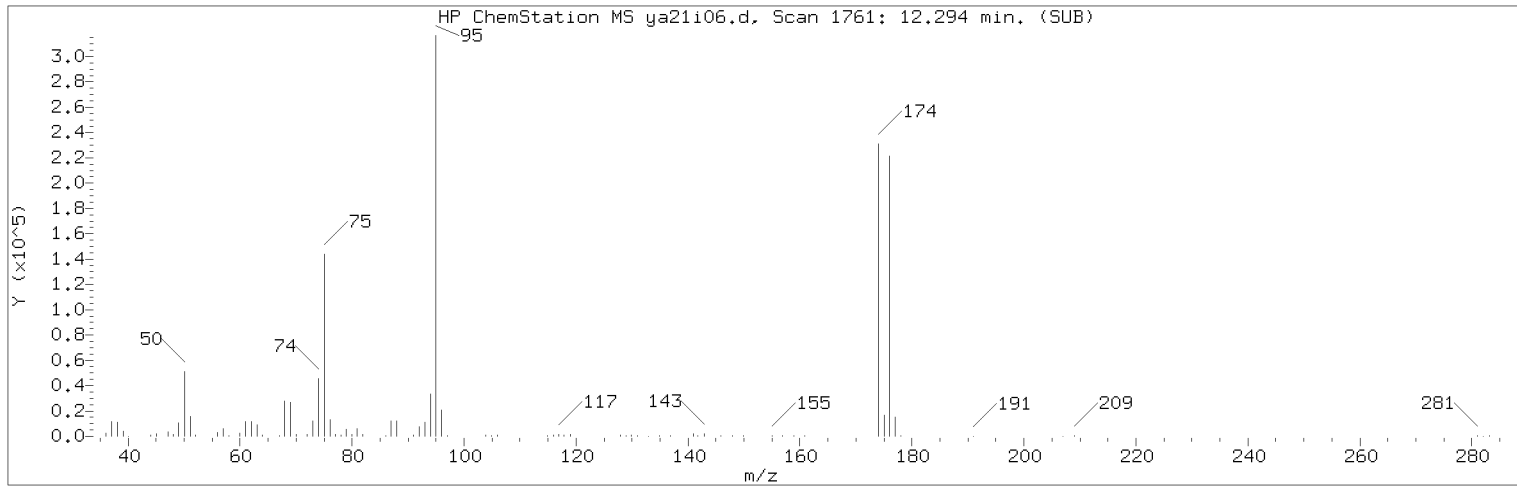
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD004

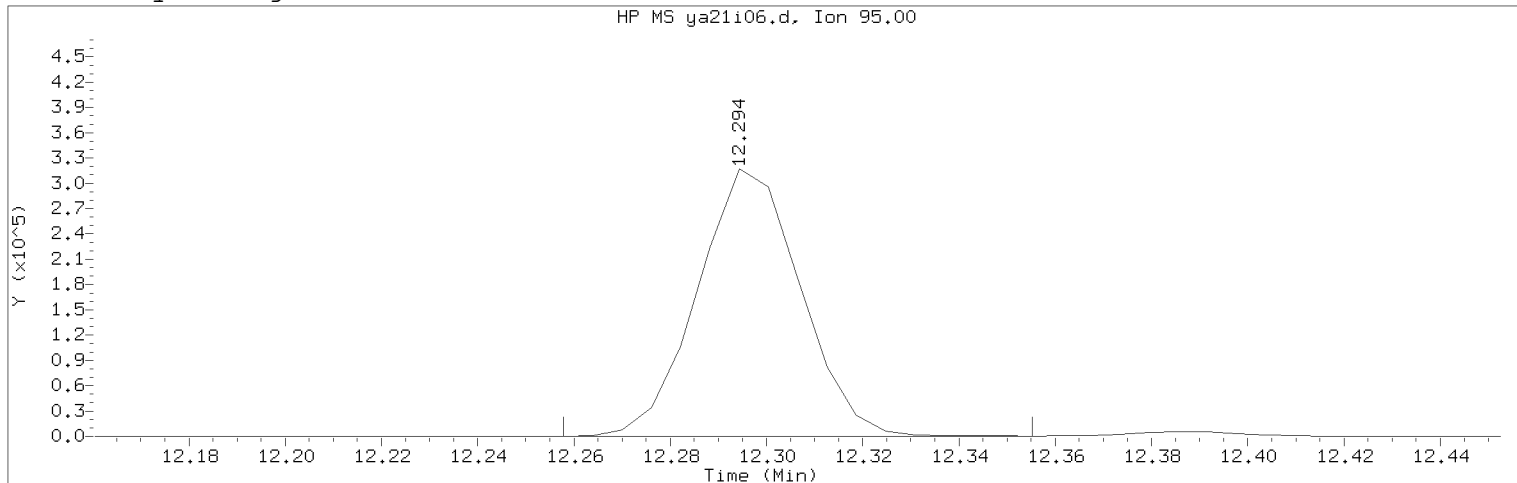
Lab Sample ID: VSTD004

Compound Number	: 79	
Compound Name	: 2-Nitropropane	
Scan Number	: 1262	
Retention Time (minutes)	: 9.259	
Quant Ion	: 41.00	
Area	: 26626	
On-column Amount (ng)	: 7.7622	
Integration start scan	: 1253	Integration stop scan: 1286
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d

Instrument ID: HP09355.i

Injection date and time: 21-APR-2020 23:44

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 114	
Compound Name	: 4-Bromofluorobenzene	
Scan Number	: 1761	
Retention Time (minutes)	: 12.294	
Quant Ion	: 95.00	
Area (flag)	: 471205M	
On-Column Amount (ng)	: 50.2130	
Integration start scan	: 1754	Integration stop scan: 1770
Y at integration start	: 0	Y at integration end: 0

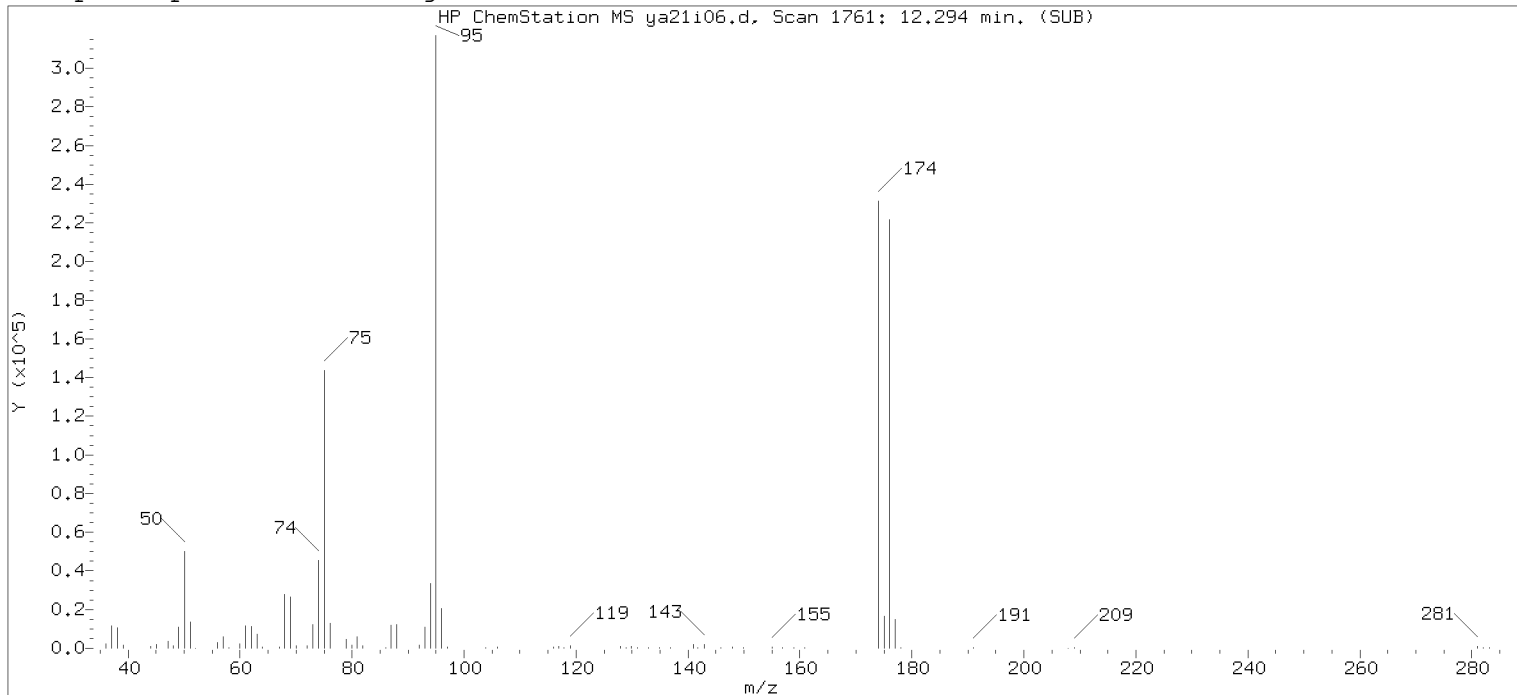
Reason for manual integration: improper integration

Analyst responsible for change:

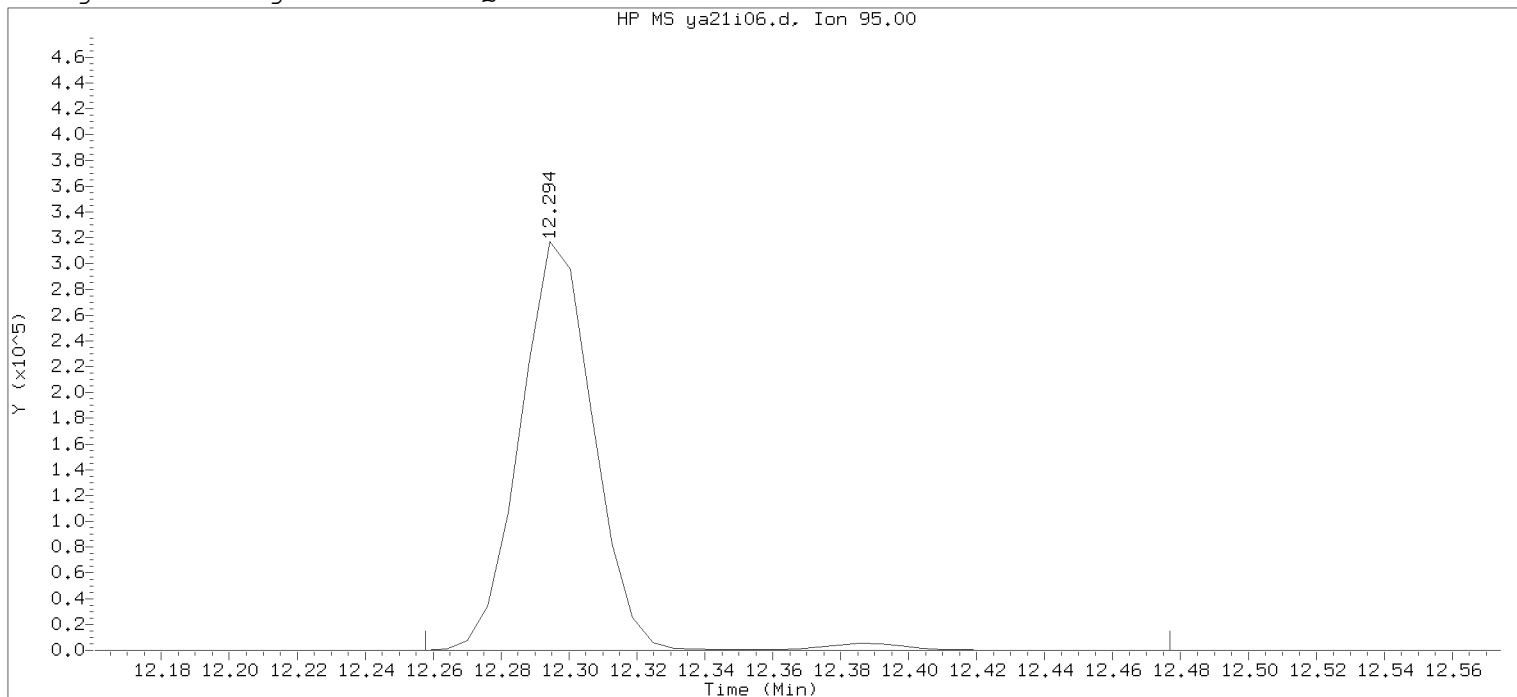
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



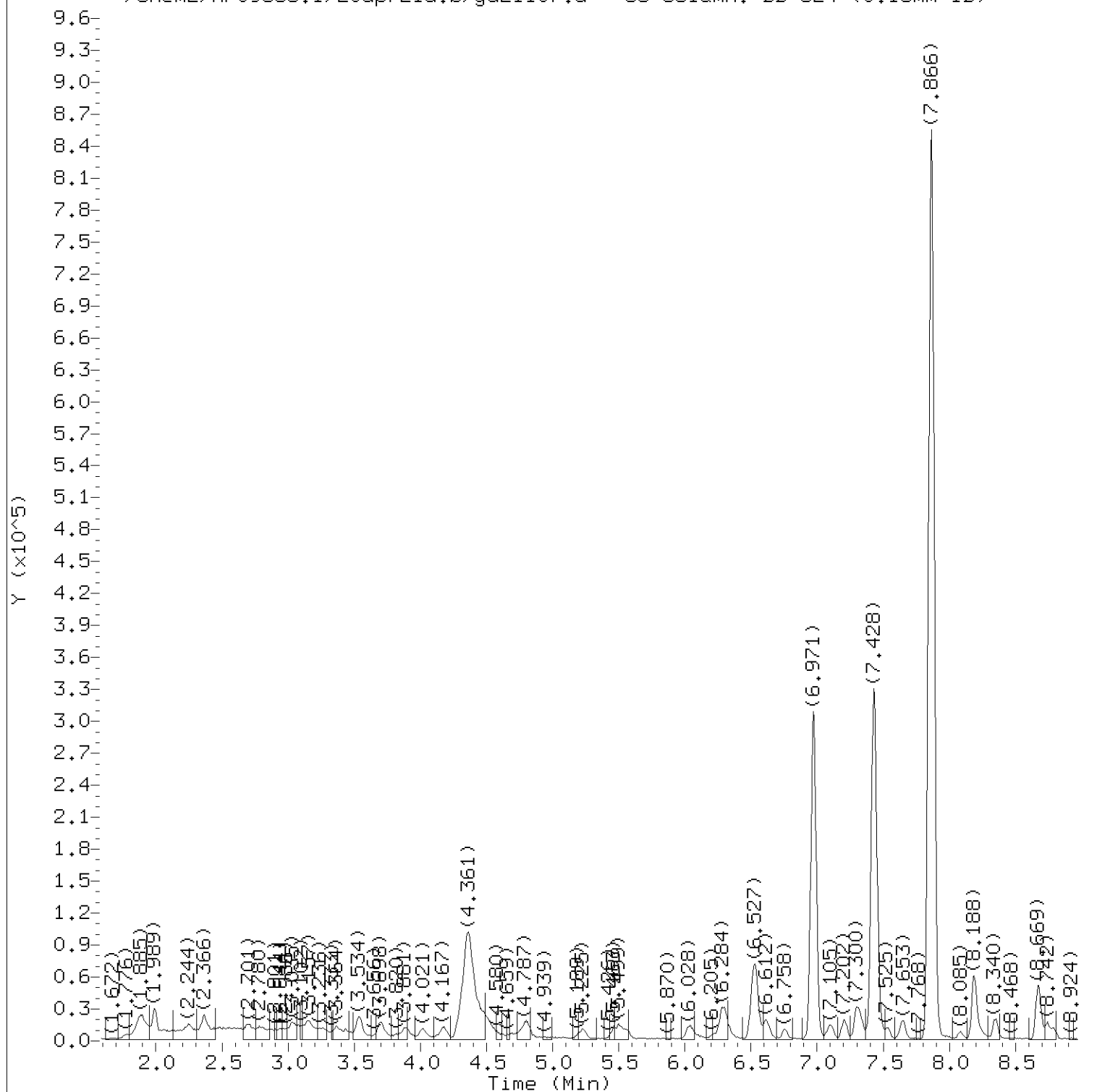
Data File: /chem2/HP09355.i/20apr21a.b/ya21i06.d Instrument ID: HP09355.i
Injection date and time: 21-APR-2020 23:44 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 07:50
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 114	
Compound Name	: 4-Bromofluorobenzene	
Scan Number	: 1761	
Retention Time (minutes)	: 12.294	
Quant Ion	: 95.00	
Area	: 479783	
On-column Amount (ng)	: 50.9605	
Integration start scan	: 1754	Integration stop scan: 1790
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d
Injection date and time: 22-APR-2020 00:06

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:05

Sublist used: 8260W

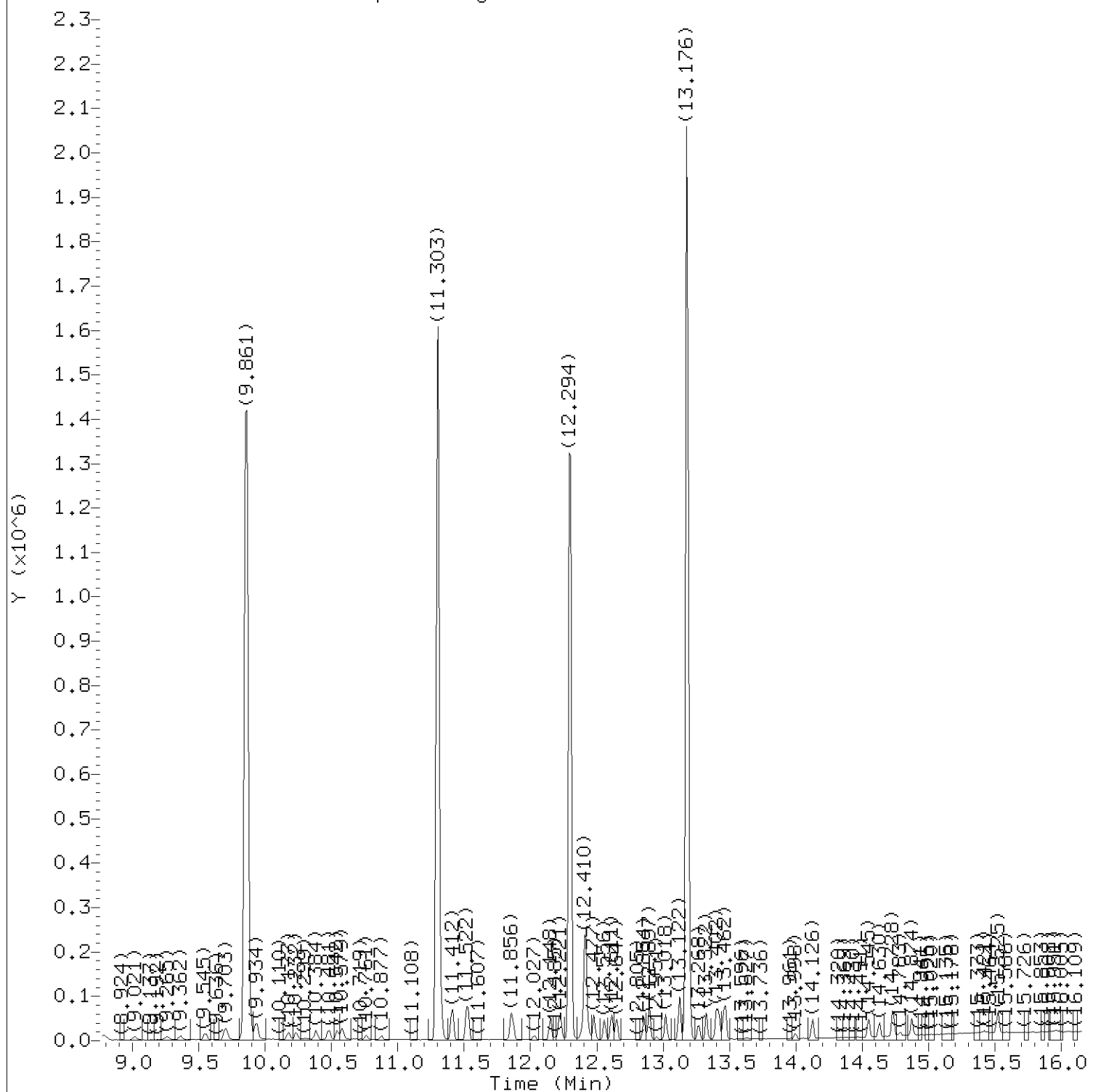
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d
Injection date and time: 22-APR-2020 00:06

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:05

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d
 Injection date and time: 22-APR-2020 00:06

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:05
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.044	85	6553	0.792
4) Chloromethane	(2)	2.244	50	7519	0.989
5) 1,3-Butadiene	(2)	2.366	39	5821	0.944
6) Vinyl Chloride	(2)	2.366	62	6984	0.922
8) Bromomethane	(2)	2.707	94	5266	1.005
9) Chloroethane	(2)	2.792	64	4017	0.957
10) Dichlorofluoromethane	(2)	3.029	67	10735	0.961
12) Trichlorofluoromethane	(2)	3.102	101	7574	0.872
11) n-Pentane	(2)	3.151	43	12391	1.236
14) Ethyl ether	(2)	3.376	59	6630	0.977
15) Freon 123a	(2)	3.443	67	7276	0.910
16) Acrolein	(1)	3.540	56	31081	10.041
17) 1,1-Dichloroethene	(2)	3.692	96	8536	1.225
17) 1,1-Dichloroethene	(2)	3.680	63	2667	0.869
18) Acetone	(1)	3.698	58	2585	1.791
19) Freon 113	(2)	3.717	101	5140	0.818
21) 2-Propanol	(1)	3.881	45	22976	21.419
22) Methyl Iodide	(2)	3.899	142	9697	0.879
23) Carbon Disulfide	(2)	4.021	76	20765	0.921
27) Methyl Acetate	(2)	4.142	43	10622	1.065
25) Allyl Chloride	(2)	4.185	41	10897	0.987
29)*t-Butyl alcohol-d10	(1)	4.355	65	376556	250.000
28) Methylene Chloride	(2)	4.367	84	6974	0.934
30) t-Butyl alcohol	(1)	4.495	59	38363	20.513
31) Acrylonitrile	(2)	4.702	53	4756	0.860
33) Methyl Tertiary Butyl Ether	(2)	4.775	73	24359	1.106
32) trans-1,2-Dichloroethene	(2)	4.812	96	7879	1.030
34) n-Hexane	(2)	5.219	57	9291	0.831
36) 1,1-Dichloroethane	(2)	5.450	63	11588	0.894
38) di-Isopropyl ether	(2)	5.499	45	21354	0.897
39) 2-Chloro-1,3-butadiene	(2)	5.572	53	8609	0.820
40) Ethyl t-butyl ether	(2)	6.047	59	19905	0.934
43) 1,2-Dichloroethene (Total)	(2)		96	16725	2.056
44) 2-Butanone	(2)	6.229	43	14276	1.915
42) cis-1,2-Dichloroethene	(2)	6.278	96	8846	1.026
45) 2,2-Dichloropropane	(2)	6.296	77	8555	0.876
47) Propionitrile	(1)	6.302	54	44848	20.126
48) Methacrylonitrile	(2)	6.527	67	52263	9.309

* = Compound is an internal standard.

page 1 of 4

Digitally signed by Jennifer K. Howe
 on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d
Injection date and time: 22-APR-2020 00:06

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:05
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.618	128	3666	0.916
50) Tetrahydrofuran	(1)	6.624	71	3709	1.800
51) Chloroform	(2)	6.752	83	11320	0.909
52) \$Dibromofluoromethane	(2)	6.971	113	285945	49.712
52) \$Dibromofluoromethane	(2)	6.971	111	290589	49.494
53) 1,1,1-Trichloroethane	(2)	6.989	97	9550	0.895
54) Cyclohexane	(2)	7.105	56	11171	0.838
54) Cyclohexane	(2)	7.093	84	9049	0.817
54) Cyclohexane	(2)	7.105	69	3155	0.775
55) 1,1-Dichloropropene	(2)	7.202	75	8981	0.867
56) Carbon Tetrachloride	(2)	7.215	117	7609	0.843
58) Isobutyl Alcohol	(1)	7.306	41	34721	51.731
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	75882	50.024
57) \$1,2-Dichloroethane-d4	(2)	7.428	65	341980	50.541
57) \$1,2-Dichloroethane-d4	(2)	7.428	104	48355	50.030
60) Benzene	(2)	7.470	78	30014	0.954
61) 1,2-Dichloroethane	(2)	7.537	62	10406	1.031
61) 1,2-Dichloroethane	(2)	7.537	98	661	0.706
65) t-Amyl methyl ether	(2)	7.653	73	20605	0.959
66) *Fluorobenzene	(2)	7.866	96	1266407	50.000
67) n-Heptane	(2)	7.878	43	11455	0.939
69) n-Butanol	(1)	8.182	56	55586	87.950
71) Trichloroethene	(2)	8.352	95	6846	0.878
72) Methylcyclohexane	(2)	8.669	83	11744	0.848
72) Methylcyclohexane	(2)	8.675	98	5235	0.857
73) 1,2-Dichloropropane	(2)	8.675	63	7338	0.911
76) Methyl Methacrylate	(2)	8.742	69	6532	0.809
75) 1,4-Dioxane	(1)	8.766	88	6446M	42.430
74) Dibromomethane	(2)	8.790	93	4485	0.878
78) Bromodichloromethane	(2)	9.015	83	7424	0.805
79) 2-Nitropropane	(2)	9.265	41	5748	1.724
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	4977	0.773
81) cis-1,3-Dichloropropene	(2)	9.551	75	10553	0.834
82) 4-Methyl-2-pentanone	(2)	9.703	43	22331	1.607
83) \$Toluene-d8	(3)	9.861	98	1215192	50.398
83) \$Toluene-d8	(3)	9.861	100	780139	50.407
88) Toluene	(3)	9.934	92	18311	0.945
90) 1,3-Dichloropropene (total)	(3)		100	20231	1.671

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d
Injection date and time: 22-APR-2020 00:06

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:05
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.177	75	9678	0.837
91) Ethyl Methacrylate	(3)	10.232	69	9090	0.727
92) 1,1,2-Trichloroethane	(3)	10.384	97	7059	0.926
93) Tetrachloroethene	(3)	10.481	166	7241	0.916
94) 1,3-Dichloropropane	(3)	10.542	76	12238	0.943
96) 2-Hexanone	(3)	10.579	43	17247	1.590
97) Dibromochloromethane	(3)	10.761	129	6078	0.798
99) 1,2-Dibromoethane	(3)	10.877	107	7085	0.862
100) *Chlorobenzene-d5	(3)	11.303	117	923376	50.000
101) 1-Chlorohexane	(3)	11.303	91	10540	0.986
102) Chlorobenzene	(3)	11.327	112	20716	0.947
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	5992	0.841
104) Ethylbenzene	(3)	11.412	91	33931	0.918
106) m+p-Xylene	(3)	11.522	106	25855	1.773
108) Xylene (Total)	(3)		106	38648	2.666
107) o-Xylene	(3)	11.850	106	12793	0.892
109) Styrene	(3)	11.869	104	17797	0.770
110) Bromoform	(3)	12.027	173	4328	0.770
111) Isopropylbenzene	(3)	12.148	105	30881	0.855
112) Cyclohexanone	(1)	12.221	55	23441M	40.081
114) \$4-Bromofluorobenzene	(3)	12.294	95	458604	50.197
114) \$4-Bromofluorobenzene	(3)	12.300	174	353771	50.273
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	12539	0.933
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	38710	8.960
115) Bromobenzene	(4)	12.416	156	8866	0.934
117) 1,2,3-Trichloropropane	(4)	12.440	110	4123	0.967
119) n-Propylbenzene	(4)	12.477	91	40191	0.909
120) 2-Chlorotoluene	(4)	12.556	126	7997	0.878
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	27066	0.847
121) 4-Chlorotoluene	(4)	12.653	126	8332	0.870
124) tert-Butylbenzene	(4)	12.854	134	5793M	0.867
125) Pentachloroethane	(4)	12.891	167	4481	0.871
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	28449	0.846
127) sec-Butylbenzene	(4)	13.018	105	36509	0.887
129) 1,3-Dichlorobenzene	(4)	13.122	146	17078	0.940
130) p-Isopropyltoluene	(4)	13.128	119	29194	0.840
131) *1,4-Dichlorobenzene-d4	(4)	13.176	152	497288	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	17625	0.939

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:06

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

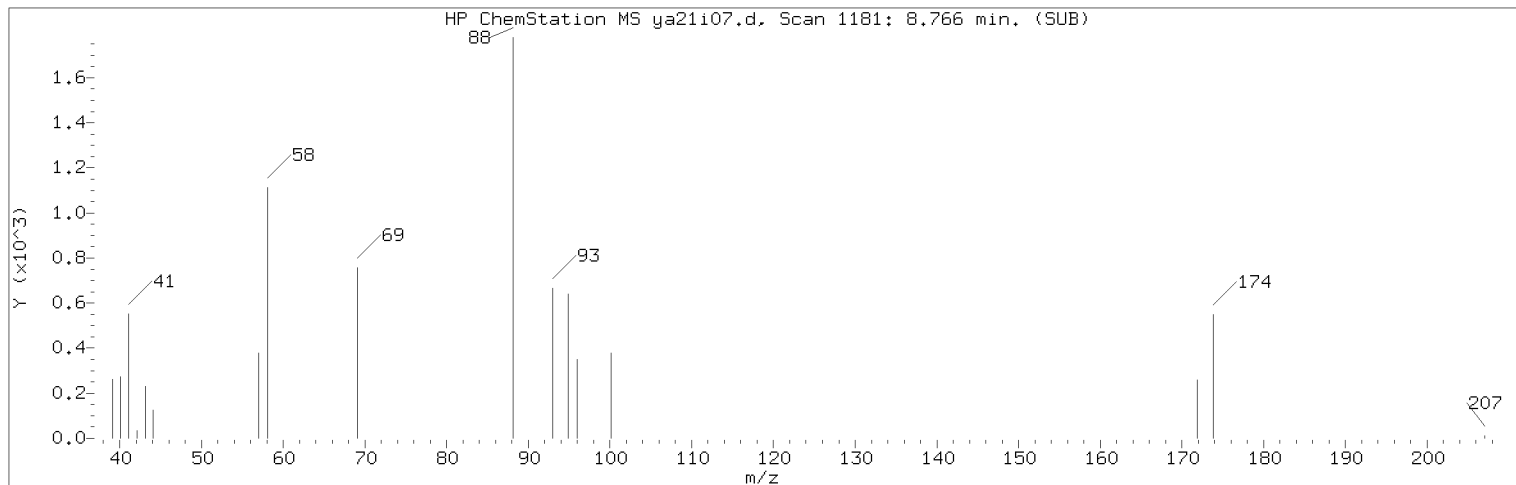
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	31323	0.948
135) Benzyl Chloride	(4)	13.268	91	21802	0.808
136) 1,3-Diethylbenzene	(4)	13.322	119	18430	0.871
141) Diethylbenzene (total)	(4)		100	53495	2.627
137) 1,4-Diethylbenzene	(4)	13.402	119	18981	0.853
139) n-Butylbenzene	(4)	13.420	92	16462	0.880
138) 1,2-Dichlorobenzene	(4)	13.456	146	16481	0.934
140) 1,2-Diethylbenzene	(4)	13.469	119	16084	0.903
142) 1,2-Dibromo-3-chloropropane	(4)	13.998	75	2892	0.874
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	12285	0.934
146) 1,2,4-Trichlorobenzene	(4)	14.551	180	11569	0.937
147) Hexachlorobutadiene	(4)	14.630	225	5419	0.973
148) Naphthalene	(4)	14.728	128	42927	0.950
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	11649	0.974
150) 2-Methylnaphthalene	(4)	15.525	142	23795	0.954

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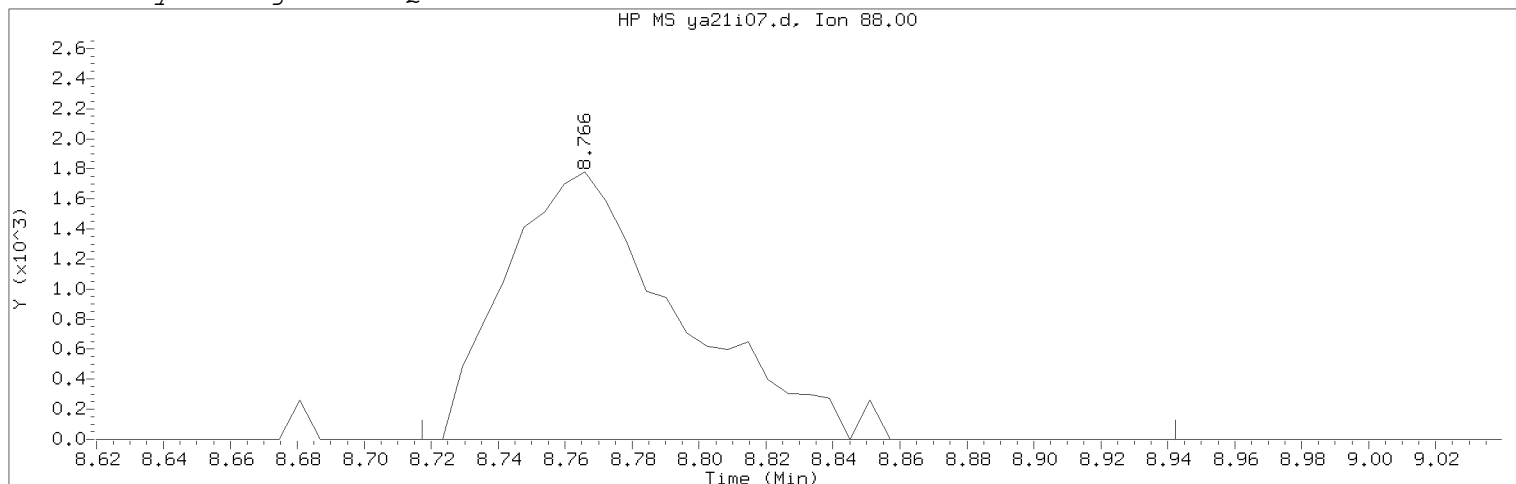
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:06 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:05
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

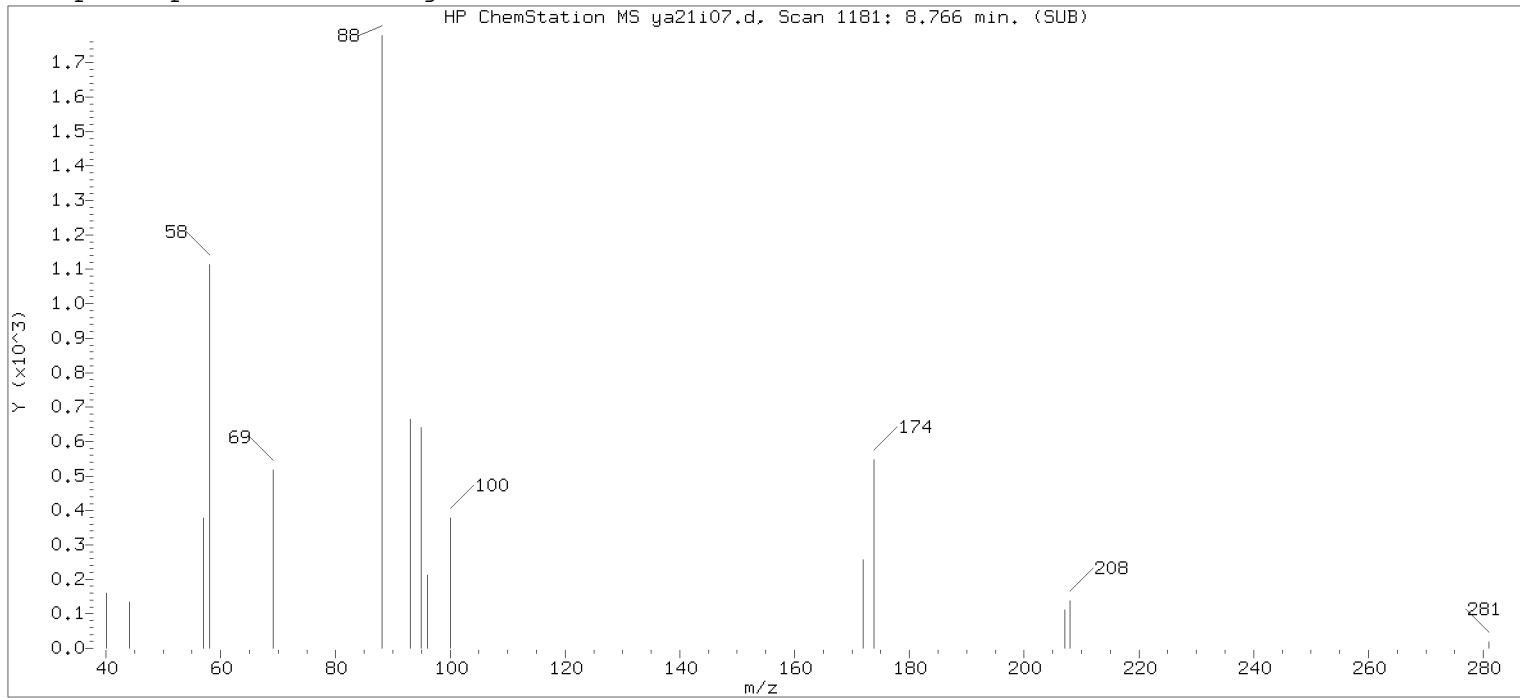
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1181
Retention Time (minutes): 8.766
Quant Ion : 88.00
Area (flag) : 6446M
On-Column Amount (ng) : 42.4298
Integration start scan : 1172 Integration stop scan: 1209
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

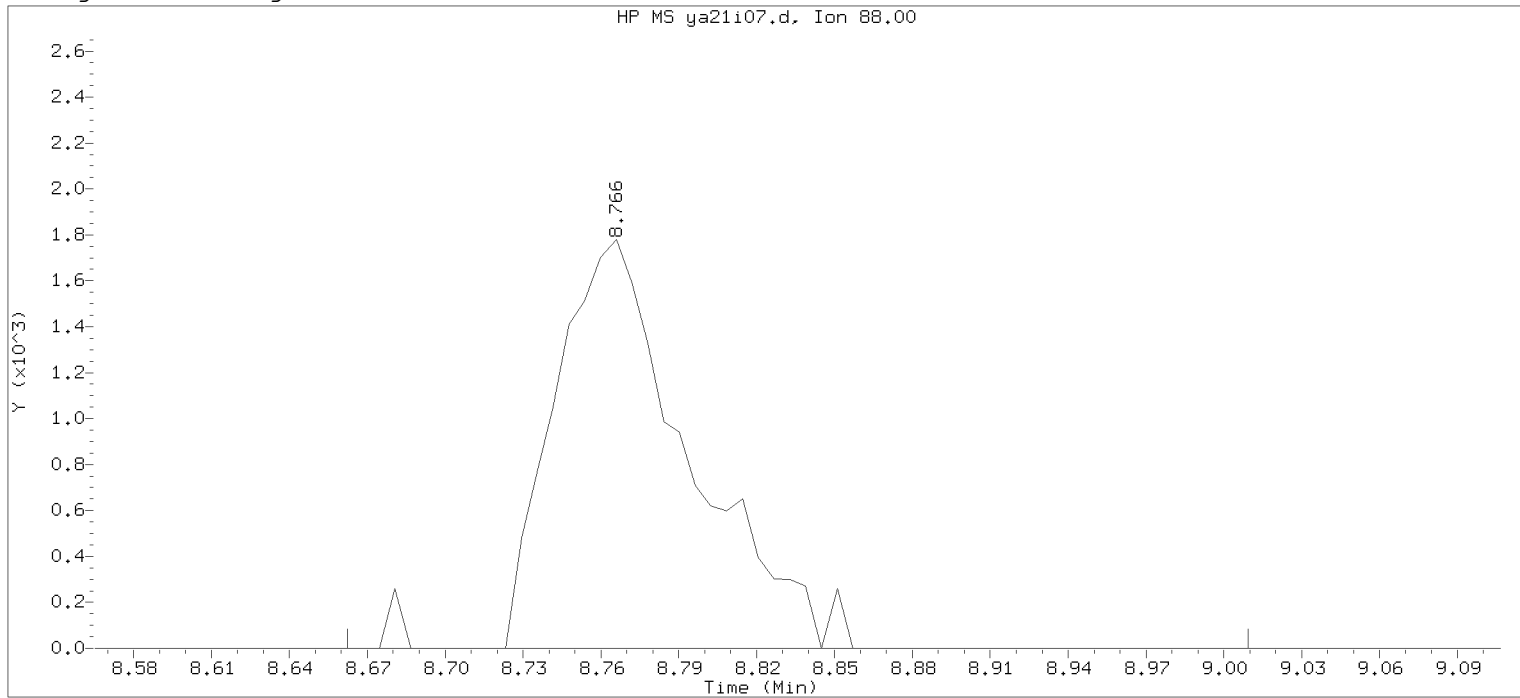
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:06

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

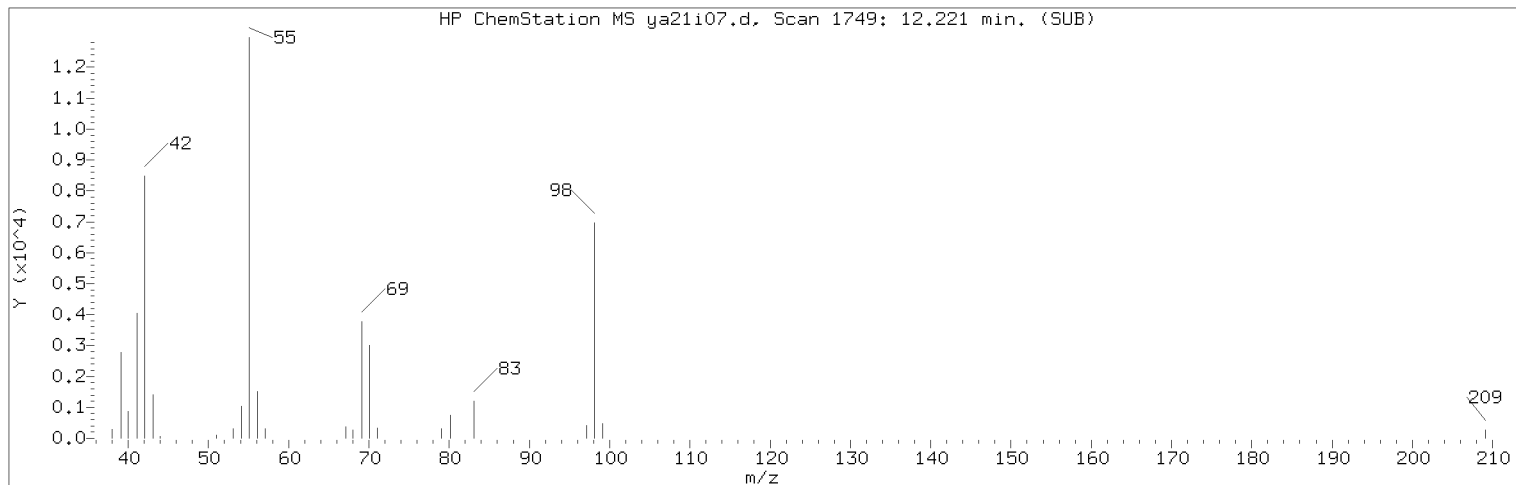
Sample Name: VSTD001

Lab Sample ID: VSTD001

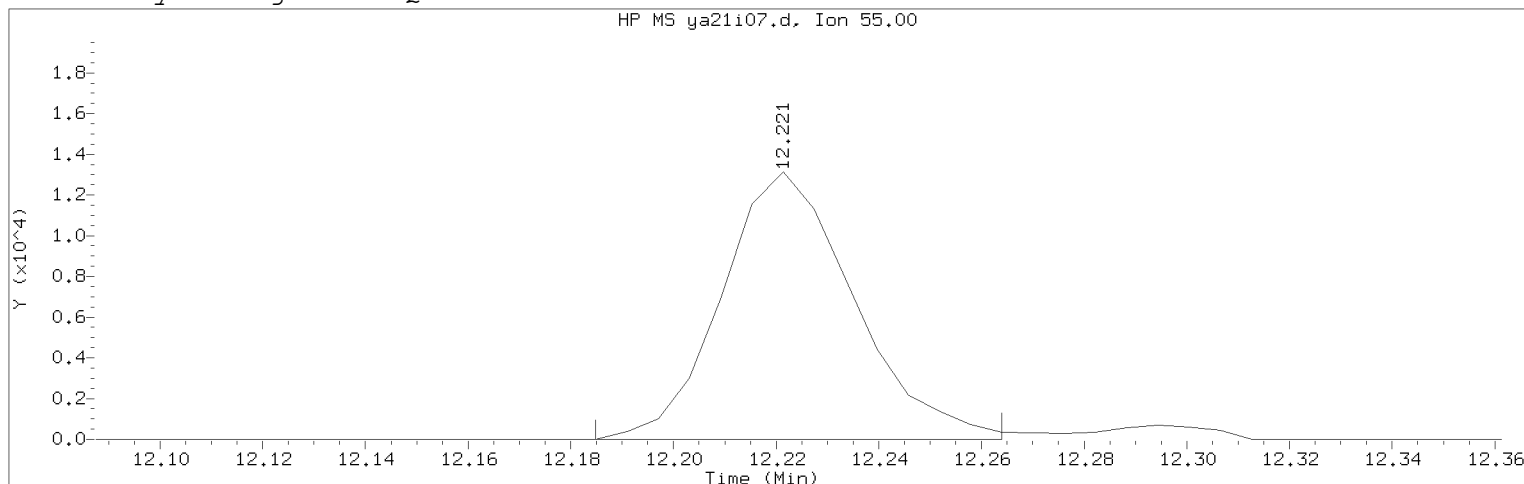
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1181
 Retention Time (minutes): 8.766
 Quant Ion : 88.00
 Area : 6541
 On-column Amount (ng) : 36.4181
 Integration start scan : 1163
 Y at integration start : 0

Integration stop scan: 1220
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:06 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:05
Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

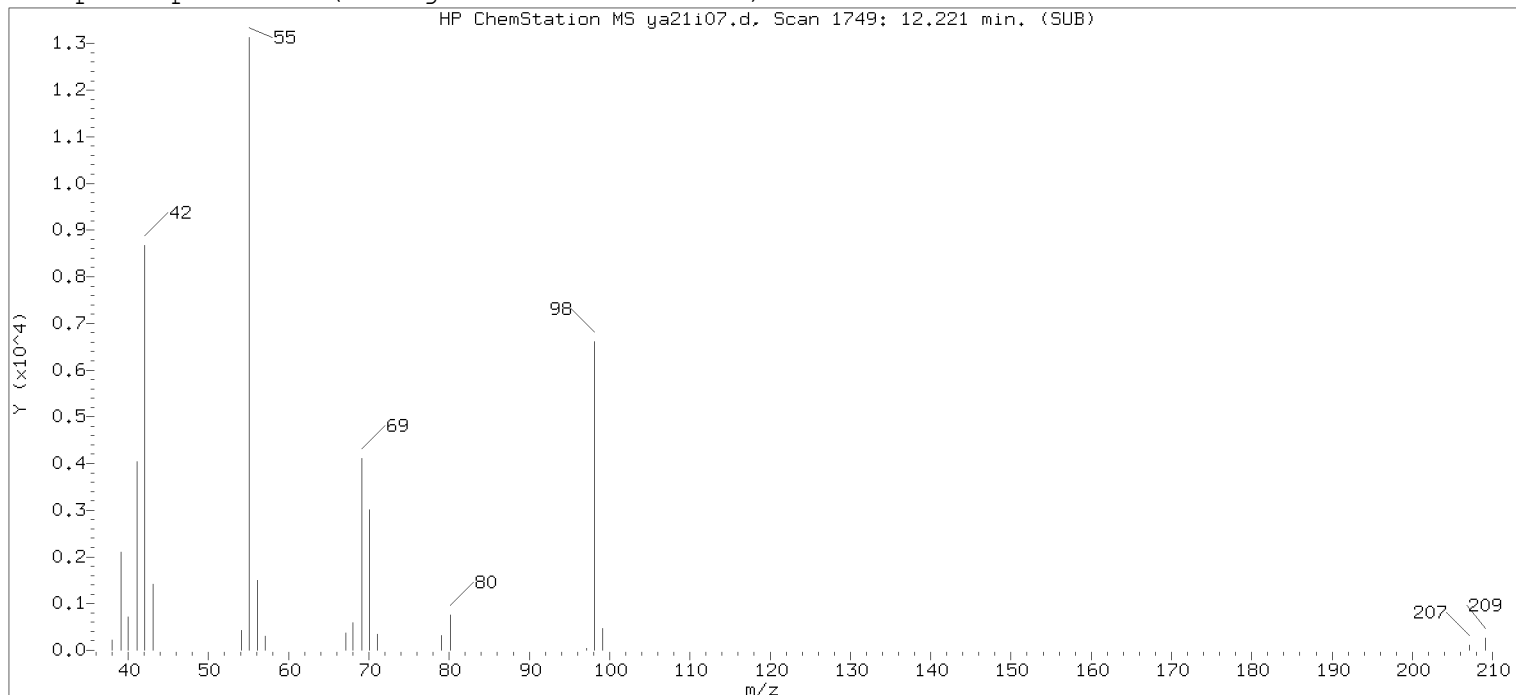
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1749
Retention Time (minutes): 12.221
Quant Ion : 55.00
Area (flag) : 23441M
On-Column Amount (ng) : 40.0807
Integration start scan : 1742 Integration stop scan: 1755
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

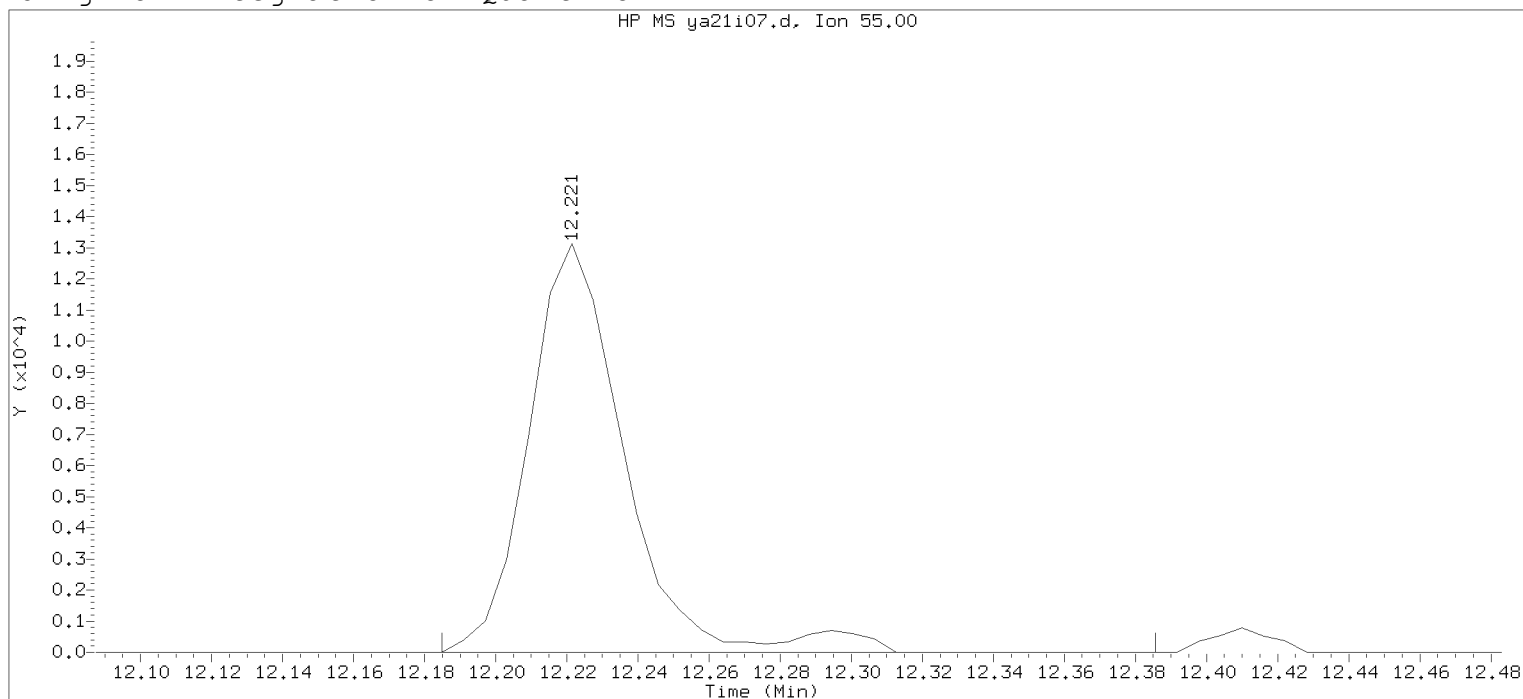
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:06

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

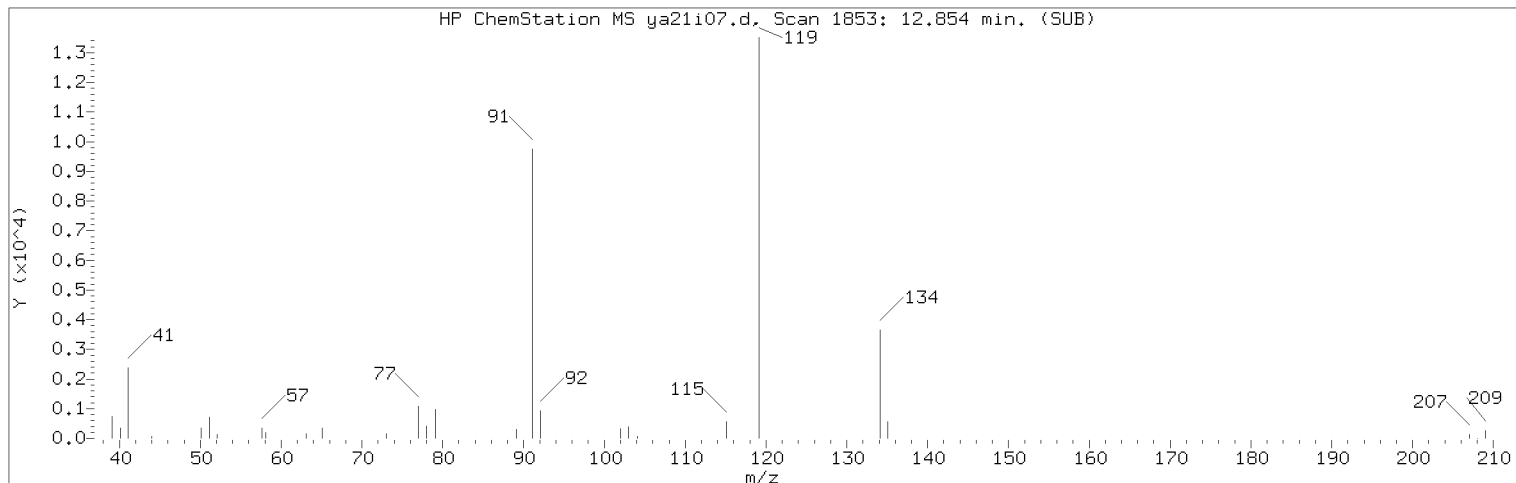
Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

Sample Name: VSTD001

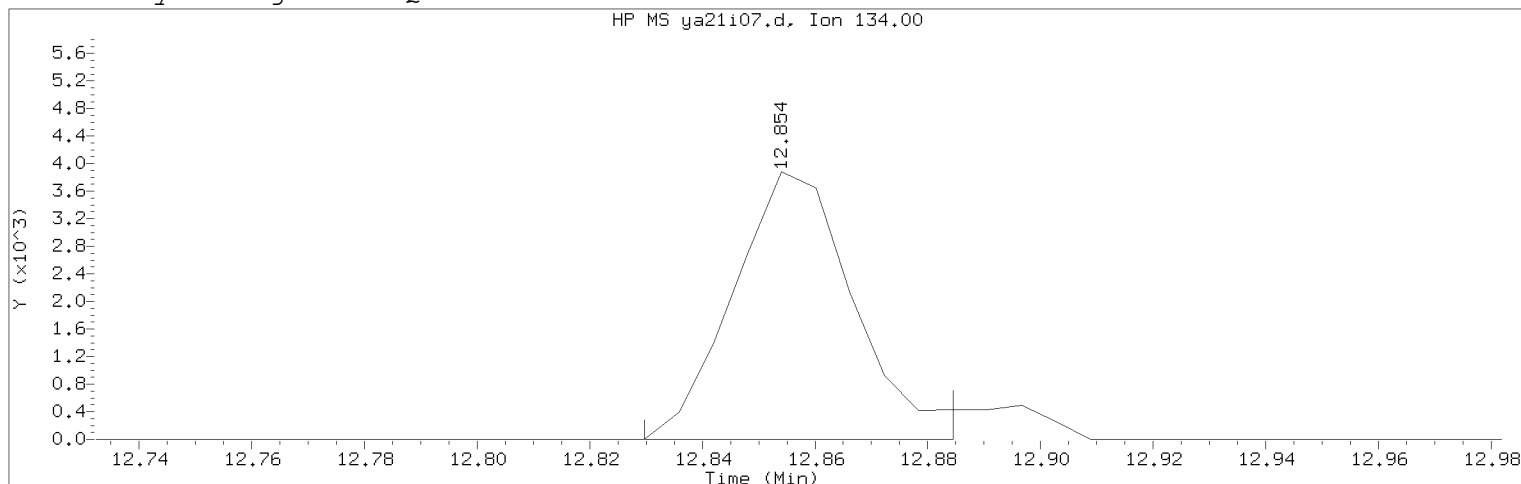
Lab Sample ID: VSTD001

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1749	
Retention Time (minutes)	: 12.221	
Quant Ion	: 55.00	
Area	: 24630	
On-column Amount (ng)	: 40.5410	
Integration start scan	: 1742	Integration stop scan: 1775
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:06

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:05

Date, time and analyst ID of latest file update: 22-Apr-2020 08:05 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1853	
Retention Time (minutes)	: 12.854	
Quant Ion	: 134.00	
Area (flag)	: 5793M	
On-Column Amount (ng)	: 0.8672	
Integration start scan	: 1848	Integration stop scan: 1857
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

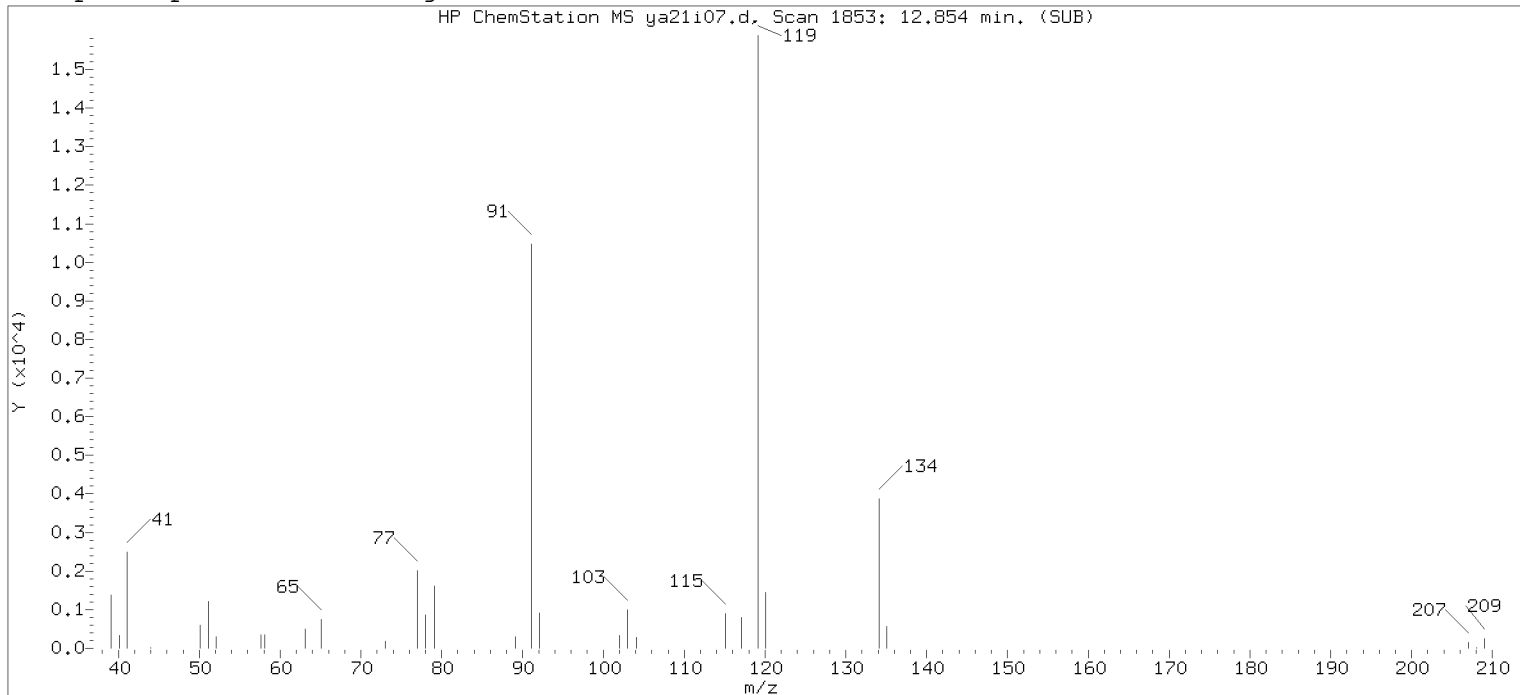
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:07.

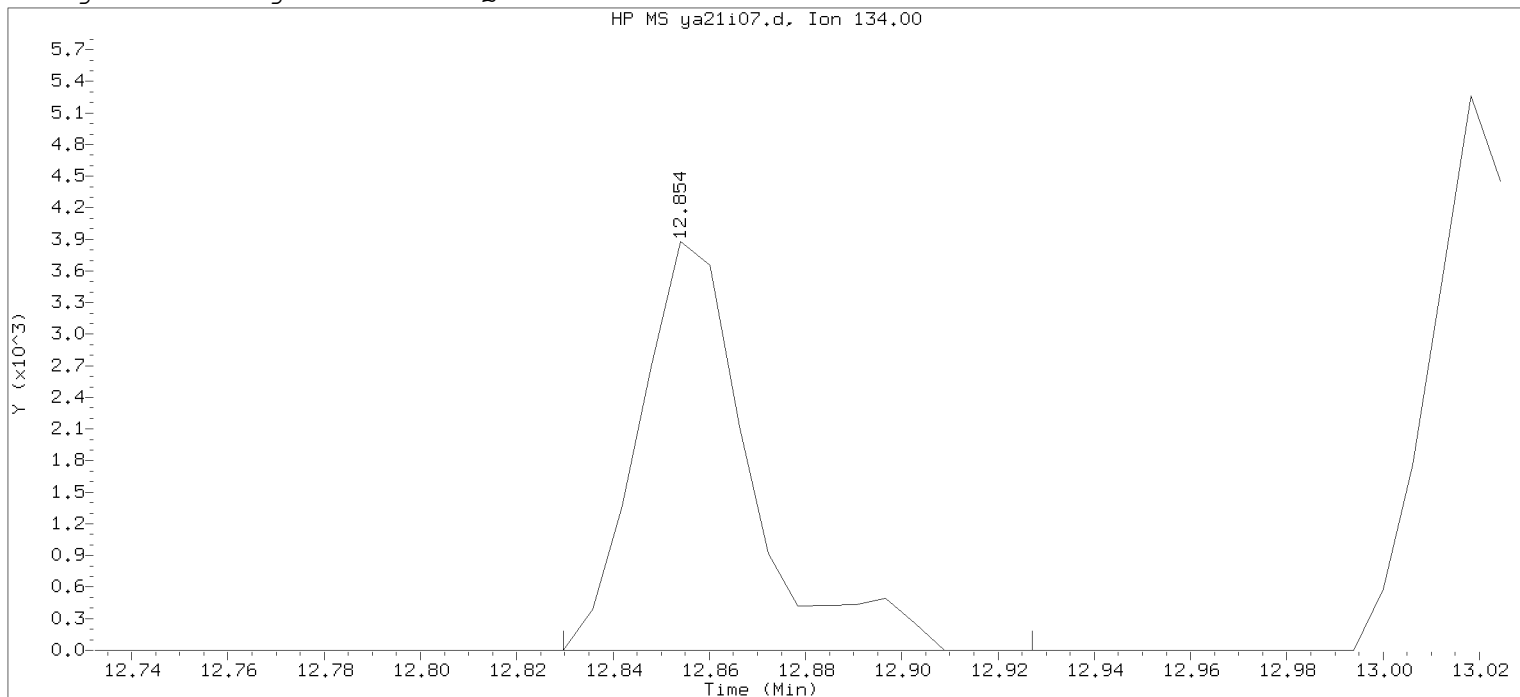
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21i07.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:06

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 07:50

Date, time and analyst ID of latest file update: 22-Apr-2020 07:50 jkh09052

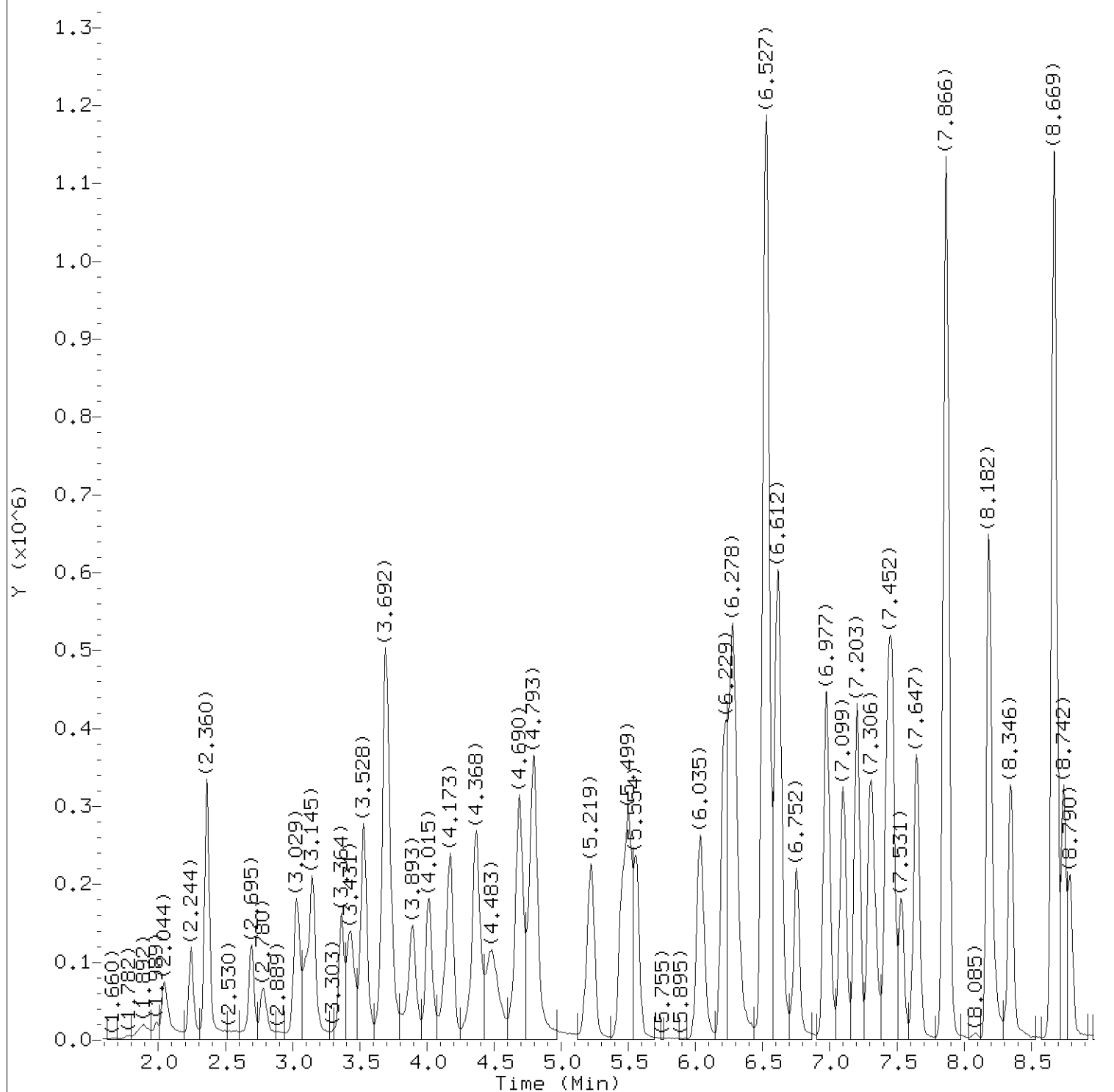
Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1853	
Retention Time (minutes)	: 12.854	
Quant Ion	: 134.00	
Area	: 6223	
On-column Amount (ng)	: 0.8981	
Integration start scan	: 1848	Integration stop scan: 1864
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:07.

Target 3.5 esignature user RAE59 Page 490 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d
Injection date and time: 22-APR-2020 00:49

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:06

Sublist used: 8260W

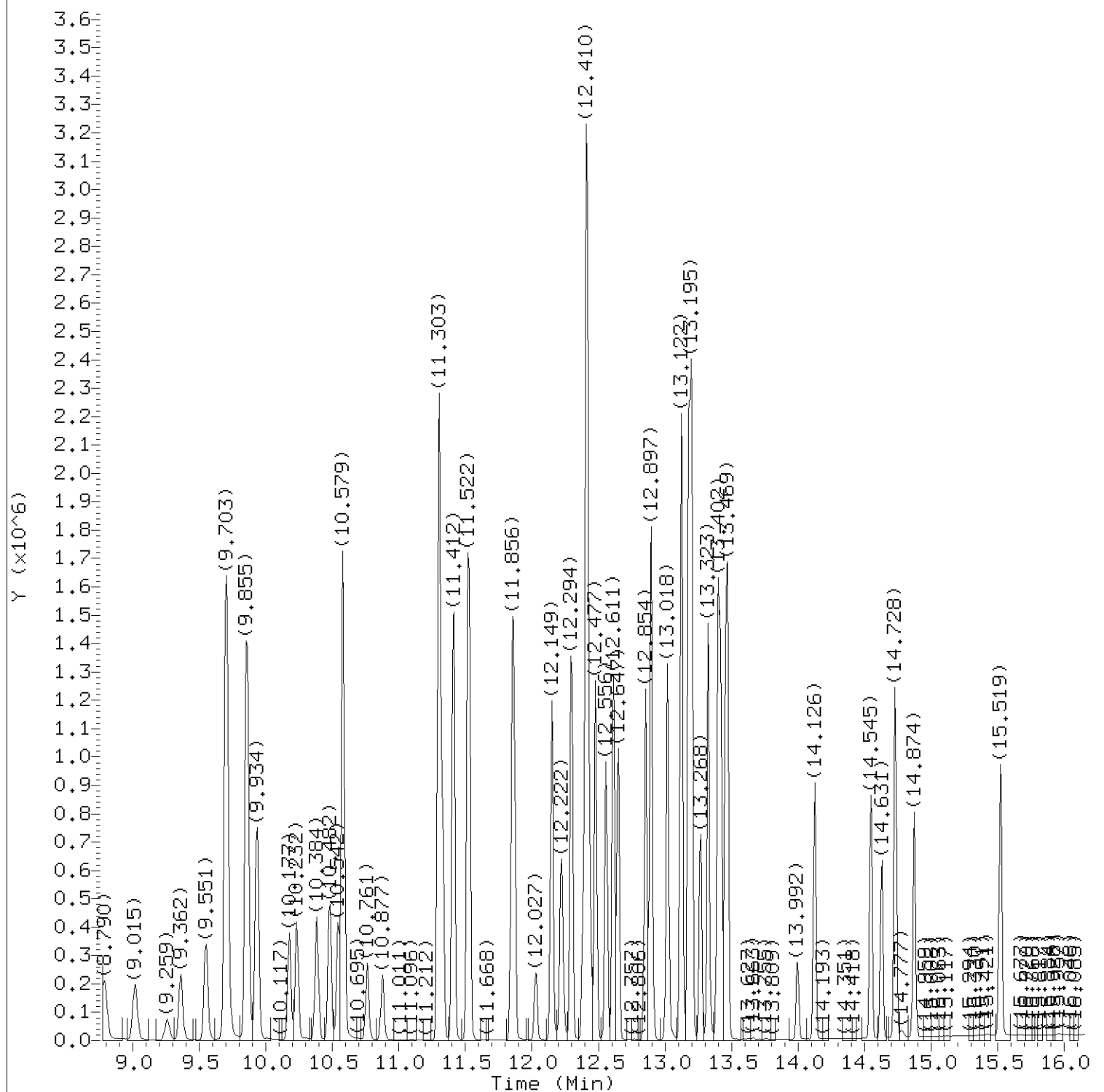
Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d
Injection date and time: 22-APR-2020 00:49

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m
Calibration date and time: 22-APR-2020 08:06

Sublist used: 8260W

Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d
 Injection date and time: 22-APR-2020 00:49

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:06
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.044	85	149080M	18.399
4) Chloromethane	(2)	2.244	50	162370	21.825
5) 1,3-Butadiene	(2)	2.360	39	142841	23.661
6) Vinyl Chloride	(2)	2.360	62	160586	21.646
8) Bromomethane	(2)	2.695	94	115129	22.452
9) Chloroethane	(2)	2.780	64	89864	21.866
10) Dichlorofluoromethane	(2)	3.029	67	234965	21.485
12) Trichlorofluoromethane	(2)	3.096	101	204026	24.007
11) n-Pentane	(2)	3.145	43	205253	20.917
14) Ethyl ether	(2)	3.364	59	128200	19.304
15) Freon 123a	(2)	3.431	67	165198	21.094
16) Acrolein	(1)	3.528	56	438546	141.048
17) 1,1-Dichloroethene	(2)	3.686	96	134864	19.772
18) Acetone	(1)	3.698	58	215959	148.923
19) Freon 113	(2)	3.717	101	132723	21.573
21) 2-Propanol	(1)	3.863	45	152418	141.458
22) Methyl Iodide	(2)	3.893	142	214601	19.866
23) Carbon Disulfide	(2)	4.015	76	446858	20.248
27) Methyl Acetate	(2)	4.143	43	209950	21.497
25) Allyl Chloride	(2)	4.179	41	244761	22.650
29)*t-Butyl alcohol-d10	(1)	4.355	65	378230M	250.000
28) Methylene Chloride	(2)	4.368	84	152279	20.842
30) t-Butyl alcohol	(1)	4.483	59	374189	199.195
31) Acrylonitrile	(2)	4.684	53	537112	99.254
33) Methyl Tertiary Butyl Ether	(2)	4.781	73	426306	19.777
32) trans-1,2-Dichloroethene	(2)	4.800	96	150787	20.141
34) n-Hexane	(2)	5.219	57	235388	21.510
36) 1,1-Dichloroethane	(2)	5.450	63	259435	20.434
38) di-Isopropyl ether	(2)	5.499	45	481634	20.670
39) 2-Chloro-1,3-butadiene	(2)	5.560	53	210428	20.485
40) Ethyl t-butyl ether	(2)	6.035	59	425551	20.402
43) 1,2-Dichloroethene (Total)	(2)		96	327762	41.103
44) 2-Butanone	(2)	6.217	43	1121422	153.627
42) cis-1,2-Dichloroethene	(2)	6.272	96	176975	20.962
45) 2,2-Dichloropropane	(2)	6.290	77	198818	20.791
47) Propionitrile	(1)	6.302	54	350429	156.561
48) Methacrylonitrile	(2)	6.527	67	843295	153.427
49) Bromochloromethane	(2)	6.612	128	83158	21.214

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d
 Injection date and time: 22-APR-2020 00:49

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:06
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Tetrahydrofuran	(1)	6.625	71	214695	103.758
51) Chloroform	(2)	6.752	83	246284	20.205
52) \$Dibromofluoromethane	(2)	6.971	113	281756	50.037
53) 1,1,1-Trichloroethane	(2)	6.990	97	208967M	20.000
54) Cyclohexane	(2)	7.099	56	267142	20.477
55) 1,1-Dichloropropene	(2)	7.203	75	206662	20.385
56) Carbon Tetrachloride	(2)	7.209	117	179007	20.269
58) Isobutyl Alcohol	(1)	7.306	41	333041	494.000
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	74349	50.067
60) Benzene	(2)	7.464	78	612544	19.884
61) 1,2-Dichloroethane	(2)	7.531	62	197009M	19.935
65) t-Amyl methyl ether	(2)	7.647	73	426325	20.258
66) *Fluorobenzene	(2)	7.866	96	1239758	50.000
67) n-Heptane	(2)	7.878	43	230810	19.336
69) n-Butanol	(1)	8.182	56	630260	992.803
71) Trichloroethene	(2)	8.346	95	151265	19.818
72) Methylcyclohexane	(2)	8.669	83	294820	21.738
73) 1,2-Dichloropropane	(2)	8.675	63	163028	20.664
76) Methyl Methacrylate	(2)	8.742	69	166698	21.101
75) 1,4-Dioxane	(1)	8.754	88	75580M	495.294
74) Dibromomethane	(2)	8.790	93	101431	20.274
78) Bromodichloromethane	(2)	9.022	83	182169	20.170
79) 2-Nitropropane	(2)	9.259	41	62245	19.070
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	127673	20.261
81) cis-1,3-Dichloropropene	(2)	9.551	75	249218	20.118
82) 4-Methyl-2-pentanone	(2)	9.703	43	1416686	104.155
83) \$Toluene-d8	(3)	9.855	98	1197204	49.952
88) Toluene	(3)	9.934	92	385407	20.021
90) 1,3-Dichloropropene (total)	(3)		100	475482	39.811
89) trans-1,3-Dichloropropene	(3)	10.177	75	226264	19.693
91) Ethyl Methacrylate	(3)	10.232	69	238080	19.150
92) 1,1,2-Trichloroethane	(3)	10.384	97	155604	20.546
93) Tetrachloroethene	(3)	10.482	166	155761	19.828
94) 1,3-Dichloropropane	(3)	10.542	76	255702	19.822
96) 2-Hexanone	(3)	10.579	43	1141598	105.895
97) Dibromochloromethane	(3)	10.761	129	154158	20.354
99) 1,2-Dibromoethane	(3)	10.877	107	163958	20.076
100) *Chlorobenzene-d5	(3)	11.303	117	917833	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d
 Injection date and time: 22-APR-2020 00:49

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 22-APR-2020 08:06
 Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
101) 1-Chlorohexane	(3)	11.303	91	206050	19.383
102) Chlorobenzene	(3)	11.327	112	437995	20.137
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	143136	20.217
104) Ethylbenzene	(3)	11.412	91	744074	20.261
106) m+p-Xylene	(3)	11.522	106	595843	41.112
108) Xylene (Total)	(3)		106	885430	61.432
107) o-Xylene	(3)	11.850	106	289587	20.320
109) Styrene	(3)	11.869	104	474392	20.661
110) Bromoform	(3)	12.033	173	107277	19.195
111) Isopropylbenzene	(3)	12.149	105	745243	20.747
112) Cyclohexanone	(1)	12.222	55	279979	476.603
114) \$4-Bromofluorobenzene	(3)	12.294	95	451532	49.722
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	265645	19.927
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	447346	104.383
115) Bromobenzene	(4)	12.416	156	186139	19.769
117) 1,2,3-Trichloropropane	(4)	12.434	110	83942	19.849
119) n-Propylbenzene	(4)	12.477	91	906973	20.674
120) 2-Chlorotoluene	(4)	12.556	126	180296	19.950
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	645836	20.382
121) 4-Chlorotoluene	(4)	12.647	126	189718	19.974
124) tert-Butylbenzene	(4)	12.854	134	129030	19.471
125) Pentachloroethane	(4)	12.891	167	107951	21.153
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	671207	20.131
127) sec-Butylbenzene	(4)	13.018	105	837007	20.499
129) 1,3-Dichlorobenzene	(4)	13.122	146	364544	20.222
130) p-Isopropyltoluene	(4)	13.128	119	710095	20.588
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	493313	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	377997	20.308
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	717285	21.888
135) Benzyl Chloride	(4)	13.268	91	477577	17.831
136) 1,3-Diethylbenzene	(4)	13.323	119	445190	21.208
141) Diethylbenzene (total)	(4)		100	1284576	63.423
137) 1,4-Diethylbenzene	(4)	13.396	119	468805	21.250
139) n-Butylbenzene	(4)	13.420	92	366800	19.770
138) 1,2-Dichlorobenzene	(4)	13.456	146	347977	19.875
140) 1,2-Diethylbenzene	(4)	13.469	119	370581	20.965
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	63594	19.374
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	250367	19.188

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

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 on 04/22/2020 at 08:10.

Target 3.5 esignature user ID: jkh09052

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Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:06

Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

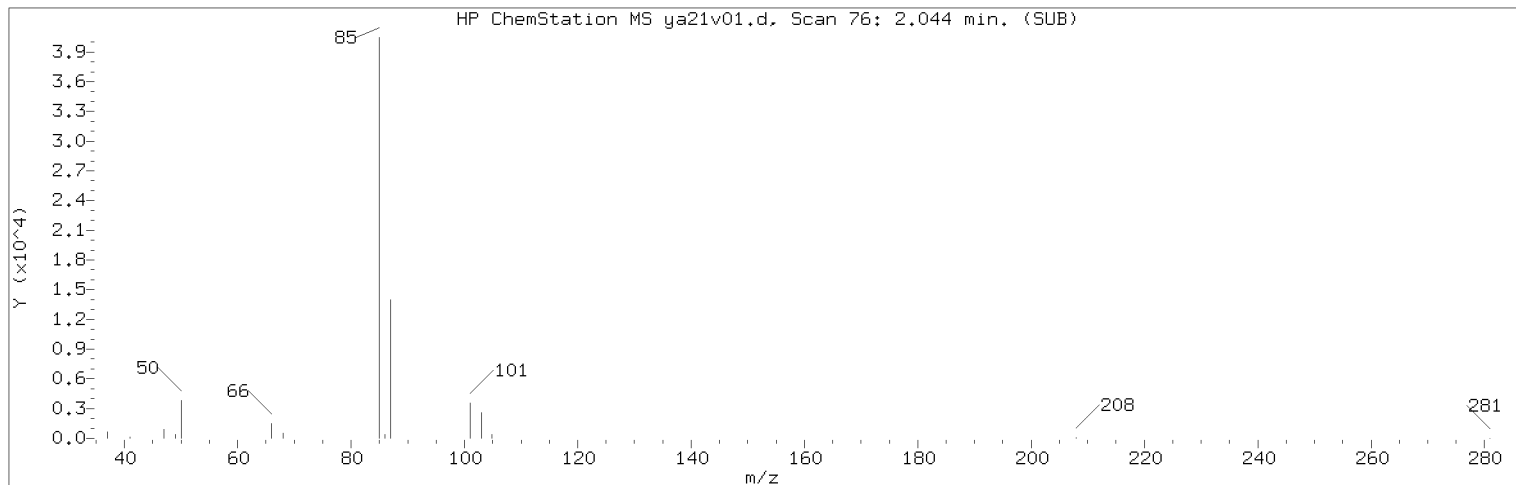
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
146) 1,2,4-Trichlorobenzene	(4)	14.545	180	235433	19.222
147) Hexachlorobutadiene	(4)	14.631	225	102714	18.598
148) Naphthalene	(4)	14.728	128	887839	19.817
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	224984	18.956
150) 2-Methylnaphthalene	(4)	15.519	142	466442	18.842

page 4 of 4

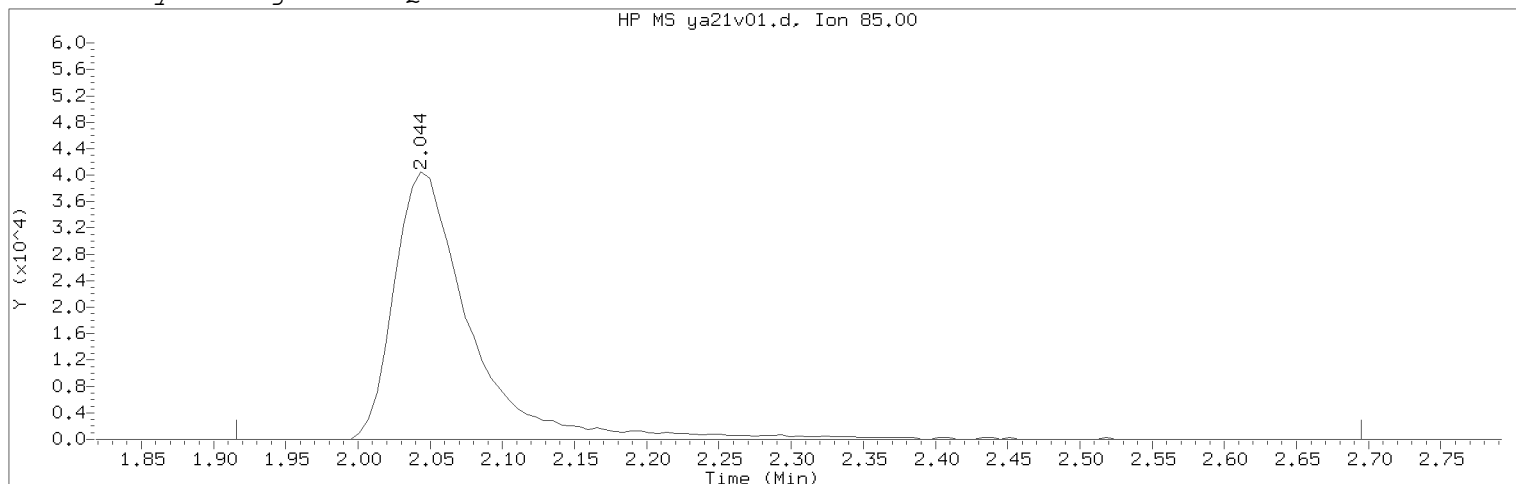
Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

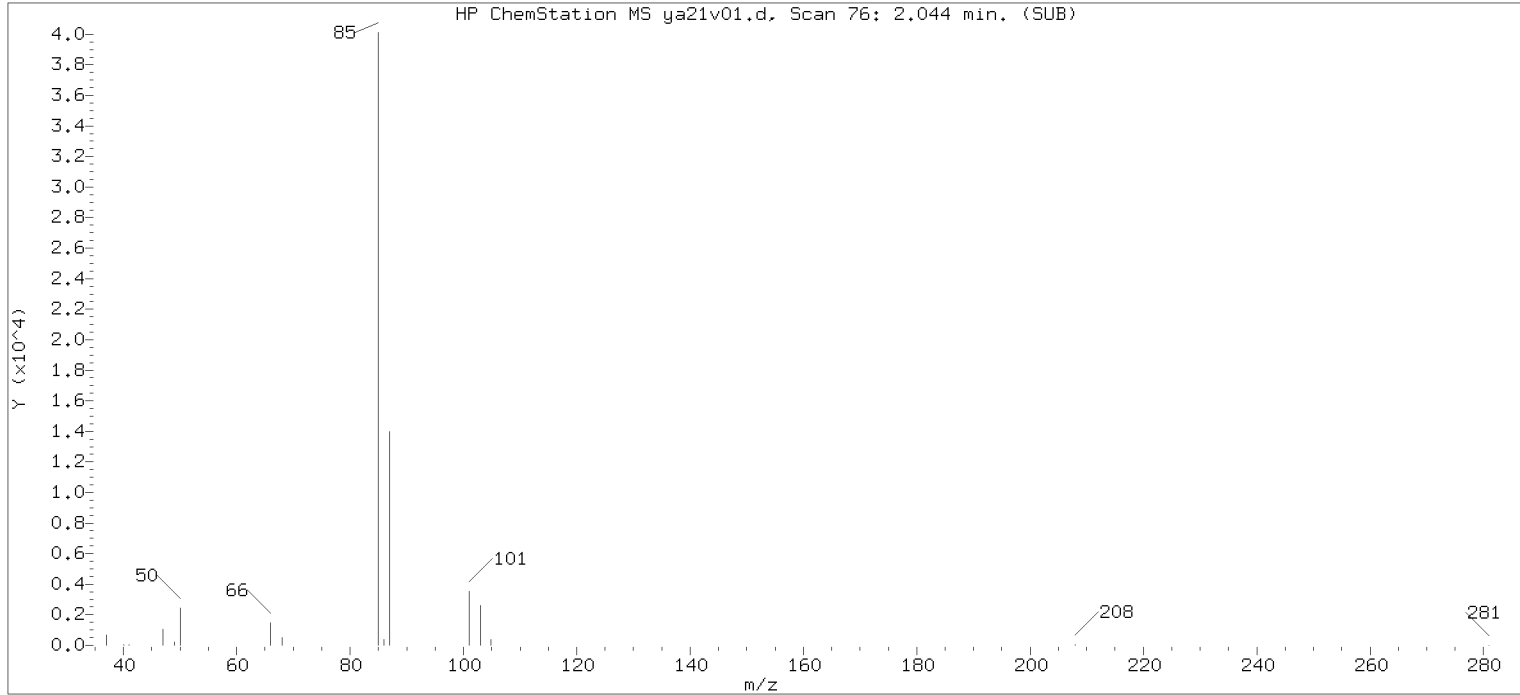
Compound Number : 3
Compound Name : Dichlorodifluoromethane
Scan Number : 76
Retention Time (minutes): 2.044
Quant Ion : 85.00
Area (flag) : 149080M
On-Column Amount (ng) : 18.3994
Integration start scan : 54 Integration stop scan: 182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

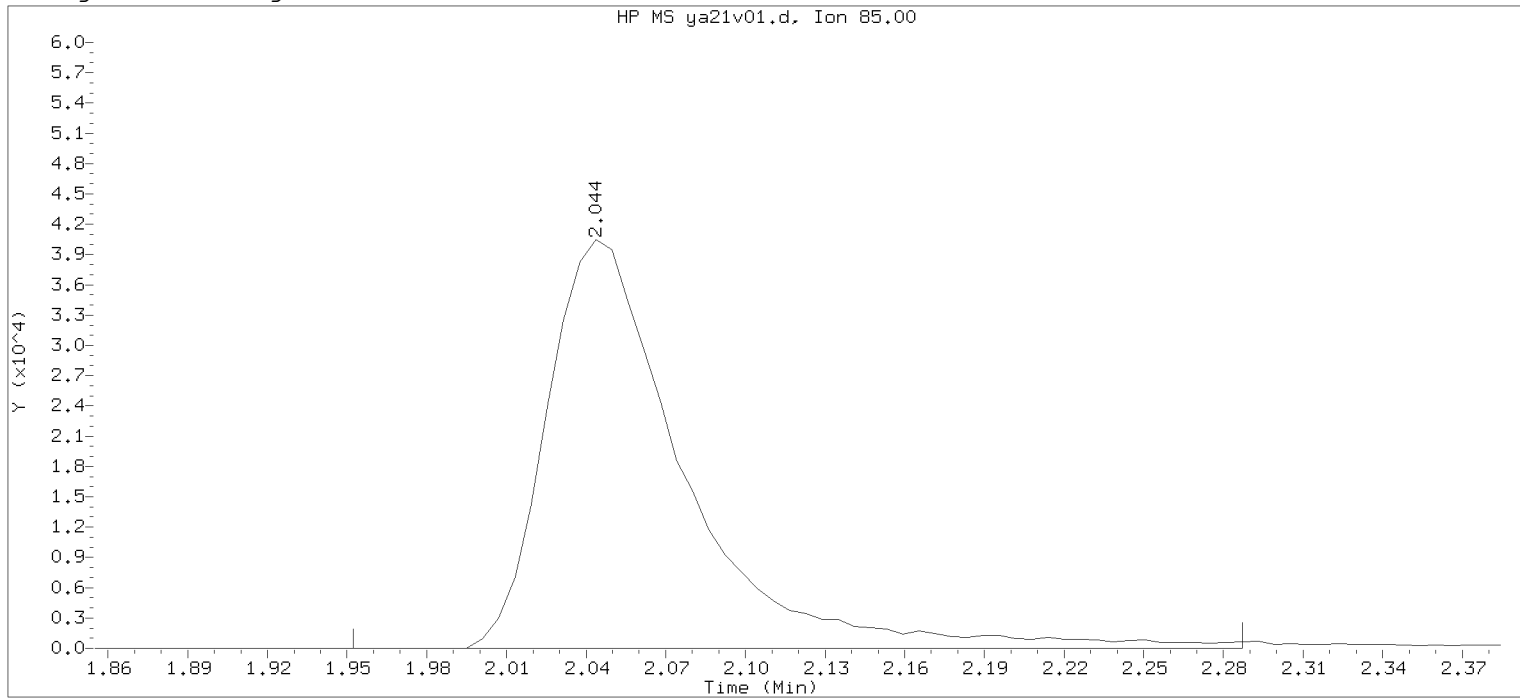
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

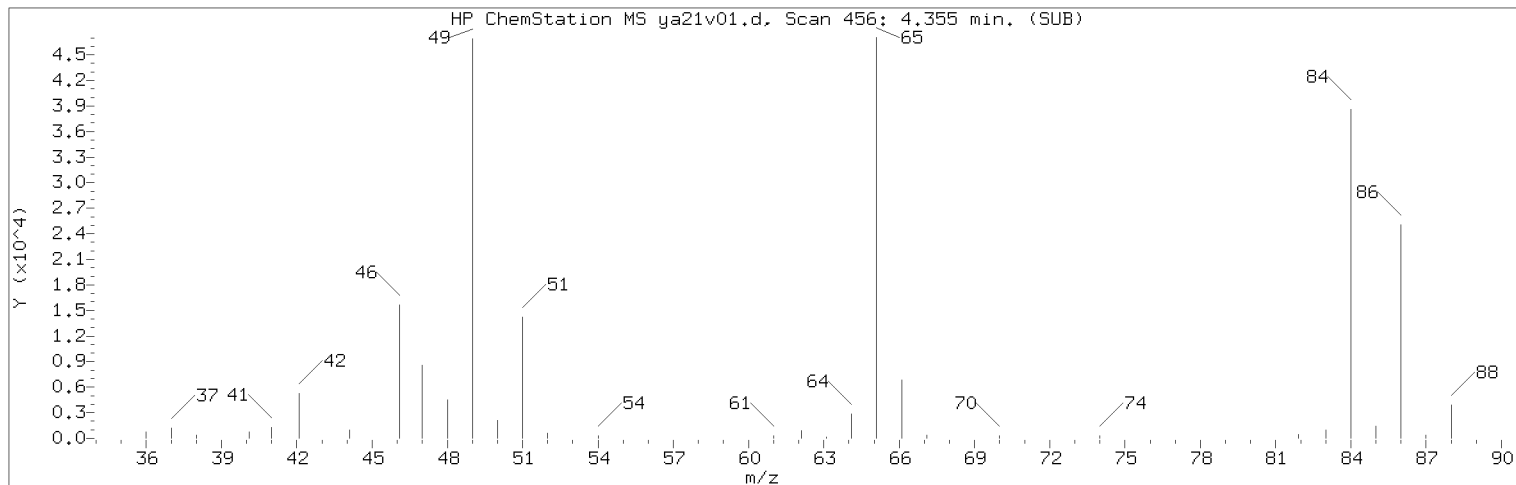
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:06 jkh09052

Sample Name: YLGICV

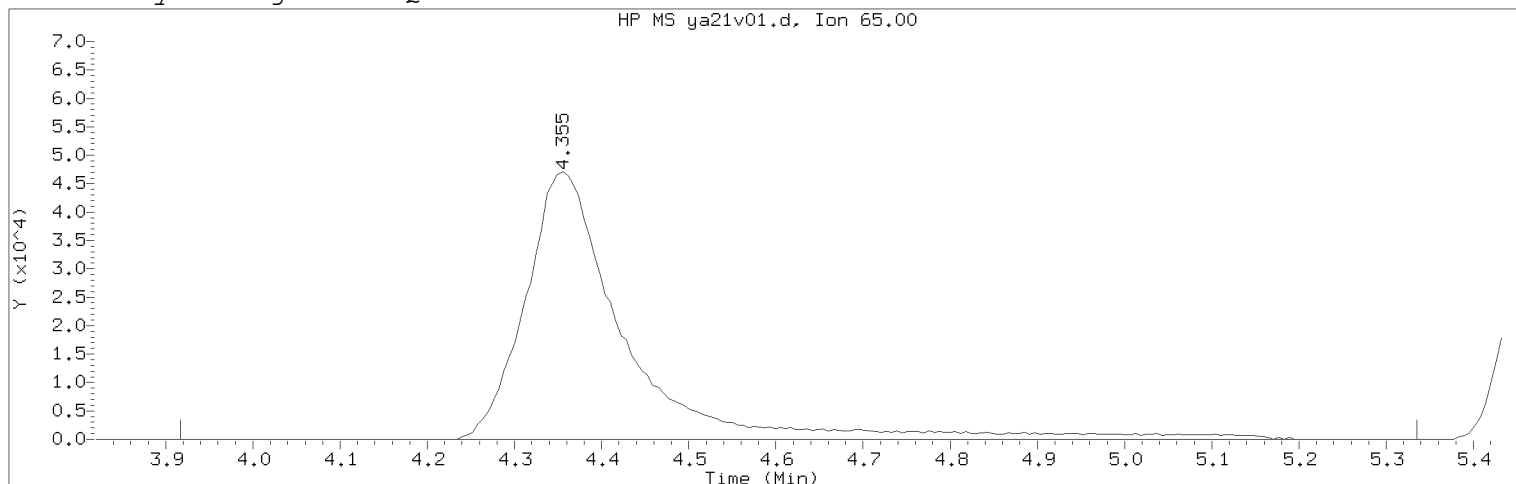
Lab Sample ID: YLGICV

Compound Number	: 3	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 76	
Retention Time (minutes)	: 2.044	
Quant Ion	: 85.00	
Area	: 146189	
On-column Amount (ng)	: 18.0427	
Integration start scan	: 60	Integration stop scan: 115
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:06

Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 456
 Retention Time (minutes): 4.355
 Quant Ion : 65.00
 Area (flag) : 378230M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 383 Integration stop scan: 616
 Y at integration start : 0 Y at integration end: 0

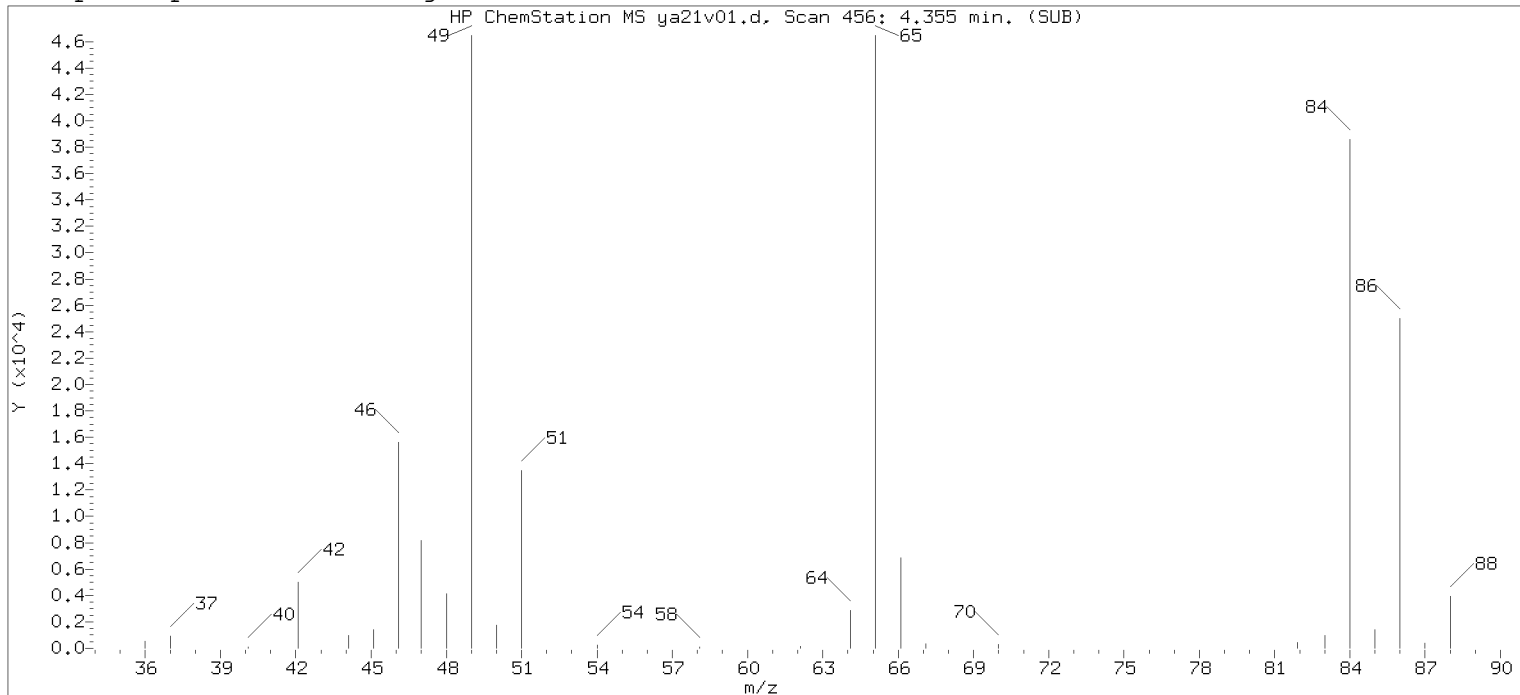
Reason for manual integration: improper integration

Analyst responsible for change:

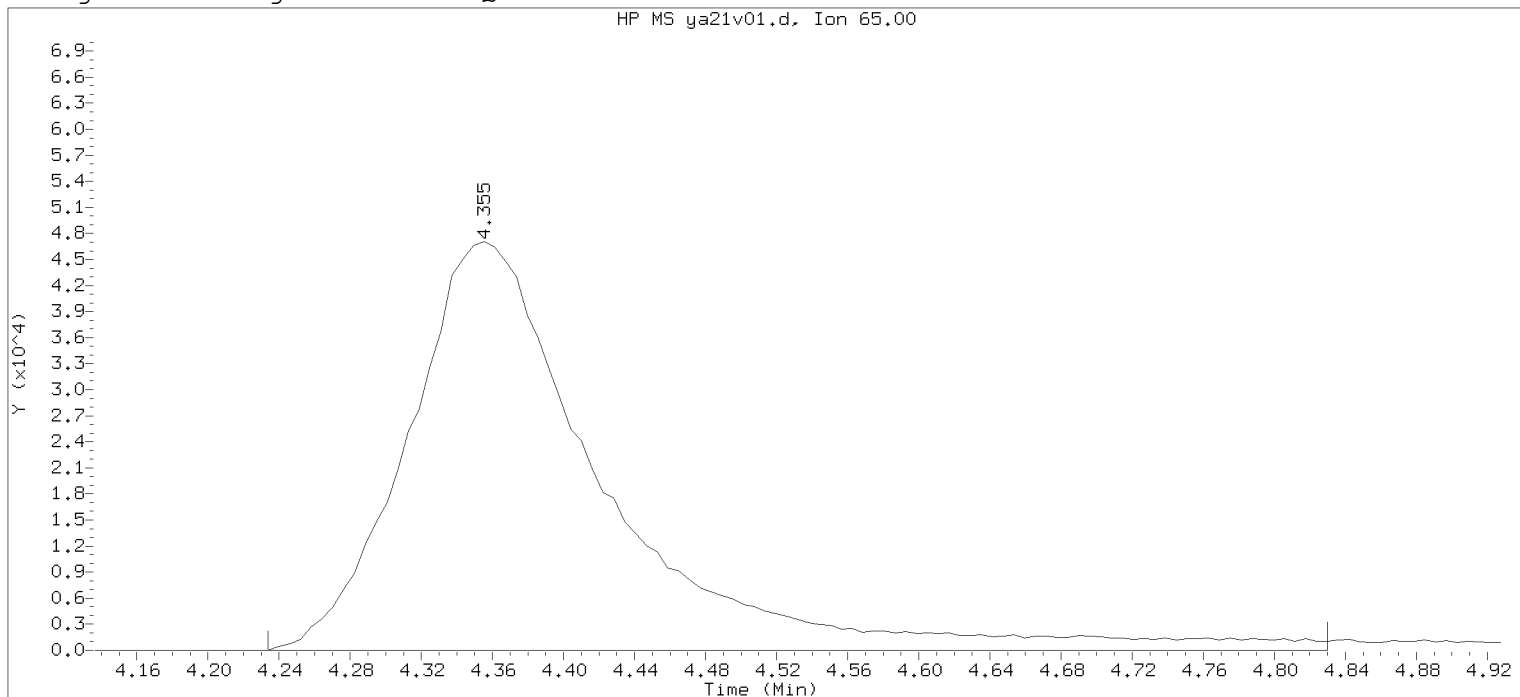
Digitally signed by Jennifer K. Howe
 on 04/22/2020 at 08:10.
 Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:06

Date, time and analyst ID of latest file update: 22-Apr-2020 08:06 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 456

Retention Time (minutes): 4.355

Quant Ion : 65.00

Area : 360290

On-column Amount (ng) : 250.0000

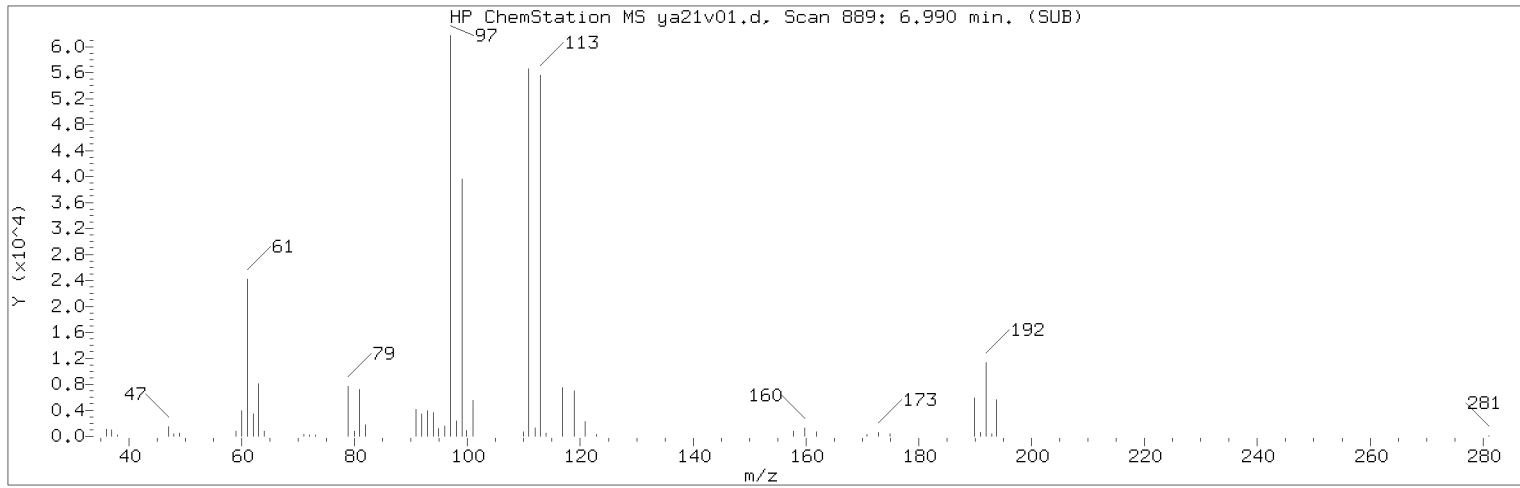
Integration start scan : 435 Integration stop scan: 533

Y at integration start : 0 Y at integration end: 0

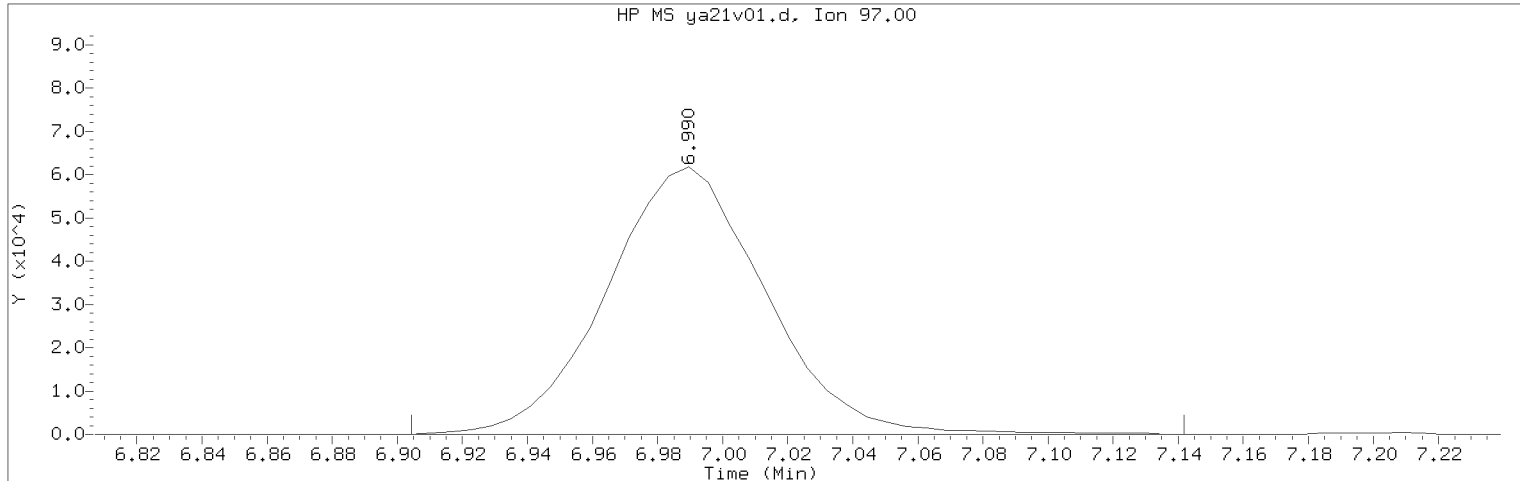
Digitally signed by Jennifer K. Howe on 04/22/2020 at 08:10.

Target 3.5 esignature user RAE59 Page 500 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

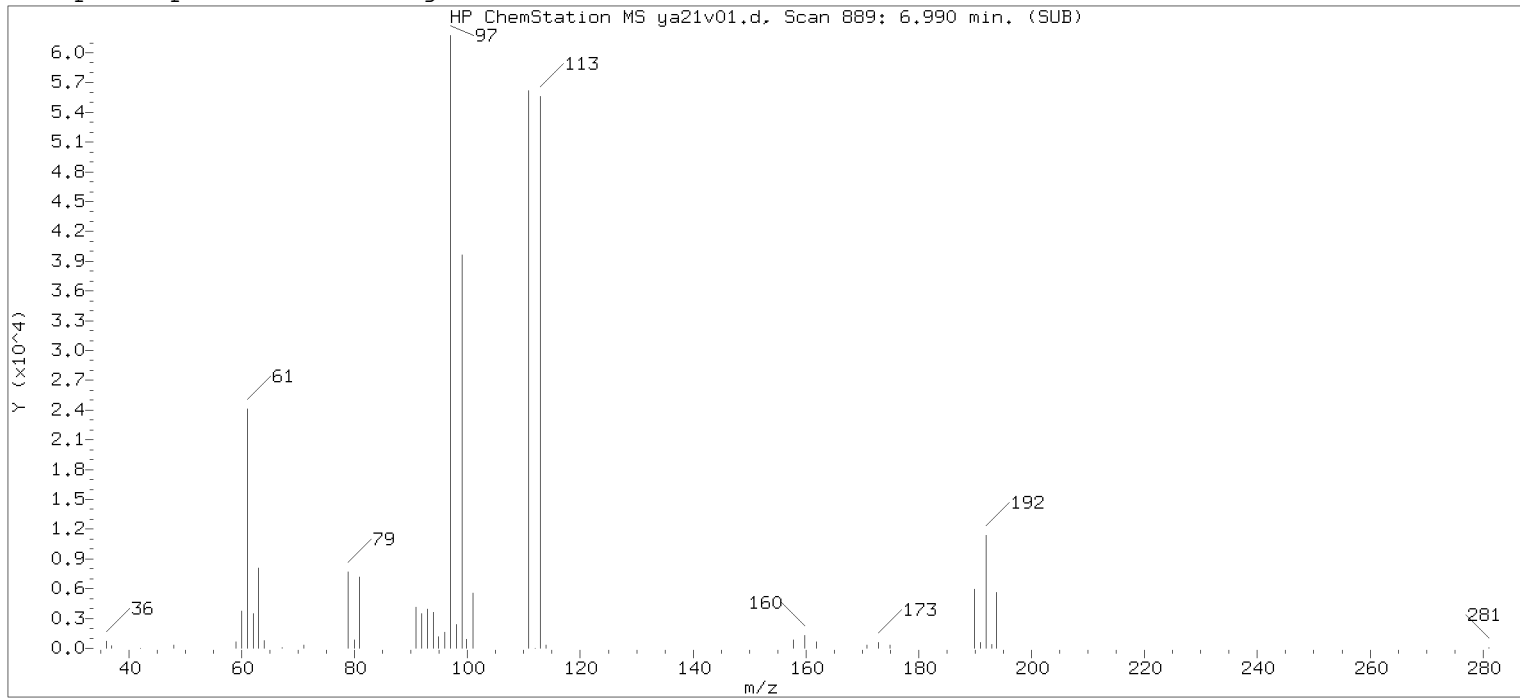
Compound Number	: 53	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 889	
Retention Time (minutes)	: 6.990	
Quant Ion	: 97.00	
Area (flag)	: 208967M	
On-Column Amount (ng)	: 19.9996	
Integration start scan	: 874	Integration stop scan: 913
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

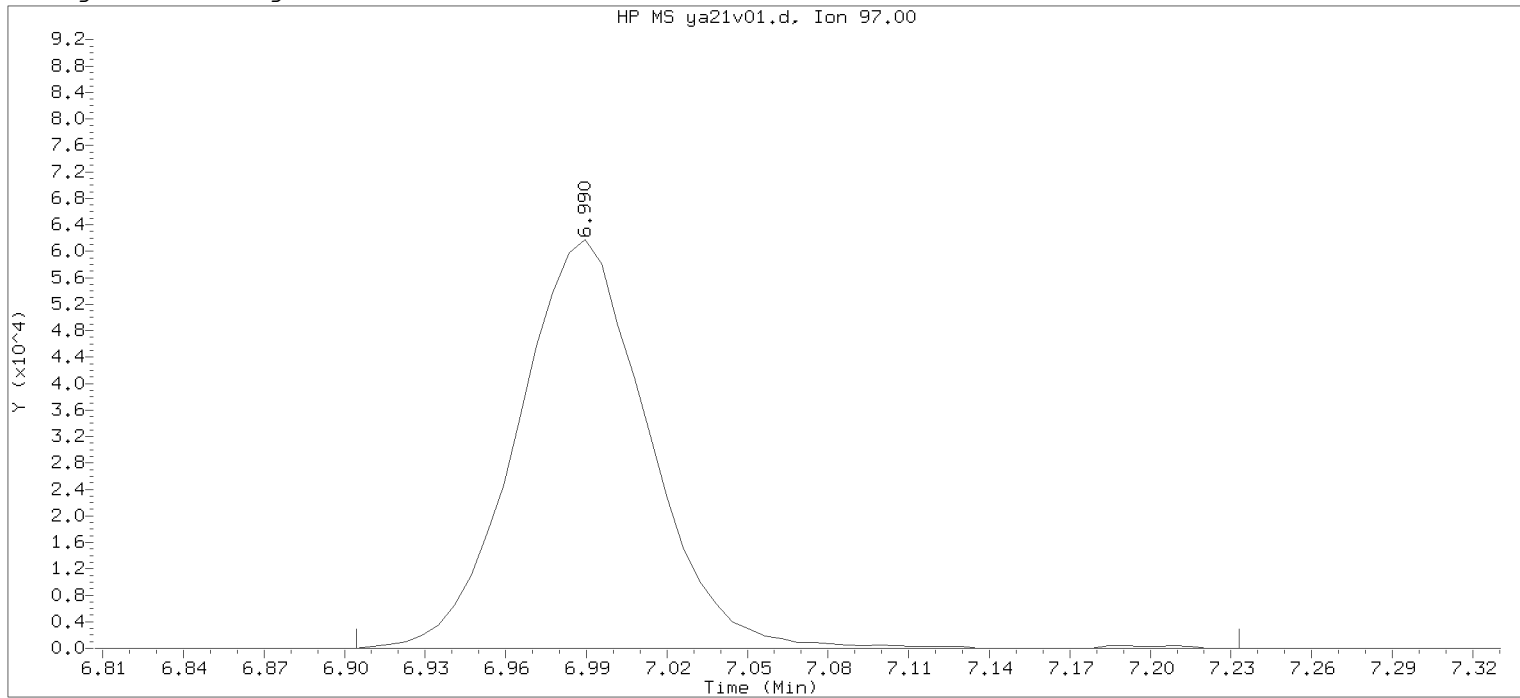
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

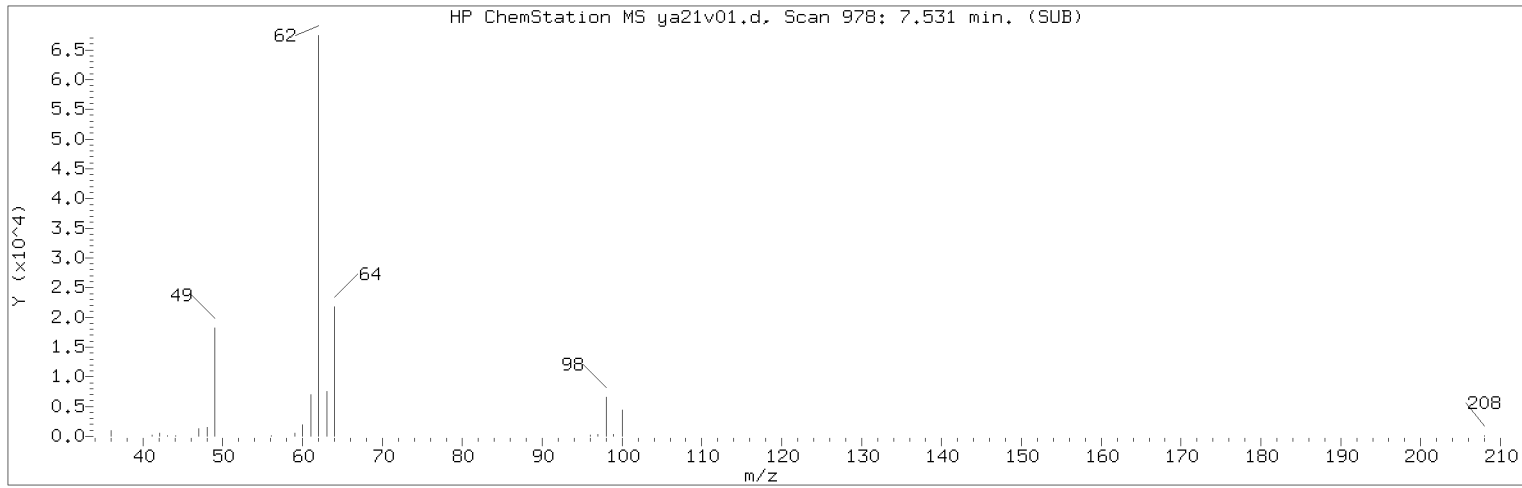
Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:06 jkh09052

Sample Name: YLGICV

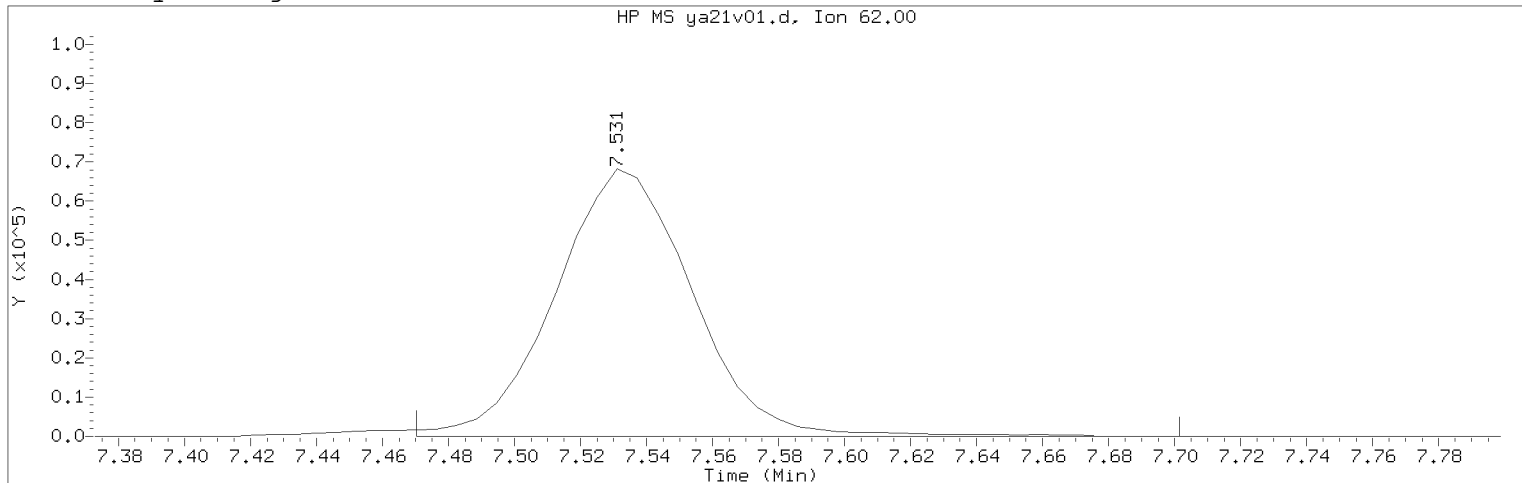
Lab Sample ID: YLGICV

Compound Number	: 53	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 889	
Retention Time (minutes)	: 6.990	
Quant Ion	: 97.00	
Area	: 209725	
On-column Amount (ng)	: 20.0722	
Integration start scan	: 874	Integration stop scan: 928
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

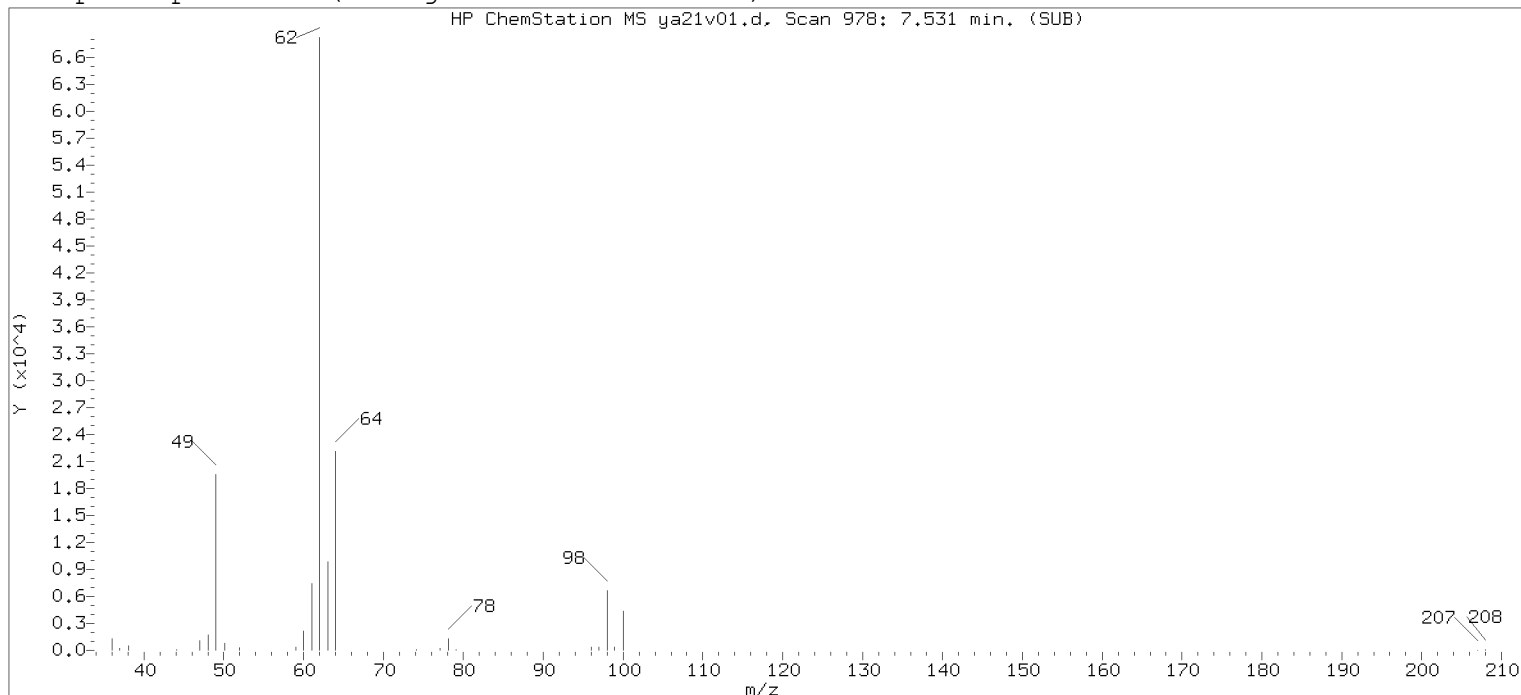
Compound Number	: 61	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 978	
Retention Time (minutes)	: 7.531	
Quant Ion	: 62.00	
Area (flag)	: 197009M	
On-Column Amount (ng)	: 19.9352	
Integration start scan	: 967	Integration stop scan: 1005
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

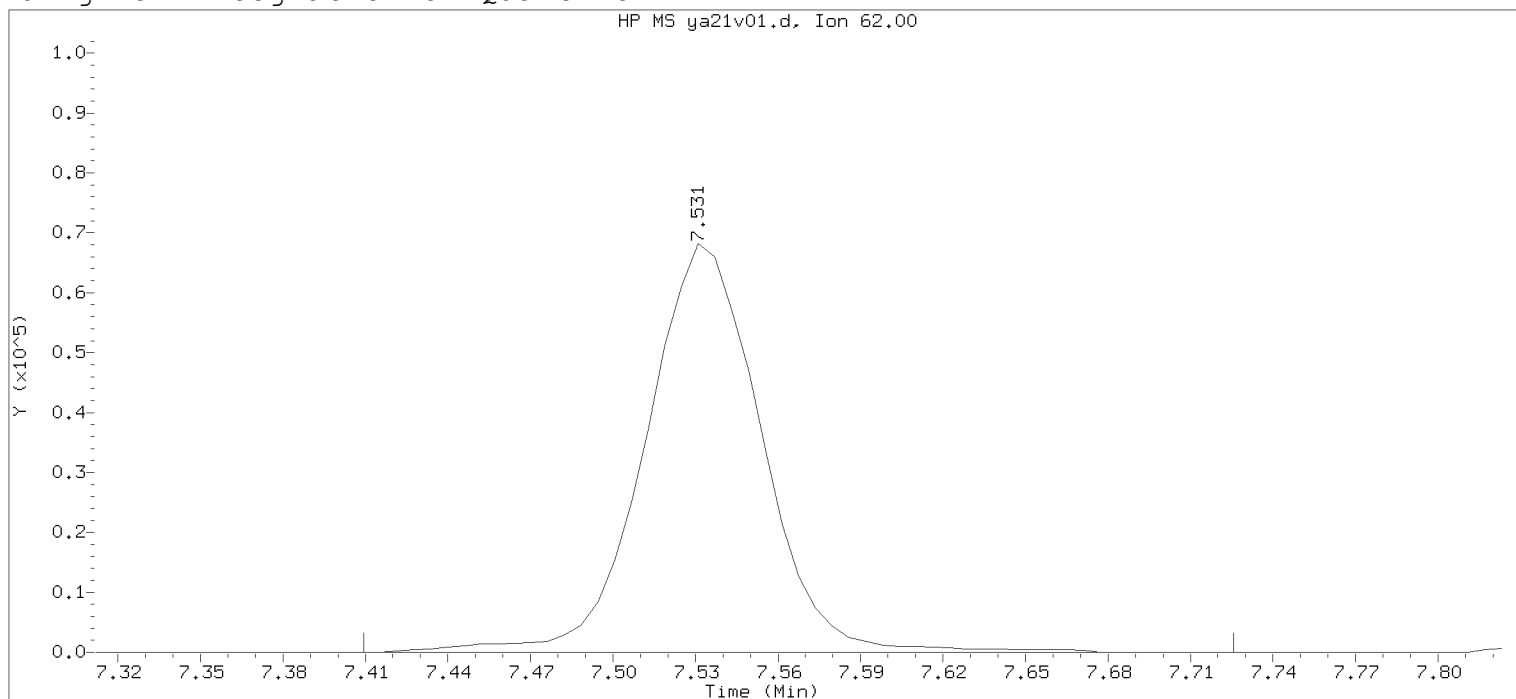
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d

Instrument ID: HP09355.i

Injection date and time: 22-APR-2020 00:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 22-APR-2020 08:06

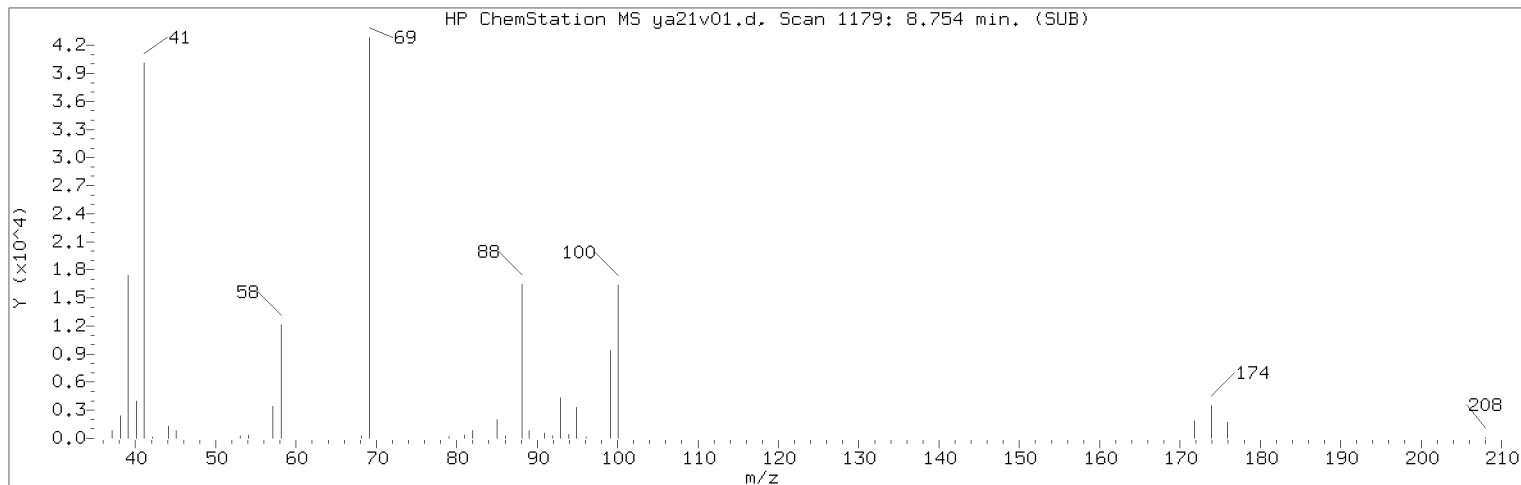
Date, time and analyst ID of latest file update: 22-Apr-2020 08:06 jkh09052

Sample Name: YLGICV

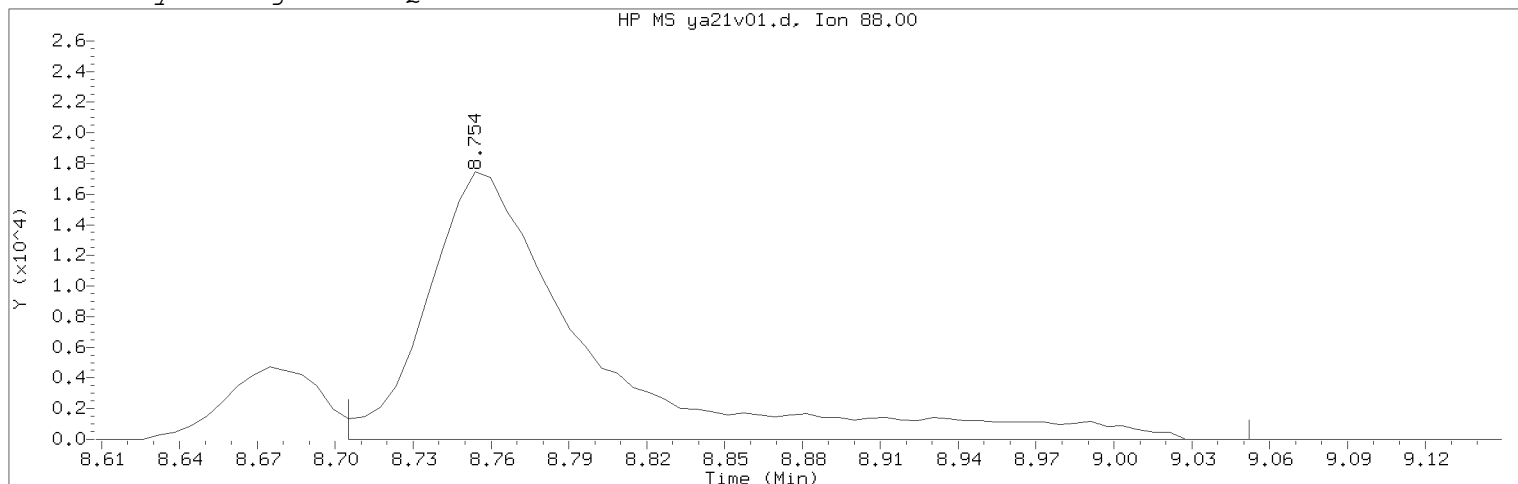
Lab Sample ID: YLGICV

Compound Number	: 61	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 978	
Retention Time (minutes)	: 7.531	
Quant Ion	: 62.00	
Area	: 199698	
On-column Amount (ng)	: 20.2072	
Integration start scan	: 957	Integration stop scan: 1009
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:09 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

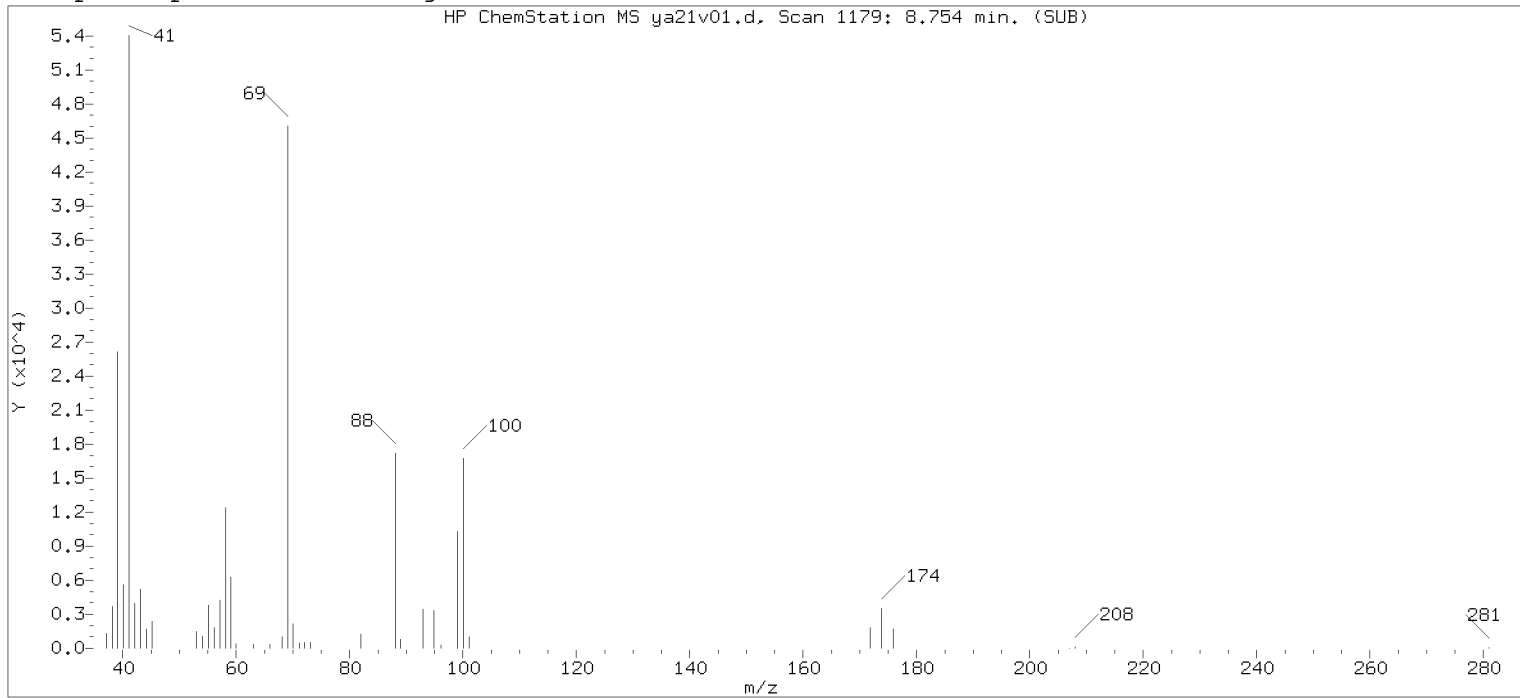
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.754
Quant Ion : 88.00
Area (flag) : 75580M
On-Column Amount (ng) : 495.2938
Integration start scan : 1170 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

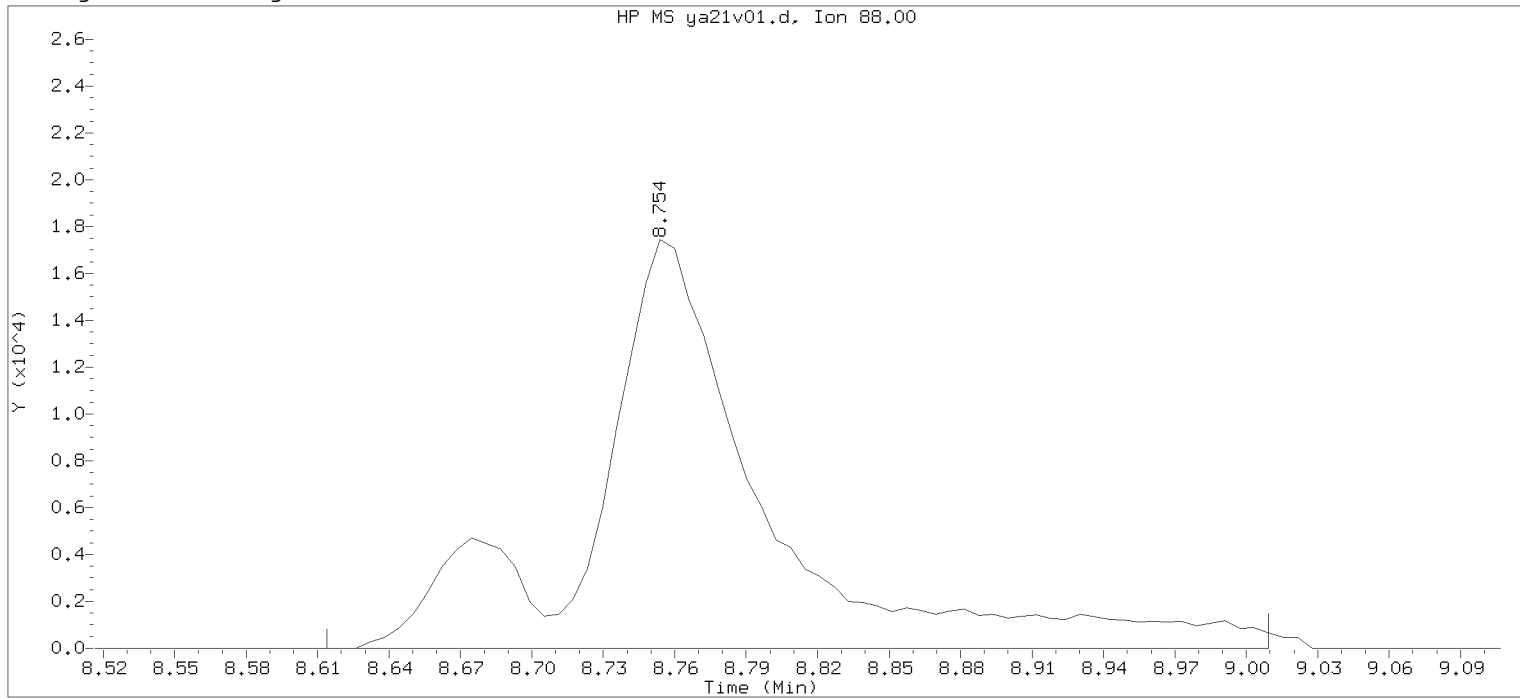
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/22/2020 at 08:10.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/23/2020 at 10:51.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr21a.b/ya21v01.d Instrument ID: HP09355.i
Injection date and time: 22-APR-2020 00:49 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr21a.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2020 08:06
Date, time and analyst ID of latest file update: 22-Apr-2020 08:06 jkh09052

Sample Name: YLGICV

Lab Sample ID: YLGICV

Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1179	
Retention Time (minutes)	: 8.754	
Quant Ion	: 88.00	
Area	: 86862	
On-column Amount (ng)	: 597.5710	
Integration start scan	: 1155	Integration stop scan: 1220
Y at integration start	: 0	Y at integration end: 0

Page 1

Client ID: jan28-20

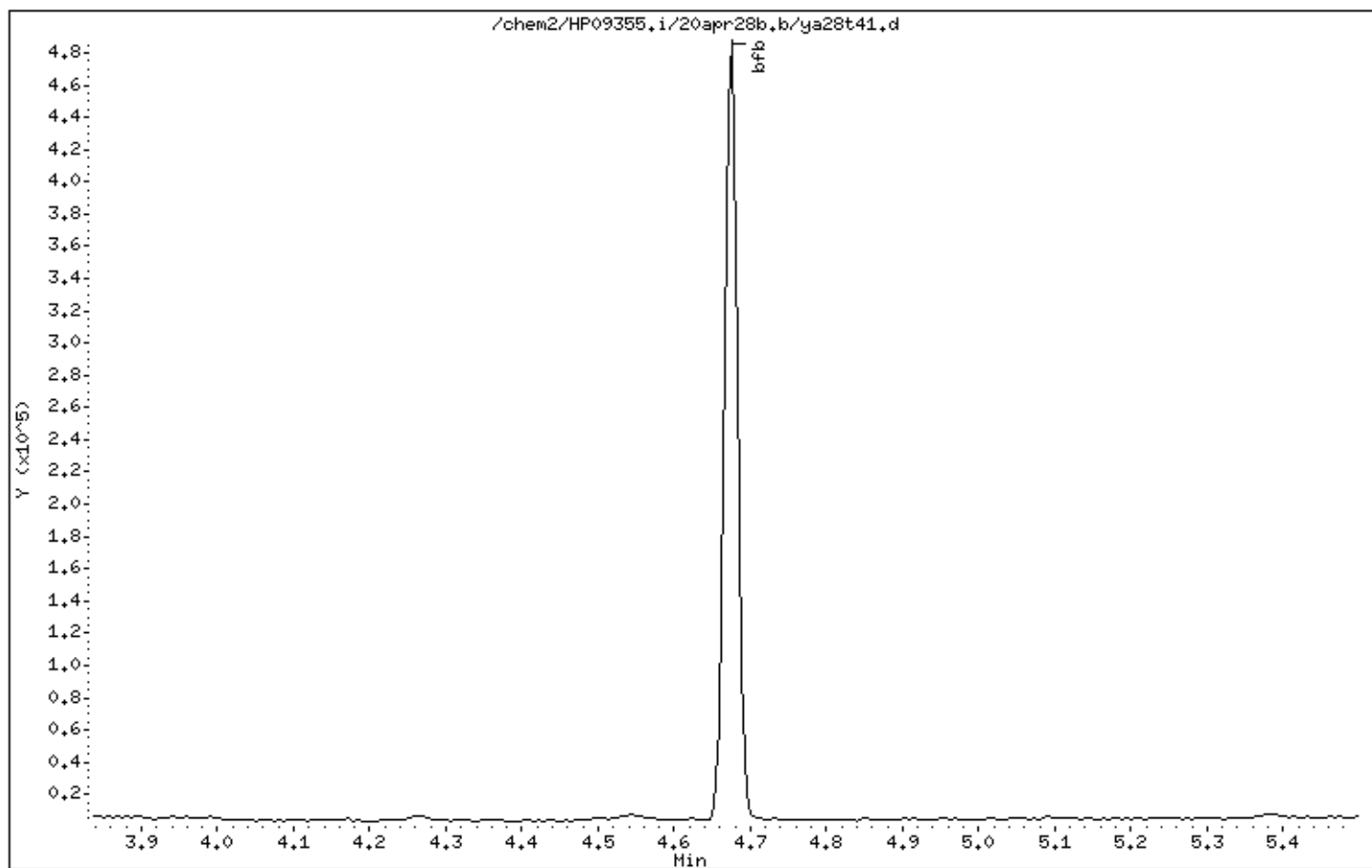
Instrument: HP09355.i

Sample Info: jan28-20;50NGBFB;1;3; ; ; ; ;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Date : 28-APR-2020 20:16

Client ID: jan28-20

Instrument: HP09355.i

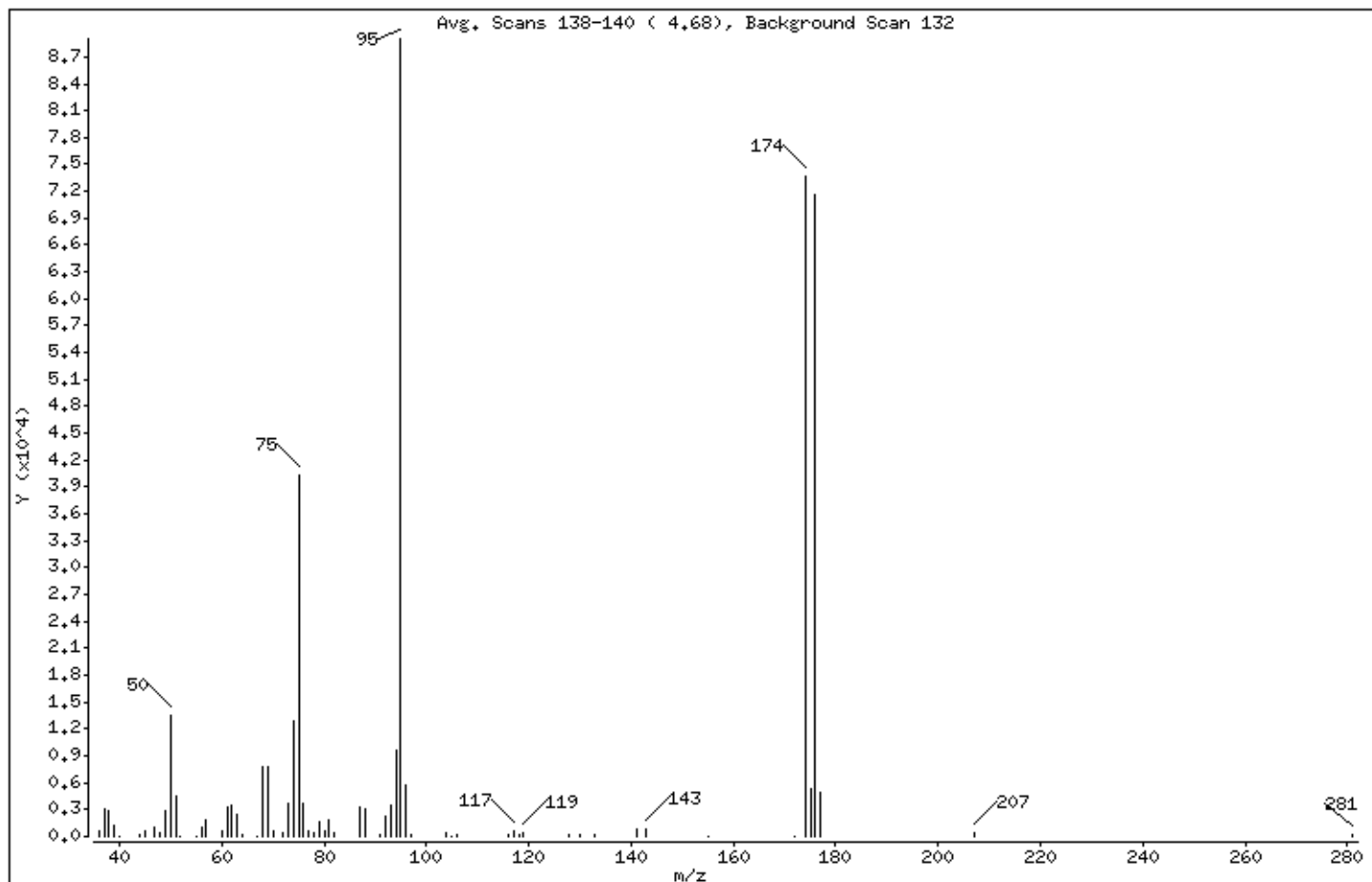
Sample Info: jan28-20;50NGBFB;1;3;++++;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.25
75	30.00 - 60.00% of mass 95	45.29
96	5.00 - 9.00% of mass 95	6.41
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	82.76
175	5.00 - 9.00% of mass 174	5.92 (7.15)
176	95.00 - 101.00% of mass 174	80.40 (97.14)
177	5.00 - 9.00% of mass 176	5.48 (6.81)

Date : 28-APR-2020 20:16

Client ID: jan28-20

Instrument: HP09355.i

Sample Info: jan28-20;50NGBFB;1;3;++++;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0,25

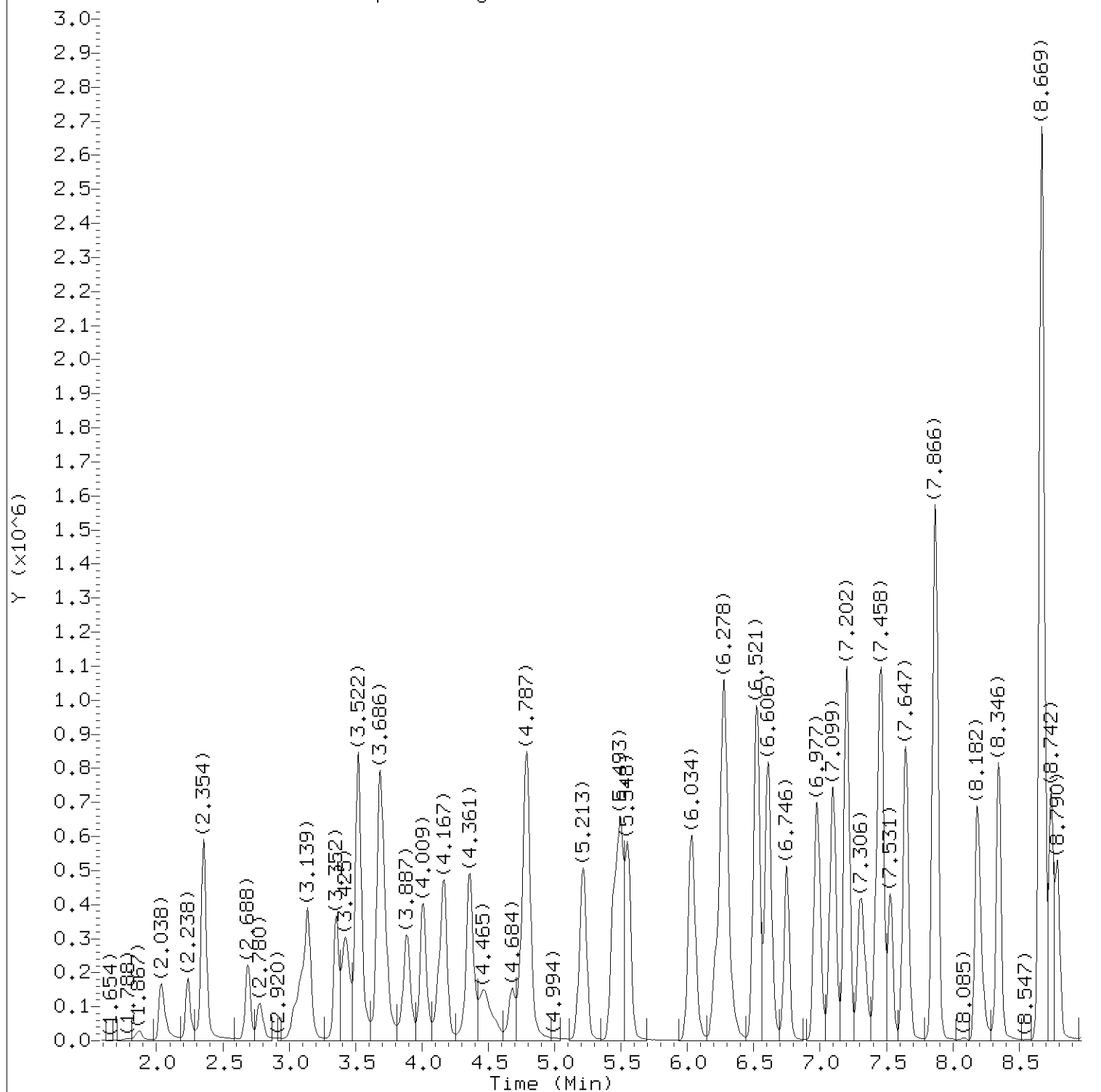
Data File: ya28t41.d

Spectrum: Avg. Scans 138-140 (4.68), Background Scan 132

Location of Maximum: 95,00

Number of points: 65

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	517	61,00	3333	81,00	1759	119,00	459
37,00	3132	62,00	3377	82,00	504	128,00	288
38,00	2904	63,00	2487	87,00	3292	130,00	271
39,00	1231	64,00	229	88,00	3138	133,00	270
40,00	83	67,00	88	91,00	247	141,00	776
44,00	254	68,00	7682	92,00	2227	143,00	862
45,00	698	69,00	7678	93,00	3435	155,00	88
47,00	1046	70,00	618	94,00	9595	172,00	98
48,00	367	72,00	337	95,00	89016	174,00	73672
49,00	2909	73,00	3597	96,00	5710	175,00	5270
50,00	13575	74,00	12855	97,00	104	176,00	71560
51,00	4524	75,00	40312	104,00	382	177,00	4876
52,00	88	76,00	3683	105,00	93	207,00	365
55,00	96	77,00	555	106,00	262	281,00	165
56,00	1063	78,00	400	116,00	215		
57,00	1876	79,00	1660	117,00	550		
60,00	672	80,00	604	118,00	217		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d
Injection date and time: 28-APR-2020 20:49

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 21:06

Sublist used: 8260W

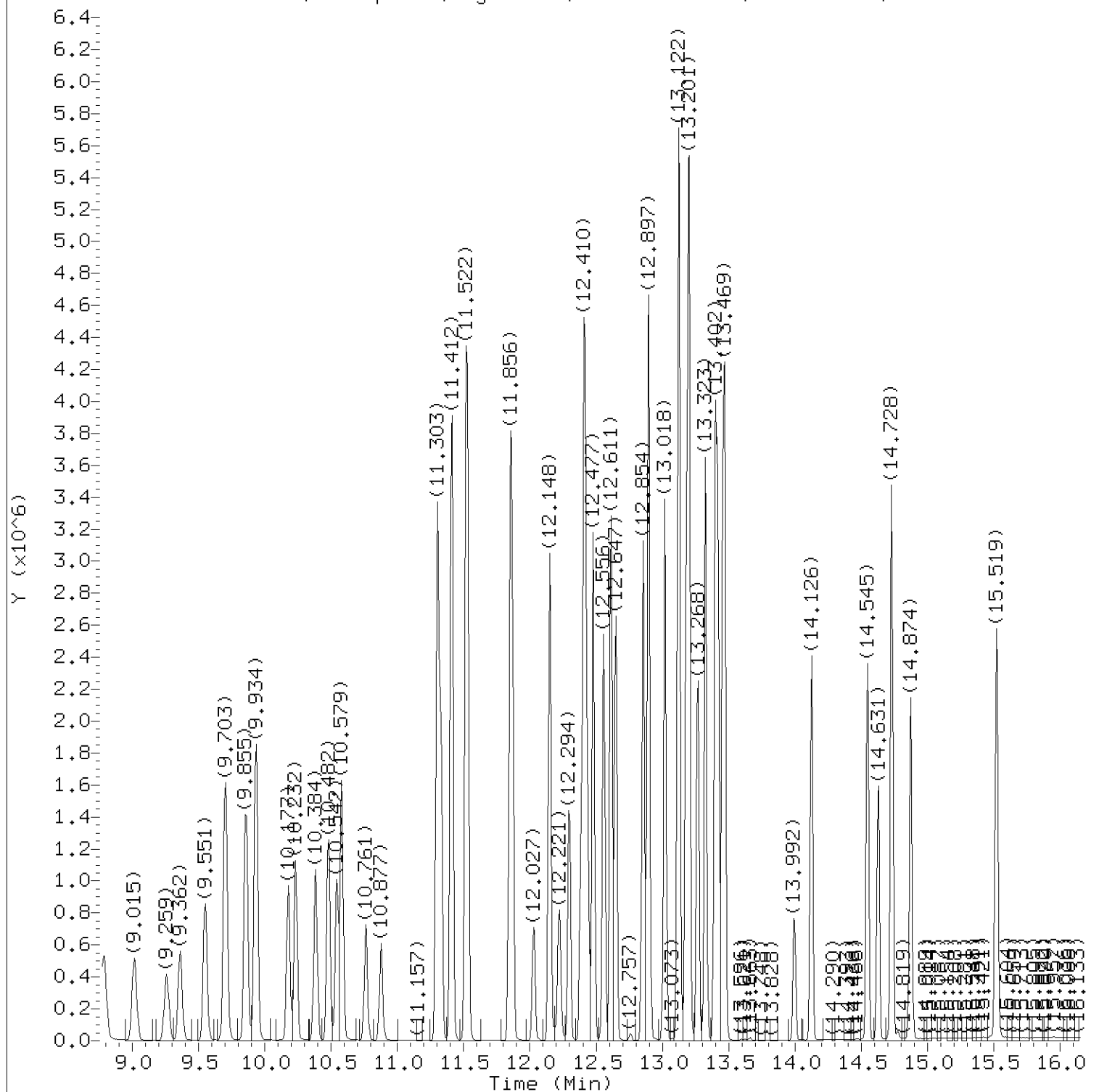
Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 21:25.

Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d
Injection date and time: 28-APR-2020 20:49

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 21:06

Sublist used: 8260W

Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 21:25.

Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 20:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 28-APR-2020 21:06

Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.038	85	346654	42.960
4) Chloromethane	(2)	2.238	50	266334	35.947
5) 1,3-Butadiene	(2)	2.354	39	295940	49.223
6) Vinyl Chloride	(2)	2.354	62	285423	38.632
8) Bromomethane	(2)	2.688	94	227479	44.544
9) Chloroethane	(2)	2.780	64	165437	40.420
12) Trichlorofluoromethane	(2)	3.090	101	418824	49.485
11) n-Pentane	(2)	3.139	43	366948	37.549
14) Ethyl ether	(2)	3.352	59	298906	45.194
15) Freon 123a	(2)	3.425	67	370937M	47.560
16) Acrolein	(1)	3.522	56	1339914	425.969
17) 1,1-Dichloroethene	(2)	3.680	96	305484	44.970
17) 1,1-Dichloroethene	(2)	3.680	63	149645	50.003
18) Acetone	(1)	3.686	58	140560	95.808
19) Freon 113	(2)	3.704	101	324231	52.917
21) 2-Propanol	(1)	3.857	45	250359	229.669
22) Methyl Iodide	(2)	3.887	142	555612	51.646
23) Carbon Disulfide	(2)	4.009	76	1043220	47.464
27) Methyl Acetate	(2)	4.130	43	450594	46.327
25) Allyl Chloride	(2)	4.167	41	471251	43.788
29)*t-Butyl alcohol-d10	(1)	4.343	65	382655	250.000
28) Methylene Chloride	(2)	4.361	84	354135	48.668
30) t-Butyl alcohol	(1)	4.471	59	496304	261.147
31) Acrylonitrile	(2)	4.684	53	246475	45.734
33) Methyl Tertiary Butyl Ether	(2)	4.775	73	1040805	48.483
32) trans-1,2-Dichloroethene	(2)	4.793	96	352889	47.331
34) n-Hexane	(2)	5.213	57	503624	46.210
36) 1,1-Dichloroethane	(2)	5.444	63	600270	47.474
38) di-Isopropyl ether	(2)	5.499	45	1039777	44.808
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	512375	50.084
40) Ethyl t-butyl ether	(2)	6.028	59	995810	47.937
43) 1,2-Dichloroethene (Total)	(2)		96	750875	94.664
44) 2-Butanone	(2)	6.223	43	665768	91.580
42) cis-1,2-Dichloroethene	(2)	6.272	96	397986	47.333
45) 2,2-Dichloropropane	(2)	6.284	77	506395	53.173
47) Propionitrile	(1)	6.296	54	549838	242.811
48) Methacrylonitrile	(2)	6.521	67	664038	121.310
49) Bromochloromethane	(2)	6.606	128	200312	51.312

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

Digitally signed by Kevin A. Spósito
on 04/28/2020 at 21:25.

Target 3.5 esignature user ID: kas02648

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Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d
 Injection date and time: 28-APR-2020 20:49

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 28-APR-2020 21:06
 Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Tetrahydrofuran	(1)	6.618	71	202661	96.810
51) Chloroform	(2)	6.746	83	613751	50.559
52) \$Dibromofluoromethane	(2)	6.965	113	287174	51.209
52) \$Dibromofluoromethane	(2)	6.965	111	294538	51.456
53) 1,1,1-Trichloroethane	(2)	6.983	97	546105	52.481
54) Cyclohexane	(2)	7.099	56	603256	46.431
54) Cyclohexane	(2)	7.099	84	530433	49.121
54) Cyclohexane	(2)	7.099	69	190533	48.023
55) 1,1-Dichloropropene	(2)	7.196	75	497094	49.234
56) Carbon Tetrachloride	(2)	7.209	117	481323	54.725
58) Isobutyl Alcohol	(1)	7.306	41	405337	594.286
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	74728	50.529
57) \$1,2-Dichloroethane-d4	(2)	7.428	65	353711	53.619
57) \$1,2-Dichloroethane-d4	(2)	7.428	104	47717	50.639
60) Benzene	(2)	7.458	78	1475744	48.102
61) 1,2-Dichloroethane	(2)	7.531	62	513560	52.180
61) 1,2-Dichloroethane	(2)	7.531	98	47472	52.042
65) t-Amyl methyl ether	(2)	7.647	73	1063558	50.746
66) *Fluorobenzene	(2)	7.860	96	1234679	50.000
67) n-Heptane	(2)	7.878	43	514819	43.306
69) n-Butanol	(1)	8.182	56	727520	1132.760
71) Trichloroethene	(2)	8.346	95	383958	50.512
72) Methylcyclohexane	(2)	8.663	83	653786	48.404
72) Methylcyclohexane	(2)	8.663	98	296484	49.786
73) 1,2-Dichloropropane	(2)	8.675	63	370635	47.172
76) Methyl Methacrylate	(2)	8.742	69	394670	50.163
75) 1,4-Dioxane	(1)	8.754	88	92333M	598.084
74) Dibromomethane	(2)	8.790	93	256207	51.421
78) Bromodichloromethane	(2)	9.015	83	470990	52.362
79) 2-Nitropropane	(2)	9.259	41	350944	107.961
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	313655	49.980
81) cis-1,3-Dichloropropene	(2)	9.551	75	617668	50.067
82) 4-Methyl-2-pentanone	(2)	9.703	43	1284629	94.834
83) \$Toluene-d8	(3)	9.855	98	1207541	47.676
83) \$Toluene-d8	(3)	9.861	100	778616	47.893
88) Toluene	(3)	9.934	92	961532	47.265
90) 1,3-Dichloropropene (total)	(3)		100	1216598	99.394
89) trans-1,3-Dichloropropene	(3)	10.177	75	598930	49.327

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d
 Injection date and time: 28-APR-2020 20:49

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 28-APR-2020 21:06
 Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) Ethyl Methacrylate	(3)	10.232	69	634787	48.316
92) 1,1,2-Trichloroethane	(3)	10.384	97	383455	47.912
93) Tetrachloroethene	(3)	10.482	166	414559	49.937
94) 1,3-Dichloropropane	(3)	10.542	76	645140	47.323
96) 2-Hexanone	(3)	10.579	43	1049457	92.118
97) Dibromochloromethane	(3)	10.761	129	413228	51.628
99) 1,2-Dibromoethane	(3)	10.877	107	430099	49.833
100)*Chlorobenzene-d5	(3)	11.303	117	969945	50.000
101) 1-Chlorohexane	(3)	11.303	91	513660	45.723
102) Chlorobenzene	(3)	11.327	112	1126571	49.013
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	383184	51.214
104) Ethylbenzene	(3)	11.412	91	1891932	48.749
106) m+p-Xylene	(3)	11.522	106	1525028	99.570
108) Xylene (Total)	(3)		106	2262939	148.567
107) o-Xylene	(3)	11.850	106	737911	48.997
109) Styrene	(3)	11.869	104	1252484	51.617
110) Bromoform	(3)	12.027	173	318354	53.902
111) Isopropylbenzene	(3)	12.148	105	1900930	50.077
112) Cyclohexanone	(1)	12.221	55	342831	576.848
114)\$4-Bromofluorobenzene	(3)	12.294	95	467549	48.719
114)\$4-Bromofluorobenzene	(3)	12.301	174	388419	52.547
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	659516	45.030
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	473442	100.552
115) Bromobenzene	(4)	12.416	156	506383	48.950
117) 1,2,3-Trichloropropane	(4)	12.434	110	223403	48.082
119) n-Propylbenzene	(4)	12.477	91	2254137	46.768
120) 2-Chlorotoluene	(4)	12.556	126	475772	47.917
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	1659622	47.672
121) 4-Chlorotoluene	(4)	12.647	126	500895	48.001
124) tert-Butylbenzene	(4)	12.854	134	341174	46.861
125) Pentachloroethane	(4)	12.891	167	289982	51.721
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	1761157	48.077
127) sec-Butylbenzene	(4)	13.018	105	2093199	46.660
129) 1,3-Dichlorobenzene	(4)	13.122	146	977283	49.345
130) p-Isopropyltoluene	(4)	13.128	119	1806109	47.664
131)*1,4-Dichlorobenzene-d4	(4)	13.177	152	541981	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	1006511	49.218
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	1711556	47.538

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

Digitally signed by Kevin A. Sposito
 on 04/28/2020 at 21:25.

Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 20:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 28-APR-2020 21:06

Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

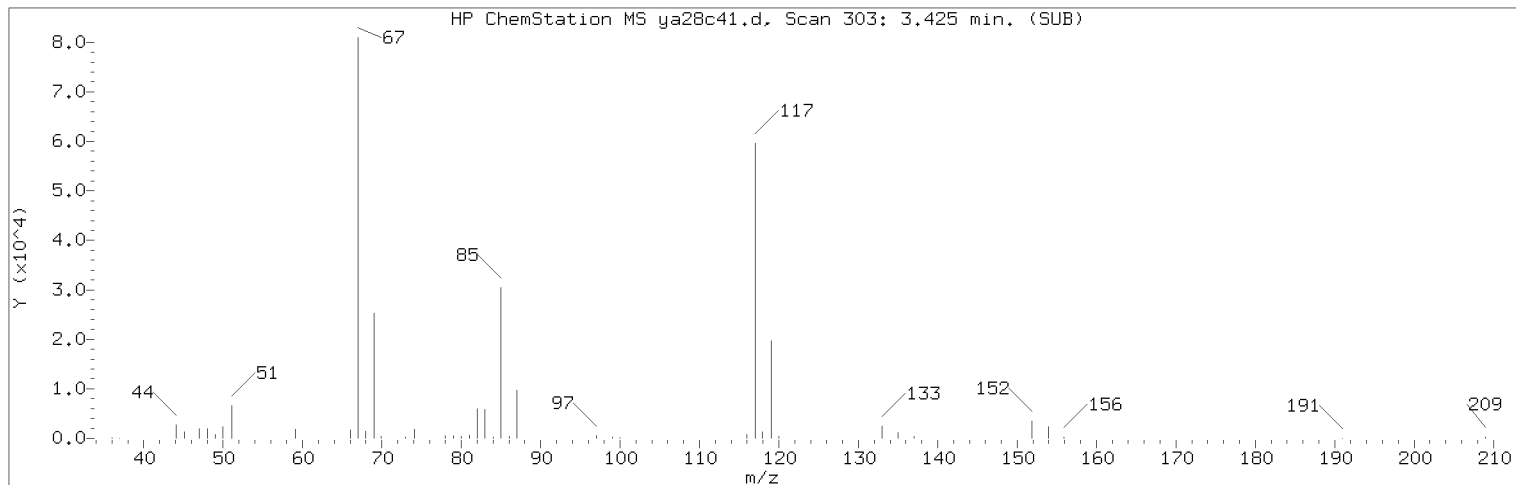
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
135) Benzyl Chloride	(4)	13.268	91	1502246	51.052
136) 1,3-Diethylbenzene	(4)	13.323	119	1103181	47.834
141) Diethylbenzene (total)	(4)		100	3183776	143.102
137) 1,4-Diethylbenzene	(4)	13.396	119	1159563	47.840
139) n-Butylbenzene	(4)	13.420	92	919004	45.086
138) 1,2-Dichlorobenzene	(4)	13.456	146	942000	48.973
140) 1,2-Diethylbenzene	(4)	13.469	119	921032	47.428
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	178228	49.422
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	693520	48.378
146) 1,2,4-Trichlorobenzene	(4)	14.545	180	651815	48.438
147) Hexachlorobutadiene	(4)	14.631	225	273253	45.033
148) Naphthalene	(4)	14.728	128	2460023	49.978
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	633634	48.593
150) 2-Methylnaphthalene	(4)	15.519	142	1289778	47.422

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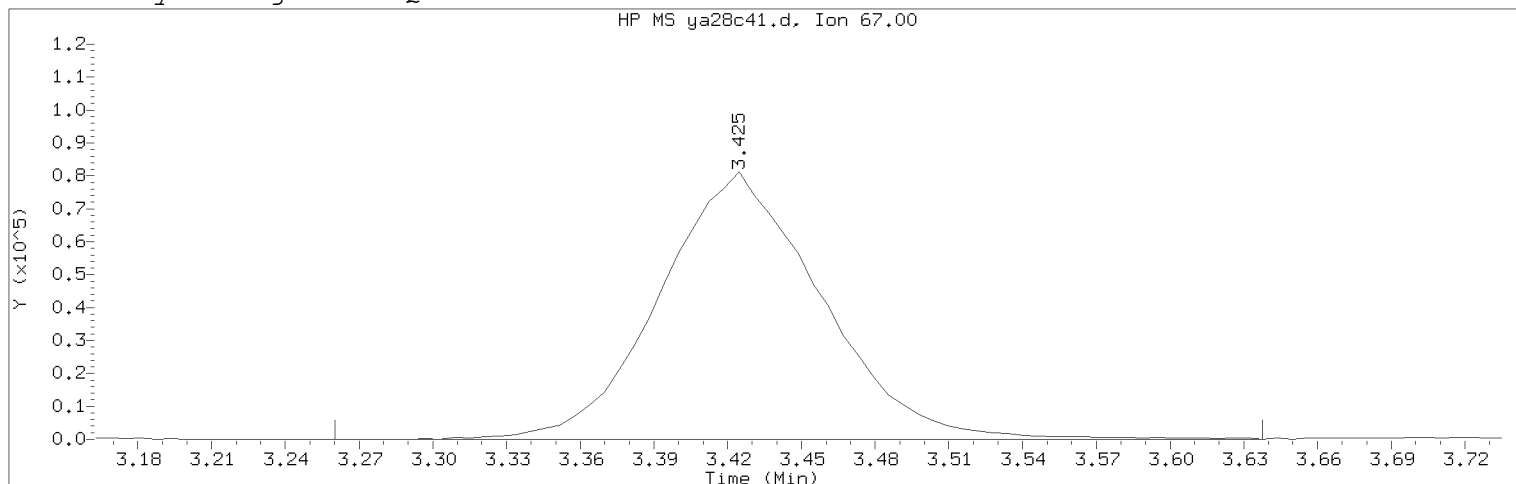
Digitally signed by Kevin A. Sposito
on 04/28/2020 at 21:25.

Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d Instrument ID: HP09355.i
Injection date and time: 28-APR-2020 20:49 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 28-APR-2020 21:06
Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

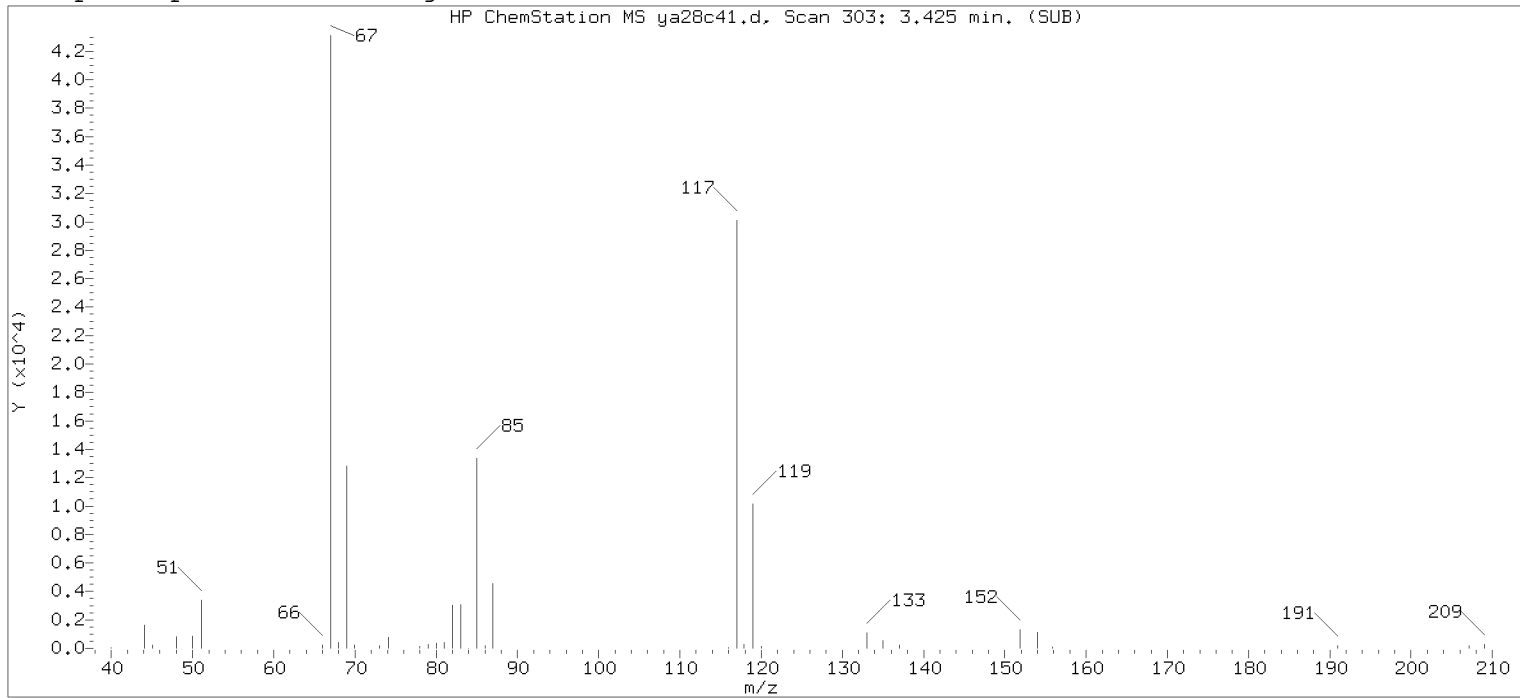
Compound Number	: 15	
Compound Name	: Freon 123a	
Scan Number	: 303	
Retention Time (minutes)	: 3.425	
Quant Ion	: 67.00	
Area (flag)	: 370937M	
On-Column Amount (ng)	: 47.5599	
Integration start scan	: 275	Integration stop scan: 337
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

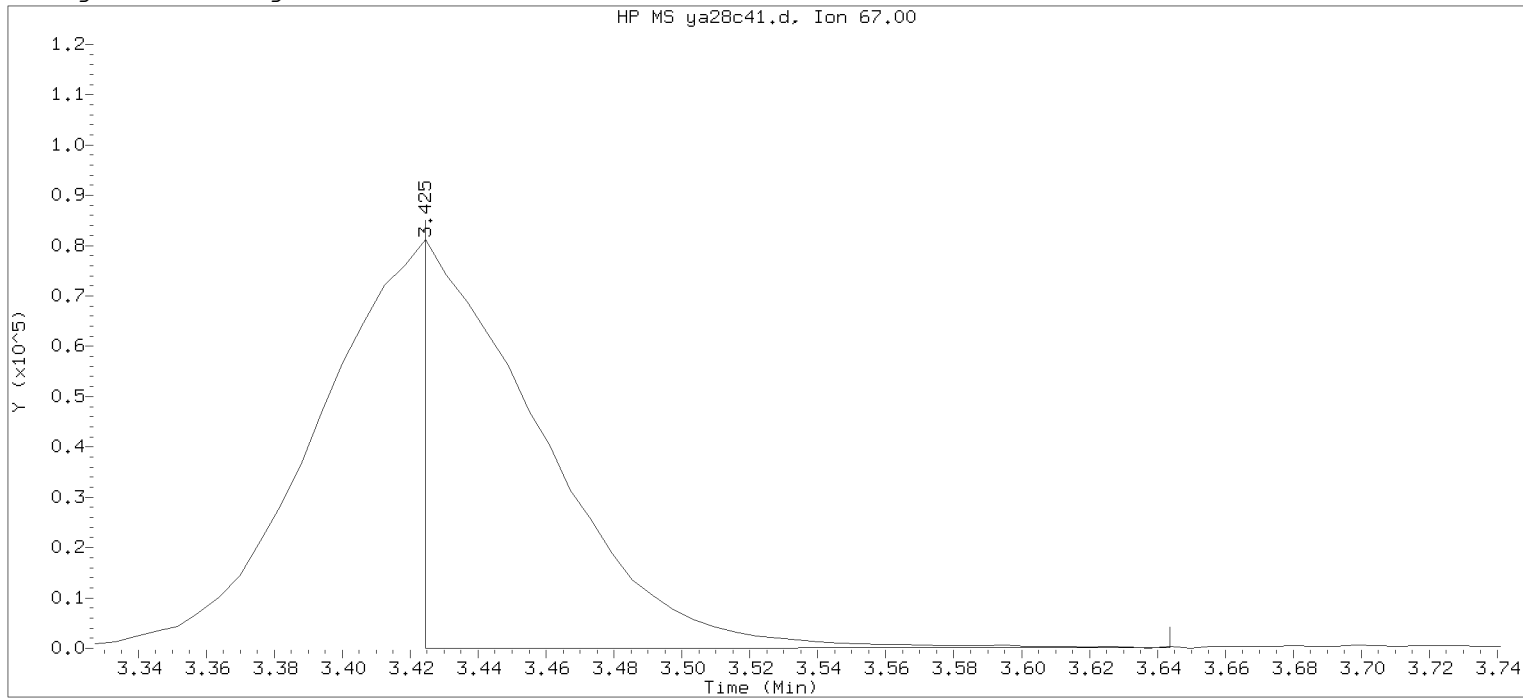
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 04/28/2020 at 21:25.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 20:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 28-APR-2020 21:06

Date, time and analyst ID of latest file update: 28-Apr-2020 21:06 Automation

Sample Name: VSTD050

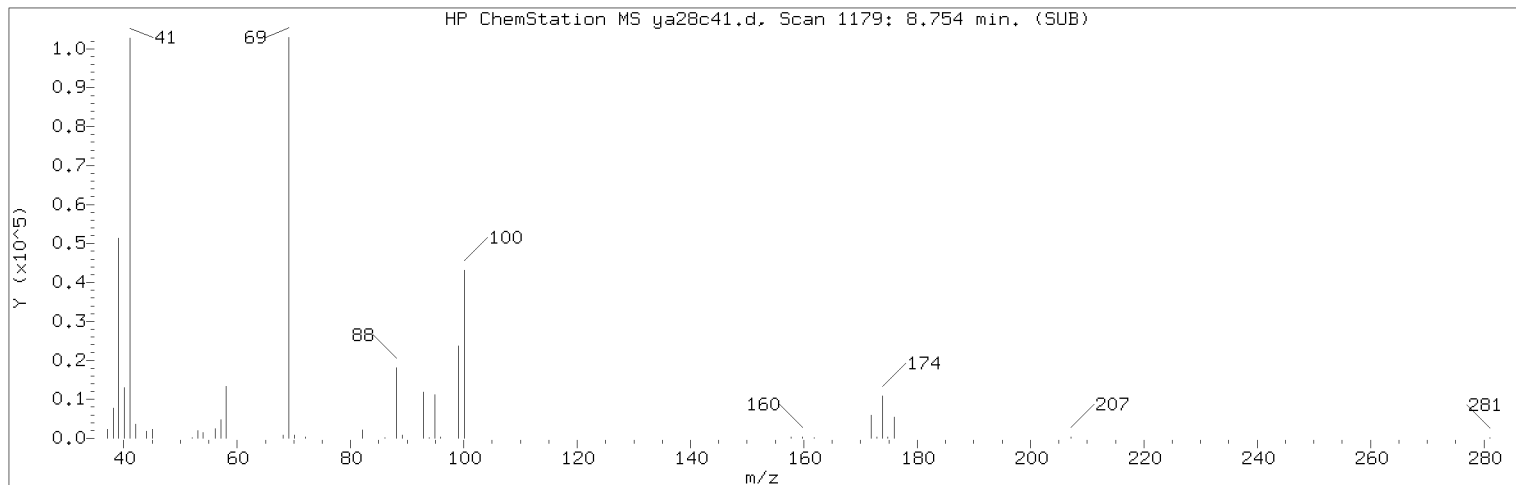
Lab Sample ID: VSTD050

Compound Number : 15
 Compound Name : Freon 123a
 Scan Number : 303
 Retention Time (minutes): 3.425
 Quant Ion : 67.00
 Area : 190872
 On-column Amount (ng) : 24.4729
 Integration start scan : 302
 Y at integration start : 0

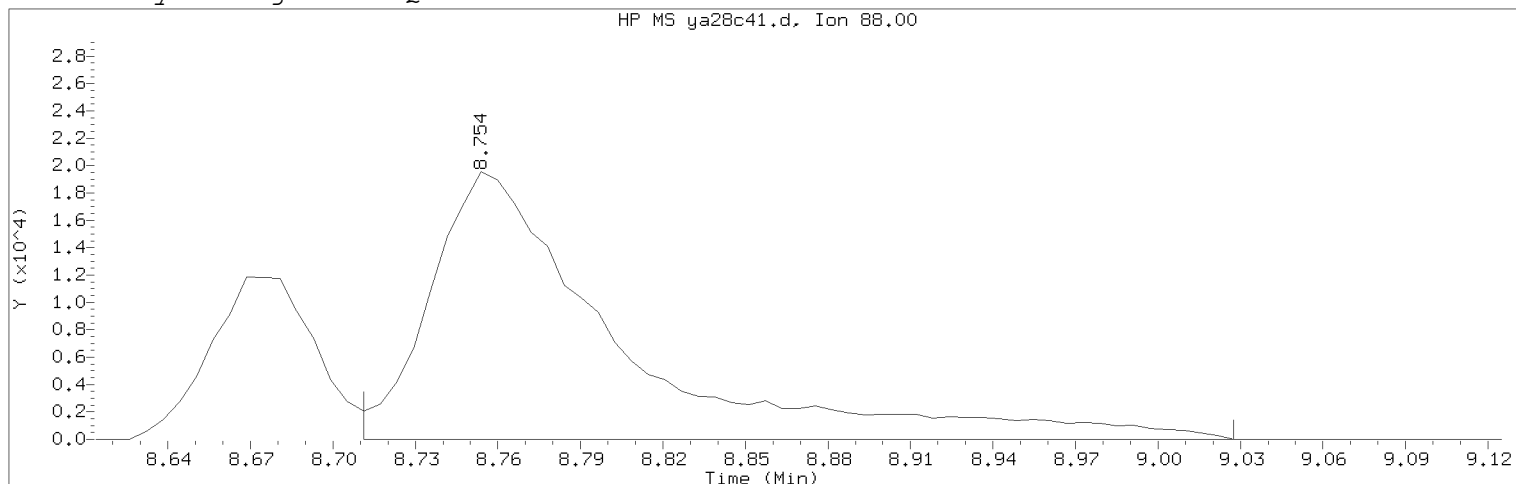
Integration stop scan: 338
 Y at integration end: 172

Digitally signed by Kevin A. Sposito on 04/28/2020 at 21:25.
 Target 3.5 esignature user RPF59 Page 517 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 20:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 28-APR-2020 21:06

Date, time and analyst ID of latest file update: 28-Apr-2020 21:24 kas02648

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1179	
Retention Time (minutes)	: 8.754	
Quant Ion	: 88.00	
Area (flag)	: 92333M	
On-Column Amount (ng)	: 598.0841	
Integration start scan	: 1171	Integration stop scan: 1223
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

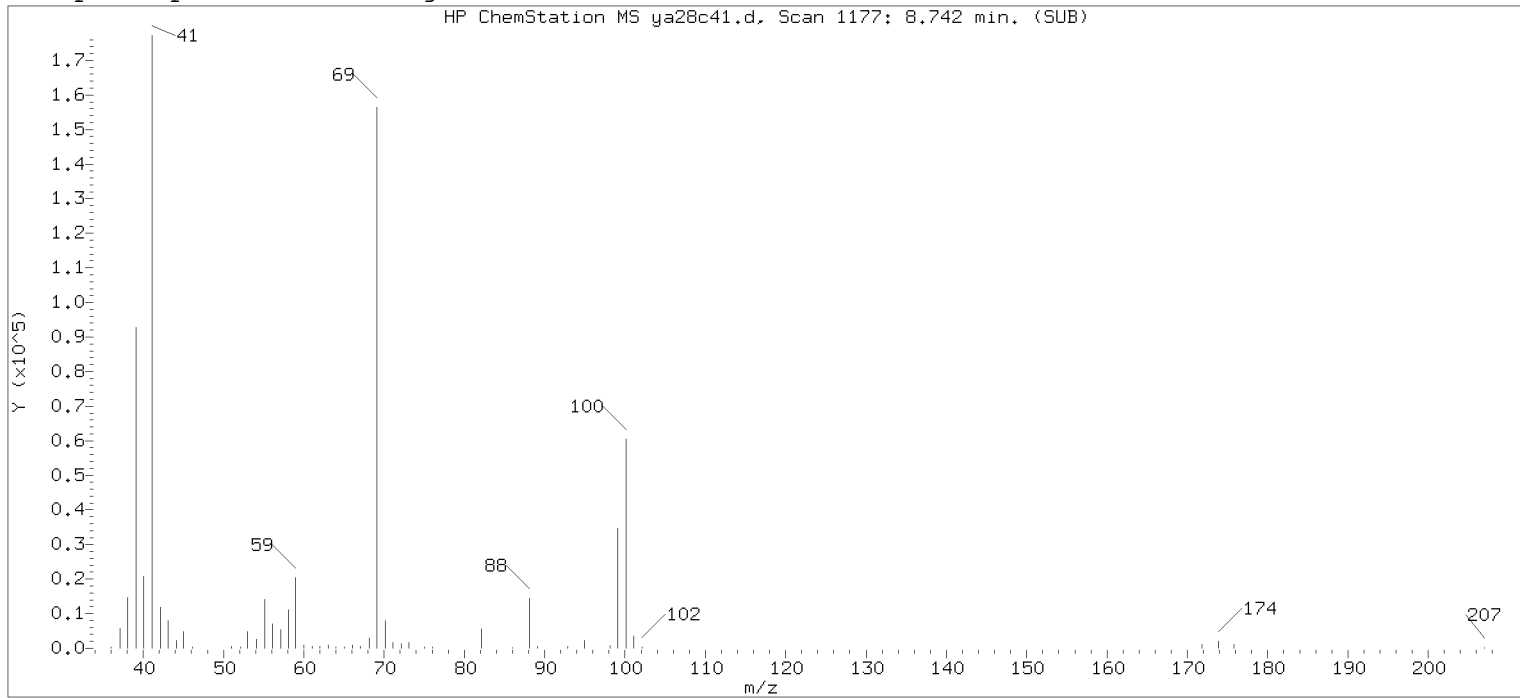
Digitally signed by Kevin A. Sposito
on 04/28/2020 at 21:25.

Target 3.5 esignature user ID: kas02648

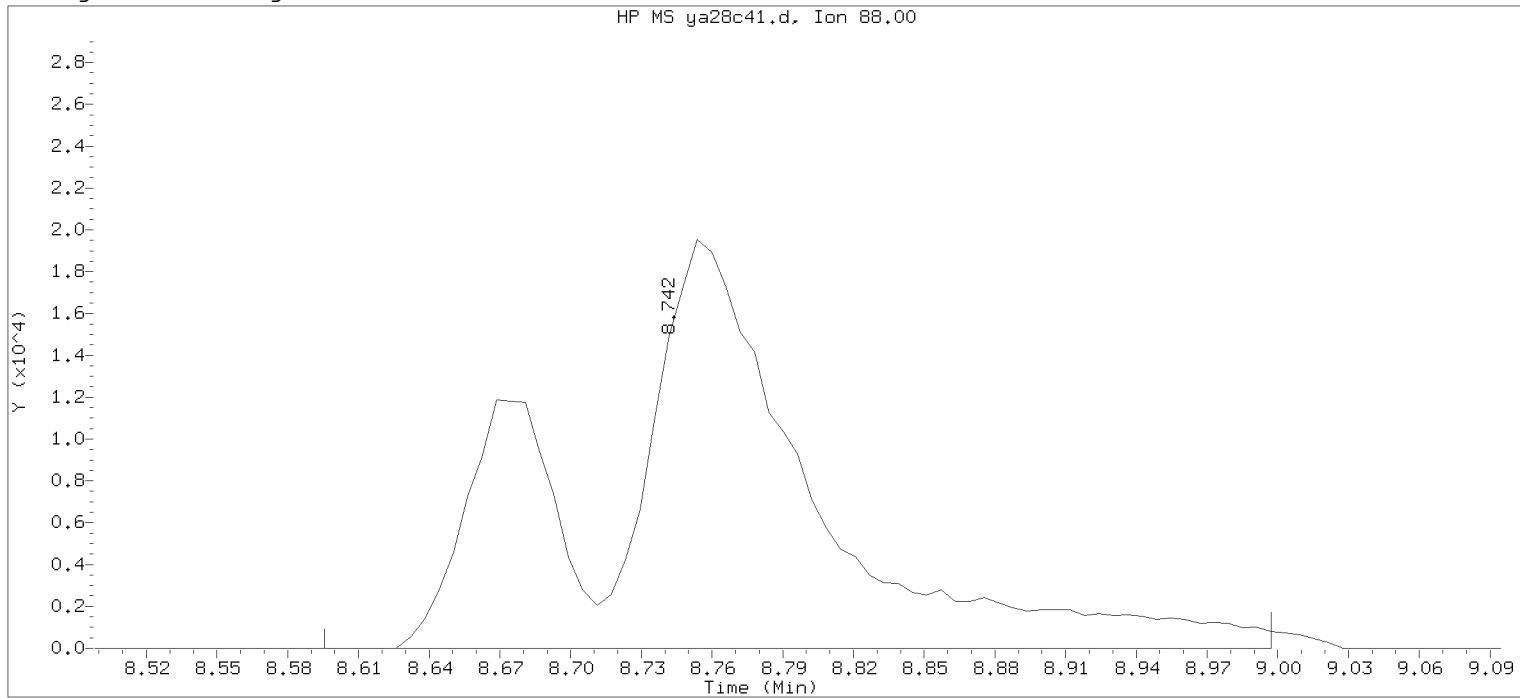
Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29.

PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 20:49

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 28-APR-2020 21:06

Date, time and analyst ID of latest file update: 28-Apr-2020 21:06 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1177
 Retention Time (minutes): 8.742
 Quant Ion : 88.00
 Area : 122456
 On-column Amount (ng) : 793.2032
 Integration start scan : 1152
 Y at integration start : 0

Integration stop scan: 1218
 Y at integration end: 0

Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Page 1

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

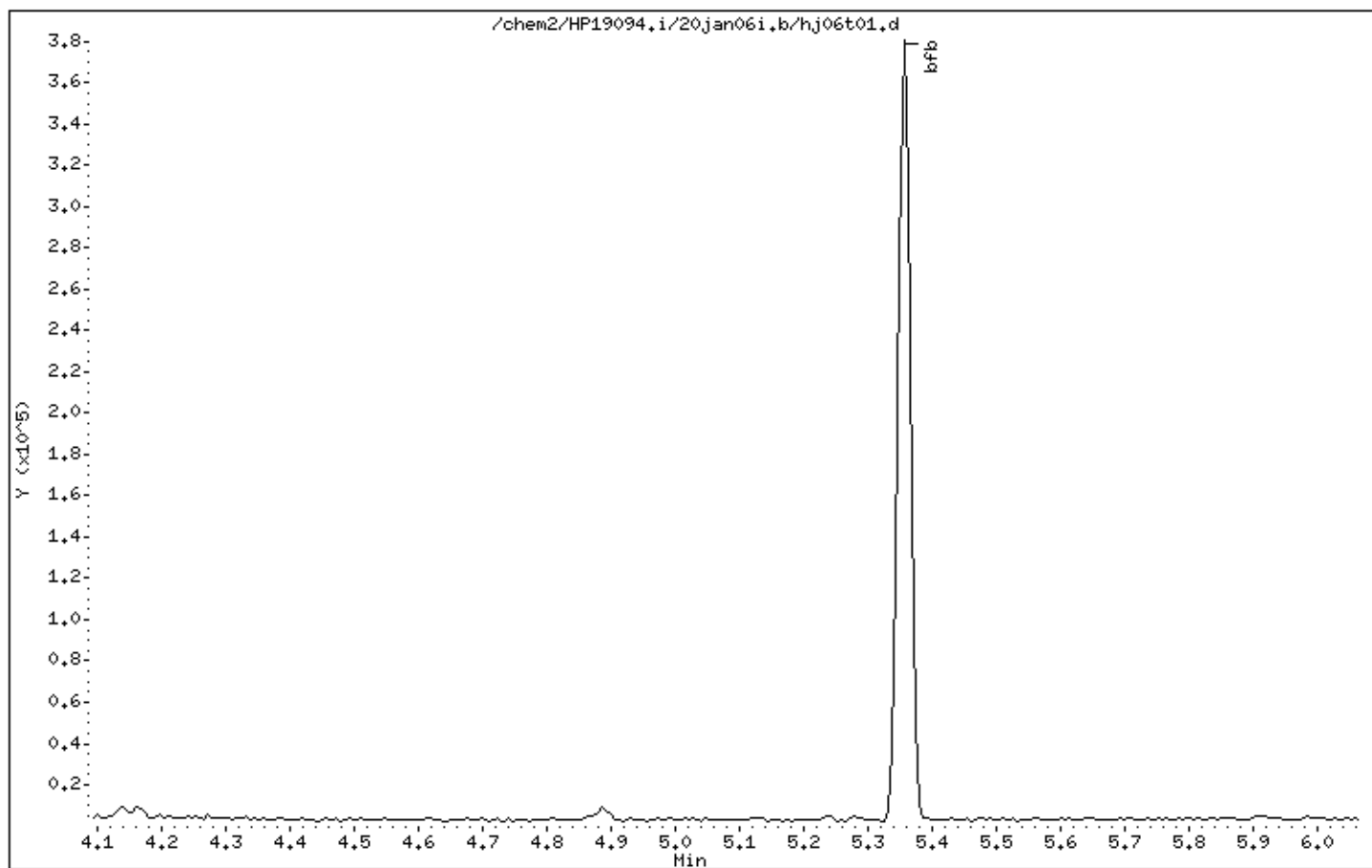
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25



Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

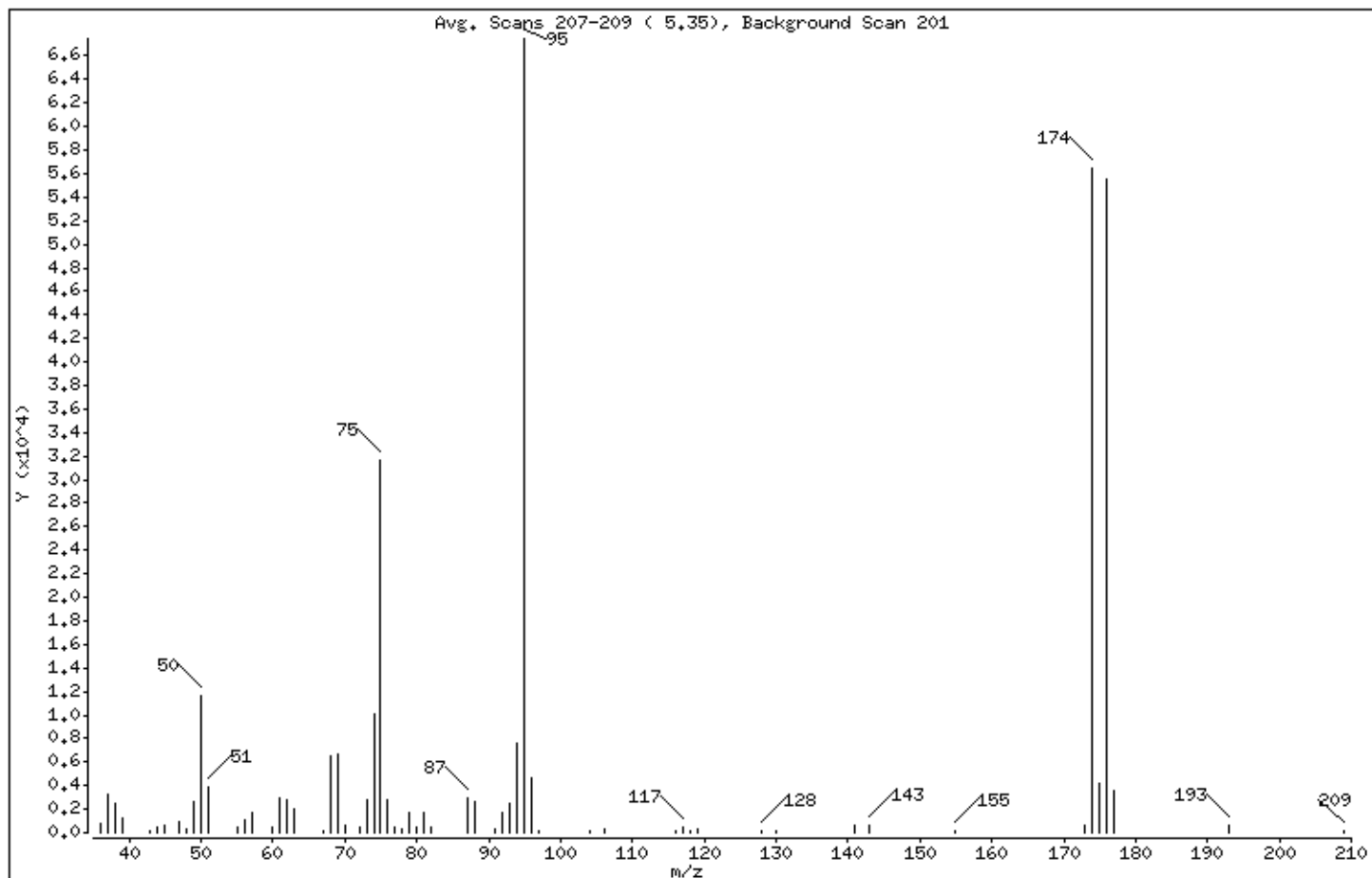
Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.81
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.87 (1.05)
174	50.00 - 100.00% of mass 95	83.57
175	5.00 - 9.00% of mass 174	6.30 (7.54)
176	95.00 - 101.00% of mass 174	82.22 (98.38)
177	5.00 - 9.00% of mass 176	5.38 (6.54)

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

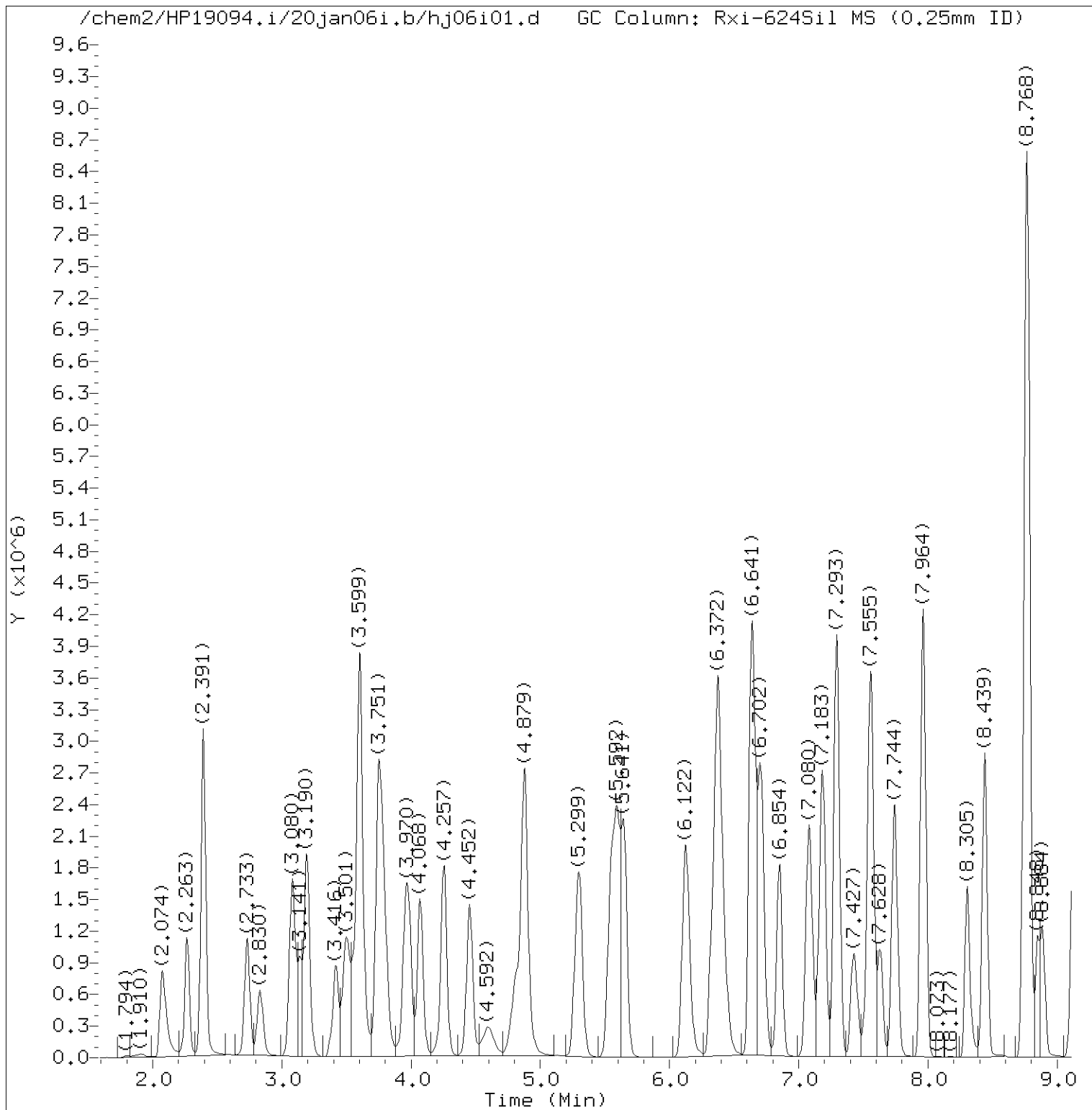
Data File: hj06t01.d

Spectrum: Avg. Scans 207-209 (5,35), Background Scan 201

Location of Maximum: 95,00

Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	728	61,00	3008	81,00	1673	119,00	311
37,00	3211	62,00	2746	82,00	464	128,00	179
38,00	2548	63,00	2022	87,00	2913	130,00	83
39,00	1276	67,00	141	88,00	2633	141,00	588
43,00	92	68,00	6446	91,00	362	143,00	676
44,00	477	69,00	6605	92,00	1689	155,00	88
45,00	580	70,00	566	93,00	2528	173,00	590
47,00	876	72,00	410	94,00	7552	174,00	56384
48,00	366	73,00	2820	95,00	67472	175,00	4254
49,00	2645	74,00	10007	96,00	4591	176,00	55472
50,00	11651	75,00	31584	97,00	183	177,00	3628
51,00	3893	76,00	2766	104,00	180	193,00	604
55,00	413	77,00	463	106,00	329	209,00	154
56,00	1070	78,00	272	116,00	96		
57,00	1740	79,00	1750	117,00	427		
60,00	500	80,00	538	118,00	84		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

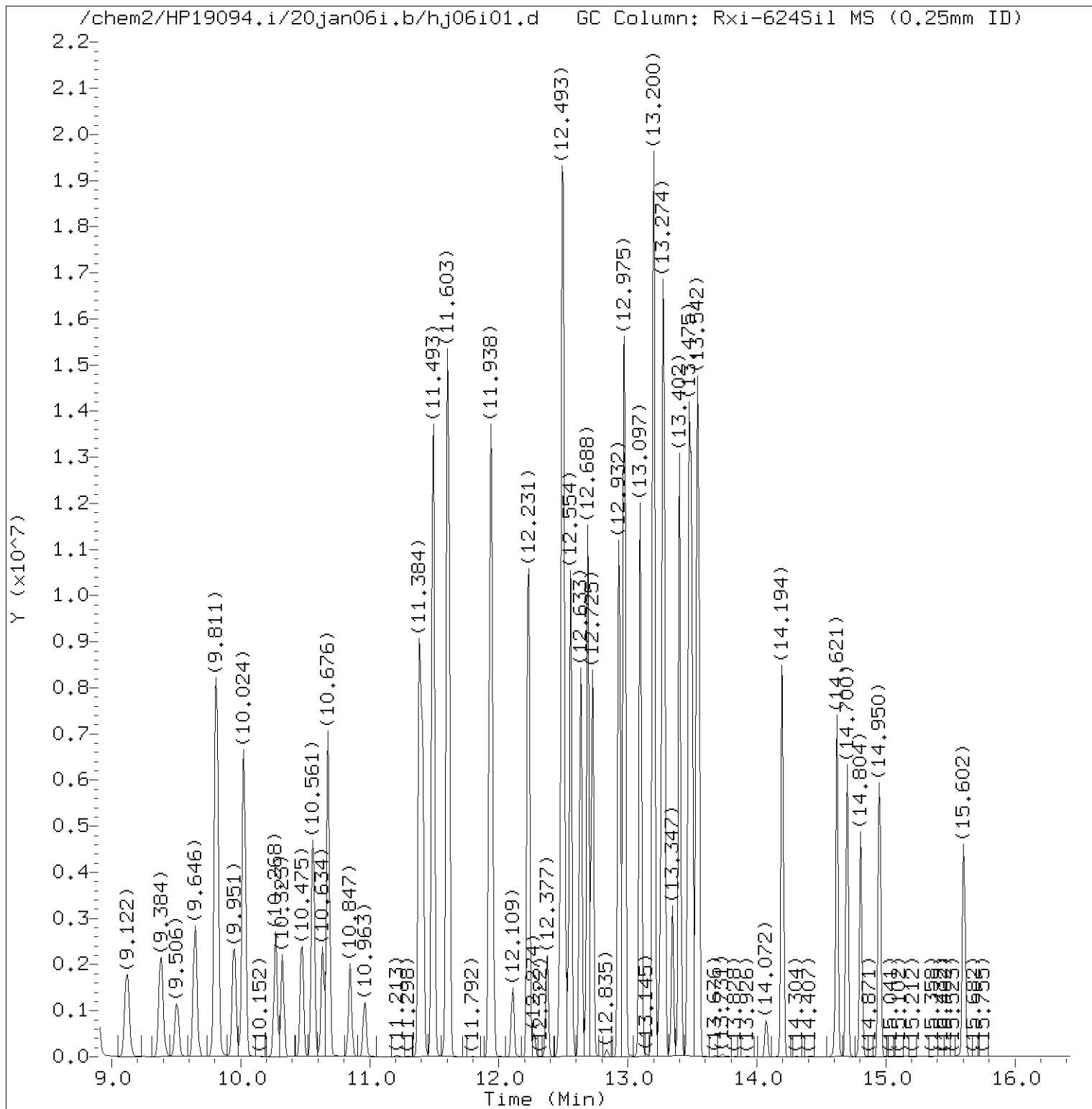
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.074	85	1888431M	26.070
2) Chloromethane	(2)	2.263	50	1774739	24.819
6) 1,3-Butadiene	(2)	2.391	39	1358999	25.292
5) Vinyl Chloride	(2)	2.391	62	1727148	25.393
7) Bromomethane	(2)	2.733	94	1193329	24.492
8) Chloroethane	(2)	2.830	64	988051	25.082
9) Dichlorofluoromethane	(2)	3.080	67	2249717	24.048
10) Trichlorofluoromethane	(2)	3.135	101	1936642	24.949
11) Ethyl ether	(2)	3.416	59	865011	25.180
12) Freon 123a	(2)	3.501	67	1489859	24.825
13) Acrolein	(1)	3.605	56	6522303	1270.686
15) 1,1-Dichloroethene	(2)	3.745	96	1170732	24.798
14) Acetone	(1)	3.781	43	1577967M	227.830
16) Freon 113	(2)	3.781	101	1260863	25.549
17) Methyl Iodide	(2)	3.958	142	2301223	25.258
18) Bromoethane	(2)	3.983	108	1026514M	24.921
19) Carbon Disulfide	(2)	4.068	76	3564017	24.678
22) Methyl Acetate	(1)	4.226	43	432665	24.755
23) Allyl Chloride	(2)	4.257	41	1940516	24.196
24) Methylene Chloride	(2)	4.452	84	1243110	24.464
27)*t-Butyl Alcohol-d10	(1)	4.476	65	113987M	50.000
29) t-Butyl Alcohol	(1)	4.598	59	1153887	479.599
30) Acrylonitrile	(1)	4.800	53	1075695	127.272
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	2669747	24.734
32) trans-1,2-Dichloroethene	(2)	4.885	96	1285392	24.767
33) n-Hexane	(2)	5.299	57	1866448	25.497
34) 1,1-Dichloroethane	(2)	5.543	63	2381394	25.415
35) di-Isopropyl Ether	(2)	5.592	45	3878957	25.133
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	2035507	25.371
41) 1,2-Dichloroethene (Total)	(2)		96	2732662	49.862
38) Ethyl t-butyl ether	(2)	6.122	59	3616764	24.961
39) 2-Butanone	(1)	6.330	43	2681869	247.640
40) cis-1,2-Dichloroethene	(2)	6.372	96	1447270	25.095
42) 2,2-Dichloropropane	(2)	6.391	77	1996218	25.037
43) Propionitrile	(1)	6.421	54	1509137	508.720
46) Methacrylonitrile	(1)	6.641	67	2746656	258.877
48) Bromochloromethane	(2)	6.702	128	593671	24.382
49) Tetrahydrofuran	(1)	6.708	71	763010	255.020

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
 Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	2302782	25.181
51) \$Dibromofluoromethane	(2)	7.067	113	482524	10.045
51) \$Dibromofluoromethane	(2)	7.067	111	495256	10.035
52) 1,1,1-Trichloroethane	(2)	7.086	97	2148440	25.262
53) Cyclohexane	(2)	7.183	56	2289885	25.210
53) Cyclohexane	(2)	7.183	84	1999561	25.701
53) Cyclohexane	(2)	7.183	69	713908	25.255
56) 1,1-Dichloropropene	(2)	7.293	75	1857069	25.837
55) Carbon Tetrachloride	(2)	7.293	117	1867884	25.616
57) Isobutyl Alcohol	(1)	7.427	41	929458	1114.509
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	93327	10.024
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	425818	9.913
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59128	10.027
59) Benzene	(2)	7.561	78	5323567	25.327
60) 1,2-Dichloroethane	(2)	7.628	62	1315186M	24.269
61) t-Amyl methyl ether	(2)	7.744	73	3151720	24.940
63) n-Heptane	(2)	7.964	43	1941468	25.282
64) *Fluorobenzene	(2)	7.964	96	1932435	10.000
66) n-Butanol	(1)	8.305	56	1581544	2355.676
68) Trichloroethene	(2)	8.439	95	1409523	25.571
70) Methylcyclohexane	(2)	8.750	83	2525018	25.569
71) 1,2-Dichloropropane	(2)	8.780	63	1305552	25.106
72) Methyl Methacrylate	(1)	8.848	69	550111	25.775
73) 1,4-Dioxane	(1)	8.860	88	161139M	995.125
74) Dibromomethane	(2)	8.890	93	588855	24.771
75) Bromodichloromethane	(2)	9.122	83	1675482	25.933
77) 2-Nitropropane	(1)	9.384	41	1813026	258.627
80) 1-Bromo-2-chloroethane	(2)	9.506	63	1246645M	25.504
81) cis-1,3-Dichloropropene	(2)	9.646	75	2001367	26.231
82) 4-Methyl-2-Pentanone	(1)	9.811	43	6845018	256.442
83) \$Toluene-d8	(3)	9.951	98	1934295	9.972
83) \$Toluene-d8	(3)	9.951	100	1251812	9.979
84) Toluene	(3)	10.024	92	3395076	24.917
86) 1,3-Dichloropropene (total)	(3)		75	3633907	52.045
85) trans-1,3-Dichloropropene	(3)	10.268	75	1632540	25.814
87) Ethyl Methacrylate	(3)	10.323	69	1234931	25.192
89) 1,1,2-Trichloroethane	(3)	10.475	97	856983	25.034
90) Tetrachloroethene	(3)	10.561	166	1554796	25.105

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	1467070	24.945
92) 2-Hexanone	(1)	10.676	43	4597643	252.076
94) Dibromochloromethane	(3)	10.847	129	1139436	25.995
96) 1,2-Dibromoethane	(3)	10.963	107	837813	25.610
97) 1-Chlorohexane	(3)	11.384	91	1992892	24.260
98) *Chlorobenzene-d5	(3)	11.384	117	1455879	10.000
99) Chlorobenzene	(3)	11.408	112	3675871	24.692
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	1325399	25.032
101) Ethylbenzene	(3)	11.493	91	6641855	24.772
102) m+p-Xylene	(3)	11.603	106	5072744	49.480
106) Xylene (Total)	(3)		106	7609455	74.638
105) o-Xylene	(3)	11.932	106	2536711	25.163
107) Styrene	(3)	11.944	104	4113469	25.144
108) Bromoform	(3)	12.109	173	667346	26.121
109) Isopropylbenzene	(3)	12.231	105	6817861	24.954
112) \$4-Bromofluorobenzene	(3)	12.377	95	707521	9.860
112) \$4-Bromofluorobenzene	(3)	12.377	174	610743	9.946
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	1006708M	25.815
115) Bromobenzene	(4)	12.493	156	1499258	25.433
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	2625732A	261.870
117) 1,2,3-Trichloropropane	(4)	12.524	110	262588	25.145
118) n-Propylbenzene	(4)	12.554	91	7839823	25.469
120) 2-Chlorotoluene	(4)	12.633	126	1554434	25.595
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	5777458	25.872
123) 4-Chlorotoluene	(4)	12.725	126	1535913	25.341
126) tert-Butylbenzene	(4)	12.932	134	1204251	26.074
127) Pentachloroethane	(4)	12.969	167	1021562	25.954
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	5903452	25.601
129) sec-Butylbenzene	(4)	13.097	105	7537250	26.052
133) p-Isopropyltoluene	(4)	13.200	119	6452104	25.912
132) 1,3-Dichlorobenzene	(4)	13.200	146	3015496	25.668
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	746931	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	2924687	25.521
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	2421094	25.178
137) Benzyl Chloride	(4)	13.347	126	444448	27.109
139) n-Butylbenzene	(4)	13.493	92	3226649	26.213
140) 1,2-Dichlorobenzene	(4)	13.530	146	2620490	25.305
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	158060	27.640

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

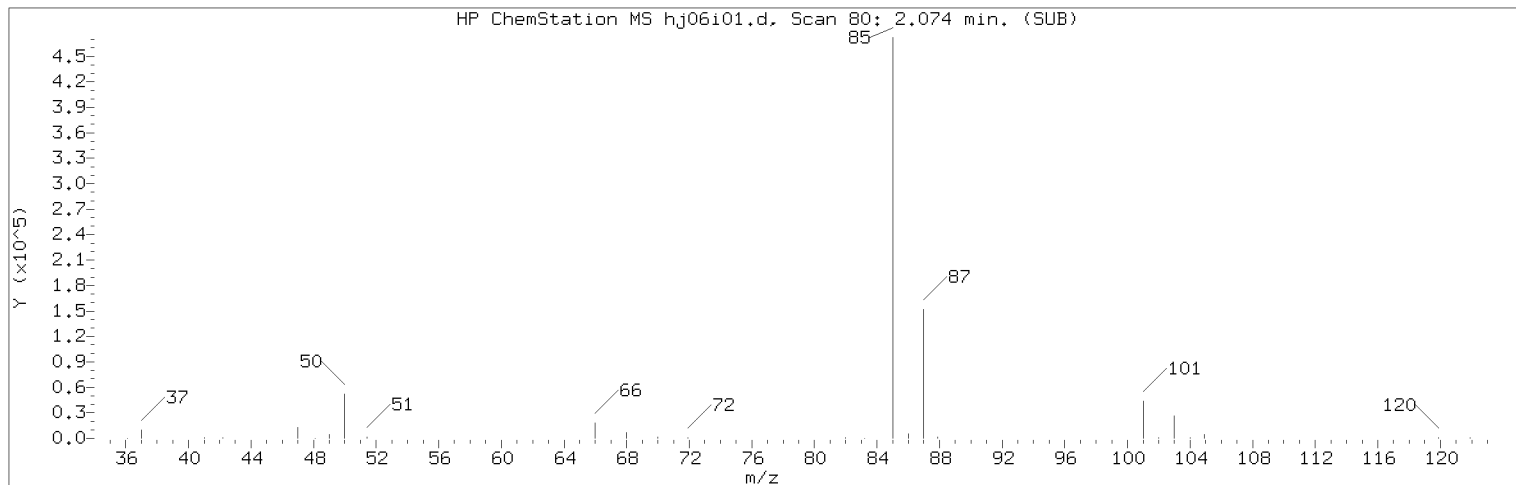
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.194	180	2531869	27.539
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	2120885	27.508
147) Hexachlorobutadiene	(4)	14.700	225	1087011	27.015
148) Naphthalene	(4)	14.804	128	3537363	26.291
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	1777387	27.005

page 4 of 4

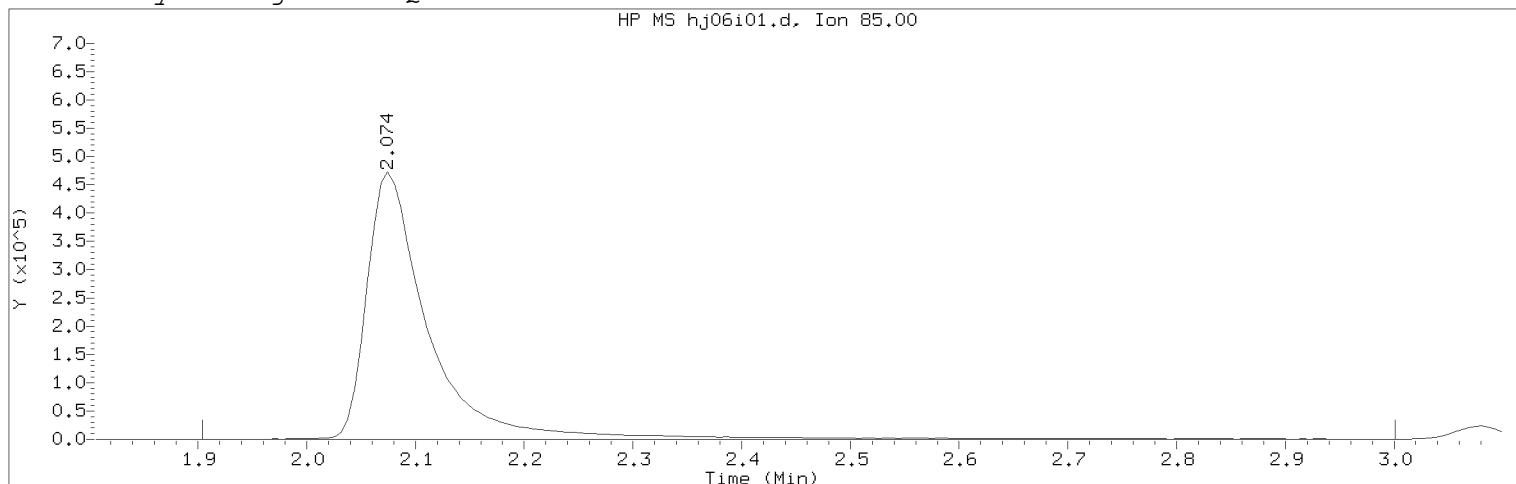
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

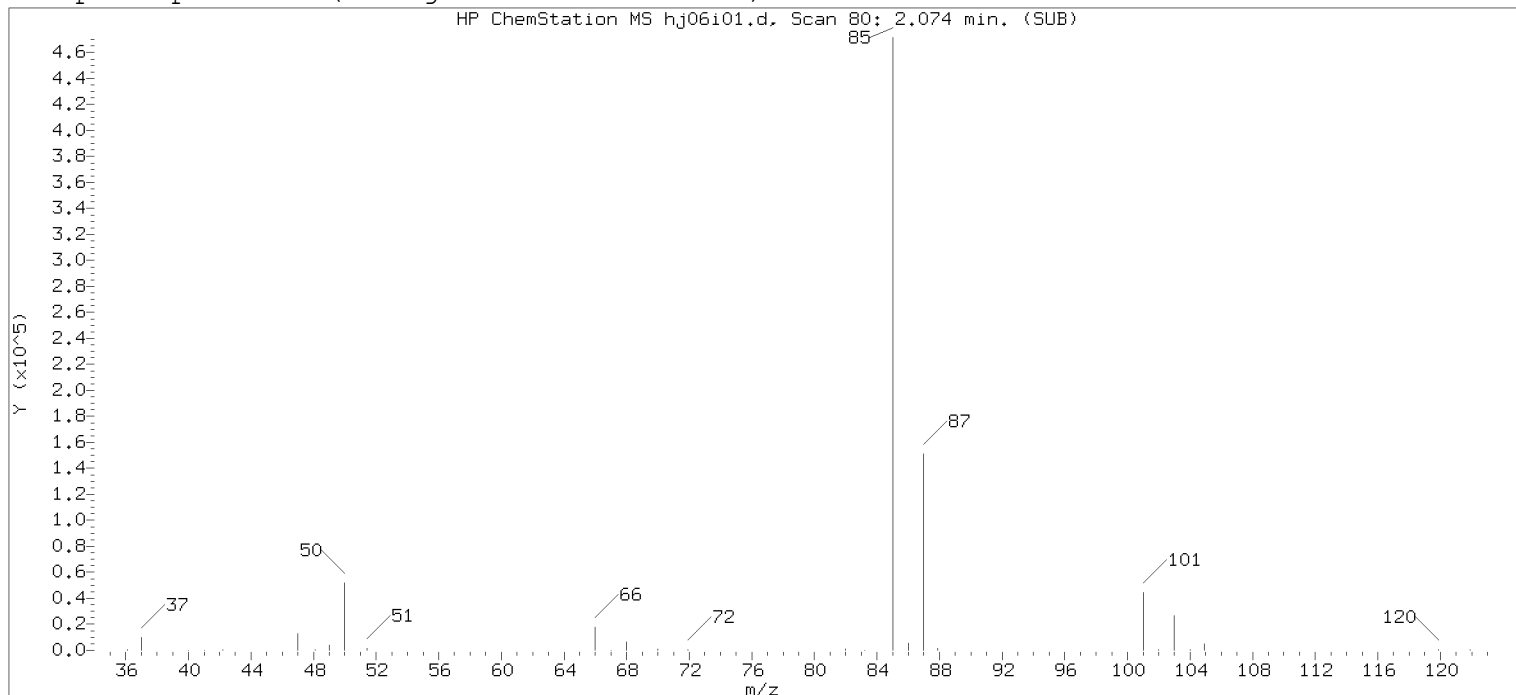
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area (flag) : 1888431M
On-Column Amount (ng) : 26.0698
Integration start scan : 51 Integration stop scan: 231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

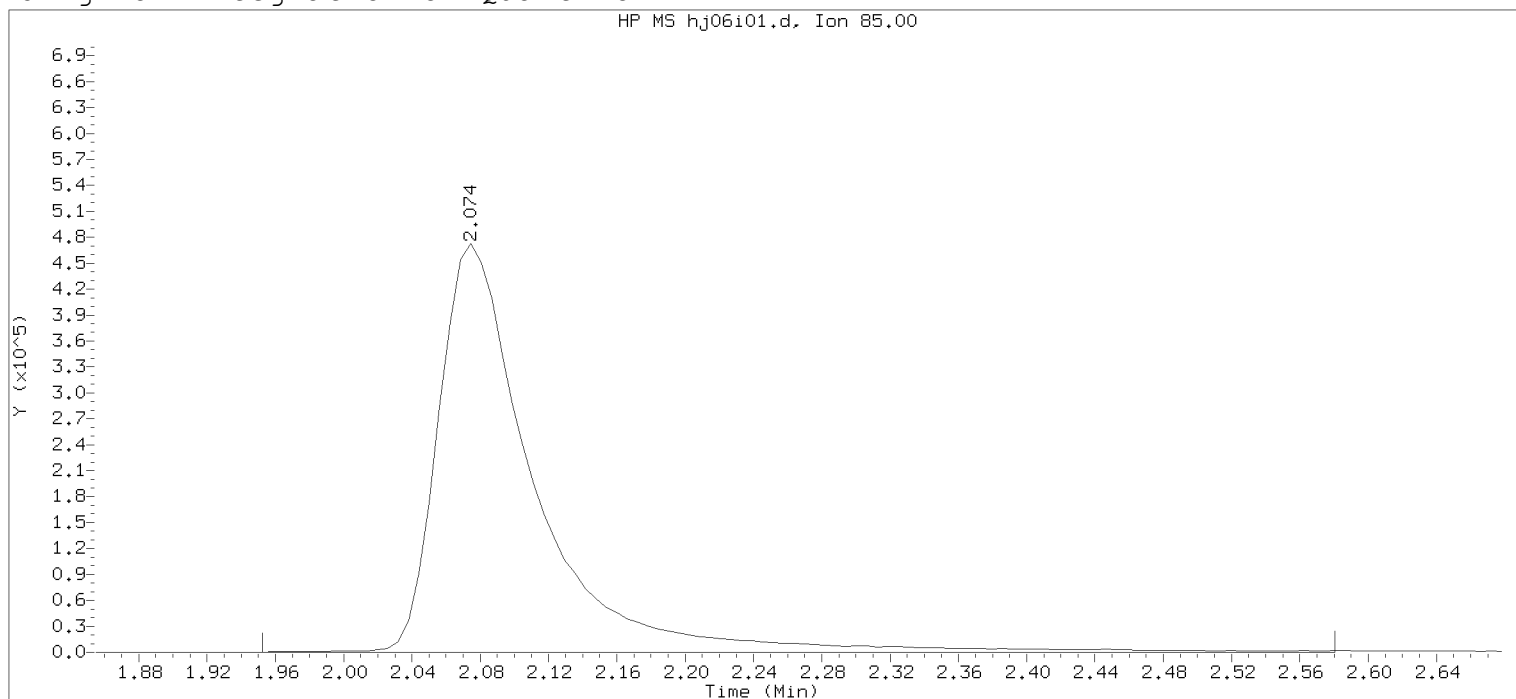
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

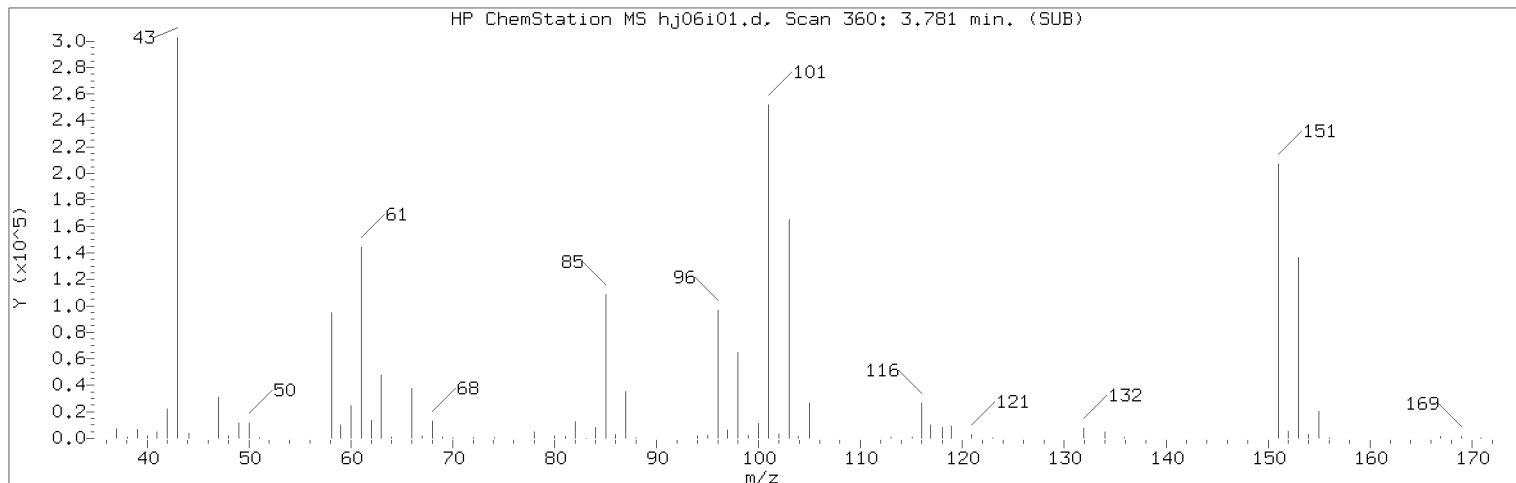
Sample Name: VSTD025

Lab Sample ID: VSTD025

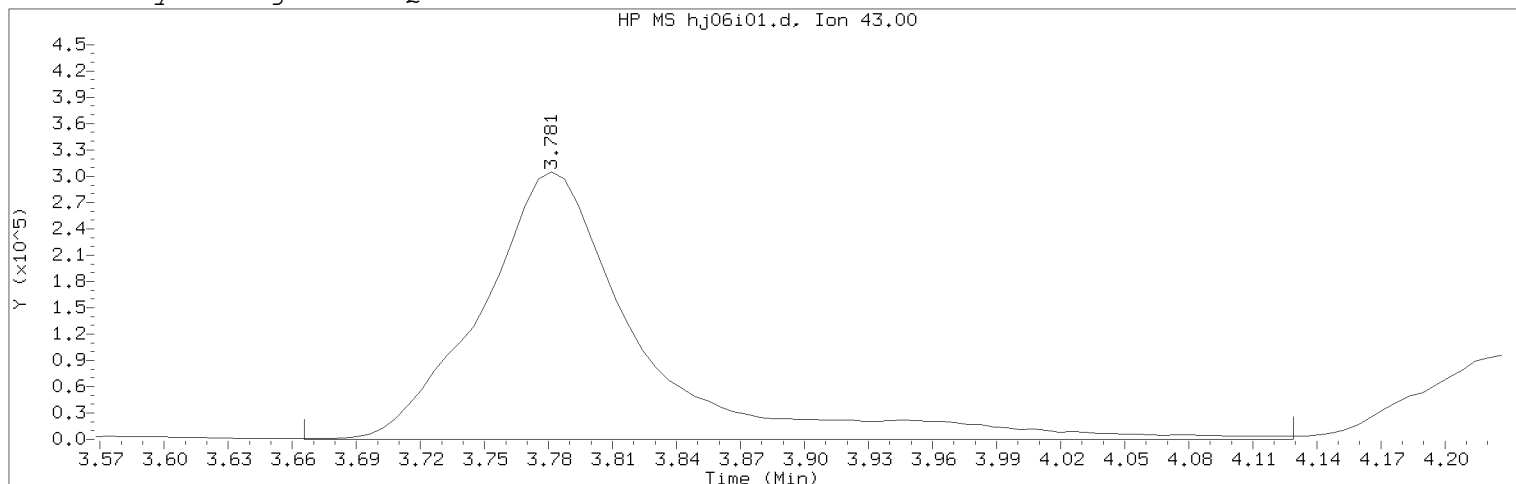
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 80	
Retention Time (minutes)	: 2.074	
Quant Ion	: 85.00	
Area	: 1866572	
On-column Amount (ng)	: 25.8333	
Integration start scan	: 59	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 530 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

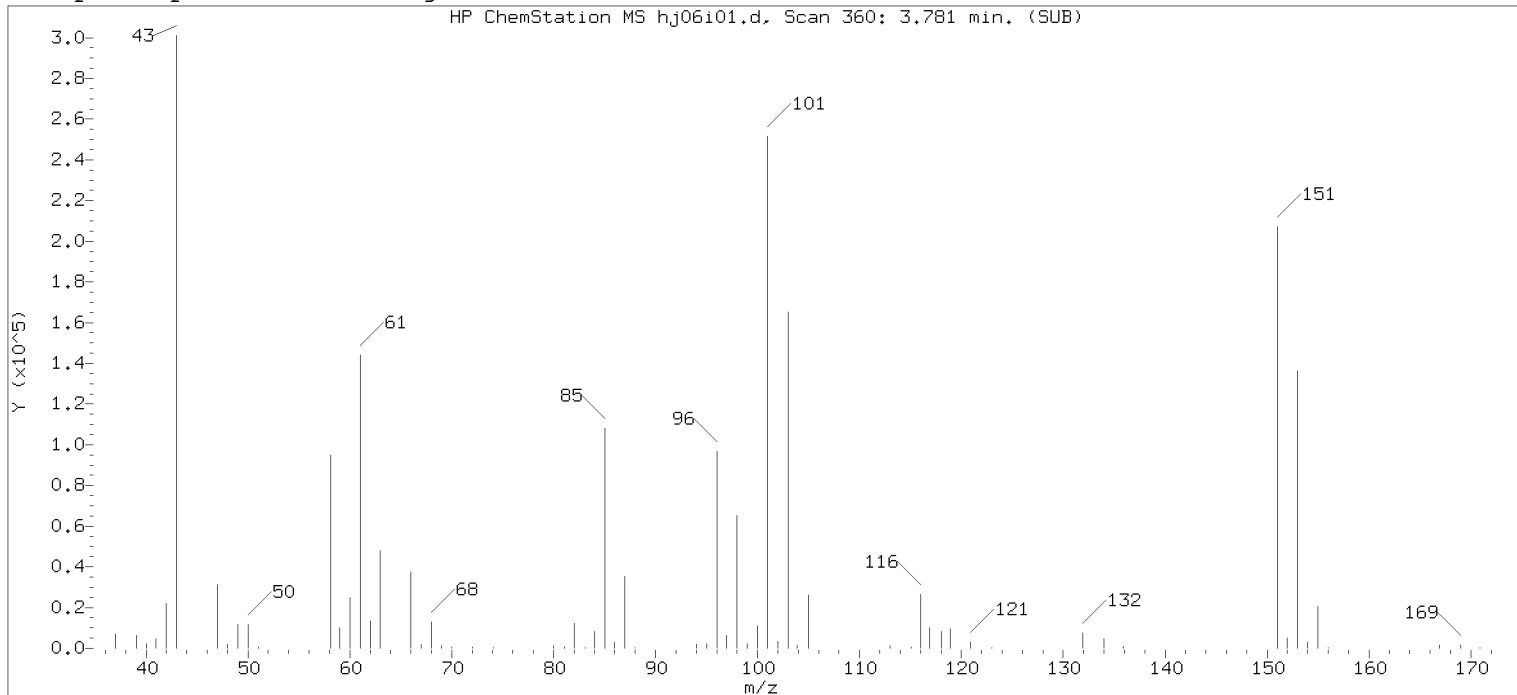
Compound Number	: 14	
Compound Name	: Acetone	
Scan Number	: 360	
Retention Time (minutes)	: 3.781	
Quant Ion	: 43.00	
Area (flag)	: 1577967M	
On-Column Amount (ng)	: 227.8298	
Integration start scan	: 340	Integration stop scan: 416
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

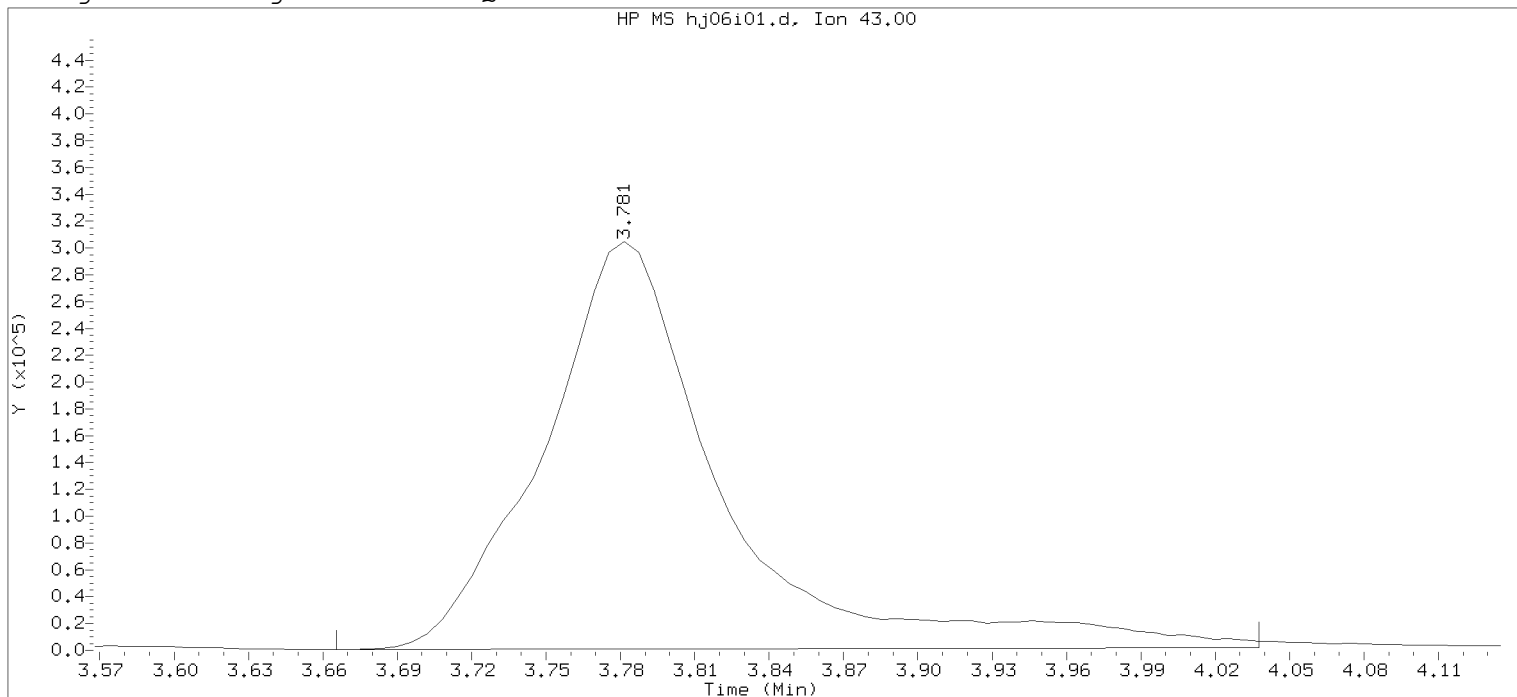
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

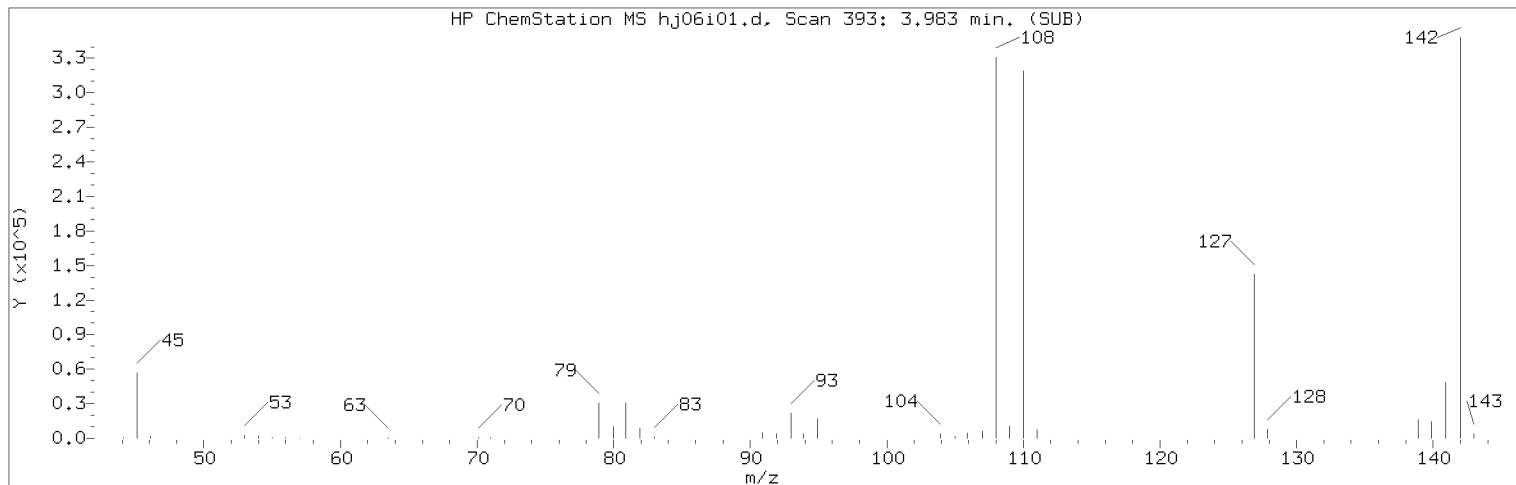
Lab Sample ID: VSTD025

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 360
 Retention Time (minutes): 3.781
 Quant Ion : 43.00
 Area : 1526309
 On-column Amount (ng) : 209.3158
 Integration start scan : 340
 Y at integration start : 368

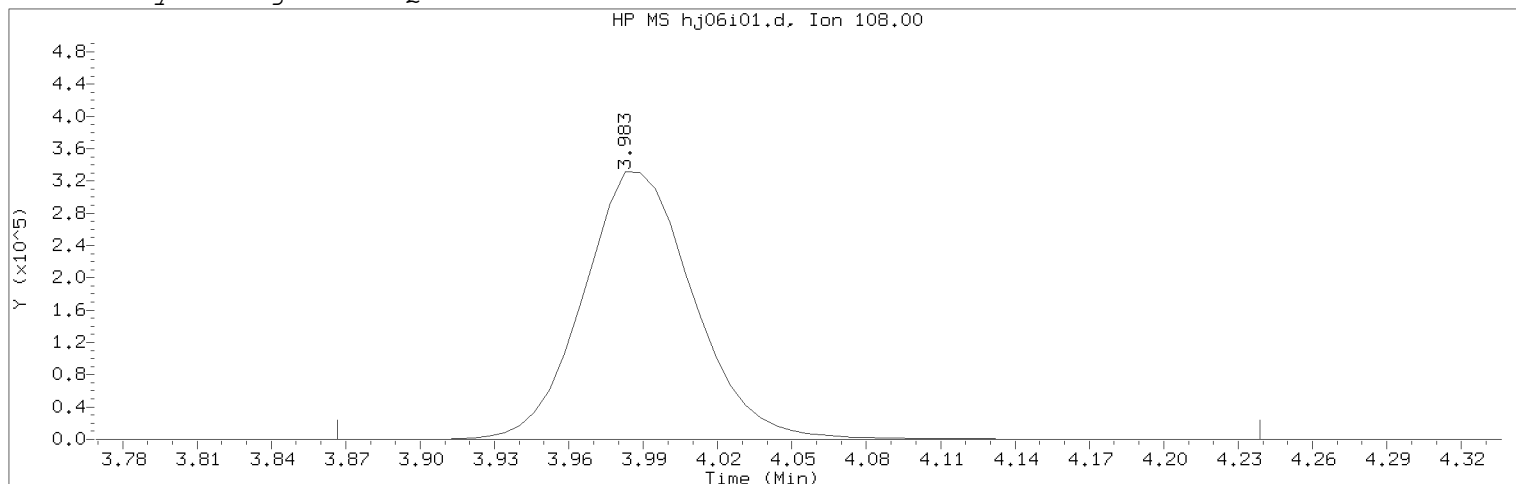
Integration stop scan: 401
 Y at integration end: 1908

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 Target 3.5 esignature user RAE59 Page 532 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

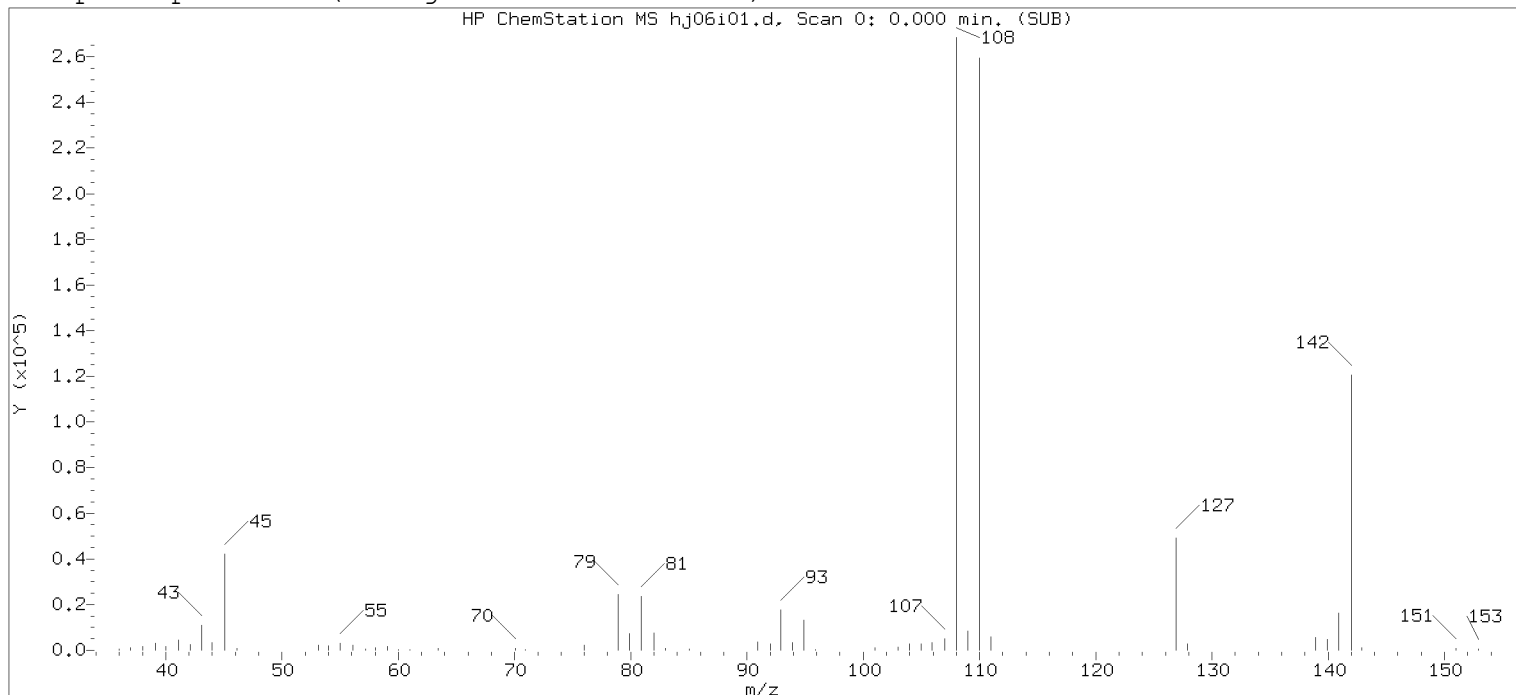
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 108.00
Area (flag) : 1026514M
On-Column Amount (ng) : 24.9213
Integration start scan : 373 Integration stop scan: 434
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

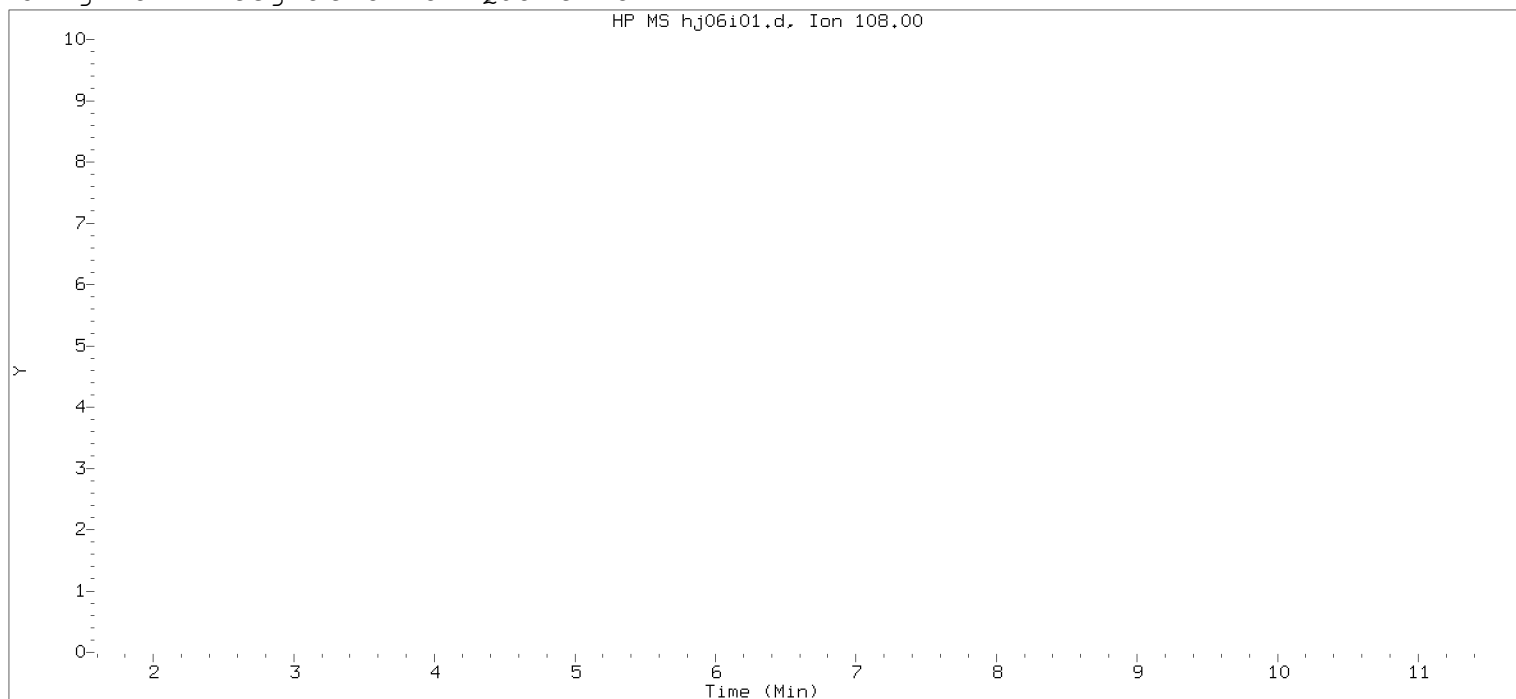
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

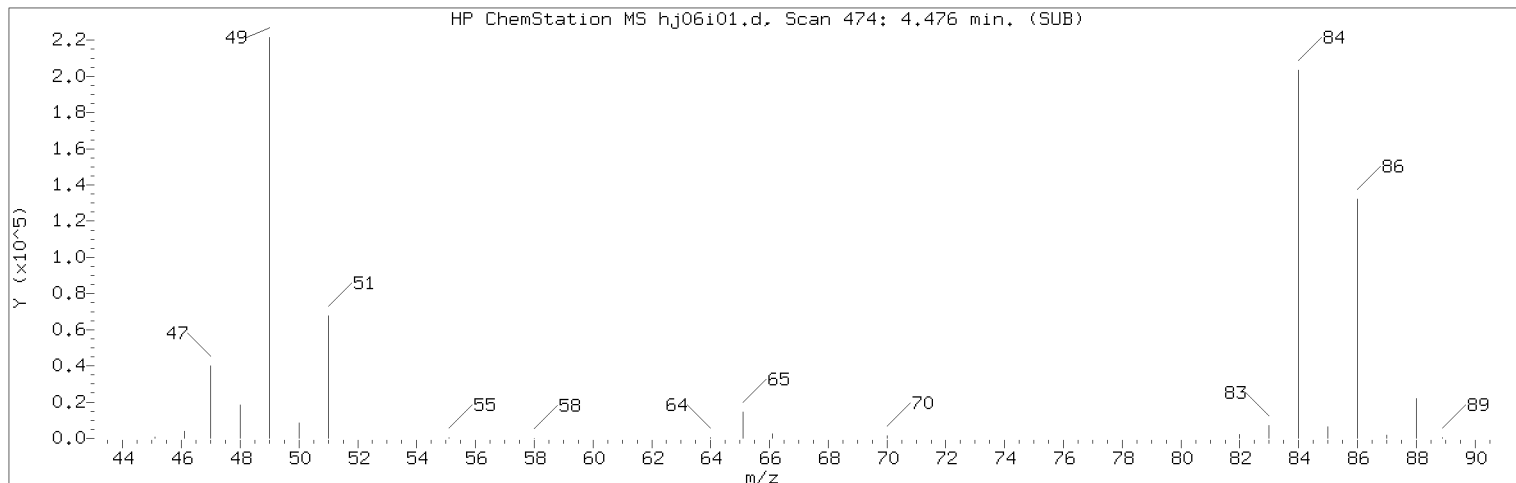
Sample Name: VSTD025

Lab Sample ID: VSTD025

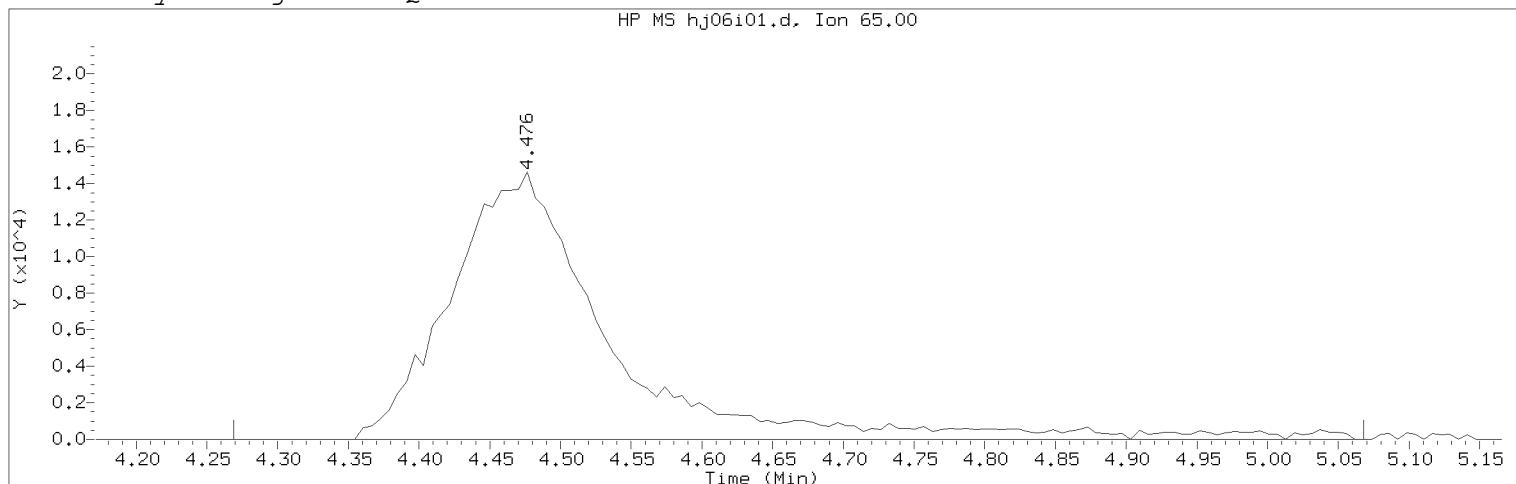
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 534 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

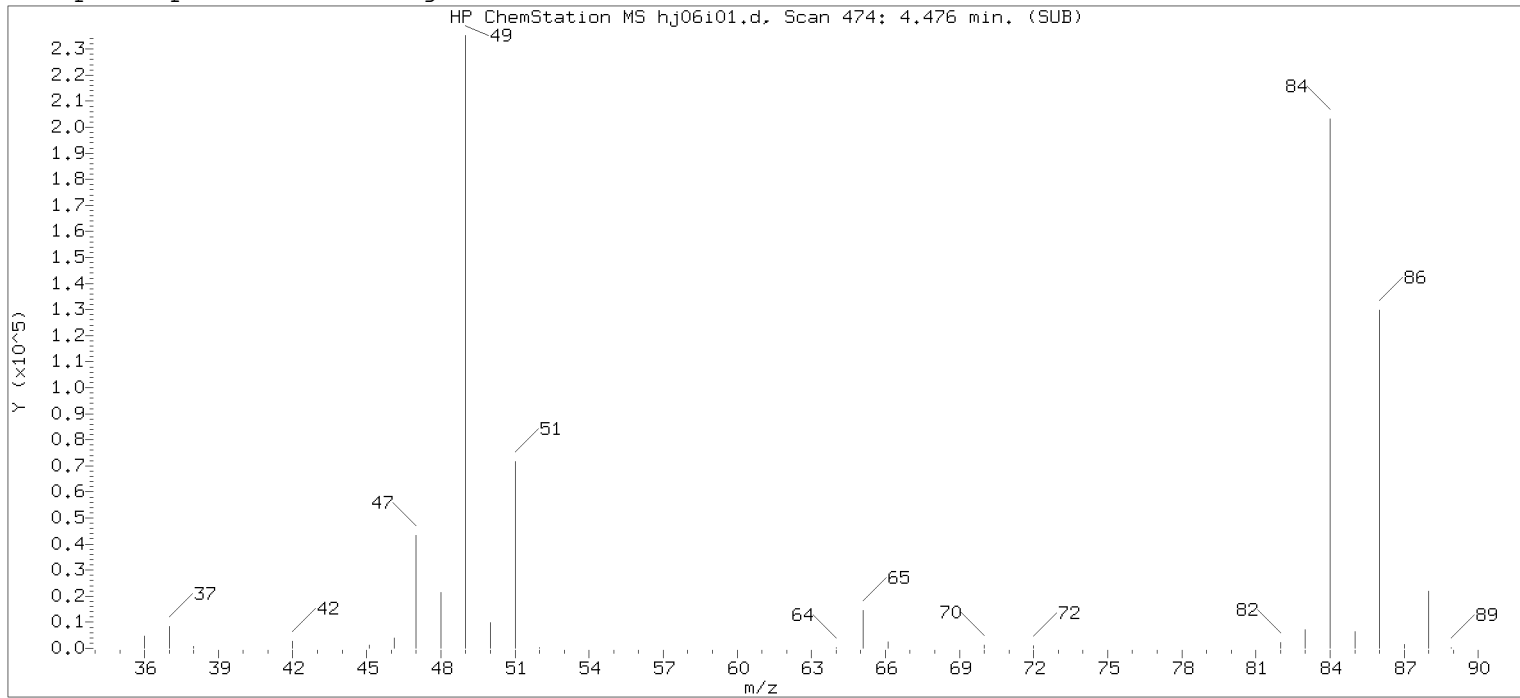
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 474	
Retention Time (minutes)	: 4.476	
Quant Ion	: 65.00	
Area (flag)	: 113987M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 439	Integration stop scan: 570
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

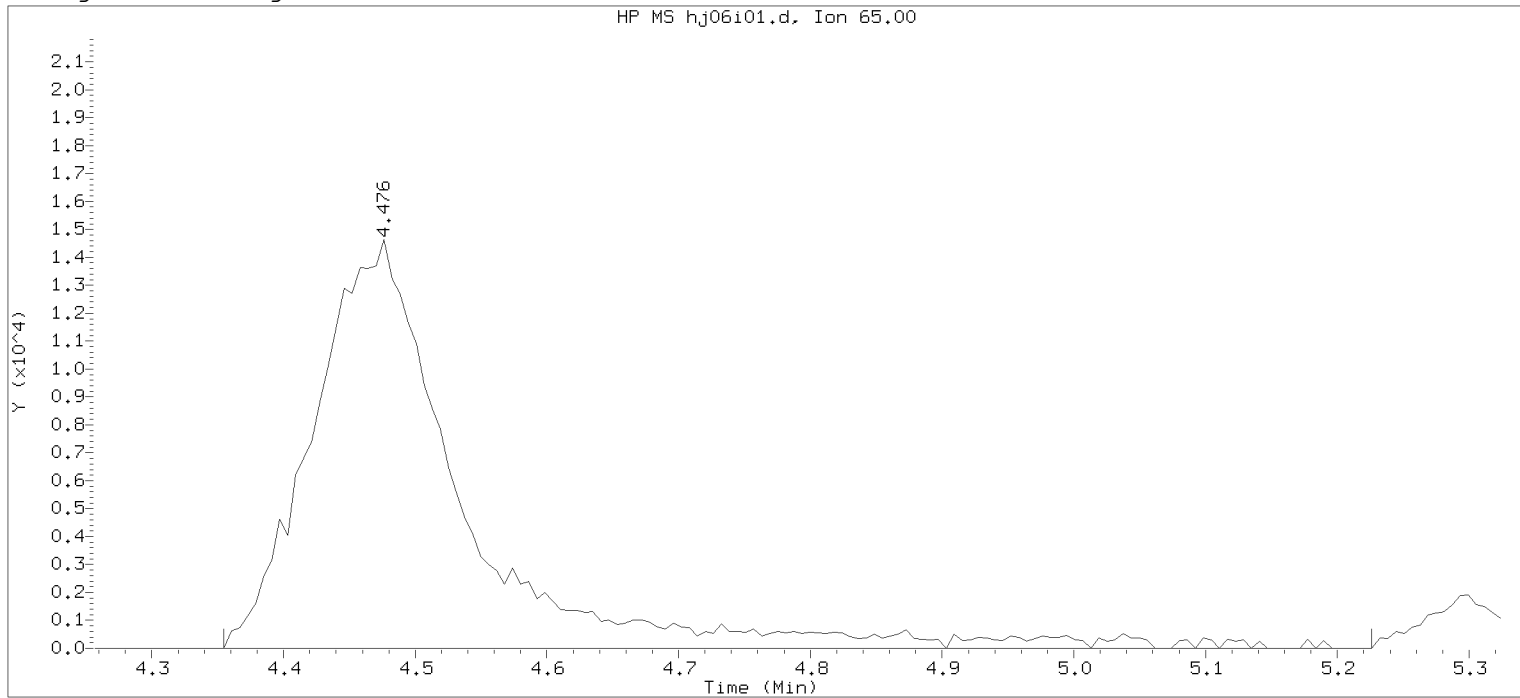
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 474

Retention Time (minutes): 4.476

Quant Ion : 65.00

Area : 115073

On-column Amount (ng) : 50.0000

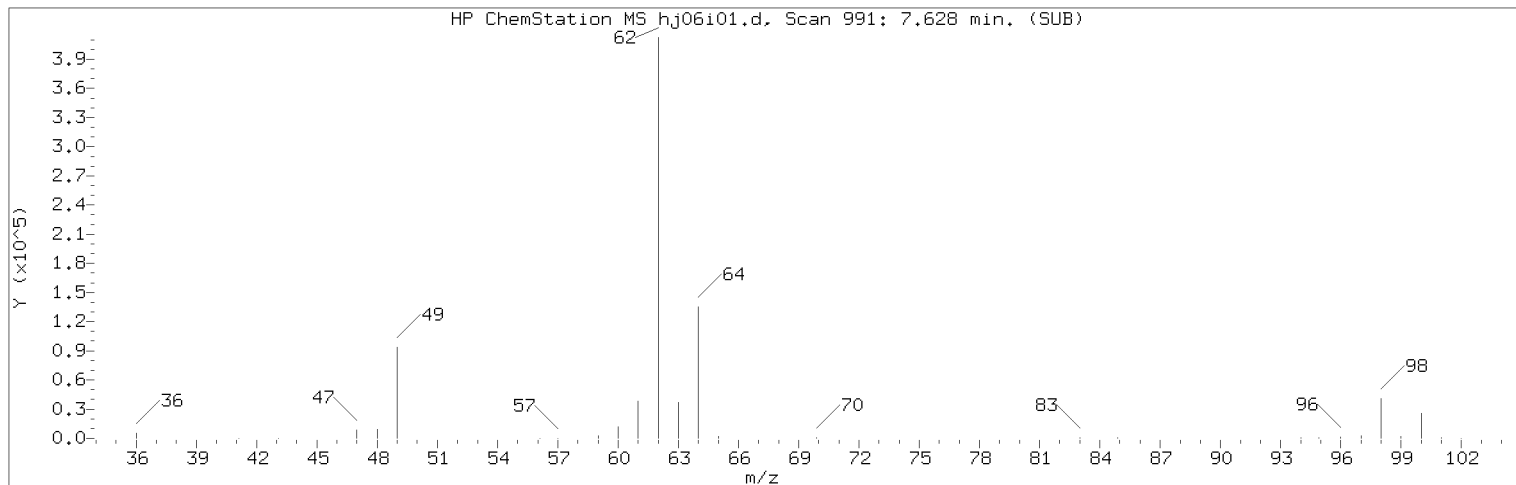
Integration start scan : 453 Integration stop scan: 596

Y at integration start : 0 Y at integration end: 0

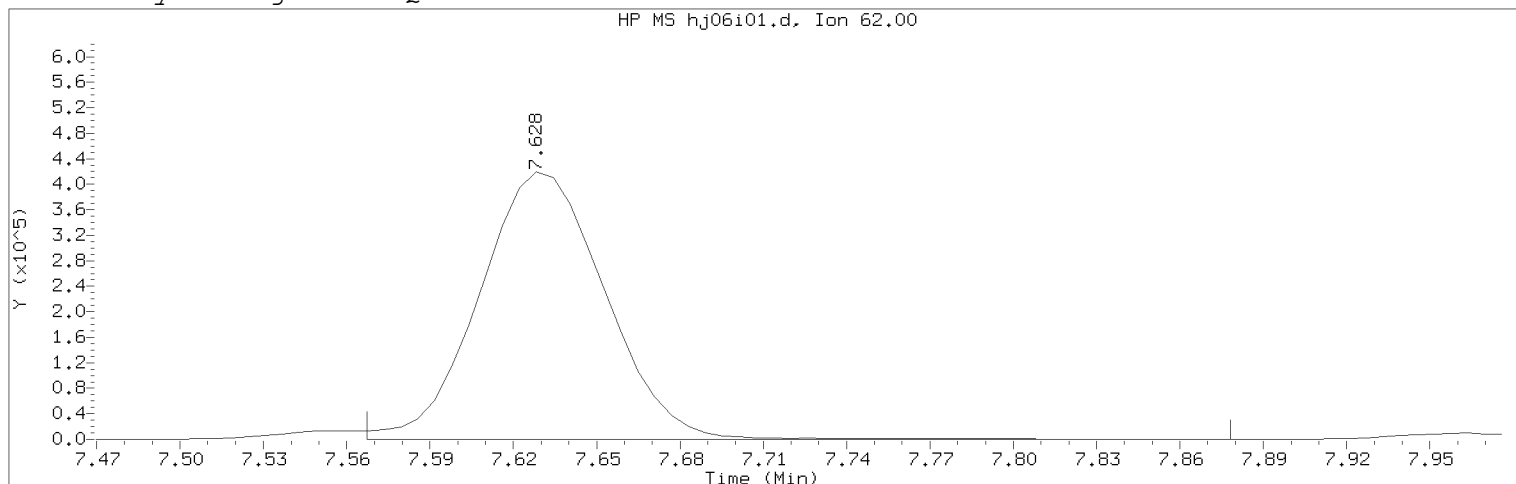
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 536 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

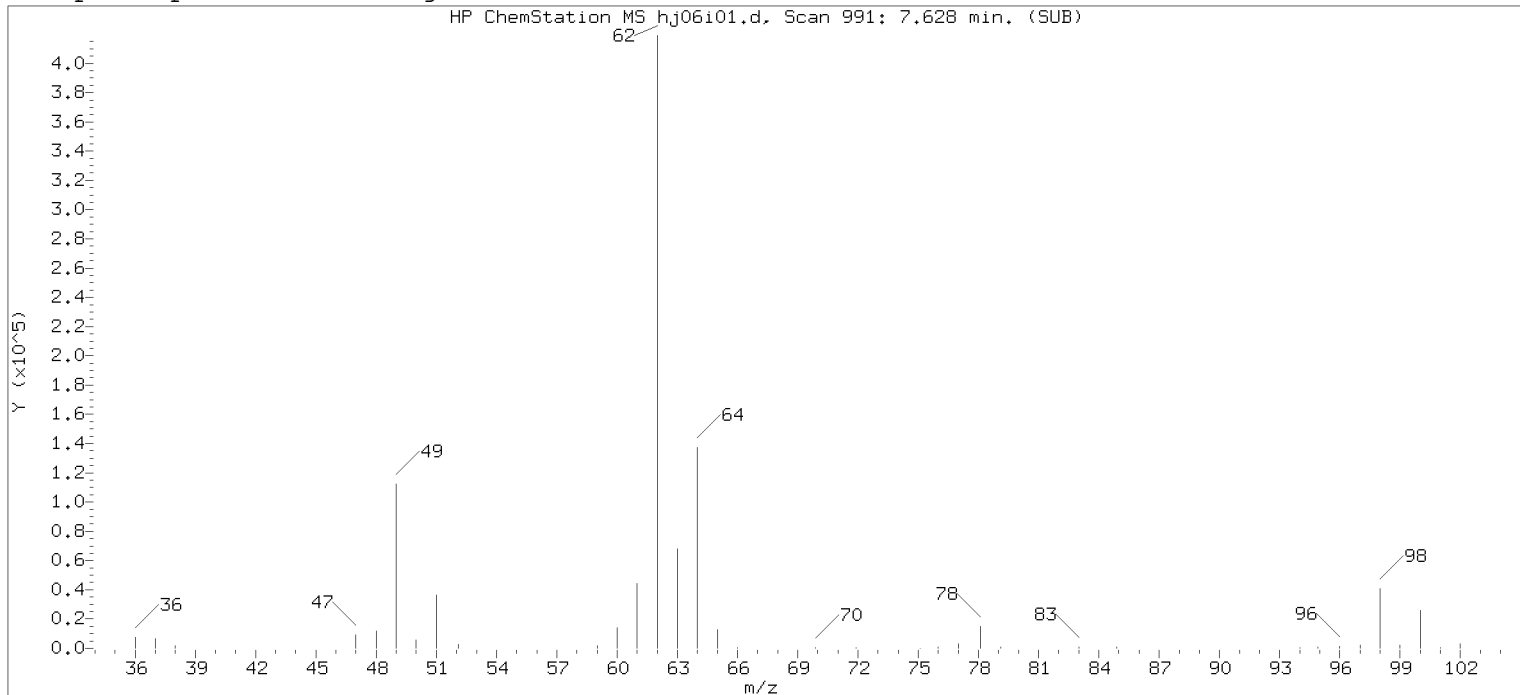
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 1315186M
On-Column Amount (ng) : 24.2692
Integration start scan : 980 Integration stop scan: 1031
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

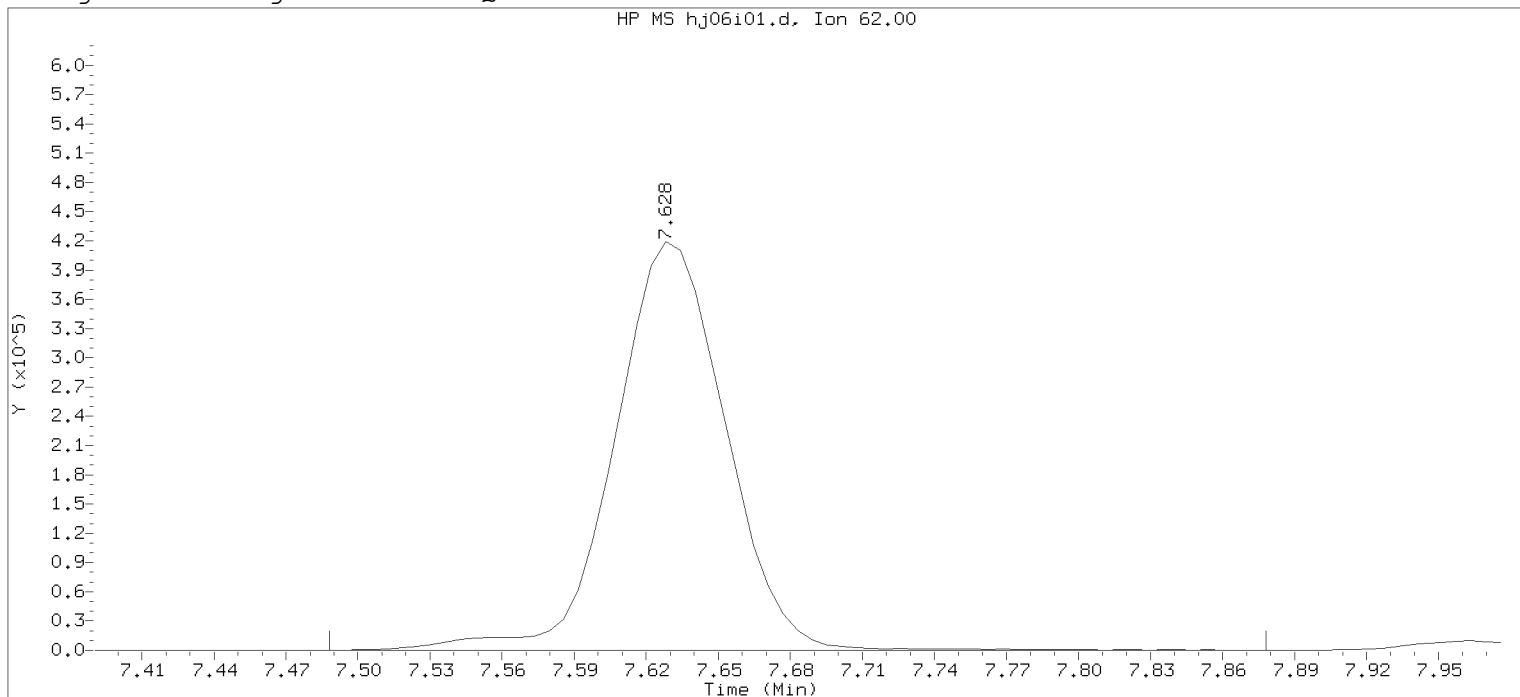
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

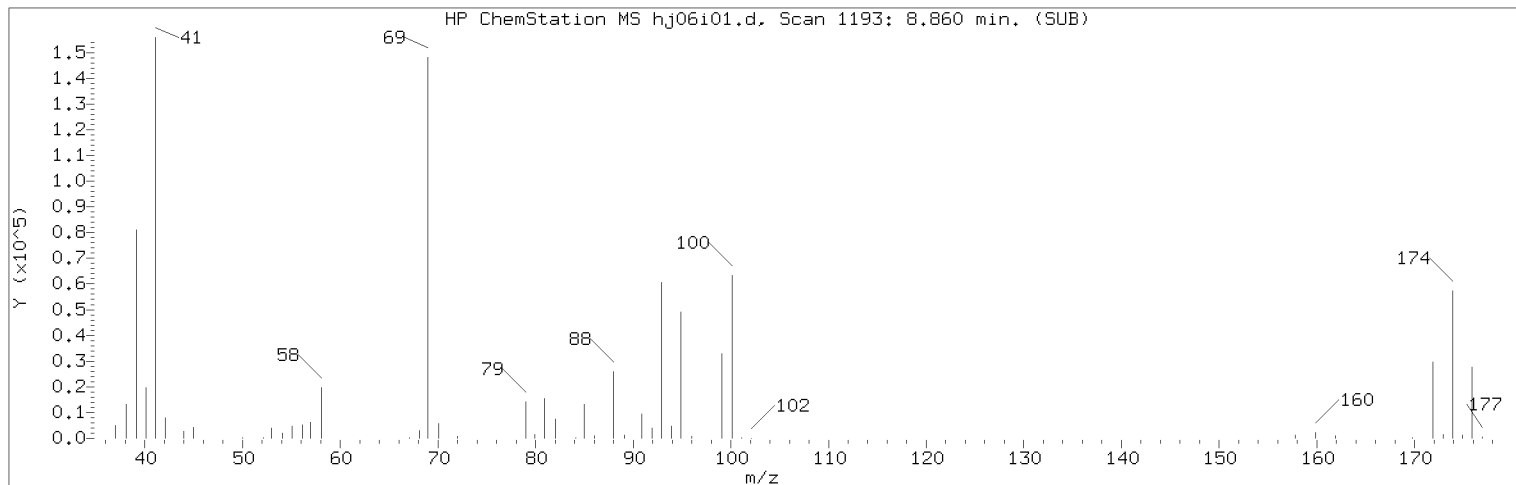
Sample Name: VSTD025

Lab Sample ID: VSTD025

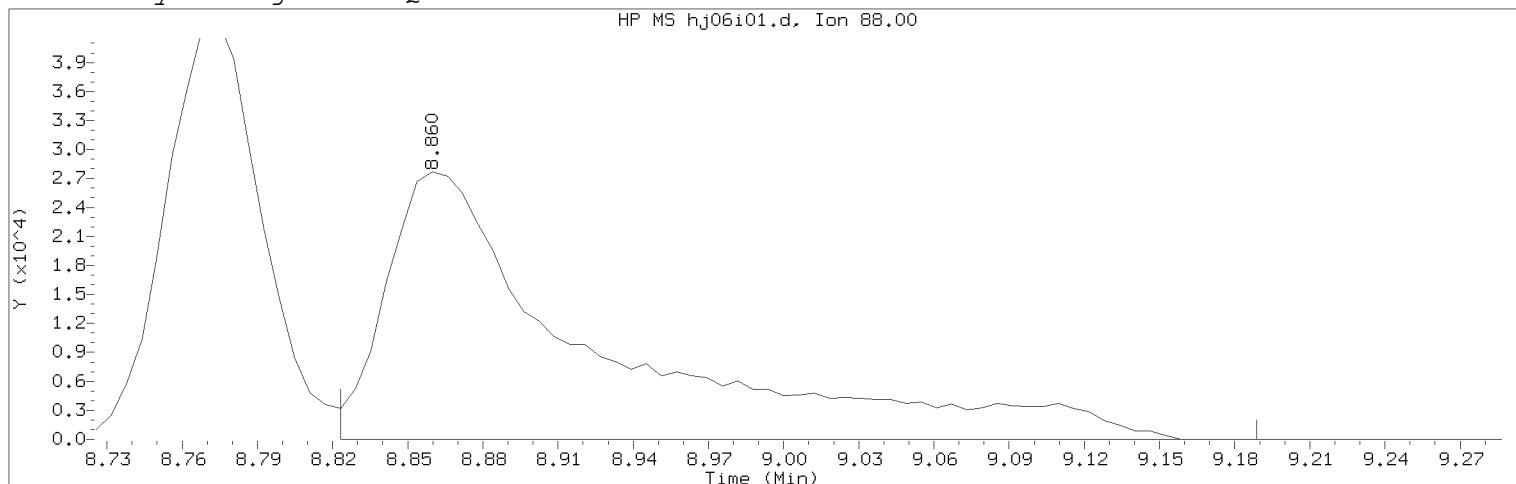
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area	: 1341880	
On-column Amount (ng)	: 24.6923	
Integration start scan	: 967	Integration stop scan: 1031
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 538 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

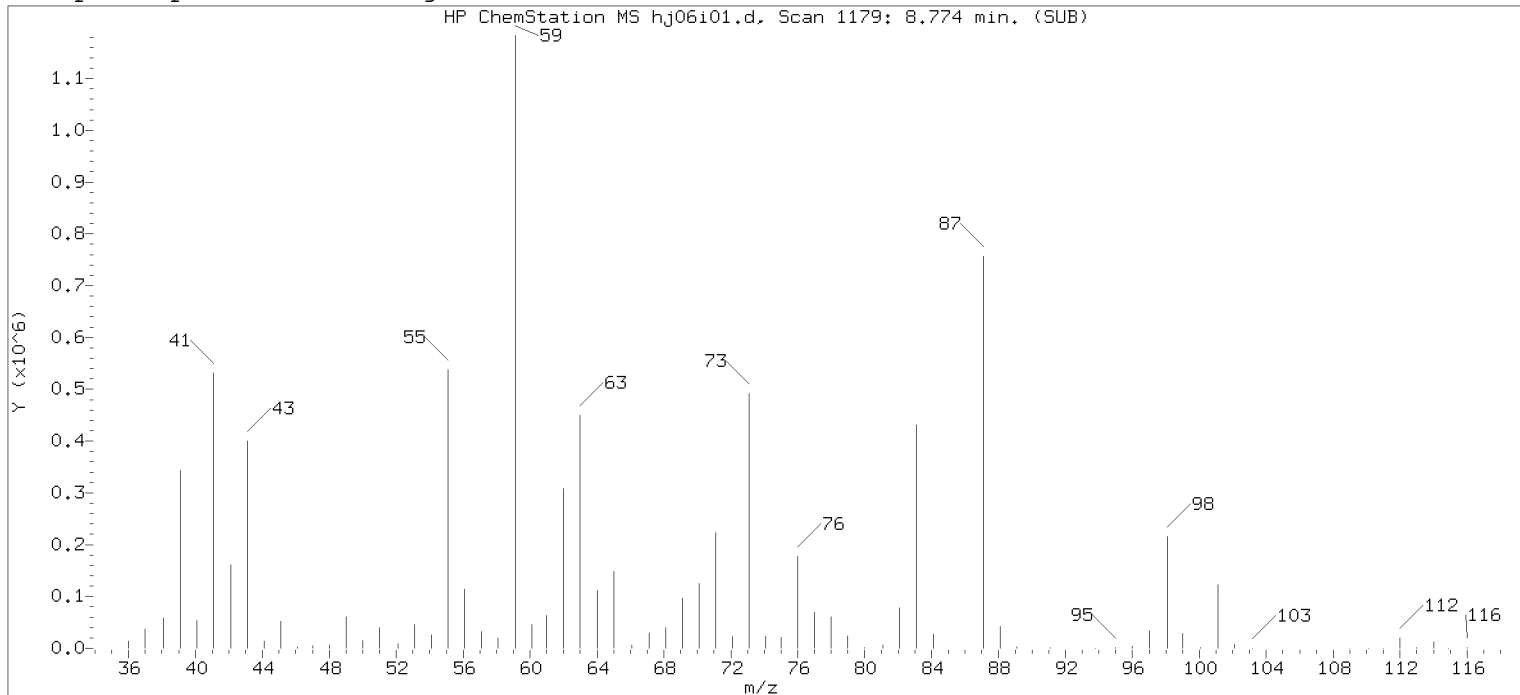
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 161139M	
On-Column Amount (ng)	: 995.1248	
Integration start scan	: 1186	Integration stop scan: 1246
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

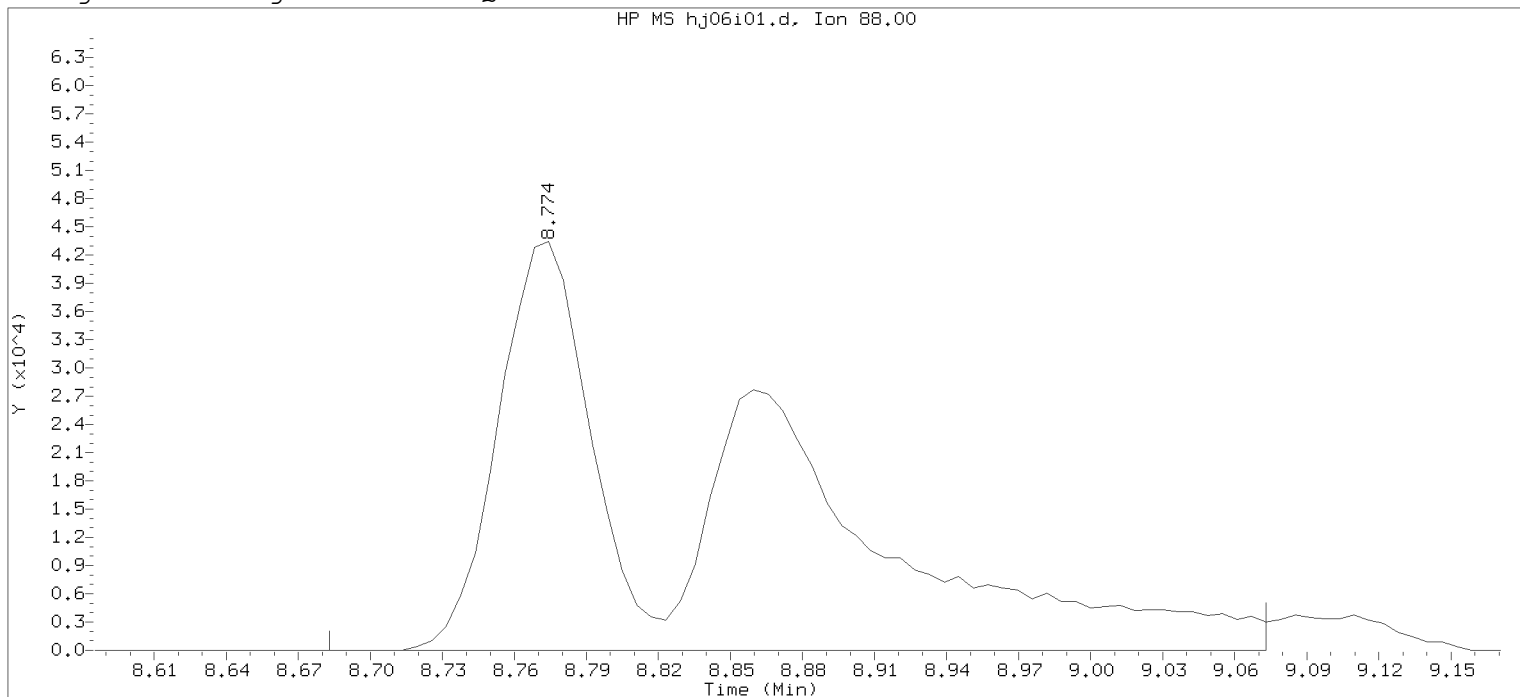
Analyst responsible for change:	Digitally signed by Sara E. Johnson
	on 01/15/2020 at 17:50.
	Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

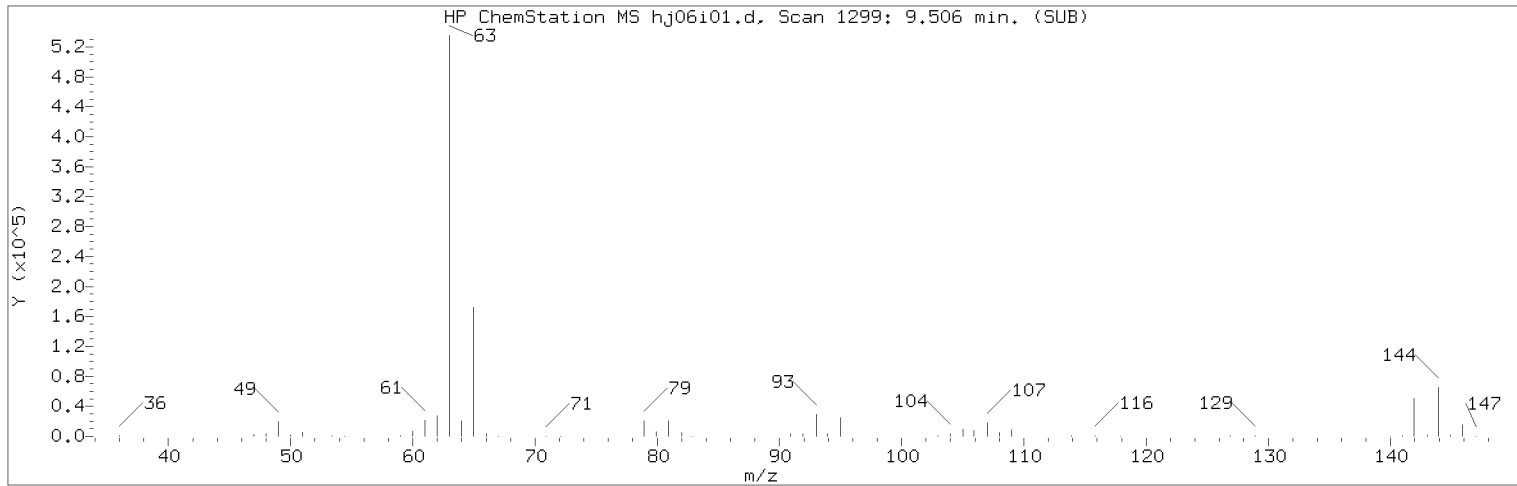
Lab Sample ID: VSTD025

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1179
 Retention Time (minutes): 8.774
 Quant Ion : 88.00
 Area : 263699
 On-column Amount (ng) : 1564.0069
 Integration start scan : 1163
 Y at integration start : 0

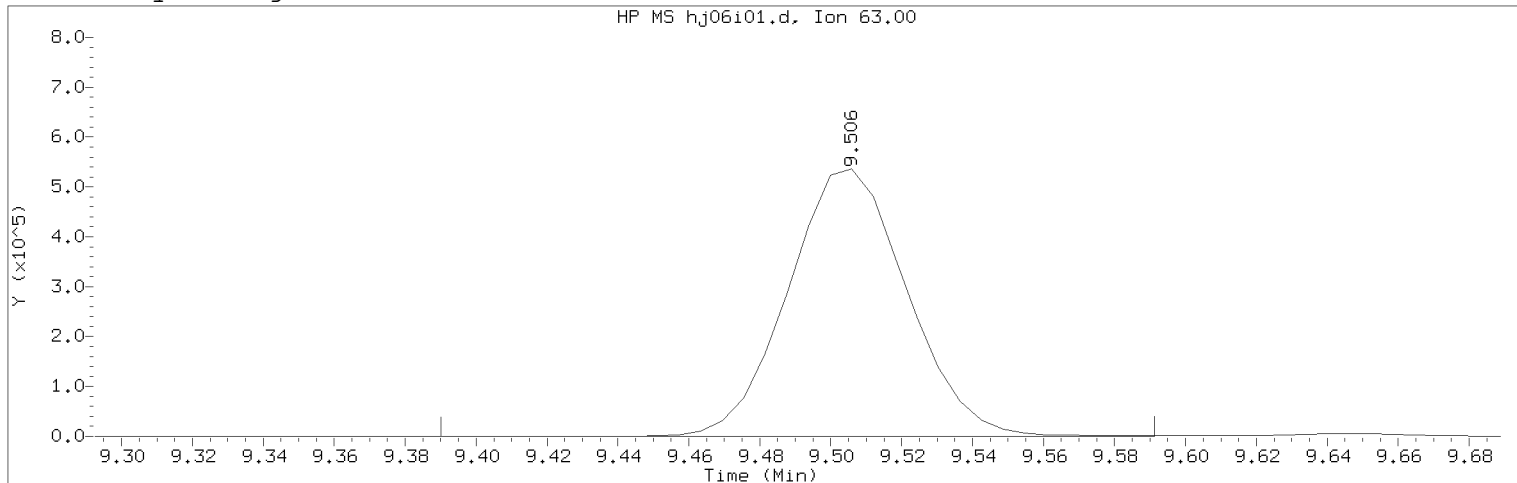
Integration stop scan: 1227
 Y at integration end: 0

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 Target 3.5 esignature user RAE59 Page 542 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

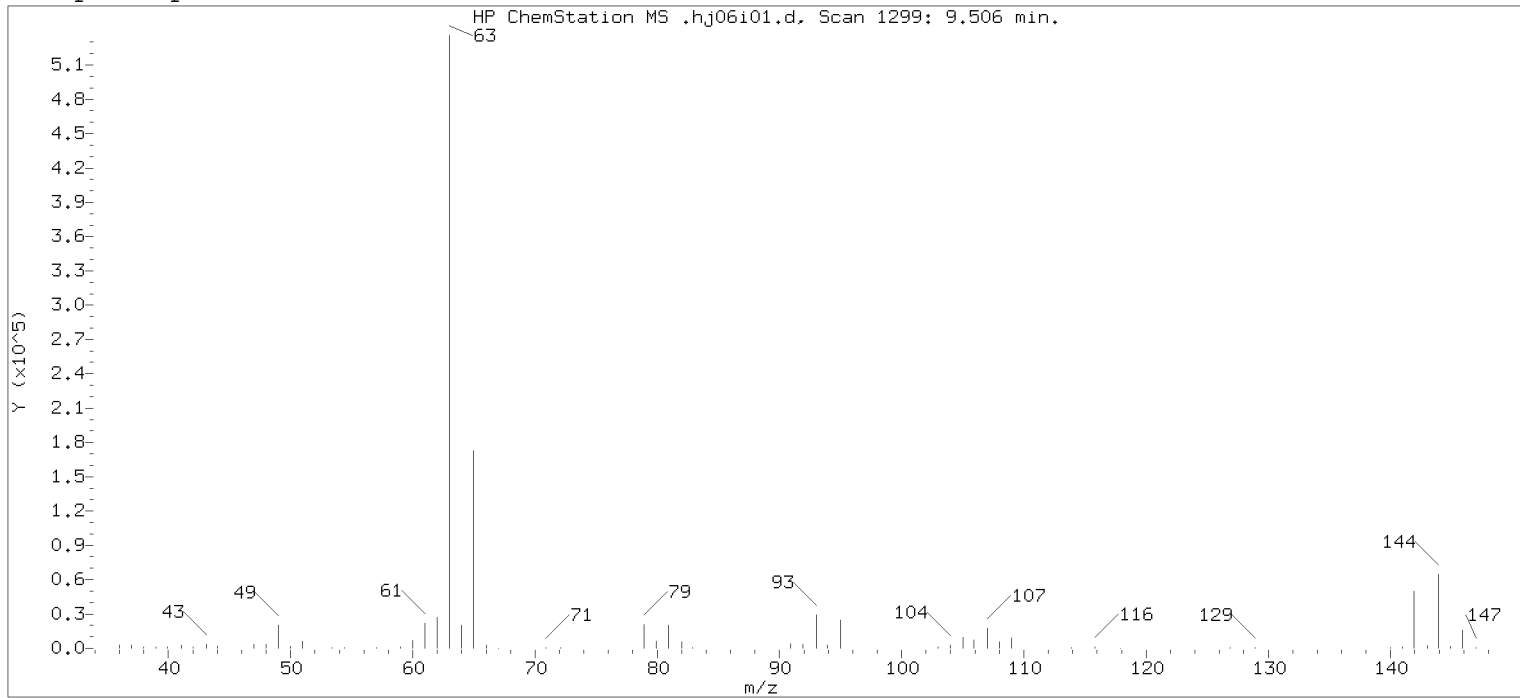
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 1246645M
On-Column Amount (ng) : 25.5039
Integration start scan : 1279 Integration stop scan: 1312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

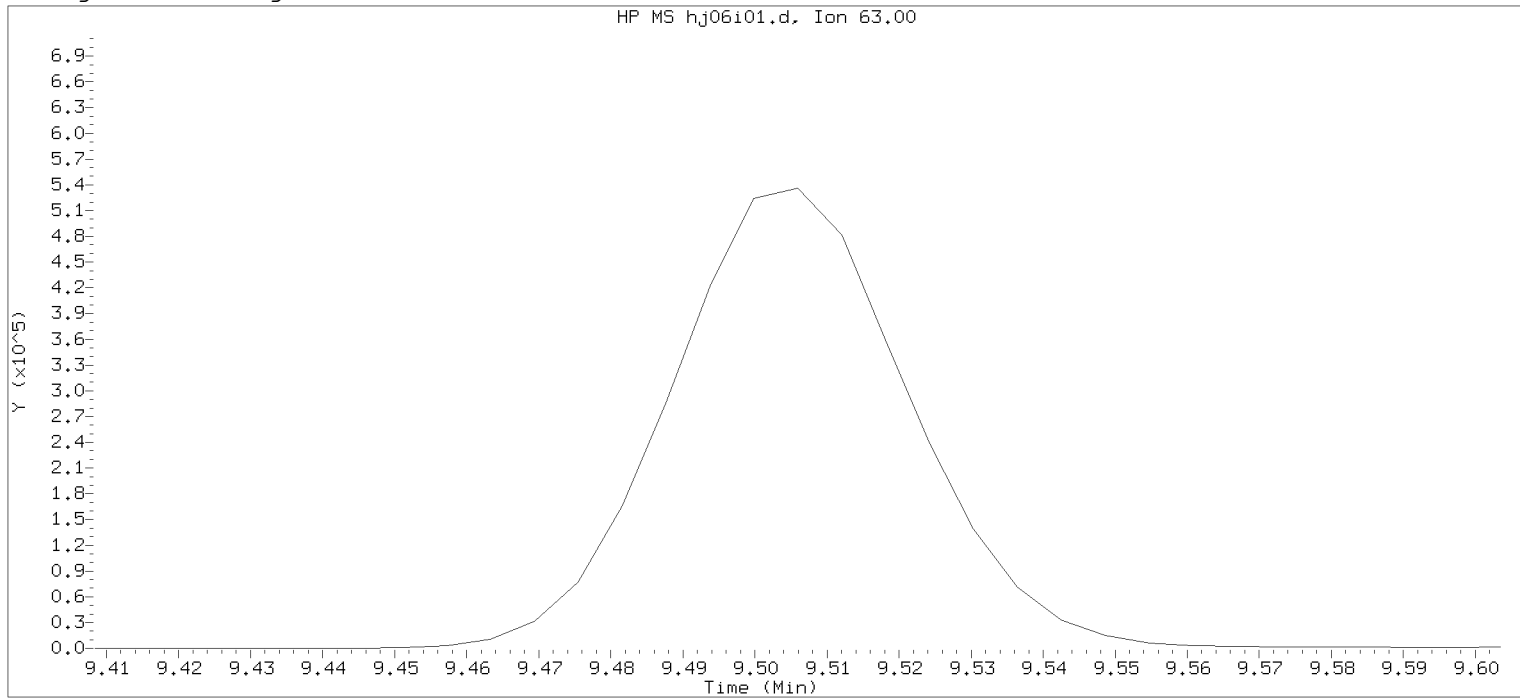
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

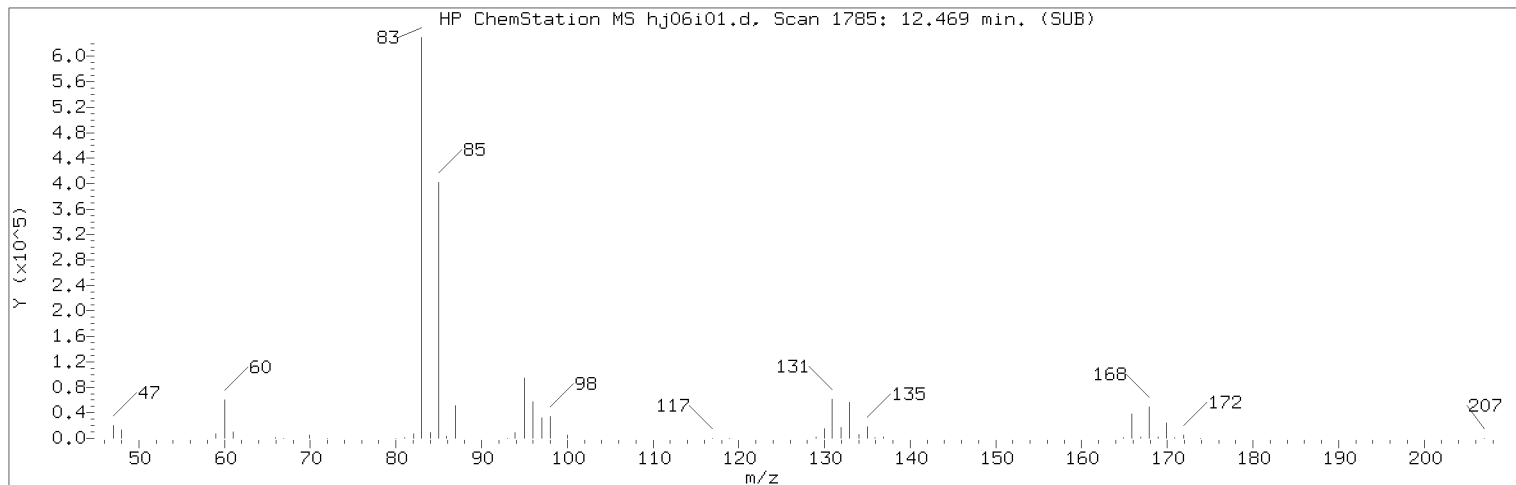
Sample Name: VSTD025

Lab Sample ID: VSTD025

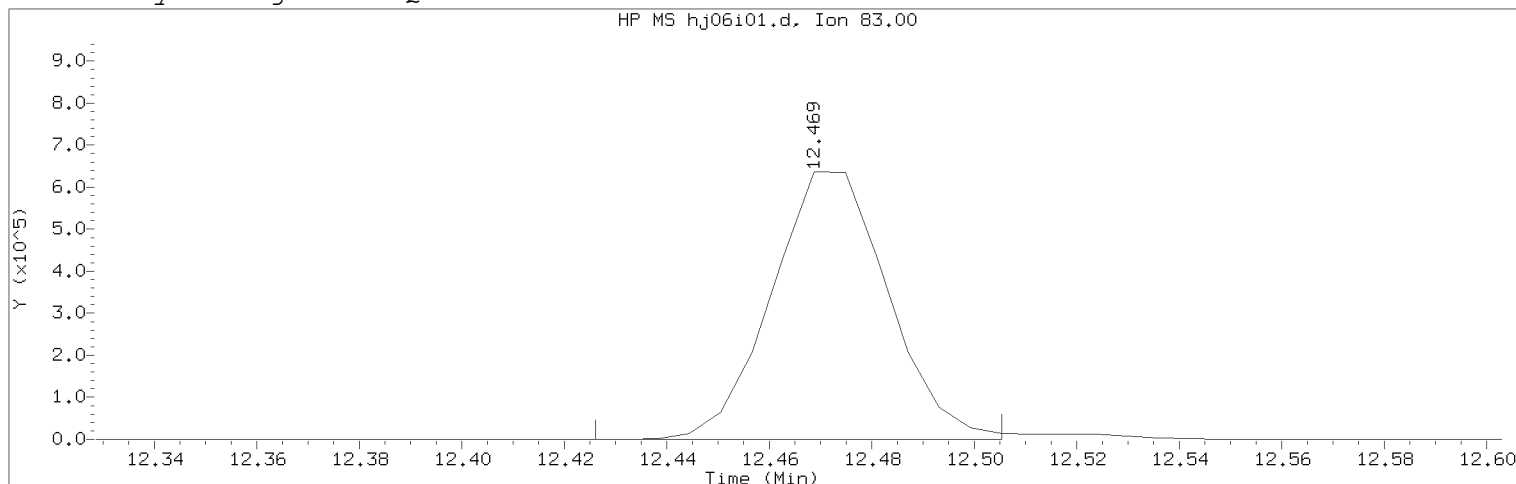
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

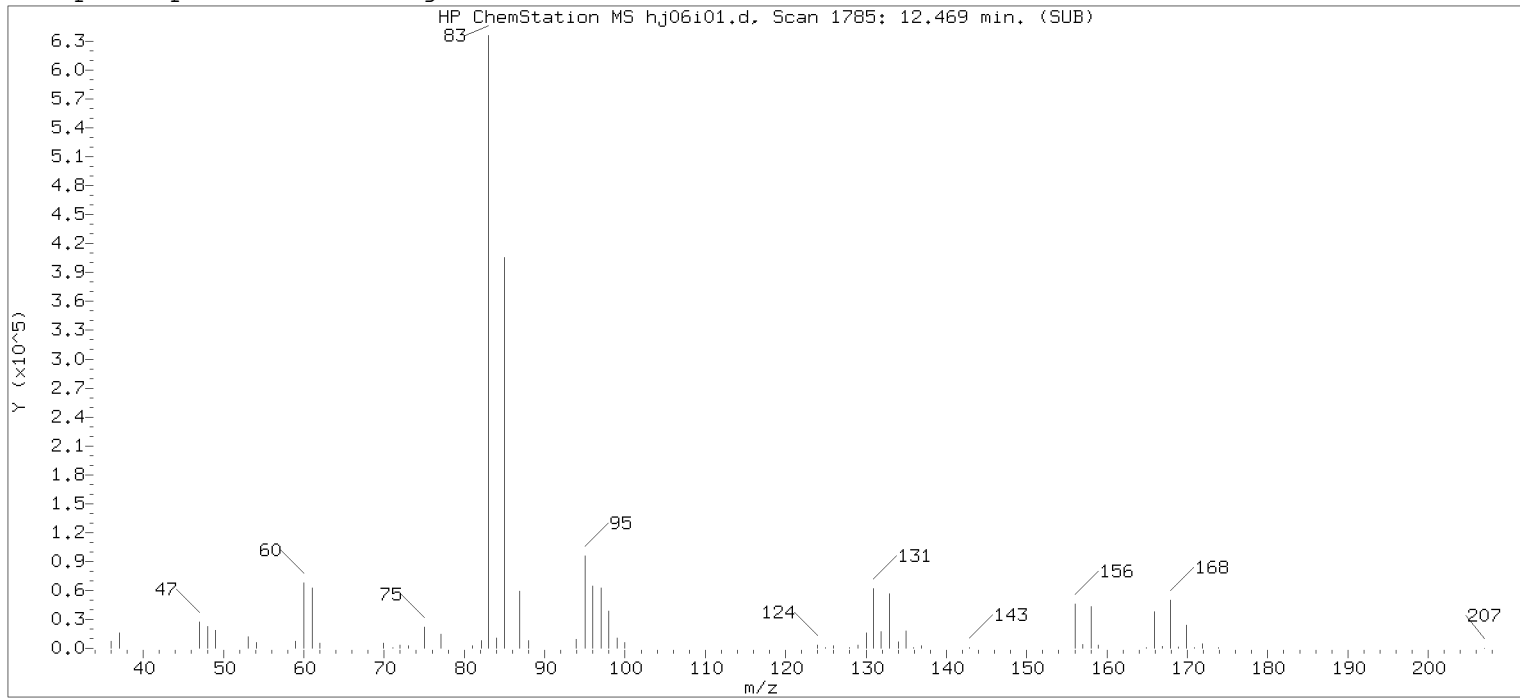
Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1785	
Retention Time (minutes)	: 12.469	
Quant Ion	: 83.00	
Area (flag)	: 1006708M	
On-Column Amount (ng)	: 25.8147	
Integration start scan	: 1777	Integration stop scan: 1790
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

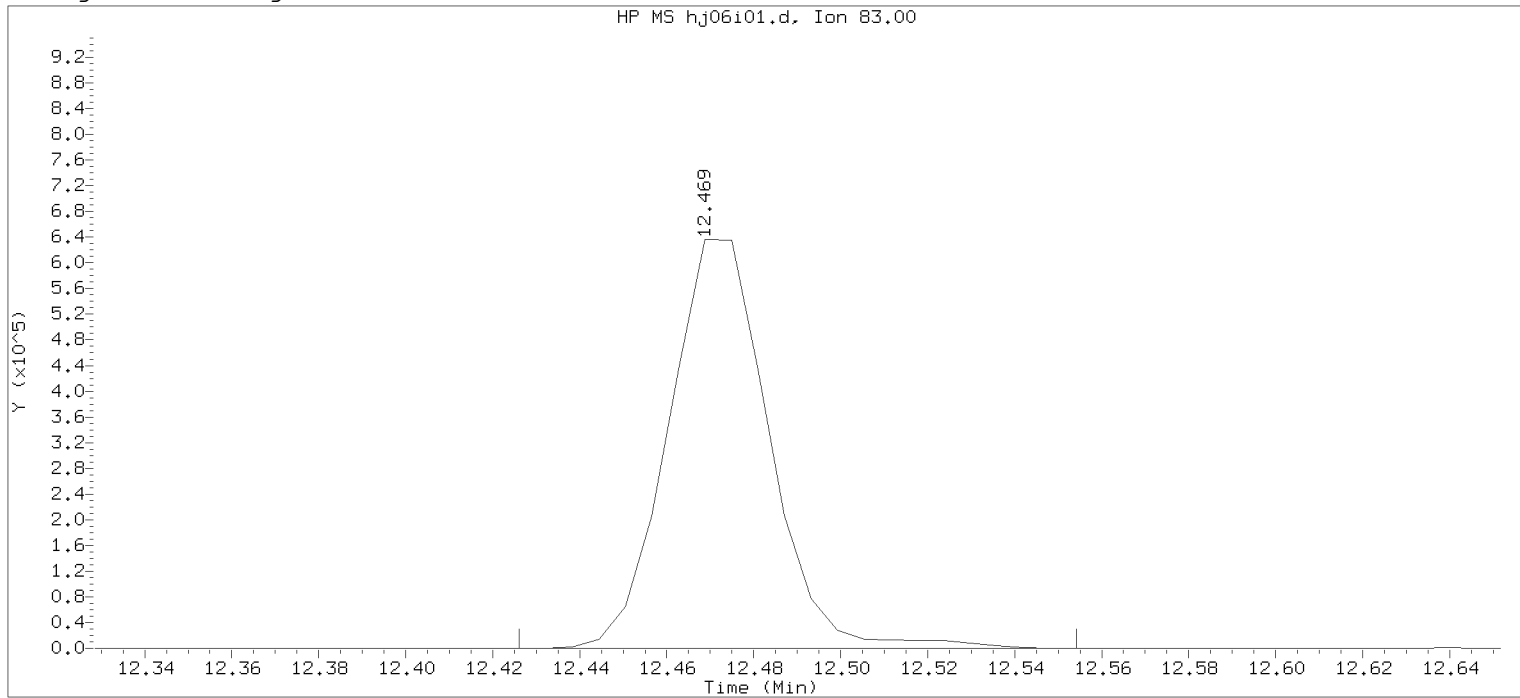
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

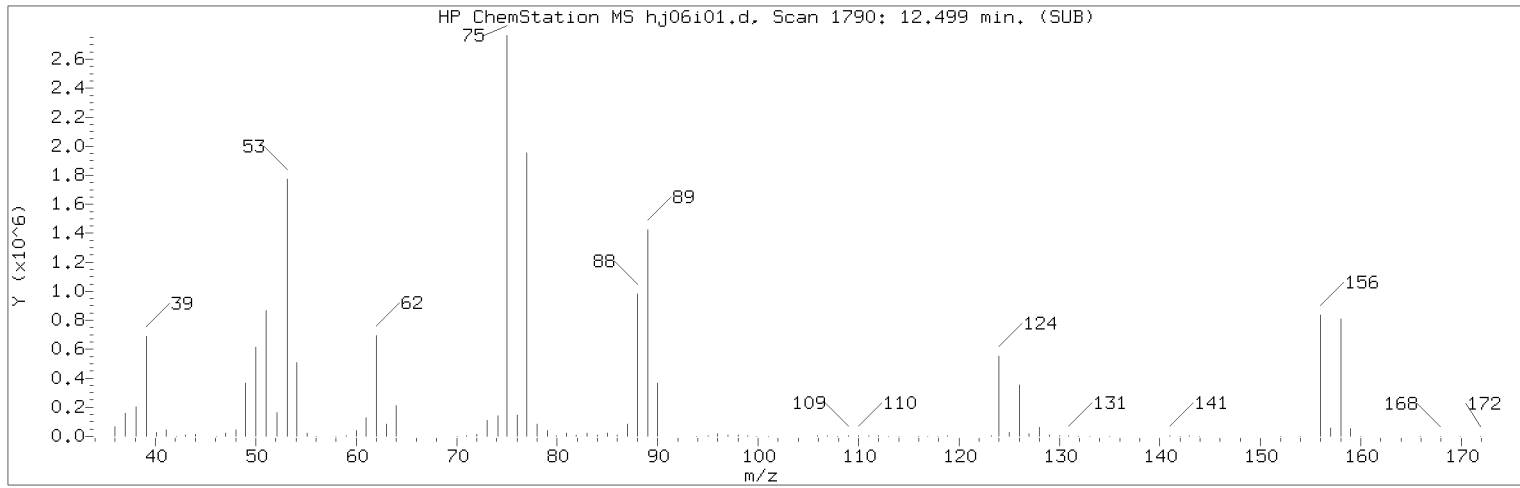
Sample Name: VSTD025

Lab Sample ID: VSTD025

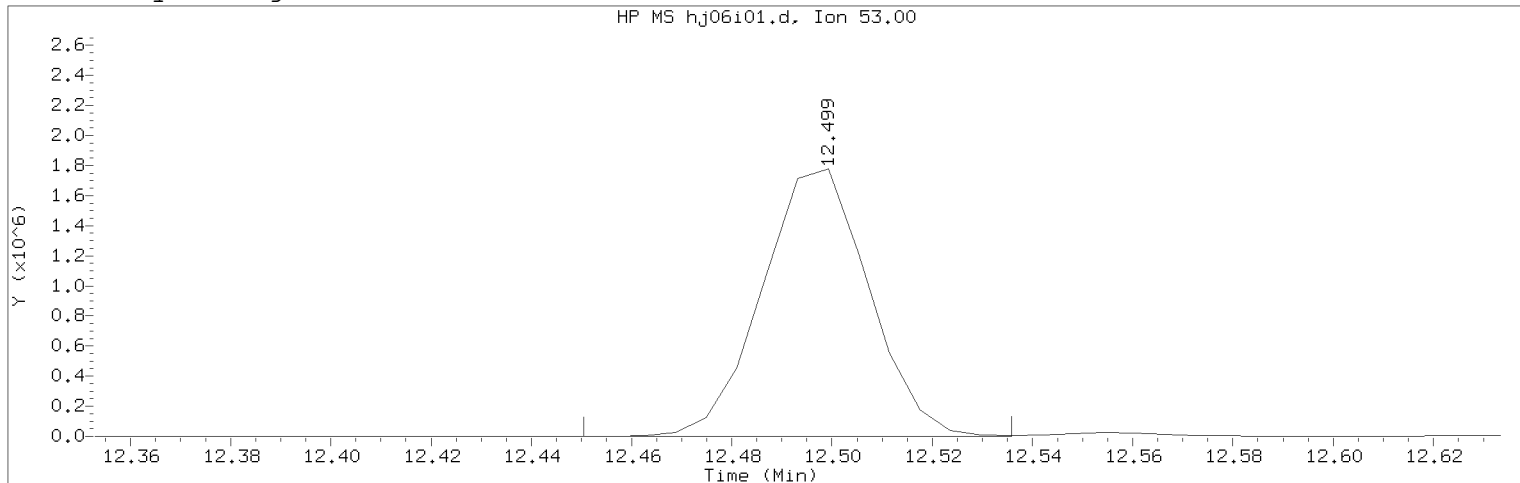
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 1024892
On-column Amount (ng) : 25.0000
Integration start scan : 1777 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 2544 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

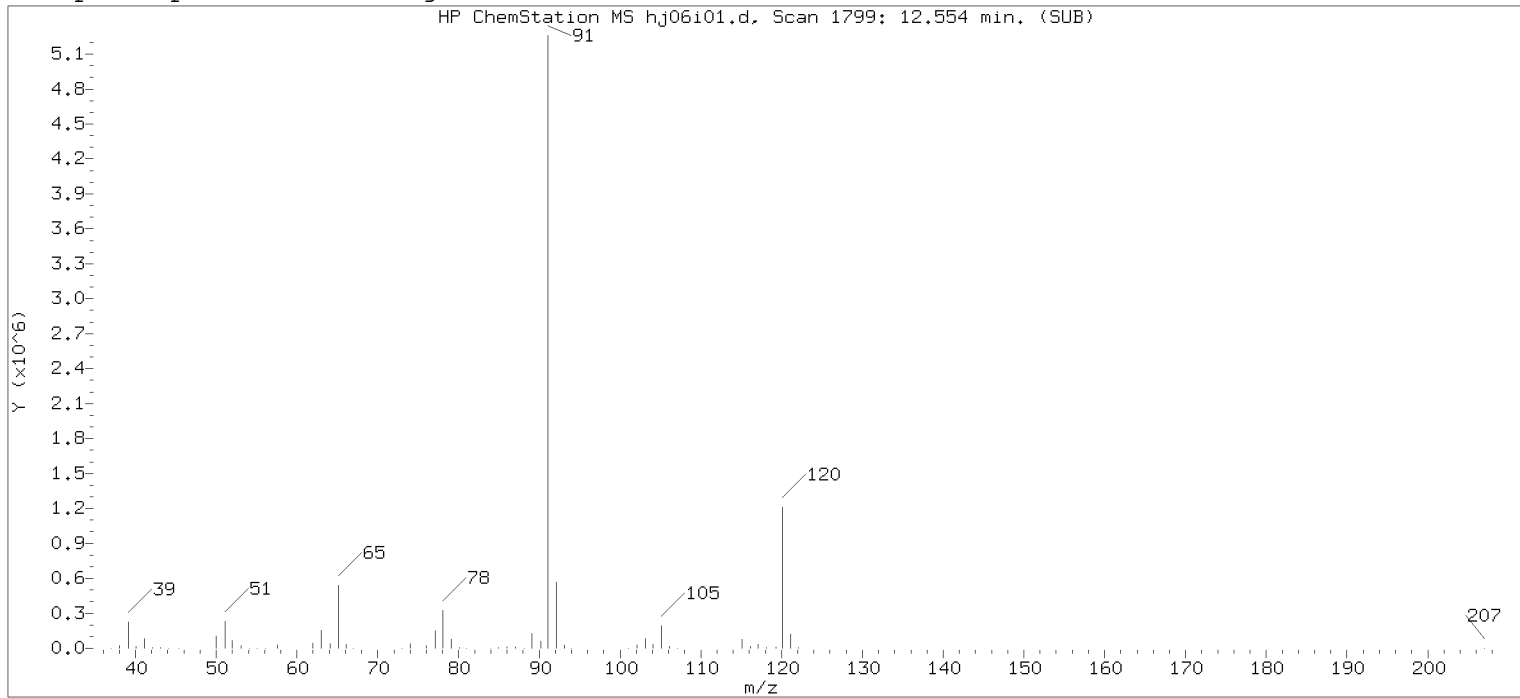
Compound Number : 116
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1790
Retention Time (minutes): 12.499
Quant Ion : 53.00
Area (flag) : 2625732A
On-Column Amount (ng) : 261.8701
Integration start scan : 1781 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

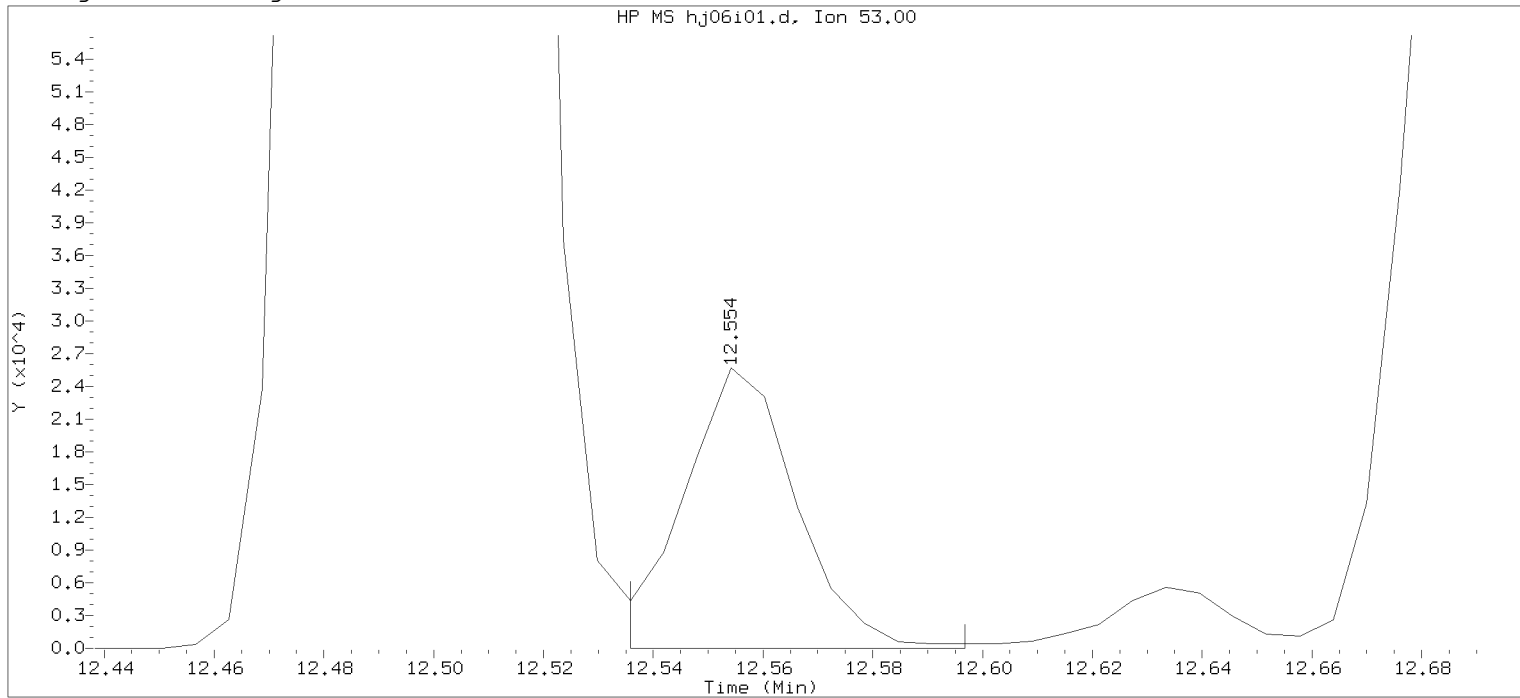
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

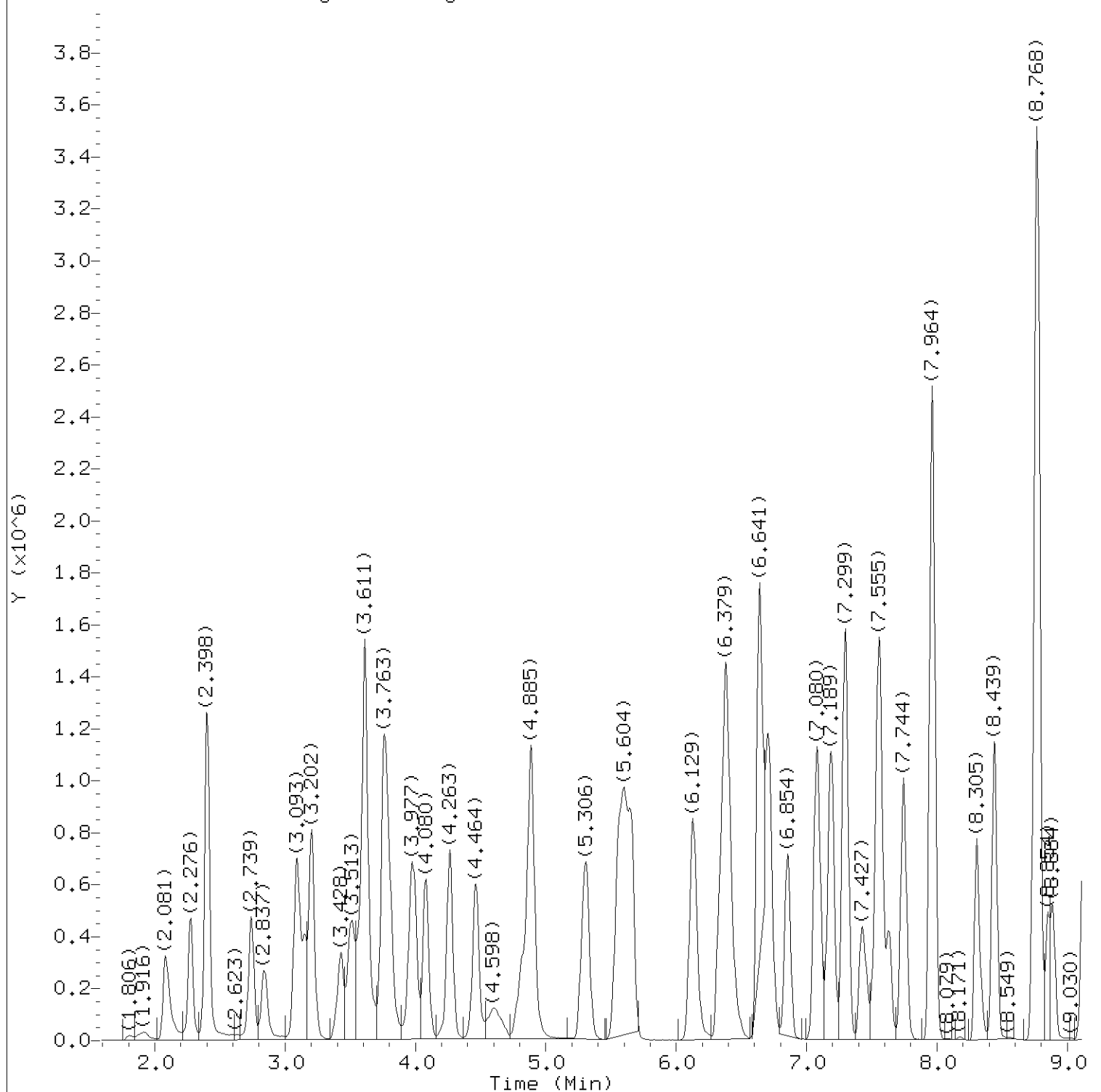
Sample Name: VSTD025

Lab Sample ID: VSTD025

Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1799	
Retention Time (minutes)	: 12.554	
Quant Ion	: 53.00	
Area	: 36305	
On-column Amount (ng)	: 250.0000	
Integration start scan	: 1795	Integration stop scan: 1805
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 2546 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

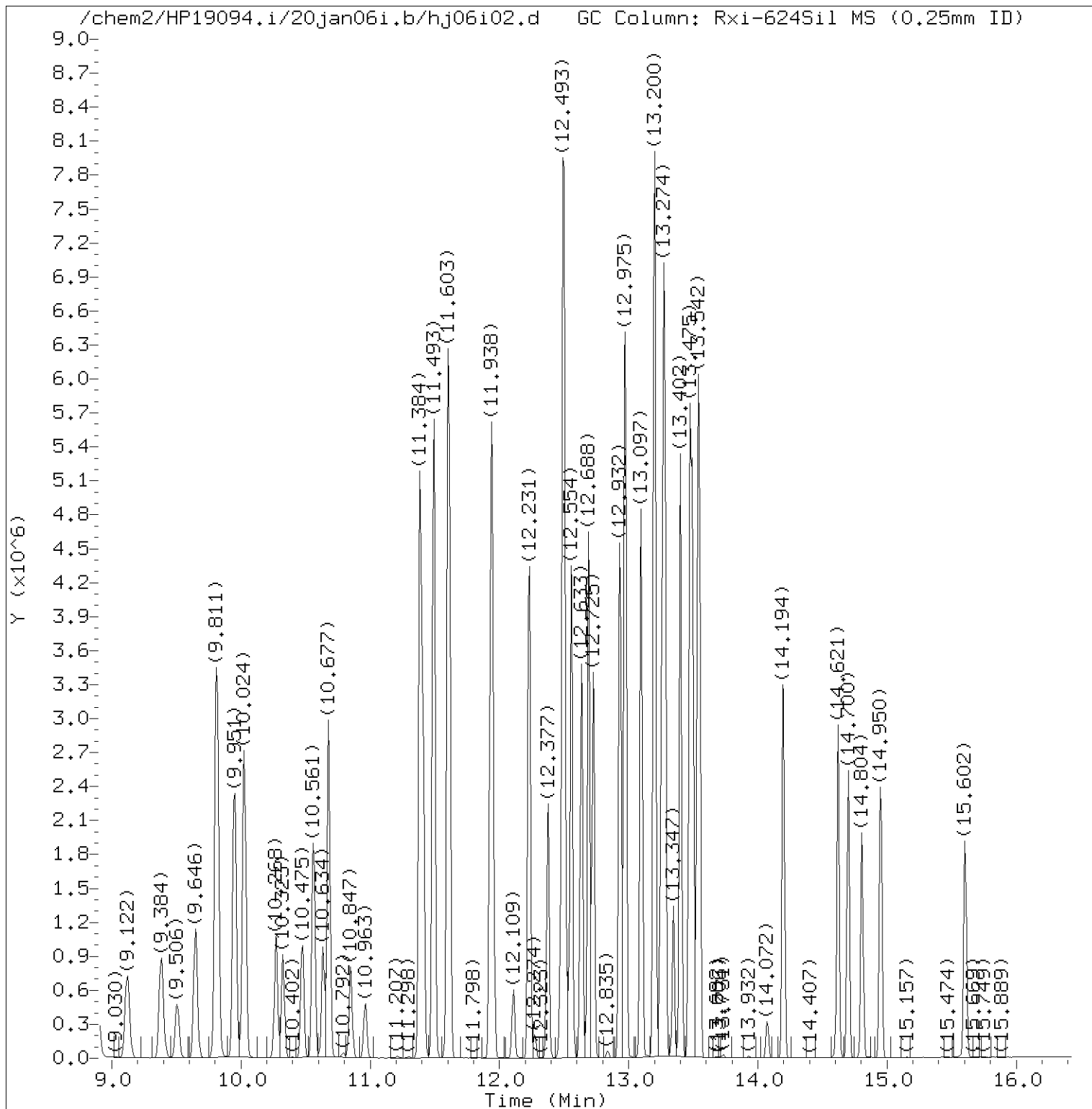
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
 Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	760677M	10.449
2) Chloromethane	(2)	2.276	50	723816	10.071
5) Vinyl Chloride	(2)	2.398	62	705685	10.323
6) 1,3-Butadiene	(2)	2.404	39	556101M	10.298
7) Bromomethane	(2)	2.739	94	492084	10.049
8) Chloroethane	(2)	2.843	64	405350	10.238
9) Dichlorofluoromethane	(2)	3.087	67	928944	9.880
10) Trichlorofluoromethane	(2)	3.147	101	810077	10.384
11) Ethyl ether	(2)	3.428	59	359873	10.423
12) Freon 123a	(2)	3.507	67	618460	10.254
13) Acrolein	(1)	3.611	56	2738099	490.908
15) 1,1-Dichloroethene	(2)	3.757	96	485755	10.238
16) Freon 113	(2)	3.781	101	518962	10.463
14) Acetone	(1)	3.788	43	680105M	90.365
17) Methyl Iodide	(2)	3.964	142	936249	10.225
18) Bromoethane	(2)	4.001	108	420057M	10.147
19) Carbon Disulfide	(2)	4.080	76	1456070	10.031
22) Methyl Acetate	(1)	4.233	43	173520	9.136
23) Allyl Chloride	(2)	4.263	41	790437	9.807
24) Methylene Chloride	(2)	4.464	84	508726	9.961
27)*t-Butyl Alcohol-d10	(1)	4.464	65	123863	50.000
29) t-Butyl Alcohol	(1)	4.604	59	538353	205.919
30) Acrylonitrile	(1)	4.806	53	450445	49.045
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	1118152	10.307
32) trans-1,2-Dichloroethene	(2)	4.891	96	525358	10.072
33) n-Hexane	(2)	5.306	57	760285	10.334
34) 1,1-Dichloroethane	(2)	5.543	63	965481	10.252
35) di-Isopropyl Ether	(2)	5.598	45	1588448	10.240
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	828227	10.272
41) 1,2-Dichloroethene (Total)	(2)		96	1112521	20.202
38) Ethyl t-butyl ether	(2)	6.129	59	1496284	10.275
39) 2-Butanone	(1)	6.330	43	1122078	95.350
40) cis-1,2-Dichloroethene	(2)	6.379	96	587163	10.130
42) 2,2-Dichloropropane	(2)	6.391	77	821251	10.249
43) Propionitrile	(1)	6.421	54	648800	201.268
46) Methacrylonitrile	(1)	6.641	67	1136111	98.542
48) Bromochloromethane	(2)	6.708	128	246581	10.076
49) Tetrahydrofuran	(1)	6.714	71	320458	98.567

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
 Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	934761	10.171
51) \$Dibromofluoromethane	(2)	7.074	113	487337	10.094
51) \$Dibromofluoromethane	(2)	7.067	111	499455	10.069
52) 1,1,1-Trichloroethane	(2)	7.086	97	865028	10.120
53) Cyclohexane	(2)	7.189	56	932893	10.219
53) Cyclohexane	(2)	7.189	84	815738	10.433
53) Cyclohexane	(2)	7.189	69	289935	10.205
56) 1,1-Dichloropropene	(2)	7.293	75	747294	10.345
55) Carbon Tetrachloride	(2)	7.299	117	754553	10.296
57) Isobutyl Alcohol	(1)	7.427	41	419476	462.887
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	93717	10.016
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	432514	10.018
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59118	9.975
59) Benzene	(2)	7.561	78	2144318	10.150
60) 1,2-Dichloroethane	(2)	7.634	62	536476M	9.850
61) t-Amyl methyl ether	(2)	7.744	73	1300717	10.241
63) n-Heptane	(2)	7.964	43	794361	10.293
64) *Fluorobenzene	(2)	7.964	96	1942157	10.000
66) n-Butanol	(1)	8.305	56	742424	1017.654
68) Trichloroethene	(2)	8.445	95	563519	10.172
70) Methylcyclohexane	(2)	8.756	83	1026004	10.338
71) 1,2-Dichloropropane	(2)	8.781	63	530369	10.148
72) Methyl Methacrylate	(1)	8.848	69	227222	9.797
73) 1,4-Dioxane	(1)	8.860	88	93413M	530.882
74) Dibromomethane	(2)	8.890	93	239624	10.029
75) Bromodichloromethane	(2)	9.122	83	664074	10.227
77) 2-Nitropropane	(1)	9.384	41	746083	97.942
80) 1-Bromo-2-chloroethane	(2)	9.506	63	500661M	10.191
81) cis-1,3-Dichloropropene	(2)	9.646	75	803099	10.473
82) 4-Methyl-2-Pentanone	(1)	9.811	43	2868230M	98.888
83) \$Toluene-d8	(3)	9.951	98	1928498	9.958
83) \$Toluene-d8	(3)	9.951	100	1247558	9.960
84) Toluene	(3)	10.024	92	1375434	10.110
86) 1,3-Dichloropropene (total)	(3)		75	1451695	20.745
85) trans-1,3-Dichloropropene	(3)	10.274	75	648596	10.272
87) Ethyl Methacrylate	(3)	10.323	69	503375	10.285
89) 1,1,2-Trichloroethane	(3)	10.475	97	346693	10.143
90) Tetrachloroethene	(3)	10.561	166	628570	10.165

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	595157	10.135
92) 2-Hexanone	(1)	10.677	43	1930183M	97.389
94) Dibromochloromethane	(3)	10.847	129	454667	10.389
96) 1,2-Dibromoethane	(3)	10.963	107	340506	10.425
97) 1-Chlorohexane	(3)	11.384	91	796363	9.710
98) *Chlorobenzene-d5	(3)	11.384	117	1453618	10.000
99) Chlorobenzene	(3)	11.408	112	1489084	10.018
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	538246	10.181
101) Ethylbenzene	(3)	11.493	91	2689588	10.047
102) m+p-Xylene	(3)	11.603	106	2063900	20.163
106) Xylene (Total)	(3)		106	3089747	30.353
105) o-Xylene	(3)	11.932	106	1025847	10.192
107) Styrene	(3)	11.951	104	1674658	10.252
108) Bromoform	(3)	12.109	173	269204	10.553
109) Isopropylbenzene	(3)	12.231	105	2771739	10.161
112) \$4-Bromofluorobenzene	(3)	12.377	95	708877	9.894
112) \$4-Bromofluorobenzene	(3)	12.377	174	605782	9.881
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	410607	10.443
115) Bromobenzene	(4)	12.493	156	611540	10.290
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	1083985	99.488
117) 1,2,3-Trichloropropane	(4)	12.524	110	107587M	10.219
118) n-Propylbenzene	(4)	12.554	91	3200410	10.312
120) 2-Chlorotoluene	(4)	12.633	126	626427	10.231
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	2339950	10.393
123) 4-Chlorotoluene	(4)	12.725	126	625771	10.240
126) tert-Butylbenzene	(4)	12.932	134	485332	10.423
127) Pentachloroethane	(4)	12.969	167	411479	10.369
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	2404012	10.341
129) sec-Butylbenzene	(4)	13.097	105	3049687	10.455
133) p-Isopropyltoluene	(4)	13.200	119	2618528	10.431
132) 1,3-Dichlorobenzene	(4)	13.200	146	1218850	10.291
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	753053	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	1185214	10.258
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	972849	10.035
137) Benzyl Chloride	(4)	13.347	126	177107	10.715
139) n-Butylbenzene	(4)	13.493	92	1312133	10.573
140) 1,2-Dichlorobenzene	(4)	13.530	146	1073891	10.286
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	63180	10.167

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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page 3 of 4

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

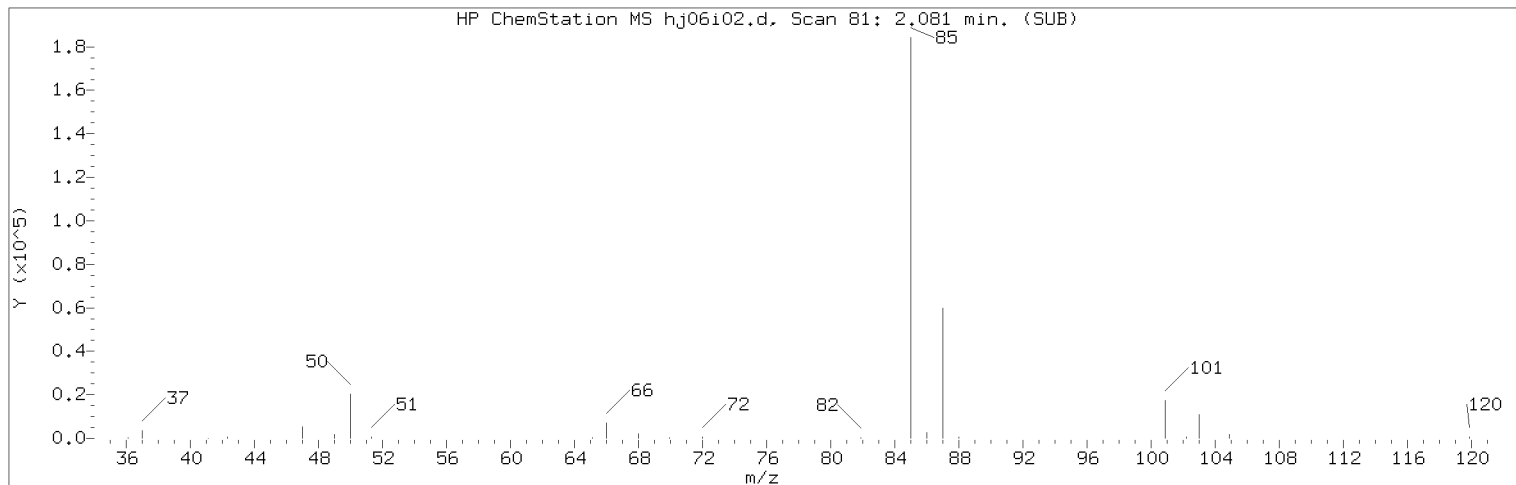
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	993380	10.717
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	845107	10.872
147) Hexachlorobutadiene	(4)	14.700	225	439808	10.842
148) Naphthalene	(4)	14.804	128	1445887	10.659
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	714131	10.762

page 4 of 4

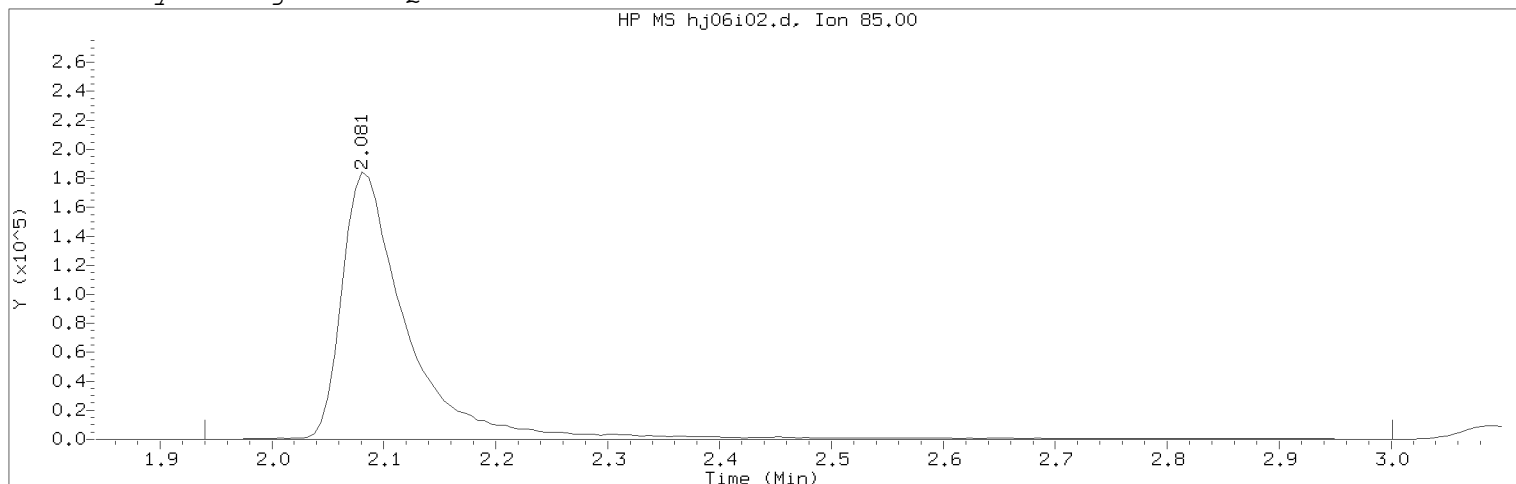
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

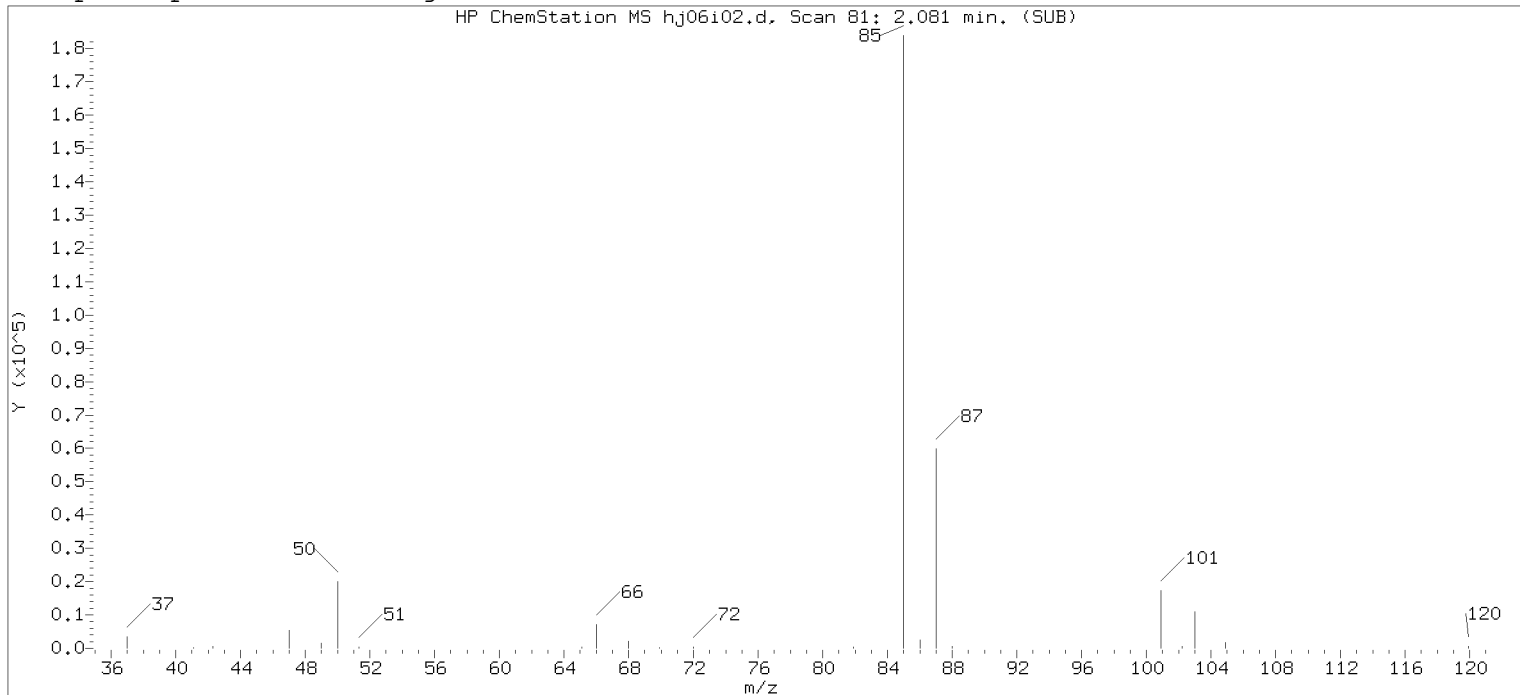
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area (flag)	: 760677M	
On-Column Amount (ng)	: 10.4486	
Integration start scan	: 57	Integration stop scan: 231
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

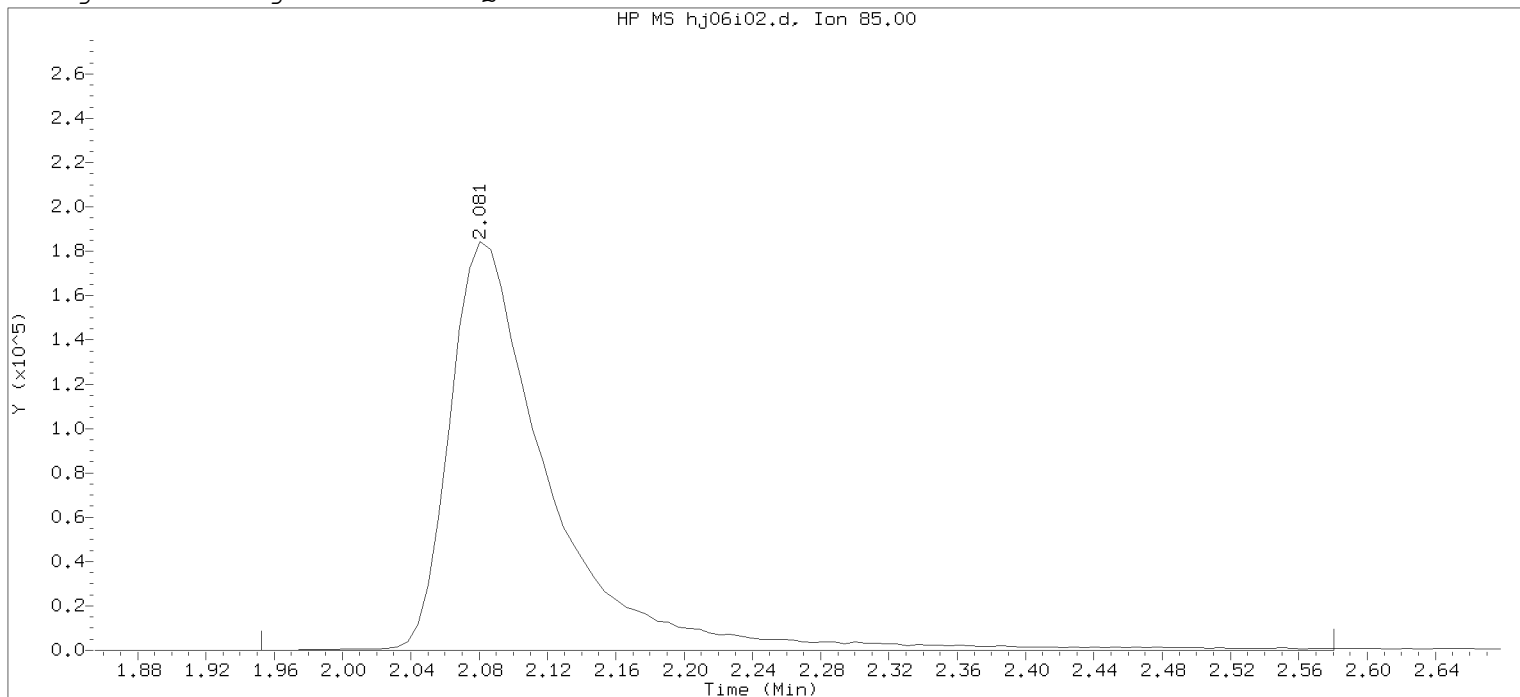
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

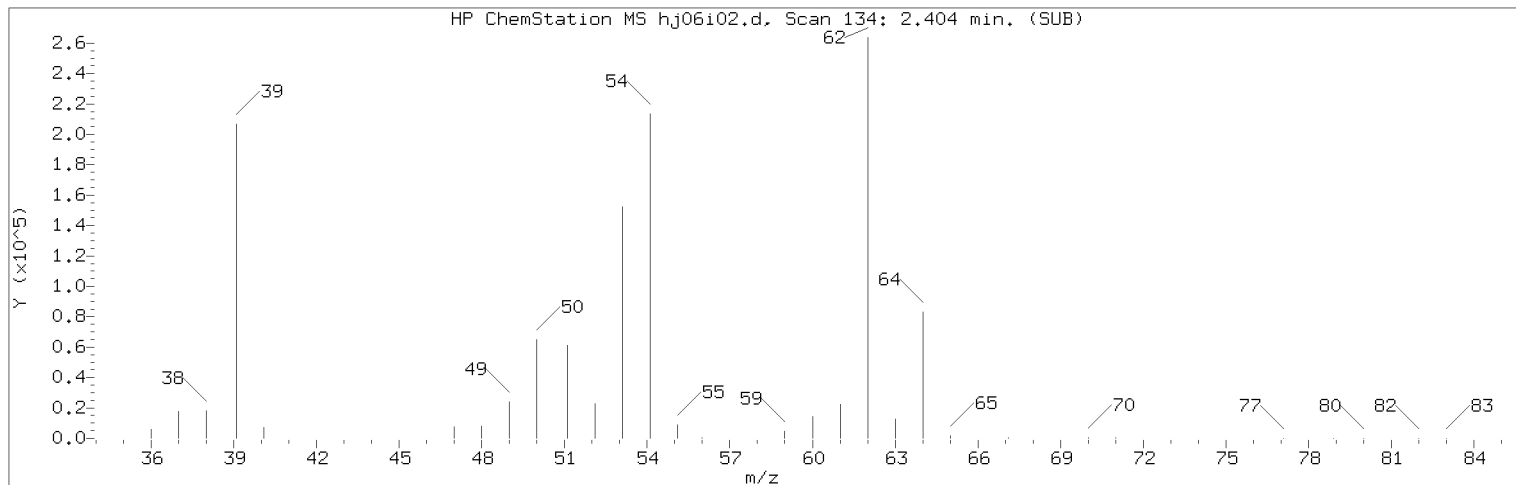
Lab Sample ID: VSTD010

Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area	: 750056	
On-column Amount (ng)	: 10.3504	
Integration start scan	: 59	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

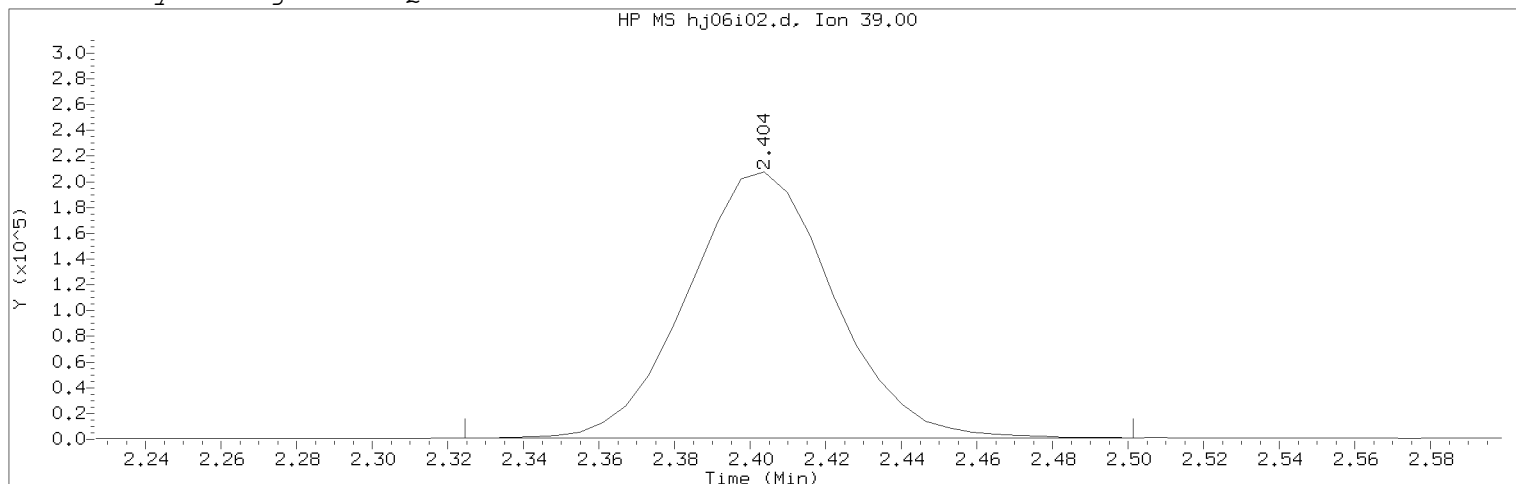
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 2554 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

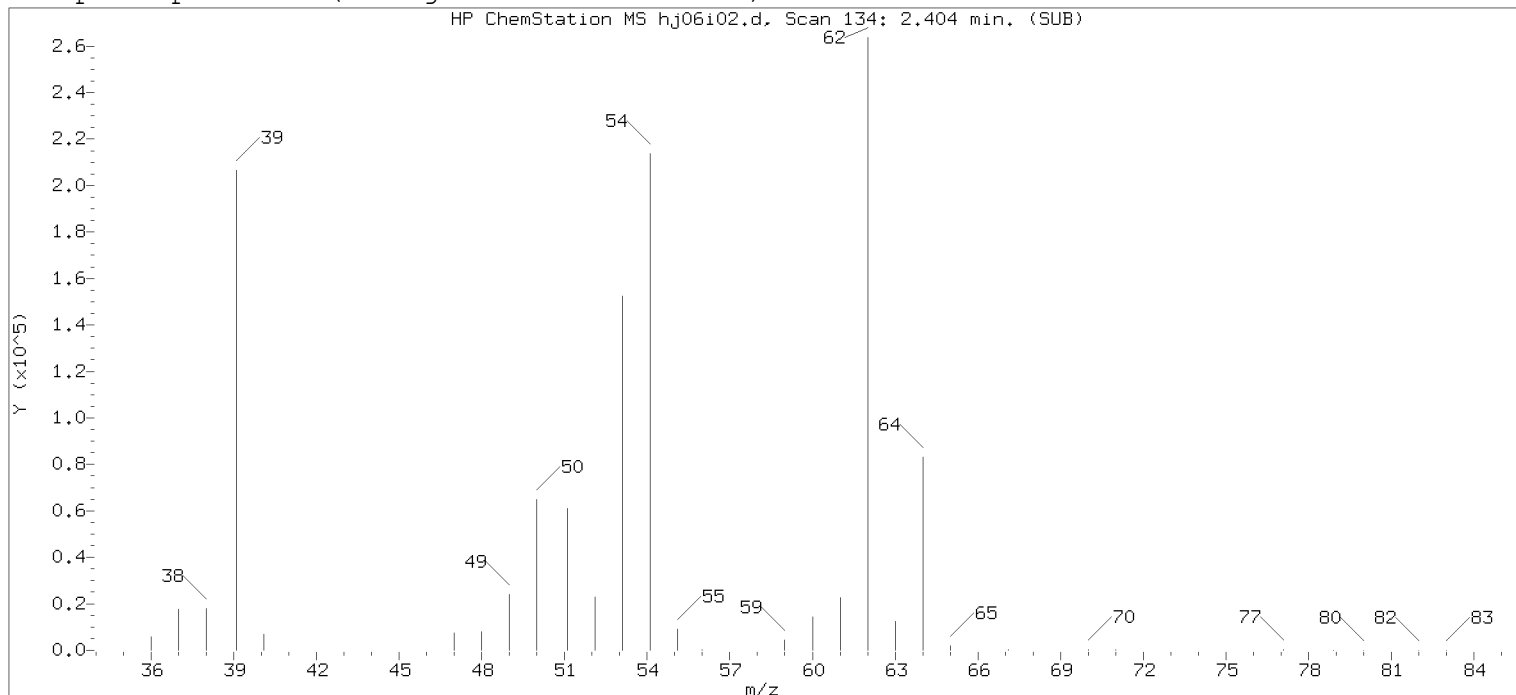
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area (flag) : 556101M
On-Column Amount (ng) : 10.2978
Integration start scan : 120 Integration stop scan: 149
Y at integration start : 805 Y at integration end: 805

Reason for manual integration: improper integration

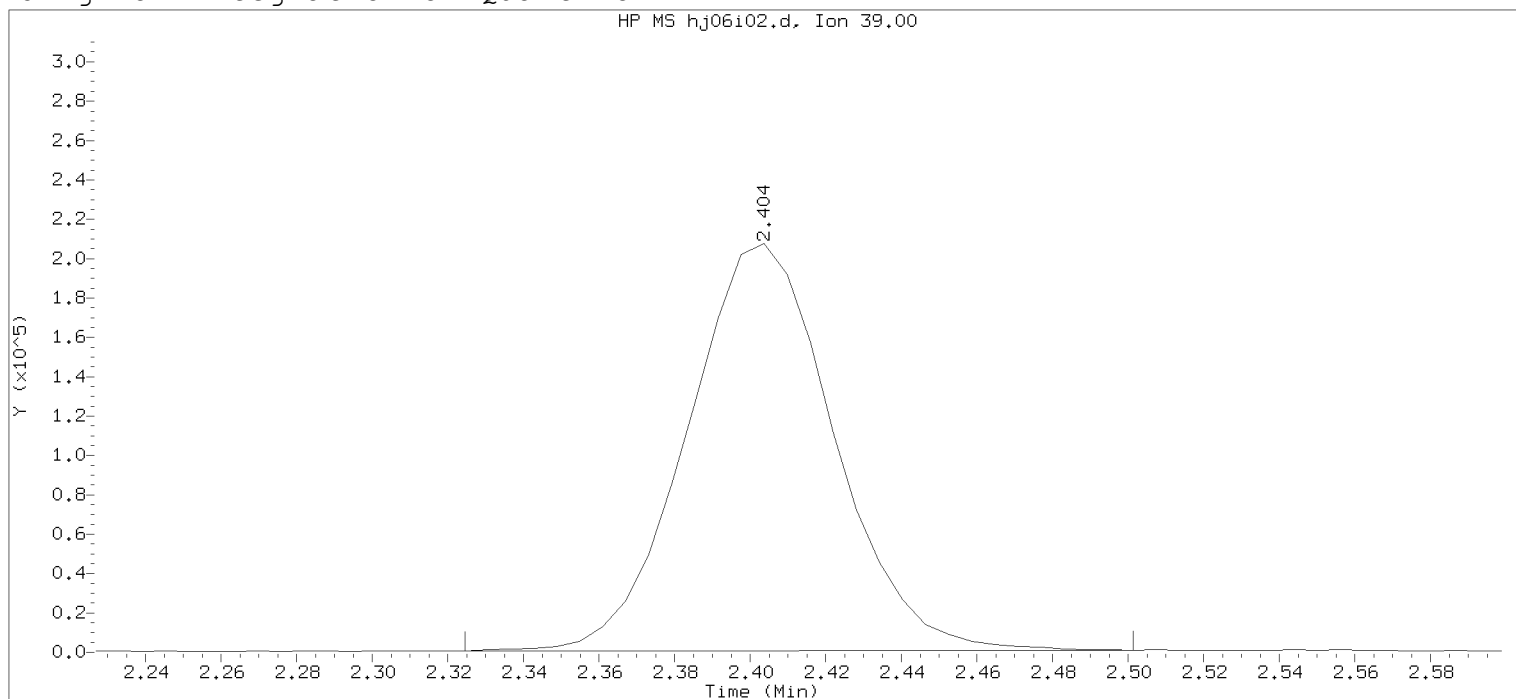
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 6

Compound Name : 1,3-Butadiene

Scan Number : 134

Retention Time (minutes): 2.404

Quant Ion : 39.00

Area : 554271

On-column Amount (ng) : 10.3624

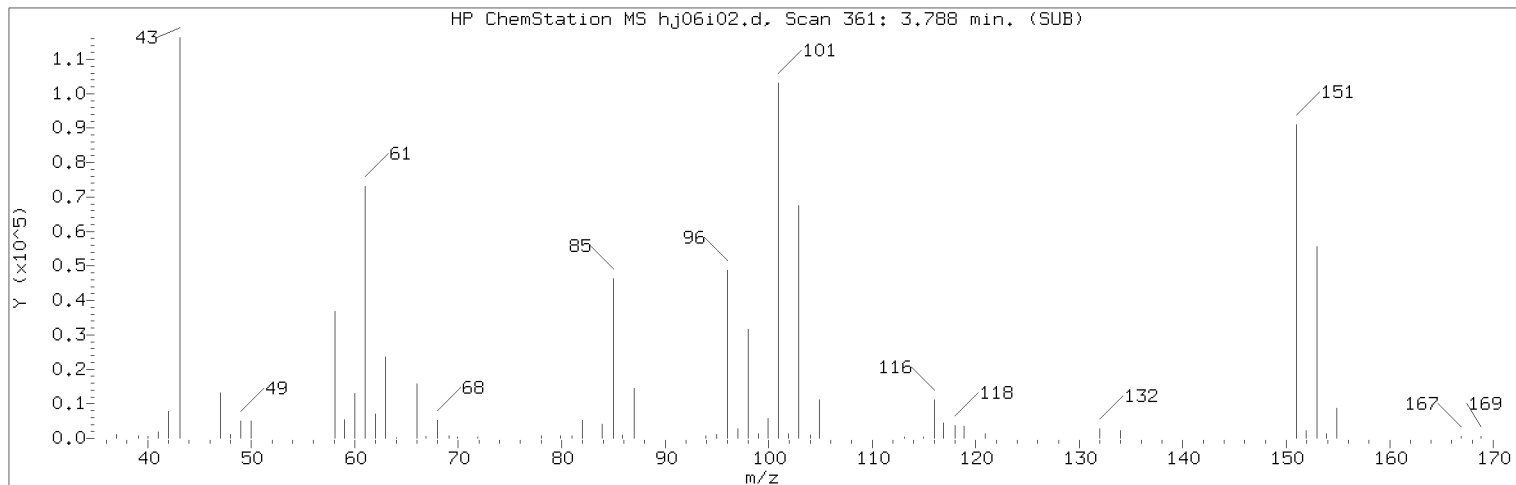
Integration start scan : 120 Integration stop scan: 149

Y at integration start : 806 Y at integration end: 1138

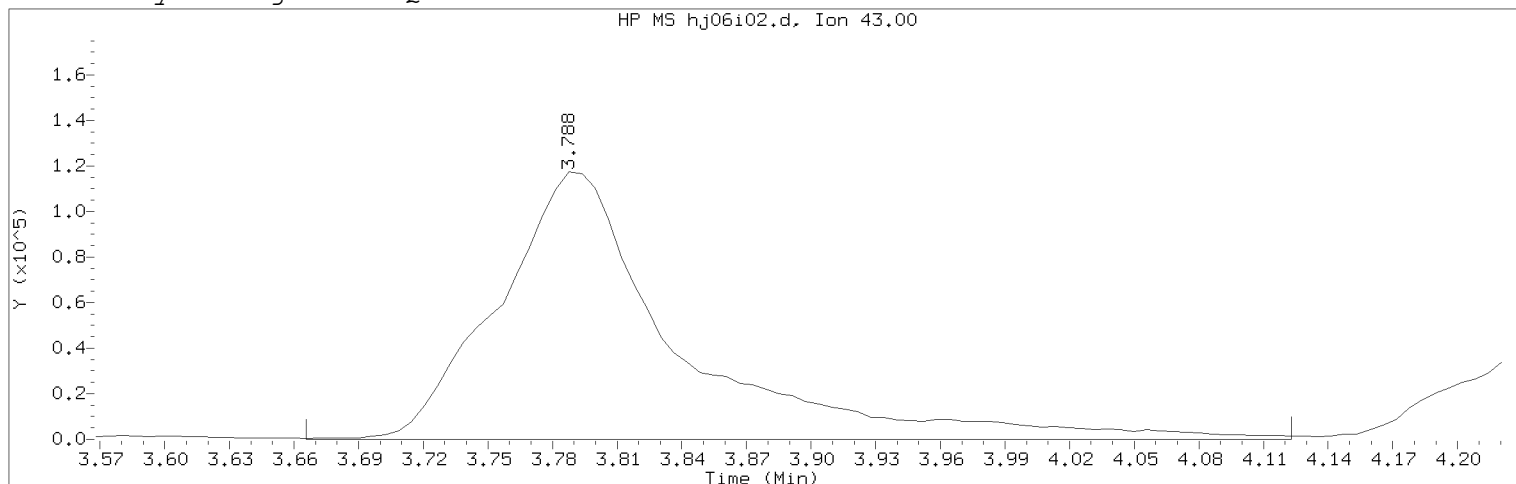
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 2556 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area (flag) : 680105M
 On-Column Amount (ng) : 90.3654
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 415
 Y at integration end: 0

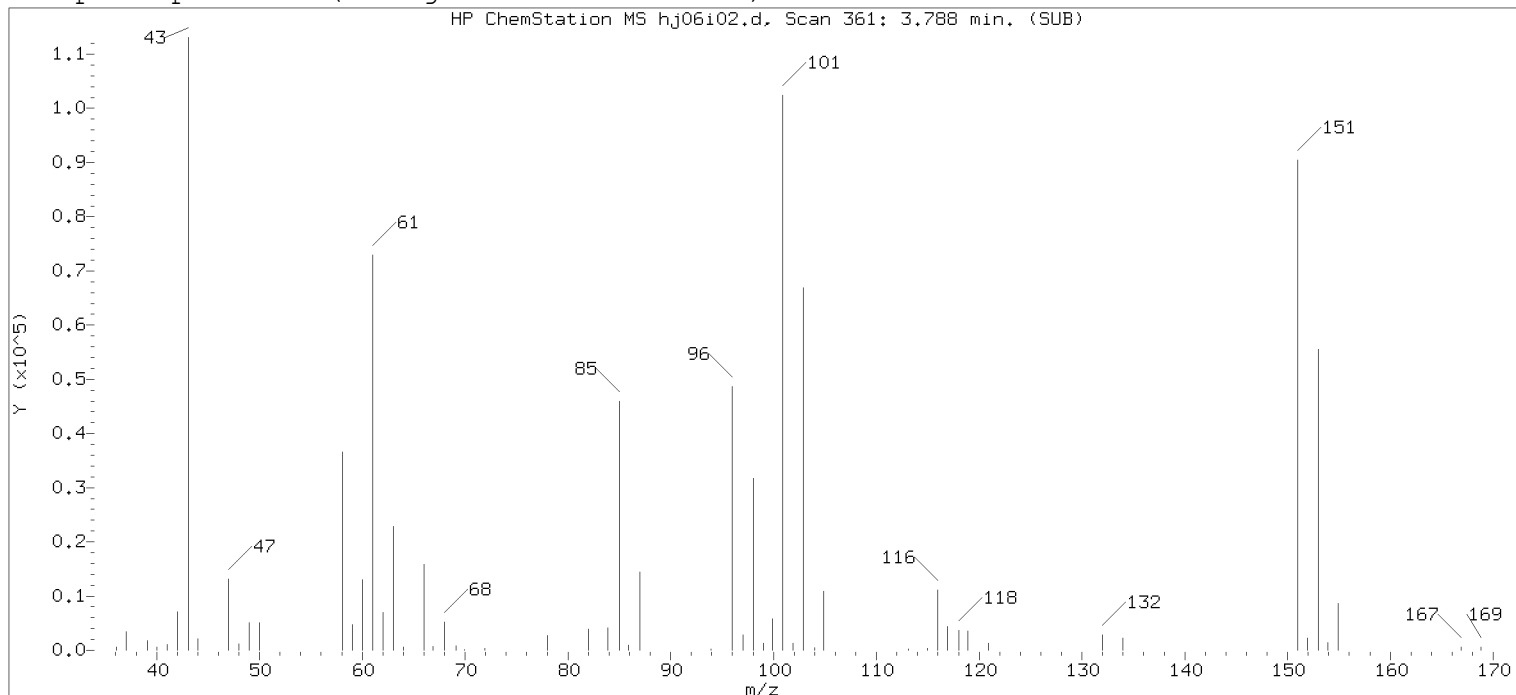
Reason for manual integration: improper integration

Analyst responsible for change:

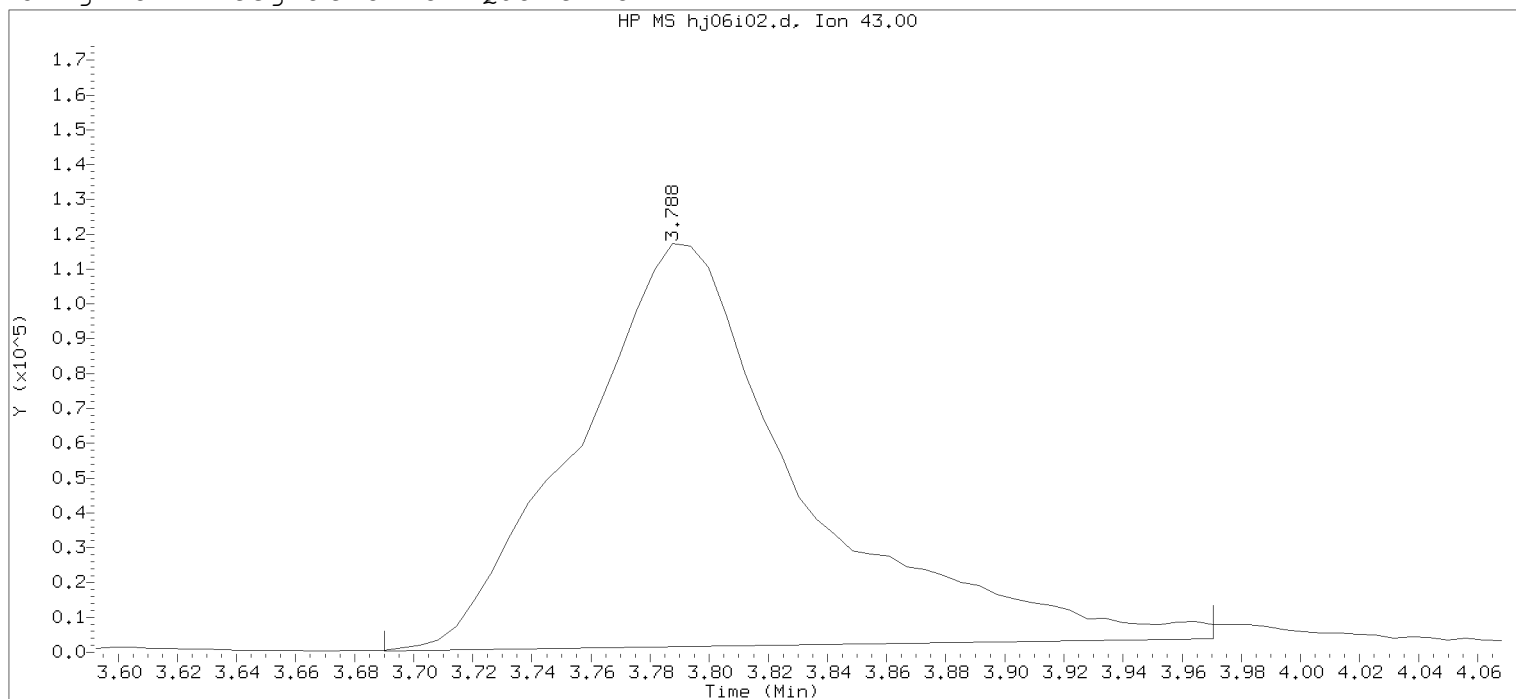
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

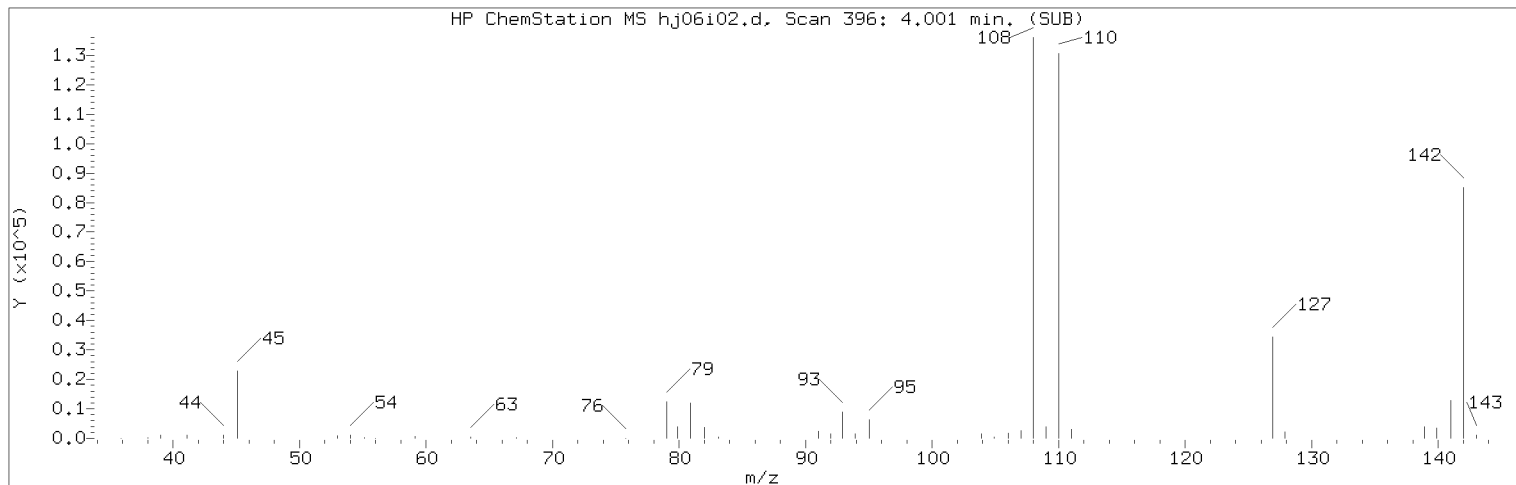
Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area : 604987
 On-column Amount (ng) : 77.9708
 Integration start scan : 344
 Y at integration start : 396

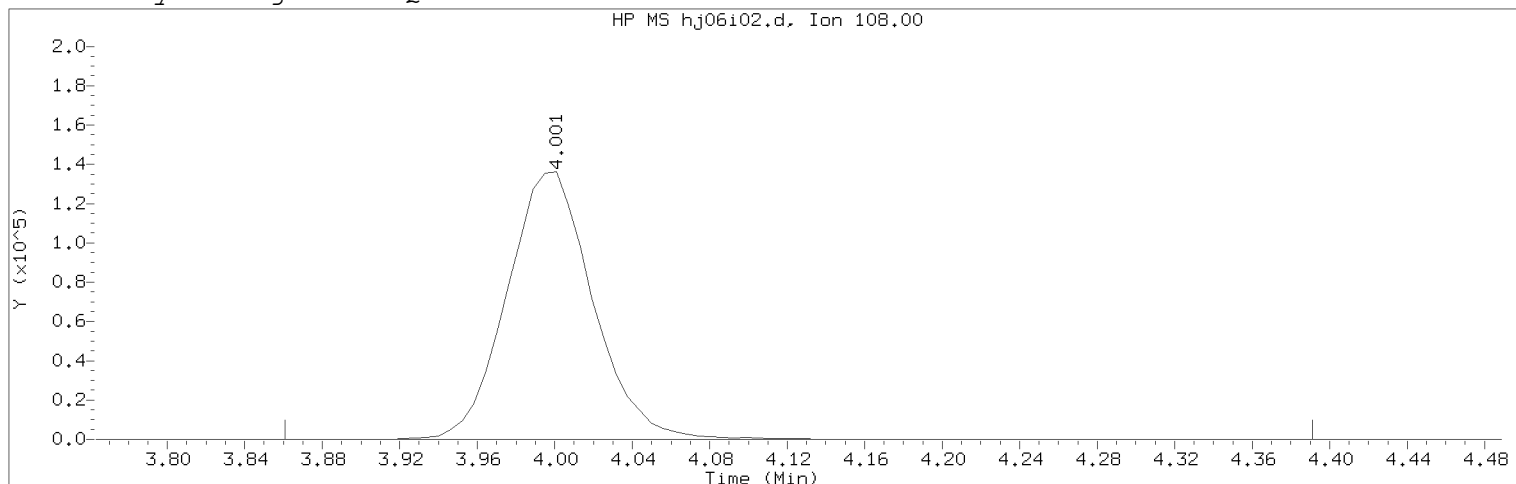
Integration stop scan: 390
 Y at integration end: 3820

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 Target 3.5 esignature user RPF59 Page 2552 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 396	
Retention Time (minutes)	: 4.001	
Quant Ion	: 108.00	
Area (flag)	: 420057M	
On-Column Amount (ng)	: 10.1469	
Integration start scan	: 372	Integration stop scan: 459
Y at integration start	: 0	Y at integration end: 0

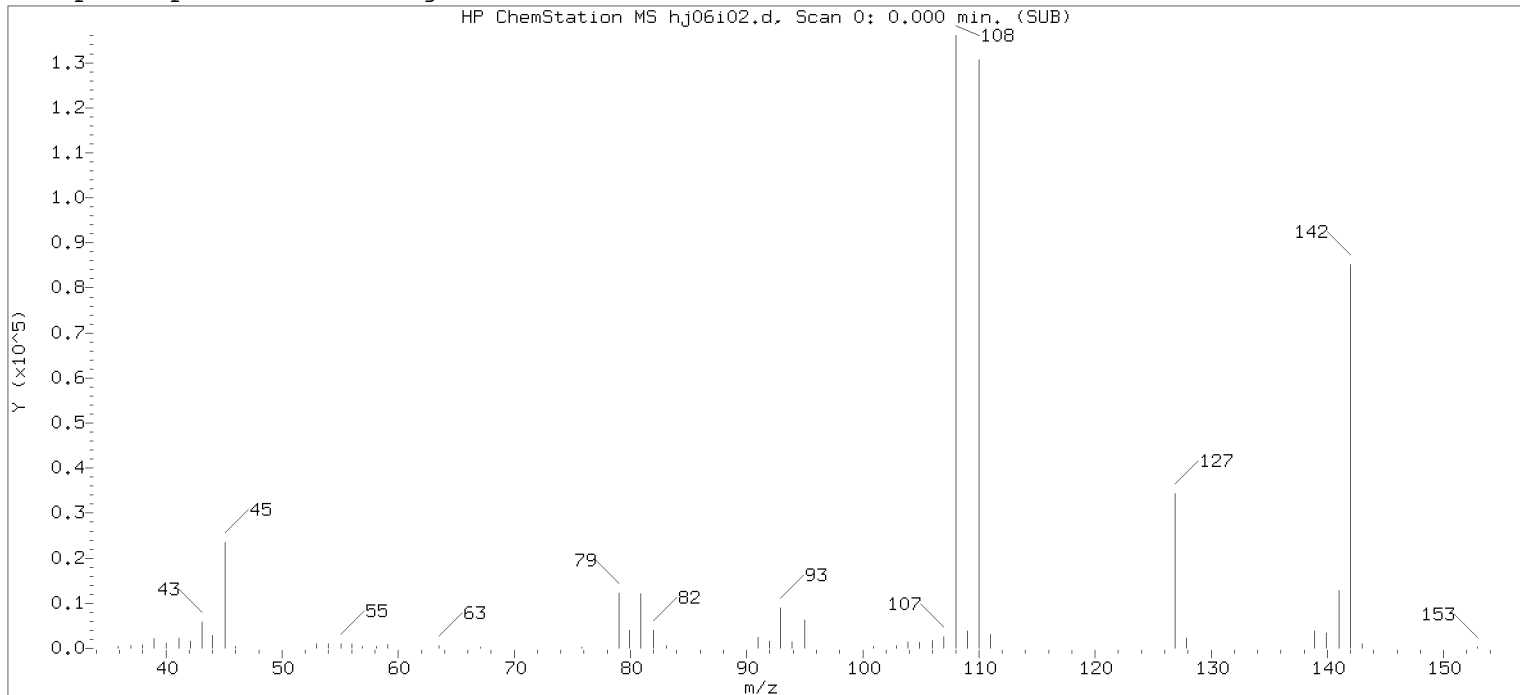
Reason for manual integration: improper integration

Analyst responsible for change:

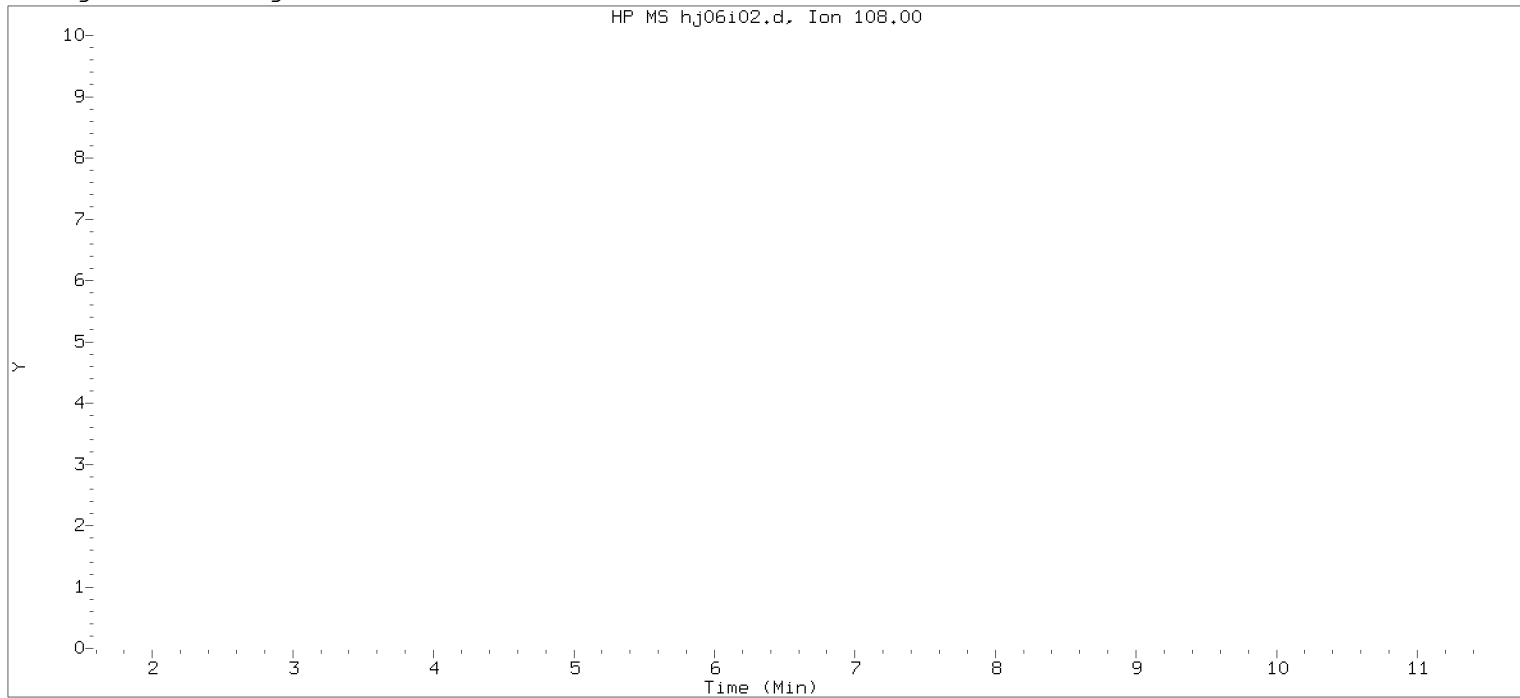
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

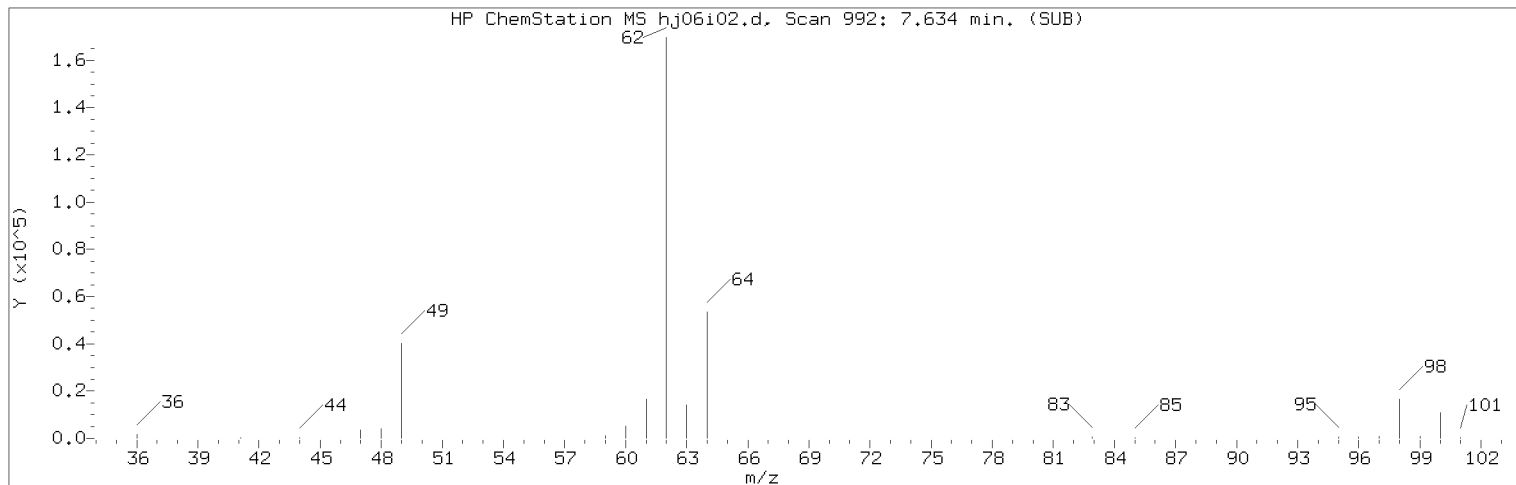
Sample Name: VSTD010

Lab Sample ID: VSTD010

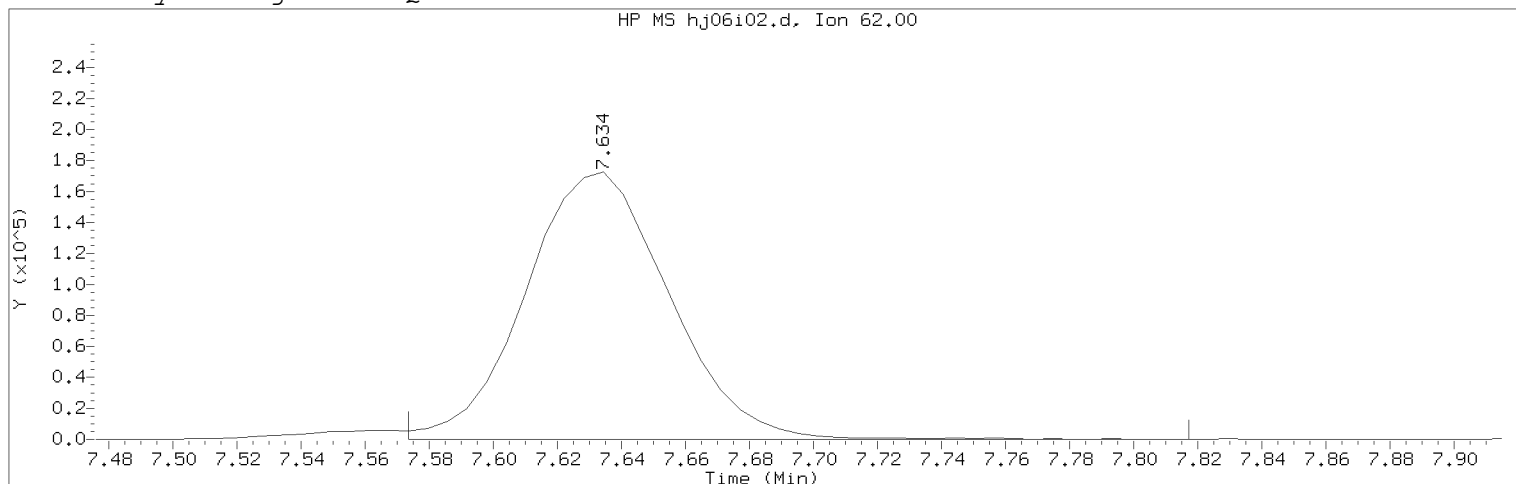
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2562 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

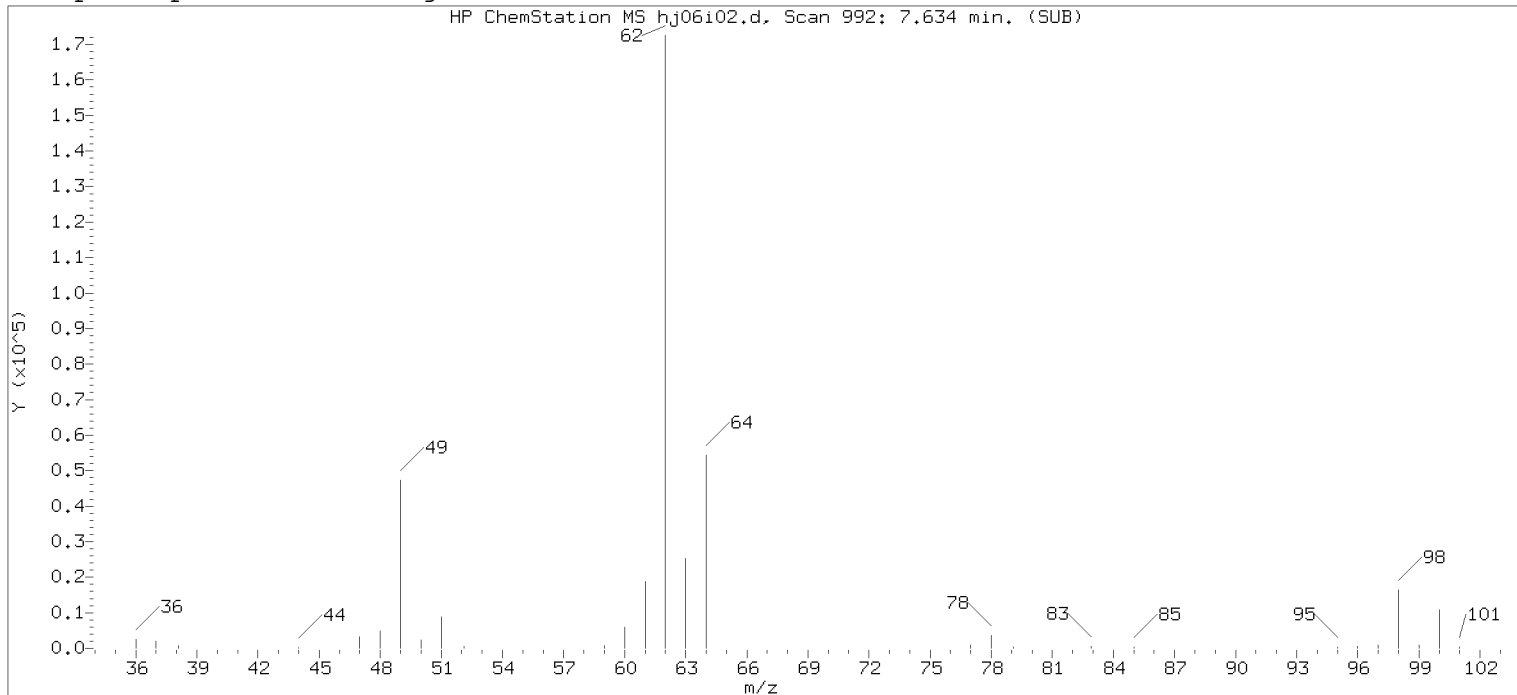
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 992	
Retention Time (minutes)	: 7.634	
Quant Ion	: 62.00	
Area (flag)	: 536476M	
On-Column Amount (ng)	: 9.8501	
Integration start scan	: 981	Integration stop scan: 1021
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

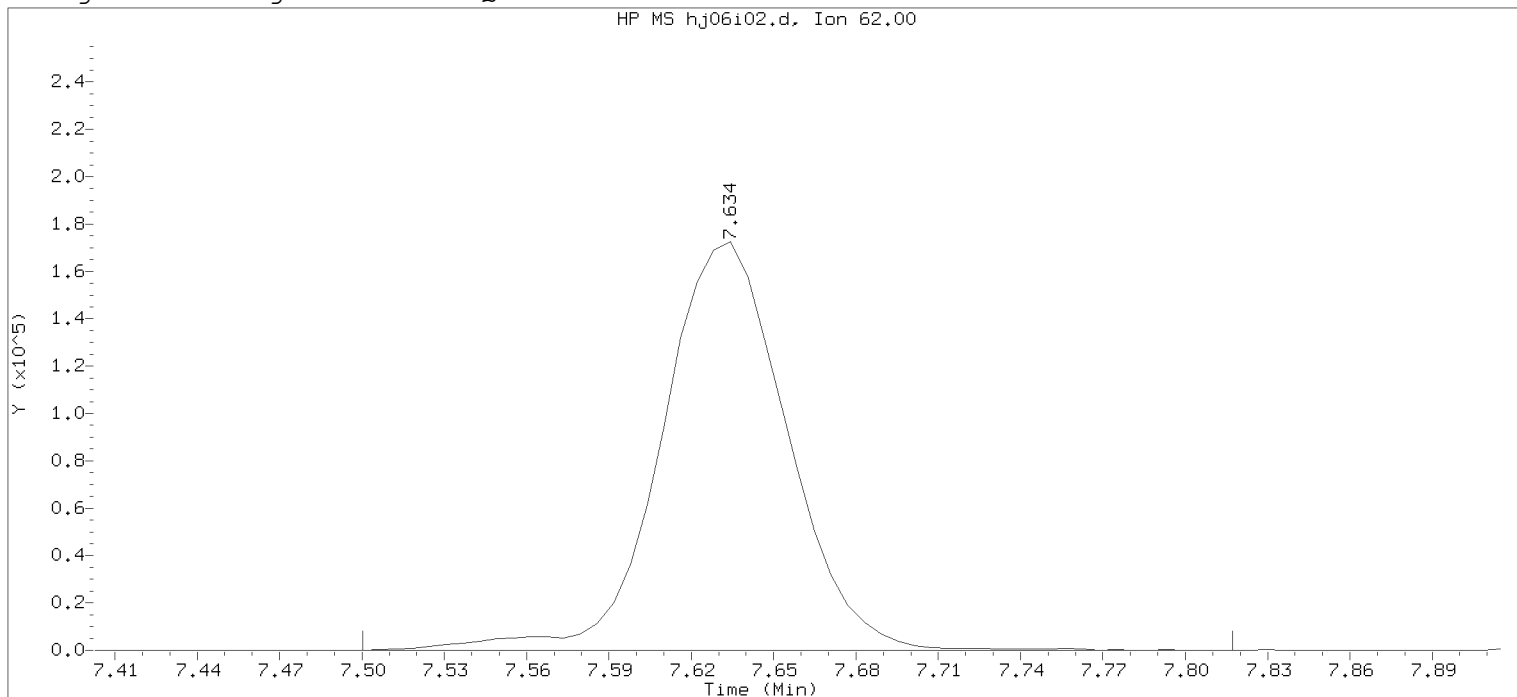
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

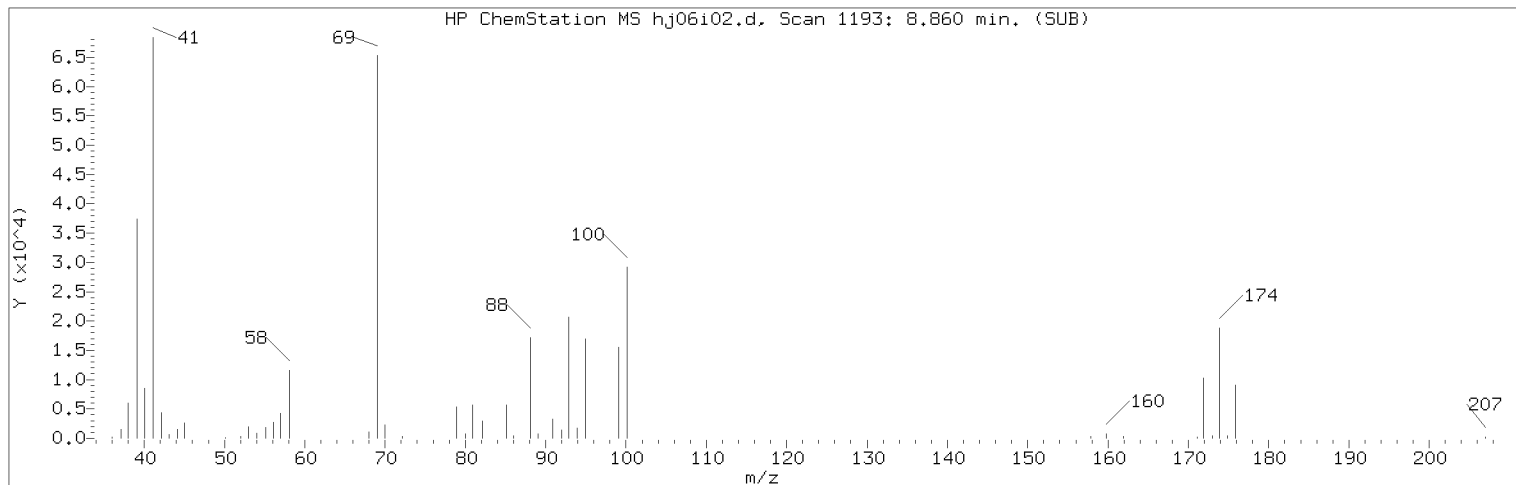
Lab Sample ID: VSTD010

Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 992	
Retention Time (minutes)	: 7.634	
Quant Ion	: 62.00	
Area	: 548873	
On-column Amount (ng)	: 10.0169	
Integration start scan	: 969	Integration stop scan: 1021
Y at integration start	: 0	Y at integration end: 0

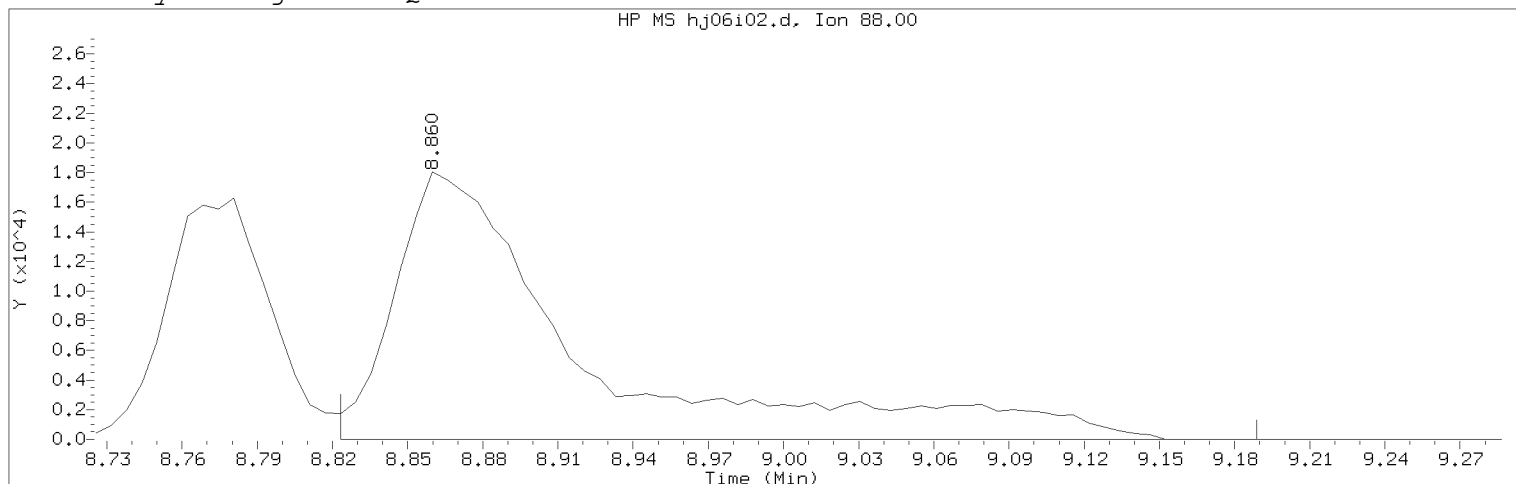
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 562 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 93413M	
On-Column Amount (ng)	: 530.8819	
Integration start scan	: 1186	Integration stop scan: 1246
Y at integration start	: 0	Y at integration end: 0

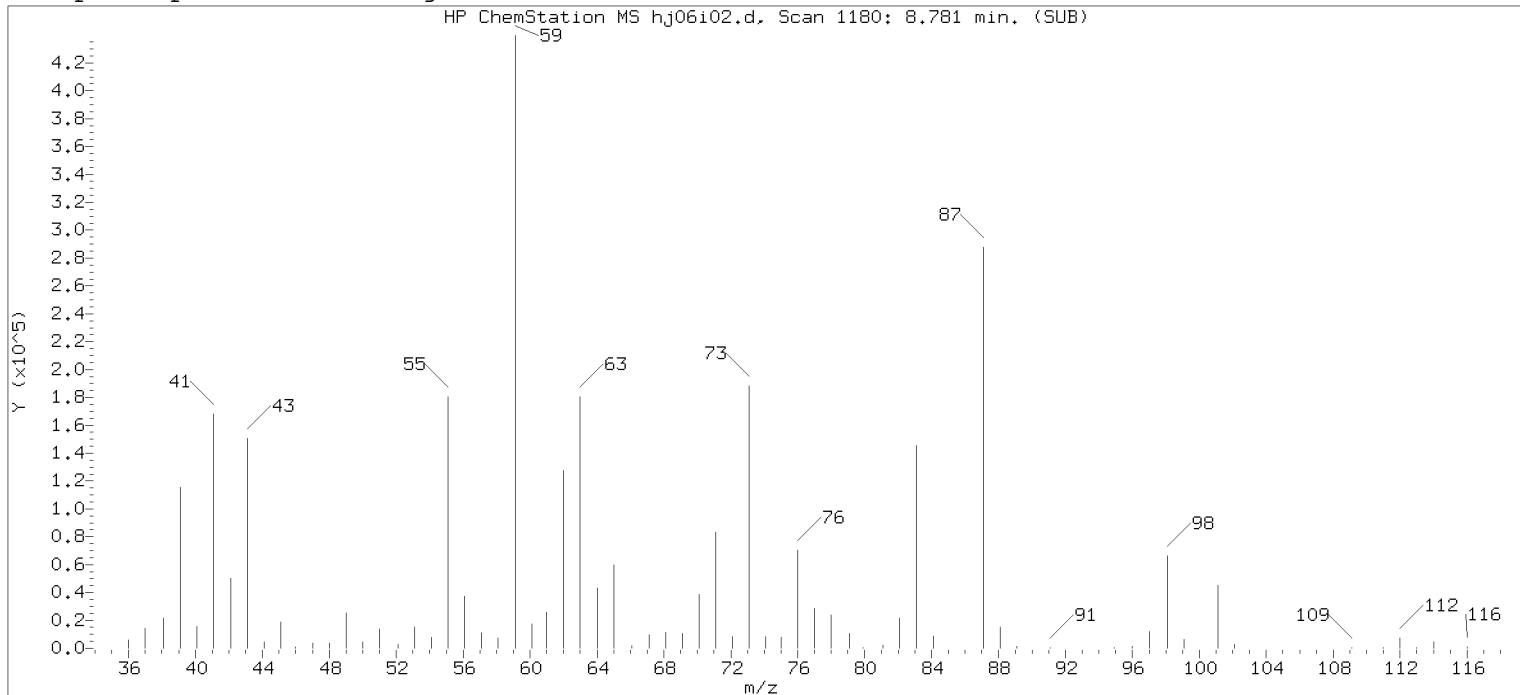
Reason for manual integration: improper integration

Analyst responsible for change:

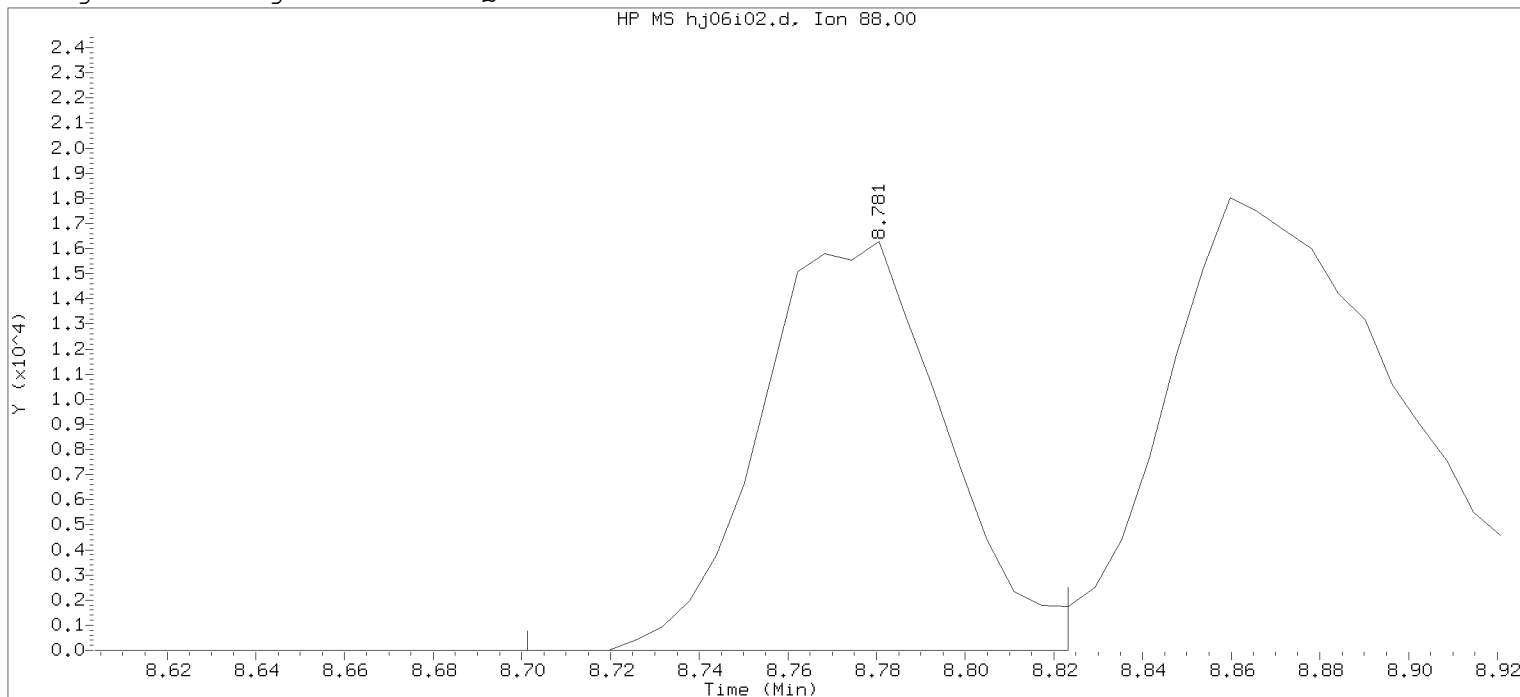
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

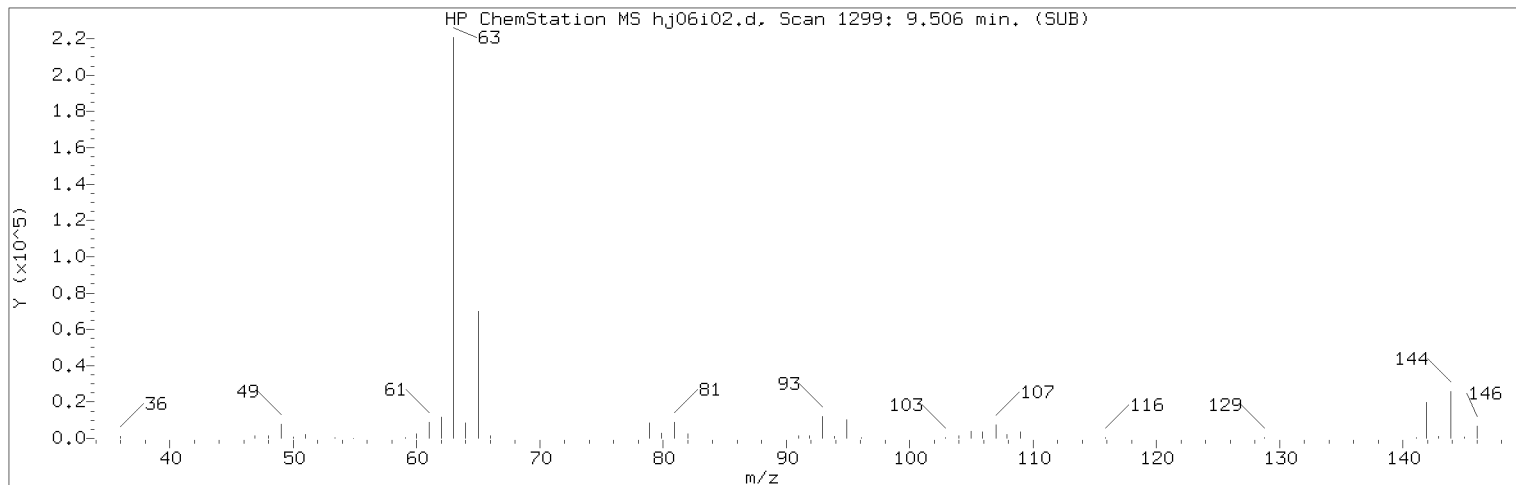
Lab Sample ID: VSTD010

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1180	
Retention Time (minutes)	: 8.781	
Quant Ion	: 88.00	
Area	: 46706	
On-column Amount (ng)	: 277.6322	
Integration start scan	: 1166	Integration stop scan: 1186
Y at integration start	: 0	Y at integration end: 0

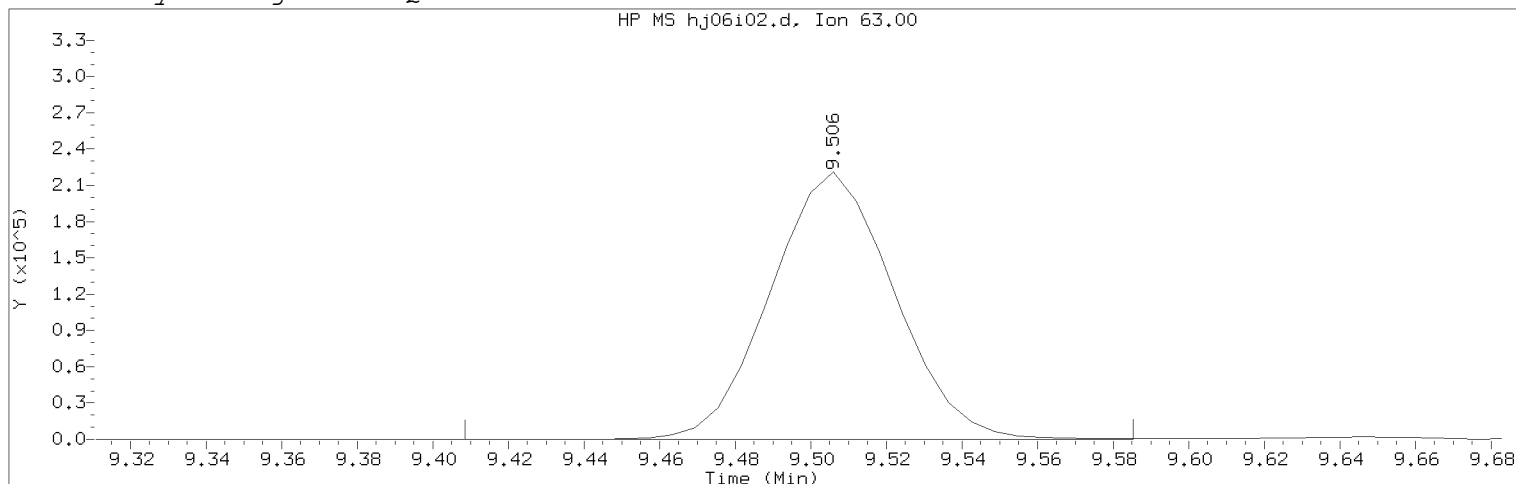
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 564 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

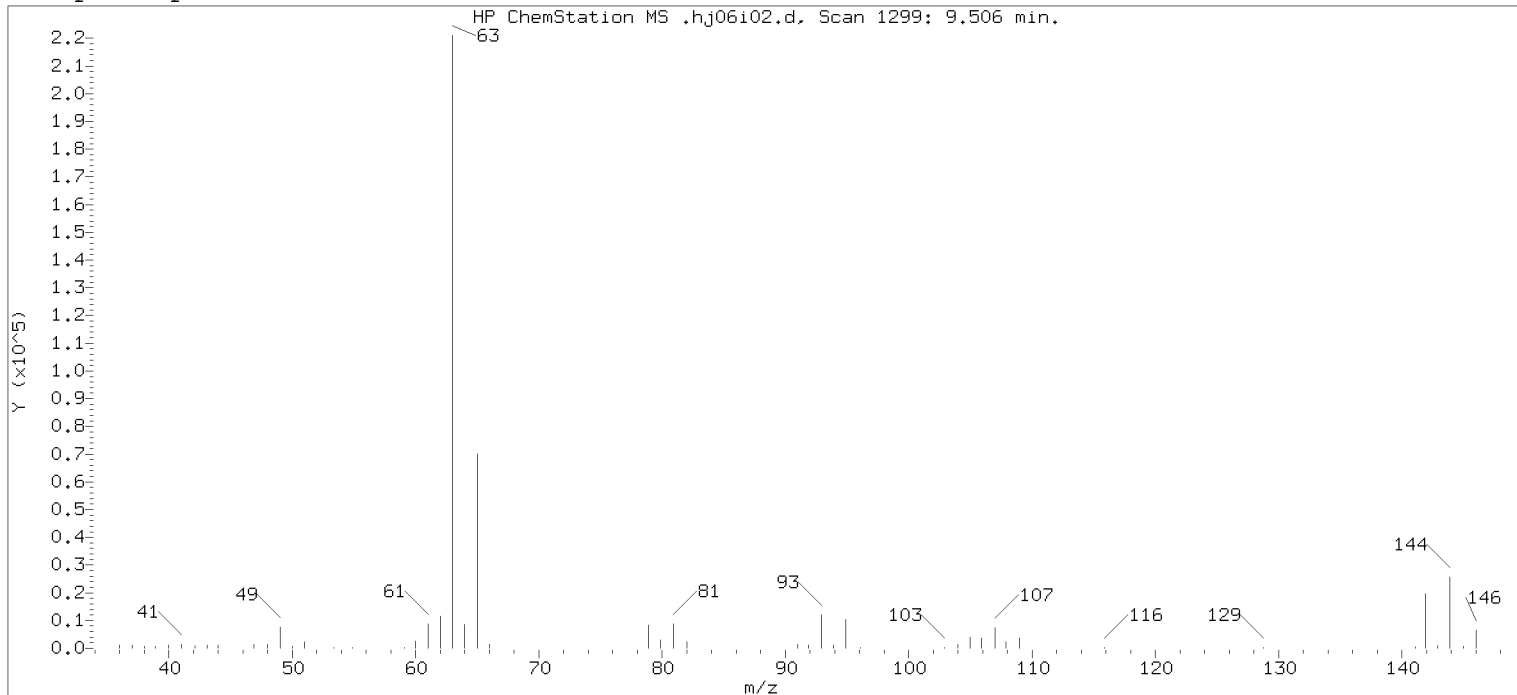
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 500661M
On-Column Amount (ng) : 10.1913
Integration start scan : 1282 Integration stop scan: 1311
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

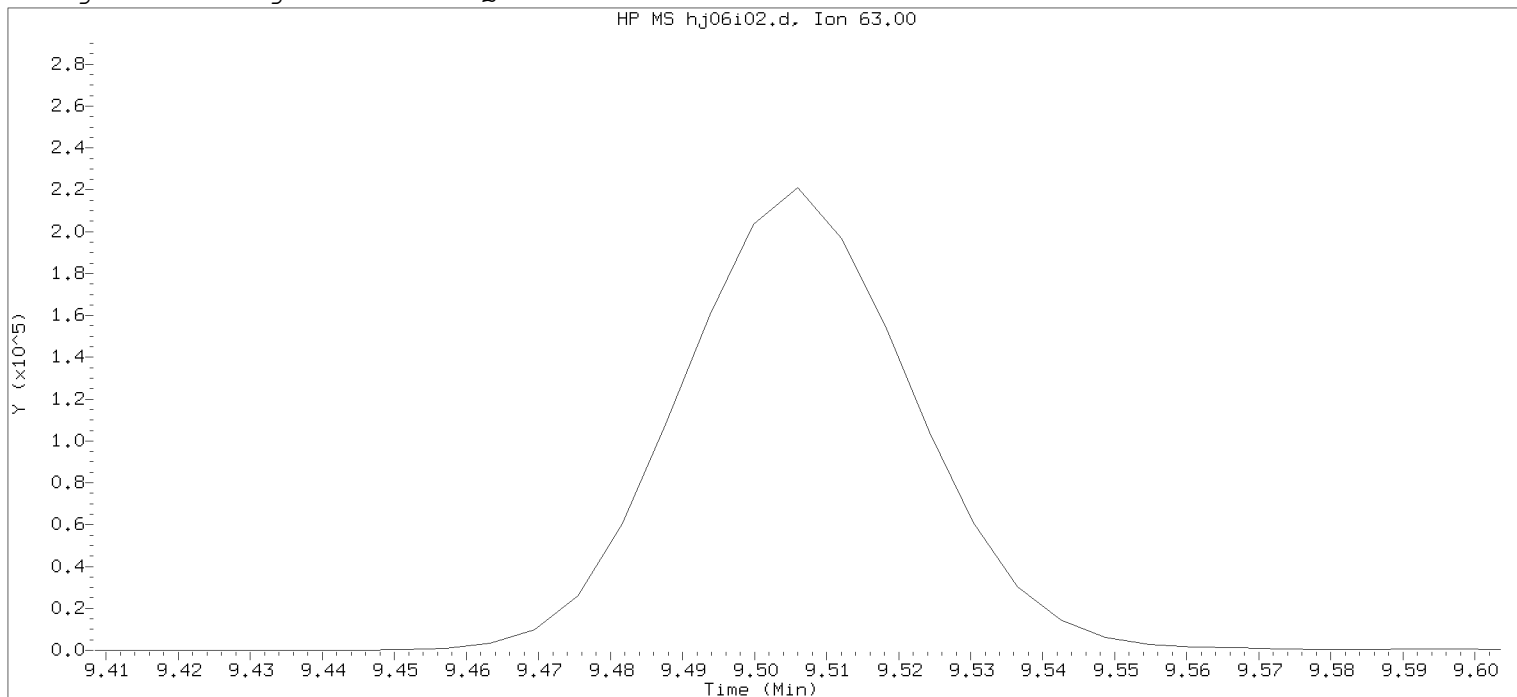
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 80

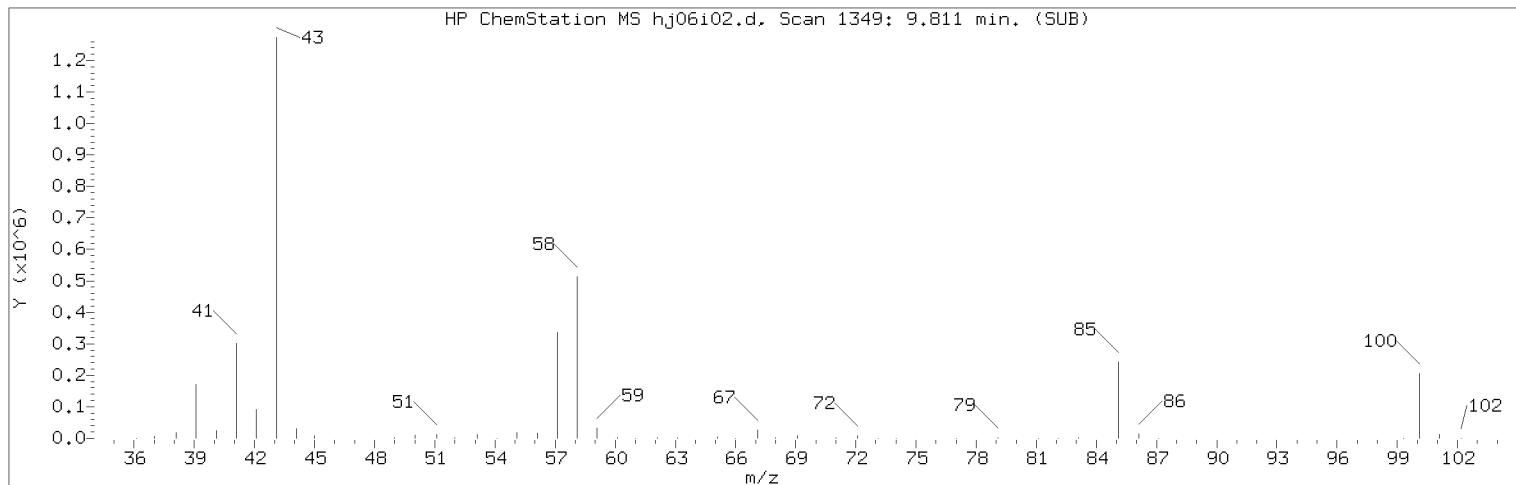
Compound Name : 1-Bromo-2-chloroethane

Expected RT (minutes) : 9.506

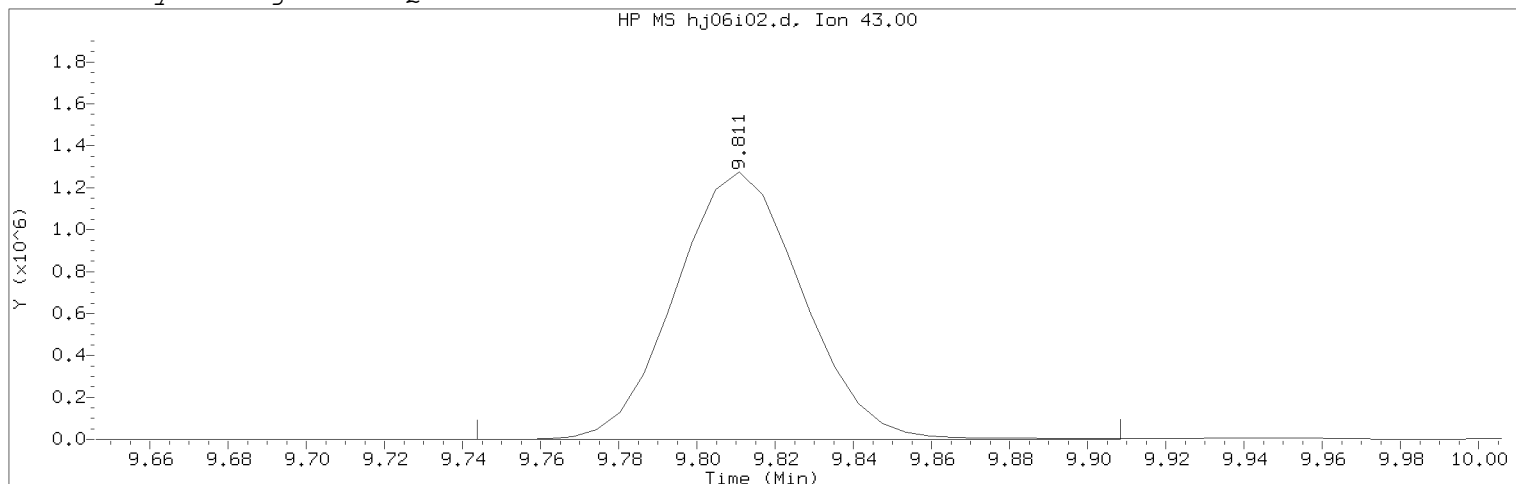
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

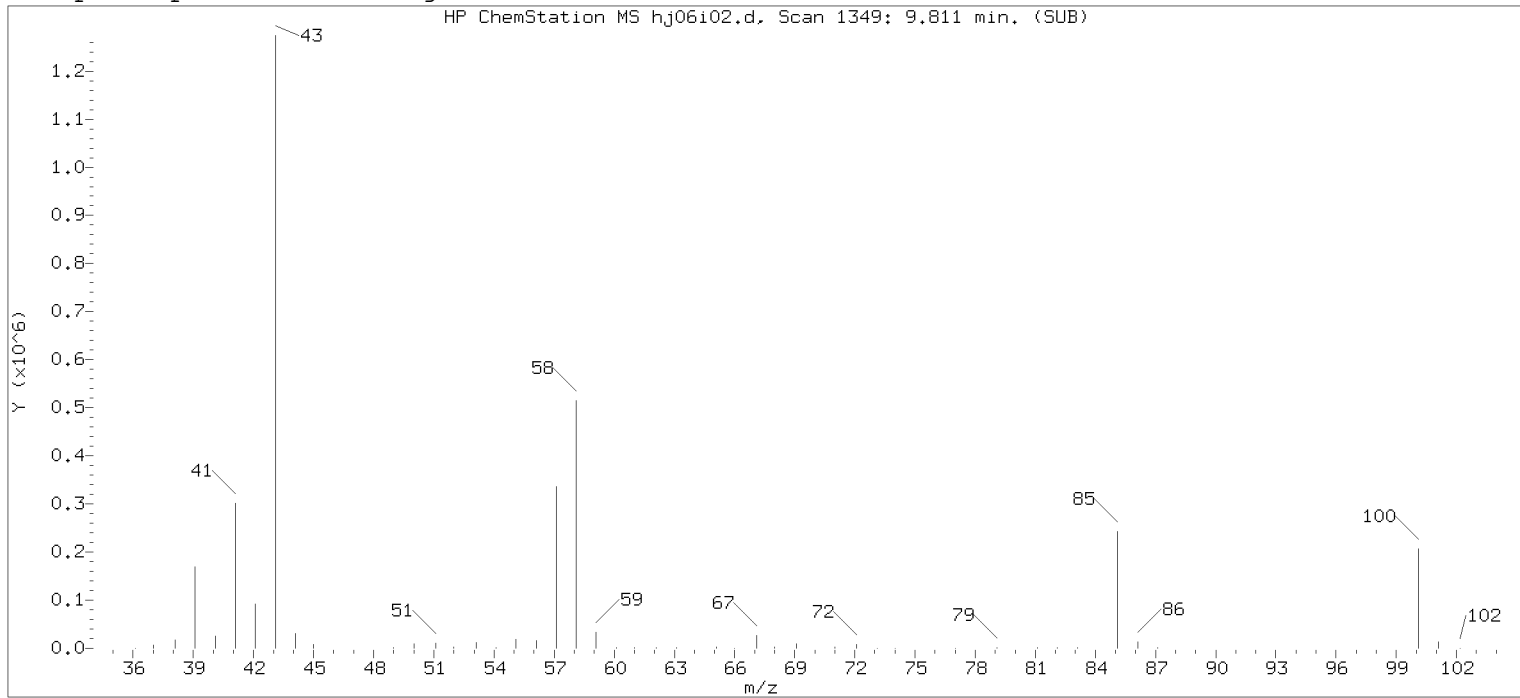
Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1349	
Retention Time (minutes)	: 9.811	
Quant Ion	: 43.00	
Area (flag)	: 2868230M	
On-Column Amount (ng)	: 98.8878	
Integration start scan	: 1337	Integration stop scan: 1364
Y at integration start	: 0	Y at integration end: 60

Reason for manual integration: improper integration

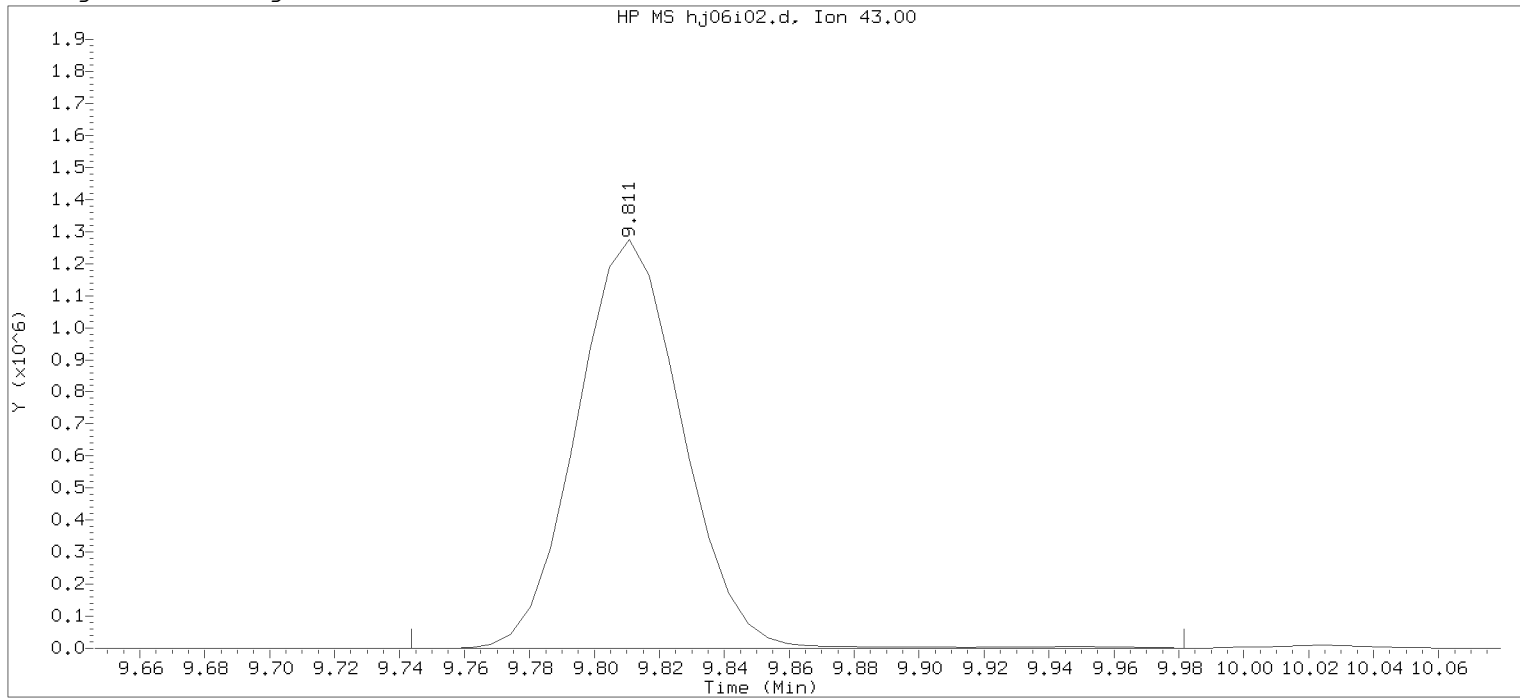
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

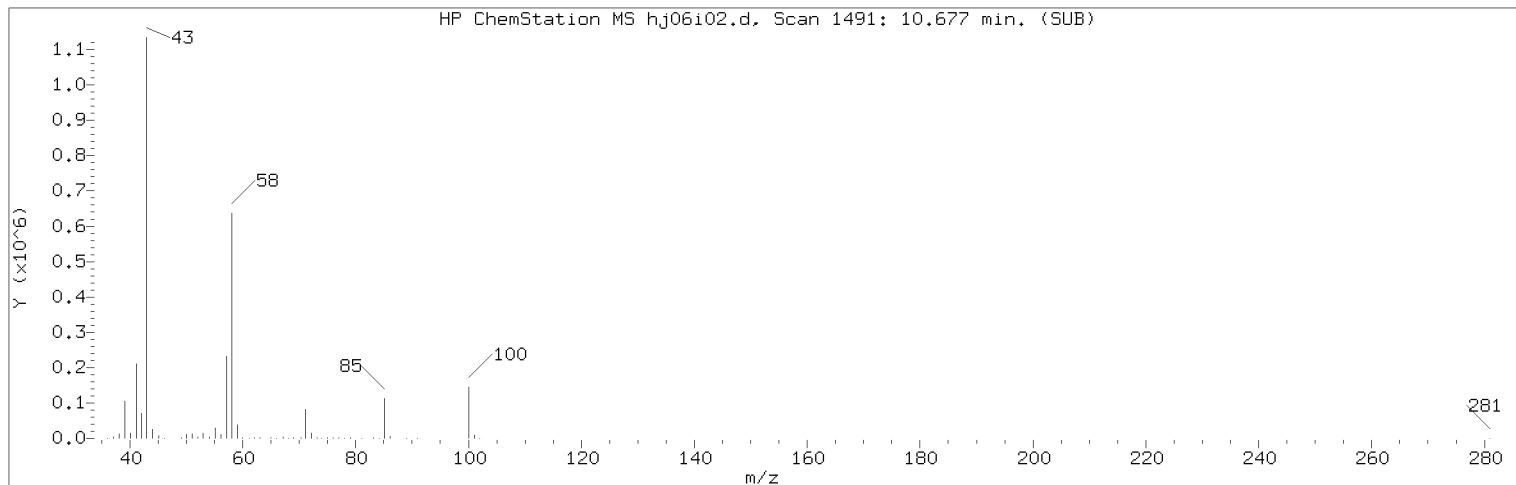
Sample Name: VSTD010

Lab Sample ID: VSTD010

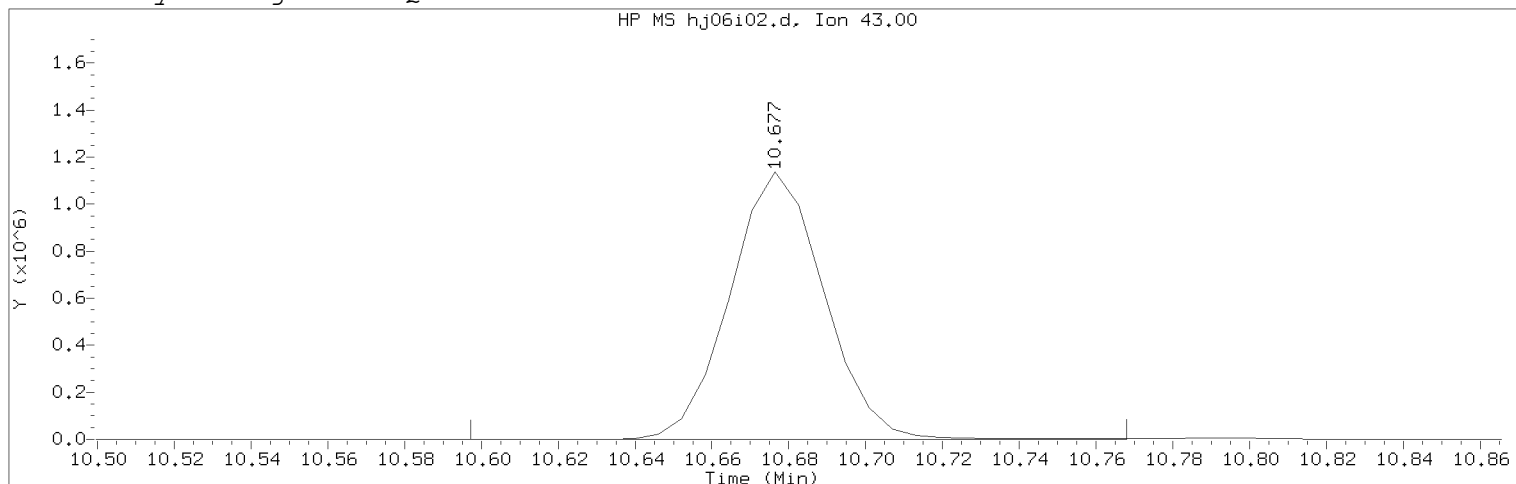
Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1349	
Retention Time (minutes)	: 9.811	
Quant Ion	: 43.00	
Area	: 2883241	
On-column Amount (ng)	: 99.9942	
Integration start scan	: 1337	Integration stop scan: 1376
Y at integration start	: 0	Y at integration end: 87

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2568 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

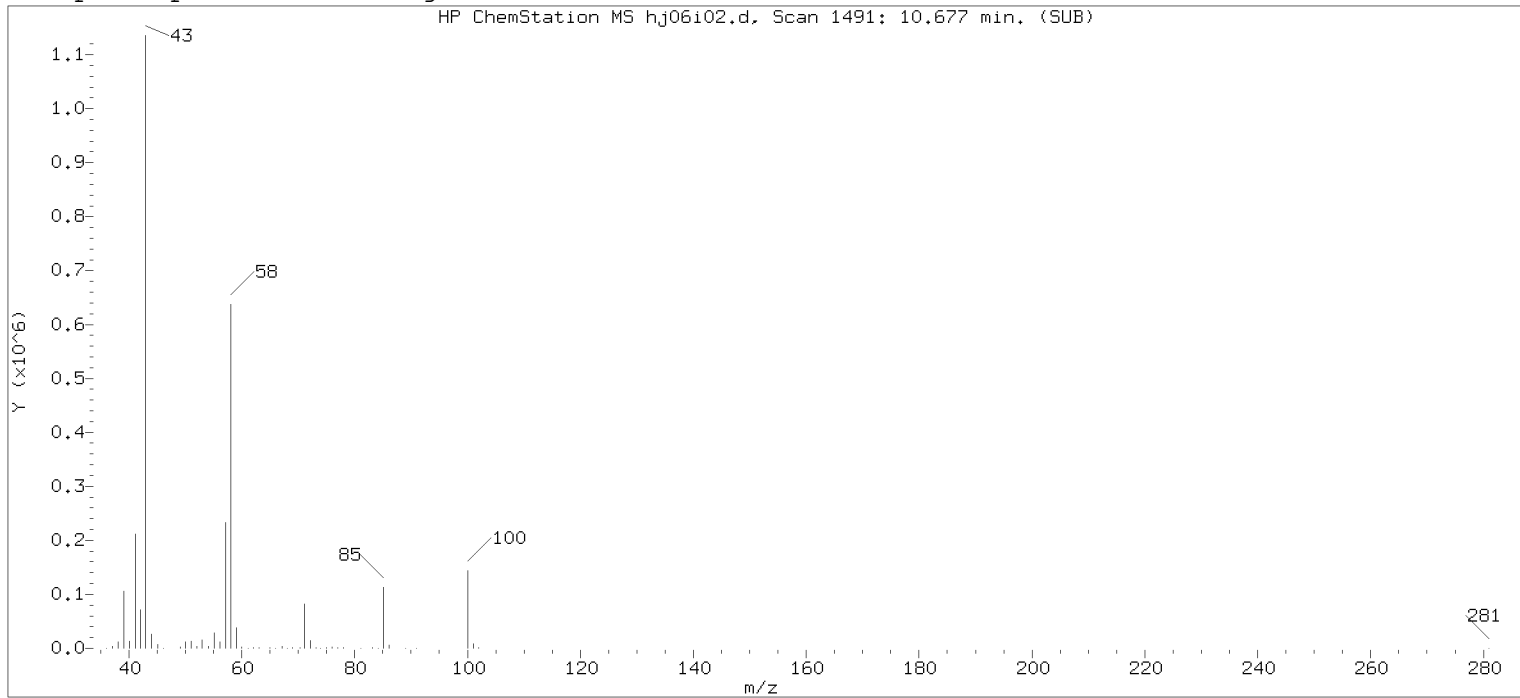
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area (flag) : 1930183M
On-Column Amount (ng) : 97.3887
Integration start scan : 1477 Integration stop scan: 1505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

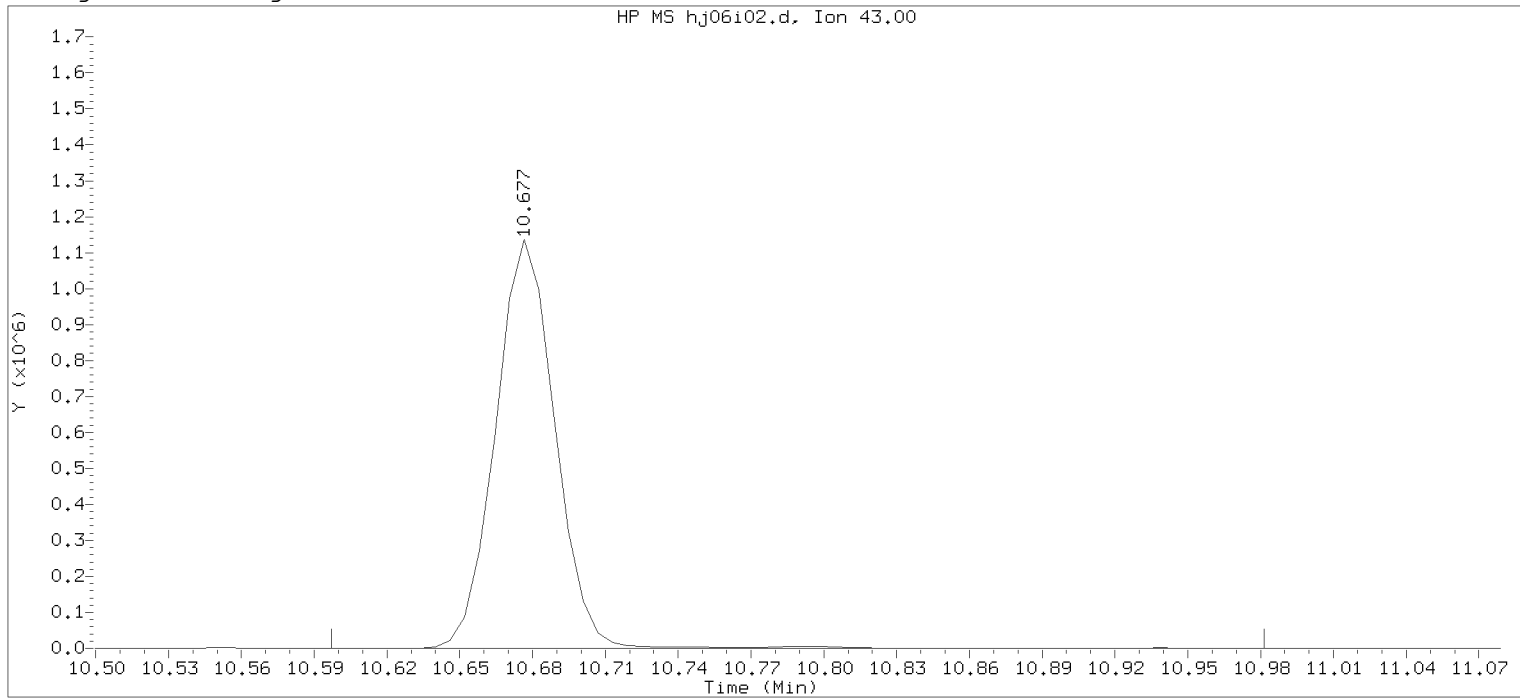
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

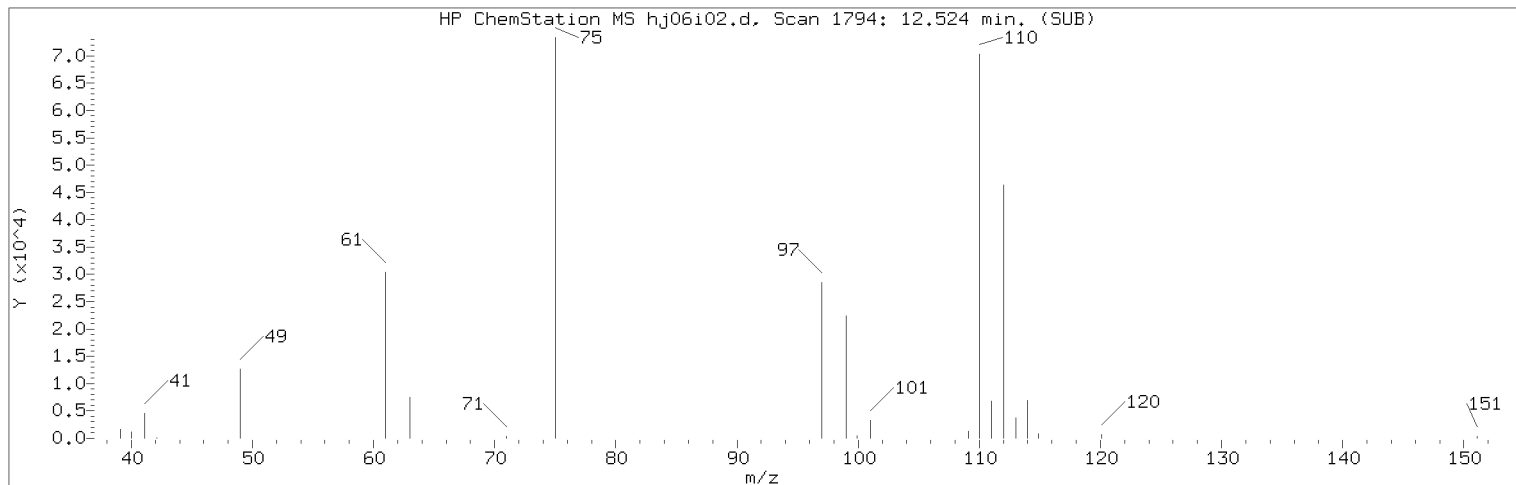
Sample Name: VSTD010

Lab Sample ID: VSTD010

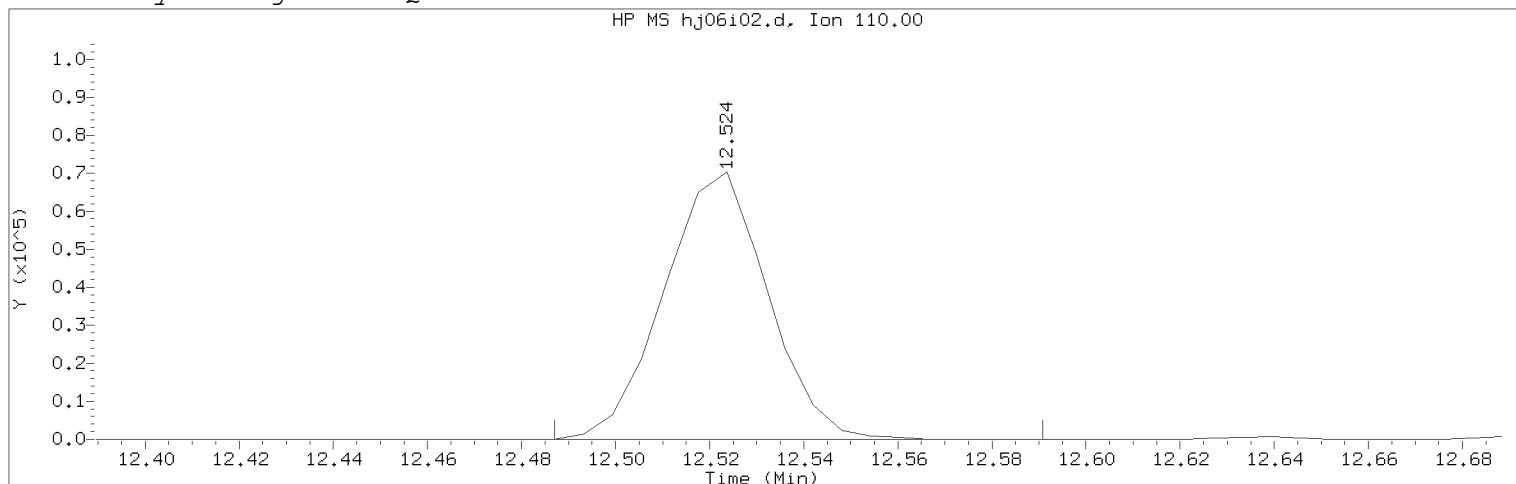
Compound Number	: 92	
Compound Name	: 2-Hexanone	
Scan Number	: 1491	
Retention Time (minutes)	: 10.677	
Quant Ion	: 43.00	
Area	: 1946858	
On-column Amount (ng)	: 97.2432	
Integration start scan	: 1477	Integration stop scan: 1540
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 570 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

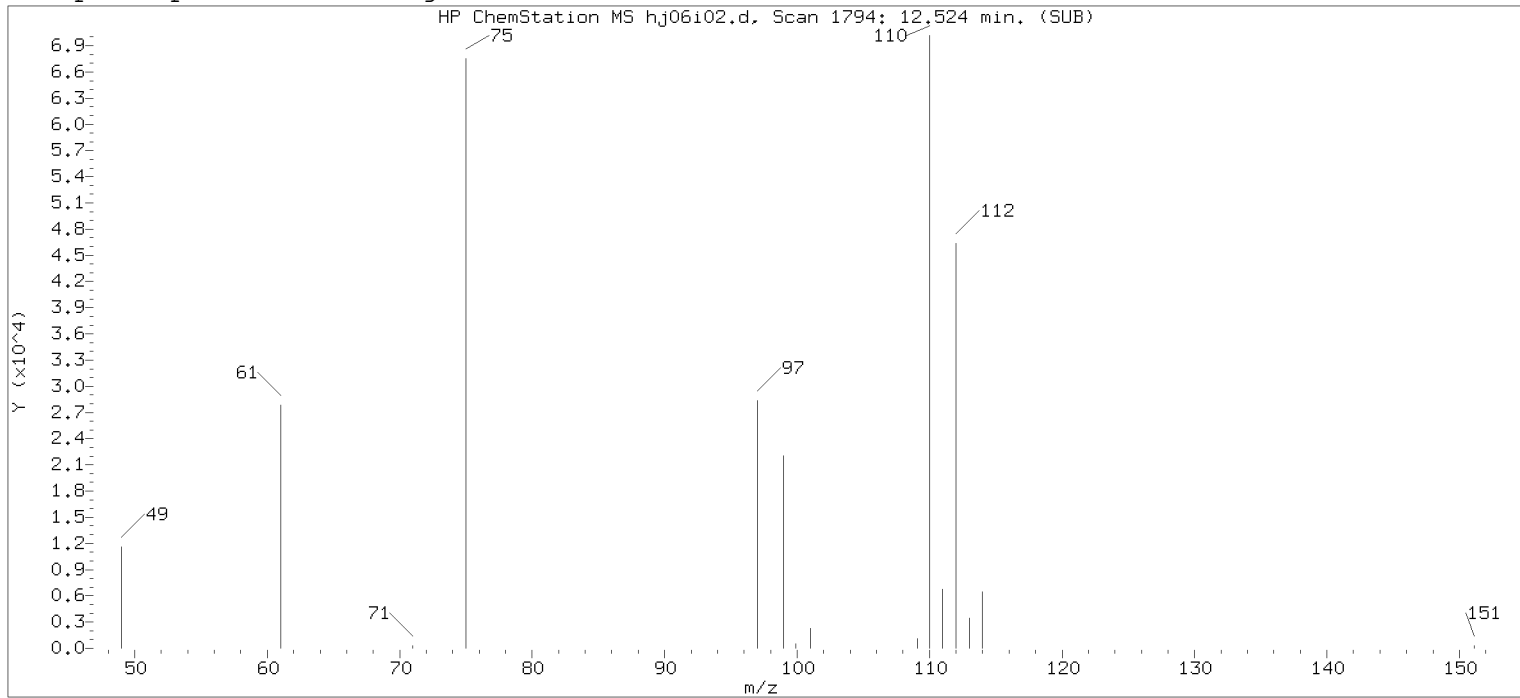
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1794	
Retention Time (minutes)	: 12.524	
Quant Ion	: 110.00	
Area (flag)	: 107587M	
On-Column Amount (ng)	: 10.2186	
Integration start scan	: 1787	Integration stop scan: 1804
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

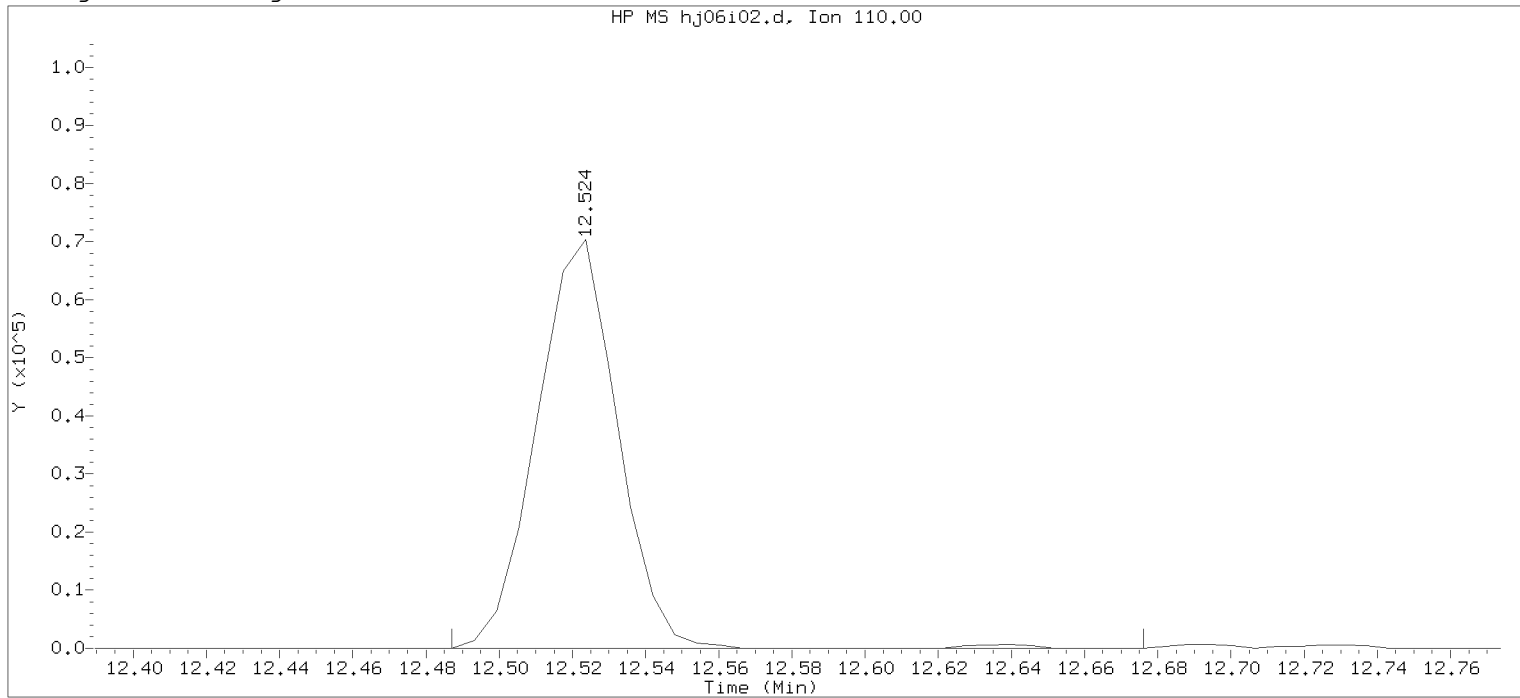
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



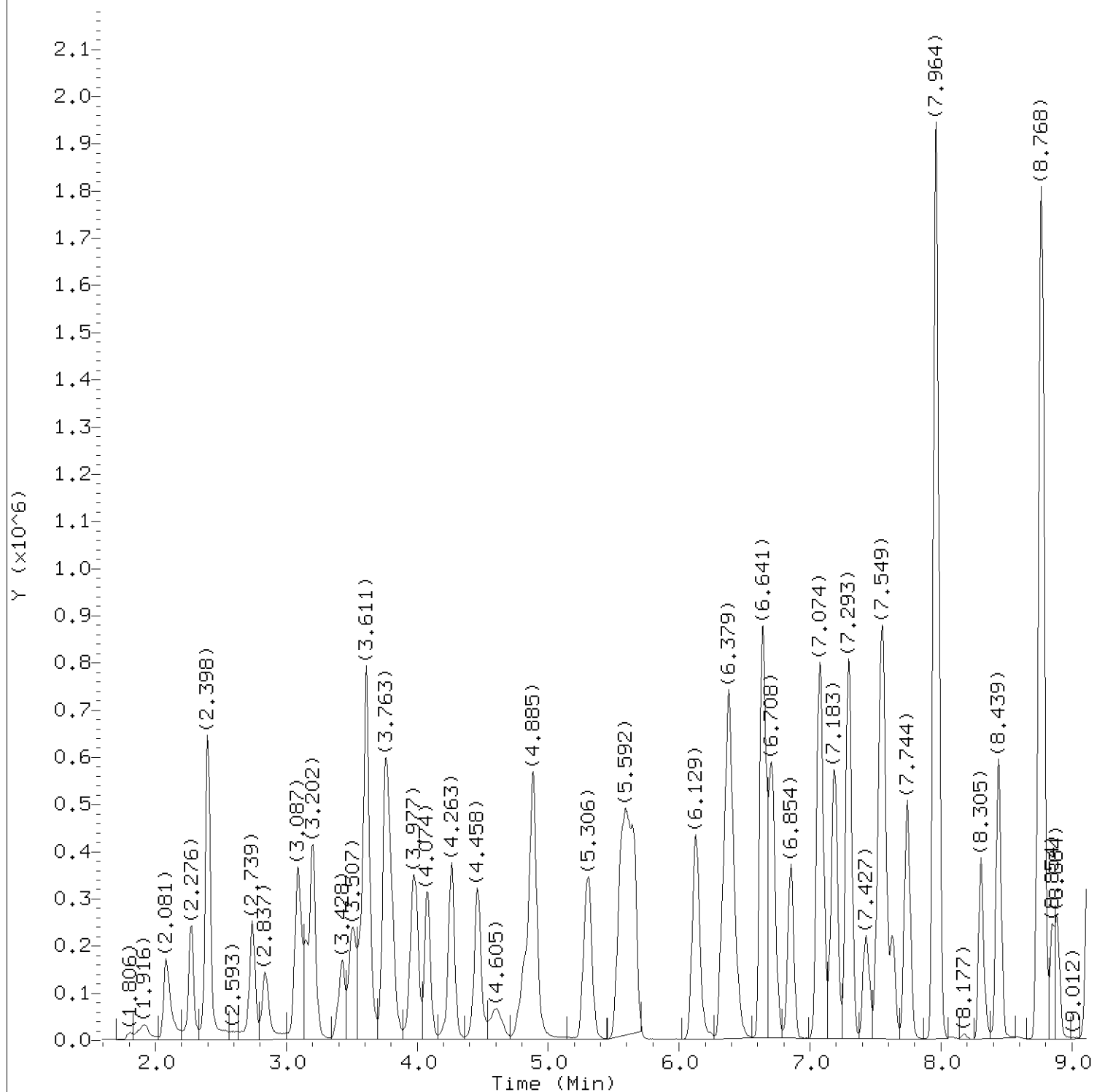
Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1794	
Retention Time (minutes)	: 12.524	
Quant Ion	: 110.00	
Area	: 108318	
On-column Amount (ng)	: 10.1131	
Integration start scan	: 1787	Integration stop scan: 1818
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
Analyst ID: JKH09052

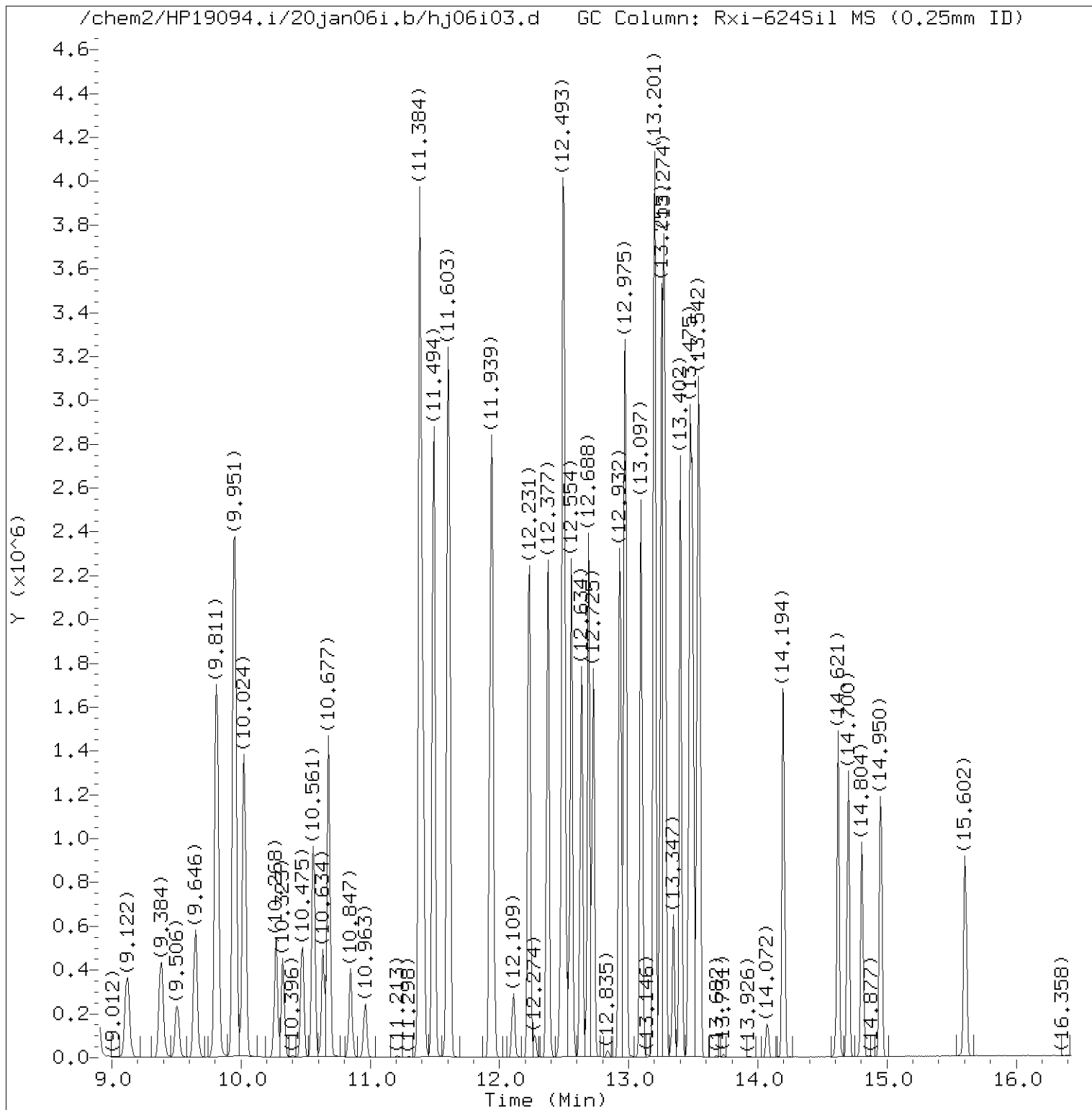
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
 Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	386923M	5.233
2) Chloromethane	(2)	2.270	50	365241	5.004
5) Vinyl Chloride	(2)	2.398	62	357439	5.148
6) 1,3-Butadiene	(2)	2.404	39	279939M	5.104
7) Bromomethane	(2)	2.739	94	248006	4.986
8) Chloroethane	(2)	2.837	64	203219	5.054
9) Dichlorofluoromethane	(2)	3.087	67	473464	4.958
10) Trichlorofluoromethane	(2)	3.148	101	408902	5.160
11) Ethyl ether	(2)	3.422	59	178519	5.091
12) Freon 123a	(2)	3.507	67	315642	5.152
13) Acrolein	(1)	3.611	56	1350061	258.845
15) 1,1-Dichloroethene	(2)	3.751	96	246959	5.124
14) Acetone	(1)	3.788	43	341103M	48.467
16) Freon 113	(2)	3.788	101	268851	5.337
17) Methyl Iodide	(2)	3.965	142	476700	5.126
18) Bromoethane	(2)	3.995	108	211837M	5.038
19) Carbon Disulfide	(2)	4.080	76	743252	5.041
22) Methyl Acetate	(1)	4.233	43	86534	4.872
23) Allyl Chloride	(2)	4.263	41	404402	4.940
24) Methylene Chloride	(2)	4.458	84	256647	4.948
27)*t-Butyl Alcohol-d10	(1)	4.483	65	115826M	50.000
29) t-Butyl Alcohol	(1)	4.611	59	243025	99.407
30) Acrylonitrile	(1)	4.812	53	219211	25.524
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	558561	5.069
32) trans-1,2-Dichloroethene	(2)	4.891	96	267093	5.041
33) n-Hexane	(2)	5.306	57	393617	5.267
34) 1,1-Dichloroethane	(2)	5.550	63	490572	5.129
35) di-Isopropyl Ether	(2)	5.598	45	804988	5.109
36) 2-Chloro-1,3-Butadiene	(2)	5.659	53	423401	5.170
41) 1,2-Dichloroethene (Total)	(2)		96	566643	10.130
38) Ethyl t-butyl ether	(2)	6.129	59	749137	5.065
39) 2-Butanone	(1)	6.330	43	551271	50.095
40) cis-1,2-Dichloroethene	(2)	6.379	96	299550	5.088
42) 2,2-Dichloropropane	(2)	6.397	77	419833	5.158
43) Propionitrile	(1)	6.427	54	312594	103.700
46) Methacrylonitrile	(1)	6.641	67	567177	52.609
48) Bromochloromethane	(2)	6.708	128	125757	5.059
49) Tetrahydrofuran	(1)	6.714	71	157126	51.682

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	476727	5.107
51) \$Dibromofluoromethane	(2)	7.068	113	490436	10.001
51) \$Dibromofluoromethane	(2)	7.068	111	500245	9.929
52) 1,1,1-Trichloroethane	(2)	7.086	97	443696M	5.111
53) Cyclohexane	(2)	7.183	56	477669	5.152
53) Cyclohexane	(2)	7.183	84	423569	5.333
53) Cyclohexane	(2)	7.189	69	150395	5.212
56) 1,1-Dichloropropene	(2)	7.293	75	382122	5.208
55) Carbon Tetrachloride	(2)	7.299	117	383131	5.147
57) Isobutyl Alcohol	(1)	7.427	41	197211	232.720
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	94766	9.971
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	432473	9.863
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59241	9.841
59) Benzene	(2)	7.561	78	1093041	5.094
60) 1,2-Dichloroethane	(2)	7.628	62	272967M	4.934
61) t-Amyl methyl ether	(2)	7.744	73	650141	5.040
64) *Fluorobenzene	(2)	7.964	96	1972661	10.000
63) n-Heptane	(2)	7.970	43	402551	5.135
66) n-Butanol	(1)	8.305	56	359098	526.377
68) Trichloroethene	(2)	8.439	95	288728	5.131
70) Methylcyclohexane	(2)	8.756	83	530176	5.259
71) 1,2-Dichloropropane	(2)	8.775	63	267031	5.030
72) Methyl Methacrylate	(1)	8.848	69	113243	5.222
73) 1,4-Dioxane	(1)	8.866	88	48534M	294.966
74) Dibromomethane	(2)	8.890	93	122074	5.030
75) Bromodichloromethane	(2)	9.122	83	330628	5.013
77) 2-Nitropropane	(1)	9.378	41	361445M	50.741
80) 1-Bromo-2-chloroethane	(2)	9.506	63	251630M	5.043
81) cis-1,3-Dichloropropene	(2)	9.646	75	400903	5.147
82) 4-Methyl-2-Pentanone	(1)	9.811	43	1402329	51.703
83) \$Toluene-d8	(3)	9.951	98	1962704	10.001
83) \$Toluene-d8	(3)	9.951	100	1273541	10.034
84) Toluene	(3)	10.024	92	706549	5.125
86) 1,3-Dichloropropene (total)	(3)		75	725243	10.216
85) trans-1,3-Dichloropropene	(3)	10.268	75	324340	5.069
87) Ethyl Methacrylate	(3)	10.323	69	248630	5.013
89) 1,1,2-Trichloroethane	(3)	10.475	97	173317	5.004
90) Tetrachloroethene	(3)	10.561	166	317187	5.062

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	297105	4.993
92) 2-Hexanone	(1)	10.677	43	954886	51.523
94) Dibromochloromethane	(3)	10.847	129	225534	5.085
96) 1,2-Dibromoethane	(3)	10.963	107	168362	5.086
97) 1-Chlorohexane	(3)	11.384	91	409531	4.927
98) *Chlorobenzene-d5	(3)	11.384	117	1473060	10.000
99) Chlorobenzene	(3)	11.408	112	765651	5.083
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	274917	5.132
101) Ethylbenzene	(3)	11.494	91	1376755	5.075
102) m+p-Xylene	(3)	11.603	106	1060302	10.222
106) Xylene (Total)	(3)		106	1582292	15.339
105) o-Xylene	(3)	11.932	106	521990	5.117
107) Styrene	(3)	11.945	104	849232	5.130
108) Bromoform	(3)	12.109	173	131247	5.077
109) Isopropylbenzene	(3)	12.231	105	1426025	5.158
112) \$4-Bromofluorobenzene	(3)	12.377	95	721170	9.933
112) \$4-Bromofluorobenzene	(3)	12.377	174	619060	9.964
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	203525M	5.049
115) Bromobenzene	(4)	12.493	156	313243	5.140
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	538157A	52.819
117) 1,2,3-Trichloropropane	(4)	12.518	110	55435M	5.135
118) n-Propylbenzene	(4)	12.554	91	1660624	5.219
120) 2-Chlorotoluene	(4)	12.634	126	325179	5.180
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	1201583	5.205
123) 4-Chlorotoluene	(4)	12.725	126	321829	5.136
126) tert-Butylbenzene	(4)	12.932	134	252740M	5.294
127) Pentachloroethane	(4)	12.969	167	207328	5.095
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	1242864	5.214
129) sec-Butylbenzene	(4)	13.097	105	1575368	5.267
133) p-Isopropyltoluene	(4)	13.201	119	1353718	5.259
132) 1,3-Dichlorobenzene	(4)	13.201	146	624292	5.140
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	772144	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	604762	5.105
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	504611	5.076
137) Benzyl Chloride	(4)	13.347	126	88697M	5.233
139) n-Butylbenzene	(4)	13.493	92	673217	5.291
140) 1,2-Dichlorobenzene	(4)	13.530	146	546317	5.103
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	31040	5.342

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

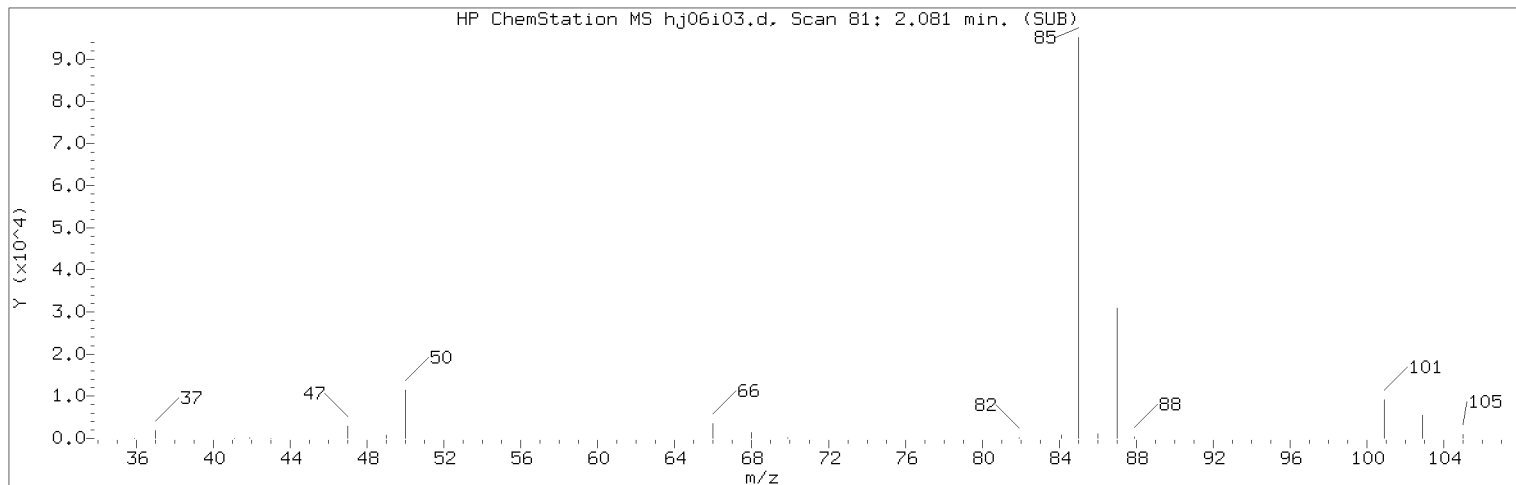
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	505280	5.316
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	414558	5.201
147) Hexachlorobutadiene	(4)	14.700	225	220536	5.302
148) Naphthalene	(4)	14.804	128	717239	5.157
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	359355	5.282

page 4 of 4

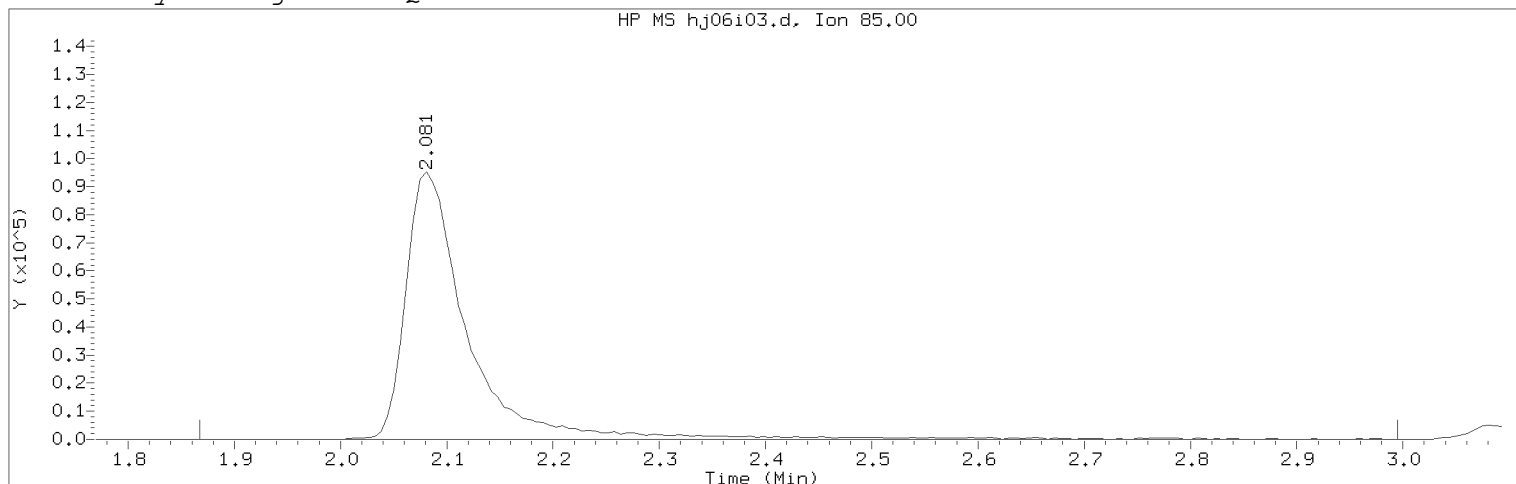
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

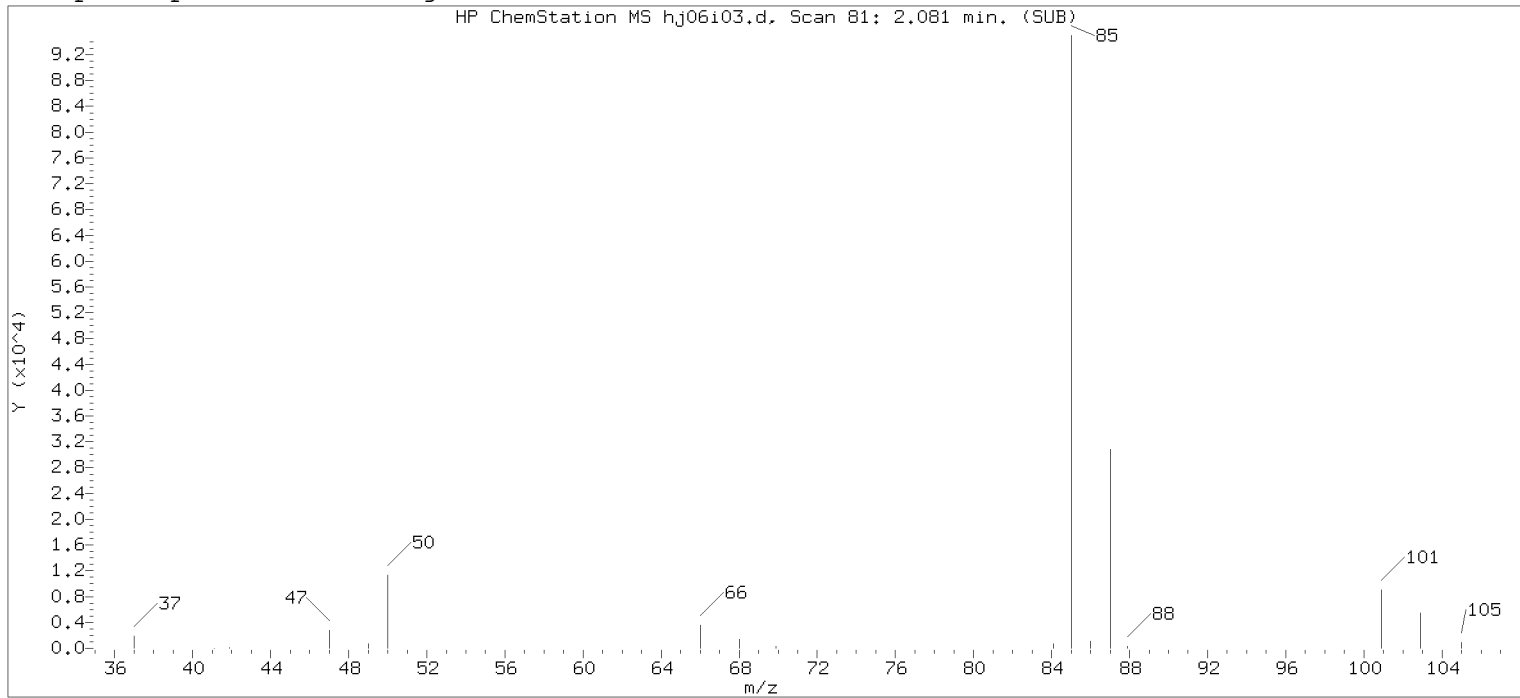
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area (flag)	: 386923M	
On-Column Amount (ng)	: 5.2325	
Integration start scan	: 45	Integration stop scan: 230
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

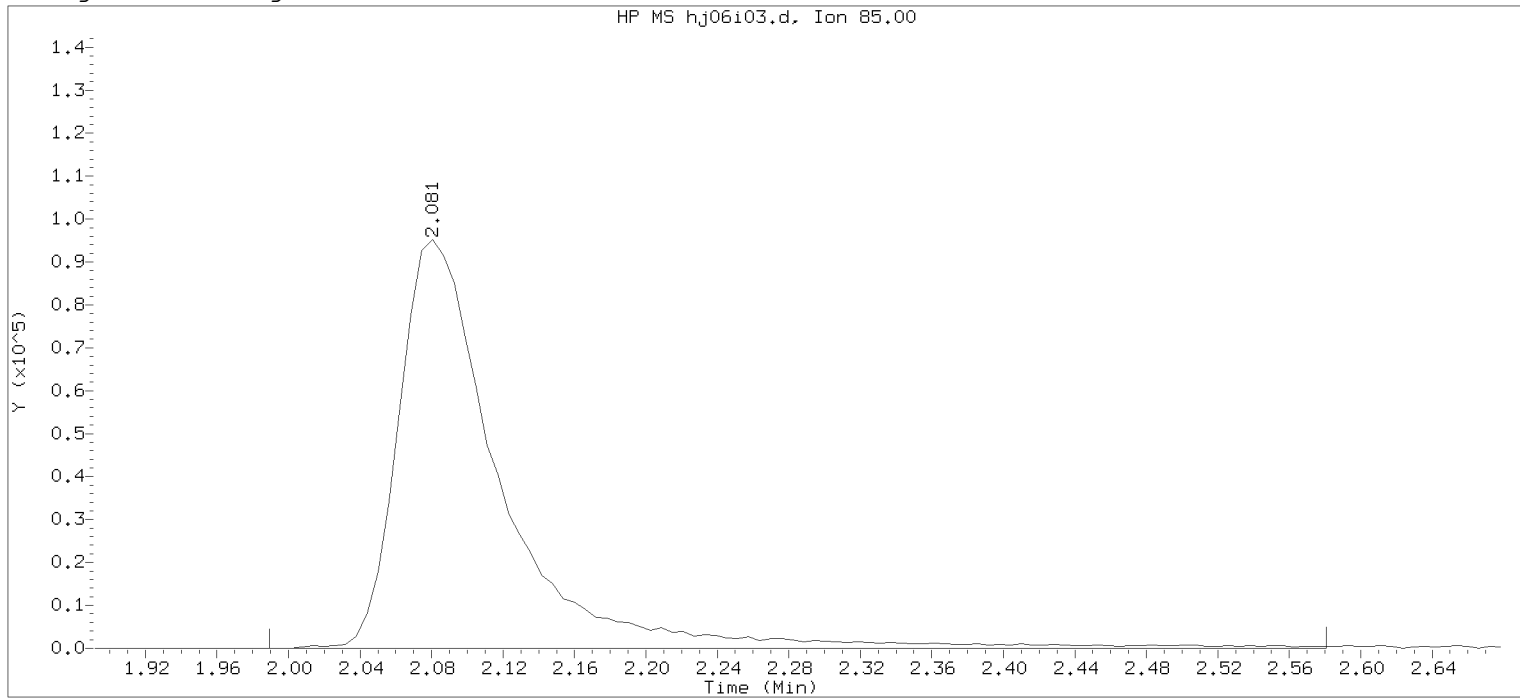
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

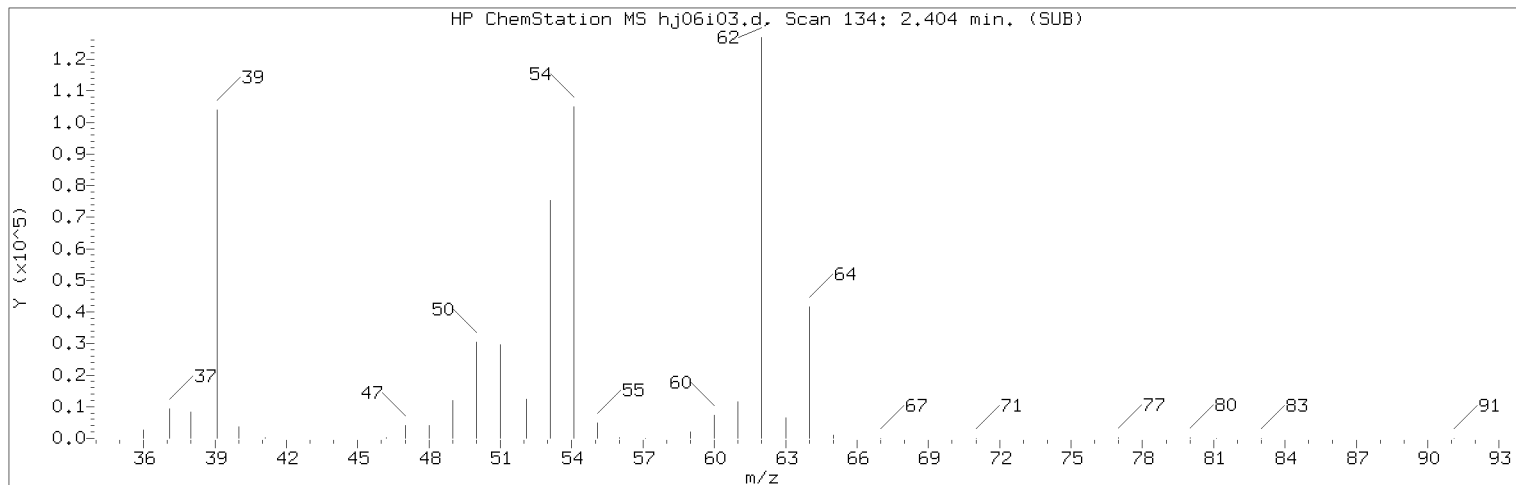
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

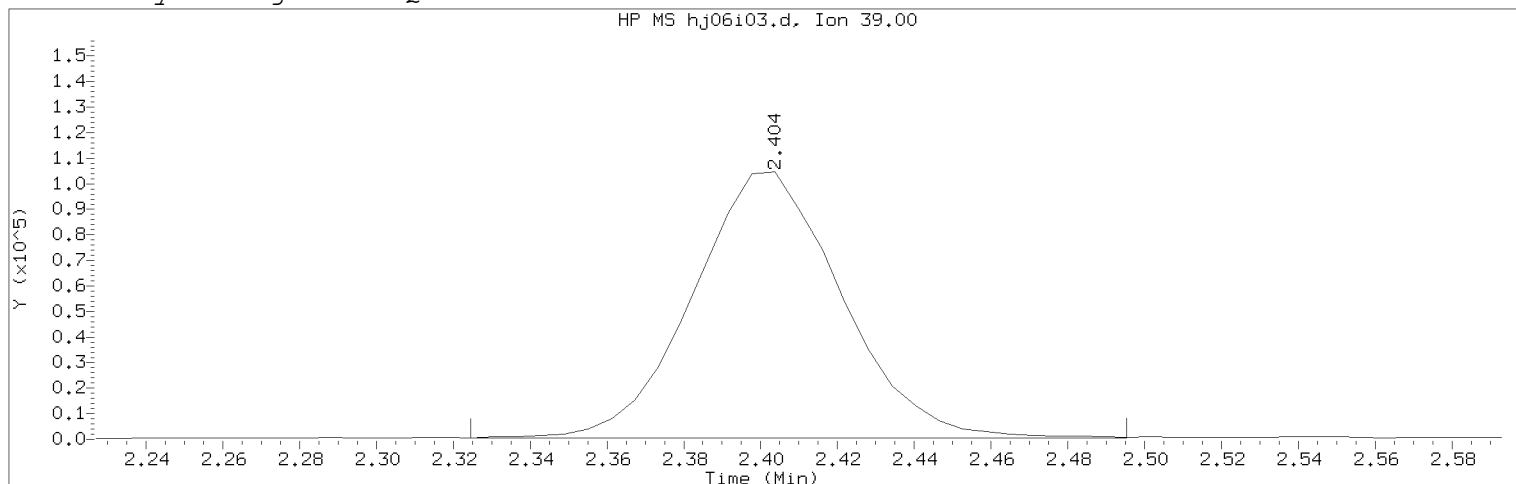
Lab Sample ID: VSTD005

Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area	: 381559	
On-column Amount (ng)	: 5.1947	
Integration start scan	: 65	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

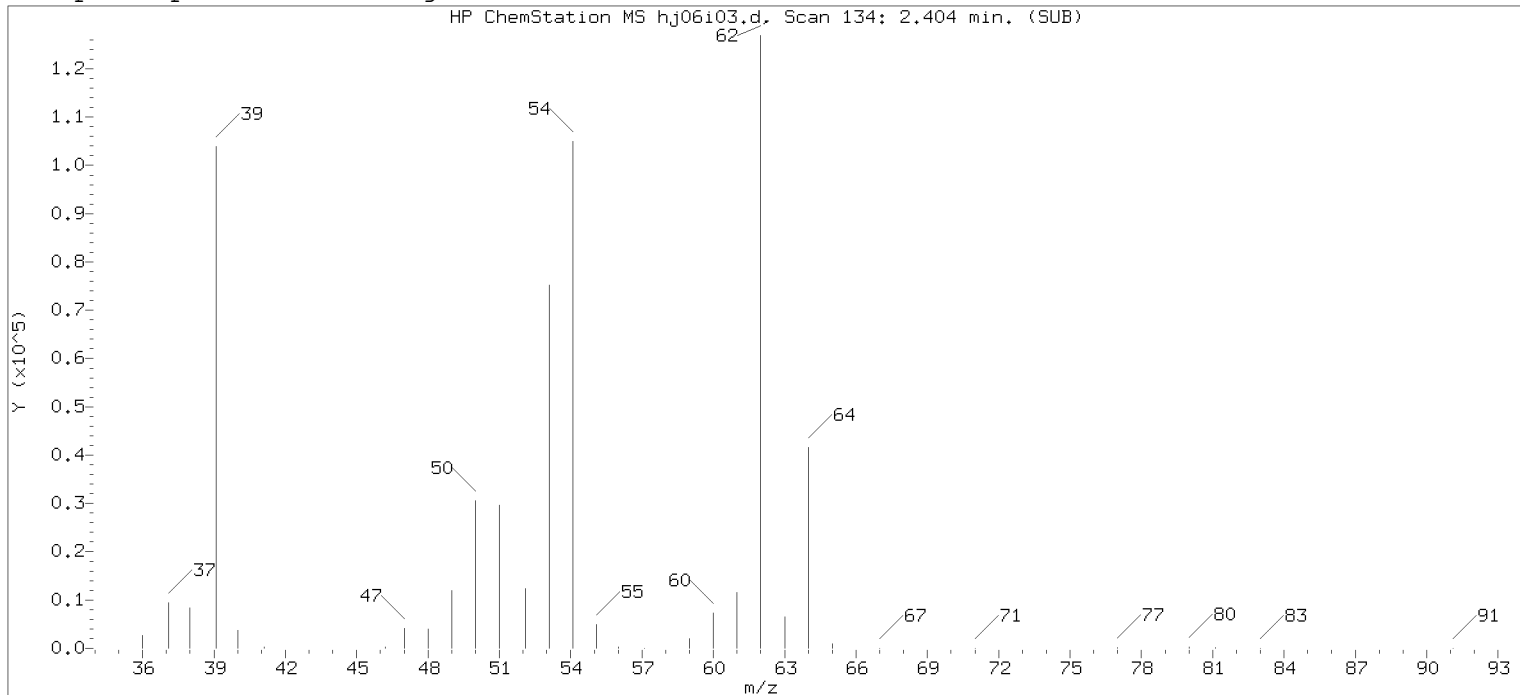
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area (flag)	: 279939M	
On-Column Amount (ng)	: 5.1037	
Integration start scan	: 120	Integration stop scan: 148
Y at integration start	: 562	Y at integration end: 562

Reason for manual integration: improper integration

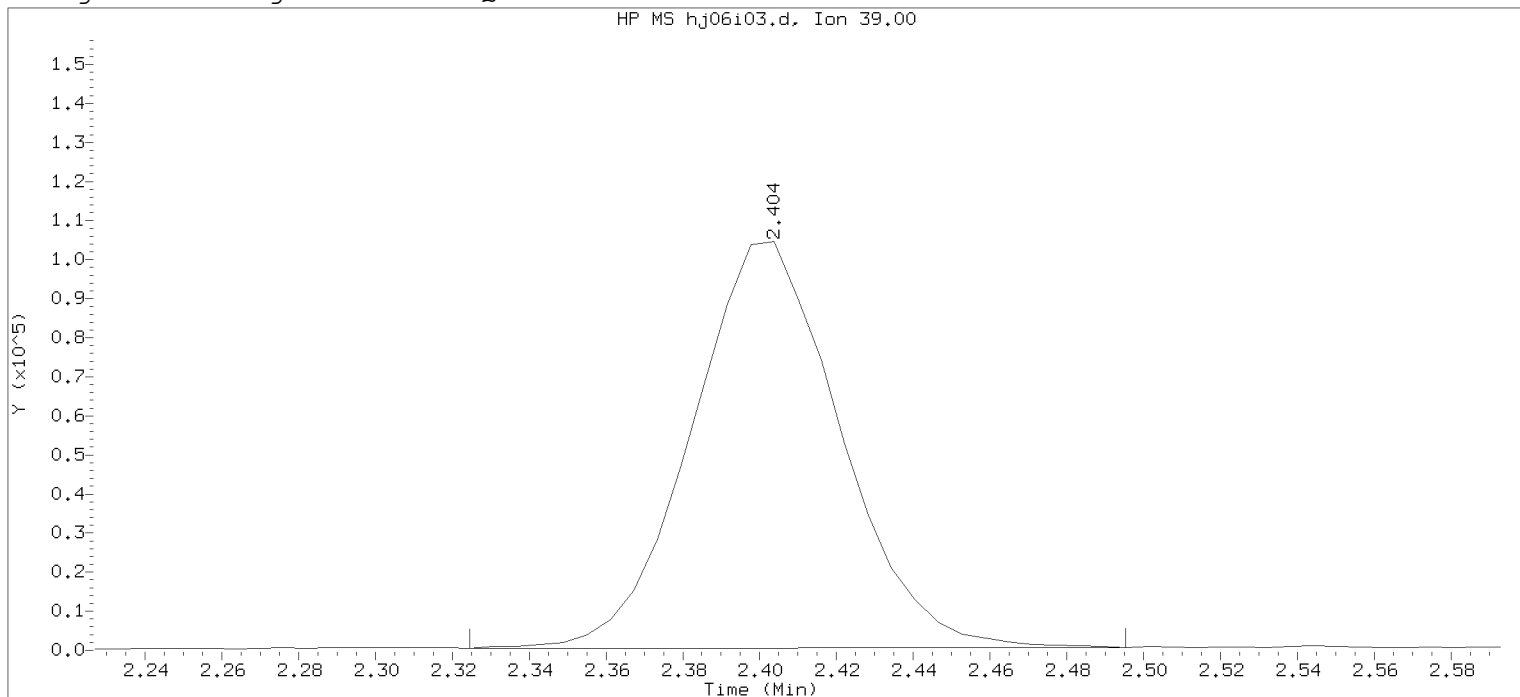
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

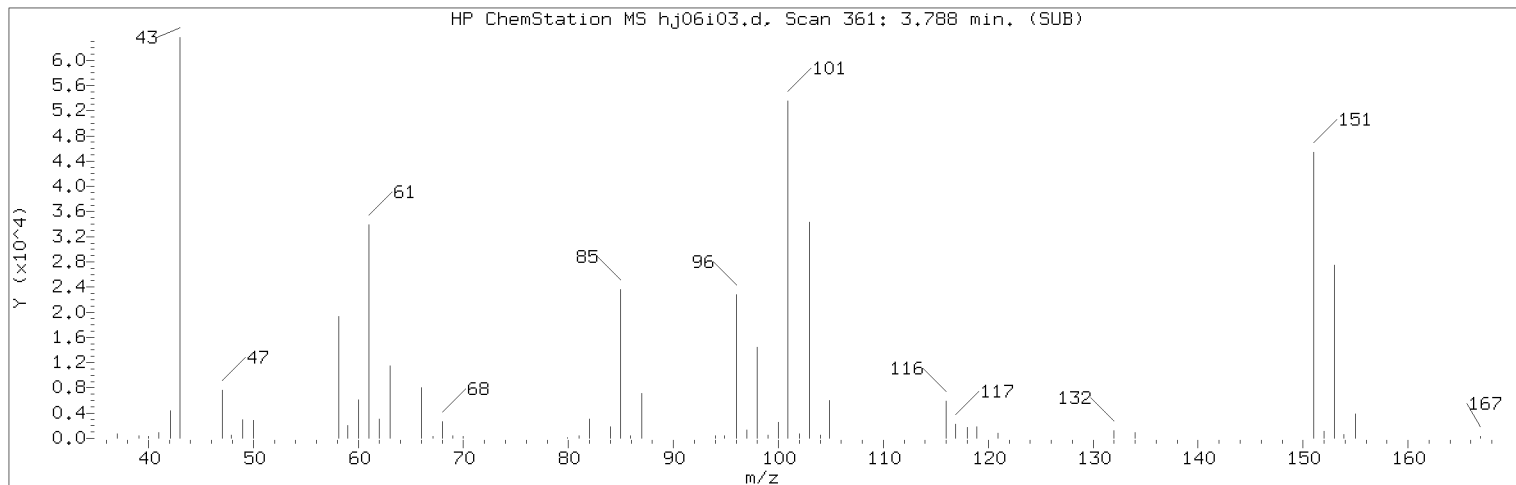
Sample Name: VSTD005

Lab Sample ID: VSTD005

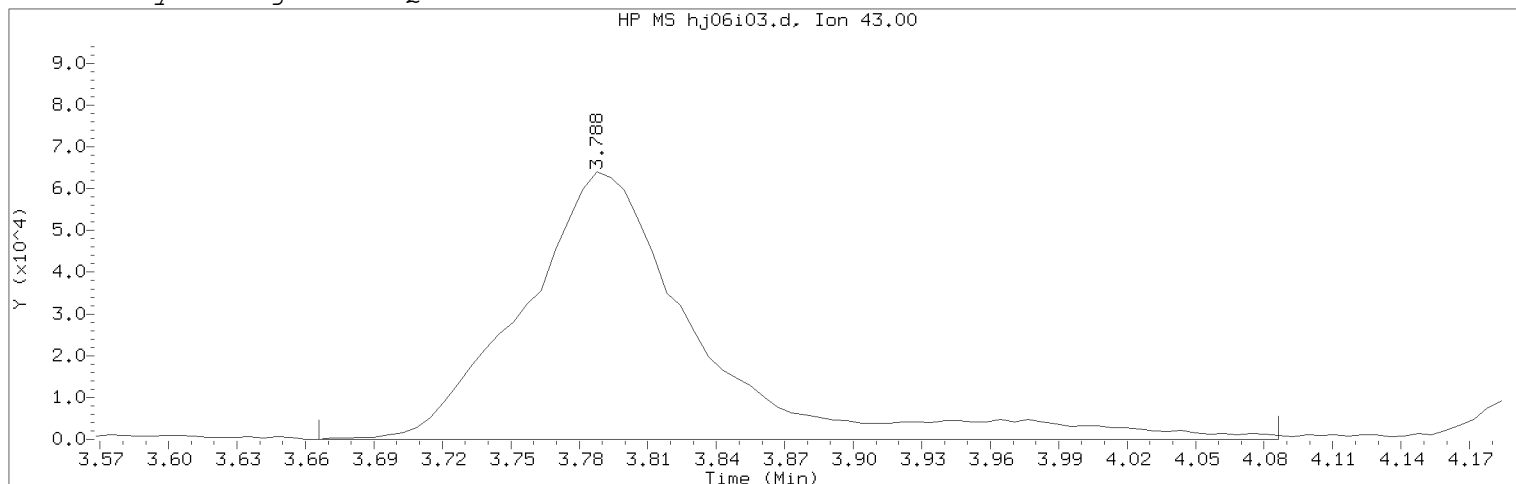
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area	: 279245	
On-column Amount (ng)	: 5.1399	
Integration start scan	: 120	Integration stop scan: 148
Y at integration start	: 563	Y at integration end: 692

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Target 3.5 esignature user RAE59 Page 2582 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

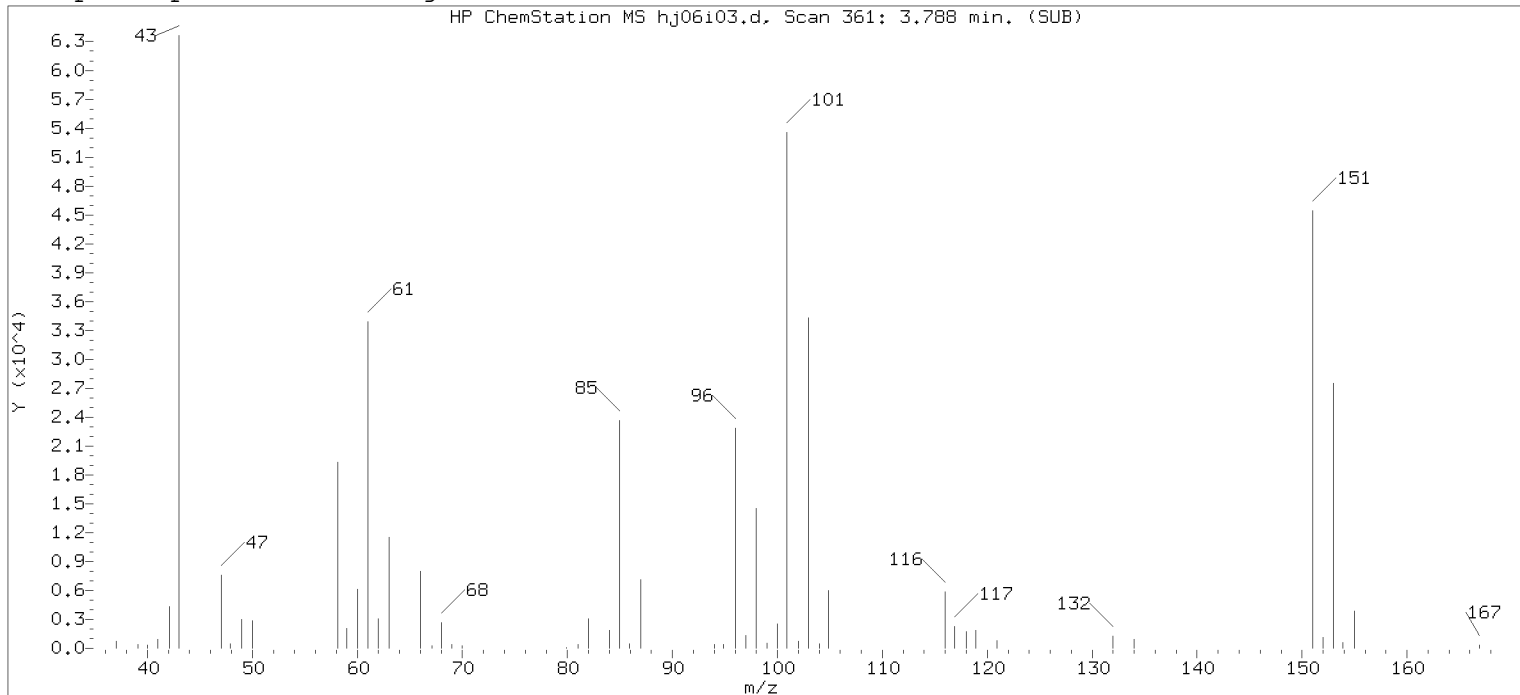
Compound Number	: 14	
Compound Name	: Acetone	
Scan Number	: 361	
Retention Time (minutes)	: 3.788	
Quant Ion	: 43.00	
Area (flag)	: 341103M	
On-Column Amount (ng)	: 48.4671	
Integration start scan	: 340	Integration stop scan: 409
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

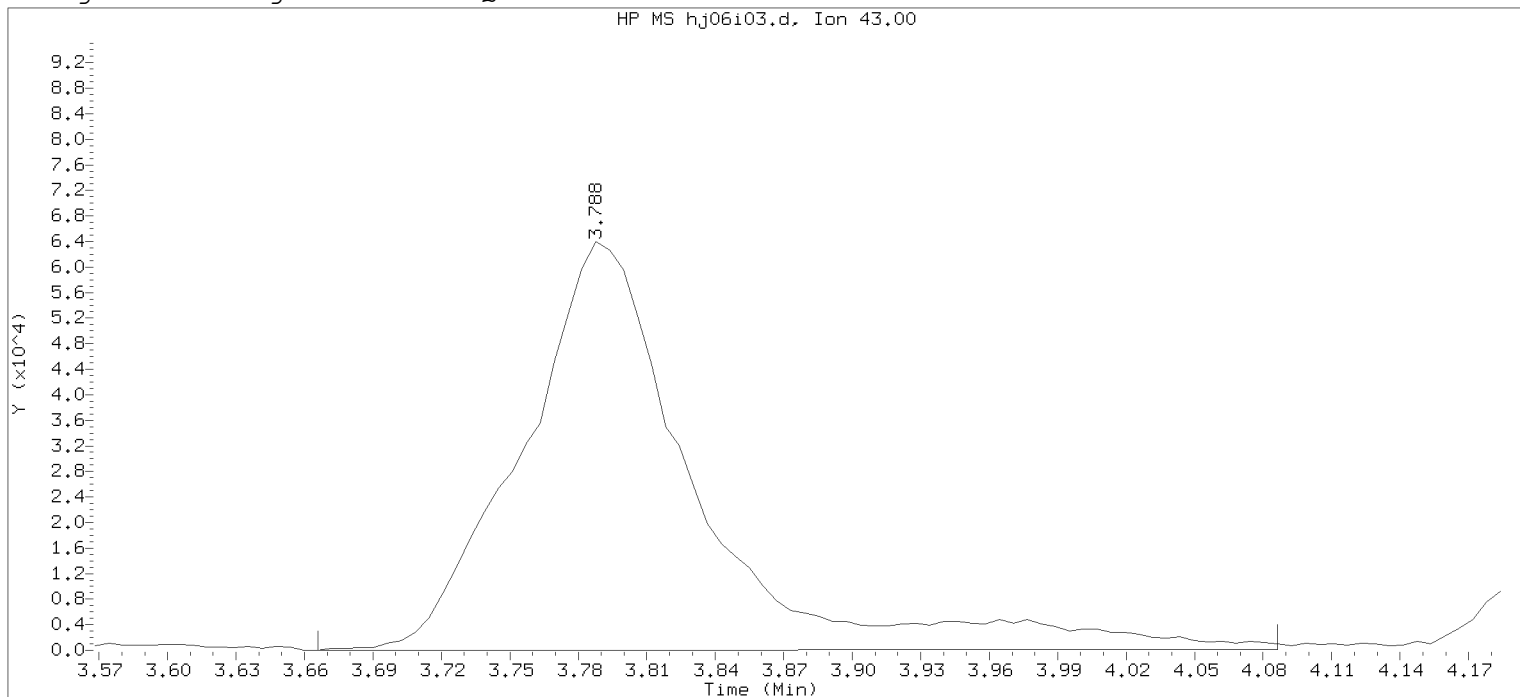
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

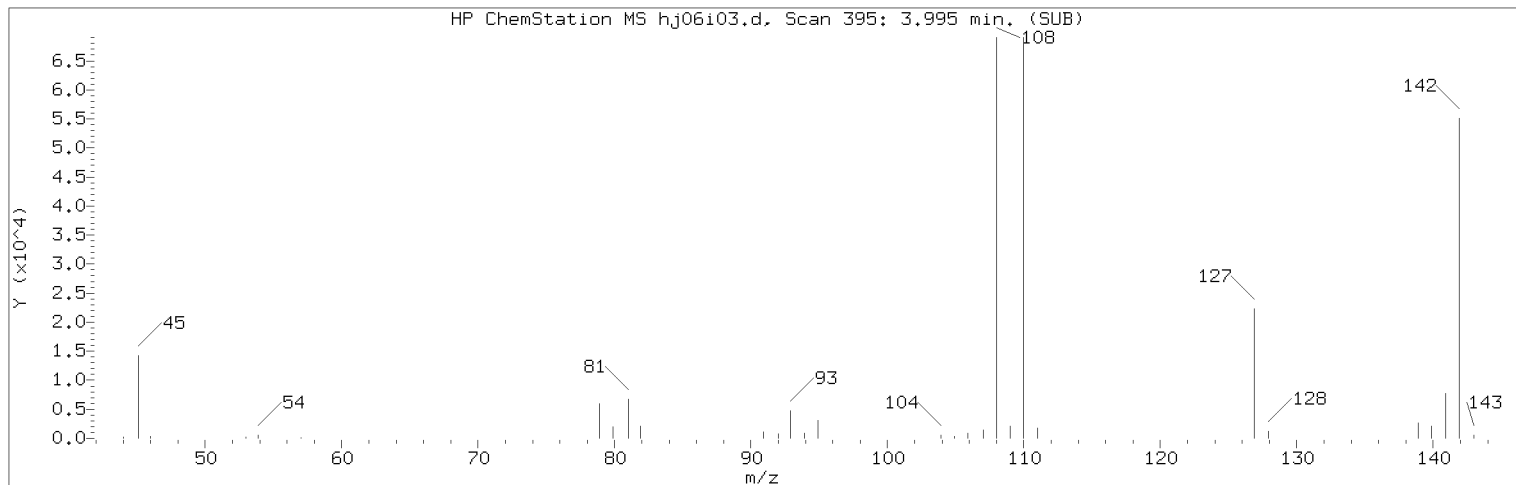
Lab Sample ID: VSTD005

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area : 339300
 On-column Amount (ng) : 44.9898
 Integration start scan : 340
 Y at integration start : 0

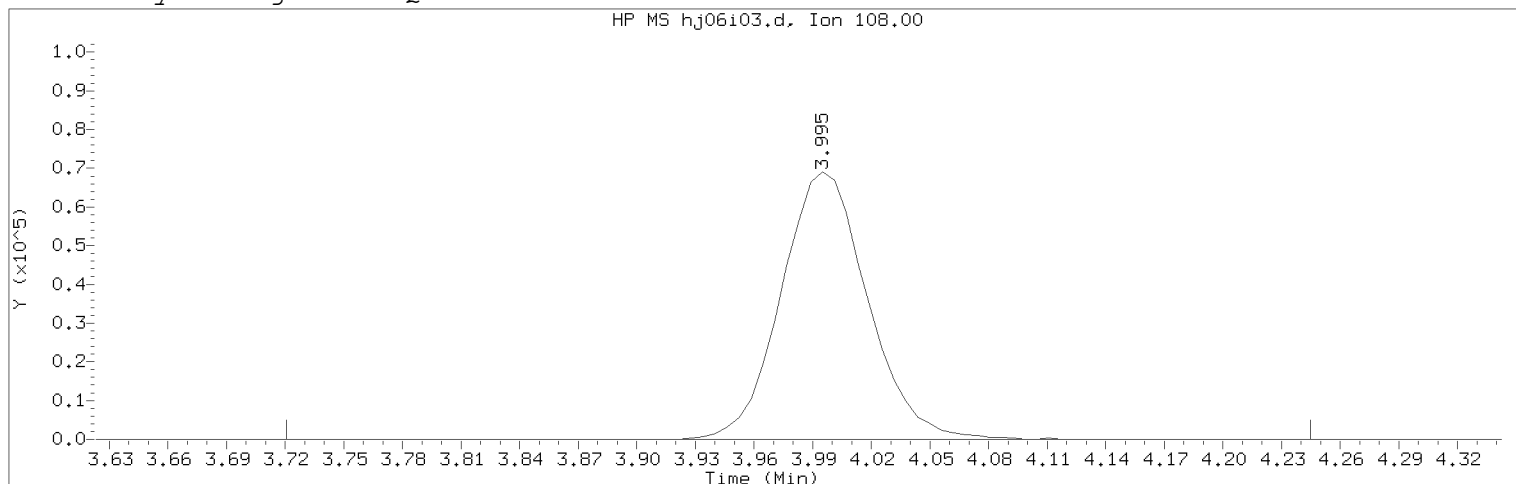
Integration stop scan: 409
 Y at integration end: 129

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 Target 3.5 esignature user RAE59 Page 584 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

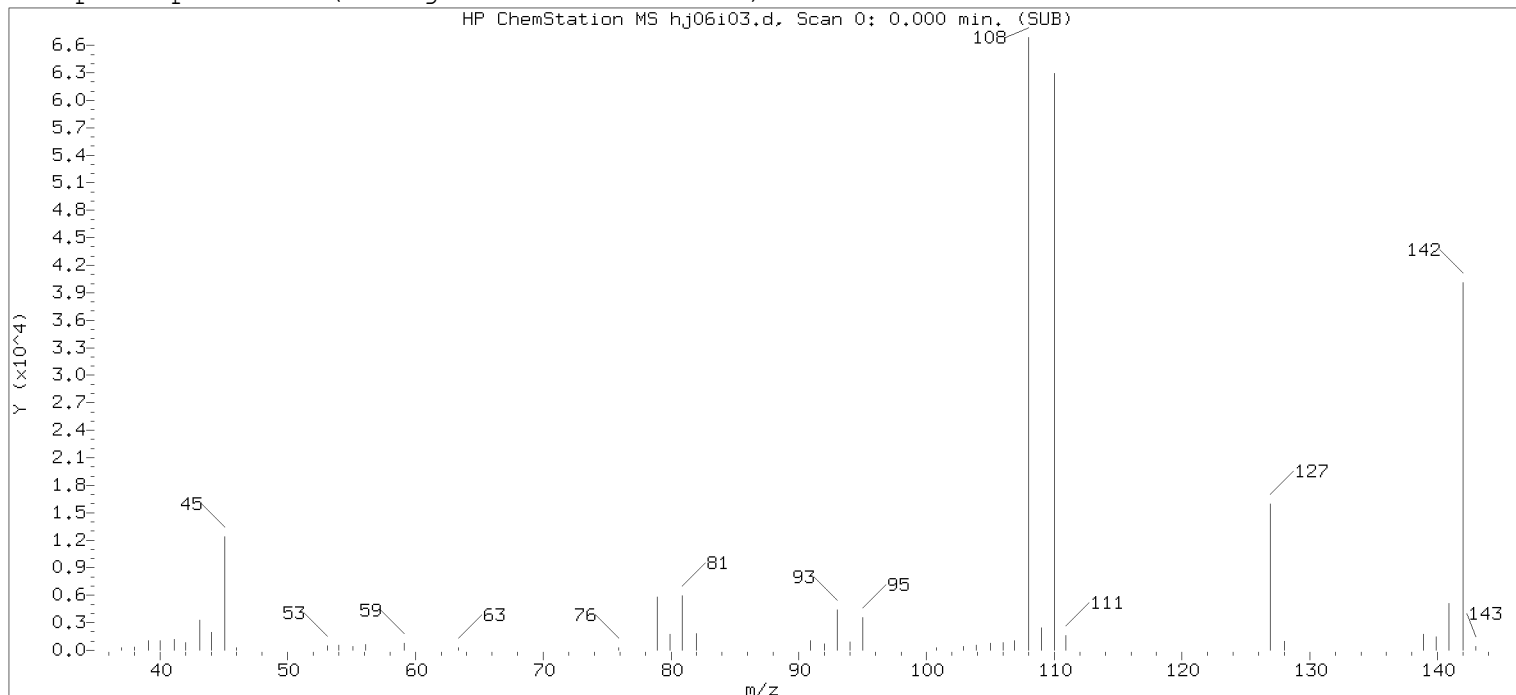
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 395	
Retention Time (minutes)	: 3.995	
Quant Ion	: 108.00	
Area (flag)	: 211837M	
On-Column Amount (ng)	: 5.0380	
Integration start scan	: 349	Integration stop scan: 435
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

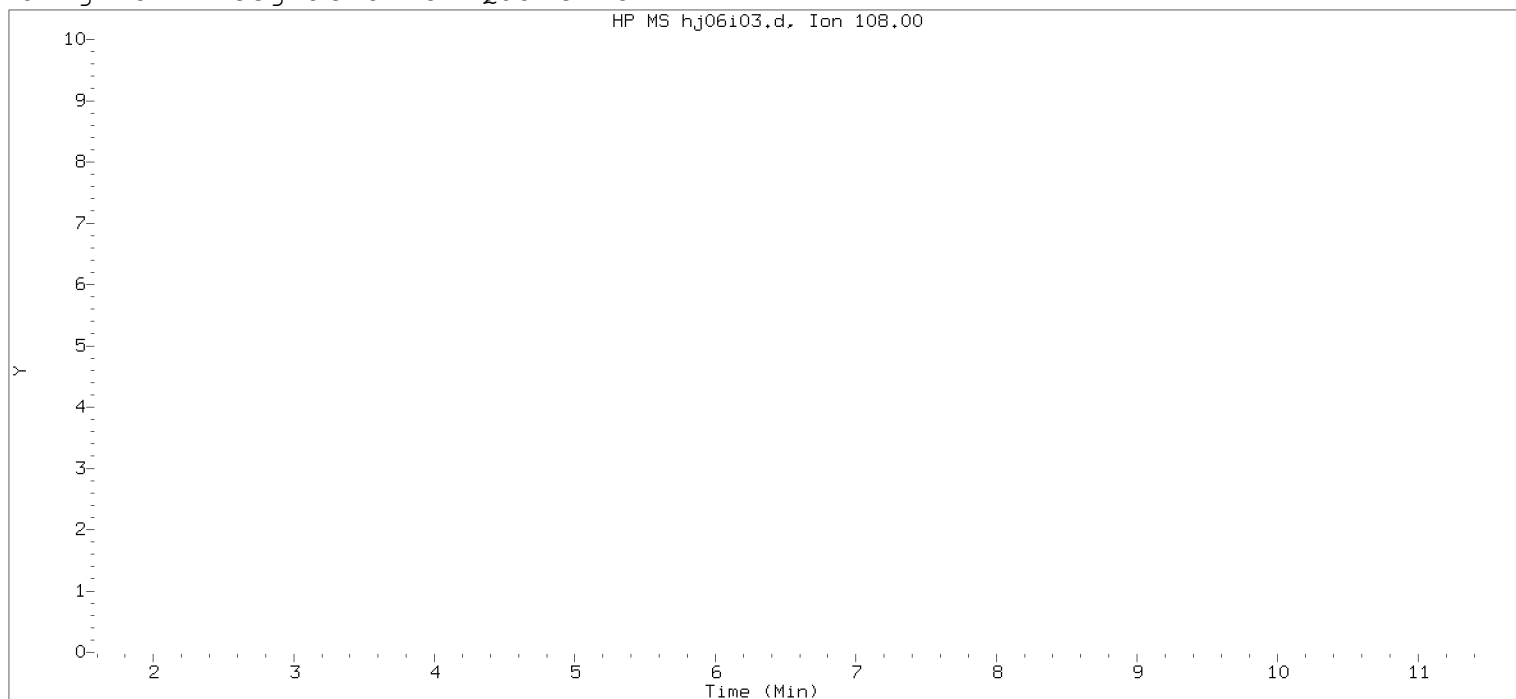
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

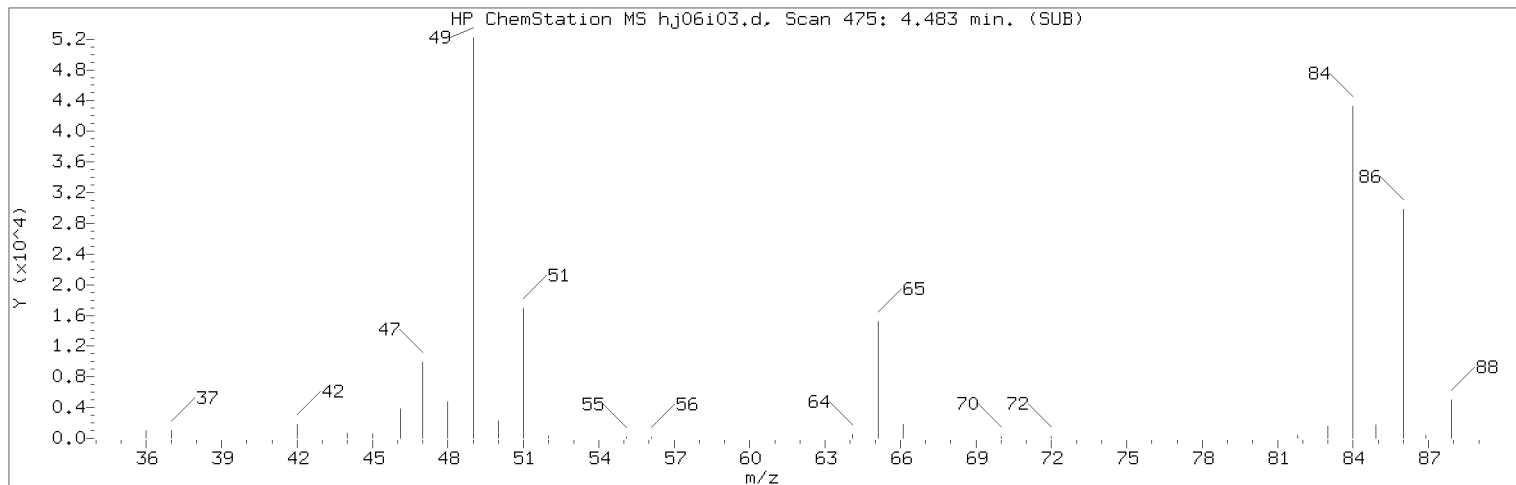
Sample Name: VSTD005

Lab Sample ID: VSTD005

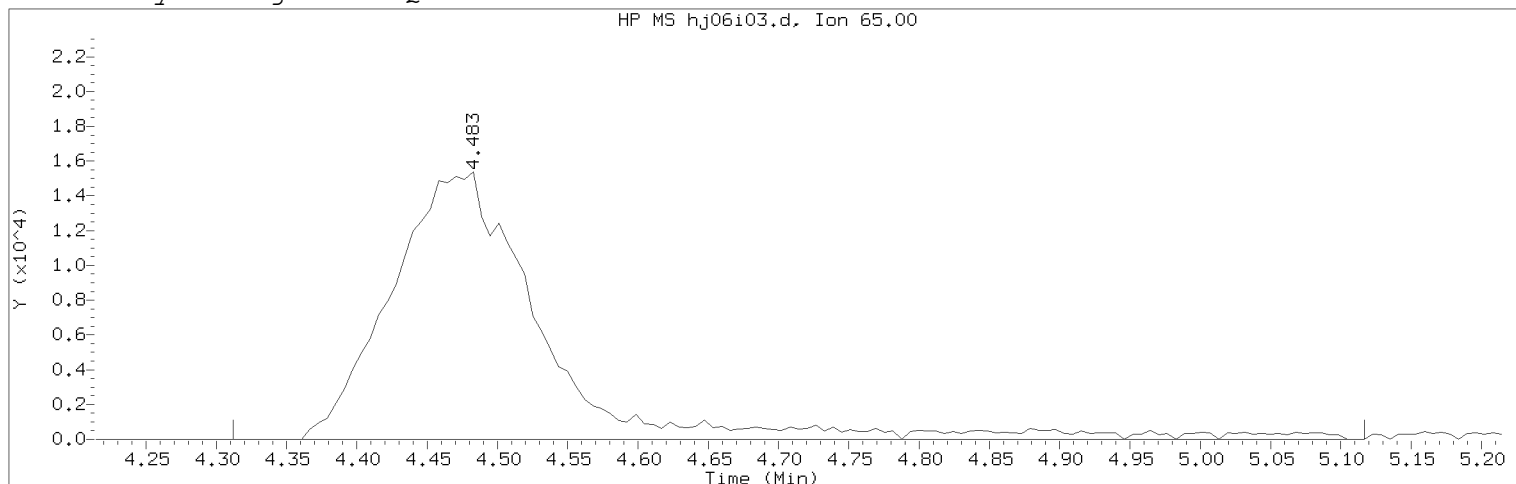
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RPF59 Page 2586 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

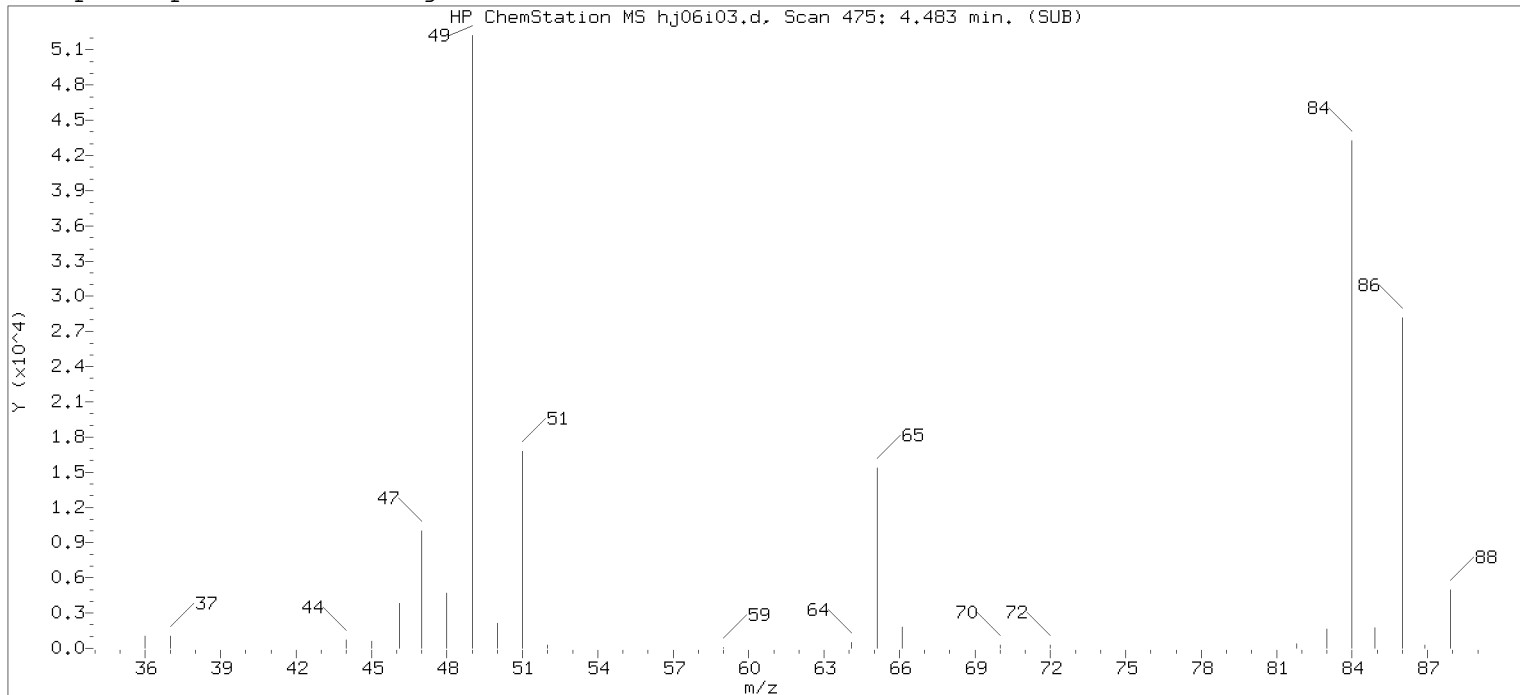
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 475	
Retention Time (minutes)	: 4.483	
Quant Ion	: 65.00	
Area (flag)	: 115826M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 578
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

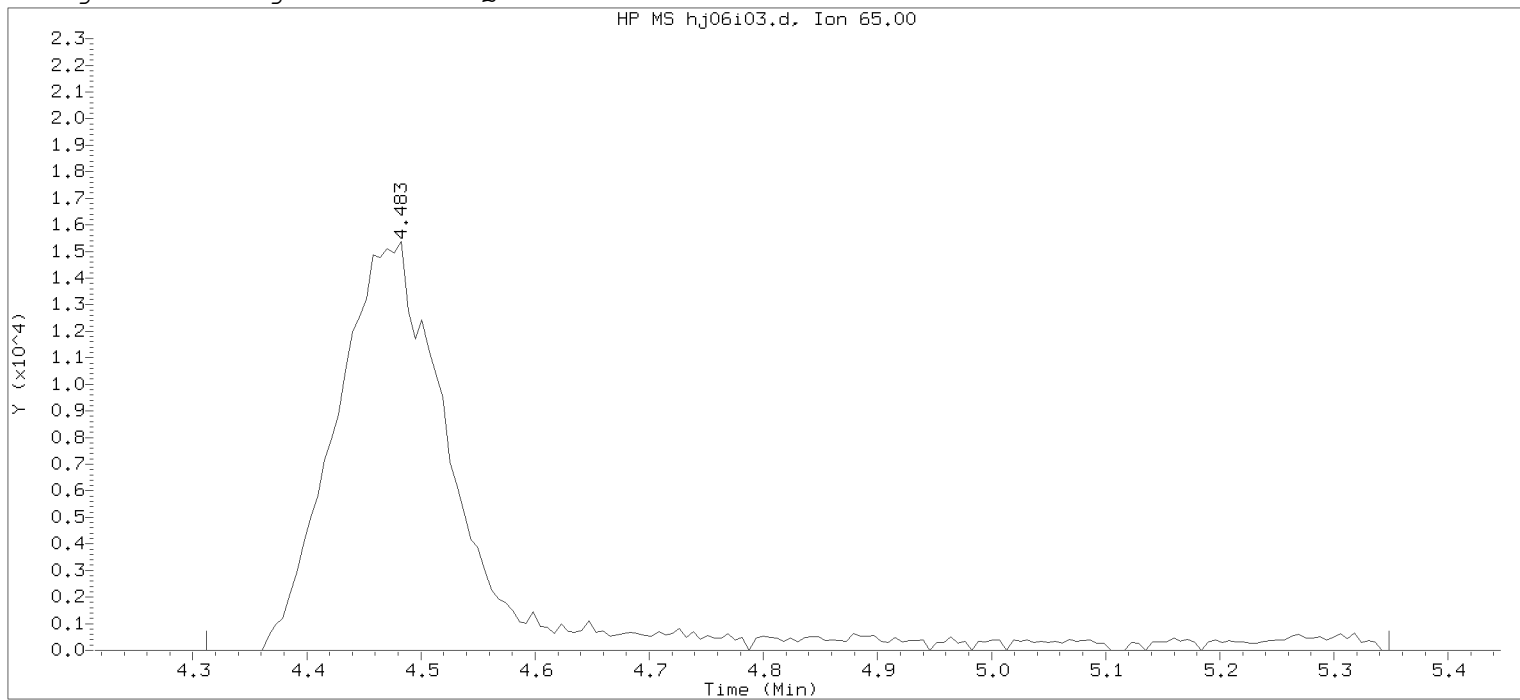
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

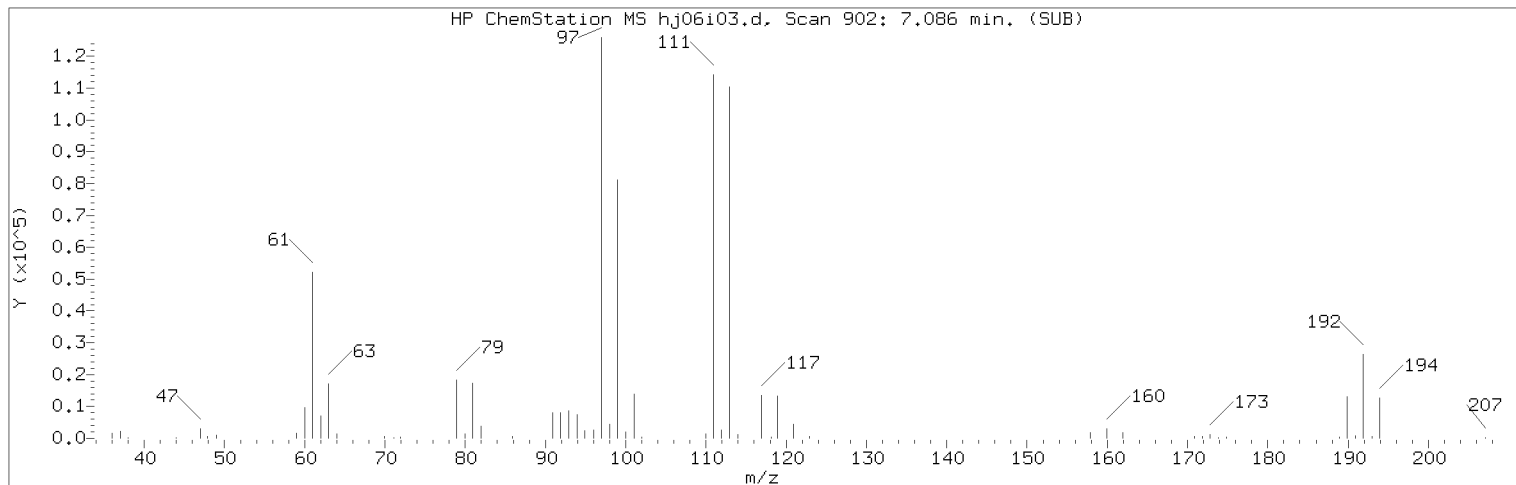
Lab Sample ID: VSTD005

Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 475	
Retention Time (minutes)	: 4.483	
Quant Ion	: 65.00	
Area	: 120597	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 616
Y at integration start	: 0	Y at integration end: 0

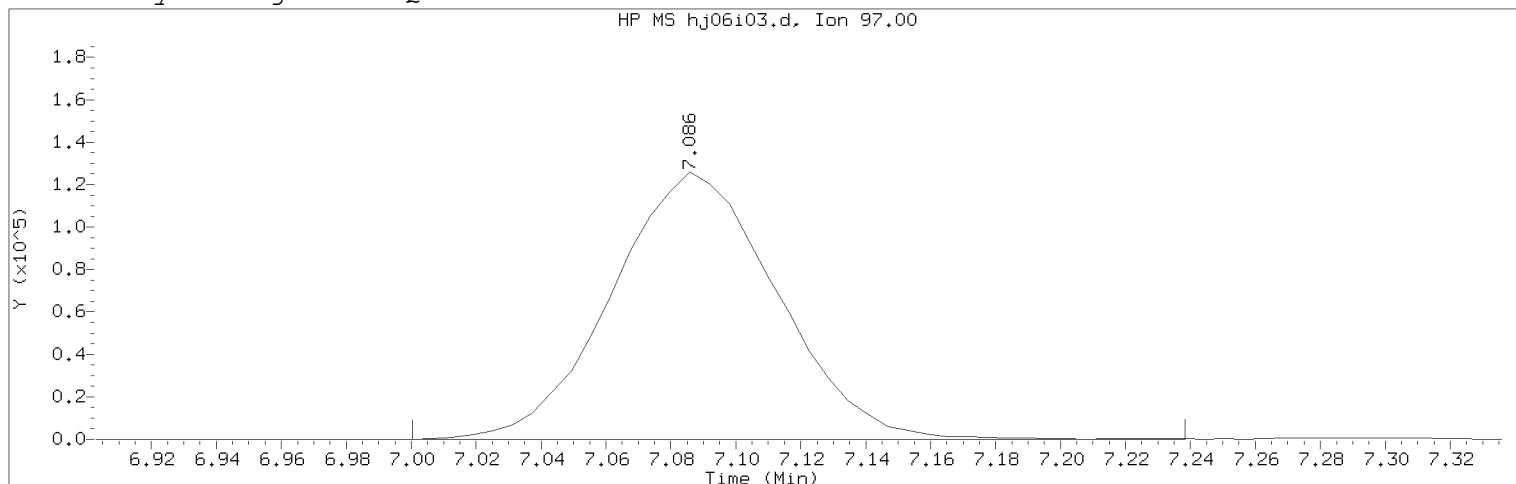
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RPF59 Page 588 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area (flag)	: 443696M	
On-Column Amount (ng)	: 5.1107	
Integration start scan	: 887	Integration stop scan: 926
Y at integration start	: 0	Y at integration end: 0

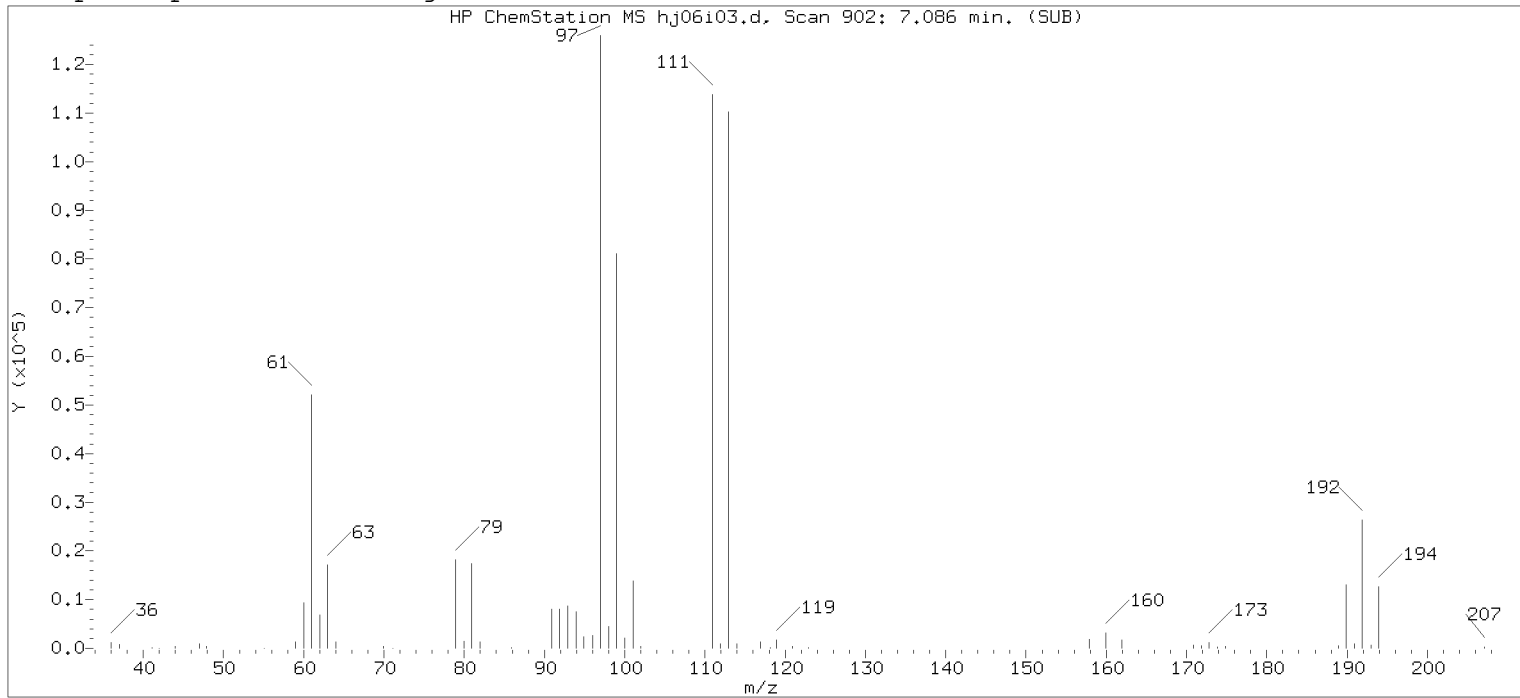
Reason for manual integration: improper integration

Analyst responsible for change:

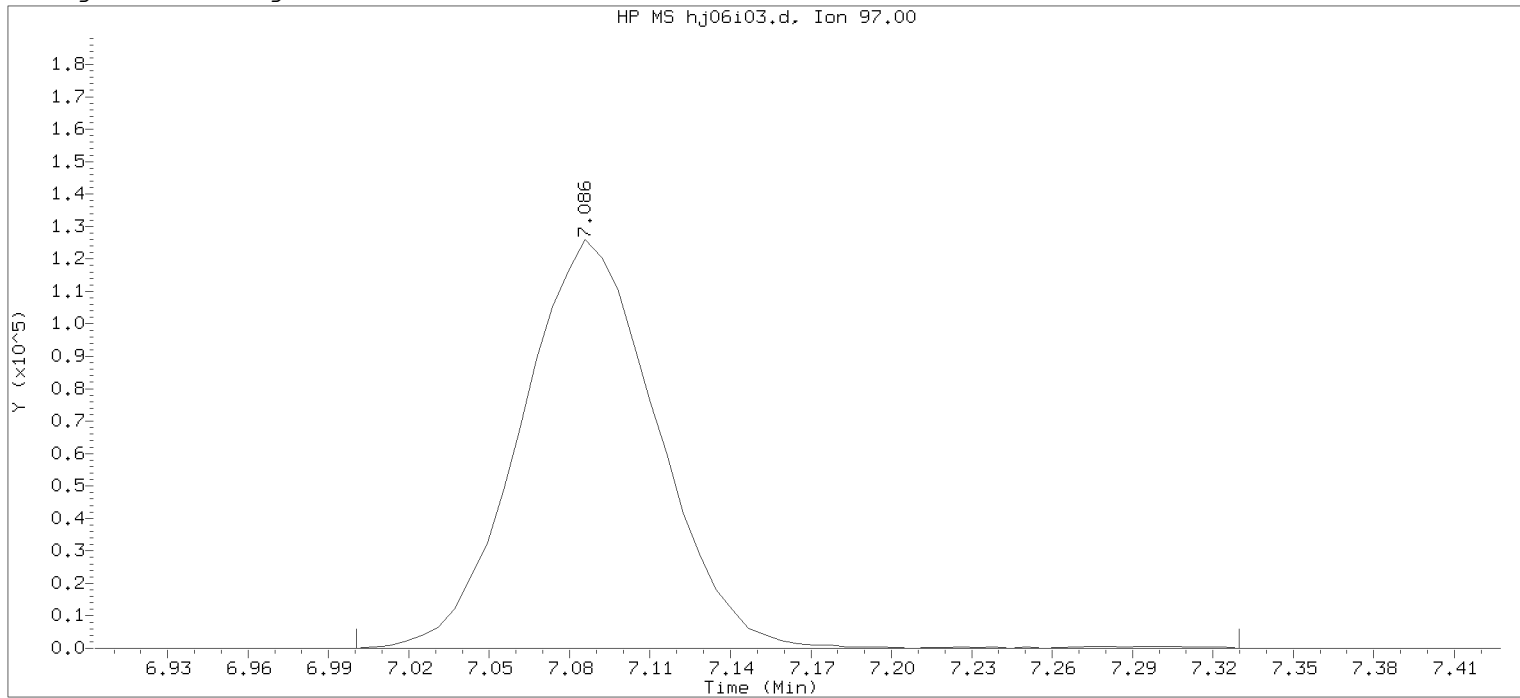
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

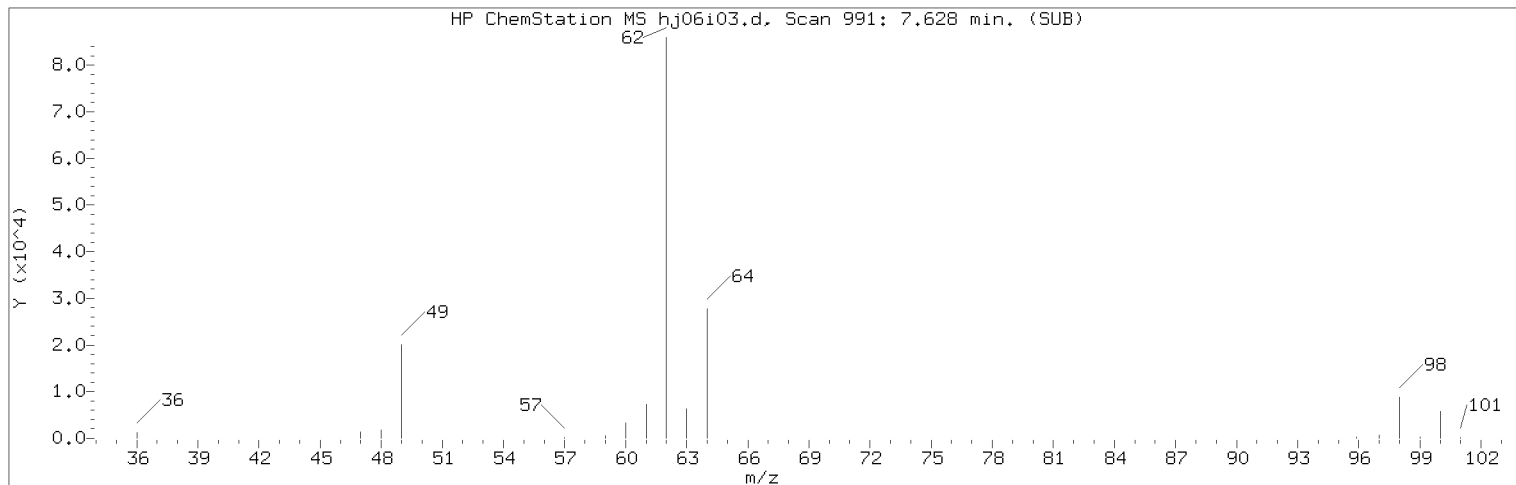
Sample Name: VSTD005

Lab Sample ID: VSTD005

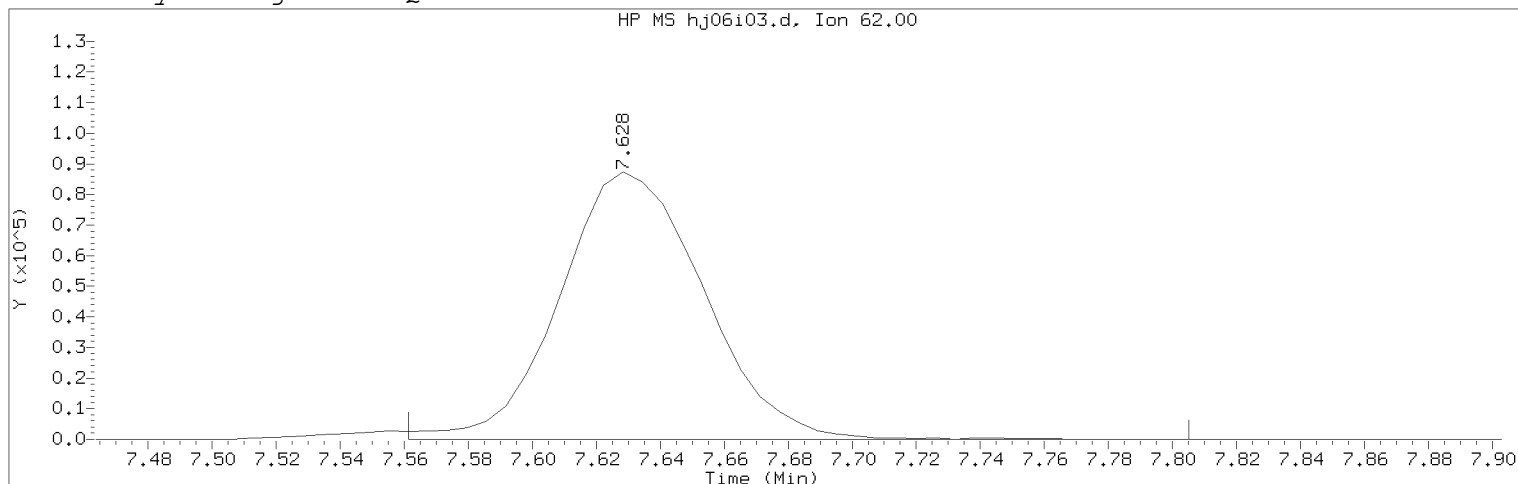
Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area	: 445768	
On-column Amount (ng)	: 5.1311	
Integration start scan	: 887	Integration stop scan: 941
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2590 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

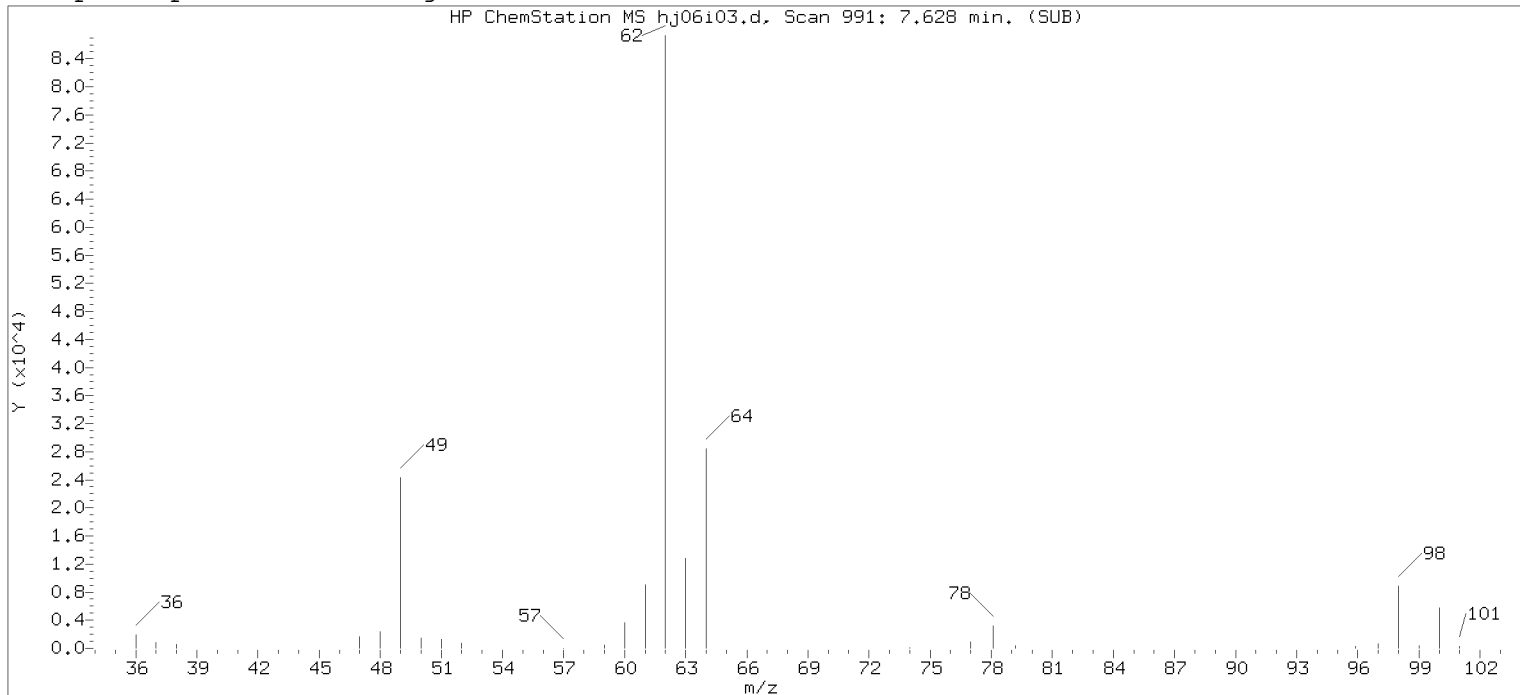
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area (flag)	: 272967M	
On-Column Amount (ng)	: 4.9344	
Integration start scan	: 979	Integration stop scan: 1019
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

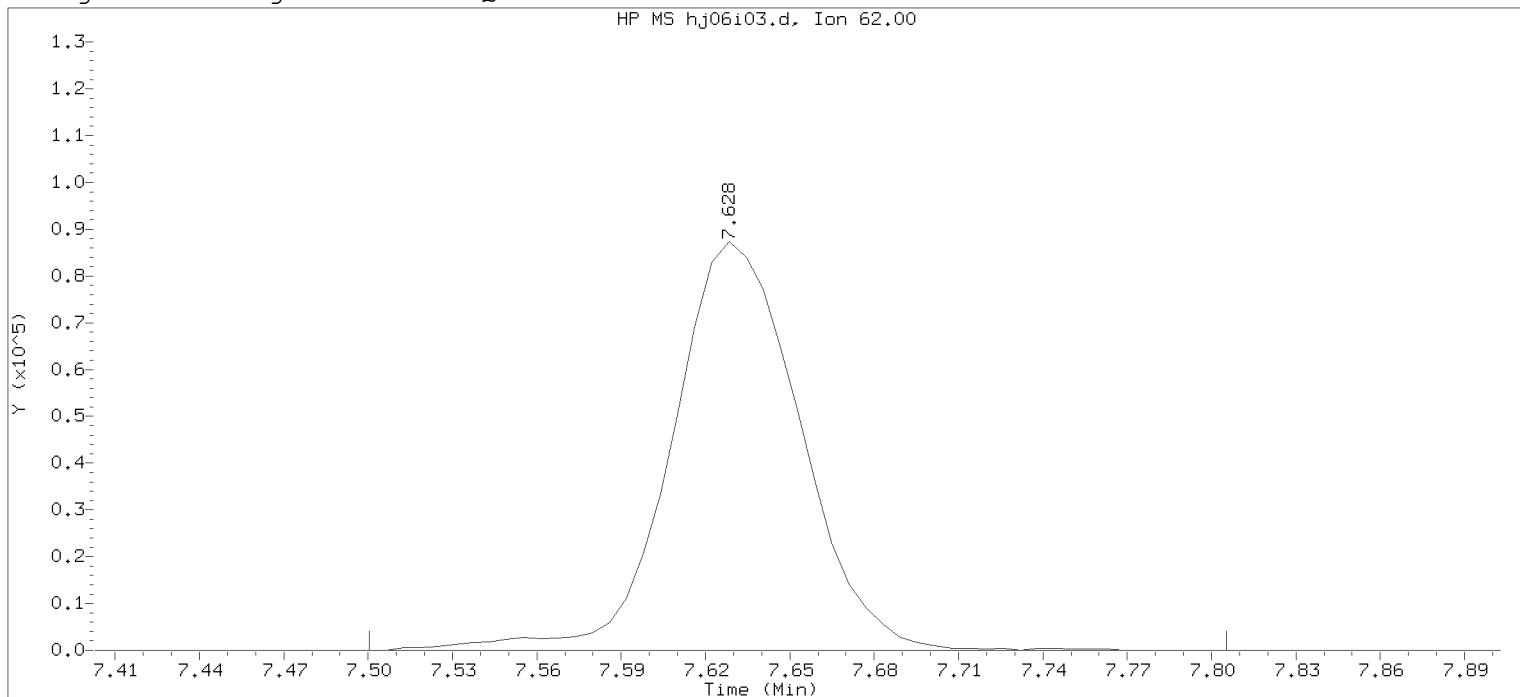
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

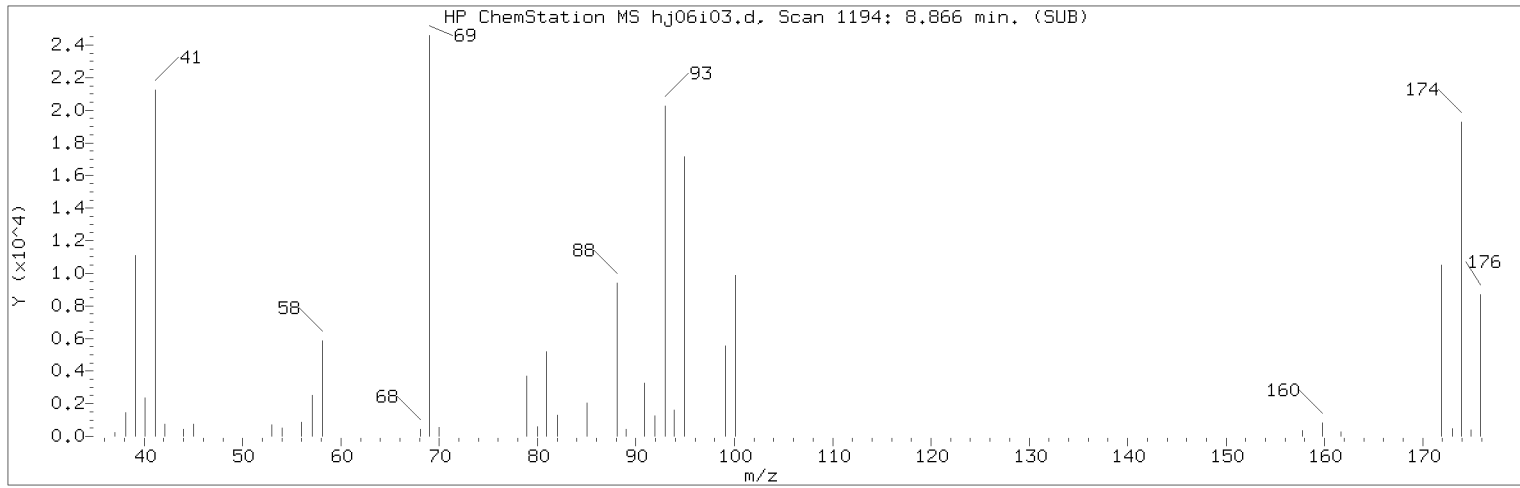
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

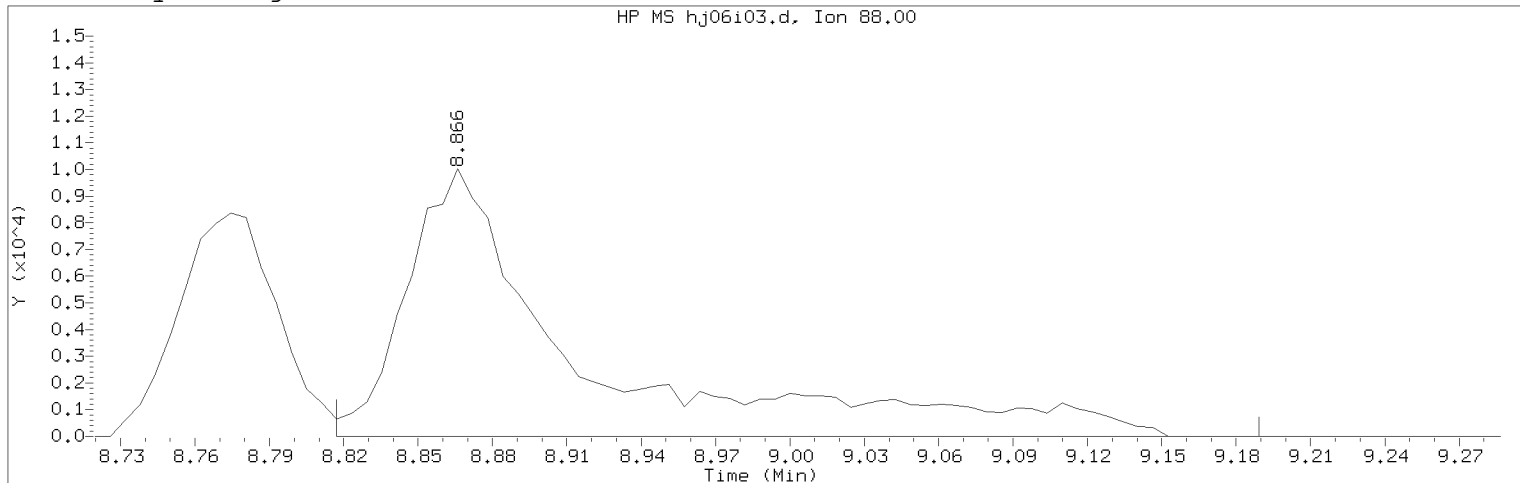
Lab Sample ID: VSTD005

Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area	: 277238	
On-column Amount (ng)	: 4.9705	
Integration start scan	: 969	Integration stop scan: 1019
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

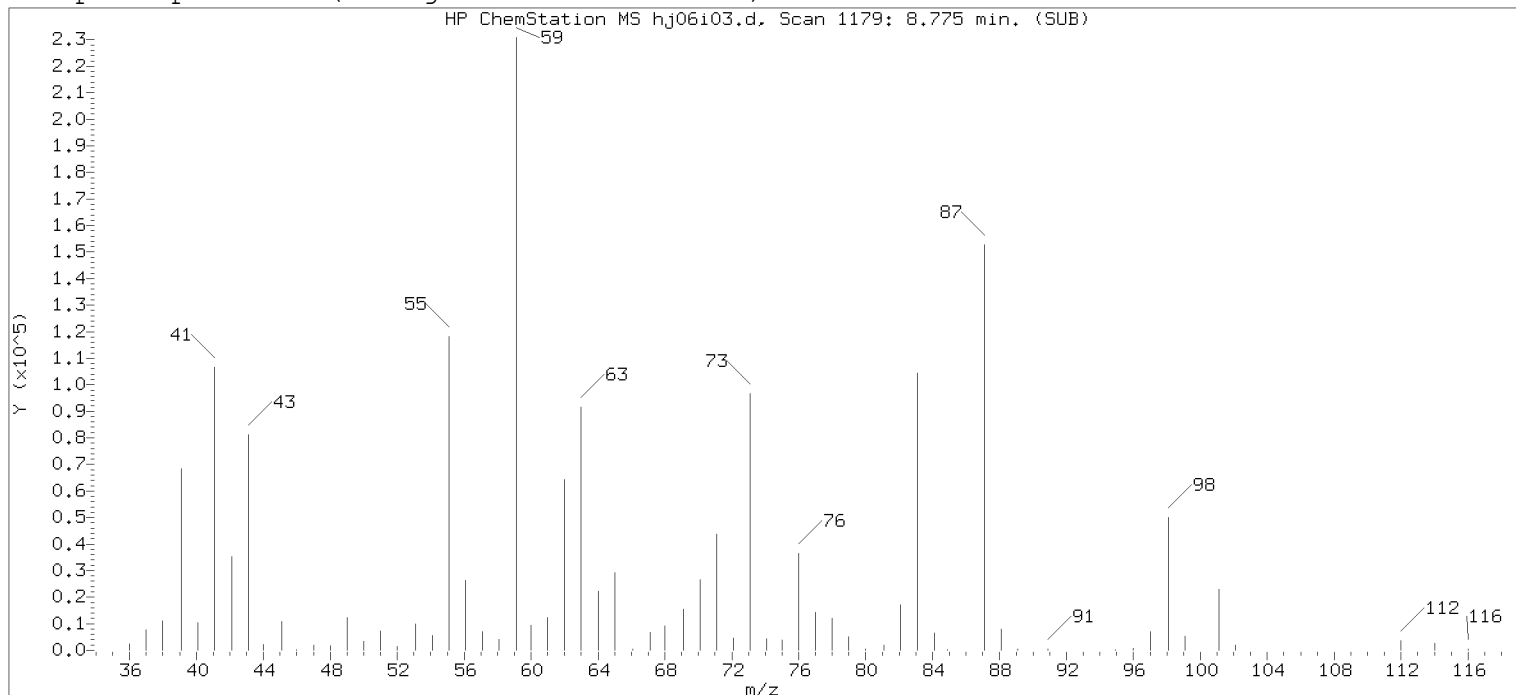
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 48534M
On-Column Amount (ng) : 294.9662
Integration start scan : 1185 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

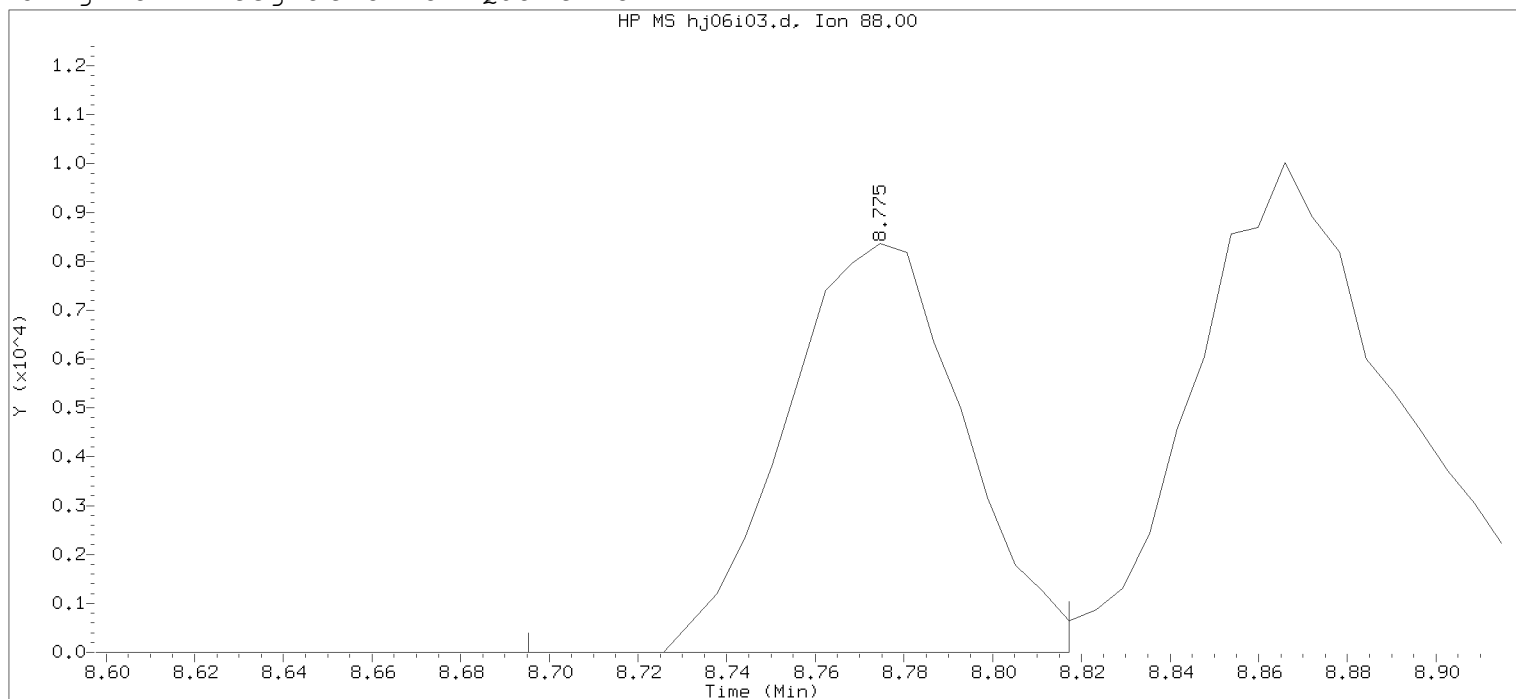
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number : 73

Compound Name : 1,4-Dioxane

Scan Number : 1179

Retention Time (minutes): 8.775

Quant Ion : 88.00

Area : 23165

On-column Amount (ng) : 155.1606

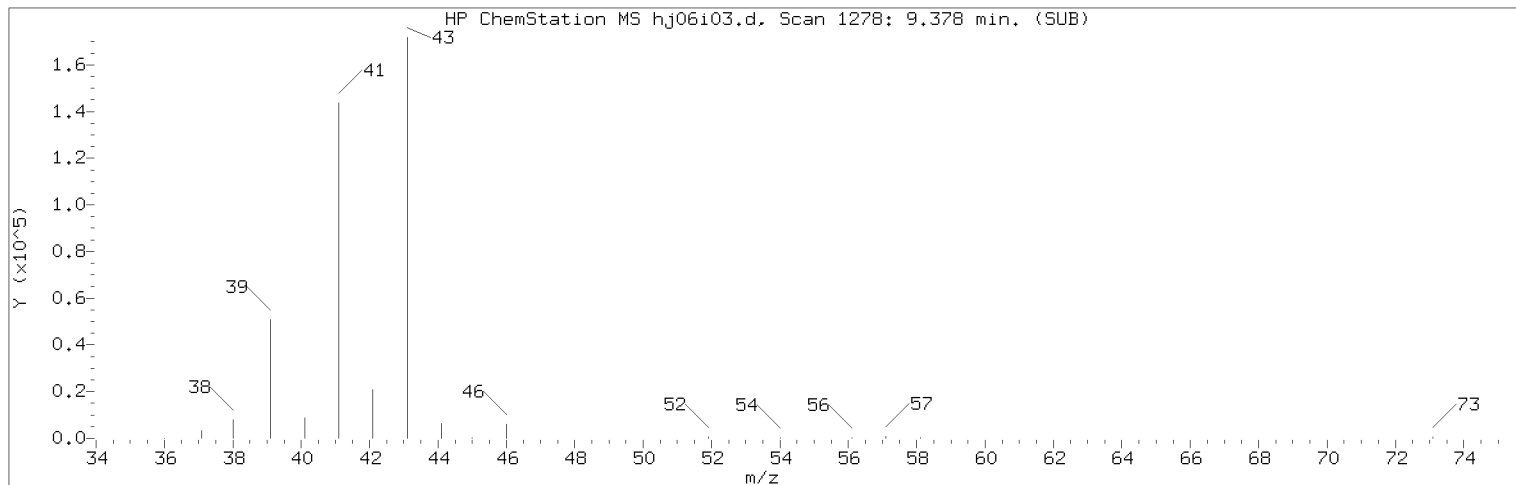
Integration start scan : 1165 Integration stop scan: 1185

Y at integration start : 0 Y at integration end: 0

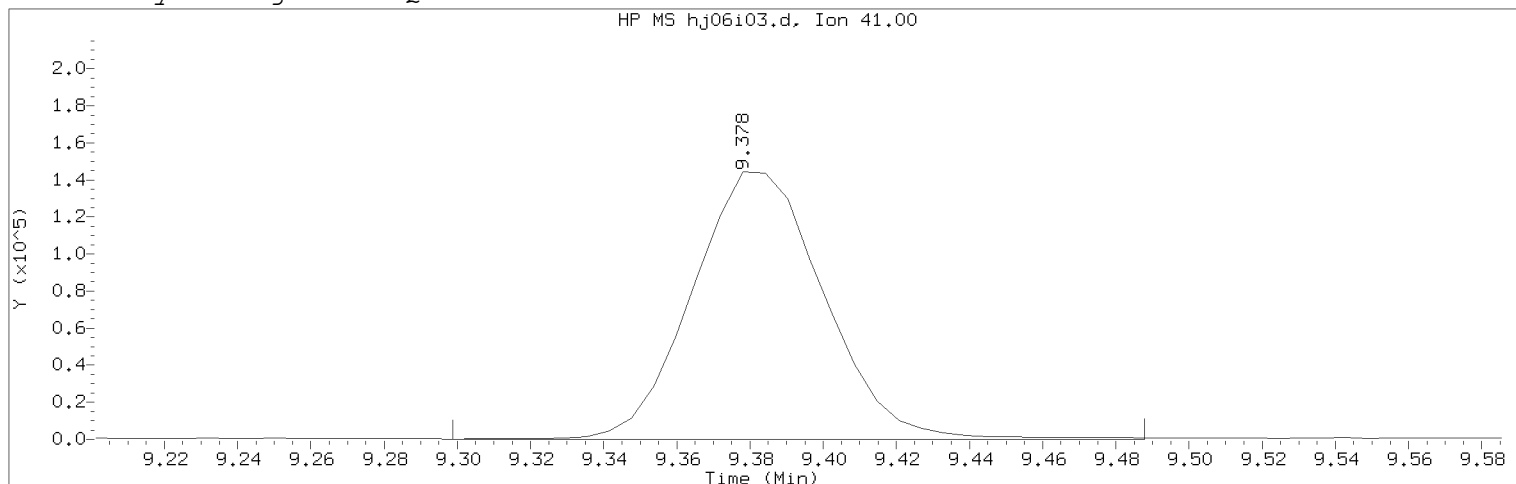
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 594 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

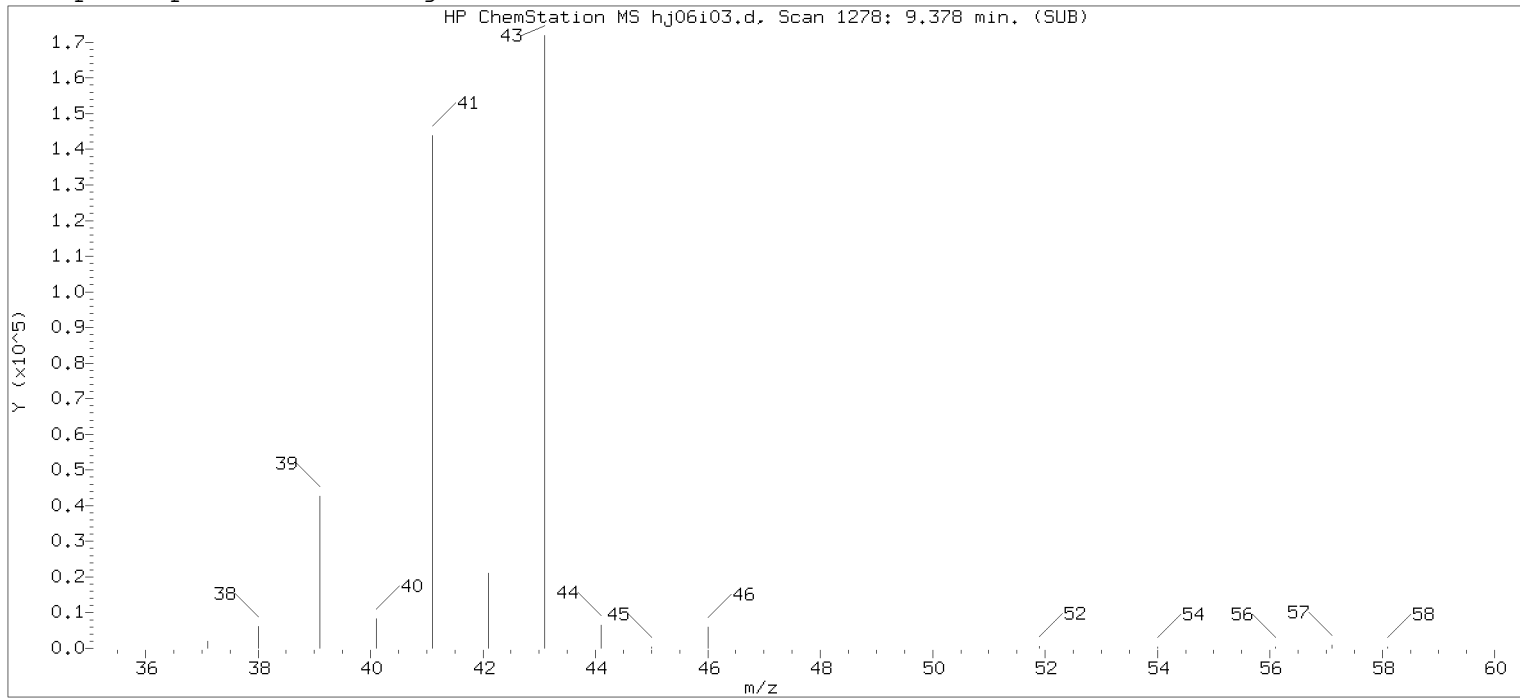
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 361445M
On-Column Amount (ng) : 50.7412
Integration start scan : 1264 Integration stop scan: 1295
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

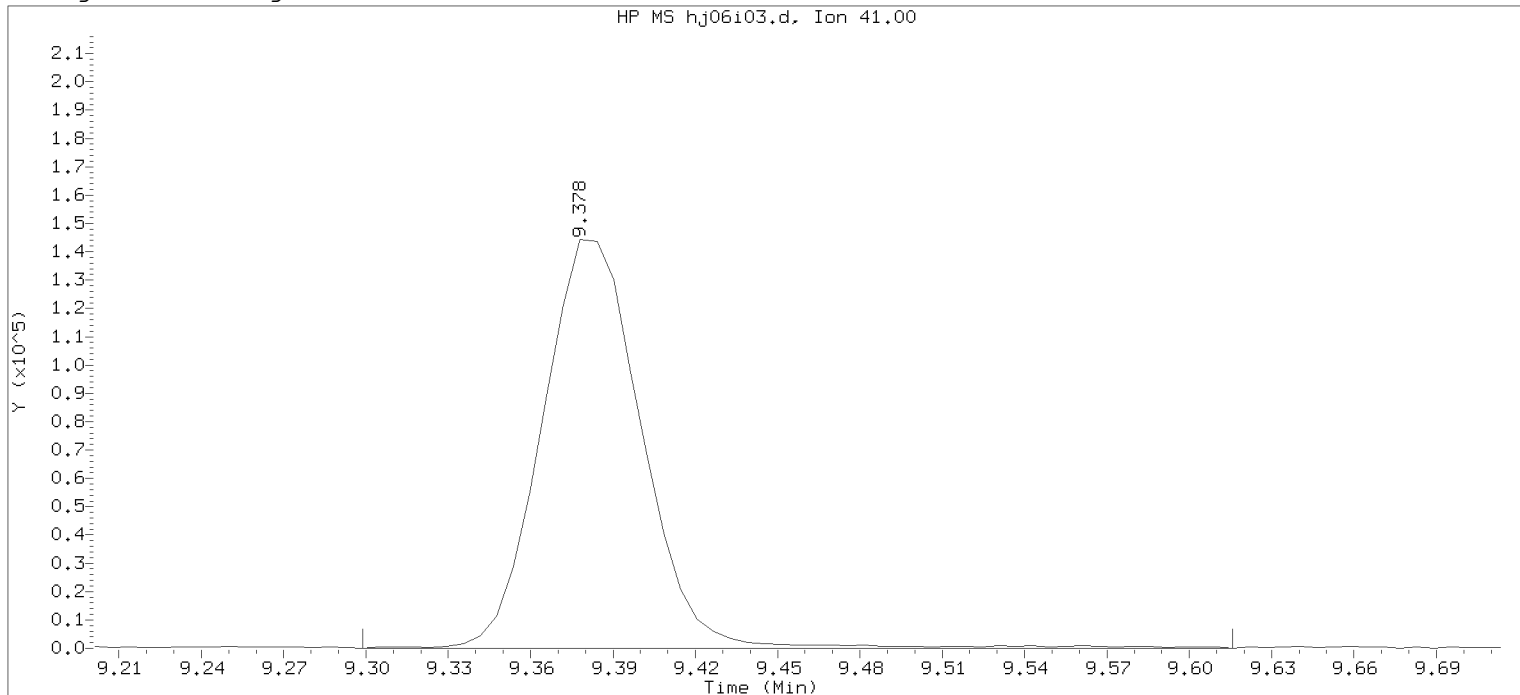
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

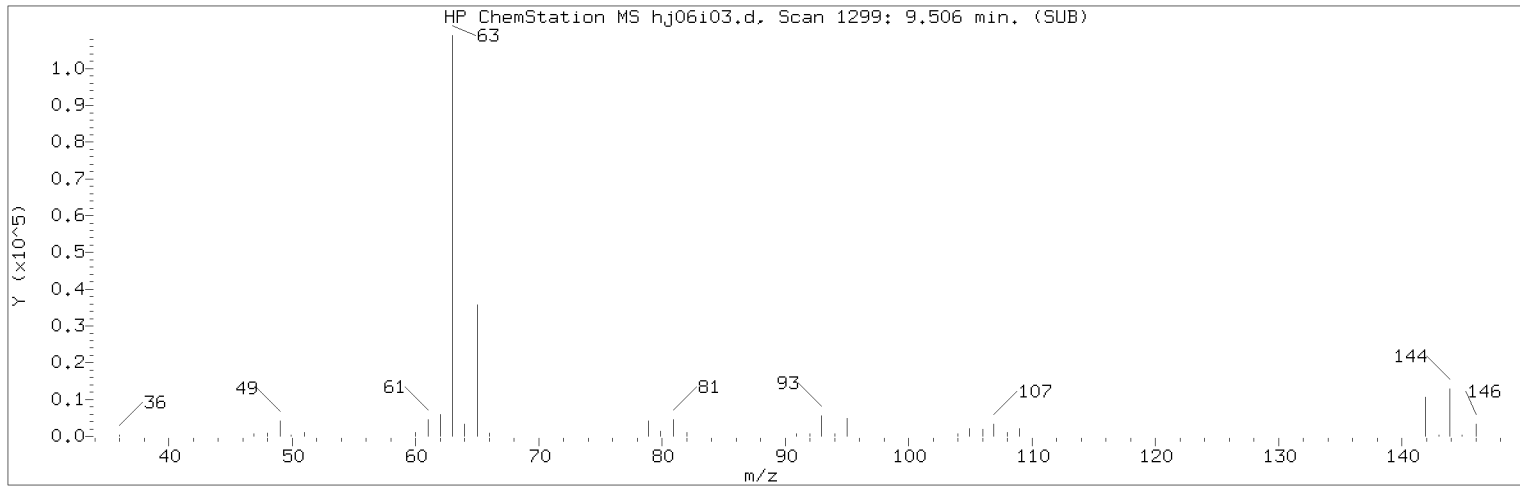
Lab Sample ID: VSTD005

Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 365903	
On-column Amount (ng)	: 48.6326	
Integration start scan	: 1264	Integration stop scan: 1316
Y at integration start	: 0	Y at integration end: 0

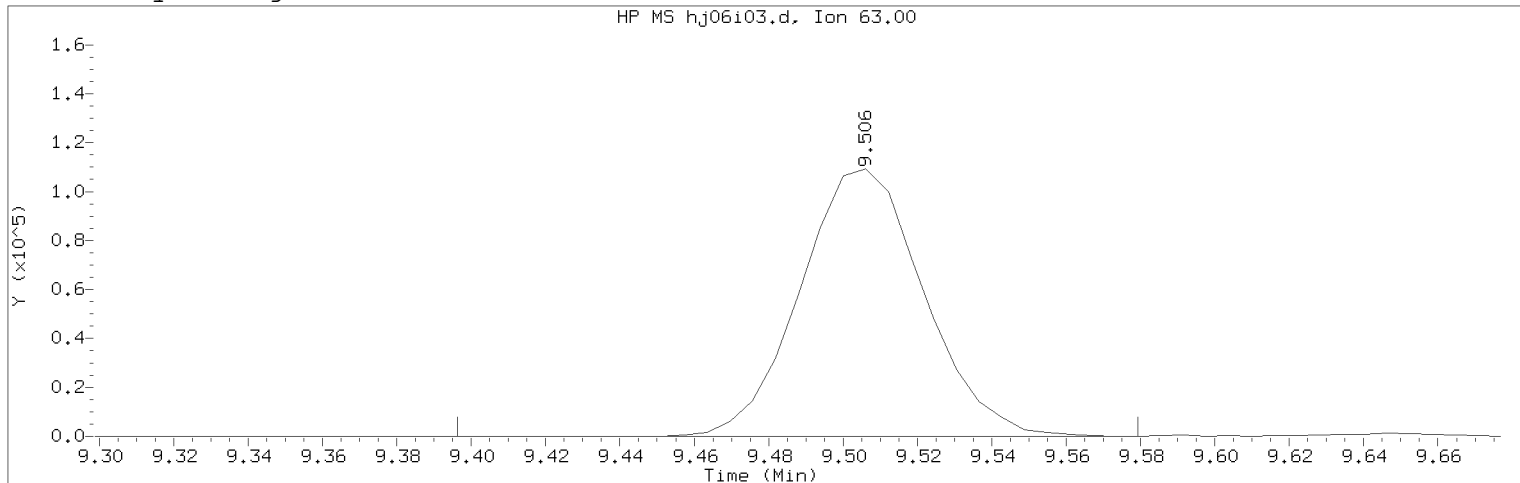
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 596 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

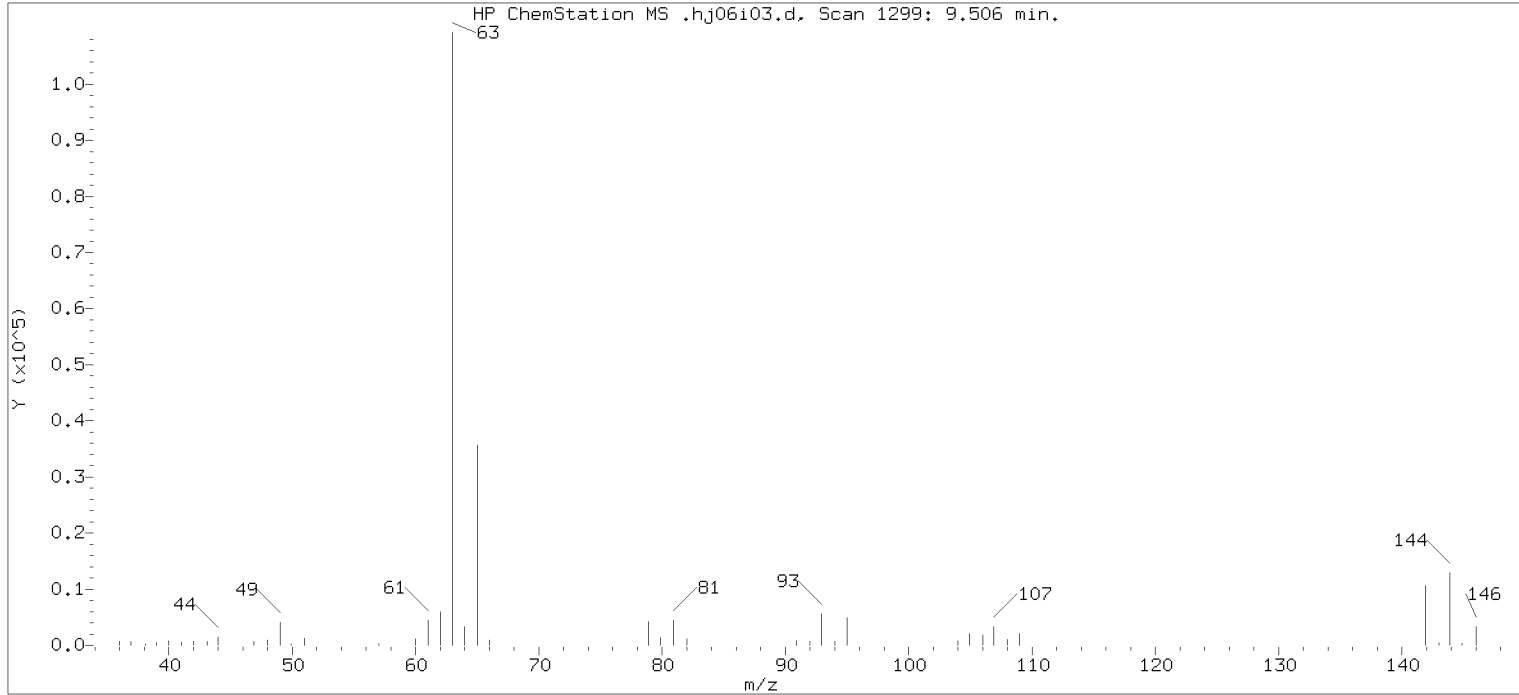
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 251630M
On-Column Amount (ng) : 5.0429
Integration start scan : 1280 Integration stop scan: 1310
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

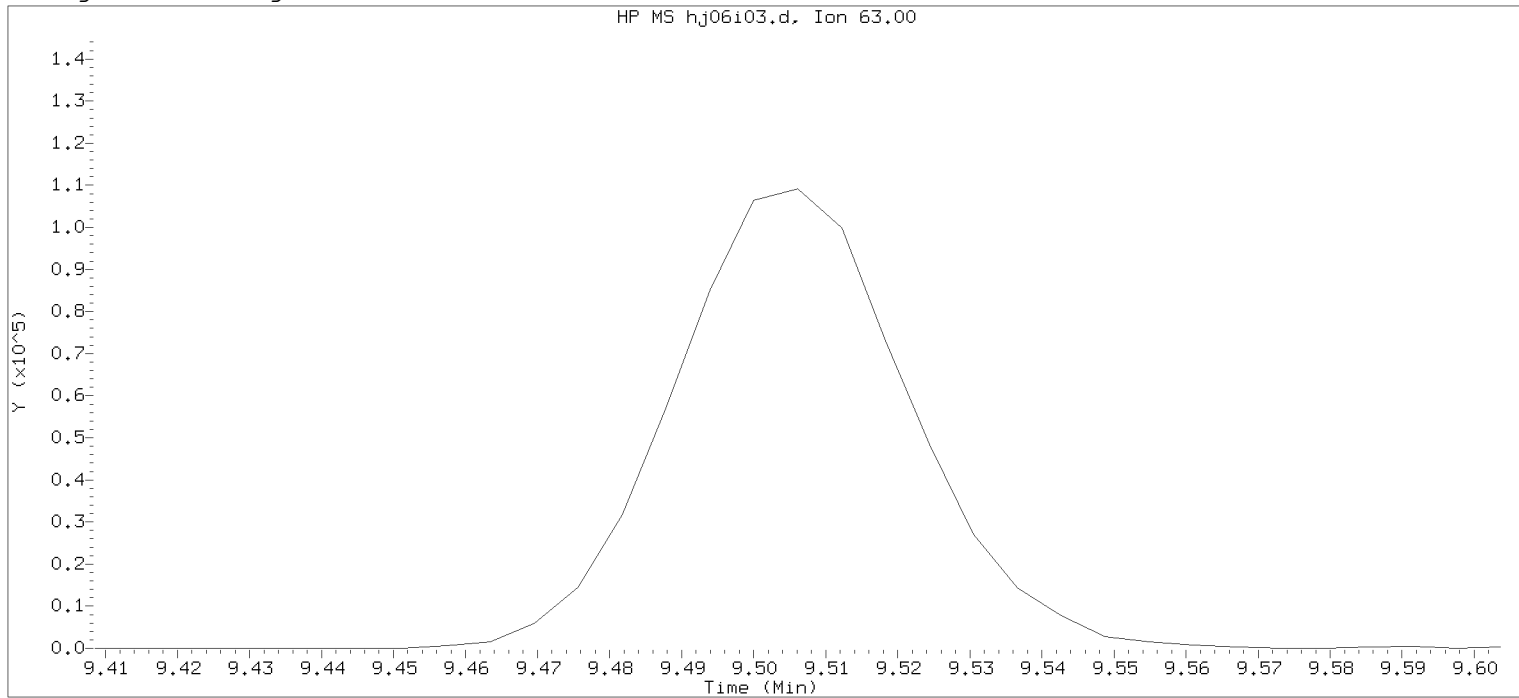
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

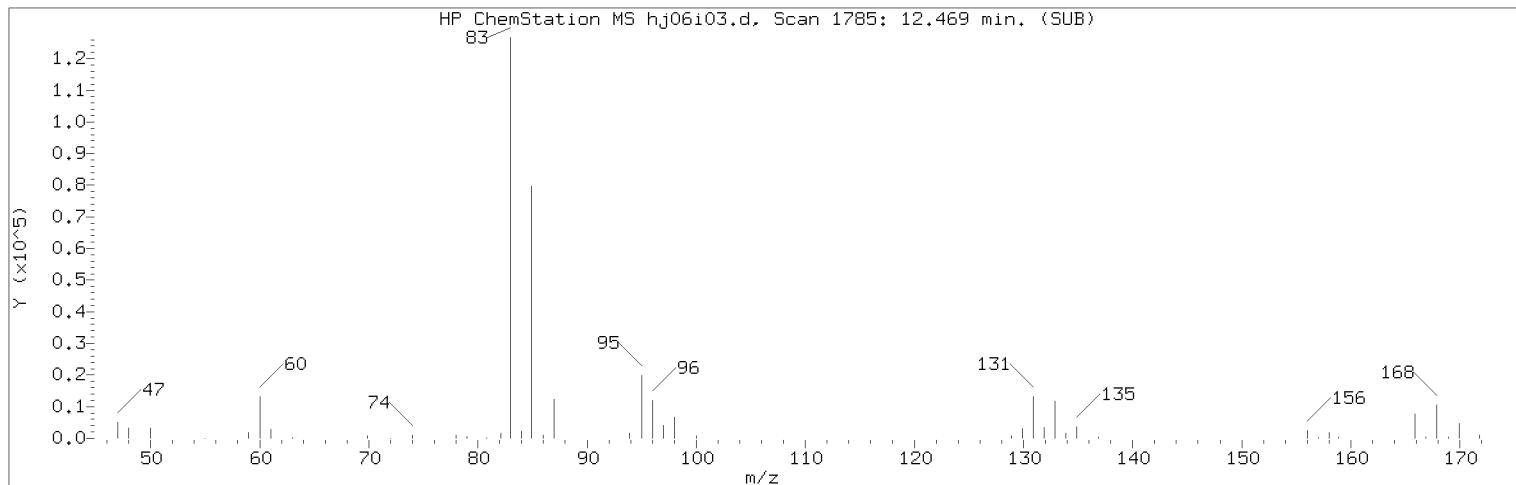
Sample Name: VSTD005

Lab Sample ID: VSTD005

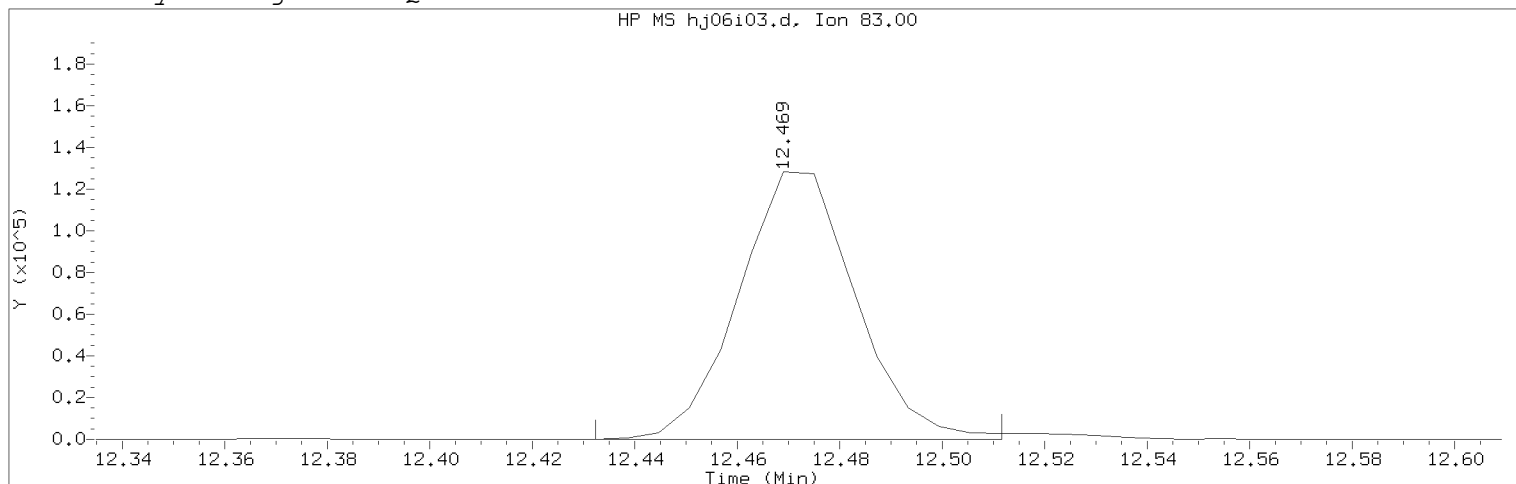
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

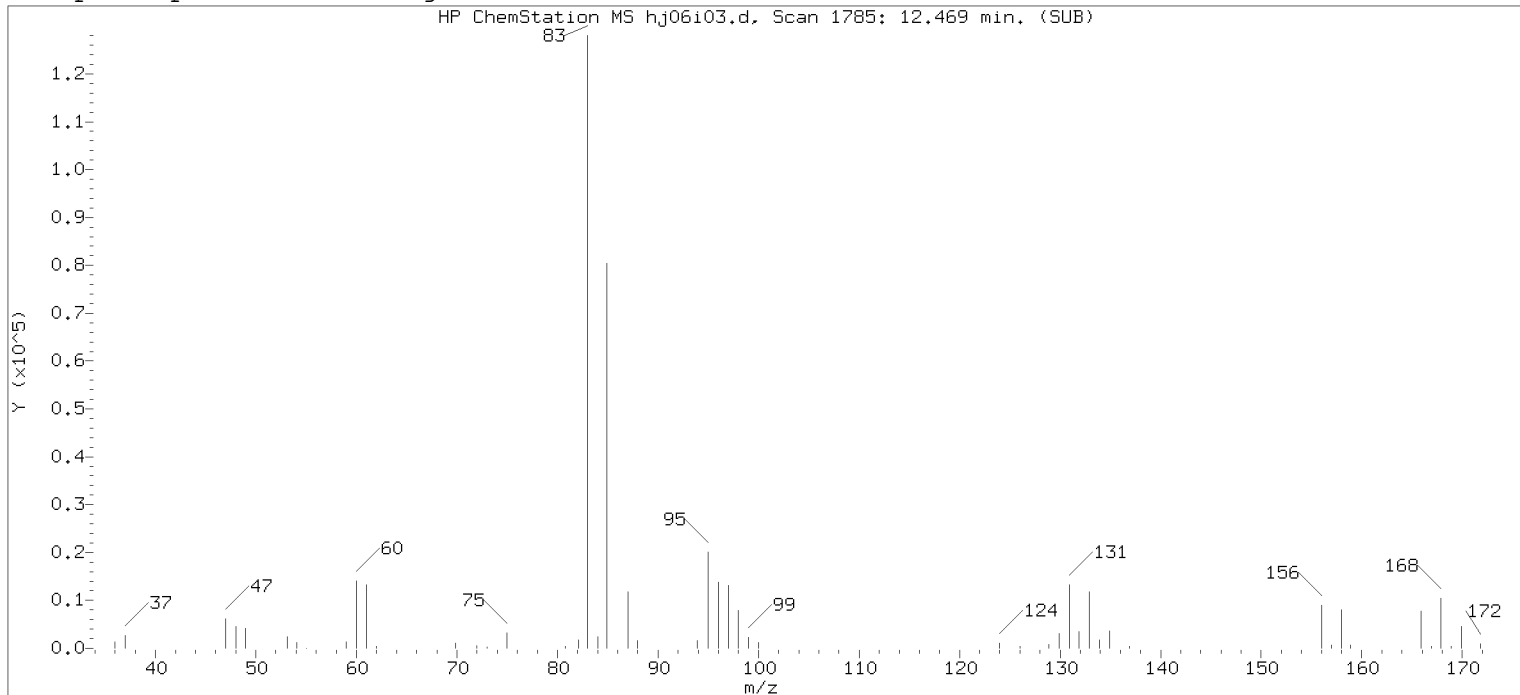
Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1785	
Retention Time (minutes)	: 12.469	
Quant Ion	: 83.00	
Area (flag)	: 203525M	
On-Column Amount (ng)	: 5.0485	
Integration start scan	: 1778	Integration stop scan: 1791
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

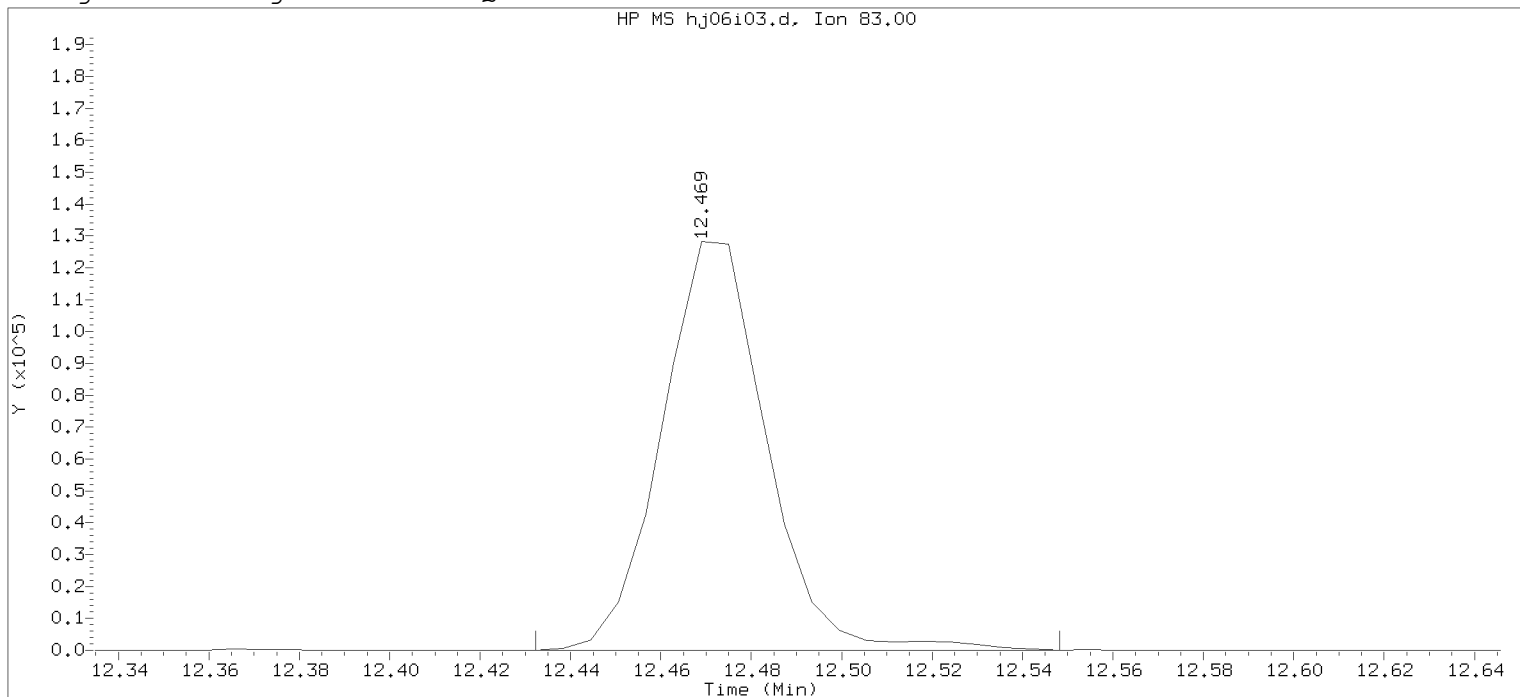
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

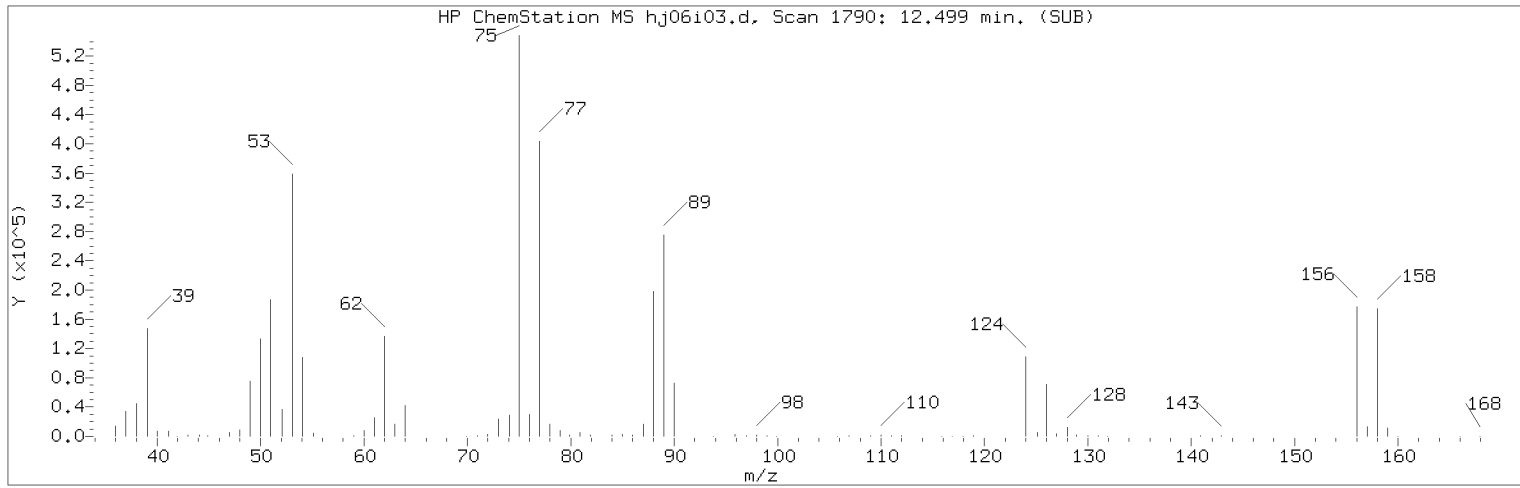
Lab Sample ID: VSTD005

Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1785	
Retention Time (minutes)	: 12.469	
Quant Ion	: 83.00	
Area	: 206626	
On-column Amount (ng)	: 4.9272	
Integration start scan	: 1778	Integration stop scan: 1797
Y at integration start	: 0	Y at integration end: 0

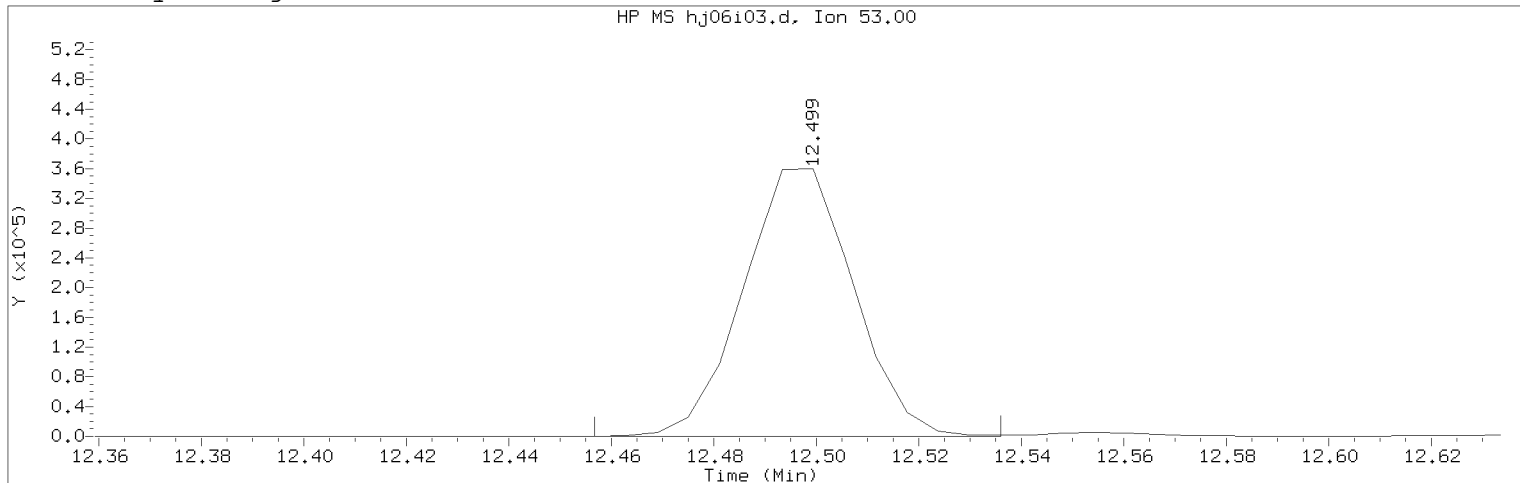
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 2600 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

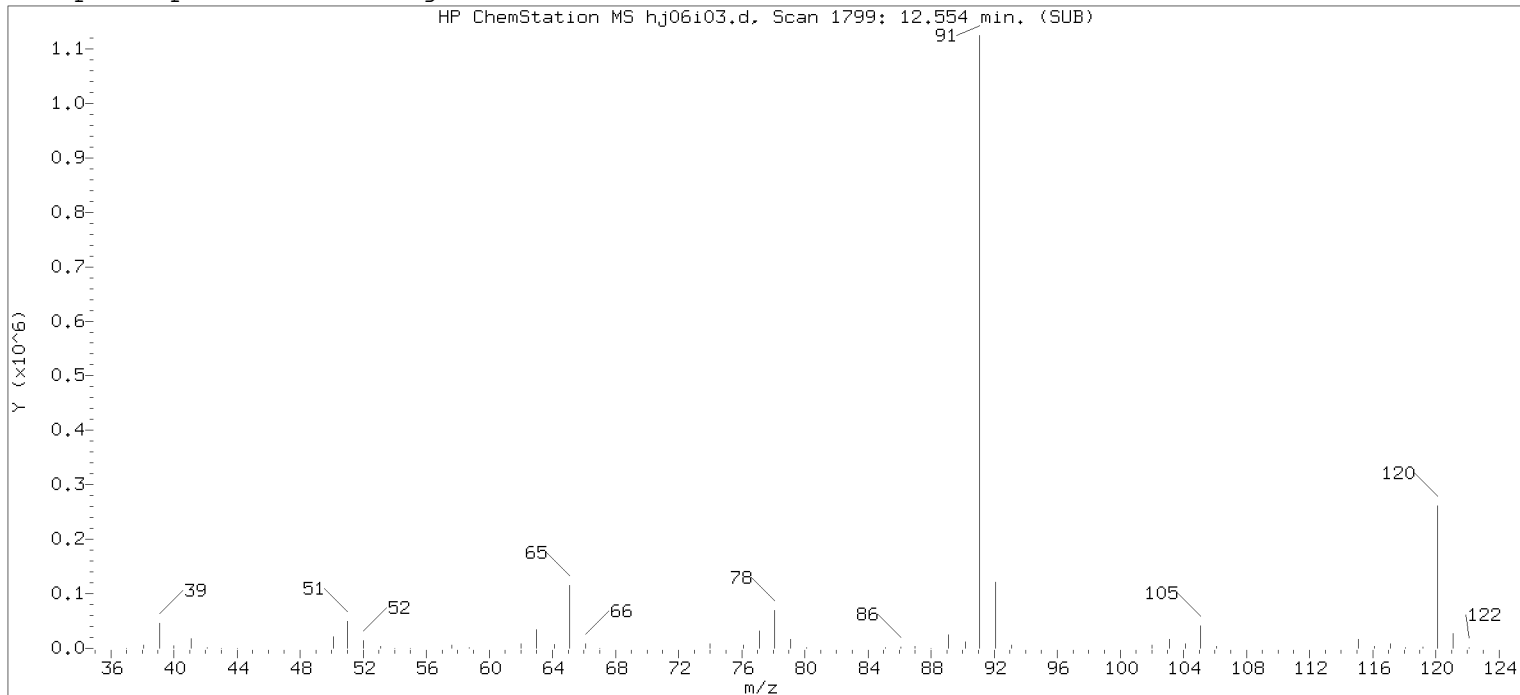
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1790	
Retention Time (minutes)	: 12.499	
Quant Ion	: 53.00	
Area (flag)	: 538157A	
On-Column Amount (ng)	: 52.8194	
Integration start scan	: 1782	Integration stop scan: 1795
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

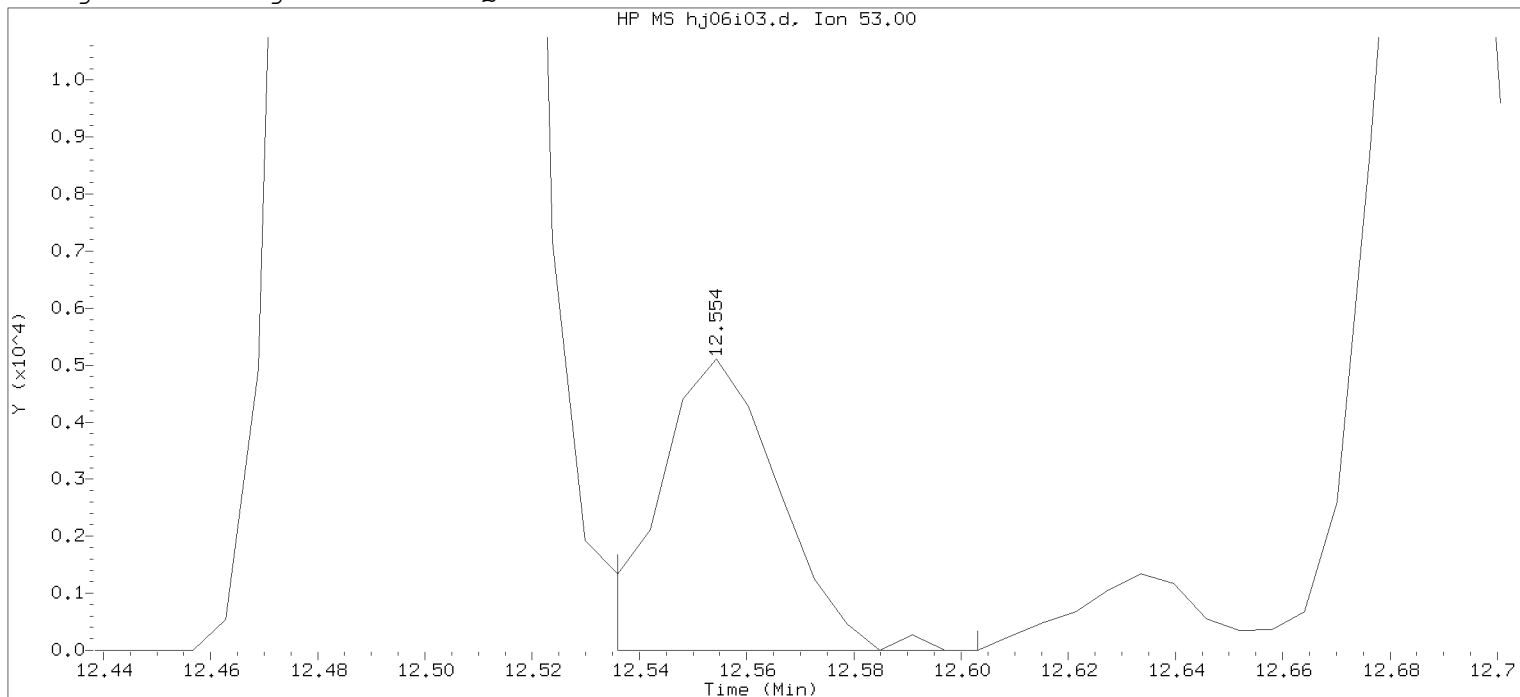
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

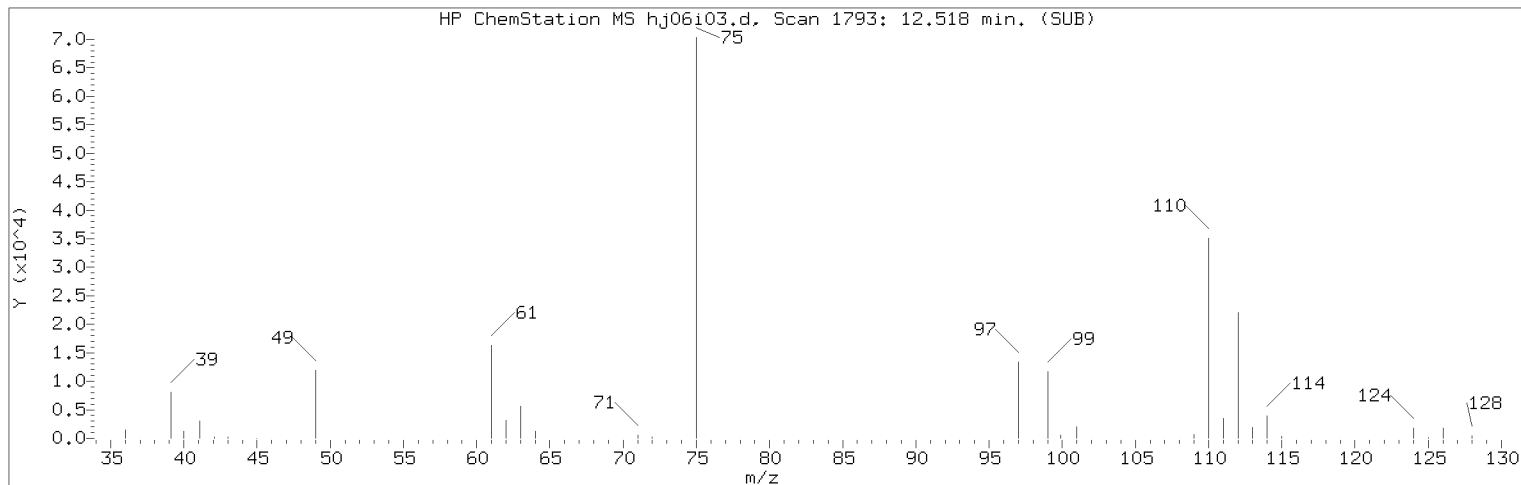
Sample Name: VSTD005

Lab Sample ID: VSTD005

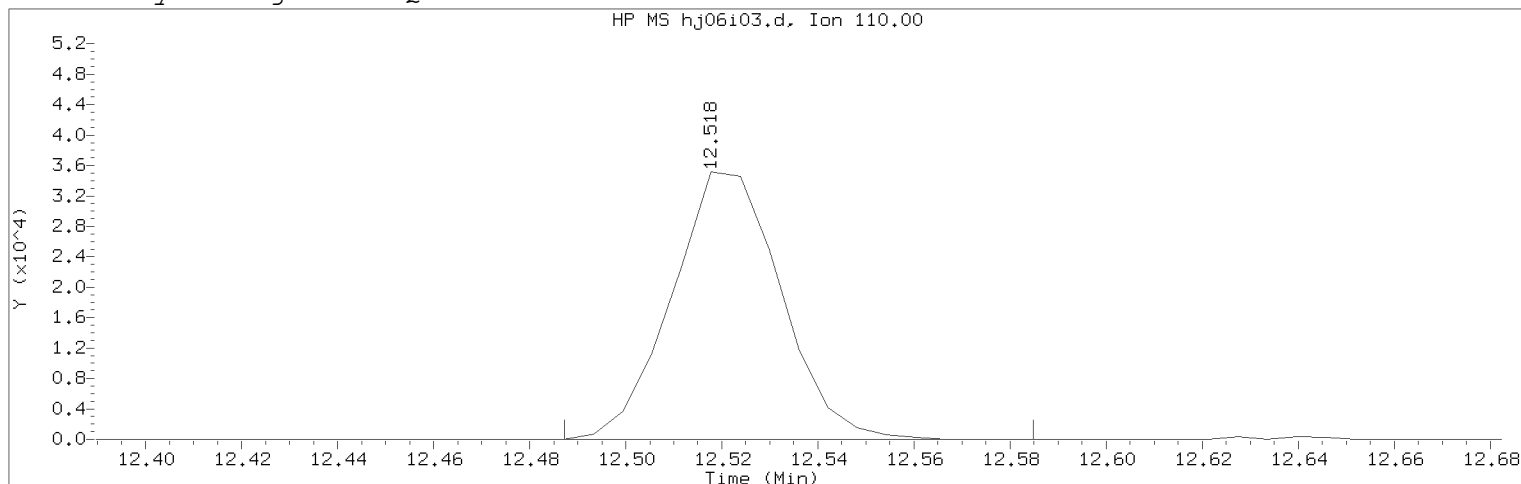
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1799	
Retention Time (minutes)	: 12.554	
Quant Ion	: 53.00	
Area	: 7791	
On-column Amount (ng)	: 2.1518	
Integration start scan	: 1795	Integration stop scan: 1806
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 602 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

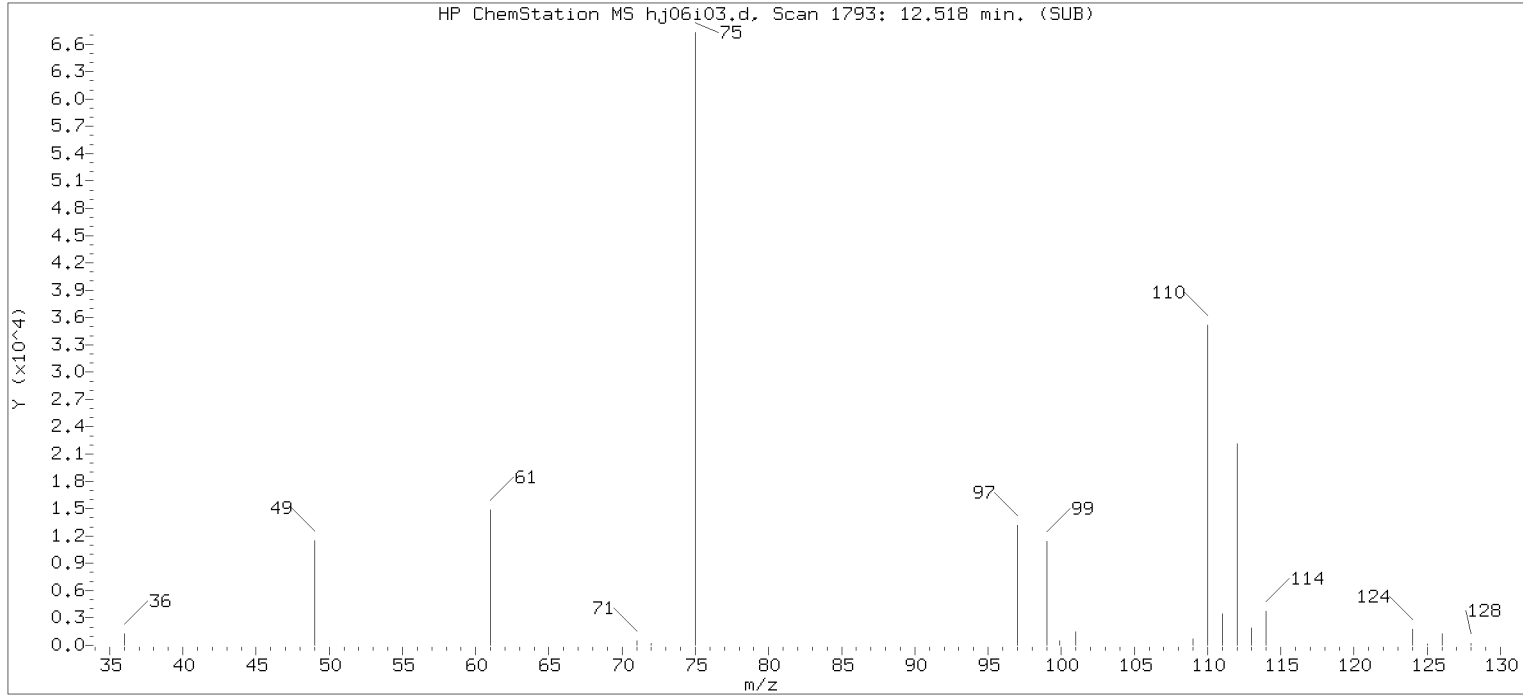
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1793	
Retention Time (minutes)	: 12.518	
Quant Ion	: 110.00	
Area (flag)	: 55435M	
On-Column Amount (ng)	: 5.1350	
Integration start scan	: 1787	Integration stop scan: 1803
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

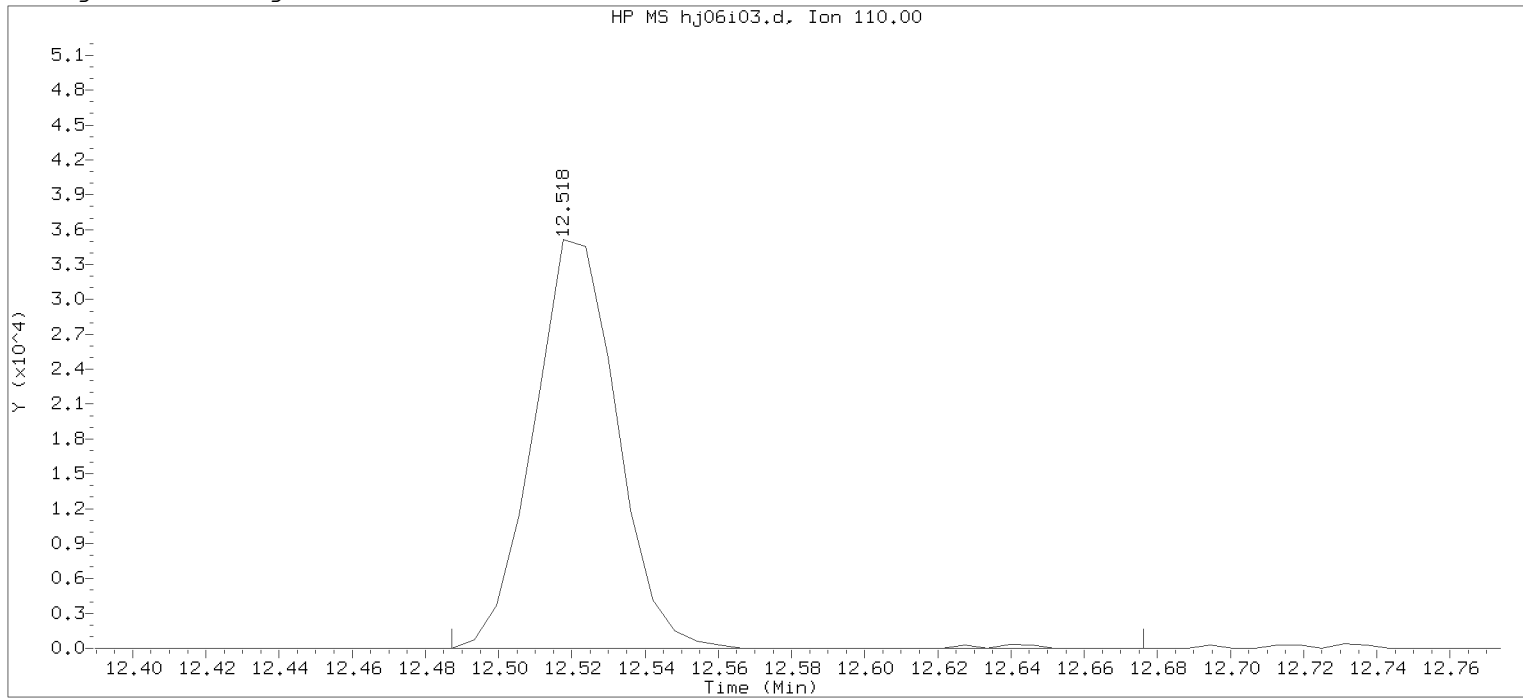
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

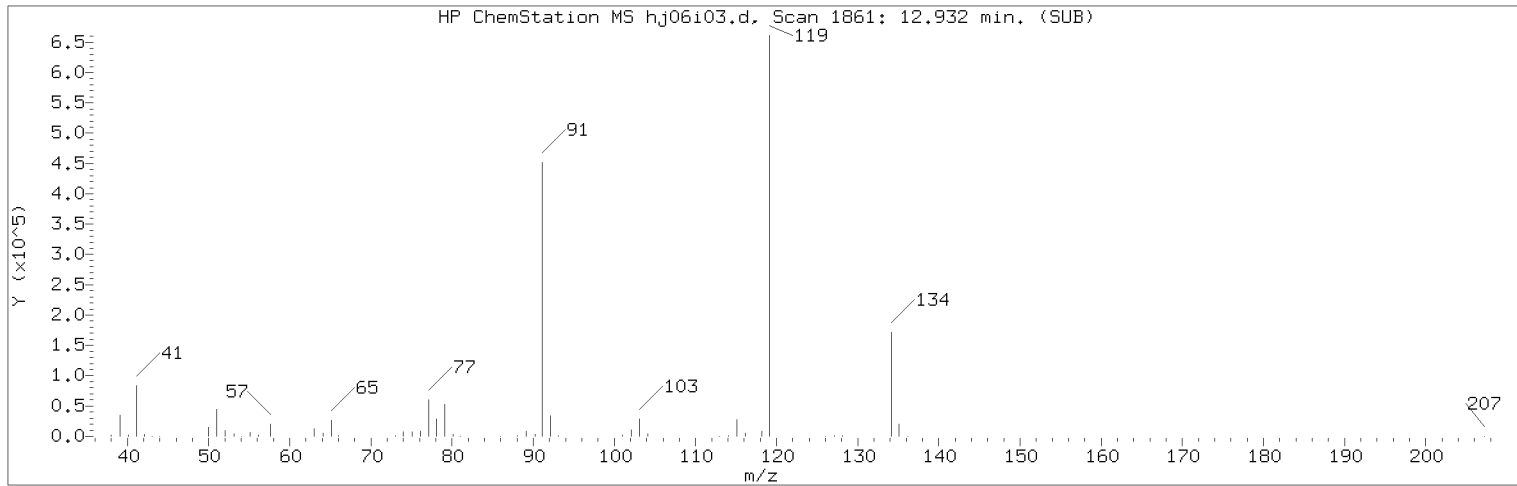
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

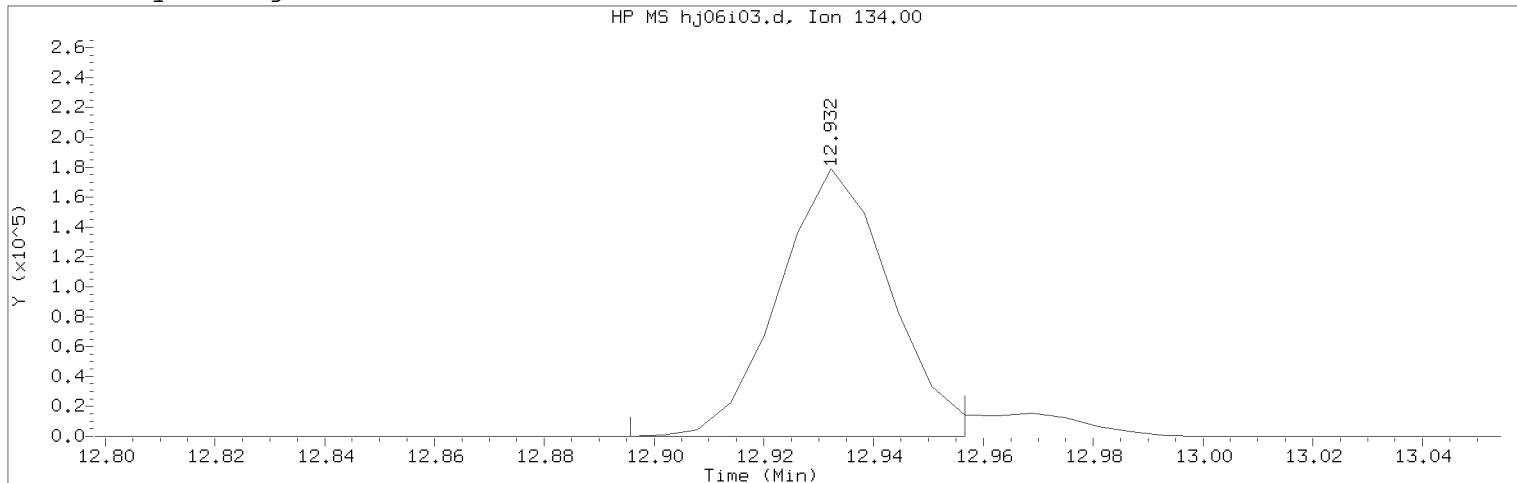
Lab Sample ID: VSTD005

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1793	
Retention Time (minutes)	: 12.518	
Quant Ion	: 110.00	
Area	: 55764	
On-column Amount (ng)	: 5.0515	
Integration start scan	: 1787	Integration stop scan: 1818
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

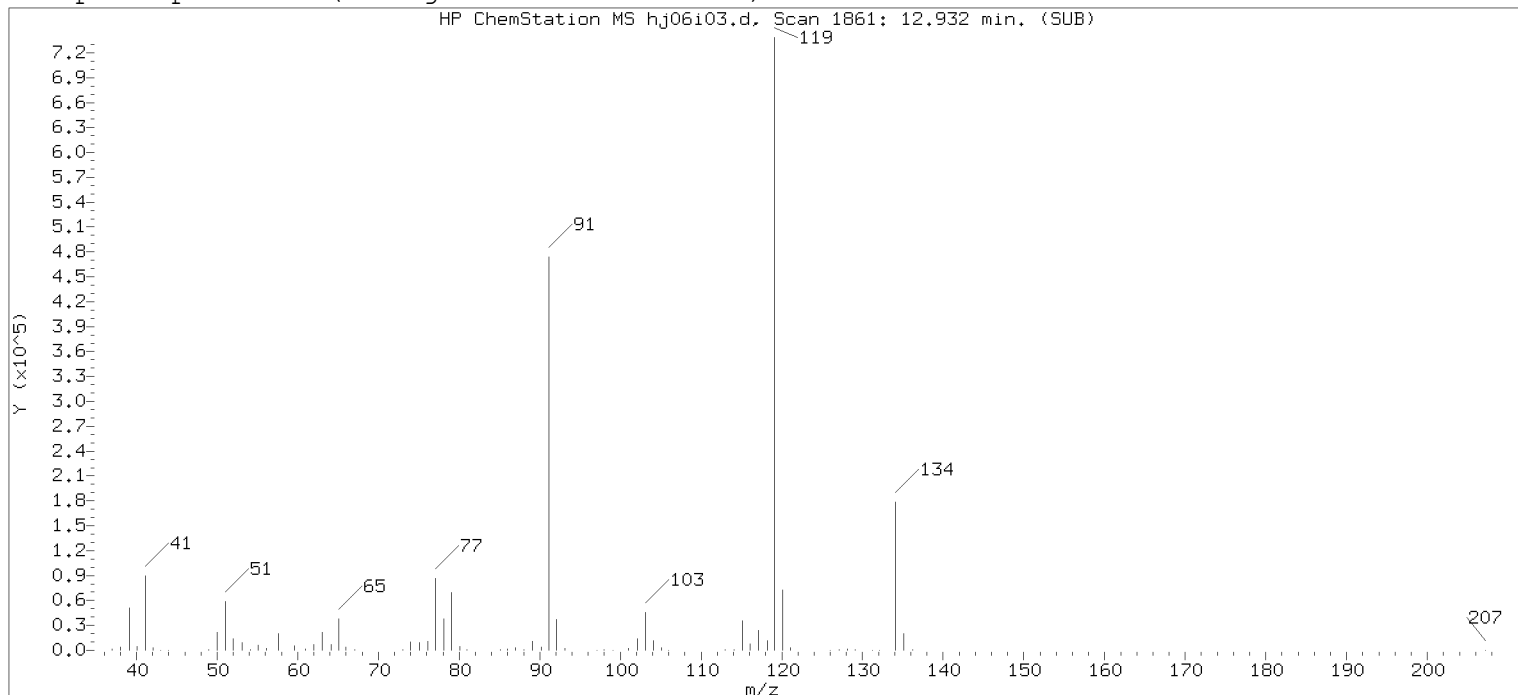
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 252740M
On-Column Amount (ng) : 5.2936
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

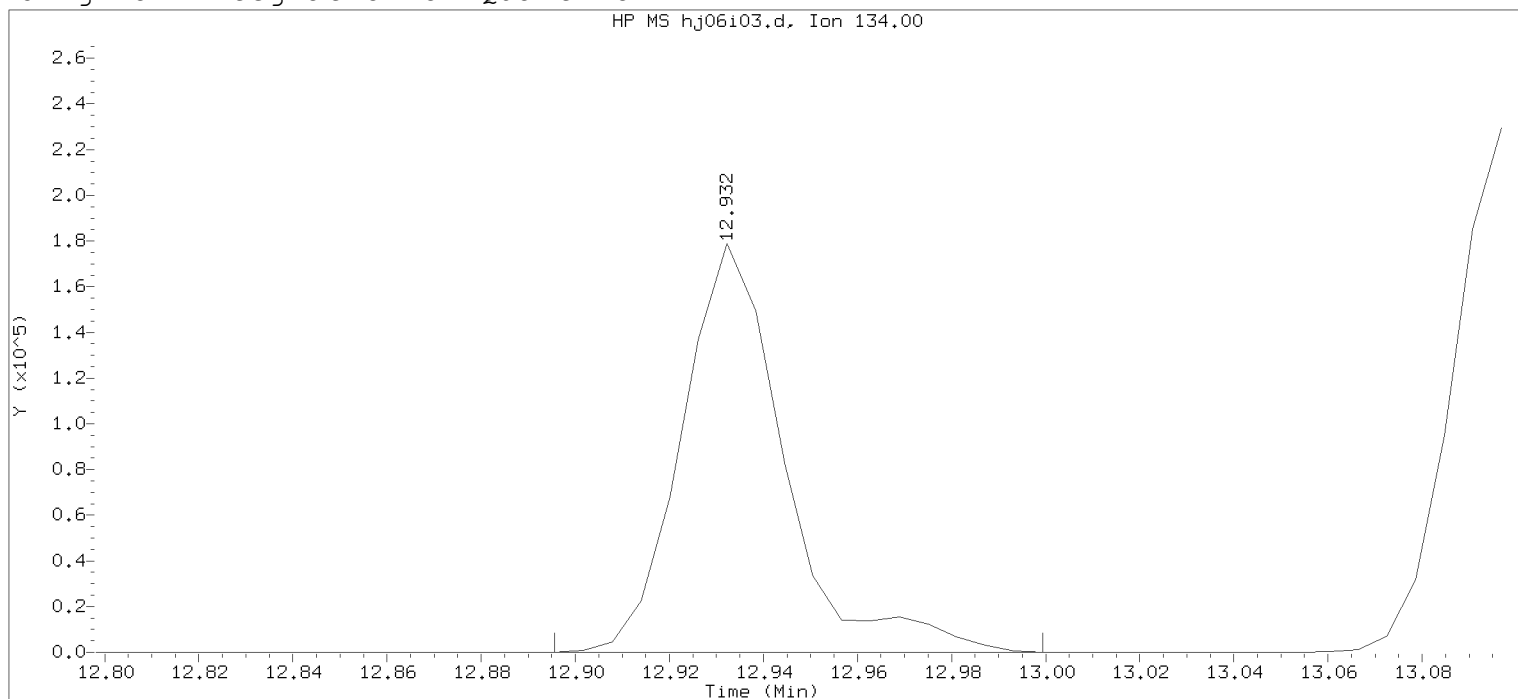
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

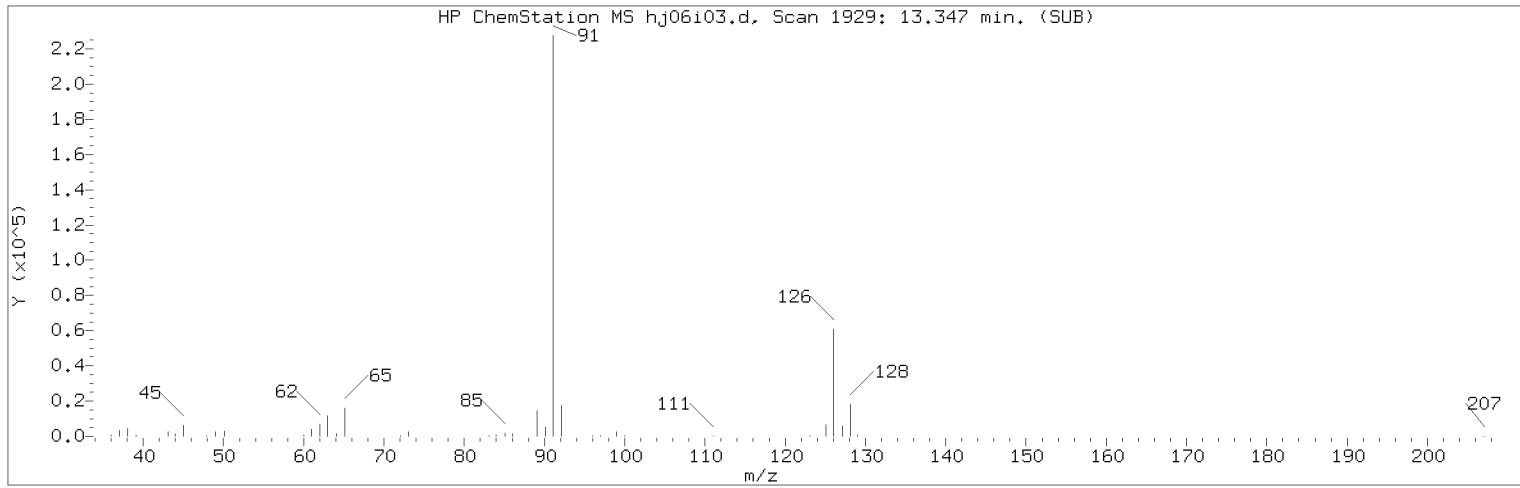
Sample Name: VSTD005

Lab Sample ID: VSTD005

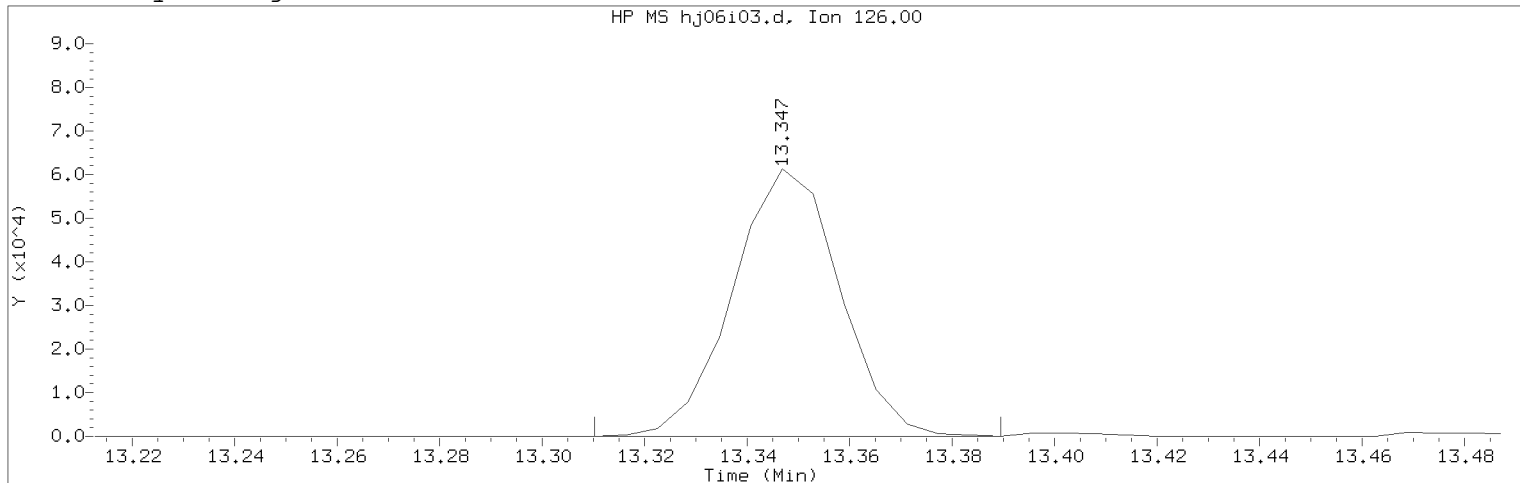
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1861	
Retention Time (minutes)	: 12.932	
Quant Ion	: 134.00	
Area	: 271783	
On-column Amount (ng)	: 5.2974	
Integration start scan	: 1854	Integration stop scan: 1871
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2606 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

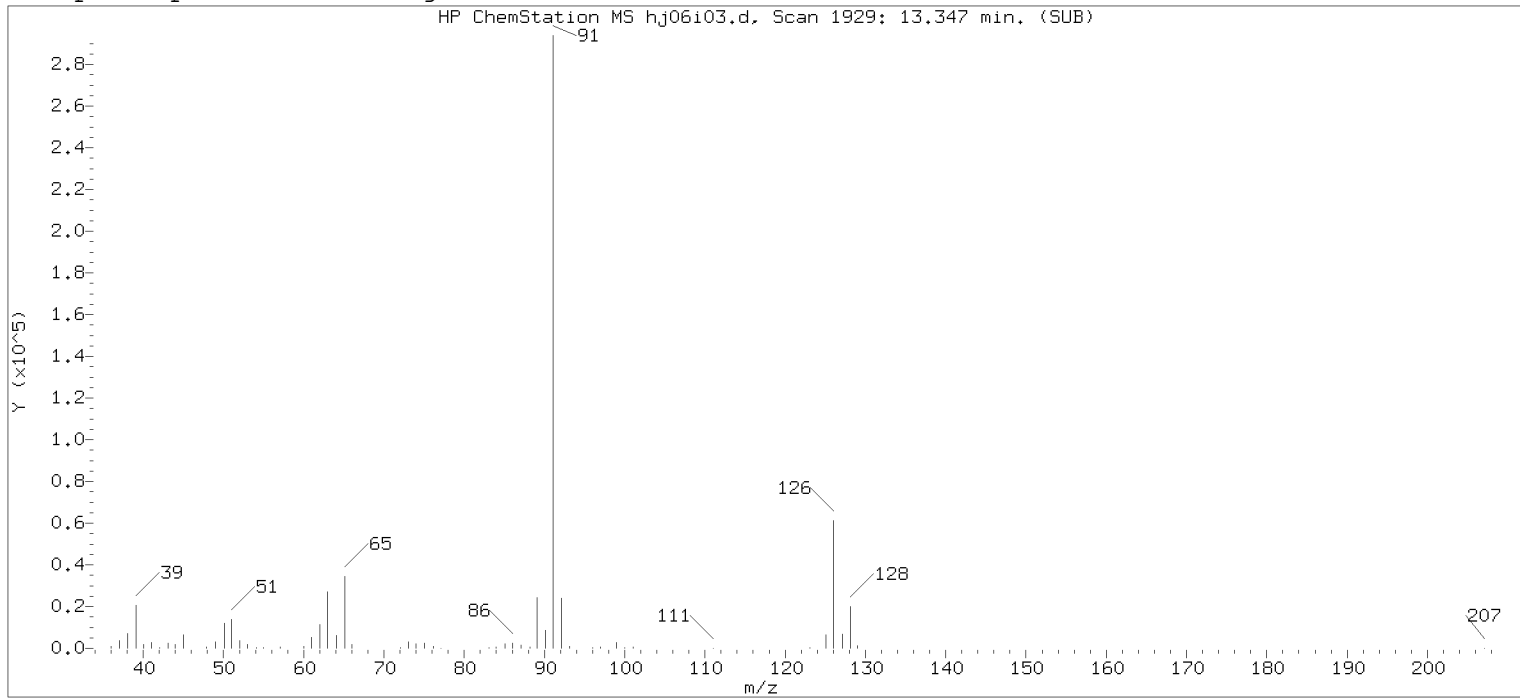
Compound Number : 137
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 88697M
On-Column Amount (ng) : 5.2335
Integration start scan : 1922 Integration stop scan: 1935
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

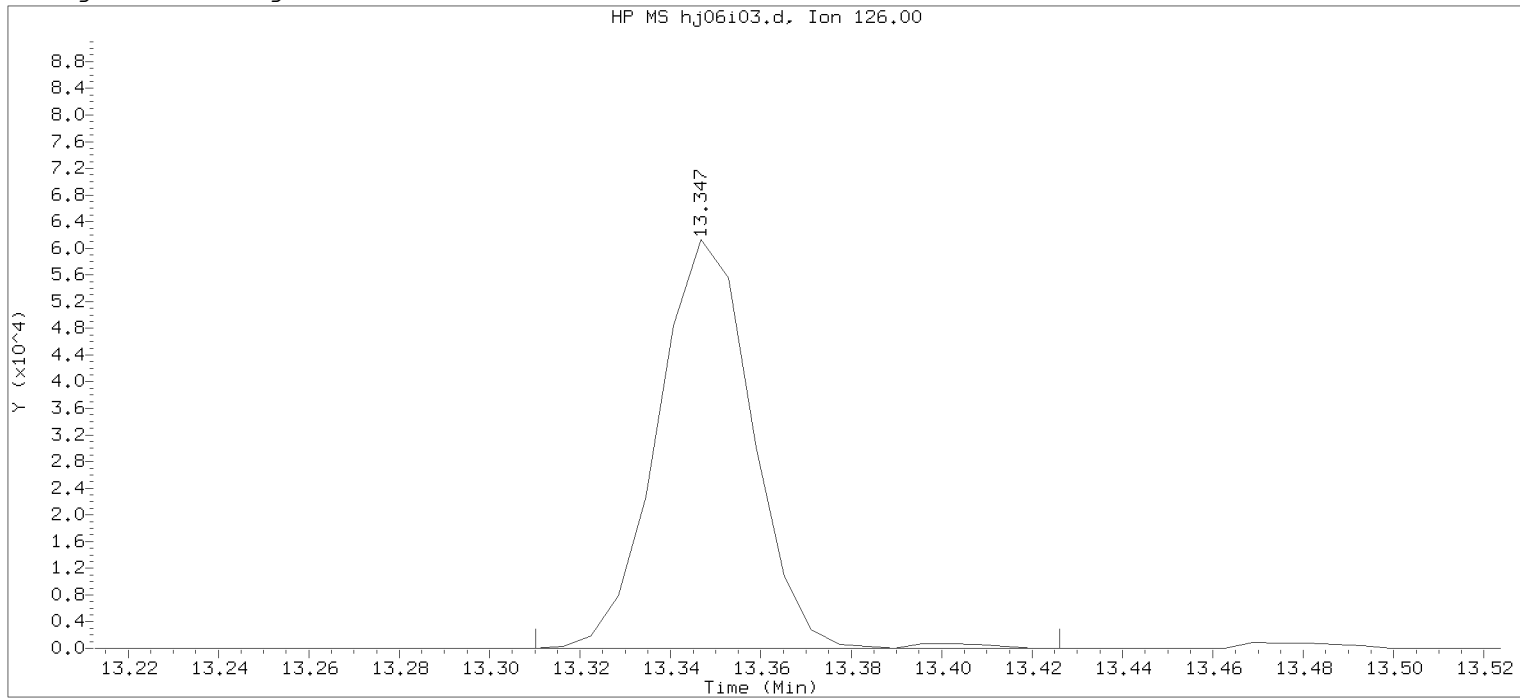
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

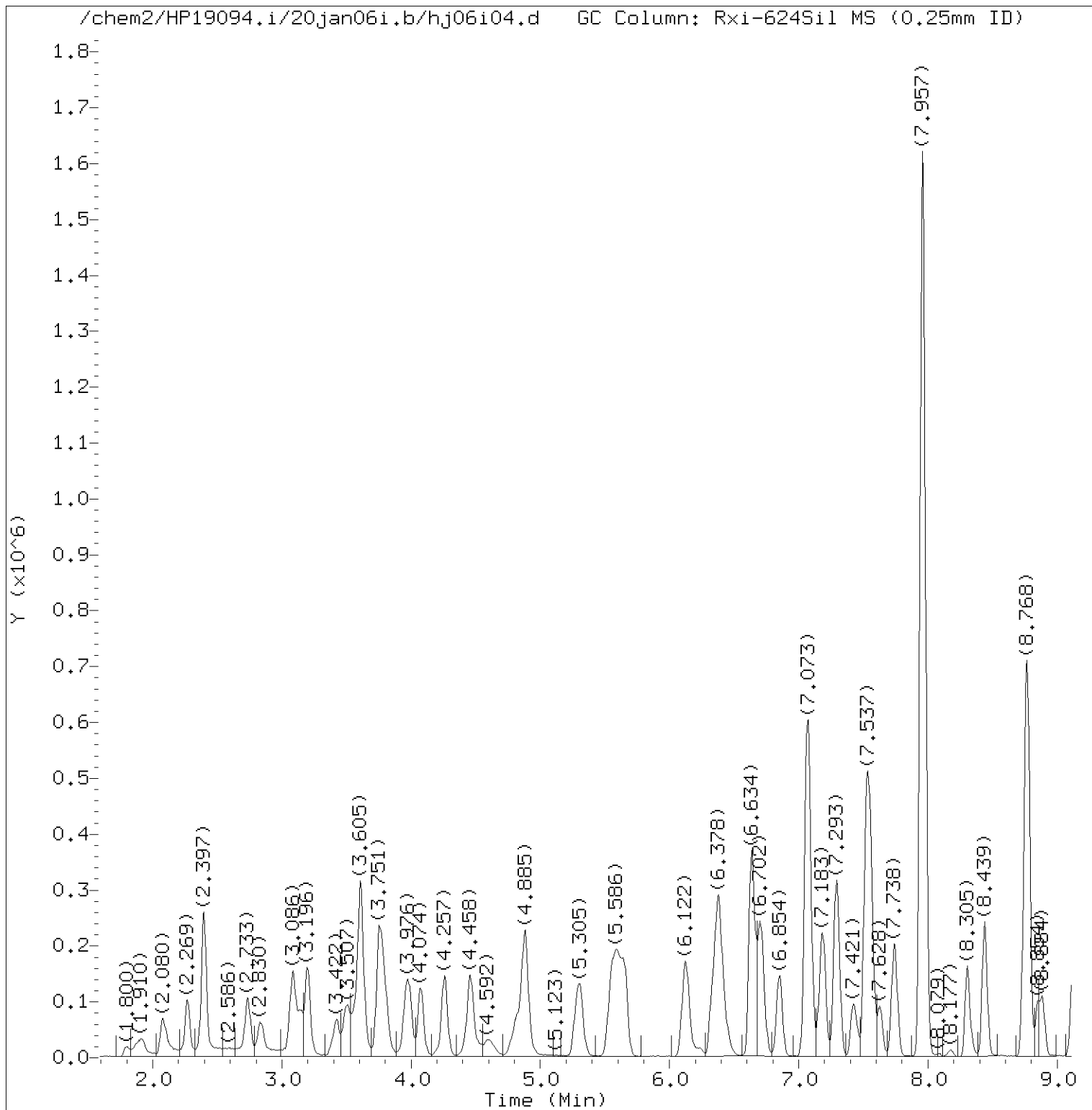
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area	: 89552	
On-column Amount (ng)	: 4.9342	
Integration start scan	: 1922	Integration stop scan: 1941
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 608 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
Analyst ID: JKH09052

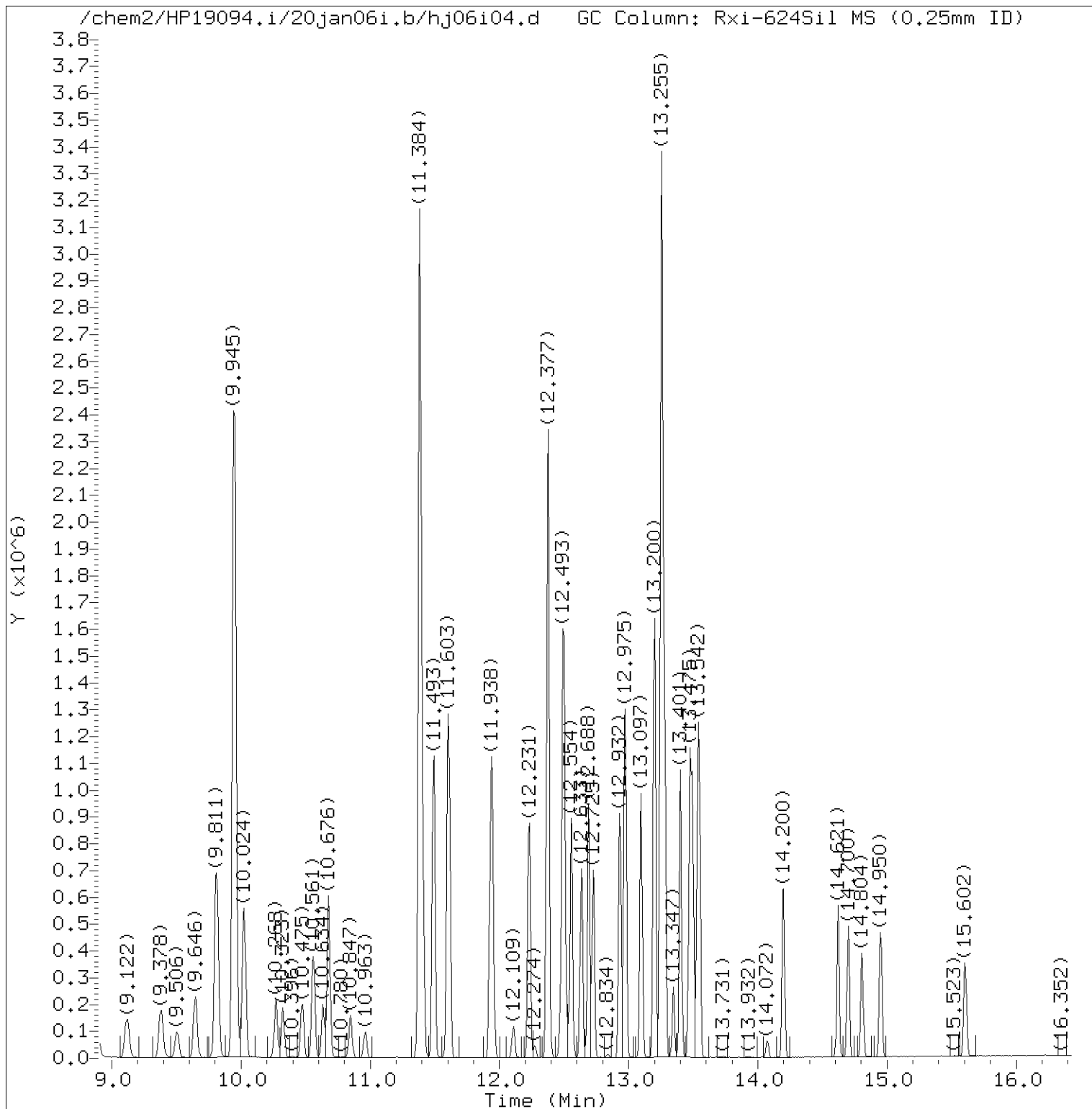
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.074	85	149722M	2.007
2) Chloromethane	(2)	2.269	50	143350	1.947
5) Vinyl Chloride	(2)	2.391	62	139052	1.985
6) 1,3-Butadiene	(2)	2.397	39	109568M	1.980
7) Bromomethane	(2)	2.733	94	98480	1.963
8) Chloroethane	(2)	2.830	64	79733	1.966
9) Dichlorofluoromethane	(2)	3.080	67	190321	1.976
10) Trichlorofluoromethane	(2)	3.147	101	164218M	2.054
11) Ethyl ether	(2)	3.422	59	70074	1.981
12) Freon 123a	(2)	3.507	67	122953	1.989
13) Acrolein	(1)	3.605	56	545377	96.587
15) 1,1-Dichloroethene	(2)	3.751	96	96615	1.987
16) Freon 113	(2)	3.781	101	103861	2.044
14) Acetone	(1)	3.787	43	144771M	19.001
17) Methyl Iodide	(2)	3.958	142	187692	2.001
18) Bromoethane	(2)	3.989	108	82628M	1.948
19) Carbon Disulfide	(2)	4.074	76	296775	1.995
22) Methyl Acetate	(1)	4.233	43	37019	1.925
23) Allyl Chloride	(2)	4.263	41	158359	1.917
24) Methylene Chloride	(2)	4.458	84	102992	1.968
27)*t-Butyl Alcohol-d10	(1)	4.458	65	125392	50.000
29) t-Butyl Alcohol	(1)	4.592	59	106730	40.326
30) Acrylonitrile	(1)	4.806	53	92174	9.914
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	225215	2.026
32) trans-1,2-Dichloroethene	(2)	4.885	96	104955	1.964
33) n-Hexane	(2)	5.305	57	151979	2.016
34) 1,1-Dichloroethane	(2)	5.549	63	191645	1.986
35) di-Isopropyl Ether	(2)	5.592	45	317427	1.997
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	163907	1.984
41) 1,2-Dichloroethene (Total)	(2)		96	221882	3.933
38) Ethyl t-butyl ether	(2)	6.122	59	297914	1.997
39) 2-Butanone	(1)	6.330	43	229650	19.277
40) cis-1,2-Dichloroethene	(2)	6.372	96	116927	1.969
42) 2,2-Dichloropropane	(2)	6.391	77	163308	1.989
43) Propionitrile	(1)	6.421	54	127206	38.980
46) Methacrylonitrile	(1)	6.634	67	229628	19.674
48) Bromochloromethane	(2)	6.702	128	49796	1.986
49) Tetrahydrofuran	(1)	6.708	71	65232	19.819

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
 Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	192171	2.041
51) \$Dibromofluoromethane	(2)	7.067	113	496104	10.029
51) \$Dibromofluoromethane	(2)	7.067	111	509210	10.019
52) 1,1,1-Trichloroethane	(2)	7.086	97	175404M	2.003
53) Cyclohexane	(2)	7.183	56	186820	1.997
53) Cyclohexane	(2)	7.177	84	162834	2.032
53) Cyclohexane	(2)	7.183	69	58825	2.021
56) 1,1-Dichloropropene	(2)	7.293	75	148995M	2.013
55) Carbon Tetrachloride	(2)	7.299	117	149793	1.995
57) Isobutyl Alcohol	(1)	7.427	41	87698	95.594
58) \$1,2-Dichloroethane-d4	(2)	7.518	102	97406M	10.160
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	448109	10.130
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	61677	10.157
59) Benzene	(2)	7.555	78	433340	2.002
60) 1,2-Dichloroethane	(2)	7.628	62	108570	1.945
61) t-Amyl methyl ether	(2)	7.738	73	264747	2.034
64) *Fluorobenzene	(2)	7.957	96	1989998	10.000
63) n-Heptane	(2)	7.963	43	157624	1.993
66) n-Butanol	(1)	8.305	56	150886	204.300
68) Trichloroethene	(2)	8.439	95	113182	1.994
70) Methylcyclohexane	(2)	8.750	83	207251	2.038
71) 1,2-Dichloropropane	(2)	8.774	63	108667	2.029
72) Methyl Methacrylate	(1)	8.847	69	46099	1.963
73) 1,4-Dioxane	(1)	8.872	88	20263M	113.754
74) Dibromomethane	(2)	8.890	93	49061	2.004
75) Bromodichloromethane	(2)	9.122	83	133411	2.005
77) 2-Nitropropane	(1)	9.384	41	149212	19.349
80) 1-Bromo-2-chloroethane	(2)	9.506	63	99821M	1.983
81) cis-1,3-Dichloropropene	(2)	9.646	75	157293	2.002
82) 4-Methyl-2-Pentanone	(1)	9.811	43	574351	19.560
83) \$Toluene-d8	(3)	9.945	98	1981567	10.088
83) \$Toluene-d8	(3)	9.945	100	1279443	10.071
84) Toluene	(3)	10.024	92	277903	2.014
86) 1,3-Dichloropropene (total)	(3)		75	285756	4.008
85) trans-1,3-Dichloropropene	(3)	10.268	75	128463	2.006
87) Ethyl Methacrylate	(3)	10.323	69	99403	2.002
89) 1,1,2-Trichloroethane	(3)	10.475	97	68554	1.977
90) Tetrachloroethene	(3)	10.561	166	125130	1.995

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	119837	2.012
92) 2-Hexanone	(1)	10.676	43	394884	19.681
94) Dibromochloromethane	(3)	10.847	129	88084	1.984
96) 1,2-Dibromoethane	(3)	10.963	107	66500	2.007
97) 1-Chlorohexane	(3)	11.384	91	161874	1.946
98) *Chlorobenzene-d5	(3)	11.384	117	1474389	10.000
99) Chlorobenzene	(3)	11.408	112	302801	2.008
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	107151	1.998
101) Ethylbenzene	(3)	11.493	91	543741	2.003
102) m+p-Xylene	(3)	11.603	106	422690	4.071
106) Xylene (Total)	(3)		106	629842	6.100
105) o-Xylene	(3)	11.932	106	207152	2.029
107) Styrene	(3)	11.944	104	338620	2.044
108) Bromoform	(3)	12.109	173	52526	2.030
109) Isopropylbenzene	(3)	12.231	105	557084	2.013
112) \$4-Bromofluorobenzene	(3)	12.377	95	734942	10.113
112) \$4-Bromofluorobenzene	(3)	12.377	174	626350	10.072
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	82697M	1.995
115) Bromobenzene	(4)	12.493	156	124753	1.991
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	217970	19.761
117) 1,2,3-Trichloropropane	(4)	12.524	110	23119	2.082
118) n-Propylbenzene	(4)	12.554	91	658135	2.011
120) 2-Chlorotoluene	(4)	12.633	126	128157	1.985
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	473210	1.993
123) 4-Chlorotoluene	(4)	12.725	126	128885	2.000
126) tert-Butylbenzene	(4)	12.932	134	95646	1.948
127) Pentachloroethane	(4)	12.969	167	79946	1.910
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	487578	1.989
129) sec-Butylbenzene	(4)	13.097	105	617331	2.007
133) p-Isopropyltoluene	(4)	13.200	119	529063	1.998
132) 1,3-Dichlorobenzene	(4)	13.200	146	249296	1.996
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	794109	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	242806	1.993
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	195936	1.917
137) Benzyl Chloride	(4)	13.347	126	34248M	1.965
139) n-Butylbenzene	(4)	13.493	92	263210	2.011
140) 1,2-Dichlorobenzene	(4)	13.529	146	224925	2.043
144) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	12701	2.019

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

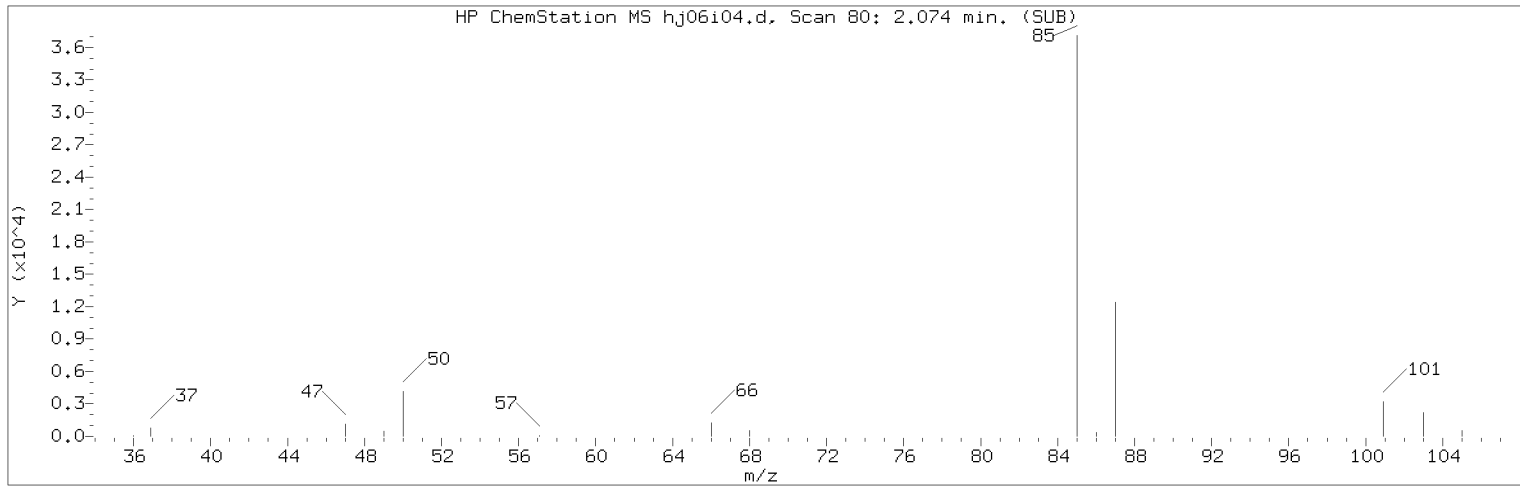
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	189855	1.942
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	158452	1.933
147) Hexachlorobutadiene	(4)	14.700	225	83917	1.962
148) Naphthalene	(4)	14.804	128	283346	1.981
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	138804	1.984

page 4 of 4

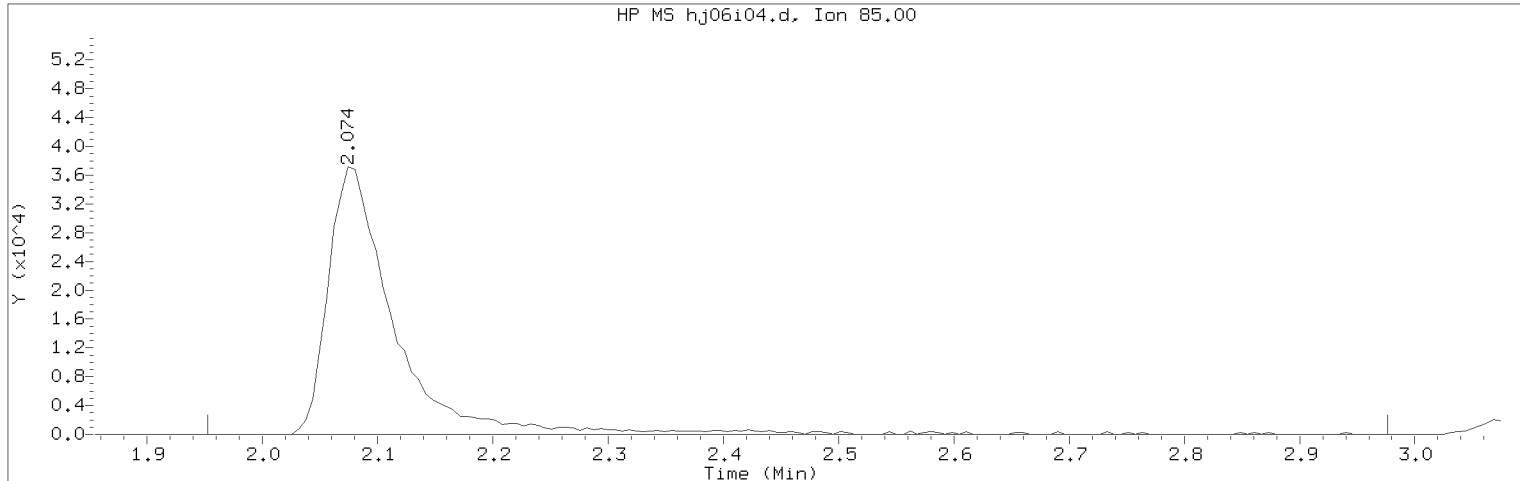
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

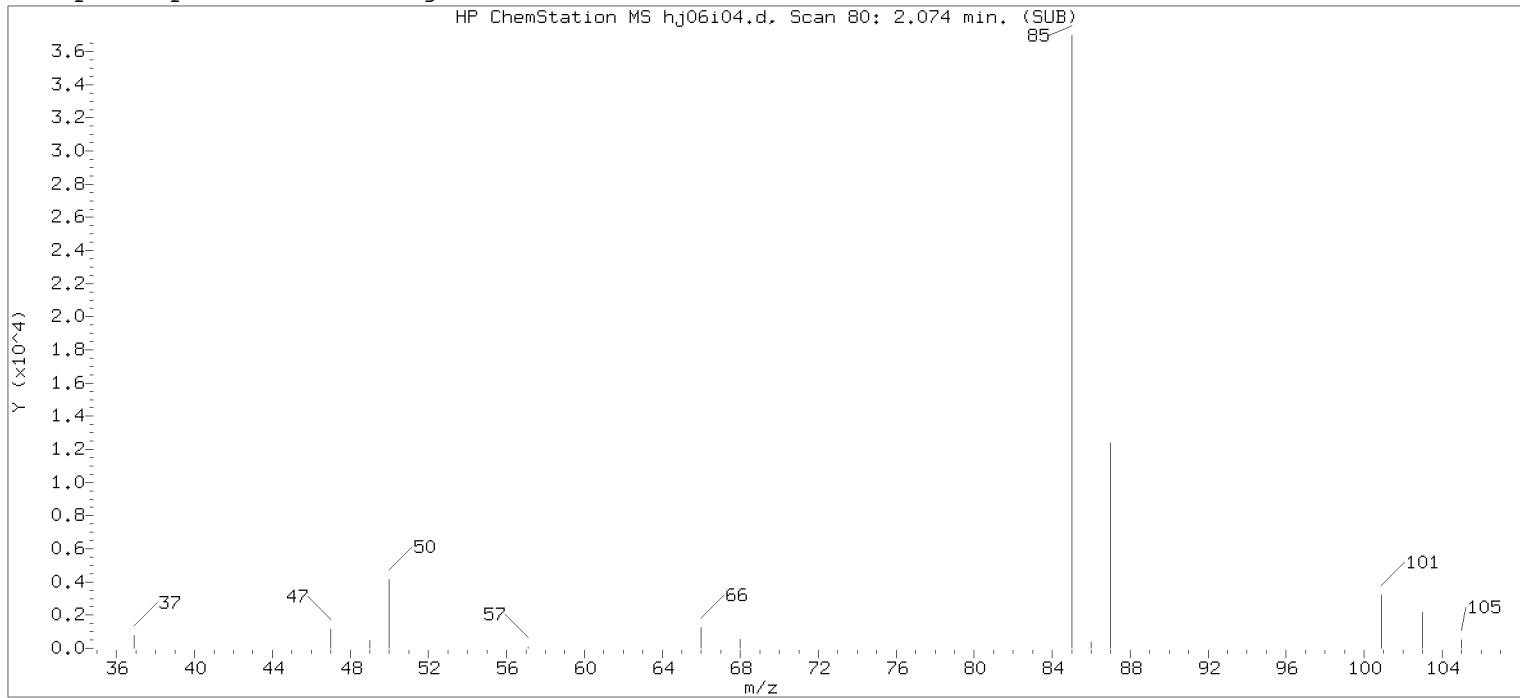
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area (flag) : 149722M
On-Column Amount (ng) : 2.0071
Integration start scan : 59 Integration stop scan: 227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

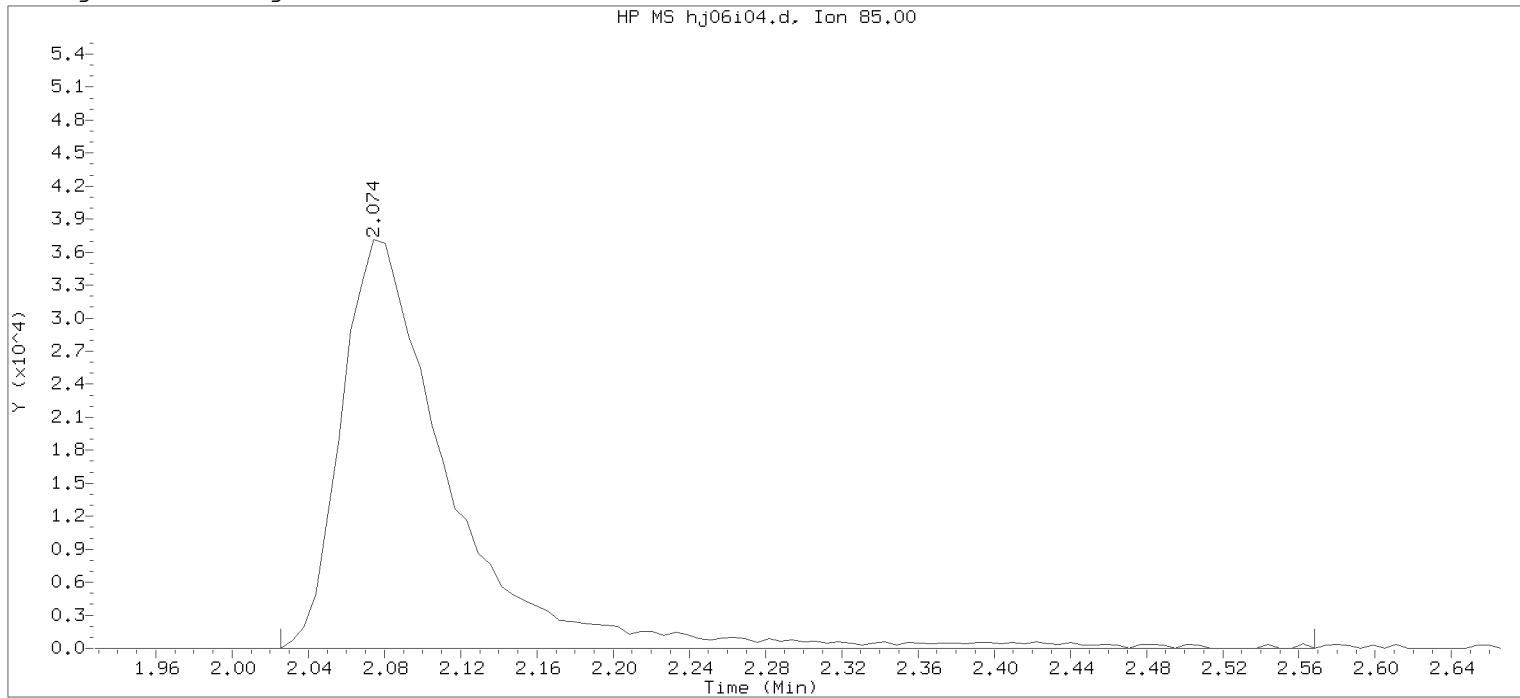
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

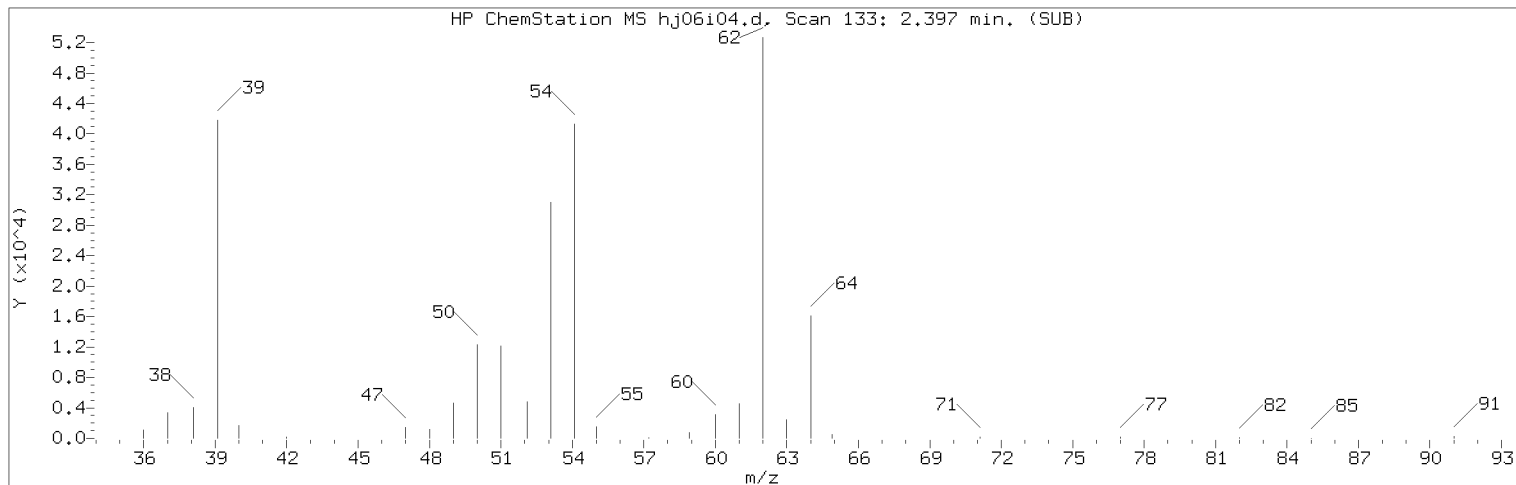
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

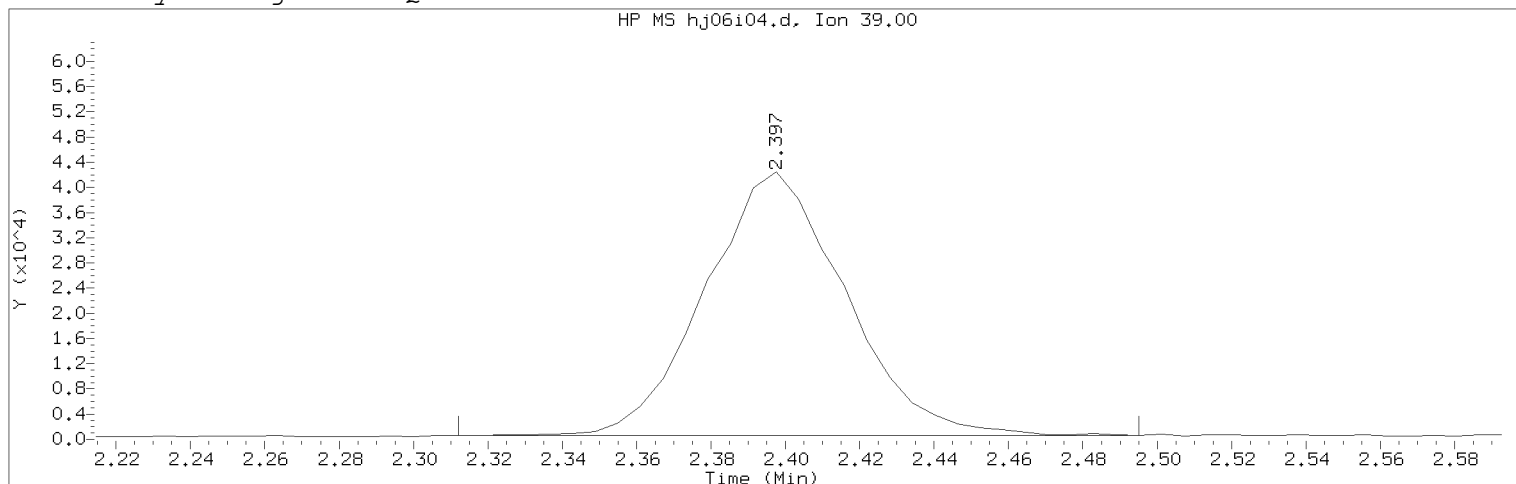
Lab Sample ID: VSTD002

Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 80	
Retention Time (minutes)	: 2.074	
Quant Ion	: 85.00	
Area	: 148084	
On-column Amount (ng)	: 2.0017	
Integration start scan	: 71	Integration stop scan: 160
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

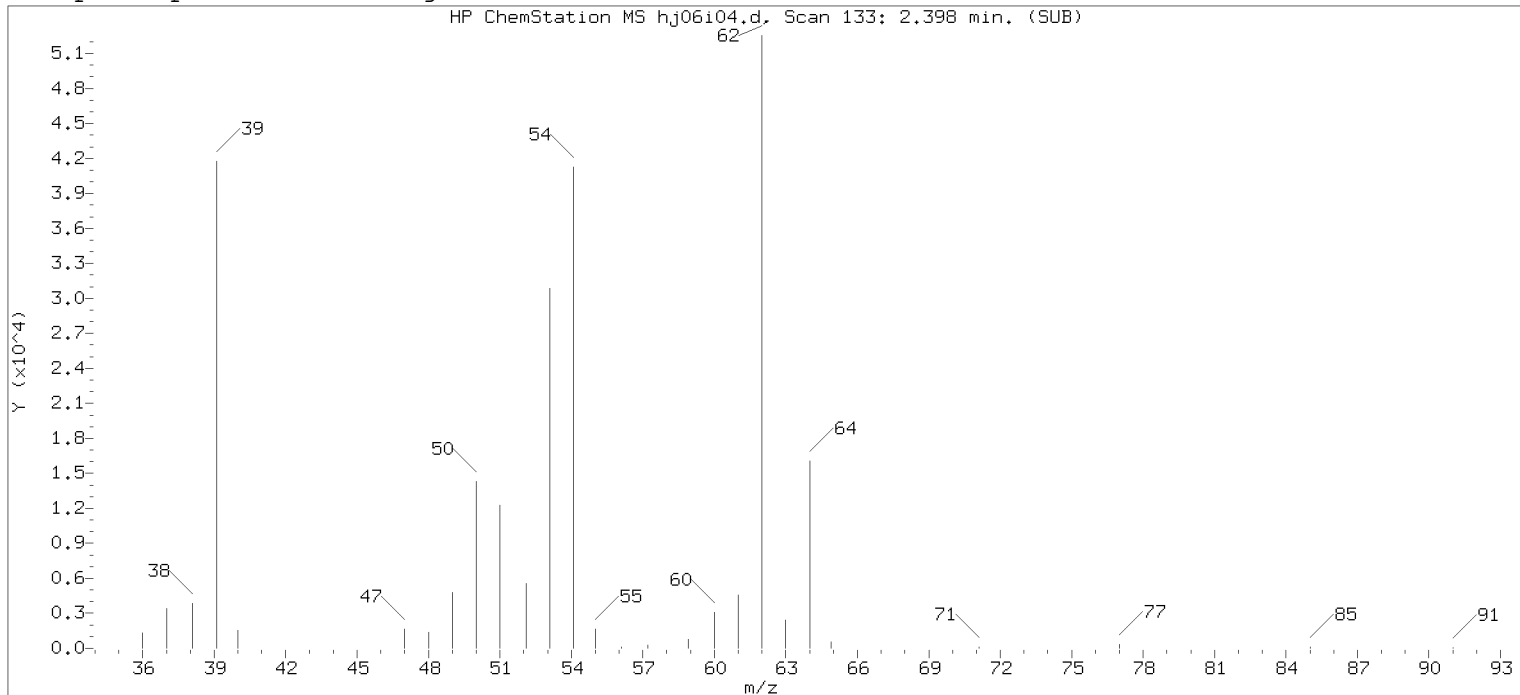
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 133	
Retention Time (minutes)	: 2.397	
Quant Ion	: 39.00	
Area (flag)	: 109568M	
On-Column Amount (ng)	: 1.9802	
Integration start scan	: 118	Integration stop scan: 148
Y at integration start	: 568	Y at integration end: 568

Reason for manual integration: improper integration

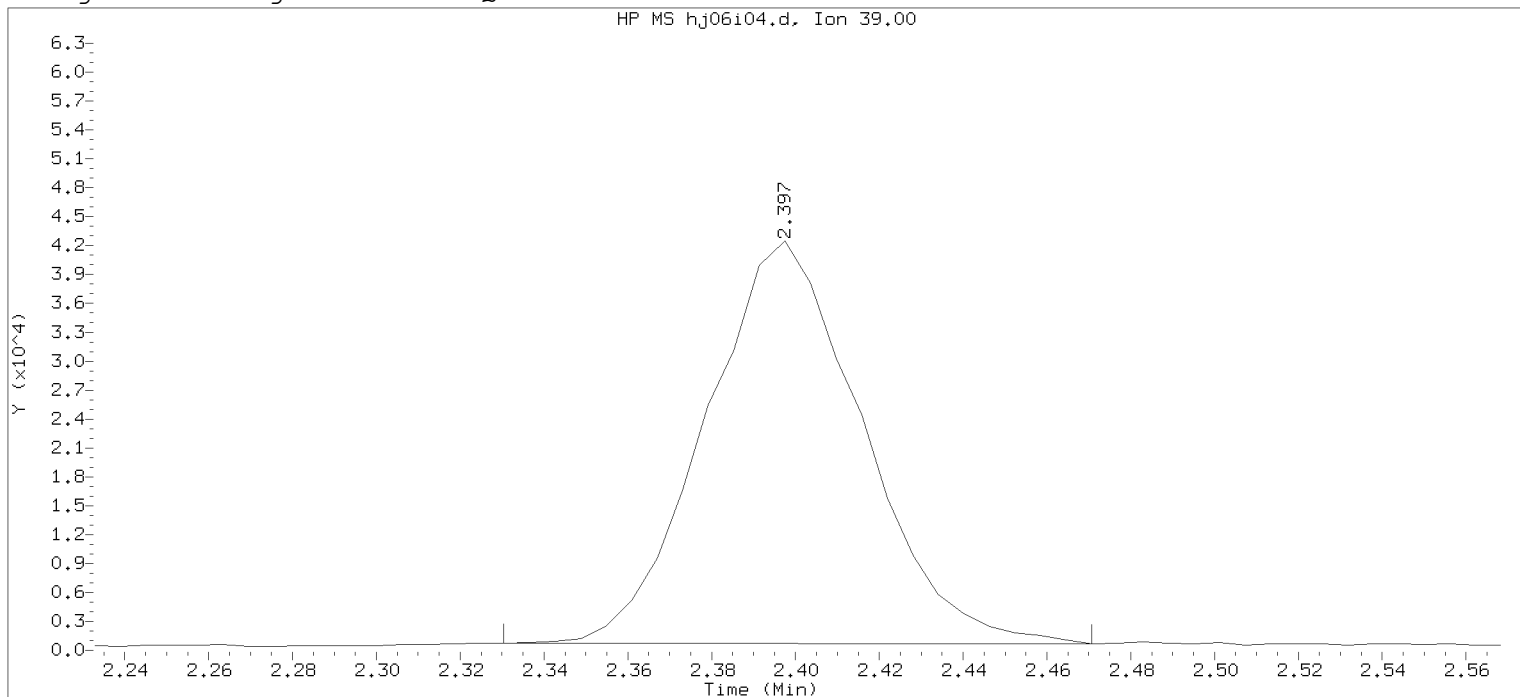
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

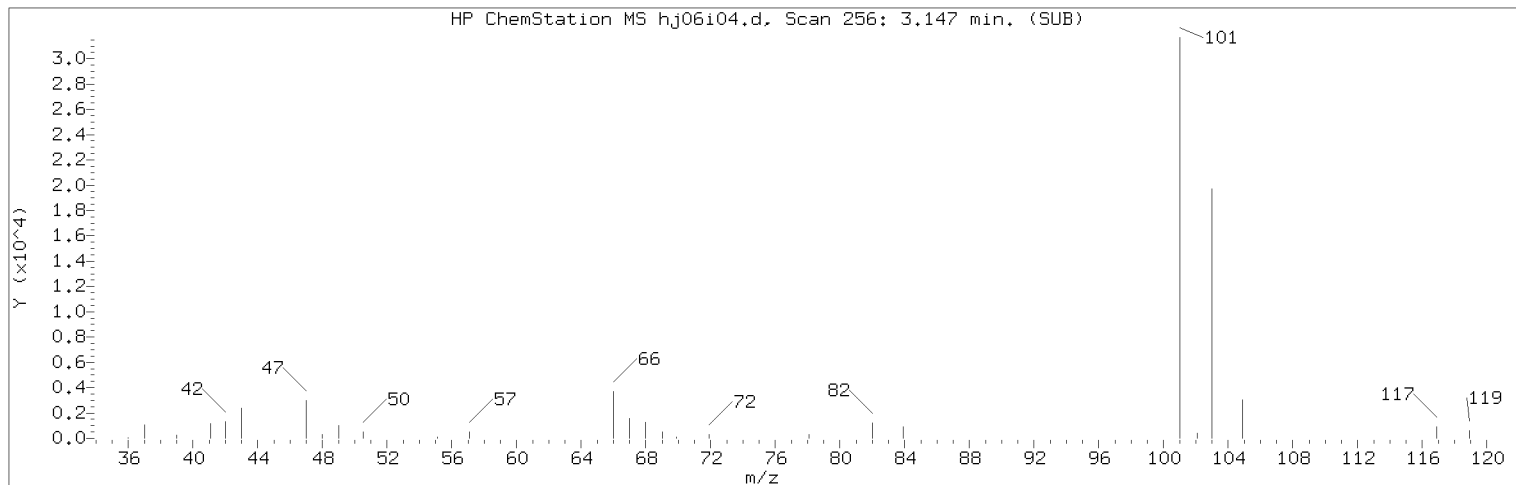
Sample Name: VSTD002

Lab Sample ID: VSTD002

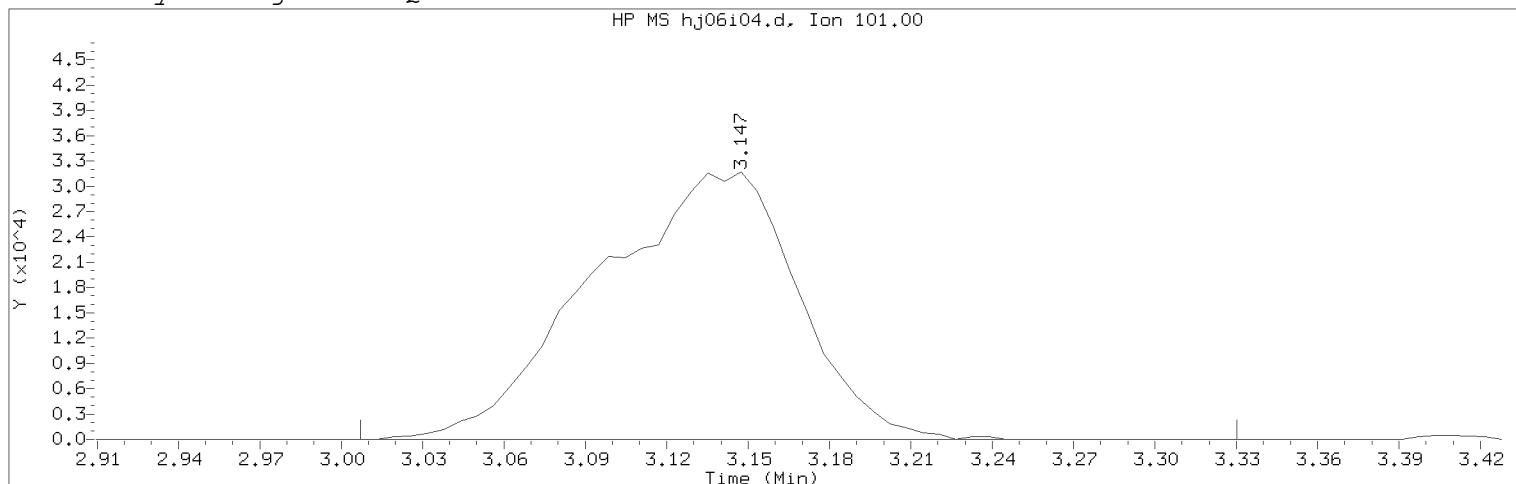
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 133	
Retention Time (minutes)	: 2.397	
Quant Ion	: 39.00	
Area	: 108129	
On-column Amount (ng)	: 1.9729	
Integration start scan	: 121	Integration stop scan: 144
Y at integration start	: 715	Y at integration end: 668

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Target 3.5 esignature user RAE59 Page 618 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

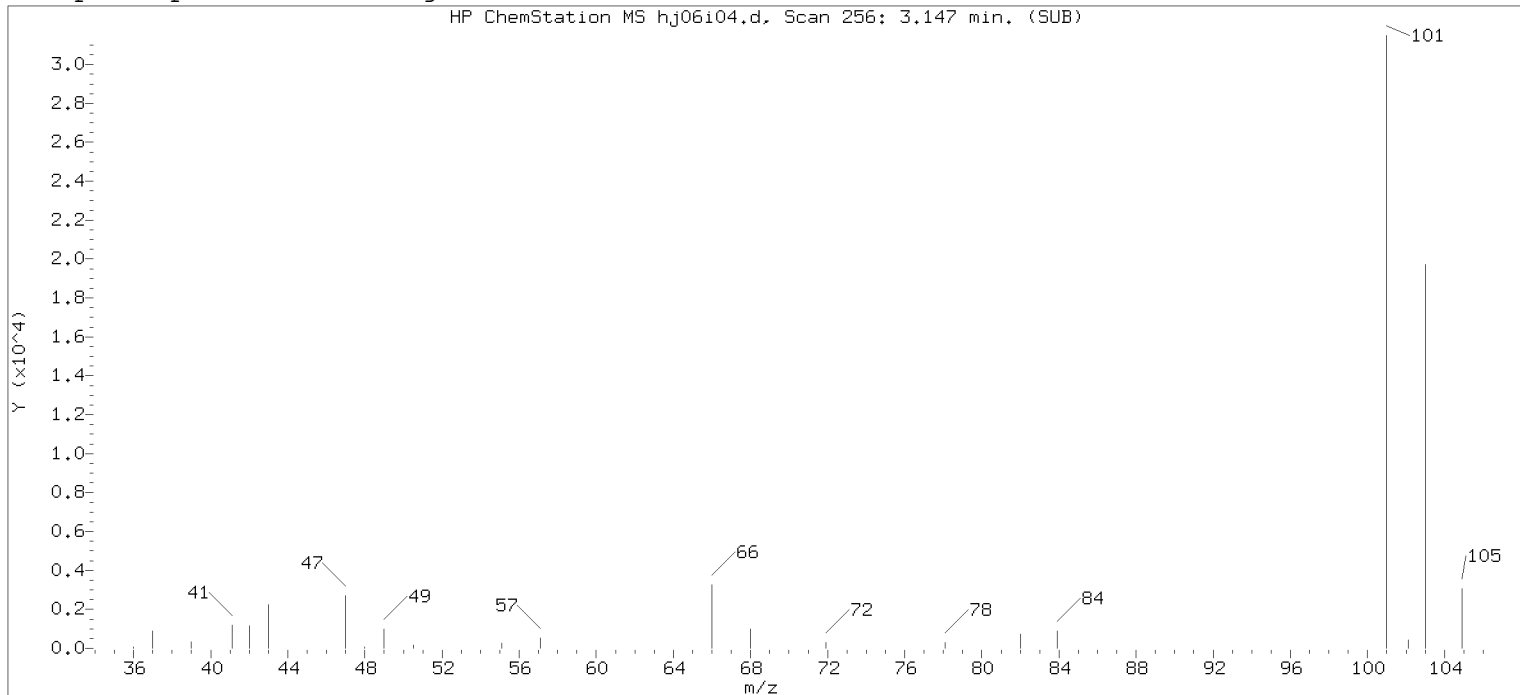
Compound Number	: 10	
Compound Name	: Trichlorofluoromethane	
Scan Number	: 256	
Retention Time (minutes)	: 3.147	
Quant Ion	: 101.00	
Area (flag)	: 164218M	
On-Column Amount (ng)	: 2.0544	
Integration start scan	: 232	Integration stop scan: 285
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

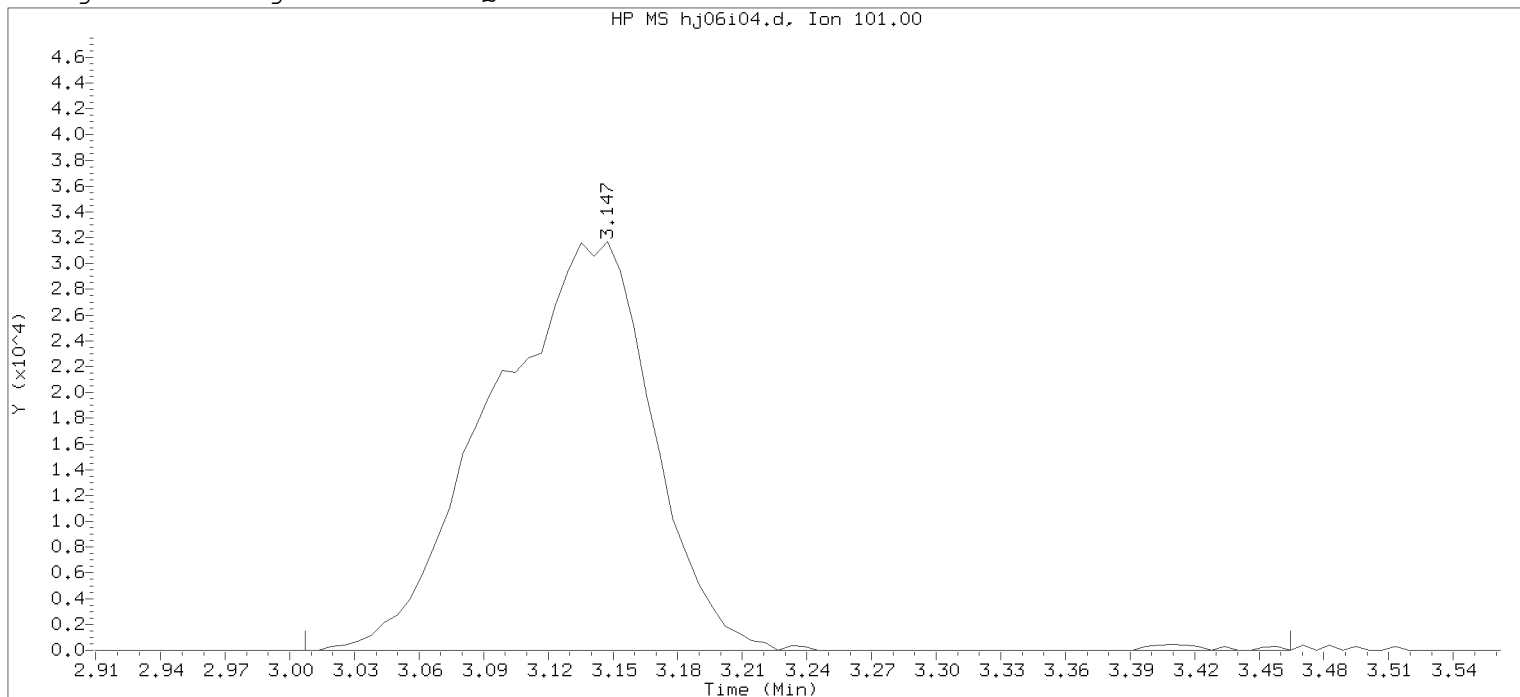
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

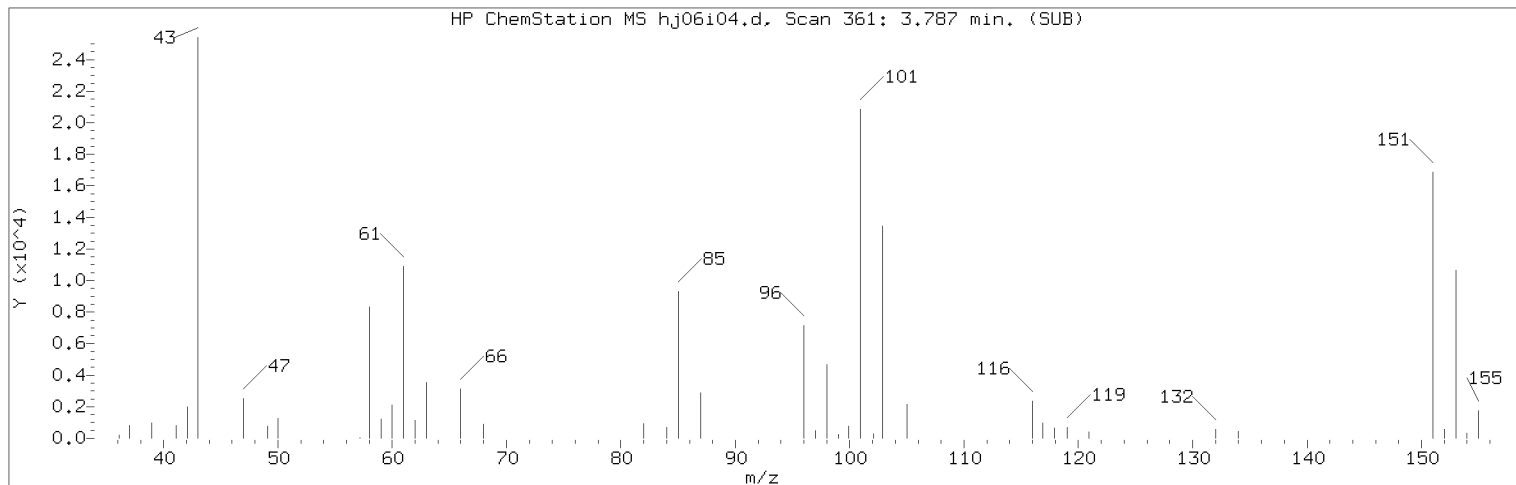
Sample Name: VSTD002

Lab Sample ID: VSTD002

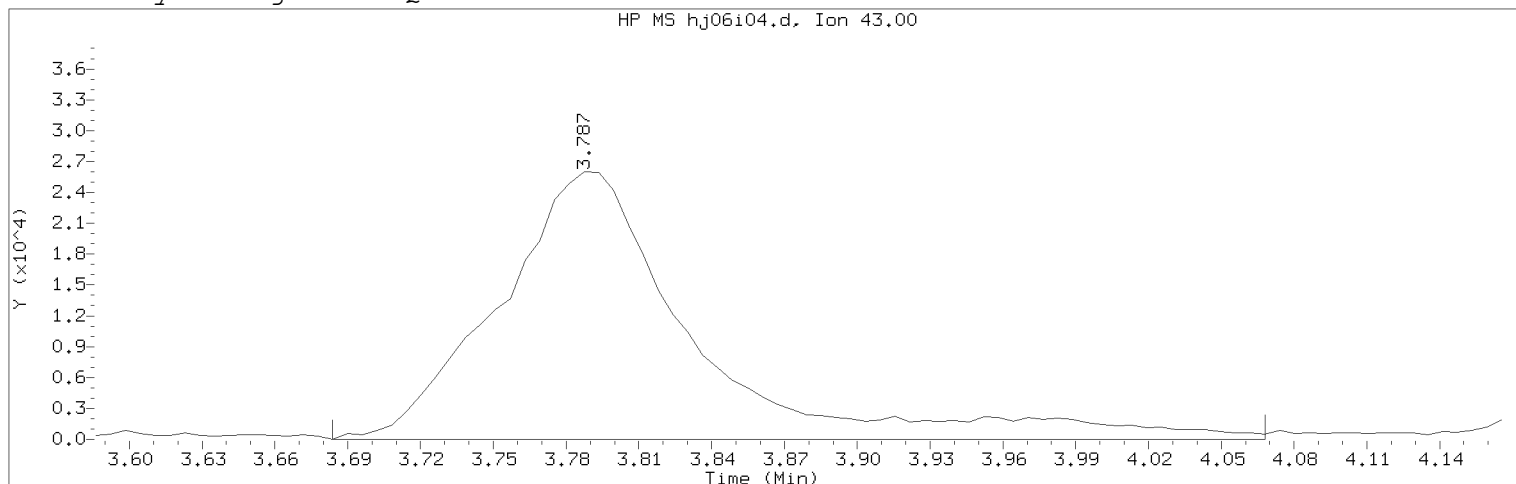
Compound Number	: 10	
Compound Name	: Trichlorofluoromethane	
Scan Number	: 256	
Retention Time (minutes)	: 3.147	
Quant Ion	: 101.00	
Area	: 165205	
On-column Amount (ng)	: 2.0649	
Integration start scan	: 232	Integration stop scan: 307
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 620 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.787
 Quant Ion : 43.00
 Area (flag) : 144771M
 On-Column Amount (ng) : 19.0011
 Integration start scan : 343
 Y at integration start : 0

Integration stop scan: 406
 Y at integration end: 0

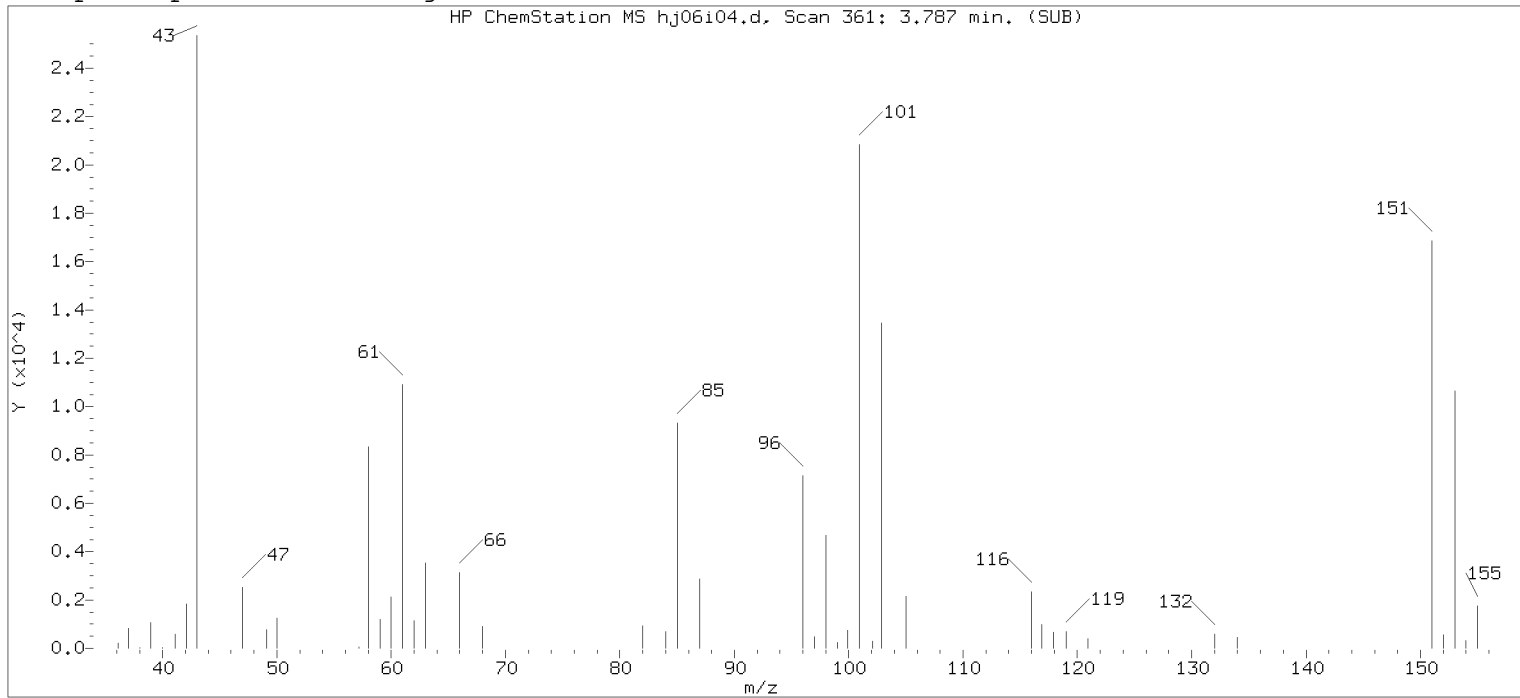
Reason for manual integration: improper integration

Analyst responsible for change:

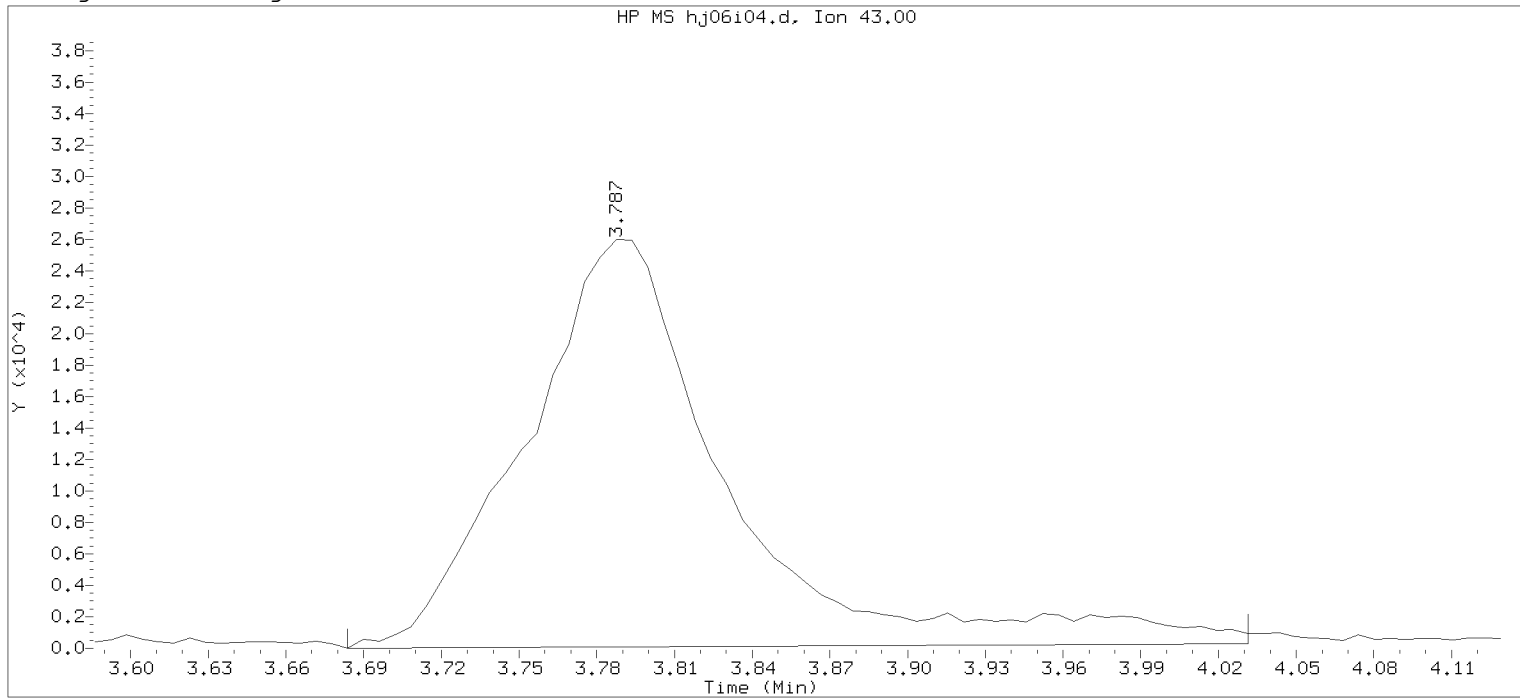
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

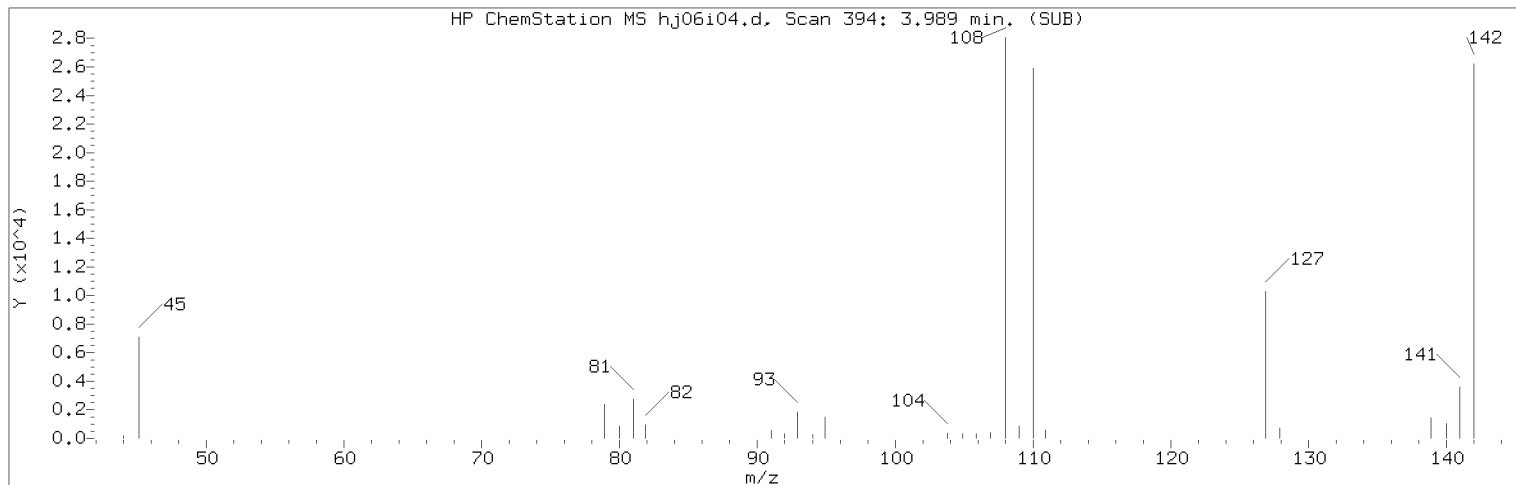
Sample Name: VSTD002

Lab Sample ID: VSTD002

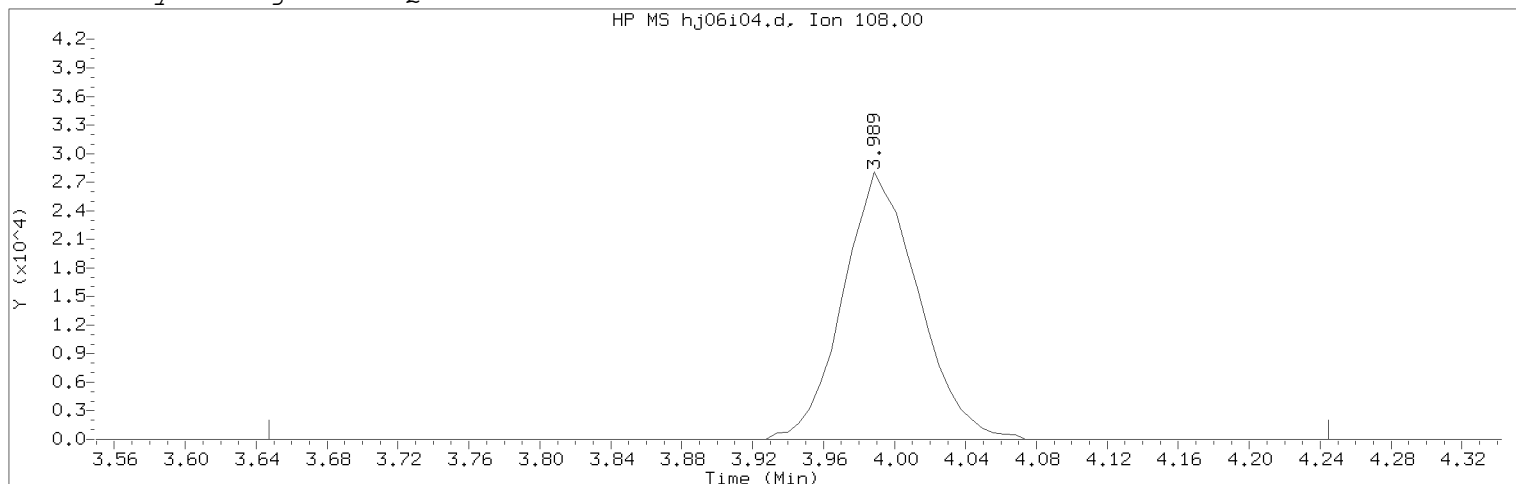
Compound Number	: 14	
Compound Name	: Acetone	
Scan Number	: 361	
Retention Time (minutes)	: 3.787	
Quant Ion	: 43.00	
Area	: 139824	
On-column Amount (ng)	: 17.9521	
Integration start scan	: 343	Integration stop scan: 400
Y at integration start	: 0	Y at integration end: 304

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Target 3.5 esignature user RPF59 Page 622 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

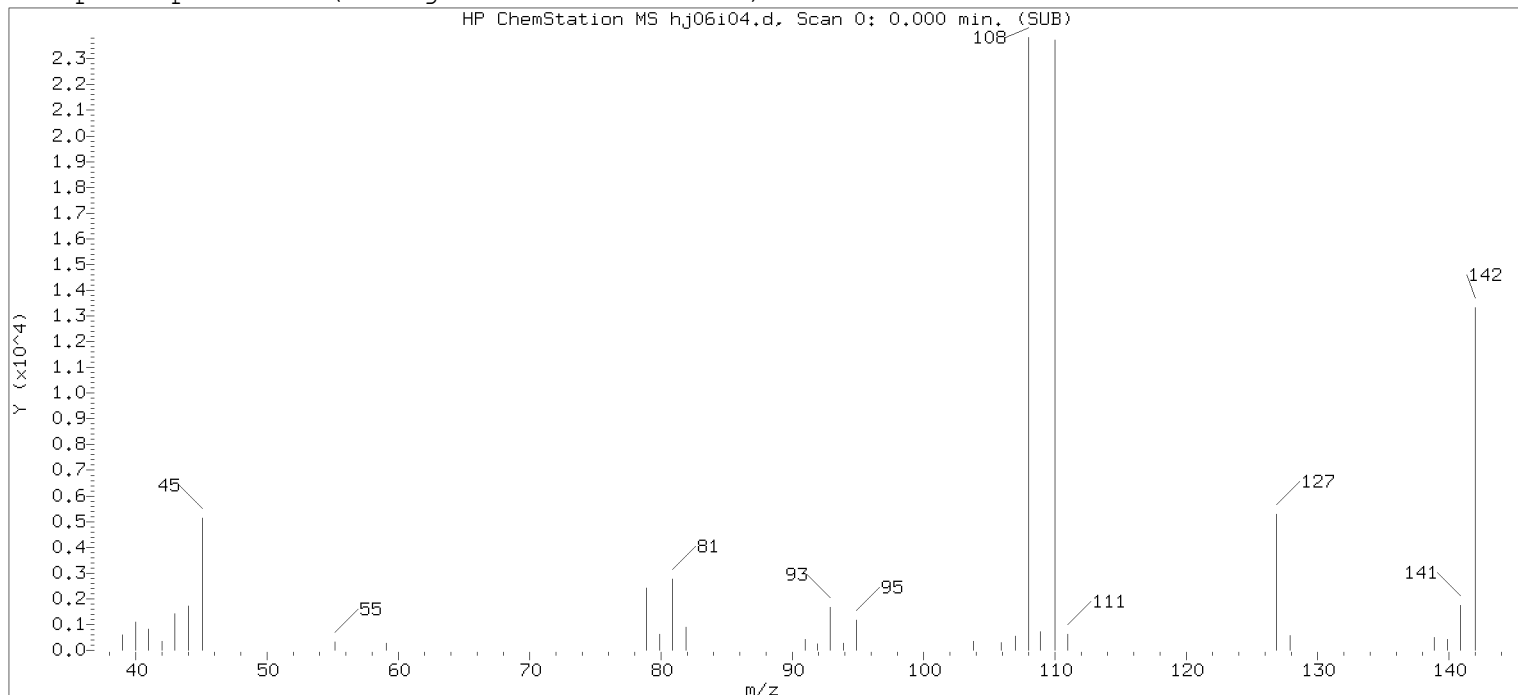
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 82628M	
On-Column Amount (ng)	: 1.9480	
Integration start scan	: 337	Integration stop scan: 435
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

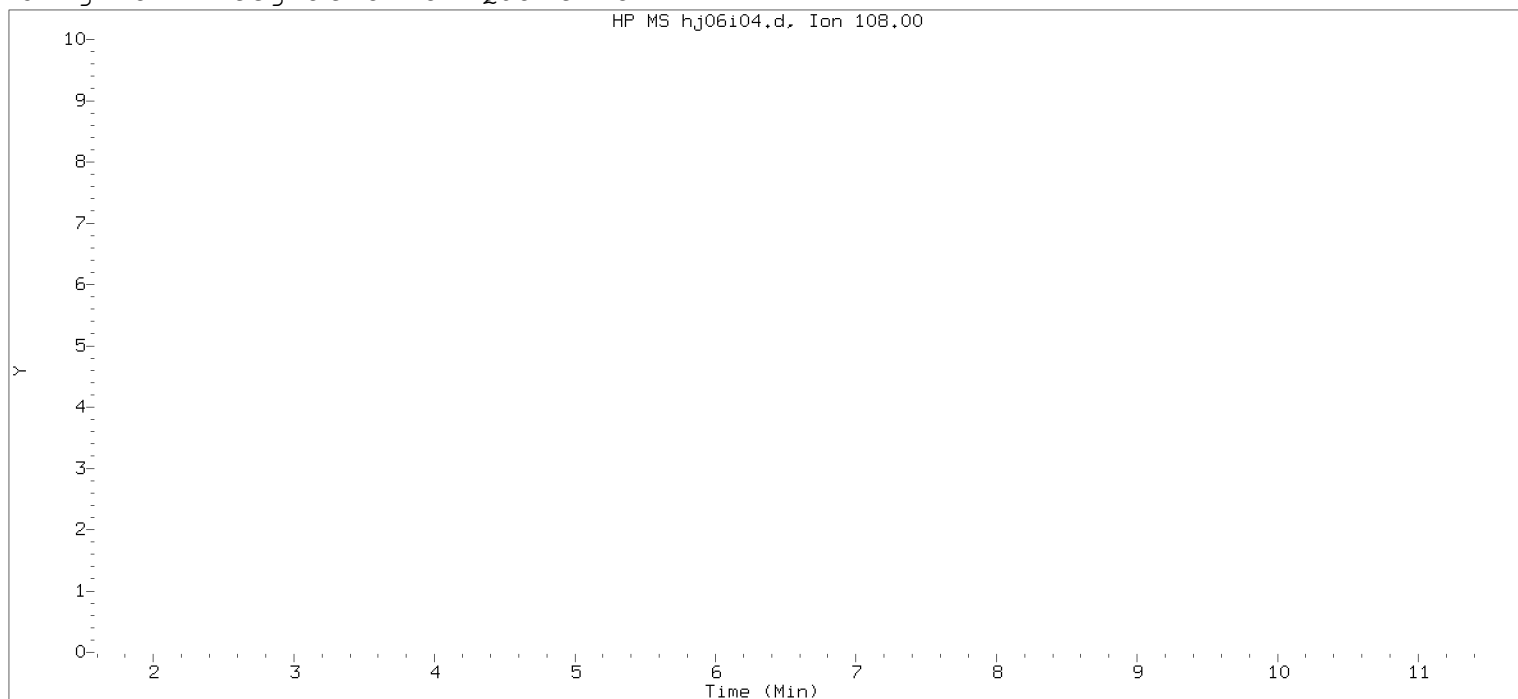
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

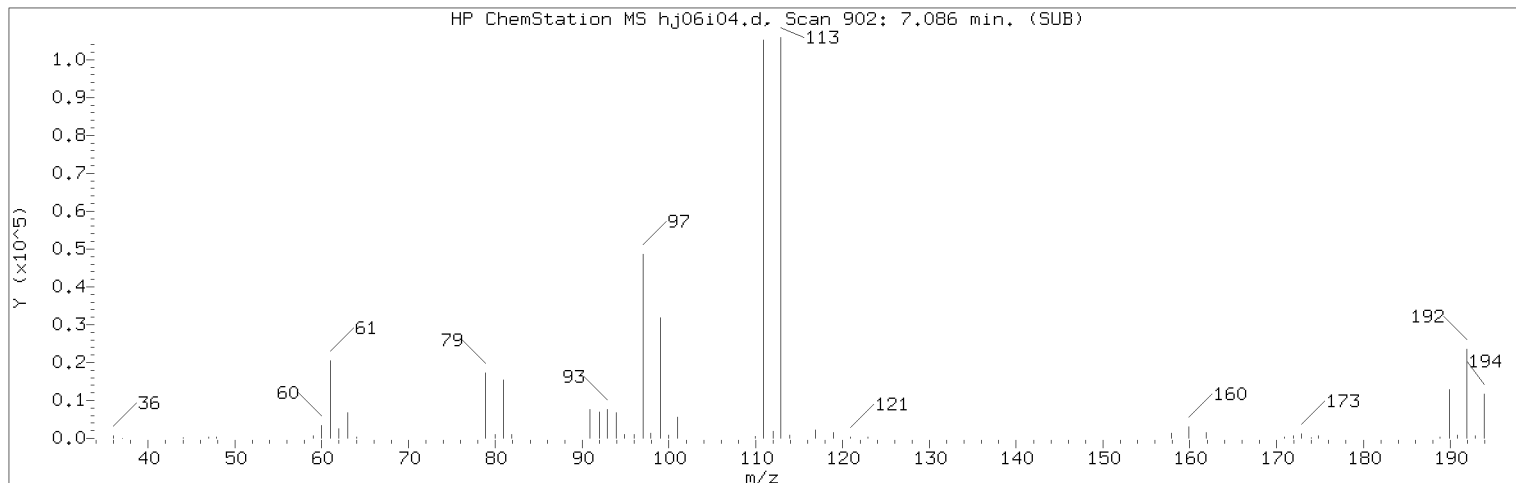
Sample Name: VSTD002

Lab Sample ID: VSTD002

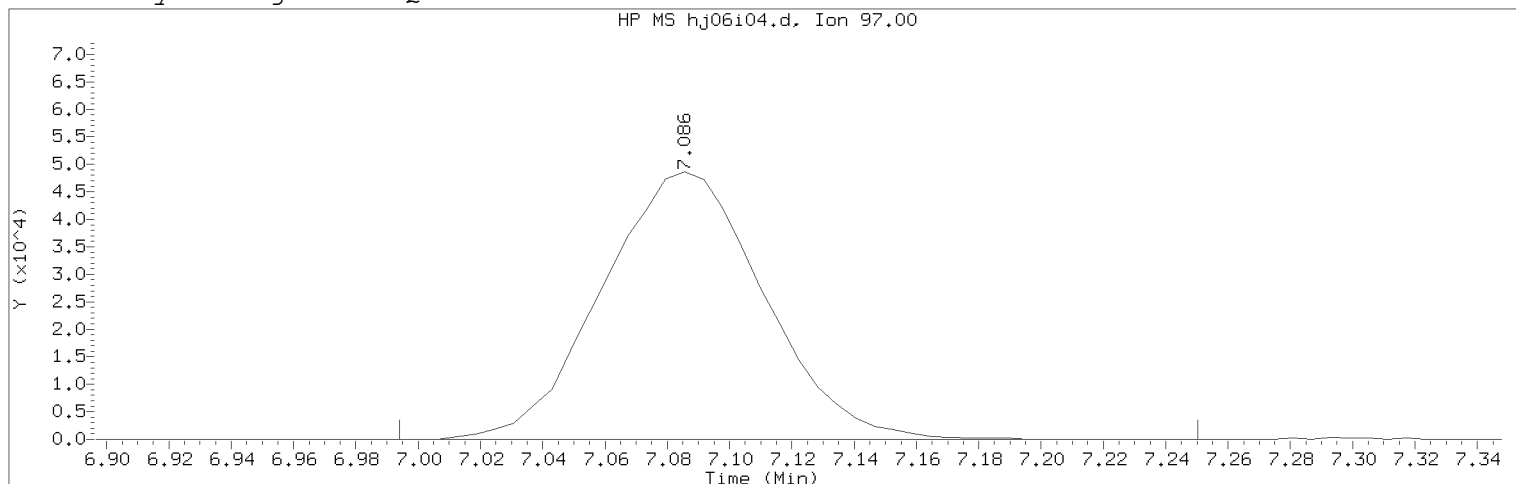
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RPF59 Page 624 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

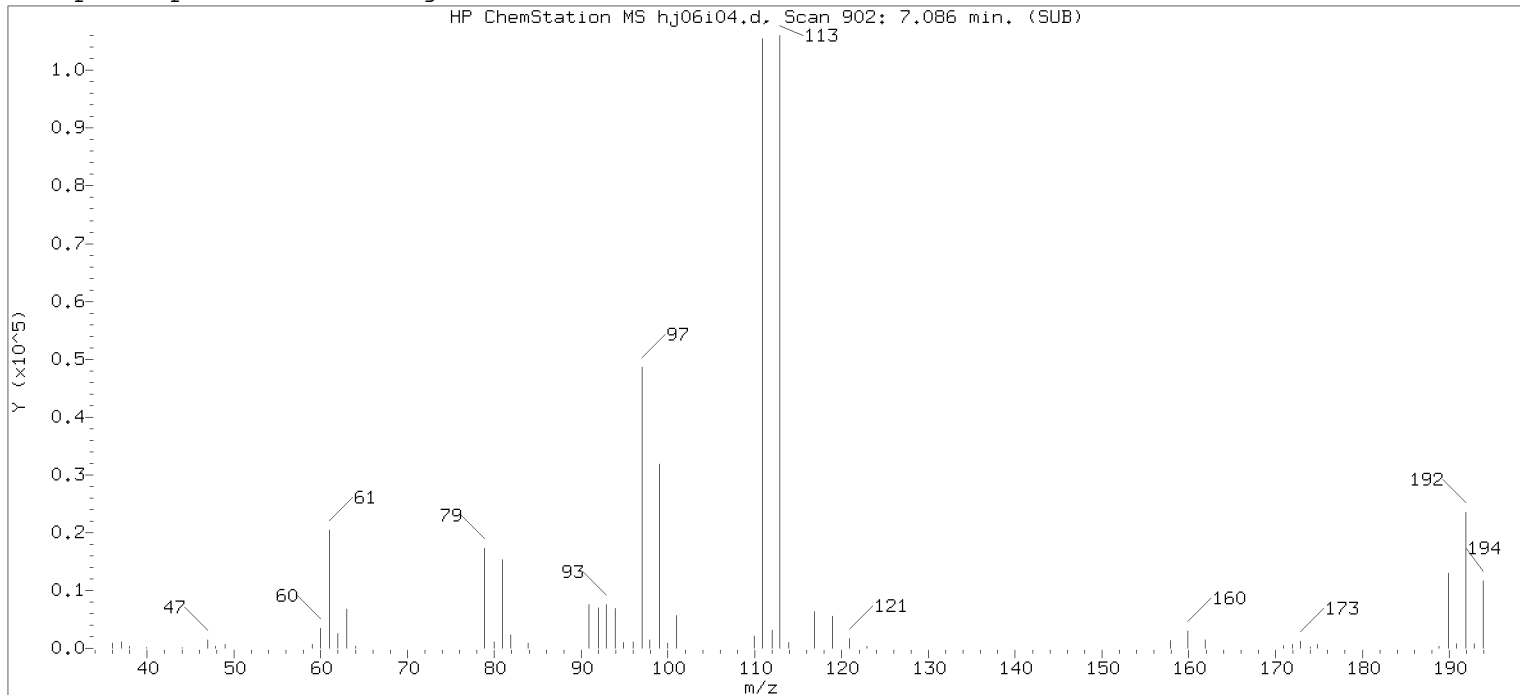
Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area (flag)	: 175404M	
On-Column Amount (ng)	: 2.0028	
Integration start scan	: 886	Integration stop scan: 928
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

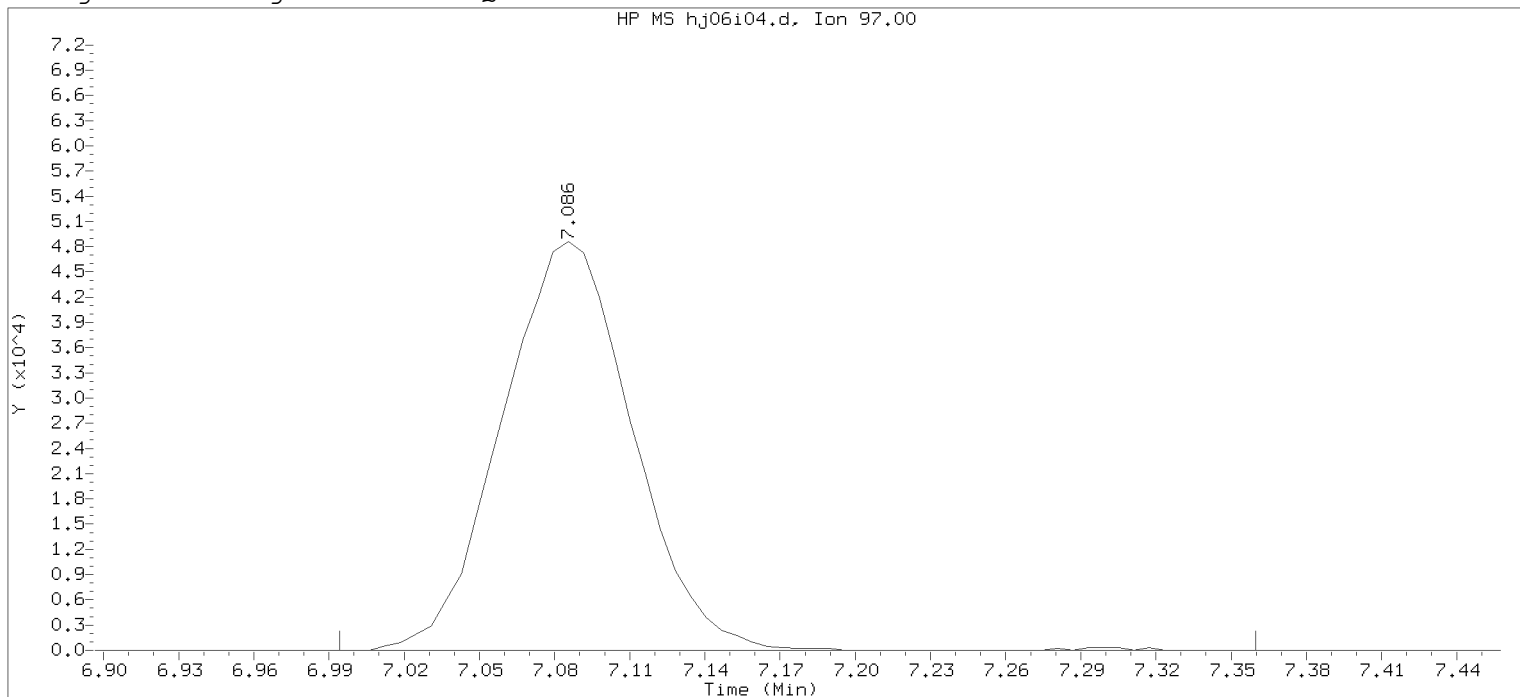
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number : 52

Compound Name : 1,1,1-Trichloroethane

Scan Number : 902

Retention Time (minutes): 7.086

Quant Ion : 97.00

Area : 175914

On-column Amount (ng) : 2.0064

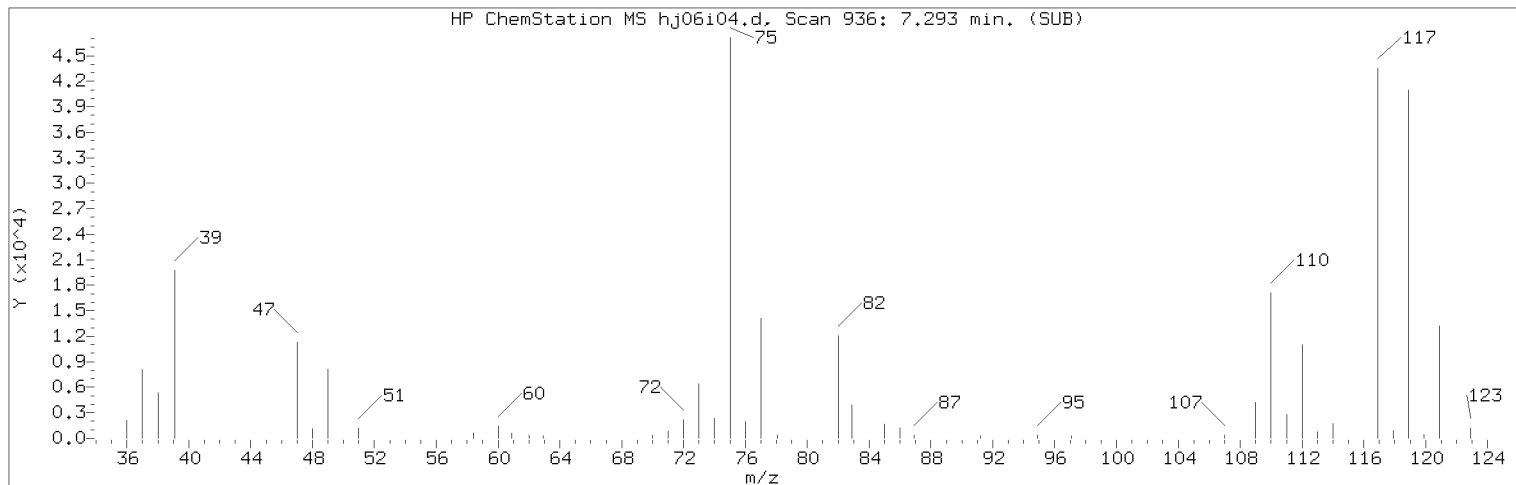
Integration start scan : 886 Integration stop scan: 946

Y at integration start : 0 Y at integration end: 0

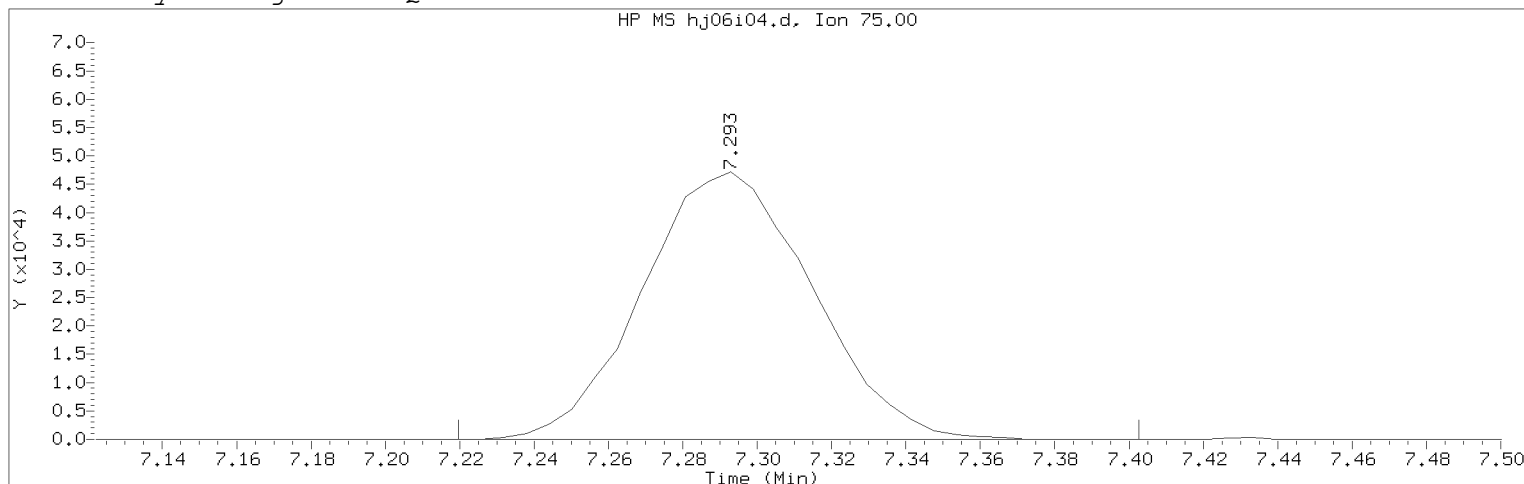
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RPF59 Page 626 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

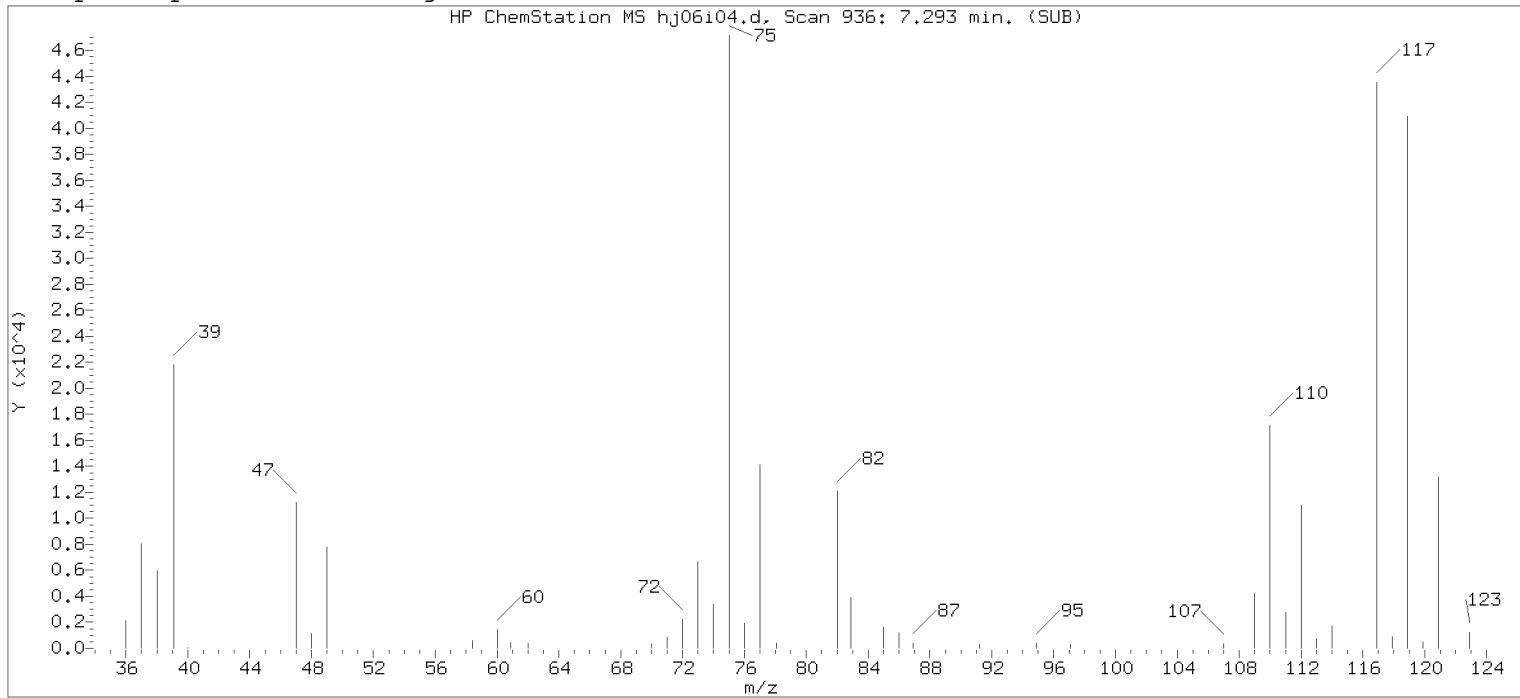
Compound Number	: 56	
Compound Name	: 1,1-Dichloropropene	
Scan Number	: 936	
Retention Time (minutes)	: 7.293	
Quant Ion	: 75.00	
Area (flag)	: 148995M	
On-Column Amount (ng)	: 2.0130	
Integration start scan	: 923	Integration stop scan: 953
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

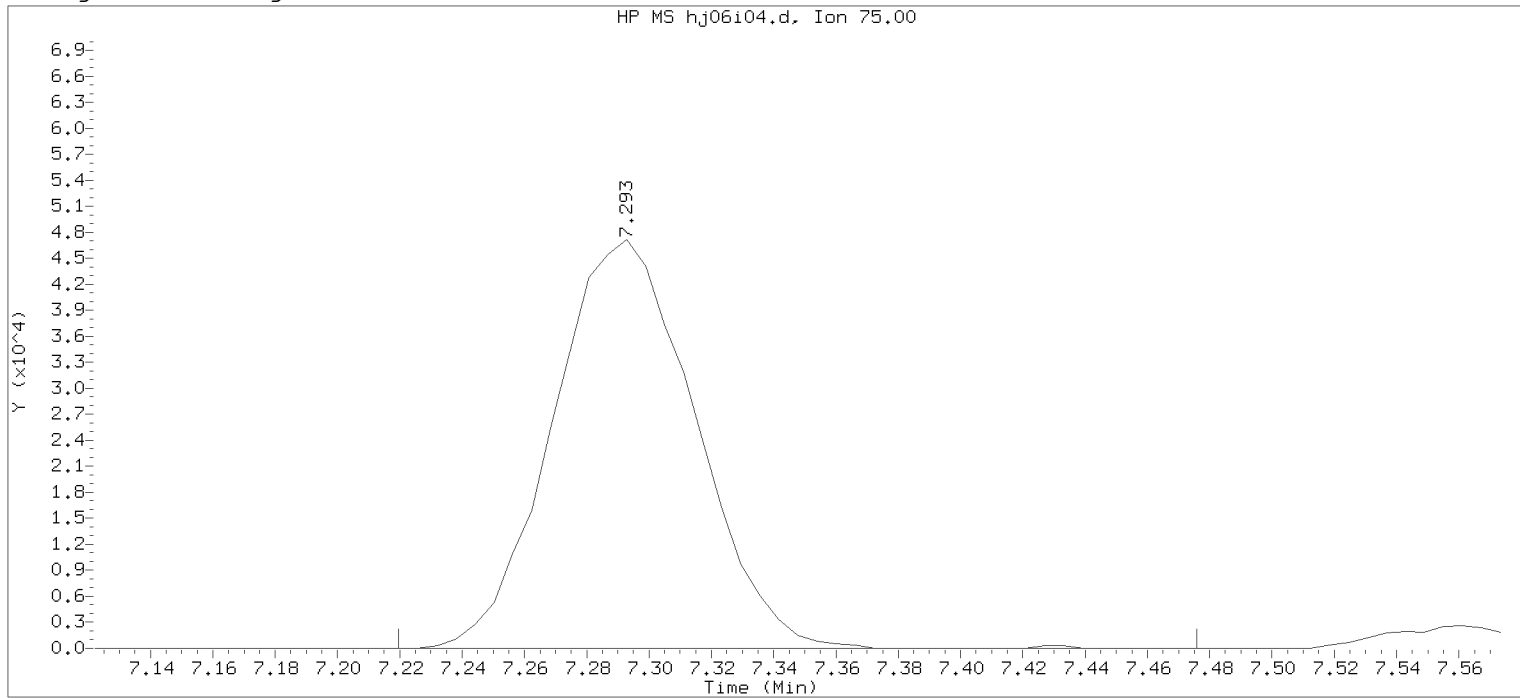
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

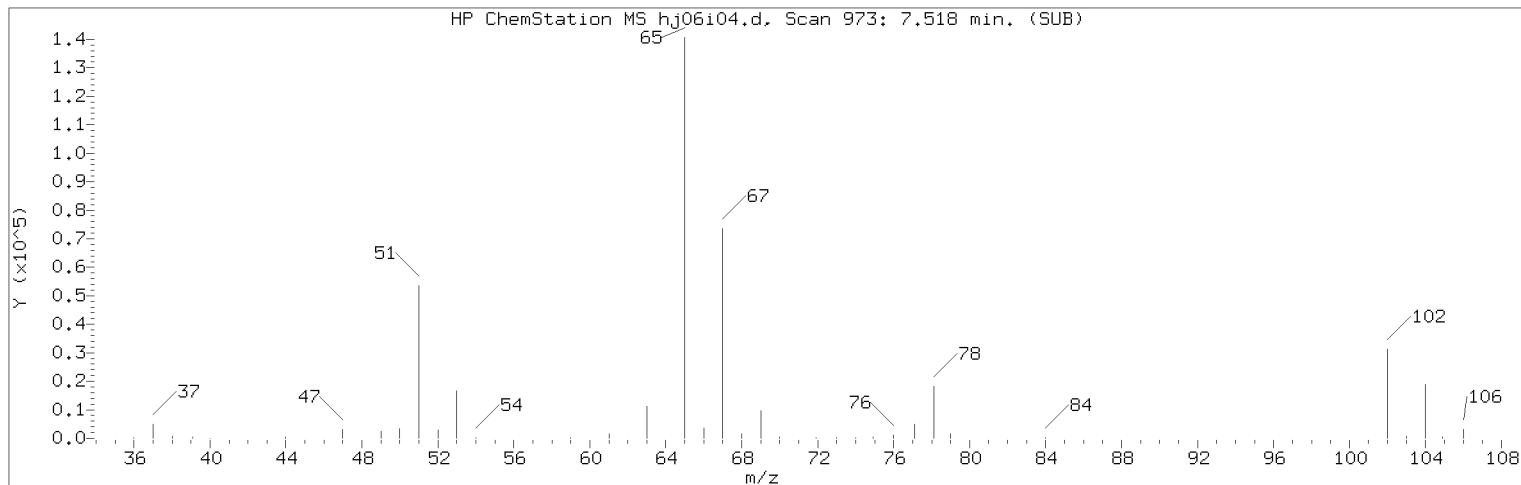
Sample Name: VSTD002

Lab Sample ID: VSTD002

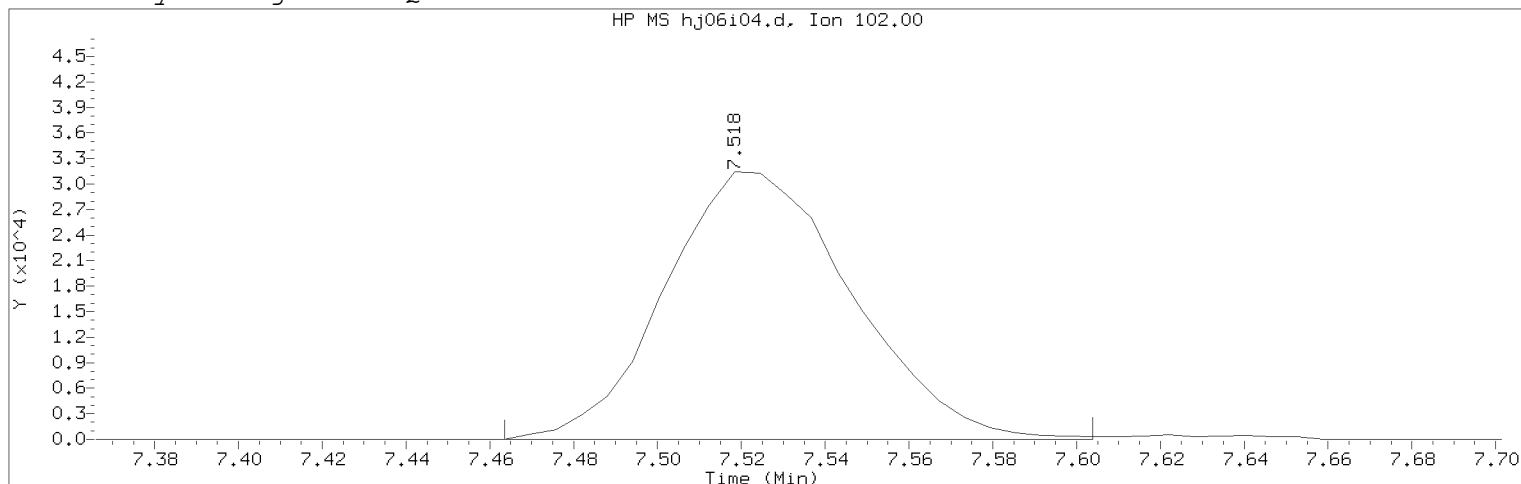
Compound Number	: 56	
Compound Name	: 1,1-Dichloropropene	
Scan Number	: 936	
Retention Time (minutes)	: 7.293	
Quant Ion	: 75.00	
Area	: 149204	
On-column Amount (ng)	: 2.0154	
Integration start scan	: 923	Integration stop scan: 965
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RPF59 Page 628 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

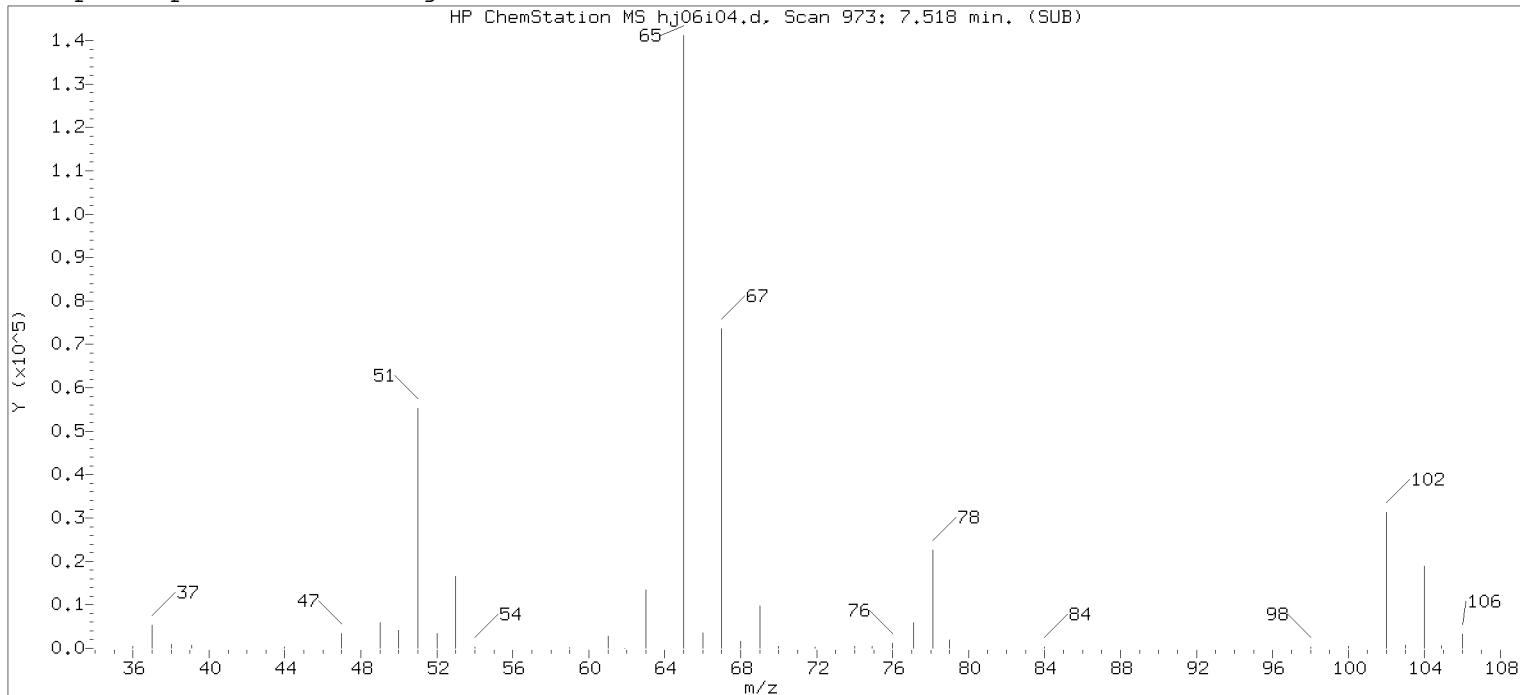
Compound Number	: 58	
Compound Name	: 1,2-Dichloroethane-d4	
Scan Number	: 973	
Retention Time (minutes)	: 7.518	
Quant Ion	: 102.00	
Area (flag)	: 97406M	
On-Column Amount (ng)	: 10.1598	
Integration start scan	: 963	Integration stop scan: 986
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

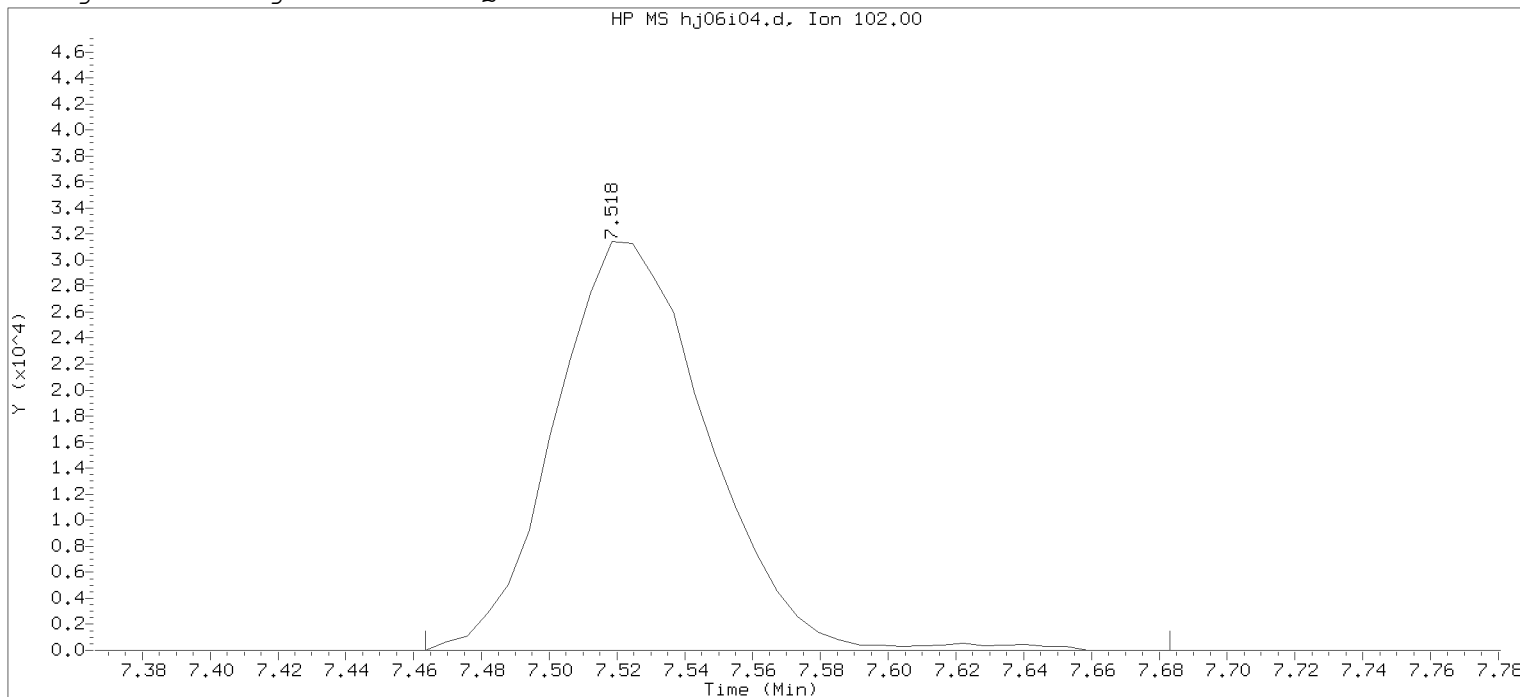
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

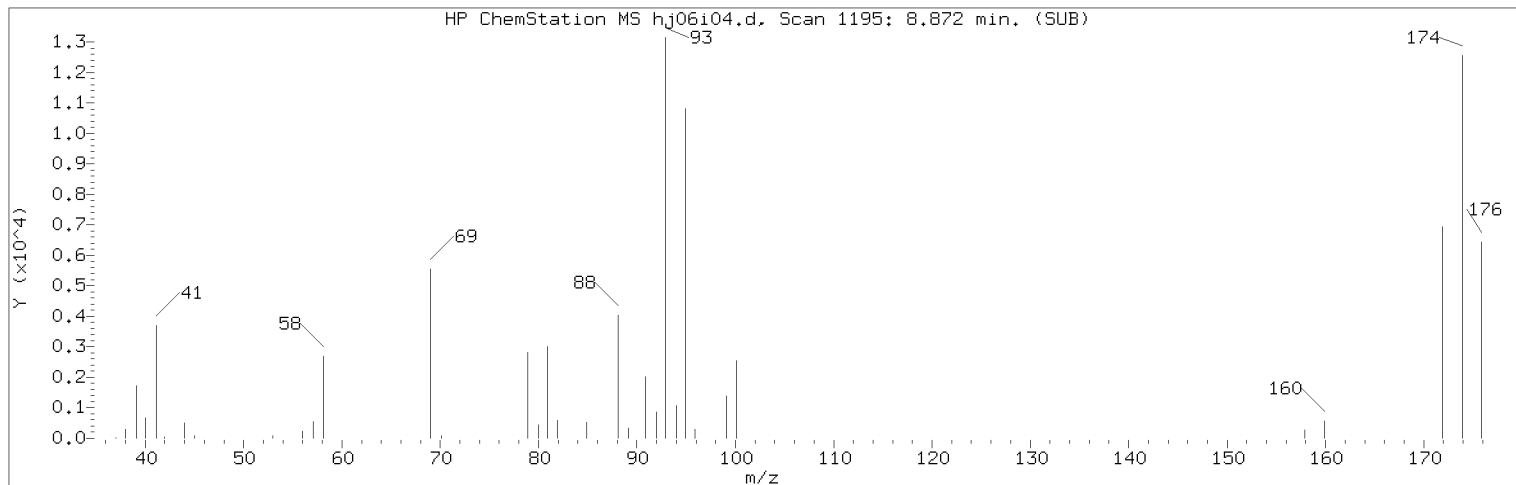
Sample Name: VSTD002

Lab Sample ID: VSTD002

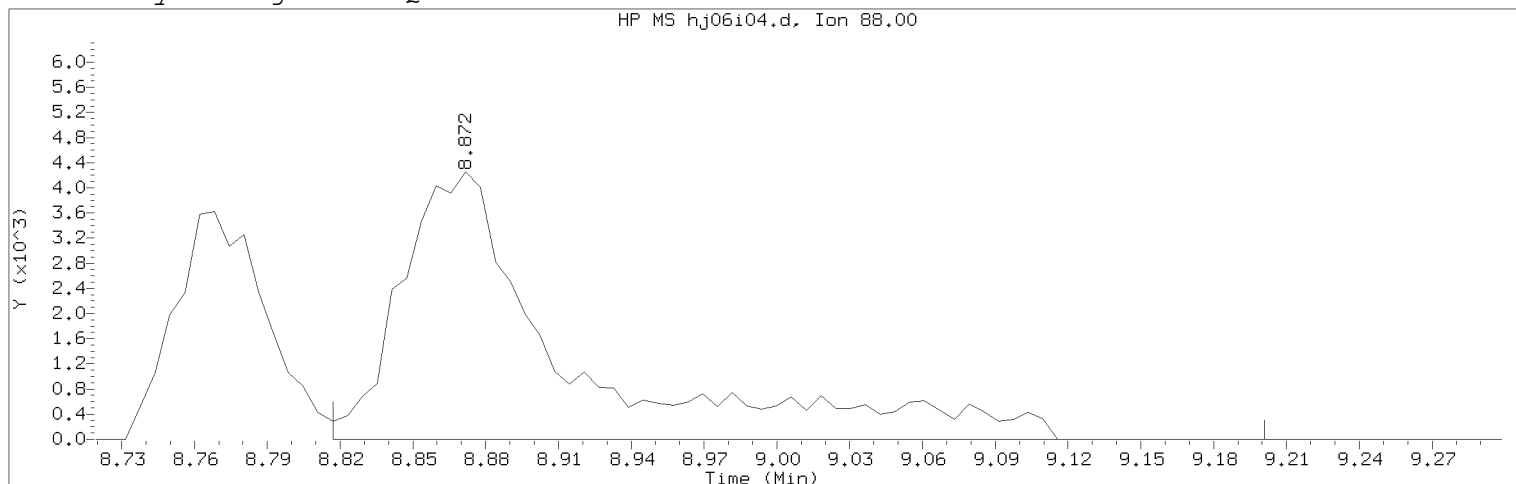
Compound Number	: 58	
Compound Name	: 1,2-Dichloroethane-d4	
Scan Number	: 973	
Retention Time (minutes)	: 7.518	
Quant Ion	: 102.00	
Area	: 98495	
On-column Amount (ng)	: 10.2568	
Integration start scan	: 963	Integration stop scan: 999
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2630 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

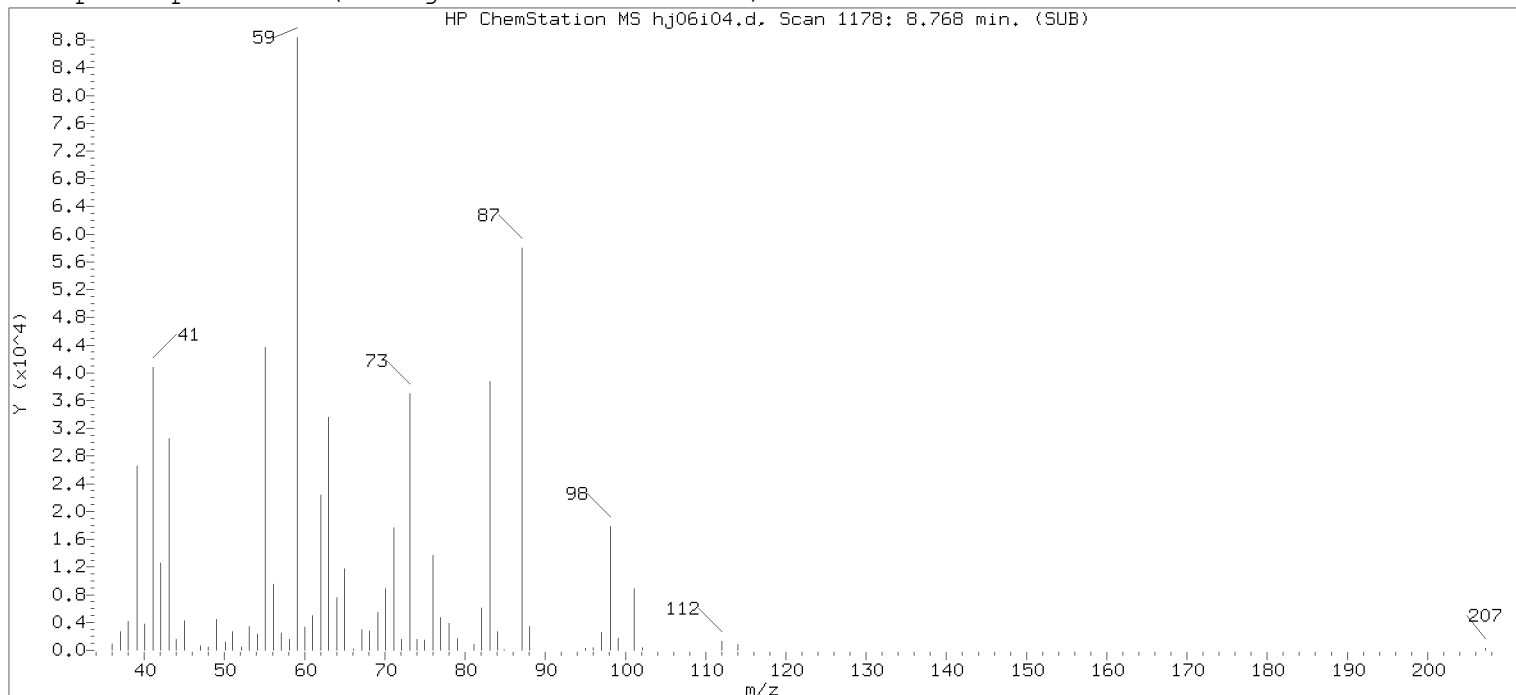
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1195	
Retention Time (minutes)	: 8.872	
Quant Ion	: 88.00	
Area (flag)	: 20263M	
On-Column Amount (ng)	: 113.7539	
Integration start scan	: 1185	Integration stop scan: 1248
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

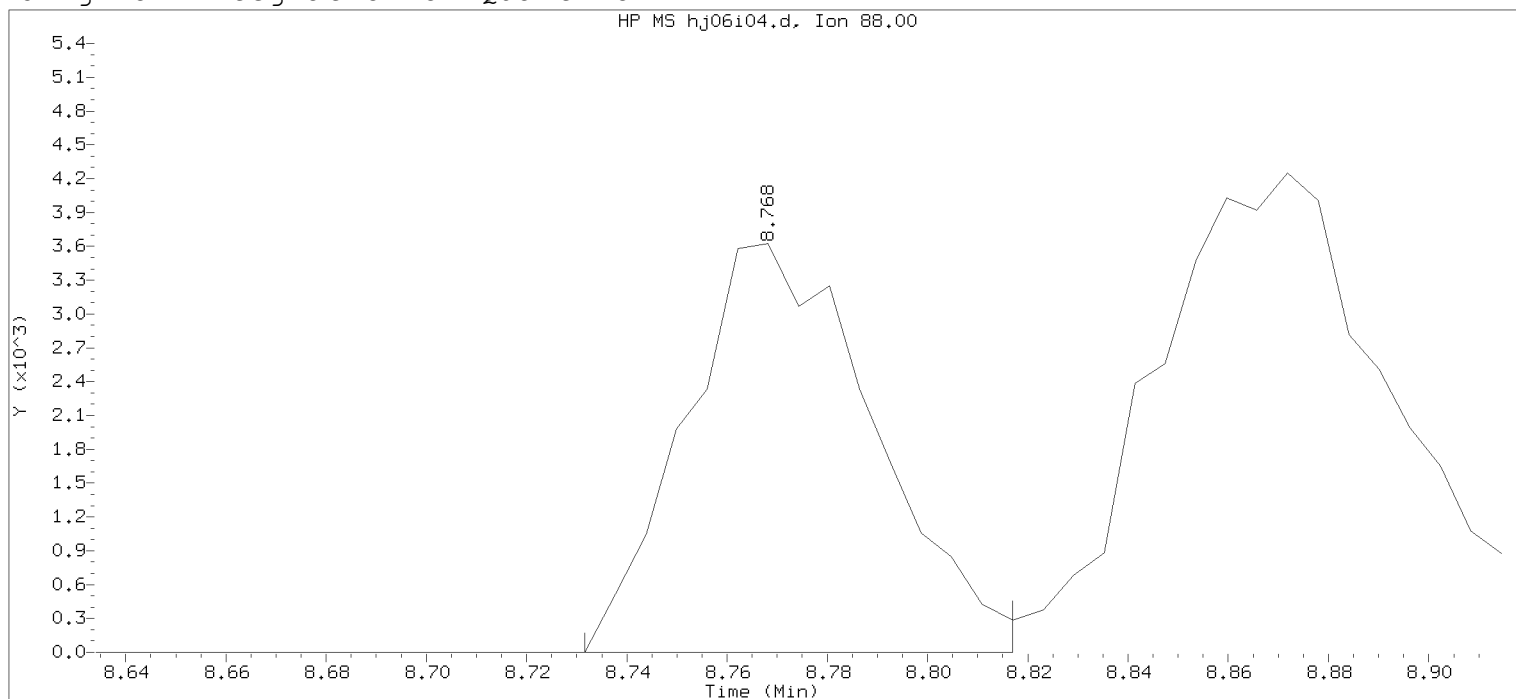
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

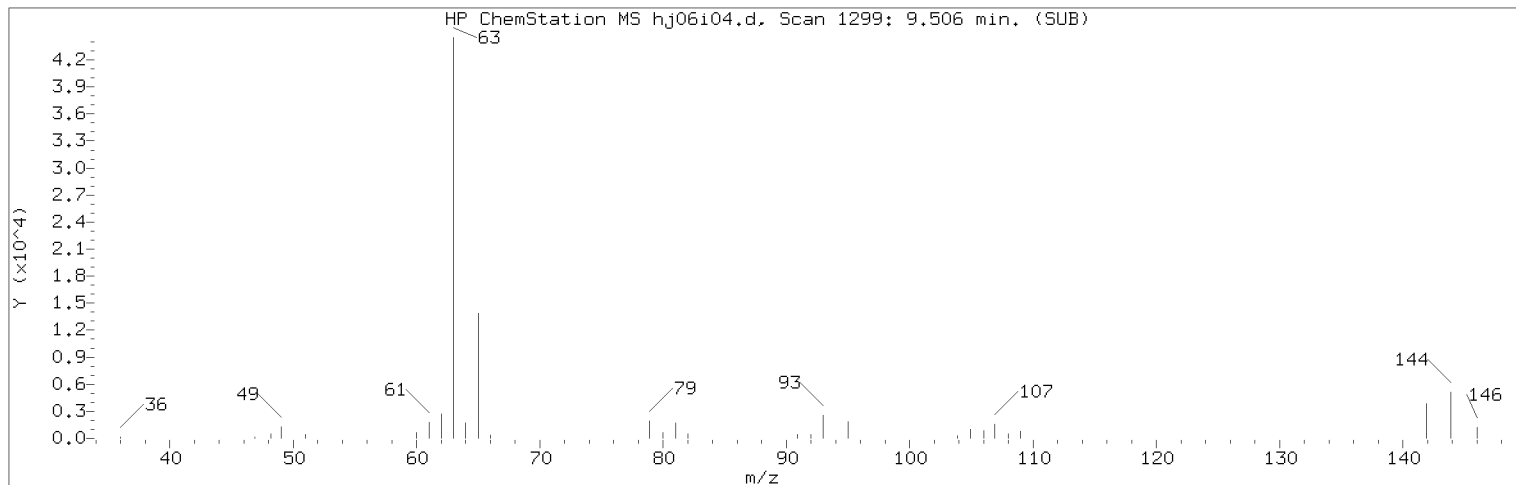
Lab Sample ID: VSTD002

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1178	
Retention Time (minutes)	: 8.768	
Quant Ion	: 88.00	
Area	: 9474	
On-column Amount (ng)	: 67.7250	
Integration start scan	: 1171	Integration stop scan: 1185
Y at integration start	: 0	Y at integration end: 0

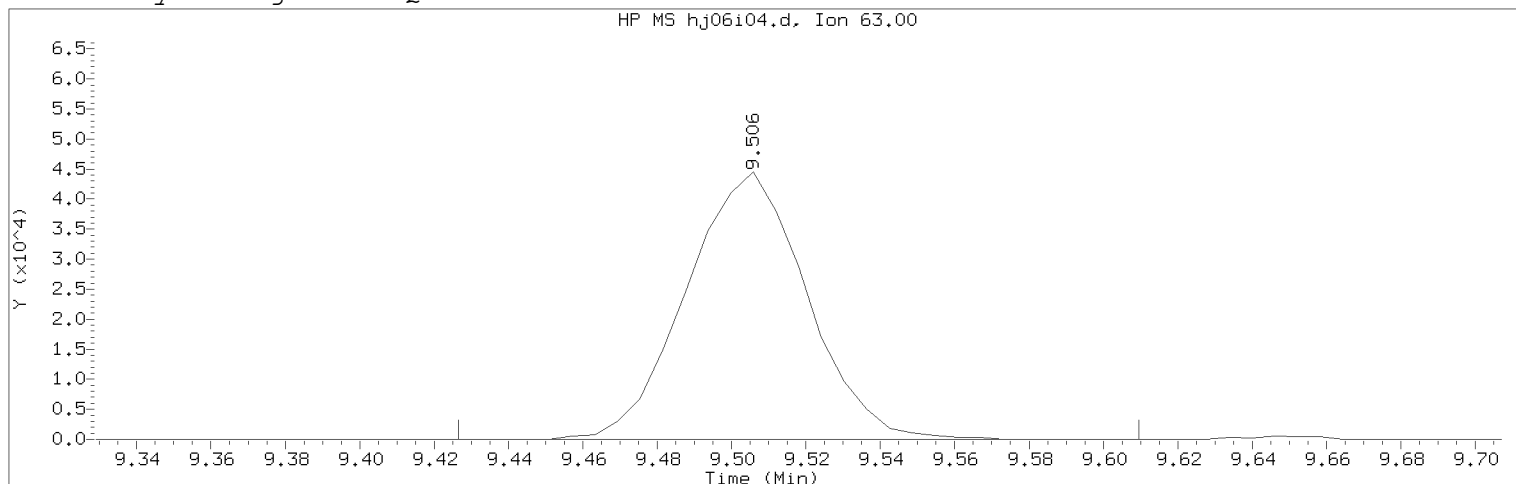
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 632 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

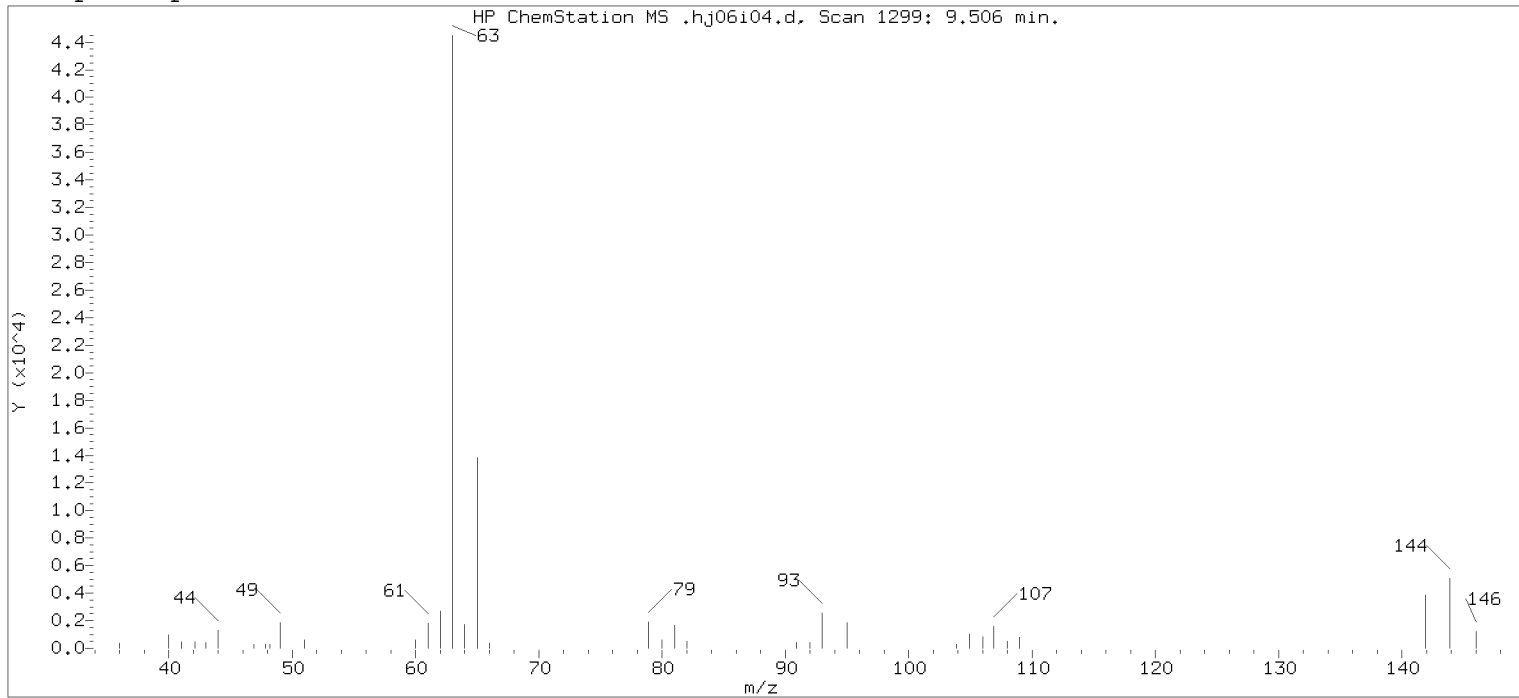
Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 99821M	
On-Column Amount (ng)	: 1.9831	
Integration start scan	: 1285	Integration stop scan: 1315
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

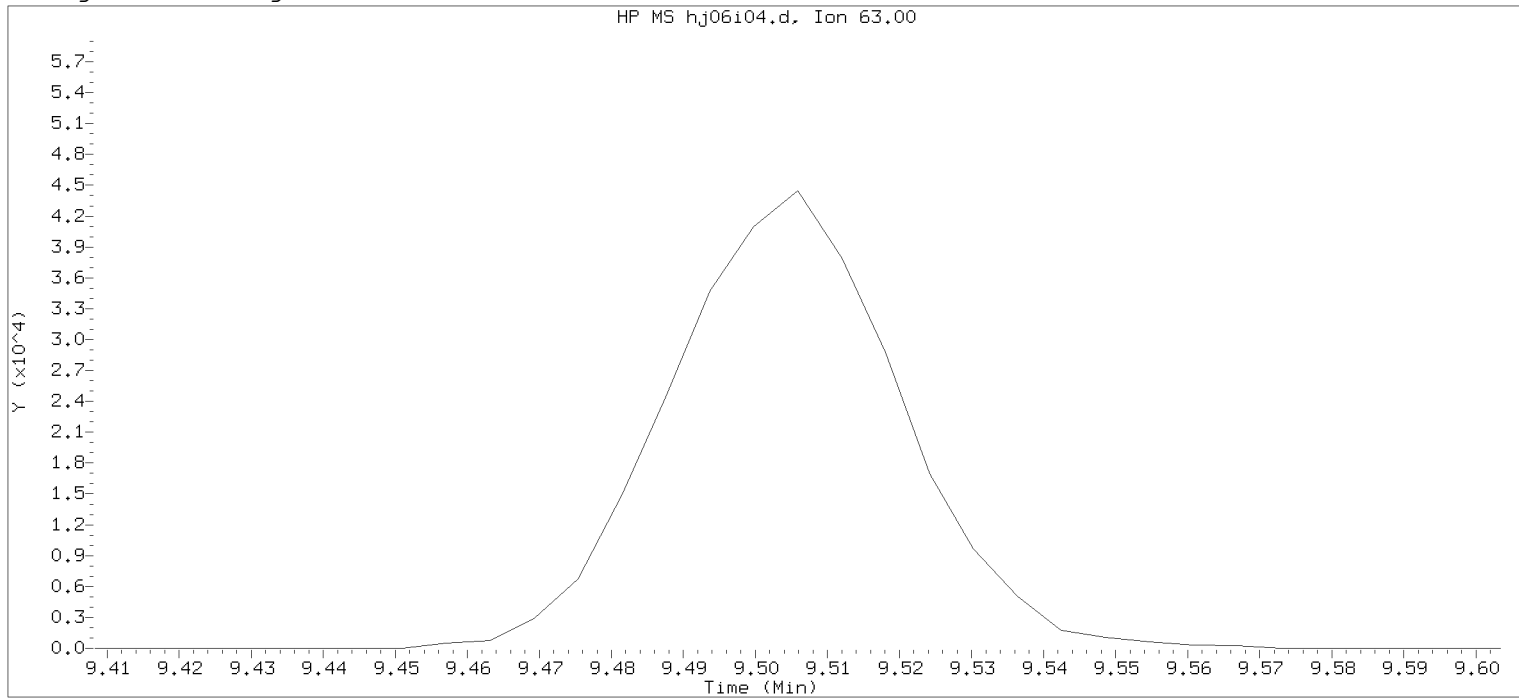
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

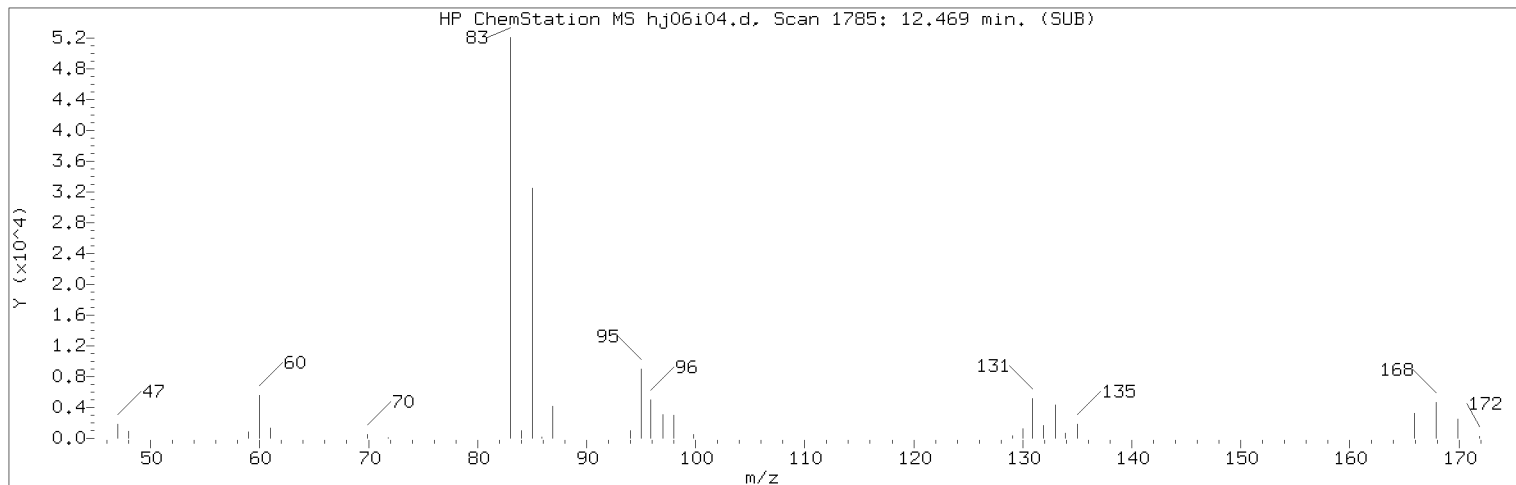
Sample Name: VSTD002

Lab Sample ID: VSTD002

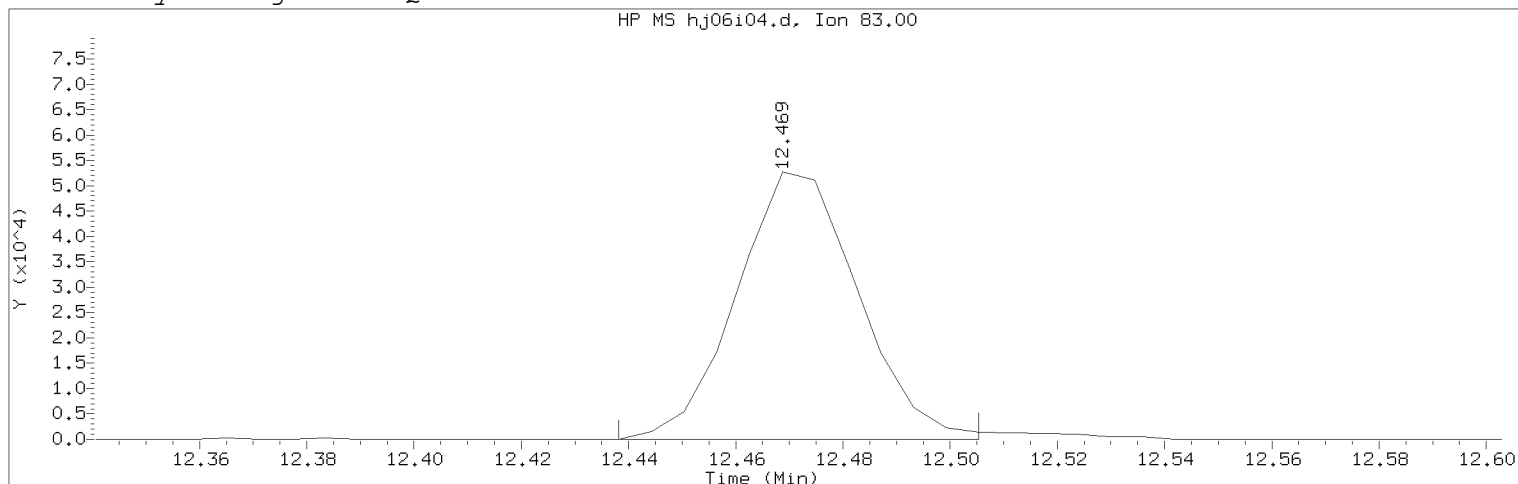
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

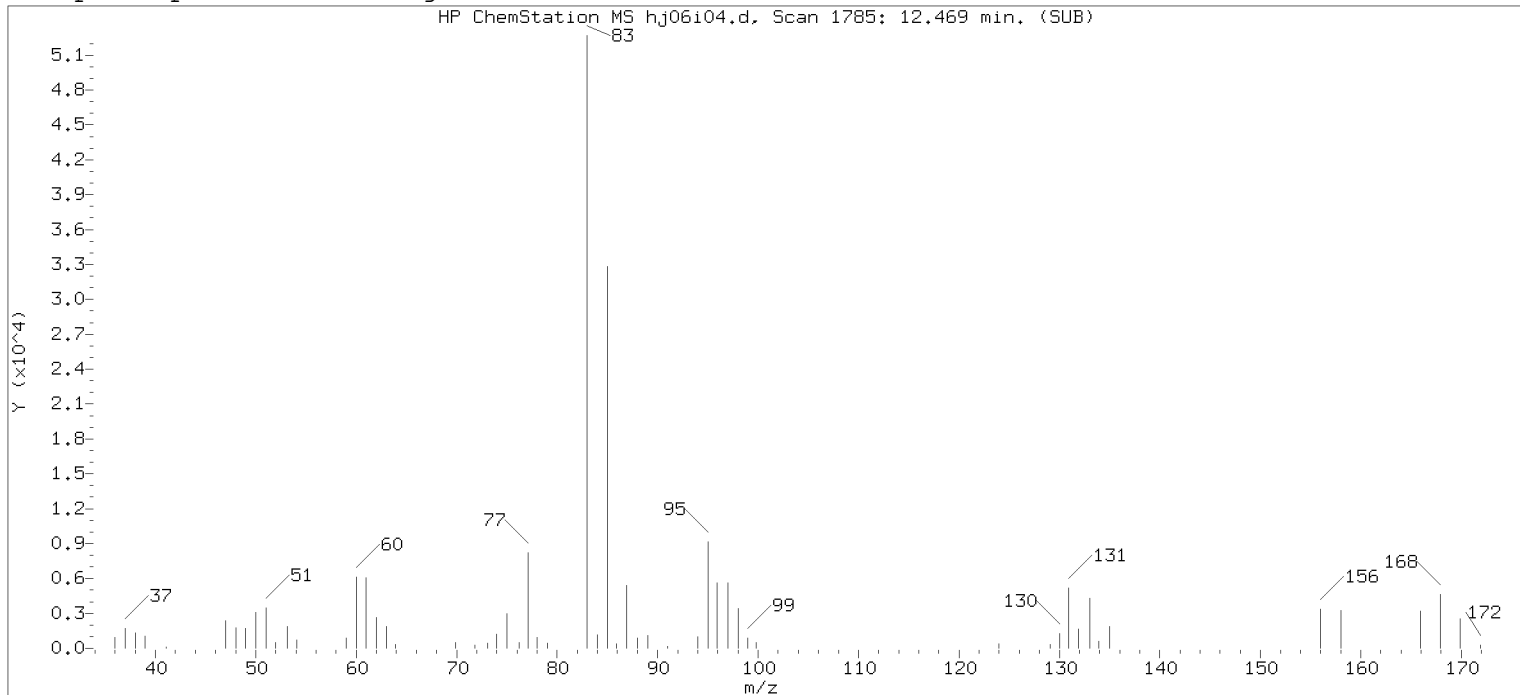
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 82697M
On-Column Amount (ng) : 1.9946
Integration start scan : 1779 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

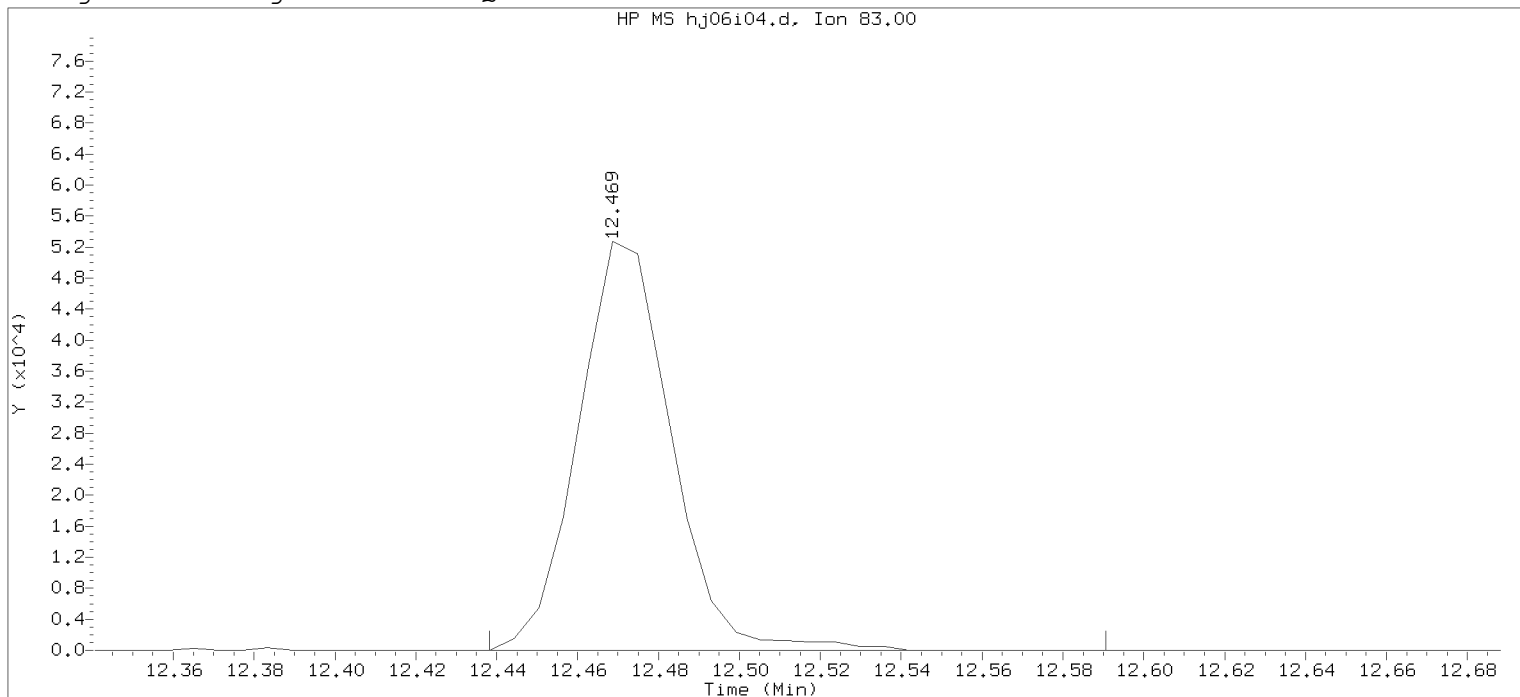
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

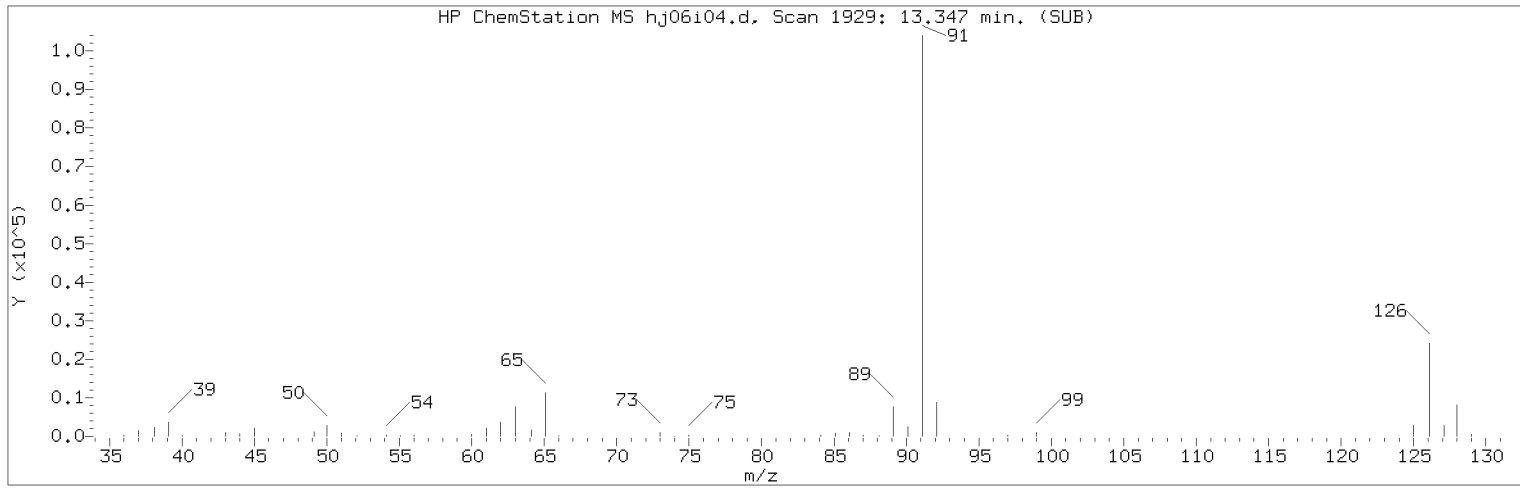
Lab Sample ID: VSTD002

Compound Number	:	114	
Compound Name	:	1,1,2,2-Tetrachloroethane	
Scan Number	:	1785	
Retention Time (minutes)	:	12.469	
Quant Ion	:	83.00	
Area	:	84320	
On-column Amount (ng)	:	1.9661	
Integration start scan	:	1779	Integration stop scan: 1804
Y at integration start	:	0	Y at integration end: 0

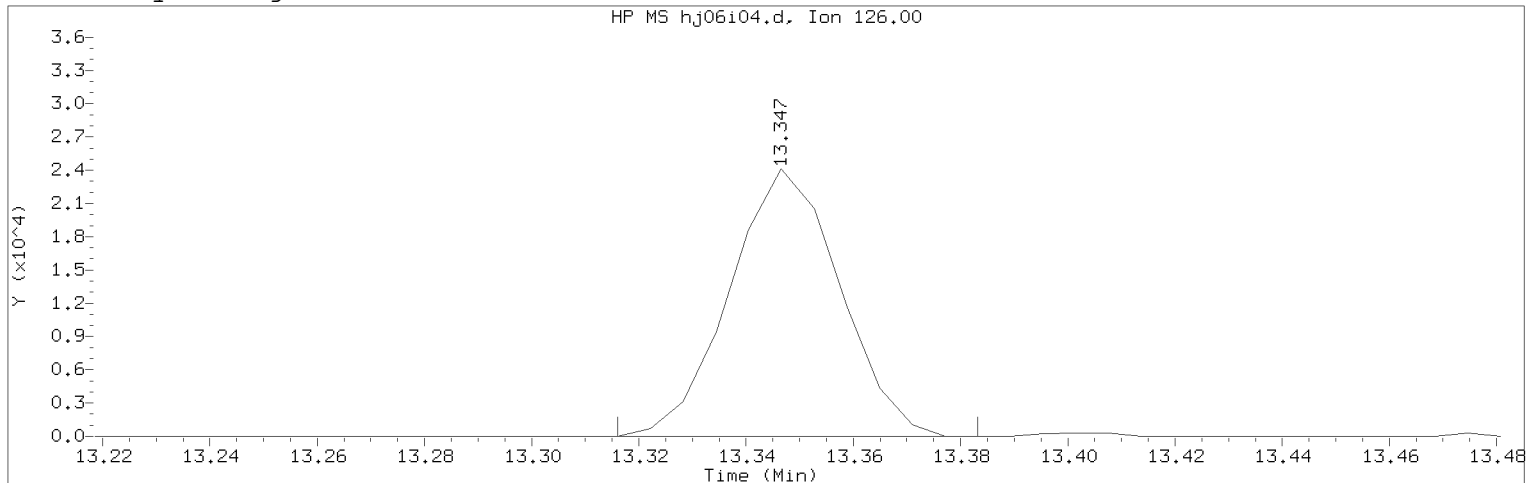
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RPF59 Page 2 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

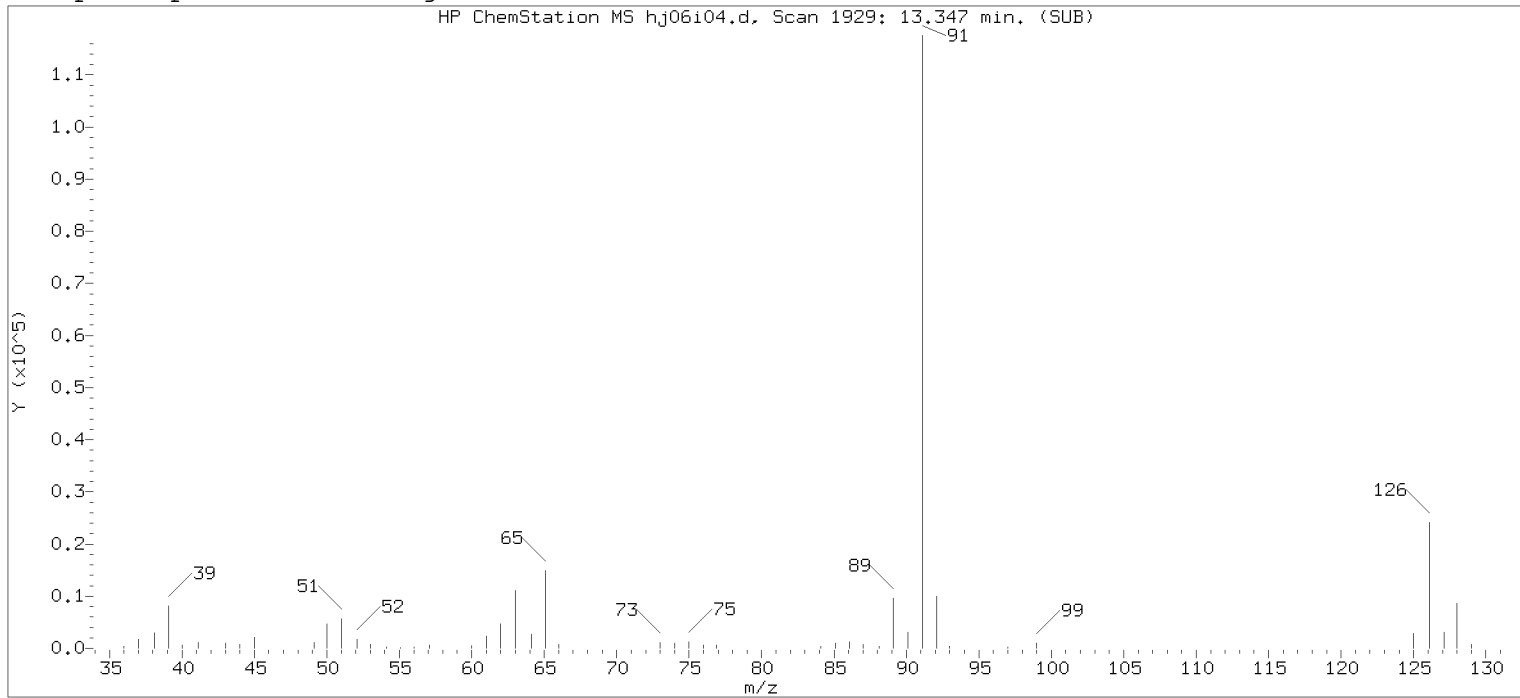
Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area (flag)	: 34248M	
On-Column Amount (ng)	: 1.9649	
Integration start scan	: 1923	Integration stop scan: 1934
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

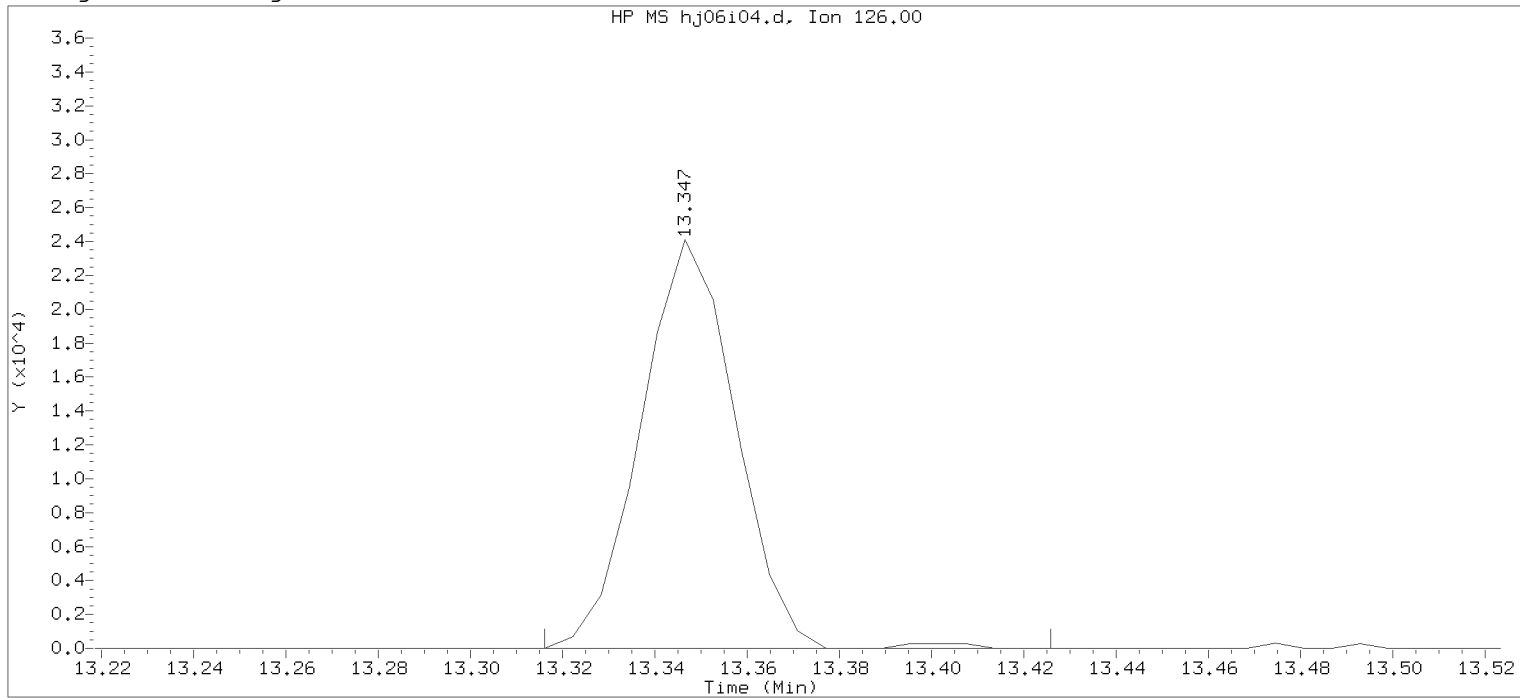
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



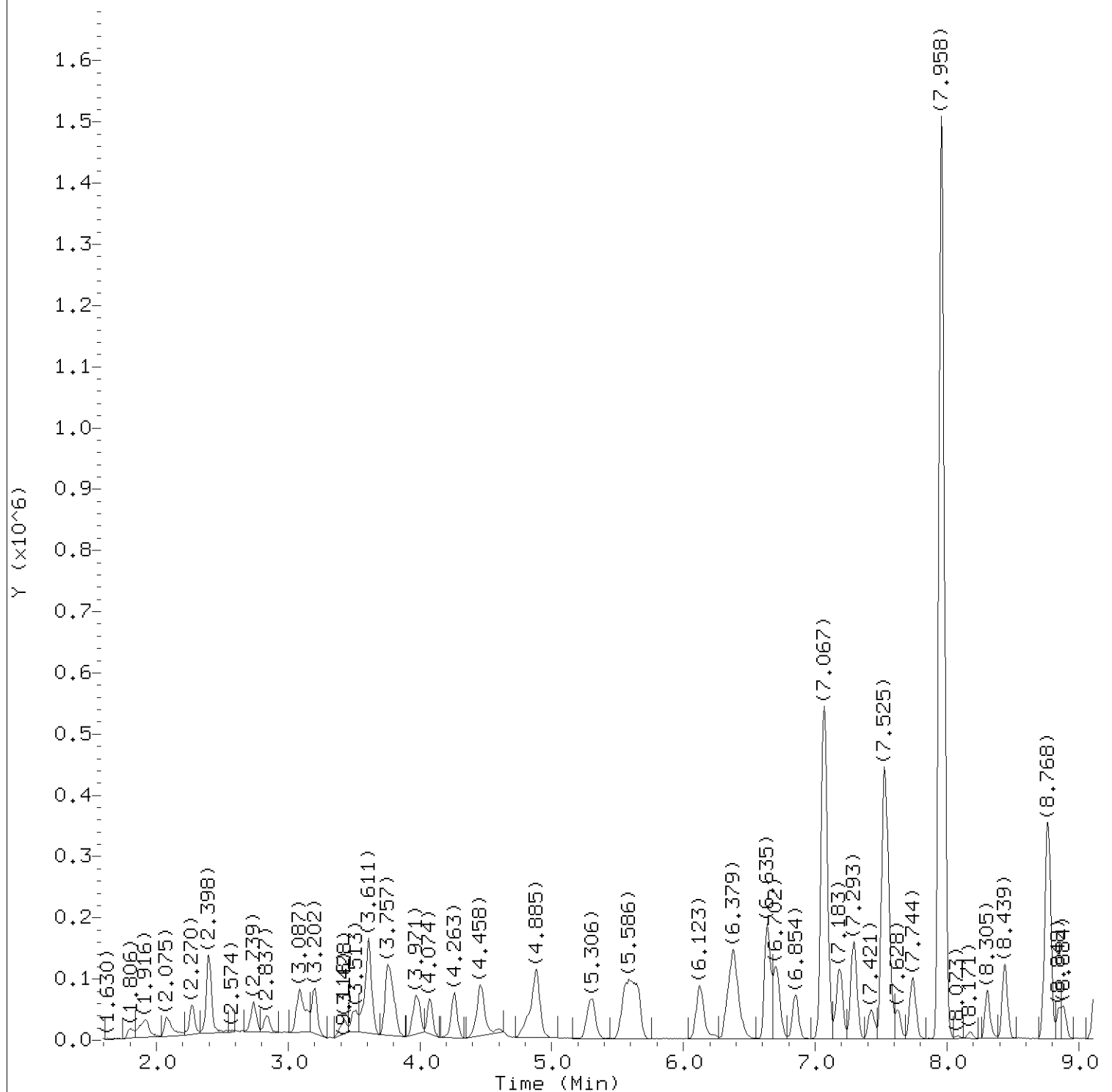
Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area	: 34536	
On-column Amount (ng)	: 1.8856	
Integration start scan	: 1923	Integration stop scan: 1941
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
Analyst ID: JKH09052

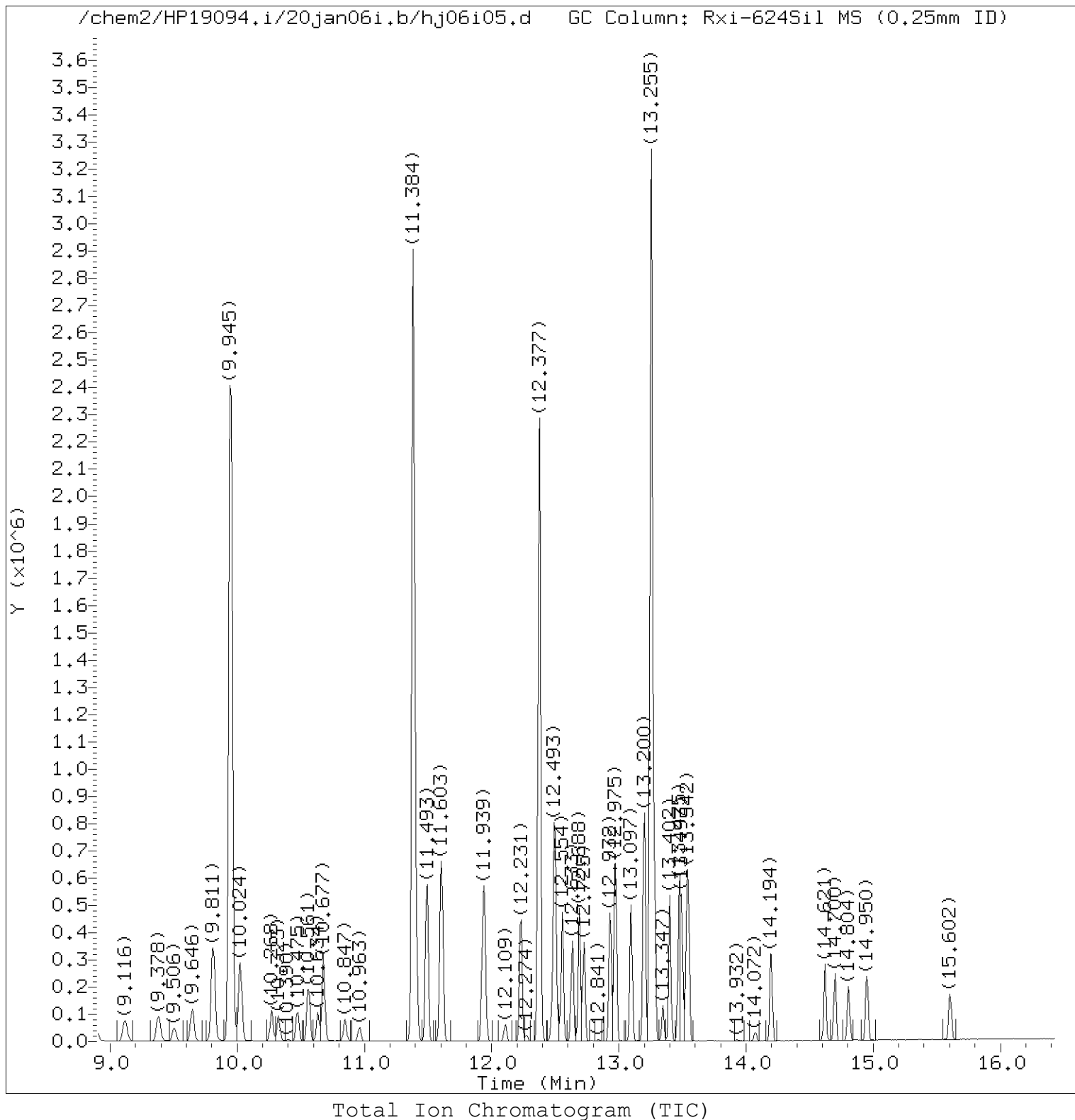
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
 Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.075	85	75278M	1.009
2) Chloromethane	(2)	2.270	50	72579	0.986
6) 1,3-Butadiene	(2)	2.398	39	56225M	1.016
5) Vinyl Chloride	(2)	2.398	62	69313	0.990
7) Bromomethane	(2)	2.739	94	48903	0.975
8) Chloroethane	(2)	2.843	64	40416	0.996
9) Dichlorofluoromethane	(2)	3.087	67	94550	0.982
10) Trichlorofluoromethane	(2)	3.148	101	79828M	0.999
11) Ethyl ether	(2)	3.428	59	34825	0.985
12) Freon 123a	(2)	3.513	67	63672	1.030
13) Acrolein	(1)	3.611	56	277191	49.634
15) 1,1-Dichloroethene	(2)	3.757	96	49369	1.016
14) Acetone	(1)	3.794	43	78581M	10.428
16) Freon 113	(2)	3.794	101	53987	1.063
17) Methyl Iodide	(2)	3.964	142	95675	1.020
18) Bromoethane	(2)	3.995	108	40968M	0.966
19) Carbon Disulfide	(2)	4.074	76	150610	1.013
22) Methyl Acetate	(1)	4.233	43	22660	1.192
23) Allyl Chloride	(2)	4.263	41	81917	0.992
24) Methylene Chloride	(2)	4.452	84	53061	1.014
27)*t-Butyl Alcohol-d10	(1)	4.458	65	124021	50.000
29) t-Butyl Alcohol	(1)	4.605	59	53216	20.329
30) Acrylonitrile	(1)	4.806	53	46077	5.011
31) Methyl Tertiary Butyl Ether	(2)	4.879	73	112679	1.014
32) trans-1,2-Dichloroethene	(2)	4.885	96	53314	0.998
33) n-Hexane	(2)	5.300	57	77385	1.027
34) 1,1-Dichloroethane	(2)	5.550	63	97205	1.008
35) di-Isopropyl Ether	(2)	5.592	45	159773	1.005
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	83728	1.014
41) 1,2-Dichloroethene (Total)	(2)		96	113693	2.015
38) Ethyl t-butyl ether	(2)	6.123	59	149284	1.001
39) 2-Butanone	(1)	6.330	43	117011	9.930
40) cis-1,2-Dichloroethene	(2)	6.373	96	60379	1.017
42) 2,2-Dichloropropane	(2)	6.391	77	82933	1.010
43) Propionitrile	(1)	6.427	54	64622	20.021
46) Methacrylonitrile	(1)	6.635	67	114480	9.917
48) Bromochloromethane	(2)	6.702	128	25252	1.007
49) Tetrahydrofuran	(1)	6.708	71	32211	9.895

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
 Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.848	83	94470	1.003
51) \$Dibromofluoromethane	(2)	7.067	113	493947	9.987
51) \$Dibromofluoromethane	(2)	7.067	111	508390	10.005
52) 1,1,1-Trichloroethane	(2)	7.086	97	88523	1.011
53) Cyclohexane	(2)	7.183	56	96178	1.028
53) Cyclohexane	(2)	7.189	84	84186M	1.051
53) Cyclohexane	(2)	7.189	69	30740	1.056
56) 1,1-Dichloropropene	(2)	7.287	75	75086	1.015
55) Carbon Tetrachloride	(2)	7.299	117	76382	1.017
57) Isobutyl Alcohol	(1)	7.421	41	44722	49.287
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	95955	10.010
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	445732	10.078
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	61459	10.123
59) Benzene	(2)	7.555	78	219939	1.016
60) 1,2-Dichloroethane	(2)	7.628	62	56848	1.019
61) t-Amyl methyl ether	(2)	7.738	73	131629	1.012
64) *Fluorobenzene	(2)	7.958	96	1989646	10.000
63) n-Heptane	(2)	7.964	43	82099	1.038
66) n-Butanol	(1)	8.305	56	74822	102.429
68) Trichloroethene	(2)	8.439	95	58033	1.023
70) Methylcyclohexane	(2)	8.750	83	101808	1.001
71) 1,2-Dichloropropane	(2)	8.774	63	54490	1.018
72) Methyl Methacrylate	(1)	8.848	69	23073	0.994
73) 1,4-Dioxane	(1)	8.860	88	8963M	50.873
74) Dibromomethane	(2)	8.890	93	25735	1.051
75) Bromodichloromethane	(2)	9.116	83	67078	1.008
77) 2-Nitropropane	(1)	9.378	41	73855M	9.683
80) 1-Bromo-2-chloroethane	(2)	9.506	63	49514M	0.984
81) cis-1,3-Dichloropropene	(2)	9.646	75	79397	1.011
82) 4-Methyl-2-Pentanone	(1)	9.811	43	289676	9.974
83) \$Toluene-d8	(3)	9.945	98	1966268	9.999
83) \$Toluene-d8	(3)	9.945	100	1275487	10.029
84) Toluene	(3)	10.024	92	140089	1.014
86) 1,3-Dichloropropene (total)	(3)		75	143344	2.008
85) trans-1,3-Dichloropropene	(3)	10.268	75	63947	0.997
87) Ethyl Methacrylate	(3)	10.323	69	51380	1.034
89) 1,1,2-Trichloroethane	(3)	10.475	97	34882M	1.005
90) Tetrachloroethene	(3)	10.561	166	64653	1.030

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	61860	1.037
92) 2-Hexanone	(1)	10.677	43	202922	10.226
94) Dibromochloromethane	(3)	10.847	129	44756	1.007
96) 1,2-Dibromoethane	(3)	10.963	107	33220	1.002
97) 1-Chlorohexane	(3)	11.384	91	85376	1.025
98) *Chlorobenzene-d5	(3)	11.384	117	1476031	10.000
99) Chlorobenzene	(3)	11.408	112	154513	1.024
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	53585	0.998
101) Ethylbenzene	(3)	11.493	91	278238	1.024
102) m+p-Xylene	(3)	11.603	106	213632	2.055
106) Xylene (Total)	(3)		106	317727	3.074
105) o-Xylene	(3)	11.932	106	104095	1.018
107) Styrene	(3)	11.945	104	169055	1.019
108) Bromoform	(3)	12.109	173	25941	1.001
109) Isopropylbenzene	(3)	12.231	105	282474	1.020
112) \$4-Bromofluorobenzene	(3)	12.377	95	730449	10.040
112) \$4-Bromofluorobenzene	(3)	12.377	174	626077	10.057
114) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	41928M	1.006
115) Bromobenzene	(4)	12.493	156	63374	1.006
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	108468	9.943
117) 1,2,3-Trichloropropane	(4)	12.524	110	11040	0.989
118) n-Propylbenzene	(4)	12.554	91	334540	1.017
120) 2-Chlorotoluene	(4)	12.633	126	64837	0.999
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	242036	1.014
123) 4-Chlorotoluene	(4)	12.725	126	64685	0.998
126) tert-Butylbenzene	(4)	12.932	134	50094	1.015
127) Pentachloroethane	(4)	12.969	167	40050	0.952
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	248595	1.008
129) sec-Butylbenzene	(4)	13.097	105	311718	1.008
133) p-Isopropyltoluene	(4)	13.200	119	269425	1.012
132) 1,3-Dichlorobenzene	(4)	13.200	146	126298	1.006
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	798465	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	121684	0.993
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	101239M	0.985
137) Benzyl Chloride	(4)	13.347	126	17647	1.007
139) n-Butylbenzene	(4)	13.493	92	133283	1.013
140) 1,2-Dichlorobenzene	(4)	13.530	146	112044	1.012
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	6378	1.025

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

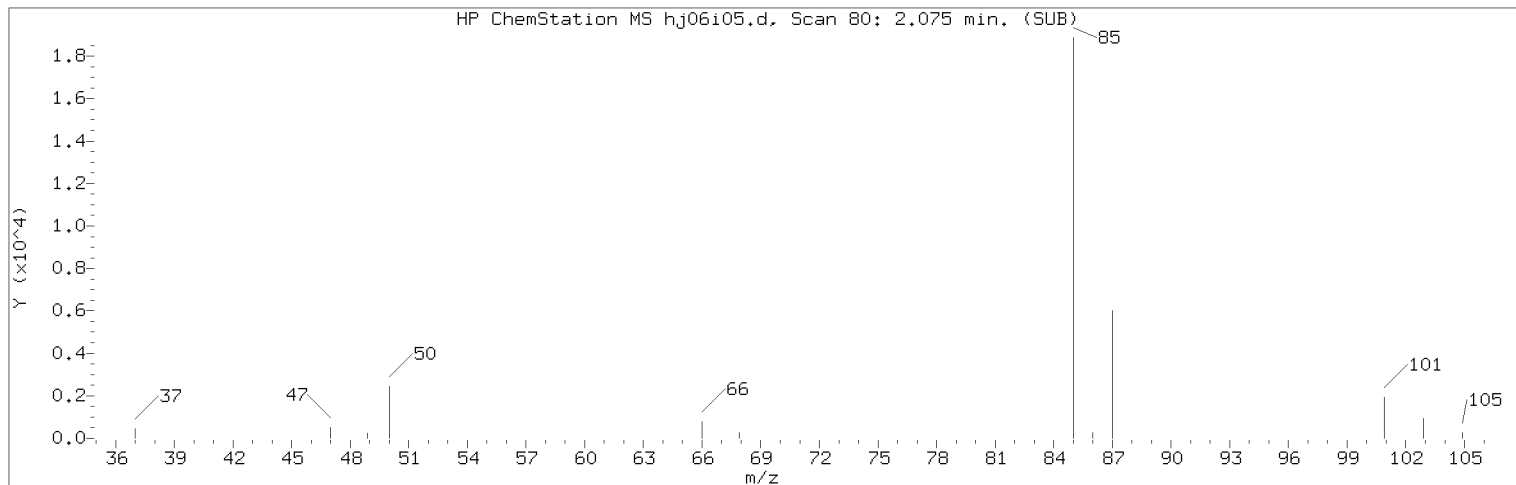
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	96296	0.980
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	78732	0.955
147) Hexachlorobutadiene	(4)	14.700	225	42759	0.994
148) Naphthalene	(4)	14.804	128	145072	1.009
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	68903	0.979

page 4 of 4

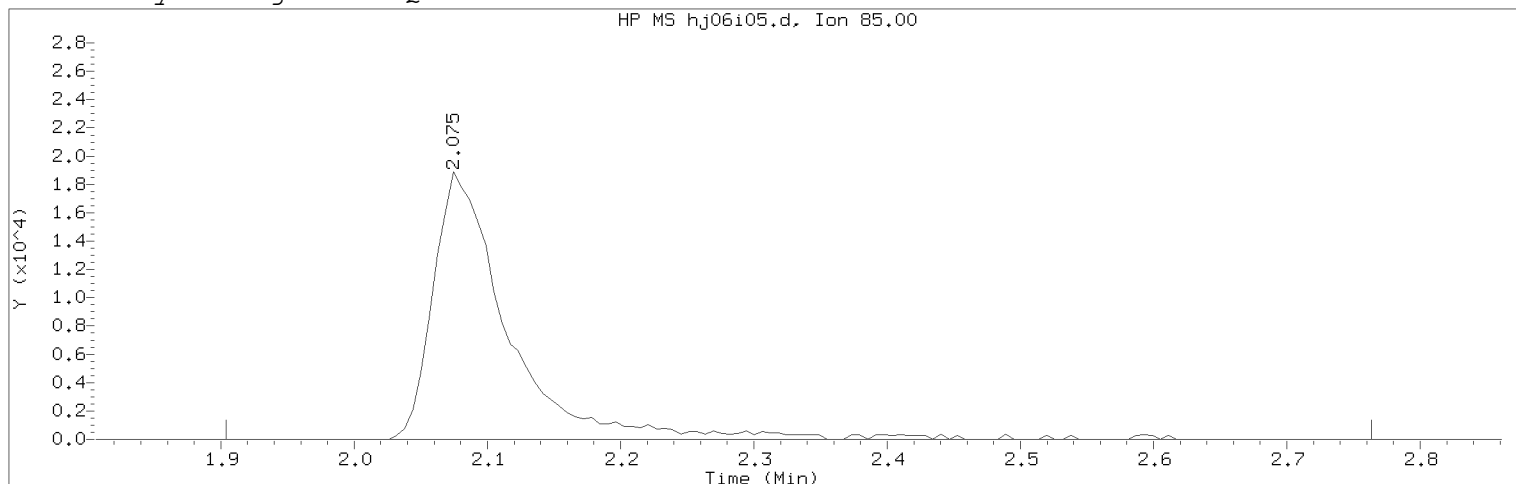
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

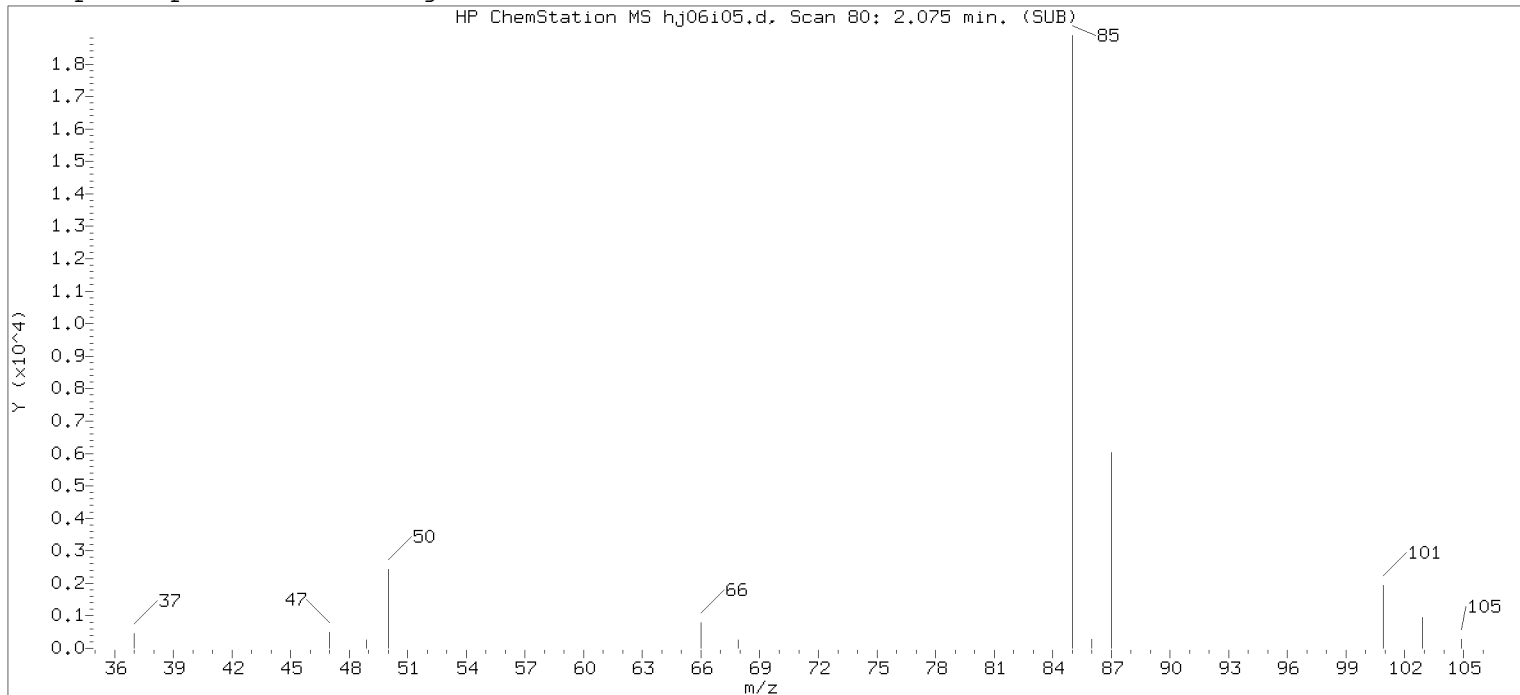
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Quant Ion : 85.00
Area (flag) : 75278M
On-Column Amount (ng) : 1.0093
Integration start scan : 51 Integration stop scan: 192
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

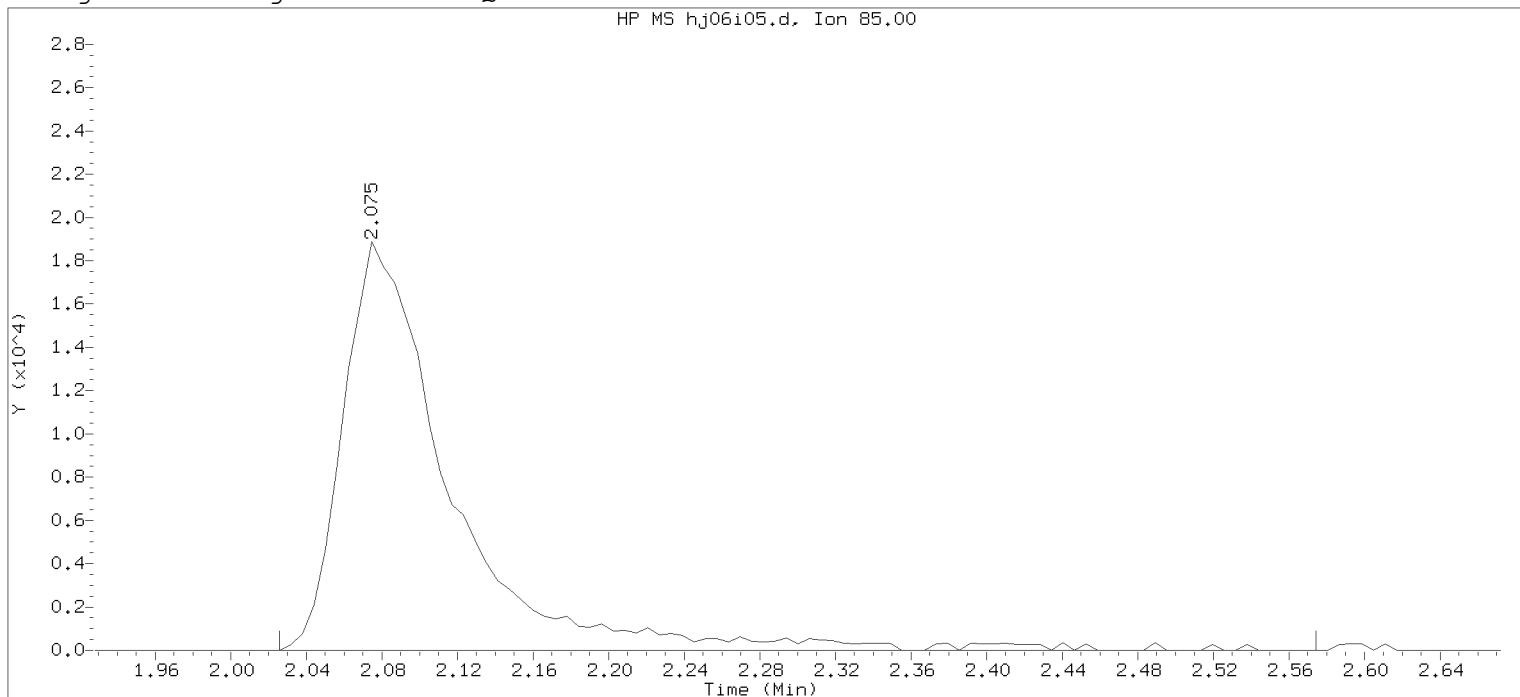
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

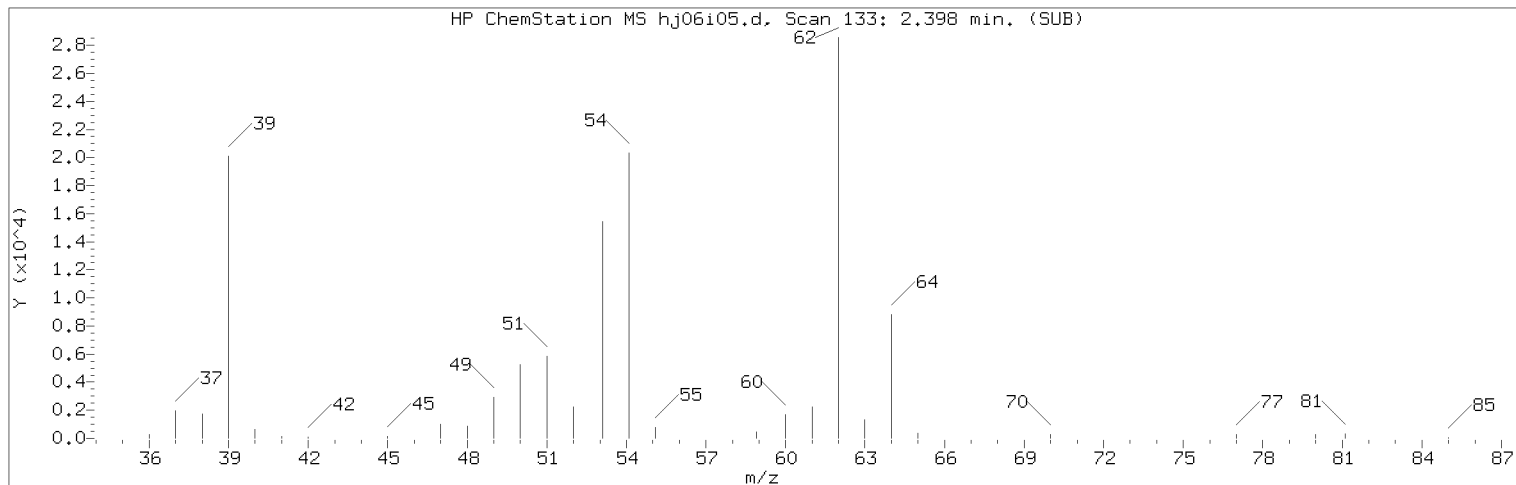
Sample Name: VSTD001

Lab Sample ID: VSTD001

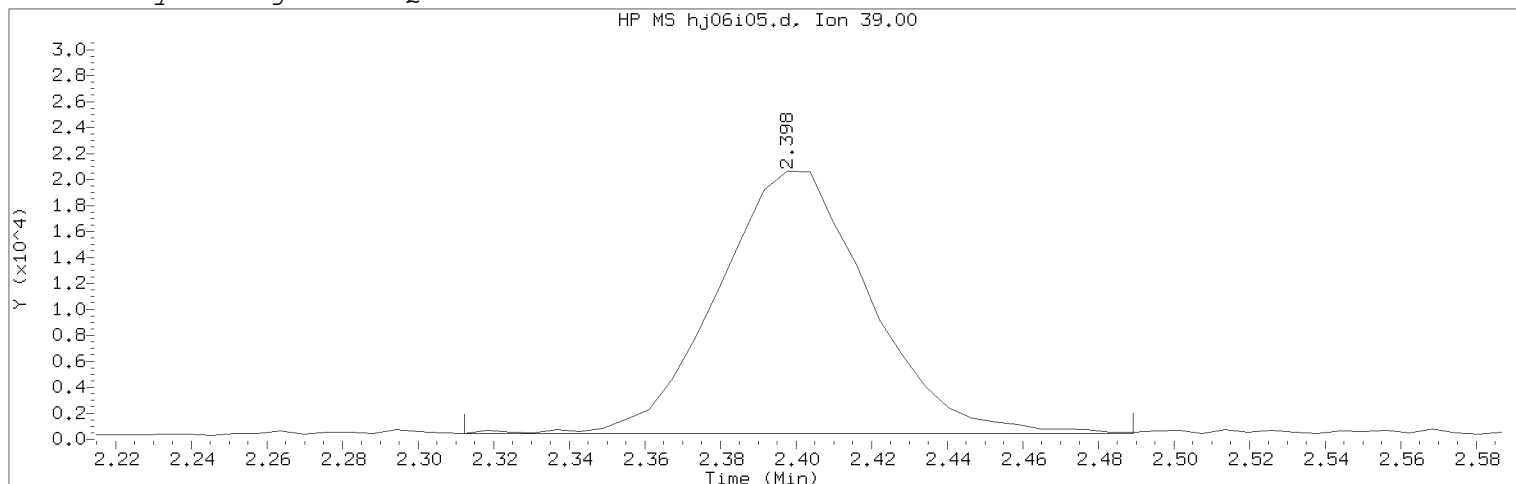
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 80	
Retention Time (minutes)	: 2.075	
Quant Ion	: 85.00	
Area	: 74859	
On-column Amount (ng)	: 1.0121	
Integration start scan	: 71	Integration stop scan: 161
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RPF59 Page 2642 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 133	
Retention Time (minutes)	: 2.398	
Quant Ion	: 39.00	
Area (flag)	: 56225M	
On-Column Amount (ng)	: 1.0163	
Integration start scan	: 118	Integration stop scan: 147
Y at integration start	: 463	Y at integration end: 463

Reason for manual integration: improper integration

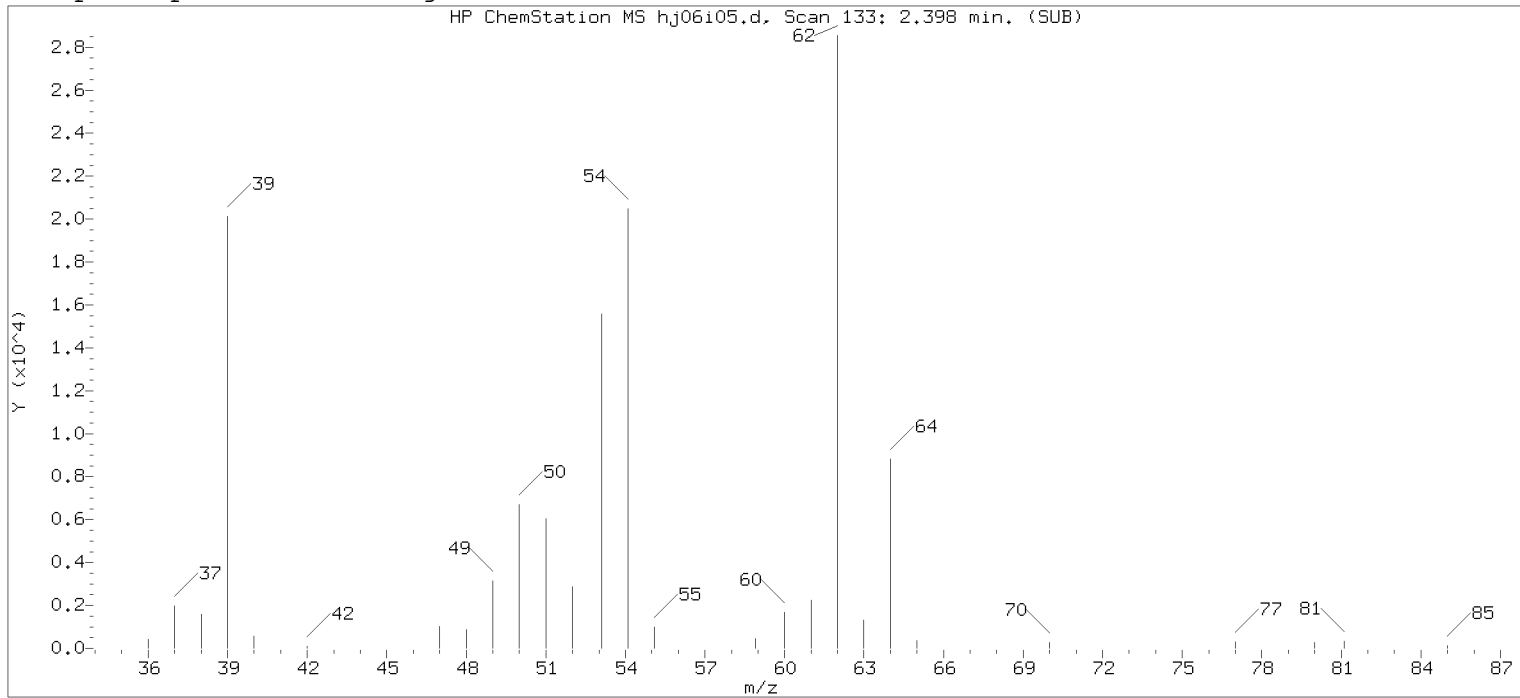
Analyst responsible for change:

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

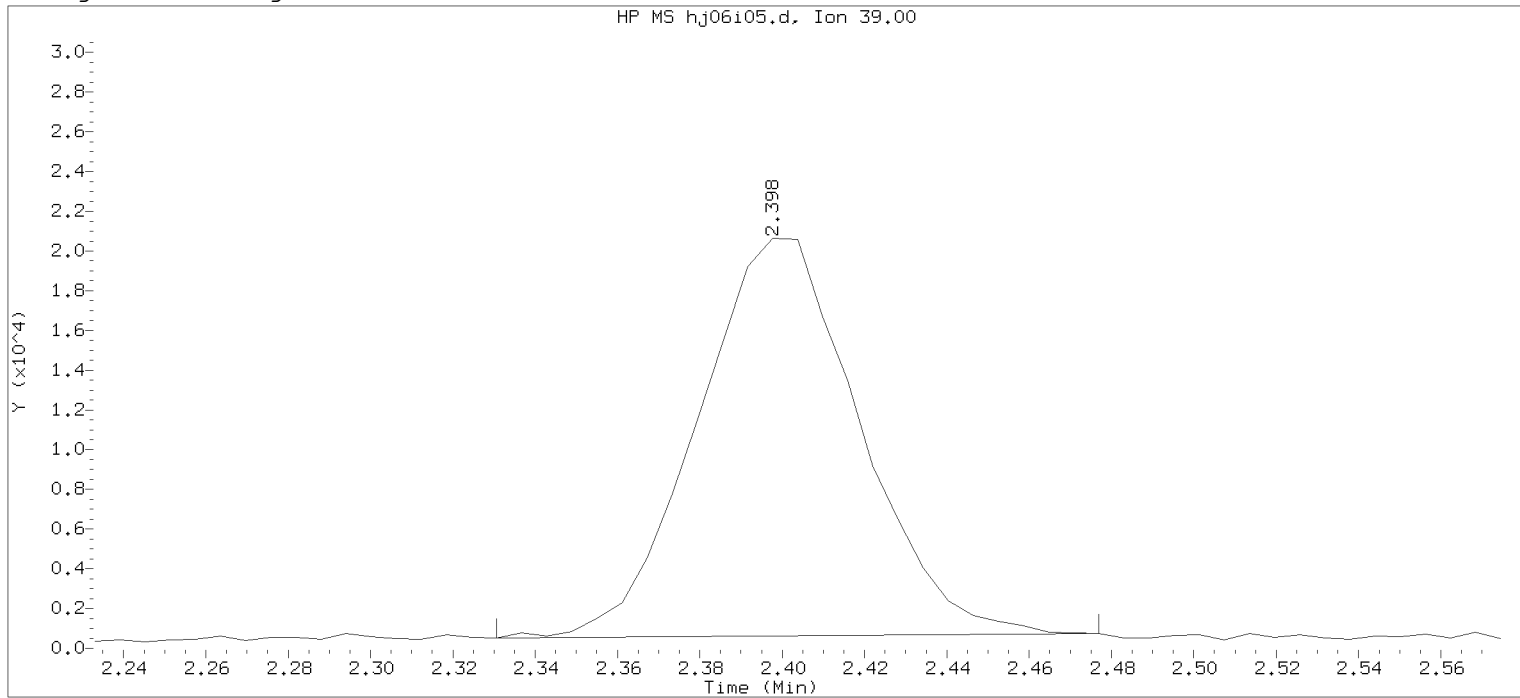
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

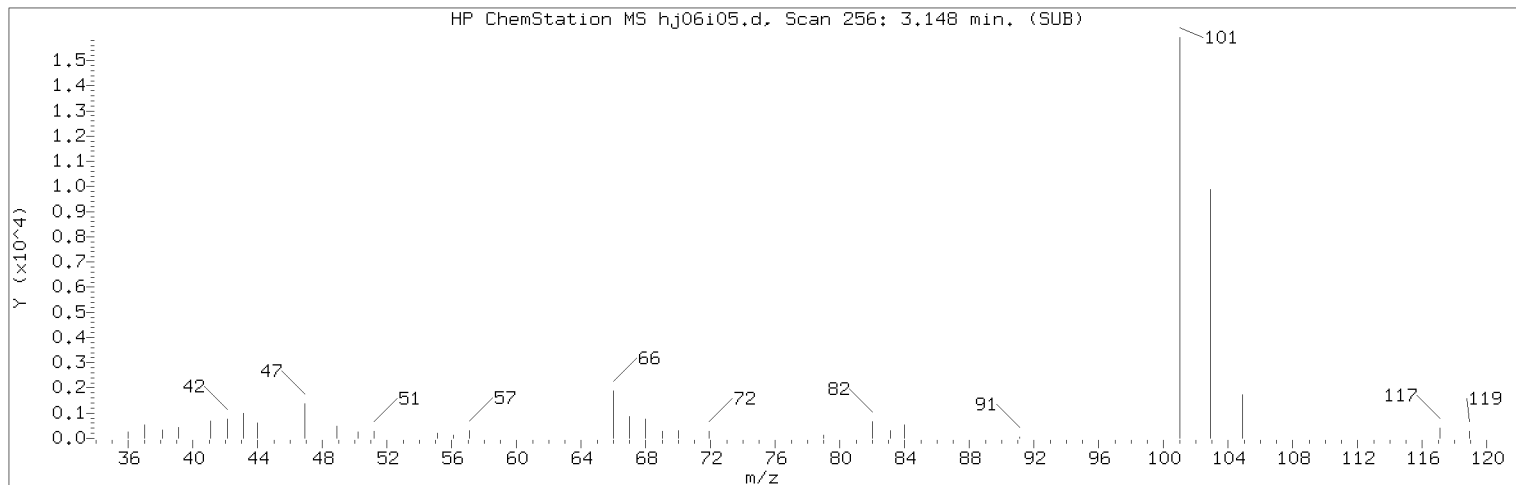
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

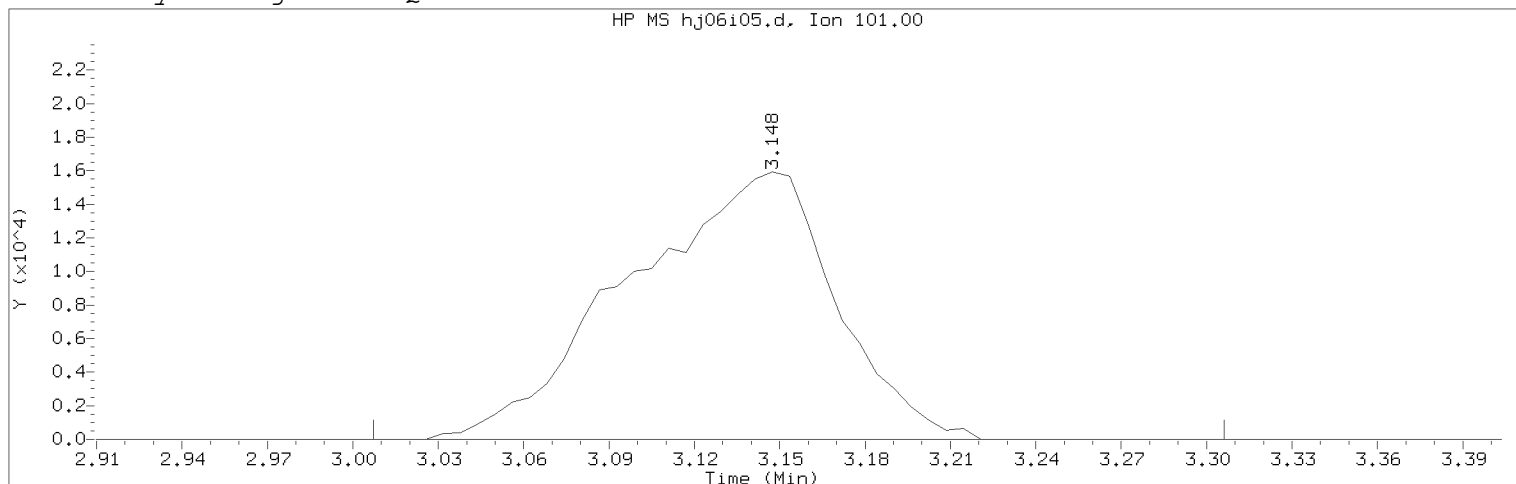
Lab Sample ID: VSTD001

Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 133	
Retention Time (minutes)	: 2.398	
Quant Ion	: 39.00	
Area	: 54561	
On-column Amount (ng)	: 0.9985	
Integration start scan	: 121	Integration stop scan: 145
Y at integration start	: 515	Y at integration end: 741

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

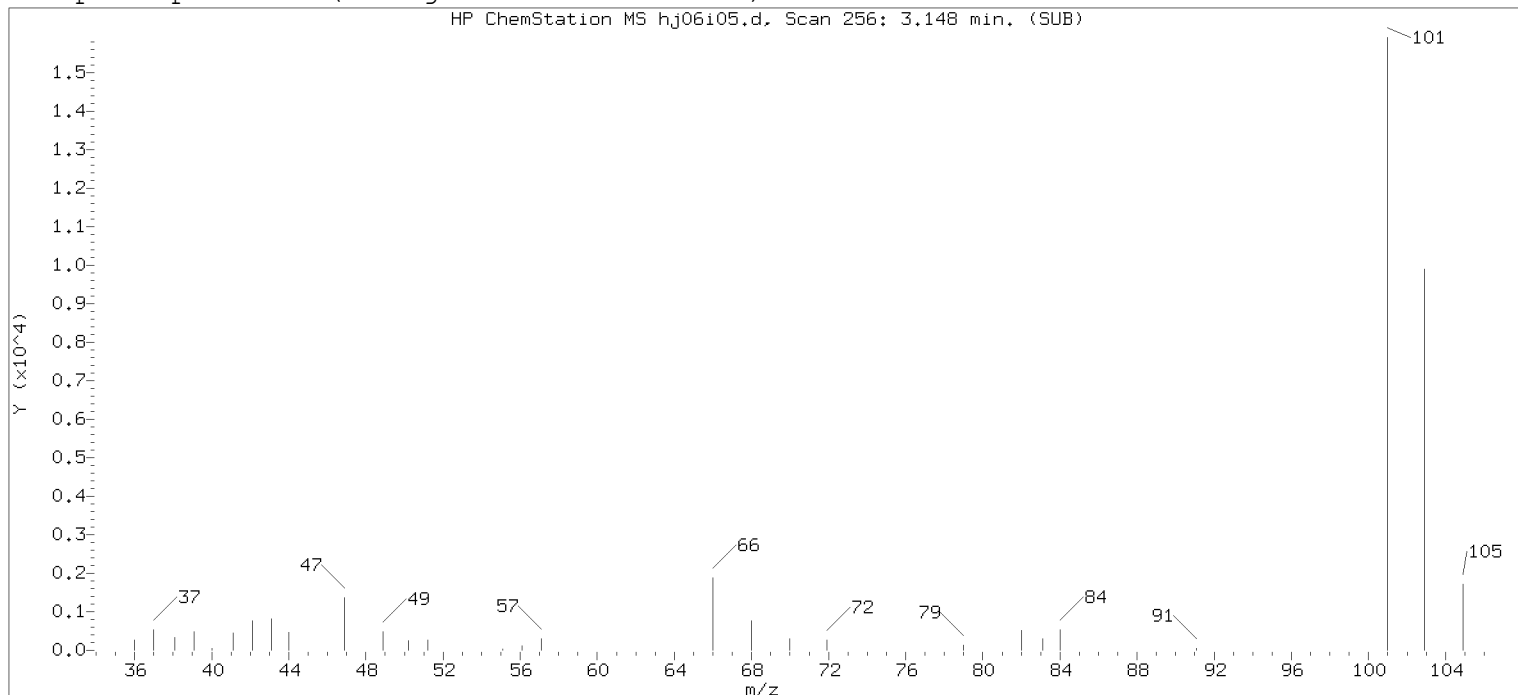
Compound Number	: 10	
Compound Name	: Trichlorofluoromethane	
Scan Number	: 256	
Retention Time (minutes)	: 3.148	
Quant Ion	: 101.00	
Area (flag)	: 79828M	
On-Column Amount (ng)	: 0.9988	
Integration start scan	: 232	Integration stop scan: 281
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

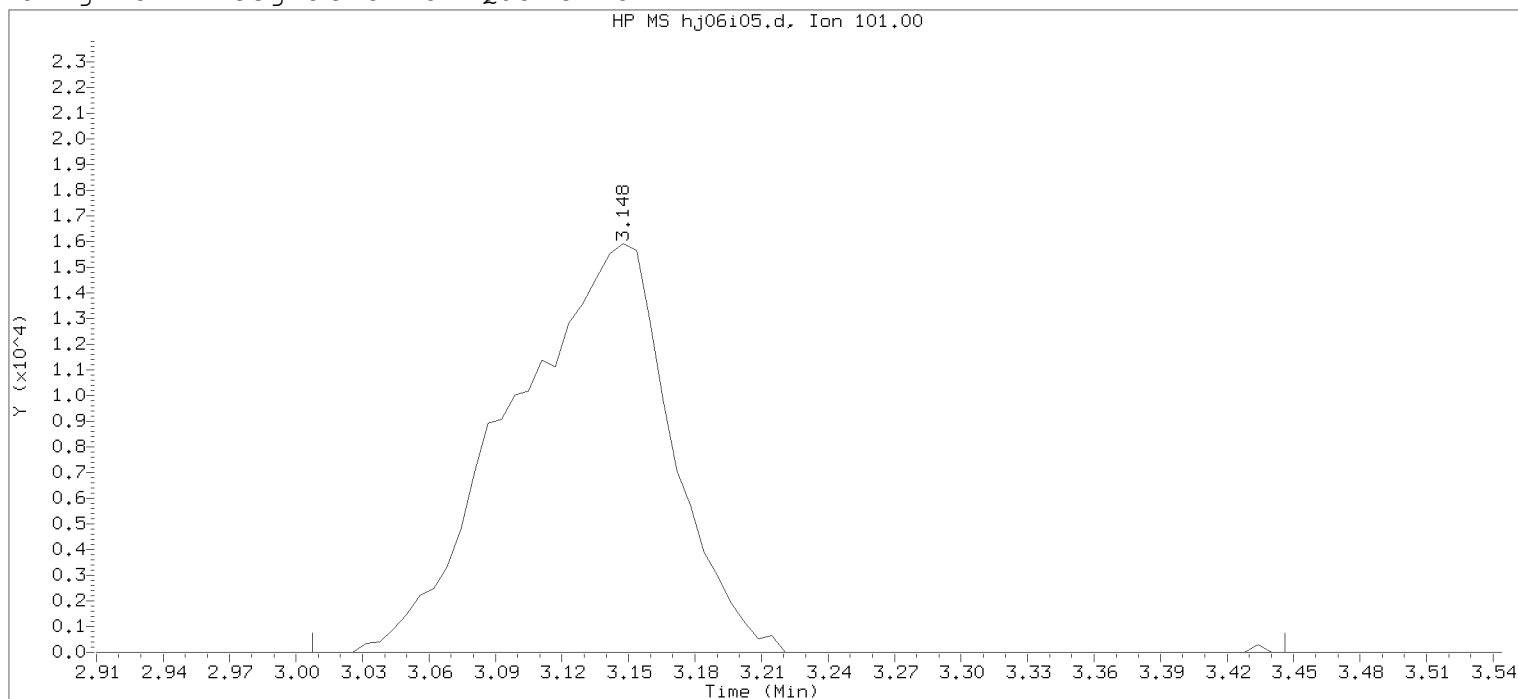
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 10

Compound Name : Trichlorofluoromethane

Scan Number : 256

Retention Time (minutes): 3.148

Quant Ion : 101.00

Area : 79941

On-column Amount (ng) : 0.9992

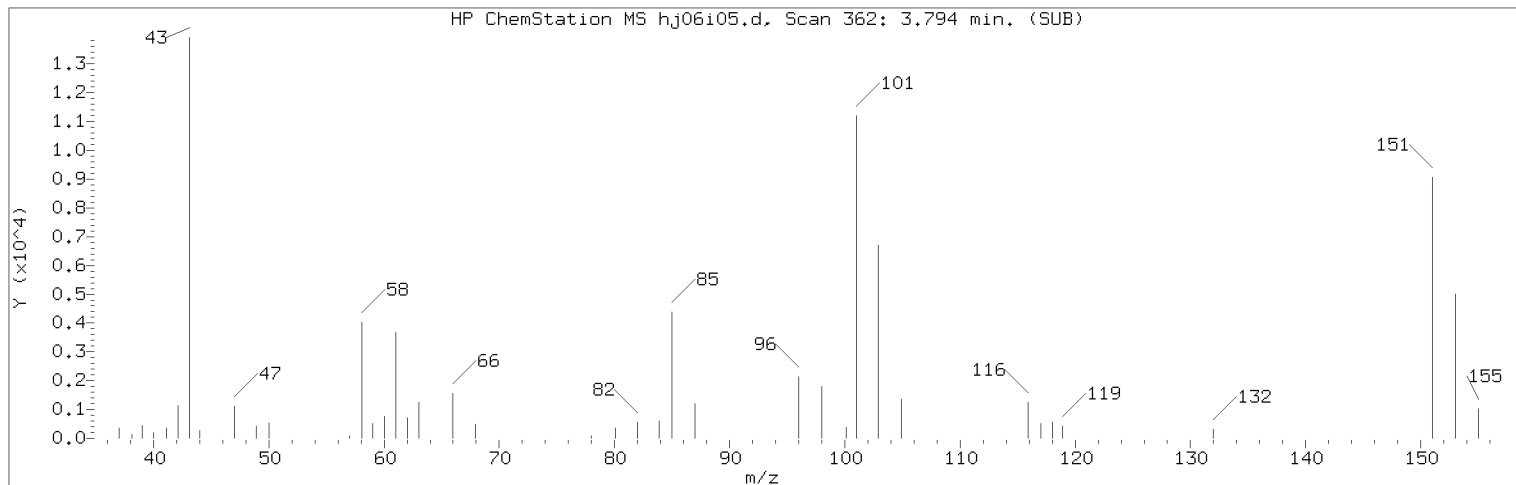
Integration start scan : 232 Integration stop scan: 304

Y at integration start : 0 Y at integration end: 0

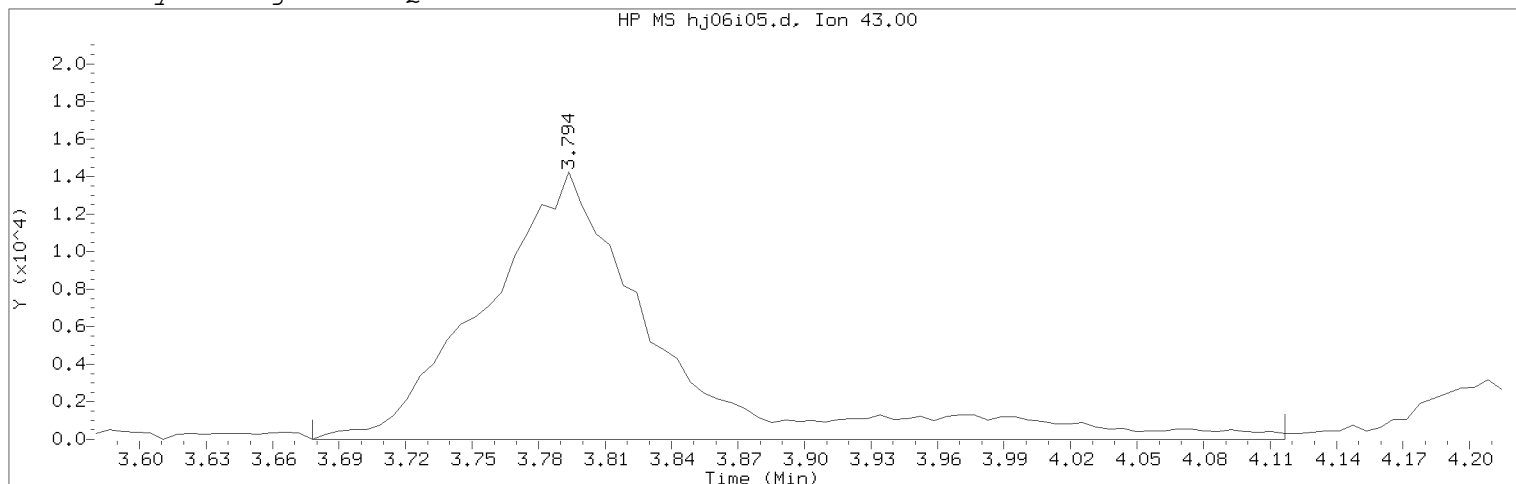
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 2 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area (flag) : 78581M
 On-Column Amount (ng) : 10.4277
 Integration start scan : 342
 Y at integration start : 0

Integration stop scan: 414
 Y at integration end: 0

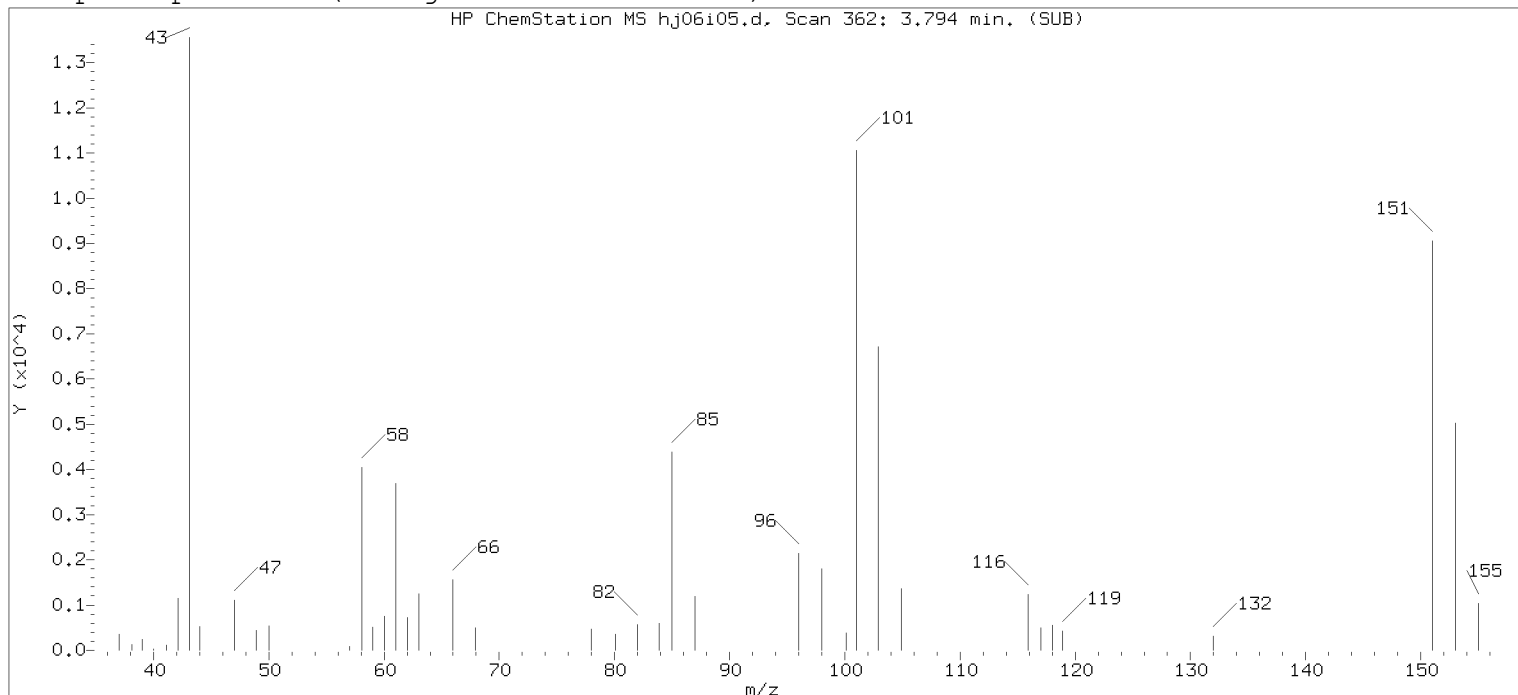
Reason for manual integration: improper integration

Analyst responsible for change:

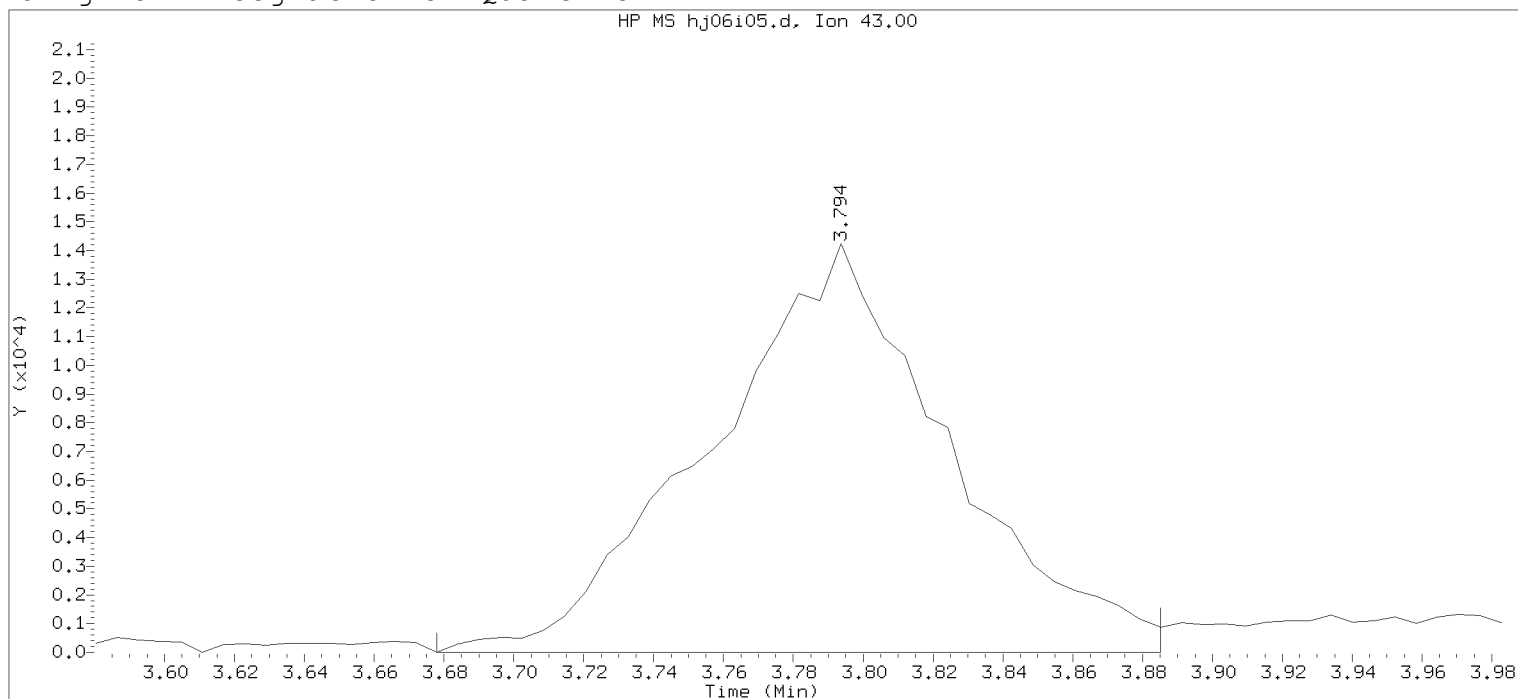
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

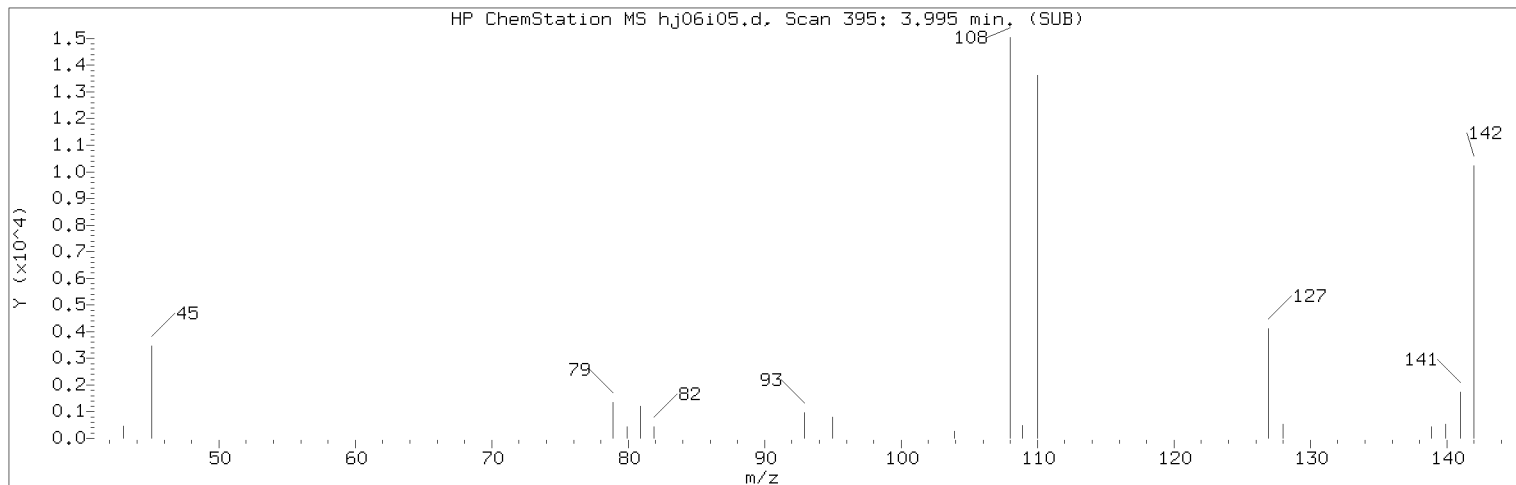
Lab Sample ID: VSTD001

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area : 66893
 On-column Amount (ng) : 8.8758
 Integration start scan : 342
 Y at integration start : 0

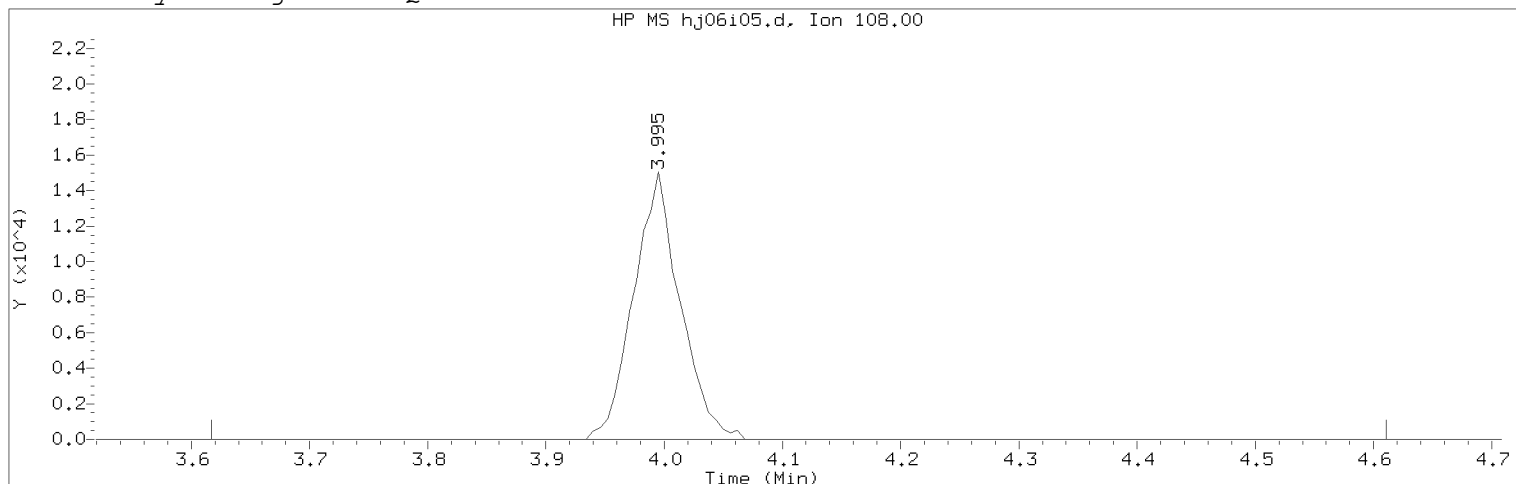
Integration stop scan: 376
 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
 Target 3.5 esignature user RAE59 Page 2 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

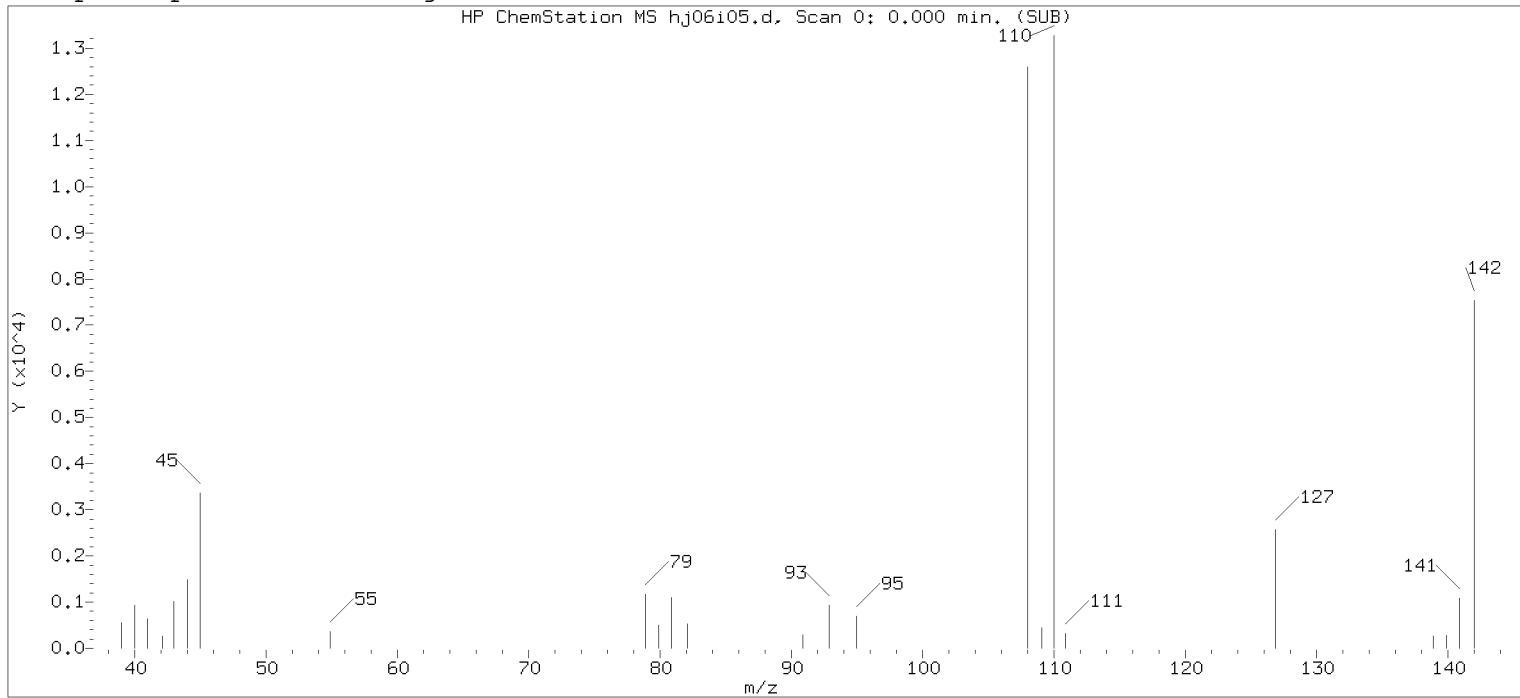
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 395	
Retention Time (minutes)	: 3.995	
Quant Ion	: 108.00	
Area (flag)	: 40968M	
On-Column Amount (ng)	: 0.9660	
Integration start scan	: 332	Integration stop scan: 495
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

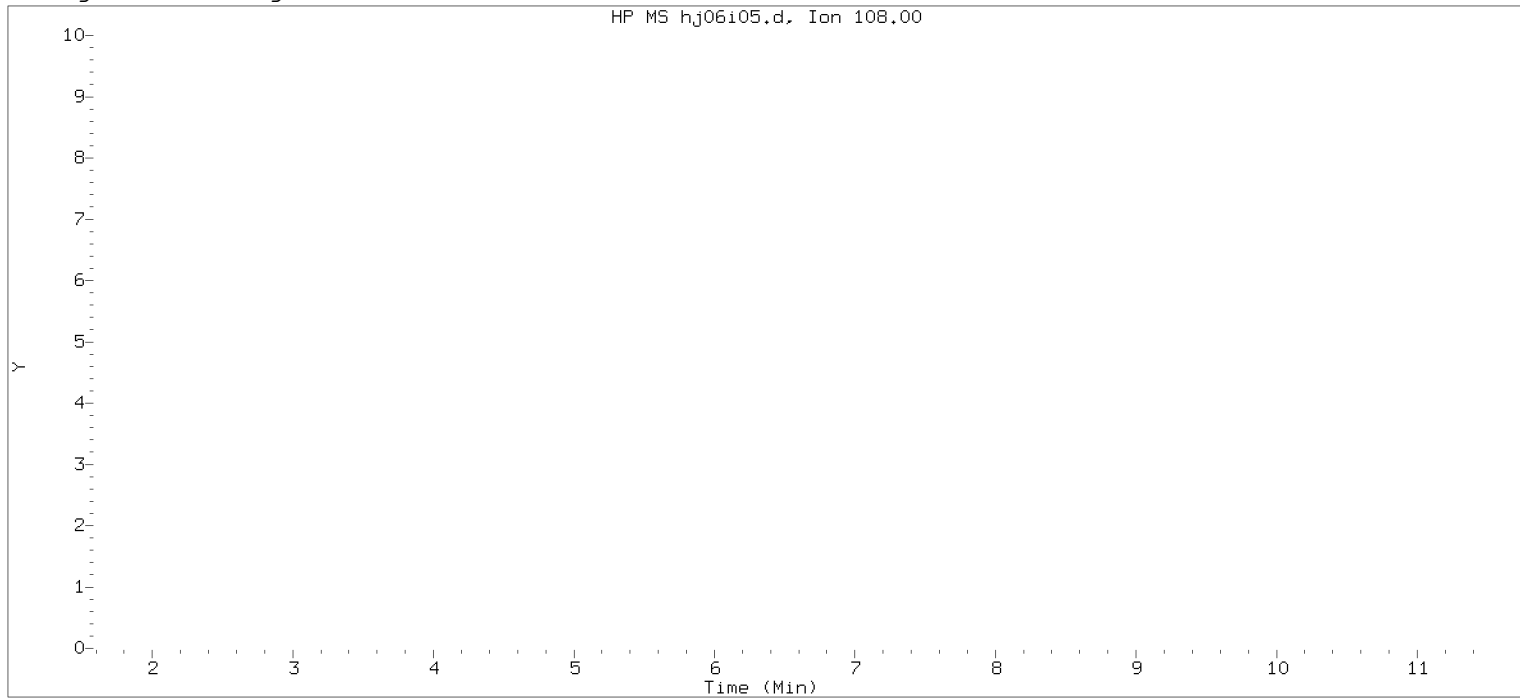
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

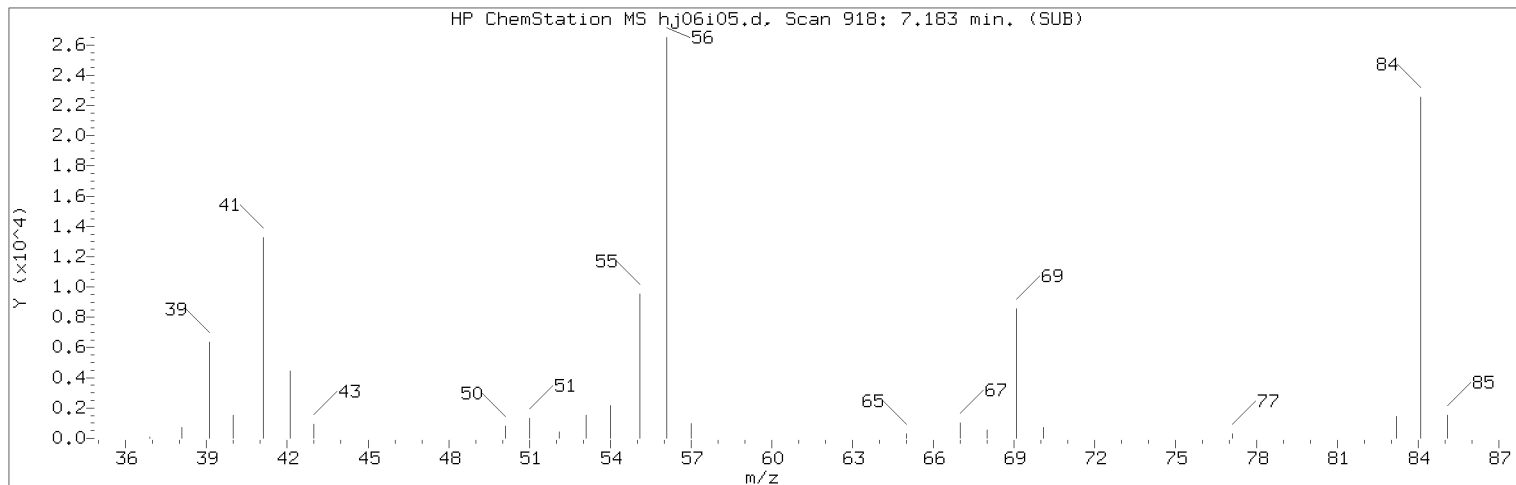
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

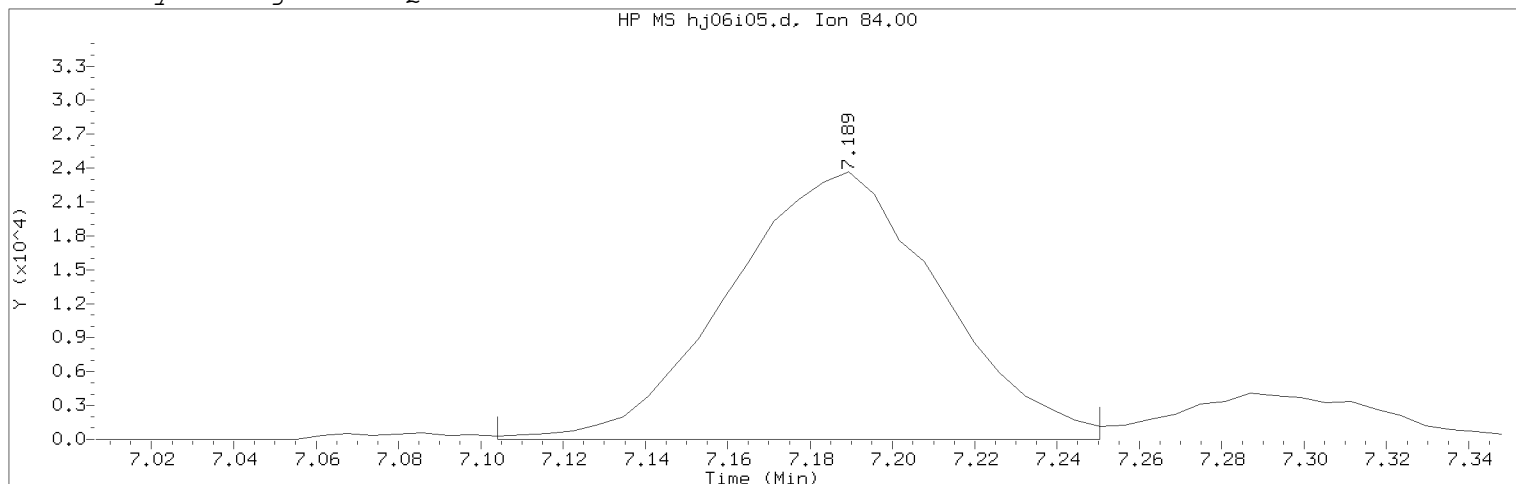
Lab Sample ID: VSTD001

Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

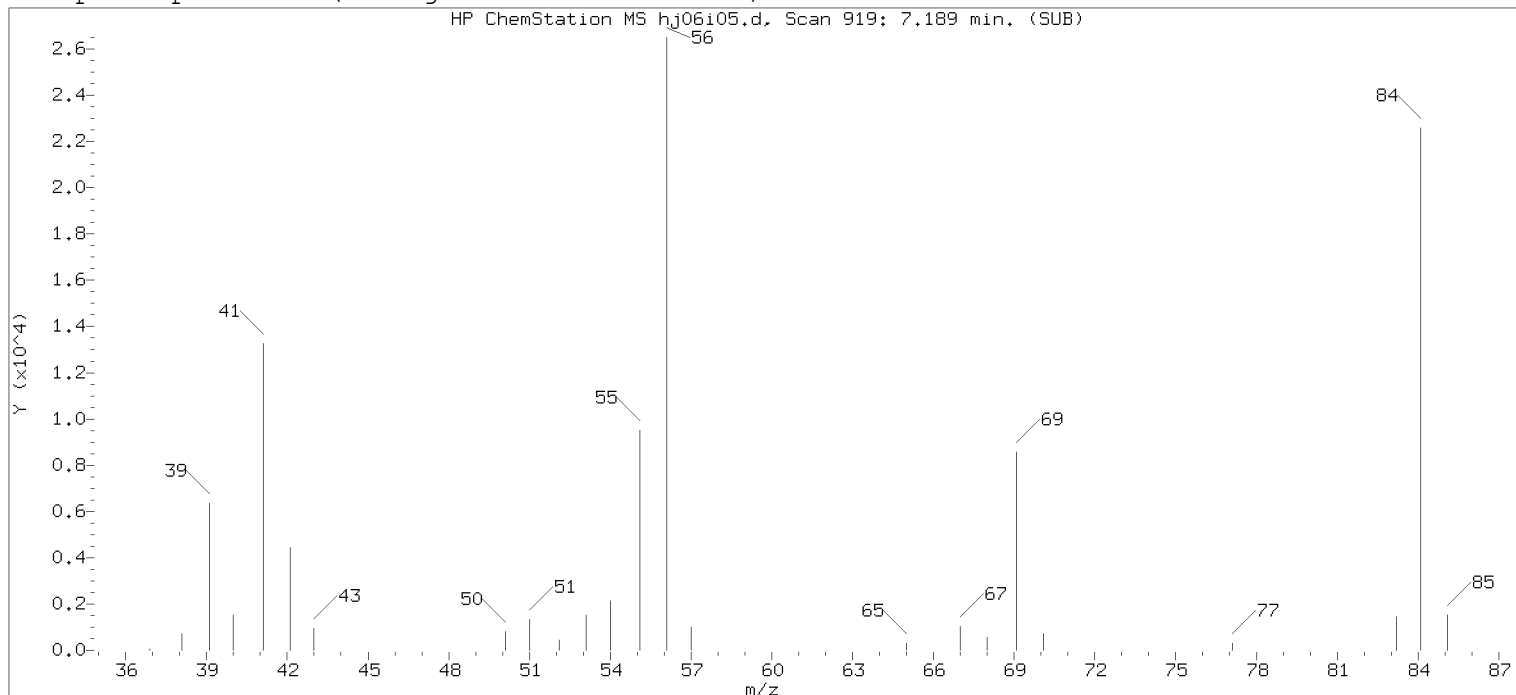
Compound Number	: 53	
Compound Name	: Cyclohexane	
Scan Number	: 919	
Retention Time (minutes)	: 7.189	
Quant Ion	: 84.00	
Area (flag)	: 84186M	
On-Column Amount (ng)	: 1.0510	
Integration start scan	: 904	Integration stop scan: 928
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

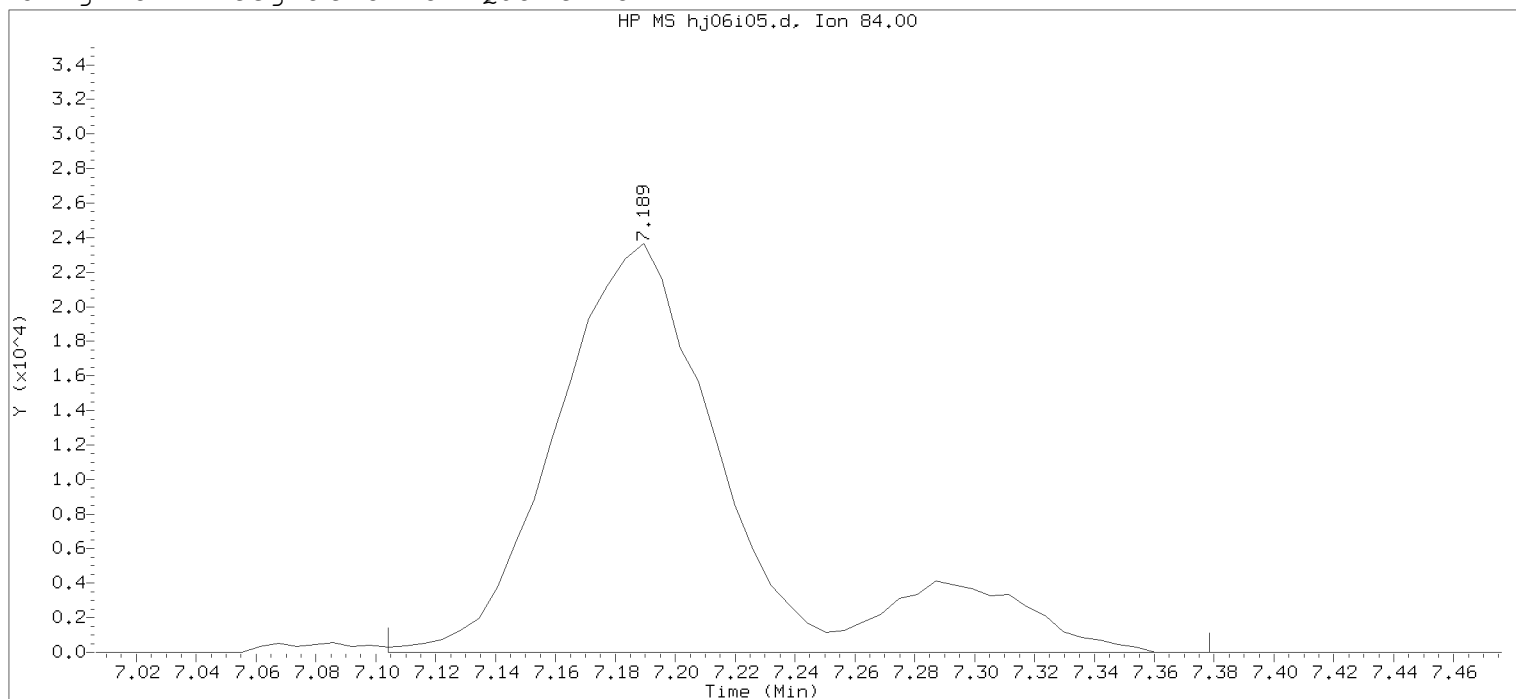
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

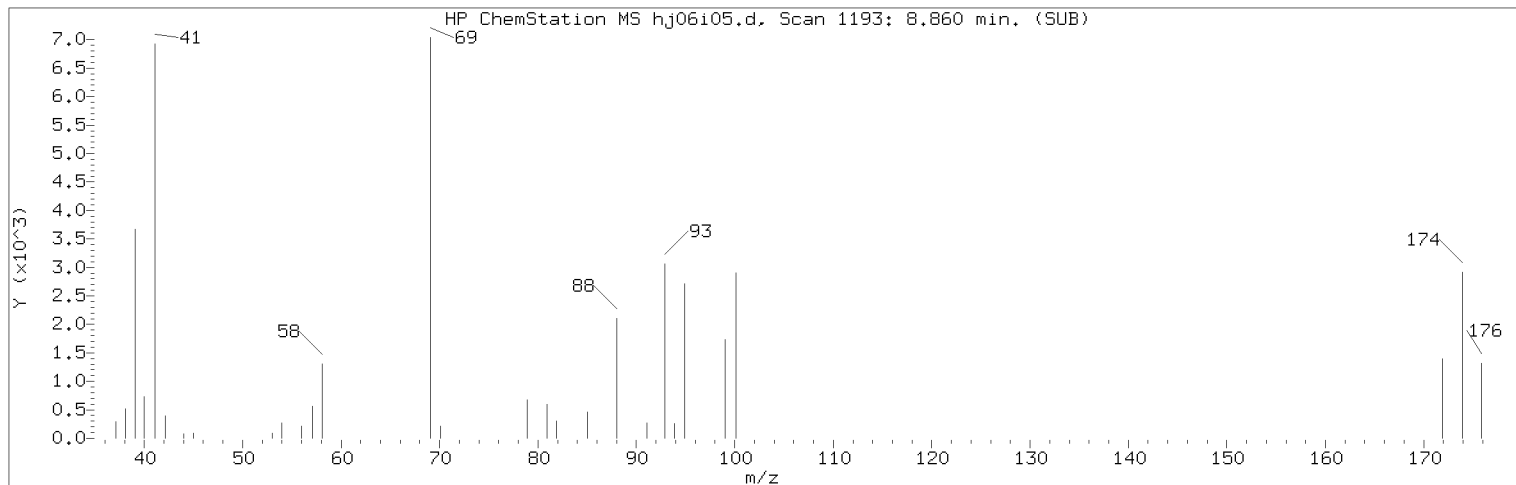
Sample Name: VSTD001

Lab Sample ID: VSTD001

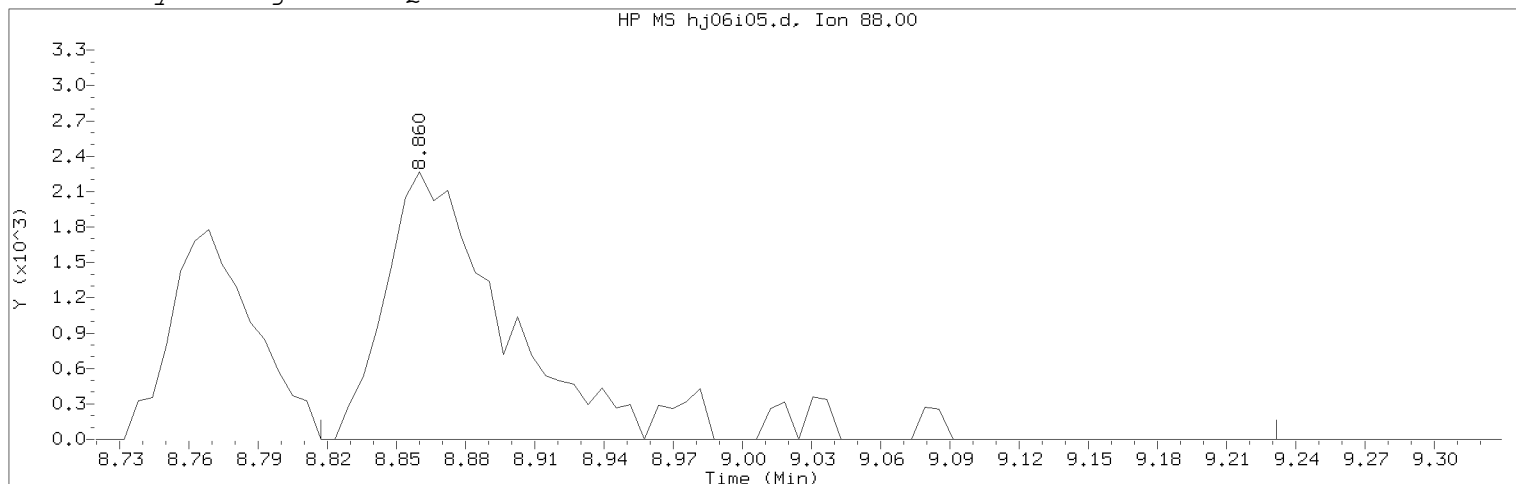
Compound Number	: 53	
Compound Name	: Cyclohexane	
Scan Number	: 919	
Retention Time (minutes)	: 7.189	
Quant Ion	: 84.00	
Area	: 98090	
On-column Amount (ng)	: 1.1949	
Integration start scan	: 904	Integration stop scan: 949
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 8963M	
On-Column Amount (ng)	: 50.8734	
Integration start scan	: 1185	Integration stop scan: 1253
Y at integration start	: 0	Y at integration end: 0

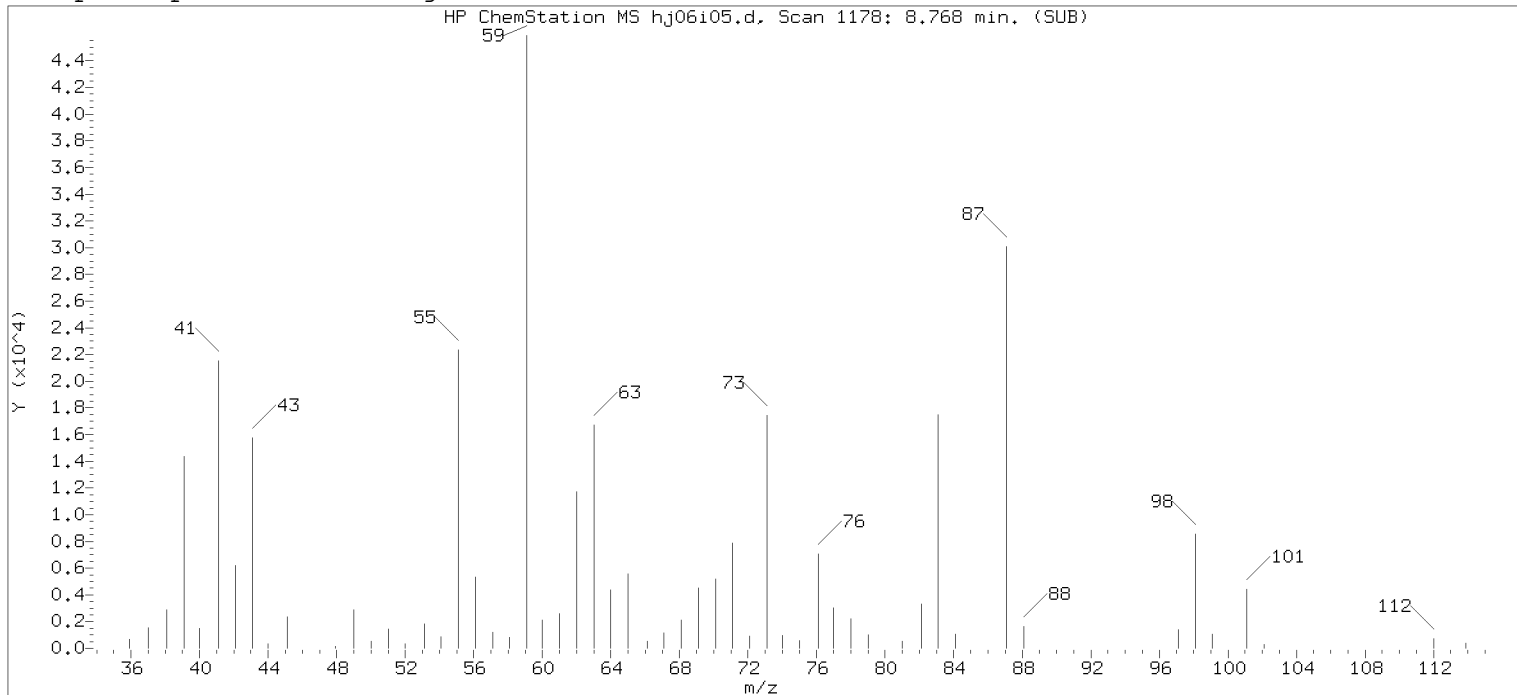
Reason for manual integration: improper integration

Analyst responsible for change:

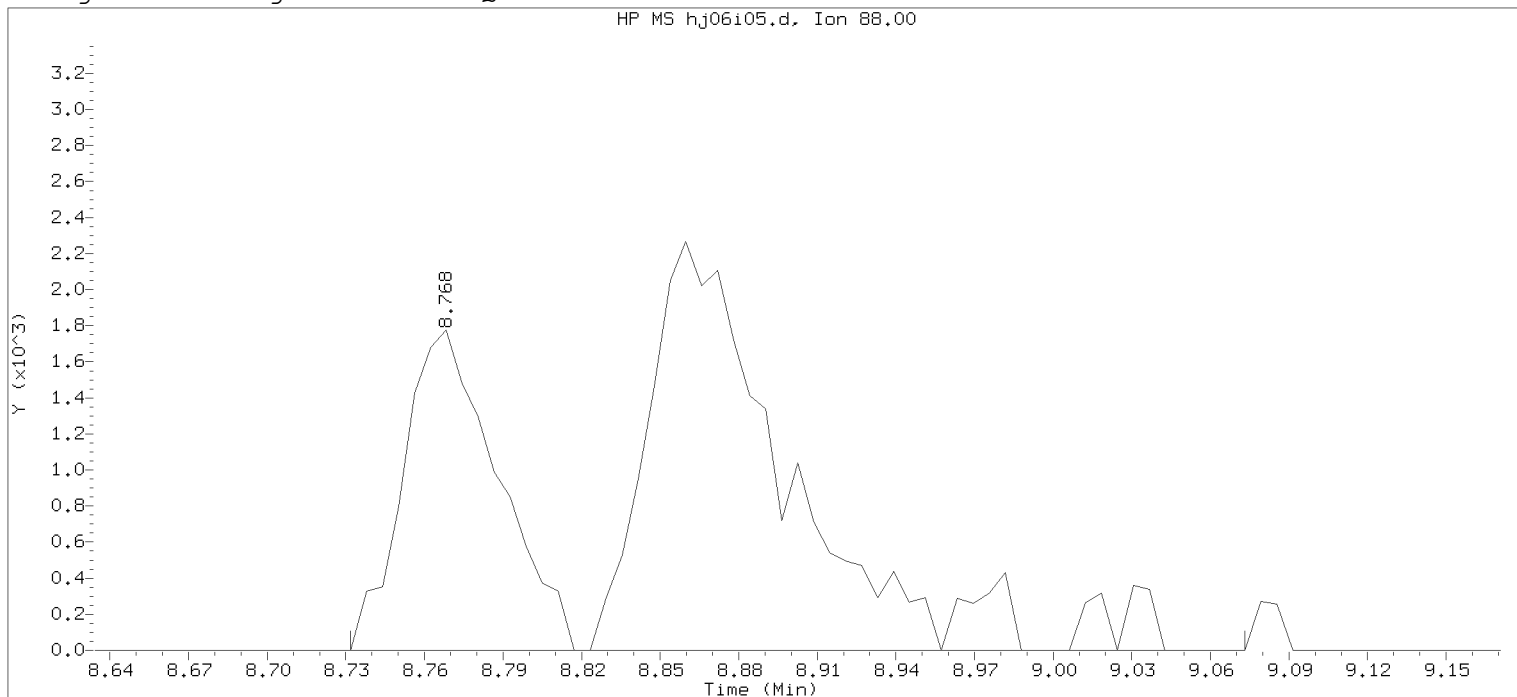
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: ms101251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

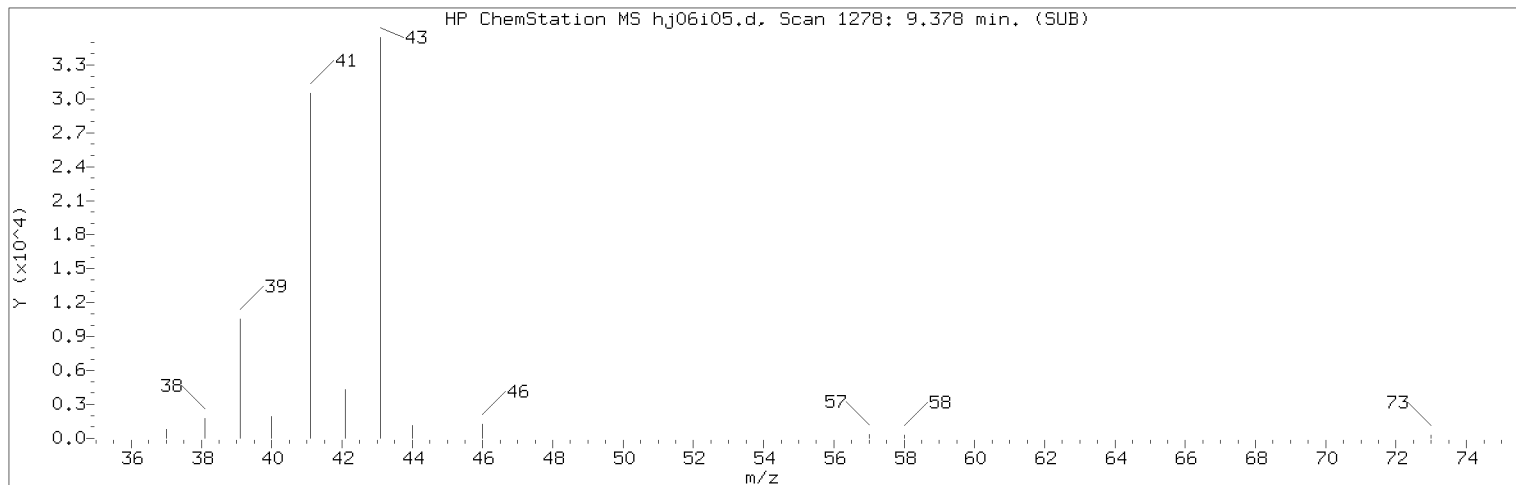
Lab Sample ID: VSTD001

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1178	
Retention Time (minutes)	: 8.768	
Quant Ion	: 88.00	
Area	: 13253	
On-column Amount (ng)	: 87.9916	
Integration start scan	: 1171	Integration stop scan: 1227
Y at integration start	: 0	Y at integration end: 0

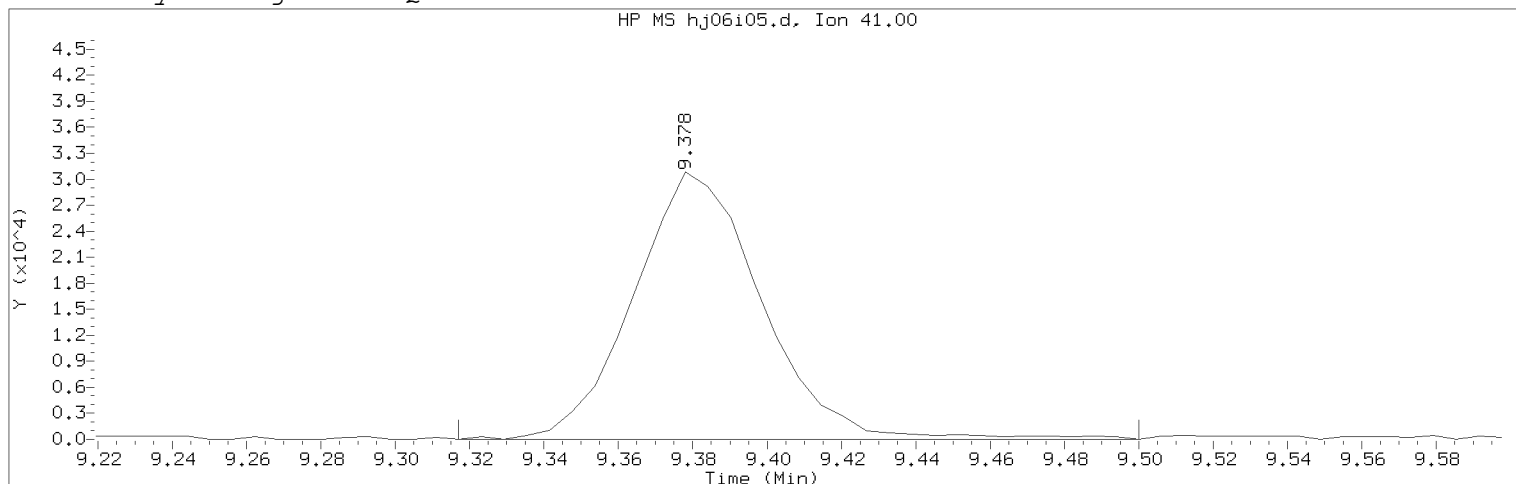
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 2 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

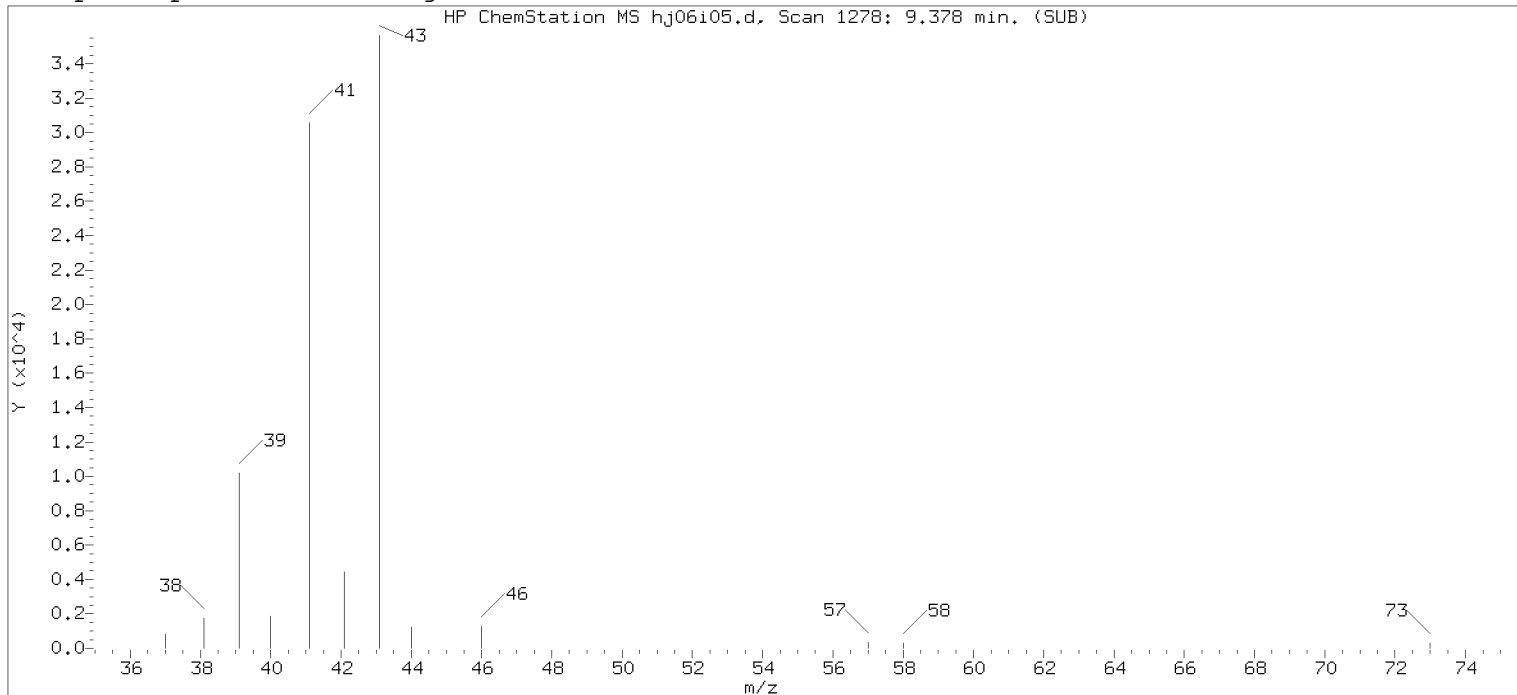
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area (flag)	: 73855M	
On-Column Amount (ng)	: 9.6830	
Integration start scan	: 1267	Integration stop scan: 1297
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

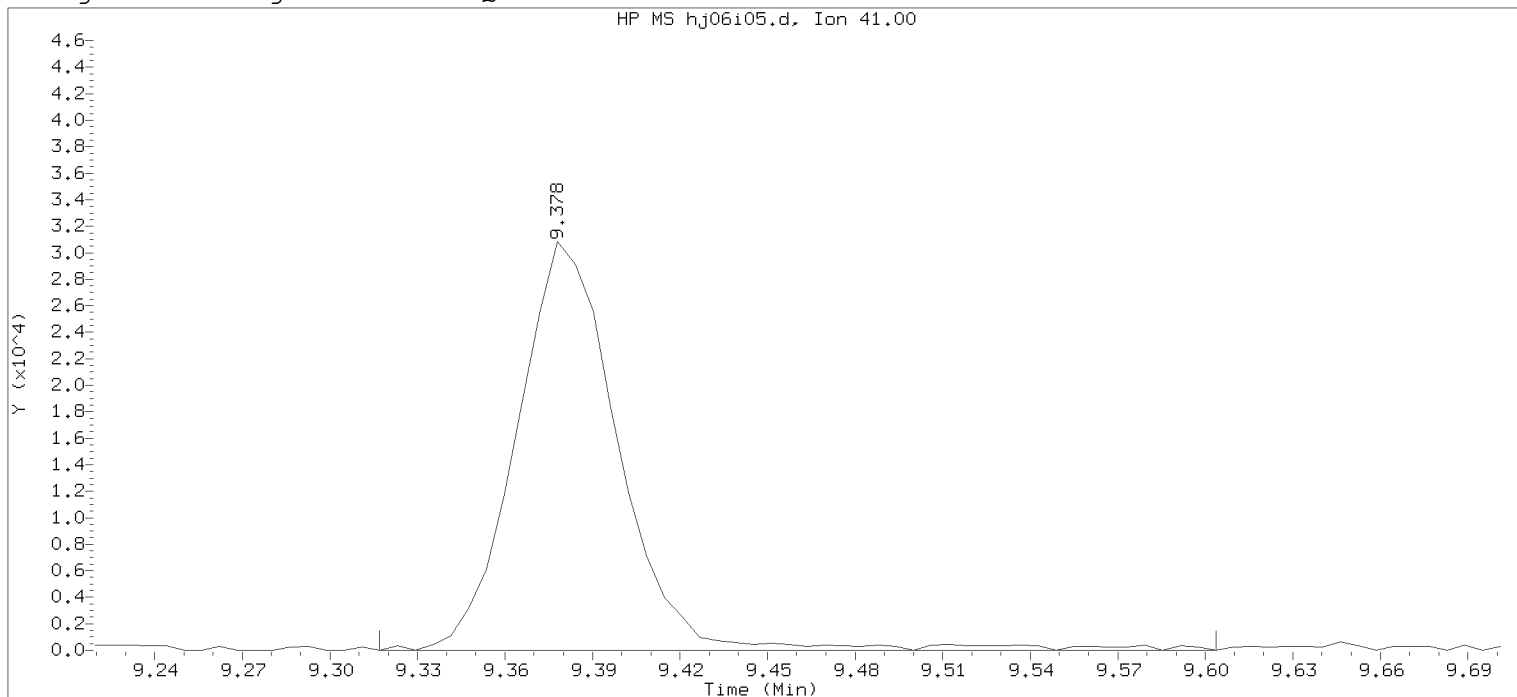
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

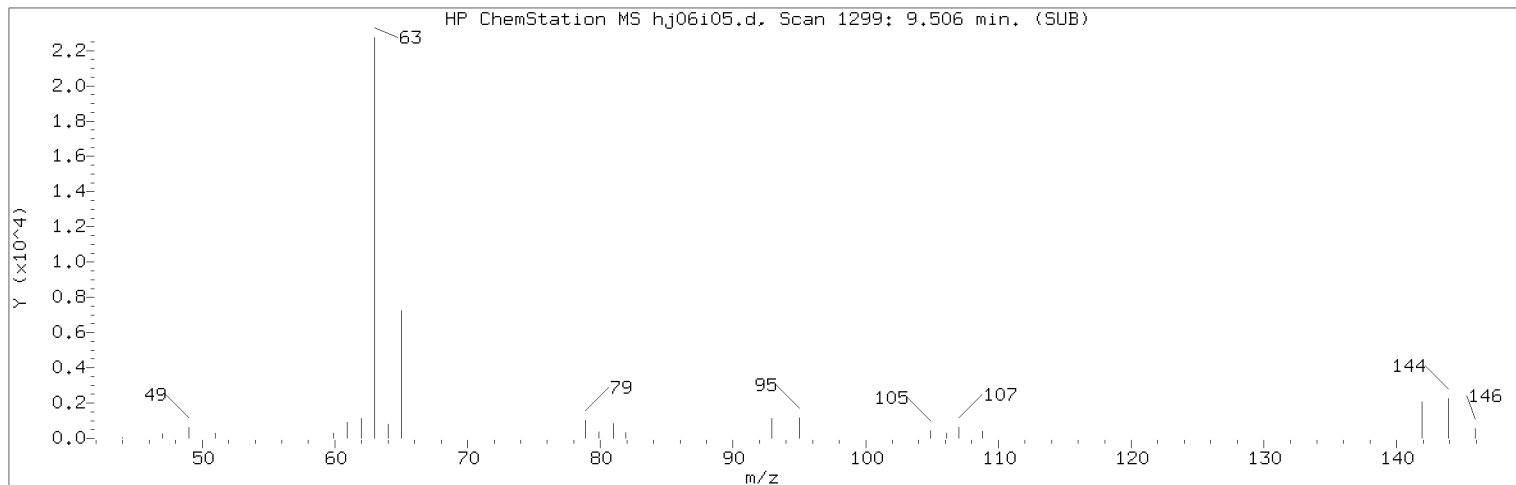
Sample Name: VSTD001

Lab Sample ID: VSTD001

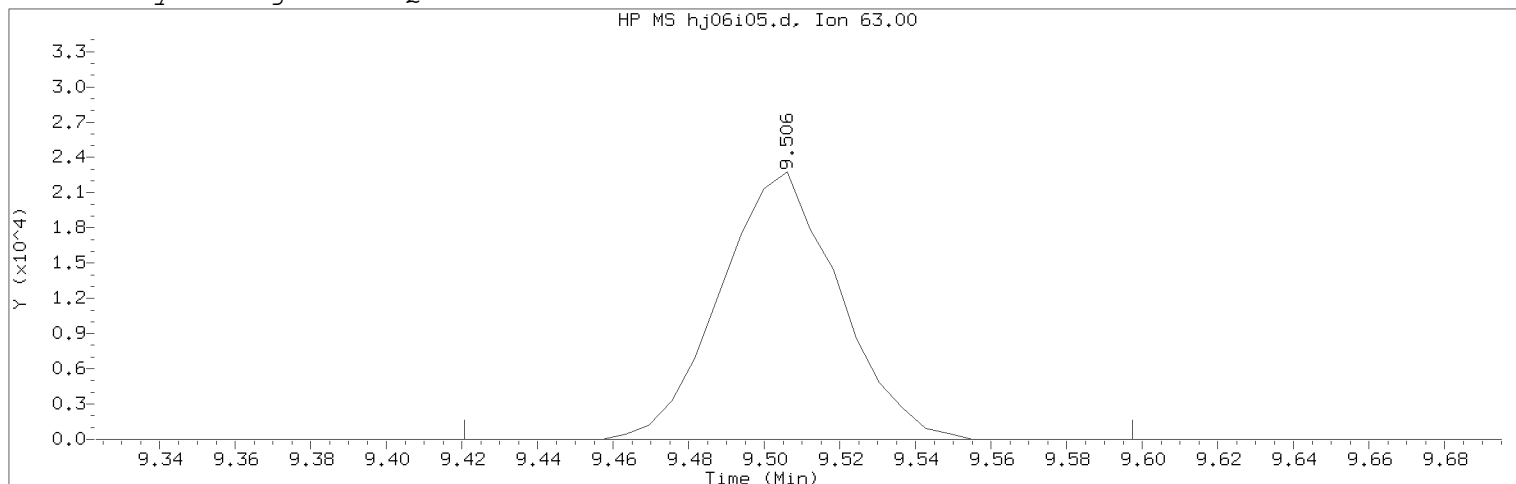
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 75580	
On-column Amount (ng)	: 9.7682	
Integration start scan	: 1267	Integration stop scan: 1314
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RPF59 Page 2662 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

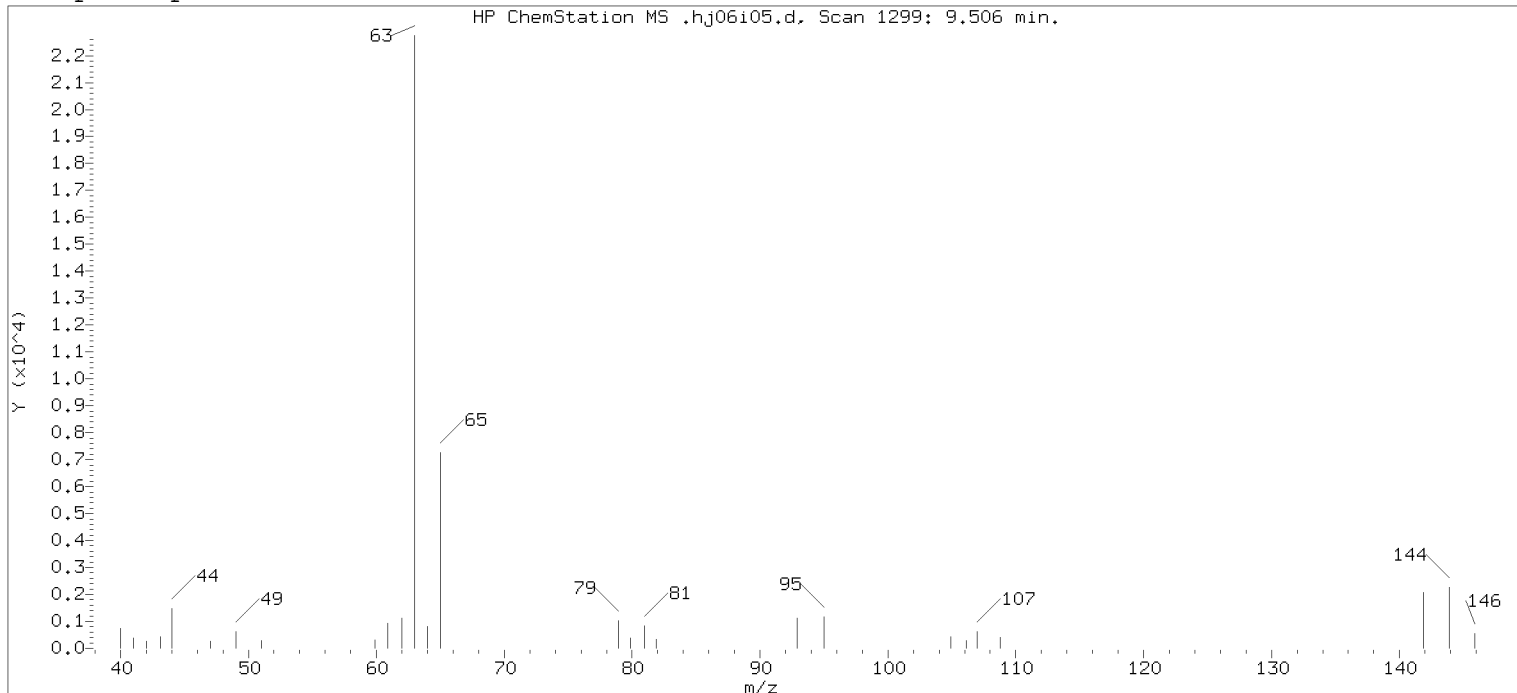
Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 49514M	
On-Column Amount (ng)	: 0.9838	
Integration start scan	: 1284	Integration stop scan: 1313
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

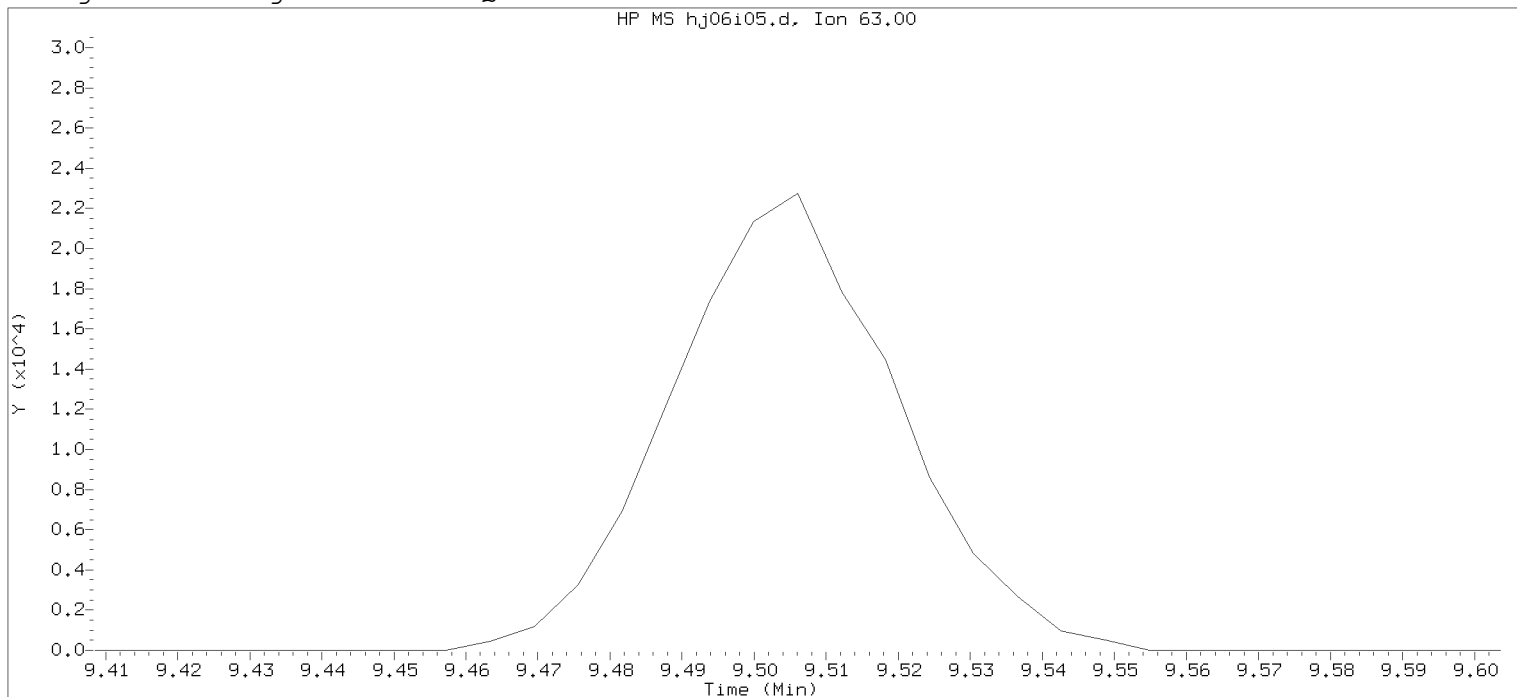
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 80

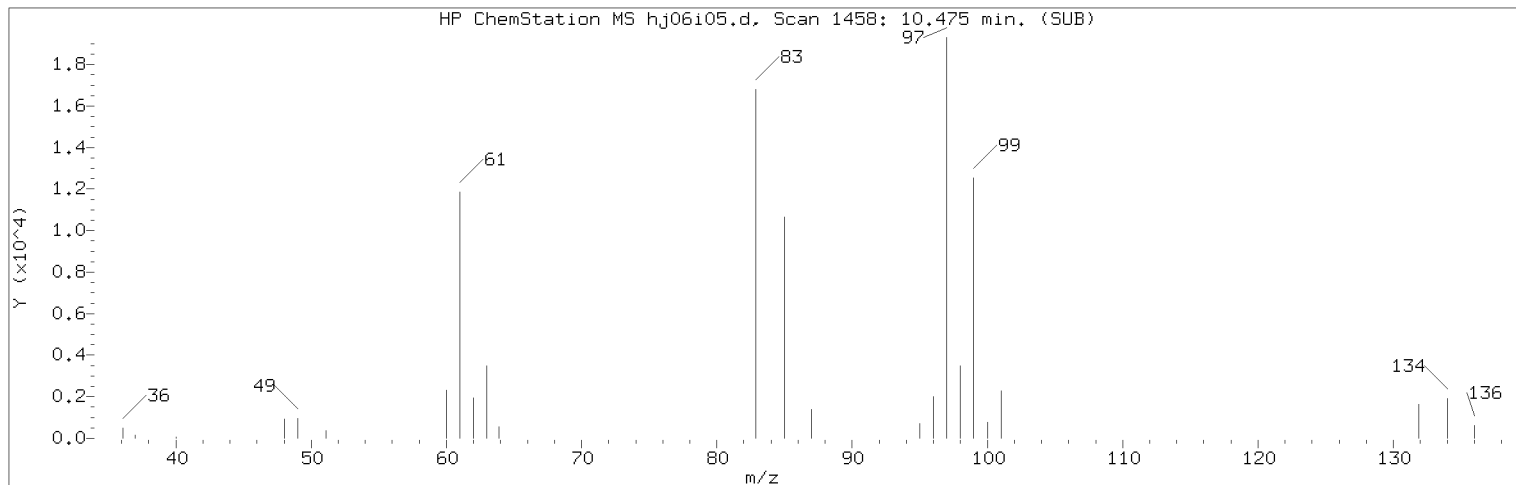
Compound Name : 1-Bromo-2-chloroethane

Expected RT (minutes) : 9.506

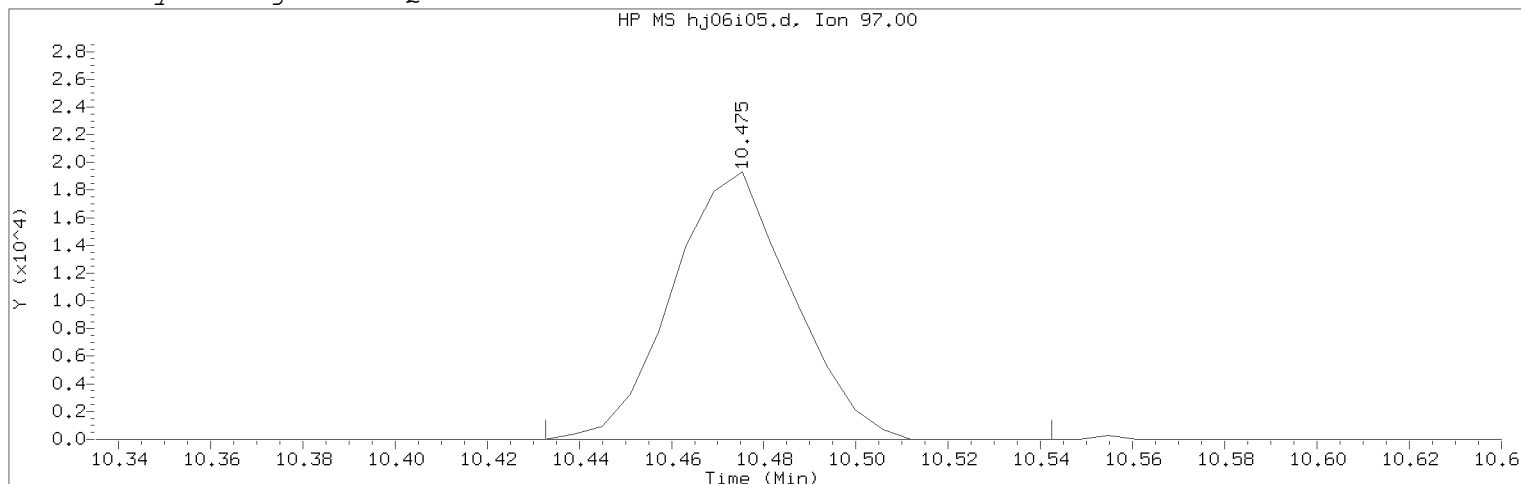
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

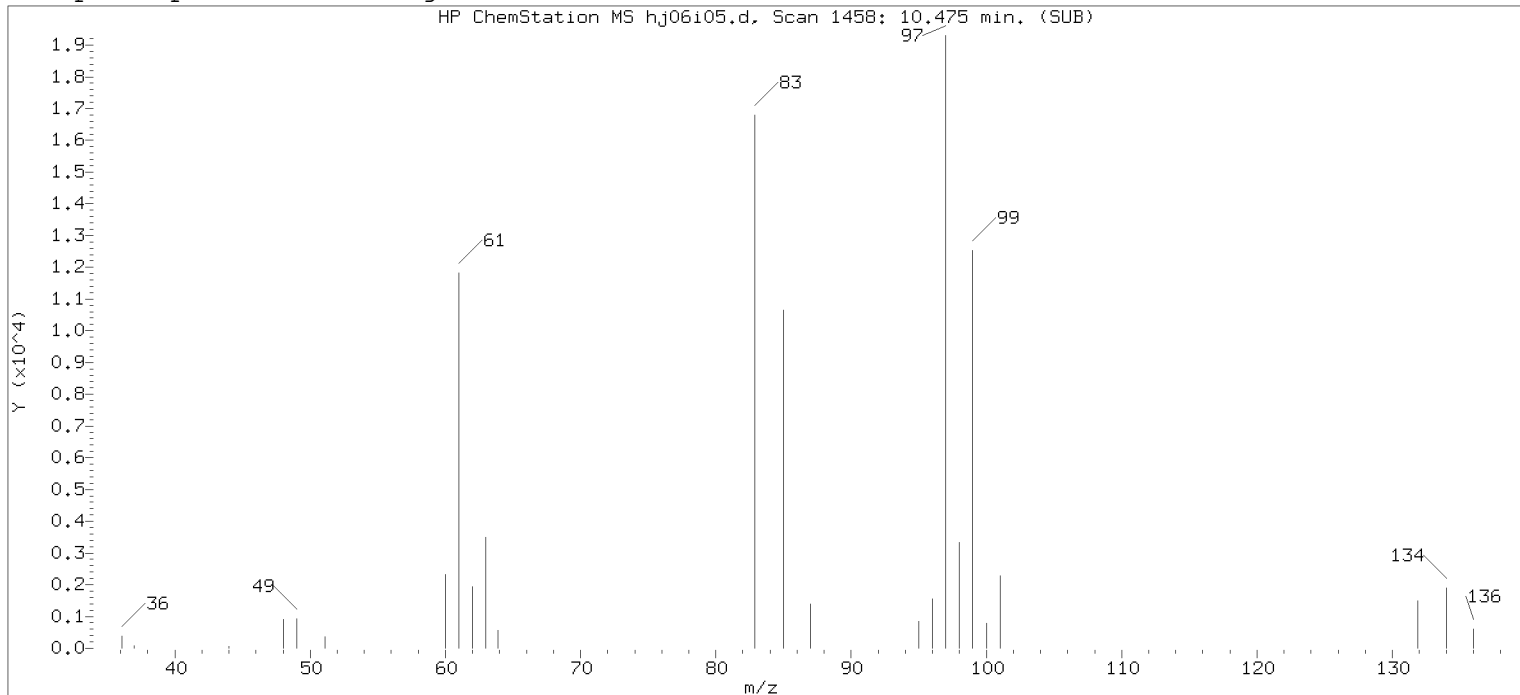
Compound Number	: 89	
Compound Name	: 1,1,2-Trichloroethane	
Scan Number	: 1458	
Retention Time (minutes)	: 10.475	
Quant Ion	: 97.00	
Area (flag)	: 34882M	
On-Column Amount (ng)	: 1.0050	
Integration start scan	: 1450	Integration stop scan: 1468
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

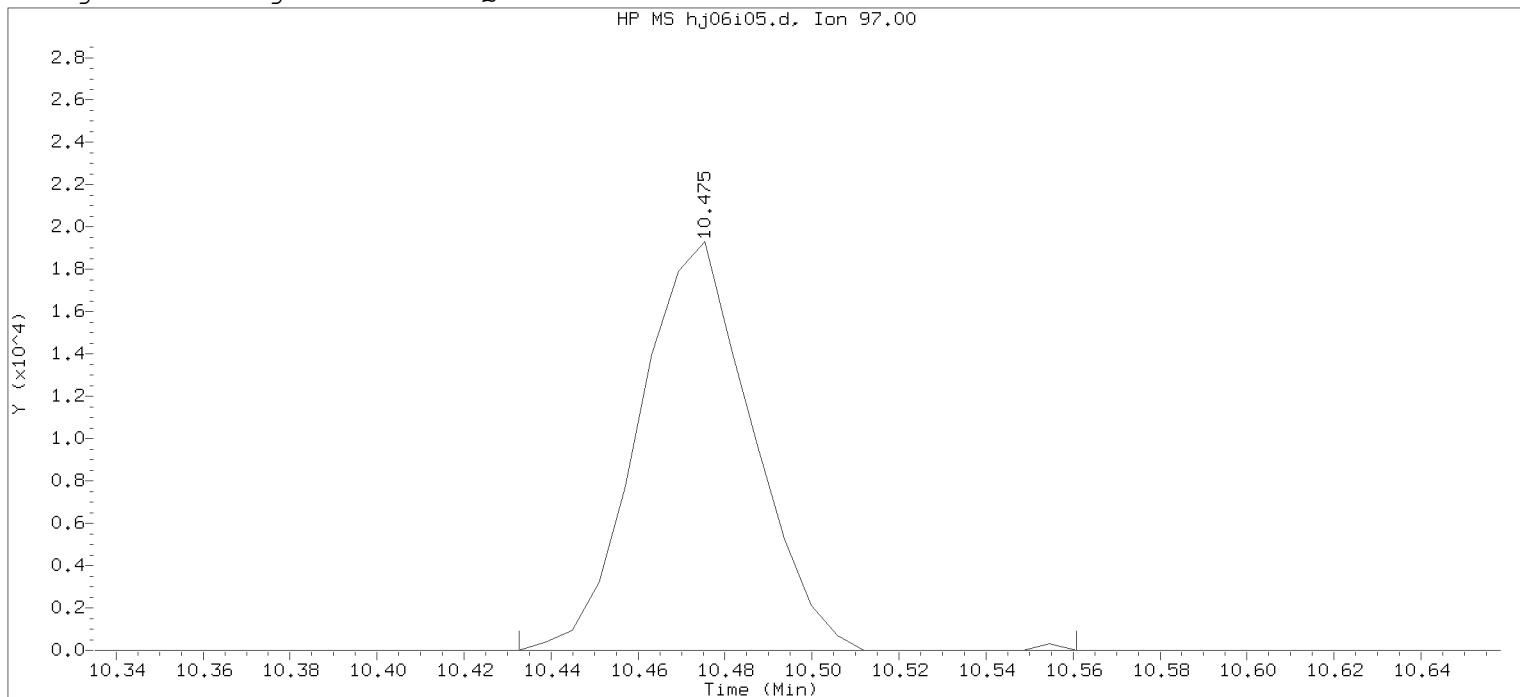
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

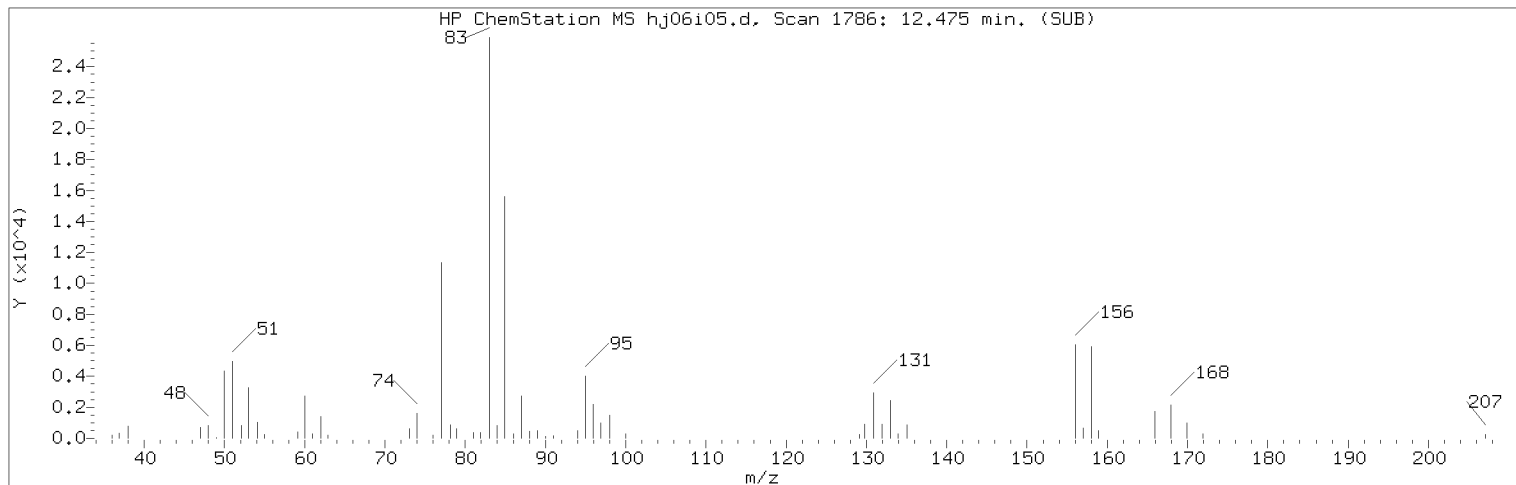
Sample Name: VSTD001

Lab Sample ID: VSTD001

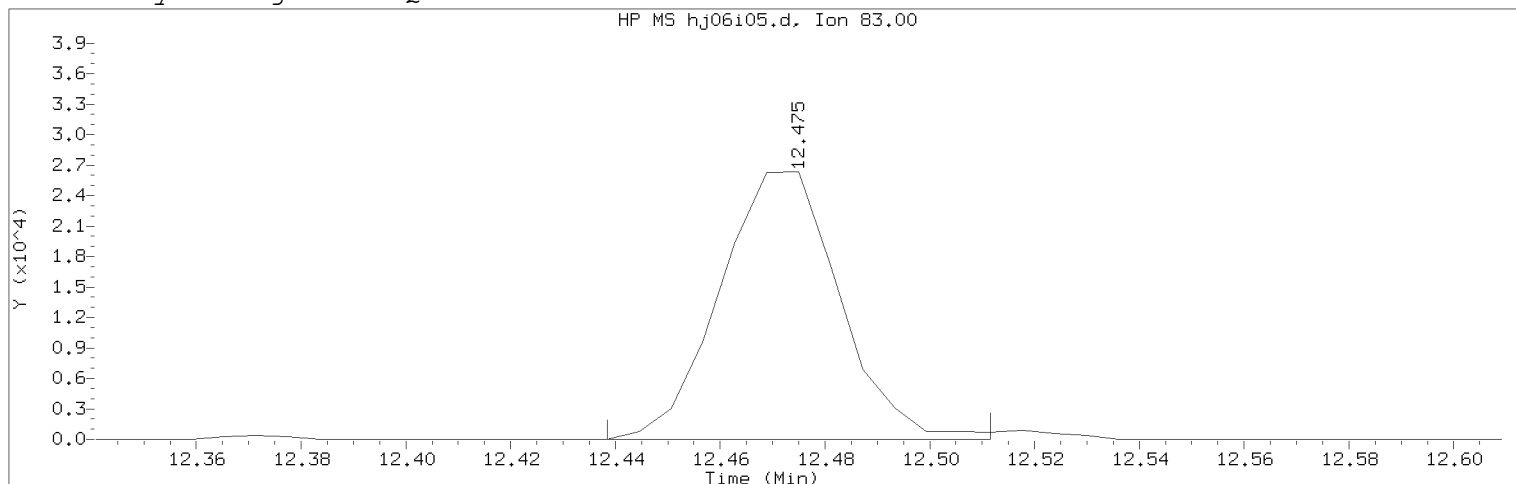
Compound Number	: 89	
Compound Name	: 1,1,2-Trichloroethane	
Scan Number	: 1458	
Retention Time (minutes)	: 10.475	
Quant Ion	: 97.00	
Area	: 34988	
On-column Amount (ng)	: 1.0115	
Integration start scan	: 1450	Integration stop scan: 1471
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE59 Page 2664 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

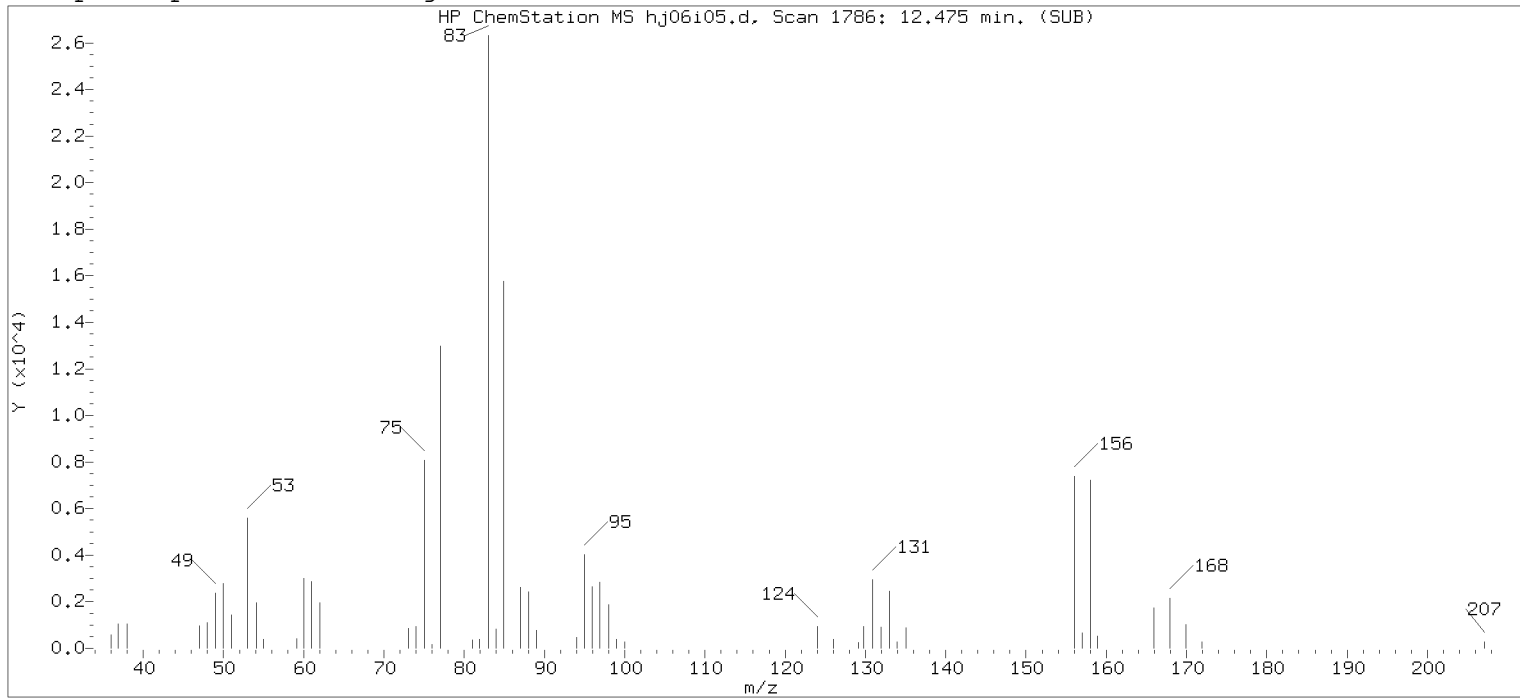
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 41928M
On-Column Amount (ng) : 1.0058
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

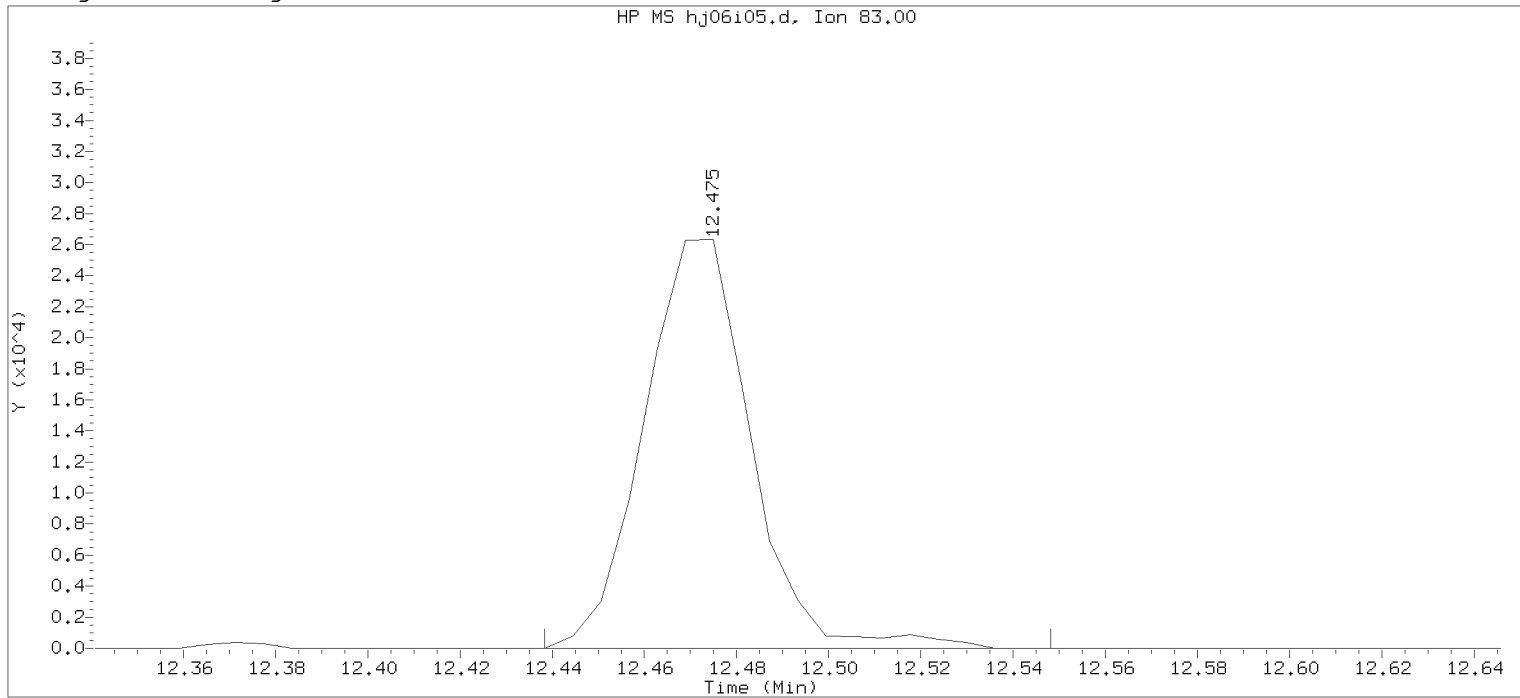
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

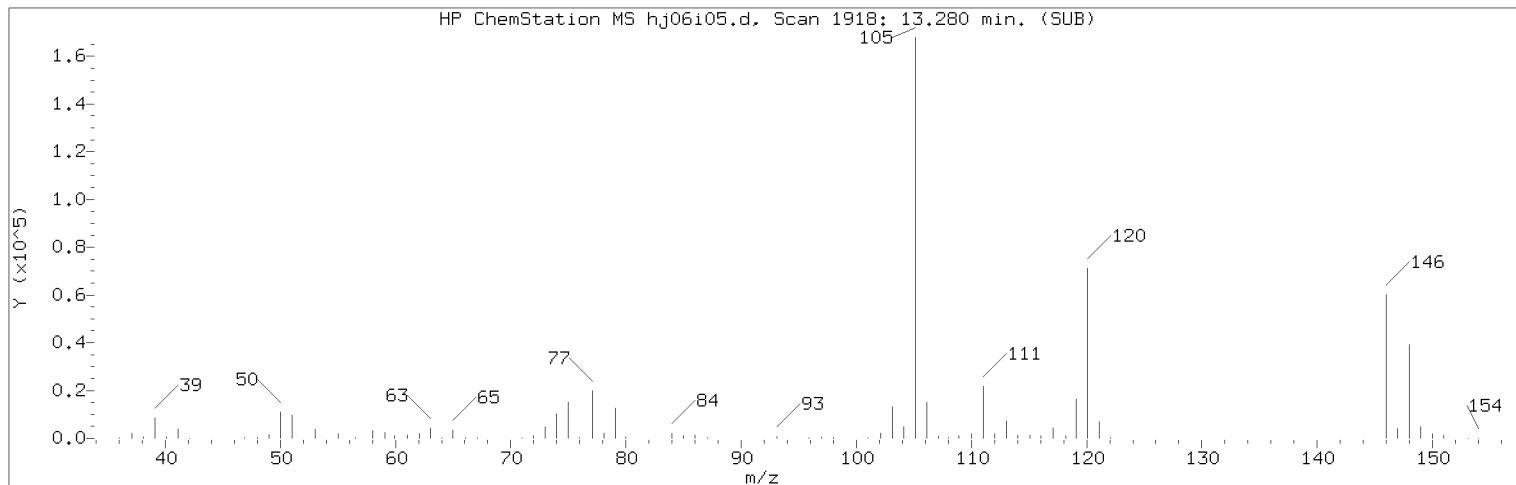
Sample Name: VSTD001

Lab Sample ID: VSTD001

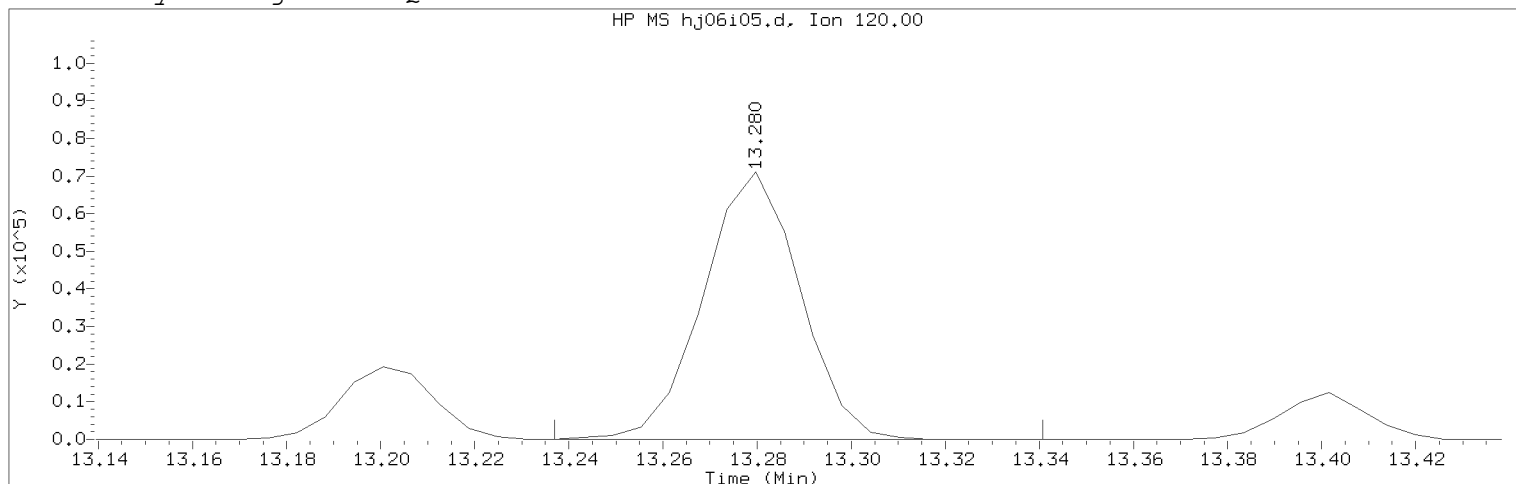
Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1786	
Retention Time (minutes)	: 12.475	
Quant Ion	: 83.00	
Area	: 42599	
On-column Amount (ng)	: 0.9903	
Integration start scan	: 1779	Integration stop scan: 1797
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 2666 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

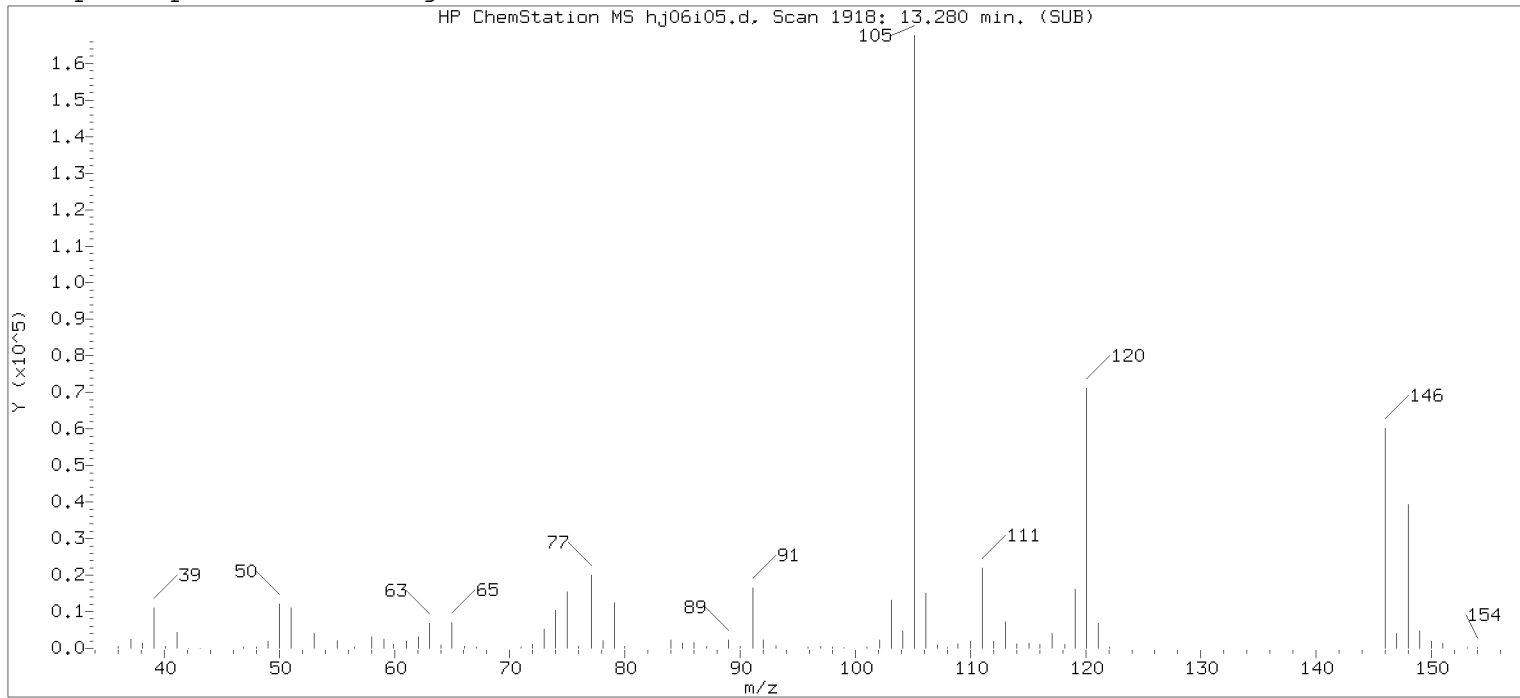
Compound Number : 136
 Compound Name : 1,2,3-Trimethylbenzene
 Scan Number : 1918
 Retention Time (minutes): 13.280
 Quant Ion : 120.00
 Area (flag) : 101239M
 On-Column Amount (ng) : 0.9849
 Integration start scan : 1910 Integration stop scan: 1927
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

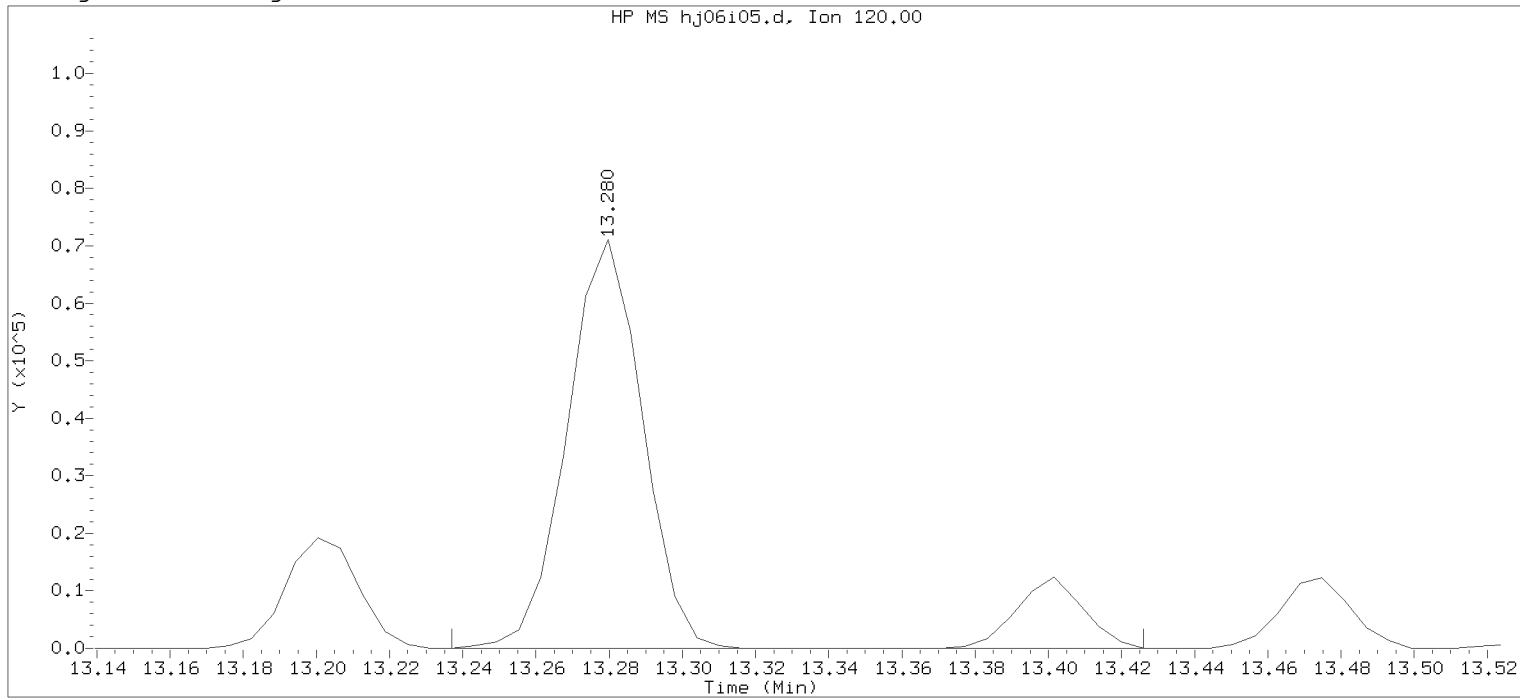
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 136

Compound Name : 1,2,3-Trimethylbenzene

Scan Number : 1918

Retention Time (minutes): 13.280

Quant Ion : 120.00

Area : 116939

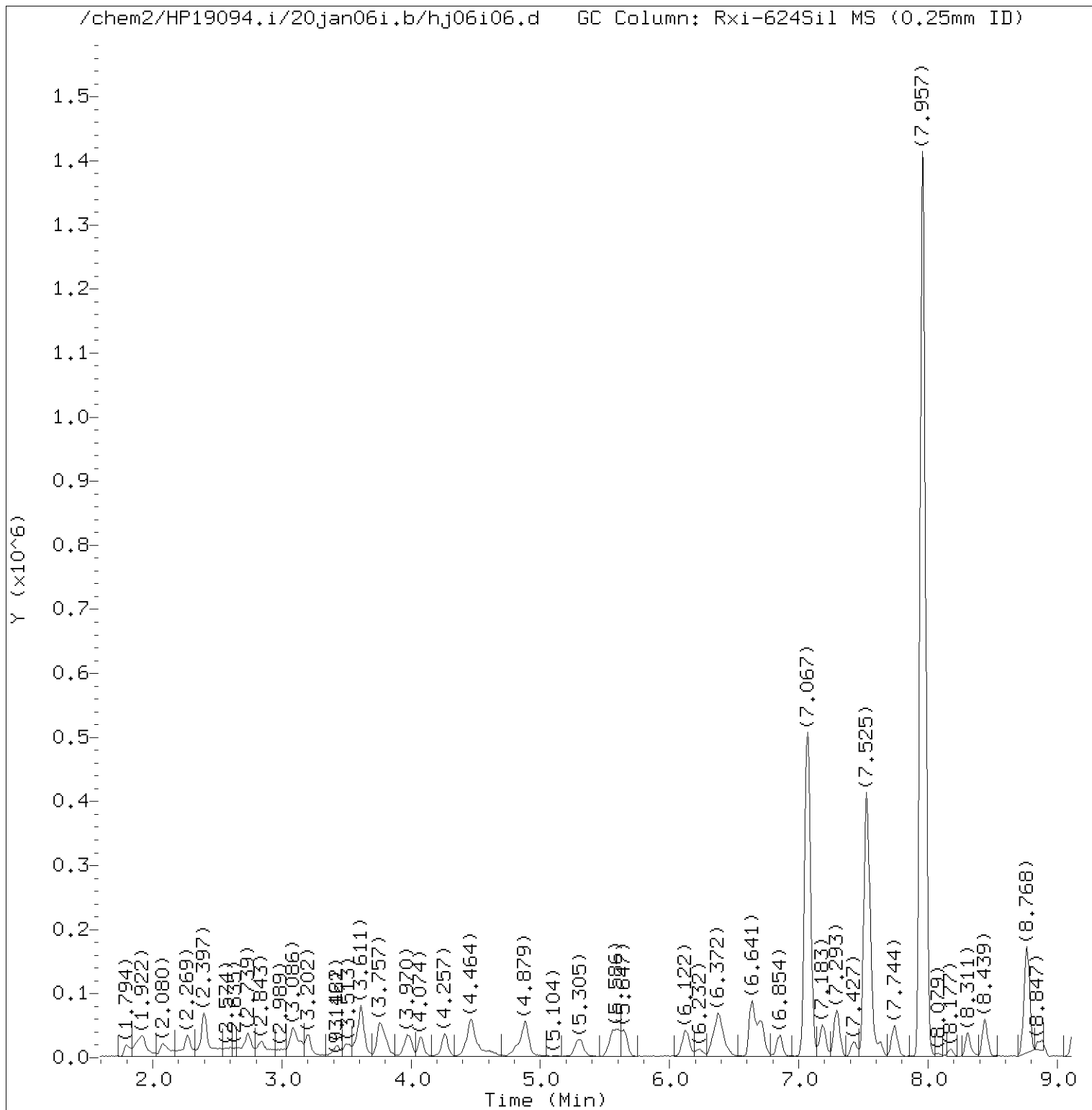
On-column Amount (ng) : 1.1106

Integration start scan : 1910 Integration stop scan: 1941

Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE59 Page 2668 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
Analyst ID: JKH09052

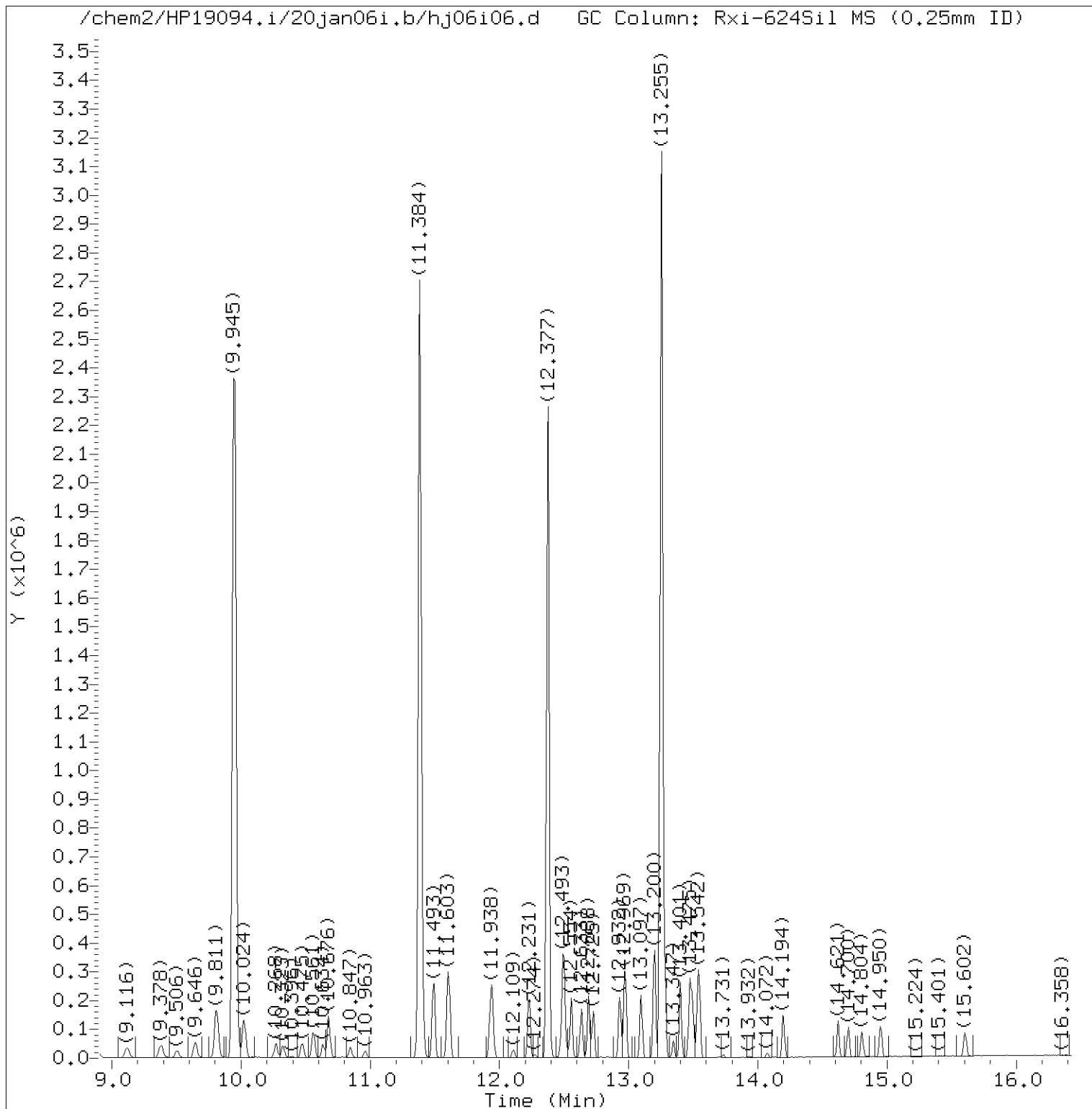
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
 Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.080	85	37646	0.513
2) Chloromethane	(2)	2.269	50	36253	0.501
5) Vinyl Chloride	(2)	2.391	62	33658	0.489
6) 1,3-Butadiene	(2)	2.404	39	24120M	0.443
7) Bromomethane	(2)	2.739	94	25193	0.511
8) Chloroethane	(2)	2.836	64	19680	0.494
9) Dichlorofluoromethane	(2)	3.080	67	48168	0.509
10) Trichlorofluoromethane	(2)	3.147	101	40642	0.517
11) Ethyl ether	(2)	3.422	59	16672	0.479
12) Freon 123a	(2)	3.513	67	27531	0.453
13) Acrolein	(1)	3.611	56	131907	24.773
15) 1,1-Dichloroethene	(2)	3.757	96	22510	0.471
14) Acetone	(1)	3.794	43	41187M	5.733
16) Freon 113	(2)	3.800	101	20991	0.420
17) Methyl Iodide	(2)	3.970	142	42798	0.464
18) Bromoethane	(2)	3.989	108	21118M	0.506
19) Carbon Disulfide	(2)	4.074	76	67993	0.465
22) Methyl Acetate	(1)	4.239	43	8769M	0.484
23) Allyl Chloride	(2)	4.257	41	39456	0.486
24) Methylene Chloride	(2)	4.458	84	25019	0.486
27)*t-Butyl Alcohol-d10	(1)	4.464	65	118243	50.000
29) t-Butyl Alcohol	(1)	4.617	59	24512	9.821
30) Acrylonitrile	(1)	4.812	53	21998	2.509
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	52026	0.476
32) trans-1,2-Dichloroethene	(2)	4.885	96	24900	0.474
33) n-Hexane	(2)	5.312	57	32680	0.441
34) 1,1-Dichloroethane	(2)	5.543	63	43072	0.454
35) di-Isopropyl Ether	(2)	5.592	45	73167	0.468
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	37519	0.462
41) 1,2-Dichloroethene (Total)	(2)		96	52826	0.952
38) Ethyl t-butyl ether	(2)	6.122	59	70601	0.481
39) 2-Butanone	(1)	6.330	43	57311	5.102
40) cis-1,2-Dichloroethene	(2)	6.372	96	27926	0.478
42) 2,2-Dichloropropane	(2)	6.391	77	36548	0.453
43) Propionitrile	(1)	6.427	54	29507	9.589
46) Methacrylonitrile	(1)	6.641	67	54315	4.935
48) Bromochloromethane	(2)	6.695	128	12252	0.497
49) Tetrahydrofuran	(1)	6.708	71	15239	4.910

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
 Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	43720	0.472
51) \$Dibromofluoromethane	(2)	7.067	113	480514	9.881
51) \$Dibromofluoromethane	(2)	7.067	111	497632	9.960
52) 1,1,1-Trichloroethane	(2)	7.092	97	40175	0.467
53) Cyclohexane	(2)	7.183	56	42220	0.459
53) Cyclohexane	(2)	7.189	84	33452	0.425
53) Cyclohexane	(2)	7.189	69	12293	0.430
55) Carbon Tetrachloride	(2)	7.293	117	33625	0.456
56) 1,1-Dichloropropene	(2)	7.299	75	33208	0.456
57) Isobutyl Alcohol	(1)	7.421	41	22212	25.676
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	94461	10.023
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	438476	10.083
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59826	10.022
59) Benzene	(2)	7.555	78	99873	0.469
60) 1,2-Dichloroethane	(2)	7.634	62	26845	0.489
61) t-Amyl methyl ether	(2)	7.744	73	61999	0.485
64) *Fluorobenzene	(2)	7.957	96	1956262	10.000
63) n-Heptane	(2)	7.970	43	33106	0.426
66) n-Butanol	(1)	8.305	56	34095	48.956
68) Trichloroethene	(2)	8.439	95	24997	0.448
70) Methylcyclohexane	(2)	8.750	83	49093	0.491
71) 1,2-Dichloropropane	(2)	8.774	63	24757	0.470
72) Methyl Methacrylate	(1)	8.847	69	11056	0.499
73) 1,4-Dioxane	(1)	8.866	88	3390M	20.182
74) Dibromomethane	(2)	8.878	93	11571	0.481
75) Bromodichloromethane	(2)	9.116	83	31654	0.484
77) 2-Nitropropane	(1)	9.378	41	35799M	4.923
80) 1-Bromo-2-chloroethane	(2)	9.500	63	25119M	0.508
81) cis-1,3-Dichloropropene	(2)	9.646	75	35796	0.463
82) 4-Methyl-2-Pentanone	(1)	9.811	43	135330	4.888
83) \$Toluene-d8	(3)	9.951	98	1938593	9.983
83) \$Toluene-d8	(3)	9.945	100	1248997	9.945
84) Toluene	(3)	10.024	92	62903	0.461
86) 1,3-Dichloropropene (total)	(3)		75	64821	0.922
85) trans-1,3-Dichloropropene	(3)	10.274	75	29025	0.458
87) Ethyl Methacrylate	(3)	10.323	69	23667	0.482
89) 1,1,2-Trichloroethane	(3)	10.469	97	16570	0.483
90) Tetrachloroethene	(3)	10.561	166	28341	0.457

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
 Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	27848	0.473
92) 2-Hexanone	(1)	10.676	43	93633M	4.949
94) Dibromochloromethane	(3)	10.847	129	20398	0.465
96) 1,2-Dibromoethane	(3)	10.963	107	15595	0.476
97) 1-Chlorohexane	(3)	11.384	91	38520	0.468
98) *Chlorobenzene-d5	(3)	11.384	117	1457562	10.000
99) Chlorobenzene	(3)	11.408	112	70804	0.475
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	24559	0.463
101) Ethylbenzene	(3)	11.493	91	126427	0.471
102) m+p-Xylene	(3)	11.603	106	95677	0.932
106) Xylene (Total)	(3)		106	142489	1.396
105) o-Xylene	(3)	11.932	106	46812	0.464
107) Styrene	(3)	11.944	104	76860	0.469
108) Bromoform	(3)	12.109	173	11985	0.469
109) Isopropylbenzene	(3)	12.231	105	128912	0.471
112) \$4-Bromofluorobenzene	(3)	12.377	95	721534	10.043
112) \$4-Bromofluorobenzene	(3)	12.377	174	616551	10.029
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	19540M	0.477
115) Bromobenzene	(4)	12.493	156	27982	0.452
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	50262M	4.832
117) 1,2,3-Trichloropropane	(4)	12.524	110	5294	0.483
118) n-Propylbenzene	(4)	12.554	91	147570	0.456
120) 2-Chlorotoluene	(4)	12.633	126	29146	0.457
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	107335	0.457
123) 4-Chlorotoluene	(4)	12.725	126	29421	0.462
126) tert-Butylbenzene	(4)	12.932	134	21922	0.452
127) Pentachloroethane	(4)	12.969	167	20333	0.492
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	110138	0.455
129) sec-Butylbenzene	(4)	13.097	105	137070M	0.451
133) p-Isopropyltoluene	(4)	13.200	119	116856	0.447
132) 1,3-Dichlorobenzene	(4)	13.200	146	57146	0.463
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	784772	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	56476	0.469
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	49264	0.488
137) Benzyl Chloride	(4)	13.347	126	7426	0.431
139) n-Butylbenzene	(4)	13.493	92	56899	0.440
140) 1,2-Dichlorobenzene	(4)	13.529	146	51602	0.474
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	2597	0.438

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

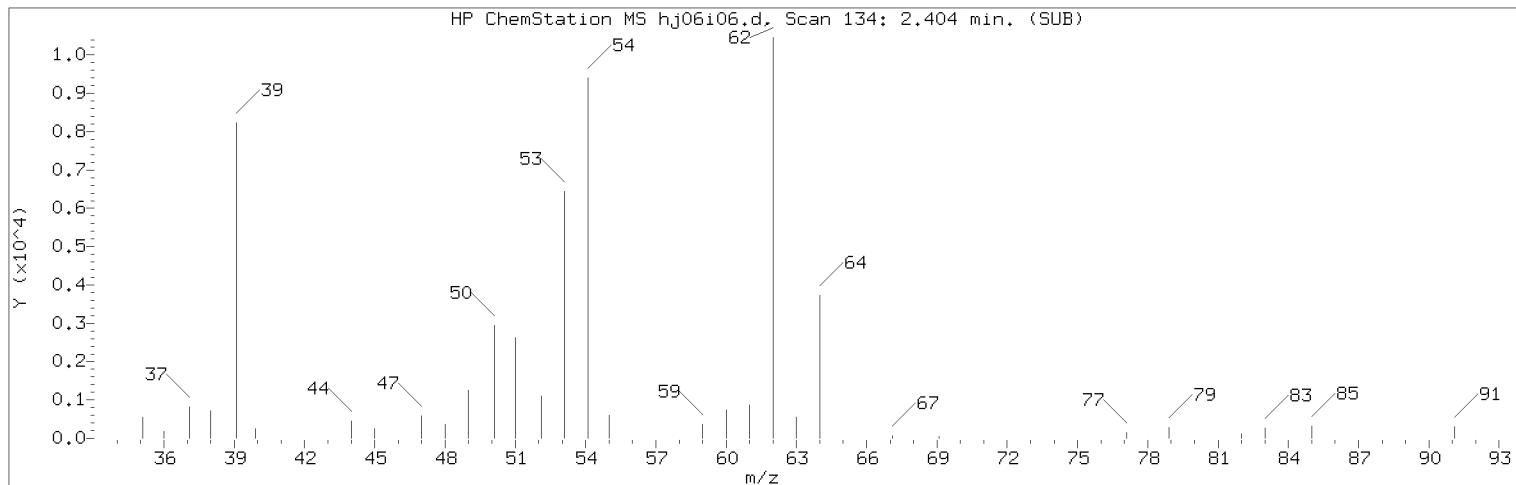
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	42778	0.443
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	35605	0.440
147) Hexachlorobutadiene	(4)	14.700	225	17895	0.423
148) Naphthalene	(4)	14.804	128	65064	0.460
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	31413	0.454

page 4 of 4

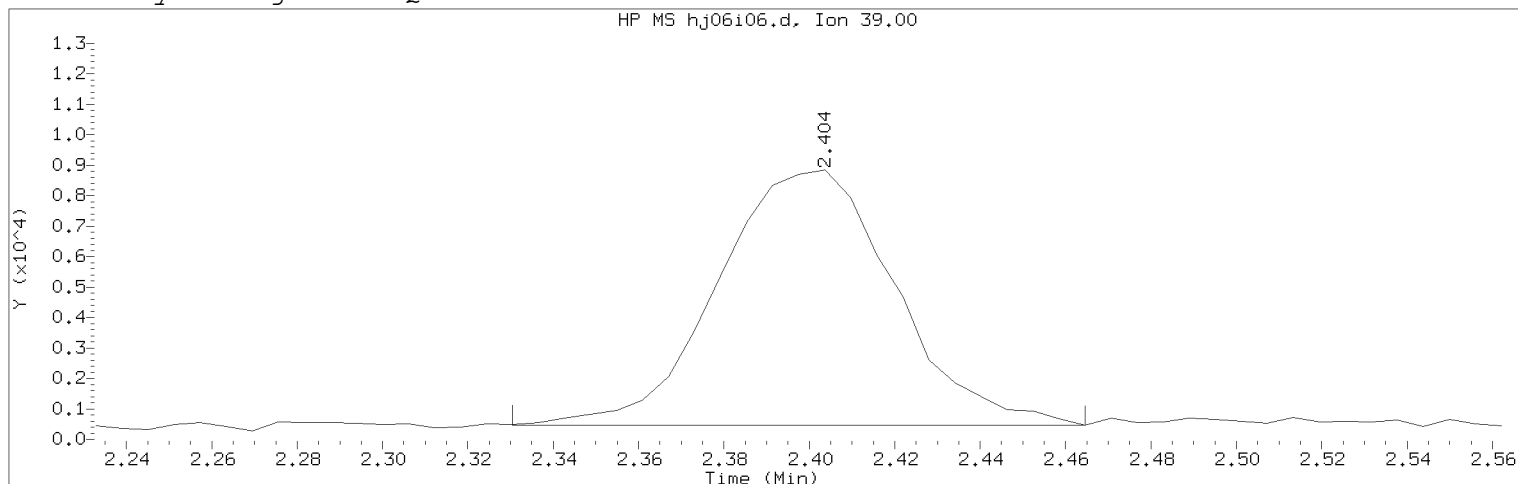
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area (flag)	: 24120M	
On-Column Amount (ng)	: 0.4434	
Integration start scan	: 121	Integration stop scan: 143
Y at integration start	: 453	Y at integration end: 453

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Sara E. Johnson

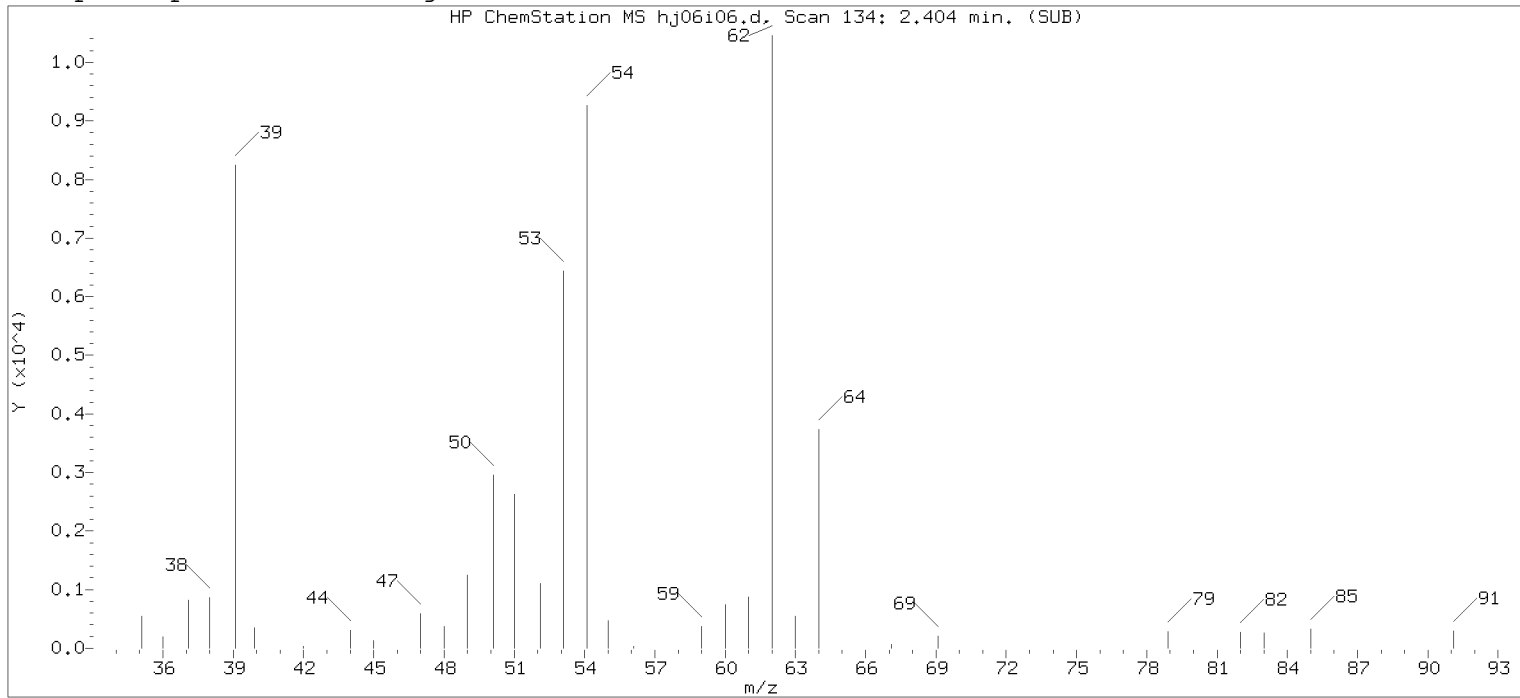
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

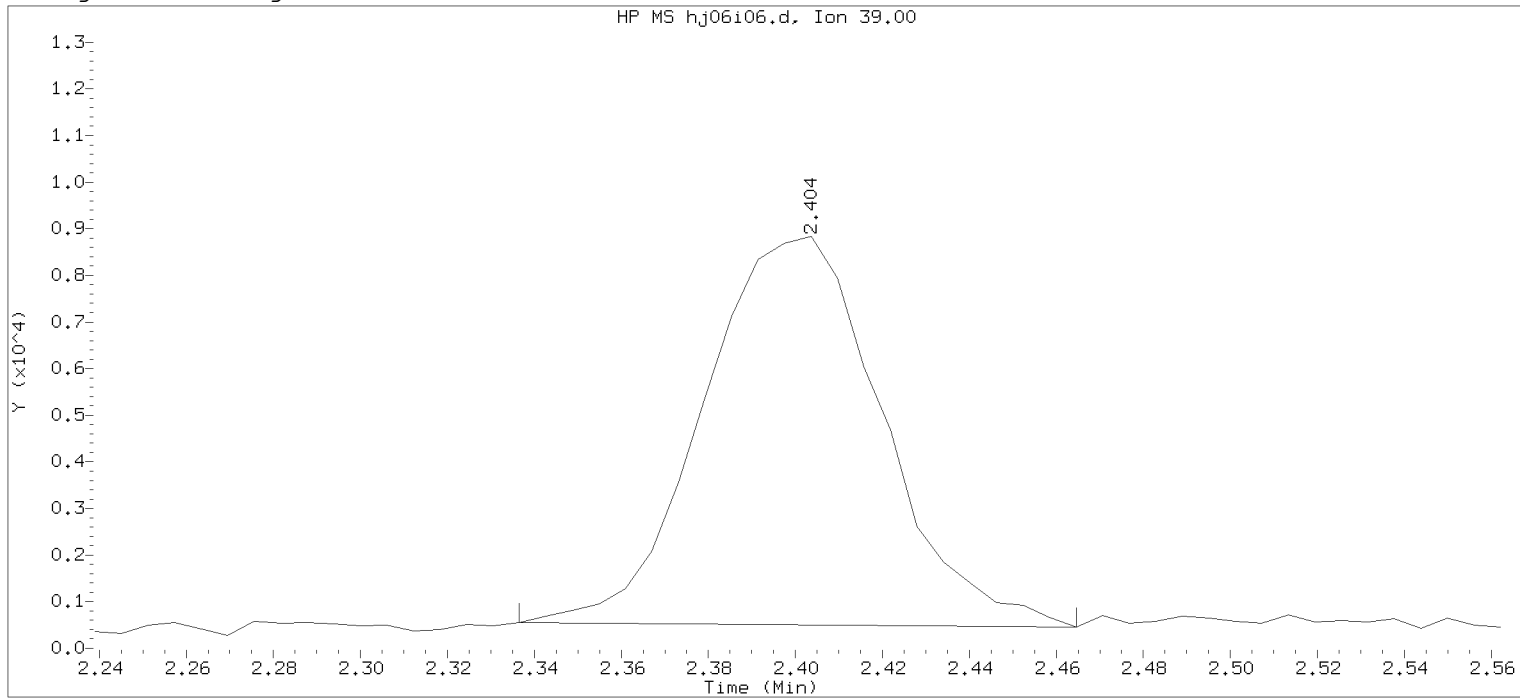
Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.

PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 6

Compound Name : 1,3-Butadiene

Scan Number : 134

Retention Time (minutes): 2.404

Quant Ion : 39.00

Area : 23728

On-column Amount (ng) : 0.4429

Integration start scan : 122

Integration stop scan: 143

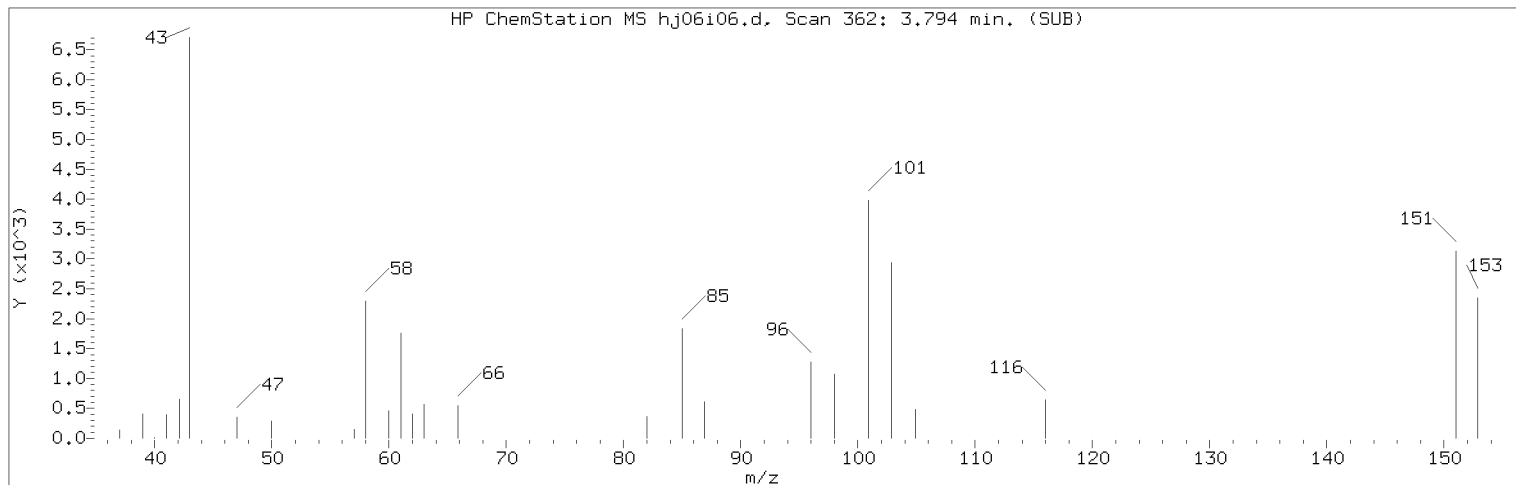
Y at integration start : 545

Y at integration end: 455

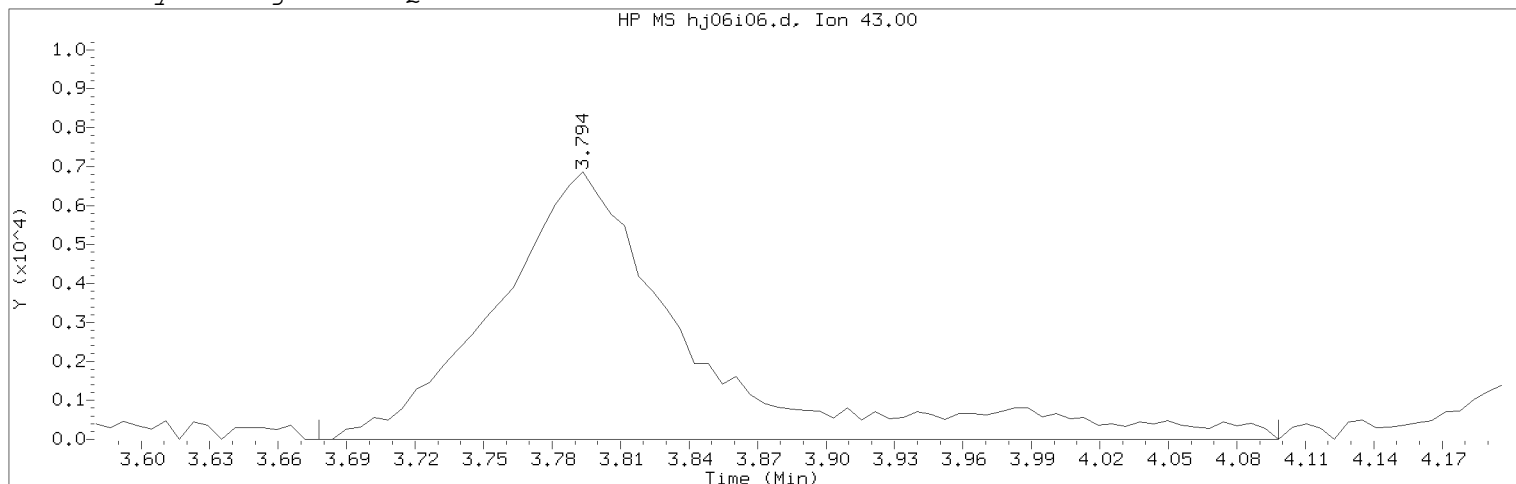
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RAE59 Page 676 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area (flag) : 41187M
 On-Column Amount (ng) : 5.7326
 Integration start scan : 342
 Y at integration start : 0

Integration stop scan: 411
 Y at integration end: 0

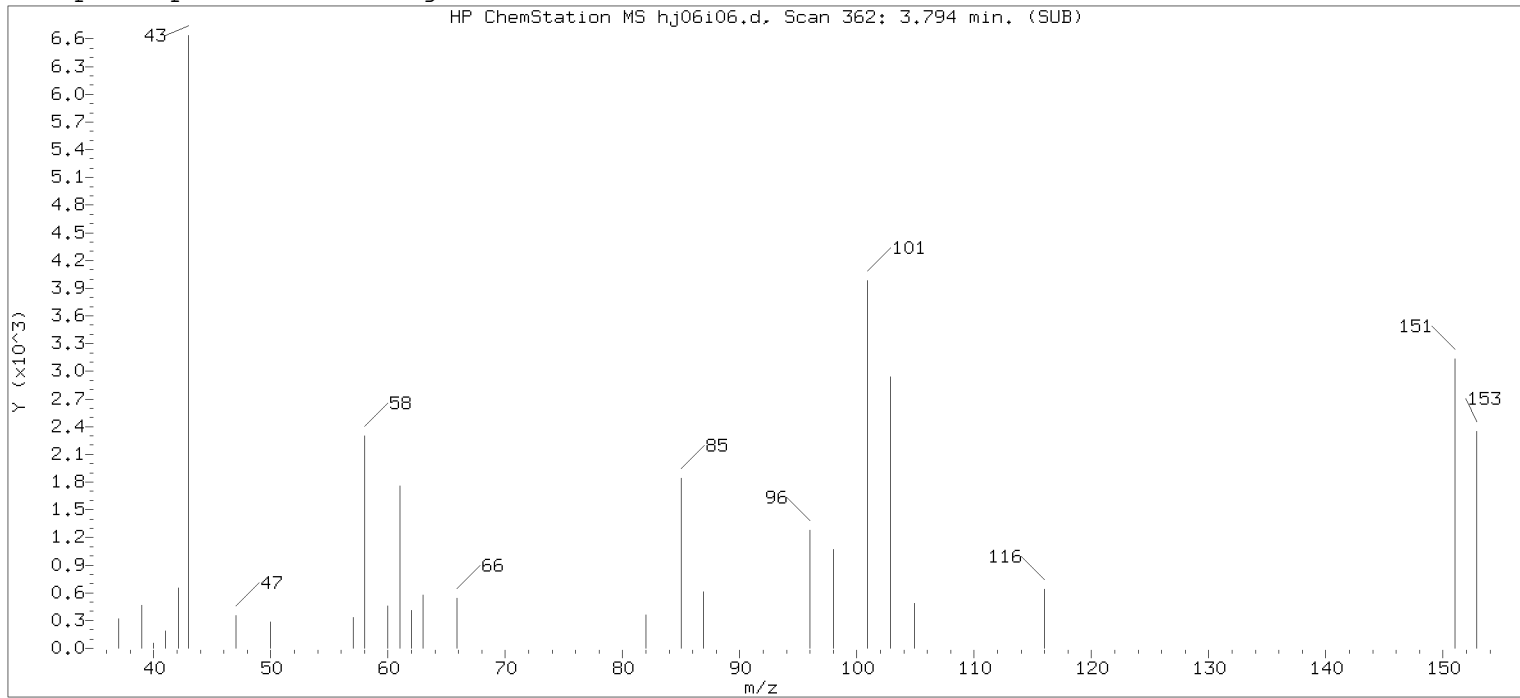
Reason for manual integration: improper integration

Analyst responsible for change:

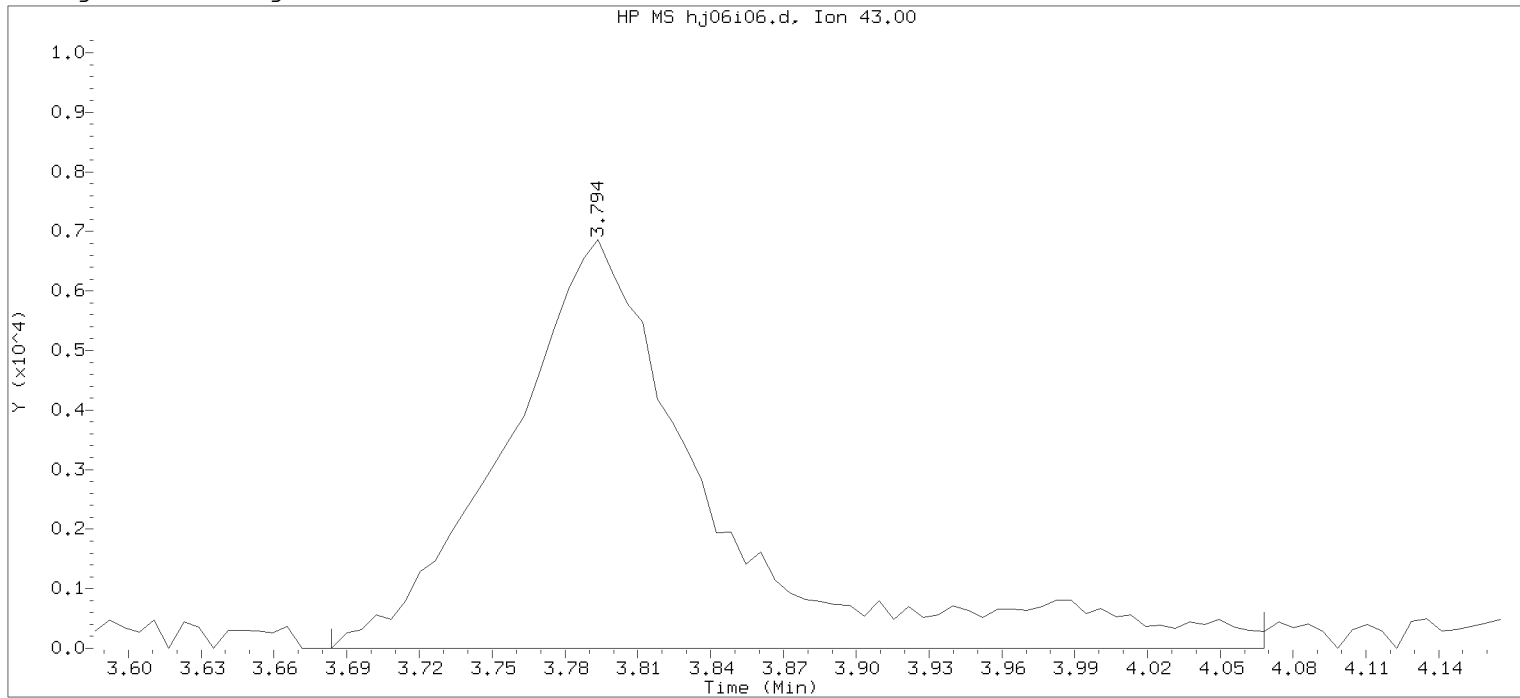
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

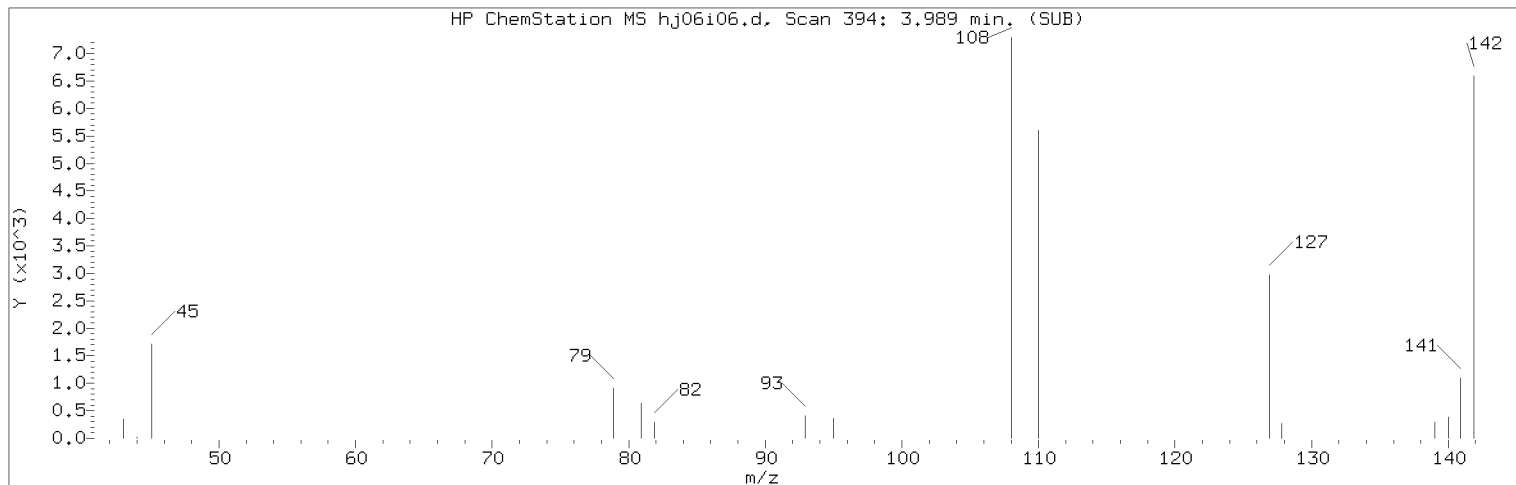
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

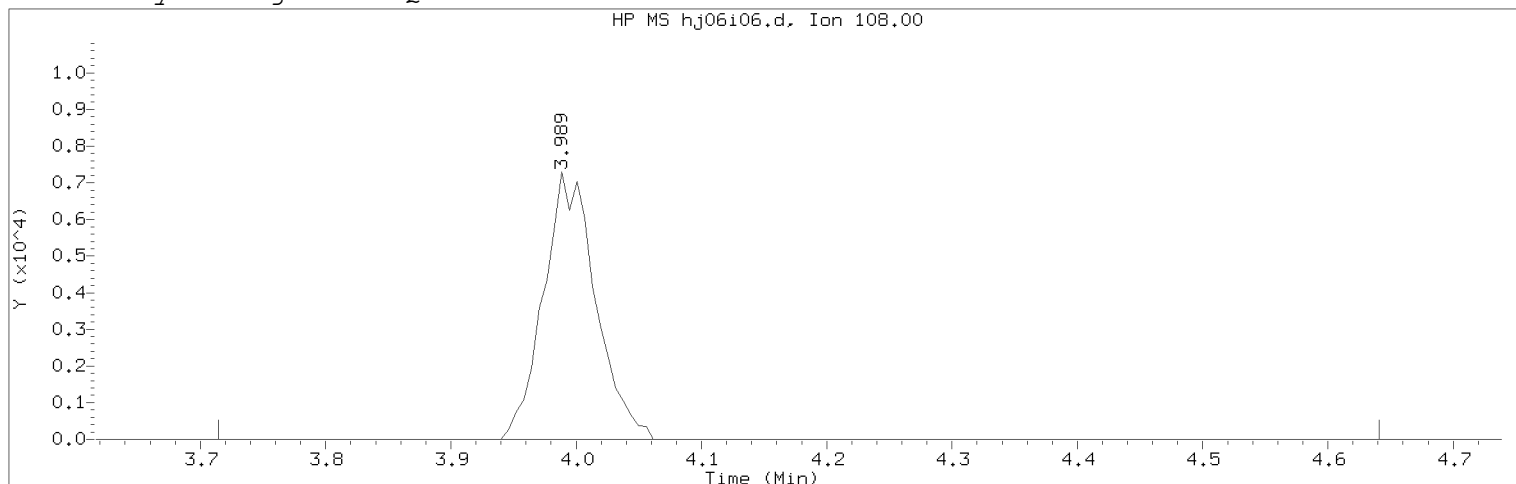
Compound Number	: 14	
Compound Name	: Acetone	
Scan Number	: 362	
Retention Time (minutes)	: 3.794	
Quant Ion	: 43.00	
Area	: 40599	
On-column Amount (ng)	: 5.6634	
Integration start scan	: 343	Integration stop scan: 406
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 678 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

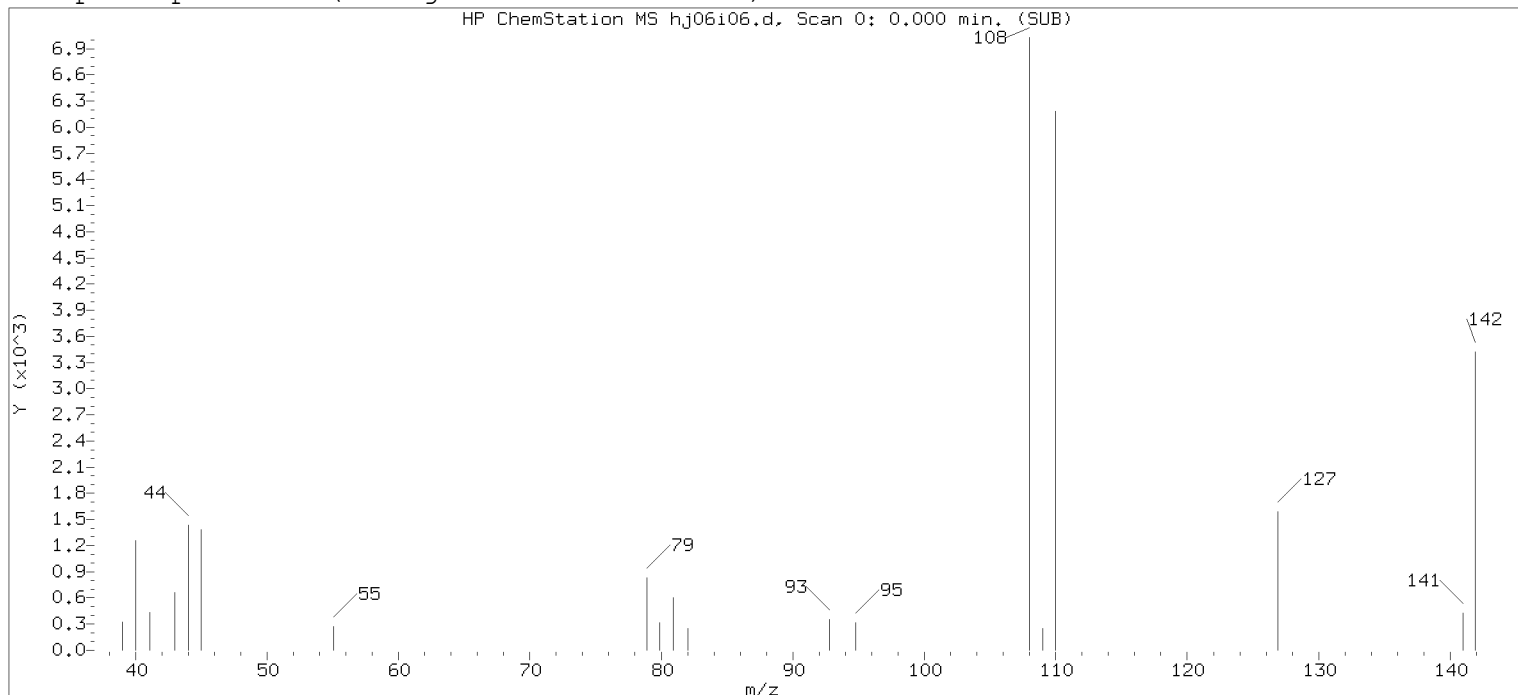
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 21118M	
On-Column Amount (ng)	: 0.5064	
Integration start scan	: 348	Integration stop scan: 500
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

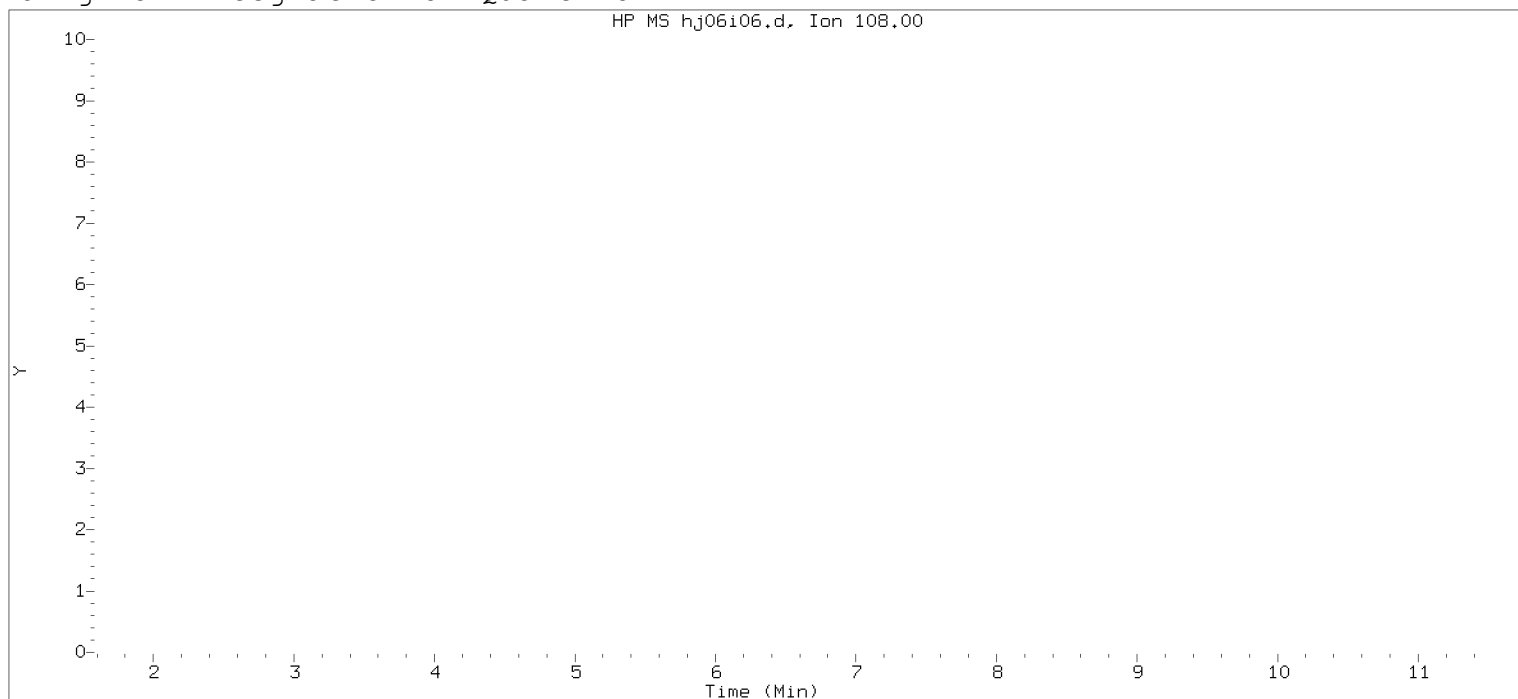
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

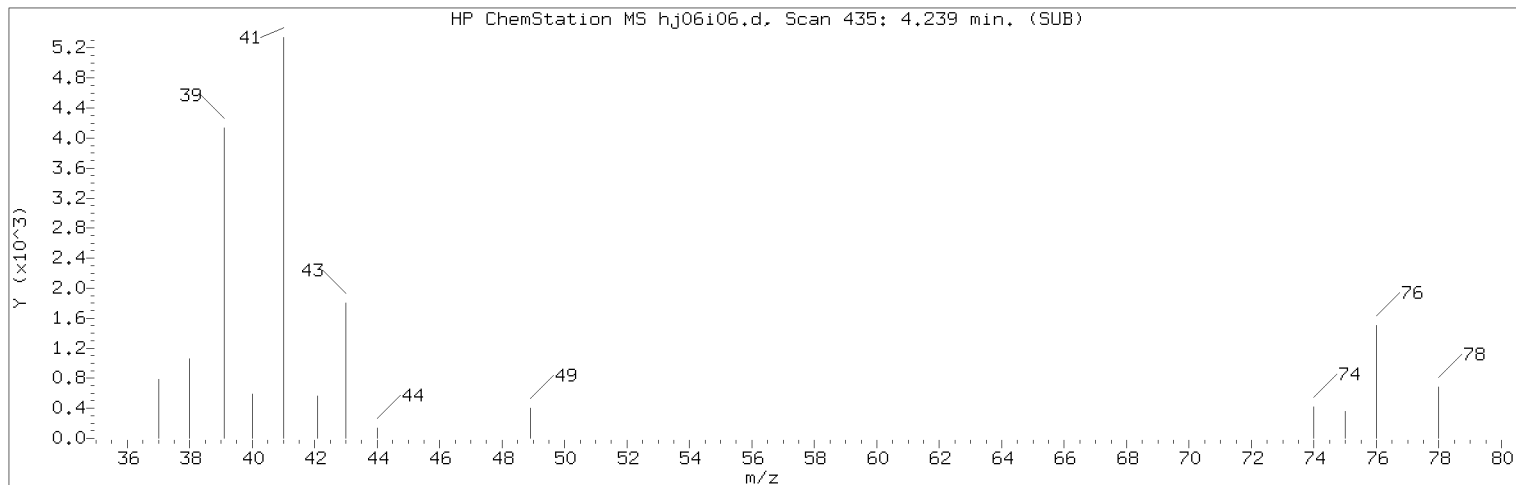
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

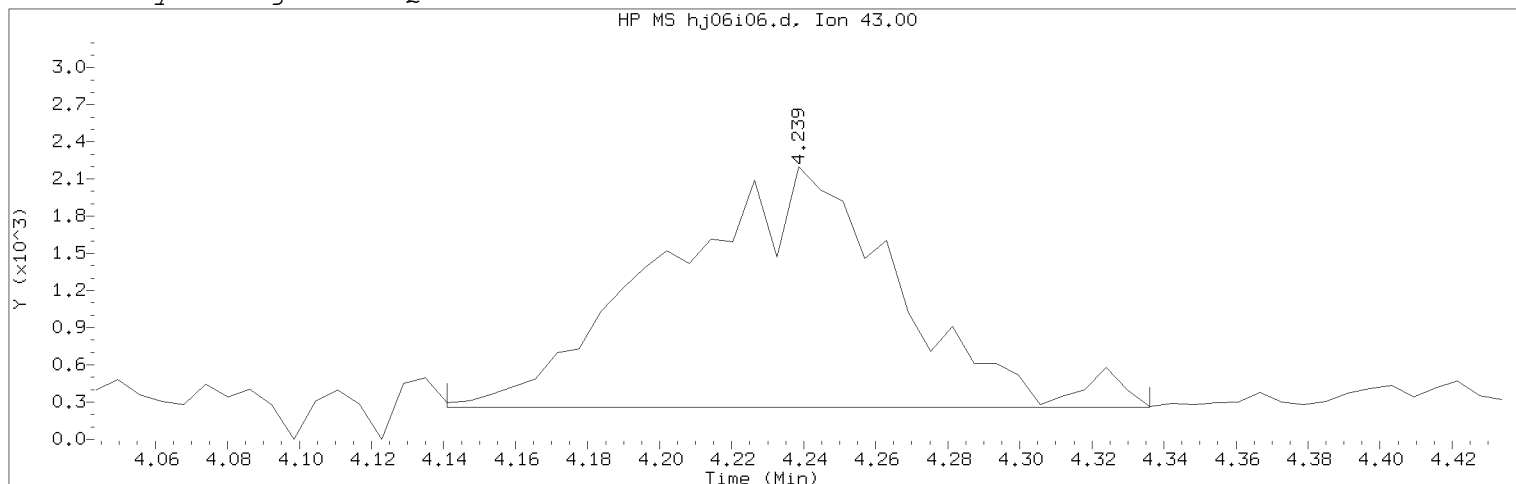
Lab Sample ID: VSTD0.5

Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 566707 Integration stop scan: 477822
Y at integration start : 0 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

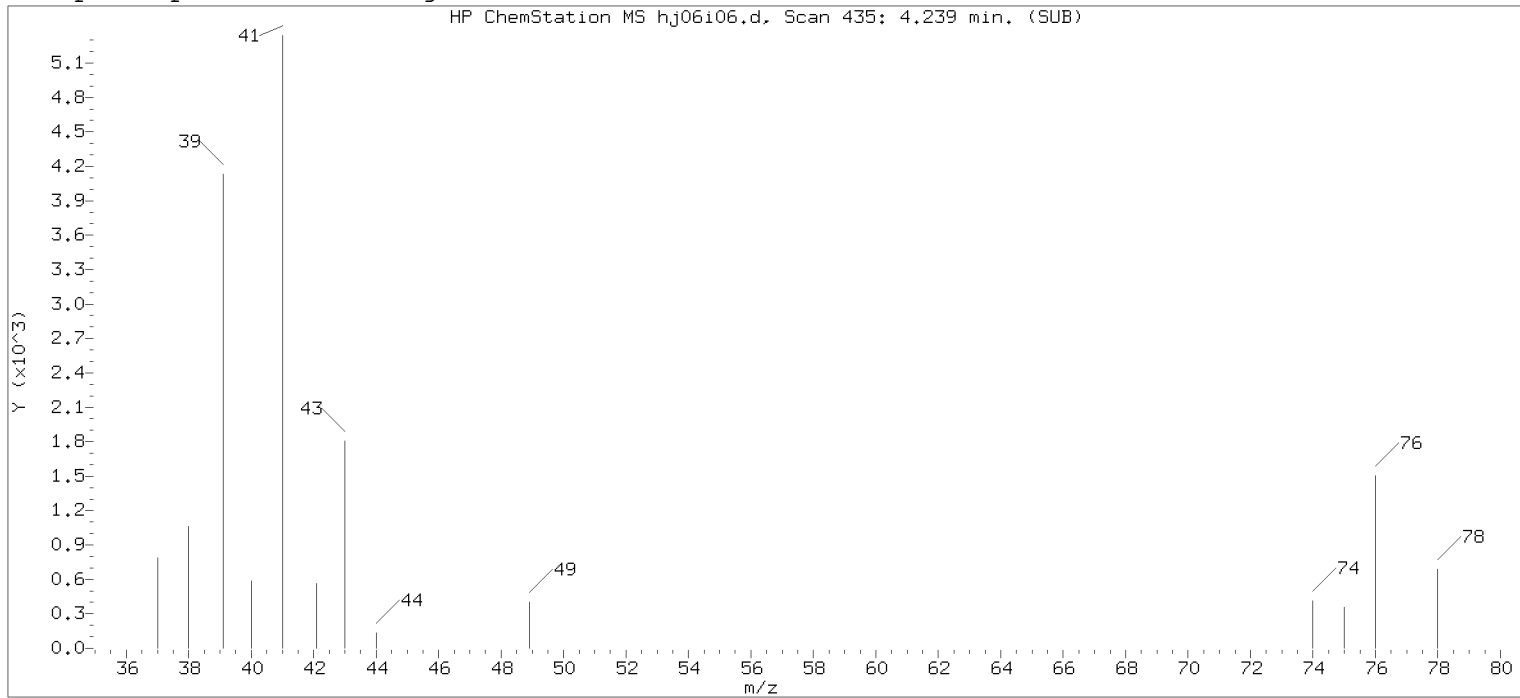
Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area (flag)	: 8769M	
On-Column Amount (ng)	: 0.4837	
Integration start scan	: 418	Integration stop scan: 450
Y at integration start	: 258	Y at integration end: 258

Reason for manual integration: improper integration

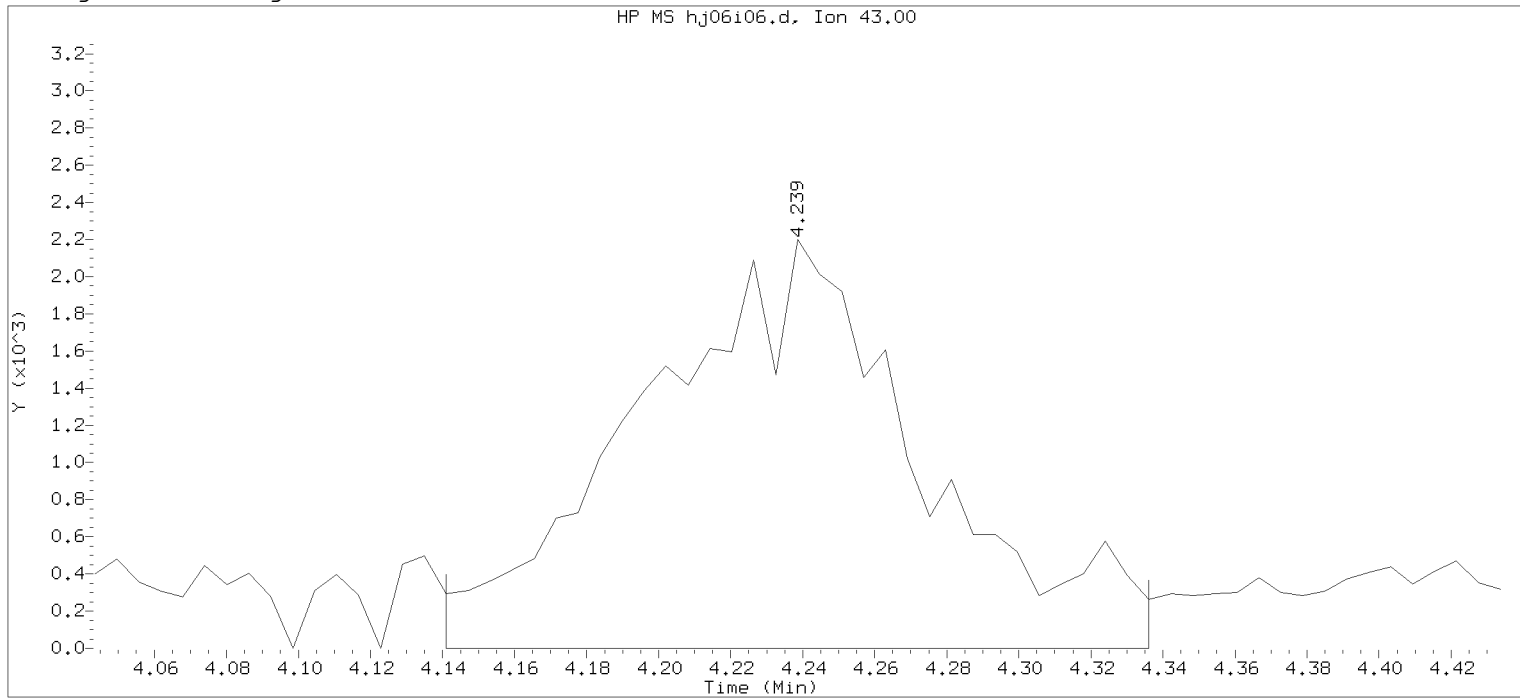
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

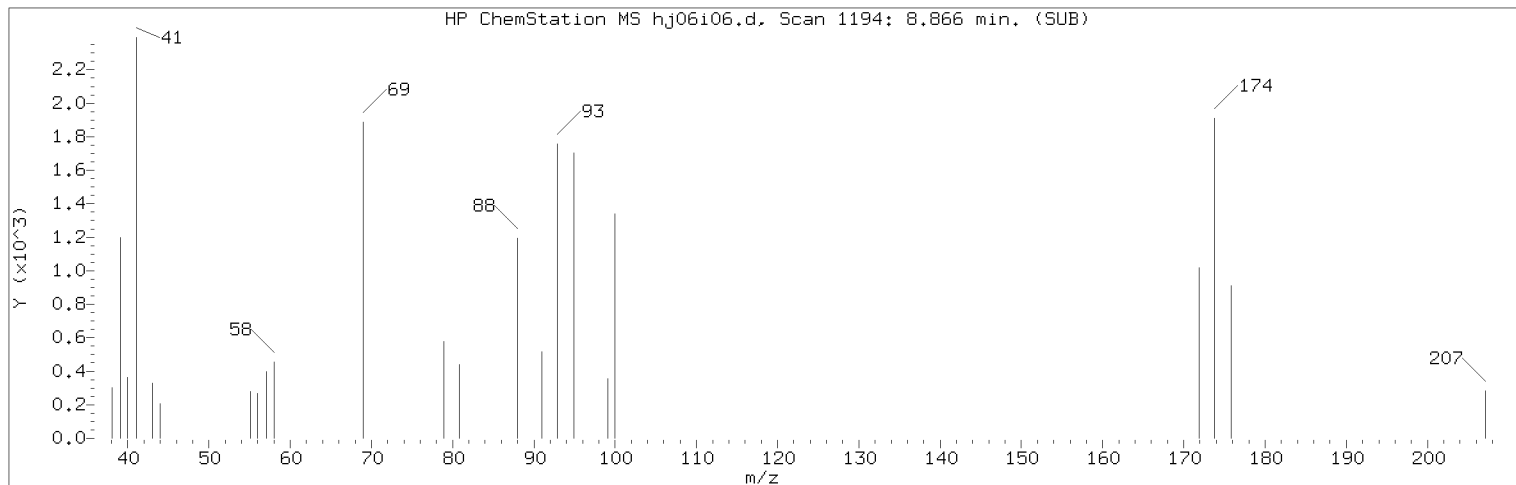
Lab Sample ID: VSTD0.5

Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area	: 11782	
On-column Amount (ng)	: 0.5416	
Integration start scan	: 418	Integration stop scan: 450
Y at integration start	: 0	Y at integration end: 0

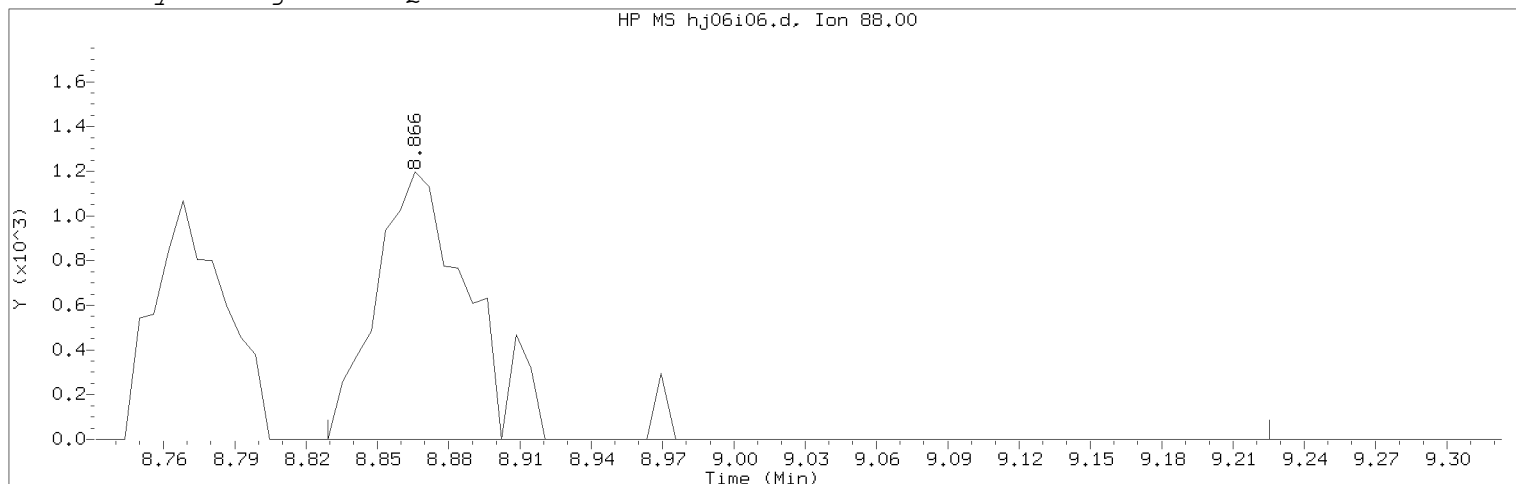
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RAE59 Page 2682 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

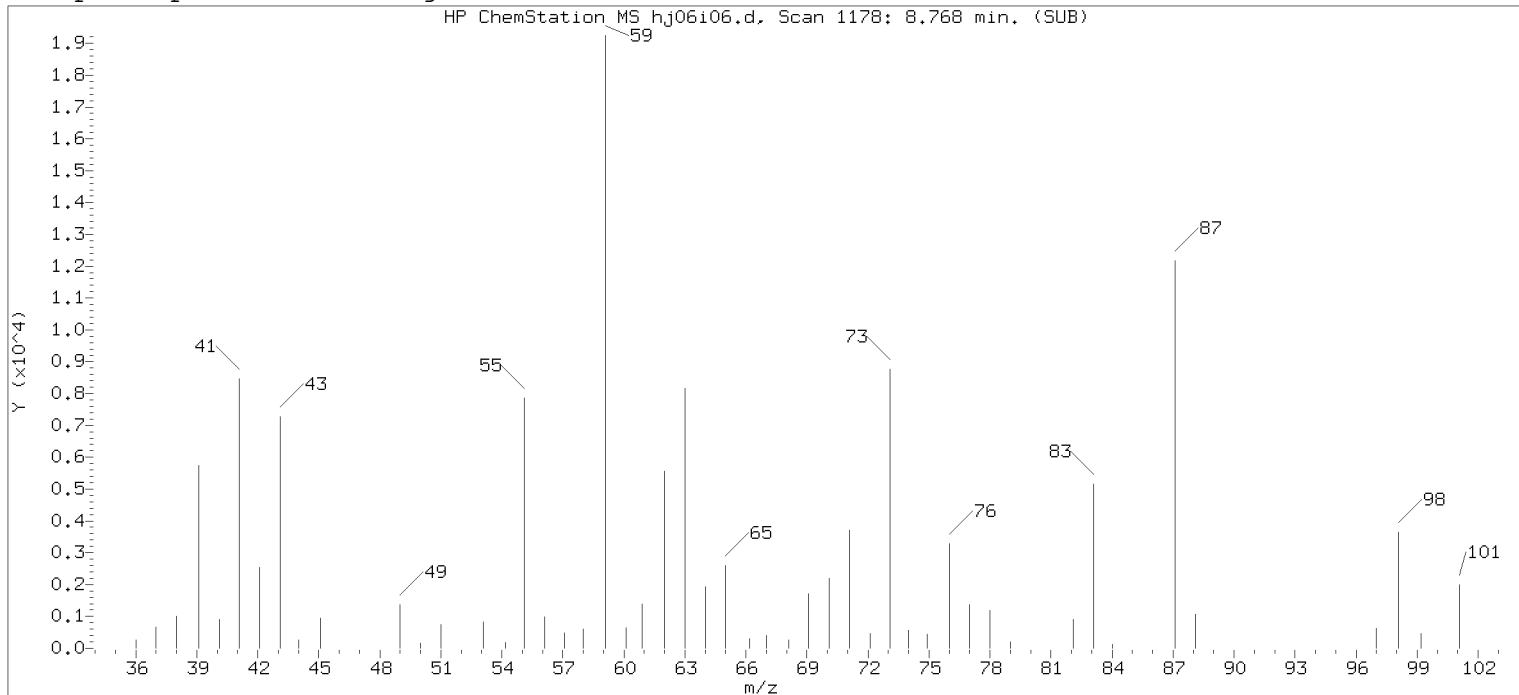
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1194	
Retention Time (minutes)	: 8.866	
Quant Ion	: 88.00	
Area (flag)	: 3390M	
On-Column Amount (ng)	: 20.1816	
Integration start scan	: 1187	Integration stop scan: 1252
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

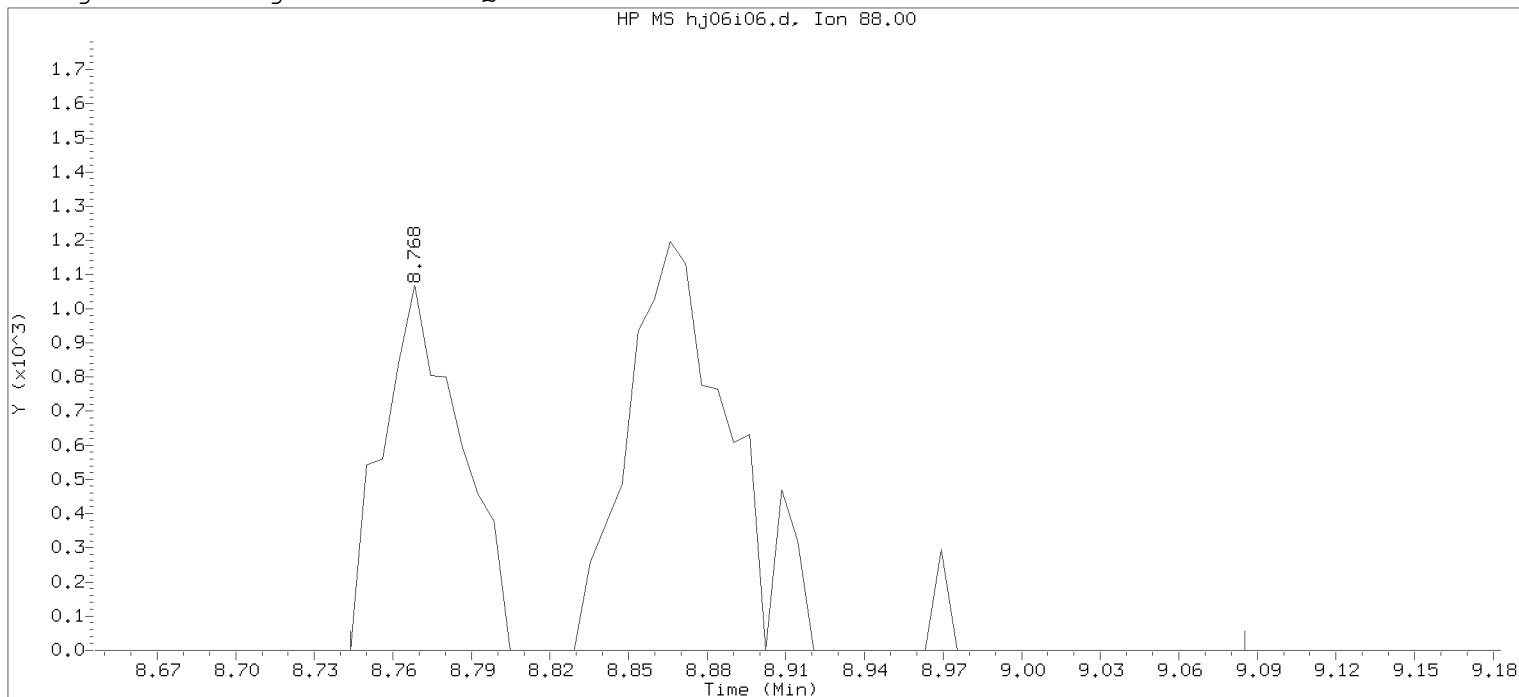
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

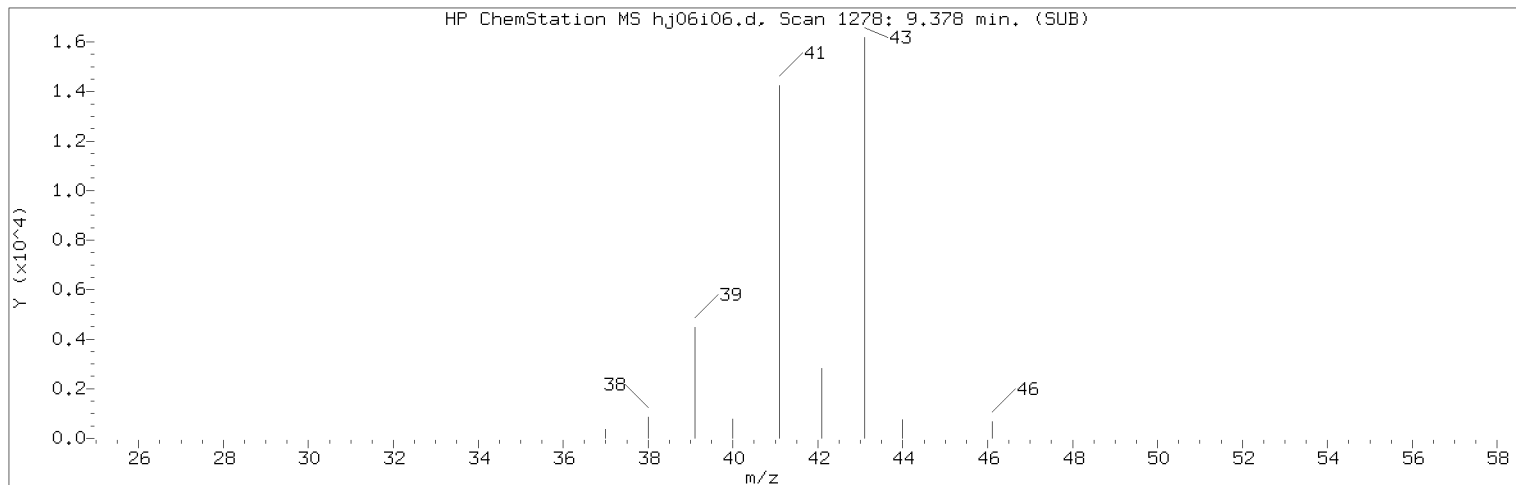
Lab Sample ID: VSTD0.5

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1178
 Retention Time (minutes): 8.768
 Quant Ion : 88.00
 Area : 5603
 On-column Amount (ng) : 35.8595
 Integration start scan : 1173
 Y at integration start : 0

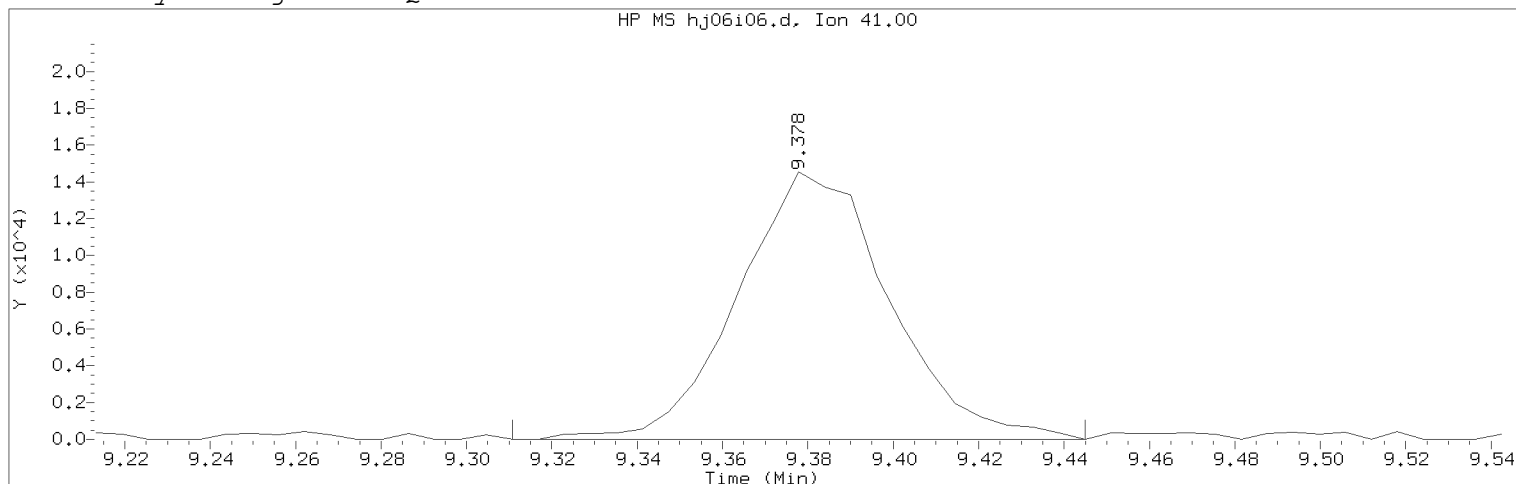
Integration stop scan: 1229
 Y at integration end: 0

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 Target 3.5 esignature user RAFF59 Page 684 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area (flag)	: 35799M	
On-Column Amount (ng)	: 4.9229	
Integration start scan	: 1266	Integration stop scan: 1288
Y at integration start	: 0	Y at integration end: 0

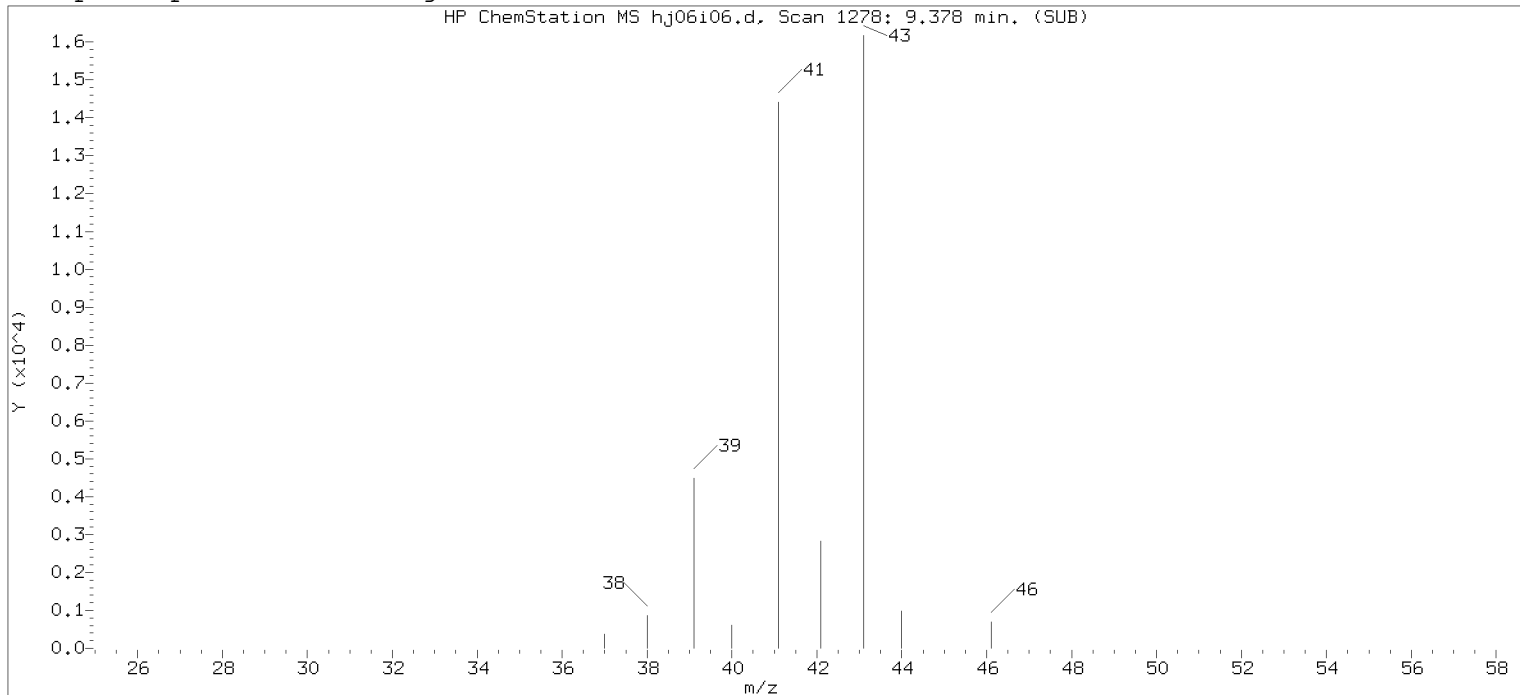
Reason for manual integration: improper integration

Analyst responsible for change:

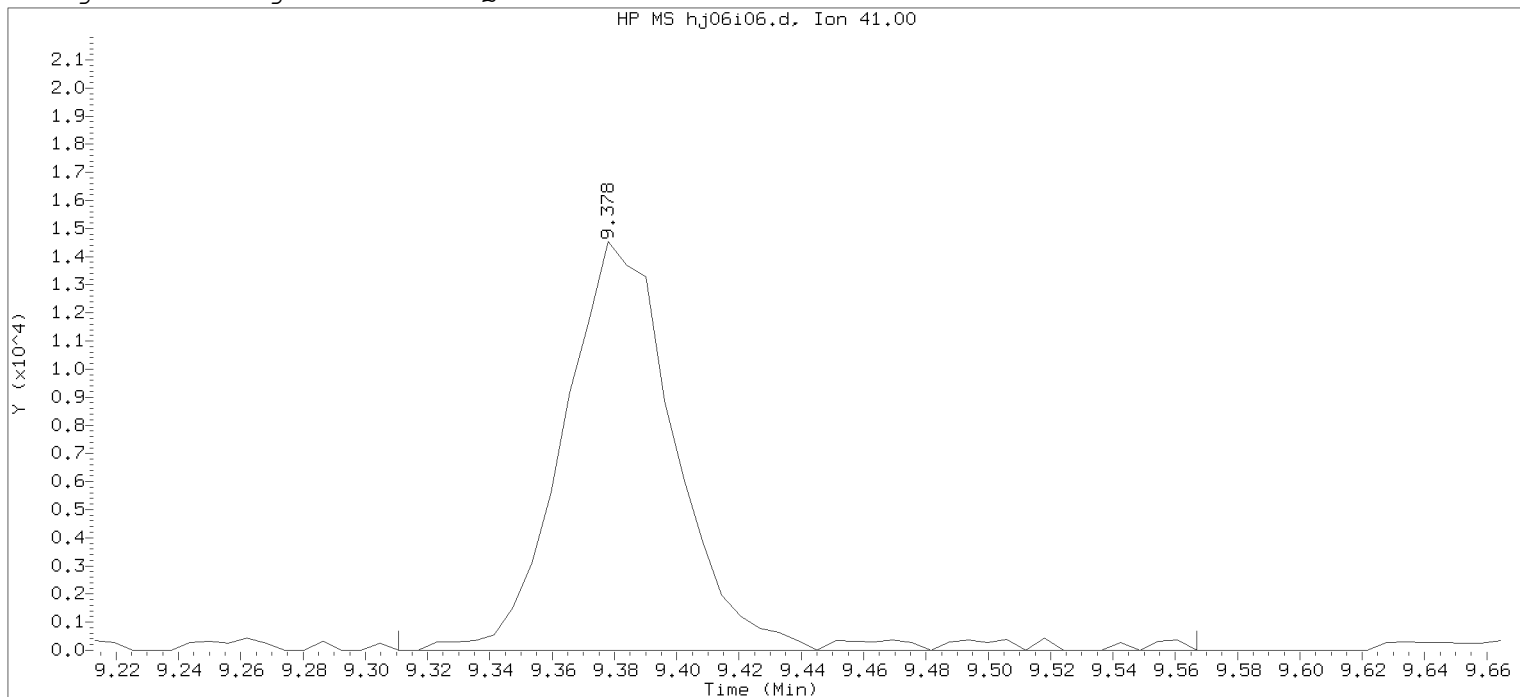
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

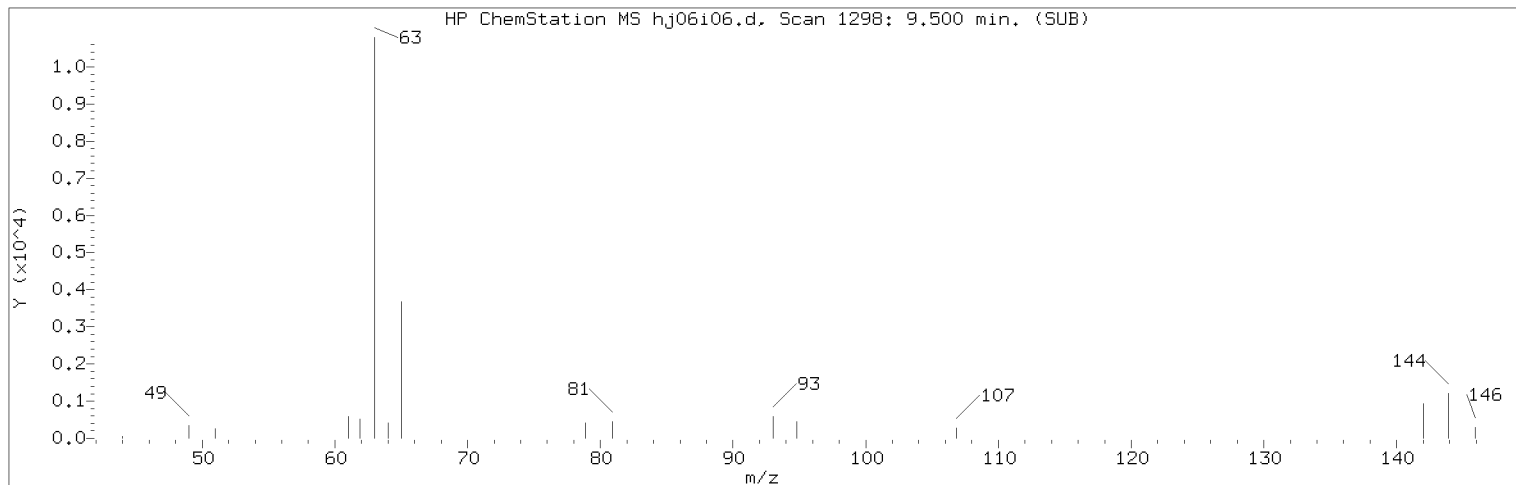
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

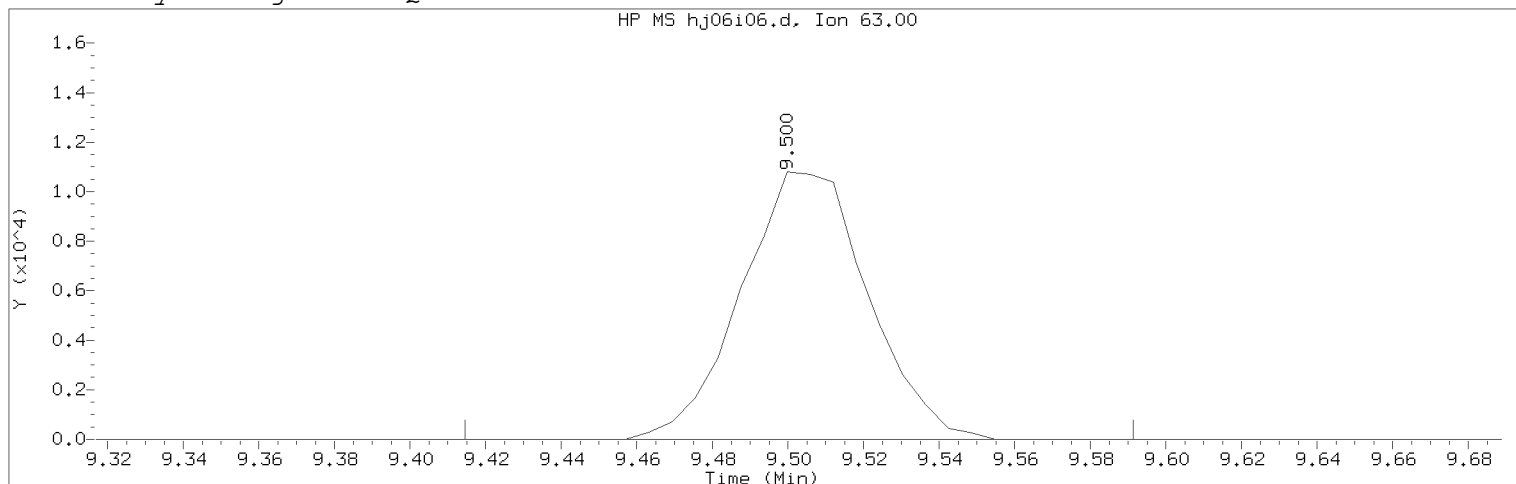
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 37377	
On-column Amount (ng)	: 5.0667	
Integration start scan	: 1266	Integration stop scan: 1308
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RAE59 Page 2 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

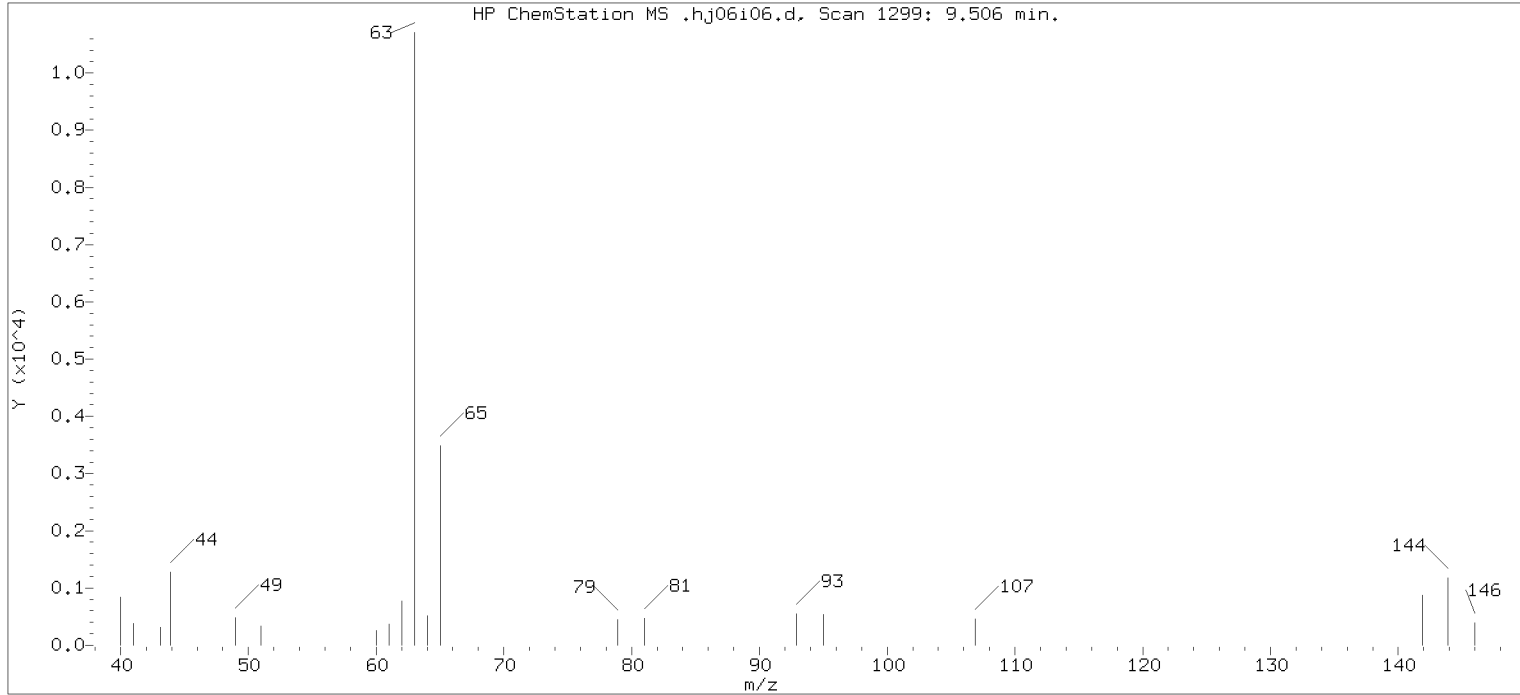
Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1298	
Retention Time (minutes)	: 9.500	
Quant Ion	: 63.00	
Area (flag)	: 25119M	
On-Column Amount (ng)	: 0.5076	
Integration start scan	: 1283	Integration stop scan: 1312
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

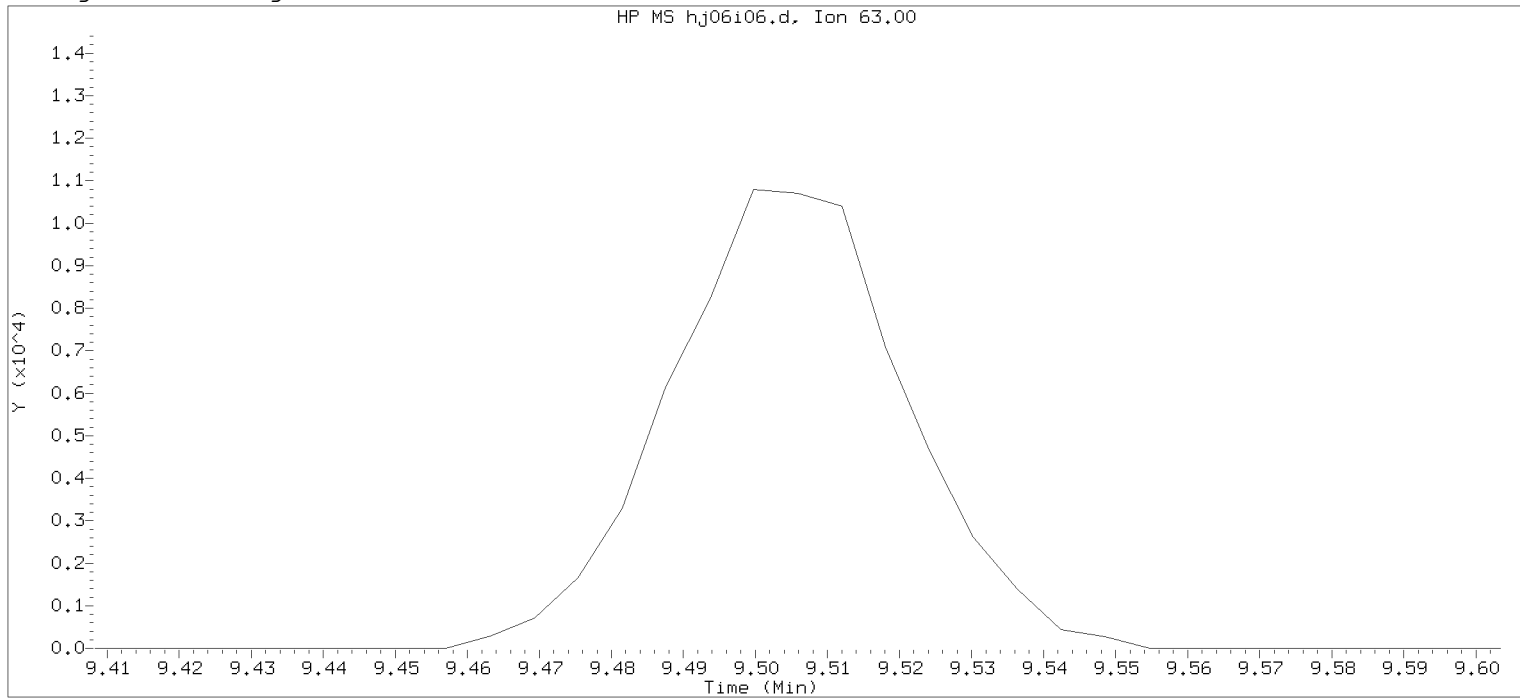
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

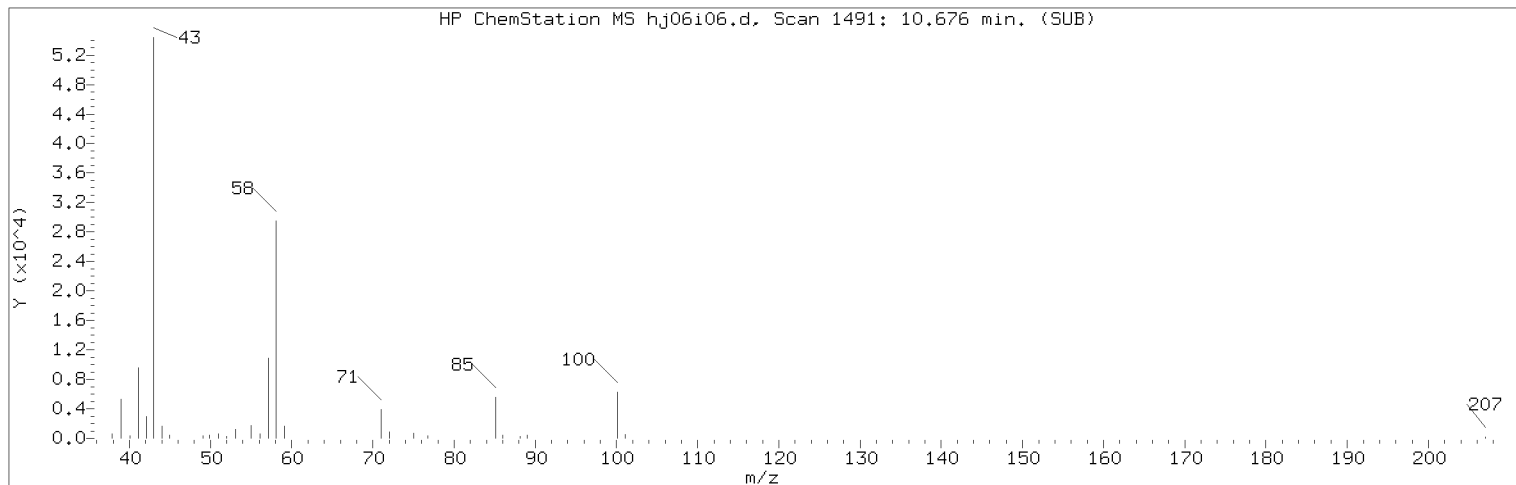
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

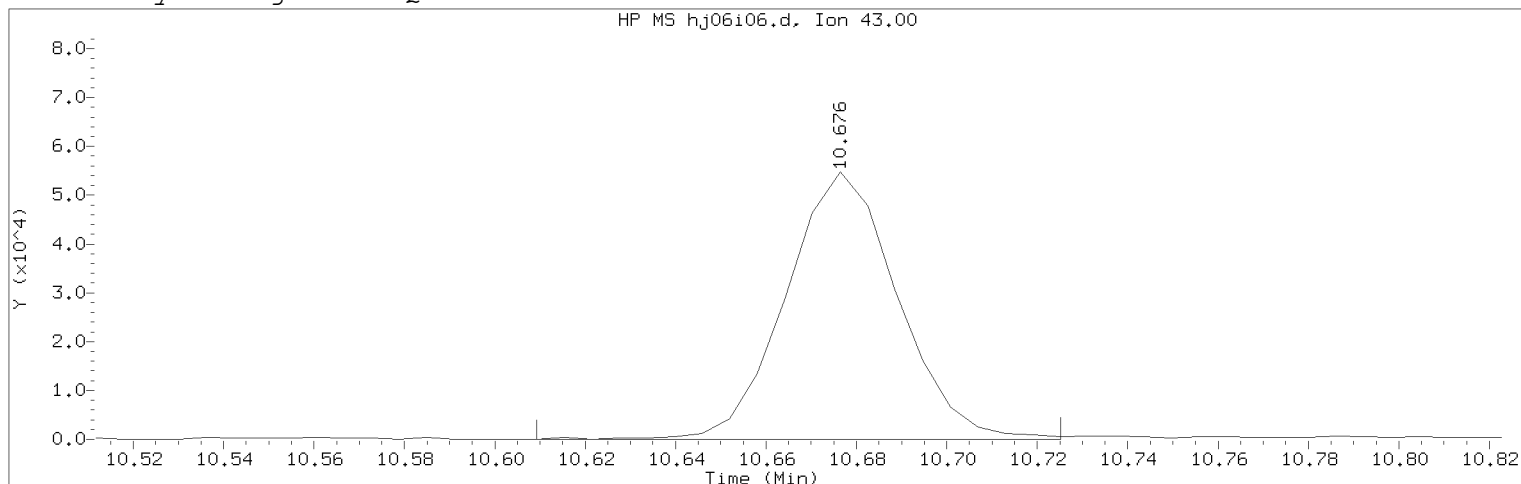
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

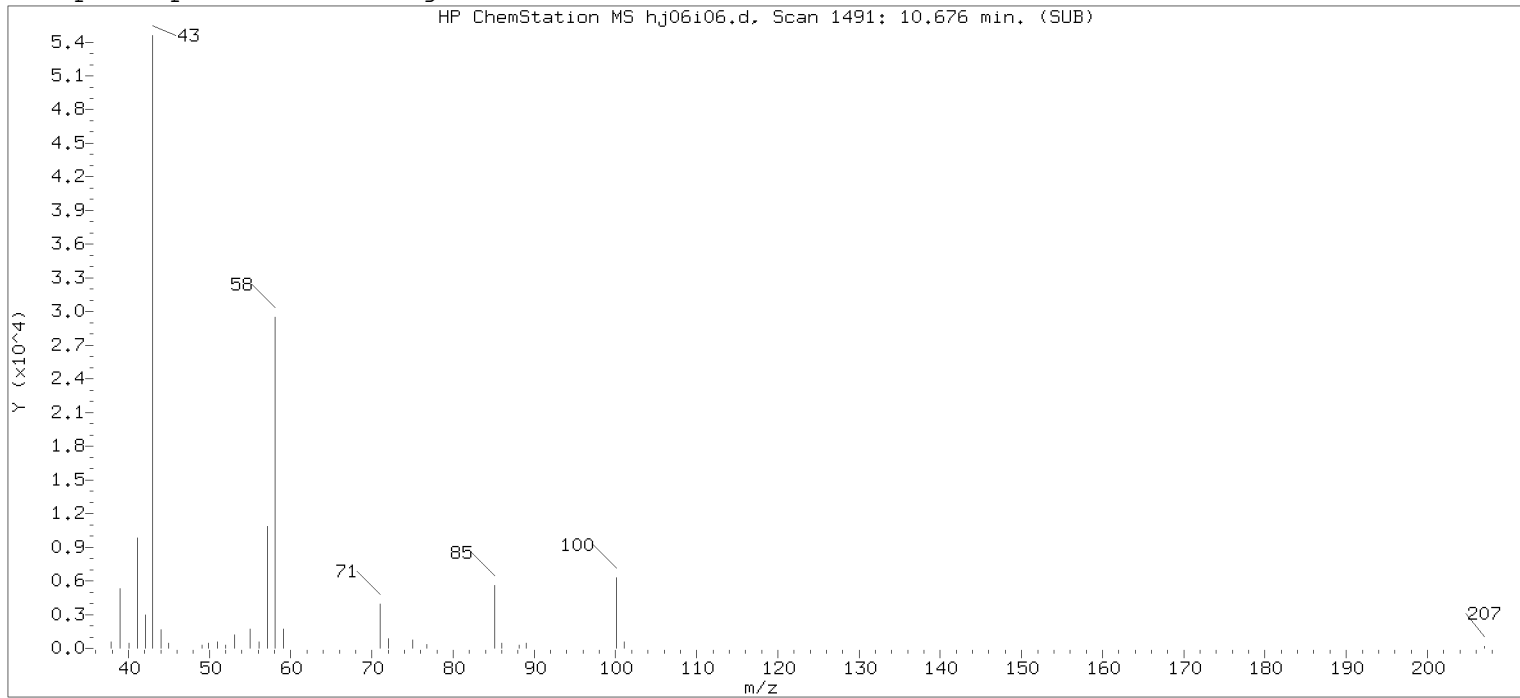
Compound Number	: 92	
Compound Name	: 2-Hexanone	
Scan Number	: 1491	
Retention Time (minutes)	: 10.676	
Quant Ion	: 43.00	
Area (flag)	: 93633M	
On-Column Amount (ng)	: 4.9489	
Integration start scan	: 1479	Integration stop scan: 1498
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

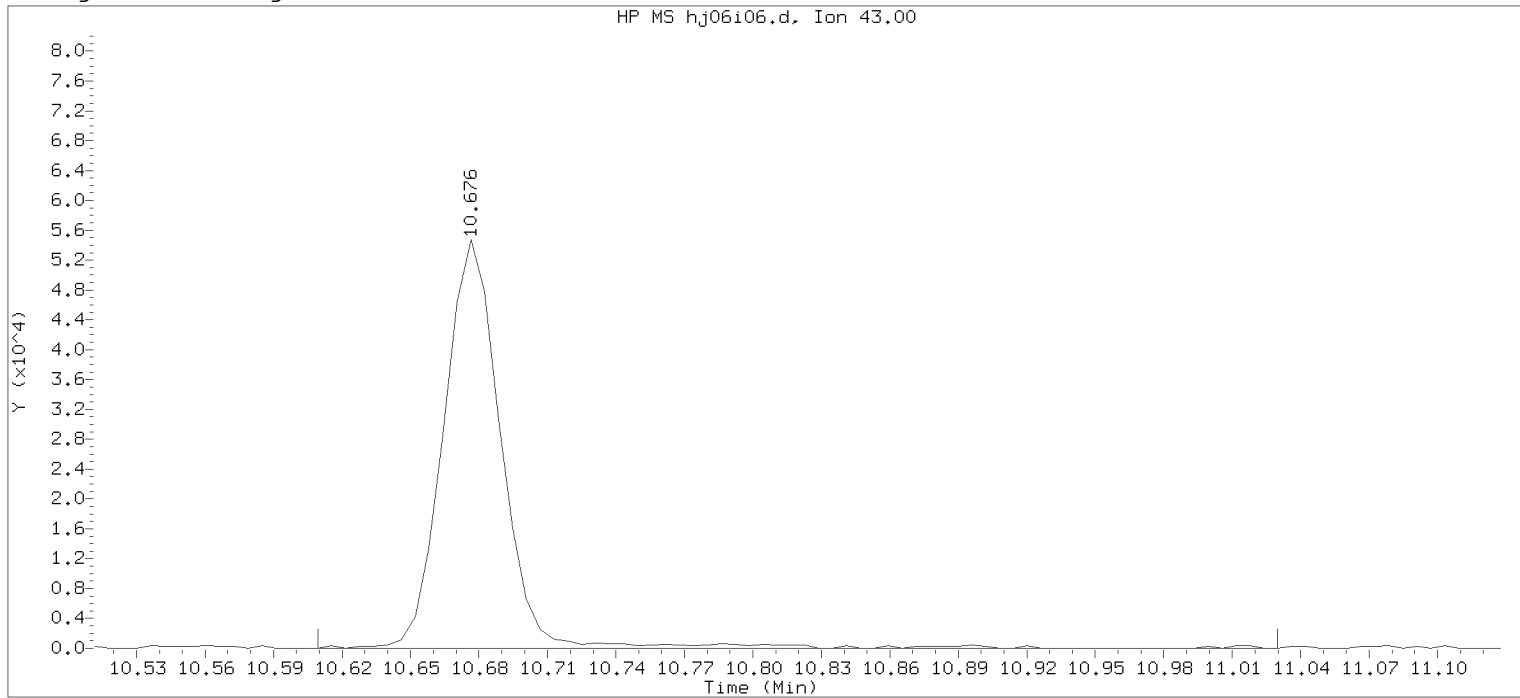
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

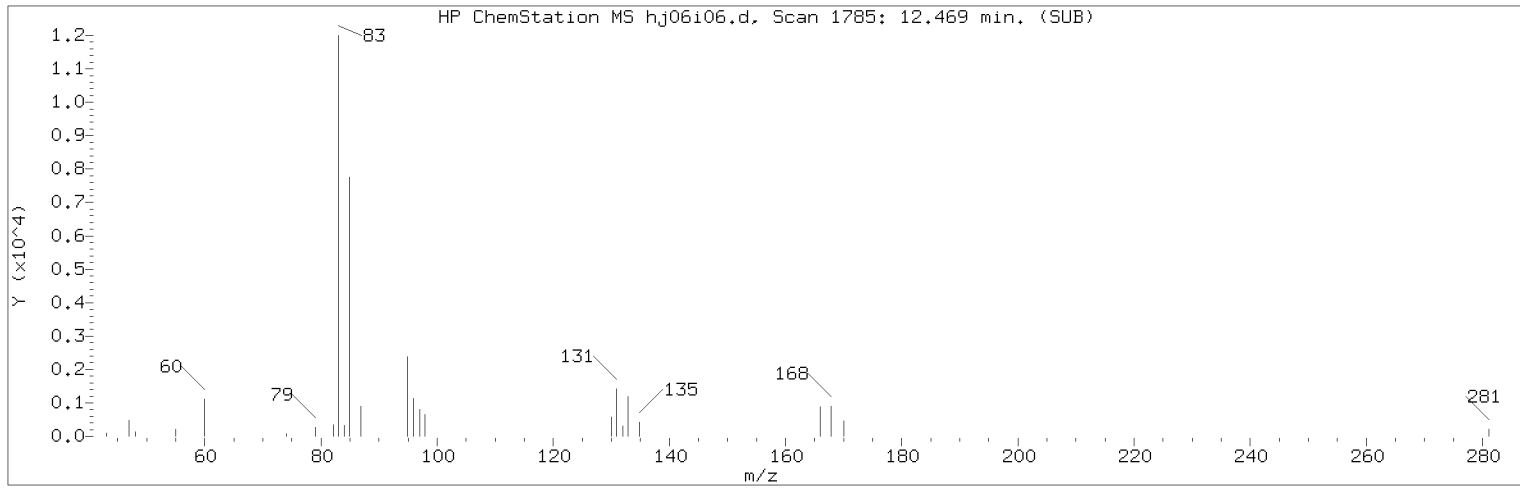
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

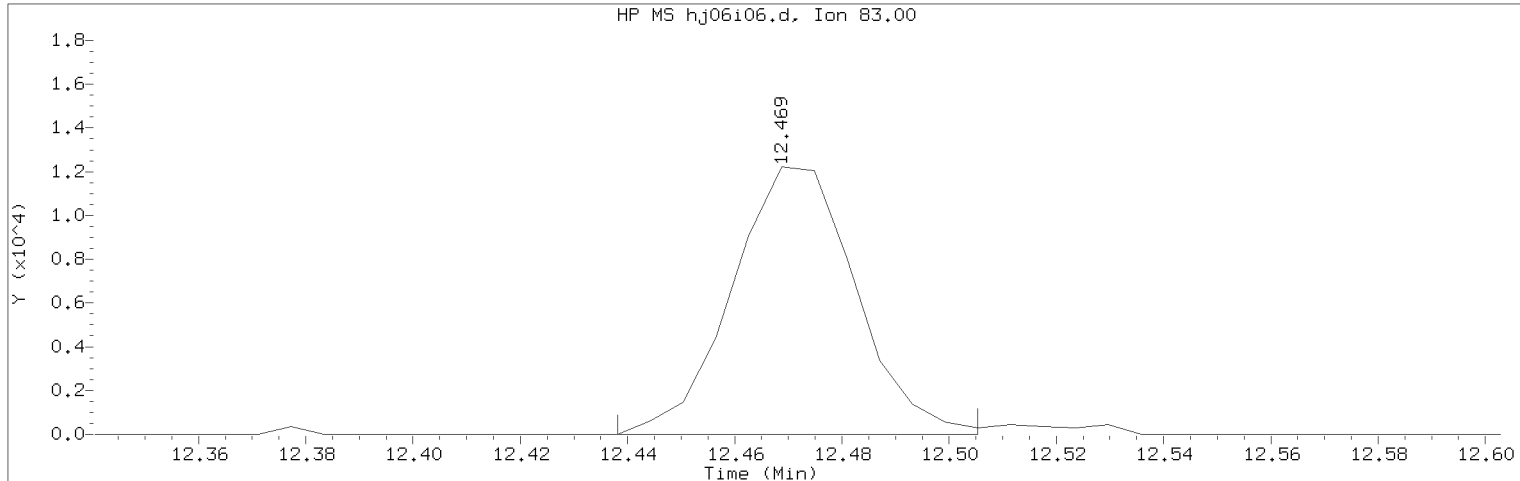
Compound Number	: 92	
Compound Name	: 2-Hexanone	
Scan Number	: 1491	
Retention Time (minutes)	: 10.676	
Quant Ion	: 43.00	
Area	: 97785	
On-column Amount (ng)	: 5.0909	
Integration start scan	: 1479	Integration stop scan: 1548
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RAE59 Page 2692 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

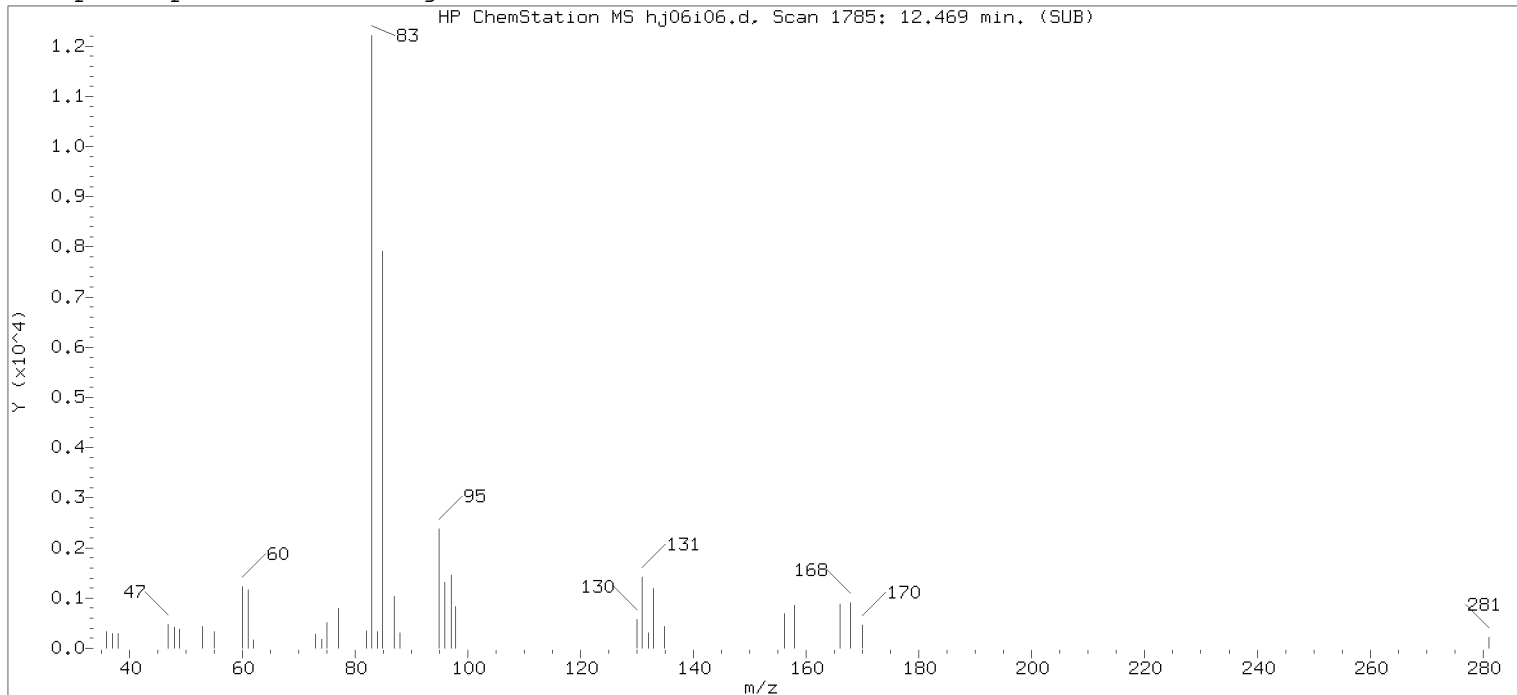
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 19540M
On-Column Amount (ng) : 0.4769
Integration start scan : 1779 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

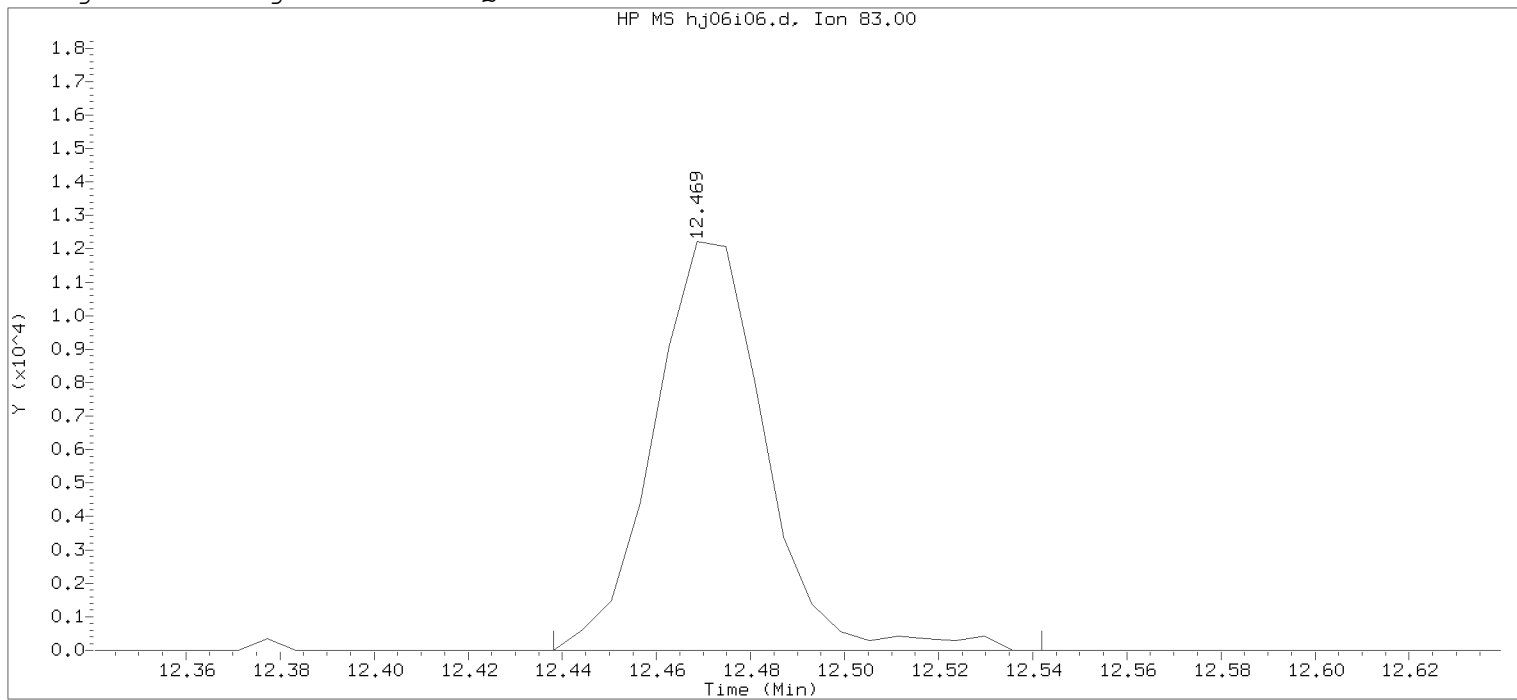
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

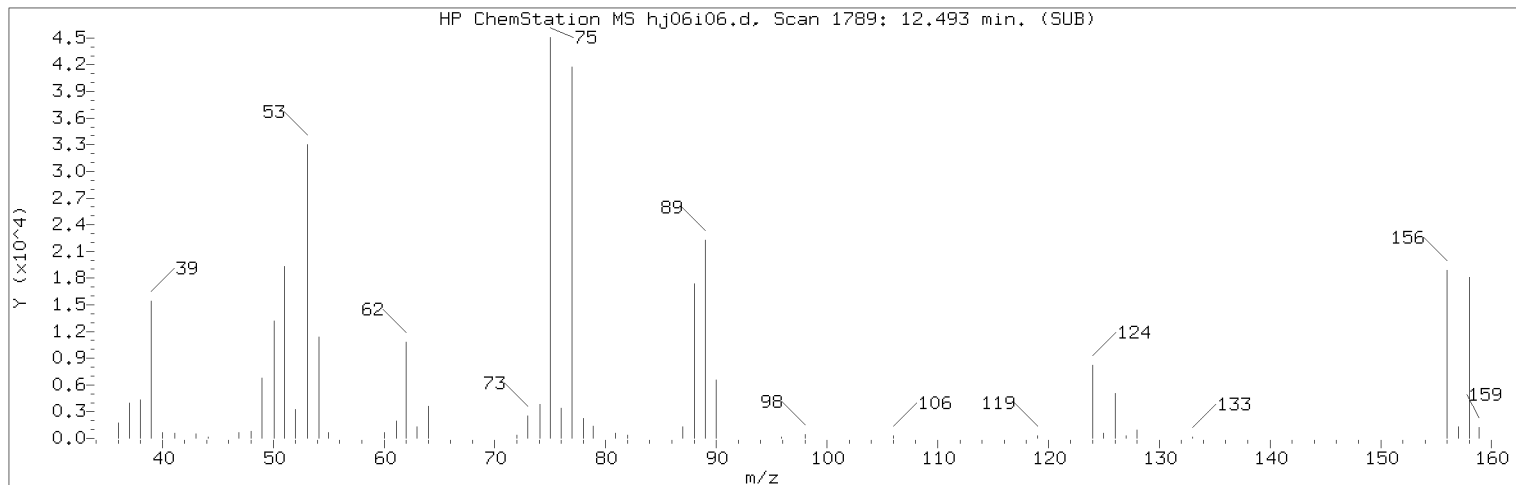
Lab Sample ID: VSTD0.5

Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1785	
Retention Time (minutes)	: 12.469	
Quant Ion	: 83.00	
Area	: 20088	
On-column Amount (ng)	: 0.4791	
Integration start scan	: 1779	Integration stop scan: 1796
Y at integration start	: 0	Y at integration end: 0

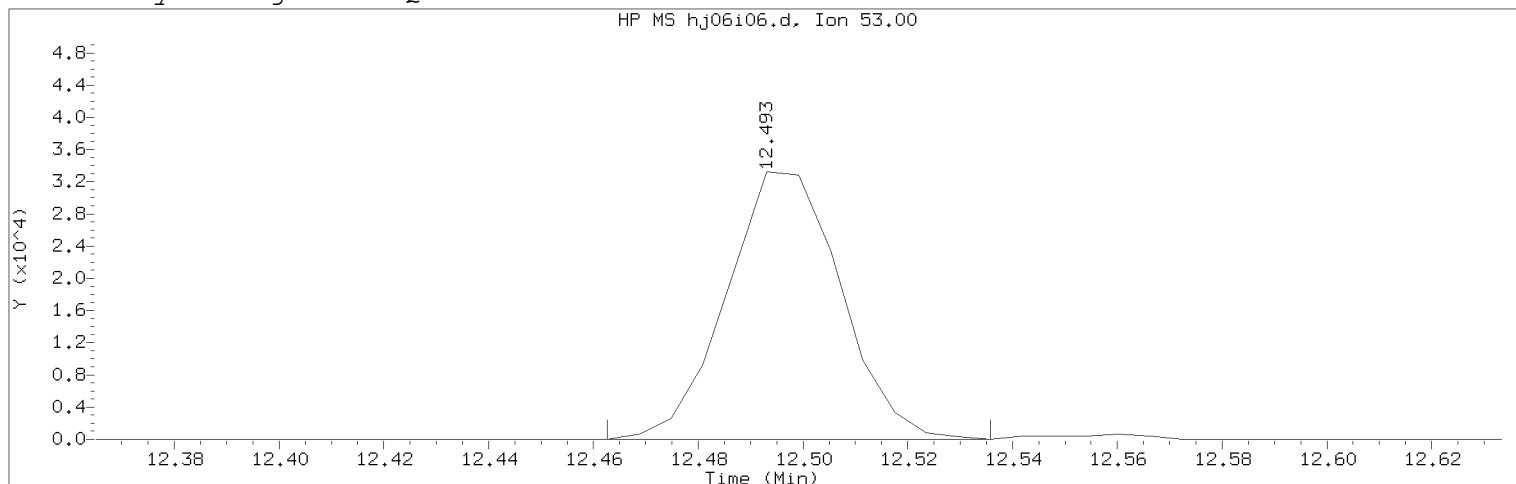
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RPF59 Page 692 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

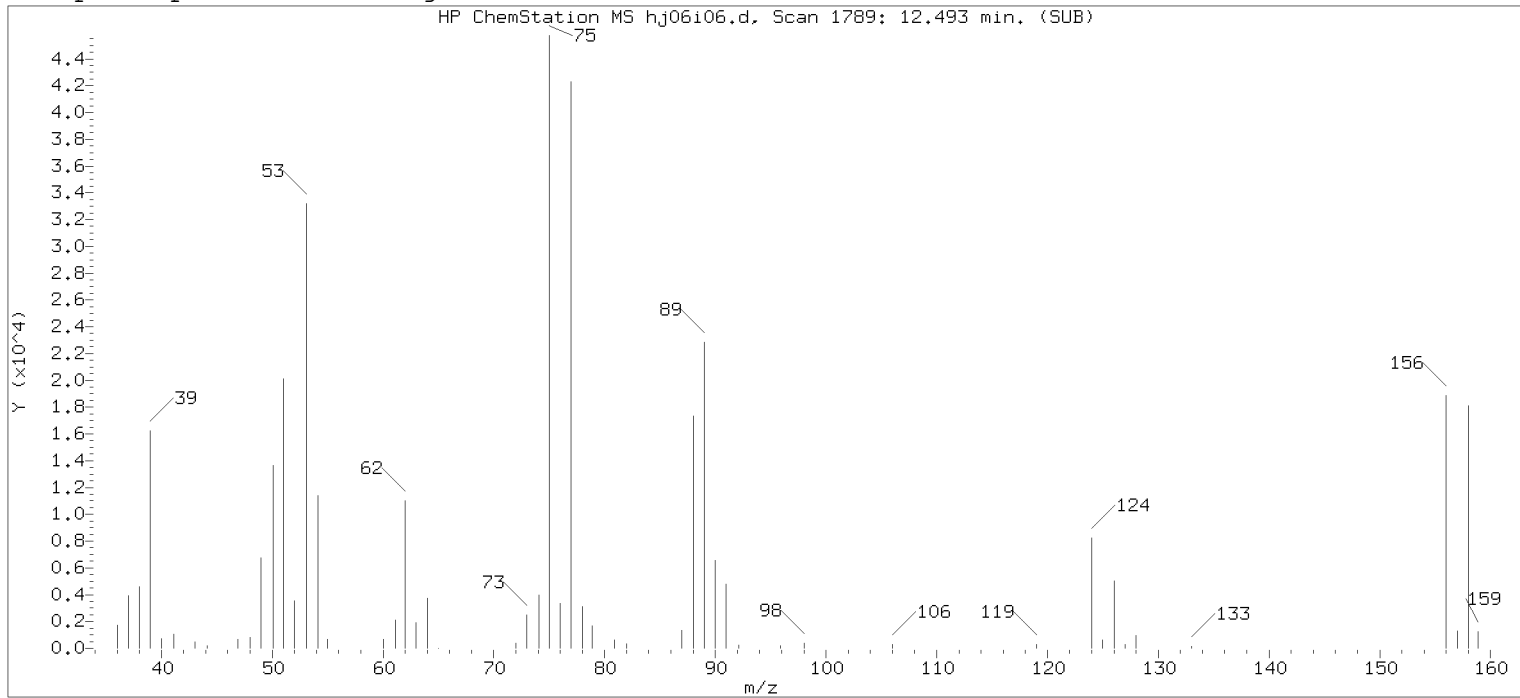
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area (flag)	: 50262M	
On-Column Amount (ng)	: 4.8323	
Integration start scan	: 1783	Integration stop scan: 1795
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

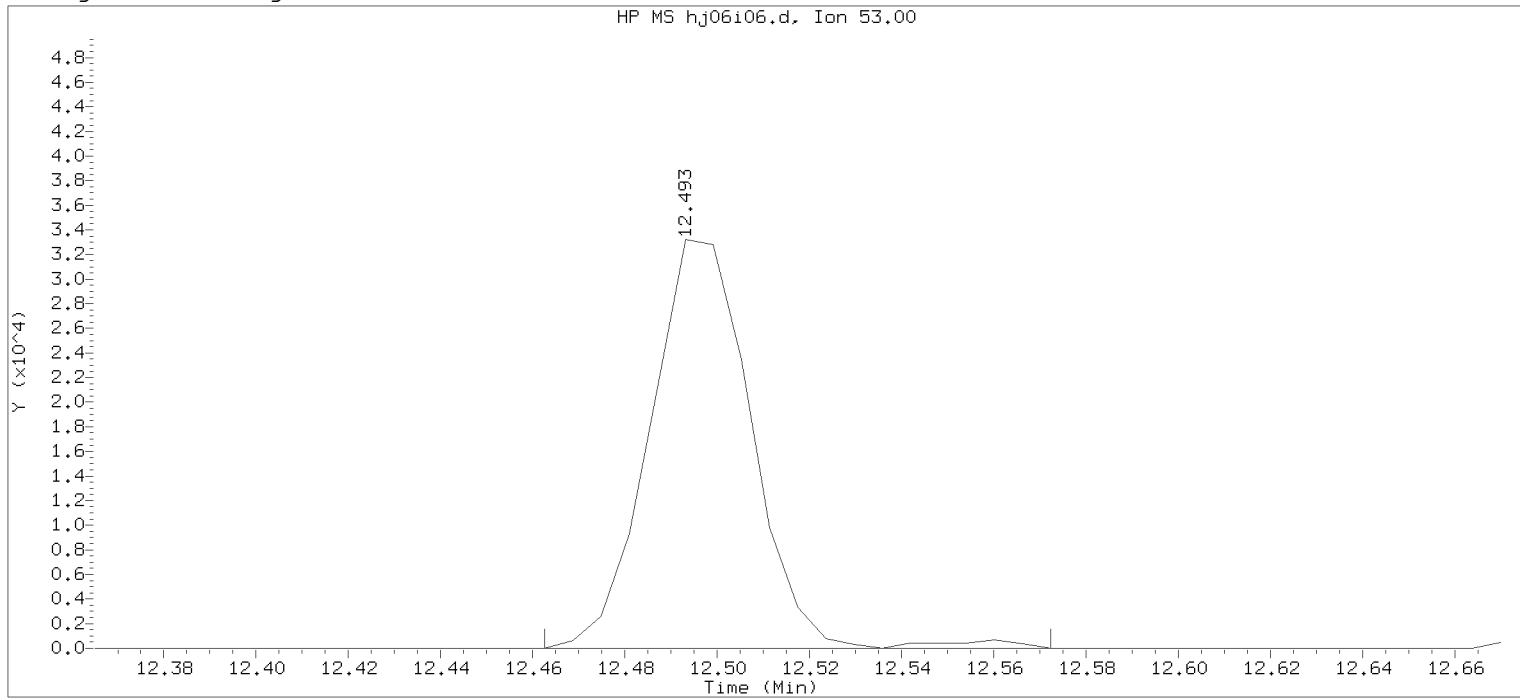
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

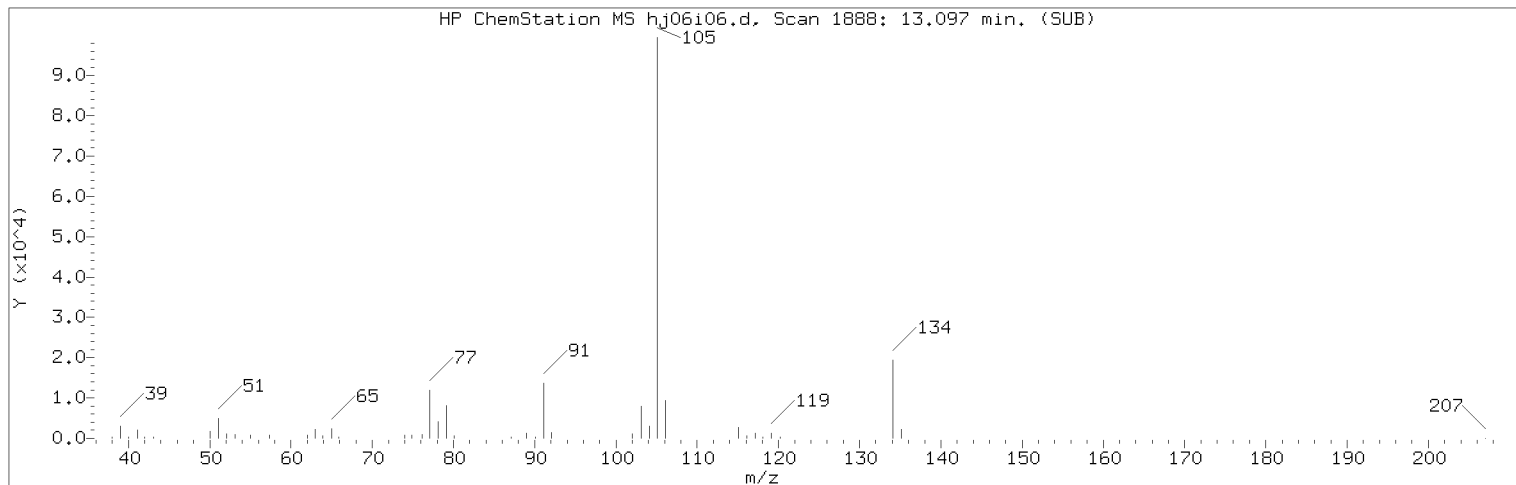
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

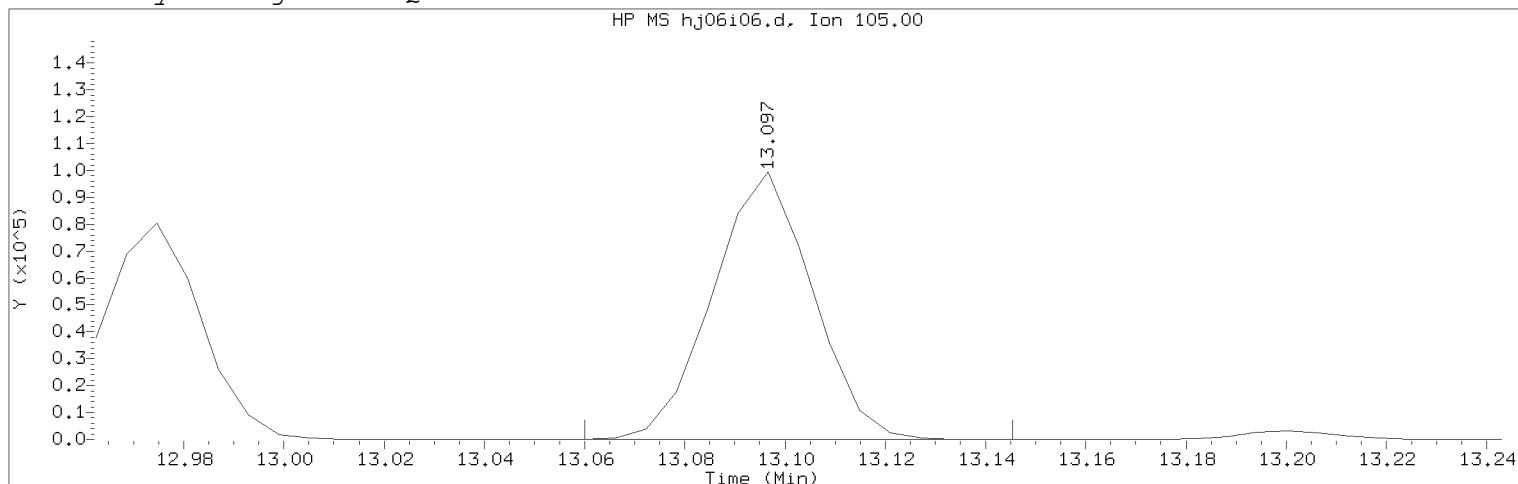
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area	: 51107	
On-column Amount (ng)	: 7.3908	
Integration start scan	: 1783	Integration stop scan: 1801
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 694 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area (flag)	: 137070M	
On-Column Amount (ng)	: 0.4509	
Integration start scan	: 1881	Integration stop scan: 1895
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

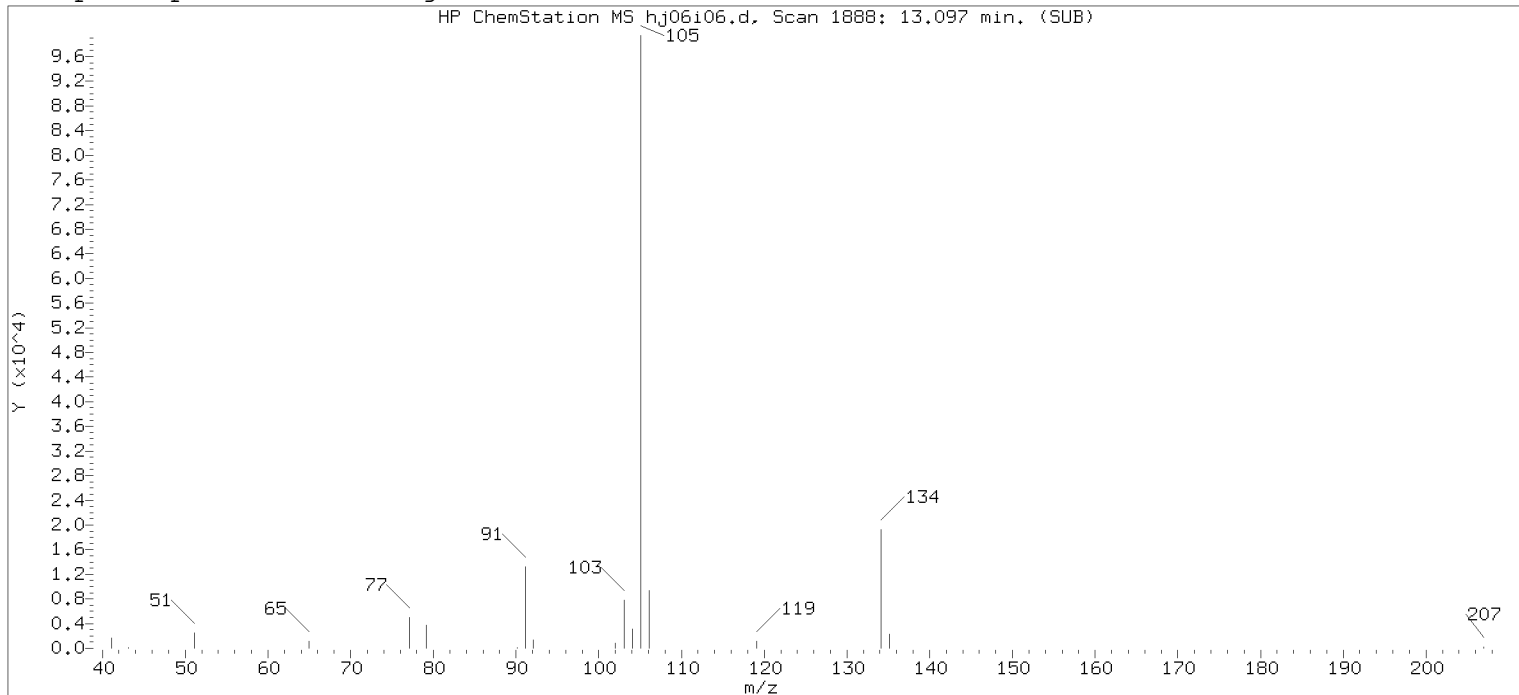
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

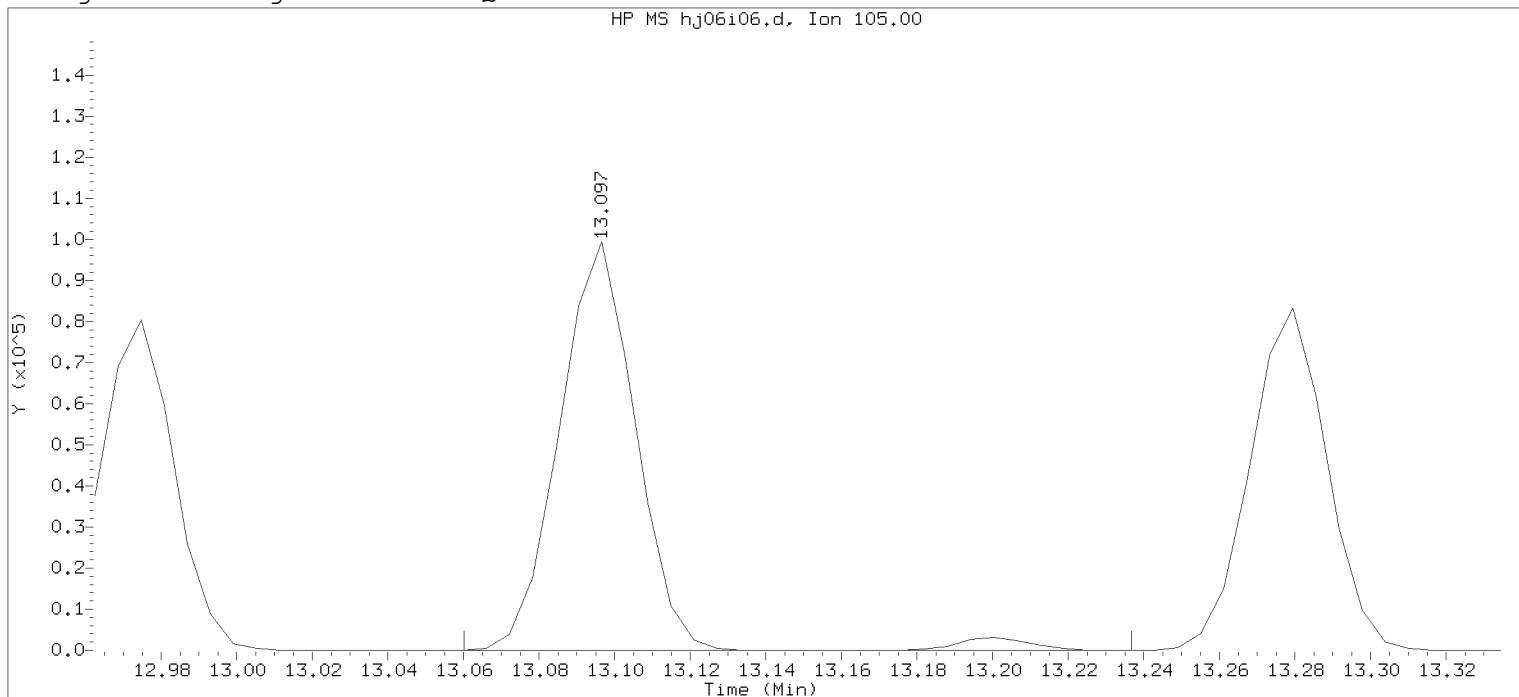
Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.

PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

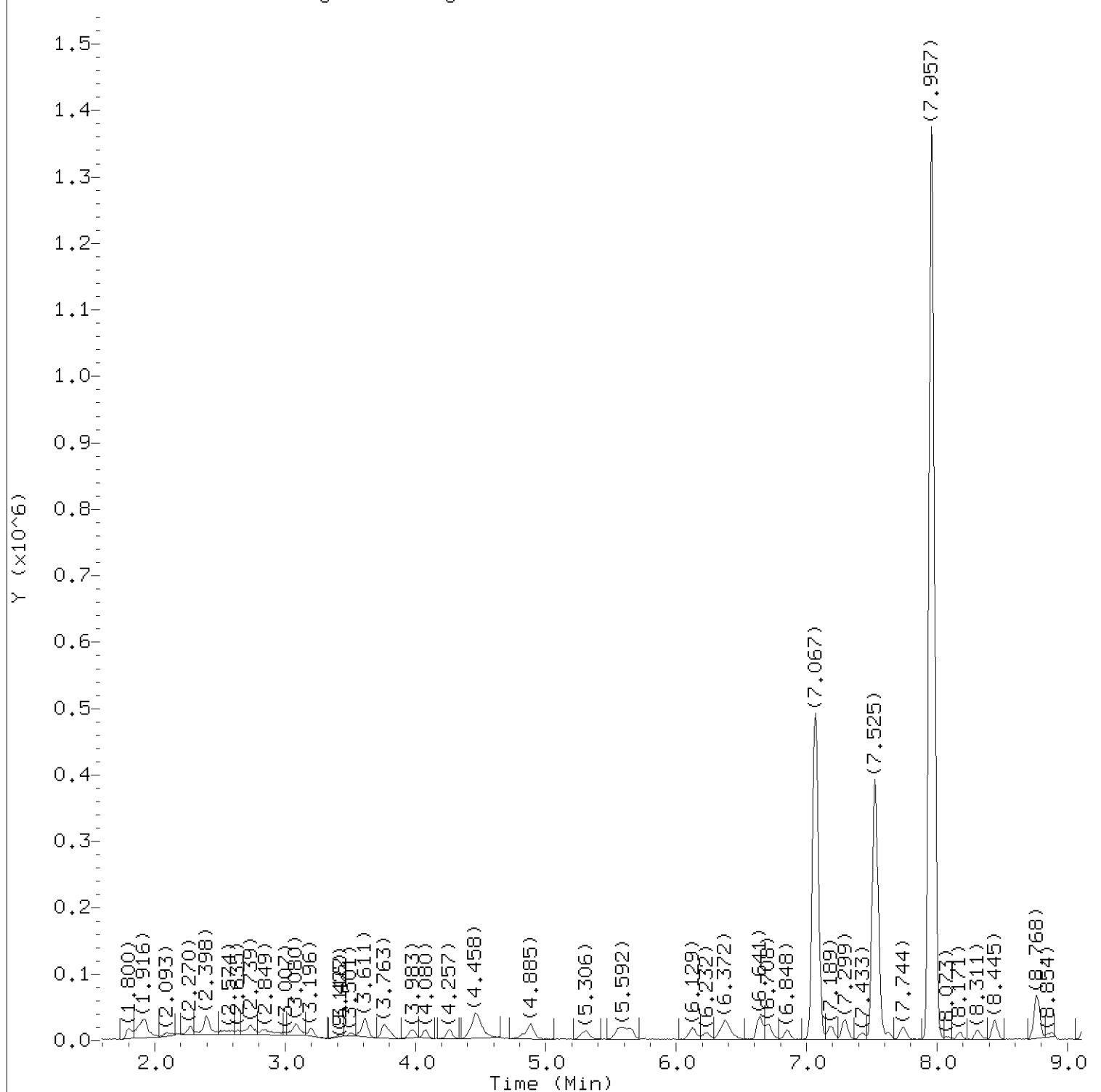
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area	: 141150	
On-column Amount (ng)	: 0.4582	
Integration start scan	: 1881	Integration stop scan: 1910
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 2696 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
Analyst ID: JKH09052

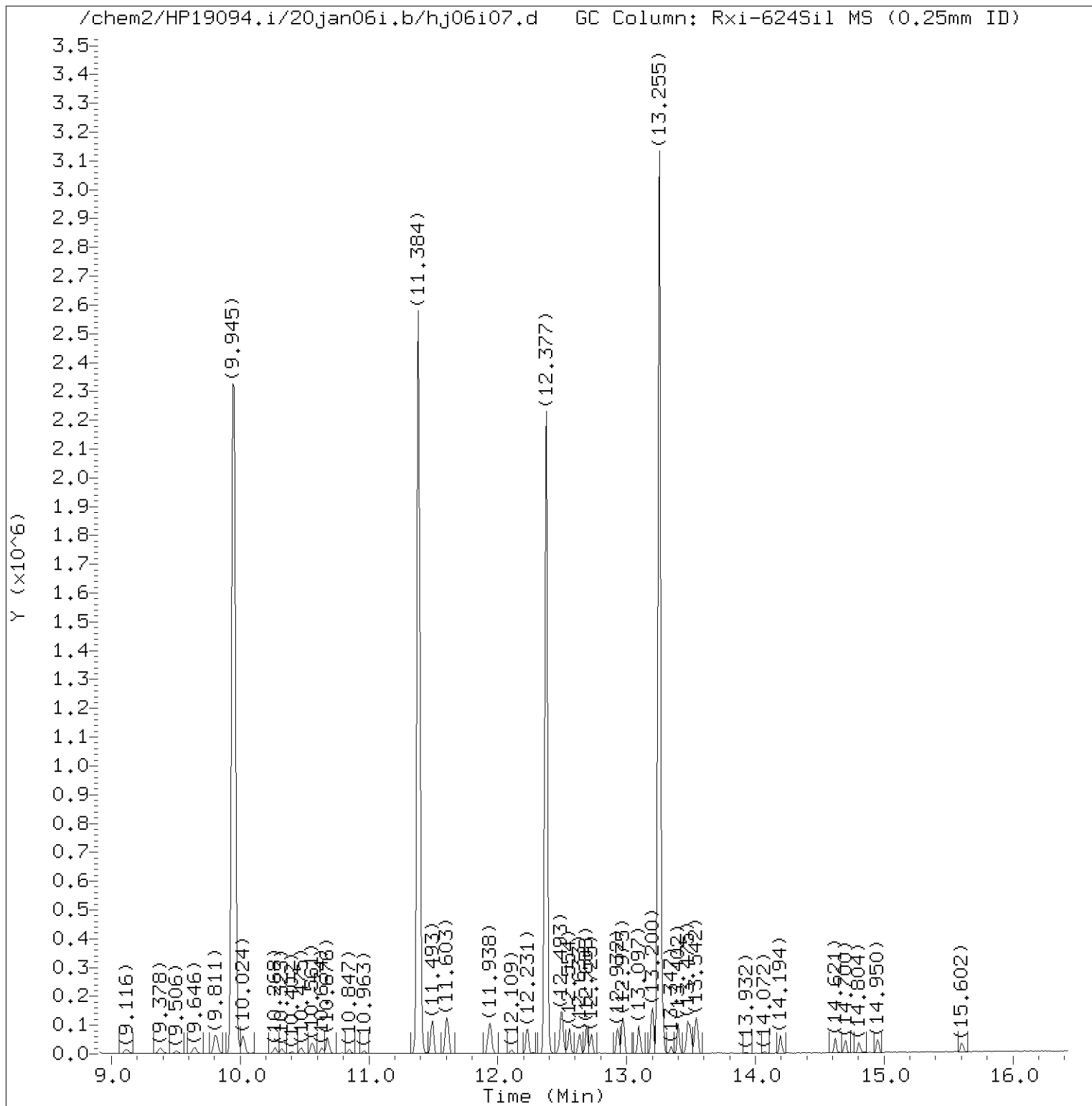
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
 Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	11989	0.165
2) Chloromethane	(2)	2.270	50	14879	0.208
5) Vinyl Chloride	(2)	2.391	62	13112	0.192
6) 1,3-Butadiene	(2)	2.404	39	11243M	0.209
7) Bromomethane	(2)	2.733	94	10156M	0.208
8) Chloroethane	(2)	2.830	64	7859	0.199
9) Dichlorofluoromethane	(2)	3.086	67	20087	0.214
10) Trichlorofluoromethane	(2)	3.147	101	13546	0.174
11) Ethyl ether	(2)	3.422	59	6871	0.200
12) Freon 123a	(2)	3.507	67	12258	0.204
13) Acrolein	(1)	3.611	56	53039	10.168
15) 1,1-Dichloroethene	(2)	3.757	96	9534	0.202
16) Freon 113	(2)	3.775	101	9289	0.188
14) Acetone	(1)	3.806	43	15152M	2.153
17) Methyl Iodide	(2)	3.964	142	18138	0.199
18) Bromoethane	(2)	3.989	108	8482M	0.206
19) Carbon Disulfide	(2)	4.080	76	30690	0.212
22) Methyl Acetate	(1)	4.239	43	5507M	0.310
23) Allyl Chloride	(2)	4.257	41	18327	0.228
24) Methylene Chloride	(2)	4.458	84	10838	0.213
27)*t-Butyl Alcohol-d10	(1)	4.470	65	115841M	50.000
29) t-Butyl Alcohol	(1)	4.611	59	9882M	4.042
30) Acrylonitrile	(1)	4.800	53	8442	0.983
32) trans-1,2-Dichloroethene	(2)	4.879	96	11087	0.213
31) Methyl Tertiary Butyl Ether	(2)	4.885	73	21337	0.197
33) n-Hexane	(2)	5.306	57	14319M	0.195
34) 1,1-Dichloroethane	(2)	5.549	63	19215	0.205
35) di-Isopropyl Ether	(2)	5.586	45	31171	0.202
36) 2-Chloro-1,3-Butadiene	(2)	5.665	53	15984	0.199
41) 1,2-Dichloroethene (Total)	(2)		96	22727	0.415
38) Ethyl t-butyl ether	(2)	6.122	59	29014	0.200
39) 2-Butanone	(1)	6.330	43	23703	2.154
40) cis-1,2-Dichloroethene	(2)	6.372	96	11640	0.202
42) 2,2-Dichloropropane	(2)	6.397	77	16477	0.206
43) Propionitrile	(1)	6.433	54	12117	4.019
46) Methacrylonitrile	(1)	6.635	67	20799	1.929
49) Tetrahydrofuran	(1)	6.702	71	6070	1.996
48) Bromochloromethane	(2)	6.702	128	4931	0.202

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
 Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	18066	0.197
51) \$Dibromofluoromethane	(2)	7.067	113	479375	9.963
51) \$Dibromofluoromethane	(2)	7.067	111	493409	9.982
52) 1,1,1-Trichloroethane	(2)	7.092	97	17203	0.202
53) Cyclohexane	(2)	7.189	56	18085	0.199
53) Cyclohexane	(2)	7.195	84	14733	0.189
53) Cyclohexane	(2)	7.183	69	5670	0.200
56) 1,1-Dichloropropene	(2)	7.287	75	13774	0.191
55) Carbon Tetrachloride	(2)	7.305	117	14470	0.198
57) Isobutyl Alcohol	(1)	7.433	41	10874	12.830
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	91347	9.796
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	426576	9.915
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	58205	9.855
59) Benzene	(2)	7.555	78	41985	0.199
60) 1,2-Dichloroethane	(2)	7.634	62	11801	0.217
61) t-Amyl methyl ether	(2)	7.744	73	24609	0.194
64) *Fluorobenzene	(2)	7.957	96	1935544	10.000
63) n-Heptane	(2)	7.964	43	16086M	0.209
66) n-Butanol	(1)	8.311	56	13133M	19.248
68) Trichloroethene	(2)	8.445	95	11243	0.204
70) Methylcyclohexane	(2)	8.756	83	17590	0.178
71) 1,2-Dichloropropane	(2)	8.787	63	10438	0.200
72) Methyl Methacrylate	(1)	8.841	69	4212	0.194
73) 1,4-Dioxane	(1)	8.860	88	978M	5.943
74) Dibromomethane	(2)	8.884	93	4691	0.197
75) Bromodichloromethane	(2)	9.116	83	12406	0.192
77) 2-Nitropropane	(1)	9.378	41	14974M	2.102
80) 1-Bromo-2-chloroethane	(2)	9.506	63	9415M	0.192
81) cis-1,3-Dichloropropene	(2)	9.646	75	14299	0.187
82) 4-Methyl-2-Pentanone	(1)	9.805	43	54162	1.997
83) \$Toluene-d8	(3)	9.945	98	1911418	10.001
83) \$Toluene-d8	(3)	9.945	100	1233939	9.983
84) Toluene	(3)	10.024	92	27492	0.205
86) 1,3-Dichloropropene (total)	(3)		75	26879	0.389
85) trans-1,3-Dichloropropene	(3)	10.274	75	12580	0.202
87) Ethyl Methacrylate	(3)	10.323	69	9292	0.192
89) 1,1,2-Trichloroethane	(3)	10.475	97	6901	0.205
90) Tetrachloroethene	(3)	10.561	166	12517	0.205

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
 Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	11599	0.200
92) 2-Hexanone	(1)	10.676	43	36737M	1.982
94) Dibromochloromethane	(3)	10.847	129	8426	0.195
96) 1,2-Dibromoethane	(3)	10.963	107	6178	0.192
97) 1-Chlorohexane	(3)	11.384	91	18428	0.228
98) *Chlorobenzene-d5	(3)	11.384	117	1434543	10.000
99) Chlorobenzene	(3)	11.408	112	29799	0.203
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	10751	0.206
101) Ethylbenzene	(3)	11.493	91	54029	0.205
102) m+p-Xylene	(3)	11.603	106	40506	0.401
106) Xylene (Total)	(3)		106	60180	0.599
105) o-Xylene	(3)	11.932	106	19674	0.198
107) Styrene	(3)	11.944	104	31053	0.193
108) Bromoform	(3)	12.109	173	4686	0.186
109) Isopropylbenzene	(3)	12.231	105	53040	0.197
112) \$4-Bromofluorobenzene	(3)	12.377	95	715402	10.118
112) \$4-Bromofluorobenzene	(3)	12.377	174	608061	10.050
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	7770	0.191
115) Bromobenzene	(4)	12.493	156	12538	0.204
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	19411M	1.905
117) 1,2,3-Trichloropropane	(4)	12.524	110	2067	0.190
118) n-Propylbenzene	(4)	12.554	91	62293	0.194
120) 2-Chlorotoluene	(4)	12.639	126	12809	0.203
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	44627	0.192
123) 4-Chlorotoluene	(4)	12.725	126	12785	0.203
126) tert-Butylbenzene	(4)	12.932	134	9273M	0.193
127) Pentachloroethane	(4)	12.969	167	8325	0.203
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	47406	0.197
129) sec-Butylbenzene	(4)	13.097	105	56997M	0.189
133) p-Isopropyltoluene	(4)	13.200	119	49995	0.193
132) 1,3-Dichlorobenzene	(4)	13.200	146	24141	0.197
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	777924	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	23977	0.201
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	21146	0.211
137) Benzyl Chloride	(4)	13.347	126	3230	0.189
139) n-Butylbenzene	(4)	13.493	92	24039	0.188
140) 1,2-Dichlorobenzene	(4)	13.530	146	20632	0.191
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	1045	0.180

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

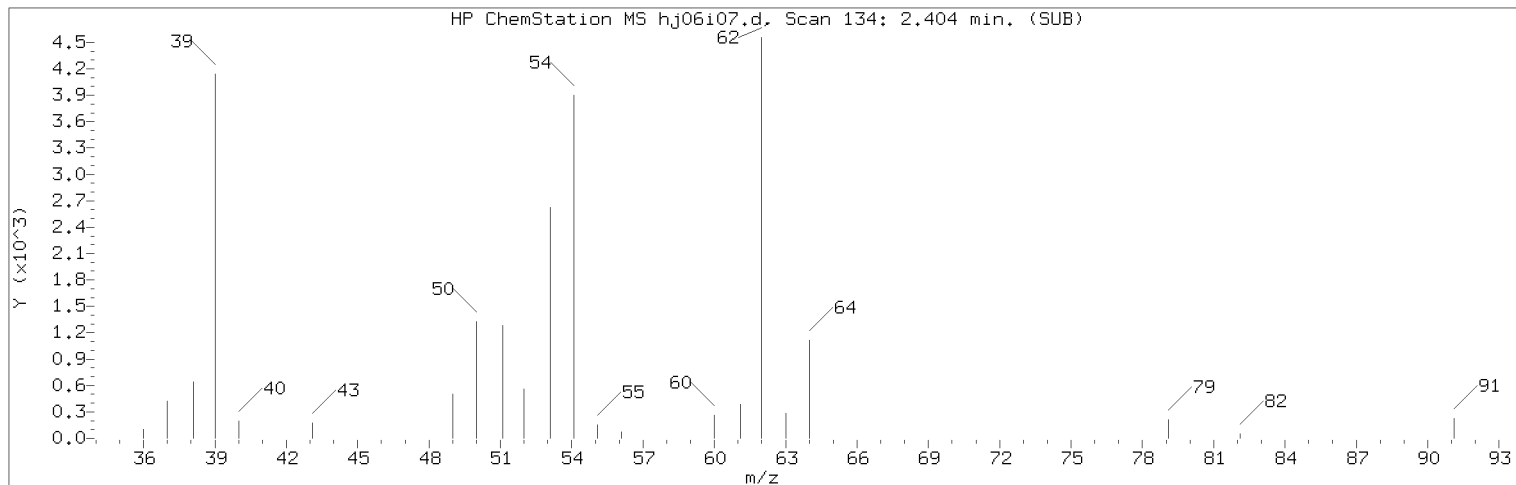
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.194	180	17748	0.185
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	15600	0.194
147) Hexachlorobutadiene	(4)	14.700	225	7990	0.191
148) Naphthalene	(4)	14.804	128	26111	0.186
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	12441	0.181

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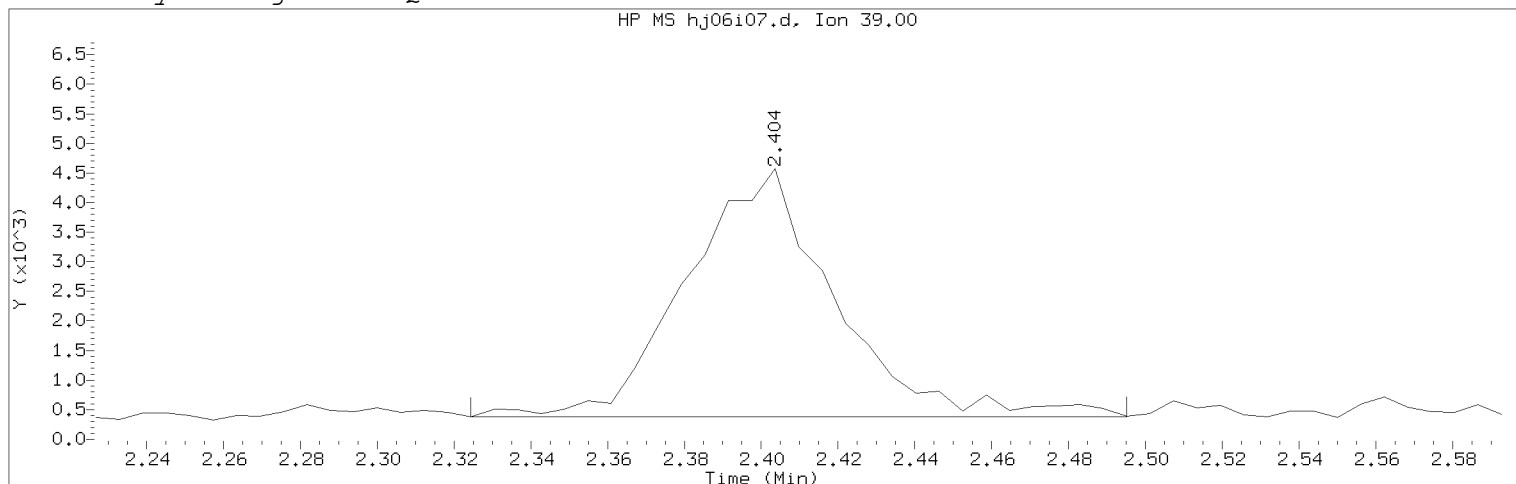
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

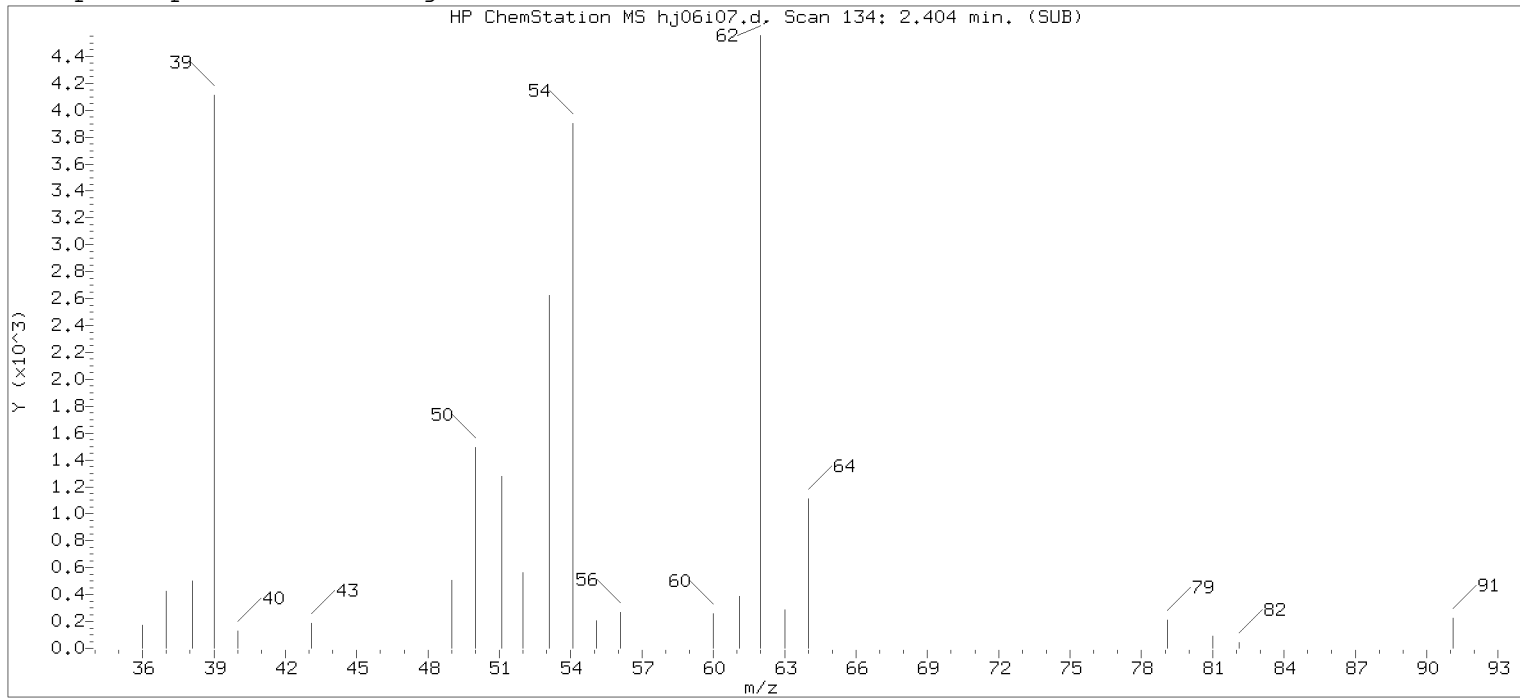
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area (flag)	: 11243M	
On-Column Amount (ng)	: 0.2089	
Integration start scan	: 120	Integration stop scan: 148
Y at integration start	: 379	Y at integration end: 379

Reason for manual integration: improper integration

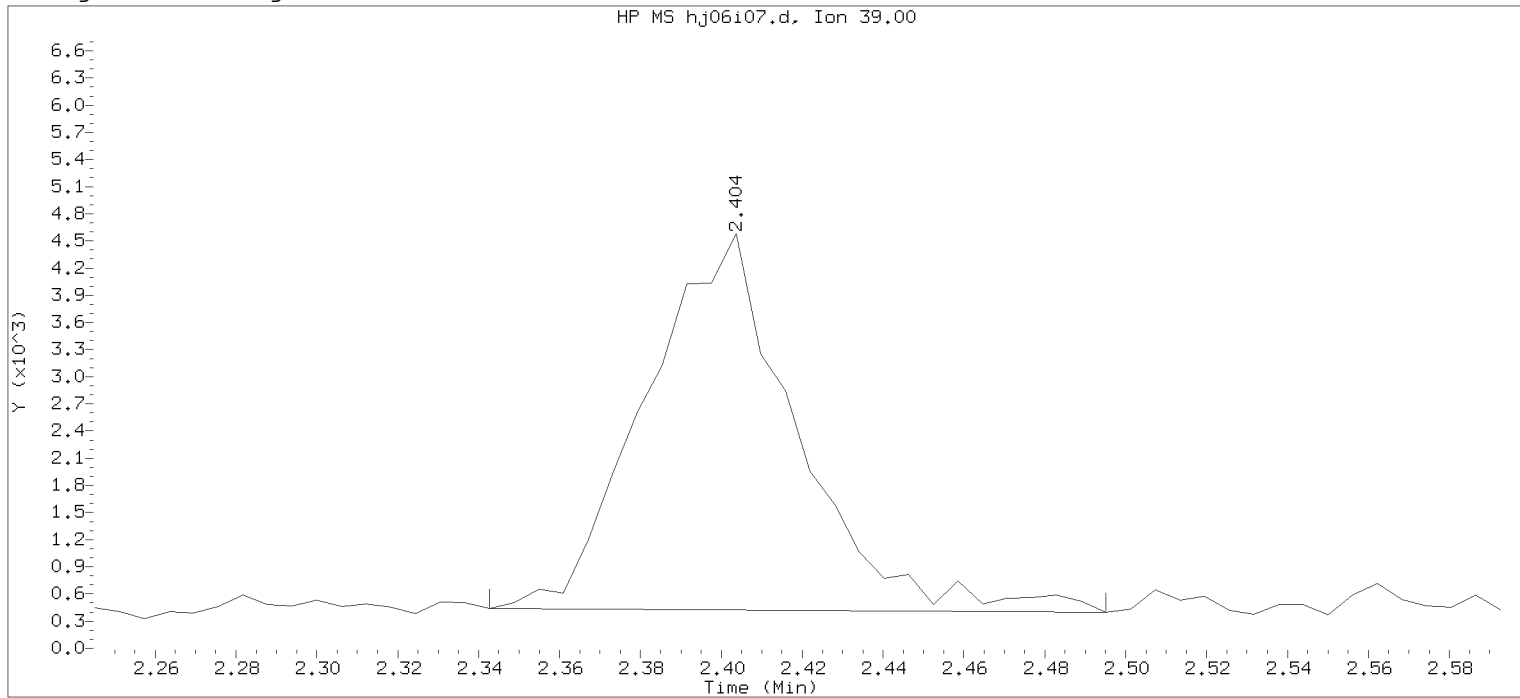
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

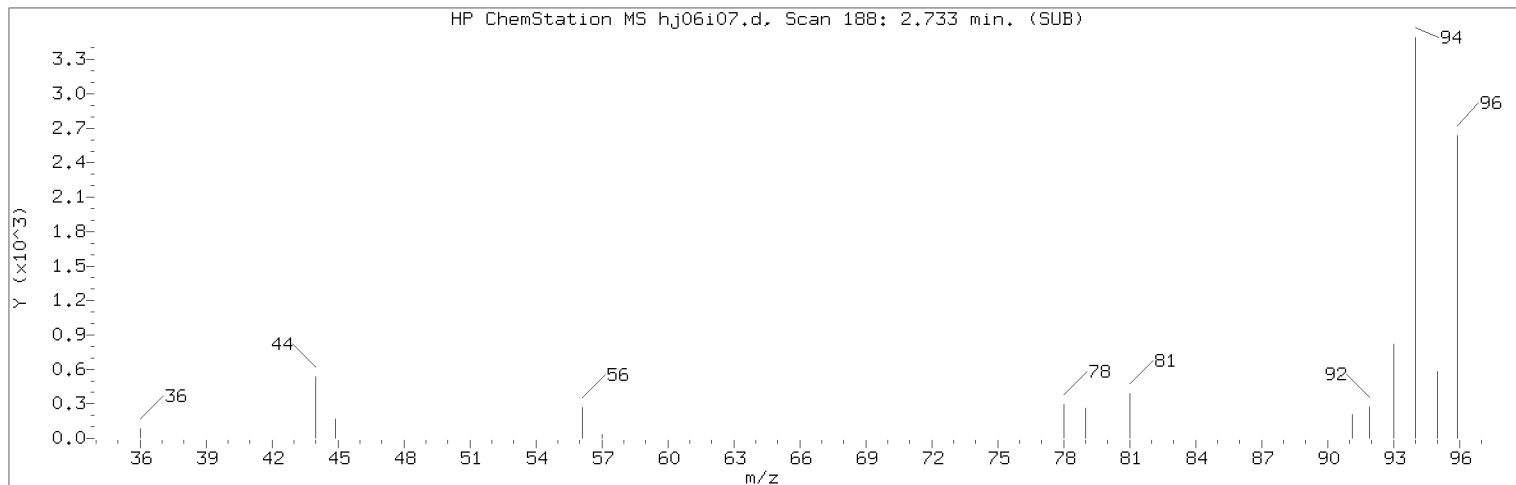
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

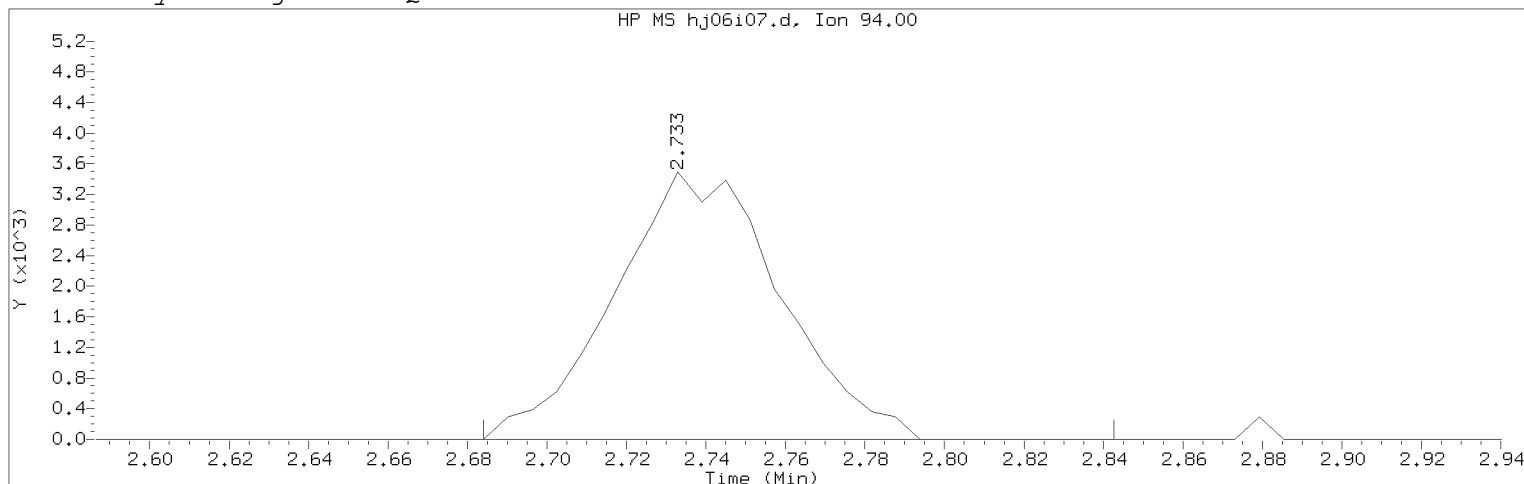
Lab Sample ID: VSTD0.2

Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area	: 10798	
On-column Amount (ng)	: 0.2037	
Integration start scan	: 123	Integration stop scan: 148
Y at integration start	: 438	Y at integration end: 394

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

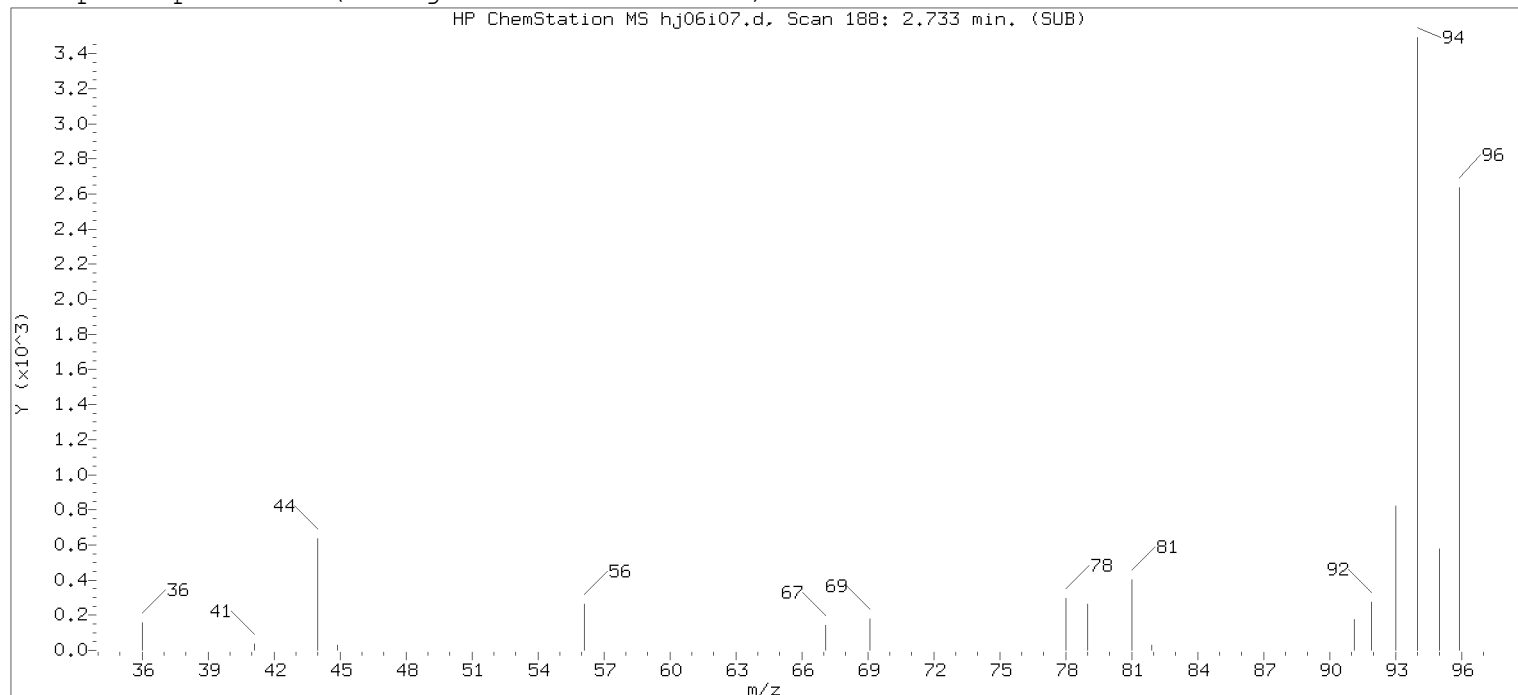
Compound Number	: 7	
Compound Name	: Bromomethane	
Scan Number	: 188	
Retention Time (minutes)	: 2.733	
Quant Ion	: 94.00	
Area (flag)	: 10156M	
On-Column Amount (ng)	: 0.2081	
Integration start scan	: 179	Integration stop scan: 205
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

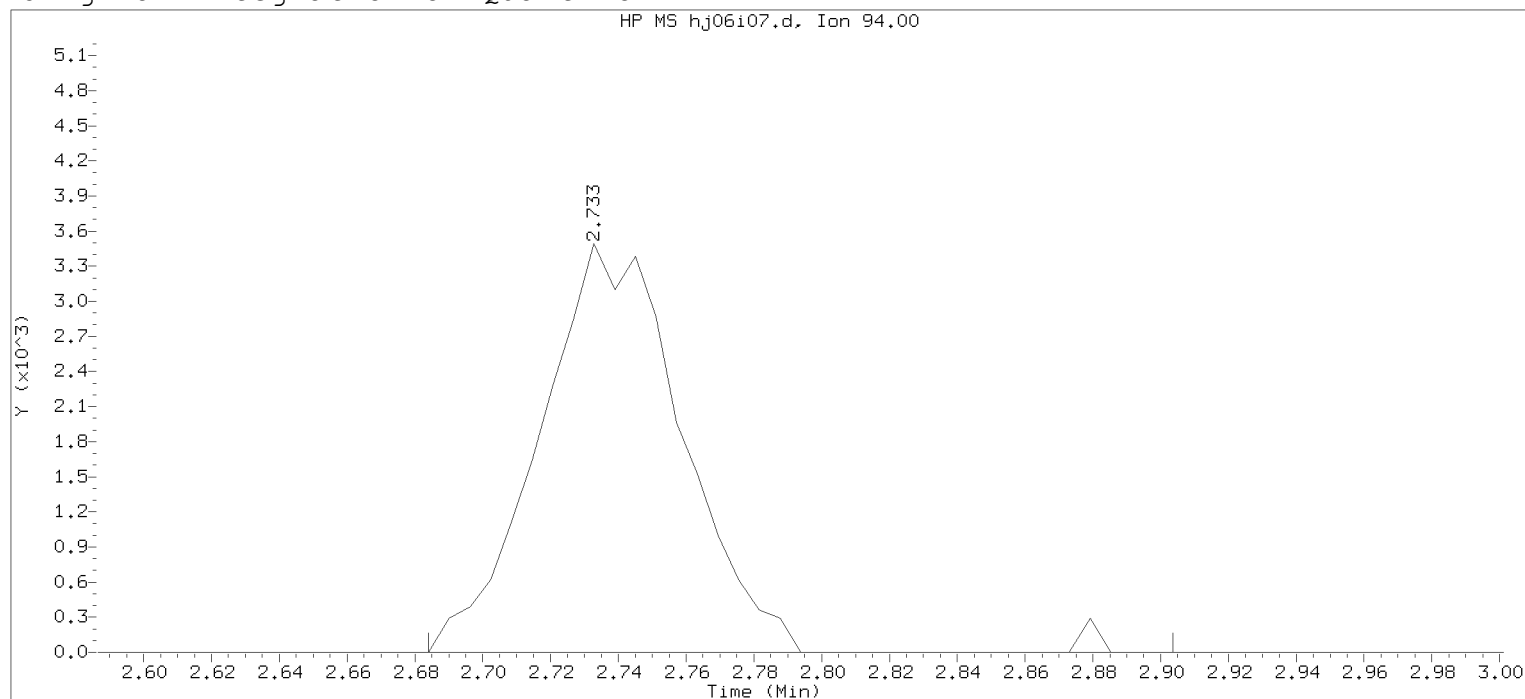
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 7

Compound Name : Bromomethane

Scan Number : 188

Retention Time (minutes): 2.733

Quant Ion : 94.00

Area : 10263

On-column Amount (ng) : 0.2100

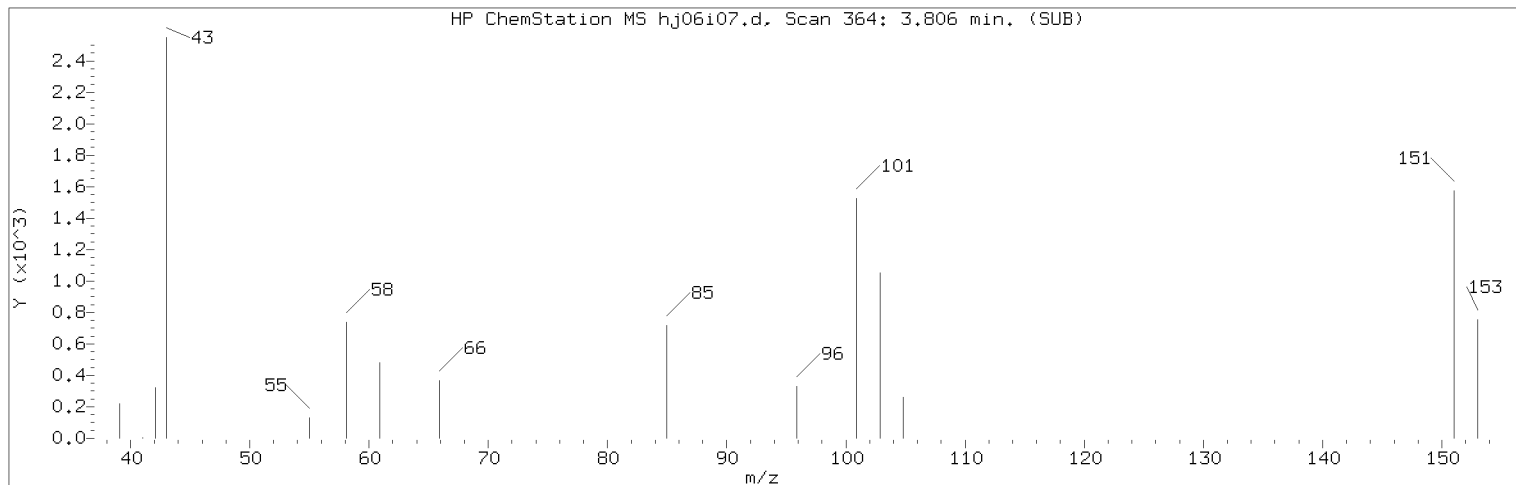
Integration start scan : 179 Integration stop scan: 215

Y at integration start : 0 Y at integration end: 0

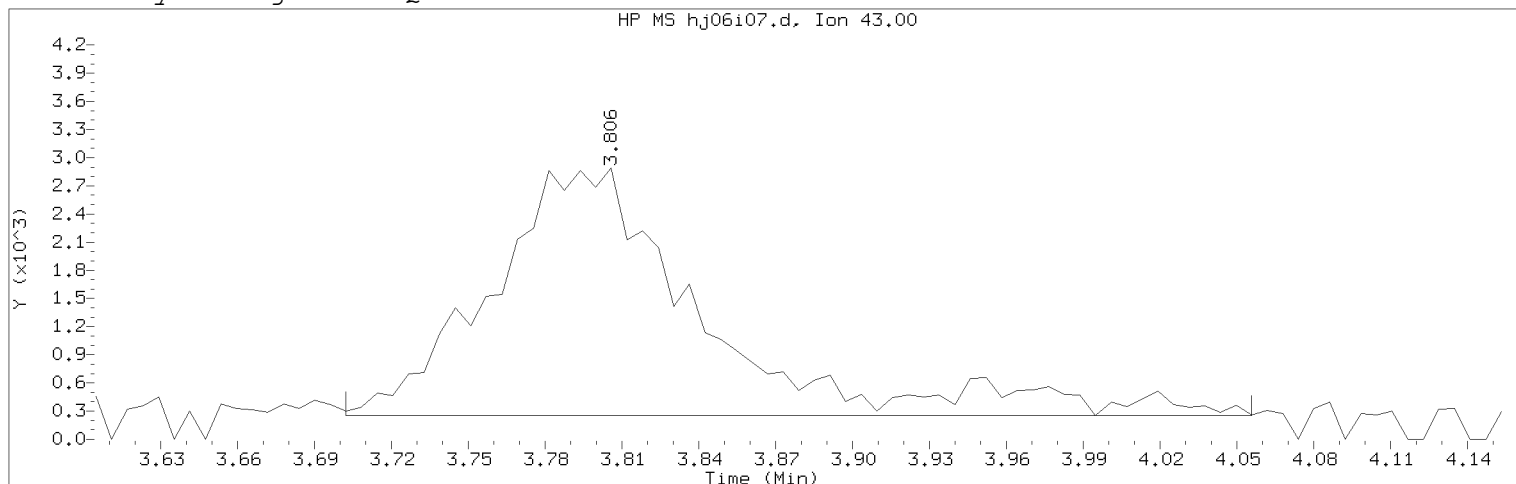
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RAE59 Page 2706 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 364
 Retention Time (minutes): 3.806
 Quant Ion : 43.00
 Area (flag) : 15152M
 On-Column Amount (ng) : 2.1527
 Integration start scan : 346
 Y at integration start : 254

Integration stop scan: 404
 Y at integration end: 254

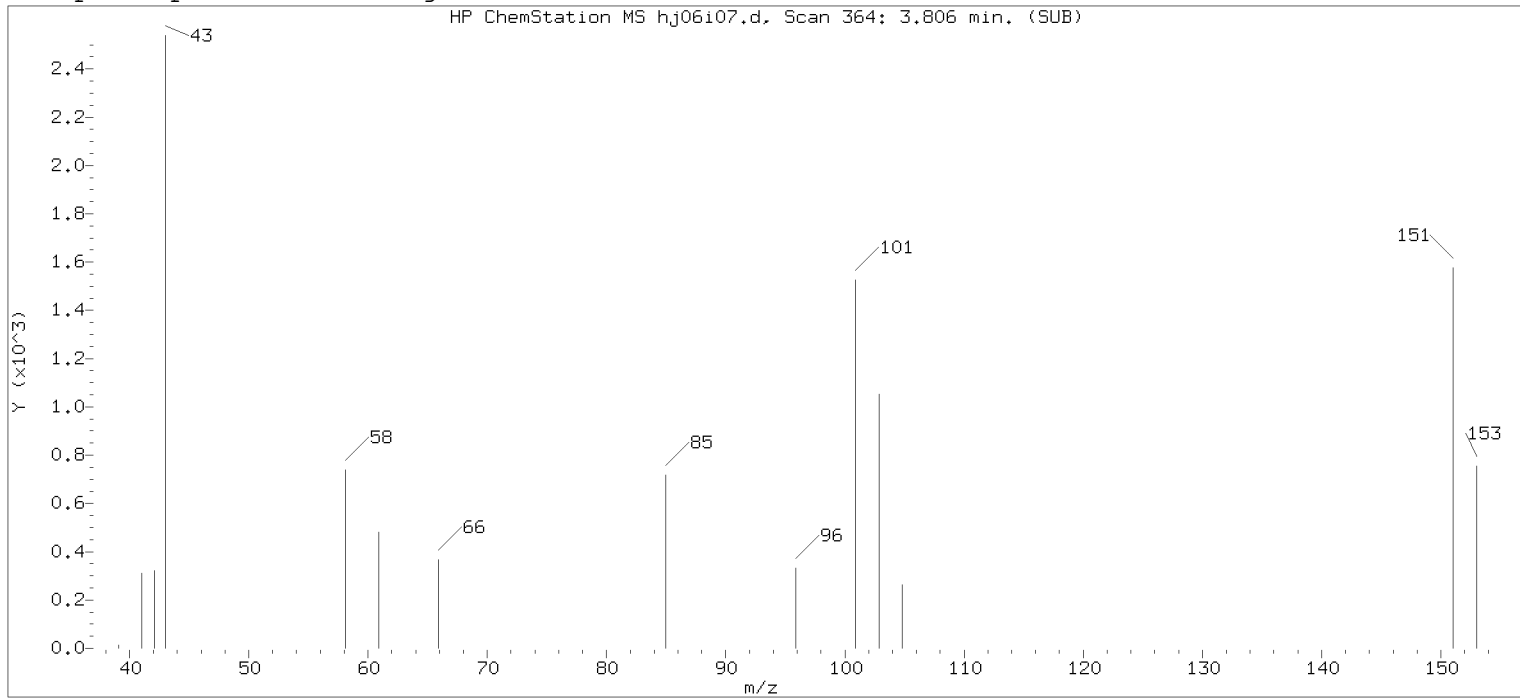
Reason for manual integration: improper integration

Analyst responsible for change:

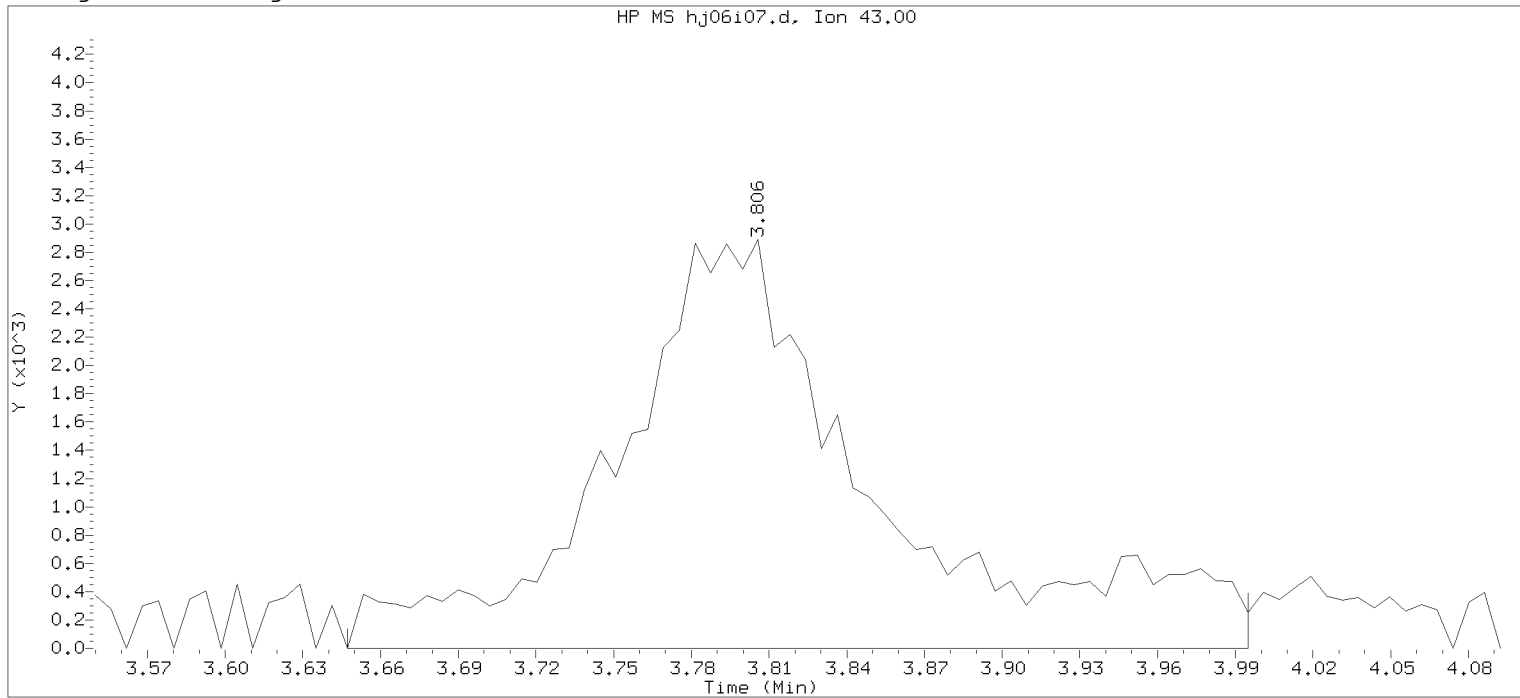
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

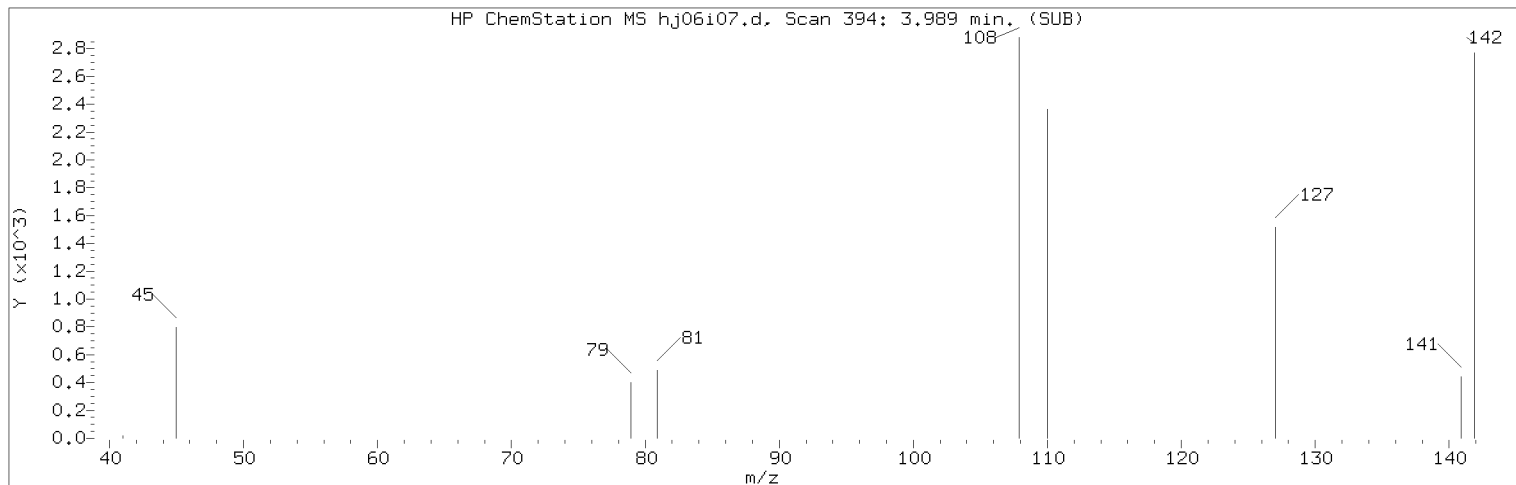
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

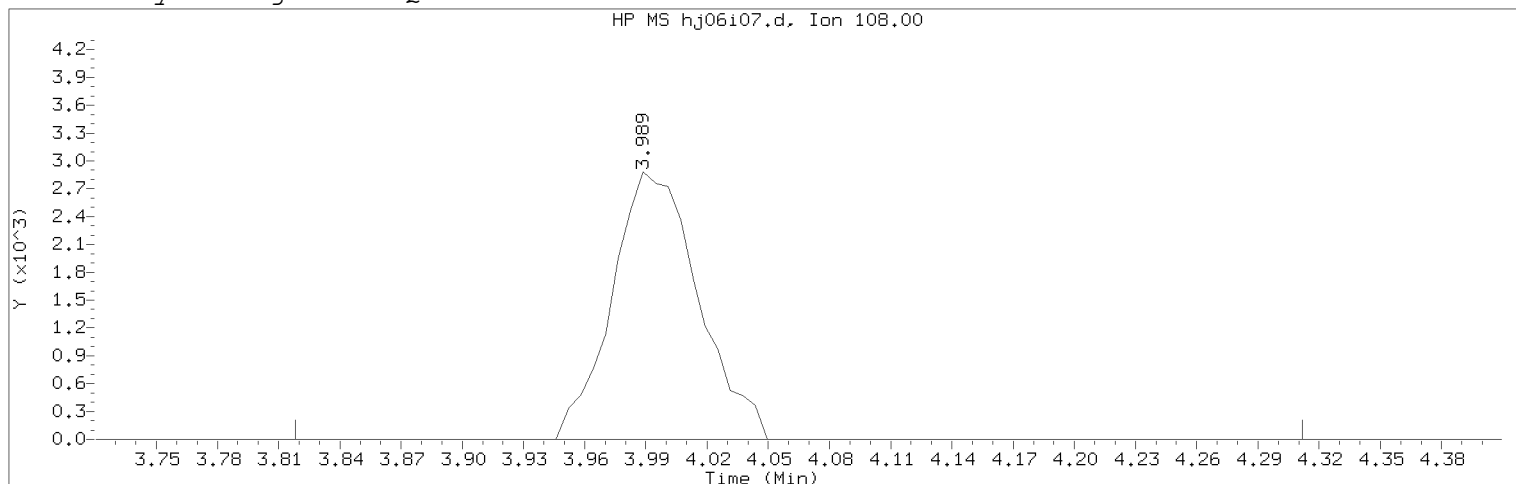
Compound Number : 14
 Compound Name : Acetone
 Scan Number : 364
 Retention Time (minutes): 3.806
 Quant Ion : 43.00
 Area : 20270
 On-column Amount (ng) : 2.8983
 Integration start scan : 337
 Y at integration start : 0

Integration stop scan: 394
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

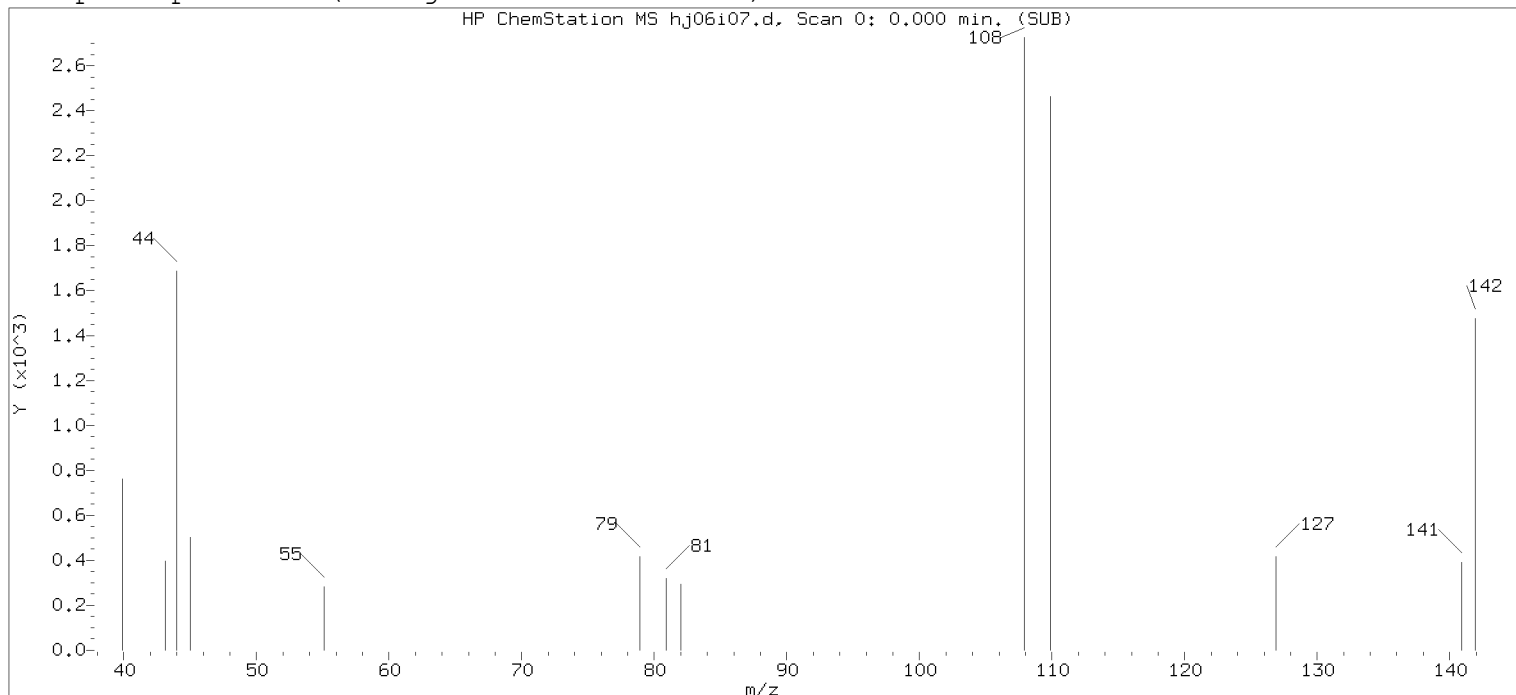
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 8482M	
On-Column Amount (ng)	: 0.2056	
Integration start scan	: 365	Integration stop scan: 446
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

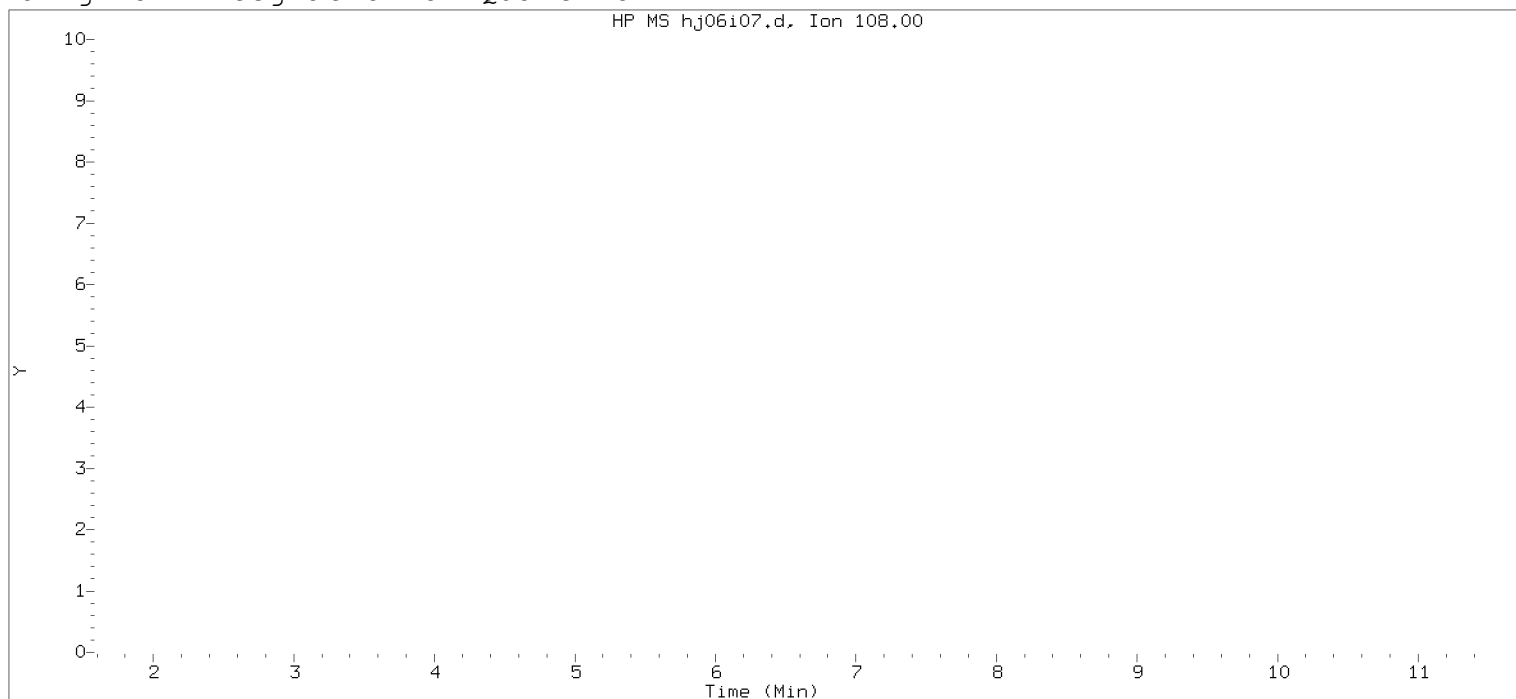
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

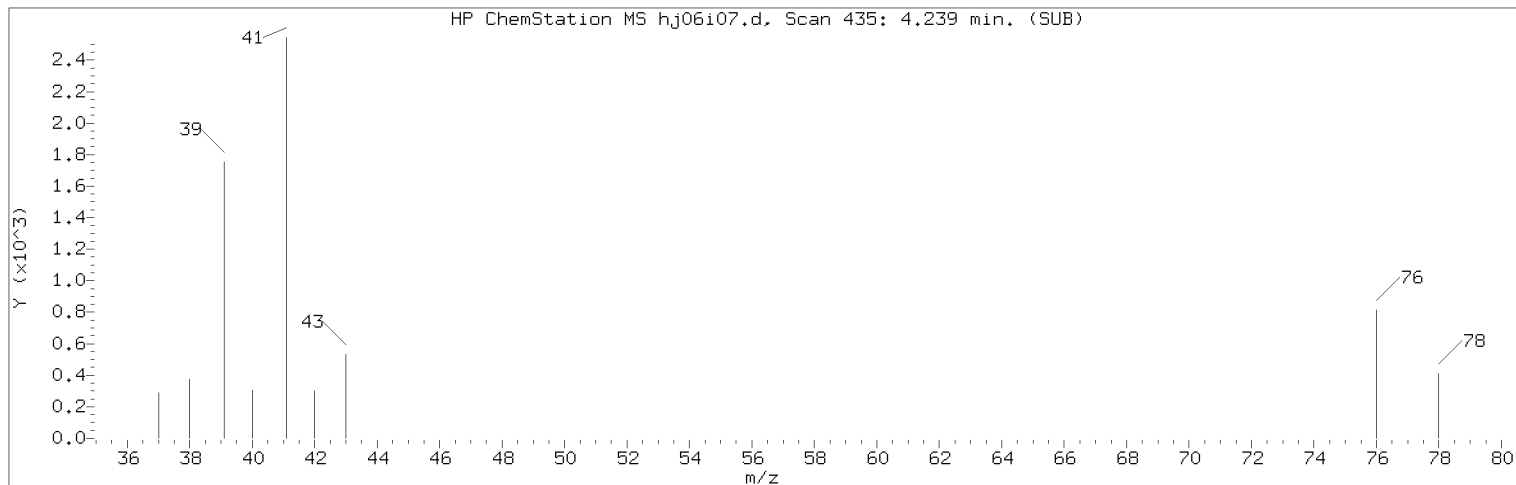
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

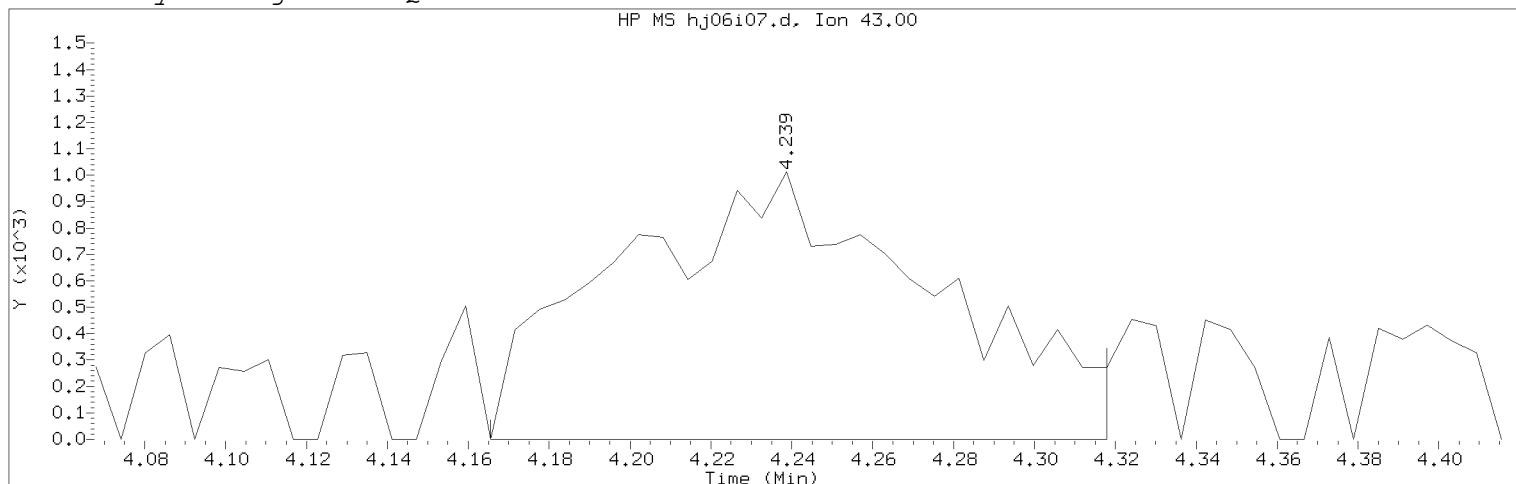
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RAE59 Page 210 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

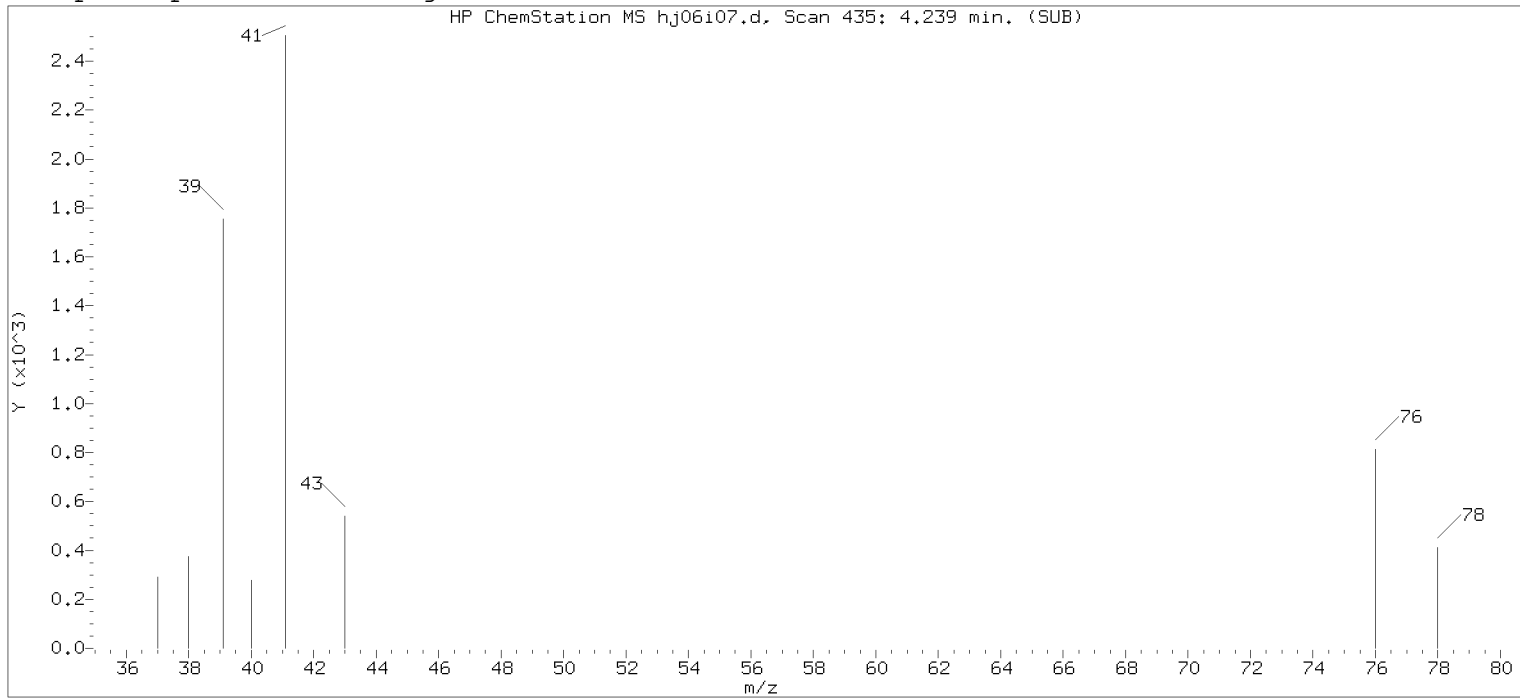
Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area (flag)	: 5507M	
On-Column Amount (ng)	: 0.3100	
Integration start scan	: 422	Integration stop scan: 447
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

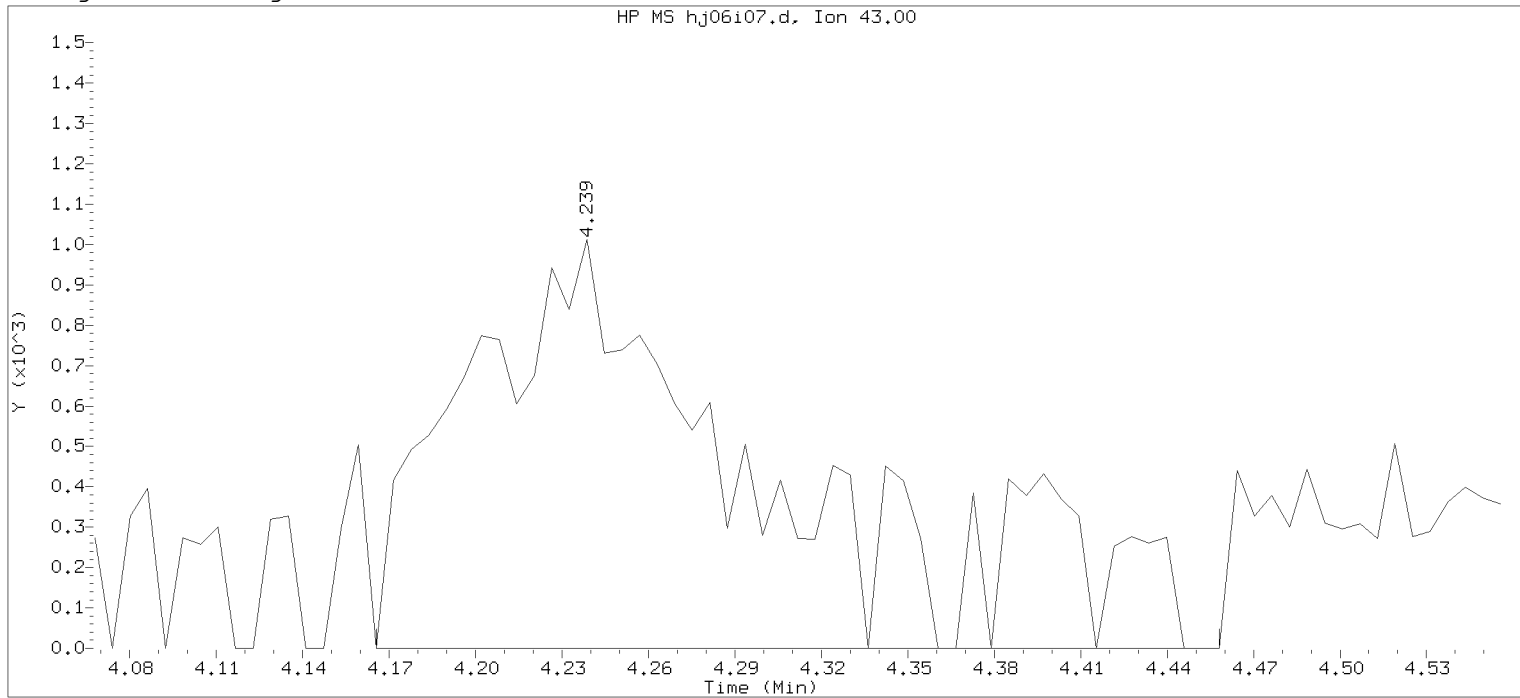
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

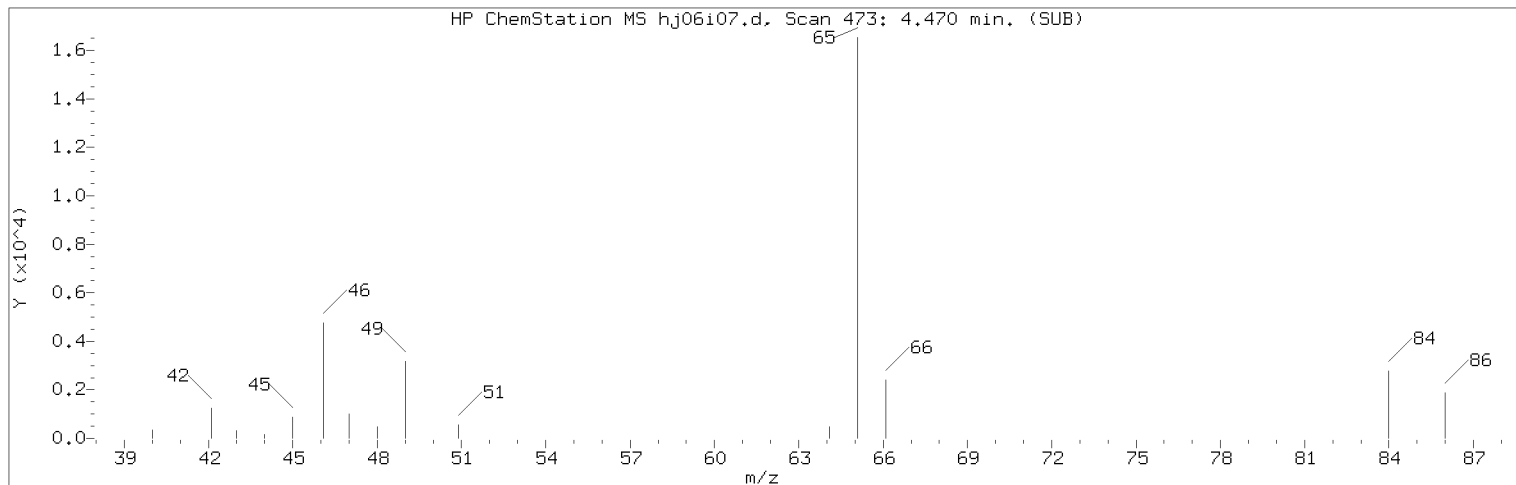
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

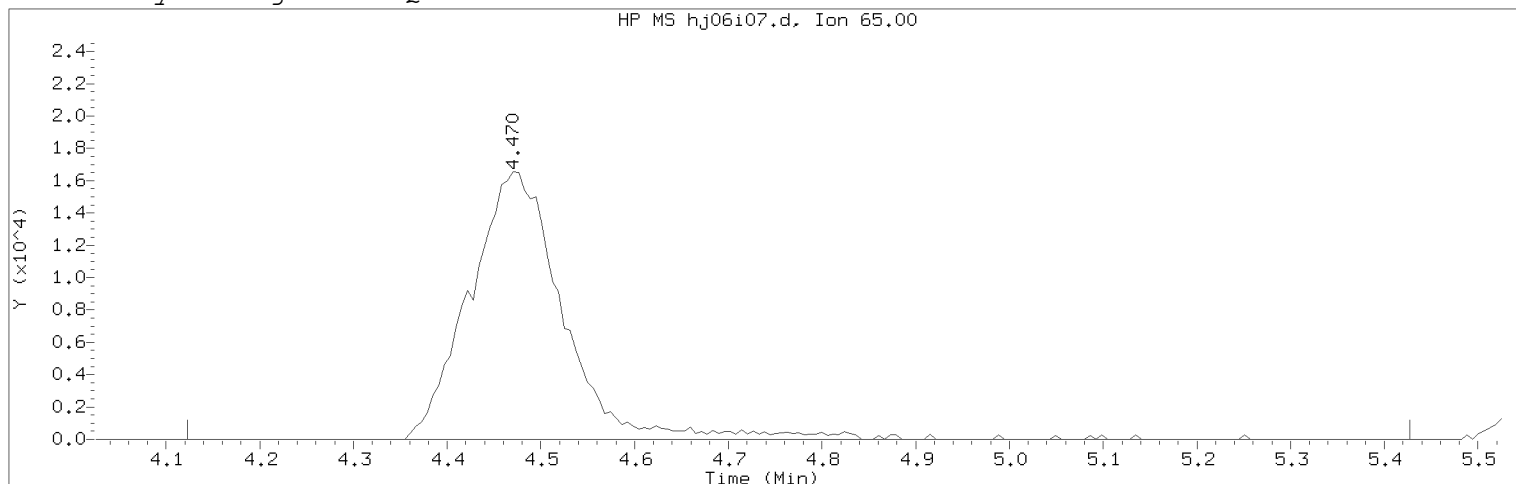
Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area	: 7482	
On-column Amount (ng)	: 0.3525	
Integration start scan	: 422	Integration stop scan: 470
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RAE59 Page 2112 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

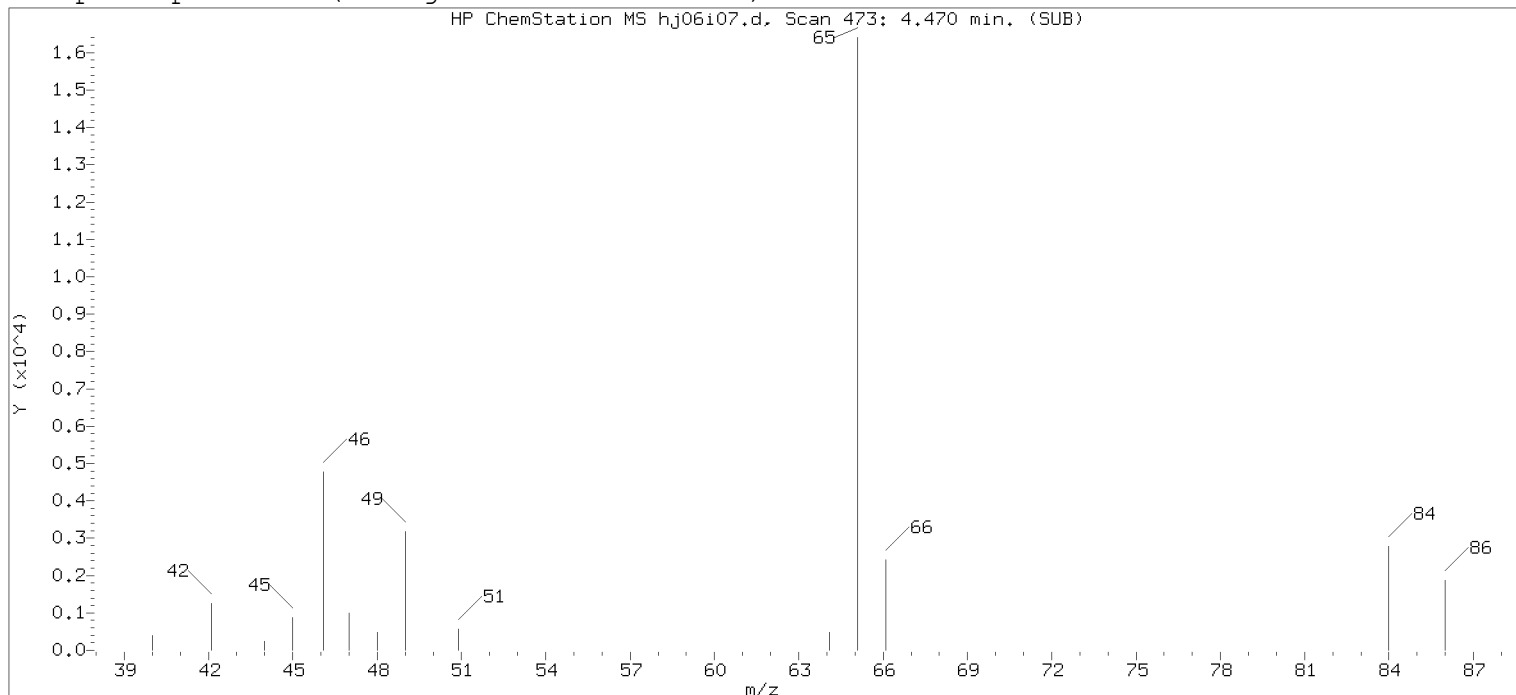
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 473	
Retention Time (minutes)	: 4.470	
Quant Ion	: 65.00	
Area (flag)	: 115841M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 415	Integration stop scan: 629
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

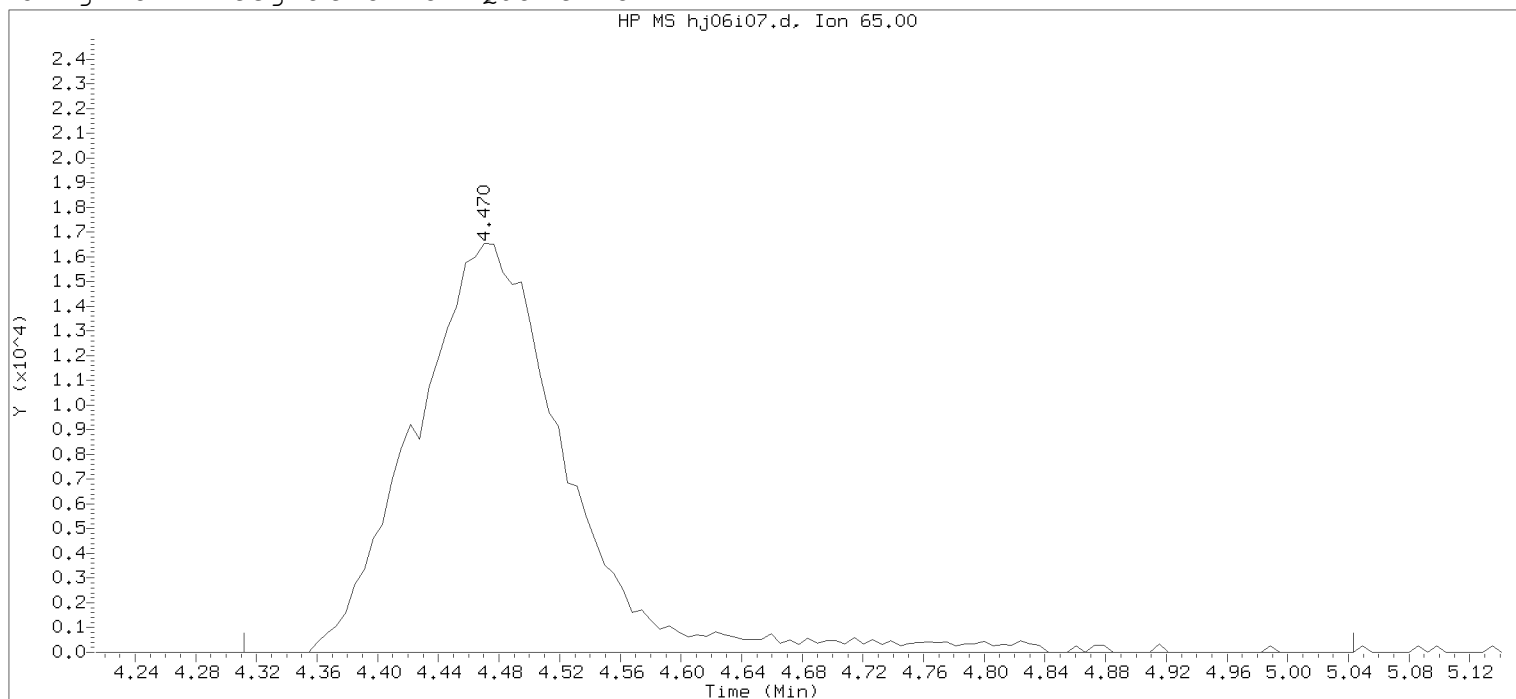
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 473

Retention Time (minutes): 4.470

Quant Ion : 65.00

Area : 115359

On-column Amount (ng) : 50.0000

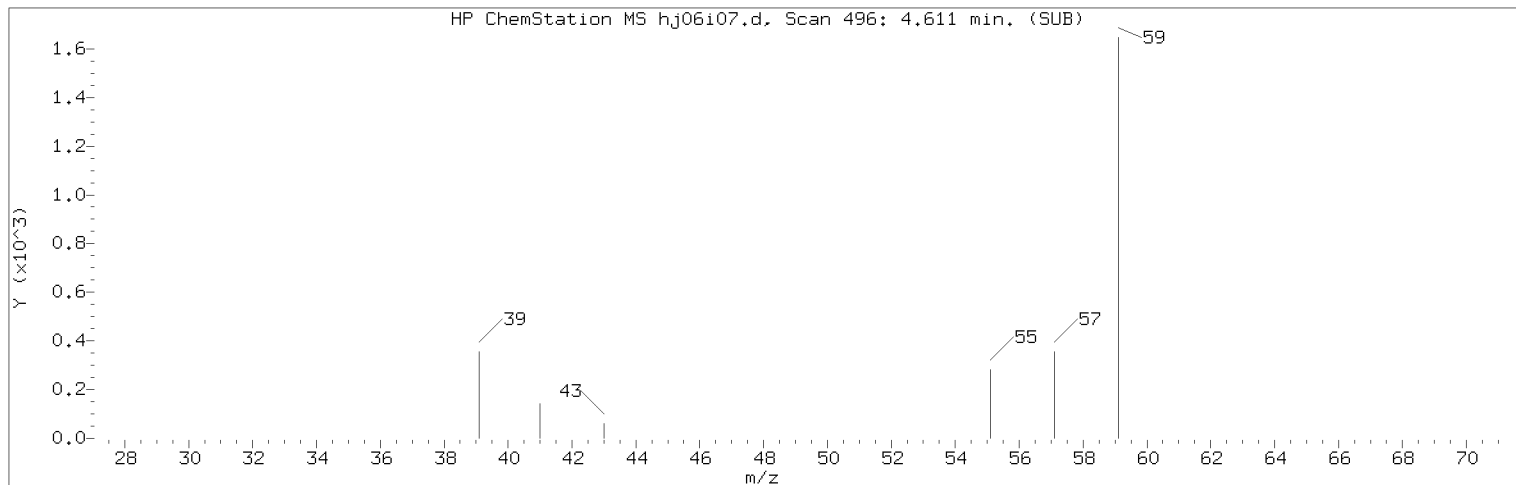
Integration start scan : 446 Integration stop scan: 566

Y at integration start : 0 Y at integration end: 0

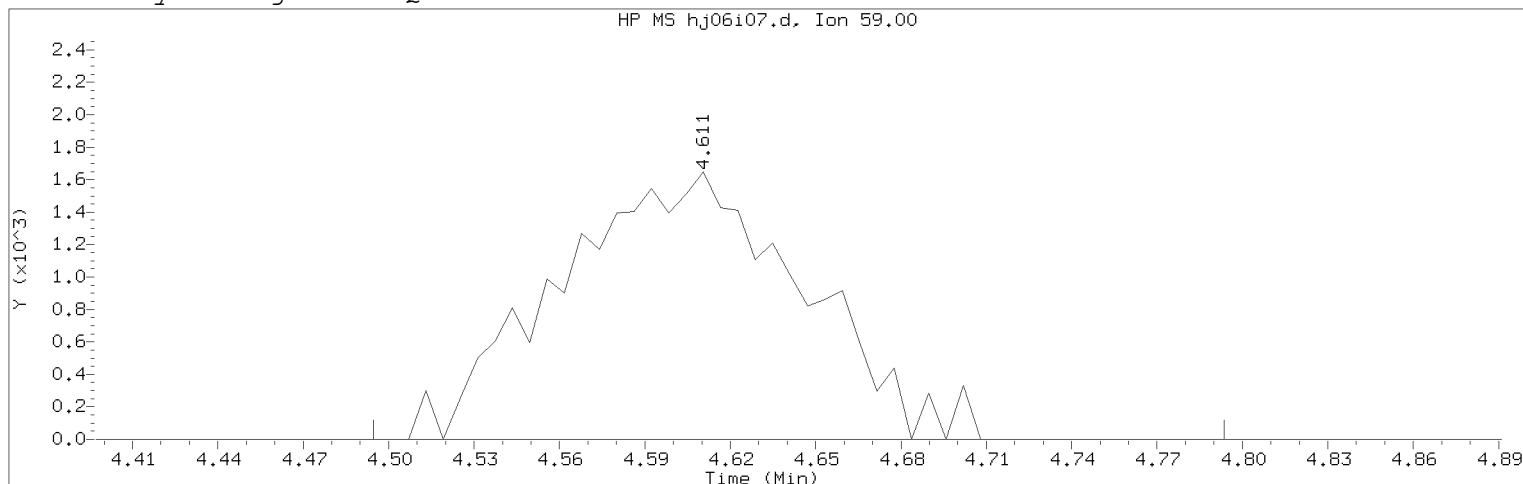
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RAE59 Page 214 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

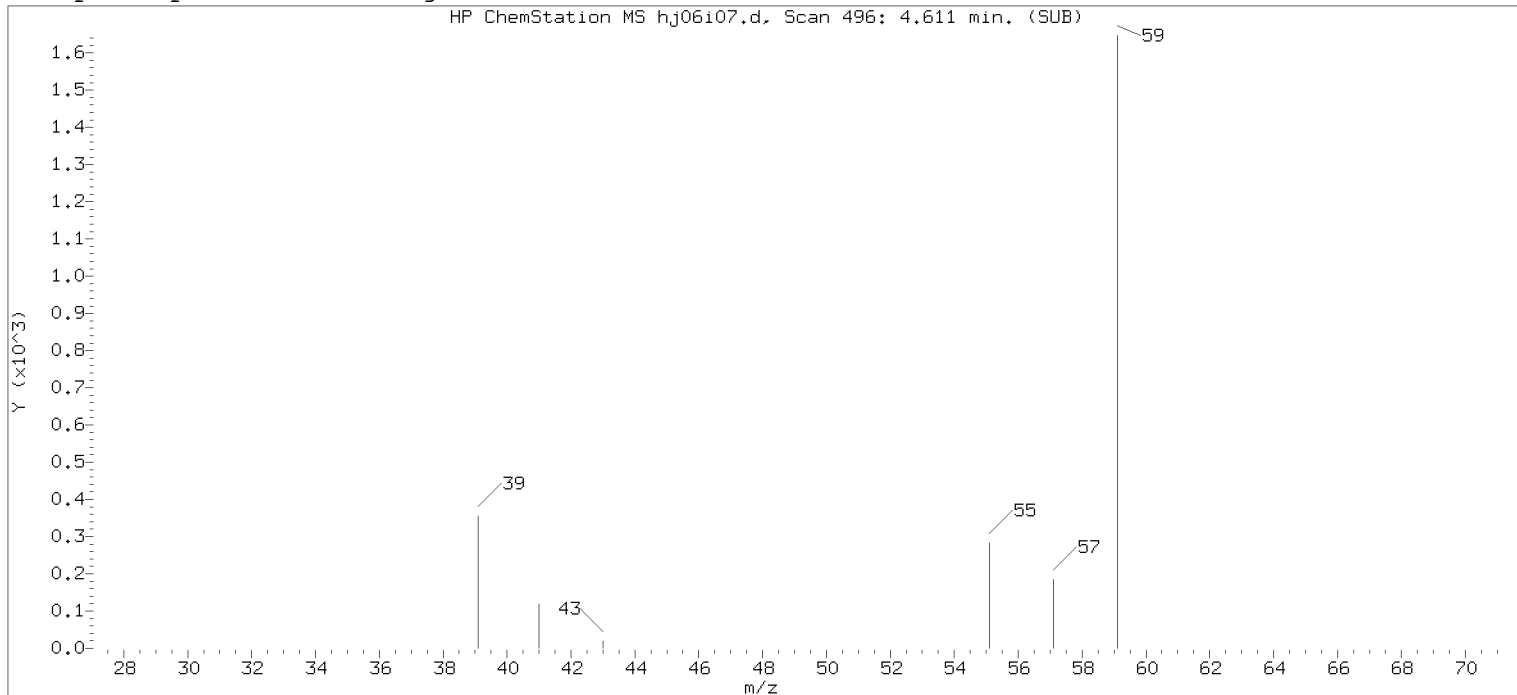
Compound Number	: 29	
Compound Name	: t-Butyl Alcohol	
Scan Number	: 496	
Retention Time (minutes)	: 4.611	
Quant Ion	: 59.00	
Area (flag)	: 9882M	
On-Column Amount (ng)	: 4.0416	
Integration start scan	: 476	Integration stop scan: 525
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

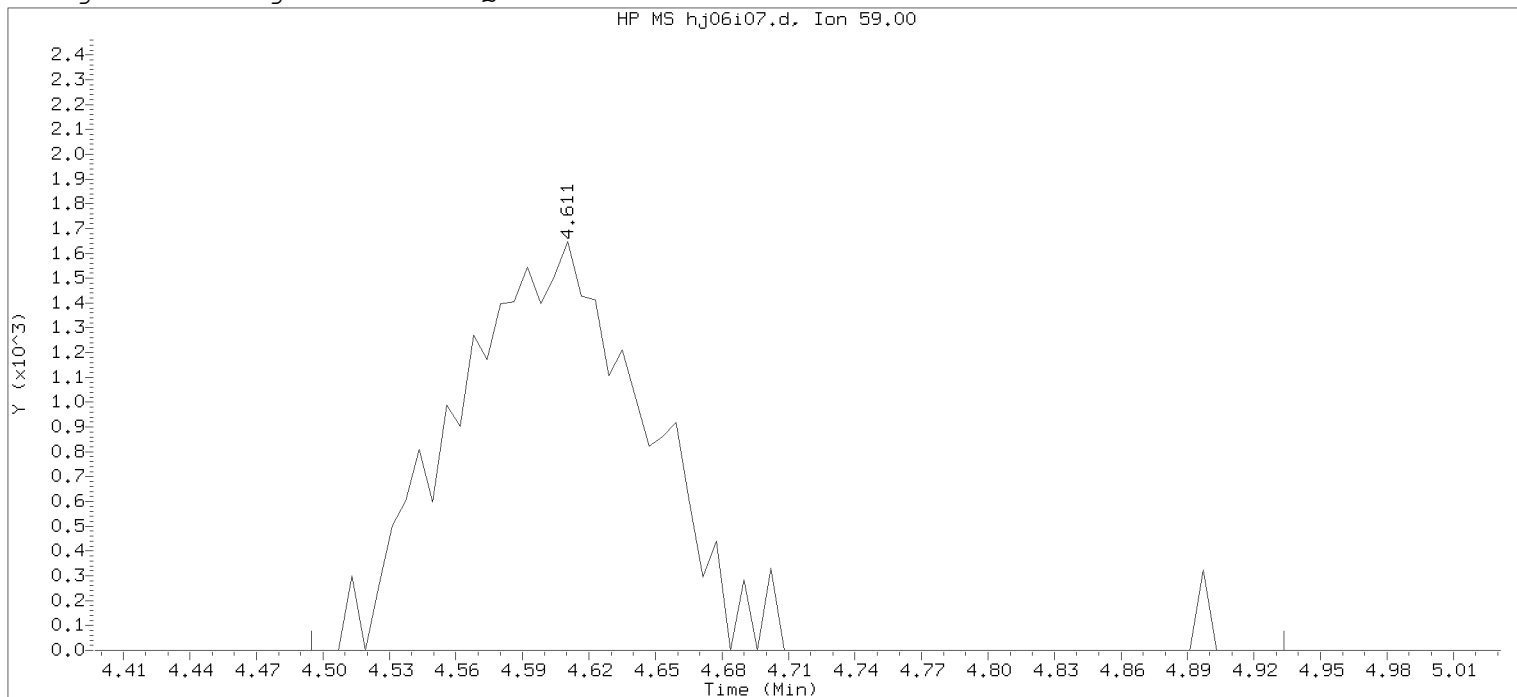
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

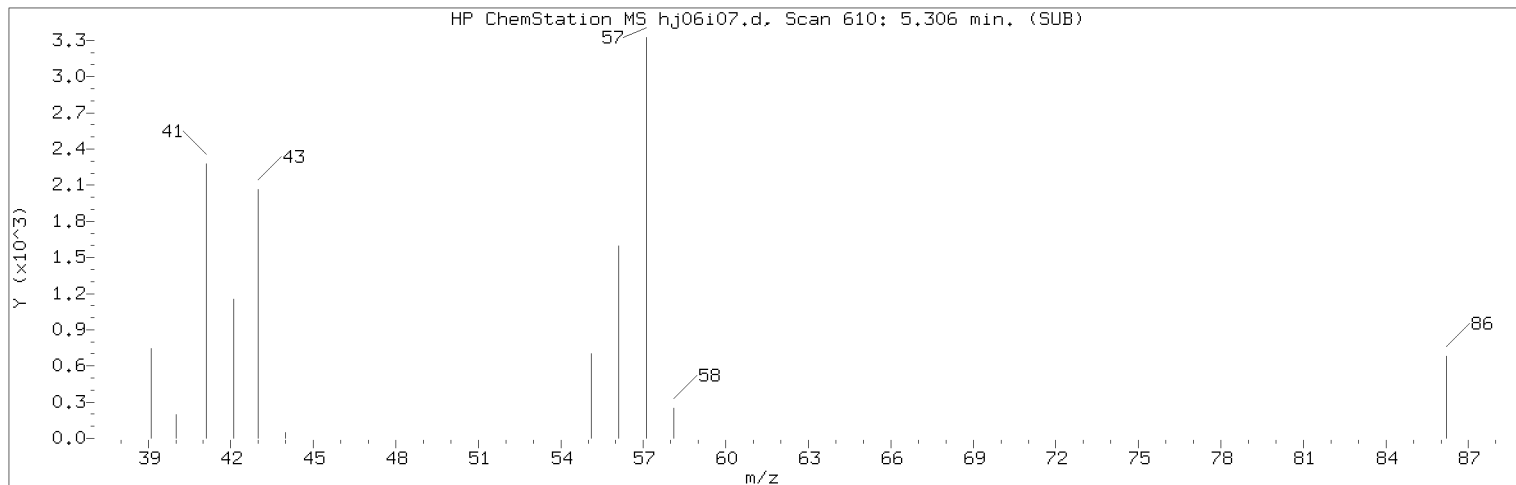
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

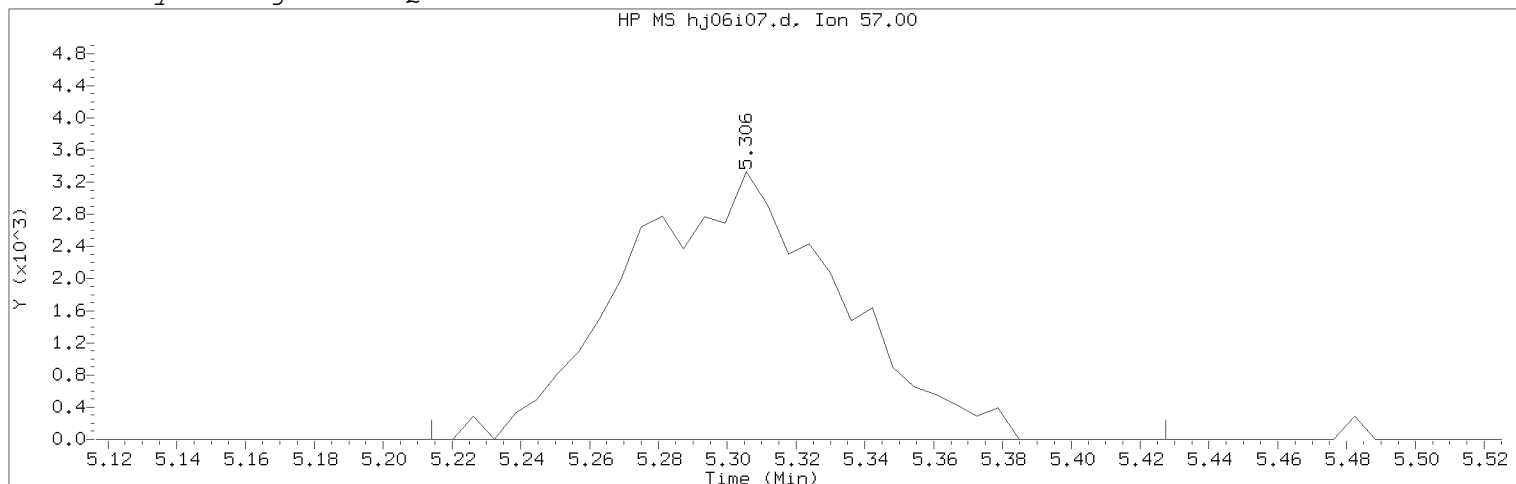
Lab Sample ID: VSTD0.2

Compound Number : 29
Compound Name : t-Butyl Alcohol
Scan Number : 496
Retention Time (minutes): 4.611
Quant Ion : 59.00
Area : 10000
On-column Amount (ng) : 4.1260
Integration start scan : 476 Integration stop scan: 548
Y at integration start : 0 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 33
 Compound Name : n-Hexane
 Scan Number : 610
 Retention Time (minutes): 5.306
 Quant Ion : 57.00
 Area (flag) : 14319M
 On-Column Amount (ng) : 0.1953
 Integration start scan : 594
 Y at integration start : 0

Integration stop scan: 629
 Y at integration end: 0

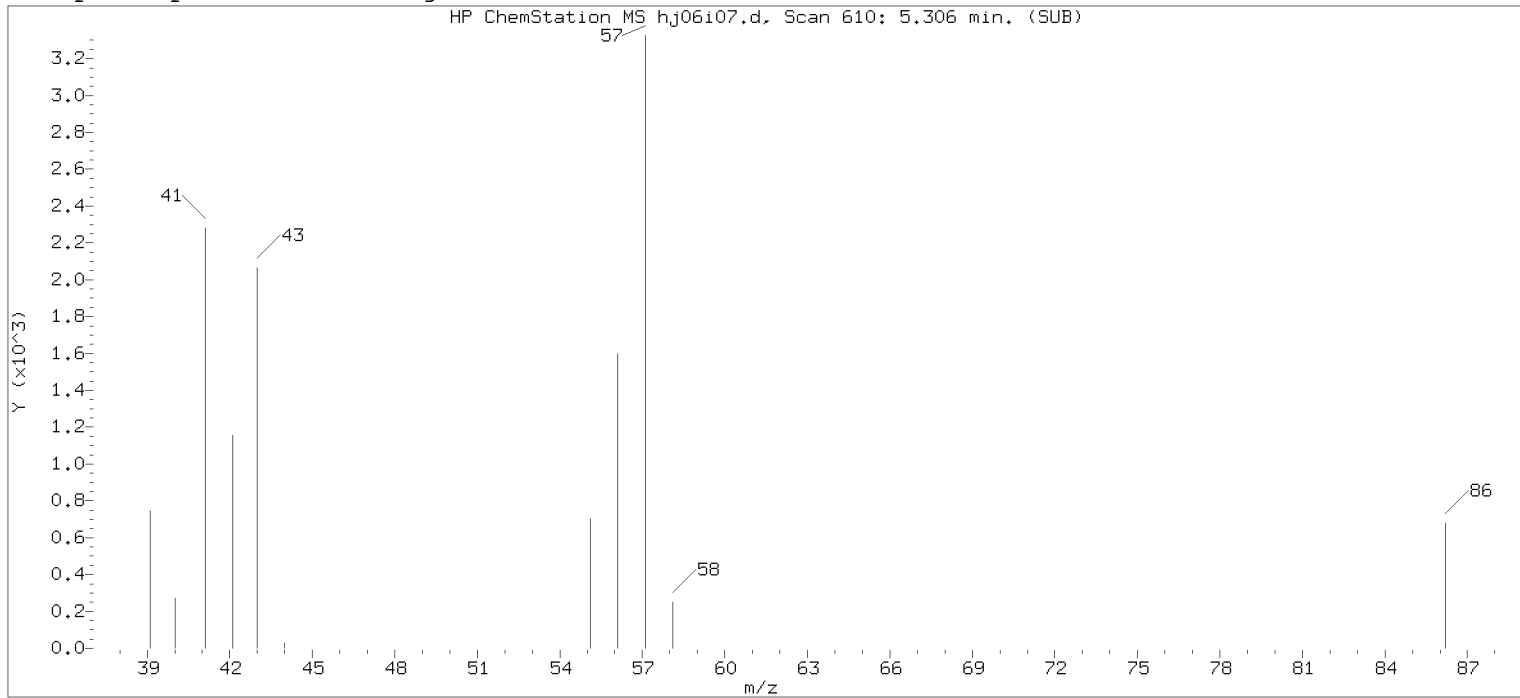
Reason for manual integration: improper integration

Analyst responsible for change:

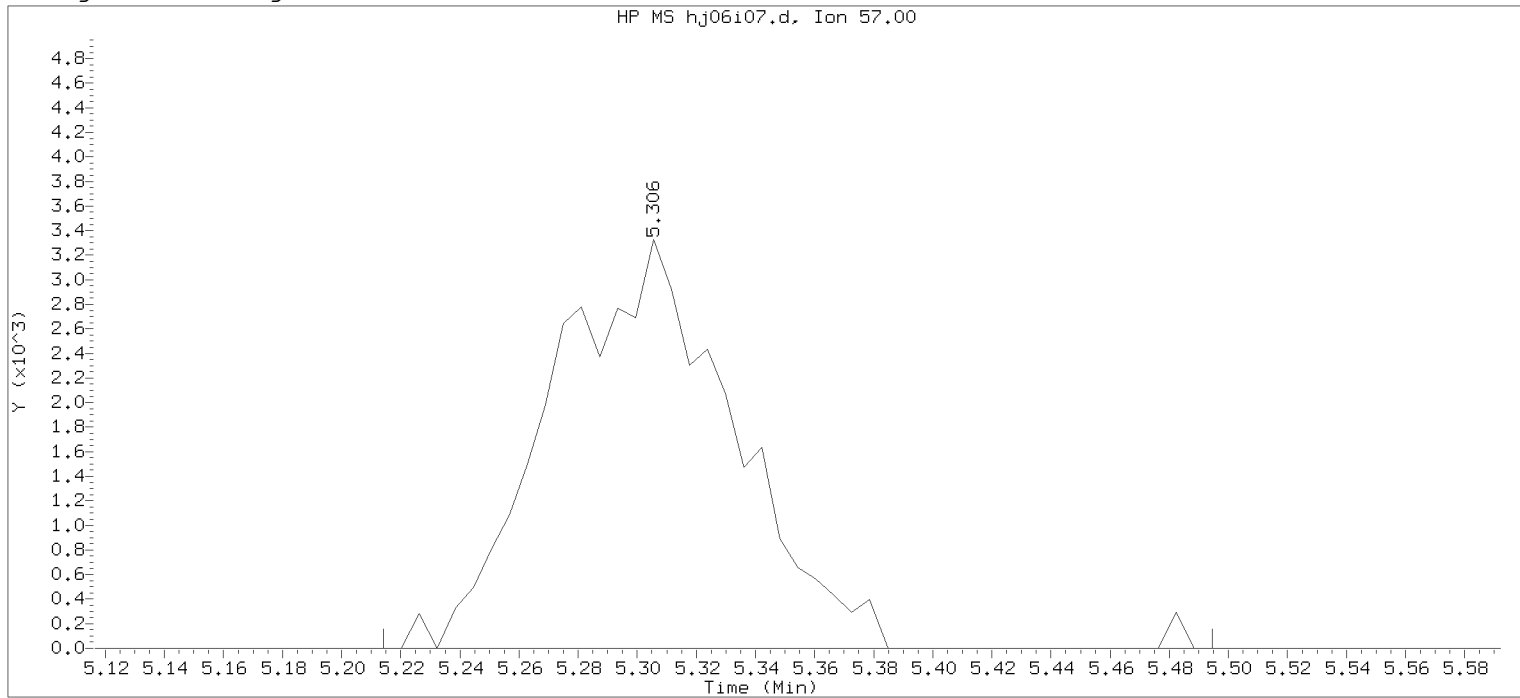
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

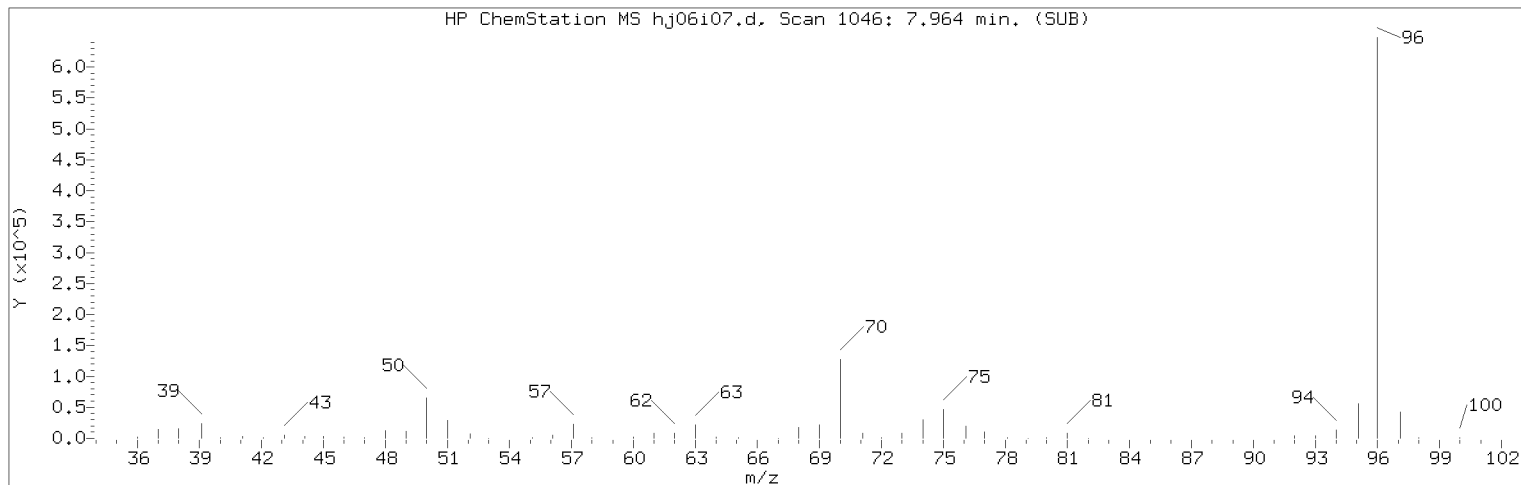
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

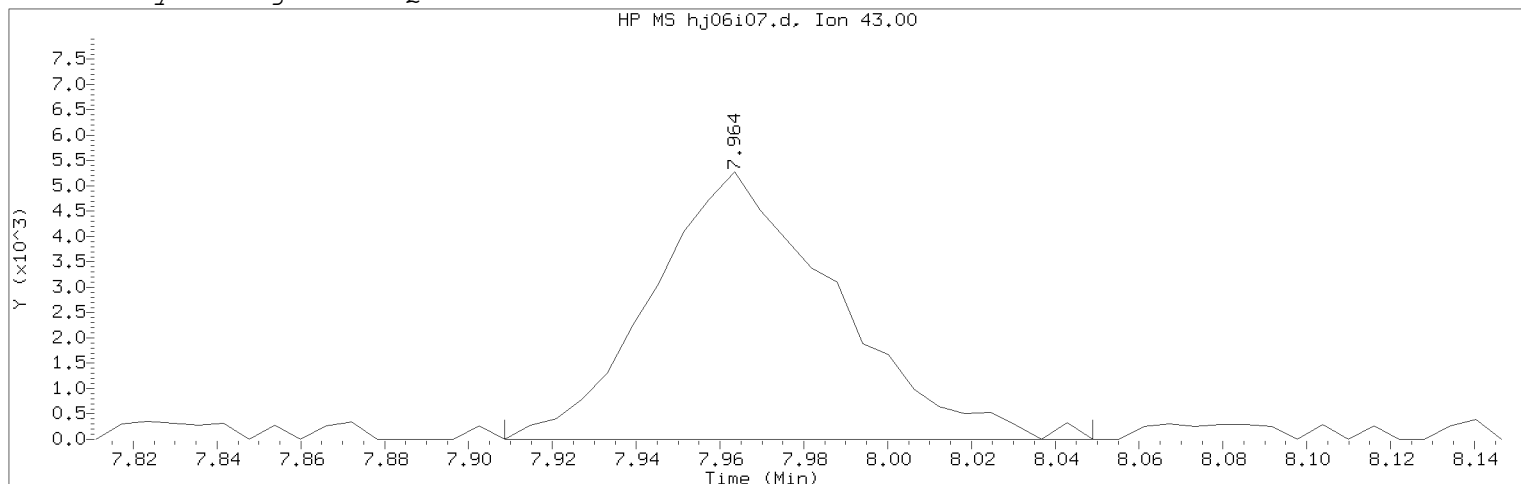
Compound Number : 33
 Compound Name : n-Hexane
 Scan Number : 610
 Retention Time (minutes): 5.306
 Quant Ion : 57.00
 Area : 14425
 On-column Amount (ng) : 0.1965
 Integration start scan : 594
 Y at integration start : 0

Integration stop scan: 640
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 63
 Compound Name : n-Heptane
 Scan Number : 1046
 Retention Time (minutes): 7.964
 Quant Ion : 43.00
 Area (flag) : 16086M
 On-Column Amount (ng) : 0.2091
 Integration start scan : 1036
 Y at integration start : 0

Integration stop scan: 1059
 Y at integration end: 0

Reason for manual integration: improper integration

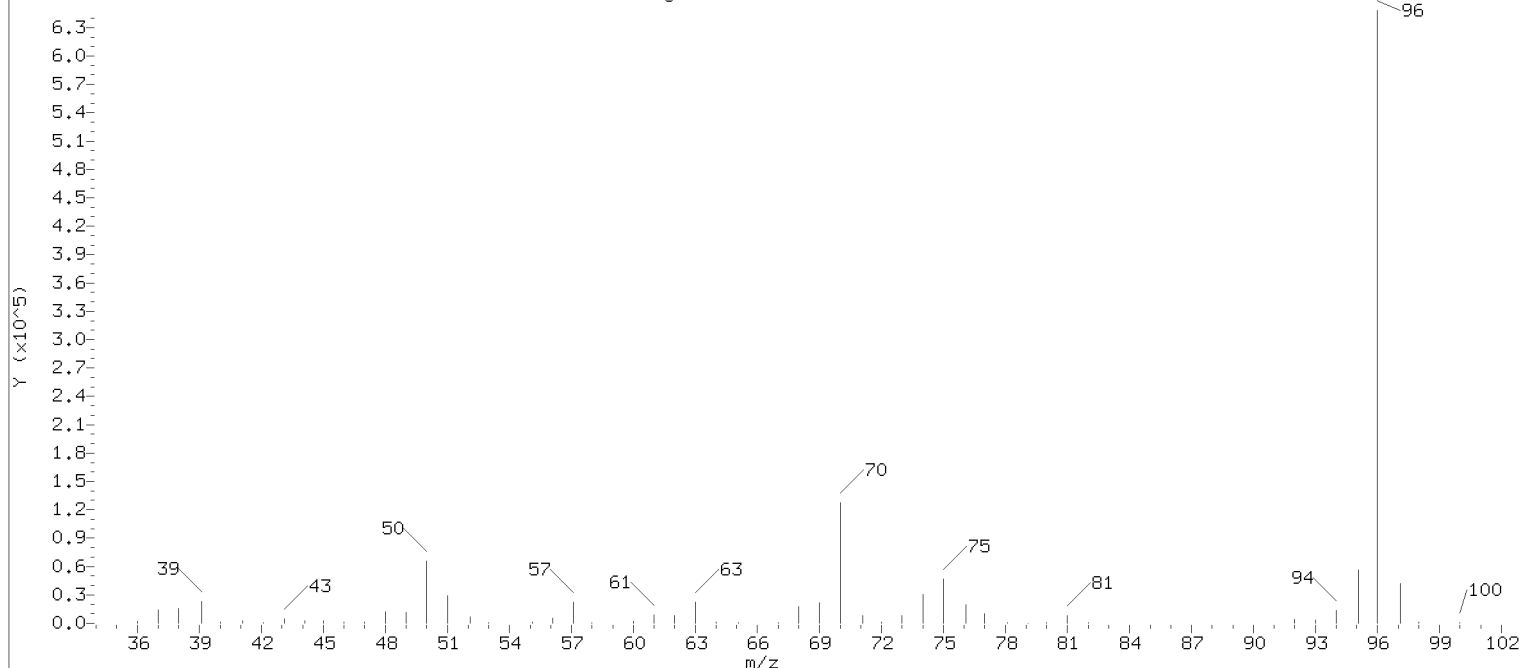
Analyst responsible for change:

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

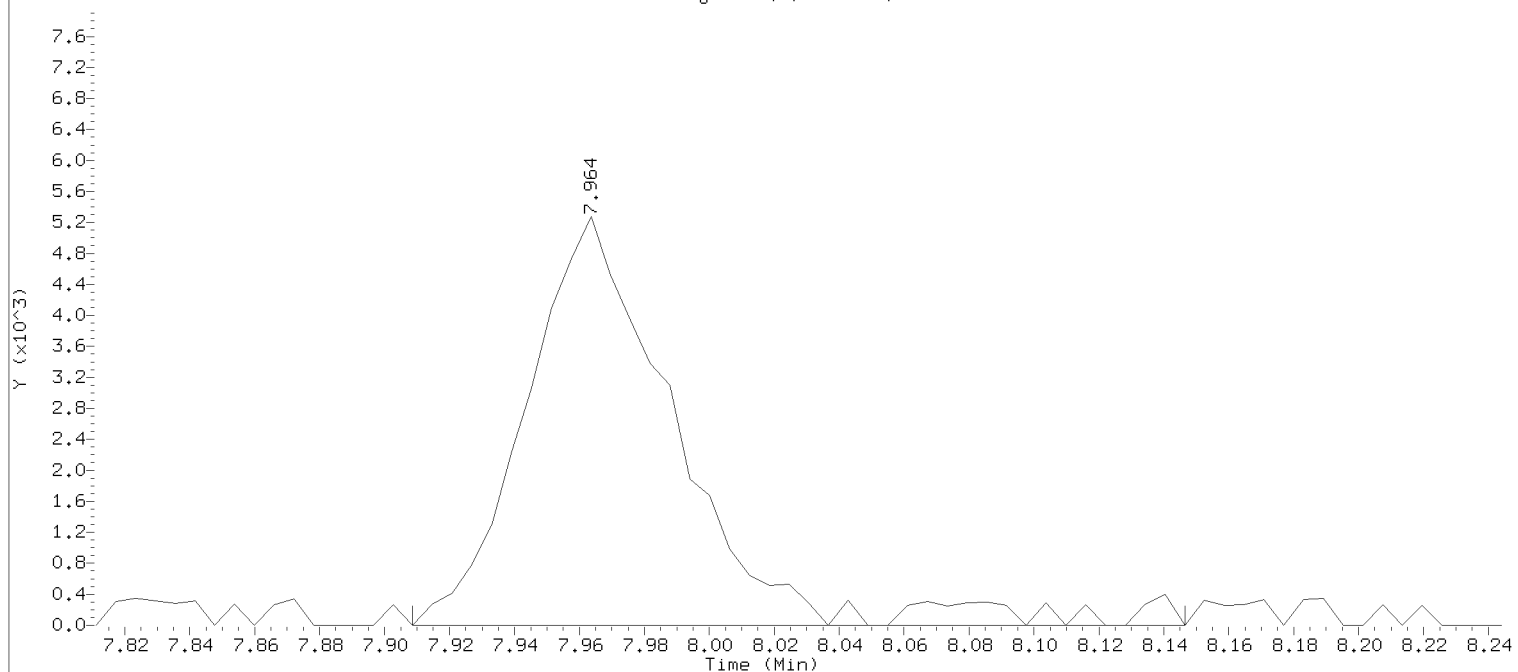
Sample Spectrum (Background Subtracted)

HP ChemStation MS hj06i07.d, Scan 1046: 7.964 min. (SUB)



Original Integration of Quant Ion

HP MS hj06i07.d, Ion 43.00



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

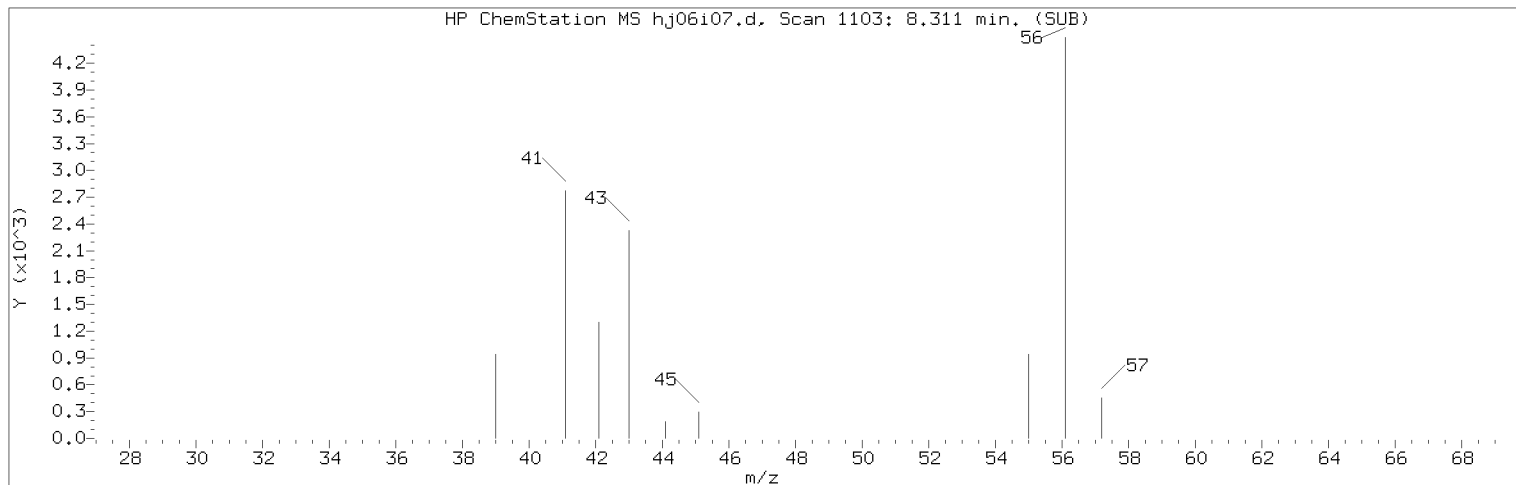
Lab Sample ID: VSTD0.2

Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area : 17141
On-column Amount (ng) : 0.2207
Integration start scan : 1036
Y at integration start : 0

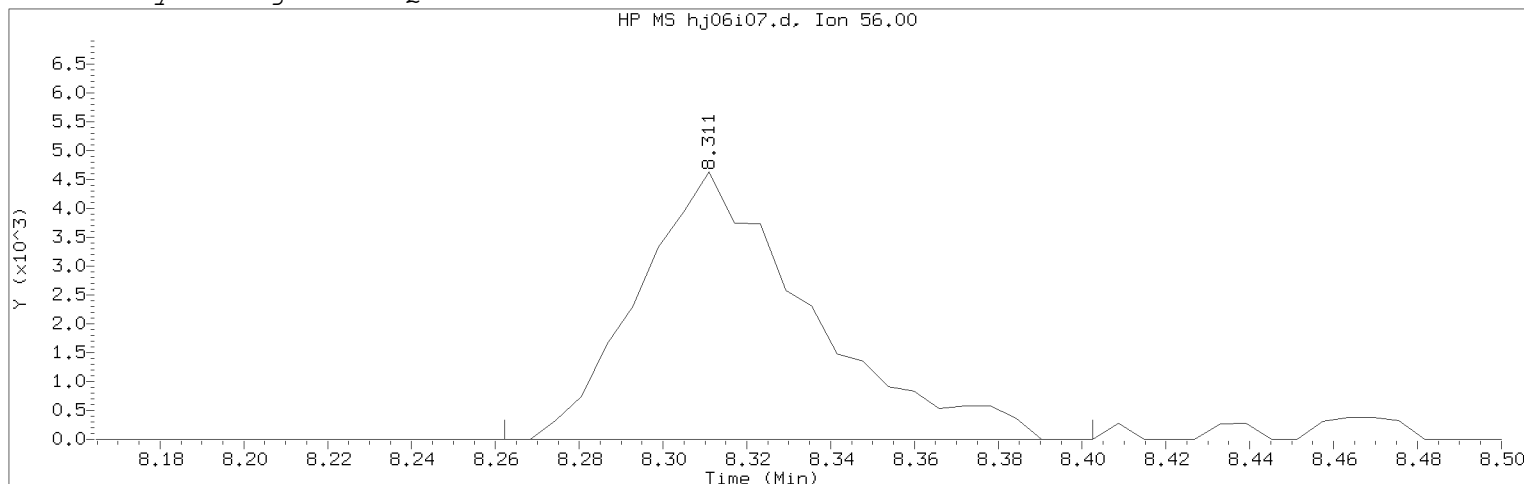
Integration stop scan: 1075
Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RAE59 Page 220 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 66	
Compound Name	: n-Butanol	
Scan Number	: 1103	
Retention Time (minutes)	: 8.311	
Quant Ion	: 56.00	
Area (flag)	: 13133M	
On-Column Amount (ng)	: 19.2483	
Integration start scan	: 1094	Integration stop scan: 1117
Y at integration start	: 0	Y at integration end: 0

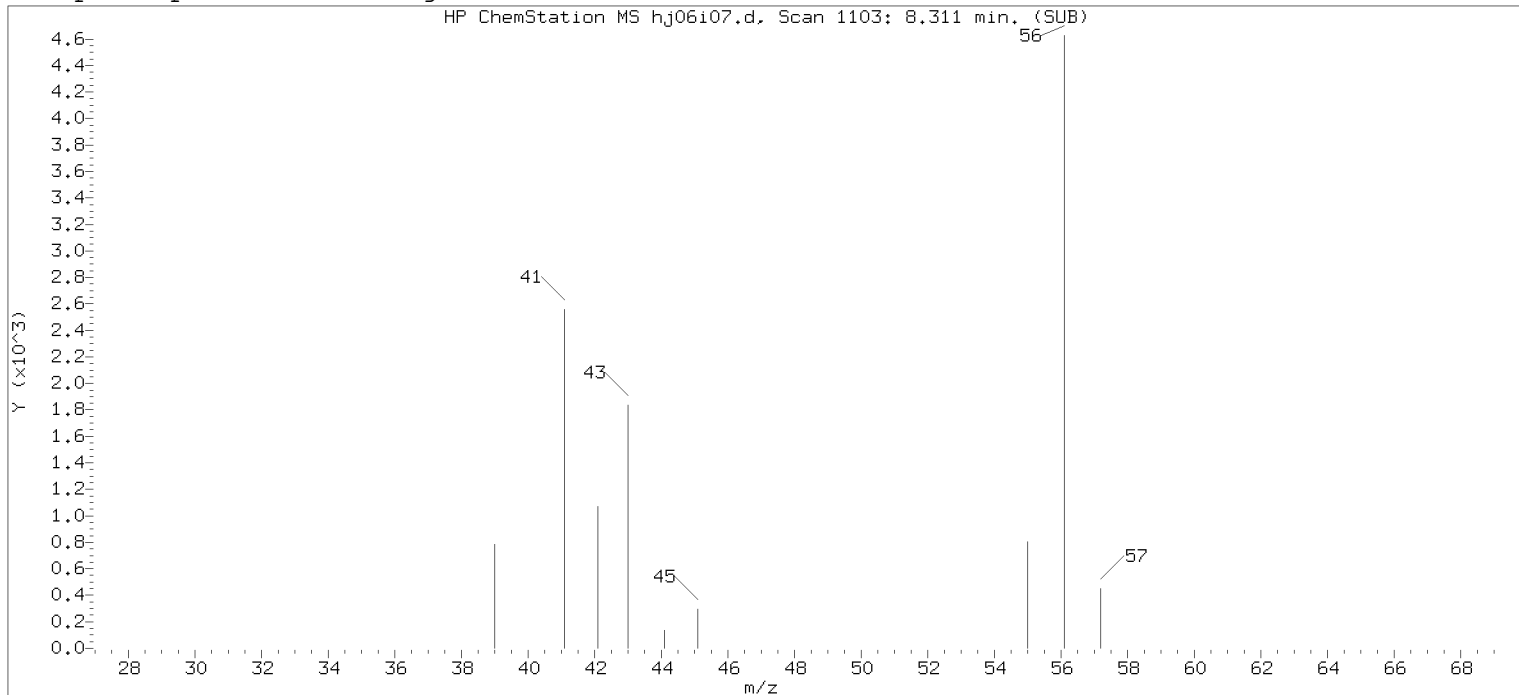
Reason for manual integration: improper integration

Analyst responsible for change:

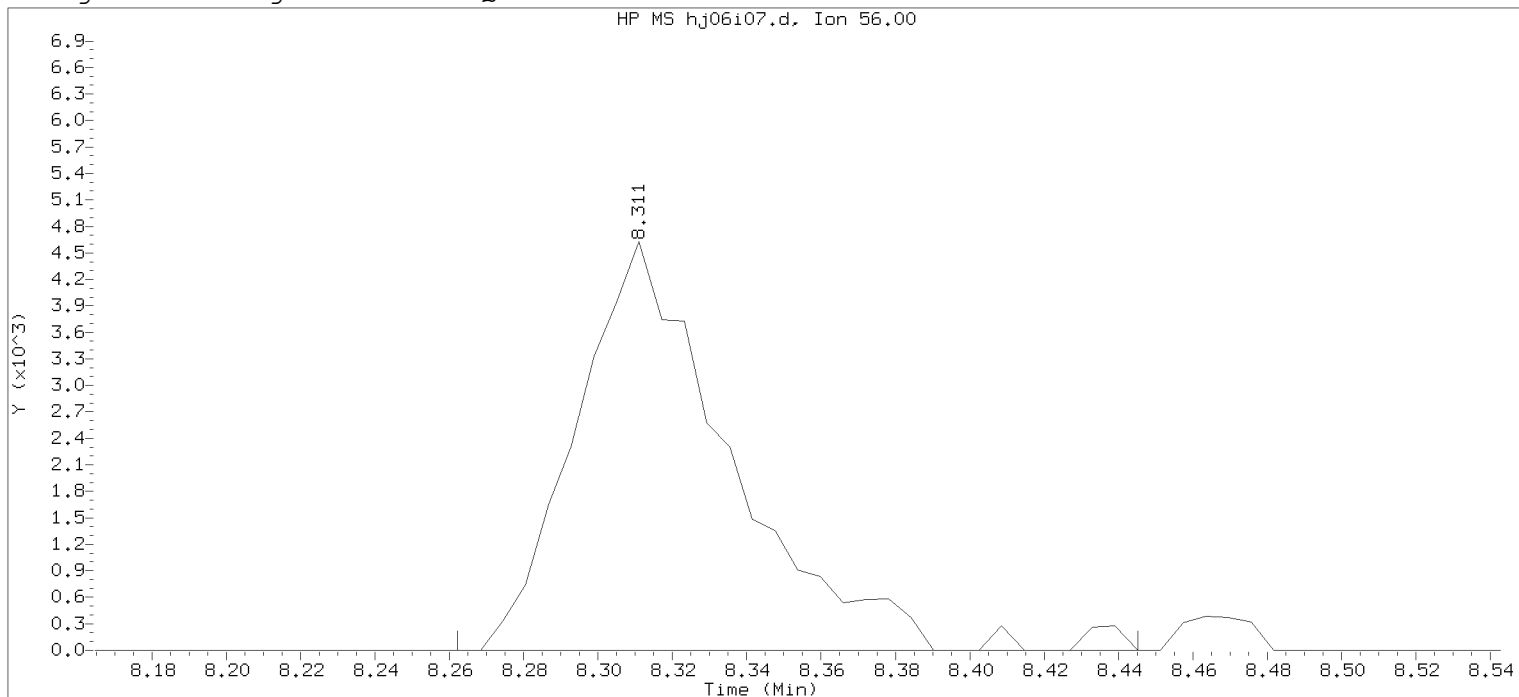
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

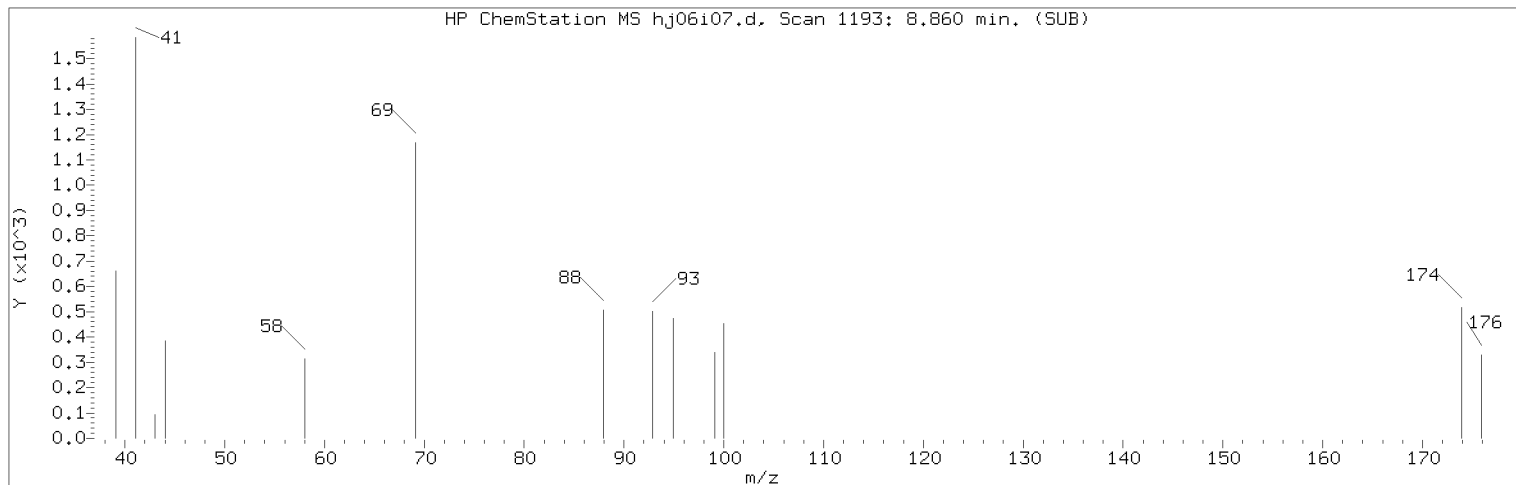
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

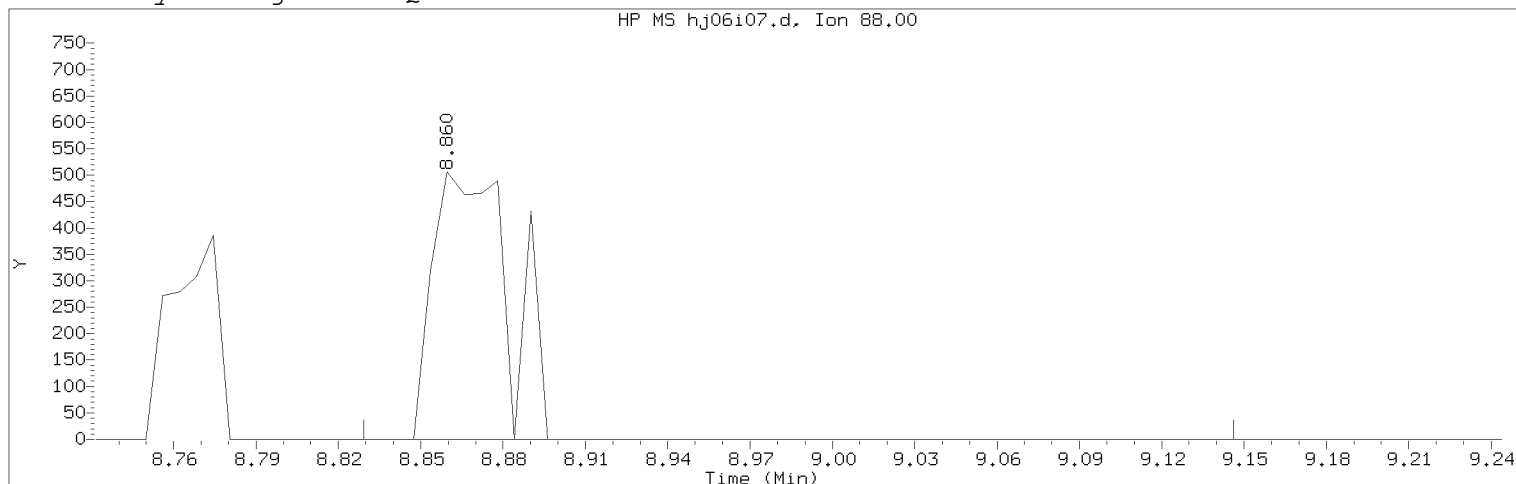
Lab Sample ID: VSTD0.2

Compound Number	: 66	
Compound Name	: n-Butanol	
Scan Number	: 1103	
Retention Time (minutes)	: 8.311	
Quant Ion	: 56.00	
Area	: 13430	
On-column Amount (ng)	: 19.8365	
Integration start scan	: 1094	Integration stop scan: 1124
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1193
 Retention Time (minutes): 8.860
 Quant Ion : 88.00
 Area (flag) : 978M
 On-Column Amount (ng) : 5.9430
 Integration start scan : 1187
 Y at integration start : 0

Integration stop scan: 1239
 Y at integration end: 0

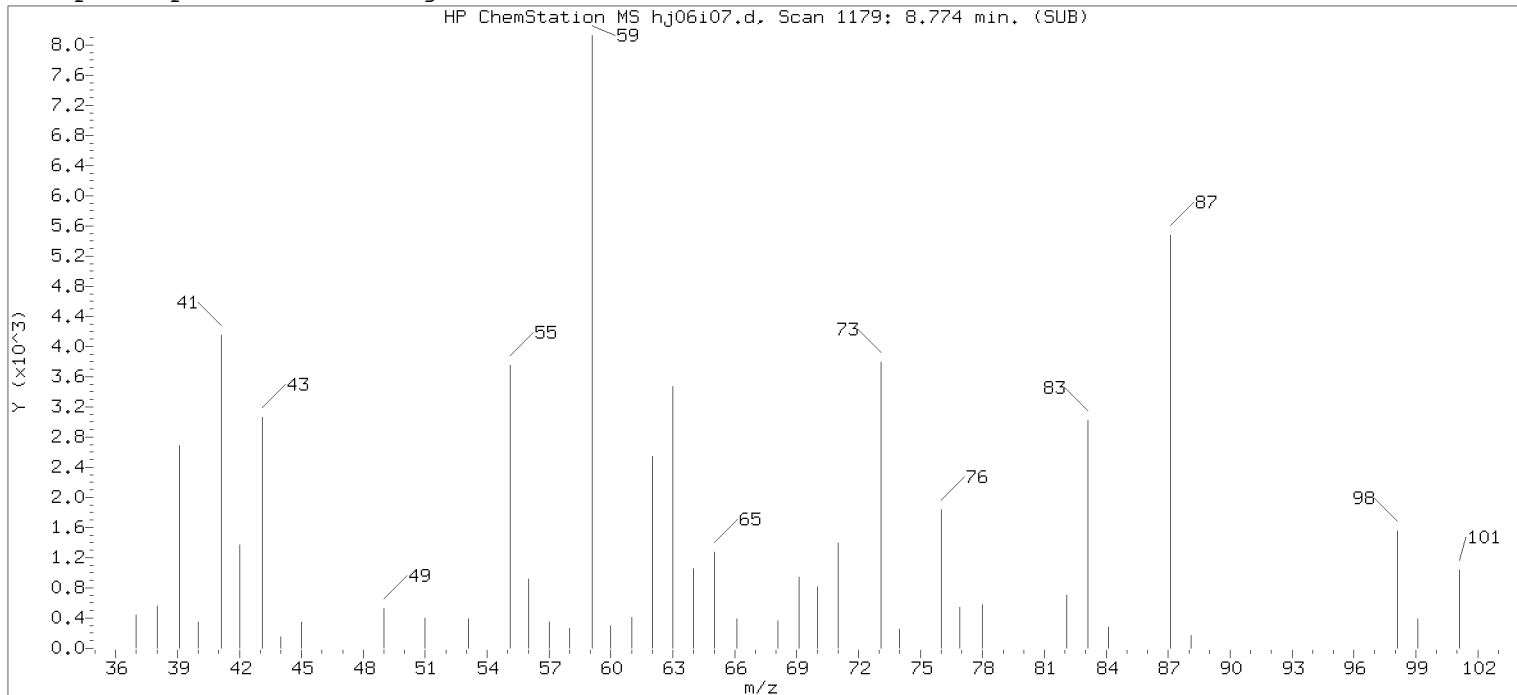
Reason for manual integration: improper integration

Analyst responsible for change:

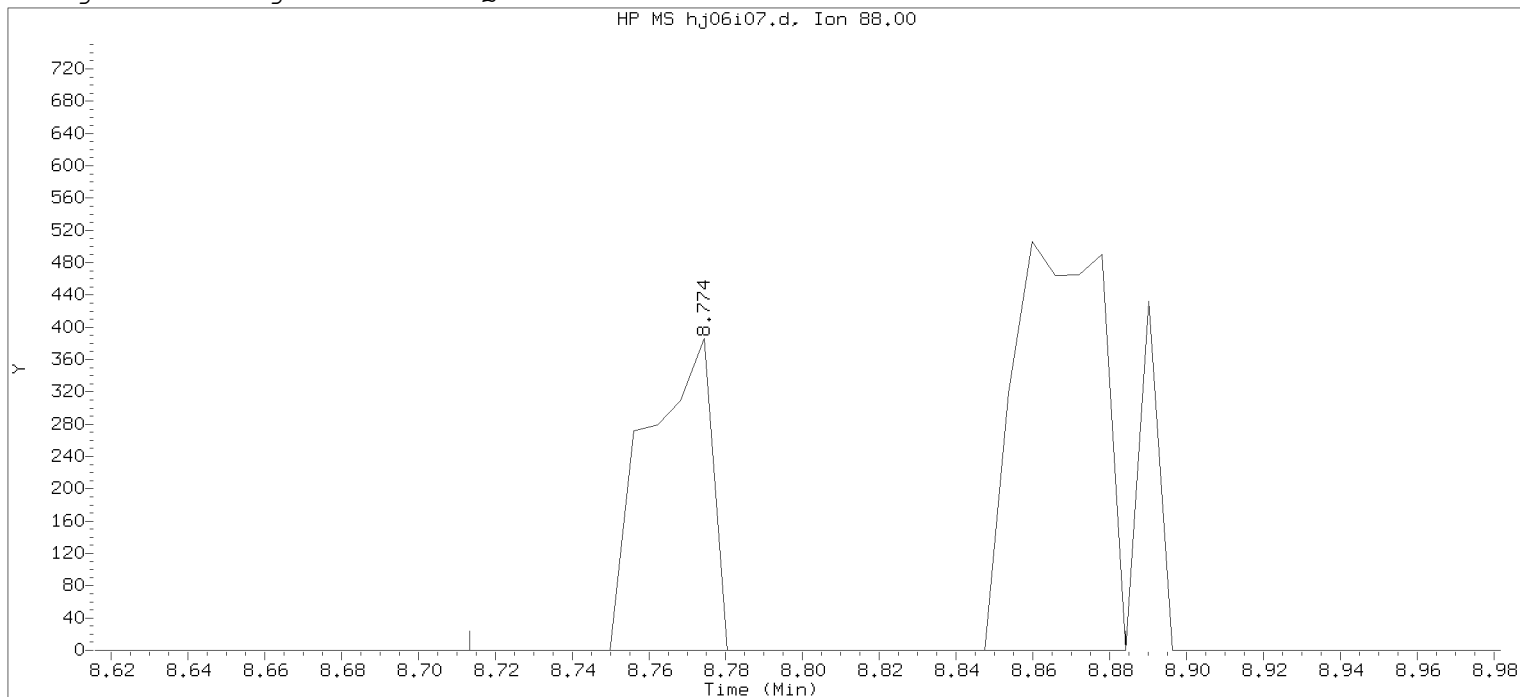
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

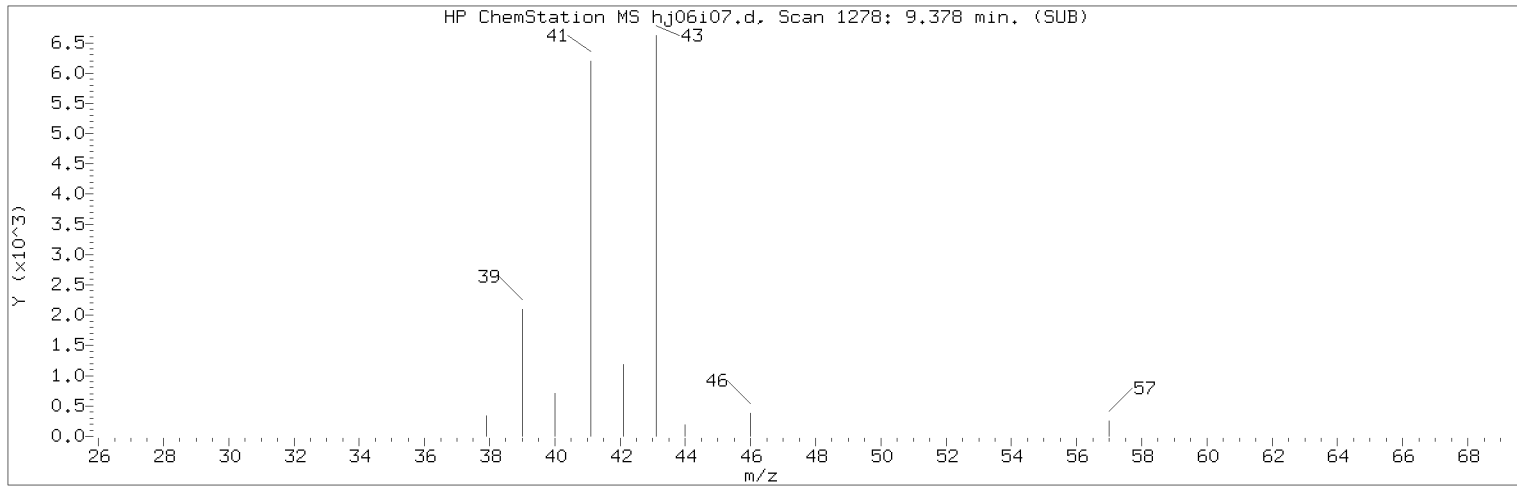
Lab Sample ID: VSTD0.2

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1179
 Retention Time (minutes): 8.774
 Quant Ion : 88.00
 Area : 1276
 On-column Amount (ng) : 8.3739
 Integration start scan : 1168
 Y at integration start : 0

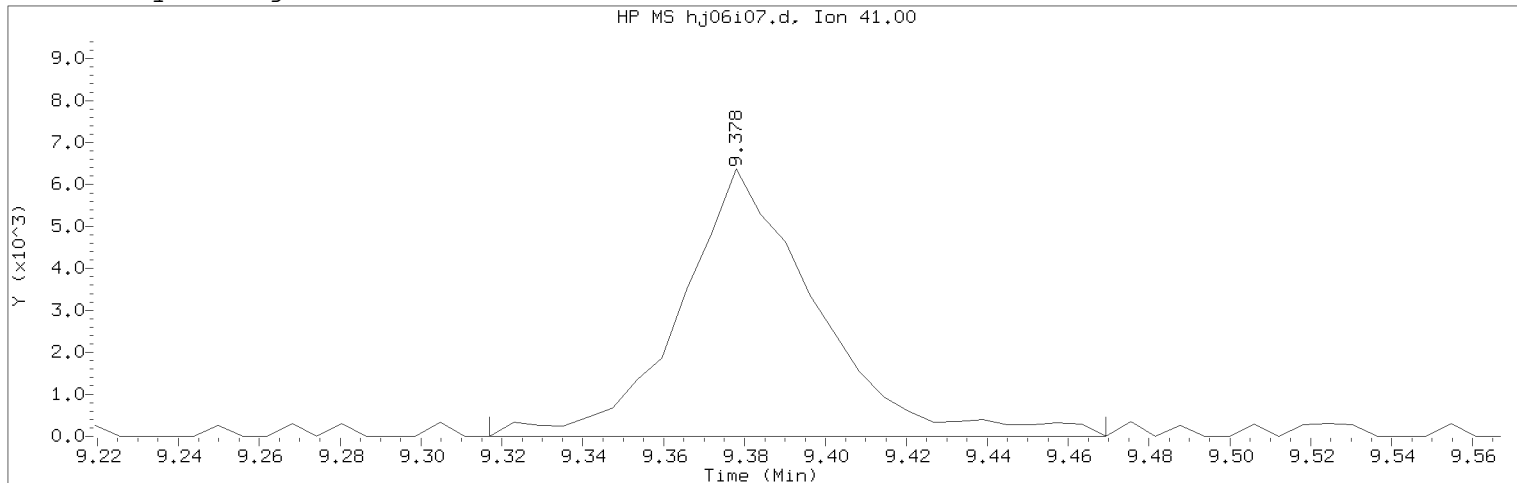
Integration stop scan: 1196
 Y at integration end: 0

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 Target 3.5 esignature user RAE59 Page 224 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

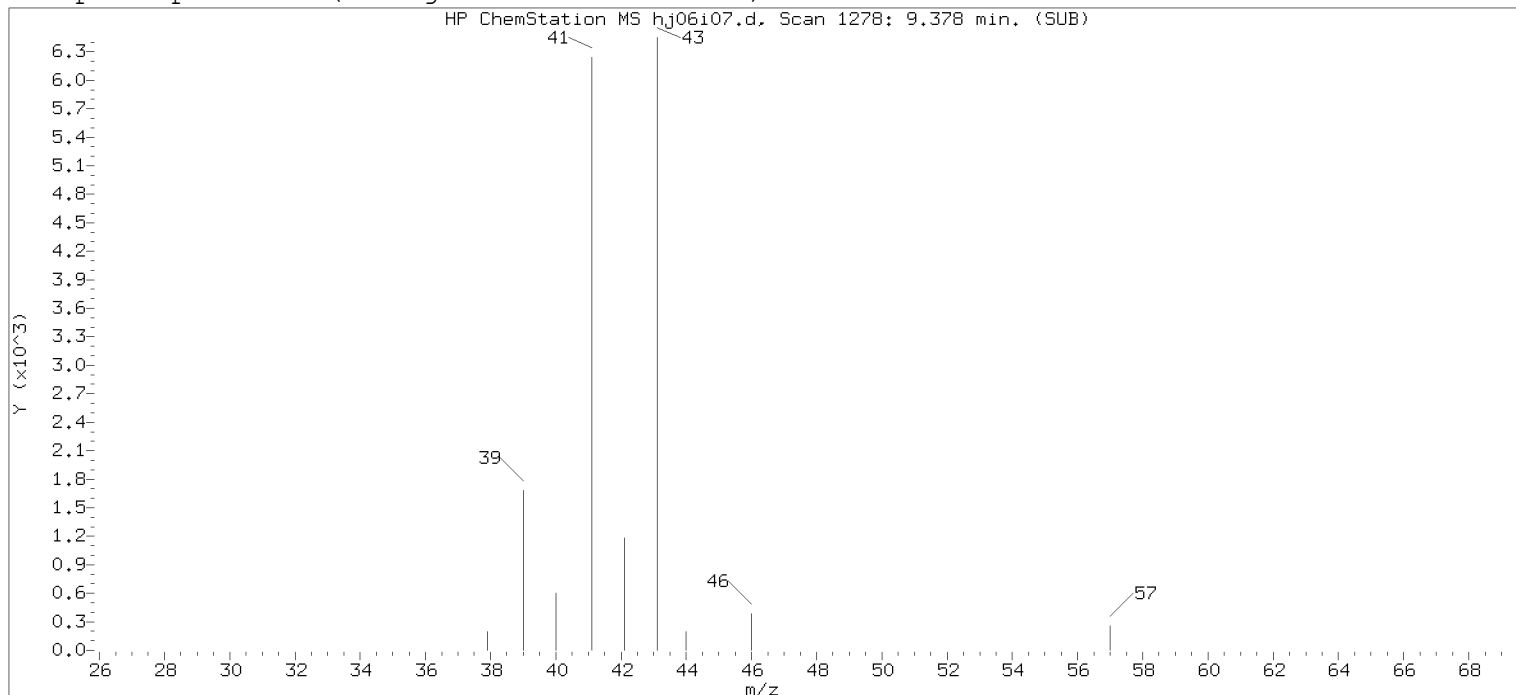
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 14974M
On-Column Amount (ng) : 2.1018
Integration start scan : 1267 Integration stop scan: 1292
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

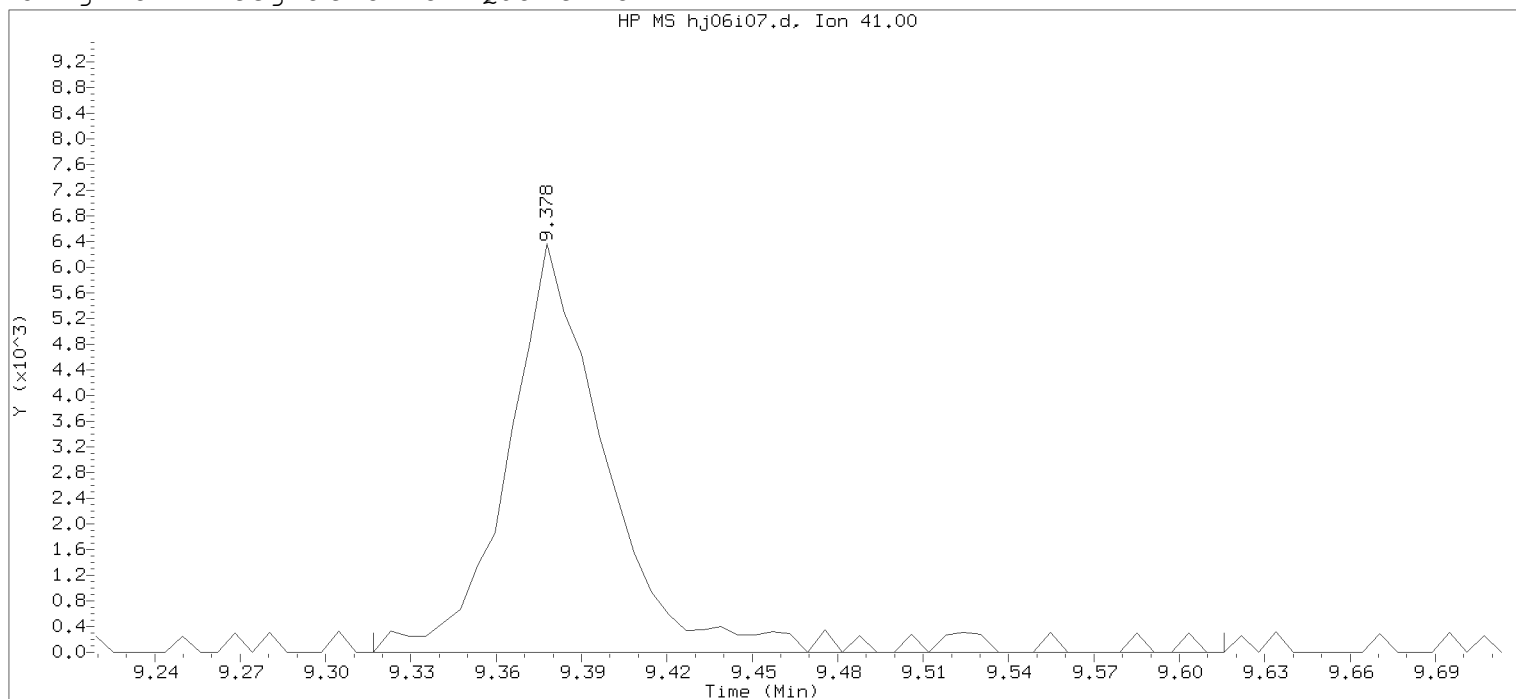
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

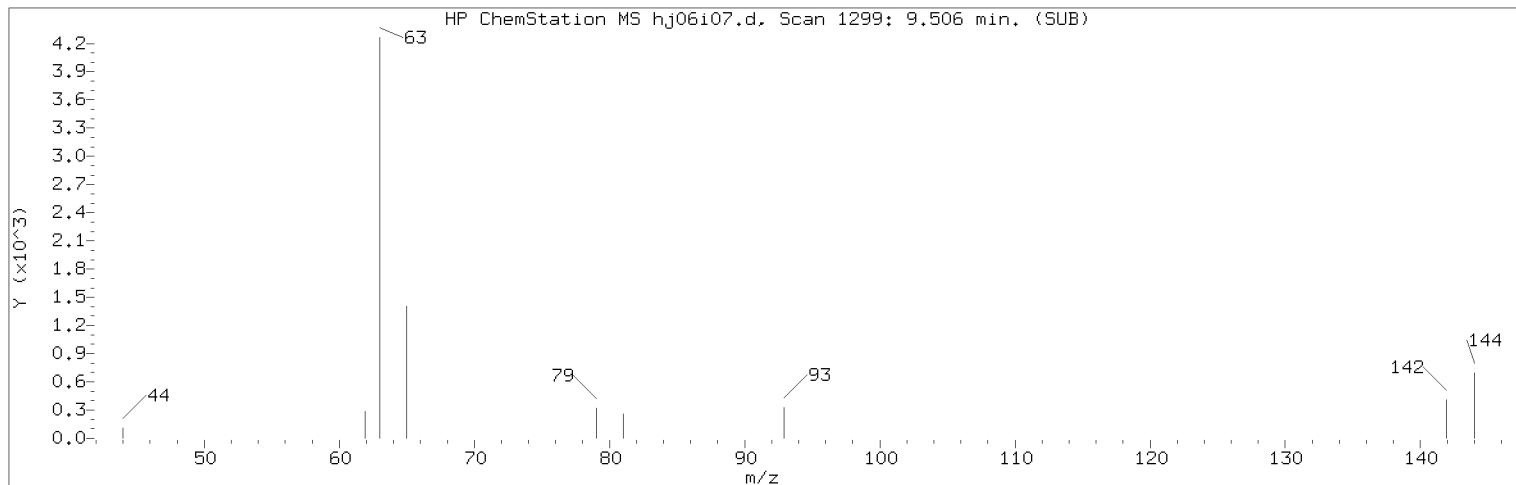
Lab Sample ID: VSTD0.2

Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 15947	
On-column Amount (ng)	: 2.2158	
Integration start scan	: 1267	Integration stop scan: 1316
Y at integration start	: 0	Y at integration end: 0

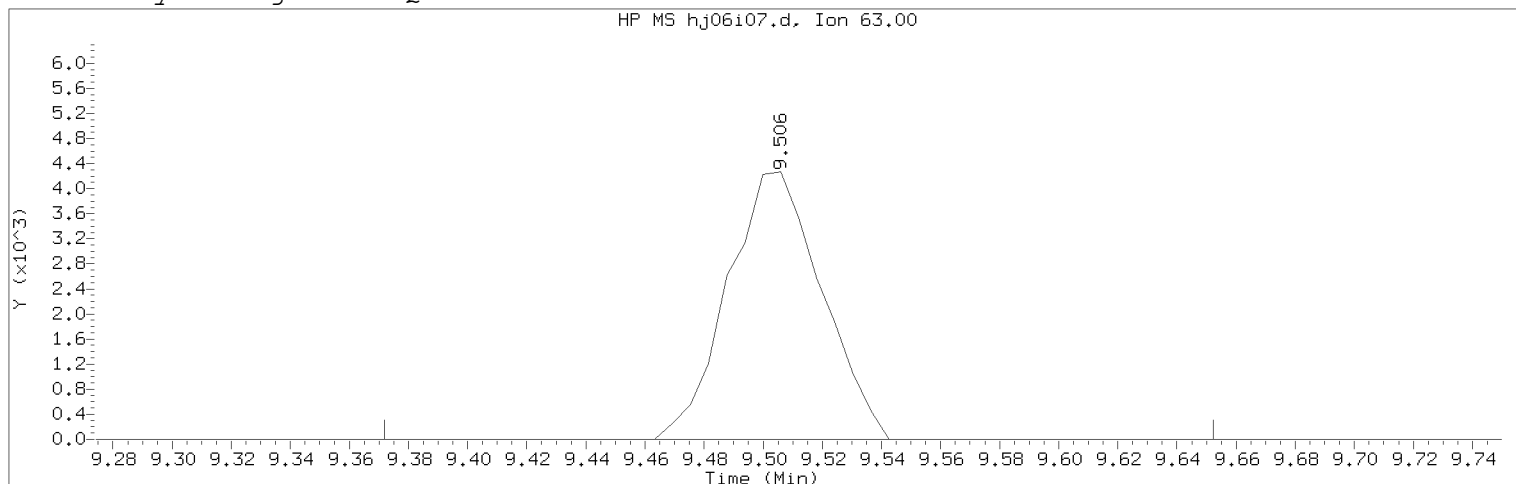
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RAE59 Page 226 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

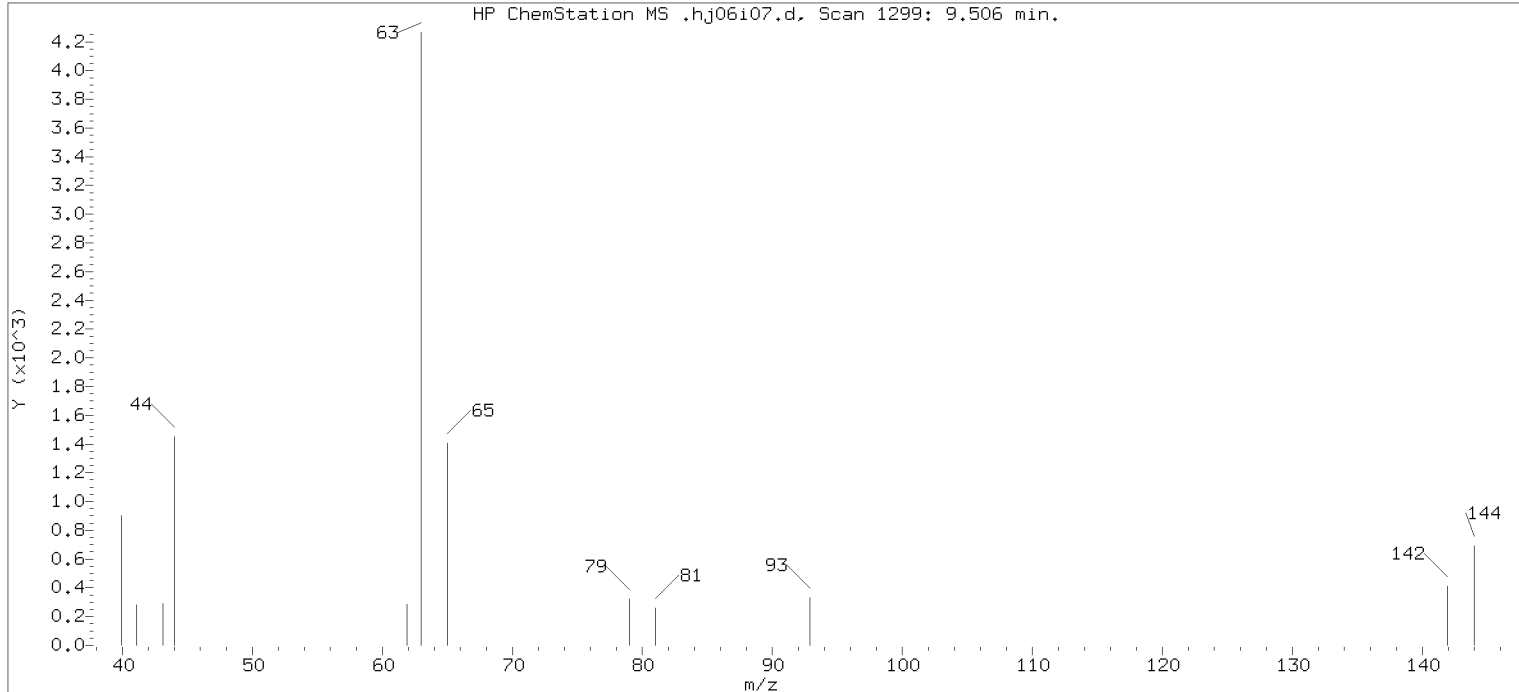
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 9415M
On-Column Amount (ng) : 0.1923
Integration start scan : 1276 Integration stop scan: 1322
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

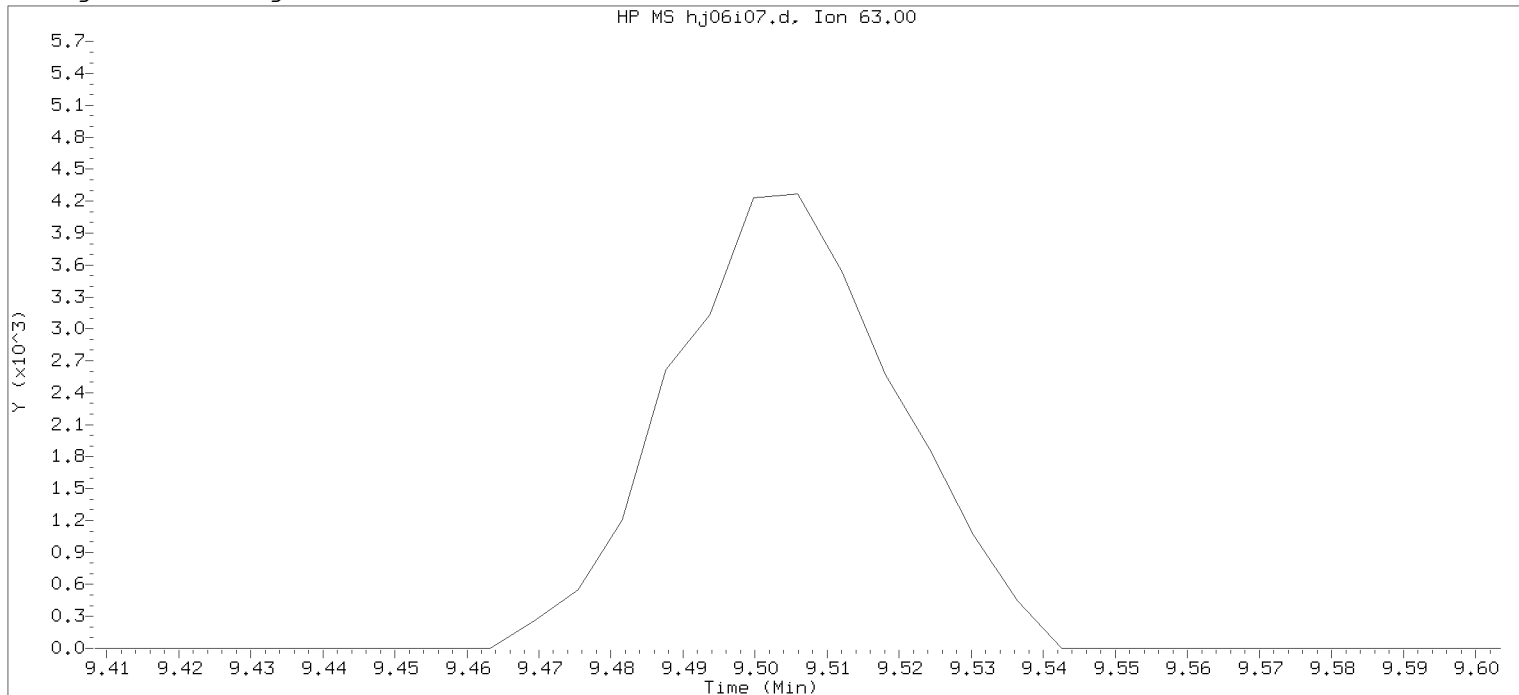
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 80

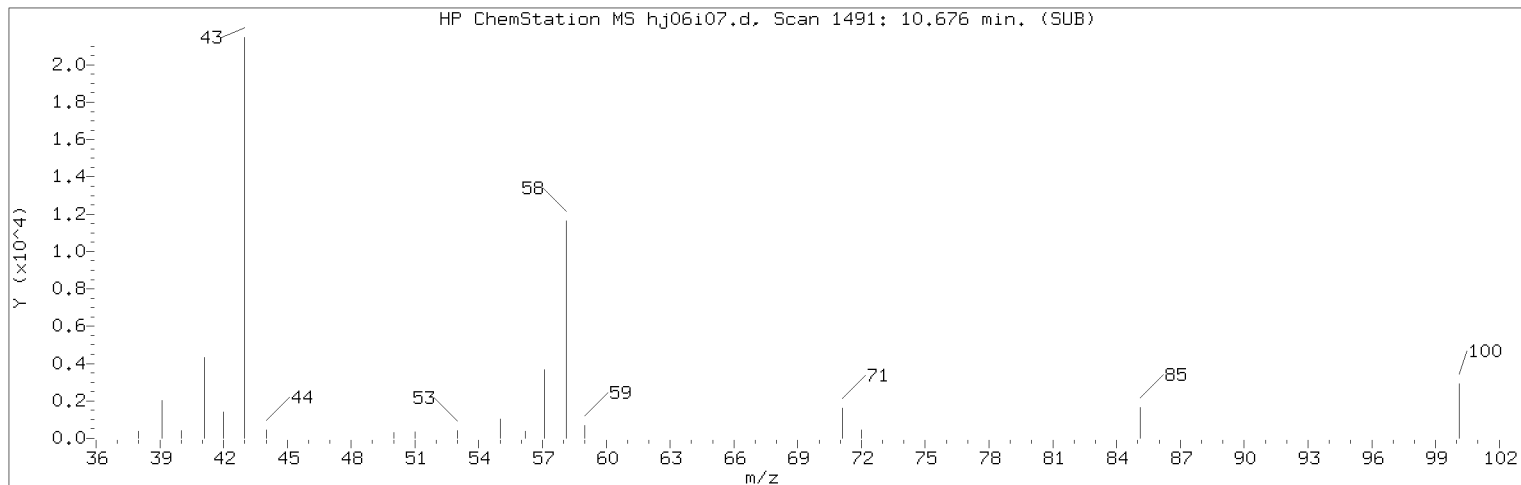
Compound Name : 1-Bromo-2-chloroethane

Expected RT (minutes) : 9.506

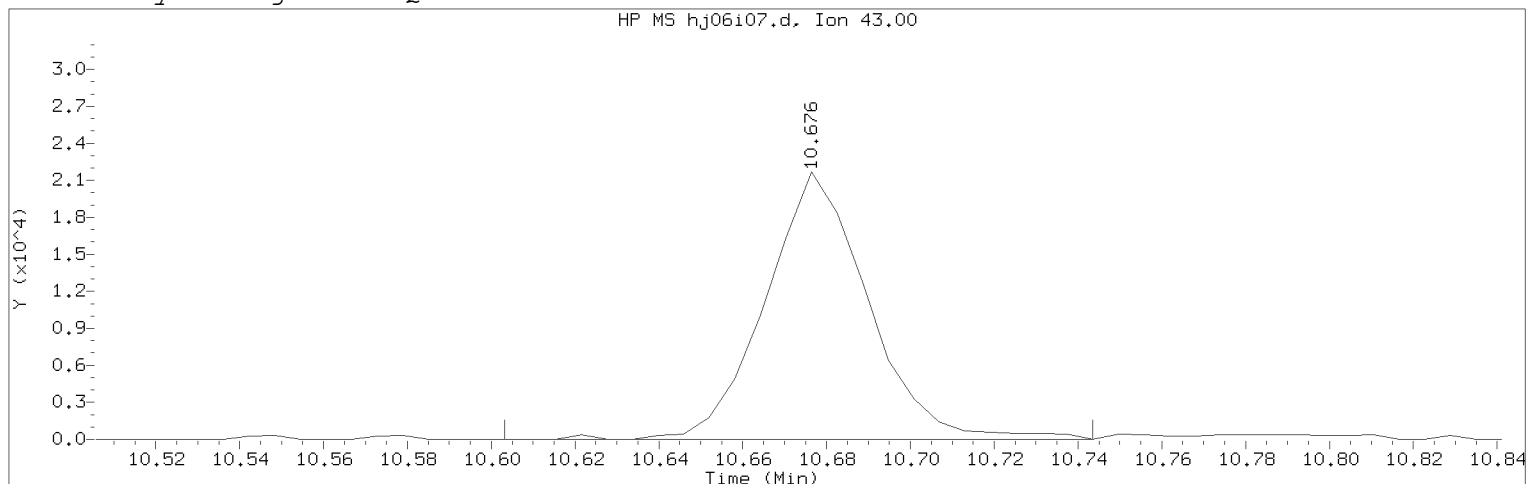
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area (flag) : 36737M
On-Column Amount (ng) : 1.9820
Integration start scan : 1478 Integration stop scan: 1501
Y at integration start : 0 Y at integration end: 0

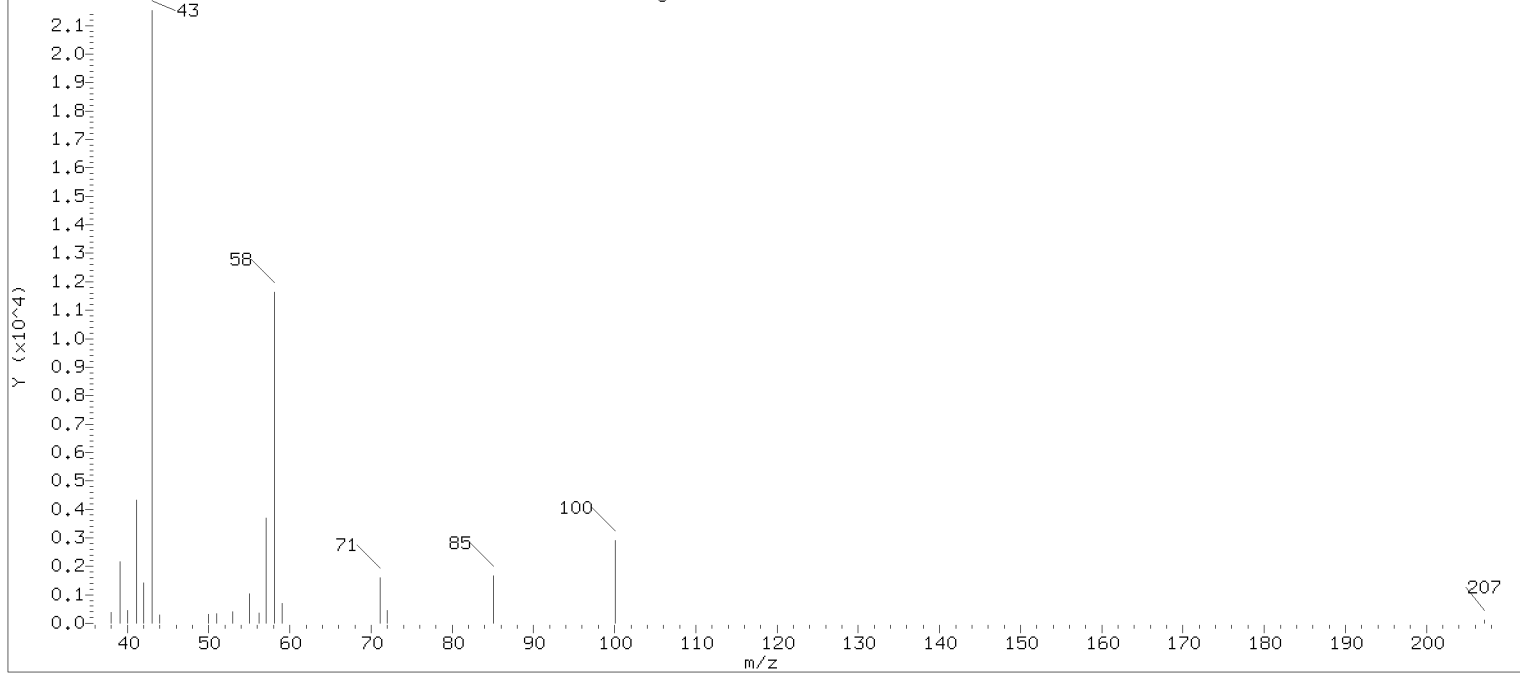
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

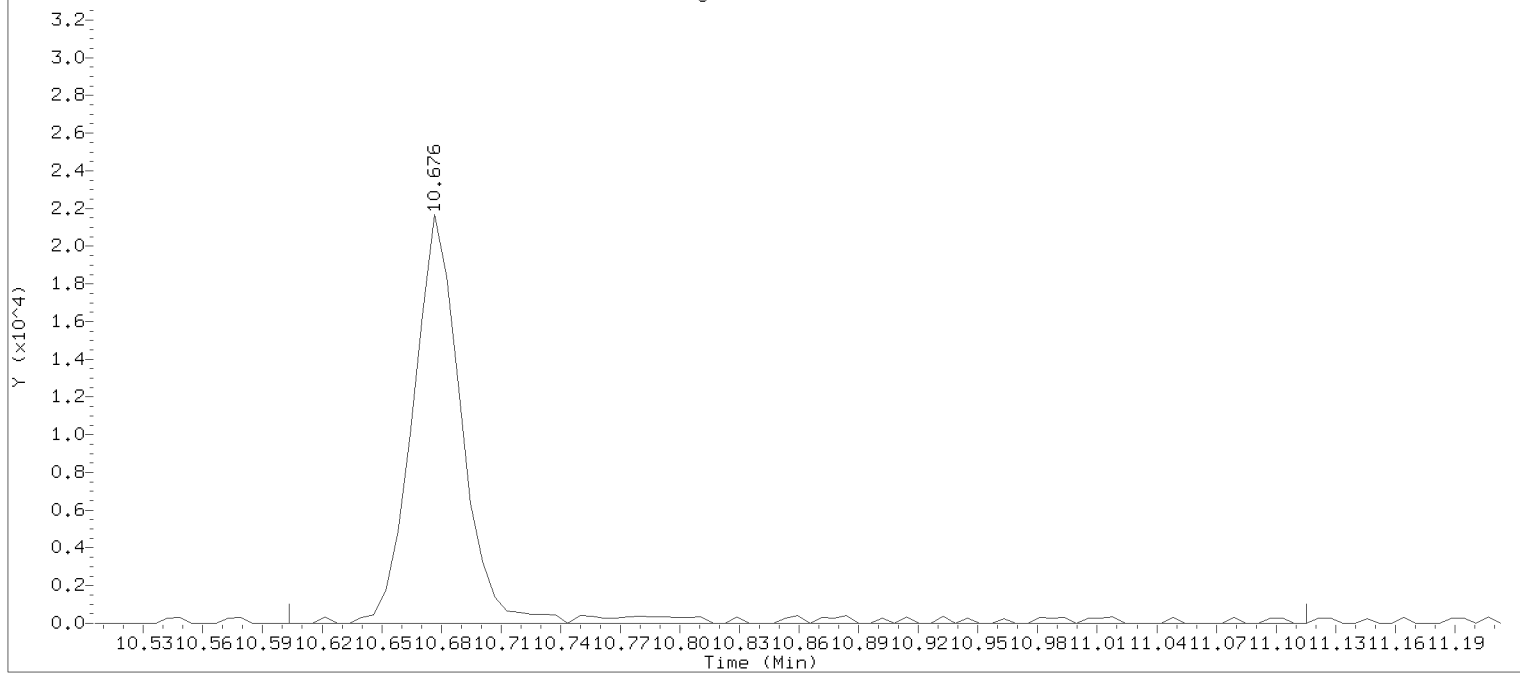
Sample Spectrum (Background Subtracted)

HP ChemStation MS hj06i07.d, Scan 1491: 10.676 min. (SUB)



Original Integration of Quant Ion

HP MS hj06i07.d, Ion 43.00



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

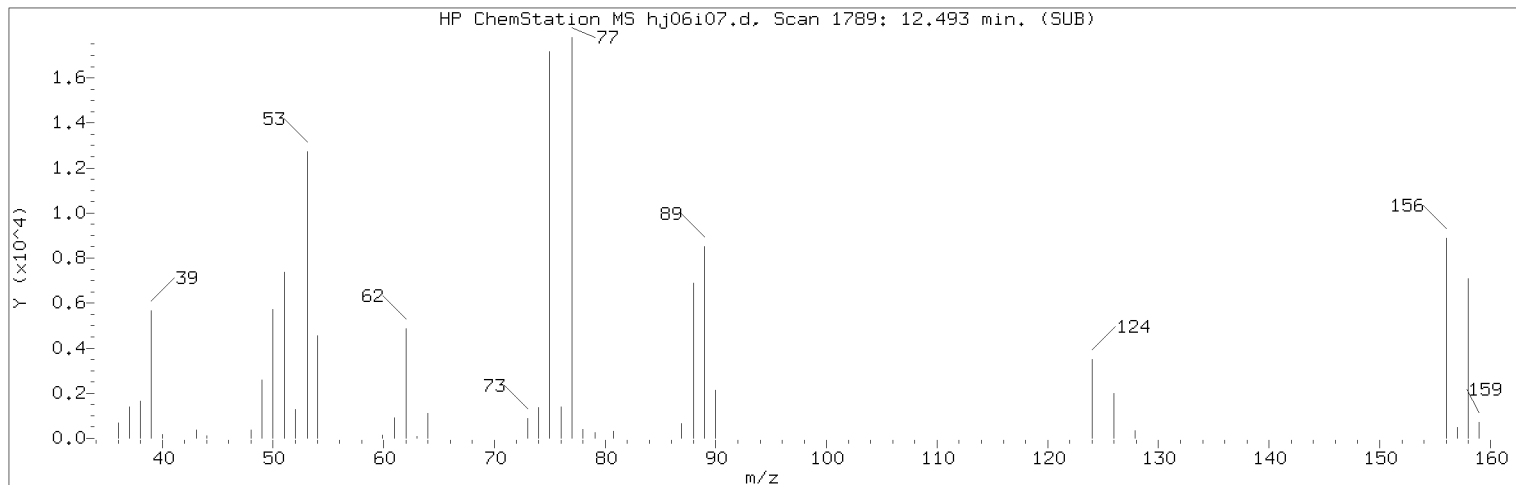
Lab Sample ID: VSTD0.2

Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area : 40437
On-column Amount (ng) : 2.1579
Integration start scan : 1478
Y at integration start : 0

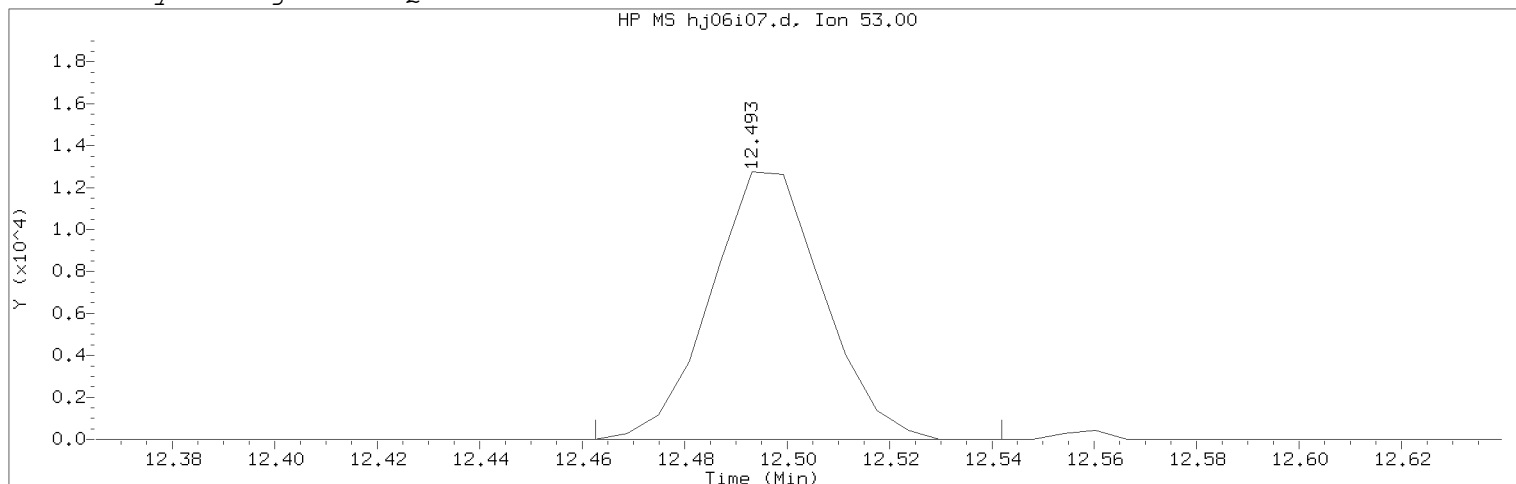
Integration stop scan: 1562
Y at integration end: 0

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Target 3.5 esignature user RA59 Page 2730 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area (flag)	: 19411M	
On-Column Amount (ng)	: 1.9049	
Integration start scan	: 1783	Integration stop scan: 1796
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

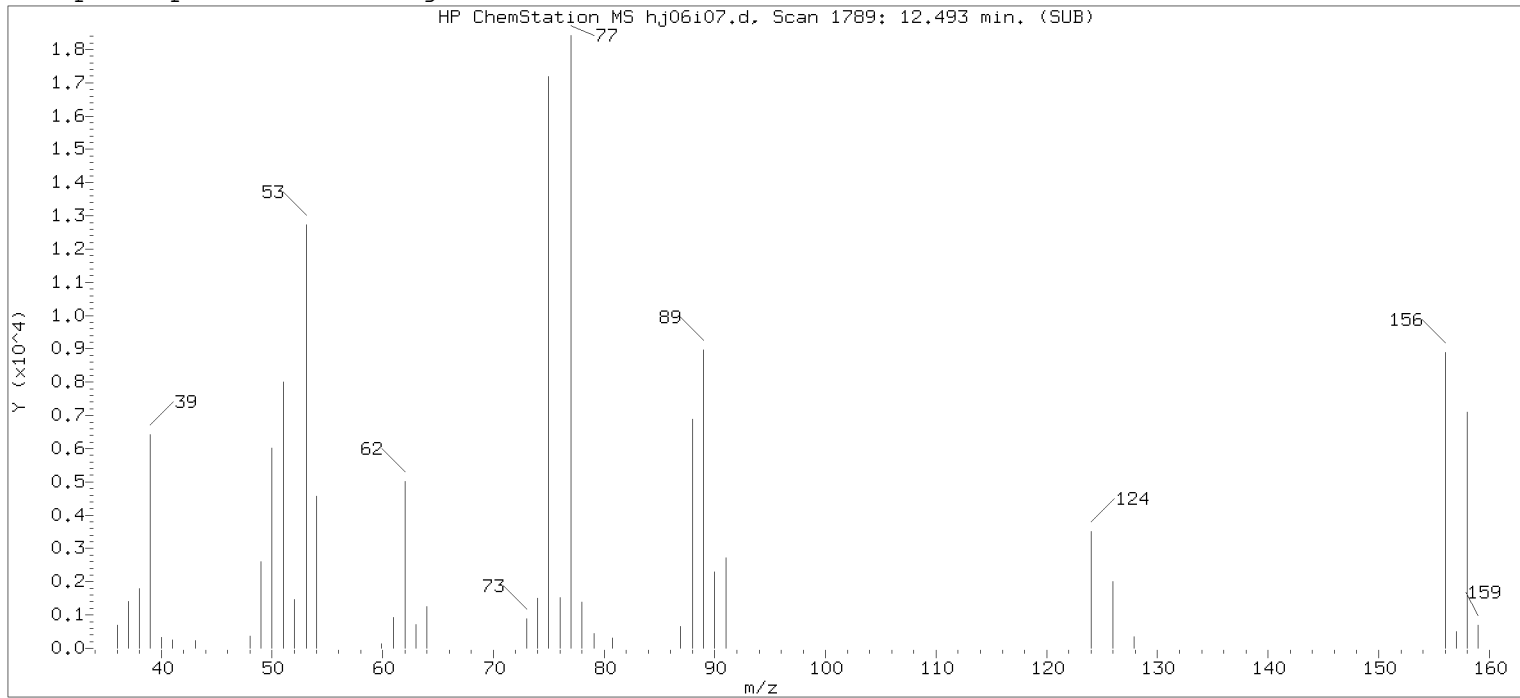
Analyst responsible for change:

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

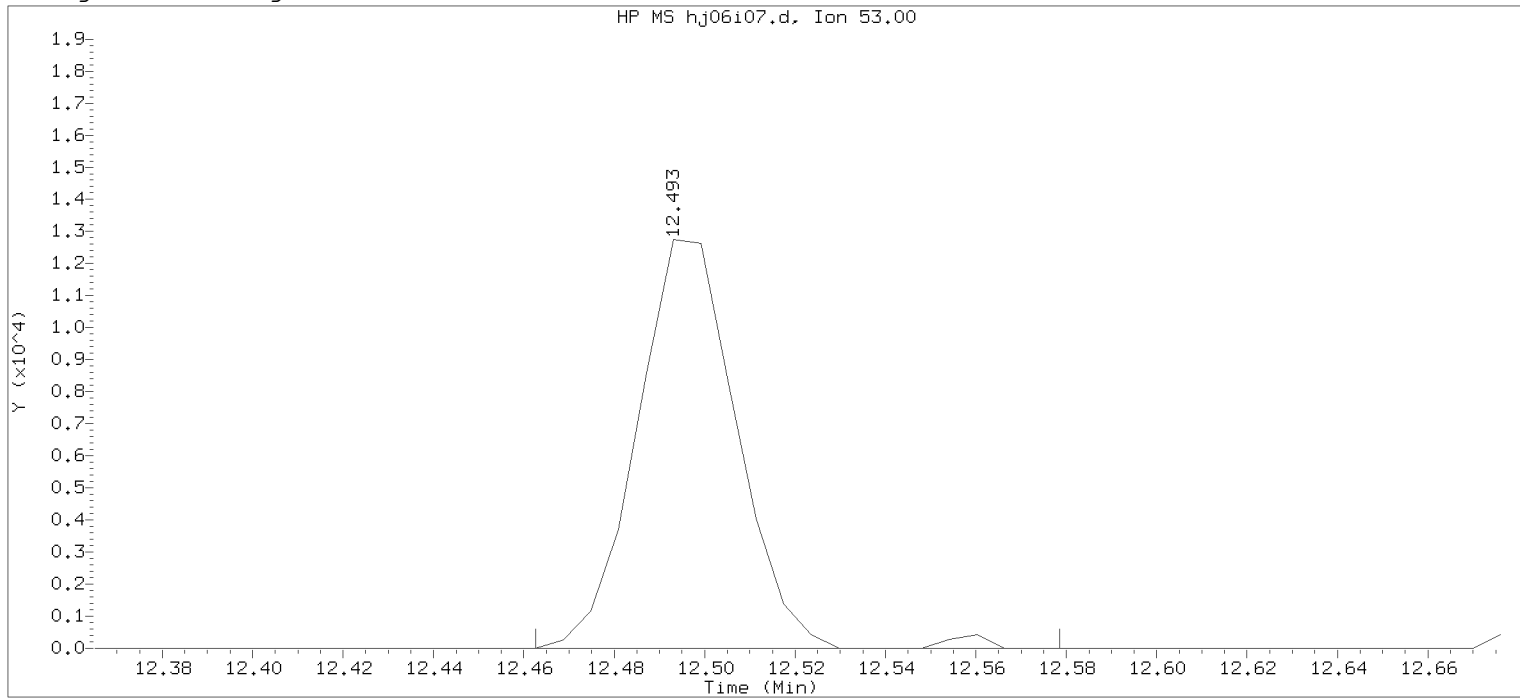
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

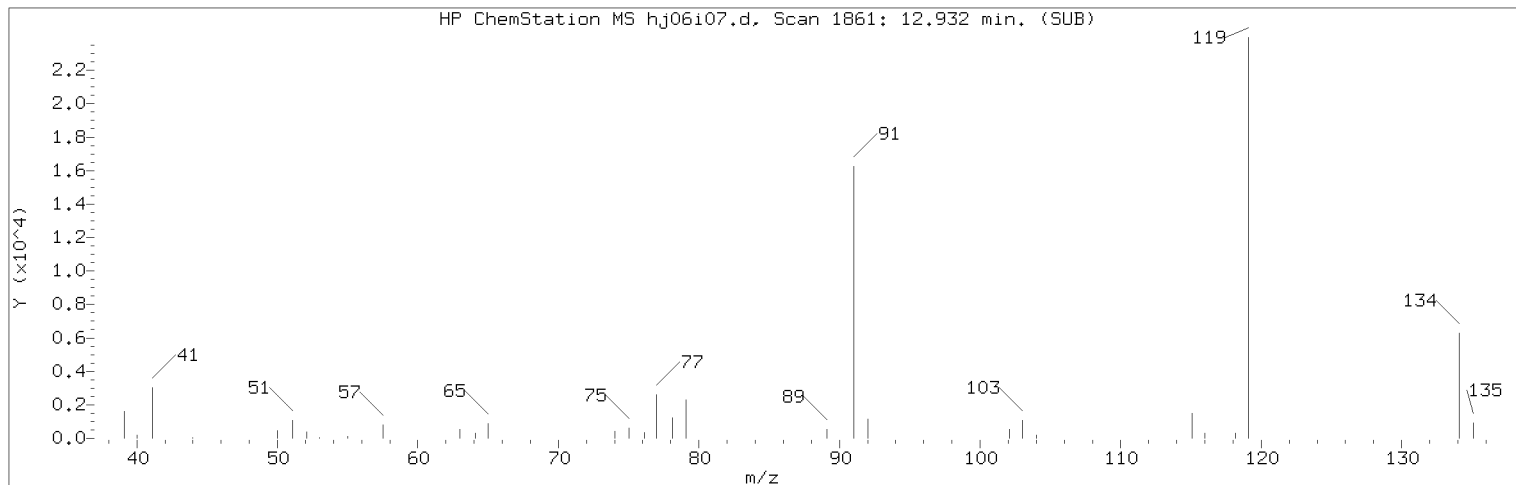
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

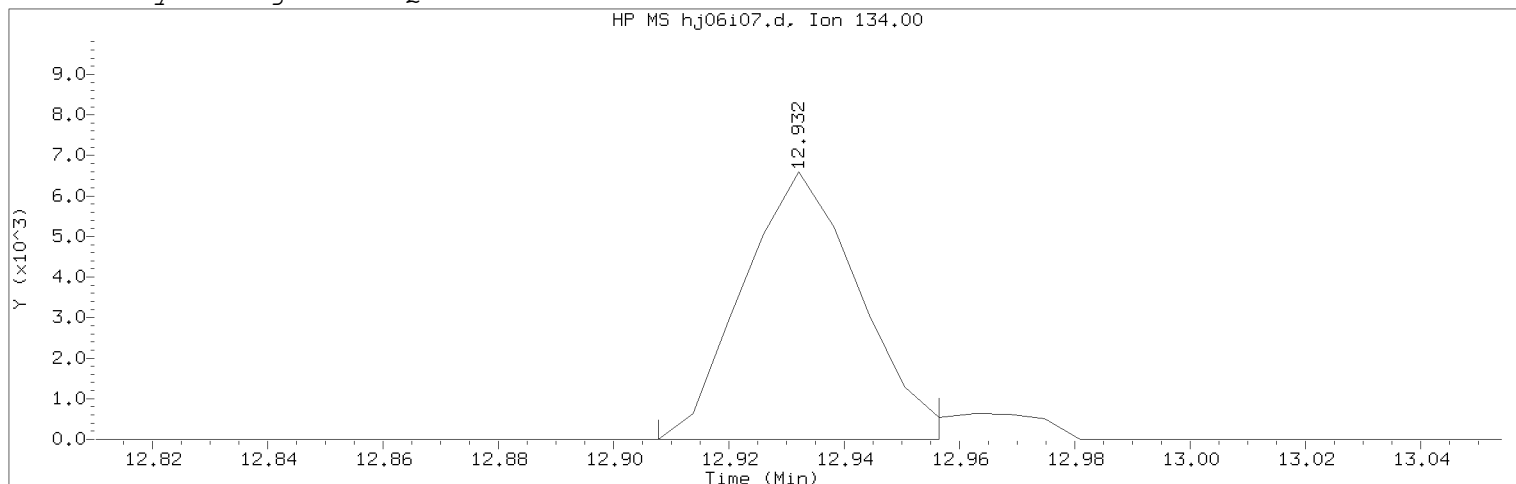
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area	: 19667	
On-column Amount (ng)	: 2.7364	
Integration start scan	: 1783	Integration stop scan: 1802
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RAE59 Page 2732 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

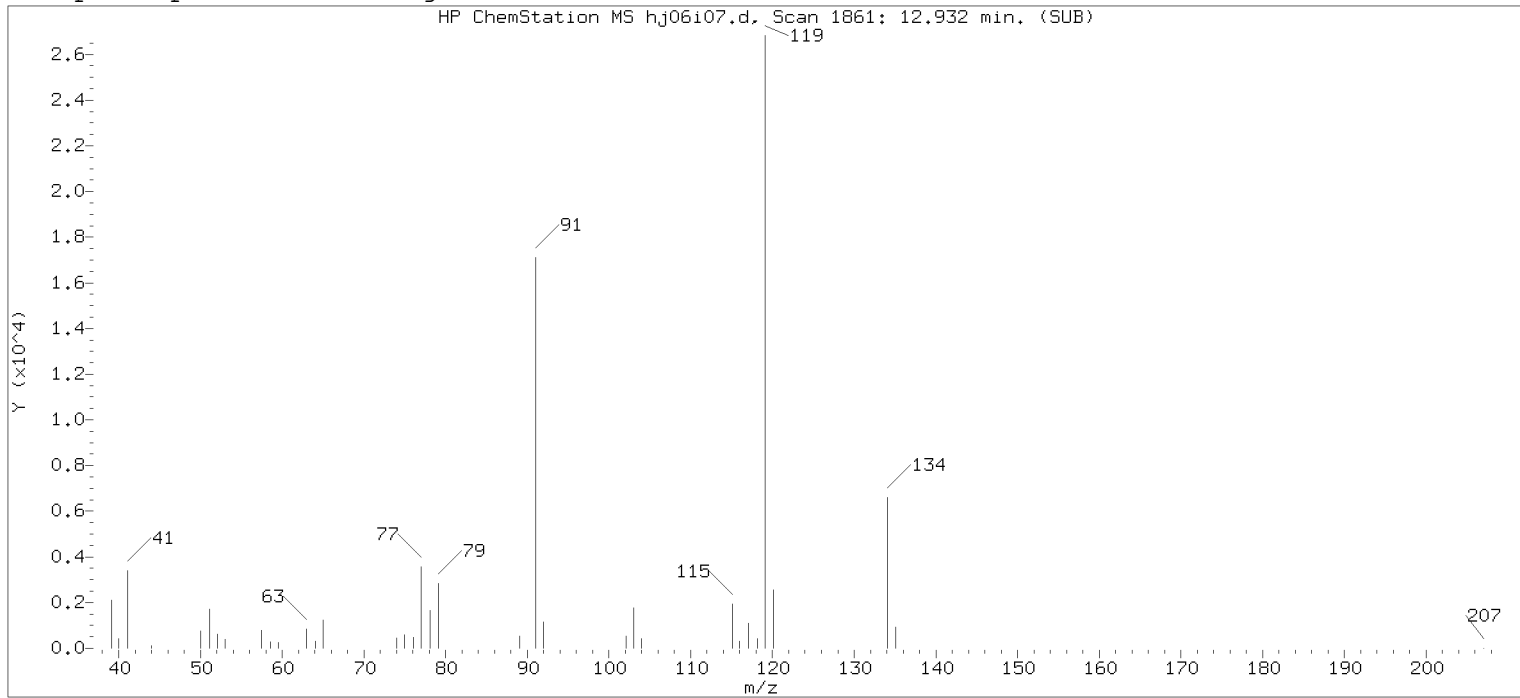
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1861	
Retention Time (minutes)	: 12.932	
Quant Ion	: 134.00	
Area (flag)	: 9273M	
On-Column Amount (ng)	: 0.1928	
Integration start scan	: 1856	Integration stop scan: 1864
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

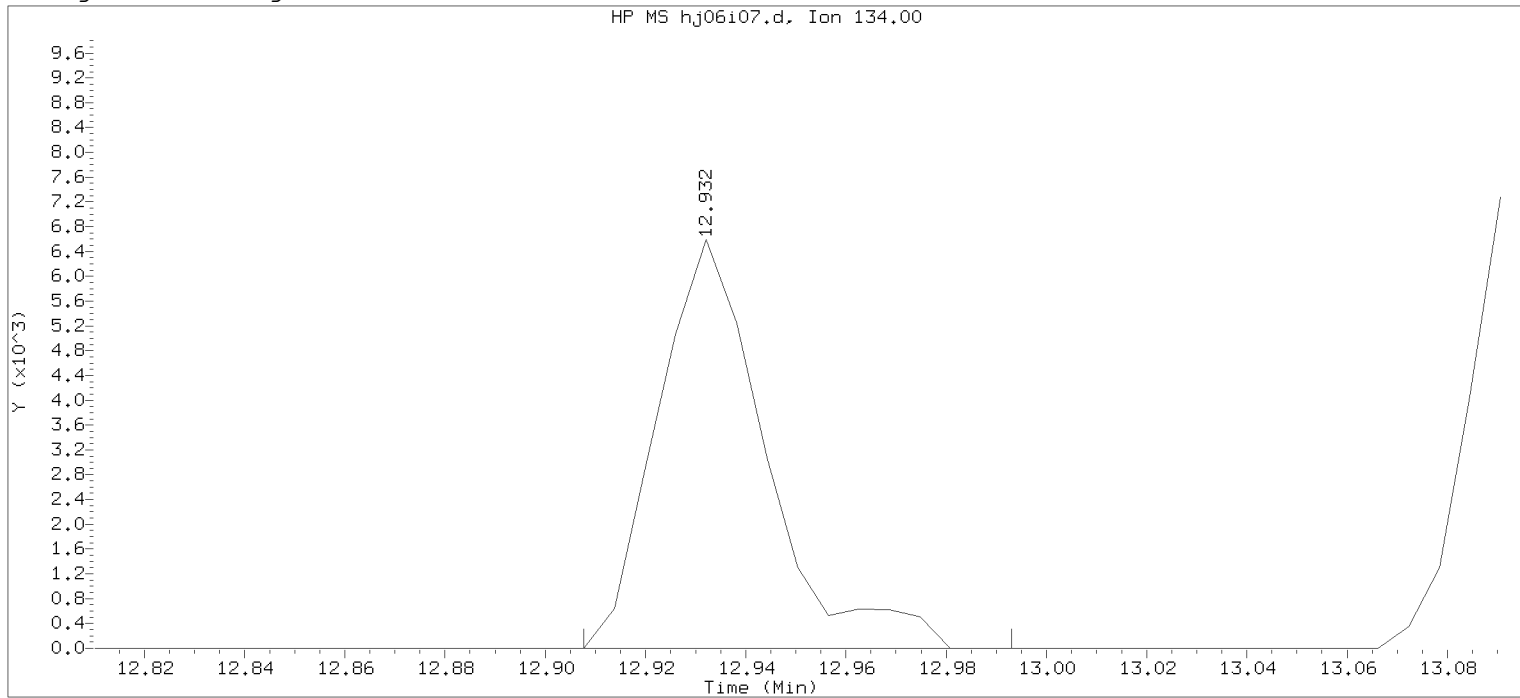
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

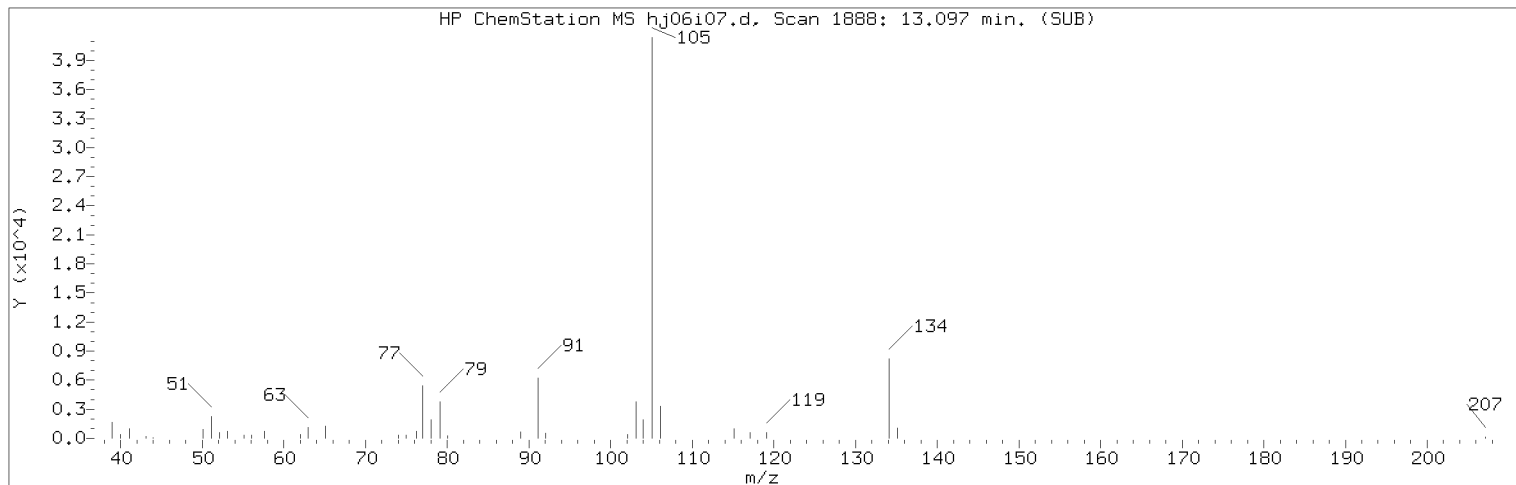
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

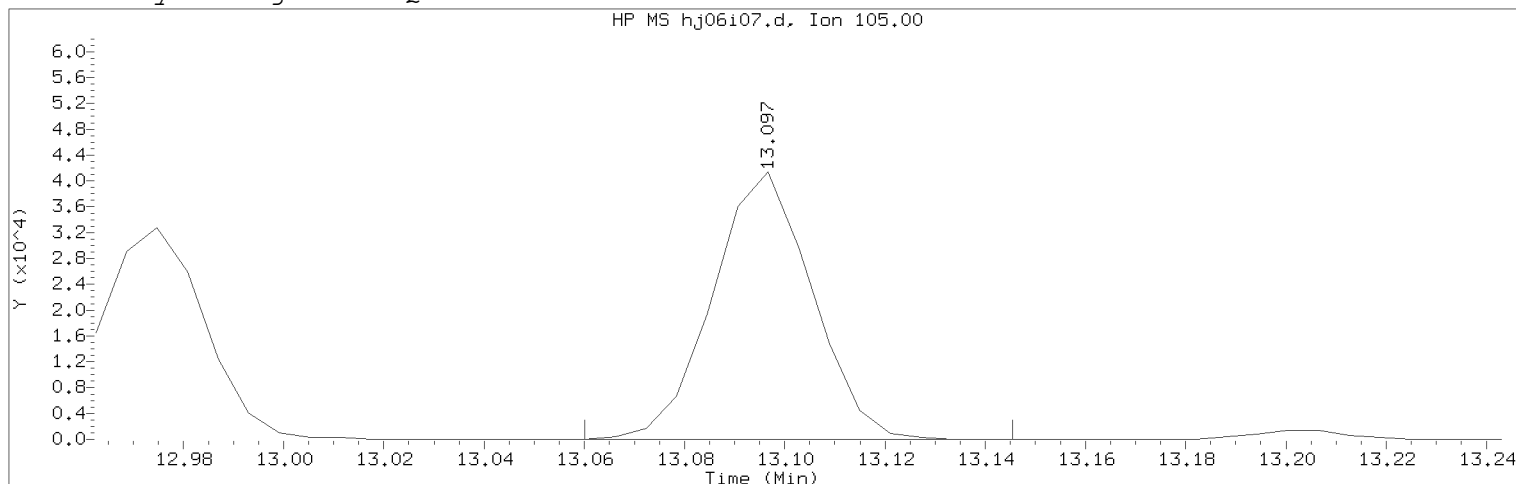
Lab Sample ID: VSTD0.2

Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1861	
Retention Time (minutes)	: 12.932	
Quant Ion	: 134.00	
Area	: 9916	
On-column Amount (ng)	: 0.2019	
Integration start scan	: 1856	Integration stop scan: 1870
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

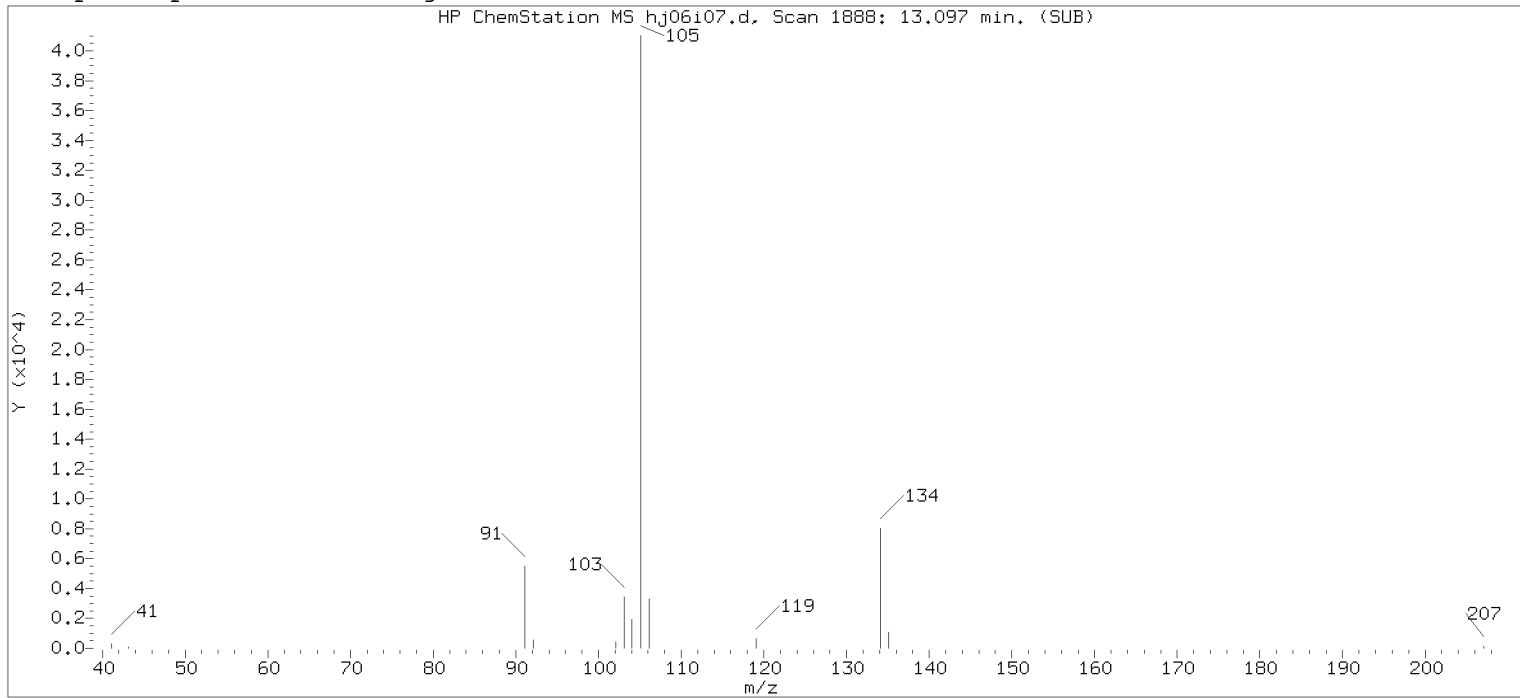
Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area (flag)	: 56997M	
On-Column Amount (ng)	: 0.1892	
Integration start scan	: 1881	Integration stop scan: 1895
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

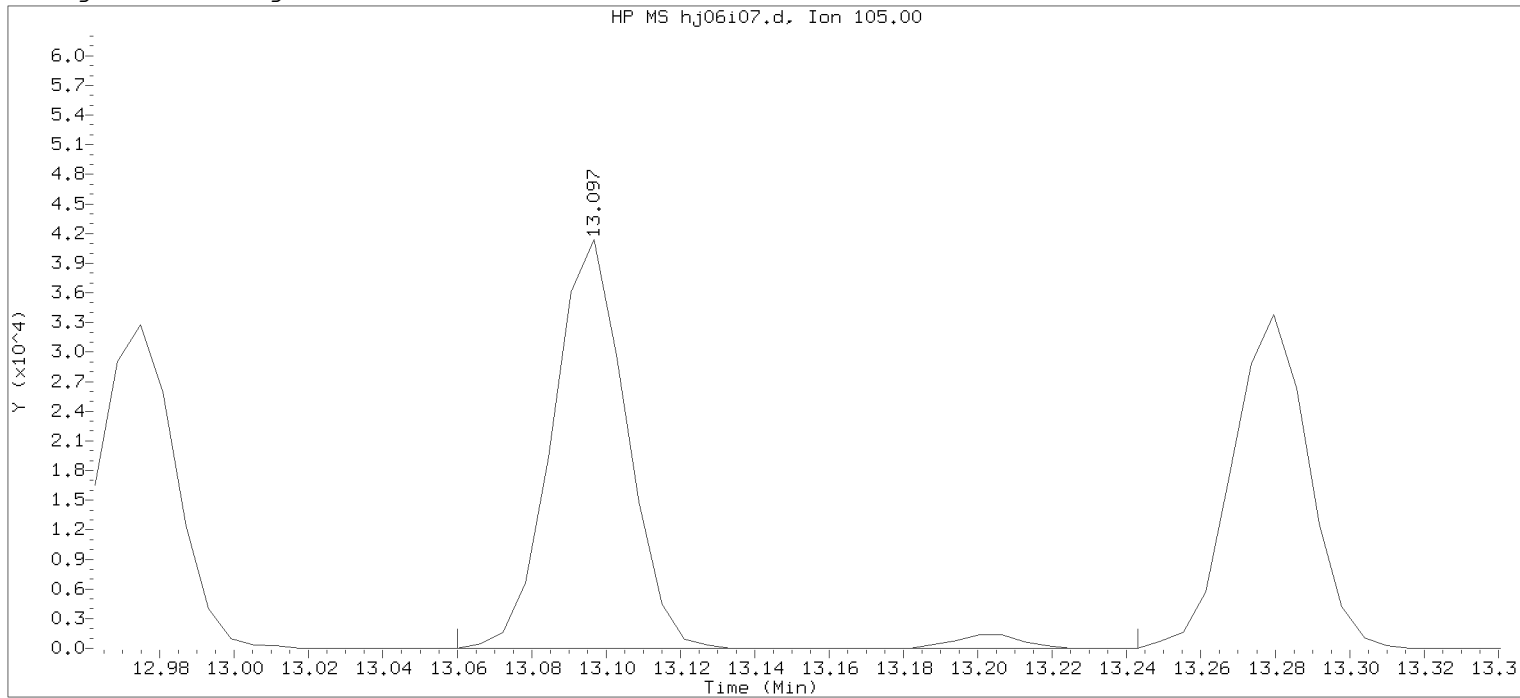
Analyst responsible for change:	Digitally signed by Sara E. Johnson
	on 01/15/2020 at 17:51.
	Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

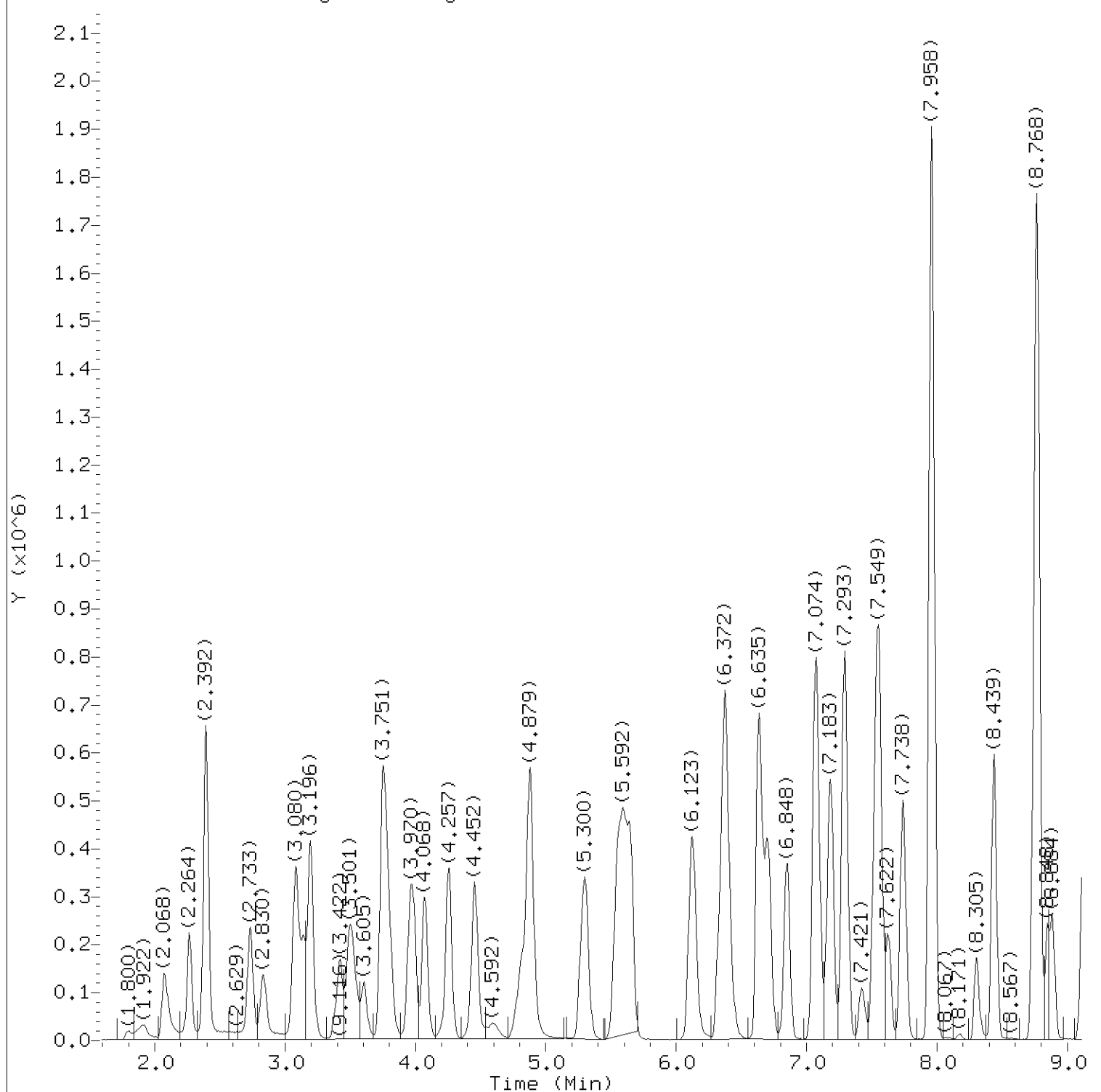
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area	: 58739	
On-column Amount (ng)	: 0.1934	
Integration start scan	: 1881	Integration stop scan: 1911
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE59 Page 2736 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
Analyst ID: JKH09052

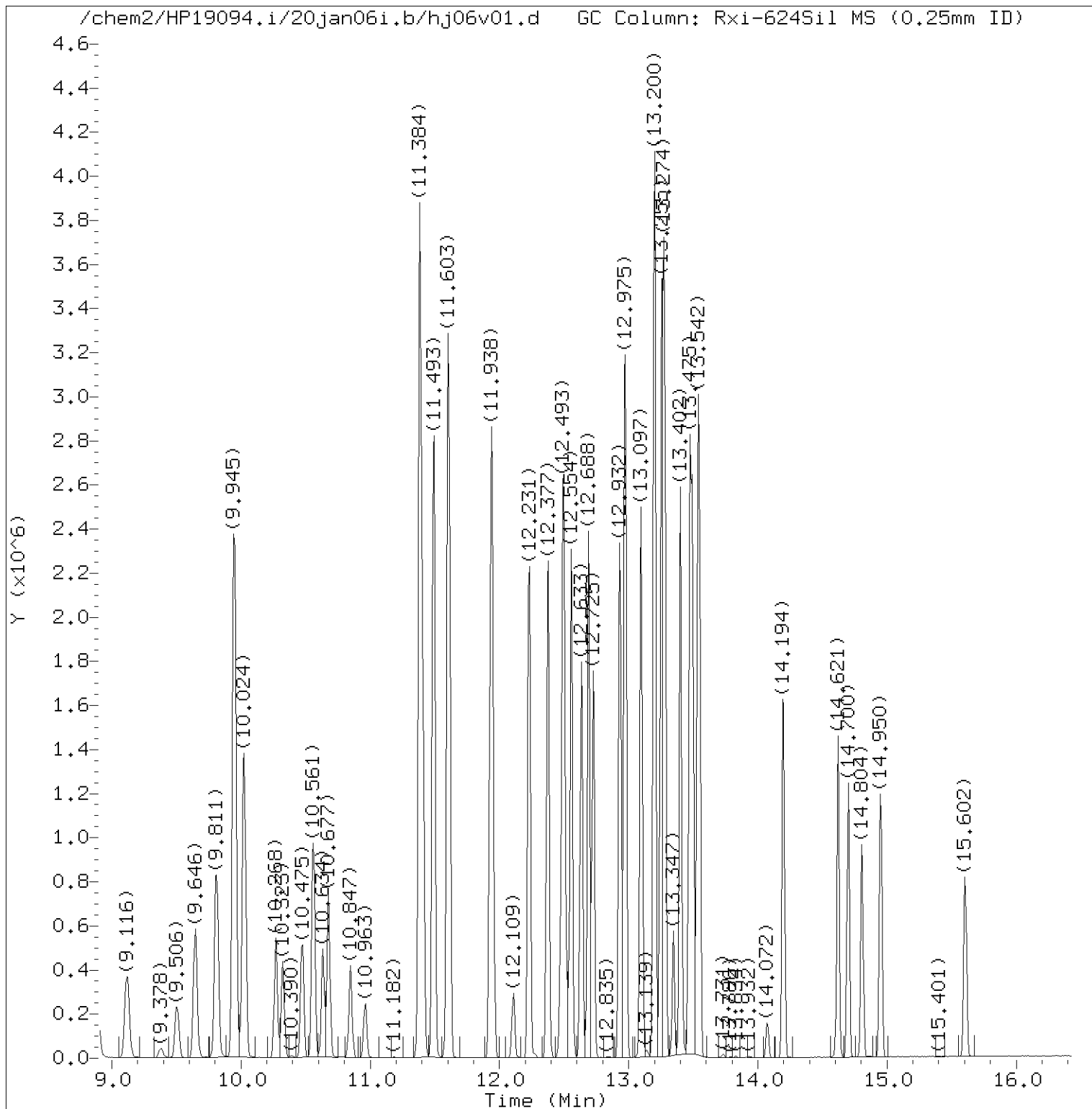
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
 Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.068	85	312946M	4.270
2) Chloromethane	(2)	2.264	50	331733	4.585
5) Vinyl Chloride	(2)	2.392	62	333154	4.841
6) 1,3-Butadiene	(2)	2.398	39	297778	5.477
7) Bromomethane	(2)	2.733	94	237855	4.824
8) Chloroethane	(2)	2.830	64	199931	5.016
9) Dichlorofluoromethane	(2)	3.080	67	465314	4.916
10) Trichlorofluoromethane	(2)	3.141	101	423736	5.395
11) Ethyl ether	(2)	3.422	59	175545	5.050
12) Freon 123a	(2)	3.501	67	318598	5.247
13) Acrolein	(1)	3.605	56	194313	36.882
15) 1,1-Dichloroethene	(2)	3.751	96	243211	5.091
16) Freon 113	(2)	3.782	101	261455	5.236
14) Acetone	(1)	3.788	43	242221M	34.072
17) Methyl Iodide	(2)	3.958	142	457754	4.965
18) Bromoethane	(2)	3.989	108	221120M	5.305
19) Carbon Disulfide	(2)	4.068	76	716993	4.906
22) Methyl Acetate	(1)	4.227	43	87739	4.891
23) Allyl Chloride	(2)	4.257	41	388062	4.782
24) Methylene Chloride	(2)	4.452	84	260231	5.061
27)*t-Butyl Alcohol-d10	(1)	4.464	65	116998M	50.000
29) t-Butyl Alcohol	(1)	4.592	59	120368	48.742
30) Acrylonitrile	(1)	4.806	53	219540	25.307
31) Methyl Tertiary Butyl Ether	(2)	4.861	73	570006	5.219
32) trans-1,2-Dichloroethene	(2)	4.885	96	264736	5.041
33) n-Hexane	(2)	5.300	57	378770	5.114
34) 1,1-Dichloroethane	(2)	5.537	63	491073	5.179
35) di-Isopropyl Ether	(2)	5.592	45	793854	5.083
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	420278	5.177
41) 1,2-Dichloroethene (Total)	(2)		96	581205	10.464
38) Ethyl t-butyl ether	(2)	6.123	59	751383	5.125
39) 2-Butanone	(1)	6.324	43	411075	36.981
40) cis-1,2-Dichloroethene	(2)	6.372	96	316469	5.423
42) 2,2-Dichloropropane	(2)	6.385	77	411925	5.106
43) Propionitrile	(1)	6.415	54	117128	38.467
46) Methacrylonitrile	(1)	6.635	67	432272	39.694
48) Bromochloromethane	(2)	6.702	128	119932	4.868
49) Tetrahydrofuran	(1)	6.708	71	81302	26.474

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
 Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.848	83	487364	5.267
51) \$Dibromofluoromethane	(2)	7.067	113	491795	10.118
52) 1,1,1-Trichloroethane	(2)	7.086	97	437394	5.083
53) Cyclohexane	(2)	7.183	56	459015	4.994
56) 1,1-Dichloropropene	(2)	7.293	75	376002	5.170
55) Carbon Tetrachloride	(2)	7.293	117	388052	5.259
57) Isobutyl Alcohol	(1)	7.421	41	96355	112.565
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	94524	10.034
59) Benzene	(2)	7.555	78	1085702	5.105
60) 1,2-Dichloroethane	(2)	7.628	62	277749M	5.065
61) t-Amyl methyl ether	(2)	7.738	73	651737	5.097
64) *Fluorobenzene	(2)	7.958	96	1955366	10.000
63) n-Heptane	(2)	7.964	43	374113M	4.815
66) n-Butanol	(1)	8.305	56	149877	217.493
68) Trichloroethene	(2)	8.439	95	289520	5.191
70) Methylcyclohexane	(2)	8.750	83	489000	4.894
71) 1,2-Dichloropropane	(2)	8.781	63	272288	5.175
72) Methyl Methacrylate	(1)	8.848	69	116054	5.298
73) 1,4-Dioxane	(1)	8.860	88	17432M	104.882
74) Dibromomethane	(2)	8.884	93	123299	5.126
75) Bromodichloromethane	(2)	9.122	83	343766	5.258
77) 2-Nitropropane	(1)	9.378	41	36462M	5.067
80) 1-Bromo-2-chloroethane	(2)	9.506	63	253199M	5.119
81) cis-1,3-Dichloropropene	(2)	9.646	75	400425	5.187
82) 4-Methyl-2-Pentanone	(1)	9.805	43	697252	25.450
83) \$Toluene-d8	(3)	9.945	98	1944618	10.029
84) Toluene	(3)	10.024	92	699711	5.137
86) 1,3-Dichloropropene (total)	(3)		75	721435	10.264
85) trans-1,3-Dichloropropene	(3)	10.268	75	321010	5.078
87) Ethyl Methacrylate	(3)	10.323	69	243318	4.965
89) 1,1,2-Trichloroethane	(3)	10.475	97	177313	5.181
90) Tetrachloroethene	(3)	10.561	166	325053	5.251
91) 1,3-Dichloropropane	(3)	10.634	76	297803	5.065
92) 2-Hexanone	(1)	10.677	43	493986	26.387
94) Dibromochloromethane	(3)	10.847	129	232732	5.311
96) 1,2-Dibromoethane	(3)	10.963	107	169893	5.195
97) 1-Chlorohexane	(3)	11.384	91	397229	4.837
98) *Chlorobenzene-d5	(3)	11.384	117	1455329	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002

RAF59 Page 740 of 1506

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
 Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

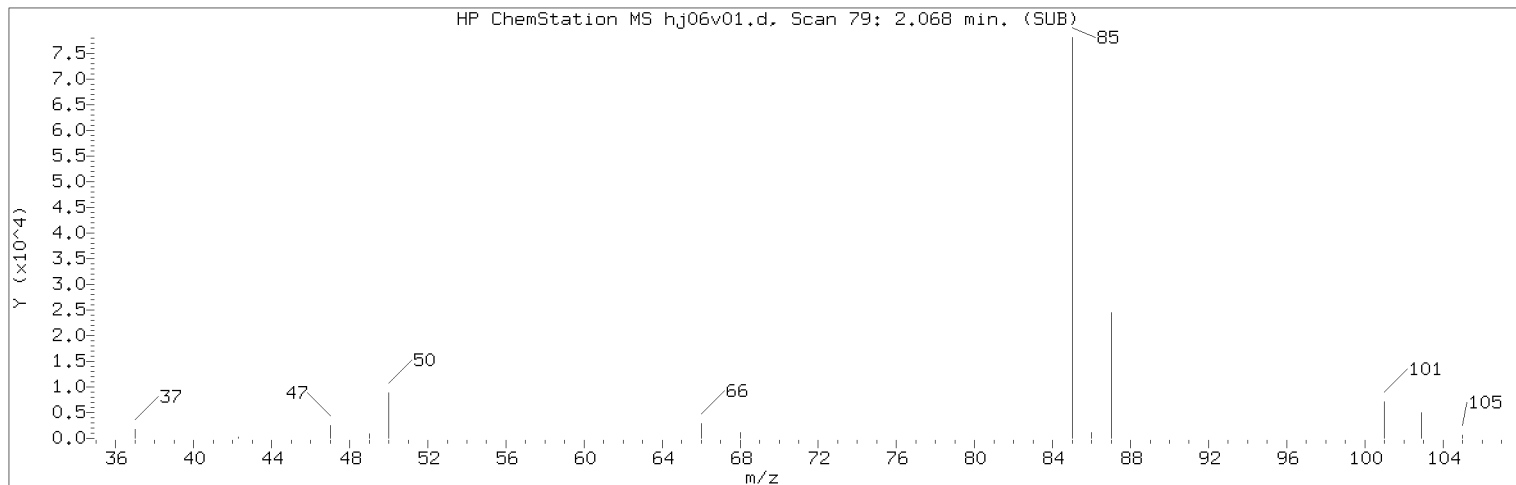
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
99) Chlorobenzene	(3)	11.408	112	767246	5.156
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	270472	5.110
101) Ethylbenzene	(3)	11.493	91	1370398	5.113
102) m+p-Xylene	(3)	11.603	106	1064975	10.392
106) Xylene (Total)	(3)		106	1584607	15.548
105) o-Xylene	(3)	11.932	106	519632	5.156
107) Styrene	(3)	11.945	104	854957	5.228
108) Bromoform	(3)	12.109	173	131963	5.167
109) Isopropylbenzene	(3)	12.231	105	1427155	5.225
112) \$4-Bromofluorobenzene	(3)	12.377	95	715490	9.974
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	205652	5.125
115) Bromobenzene	(4)	12.493	156	313664	5.171
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	274302	26.653
117) 1,2,3-Trichloropropane	(4)	12.524	110	57312M	5.333
118) n-Propylbenzene	(4)	12.554	91	1664747	5.256
120) 2-Chlorotoluene	(4)	12.633	126	324946	5.200
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	1189822	5.178
123) 4-Chlorotoluene	(4)	12.725	126	321514	5.155
126) tert-Butylbenzene	(4)	12.932	134	248450	5.228
127) Pentachloroethane	(4)	12.969	167	199764	4.932
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	1209946	5.099
129) sec-Butylbenzene	(4)	13.097	105	1556811	5.229
133) p-Isopropyltoluene	(4)	13.200	119	1334943	5.210
132) 1,3-Dichlorobenzene	(4)	13.200	146	622186	5.147
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	768618	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	615335	5.218
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	494653	4.999
137) Benzyl Chloride	(4)	13.347	126	76618	4.542
139) n-Butylbenzene	(4)	13.493	92	656303	5.181
140) 1,2-Dichlorobenzene	(4)	13.530	146	556271	5.220
144) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	31589	5.382
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	489765	5.177
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	411933	5.192
147) Hexachlorobutadiene	(4)	14.700	225	215902	5.214
148) Naphthalene	(4)	14.804	128	709427	5.124
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	351724	5.193

M = Compound was manually integrated.

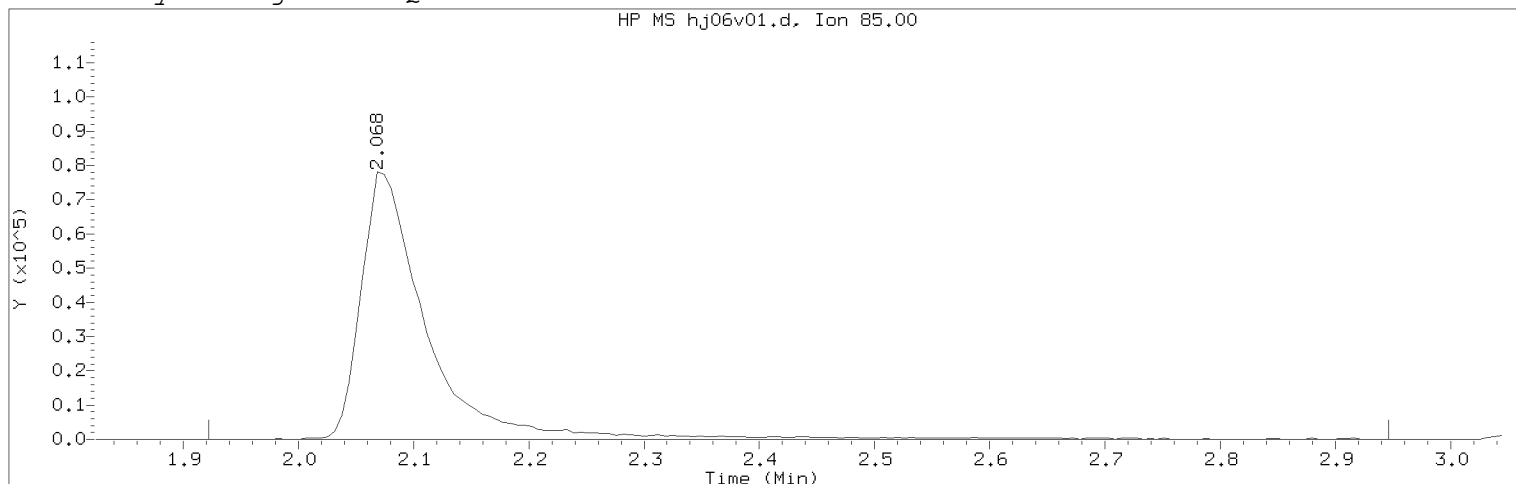
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

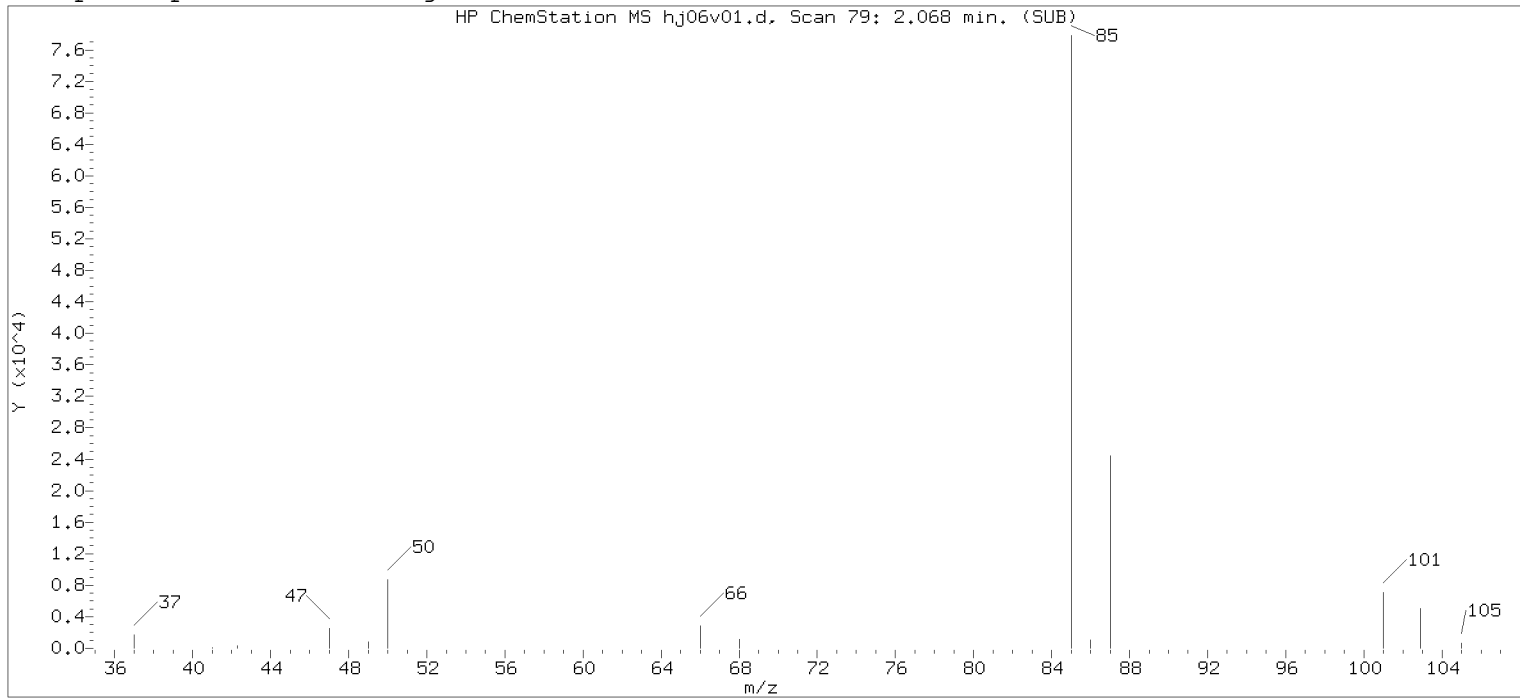
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 79
Retention Time (minutes): 2.068
Quant Ion : 85.00
Area (flag) : 312946M
On-Column Amount (ng) : 4.2695
Integration start scan : 54 Integration stop scan: 222
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

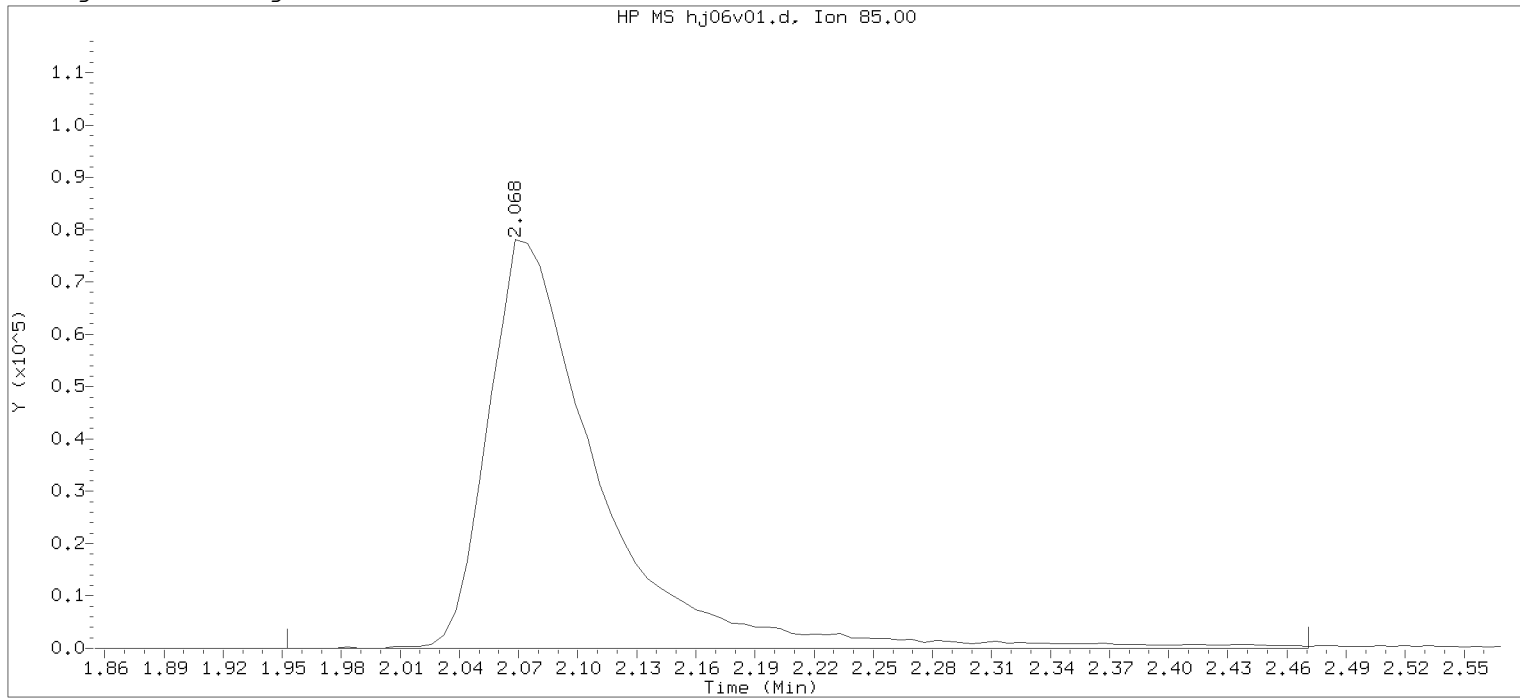
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

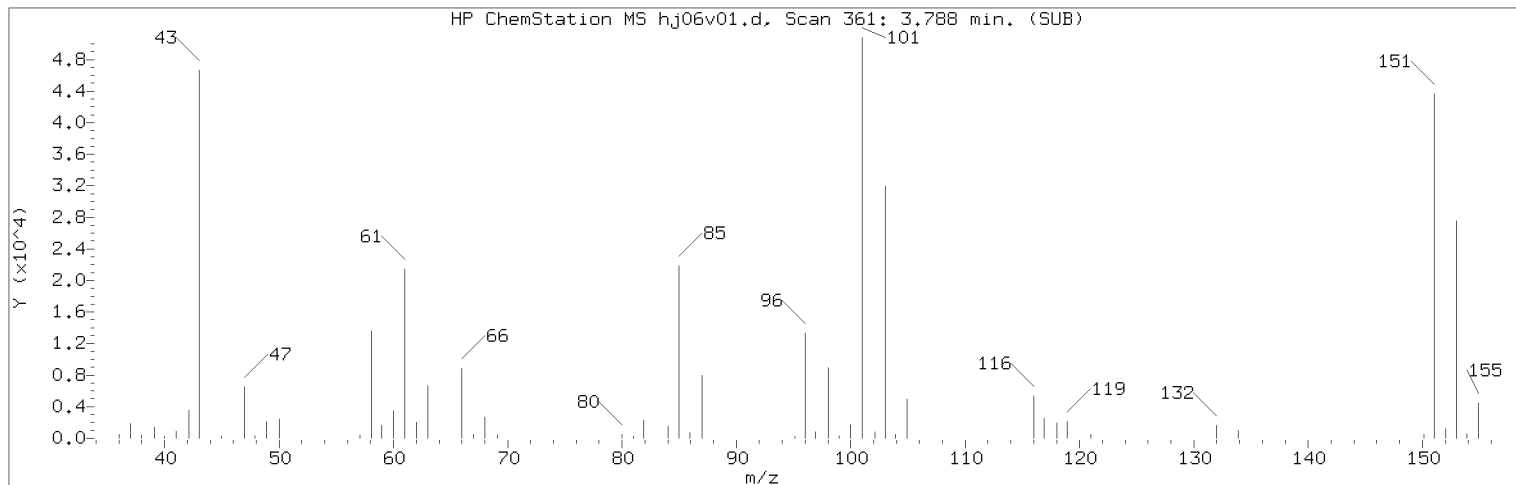
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

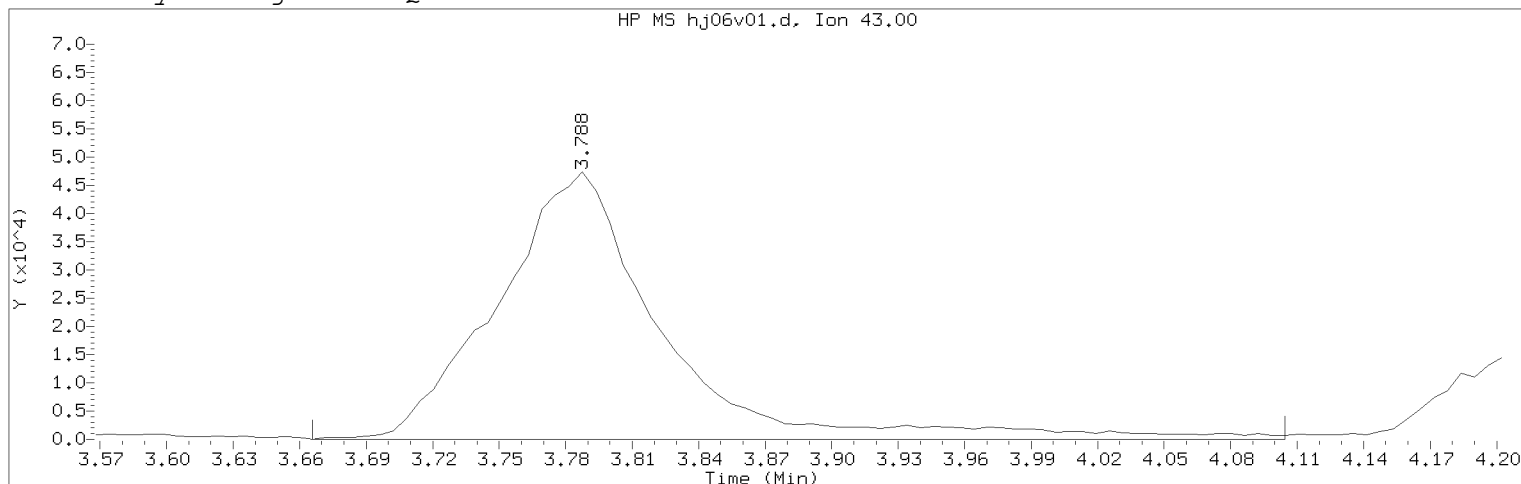
Lab Sample ID: ICVH00

Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 79	
Retention Time (minutes)	: 2.068	
Quant Ion	: 85.00	
Area	: 306455	
On-column Amount (ng)	: 4.1810	
Integration start scan	: 59	Integration stop scan: 144
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area (flag) : 242221M
 On-Column Amount (ng) : 34.0723
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 412
 Y at integration end: 0

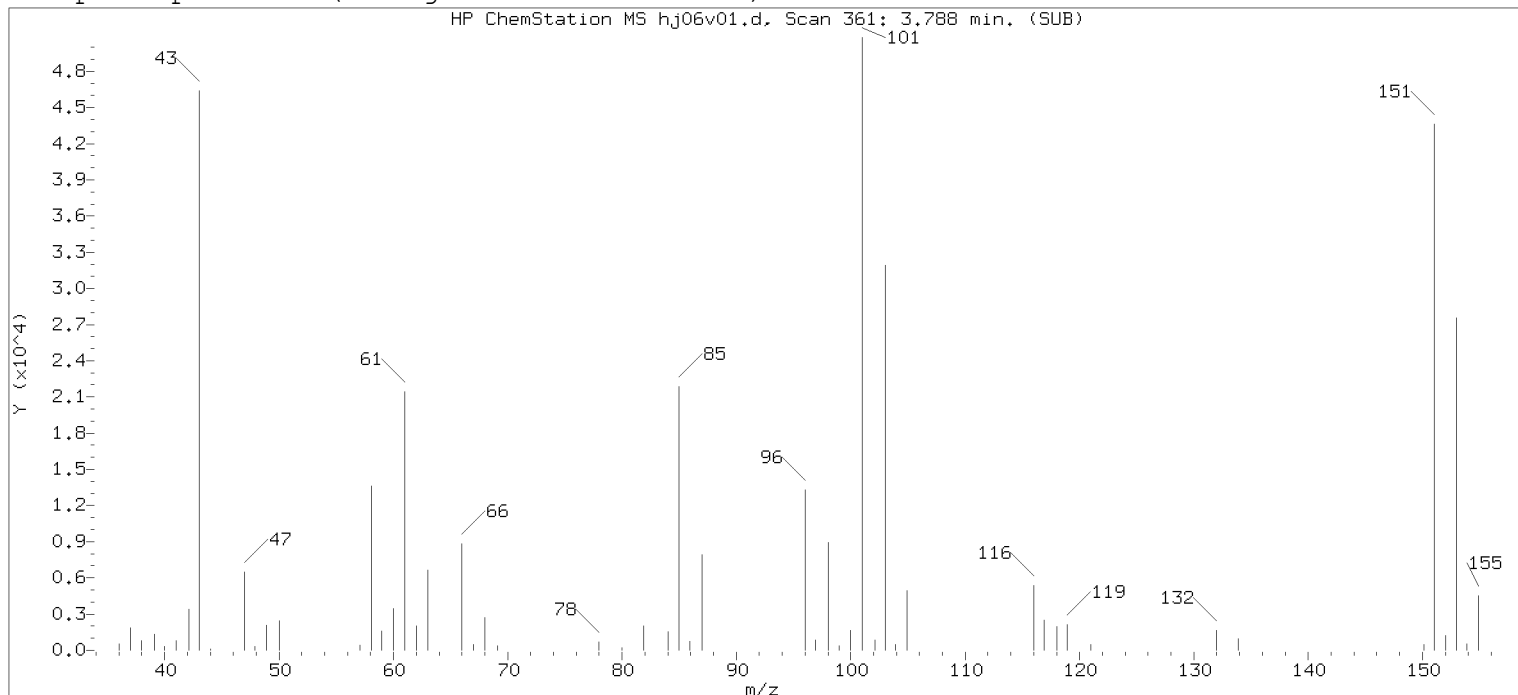
Reason for manual integration: improper integration

Analyst responsible for change:

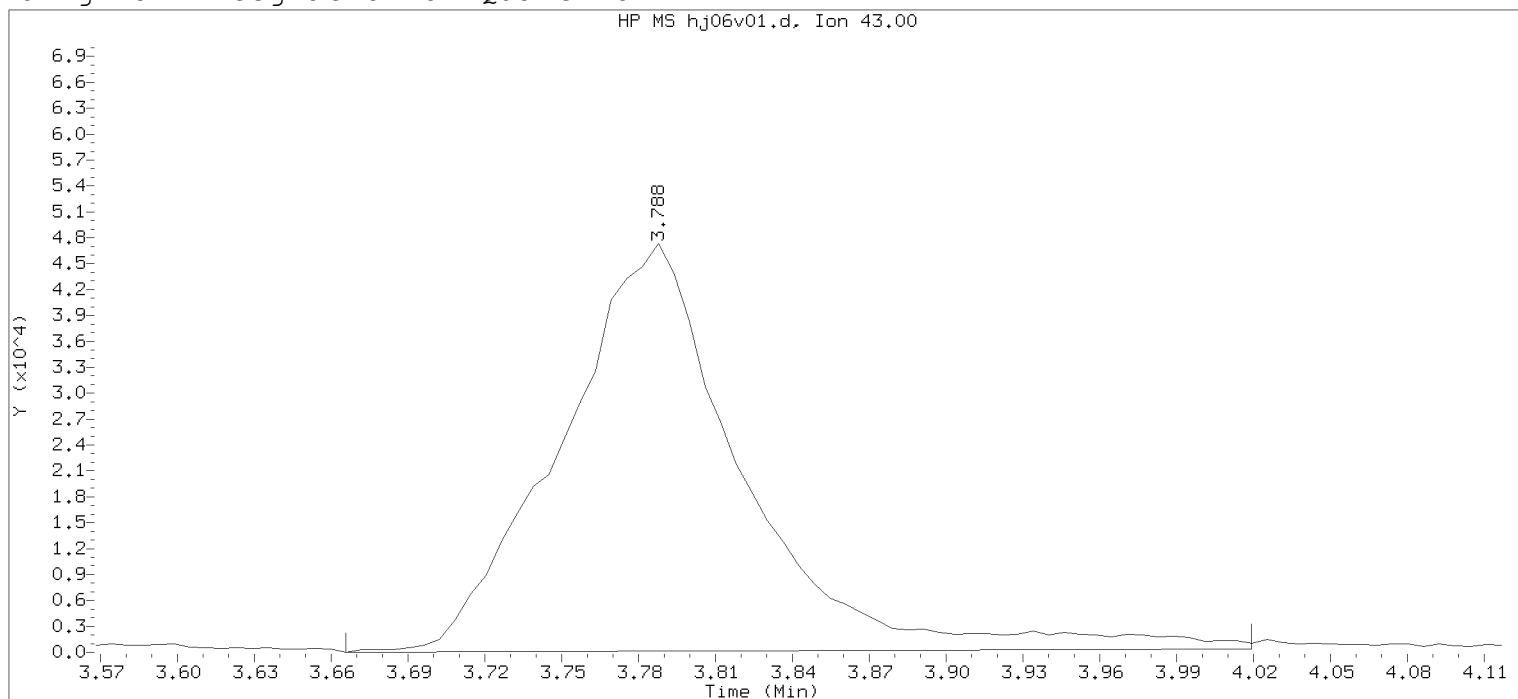
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:52.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

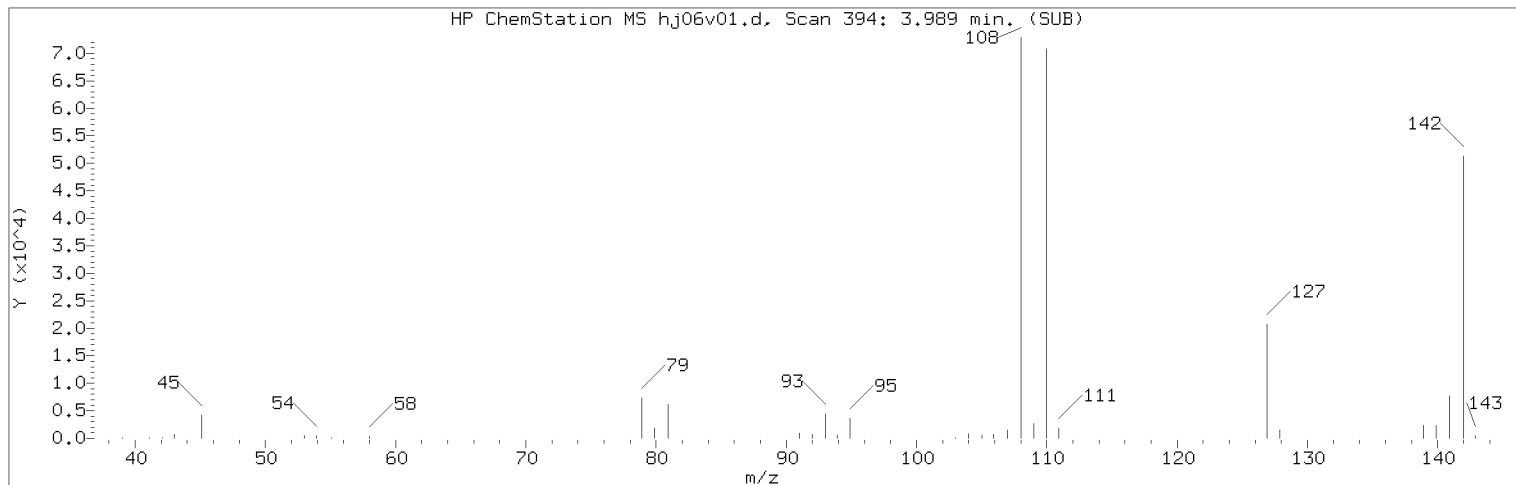
Lab Sample ID: ICVH00

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area : 233636
 On-column Amount (ng) : 33.2885
 Integration start scan : 340
 Y at integration start : 0

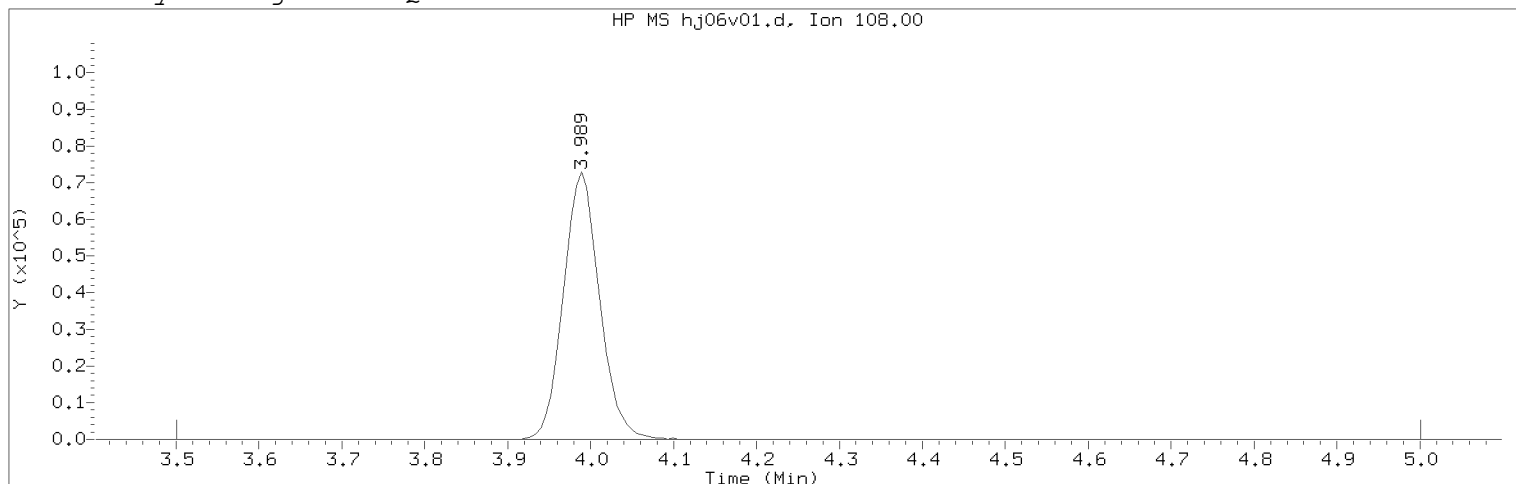
Integration stop scan: 398
 Y at integration end: 335

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 Target 3.5 esignature user RAE59 Page 2745 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

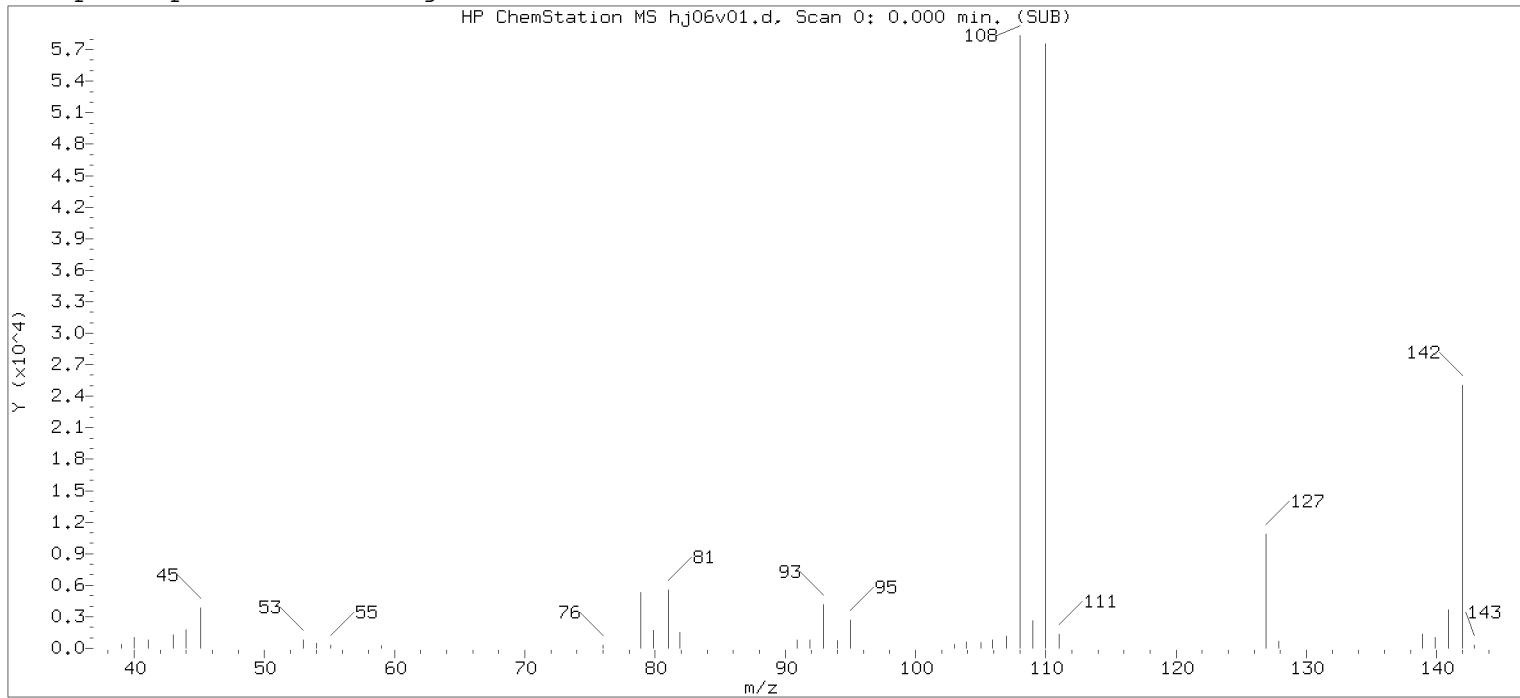
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 221120M	
On-Column Amount (ng)	: 5.3053	
Integration start scan	: 313	Integration stop scan: 559
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

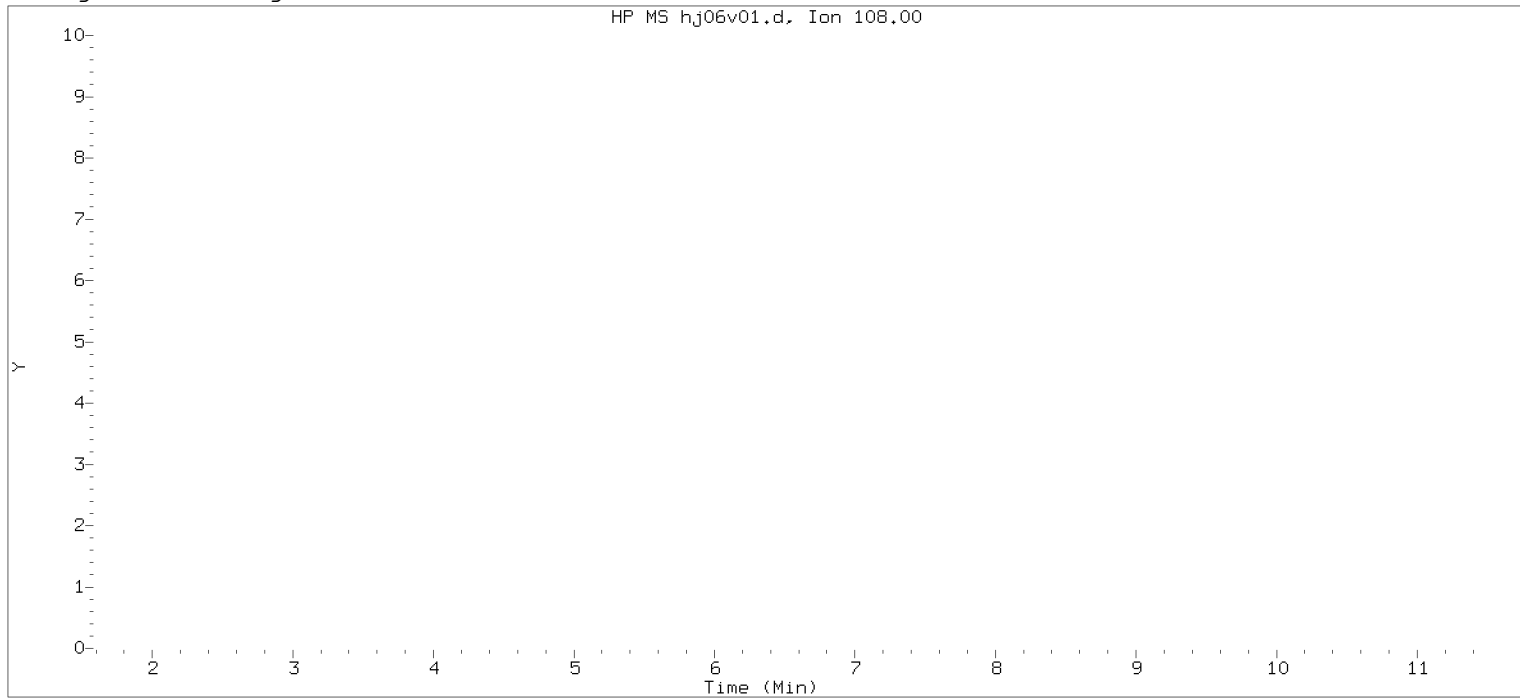
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

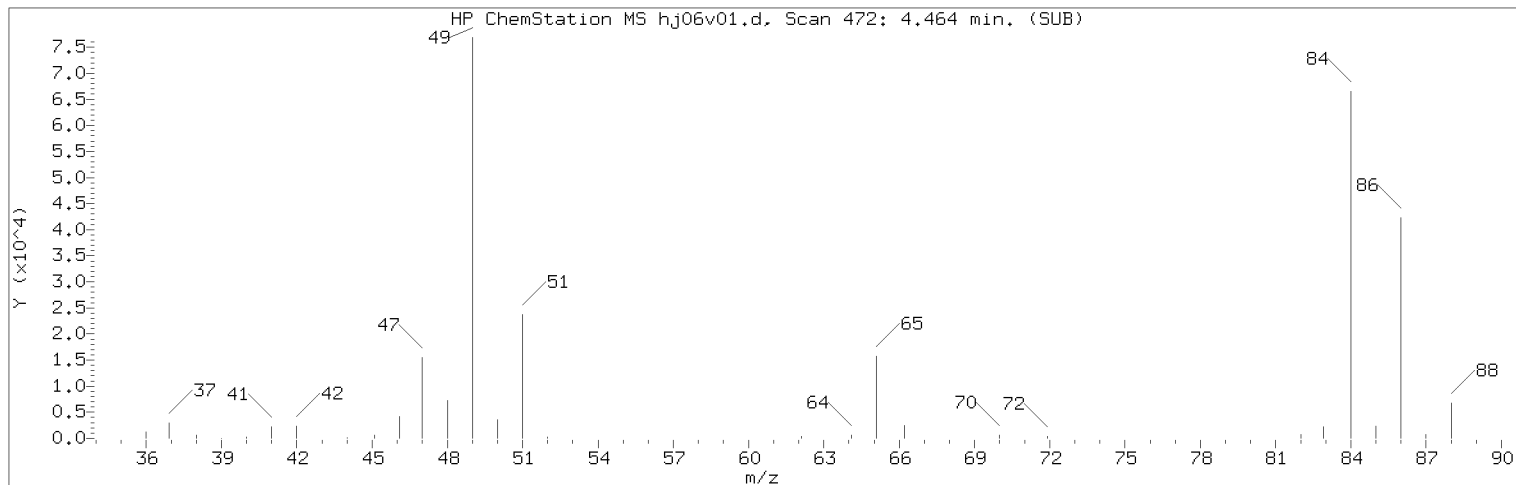
Sample Name: ICVH00

Lab Sample ID: ICVH00

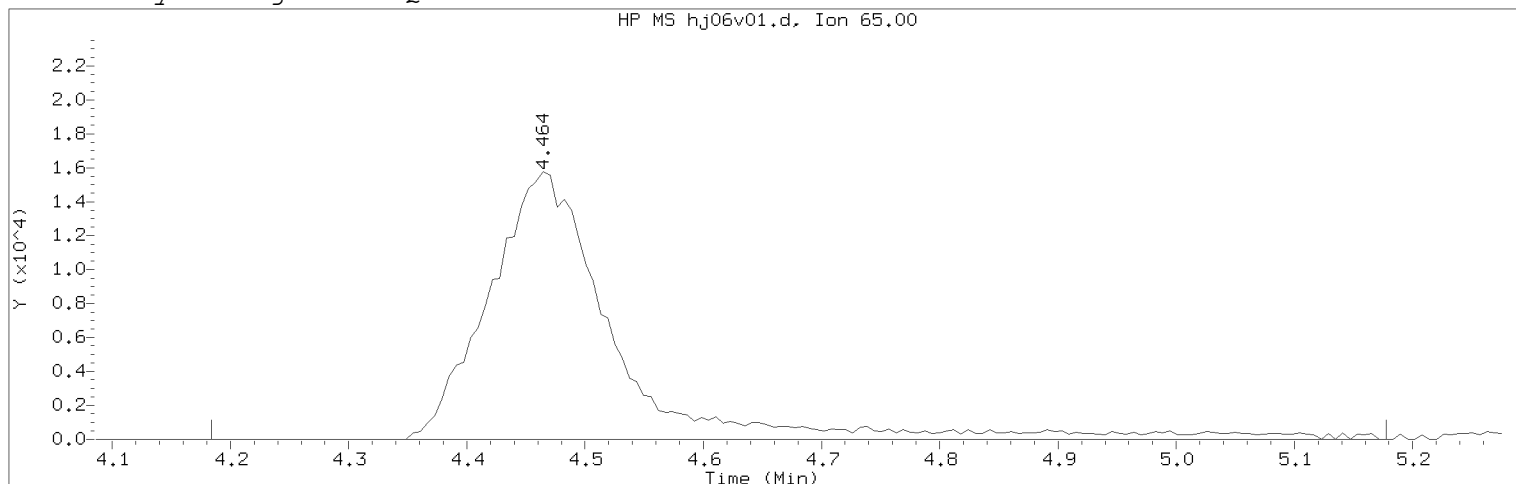
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 1112014848 Integration stop scan: 195124375
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RAE59 Page 2742 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

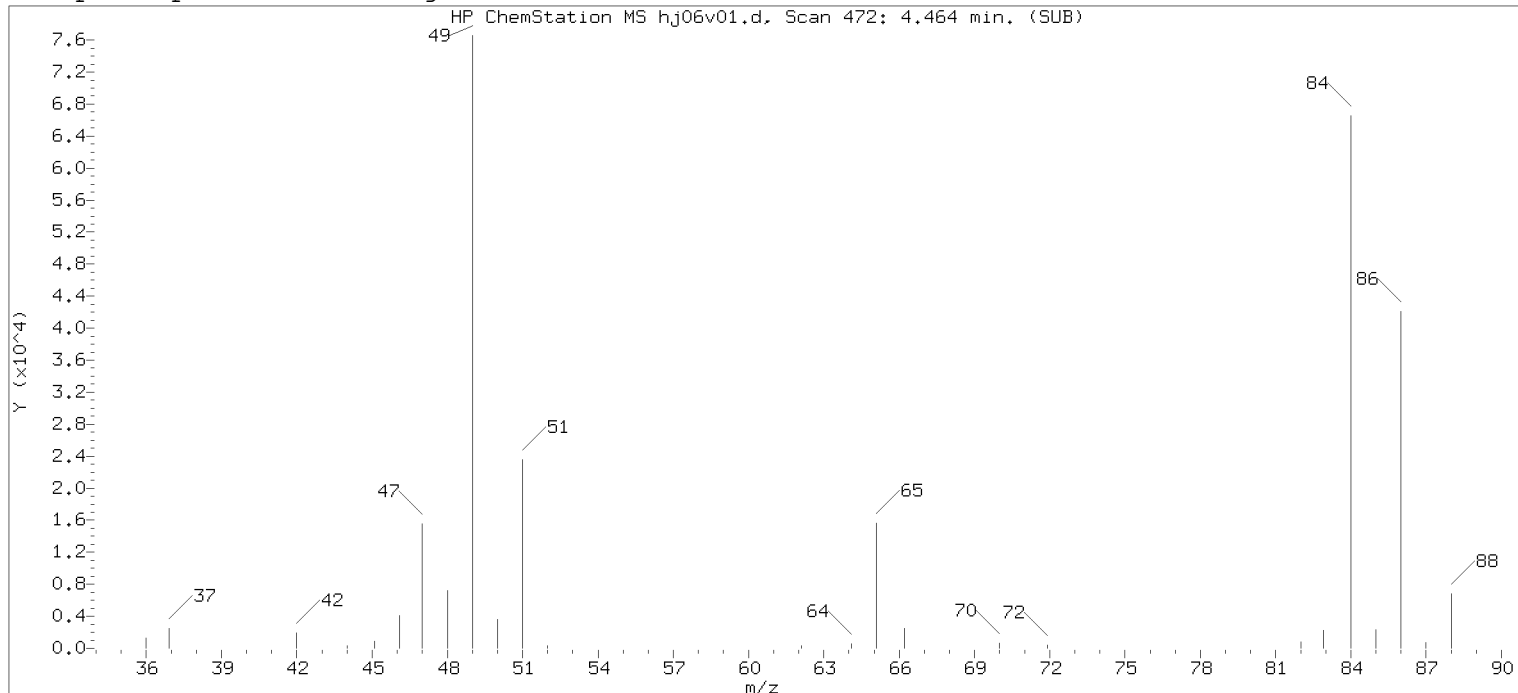
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 472	
Retention Time (minutes)	: 4.464	
Quant Ion	: 65.00	
Area (flag)	: 116998M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 425	Integration stop scan: 588
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

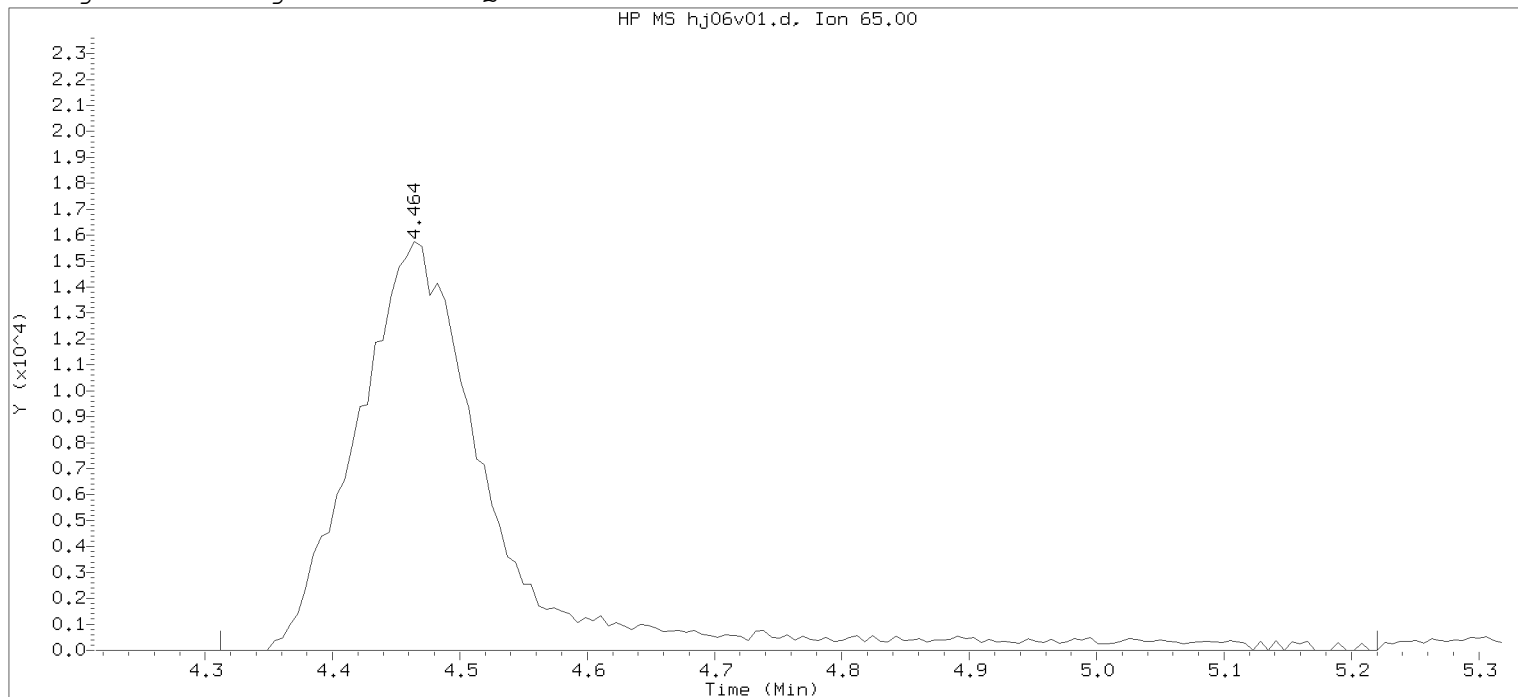
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 472

Retention Time (minutes): 4.464

Quant Ion : 65.00

Area : 117211

On-column Amount (ng) : 50.0000

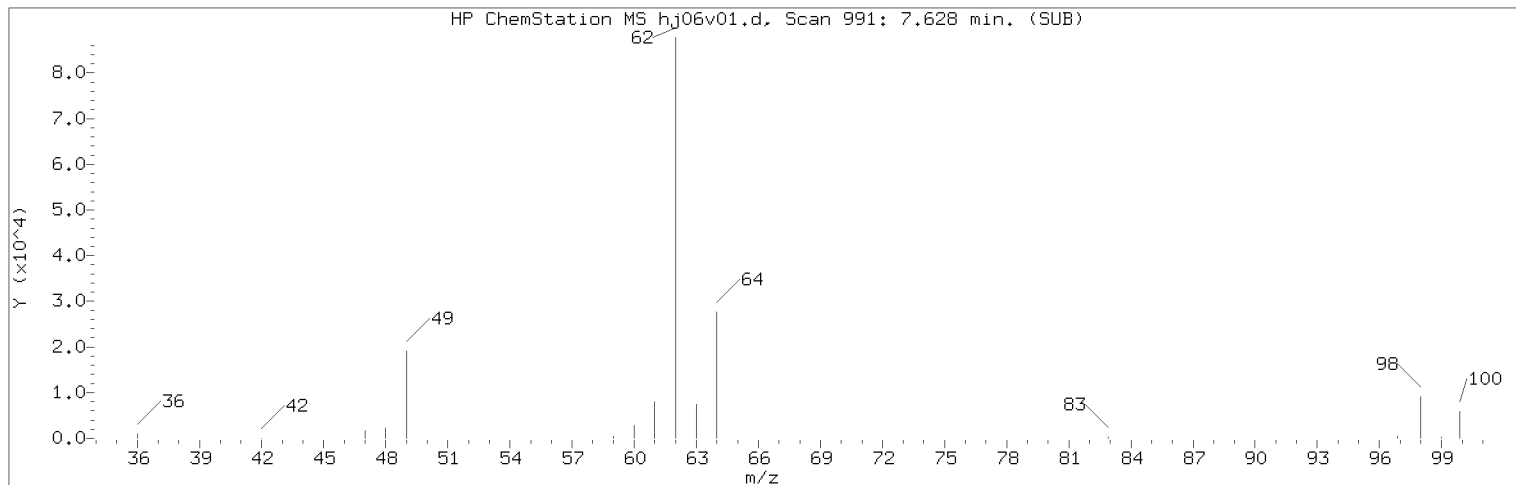
Integration start scan : 446 Integration stop scan: 595

Y at integration start : 0 Y at integration end: 0

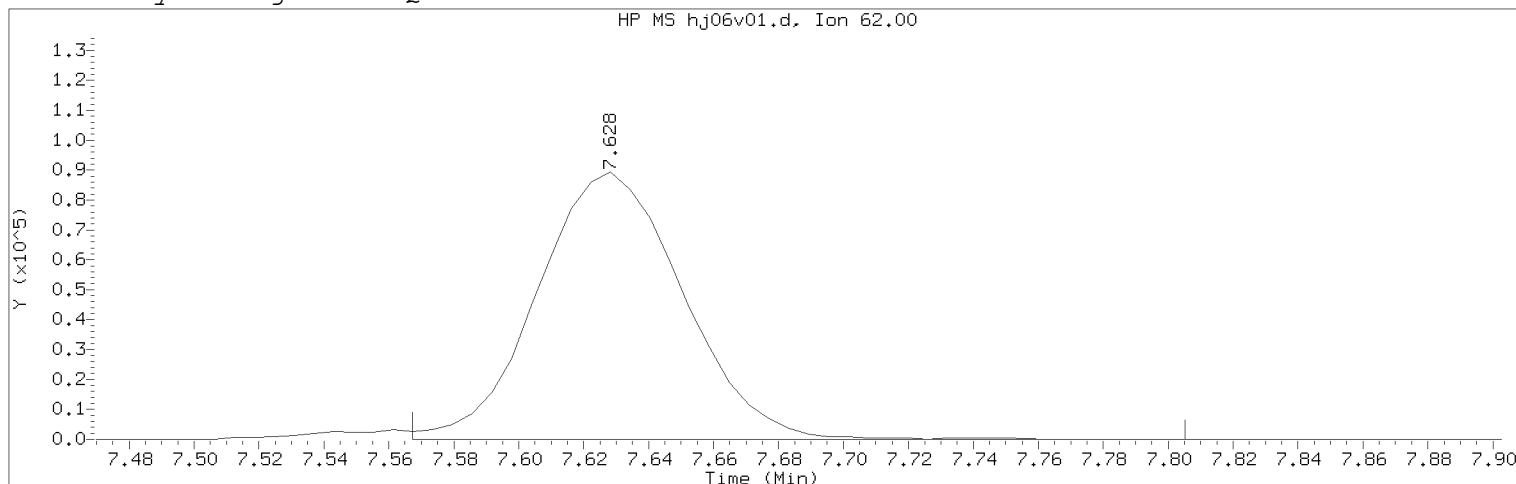
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.

Target 3.5 esignature user RAE59 Page 2749 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area (flag)	: 277749M	
On-Column Amount (ng)	: 5.0652	
Integration start scan	: 980	Integration stop scan: 1019
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

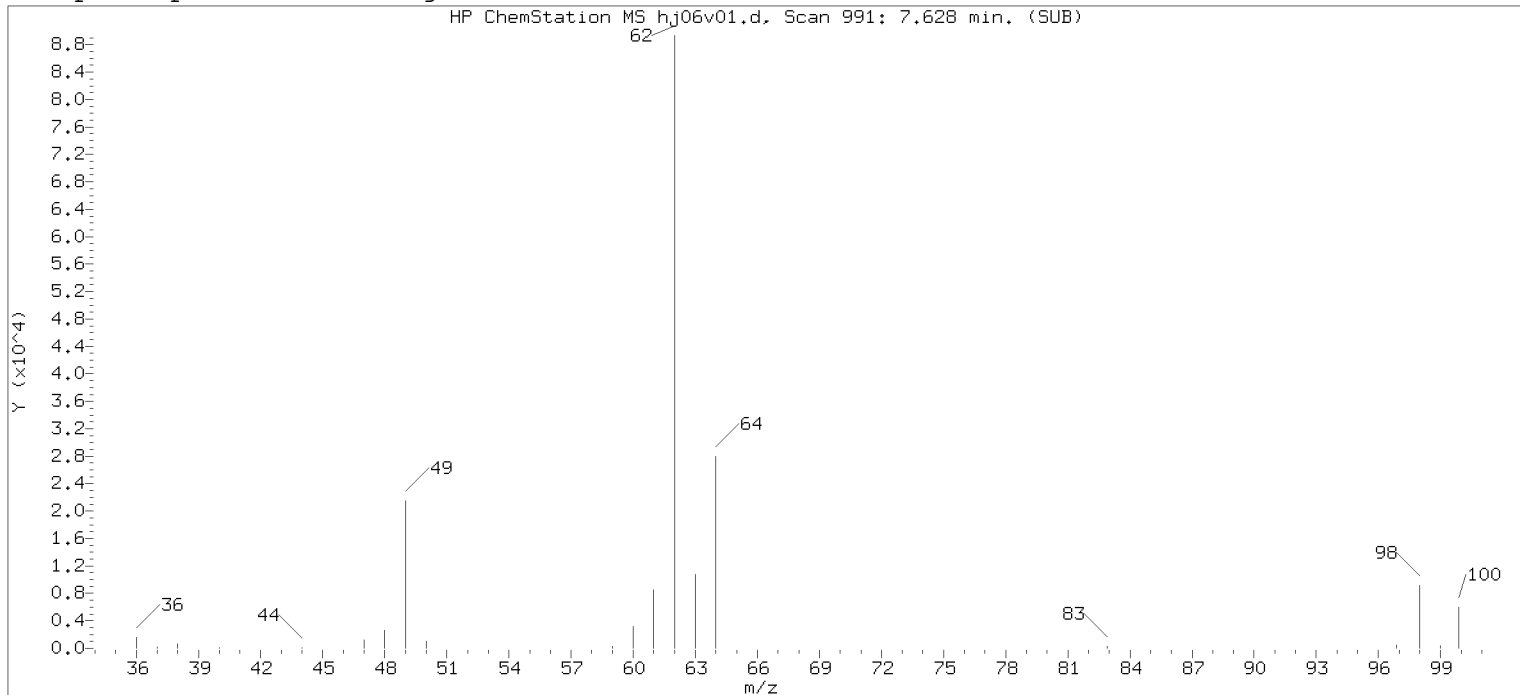
Analyst responsible for change:

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.

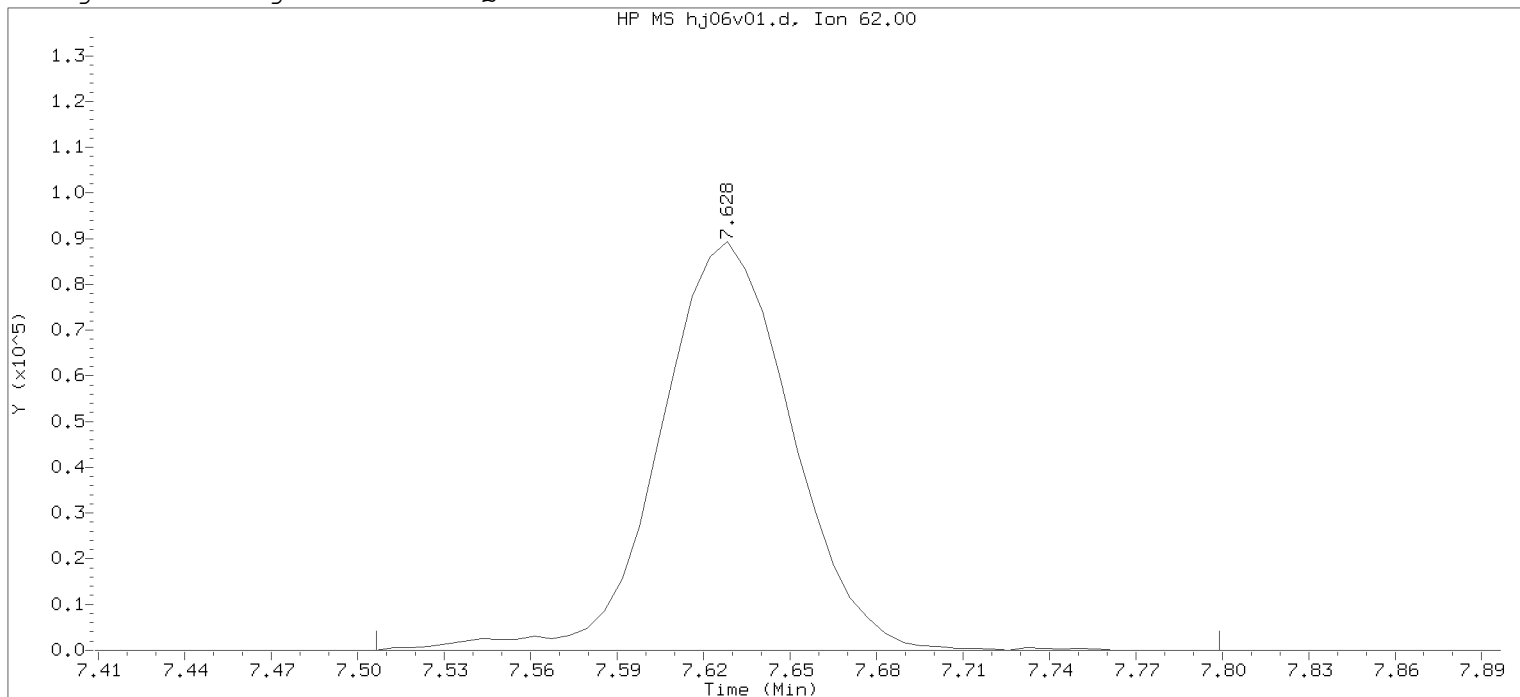
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

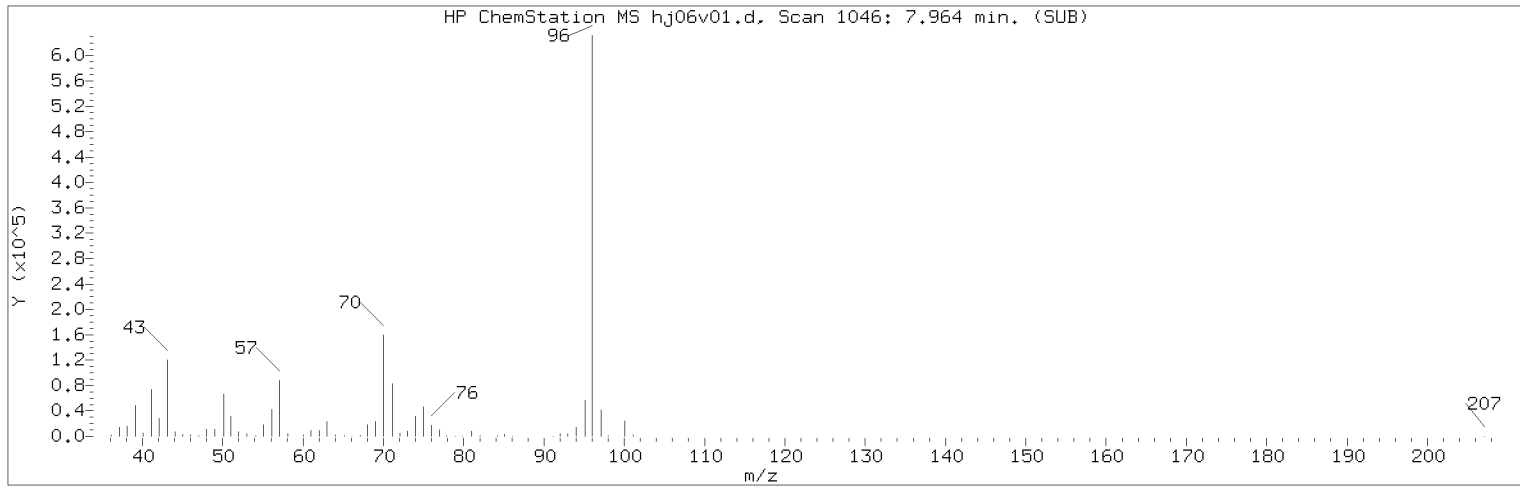
Lab Sample ID: ICVH00

Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area	: 283519	
On-column Amount (ng)	: 5.1704	
Integration start scan	: 970	Integration stop scan: 1018
Y at integration start	: 0	Y at integration end: 0

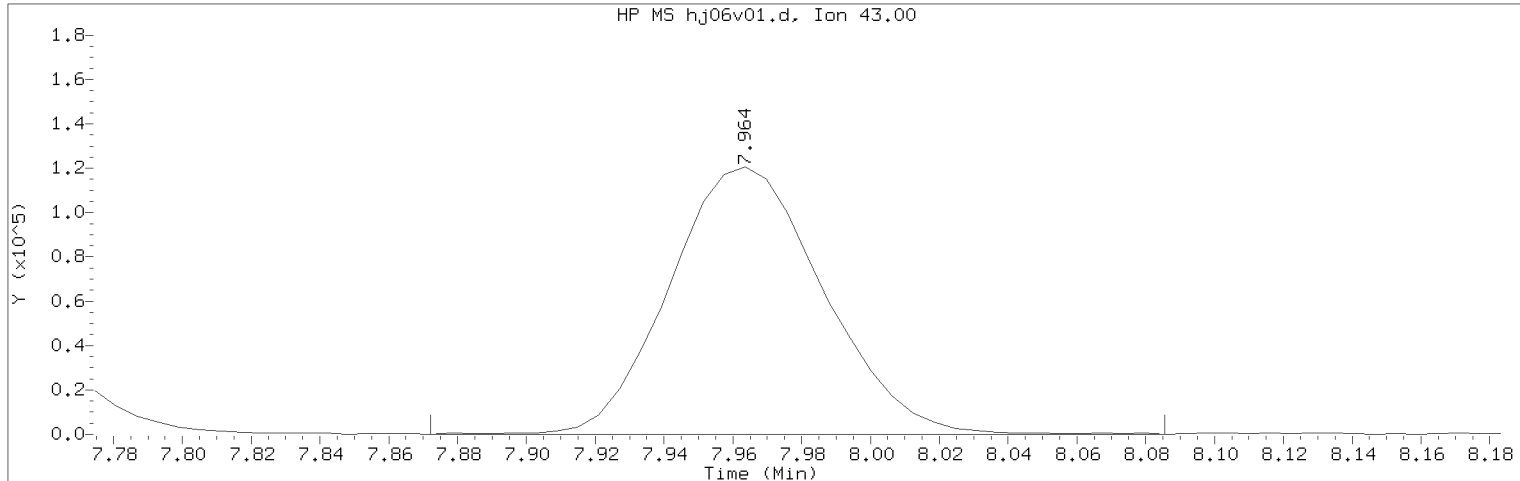
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.

Target 3.5 esignature user RAE59 Page 2751 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

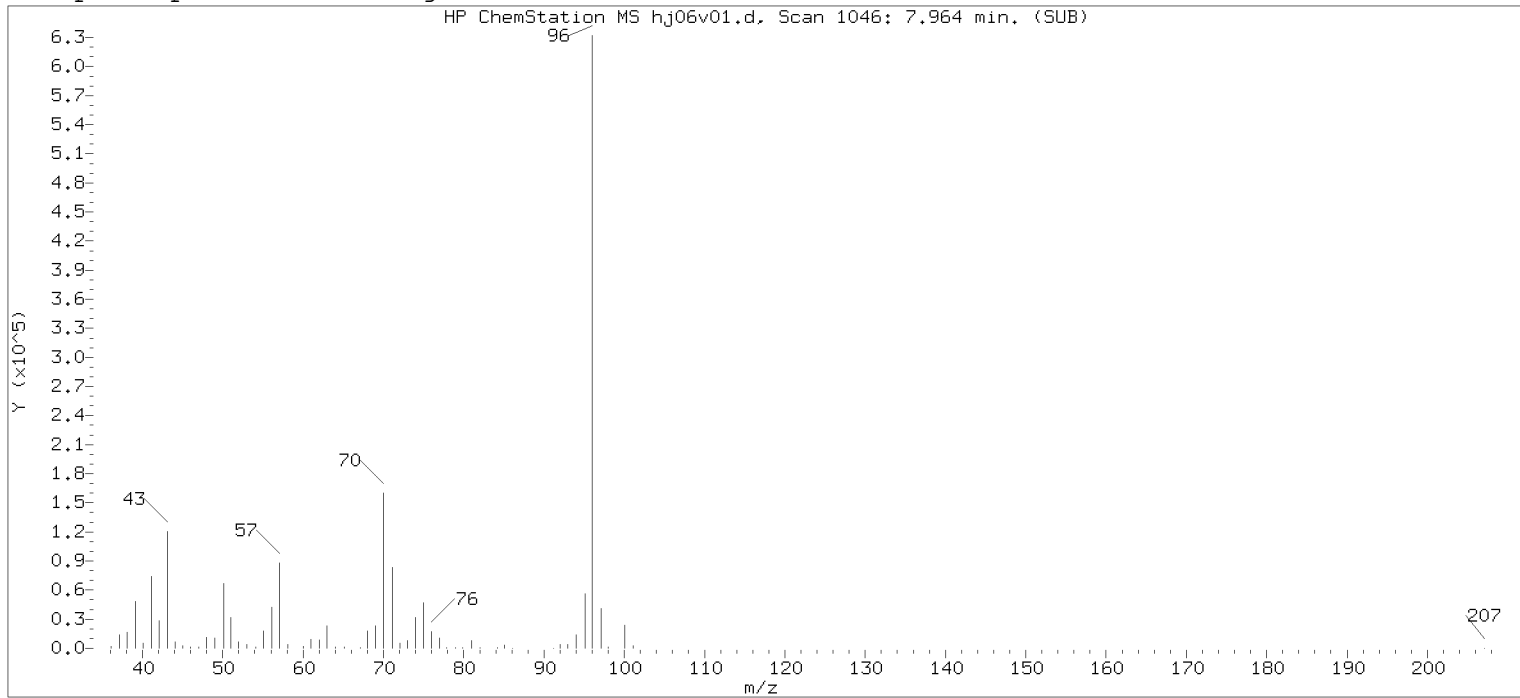
Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 374113M
On-Column Amount (ng) : 4.8147
Integration start scan : 1030 Integration stop scan: 1065
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

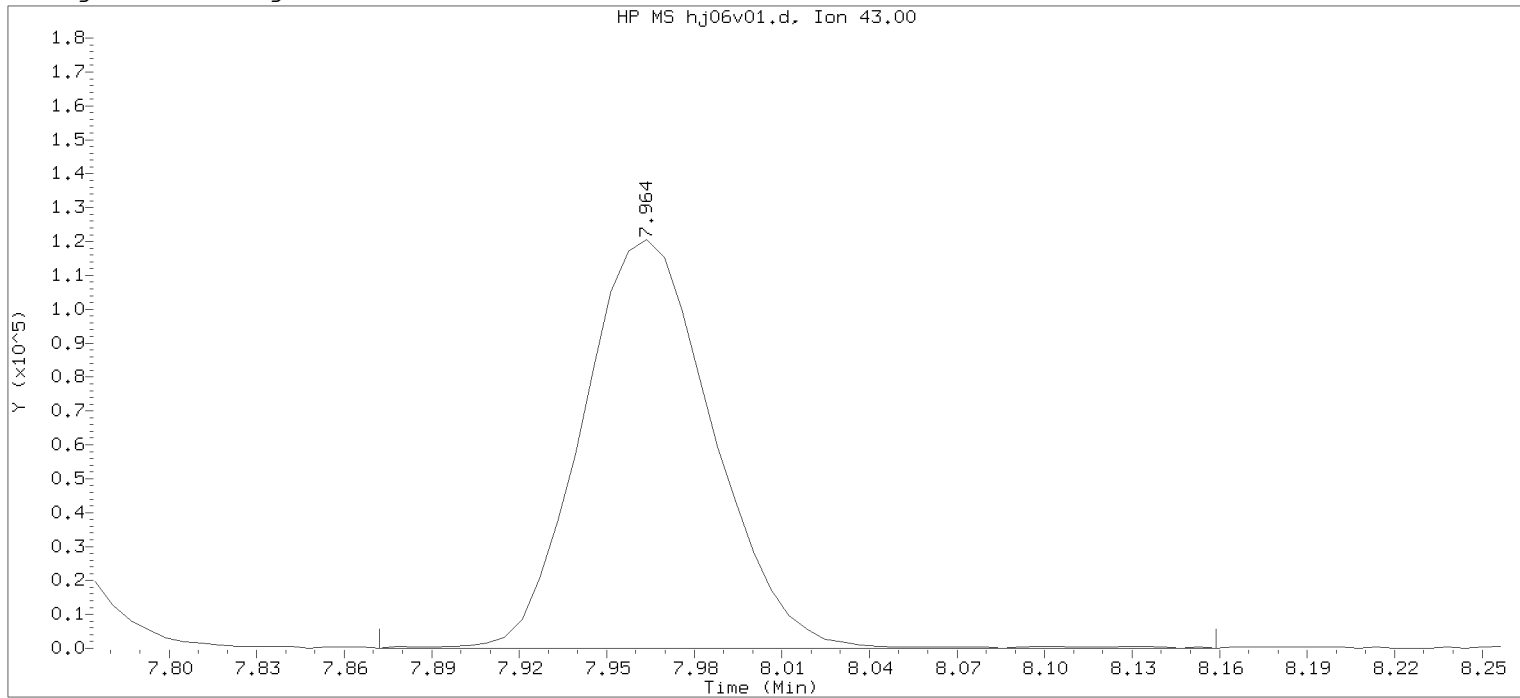
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

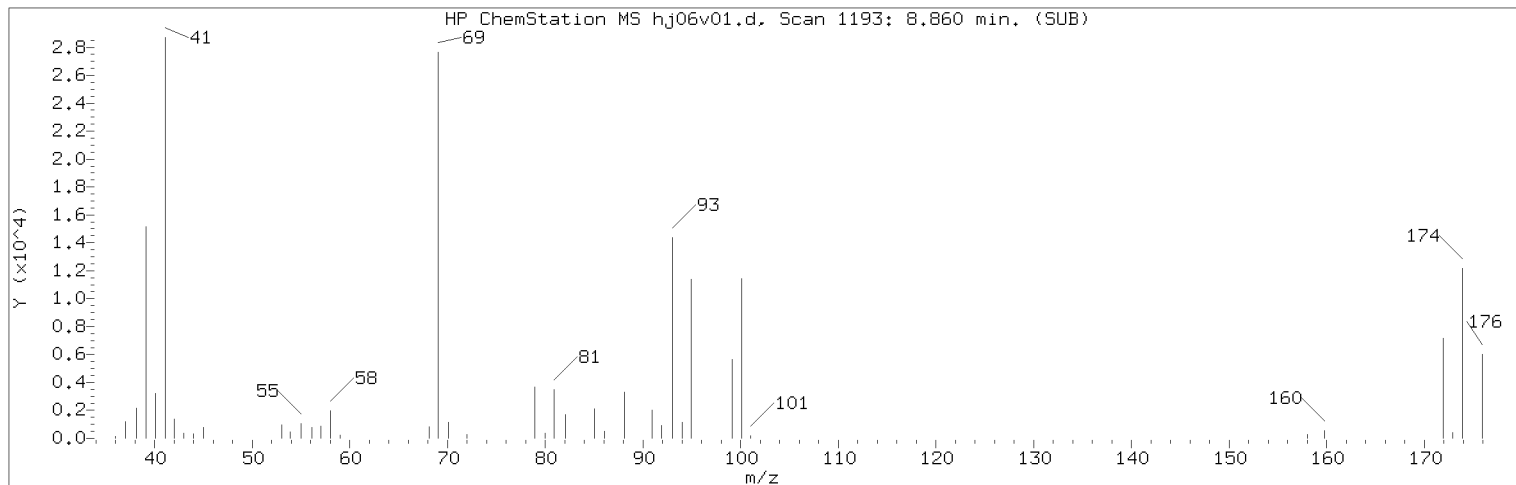
Sample Name: ICVH00

Lab Sample ID: ICVH00

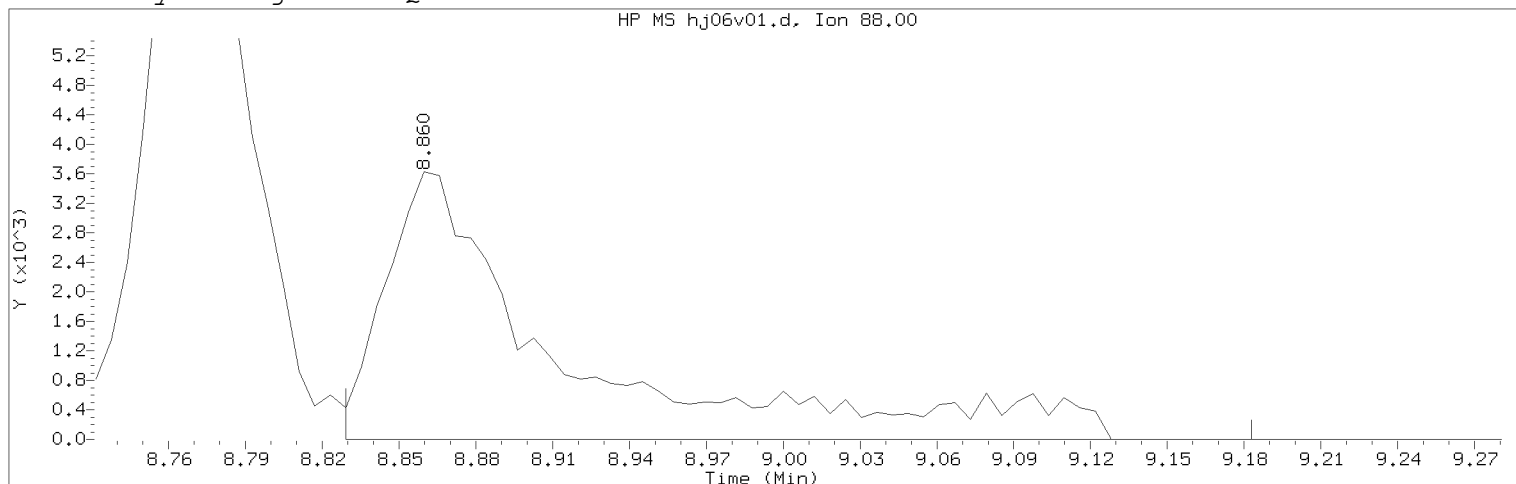
Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area : 375659
On-column Amount (ng) : 4.8345
Integration start scan : 1030 Integration stop scan: 1077
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RAE59 Page 2753 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

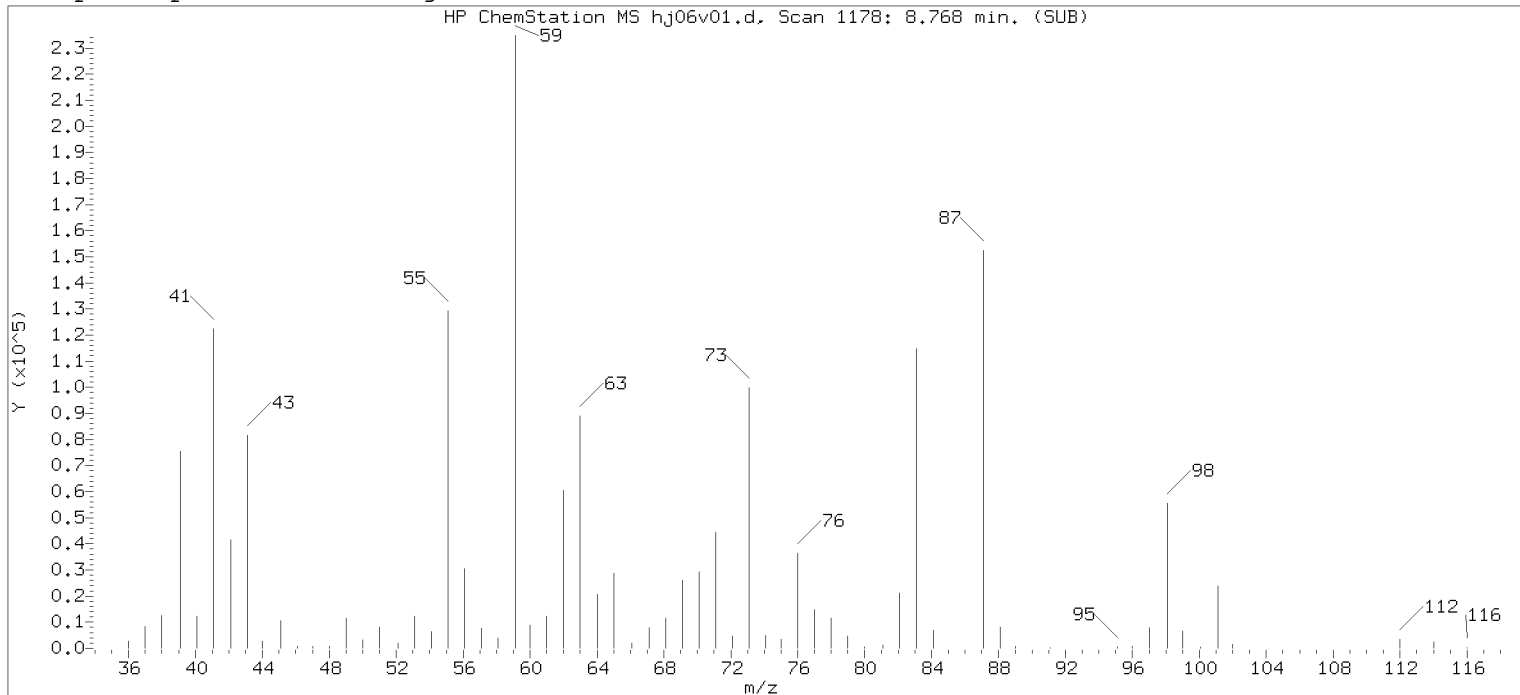
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 17432M	
On-Column Amount (ng)	: 104.8820	
Integration start scan	: 1187	Integration stop scan: 1245
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

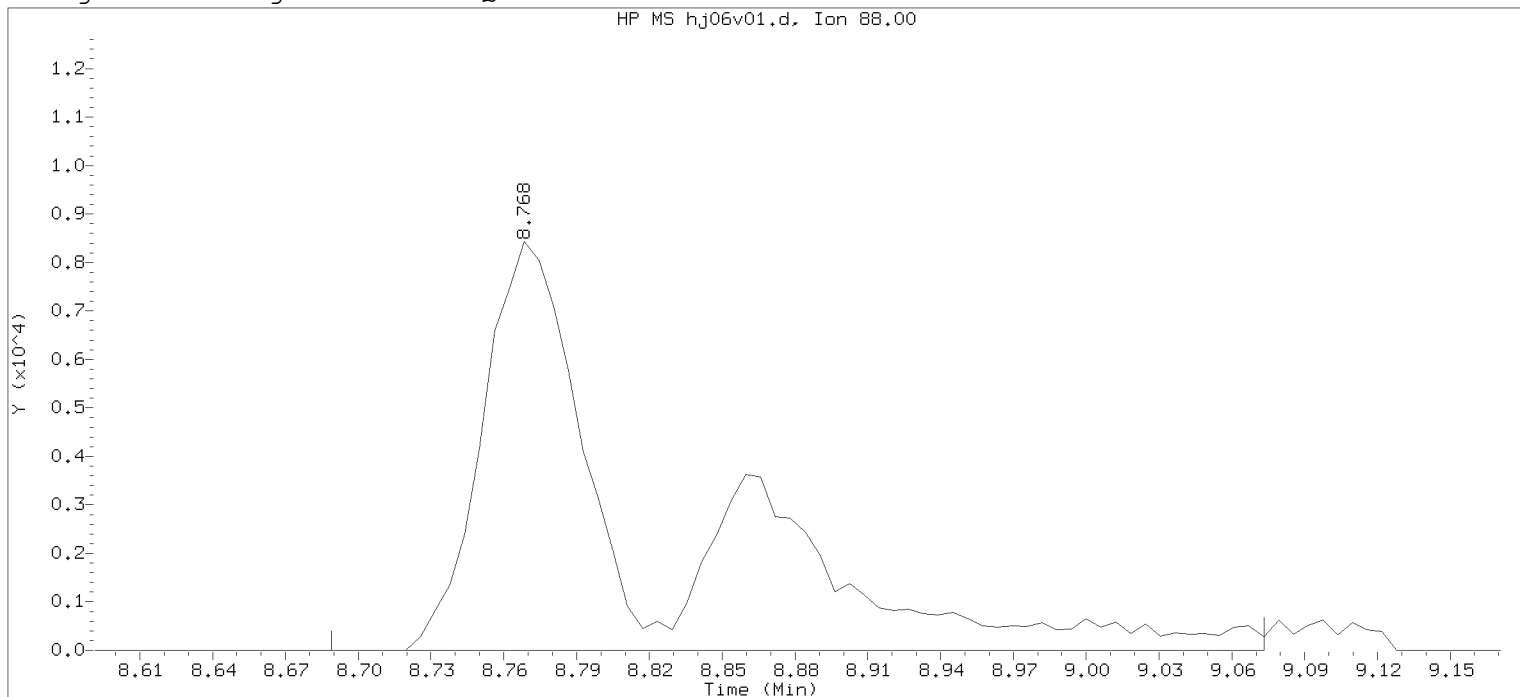
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

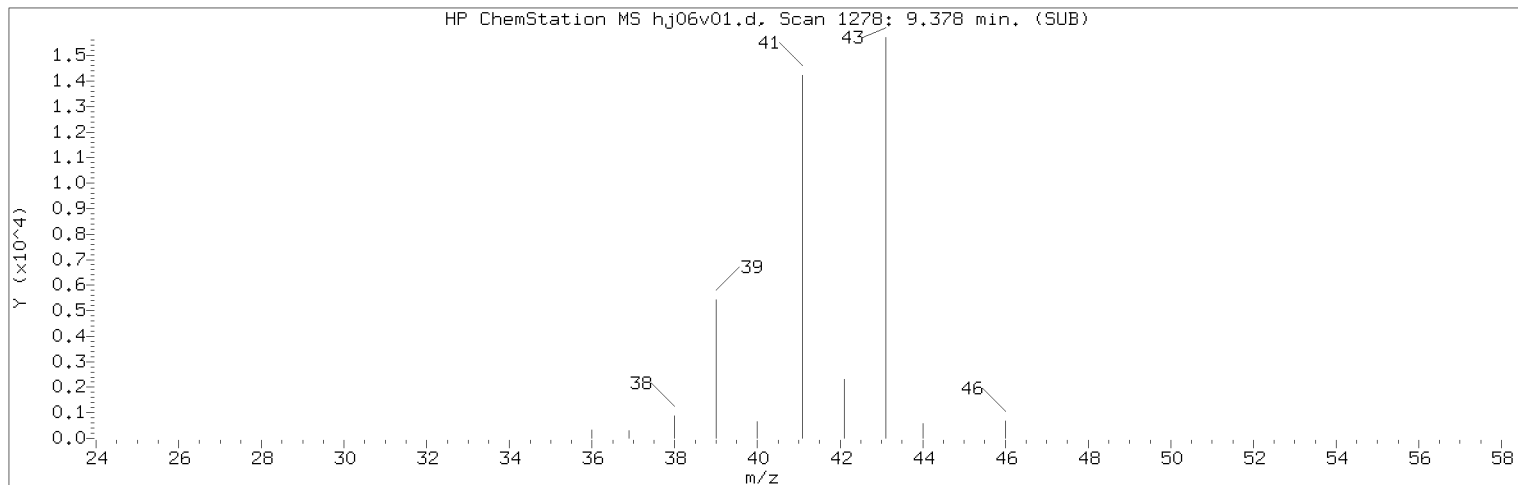
Lab Sample ID: ICVH00

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1178
 Retention Time (minutes): 8.768
 Quant Ion : 88.00
 Area : 39311
 On-column Amount (ng) : 240.1787
 Integration start scan : 1164
 Y at integration start : 0

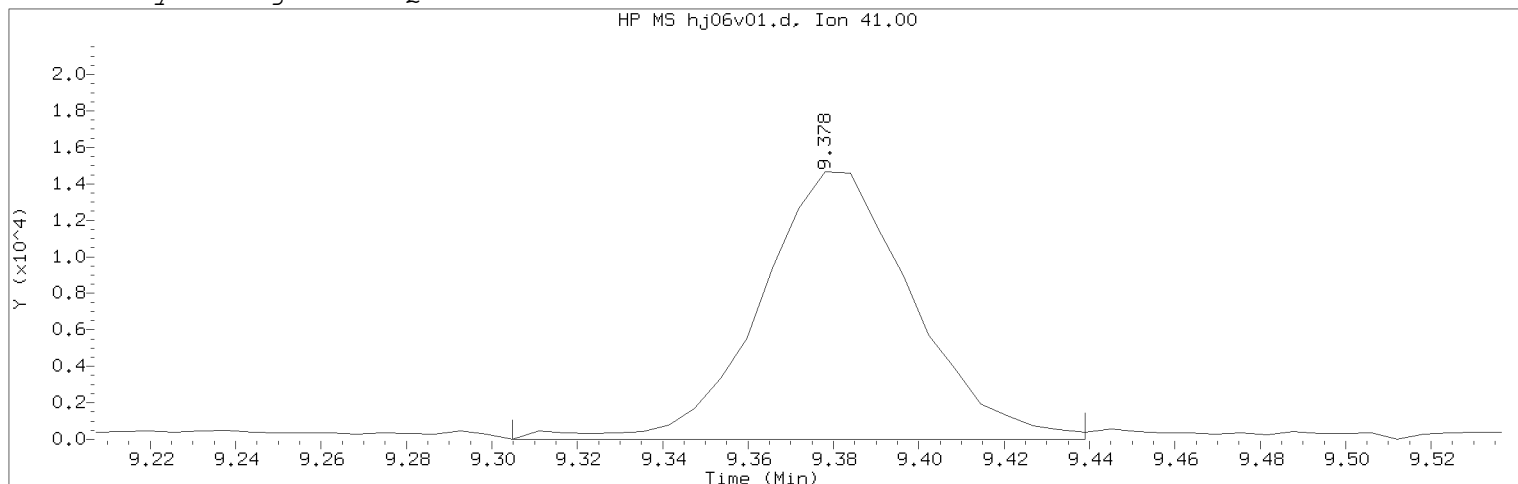
Integration stop scan: 1227
 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
 Target 3.5 esignature user RAE59 Page 2755 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

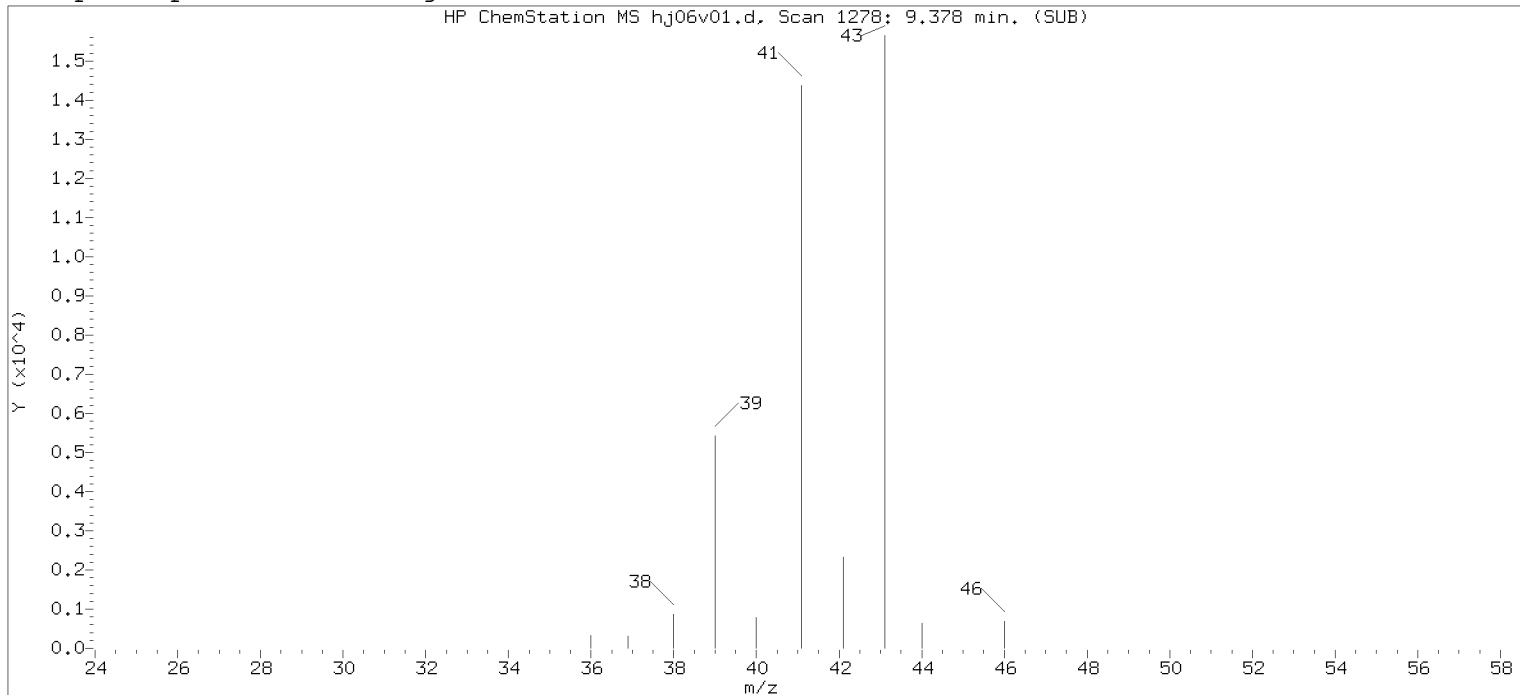
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 36462M
On-Column Amount (ng) : 5.0674
Integration start scan : 1265 Integration stop scan: 1287
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

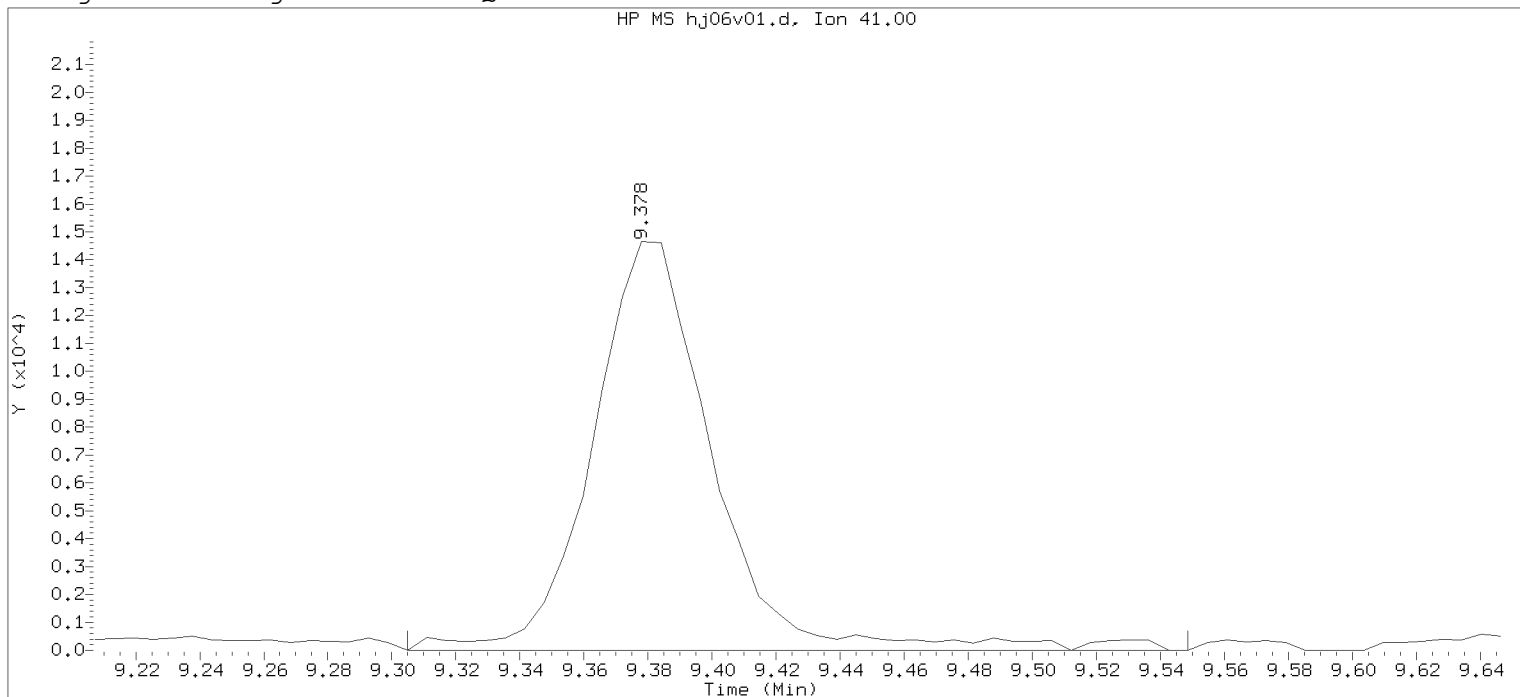
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

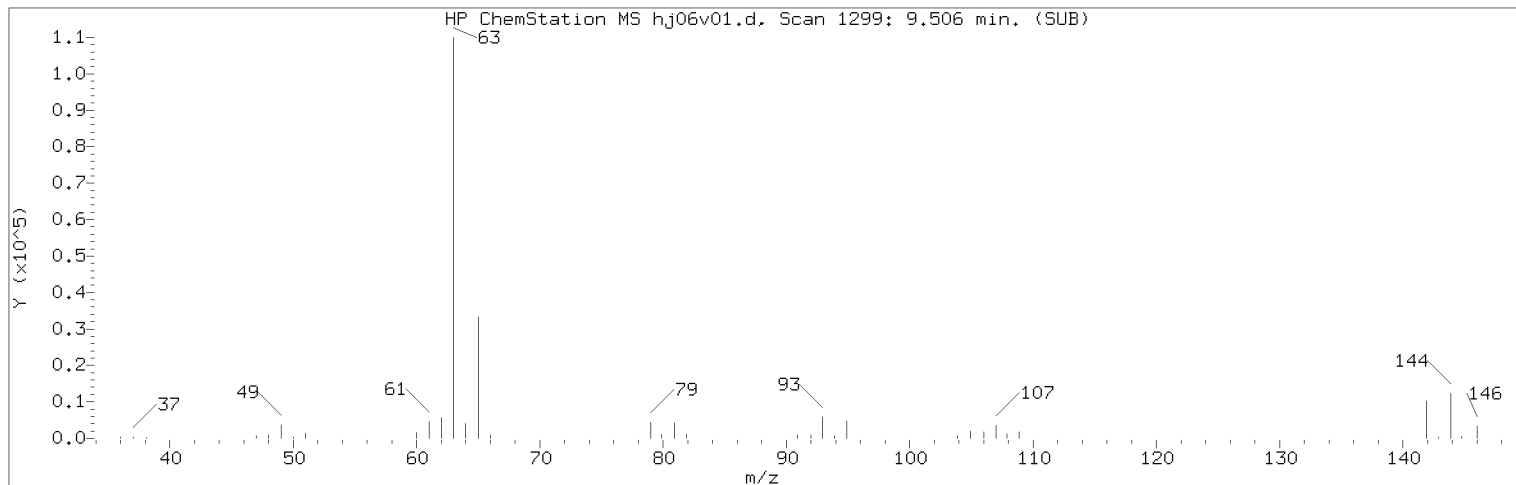
Sample Name: ICVH00

Lab Sample ID: ICVH00

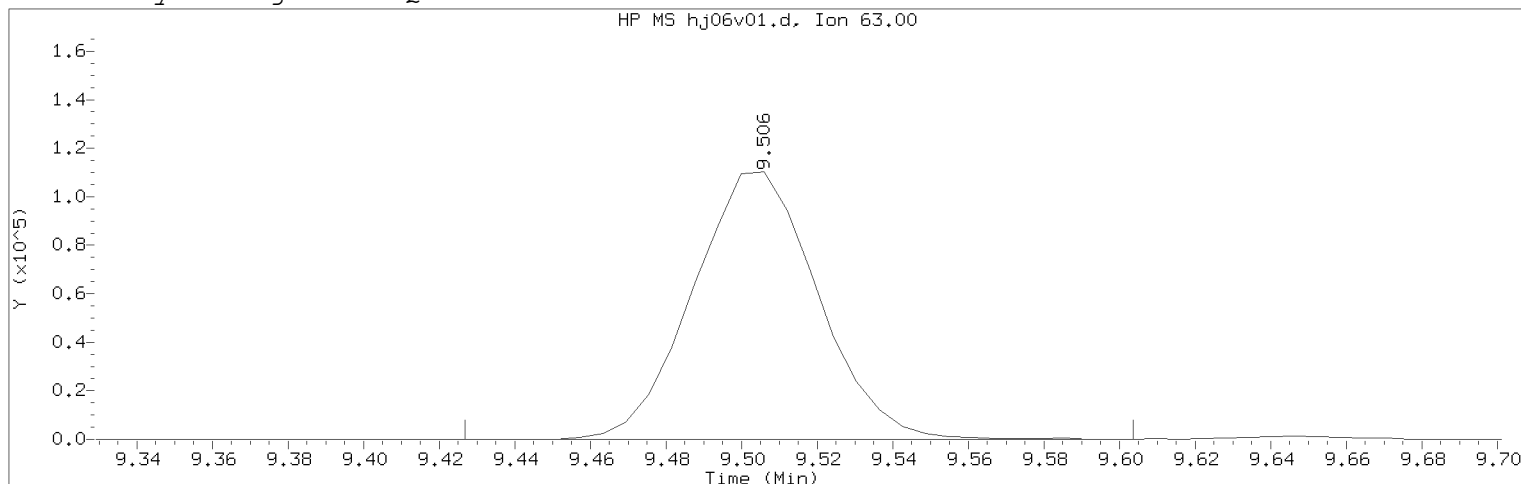
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 38430	
On-column Amount (ng)	: 5.4180	
Integration start scan	: 1265	Integration stop scan: 1305
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RAE59 Page 252 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

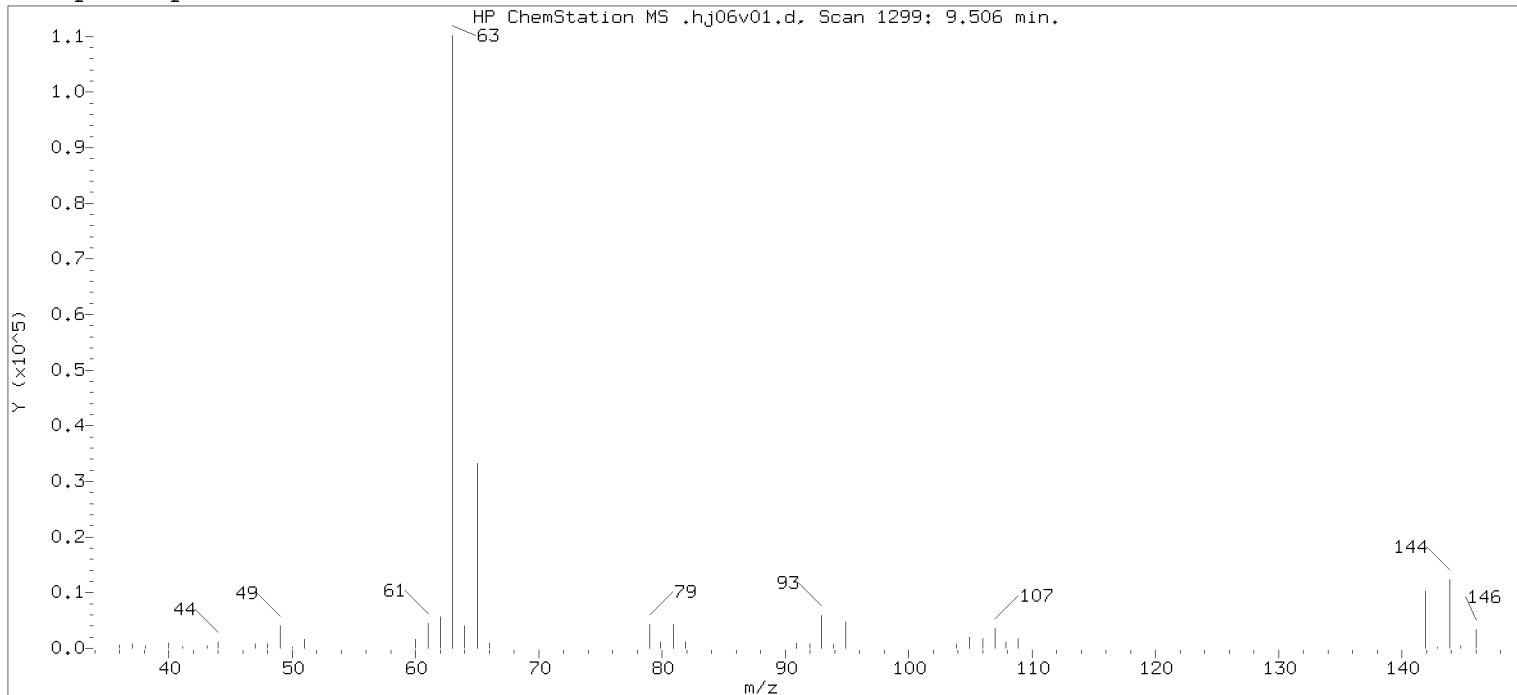
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 253199M
On-Column Amount (ng) : 5.1192
Integration start scan : 1285 Integration stop scan: 1314
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

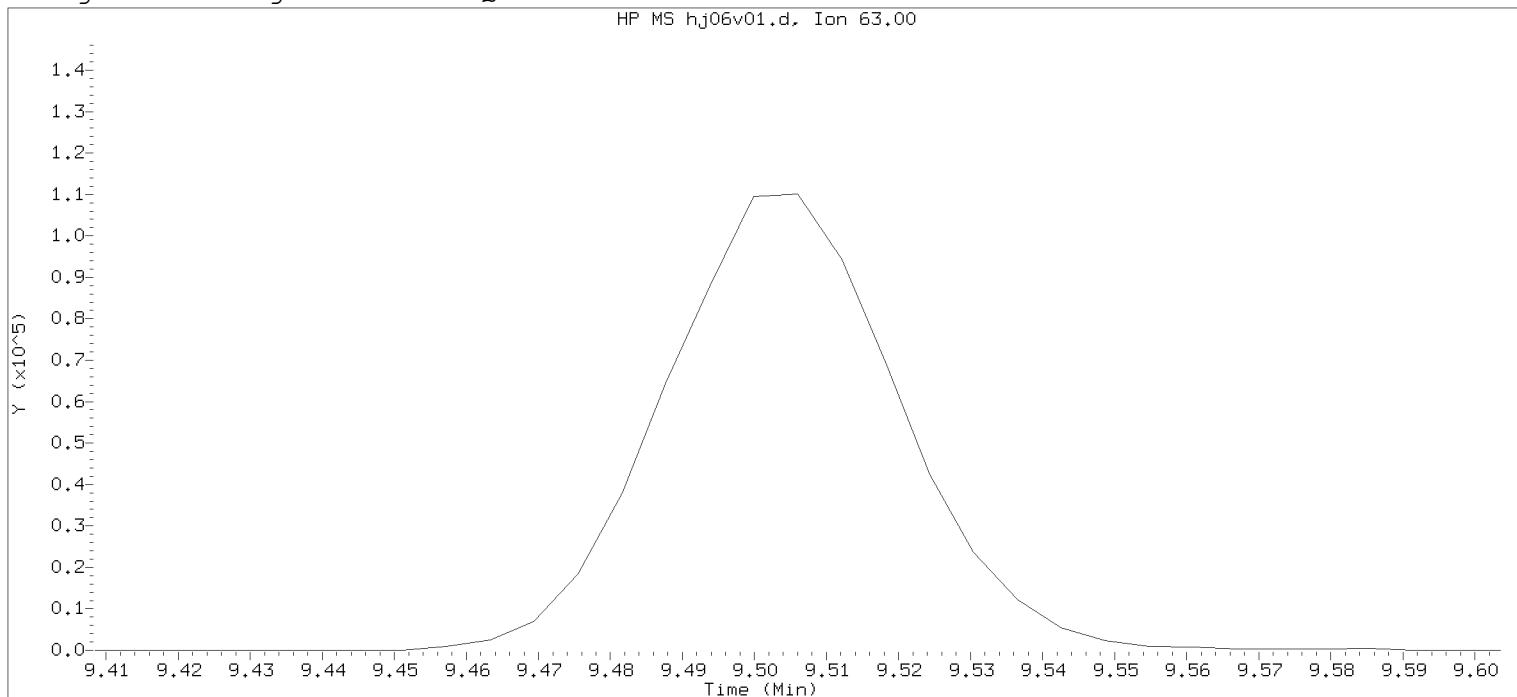
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number : 80

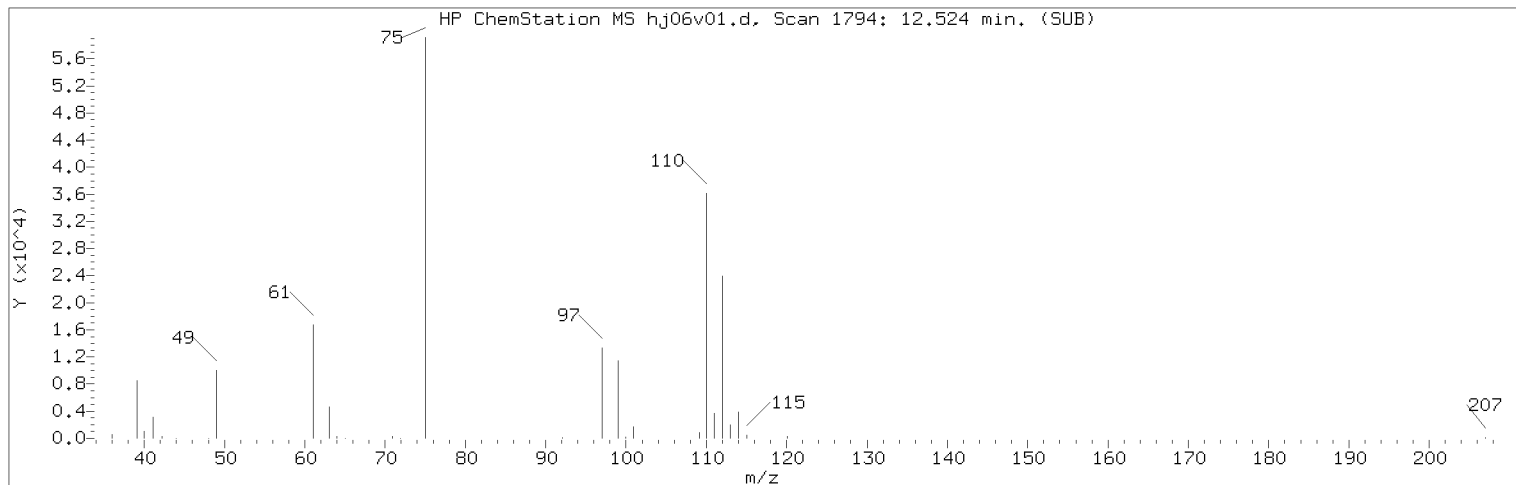
Compound Name : 1-Bromo-2-chloroethane

Expected RT (minutes) : 9.506

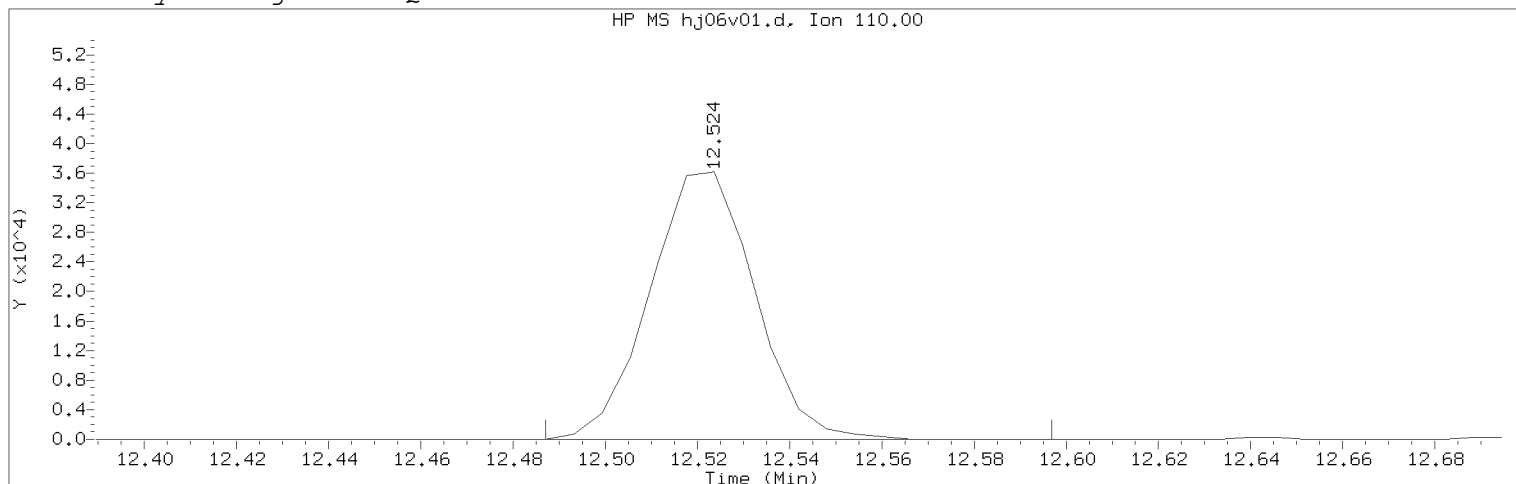
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

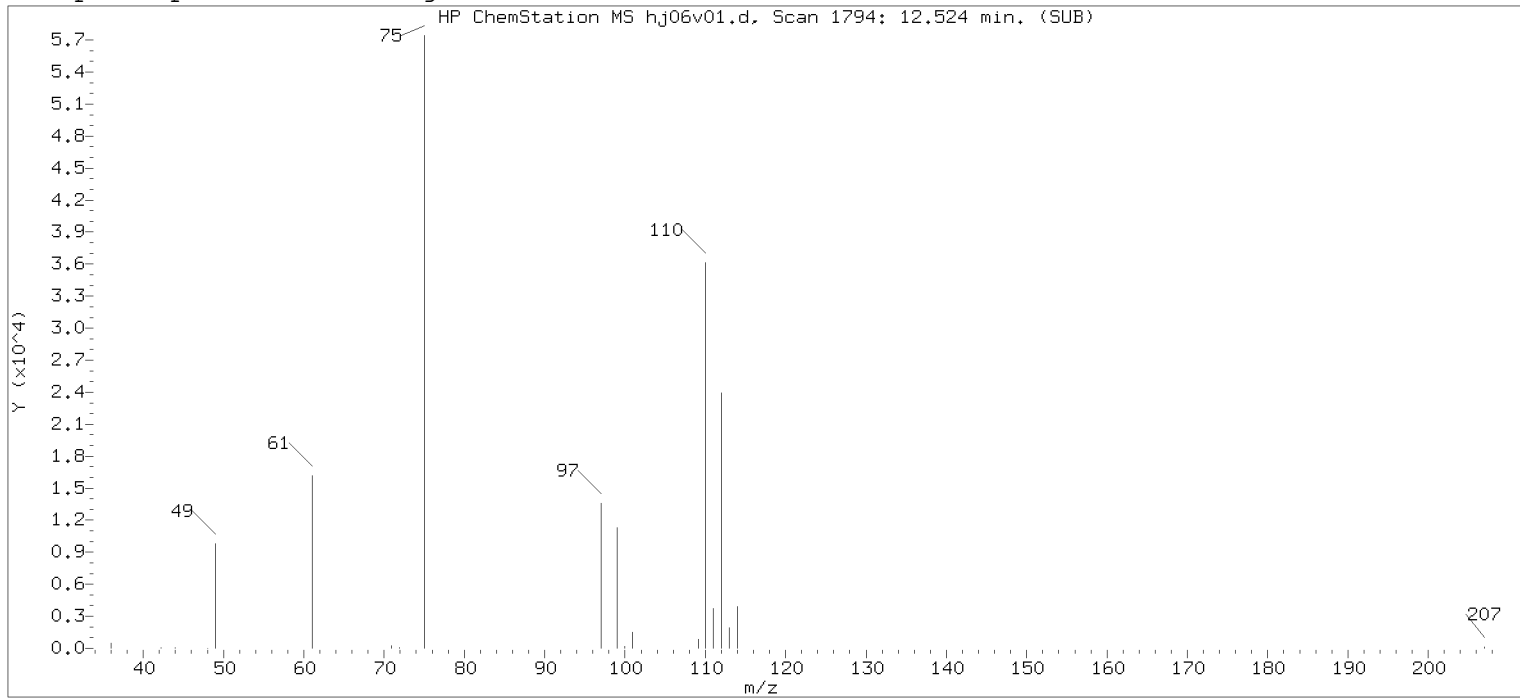
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 57312M
On-Column Amount (ng) : 5.3333
Integration start scan : 1787 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

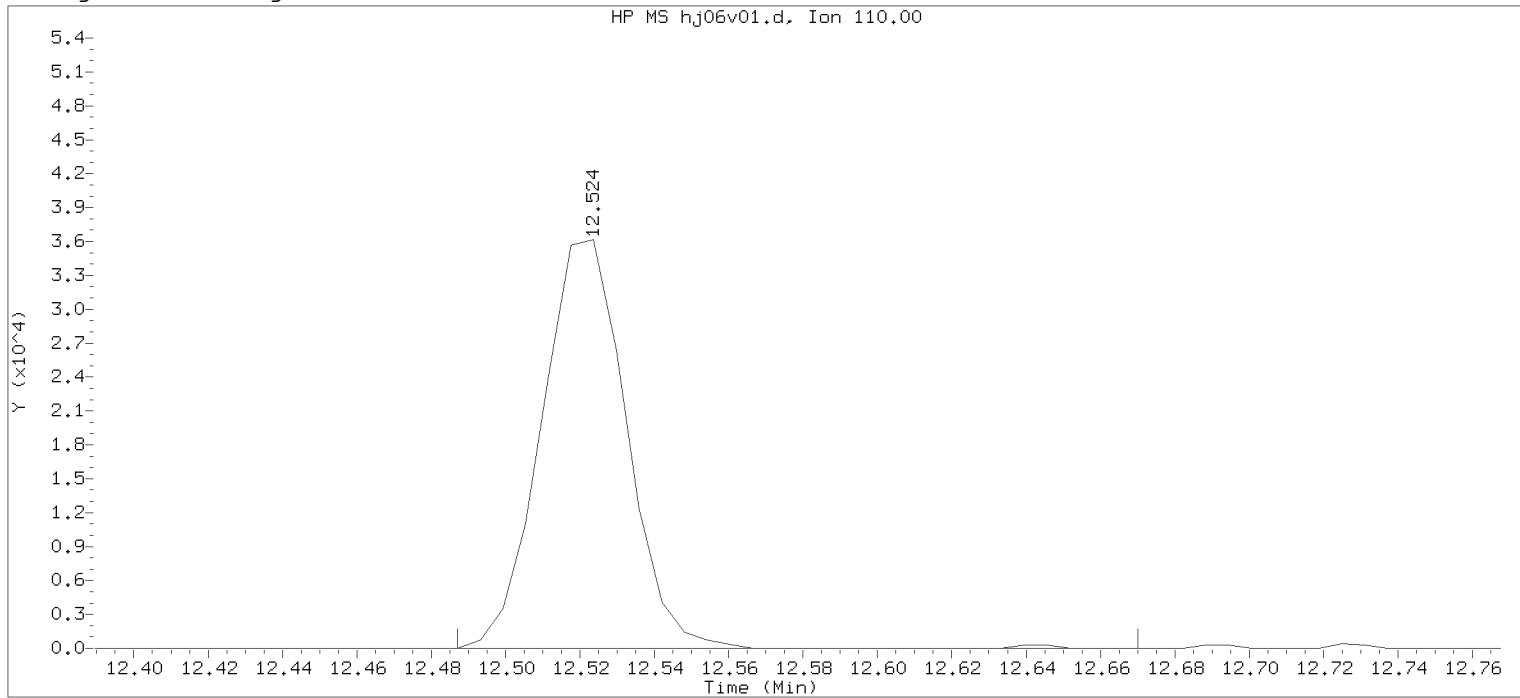
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1794	
Retention Time (minutes)	: 12.524	
Quant Ion	: 110.00	
Area	: 57524	
On-column Amount (ng)	: 5.3530	
Integration start scan	: 1787	Integration stop scan: 1817
Y at integration start	: 0	Y at integration end: 0

Data File: /chem2/HP19094.i/20apr27a,b/ha27t01.d

Page 1

Date : 27-APR-2020 19:06

Client ID: 50NG BFB

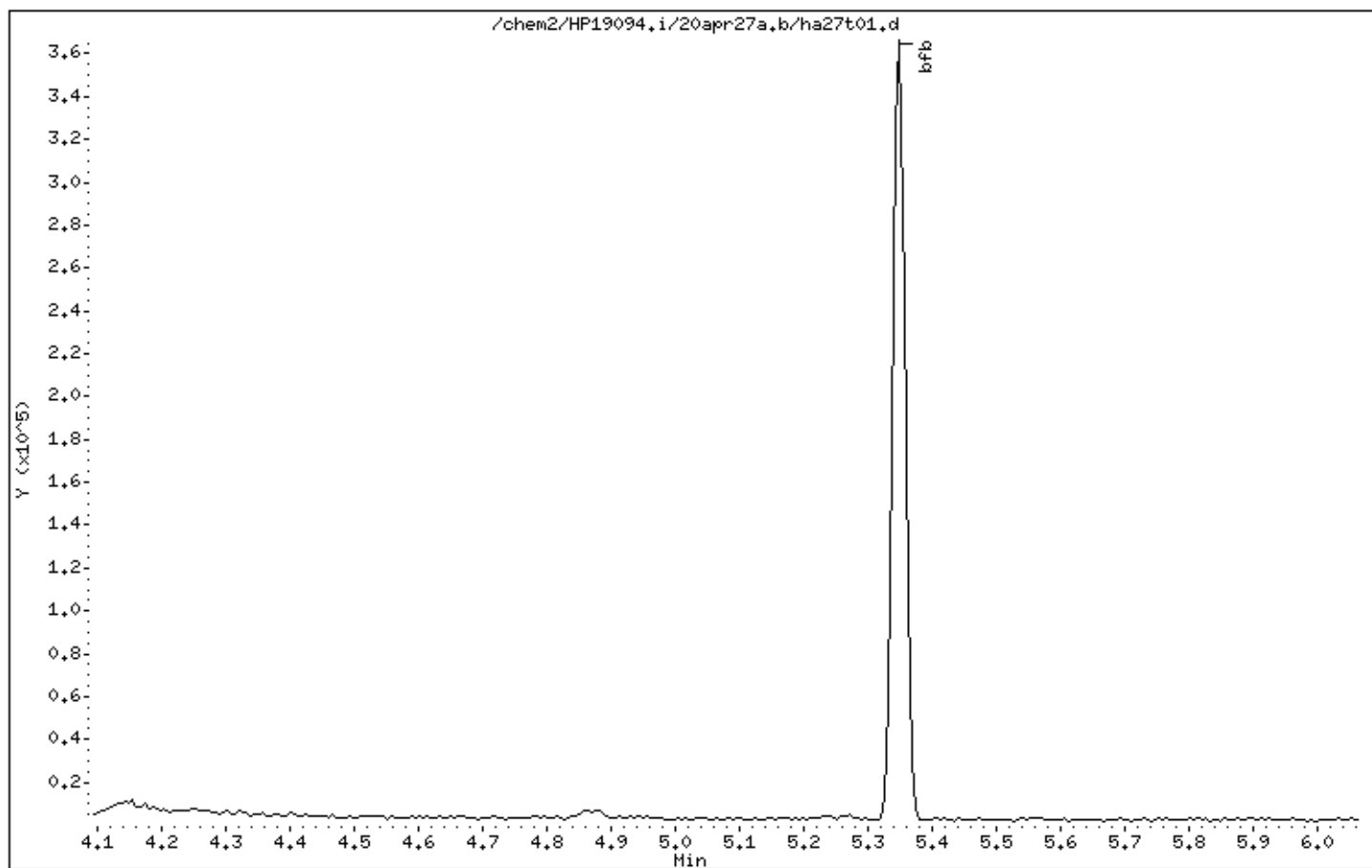
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB JAN 28 2020 ;1;3;3;3;3

Operator: mec29284

Column phase: Rxi-624Sil MS

Column diameter: 0,25



Date : 27-APR-2020 19:06

Client ID: 50NG BFB

Instrument: HP19094.i

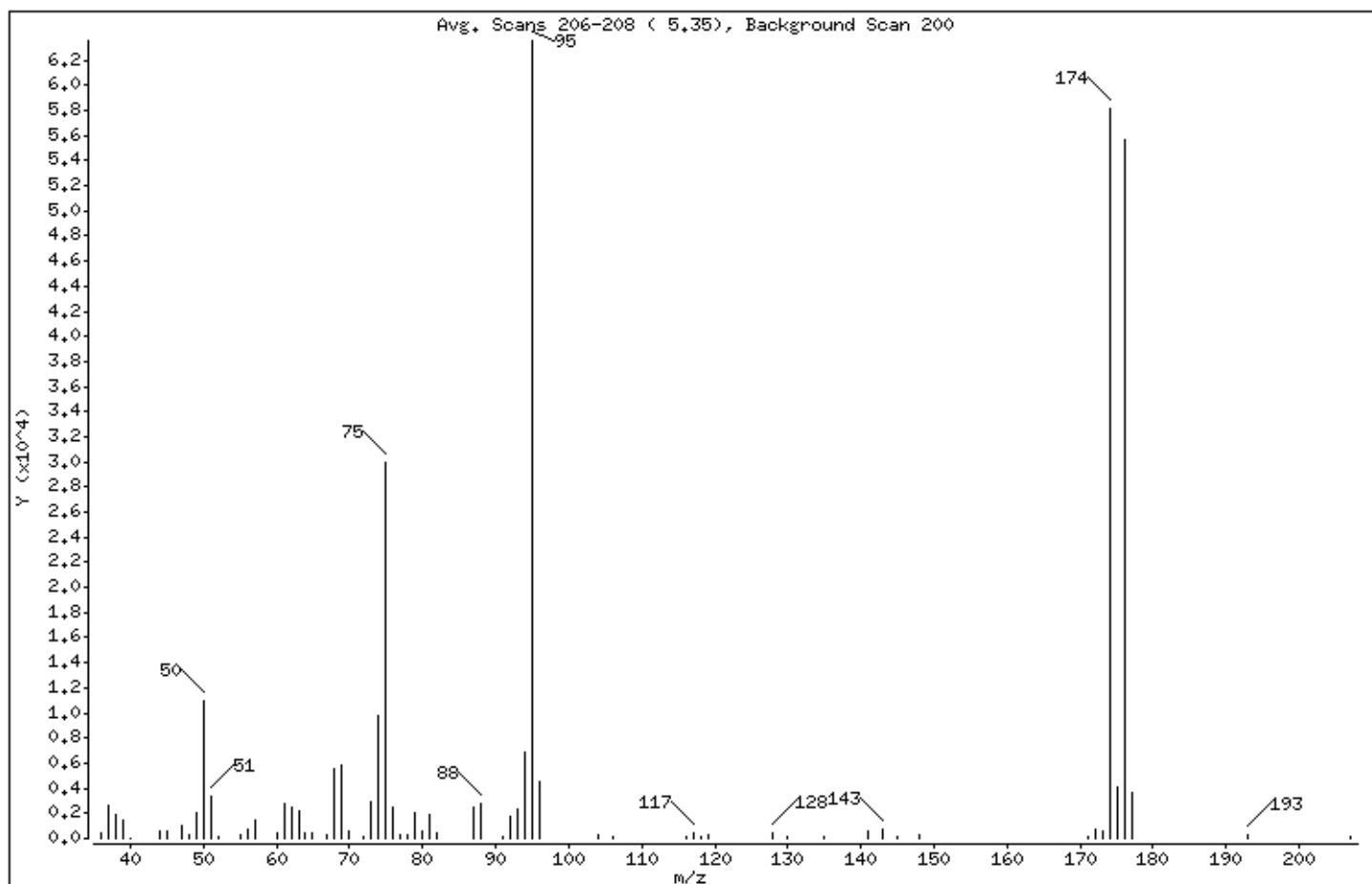
Sample Info: 50NG BFB;BFB JAN 28 2020 ;1;3; ; ; ; ;

Operator: mec29284

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.20
75	30.00 - 60.00% of mass 95	47.15
96	5.00 - 9.00% of mass 95	7.02
173	Less than 2.00% of mass 174	0.96 (1.04)
174	50.00 - 100.00% of mass 95	91.58
175	5.00 - 9.00% of mass 174	6.35 (6.93)
176	95.00 - 101.00% of mass 174	87.55 (95.60)
177	5.00 - 9.00% of mass 176	5.71 (6.53)

Date : 27-APR-2020 19:06

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB JAN 28 2020 ;1;3; ; ; ; ;

Operator: mec29284

Column phase: Rxi-624Sil MS

Column diameter: 0,25

Data File: ha27t01.d

Spectrum: Avg. Scans 206-208 (5,35), Background Scan 200

Location of Maximum: 95,00

Number of points: 67

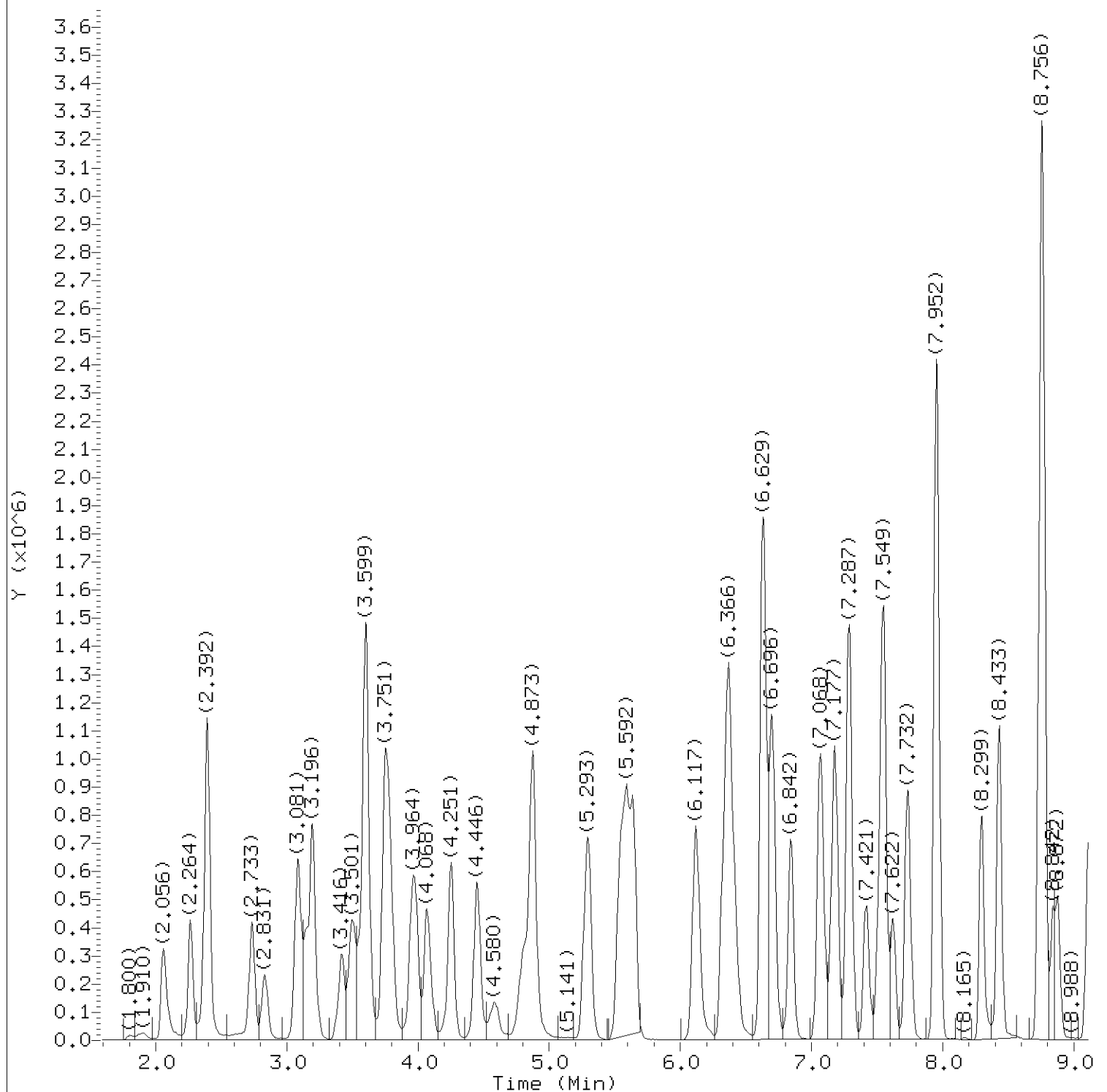
m/z	Y	m/z	Y	m/z	Y	m/z	Y

36,00	473	61,00	2759	80,00	531	128,00	373
37,00	2663	62,00	2467	81,00	1961	130,00	95
38,00	1936	63,00	2124	82,00	446	135,00	191
39,00	1403	64,00	499	87,00	2414	141,00	521
40,00	38	65,00	405	88,00	2748	143,00	681

44,00	616	67,00	258	91,00	136	145,00	192
45,00	645	68,00	5624	92,00	1816	148,00	227
47,00	961	69,00	5893	93,00	2323	171,00	213
48,00	283	70,00	557	94,00	6861	172,00	728
49,00	2020	72,00	193	95,00	63560	173,00	608

50,00	10934	73,00	2891	96,00	4463	174,00	58208
51,00	3320	74,00	9767	104,00	258	175,00	4033
52,00	186	75,00	29968	106,00	97	176,00	55648
55,00	222	76,00	2539	116,00	146	177,00	3632
56,00	781	77,00	242	117,00	376	193,00	292

57,00	1506	78,00	297	118,00	119	207,00	96
60,00	466	79,00	1973	119,00	354		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d
Injection date and time: 27-APR-2020 19:41

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m
Calibration date and time: 27-APR-2020 21:01

Sublist used: 8260W25

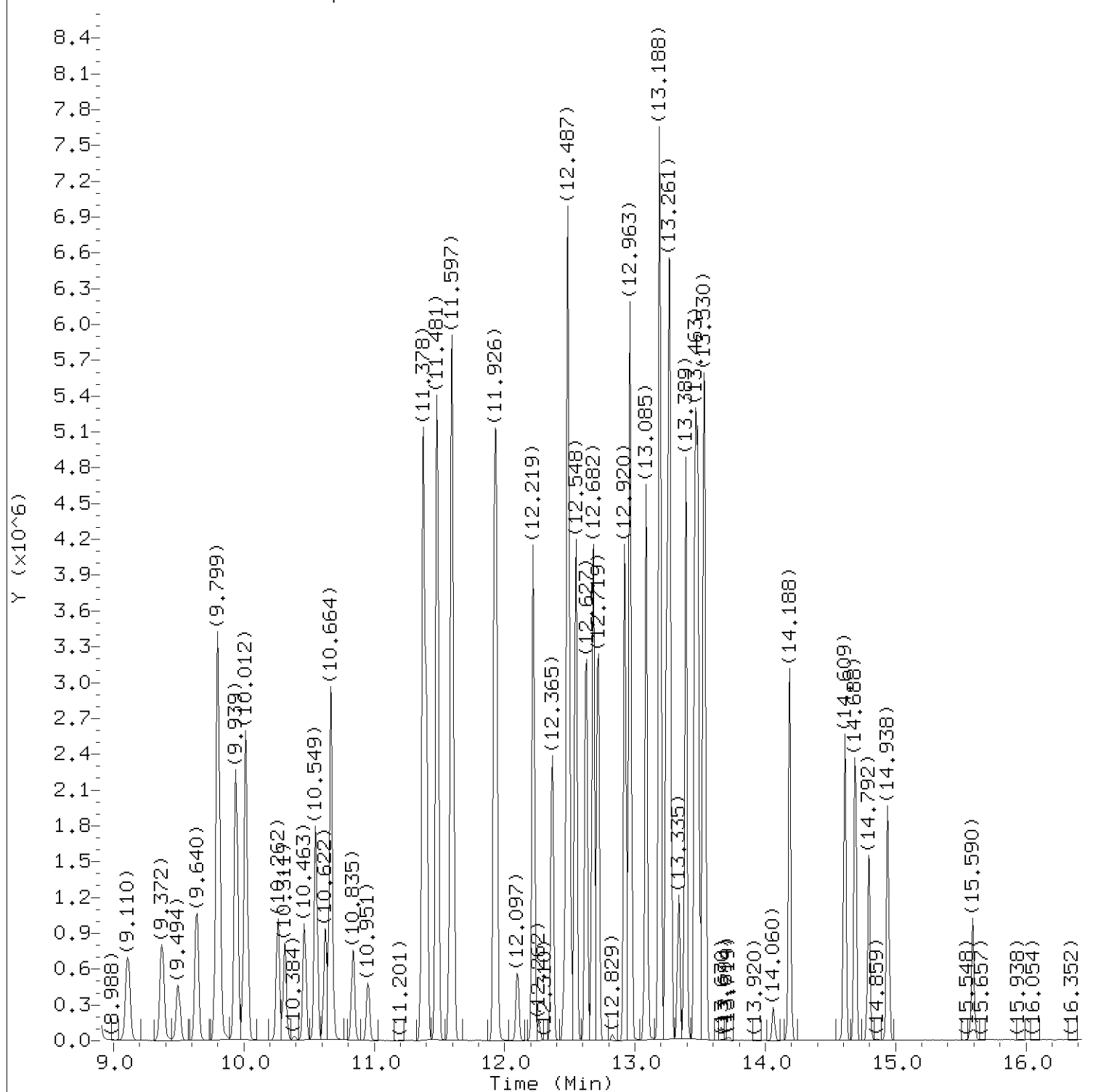
Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d
Injection date and time: 27-APR-2020 19:41

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 21:01
Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 19:41

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 27-APR-2020 21:01

Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.056	85	693631	11.009
2) Chloromethane	(2)	2.264	50	700175	11.258
5) Vinyl Chloride	(2)	2.392	62	668561	11.301
6) 1,3-Butadiene	(2)	2.392	39	644244M	13.785
7) Bromomethane	(2)	2.733	94	448118	10.574
8) Chloroethane	(2)	2.837	64	376634	10.993
9) Dichlorofluoromethane	(2)	3.081	67	875167	10.756
10) Trichlorofluoromethane	(2)	3.141	101	789366	11.692
11) Ethyl ether	(2)	3.416	59	307784	10.301
12) Freon 123a	(2)	3.501	67	579091	11.094
13) Acrolein	(1)	3.605	56	2590743	438.932
15) 1,1-Dichloroethene	(2)	3.745	96	417973	10.179
16) Freon 113	(2)	3.776	101	470298	10.957
14) Acetone	(1)	3.782	43	586864	73.686
17) Methyl Iodide	(2)	3.952	142	824612	10.406
18) Bromoethane	(2)	3.989	108	354254	9.888
19) Carbon Disulfide	(2)	4.068	76	1299111	10.342
22) Methyl Acetate	(1)	4.221	43	186880	9.298
23) Allyl Chloride	(2)	4.251	41	688918	9.877
24) Methylene Chloride	(2)	4.446	84	471059	10.658
27)*t-Butyl Alcohol-d10	(1)	4.446	65	131075M	50.000
29) t-Butyl Alcohol	(1)	4.586	59	426698	154.231
30) Acrylonitrile	(1)	4.794	53	459878	47.317
31) Methyl Tertiary Butyl Ether	(2)	4.855	73	955761	10.181
32) trans-1,2-Dichloroethene	(2)	4.879	96	469990	10.412
33) n-Hexane	(2)	5.293	57	740791	11.635
34) 1,1-Dichloroethane	(2)	5.537	63	905985	11.117
35) di-Isopropyl Ether	(2)	5.592	45	1519627	11.320
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	744968	10.676
41) 1,2-Dichloroethene (Total)	(2)		96	1011350	21.205
38) Ethyl t-butyl ether	(2)	6.117	59	1281475	10.168
39) 2-Butanone	(1)	6.324	43	1177779	94.576
40) cis-1,2-Dichloroethene	(2)	6.366	96	541360	10.793
42) 2,2-Dichloropropane	(2)	6.385	77	707924	10.209
43) Propionitrile	(1)	6.421	54	673211	197.350
46) Methacrylonitrile	(1)	6.629	67	1166223	95.589
48) Bromochloromethane	(2)	6.696	128	222135	10.489
49) Tetrahydrofuran	(1)	6.702	71	310009	90.106

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d
 Injection date and time: 27-APR-2020 19:41

Instrument ID: HP19094.i
 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 27-APR-2020 21:01
 Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.842	83	868771	10.923
51) \$Dibromofluoromethane	(2)	7.061	113	448395	10.732
51) \$Dibromofluoromethane	(2)	7.061	111	455113	10.603
52) 1,1,1-Trichloroethane	(2)	7.080	97	763421	10.321
53) Cyclohexane	(2)	7.177	56	882055	11.165
53) Cyclohexane	(2)	7.177	84	731257	10.807
53) Cyclohexane	(2)	7.177	69	267469	10.879
56) 1,1-Dichloropropene	(2)	7.281	75	696168	11.136
55) Carbon Tetrachloride	(2)	7.293	117	680346	10.727
57) Isobutyl Alcohol	(1)	7.415	41	422950	441.040
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	87735	10.835
58) \$1,2-Dichloroethane-d4	(2)	7.519	65	392636	10.509
58) \$1,2-Dichloroethane-d4	(2)	7.519	104	55056	10.735
59) Benzene	(2)	7.549	78	2028660	11.097
60) 1,2-Dichloroethane	(2)	7.622	62	524100	11.120
61) t-Amyl methyl ether	(2)	7.732	73	1120280	10.193
64) *Fluorobenzene	(2)	7.952	96	1680744	10.000
63) n-Heptane	(2)	7.958	43	823539	12.330
66) n-Butanol	(1)	8.299	56	717821	929.792
68) Trichloroethene	(2)	8.427	95	518963	10.825
70) Methylcyclohexane	(2)	8.744	83	891360	10.378
71) 1,2-Dichloropropane	(2)	8.768	63	528626	11.688
72) Methyl Methacrylate	(1)	8.835	69	219335	8.937
73) 1,4-Dioxane	(1)	8.854	88	85565M	459.524
74) Dibromomethane	(2)	8.878	93	236026	11.415
75) Bromodichloromethane	(2)	9.110	83	628250	11.180
77) 2-Nitropropane	(1)	9.372	41	657391	81.551
80) 1-Bromo-2-chloroethane	(2)	9.494	63	511226	12.025
81) cis-1,3-Dichloropropene	(2)	9.640	75	754762	11.373
82) 4-Methyl-2-Pentanone	(1)	9.799	43	2894738	94.310
83) \$Toluene-d8	(3)	9.939	98	1810407	9.116
83) \$Toluene-d8	(3)	9.939	100	1173214	9.134
84) Toluene	(3)	10.012	92	1300638	9.323
86) 1,3-Dichloropropene (total)	(3)		75	1362623	20.761
85) trans-1,3-Dichloropropene	(3)	10.262	75	607861	9.387
87) Ethyl Methacrylate	(3)	10.317	69	464656	9.258
89) 1,1,2-Trichloroethane	(3)	10.463	97	335990	9.586
90) Tetrachloroethene	(3)	10.549	166	599280	9.451

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d
Injection date and time: 27-APR-2020 19:41

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 21:01
Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.622	76	594888	9.879
92) 2-Hexanone	(1)	10.664	43	1997259	95.228
94) Dibromochloromethane	(3)	10.841	129	436029	9.715
96) 1,2-Dibromoethane	(3)	10.951	107	328452	9.806
98) *Chlorobenzene-d5	(3)	11.372	117	1490660	10.000
97) 1-Chlorohexane	(3)	11.378	91	744596	8.853
99) Chlorobenzene	(3)	11.402	112	1449440	9.509
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	511160	9.429
101) Ethylbenzene	(3)	11.481	91	2513172	9.155
102) m+p-Xylene	(3)	11.597	106	1968272	18.751
106) Xylene (Total)	(3)		106	2917854	27.952
105) o-Xylene	(3)	11.920	106	949582	9.199
107) Styrene	(3)	11.939	104	1605669	9.586
108) Bromoform	(3)	12.097	173	255224	9.757
109) Isopropylbenzene	(3)	12.219	105	2511452	8.978
112) \$4-Bromofluorobenzene	(3)	12.365	95	722942	9.839
112) \$4-Bromofluorobenzene	(3)	12.365	174	646540	10.284
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	411697	9.609
115) Bromobenzene	(4)	12.481	156	597205	9.221
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	892331	77.392
117) 1,2,3-Trichloropropane	(4)	12.512	110	108266M	9.437
118) n-Propylbenzene	(4)	12.548	91	3053263	9.028
120) 2-Chlorotoluene	(4)	12.627	126	603450	9.044
122) 1,3,5-Trimethylbenzene	(4)	12.682	105	2172882	8.857
123) 4-Chlorotoluene	(4)	12.719	126	610056	9.161
126) tert-Butylbenzene	(4)	12.926	134	464410M	9.153
127) Pentachloroethane	(4)	12.957	167	382125	8.837
128) 1,2,4-Trimethylbenzene	(4)	12.963	105	2241382	8.847
129) sec-Butylbenzene	(4)	13.085	105	2879315	9.058
132) 1,3-Dichlorobenzene	(4)	13.188	146	1197244	9.276
133) p-Isopropyltoluene	(4)	13.194	119	2469196	9.026
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	820606	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	1171078	9.302
136) 1,2,3-Trimethylbenzene	(4)	13.268	120	909564	8.610
137) Benzyl Chloride	(4)	13.335	126	169437	9.407
139) n-Butylbenzene	(4)	13.481	92	1272977	9.413
140) 1,2-Dichlorobenzene	(4)	13.524	146	1052045	9.247
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	155	55216	8.397

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 19:41

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 27-APR-2020 21:01

Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

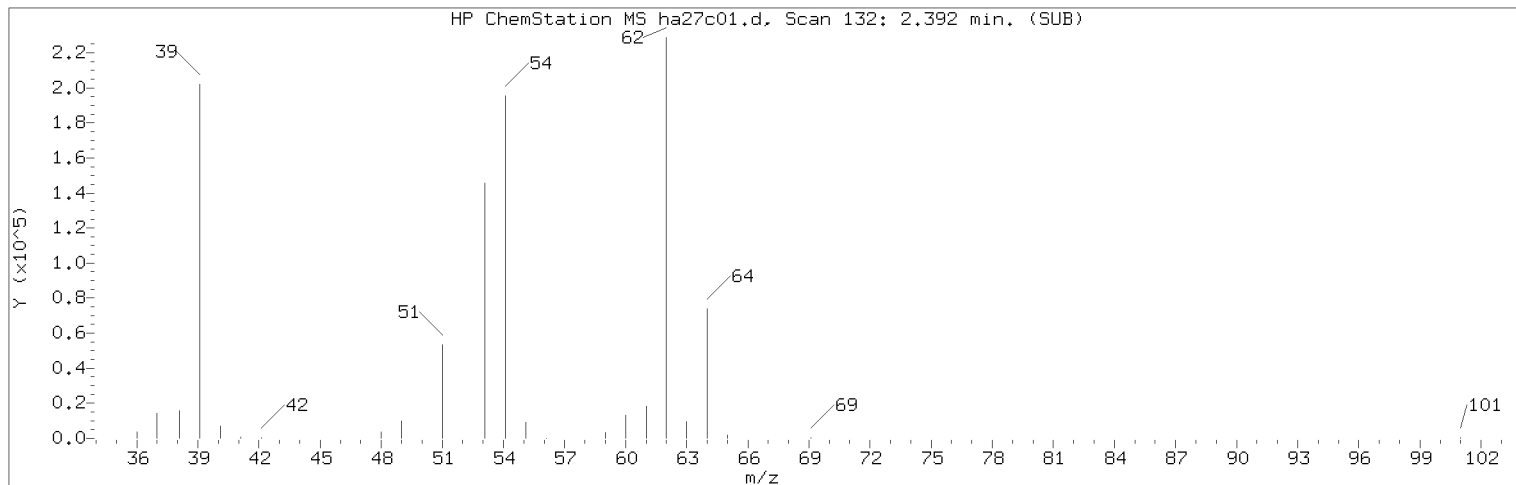
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.188	180	940886	9.315
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	731354	8.634
147) Hexachlorobutadiene	(4)	14.688	225	417308	9.440
148) Naphthalene	(4)	14.792	128	1143751	7.737
149) 1,2,3-Trichlorobenzene	(4)	14.938	180	600054	8.299

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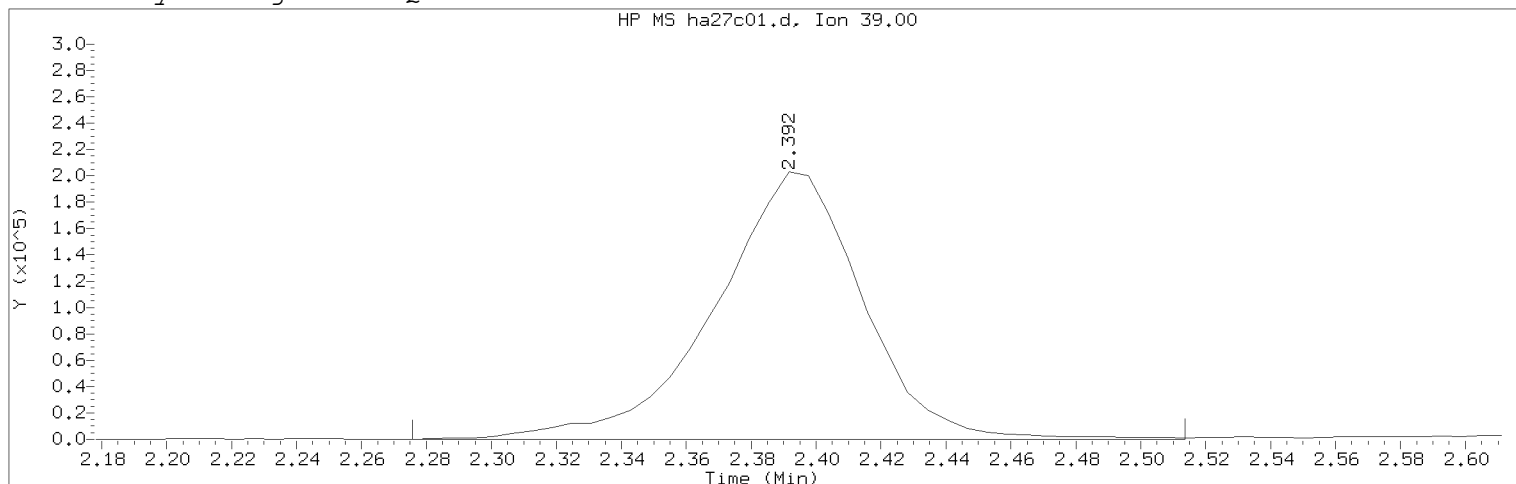
Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 19:41 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 21:01
Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

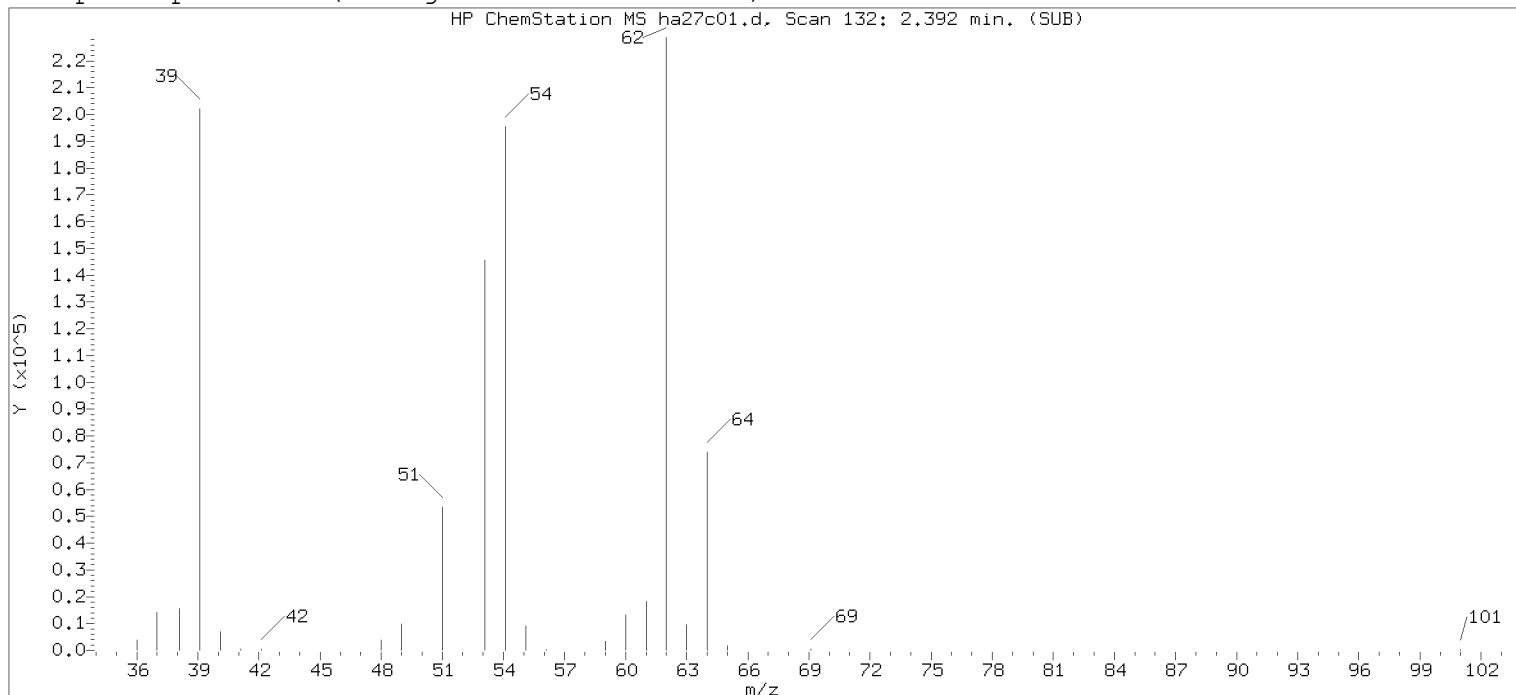
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 132	
Retention Time (minutes)	: 2.392	
Quant Ion	: 39.00	
Area (flag)	: 644244M	
On-Column Amount (ng)	: 13.7855	
Integration start scan	: 112	Integration stop scan: 151
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

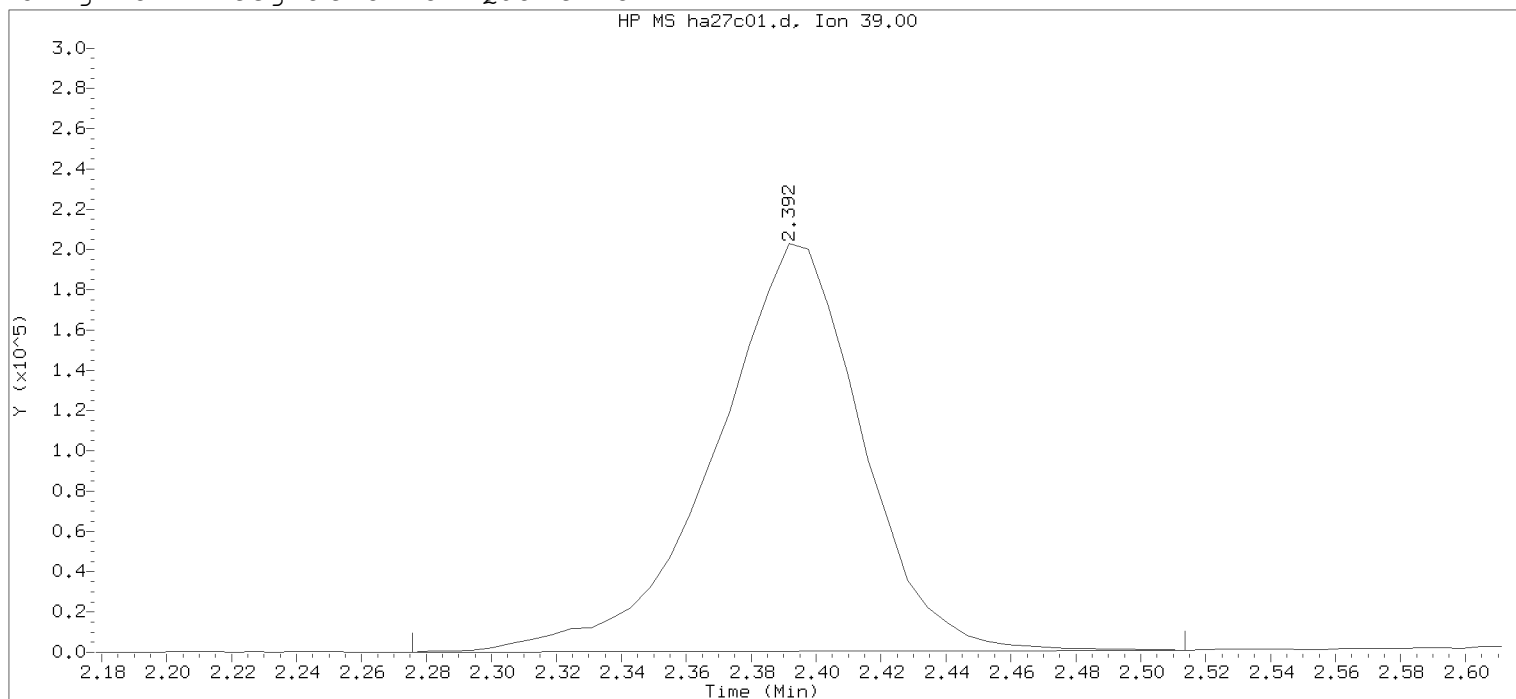
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 19:41 Analyst ID: mec29284

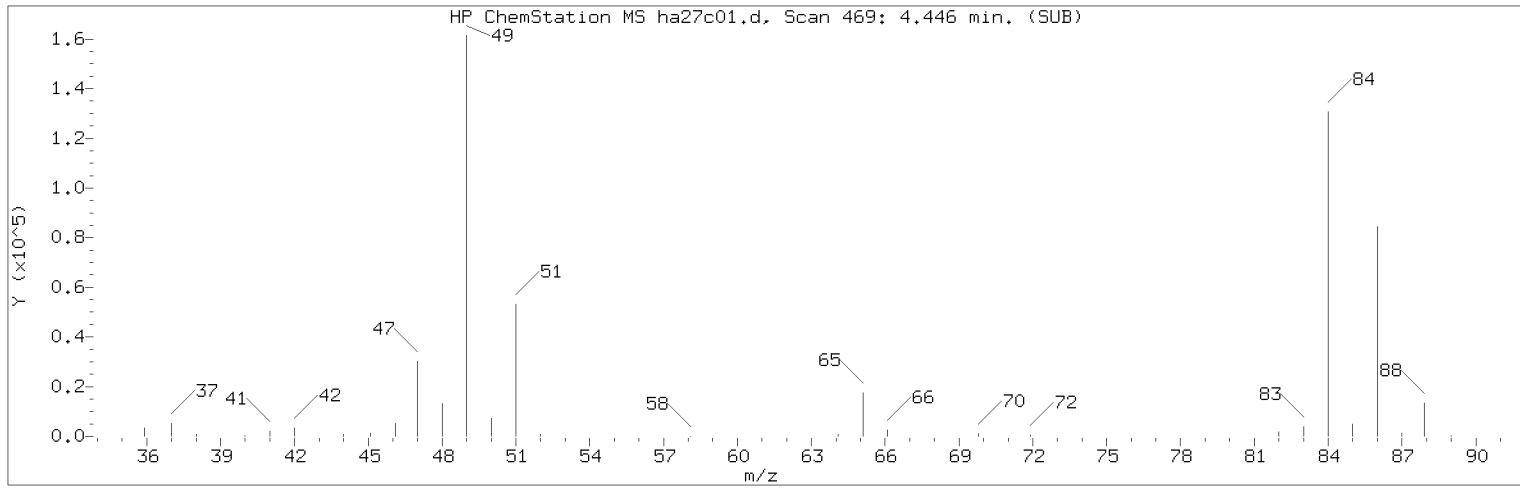
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 20:00
Date, time and analyst ID of latest file update: 27-Apr-2020 20:01 mec29284

Sample Name: VSTD010

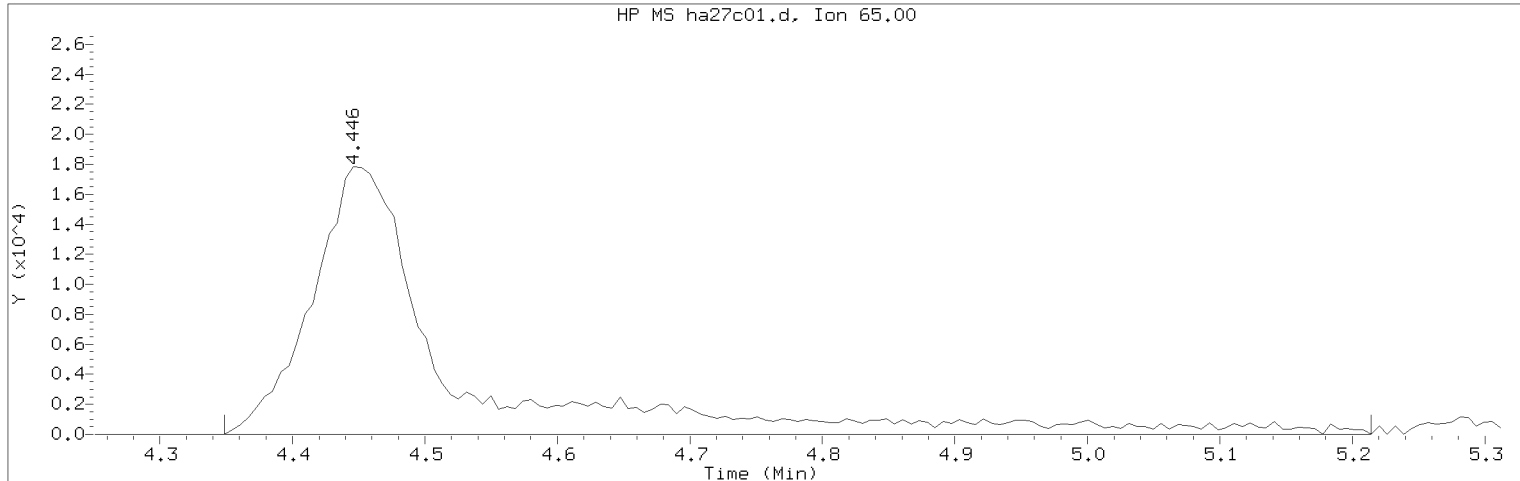
Lab Sample ID: VSTD010

Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 132	
Retention Time (minutes)	: 2.392	
Quant Ion	: 39.00	
Area	: 636570	
On-column Amount (ng)	: 13.6213	
Integration start scan	: 112	Integration stop scan: 151
Y at integration start	: 0	Y at integration end: 1050

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 19:41 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 21:01
Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

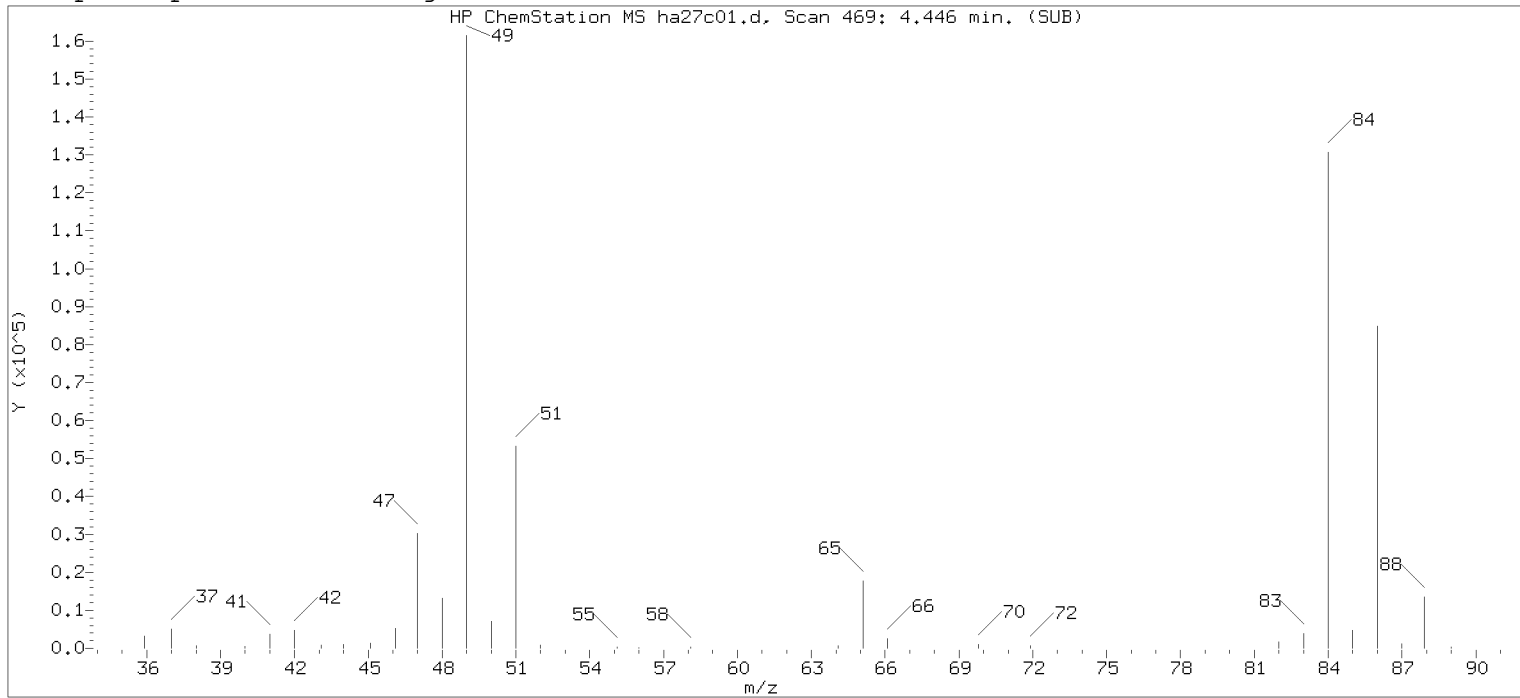
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 469
Retention Time (minutes): 4.446
Quant Ion : 65.00
Area (flag) : 131075M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

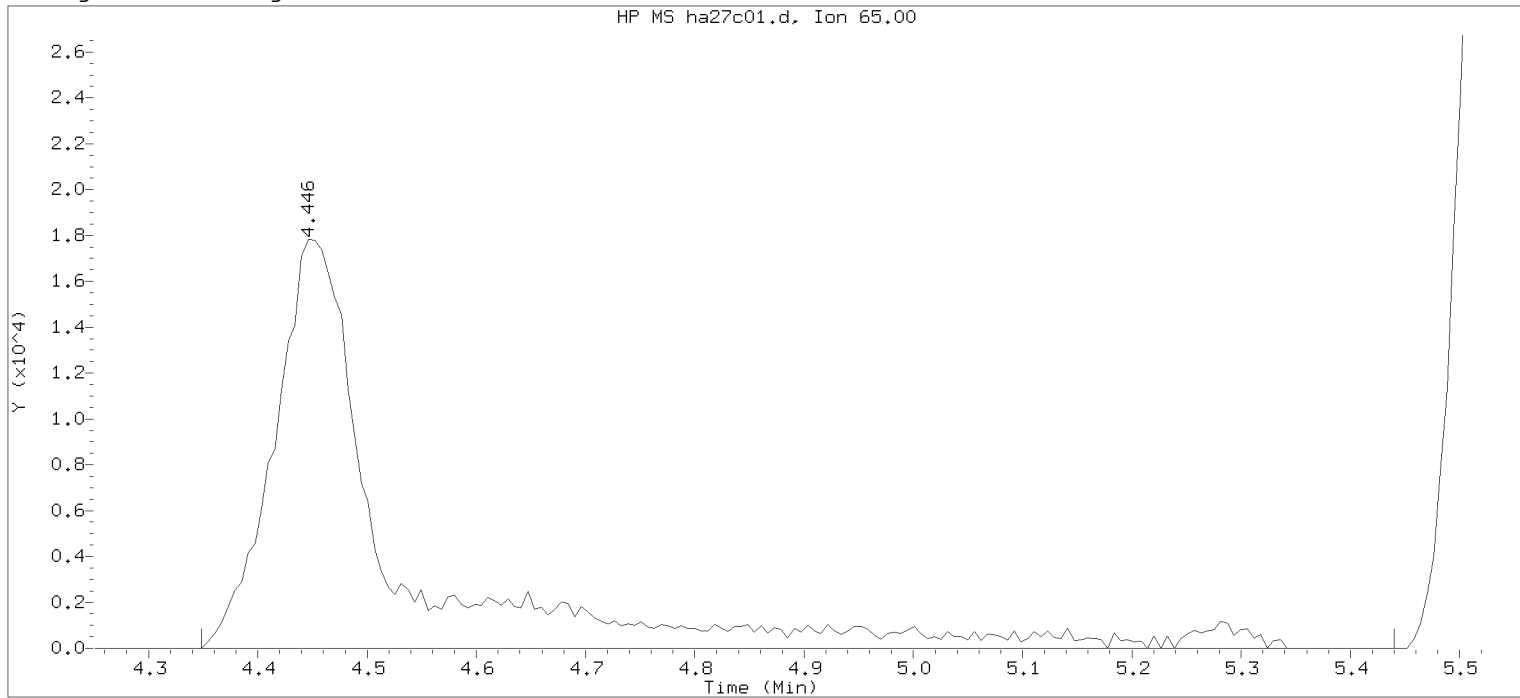
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 19:41

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 27-APR-2020 20:00

Date, time and analyst ID of latest file update: 27-Apr-2020 20:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 469

Retention Time (minutes): 4.446

Quant Ion : 65.00

Area : 135225

On-column Amount (ng) : 50.0000

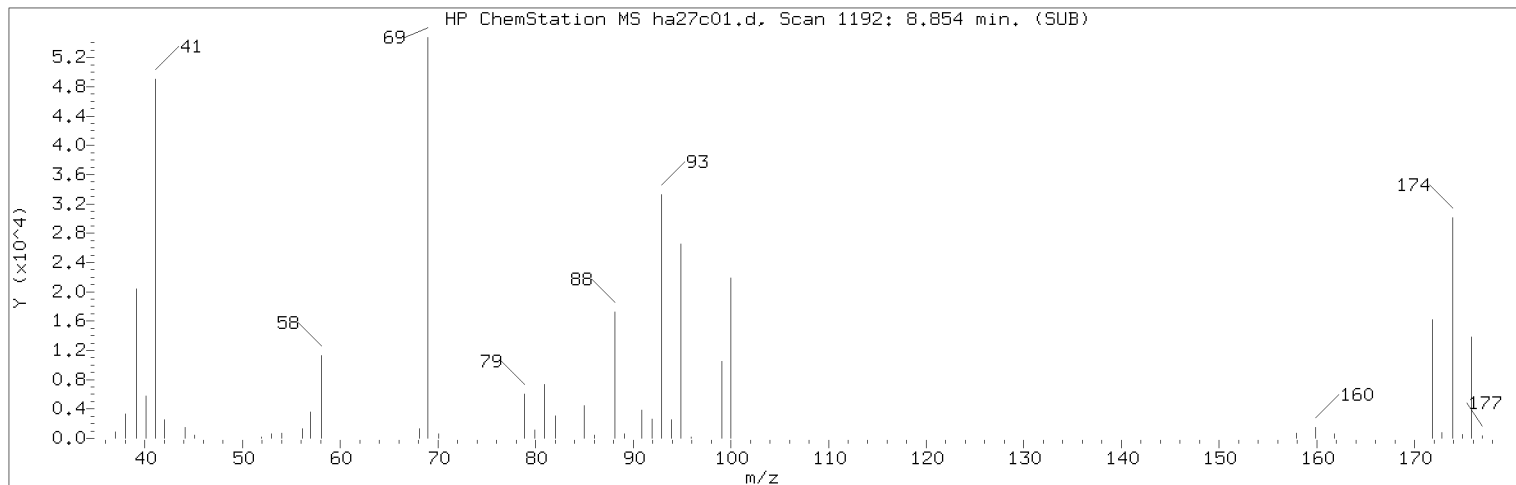
Integration start scan : 452 Integration stop scan: 631

Y at integration start : 0 Y at integration end: 0

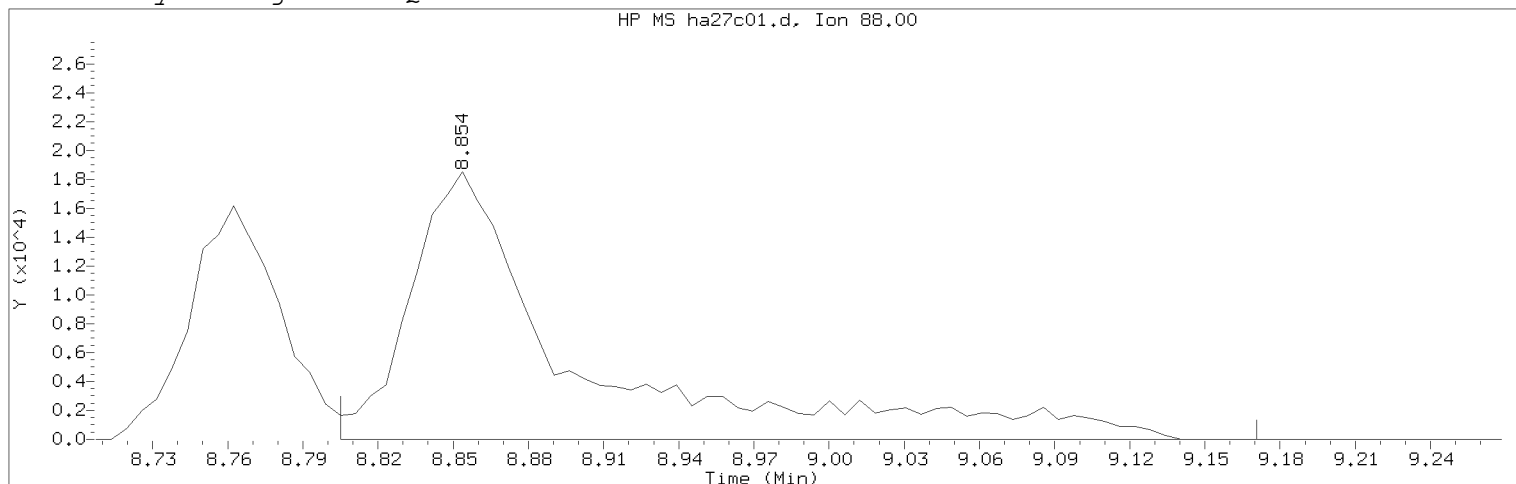
Digitally signed by Miranda E. Campbell on 04/27/2020 at 23:05.

Target 3.5 esignature user RAE59 Page 274 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 19:41

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 27-APR-2020 21:01

Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1192	
Retention Time (minutes)	: 8.854	
Quant Ion	: 88.00	
Area (flag)	: 85565M	
On-Column Amount (ng)	: 459.5243	
Integration start scan	: 1183	Integration stop scan: 1243
Y at integration start	: 0	Y at integration end: 0

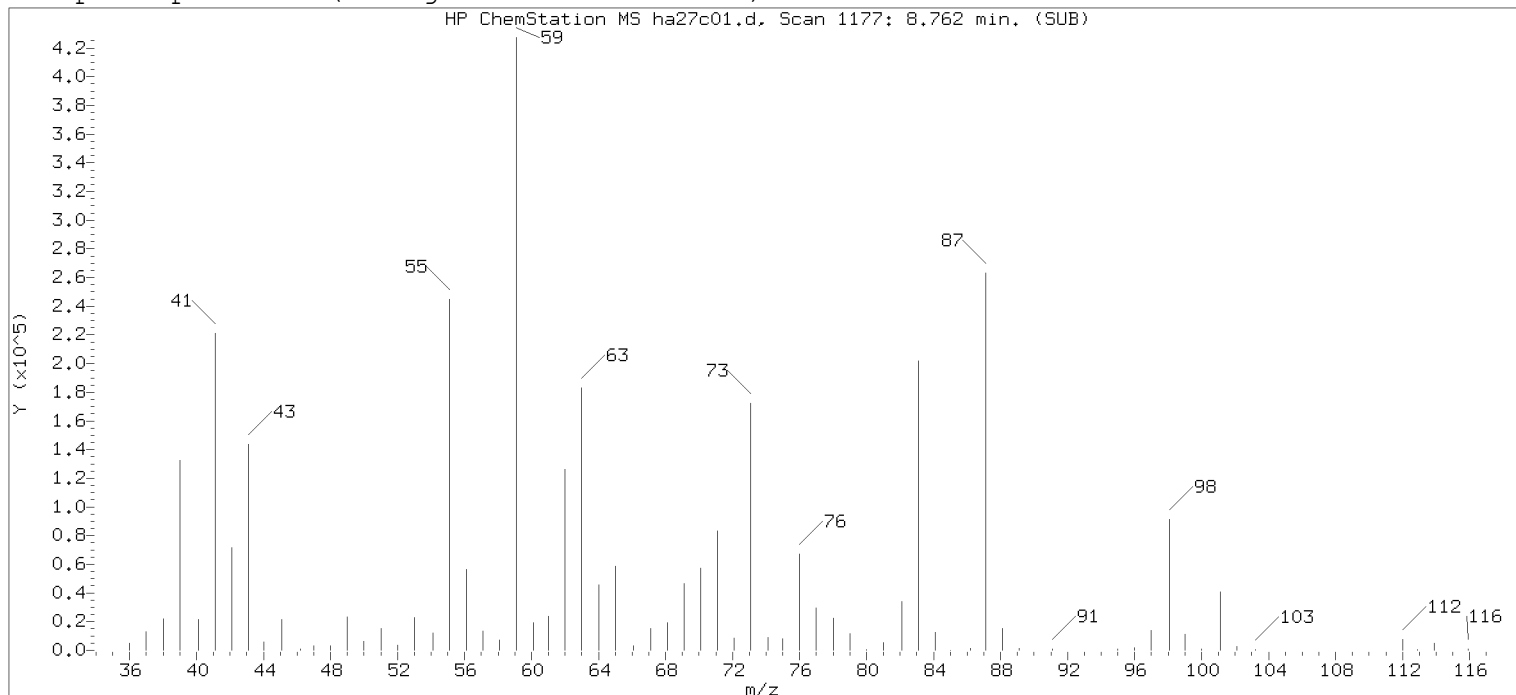
Reason for manual integration: improper integration

Analyst responsible for change:

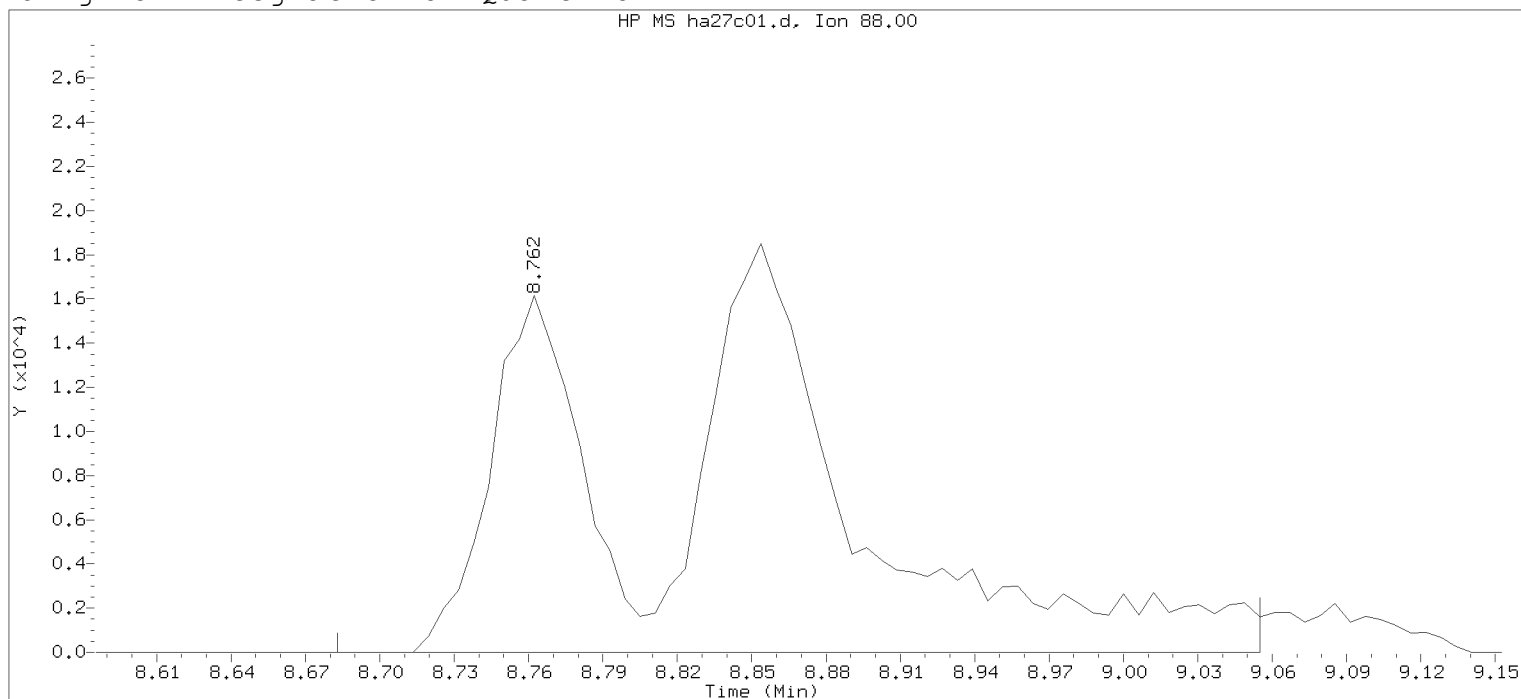
Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 19:41

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 27-APR-2020 20:00

Date, time and analyst ID of latest file update: 27-Apr-2020 20:01 mec29284

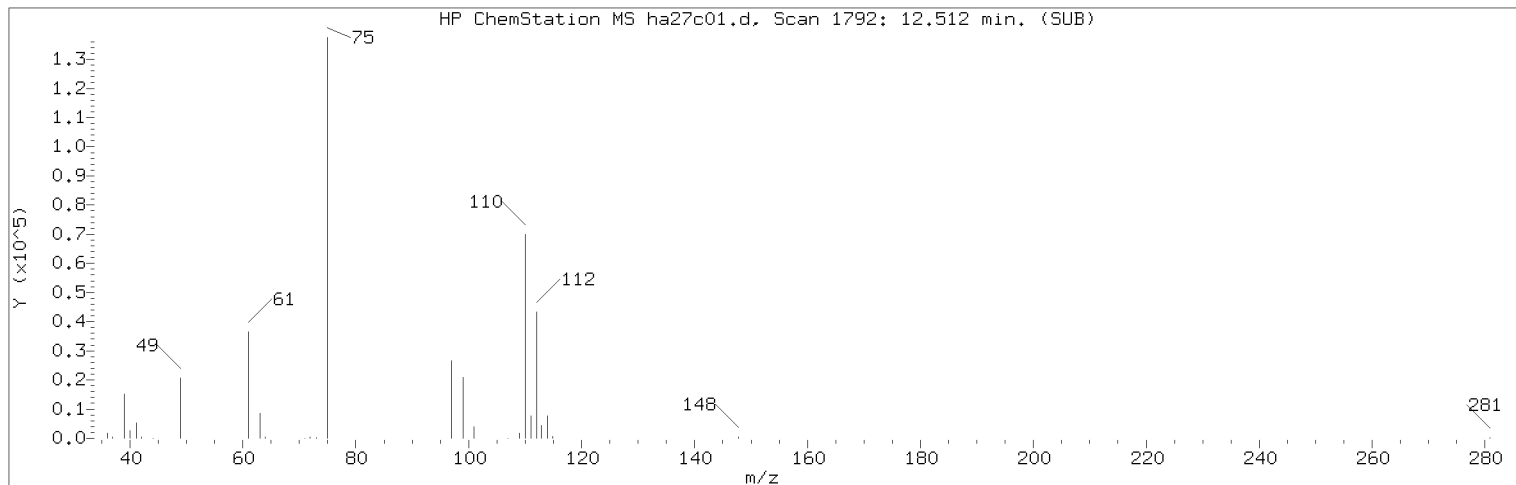
Sample Name: VSTD010

Lab Sample ID: VSTD010

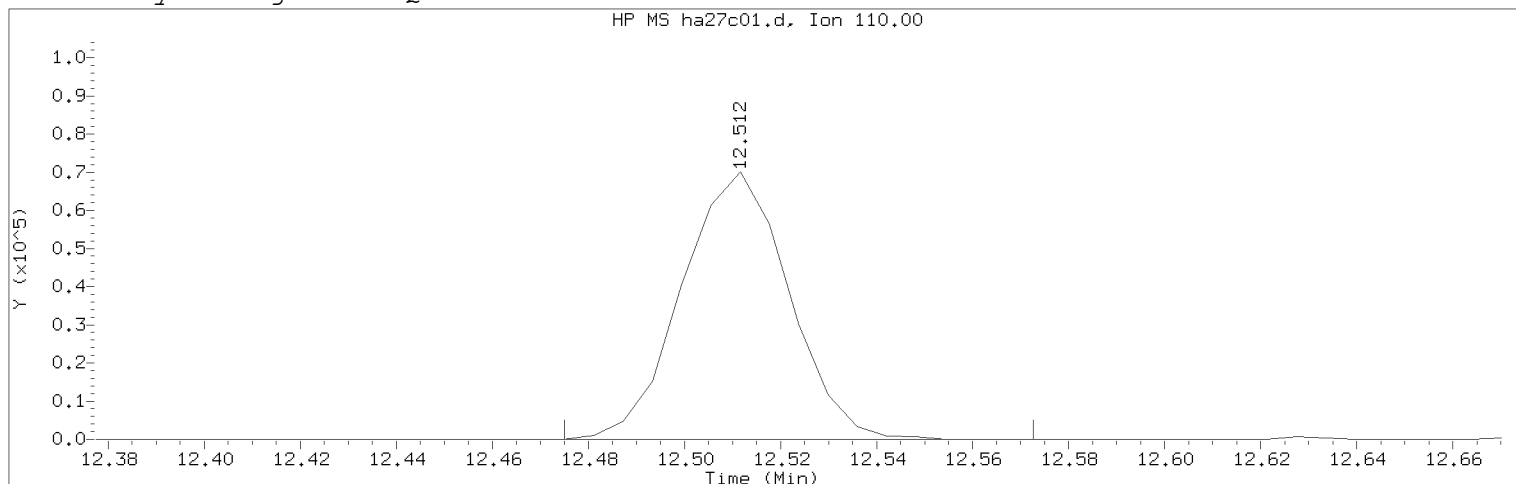
Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1177
 Retention Time (minutes): 8.762
 Quant Ion : 88.00
 Area : 119173
 On-column Amount (ng) : 620.3723
 Integration start scan : 1163
 Y at integration start : 0

Integration stop scan: 1224
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 19:41 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 21:01
Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

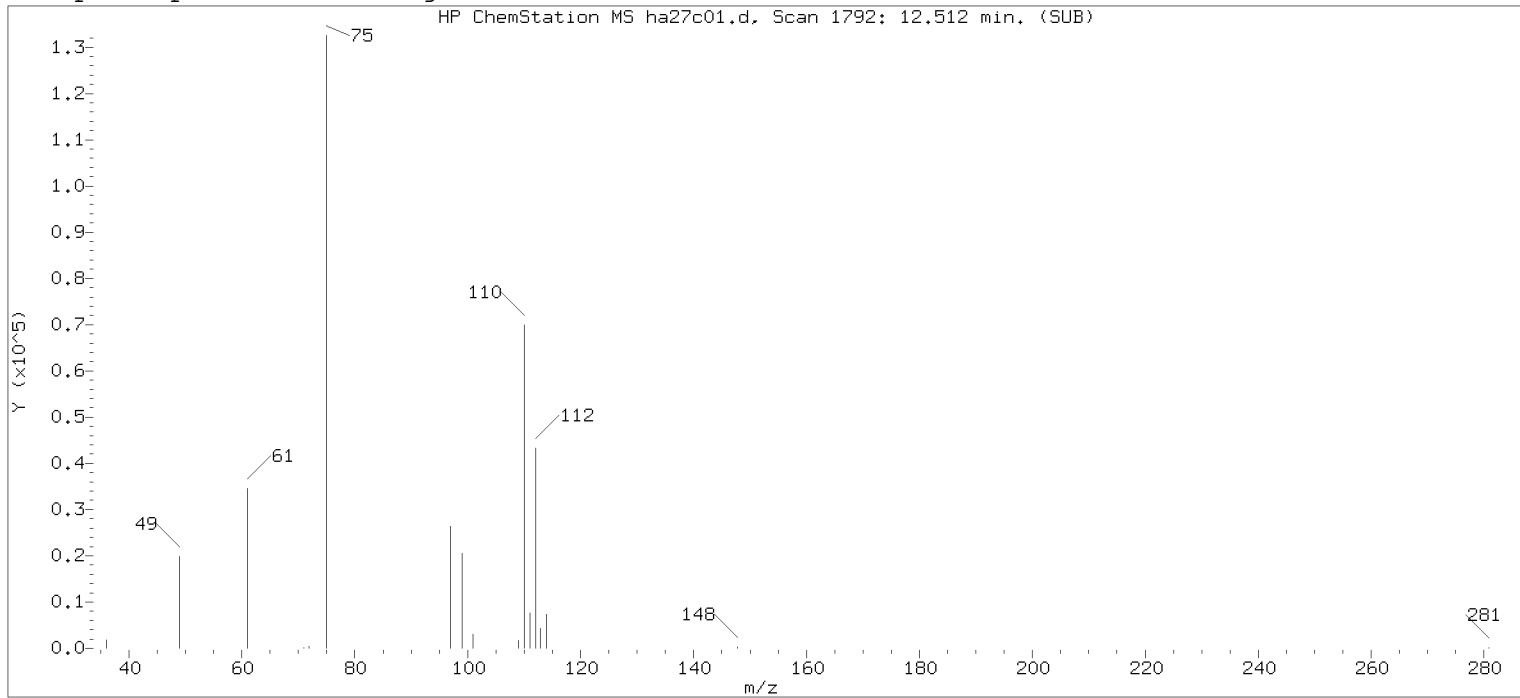
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1792
Retention Time (minutes): 12.512
Quant Ion : 110.00
Area (flag) : 108266M
On-Column Amount (ng) : 9.4366
Integration start scan : 1785 Integration stop scan: 1801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

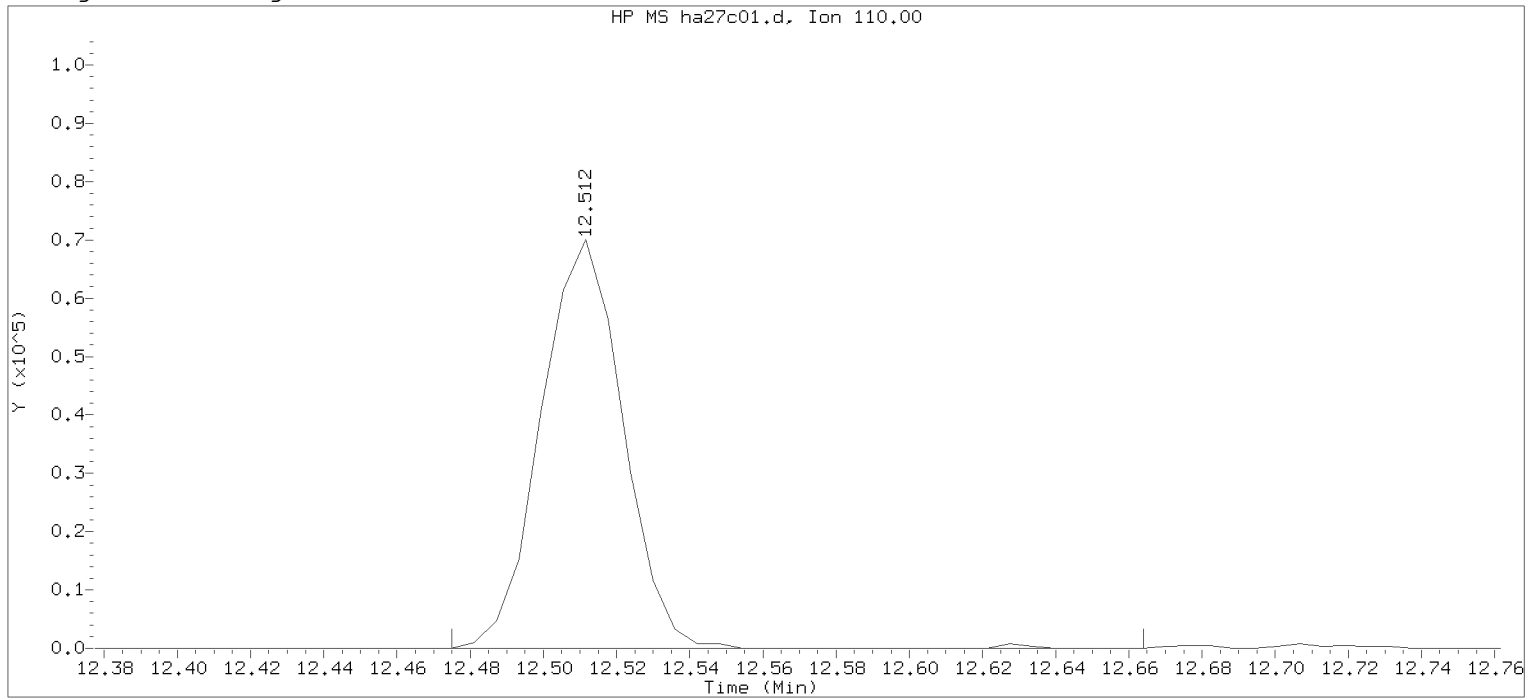
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 19:41 Analyst ID: mec29284

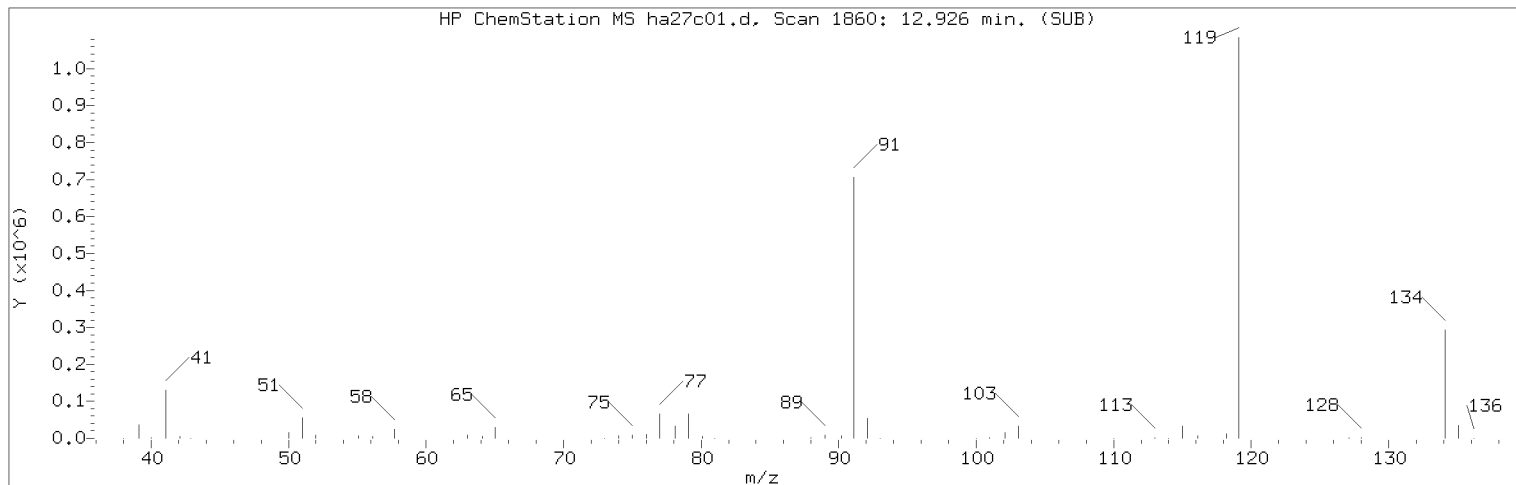
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 20:00
Date, time and analyst ID of latest file update: 27-Apr-2020 20:01 mec29284

Sample Name: VSTD010

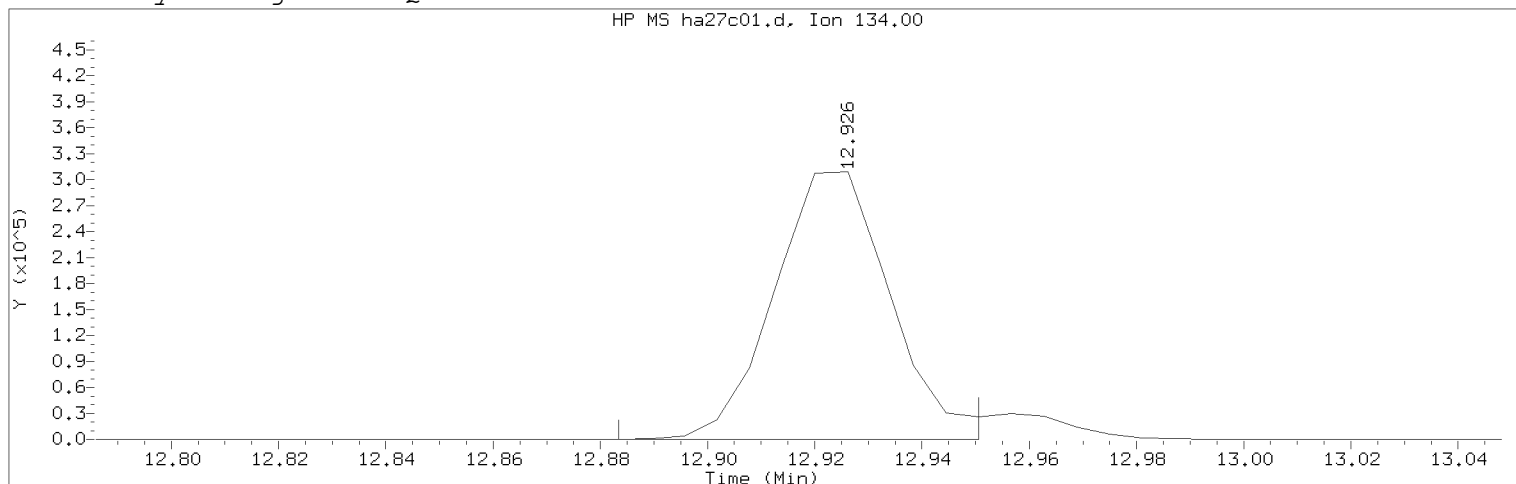
Lab Sample ID: VSTD010

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area	: 108646	
On-column Amount (ng)	: 9.4698	
Integration start scan	: 1785	Integration stop scan: 1816
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 19:41

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 27-APR-2020 21:01

Date, time and analyst ID of latest file update: 27-Apr-2020 21:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

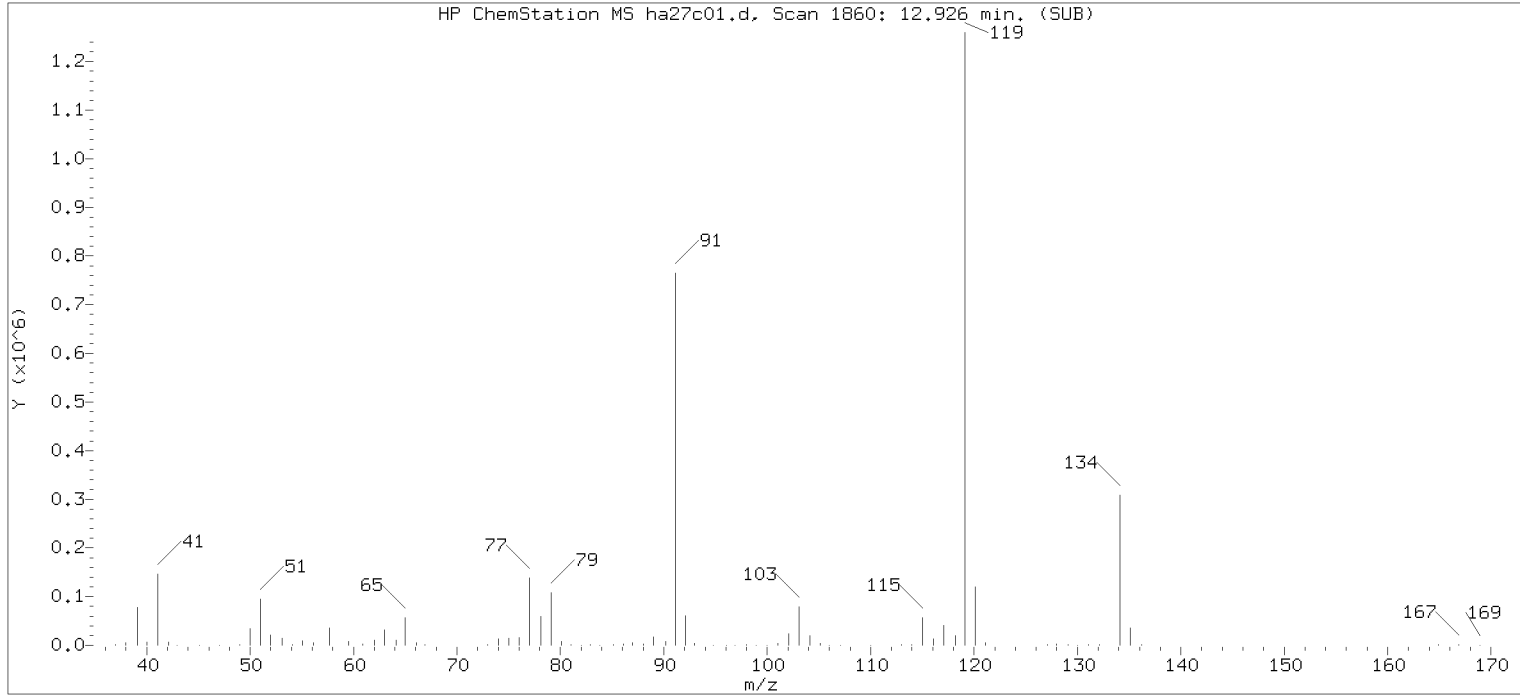
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1860	
Retention Time (minutes)	: 12.926	
Quant Ion	: 134.00	
Area (flag)	: 464410M	
On-Column Amount (ng)	: 9.1526	
Integration start scan	: 1852	Integration stop scan: 1863
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

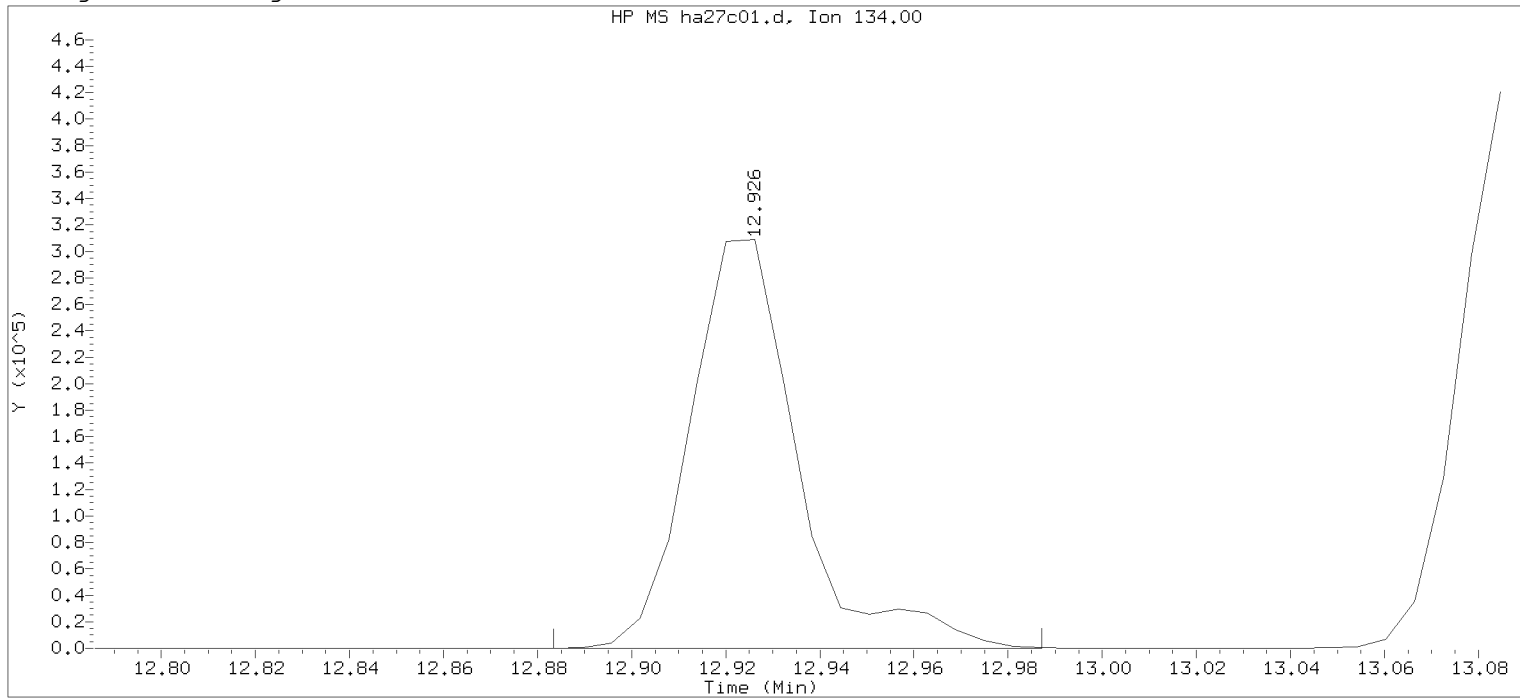
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c01.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 19:41 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 27-APR-2020 20:00
Date, time and analyst ID of latest file update: 27-Apr-2020 20:01 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1860	
Retention Time (minutes)	: 12.926	
Quant Ion	: 134.00	
Area	: 493206	
On-column Amount (ng)	: 9.7201	
Integration start scan	: 1852	Integration stop scan: 1869
Y at integration start	: 0	Y at integration end: 0

Date : 28-APR-2020 08:15

Client ID: 50NG BFB

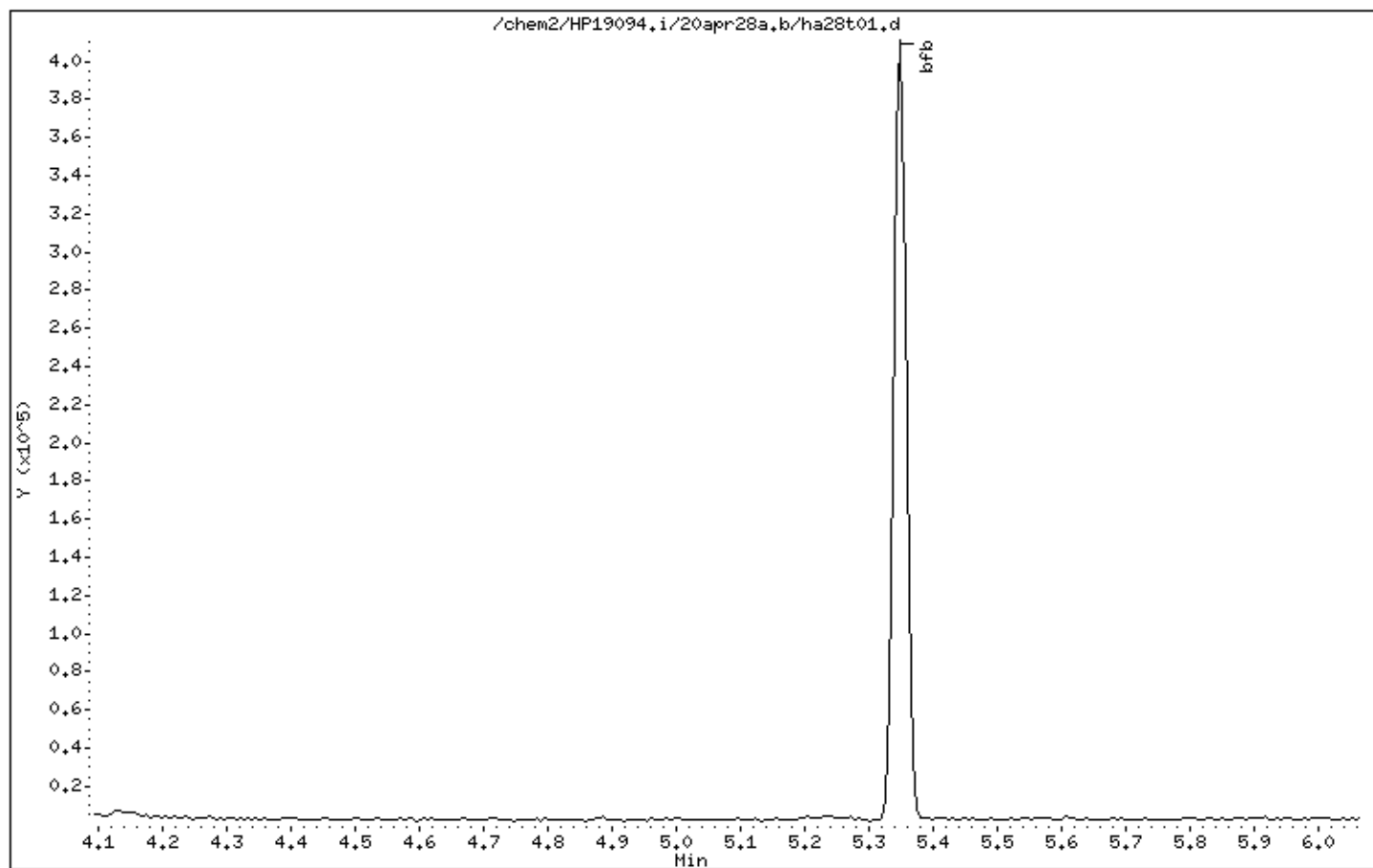
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB jan28 2020 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

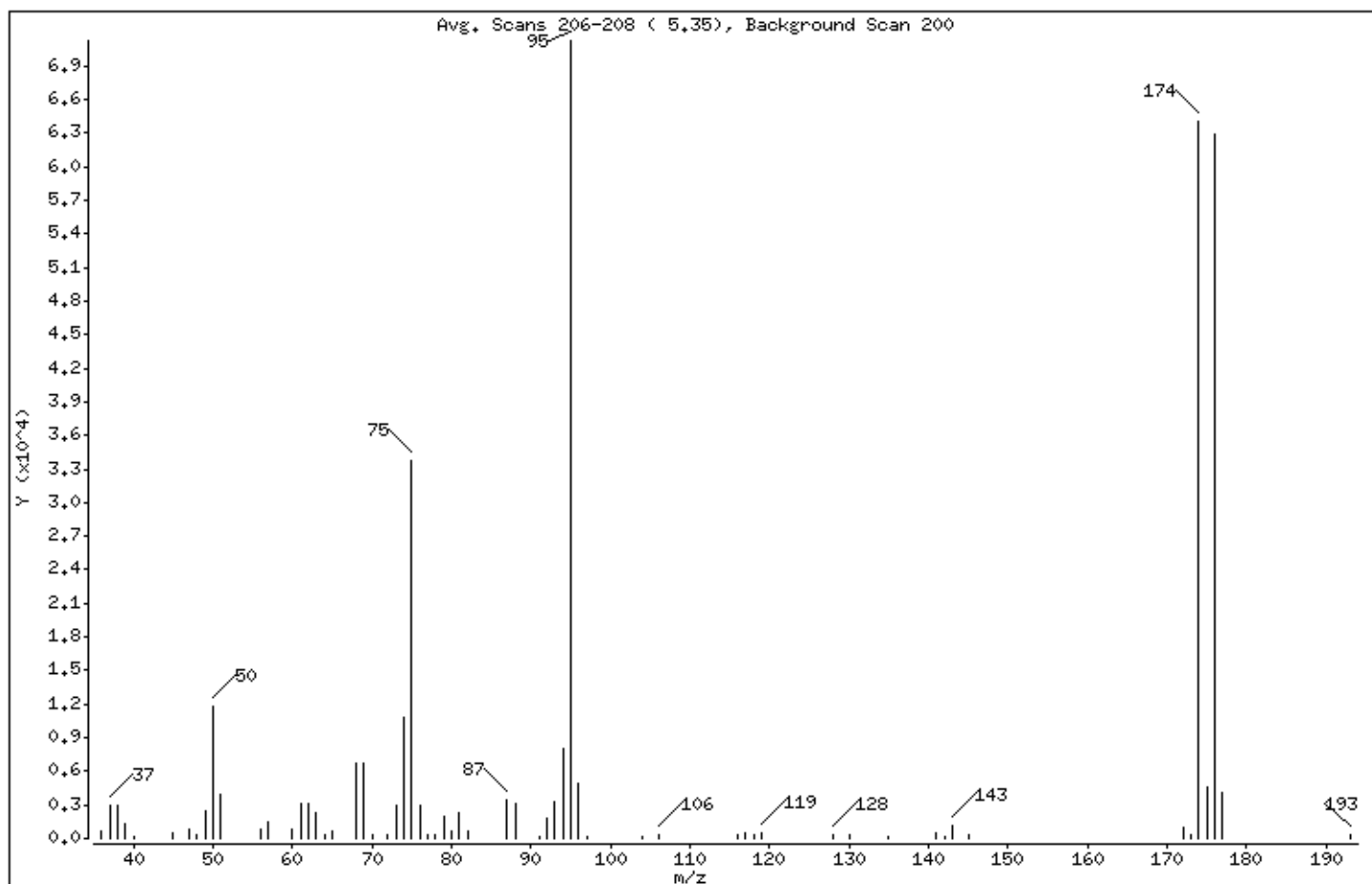


Instrument: HP19094.i

Operator: JKH09052

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.53
75	30.00 - 60.00% of mass 95	47.45
96	5.00 - 9.00% of mass 95	6.91
173	Less than 2.00% of mass 174	0.49 (0.55)
174	50.00 - 100.00% of mass 95	89.86
175	5.00 - 9.00% of mass 174	6.36 (7.07)
176	95.00 - 101.00% of mass 174	88.19 (98.14)
177	5.00 - 9.00% of mass 176	5.85 (6.63)

Date : 28-APR-2020 08:15

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB:BFB jan28 2020 ;1;3; ; ; ; ;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

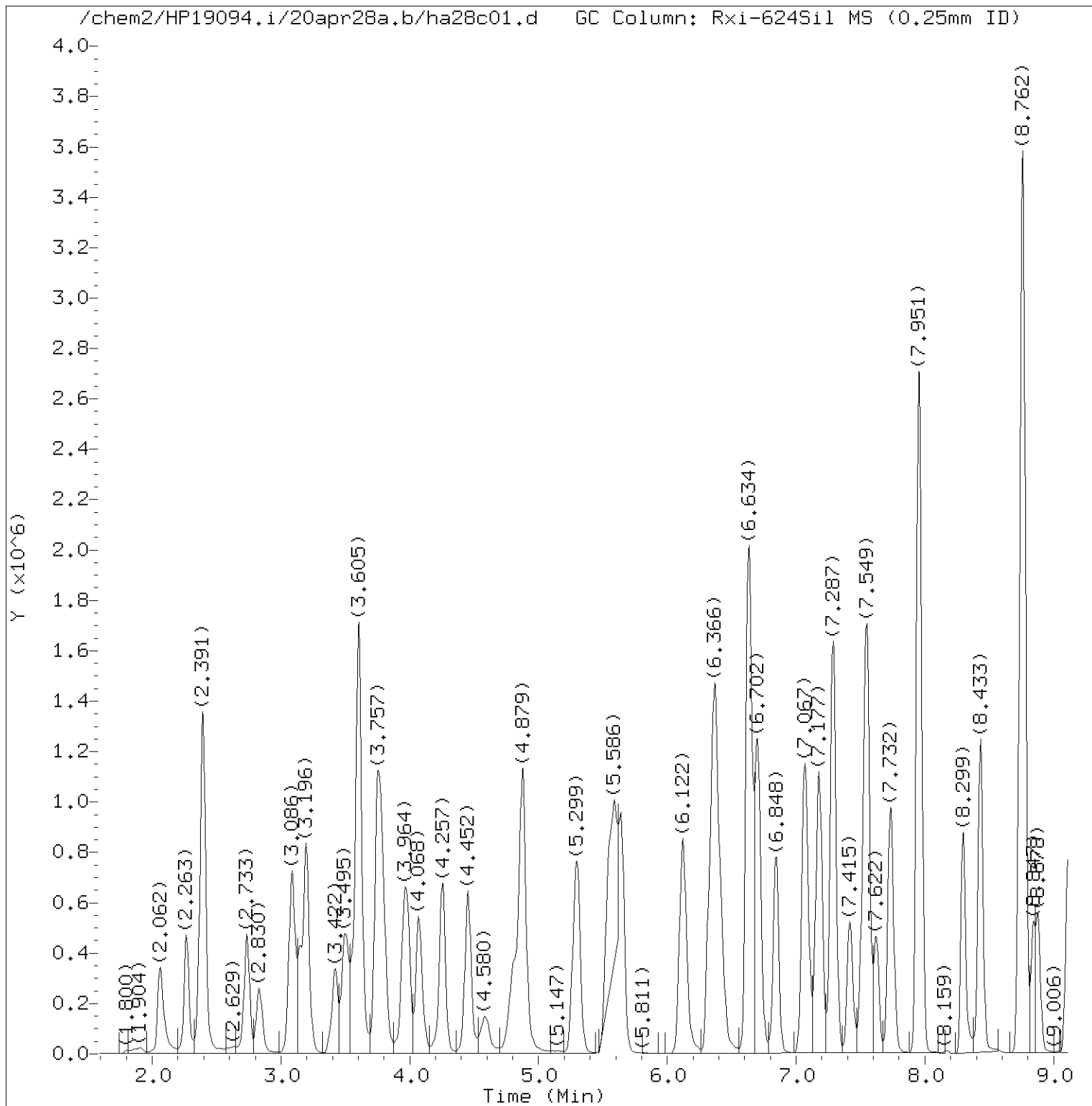
Data File: ha28t01.d

Spectrum: Avg. Scans 206-208 (5.35), Background Scan 200

Location of Maximum: 95.00

Number of points: 62

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	693	63.00	2288	82.00	702	128.00	282
37.00	3021	64.00	407	87.00	3432	130.00	251
38.00	2911	65.00	602	88.00	3048	135.00	83
39.00	1254	68.00	6658	91.00	208	141.00	556
40.00	127	69.00	6721	92.00	1861	142.00	83
45.00	518	70.00	348	93.00	3258	143.00	1172
47.00	893	72.00	323	94.00	8064	145.00	279
48.00	289	73.00	2935	95.00	71256	172.00	947
49.00	2417	74.00	10827	96.00	4923	173.00	350
50.00	11777	75.00	33816	97.00	189	174.00	64032
51.00	3872	76.00	2930	104.00	176	175.00	4530
56.00	873	77.00	276	106.00	347	176.00	62840
57.00	1553	78.00	306	116.00	272	177.00	4166
60.00	862	79.00	1948	117.00	439	193.00	296
61.00	3048	80.00	720	118.00	321		
62.00	3152	81.00	2240	119.00	492		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d
Injection date and time: 28-APR-2020 08:51

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:29

Sublist used: 8260W25

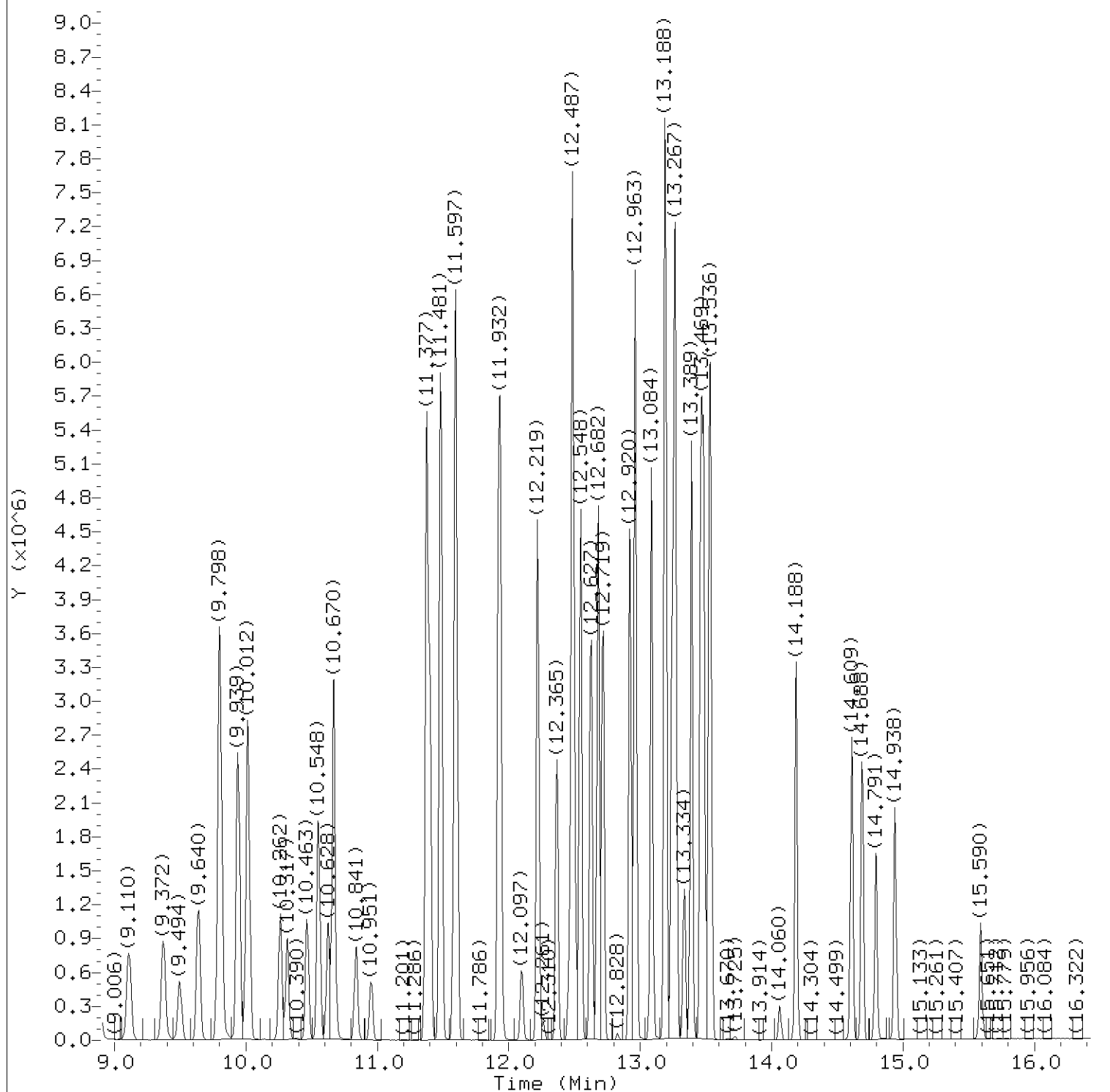
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d
Injection date and time: 28-APR-2020 08:51

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 28-APR-2020 09:29
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:29

Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.062	85	742271	9.666
2) Chloromethane	(2)	2.263	50	768883	10.143
5) Vinyl Chloride	(2)	2.397	62	737868	10.233
6) 1,3-Butadiene	(2)	2.397	39	784038	13.765
7) Bromomethane	(2)	2.733	94	515217	9.975
8) Chloroethane	(2)	2.830	64	418227	10.015
9) Dichlorofluoromethane	(2)	3.080	67	975467	9.836
10) Trichlorofluoromethane	(2)	3.141	101	869840	10.571
11) Ethyl ether	(2)	3.422	59	334930	9.197
12) Freon 123a	(2)	3.495	67	640016	10.060
13) Acrolein	(1)	3.605	56	2841370	474.622
15) 1,1-Dichloroethene	(2)	3.745	96	463685	9.265
16) Freon 113	(2)	3.775	101	512708	9.800
14) Acetone	(1)	3.775	43	731491M	90.553
17) Methyl Iodide	(2)	3.958	142	927447	9.603
18) Bromoethane	(2)	3.989	108	394510	9.035
19) Carbon Disulfide	(2)	4.068	76	1431293	9.349
22) Methyl Acetate	(1)	4.220	43	196052	9.618
23) Allyl Chloride	(2)	4.257	41	750800	8.831
24) Methylene Chloride	(2)	4.452	84	521637	9.684
27)*t-Butyl Alcohol-d10	(1)	4.458	65	132945M	50.000
29) t-Butyl Alcohol	(1)	4.580	59	474337	169.038
30) Acrylonitrile	(1)	4.799	53	500994	50.823
31) Methyl Tertiary Butyl Ether	(2)	4.860	73	1069293	9.345
32) trans-1,2-Dichloroethene	(2)	4.879	96	521791	9.484
33) n-Hexane	(2)	5.293	57	789024	10.168
34) 1,1-Dichloroethane	(2)	5.537	63	1004420	10.112
35) di-Isopropyl Ether	(2)	5.586	45	1682704	10.285
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	821967	9.665
41) 1,2-Dichloroethene (Total)	(2)		96	1121509	19.293
38) Ethyl t-butyl ether	(2)	6.122	59	1425226	9.279
39) 2-Butanone	(1)	6.330	43	1267817	100.374
40) cis-1,2-Dichloroethene	(2)	6.366	96	599718	9.810
42) 2,2-Dichloropropane	(2)	6.378	77	786787	9.309
43) Propionitrile	(1)	6.421	54	753179	217.686
46) Methacrylonitrile	(1)	6.628	67	1271958	102.789
48) Bromochloromethane	(2)	6.695	128	246163	9.537
49) Tetrahydrofuran	(1)	6.702	71	337185	96.627

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:29

Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.848	83	966236	9.967
51) \$Dibromofluoromethane	(2)	7.061	113	520913	10.229
51) \$Dibromofluoromethane	(2)	7.055	111	530927	10.148
52) 1,1,1-Trichloroethane	(2)	7.080	97	848100	9.407
53) Cyclohexane	(2)	7.177	56	951384	9.881
53) Cyclohexane	(2)	7.177	84	795667	9.647
53) Cyclohexane	(2)	7.183	69	286377	9.556
55) Carbon Tetrachloride	(2)	7.287	117	753580	9.749
56) 1,1-Dichloropropene	(2)	7.287	75	766292	10.057
57) Isobutyl Alcohol	(1)	7.415	41	459452	472.365
58) \$1,2-Dichloroethane-d4	(2)	7.518	102	102221	10.357
58) \$1,2-Dichloroethane-d4	(2)	7.518	65	466931	10.254
58) \$1,2-Dichloroethane-d4	(2)	7.512	104	61686	9.868
59) Benzene	(2)	7.549	78	2272596	10.199
60) 1,2-Dichloroethane	(2)	7.622	62	564049M	9.818
61) t-Amyl methyl ether	(2)	7.738	73	1243684	9.284
64) *Fluorobenzene	(2)	7.951	96	2048561	10.000
63) n-Heptane	(2)	7.957	43	870855	10.698
66) n-Butanol	(1)	8.299	56	811468	1036.308
68) Trichloroethene	(2)	8.433	95	582970	9.977
70) Methylcyclohexane	(2)	8.744	83	957930	9.150
71) 1,2-Dichloropropane	(2)	8.768	63	587481	10.657
72) Methyl Methacrylate	(1)	8.841	69	243708	9.790
73) 1,4-Dioxane	(1)	8.854	88	88487M	468.532
74) Dibromomethane	(2)	8.878	93	257232	10.207
75) Bromodichloromethane	(2)	9.110	83	689653	10.069
77) 2-Nitropropane	(1)	9.372	41	703659	86.063
80) 1-Bromo-2-chloroethane	(2)	9.494	63	565263	10.909
81) cis-1,3-Dichloropropene	(2)	9.640	75	833791	10.308
82) 4-Methyl-2-Pentanone	(1)	9.798	43	3160060	101.506
83) \$Toluene-d8	(3)	9.939	98	2059456	9.672
83) \$Toluene-d8	(3)	9.939	100	1334409	9.690
84) Toluene	(3)	10.012	92	1446493	9.671
86) 1,3-Dichloropropene (total)	(3)		75	1498092	19.877
85) trans-1,3-Dichloropropene	(3)	10.262	75	664301	9.569
87) Ethyl Methacrylate	(3)	10.317	69	511006	9.496
89) 1,1,2-Trichloroethane	(3)	10.463	97	371442	9.884
90) Tetrachloroethene	(3)	10.554	166	668175	9.828

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:29

Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.628	76	656977	10.176
92) 2-Hexanone	(1)	10.664	43	2170720	102.043
94) Dibromochloromethane	(3)	10.841	129	479786	9.971
96) 1,2-Dibromoethane	(3)	10.951	107	364341	10.145
98) *Chlorobenzene-d5	(3)	11.371	117	1598245	10.000
97) 1-Chlorohexane	(3)	11.377	91	817155	9.062
99) Chlorobenzene	(3)	11.402	112	1601984	9.803
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	565185	9.723
101) Ethylbenzene	(3)	11.481	91	2810240	9.548
102) m+p-Xylene	(3)	11.597	106	2192098	19.477
106) Xylene (Total)	(3)		106	3256928	29.100
105) o-Xylene	(3)	11.926	106	1064830	9.622
107) Styrene	(3)	11.938	104	1784159	9.934
108) Bromoform	(3)	12.097	173	281714	10.044
109) Isopropylbenzene	(3)	12.219	105	2807941	9.362
112) \$4-Bromofluorobenzene	(3)	12.365	95	754858	9.582
112) \$4-Bromofluorobenzene	(3)	12.365	174	676910	10.042
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	445608	9.946
115) Bromobenzene	(4)	12.487	156	665077	9.820
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	950174	81.250
117) 1,2,3-Trichloropropane	(4)	12.511	110	117326M	9.779
118) n-Propylbenzene	(4)	12.548	91	3353893	9.483
120) 2-Chlorotoluene	(4)	12.627	126	670317	9.607
122) 1,3,5-Trimethylbenzene	(4)	12.682	105	2403449	9.368
123) 4-Chlorotoluene	(4)	12.719	126	686542	9.859
126) tert-Butylbenzene	(4)	12.926	134	520594M	9.811
127) Pentachloroethane	(4)	12.956	167	422266	9.338
128) 1,2,4-Trimethylbenzene	(4)	12.963	105	2501416	9.442
129) sec-Butylbenzene	(4)	13.084	105	3163719	9.518
132) 1,3-Dichlorobenzene	(4)	13.188	146	1332244	9.870
133) p-Isopropyltoluene	(4)	13.194	119	2702377	9.446
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	858159	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	1284389	9.755
136) 1,2,3-Trimethylbenzene	(4)	13.267	120	987386	8.937
137) Benzyl Chloride	(4)	13.334	126	189368	10.054
139) n-Butylbenzene	(4)	13.481	92	1379407	9.754
140) 1,2-Dichlorobenzene	(4)	13.523	146	1159684	9.747
144) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	62837	9.421

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 08:51 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 28-APR-2020 09:29
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

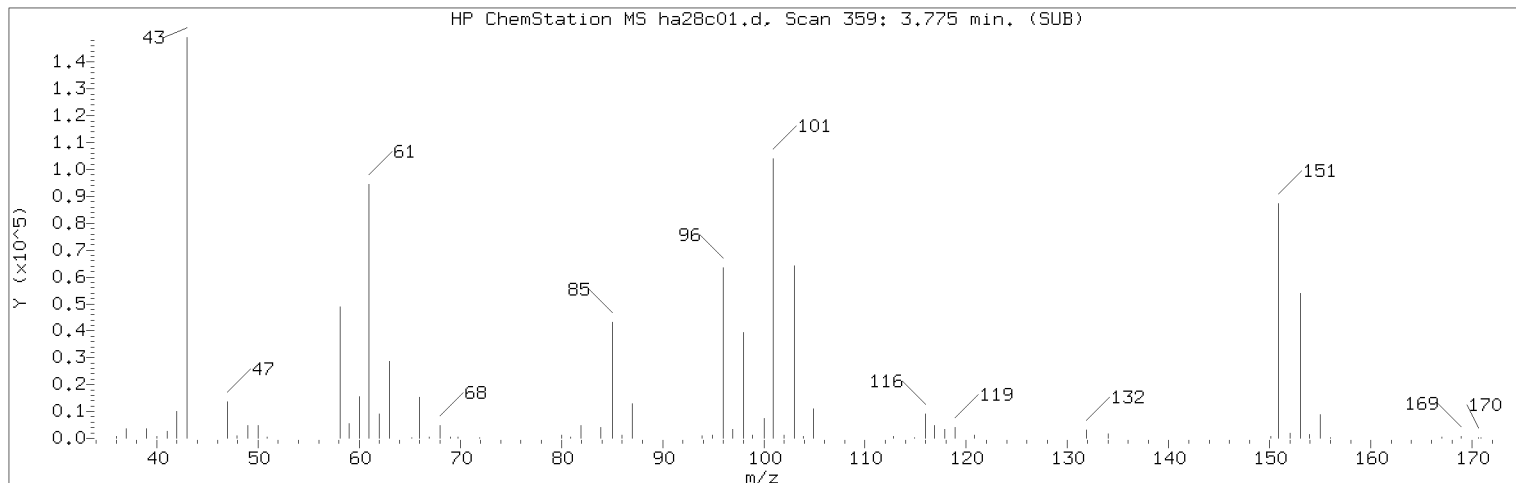
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.188	180	998192	9.450
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	787818	8.894
147) Hexachlorobutadiene	(4)	14.688	225	446113	9.650
148) Naphthalene	(4)	14.791	128	1230147	7.958
149) 1,2,3-Trichlorobenzene	(4)	14.938	180	631163	8.347

page 4 of 4

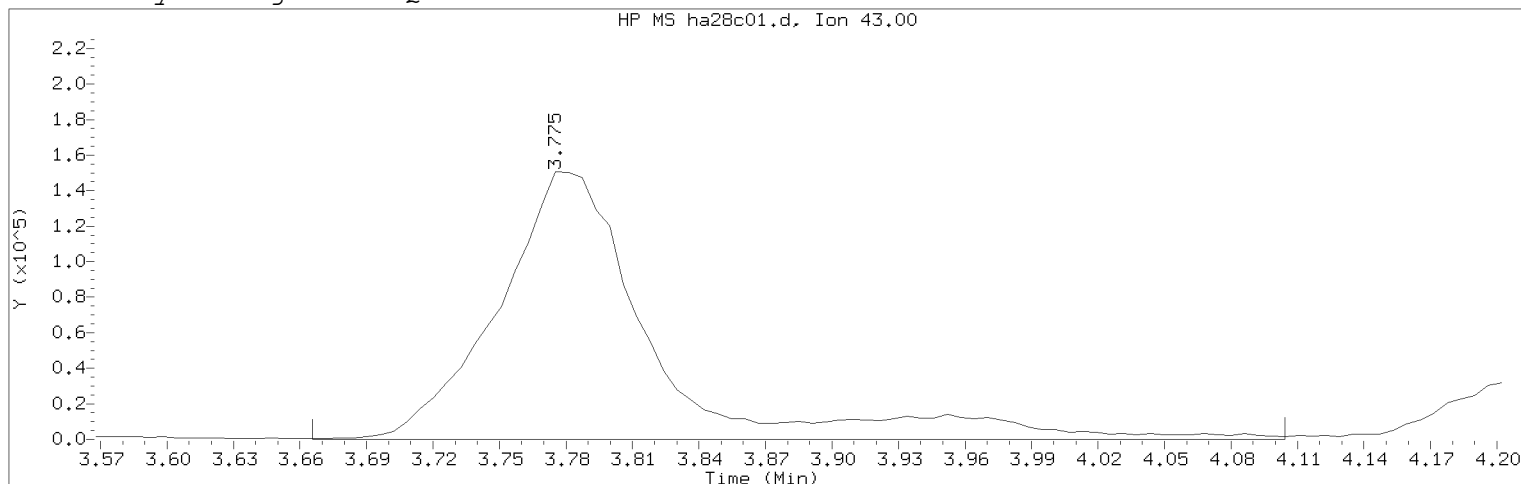
Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:29

Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 359
 Retention Time (minutes): 3.775
 Quant Ion : 43.00
 Area (flag) : 731491M
 On-Column Amount (ng) : 90.5534
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 412
 Y at integration end: 0

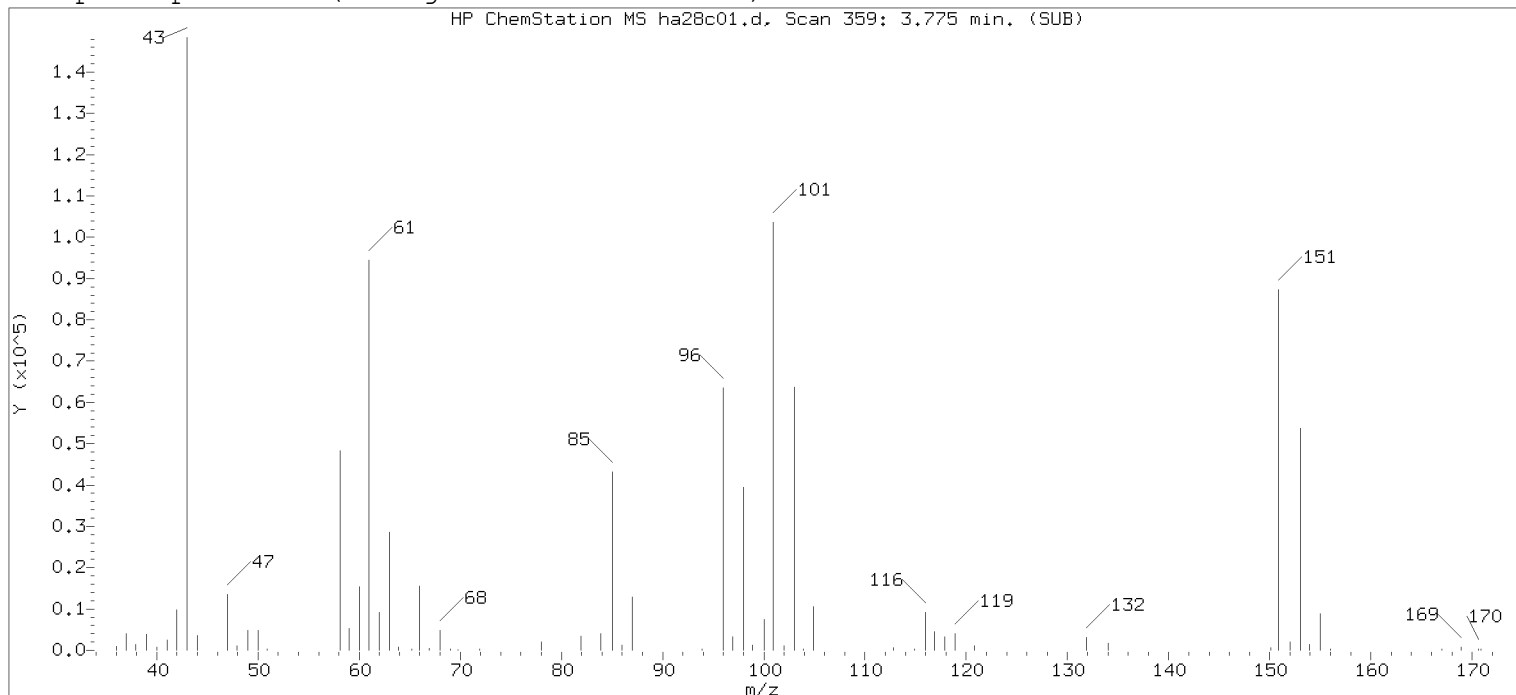
Reason for manual integration: improper integration

Analyst responsible for change:

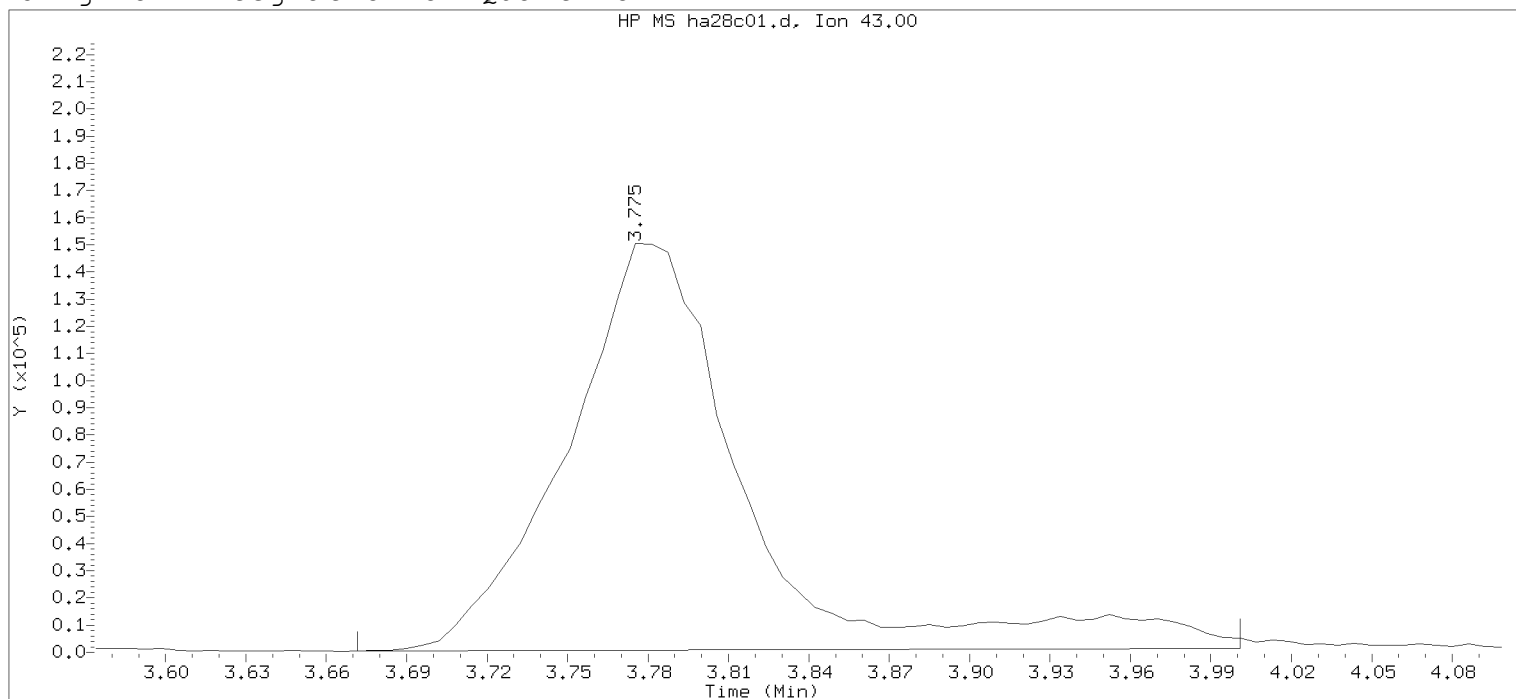
Digitally signed by Jennifer K. Howe
 on 04/28/2020 at 09:29.
 Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/28/2020 at 23:27.
 PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:09

Date, time and analyst ID of latest file update: 28-Apr-2020 09:09 Automation

Sample Name: VSTD010

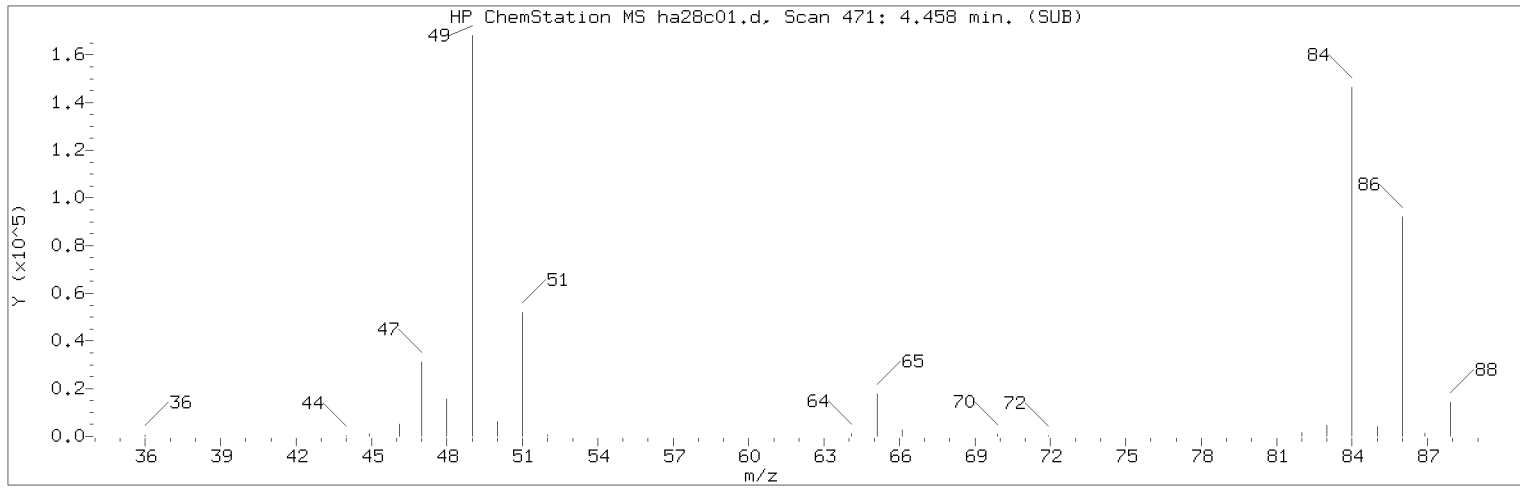
Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 359
 Retention Time (minutes): 3.775
 Quant Ion : 43.00
 Area : 694375
 On-column Amount (ng) : 90.0143
 Integration start scan : 341
 Y at integration start : 393

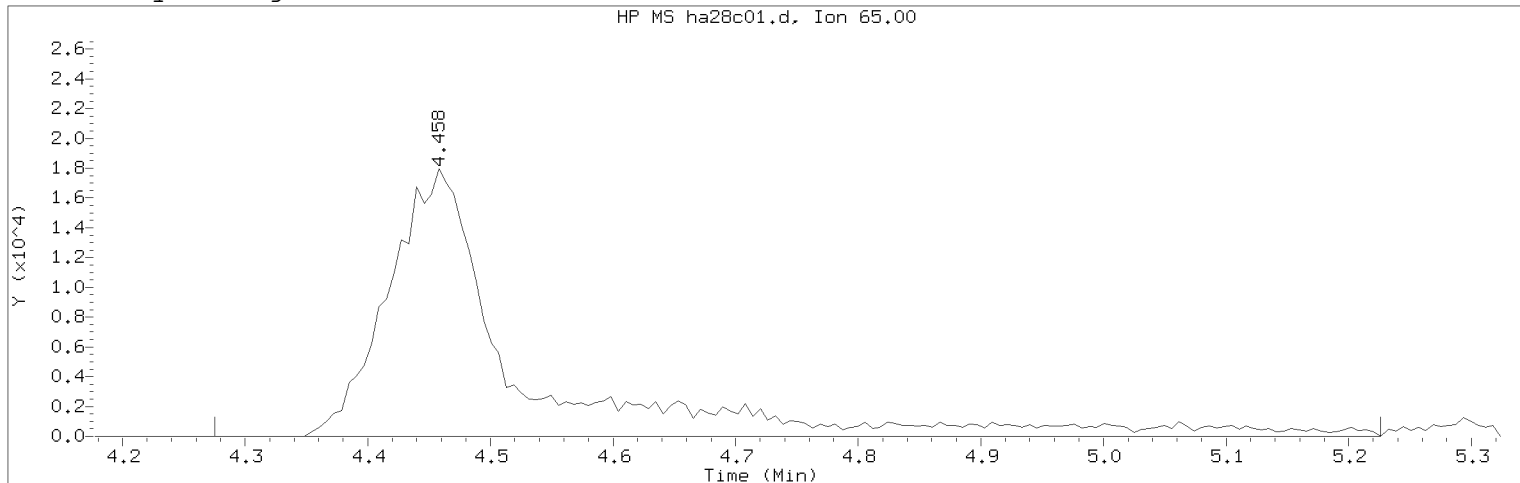
Integration stop scan: 395
 Y at integration end: 1474

Digitally signed by Jennifer K. Howe on 04/28/2020 at 09:29.
 Target 3.5 esignature user RPF59 Page 791 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 08:51 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 28-APR-2020 09:29
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

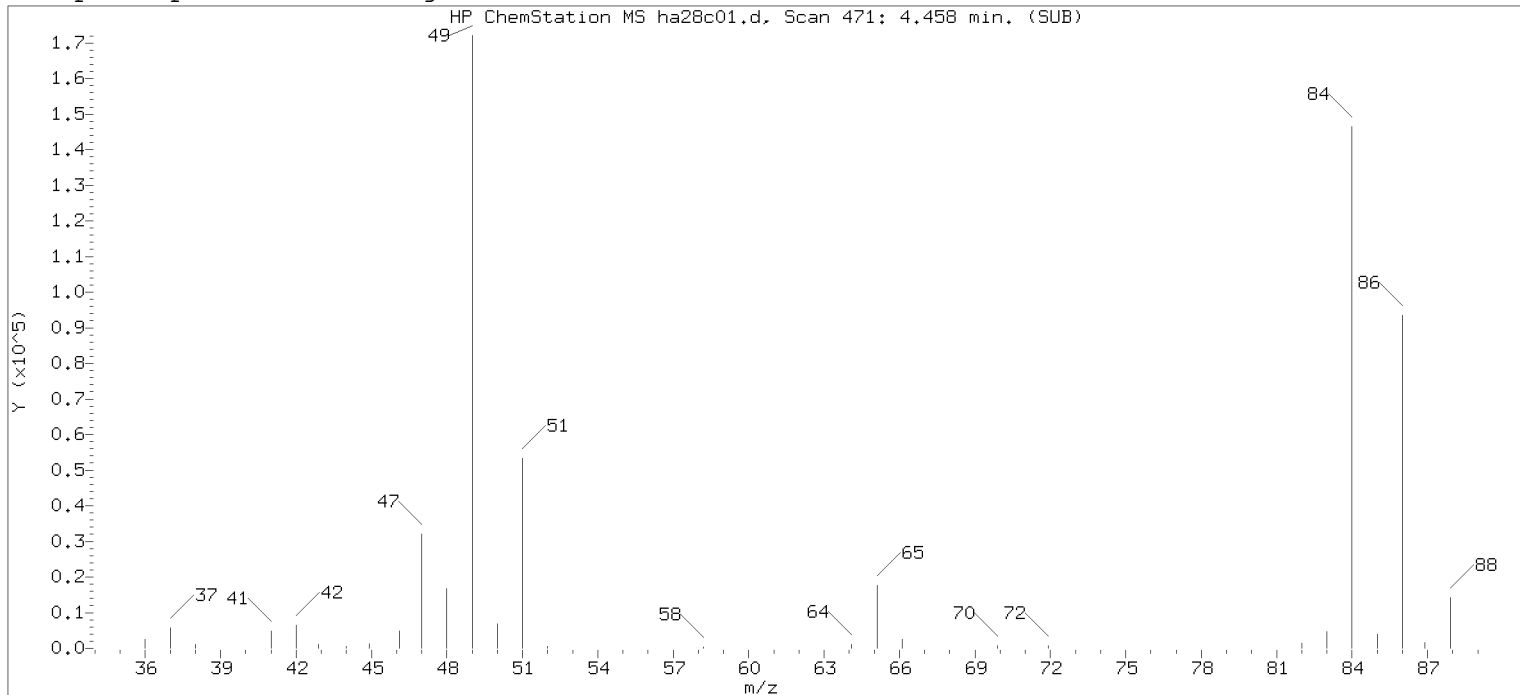
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 132945M
On-Column Amount (ng) : 50.0000
Integration start scan : 440 Integration stop scan: 596
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

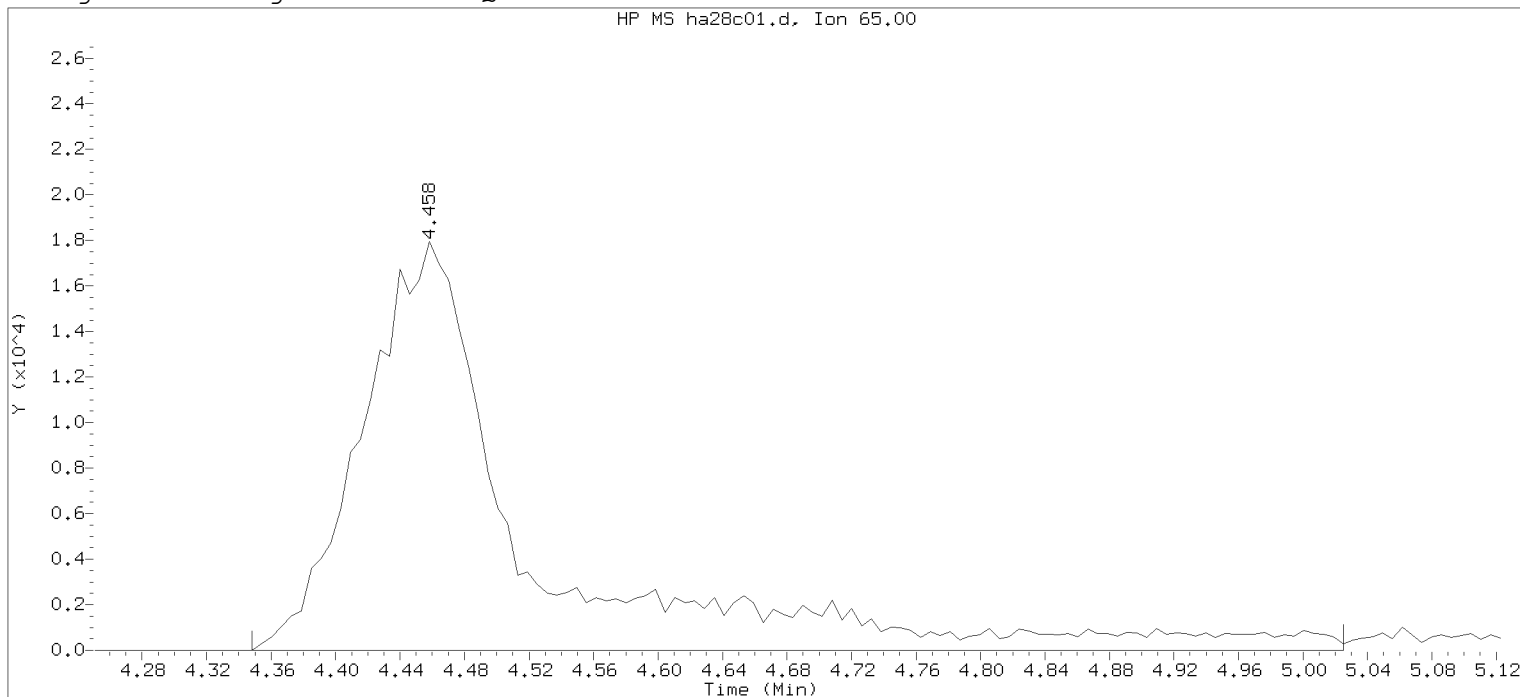
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/28/2020 at 23:27.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:09

Date, time and analyst ID of latest file update: 28-Apr-2020 09:09 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 471

Retention Time (minutes): 4.458

Quant Ion : 65.00

Area : 126955

On-column Amount (ng) : 50.0000

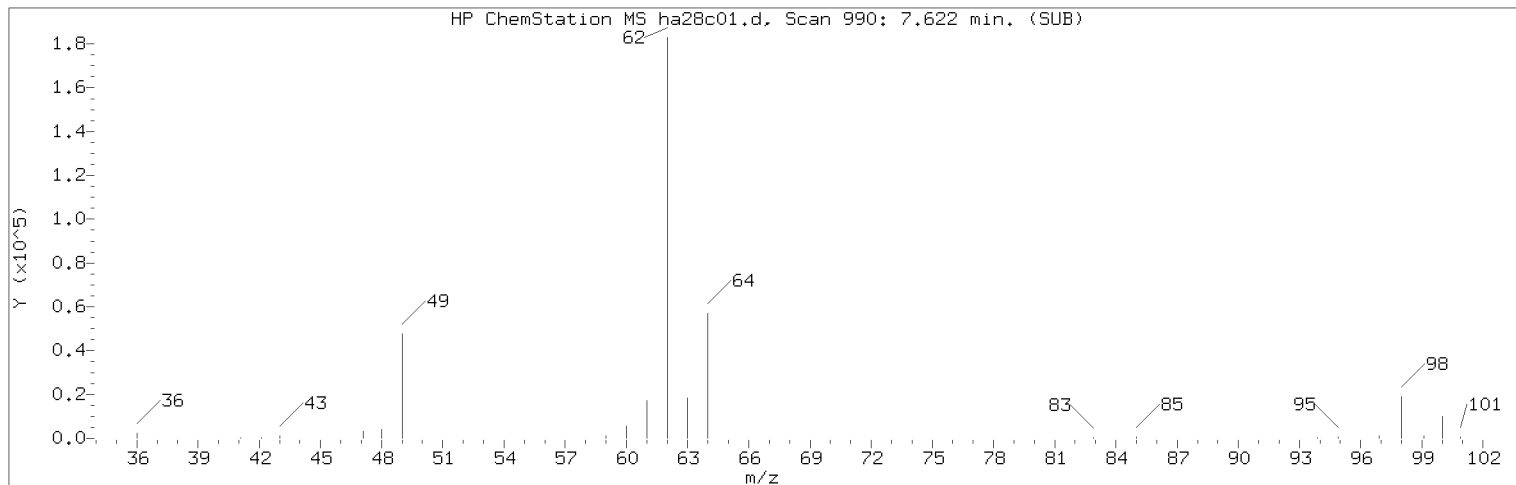
Integration start scan : 452 Integration stop scan: 563

Y at integration start : 0 Y at integration end: 0

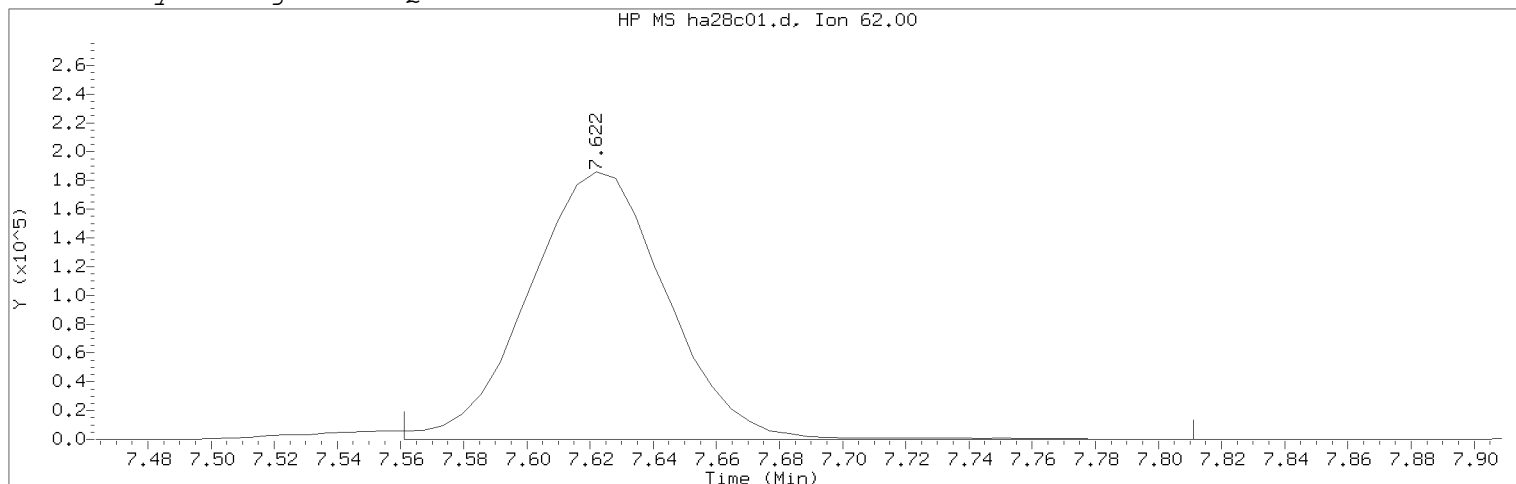
Digitally signed by Jennifer K. Howe on 04/28/2020 at 09:29.

Target 3.5 esignature user RAE59 Page 793 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 08:51 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 28-APR-2020 09:29
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

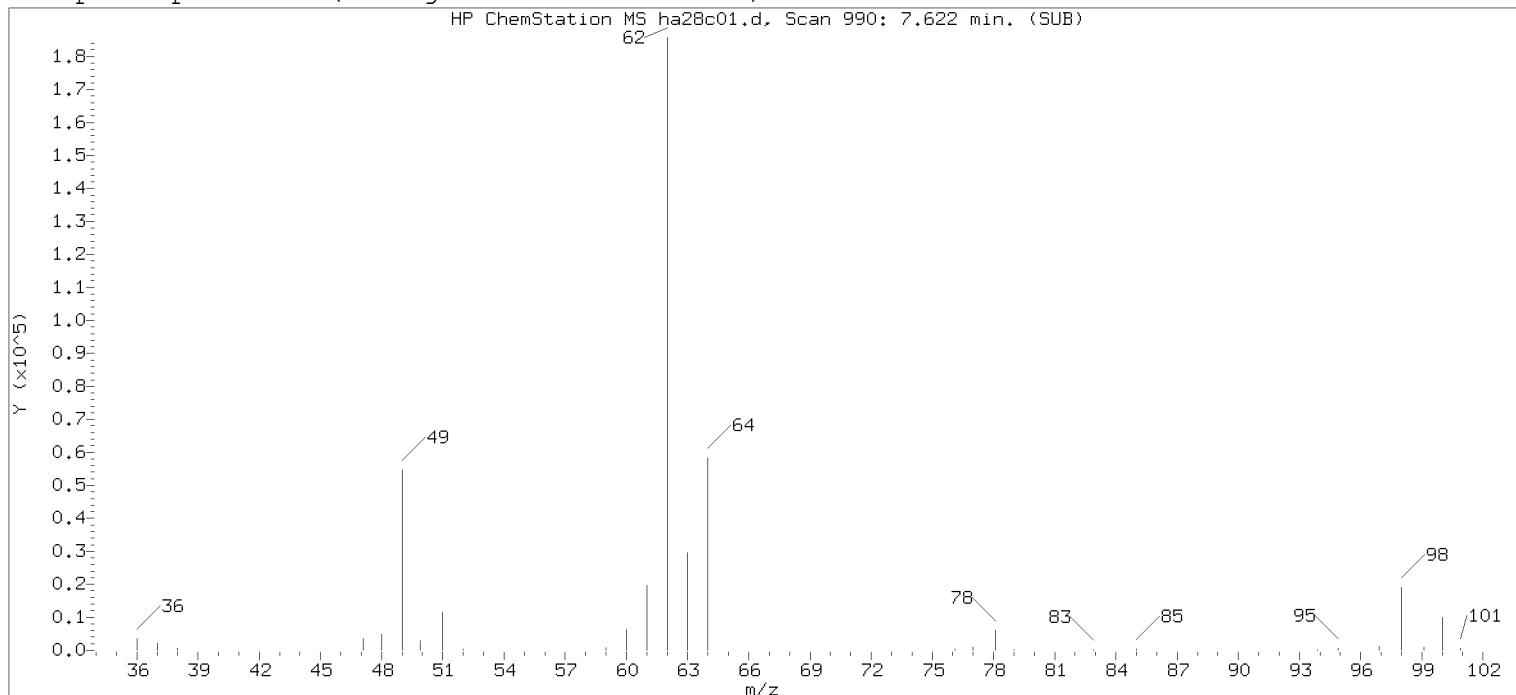
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 990	
Retention Time (minutes)	: 7.622	
Quant Ion	: 62.00	
Area (flag)	: 564049M	
On-Column Amount (ng)	: 9.8184	
Integration start scan	: 979	Integration stop scan: 1020
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

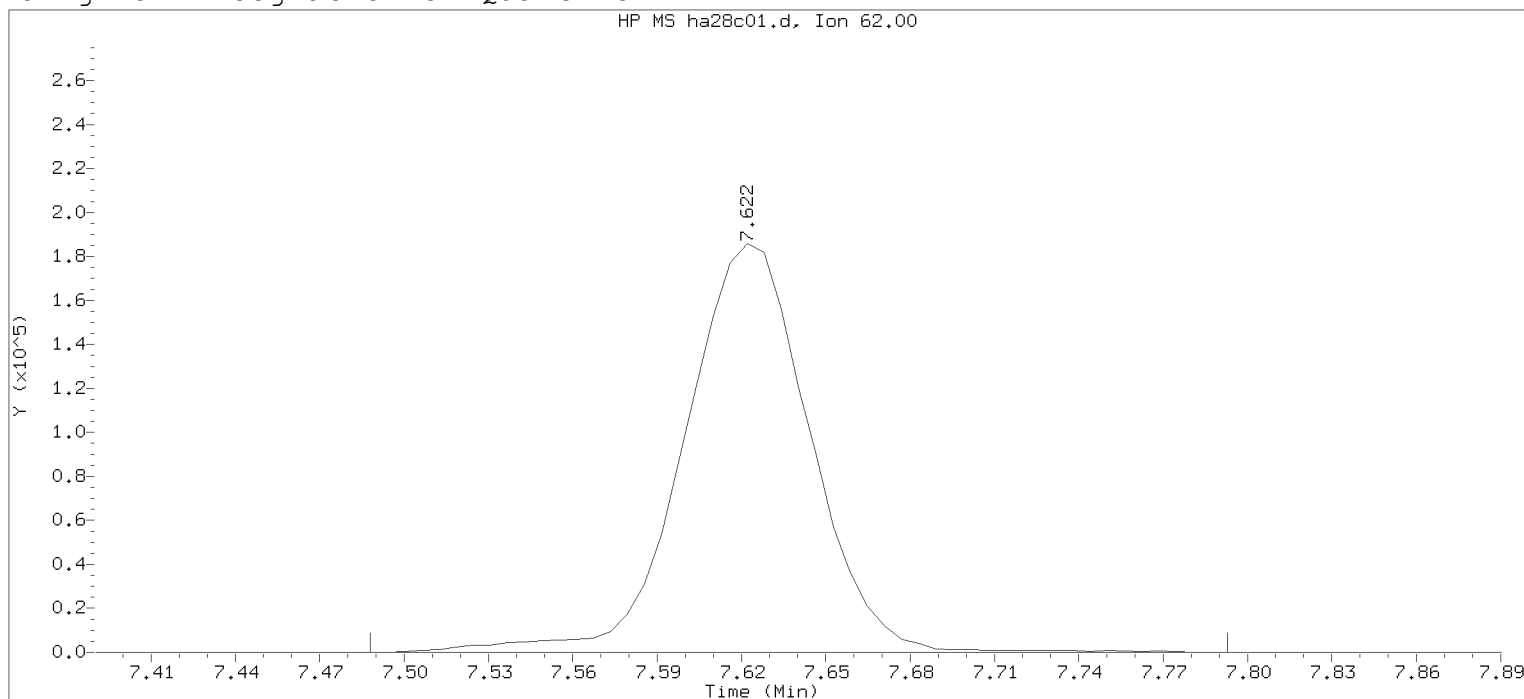
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/28/2020 at 23:27.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:09

Date, time and analyst ID of latest file update: 28-Apr-2020 09:09 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 60

Compound Name : 1,2-Dichloroethane

Scan Number : 990

Retention Time (minutes): 7.622

Quant Ion : 62.00

Area : 575451

On-column Amount (ng) : 10.0169

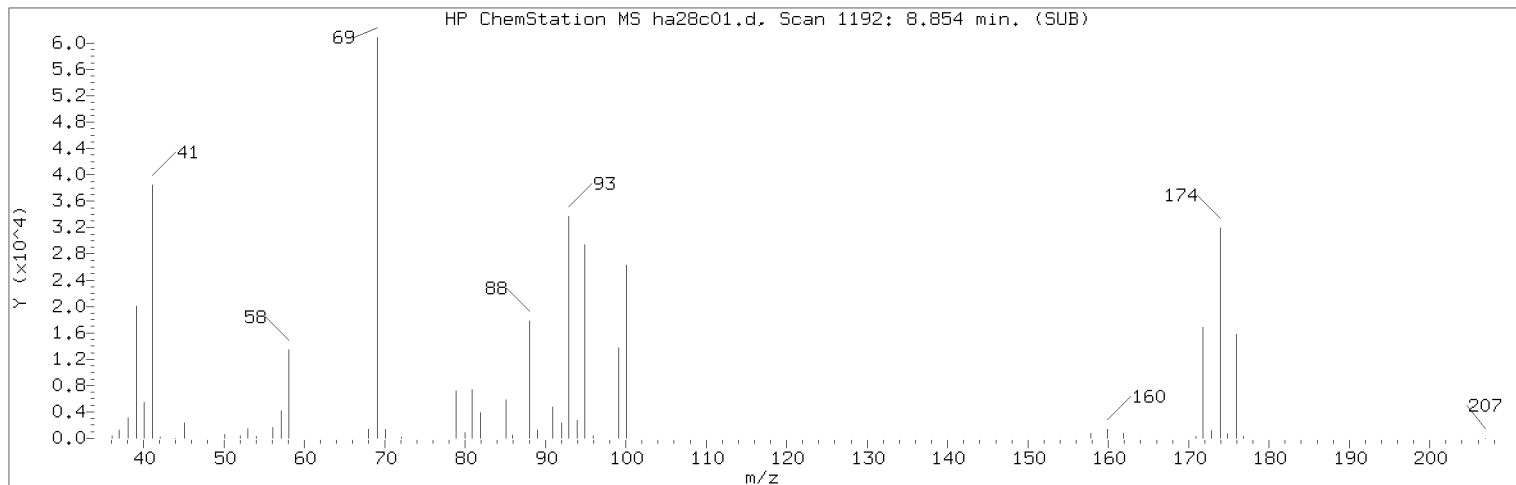
Integration start scan : 967 Integration stop scan: 1017

Y at integration start : 0 Y at integration end: 0

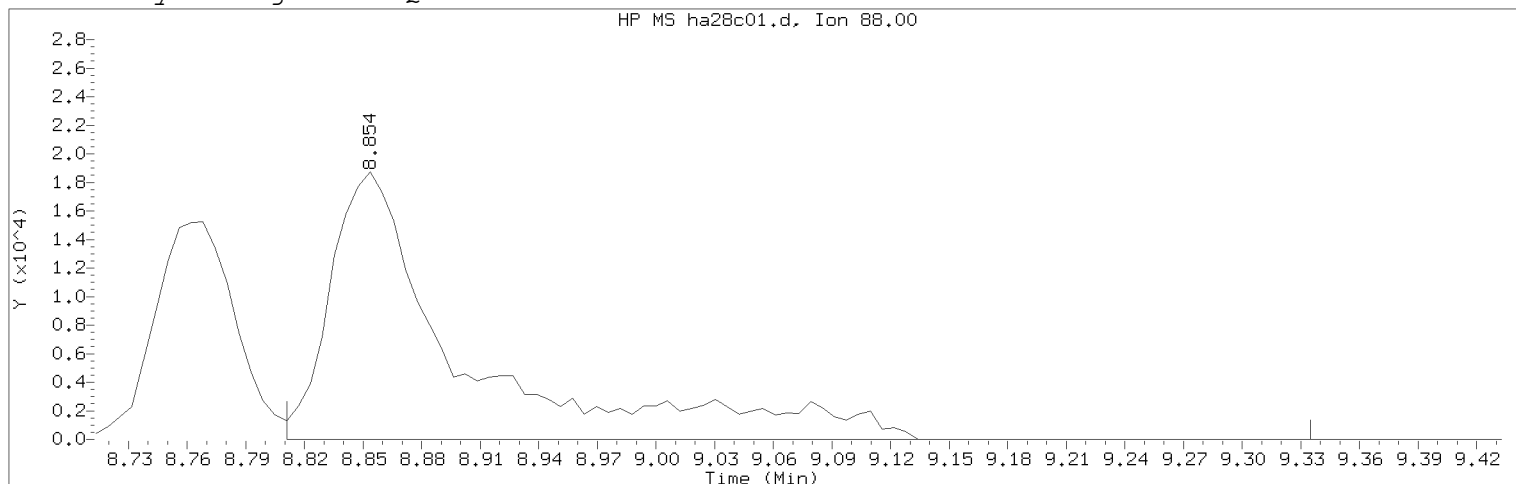
Digitally signed by Jennifer K. Howe on 04/28/2020 at 09:29.

Target 3.5 esignature user RAE59 Page 795 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 08:51 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 28-APR-2020 09:29
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

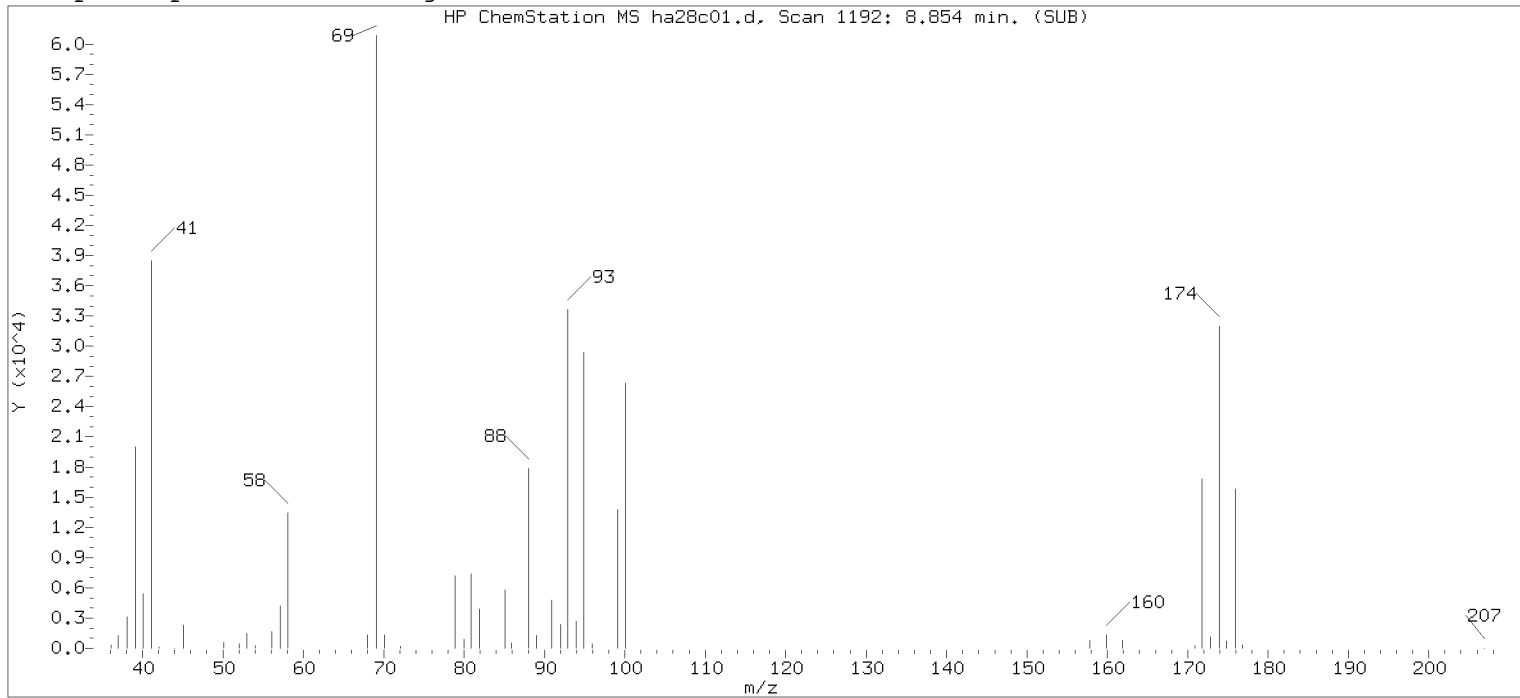
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 88.00
Area (flag) : 88487M
On-Column Amount (ng) : 468.5325
Integration start scan : 1184 Integration stop scan: 1270
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

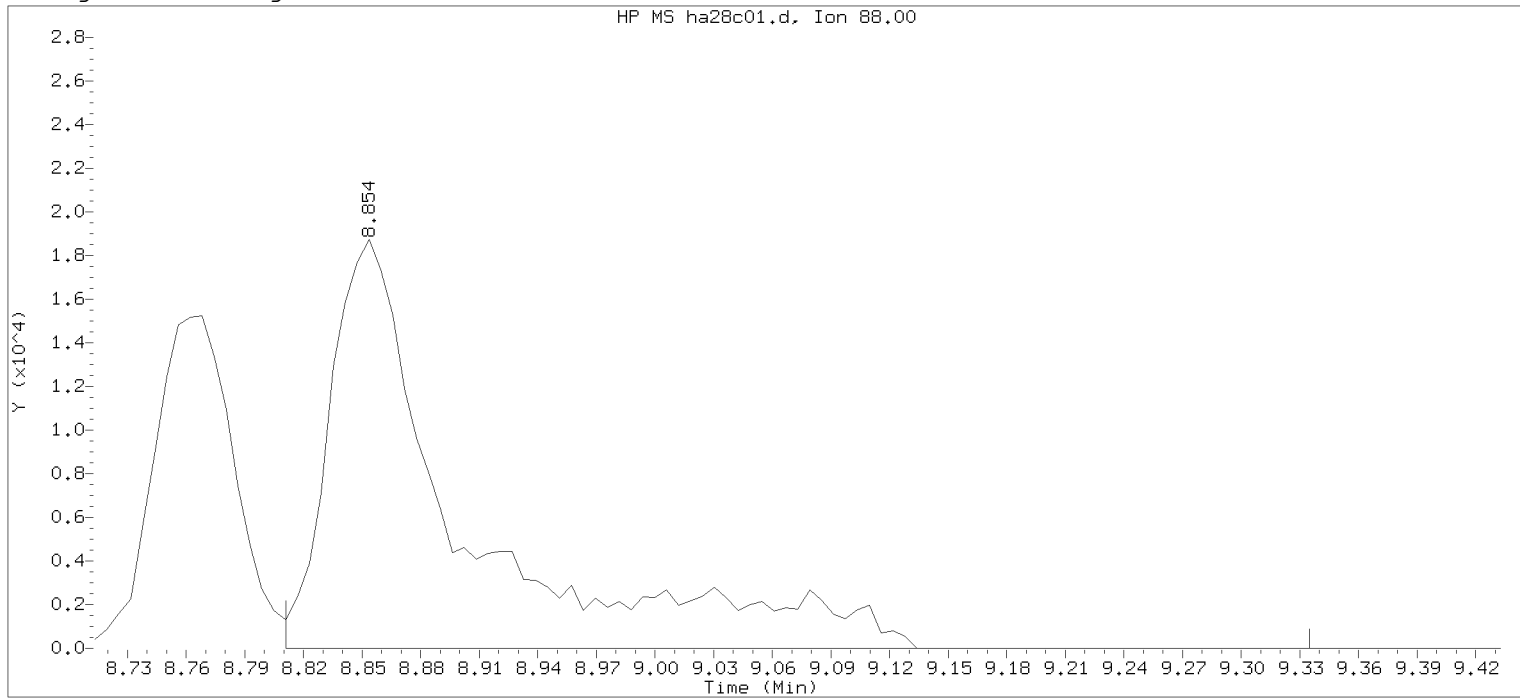
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/28/2020 at 23:27.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:09

Date, time and analyst ID of latest file update: 28-Apr-2020 09:09 Automation

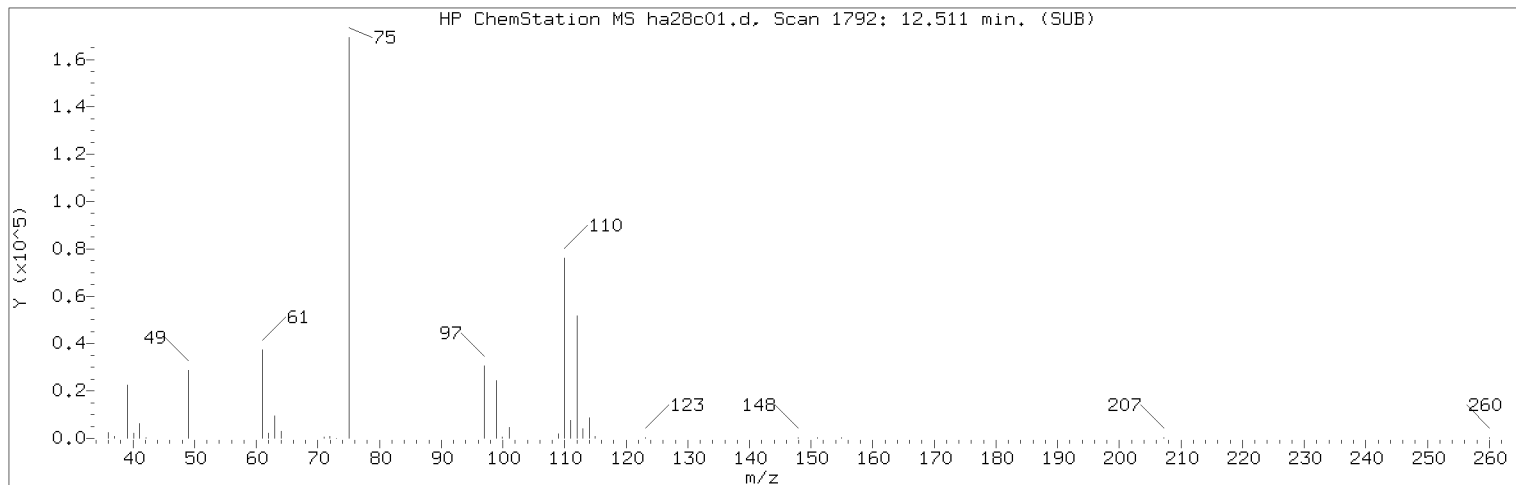
Sample Name: VSTD010

Lab Sample ID: VSTD010

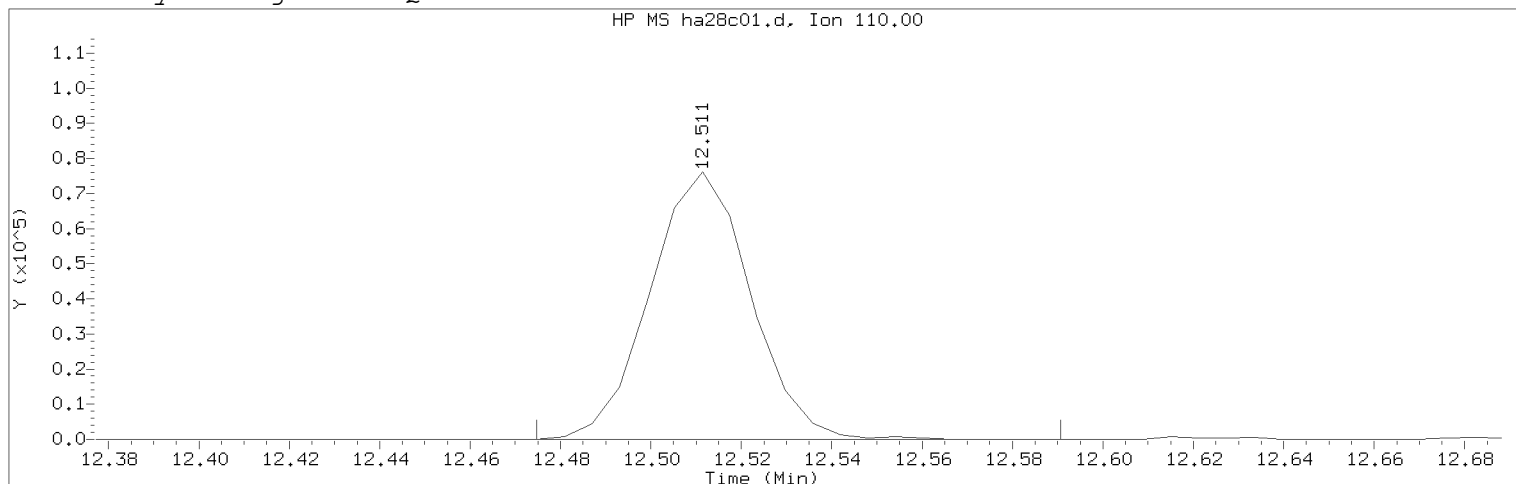
Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1192
 Retention Time (minutes): 8.854
 Quant Ion : 88.00
 Area : 88487
 On-column Amount (ng) : 490.6401
 Integration start scan : 1184
 Y at integration start : 0

Integration stop scan: 1270
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:29

Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.511	
Quant Ion	: 110.00	
Area (flag)	: 117326M	
On-Column Amount (ng)	: 9.7788	
Integration start scan	: 1785	Integration stop scan: 1804
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Jennifer K. Howe

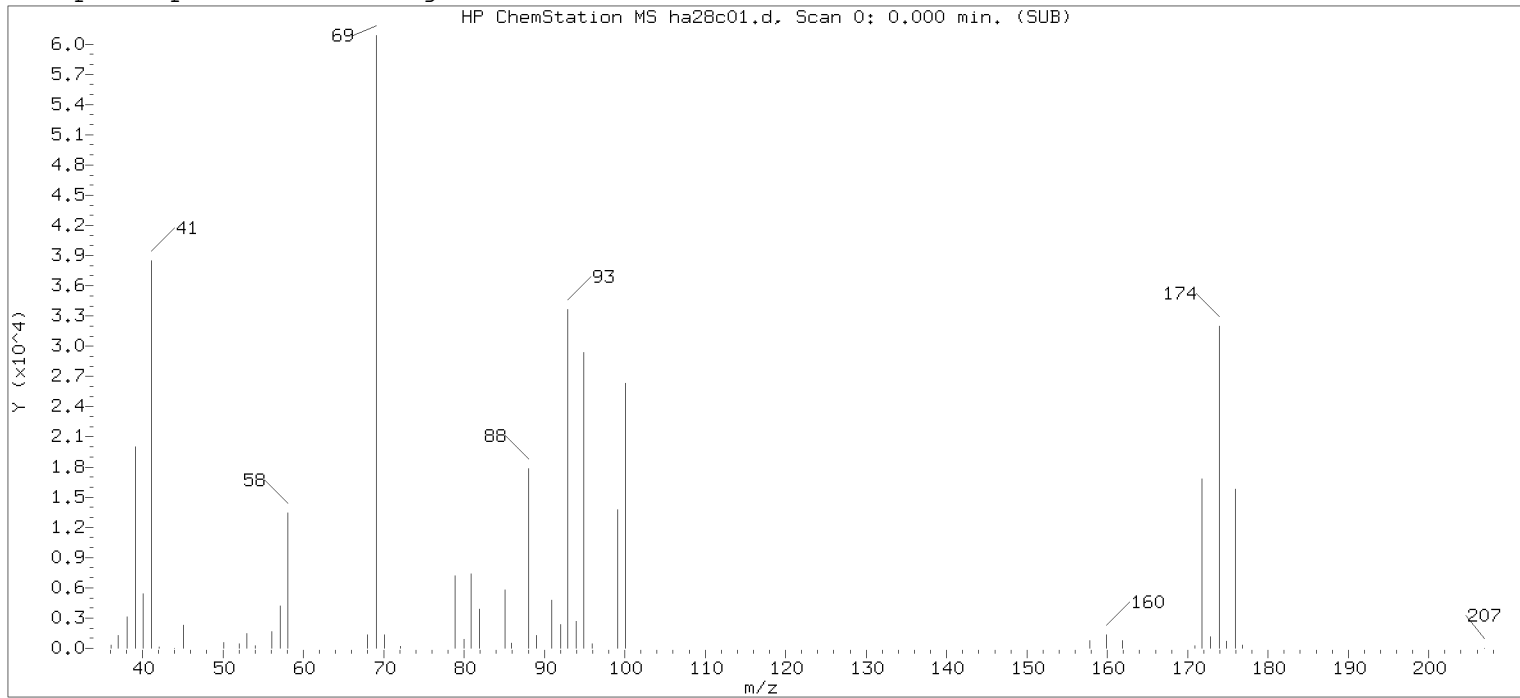
on 04/28/2020 at 09:29.

Target 3.5 esignature user ID: jkh09052

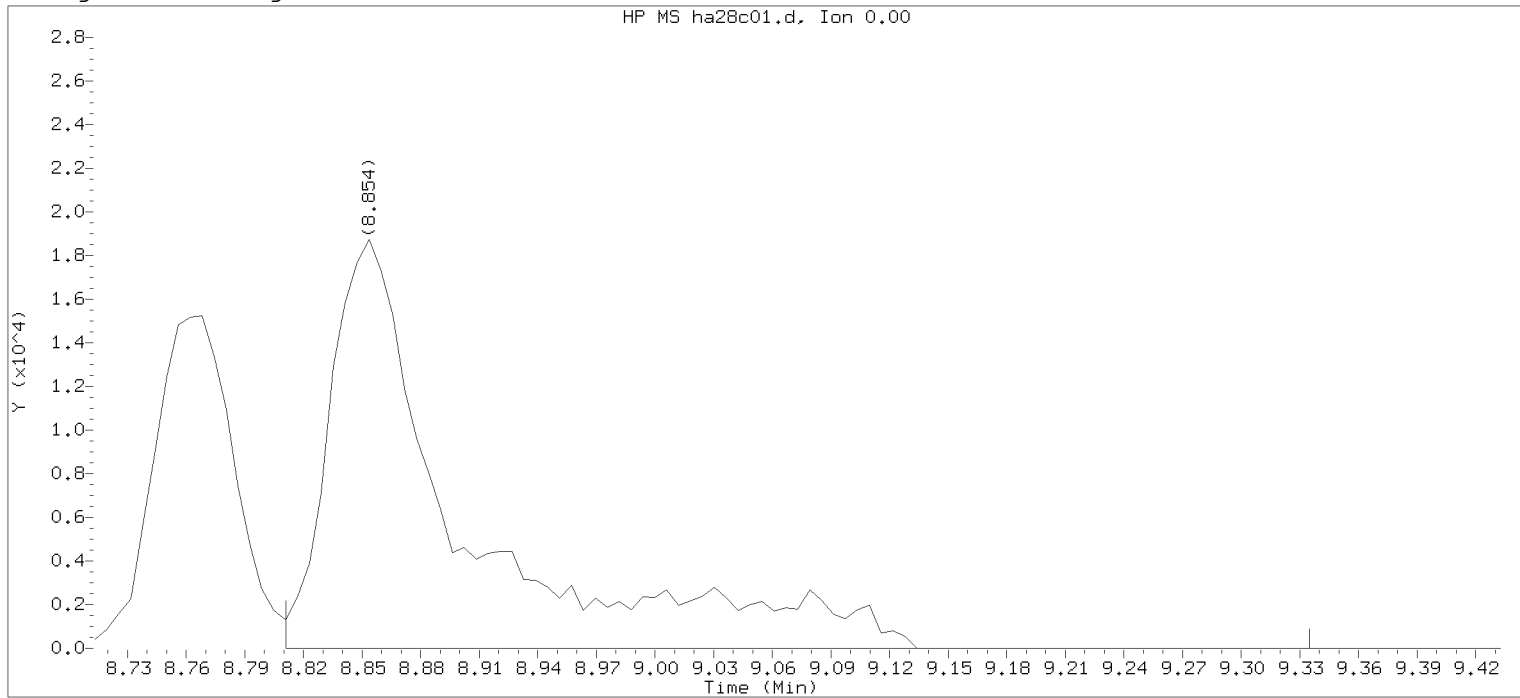
Secondary review performed and digitally signed by Rachel Krueger on 04/28/2020 at 23:27.

PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 08:51

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 28-APR-2020 09:09

Date, time and analyst ID of latest file update: 28-Apr-2020 09:09 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 0

Compound Name : 1,2,3-Trichloropropane

Scan Number : 0

Retention Time (minutes): 0.000

Quant Ion : 0.00

Area : 0

On-column Amount (ng) : 0.0000

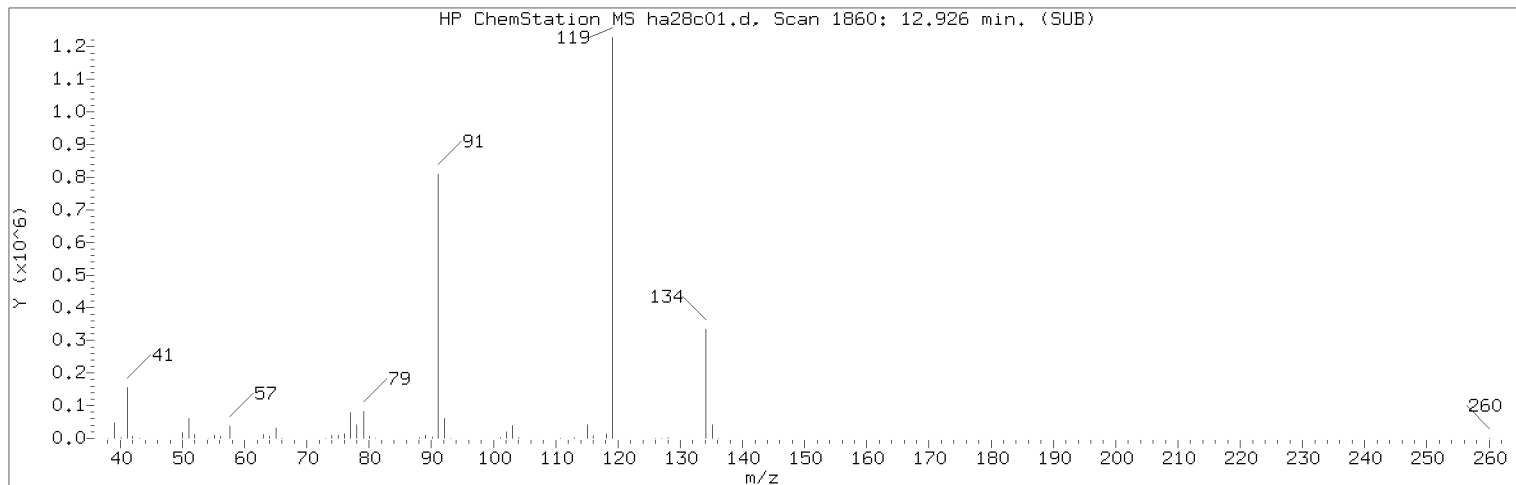
Integration start scan : 1785 Integration stop scan: 1817

Y at integration start : 0 Y at integration end: 0

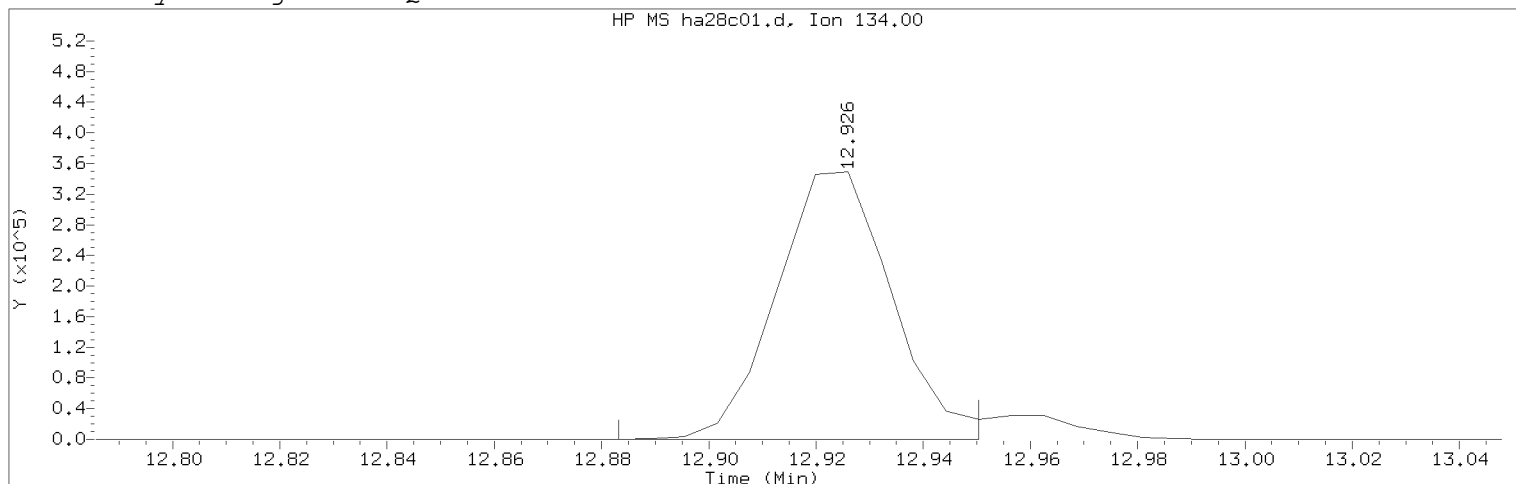
Digitally signed by Jennifer K. Howe on 04/28/2020 at 09:29.

Target 3.5 esignature user RAE59 Page 799 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c01.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 08:51 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 28-APR-2020 09:29
Date, time and analyst ID of latest file update: 28-Apr-2020 09:29 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area (flag) : 520594M
On-Column Amount (ng) : 9.8109
Integration start scan : 1852 Integration stop scan: 1863
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Rachel Krueger on 04/28/2020 at 23:27.
PARALLAX ID: rek30744

Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Page 1

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

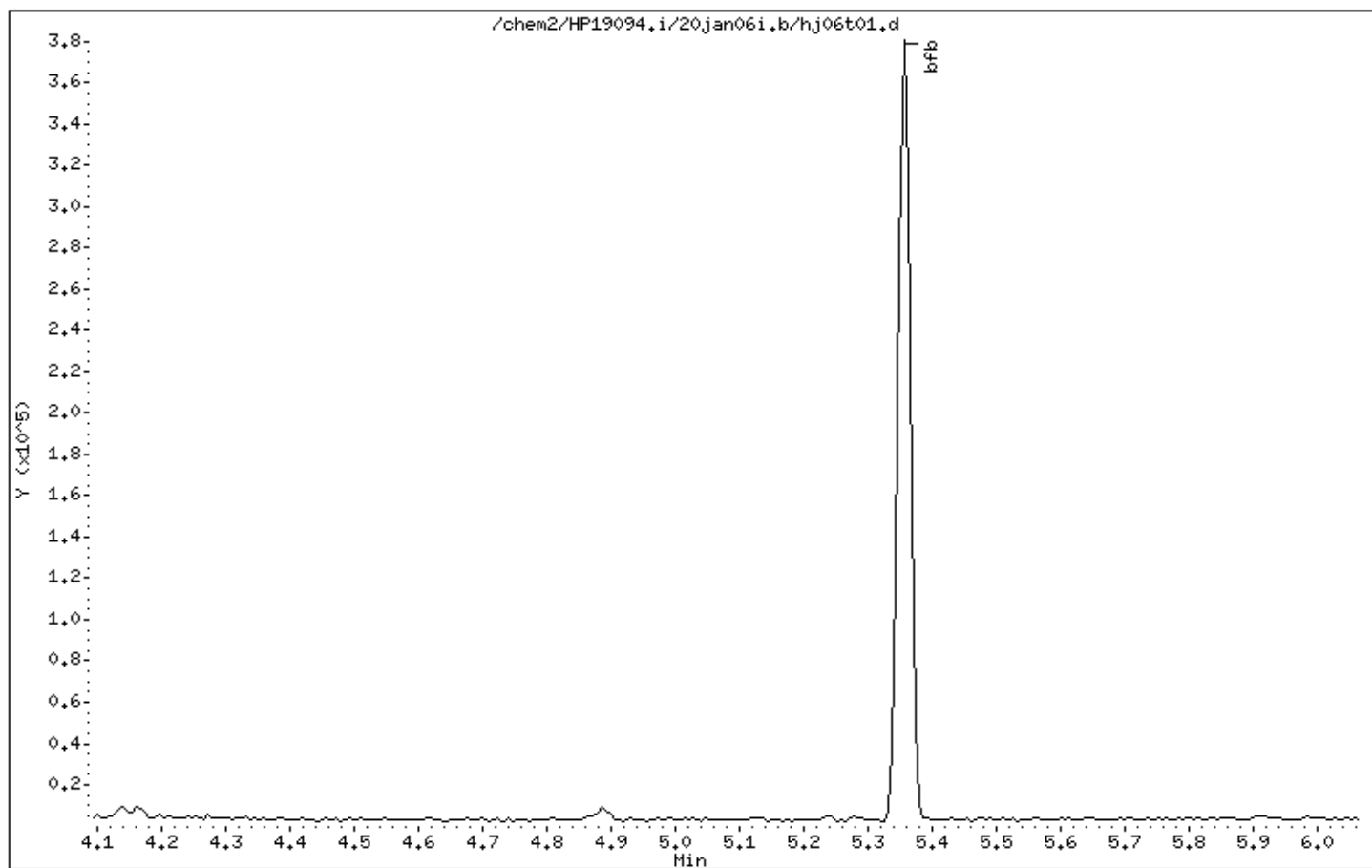
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25



Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

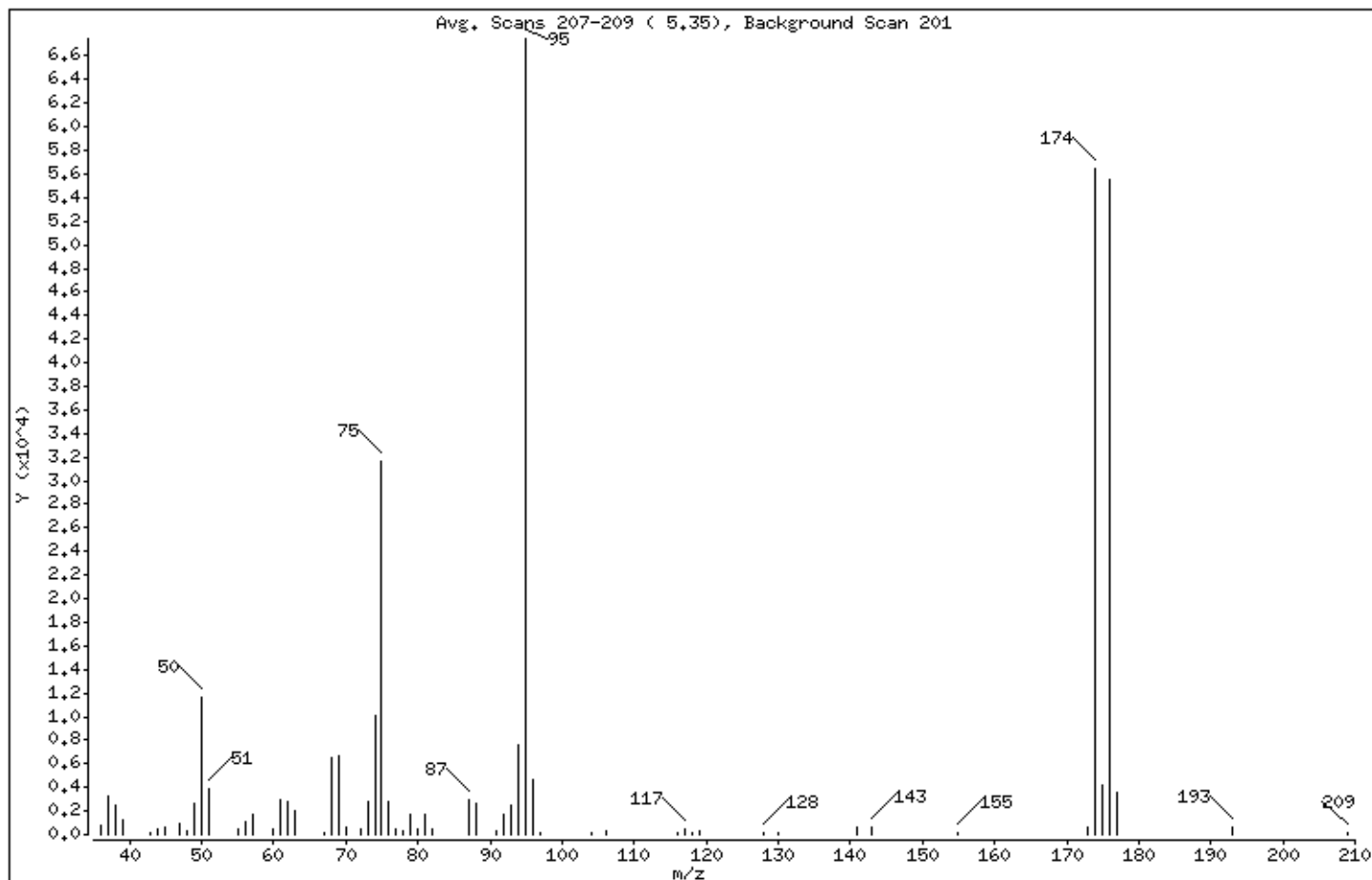
Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.81
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.87 (1.05)
174	50.00 - 100.00% of mass 95	83.57
175	5.00 - 9.00% of mass 174	6.30 (7.54)
176	95.00 - 101.00% of mass 174	82.22 (98.38)
177	5.00 - 9.00% of mass 176	5.38 (6.54)

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

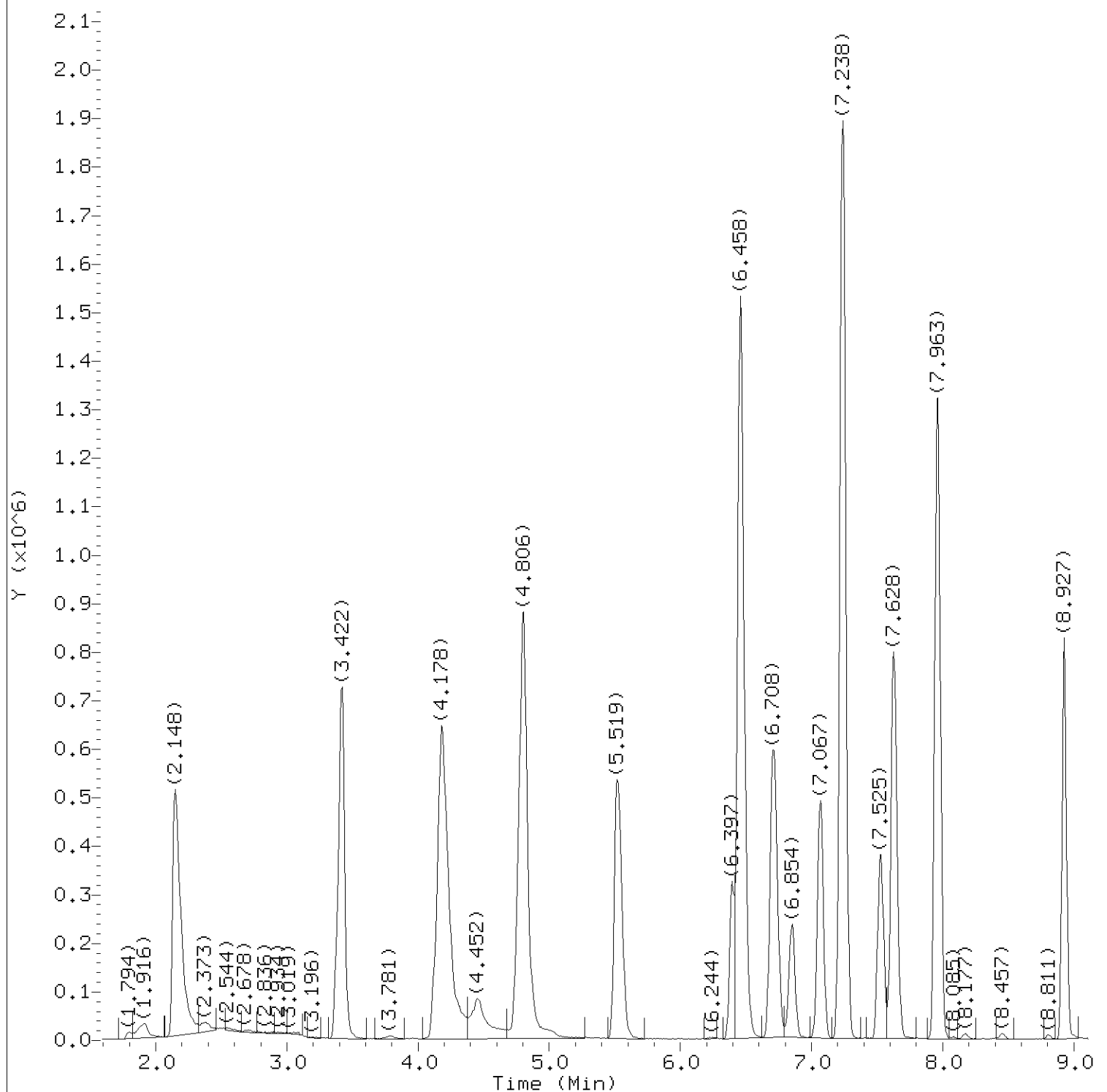
Data File: hj06t01.d

Spectrum: Avg. Scans 207-209 (5,35), Background Scan 201

Location of Maximum: 95,00

Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	728	61,00	3008	81,00	1673	119,00	311
37,00	3211	62,00	2746	82,00	464	128,00	179
38,00	2548	63,00	2022	87,00	2913	130,00	83
39,00	1276	67,00	141	88,00	2633	141,00	588
43,00	92	68,00	6446	91,00	362	143,00	676
44,00	477	69,00	6605	92,00	1689	155,00	88
45,00	580	70,00	566	93,00	2528	173,00	590
47,00	876	72,00	410	94,00	7552	174,00	56384
48,00	366	73,00	2820	95,00	67472	175,00	4254
49,00	2645	74,00	10007	96,00	4591	176,00	55472
50,00	11651	75,00	31584	97,00	183	177,00	3628
51,00	3893	76,00	2766	104,00	180	193,00	604
55,00	413	77,00	463	106,00	329	209,00	154
56,00	1070	78,00	272	116,00	96		
57,00	1740	79,00	1750	117,00	427		
60,00	500	80,00	538	118,00	84		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d
Injection date and time: 06-JAN-2020 11:19

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

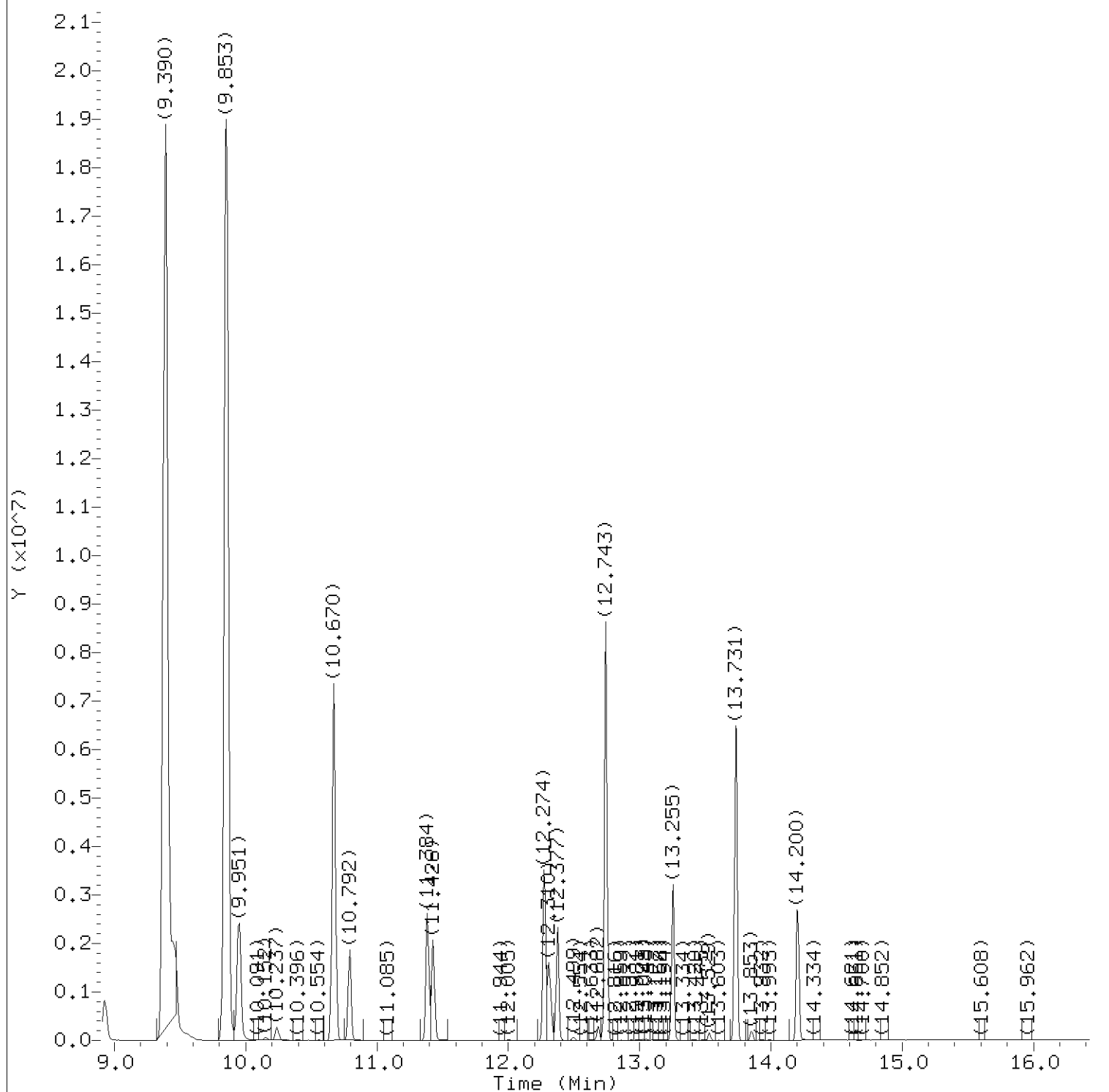
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d
Injection date and time: 06-JAN-2020 11:19

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:19

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	1567293M	25.000
25) Acetonitrile	(1)	4.178	41	2320400M	1000.000
26)*t-Butyl Alcohol-d10	(1)	4.458	65	119574	50.000
36) Vinyl Acetate	(2)	5.519	43	1721874	25.000
43) Methyl Acrylate	(2)	6.458	55	3085421M	125.000
53) 1-Chlorobutane	(2)	7.238	56	2492014	25.000
63)*Fluorobenzene	(2)	7.963	96	1935181	10.000
77) Chloroacetonitrile	(2)	9.439	75	1561287	1250.000
78) 2-Chloroethyl vinyl ether	(2)	9.469	63	555274	25.000
97)*Chlorobenzene-d5	(3)	11.384	117	1527614	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	787230	50.000
112) Cyclohexanone	(1)	12.310	55	749673M	1250.000
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	793148	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

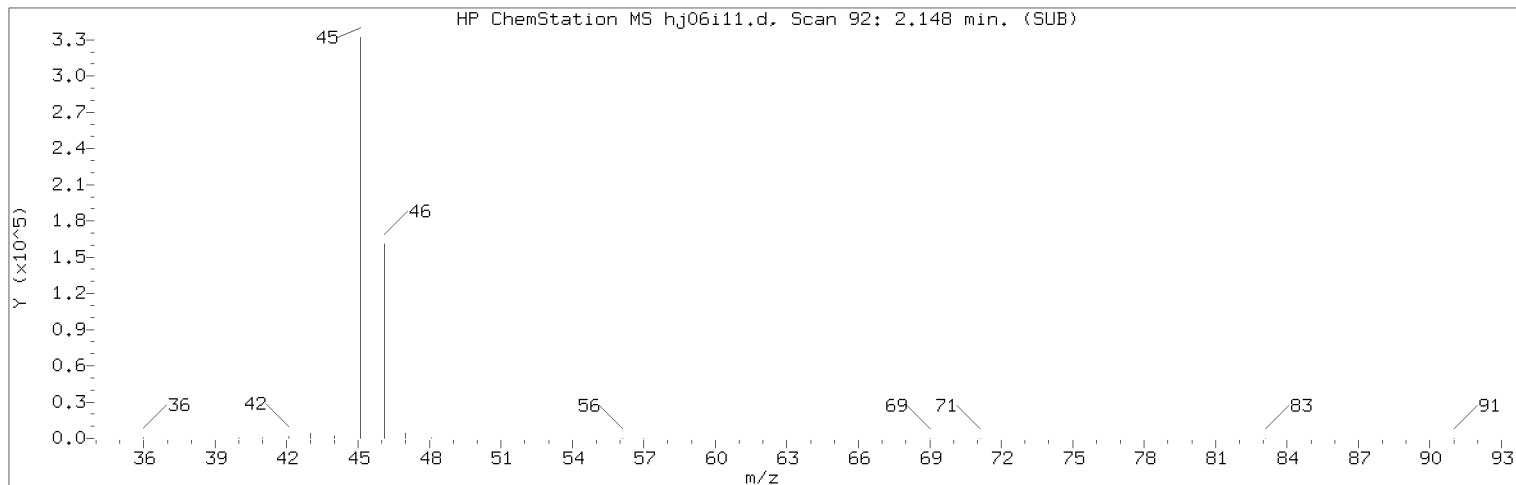
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

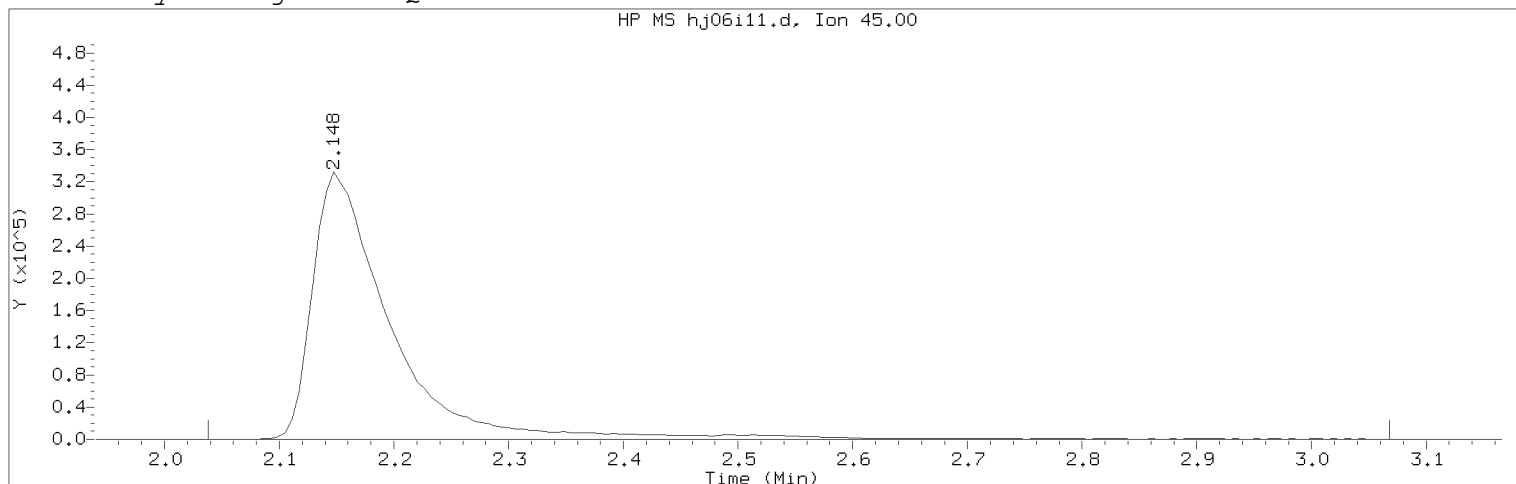
Target 3.5 esignature user ID: jkh09052

RAF59 Page 806 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

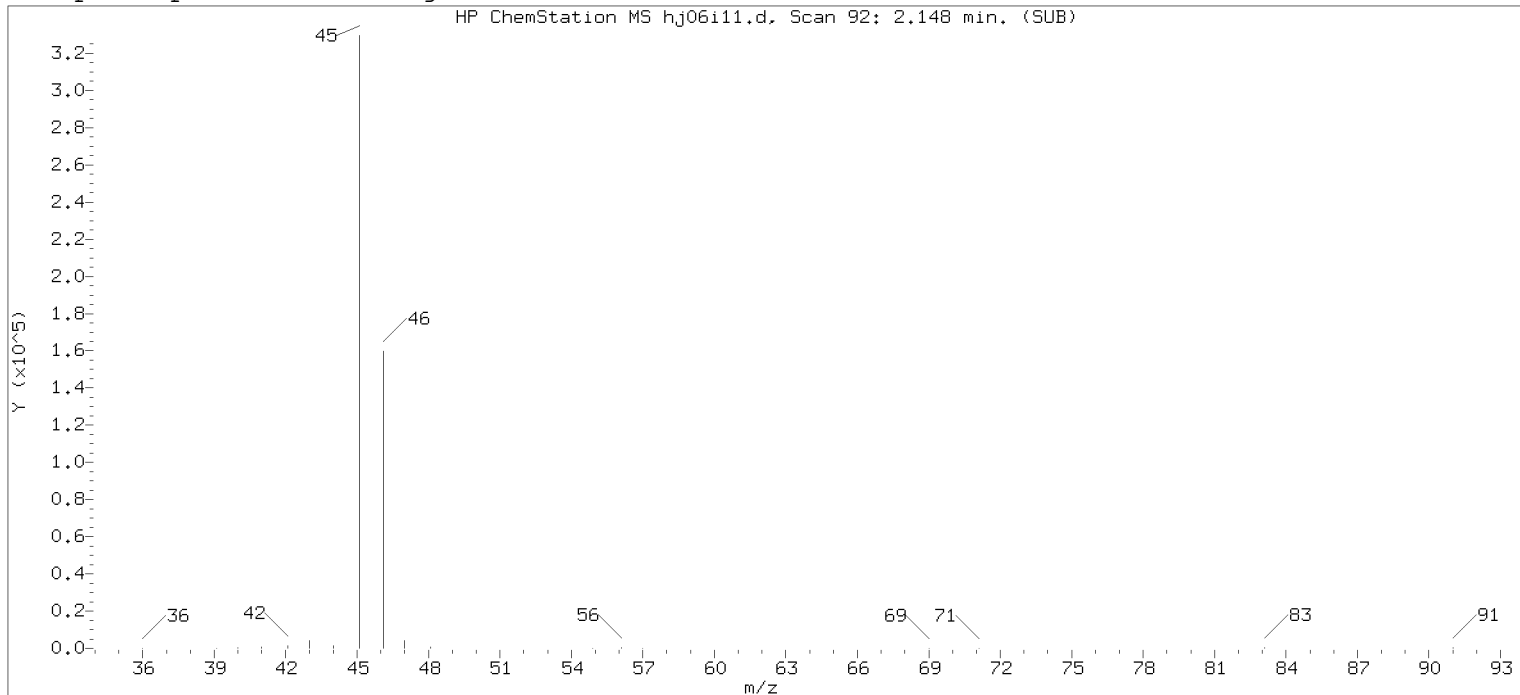
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 1567293M
On-Column Amount (ng) : 25.0000
Integration start scan : 73 Integration stop scan: 242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

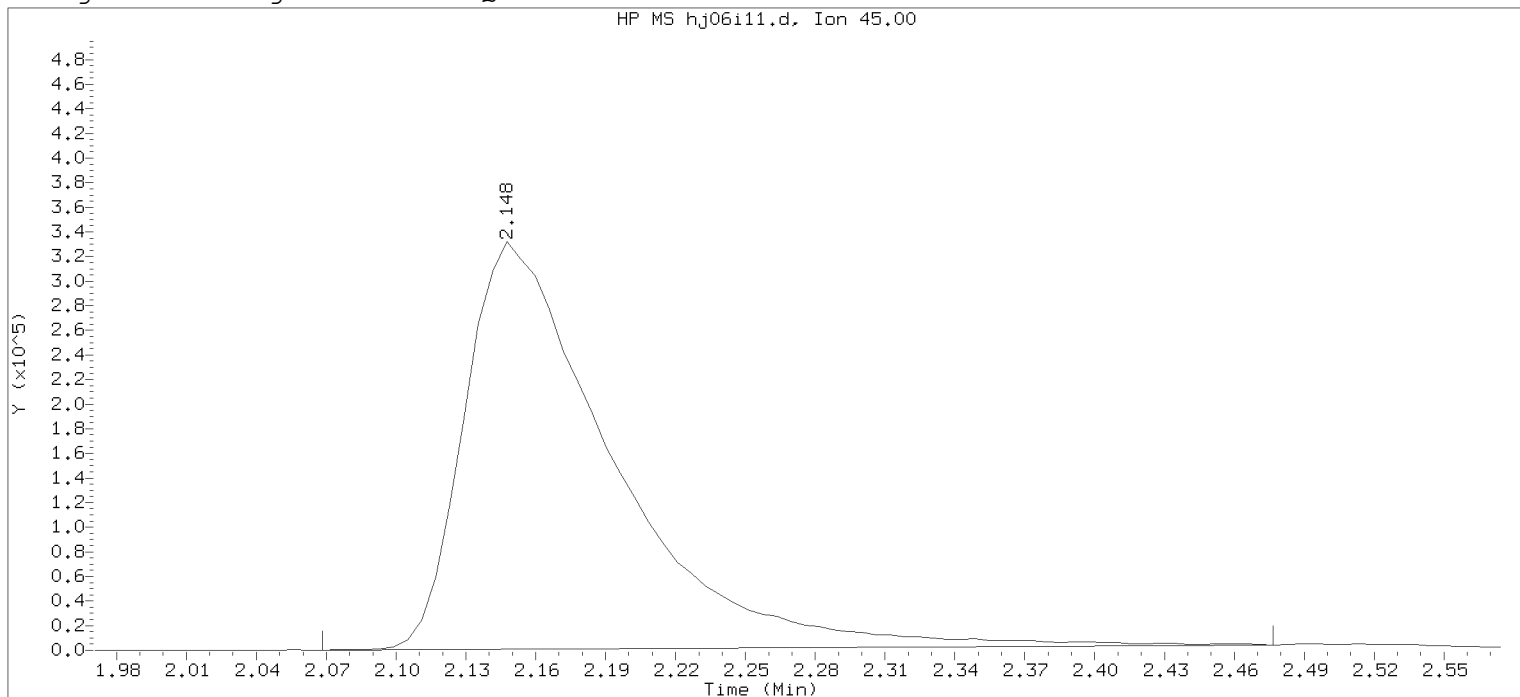
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

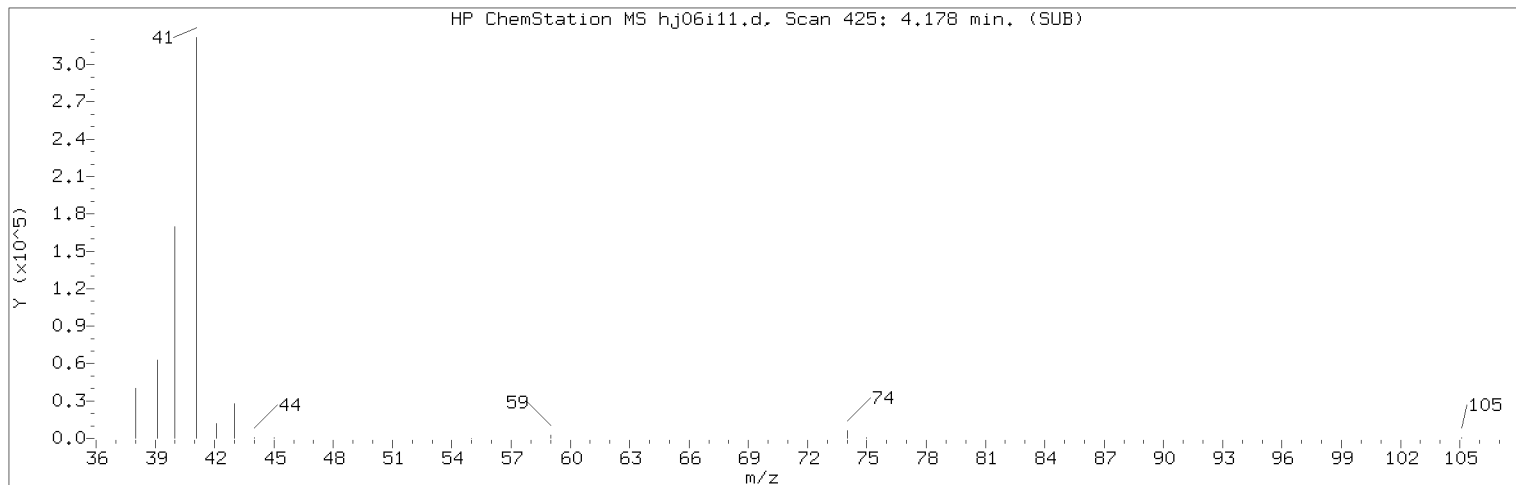
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD025

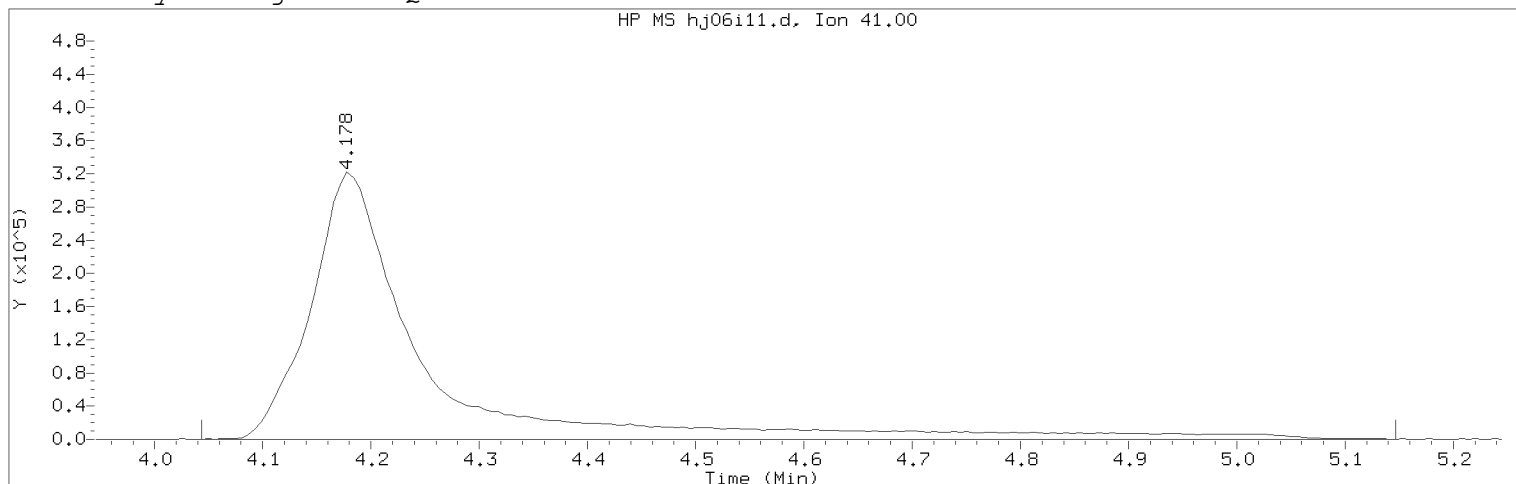
Lab Sample ID: VSTD025

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 1471270	
On-column Amount (ng)	: 25.4615	
Integration start scan	: 78	Integration stop scan: 145
Y at integration start	: 0	Y at integration end: 4362

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

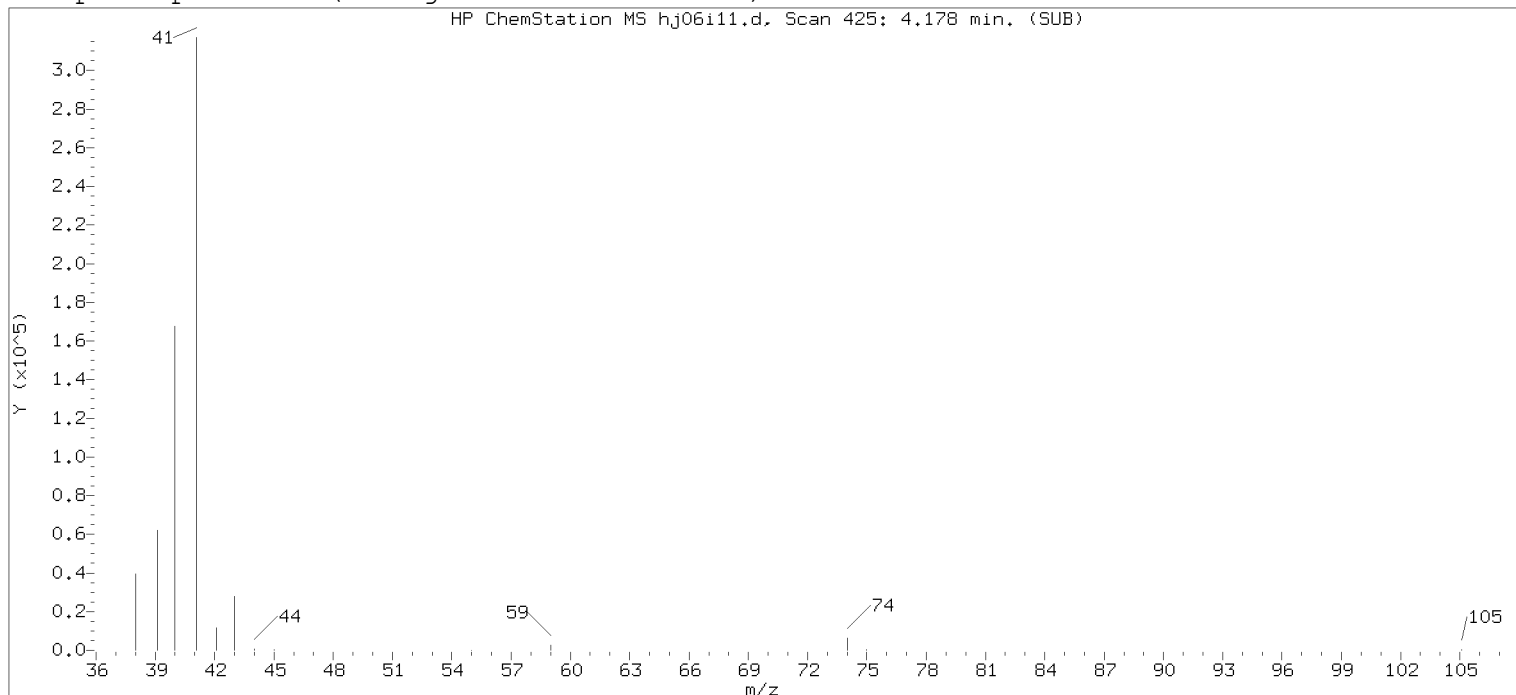
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area (flag) : 2320400M
On-Column Amount (ng) : 1000.0000
Integration start scan : 402 Integration stop scan: 583
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

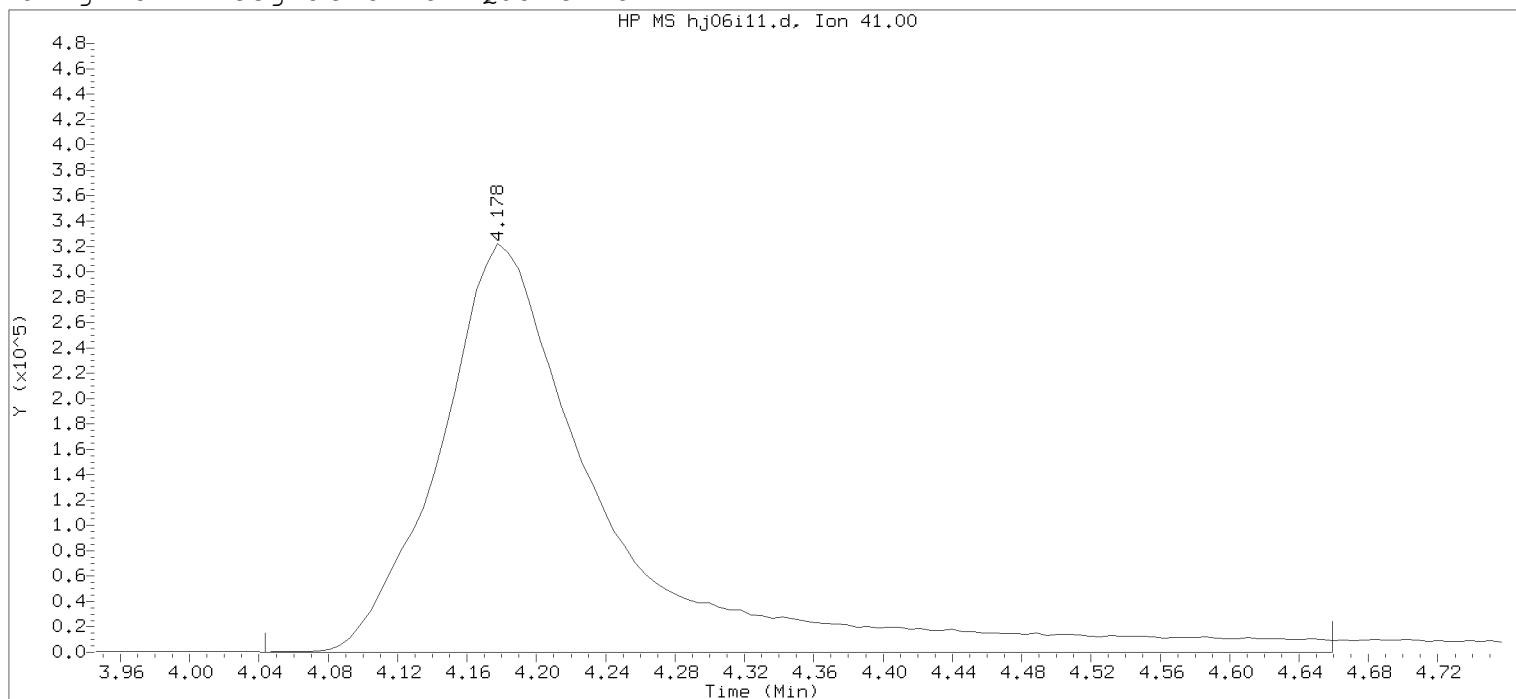
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

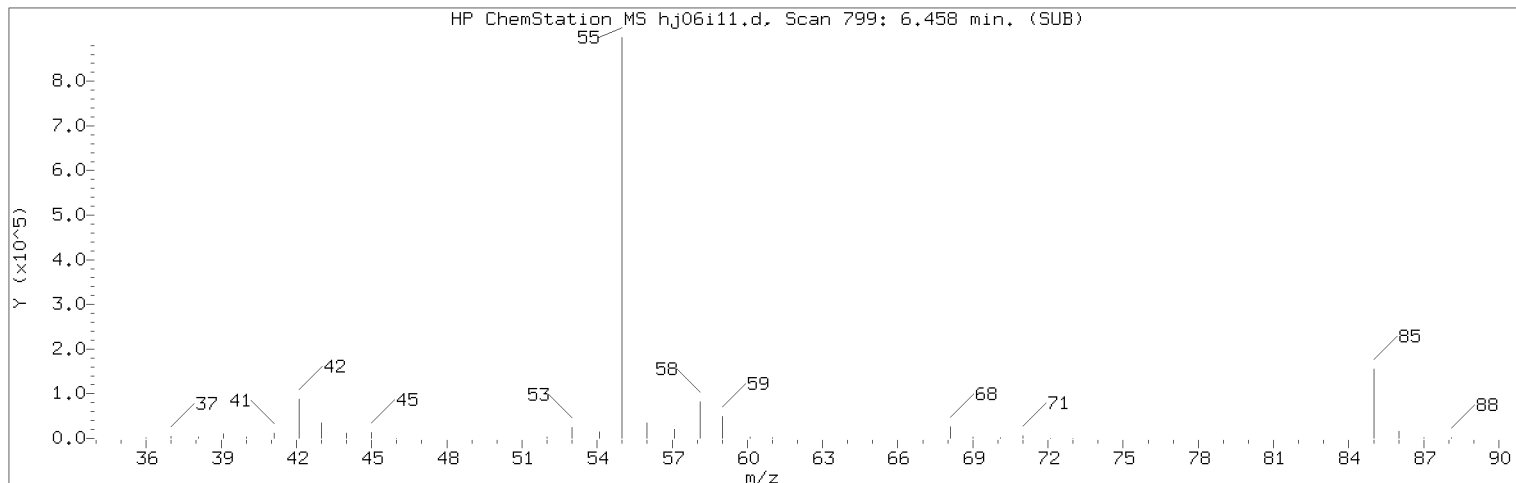
Sample Name: VSTD025

Lab Sample ID: VSTD025

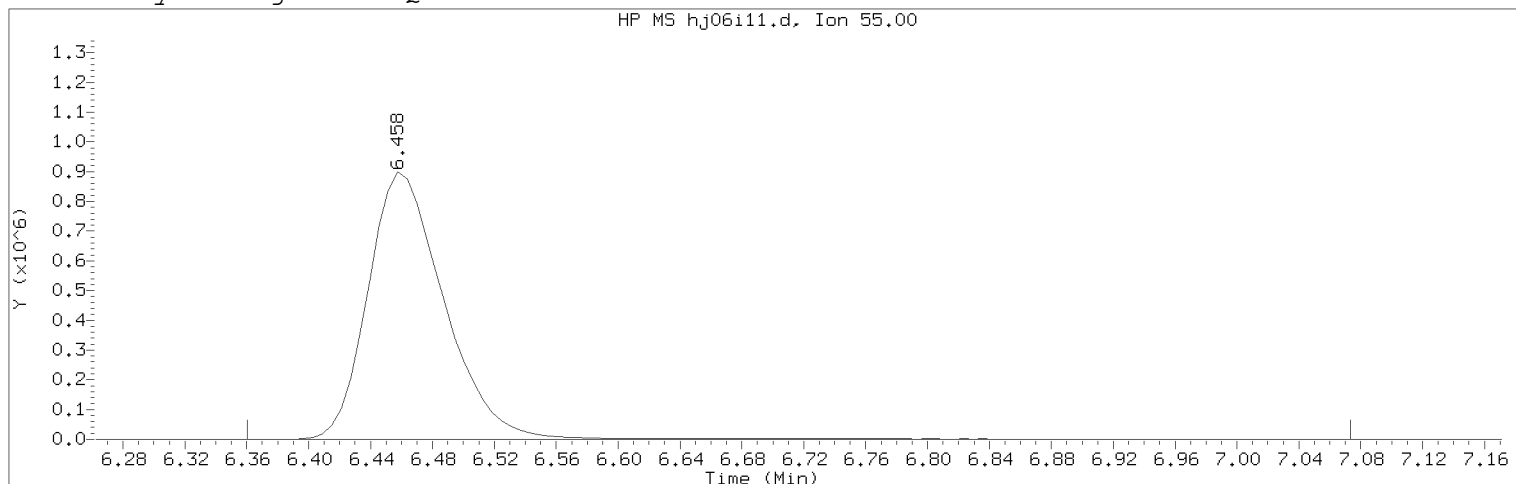
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area : 2141775
On-column Amount (ng) : 897.1952
Integration start scan : 402 Integration stop scan: 503
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.
Target 3.5 esignature user RPF59 Page 912 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

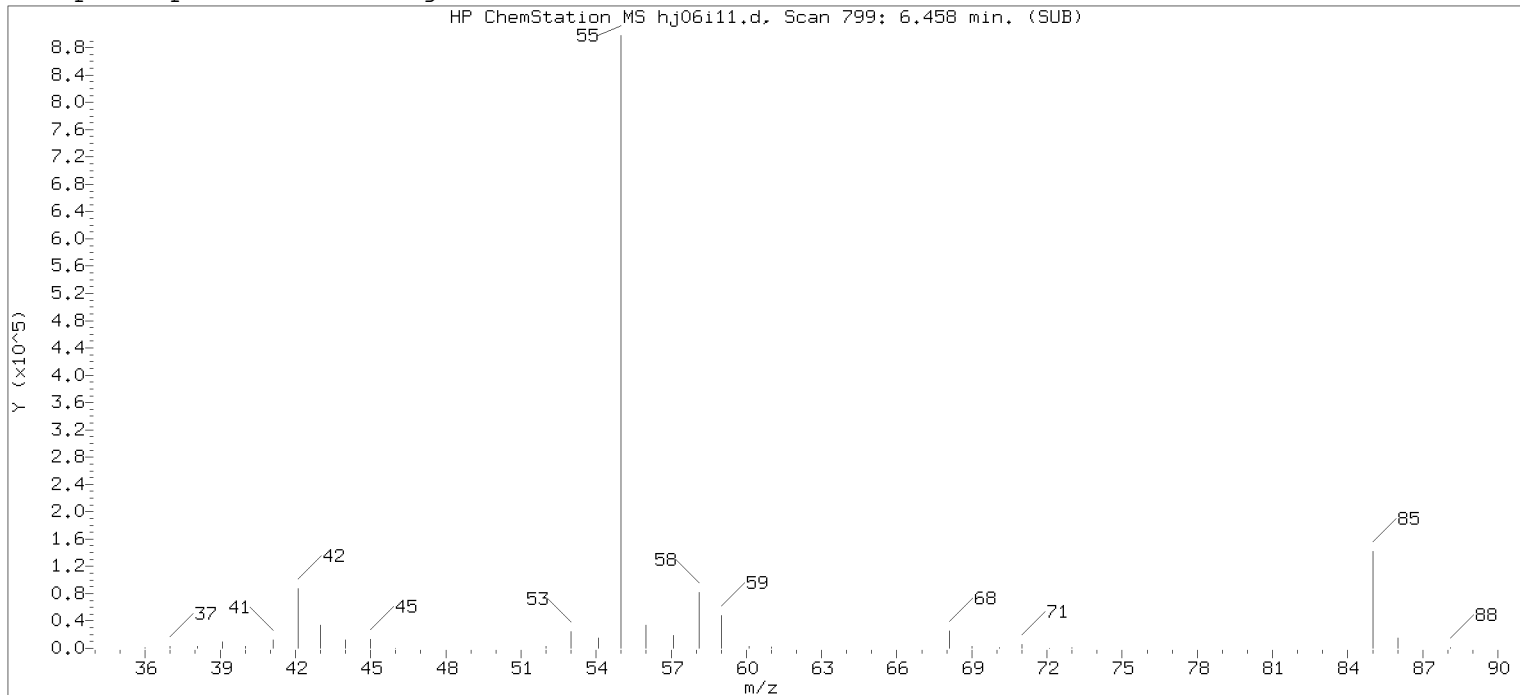
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 799
Retention Time (minutes): 6.458
Quant Ion : 55.00
Area (flag) : 3085421M
On-Column Amount (ng) : 125.0000
Integration start scan : 782 Integration stop scan: 899
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

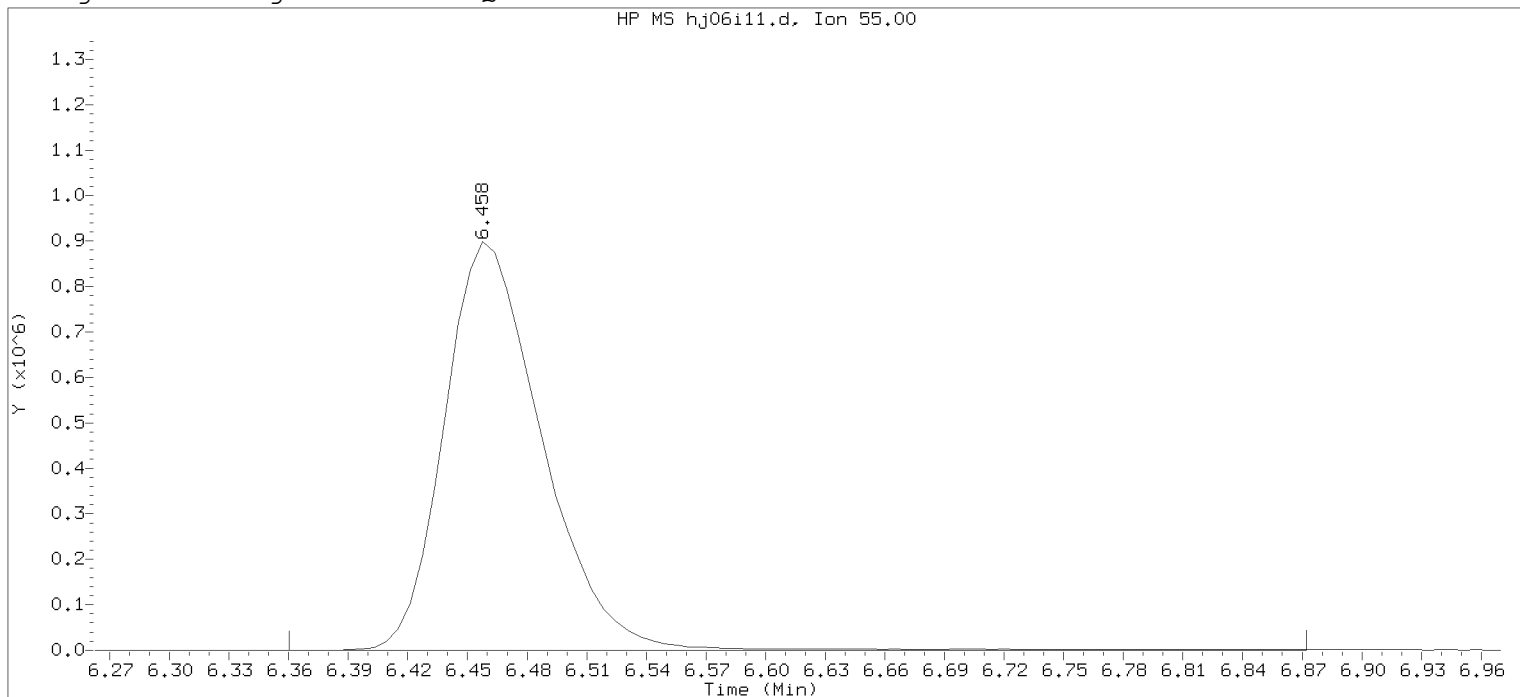
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

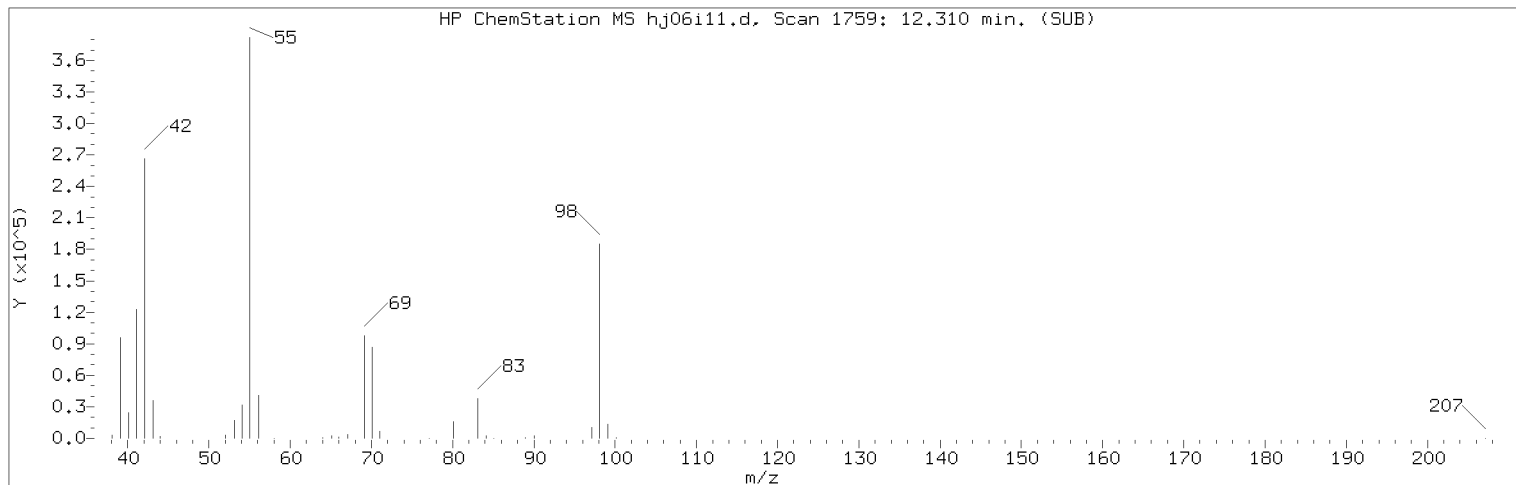
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD025

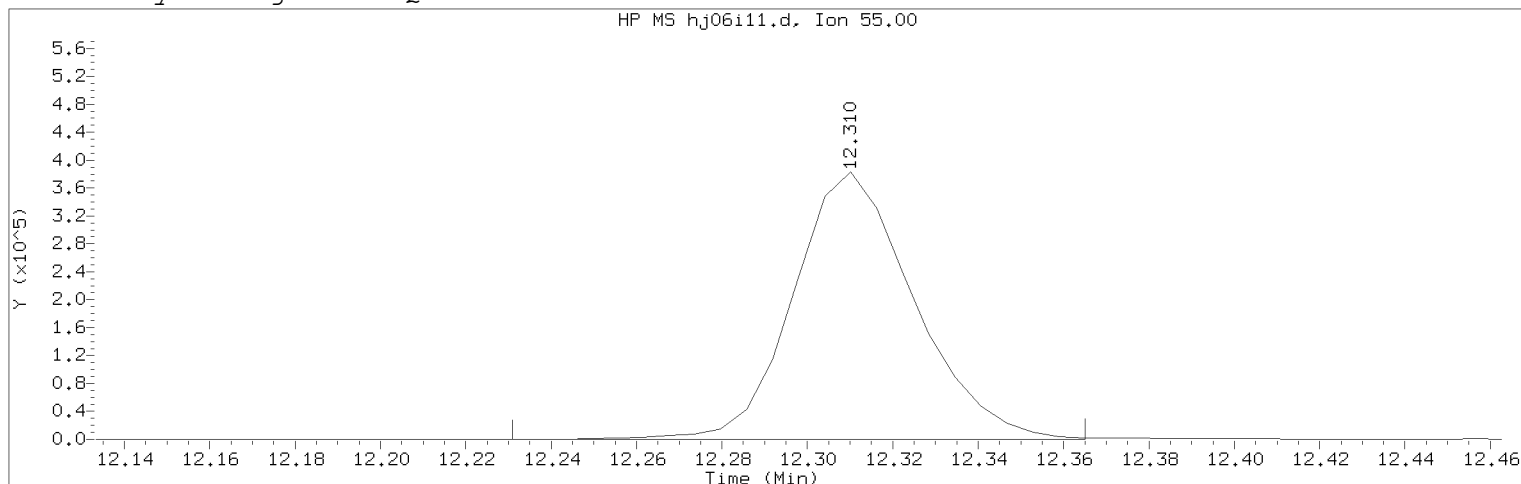
Lab Sample ID: VSTD025

Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 799
Retention Time (minutes): 6.458
Quant Ion : 55.00
Area : 3074426
On-column Amount (ng) : 125.6136
Integration start scan : 782 Integration stop scan: 866
Y at integration start : 0 Y at integration end: 258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:19

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

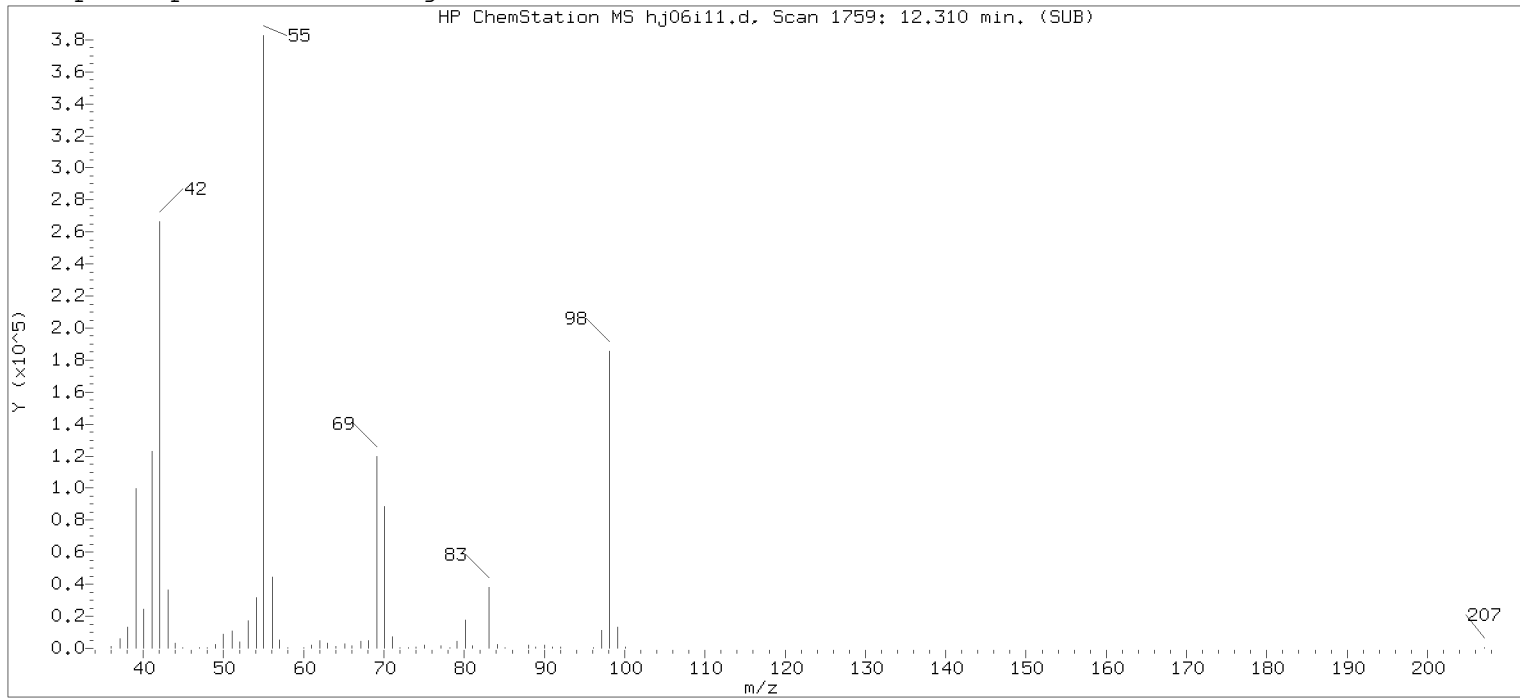
Compound Number	: 112
Compound Name	: Cyclohexanone
Scan Number	: 1759
Retention Time (minutes)	: 12.310
Quant Ion	: 55.00
Area (flag)	: 749673M
On-Column Amount (ng)	: 1250.0000
Integration start scan	: 1745
Integration stop scan	: 1767
Y at integration start	: 0
Y at integration end	: 0

Reason for manual integration: improper integration

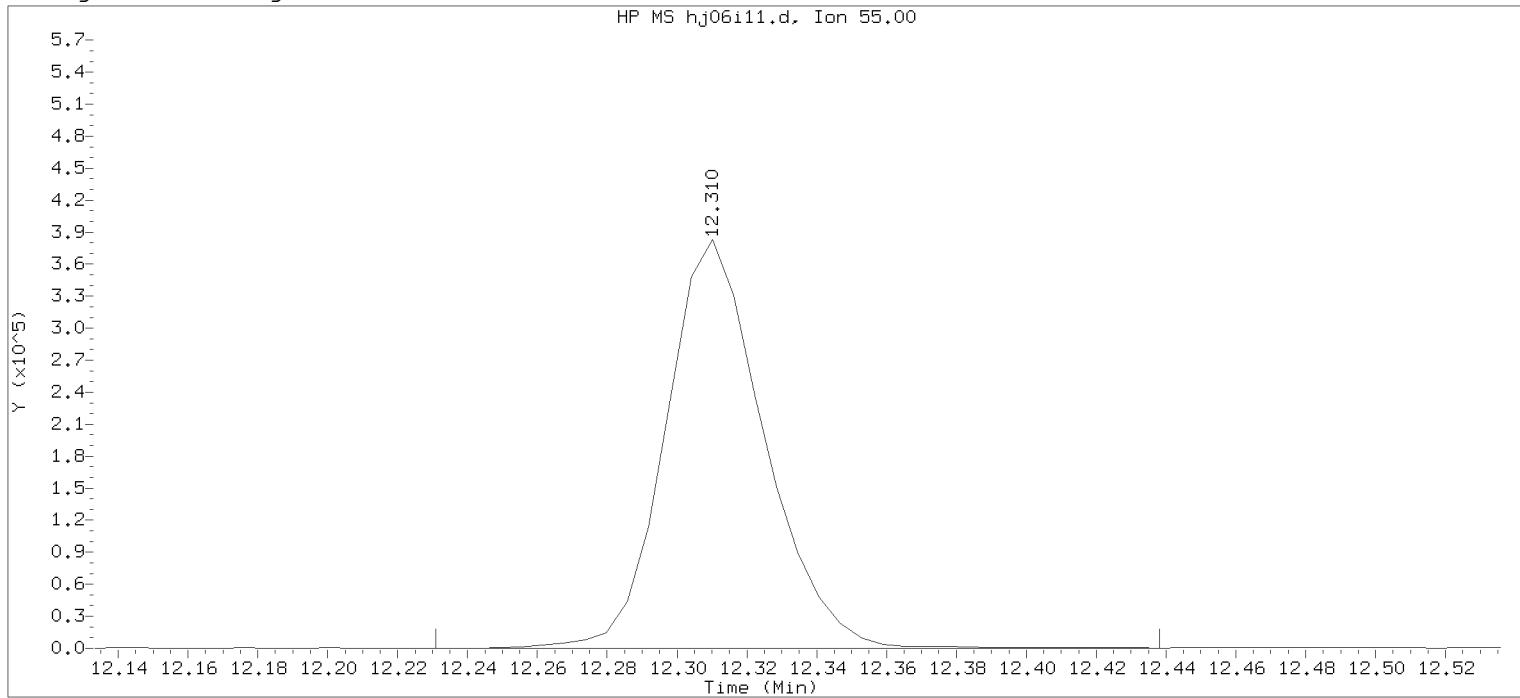
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



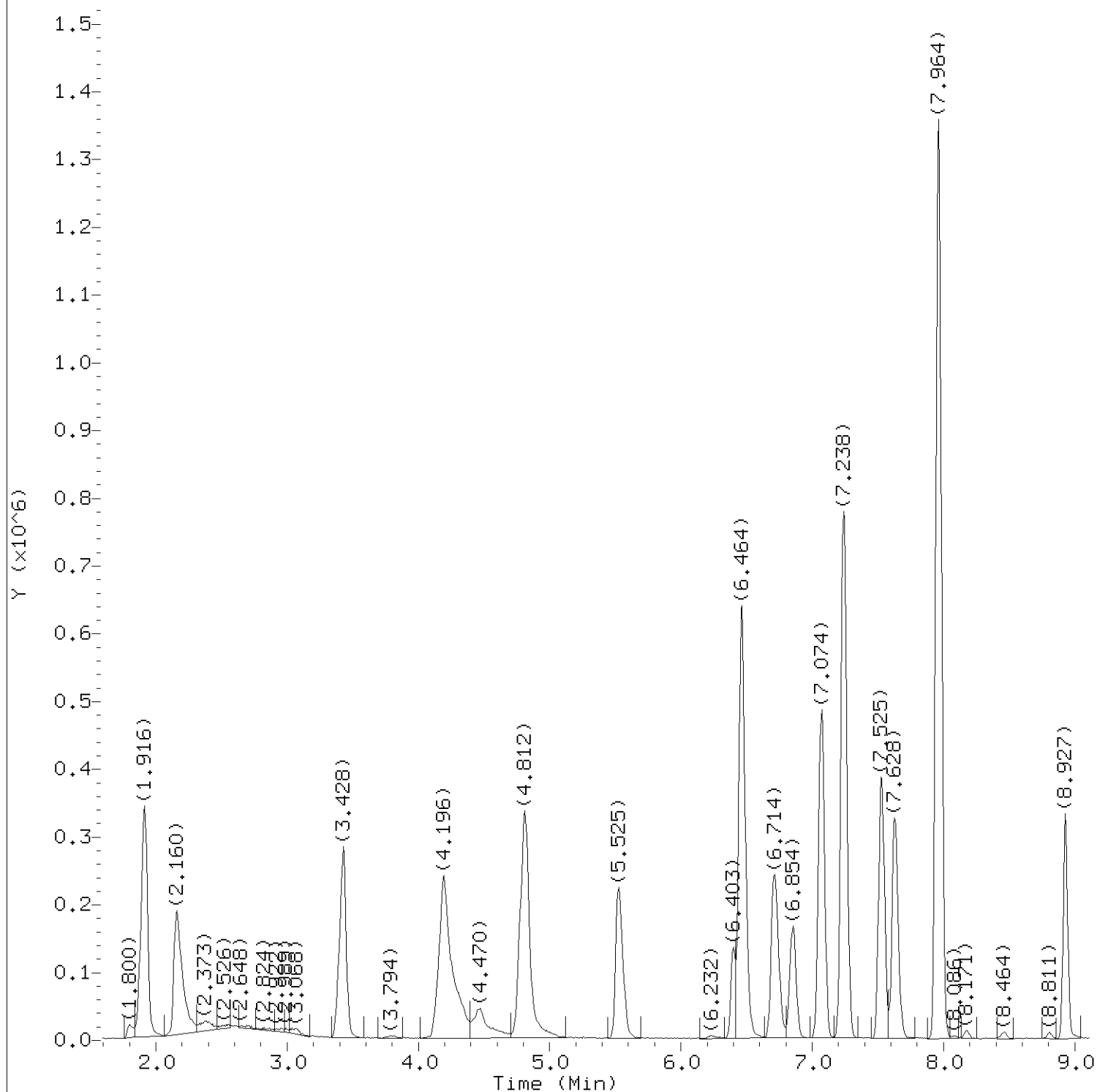
Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 752786	
On-column Amount (ng)	: 912.1339	
Integration start scan	: 1745	Integration stop scan: 1779
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d
Injection date and time: 06-JAN-2020 11:41

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

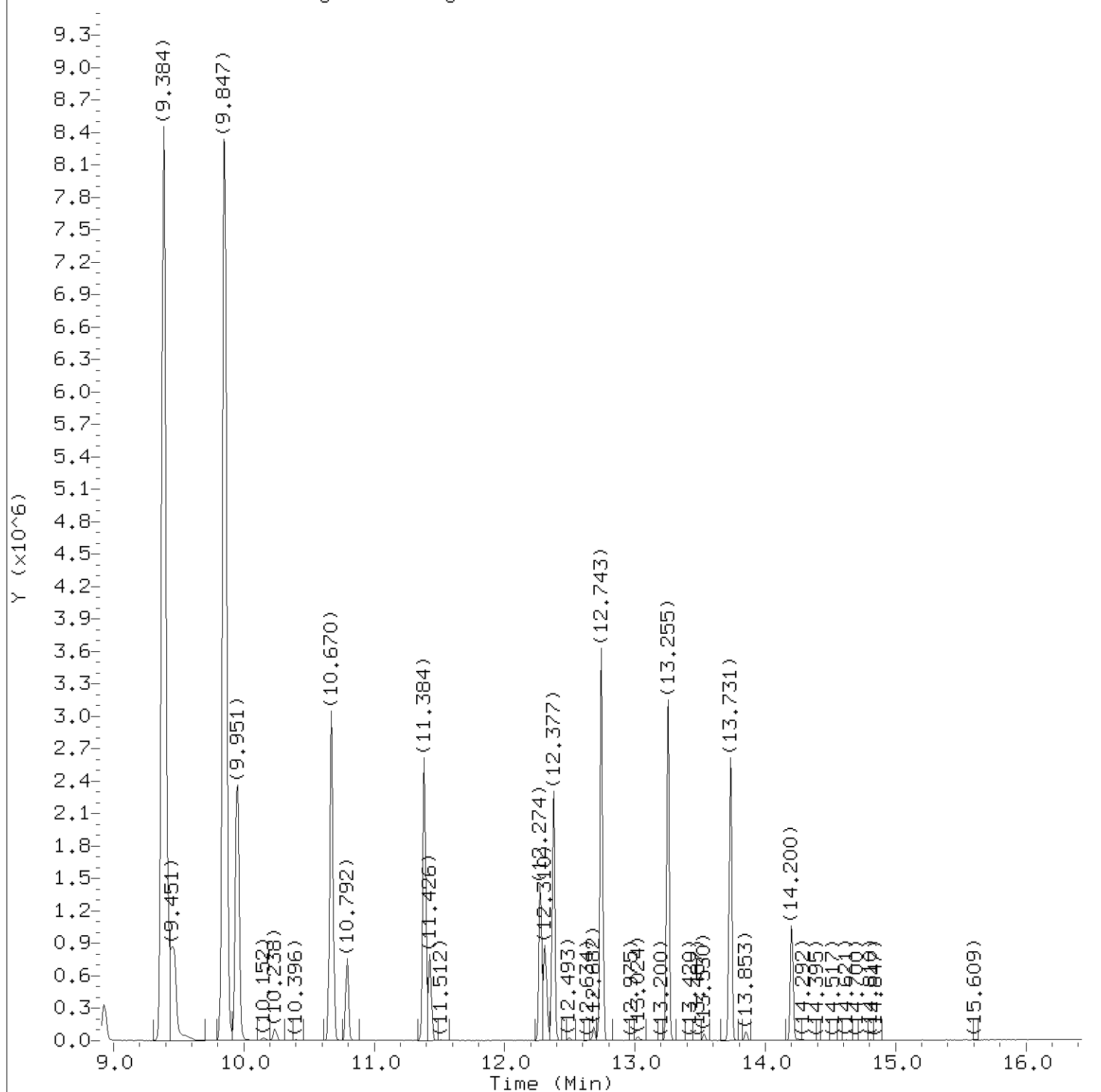
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d
Injection date and time: 06-JAN-2020 11:41

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.160	45	562958M	9.381
25) Acetonitrile	(1)	4.196	41	964447M	418.584
26)*t-Butyl Alcohol-d10	(1)	4.464	65	113216M	50.000
36) Vinyl Acetate	(2)	5.525	43	683409	9.880
43) Methyl Acrylate	(2)	6.464	55	1243208	49.775
53) 1-Chlorobutane	(2)	7.238	56	1026298	10.064
63)*Fluorobenzene	(2)	7.964	96	1966967	10.000
77) Chloroacetonitrile	(2)	9.445	75	668780	513.044
78) 2-Chloroethyl vinyl ether	(2)	9.470	63	242776	10.363
97)*Chlorobenzene-d5	(3)	11.384	117	1484003	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	317303	20.622
112) Cyclohexanone	(1)	12.310	55	396626M	582.802
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	785939	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

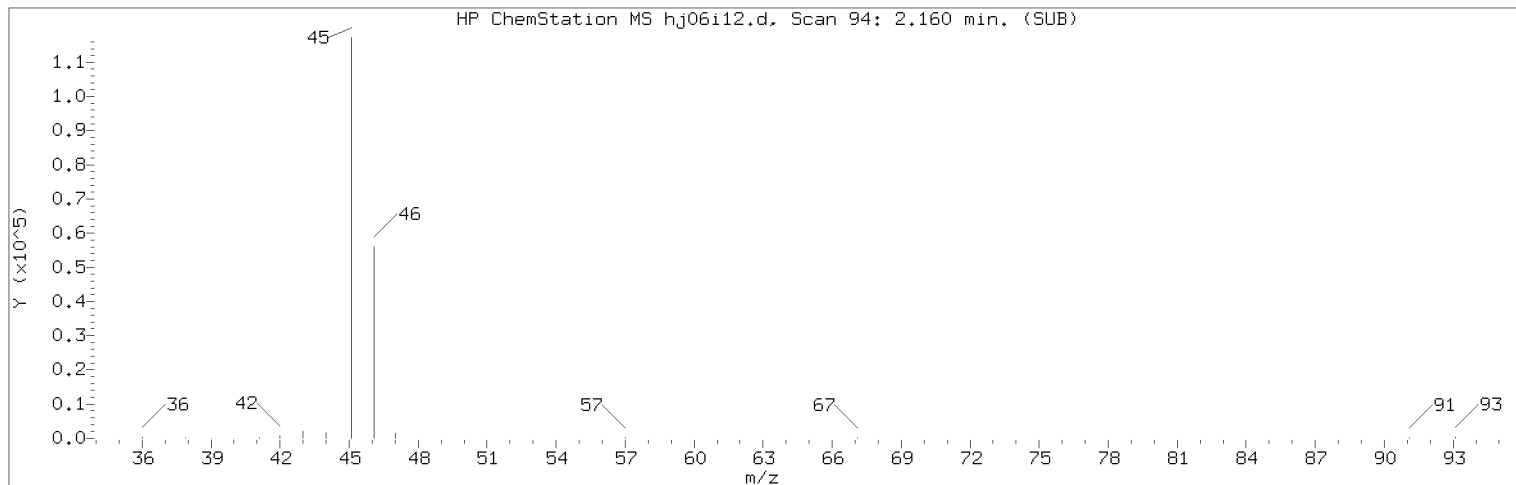
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

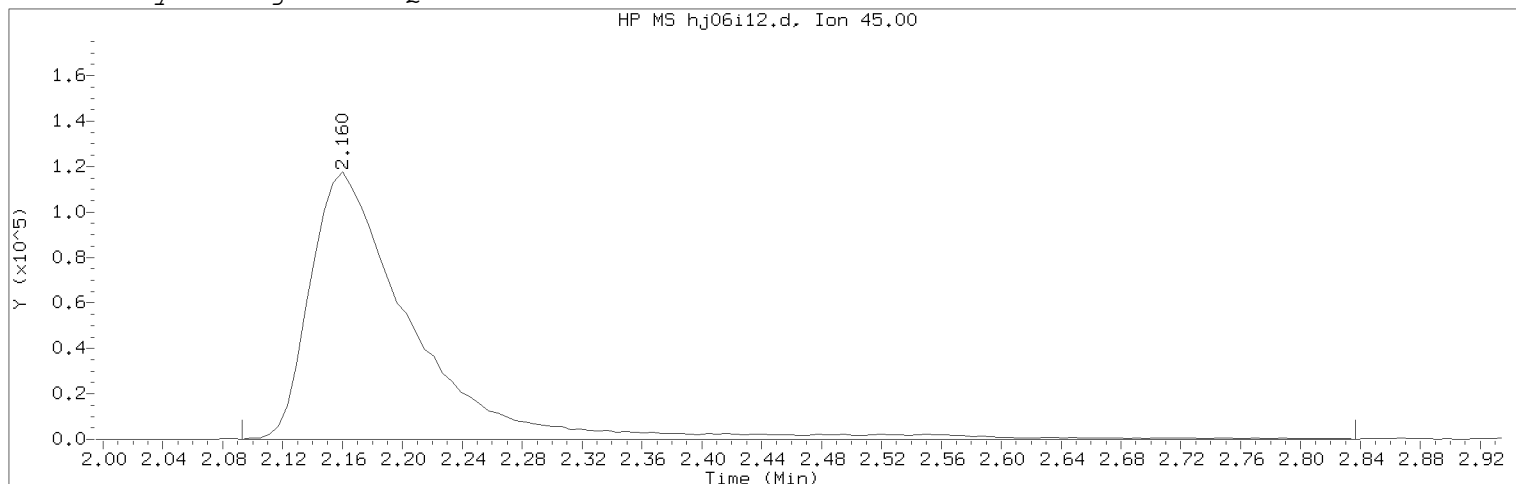
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

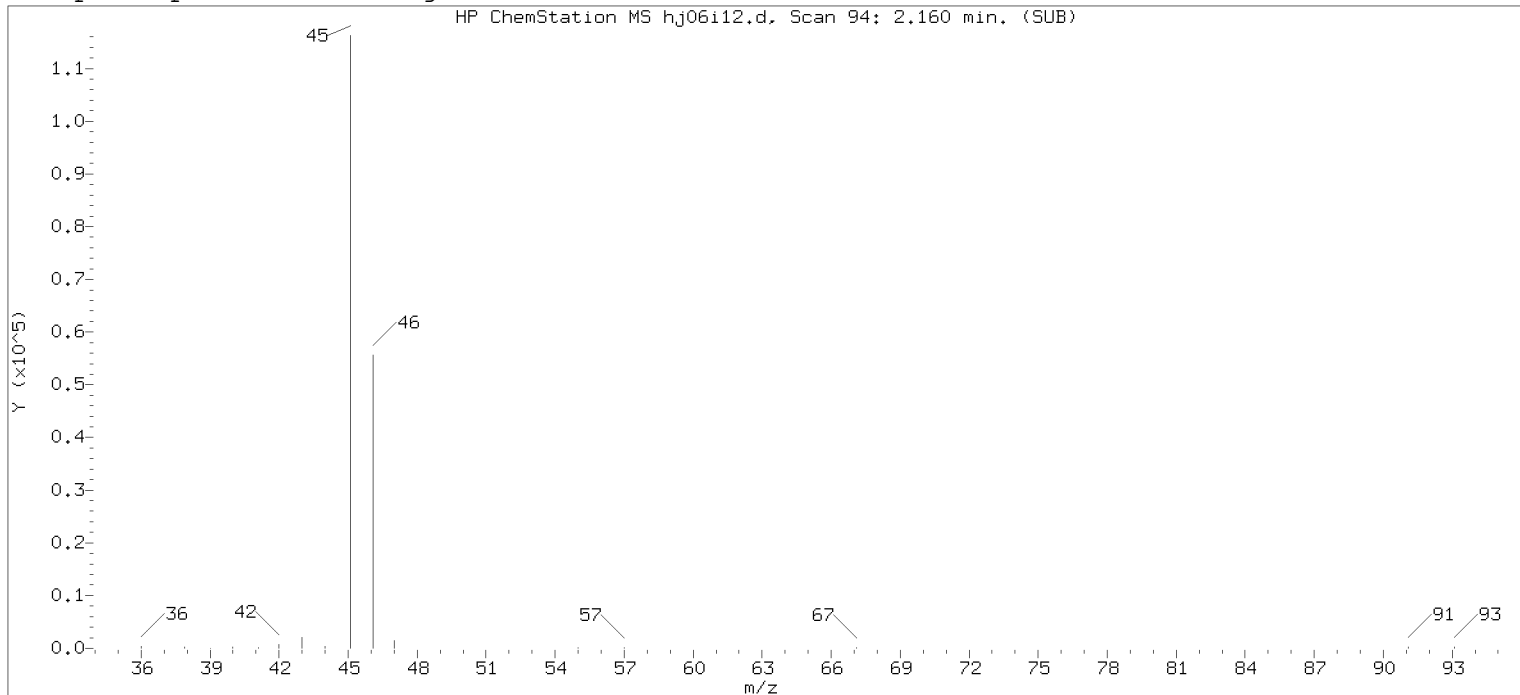
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 562958M
On-Column Amount (ng) : 9.3813
Integration start scan : 82 Integration stop scan: 204
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

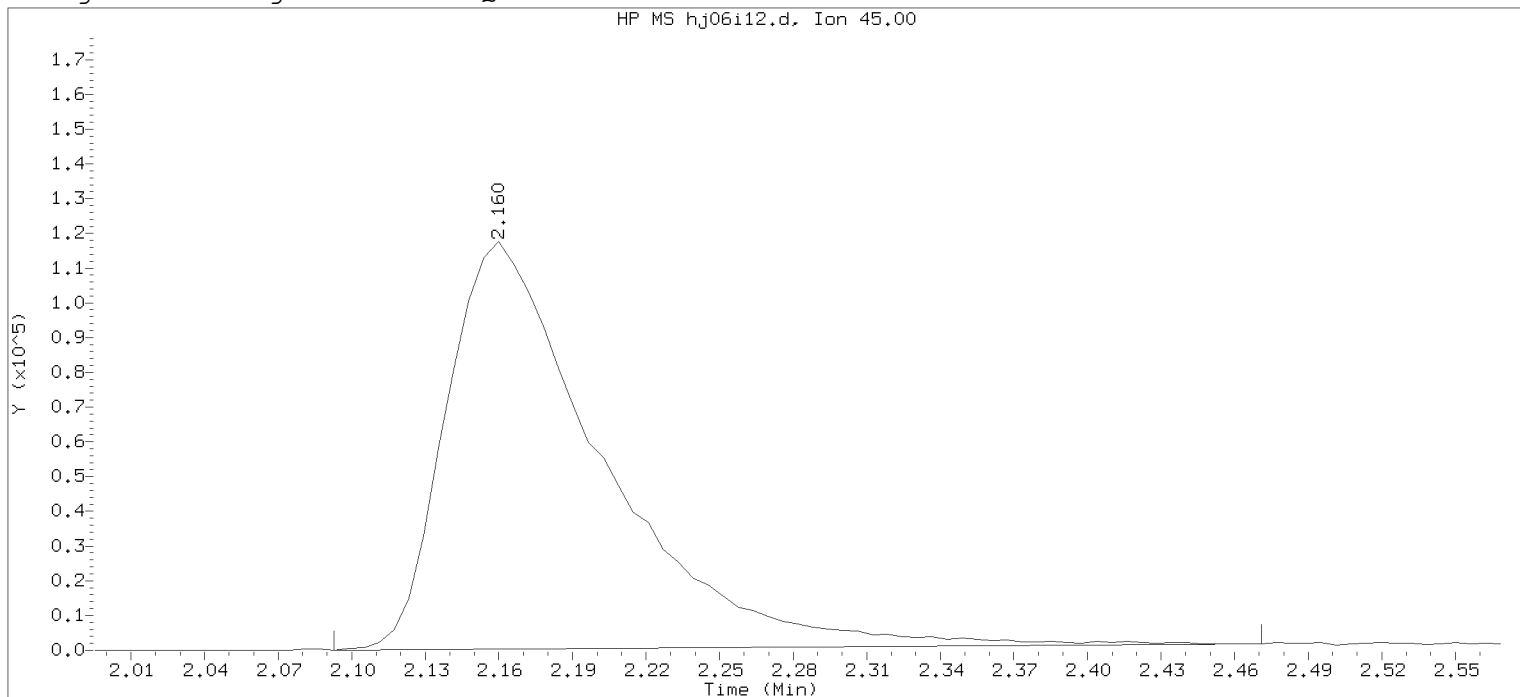
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

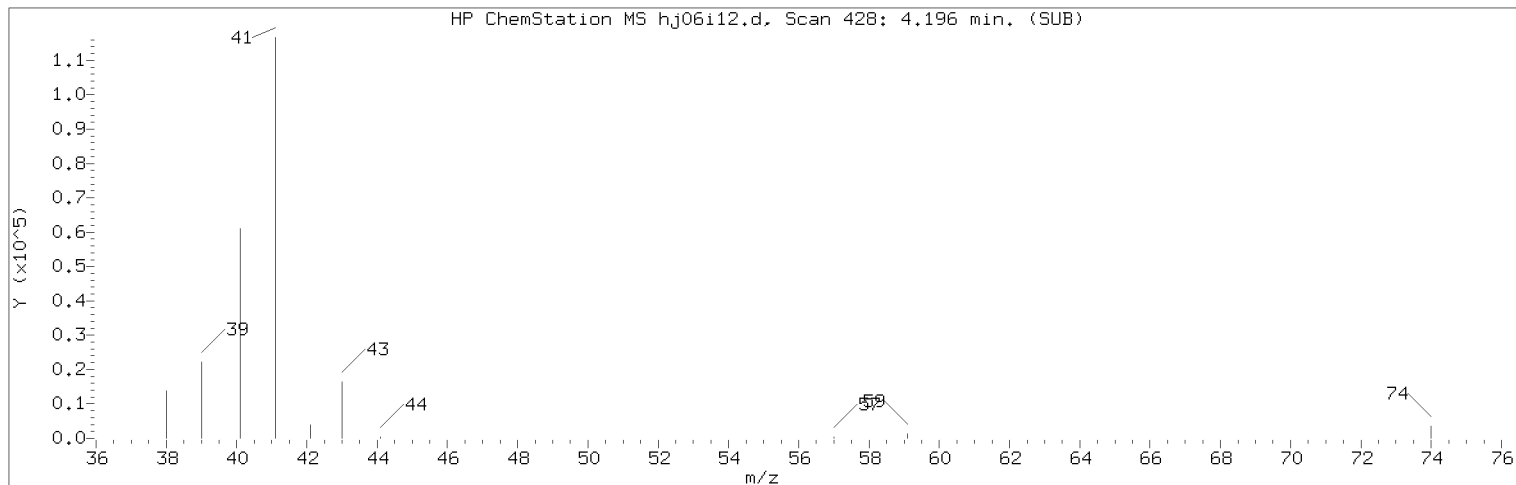
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 11:58
Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

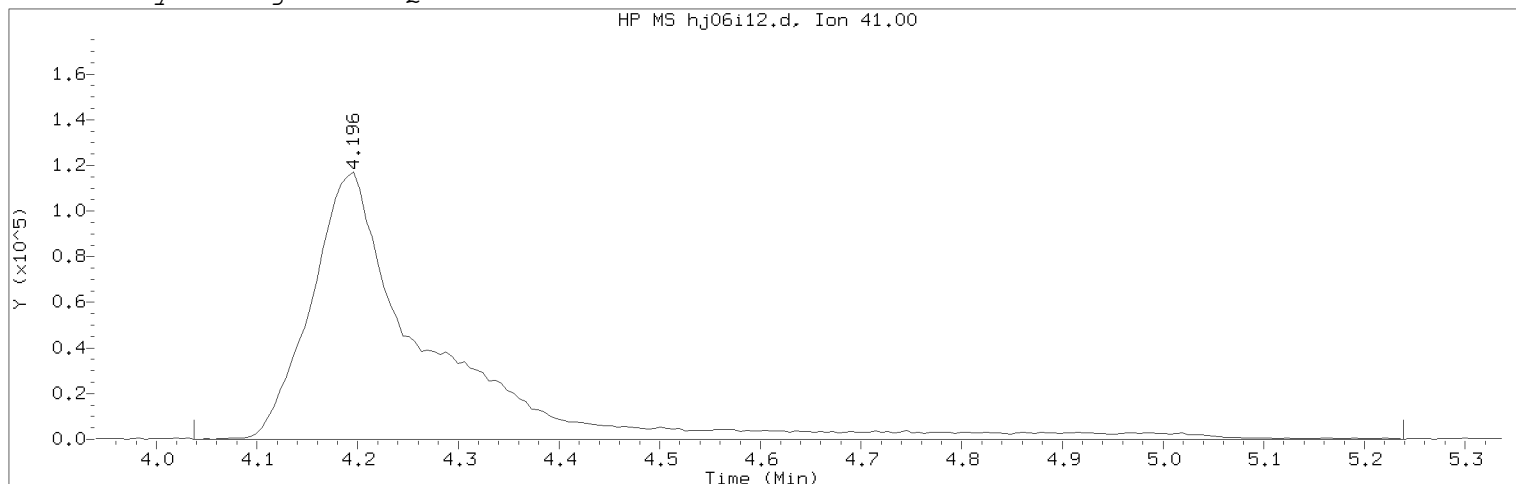
Lab Sample ID: VSTD010

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 94	
Retention Time (minutes)	: 2.160	
Quant Ion	: 45.00	
Area	: 521719	
On-column Amount (ng)	: 7.5770	
Integration start scan	: 82	Integration stop scan: 144
Y at integration start	: 0	Y at integration end: 1789

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

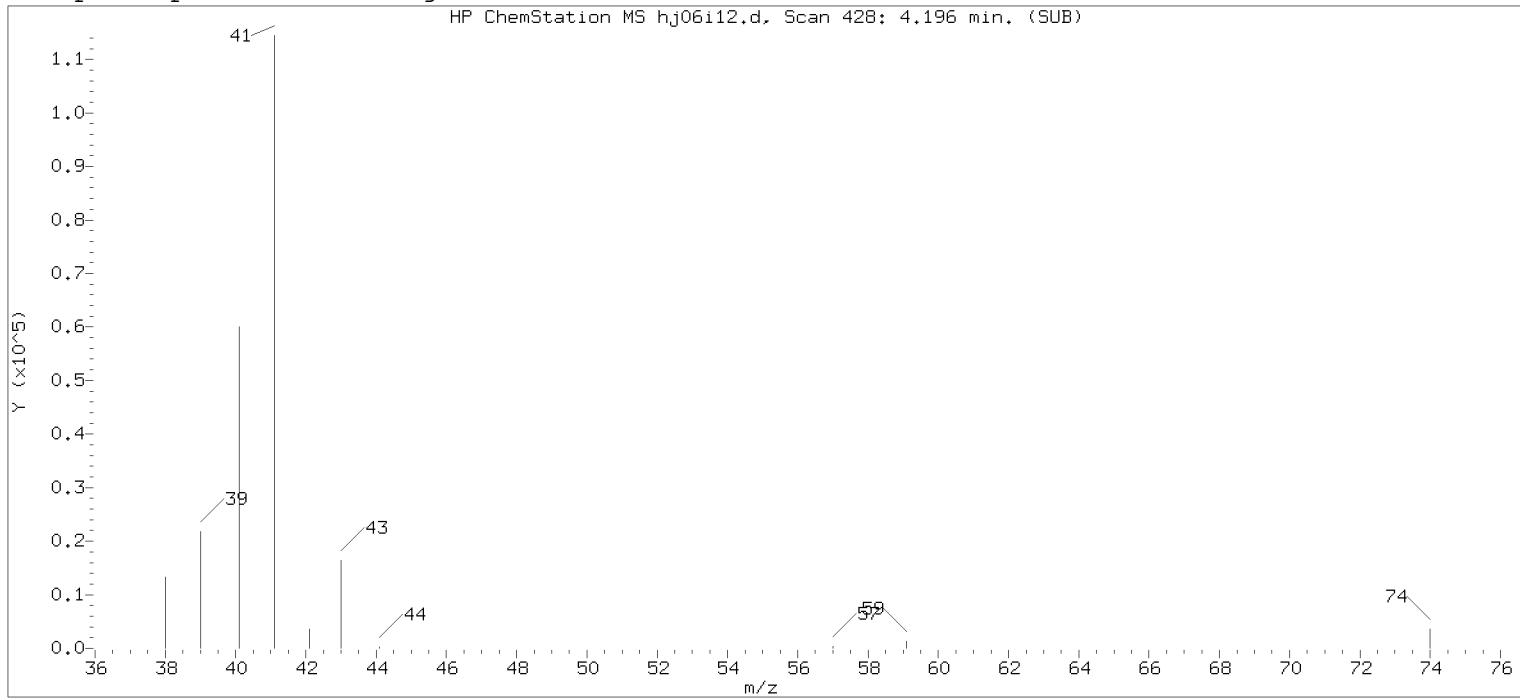
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area (flag) : 964447M
On-Column Amount (ng) : 418.5843
Integration start scan : 401 Integration stop scan: 598
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

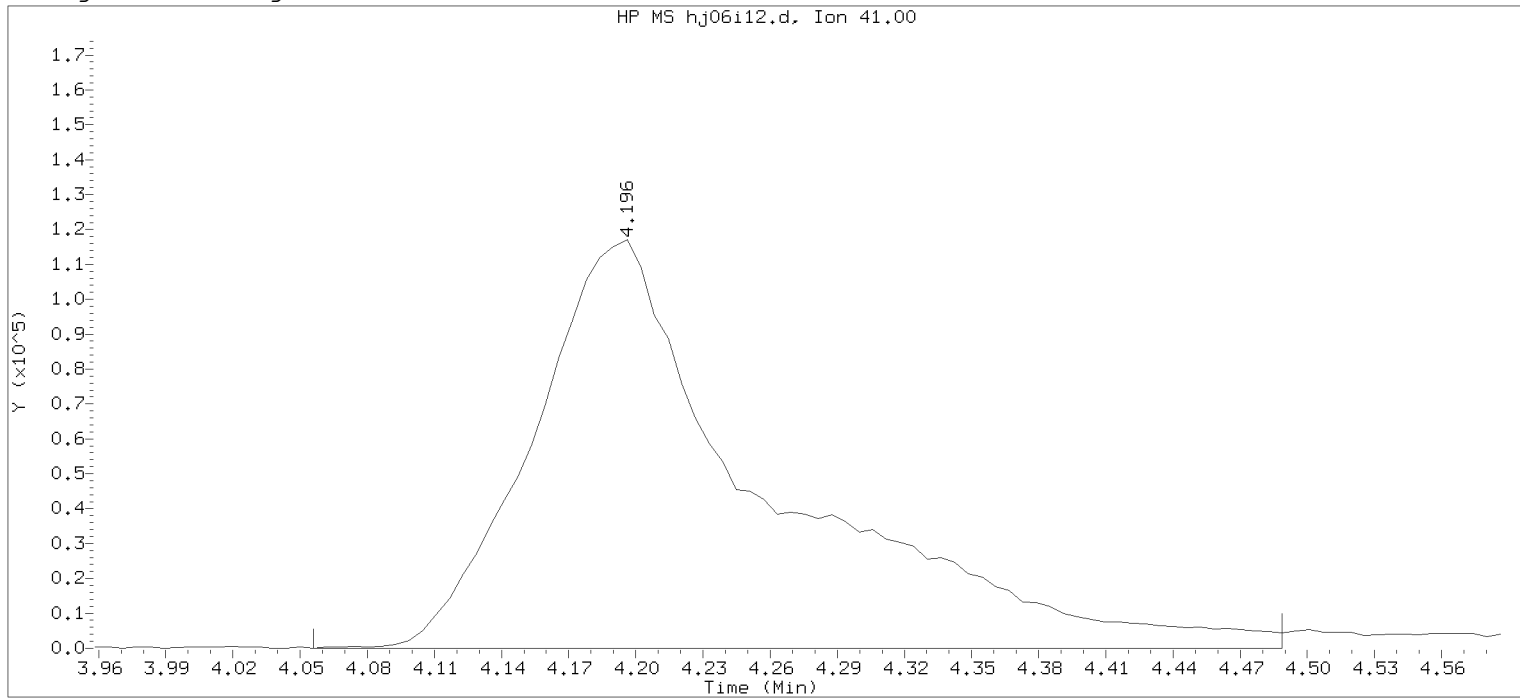
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 11:58

Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 25

Compound Name : Acetonitrile

Scan Number : 428

Retention Time (minutes): 4.196

Quant Ion : 41.00

Area : 853172

On-column Amount (ng) : 330.8568

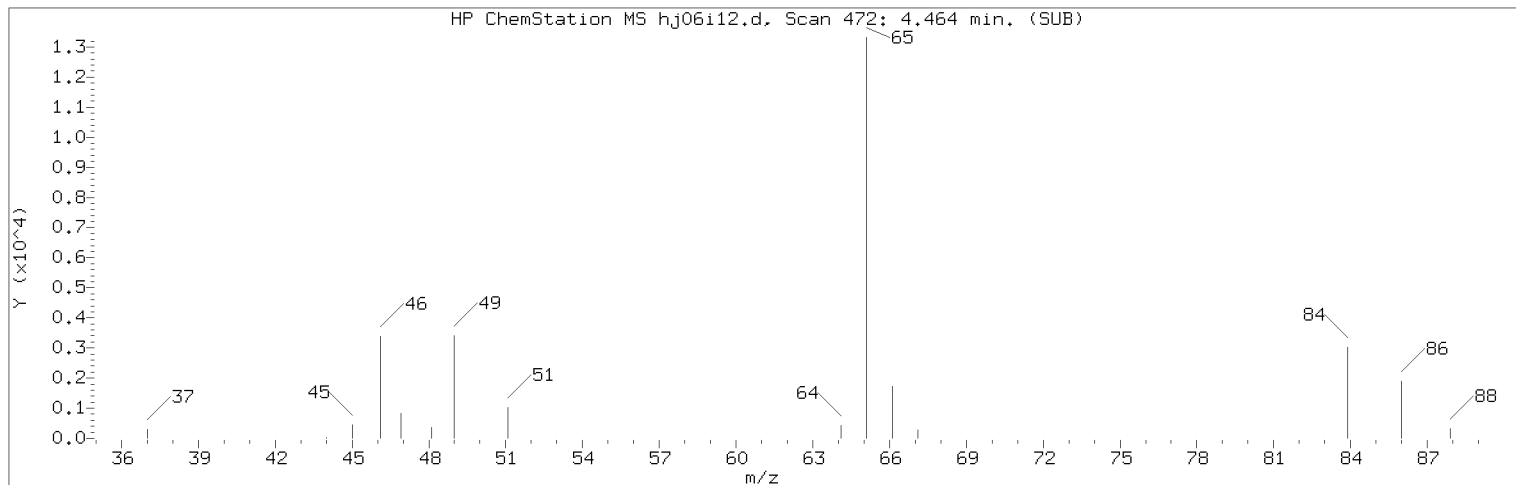
Integration start scan : 404 Integration stop scan: 475

Y at integration start : 0 Y at integration end: 0

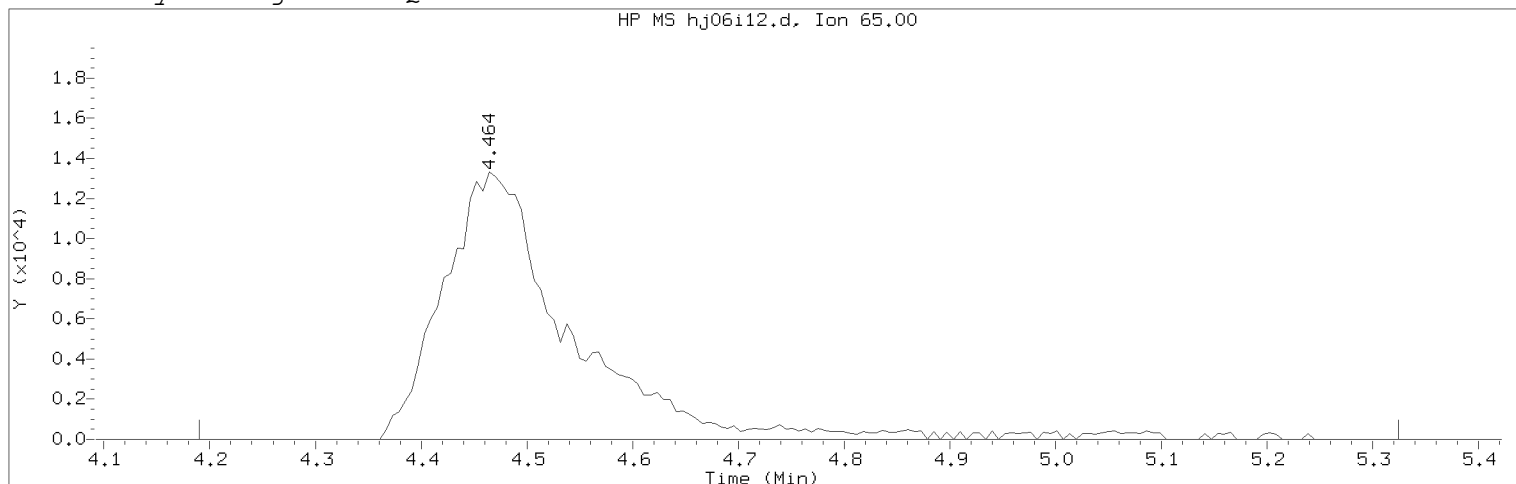
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RAE59 Page 821 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 26	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 472	
Retention Time (minutes)	: 4.464	
Quant Ion	: 65.00	
Area (flag)	: 113216M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 426	Integration stop scan: 612
Y at integration start	: 0	Y at integration end: 0

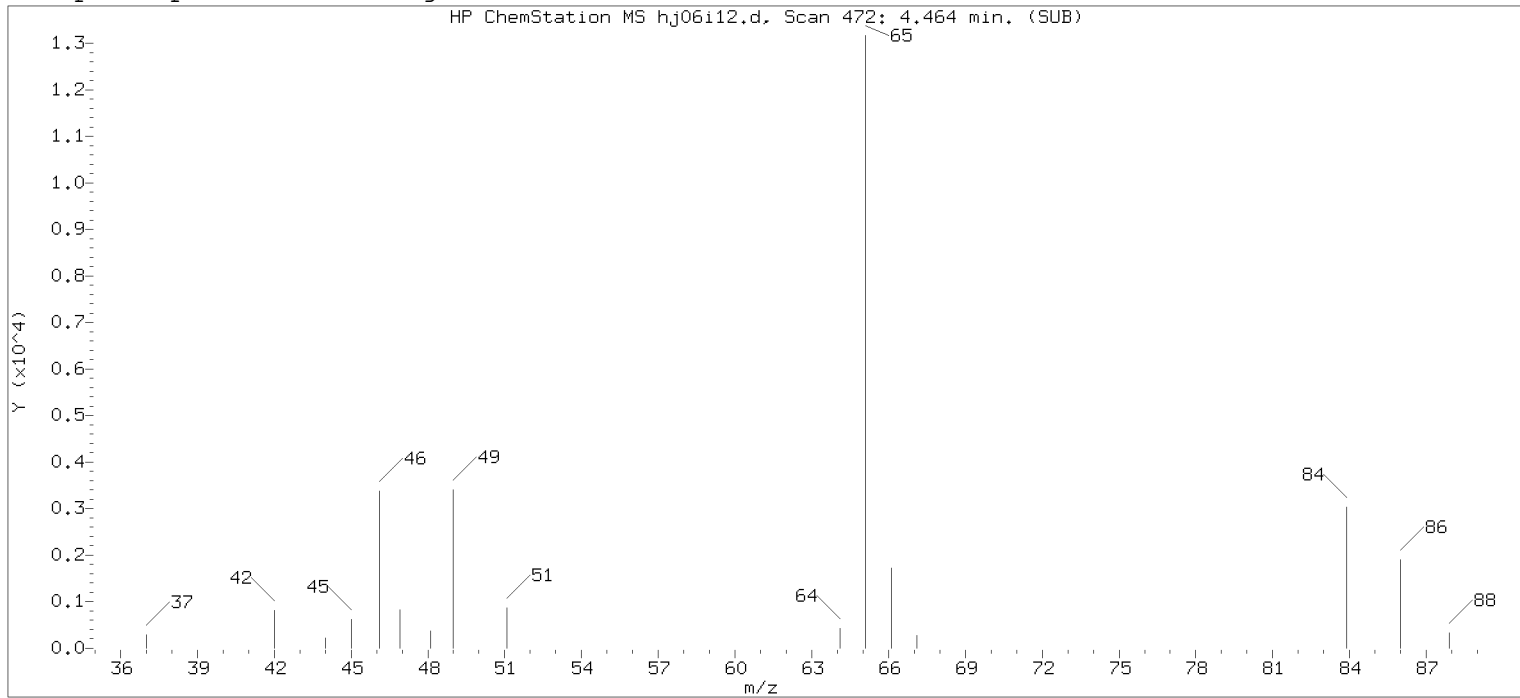
Reason for manual integration: improper integration

Analyst responsible for change:

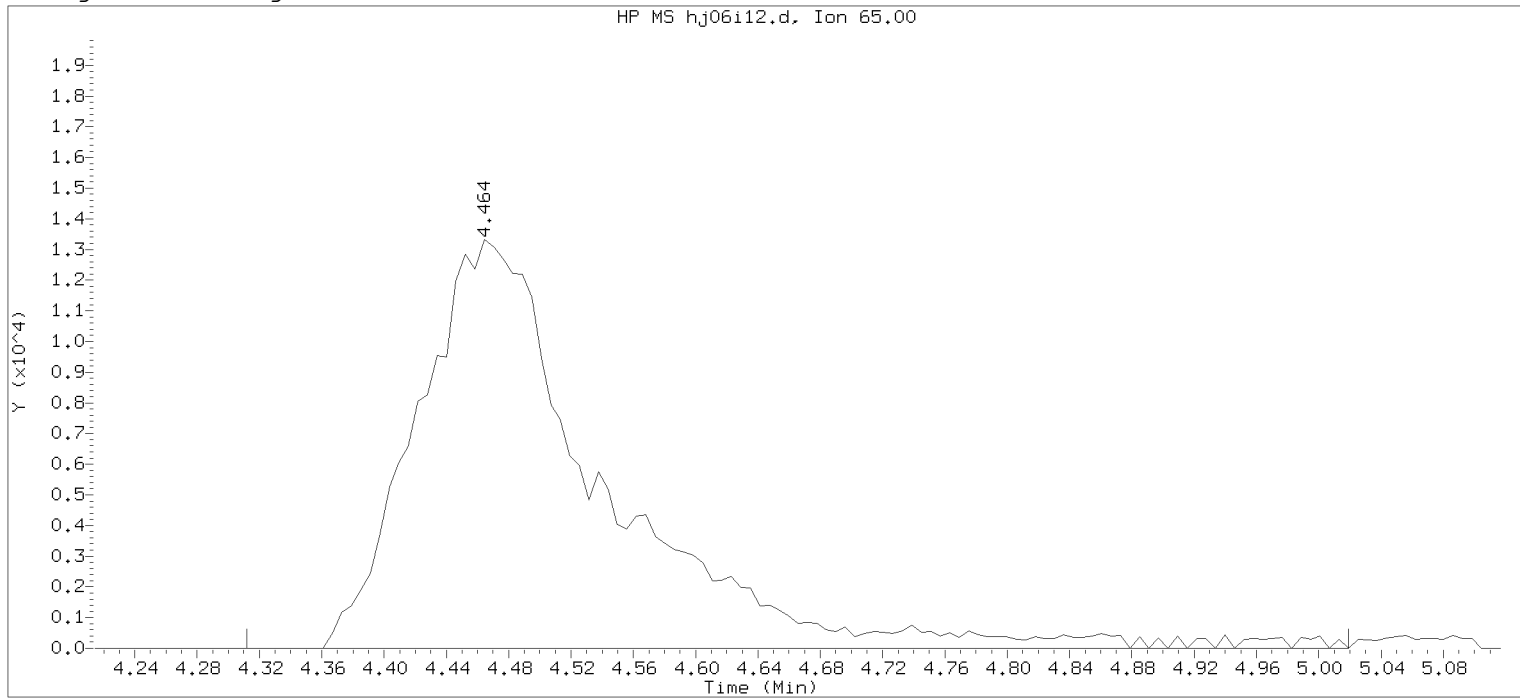
Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 11:58

Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 26

Compound Name : t-Butyl Alcohol-d10

Scan Number : 472

Retention Time (minutes): 4.464

Quant Ion : 65.00

Area : 110853

On-column Amount (ng) : 50.0000

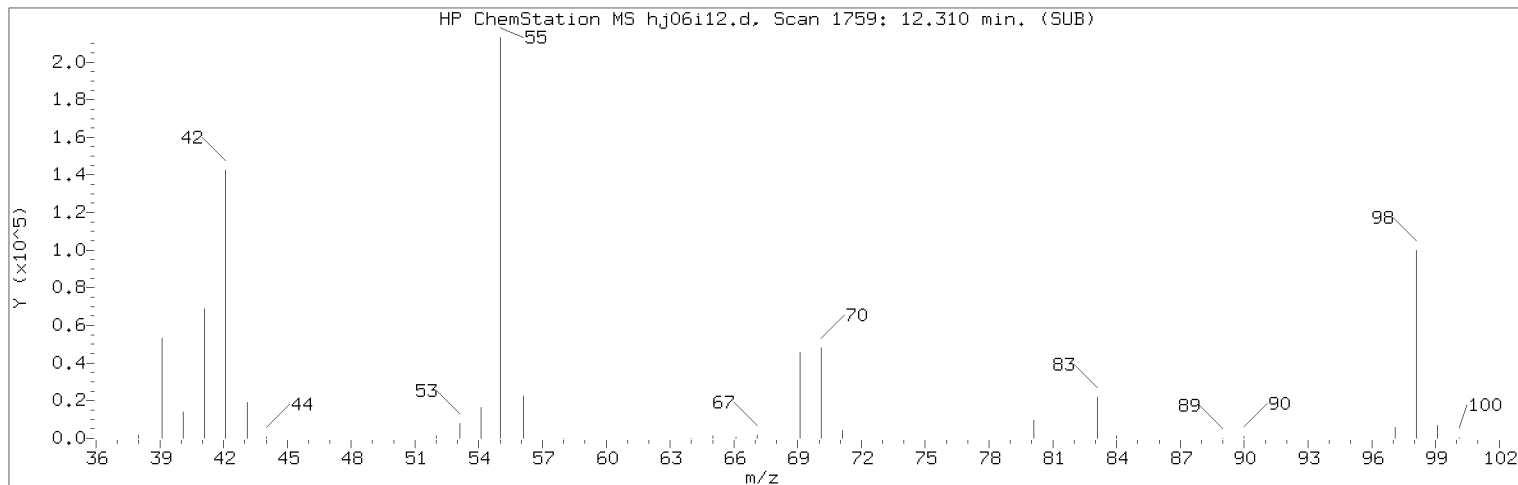
Integration start scan : 446 Integration stop scan: 562

Y at integration start : 0 Y at integration end: 0

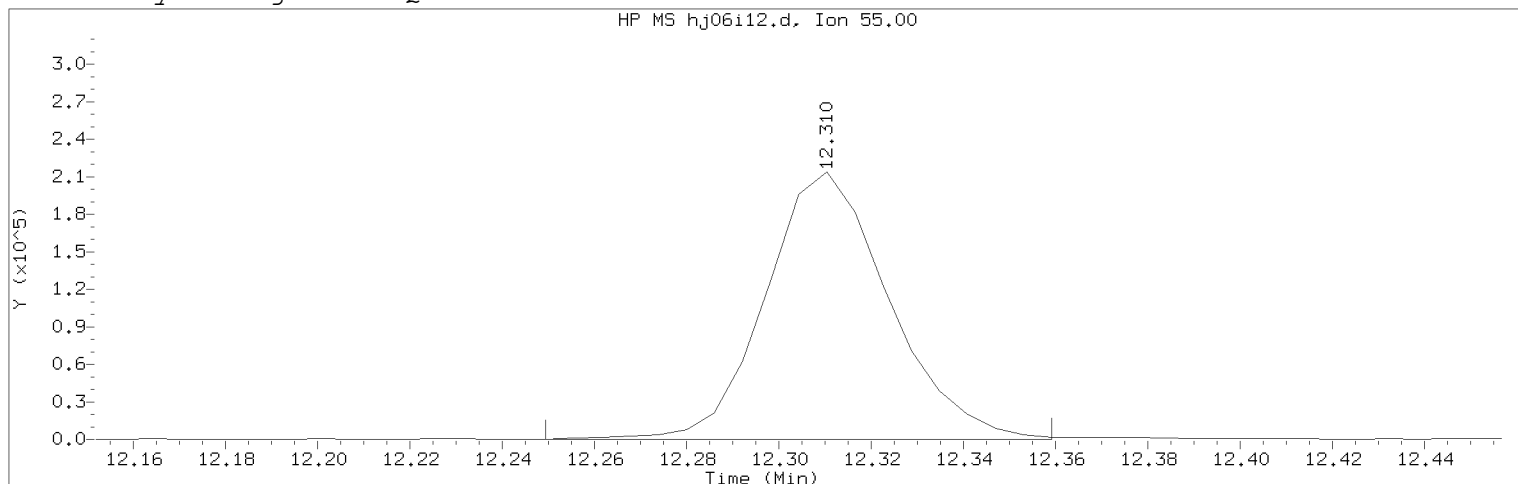
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RPF59 Page 923 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

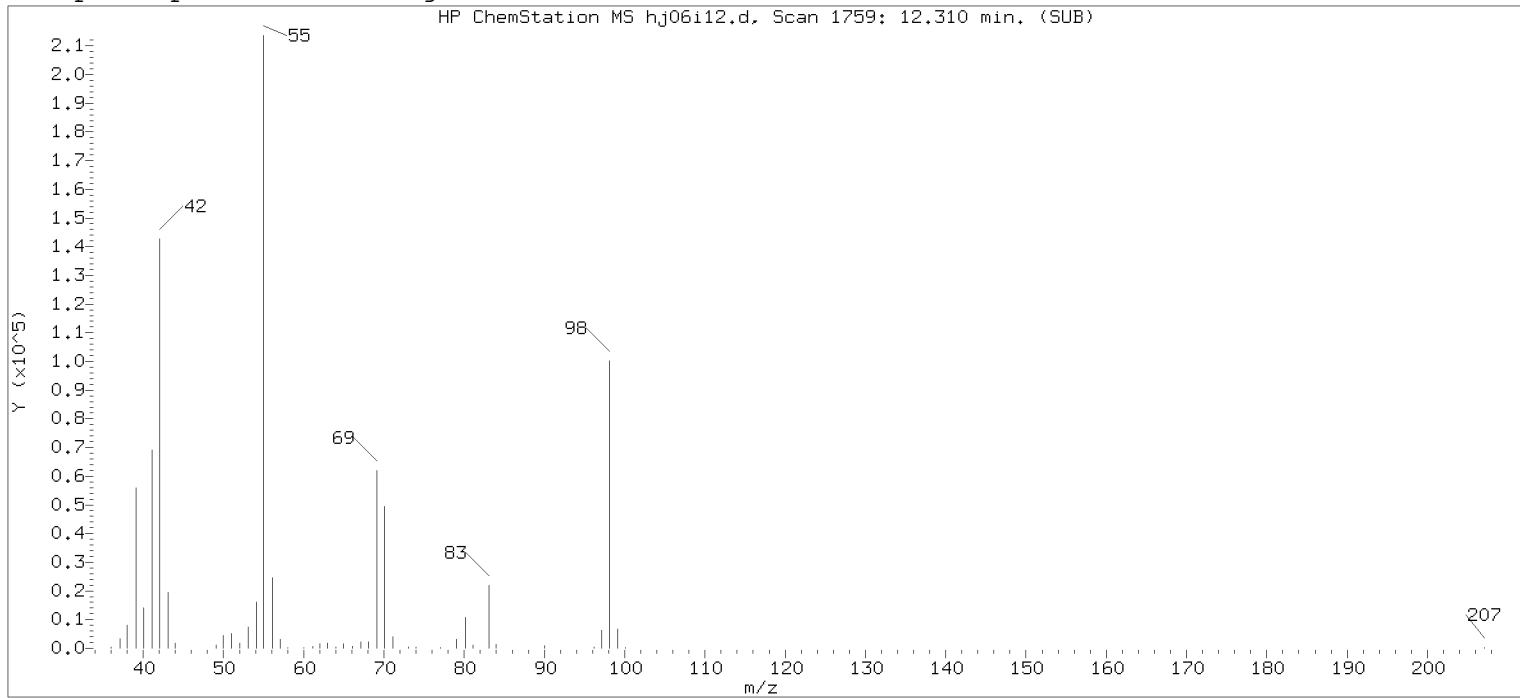
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 396626M
On-Column Amount (ng) : 582.8017
Integration start scan : 1748 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

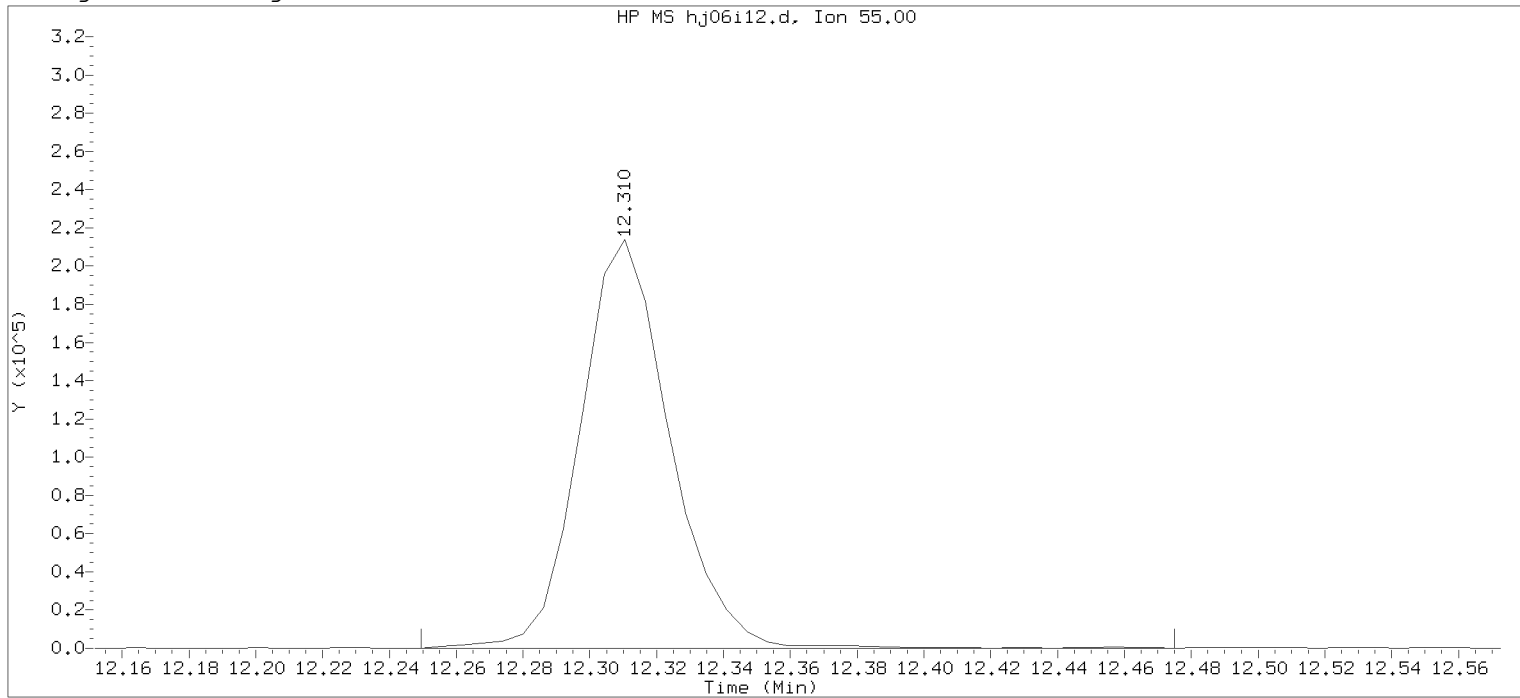
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



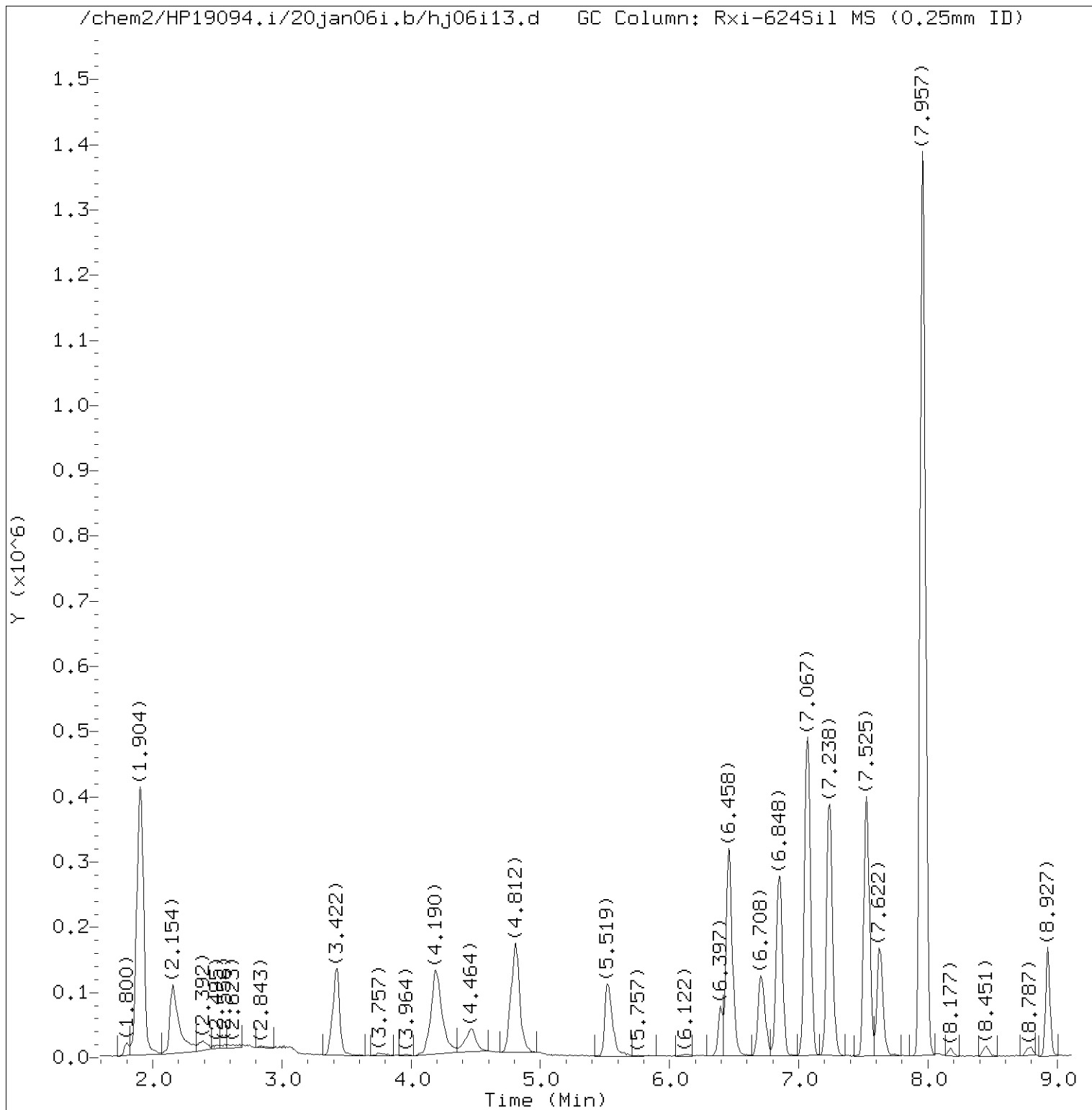
Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 11:58
Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 400207	
On-column Amount (ng)	: 510.8582	
Integration start scan	: 1748	Integration stop scan: 1785
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d
Injection date and time: 06-JAN-2020 12:02

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

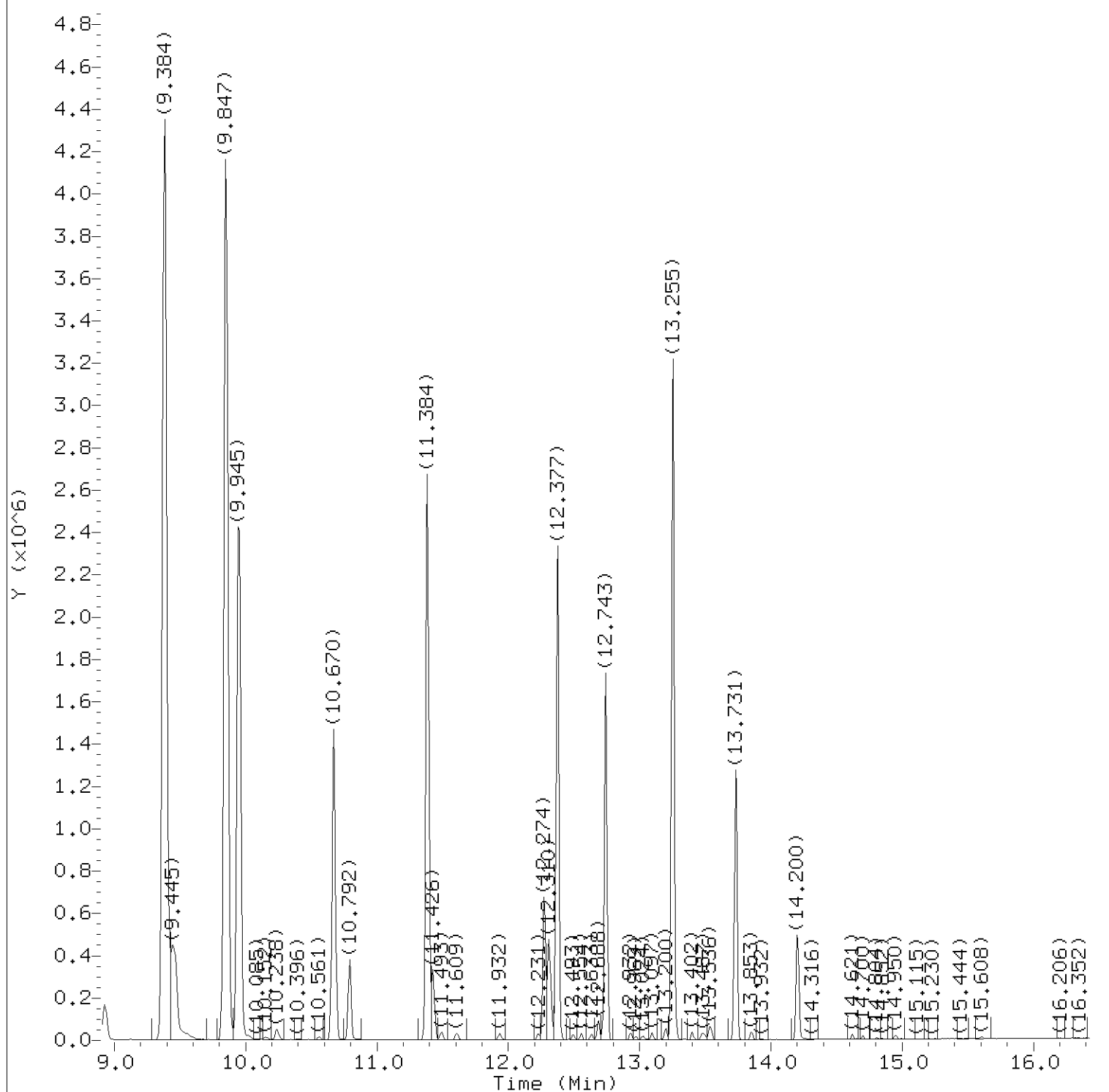
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d
Injection date and time: 06-JAN-2020 12:02

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:02

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	305633M	5.001
25) Acetonitrile	(1)	4.190	41	507655M	208.784
26)*t-Butyl Alcohol-d10	(1)	4.476	65	116853	50.000
36) Vinyl Acetate	(2)	5.519	43	339937	4.882
43) Methyl Acrylate	(2)	6.458	55	606068	24.206
53) 1-Chlorobutane	(2)	7.232	56	505754	4.913
63)*Fluorobenzene	(2)	7.957	96	2003060	10.000
77) Chloroacetonitrile	(2)	9.439	75	341092	254.590
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	119048	4.993
97)*Chlorobenzene-d5	(3)	11.384	117	1501115	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	150421	9.642
112) Cyclohexanone	(1)	12.310	55	218604M	287.733
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	807265	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

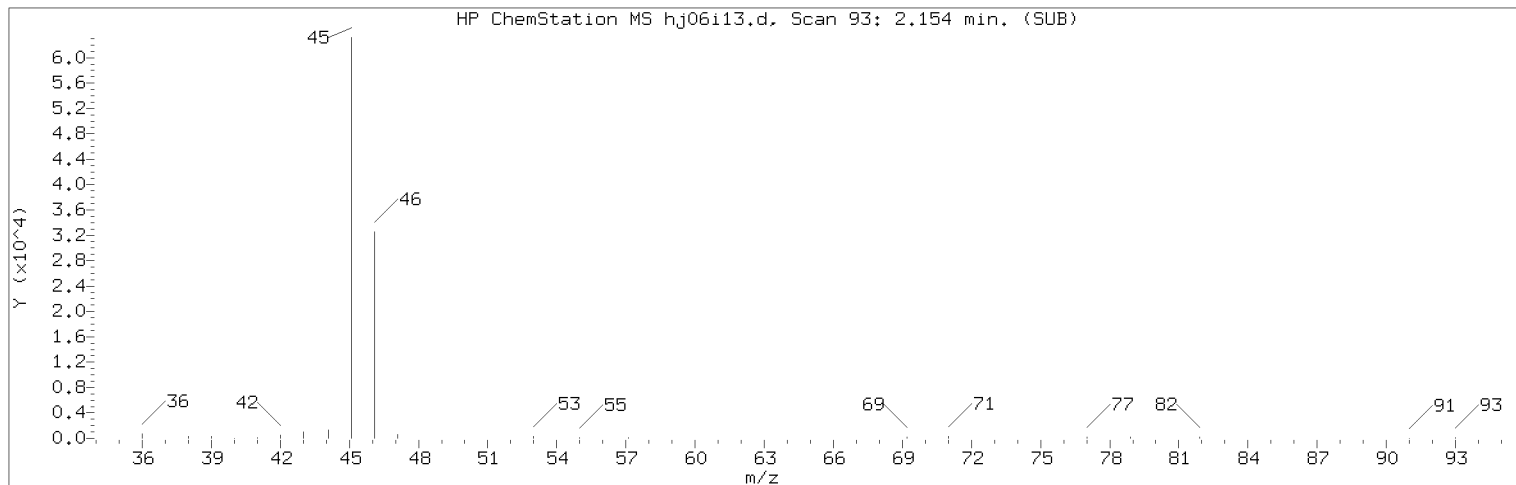
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

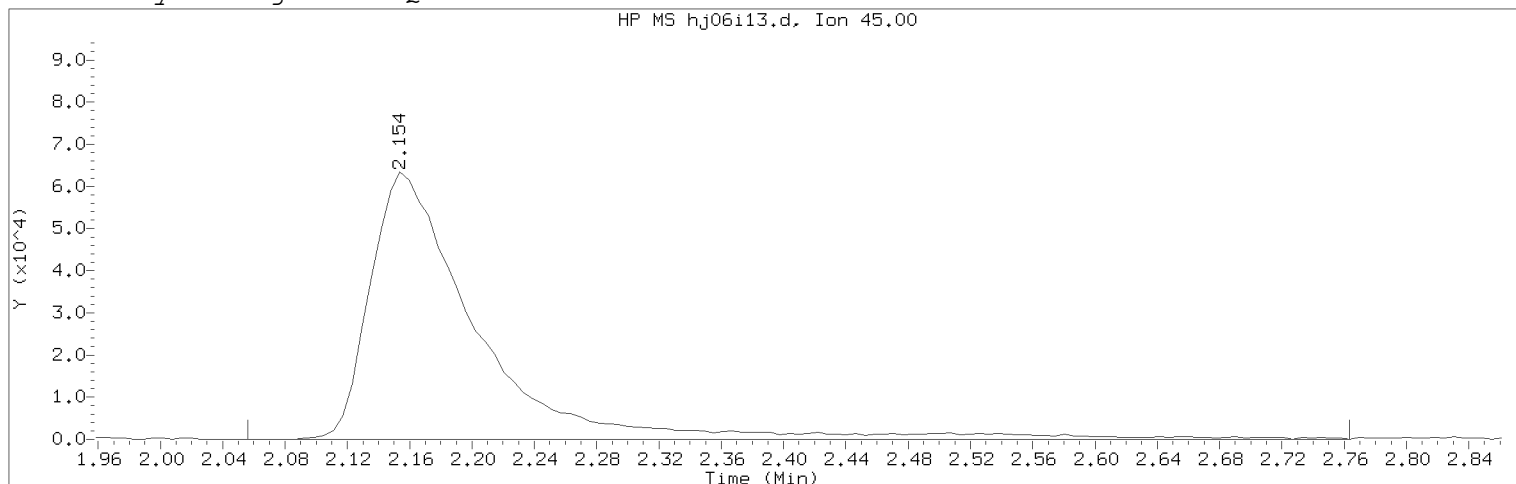
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

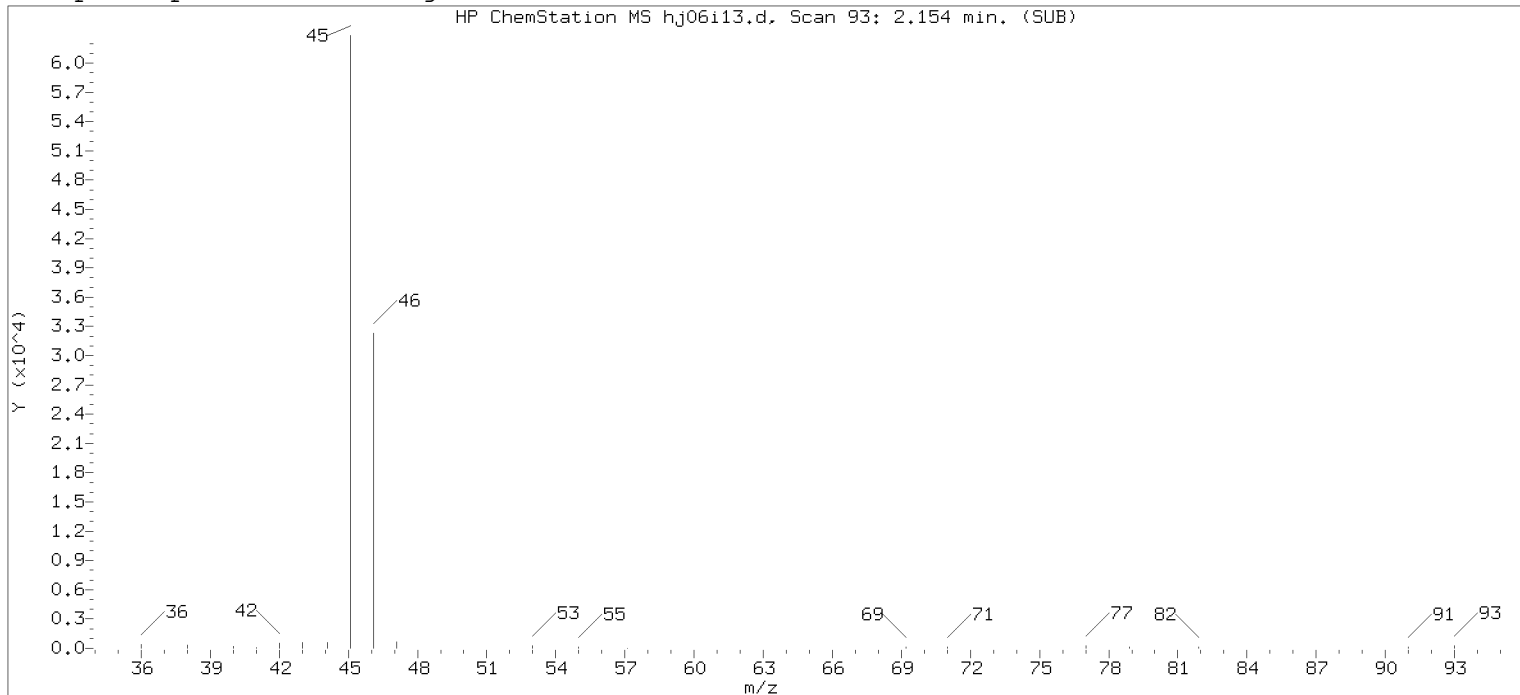
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 305633M
On-Column Amount (ng) : 5.0009
Integration start scan : 76 Integration stop scan: 192
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

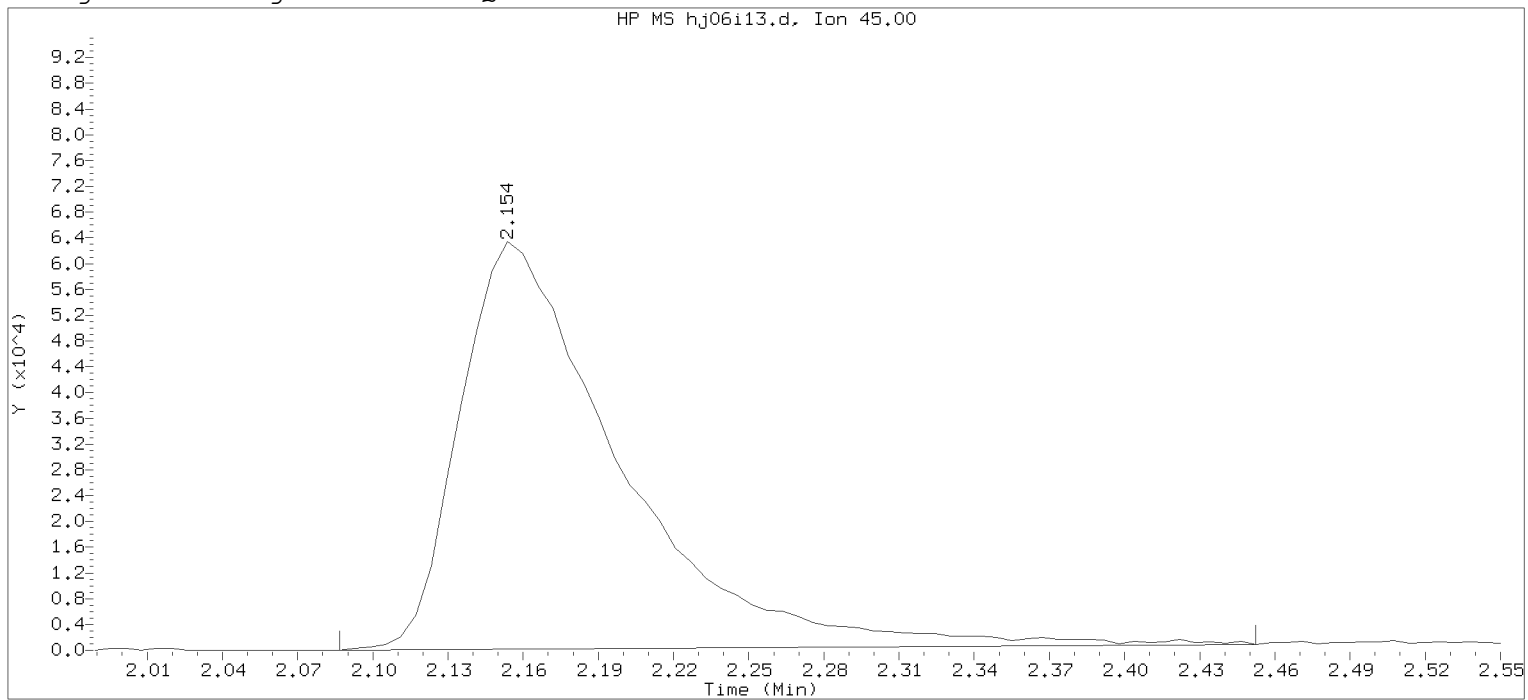
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:02

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 12:55

Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

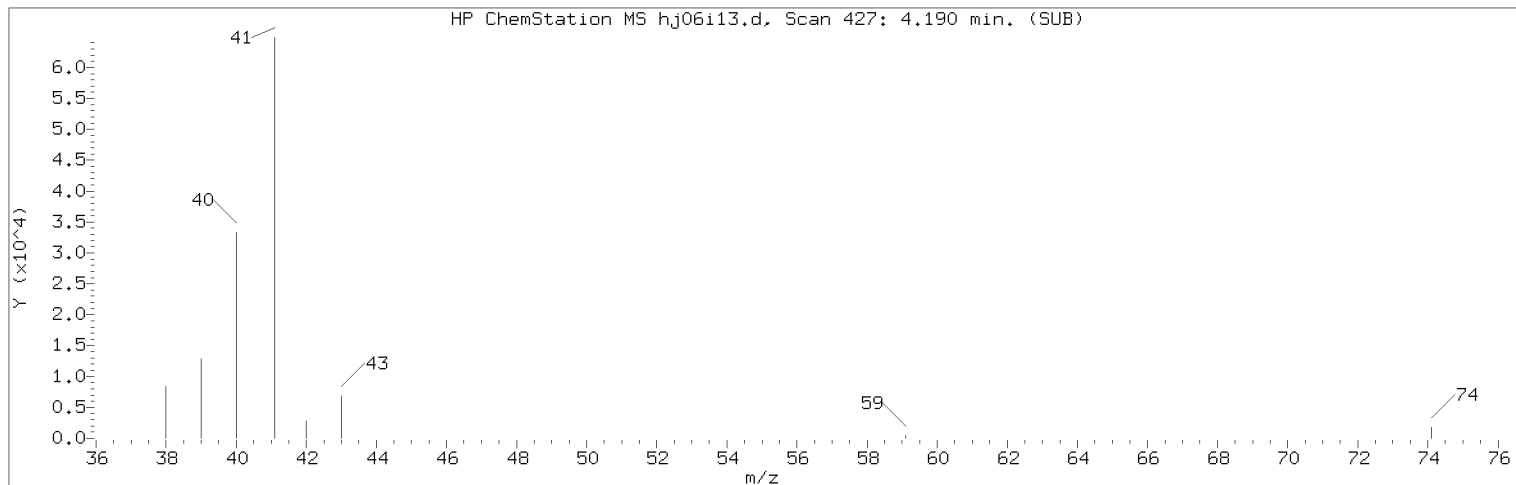
Sample Name: VSTD005

Lab Sample ID: VSTD005

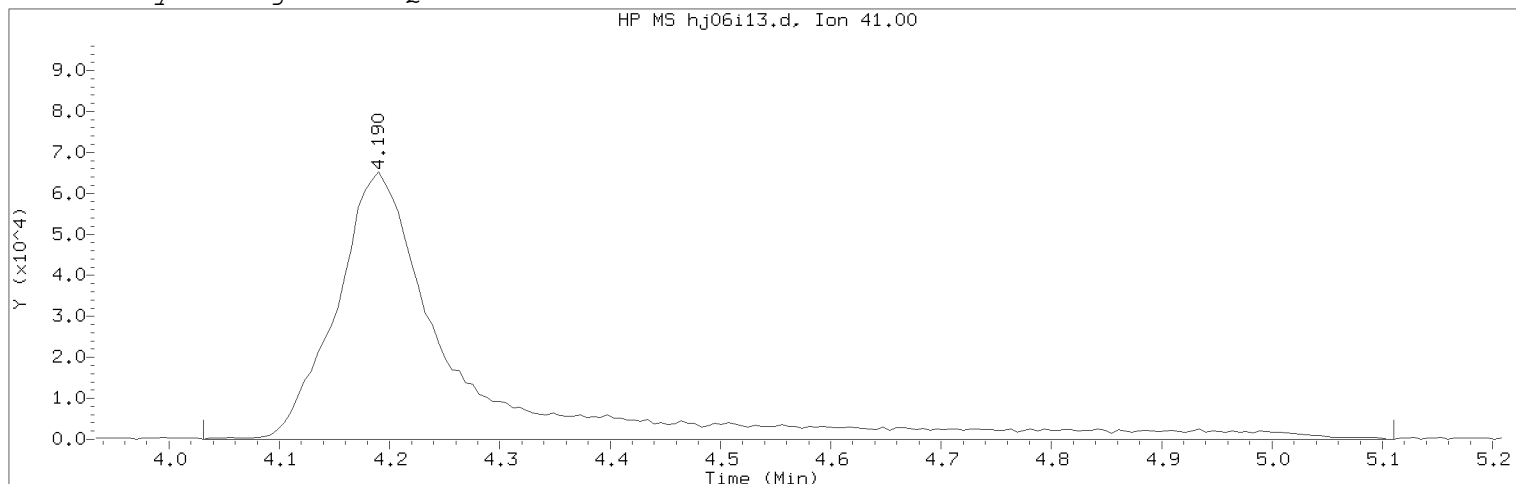
Compound Number : 4
 Compound Name : Dimethyl ether
 Scan Number : 93
 Retention Time (minutes): 2.154
 Quant Ion : 45.00
 Area : 281228
 On-column Amount (ng) : 4.7731
 Integration start scan : 81
 Y at integration start : 0

Integration stop scan: 141
 Y at integration end: 937

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

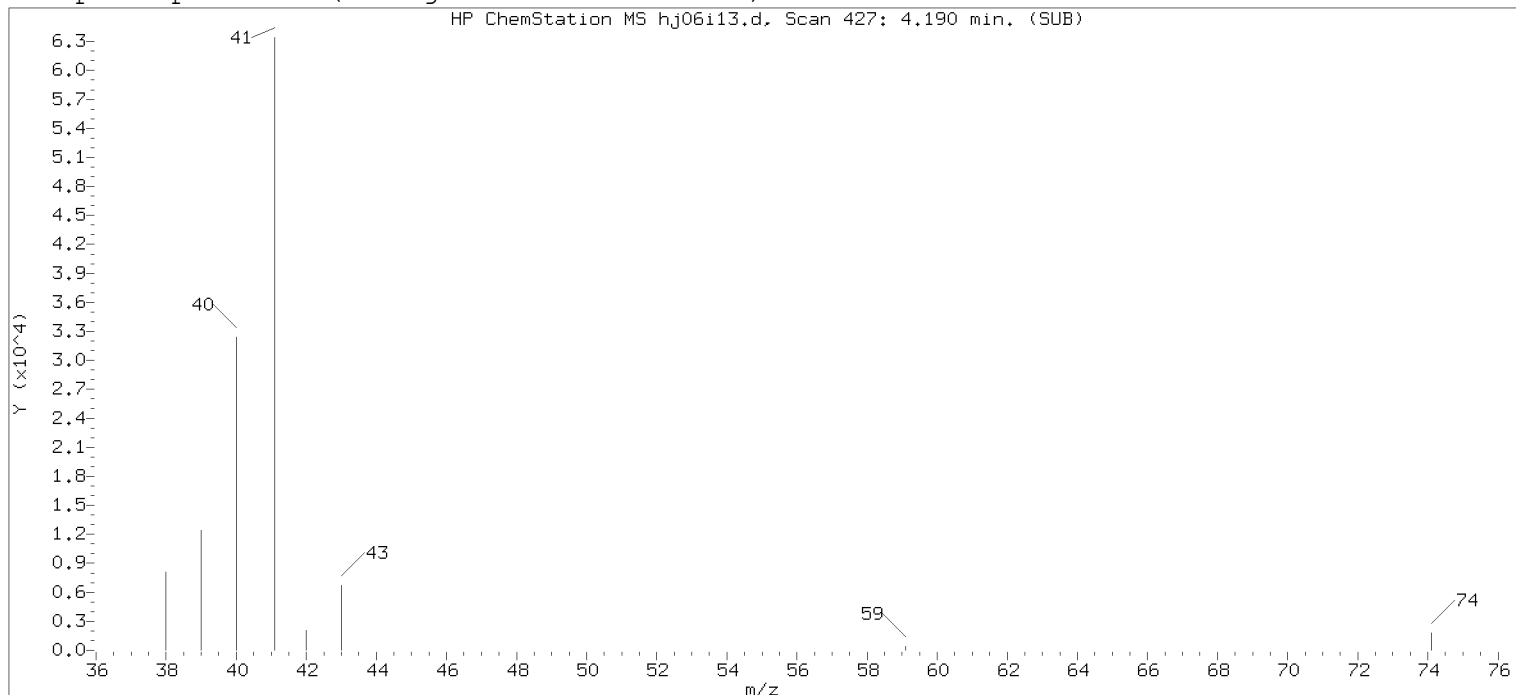
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 427
Retention Time (minutes): 4.190
Quant Ion : 41.00
Area (flag) : 507655M
On-Column Amount (ng) : 208.7842
Integration start scan : 400 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

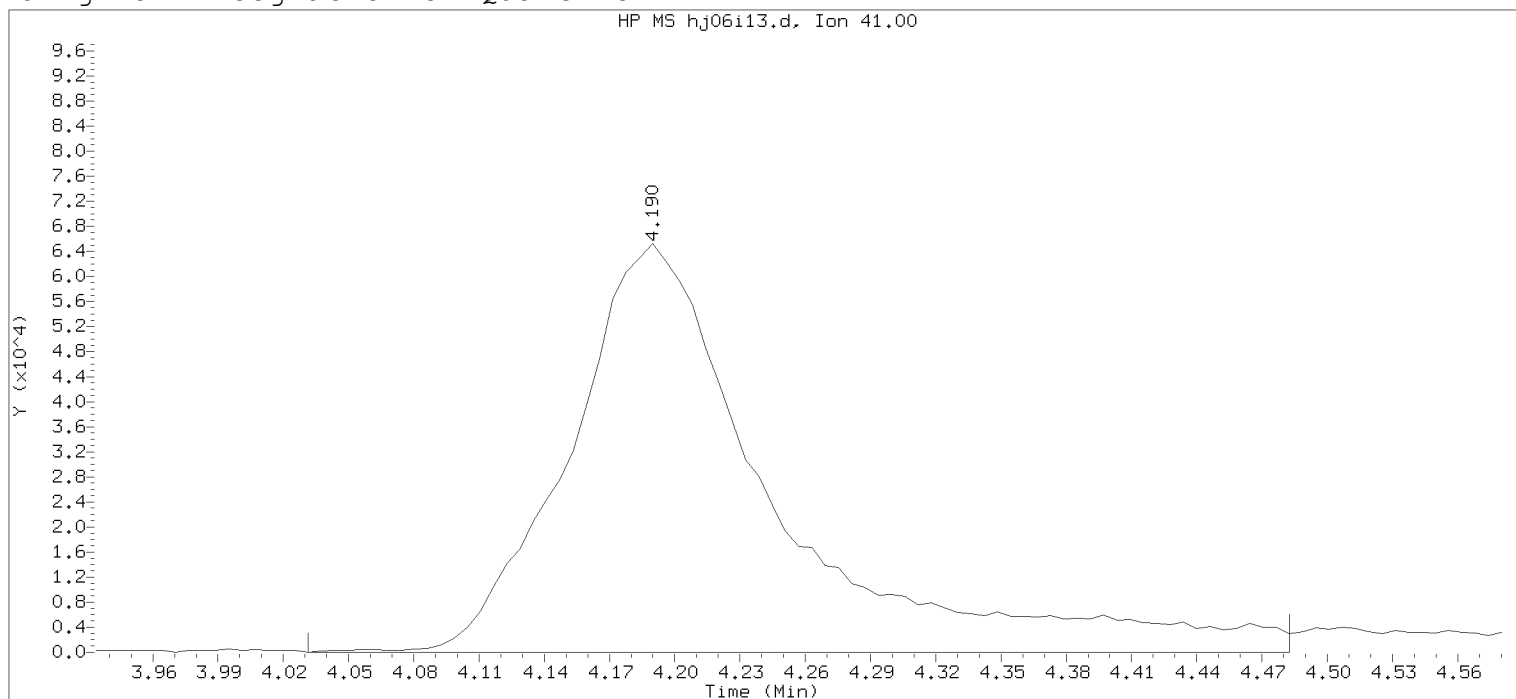
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

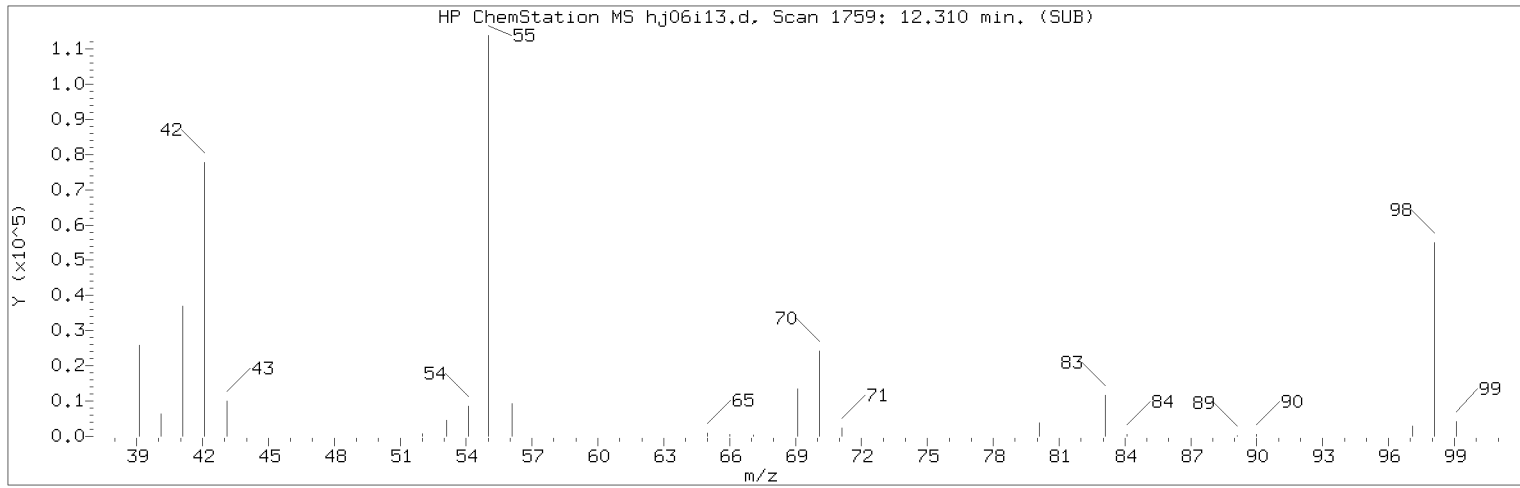
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD005

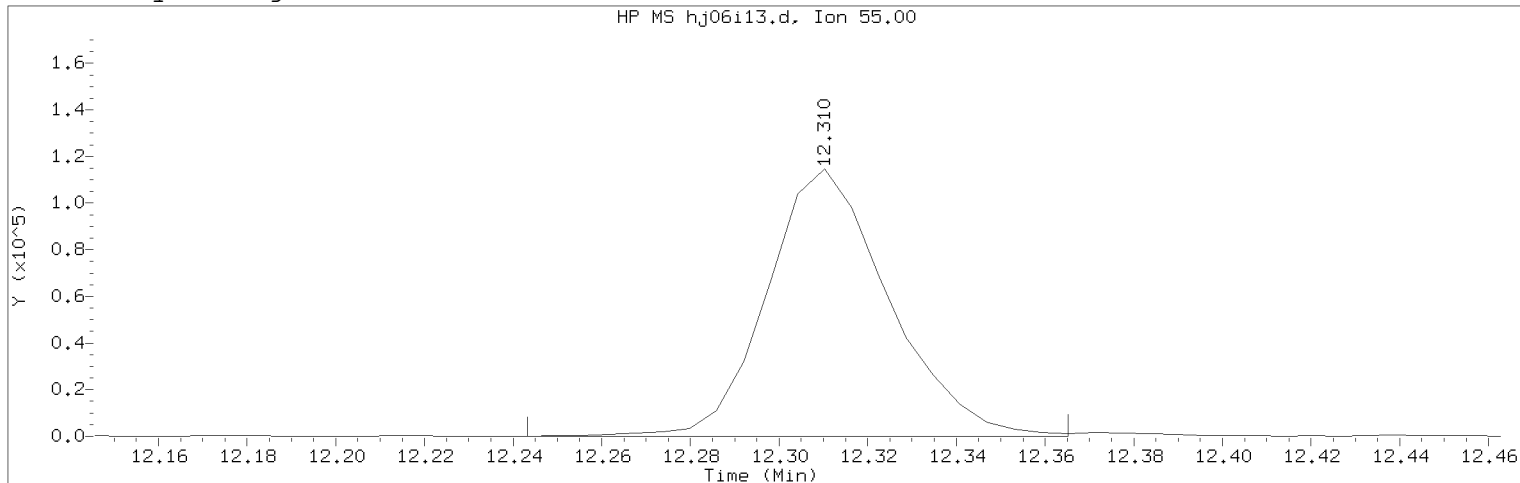
Lab Sample ID: VSTD005

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 427	
Retention Time (minutes)	: 4.190	
Quant Ion	: 41.00	
Area	: 425452	
On-column Amount (ng)	: 186.4808	
Integration start scan	: 400	Integration stop scan: 474
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

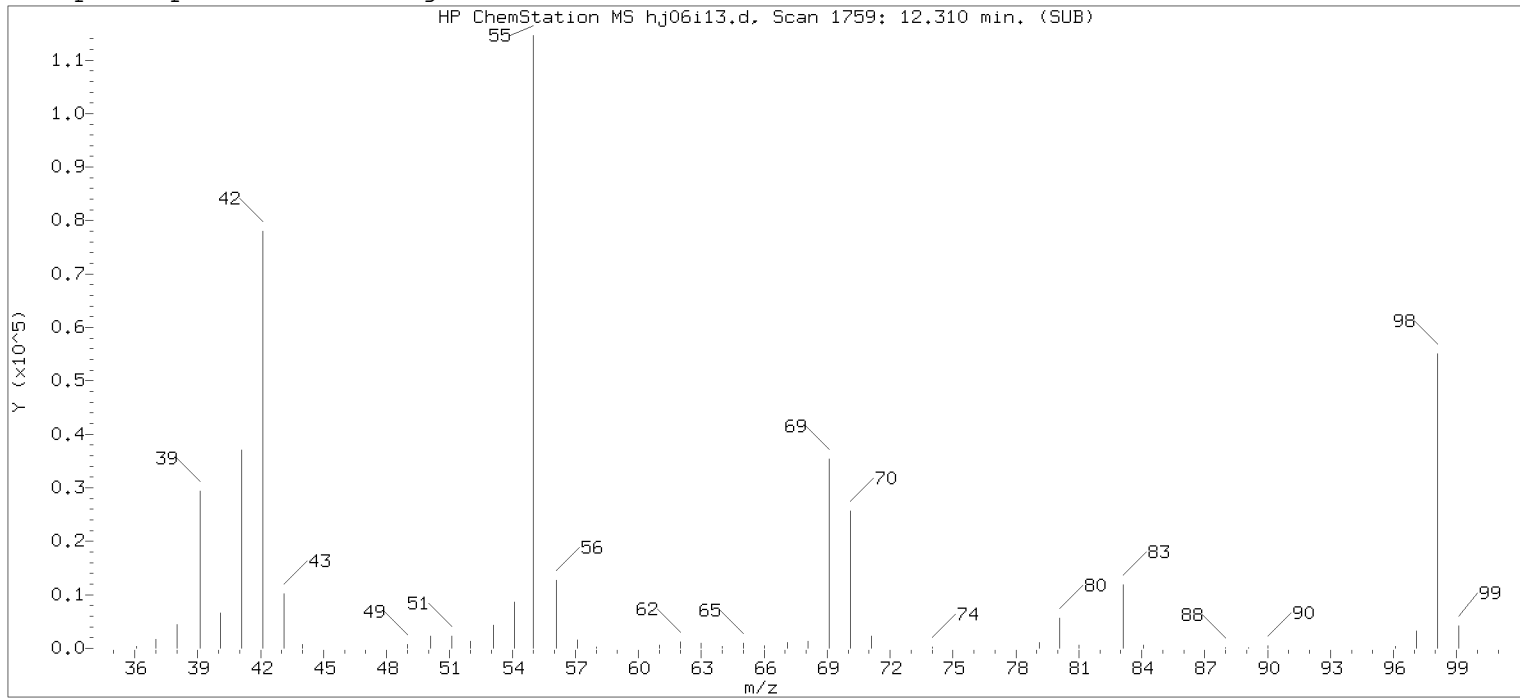
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 218604M
On-Column Amount (ng) : 287.7325
Integration start scan : 1747 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

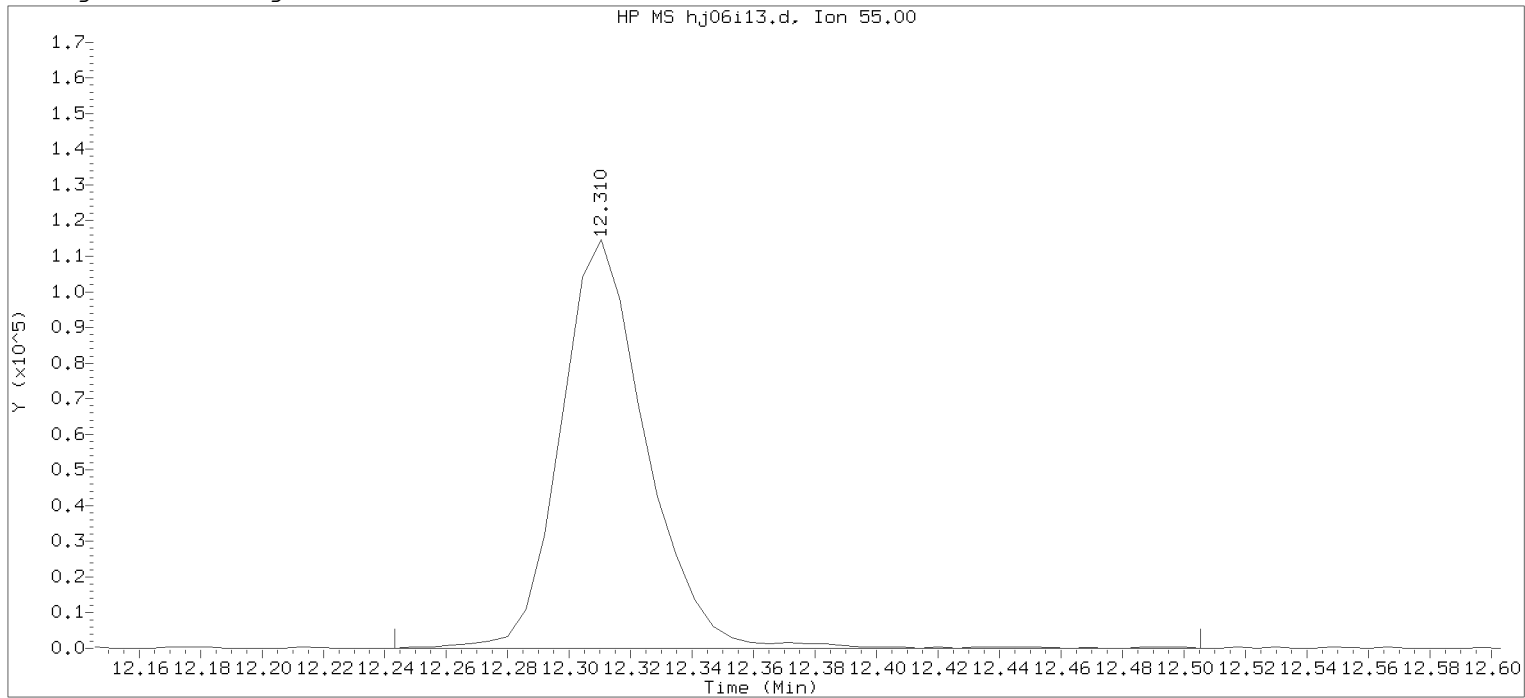
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:02

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

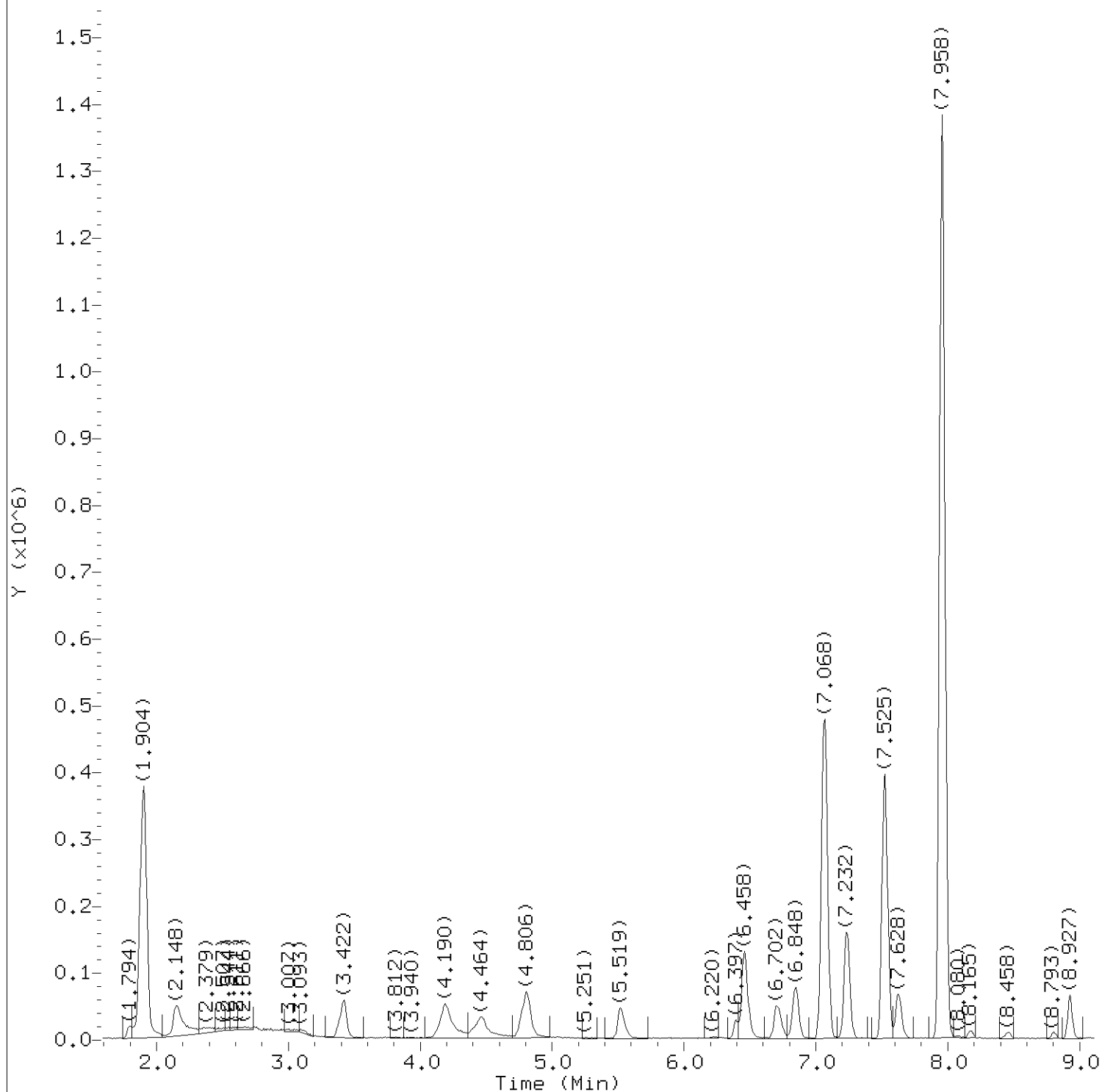
Calibration date and time: 06-JAN-2020 12:55

Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 221925	
On-column Amount (ng)	: 268.4080	
Integration start scan	: 1747	Integration stop scan: 1790
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d
Injection date and time: 06-JAN-2020 12:24

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

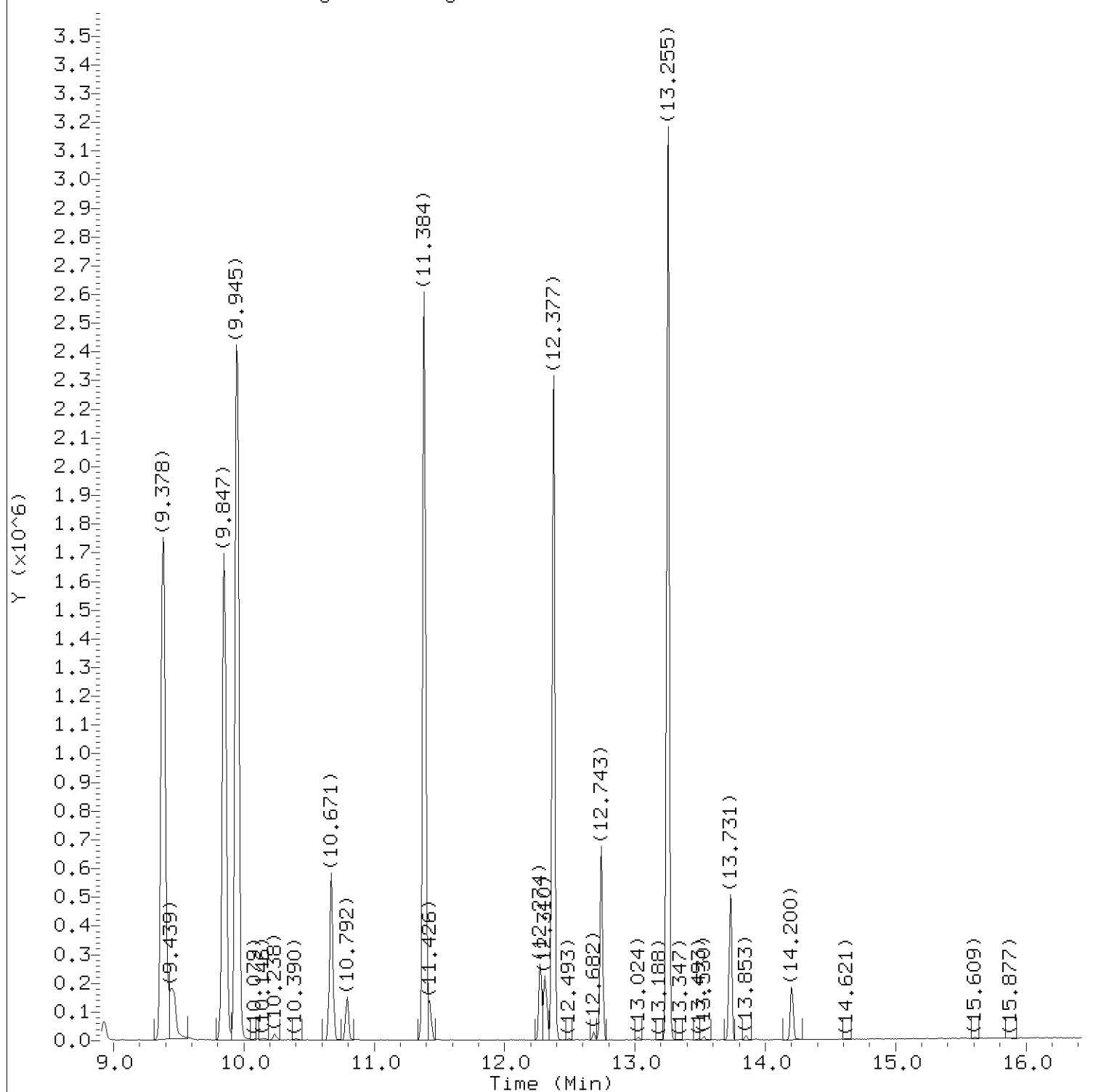
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d
Injection date and time: 06-JAN-2020 12:24

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:24

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	136325M	2.195
25) Acetonitrile	(1)	4.190	41	225320M	87.691
26)*t-Butyl Alcohol-d10	(1)	4.458	65	119527	50.000
36) Vinyl Acetate	(2)	5.519	43	137908	2.011
43) Methyl Acrylate	(2)	6.458	55	247993	10.055
53) 1-Chlorobutane	(2)	7.232	56	204968	2.019
63)*Fluorobenzene	(2)	7.958	96	1969431	10.000
77) Chloroacetonitrile	(2)	9.439	75	144376	107.033
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	47253	2.012
97)*Chlorobenzene-d5	(3)	11.384	117	1478019	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	58478	3.743
112) Cyclohexanone	(1)	12.310	55	102791	122.395
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	799344	10.000

M = Compound was manually integrated.

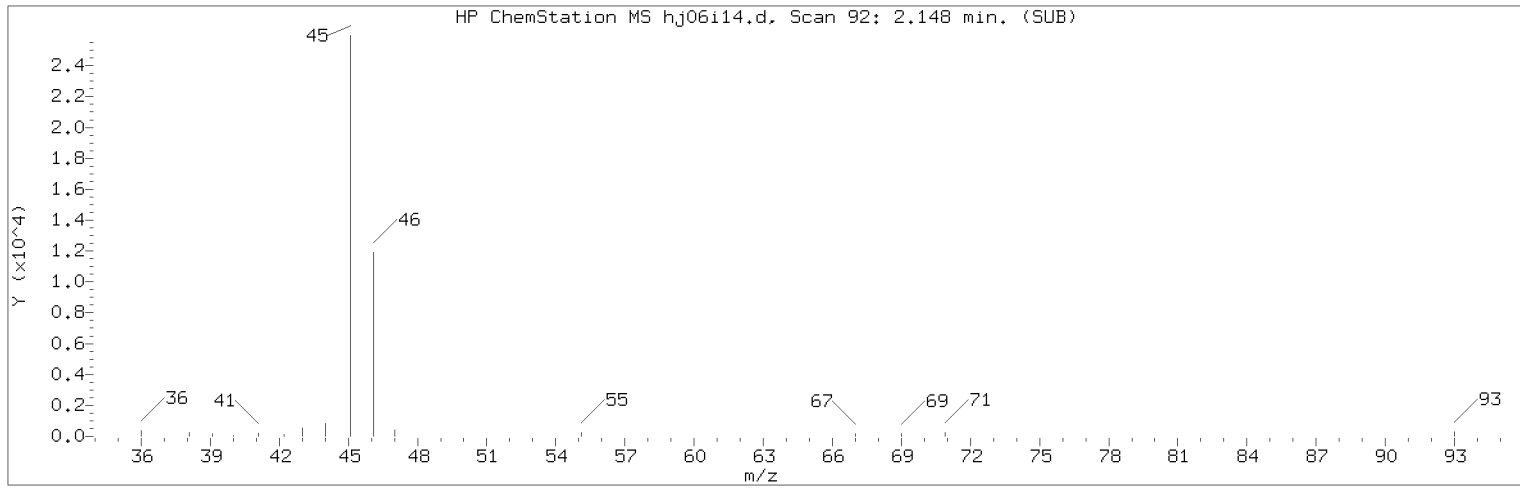
* = Compound is an internal standard.

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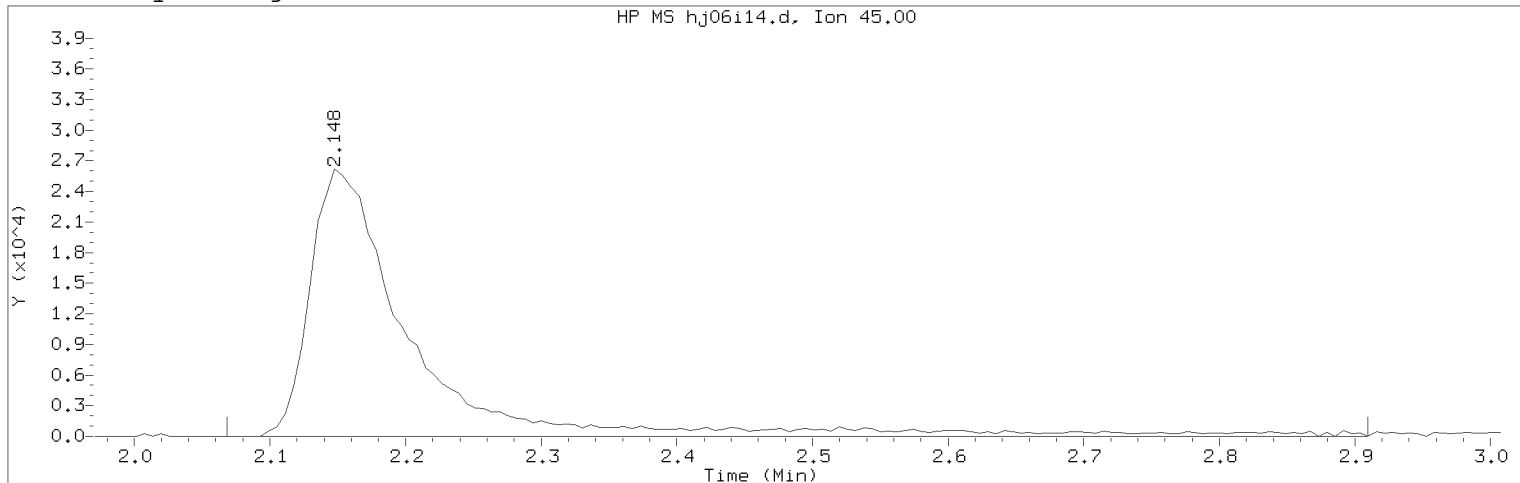
Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

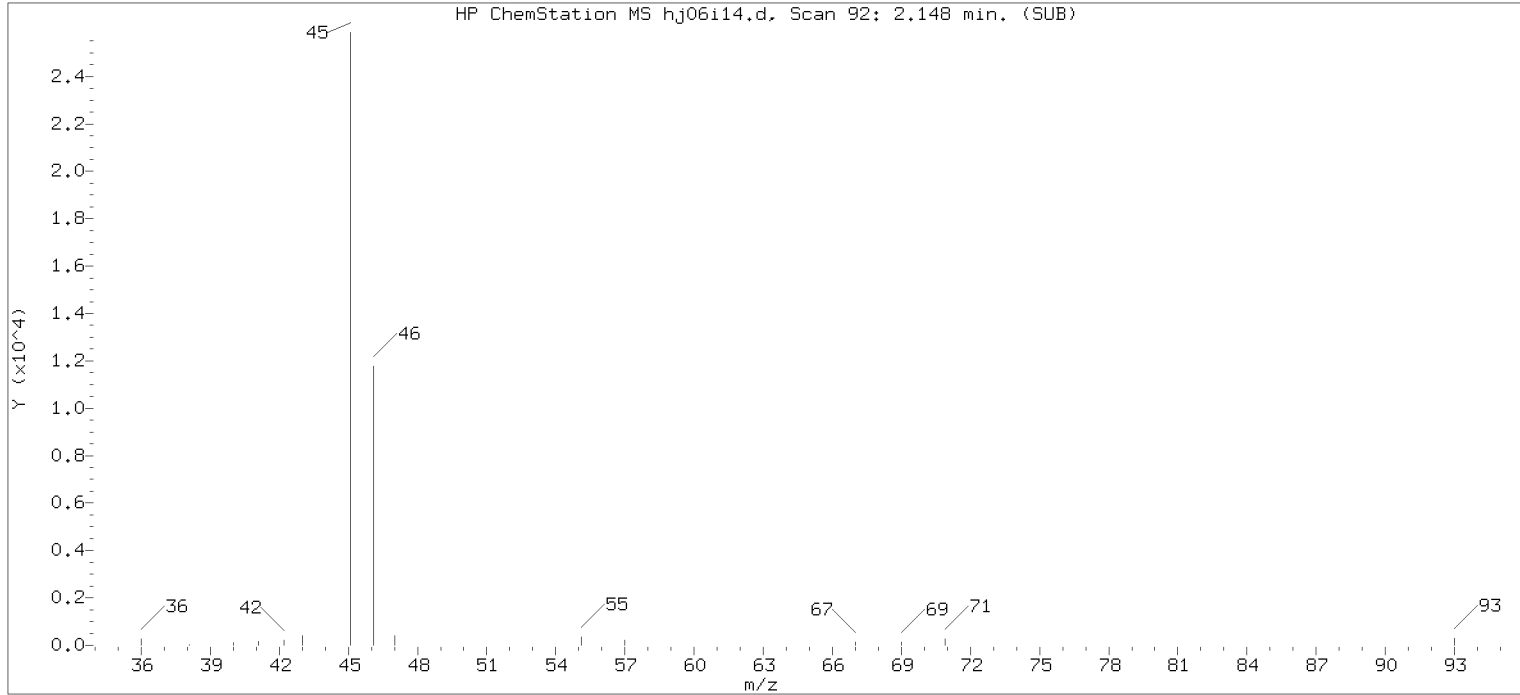
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 136325M
On-Column Amount (ng) : 2.1950
Integration start scan : 78 Integration stop scan: 216
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

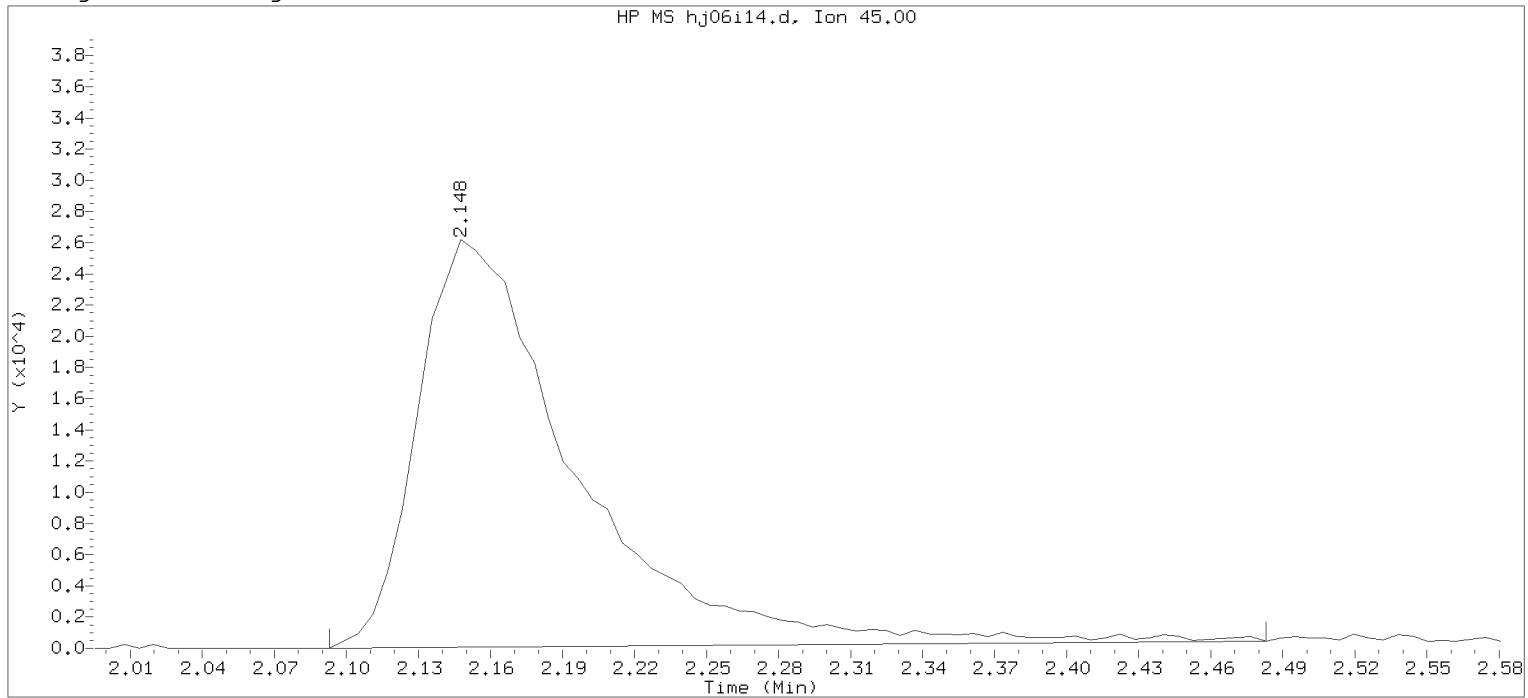
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

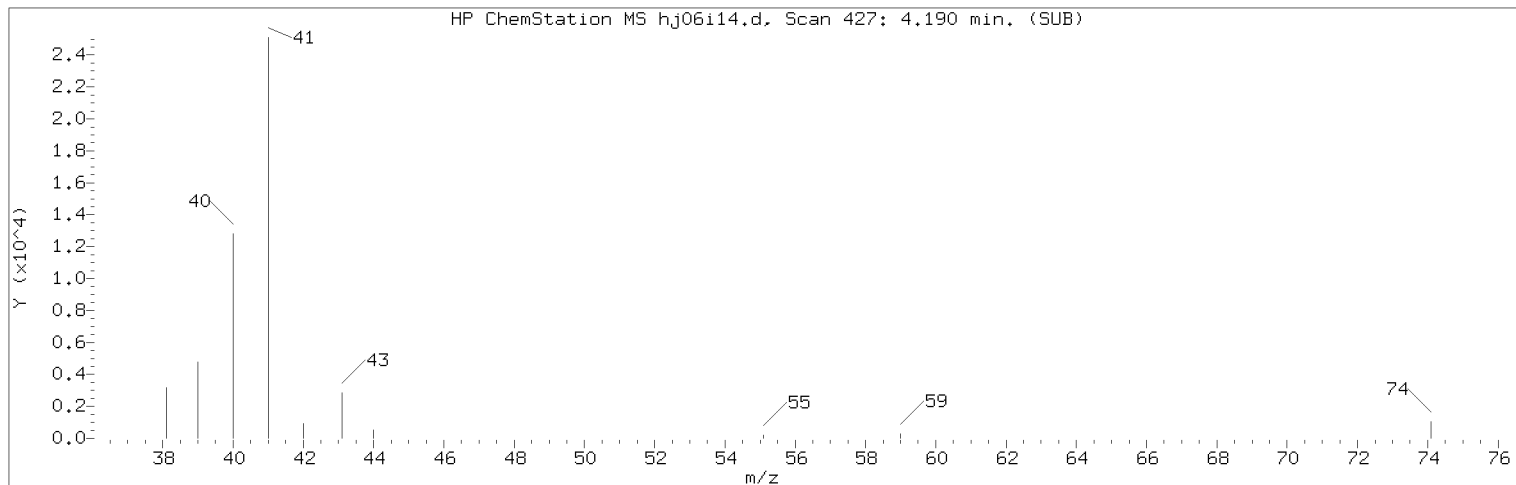
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD002

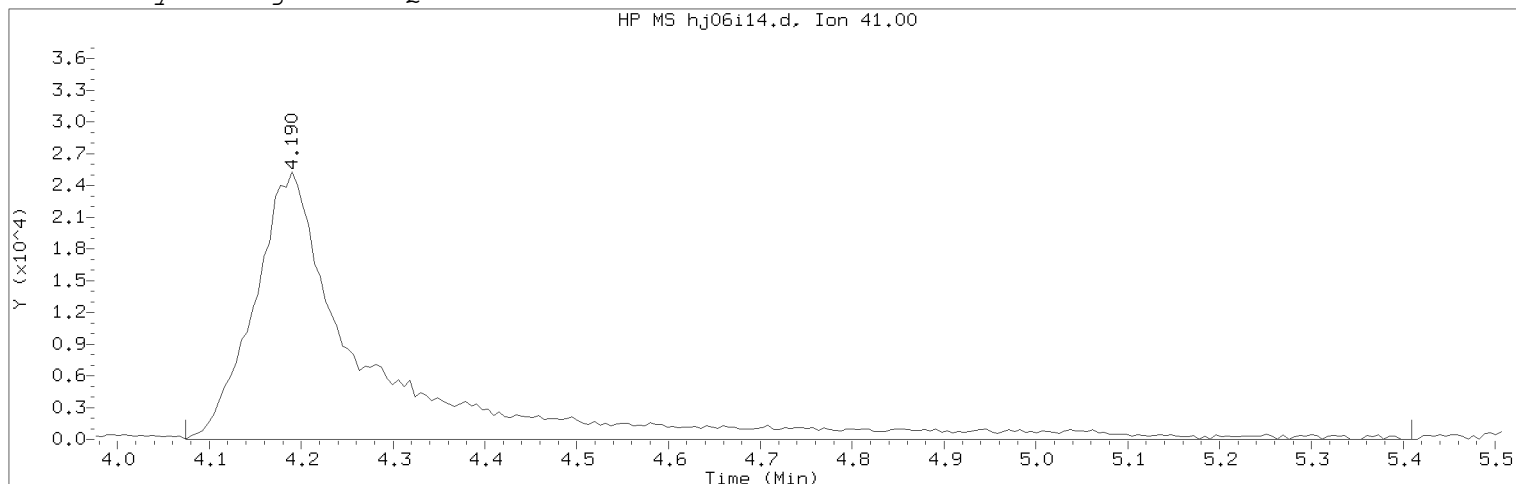
Lab Sample ID: VSTD002

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 120324	
On-column Amount (ng)	: 2.0771	
Integration start scan	: 82	Integration stop scan: 146
Y at integration start	: 0	Y at integration end: 455

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

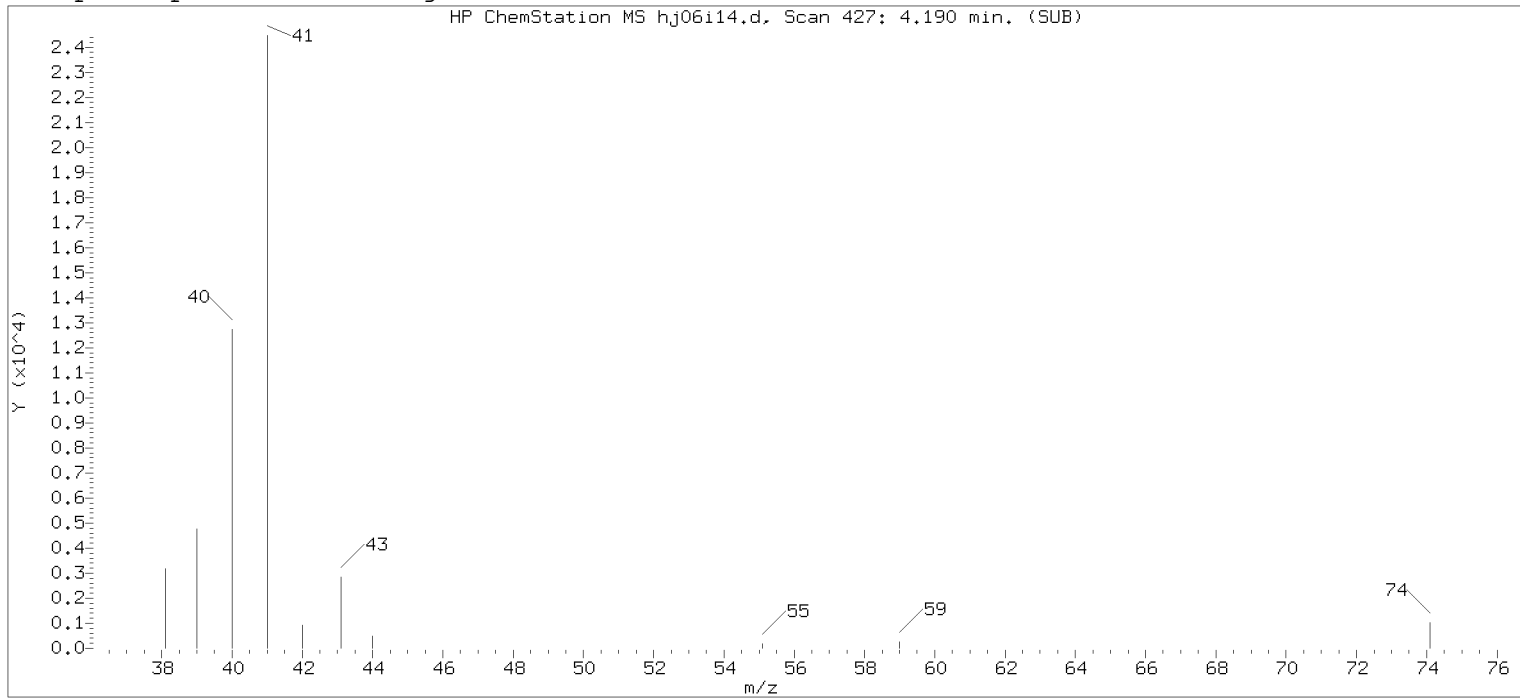
Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 427	
Retention Time (minutes)	: 4.190	
Quant Ion	: 41.00	
Area (flag)	: 225320M	
On-Column Amount (ng)	: 87.6913	
Integration start scan	: 407	Integration stop scan: 626
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

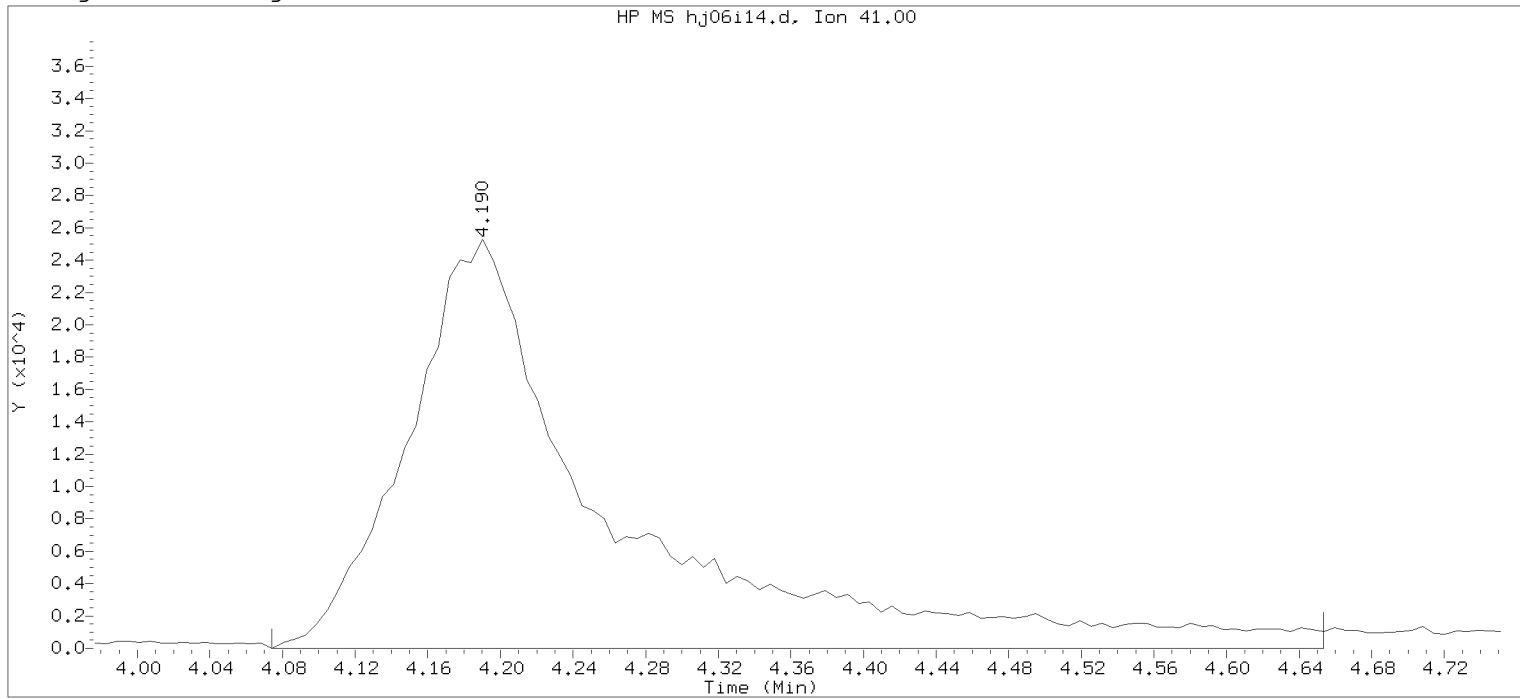
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



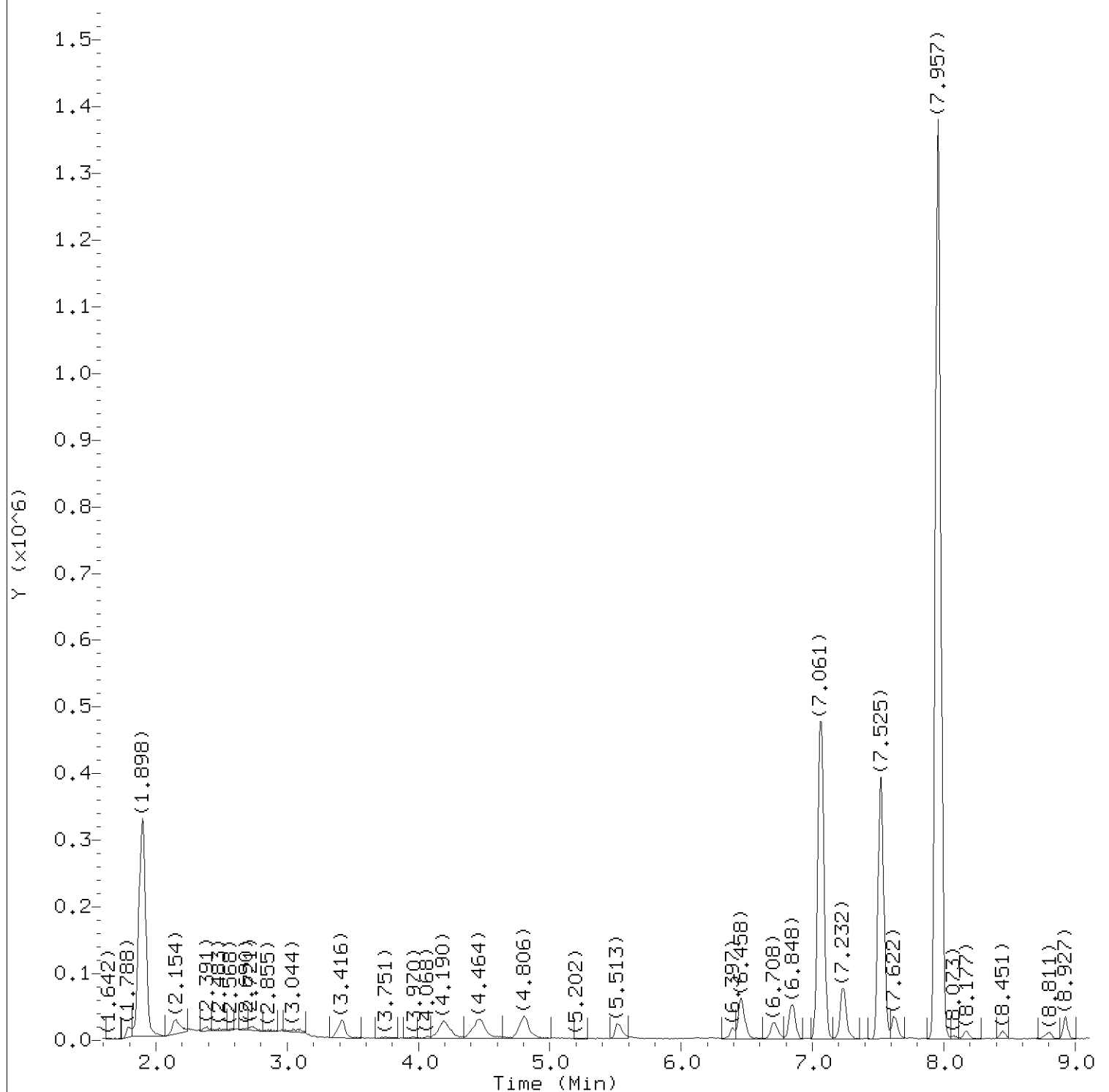
Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 427	
Retention Time (minutes)	: 4.190	
Quant Ion	: 41.00	
Area	: 197784	
On-column Amount (ng)	: 84.7521	
Integration start scan	: 407	Integration stop scan: 502
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d
Injection date and time: 06-JAN-2020 12:46

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

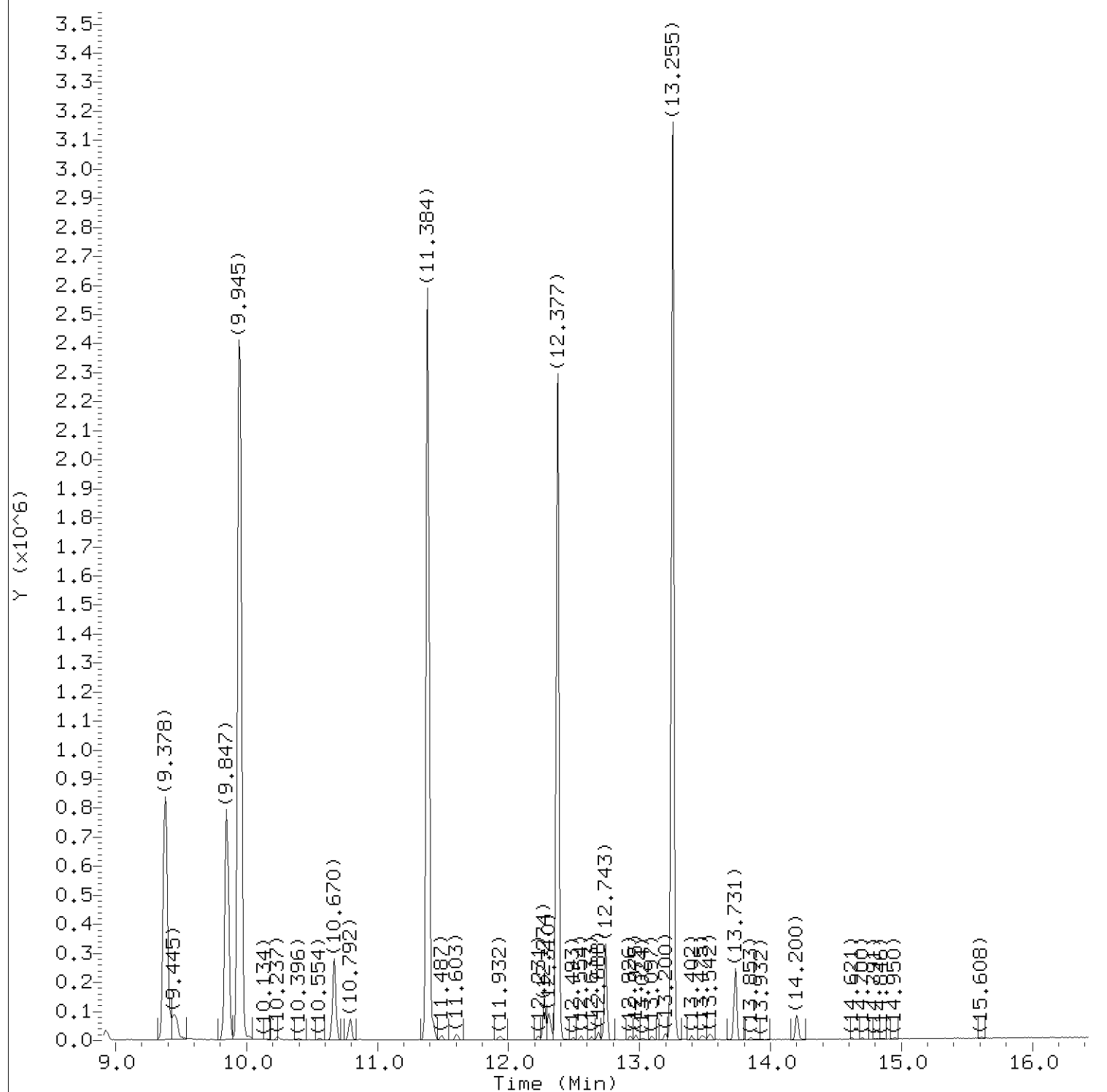
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d
Injection date and time: 06-JAN-2020 12:46

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	65177M	1.042
25) Acetonitrile	(1)	4.196	41	112928M	44.327
26)*t-Butyl Alcohol-d10	(1)	4.470	65	115307M	50.000
36) Vinyl Acetate	(2)	5.513	43	68630	1.003
43) Methyl Acrylate	(2)	6.458	55	118440	4.853
53) 1-Chlorobutane	(2)	7.232	56	99808	0.989
63)*Fluorobenzene	(2)	7.957	96	1963066	10.000
77) Chloroacetonitrile	(2)	9.439	75	65666	49.067
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	22535	0.970
97)*Chlorobenzene-d5	(3)	11.384	117	1468428	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	27547	1.860
112) Cyclohexanone	(1)	12.310	55	43720M	53.121
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	795533	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

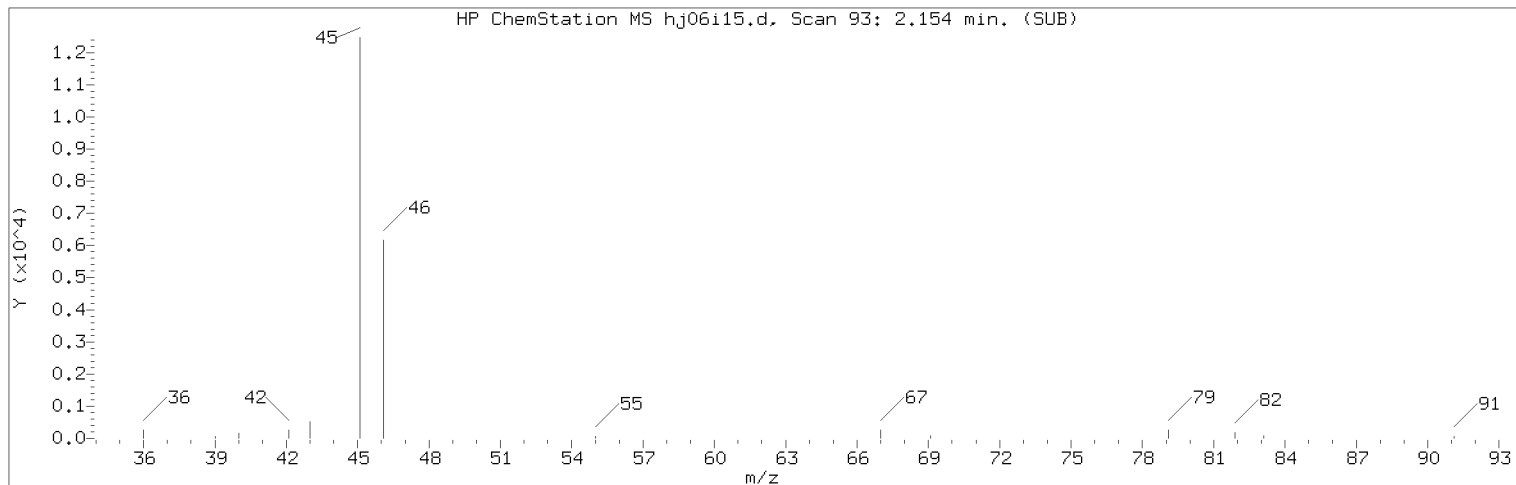
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

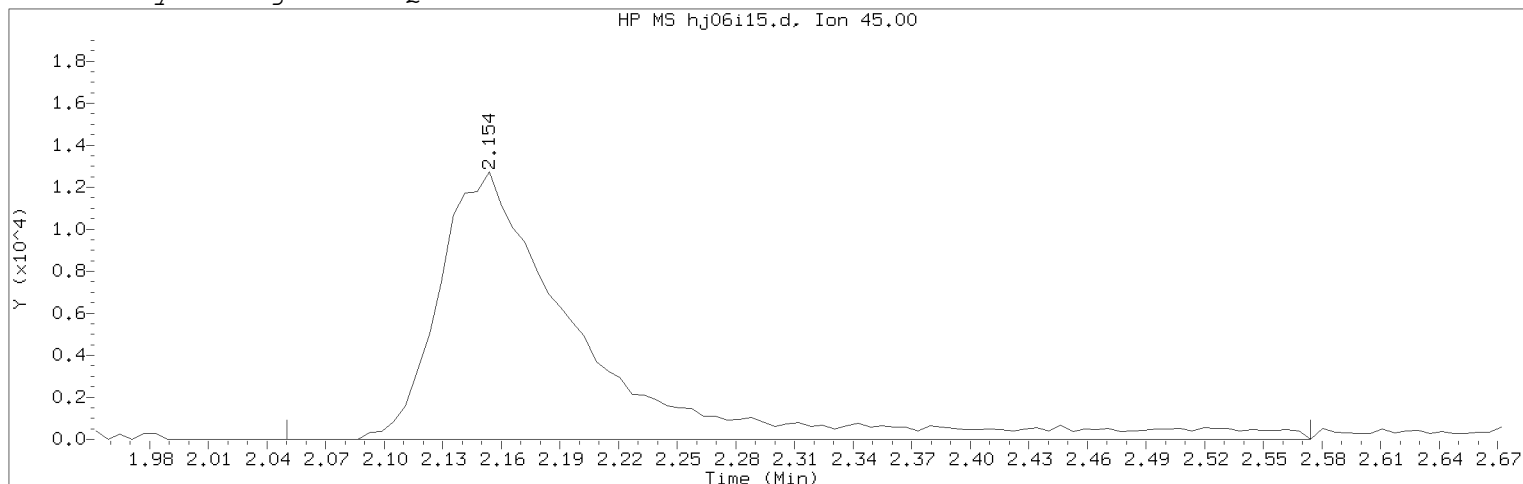
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area (flag)	: 65177M	
On-Column Amount (ng)	: 1.0418	
Integration start scan	: 75	Integration stop scan: 161
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

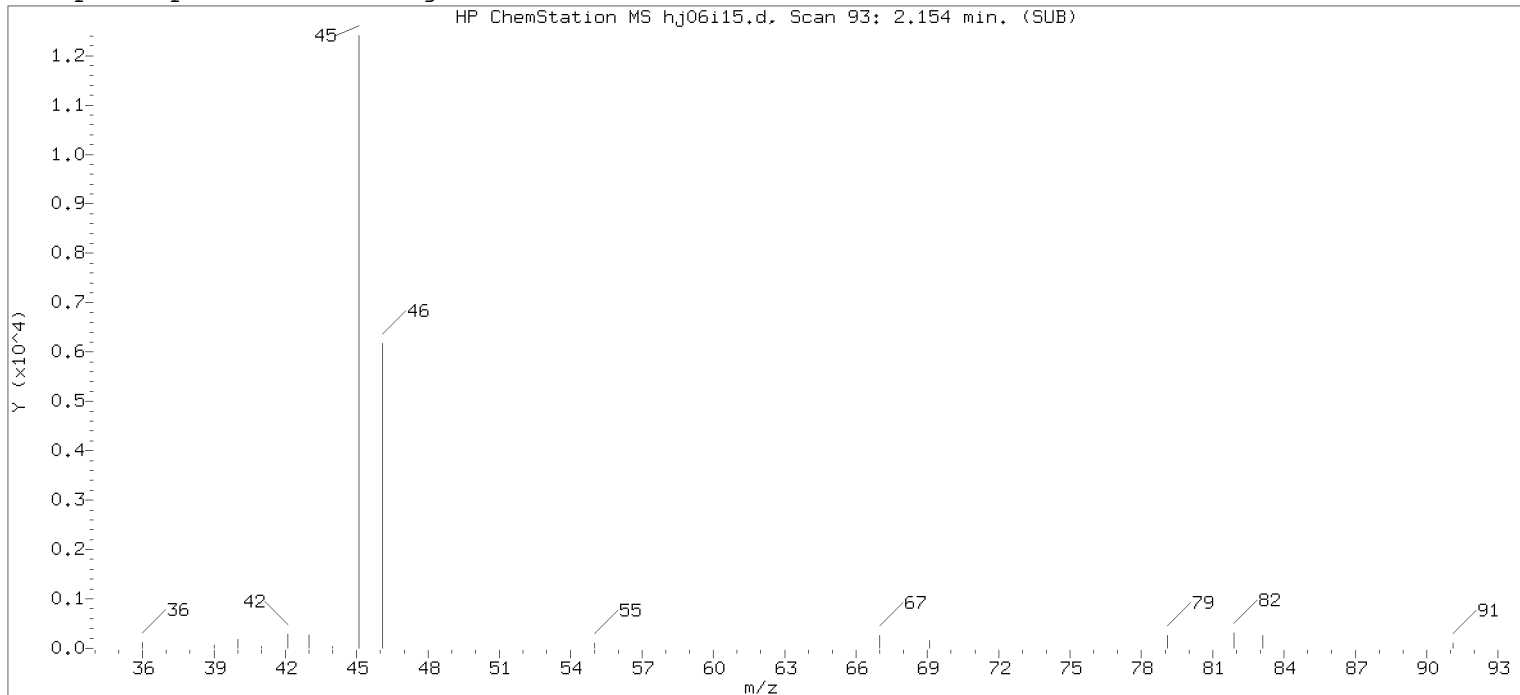
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

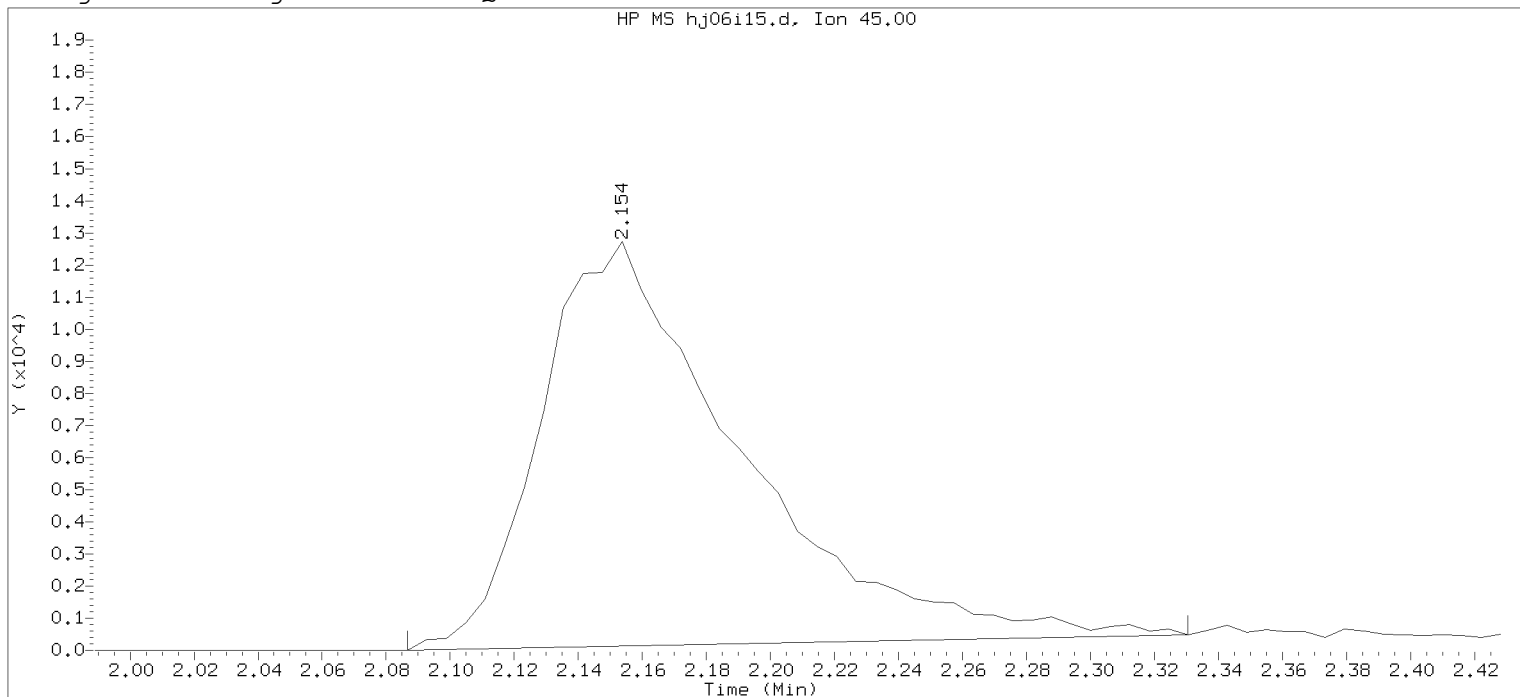
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

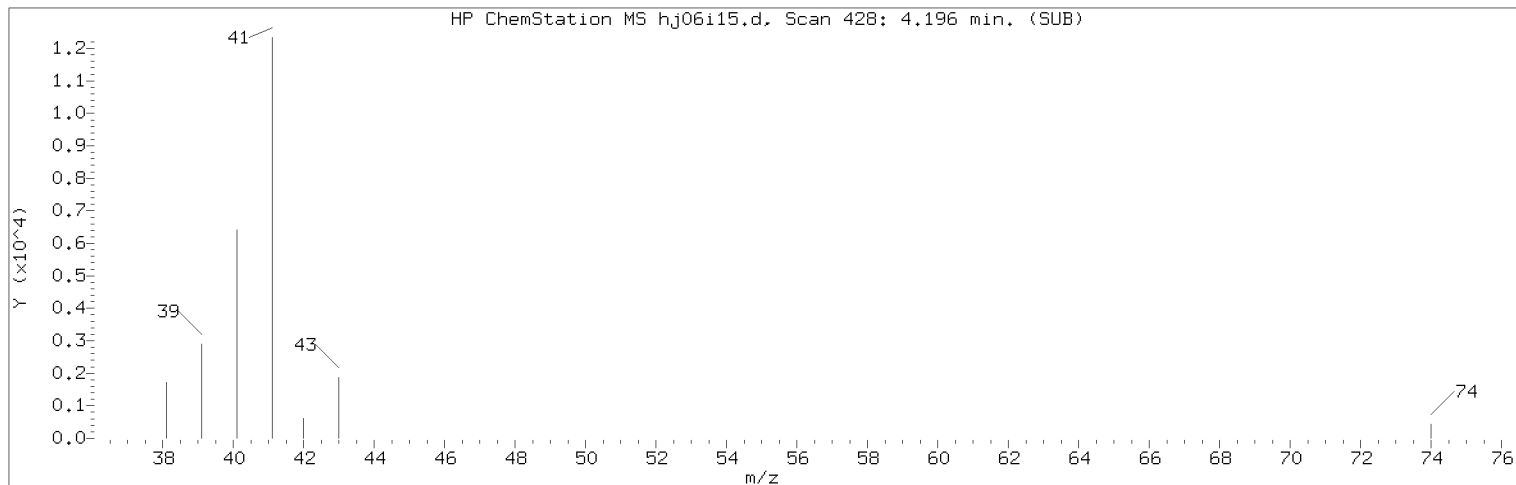
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:04
Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

Sample Name: VSTD001

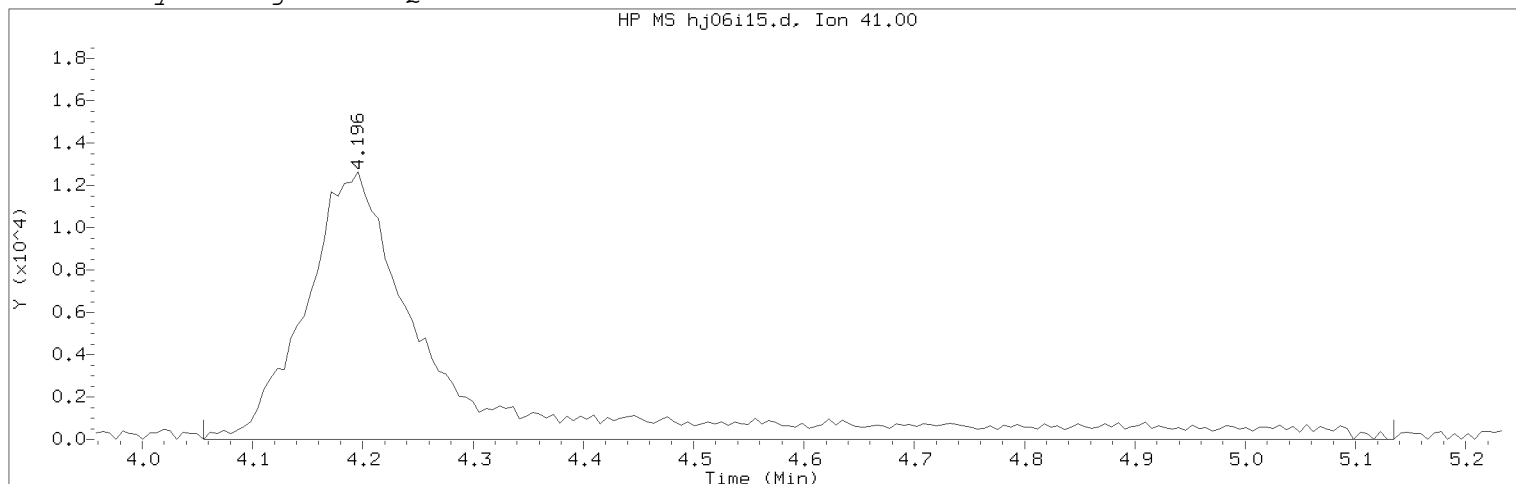
Lab Sample ID: VSTD001

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area	: 54478	
On-column Amount (ng)	: 0.9016	
Integration start scan	: 81	Integration stop scan: 121
Y at integration start	: 0	Y at integration end: 479

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

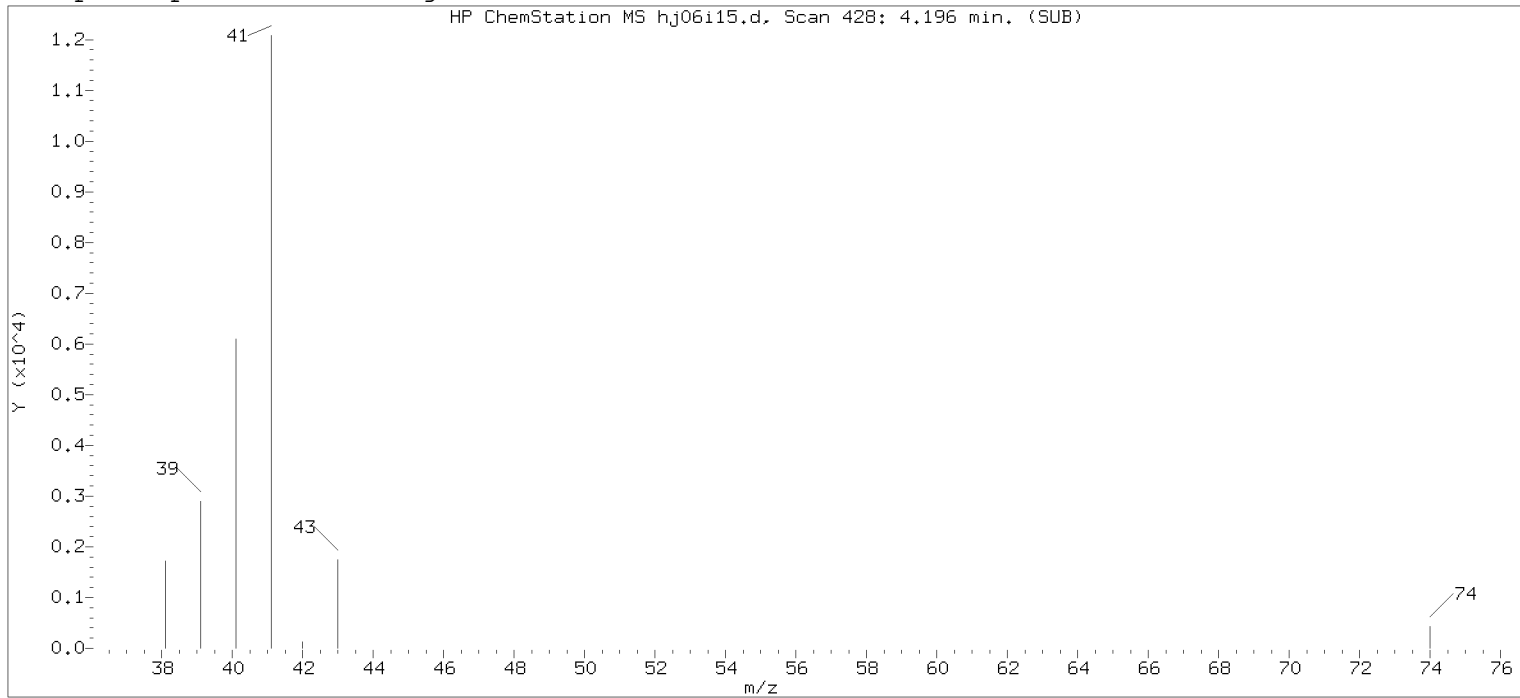
Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 428	
Retention Time (minutes)	: 4.196	
Quant Ion	: 41.00	
Area (flag)	: 112928M	
On-Column Amount (ng)	: 44.3265	
Integration start scan	: 404	Integration stop scan: 581
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

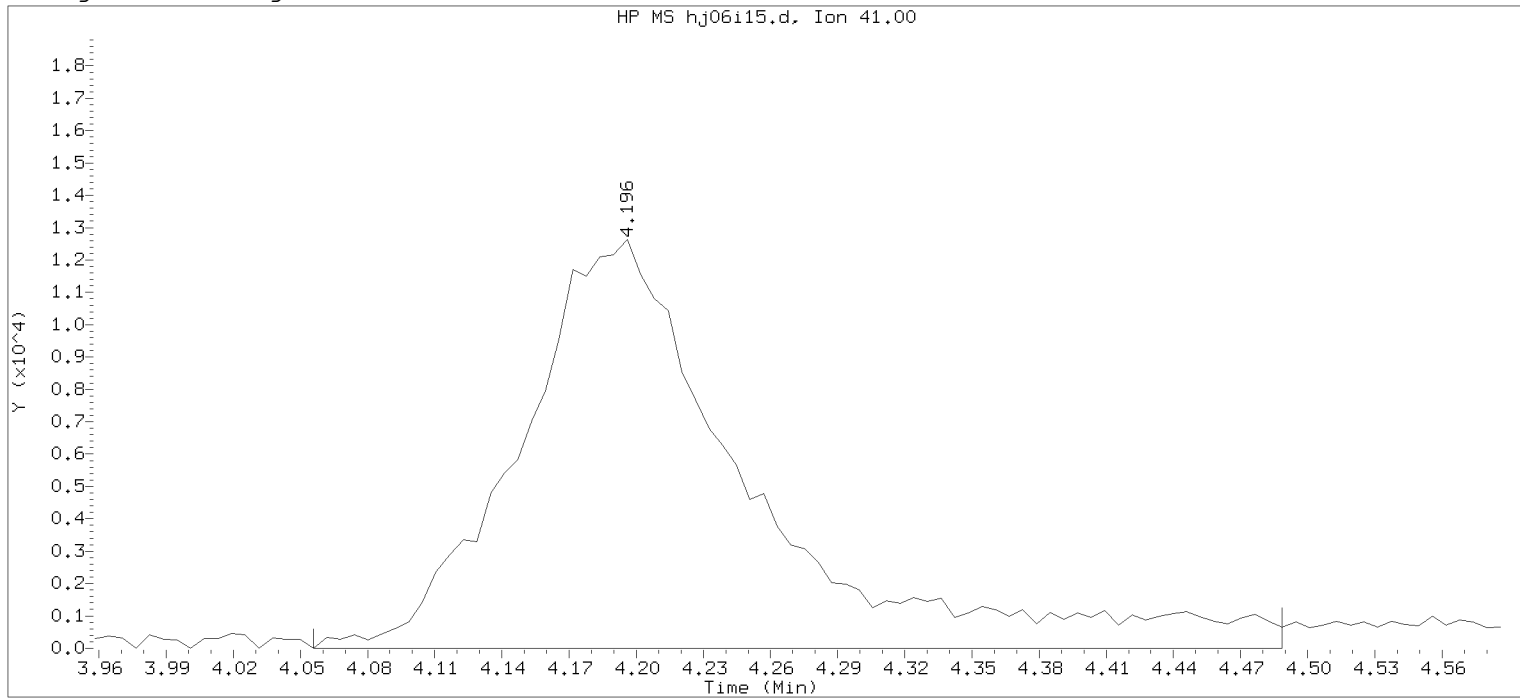
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:04

Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 25

Compound Name : Acetonitrile

Scan Number : 428

Retention Time (minutes): 4.196

Quant Ion : 41.00

Area : 89840

On-column Amount (ng) : 37.4705

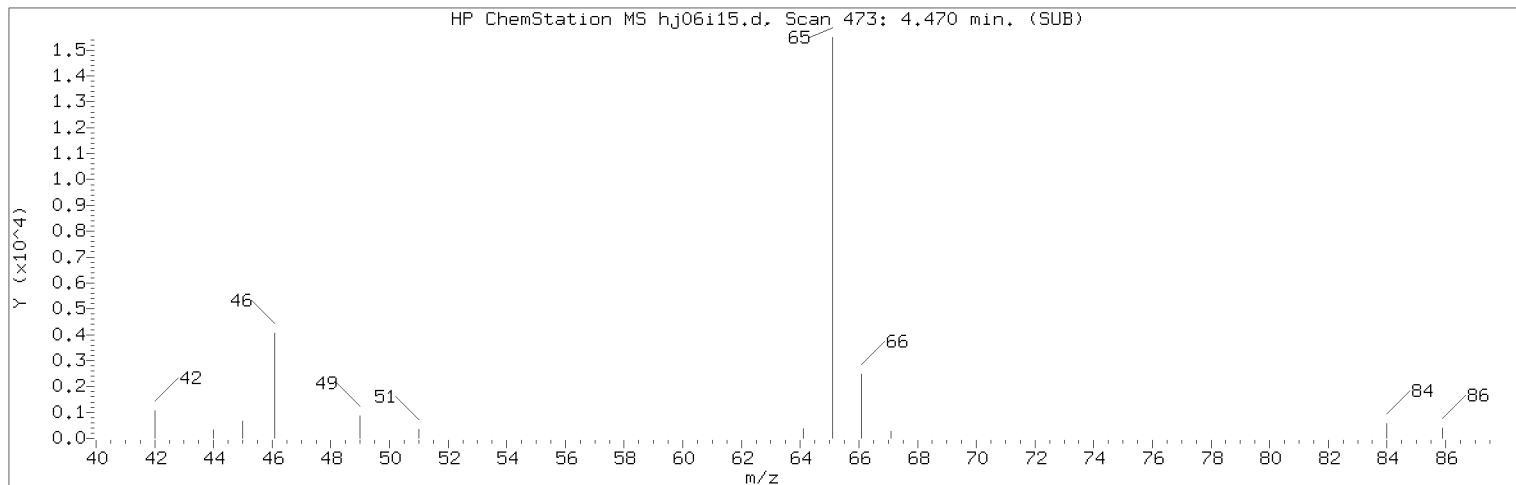
Integration start scan : 404 Integration stop scan: 475

Y at integration start : 0 Y at integration end: 0

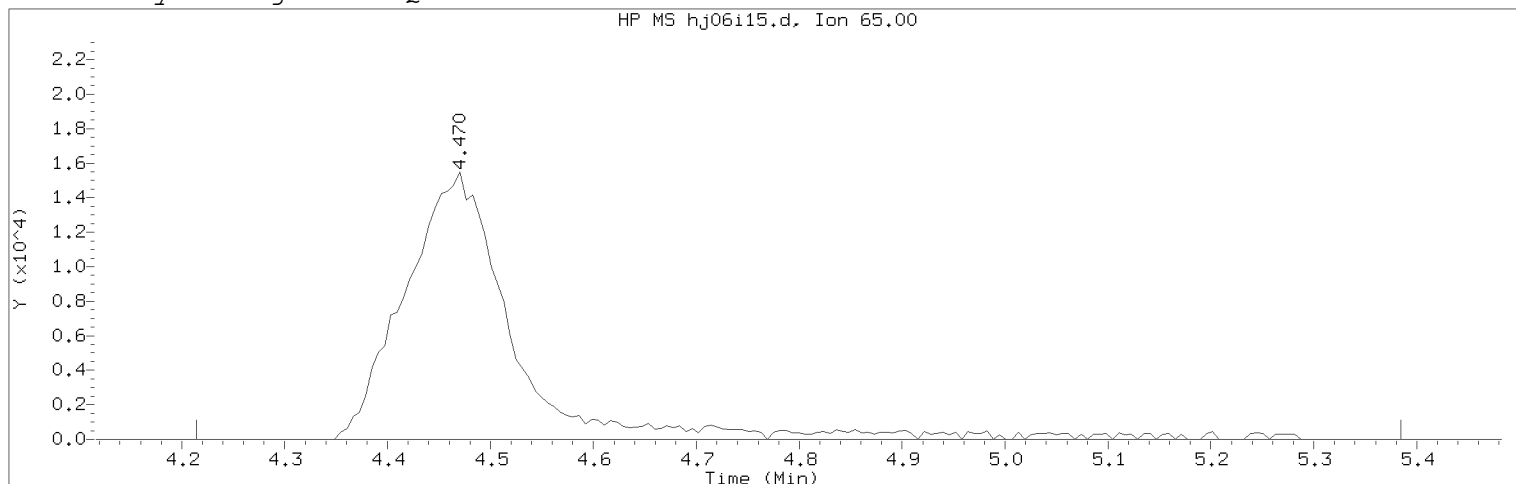
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RAE59 Page 948 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 26	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 473	
Retention Time (minutes)	: 4.470	
Quant Ion	: 65.00	
Area (flag)	: 115307M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 430	Integration stop scan: 622
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

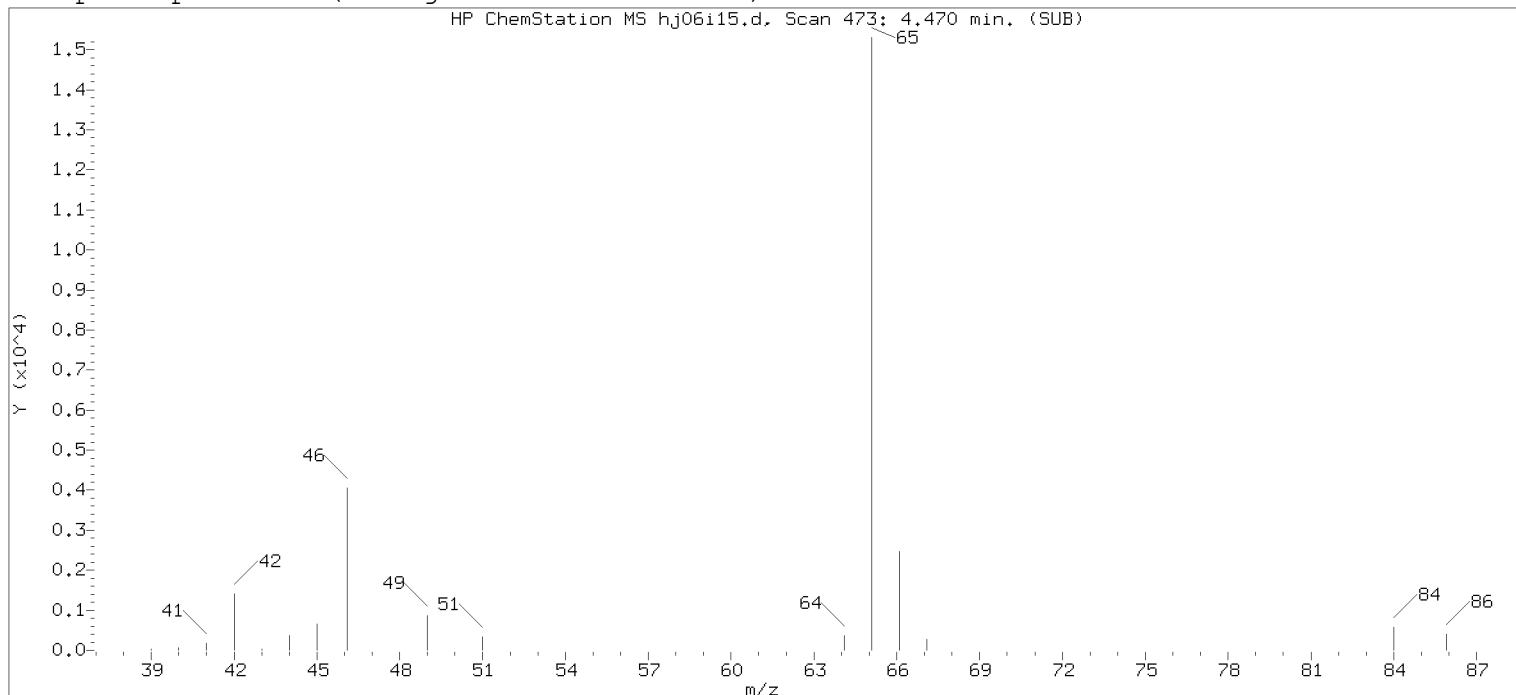
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

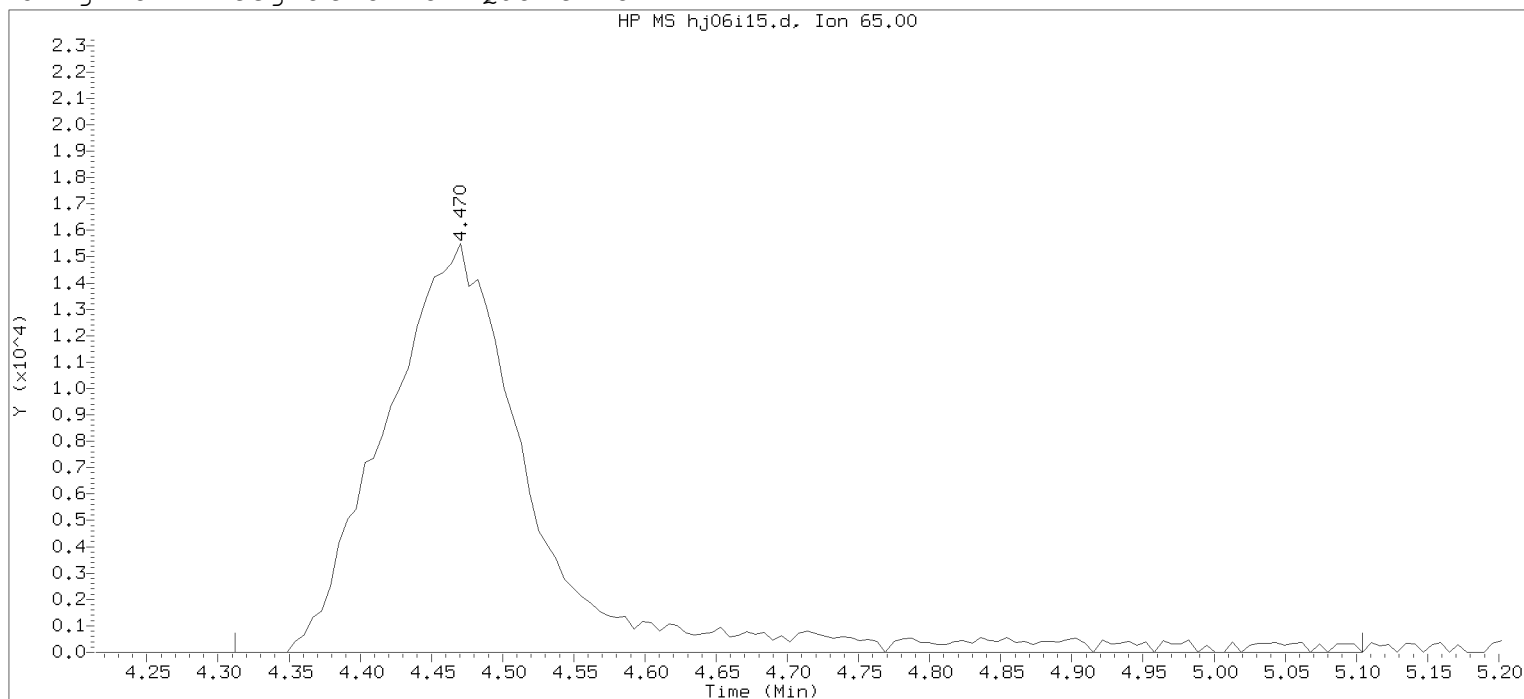
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:04

Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 26

Compound Name : t-Butyl Alcohol-d10

Scan Number : 473

Retention Time (minutes): 4.470

Quant Ion : 65.00

Area : 113296

On-column Amount (ng) : 50.0000

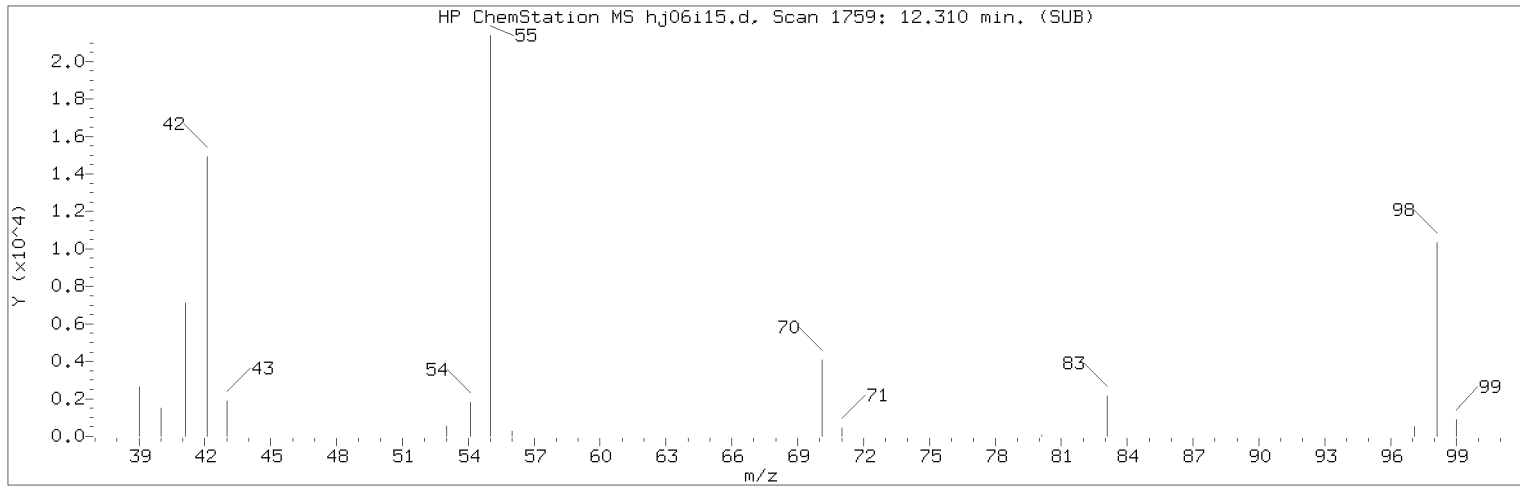
Integration start scan : 446 Integration stop scan: 576

Y at integration start : 0 Y at integration end: 0

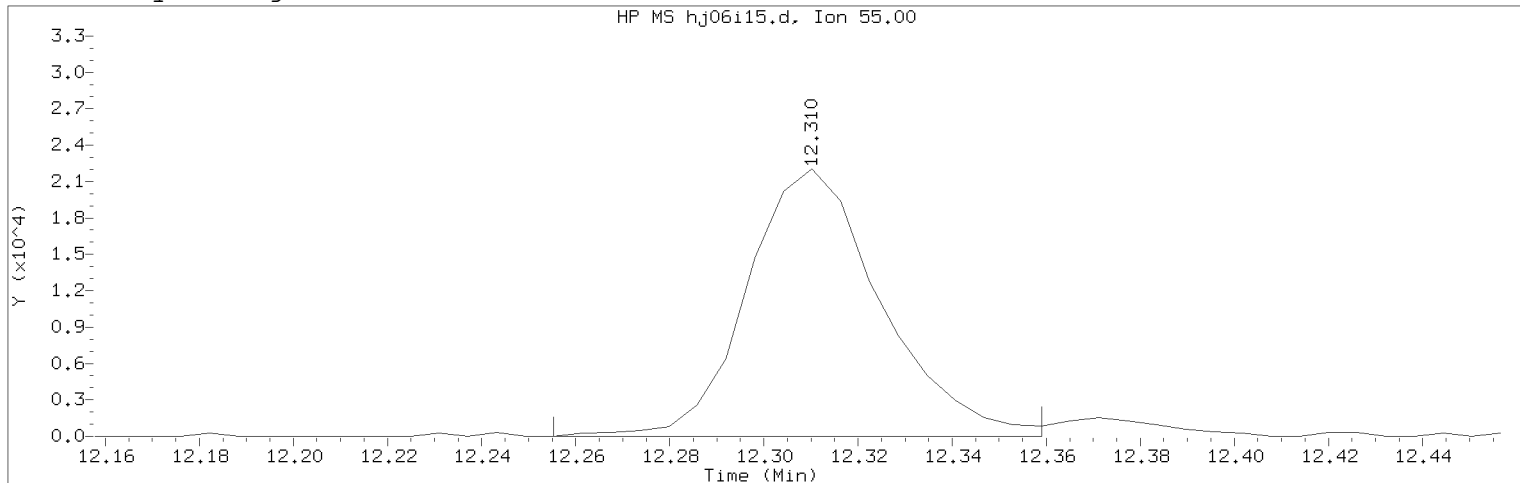
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RAE59 Page 850 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

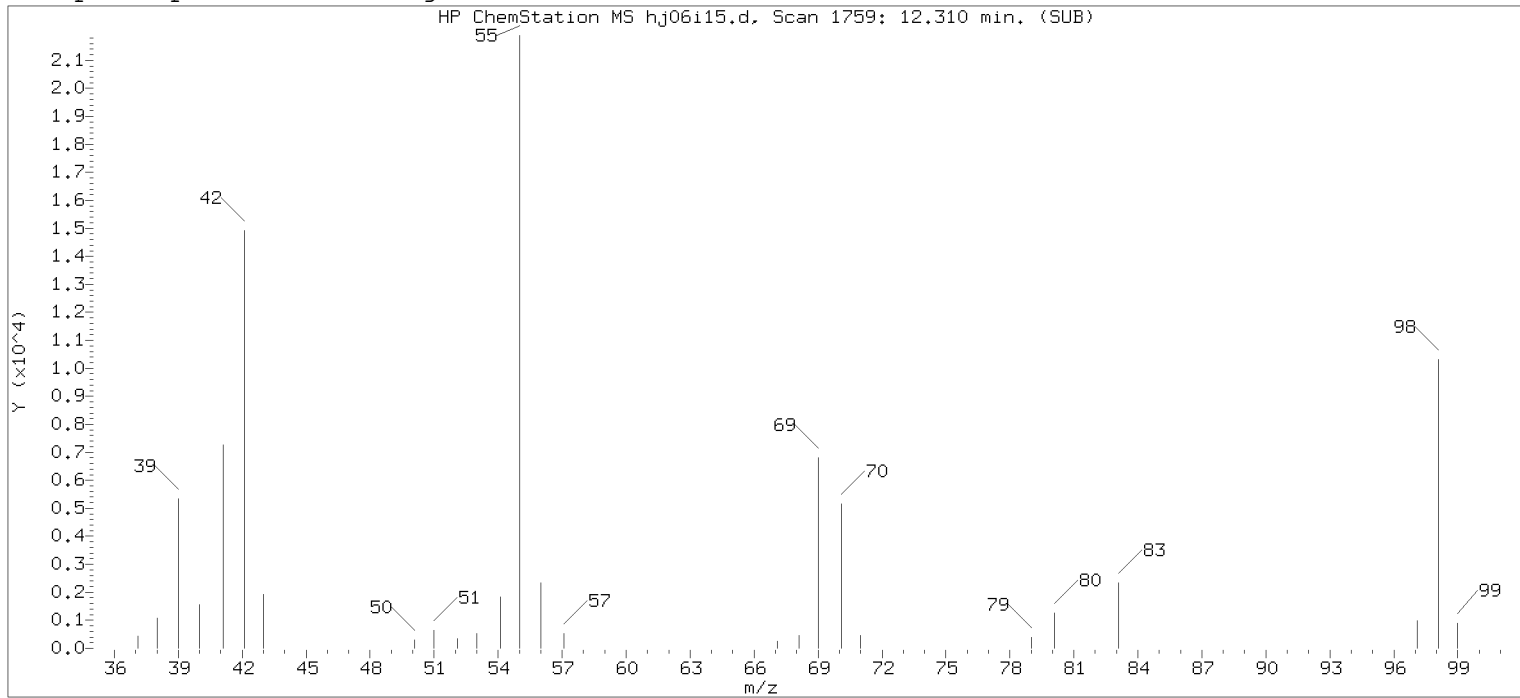
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 43720M
On-Column Amount (ng) : 53.1214
Integration start scan : 1749 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

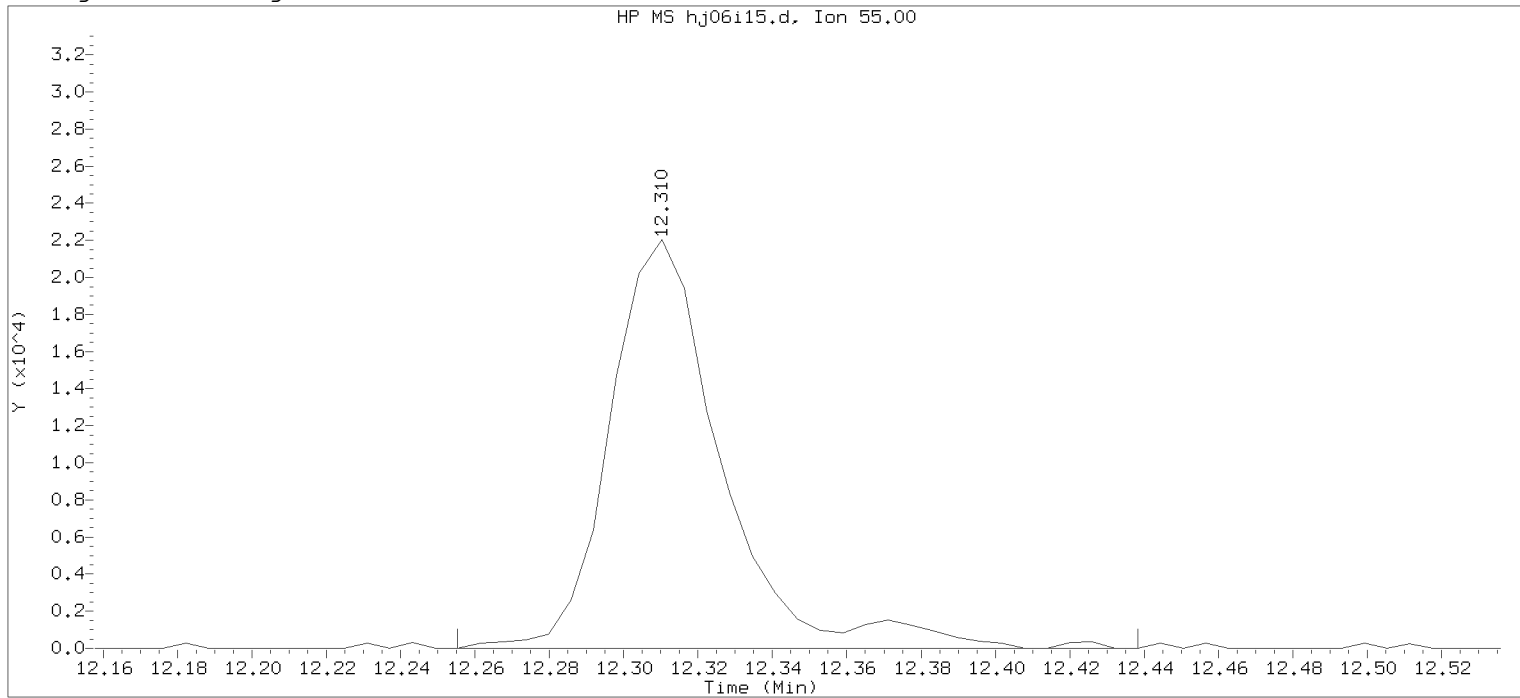
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:04

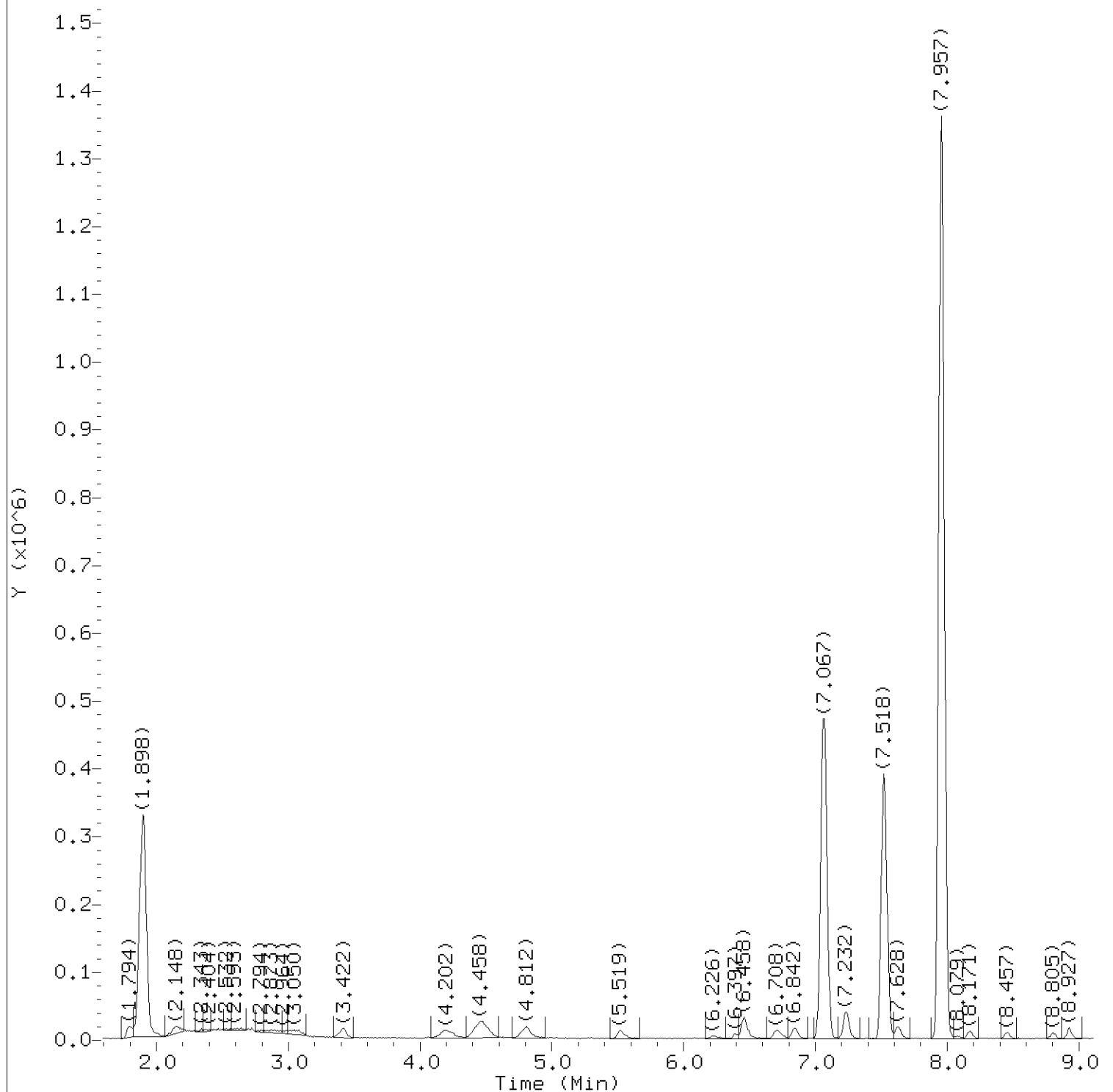
Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 1759
 Retention Time (minutes): 12.310
 Quant Ion : 55.00
 Area : 46239
 On-column Amount (ng) : 56.2664
 Integration start scan : 1749
 Y at integration start : 0

Integration stop scan: 1779
 Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d
Injection date and time: 06-JAN-2020 13:07

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

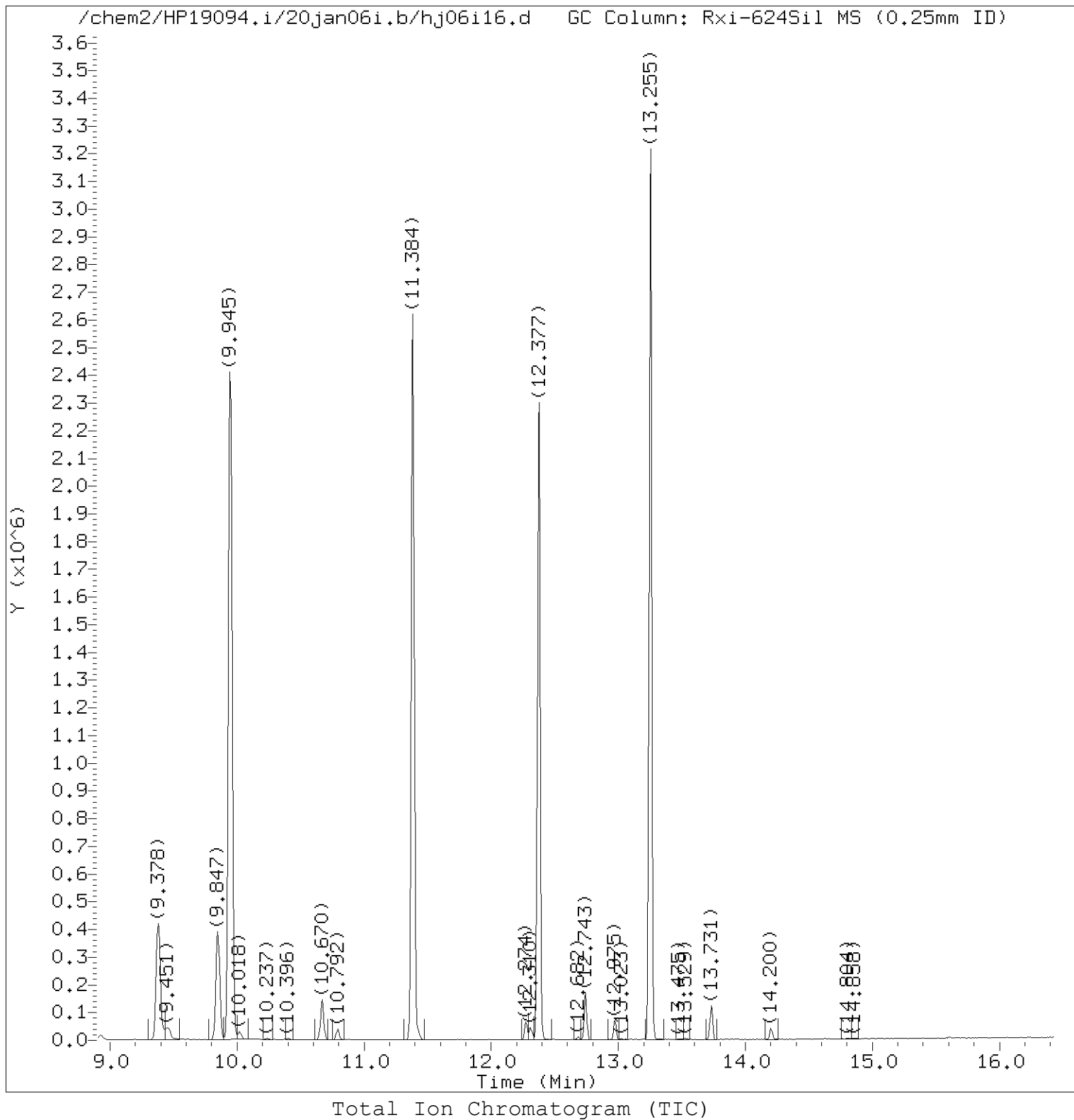
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d
Injection date and time: 06-JAN-2020 13:07

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	33159M	0.526
25) Acetonitrile	(1)	4.202	41	63960M	24.474
26)*t-Butyl Alcohol-d10	(1)	4.464	65	112993	50.000
36) Vinyl Acetate	(2)	5.513	43	37205	0.537
43) Methyl Acrylate	(2)	6.458	55	60411	2.485
53) 1-Chlorobutane	(2)	7.232	56	50335	0.500
63)*Fluorobenzene	(2)	7.957	96	1958073	10.000
77) Chloroacetonitrile	(2)	9.439	75	31737M	23.971
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	11634	0.502
97)*Chlorobenzene-d5	(3)	11.384	117	1468028	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	13624	0.948
112) Cyclohexanone	(1)	12.310	55	20534M	25.383
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	798270	10.000

M = Compound was manually integrated.

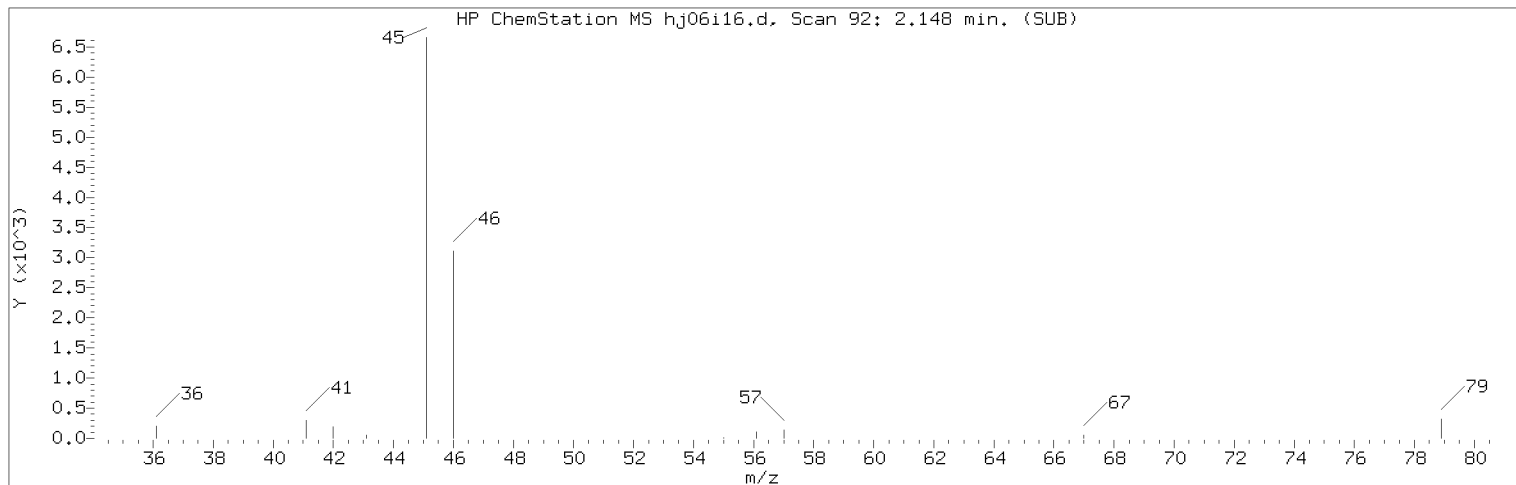
* = Compound is an internal standard.

page 1 of 1

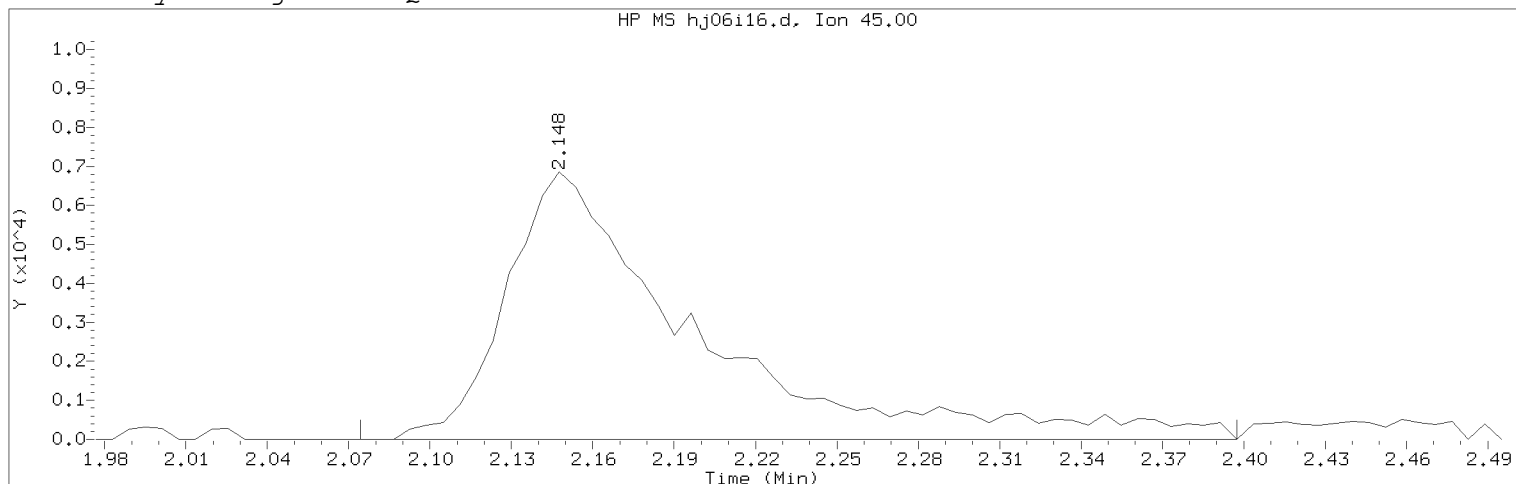
Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

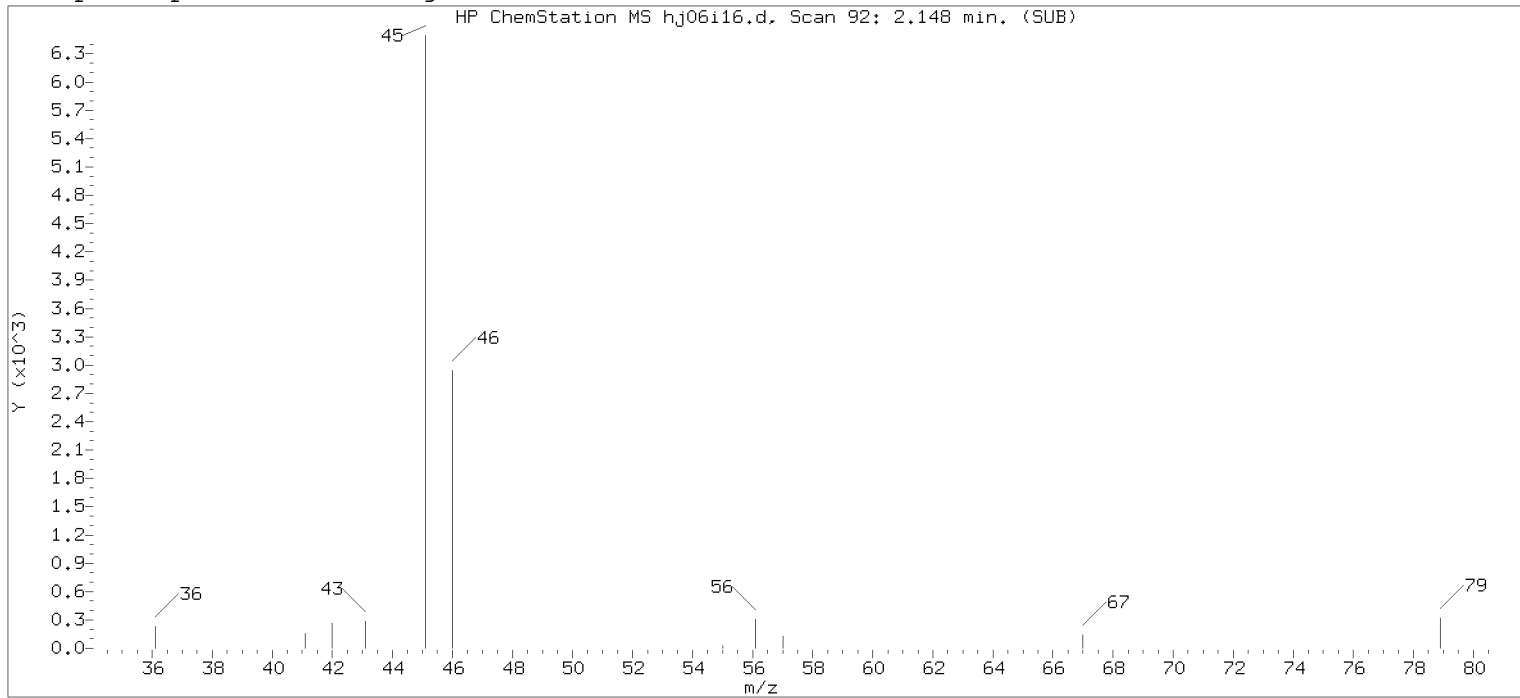
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 33159M
On-Column Amount (ng) : 0.5259
Integration start scan : 79 Integration stop scan: 132
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

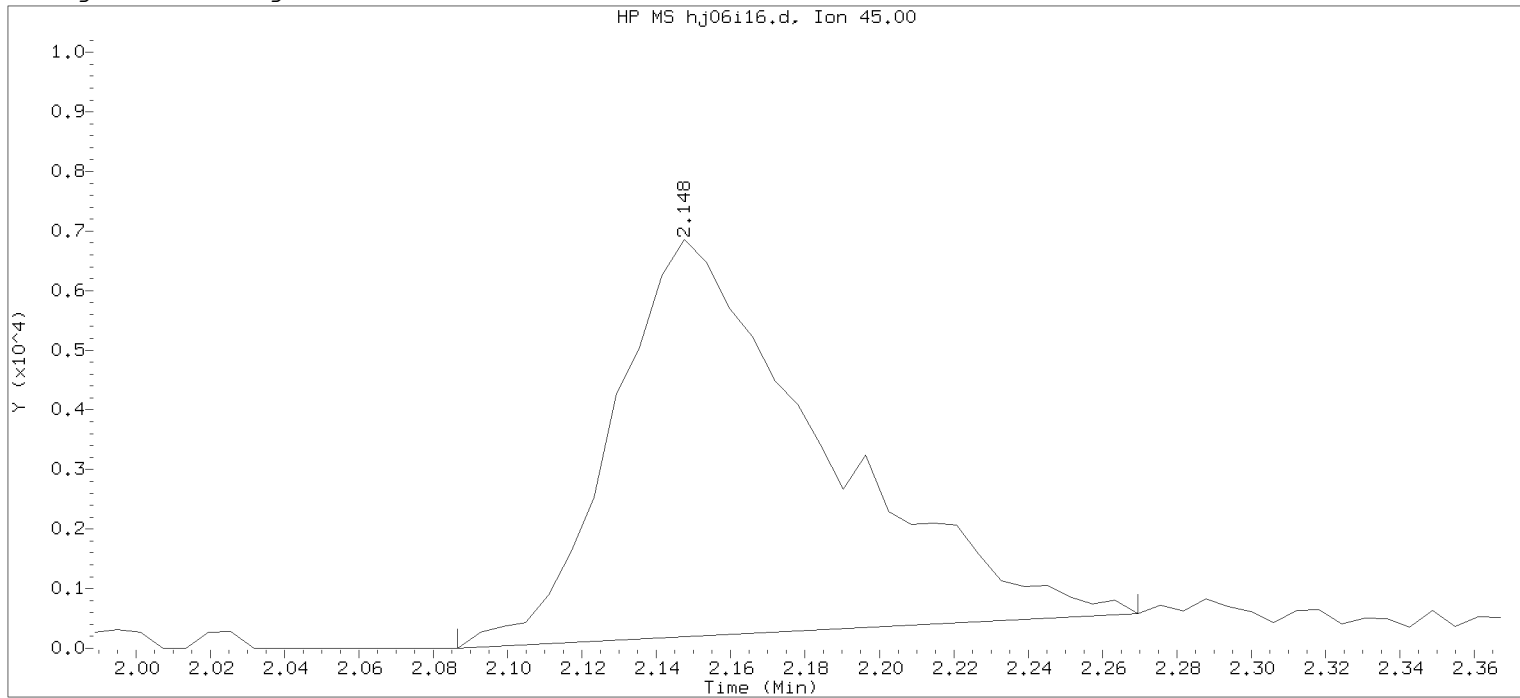
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

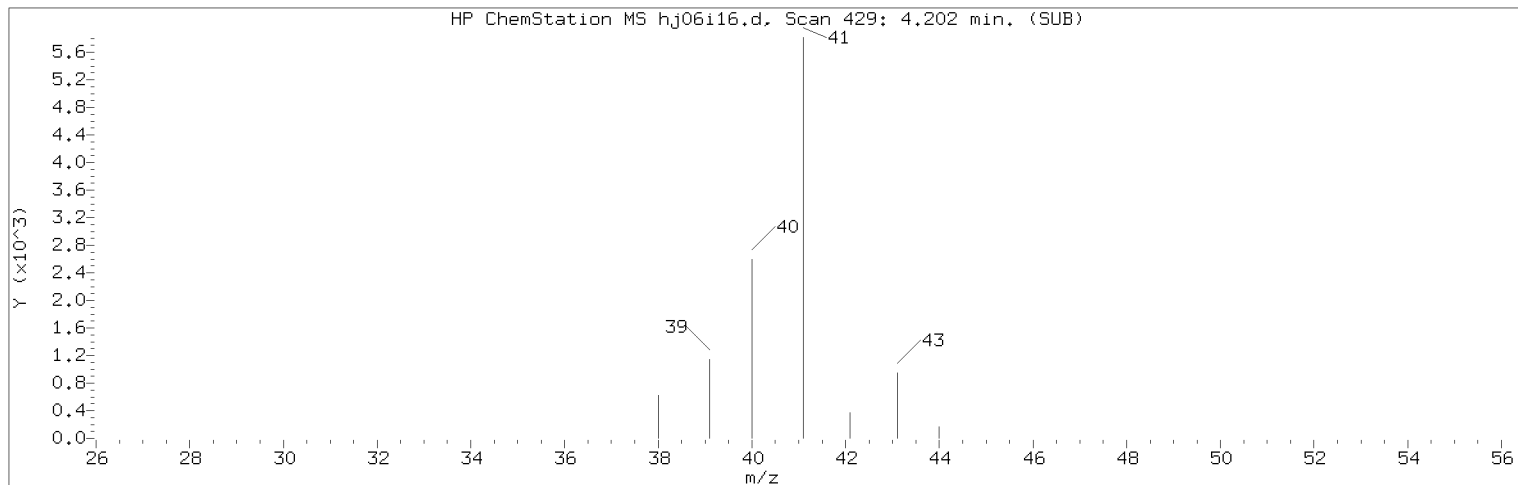
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:25
Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

Sample Name: VSTD0.5

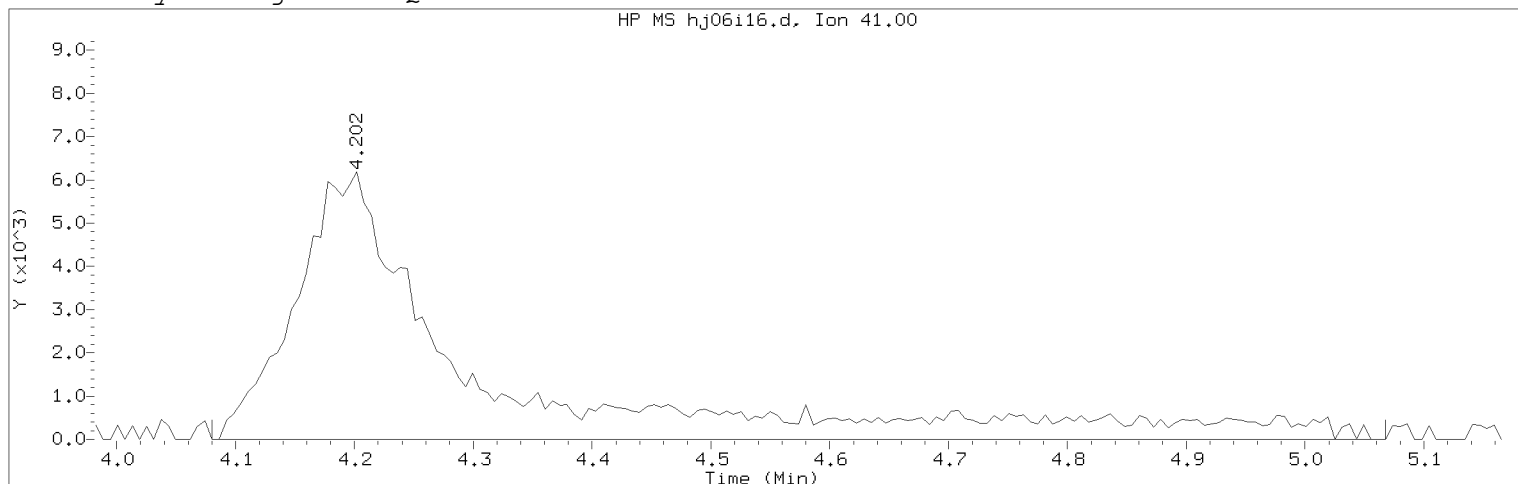
Lab Sample ID: VSTD0.5

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 26016	
On-column Amount (ng)	: 0.4288	
Integration start scan	: 81	Integration stop scan: 111
Y at integration start	: 0	Y at integration end: 581

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

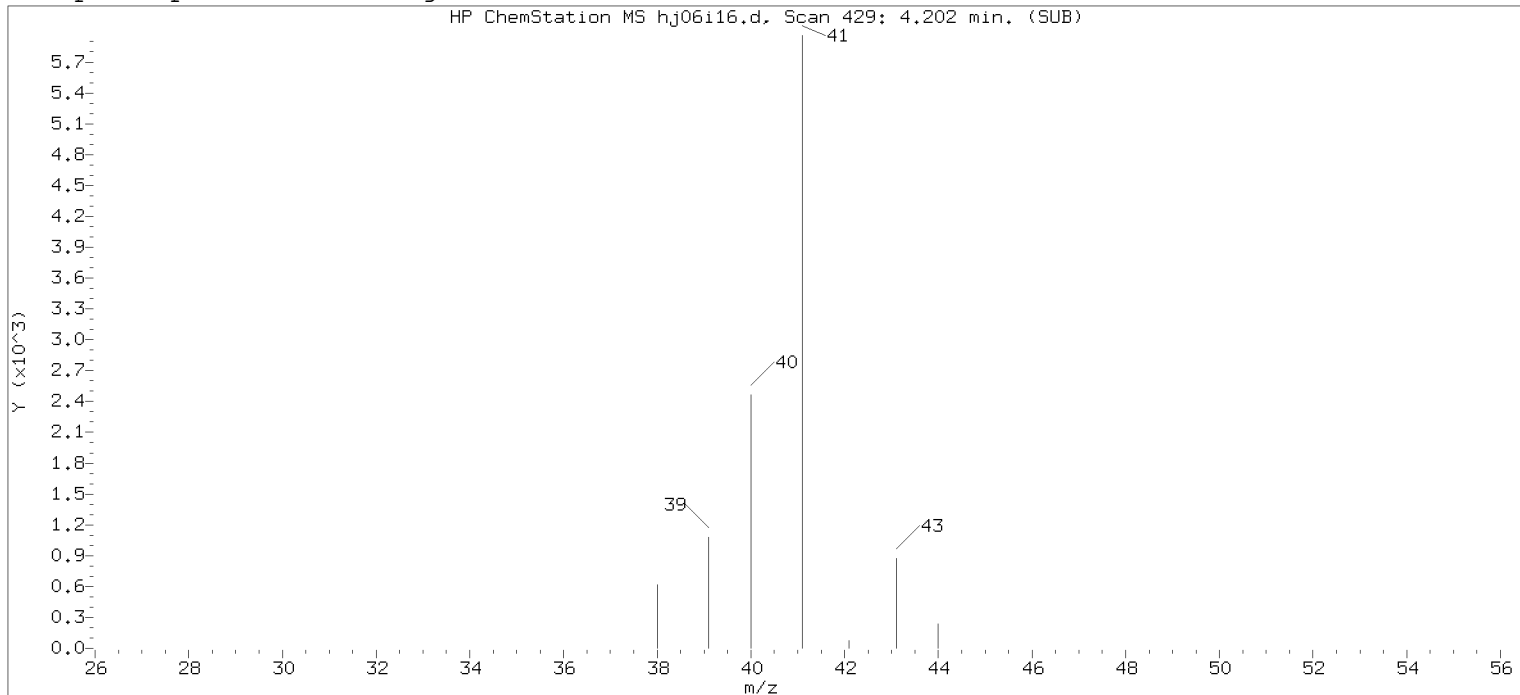
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area (flag) : 63960M
On-Column Amount (ng) : 24.4736
Integration start scan : 408 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

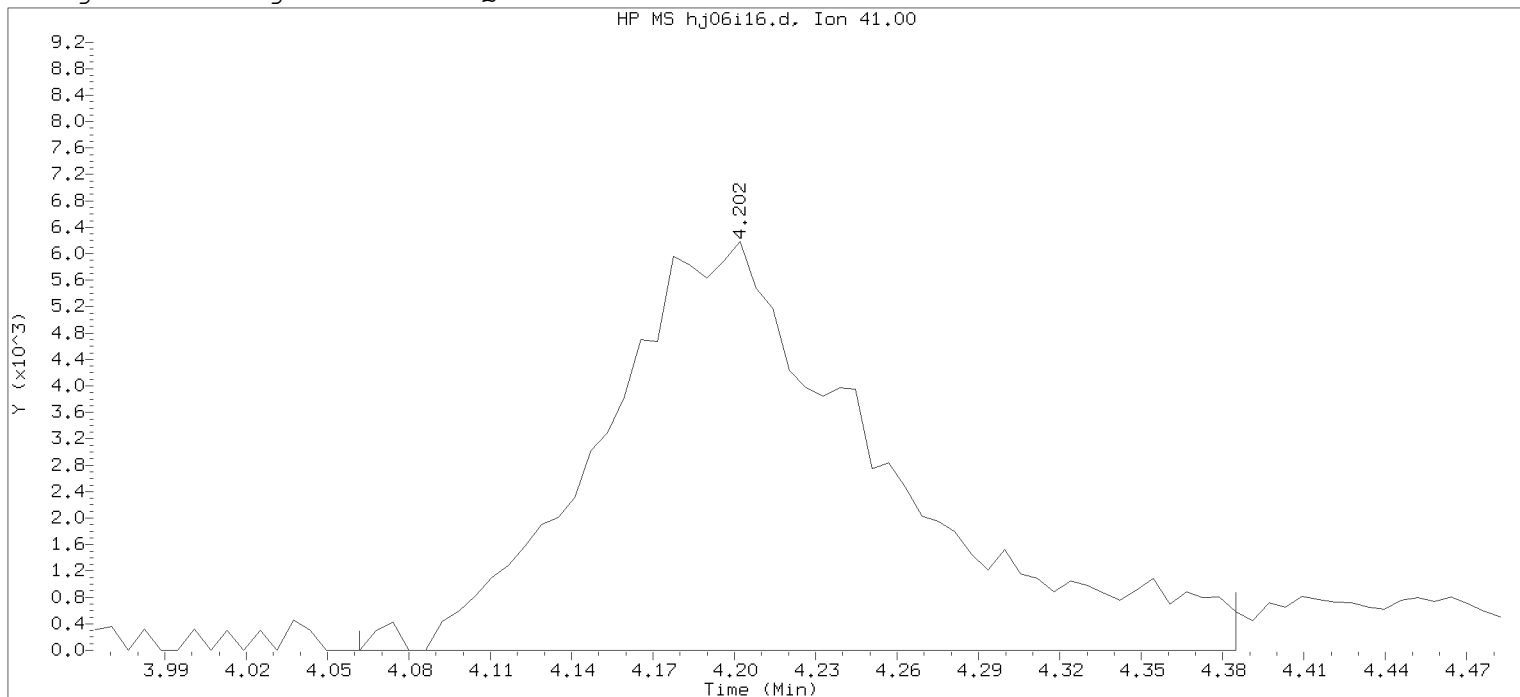
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:25

Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 25

Compound Name : Acetonitrile

Scan Number : 429

Retention Time (minutes): 4.202

Quant Ion : 41.00

Area : 44862

On-column Amount (ng) : 18.2792

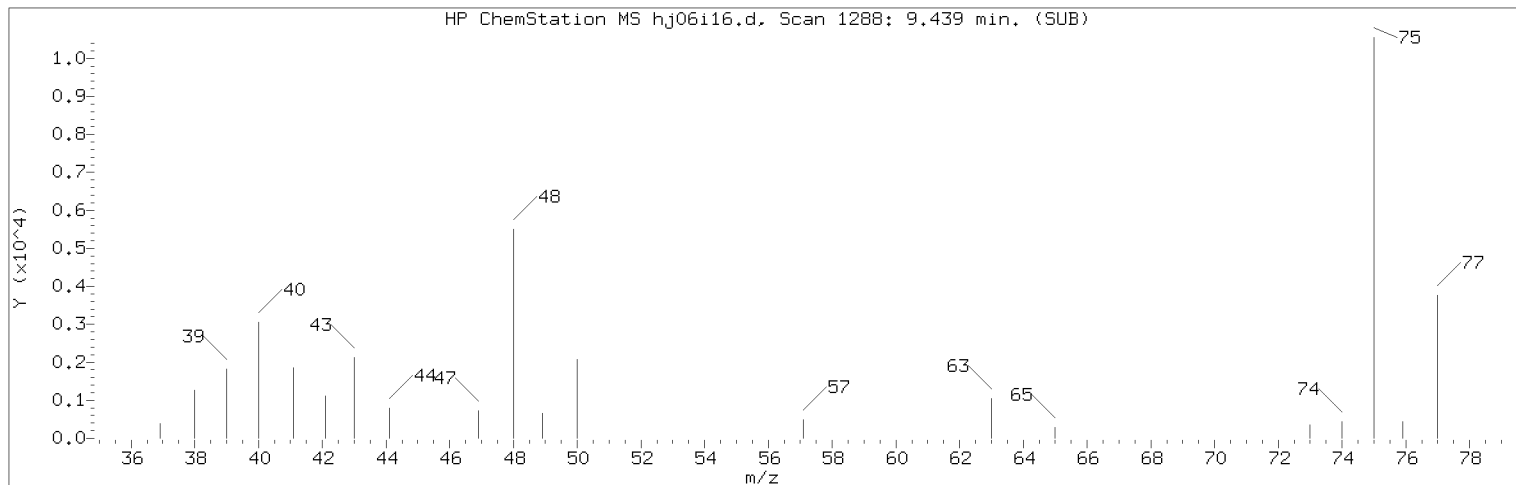
Integration start scan : 405 Integration stop scan: 458

Y at integration start : 0 Y at integration end: 0

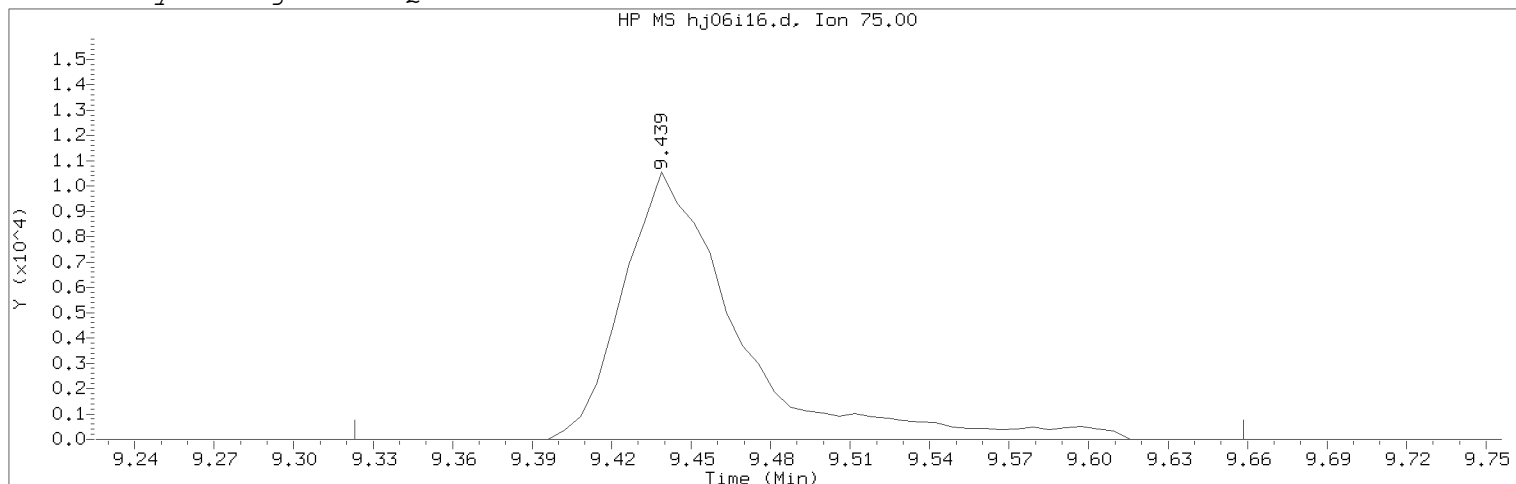
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RAE59 Page 859 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 77	
Compound Name	: Chloroacetonitrile	
Scan Number	: 1288	
Retention Time (minutes)	: 9.439	
Quant Ion	: 75.00	
Area (flag)	: 31737M	
On-Column Amount (ng)	: 23.9707	
Integration start scan	: 1268	Integration stop scan: 1323
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

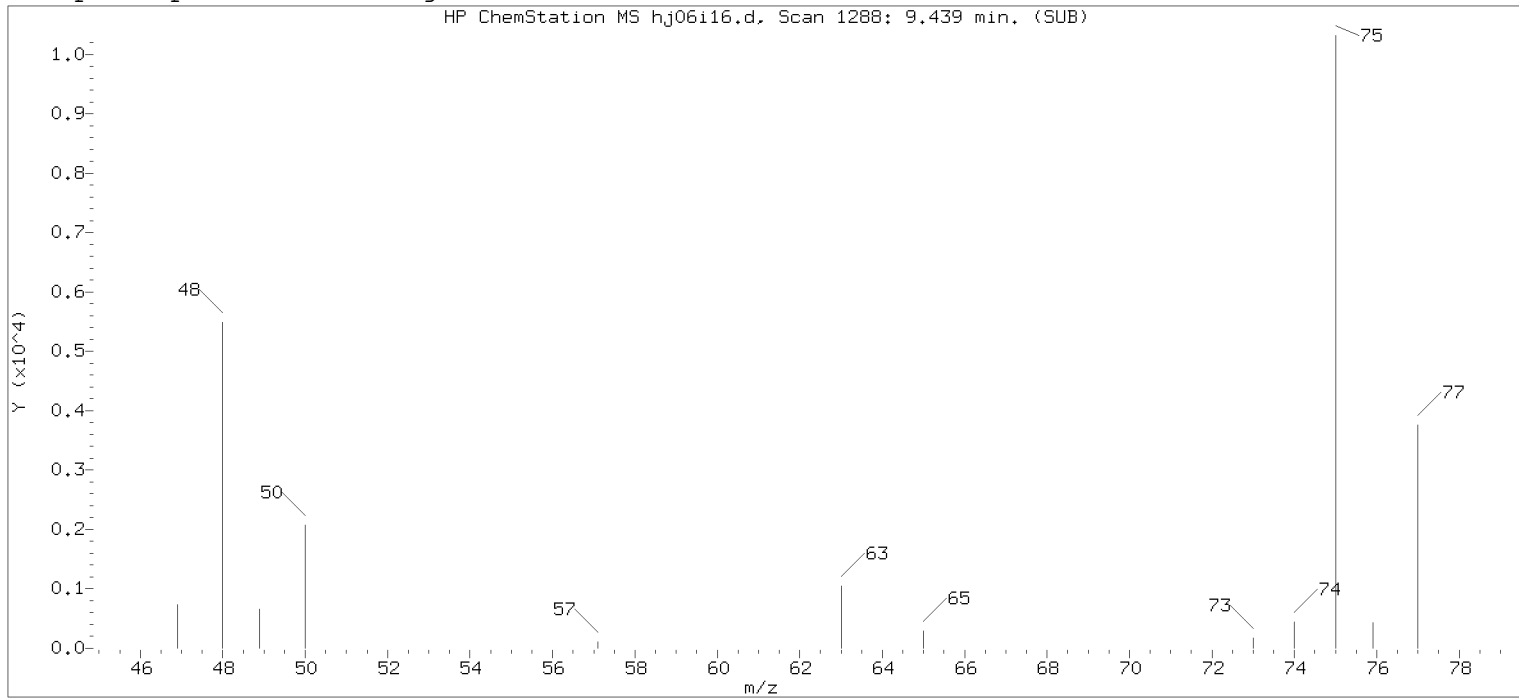
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

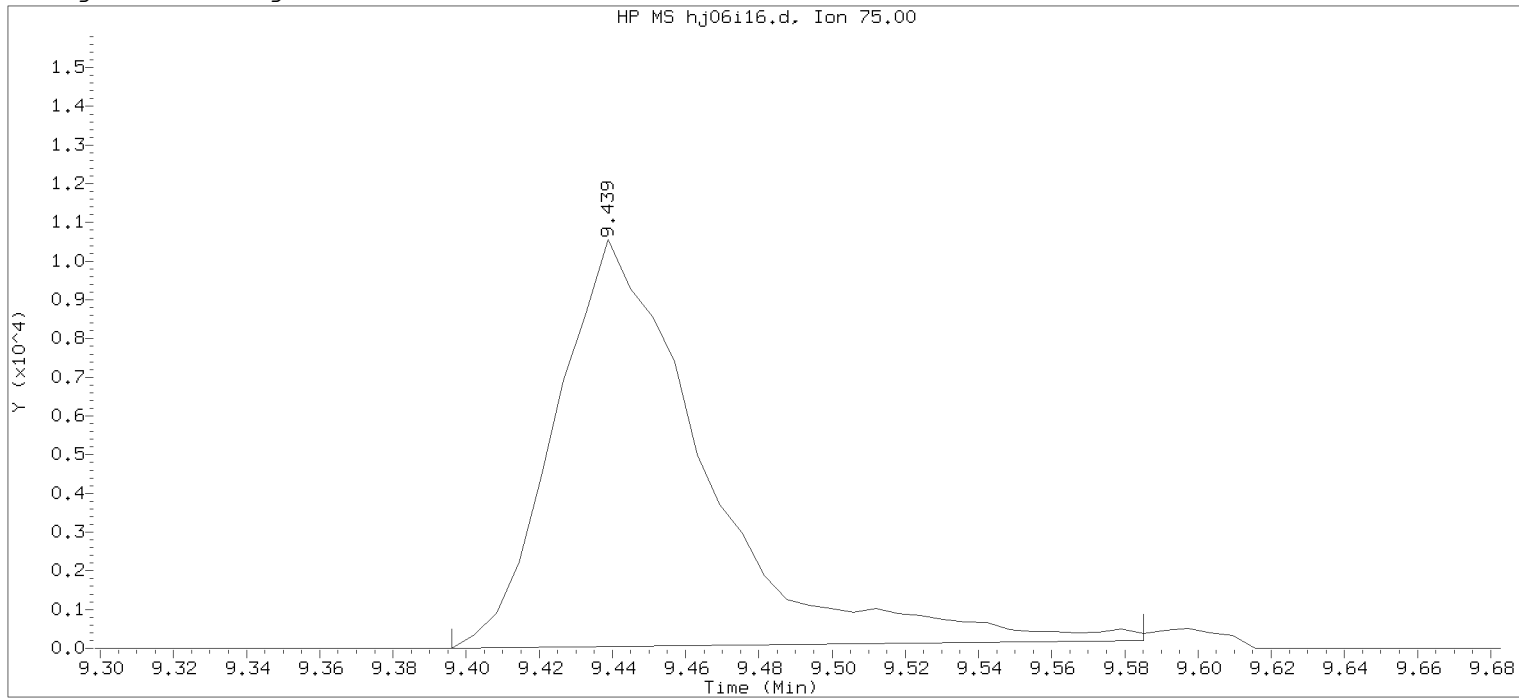
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

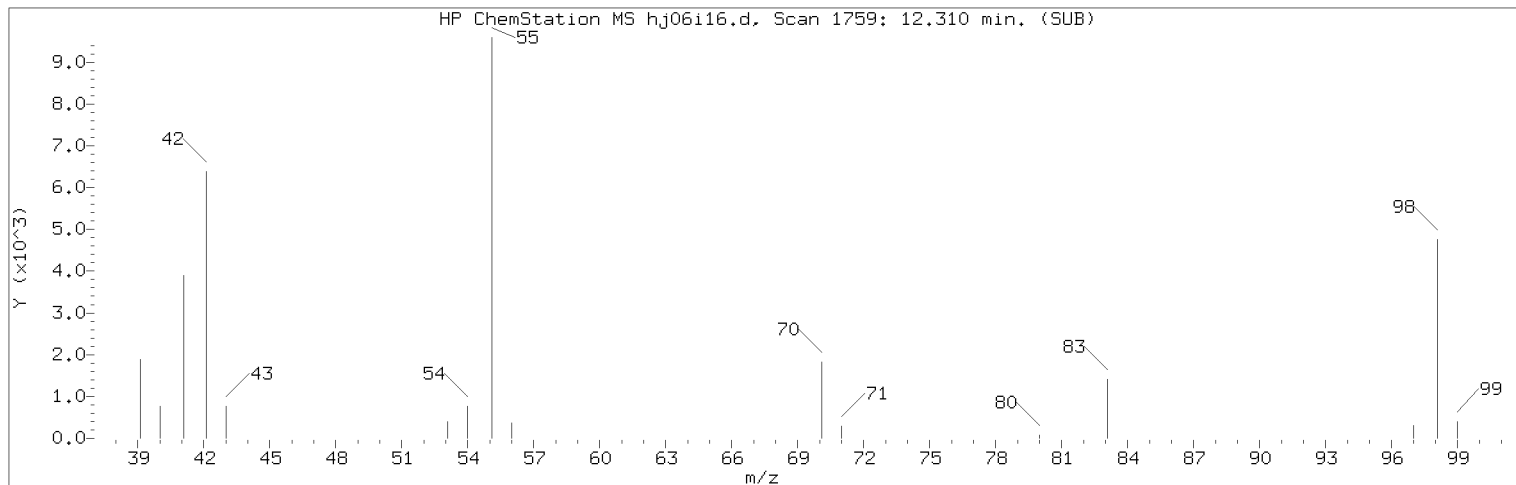
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:25
Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

Sample Name: VSTD0.5

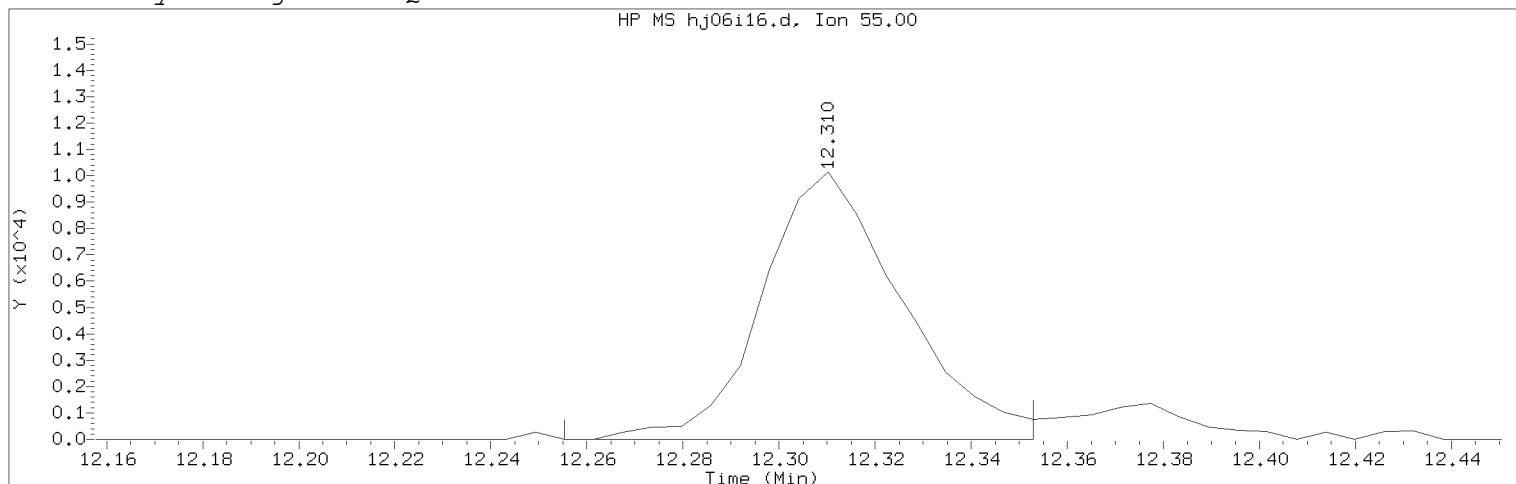
Lab Sample ID: VSTD0.5

Compound Number	: 77	
Compound Name	: Chloroacetonitrile	
Scan Number	: 1288	
Retention Time (minutes)	: 9.439	
Quant Ion	: 75.00	
Area	: 29943	
On-column Amount (ng)	: 22.8222	
Integration start scan	: 1280	Integration stop scan: 1311
Y at integration start	: 0	Y at integration end: 194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

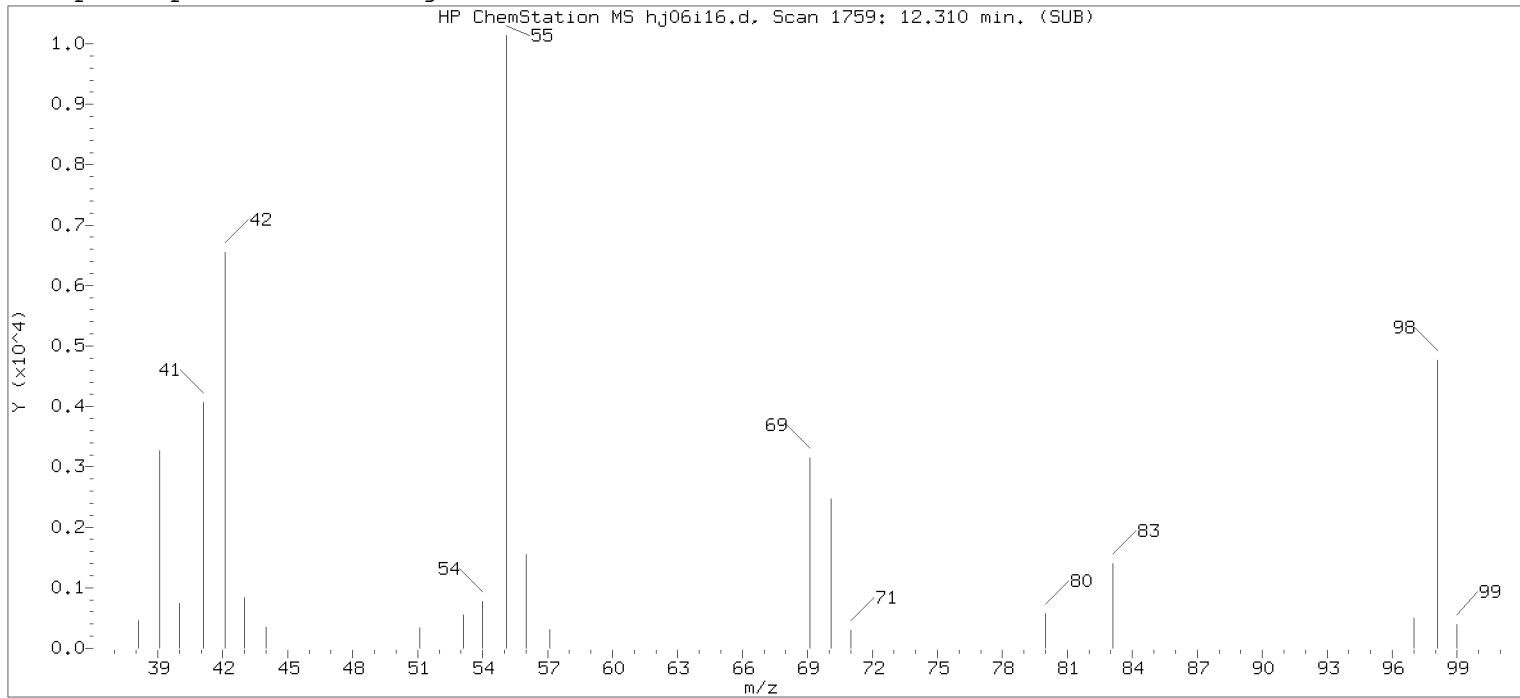
Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area (flag)	: 20534M	
On-Column Amount (ng)	: 25.3826	
Integration start scan	: 1749	Integration stop scan: 1765
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

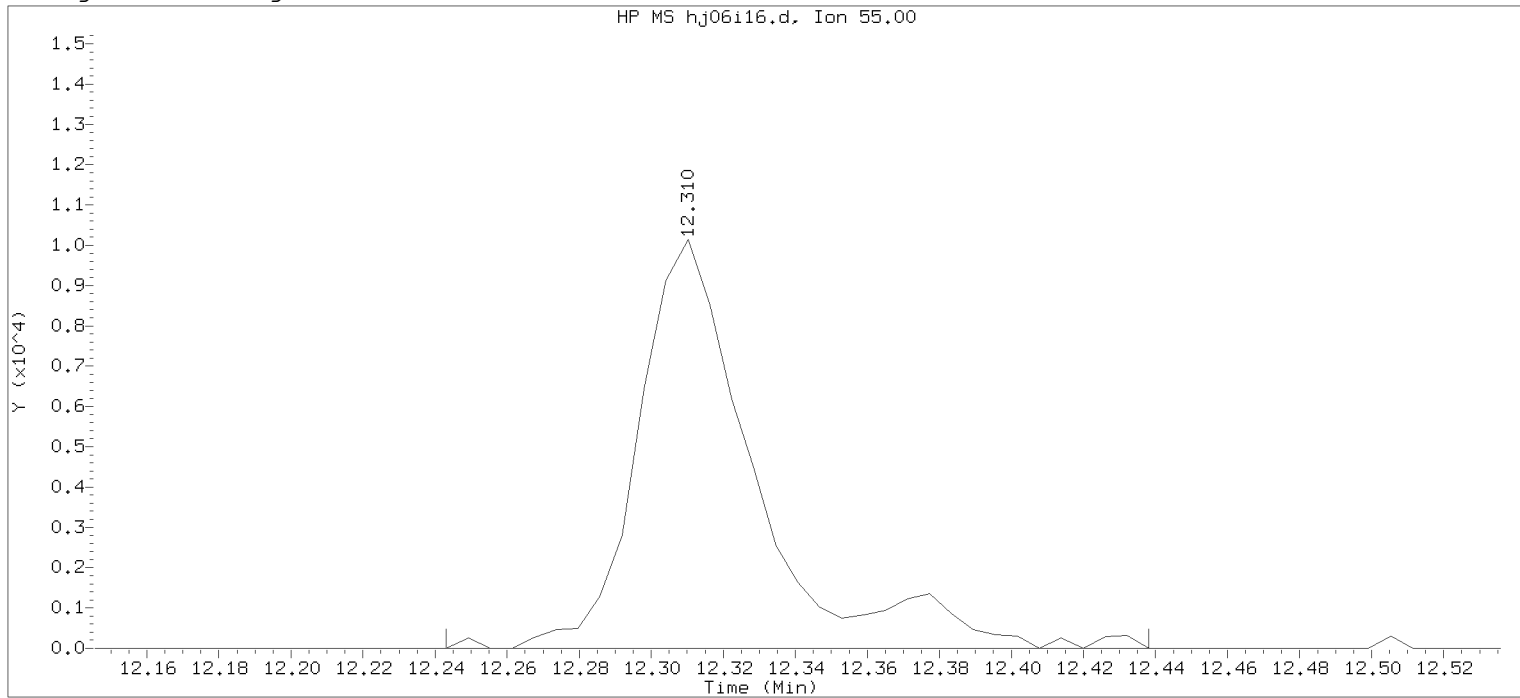
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:25

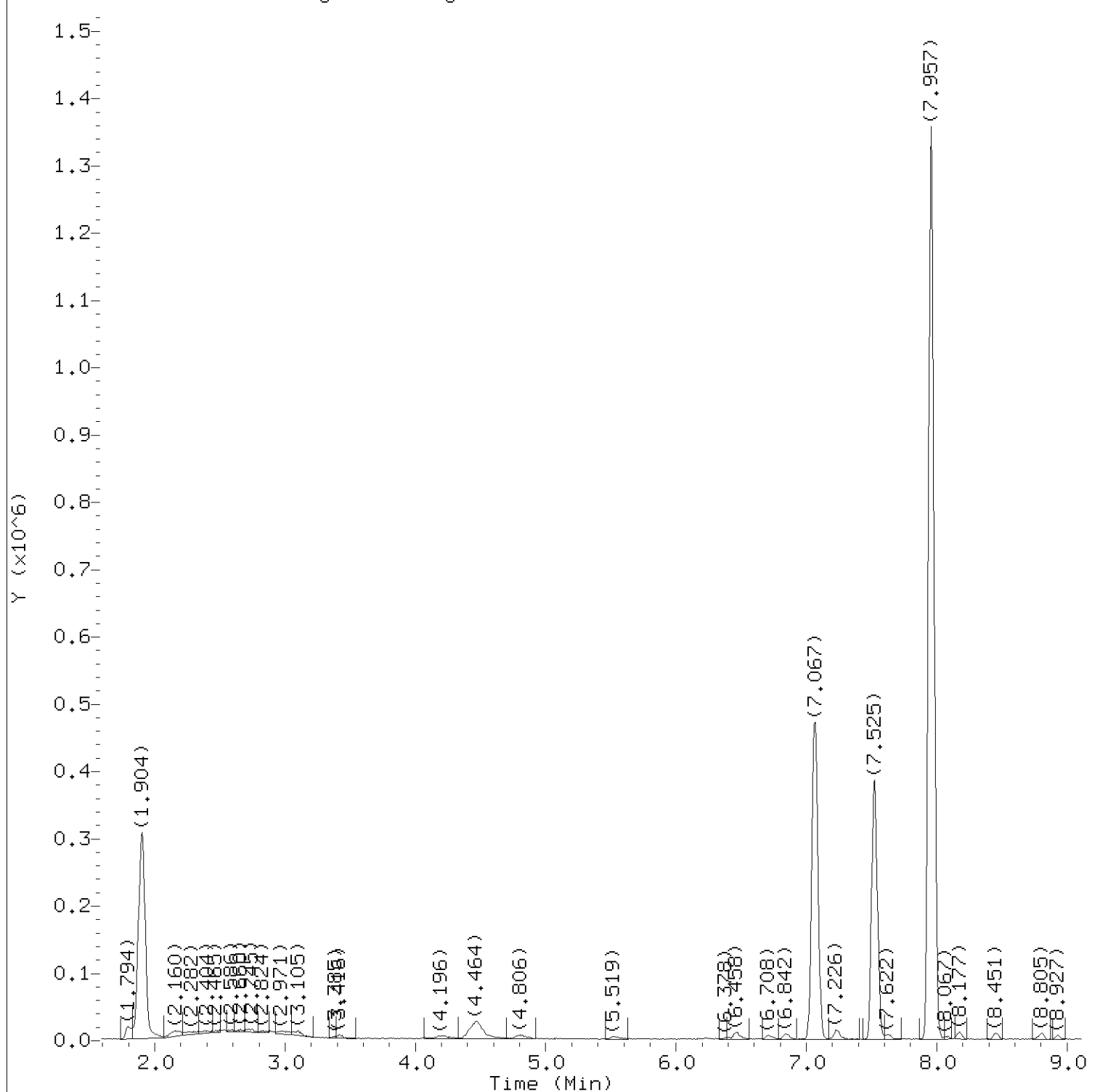
Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 1759
 Retention Time (minutes): 12.310
 Quant Ion : 55.00
 Area : 23247
 On-column Amount (ng) : 28.1085
 Integration start scan : 1747
 Y at integration start : 0

Integration stop scan: 1779
 Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d
Injection date and time: 06-JAN-2020 13:29

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

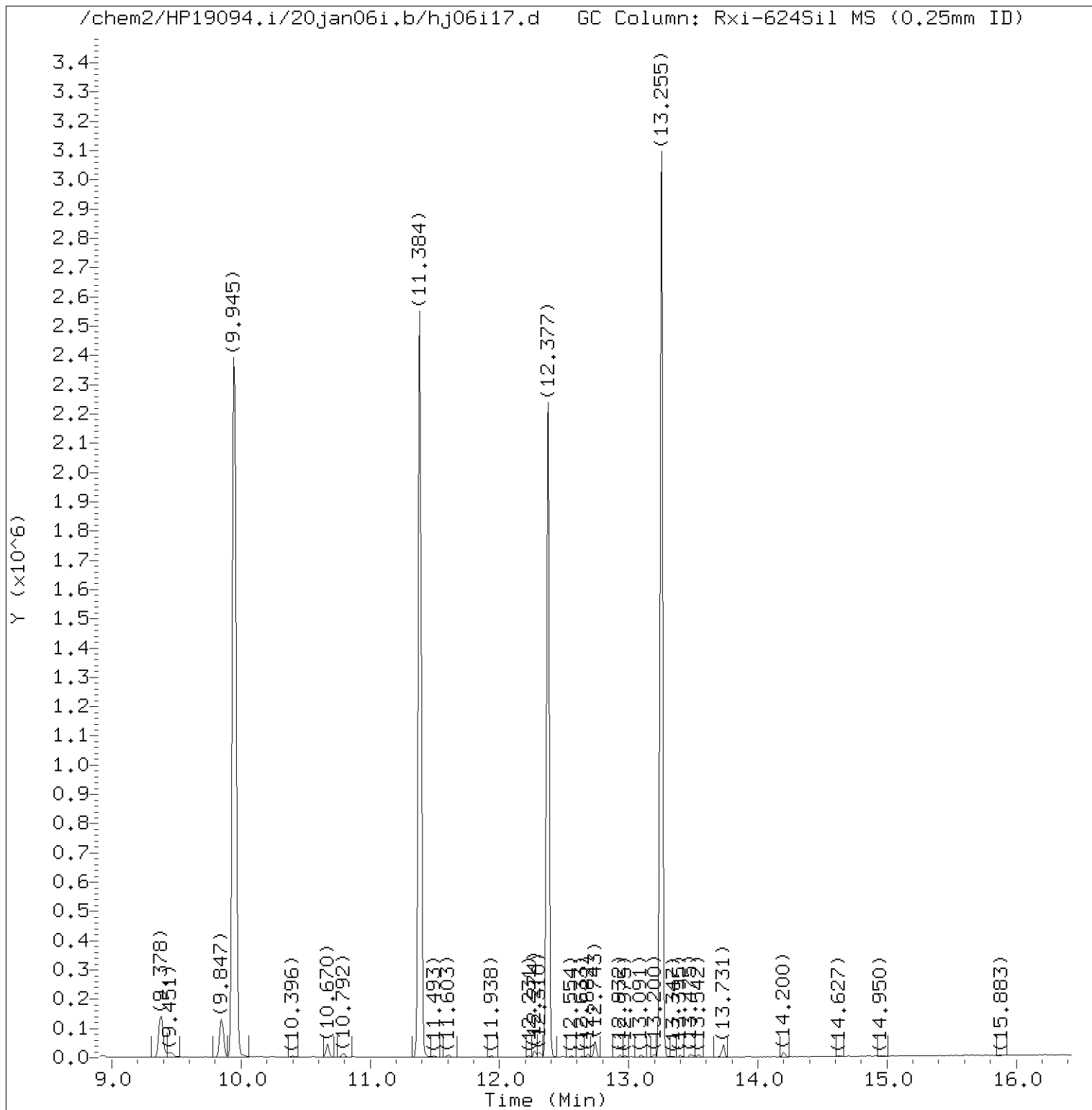
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d
Injection date and time: 06-JAN-2020 13:29

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.160	45	15436M	0.240
25) Acetonitrile	(1)	4.196	41	30544M	10.407
26)*t-Butyl Alcohol-d10	(1)	4.476	65	120535	50.000
36) Vinyl Acetate	(2)	5.519	43	13976	0.204
43) Methyl Acrylate	(2)	6.452	55	21793	0.921
53) 1-Chlorobutane	(2)	7.226	56	17623	0.180
63)*Fluorobenzene	(2)	7.957	96	1930427	10.000
77) Chloroacetonitrile	(2)	9.445	75	11339	8.853
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	3676	0.165
97)*Chlorobenzene-d5	(3)	11.384	117	1436470	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	4598	0.311
112) Cyclohexanone	(1)	12.310	55	8454A	9.825
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	784103	10.000

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

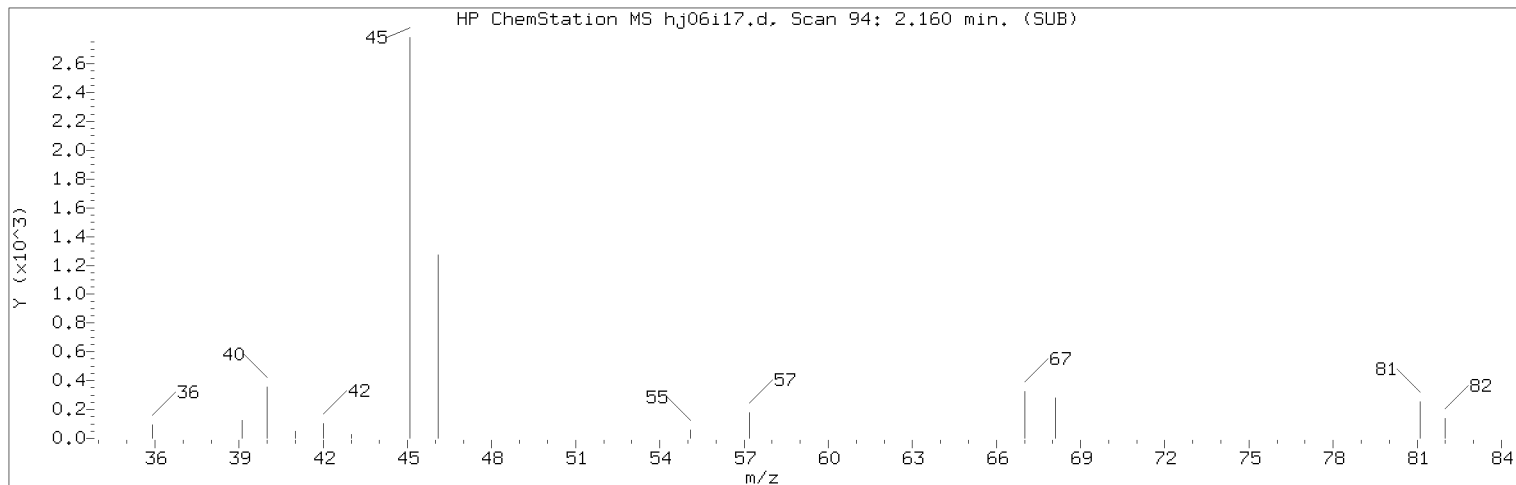
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

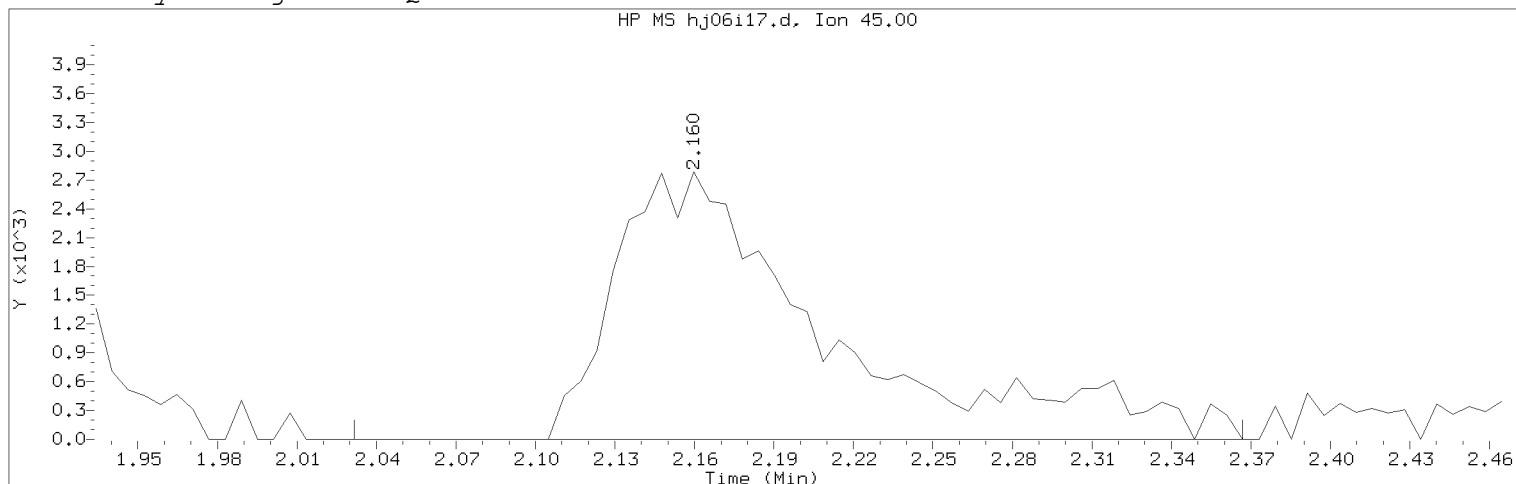
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 94	
Retention Time (minutes)	: 2.160	
Quant Ion	: 45.00	
Area (flag)	: 15436M	
On-Column Amount (ng)	: 0.2400	
Integration start scan	: 72	Integration stop scan: 127
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Jennifer K. Howe

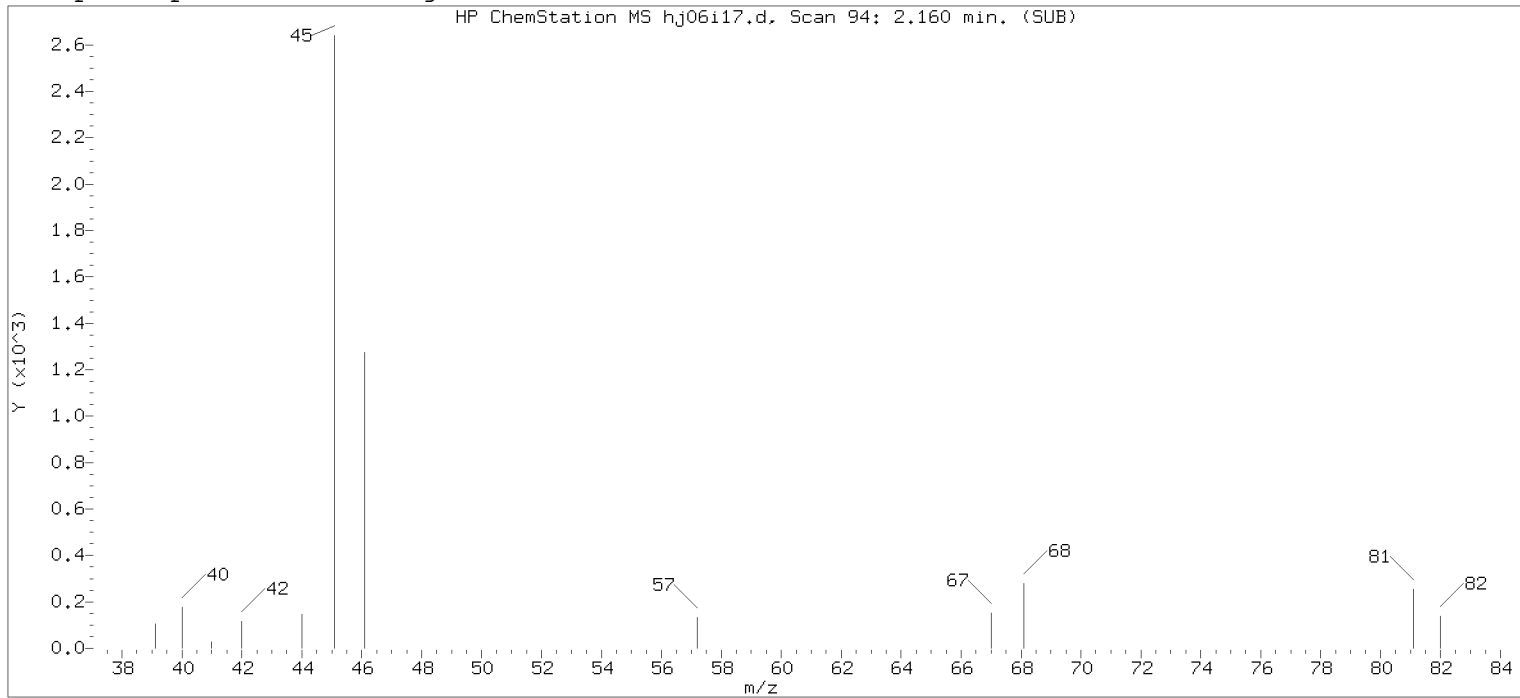
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

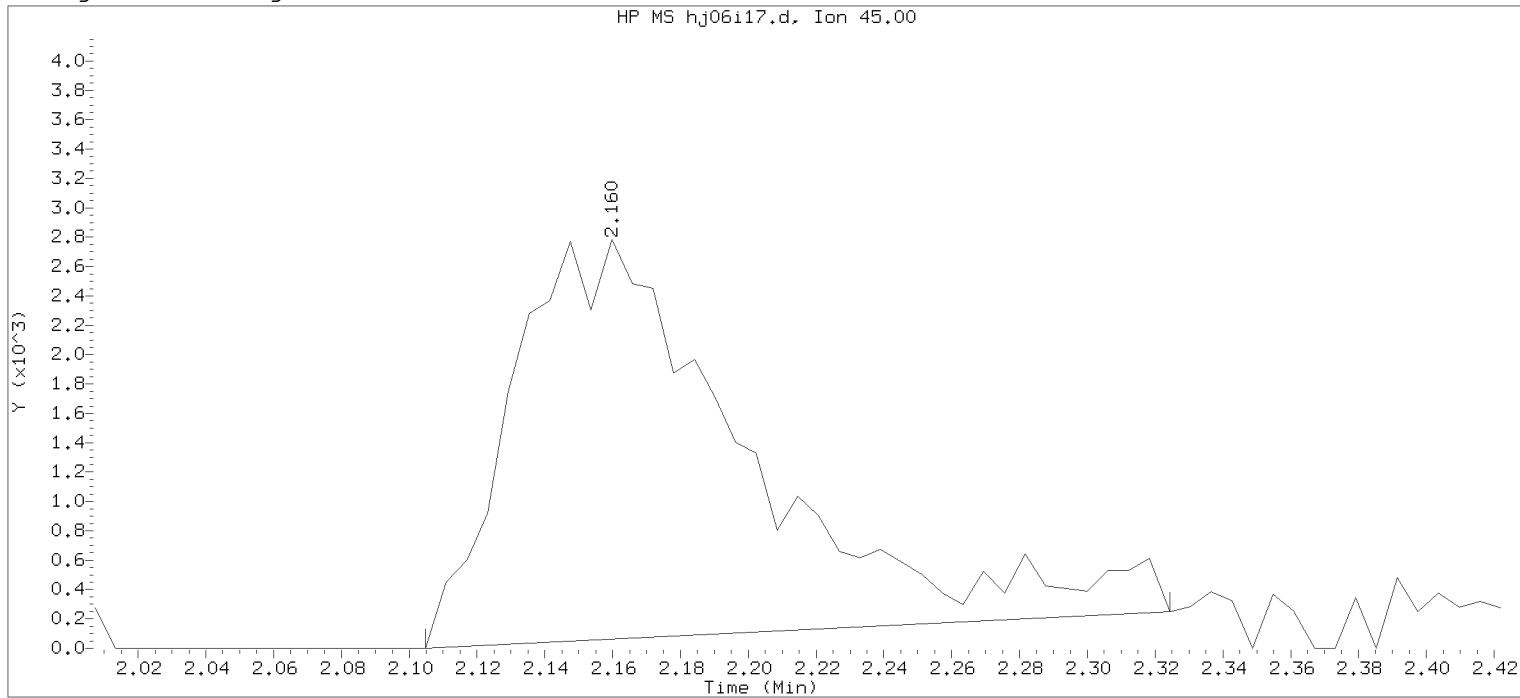
Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:47

Date, time and analyst ID of latest file update: 06-Jan-2020 13:47 Automation

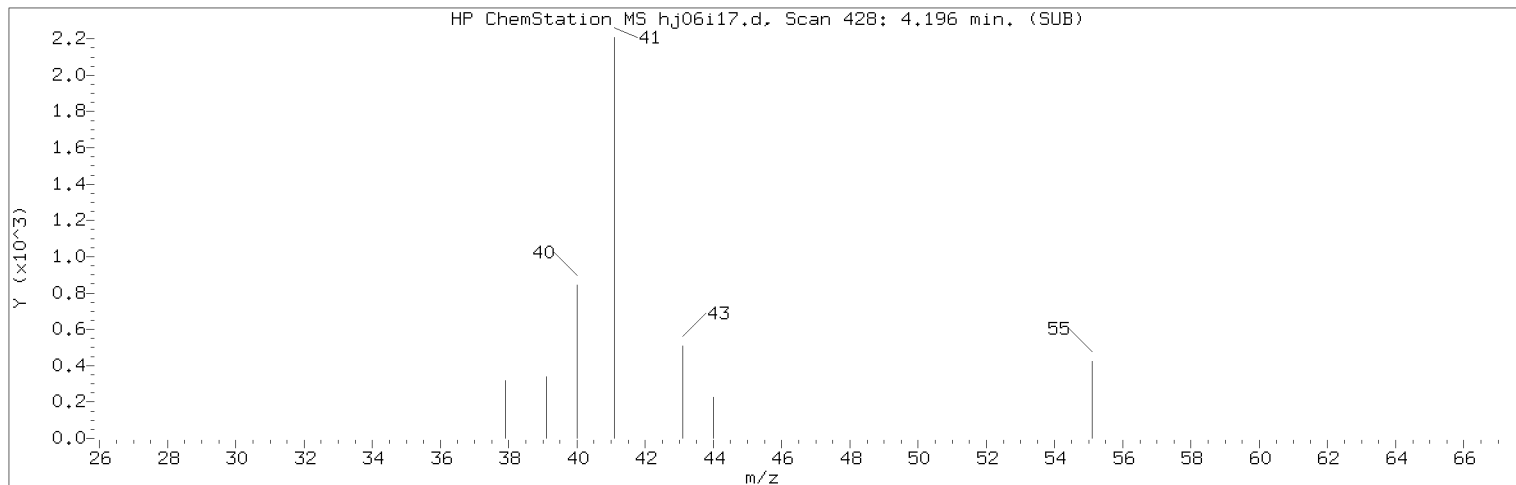
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

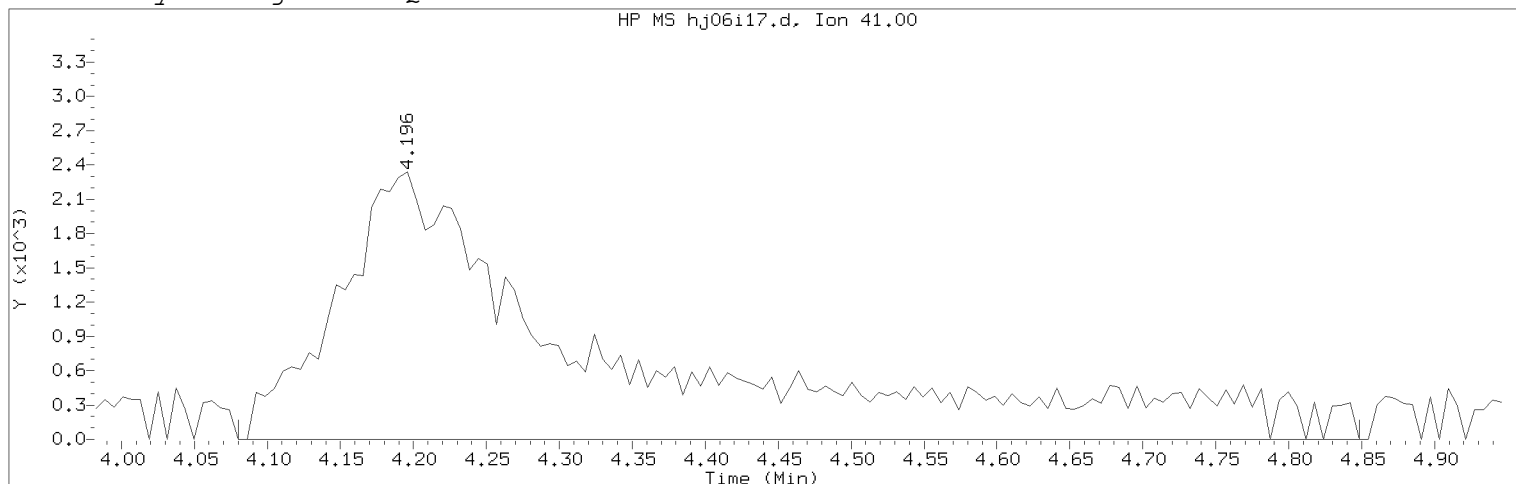
Compound Number : 4
 Compound Name : Dimethyl ether
 Scan Number : 94
 Retention Time (minutes): 2.160
 Quant Ion : 45.00
 Area : 13148
 On-column Amount (ng) : 0.2098
 Integration start scan : 84
 Y at integration start : 0

Integration stop scan: 120
 Y at integration end: 251

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

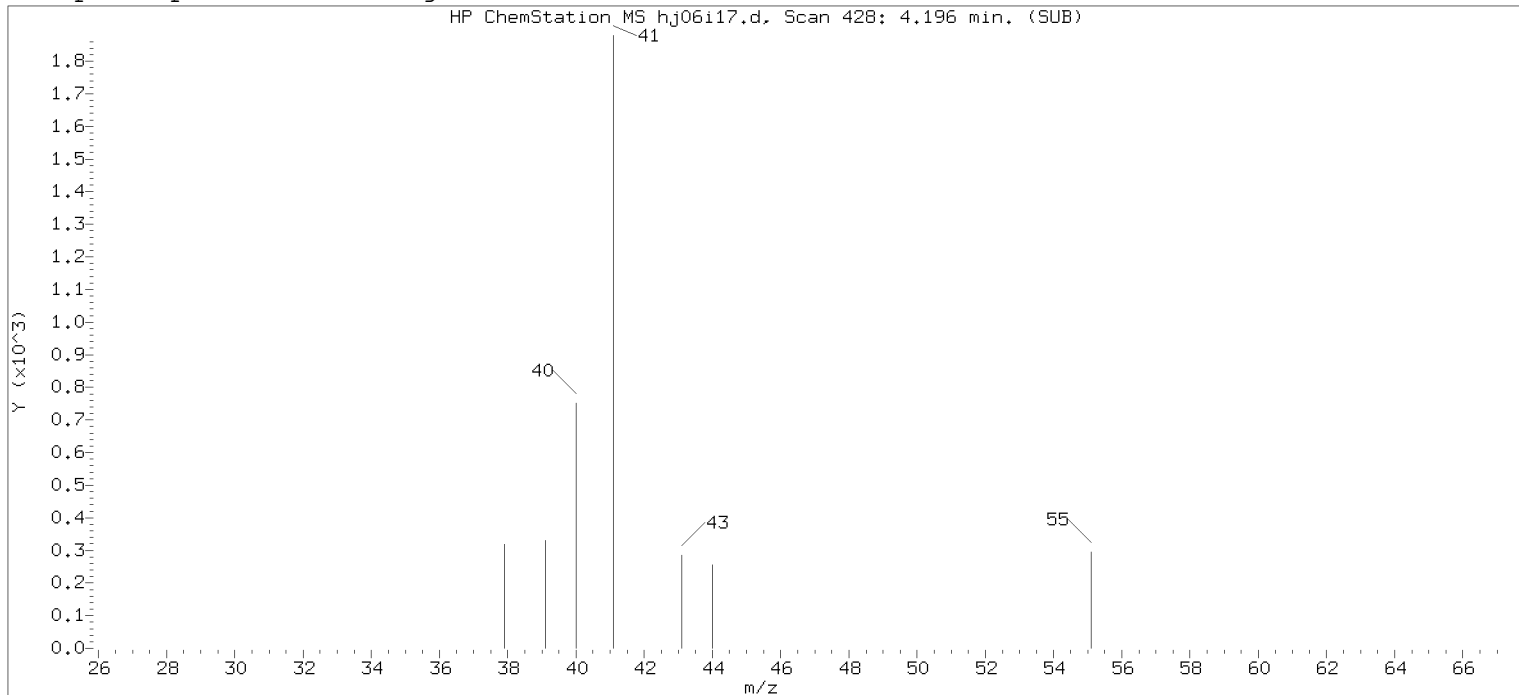
Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 428	
Retention Time (minutes)	: 4.196	
Quant Ion	: 41.00	
Area (flag)	: 30544M	
On-Column Amount (ng)	: 10.4067	
Integration start scan	: 408	Integration stop scan: 534
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

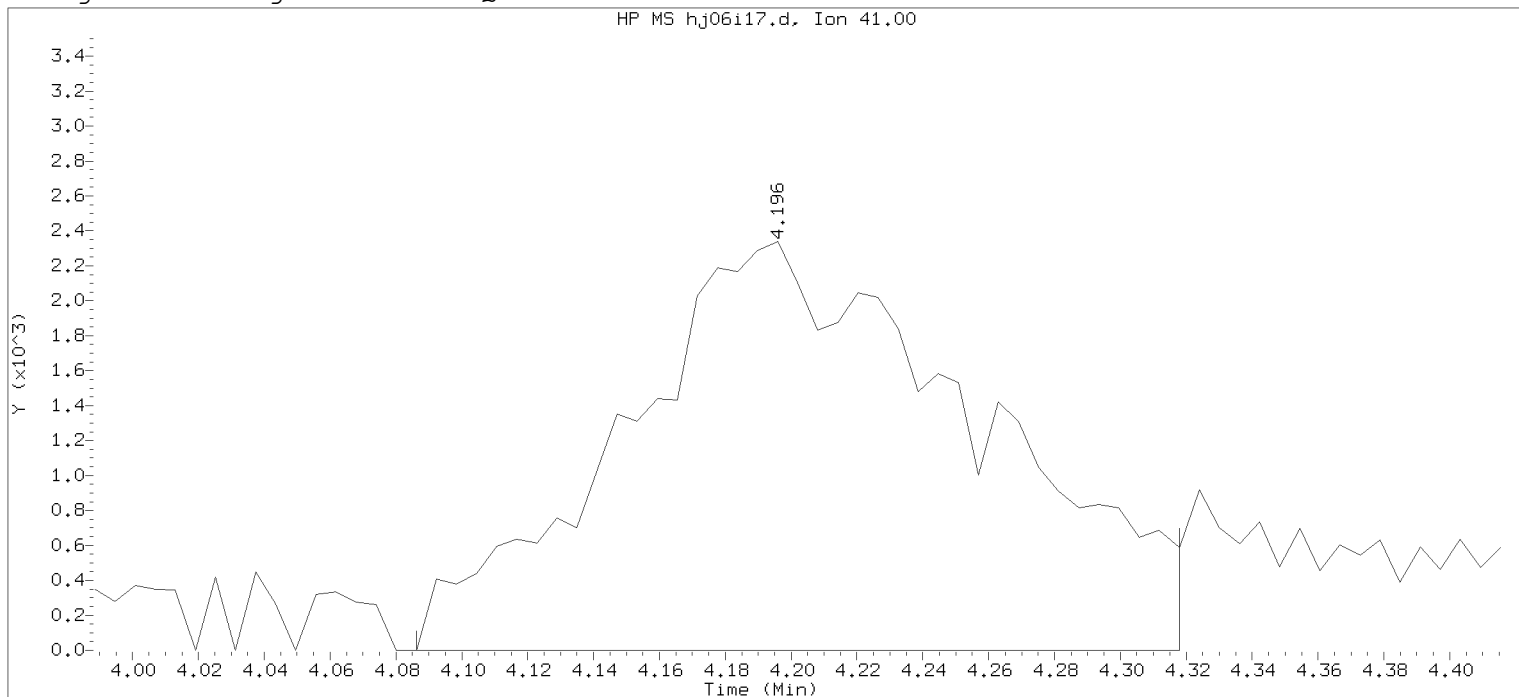
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:29 Analyst ID: JKH09052

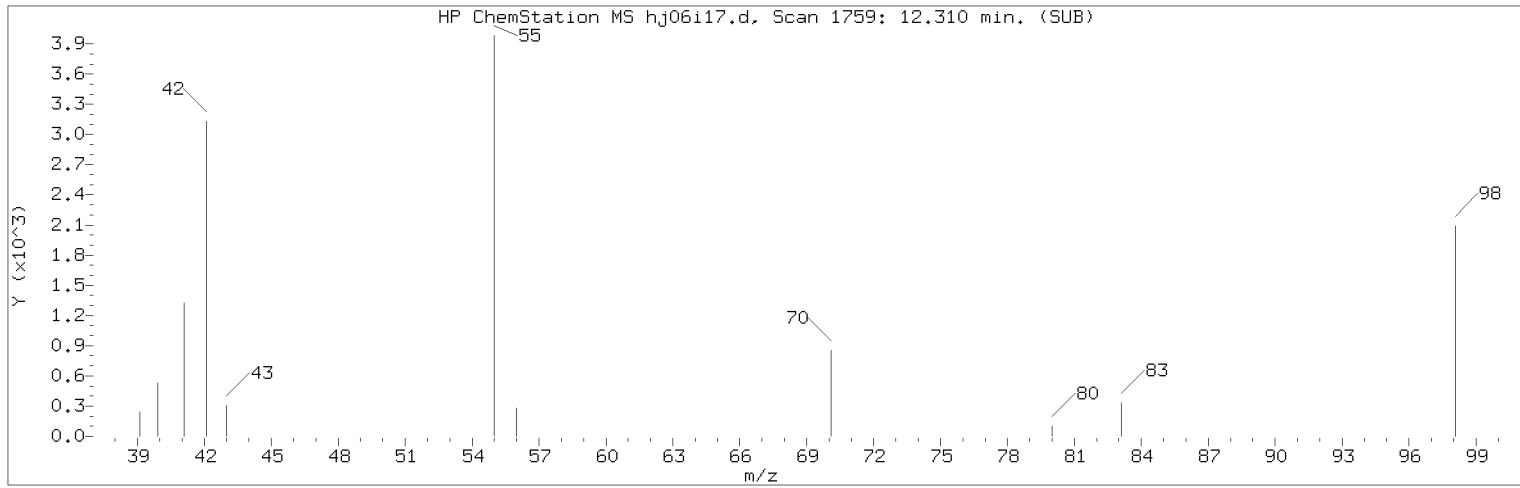
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:47
Date, time and analyst ID of latest file update: 06-Jan-2020 13:47 Automation

Sample Name: VSTD0.2

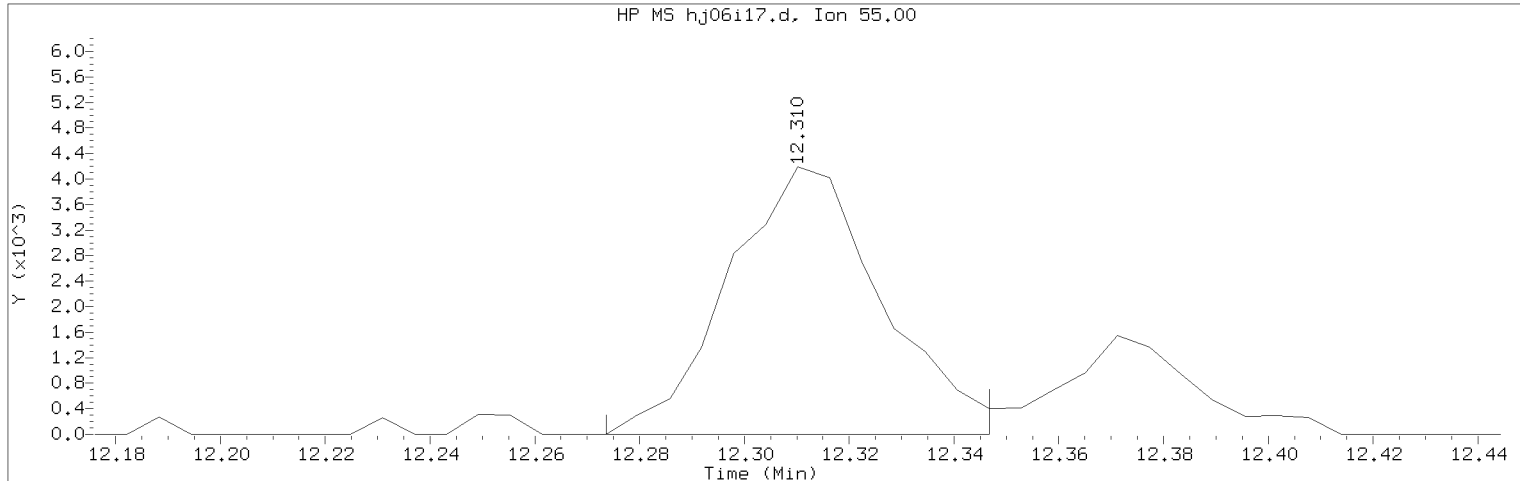
Lab Sample ID: VSTD0.2

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 428	
Retention Time (minutes)	: 4.196	
Quant Ion	: 41.00	
Area	: 17625	
On-column Amount (ng)	: 6.5176	
Integration start scan	: 409	Integration stop scan: 447
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

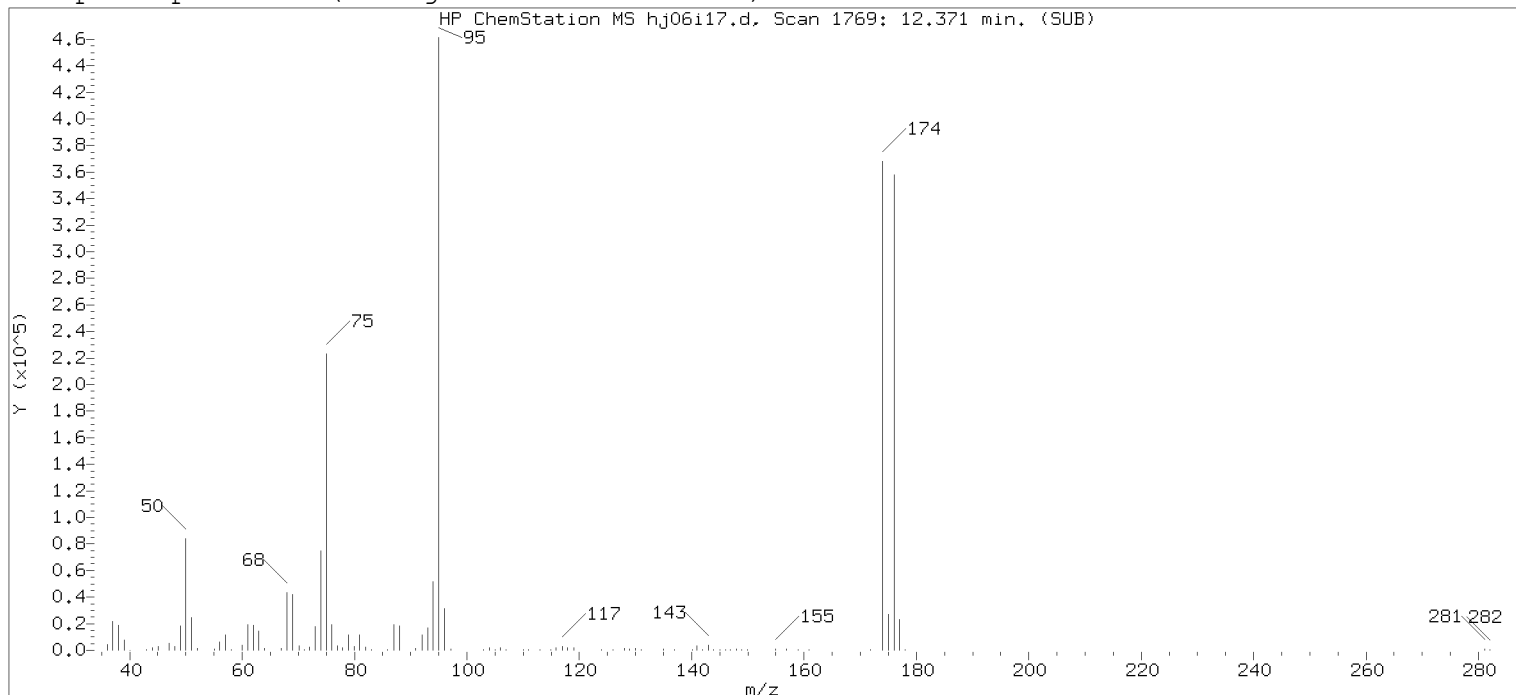
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 8454A
On-Column Amount (ng) : 9.8249
Integration start scan : 1752 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

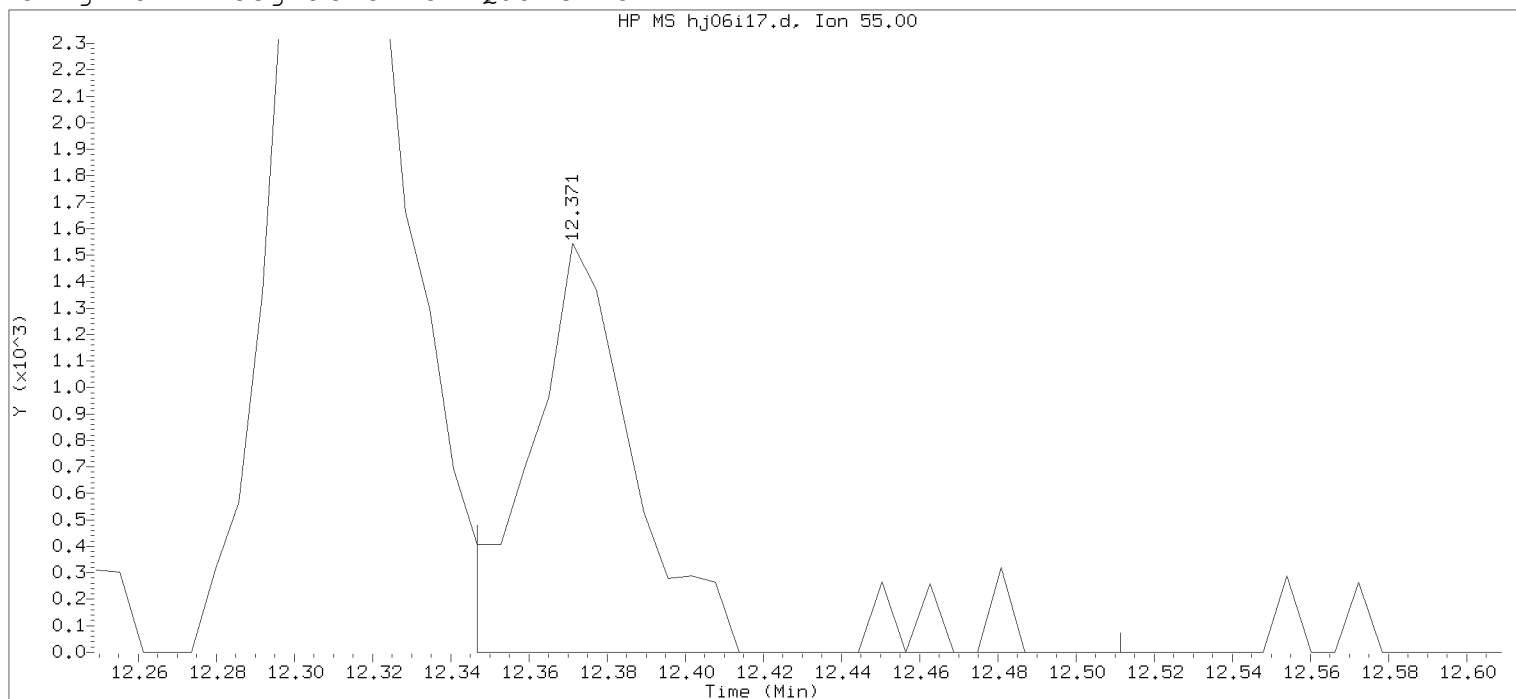
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:47

Date, time and analyst ID of latest file update: 06-Jan-2020 13:47 Automation

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 112

Compound Name : Cyclohexanone

Scan Number : 1769

Retention Time (minutes): 12.371

Quant Ion : 55.00

Area : 3049

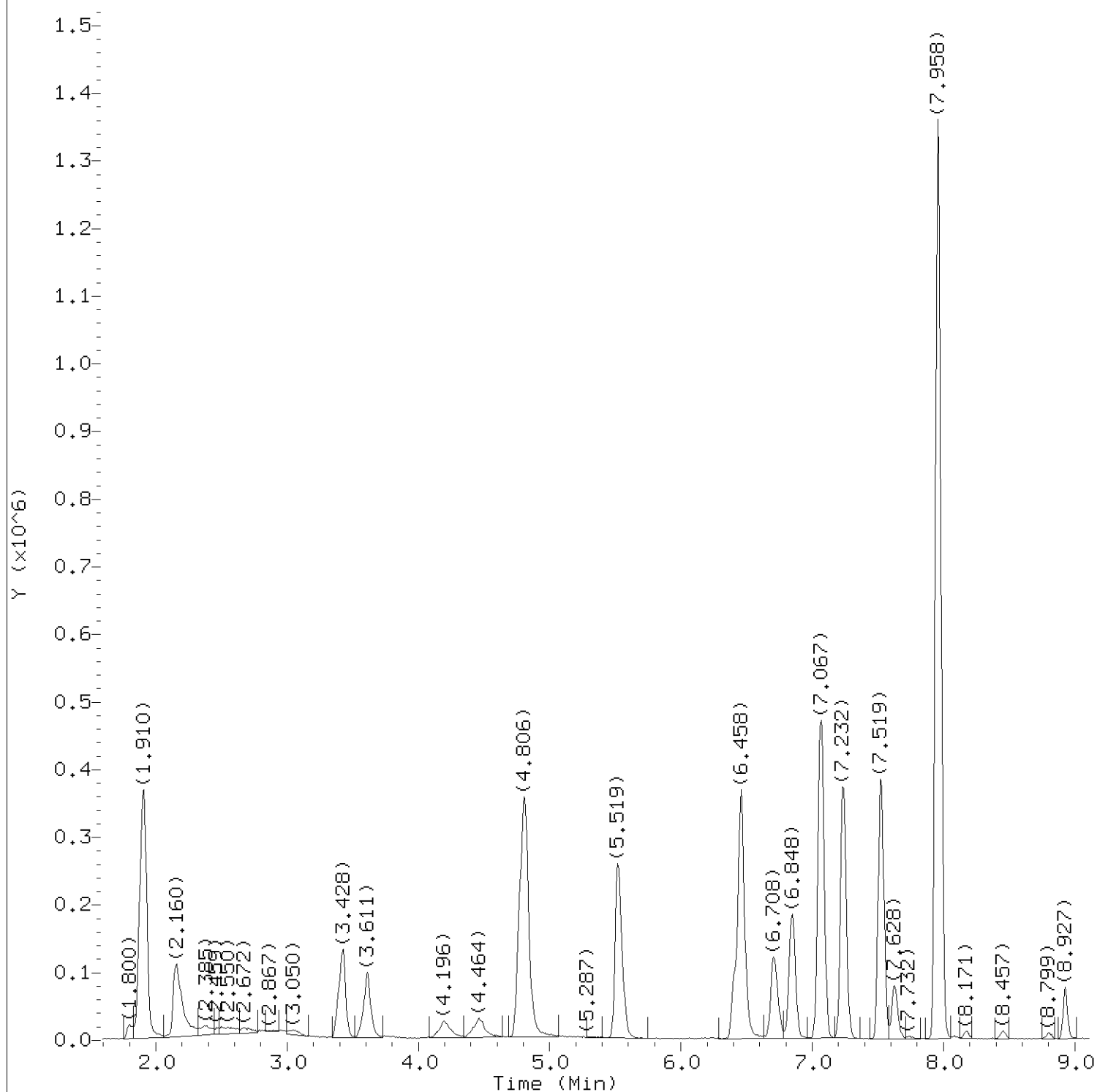
On-column Amount (ng) : 3.8934

Integration start scan : 1764 Integration stop scan: 1791

Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RPF59 Page 9872 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d
Injection date and time: 06-JAN-2020 13:51

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 17:02

Sublist used: SMQC

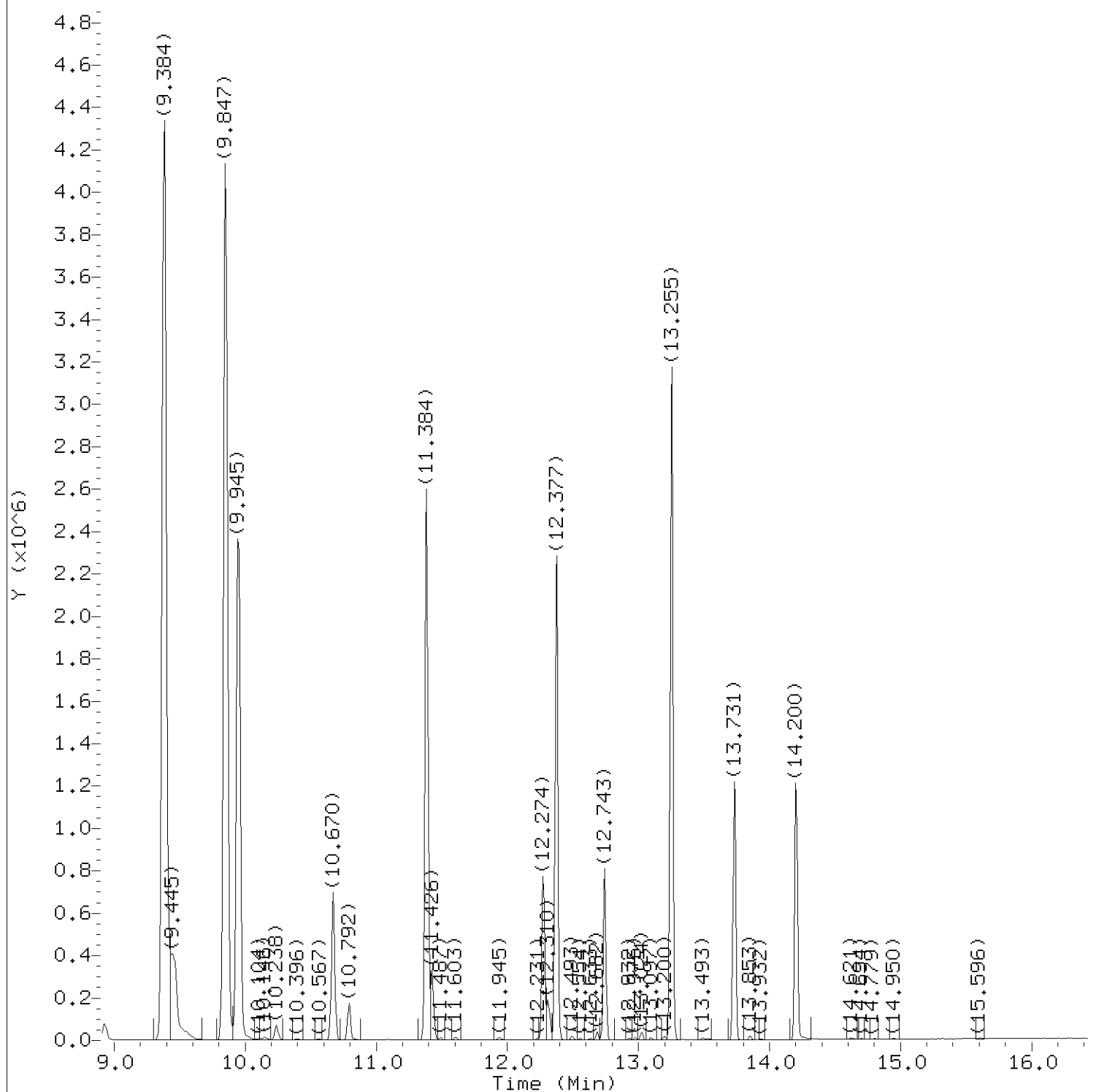
Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d
Injection date and time: 06-JAN-2020 13:51

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 17:02

Sublist used: SMQC

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	333019M	5.194
25) Acetonitrile	(1)	4.184	41	106822M	38.950
26)*t-Butyl Alcohol-d10	(1)	4.464	65	112632	50.000
36) Vinyl Acetate	(2)	5.519	43	752759	11.019
43) Methyl Acrylate	(2)	6.458	55	639729	27.121
50)\$Dibromofluoromethane	(2)	7.067	113	481701	10.068
53) 1-Chlorobutane	(2)	7.232	56	472374	4.851
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	92697	9.981
63)*Fluorobenzene	(2)	7.958	96	1924670	10.000
77) Chloroacetonitrile	(2)	9.439	75	314109	245.976
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	105855	4.777
82)\$Toluene-d8	(3)	9.945	98	1900646	9.720
97)*Chlorobenzene-d5	(3)	11.384	117	1467623	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	172755	12.510
112) Cyclohexanone	(1)	12.310	55	91222M	113.454
111)\$4-Bromofluorobenzene	(3)	12.377	95	731452	10.111
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	793132	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

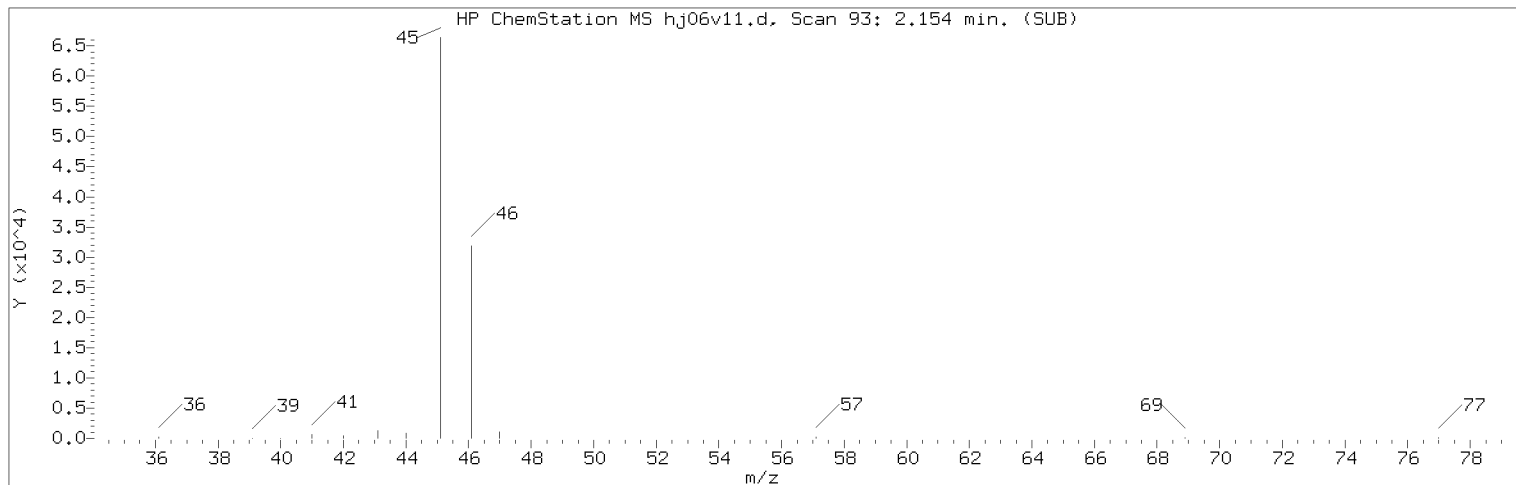
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

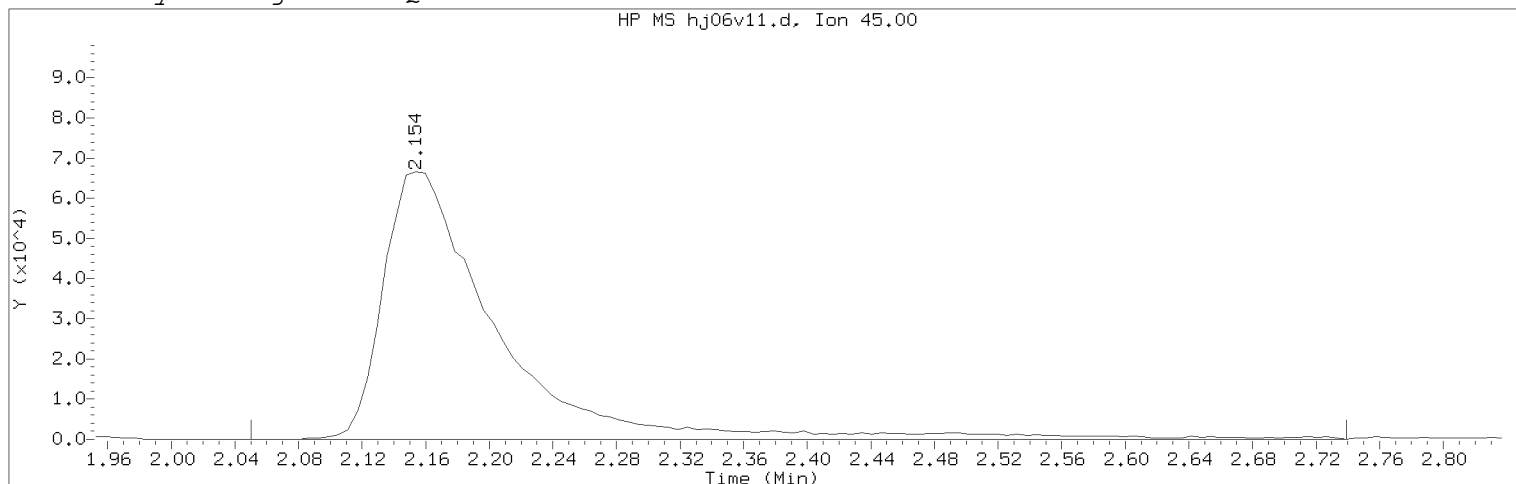
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01 Lab Sample ID: ICVH01

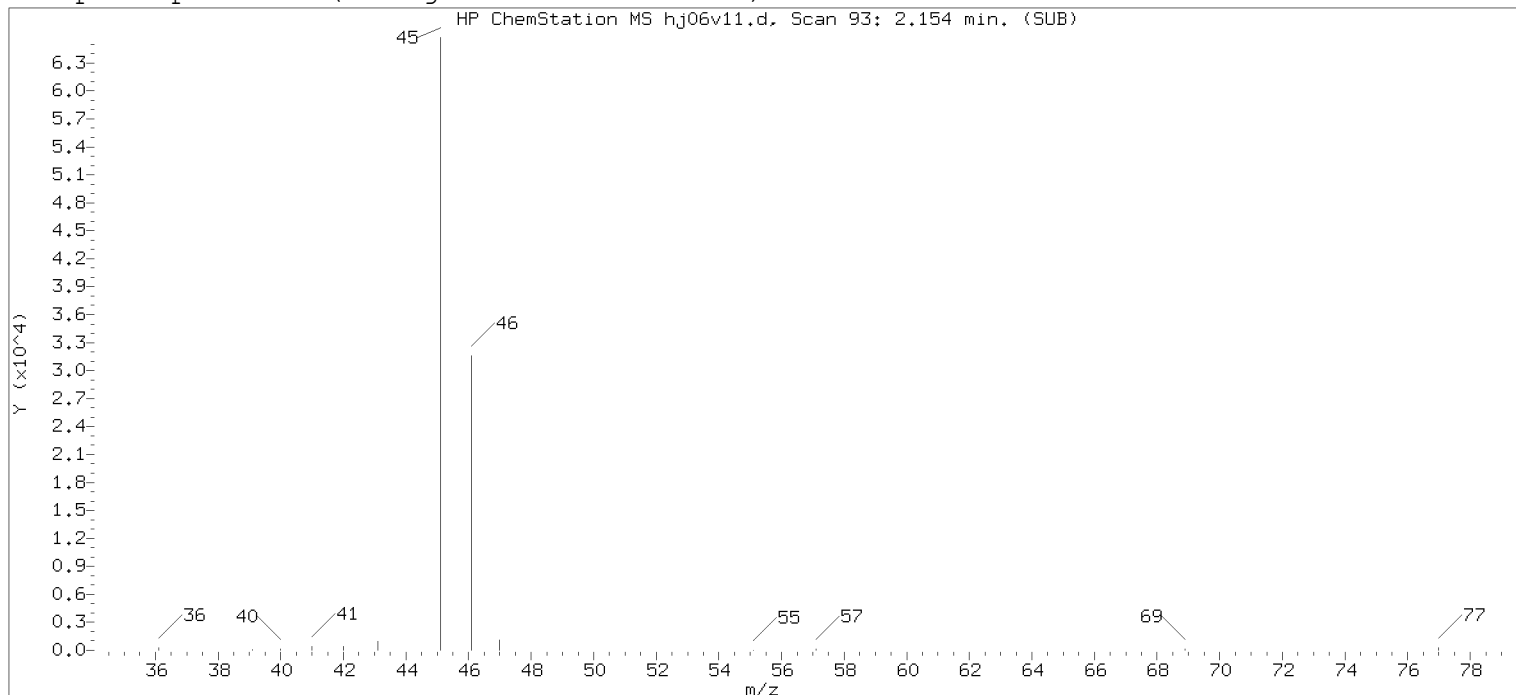
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 333019M
On-Column Amount (ng) : 5.1939
Integration start scan : 75 Integration stop scan: 188
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

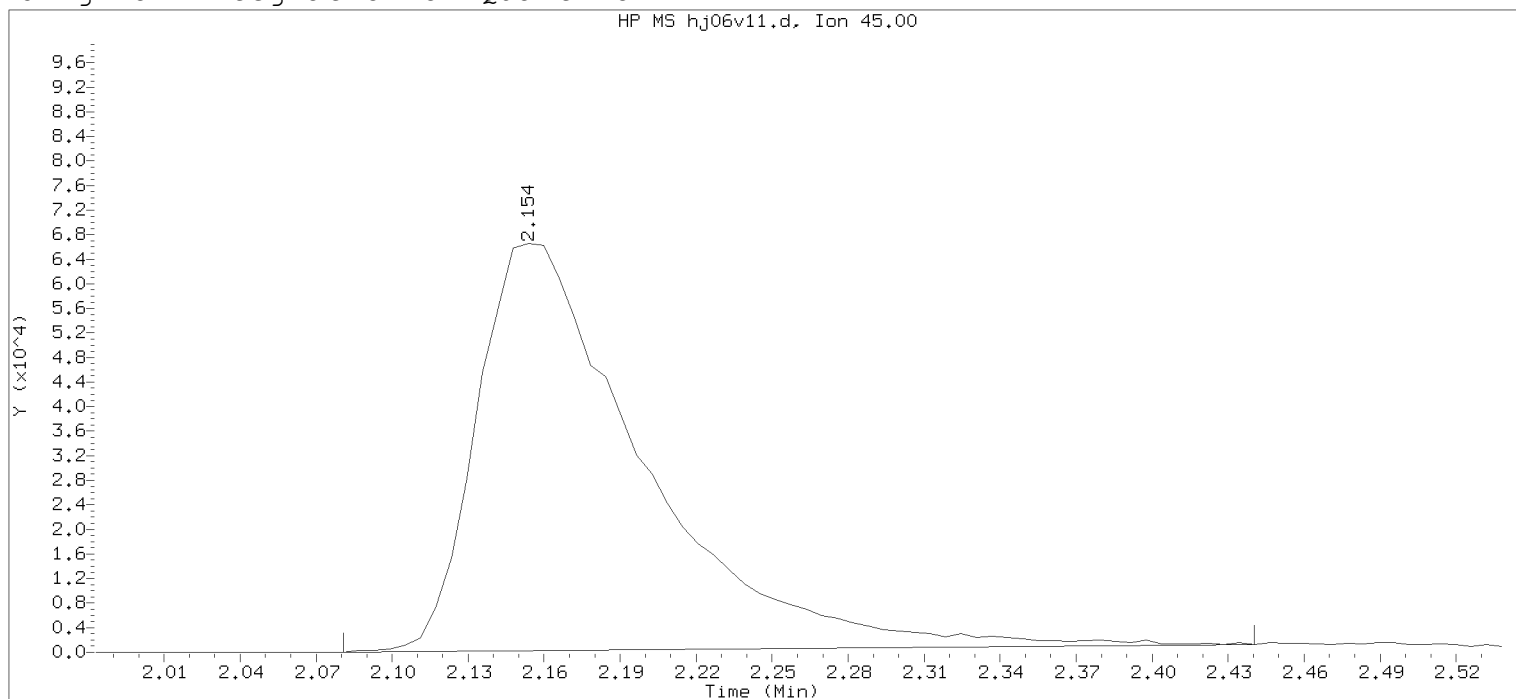
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



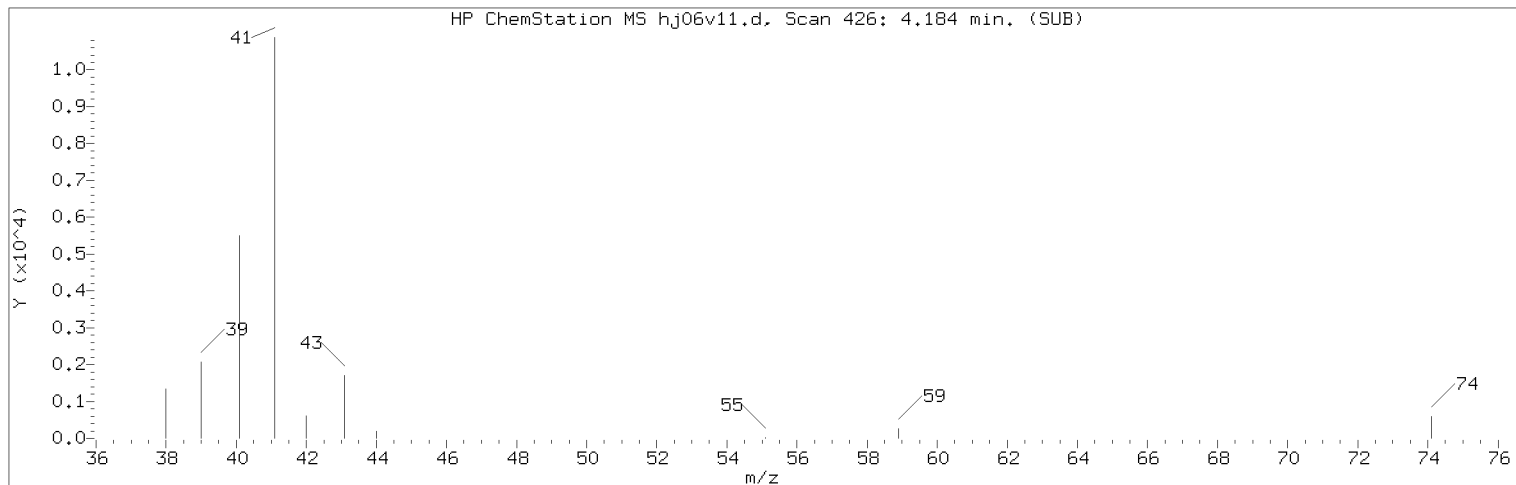
Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:27 jkh09052

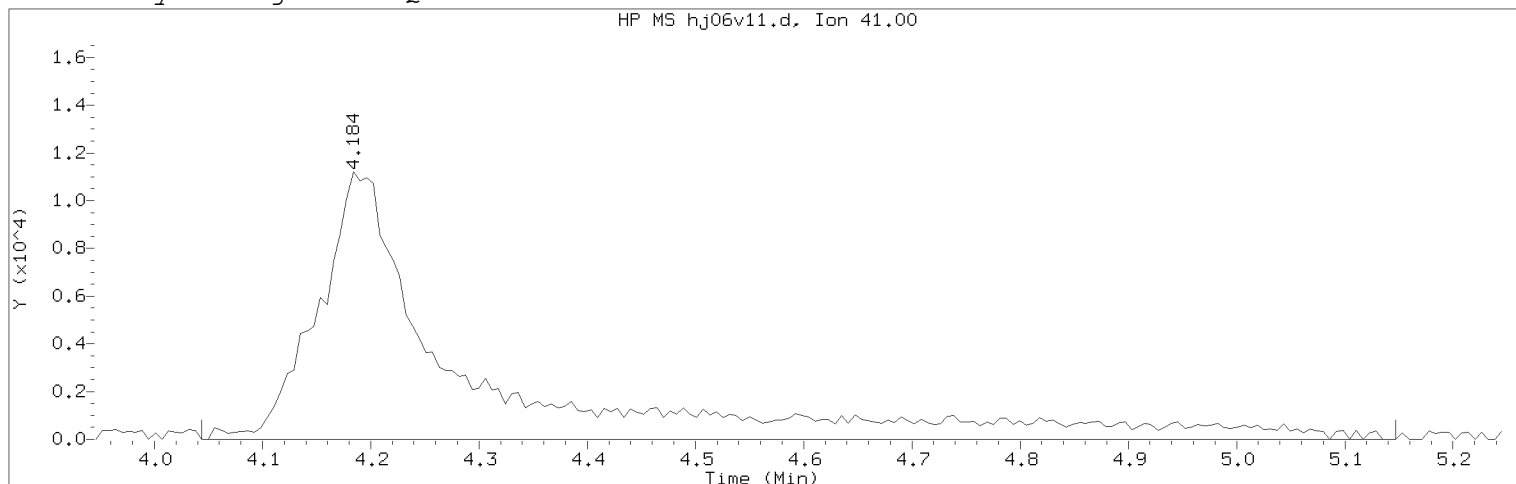
Sample Name: ICVH01 Lab Sample ID: ICVH01

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area : 305023
On-column Amount (ng) : 4.7573
Integration start scan : 80 Integration stop scan: 139
Y at integration start : 0 Y at integration end: 1217

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 426	
Retention Time (minutes)	: 4.184	
Quant Ion	: 41.00	
Area (flag)	: 106822M	
On-Column Amount (ng)	: 38.9496	
Integration start scan	: 402	Integration stop scan: 583
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

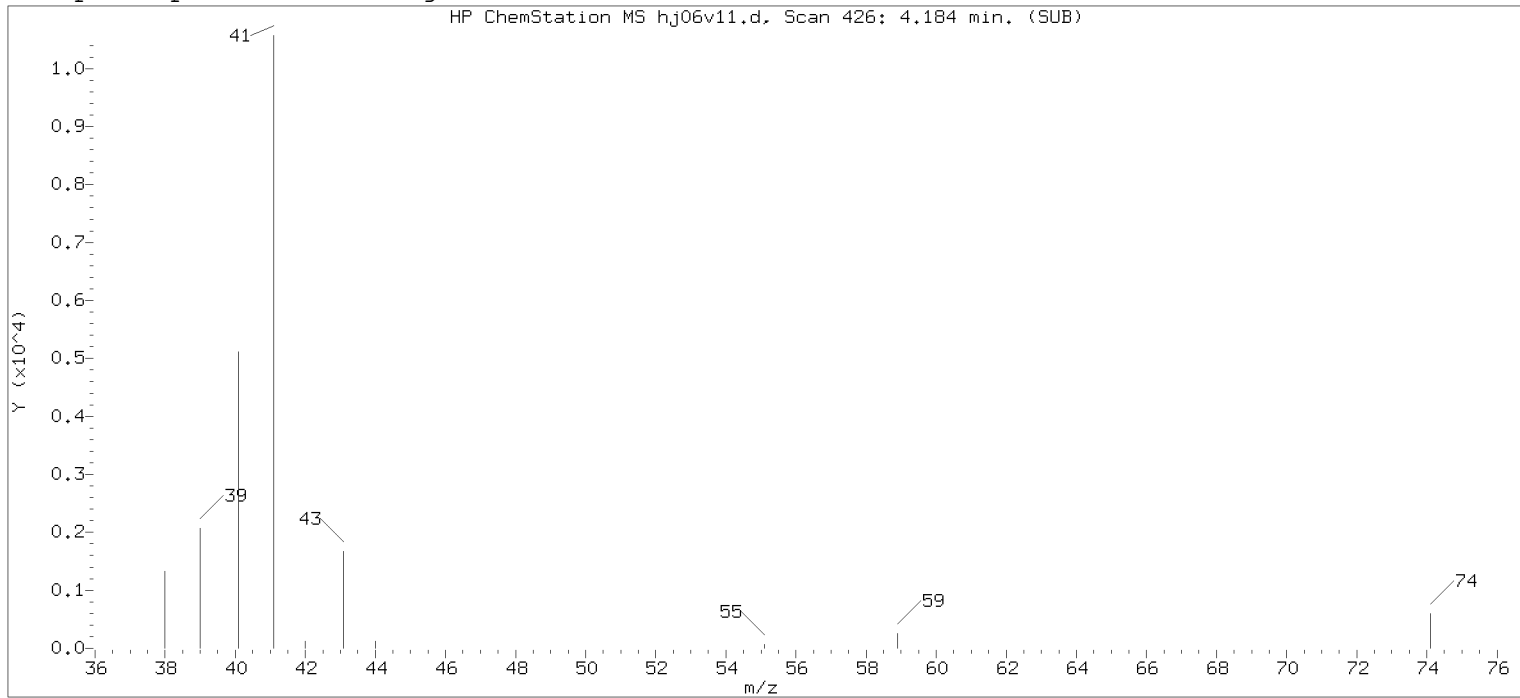
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

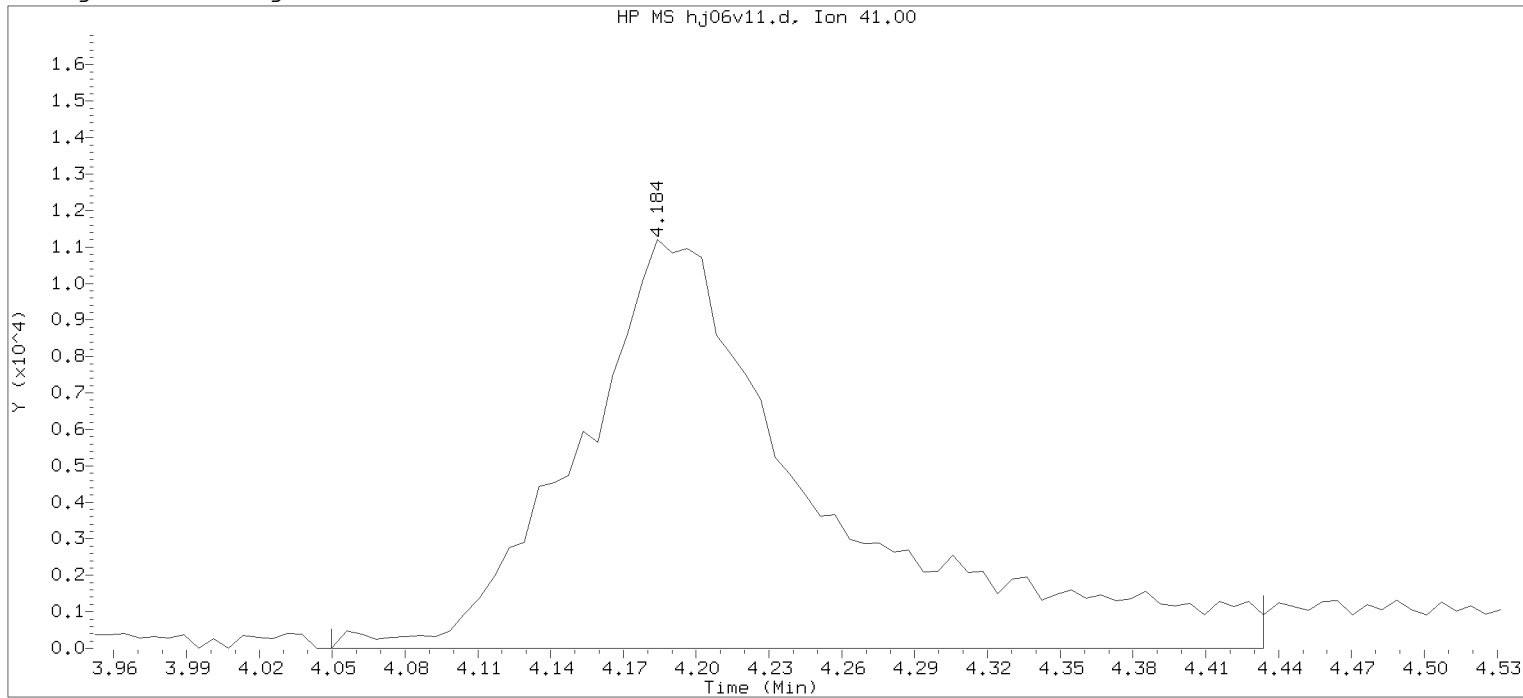
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:27 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number : 25

Compound Name : Acetonitrile

Scan Number : 426

Retention Time (minutes): 4.184

Quant Ion : 41.00

Area : 77184

On-column Amount (ng) : 28.1428

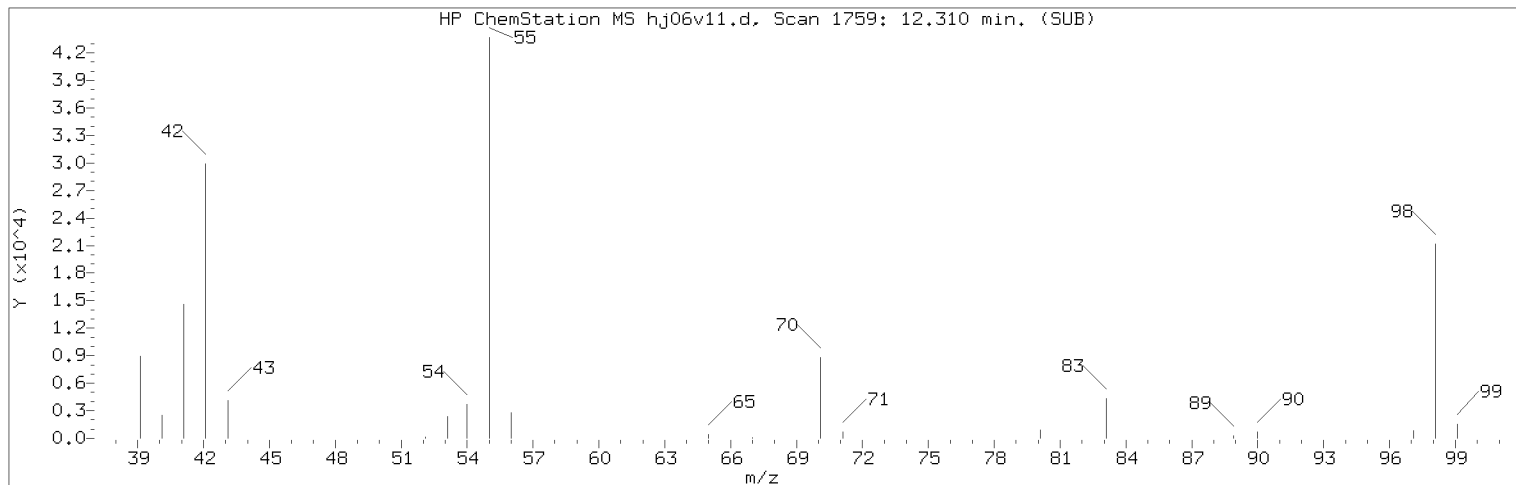
Integration start scan : 403 Integration stop scan: 466

Y at integration start : 0 Y at integration end: 0

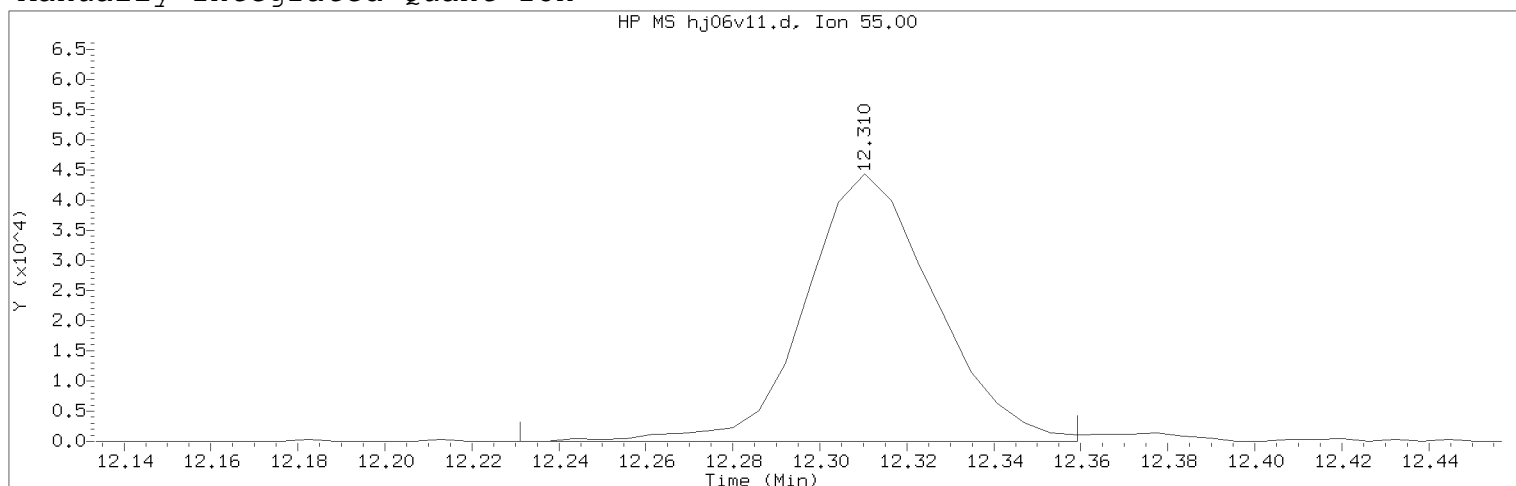
Digitally signed by Jennifer K. Howe on 01/07/2020 at 10:28.

Target 3.5 esignature user RAE59 Page 9872 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area (flag)	: 91222M	
On-Column Amount (ng)	: 113.4537	
Integration start scan	: 1745	Integration stop scan: 1766
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

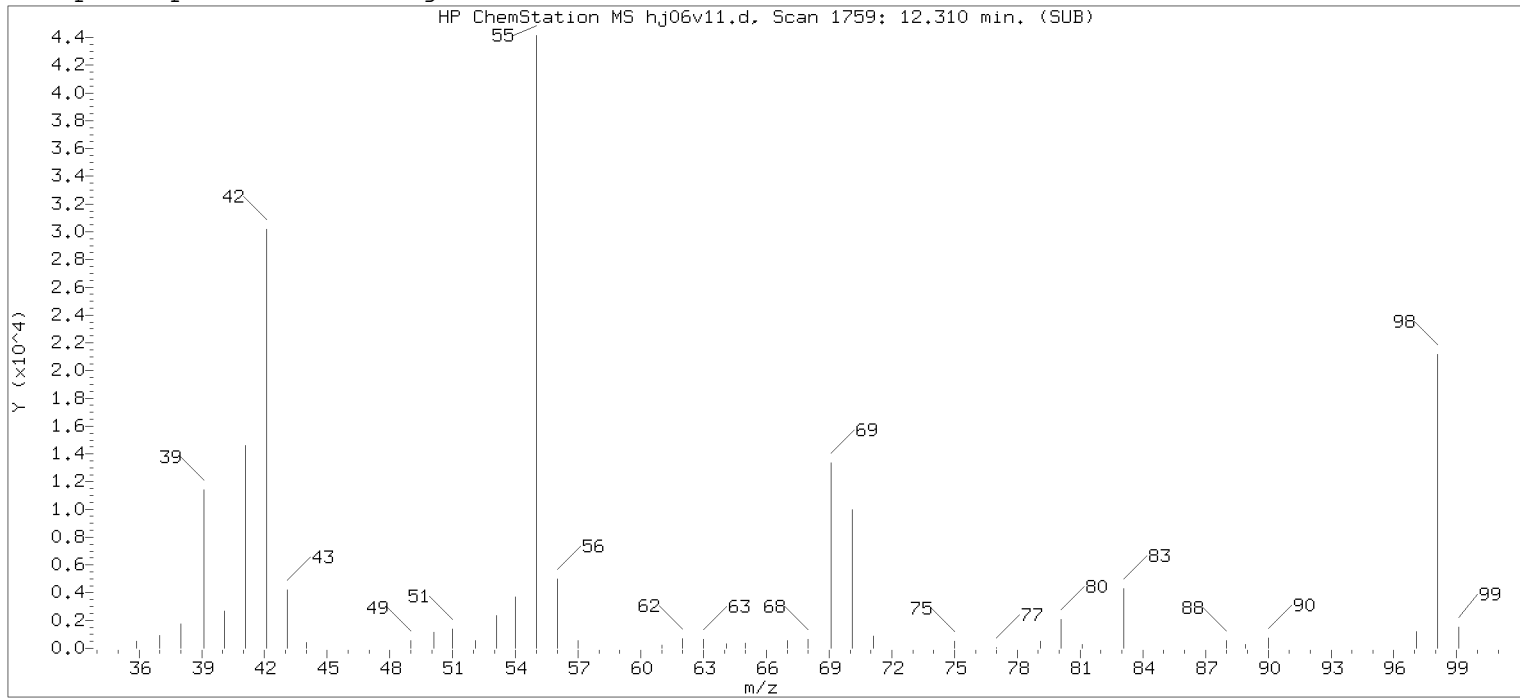
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

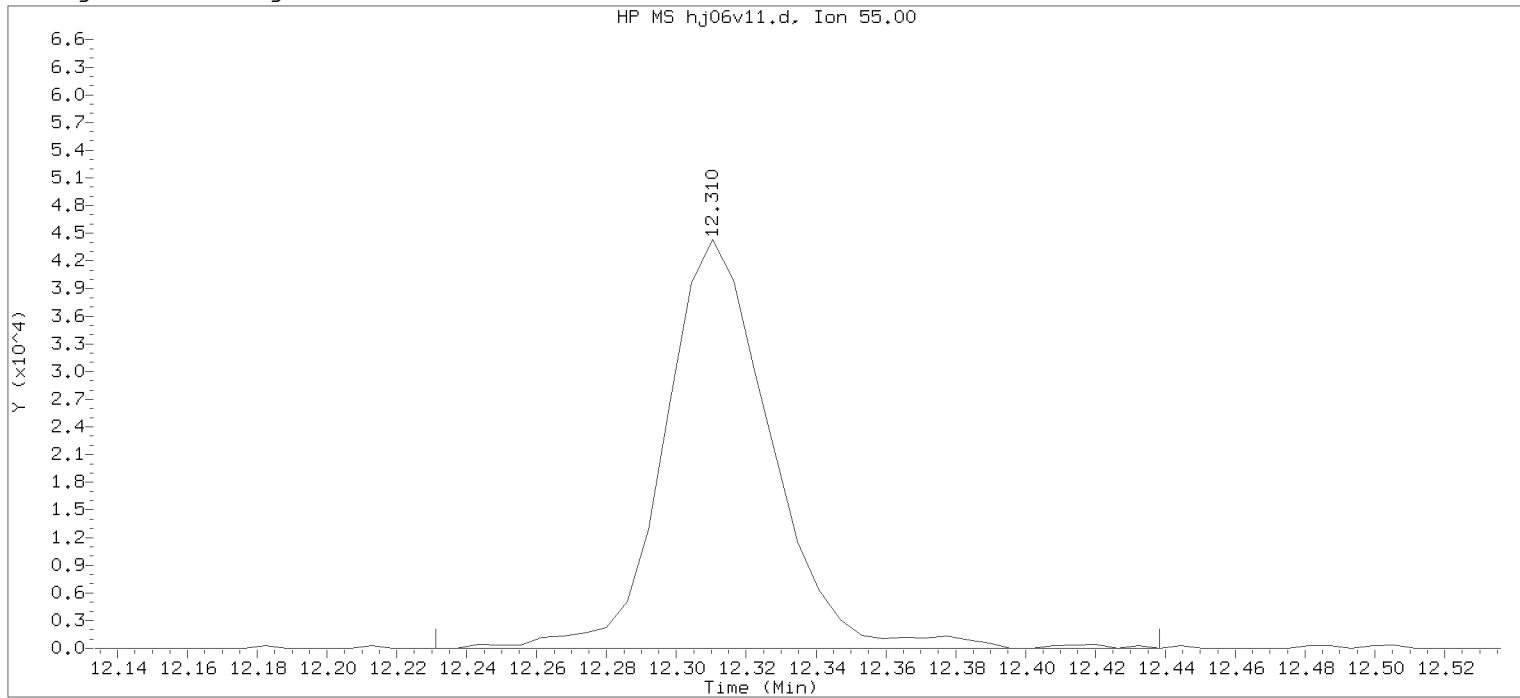
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



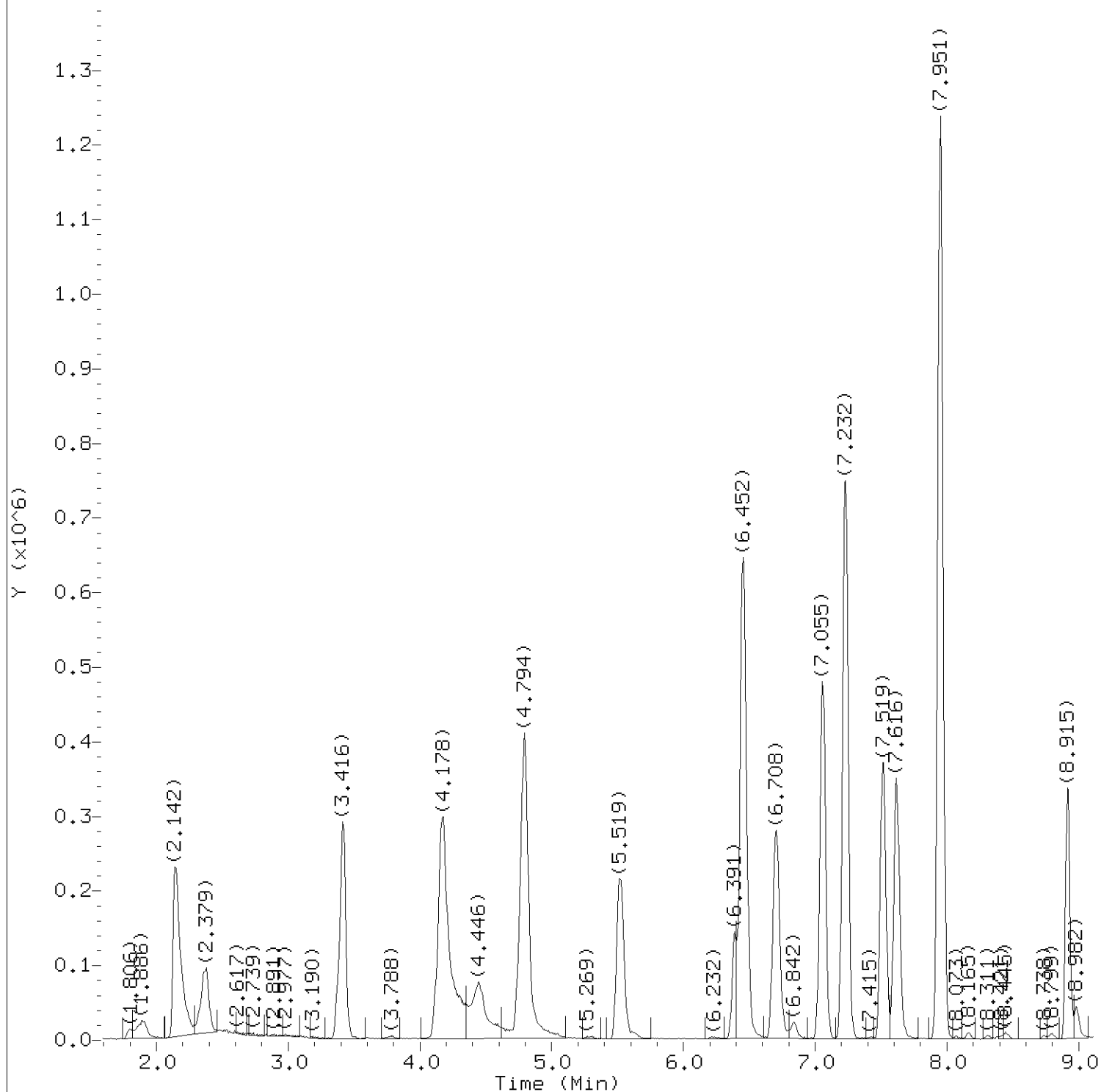
Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:27 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 93561	
On-column Amount (ng)	: 116.3633	
Integration start scan	: 1745	Integration stop scan: 1779
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d
Injection date and time: 27-APR-2020 20:03

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m
Calibration date and time: 27-APR-2020 20:21

Sublist used: SMICAL

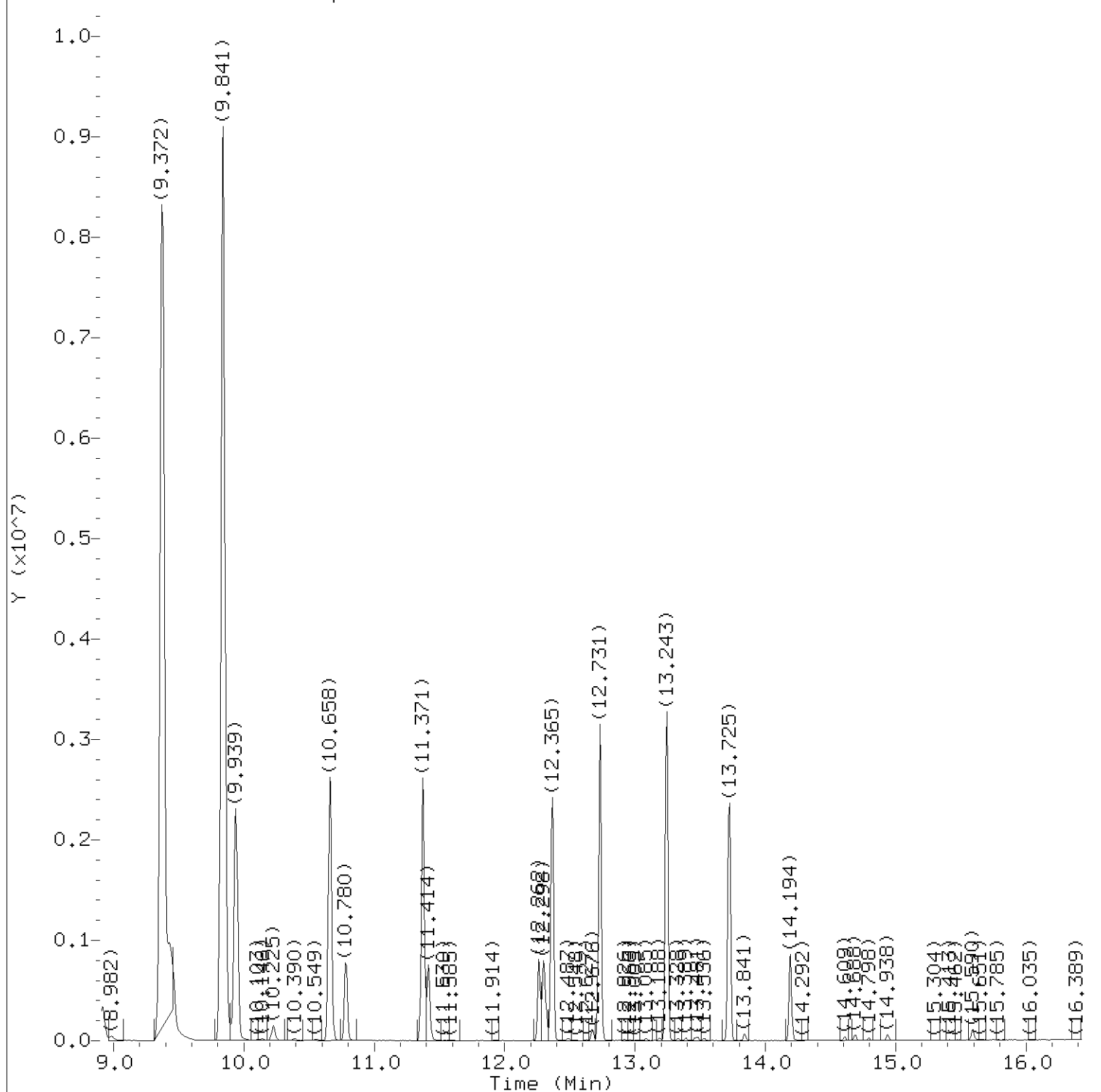
Date, time and analyst ID of latest file update: 27-Apr-2020 20:35 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d
Injection date and time: 27-APR-2020 20:03

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m
Calibration date and time: 27-APR-2020 20:21

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 27-Apr-2020 20:35 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:03

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 27-APR-2020 20:21

Date, time and analyst ID of latest file update: 27-Apr-2020 20:35 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.142	45	679482M	12.137
26) Acetonitrile	(1)	4.178	41	1247235M	371.335
27)*t-Butyl Alcohol-d10	(1)	4.452	65	137938	50.000
37) Vinyl Acetate	(2)	5.513	43	673970	11.300
44) Methyl Acrylate	(2)	6.452	55	1297944	63.023
54) 1-Chlorobutane	(2)	7.226	56	926945	10.904
64)*Fluorobenzene	(2)	7.951	96	1680461	10.000
78) Chloroacetonitrile	(2)	9.427	75	776219	696.184
79) 2-Chloroethyl vinyl ether	(2)	9.457	63	233084	12.048
98)*Chlorobenzene-d5	(3)	11.371	117	1509673	10.000
110) cis-1,4-Dichloro-2-butene	(1)	12.268	88	180544	10.676
113) Cyclohexanone	(1)	12.298	55	398924	405.122
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	811495	10.000

M = Compound was manually integrated.

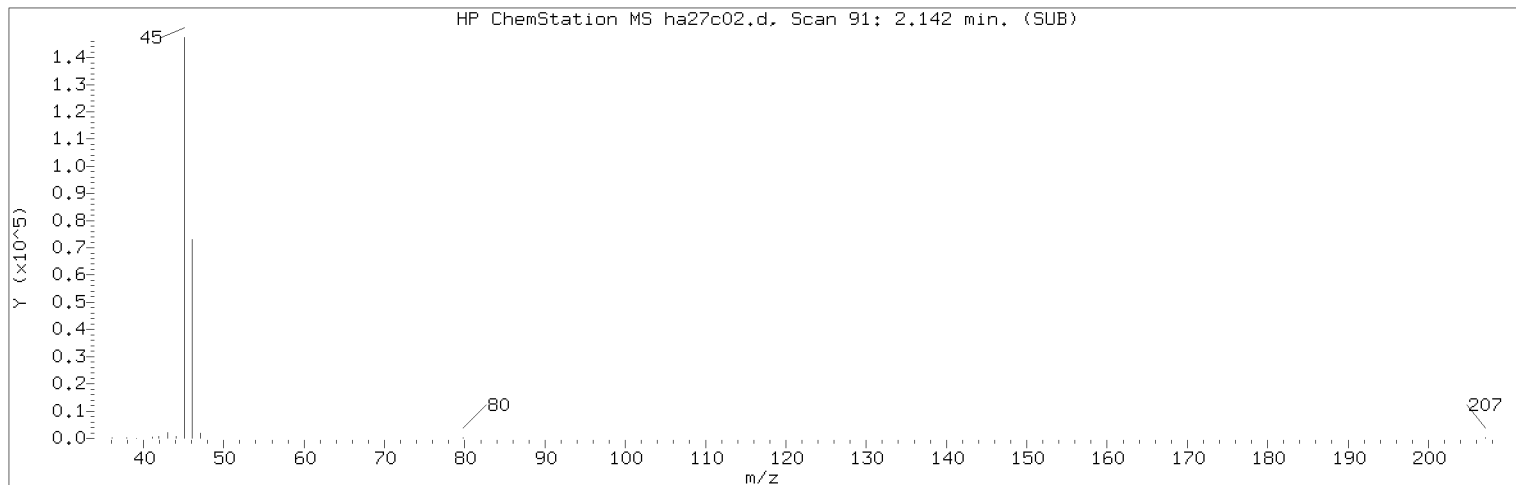
* = Compound is an internal standard.

page 1 of 1

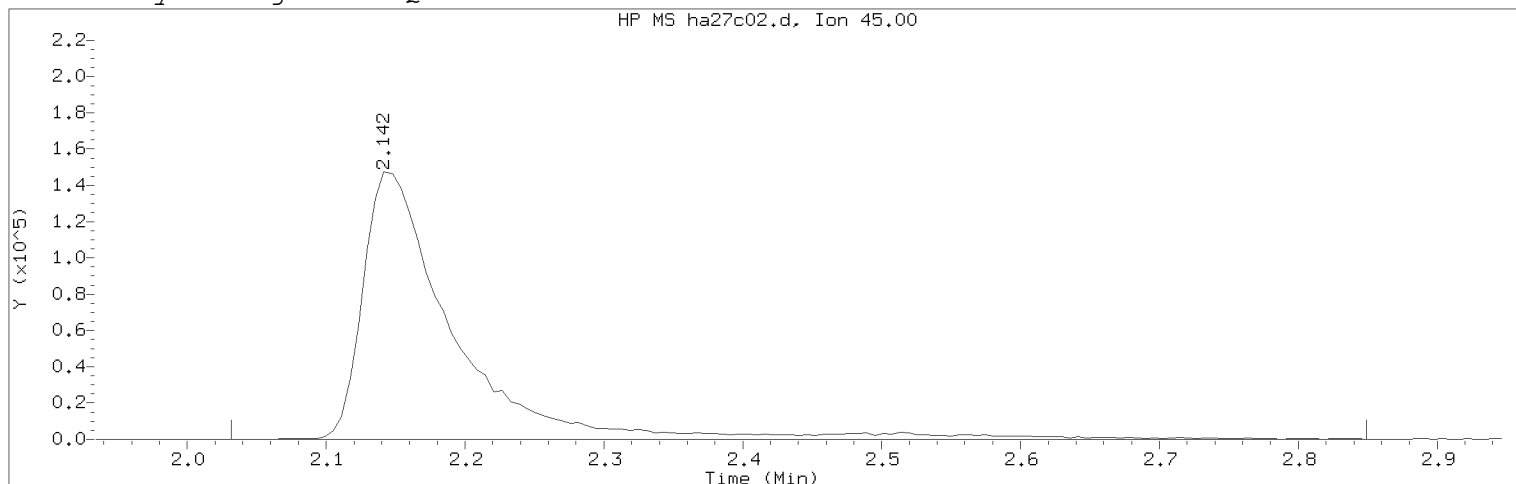
Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 20:03 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 27-APR-2020 20:21
Date, time and analyst ID of latest file update: 27-Apr-2020 20:35 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

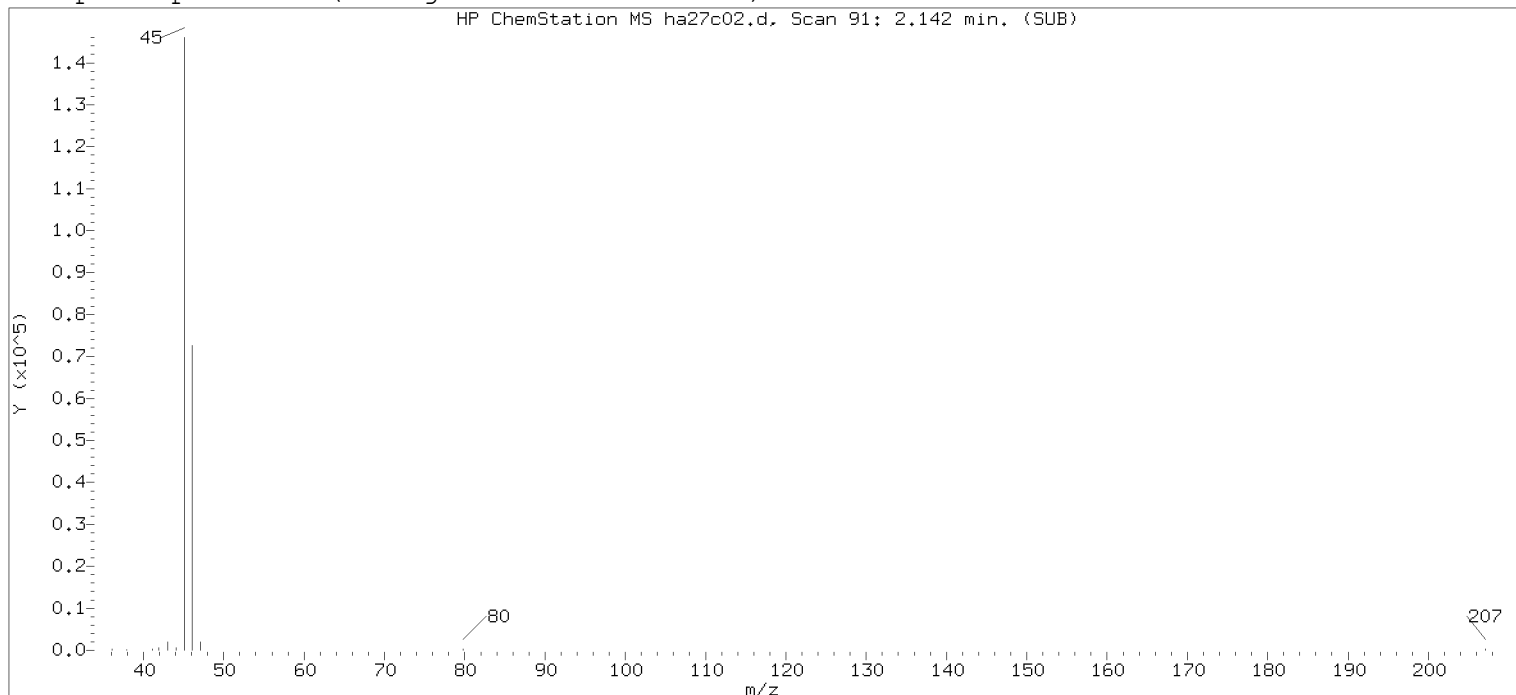
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Quant Ion : 45.00
Area (flag) : 679482M
On-Column Amount (ng) : 12.1375
Integration start scan : 72 Integration stop scan: 206
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

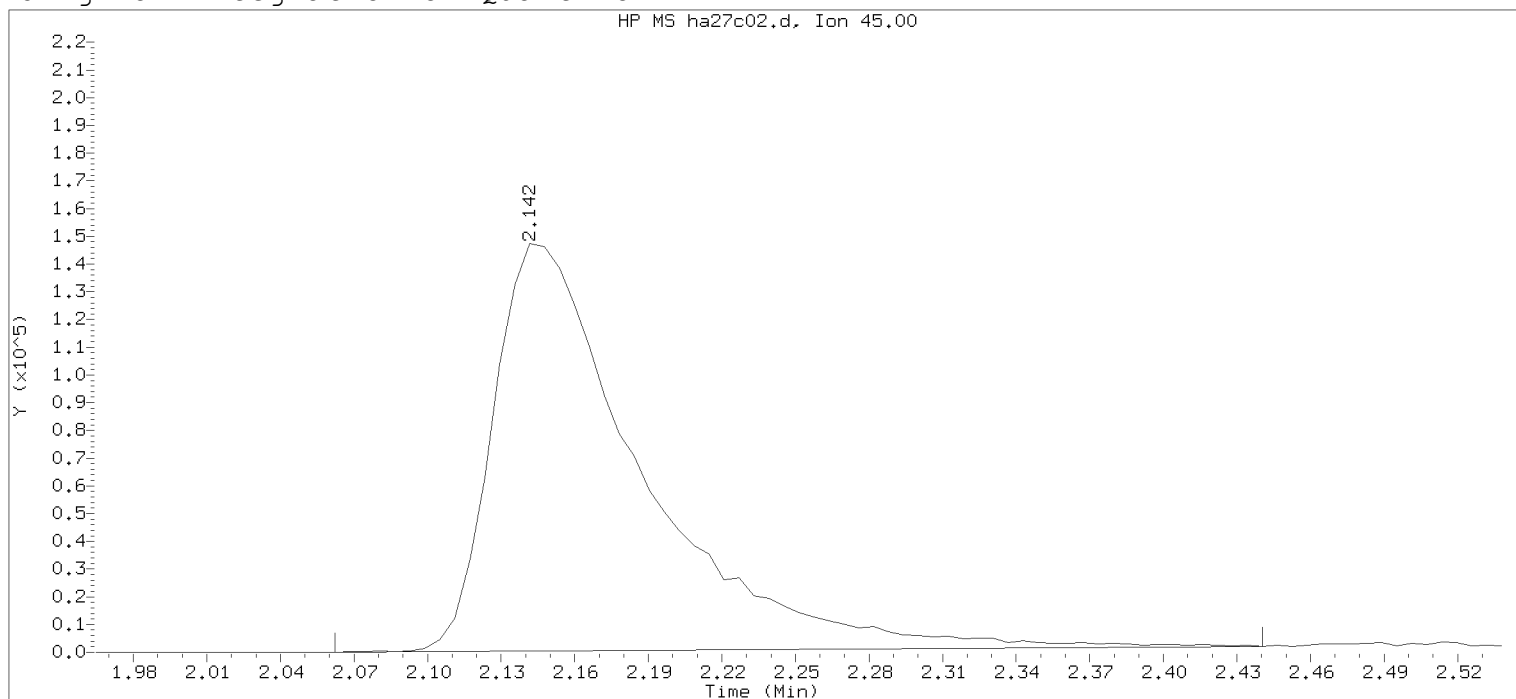
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:03

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 27-APR-2020 20:21

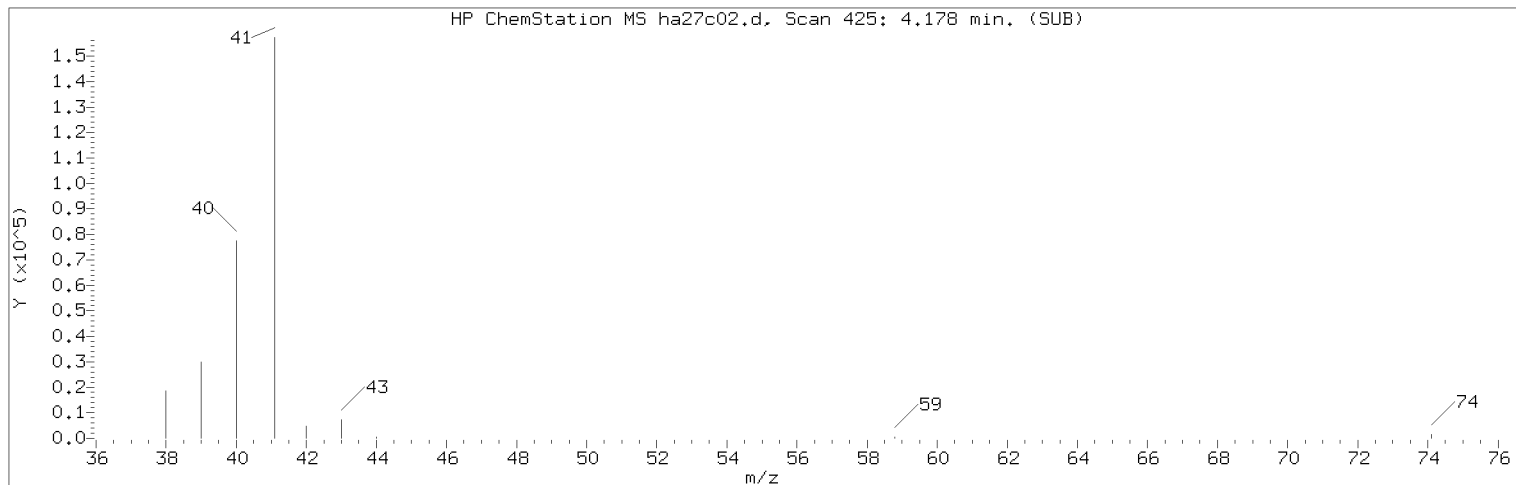
Date, time and analyst ID of latest file update: 27-Apr-2020 20:21 Automation

Sample Name: VSTD010

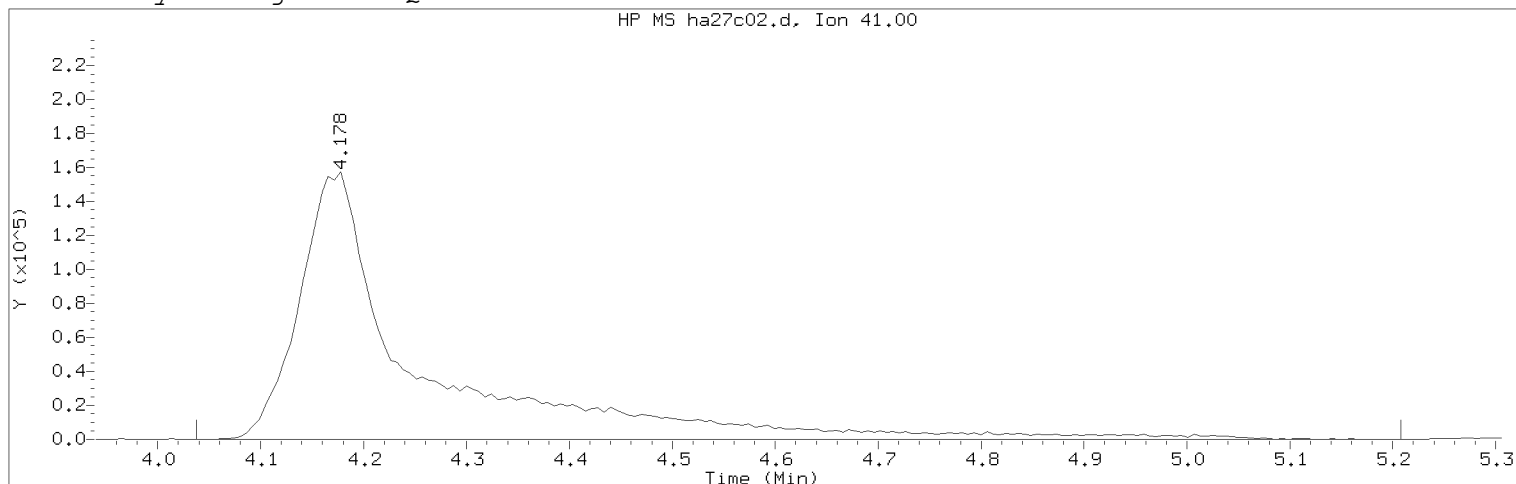
Lab Sample ID: VSTD010

Compound Number	:	4	
Compound Name	:	Dimethyl ether	
Scan Number	:	91	
Retention Time (minutes)	:	2.142	
Quant Ion	:	45.00	
Area	:	621453	
On-column Amount (ng)	:	11.1009	
Integration start scan	:	77	Integration stop scan: 139
Y at integration start	:	0	Y at integration end: 2088

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 20:03 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 27-APR-2020 20:21
Date, time and analyst ID of latest file update: 27-Apr-2020 20:35 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

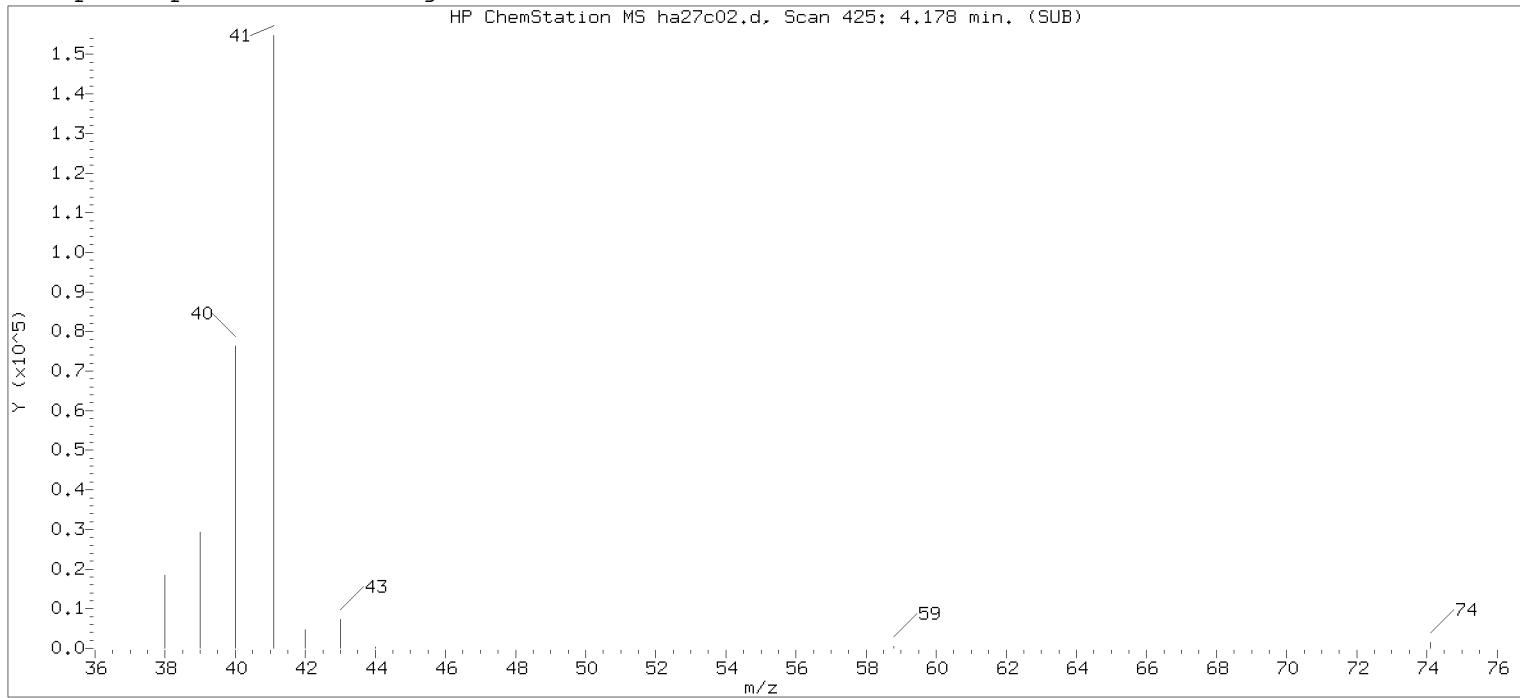
Compound Number : 26
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area (flag) : 1247235M
On-Column Amount (ng) : 371.3345
Integration start scan : 401 Integration stop scan: 593
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

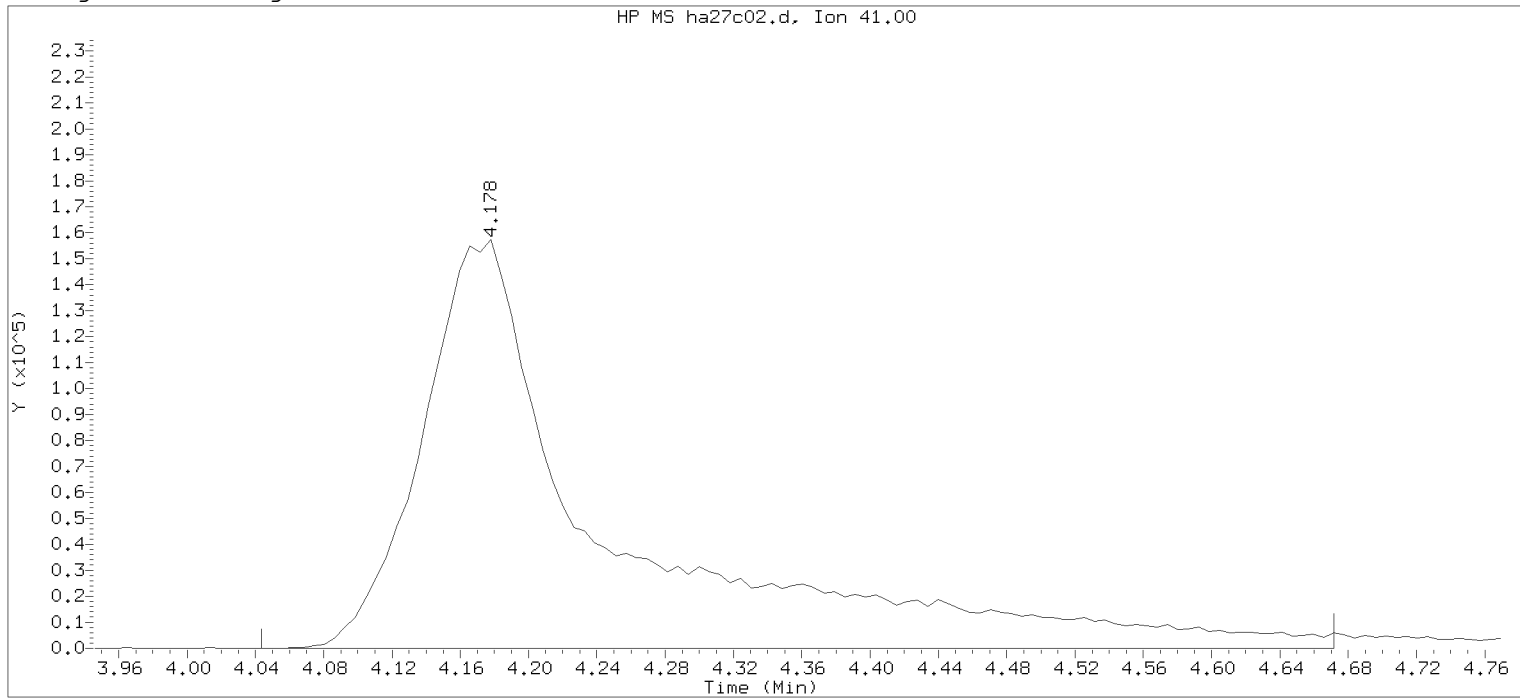
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/27/2020 at 23:05.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27c02.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:03

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 27-APR-2020 20:21

Date, time and analyst ID of latest file update: 27-Apr-2020 20:21 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 26

Compound Name : Acetonitrile

Scan Number : 425

Retention Time (minutes): 4.178

Quant Ion : 41.00

Area : 1177965

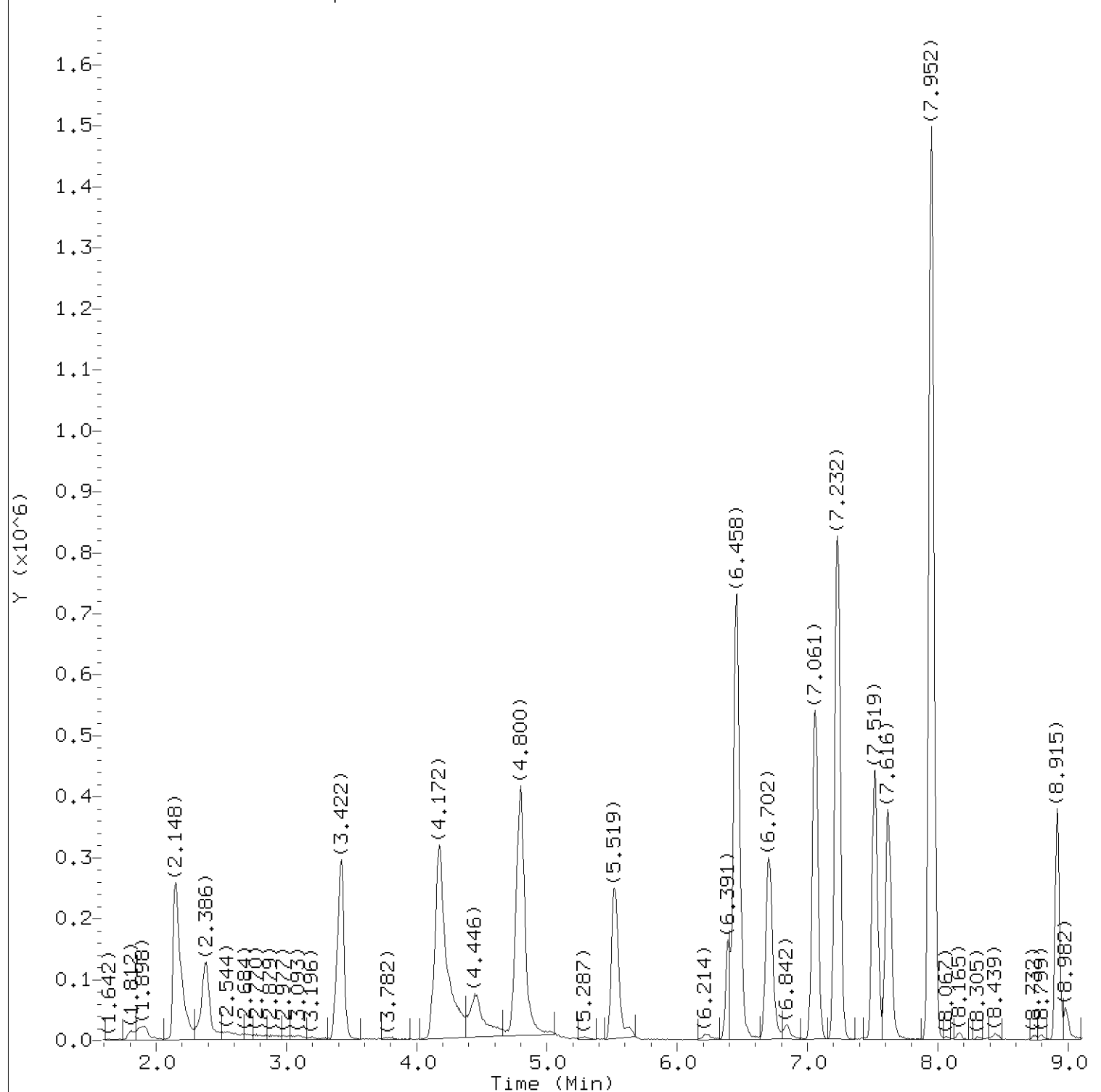
On-column Amount (ng) : 350.7090

Integration start scan : 402 Integration stop scan: 505

Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/27/2020 at 23:05.

Target 3.5 esignature user RAE59 Page 288 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d
Injection date and time: 28-APR-2020 09:13

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:31

Sublist used: SMICAL

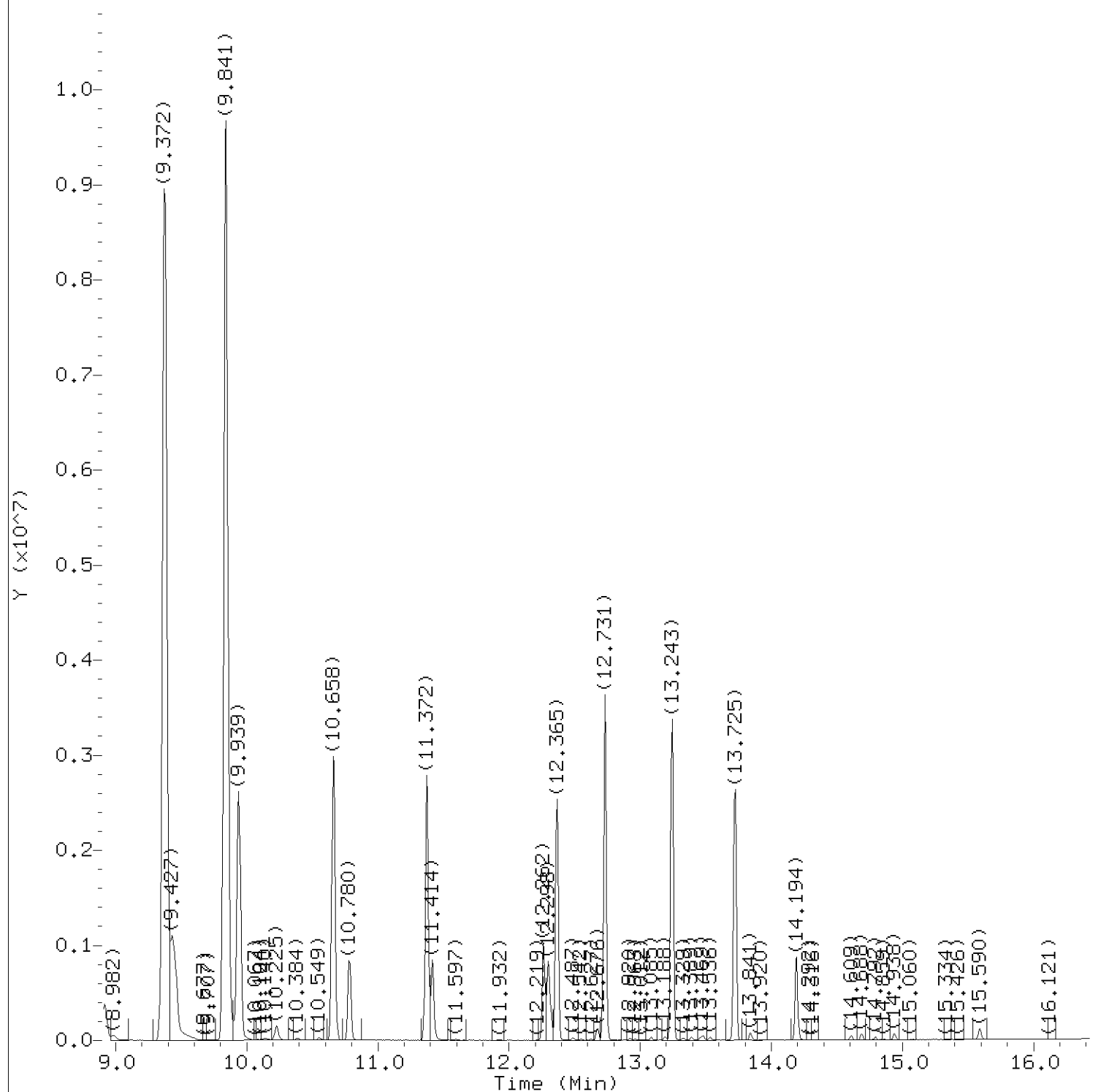
Date, time and analyst ID of latest file update: 28-Apr-2020 09:35 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:36.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d
Injection date and time: 28-APR-2020 09:13

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:31

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 28-Apr-2020 09:35 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:36.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:13

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 28-APR-2020 09:31

Date, time and analyst ID of latest file update: 28-Apr-2020 09:35 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	703463M	10.311
26) Acetonitrile	(1)	4.172	41	1347907M	413.823
27)*t-Butyl Alcohol-d10	(1)	4.446	65	133766	50.000
37) Vinyl Acetate	(2)	5.519	43	751084	10.333
44) Methyl Acrylate	(2)	6.458	55	1423362	56.713
54) 1-Chlorobutane	(2)	7.232	56	1034413	9.985
64)*Fluorobenzene	(2)	7.952	96	2047875	10.000
78) Chloroacetonitrile	(2)	9.427	75	820131	603.599
79) 2-Chloroethyl vinyl ether	(2)	9.457	63	263575	11.180
98)*Chlorobenzene-d5	(3)	11.372	117	1605277	10.000
110) cis-1,4-Dichloro-2-butene	(1)	12.262	88	229002	13.963
113) Cyclohexanone	(1)	12.298	55	410890	430.288
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	850681	10.000

M = Compound was manually integrated.

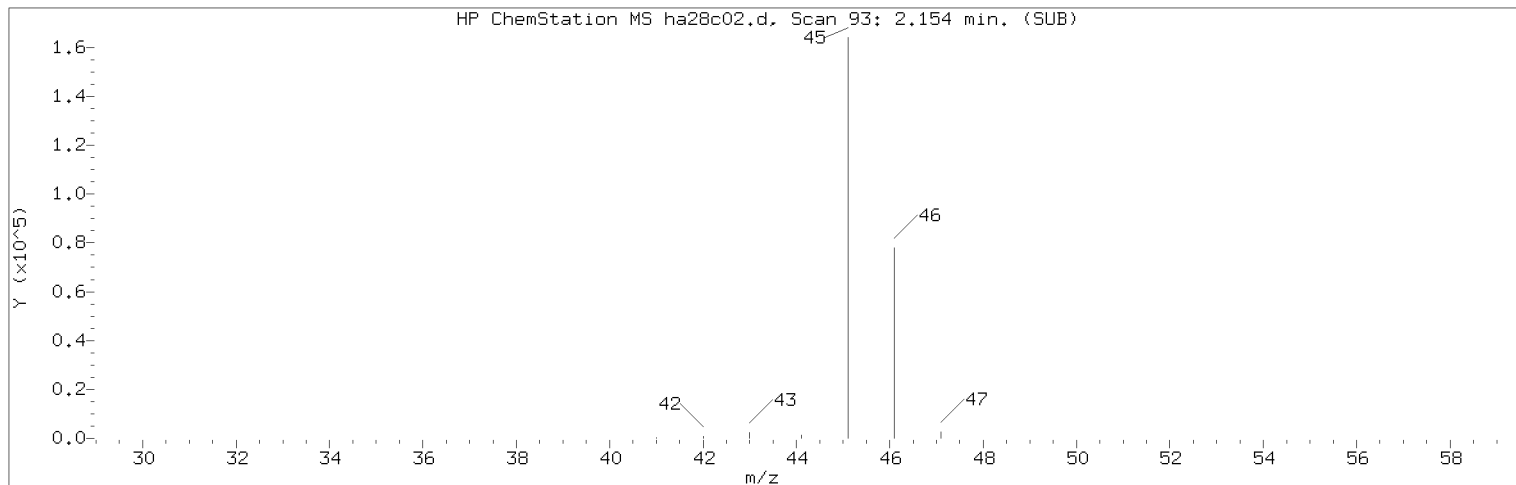
* = Compound is an internal standard.

page 1 of 1

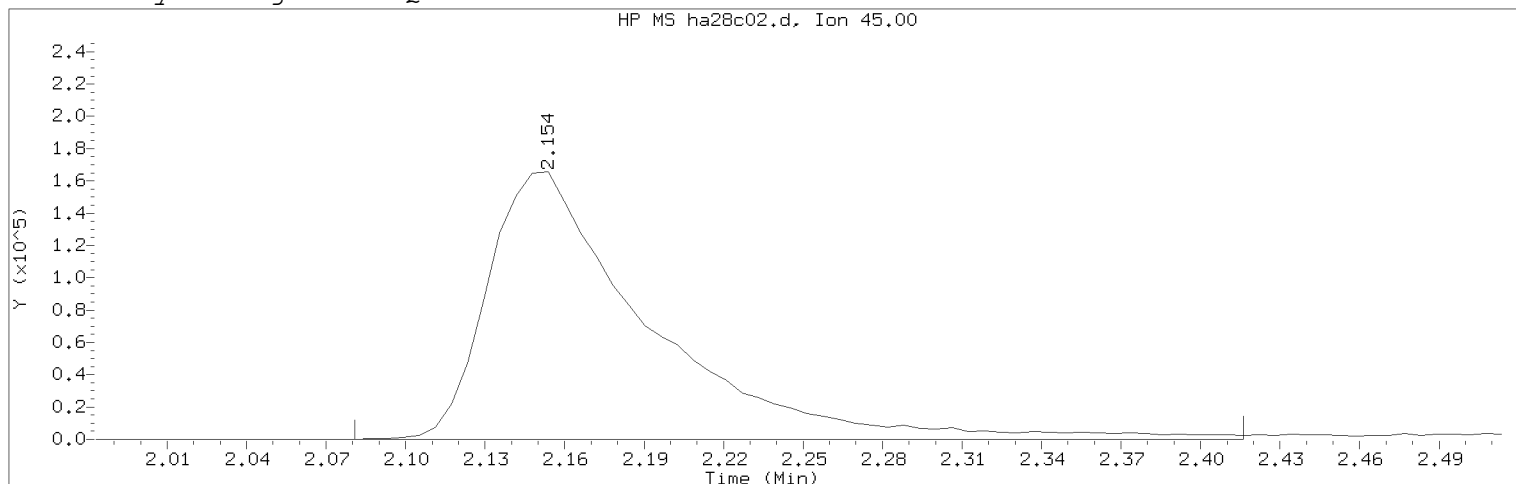
Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:36.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:13 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 28-APR-2020 09:31
Date, time and analyst ID of latest file update: 28-Apr-2020 09:35 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

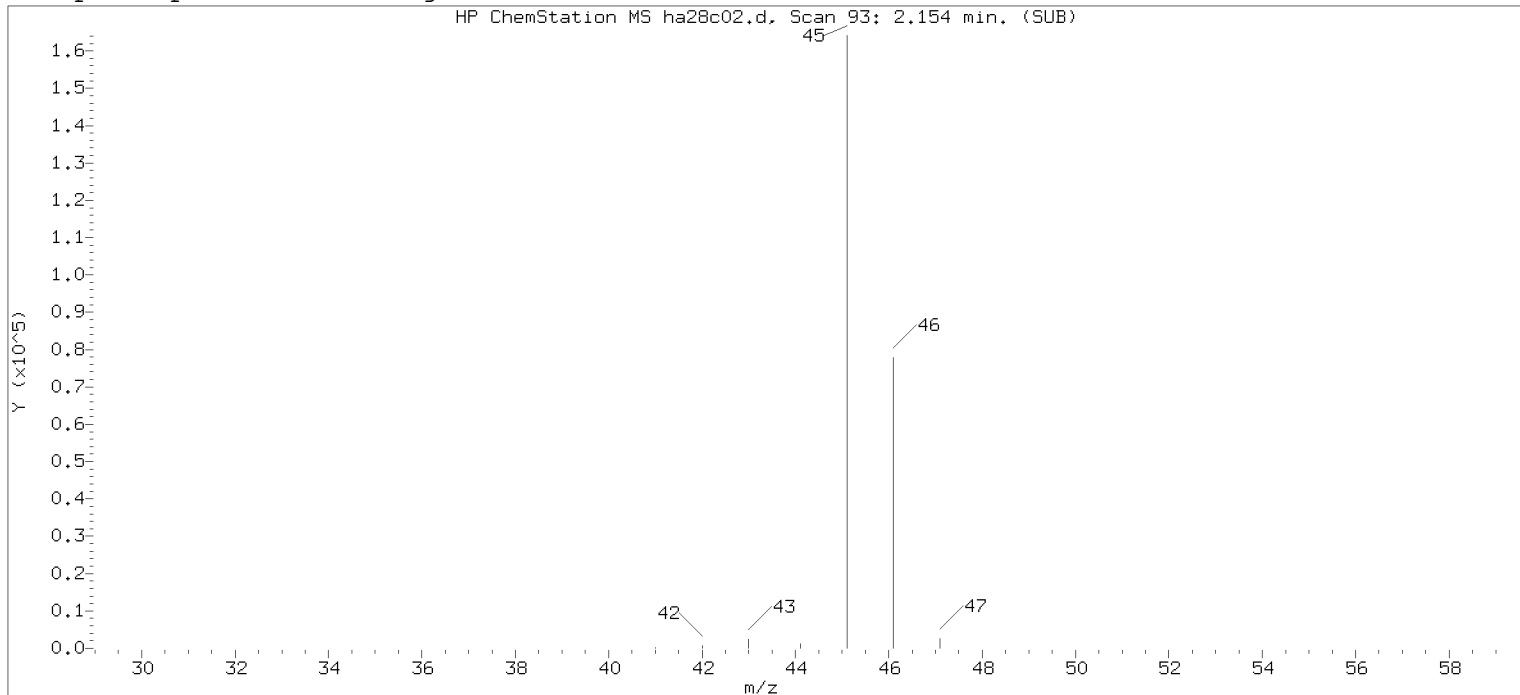
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 703463M
On-Column Amount (ng) : 10.3114
Integration start scan : 80 Integration stop scan: 135
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

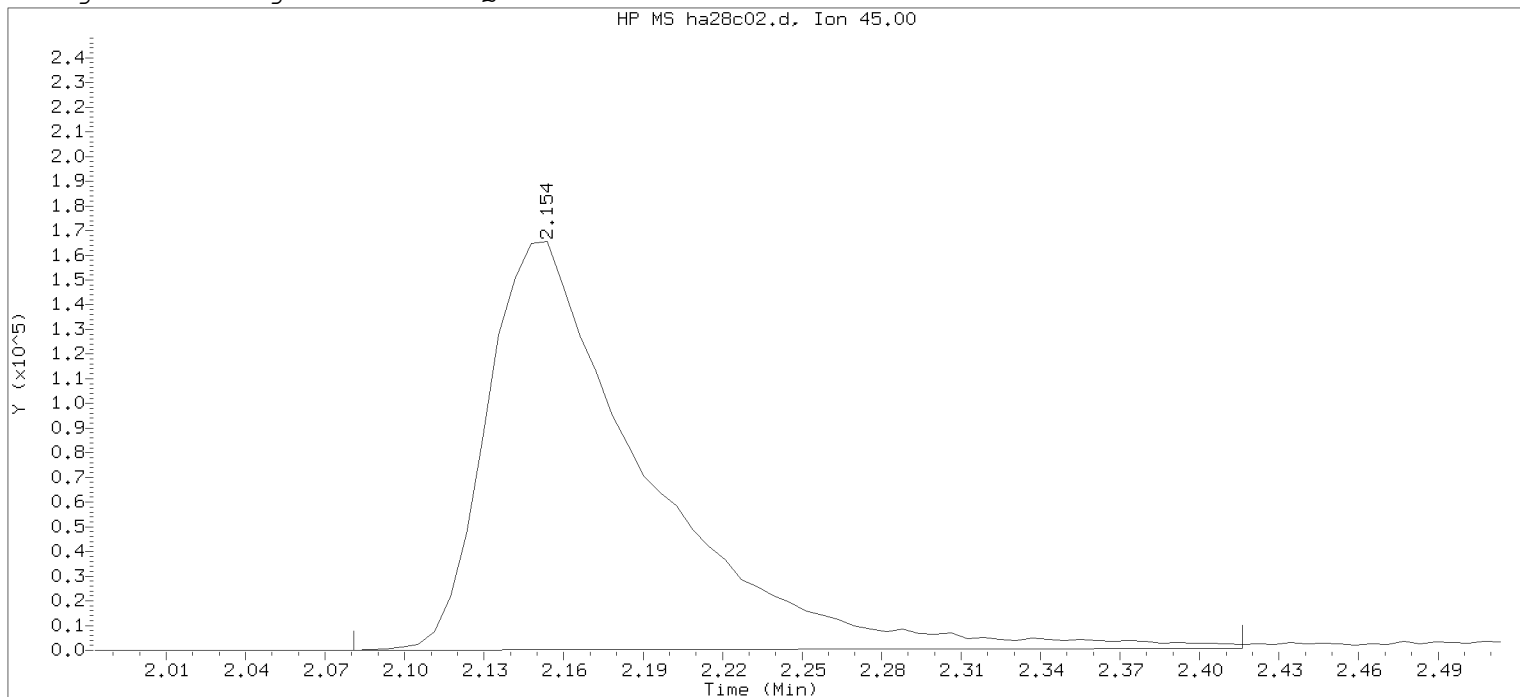
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:36.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:13

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 28-APR-2020 09:31

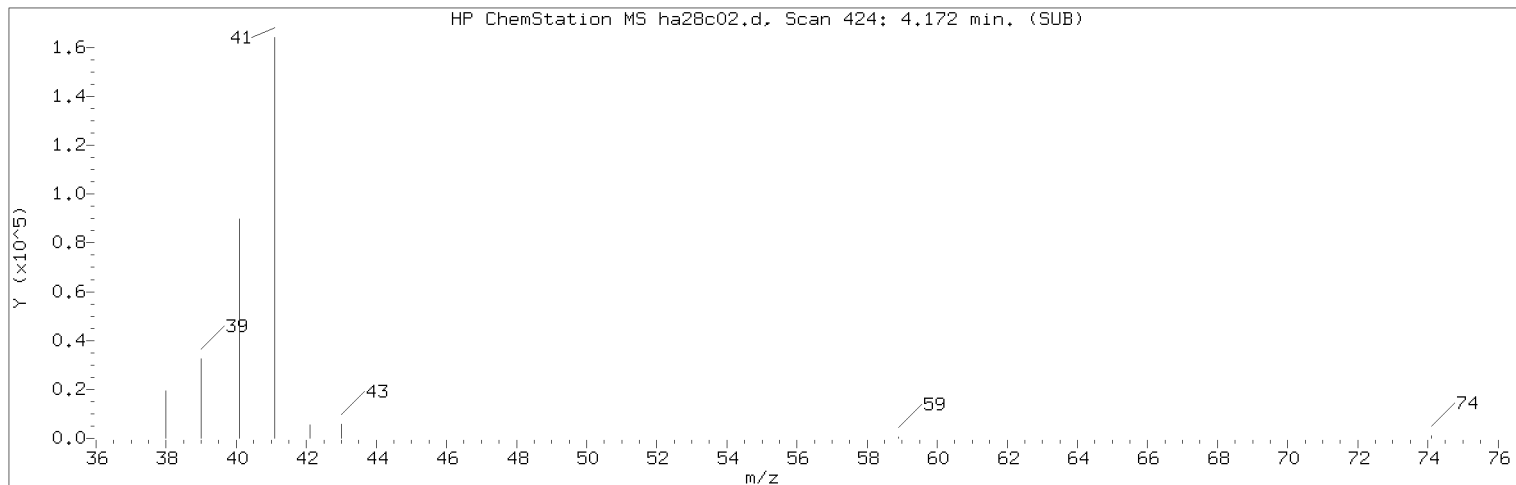
Date, time and analyst ID of latest file update: 28-Apr-2020 09:31 Automation

Sample Name: VSTD010

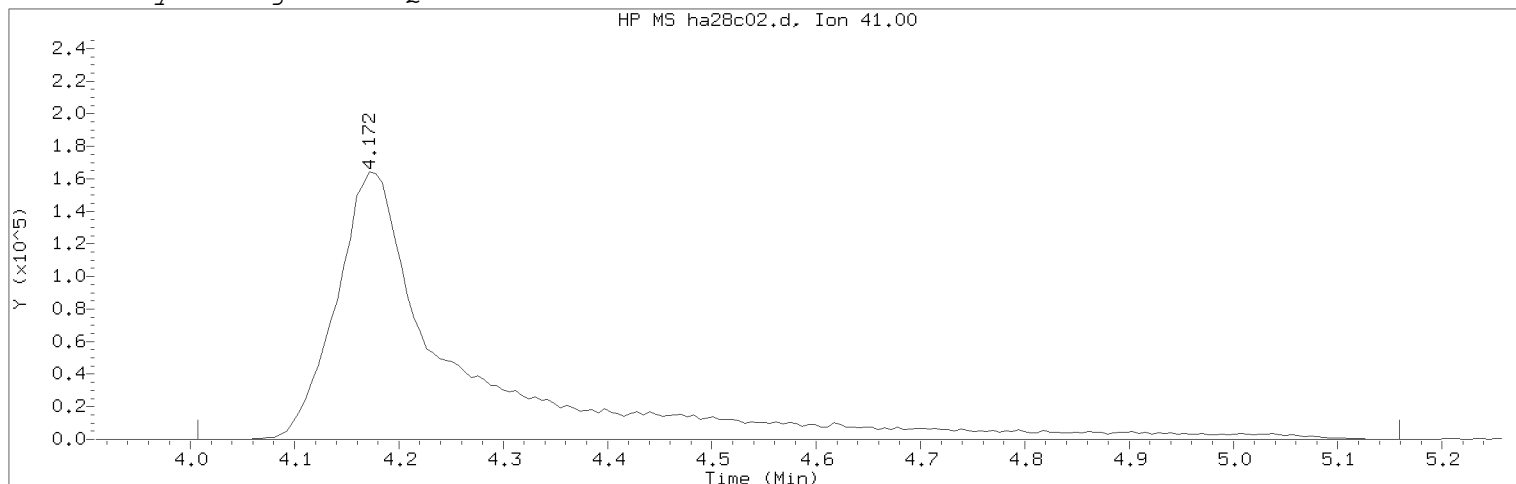
Lab Sample ID: VSTD010

Compound Number	:	4	
Compound Name	:	Dimethyl ether	
Scan Number	:	93	
Retention Time (minutes)	:	2.154	
Quant Ion	:	45.00	
Area	:	693940	
On-column Amount (ng)	:	10.1718	
Integration start scan	:	80	Integration stop scan: 135
Y at integration start	:	0	Y at integration end: 906

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:13 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 28-APR-2020 09:31
Date, time and analyst ID of latest file update: 28-Apr-2020 09:35 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

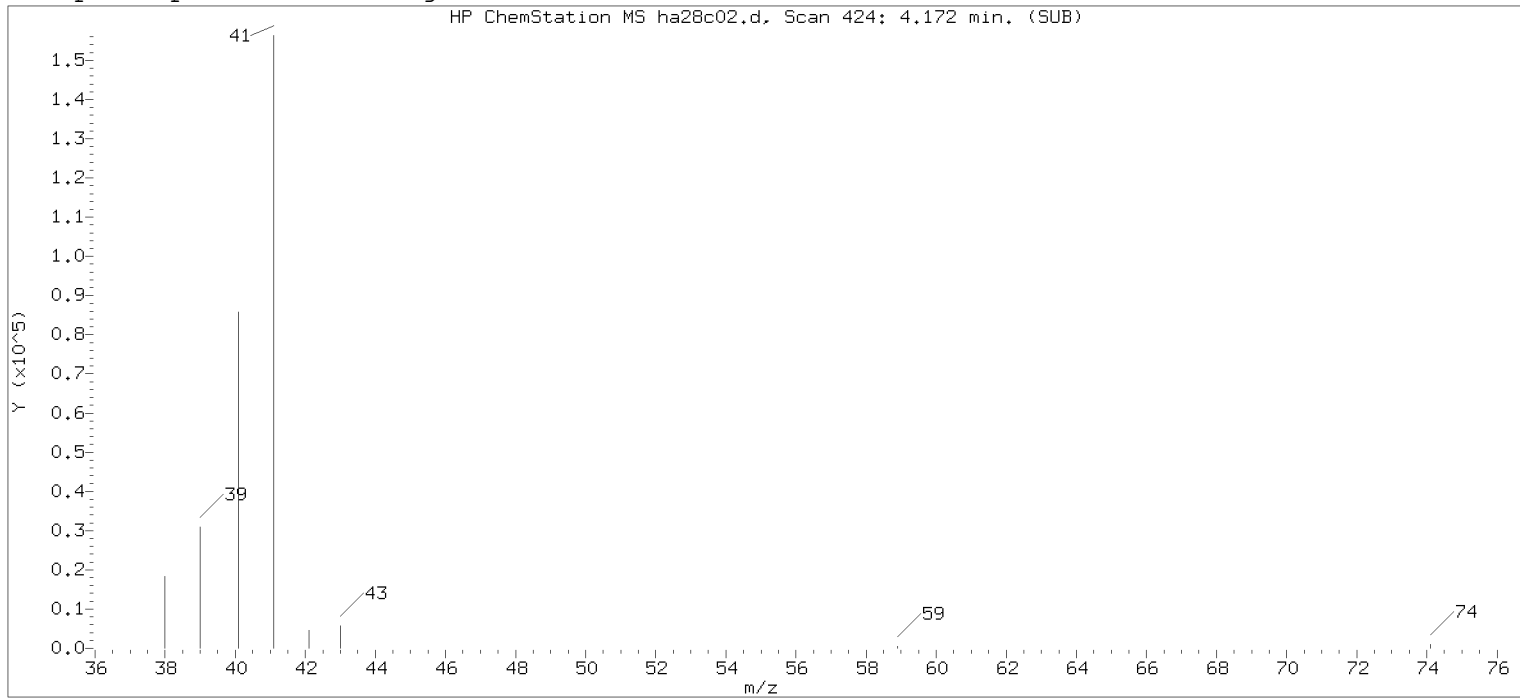
Compound Number : 26
Compound Name : Acetonitrile
Scan Number : 424
Retention Time (minutes): 4.172
Quant Ion : 41.00
Area (flag) : 1347907M
On-Column Amount (ng) : 413.8234
Integration start scan : 396 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

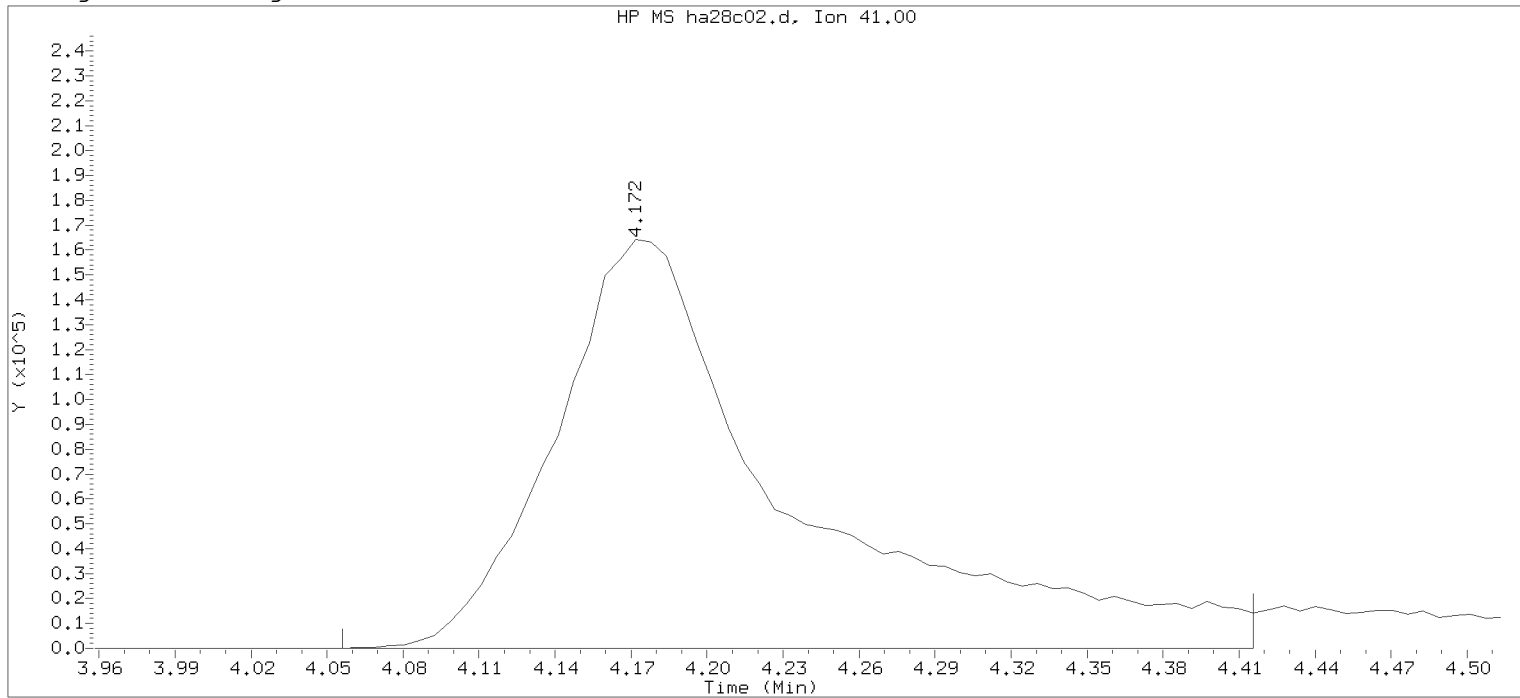
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/28/2020 at 09:36.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28c02.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:13 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 28-APR-2020 09:31
Date, time and analyst ID of latest file update: 28-Apr-2020 09:31 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 424	
Retention Time (minutes)	: 4.172	
Quant Ion	: 41.00	
Area	: 1072188	
On-column Amount (ng)	: 329.1736	
Integration start scan	: 404	Integration stop scan: 463
Y at integration start	: 0	Y at integration end: 0

Raw QC Data

Volatiles by GC/MS

VBLKY37

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY37

Data file: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Injection date and time: 28-APR-2020 21:56

Data file Sample Info. Line: VBLKY37;VBLKY37;1;3;;;;;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:13 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.343(0.000)	454	65	417034 (9)	250.00	
66) Fluorobenzene	7.859(0.000)	1032	96	1252113 (1)	50.00	
100) Chlorobenzene-d5	11.303(0.000)	1598	117	954161 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.176(0.000)	1906	152	517365 (-5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965(0.000)	113	288493	50.728	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428(0.000)	102	77639	51.767	104%		80 - 120
83) Toluene-d8	(3)	9.855(0.000)	98	1195346	47.975	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294(0.000)	95	447327	47.383	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
5) 1,3-Butadiene	(2)			Not Detected					1	3
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
11) n-Pentane	(2)			Not Detected					0.4	10
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
14) Ethyl ether	(2)			Not Detected					0.2	5
15) Freon 123a	(2)			Not Detected					0.4	5
16) Acrolein	(1)			Not Detected					2	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
21) 2-Propanol	(1)			Not Detected					18	100
22) Methyl Iodide	(2)			Not Detected					0.2	1
23) Carbon Disulfide	(2)			Not Detected					0.2	5
25) Allyl Chloride	(2)			Not Detected					0.3	5
27) Methyl Acetate	(2)			Not Detected					0.3	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
30) t-Butyl alcohol	(1)			Not Detected					12	50
31) Acrylonitrile	(2)			Not Detected					0.3	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
34) n-Hexane	(2)			Not Detected					2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
38) di-Isopropyl ether	(2)			Not Detected					0.2	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					0.2	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.4	2

VBLKY37

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY37

Data file: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Injection date and time: 28-APR-2020 21:56

Data file Sample Info. Line: VBLKY37;VBLKY37;1;3;;;;;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:13 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
44) 2-Butanone	(2)			Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)			Not Detected					0.3	1
47) Propionitrile	(1)			Not Detected					14	100
48) Methacrylonitrile	(2)			Not Detected					6	50
49) Bromochloromethane	(2)			Not Detected					0.2	5
50) Tetrahydrofuran	(1)			Not Detected					0.7	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
54) Cyclohexane	(2)			Not Detected					1	5
55) 1,1-Dichloropropene	(2)			Not Detected					0.2	5
56) Carbon Tetrachloride	(2)			Not Detected					0.2	1
58) Isobutyl Alcohol	(1)			Not Detected					36	250
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
65) t-Amyl methyl ether	(2)			Not Detected					0.8	5
67) n-Heptane	(2)			Not Detected					2	5
69) n-Butanol	(1)			Not Detected					61	250
71) Trichloroethene	(2)			Not Detected					0.2	1
72) Methylcyclohexane	(2)			Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)			Not Detected					0.2	1
74) Dibromomethane	(2)			Not Detected					0.2	1
75) 1,4-Dioxane	(1)			Not Detected					29	250
76) Methyl Methacrylate	(2)			Not Detected					0.2	5
78) Bromodichloromethane	(2)			Not Detected					0.2	1
79) 2-Nitropropane	(2)			Not Detected					0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)			Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					0.5	10
88) Toluene	(3)			Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.2	1
90) 1,3-Dichloropropene (total)	(3)			Not Detected					0.4	2
91) Ethyl Methacrylate	(3)			Not Detected					0.2	5
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)			Not Detected					0.2	1
96) 2-Hexanone	(3)			Not Detected					0.3	10
97) Dibromochloromethane	(3)			Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)			Not Detected					0.2	1
101) 1-Chlorohexane	(3)			Not Detected					0.3	5
102) Chlorobenzene	(3)			Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
109) Styrene	(3)			Not Detected					0.2	5
110) Bromoform	(3)			Not Detected					1	4
111) Isopropylbenzene	(3)			Not Detected					0.2	5
112) Cyclohexanone	(1)			Not Detected					25	100
115) Bromobenzene	(4)			Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.2	5
118) trans-1,4-Dichloro-2-butene	(4)			Not Detected					6	50
119) n-Propylbenzene	(4)			Not Detected					0.2	5

VBLKY37

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKY37

Data file: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Injection date and time: 28-APR-2020 21:56

Data file Sample Info. Line: VBLKY37;VBLKY37;1;3;;;;;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:13 Automation

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

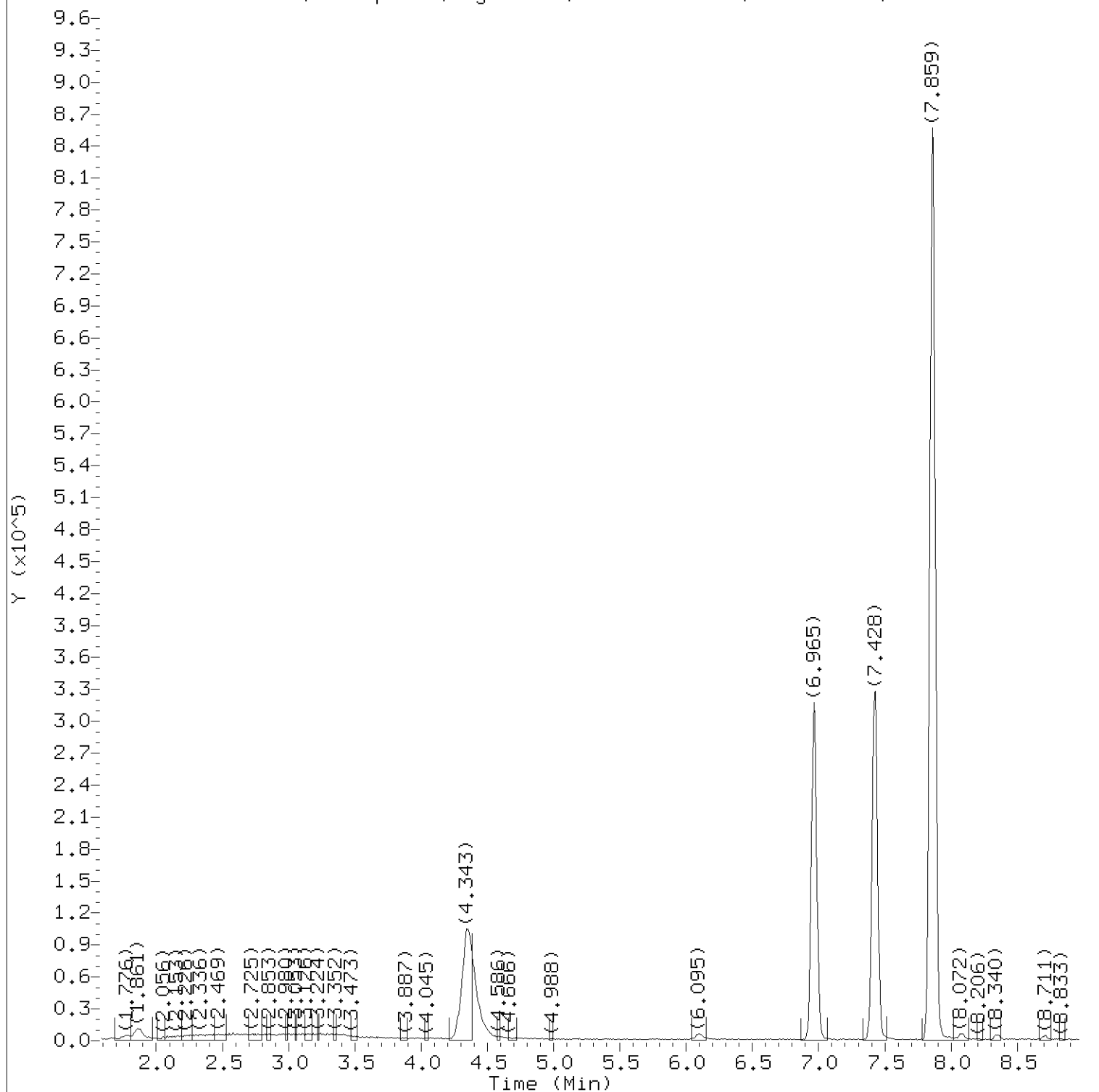
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)				Not Detected					0.2	5
121) 4-Chlorotoluene	(4)				Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					0.3	5
124) tert-Butylbenzene	(4)				Not Detected					0.3	5
125) Pentachloroethane	(4)				Not Detected					0.2	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
130) p-Isopropyltoluene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					0.2	5
137) 1,4-Diethylbenzene	(4)				Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
139) n-Butylbenzene	(4)				Not Detected					0.2	5
140) 1,2-Diethylbenzene	(4)				Not Detected					0.2	5
141) Diethylbenzene (total)	(4)				Not Detected					0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					0.2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					0.4	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	4

Total number of targets = 110

Digitally signed by Kevin A. Sposito on 04/28/2020 at 22:41. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28b41.d
Injection date and time: 28-APR-2020 21:56

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 8260W-D

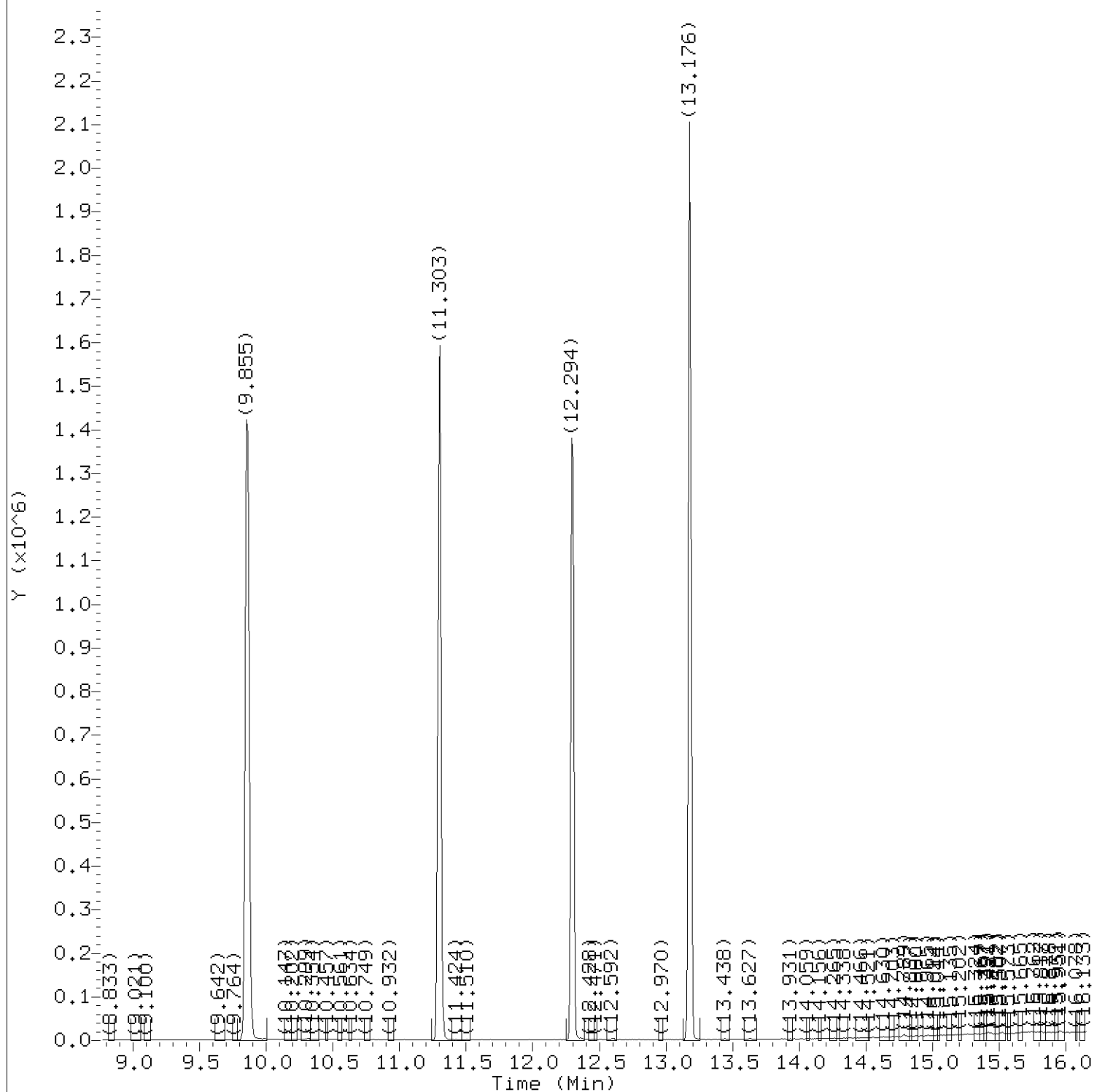
Date, time and analyst ID of latest file update: 28-Apr-2020 22:13 Automation

Sample Name: VBLKY37

Lab Sample ID: VBLKY37

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28b41.d
Injection date and time: 28-APR-2020 21:56

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 8260W-D

Date, time and analyst ID of latest file update: 28-Apr-2020 22:13 Automation

Sample Name: VBLKY37

Lab Sample ID: VBLKY37

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 21:56

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 28-Apr-2020 22:13 Automation

Sample Name: VBLKY37

Lab Sample ID: VBLKY37

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.343	65	417034	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	288493	50.728
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	77639	51.767
66) *Fluorobenzene	(2)	7.859	96	1252113	50.000
83) \$Toluene-d8	(3)	9.855	98	1195346	47.975
100) *Chlorobenzene-d5	(3)	11.303	117	954161	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	447327	47.383
131) *1,4-Dichlorobenzene-d4	(4)	13.176	152	517365	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648

VBLKH54

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH54

Data file: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Injection date and time: 27-APR-2020 22:13

Data file Sample Info. Line: VBLKH54;VBLKH54;1;3;;;DAA3568;;;

Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (-0.006)	470	65	129748 (-1)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	1639074 (-2)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1461061 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	795566 (-3)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.067 (-0.001)	113	451684	11.086	111%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.518 (0.000)	102	86689	10.978	110%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1773250	9.109	91%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	688959	9.567	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)			Not Detected					2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

VBLKH54

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH54

Data file: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Injection date and time: 27-APR-2020 22:13

Data file Sample Info. Line: VBLKH54;VBLKH54;1;3;;;DAA3568;;;

Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

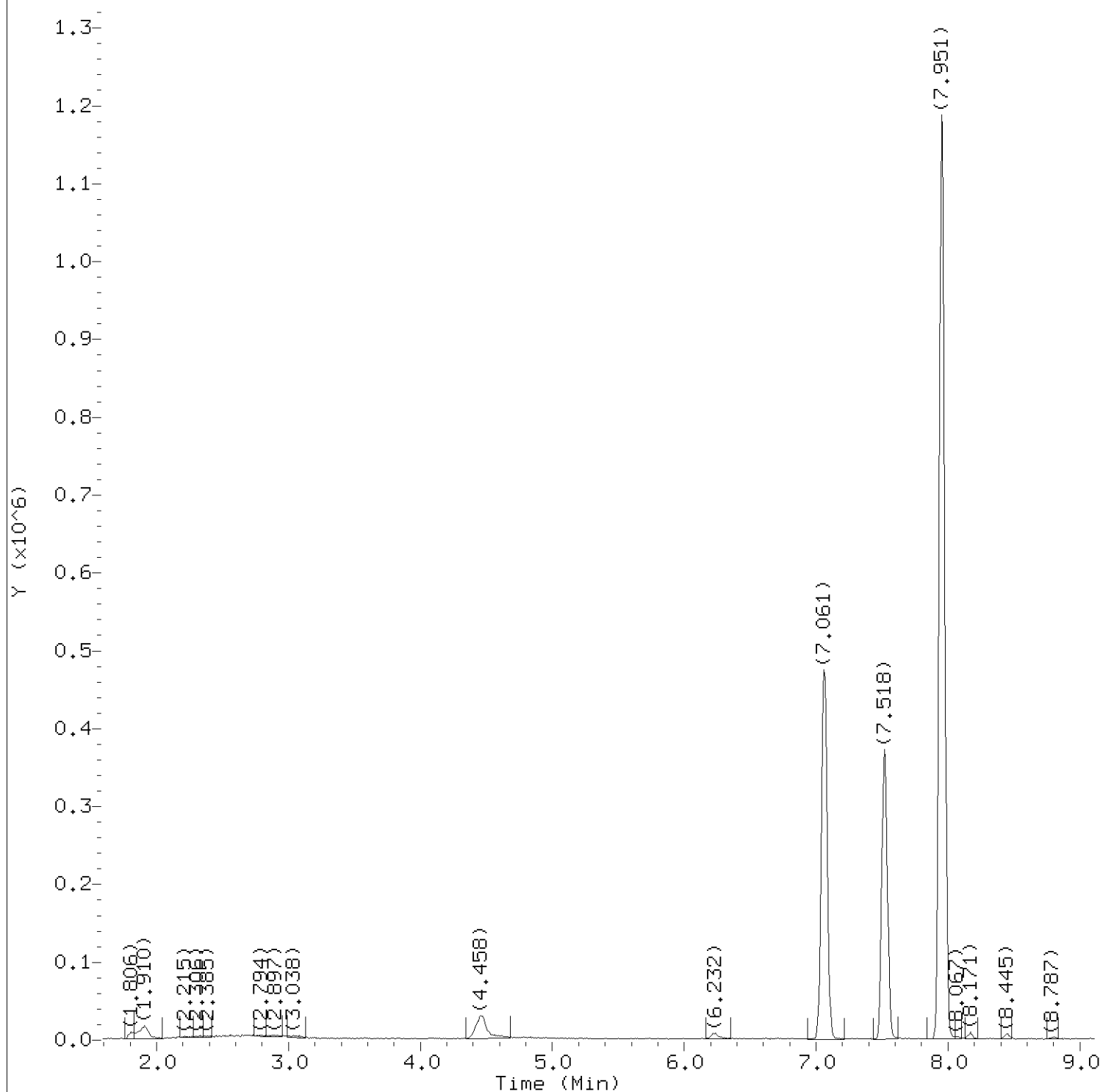
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
59) Benzene	(2)				Not Detected					0.07	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
72) Methyl Methacrylate	(1)				Not Detected					4	10
74) Dibromomethane	(2)				Not Detected					0.07	1
73) 1,4-Dioxane	(1)				Not Detected					45	200
75) Bromodichloromethane	(2)				Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)				Not Detected					0.9	10
84) Toluene	(3)				Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
87) Ethyl Methacrylate	(3)				Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.08	1
90) Tetrachloroethene	(3)				Not Detected					0.06	1
91) 1,3-Dichloropropane	(3)				Not Detected					0.09	1
92) 2-Hexanone	(1)				Not Detected					0.6	10
94) Dibromochloromethane	(3)				Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)				Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.08	1
101) Ethylbenzene	(3)				Not Detected					0.08	1
102) m+p-Xylene	(3)				Not Detected					0.1	2
105) o-Xylene	(3)				Not Detected					0.1	1
106) Xylene (Total)	(3)				Not Detected					0.2	3
107) Styrene	(3)				Not Detected					0.07	1
108) Bromoform	(3)				Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.1	1
127) Pentachloroethane	(4)				Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
147) Hexachlorobutadiene	(4)				Not Detected					0.07	1
148) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Jennifer K. Howe on 04/30/2020 at 07:52. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/30/2020 at 09:50. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27b01.d
Injection date and time: 27-APR-2020 22:13

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m
Calibration date and time: 28-APR-2020 22:26

Sublist used: 27091

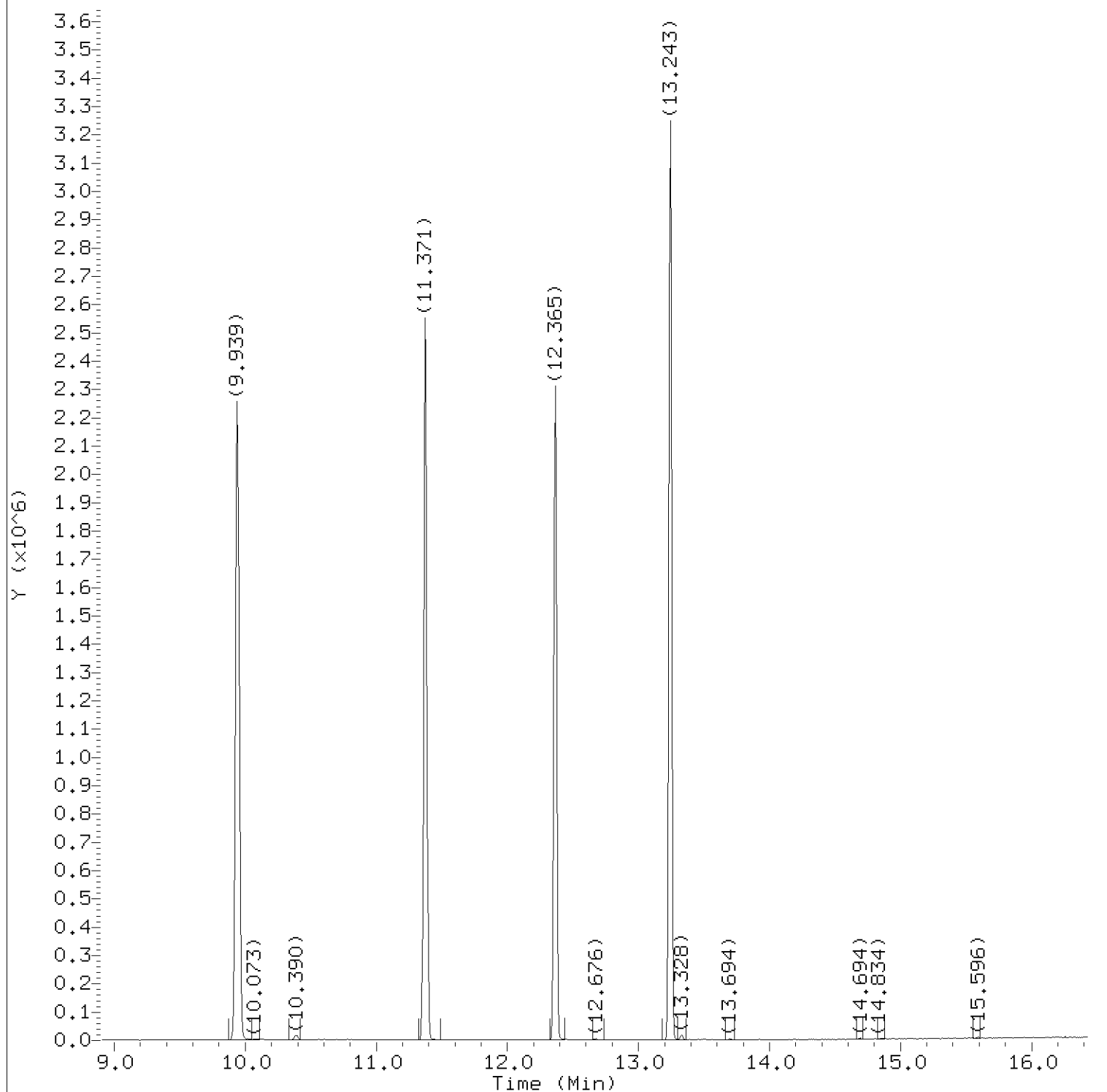
Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: VBLKH54

Lab Sample ID: VBLKH54

Digitally signed by Jennifer K. Howe
on 04/30/2020 at 07:52.

Target 3.5 esignature user ID: ikh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27b01.d
Injection date and time: 27-APR-2020 22:13

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: VBLKH54

Lab Sample ID: VBLKH54

Digitally signed by Jennifer K. Howe
on 04/30/2020 at 07:52.

Target 3.5 esignature user ID: ikh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 22:13

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: VBLKH54

Lab Sample ID: VBLKH54

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.452	65	129748	50.000
51) \$Dibromofluoromethane	(2)	7.067	113	451684	11.086
58) \$1,2-Dichloroethane-d4	(2)	7.518	102	86689	10.978
64) *Fluorobenzene	(2)	7.951	96	1639074	10.000
83) \$Toluene-d8	(3)	9.939	98	1773250	9.109
98) *Chlorobenzene-d5	(3)	11.371	117	1461061	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	688959	9.567
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	795566	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Jennifer K. Howe
on 04/30/2020 at 07:52.

Target 3.5 esignature user ID: jkh09052

VBLKH59

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH59

Data file: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Injection date and time: 28-APR-2020 11:02

Data file Sample Info. Line: VBLKH59;VBLKH59;1;3;;;DAA3568;;;

Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments: 9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	130059 (-2)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2012967 (-2)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1564031 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	819706 (-4)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.001)	113	527583	10.543	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512 (0.001)	102	104430	10.768	108%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2018836	9.688	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	722957	9.378	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.04	13
2) Chloromethane	(2)			Not Detected					0.06	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.07	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					3	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.1	1
14) Acetone	(1)			Not Detected					0.9	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
19) Carbon Disulfide	(2)			Not Detected					0.4	10
26) Acetonitrile	(1)			Not Detected					32	100
23) Allyl Chloride	(2)			Not Detected					0.8	10
24) Methylene Chloride	(2)			Not Detected					0.2	1
30) Acrylonitrile	(1)			Not Detected					0.5	10
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
34) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
37) Vinyl Acetate	(2)			Not Detected					3	10
36) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
39) 2-Butanone	(1)			Not Detected					0.6	10
43) Propionitrile	(1)			Not Detected					10	100
46) Methacrylonitrile	(1)			Not Detected					10	100
49) Tetrahydrofuran	(1)			Not Detected					2	25
50) Chloroform	(2)			Not Detected					0.09	1
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
55) Carbon Tetrachloride	(2)			Not Detected					0.2	1
57) Isobutyl Alcohol	(1)			Not Detected					4	200

VBLKH59

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH59

Data file: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Injection date and time: 28-APR-2020 11:02

Data file Sample Info. Line: VBLKH59;VBLKH59;1;3;;;DAA3568;;;

Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

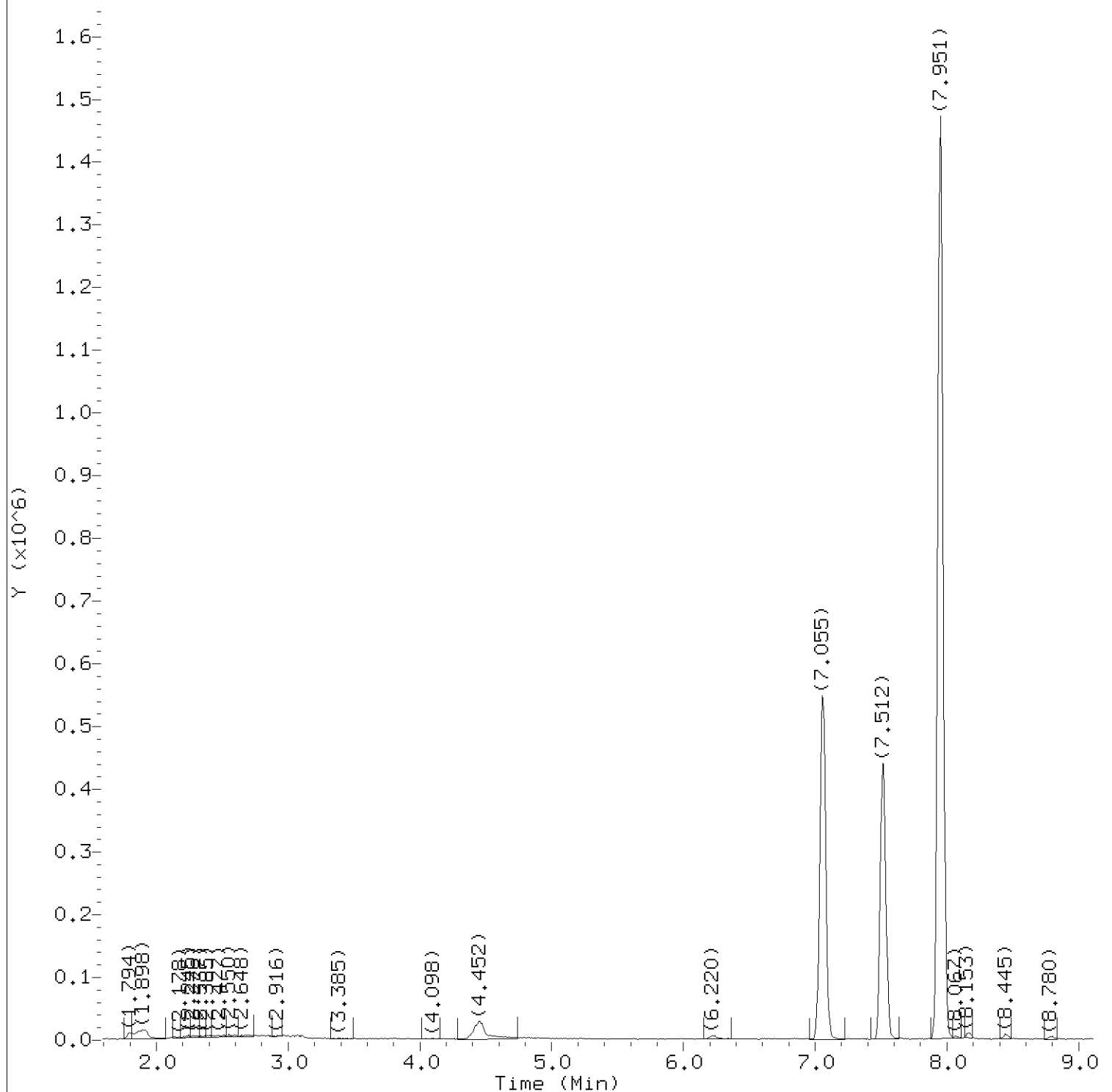
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
59) Benzene	(2)				Not Detected					0.07	1
60) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
68) Trichloroethene	(2)				Not Detected					0.2	1
71) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
72) Methyl Methacrylate	(1)				Not Detected					4	10
74) Dibromomethane	(2)				Not Detected					0.07	1
73) 1,4-Dioxane	(1)				Not Detected					45	200
75) Bromodichloromethane	(2)				Not Detected					0.09	1
82) 4-Methyl-2-Pentanone	(1)				Not Detected					0.9	10
84) Toluene	(3)				Not Detected					0.09	1
85) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
87) Ethyl Methacrylate	(3)				Not Detected					0.8	10
89) 1,1,2-Trichloroethane	(3)				Not Detected					0.08	1
90) Tetrachloroethene	(3)				Not Detected					0.06	1
91) 1,3-Dichloropropane	(3)				Not Detected					0.09	1
92) 2-Hexanone	(1)				Not Detected					0.6	10
94) Dibromochloromethane	(3)				Not Detected					0.07	1
96) 1,2-Dibromoethane	(3)				Not Detected					0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.08	1
101) Ethylbenzene	(3)				Not Detected					0.08	1
102) m+p-Xylene	(3)				Not Detected					0.1	2
105) o-Xylene	(3)				Not Detected					0.1	1
106) Xylene (Total)	(3)				Not Detected					0.2	3
107) Styrene	(3)				Not Detected					0.07	1
108) Bromoform	(3)				Not Detected					0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
116) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
117) 1,2,3-Trichloropropane	(4)				Not Detected					0.1	1
127) Pentachloroethane	(4)				Not Detected					0.8	10
132) 1,3-Dichlorobenzene	(4)				Not Detected					0.06	1
135) 1,4-Dichlorobenzene	(4)				Not Detected					0.07	1
140) 1,2-Dichlorobenzene	(4)				Not Detected					0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
147) Hexachlorobutadiene	(4)				Not Detected					0.07	1
148) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 66

Digitally signed by Miranda E. Campbell on 04/29/2020 at 15:53. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Marla S. Brewer on 04/29/2020 at 19:58. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28b01.d
Injection date and time: 28-APR-2020 11:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

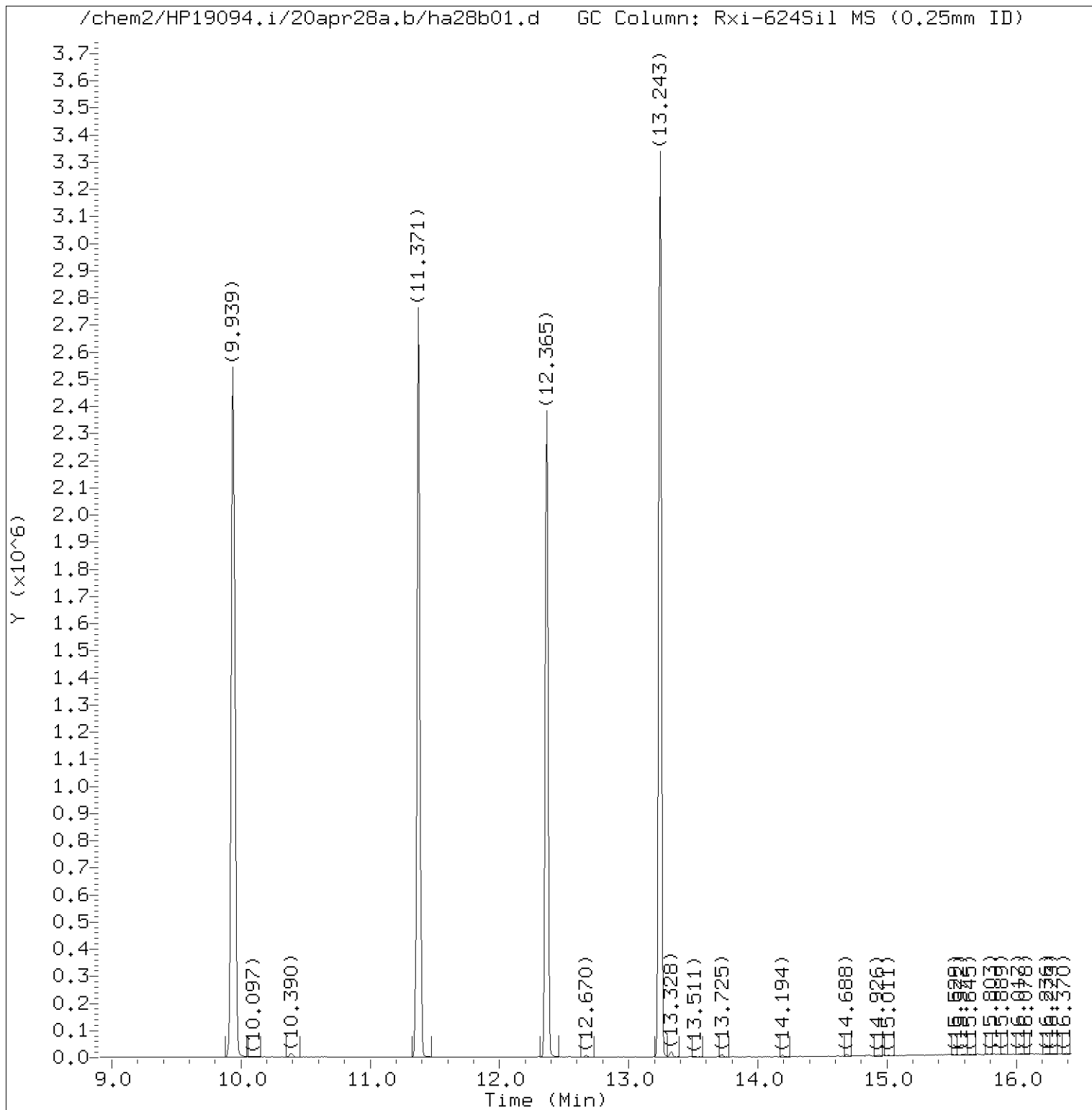
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: VBLKH59

Lab Sample ID: VBLKH59

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28b01.d
Injection date and time: 28-APR-2020 11:02

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: VBLKH59

Lab Sample ID: VBLKH59

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28b01.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 11:02 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: VBLKH59

Lab Sample ID: VBLKH59

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.458	65	130059	50.000
51) \$Dibromofluoromethane	(2)	7.055	113	527583	10.543
58) \$1,2-Dichloroethane-d4	(2)	7.512	102	104430	10.768
64) *Fluorobenzene	(2)	7.951	96	2012967	10.000
83) \$Toluene-d8	(3)	9.939	98	2018836	9.688
98) *Chlorobenzene-d5	(3)	11.371	117	1564031	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	722957	9.378
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	819706	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Miranda E. Campbell
on 04/29/2020 at 15:53.

Target 3.5 esignature user ID: mec29284

59R04MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300798MS

Data file: /chem2/HP09355.i/20apr28b.b/ya28s46.d Injection date and time: 29-APR-2020 00:07
Data file Sample Info. Line: 59R04MS;1300798MS;1;3;MS;RAF59;;;ya28b41; Instrument ID: HP09355.i Batch: Y201192AA
Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342
Calibration date and time (Last Method Edit): 28-APR-2020 22:06
Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349 (-0.006)	455	65	377479M (-1)	250.00	
66) Fluorobenzene	7.860 (0.000)	1032	96	1204515 (-2)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	936193 (-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.177 (0.000)	1906	152	522302 (-4)	50.00	

M = Internal Standard was manually integrated

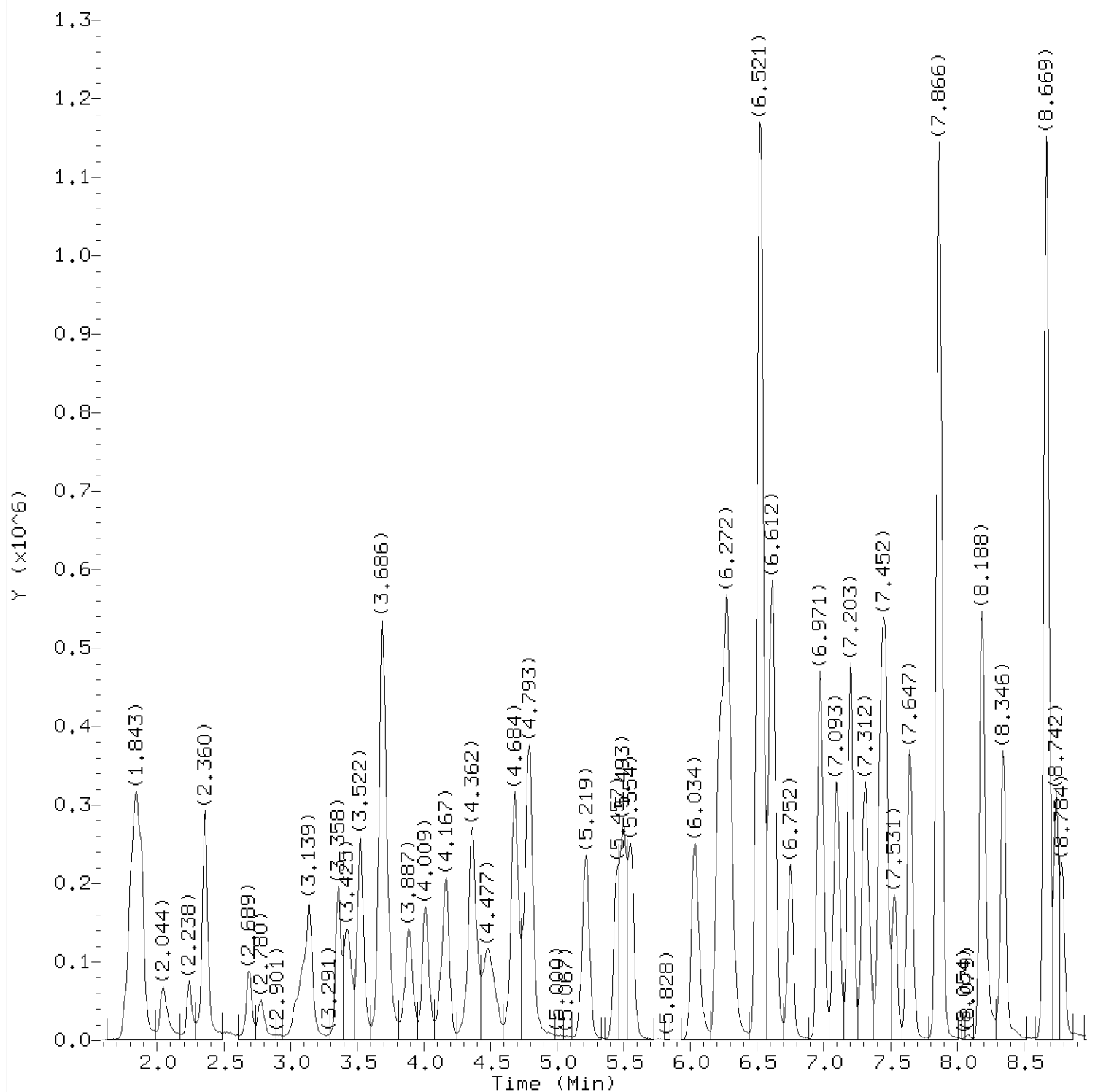
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965 (0.000)	113	279705	51.126	102%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428 (0.000)	102	73963	51.264	103%		80 - 120
83) Toluene-d8	(3)	9.855 (0.000)	98	1182133	48.356	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294 (0.000)	95	452600	48.862	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.863 (-0.000)	45	144894	134.743	134.74		18	100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:35. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s46.d
Injection date and time: 29-APR-2020 00:07

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

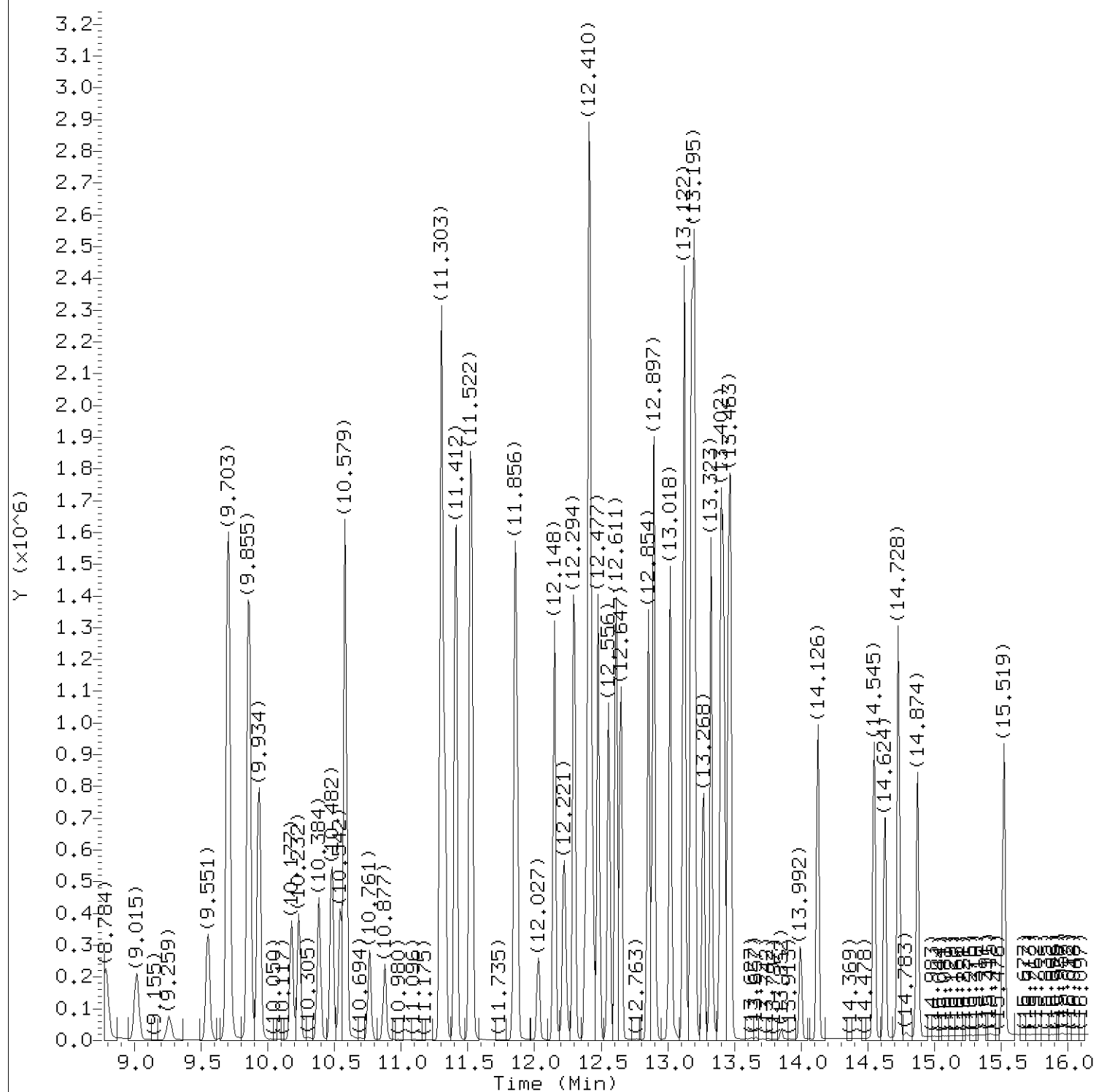
Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s46.d
Injection date and time: 29-APR-2020 00:07

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s46.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 00:07

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
21) 2-Propanol	(1)	3.863	45	144894	134.743
29) *t-Butyl alcohol-d10	(1)	4.349	65	377479M	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	279705	51.126
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	73963	51.264
66) *Fluorobenzene	(2)	7.860	96	1204515	50.000
83) \$Toluene-d8	(3)	9.855	98	1182133	48.356
100) *Chlorobenzene-d5	(3)	11.303	117	936193	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	452600	48.862
131) *1,4-Dichlorobenzene-d4	(4)	13.177	152	522302	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

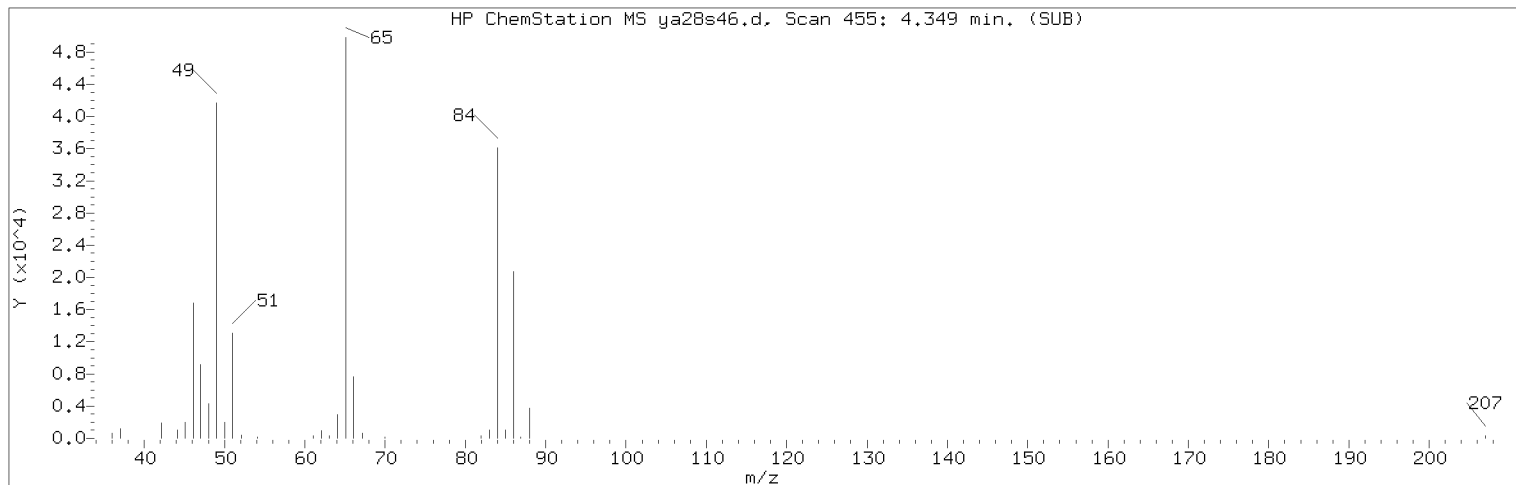
page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

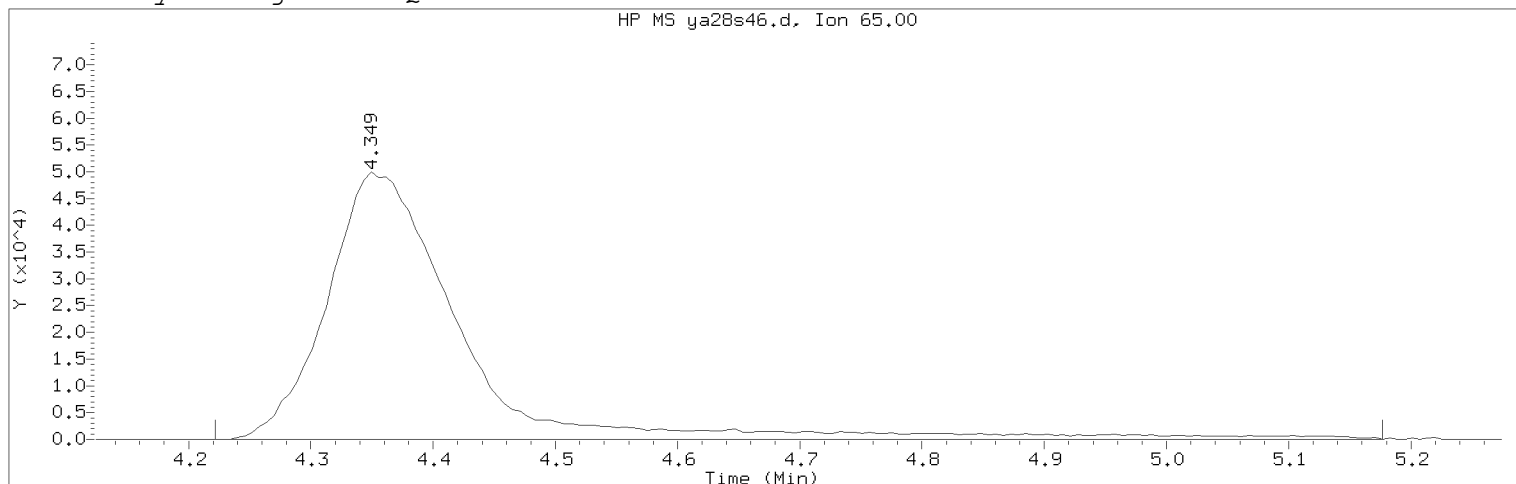
Target 3.5 esignature user ID: dvv10203

RAF59 Page 916 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s46.d Instrument ID: HP09355.i
Injection date and time: 29-APR-2020 00:07 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342
Calibration date and time: 28-APR-2020 22:06
Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MS Lab Sample ID: 1300798MS

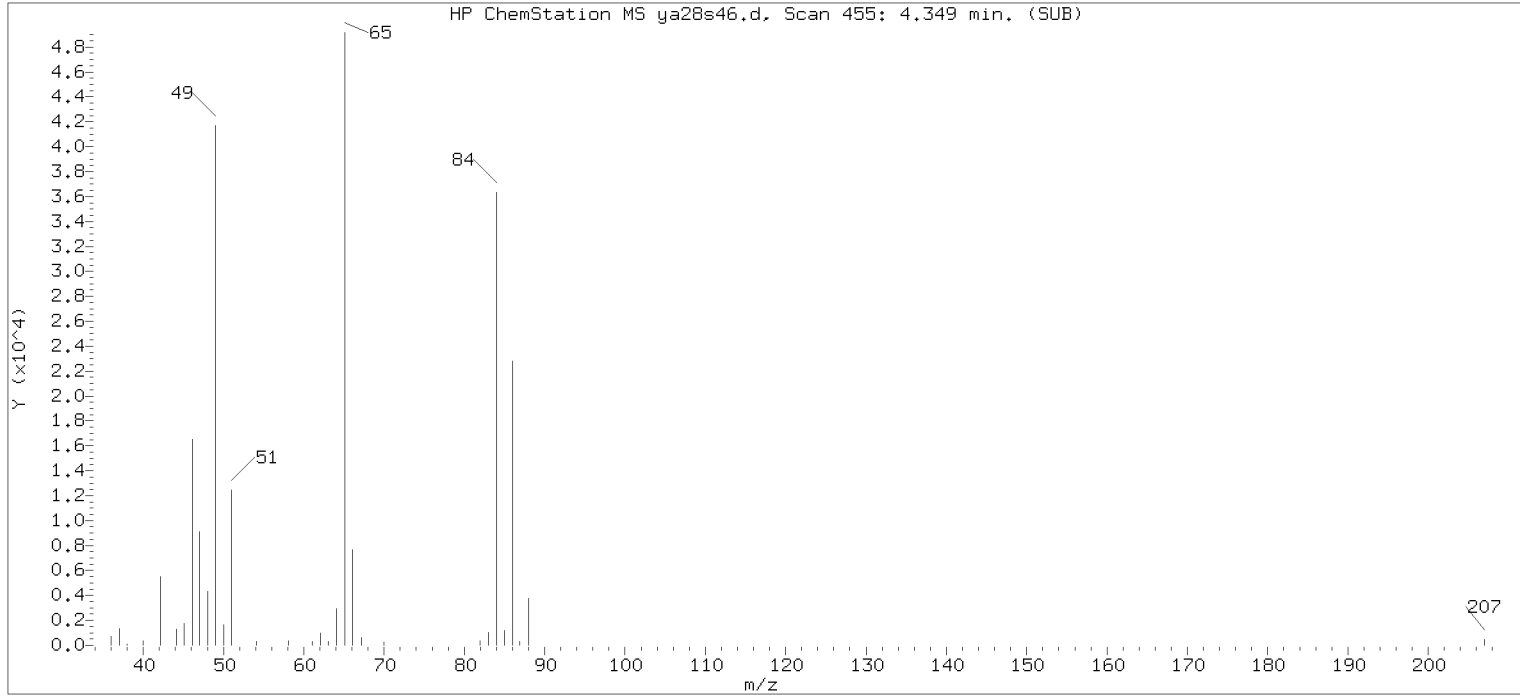
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 455
Retention Time (minutes): 4.349
Quant Ion : 65.00
Area (flag) : 377479M
On-Column Amount (ng) : 250.0000
Integration start scan : 433 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

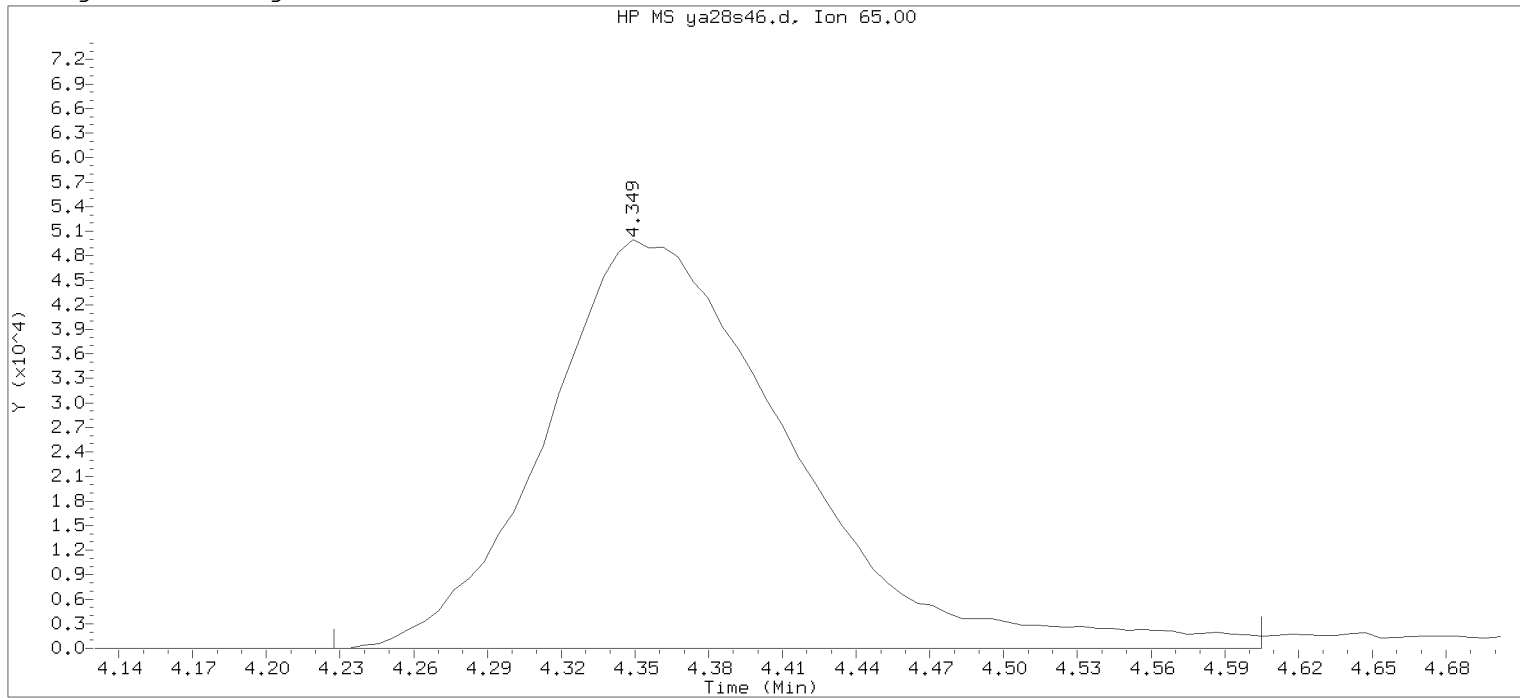
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s46.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 00:07

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 00:25 Automation

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compound Number	: 29	
Compound Name	: t-Butyl alcohol-d10	
Scan Number	: 455	
Retention Time (minutes)	: 4.349	
Quant Ion	: 65.00	
Area	: 345343	
On-column Amount (ng)	: 250.0000	
Integration start scan	: 434	Integration stop scan: 496
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Don V. Viray on 04/29/2020 at 12:35.

Target 3.5 esignature user RAE59 Page 218 of 1506

59R04MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300799MSD

Data file: /chem2/HP09355.i/20apr28b.b/ya28s47.d

Injection date and time: 29-APR-2020 00:29

Data file Sample Info. Line: 59R04MSD;1300799MSD;1;3;MSD;RAF59;;;ya28b41; Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 16342

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: 038C Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.355 (-0.012)	456	65	406785M (6)	250.00	
66) Fluorobenzene	7.859 (0.000)	1032	96	1264556 (2)	50.00	
100) Chlorobenzene-d5	11.303 (0.000)	1598	117	974810 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.176 (0.000)	1906	152	538157 (-1)	50.00	

M = Internal Standard was manually integrated

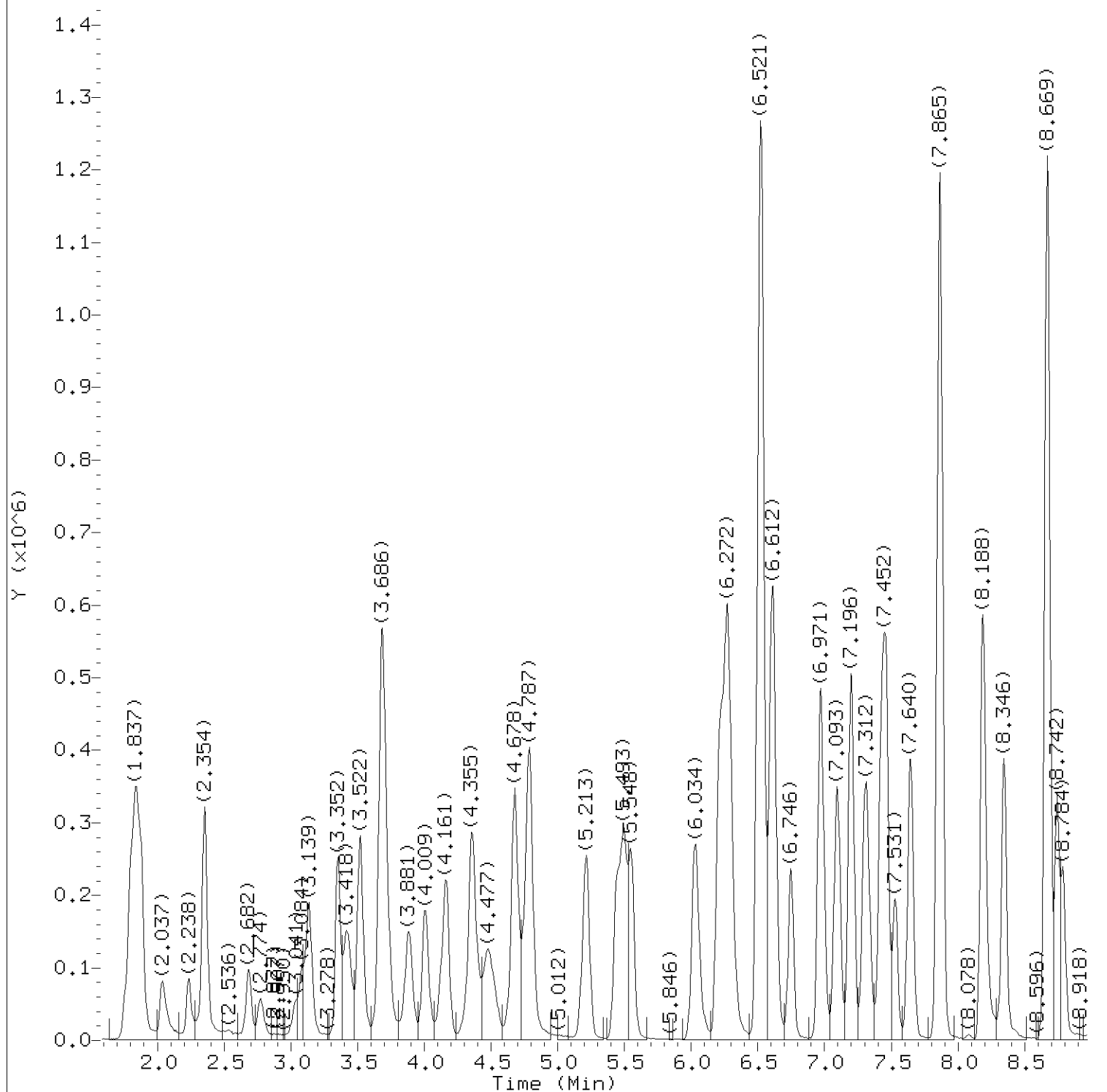
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965 (0.000)	113	290970	50.660	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.421 (0.001)	102	76475	50.489	101%		80 - 120
83) Toluene-d8	(3)	9.855 (0.000)	98	1225988	48.163	96%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294 (0.000)	95	472579	48.998	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.869 (-0.000)	45	157397	135.825	135.82		18	100

Total number of targets = 1

Digitally signed by Don V. Viray on 04/29/2020 at 12:35. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s47.d
Injection date and time: 29-APR-2020 00:29

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 16342

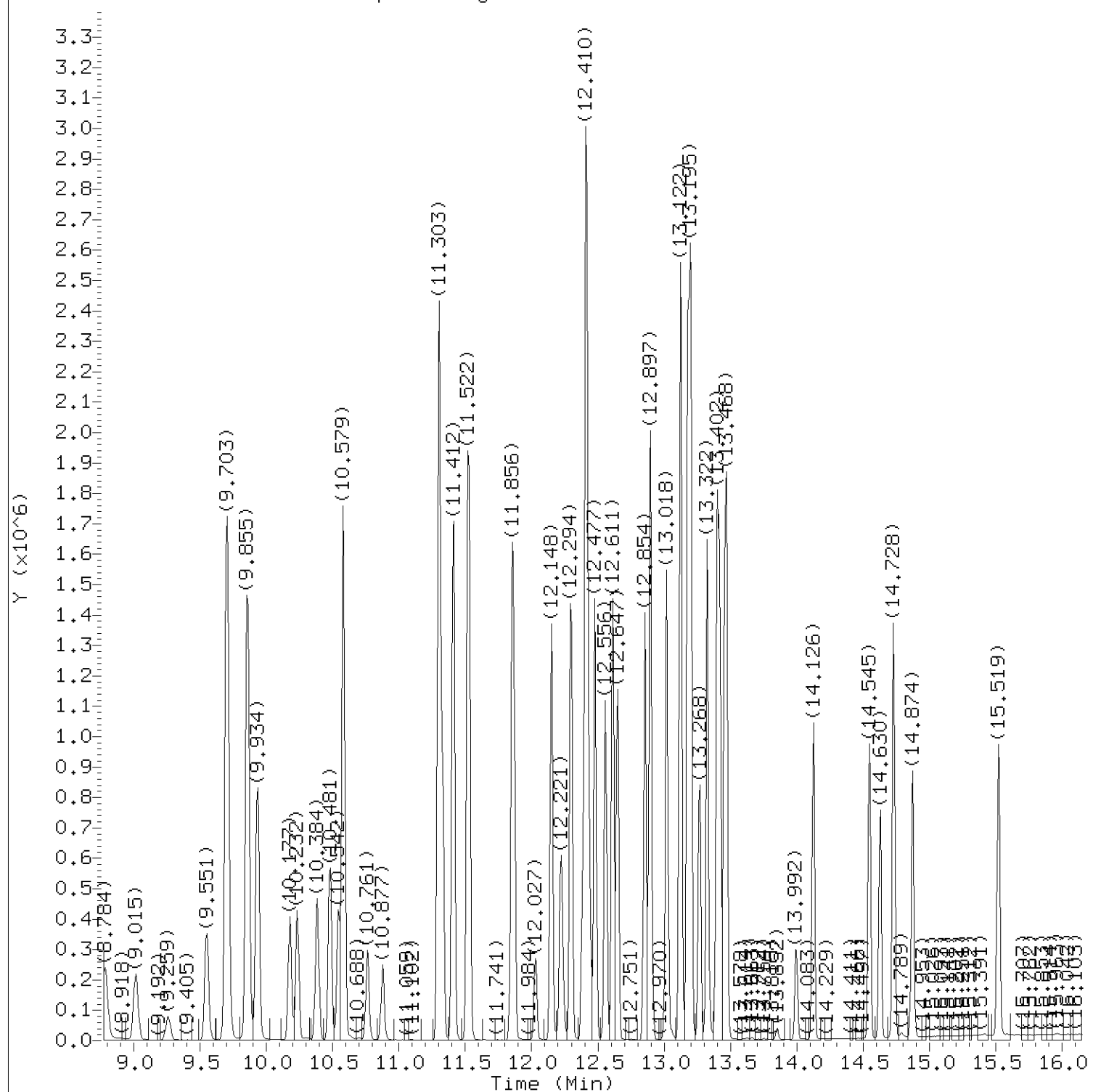
Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s47.d
Injection date and time: 29-APR-2020 00:29

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s47.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 00:29

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
21) 2-Propanol	(1)	3.869	45	157397	135.825
29) *t-Butyl alcohol-d10	(1)	4.355	65	406785M	250.000
52) \$Dibromofluoromethane	(2)	6.965	113	290970	50.660
57) \$1,2-Dichloroethane-d4	(2)	7.421	102	76475	50.489
66) *Fluorobenzene	(2)	7.859	96	1264556	50.000
83) \$Toluene-d8	(3)	9.855	98	1225988	48.163
100) *Chlorobenzene-d5	(3)	11.303	117	974810	50.000
114) \$4-Bromofluorobenzene	(3)	12.294	95	472579	48.998
131) *1,4-Dichlorobenzene-d4	(4)	13.176	152	538157	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

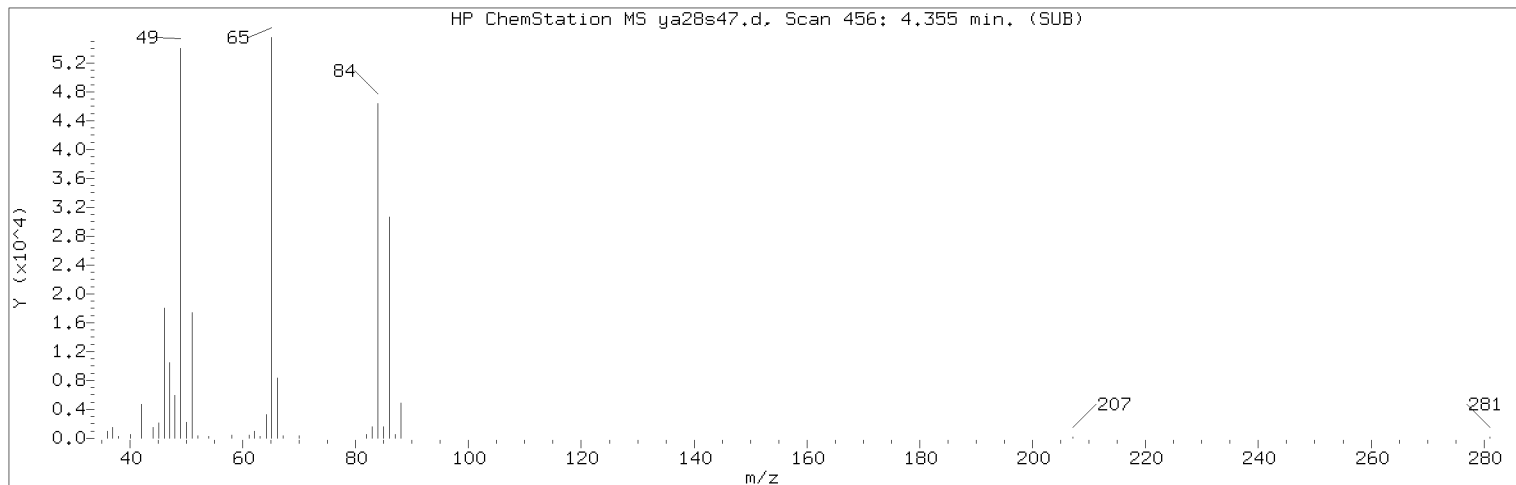
\$ = Compound is a surrogate standard.

page 1 of 1

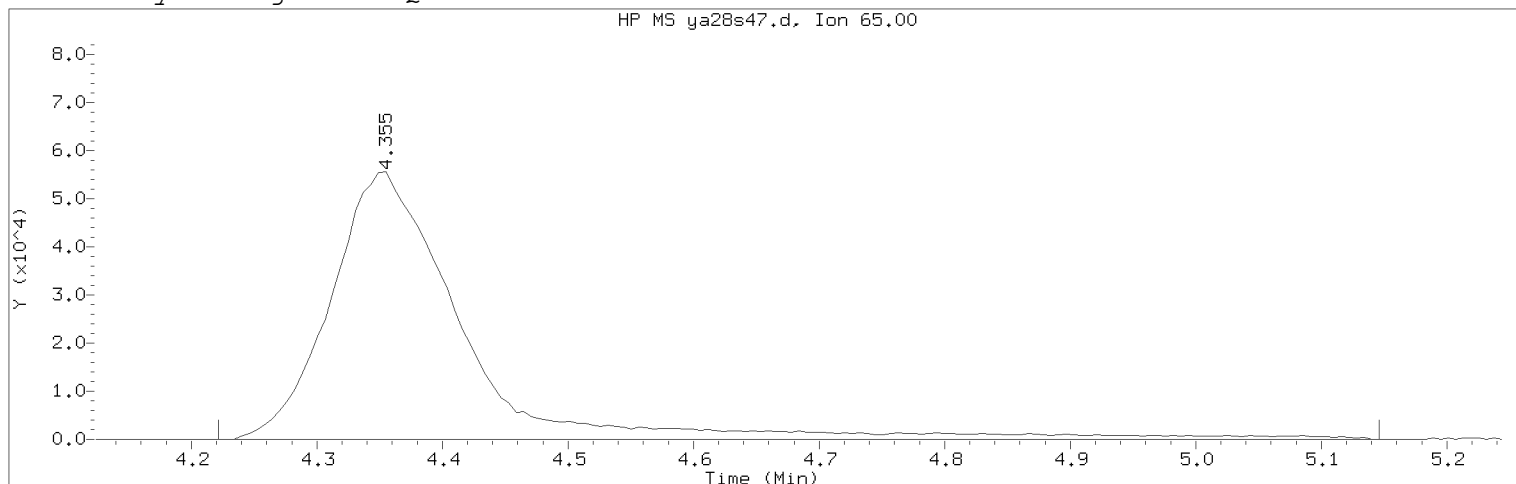
Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.

Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s47.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 00:29

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 16342

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 12:35 dvv10203

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

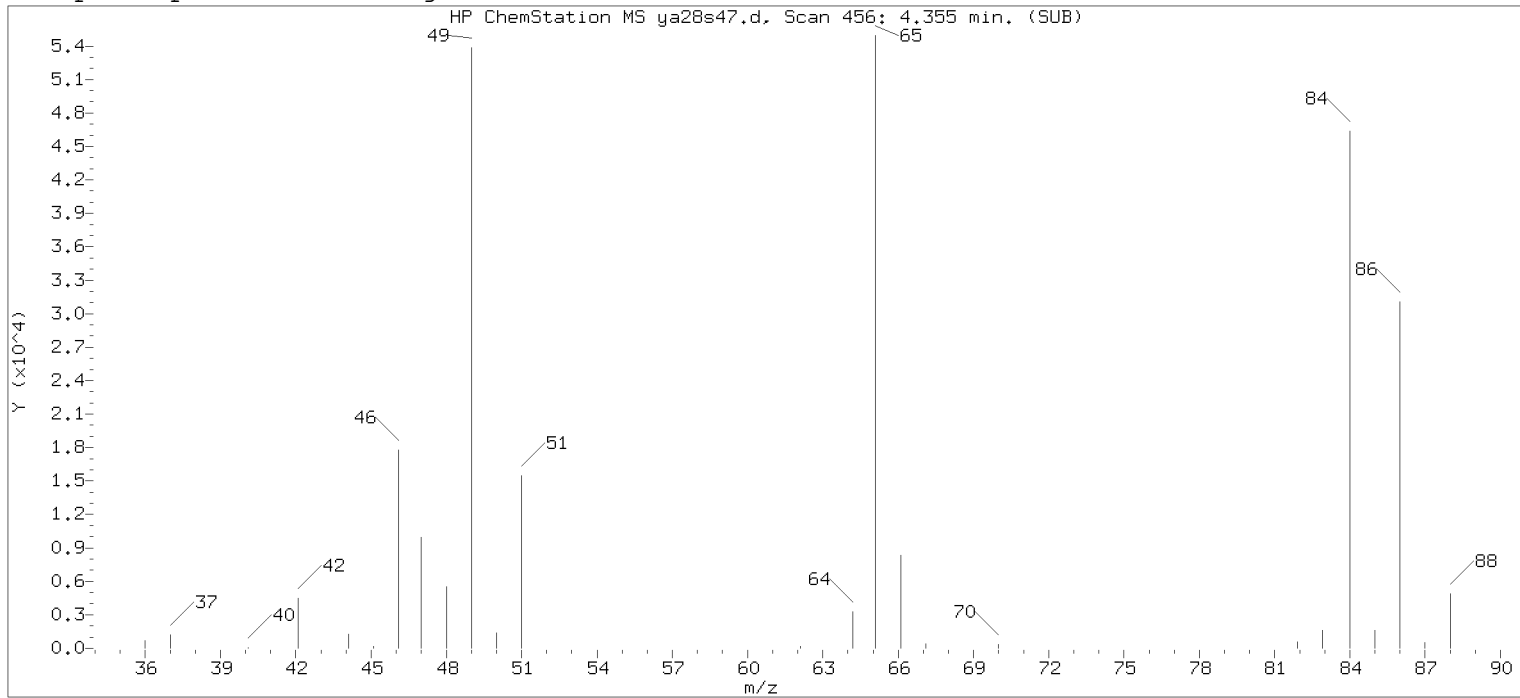
Compound Number	: 29	
Compound Name	: t-Butyl alcohol-d10	
Scan Number	: 456	
Retention Time (minutes)	: 4.355	
Quant Ion	: 65.00	
Area (flag)	: 406785M	
On-Column Amount (ng)	: 250.0000	
Integration start scan	: 433	Integration stop scan: 585
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

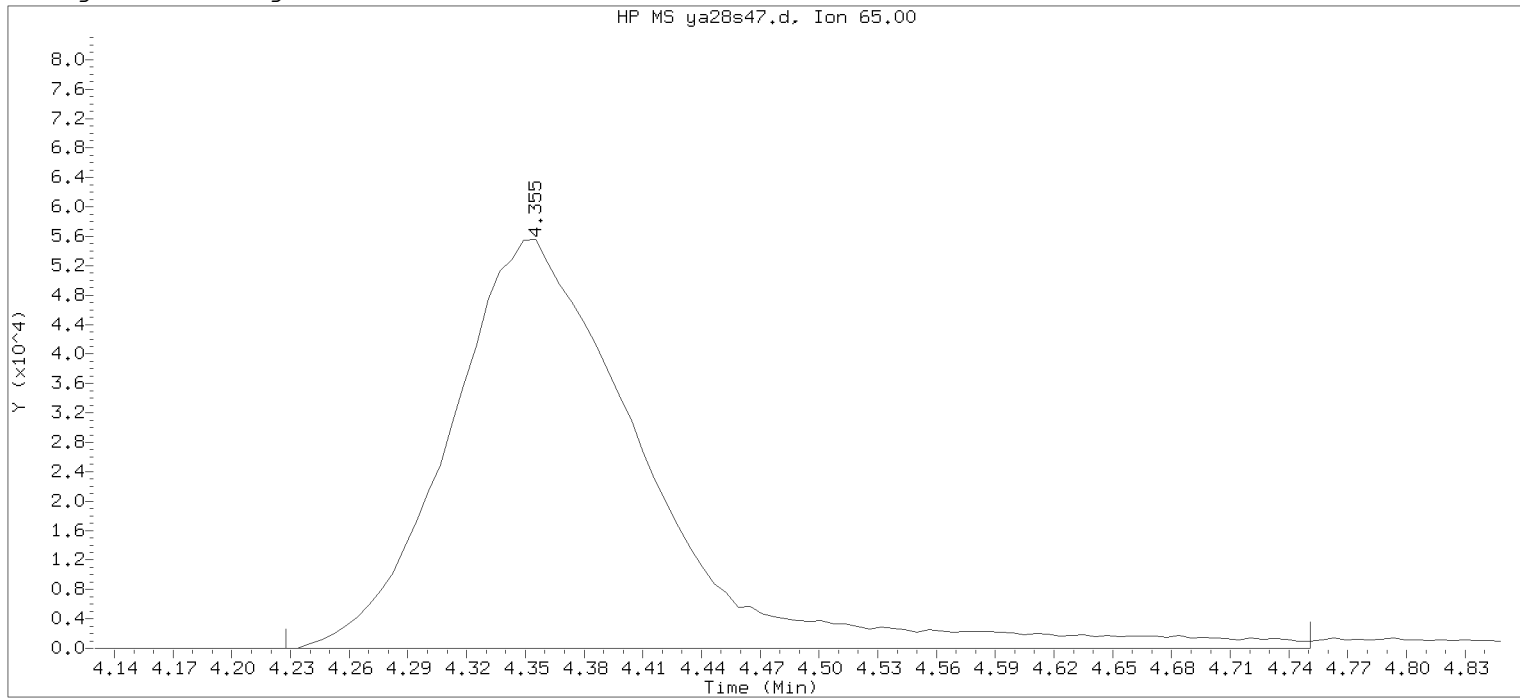
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/29/2020 at 12:35.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s47.d

Instrument ID: HP09355.i

Injection date and time: 29-APR-2020 00:29

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 29-Apr-2020 00:46 Automation

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compound Number : 29

Compound Name : t-Butyl alcohol-d10

Scan Number : 456

Retention Time (minutes): 4.355

Quant Ion : 65.00

Area : 387307

On-column Amount (ng) : 250.0000

Integration start scan : 434 Integration stop scan: 520

Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/29/2020 at 12:35.

Target 3.5 esignature user RAE59 Page 924 of 1506

59R04MS1

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300798MS

Data file: /chem2/HP19094.i/20apr27a.b/ha27s08.d

Injection date and time: 28-APR-2020 00:48

Data file Sample Info. Line: 59R04MS1;1300798MS;1;3;MS;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H2011817

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.446(0.000)	469	65	128193 (-2)	50.00	
64) Fluorobenzene	7.951(0.000)	1044	96	1667387 (-1)	10.00	
98) Chlorobenzene-d5	11.371(0.000)	1605	117	1489319 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	804206 (-2)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061(0.000)	113	455506	10.990	110%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525(-0.001)	102	87763	10.925	109%		80 - 120
83) Toluene-d8	(3)	9.939(0.000)	98	1789378	9.018	90%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	688434	9.378	94%		80 - 120

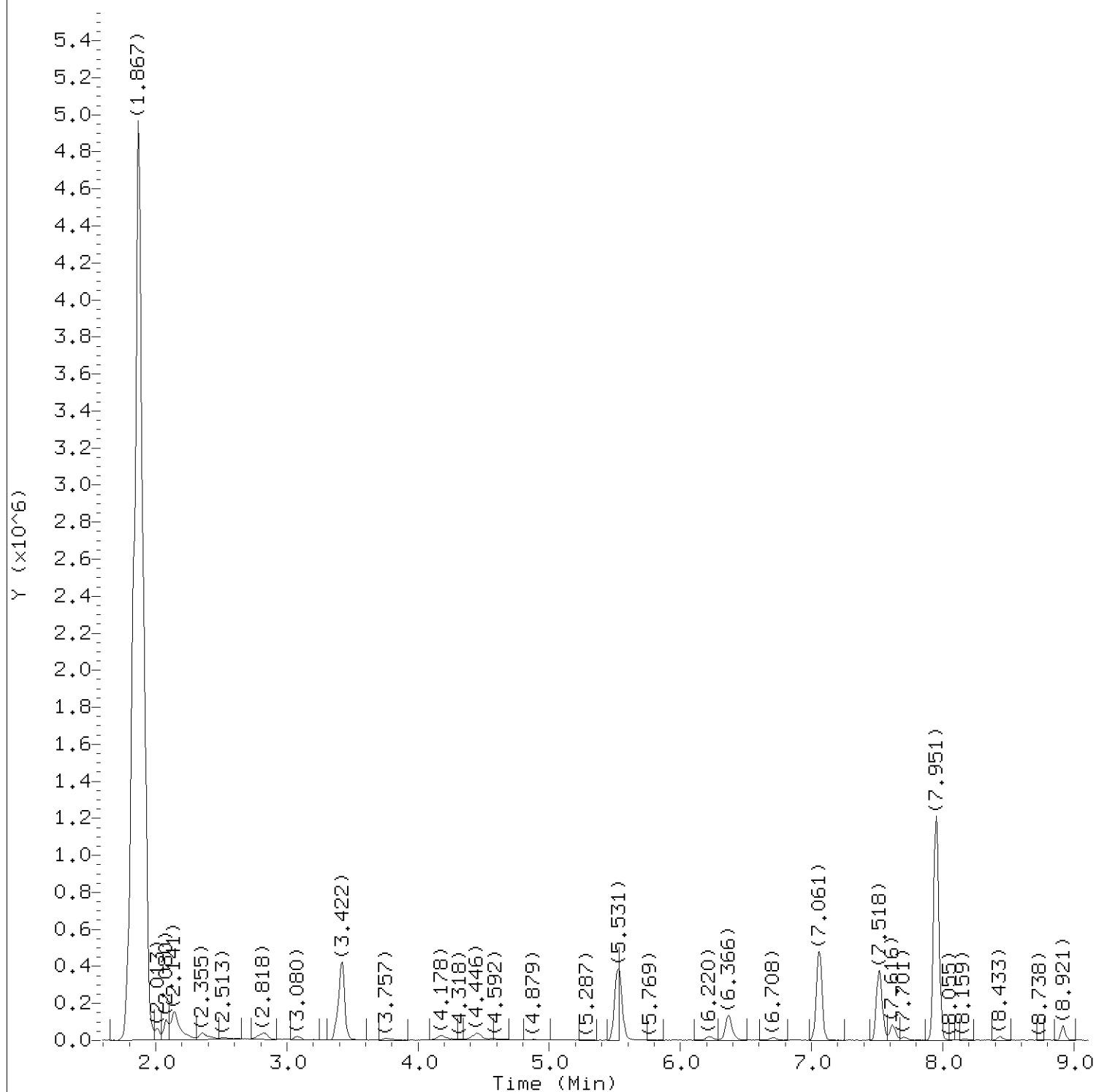
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.148(-0.000)	45	345747M	6.224	6.22		J	0.04	13
26) Acetonitrile	(1)	4.178(-0.000)	41	118340M	37.911	37.91		J	32	100
37) Vinyl Acetate	(2)	5.519(-0.000)	43	814893	13.770	13.77			3	10

M = Compound was manually integrated.

Total number of targets = 3

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d
Injection date and time: 28-APR-2020 00:48

Instrument ID: HP19094.i
Analyst ID: mec29284

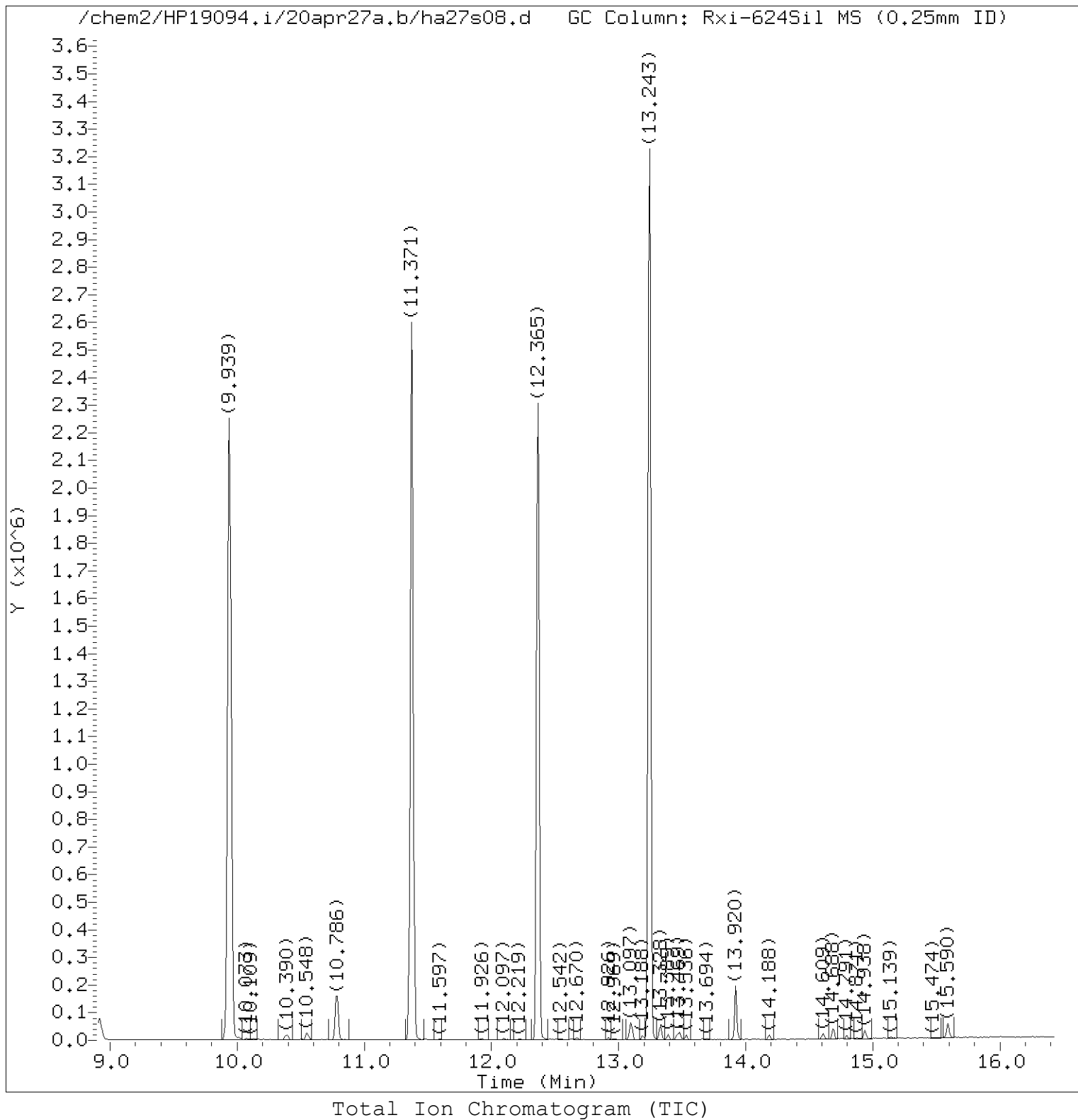
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS1

Lab Sample ID: 1300798MS

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284



Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d
Injection date and time: 28-APR-2020 00:48

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS1

Lab Sample ID: 1300798MS

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:48

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS1

Lab Sample ID: 1300798MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	345747M	6.224
26) Acetonitrile	(1)	4.178	41	118340M	37.911
27) *t-Butyl Alcohol-d10	(1)	4.446	65	128193	50.000
37) Vinyl Acetate	(2)	5.519	43	814893	13.770
51) \$Dibromofluoromethane	(2)	7.061	113	455506	10.990
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	87763	10.925
64) *Fluorobenzene	(2)	7.951	96	1667387	10.000
83) \$Toluene-d8	(3)	9.939	98	1789378	9.018
98) *Chlorobenzene-d5	(3)	11.371	117	1489319	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	688434	9.378
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	804206	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

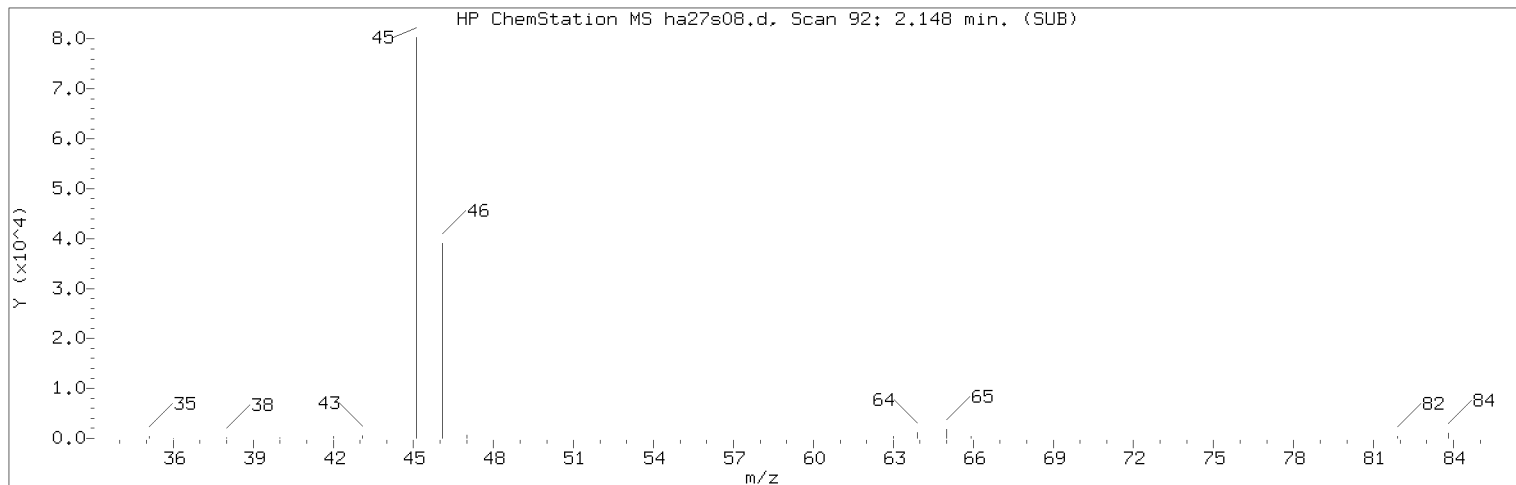
\$ = Compound is a surrogate standard.

page 1 of 1

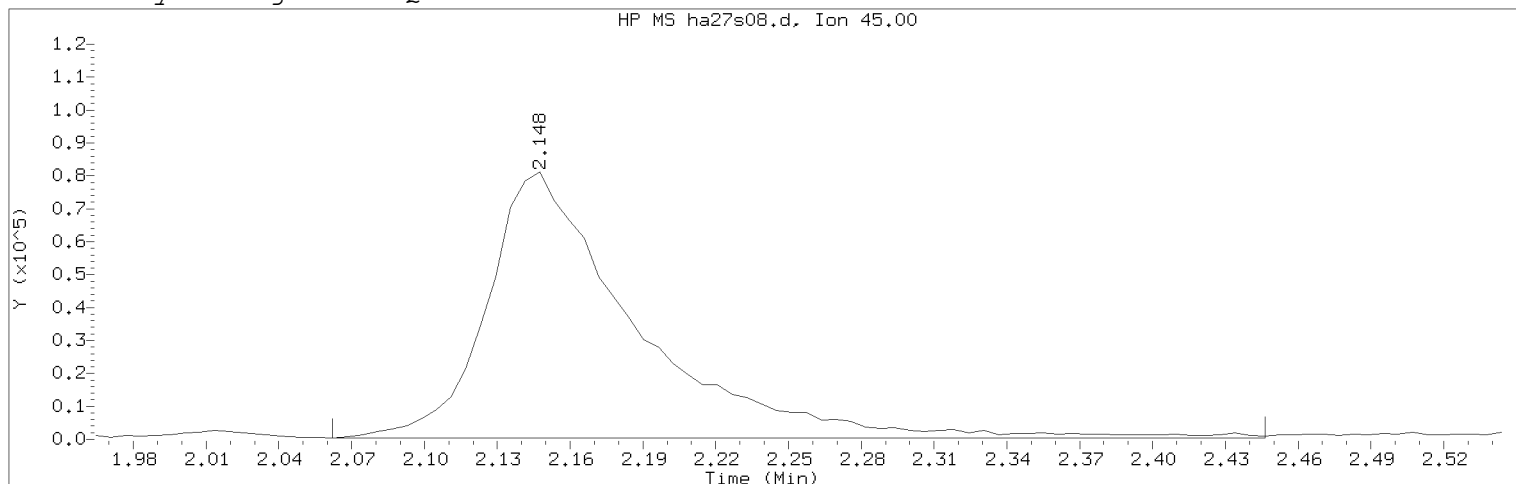
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 00:48 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS1 Lab Sample ID: 1300798MS

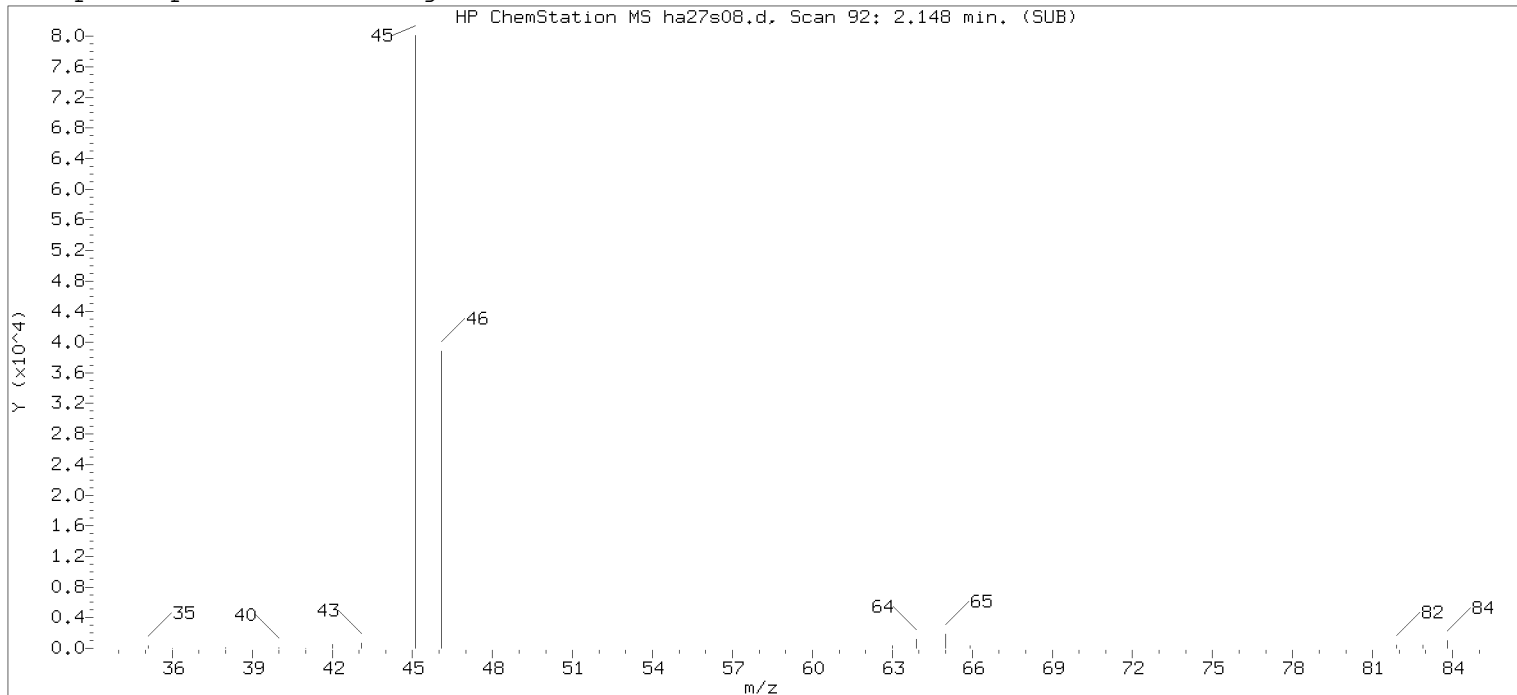
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 345747M
On-Column Amount (ng) : 6.2245
Integration start scan : 77 Integration stop scan: 140
Y at integration start : 422 Y at integration end: 422

Reason for manual integration: improper integration

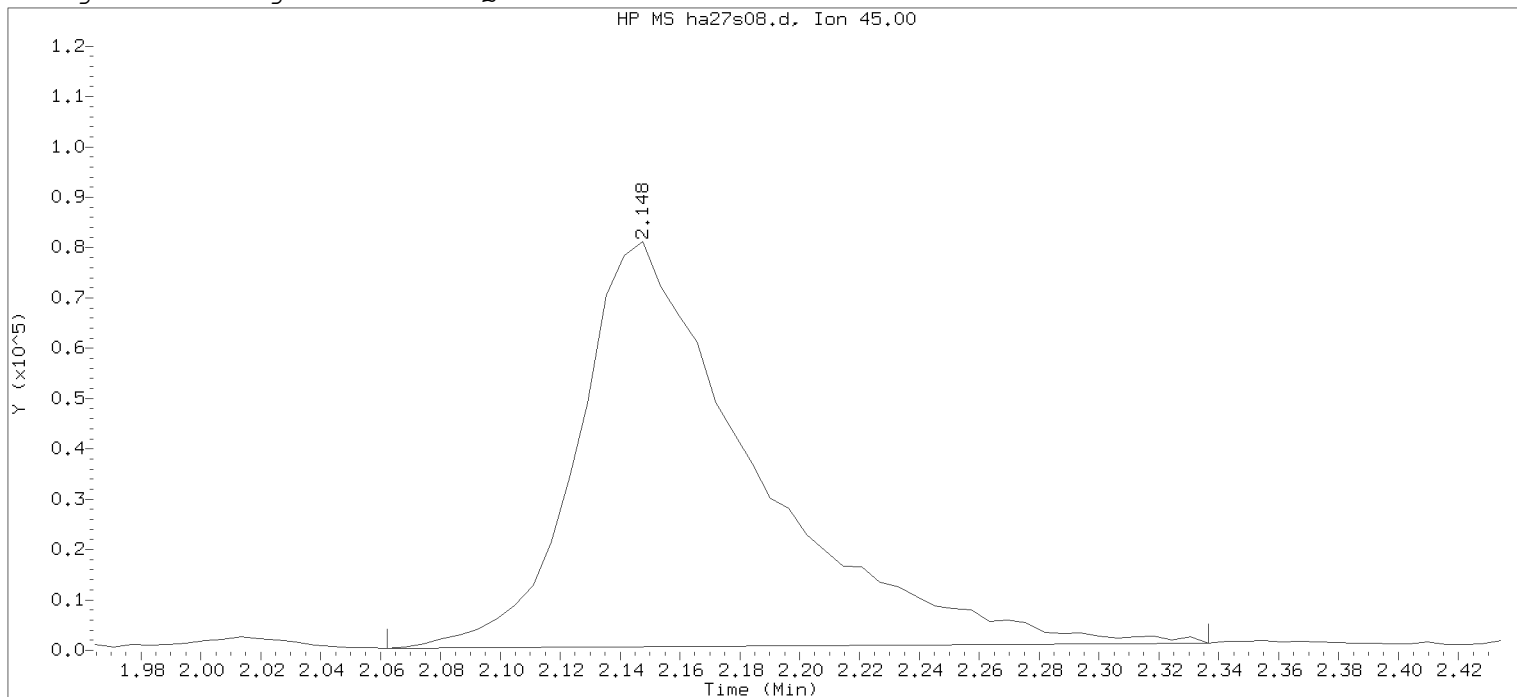
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:48

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 01:06 Automation

Sample Name: 59R04MS1

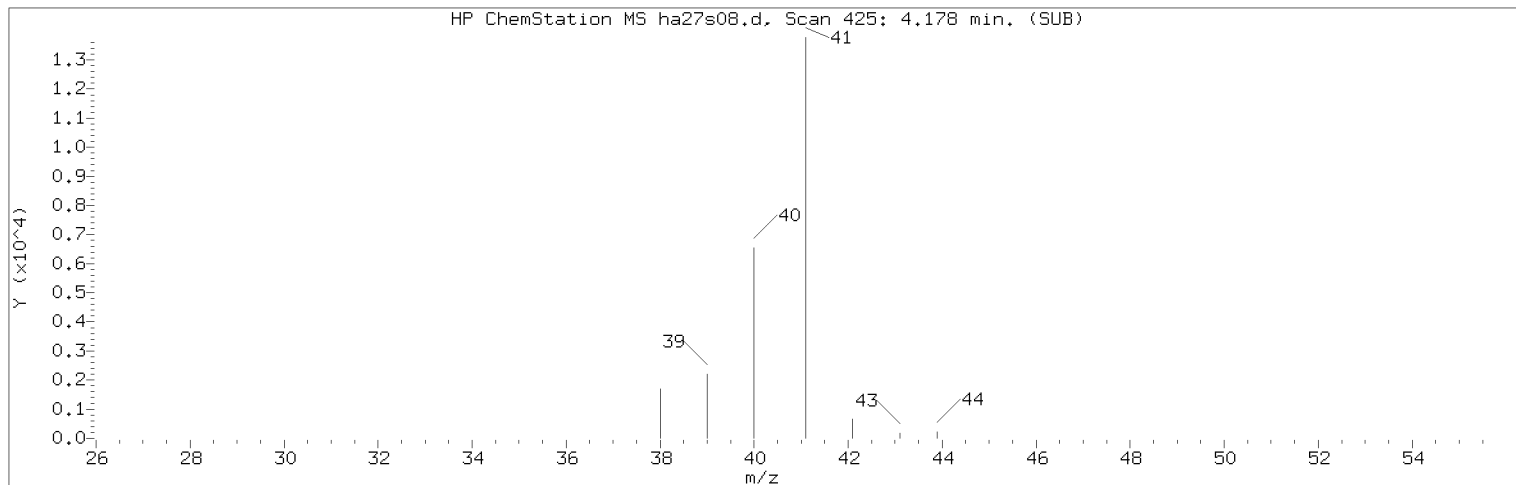
Lab Sample ID: 1300798MS

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 330669	
On-column Amount (ng)	: 5.9530	
Integration start scan	: 77	Integration stop scan: 122
Y at integration start	: 430	Y at integration end: 1376

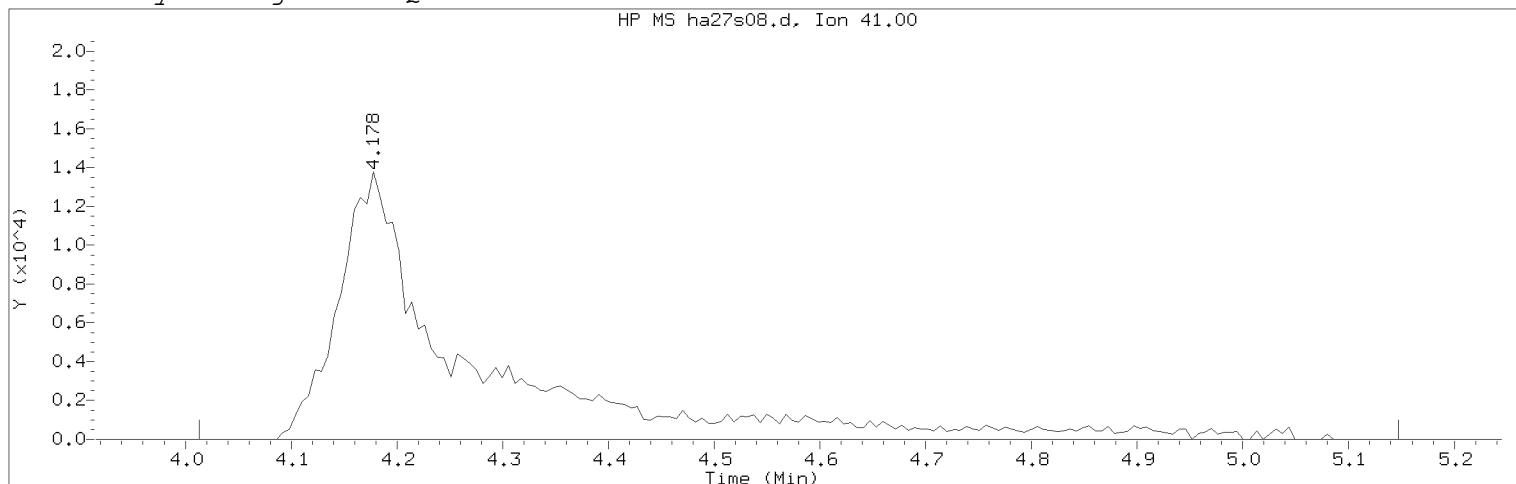
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 930 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:48

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS1

Lab Sample ID: 1300798MS

Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 425	
Retention Time (minutes)	: 4.178	
Quant Ion	: 41.00	
Area (flag)	: 118340M	
On-Column Amount (ng)	: 37.9112	
Integration start scan	: 397	Integration stop scan: 583
Y at integration start	: 0	Y at integration end: 0

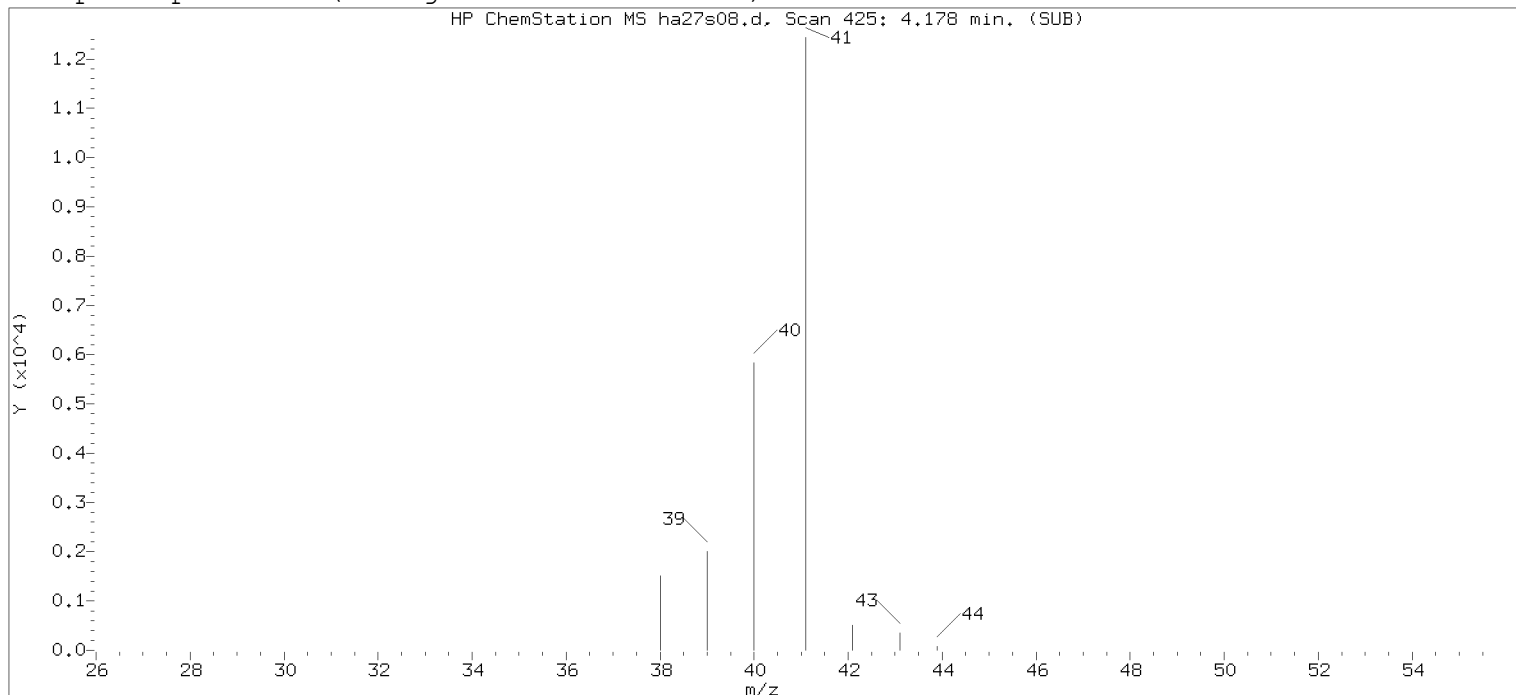
Reason for manual integration: improper integration

Analyst responsible for change:

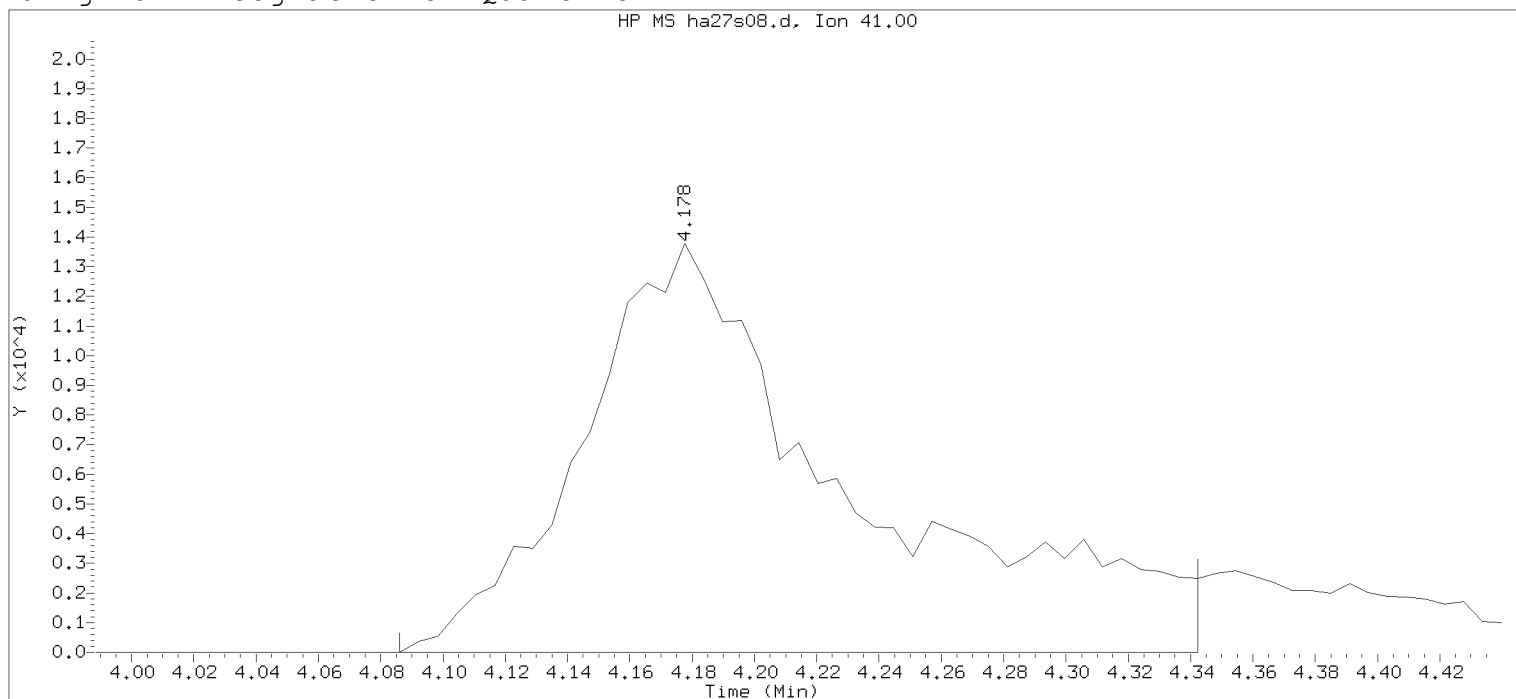
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s08.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:48

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 01:06 Automation

Sample Name: 59R04MS1

Lab Sample ID: 1300798MS

Compound Number : 26

Compound Name : Acetonitrile

Scan Number : 425

Retention Time (minutes): 4.178

Quant Ion : 41.00

Area : 82428

On-column Amount (ng) : 26.4065

Integration start scan : 409 Integration stop scan: 451

Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 932 of 1506

59R04MSD1 Lancaster Laboratories 1300799MSD

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/20apr27a.b/ha27s09.d Injection date and time: 28-APR-2020 01:10
 Data file Sample Info. Line: 59R04MSD1;1300799MSD;1;3;MSD;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H2011
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
 Calibration date and time (Last Method Edit): 28-APR-2020 22:26
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038B Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (-0.006)	470	65	121202 (-8)	50.00	
64) Fluorobenzene	7.952 (0.000)	1044	96	1637474 (-3)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1473893 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	802307 (-2)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	448896	11.028	110%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	88008	11.156	112%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1777129	9.050	90%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	688811	9.482	95%		80 - 120

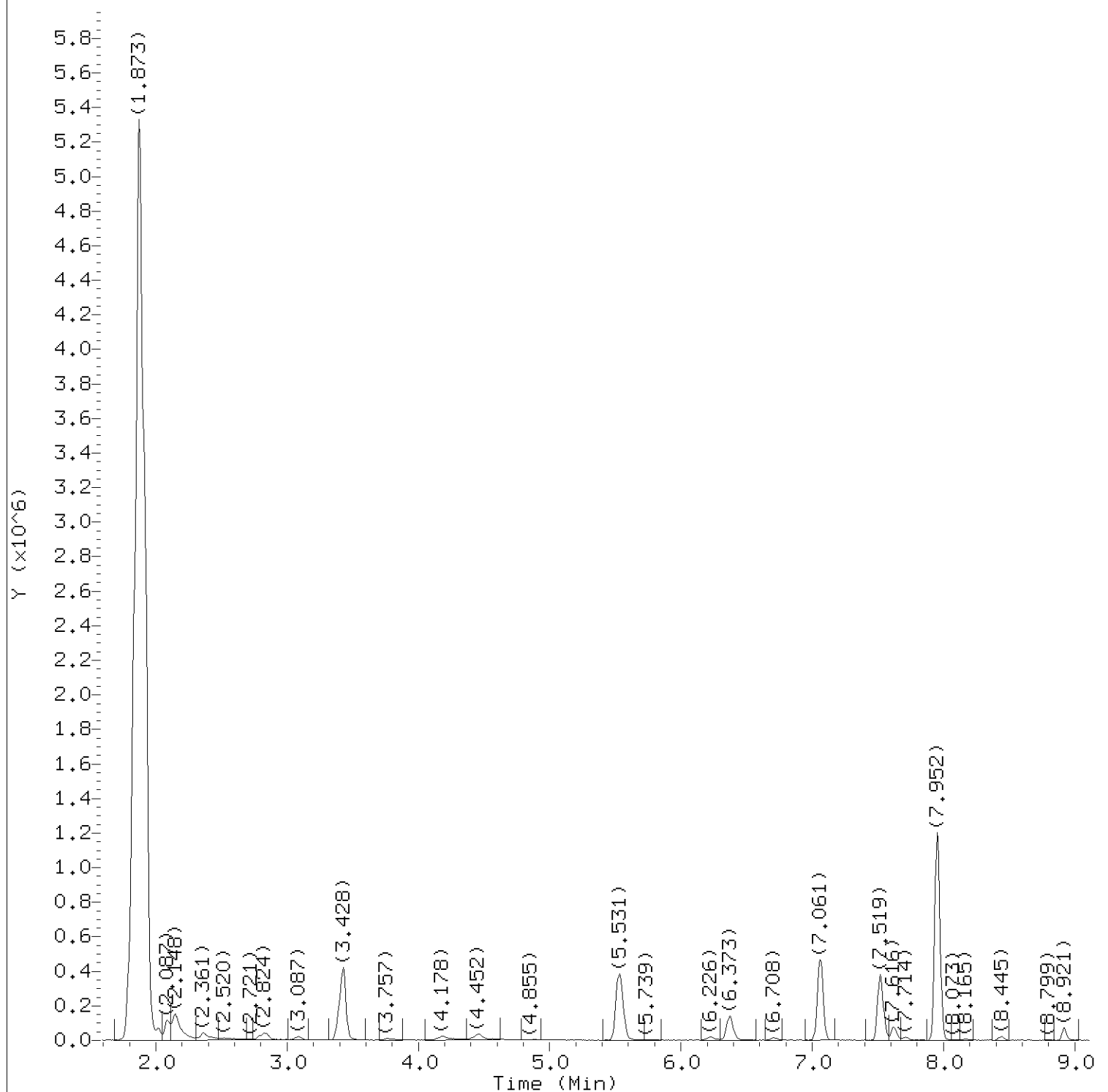
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.148 (-0.000)	45	338603M	6.207	6.21		J	0.04	13
26) Acetonitrile	(1)	4.178 (0.001)	41	112618M	38.159	38.16		J	32	100
37) Vinyl Acetate	(2)	5.519 (-0.000)	43	774084	13.319	13.32			3	10

M = Compound was manually integrated.

Total number of targets = 3

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d
Injection date and time: 28-APR-2020 01:10

Instrument ID: HP19094.i
Analyst ID: mec29284

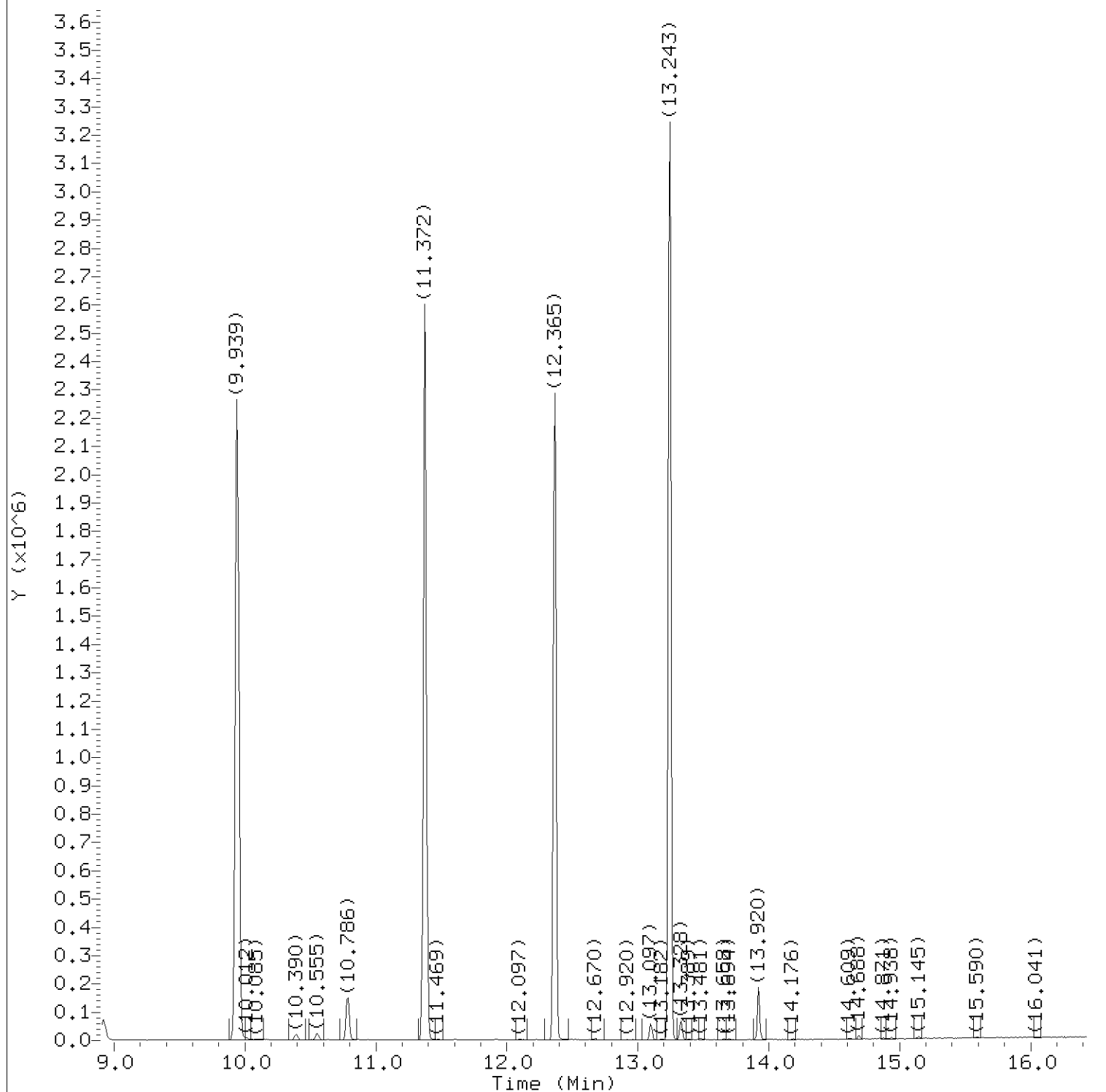
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R04MSD1

Lab Sample ID: 1300799MSD

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d
Injection date and time: 28-APR-2020 01:10

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R04MSD1

Lab Sample ID: 1300799MSD

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:10

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R04MSD1

Lab Sample ID: 1300799MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	338603M	6.207
26) Acetonitrile	(1)	4.178	41	112618M	38.159
27) *t-Butyl Alcohol-d10	(1)	4.452	65	121202	50.000
37) Vinyl Acetate	(2)	5.519	43	774084	13.319
51) \$Dibromofluoromethane	(2)	7.061	113	448896	11.028
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	88008	11.156
64) *Fluorobenzene	(2)	7.952	96	1637474	10.000
83) \$Toluene-d8	(3)	9.939	98	1777129	9.050
98) *Chlorobenzene-d5	(3)	11.372	117	1473893	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	688811	9.482
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	802307	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

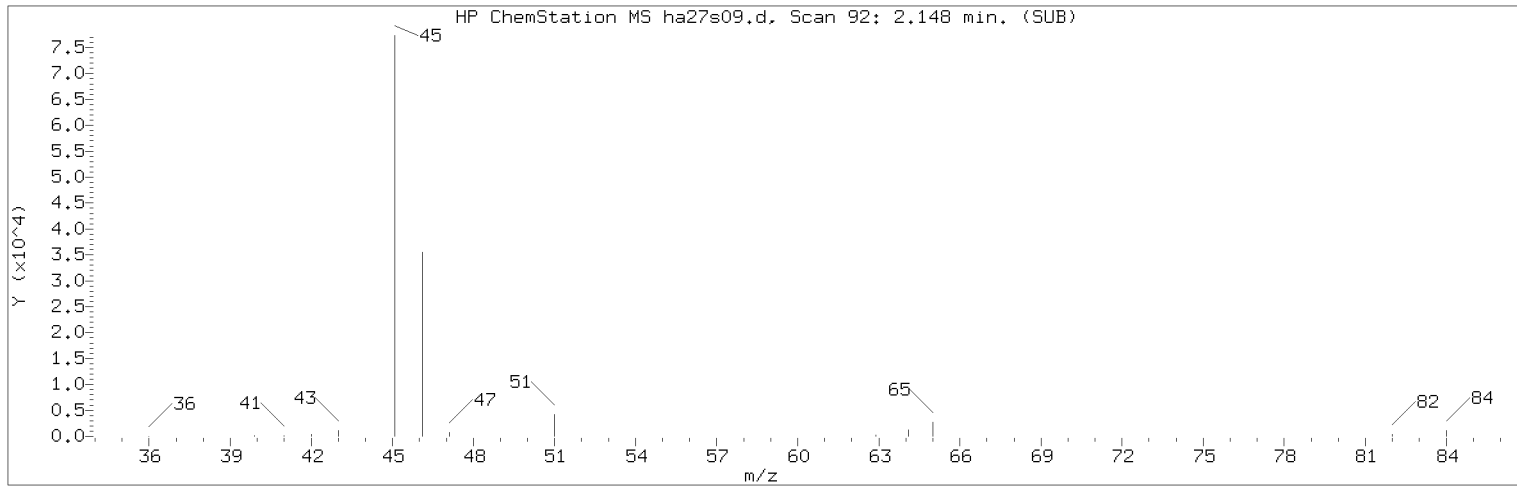
\$ = Compound is a surrogate standard.

page 1 of 1

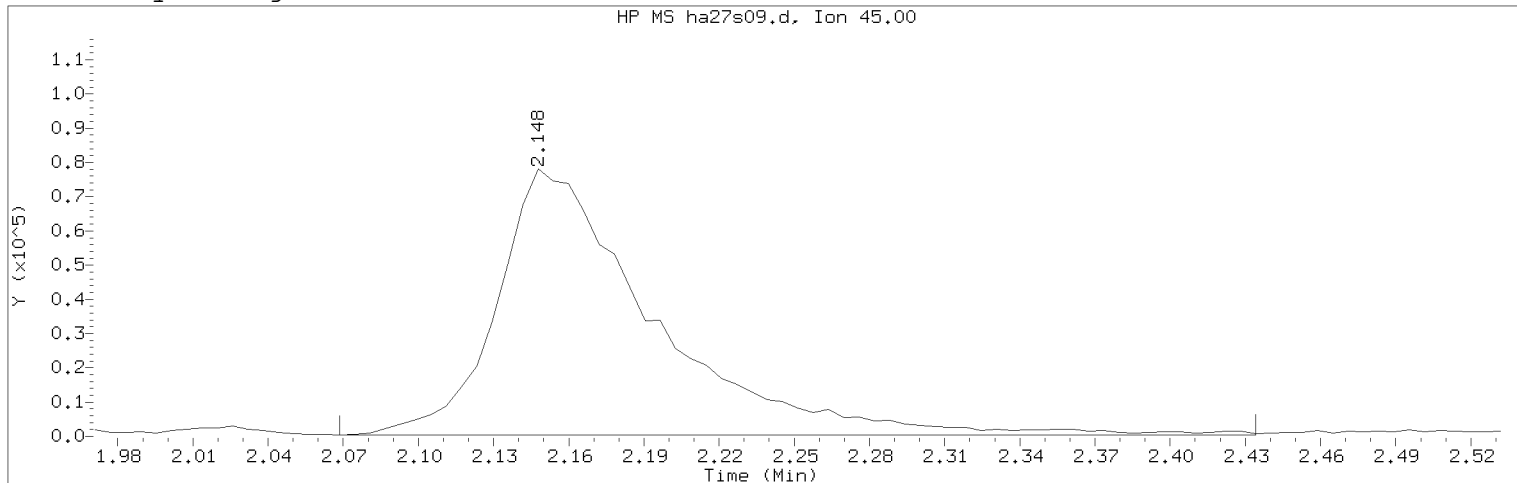
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 01:10 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R04MSD1 Lab Sample ID: 1300799MSD

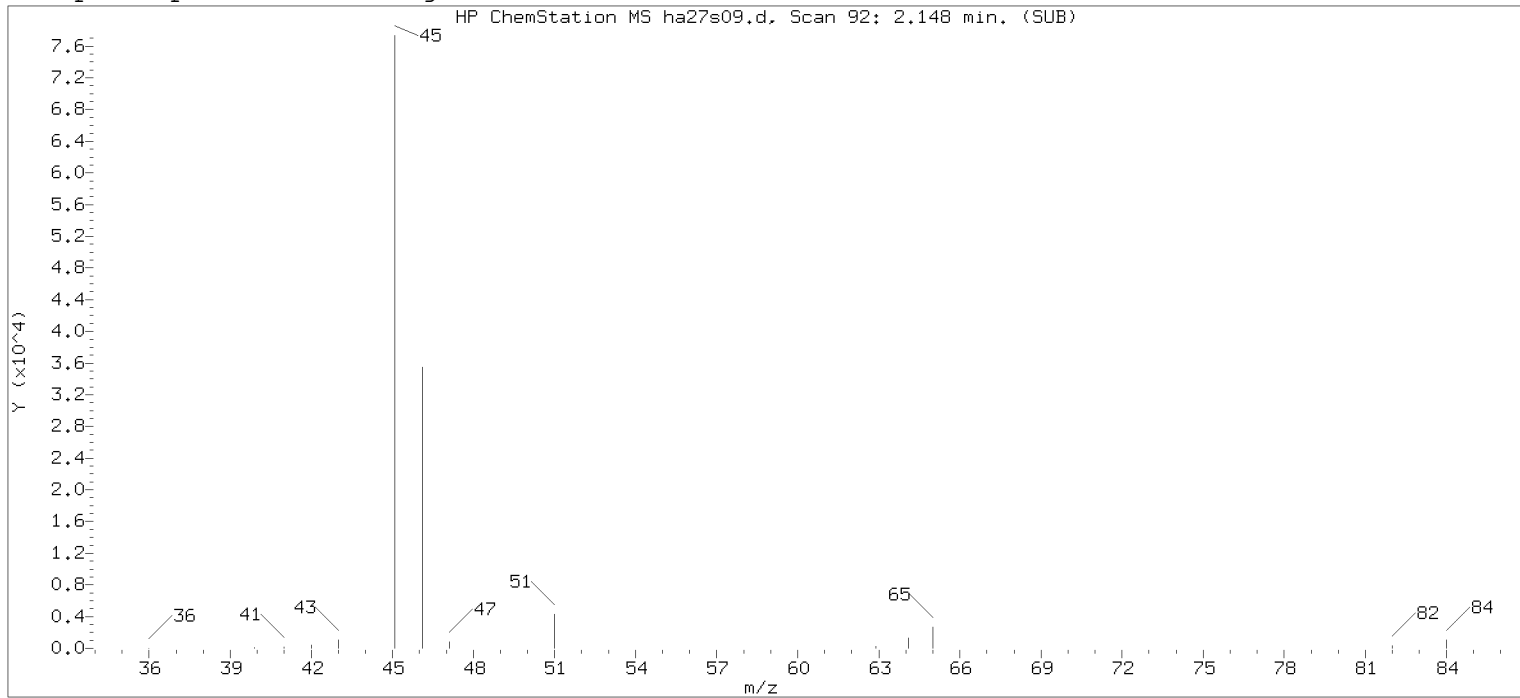
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 338603M
On-Column Amount (ng) : 6.2072
Integration start scan : 78 Integration stop scan: 138
Y at integration start : 360 Y at integration end: 360

Reason for manual integration: improper integration

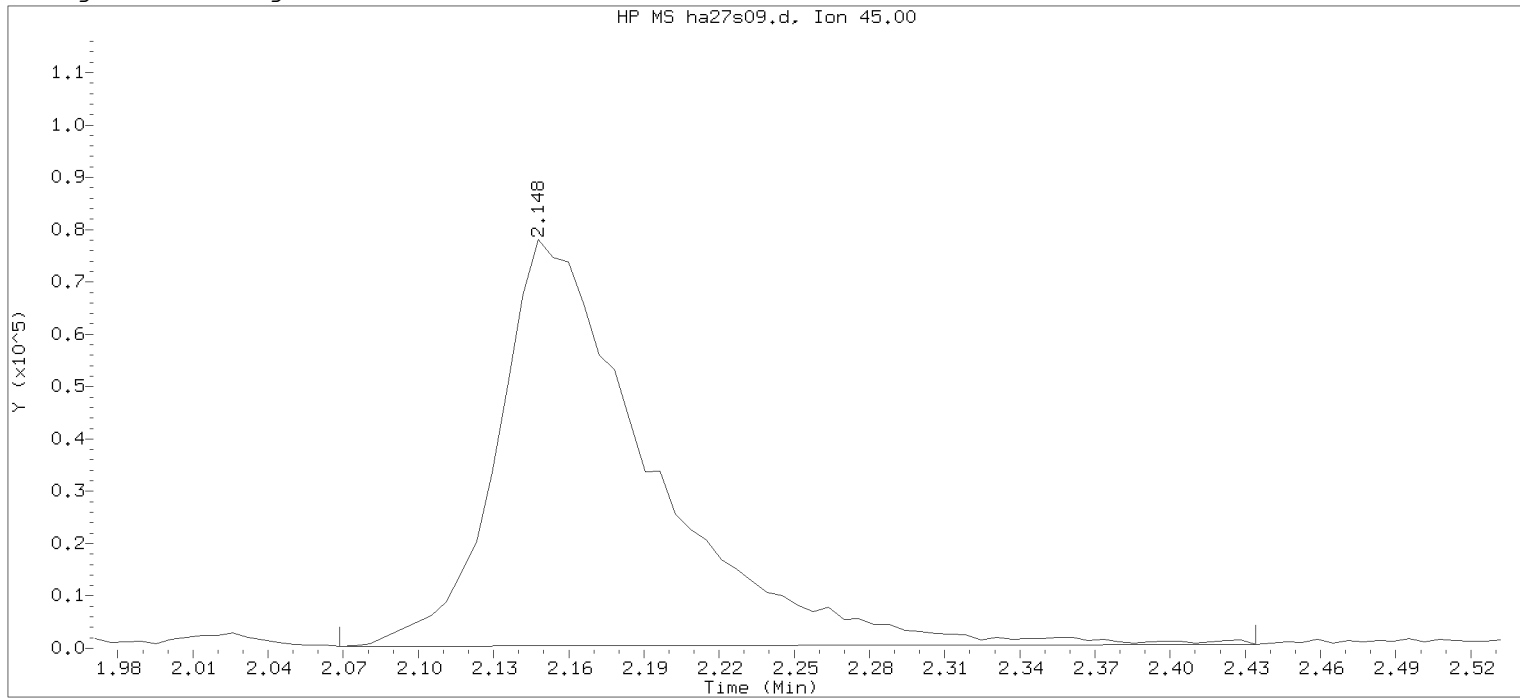
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:10

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 01:28 Automation

Sample Name: 59R04MSD1

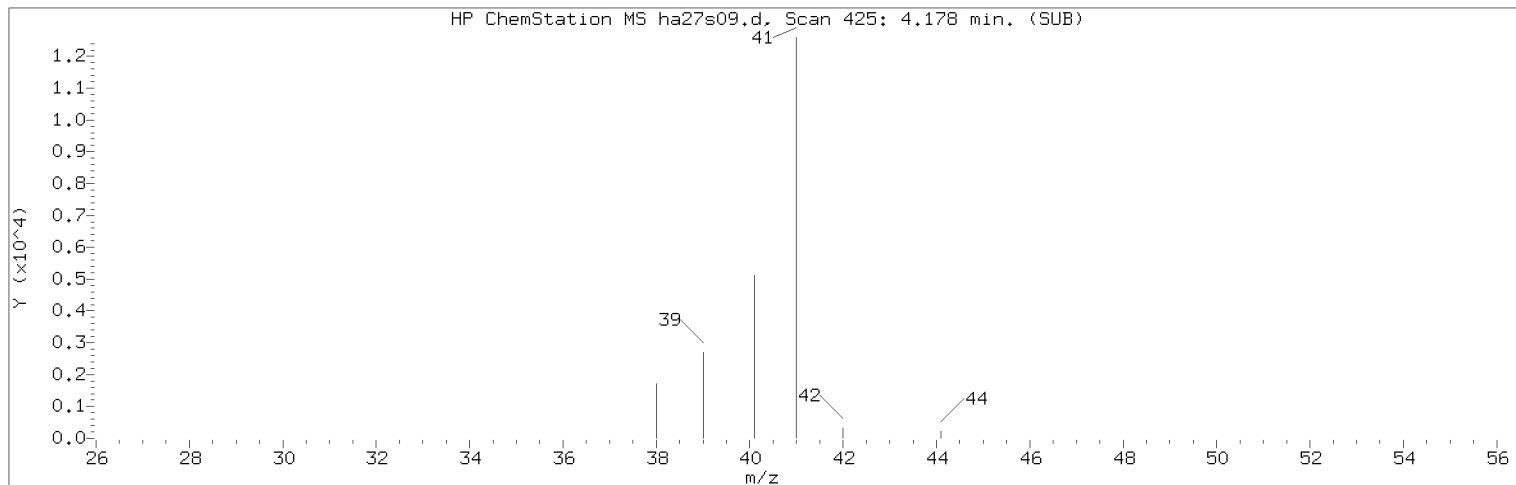
Lab Sample ID: 1300799MSD

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 333826	
On-column Amount (ng)	: 6.1196	
Integration start scan	: 78	Integration stop scan: 138
Y at integration start	: 397	Y at integration end: 751

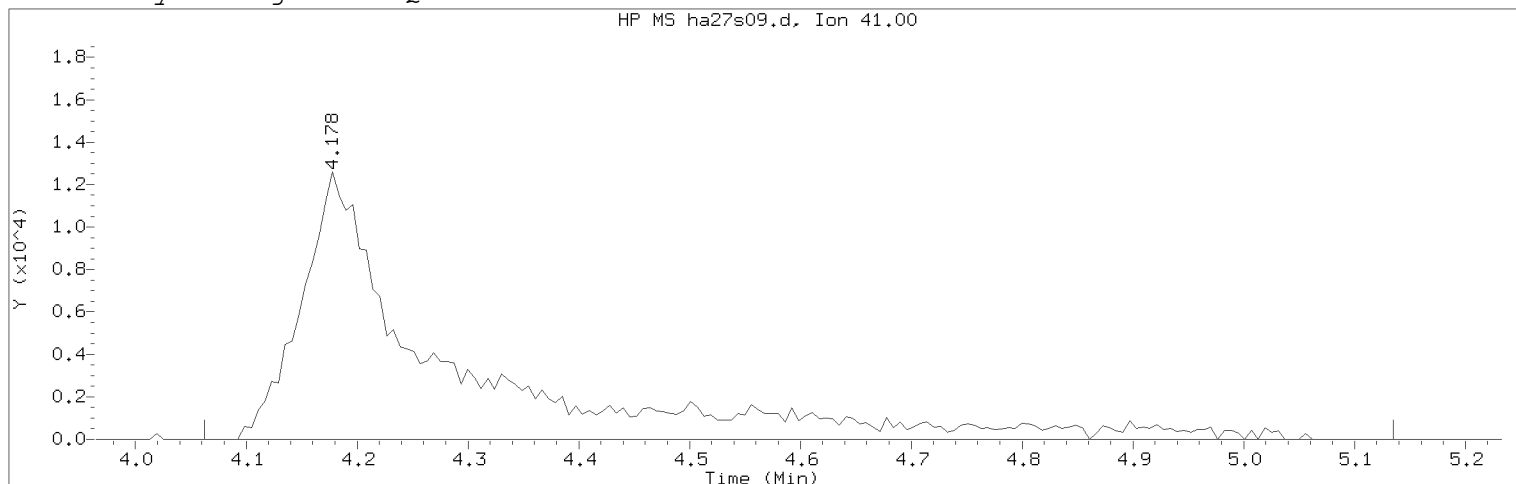
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 938 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 01:10

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:29 mec29284

Sample Name: 59R04MSD1

Lab Sample ID: 1300799MSD

Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 425	
Retention Time (minutes)	: 4.178	
Quant Ion	: 41.00	
Area (flag)	: 112618M	
On-Column Amount (ng)	: 38.1592	
Integration start scan	: 405	Integration stop scan: 581
Y at integration start	: 0	Y at integration end: 0

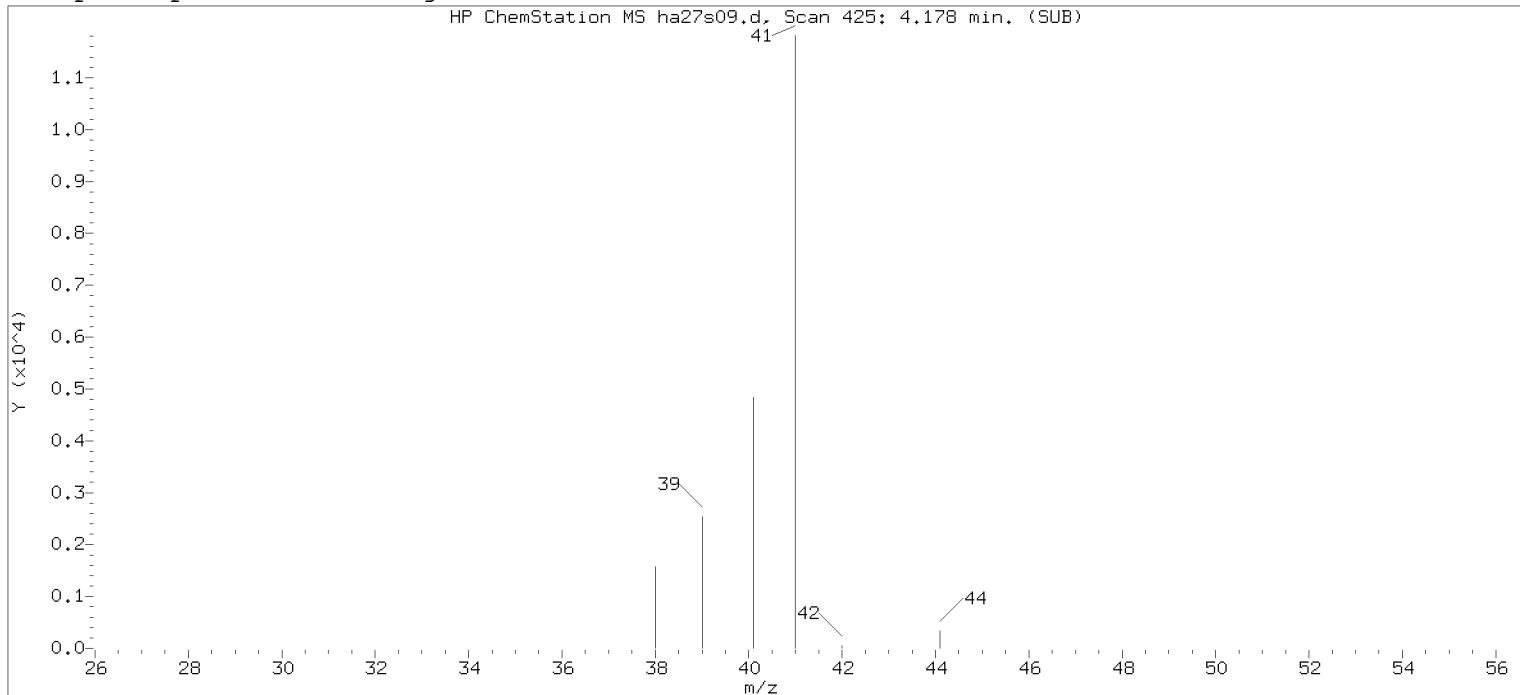
Reason for manual integration: improper integration

Analyst responsible for change:

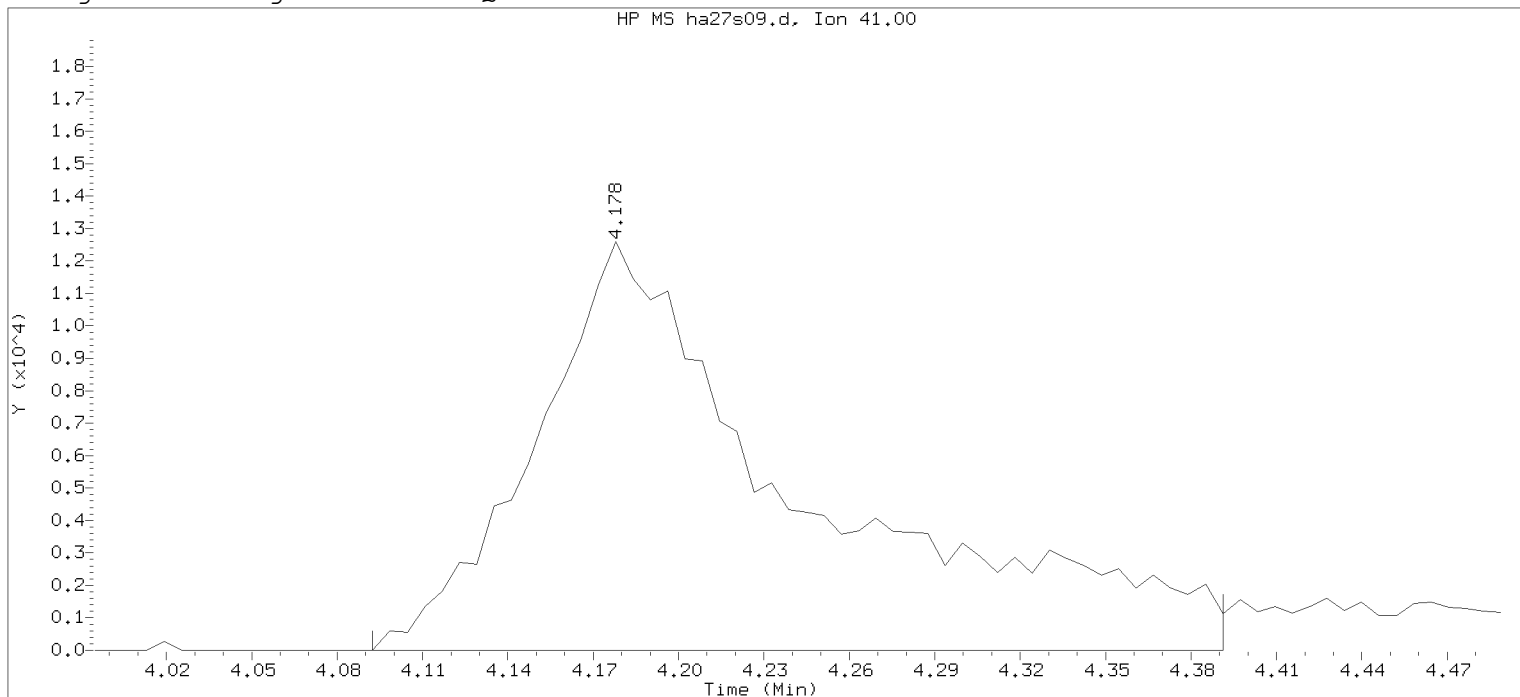
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s09.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 01:10 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 27-APR-2020 22:27
Date, time and analyst ID of latest file update: 28-Apr-2020 01:28 Automation

Sample Name: 59R04MSD1 Lab Sample ID: 1300799MSD

Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 425	
Retention Time (minutes)	: 4.178	
Quant Ion	: 41.00	
Area	: 81905	
On-column Amount (ng)	: 27.7525	
Integration start scan	: 410	Integration stop scan: 459
Y at integration start	: 0	Y at integration end: 0

59R04MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300798MS

Data file: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Injection date and time: 28-APR-2020 00:05

Data file Sample Info. Line: 59R04MS;1300798MS;1;3;MS;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181A

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.440 (0.006)	468	65	117364M (-10)	50.00	
64) Fluorobenzene	7.952 (0.000)	1044	96	1665793 (-1)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1477359 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	819129 (0)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.001)	113	442459	10.685	107%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513 (0.001)	102	85770	10.687	107%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1817510	9.234	92%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	717810	9.858	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.050 (0.000)	85	352944	5.652	5.65			0.1	1
2) Chloromethane	(2)	2.264 (-0.000)	50	384653	6.240	6.24			0.06	0.5
5) Vinyl Chloride	(2)	2.392 (-0.000)	62	382373	6.522	6.52			0.2	1
7) Bromomethane	(2)	2.733 (-0.000)	94	244456	5.820	5.82			0.5	1
8) Chloroethane	(2)	2.824 (0.001)	64	253539	7.466	7.47			0.07	0.5
10) Trichlorofluoromethane	(2)	3.135 (0.000)	101	459430	6.866	6.87			0.2	1
11) Ethyl ether	(2)	3.416 (-0.000)	59	634160	21.415	21.42			1	13
13) Acrolein	(1)	3.599 (0.000)	56	186951	35.374	35.37			3	25
15) 1,1-Dichloroethene	(2)	3.739 (0.000)	96	254508	6.254	6.25			0.2	1
16) Freon 113	(2)	3.769 (0.000)	101	277933	6.533	6.53			0.1	1
14) Acetone	(1)	3.776 (0.000)	43	227247	31.866	31.87			0.9	10
17) Methyl Iodide	(2)	3.952 (-0.000)	142	449635	5.725	5.73			0.6	10
19) Carbon Disulfide	(2)	4.068 (-0.000)	76	770198	6.187	6.19		J	0.4	10
23) Allyl Chloride	(2)	4.251 (-0.000)	41	379091	5.484	5.48		J	0.8	10
24) Methylene Chloride	(2)	4.452 (-0.000)	84	270685	6.180	6.18			0.2	1
30) Acrylonitrile	(1)	4.794 (-0.001)	53	240633	27.652	27.65			0.5	10
32) trans-1,2-Dichloroethene	(2)	4.879 (-0.000)	96	267444	5.978	5.98			0.2	1
34) 1,1-Dichloroethane	(2)	5.531 (0.000)	63	761785	9.431	9.43			0.1	1
36) 2-Chloro-1,3-Butadiene	(2)	5.641 (0.000)	53	416812	6.027	6.03		J	0.5	10
39) 2-Butanone	(1)	6.324 (-0.001)	43	451644	40.504	40.50			0.6	10
43) Propionitrile	(1)	6.415 (-0.000)	54	124669	40.816	40.82		J	10	100
46) Methacrylonitrile	(1)	6.635 (-0.003)	67	447998	41.010	41.01		J	10	100
49) Tetrahydrofuran	(1)	6.708 (-0.003)	71	87908	28.536	28.54			2	25
50) Chloroform	(2)	6.842 (-0.000)	83	486978	6.178	6.18			0.09	1
52) 1,1,1-Trichloroethane	(2)	7.074 (0.000)	97	429259	5.855	5.86			0.1	1
55) Carbon Tetrachloride	(2)	7.287 (0.000)	117	389412	6.195	6.20			0.2	1
57) Isobutyl Alcohol	(1)	7.415 (-0.002)	41	108406	126.249	126.25		J	4	200
59) Benzene	(2)	7.549 (-0.000)	78	1159489	6.399	6.40			0.07	1
60) 1,2-Dichloroethane	(2)	7.622 (0.000)	62	278050M	5.952	5.95			0.1	1
68) Trichloroethene	(2)	8.427 (0.000)	95	292964	6.166	6.17			0.2	1

M = Compound was manually integrated.

59R04MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300798MS

Data file: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Injection date and time: 28-APR-2020 00:05

Data file Sample Info. Line: 59R04MS;1300798MS;1;3;MS;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181A2

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

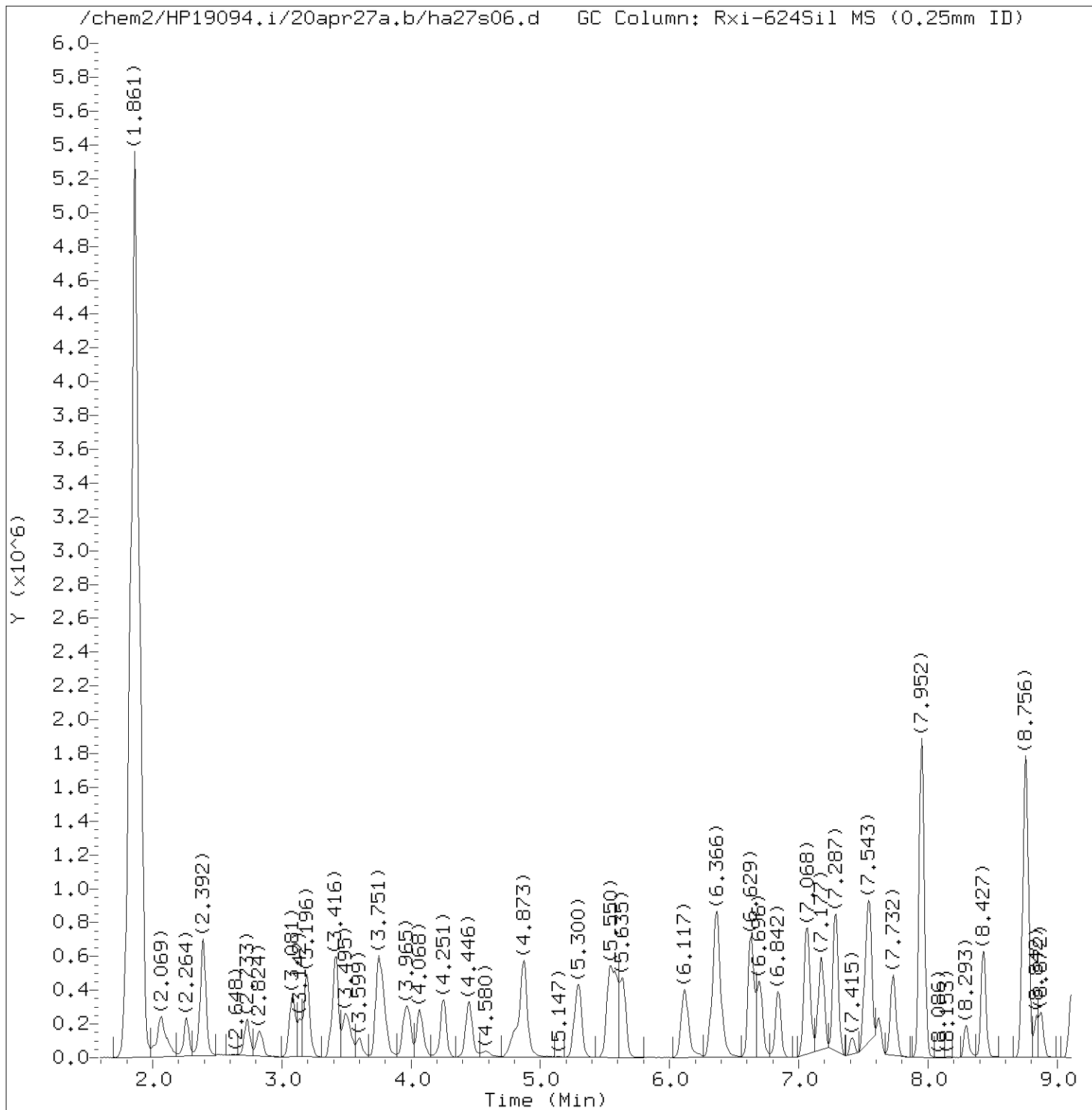
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
71) 1,2-Dichloropropane	(2)	8.768(0.000)	63	293381	6.545	6.54			0.1	1
72) Methyl Methacrylate	(1)	8.842(-0.004)	69	117680	5.355	5.36		J	4	10
74) Dibromomethane	(2)	8.872(0.000)	93	125184	6.109	6.11			0.07	1
73) 1,4-Dioxane	(1)	8.842(0.000)	88	23234M	139.355	139.35		J	45	200
75) Bromodichloromethane	(2)	9.110(0.000)	83	333129	5.981	5.98			0.09	1
82) 4-Methyl-2-Pentanone	(1)	9.799(-0.003)	43	721169	26.241	26.24			0.9	10
84) Toluene	(3)	10.012(-0.000)	92	711607	5.147	5.15			0.09	1
85) trans-1,3-Dichloropropene	(3)	10.262(-0.000)	75	305178	4.755	4.76			0.1	1
87) Ethyl Methacrylate	(3)	10.311(0.000)	69	214183	4.306	4.31		J	0.8	10
89) 1,1,2-Trichloroethane	(3)	10.463(-0.000)	97	181998	5.239	5.24			0.08	1
90) Tetrachloroethene	(3)	10.549(-0.000)	166	342778	5.454	5.45			0.06	1
91) 1,3-Dichloropropane	(3)	10.622(-0.000)	76	309363	5.184	5.18			0.09	1
92) 2-Hexanone	(1)	10.664(-0.003)	43	502187	26.741	26.74			0.6	10
94) Dibromochloromethane	(3)	10.835(0.000)	129	226810	5.099	5.10			0.07	1
96) 1,2-Dibromoethane	(3)	10.951(-0.000)	107	171268	5.159	5.16			0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)	11.481(-0.000)	131	264052	4.914	4.91			0.08	1
101) Ethylbenzene	(3)	11.481(-0.000)	91	1354202	4.977	4.98			0.08	1
102) m+p-Xylene	(3)	11.597(0.000)	106	1084613	10.426	10.43			0.1	2
105) o-Xylene	(3)	11.920(-0.000)	106	496611	4.854	4.85			0.1	1
106) Xylene (Total)	(3)		106	1581224	15.280	15.28			0.2	3
107) Styrene	(3)	11.938(-0.000)	104	841408	5.068	5.07			0.07	1
108) Bromoform	(3)	12.097(-0.000)	173	122377	4.720	4.72			0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)	12.463(0.000)	83	201629	4.715	4.71			0.2	1
116) trans-1,4-Dichloro-2-butene	(1)	12.487(-0.003)	53	220358	21.344	21.34			1	10
117) 1,2,3-Trichloropropane	(4)	12.512(-0.000)	110	56165M	4.904	4.90			0.1	1
127) Pentachloroethane	(4)	12.957(-0.000)	167	197932	4.585	4.59		J	0.8	10
132) 1,3-Dichlorobenzene	(4)	13.188(-0.000)	146	628097	4.875	4.88			0.06	1
135) 1,4-Dichlorobenzene	(4)	13.261(0.000)	146	626586	4.986	4.99			0.07	1
140) 1,2-Dichlorobenzene	(4)	13.524(0.000)	146	548862	4.833	4.83			0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)	14.060(-0.004)	155	30107	5.113	5.11			0.2	1
146) 1,2,4-Trichlorobenzene	(4)	14.609(0.000)	180	362507	4.287	4.29			0.1	1
147) Hexachlorobutadiene	(4)	14.688(0.000)	225	222477	5.042	5.04			0.07	1
148) Naphthalene	(4)	14.792(0.000)	128	546792	3.706	3.71			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d
Injection date and time: 28-APR-2020 00:05

Instrument ID: HP19094.i
Analyst ID: mec29284

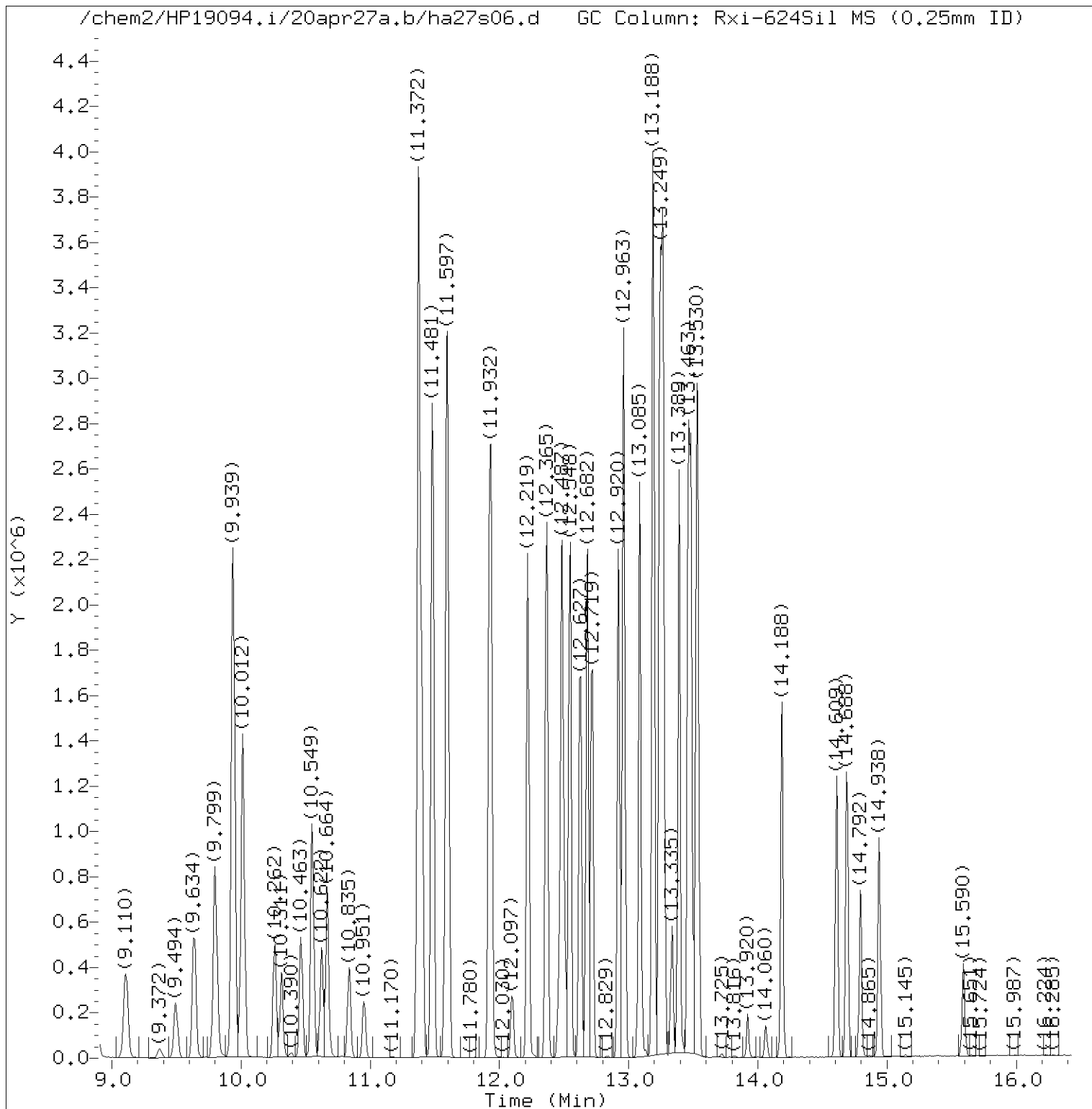
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d
Injection date and time: 28-APR-2020 00:05

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d
 Injection date and time: 28-APR-2020 00:05

Instrument ID: HP19094.i
 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 22:26
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.050	85	352944	5.652
2) Chloromethane	(2)	2.264	50	384653	6.240
5) Vinyl Chloride	(2)	2.392	62	382373	6.522
7) Bromomethane	(2)	2.733	94	244456	5.820
8) Chloroethane	(2)	2.824	64	253539	7.466
10) Trichlorofluoromethane	(2)	3.135	101	459430	6.866
11) Ethyl ether	(2)	3.416	59	634160	21.415
13) Acrolein	(1)	3.599	56	186951	35.374
15) 1,1-Dichloroethene	(2)	3.739	96	254508	6.254
16) Freon 113	(2)	3.769	101	277933	6.533
14) Acetone	(1)	3.776	43	227247	31.866
17) Methyl Iodide	(2)	3.952	142	449635	5.725
19) Carbon Disulfide	(2)	4.068	76	770198	6.187
23) Allyl Chloride	(2)	4.251	41	379091	5.484
27) *t-Butyl Alcohol-d10	(1)	4.440	65	117364M	50.000
24) Methylene Chloride	(2)	4.452	84	270685	6.180
30) Acrylonitrile	(1)	4.794	53	240633	27.652
32) trans-1,2-Dichloroethene	(2)	4.879	96	267444	5.978
34) 1,1-Dichloroethane	(2)	5.531	63	761785	9.431
36) 2-Chloro-1,3-Butadiene	(2)	5.641	53	416812	6.027
39) 2-Butanone	(1)	6.324	43	451644	40.504
43) Propionitrile	(1)	6.415	54	124669	40.816
46) Methacrylonitrile	(1)	6.635	67	447998	41.010
49) Tetrahydrofuran	(1)	6.708	71	87908	28.536
50) Chloroform	(2)	6.842	83	486978	6.178
51) \$Dibromofluoromethane	(2)	7.055	113	442459	10.685
52) 1,1,1-Trichloroethane	(2)	7.074	97	429259	5.855
55) Carbon Tetrachloride	(2)	7.287	117	389412	6.195
57) Isobutyl Alcohol	(1)	7.415	41	108406	126.249
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	85770	10.687
59) Benzene	(2)	7.549	78	1159489	6.399
60) 1,2-Dichloroethane	(2)	7.622	62	278050M	5.952
64) *Fluorobenzene	(2)	7.952	96	1665793	10.000
68) Trichloroethene	(2)	8.427	95	292964	6.166
71) 1,2-Dichloropropane	(2)	8.768	63	293381	6.545
73) 1,4-Dioxane	(1)	8.842	88	23234M	139.355
72) Methyl Methacrylate	(1)	8.842	69	117680	5.355
74) Dibromomethane	(2)	8.872	93	125184	6.109

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d
Injection date and time: 28-APR-2020 00:05

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
75) Bromodichloromethane	(2)	9.110	83	333129	5.981
82) 4-Methyl-2-Pentanone	(1)	9.799	43	721169	26.241
83) \$Toluene-d8	(3)	9.939	98	1817510	9.234
84) Toluene	(3)	10.012	92	711607	5.147
85) trans-1,3-Dichloropropene	(3)	10.262	75	305178	4.755
87) Ethyl Methacrylate	(3)	10.311	69	214183	4.306
89) 1,1,2-Trichloroethane	(3)	10.463	97	181998	5.239
90) Tetrachloroethene	(3)	10.549	166	342778	5.454
91) 1,3-Dichloropropane	(3)	10.622	76	309363	5.184
92) 2-Hexanone	(1)	10.664	43	502187	26.741
94) Dibromochloromethane	(3)	10.835	129	226810	5.099
96) 1,2-Dibromoethane	(3)	10.951	107	171268	5.159
98) *Chlorobenzene-d5	(3)	11.372	117	1477359	10.000
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	264052	4.914
101) Ethylbenzene	(3)	11.481	91	1354202	4.977
102) m+p-Xylene	(3)	11.597	106	1084613	10.426
106) Xylene (Total)	(3)		106	1581224	15.280
105) o-Xylene	(3)	11.920	106	496611	4.854
107) Styrene	(3)	11.939	104	841408	5.068
108) Bromoform	(3)	12.097	173	122377	4.720
112) \$4-Bromofluorobenzene	(3)	12.365	95	717810	9.858
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	201629	4.715
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	220358	21.344
117) 1,2,3-Trichloropropane	(4)	12.512	110	56165M	4.904
127) Pentachloroethane	(4)	12.957	167	197932	4.585
132) 1,3-Dichlorobenzene	(4)	13.188	146	628097	4.875
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	819129	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	626586	4.986
140) 1,2-Dichlorobenzene	(4)	13.524	146	548862	4.833
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	155	30107	5.113
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	362507	4.287
147) Hexachlorobutadiene	(4)	14.688	225	222477	5.042
148) Naphthalene	(4)	14.792	128	546792	3.706

M = Compound was manually integrated.

* = Compound is an internal standard.

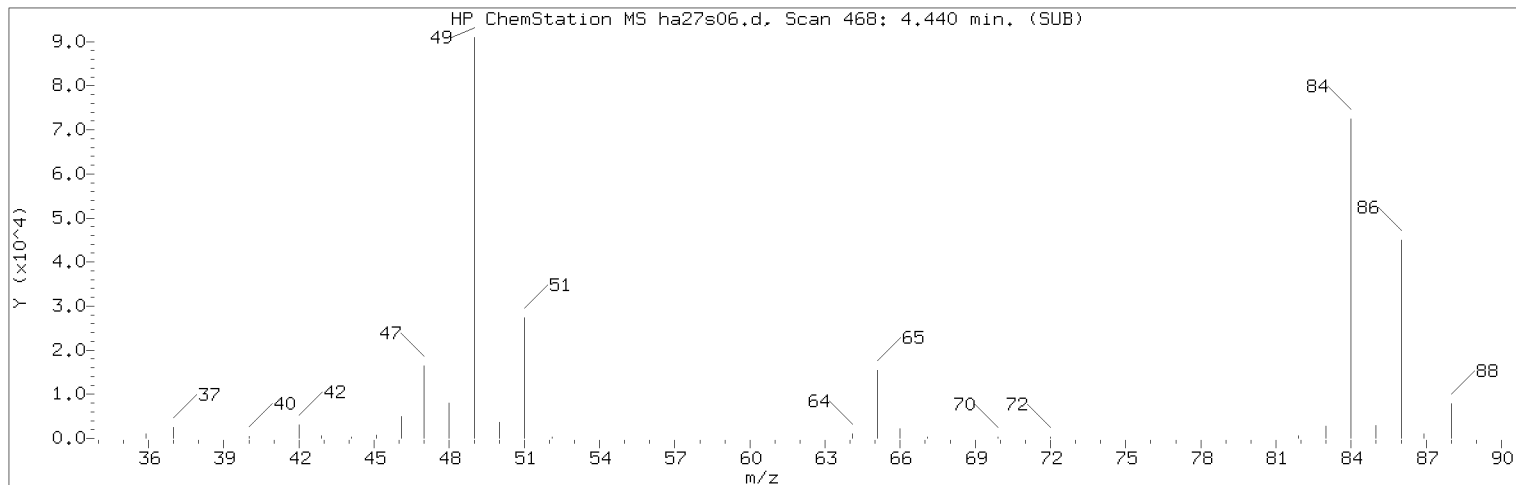
\$ = Compound is a surrogate standard.

page 2 of 2

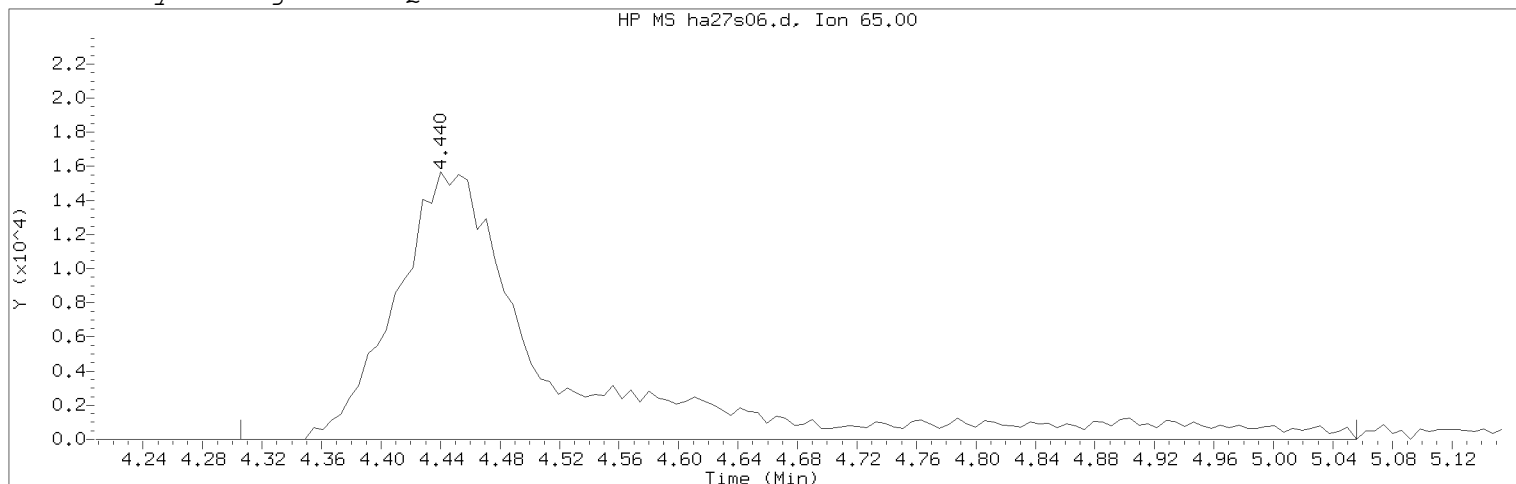
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:05

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 468
Retention Time (minutes): 4.440
Quant Ion : 65.00
Area (flag) : 117364M
On-Column Amount (ng) : 50.0000
Integration start scan : 445 Integration stop scan: 568
Y at integration start : 0 Y at integration end: 0

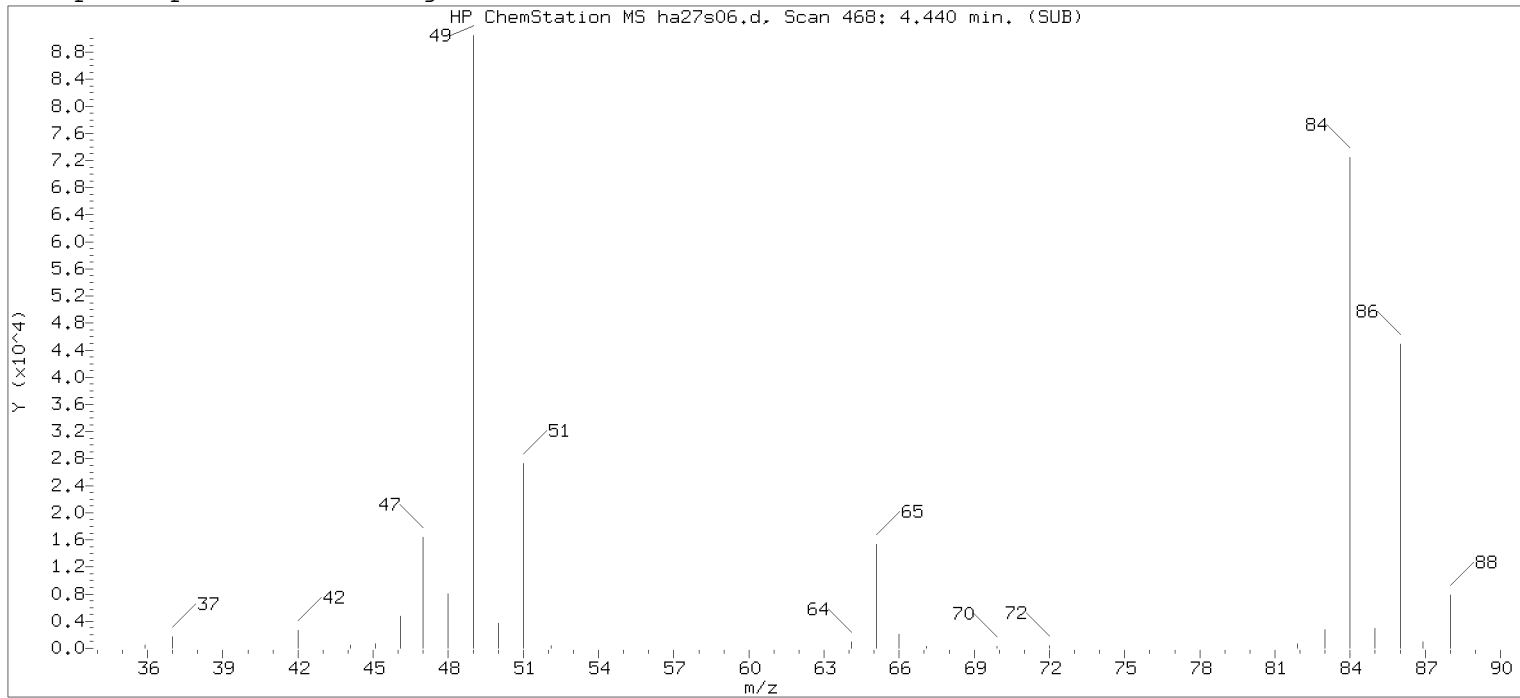
Reason for manual integration: improper integration

Analyst responsible for change:

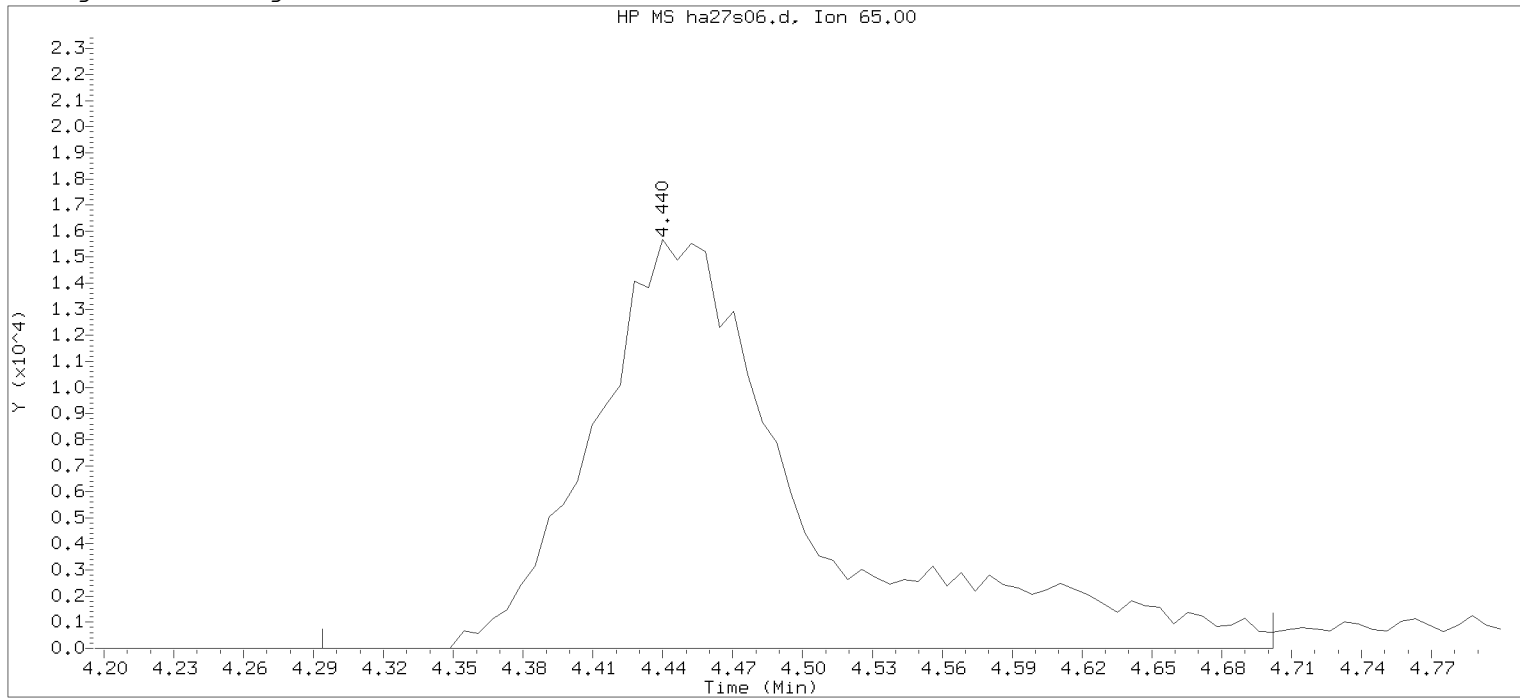
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:05

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:22 Automation

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 468

Retention Time (minutes): 4.440

Quant Ion : 65.00

Area : 100192

On-column Amount (ng) : 50.0000

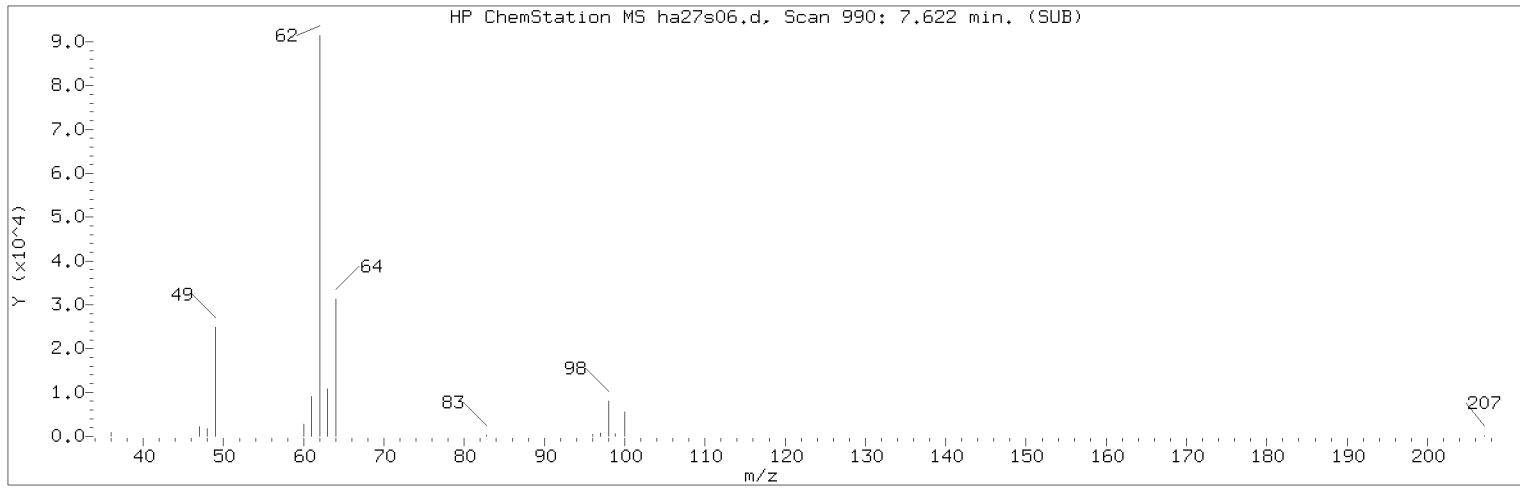
Integration start scan : 443 Integration stop scan: 510

Y at integration start : 0 Y at integration end: 0

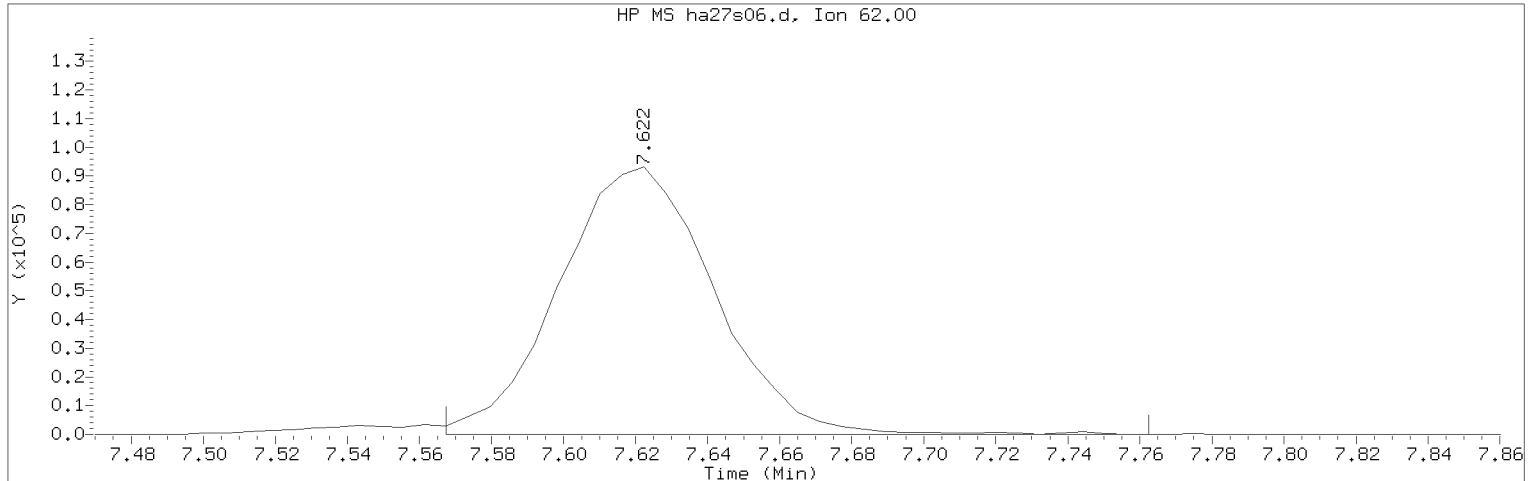
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 948 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 00:05 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

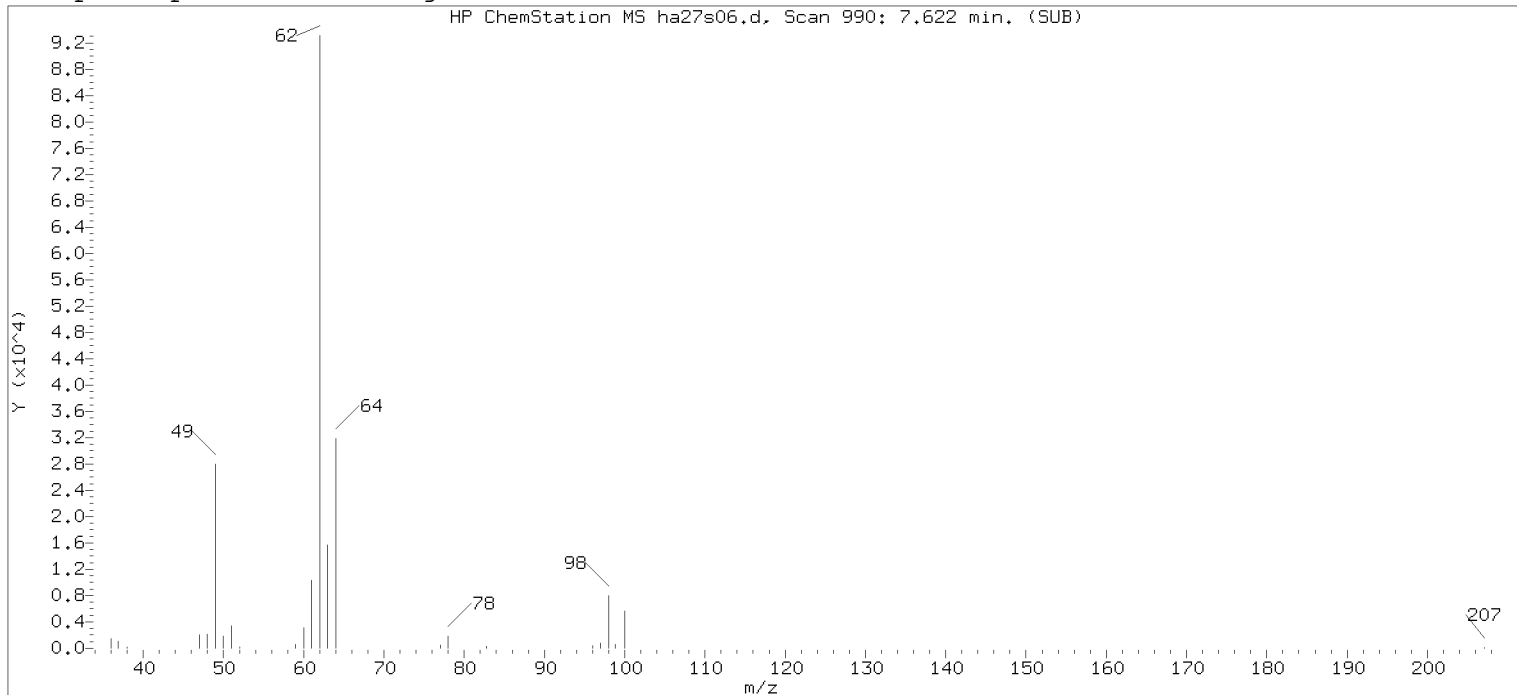
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 990
Retention Time (minutes): 7.622
Quant Ion : 62.00
Area (flag) : 278050M
On-Column Amount (ng) : 5.9522
Integration start scan : 980 Integration stop scan: 1012
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

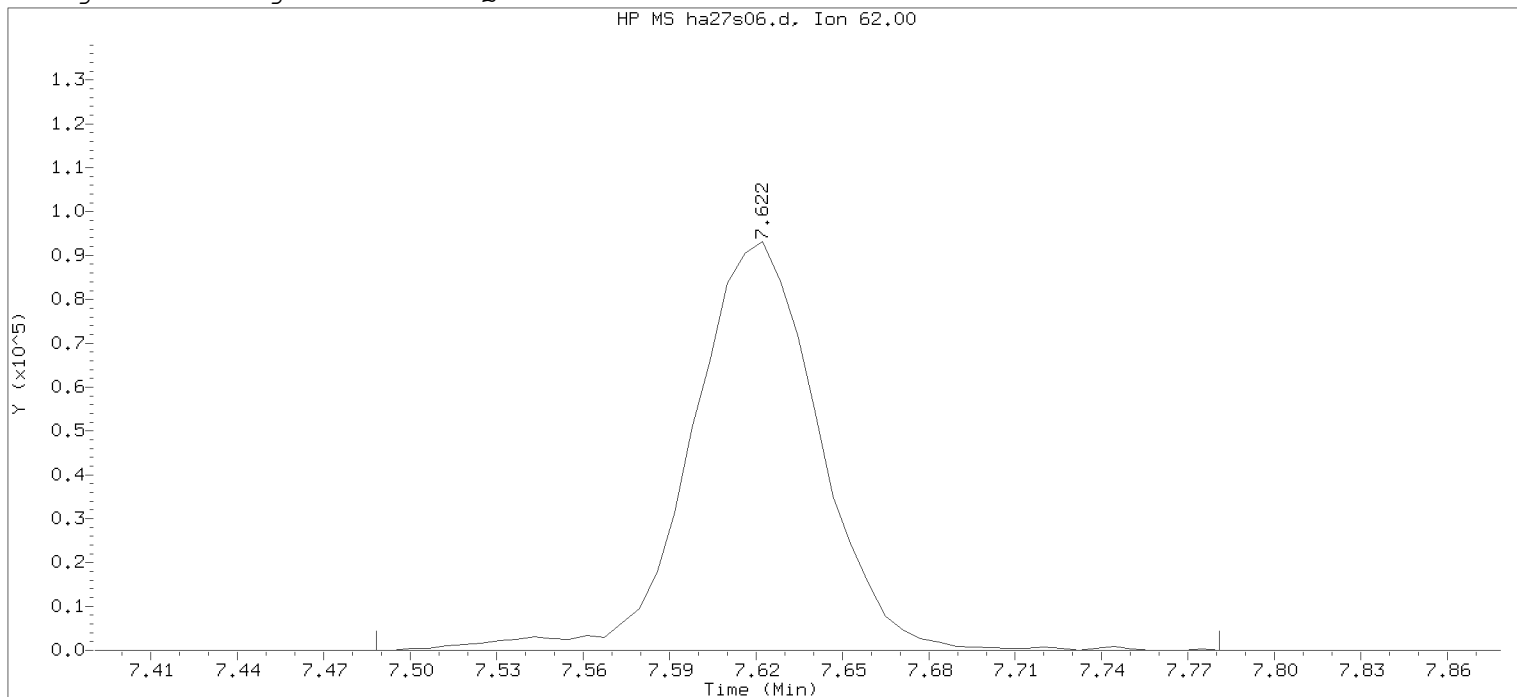
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:05

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:22 Automation

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compound Number : 60

Compound Name : 1,2-Dichloroethane

Scan Number : 990

Retention Time (minutes): 7.622

Quant Ion : 62.00

Area : 285873

On-column Amount (ng) : 6.1196

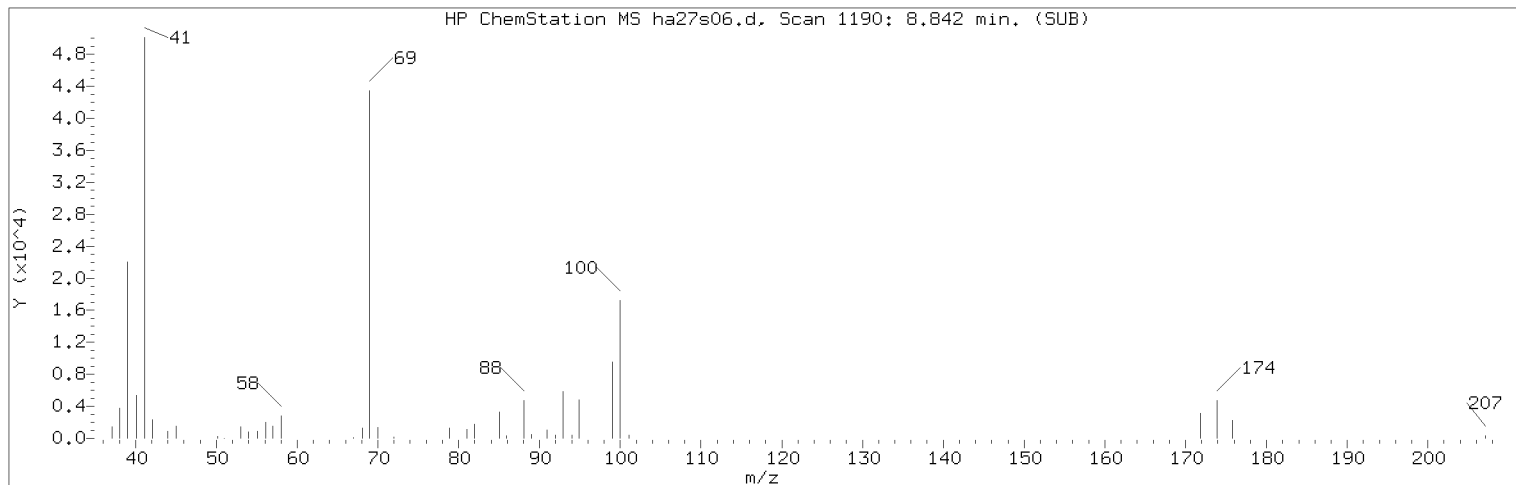
Integration start scan : 967 Integration stop scan: 1015

Y at integration start : 0 Y at integration end: 0

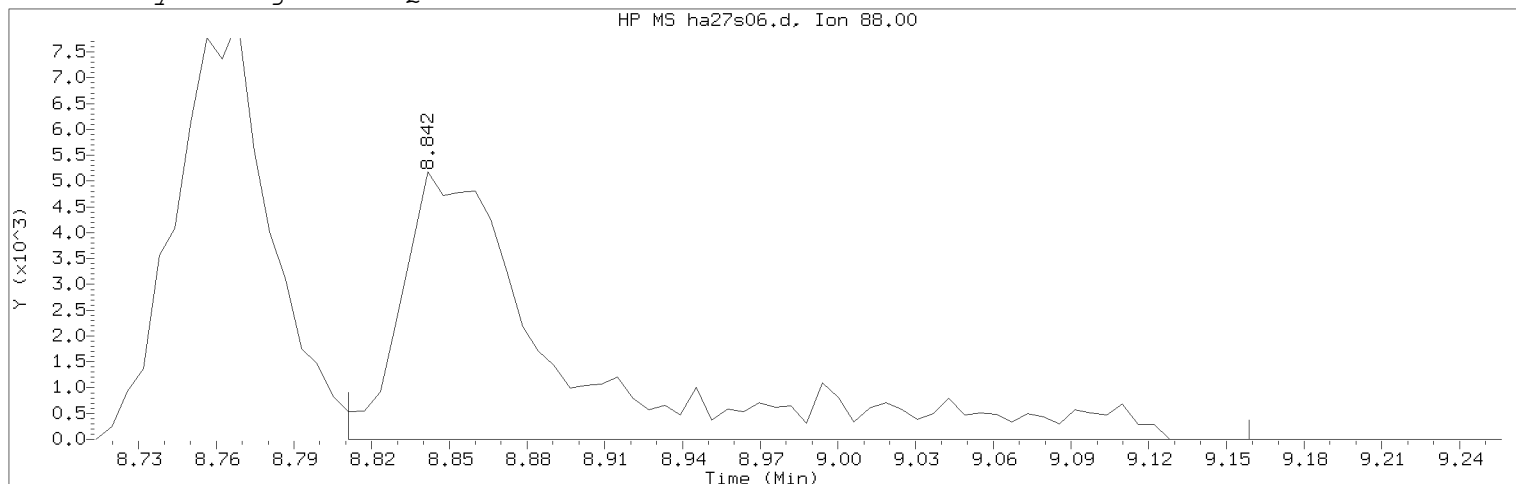
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 950 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:05

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1190	
Retention Time (minutes)	: 8.842	
Quant Ion	: 88.00	
Area (flag)	: 23234M	
On-Column Amount (ng)	: 139.3546	
Integration start scan	: 1184	Integration stop scan: 1241
Y at integration start	: 0	Y at integration end: 0

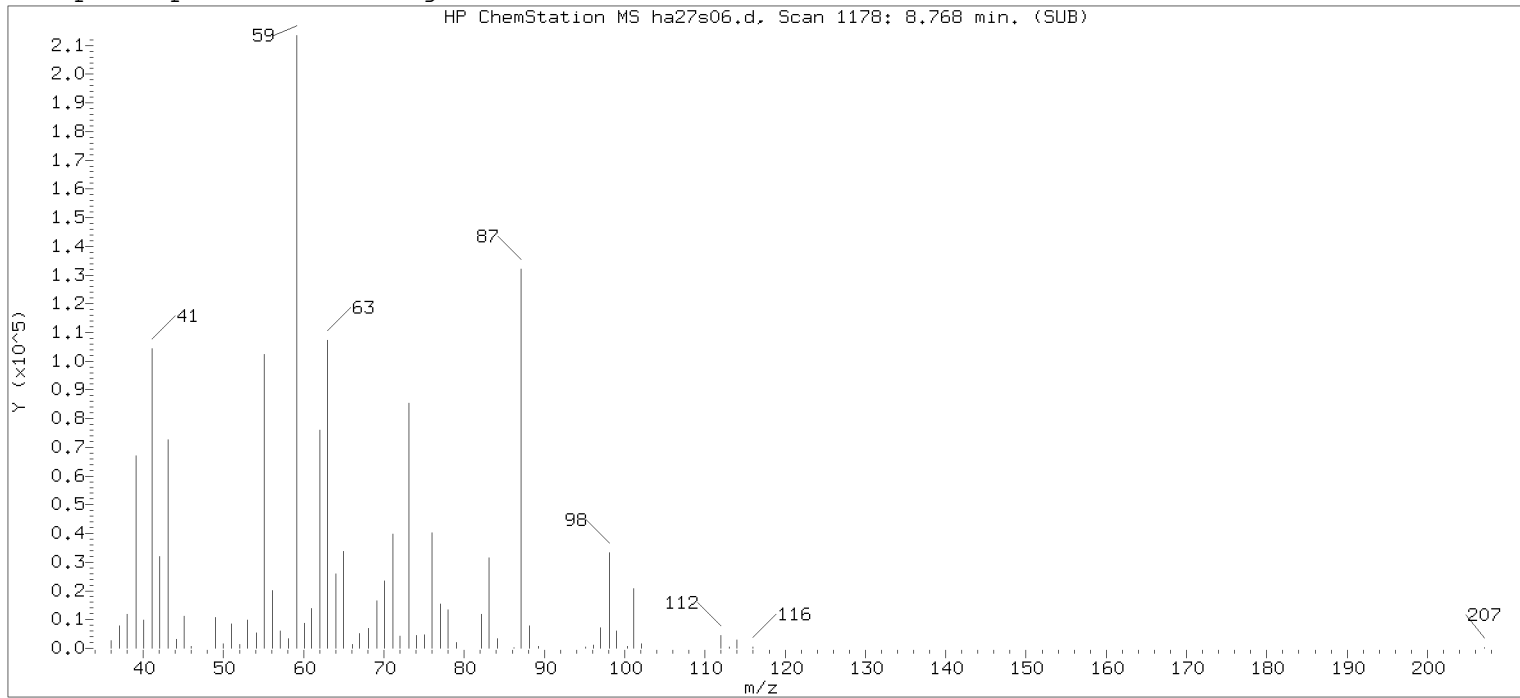
Reason for manual integration: improper integration

Analyst responsible for change:

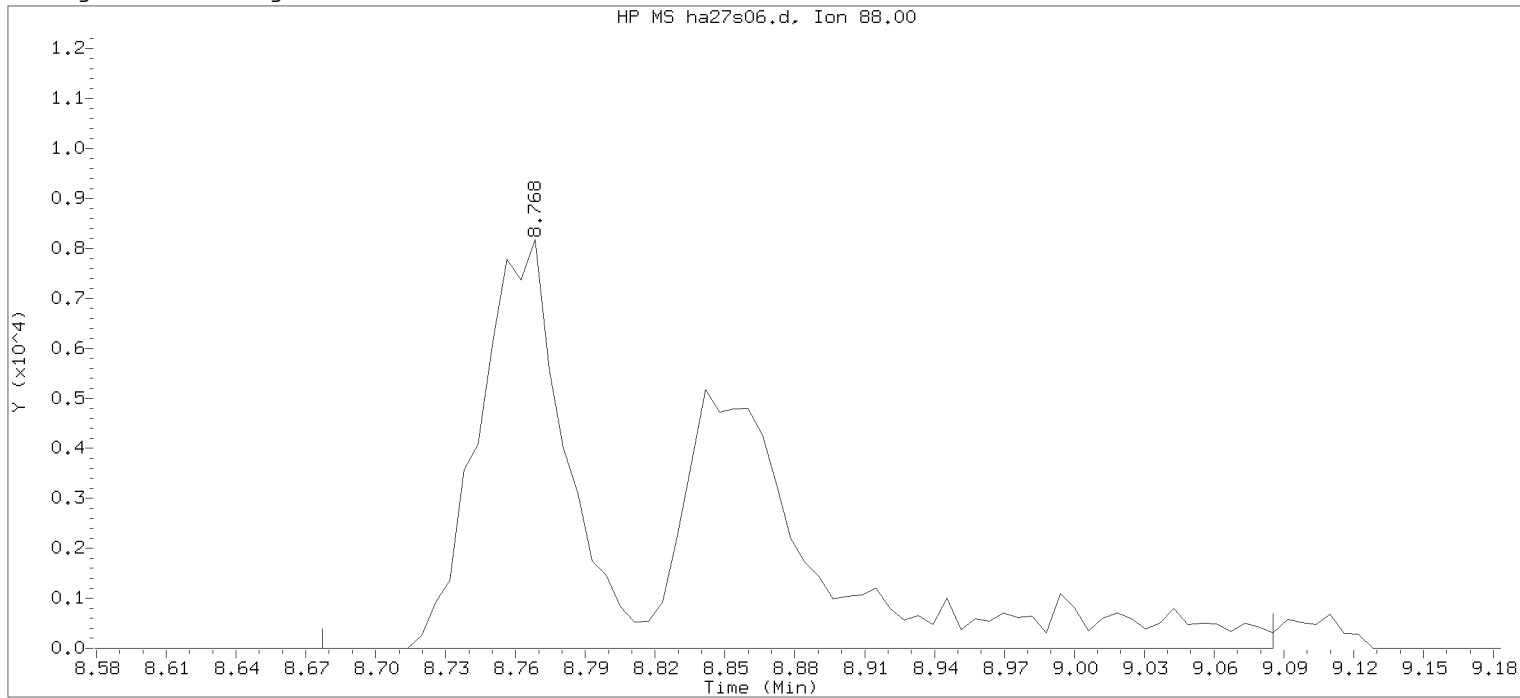
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:05

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:22 Automation

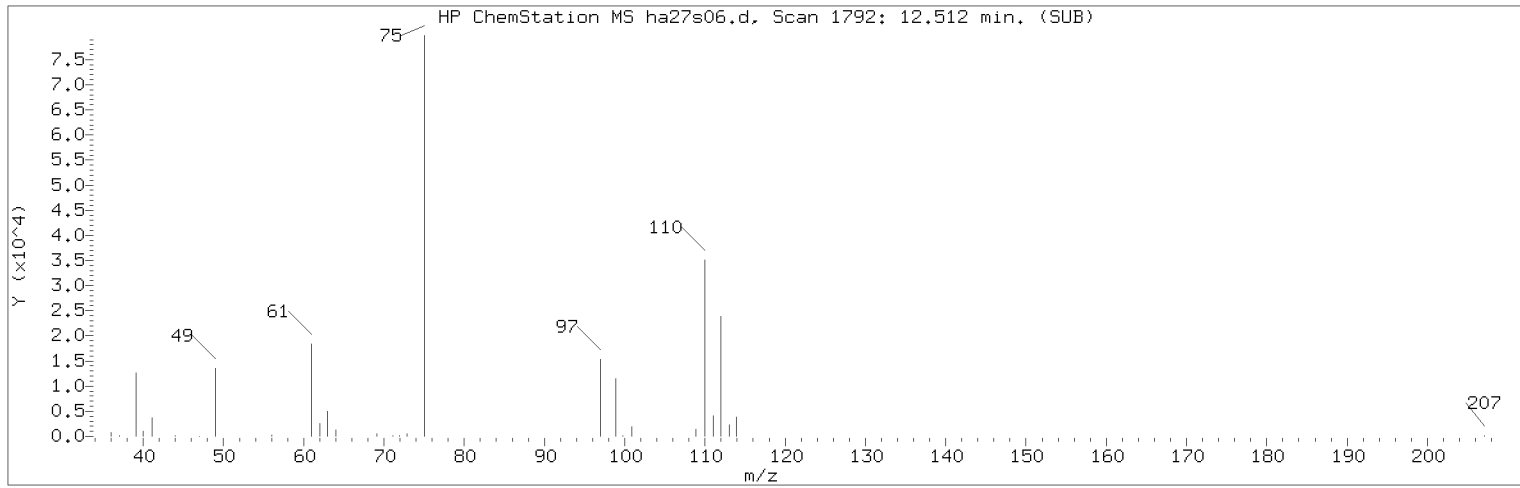
Sample Name: 59R04MS

Lab Sample ID: 1300798MS

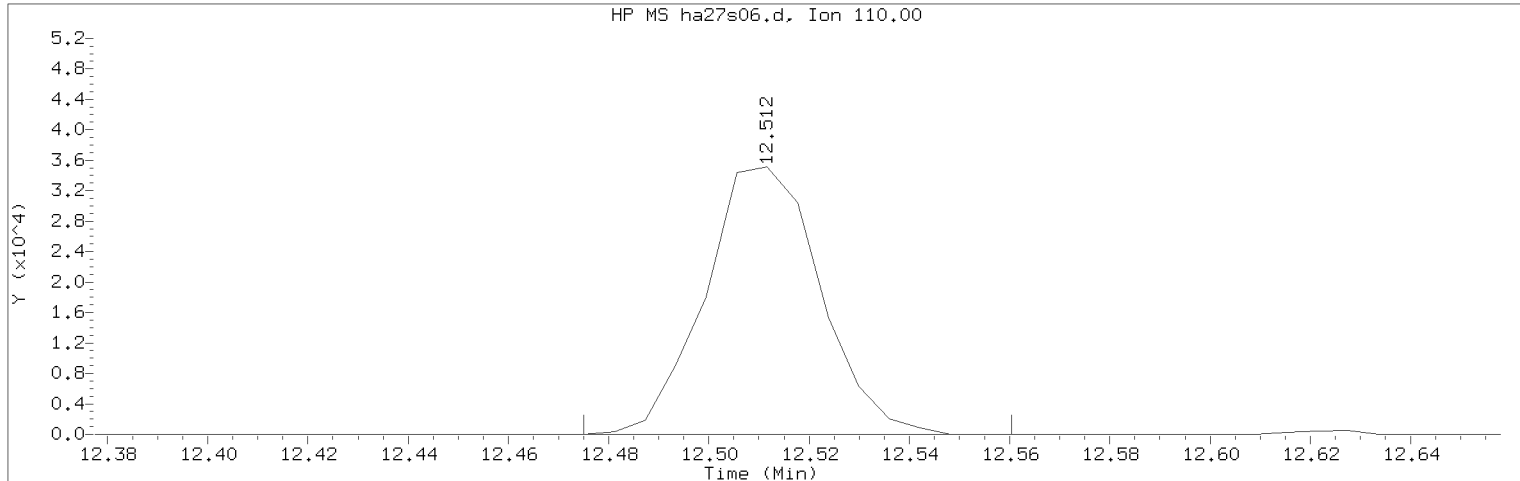
Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1178
 Retention Time (minutes): 8.768
 Quant Ion : 88.00
 Area : 42778
 On-column Amount (ng) : 300.5570
 Integration start scan : 1162
 Y at integration start : 0

Integration stop scan: 1229
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 00:05 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

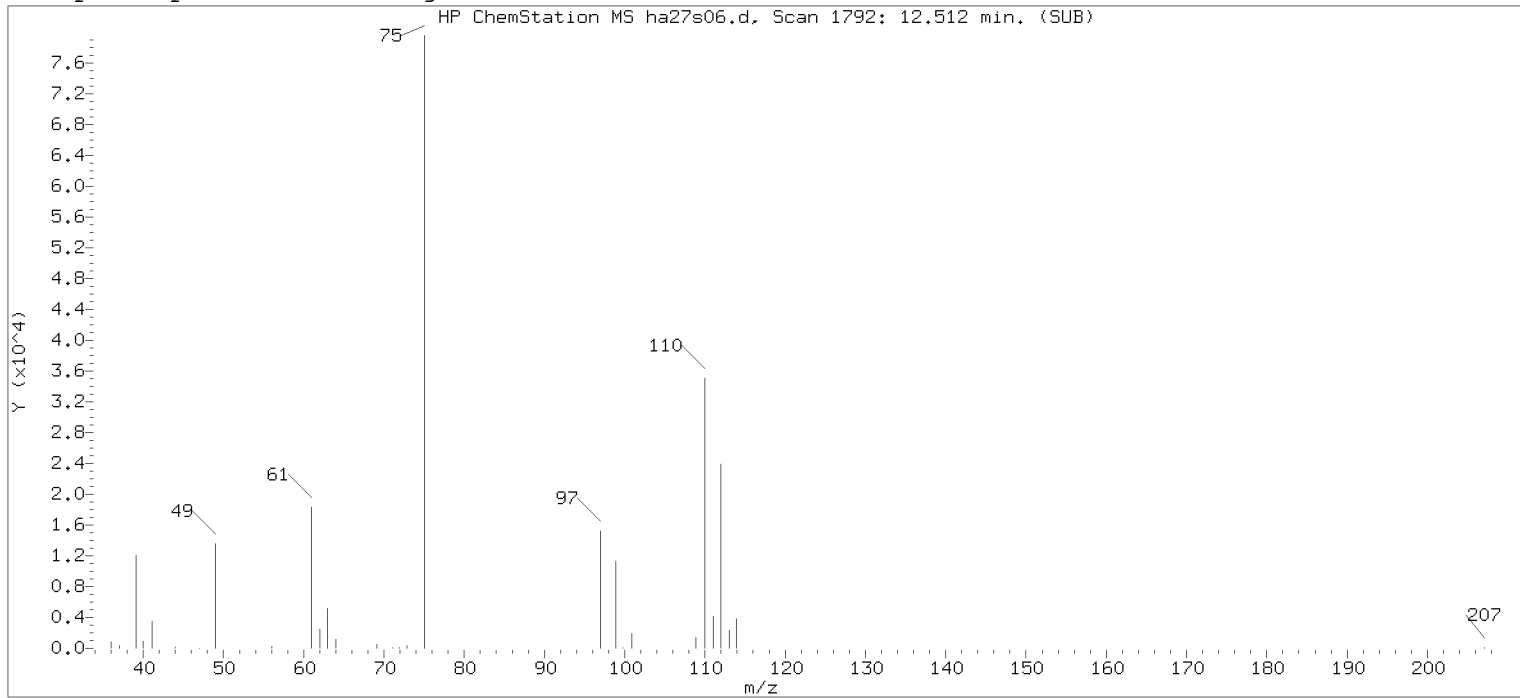
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area (flag)	: 56165M	
On-Column Amount (ng)	: 4.9042	
Integration start scan	: 1785	Integration stop scan: 1799
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

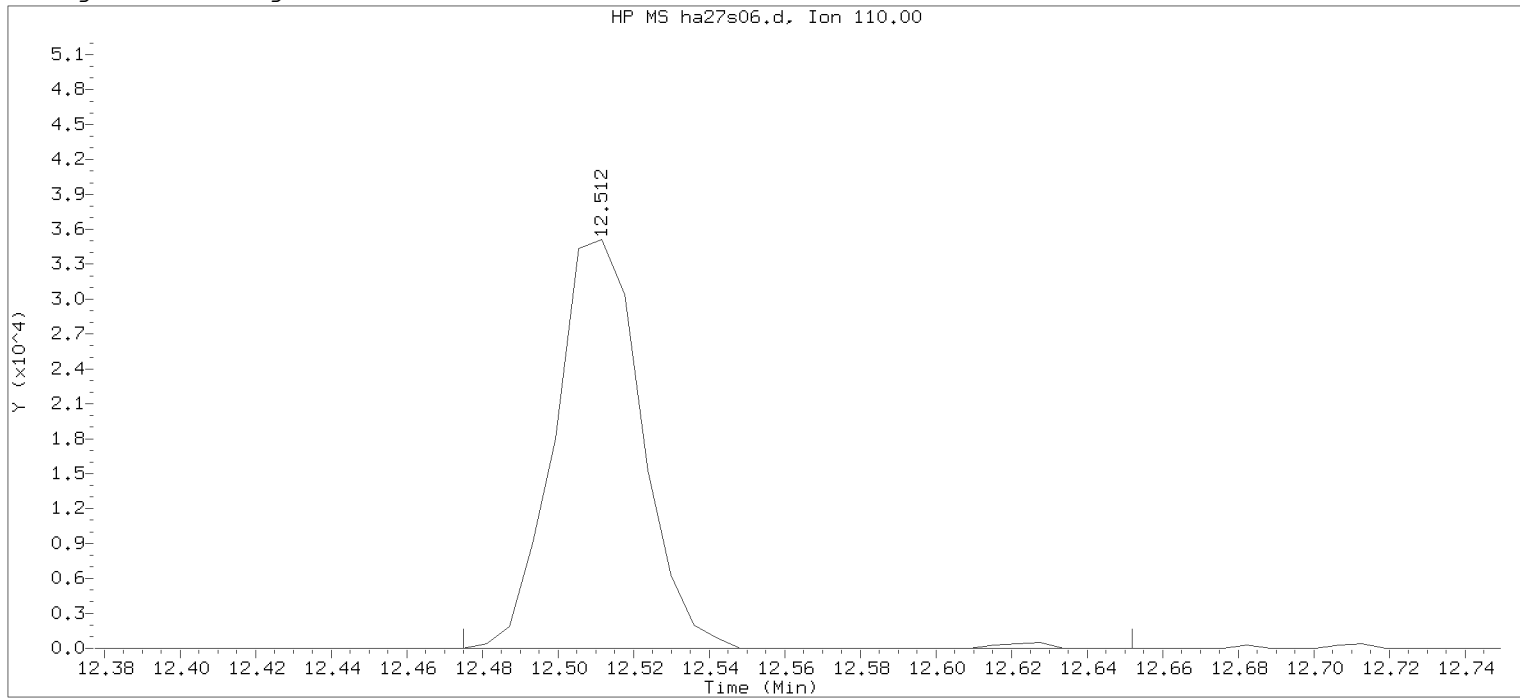
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s06.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 00:05 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 27-APR-2020 22:27
Date, time and analyst ID of latest file update: 28-Apr-2020 00:22 Automation

Sample Name: 59R04MS

Lab Sample ID: 1300798MS

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area	: 56596	
On-column Amount (ng)	: 4.9419	
Integration start scan	: 1785	Integration stop scan: 1814
Y at integration start	: 0	Y at integration end: 0

59R04MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1300799MSD

Data file: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Injection date and time: 28-APR-2020 00:26

Data file Sample Info. Line: 59R04MSD;1300799MSD;1;3;MSD;RAF59;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H20118

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (-0.012)	471	65	126983 (-3)	50.00	
64) Fluorobenzene	7.958 (-0.006)	1045	96	1681427 (0)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1498012 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	823188 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.001)	113	448959	10.741	107%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (0.000)	102	87540	10.806	108%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1832468	9.181	92%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	722098	9.780	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.068 (-0.001)	85	349509	5.545	5.55			0.1	1
2) Chloromethane	(2)	2.270 (-0.000)	50	386381	6.210	6.21			0.06	0.5
5) Vinyl Chloride	(2)	2.398 (-0.000)	62	375804	6.350	6.35			0.2	1
7) Bromomethane	(2)	2.739 (-0.000)	94	241998	5.708	5.71			0.5	1
8) Chloroethane	(2)	2.837 (0.000)	64	258036	7.528	7.53			0.07	0.5
10) Trichlorofluoromethane	(2)	3.154 (-0.001)	101	466777	6.911	6.91			0.2	1
11) Ethyl ether	(2)	3.428 (-0.001)	59	652256	21.822	21.82			1	13
13) Acrolein	(1)	3.611 (0.000)	56	182042	31.836	31.84			3	25
15) 1,1-Dichloroethene	(2)	3.757 (-0.001)	96	246611	6.003	6.00			0.2	1
16) Freon 113	(2)	3.782 (-0.000)	101	269917	6.286	6.29			0.1	1
14) Acetone	(1)	3.782 (0.002)	43	240112M	31.120	31.12			0.9	10
17) Methyl Iodide	(2)	3.964 (-0.001)	142	435475	5.493	5.49		J	0.6	10
19) Carbon Disulfide	(2)	4.074 (-0.000)	76	738065	5.873	5.87		J	0.4	10
23) Allyl Chloride	(2)	4.263 (-0.001)	41	370631	5.311	5.31		J	0.8	10
24) Methylene Chloride	(2)	4.458 (-0.001)	84	262881	5.946	5.95			0.2	1
30) Acrylonitrile	(1)	4.806 (0.000)	53	227737	24.187	24.19			0.5	10
32) trans-1,2-Dichloroethene	(2)	4.885 (-0.000)	96	259304	5.742	5.74			0.2	1
34) 1,1-Dichloroethane	(2)	5.543 (-0.000)	63	765263	9.386	9.39			0.1	1
36) 2-Chloro-1,3-Butadiene	(2)	5.647 (0.000)	53	409288	5.863	5.86		J	0.5	10
39) 2-Butanone	(1)	6.324 (0.003)	43	437628	36.274	36.27			0.6	10
43) Propionitrile	(1)	6.434 (0.001)	54	124039	37.533	37.53		J	10	100
46) Methacrylonitrile	(1)	6.641 (0.001)	67	429301	36.321	36.32		J	10	100
49) Tetrahydrofuran	(1)	6.714 (0.001)	71	84848	25.456	25.46			2	25
50) Chloroform	(2)	6.848 (-0.000)	83	470407	5.912	5.91			0.09	1
52) 1,1,1-Trichloroethane	(2)	7.080 (0.000)	97	413689	5.590	5.59			0.1	1
55) Carbon Tetrachloride	(2)	7.287 (0.001)	117	379712	5.985	5.98			0.2	1
57) Isobutyl Alcohol	(1)	7.427 (0.001)	41	106506	114.640	114.64		J	4	200
59) Benzene	(2)	7.555 (-0.000)	78	1128695	6.171	6.17			0.07	1
60) 1,2-Dichloroethane	(2)	7.628 (-0.000)	62	264692	5.614	5.61			0.1	1
68) Trichloroethene	(2)	8.433 (0.000)	95	293457	6.119	6.12			0.2	1
71) 1,2-Dichloropropane	(2)	8.768 (0.000)	63	281461	6.221	6.22			0.1	1

M = Compound was manually integrated.

59R04MSD Lancaster Laboratories 1300799MSD

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/20apr27a.b/ha27s07.d Injection date and time: **28-APR-2020 00:26**
 Data file Sample Info. Line: 59R04MSD;1300799MSD;1;3;MSD;RAF59;DAA3568;;ha27b01; Instrument ID: **HP19094.i** Batch: **H20118**
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: **27091-SM**
 Calibration date and time (Last Method Edit): 28-APR-2020 22:26
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

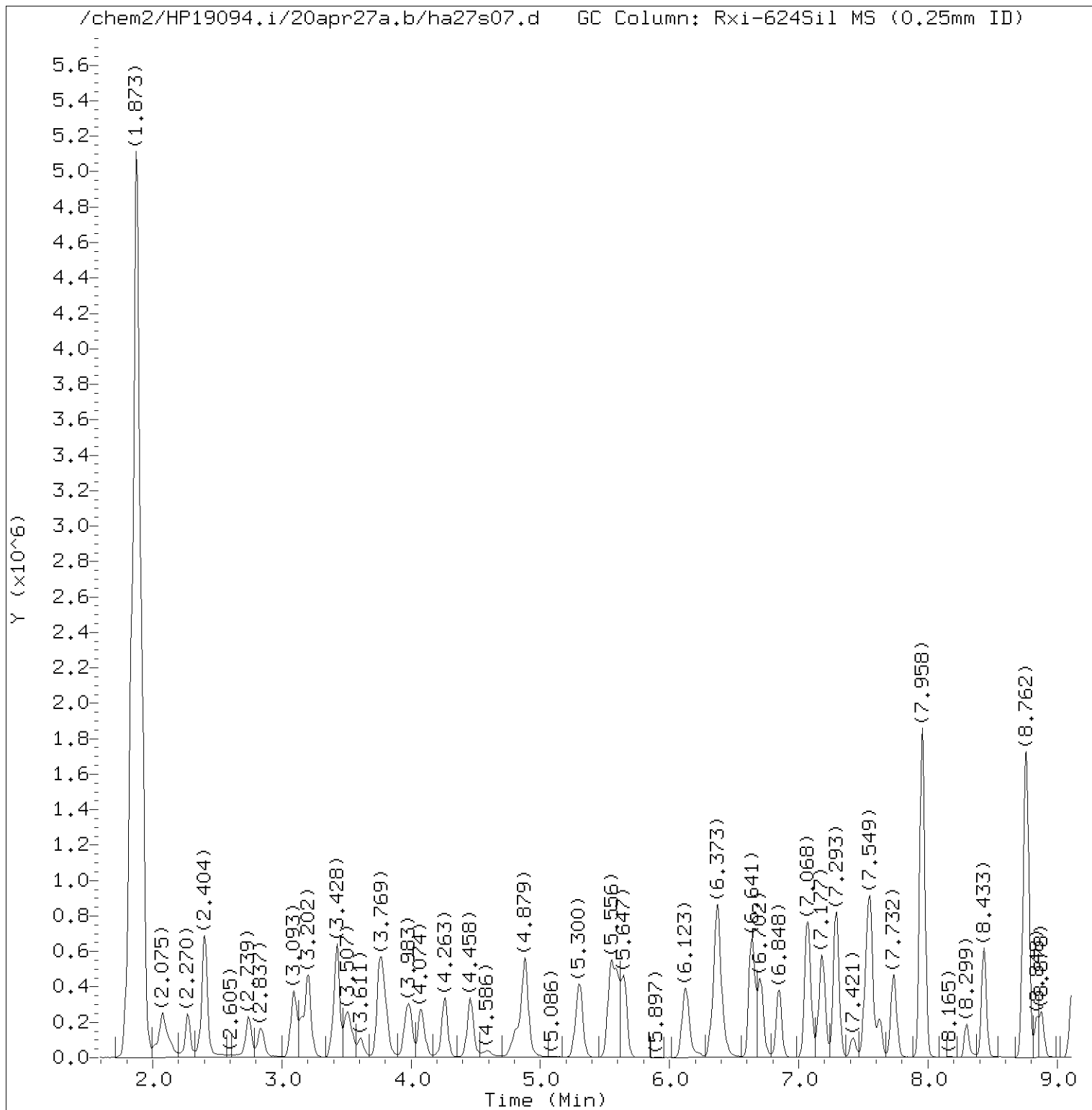
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ
72) Methyl Methacrylate	(1)	8.835	(0.005)	69	114694	4.824	4.82		J	4	10
74) Dibromomethane	(2)	8.884	(0.000)	93	122736	5.934	5.93			0.07	1
73) 1,4-Dioxane	(1)	8.854	(0.005)	88	24520M	135.927	135.93		J	45	200
75) Bromodichloromethane	(2)	9.110	(0.000)	83	326461	5.807	5.81			0.09	1
82) 4-Methyl-2-Pentanone	(1)	9.799	(0.006)	43	690784M	23.231	23.23			0.9	10
84) Toluene	(3)	10.012	(0.000)	92	695973	4.964	4.96			0.09	1
85) trans-1,3-Dichloropropene	(3)	10.262	(0.000)	75	297415	4.571	4.57			0.1	1
87) Ethyl Methacrylate	(3)	10.317	(0.000)	69	208166	4.127	4.13		J	0.8	10
89) 1,1,2-Trichloroethane	(3)	10.463	(0.000)	97	176990	5.025	5.02			0.08	1
90) Tetrachloroethene	(3)	10.555	(-0.000)	166	329822	5.176	5.18			0.06	1
91) 1,3-Dichloropropane	(3)	10.628	(-0.000)	76	300306	4.963	4.96			0.09	1
92) 2-Hexanone	(1)	10.664	(0.006)	43	486065	23.922	23.92			0.6	10
94) Dibromochloromethane	(3)	10.841	(0.000)	129	216468	4.800	4.80			0.07	1
96) 1,2-Dibromoethane	(3)	10.951	(0.000)	107	166324	4.941	4.94			0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	(0.000)	131	258100	4.737	4.74			0.08	1
101) Ethylbenzene	(3)	11.481	(0.000)	91	1310930	4.752	4.75			0.08	1
102) m+p-Xylene	(3)	11.597	(0.000)	106	1045806	9.914	9.91			0.1	2
105) o-Xylene	(3)	11.920	(0.000)	106	485575	4.681	4.68			0.1	1
106) Xylene (Total)	(3)			106	1531381	14.595	14.60			0.2	3
107) Styrene	(3)	11.938	(0.000)	104	809041	4.806	4.81			0.07	1
108) Bromoform	(3)	12.097	(0.000)	173	117705	4.478	4.48			0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	(0.000)	83	200707	4.670	4.67			0.2	1
116) trans-1,4-Dichloro-2-butene	(1)	12.487	(0.007)	53	214784A	19.229	19.23			1	10
117) 1,2,3-Trichloropropane	(4)	12.512	(0.000)	110	55830M	4.851	4.85			0.1	1
127) Pentachloroethane	(4)	12.957	(0.000)	167	197962	4.564	4.56		J	0.8	10
132) 1,3-Dichlorobenzene	(4)	13.188	(0.000)	146	610493	4.715	4.72			0.06	1
135) 1,4-Dichlorobenzene	(4)	13.261	(0.000)	146	601973	4.766	4.77			0.07	1
140) 1,2-Dichlorobenzene	(4)	13.524	(0.000)	146	532642	4.667	4.67			0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	(0.008)	155	28188	4.425	4.42			0.2	1
146) 1,2,4-Trichlorobenzene	(4)	14.609	(0.000)	180	352054	4.143	4.14			0.1	1
147) Hexachlorobutadiene	(4)	14.688	(0.000)	225	212206	4.785	4.79			0.07	1
148) Naphthalene	(4)	14.792	(0.000)	128	532190	3.589	3.59			0.1	1

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 63

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d
Injection date and time: 28-APR-2020 00:26

Instrument ID: HP19094.i
Analyst ID: mec29284

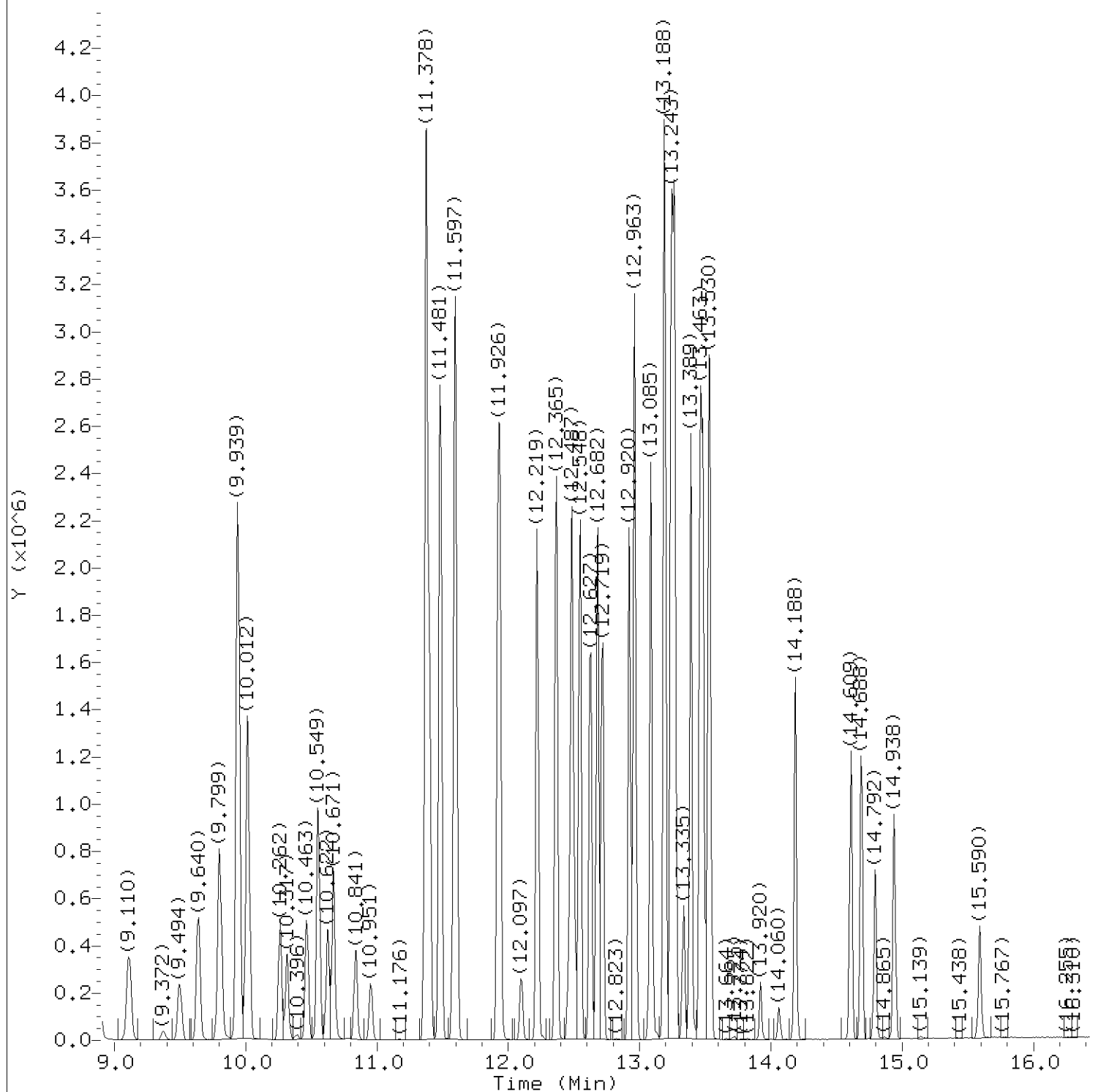
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d
Injection date and time: 28-APR-2020 00:26

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d
Injection date and time: 28-APR-2020 00:26

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.069	85	349509	5.545
2) Chloromethane	(2)	2.270	50	386381	6.210
5) Vinyl Chloride	(2)	2.398	62	375804	6.350
7) Bromomethane	(2)	2.739	94	241998	5.708
8) Chloroethane	(2)	2.837	64	258036	7.528
10) Trichlorofluoromethane	(2)	3.154	101	466777	6.911
11) Ethyl ether	(2)	3.428	59	652256	21.822
13) Acrolein	(1)	3.611	56	182042	31.836
15) 1,1-Dichloroethene	(2)	3.757	96	246611	6.003
16) Freon 113	(2)	3.782	101	269917	6.286
14) Acetone	(1)	3.782	43	240112M	31.120
17) Methyl Iodide	(2)	3.964	142	435475	5.493
19) Carbon Disulfide	(2)	4.074	76	738065	5.873
23) Allyl Chloride	(2)	4.263	41	370631	5.311
24) Methylene Chloride	(2)	4.458	84	262881	5.946
27) *t-Butyl Alcohol-d10	(1)	4.458	65	126983	50.000
30) Acrylonitrile	(1)	4.806	53	227737	24.187
32) trans-1,2-Dichloroethene	(2)	4.885	96	259304	5.742
34) 1,1-Dichloroethane	(2)	5.543	63	765263	9.386
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	409288	5.863
39) 2-Butanone	(1)	6.324	43	437628	36.274
43) Propionitrile	(1)	6.434	54	124039	37.533
46) Methacrylonitrile	(1)	6.641	67	429301	36.321
49) Tetrahydrofuran	(1)	6.714	71	84848	25.456
50) Chloroform	(2)	6.848	83	470407	5.912
51) \$Dibromofluoromethane	(2)	7.061	113	448959	10.741
52) 1,1,1-Trichloroethane	(2)	7.080	97	413689	5.590
55) Carbon Tetrachloride	(2)	7.287	117	379712	5.985
57) Isobutyl Alcohol	(1)	7.427	41	106506	114.640
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	87540	10.806
59) Benzene	(2)	7.555	78	1128695	6.171
60) 1,2-Dichloroethane	(2)	7.628	62	264692	5.614
64) *Fluorobenzene	(2)	7.958	96	1681427	10.000
68) Trichloroethene	(2)	8.433	95	293457	6.119
71) 1,2-Dichloropropane	(2)	8.768	63	281461	6.221
72) Methyl Methacrylate	(1)	8.835	69	114694	4.824
73) 1,4-Dioxane	(1)	8.854	88	24520M	135.927
74) Dibromomethane	(2)	8.884	93	122736	5.934

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

RAF59 Page 959 of 1506

page 1 of 2

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d
 Injection date and time: 28-APR-2020 00:26

Instrument ID: HP19094.i
 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 22:26
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
75) Bromodichloromethane	(2)	9.110	83	326461	5.807
82) 4-Methyl-2-Pentanone	(1)	9.799	43	690784M	23.231
83) \$Toluene-d8	(3)	9.939	98	1832468	9.181
84) Toluene	(3)	10.012	92	695973	4.964
85) trans-1,3-Dichloropropene	(3)	10.262	75	297415	4.571
87) Ethyl Methacrylate	(3)	10.317	69	208166	4.127
89) 1,1,2-Trichloroethane	(3)	10.463	97	176990	5.025
90) Tetrachloroethene	(3)	10.555	166	329822	5.176
91) 1,3-Dichloropropane	(3)	10.628	76	300306	4.963
92) 2-Hexanone	(1)	10.664	43	486065	23.922
94) Dibromochloromethane	(3)	10.841	129	216468	4.800
96) 1,2-Dibromoethane	(3)	10.951	107	166324	4.941
98) *Chlorobenzene-d5	(3)	11.372	117	1498012	10.000
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	258100	4.737
101) Ethylbenzene	(3)	11.481	91	1310930	4.752
102) m+p-Xylene	(3)	11.597	106	1045806	9.914
106) Xylene (Total)	(3)		106	1531381	14.595
105) o-Xylene	(3)	11.920	106	485575	4.681
107) Styrene	(3)	11.939	104	809041	4.806
108) Bromoform	(3)	12.097	173	117705	4.478
112) \$4-Bromofluorobenzene	(3)	12.365	95	722098	9.780
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	200707	4.670
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	214784A	19.229
117) 1,2,3-Trichloropropane	(4)	12.512	110	55830M	4.851
127) Pentachloroethane	(4)	12.957	167	197962	4.564
132) 1,3-Dichlorobenzene	(4)	13.188	146	610493	4.715
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	823188	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	601973	4.766
140) 1,2-Dichlorobenzene	(4)	13.524	146	532642	4.667
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	155	28188	4.425
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	352054	4.143
147) Hexachlorobutadiene	(4)	14.688	225	212206	4.785
148) Naphthalene	(4)	14.792	128	532190	3.589

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

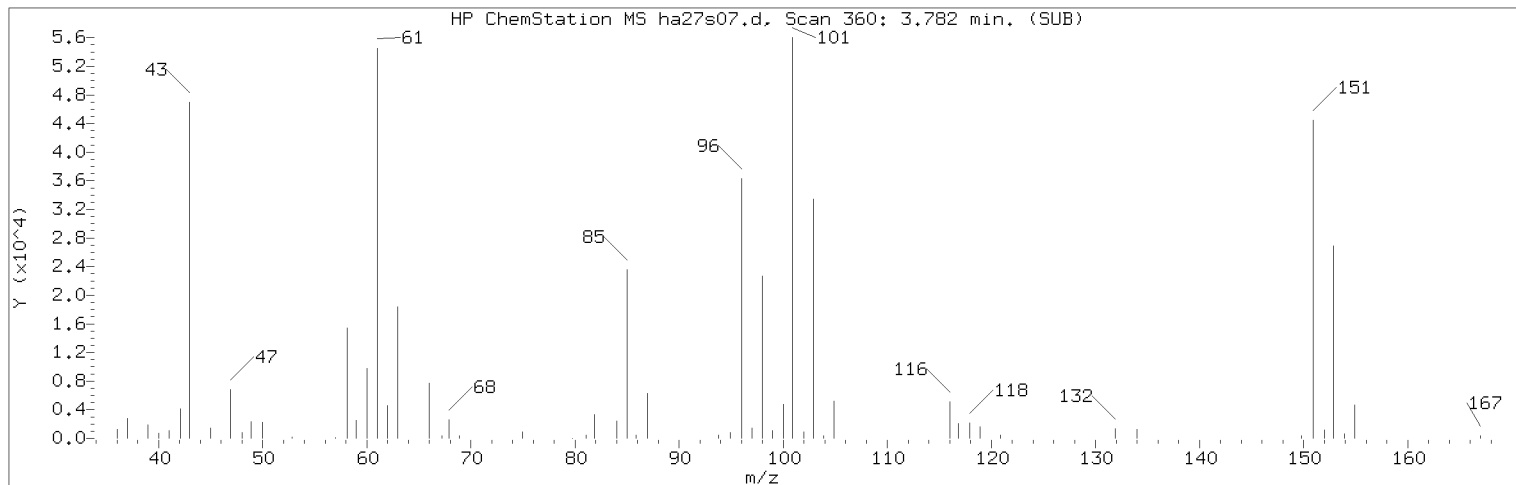
\$ = Compound is a surrogate standard.

page 2 of 2

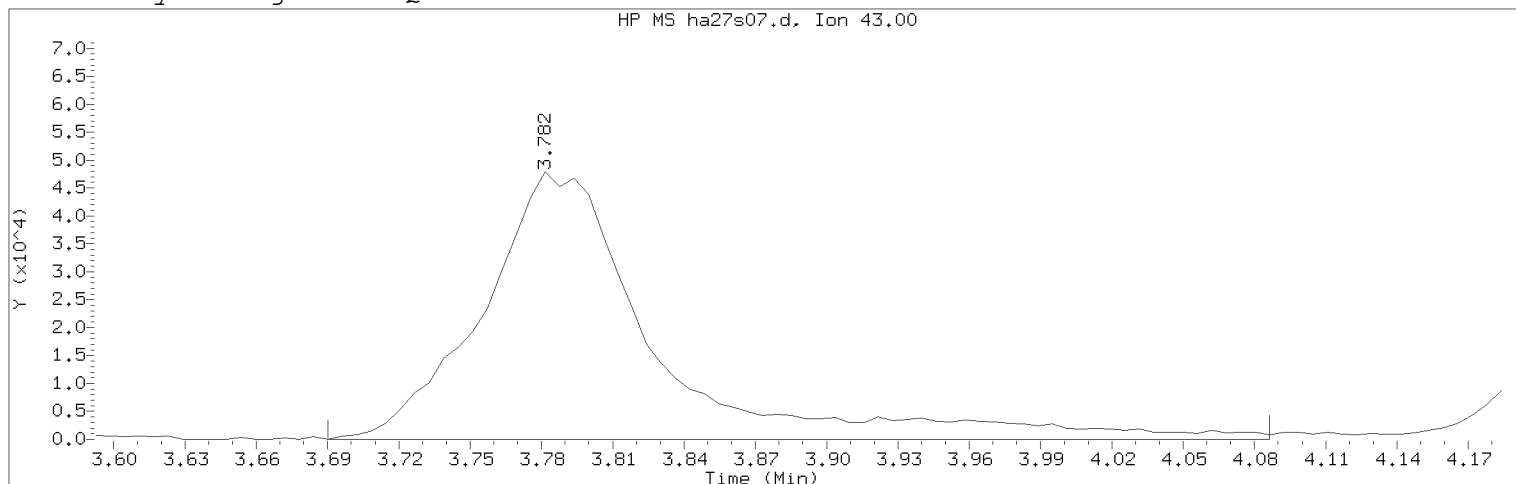
Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:37.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 360
 Retention Time (minutes): 3.782
 Quant Ion : 43.00
 Area (flag) : 240112M
 On-Column Amount (ng) : 31.1198
 Integration start scan : 344
 Y at integration start : 0

Integration stop scan: 409
 Y at integration end: 0

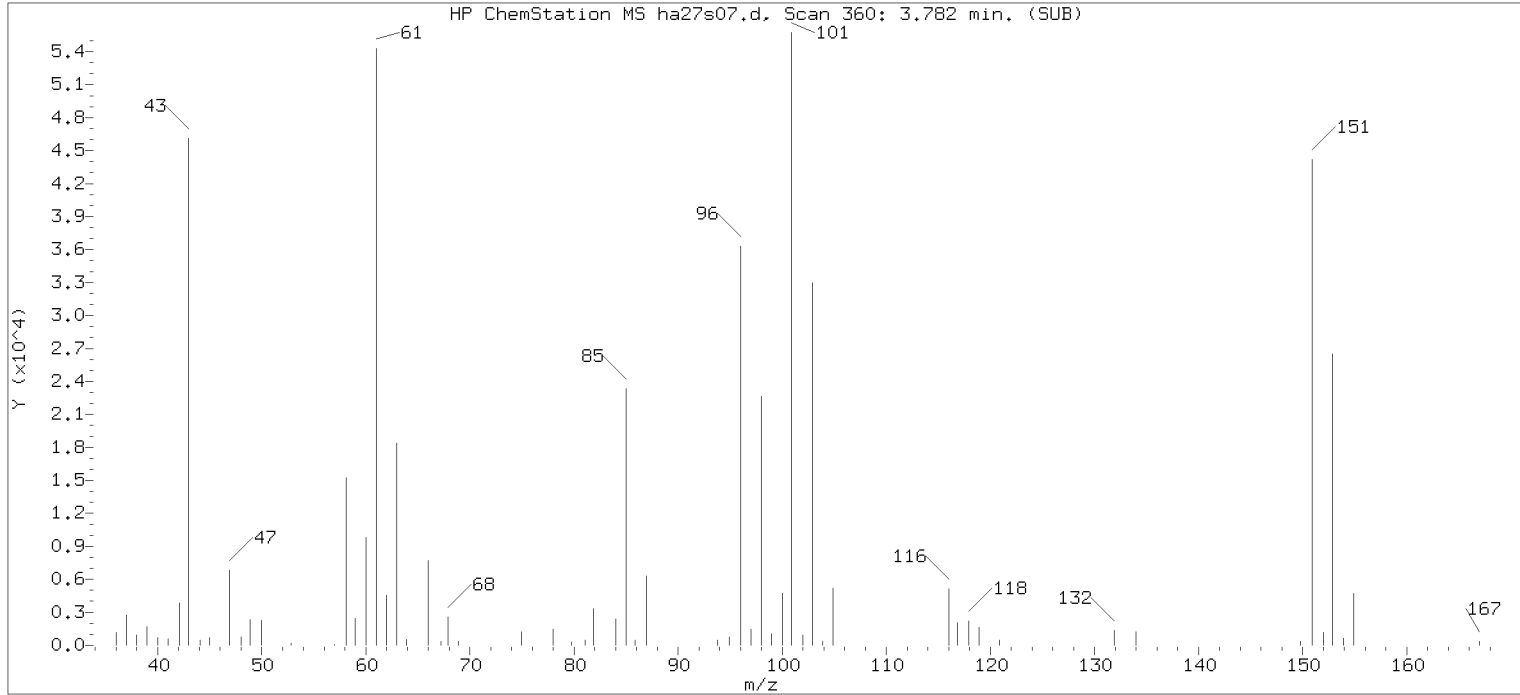
Reason for manual integration: improper integration

Analyst responsible for change:

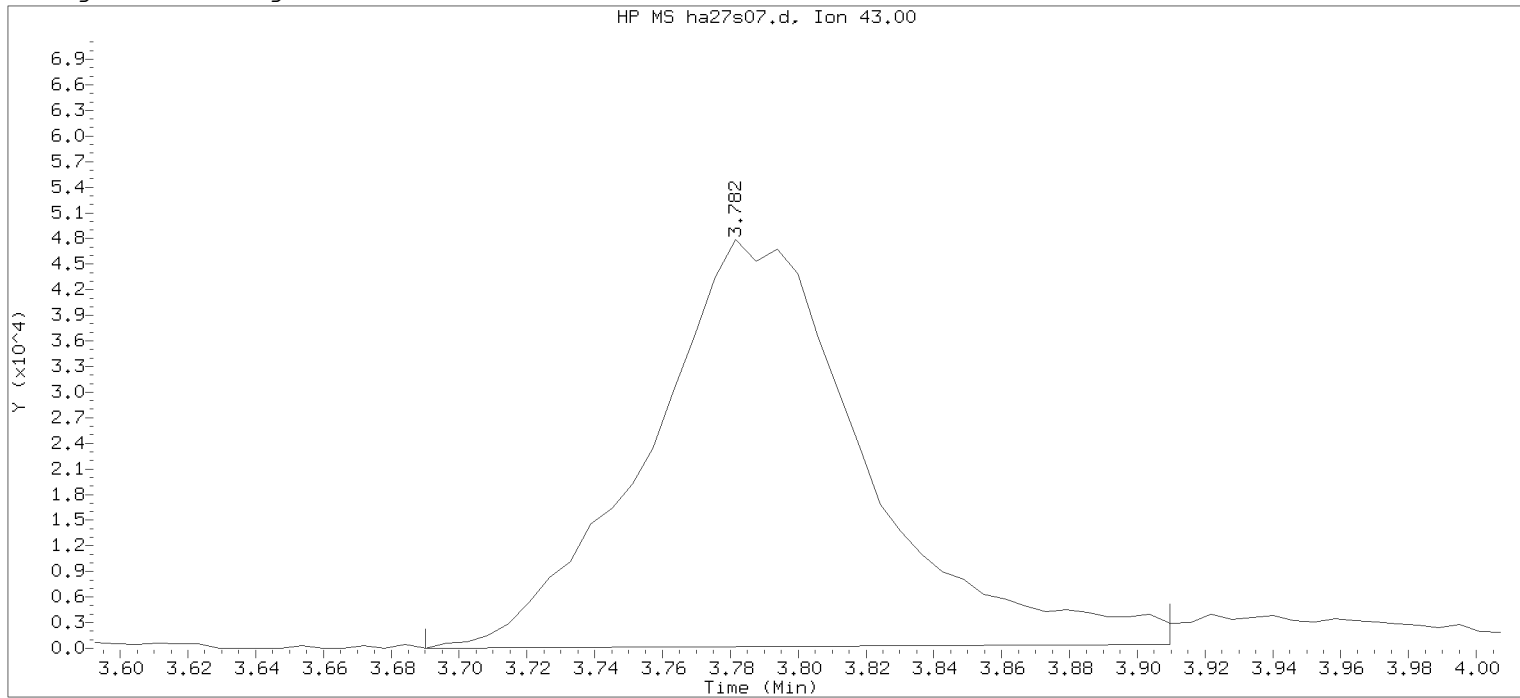
Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:37.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:44 Automation

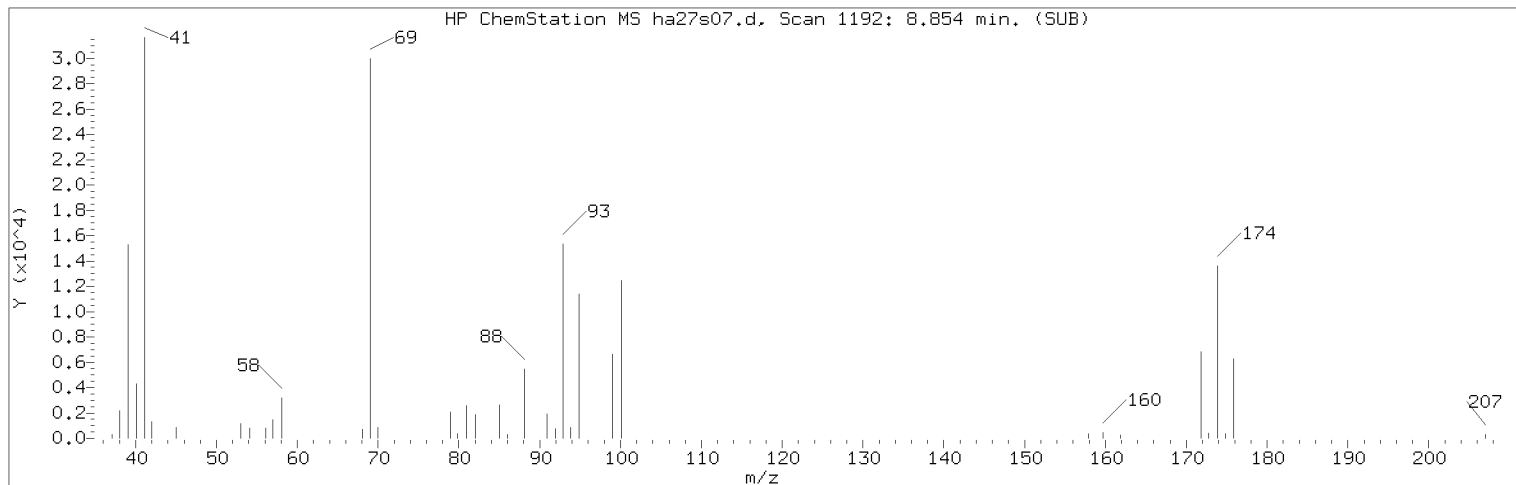
Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

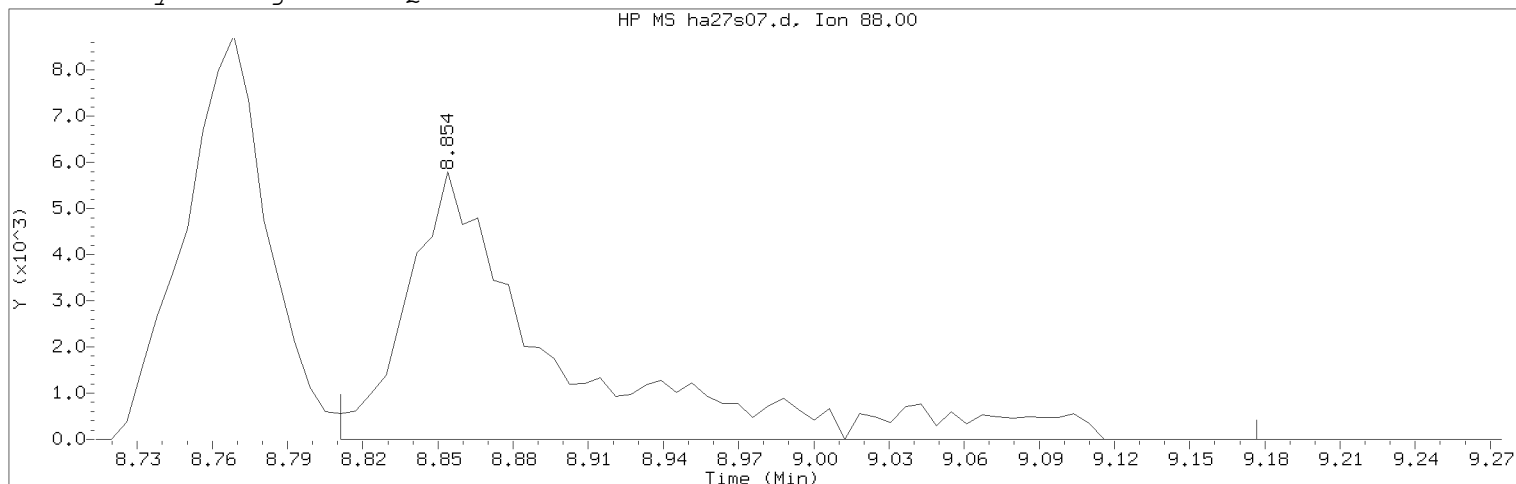
Compound Number : 14
 Compound Name : Acetone
 Scan Number : 360
 Retention Time (minutes): 3.782
 Quant Ion : 43.00
 Area : 212187
 On-column Amount (ng) : 27.5006
 Integration start scan : 344
 Y at integration start : 0

Integration stop scan: 380
 Y at integration end: 467

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1192	
Retention Time (minutes)	: 8.854	
Quant Ion	: 88.00	
Area (flag)	: 24520M	
On-Column Amount (ng)	: 135.9274	
Integration start scan	: 1184	Integration stop scan: 1244
Y at integration start	: 0	Y at integration end: 0

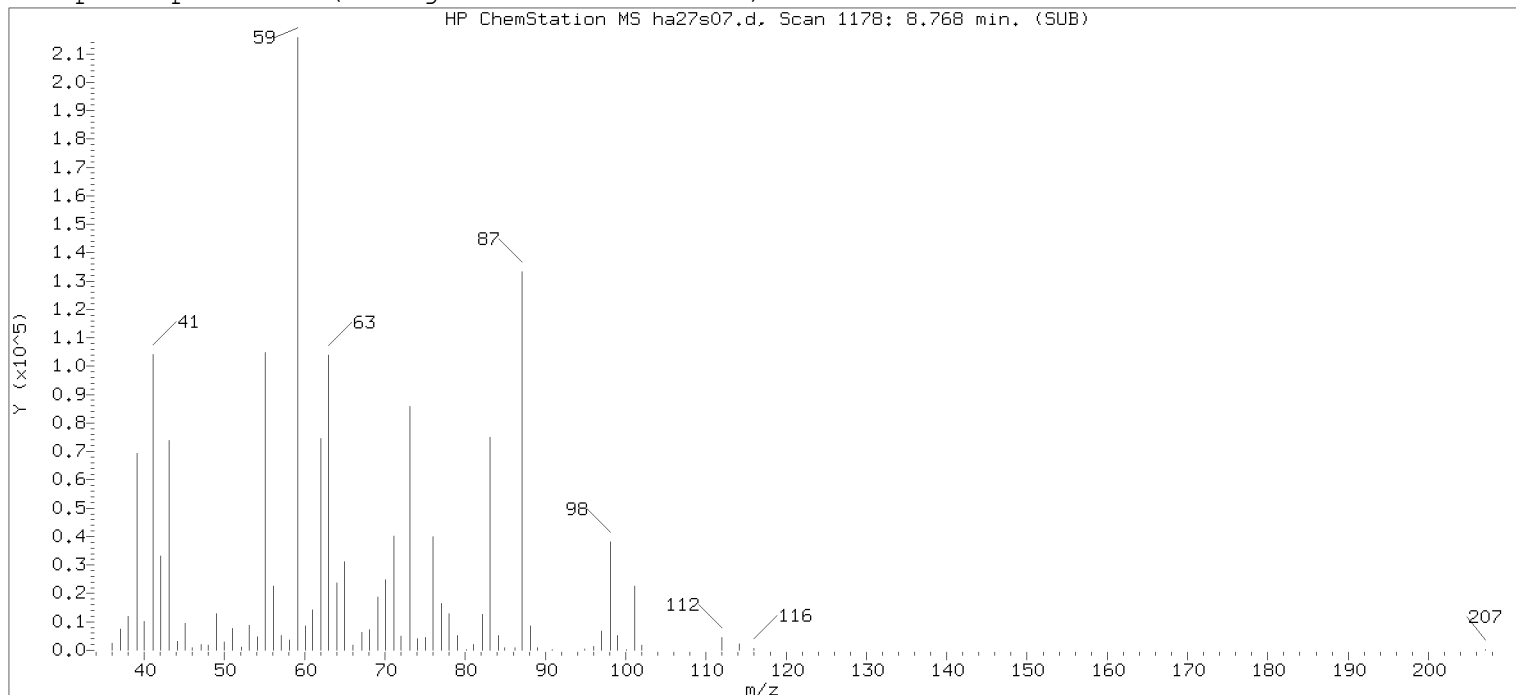
Reason for manual integration: improper integration

Analyst responsible for change:

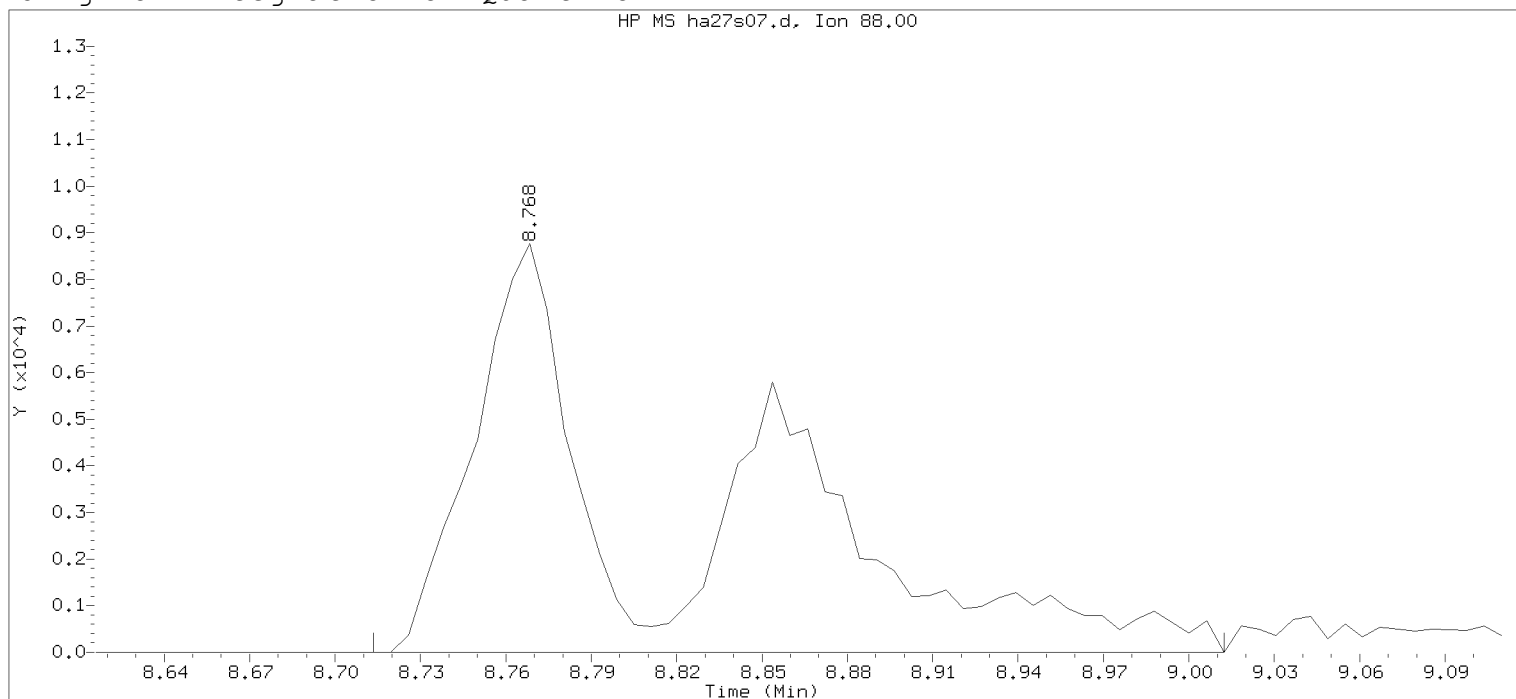
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:44 Automation

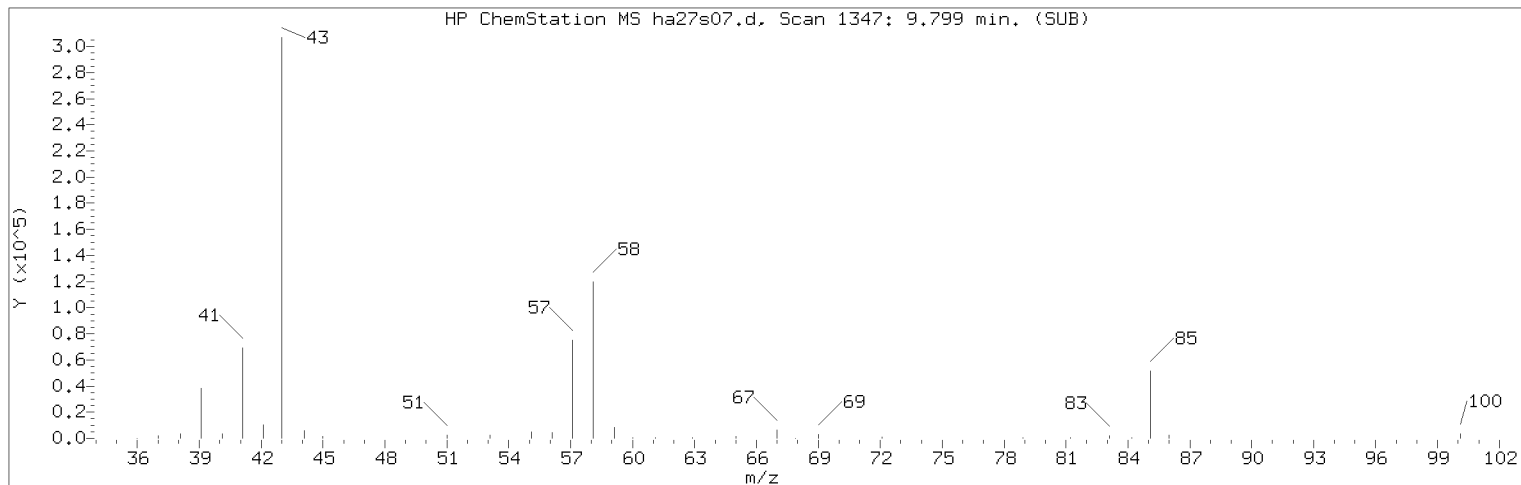
Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

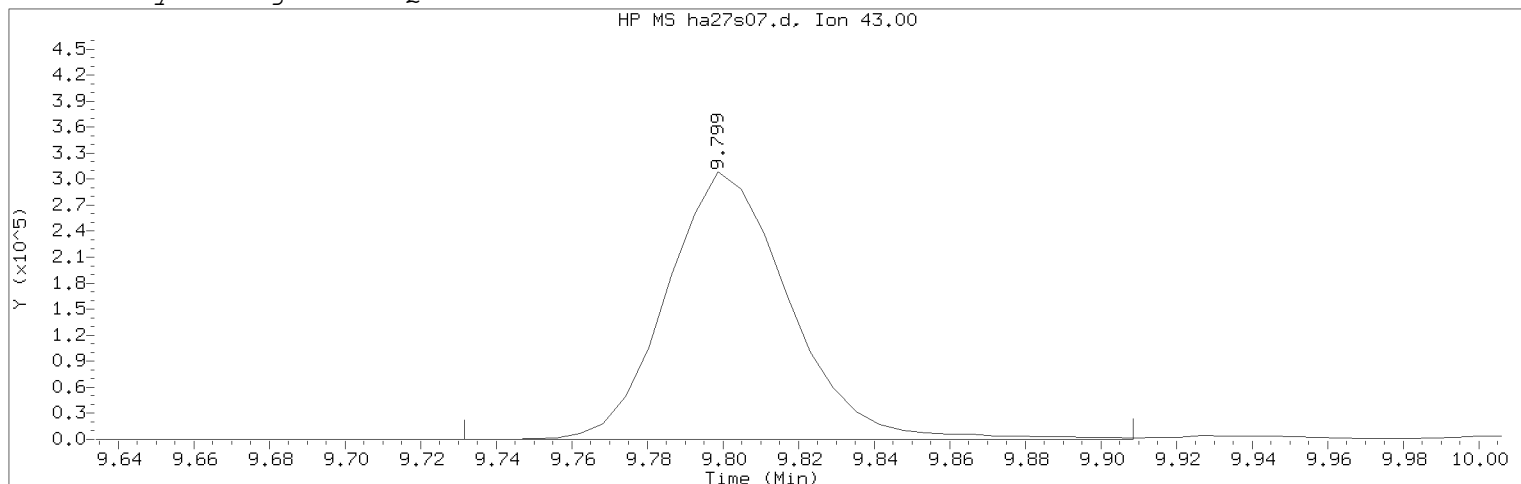
Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1178
 Retention Time (minutes): 8.768
 Quant Ion : 88.00
 Area : 41931
 On-column Amount (ng) : 232.4466
 Integration start scan : 1168
 Y at integration start : 0

Integration stop scan: 1217
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1347	
Retention Time (minutes)	: 9.799	
Quant Ion	: 43.00	
Area (flag)	: 690784M	
On-Column Amount (ng)	: 23.2310	
Integration start scan	: 1335	Integration stop scan: 1364
Y at integration start	: 0	Y at integration end: 0

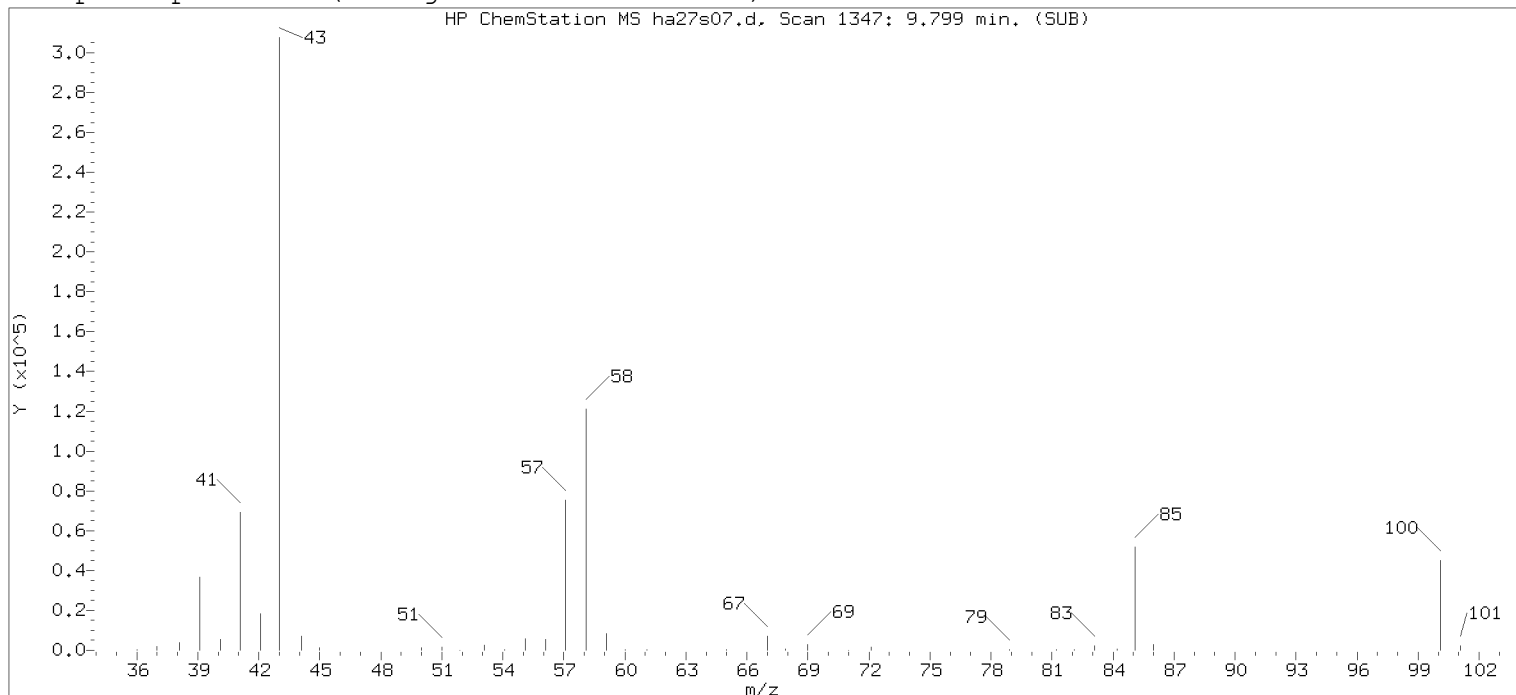
Reason for manual integration: improper integration

Analyst responsible for change:

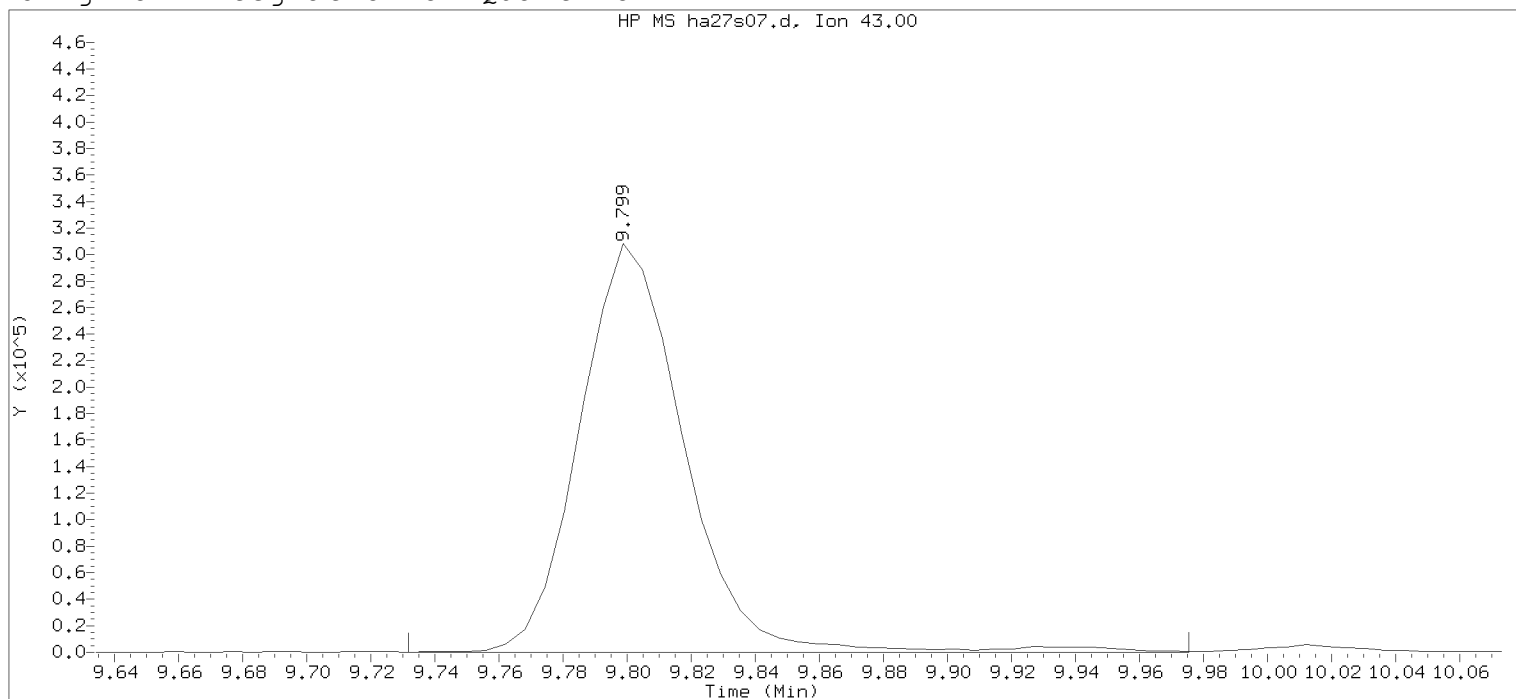
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:44 Automation

Sample Name: 59R04MSD

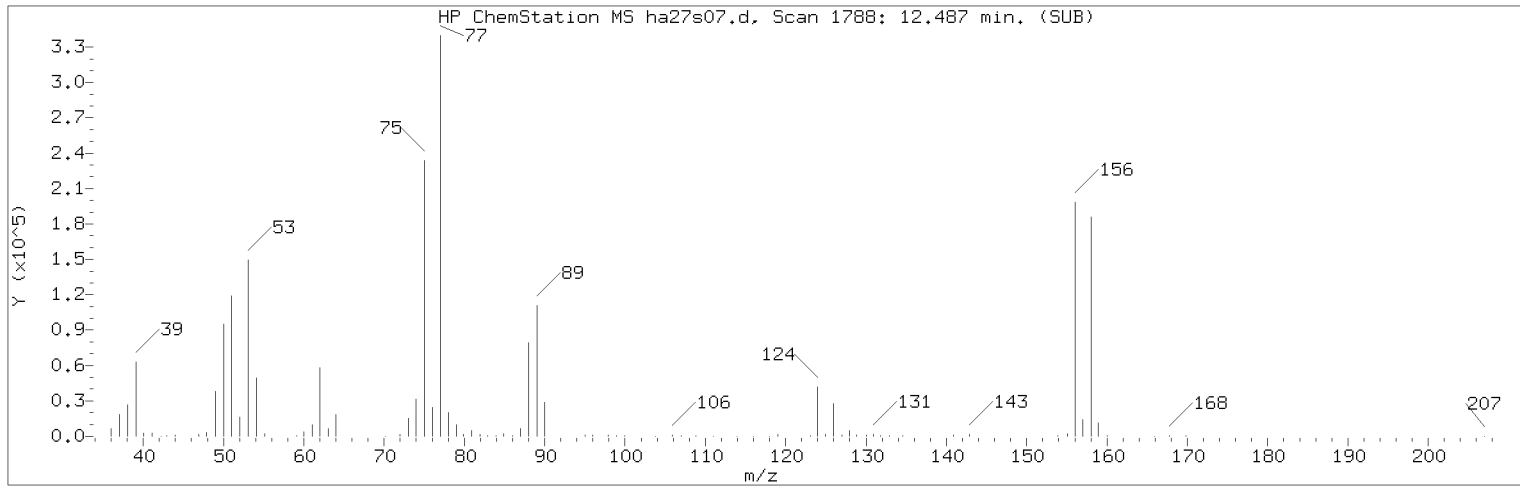
Lab Sample ID: 1300799MSD

Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1347	
Retention Time (minutes)	: 9.799	
Quant Ion	: 43.00	
Area	: 701027	
On-column Amount (ng)	: 23.5754	
Integration start scan	: 1335	Integration stop scan: 1375
Y at integration start	: 0	Y at integration end: 0

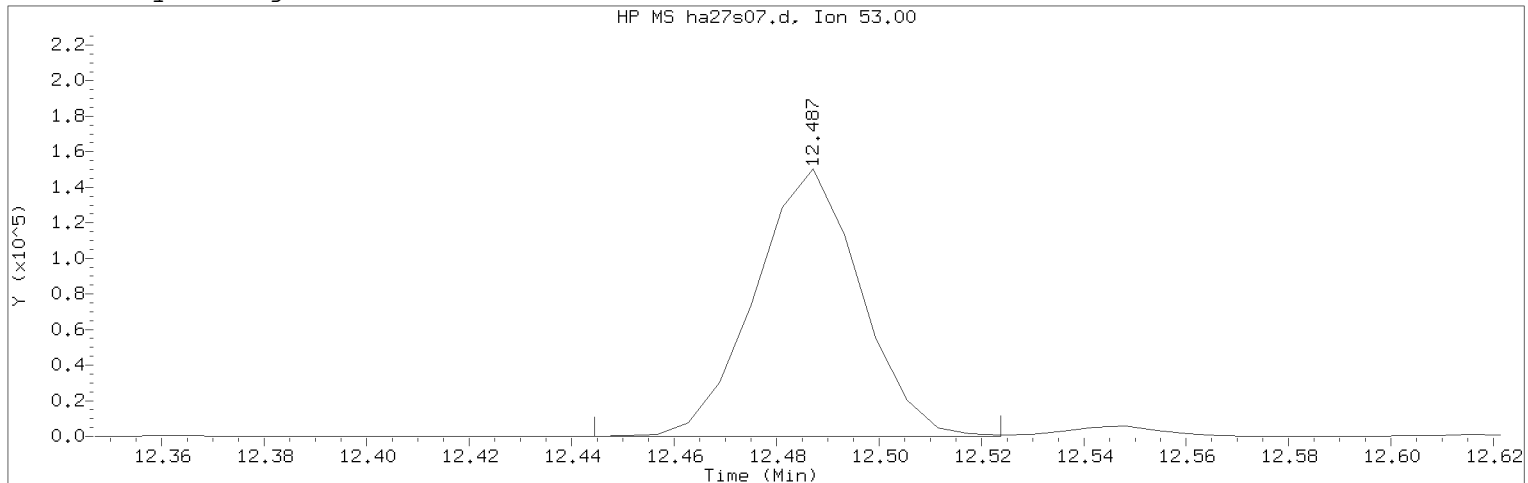
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 966 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

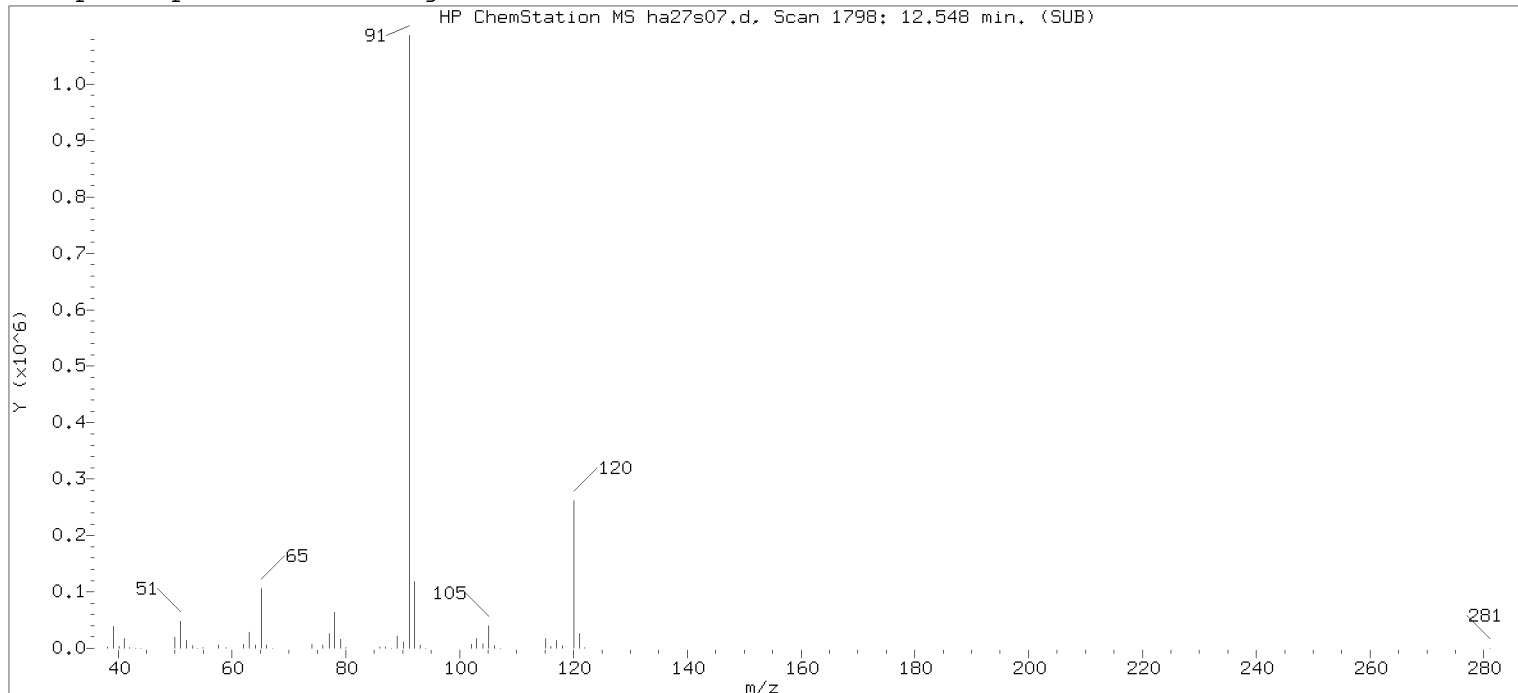
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1788	
Retention Time (minutes)	: 12.487	
Quant Ion	: 53.00	
Area (flag)	: 214784A	
On-Column Amount (ng)	: 19.2286	
Integration start scan	: 1780	Integration stop scan: 1793
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

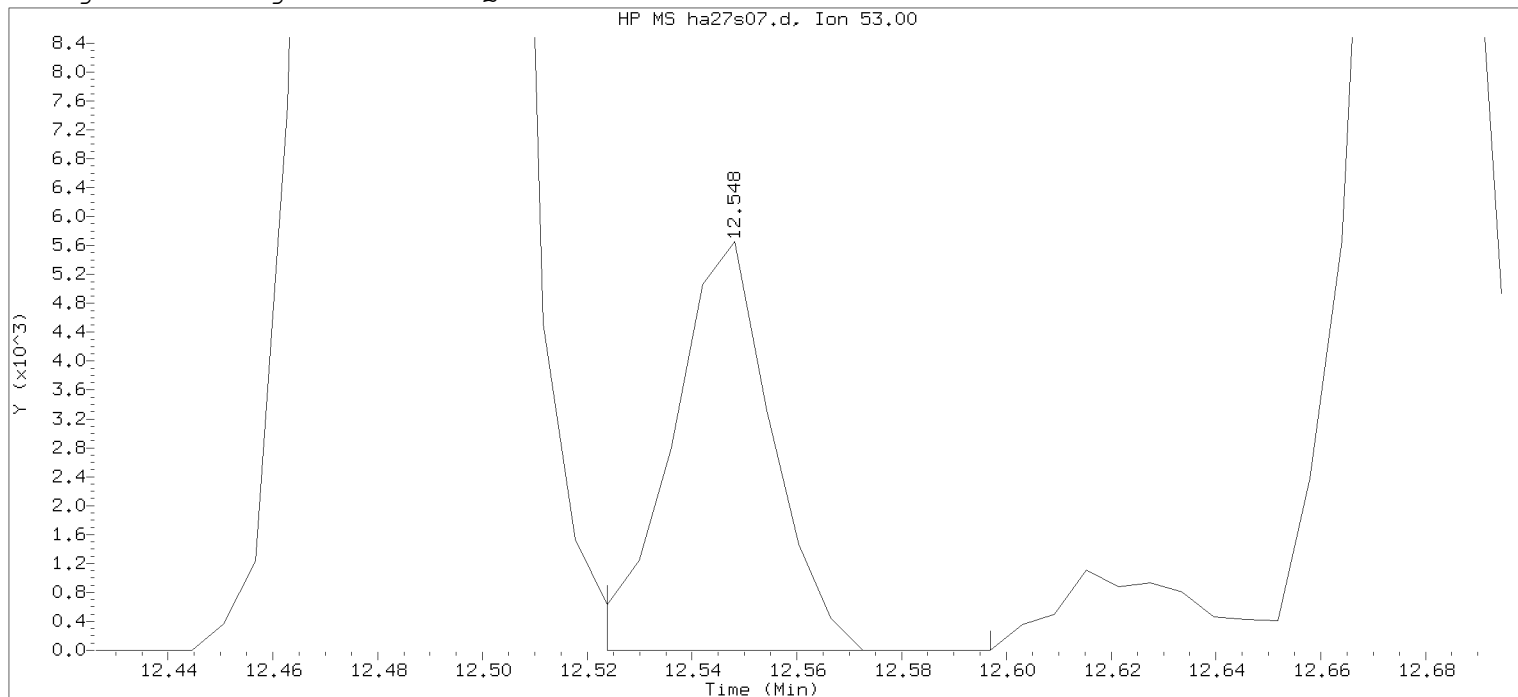
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:44 Automation

Sample Name: 59R04MSD

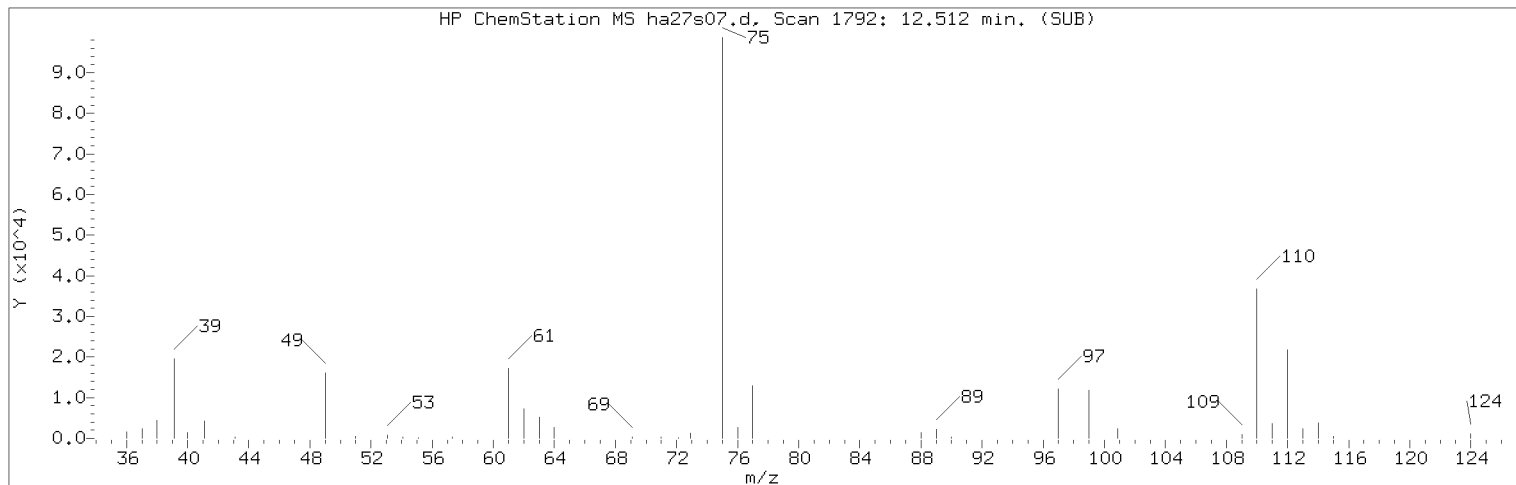
Lab Sample ID: 1300799MSD

Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1798	
Retention Time (minutes)	: 12.548	
Quant Ion	: 53.00	
Area	: 7427	
On-column Amount (ng)	: 0.6649	
Integration start scan	: 1793	Integration stop scan: 1805
Y at integration start	: 0	Y at integration end: 0

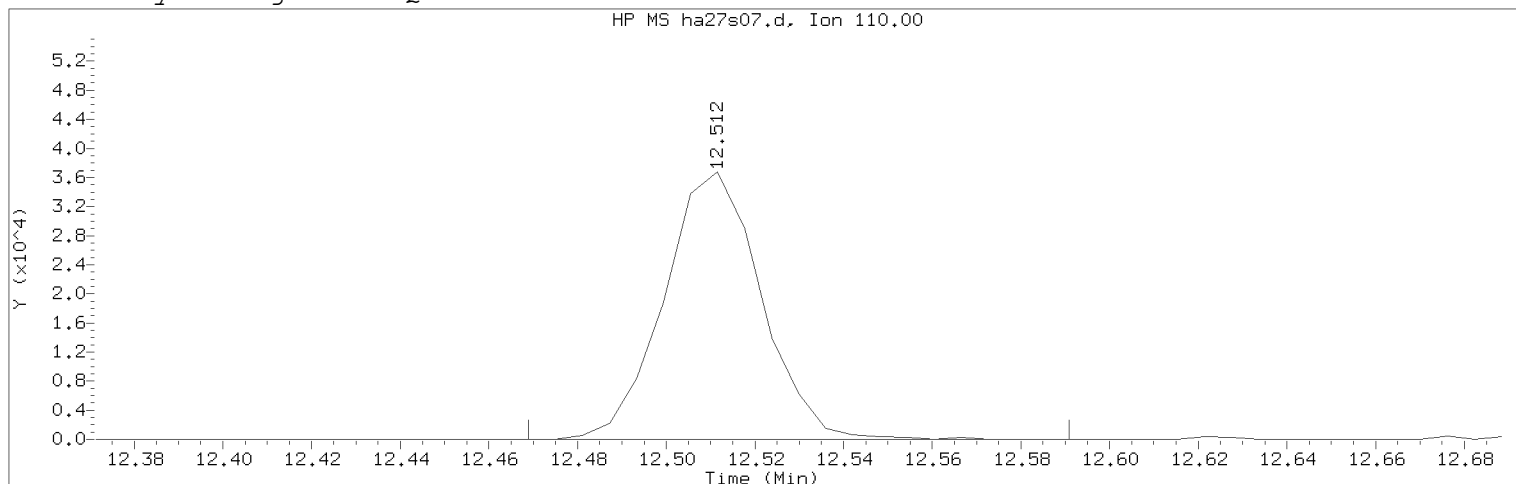
Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 968 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:28 mec29284

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area (flag)	: 55830M	
On-Column Amount (ng)	: 4.8509	
Integration start scan	: 1784	Integration stop scan: 1804
Y at integration start	: 0	Y at integration end: 0

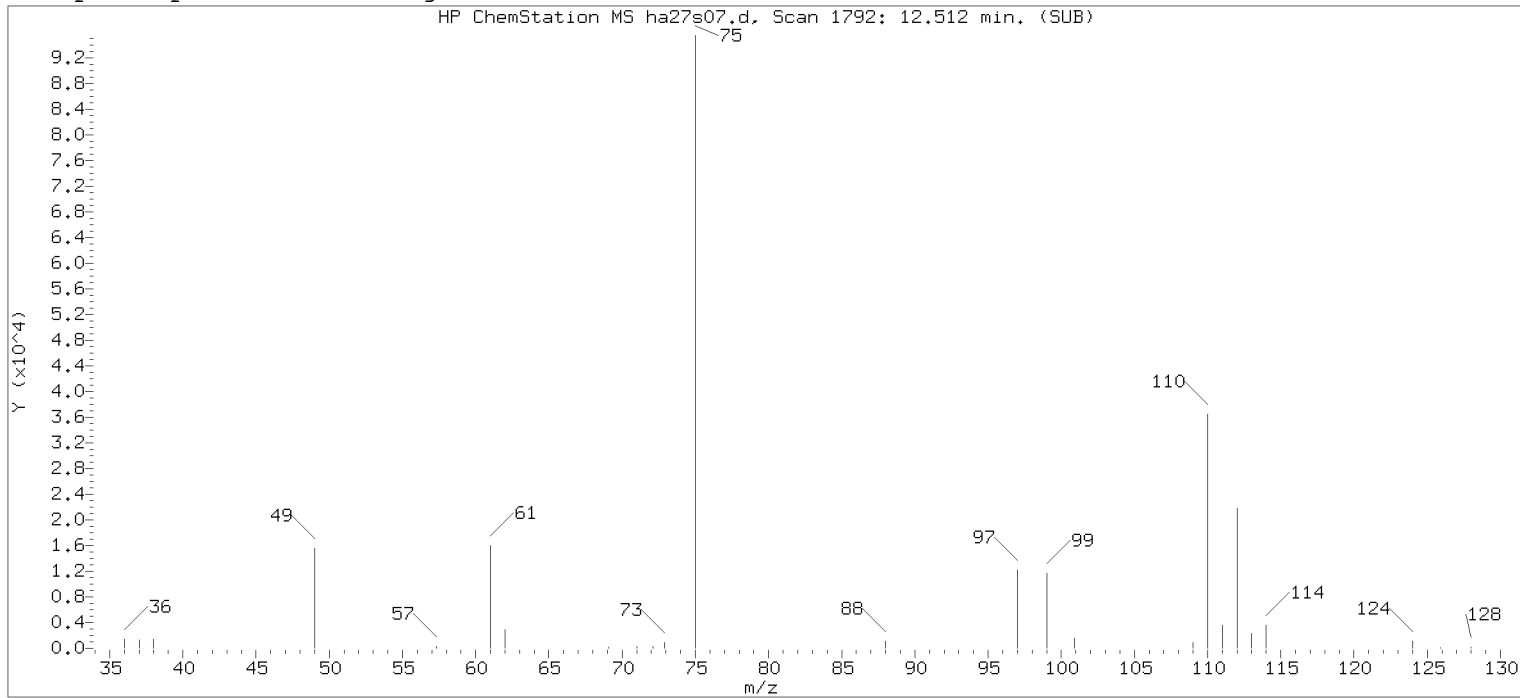
Reason for manual integration: improper integration

Analyst responsible for change:

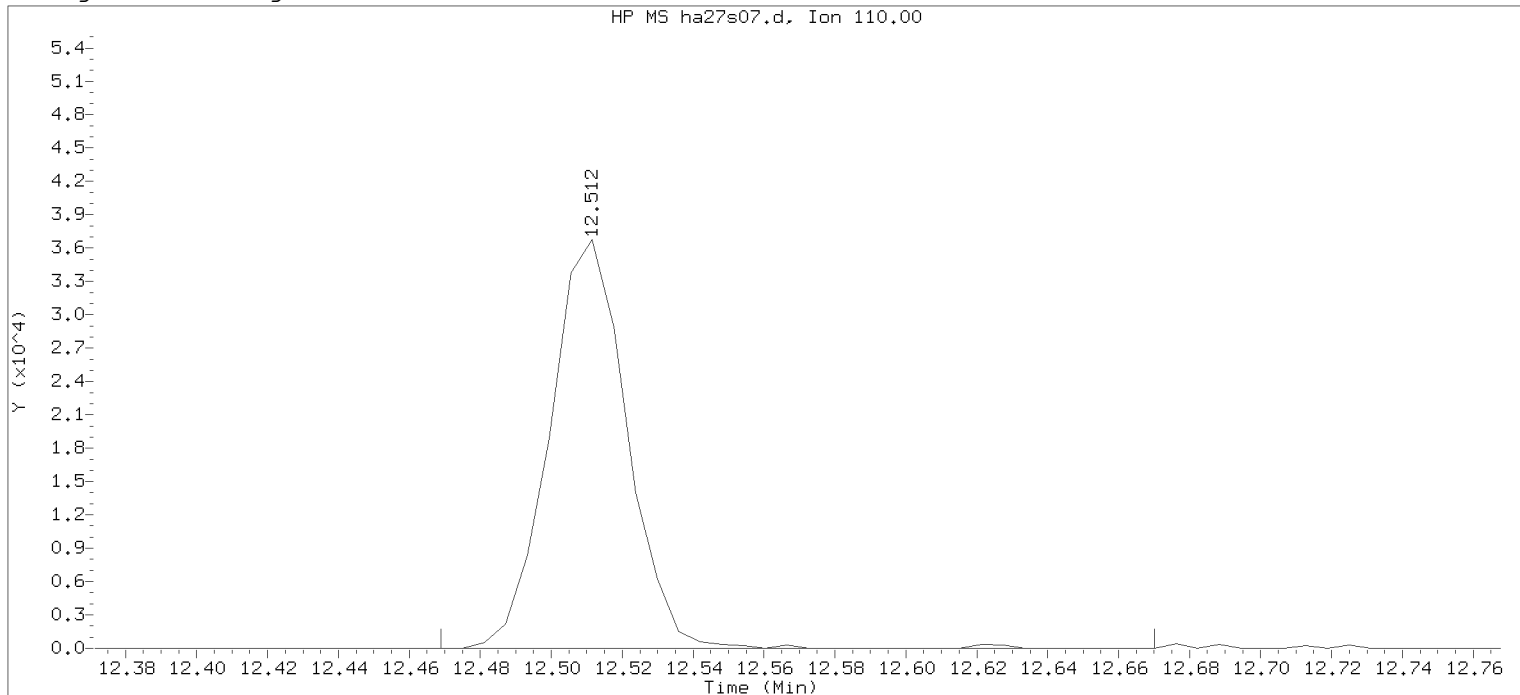
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:37.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27s07.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 00:26

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 22:27

Date, time and analyst ID of latest file update: 28-Apr-2020 00:44 Automation

Sample Name: 59R04MSD

Lab Sample ID: 1300799MSD

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area	: 56049	
On-column Amount (ng)	: 4.8700	
Integration start scan	: 1784	Integration stop scan: 1817
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:37.

Target 3.5 esignature user RAE59 Page 970 of 1506

LCSY37

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSY37

Data file: /chem2/HP09355.i/20apr28b.b/ya28s41.d

Injection date and time: 28-APR-2020 21:11

Data file Sample Info. Line: LCSY37;LCSY37;1;3;LCS;::;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.349(-0.006)	455	65	439144 (15)	250.00	
66) Fluorobenzene	7.859(0.000)	1032	96	1317458 (7)	50.00	
100) Chlorobenzene-d5	11.303(0.000)	1598	117	1005331 (4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.176(0.000)	1906	152	553618 (2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.965(0.000)	113	299739	50.091	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.428(0.000)	102	80375	50.933	102%		80 - 120
83) Toluene-d8	(3)	9.855(0.000)	98	1276496	48.625	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	12.294(0.000)	95	489308	49.192	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.037(0.000)	85	124661	14.478	14.48			0.2	1
4) Chloromethane	(2)	2.238(0.000)	50	112676	14.252	14.25			0.2	1
5) 1,3-Butadiene	(2)	2.354(0.000)	39	166984	26.029	26.03			1	3
6) Vinyl Chloride	(2)	2.354(0.000)	62	115942	14.707	14.71			0.2	1
8) Bromomethane	(2)	2.682(0.000)	94	88416	16.225	16.23			0.3	1
9) Chloroethane	(2)	2.774(0.000)	64	65700	15.043	15.04			0.2	1
11) n-Pentane	(2)	3.132(0.000)	43	159037	15.251	15.25			0.4	10
12) Trichlorofluoromethane	(2)	3.084(0.000)	101	178966	19.817	19.82			0.2	1
14) Ethyl ether	(2)	3.352(0.000)	59	109634	15.535	15.53			0.2	5
15) Freon 123a	(2)	3.424(0.000)	67	161726	19.433	19.43			0.4	5
16) Acrolein	(1)	3.522(0.001)	56	438841	121.565	121.56			2	100
17) 1,1-Dichloroethene	(2)	3.674(0.000)	96	133868	18.468	18.47			0.2	1
18) Acetone	(1)	3.686(0.001)	58	259621	154.199	154.20			0.7	20
19) Freon 113	(2)	3.710(-0.000)	101	134692	20.602	20.60			0.2	10
21) 2-Propanol	(1)	3.869(-0.001)	45	175141	140.000	140.00			18	100
22) Methyl Iodide	(2)	3.887(0.000)	142	222420	19.375	19.38			0.2	1
23) Carbon Disulfide	(2)	4.002(0.000)	76	429757	18.325	18.32			0.2	5
25) Allyl Chloride	(2)	4.167(0.000)	41	203645	17.733	17.73			0.3	5
27) Methyl Acetate	(2)	4.130(0.000)	43	204989	19.751	19.75			0.3	5
28) Methylene Chloride	(2)	4.361(0.000)	84	157015	20.223	20.22			0.3	1
30) t-Butyl alcohol	(1)	4.483(-0.001)	59	453886	208.106	208.11			12	50
31) Acrylonitrile	(2)	4.678(0.000)	53	547254	95.164	95.16			0.3	20
32) trans-1,2-Dichloroethene	(2)	4.793(0.000)	96	150863	18.963	18.96			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.769(0.000)	73	448039	19.559	19.56			0.2	1
34) n-Hexane	(2)	5.213(0.000)	57	220441	18.956	18.96			2	5
36) 1,1-Dichloroethane	(2)	5.438(0.000)	63	258518	19.161	19.16			0.2	1
38) di-Isopropyl ether	(2)	5.493(0.000)	45	446669	18.039	18.04			0.2	1
39) 2-Chloro-1,3-butadiene	(2)	5.554(0.000)	53	207710	19.028	19.03			0.2	5
40) Ethyl t-butyl ether	(2)	6.028(0.000)	59	426239	19.229	19.23			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.266(0.000)	96	179398	19.996	20.00			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	330261	38.959	38.96			0.4	2

LCSY37

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSY37

Data file: /chem2/HP09355.i/20apr28b.b/ya28s41.d

Injection date and time: 28-APR-2020 21:11

Data file Sample Info. Line: LCSY37;LCSY37;1;3;LCS;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
44) 2-Butanone	(2)	6.223(0.000)	43	1141227	147.119	147.12			0.3	10
45) 2,2-Dichloropropane	(2)	6.278(0.000)	77	214135	21.072	21.07			0.3	1
47) Propionitrile	(1)	6.302(0.000)	54	364435	140.234	140.23			14	100
48) Methacrylonitrile	(2)	6.521(-0.000)	67	849781	145.489	145.49			6	50
49) Bromochloromethane	(2)	6.606(0.000)	128	83473	20.039	20.04			0.2	5
50) Tetrahydrofuran	(1)	6.612(0.003)	71	228112	94.951	94.95			0.7	10
51) Chloroform	(2)	6.746(0.000)	83	254550	19.652	19.65			0.2	1
53) 1,1,1-Trichloroethane	(2)	6.983(-0.000)	97	222626	20.050	20.05			0.3	1
54) Cyclohexane	(2)	7.093(0.000)	56	254201	18.336	18.34			1	5
55) 1,1-Dichloropropene	(2)	7.196(-0.000)	75	210254	19.516	19.52			0.2	5
56) Carbon Tetrachloride	(2)	7.202(0.000)	117	192727	20.536	20.54			0.2	1
58) Isobutyl Alcohol	(1)	7.312(0.000)	41	357425	456.630	456.63			36	250
60) Benzene	(2)	7.458(0.000)	78	620547	18.956	18.96			0.2	1
61) 1,2-Dichloroethane	(2)	7.531(0.000)	62	217246	20.686	20.69			0.3	1
65) t-Amyl methyl ether	(2)	7.646(-0.000)	73	454005	20.301	20.30			0.8	5
67) n-Heptane	(2)	7.872(0.000)	43	216012	17.029	17.03			2	5
69) n-Butanol	(1)	8.188(0.001)	56	633494	859.480	859.48			61	250
71) Trichloroethene	(2)	8.346(-0.000)	95	159066	19.611	19.61			0.2	1
72) Methylcyclohexane	(2)	8.662(-0.000)	83	271805	18.859	18.86			0.5	5
73) 1,2-Dichloropropane	(2)	8.675(-0.000)	63	157435	18.778	18.78			0.2	1
74) Dibromomethane	(2)	8.790(-0.000)	93	106288	19.992	19.99			0.2	1
75) 1,4-Dioxane	(1)	8.760(0.001)	88	83436M	470.930	470.93			29	250
76) Methyl Methacrylate	(2)	8.742(-0.000)	69	170164	20.269	20.27			0.2	5
78) Bromodichloromethane	(2)	9.015(-0.000)	83	188082	19.596	19.60			0.2	1
79) 2-Nitropropane	(2)	9.259(-0.000)	41	66747	19.243	19.24			0.8	10
80) 2-Chloroethyl Vinyl Ether	(2)	9.362(-0.000)	63	128747	19.226	19.23			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.551(-0.000)	75	255144	19.382	19.38			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.703(-0.000)	43	1397944	96.715	96.72			0.5	10
88) Toluene	(3)	9.934(0.000)	92	400398	18.989	18.99			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.177(-0.000)	75	240782	19.133	19.13			0.2	1
90) 1,3-Dichloropropene (total)	(3)		100	495926	38.514	38.51			0.4	2
91) Ethyl Methacrylate	(3)	10.232(-0.000)	69	237582	17.447	17.45			0.2	5
92) 1,1,2-Trichloroethane	(3)	10.384(0.000)	97	165694	19.974	19.97			0.2	1
93) Tetrachloroethene	(3)	10.481(0.000)	166	172030	19.993	19.99			0.2	1
94) 1,3-Dichloropropane	(3)	10.542(-0.000)	76	263961	18.681	18.68			0.2	1
96) 2-Hexanone	(3)	10.579(-0.000)	43	1155495	97.856	97.86			0.3	10
97) Dibromochloromethane	(3)	10.761(0.000)	129	163540	19.713	19.71			0.2	1
99) 1,2-Dibromoethane	(3)	10.877(0.000)	107	174684	19.527	19.53			0.2	1
101) 1-Chlorohexane	(3)	11.303(0.000)	91	208636	17.918	17.92			0.3	5
102) Chlorobenzene	(3)	11.327(-0.000)	112	467482	19.623	19.62			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.406(-0.000)	131	152244	19.632	19.63			0.2	1
104) Ethylbenzene	(3)	11.412(-0.000)	91	773893	19.239	19.24			0.4	1
106) m+p-Xylene	(3)	11.522(-0.000)	106	625786	39.420	39.42			1	5
107) o-Xylene	(3)	11.850(-0.000)	106	299611	19.194	19.19			0.4	1
108) Xylene (Total)	(3)		106	925397	58.614	58.61			1	6
109) Styrene	(3)	11.868(-0.000)	104	497620	19.786	19.79			0.2	5
110) Bromoform	(3)	12.027(-0.000)	173	117630	19.216	19.22			1	4
111) Isopropylbenzene	(3)	12.148(-0.000)	105	773116	19.650	19.65			0.2	5
112) Cyclohexanone	(1)	12.221(0.003)	55	306817	449.843	449.84			25	100
115) Bromobenzene	(4)	12.416(0.000)	156	207660	19.652	19.65			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.386(0.000)	83	276506	18.482	18.48			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.434(0.000)	110	92271	19.442	19.44			0.2	5
118) trans-1,4-Dichloro-2-butene	(4)	12.410(0.000)	53	378112	78.617	78.62			6	50
119) n-Propylbenzene	(4)	12.477(0.000)	91	941354	19.120	19.12			0.2	5

M = Compound was manually integrated.

LCSY37

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSY37

Data file: /chem2/HP09355.i/20apr28b.b/ya28s41.d

Injection date and time: 28-APR-2020 21:11

Data file Sample Info. Line: LCSY37;LCSY37;1;3;LCS;;;ya28b41;

Instrument ID: HP09355.i Batch: Y201192AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Blank Data file reference: /chem2/HP09355.i/20apr28b.b/ya28b41.d

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D

Calibration date and time (Last Method Edit): 28-APR-2020 22:06

Mid Level Daily Calibration Standard Reference: /chem2/HP09355.i/20apr28b.b/ya28c41.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

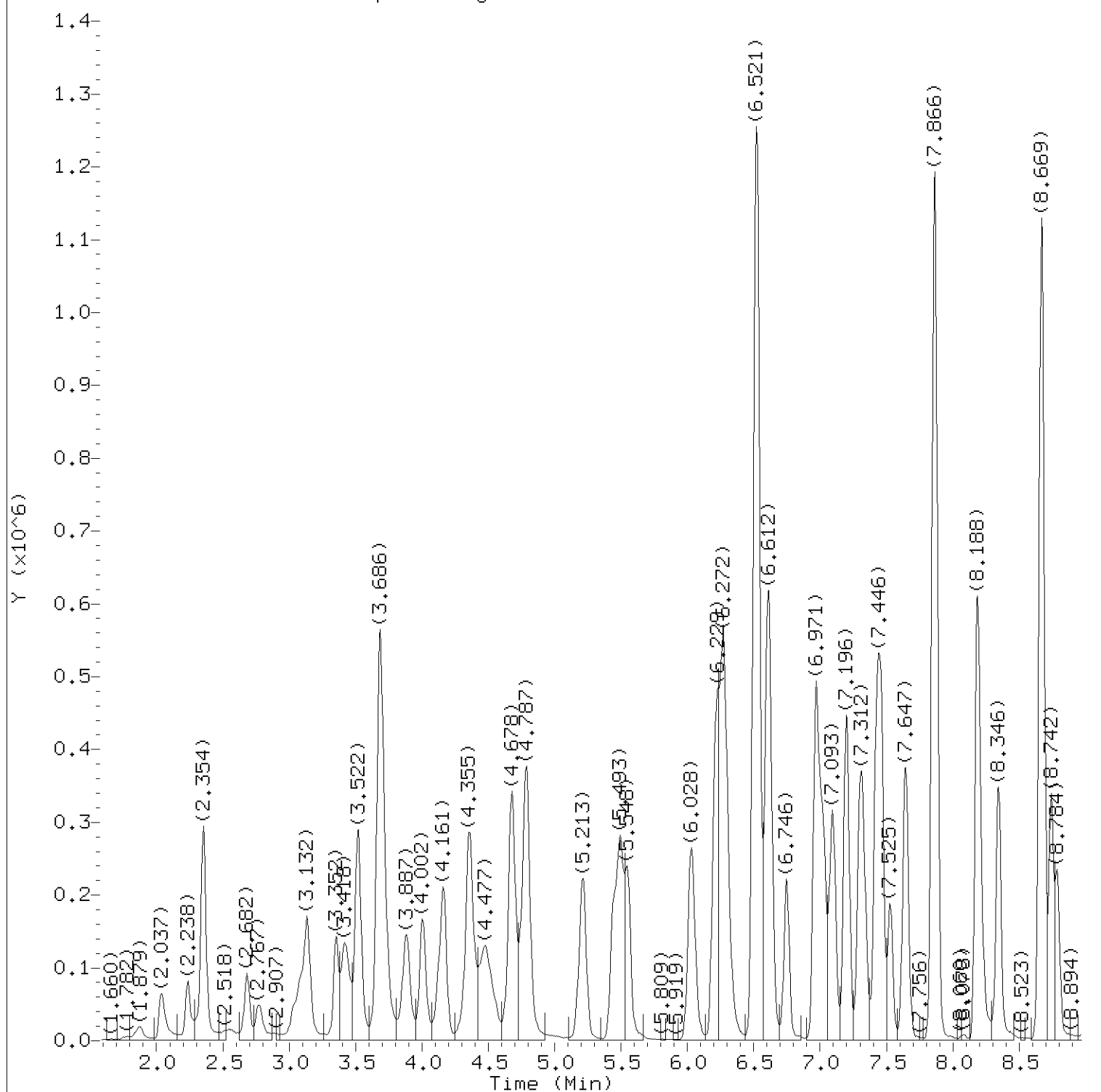
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
120) 2-Chlorotoluene	(4)	12.556(0.000)	126	191739	18.905	18.91			0.2	5
121) 4-Chlorotoluene	(4)	12.647(0.000)	126	205278	19.258	19.26			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.611(0.000)	105	678039	19.067	19.07			0.3	5
124) tert-Butylbenzene	(4)	12.854(0.000)	134	137761	18.524	18.52			0.3	5
125) Pentachloroethane	(4)	12.890(0.000)	167	117237	20.471	20.47			0.2	5
126) 1,2,4-Trimethylbenzene	(4)	12.897(0.000)	105	706404	18.878	18.88			1	5
127) sec-Butylbenzene	(4)	13.018(0.000)	105	878597	19.173	19.17			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.122(0.000)	146	396393	19.594	19.59			0.2	5
130) p-Isopropyltoluene	(4)	13.128(0.000)	119	746837	19.295	19.29			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.195(-0.000)	146	413996	19.819	19.82			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.201(-0.000)	105	736249	20.019	20.02			0.3	5
135) Benzyl Chloride	(4)	13.268(0.000)	91	530112	17.636	17.64			1	5
136) 1,3-Diethylbenzene	(4)	13.322(0.000)	119	456694	19.386	19.39			0.2	5
137) 1,4-Diethylbenzene	(4)	13.395(0.000)	119	480892	19.423	19.42			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.456(-0.000)	146	389642	19.831	19.83			0.2	5
139) n-Butylbenzene	(4)	13.420(-0.000)	92	381206	18.309	18.31			0.2	5
140) 1,2-Diethylbenzene	(4)	13.468(-0.000)	119	383732	19.345	19.34			0.2	5
141) Diethylbenzene (total)	(4)		100	1321318	58.154	58.15			0.6	15
142) 1,2-Dibromo-3-chloropropane	(4)	13.992(-0.000)	75	69535	18.877	18.88			0.3	5
144) 1,3,5-Trichlorobenzene	(4)	14.126(0.000)	180	282312	19.279	19.28			0.2	5
146) 1,2,4-Trichlorobenzene	(4)	14.545(0.000)	180	270686	19.692	19.69			0.3	5
147) Hexachlorobutadiene	(4)	14.630(0.000)	225	116488	18.794	18.79			2	5
148) Naphthalene	(4)	14.728(-0.000)	128	982413	19.539	19.54			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.874(-0.000)	180	255142	19.155	19.16			0.4	5
150) 2-Methylnaphthalene	(4)	15.519(-0.000)	142	496893	17.885	17.89			2	4

Total number of targets = 110

Digitally signed by Kevin A. Sposito on 04/28/2020 at 22:41. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29. PARALLAX ID: rek30744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d
Injection date and time: 28-APR-2020 21:11

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 8260W-D

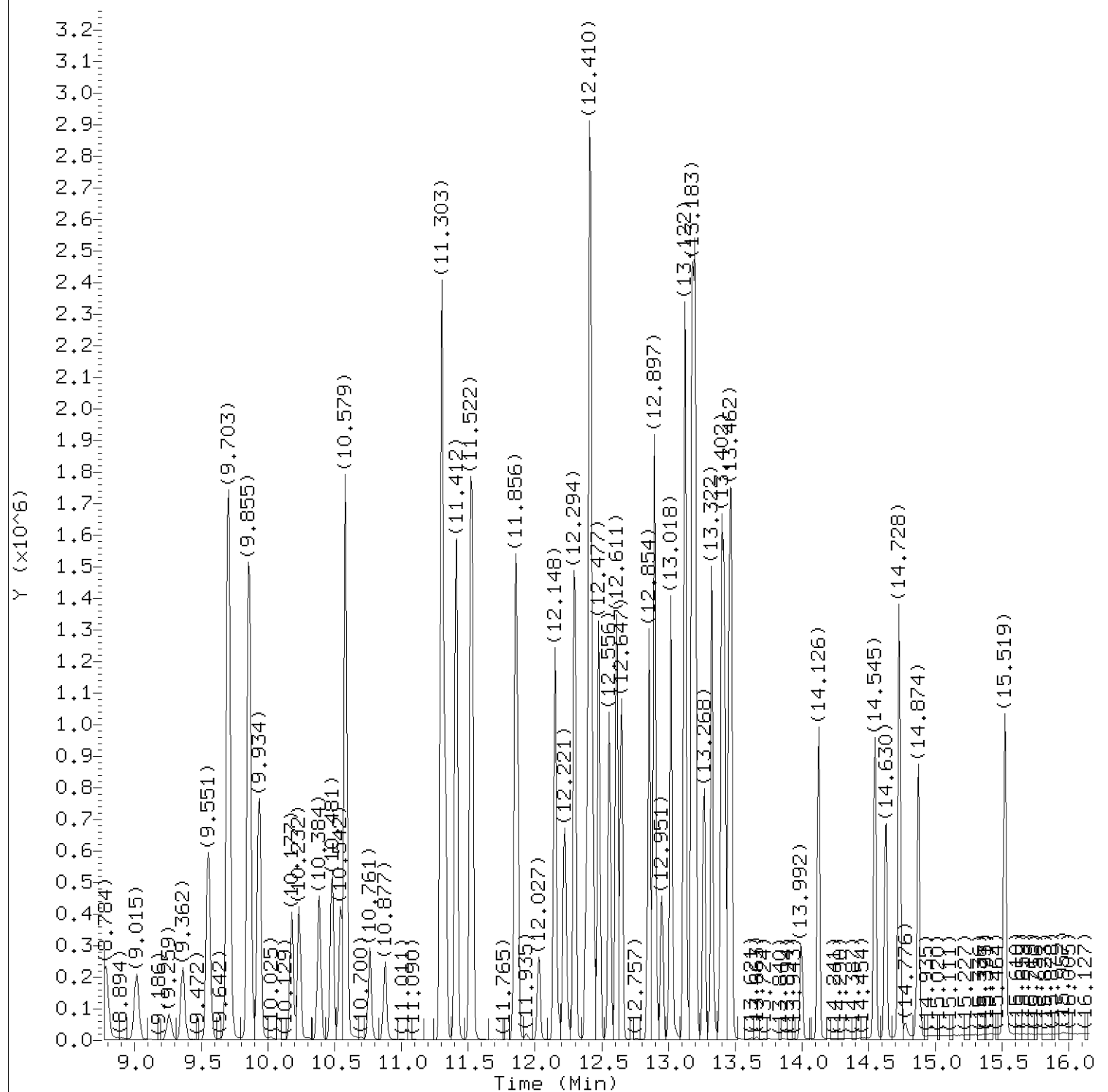
Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d
Injection date and time: 28-APR-2020 21:11

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m
Calibration date and time: 28-APR-2020 22:06

Sublist used: 8260W-D

Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 21:11

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.037	85	124661	14.478
4) Chloromethane	(2)	2.238	50	112676	14.252
5) 1,3-Butadiene	(2)	2.354	39	166984	26.029
6) Vinyl Chloride	(2)	2.354	62	115942	14.707
8) Bromomethane	(2)	2.682	94	88416	16.225
9) Chloroethane	(2)	2.774	64	65700	15.043
12) Trichlorofluoromethane	(2)	3.084	101	178966	19.817
11) n-Pentane	(2)	3.132	43	159037	15.251
14) Ethyl ether	(2)	3.352	59	109634	15.535
15) Freon 123a	(2)	3.425	67	161726	19.433
16) Acrolein	(1)	3.522	56	438841	121.565
17) 1,1-Dichloroethene	(2)	3.674	96	133868	18.468
18) Acetone	(1)	3.686	58	259621	154.199
19) Freon 113	(2)	3.710	101	134692	20.602
21) 2-Propanol	(1)	3.869	45	175141	140.000
22) Methyl Iodide	(2)	3.887	142	222420	19.375
23) Carbon Disulfide	(2)	4.002	76	429757	18.325
27) Methyl Acetate	(2)	4.130	43	204989	19.751
25) Allyl Chloride	(2)	4.167	41	203645	17.733
29)*t-Butyl alcohol-d10	(1)	4.349	65	439144	250.000
28) Methylene Chloride	(2)	4.361	84	157015	20.223
30) t-Butyl alcohol	(1)	4.483	59	453886	208.106
31) Acrylonitrile	(2)	4.678	53	547254	95.164
33) Methyl Tertiary Butyl Ether	(2)	4.769	73	448039	19.559
32) trans-1,2-Dichloroethene	(2)	4.793	96	150863	18.963
34) n-Hexane	(2)	5.213	57	220441	18.956
36) 1,1-Dichloroethane	(2)	5.438	63	258518	19.161
38) di-Isopropyl ether	(2)	5.493	45	446669	18.039
39) 2-Chloro-1,3-butadiene	(2)	5.554	53	207710	19.028
40) Ethyl t-butyl ether	(2)	6.028	59	426239	19.229
43) 1,2-Dichloroethene (Total)	(2)		96	330261	38.959
44) 2-Butanone	(2)	6.223	43	1141227	147.119
42) cis-1,2-Dichloroethene	(2)	6.266	96	179398	19.996
45) 2,2-Dichloropropane	(2)	6.278	77	214135	21.072
47) Propionitrile	(1)	6.302	54	364435	140.234
48) Methacrylonitrile	(2)	6.521	67	849781	145.489
49) Bromochloromethane	(2)	6.606	128	83473	20.039
50) Tetrahydrofuran	(1)	6.612	71	228112	94.951

* = Compound is an internal standard.

page 1 of 4

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on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648

RAF59 Page 976 of 1506

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d
 Injection date and time: 28-APR-2020 21:11

Instrument ID: HP09355.i
 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D
 Calibration date and time: 28-APR-2020 22:06
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
51) Chloroform	(2)	6.746	83	254550	19.652
52) \$Dibromofluoromethane	(2)	6.965	113	299739	50.091
53) 1,1,1-Trichloroethane	(2)	6.983	97	222626	20.050
54) Cyclohexane	(2)	7.093	56	254201	18.336
55) 1,1-Dichloropropene	(2)	7.196	75	210254	19.516
56) Carbon Tetrachloride	(2)	7.202	117	192727	20.536
58) Isobutyl Alcohol	(1)	7.312	41	357425	456.630
57) \$1,2-Dichloroethane-d4	(2)	7.428	102	80375	50.933
60) Benzene	(2)	7.458	78	620547	18.956
61) 1,2-Dichloroethane	(2)	7.531	62	217246	20.686
65) t-Amyl methyl ether	(2)	7.647	73	454005	20.301
66) *Fluorobenzene	(2)	7.859	96	1317458	50.000
67) n-Heptane	(2)	7.872	43	216012	17.029
69) n-Butanol	(1)	8.188	56	633494	859.480
71) Trichloroethene	(2)	8.346	95	159066	19.611
72) Methylcyclohexane	(2)	8.662	83	271805	18.859
73) 1,2-Dichloropropane	(2)	8.675	63	157435	18.778
76) Methyl Methacrylate	(2)	8.742	69	170164	20.269
75) 1,4-Dioxane	(1)	8.760	88	83436M	470.930
74) Dibromomethane	(2)	8.790	93	106288	19.992
78) Bromodichloromethane	(2)	9.015	83	188082	19.596
79) 2-Nitropropane	(2)	9.259	41	66747	19.243
80) 2-Chloroethyl Vinyl Ether	(2)	9.362	63	128747	19.226
81) cis-1,3-Dichloropropene	(2)	9.551	75	255144	19.382
82) 4-Methyl-2-pentanone	(2)	9.703	43	1397944	96.715
83) \$Toluene-d8	(3)	9.855	98	1276496	48.625
88) Toluene	(3)	9.934	92	400398	18.989
90) 1,3-Dichloropropene (total)	(3)		100	495926	38.514
89) trans-1,3-Dichloropropene	(3)	10.177	75	240782	19.133
91) Ethyl Methacrylate	(3)	10.232	69	237582	17.447
92) 1,1,2-Trichloroethane	(3)	10.384	97	165694	19.974
93) Tetrachloroethene	(3)	10.481	166	172030	19.993
94) 1,3-Dichloropropane	(3)	10.542	76	263961	18.681
96) 2-Hexanone	(3)	10.579	43	1155495	97.856
97) Dibromochloromethane	(3)	10.761	129	163540	19.713
99) 1,2-Dibromoethane	(3)	10.877	107	174684	19.527
100) *Chlorobenzene-d5	(3)	11.303	117	1005331	50.000
101) 1-Chlorohexane	(3)	11.303	91	208636	17.918

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d
Injection date and time: 28-APR-2020 21:11

Instrument ID: HP09355.i
Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 28-APR-2020 22:06
Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
102) Chlorobenzene	(3)	11.327	112	467482	19.623
103) 1,1,1,2-Tetrachloroethane	(3)	11.406	131	152244	19.632
104) Ethylbenzene	(3)	11.412	91	773893	19.239
106) m+p-Xylene	(3)	11.522	106	625786	39.420
108) Xylene (Total)	(3)		106	925397	58.614
107) o-Xylene	(3)	11.850	106	299611	19.194
109) Styrene	(3)	11.869	104	497620	19.786
110) Bromoform	(3)	12.027	173	117630	19.216
111) Isopropylbenzene	(3)	12.148	105	773116	19.650
112) Cyclohexanone	(1)	12.221	55	306817	449.843
114) \$4-Bromofluorobenzene	(3)	12.294	95	489308	49.192
116) 1,1,2,2-Tetrachloroethane	(4)	12.386	83	276506	18.482
118) trans-1,4-Dichloro-2-butene	(4)	12.410	53	378112	78.617
115) Bromobenzene	(4)	12.416	156	207660	19.652
117) 1,2,3-Trichloropropane	(4)	12.434	110	92271	19.442
119) n-Propylbenzene	(4)	12.477	91	941354	19.120
120) 2-Chlorotoluene	(4)	12.556	126	191739	18.905
122) 1,3,5-Trimethylbenzene	(4)	12.611	105	678039	19.067
121) 4-Chlorotoluene	(4)	12.647	126	205278	19.258
124) tert-Butylbenzene	(4)	12.854	134	137761	18.524
125) Pentachloroethane	(4)	12.891	167	117237	20.471
126) 1,2,4-Trimethylbenzene	(4)	12.897	105	706404	18.878
127) sec-Butylbenzene	(4)	13.018	105	878597	19.173
129) 1,3-Dichlorobenzene	(4)	13.122	146	396393	19.594
130) p-Isopropyltoluene	(4)	13.128	119	746837	19.295
131) *1,4-Dichlorobenzene-d4	(4)	13.176	152	553618	50.000
133) 1,4-Dichlorobenzene	(4)	13.195	146	413996	19.819
134) 1,2,3-Trimethylbenzene	(4)	13.201	105	736249	20.019
135) Benzyl Chloride	(4)	13.268	91	530112	17.636
136) 1,3-Diethylbenzene	(4)	13.322	119	456694	19.386
141) Diethylbenzene (total)	(4)		100	1321318	58.154
137) 1,4-Diethylbenzene	(4)	13.395	119	480892	19.423
139) n-Butylbenzene	(4)	13.420	92	381206	18.309
138) 1,2-Dichlorobenzene	(4)	13.456	146	389642	19.831
140) 1,2-Diethylbenzene	(4)	13.469	119	383732	19.345
142) 1,2-Dibromo-3-chloropropane	(4)	13.992	75	69535	18.877
144) 1,3,5-Trichlorobenzene	(4)	14.126	180	282312	19.279
146) 1,2,4-Trichlorobenzene	(4)	14.545	180	270686	19.692

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 21:11

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 22:06

Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

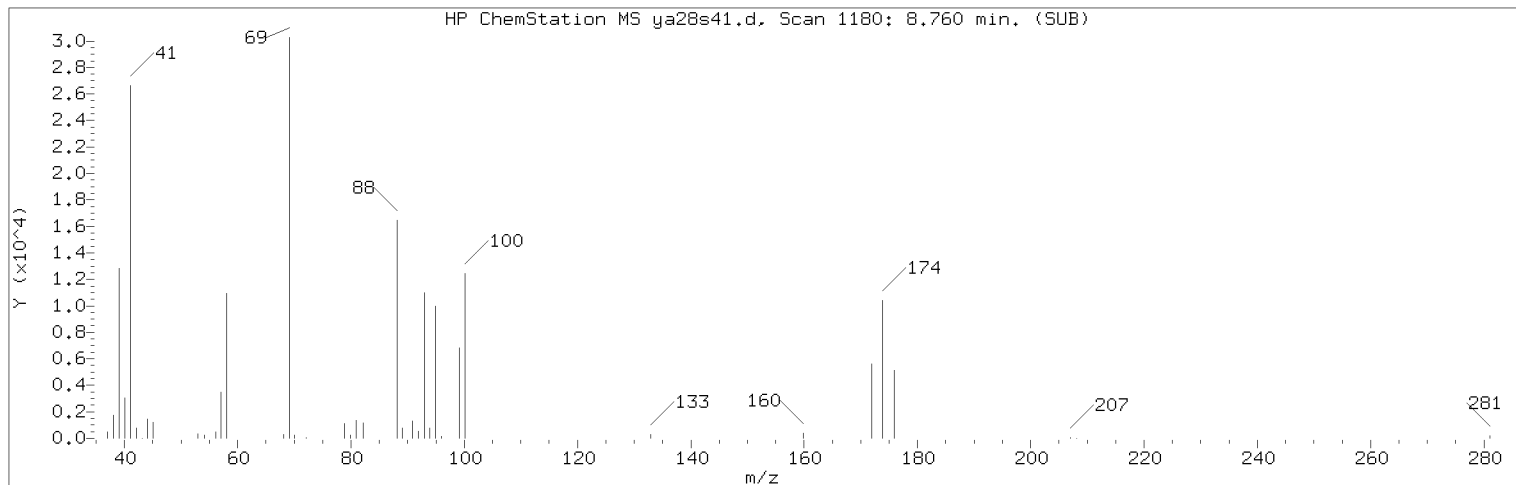
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
147) Hexachlorobutadiene	(4)	14.630	225	116488	18.794
148) Naphthalene	(4)	14.728	128	982413	19.539
149) 1,2,3-Trichlorobenzene	(4)	14.874	180	255142	19.155
150) 2-Methylnaphthalene	(4)	15.519	142	496893	17.885

page 4 of 4

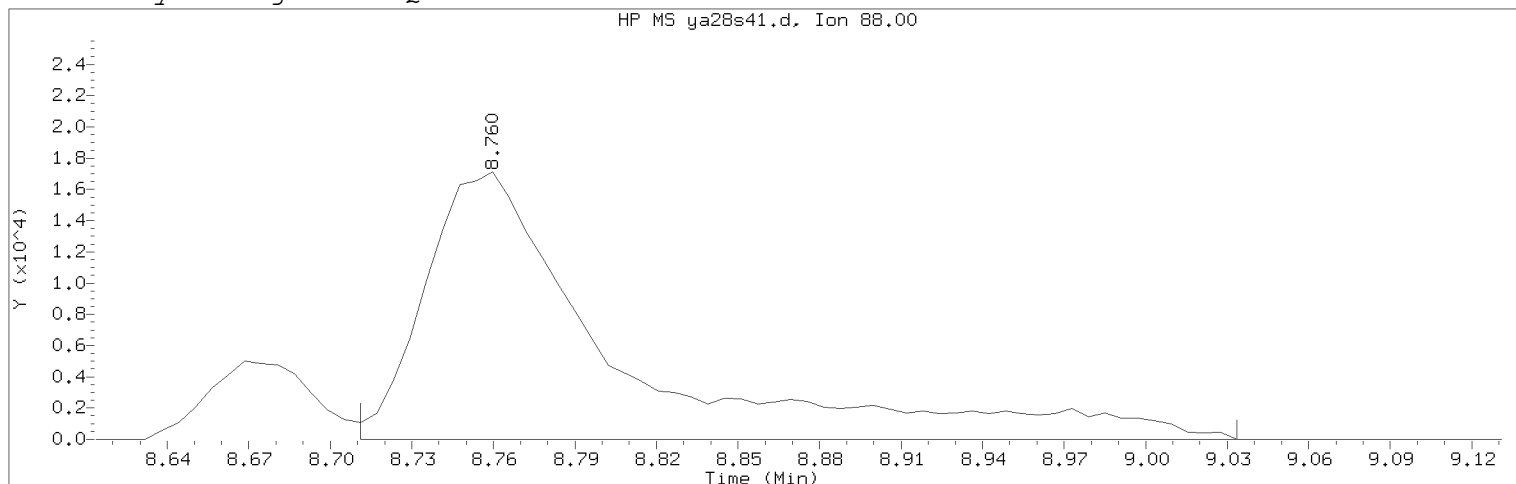
Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.

Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d Instrument ID: HP09355.i
Injection date and time: 28-APR-2020 21:11 Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m Sublist used: 8260W-D
Calibration date and time: 28-APR-2020 22:06
Date, time and analyst ID of latest file update: 28-Apr-2020 22:40 kas02648

Sample Name: LCSY37

Lab Sample ID: LCSY37

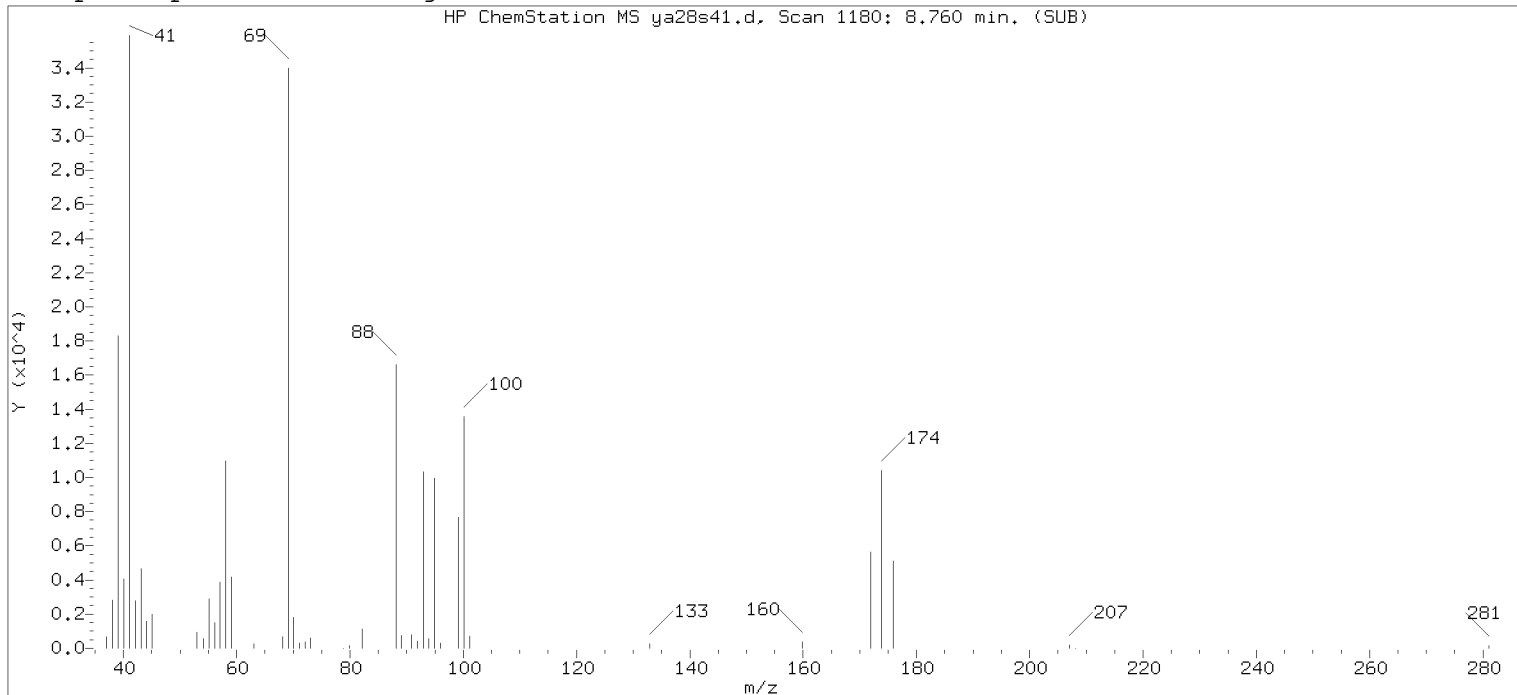
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.760
Quant Ion : 88.00
Area (flag) : 83436M
On-Column Amount (ng) : 470.9301
Integration start scan : 1171 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

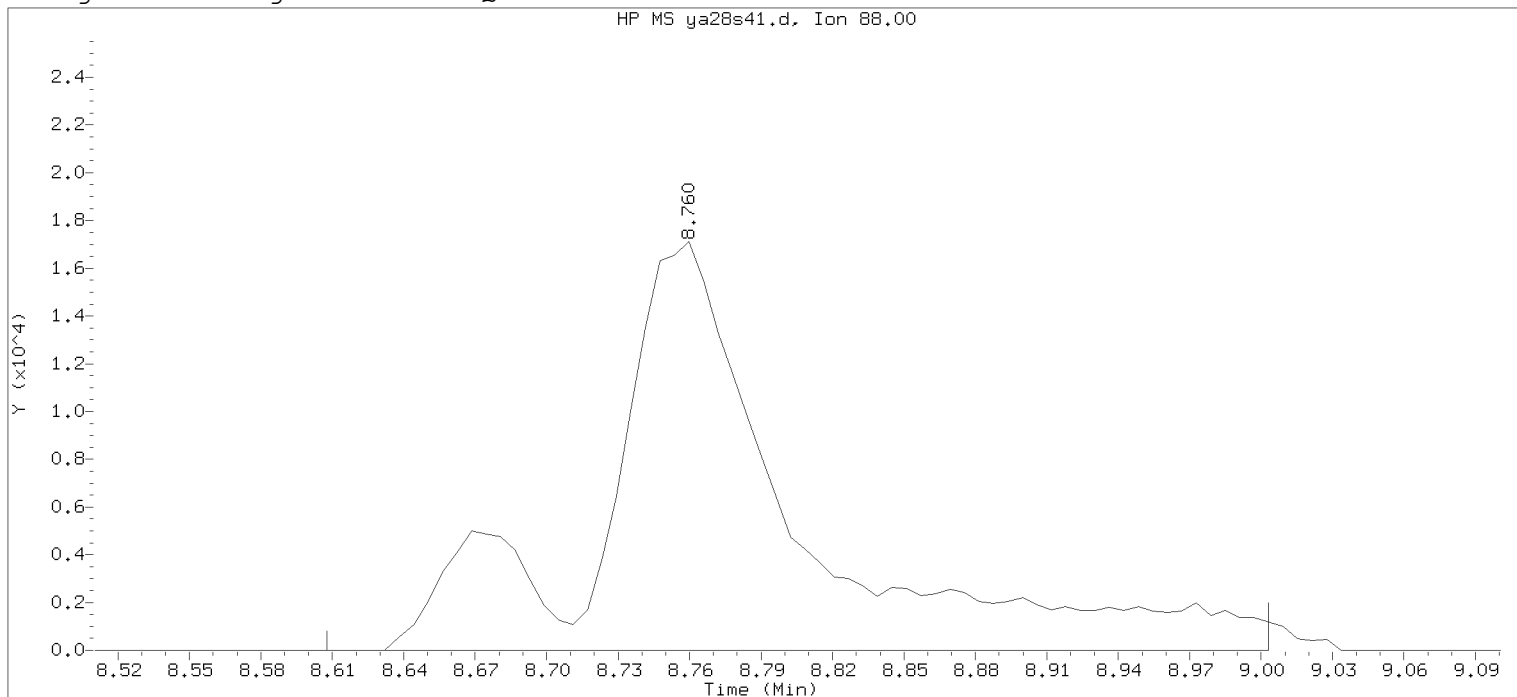
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 04/28/2020 at 22:41.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Rachel Krueger on 04/29/2020 at 17:29.
PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/20apr28b.b/ya28s41.d

Instrument ID: HP09355.i

Injection date and time: 28-APR-2020 21:11

Analyst ID: KAS02648

Method used: /chem2/HP09355.i/20apr28b.b/m8260c5.m

Sublist used: 8260W-D

Calibration date and time: 28-APR-2020 21:06

Date, time and analyst ID of latest file update: 28-Apr-2020 21:28 Automation

Sample Name: LCSY37

Lab Sample ID: LCSY37

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 1180
 Retention Time (minutes): 8.760
 Quant Ion : 88.00
 Area : 95512
 On-column Amount (ng) : 539.0893
 Integration start scan : 1154
 Y at integration start : 0

Integration stop scan: 1219
 Y at integration end: 0

LCSH55

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH55

Data file: /chem2/HP19094.i/20apr27a.b/ha27134.d

Injection date and time: 27-APR-2020 21:30

Data file Sample Info. Line: LCSH55;LCSH55;1;3;LCS;;DAA3568;;ha27b01;

Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 29-Apr-2020 13:25 cbs01947

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340SM

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.476 (-0.030)	474	65	128264 (-2)	50.00	
64) Fluorobenzene	7.957 (-0.006)	1045	96	1681141 (0)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1488451 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	802725 (-2)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.001)	113	450676	10.784	108%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (0.000)	102	89221	11.016	110%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1832680	9.241	92%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	728977	9.936	99%		80 - 120

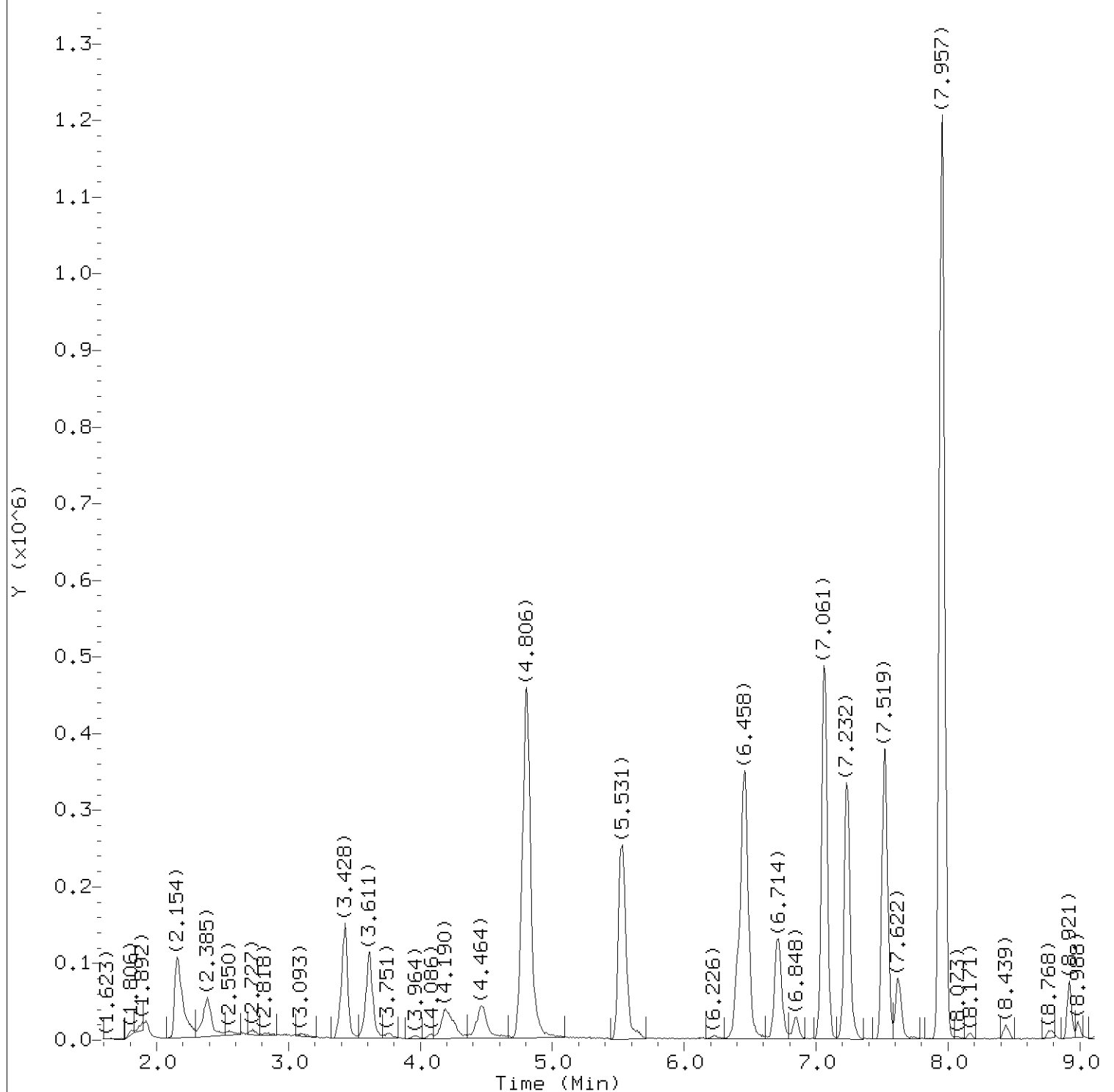
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.154 (-0.001)	45	296851M	5.300	5.30		J	0.04	13
26) Acetonitrile	(1)	4.178 (0.006)	41	110147	35.267	35.27		J	32	100
37) Vinyl Acetate	(2)	5.531 (-0.001)	43	785633	13.167	13.17			3	10

M = Compound was manually integrated.

Total number of targets = 3

Digitally signed by Don V. Viray on 04/29/2020 at 13:33. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27134.d
Injection date and time: 27-APR-2020 21:30

Instrument ID: HP19094.i
Analyst ID: mec29284

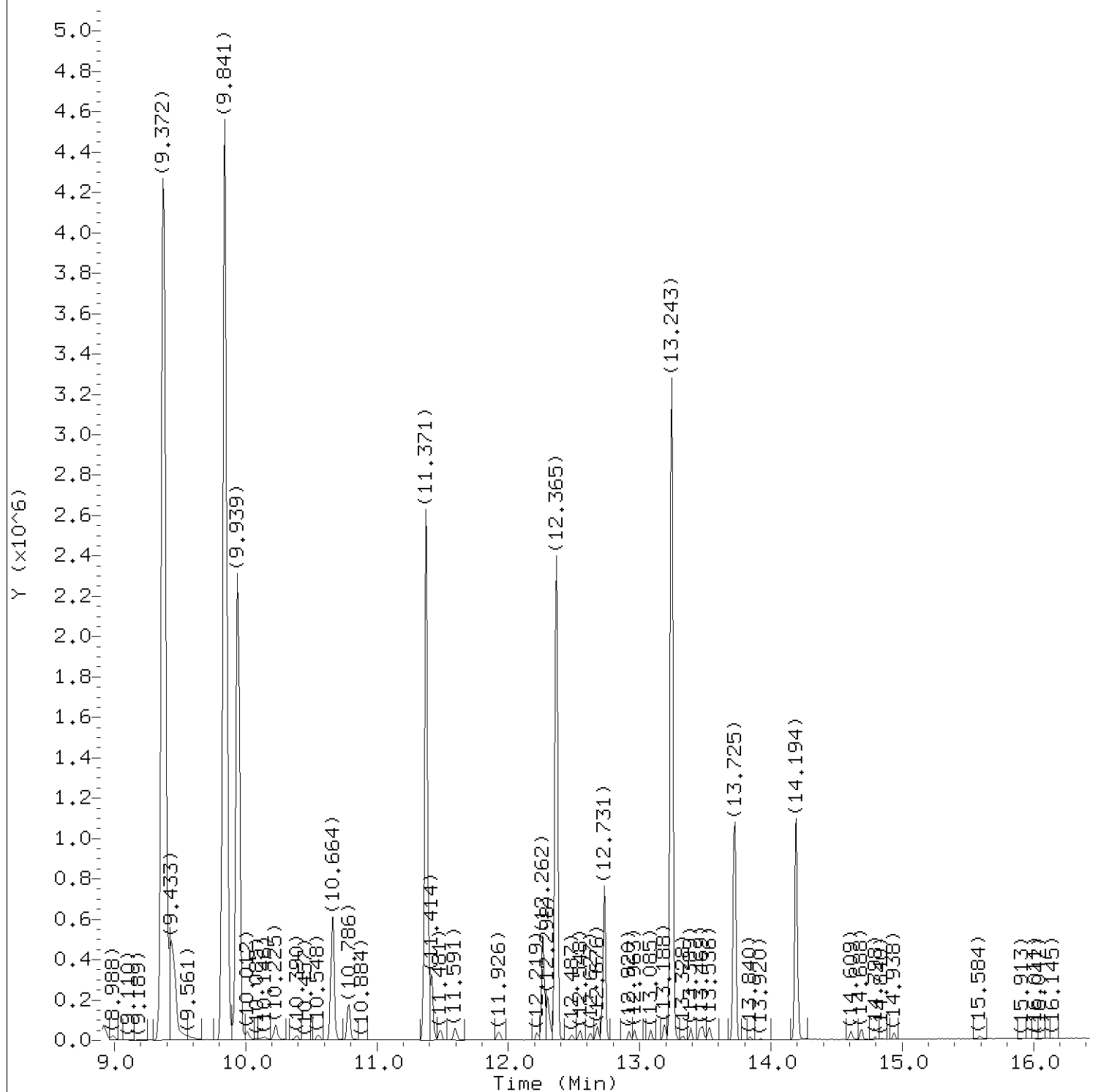
Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 29-Apr-2020 13:25 cbs01947

Sample Name: LCSH55

Lab Sample ID: LCSH55

Digitally signed by Don V. Viray
on 04/29/2020 at 13:33.

Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27134.d
Injection date and time: 27-APR-2020 21:30

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 29-Apr-2020 13:25 cbs01947

Sample Name: LCSH55

Lab Sample ID: LCSH55

Digitally signed by Don V. Viray
on 04/29/2020 at 13:33.

Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27134.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 21:30

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 29-Apr-2020 13:25 cbs01947

Sample Name: LCSH55

Lab Sample ID: LCSH55

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	296851M	5.300
26) Acetonitrile	(1)	4.178	41	110147	35.267
27) *t-Butyl Alcohol-d10	(1)	4.476	65	128264	50.000
37) Vinyl Acetate	(2)	5.531	43	785633	13.167
51) \$Dibromofluoromethane	(2)	7.061	113	450676	10.784
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	89221	11.016
64) *Fluorobenzene	(2)	7.957	96	1681141	10.000
83) \$Toluene-d8	(3)	9.939	98	1832680	9.241
98) *Chlorobenzene-d5	(3)	11.371	117	1488451	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	728977	9.936
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	802725	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

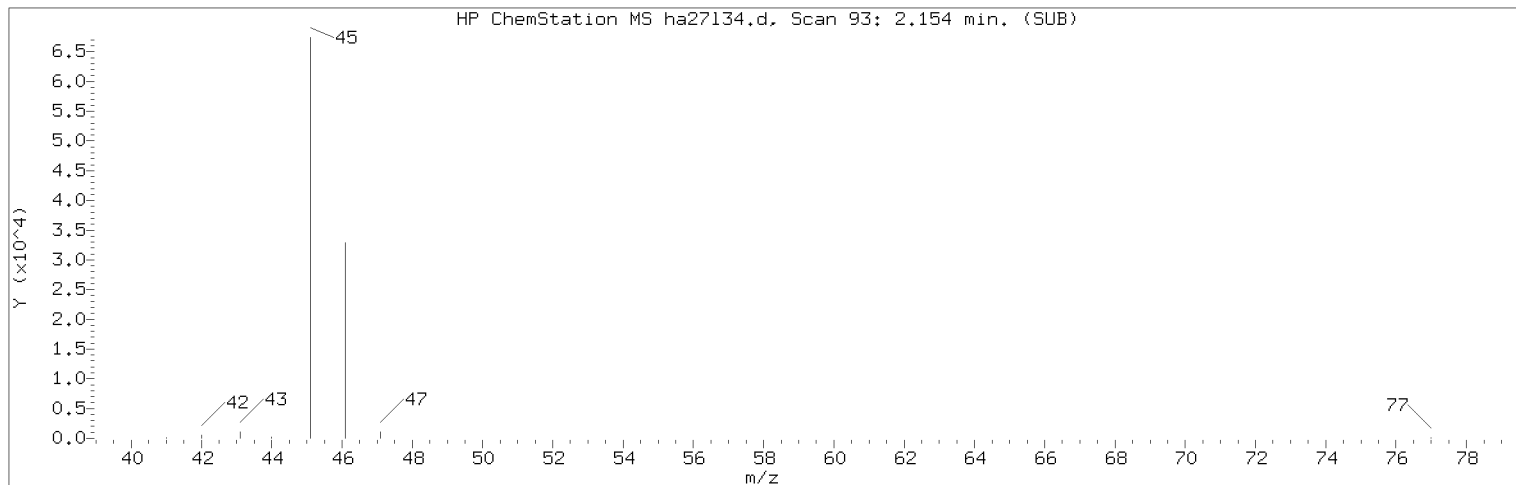
page 1 of 1

Digitally signed by Don V. Viray
on 04/29/2020 at 13:33.

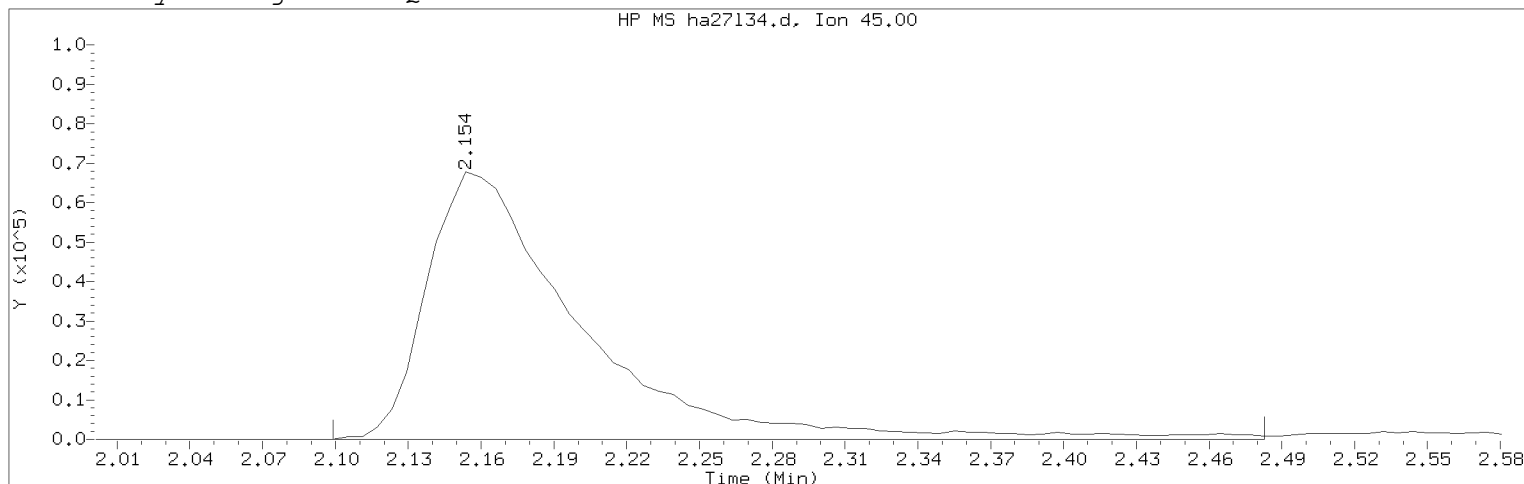
Target 3.5 esignature user ID: dvv10203

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27134.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 21:30

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 29-Apr-2020 13:25 cbs01947

Sample Name: LCSH55

Lab Sample ID: LCSH55

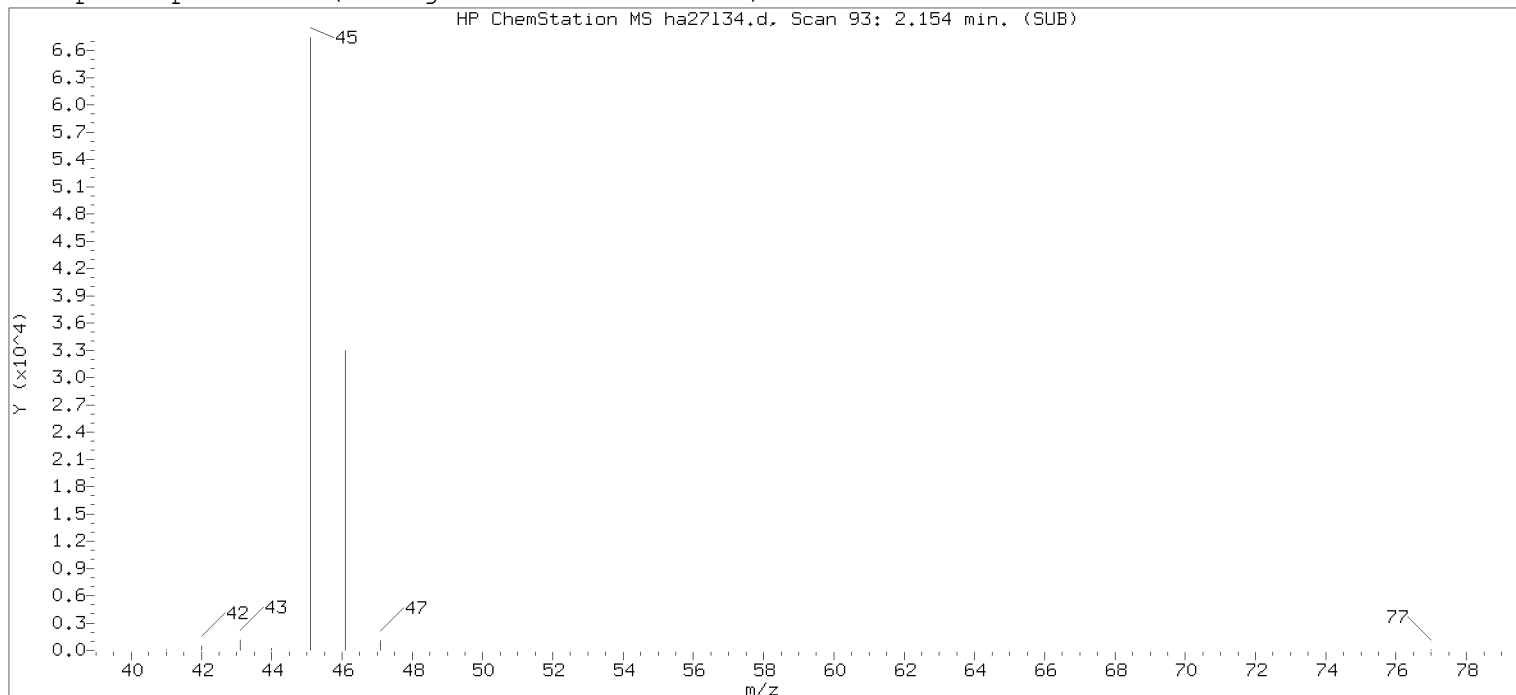
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area (flag)	: 296851M	
On-Column Amount (ng)	: 5.3005	
Integration start scan	: 83	Integration stop scan: 146
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

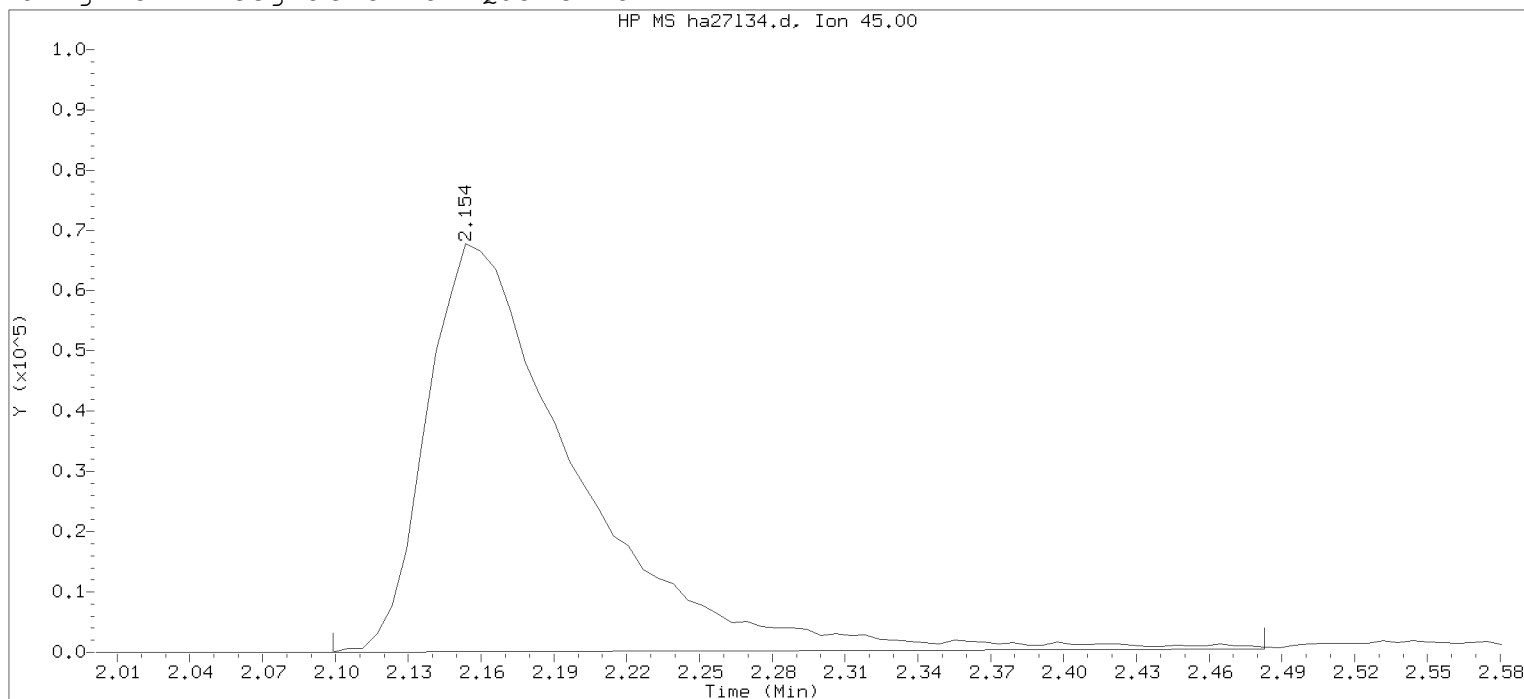
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/29/2020 at 13:33.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:09.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27134.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 21:30

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 29-Apr-2020 13:24 cbs01947

Sample Name: LCSH55

Lab Sample ID: LCSH55

Compound Number	:	4	
Compound Name	:	Dimethyl ether	
Scan Number	:	93	
Retention Time (minutes)	:	2.154	
Quant Ion	:	45.00	
Area	:	290539	
On-column Amount (ng)	:	5.1878	
Integration start scan	:	83	Integration stop scan: 146
Y at integration start	:	0	Y at integration end: 534

Digitally signed by Don V. Viray on 04/29/2020 at 13:33.

Target 3.5 esignature user RAE59 Page 987 of 1506

LCSH54

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH54

Data file: /chem2/HP19094.i/20apr27a.b/ha27101.d Injection date and time: 27-APR-2020 20:25
 Data file Sample Info. Line: LCSH54;LCSH54;1;3;LCS;;DAA3568;;ha27b01; Instrument ID: HP19094.i Batch: H201181AA
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time (Last Method Edit): 28-APR-2020 22:26
 Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (-0.012)	471	65	134107 (2)	50.00	
64) Fluorobenzene	7.957 (-0.006)	1045	96	1688805 (0)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1478359 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	818477 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.001)	113	445435	10.610	106%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.518 (0.001)	102	87060	10.700	107%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	1836482	9.324	93%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	718353	9.858	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.062 (-0.000)	85	292150	4.615	4.61			0.1	1
2) Chloromethane	(2)	2.263 (0.000)	50	335115	5.362	5.36			0.06	0.5
5) Vinyl Chloride	(2)	2.398 (-0.000)	62	311129	5.234	5.23			0.2	1
7) Bromomethane	(2)	2.739 (-0.000)	94	222812	5.233	5.23			0.5	1
8) Chloroethane	(2)	2.836 (0.000)	64	178895	5.196	5.20			0.07	0.5
10) Trichlorofluoromethane	(2)	3.153 (-0.001)	101	382474	5.638	5.64			0.2	1
11) Ethyl ether	(2)	3.422 (-0.000)	59	176933	5.894	5.89		J	1	13
13) Acrolein	(1)	3.617 (-0.000)	56	194528	32.212	32.21			3	25
15) 1,1-Dichloroethene	(2)	3.751 (-0.000)	96	207535	5.030	5.03			0.2	1
16) Freon 113	(2)	3.787 (-0.001)	101	218067	5.056	5.06			0.1	1
14) Acetone	(1)	3.787 (0.000)	43	236621M	29.038	29.04			0.9	10
17) Methyl Iodide	(2)	3.964 (-0.001)	142	397760	4.996	5.00		J	0.6	10
19) Carbon Disulfide	(2)	4.074 (-0.000)	76	631348	5.002	5.00		J	0.4	10
23) Allyl Chloride	(2)	4.263 (-0.001)	41	342503	4.887	4.89		J	0.8	10
24) Methylene Chloride	(2)	4.458 (-0.001)	84	238742	5.376	5.38			0.2	1
30) Acrylonitrile	(1)	4.806 (0.000)	53	239878	24.123	24.12			0.5	10
32) trans-1,2-Dichloroethene	(2)	4.885 (-0.000)	96	225976	4.982	4.98			0.2	1
34) 1,1-Dichloroethane	(2)	5.543 (-0.000)	63	441259	5.389	5.39			0.1	1
36) 2-Chloro-1,3-Butadiene	(2)	5.647 (0.000)	53	350926	5.005	5.01		J	0.5	10
39) 2-Butanone	(1)	6.330 (0.002)	43	452659	35.527	35.53			0.6	10
43) Propionitrile	(1)	6.421 (0.003)	54	136181	39.018	39.02		J	10	100
46) Methacrylonitrile	(1)	6.640 (0.001)	67	443963	35.566	35.57		J	10	100
49) Tetrahydrofuran	(1)	6.708 (0.002)	71	80051	22.741	22.74		J	2	25
50) Chloroform	(2)	6.848 (-0.000)	83	434450	5.436	5.44			0.09	1
52) 1,1,1-Trichloroethane	(2)	7.086 (-0.000)	97	359673	4.839	4.84			0.1	1
55) Carbon Tetrachloride	(2)	7.287 (0.001)	117	327829	5.144	5.14			0.2	1
57) Isobutyl Alcohol	(1)	7.427 (0.001)	41	113788	115.972	115.97		J	4	200
59) Benzene	(2)	7.555 (-0.000)	78	985333	5.364	5.36			0.07	1
60) 1,2-Dichloroethane	(2)	7.622 (0.000)	62	263036	5.554	5.55			0.1	1
68) Trichloroethene	(2)	8.433 (0.000)	95	247269	5.133	5.13			0.2	1
71) 1,2-Dichloropropane	(2)	8.768 (0.000)	63	263827	5.805	5.81			0.1	1

M = Compound was manually integrated.

LCSH54

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH54

Data file: /chem2/HP19094.i/20apr27a.b/ha27101.d

Injection date and time: 27-APR-2020 20:25

Data file Sample Info. Line: LCSH54;LCSH54;1;3;LCS;;DAA3568;;ha27b01;

Instrument ID: HP19094.i Batch: H201181AA

Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr27a.b/ha27b01.d

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 22:26

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr27a.b/ha27c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

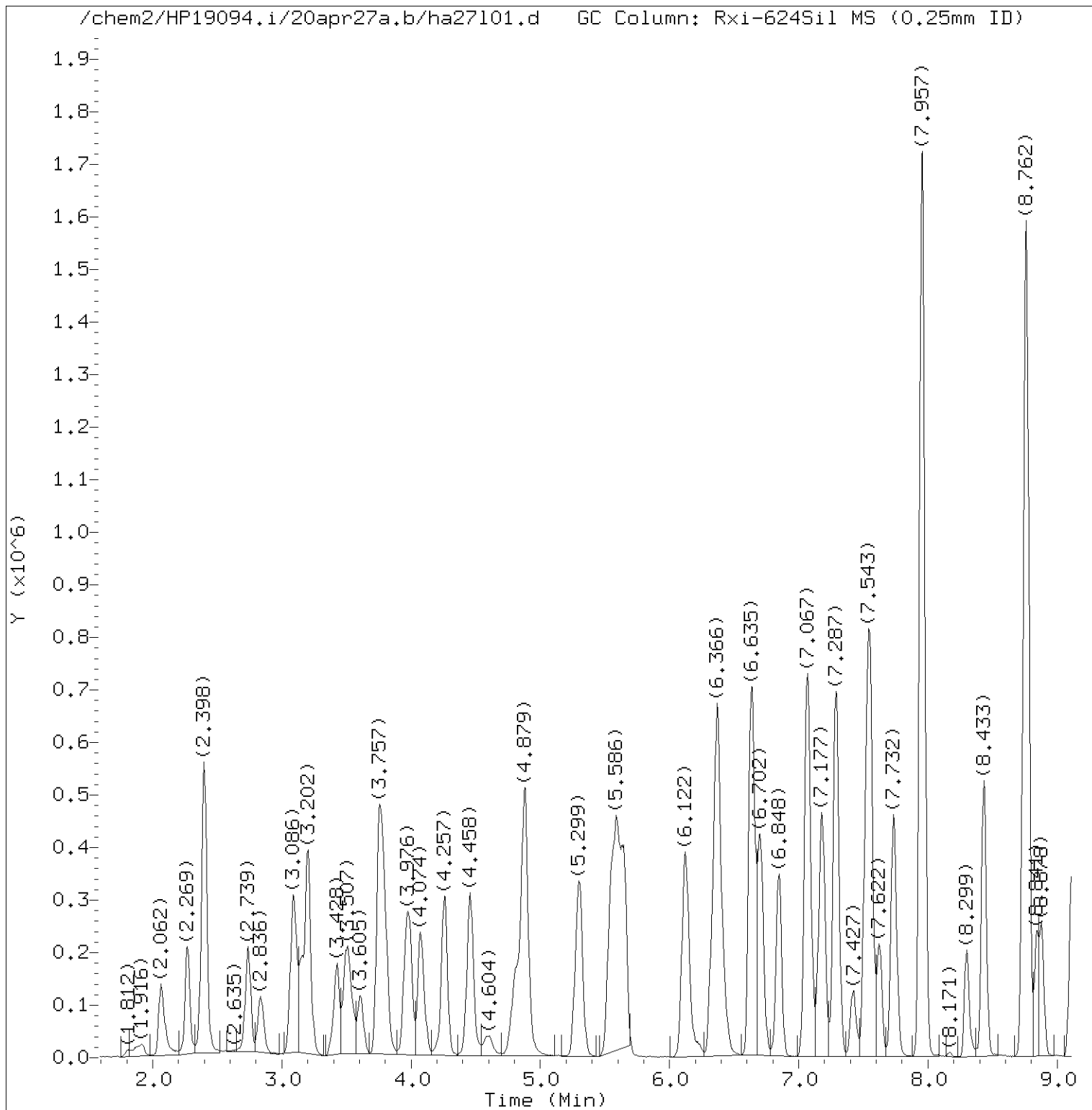
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
72) Methyl Methacrylate	(1)	8.841(0.004)	69	115879	4.615	4.61		J	4	10
74) Dibromomethane	(2)	8.884(0.000)	93	121478	5.847	5.85			0.07	1
73) 1,4-Dioxane	(1)	8.847(0.006)	88	24724M	129.778	129.78		J	45	200
75) Bromodichloromethane	(2)	9.110(0.000)	83	308177	5.458	5.46			0.09	1
82) 4-Methyl-2-Pentanone	(1)	9.798(0.005)	43	720341	22.938	22.94			0.9	10
84) Toluene	(3)	10.012(0.000)	92	623098	4.504	4.50			0.09	1
85) trans-1,3-Dichloropropene	(3)	10.262(0.000)	75	293970	4.578	4.58			0.1	1
87) Ethyl Methacrylate	(3)	10.317(0.000)	69	209437	4.207	4.21		J	0.8	10
89) 1,1,2-Trichloroethane	(3)	10.463(0.000)	97	176241	5.070	5.07			0.08	1
90) Tetrachloroethene	(3)	10.554(-0.000)	166	285414	4.538	4.54			0.06	1
91) 1,3-Dichloropropane	(3)	10.628(-0.000)	76	293291	4.911	4.91			0.09	1
92) 2-Hexanone	(1)	10.670(0.005)	43	502286	23.407	23.41			0.6	10
94) Dibromochloromethane	(3)	10.841(0.000)	129	221733	4.982	4.98			0.07	1
96) 1,2-Dibromoethane	(3)	10.951(0.000)	107	163366	4.918	4.92			0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)	11.481(-0.000)	131	246803	4.590	4.59			0.08	1
101) Ethylbenzene	(3)	11.481(-0.000)	91	1182361	4.343	4.34			0.08	1
102) m+p-Xylene	(3)	11.597(-0.000)	106	940964	9.039	9.04			0.1	2
105) o-Xylene	(3)	11.920(-0.000)	106	444847	4.345	4.35			0.1	1
106) Xylene (Total)	(3)		106	1385811	13.384	13.38			0.2	3
107) Styrene	(3)	11.938(-0.000)	104	768131	4.624	4.62			0.07	1
108) Bromoform	(3)	12.097(-0.000)	173	125614	4.842	4.84			0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)	12.463(0.000)	83	207766	4.862	4.86			0.2	1
116) trans-1,4-Dichloro-2-butene	(1)	12.487(0.007)	53	214248	18.162	18.16			1	10
117) 1,2,3-Trichloropropane	(4)	12.505(0.000)	110	56899M	4.972	4.97			0.1	1
127) Pentachloroethane	(4)	12.956(0.000)	167	187526	4.348	4.35		J	0.8	10
132) 1,3-Dichlorobenzene	(4)	13.188(0.000)	146	565817	4.395	4.40			0.06	1
135) 1,4-Dichlorobenzene	(4)	13.261(-0.000)	146	571171	4.548	4.55			0.07	1
140) 1,2-Dichlorobenzene	(4)	13.523(-0.000)	146	515546	4.543	4.54			0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)	14.066(0.007)	155	27568	4.098	4.10			0.2	1
146) 1,2,4-Trichlorobenzene	(4)	14.608(-0.000)	180	336228	3.980	3.98			0.1	1
147) Hexachlorobutadiene	(4)	14.688(-0.000)	225	189702	4.303	4.30			0.07	1
148) Naphthalene	(4)	14.791(-0.000)	128	521929	3.540	3.54			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:36. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d
Injection date and time: 27-APR-2020 20:25

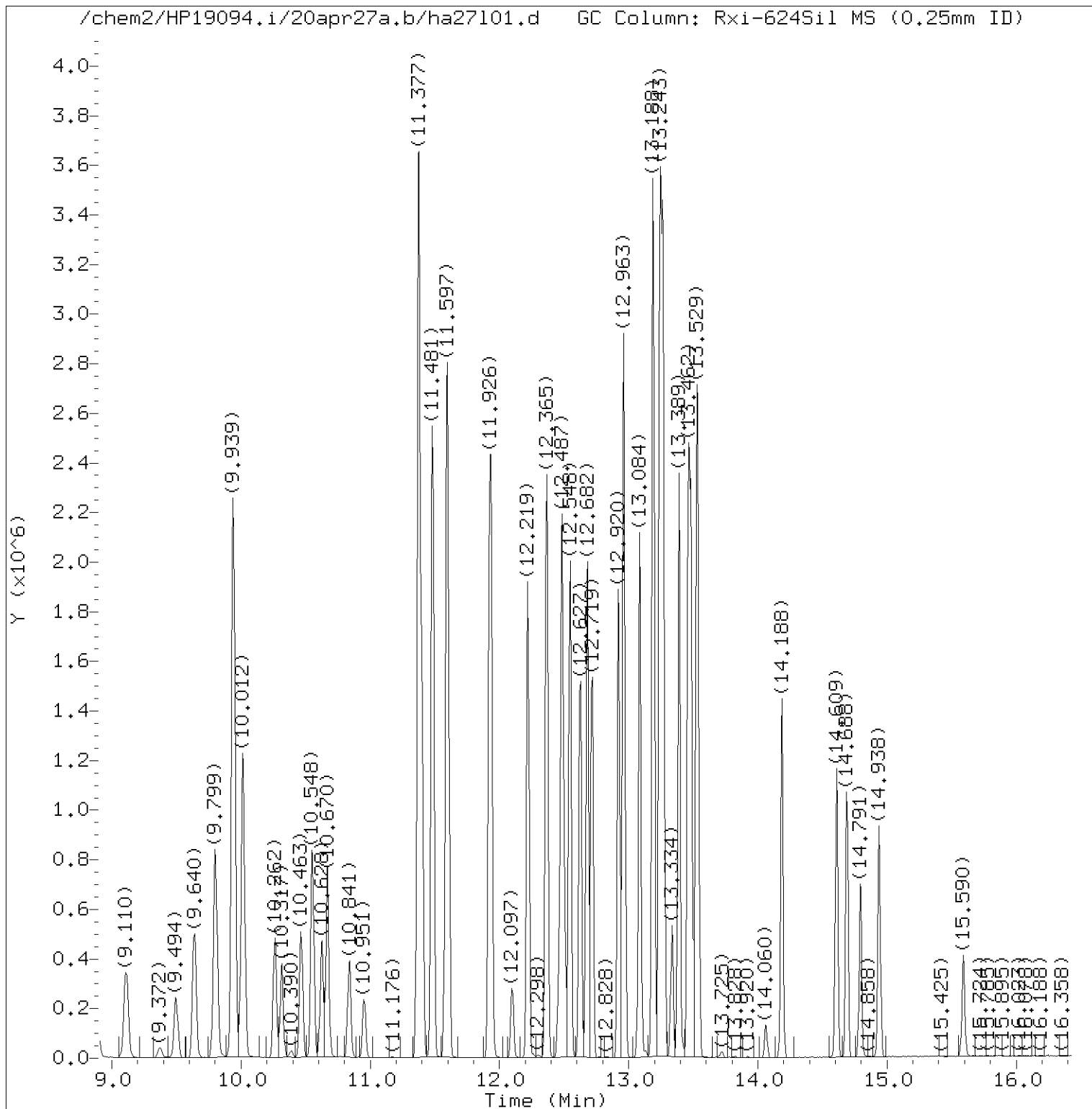
Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d
Injection date and time: 27-APR-2020 20:25

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d
 Injection date and time: 27-APR-2020 20:25

Instrument ID: HP19094.i
 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 22:26
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.062	85	292150	4.615
2) Chloromethane	(2)	2.263	50	335115	5.362
5) Vinyl Chloride	(2)	2.398	62	311129	5.234
7) Bromomethane	(2)	2.739	94	222812	5.233
8) Chloroethane	(2)	2.836	64	178895	5.196
10) Trichlorofluoromethane	(2)	3.153	101	382474	5.638
11) Ethyl ether	(2)	3.422	59	176933	5.894
13) Acrolein	(1)	3.617	56	194528	32.212
15) 1,1-Dichloroethene	(2)	3.751	96	207535	5.030
16) Freon 113	(2)	3.787	101	218067	5.056
14) Acetone	(1)	3.787	43	236621M	29.038
17) Methyl Iodide	(2)	3.964	142	397760	4.996
19) Carbon Disulfide	(2)	4.074	76	631348	5.002
23) Allyl Chloride	(2)	4.263	41	342503	4.887
24) Methylene Chloride	(2)	4.458	84	238742	5.376
27) *t-Butyl Alcohol-d10	(1)	4.458	65	134107	50.000
30) Acrylonitrile	(1)	4.806	53	239878	24.123
32) trans-1,2-Dichloroethene	(2)	4.885	96	225976	4.982
34) 1,1-Dichloroethane	(2)	5.543	63	441259	5.389
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	350926	5.005
39) 2-Butanone	(1)	6.330	43	452659	35.527
43) Propionitrile	(1)	6.421	54	136181	39.018
46) Methacrylonitrile	(1)	6.641	67	443963	35.566
49) Tetrahydrofuran	(1)	6.708	71	80051	22.741
50) Chloroform	(2)	6.848	83	434450	5.436
51) \$Dibromofluoromethane	(2)	7.061	113	445435	10.610
52) 1,1,1-Trichloroethane	(2)	7.086	97	359673	4.839
55) Carbon Tetrachloride	(2)	7.287	117	327829	5.144
57) Isobutyl Alcohol	(1)	7.427	41	113788	115.972
58) \$1,2-Dichloroethane-d4	(2)	7.518	102	87060	10.700
59) Benzene	(2)	7.555	78	985333	5.364
60) 1,2-Dichloroethane	(2)	7.622	62	263036	5.554
64) *Fluorobenzene	(2)	7.957	96	1688805	10.000
68) Trichloroethene	(2)	8.433	95	247269	5.133
71) 1,2-Dichloropropane	(2)	8.768	63	263827	5.805
72) Methyl Methacrylate	(1)	8.841	69	115879	4.615
73) 1,4-Dioxane	(1)	8.847	88	24724M	129.778
74) Dibromomethane	(2)	8.884	93	121478	5.847

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d
 Injection date and time: 27-APR-2020 20:25

Instrument ID: HP19094.i
 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 22:26
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
75) Bromodichloromethane	(2)	9.110	83	308177	5.458
82) 4-Methyl-2-Pentanone	(1)	9.799	43	720341	22.938
83) \$Toluene-d8	(3)	9.939	98	1836482	9.324
84) Toluene	(3)	10.012	92	623098	4.504
85) trans-1,3-Dichloropropene	(3)	10.262	75	293970	4.578
87) Ethyl Methacrylate	(3)	10.317	69	209437	4.207
89) 1,1,2-Trichloroethane	(3)	10.463	97	176241	5.070
90) Tetrachloroethene	(3)	10.554	166	285414	4.538
91) 1,3-Dichloropropane	(3)	10.628	76	293291	4.911
92) 2-Hexanone	(1)	10.670	43	502286	23.407
94) Dibromochloromethane	(3)	10.841	129	221733	4.982
96) 1,2-Dibromoethane	(3)	10.951	107	163366	4.918
98) *Chlorobenzene-d5	(3)	11.371	117	1478359	10.000
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	246803	4.590
101) Ethylbenzene	(3)	11.481	91	1182361	4.343
102) m+p-Xylene	(3)	11.597	106	940964	9.039
106) Xylene (Total)	(3)		106	1385811	13.384
105) o-Xylene	(3)	11.920	106	444847	4.345
107) Styrene	(3)	11.938	104	768131	4.624
108) Bromoform	(3)	12.097	173	125614	4.842
112) \$4-Bromofluorobenzene	(3)	12.365	95	718353	9.858
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	207766	4.862
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	214248	18.162
117) 1,2,3-Trichloropropane	(4)	12.505	110	56899M	4.972
127) Pentachloroethane	(4)	12.956	167	187526	4.348
132) 1,3-Dichlorobenzene	(4)	13.188	146	565817	4.395
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	818477	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	571171	4.548
140) 1,2-Dichlorobenzene	(4)	13.523	146	515546	4.543
144) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	27568	4.098
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	336228	3.980
147) Hexachlorobutadiene	(4)	14.688	225	189702	4.303
148) Naphthalene	(4)	14.791	128	521929	3.540

M = Compound was manually integrated.

* = Compound is an internal standard.

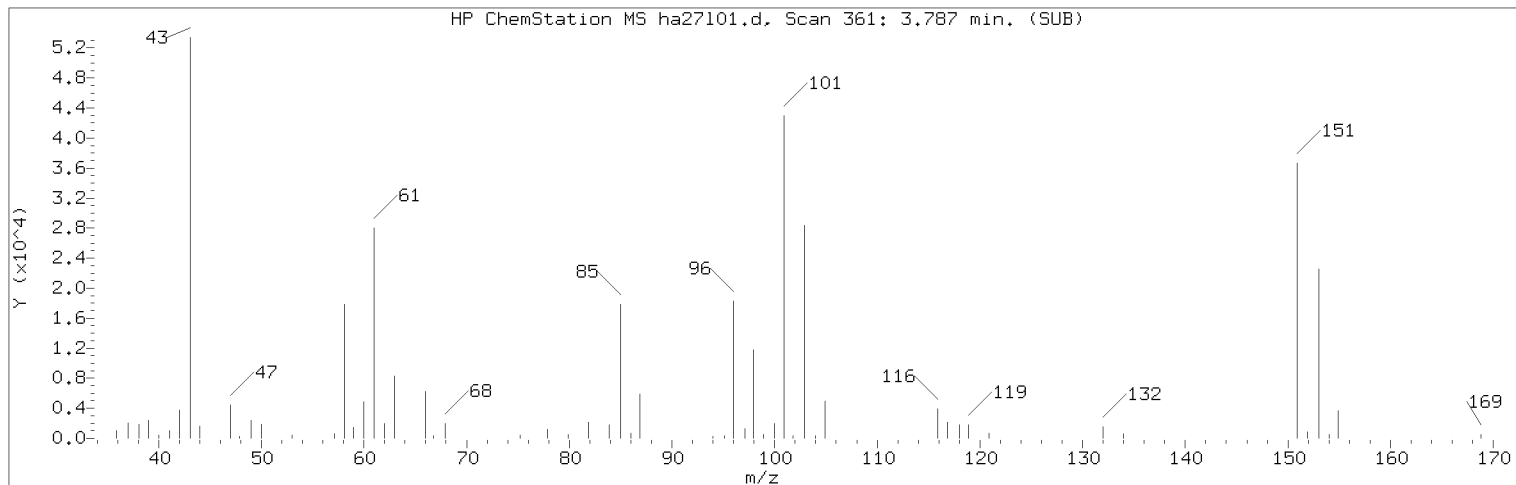
\$ = Compound is a surrogate standard.

page 2 of 2

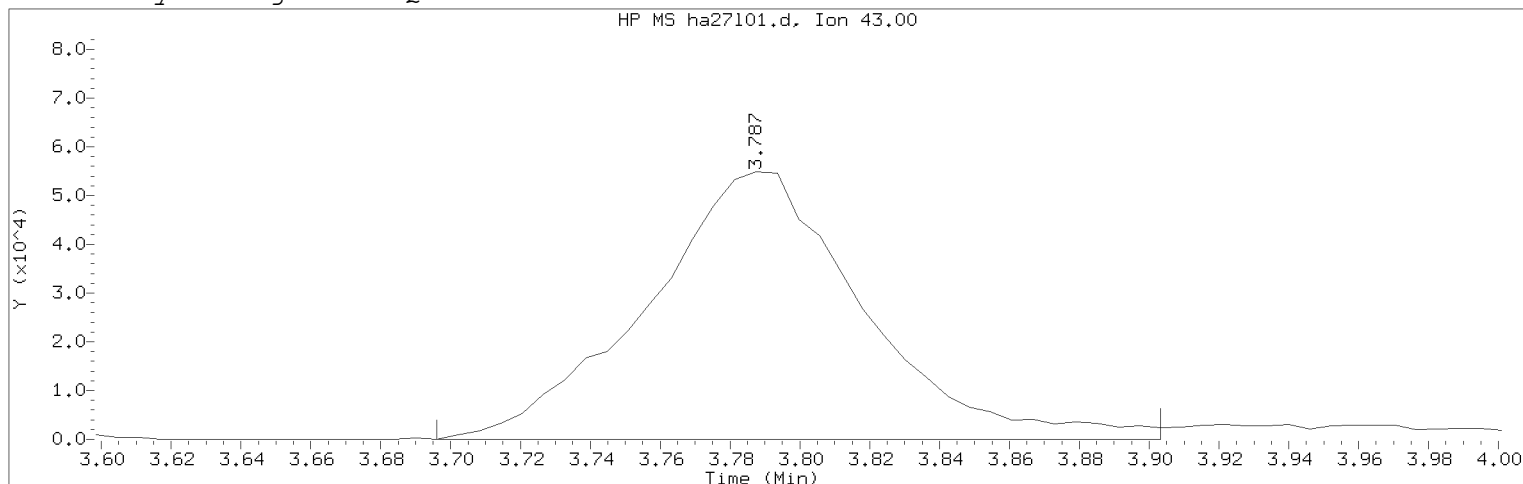
Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:36.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:25

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Compound Number	: 14	
Compound Name	: Acetone	
Scan Number	: 361	
Retention Time (minutes)	: 3.787	
Quant Ion	: 43.00	
Area (flag)	: 236621M	
On-Column Amount (ng)	: 29.0382	
Integration start scan	: 345	Integration stop scan: 379
Y at integration start	: 0	Y at integration end: 0

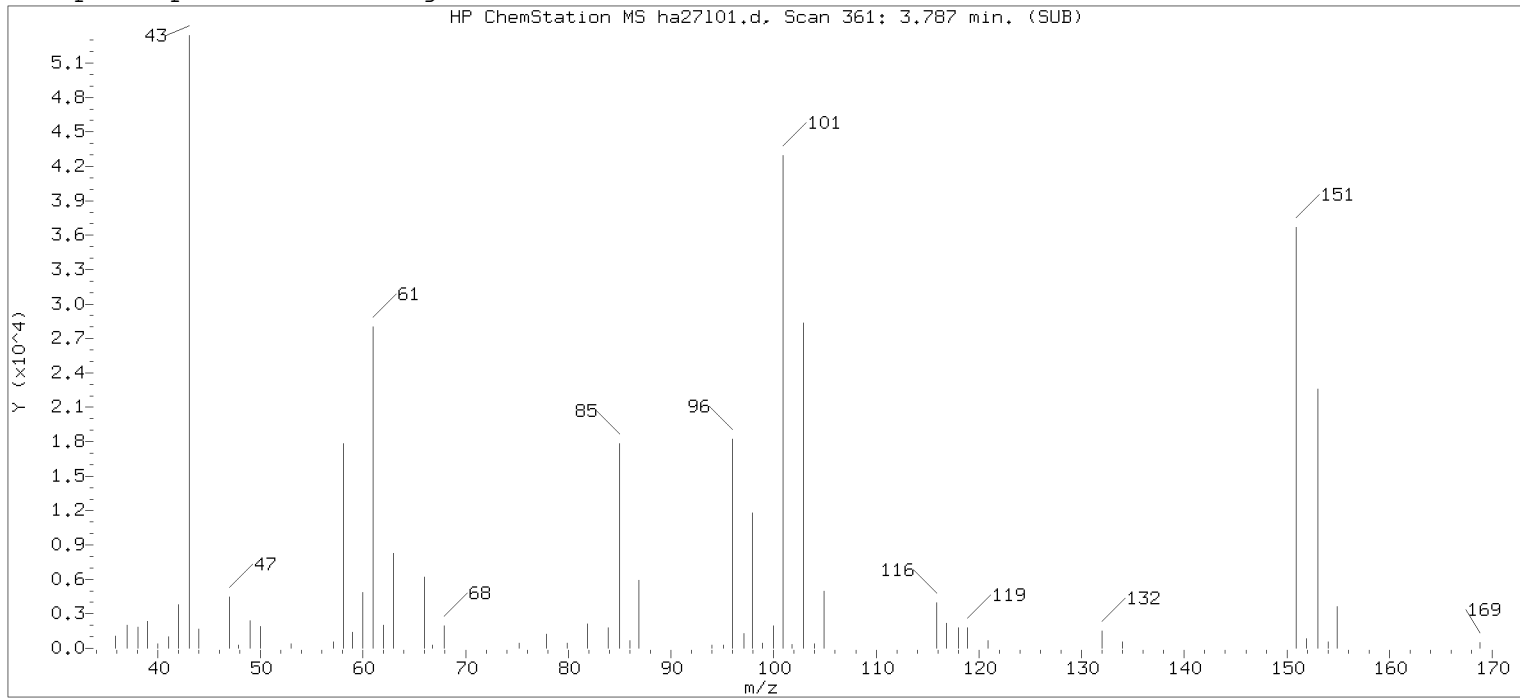
Reason for manual integration: improper integration

Analyst responsible for change:

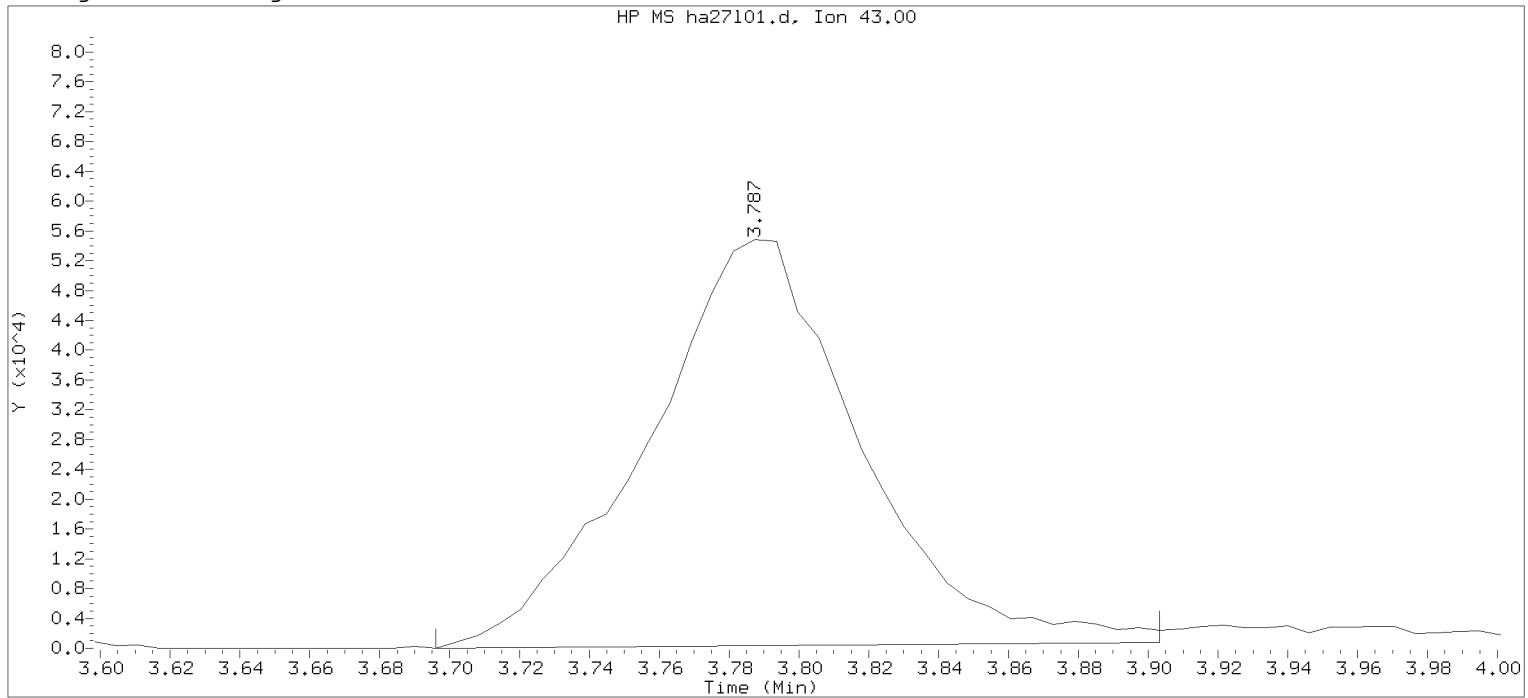
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:25

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 20:54

Date, time and analyst ID of latest file update: 27-Apr-2020 20:54 mec29284

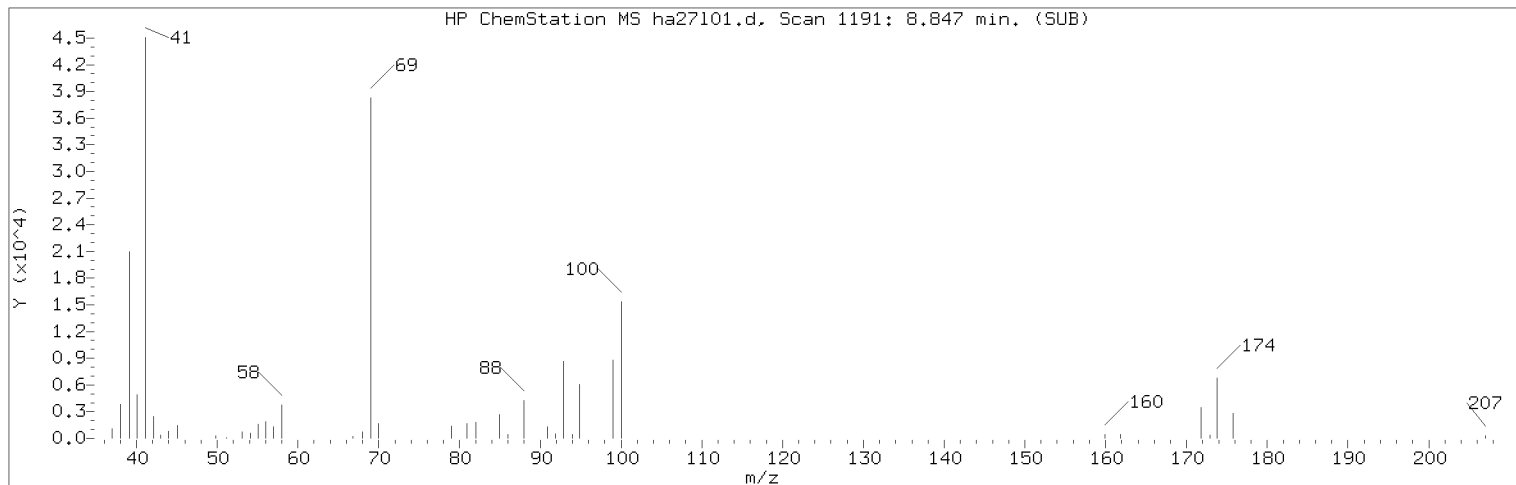
Sample Name: LCSH54

Lab Sample ID: LCSH54

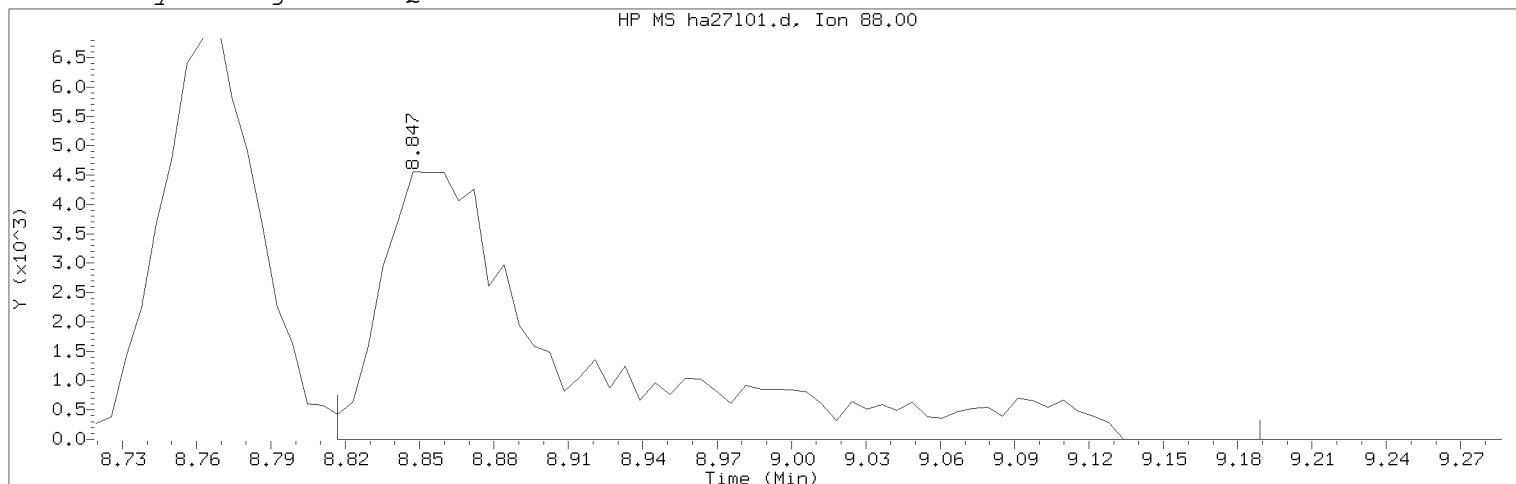
Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.787
 Quant Ion : 43.00
 Area : 231508
 On-column Amount (ng) : 28.4107
 Integration start scan : 345
 Y at integration start : 0

Integration stop scan: 379
 Y at integration end: 752

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:25

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 22:26

Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1191	
Retention Time (minutes)	: 8.847	
Quant Ion	: 88.00	
Area (flag)	: 24724M	
On-Column Amount (ng)	: 129.7775	
Integration start scan	: 1185	Integration stop scan: 1246
Y at integration start	: 0	Y at integration end: 0

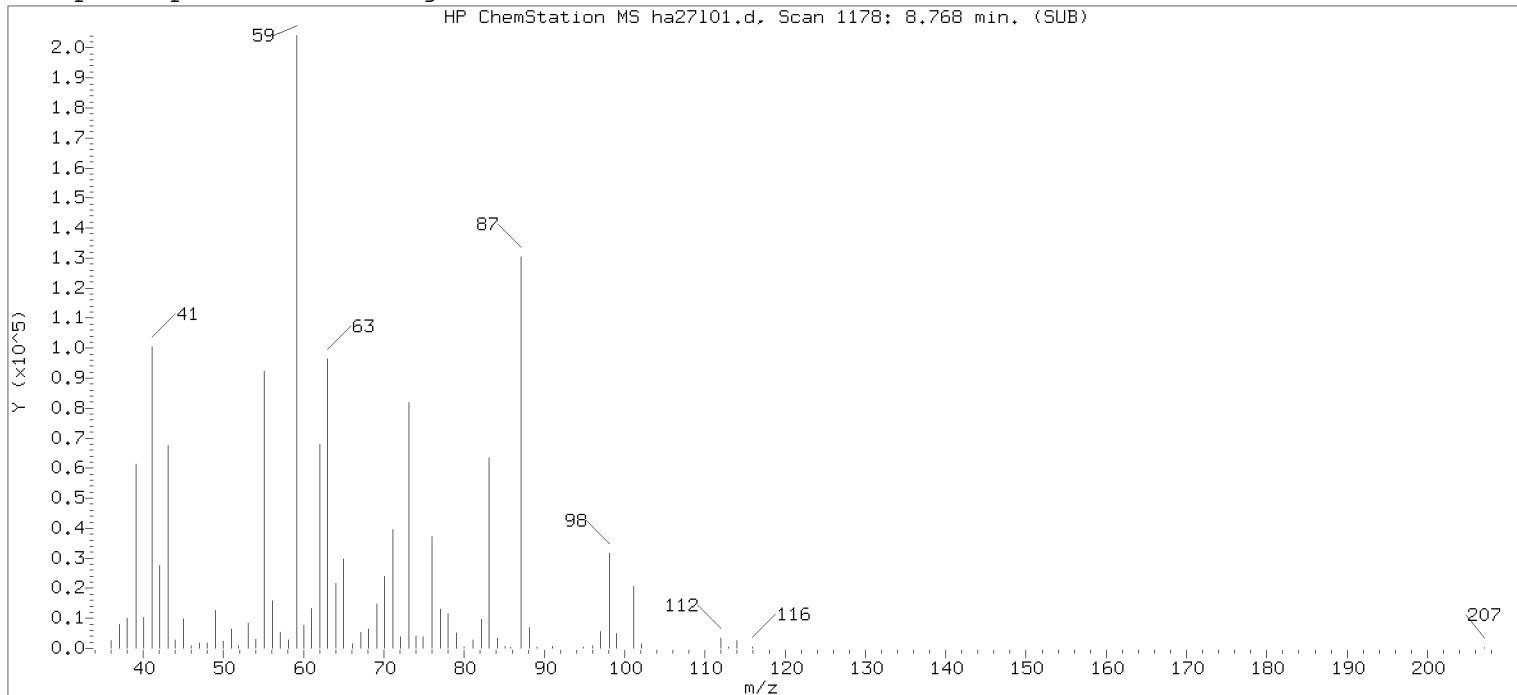
Reason for manual integration: improper integration

Analyst responsible for change:

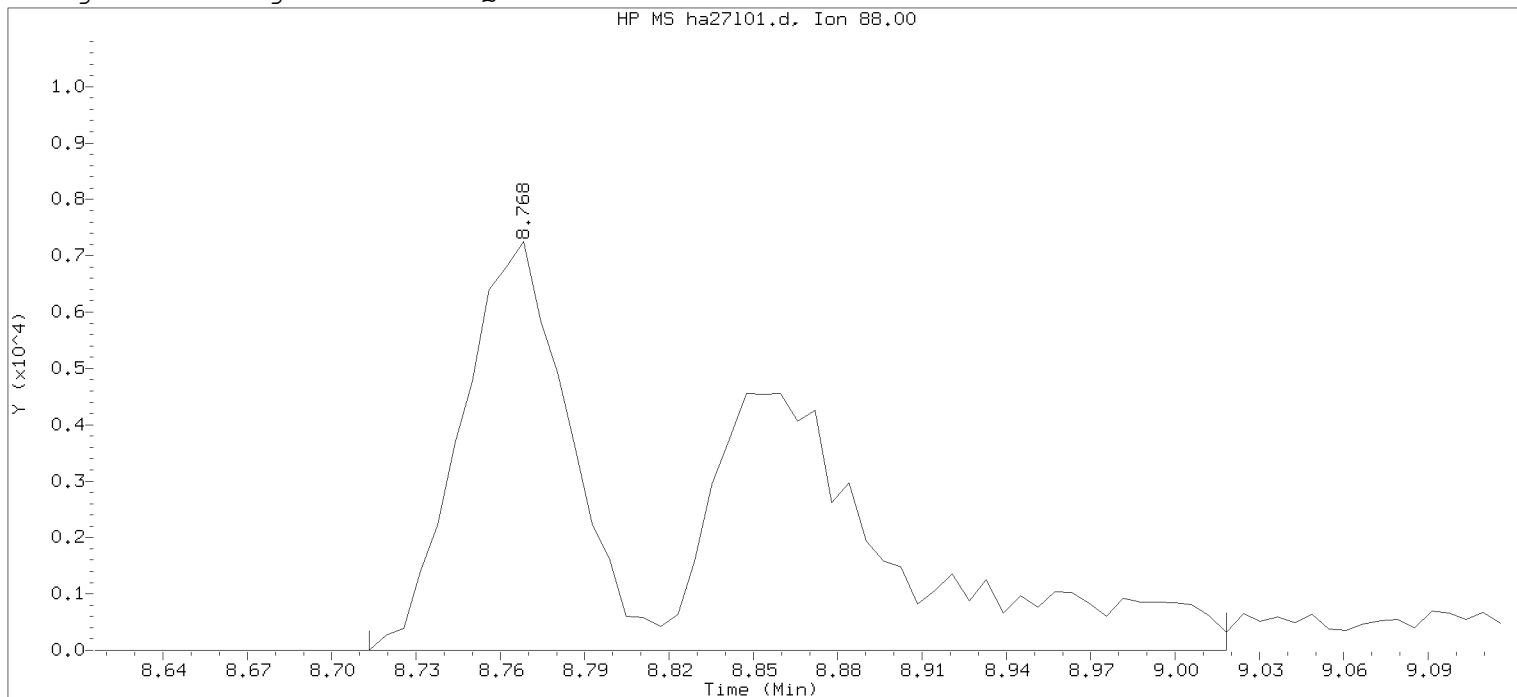
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d

Instrument ID: HP19094.i

Injection date and time: 27-APR-2020 20:25

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 27-APR-2020 20:54

Date, time and analyst ID of latest file update: 27-Apr-2020 20:54 mec29284

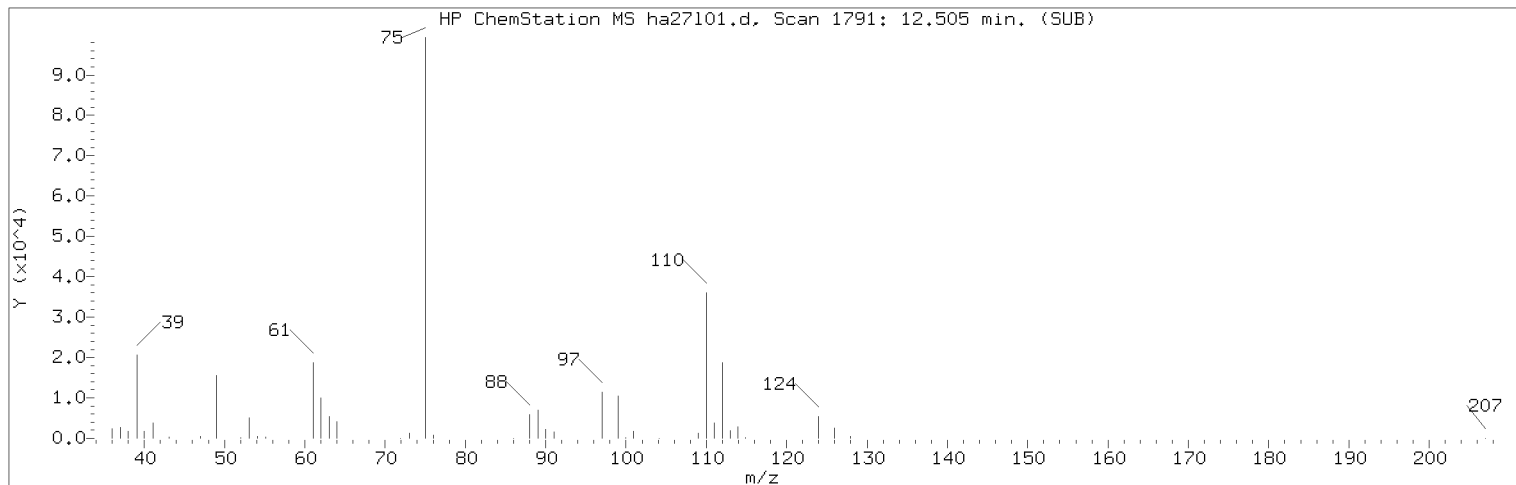
Sample Name: LCSH54

Lab Sample ID: LCSH54

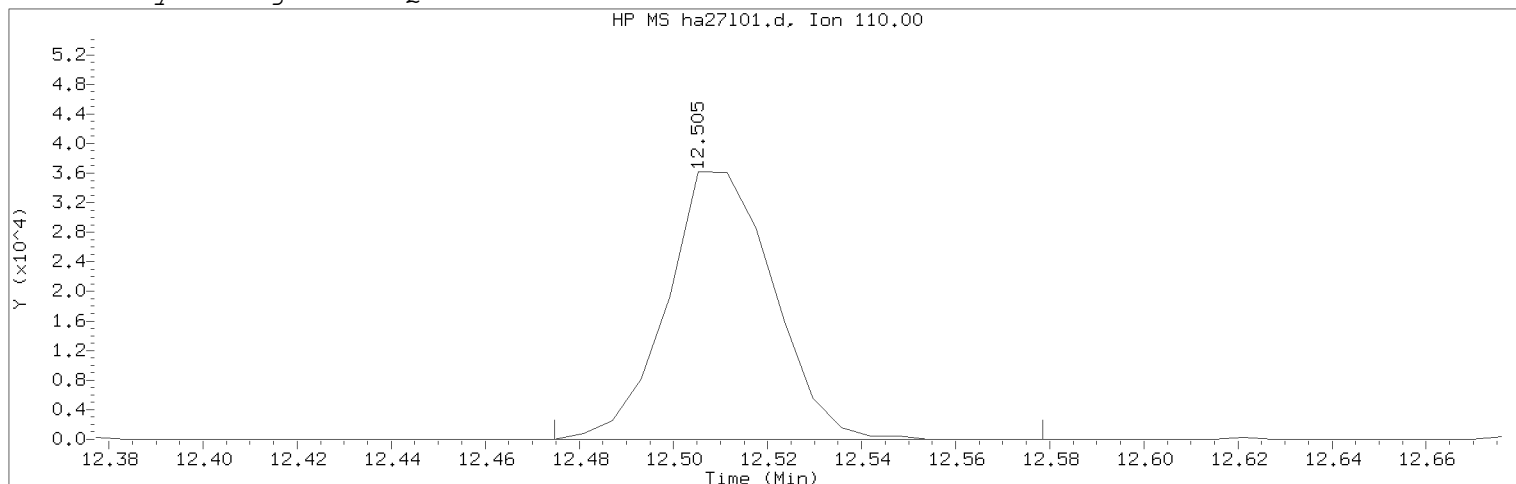
Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1178
 Retention Time (minutes): 8.768
 Quant Ion : 88.00
 Area : 40523
 On-column Amount (ng) : 212.7104
 Integration start scan : 1168
 Y at integration start : 0

Integration stop scan: 1218
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 20:25 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 22:26
Date, time and analyst ID of latest file update: 28-Apr-2020 22:30 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

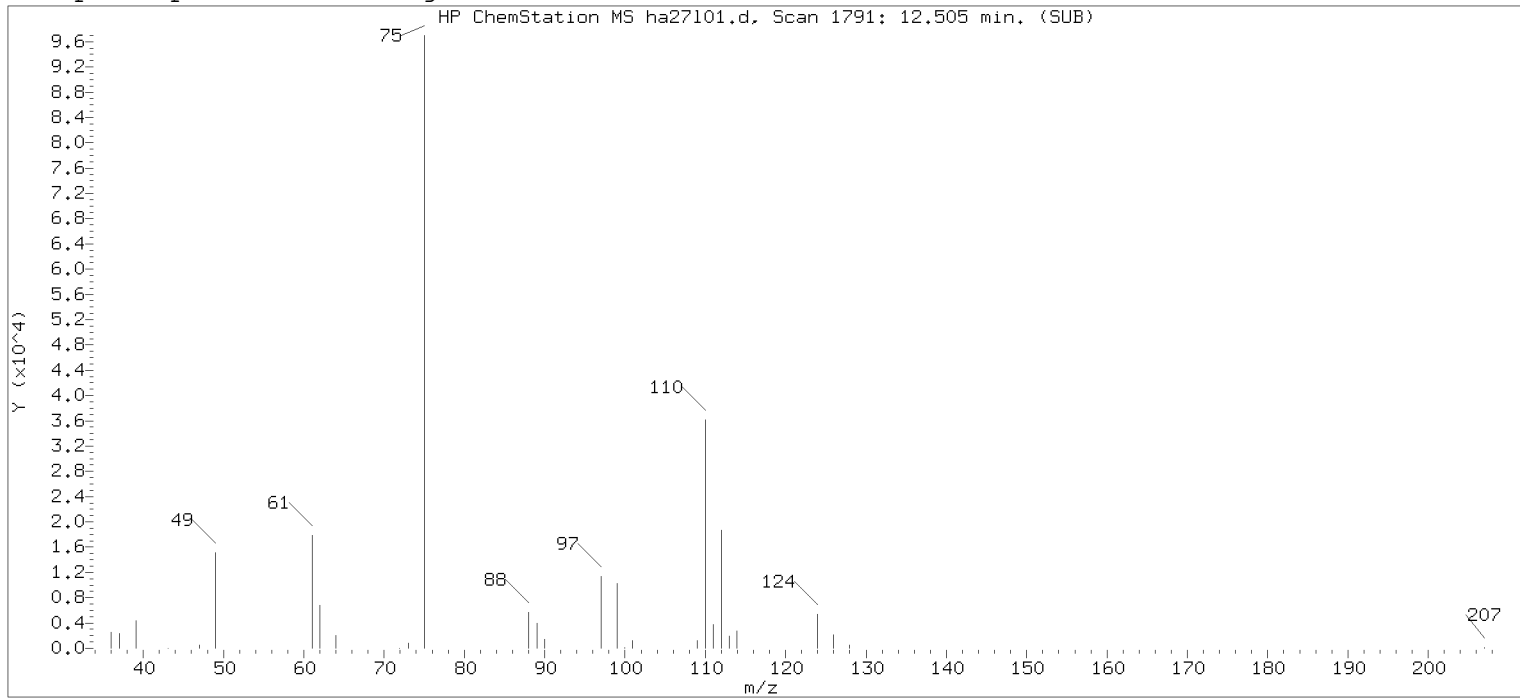
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1791
Retention Time (minutes): 12.505
Quant Ion : 110.00
Area (flag) : 56899M
On-Column Amount (ng) : 4.9723
Integration start scan : 1785 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

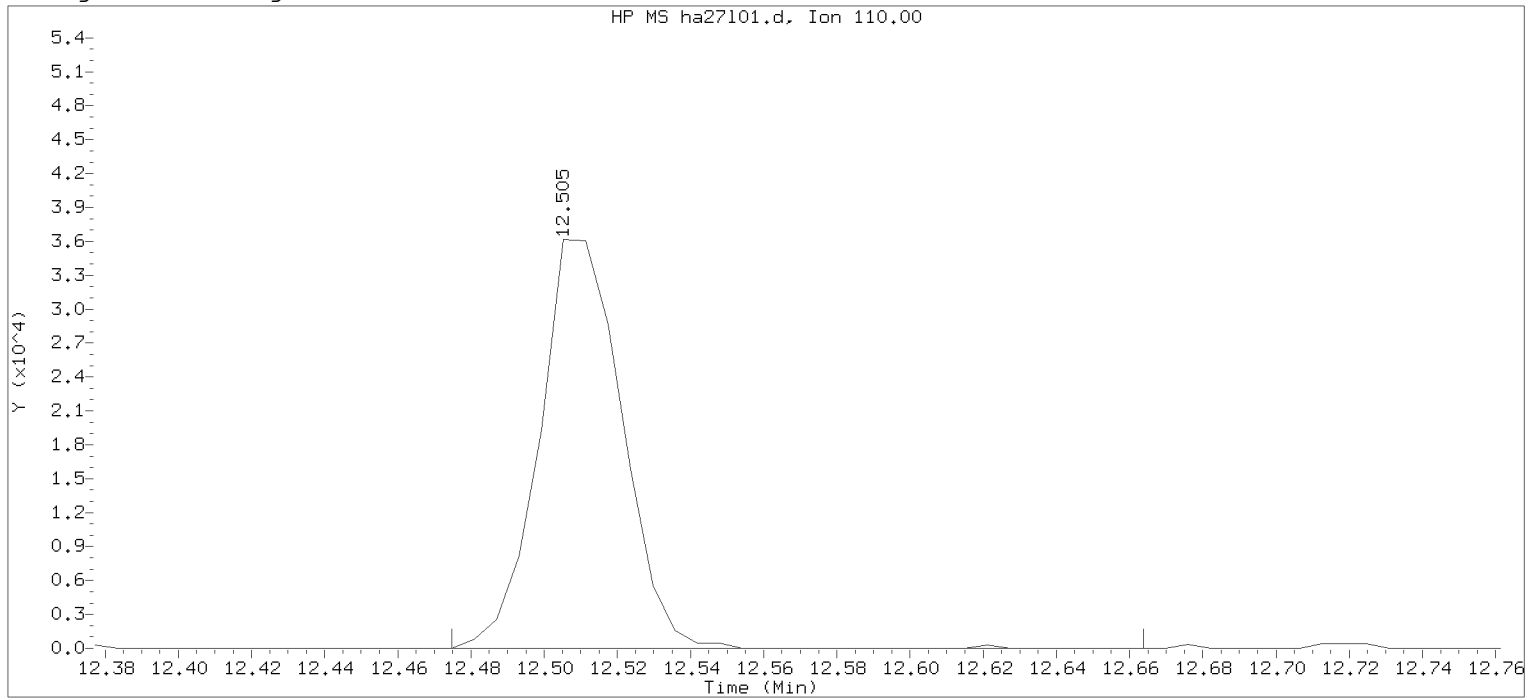
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:36.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:25.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr27a.b/ha27101.d Instrument ID: HP19094.i
Injection date and time: 27-APR-2020 20:25 Analyst ID: mec29284

Method used: /chem2/HP19094.i/20apr27a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 27-APR-2020 20:54
Date, time and analyst ID of latest file update: 27-Apr-2020 20:54 mec29284

Sample Name: LCSH54

Lab Sample ID: LCSH54

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1791	
Retention Time (minutes)	: 12.505	
Quant Ion	: 110.00	
Area	: 56995	
On-column Amount (ng)	: 4.9807	
Integration start scan	: 1785	Integration stop scan: 1816
Y at integration start	: 0	Y at integration end: 0

LCSH60

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH60

Data file: /chem2/HP19094.i/20apr28a.b/ha28103.d

Injection date and time: 28-APR-2020 10:18

Data file Sample Info. Line: LCSH60;LCSH60;1;3;LCS;;DAA3568;;ha28b01;

Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091SM

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	139833 (5)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2040424 (0)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1577697 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	829489 (-3)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.001)	113	524570	10.342	103%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	105202	10.702	107%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2070371	9.850	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	742538	9.549	95%		80 - 120

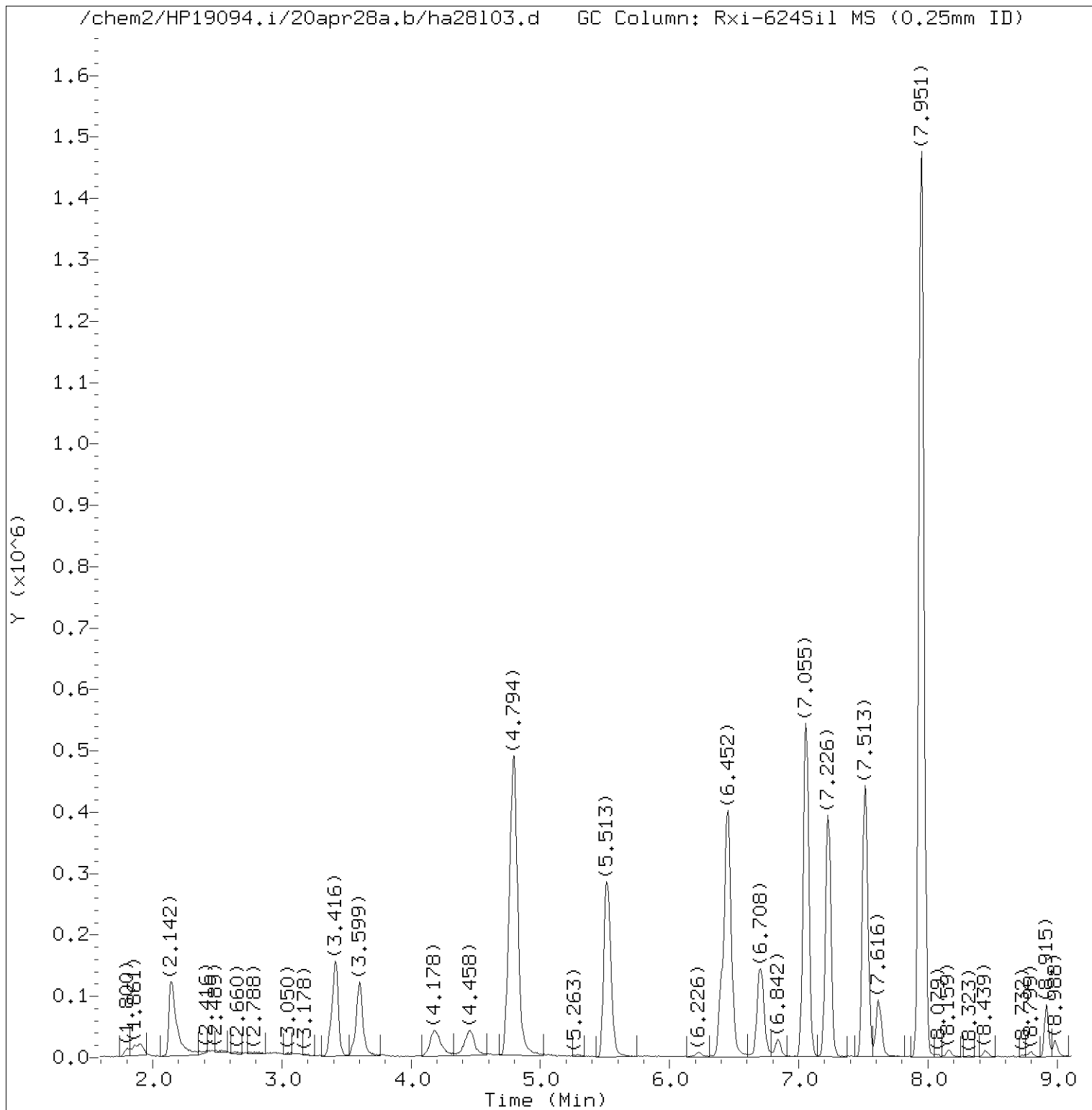
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.142 (0.001)	45	343796M	5.058	5.06		J	0.04	13
26) Acetonitrile	(1)	4.178 (-0.001)	41	145692M	42.788	42.79		J	32	100
37) Vinyl Acetate	(2)	5.513 (0.000)	43	865690	11.954	11.95			3	10

M = Compound was manually integrated.

Total number of targets = 3

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d
Injection date and time: 28-APR-2020 10:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

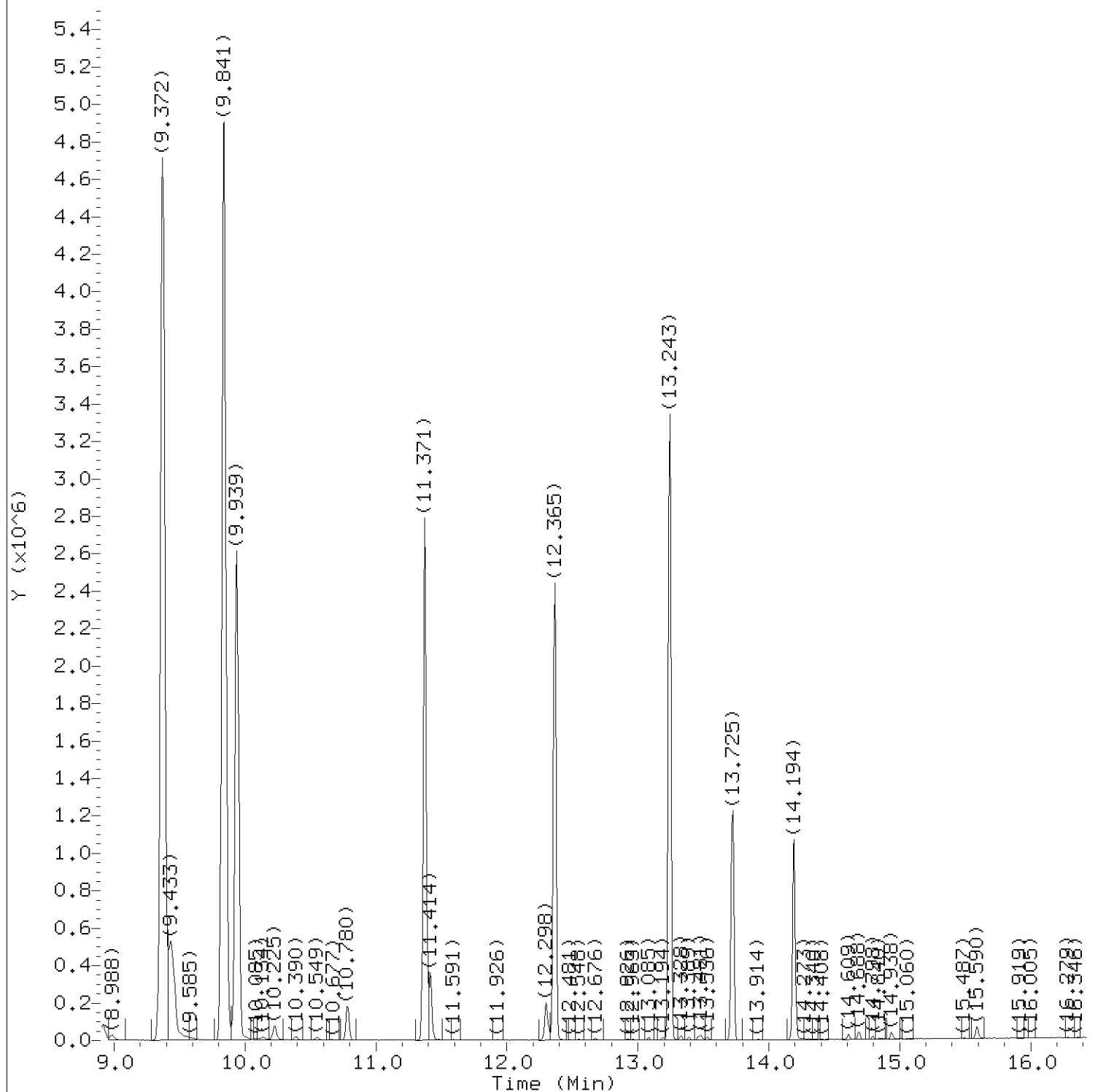
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCSH60

Lab Sample ID: LCSH60

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d
Injection date and time: 28-APR-2020 10:18

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 27091SM

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCSH60

Lab Sample ID: LCSH60

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 10:18

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCSH60

Lab Sample ID: LCSH60

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.142	45	343796M	5.058
26) Acetonitrile	(1)	4.178	41	145692M	42.788
27) *t-Butyl Alcohol-d10	(1)	4.458	65	139833	50.000
37) Vinyl Acetate	(2)	5.513	43	865690	11.954
51) \$Dibromofluoromethane	(2)	7.055	113	524570	10.342
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	105202	10.702
64) *Fluorobenzene	(2)	7.951	96	2040424	10.000
83) \$Toluene-d8	(3)	9.939	98	2070371	9.850
98) *Chlorobenzene-d5	(3)	11.371	117	1577697	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	742538	9.549
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	829489	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

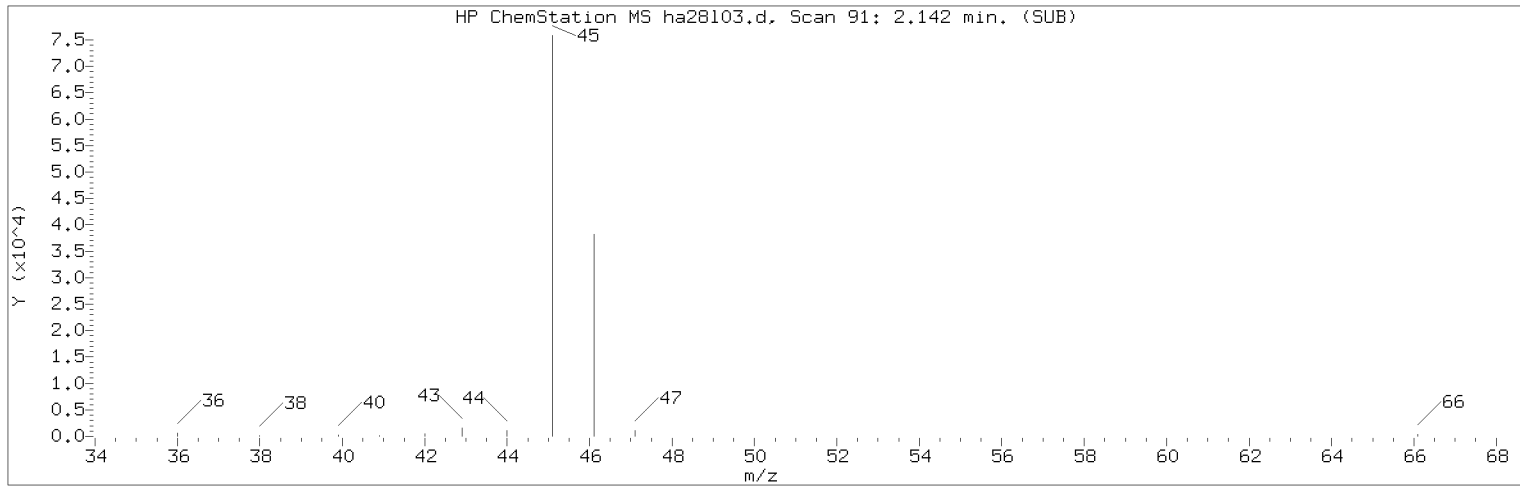
\$ = Compound is a surrogate standard.

page 1 of 1

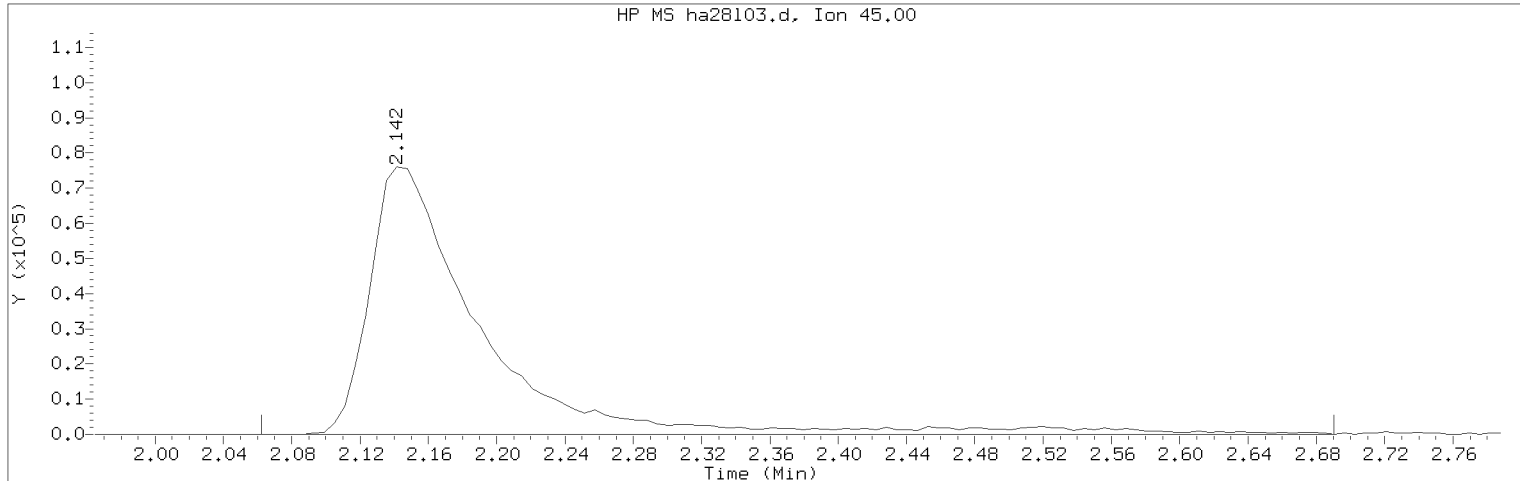
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 10:18 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCSH60

Lab Sample ID: LCSH60

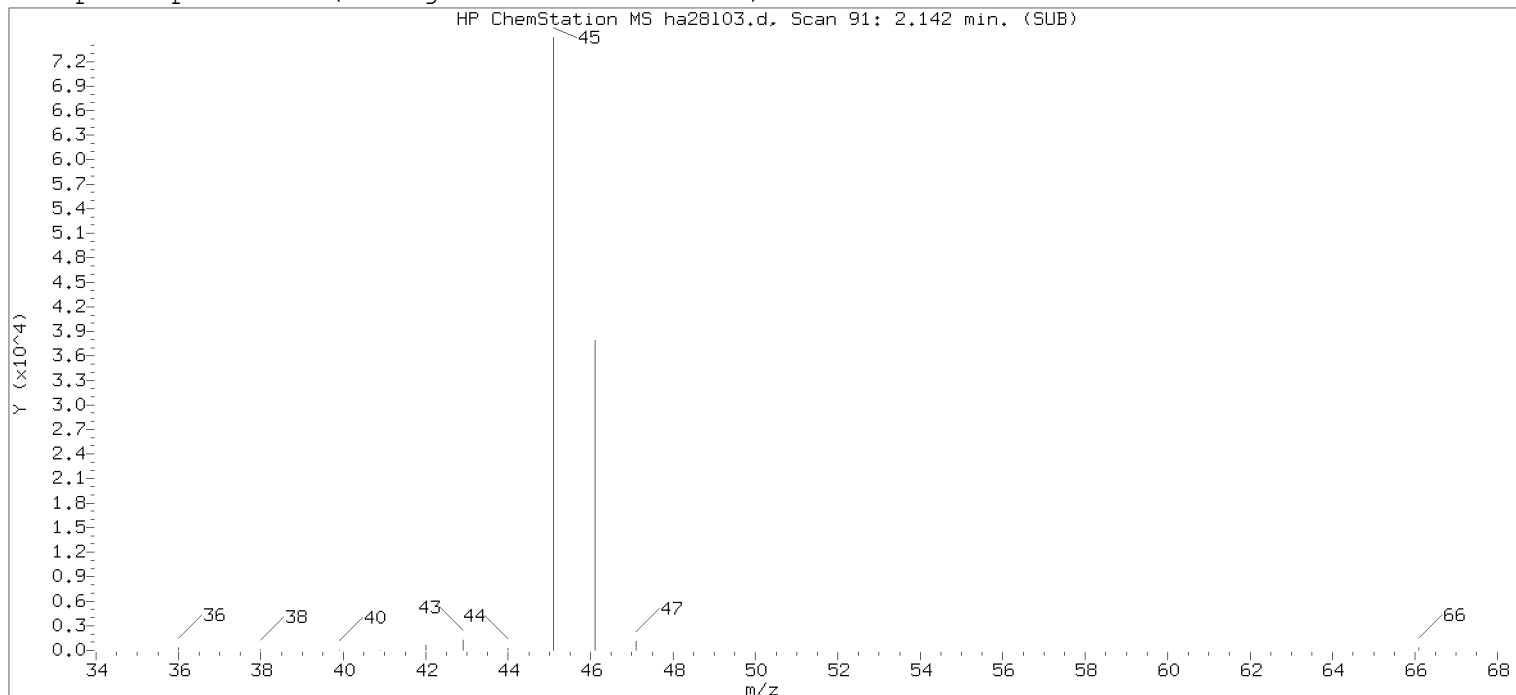
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Quant Ion : 45.00
Area (flag) : 343796M
On-Column Amount (ng) : 5.0578
Integration start scan : 77 Integration stop scan: 180
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

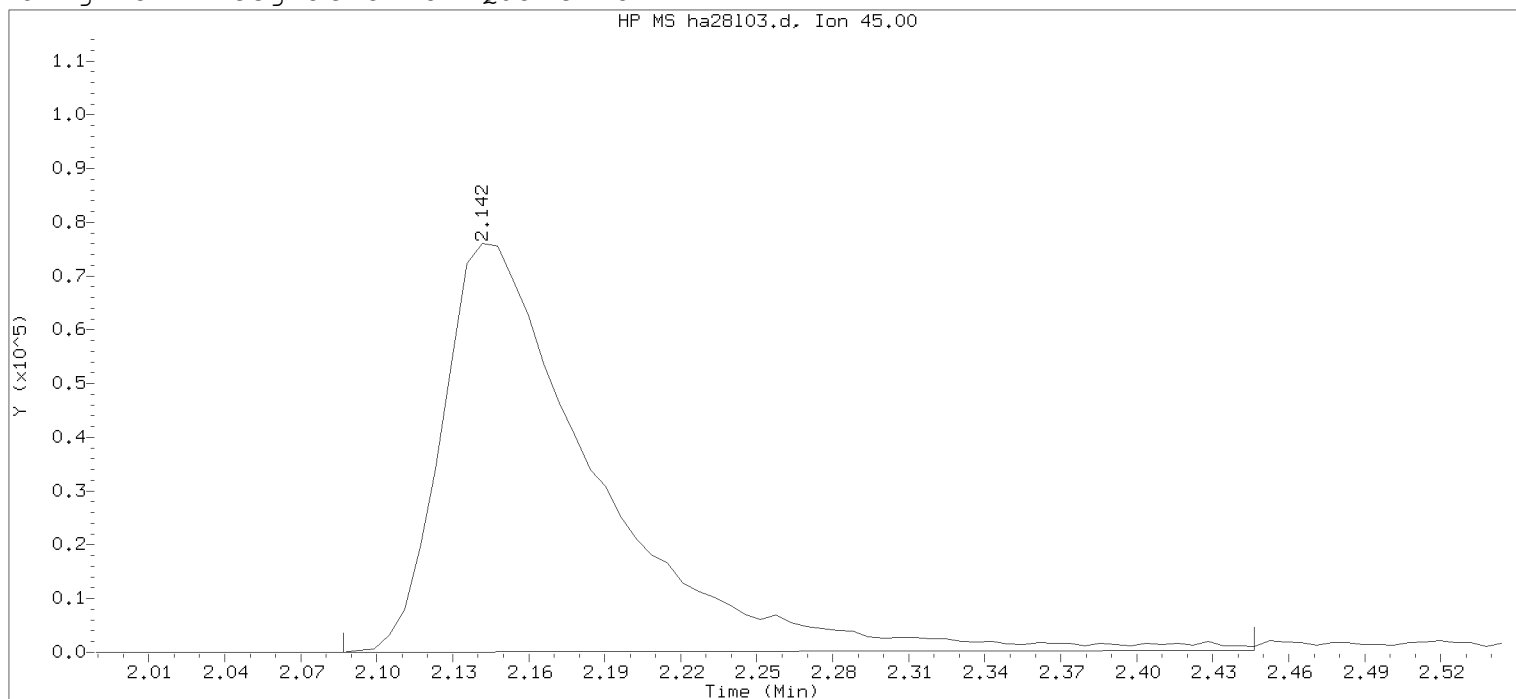
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 10:18

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:36 Automation

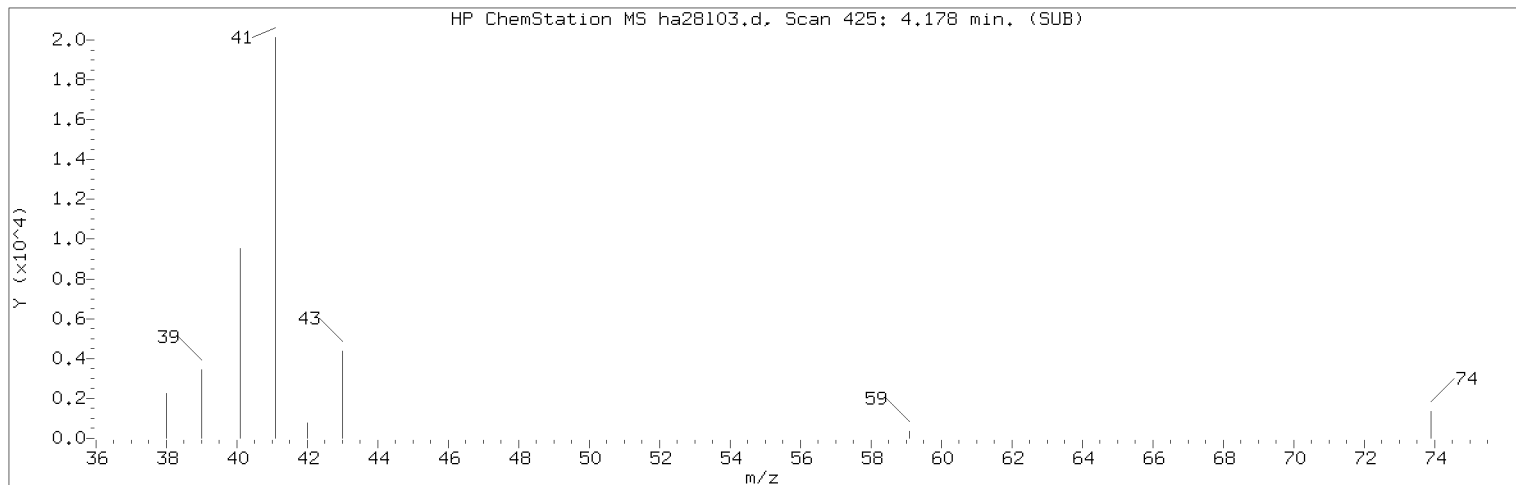
Sample Name: LCSH60

Lab Sample ID: LCSH60

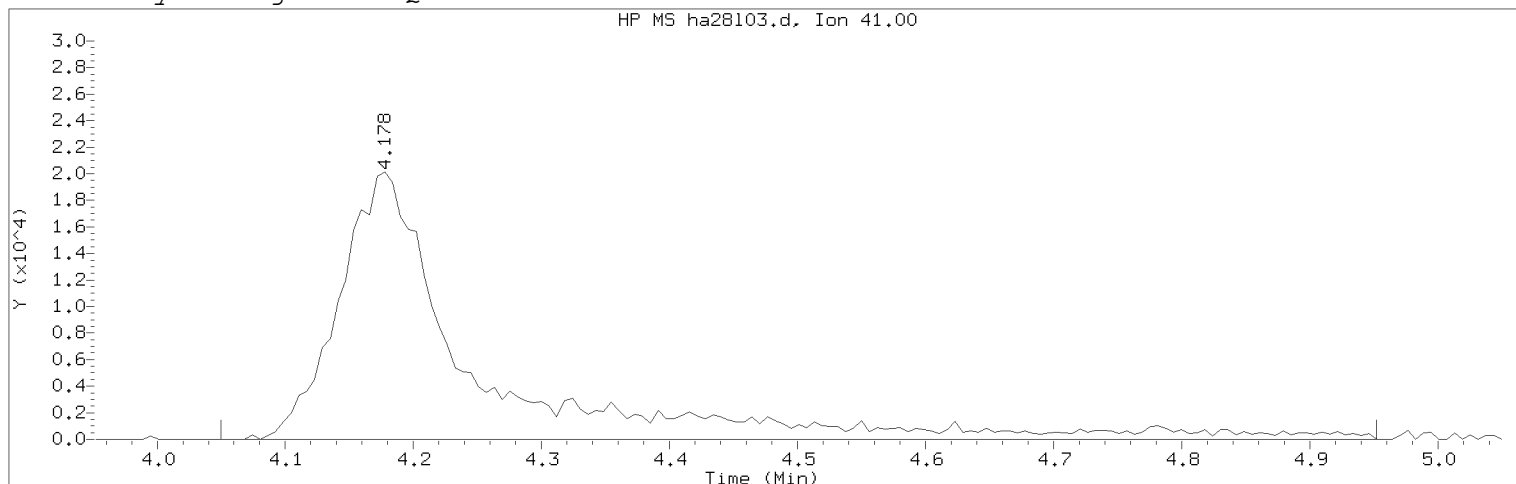
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 91	
Retention Time (minutes)	: 2.142	
Quant Ion	: 45.00	
Area	: 323310	
On-column Amount (ng)	: 4.7564	
Integration start scan	: 81	Integration stop scan: 140
Y at integration start	: 0	Y at integration end: 346

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 10:18

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCSH60

Lab Sample ID: LCSH60

Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 425	
Retention Time (minutes)	: 4.178	
Quant Ion	: 41.00	
Area (flag)	: 145692M	
On-Column Amount (ng)	: 42.7885	
Integration start scan	: 403	Integration stop scan: 551
Y at integration start	: 0	Y at integration end: 0

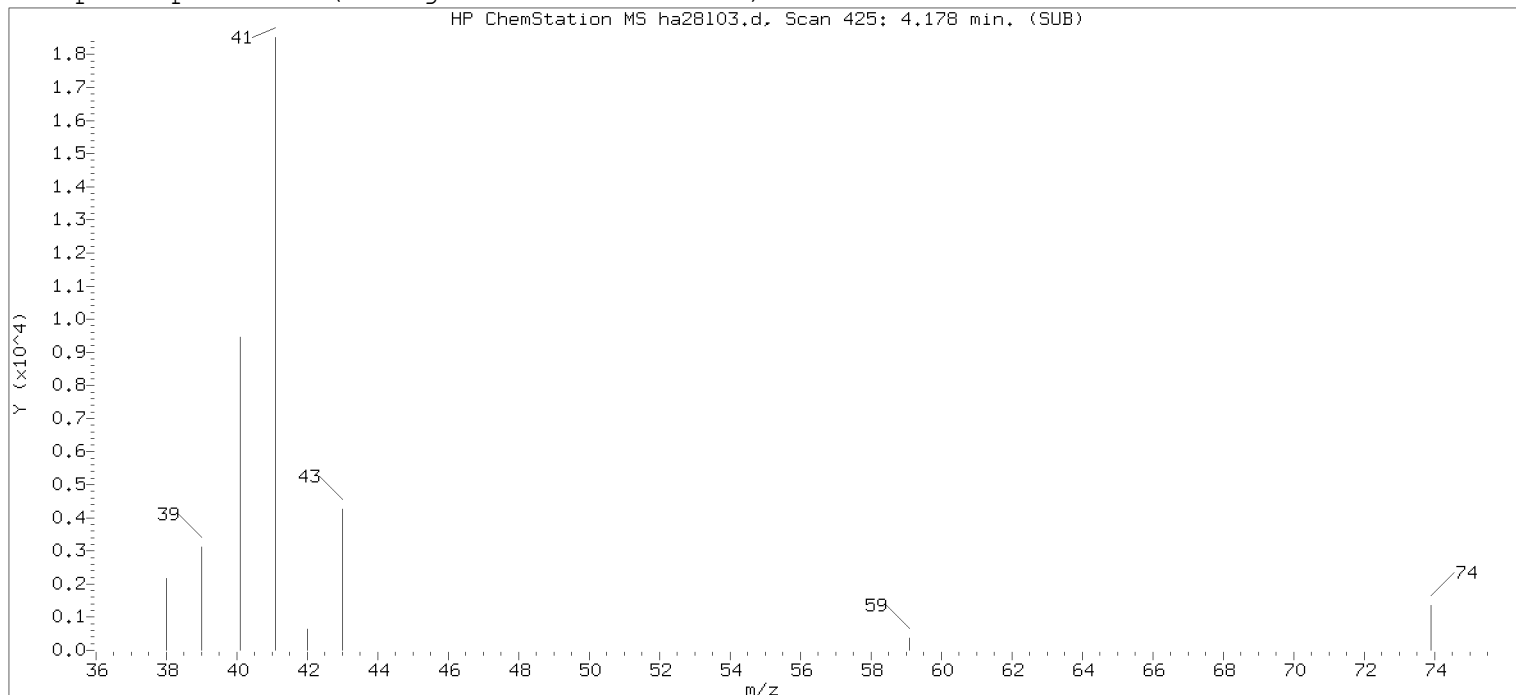
Reason for manual integration: improper integration

Analyst responsible for change:

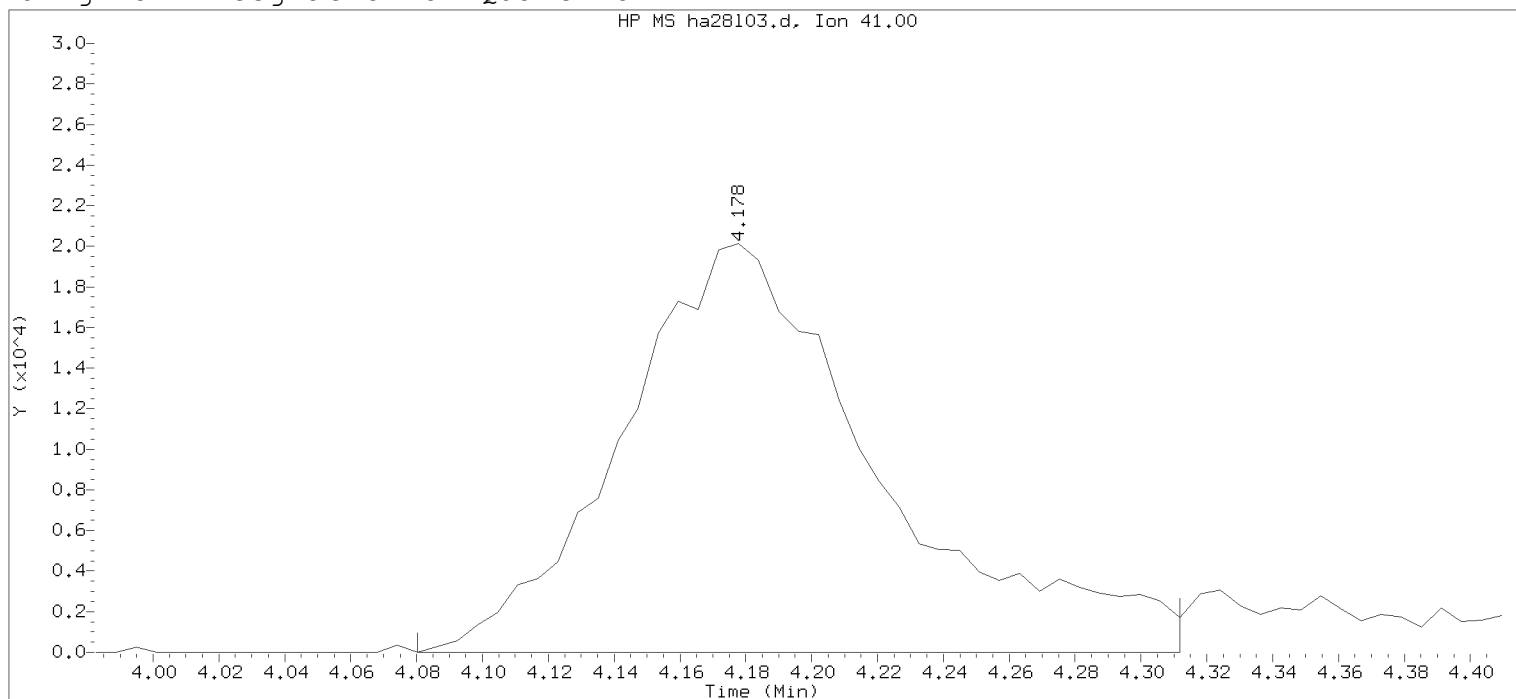
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28103.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 10:18

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 16340SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:36 Automation

Sample Name: LCSH60

Lab Sample ID: LCSH60

Compound Number : 26

Compound Name : Acetonitrile

Scan Number : 425

Retention Time (minutes): 4.178

Quant Ion : 41.00

Area : 108456

On-column Amount (ng) : 31.8527

Integration start scan : 408 Integration stop scan: 446

Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45.

Target 3.5 esignature use **RAF59 Page 1007 of 1506**

LCDH60

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDH60

Data file: /chem2/HP19094.i/20apr28a.b/ha28104.d Injection date and time: 28-APR-2020 10:40
Data file Sample Info. Line: LCDH60;LCDH60;1;3;LCSD;;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time (Last Method Edit): 28-APR-2020 09:36
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (0.000)	471	65	129225 (-3)	50.00	
64) Fluorobenzene	7.957 (-0.006)	1045	96	2032314 (-1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1573880 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	825398 (-4)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.001)	113	521780	10.328	103%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.525 (0.000)	102	102513	10.470	105%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2056098	9.805	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	740806	9.549	95%		80 - 120

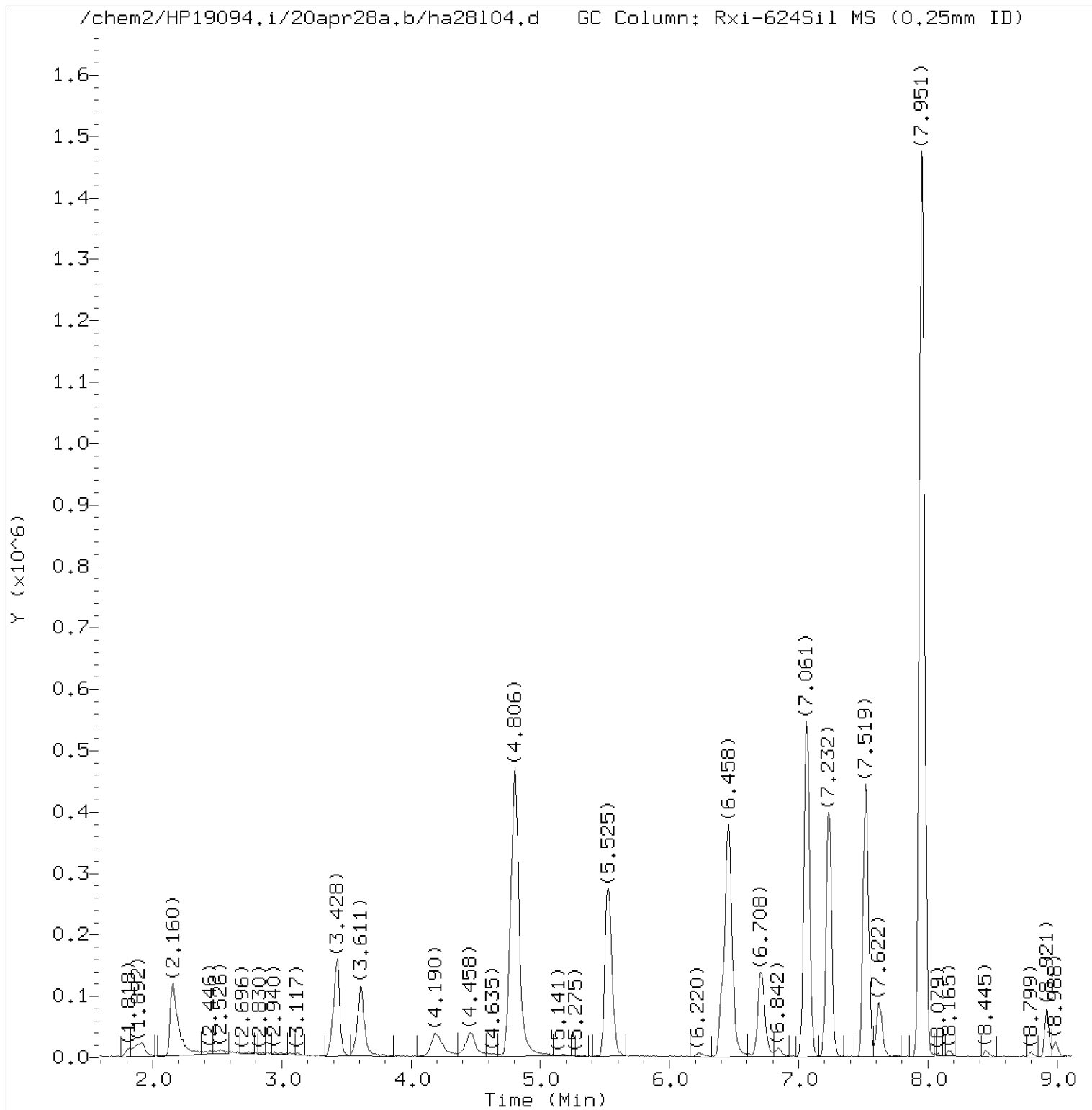
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.160 (-0.000)	45	340942M	5.036	5.04		J	0.04	13
26) Acetonitrile	(1)	4.178 (-0.001)	41	137365M	43.655	43.65		J	32	100
37) Vinyl Acetate	(2)	5.525 (-0.000)	43	848616	11.765	11.76			3	10

M = Compound was manually integrated.

Total number of targets = 3

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d
Injection date and time: 28-APR-2020 10:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 27091SM

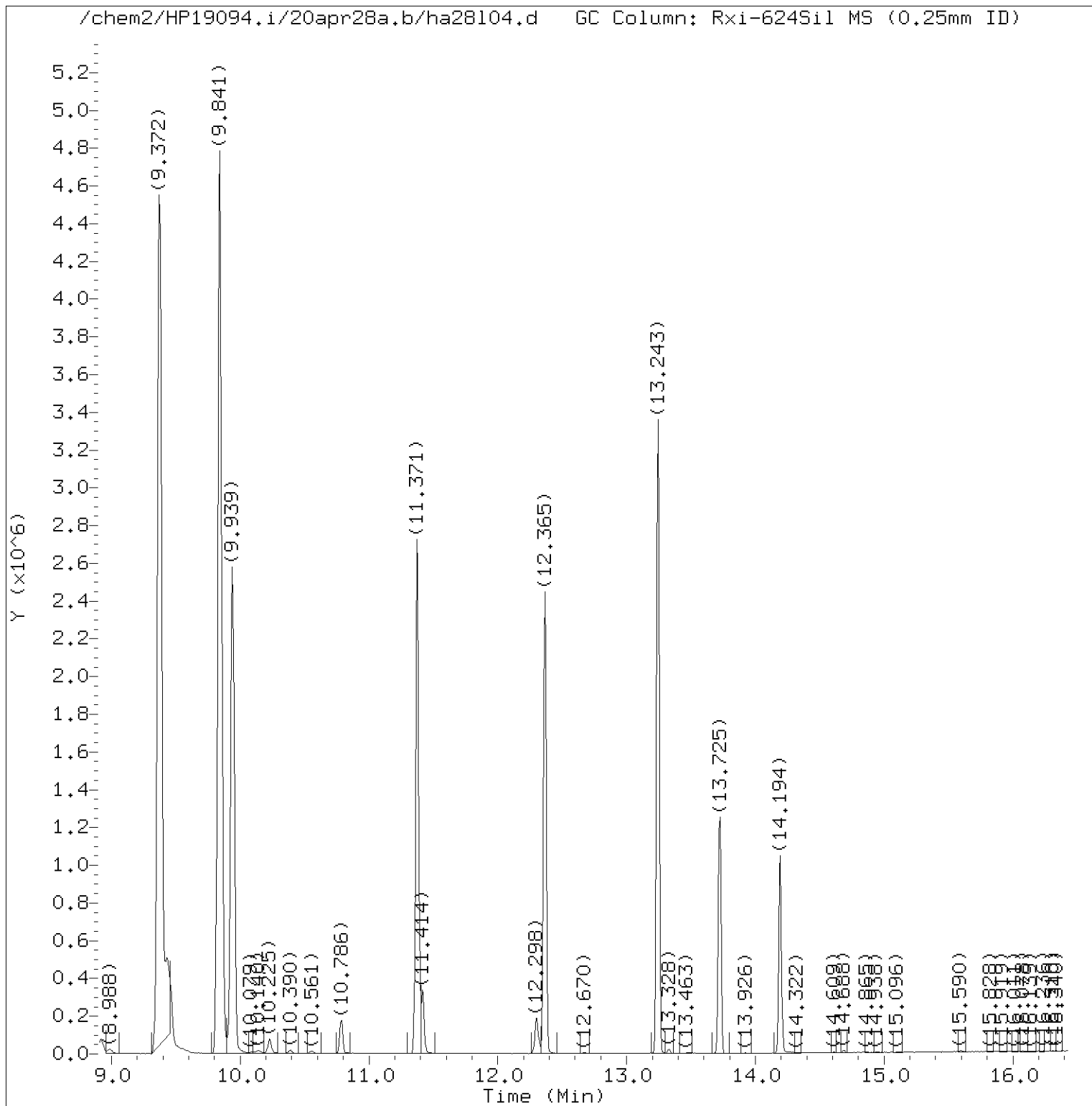
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCDH60

Lab Sample ID: LCDH60

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d
Injection date and time: 28-APR-2020 10:40

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 27091SM

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCDH60

Lab Sample ID: LCDH60

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 10:40

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCDH60

Lab Sample ID: LCDH60

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.160	45	340942M	5.036
26) Acetonitrile	(1)	4.178	41	137365M	43.655
27) *t-Butyl Alcohol-d10	(1)	4.458	65	129225	50.000
37) Vinyl Acetate	(2)	5.525	43	848616	11.765
51) \$Dibromofluoromethane	(2)	7.061	113	521780	10.328
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	102513	10.470
64) *Fluorobenzene	(2)	7.957	96	2032314	10.000
83) \$Toluene-d8	(3)	9.939	98	2056098	9.805
98) *Chlorobenzene-d5	(3)	11.371	117	1573880	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	740806	9.549
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	825398	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

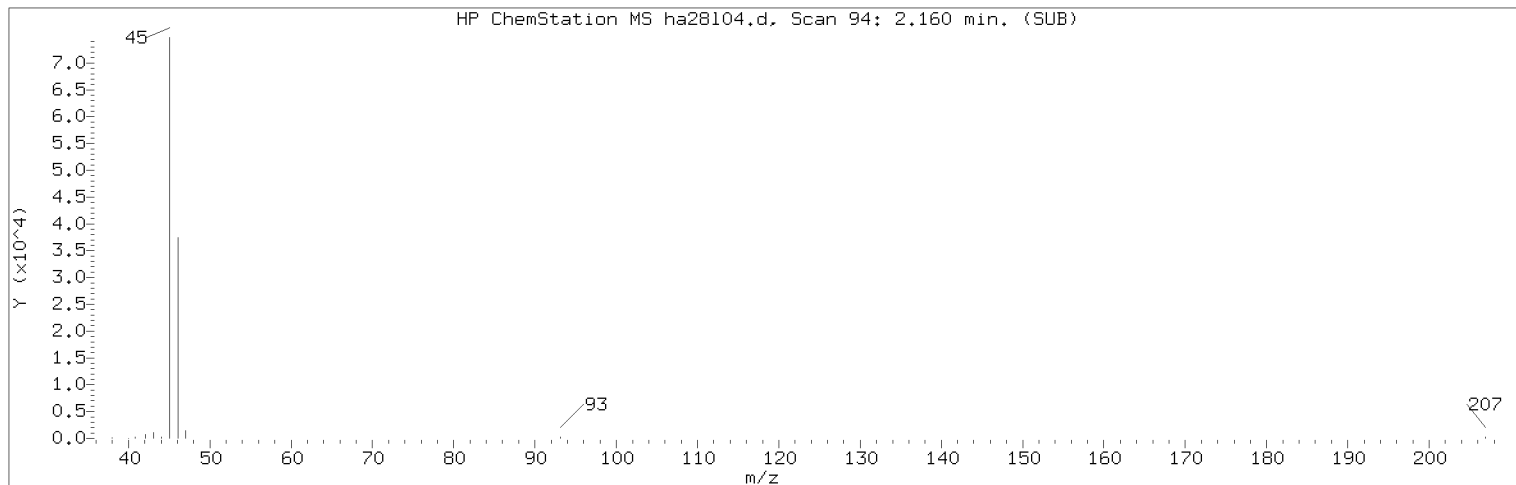
page 1 of 1

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

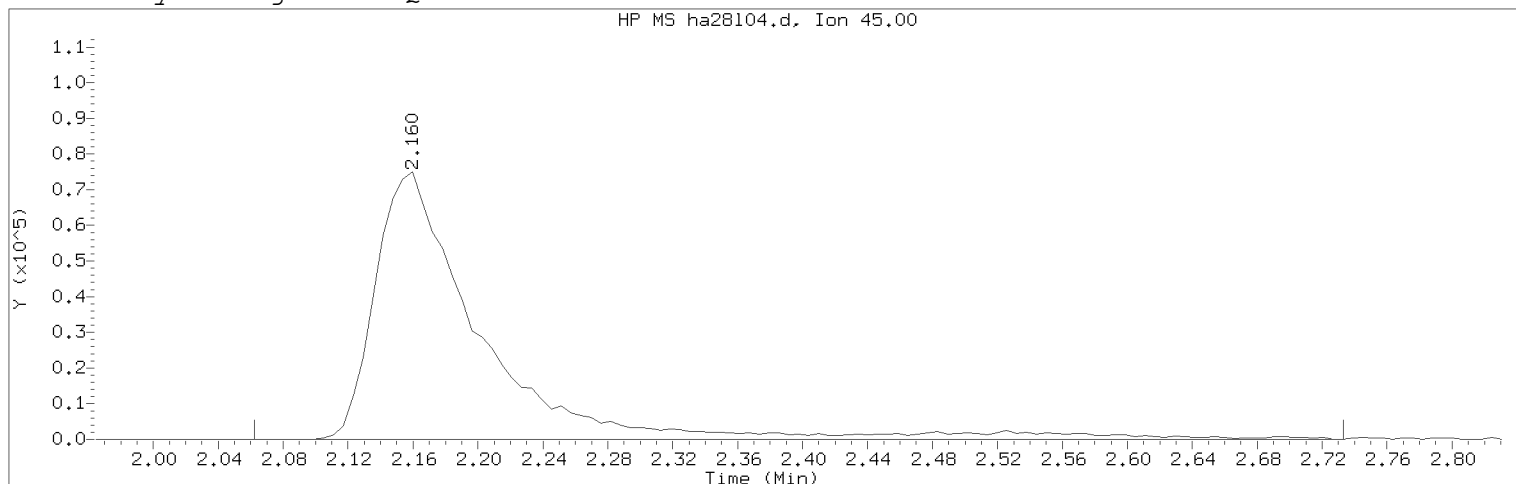
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 10:40 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCDH60

Lab Sample ID: LCDH60

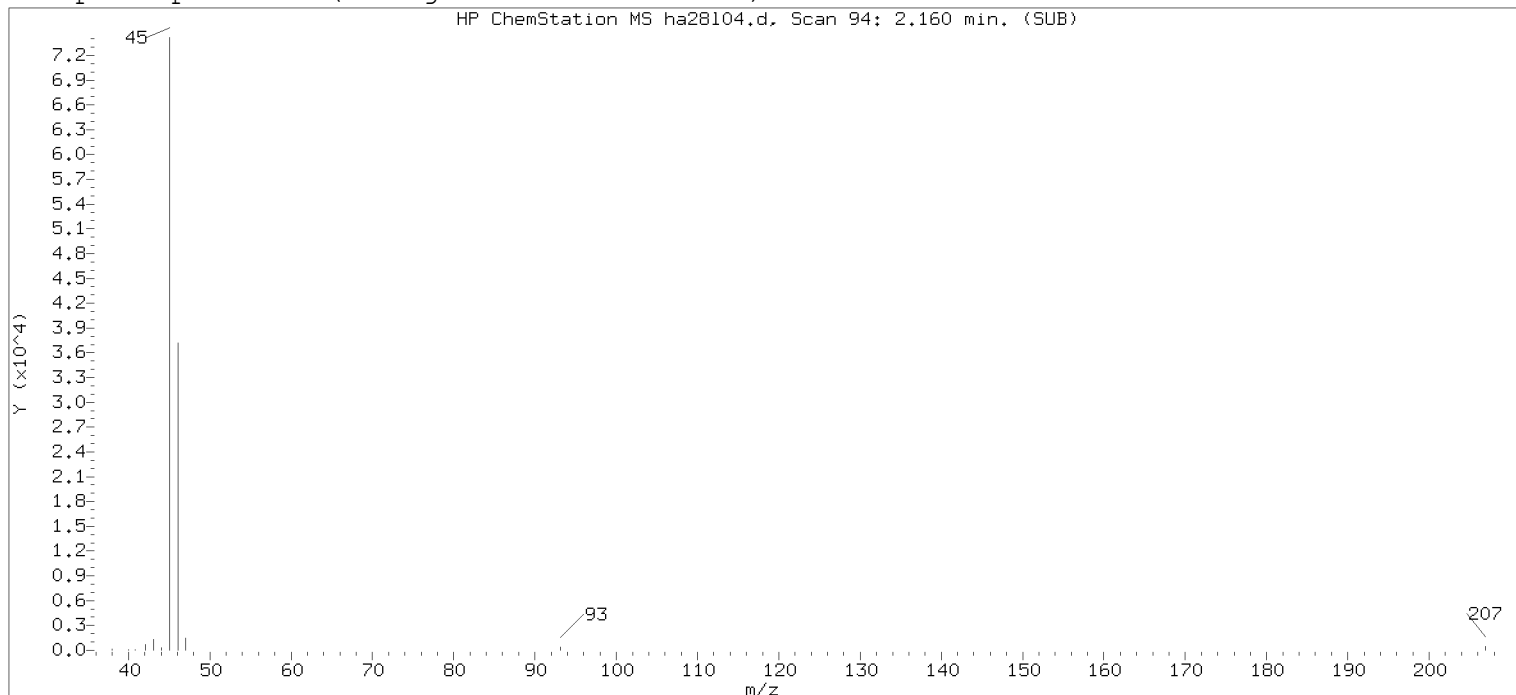
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 340942M
On-Column Amount (ng) : 5.0358
Integration start scan : 77 Integration stop scan: 187
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

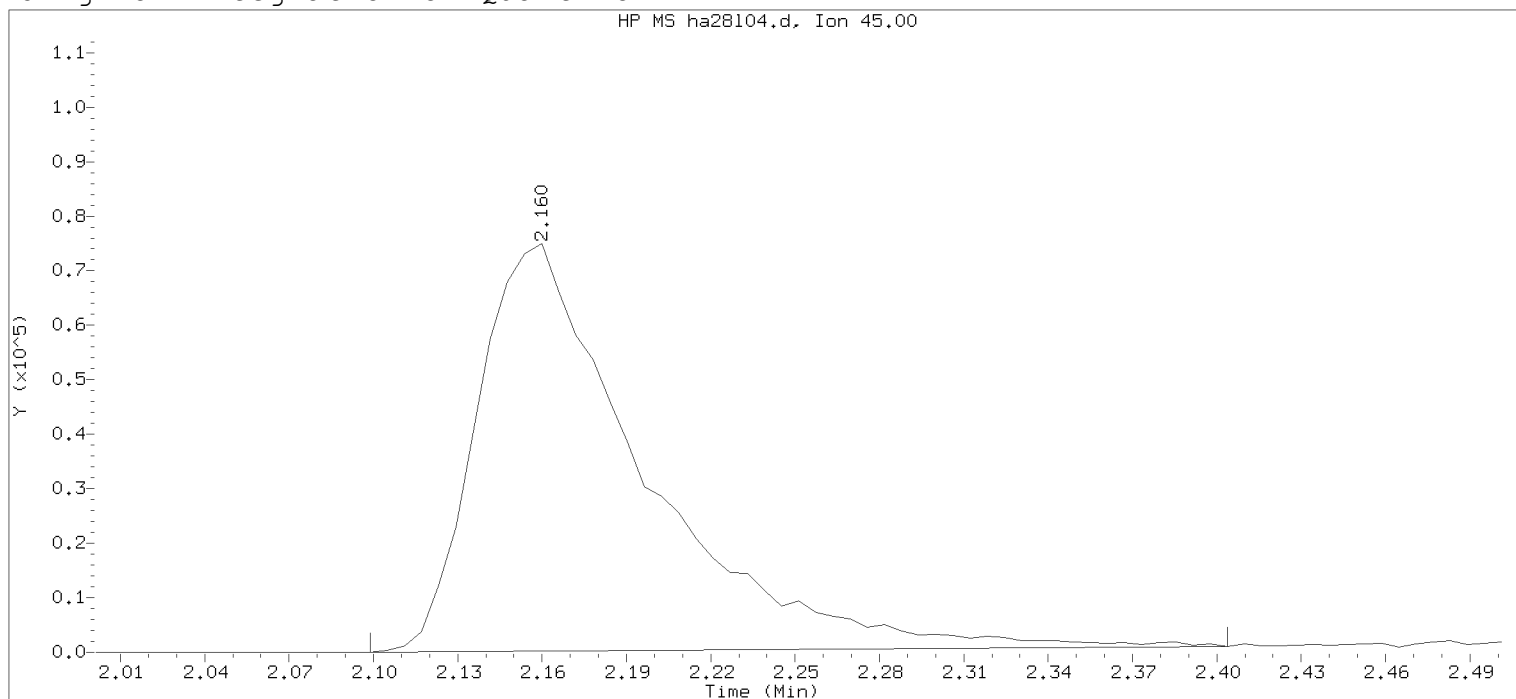
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 10:40

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 16340SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:58 Automation

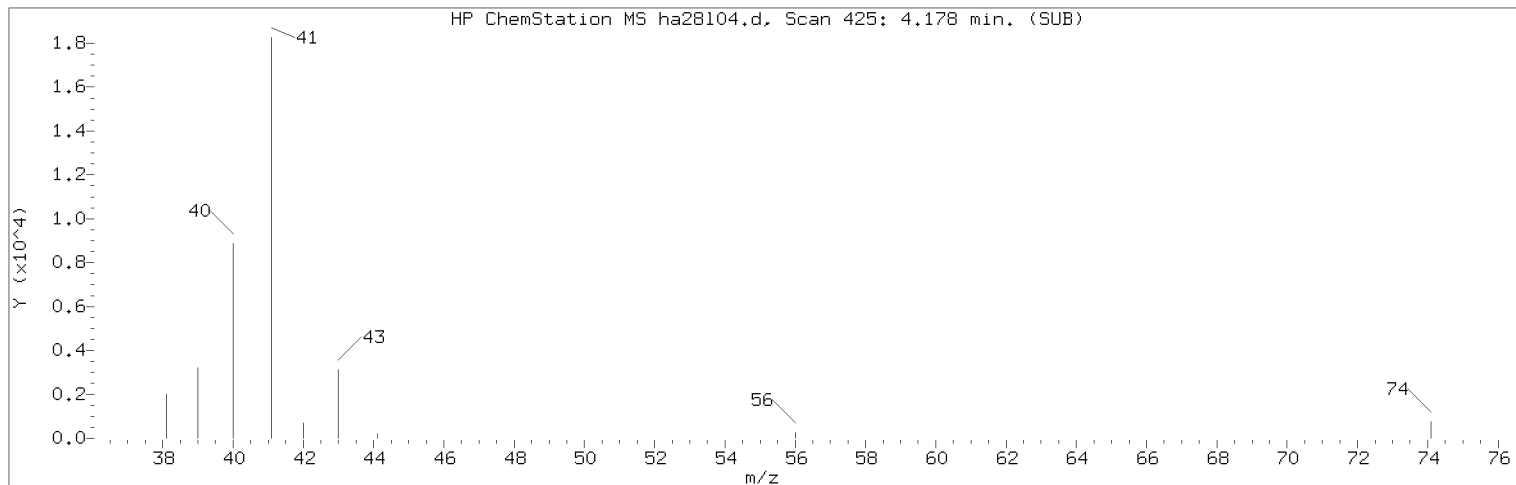
Sample Name: LCDH60

Lab Sample ID: LCDH60

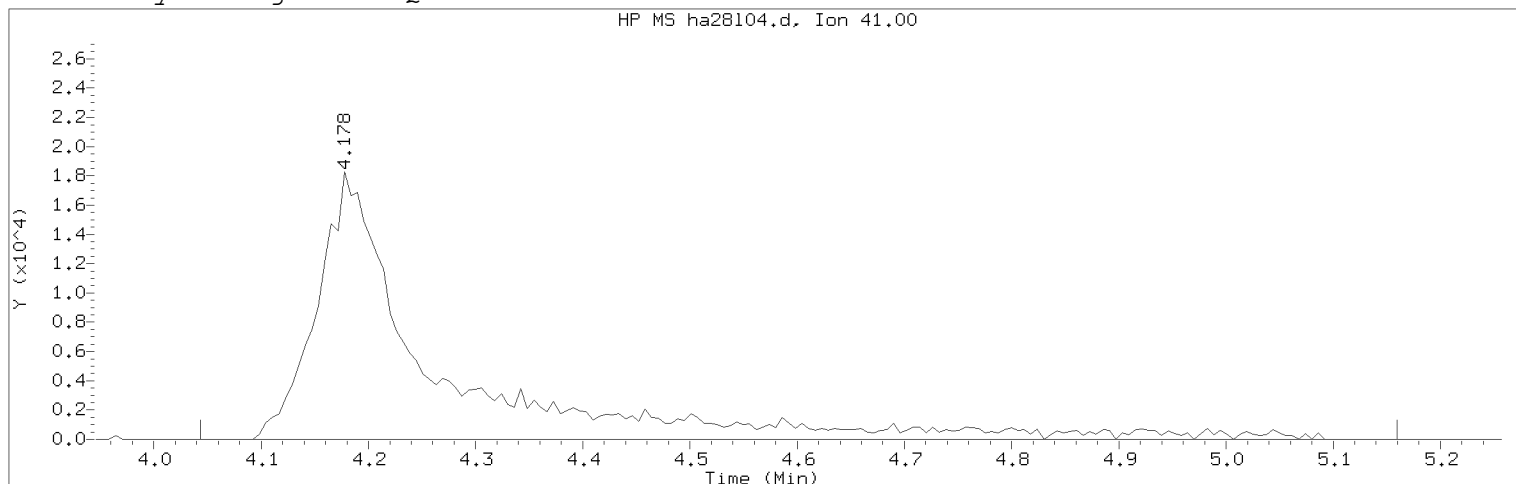
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 94	
Retention Time (minutes)	: 2.160	
Quant Ion	: 45.00	
Area	: 308648	
On-column Amount (ng)	: 4.5588	
Integration start scan	: 83	Integration stop scan: 133
Y at integration start	: 0	Y at integration end: 1081

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 10:40 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:44 mec29284

Sample Name: LCDH60

Lab Sample ID: LCDH60

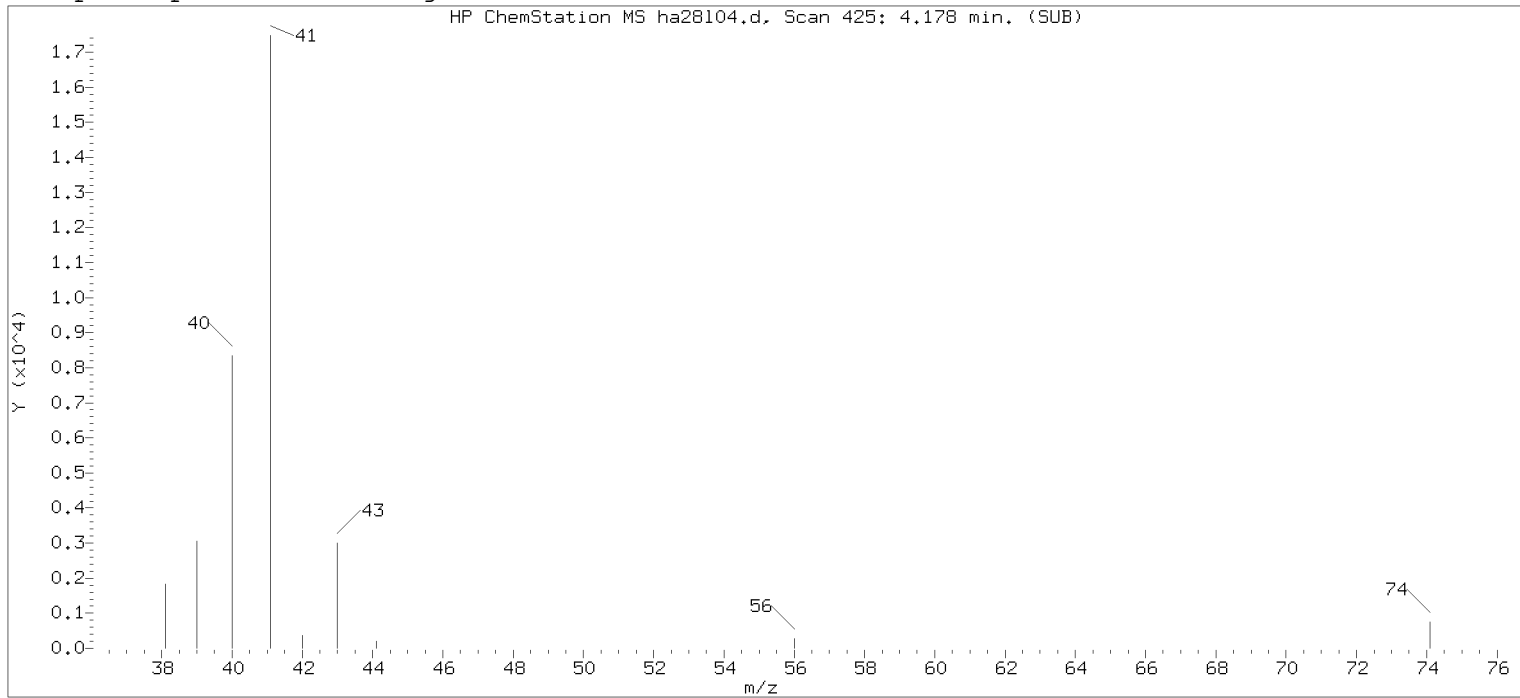
Compound Number : 26
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area (flag) : 137365M
On-Column Amount (ng) : 43.6546
Integration start scan : 402 Integration stop scan: 585
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

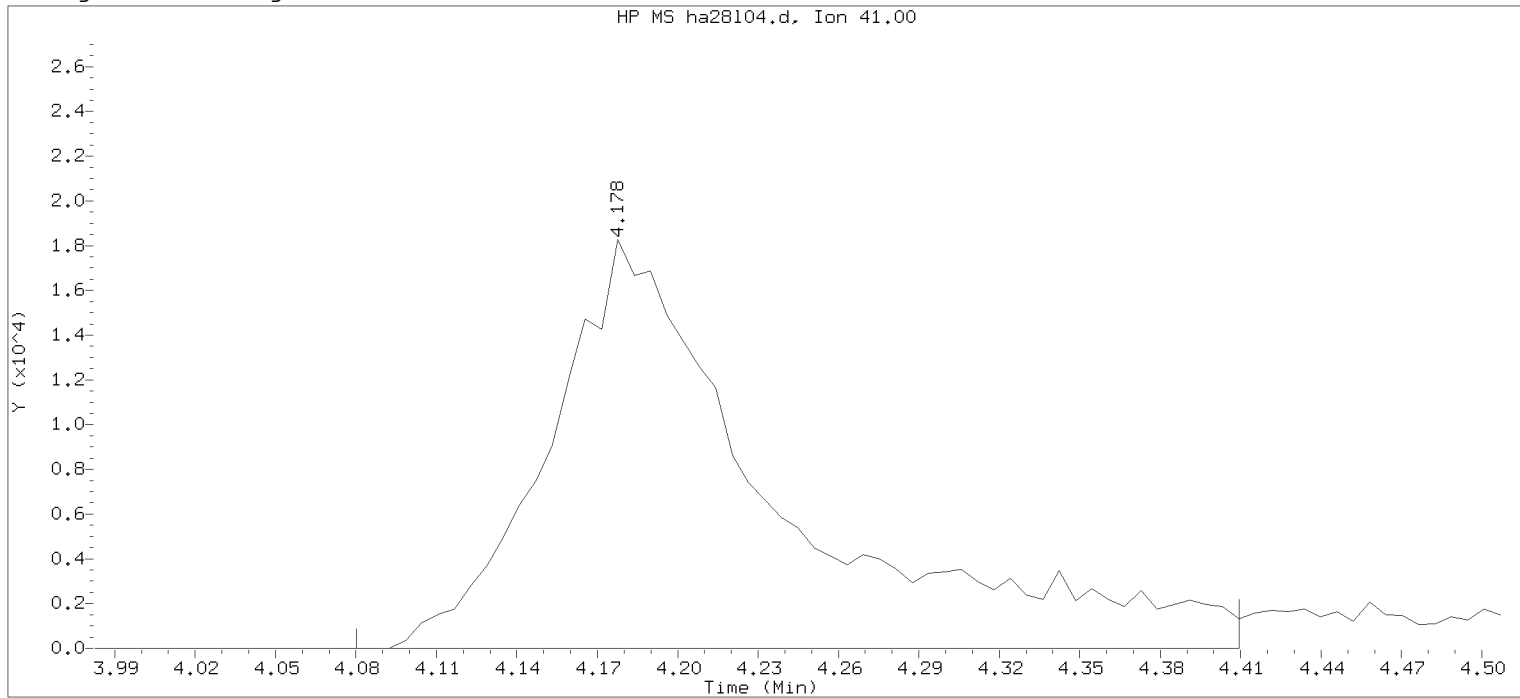
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28104.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 10:40 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 10:58 Automation

Sample Name: LCDH60

Lab Sample ID: LCDH60

Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 425	
Retention Time (minutes)	: 4.178	
Quant Ion	: 41.00	
Area	: 107785	
On-column Amount (ng)	: 34.2542	
Integration start scan	: 408	Integration stop scan: 462
Y at integration start	: 0	Y at integration end: 0

LCSH59

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH59

Data file: /chem2/HP19094.i/20apr28a.b/ha28101.d

Injection date and time: 28-APR-2020 09:35

Data file Sample Info. Line: LCSH59;LCSH59;1;3;LCS;;DAA3568;;ha28b01;

Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452 (0.006)	470	65	141072 (6)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2053328 (0)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1598795 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	855425 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	514463	10.079	101%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	104154	10.529	105%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2084820	9.787	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	750275	9.521	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.056 (0.000)	85	349060	4.535	4.54			0.1	1
2) Chloromethane	(2)	2.264 (-0.000)	50	394585	5.193	5.19			0.06	0.5
5) Vinyl Chloride	(2)	2.392 (0.000)	62	369080	5.107	5.11			0.2	1
7) Bromomethane	(2)	2.733 (-0.000)	94	256880	4.962	4.96			0.5	1
8) Chloroethane	(2)	2.830 (-0.000)	64	210847	5.037	5.04			0.07	0.5
10) Trichlorofluoromethane	(2)	3.141 (-0.000)	101	458582	5.560	5.56			0.2	1
11) Ethyl ether	(2)	3.422 (-0.000)	59	197294	5.405	5.41		J	1	13
13) Acrolein	(1)	3.605 (-0.001)	56	216423	34.069	34.07			3	25
15) 1,1-Dichloroethene	(2)	3.745 (-0.000)	96	231958	4.624	4.62			0.2	1
16) Freon 113	(2)	3.782 (-0.000)	101	248571	4.740	4.74			0.1	1
14) Acetone	(1)	3.782 (-0.002)	43	273283M	31.882	31.88			0.9	10
17) Methyl Iodide	(2)	3.952 (0.000)	142	436151	4.505	4.51		J	0.6	10
19) Carbon Disulfide	(2)	4.068 (-0.000)	76	703492	4.584	4.58		J	0.4	10
23) Allyl Chloride	(2)	4.251 (0.000)	41	395997	4.647	4.65		J	0.8	10
24) Methylene Chloride	(2)	4.446 (0.000)	84	265951	4.926	4.93			0.2	1
30) Acrylonitrile	(1)	4.800 (-0.001)	53	256636	24.534	24.53			0.5	10
32) trans-1,2-Dichloroethene	(2)	4.879 (-0.000)	96	258958	4.696	4.70			0.2	1
34) 1,1-Dichloroethane	(2)	5.537 (-0.000)	63	498396	5.006	5.01			0.1	1
36) 2-Chloro-1,3-Butadiene	(2)	5.647 (-0.000)	53	399359	4.685	4.68		J	0.5	10
39) 2-Butanone	(1)	6.324 (-0.000)	43	494272	36.878	36.88			0.6	10
43) Propionitrile	(1)	6.409 (0.000)	54	145495	39.629	39.63		J	10	100
46) Methacrylonitrile	(1)	6.628 (-0.002)	67	487289	37.110	37.11		J	10	100
49) Tetrahydrofuran	(1)	6.702 (-0.002)	71	89118	24.067	24.07		J	2	25
50) Chloroform	(2)	6.842 (0.000)	83	486661	5.008	5.01			0.09	1
52) 1,1,1-Trichloroethane	(2)	7.074 (0.000)	97	418278	4.629	4.63			0.1	1
55) Carbon Tetrachloride	(2)	7.287 (-0.000)	117	375158	4.842	4.84			0.2	1
57) Isobutyl Alcohol	(1)	7.409 (-0.000)	41	125977	122.056	122.06		J	4	200
59) Benzene	(2)	7.549 (0.000)	78	1101355	4.931	4.93			0.07	1
60) 1,2-Dichloroethane	(2)	7.616 (0.000)	62	287564	4.994	4.99			0.1	1
68) Trichloroethene	(2)	8.433 (0.000)	95	286989	4.900	4.90			0.2	1
71) 1,2-Dichloropropane	(2)	8.768 (0.000)	63	290457	5.257	5.26			0.1	1

M = Compound was manually integrated.

LCSH59

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH59

Data file: /chem2/HP19094.i/20apr28a.b/ha28101.d

Injection date and time: 28-APR-2020 09:35

Data file Sample Info. Line: LCSH59;LCSH59;1;3;LCS;;DAA3568;;ha28b01;

Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml

Sample Volume (Vo): 25 ml

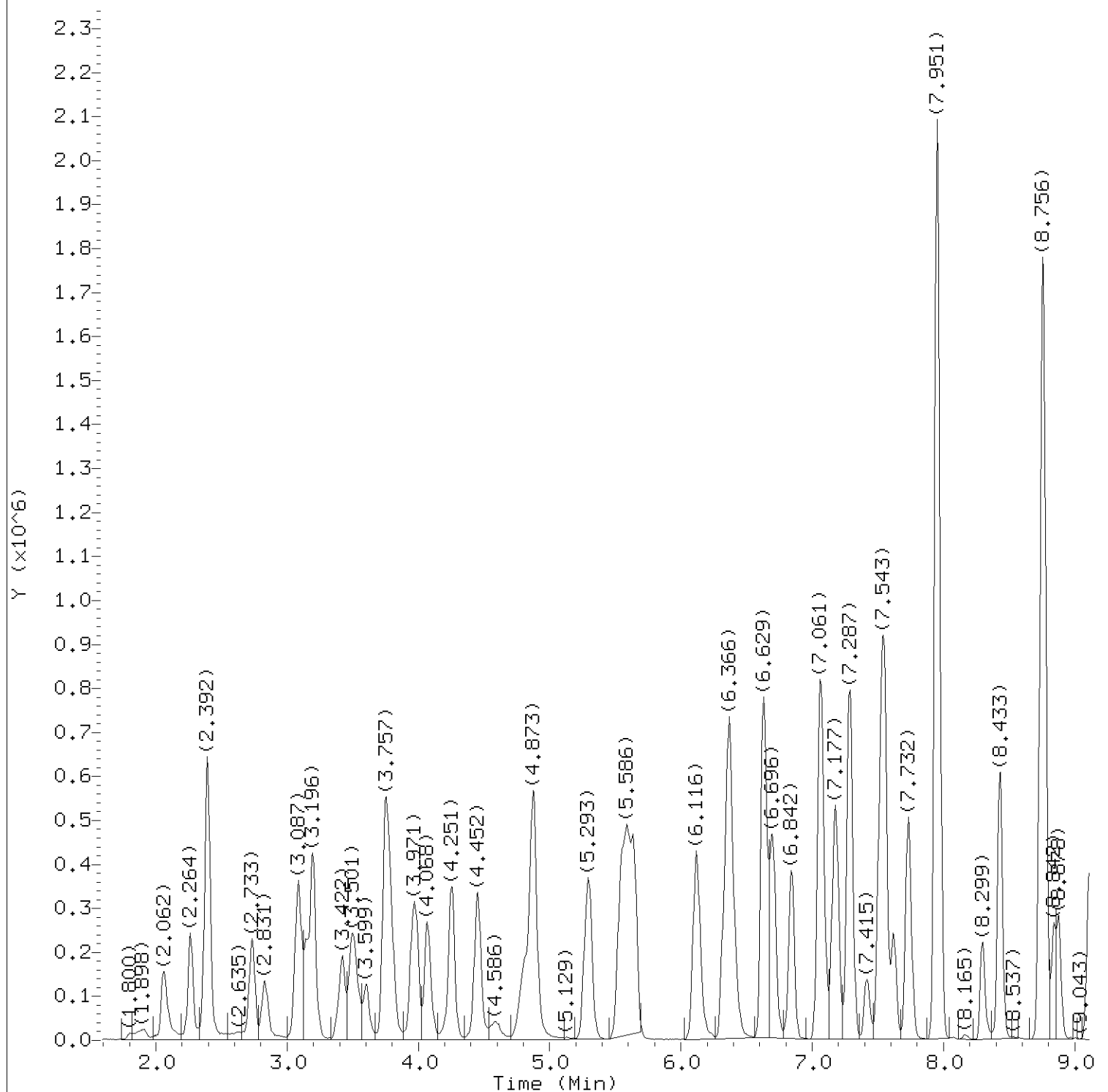
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
72) Methyl Methacrylate	(1)	8.842(-0.002)	69	126214	4.778	4.78		J	4	10
74) Dibromomethane	(2)	8.878(0.000)	93	127368	5.042	5.04			0.07	1
73) 1,4-Dioxane	(1)	8.860(-0.004)	88	27531M	137.377	137.38		J	45	200
75) Bromodichloromethane	(2)	9.110(0.000)	83	342422	4.988	4.99			0.09	1
82) 4-Methyl-2-Pentanone	(1)	9.799(-0.002)	43	775121M	23.464	23.46			0.9	10
84) Toluene	(3)	10.012(-0.000)	92	706919	4.725	4.72			0.09	1
85) trans-1,3-Dichloropropene	(3)	10.262(-0.000)	75	319835	4.605	4.61			0.1	1
87) Ethyl Methacrylate	(3)	10.317(-0.000)	69	228325	4.241	4.24		J	0.8	10
89) 1,1,2-Trichloroethane	(3)	10.463(0.000)	97	194525	5.174	5.17			0.08	1
90) Tetrachloroethene	(3)	10.548(0.000)	166	328633	4.832	4.83			0.06	1
91) 1,3-Dichloropropane	(3)	10.622(0.000)	76	326456	5.055	5.05			0.09	1
92) 2-Hexanone	(1)	10.664(-0.003)	43	552494	24.476	24.48			0.6	10
94) Dibromochloromethane	(3)	10.835(0.000)	129	244740	5.084	5.08			0.07	1
96) 1,2-Dibromoethane	(3)	10.951(-0.000)	107	181446	5.051	5.05			0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)	11.481(0.000)	131	276772	4.760	4.76			0.08	1
101) Ethylbenzene	(3)	11.481(0.000)	91	1351624	4.591	4.59			0.08	1
102) m+p-Xylene	(3)	11.597(0.000)	106	1068033	9.486	9.49			0.1	2
105) o-Xylene	(3)	11.926(0.000)	106	505620	4.567	4.57			0.1	1
106) Xylene (Total)	(3)		106	1573653	14.054	14.05			0.2	3
107) Styrene	(3)	11.938(0.000)	104	860219	4.788	4.79			0.07	1
108) Bromoform	(3)	12.097(0.000)	173	134716	4.802	4.80			0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)	12.463(-0.000)	83	221023	4.949	4.95			0.2	1
116) trans-1,4-Dichloro-2-butene	(1)	12.487(-0.003)	53	235568	18.983	18.98			1	10
117) 1,2,3-Trichloropropane	(4)	12.512(0.000)	110	59196M	4.950	4.95			0.1	1
127) Pentachloroethane	(4)	12.957(0.000)	167	215678	4.785	4.78		J	0.8	10
132) 1,3-Dichlorobenzene	(4)	13.188(-0.000)	146	643198	4.781	4.78			0.06	1
135) 1,4-Dichlorobenzene	(4)	13.261(0.000)	146	628182	4.786	4.79			0.07	1
140) 1,2-Dichlorobenzene	(4)	13.524(0.000)	146	574734	4.846	4.85			0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)	14.060(-0.002)	155	31065	4.389	4.39			0.2	1
146) 1,2,4-Trichlorobenzene	(4)	14.609(0.000)	180	377419	4.274	4.27			0.1	1
147) Hexachlorobutadiene	(4)	14.688(0.000)	225	216074	4.689	4.69			0.07	1
148) Naphthalene	(4)	14.792(0.000)	128	581238	3.772	3.77			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:44. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d
Injection date and time: 28-APR-2020 09:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m
Calibration date and time: 28-APR-2020 09:36

Sublist used: 27091-SM

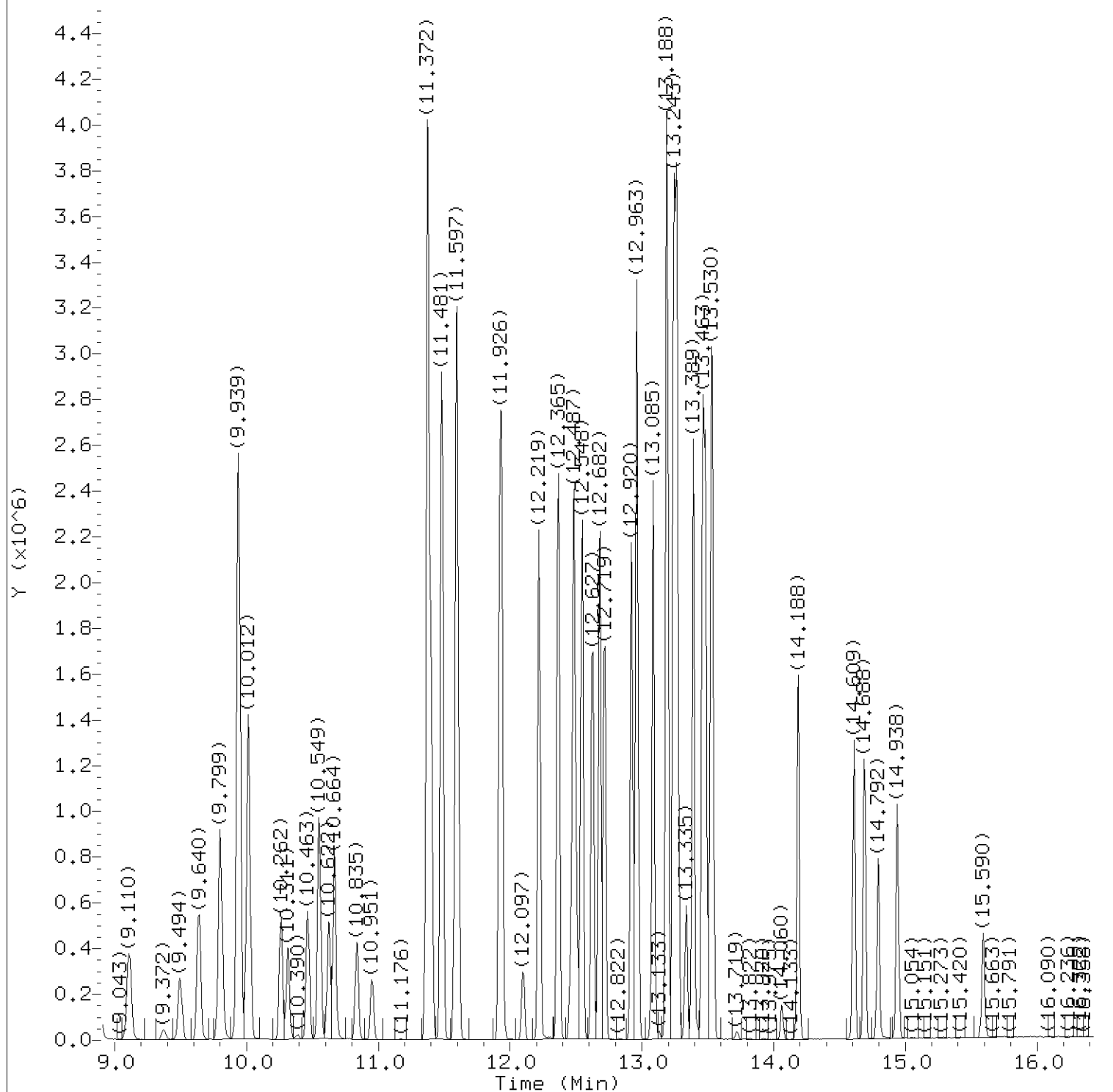
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:44.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d
Injection date and time: 28-APR-2020 09:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:44.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d
Injection date and time: 28-APR-2020 09:35

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.056	85	349060	4.535
2) Chloromethane	(2)	2.264	50	394585	5.193
5) Vinyl Chloride	(2)	2.392	62	369080	5.107
7) Bromomethane	(2)	2.733	94	256880	4.962
8) Chloroethane	(2)	2.831	64	210847	5.037
10) Trichlorofluoromethane	(2)	3.141	101	458582	5.560
11) Ethyl ether	(2)	3.422	59	197294	5.405
13) Acrolein	(1)	3.605	56	216423	34.069
15) 1,1-Dichloroethene	(2)	3.745	96	231958	4.624
16) Freon 113	(2)	3.782	101	248571	4.740
14) Acetone	(1)	3.782	43	273283M	31.882
17) Methyl Iodide	(2)	3.952	142	436151	4.505
19) Carbon Disulfide	(2)	4.068	76	703492	4.584
23) Allyl Chloride	(2)	4.251	41	395997	4.647
24) Methylene Chloride	(2)	4.446	84	265951	4.926
27) *t-Butyl Alcohol-d10	(1)	4.452	65	141072	50.000
30) Acrylonitrile	(1)	4.800	53	256636	24.534
32) trans-1,2-Dichloroethene	(2)	4.879	96	258958	4.696
34) 1,1-Dichloroethane	(2)	5.537	63	498396	5.006
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	399359	4.685
39) 2-Butanone	(1)	6.324	43	494272	36.878
43) Propionitrile	(1)	6.409	54	145495	39.629
46) Methacrylonitrile	(1)	6.629	67	487289	37.110
49) Tetrahydrofuran	(1)	6.702	71	89118	24.067
50) Chloroform	(2)	6.842	83	486661	5.008
51) \$Dibromofluoromethane	(2)	7.061	113	514463	10.079
52) 1,1,1-Trichloroethane	(2)	7.074	97	418278	4.629
55) Carbon Tetrachloride	(2)	7.287	117	375158	4.842
57) Isobutyl Alcohol	(1)	7.409	41	125977	122.056
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	104154	10.529
59) Benzene	(2)	7.549	78	1101355	4.931
60) 1,2-Dichloroethane	(2)	7.616	62	287564	4.994
64) *Fluorobenzene	(2)	7.951	96	2053328	10.000
68) Trichloroethene	(2)	8.433	95	286989	4.900
71) 1,2-Dichloropropane	(2)	8.768	63	290457	5.257
72) Methyl Methacrylate	(1)	8.842	69	126214	4.778
73) 1,4-Dioxane	(1)	8.860	88	27531M	137.377
74) Dibromomethane	(2)	8.878	93	127368	5.042

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:44.

Target 3.5 esignature user ID: mec29284

RAF59 Page 1020 of 1506

page 1 of 2

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d
 Injection date and time: 28-APR-2020 09:35

Instrument ID: HP19094.i
 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 09:36
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
75) Bromodichloromethane	(2)	9.110	83	342422	4.988
82) 4-Methyl-2-Pentanone	(1)	9.799	43	775121M	23.464
83) \$Toluene-d8	(3)	9.939	98	2084820	9.787
84) Toluene	(3)	10.012	92	706919	4.725
85) trans-1,3-Dichloropropene	(3)	10.262	75	319835	4.605
87) Ethyl Methacrylate	(3)	10.317	69	228325	4.241
89) 1,1,2-Trichloroethane	(3)	10.463	97	194525	5.174
90) Tetrachloroethene	(3)	10.549	166	328633	4.832
91) 1,3-Dichloropropane	(3)	10.622	76	326456	5.055
92) 2-Hexanone	(1)	10.664	43	552494	24.476
94) Dibromochloromethane	(3)	10.835	129	244740	5.084
96) 1,2-Dibromoethane	(3)	10.951	107	181446	5.051
98) *Chlorobenzene-d5	(3)	11.372	117	1598795	10.000
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	276772	4.760
101) Ethylbenzene	(3)	11.481	91	1351624	4.591
102) m+p-Xylene	(3)	11.597	106	1068033	9.486
106) Xylene (Total)	(3)		106	1573653	14.054
105) o-Xylene	(3)	11.926	106	505620	4.567
107) Styrene	(3)	11.938	104	860219	4.788
108) Bromoform	(3)	12.097	173	134716	4.802
112) \$4-Bromofluorobenzene	(3)	12.365	95	750275	9.521
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	221023	4.949
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	235568	18.983
117) 1,2,3-Trichloropropane	(4)	12.512	110	59196M	4.950
127) Pentachloroethane	(4)	12.957	167	215678	4.785
132) 1,3-Dichlorobenzene	(4)	13.188	146	643198	4.781
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	855425	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	628182	4.786
140) 1,2-Dichlorobenzene	(4)	13.524	146	574734	4.846
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	155	31065	4.389
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	377419	4.274
147) Hexachlorobutadiene	(4)	14.688	225	216074	4.689
148) Naphthalene	(4)	14.792	128	581238	3.772

M = Compound was manually integrated.

* = Compound is an internal standard.

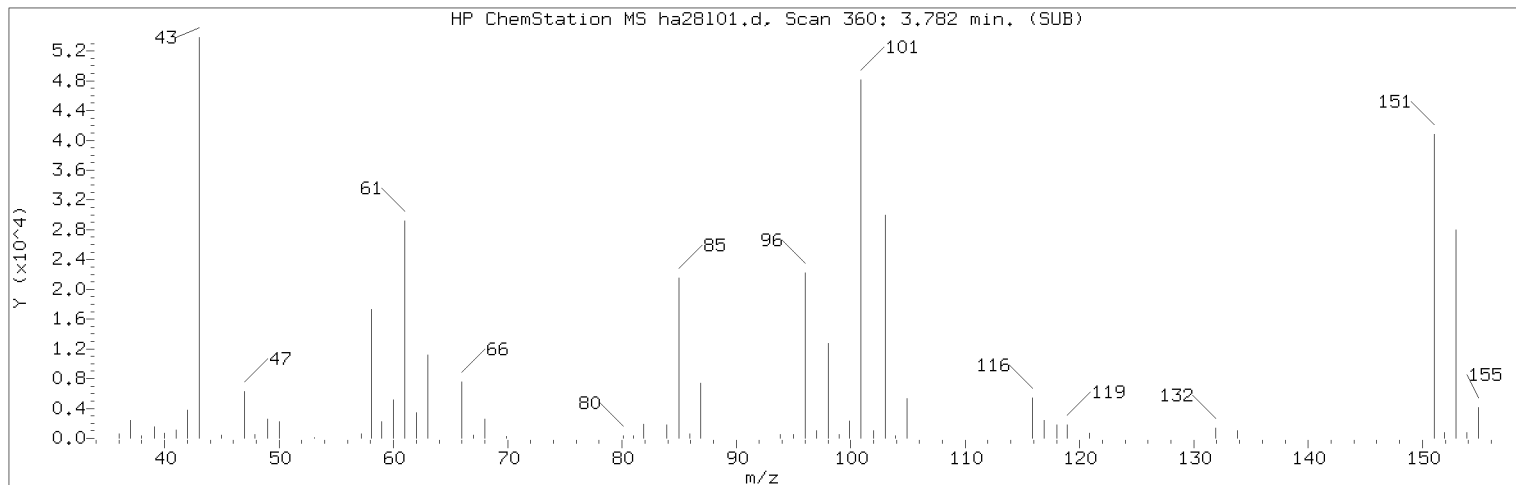
\$ = Compound is a surrogate standard.

page 2 of 2

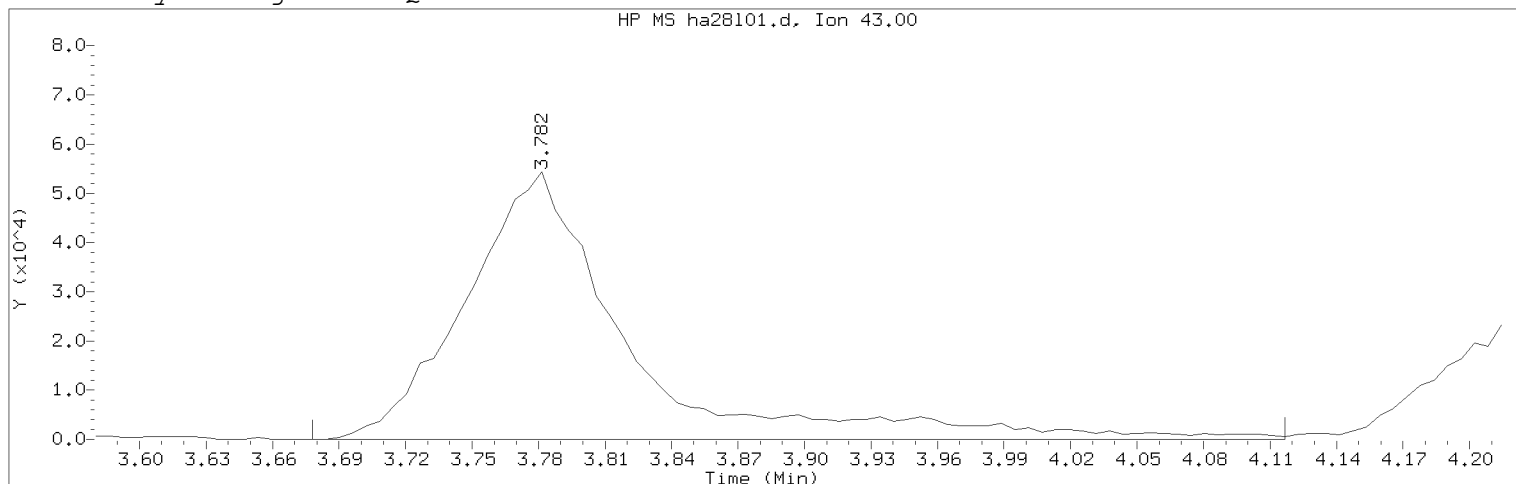
Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:44.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:35

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 360
 Retention Time (minutes): 3.782
 Quant Ion : 43.00
 Area (flag) : 273283M
 On-Column Amount (ng) : 31.8816
 Integration start scan : 342
 Y at integration start : 0

Integration stop scan: 414
 Y at integration end: 0

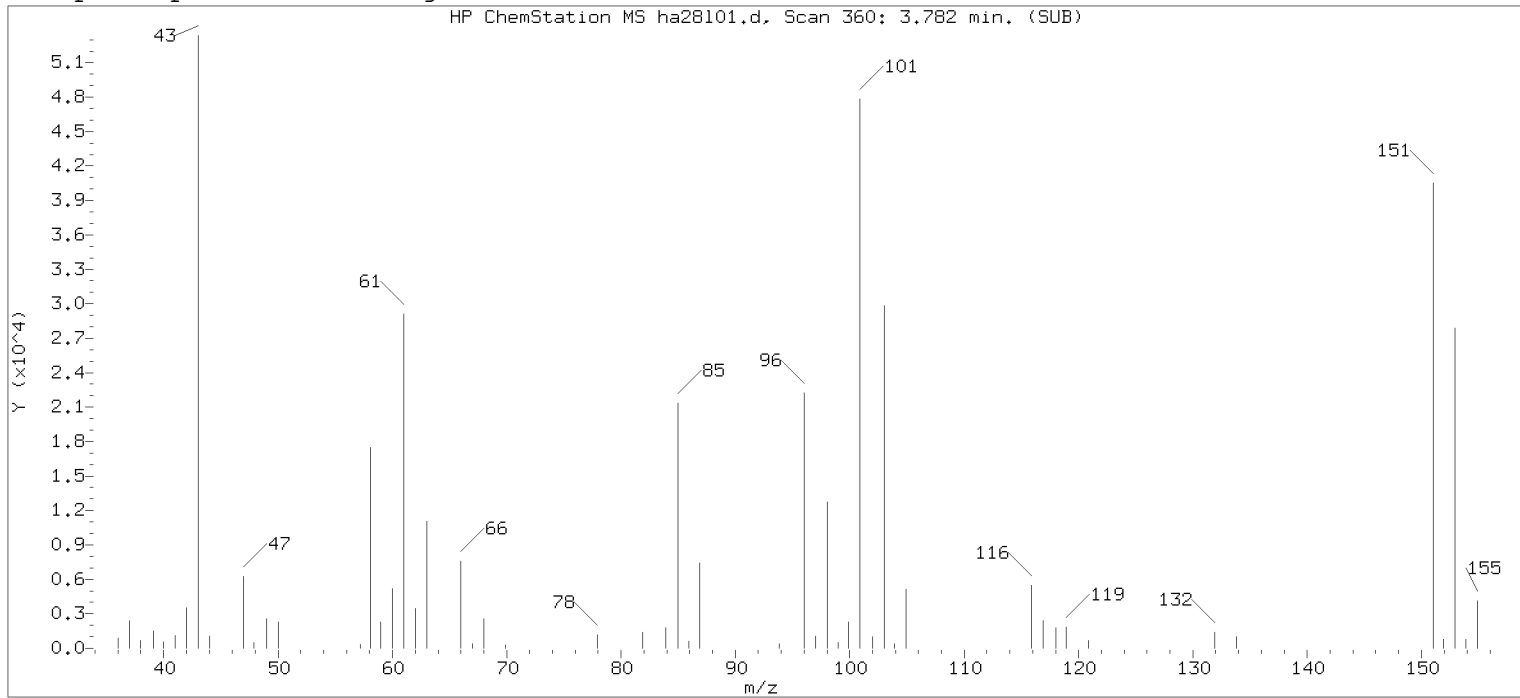
Reason for manual integration: improper integration

Analyst responsible for change:

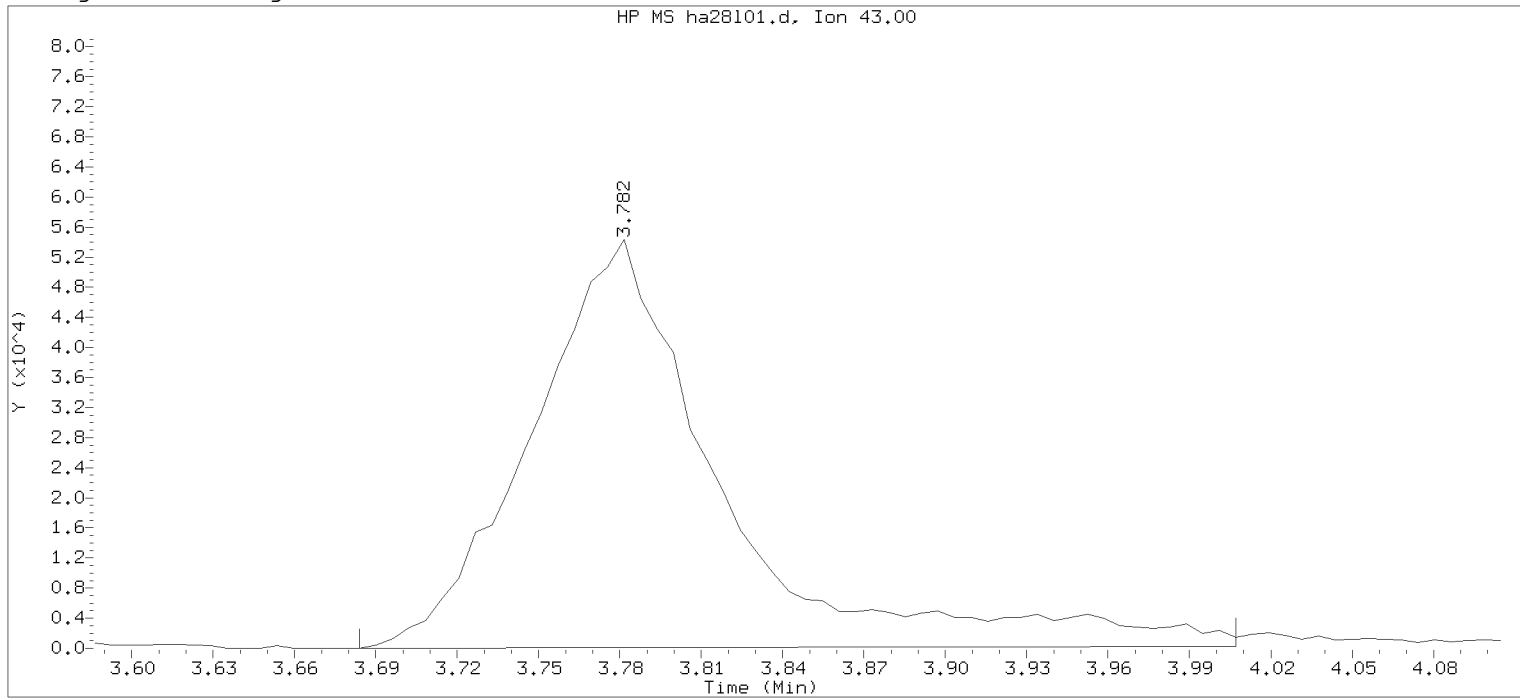
Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:44.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:35

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:02 jkh09052

Sample Name: LCSH59

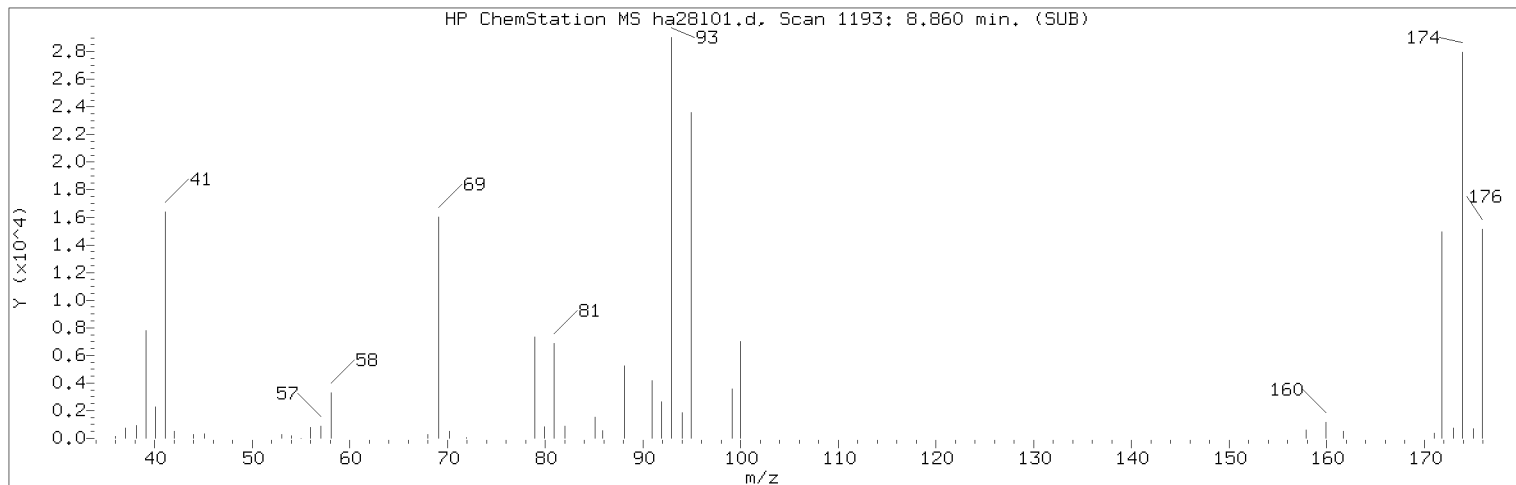
Lab Sample ID: LCSH59

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 360
 Retention Time (minutes): 3.782
 Quant Ion : 43.00
 Area : 262679
 On-column Amount (ng) : 30.6445
 Integration start scan : 343
 Y at integration start : 0

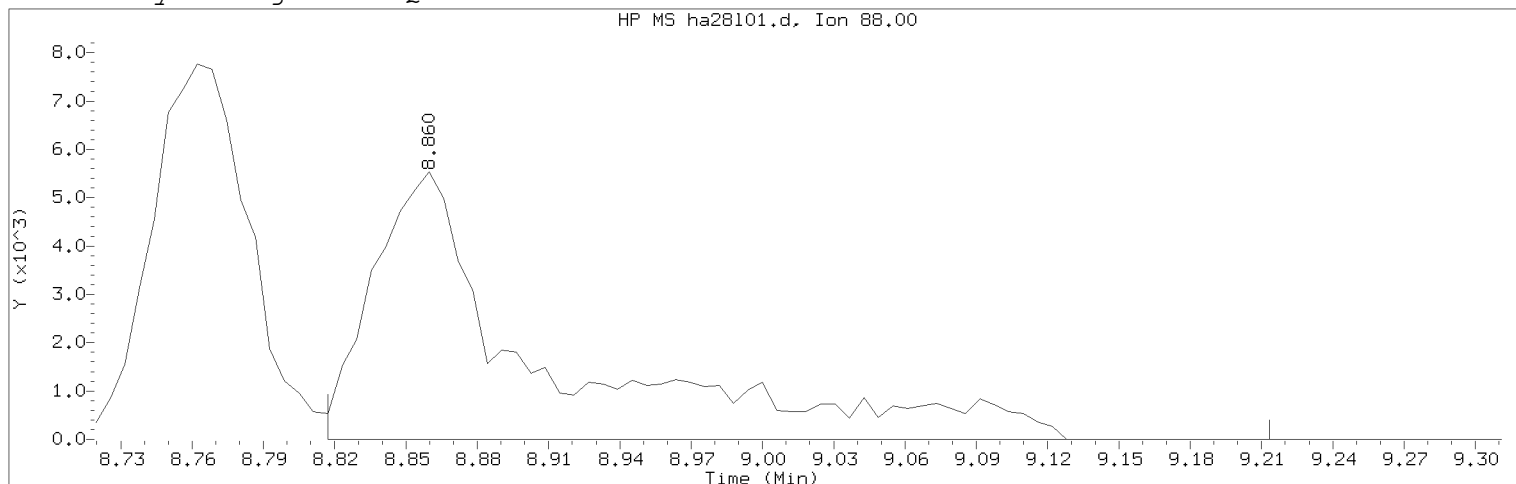
Integration stop scan: 396
 Y at integration end: 249

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:44.
 Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:35

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

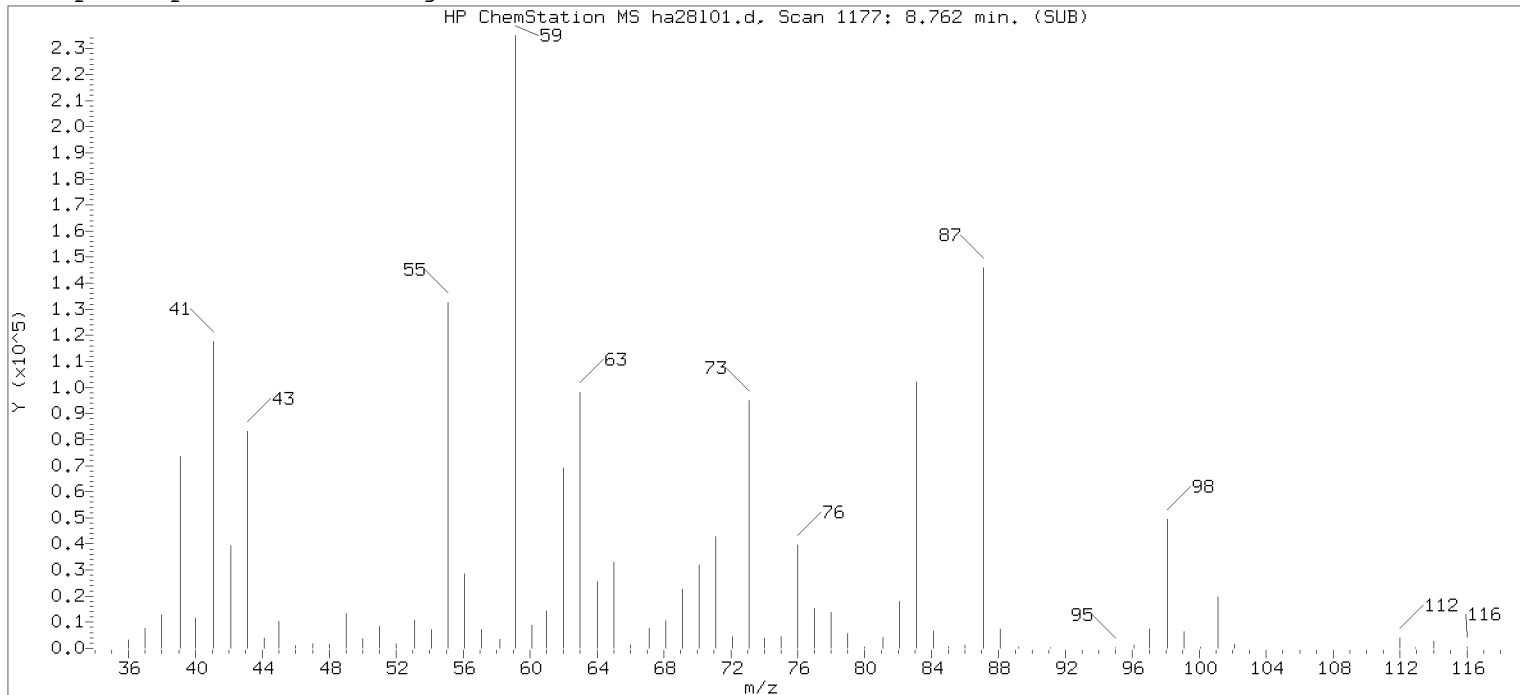
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 27531M	
On-Column Amount (ng)	: 137.3768	
Integration start scan	: 1185	Integration stop scan: 1250
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

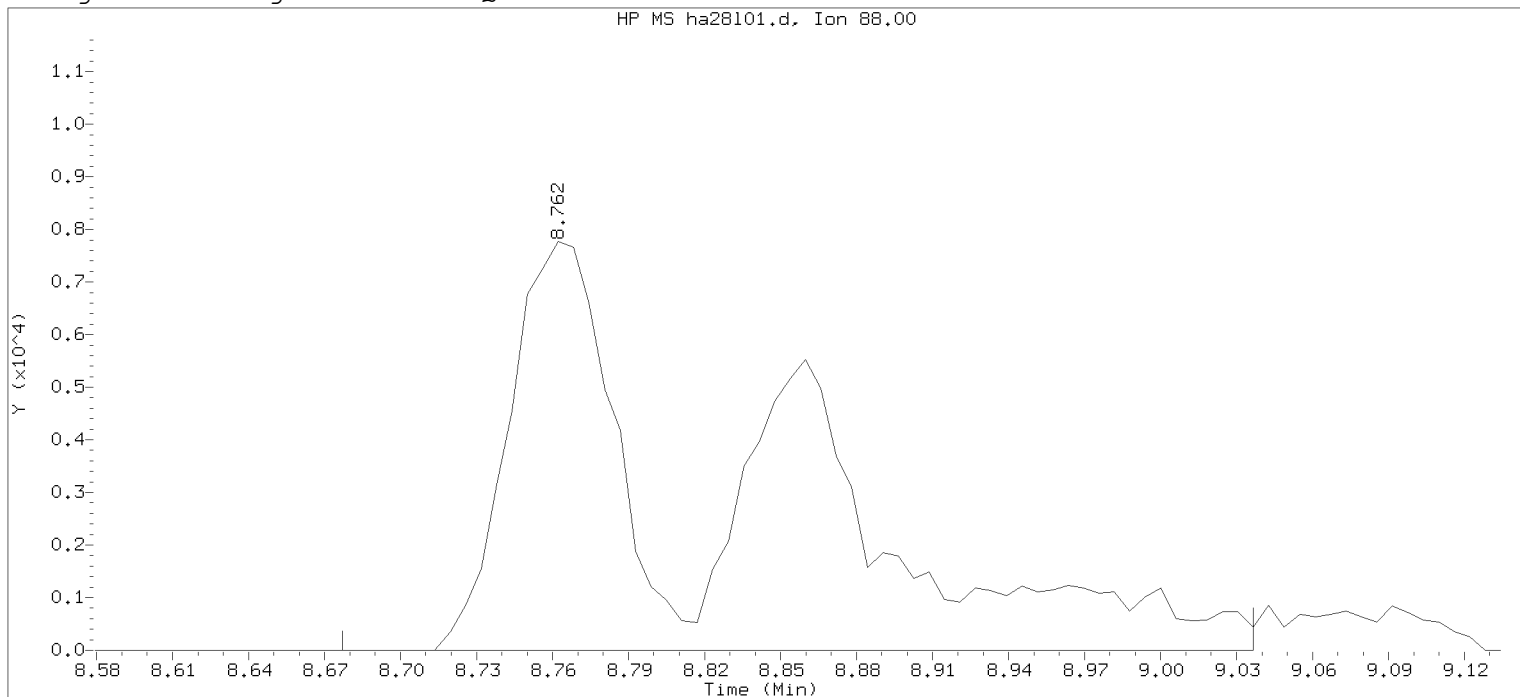
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:44.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:35

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:02 jkh09052

Sample Name: LCSH59

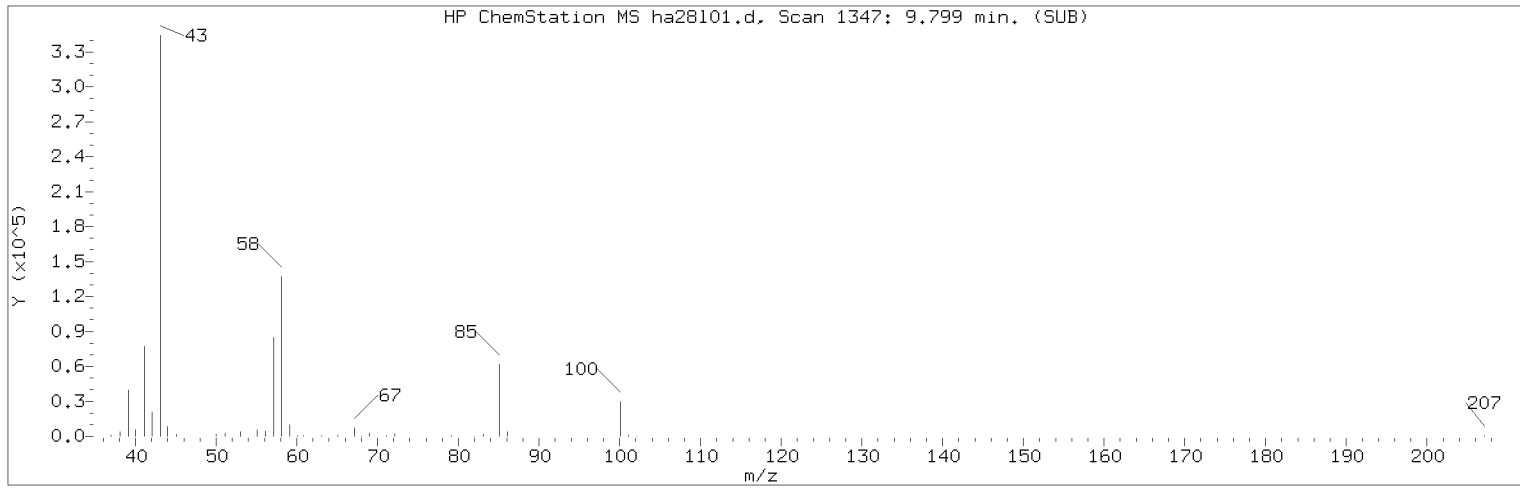
Lab Sample ID: LCSH59

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1177
 Retention Time (minutes): 8.762
 Quant Ion : 88.00
 Area : 46386
 On-column Amount (ng) : 231.4637
 Integration start scan : 1162
 Y at integration start : 0

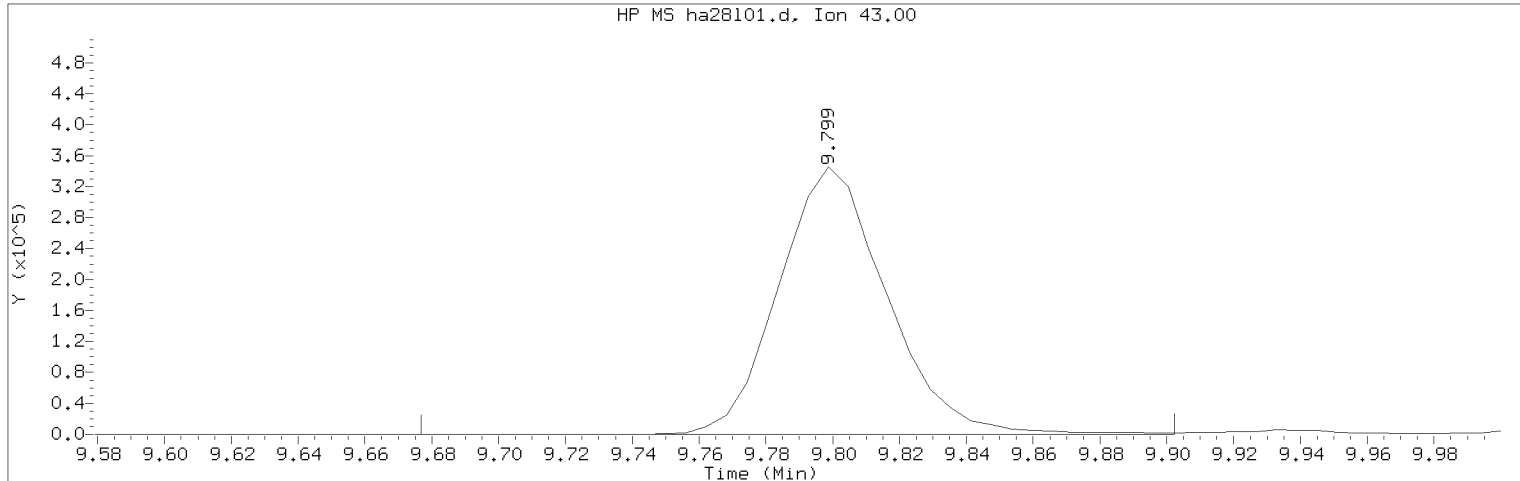
Integration stop scan: 1221
 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:44.
 Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:35 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

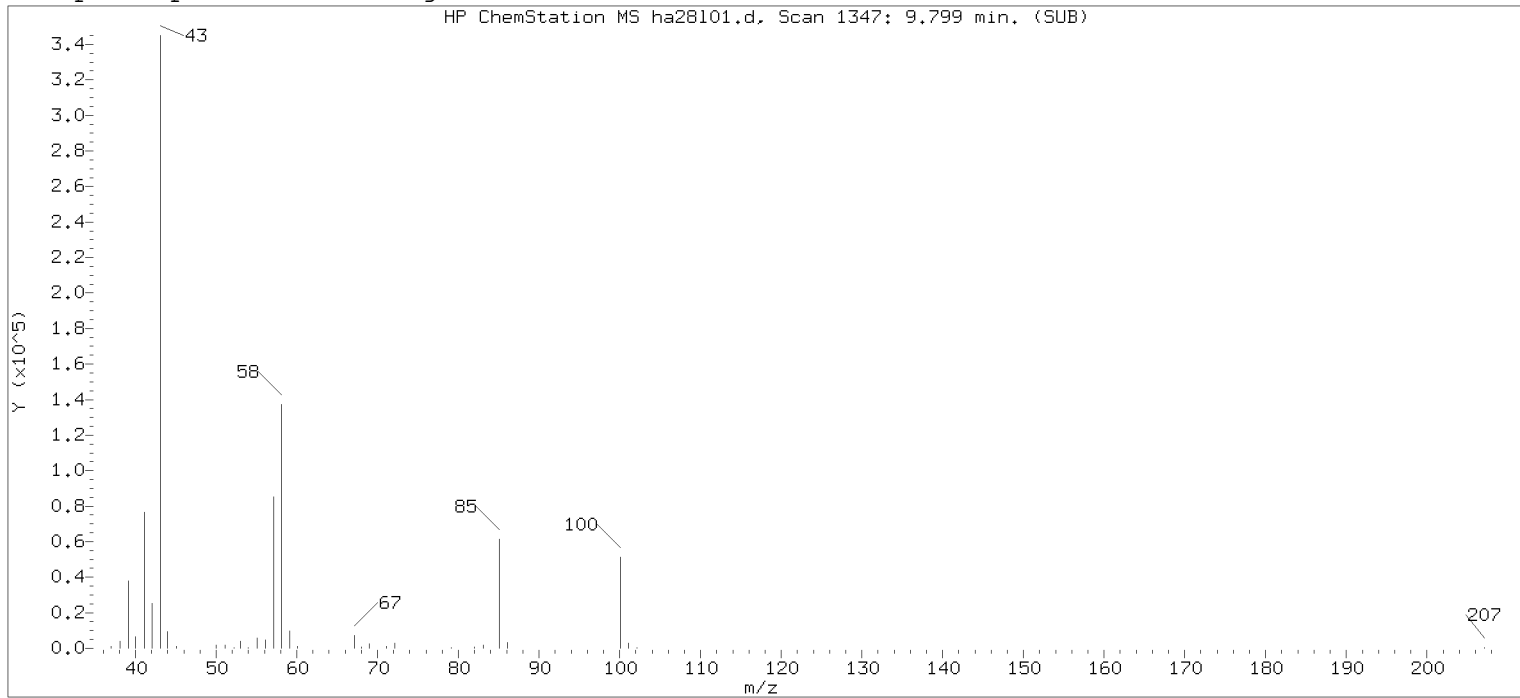
Compound Number : 82
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1347
Retention Time (minutes): 9.799
Quant Ion : 43.00
Area (flag) : 775121M
On-Column Amount (ng) : 23.4638
Integration start scan : 1326 Integration stop scan: 1363
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

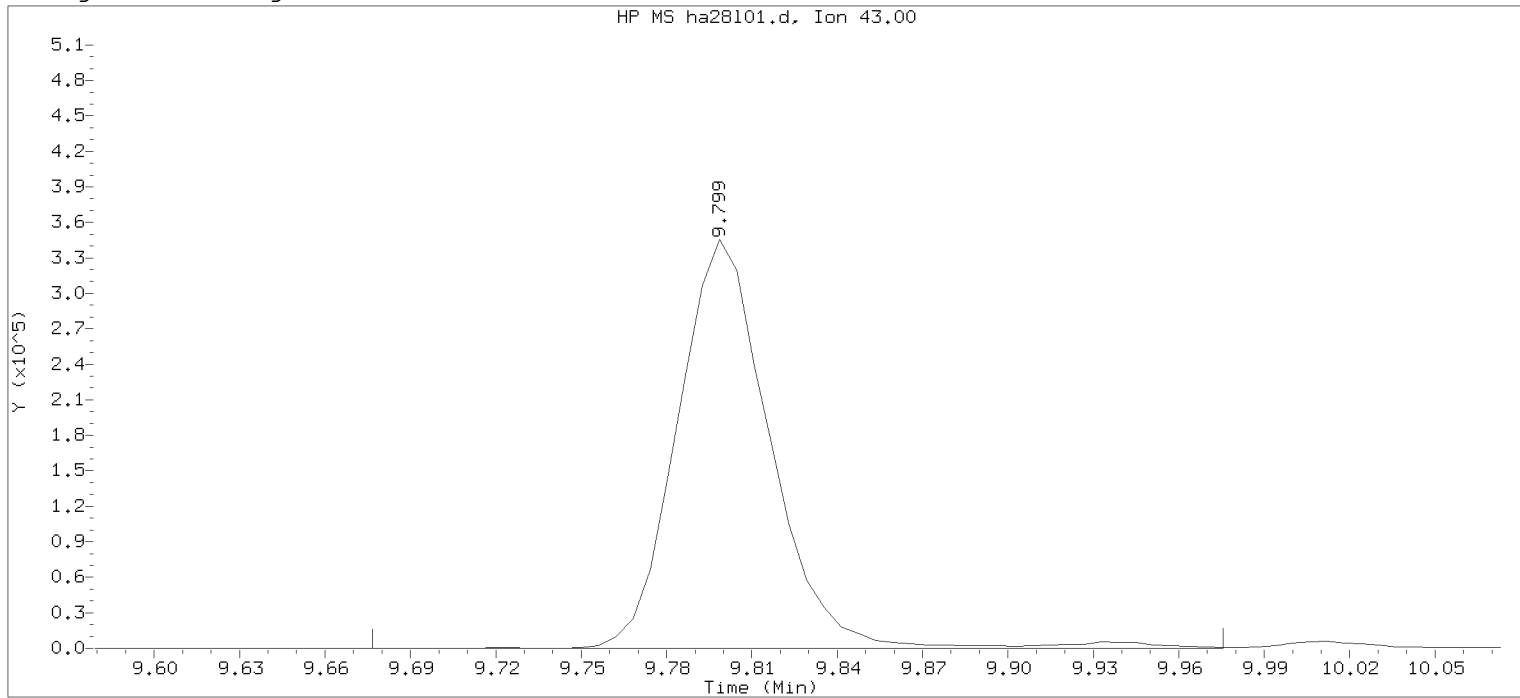
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:44.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:35 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 10:02 jkh09052

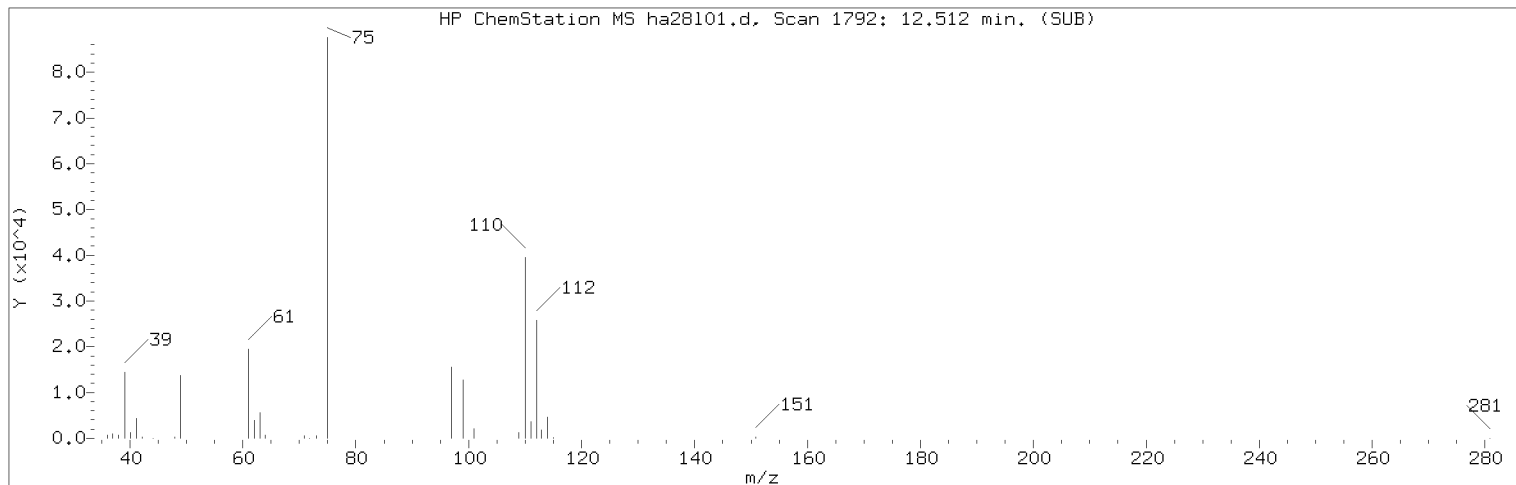
Sample Name: LCSH59

Lab Sample ID: LCSH59

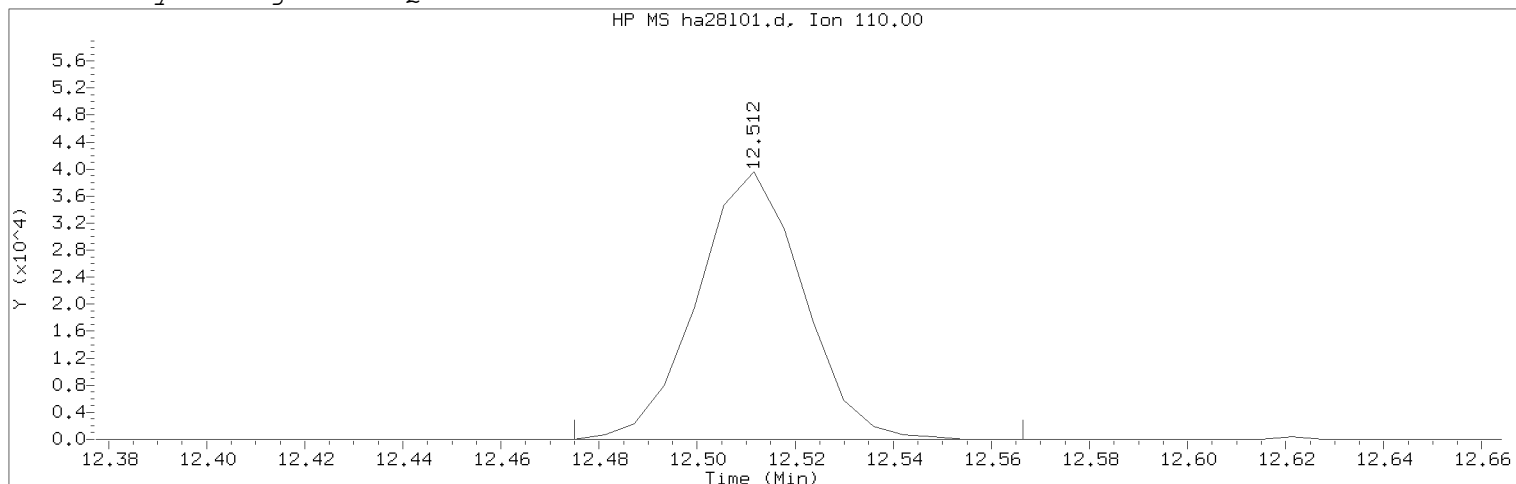
Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1347	
Retention Time (minutes)	: 9.799	
Quant Ion	: 43.00	
Area	: 787444	
On-column Amount (ng)	: 23.8368	
Integration start scan	: 1326	Integration stop scan: 1375
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:44.
Target 3.5 esignature use **RAF59** Page 1027 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:35

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCSH59

Lab Sample ID: LCSH59

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area (flag)	: 59196M	
On-Column Amount (ng)	: 4.9496	
Integration start scan	: 1785	Integration stop scan: 1800
Y at integration start	: 0	Y at integration end: 0

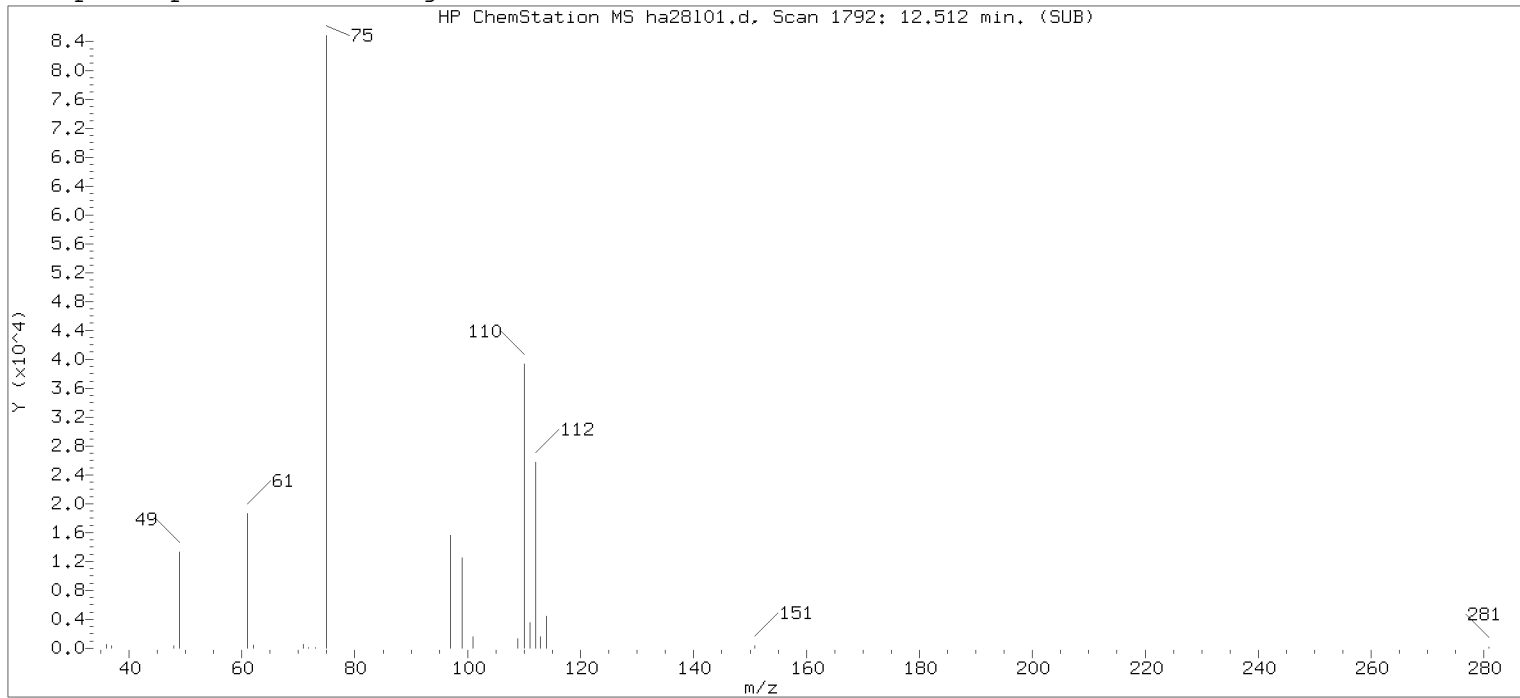
Reason for manual integration: improper integration

Analyst responsible for change:

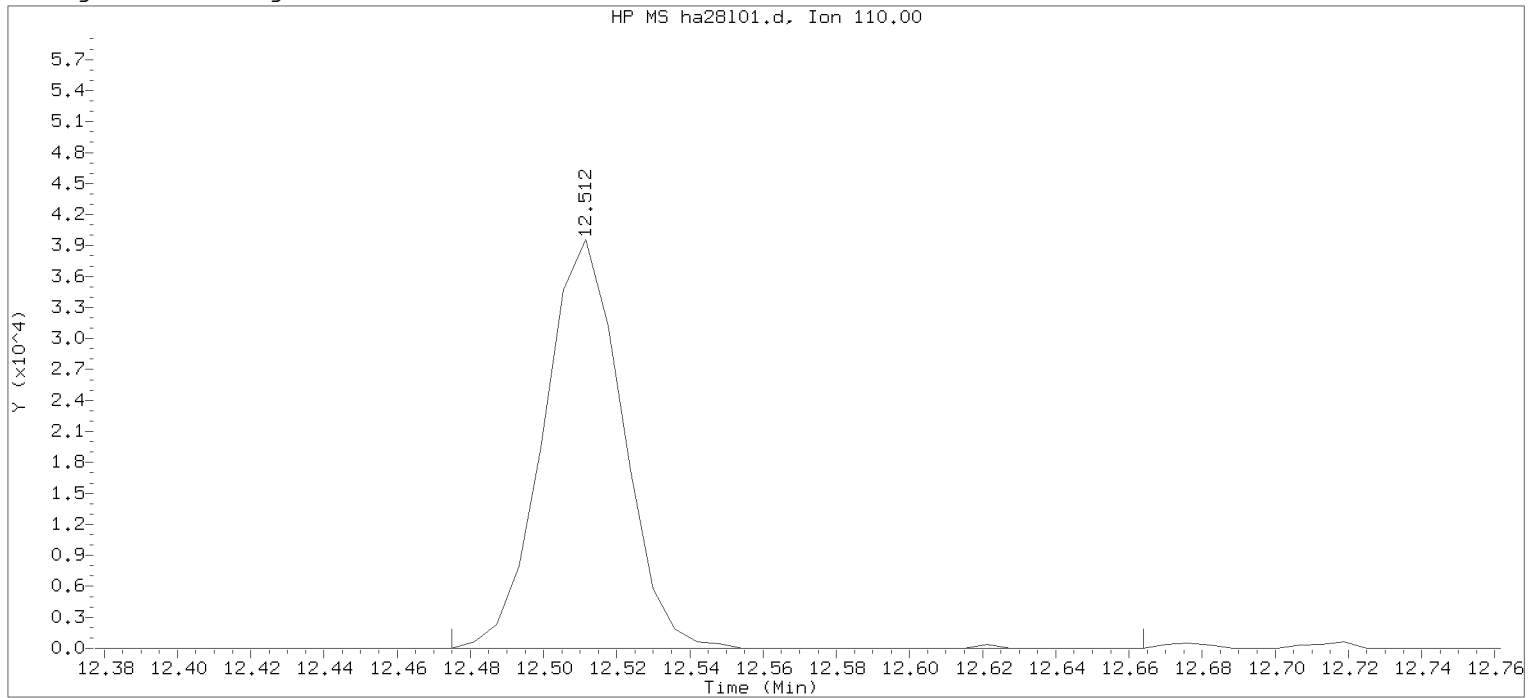
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:44.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28101.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:35 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 10:02 jkh09052

Sample Name: LCSH59

Lab Sample ID: LCSH59

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area	: 59324	
On-column Amount (ng)	: 4.9603	
Integration start scan	: 1785	Integration stop scan: 1816
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:44.
Target 3.5 esignature use

LCDH59

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDH59

Data file: /chem2/HP19094.i/20apr28a.b/ha28102.d

Injection date and time: 28-APR-2020 09:56

Data file Sample Info. Line: LCDH59;LCDH59;1;3;LCSD;;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464 (-0.006)	472	65	133501 (0)	50.00	
64) Fluorobenzene	7.951 (0.000)	1044	96	2060441 (1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1582424 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	851673 (-1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.061 (0.000)	113	517439	10.102	101%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	104812	10.559	106%		80 - 120
83) Toluene-d8	(3)	9.939 (0.000)	98	2068636	9.812	98%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	739233	9.478	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.062 (-0.000)	85	337899	4.375	4.37			0.1	1
2) Chloromethane	(2)	2.263 (-0.000)	50	391547	5.135	5.14			0.06	0.5
5) Vinyl Chloride	(2)	2.391 (0.000)	62	368736	5.084	5.08			0.2	1
7) Bromomethane	(2)	2.739 (-0.000)	94	251368	4.839	4.84			0.5	1
8) Chloroethane	(2)	2.830 (-0.000)	64	206900	4.926	4.93			0.07	0.5
10) Trichlorofluoromethane	(2)	3.147 (-0.000)	101	451634	5.457	5.46			0.2	1
11) Ethyl ether	(2)	3.422 (-0.000)	59	192615	5.259	5.26		J	1	13
13) Acrolein	(1)	3.605 (0.001)	56	205543	34.191	34.19			3	25
15) 1,1-Dichloroethene	(2)	3.745 (-0.000)	96	230730	4.584	4.58			0.2	1
16) Freon 113	(2)	3.775 (-0.000)	101	252819	4.805	4.80			0.1	1
14) Acetone	(1)	3.788 (-0.001)	43	262917	32.412	32.41			0.9	10
17) Methyl Iodide	(2)	3.958 (-0.000)	142	428406	4.410	4.41		J	0.6	10
19) Carbon Disulfide	(2)	4.074 (-0.000)	76	701023	4.552	4.55		J	0.4	10
23) Allyl Chloride	(2)	4.257 (-0.000)	41	389800	4.558	4.56		J	0.8	10
24) Methylene Chloride	(2)	4.452 (-0.000)	84	267881	4.944	4.94			0.2	1
30) Acrylonitrile	(1)	4.793 (0.002)	53	250017	25.257	25.26			0.5	10
32) trans-1,2-Dichloroethene	(2)	4.879 (-0.000)	96	259442	4.688	4.69			0.2	1
34) 1,1-Dichloroethane	(2)	5.537 (0.000)	63	498004	4.985	4.98			0.1	1
36) 2-Chloro-1,3-Butadiene	(2)	5.641 (0.000)	53	394646	4.613	4.61		J	0.5	10
39) 2-Butanone	(1)	6.324 (0.003)	43	478659	37.738	37.74			0.6	10
43) Propionitrile	(1)	6.415 (0.003)	54	137999	39.719	39.72		J	10	100
46) Methacrylonitrile	(1)	6.634 (0.000)	67	477820	38.452	38.45		J	10	100
49) Tetrahydrofuran	(1)	6.702 (0.002)	71	89117	25.432	25.43			2	25
50) Chloroform	(2)	6.848 (-0.000)	83	483869	4.962	4.96			0.09	1
52) 1,1,1-Trichloroethane	(2)	7.073 (0.000)	97	416911	4.598	4.60			0.1	1
55) Carbon Tetrachloride	(2)	7.293 (-0.000)	117	374007	4.810	4.81			0.2	1
57) Isobutyl Alcohol	(1)	7.421 (0.000)	41	116778	119.560	119.56		J	4	200
59) Benzene	(2)	7.549 (-0.000)	78	1105977	4.935	4.93			0.07	1
60) 1,2-Dichloroethane	(2)	7.616 (0.000)	62	282879	4.896	4.90			0.1	1
68) Trichloroethene	(2)	8.433 (0.000)	95	288923	4.916	4.92			0.2	1
71) 1,2-Dichloropropane	(2)	8.768 (0.000)	63	292259	5.271	5.27			0.1	1

LCDH59

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDH59

Data file: /chem2/HP19094.i/20apr28a.b/ha28102.d

Injection date and time: 28-APR-2020 09:56

Data file Sample Info. Line: LCDH59;LCDH59;1;3;LCSD;;DAA3568;;ha28b01; Instrument ID: HP19094.i Batch: H201181AB

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Blank Data file reference: /chem2/HP19094.i/20apr28a.b/ha28b01.d

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM

Calibration date and time (Last Method Edit): 28-APR-2020 09:36

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20apr28a.b/ha28c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

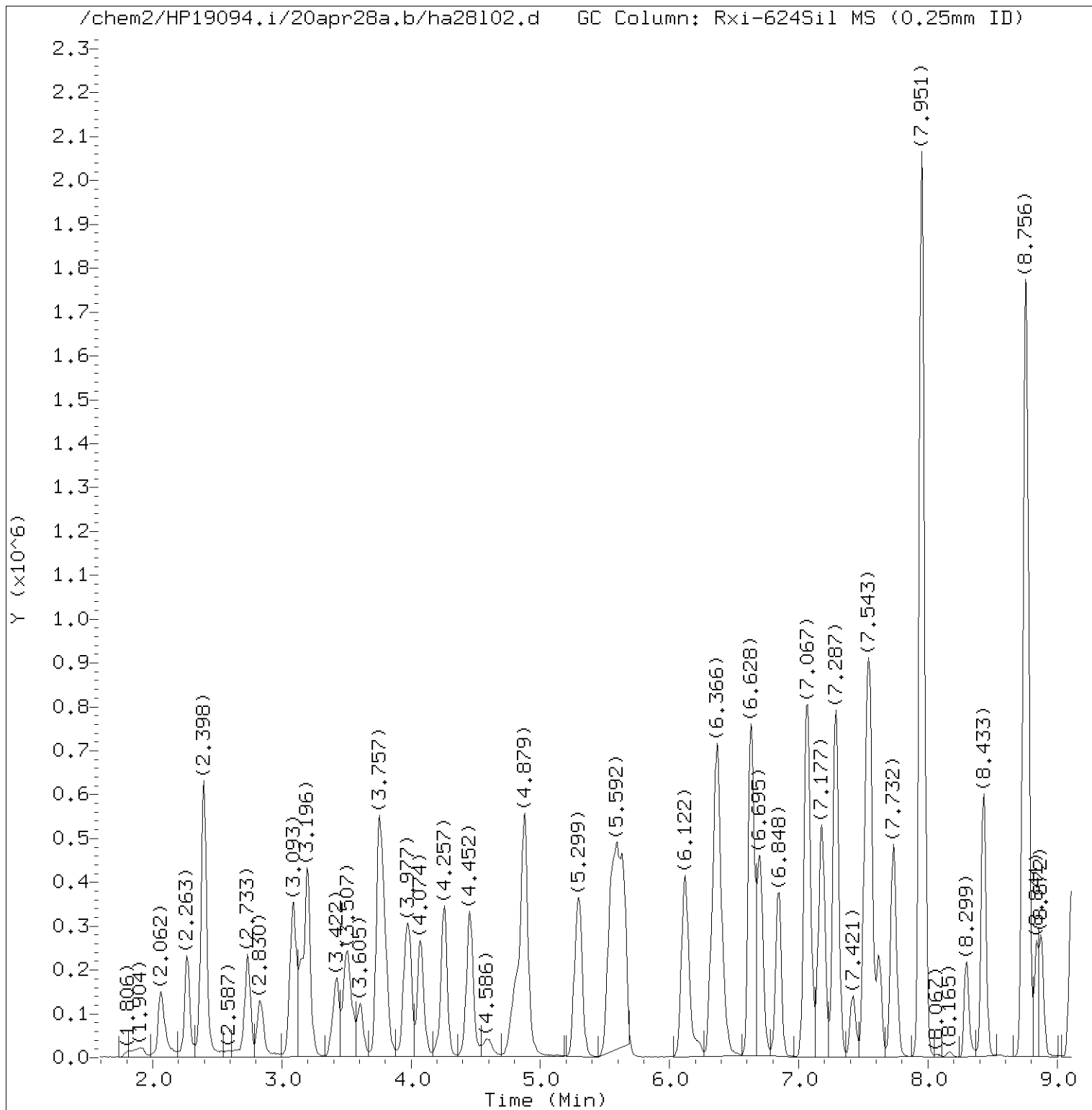
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
									Limit (in sample)	LOQ
72) Methyl Methacrylate	(1)	8.841(0.002)	69	126141	5.046	5.05		J	4	10
74) Dibromomethane	(2)	8.878(0.000)	93	126945	5.008	5.01			0.07	1
73) 1,4-Dioxane	(1)	8.848(0.004)	88	25494M	134.427	134.43		J	45	200
75) Bromodichloromethane	(2)	9.110(0.000)	83	343307	4.983	4.98			0.09	1
82) 4-Methyl-2-Pentanone	(1)	9.798(0.003)	43	745920	23.860	23.86			0.9	10
84) Toluene	(3)	10.012(-0.000)	92	706265	4.769	4.77			0.09	1
85) trans-1,3-Dichloropropene	(3)	10.262(-0.000)	75	316862	4.610	4.61			0.1	1
87) Ethyl Methacrylate	(3)	10.317(-0.000)	69	222263	4.171	4.17		J	0.8	10
89) 1,1,2-Trichloroethane	(3)	10.463(0.000)	97	188936	5.078	5.08			0.08	1
90) Tetrachloroethene	(3)	10.554(-0.000)	166	328967	4.887	4.89			0.06	1
91) 1,3-Dichloropropane	(3)	10.622(0.000)	76	321375	5.027	5.03			0.09	1
92) 2-Hexanone	(1)	10.664(0.003)	43	536145	25.099	25.10			0.6	10
94) Dibromochloromethane	(3)	10.835(0.000)	129	236650	4.967	4.97			0.07	1
96) 1,2-Dibromoethane	(3)	10.951(-0.000)	107	174861	4.918	4.92			0.06	1
100) 1,1,1,2-Tetrachloroethane	(3)	11.481(0.000)	131	272453	4.734	4.73			0.08	1
101) Ethylbenzene	(3)	11.481(0.000)	91	1355590	4.652	4.65			0.08	1
102) m+p-Xylene	(3)	11.597(0.000)	106	1066699	9.573	9.57			0.1	2
105) o-Xylene	(3)	11.920(0.000)	106	508935	4.645	4.64			0.1	1
106) Xylene (Total)	(3)		106	1575634	14.217	14.22			0.2	3
107) Styrene	(3)	11.938(0.000)	104	855674	4.812	4.81			0.07	1
108) Bromoform	(3)	12.097(0.000)	173	133247	4.798	4.80			0.1	1
114) 1,1,2,2-Tetrachloroethane	(4)	12.463(-0.000)	83	214878	4.832	4.83			0.2	1
116) trans-1,4-Dichloro-2-butene	(1)	12.487(0.003)	53	232718	19.817	19.82			1	10
117) 1,2,3-Trichloropropane	(4)	12.511(0.000)	110	60533M	5.084	5.08			0.1	1
127) Pentachloroethane	(4)	12.956(0.000)	167	210183	4.683	4.68		J	0.8	10
132) 1,3-Dichlorobenzene	(4)	13.188(-0.000)	146	638674	4.768	4.77			0.06	1
135) 1,4-Dichlorobenzene	(4)	13.261(0.000)	146	634149	4.853	4.85			0.07	1
140) 1,2-Dichlorobenzene	(4)	13.523(0.000)	146	567903	4.810	4.81			0.08	1
144) 1,2-Dibromo-3-chloropropane	(1)	14.066(0.004)	155	29941	4.471	4.47			0.2	1
146) 1,2,4-Trichlorobenzene	(4)	14.608(0.000)	180	376751	4.286	4.29			0.1	1
147) Hexachlorobutadiene	(4)	14.688(0.000)	225	217407	4.739	4.74			0.07	1
148) Naphthalene	(4)	14.791(0.000)	128	579849	3.780	3.78			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45. Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d
Injection date and time: 28-APR-2020 09:56

Instrument ID: HP19094.i
Analyst ID: jkh09052

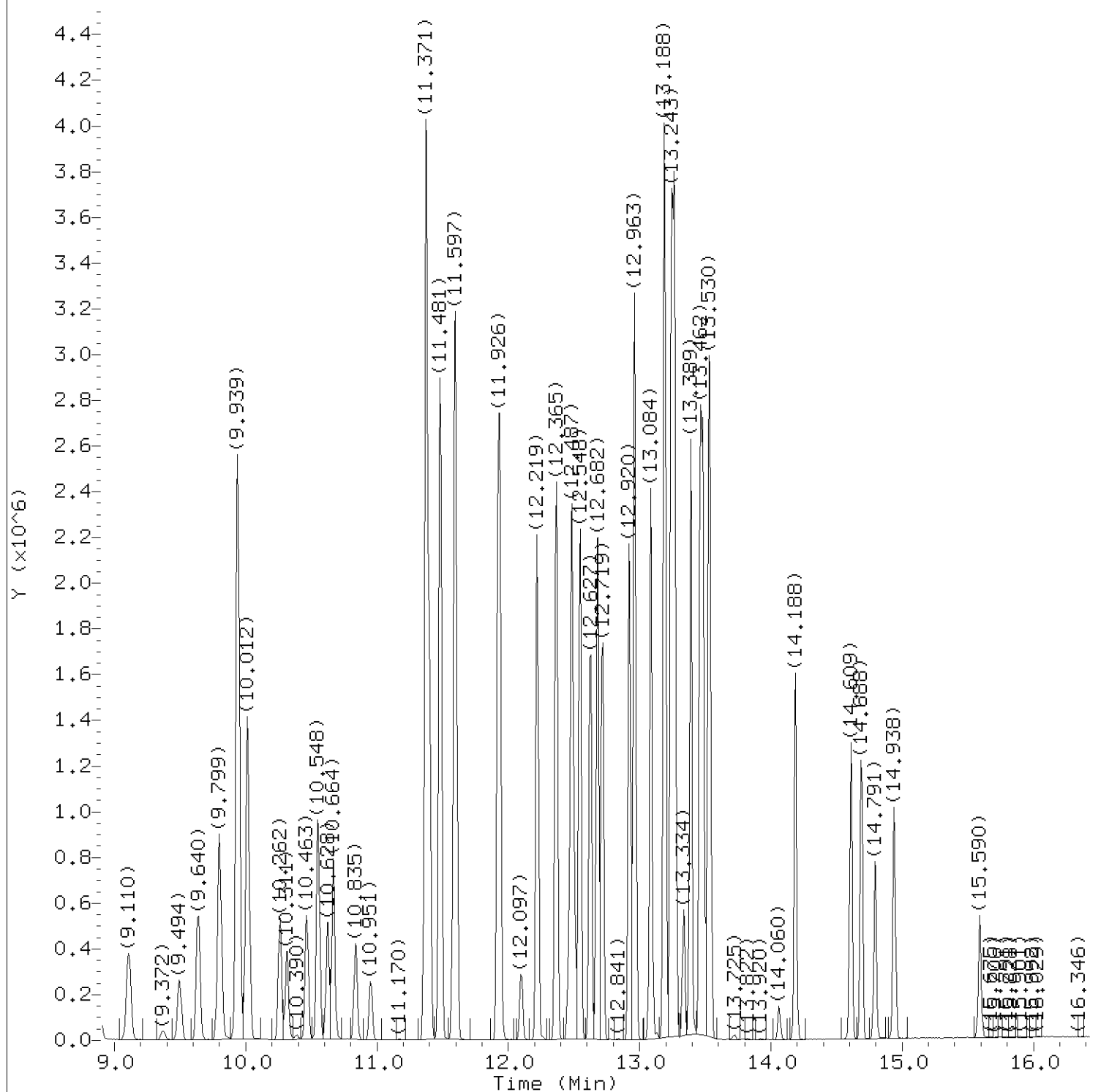
Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCDH59

Lab Sample ID: LCDH59

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d
Injection date and time: 28-APR-2020 09:56

Instrument ID: HP19094.i
Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCDH59

Lab Sample ID: LCDH59

Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d
 Injection date and time: 28-APR-2020 09:56

Instrument ID: HP19094.i
 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 09:36
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCDH59

Lab Sample ID: LCDH59

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.062	85	337899	4.375
2) Chloromethane	(2)	2.263	50	391547	5.135
5) Vinyl Chloride	(2)	2.391	62	368736	5.084
7) Bromomethane	(2)	2.739	94	251368	4.839
8) Chloroethane	(2)	2.830	64	206900	4.926
10) Trichlorofluoromethane	(2)	3.147	101	451634	5.457
11) Ethyl ether	(2)	3.422	59	192615	5.259
13) Acrolein	(1)	3.605	56	205543	34.191
15) 1,1-Dichloroethene	(2)	3.745	96	230730	4.584
16) Freon 113	(2)	3.775	101	252819	4.805
14) Acetone	(1)	3.788	43	262917	32.412
17) Methyl Iodide	(2)	3.958	142	428406	4.410
19) Carbon Disulfide	(2)	4.074	76	701023	4.552
23) Allyl Chloride	(2)	4.257	41	389800	4.558
24) Methylene Chloride	(2)	4.452	84	267881	4.944
27) *t-Butyl Alcohol-d10	(1)	4.464	65	133501	50.000
30) Acrylonitrile	(1)	4.793	53	250017	25.257
32) trans-1,2-Dichloroethene	(2)	4.879	96	259442	4.688
34) 1,1-Dichloroethane	(2)	5.537	63	498004	4.985
36) 2-Chloro-1,3-Butadiene	(2)	5.641	53	394646	4.613
39) 2-Butanone	(1)	6.324	43	478659	37.738
43) Propionitrile	(1)	6.415	54	137999	39.719
46) Methacrylonitrile	(1)	6.635	67	477820	38.452
49) Tetrahydrofuran	(1)	6.702	71	89117	25.432
50) Chloroform	(2)	6.848	83	483869	4.962
51) \$Dibromofluoromethane	(2)	7.061	113	517439	10.102
52) 1,1,1-Trichloroethane	(2)	7.073	97	416911	4.598
55) Carbon Tetrachloride	(2)	7.293	117	374007	4.810
57) Isobutyl Alcohol	(1)	7.421	41	116778	119.560
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	104812	10.559
59) Benzene	(2)	7.549	78	1105977	4.935
60) 1,2-Dichloroethane	(2)	7.616	62	282879	4.896
64) *Fluorobenzene	(2)	7.951	96	2060441	10.000
68) Trichloroethene	(2)	8.433	95	288923	4.916
71) 1,2-Dichloropropane	(2)	8.768	63	292259	5.271
72) Methyl Methacrylate	(1)	8.841	69	126141	5.046
73) 1,4-Dioxane	(1)	8.848	88	25494M	134.427
74) Dibromomethane	(2)	8.878	93	126945	5.008

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d
 Injection date and time: 28-APR-2020 09:56

Instrument ID: HP19094.i
 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
 Calibration date and time: 28-APR-2020 09:36
 Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCDH59

Lab Sample ID: LCDH59

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
75) Bromodichloromethane	(2)	9.110	83	343307	4.983
82) 4-Methyl-2-Pentanone	(1)	9.799	43	745920	23.860
83) \$Toluene-d8	(3)	9.939	98	2068636	9.812
84) Toluene	(3)	10.012	92	706265	4.769
85) trans-1,3-Dichloropropene	(3)	10.262	75	316862	4.610
87) Ethyl Methacrylate	(3)	10.317	69	222263	4.171
89) 1,1,2-Trichloroethane	(3)	10.463	97	188936	5.078
90) Tetrachloroethene	(3)	10.554	166	328967	4.887
91) 1,3-Dichloropropane	(3)	10.622	76	321375	5.027
92) 2-Hexanone	(1)	10.664	43	536145	25.099
94) Dibromochloromethane	(3)	10.835	129	236650	4.967
96) 1,2-Dibromoethane	(3)	10.951	107	174861	4.918
98) *Chlorobenzene-d5	(3)	11.371	117	1582424	10.000
100) 1,1,1,2-Tetrachloroethane	(3)	11.481	131	272453	4.734
101) Ethylbenzene	(3)	11.481	91	1355590	4.652
102) m+p-Xylene	(3)	11.597	106	1066699	9.573
106) Xylene (Total)	(3)		106	1575634	14.217
105) o-Xylene	(3)	11.920	106	508935	4.645
107) Styrene	(3)	11.938	104	855674	4.812
108) Bromoform	(3)	12.097	173	133247	4.798
112) \$4-Bromofluorobenzene	(3)	12.365	95	739233	9.478
114) 1,1,2,2-Tetrachloroethane	(4)	12.463	83	214878	4.832
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	232718	19.817
117) 1,2,3-Trichloropropane	(4)	12.511	110	60533M	5.084
127) Pentachloroethane	(4)	12.956	167	210183	4.683
132) 1,3-Dichlorobenzene	(4)	13.188	146	638674	4.768
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	851673	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	634149	4.853
140) 1,2-Dichlorobenzene	(4)	13.523	146	567903	4.810
144) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	29941	4.471
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	376751	4.286
147) Hexachlorobutadiene	(4)	14.688	225	217407	4.739
148) Naphthalene	(4)	14.791	128	579849	3.780

M = Compound was manually integrated.

* = Compound is an internal standard.

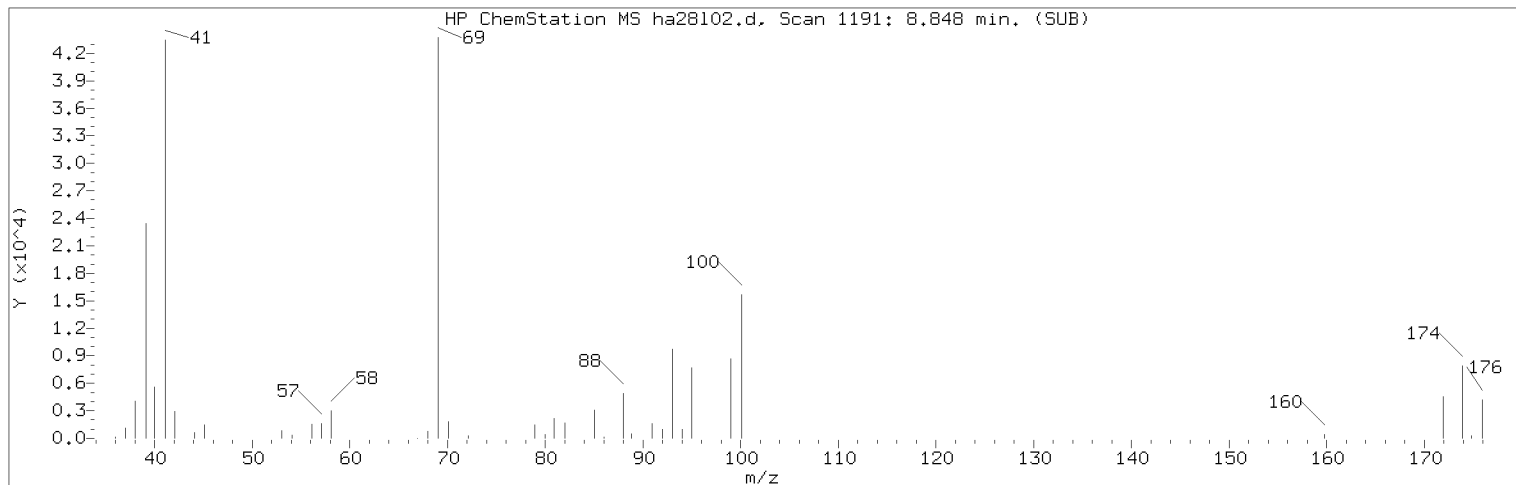
\$ = Compound is a surrogate standard.

page 2 of 2

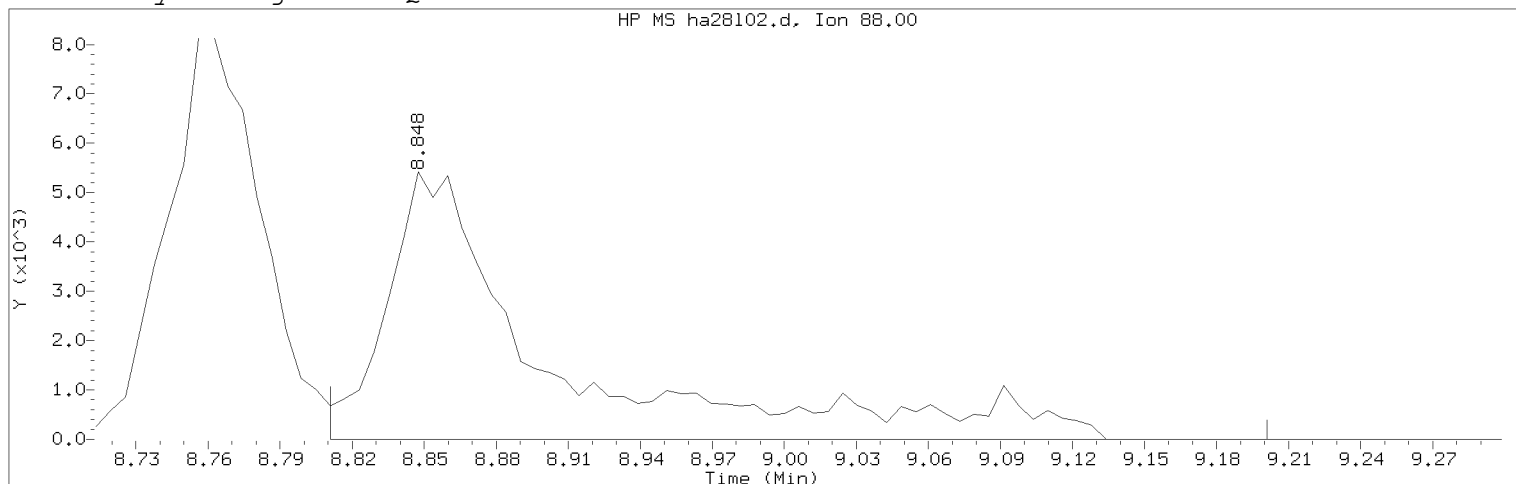
Digitally signed by Miranda E. Campbell
 on 04/28/2020 at 22:45.

Target 3.5 esignature user ID: mec29284

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:56

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 27091-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCDH59

Lab Sample ID: LCDH59

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1191	
Retention Time (minutes)	: 8.848	
Quant Ion	: 88.00	
Area (flag)	: 25494M	
On-Column Amount (ng)	: 134.4267	
Integration start scan	: 1184	Integration stop scan: 1248
Y at integration start	: 0	Y at integration end: 0

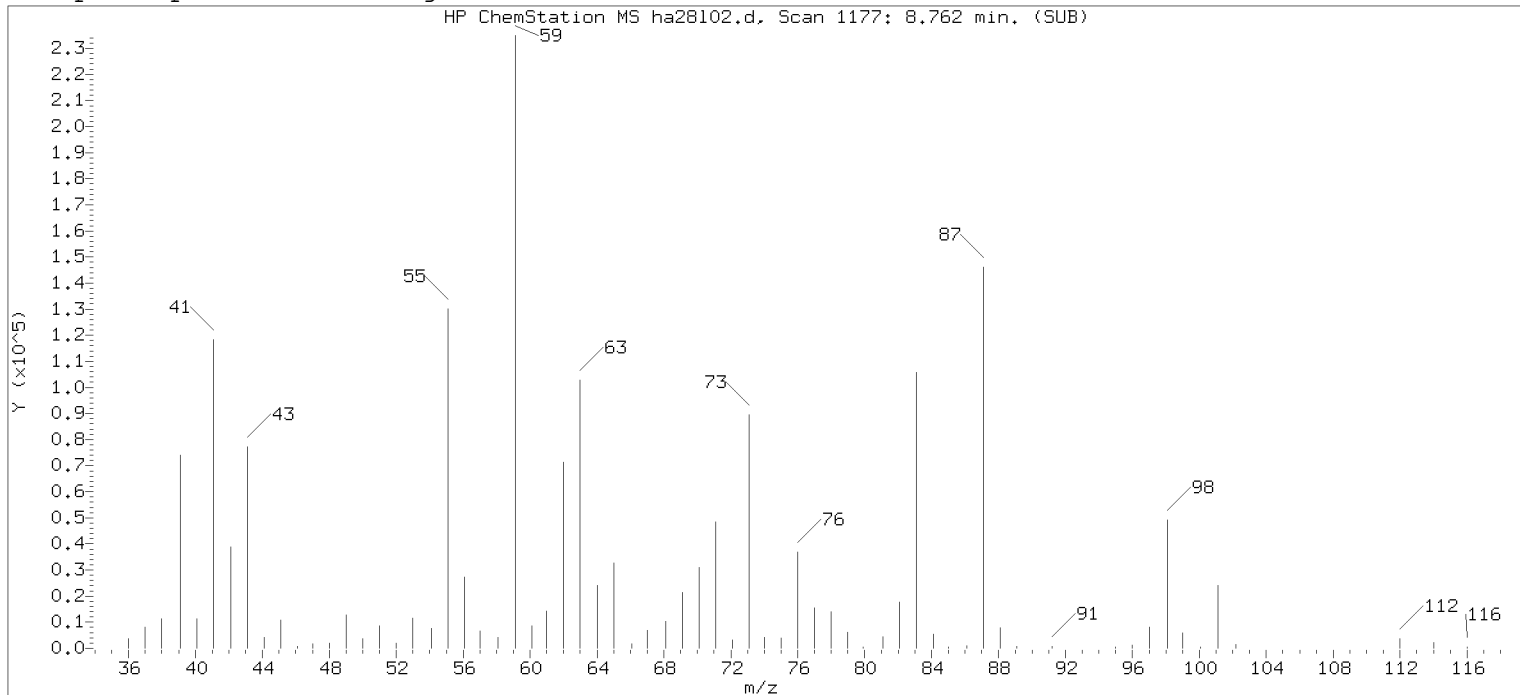
Reason for manual integration: improper integration

Analyst responsible for change:

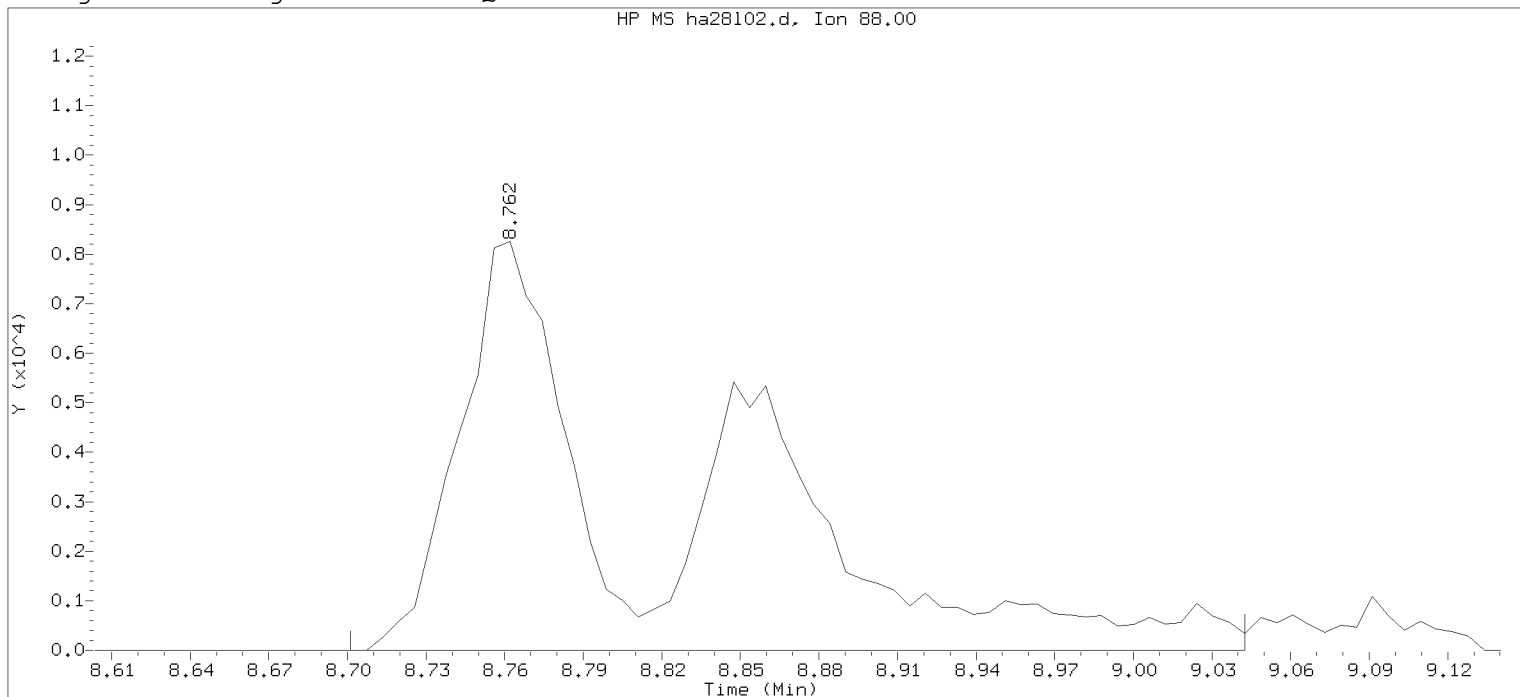
Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:56

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 16340-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:14 Automation

Sample Name: LCDH59

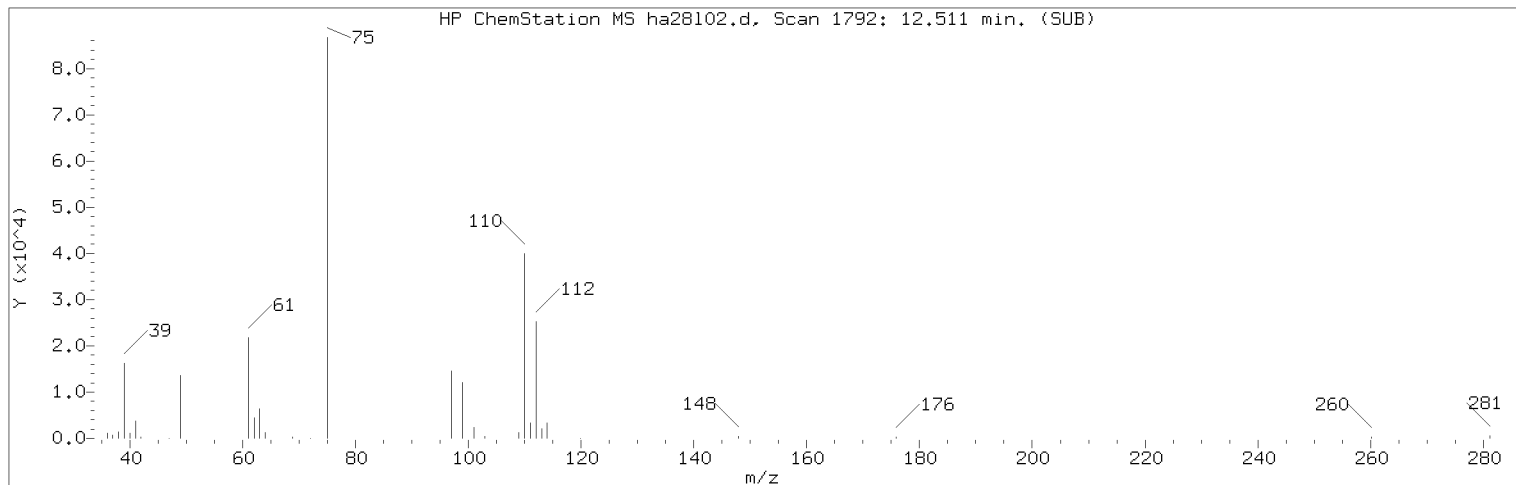
Lab Sample ID: LCDH59

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1177
 Retention Time (minutes): 8.762
 Quant Ion : 88.00
 Area : 44909
 On-column Amount (ng) : 236.8019
 Integration start scan : 1166
 Y at integration start : 0

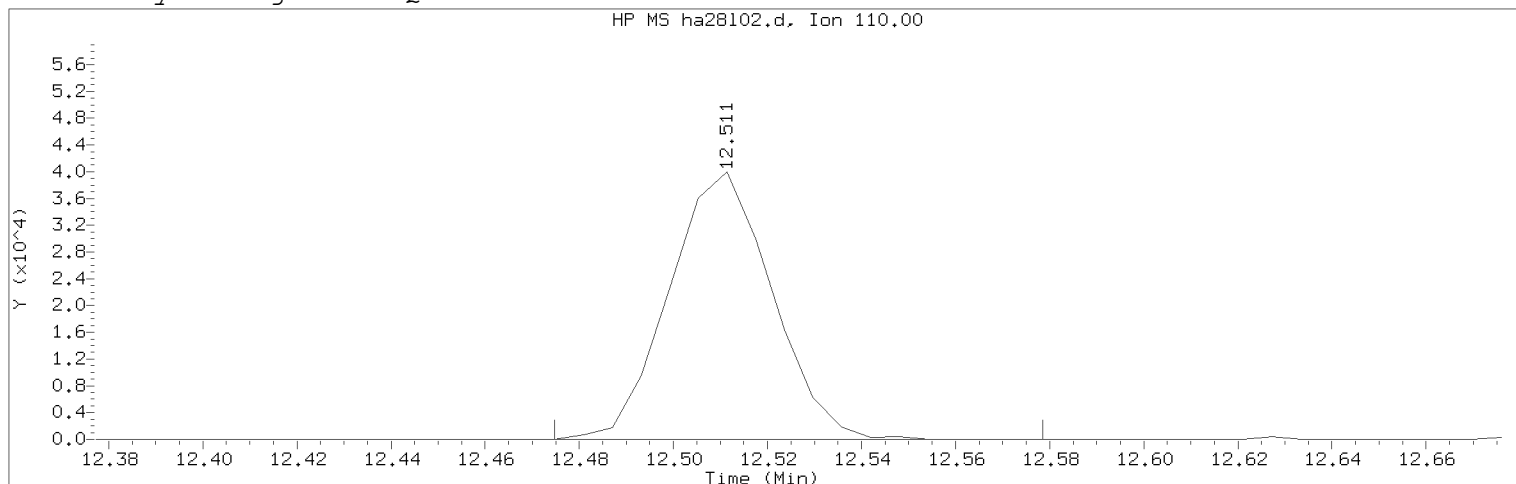
Integration stop scan: 1222
 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45.
 Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d Instrument ID: HP19094.i
Injection date and time: 28-APR-2020 09:56 Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 28-APR-2020 09:36
Date, time and analyst ID of latest file update: 28-Apr-2020 22:43 mec29284

Sample Name: LCDH59

Lab Sample ID: LCDH59

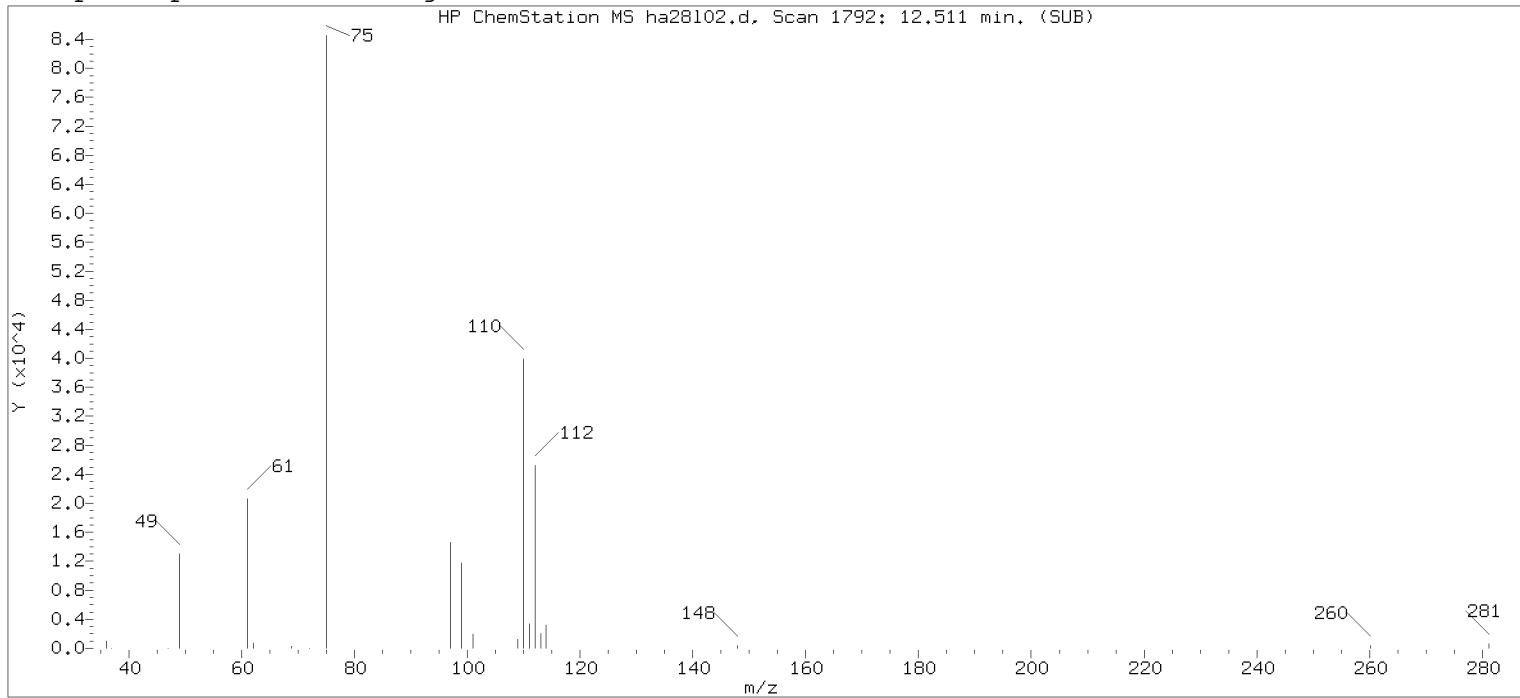
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.511	
Quant Ion	: 110.00	
Area (flag)	: 60533M	
On-Column Amount (ng)	: 5.0837	
Integration start scan	: 1785	Integration stop scan: 1802
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

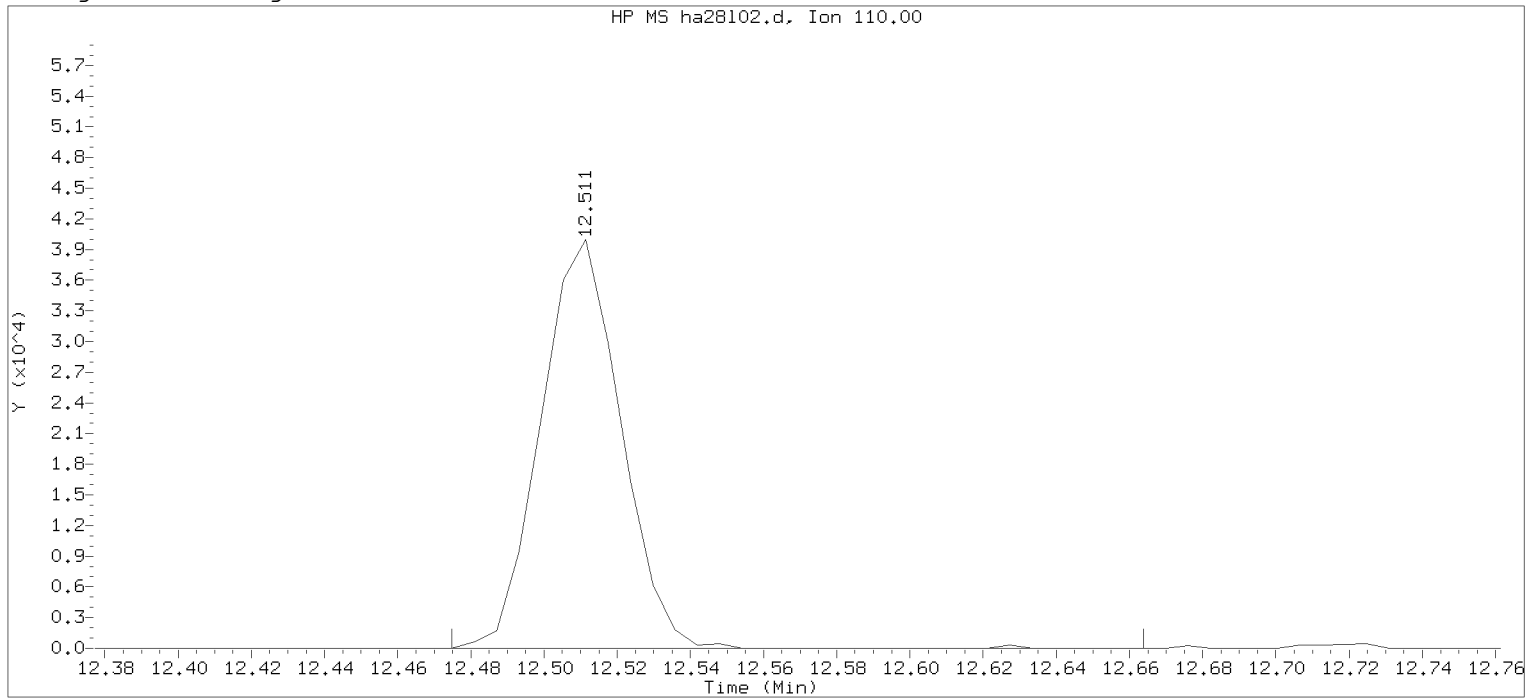
Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 04/28/2020 at 22:45.
Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Chelsea B. Riehl on 04/29/2020 at 14:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20apr28a.b/ha28102.d

Instrument ID: HP19094.i

Injection date and time: 28-APR-2020 09:56

Analyst ID: jkh09052

Method used: /chem2/HP19094.i/20apr28a.b/m8260c25.m

Sublist used: 16340-SM

Calibration date and time: 28-APR-2020 09:36

Date, time and analyst ID of latest file update: 28-Apr-2020 10:14 Automation

Sample Name: LCDH59

Lab Sample ID: LCDH59

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.511	
Quant Ion	: 110.00	
Area	: 60657	
On-column Amount (ng)	: 5.0941	
Integration start scan	: 1785	Integration stop scan: 1816
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 04/28/2020 at 22:45.
Target 3.5 esignature use

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1300794	16C1	X		1	
1300795	16MW8	X		1	
1300796	16MW9	X		1	
1300797	16WC1A	X		1	Unspiked
1300798	16WC1A MS	X		1	Matrix Spike
1300799	16WC1A MSD	X		1	Matrix Spike Duplicate
1300800	16WDUP	X		1	Field Duplicate Sample
1300801	16WC1B	X		1	
1300802	16-2	X		1	
1300803	16-3	X		1	
1300804	16-5	X		1	
1300805	16WC2B	X		1	
1300806	16SPRING	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 1300794-1300801: Analysis: 14241)

The QC limits for 1,4-Naphthoquinone are advisory due to the erratic performance of the compound.

The QC limits for 1,4-Phenylenediamine are advisory. It is a known poor performer.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

The % RPD for target analyte(s) in the Laboratory Control Spike/Spike Duplicate is outside the QC acceptance limits as noted on the QC Summary. Since the individual % recovery is within the acceptance limits, the data is reported.

Batch#: 20112WAH026 (Sample number(s): 1300794-1300806, UNSPK: 1300797)

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: 1,3,5-Trinitrobenzene, Chlorobenzilate, Dimethoate, Famphur, Kepone

The recovery(ies) for the following analyte(s) in the LCS and LCSD exceeded the acceptance window indicating a positive bias. Methyl parathion
Refer to the QC Summary forms for more information.

The recovery(ies) for the following analyte(s) in the LCS and LCSD were below the acceptance window: 1,4-Naphthoquinone, 1,4-Phenylenediamine, a,a-Dimethylphenethylamine, Famphur
Refer to the QC Summary forms for more information.

MS/MSD

Batch#: 20112WAH026 (Sample number(s): 1300794-1300806, UNSPK: 1300797)

The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: Pentachlorophenol

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: 1-Naphthylamine, Aniline

The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2,4,6-

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Trichlorophenol, 2,4-Dichlorophenol, 2-Chlorophenol, 3,3'-Dimethylbenzidine,
Pentachlorophenol

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

(Sample number(s): 1300797: Analysis: 14241)

The GC/MS semivolatile surrogate(s) is outside QC acceptance limits. The associated matrix spike and matrix spike duplicate samples were analyzed and the recovery for the surrogate(s) is again outside of QC limits, indicating a matrix effect.

(Sample number(s): 1300798: Analysis: 14241)

The GC/MS semivolatile surrogate recoveries are outside of QC limits. The unspiked background and matrix spike duplicate samples were analyzed and surrogate recoveries are again outside of QC limits, indicating a matrix effect.

(Sample number(s): 1300799: Analysis: 14241)

The GC/MS semivolatile surrogate recoveries were outside of QC limits. The unspiked background and matrix spike samples were analyzed and surrogate recoveries are again outside of QC limits, indicating a matrix effect.

(Sample number(s): 1300800-1300801: Analysis: 14241)

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

Batch#: 20112WAH026 (Sample number(s): 1300794-1300806, UNSPK: 1300797)

The recovery(ies) for the following surrogate(s) were below the acceptance window:
2,4,6-Tribromophenol (1300797 UNSPK, 1300798, 1300799, 1300800, 1300801), 2-Fluorophenol (1300797 UNSPK, 1300800, 1300801), Phenol-d6 (1300801)

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

Quality Control Reference List GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF59

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
3 SVOCs 8270D	20112WAH026	SBLKWH112	04/23/2020 11:13
		112WHLCS	04/23/2020 11:43
		1300802	04/23/2020 19:07
		1300803	04/28/2020 09:55
		1300804	04/28/2020 10:25
		1300805	04/28/2020 10:55
		1300806	04/28/2020 11:24
SVOAs 8270D/E MINI	20112WAH026	SBLKWH112	04/23/2020 11:13
		112WHLCS	04/23/2020 11:43
		112WHLCS1	04/23/2020 12:12
		112WHLCS1	04/23/2020 12:42
		1300794	04/23/2020 16:39
		1300795	04/23/2020 17:08
		1300796	04/23/2020 17:38
		1300797 UNSPK	04/23/2020 13:12
		1300798 MS	04/23/2020 13:41
		1300799 MSD	04/23/2020 14:11
		1300800	04/23/2020 18:08
		1300801	04/23/2020 18:37

Fraction: Semivolatiles by GC/MS

20112WAH026 / SBLKWH112 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
N-Nitrosodimethylamine	04/23/20	N.D.	ug/l	2	10
Pyridine	04/23/20	N.D.	ug/l	2	10
2-Picoline	04/23/20	N.D.	ug/l	2	10
N-Nitrosomethylethylamine	04/23/20	N.D.	ug/l	2	10
Methyl methanesulfonate	04/23/20	N.D.	ug/l	1	10
N-Nitrosodiethylamine	04/23/20	N.D.	ug/l	0.5	10
Ethyl methanesulfonate	04/23/20	N.D.	ug/l	0.5	10
Phenol	04/23/20	N.D.	ug/l	0.8	10
Aniline	04/23/20	N.D.	ug/l	3	10
bis(2-Chloroethyl)ether	04/23/20	N.D.	ug/l	0.5	2
2-Chlorophenol	04/23/20	N.D.	ug/l	1	10
o-Toluidine	04/23/20	N.D.	ug/l	4	10
Benzyl alcohol	04/23/20	N.D.	ug/l	10	30
2-Methylphenol	04/23/20	N.D.	ug/l	1	10
bis(2-Chloroisopropyl)ether	04/23/20	N.D.	ug/l	0.5	10
2,2'-oxybis(1-Chloropropane)	04/23/20	N.D.	ug/l	0.5	2
2,4-Dichlorophenol	04/23/20	N.D.	ug/l	2	10
N-Nitrosopyrrolidine	04/23/20	N.D.	ug/l	0.5	10
Acetophenone	04/23/20	N.D.	ug/l	4	10
4-Methylphenol	04/23/20	N.D.	ug/l	2	20
N-Nitroso-di-n-propylamine	04/23/20	N.D.	ug/l	0.7	10
N-Nitrosomorpholine	04/23/20	N.D.	ug/l	2	10
Nitrobenzene	04/23/20	N.D.	ug/l	0.5	10
N-Nitrosopiperidine	04/23/20	N.D.	ug/l	0.5	10
Isophorone	04/23/20	N.D.	ug/l	0.5	10
2-Nitrophenol	04/23/20	N.D.	ug/l	3	10
2,4-Dimethylphenol	04/23/20	N.D.	ug/l	3	10
O,O,O-Triethylphosphorothioate	04/23/20	N.D.	ug/l	2	10
bis(2-Chloroethoxy)methane	04/23/20	N.D.	ug/l	0.5	2
a,a-Dimethylphenethylamine	04/23/20	N.D.	ug/l	5	50
4-Chloroaniline	04/23/20	N.D.	ug/l	4	10
2,6-Dichlorophenol	04/23/20	N.D.	ug/l	0.5	10
Hexachloropropene	04/23/20	N.D.	ug/l	2	10
N-Nitrosodi-n-butylamine	04/23/20	N.D.	ug/l	12	25
1,4-Phenylenediamine	04/23/20	N.D.	ug/l	75	300
4-Chloro-3-methylphenol	04/23/20	N.D.	ug/l	1	10
Safrole	04/23/20	N.D.	ug/l	2	10
2-Methylnaphthalene	04/23/20	N.D.	ug/l	0.3	10
Hexachlorocyclopentadiene	04/23/20	N.D.	ug/l	5	11
1,2,4,5-Tetrachlorobenzene	04/23/20	N.D.	ug/l	2	10
2,4,6-Trichlorophenol	04/23/20	N.D.	ug/l	0.6	10
2,4,5-Trichlorophenol	04/23/20	N.D.	ug/l	0.8	10
Isosafrole	04/23/20	N.D.	ug/l	4	10
2-Chloronaphthalene	04/23/20	N.D.	ug/l	0.5	10
2-Nitroaniline	04/23/20	N.D.	ug/l	2	10

Fraction: Semivolatiles by GC/MS

20112WAH026 / SBLKWH112 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,4-Naphthoquinone	04/23/20	N.D.	ug/l	25	60
Dimethylphthalate	04/23/20	N.D.	ug/l	2	10
1,3-Dinitrobenzene	04/23/20	N.D.	ug/l	2	10
2,6-Dinitrotoluene	04/23/20	N.D.	ug/l	0.5	10
Acenaphthylene	04/23/20	N.D.	ug/l	0.5	10
3-Nitroaniline	04/23/20	N.D.	ug/l	3	10
Acenaphthene	04/23/20	N.D.	ug/l	0.4	10
2,4-Dinitrophenol	04/23/20	N.D.	ug/l	14	30
4-Nitrophenol	04/23/20	N.D.	ug/l	10	30
Pentachlorobenzene	04/23/20	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	04/23/20	N.D.	ug/l	1	10
Dibenzofuran	04/23/20	N.D.	ug/l	0.6	10
1-Naphthylamine	04/23/20	N.D.	ug/l	8	21
2,3,4,6-Tetrachlorophenol	04/23/20	N.D.	ug/l	4	10
2-Naphthylamine	04/23/20	N.D.	ug/l	7	21
Diethylphthalate	04/23/20	N.D.	ug/l	2	10
Thionazin	04/23/20	N.D.	ug/l	2	10
Fluorene	04/23/20	N.D.	ug/l	0.4	10
4-Chlorophenyl-phenylether	04/23/20	N.D.	ug/l	0.5	10
5-Nitro-o-toluidine	04/23/20	N.D.	ug/l	4	10
4-Nitroaniline	04/23/20	N.D.	ug/l	0.9	10
4,6-Dinitro-2-methylphenol	04/23/20	N.D.	ug/l	8	21
N-Nitrosodiphenylamine	04/23/20	N.D.	ug/l	0.7	10
NDPA as diphenylamine	04/23/20	N.D.	ug/l	0.7	10
1,3,5-Trinitrobenzene	04/23/20	N.D.	ug/l	97	200
Phorate	04/23/20	N.D.	ug/l	2	10
Phenacetin	04/23/20	N.D.	ug/l	0.5	10
4-Bromophenyl-phenylether	04/23/20	N.D.	ug/l	0.6	10
Diallate trans/cis	04/23/20	N.D.	ug/l	1	10
Hexachlorobenzene	04/23/20	N.D.	ug/l	0.9	10
Dimethoate	04/23/20	N.D.	ug/l	3	10
Pentachlorophenol	04/23/20	N.D.	ug/l	3	10
4-Aminobiphenyl	04/23/20	N.D.	ug/l	5	11
Pentachloronitrobenzene	04/23/20	N.D.	ug/l	2	10
Pronamide	04/23/20	N.D.	ug/l	1	10
Phenanthrene	04/23/20	N.D.	ug/l	0.5	10
Anthracene	04/23/20	N.D.	ug/l	0.5	10
Disulfoton	04/23/20	N.D.	ug/l	25	50
Methyl parathion	04/23/20	N.D.	ug/l	5	10
Di-n-butylphthalate	04/23/20	N.D.	ug/l	2	10
Parathion	04/23/20	N.D.	ug/l	7	12
4-Nitroquinoline-1-oxide	04/23/20	N.D.	ug/l	20	60
Methapyrilene	04/23/20	N.D.	ug/l	15	50
Isodrin	04/23/20	N.D.	ug/l	0.5	10
Fluoranthene	04/23/20	N.D.	ug/l	0.4	10

Fraction: Semivolatiles by GC/MS

20112WAH026 / SBLKWH112 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Pyrene	04/23/20	N.D.	ug/l	0.4	10
Aramite	04/23/20	N.D.	ug/l	5	15
p-Dimethylaminoazobenzene	04/23/20	N.D.	ug/l	5	10
Chlorobenzilate	04/23/20	N.D.	ug/l	3	10
3,3'-Dimethylbenzidine	04/23/20	N.D.	ug/l	25	75
Butylbenzylphthalate	04/23/20	N.D.	ug/l	2	10
Famphur	04/23/20	N.D.	ug/l	25	50
Kepone	04/23/20	N.D.	ug/l	25	50
2-Acetylaminofluorene	04/23/20	N.D.	ug/l	10	21
3,3'-Dichlorobenzidine	04/23/20	N.D.	ug/l	3	10
Benzo(a)anthracene	04/23/20	N.D.	ug/l	0.5	10
Chrysene	04/23/20	N.D.	ug/l	0.3	10
bis(2-Ethylhexyl)phthalate	04/23/20	N.D.	ug/l	5	11
Di-n-octylphthalate	04/23/20	N.D.	ug/l	5	11
Benzo(b)fluoranthene	04/23/20	N.D.	ug/l	1	10
7,12-Dimethylbenz[a]anthracene	04/23/20	N.D.	ug/l	5	11
Benzo(k)fluoranthene	04/23/20	N.D.	ug/l	2	10
Benzo(a)pyrene	04/23/20	N.D.	ug/l	2	10
3-Methylcholanthrene	04/23/20	N.D.	ug/l	4	10
Indeno(1,2,3-cd)pyrene	04/23/20	N.D.	ug/l	0.2	10
Dibenz(a,h)anthracene	04/23/20	N.D.	ug/l	0.4	10
Benzo(g,h,i)perylene	04/23/20	N.D.	ug/l	0.4	10

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAF59
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

Sample	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
20112WAH026												
SBLKWH112	89	18 - 141	65	44 - 102	44	10 - 84	71	38 - 113	32	10 - 67	94	34 - 128
112WHLCS	99	18 - 141	78	44 - 102	61	10 - 84	79	38 - 113	50	10 - 67	102	34 - 128
112WHLCS1	86	18 - 141	76	44 - 102	60	10 - 84	79	38 - 113	47	10 - 67	98	34 - 128
1300794	86	18 - 141	71	44 - 102	44	10 - 84	72	38 - 113	43	10 - 67	104	34 - 128
1300795	77	18 - 141	75	44 - 102	35	10 - 84	76	38 - 113	40	10 - 67	95	34 - 128
1300796	79	18 - 141	74	44 - 102	47	10 - 84	75	38 - 113	48	10 - 67	99	34 - 128
1300797 UNSPK	11 *	18 - 141	72	44 - 102	6 *	10 - 84	76	38 - 113	22	10 - 67	37	34 - 128
1300798 MS	12 *	18 - 141	77	44 - 102	12	10 - 84	77	38 - 113	32	10 - 67	74	34 - 128
1300799 MSD	13 *	18 - 141	74	44 - 102	15	10 - 84	74	38 - 113	35	10 - 67	65	34 - 128
1300800	7 *	18 - 141	66	44 - 102	4 *	10 - 84	70	38 - 113	19	10 - 67	42	34 - 128
1300801	6 *	18 - 141	63	44 - 102	3 *	10 - 84	68	38 - 113	9 *	10 - 67	44	34 - 128
1300802			57	44 - 102			60	38 - 113			85	34 - 128
1300803			73	44 - 102			76	38 - 113			99	34 - 128
1300804			73	44 - 102			75	38 - 113			104	34 - 128
1300805			73	44 - 102			78	38 - 113			100	34 - 128
1300806			62	44 - 102			67	38 - 113			97	34 - 128

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 1300797 MS: 1300798 MSD: 1300799 Analyte	Batch: 20112WAH026 (Sample number(s): 1300794-1300806)								
	Spike Added ug/l MS/MSD	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
N-Nitrosodimethylamine	50.4 / 50.61	N.D.	25.2	26.31	50	52	17-101	4	30
Pyridine	50.4 / 50.61	N.D.	13.75	16.76	27	33	23-64	20	30
2-Picoline	50.4 / 50.61	N.D.	29.64	30.84	59	61	43-95	4	30
Phenol	50.4 / 50.61	N.D.	15.48	17.63	31	35	19-79	13	30
Aniline	50.4 / 50.61	N.D.	18.28	22.54	36 *	45	45-87	21	30
bis(2-Chloroethyl)ether	50.4 / 50.61	N.D.	40.39	41.29	80	82	58-108	2	30
2-Chlorophenol	50.4 / 50.61	N.D.	16.67	20.24	33 *	40 *	57-105	19	30
o-Toluidine	50.4 / 50.61	N.D.	22.58	28.1	45	56	45-104	22	30
Benzyl alcohol	50.4 / 50.61	N.D.	39.61	39.82	79	79	56-115	1	30
2-Methylphenol	50.4 / 50.61	N.D.	36.09	36.43	72	72	53-107	1	30
bis(2-Chloroisopropyl)ether	50.4 / 50.61	N.D.	39.74	40.31	79	80	44-108	1	30
2,2'-oxybis(1-Chloropropane)	50.4 / 50.61	N.D.	39.52	40.24	78	80	48-105	2	30
2,4-Dichlorophenol	50.4 / 50.61	N.D.	14.75	15.87	29 *	31 *	65-110	7	30
Acetophenone	50.4 / 50.61	N.D.	40.4	41.77	80	83	61-114	3	30
4-Methylphenol	50.4 / 50.61	N.D.	30.29	32.41	60	64	49-108	7	30
N-Nitroso-di-n-propylamine	50.4 / 50.61	N.D.	43.86	45.09	87	89	58-120	3	30
Nitrobenzene	50.4 / 50.61	N.D.	39.08	38.87	78	77	59-109	1	30
Isophorone	50.4 / 50.61	N.D.	43.1	41.44	86	82	63-120	4	30
2-Nitrophenol	50.4 / 50.61	N.D.	41.3	41.34	82	82	63-111	0	30
2,4-Dimethylphenol	50.4 / 50.61	N.D.	33.28	32.77	66	65	53-93	2	30
bis(2-Chloroethoxy)methane	50.4 / 50.61	N.D.	44.7	44.75	89	88	63-116	0	30
4-Chloroaniline	50.4 / 50.61	N.D.	25.43	28.11	50	56	45-111	10	30
4-Chloro-3-methylphenol	50.4 / 50.61	N.D.	40.29	39.34	80	78	60-118	2	30
2-Methylnaphthalene	50.4 / 50.61	N.D.	41.11	39.84	82	79	51-107	3	30
Hexachlorocyclopentadiene	100.81 / 101.21	N.D.	43.77	40.85	43	40	10-91	7	30
1,2,4,5-Tetrachlorobenzene	50.4 / 50.61	N.D.	35.22	33.36	70	66	40-102	5	30
2,4,6-Trichlorophenol	50.4 / 50.61	N.D.	5.27 J	5.43 J	10 *	11 *	69-117	3	30
2,4,5-Trichlorophenol	50.4 / 50.61	N.D.	12.9	13.91	26 *	27 *	66-118	8	30
2-Chloronaphthalene	50.4 / 50.61	N.D.	36.97	38.34	73	76	51-107	4	30
2-Nitroaniline	50.4 / 50.61	N.D.	45.09	43.97	89	87	66-126	3	30
Dimethylphthalate	50.4 / 50.61	N.D.	43.03	41.58	85	82	10-134	3	30
1,3-Dinitrobenzene	50.4 / 50.61	N.D.	49.89	46.51	99	92	73-114	7	30
2,6-Dinitrotoluene	50.4 / 50.61	N.D.	48.1	44.92	95	89	71-120	7	30
Acenaphthylene	50.4 / 50.61	N.D.	43.29	40.82	86	81	56-127	6	30
3-Nitroaniline	50.4 / 50.61	N.D.	41.3	40.34	82	80	55-121	2	30
Acenaphthene	50.4 / 50.61	N.D.	42.73	39.72	85	78	52-114	7	30

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 1300797 MS: 1300798 MSD: 1300799 Analyte	Batch: 20112WAH026 (Sample number(s): 1300794-1300806)								
	Spike Added ug/l MS/MSD	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
2,4-Dinitrophenol	100.81 / 101.21	N.D.	94.42	92.11	94	91	44-134	2	30
4-Nitrophenol	50.4 / 50.61	N.D.	23.65 J	23.59 J	47	47	23-89	0	30
2,4-Dinitrotoluene	50.4 / 50.61	N.D.	46.27	44.28	92	87	66-122	4	30
Dibenzofuran	50.4 / 50.61	N.D.	42.94	40.2	85	79	60-112	7	30
1-Naphthylamine	100.81 / 101.21	N.D.	28.05	33.32	28 *	33	30-97	17	30
2,3,4,6-Tetrachlorophenol	50.4 / 50.61	N.D.	6.39 J	5.74 J	13 *	11 *	66-124	11	30
2-Naphthylamine	100.81 / 101.21	N.D.	23.95	27.88	24	28	22-91	15	30
Diethylphthalate	50.4 / 50.61	N.D.	45.25	42.36	90	84	42-126	7	30
Fluorene	50.4 / 50.61	N.D.	43.8	40.05	87	79	56-115	9	30
4-Chlorophenyl-phenylether	50.4 / 50.61	N.D.	44.7	41.74	89	82	57-110	7	30
4-Nitroaniline	50.4 / 50.61	N.D.	37.23	35.73	74	71	55-113	4	30
4,6-Dinitro-2-methylphenol	50.4 / 50.61	N.D.	47.26	46.74	94	92	63-129	1	30
N-Nitrosodiphenylamine	50.4 / 50.61	N.D.	42.24	43.92	84	87	60-126	4	30
NDPA as diphenylamine	50.4 / 50.61	N.D.	41.86	43.74	83	86	70-130	4	30
4-Bromophenyl-phenylether	50.4 / 50.61	N.D.	41.21	40.44	82	80	60-114	2	30
Hexachlorobenzene	50.4 / 50.61	N.D.	41.14	39.77	82	79	60-117	3	30
Pentachlorophenol	50.4 / 50.61	N.D.	9.21 J	5.39 J	18 *	11 *	54-131	52 *	30
Phenanthrene	50.4 / 50.61	N.D.	43.46	43.84	86	87	65-113	1	30
Anthracene	50.4 / 50.61	N.D.	43.37	43.2	86	85	67-116	0	30
Di-n-butylphthalate	50.4 / 50.61	N.D.	44.3	44.28	88	87	58-125	0	30
Fluoranthene	50.4 / 50.61	N.D.	45.19	43.93	90	87	63-122	3	30
Pyrene	50.4 / 50.61	N.D.	43.37	40.99	86	81	65-115	6	30
3,3'-Dimethylbenzidine	100.81 / 101.21	N.D.	N.D.	N.D.	0 *	0 *	10-60	0	30
Butylbenzylphthalate	50.4 / 50.61	N.D.	46.36	42.03	92	83	40-133	10	30
3,3'-Dichlorobenzidine	50.4 / 50.61	N.D.	28.05	29.18	56	58	42-107	4	30
Benzo(a)anthracene	50.4 / 50.61	N.D.	46.97	42.5	93	84	68-123	10	30
Chrysene	50.4 / 50.61	N.D.	43.92	40.32	87	80	65-121	9	30
bis(2-Ethylhexyl)phthalate	50.4 / 50.61	N.D.	46.51	42.18	92	83	61-129	10	30
Di-n-octylphthalate	50.4 / 50.61	N.D.	47.81	46.93	95	93	60-136	2	30
Benzo(b)fluoranthene	50.4 / 50.61	N.D.	43.94	42.9	87	85	69-121	2	30
7,12-Dimethylbenz[a]anthracene	50.4 / 50.61	N.D.	41.39	40.09	82	79	61-121	3	30
Benzo(k)fluoranthene	50.4 / 50.61	N.D.	43.33	41.99	86	83	69-122	3	30
Benzo(a)pyrene	50.4 / 50.61	N.D.	39.66	39.04	79	77	71-117	2	30

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 1300797 MS: 1300798 MSD: 1300799 Analyte	Batch: 20112WAH026 (Sample number(s): 1300794-1300806)								
	Spike Added ug/l MS/MSD	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Indeno(1,2,3-cd)pyrene	50.4 / 50.61	N.D.	43.5	42.57	86	84	59-123	2	30
Dibenz(a,h)anthracene	50.4 / 50.61	N.D.	44.06	43.11	87	85	63-128	2	30
Benzo(g,h,i)perylene	50.4 / 50.61	N.D.	41.11	40.76	82	81	60-119	1	30

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

SDG: RAF59
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 112WHLCS	Batch: 20112WAH026 (Sample number(s): 1300794-1300806)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Analyte								
N-Nitrosodimethylamine	50	28.82	NA	58	NA	17-101	NA	NA
Pyridine	50	18.81	NA	38	NA	23-64	NA	NA
2-Picoline	50	32.64	NA	65	NA	43-95	NA	NA
Phenol	50	24.18	NA	48	NA	19-79	NA	NA
Aniline	50	27.05	NA	54	NA	45-87	NA	NA
bis(2-Chloroethyl)ether	50	43.67	NA	87	NA	58-108	NA	NA
2-Chlorophenol	50	43.72	NA	87	NA	57-107	NA	NA
o-Toluidine	50	33.17	NA	66	NA	45-104	NA	NA
Benzyl alcohol	50	46.11	NA	92	NA	56-115	NA	NA
2-Methylphenol	50	43.91	NA	88	NA	53-107	NA	NA
bis(2-Chloroisopropyl)ether	50	42.75	NA	86	NA	44-108	NA	NA
2,2'-oxybis(1-Chloropropane)	50	42.75	NA	86	NA	48-105	NA	NA
2,4-Dichlorophenol	50	43.36	NA	87	NA	65-110	NA	NA
Acetophenone	50	45.75	NA	92	NA	61-114	NA	NA
4-Methylphenol	50	38.53	NA	77	NA	49-108	NA	NA
N-Nitroso-di-n-propylamine	50	48.33	NA	97	NA	58-120	NA	NA
Nitrobenzene	50	39.5	NA	79	NA	59-109	NA	NA
Isophorone	50	43.98	NA	88	NA	63-120	NA	NA
2-Nitrophenol	50	46.12	NA	92	NA	63-111	NA	NA
2,4-Dimethylphenol	50	36.4	NA	73	NA	53-93	NA	NA
bis(2-Chloroethoxy)methane	50	47.57	NA	95	NA	63-116	NA	NA
4-Chloroaniline	50	34.33	NA	69	NA	45-111	NA	NA
4-Chloro-3-methylphenol	50	45.73	NA	91	NA	60-118	NA	NA
2-Methylnaphthalene	50	41.54	NA	83	NA	51-107	NA	NA
Hexachlorocyclopentadiene	100	23.82	NA	24	NA	10-91	NA	NA
1,2,4,5-Tetrachlorobenzene	50	36.02	NA	72	NA	40-102	NA	NA
2,4,6-Trichlorophenol	50	45.51	NA	91	NA	69-117	NA	NA
2,4,5-Trichlorophenol	50	43.66	NA	87	NA	66-118	NA	NA
2-Chloronaphthalene	50	38.69	NA	77	NA	51-107	NA	NA
2-Nitroaniline	50	45.58	NA	91	NA	66-126	NA	NA
Dimethylphthalate	50	28.07	NA	56	NA	10-134	NA	NA
1,3-Dinitrobenzene	50	48.1	NA	96	NA	73-114	NA	NA
2,6-Dinitrotoluene	50	49.67	NA	99	NA	71-120	NA	NA
Acenaphthylene	50	42.84	NA	86	NA	56-127	NA	NA
3-Nitroaniline	50	44.25	NA	89	NA	55-121	NA	NA
Acenaphthene	50	43.2	NA	86	NA	52-114	NA	NA
2,4-Dinitrophenol	100	94.67	NA	95	NA	44-134	NA	NA
4-Nitrophenol	50	28.82 J	NA	58	NA	23-89	NA	NA
2,4-Dinitrotoluene	50	45.34	NA	91	NA	66-122	NA	NA
Dibenzofuran	50	44.32	NA	89	NA	60-112	NA	NA
1-Naphthylamine	100	48.07	NA	48	NA	30-97	NA	NA
2,3,4,6-Tetrachlorophenol	50	47.99	NA	96	NA	64-124	NA	NA

SDG: RAF59
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 112WHLCS		Batch: 20112WAH026 (Sample number(s): 1300794-1300806)						
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
2-Naphthylamine	100	40.79	NA	41	NA	22-91	NA	NA
Diethylphthalate	50	38.78	NA	78	NA	42-126	NA	NA
Fluorene	50	43.23	NA	86	NA	56-115	NA	NA
4-Chlorophenyl-phenylether	50	45.69	NA	91	NA	57-110	NA	NA
4-Nitroaniline	50	37.7	NA	75	NA	55-113	NA	NA
4,6-Dinitro-2-methylphenol	50	45.9	NA	92	NA	63-129	NA	NA
N-Nitrosodiphenylamine	50	43.26	NA	87	NA	60-126	NA	NA
NDPA as diphenylamine	50	43.26	NA	87	NA	70-130	NA	NA
4-Bromophenyl-phenylether	50	41.12	NA	82	NA	60-114	NA	NA
Hexachlorobenzene	50	41.98	NA	84	NA	60-117	NA	NA
Pentachlorophenol	50	40.49	NA	81	NA	54-131	NA	NA
Phenanthrene	50	44.61	NA	89	NA	65-113	NA	NA
Anthracene	50	45.33	NA	91	NA	67-116	NA	NA
Di-n-butylphthalate	50	44.54	NA	89	NA	58-125	NA	NA
Fluoranthene	50	45.79	NA	92	NA	63-122	NA	NA
Pyrene	50	44.95	NA	90	NA	65-115	NA	NA
3,3'-Dimethylbenzidine	100	18.98 J	NA	19	NA	10-60	NA	NA
Butylbenzylphthalate	50	37.26	NA	75	NA	40-133	NA	NA
3,3'-Dichlorobenzidine	50	30.82	NA	62	NA	42-107	NA	NA
Benzo(a)anthracene	50	48.89	NA	98	NA	68-123	NA	NA
Chrysene	50	44.59	NA	89	NA	65-121	NA	NA
bis(2-Ethylhexyl)phthalate	50	48.99	NA	98	NA	61-129	NA	NA
Di-n-octylphthalate	50	52.65	NA	105	NA	60-136	NA	NA
Benzo(b)fluoranthene	50	47.26	NA	95	NA	69-121	NA	NA
7,12-Dimethylbenz[a]anthracene	50	45.21	NA	90	NA	61-121	NA	NA
Benzo(k)fluoranthene	50	47.39	NA	95	NA	69-122	NA	NA
Benzo(a)pyrene	50	44.69	NA	89	NA	71-117	NA	NA
Indeno(1,2,3-cd)pyrene	50	47.39	NA	95	NA	59-123	NA	NA
Dibenz(a,h)anthracene	50	48.65	NA	97	NA	63-128	NA	NA
Benzo(g,h,i)perylene	50	47.91	NA	96	NA	60-119	NA	NA

LCS: 112WHLCS1 LCSD: 112WHLCS1		Batch: 20112WAH026 (Sample number(s): 1300794-1300806)						
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
N-Nitrosomethylethylamine	50	40.98	42.93	82	86	53-105	5	30
Methyl methanesulfonate	50	34.45	34.99	69	70	46-98	2	30
N-Nitrosodiethylamine	50	43.7	46.12	87	92	63-106	5	30
Ethyl methanesulfonate	50	47.23	46.22	94	92	55-119	2	30
N-Nitrosopyrrolidine	50	49.05	51.12	98	102	65-115	4	30
N-Nitrosomorpholine	50	37.05	37.32	74	75	52-102	1	30
N-Nitrosopiperidine	50	45.89	44.91	92	90	68-110	2	30

SDG: RAF59
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 112WHLCS1 LCSD: 112WHLCS1D1 Analyte	Batch: 20112WAH026 (Sample number(s): 1300794-1300806)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
O,O,O-Triethylphosphorothioate	50	44.91	45.97	90	92	59-117	2	30
a,a-Dimethylphenethylamine	50	1.87 J	1.52 J	4 *	3 *	70-130	20	30
2,6-Dichlorophenol	50	42.95	43.59	86	87	50-113	1	30
Hexachloropropene	50	19.01	18.36	38	37	10-92	3	30
N-Nitrosodi-n-butylamine	50	43.09	44.13	86	88	49-104	2	30
1,4-Phenylenediamine	1000	5.28 J	6.18 J	1 *	1 *	70-130	16	30
Safrole	50	42.39	43.06	85	86	62-104	2	30
Isosafrole	50	43.19	42.58	86	85	62-129	1	30
1,4-Naphthoquinone	100	N.D	N.D	0 *	0 *	70-130	0	30
Pentachlorobenzene	50	41.35	37.52	83	75	36-109	10	30
Thionazin	50	46.47	43.56	93	87	66-121	6	30
5-Nitro-o-toluidine	50	46.54	43.04	93	86	57-109	8	30
1,3,5-Trinitrobenzene	50	34.08 J	23.54 J	68	47	10-111	37 *	30
Phorate	50	47.87	46.44	96	93	37-143	3	30
Phenacetin	50	46.26	48.17	93	96	67-128	4	30
Diallate trans/cis	50	45.31	47.47	91	95	66-114	5	30
Dimethoate	50	21.15	14.1	42	28	10-80	40 *	30
4-Aminobiphenyl	50	27.44	22.11	55	44	11-128	21	30
Pentachloronitrobenzene	50	42.88	43.25	86	87	60-112	1	30
Pronamide	50	48.44	50.19	97	100	73-117	4	30
Disulfoton	100	103.64	104.67	104	105	50-135	1	30
Methyl parathion	50	43.54	44.06	87 *	88 *	30-77	1	30
Parathion	50	51.74	53.21	103	106	68-133	3	30
4-Nitroquinoline-1-oxide	500	538.66	548.5	108	110	56-156	2	30
Methapyrilene	400	217.25	246.29	54	62	45-155	13	30
Isodrin	50	42.71	42.86	85	86	55-118	0	30
Aramite	50	7.40 J	8.34 J	15	17	10-122	12	30
p-Dimethylaminoazobenzene	50	49.04	47.84	98	96	75-144	2	30
Chlorobenzilate	50	24.29	16.46	49	33	10-133	38 *	30
Famphur	100	19.62 J	11.13 J	20 *	11 *	70-130	55 *	20
Kepone	100	37.28 J	27.41 J	37	27	10-92	31 *	30
2-Acetylaminofluorene	50	46.94	46.16	94	92	59-135	2	30
3-Methylcholanthrene	50	50.72	52.38	101	105	69-162	3	30

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D/E MINI Analyte Name	Default MDL	Default LOQ	Units
N-Nitrosodimethylamine	2	10	ug/l
Pyridine	2	10	ug/l
2-Picoline	2	10	ug/l
N-Nitrosomethylethylamine	2	10	ug/l
Methyl methanesulfonate	1	10	ug/l
N-Nitrosodiethylamine	0.5	10	ug/l
Ethyl methanesulfonate	0.5	10	ug/l
Phenol	0.8	10	ug/l
Aniline	3	10	ug/l
bis(2-Chloroethyl)ether	0.5	2	ug/l
2-Chlorophenol	1	10	ug/l
o-Toluidine	4	10	ug/l
Benzyl alcohol	10	30	ug/l
2-Methylphenol	1	10	ug/l
bis(2-Chloroisopropyl)ether	0.5	10	ug/l
2,2'-oxybis(1-Chloropropane)	0.5	2	ug/l
2,4-Dichlorophenol	2	10	ug/l
N-Nitrosopyrrolidine	0.5	10	ug/l
Acetophenone	4	10	ug/l
4-Methylphenol	2	20	ug/l
N-Nitroso-di-n-propylamine	0.7	10	ug/l
N-Nitrosomorpholine	2	10	ug/l
Nitrobenzene	0.5	10	ug/l
N-Nitrosopiperidine	0.5	10	ug/l
Isophorone	0.5	10	ug/l
2-Nitrophenol	3	10	ug/l
2,4-Dimethylphenol	3	10	ug/l
O,O,O-Triethylphosphorothioate	2	10	ug/l
bis(2-Chloroethoxy)methane	0.5	2	ug/l
a,a-Dimethylphenethylamine	5	50	ug/l
4-Chloroaniline	4	10	ug/l
2,6-Dichlorophenol	0.5	10	ug/l
Hexachloropropene	2	10	ug/l
N-Nitrosodi-n-butylamine	12	25	ug/l
1,4-Phenylenediamine	75	300	ug/l
4-Chloro-3-methylphenol	1	10	ug/l
Safrole	2	10	ug/l
2-Methylnaphthalene	0.3	10	ug/l
Hexachlorocyclopentadiene	5	11	ug/l
1,2,4,5-Tetrachlorobenzene	2	10	ug/l
2,4,6-Trichlorophenol	0.6	10	ug/l
2,4,5-Trichlorophenol	0.8	10	ug/l
Isosafrole	4	10	ug/l
2-Chloronaphthalene	0.5	10	ug/l
2-Nitroaniline	2	10	ug/l
1,4-Naphthoquinone	25	60	ug/l
Dimethylphthalate	2	10	ug/l

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D/E MINI Analyte Name	Default MDL	Default LOQ	Units
1,3-Dinitrobenzene	2	10	ug/l
2,6-Dinitrotoluene	0.5	10	ug/l
Acenaphthylene	0.5	10	ug/l
3-Nitroaniline	3	10	ug/l
Acenaphthene	0.4	10	ug/l
2,4-Dinitrophenol	14	30	ug/l
4-Nitrophenol	10	30	ug/l
Pentachlorobenzene	0.5	10	ug/l
2,4-Dinitrotoluene	1	10	ug/l
Dibenzofuran	0.6	10	ug/l
1-Naphthylamine	8	21	ug/l
2,3,4,6-Tetrachlorophenol	4	10	ug/l
2-Naphthylamine	7	21	ug/l
Diethylphthalate	2	10	ug/l
Thionazin	2	10	ug/l
Fluorene	0.4	10	ug/l
4-Chlorophenyl-phenylether	0.5	10	ug/l
5-Nitro-o-toluidine	4	10	ug/l
4-Nitroaniline	0.9	10	ug/l
4,6-Dinitro-2-methylphenol	8	21	ug/l
N-Nitrosodiphenylamine	0.7	10	ug/l
NDPA as diphenylamine	0.7	10	ug/l
1,3,5-Trinitrobenzene	97	200	ug/l
Phorate	2	10	ug/l
Phenacetin	0.5	10	ug/l
4-Bromophenyl-phenylether	0.6	10	ug/l
Diallate trans/cis	1	10	ug/l
Hexachlorobenzene	0.9	10	ug/l
Dimethoate	3	10	ug/l
Pentachlorophenol	3	10	ug/l
4-Aminobiphenyl	5	11	ug/l
Pentachloronitrobenzene	2	10	ug/l
Pronamide	1	10	ug/l
Phenanthrene	0.5	10	ug/l
Anthracene	0.5	10	ug/l
Disulfoton	25	50	ug/l
Methyl parathion	5	10	ug/l
Di-n-butylphthalate	2	10	ug/l
Parathion	7	12	ug/l
4-Nitroquinoline-1-oxide	20	60	ug/l
Methapyrilene	15	50	ug/l
Isodrin	0.5	10	ug/l
Fluoranthene	0.4	10	ug/l
Pyrene	0.4	10	ug/l
Aramite	5	15	ug/l
p-Dimethylaminoazobenzene	5	10	ug/l
Chlorobenzilate	3	10	ug/l

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D/E MINI Analyte Name	Default MDL	Default LOQ	Units
3,3'-Dimethylbenzidine	25	75	ug/l
Butylbenzylphthalate	2	10	ug/l
Famphur	25	50	ug/l
Kepone	25	50	ug/l
2-Acetylaminofluorene	10	21	ug/l
3,3'-Dichlorobenzidine	3	10	ug/l
Benzo(a)anthracene	0.5	10	ug/l
Chrysene	0.3	10	ug/l
bis(2-Ethylhexyl)phthalate	5	11	ug/l
Di-n-octylphthalate	5	11	ug/l
Benzo(b)fluoranthene	1	10	ug/l
7,12-Dimethylbenz[a]anthracene	5	11	ug/l
Benzo(k)fluoranthene	2	10	ug/l
Benzo(a)pyrene	2	10	ug/l
3-Methylcholanthrene	4	10	ug/l
Indeno(1,2,3-cd)pyrene	0.2	10	ug/l
Dibenz(a,h)anthracene	0.4	10	ug/l
Benzo(g,h,i)perylene	0.4	10	ug/l

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: jc0270.d DFTPP Injection Date: 03/11/20
 Instrument ID: HP23264 DFTPP Injection Time: 09:56

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	49.3
68	Less than 2.0% of mass 69	1.26 (1.98)1
69	Mass 69 relative abundance	63.5
70	Less than 2.0% of mass 69	0.52 (0.82)1
127	10.0 - 80.00% of mass 198	49.2
197	Less than 2.0% of mass 198	1.4
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.56
275	10.0 - 60.0% of mass 198	24.6
365	Greater than 1.00% of mass 198	3.56
441	Present, and less than mass 443	10.9
442	Greater than 50.00% of mass 198	74.4
443	15.00 - 24.00% of mass 442	17.4 (23.4)2

1-Value is % mass 69

2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0340 - SST07.5	jc0271.d	03/11/20	10:15
02	rvSTD0340 - SST0.125	jc0272.d	03/11/20	11:14
03	rvSTD0340 - SST030	jc0273.d	03/11/20	11:44
04	rvSTD0340 - SST020	jc0274.d	03/11/20	12:14
05	rvSTD0340 - SST012.5	jc0275.d	03/11/20	12:43
06	rvSTD0340 - SST03.75	jc0276.d	03/11/20	13:12
07	rvSTD0340 - SST01.25	jc0277.d	03/11/20	13:42
08	rvSTD0340 - SST0.25	jc0278.d	03/11/20	14:11
09	rvMDL0340 - SST00.125	jc0279.d	03/11/20	14:41
10	rvPAHMDL0340 - SST00.025	jc0280.d	03/11/20	15:10
11	rvICV3089 - SST012.5	jc0281.d	03/11/20	15:40
12	RVBASICV2399 - SST012.5	jc0282.d	03/11/20	16:09
13	RVDMPICV2609 - SST012.5	jc0283.d	03/11/20	16:39
14	RVHCCPDICV0350 - SST012.5	jc0284.d	03/11/20	17:08

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: jd0400.d DFTPP Injection Date: 04/16/20

Instrument ID: HP23264 DFTPP Injection Time: 21:15

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.7
68	Less than 2.0% of mass 69	1.07 (1.9)1
69	Mass 69 relative abundance	56.0
70	Less than 2.0% of mass 69	0.29 (0.51)1
127	10.0 - 80.00% of mass 198	49.5
197	Less than 2.0% of mass 198	0.53
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.33
275	10.0 - 60.0% of mass 198	24.6
365	Greater than 1.00% of mass 198	3.59
441	Present, and less than mass 443	11.1
442	Greater than 50.00% of mass 198	73.3
443	15.00 - 24.00% of mass 442	13.2 (18.0)2

1-Value is % mass 69

2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	rvPDA1070 - SSTD30	jd0402a.d	04/16/20	23:40
02	rvPDA1070 - SSTD20	jd0403.d	04/17/20	00:09
03	rvPDA1070 - SSTD12.5	jd0404.d	04/17/20	00:39
04	rvPDA1070 - SSTD7.5	jd0405.d	04/17/20	01:08
05	rvPDA1070 - SSTD3.75	jd0406.d	04/17/20	01:38
06	rvPDA1070 - SSTD1.25	jd0407.d	04/17/20	02:07
07	rvPDA1070 - SSTD1.25	jd0407x.d	04/17/20	02:07
08	rvABC1070 - SSTD30	jd0408.d	04/17/20	02:36
09	rvABC1070 - SSTD20	jd0409.d	04/17/20	03:06
10	rvABC1070 - SSTD12.5	jd0410.d	04/17/20	03:35
11	rvABC1070 - SSTD7.5	jd0411.d	04/17/20	04:04
12	rvABC1070 - SSTD3.75	jd0412.d	04/17/20	04:34
13	rvABC1070 - SSTD1.25	jd0413.d	04/17/20	05:03
14	rvABC1070 - SSTD6	jd0414.d	04/17/20	05:32

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: jd0620.d DFTPP Injection Date: 04/23/20

Instrument ID: HP23264 DFTPP Injection Time: 07:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	40.3
68	Less than 2.0% of mass 69	0.84 (1.56)1
69	Mass 69 relative abundance	53.7
70	Less than 2.0% of mass 69	0.37 (0.68)1
127	10.0 - 80.00% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.58
275	10.0 - 60.0% of mass 198	23.8
365	Greater than 1.00% of mass 198	4.19
441	Present, and less than mass 443	12.9
442	Greater than 50.00% of mass 198	78.9
443	15.00 - 24.00% of mass 442	15.4 (19.5)2

1-Value is % mass 69

2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	rvSTD0940 - SST125	jd0621.d	04/23/20	07:25
02	rvPDA1070 - SST125	jd0622.d	04/23/20	08:52
03	rvABC1070 - SST125	jd0623.d	04/23/20	09:27
04	rvAAP1140 - SST12.5	jd0624.d	04/23/20	10:17
05	SBLKWH112	jd0625.d	04/23/20	11:13
06	SBLKWZ112	jd0625a.d	04/23/20	11:13
07	112WHLCS	jd0626.d	04/23/20	11:43
08	112WZLCS	jd0626a.d	04/23/20	11:43
09	112WHLCS1	jd0627.d	04/23/20	12:12
10	112WHLCS1	jd0628.d	04/23/20	12:42
11	1300797	jd0629.d	04/23/20	13:12
12	112WZUS	jd0629a.d	04/23/20	13:12
13	1300798MS	jd0630.d	04/23/20	13:41
14	112WZMSMS	jd0630a.d	04/23/20	13:41
15	1300799MSD	jd0631.d	04/23/20	14:11
16	112WZMSDMSD	jd0631a.d	04/23/20	14:11
17	1300599	jd0632.d	04/23/20	14:40
18	1300600	jd0633.d	04/23/20	15:10

page 1 of 2

FORM V SV

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: jd0620.d DFTPP Injection Date: 04/23/20

Instrument ID: HP23264 DFTPP Injection Time: 07:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	40.3
68	Less than 2.0% of mass 69	0.84 (1.56)1
69	Mass 69 relative abundance	53.7
70	Less than 2.0% of mass 69	0.37 (0.68)1
127	10.0 - 80.00% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.58
275	10.0 - 60.0% of mass 198	23.8
365	Greater than 1.00% of mass 198	4.19
441	Present, and less than mass 443	12.9
442	Greater than 50.00% of mass 198	78.9
443	15.00 - 24.00% of mass 442	15.4 (19.5)2

1-Value is % mass 69

2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	1300601	jd0634.d	04/23/20	15:39
20	1300794	jd0635.d	04/23/20	16:39
21	1300795	jd0636.d	04/23/20	17:08
22	1300796	jd0637.d	04/23/20	17:38
23	1300800	jd0638.d	04/23/20	18:08
24	1300801	jd0639.d	04/23/20	18:37
25	1300802	jd0640.d	04/23/20	19:07

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: jd0810.d DFTPP Injection Date: 04/28/20

Instrument ID: HP23264 DFTPP Injection Time: 07:05

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	46.5
68	Less than 2.0% of mass 69	0.96 (1.56)1
69	Mass 69 relative abundance	61.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.00% of mass 198	51.6
197	Less than 2.0% of mass 198	0.43
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.73
275	10.0 - 60.0% of mass 198	22.3
365	Greater than 1.00% of mass 198	3.23
441	Present, and less than mass 443	10.2
442	Greater than 50.00% of mass 198	65.8
443	15.00 - 24.00% of mass 442	12.1 (18.5)2

1-Value is % mass 69

2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	rvSTD0940 - SSTD125	jd0811.d	04/28/20	07:21
02	SBLKWC118	jd0812.d	04/28/20	08:57
03	118WCLCS	jd0813.d	04/28/20	09:26
04	1300803	jd0814.d	04/28/20	09:55
05	1300804	jd0815.d	04/28/20	10:25
06	1300805	jd0816.d	04/28/20	10:55
07	1300806	jd0817.d	04/28/20	11:24
08	1302545	jd0818.d	04/28/20	11:54
09	1302546	jd0819.d	04/28/20	12:23
10	1302547	jd0820.d	04/28/20	12:53
11	1302548	jd0821.d	04/28/20	13:22
12	1302549MS	jd0822.d	04/28/20	13:52
13	1302550MSD	jd0823.d	04/28/20	14:21
14	1302552	jd0824.d	04/28/20	14:51

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP23264 Calibration Date(s): 03/11/20 03/11/20

Calibration Times: 10:15 14:11

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = jc0272.d RRF0.25 = jc0278.d RRF1.25 = jc0277.d RRF3.75 = jc0276.d RRF7.5 = jc0271.d RRF12.5 = jc0275.d RRF20 = jc0274.d RRF30 = jc0273.d											
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	% RSD	CAL. METHOD
1,4-Dioxane			0.731	0.719	0.825	0.738	0.719	0.783	0.752	6	AVG
N-Nitrosodimethylamine			1.105	1.061	1.282	1.177	1.194	1.289	1.185	8	AVG
Pyridine			1.458	1.706	2.043	2.003	1.932	2.030	1.862	13	AVG
2-Picoline			1.617	1.722	1.909	1.836	1.809	1.857	1.792	6	AVG
N-Nitrosomethylethylamine			0.798	0.762	0.840	0.788	0.769	0.762	0.786	4	AVG
Methyl methanesulfonate			1.061	1.078	1.249	1.171	1.111	1.133	1.134	6	AVG
N-Nitrosodiethylamine		0.777	0.654	0.686	0.756	0.752	0.732	0.714	0.724	6	AVG
Ethyl methanesulfonate		0.614	0.603	0.681	0.730	0.732	0.685	0.726	0.682	8	AVG
Benzaldehyde			1.478	1.523	1.621	1.388	1.283	1.079	1.395	14	AVG
Phenol		2.140	2.013	2.180	2.476	2.313	2.233	2.258	2.231	6	AVG
Aniline		2.676	2.337	2.408	2.689	2.655	2.589	2.529	2.555	5	AVG
bis(2-Chloroethyl)ether		1.676	1.587	1.543	1.660	1.682	1.640	1.594	1.626	3	AVG
2-Chlorophenol		1.061	1.248	1.285	1.462	1.409	1.403	1.391	1.323	10	AVG
1,3-Dichlorobenzene		1.742	1.437	1.471	1.642	1.600	1.575	1.618	1.584	7	AVG
1,4-Dichlorobenzene		1.878	1.393	1.494	1.672	1.617	1.614	1.616	1.612	9	AVG
Benzyl alcohol			0.751	0.799	0.934	1.001	0.948	0.943	0.896	11	AVG
1,2-Dichlorobenzene		1.498	1.377	1.441	1.664	1.514	1.514	1.534	1.506	6	AVG
Indene			2.049	2.061	2.286	2.318	2.227	2.235	2.196	5	AVG
2-Methylphenol		1.202	1.205	1.320	1.449	1.429	1.377	1.371	1.336	7	AVG
2,2'-oxybis(1-Chloropropane)		2.366	1.908	2.019	2.235	2.142	2.095	2.132	2.128	7	AVG
bis(2-Chloroisopropyl)ether		2.366	1.908	2.019	2.235	2.142	2.095	2.132	2.128	7	AVG
N-Nitrosopyrrolidine		0.558	0.604	0.728	0.789	0.806	0.772	0.765	0.717	14	AVG
Acetophenone		2.630	1.840	2.142	2.450	2.153	2.153	2.138	2.215	11	AVG
4-Methylphenol		1.767	1.424	1.432	1.637	1.630	1.660	1.602	1.593	8	AVG
Total Cresols		1.485	1.315	1.376	1.543	1.530	1.519	1.487	1.465	6	AVG
N-Nitroso-di-n-propylamine		1.368	1.176	1.260	1.503	1.416	1.389	1.409	1.360	8	AVG
N-Nitrosomorpholine			1.114	1.052	1.173	1.161	1.142	1.133	1.129	4	AVG
o-Toluidine		2.533	2.062	2.203	2.467	2.438	2.339	2.378	2.346	7	AVG
Hexachloroethane			0.741	0.729	0.819	0.789	0.788	0.769	0.773	4	AVG
Nitrobenzene		0.645	0.585	0.525	0.567	0.578	0.568	0.590	0.580	6	AVG
N-Nitrosopiperidine		0.179	0.180	0.180	0.176	0.177	0.179	0.180	0.179	1	AVG
Isophorone		0.971	0.875	0.863	0.924	0.948	0.945	0.956	0.926	4	AVG
2-Nitrophenol		0.154	0.171	0.199	0.192	0.201	0.194	0.194	0.186	9	AVG
2,4-Dimethylphenol		0.330	0.447	0.440	0.442	0.440	0.441	0.455	0.428	10	AVG
O,O,O-Triethylphosphorothioat			0.185	0.171	0.176	0.188	0.188	0.185	0.182	4	AVG
bis(2-Chloroethoxy)methane		0.435	0.496	0.497	0.504	0.534	0.523	0.528	0.502	7	AVG
Benzoic acid			0.186	0.213	0.216	0.256	0.268	0.266	0.234	14	AVG
2,4-Dichlorophenol		0.297	0.325	0.304	0.315	0.325	0.322	0.329	0.317	4	AVG
1,2,4-Trichlorobenzene		0.385	0.369	0.348	0.375	0.359	0.352	0.380	0.367	4	AVG
Naphthalene	0.928	1.059	1.080	1.026	1.084	1.068	1.045	1.070	1.045	5	AVG
4-Chloroaniline		0.394	0.415	0.403	0.428	0.431	0.420	0.438	0.418	4	AVG
2,6-Dichlorophenol		0.335	0.320	0.284	0.311	0.312	0.307	0.321	0.313	5	AVG
Hexachloropropene			0.268	0.268	0.280	0.282	0.280	0.294	0.278	3	AVG
Hexachlorobutadiene		0.251	0.246	0.237	0.254	0.244	0.233	0.245	0.244	3	AVG
Quinoline		0.669	0.685	0.608	0.672	0.672	0.647	0.647	0.657	4	AVG
Caprolactam			0.100	0.104	0.099	0.104	0.098	0.093	0.100	4	AVG
N-Nitrosodi-n-butylamine		0.316	0.298	0.293	0.298	0.318	0.311	0.382	0.317	10	AVG
4-Chloro-3-methylphenol		0.334	0.324	0.307	0.346	0.359	0.359	0.353	0.340	6	AVG
Safrole			0.298	0.266	0.276	0.276	0.280	0.284	0.280	4	AVG
2-Methylnaphthalene	0.558	0.784	0.672	0.666	0.702	0.710	0.690	0.711	0.687	9	AVG
1-Methylnaphthalene	0.572	0.720	0.637	0.643	0.660	0.671	0.646	0.662	0.651	6	AVG
Hexachlorocyclopentadiene			0.534	0.565	0.581	0.547	0.544	0.554	0.554	3	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date(s): 03/11/20 03/11/20
 Calibration Times: 10:15 14:11
 Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = jc0272.d RRF0.25 = jc0278.d RRF1.25 = jc0277.d RRF3.75 = jc0276.d											
RRF7.5 = jc0271.d RRF12.5 = jc0275.d RRF20 = jc0274.d RRF30 = jc0273.d											
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	% RSD	CAL. METHOD
1,2,4,5-Tetrachlorobenzene		0.897	0.757	0.756	0.791	0.716	0.717	0.736	0.767	8	AVG
cis-Isosafrole			0.529	0.665	0.598	0.555	0.601	0.603	0.592	8	AVG
2,4,6-Trichlorophenol		0.416	0.395	0.462	0.514	0.485	0.480	0.477	0.461	9	AVG
2,4,5-Trichlorophenol		0.505	0.455	0.512	0.534	0.518	0.517	0.504	0.506	5	AVG
trans-Isosafrole			0.615	0.672	0.715	0.654	0.669	0.654	0.663	5	AVG
Isosafrole			0.601	0.671	0.695	0.637	0.657	0.645	0.651	5	AVG
1,1'-Biphenyl		2.212	1.629	1.760	1.699	1.618	1.619	1.619	1.737	12	AVG
2-Chloronaphthalene		1.640	1.411	1.440	1.427	1.435	1.449	1.462	1.466	5	AVG
1-Chloronaphthalene		1.371	1.384	1.369	1.389	1.283	1.305	1.352	1.350	3	AVG
Diphenyl ether		0.970	0.929	0.944	1.022	0.944	0.927	0.961	0.957	3	AVG
2-Nitroaniline		0.380	0.438	0.389	0.424	0.444	0.425	0.437	0.420	6	AVG
1,4-Naphthoquinone			0.483	0.558	0.566	0.559	0.576	0.554	0.549	6	AVG
1,4-Dinitrobenzene			0.193	0.199	0.223	0.222	0.215	0.227	0.213	7	AVG
Dimethylphthalate			1.575	1.540	1.645	1.594	1.536	1.515	1.567	3	AVG
1,3-Dinitrobenzene			0.209	0.225	0.259	0.258	0.243	0.250	0.241	8	AVG
2,6-Dinitrotoluene		0.303	0.291	0.354	0.363	0.367	0.366	0.355	0.343	9	AVG
Acenaphthylene	1.531	2.148	1.931	1.955	1.954	1.973	1.935	1.968	1.924	9	AVG
3-Nitroaniline		0.305	0.298	0.363	0.357	0.345	0.344	0.349	0.337	8	AVG
Acenaphthene	1.113	1.377	1.325	1.332	1.424	1.363	1.363	1.386	1.335	7	AVG
2,4-Dinitrophenol				0.198	0.197	0.210	0.209	0.214	0.206	4	AVG
4-Nitrophenol				0.308	0.336	0.336	0.345	0.340	0.333	4	AVG
Pentachlorobenzene		0.656	0.629	0.645	0.653	0.622	0.621	0.615	0.635	3	AVG
2,4-Dinitrotoluene			0.415	0.473	0.490	0.475	0.477	0.472	0.467	6	AVG
2,4,6-Dinitrotoluenes		0.365	0.353	0.413	0.427	0.421	0.421	0.413	0.402	7	AVG
Dibenzofuran		2.141	1.901	1.869	2.015	1.904	1.912	1.954	1.957	5	AVG
1-Naphthylamine				1.242	1.318	1.312	1.287	1.315	1.295	2	AVG
2,3,4,6-Tetrachlorophenol		0.375	0.330	0.382	0.404	0.389	0.382	0.390	0.379	6	AVG
2-Naphthylamine				1.277	1.291	1.271	1.254	1.260	1.270	1	AVG
Diethylphthalate			1.501	1.442	1.613	1.561	1.525	1.532	1.529	4	AVG
Thionazin			0.296	0.301	0.283	0.287	0.292	0.293	0.292	2	AVG
Fluorene	1.126	1.797	1.519	1.518	1.622	1.555	1.547	1.563	1.531	12	AVG
4-Chlorophenyl-phenylether		0.685	0.741	0.785	0.773	0.767	0.763	0.749	0.752	4	AVG
5-Nitro-o-toluidine		0.393	0.357	0.402	0.415	0.395	0.386	0.400	0.393	5	AVG
4-Nitroaniline		0.408	0.315	0.389	0.386	0.373	0.356	0.365	0.370	8	AVG
4,6-Dinitro-2-methylphenol				0.133	0.143	0.147	0.155	0.150	0.146	6	AVG
N-Nitrosodiphenylamine (1)		0.605	0.630	0.671	0.681	0.681	0.718	0.672	0.665	6	AVG
NDPA as diphenylamine		0.605	0.630	0.671	0.681	0.681	0.718	0.672	0.665	6	AVG
1,2-Diphenylhydrazine		1.178	1.173	1.148	1.185	1.127	1.195	1.092	1.157	3	AVG
Tetraethyldithiopyrophosphate			0.160	0.174	0.185	0.185	0.197	0.186	0.181	7	AVG
Diallate (peak 1)			0.380	0.370	0.376	0.395	0.420	0.397	0.390	5	AVG
Phorate		0.486	0.502	0.568	0.592	0.626	0.655	0.622	0.579	11	AVG
Phenacetin		0.325	0.374	0.407	0.450	0.452	0.499	0.484	0.427	15	AVG
4-Bromophenyl-phenylether		0.280	0.243	0.238	0.241	0.237	0.258	0.239	0.248	6	AVG
Diallate (peak 2)			0.375	0.447	0.356	0.376	0.405	0.387	0.391	8	AVG
Diallate trans/cis			0.378	0.390	0.370	0.391	0.416	0.394	0.390	4	AVG
Hexachlorobenzene	0.231	0.282	0.265	0.259	0.277	0.252	0.270	0.262	0.262	6	AVG
Dimethoate			0.333	0.332	0.359	0.383	0.409	0.395	0.368	9	AVG
Atrazine			0.222	0.244	0.226	0.214	0.231	0.190	0.221	8	AVG
Pentachlorophenol			0.150	0.151	0.164	0.176	0.191	0.180	0.169	10	AVG
4-Aminobiphenyl		0.638	0.726	0.737	0.754	0.765	0.817	0.757	0.742	7	AVG
Pentachloronitrobenzene			0.117	0.126	0.139	0.131	0.142	0.134	0.131	7	AVG
Pronamide		0.264	0.335	0.360	0.387	0.393	0.420	0.411	0.367	15	AVG

(1) Cannot be separated from Diphenylamine
 4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date(s): 03/11/20 03/11/20
 Calibration Times: 10:15 14:11
 Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = jc0272.d RRF0.25 = jc0278.d RRF1.25 = jc0277.d RRF3.75 = jc0276.d											
RRF7.5 = jc0271.d RRF12.5 = jc0275.d RRF20 = jc0274.d RRF30 = jc0273.d											
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	% RSD	CAL. METHOD
Dinoseb				0.162	0.185	0.198	0.222	0.205	0.194	12	AVG
Phenanthrene	1.033	1.189	1.150	1.152	1.210	1.154	1.225	1.182	1.162	5	AVG
Anthracene	0.907	1.119	1.094	1.194	1.202	1.224	1.268	1.190	1.150	10	AVG
Carbazole		0.978	0.990	1.029	1.098	1.103	1.171	1.110	1.068	7	AVG
Methyl parathion			0.245	0.278	0.287	0.321	0.338	0.322	0.298	12	AVG
Di-n-butylphthalate			1.257	1.342	1.414	1.463	1.586	1.443	1.418	8	AVG
Parathion			0.149	0.143	0.187	0.194	0.209	0.201	0.181	15	AVG
4-Nitroquinoline-1-oxide				0.104	0.126	0.144	0.154	0.154	0.137	16	AVG
Octachlorostyrene			0.129	0.102	0.112	0.113	0.122	0.119	0.116	8	AVG
Isodrin		0.179	0.155	0.169	0.163	0.157	0.162	0.157	0.163	5	AVG
Fluoranthene	1.213	1.238	1.379	1.297	1.384	1.427	1.491	1.405	1.354	7	AVG
Benzdine				0.800	0.847	0.896	0.801	0.727	0.814	8	AVG
Pyrene	1.149	1.377	1.330	1.407	1.361	1.435	1.341	1.393	1.349	7	AVG
p-Dimethylaminoazobenzene		0.268	0.190	0.223	0.220	0.246	0.227	0.237	0.230	11	AVG
Chlorobenzilate			0.315	0.362	0.385	0.445	0.418	0.443	0.394	13	AVG
3,3'-Dimethylbenzidine			0.633	0.730	0.790	0.852	0.817	0.826	0.775	10	AVG
Butylbenzylphthalate			0.507	0.542	0.578	0.632	0.602	0.632	0.582	9	AVG
2-Acetylaminofluorene				0.374	0.444	0.489	0.473	0.506	0.457	11	AVG
3,3'-Dichlorobenzidine			0.420	0.428	0.470	0.501	0.481	0.500	0.467	8	AVG
4,4'-Methylenebis(2-chloroani				0.229	0.238	0.241	0.229	0.240	0.235	2	AVG
Benzo(a)anthracene	0.961	0.958	1.069	1.170	1.224	1.264	1.215	1.270	1.141	11	AVG
Chrysene	0.958	1.192	1.181	1.228	1.251	1.269	1.180	1.233	1.187	8	AVG
bis(2-Ethylhexyl)phthalate			0.639	0.778	0.800	0.871	0.841	0.902	0.805	12	AVG
6-Methylchrysene			0.785	0.874	0.857	0.889	0.847	0.891	0.857	5	AVG
Di-n-octylphthalate			1.129	1.135	1.361	1.592	1.592	1.595	1.401	16	AVG
Benzo(b)fluoranthene	1.303	1.178	1.196	1.218	1.289	1.348	1.383	1.379	1.287	6	AVG
7,12-Dimethylbenz[a]anthracen		0.439	0.542	0.511	0.548	0.593	0.628	0.619	0.554	12	AVG
Benzo(k)fluoranthene	0.925	1.127	1.192	1.232	1.340	1.308	1.355	1.316	1.224	12	AVG
Benzo(a)pyrene	0.921	1.129	1.141	1.111	1.203	1.269	1.312	1.300	1.173	11	AVG
3-Methylcholanthrene		0.510	0.450	0.518	0.565	0.599	0.618	0.603	0.552	11	AVG
Dibenz(a,h)acridine			0.772	0.747	0.865	0.886	0.918	0.902	0.848	8	AVG
Dibenz(a,j)acridine			0.812	0.855	0.935	0.952	0.960	0.976	0.915	7	AVG
Indeno(1,2,3-cd)pyrene	0.674	1.139	0.898	0.897	1.020	1.068	1.091	1.074	0.983	16	AVG
Dibenz(a,h)anthracene	0.974	0.856	0.992	0.962	1.090	1.095	1.134	1.102	1.026	9	AVG
Benzo(g,h,i)perylene	0.816	0.983	1.039	0.985	1.070	1.114	1.138	1.127	1.034	10	AVG
Total PAHs	0.916	1.094	1.051	1.039	1.121	1.166	1.199	1.165	1.094	8	AVG
2-Fluorophenol		1.458	1.359	1.368	1.562	1.487	1.468	1.497	1.457	5	AVG
Phenol-d6		1.833	1.715	1.821	2.107	2.069	1.999	2.017	1.937	8	AVG
Nitrobenzene-d5		0.536	0.557	0.554	0.576	0.577	0.569	0.585	0.565	3	AVG
2-Fluorobiphenyl		1.540	1.610	1.635	1.692	1.641	1.625	1.597	1.620	3	AVG
2,4,6-Tribromophenol		0.208	0.203	0.209	0.236	0.227	0.227	0.236	0.221	6	AVG
Terphenyl-d14		0.872	0.868	0.888	0.939	0.964	0.913	0.899	0.906	4	AVG
Average %RSD										7	

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
 Benzydine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
 Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

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/chem/HP23264.i/20mar11.b/jc0271.d  SSTD7.5
/chem/HP23264.i/20mar11.b/jc0272.d  SSTD0.125
/chem/HP23264.i/20mar11.b/jc0273.d  SSTD30
/chem/HP23264.i/20mar11.b/jc0274.d  SSTD20
/chem/HP23264.i/20mar11.b/jc0275.d  SSTD12.5
/chem/HP23264.i/20mar11.b/jc0276.d  SSTD3.75
/chem/HP23264.i/20mar11.b/jc0277.d  SSTD1.25
/chem/HP23264.i/20mar11.b/jc0278.d  SSTD0.25
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Area Summary

File ID:

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Internal Standard Name	jc0271.d	jc0272.d	jc0273.d	jc0274.d	jc0275.d	jc0276.d	jc0277.d	jc0278.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	250625	362527	298142	309168	398020	293073	330545	294163	317033	14	Yes
Naphthalene-d8	967500	1290785	1085354	1168319	1505983	1039420	1101797	1055012	1151771	15	Yes
Acenaphthene-d10	474637	649032	545092	581461	761278	478800	553159	514193	569706	17	Yes
Phenanthrene-d10	889943	1173785	1012966	1007260	1412520	884910	1001038	931612	1039254	17	Yes
Pyrene-d10	936761	1184513	1026164	1115819	1394777	886542	1042094	934693	1065170	16	Yes
Perylene-d12	889714	1142996	962346	973066	1328668	920556	1014062	906569	1017247	15	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	jc0271.d	jc0272.d	jc0273.d	jc0274.d	jc0275.d	jc0276.d	jc0277.d	jc0278.d	Avg. RT
1,4-Dichlorobenzene-d4	6.771	6.771	6.771	6.770	6.770	6.770	6.765	6.765	6.769
Naphthalene-d8	8.709	8.709	8.709	8.709	8.709	8.709	8.709	8.709	8.709
Acenaphthene-d10	11.500	11.500	11.500	11.500	11.500	11.500	11.500	11.500	11.500
Phenanthrene-d10	13.386	13.386	13.386	13.386	13.386	13.386	13.386	13.386	13.386
Pyrene-d10	15.348	15.348	15.354	15.348	15.354	15.348	15.348	15.348	15.350
Perylene-d12	19.827	19.833	19.832	19.832	19.827	19.827	19.827	19.827	19.829

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification
=====

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0281.d

ICV SAMPLE ID: rvICV3089

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	11.76	-6	30	YES
N-Nitrosodimethylamine	12.50	13.03	4	30	YES
Pyridine	12.50	12.72	2	30	YES
2-Picoline	12.50	12.61	1	30	YES
N-Nitrosomethylethylamine	12.50	11.94	-4	30	YES
Methyl methanesulfonate	12.50	13.74	10	30	YES
N-Nitrosodiethylamine	12.50	12.80	2	30	YES
Ethyl methanesulfonate	12.50	11.85	-5	30	YES
Phenol	12.50	11.82	-5	30	YES
Aniline	12.50	10.41	-17	30	YES
bis(2-Chloroethyl)ether	12.50	11.74	-6	30	YES
2-Chlorophenol	12.50	12.62	1	30	YES
1,3-Dichlorobenzene	12.50	12.46	0	30	YES
1,4-Dichlorobenzene	12.50	12.50	0	30	YES
Benzyl alcohol	12.50	13.52	8	30	YES
1,2-Dichlorobenzene	12.50	12.23	-2	30	YES
Indene	12.50	14.43	15	30	YES
2-Methylphenol	12.50	12.34	-1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.21	-2	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.21	-2	30	YES
N-Nitrosopyrrolidine	12.50	13.00	4	30	YES
Acetophenone	12.50	12.08	-3	30	YES
4-Methylphenol	12.50	12.01	-4	30	YES
N-Nitroso-di-n-propylamine	12.50	12.66	1	30	YES
N-Nitrosomorpholine	12.50	12.81	2	30	YES
o-Toluidine	12.50	12.15	-3	30	YES
Total Cresols	25.00	24.34	-3	30	YES
Hexachloroethane	12.50	12.90	3	30	YES
Nitrobenzene	12.50	12.68	1	30	YES
N-Nitrosopiperidine	12.50	12.62	1	30	YES
Isophorone	12.50	12.23	-2	30	YES
2-Nitrophenol	12.50	13.15	5	30	YES
bis(2-Chloroethoxy)methane	12.50	12.98	4	30	YES
Benzoic acid	25.00	25.24	1	30	YES
O,O,O-Triethylphosphorothio	12.50	12.47	0	30	YES
2,4-Dichlorophenol	12.50	12.90	3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0281.d

ICV SAMPLE ID: rvICV3089

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	13.08	5	30	YES
Naphthalene	12.50	12.75	2	30	YES
4-Chloroaniline	12.50	12.59	1	30	YES
2,6-Dichlorophenol	12.50	12.16	-3	30	YES
Hexachloropropene	12.50	13.96	12	30	YES
Hexachlorobutadiene	12.50	13.06	5	30	YES
Quinoline	12.50	12.35	-1	30	YES
N-Nitrosodi-n-butylamine	12.50	12.64	1	30	YES
4-Chloro-3-methylphenol	12.50	13.50	8	30	YES
Safrole	12.50	12.60	1	30	YES
2-Methylnaphthalene	12.50	13.12	5	30	YES
1-Methylnaphthalene	12.50	12.54	0	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	13.03	4	30	YES
cis-Isosafrole	1.50	1.56	4	30	YES
2,4,6-Trichlorophenol	12.50	13.26	6	30	YES
2,4,5-Trichlorophenol	12.50	13.30	6	30	YES
trans-Isosafrole	11.00	11.48	4	30	YES
1,1'-Biphenyl	12.50	12.70	2	30	YES
2-Chloronaphthalene	12.50	12.30	-2	30	YES
Isosafrole	12.50	13.04	4	30	YES
1-Chloronaphthalene	12.50	12.56	0	30	YES
Diphenyl ether	12.50	11.60	-7	30	YES
2-Nitroaniline	12.50	13.74	10	30	YES
1,4-Naphthoquinone	15.63	16.32	4	30	YES
1,4-Dinitrobenzene	12.50	14.24	14	30	YES
Dimethylphthalate	12.50	12.82	3	30	YES
1,3-Dinitrobenzene	12.50	13.77	10	30	YES
2,6-Dinitrotoluene	12.50	13.93	11	30	YES
Acenaphthylene	12.50	12.50	0	30	YES
3-Nitroaniline	12.50	13.63	9	30	YES
Acenaphthene	12.50	13.05	4	30	YES
2,4-Dinitrophenol	25.00	28.40	14	30	YES
4-Nitrophenol	12.50	14.08	13	30	YES
Pentachlorobenzene	12.50	13.37	7	30	YES
2,4-Dinitrotoluene	12.50	13.06	4	30	YES
Dibenzofuran	12.50	12.91	3	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0281.d

ICV SAMPLE ID: rvICV3089

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4,2,6-Dinitrotoluenes	25.00	26.98	8	30	YES
1-Naphthylamine	25.00	22.98	-8	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.35	7	30	YES
2-Naphthylamine	25.00	22.10	-12	30	YES
Diethylphthalate	12.50	13.30	6	30	YES
Thionazin	12.50	12.22	-2	30	YES
Fluorene	12.50	12.86	3	30	YES
4-Chlorophenyl-phenylether	12.50	13.67	9	30	YES
5-Nitro-o-toluidine	12.50	13.91	11	30	YES
4-Nitroaniline	12.50	13.08	5	30	YES
4,6-Dinitro-2-methylphenol	12.50	13.26	6	30	YES
N-Nitrosodiphenylamine	12.50	13.66	9	30	YES
NDPA as diphenylamine	12.50	13.66	9	30	YES
1,2-Diphenylhydrazine	12.50	13.10	5	30	YES
Tetraethyldithiopyrophospha	12.50	12.34	-1	30	YES
Diallate (peak 1)	9.38	9.47	1	30	YES
Phorate	12.50	13.11	5	30	YES
Phenacetin	12.50	13.98	12	30	YES
4-Bromophenyl-phenylether	12.50	12.85	3	30	YES
Diallate (peak 2)	3.13	2.86	-9	30	YES
Hexachlorobenzene	12.50	12.48	0	30	YES
Diallate trans/cis	12.50	12.33	-1	30	YES
Dimethoate	12.50	12.24	-2	30	YES
Pentachlorophenol	12.50	14.47	16	30	YES
4-Aminobiphenyl	12.50	15.46	24	30	YES
Pentachloronitrobenzene	12.50	13.28	6	30	YES
Pronamide	12.50	13.46	8	30	YES
Dinoseb	12.50	15.17	21	30	YES
Phenanthrene	12.50	13.28	6	30	YES
Anthracene	12.50	13.55	8	30	YES
Carbazole	12.50	13.87	11	30	YES
Methyl parathion	12.50	12.86	3	30	YES
Di-n-butylphthalate	12.50	13.60	9	30	YES
Parathion	12.50	15.17	21	30	YES
4-Nitroquinoline-1-oxide	150.00	227.28	52	30	NO*
Isodrin	12.50	12.81	2	30	YES
Fluoranthene	12.50	13.62	9	30	YES

NC = Could not calculate

Comments: *Re-run hits under valid ICV

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0281.d

ICV SAMPLE ID: rvICV3089

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzidine	62.50	53.42	-15	30	YES
Pyrene	12.50	12.82	3	30	YES
p-Dimethylaminoazobenzene	12.50	13.71	10	30	YES
Chlorobenzilate	12.50	13.68	9	30	YES
3,3'-Dimethylbenzidine	25.00	22.69	-9	30	YES
Butylbenzylphthalate	12.50	13.55	8	30	YES
2-Acetylaminofluorene	12.50	12.92	3	30	YES
3,3'-Dichlorobenzidine	12.50	12.53	0	30	YES
Benzo(a)anthracene	12.50	13.94	11	30	YES
Chrysene	12.50	12.72	2	30	YES
4,4'-Methylenebis(2-chloroa	12.50	12.65	1	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.45	8	30	YES
6-Methylchrysene	12.50	12.39	-1	30	YES
Di-n-octylphthalate	12.50	13.62	9	30	YES
Benzo(b)fluoranthene	12.50	13.53	8	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.51	8	30	YES
Benzo(k)fluoranthene	12.50	13.72	10	30	YES
Benzo(a)pyrene	12.50	13.34	7	30	YES
3-Methylcholanthrene	12.50	14.15	13	30	YES
Dibenz(a,h)acridine	12.50	13.87	11	30	YES
Dibenz(a,j)acridine	12.50	12.31	-2	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.31	7	30	YES
Dibenz(a,h)anthracene	12.50	13.77	10	30	YES
Benzo(g,h,i)perylene	12.50	13.81	10	30	YES
Total PAHs	225.00	238.22	6	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0282.d

ICV SAMPLE ID: RVBASICV2399

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	16.10	29	30	YES
Caprolactam	12.50	11.47	-8	30	YES
Atrazine	12.50	12.85	3	30	YES

Comments: _____ NC = Could not calculate

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0283.d

ICV SAMPLE ID: RVDMPICV2609

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4-Dimethylphenol	12.50	11.94	-4	30	YES

Comments: _____ NC = Could not calculate

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS

LAB CODE: LANCAS

INSTRUMENT: HP23264

Method: SW-846 8270D MINI

File ID: jc0284.d

ICV SAMPLE ID: RVHCCPDICV0350

BATCH: 20MAR11026

Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Hexachlorocyclopentadiene	25.00	25.74	3	30	YES

Comments: _____ NC = Could not calculate

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date(s): 04/16/20 04/17/20
 Calibration Times: 23:40 02:07
 Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:										RRF1.25 = jd0407.d		RRF3.75 = jd0406.d		
RRF7.5 = jd0405.d			RRF12.5 = jd0404.d			RRF20 = jd0403.d			RRF30 = jd0402a.d					
COMPOUND	RRF	RRF	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	%	CAL.			
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	METHOD			
1,4-Phenylenediamine			0.180	0.214	0.235	0.244	0.252	0.249	0.229	12	AVG			
1,3,5-Trinitrobenzene			0.064	0.063	0.077	0.074	0.089	0.086	0.076	14	AVG			
Methapyrilene			0.269	0.346	0.414	0.446	0.462	0.415	0.392	18	AVG			
Average %RSD										11				

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
 Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
 Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

```
/chem/HP23264.i/20apr16a.b/jd0402a.d  SSTD30
/chem/HP23264.i/20apr16a.b/jd0403.d  SSTD20
/chem/HP23264.i/20apr16a.b/jd0404.d  SSTD12.5
/chem/HP23264.i/20apr16a.b/jd0405.d  SSTD7.5
/chem/HP23264.i/20apr16a.b/jd0406.d  SSTD3.75
/chem/HP23264.i/20apr16a.b/jd0407.d  SSTD1.25
```

Area Summary

File ID: =====									
Internal Standard Name	jd0402a.d	jd0403.d	jd0404.d	jd0405.d	jd0406.d	jd0407.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	324382	362631	356502	334599	320428	306991	334256	6	Yes
Naphthalene-d8	1225624	1324027	1309929	1240742	1212594	1153673	1244432	5	Yes
Acenaphthene-d10	595361	633137	626492	619560	596389	558262	604867	5	Yes
Phenanthrene-d10	1178948	1128437	1097445	1085772	1056800	1023578	1095163	5	Yes
Pyrene-d10	1164950	1191977	1099572	1103648	1030003	1015342	1100915	6	Yes
Perylene-d12	1073150	1092507	1071904	1013044	974110	963003	1031286	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID: =====							
Internal Standard Name	jd0402a.d	jd0403.d	jd0404.d	jd0405.d	jd0406.d	jd0407.d	Avg. RT
1,4-Dichlorobenzene-d4	6.654	6.654	6.654	6.654	6.654	6.654	6.654
Naphthalene-d8	8.592	8.592	8.592	8.592	8.592	8.592	8.592
Acenaphthene-d10	11.383	11.383	11.383	11.383	11.383	11.383	11.383
Phenanthrene-d10	13.281	13.281	13.281	13.281	13.275	13.281	13.280
Pyrene-d10	15.220	15.220	15.220	15.220	15.220	15.220	15.220
Perylene-d12	19.675	19.675	19.669	19.675	19.675	19.675	19.674

Comments:

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date(s): 04/17/20 04/17/20
 Calibration Times: 02:36 05:03
 Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:										RRF1.25 = jd0413.d		RRF3.75 = jd0412.d		
RRF7.5 = jd0411.d			RRF12.5 = jd0410.d			RRF20 = jd0409.d			RRF30 = jd0408.d					
COMPOUND	RRF	RRF	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	%	CAL.			
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	METHOD			
Disulfoton			0.328	0.367	0.397	0.416	0.431	0.447	0.398	11	AVG			
Famphur			0.364	0.441	0.468	0.486	0.438	0.395	0.432	11	AVG			
Kepone			0.052	0.069	0.066	0.064	0.061	0.046	0.060	15	AVG			
Average %RSD										9				

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
 Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
 Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

```
/chem/HP23264.i/20apr16a.b/jd0408.d  SST30
/chem/HP23264.i/20apr16a.b/jd0409.d  SST20
/chem/HP23264.i/20apr16a.b/jd0410.d  SST12.5
/chem/HP23264.i/20apr16a.b/jd0411.d  SST7.5
/chem/HP23264.i/20apr16a.b/jd0412.d  SST3.75
/chem/HP23264.i/20apr16a.b/jd0413.d  SST1.25
/chem/HP23264.i/20apr16a.b/jd0414.d  SST6
```

Area Summary

File ID:

=====

Internal Standard Name	jd0408.d	jd0409.d	jd0410.d	jd0411.d	jd0412.d	jd0413.d	jd0414.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	276865	311168	296986	303084	295414	291778	293500	295542	4	Yes
Naphthalene-d8	1050763	1154068	1118485	1105747	1108240	1088721	1073029	1099865	3	Yes
Acenaphthene-d10	487216	555554	525361	522155	526590	545368	526388	526947	4	Yes
Phenanthrene-d10	906557	957599	959769	971072	937977	972201	986193	955910	3	Yes
Pyrene-d10	913642	921034	900108	911068	840227	911352	920562	902570	3	Yes
Perylene-d12	807252	875155	854014	833476	839780	866710	841512	845414	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	jd0408.d	jd0409.d	jd0410.d	jd0411.d	jd0412.d	jd0413.d	jd0414.d	Avg. RT
1,4-Dichlorobenzene-d4	6.654	6.654	6.654	6.654	6.654	6.654	6.654	6.654
Naphthalene-d8	8.592	8.592	8.592	8.592	8.592	8.592	8.592	8.592
Acenaphthene-d10	11.383	11.384	11.383	11.384	11.383	11.384	11.383	11.383
Phenanthrene-d10	13.275	13.275	13.275	13.275	13.275	13.281	13.275	13.276
Pyrene-d10	15.220	15.220	15.214	15.220	15.220	15.220	15.214	15.218
Perylene-d12	19.675	19.669	19.669	19.675	19.675	19.675	19.675	19.673

Comments:

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date(s): 04/23/20 04/23/20
 Calibration Times: 10:17 10:17
 Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:

RRF12.5 = jd0624.d

COMPOUND	RRF	RRF	RRF	RRF	RRF	RRF12.5RRF	RRF	% RSD	CAL. METHOD
a,a-Dimethylphenethylamine						0.590	0.590	0	AVG
Aramite (1)						0.018	0.018	0	AVG
Aramite (2)						0.010	0.010	0	AVG
Aramite (3)						0.571	0.571	0	AVG
Aramite (4)						0.710	0.710	0	AVG
Aramite						0.139	0.139	0	AVG
Average %RSD								0	

+ %RSD is less than or equal to 0%; however, value rounds to 0.

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
 Benzdine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
 Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

page 1 of 1

FORM VI SV-1

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date: 04/23/20 Time: 07:25
 Lab File ID: jd0621.d Init. Calib. Date(s): 03/11/20 03/11/20
 Init. Calib. Times(s): 10:15 14:11

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.752	0.728	12.090	12.5	-3
N-Nitrosodimethylamine	1.185	1.168	12.320	12.5	-1
Pyridine	1.862	1.876	12.600	12.5	1
2-Picoline	1.792	1.871	13.050	12.5	4
N-Nitrosomethylethylamine	0.786	0.738	11.730	12.5	-6
Methyl methanesulfonate	1.134	1.031	11.370	12.5	-9
N-Nitrosodiethylamine	0.724	0.736	12.700	12.5	2
Ethyl methanesulfonate	0.682	0.711	13.050	12.5	4
Benzaldehyde	1.395	1.604	14.370	12.5	15
Phenol	2.230	2.200	12.330	12.5	-1
Aniline	2.555	2.519	12.330	12.5	-1
bis(2-Chloroethyl)ether	1.626	1.631	12.540	12.5	0
2-Chlorophenol	1.323	1.395	13.180	12.5	5
1,3-Dichlorobenzene	1.584	1.571	12.400	12.5	-1
1,4-Dichlorobenzene	1.612	1.573	12.200	12.5	-2
Benzyl alcohol	0.896	0.932	13.010	12.5	4
1,2-Dichlorobenzene	1.506	1.492	12.390	12.5	-1
Indene	2.196	2.338	13.310	12.5	6
2-Methylphenol	1.336	1.394	13.040	12.5	4
2,2'-oxybis(1-Chloropropane)	2.128	2.098	12.320	12.5	-1
bis(2-Chloroisopropyl)ether	2.128	2.098	12.320	12.5	-1
N-Nitrosopyrrolidine	0.717	0.790	13.760	12.5	10
Acetophenone	2.215	2.378	13.420	12.5	7
4-Methylphenol	1.593	1.568	12.300	12.5	-2
Total Cresols	1.465	1.481	25.350	25.0	1
N-Nitroso-di-n-propylamine	1.360	1.446	13.280	12.5	6
N-Nitrosomorpholine	1.129	1.092	12.090	12.5	-3
o-Toluidine	2.346	2.508	13.370	12.5	7
Hexachloroethane	0.773	0.752	12.170	12.5	-3
Nitrobenzene	0.580	0.548	11.820	12.5	-5
N-Nitrosopiperidine	0.179	0.178	12.470	12.5	0
Isophorone	0.926	0.927	12.520	12.5	0
2-Nitrophenol	0.186	0.193	12.930	12.5	3
2,4-Dimethylphenol	0.428	0.425	12.410	12.5	-1
O,O,O-Triethylphosphorothioate	0.182	0.187	12.860	12.5	3
bis(2-Chloroethoxy)methane	0.502	0.527	13.120	12.5	5

7C

Contract:

Case No.:

Calibration Date: 04/23/20

Init. Calib. Date(s): 03/11/20

14:11

Min RRF for SPCC (#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Benzoic acid	0.234	0.172	9.180	12.5	-27
2,4-Dichlorophenol	0.317	0.305	12.040	12.5	-4
1,2,4-Trichlorobenzene	0.367	0.354	12.070	12.5	-3
Naphthalene	1.045	1.037	12.410	12.5	-1
4-Chloroaniline	0.418	0.405	12.110	12.5	-3
2,6-Dichlorophenol	0.313	0.297	11.870	12.5	-5
Hexachloropropene	0.278	0.284	12.770	12.5	2
Hexachlorobutadiene	0.244	0.229	11.700	12.5	-6
Quinoline	0.657	0.644	12.260	12.5	-2
Caprolactam	0.100	0.109	13.690	12.5	10
N-Nitrosodi-n-butylamine	0.317	0.305	12.050	12.5	-4
4-Chloro-3-methylphenol	0.340	0.340	12.490	12.5	0
Safrole	0.280	0.271	12.100	12.5	-3
2-Methylnaphthalene	0.687	0.680	12.380	12.5	-1
1-Methylnaphthalene	0.651	0.630	12.100	12.5	-3
Hexachlorocyclopentadiene	0.554	0.535	12.060	12.5	-4
1,2,4,5-Tetrachlorobenzene	0.767	0.723	11.770	12.5	-6
cis-Isosafrole	0.592	0.531	1.910	2.1	-10
2,4,6-Trichlorophenol	0.461	0.480	13.010	12.5	4
2,4,5-Trichlorophenol	0.506	0.504	12.450	12.5	0
trans-Isosafrole	0.663	0.652	10.200	10.4	-2
Isosafrole	0.651	0.631	12.100	12.5	-3
1,1'-Biphenyl	1.737	1.705	12.270	12.5	-2
2-Chloronaphthalene	1.466	1.452	12.380	12.5	-1
1-Chloronaphthalene	1.350	1.270	11.760	12.5	-6
Diphenyl ether	0.957	0.946	12.360	12.5	-1
2-Nitroaniline	0.420	0.419	12.470	12.5	0
1,4-Naphthoquinone	0.549	0.552	12.550	12.5	0
1,4-Dinitrobenzene	0.213	0.228	13.370	12.5	7
Dimethylphthalate	1.567	1.572	12.540	12.5	0
1,3-Dinitrobenzene	0.241	0.250	12.980	12.5	4
2,6-Dinitrotoluene	0.343	0.368	13.440	12.5	8
Acenaphthylene	1.924	1.949	12.660	12.5	1
3-Nitroaniline	0.337	0.353	13.070	12.5	5
Acenaphthene	1.335	1.357	12.700	12.5	2
2,4-Dinitrophenol	0.206	0.209	12.690	12.5	2

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP23264 Calibration Date: 04/23/20 Time: 07:25

Lab File ID: jd0621.d Init. Calib. Date(s): 03/11/20 03/11/20
Init. Calib. Times(s): 10:15 14:11

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.333	0.274	10.280	12.5	-18
Pentachlorobenzene	0.635	0.605	11.910	12.5	-5
2,4-Dinitrotoluene	0.467	0.480	12.840	12.5	3
2,4 2,6-Dinitrotoluenes	0.402	0.424	26.280	25.0	5
Dibenzofuran	1.957	1.927	12.310	12.5	-2
1-Naphthylamine	1.295	1.276	12.320	12.5	-1
2,3,4,6-Tetrachlorophenol	0.379	0.403	13.290	12.5	6
2-Naphthylamine	1.270	1.211	11.910	12.5	-5
Diethylphthalate	1.529	1.570	12.840	12.5	3
Thionazin	0.292	0.302	12.920	12.5	3
Fluorene	1.531	1.520	12.410	12.5	-1
4-Chlorophenyl-phenylether	0.752	0.775	12.880	12.5	3
5-Nitro-o-toluidine	0.393	0.406	12.930	12.5	3
4-Nitroaniline	0.370	0.369	12.460	12.5	0
4,6-Dinitro-2-methylphenol	0.146	0.153	13.120	12.5	5
N-Nitrosodiphenylamine (1)	0.665	0.658	12.360	12.5	-1
NDPA as diphenylamine	0.665	0.658	12.360	12.5	-1
1,2-Diphenylhydrazine	1.157	1.057	11.420	12.5	-9
Tetraethyldithiopyrophosphate	0.181	0.186	12.810	12.5	2
Diallate (peak 1)	0.390	0.395	9.390	9.3	2
Phorate	0.579	0.617	13.330	12.5	7
Phenacetin	0.427	0.442	12.940	12.5	4
4-Bromophenyl-phenylether	0.248	0.231	11.630	12.5	-7
Diallate (peak 2)	0.391	0.389	3.230	3.3	0
Diallate trans/cis	0.390	0.394	12.620	12.5	1
Hexachlorobenzene	0.262	0.257	12.230	12.5	-2
Dimethoate	0.368	0.407	13.790	12.5	10
Atrazine	0.221	0.229	12.940	12.5	4
Pentachlorophenol	0.169	0.152	11.280	12.5	-10
4-Aminobiphenyl	0.742	0.675	11.380	12.5	-9
Pentachloronitrobenzene	0.131	0.132	12.560	12.5	1
Pronamide	0.367	0.405	13.770	12.5	10
Dinoseb	0.194	0.217	13.970	12.5	12
Phenanthrene	1.162	1.155	12.430	12.5	-1
Anthracene	1.150	1.165	12.660	12.5	1
Carbazole	1.068	1.065	12.460	12.5	0

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Lab Name: Lancaster Laboratories		Contract:_____	
Lab Code: LANCAS	Case No.:_____	SAS No.:_____	SDG No.:_____
Instrument ID: HP23264	Calibration Date:	04/23/20	Time: 07:25
Lab File ID: jd0621.d	Init. Calib. Date(s):	03/11/20	03/11/20
	Init. Calib. Times(s):	10:15	14:11

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Methyl parathion	0.298	0.315	13.210	12.5	6
Di-n-butylphthalate	1.418	1.477	13.020	12.5	4
Parathion	0.181	0.195	13.490	12.5	8
4-Nitroquinoline-1-oxide	0.137	0.128	11.670	12.5	-7
Octachlorostyrene	0.116	0.113	12.120	12.5	-3
Isodrin	0.163	0.153	11.710	12.5	-6
Fluoranthene	1.354	1.391	12.840	12.5	3
Benzdine	0.814	0.828	38.120	37.5	2
Pyrene	1.349	1.362	12.620	12.5	1
p-Dimethylaminoazobenzene	0.230	0.238	12.960	12.5	4
Chlorobenzilate	0.394	0.442	14.000	12.5	12
3,3'-Dimethylbenzidine	0.775	0.820	13.240	12.5	6
Butylbenzylphthalate	0.582	0.621	13.330	12.5	7
2-Acetylaminofluorene	0.457	0.485	13.250	12.5	6
3,3'-Dichlorobenzidine	0.467	0.482	12.900	12.5	3
4,4'-Methylenebis(2-chloroanil	0.235	0.245	13.040	12.5	4
Benzo (a) anthracene	1.141	1.234	13.510	12.5	8
Chrysene	1.186	1.234	13.000	12.5	4
bis(2-Ethylhexyl)phthalate	0.805	0.889	13.800	12.5	10
6-Methylchrysene	0.857	0.906	13.210	12.5	6
Di-n-octylphthalate	1.401	1.616	14.420	12.5	15
Benzo (b) fluoranthene	1.287	1.290	12.540	12.5	0
7,12-Dimethylbenz[a]anthracene	0.554	0.560	12.620	12.5	1
Benzo (k) fluoranthene	1.224	1.253	12.790	12.5	2
Benzo (a) pyrene	1.173	1.201	12.800	12.5	2
3-Methylcholanthrene	0.552	0.621	14.060	12.5	12
Dibenz (a,h) acridine	0.848	0.907	13.360	12.5	7
Dibenz (a,j) acridine	0.915	0.981	13.400	12.5	7
Indeno (1,2,3-cd) pyrene	0.983	1.050	13.350	12.5	7
Dibenz (a,h) anthracene	1.026	1.091	13.290	12.5	6
Benzo (g,h,i) perylene	1.034	1.106	13.370	12.5	7
Total PAHs	1.094	1.104	229.860	225.0	2
2-Fluorophenol	1.457	1.466	25.160	25.0	1
Phenol-d6	1.937	1.996	25.760	25.0	3
Nitrobenzene-d5	0.565	0.536	23.720	25.0	-5

Lab Name: Lancaster Laboratories		Contract: _____	
Lab Code: LANCAS	Case No.: _____	SAS No.: _____	SDG No.: _____
Instrument ID: HP23264	Calibration Date: 04/23/20	Time: 07:25	
Lab File ID: jd0621.d	Init. Calib. Date(s): 03/11/20	03/11/20	
	Init. Calib. Times(s): 10:15	14:11	

Max %Drift for CCC(*) = 20%

Average %Drift: 4

Continuing Calibration Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

```
/chem/HP23264.i/20mar11.b/jc0271.d **
/chem/HP23264.i/20mar11.b/jc0272.d
/chem/HP23264.i/20mar11.b/jc0273.d
/chem/HP23264.i/20mar11.b/jc0274.d
/chem/HP23264.i/20mar11.b/jc0275.d
/chem/HP23264.i/20mar11.b/jc0276.d
/chem/HP23264.i/20mar11.b/jc0277.d
/chem/HP23264.i/20mar11.b/jc0278.d
```

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

```
/chem/HP23264.i/20apr23.b/jd0621.d
```

Area Summary

File ID:

=====

Internal Standard Name	jd0621.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	253190	250625	125312	501250	Yes
Naphthalene-d8	978757	967500	483750	1935000	Yes
Acenaphthene-d10	486796	474637	237318	949274	Yes
Phenanthrene-d10	917663	889943	444972	1779886	Yes
Pyrene-d10	932321	936761	468380	1873522	Yes
Perylene-d12	901999	889714	444857	1779428	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

=====

Internal Standard Name	jd0621.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.619	6.771	Yes
Naphthalene-d8	8.557	8.709	Yes
Acenaphthene-d10	11.348	11.500	Yes
Phenanthrene-d10	13.246	13.386	Yes
Pyrene-d10	15.185	15.348	Yes
Perylene-d12	19.634	19.827	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date: 04/23/20 Time: 08:52
 Lab File ID: jd0622.d Init. Calib. Date(s): 04/16/20 04/17/20
 Init. Calib. Times(s): 23:40 02:07

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Phenylenediamine	0.229	0.212	11.570	12.5	-7
1,3,5-Trinitrobenzene	0.076	0.073	12.090	12.5	-3
Methapyrilene	0.392	0.443	14.140	12.5	13
Average %Drift:					8

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date: 04/23/20 Time: 09:27
 Lab File ID: jd0623.d Init. Calib. Date(s): 04/17/20 04/17/20
 Init. Calib. Times(s): 02:36 05:03

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Disulfoton	0.398	0.441	13.870	12.5	11
Famphur	0.432	0.465	13.460	12.5	8
Kepone	0.060	0.089	89.180	60.0	49
Average %Drift:					23

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date: 04/28/20 Time: 07:21
 Lab File ID: jd0811.d Init. Calib. Date(s): 03/11/20 03/11/20
 Init. Calib. Times(s): 10:15 14:11

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.752	0.713	11.850	12.5	-5
N-Nitrosodimethylamine	1.185	1.171	12.350	12.5	-1
Pyridine	1.862	1.862	12.500	12.5	0
2-Picoline	1.792	1.757	12.260	12.5	-2
N-Nitrosomethylethylamine	0.786	0.752	11.950	12.5	-4
Methyl methanesulfonate	1.134	1.011	11.150	12.5	-11
N-Nitrosodiethylamine	0.724	0.681	11.750	12.5	-6
Ethyl methanesulfonate	0.682	0.672	12.330	12.5	-1
Benzaldehyde	1.395	1.431	12.820	12.5	3
Phenol	2.230	2.063	11.560	12.5	-8
Aniline	2.555	2.434	11.910	12.5	-5
bis(2-Chloroethyl)ether	1.626	1.558	11.980	12.5	-4
2-Chlorophenol	1.323	1.341	12.670	12.5	1
1,3-Dichlorobenzene	1.584	1.518	11.980	12.5	-4
1,4-Dichlorobenzene	1.612	1.554	12.050	12.5	-4
Benzyl alcohol	0.896	0.884	12.340	12.5	-1
1,2-Dichlorobenzene	1.506	1.426	11.830	12.5	-5
Indene	2.196	2.245	12.780	12.5	2
2-Methylphenol	1.336	1.279	11.970	12.5	-4
2,2'-oxybis(1-Chloropropane)	2.128	1.998	11.740	12.5	-6
bis(2-Chloroisopropyl)ether	2.128	1.998	11.740	12.5	-6
N-Nitrosopyrrolidine	0.717	0.759	13.230	12.5	6
Acetophenone	2.215	2.213	12.480	12.5	0
4-Methylphenol	1.593	1.458	11.440	12.5	-8
Total Cresols	1.465	1.369	23.410	25.0	-6
N-Nitroso-di-n-propylamine	1.360	1.309	12.030	12.5	-4
N-Nitrosomorpholine	1.129	0.994	11.000	12.5	-12
o-Toluidine	2.346	2.281	12.150	12.5	-3
Hexachloroethane	0.773	0.720	11.640	12.5	-7
Nitrobenzene	0.580	0.548	11.830	12.5	-5
N-Nitrosopiperidine	0.179	0.185	12.960	12.5	4
Isophorone	0.926	0.905	12.210	12.5	-2
2-Nitrophenol	0.186	0.196	13.110	12.5	5
2,4-Dimethylphenol	0.428	0.431	12.580	12.5	1
O,O,O-Triethylphosphorothioate	0.182	0.184	12.620	12.5	1
bis(2-Chloroethoxy)methane	0.502	0.505	12.560	12.5	1

FORM VII SV-1

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP23264 Calibration Date: 04/28/20 Time: 07:21

Lab File ID: jd0811.d Init. Calib. Date(s): 03/11/20 03/11/20

Init. Calib. Times(s): 10:15 14:11

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Benzoic acid	0.234	0.225	12.020	12.5	-4
2,4-Dichlorophenol	0.317	0.317	12.500	12.5	0
1,2,4-Trichlorobenzene	0.367	0.357	12.180	12.5	-3
Naphthalene	1.045	1.048	12.540	12.5	0
4-Chloroaniline	0.418	0.411	12.270	12.5	-2
2,6-Dichlorophenol	0.313	0.302	12.060	12.5	-4
Hexachloropropene	0.278	0.284	12.730	12.5	2
Hexachlorobutadiene	0.244	0.236	12.080	12.5	-3
Quinoline	0.657	0.646	12.290	12.5	-2
Caprolactam	0.100	0.105	13.230	12.5	6
N-Nitrosodi-n-butylamine	0.317	0.298	11.790	12.5	-6
4-Chloro-3-methylphenol	0.340	0.341	12.530	12.5	0
Safrole	0.280	0.275	12.300	12.5	-2
2-Methylnaphthalene	0.687	0.686	12.490	12.5	0
1-Methylnaphthalene	0.651	0.642	12.330	12.5	-1
Hexachlorocyclopentadiene	0.554	0.543	12.250	12.5	-2
1,2,4,5-Tetrachlorobenzene	0.767	0.740	12.060	12.5	-4
cis-Isosafrole	0.592	0.585	2.100	2.1	-1
2,4,6-Trichlorophenol	0.461	0.484	13.120	12.5	5
2,4,5-Trichlorophenol	0.506	0.517	12.760	12.5	2
trans-Isosafrole	0.663	0.690	10.790	10.4	4
Isosafrole	0.651	0.672	12.890	12.5	3
1,1'-Biphenyl	1.737	1.728	12.440	12.5	0
2-Chloronaphthalene	1.466	1.471	12.540	12.5	0
1-Chloronaphthalene	1.350	1.268	11.730	12.5	-6
Diphenyl ether	0.957	0.913	11.930	12.5	-5
2-Nitroaniline	0.420	0.428	12.740	12.5	2
1,4-Naphthoquinone	0.549	0.539	12.270	12.5	-2
1,4-Dinitrobenzene	0.213	0.226	13.240	12.5	6
Dimethylphthalate	1.567	1.575	12.560	12.5	1
1,3-Dinitrobenzene	0.241	0.251	13.060	12.5	4
2,6-Dinitrotoluene	0.343	0.361	13.170	12.5	5
Acenaphthylene	1.924	1.882	12.220	12.5	-2
3-Nitroaniline	0.337	0.341	12.640	12.5	1
Acenaphthene	1.335	1.328	12.440	12.5	-1
2,4-Dinitrophenol	0.206	0.219	13.330	12.5	7

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date: 04/28/20 Time: 07:21
 Lab File ID: jd0811.d Init. Calib. Date(s): 03/11/20 03/11/20
 Init. Calib. Times(s): 10:15 14:11

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.333	0.277	10.390	12.5	-17
Pentachlorobenzene	0.635	0.616	12.140	12.5	-3
2,4-Dinitrotoluene	0.467	0.468	12.530	12.5	0
2,4,2,6-Dinitrotoluenes	0.402	0.415	25.700	25.0	3
Dibenzofuran	1.957	1.916	12.240	12.5	-2
1-Naphthylamine	1.295	1.287	12.420	12.5	-1
2,3,4,6-Tetrachlorophenol	0.379	0.384	12.670	12.5	1
2-Naphthylamine	1.270	1.215	11.960	12.5	-4
Diethylphthalate	1.529	1.520	12.430	12.5	-1
Thionazin	0.292	0.287	12.300	12.5	-2
Fluorene	1.531	1.529	12.490	12.5	0
4-Chlorophenyl-phenylether	0.752	0.782	13.000	12.5	4
5-Nitro-o-toluidine	0.393	0.393	12.510	12.5	0
4-Nitroaniline	0.370	0.360	12.150	12.5	-3
4,6-Dinitro-2-methylphenol	0.146	0.164	14.080	12.5	13
N-Nitrosodiphenylamine (1)	0.665	0.693	13.030	12.5	4
NDPA as diphenylamine	0.665	0.693	13.030	12.5	4
1,2-Diphenylhydrazine	1.157	1.099	11.880	12.5	-5
Tetraethyldithiopyrophosphate	0.181	0.184	12.670	12.5	1
Diallate (peak 1)	0.390	0.398	9.440	9.3	2
Phorate	0.579	0.639	13.810	12.5	11
Phenacetin	0.427	0.455	13.320	12.5	7
4-Bromophenyl-phenylether	0.248	0.245	12.370	12.5	-1
Diallate (peak 2)	0.391	0.414	3.440	3.3	6
Diallate trans/cis	0.390	0.402	12.880	12.5	3
Hexachlorobenzene	0.262	0.268	12.790	12.5	2
Dimethoate	0.368	0.411	13.940	12.5	12
Atrazine	0.221	0.228	12.880	12.5	3
Pentachlorophenol	0.169	0.177	13.110	12.5	5
4-Aminobiphenyl	0.742	0.719	12.110	12.5	-3
Pentachloronitrobenzene	0.131	0.139	13.220	12.5	6
Pronamide	0.367	0.415	14.110	12.5	13
Dinoseb	0.194	0.227	14.630	12.5	17
Phenanthrene	1.162	1.156	12.440	12.5	0
Anthracene	1.150	1.195	12.990	12.5	4
Carbazole	1.068	1.088	12.730	12.5	2

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Instrument ID: HP23264 Calibration Date: 04/28/20 Time: 07:21
Lab File ID: jd0811.d Init. Calib. Date(s): 03/11/20 03/11/20
Init. Calib. Times(s): 10:15 14:11

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Methyl parathion	0.298	0.343	14.380	12.5	15
Di-n-butylphthalate	1.418	1.536	13.540	12.5	8
Parathion	0.181	0.211	14.600	12.5	17
4-Nitroquinoline-1-oxide	0.137	0.147	13.480	12.5	8
Octachlorostyrene	0.116	0.111	11.900	12.5	-5
Isodrin	0.163	0.159	12.220	12.5	-2
Fluoranthene	1.354	1.434	13.240	12.5	6
Benzidine	0.814	0.844	38.860	37.5	4
Pyrene	1.349	1.345	12.460	12.5	0
p-Dimethylaminoazobenzene	0.230	0.244	13.260	12.5	6
Chlorobenzilate	0.394	0.443	14.040	12.5	12
3,3'-Dimethylbenzidine	0.775	0.878	14.170	12.5	13
Butylbenzylphthalate	0.582	0.649	13.930	12.5	11
2-Acetylaminofluorene	0.457	0.487	13.320	12.5	7
3,3'-Dichlorobenzidine	0.467	0.502	13.440	12.5	8
4,4'-Methylenebis(2-chloroanil	0.235	0.247	13.120	12.5	5
Benzo(a)anthracene	1.141	1.263	13.830	12.5	11
Chrysene	1.186	1.225	12.900	12.5	3
bis(2-Ethylhexyl)phthalate	0.805	0.926	14.380	12.5	15
6-Methylchrysene	0.857	0.913	13.320	12.5	7
Di-n-octylphthalate	1.401	1.738	15.510	12.5	24
Benzo(b)fluoranthene	1.287	1.320	12.820	12.5	3
7,12-Dimethylbenz[a]anthracene	0.554	0.594	13.380	12.5	7
Benzo(k)fluoranthene	1.224	1.315	13.430	12.5	7
Benzo(a)pyrene	1.173	1.234	13.150	12.5	5
3-Methylcholanthrene	0.552	0.634	14.360	12.5	15
Dibenz(a,h)acridine	0.848	0.930	13.710	12.5	10
Dibenz(a,j)acridine	0.915	0.969	13.240	12.5	6
Indeno(1,2,3-cd)pyrene	0.983	1.087	13.830	12.5	11
Dibenz(a,h)anthracene	1.026	1.087	13.250	12.5	6
Benzo(g,h,i)perylene	1.034	1.098	13.270	12.5	6
Total PAHs	1.094	1.126	232.120	225.0	3
2-Fluorophenol	1.457	1.388	23.820	25.0	-5
Phenol-d6	1.937	1.917	24.740	25.0	-1
Nitrobenzene-d5	0.565	0.544	24.060	25.0	-4

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP23264 Calibration Date: 04/28/20 Time: 07:21
 Lab File ID: jd0811.d Init. Calib. Date(s): 03/11/20 03/11/20
 Init. Calib. Times(s): 10:15 14:11

Min RRF for SPCC(#) = 0.050

Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Fluorobiphenyl	1.620	1.609	24.830	25.0	-1
2,4,6-Tribromophenol	0.221	0.235	26.650	25.0	7
Terphenyl-d14	0.906	0.946	26.100	25.0	4
Average %Drift:					5

FORM VII SV-1

Continuing Calibration Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP23264.i/20mar11.b/jc0271.d **
/chem/HP23264.i/20mar11.b/jc0272.d
/chem/HP23264.i/20mar11.b/jc0273.d
/chem/HP23264.i/20mar11.b/jc0274.d
/chem/HP23264.i/20mar11.b/jc0275.d
/chem/HP23264.i/20mar11.b/jc0276.d
/chem/HP23264.i/20mar11.b/jc0277.d
/chem/HP23264.i/20mar11.b/jc0278.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP23264.i/20apr28.b/jd0811.d

Area Summary

File ID:

=====

Internal Standard Name	jd0811.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	365735	250625	125312	501250	Yes
Naphthalene-d8	1305363	967500	483750	1935000	Yes
Acenaphthene-d10	644065	474637	237318	949274	Yes
Phenanthrene-d10	1195092	889943	444972	1779886	Yes
Pyrene-d10	1276786	936761	468380	1873522	Yes
Perylene-d12	1185975	889714	444857	1779428	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

=====

Internal Standard Name	jd0811.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.671	6.771	Yes
Naphthalene-d8	8.610	8.709	Yes
Acenaphthene-d10	11.395	11.500	Yes
Phenanthrene-d10	13.293	13.386	Yes
Pyrene-d10	15.231	15.348	Yes
Perylene-d12	19.687	19.827	Yes

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments:

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): jd0621.d Date Analyzed: 04/23/20
 Instrument ID: HP23264 Time Analyzed: 07:25

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	253190	6.619	978757	8.557	486796	11.348
	UPPER LIMIT	506380	7.119	1957514	9.057	973592	11.848
	LOWER LIMIT	126595	6.119	489379	8.057	243398	10.848
	=====	=====	=====	=====	=====	=====	=====
	LLI SAMPLE NO.						
	=====	=====	=====	=====	=====	=====	=====
01	SBLKWH112	200555	6.619	690087	8.557	353593	11.342
02	SBLKWZ112	200555	6.619	690087	8.557	353593	11.342
03	112WHLCS	192542	6.619	752858	8.557	404654	11.348
04	112WZLCS	192542	6.619	752858	8.557	404654	11.348
05	112WHLCS1	217274	6.619	851290	8.557	422185	11.343
06	112WHLCS1	227156	6.619	885995	8.552	463585	11.343
07	112WZUS	227112	6.619	888524	8.551	453875	11.342
08	1300797	227112	6.619	888524	8.551	453875	11.342
09	112WZMS	223184	6.619	831870	8.552	429756	11.348
10	1300798MS	223184	6.619	831870	8.552	429756	11.348
11	112WZMSD	222635	6.619	874145	8.557	466701	11.348
12	1300799MSD	222635	6.619	874145	8.557	466701	11.348
13	1300599	232433	6.619	831071	8.552	452075	11.343
14	1300600	233138	6.619	865148	8.552	432016	11.343
15	1300601	210523	6.619	798736	8.557	399730	11.343
16	1300794	238716	6.619	917170	8.552	451719	11.343
17	1300795	234830	6.619	867144	8.551	437677	11.342

IS1 (DCB) = 1,4-Dichlorobenzene-d4
 IS2 (NPT) = Naphthalene-d8
 IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = -50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
 * Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): jd0621.d Date Analyzed: 04/23/20

Instrument ID: HP23264 Time Analyzed: 07:25

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	917663	13.246	932321	15.185	901999	19.634
	UPPER LIMIT	1835326	13.746	1864642	15.685	1803998	20.134
	LOWER LIMIT	458832	12.746	466161	14.685	451000	19.134
	=====	=====	=====	=====	=====	=====	=====
	LLI SAMPLE NO.						
	=====	=====	=====	=====	=====	=====	=====
01	SBLKWH112	662175	13.246	681269	15.179	625379	19.634
02	SBLKWZ112	662175	13.246	681269	15.179	625379	19.634
03	112WHLCS	794014	13.246	848968	15.179	769258	19.634
04	112WZLCS	794014	13.246	848968	15.179	769258	19.634
05	112WHLCS1	799264	13.246	798843	15.179	763366	19.628
06	112WHLCS1	851764	13.246	882198	15.179	804999	19.628
07	112WZUS	840989	13.246	868219	15.179	805494	19.634
08	1300797	840989	13.246	868219	15.179	805494	19.634
09	112WZMS	827139	13.246	834243	15.179	782429	19.628
10	1300798MS	827139	13.246	834243	15.179	782429	19.628
11	112WZMSD	848239	13.246	919180	15.179	805092	19.634
12	1300799MSD	848239	13.246	919180	15.179	805092	19.634
13	1300599	831139	13.246	850576	15.179	781765	19.628
14	1300600	880870	13.246	862713	15.179	761377	19.628
15	1300601	755500	13.246	759721	15.179	719848	19.628
16	1300794	868056	13.246	884337	15.179	827210	19.628
17	1300795	866821	13.246	865069	15.179	768806	19.628

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): jd0621.d Date Analyzed: 04/23/20

Instrument ID: HP23264 Time Analyzed: 07:25

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	253190	6.619	978757	8.557	486796	11.348
	UPPER LIMIT	506380	7.119	1957514	9.057	973592	11.848
	LOWER LIMIT	126595	6.119	489379	8.057	243398	10.848
	=====	=====	=====	=====	=====	=====	=====
	LLI SAMPLE						
	NO.						
	=====	=====	=====	=====	=====	=====	=====
18	1300796	222787	6.619	866221	8.551	424171	11.342
19	1300800	205925	6.619	779235	8.551	392247	11.342
20	1300801	206167	6.619	774478	8.557	385201	11.342
21	1300802	202226	6.619	777127	8.551	382581	11.343

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): jd0621.d Date Analyzed: 04/23/20

Instrument ID: HP23264 Time Analyzed: 07:25

		IS4(PHN) AREA #	RT #	IS5(PYR) AREA #	RT #	IS6(PRY) AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	917663	13.246	932321	15.185	901999	19.634
	UPPER LIMIT	1835326	13.746	1864642	15.685	1803998	20.134
	LOWER LIMIT	458832	12.746	466161	14.685	451000	19.134
	=====	=====	=====	=====	=====	=====	=====
	LLI SAMPLE NO.						
	=====	=====	=====	=====	=====	=====	=====
18	1300796	822448	13.246	827772	15.179	747057	19.628
19	1300800	728255	13.246	745877	15.179	682157	19.628
20	1300801	747860	13.246	759787	15.179	672768	19.628
21	1300802	736618	13.246	734028	15.179	673700	19.628

IS4 (PHN) = Phenanthrene-d10

IS5 (PYR) = Pyrene-d10

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk

* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): jd0811.d Date Analyzed: 04/28/20

Instrument ID: HP23264 Time Analyzed: 07:21

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	365735	6.671	1305363	8.610	644065	11.395
	UPPER LIMIT	731470	7.171	2610726	9.110	1288130	11.895
	LOWER LIMIT	182868	6.171	652682	8.110	322033	10.895
	=====	=====	=====	=====	=====	=====	=====
	LLI SAMPLE NO.						
	=====	=====	=====	=====	=====	=====	=====
01	SBLKWC118	237632	6.665	847428	8.604	433874	11.395
02	118WCLCS	230659	6.665	838158	8.604	420104	11.395
03	1300803	270943	6.665	986863	8.604	474774	11.395
04	1300804	281983	6.671	1031424	8.604	493590	11.395
05	1300805	234273	6.671	876732	8.604	431269	11.395
06	1300806	229729	6.671	862336	8.604	425288	11.395
07	1302545	209661	6.671	754639	8.604	362225	11.395
08	1302546	205359	6.671	724922	8.604	347491	11.395
09	1302547	202013	6.671	794500	8.604	391085	11.395
10	1302548	200466	6.671	752217	8.604	381007	11.395
11	1302549MS	189184	6.671	719530	8.604	383365	11.395
12	1302550MSD	233959	6.671	847098	8.604	426165	11.395
13	1302552	232514	6.671	898173	8.604	447358	11.395

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): jd0811.d Date Analyzed: 04/28/20

Instrument ID: HP23264 Time Analyzed: 07:21

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	1195092	13.293	1276786	15.231	1185975	19.687
	UPPER LIMIT	2390184	13.793	2553572	15.731	2371950	20.187
	LOWER LIMIT	597546	12.793	638393	14.731	592988	19.187
	=====	=====	=====	=====	=====	=====	=====
	LLI SAMPLE						
	NO.						
	=====	=====	=====	=====	=====	=====	=====
01	SBLKWC118	819670	13.287	810010	15.231	725010	19.686
02	118WCLCS	807930	13.287	870064	15.231	736765	19.686
03	1300803	909355	13.287	945336	15.231	881557	19.686
04	1300804	935037	13.287	939398	15.231	899679	19.687
05	1300805	807713	13.287	832483	15.231	744821	19.687
06	1300806	770830	13.287	802110	15.231	733387	19.687
07	1302545	639707	13.287	655568	15.231	665932	19.687
08	1302546	655866	13.287	650570	15.231	644992	19.687
09	1302547	744704	13.287	727936	15.231	697002	19.687
10	1302548	706755	13.287	727690	15.231	648785	19.686
11	1302549MS	670854	13.293	755989	15.231	706824	19.687
12	1302550MSD	790518	13.293	826649	15.231	750908	19.687
13	1302552	837528	13.287	861597	15.231	790611	19.686

IS4 (PHN) = Phenanthrene-d10

IS5 (PYR) = Pyrene-d10

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk

* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

59R01

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300794

Data file: /chem/HP23264.i/20apr23.b/jd0635.d

Injection date and time: 23-APR-2020 16:39

Data file Sample Info. Line: 59R01;1300794;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 247 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	238716 (-6)	5.00	
68) Naphthalene-d8	8.552 (0.006)	1150	136	917170 (-6)	5.00	
118) Acenaphthene-d10	11.343 (0.006)	1628	164	451719 (-7)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	868056 (-5)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	884337 (-5)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	827210 (-8)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.756 (-0.001)	112	1515782	21.790	44%		10 - 84
18) Phenol-d6	(1)	6.163 (-0.002)	99	2005539	21.683	43%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1872688	18.072	72%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2595262	17.731	71%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	859319	43.083	86%		18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	4177423	26.064	104%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5

59R01

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300794

Data file: /chem/HP23264.i/20apr23.b/jd0635.d

Injection date and time: 23-APR-2020 16:39

Data file Sample Info. Line: 59R01;1300794;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 247 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.8
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					4
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
128) 2-Naphthylamine	(3)			Not Detected					2
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) NDPA as diphenylamine	(4)			Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)			Not Detected					0.7

59R01

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300794

Data file: /chem/HP23264.i/20apr23.b/jd0635.d

Injection date and time: 23-APR-2020 16:39

Data file Sample Info. Line: 59R01;1300794;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

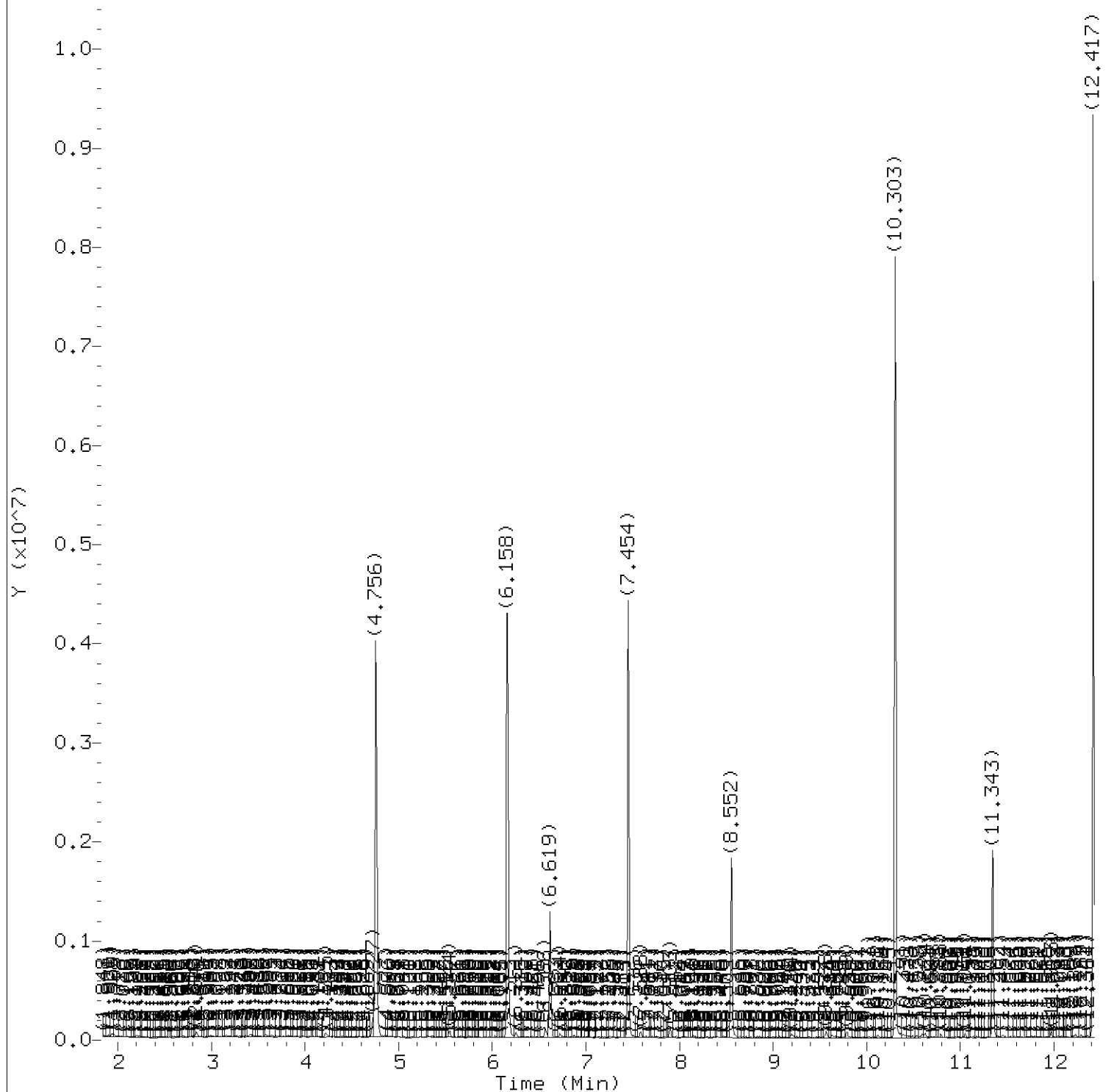
Sample Volume (Vo): 247 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenzo(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:43. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0635.d
Injection date and time: 23-APR-2020 16:39

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

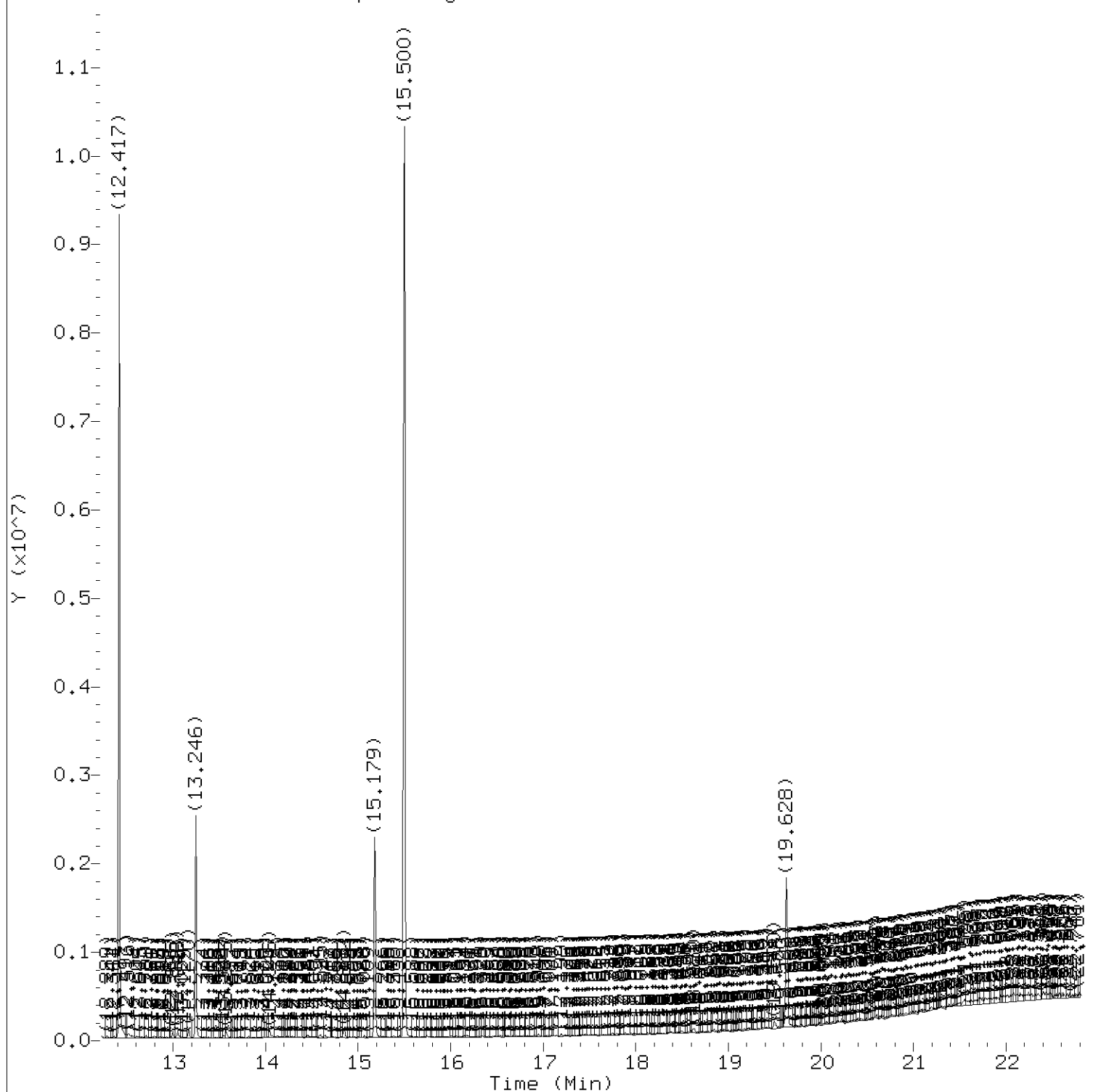
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R01

Lab Sample ID: 1300794

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0635.d
Injection date and time: 23-APR-2020 16:39

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R01

Lab Sample ID: 1300794

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0635.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 16:39

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R01

Lab Sample ID: 1300794

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.756	112	1515782	21.790
18) \$Phenol-d6	(1)	6.163	99	2005539	21.683
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	238716	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1872688	18.072
68) *Naphthalene-d8	(2)	8.552	136	917170	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	2595262	17.731
118) *Acenaphthene-d10	(3)	11.343	164	451719	5.000
140) \$2,4,6-Tribromophenol	(3)	12.417	330	859319	43.083
158) *Phenanthrene-d10	(4)	13.246	188	868056	5.000
180) *Pyrene-d10	(5)	15.179	212	884337	5.000
184) \$Terphenyl-d14	(5)	15.500	244	4177423	26.064
218) *Perylene-d12	(6)	19.628	264	827210	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

59R02

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300795

Data file: /chem/HP23264.i/20apr23.b/jd0636.d

Injection date and time: 23-APR-2020 17:08

Data file Sample Info. Line: 59R02;1300795;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	234830 (-7)	5.00	
68) Naphthalene-d8	8.551 (0.006)	1150	136	867144 (-11)	5.00	
118) Acenaphthene-d10	11.342 (0.006)	1628	164	437677 (-10)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	866821 (-6)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	865069 (-7)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	768806 (-15)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.762 (-0.002)	112	1194594	17.457	35%		10 - 84
18) Phenol-d6	(1)	6.163 (-0.002)	99	1804242	19.830	40%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1869308	19.080	76%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2642145	18.631	75%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	744635	38.531	77%		18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	3718596	23.718	95%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5

59R02

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300795

Data file: /chem/HP23264.i/20apr23.b/jd0636.d

Injection date and time: 23-APR-2020 17:08

Data file Sample Info. Line: 59R02;1300795;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.8
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					4
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
128) 2-Naphthylamine	(3)			Not Detected					2
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) NDPA as diphenylamine	(4)			Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)			Not Detected					0.7

59R02

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300795

Data file: /chem/HP23264.i/20apr23.b/jd0636.d

Injection date and time: 23-APR-2020 17:08

Data file Sample Info. Line: 59R02;1300795;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

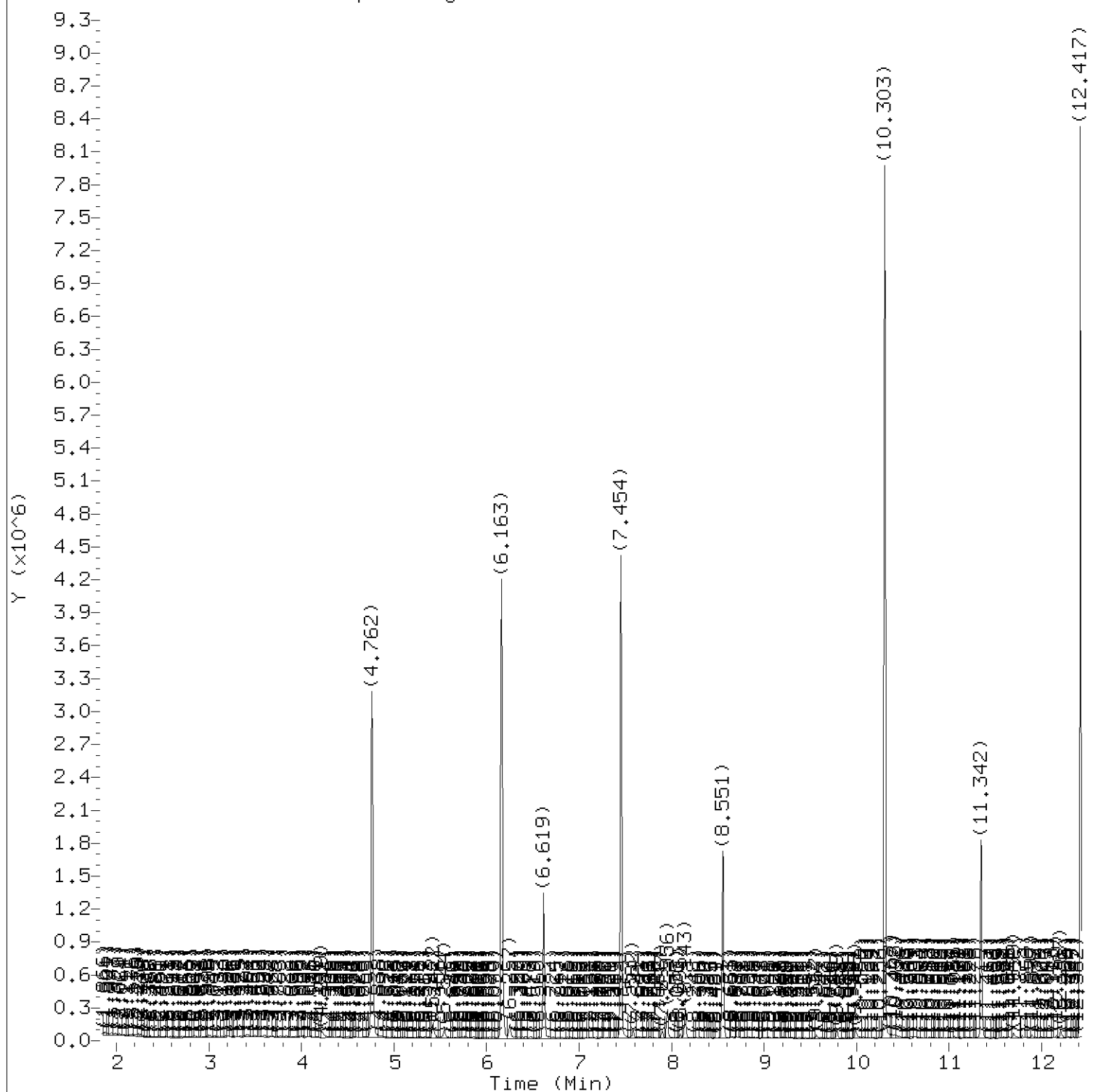
Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo (a) anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis (2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo (b) fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo (k) fluoranthene	(6)			Not Detected					0.4
216) Benzo (a) pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno (1,2,3-cd) pyrene	(6)			Not Detected					0.04
225) Dibenzo (a,h) anthracene	(6)			Not Detected					0.1
226) Benzo (g,h,i) perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:43. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0636.d
Injection date and time: 23-APR-2020 17:08

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

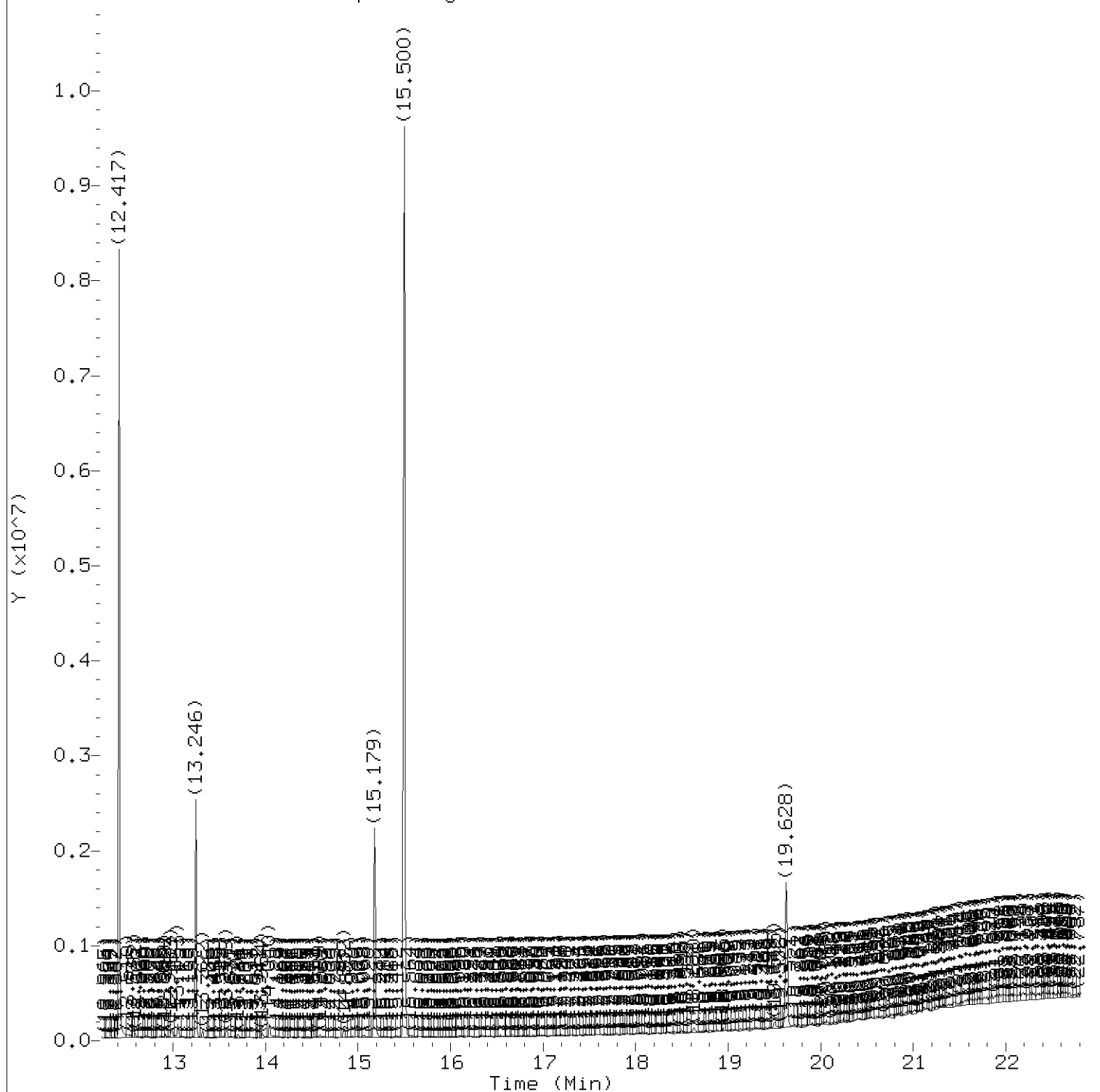
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R02

Lab Sample ID: 1300795

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0636.d
Injection date and time: 23-APR-2020 17:08

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R02

Lab Sample ID: 1300795

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 signature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0636.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 17:08

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R02

Lab Sample ID: 1300795

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.762	112	1194594	17.457
18) \$Phenol-d6	(1)	6.163	99	1804242	19.830
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	234830	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1869308	19.080
68) *Naphthalene-d8	(2)	8.551	136	867144	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	2642145	18.631
118) *Acenaphthene-d10	(3)	11.342	164	437677	5.000
140) \$2,4,6-Tribromophenol	(3)	12.417	330	744635	38.531
158) *Phenanthrene-d10	(4)	13.246	188	866821	5.000
180) *Pyrene-d10	(5)	15.179	212	865069	5.000
184) \$Terphenyl-d14	(5)	15.500	244	3718596	23.718
218) *Perylene-d12	(6)	19.628	264	768806	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

59R03

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300796

Data file: /chem/HP23264.i/20apr23.b/jd0637.d

Injection date and time: 23-APR-2020 17:38

Data file Sample Info. Line: 59R03;1300796;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 249 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	222787 (-12)	5.00	
68) Naphthalene-d8	8.551 (0.006)	1150	136	866221 (-11)	5.00	
118) Acenaphthene-d10	11.342 (0.006)	1628	164	424171 (-13)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	822448 (-10)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	827772 (-11)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	747057 (-17)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.762 (-0.002)	112	1540901	23.734	47%		10 - 84
18) Phenol-d6	(1)	6.157 (-0.001)	99	2069908	23.979	48%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1837909	18.780	75%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2539555	18.477	74%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	736212	39.308	79%		18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	3711210	24.737	99%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5

59R03

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300796

Data file: /chem/HP23264.i/20apr23.b/jd0637.d

Injection date and time: 23-APR-2020 17:38

Data file Sample Info. Line: 59R03;1300796;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 249 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.8
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					4
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
128) 2-Naphthylamine	(3)			Not Detected					2
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) NDPA as diphenylamine	(4)			Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)			Not Detected					0.7

59R03

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300796

Data file: /chem/HP23264.i/20apr23.b/jd0637.d

Injection date and time: 23-APR-2020 17:38

Data file Sample Info. Line: 59R03;1300796;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

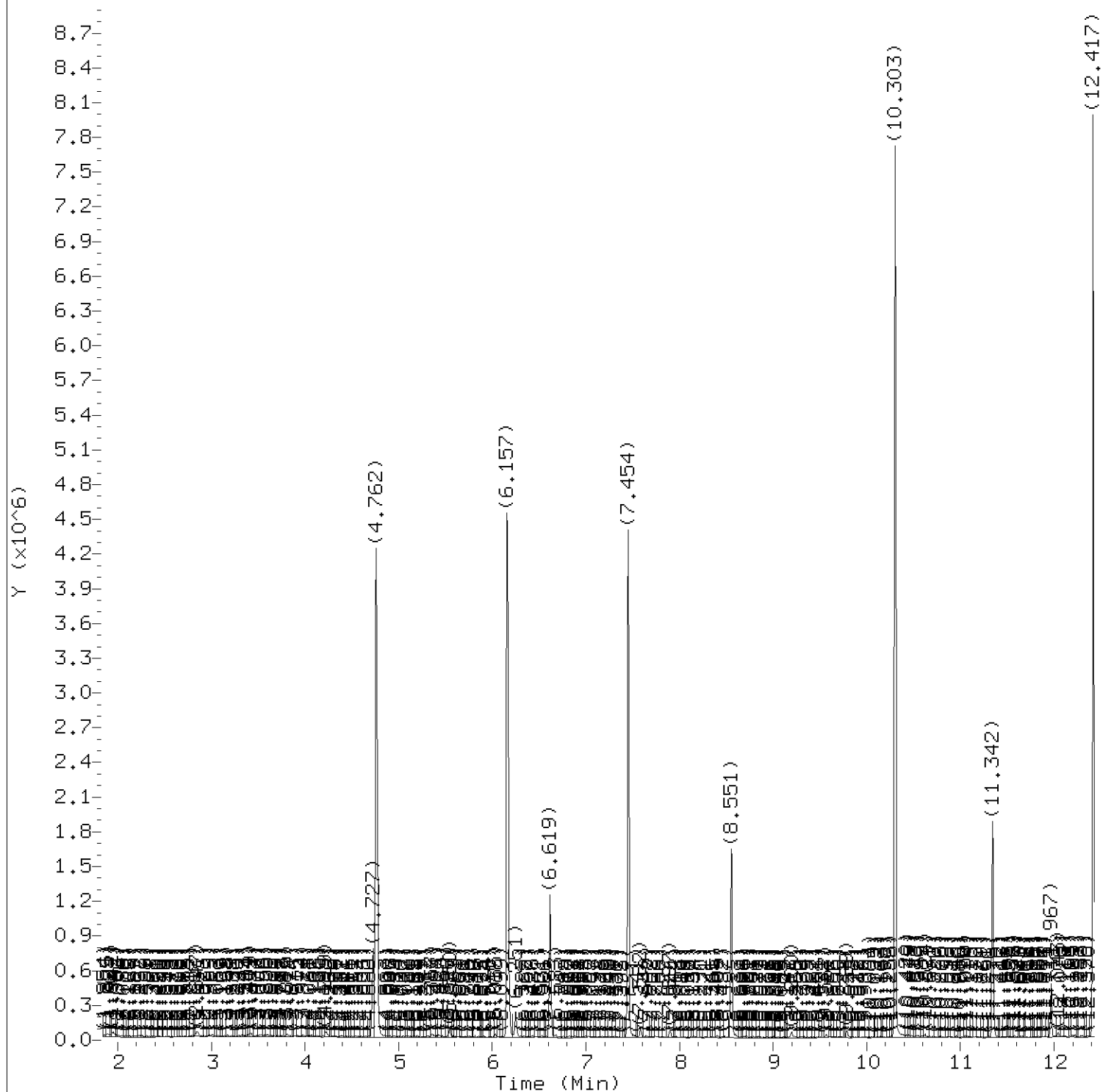
Sample Volume (Vo): 249 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenzo(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:43. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0637.d
Injection date and time: 23-APR-2020 17:38

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

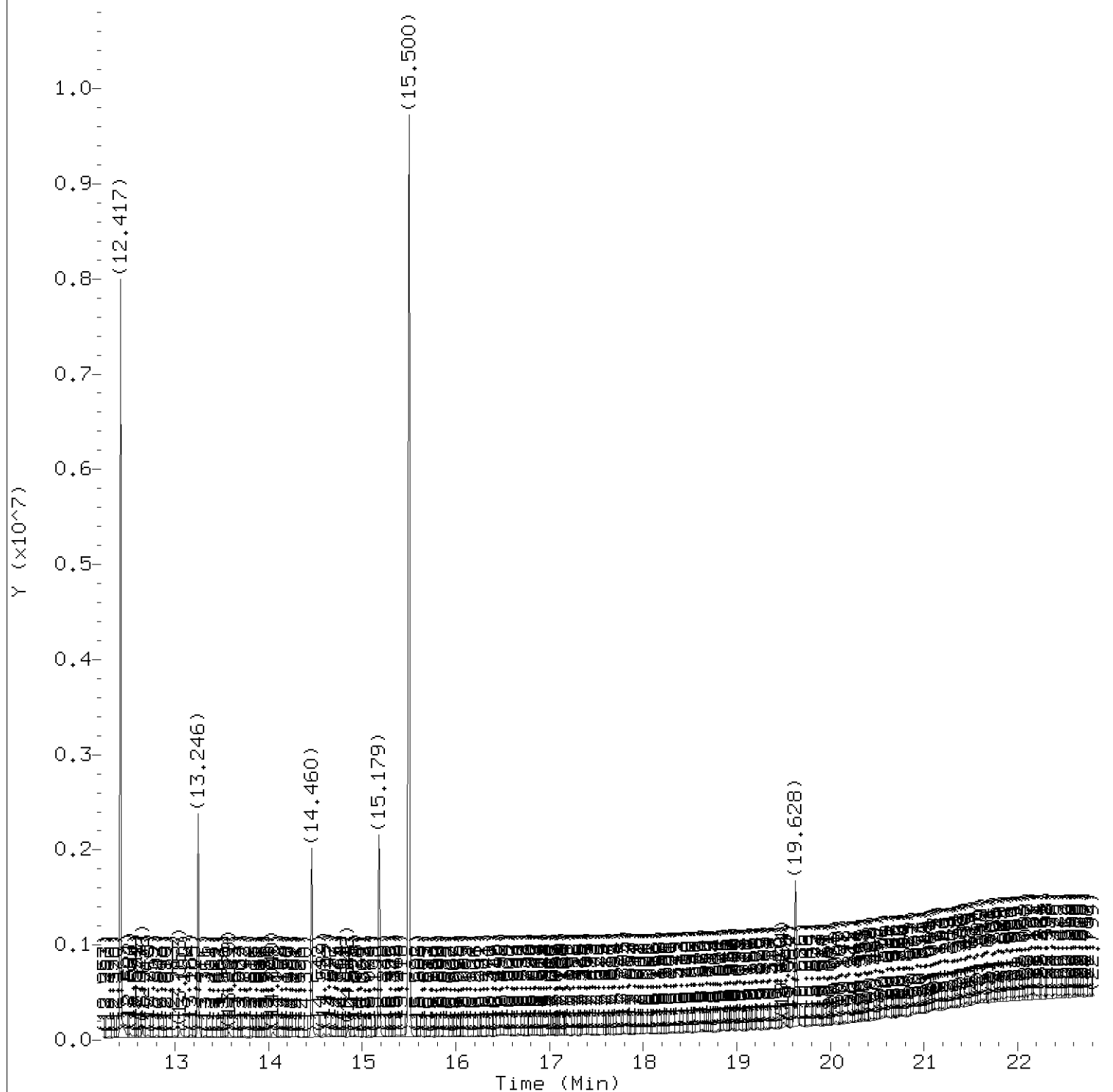
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R03

Lab Sample ID: 1300796

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0637.d
Injection date and time: 23-APR-2020 17:38

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R03

Lab Sample ID: 1300796

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0637.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 17:38

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R03

Lab Sample ID: 1300796

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.762	112	1540901	23.734
18) \$Phenol-d6	(1)	6.157	99	2069908	23.979
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	222787	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1837909	18.780
68) *Naphthalene-d8	(2)	8.551	136	866221	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	2539555	18.477
118) *Acenaphthene-d10	(3)	11.342	164	424171	5.000
140) \$2,4,6-Tribromophenol	(3)	12.417	330	736212	39.308
158) *Phenanthrene-d10	(4)	13.246	188	822448	5.000
180) *Pyrene-d10	(5)	15.179	212	827772	5.000
184) \$Terphenyl-d14	(5)	15.500	244	3711210	24.737
218) *Perylene-d12	(6)	19.628	264	747057	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

59R04

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300797

Data file: /chem/HP23264.i/20apr23.b/jd0629.d

Injection date and time: 23-APR-2020 13:12

Data file Sample Info. Line: 59R04;1300797;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	227112 (-10)	5.00	
68) Naphthalene-d8	8.551 (0.006)	1150	136	888524 (-9)	5.00	
118) Acenaphthene-d10	11.342 (0.006)	1628	164	453875 (-7)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	840989 (-8)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	868219 (-7)	5.00	
218) Perylene-d12	19.634 (0.000)	3048	264	805494 (-11)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.762 (-0.002)	112	204446	3.089	6%	*	10 - 84
18) Phenol-d6	(1)	6.163 (-0.002)	99	965610	10.973	22%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1917293	19.099	76%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2639625	17.949	72%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	106433	5.311	11%	*	18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	1458000	9.266	37%		34 - 128

* = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8

59R04

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300797

Data file: /chem/HP23264.i/20apr23.b/jd0629.d

Injection date and time: 23-APR-2020 13:12

Data file Sample Info. Line: 59R04;1300797;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate(2)	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.8
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					4
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
128) 2-Naphthylamine	(3)			Not Detected					2
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) NDPA as diphenylamine	(4)			Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8

59R04

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300797

Data file: /chem/HP23264.i/20apr23.b/jd0629.d

Injection date and time: 23-APR-2020 13:12

Data file Sample Info. Line: 59R04;1300797;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
154) Pentachlorophenol	(4)			Not Detected					0.7
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenzo(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

59R04

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300797

Data file: /chem/HP23264.i/20apr23.b/jd0629.d

Injection date and time: 23-APR-2020 13:12

Data file Sample Info. Line: 59R04;1300797;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

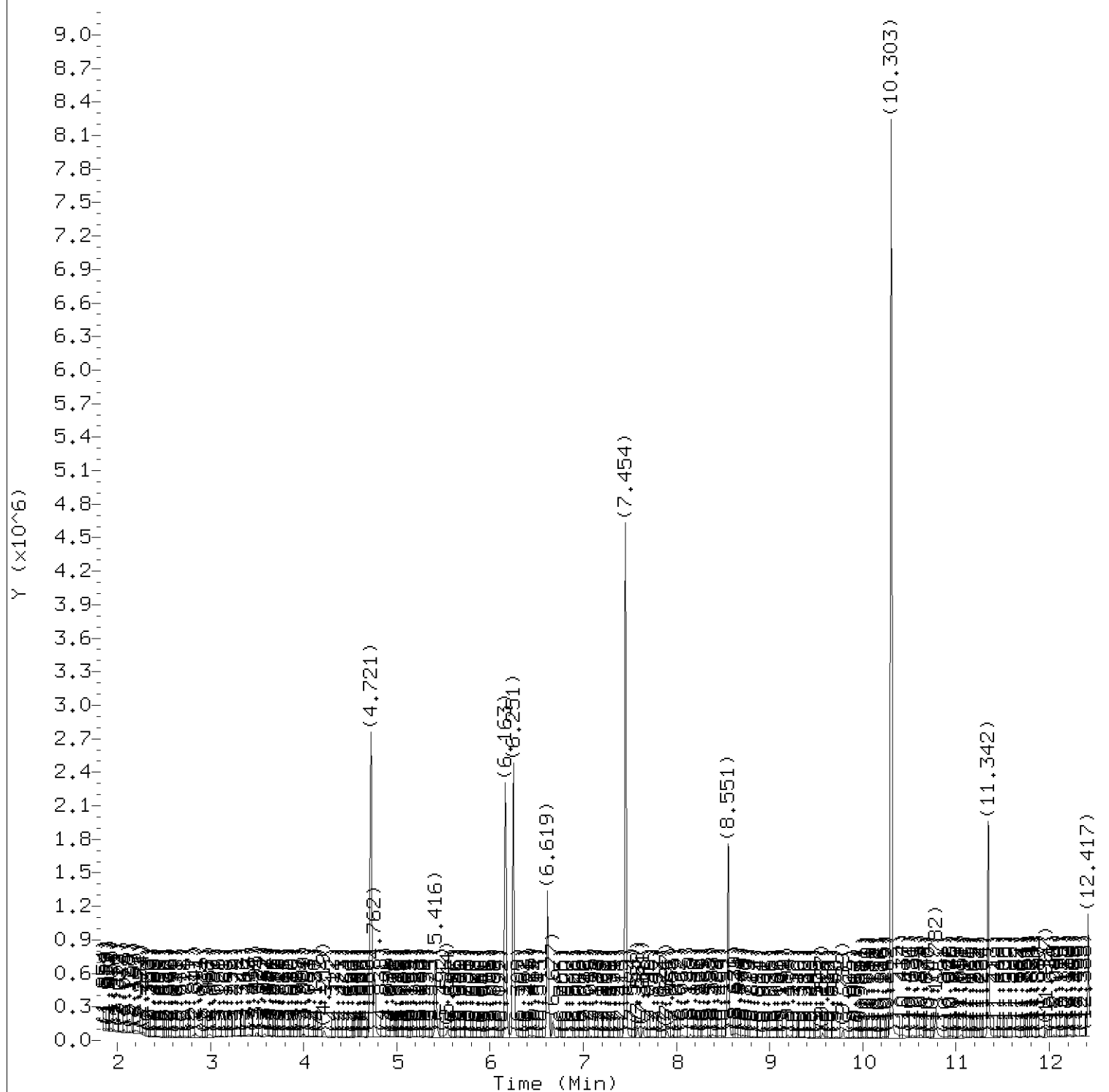
Volume Injected (Vi): 0.5 ul

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Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:41. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0629.d
Injection date and time: 23-APR-2020 13:12

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

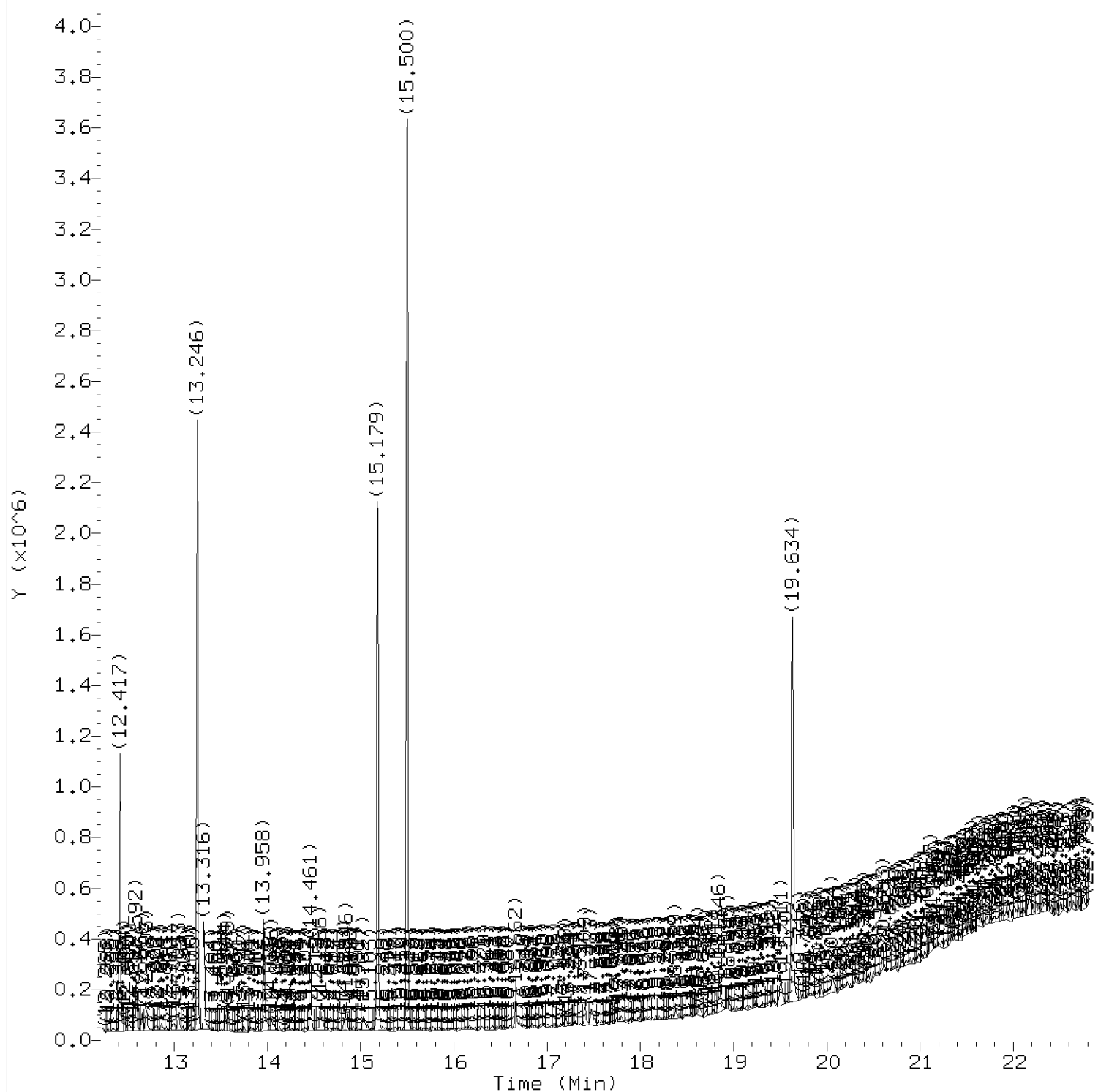
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04

Lab Sample ID: 1300797

Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0629.d
Injection date and time: 23-APR-2020 13:12

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04

Lab Sample ID: 1300797

Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0629.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04

Lab Sample ID: 1300797

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.762	112	204446	3.089
18) \$Phenol-d6	(1)	6.163	99	965610	10.973
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	227112	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1917293	19.099
68) *Naphthalene-d8	(2)	8.551	136	888524	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	2639625	17.949
118) *Acenaphthene-d10	(3)	11.342	164	453875	5.000
140) \$2,4,6-Tribromophenol	(3)	12.417	330	106433	5.311
158) *Phenanthrene-d10	(4)	13.246	188	840989	5.000
180) *Pyrene-d10	(5)	15.179	212	868219	5.000
184) \$Terphenyl-d14	(5)	15.500	244	1458000	9.266
218) *Perylene-d12	(6)	19.634	264	805494	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

59R05

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300800

Data file: /chem/HP23264.i/20apr23.b/jd0638.d

Injection date and time: 23-APR-2020 18:08

Data file Sample Info. Line: 59R05;1300800;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	205925 (-19)	5.00	
68) Naphthalene-d8	8.551 (0.006)	1150	136	779235 (-20)	5.00	
118) Acenaphthene-d10	11.342 (0.006)	1628	164	392247 (-19)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	728255 (-21)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	745877 (-20)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	682157 (-24)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.768 (-0.003)	112	134626	2.243	4%	*	10 - 84
18) Phenol-d6	(1)	6.163 (-0.002)	99	768061	9.626	19%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1529735	17.376	70%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2112003	16.617	66%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	62178	3.590	7%	*	18 - 141
184) Terphenyl-d14	(5)	15.494 (0.000)	244	1410617	10.435	42%		34 - 128

* = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8

59R05

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300800

Data file: /chem/HP23264.i/20apr23.b/jd0638.d

Injection date and time: 23-APR-2020 18:08

Data file Sample Info. Line: 59R05;1300800;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate(2)	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.8
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					4
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
128) 2-Naphthylamine	(3)			Not Detected					2
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) NDPA as diphenylamine	(4)			Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8

59R05

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300800

Data file: /chem/HP23264.i/20apr23.b/jd0638.d

Injection date and time: 23-APR-2020 18:08

Data file Sample Info. Line: 59R05;1300800;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
154) Pentachlorophenol	(4)			Not Detected					0.7
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

59R05

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300800

Data file: /chem/HP23264.i/20apr23.b/jd0638.d Injection date and time: 23-APR-2020 18:08
Data file Sample Info. Line: 59R05;1300800;1;0;SAMPLE;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M
Calibration date and time (Last Method Edit): 29-APR-2020 11:39
Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

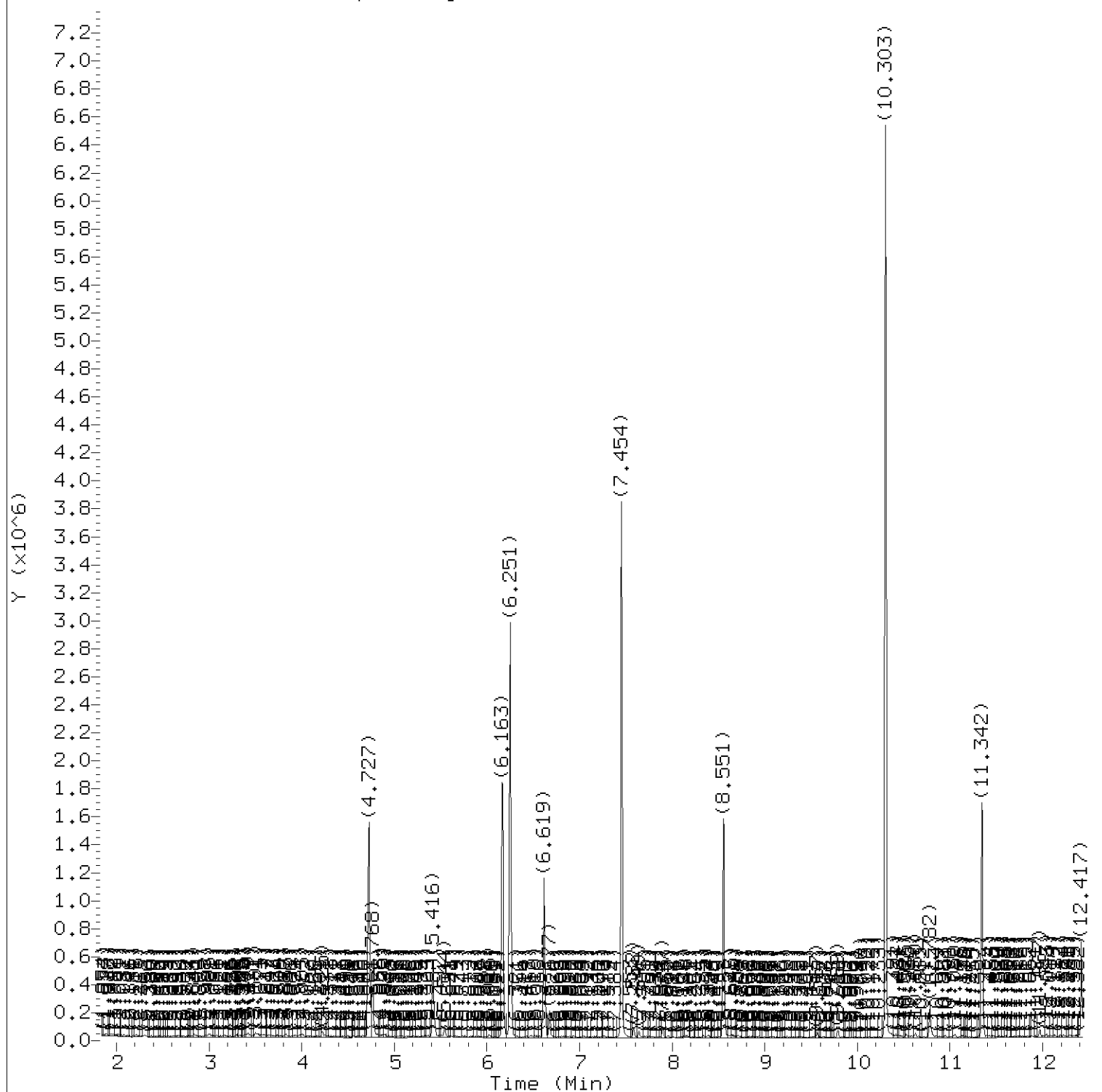
Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 0.5 ul

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Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:43. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0638.d
Injection date and time: 23-APR-2020 18:08

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

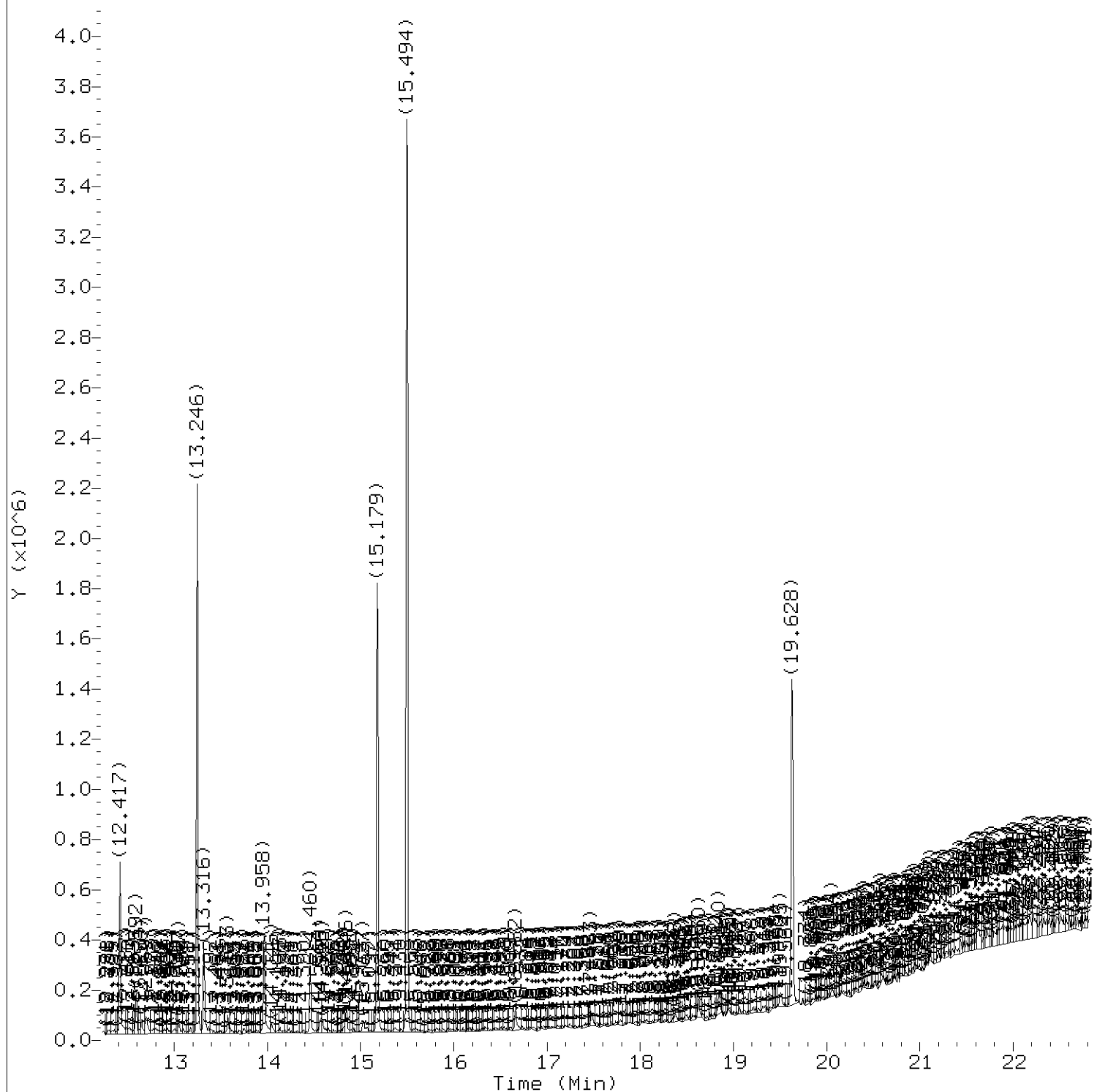
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R05

Lab Sample ID: 1300800

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0638.d
Injection date and time: 23-APR-2020 18:08

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R05

Lab Sample ID: 1300800

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0638.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 18:08

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R05

Lab Sample ID: 1300800

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.768	112	134626	2.243
18) \$Phenol-d6	(1)	6.163	99	768061	9.626
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	205925	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1529735	17.376
68) *Naphthalene-d8	(2)	8.551	136	779235	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	2112003	16.617
118) *Acenaphthene-d10	(3)	11.342	164	392247	5.000
140) \$2,4,6-Tribromophenol	(3)	12.417	330	62178	3.590
158) *Phenanthrene-d10	(4)	13.246	188	728255	5.000
180) *Pyrene-d10	(5)	15.179	212	745877	5.000
184) \$Terphenyl-d14	(5)	15.494	244	1410617	10.435
218) *Perylene-d12	(6)	19.628	264	682157	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

59R06

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300801

Data file: /chem/HP23264.i/20apr23.b/jd0639.d

Injection date and time: 23-APR-2020 18:37

Data file Sample Info. Line: 59R06;1300801;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	206167 (-19)	5.00	
68) Naphthalene-d8	8.557 (0.000)	1151	136	774478 (-21)	5.00	
118) Acenaphthene-d10	11.342 (0.006)	1628	164	385201 (-21)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	747860 (-19)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	759787 (-19)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	672768 (-25)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.768 (-0.003)	112	86409	1.438	3%	*	10 - 84
18) Phenol-d6	(1)	6.169 (-0.003)	99	358795A	4.492	9%	*	10 - 67
45) Nitrobenzene-d5	(2)	7.454 (0.000)	82	1480832	16.924	68%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	1962994	15.727	63%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	50625	2.976	6%	*	18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	1515033	11.002	44%		34 - 128

A = User selected an alternate peak. * = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8

59R06

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300801

Data file: /chem/HP23264.i/20apr23.b/jd0639.d

Injection date and time: 23-APR-2020 18:37

Data file Sample Info. Line: 59R06;1300801;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate(2)	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.8
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					4
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
128) 2-Naphthylamine	(3)			Not Detected					2
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) NDPA as diphenylamine	(4)			Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8

59R06

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300801

Data file: /chem/HP23264.i/20apr23.b/jd0639.d

Injection date and time: 23-APR-2020 18:37

Data file Sample Info. Line: 59R06;1300801;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
154) Pentachlorophenol	(4)			Not Detected					0.7
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenzo(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

59R06

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300801

Data file: /chem/HP23264.i/20apr23.b/jd0639.d

Injection date and time: 23-APR-2020 18:37

Data file Sample Info. Line: 59R06;1300801;1;0;SAMPLE;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

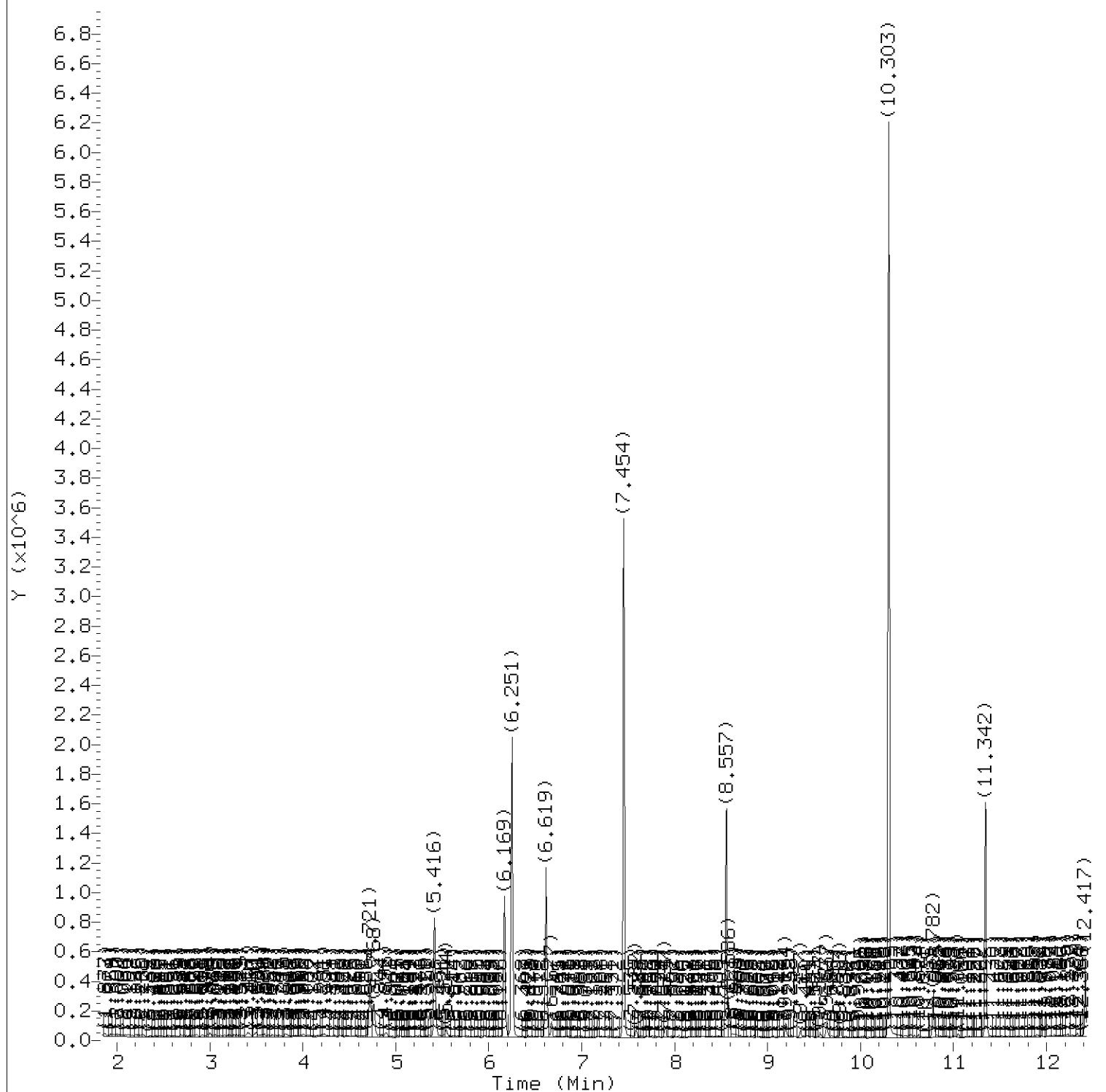
Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:43. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0639.d
Injection date and time: 23-APR-2020 18:37

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

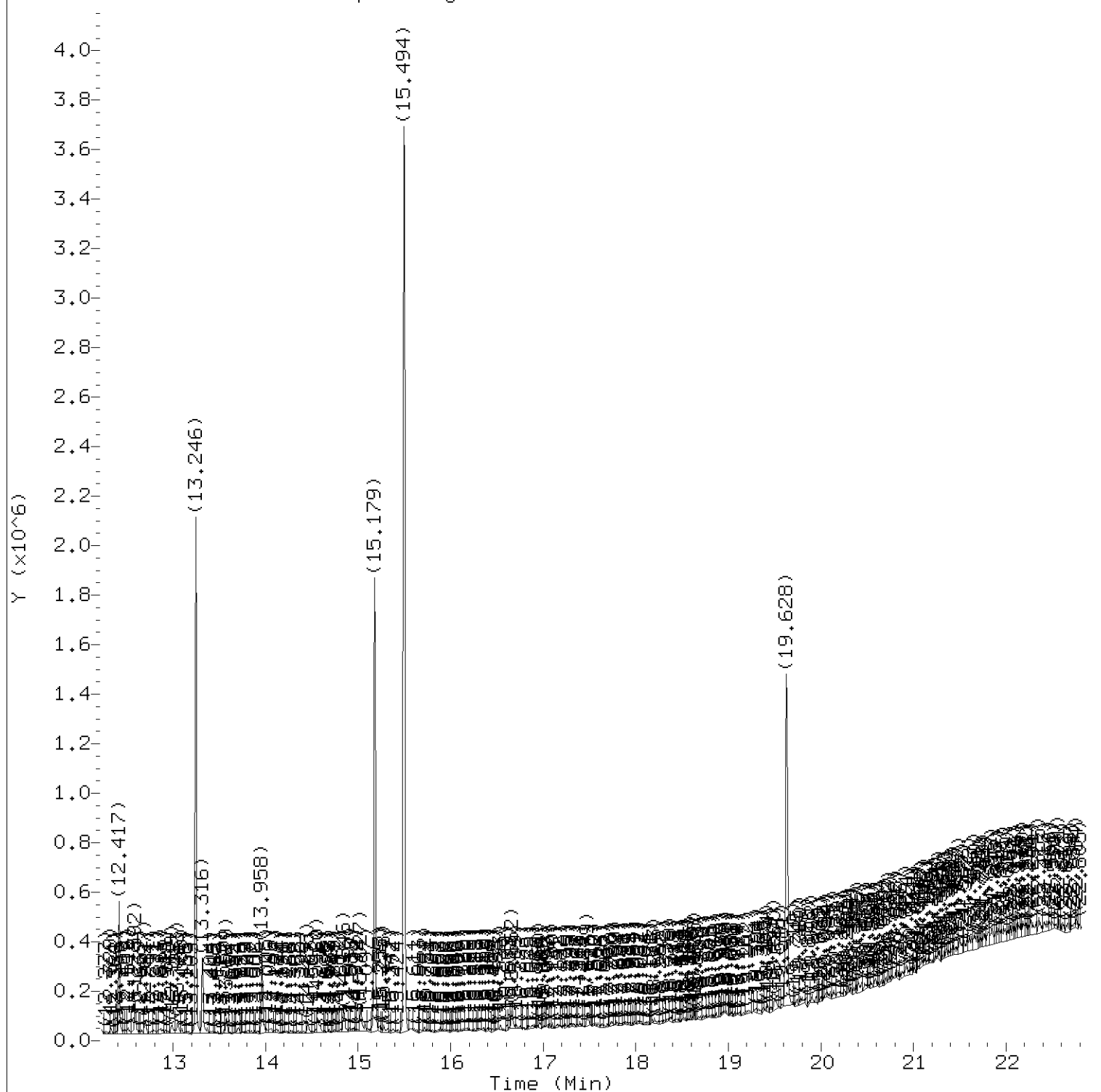
Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Sample Name: 59R06

Lab Sample ID: 1300801

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0639.d
Injection date and time: 23-APR-2020 18:37

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Sample Name: 59R06

Lab Sample ID: 1300801

Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0639.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 18:37

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Sample Name: 59R06

Lab Sample ID: 1300801

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.768	112	86409	1.438
18) \$Phenol-d6	(1)	6.169	99	358795A	4.492
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	206167	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1480832	16.924
68) *Naphthalene-d8	(2)	8.557	136	774478	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	1962994	15.727
118) *Acenaphthene-d10	(3)	11.342	164	385201	5.000
140) \$2,4,6-Tribromophenol	(3)	12.417	330	50625	2.976
158) *Phenanthrene-d10	(4)	13.246	188	747860	5.000
180) *Pyrene-d10	(5)	15.179	212	759787	5.000
184) \$Terphenyl-d14	(5)	15.500	244	1515033	11.002
218) *Perylene-d12	(6)	19.628	264	672768	5.000

A = User selected an alternate hit.

* = Compound is an internal standard.

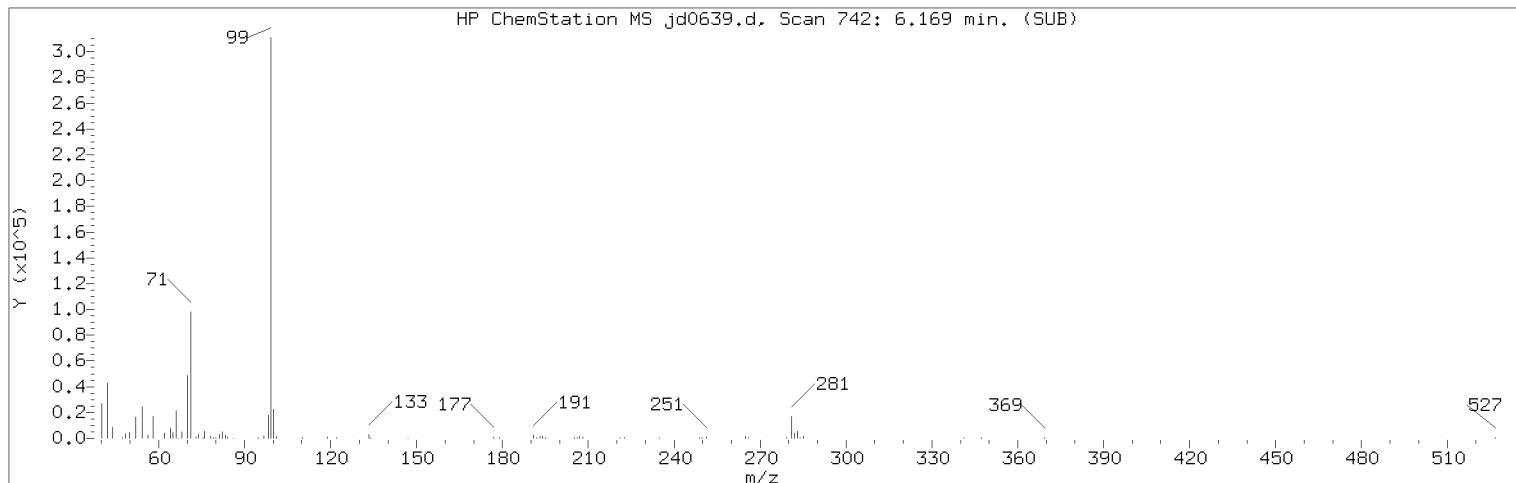
\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

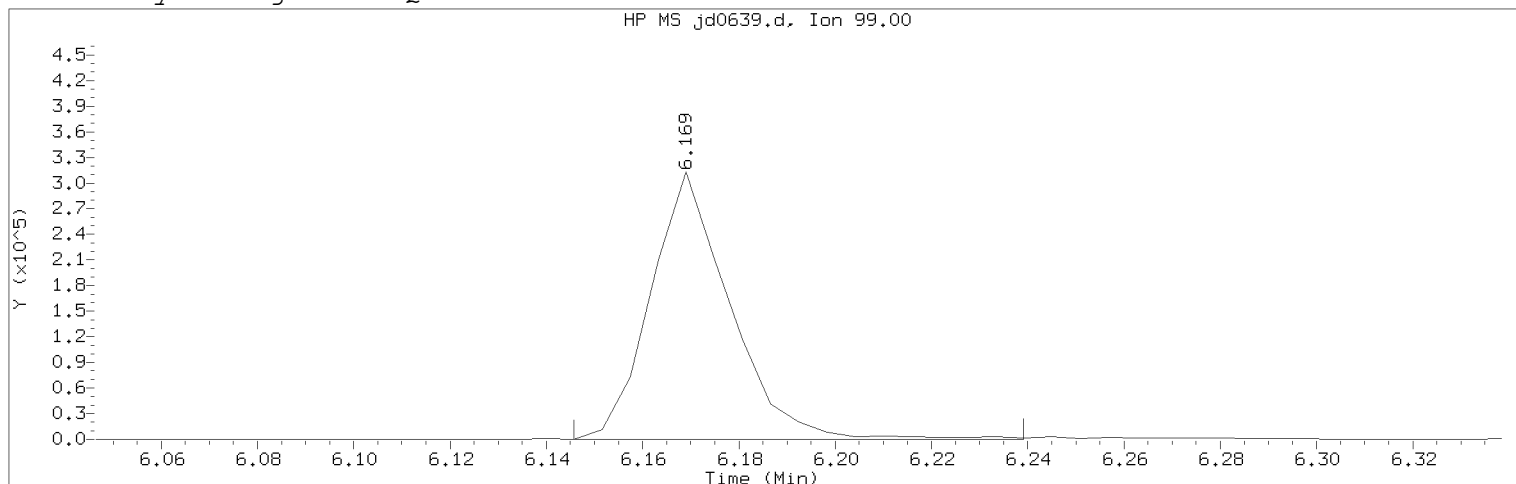
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0639.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 18:37

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:41 whs02991

Sample Name: 59R06

Lab Sample ID: 1300801

Compound Number	: 18	
Compound Name	: Phenol-d6	
Scan Number	: 742	
Retention Time (minutes)	: 6.169	
Quant Ion	: 99.00	
Area (flag)	: 358795A	
On-column Amount (ng/ul)	: 4.4916	
Integration start scan	: 737	Integration stop scan: 753
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

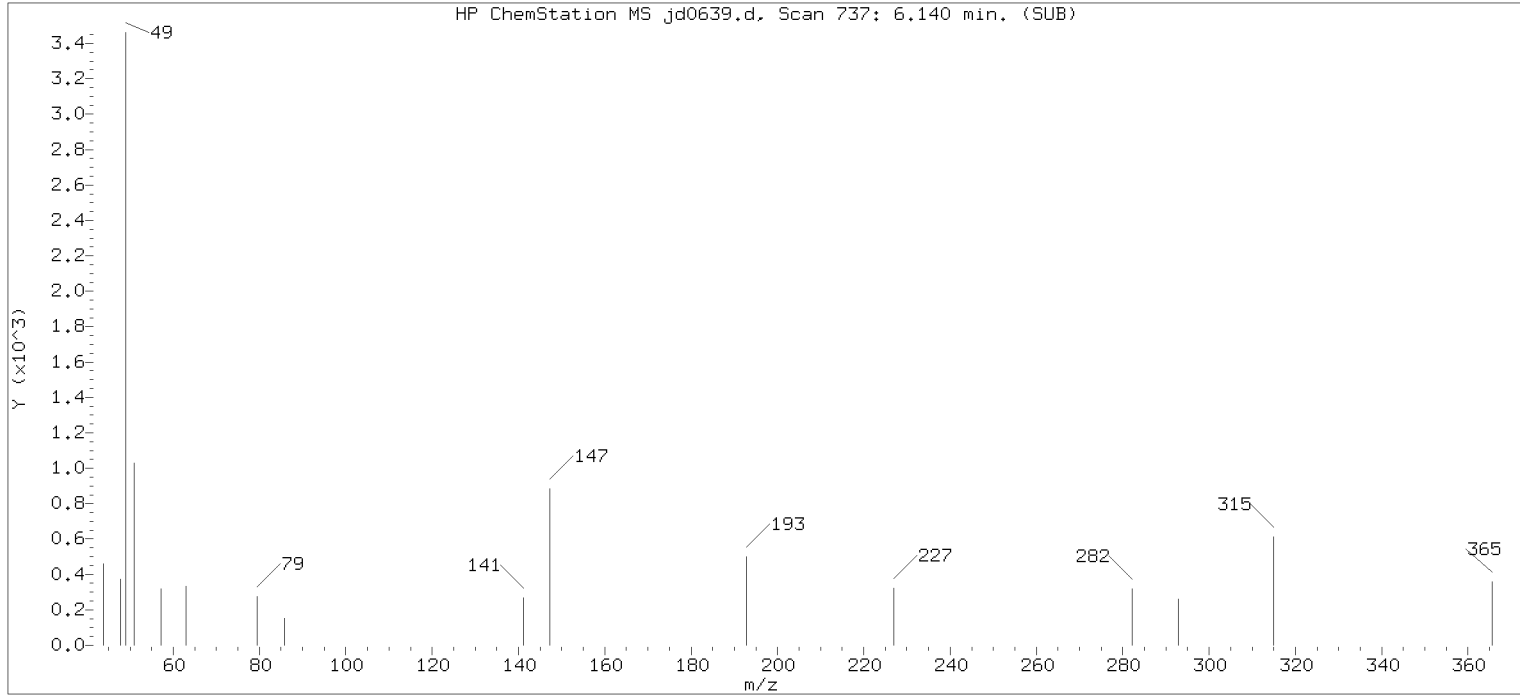
Digitally signed by William H Saadeh
on 04/29/2020 at 11:43.

Target 3.5 esignature user ID: whs02991

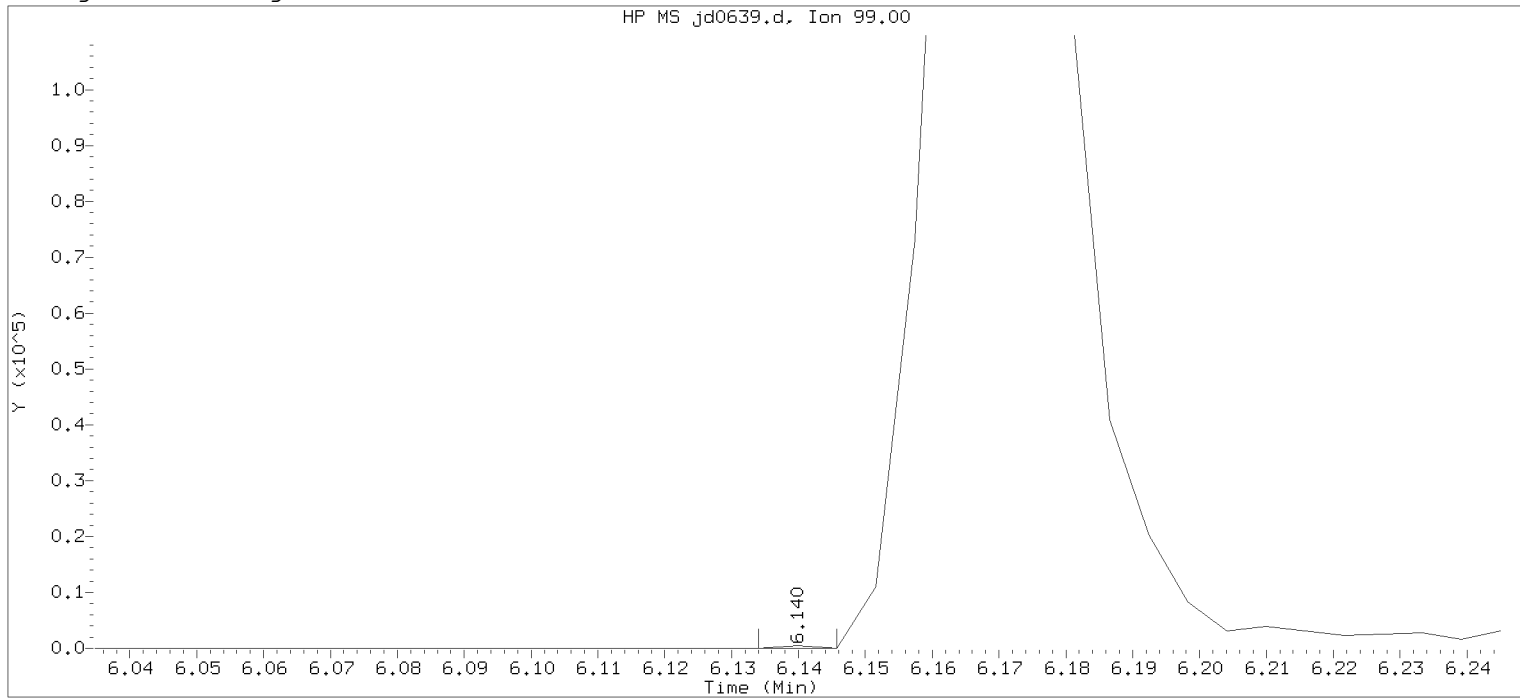
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:36.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0639.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 18:37

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:45 whs02991

Sample Name: 59R06

Lab Sample ID: 1300801

Compound Number	: 18	
Compound Name	: Phenol-d6	
Scan Number	: 737	
Retention Time (minutes)	: 6.140	
Quant Ion	: 99.00	
Area	: 180	
On-column Amount (ng/ul)	: 0.0023	
Integration start scan	: 735	Integration stop scan: 737
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:43.
Target 3.5 esignature use

59R07

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300802

Data file: /chem/HP23264.i/20apr23.b/jd0640.d

Injection date and time: 23-APR-2020 19:07

Data file Sample Info. Line: 59R07;1300802;1;0;SAMPLE;;RAAPVA;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 28-Apr-2020 15:23 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 22230M

Calibration date and time (Last Method Edit): 28-APR-2020 15:23

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 250 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	202226 (-20)	5.00	
68) Naphthalene-d8	8.551 (0.006)	1150	136	777127 (-21)	5.00	
118) Acenaphthene-d10	11.343 (0.006)	1628	164	382581 (-21)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	736618 (-20)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	734028 (-21)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	673700 (-25)	5.00	

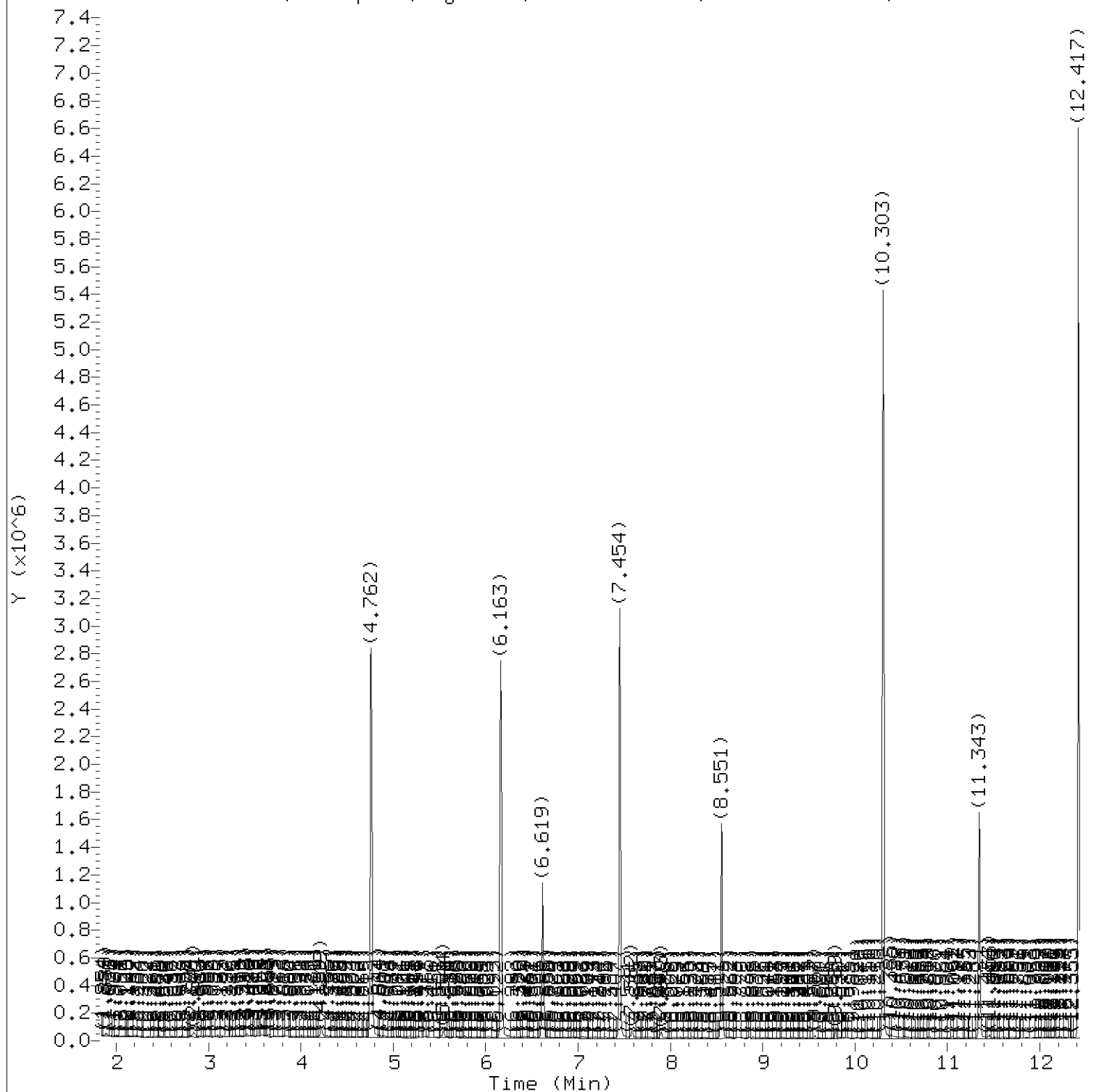
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1306079	14.876	60%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	1777879	14.342	57%		44 - 102
184) Terphenyl-d14	(5)	15.500 (0.000)	244	2812150	21.139	85%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
129) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by William H Saadeh on 04/28/2020 at 15:28. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0640.d
Injection date and time: 23-APR-2020 19:07

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:23

Sublist used: 22230M

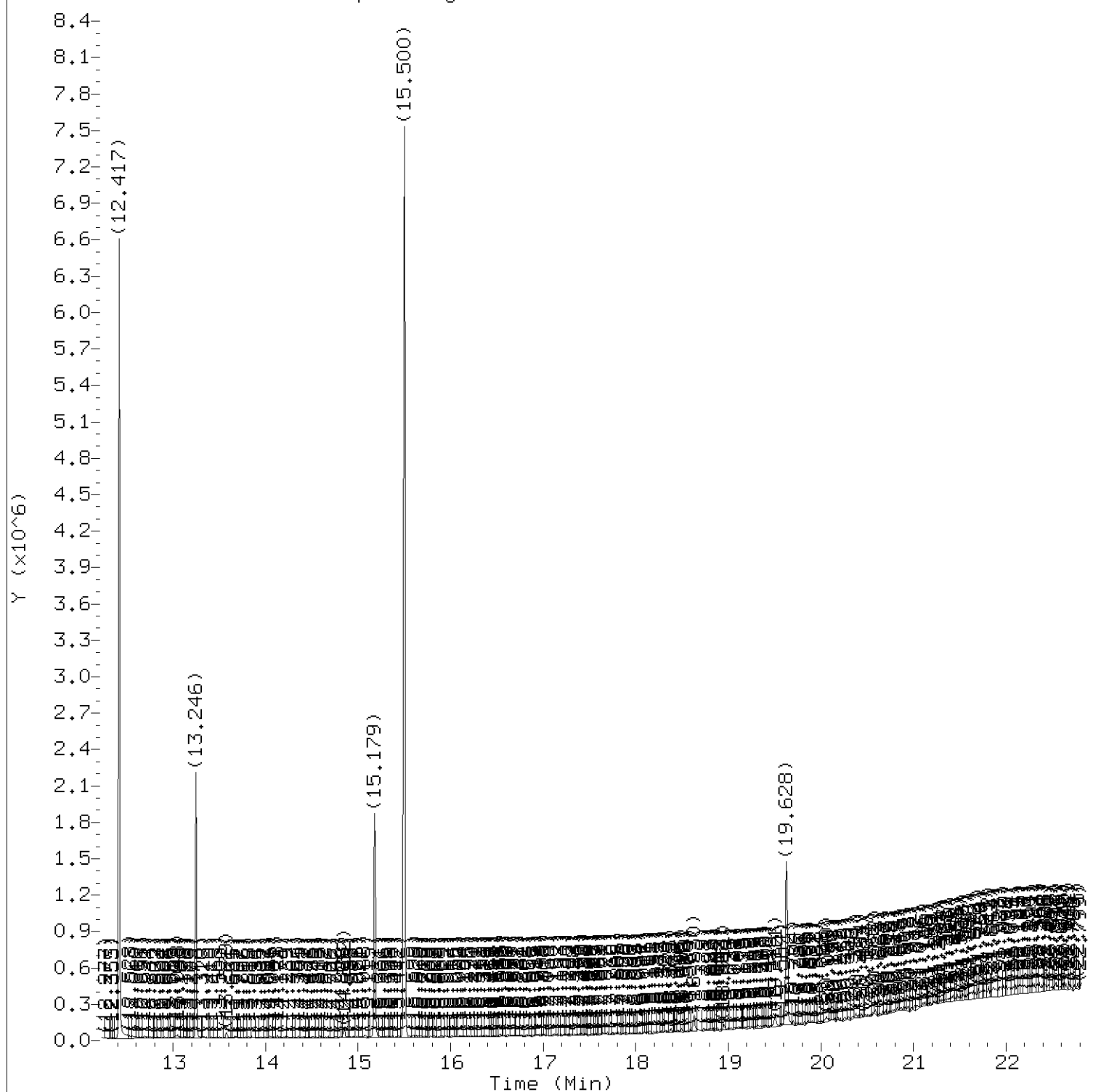
Date, time and analyst ID of latest file update: 28-Apr-2020 15:23 whs02991

Sample Name: 59R07

Lab Sample ID: 1300802

Digitally signed by William H Saadeh
on 04/28/2020 at 15:28.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0640.d
Injection date and time: 23-APR-2020 19:07

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:23

Sublist used: 22230M

Date, time and analyst ID of latest file update: 28-Apr-2020 15:23 whs02991

Sample Name: 59R07

Lab Sample ID: 1300802

Digitally signed by William H Saadeh
on 04/28/2020 at 15:28.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0640.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 19:07

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 15:23

Date, time and analyst ID of latest file update: 28-Apr-2020 15:23 whs02991

Sample Name: 59R07

Lab Sample ID: 1300802

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	202226	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1306079	14.876
68) *Naphthalene-d8	(2)	8.551	136	777127	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	1777879	14.342
118) *Acenaphthene-d10	(3)	11.343	164	382581	5.000
158) *Phenanthrene-d10	(4)	13.246	188	736618	5.000
180) *Pyrene-d10	(5)	15.179	212	734028	5.000
184) \$Terphenyl-d14	(5)	15.500	244	2812150	21.139
218) *Perylene-d12	(6)	19.628	264	673700	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/28/2020 at 15:28.

Target 3.5 esignature user ID: whs02991

59R08

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300803

Data file: /chem/HP23264.i/20apr28.b/jd0814.d

Injection date and time: 28-APR-2020 09:55

Data file Sample Info. Line: 59R08;1300803;1;0;SAMPLE;;RAAPVA;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time (Last Method Edit): 28-APR-2020 12:41

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr28.b/jd0811.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 249 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.665 (0.006)	827	152	270943 (-26)	5.00	
68) Naphthalene-d8	8.604 (0.006)	1159	136	986863 (-24)	5.00	
118) Acenaphthene-d10	11.395 (0.000)	1637	164	474774 (-26)	5.00	
158) Phenanthrene-d10	13.287 (0.006)	1961	188	909355 (-24)	5.00	
180) Pyrene-d10	15.231 (0.000)	2294	212	945336 (-26)	5.00	
218) Perylene-d12	19.686 (0.000)	3057	264	881557 (-26)	5.00	

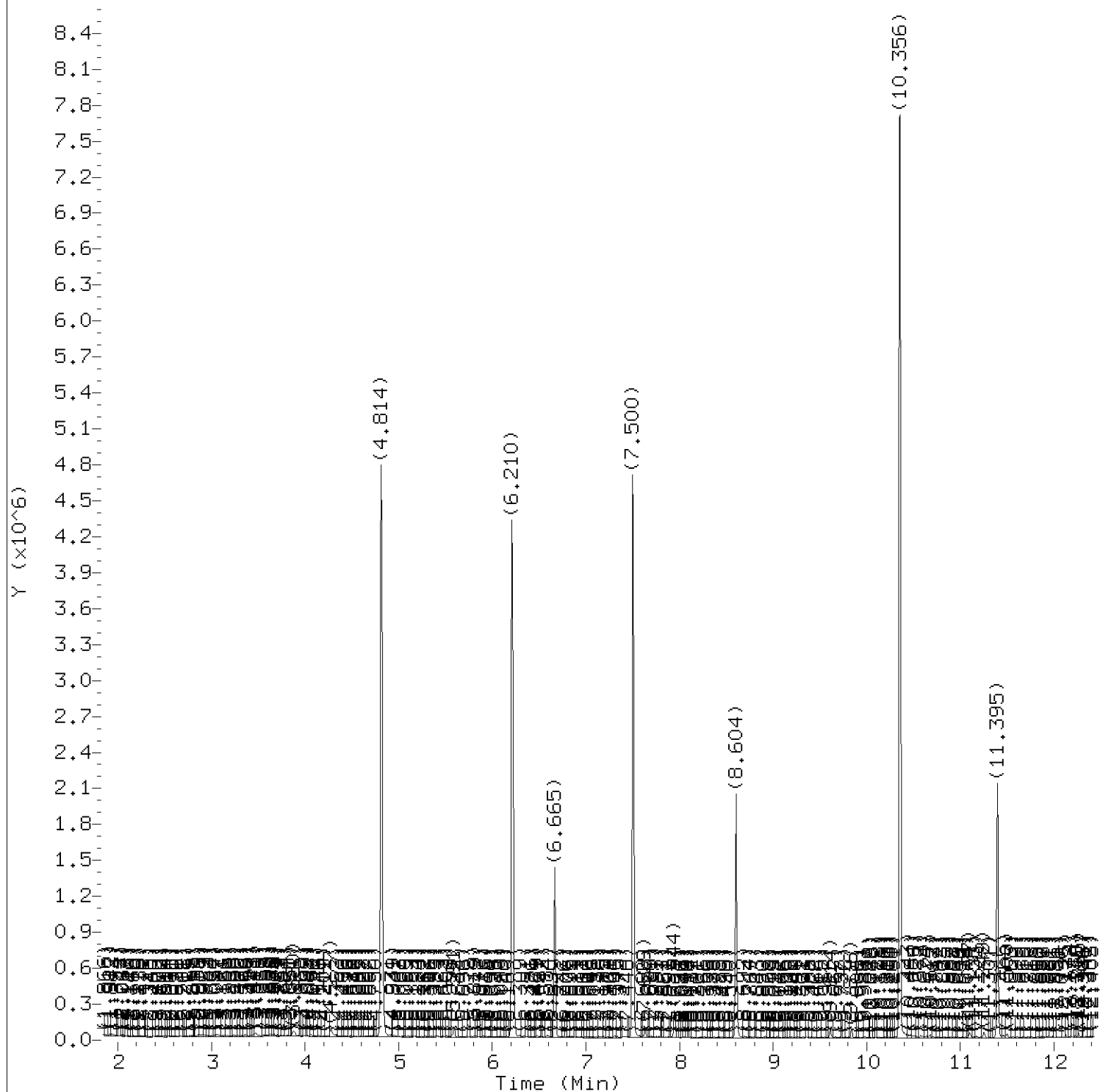
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.500 (0.000)	82	2119285	19.008	76%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.356 (0.000)	172	2810427	18.269	73%		44 - 102
184) Terphenyl-d14	(5)	15.547 (0.000)	244	4259412	24.861	99%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
129) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by William H Saadeh on 04/28/2020 at 15:29. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0814.d
Injection date and time: 28-APR-2020 09:55

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

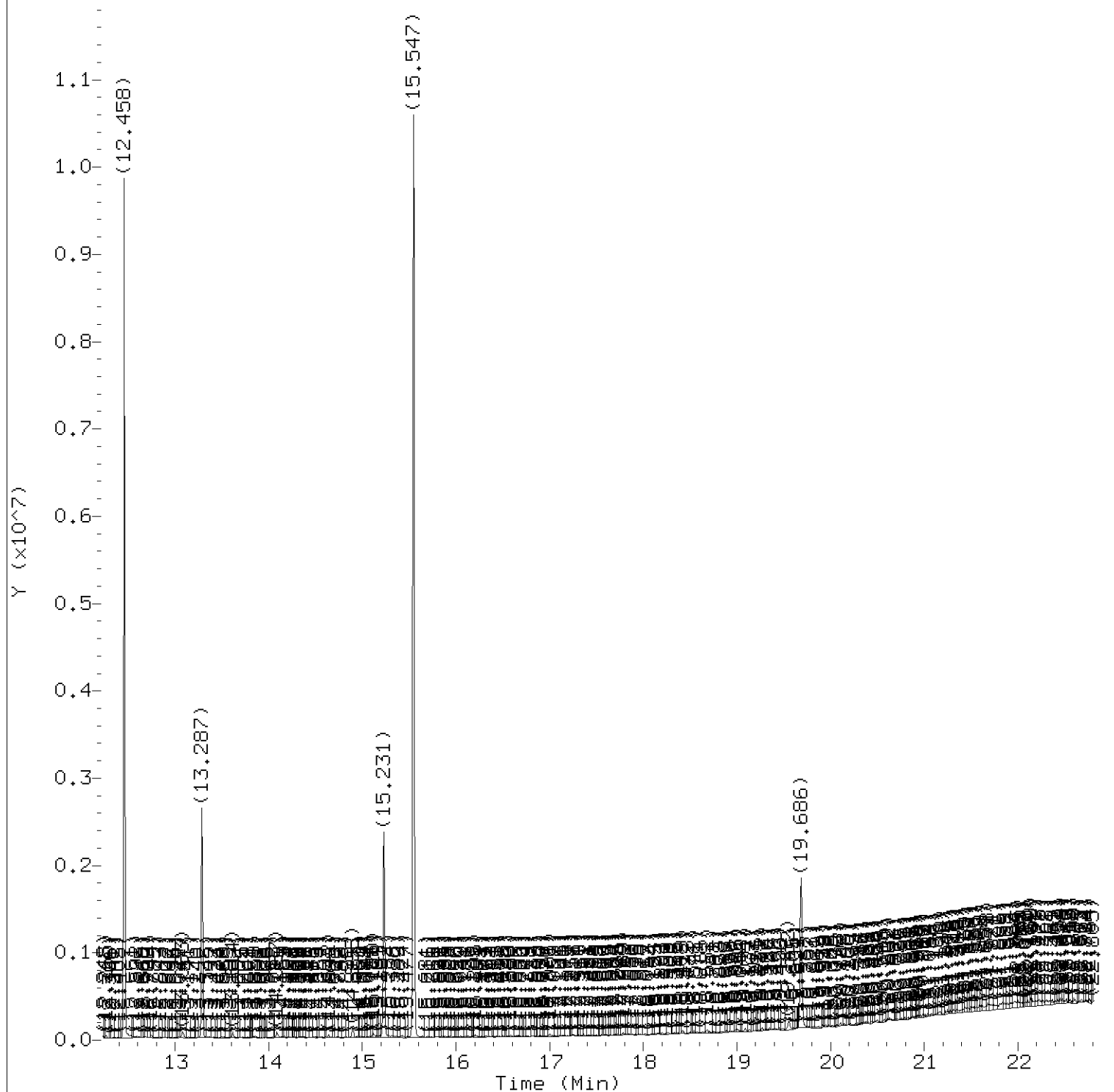
Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R08

Lab Sample ID: 1300803

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0814.d
Injection date and time: 28-APR-2020 09:55

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m
Calibration date and time: 28-APR-2020 12:41

Sublist used: 22230M

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R08

Lab Sample ID: 1300803

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0814.d

Instrument ID: HP23264.i

Injection date and time: 28-APR-2020 09:55

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R08

Lab Sample ID: 1300803

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.665	152	270943	5.000
45) \$Nitrobenzene-d5	(2)	7.500	82	2119285	19.008
68) *Naphthalene-d8	(2)	8.604	136	986863	5.000
96) \$2-Fluorobiphenyl	(3)	10.356	172	2810427	18.269
118) *Acenaphthene-d10	(3)	11.395	164	474774	5.000
158) *Phenanthrene-d10	(4)	13.287	188	909355	5.000
180) *Pyrene-d10	(5)	15.231	212	945336	5.000
184) \$Terphenyl-d14	(5)	15.547	244	4259412	24.861
218) *Perylene-d12	(6)	19.686	264	881557	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

59R09

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300804

Data file: /chem/HP23264.i/20apr28.b/jd0815.d

Injection date and time: 28-APR-2020 10:25

Data file Sample Info. Line: 59R09;1300804;1;0;SAMPLE;;RAAPVA;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time (Last Method Edit): 28-APR-2020 12:41

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr28.b/jd0811.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

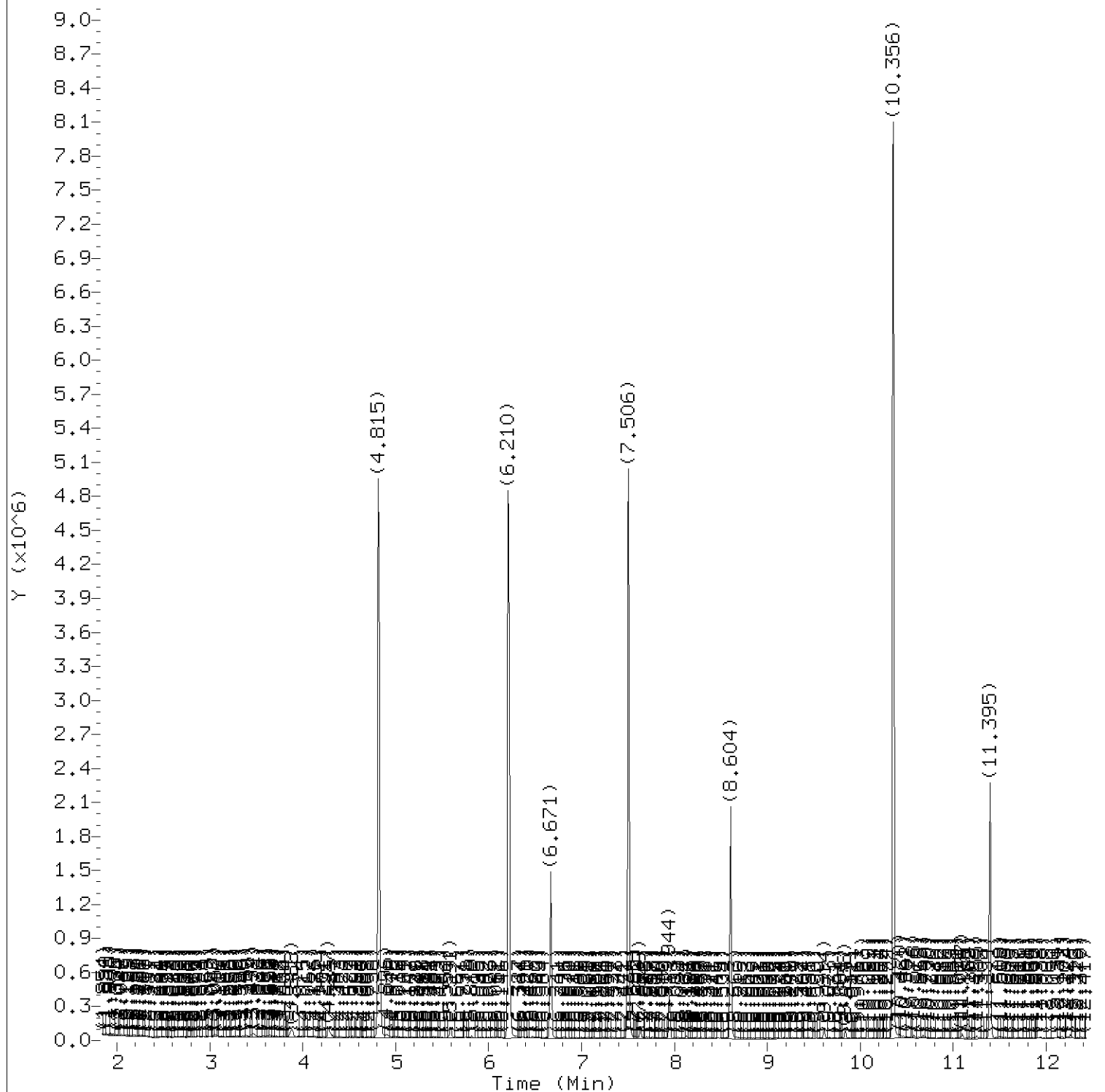
Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.671(0.000)	828	152	281983 (-23)	5.00	
68) Naphthalene-d8	8.604(0.006)	1159	136	1031424 (-21)	5.00	
118) Acenaphthene-d10	11.395(0.000)	1637	164	493590 (-23)	5.00	
158) Phenanthrene-d10	13.287(0.006)	1961	188	935037 (-22)	5.00	
180) Pyrene-d10	15.231(0.000)	2294	212	939398 (-26)	5.00	
218) Perylene-d12	19.687(0.000)	3057	264	899679 (-24)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.506(-0.001)	82	2182232	18.727	75%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.356(0.000)	172	2912307	18.209	73%		44 - 102
184) Terphenyl-d14	(5)	15.547(0.000)	244	4441675	26.088	104%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
129) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by William H Saadeh on 04/28/2020 at 15:29. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0815.d
Injection date and time: 28-APR-2020 10:25

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

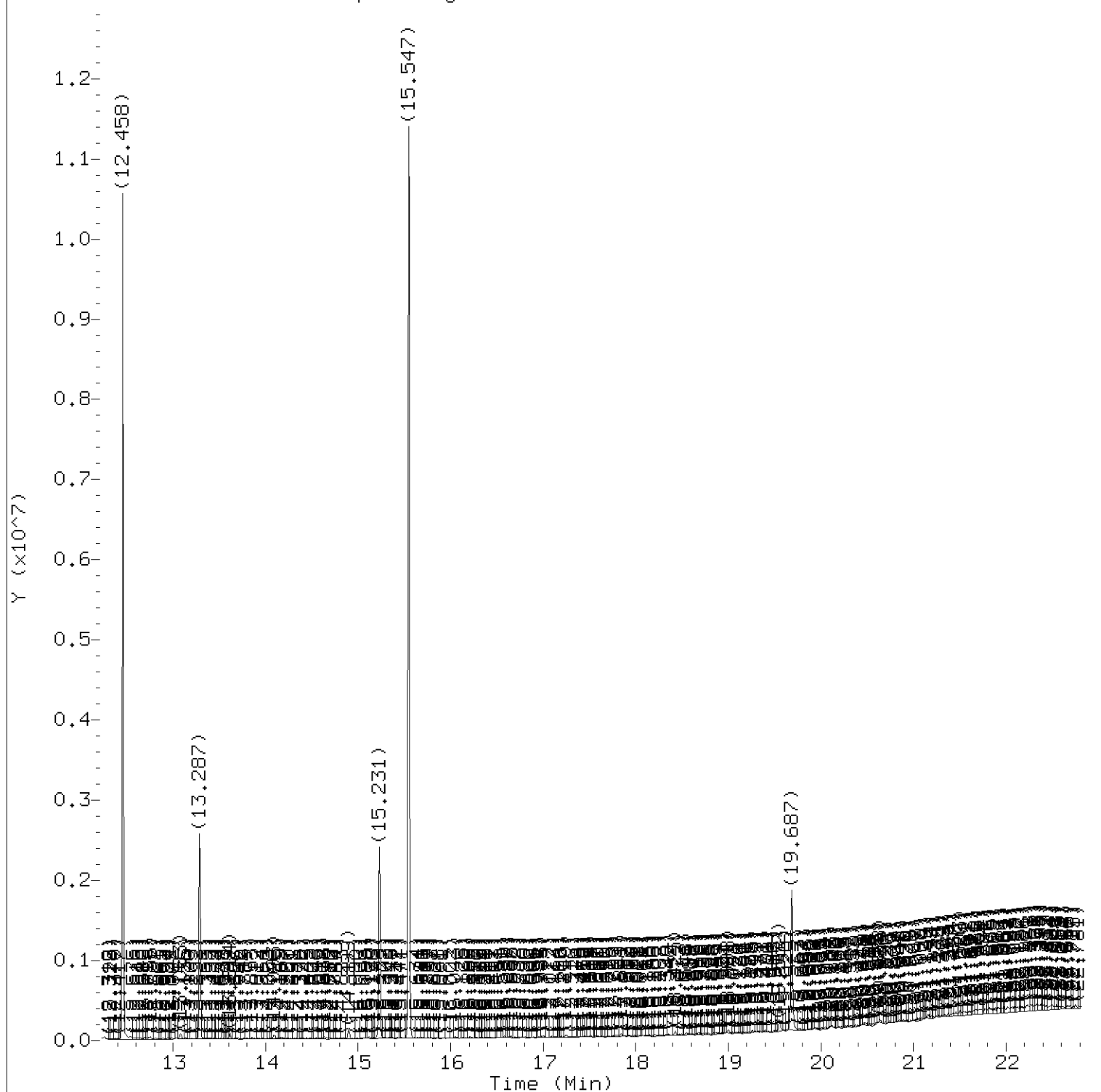
Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R09

Lab Sample ID: 1300804

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0815.d
Injection date and time: 28-APR-2020 10:25

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m
Calibration date and time: 28-APR-2020 12:41

Sublist used: 22230M

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R09

Lab Sample ID: 1300804

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0815.d

Instrument ID: HP23264.i

Injection date and time: 28-APR-2020 10:25

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R09

Lab Sample ID: 1300804

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.671	152	281983	5.000
45) \$Nitrobenzene-d5	(2)	7.506	82	2182232	18.727
68) *Naphthalene-d8	(2)	8.604	136	1031424	5.000
96) \$2-Fluorobiphenyl	(3)	10.356	172	2912307	18.209
118) *Acenaphthene-d10	(3)	11.395	164	493590	5.000
158) *Phenanthrene-d10	(4)	13.287	188	935037	5.000
180) *Pyrene-d10	(5)	15.231	212	939398	5.000
184) \$Terphenyl-d14	(5)	15.547	244	4441675	26.088
218) *Perylene-d12	(6)	19.687	264	899679	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

59R10

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300805

Data file: /chem/HP23264.i/20apr28.b/jd0816.d

Injection date and time: 28-APR-2020 10:55

Data file Sample Info. Line: 59R10;1300805;1;0;SAMPLE;;RAAPVA;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time (Last Method Edit): 28-APR-2020 12:41

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr28.b/jd0811.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 247 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
=====	=====	=====	=====	=====	=====	=====
26) 1,4-Dichlorobenzene-d4	6.671(0.000)	828	152	234273 (-36)	5.00	
68) Naphthalene-d8	8.604(0.006)	1159	136	876732 (-33)	5.00	
118) Acenaphthene-d10	11.395(0.000)	1637	164	431269 (-33)	5.00	
158) Phenanthrene-d10	13.287(0.006)	1961	188	807713 (-32)	5.00	
180) Pyrene-d10	15.231(0.000)	2294	212	832483 (-35)	5.00	
218) Perylene-d12	19.687(0.000)	3057	264	744821 (-37)	5.00	

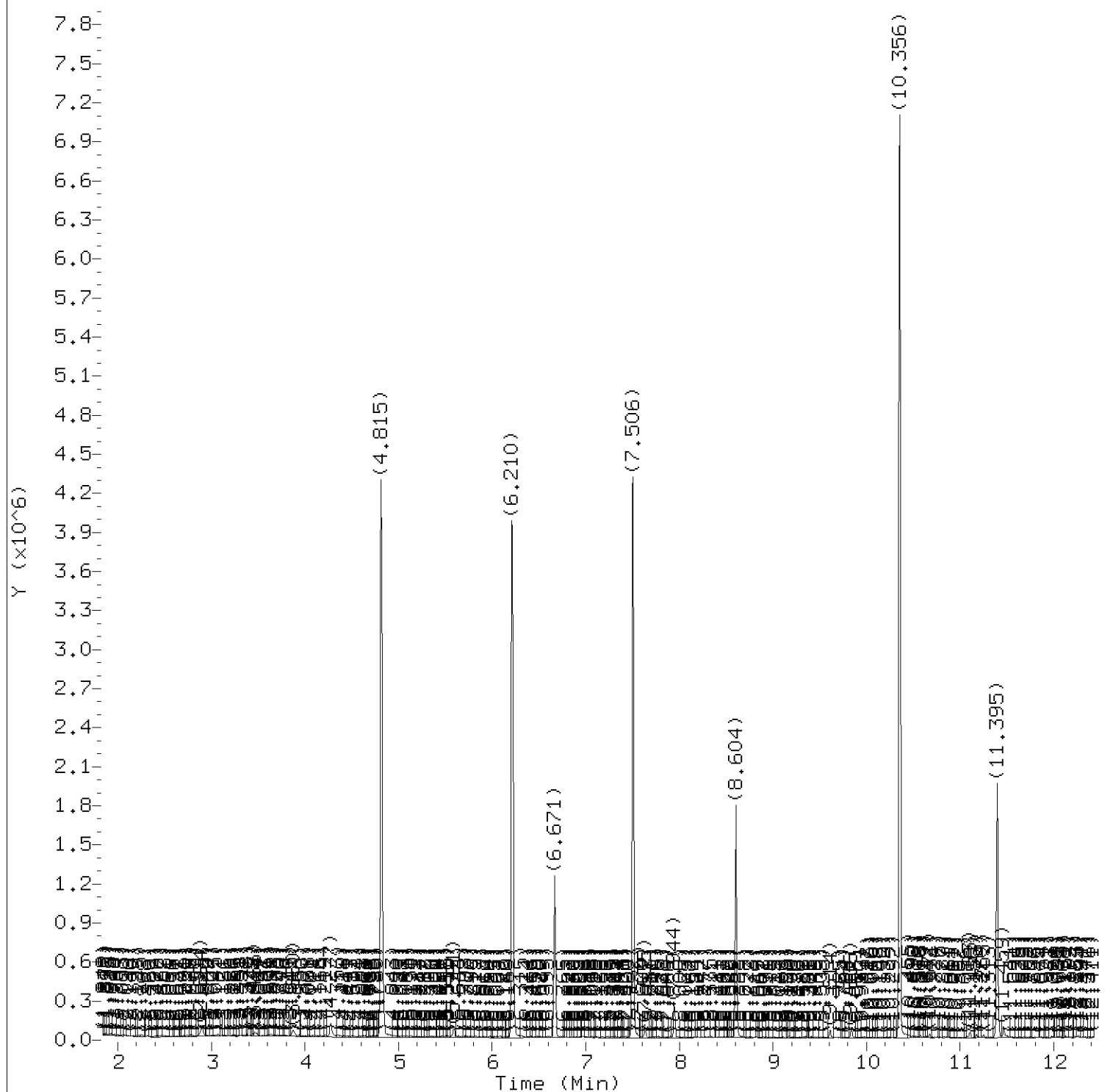
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
=====	=====	=====	=====	=====	=====	=====	=====	=====
45) Nitrobenzene-d5	(2)	7.506(-0.001)	82	1928763	19.472	78%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.356(0.000)	172	2535757	18.146	73%		44 - 102
184) Terphenyl-d14	(5)	15.547(0.000)	244	3764582	24.951	100%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
129) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by William H Saadeh on 04/28/2020 at 15:29. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0816.d
Injection date and time: 28-APR-2020 10:55

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m
Calibration date and time: 28-APR-2020 12:41

Sublist used: 22230M

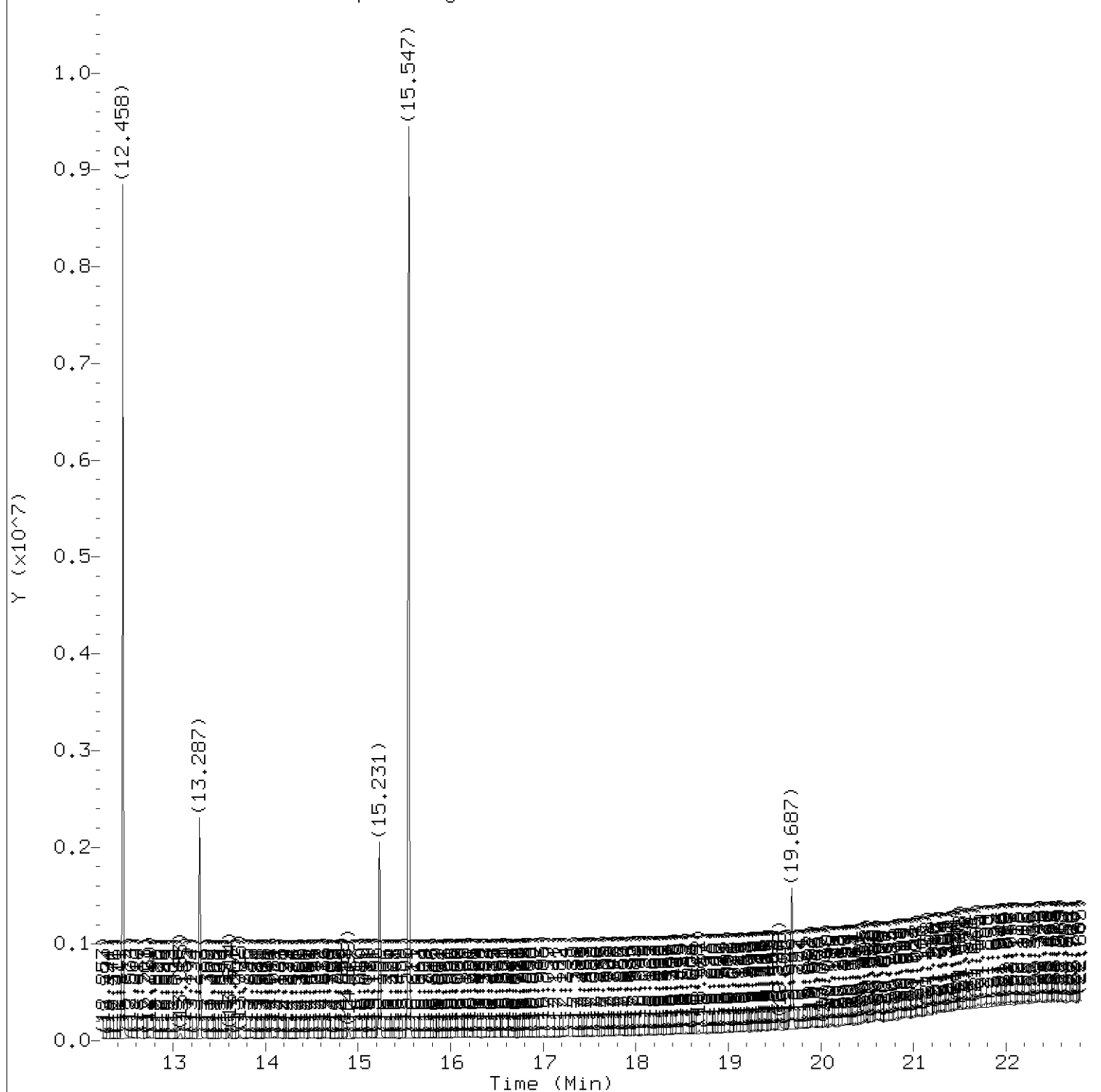
Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R10

Lab Sample ID: 1300805

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0816.d
Injection date and time: 28-APR-2020 10:55

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m
Calibration date and time: 28-APR-2020 12:41

Sublist used: 22230M

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R10

Lab Sample ID: 1300805

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0816.d

Instrument ID: HP23264.i

Injection date and time: 28-APR-2020 10:55

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R10

Lab Sample ID: 1300805

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.671	152	234273	5.000
45) \$Nitrobenzene-d5	(2)	7.506	82	1928763	19.472
68) *Naphthalene-d8	(2)	8.604	136	876732	5.000
96) \$2-Fluorobiphenyl	(3)	10.356	172	2535757	18.146
118) *Acenaphthene-d10	(3)	11.395	164	431269	5.000
158) *Phenanthrene-d10	(4)	13.287	188	807713	5.000
180) *Pyrene-d10	(5)	15.231	212	832483	5.000
184) \$Terphenyl-d14	(5)	15.547	244	3764582	24.951
218) *Perylene-d12	(6)	19.687	264	744821	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

59R11

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300806

Data file: /chem/HP23264.i/20apr28.b/jd0817.d

Injection date and time: 28-APR-2020 11:24

Data file Sample Info. Line: 59R11;1300806;1;0;SAMPLE;;RAAPVA;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time (Last Method Edit): 28-APR-2020 12:41

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr28.b/jd0811.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 246 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.671(0.000)	828	152	229729 (-37)	5.00	
68) Naphthalene-d8	8.604(0.006)	1159	136	862336 (-34)	5.00	
118) Acenaphthene-d10	11.395(0.000)	1637	164	425288 (-34)	5.00	
158) Phenanthrene-d10	13.287(0.006)	1961	188	770830 (-36)	5.00	
180) Pyrene-d10	15.231(0.000)	2294	212	802110 (-37)	5.00	
218) Perylene-d12	19.686(0.000)	3057	264	733387 (-38)	5.00	

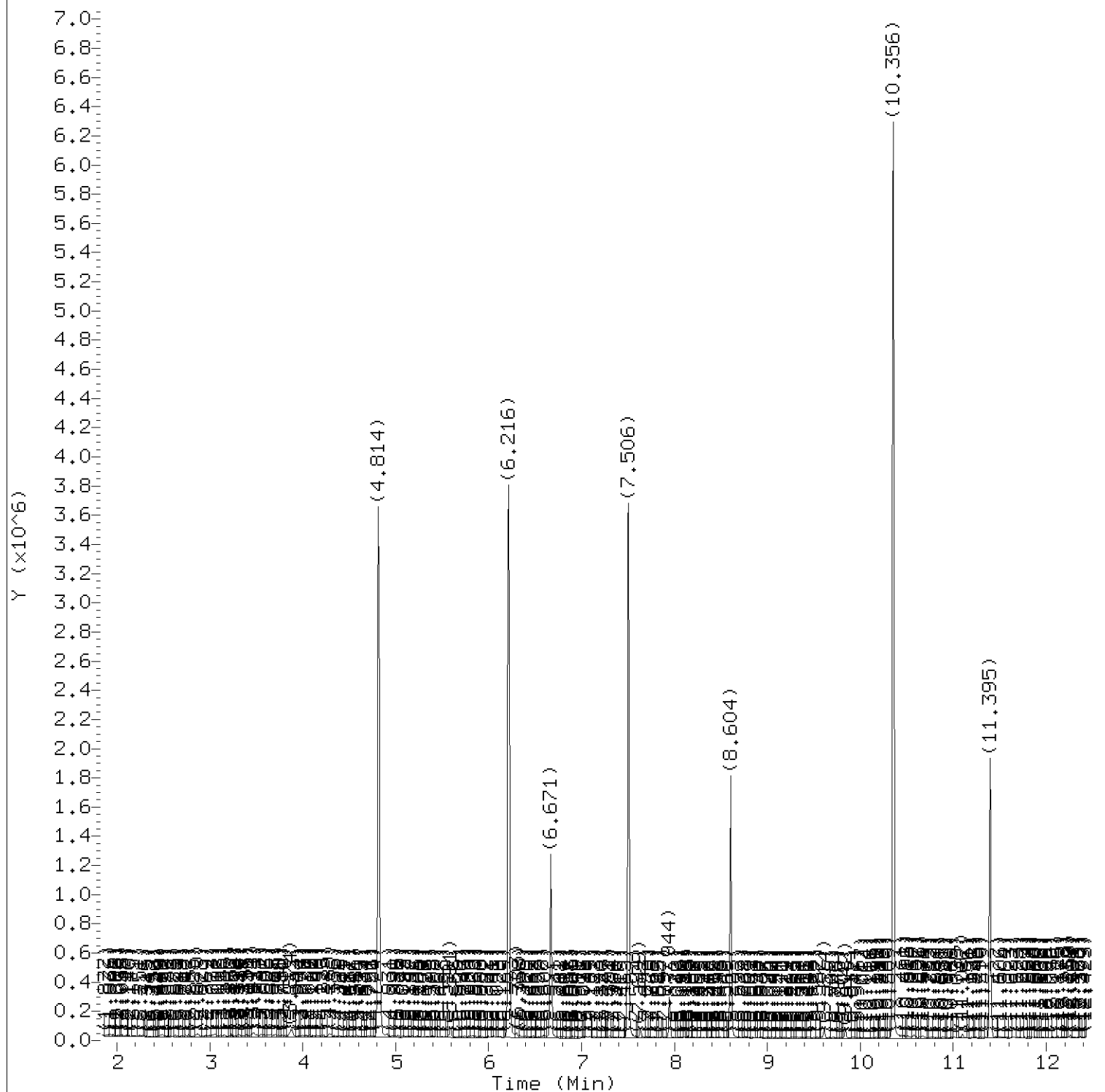
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.506(-0.001)	82	1643768	16.872	67%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.356(0.000)	172	2146164	15.574	62%		44 - 102
184) Terphenyl-d14	(5)	15.547(0.000)	244	3531923	24.296	97%		34 - 128

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
129) Diethylphthalate	(3)			Not Detected					0.5

Total number of targets = 3

Digitally signed by William H Saadeh on 04/28/2020 at 15:29. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0817.d
Injection date and time: 28-APR-2020 11:24

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m
Calibration date and time: 28-APR-2020 12:41

Sublist used: 22230M

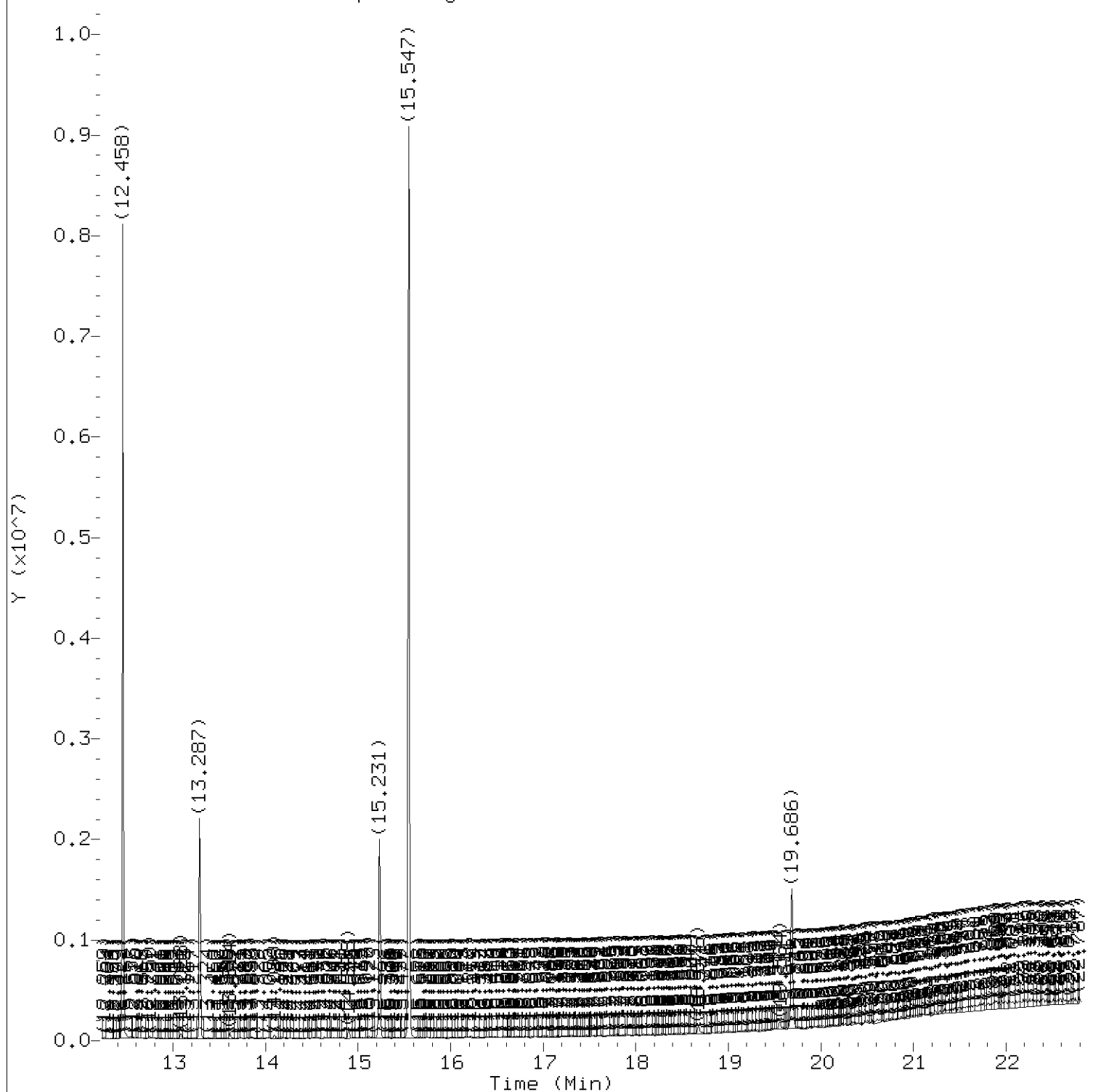
Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R11

Lab Sample ID: 1300806

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0817.d
Injection date and time: 28-APR-2020 11:24

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R11

Lab Sample ID: 1300806

Digitally signed by William H Saadeh
on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0817.d

Instrument ID: HP23264.i

Injection date and time: 28-APR-2020 11:24

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: 22230M

Calibration date and time: 28-APR-2020 12:41

Date, time and analyst ID of latest file update: 28-Apr-2020 15:28 whs02991

Sample Name: 59R11

Lab Sample ID: 1300806

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.671	152	229729	5.000
45) \$Nitrobenzene-d5	(2)	7.506	82	1643768	16.872
68) *Naphthalene-d8	(2)	8.604	136	862336	5.000
96) \$2-Fluorobiphenyl	(3)	10.356	172	2146164	15.574
118) *Acenaphthene-d10	(3)	11.395	164	425288	5.000
158) *Phenanthrene-d10	(4)	13.287	188	770830	5.000
180) *Pyrene-d10	(5)	15.231	212	802110	5.000
184) \$Terphenyl-d14	(5)	15.547	244	3531923	24.296
218) *Perylene-d12	(6)	19.686	264	733387	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/28/2020 at 15:29.

Target 3.5 esignature user ID: whs02991

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP23264 **HP #10**

Data Directory Path is - C:\msdchem\1\data\20mar11\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
knb25316	JC0270.D	rvDFTPP0430	03/11/2020	09:56		
knb25316	JC0271.D	RVSTD0340	03/11/2020	10:15		
knb25316	JC0272.D	rvSTD0340	03/11/2020	11:14		
knb25316	JC0273.D	rvSTD0340	03/11/2020	11:44		
knb25316	JC0274.D	rvSTD0340	03/11/2020	12:14		
knb25316	JC0275.D	rvSTD0340	03/11/2020	12:43		
knb25316	JC0276.D	rvSTD0340	03/11/2020	13:12		
knb25316	JC0277.D	rvSTD0340	03/11/2020	13:42		
knb25316	JC0278.D	rvSTD0340	03/11/2020	14:11		
knb25316	JC0279.D	rvMDL0340	03/11/2020	14:41		
knb25316	JC0280.D	rvPAHMDL0340	03/11/2020	15:10		
knb25316	JC0281.D	rvICV3089	03/11/2020	15:40		
knb25316	JC0282.D	RVBASICV2399	03/11/2020	16:09		
knb25316	JC0283.D	RVDMPICV2609	03/11/2020	16:39		
knb25316	JC0284.D	RVHCCPDICV0350	03/11/2020	17:08		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP23264 **HP #10**

Data Directory Path is - C:\msdchem\1\data\20apr16a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	JD0400.D	rvDFTPP0430	04/16/2020	21:15		
art12405	JD0401.D	rvSTD0940	04/16/2020	21:50		
art12405	JD0400.D	rvDFTPP0430	04/16/2020	22:35		
art12405	JD0402a.D	rvPDA1070	04/16/2020	23:40		
art12405	JD0403.D	rvPDA1070	04/17/2020	00:09		
art12405	JD0404.D	rvPDA1070	04/17/2020	00:39		
art12405	JD0405.D	rvPDA1070	04/17/2020	01:08		
art12405	JD0406.D	rvPDA1070	04/17/2020	01:38		
art12405	JD0407.D	rvPDA1070	04/17/2020	02:07		
art12405	JD0408.D	rvABC1070	04/17/2020	02:36		
art12405	JD0409.D	rvABC1070	04/17/2020	03:06		
art12405	JD0410.D	rvABC1070	04/17/2020	03:35		
art12405	JD0411.D	rvABC1070	04/17/2020	04:04		
art12405	JD0412.D	rvABC1070	04/17/2020	04:34		
art12405	JD0413.D	rvABC1070	04/17/2020	05:03		
art12405	JD0414.D	rvABC1070	04/17/2020	05:32		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP23264 **HP #10**

Data Directory Path is - C:\msdchem\1\data\20apr23\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
knb25316	JD0620.D	rvDFTPP0430	04/23/2020	07:07		
knb25316	JD0621.D	rvSTD0940	04/23/2020	07:25		
knb25316	JD0622.D	rvPDA1070	04/23/2020	08:52		
knb25316	JD0623.D	rvABC1070	04/23/2020	09:27		
knb25316	JD0624.D	rvAAP1140	04/23/2020	10:17		
knb25316	JD0625.D	SBLKWH112	04/23/2020	11:13	20112WAH	
knb25316	JD0626.D	112WHLCS	04/23/2020	11:43	20112WAH	
knb25316	JD0627.D	112WHLCS1	04/23/2020	12:12	20112WAH	
knb25316	JD0628.D	112WHLCS1	04/23/2020	12:42	20112WAH	
knb25316	JD0629.D	1300797	04/23/2020	13:12	20112WAH	
knb25316	JD0630.D	1300798	04/23/2020	13:41	20112WAH	
knb25316	JD0631.D	1300799	04/23/2020	14:11	20112WAH	
knb25316	JD0632.D	1300599	04/23/2020	14:40	20112WAZ	
knb25316	JD0633.D	1300600	04/23/2020	15:10	20112WAZ	
knb25316	JD0634.D	1300601	04/23/2020	15:39	20112WAZ	
knb25316	JD0645.D	rvSTD0940	04/23/2020	16:09		
knb25316	JD0635.D	1300794	04/23/2020	16:39	20112WAH	
knb25316	JD0636.D	1300795	04/23/2020	17:08	20112WAH	
knb25316	JD0637.D	1300796	04/23/2020	17:38	20112WAH	
knb25316	JD0638.D	1300800	04/23/2020	18:08	20112WAH	
knb25316	JD0639.D	1300801	04/23/2020	18:37	20112WAH	
knb25316	JD0640.D	1300802	04/23/2020	19:07	20112WAH	
knb25316	JD0641.D	1300803	04/23/2020	19:36	20112WAH	
knb25316	JD0642.D	1300804	04/23/2020	20:06	20112WAH	
knb25316	JD0643.D	1300805	04/23/2020	20:35	20112WAH	
knb25316	JD0644.D	1300806	04/23/2020	21:05	20112WAH	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP23264 **HP #10**

Data Directory Path is - C:\msdchem\1\data\20apr28\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
knb25316	JD0810.D	rvDFTPP0430	04/28/2020	07:05		
knb25316	JD0811.D	rvSTD0940	04/28/2020	07:21		
knb25316	JD0812.D	SBLKWC118	04/28/2020	08:57	20118WAC	
knb25316	JD0813.D	118WCLCS	04/28/2020	09:26	20118WAC	
knb25316	JD0814.D	1300803	04/28/2020	09:55	20112WAH	
knb25316	JD0815.D	1300804	04/28/2020	10:25	20112WAH	
knb25316	JD0816.D	1300805	04/28/2020	10:55	20112WAH	
knb25316	JD0817.D	1300806	04/28/2020	11:24	20112WAH	
knb25316	JD0818.D	1302545	04/28/2020	11:54	20118WAC	
knb25316	JD0819.D	1302546	04/28/2020	12:23	20118WAC	
knb25316	JD0820.D	1302547	04/28/2020	12:53	20118WAC	
knb25316	JD0821.D	1302548	04/28/2020	13:22	20118WAC	
knb25316	JD0822.D	1302549	04/28/2020	13:52	20118WAC	
knb25316	JD0823.D	1302550	04/28/2020	14:21	20118WAC	
knb25316	JD0824.D	1302552	04/28/2020	14:51	20118WAC	

Date : 11-MAR-2020 09:56

Client ID: DFTPP

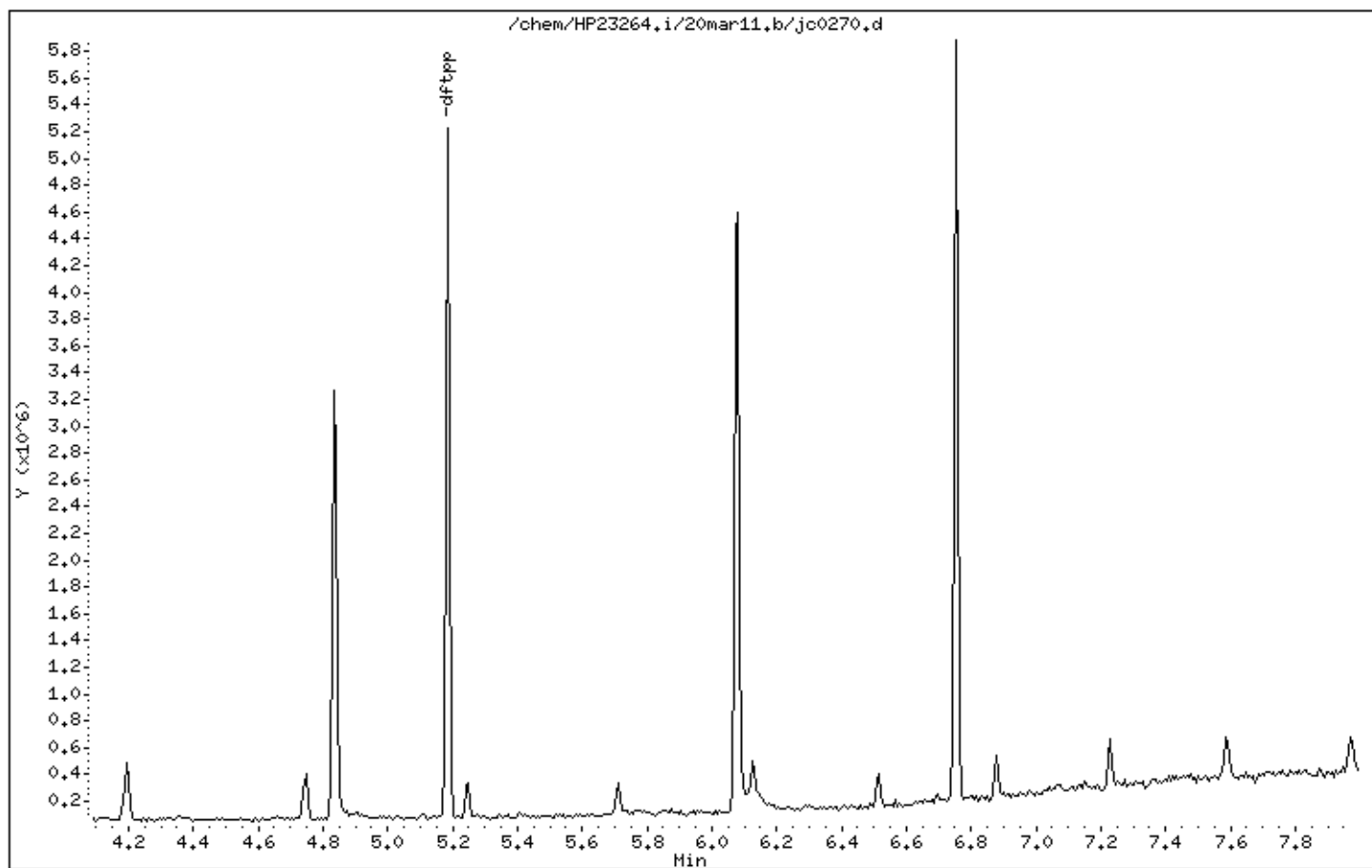
Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18



Date : 11-MAR-2020 09:56

Client ID: DFTPP

Instrument: HP23264.i

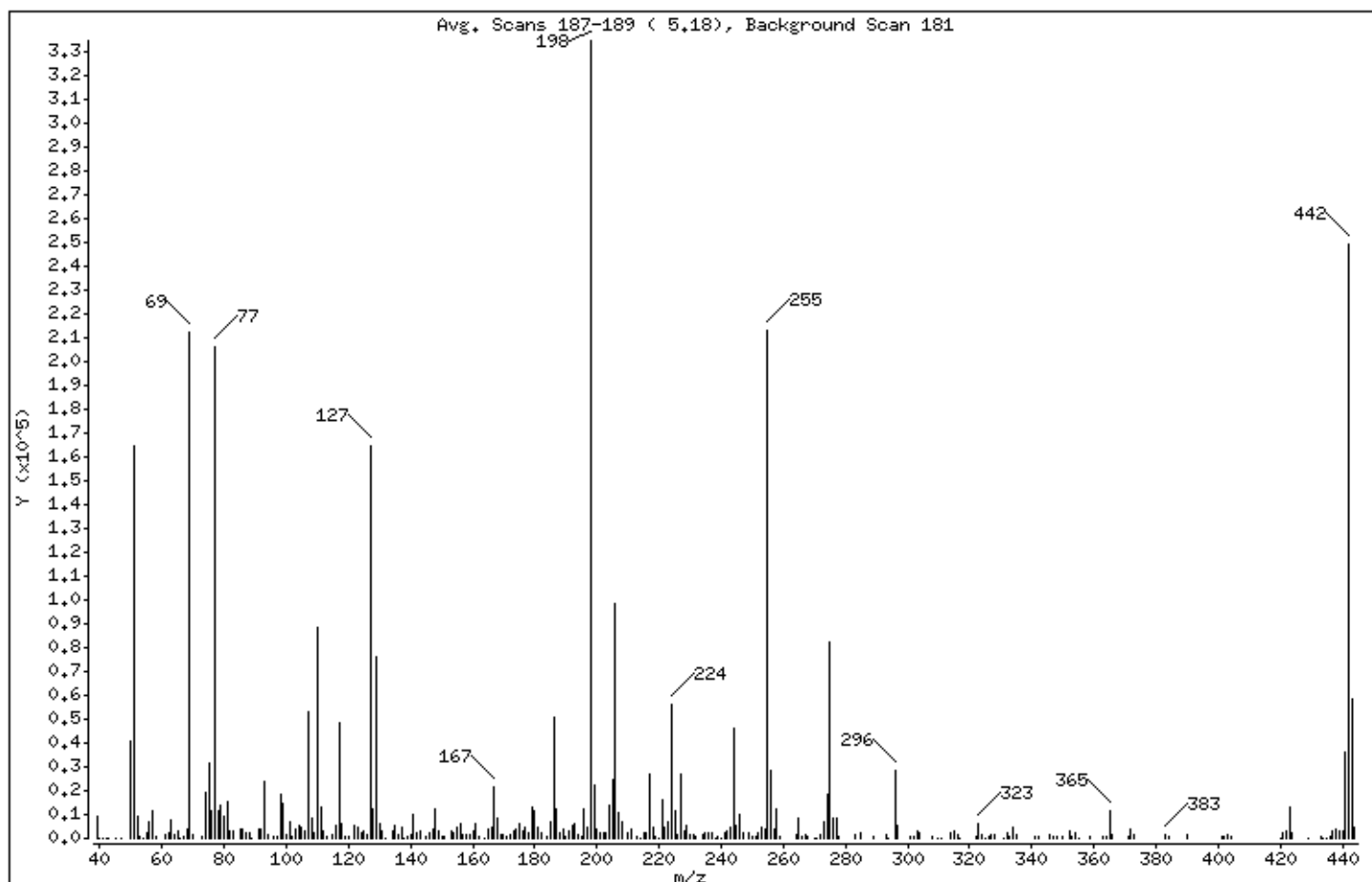
Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	49.27
68	Less than 2.00% of mass 69	1.26 (1.98)
69	Mass 69 relative abundance	63.50
70	Less than 2.00% of mass 69	0.52 (0.82)
127	10.00 - 80.00% of mass 198	49.18
197	Less than 2.00% of mass 198	1.40
199	5.00 - 9.00% of mass 198	6.56
275	10.00 - 60.00% of mass 198	24.63
365	Greater than 1.00% of mass 198	3.56
441	0.01 - 24.00% of mass 442	10.86 (14.61)
442	50.00 - 99.99% of mass 198	74.39
443	15.00 - 24.00% of mass 442	17.40 (23.39)

Date : 11-MAR-2020 09:56

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jc0270.d

Spectrum: Avg. Scans 187-189 (5.18), Background Scan 181

Location of Maximum: 198.00

Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	9338	124.00	2547	201.00	2426	293.00	1448
40.00	23	125.00	3385	202.00	2230	294.00	155
41.00	334	126.00	1824	203.00	2097	296.00	28296
42.00	356	127.00	164544	204.00	13743	297.00	5055
43.00	375	128.00	12655	205.00	24928	301.00	609
45.00	232	129.00	76088	206.00	98152	302.00	800
47.00	384	130.00	6020	207.00	10908	303.00	3151
50.00	40984	131.00	2745	208.00	6737	304.00	2075
51.00	164800	132.00	127	210.00	2219	308.00	984
52.00	9413	134.00	2730	211.00	4177	310.00	331
53.00	504	135.00	5696	213.00	418	311.00	287
54.00	128	136.00	1671	214.00	110	314.00	2636
55.00	2092	137.00	4643	215.00	2615	315.00	3414
56.00	6981	138.00	109	216.00	2380	316.00	1330
57.00	11476	139.00	669	217.00	27088	317.00	85
58.00	514	140.00	1887	218.00	4940	322.00	402
61.00	1250	141.00	9786	219.00	833	323.00	6336
62.00	2199	142.00	2174	220.00	225	324.00	1708
63.00	8025	143.00	2997	221.00	16384	325.00	227
64.00	1616	145.00	667	222.00	4935	326.00	615
65.00	3072	146.00	2088	223.00	7018	327.00	1554
66.00	196	147.00	4030	224.00	56464	328.00	1393
67.00	711	148.00	12569	225.00	11641	331.00	231
68.00	4214	149.00	2712	226.00	1886	332.00	2078
69.00	212416	150.00	669	227.00	27280	333.00	758
70.00	1747	151.00	1017	228.00	3326	334.00	4875
73.00	879	153.00	3084	229.00	5283	335.00	1324
74.00	19032	154.00	2067	230.00	1341	341.00	677
75.00	31640	155.00	4951	231.00	1193	342.00	403
76.00	11591	156.00	5810	232.00	532	346.00	1311
77.00	206336	157.00	1230	234.00	1768	347.00	854
78.00	11748	158.00	1390	235.00	2379	348.00	385
79.00	13622	159.00	1460	236.00	2454	350.00	598
80.00	8972	160.00	3341	237.00	2567	352.00	3383
81.00	15387	161.00	6004	238.00	343	353.00	1037

Date : 11-MAR-2020 09:56

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jc0270.d

Spectrum: Avg. Scans 187-189 (5.18), Background Scan 181

Location of Maximum: 198.00

Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y

82.00	3263	162.00	428	239.00	916	354.00	2410
83.00	3295	164.00	289	240.00	278	355.00	240
85.00	3975	165.00	4030	241.00	2542	359.00	545
86.00	3875	166.00	4959	242.00	2762	363.00	613
87.00	1935	167.00	21168	243.00	4916	364.00	486

88.00	2064	168.00	8485	244.00	46336	365.00	11899
89.00	294	169.00	1894	245.00	5189	366.00	1188
91.00	4059	170.00	1824	246.00	9945	371.00	1089
92.00	3965	171.00	459	247.00	1985	372.00	3518
93.00	23784	172.00	1423	249.00	2485	373.00	1300

94.00	1386	173.00	2837	250.00	476	383.00	1638
96.00	829	174.00	3757	251.00	847	384.00	859
97.00	520	175.00	5770	252.00	2558	390.00	1191
98.00	18080	176.00	2962	253.00	4602	401.00	496
99.00	14817	177.00	4709	254.00	3810	402.00	1063

100.00	1841	178.00	2383	255.00	213248	403.00	1323
101.00	6547	179.00	13347	256.00	28600	404.00	450
102.00	919	180.00	11554	257.00	3903	420.00	107
103.00	3563	181.00	4962	258.00	12136	421.00	2057
104.00	5528	182.00	1925	259.00	569	422.00	2753

105.00	4896	184.00	976	264.00	1295	423.00	13259
106.00	3124	185.00	6770	265.00	8445	424.00	2556
107.00	53424	186.00	50664	266.00	934	429.00	269
108.00	8232	187.00	12553	267.00	1172	433.00	429
109.00	2250	188.00	1945	268.00	586	434.00	143

110.00	88264	189.00	3786	270.00	136	435.00	351
111.00	12890	190.00	724	271.00	304	436.00	709
112.00	3403	191.00	3088	272.00	1382	437.00	2855
113.00	545	192.00	5522	273.00	6603	438.00	4127
115.00	1356	193.00	6311	274.00	18816	439.00	3244

116.00	5150	194.00	1862	275.00	82408	440.00	3092
117.00	48408	195.00	1037	276.00	8693	441.00	36344
118.00	5983	196.00	12105	277.00	8834	442.00	248832
119.00	710	197.00	4670	278.00	766	443.00	58200
120.00	827	198.00	334528	283.00	1455	444.00	4727

Data File: /chem/HP23264.i/20mar11.b/jc0270.d

Page 5

Date : 11-MAR-2020 09:56

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jc0270.d

Spectrum: Avg. Scans 187-189 (5,18), Background Scan 181

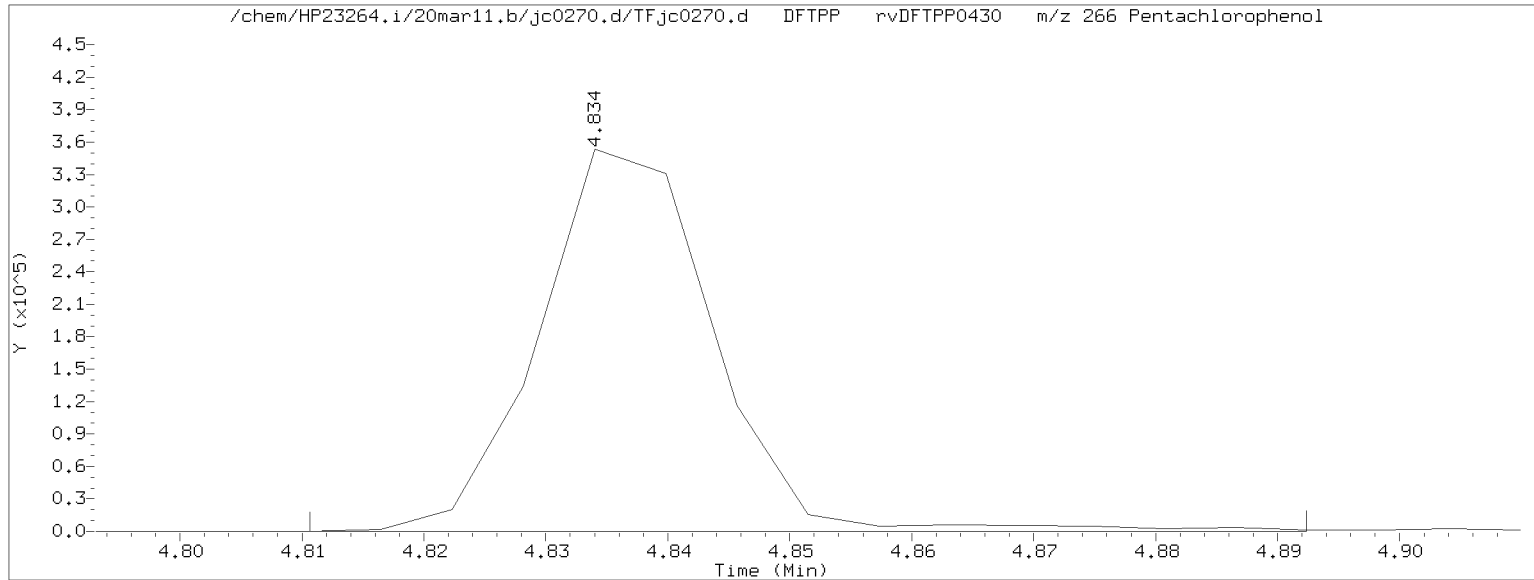
Location of Maximum: 198,00

Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122,00	5227	199,00	21960	285,00	2192		
123,00	4498	200,00	3804	289,00	688		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP23264.i Injection Date: 11-MAR-2020 09:56 Operator: knb25316



Pentachlorophenol EICP peak height = 353536 EICP peak height at 10% = 35354 Pentachlorophenol EICP area = 350101

Pentachlorophenol EICP peak apex (min.) = 4.834

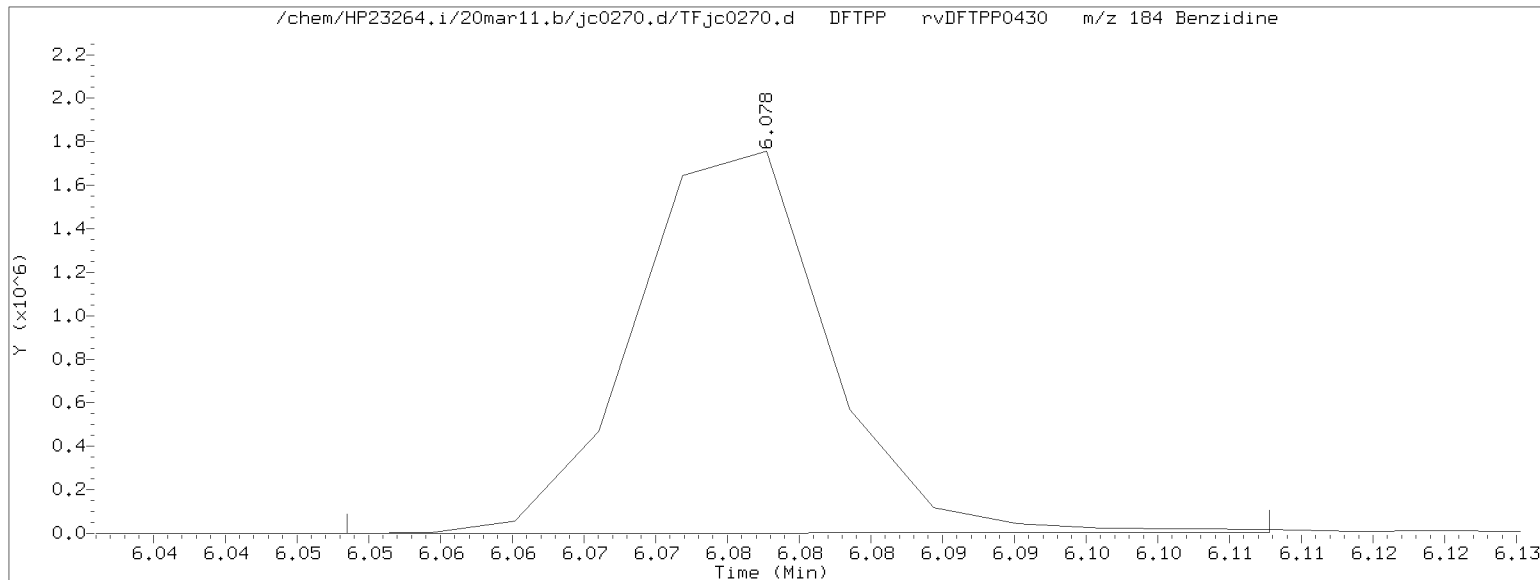
RT at 10% of front half of EICP (min.) = 4.823

RT at 10% of back half of EICP (min.) = 4.850

'Front' peak width (min.) = 0.0109000000

'Tailing' peak width (min.) = 0.0163500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0163500000}{0.0109000000} = 1.500$$



Benzidine EICP peak height = 1756979 EICP peak height at 10% = 175698 Benzidine EICP area = 1648261

Benzidine EICP peak apex (min.) = 6.078

RT at 10% of front half of EICP (min.) = 6.062

RT at 10% of back half of EICP (min.) = 6.089

'Front' peak width (min.) = 0.0157166667

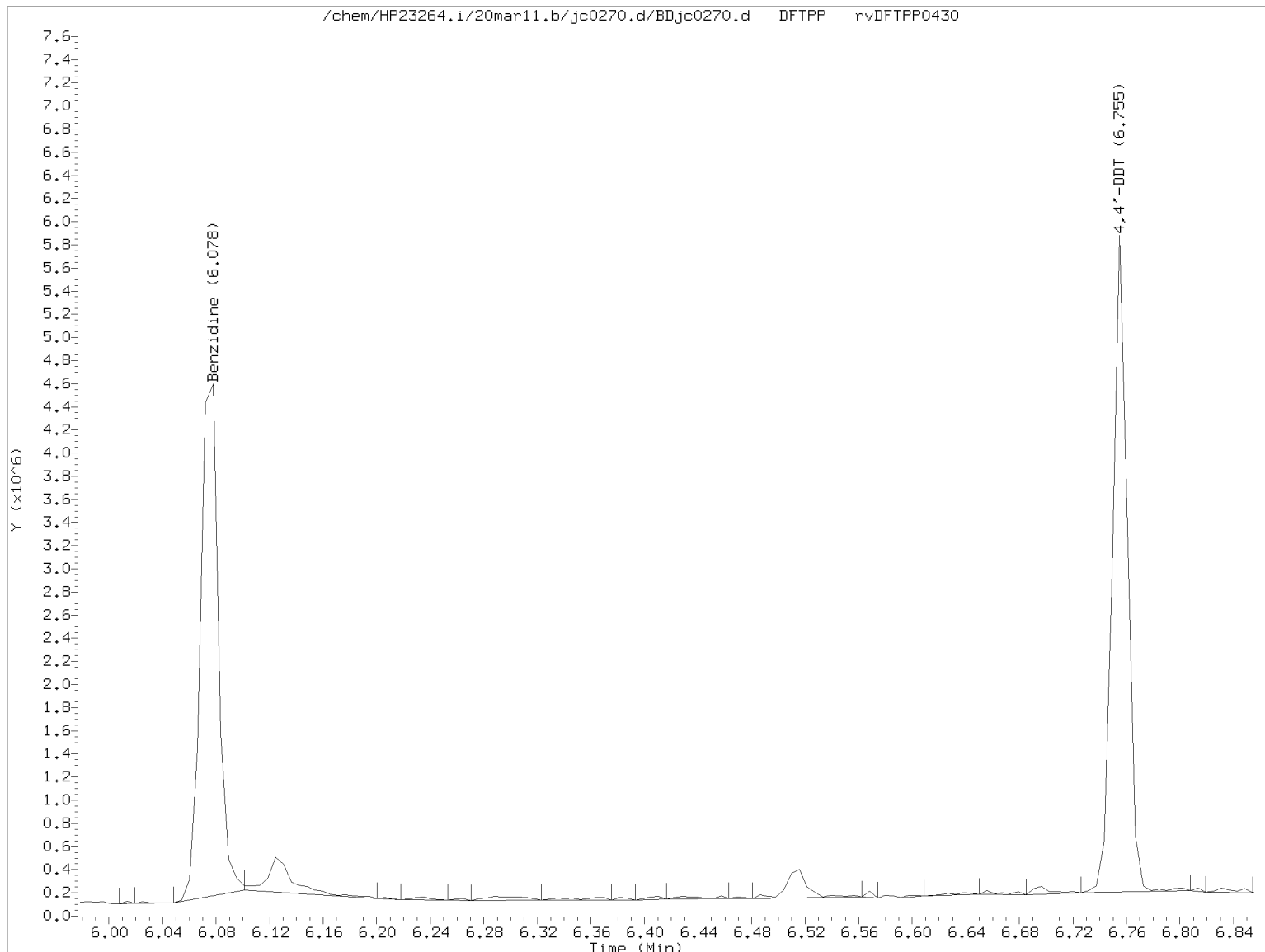
'Tailing' peak width (min.) = 0.0108333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0108333333}{0.0157166667} = 0.689$$

page 1 of 2
printed on 03/11/2020 at 10:15

Assessment of GC Column Performance and Injection Port Inertness for

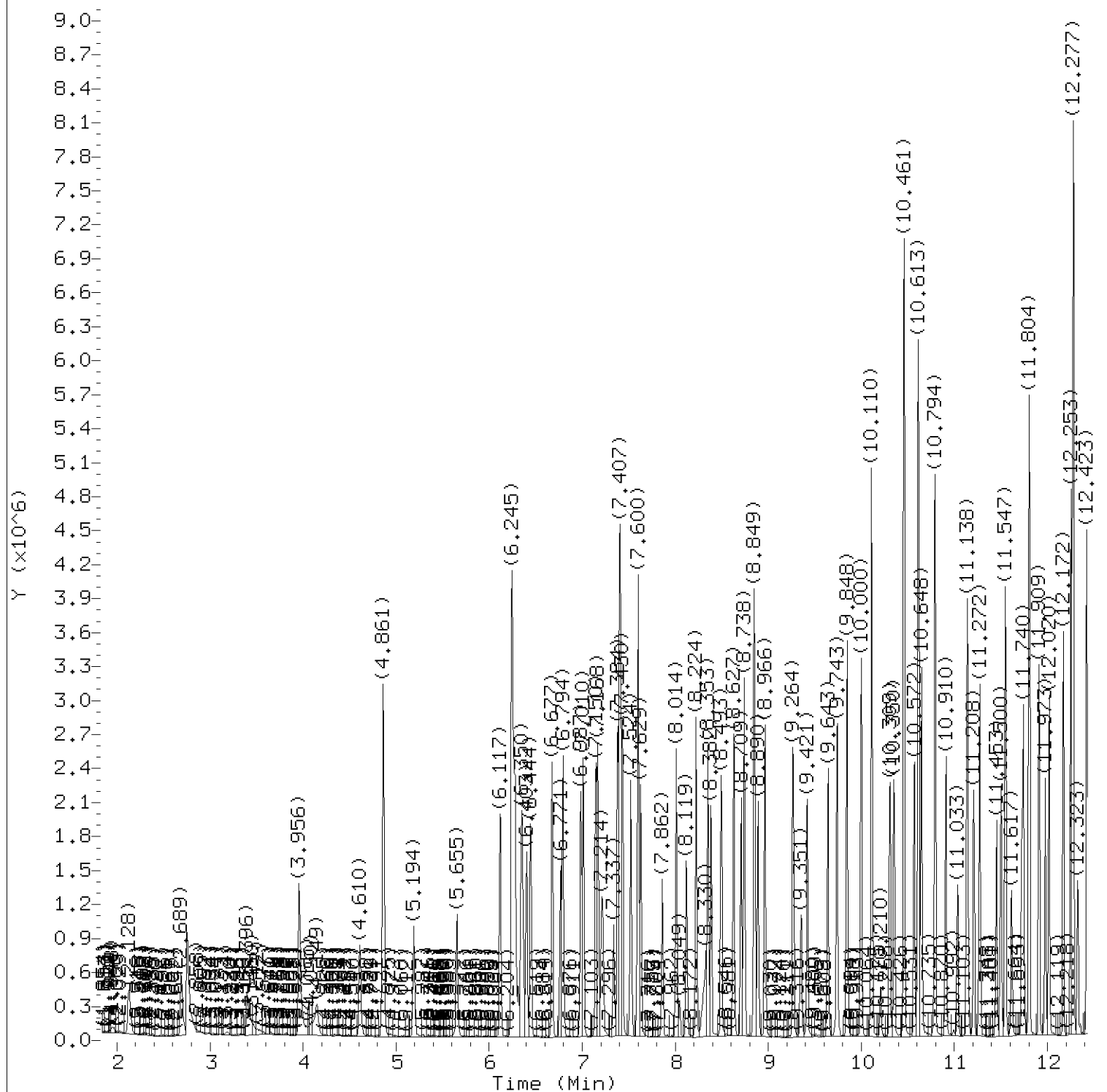
Instrument ID: HP23264.i Injection Date: 11-MAR-2020 09:56 Operator: knb25316



$$\% \text{ 4,4'-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 0}{0 + 0 + 4462545} \times 100 = 0.0$$

page 2 of 2
printed on 03/17/2020 at 09:29



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0271.d
Injection date and time: 11-MAR-2020 10:15

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

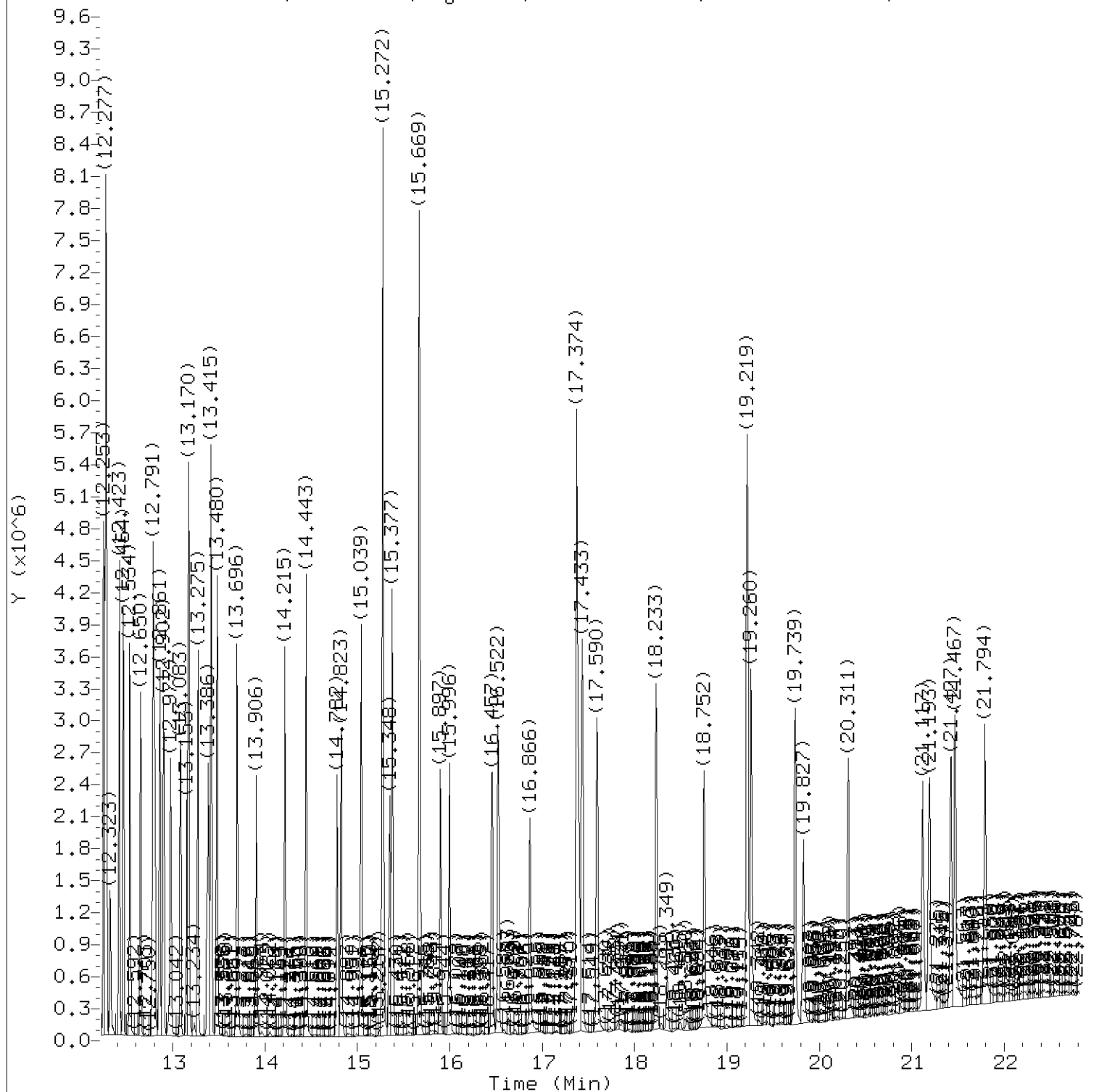
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SST7.5

Lab Sample ID: RVSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:34.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0271.d
Injection date and time: 11-MAR-2020 10:15

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:34.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0271.d
 Injection date and time: 11-MAR-2020 10:15

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.134	88	309978	7.500
5) N-Nitrosodimethylamine	(1)	2.689	74	481921	7.500
6) Pyridine	(1)	2.747	79	767957	7.500
8) 2-Picoline	(1)	3.956	93	717498	7.500
9) N-Nitrosomethylethylamine	(1)	4.155	88	315674	7.500
10) Methyl methanesulfonate	(1)	4.610	80	469510	7.500
12) \$2-Fluorophenol	(1)	4.861	112	1174686	15.000
14) N-Nitrosodiethylamine	(1)	5.194	102	284187	7.500
16) Ethyl methanesulfonate	(1)	5.655	109	274377	7.500
43) Total Cresols	(1)			1160124	15.000
17) Benzaldehyde	(1)	6.117	77	609444	7.500
18) \$Phenol-d6	(1)	6.245	99	1584018	15.000
19) Phenol	(1)	6.263	94	930797	7.500
20) Aniline	(1)	6.280	93	1010743	7.500
23) bis(2-Chloroethyl) ether	(1)	6.403	93	623998	7.500
24) 2-Chlorophenol	(1)	6.444	128	549796	7.500
25) 1,3-Dichlorobenzene	(1)	6.677	146	617469	7.500
26) *1,4-Dichlorobenzene-d4	(1)	6.771	152	250625	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	628737	7.500
28) Benzyl alcohol	(1)	6.987	108	351233	7.500
29) 1,2-Dichlorobenzene	(1)	7.010	146	625434	7.500
31) Indene	(1)	7.144	115	859420	7.500
32) 2-Methylphenol	(1)	7.168	108	544828	7.500
35) bis(2-Chloroisopropyl) ether	(1)	7.214	45	840205	7.500
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.214	45	840205	7.500
36) N-Nitrosopyrrolidine	(1)	7.337	100	296610	7.500
100) Isosafrole	(3)			494832	7.500
37) Acetophenone	(1)	7.384	105	921206	7.500
39) N-Nitroso-di-n-propylamine	(1)	7.401	70	565012	7.500
38) 4-Methylphenol	(1)	7.407	108	615296	7.500
40) N-Nitrosomorpholine	(1)	7.413	56	440915	7.500
41) o-Toluidine	(1)	7.430	106	927447	7.500
44) Hexachloroethane	(1)	7.524	117	307923	7.500
45) \$Nitrobenzene-d5	(2)	7.600	82	1671294	15.000
46) Nitrobenzene	(2)	7.629	77	822468	7.500
50) N-Nitrosopiperidine	(2)	7.862	114	255712	7.500
52) Isophorone	(2)	8.014	82	1341202	7.500
125) 2,4,2,6-Dinitrotoluenes	(3)			607920	15.000
53) 2-Nitrophenol	(2)	8.119	139	278483	7.500
55) 2,4-Dimethylphenol	(2)	8.224	107	640814	7.500

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:34.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0271.d
 Injection date and time: 11-MAR-2020 10:15

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
58) Benzoic acid	(2)	8.330	105	417357	10.000
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	255203	7.500
57) bis(2-Chloroethoxy)methane	(2)	8.382	93	731028	7.500
62) 2,4-Dichlorophenol	(2)	8.493	162	457579	7.500
65) 1,2,4-Trichlorobenzene	(2)	8.627	180	544432	7.500
68)*Naphthalene-d8	(2)	8.709	136	967500	5.000
69) Naphthalene	(2)	8.744	128	1572625	7.500
151) Diallyl trans/cis	(4)			494540	7.500
70) 4-Chloroaniline	(2)	8.849	127	620740	7.500
71) 2,6-Dichlorophenol	(2)	8.855	162	450831	7.500
72) Hexachloropropene	(2)	8.890	213	405659	7.500
74) Hexachlorobutadiene	(2)	8.966	225	368175	7.500
78) Quinoline	(2)	9.264	129	975852	7.500
79) Caprolactam	(2)	9.357	113	143170	7.500
80) N-Nitrosodi-n-butylamine	(2)	9.416	84	432128	7.500
83) 4-Chloro-3-methylphenol	(2)	9.643	107	501804	7.500
85) Safrole	(2)	9.743	162	401105	7.500
86) 2-Methylnaphthalene	(2)	9.848	142	1018670	7.500
87) 1-Methylnaphthalene	(2)	10.000	142	957283	7.500
88) Hexachlorocyclopentadiene	(3)	10.110	237	413375	7.500
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.110	216	563408	7.500
91) cis-Isosafrole	(3)	10.210	162	72385	1.275
93) 2,4,6-Trichlorophenol	(3)	10.309	196	366231	7.500
95) 2,4,5-Trichlorophenol	(3)	10.350	196	380375	7.500
96)\$2-Fluorobiphenyl	(3)	10.461	172	2409469	15.000
97) trans-Isosafrole	(3)	10.572	162	422447	6.225
98) 1,1'-Biphenyl	(3)	10.607	154	1209374	7.500
99) 2-Chloronaphthalene	(3)	10.618	162	1015800	7.500
101) 1-Chloronaphthalene	(3)	10.648	162	988872	7.500
103) Diphenyl ether	(3)	10.788	170	727279	7.500
104) 2-Nitroaniline	(3)	10.794	138	302061	7.500
108) 1,4-Naphthoquinone	(3)	10.910	158	402945	7.500
109) 1,4-Dinitrobenzene	(3)	11.039	168	158631	7.500
110) Dimethylphthalate	(3)	11.138	163	1171306	7.500
111) 1,3-Dinitrobenzene	(3)	11.144	168	184615	7.500
113) 2,6-Dinitrotoluene	(3)	11.208	165	258747	7.500
114) Acenaphthylene	(3)	11.272	152	1391427	7.500
117) 3-Nitroaniline	(3)	11.453	138	254215	7.500
118)*Acenaphthene-d10	(3)	11.500	164	474637	5.000
119) Acenaphthene	(3)	11.547	153	1013677	7.500

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 03/12/2020 at 08:34.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0271.d
 Injection date and time: 11-MAR-2020 10:15

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
120) 2,4-Dinitrophenol	(3)	11.617	184	187427	10.000
121) 4-Nitrophenol	(3)	11.728	109	238968	7.500
122) Pentachlorobenzene	(3)	11.740	250	464819	7.500
124) Dibenzofuran	(3)	11.804	168	1434820	7.500
123) 2,4-Dinitrotoluene	(3)	11.810	165	349173	7.500
126) 1-Naphthylamine	(3)	11.909	143	938414	7.500
127) 2,3,4,6-Tetrachlorophenol	(3)	11.979	232	287692	7.500
128) 2-Naphthylamine	(3)	12.020	143	918839	7.500
129) Diethylphthalate	(3)	12.172	149	1148240	7.500
131) Fluorene	(3)	12.253	166	1154471	7.500
130) Thionazin	(3)	12.265	107	201799	7.500
133) 5-Nitro-o-toluidine	(3)	12.277	152	295501	7.500
134) 4-Nitroaniline	(3)	12.283	138	274938	7.500
132) 4-Chlorophenyl-phenylether	(3)	12.283	204	550406	7.500
135) 4,6-Dinitro-2-methylphenol	(4)	12.323	198	191476	7.500
136) N-Nitrosodiphenylamine	(4)	12.423	169	908497	7.500
137) NDPA as diphenylamine	(4)	12.423	169	908497	7.500
139) 1,2-Diphenylhydrazine	(4)	12.464	77	1582015	7.500
140) \$2,4,6-Tribromophenol	(3)	12.540	330	335498	15.000
142) Tetraethyldithiopyrophosphate	(4)	12.650	97	247296	7.500
145) Diallate (peak 1)	(4)	12.785	86	371046	5.550
146) Phorate	(4)	12.791	75	790127	7.500
147) Phenacetin	(4)	12.802	108	600088	7.500
148) 4-Bromophenyl-phenylether	(4)	12.861	248	321960	7.500
149) Diallate (peak 2)	(4)	12.890	86	123494	1.950
150) Hexachlorobenzene	(4)	12.907	284	370240	7.500
152) Dimethoate	(4)	12.977	87	478610	7.500
153) Atrazine	(4)	13.088	200	302291	7.500
154) Pentachlorophenol	(4)	13.153	266	218956	7.500
156) Pentachloronitrobenzene	(4)	13.170	237	185607	7.500
155) 4-Aminobiphenyl	(4)	13.176	169	1006596	7.500
157) Pronamide	(4)	13.275	173	516239	7.500
158) *Phenanthrene-d10	(4)	13.386	188	889943	5.000
159) Dinoseb	(4)	13.410	211	247392	7.500
160) Phenanthrene	(4)	13.415	178	1615421	7.500
162) Anthracene	(4)	13.480	178	1605218	7.500
168) Carbazole	(4)	13.696	167	1466383	7.500
169) Methyl parathion	(4)	13.906	109	382541	7.500
170) Di-n-butylphthalate	(4)	14.215	149	1887360	7.500
172) Parathion	(4)	14.443	109	250242	7.500

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:34.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0271.d
 Injection date and time: 11-MAR-2020 10:15

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
173) 4-Nitroquinoline-1-oxide	(4)	14.449	190	168786	7.500
174) Octachlorostyrene	(4)	14.782	308	149491	7.500
176) Isodrin	(4)	14.823	193	217493	7.500
227) Total PAHs	(6)			26924628	135.000
178) Fluoranthene	(4)	15.039	202	1847570	7.500
179) Benzidine	(5)	15.272	184	3570007	22.500
180)*Pyrene-d10	(5)	15.348	212	936761	5.000
182) Pyrene	(5)	15.377	202	1912976	7.500
184)\$Terphenyl-d14	(5)	15.669	244	2639585	15.000
187) p-Dimethylaminoazobenzene	(5)	15.897	225	309404	7.500
190) Chlorobenzilate	(5)	15.996	139	540642	7.500
192) 3,3'-Dimethylbenzidine	(5)	16.457	212	1110136	7.500
193) Butylbenzylphthalate	(5)	16.522	149	812770	7.500
196) 2-Acetylaminofluorene	(5)	16.866	181	623719	7.500
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	660690	7.500
200) Benzo(a)anthracene	(5)	17.374	228	1719934	7.500
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.398	231	334064	7.500
201) Chrysene	(5)	17.433	228	1758153	7.500
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	1124104	7.500
208) 6-Methylchrysene	(5)	18.233	242	1203658	7.500
210) Di-n-octylphthalate	(6)	18.752	149	1816005	7.500
211) Benzo(b)fluoranthene	(6)	19.214	252	1720369	7.500
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.225	256	731874	7.500
213) Benzo(k)fluoranthene	(6)	19.260	252	1787921	7.500
216) Benzo(a)pyrene	(6)	19.739	252	1606085	7.500
218)*Perylene-d12	(6)	19.827	264	889714	5.000
220) 3-Methylcholanthrene	(6)	20.311	268	753411	7.500
222) Dibenz(a,h)acridine	(6)	21.117	279	1154921	7.500
223) Dibenz(a,j)acridine	(6)	21.193	279	1247180	7.500
224) Indeno(1,2,3-cd)pyrene	(6)	21.427	276	1361274M	7.500
225) Dibenz(a,h)anthracene	(6)	21.467	278	1454146	7.500
226) Benzo(g,h,i)perylene	(6)	21.794	276	1427408	7.500

M = Compound was manually integrated.

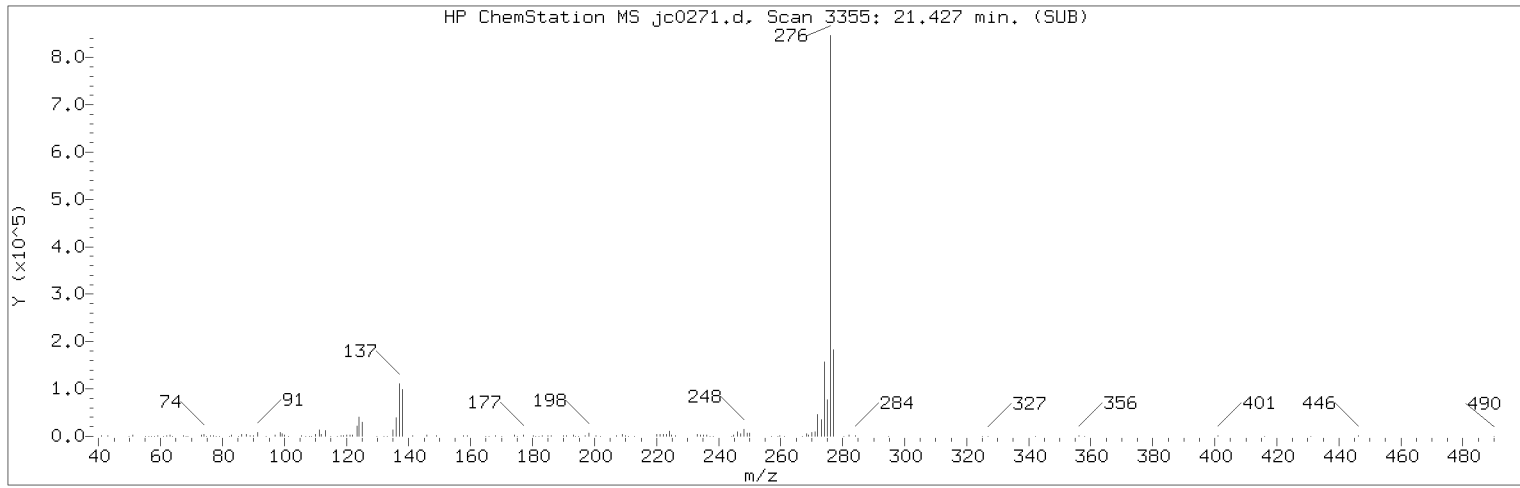
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

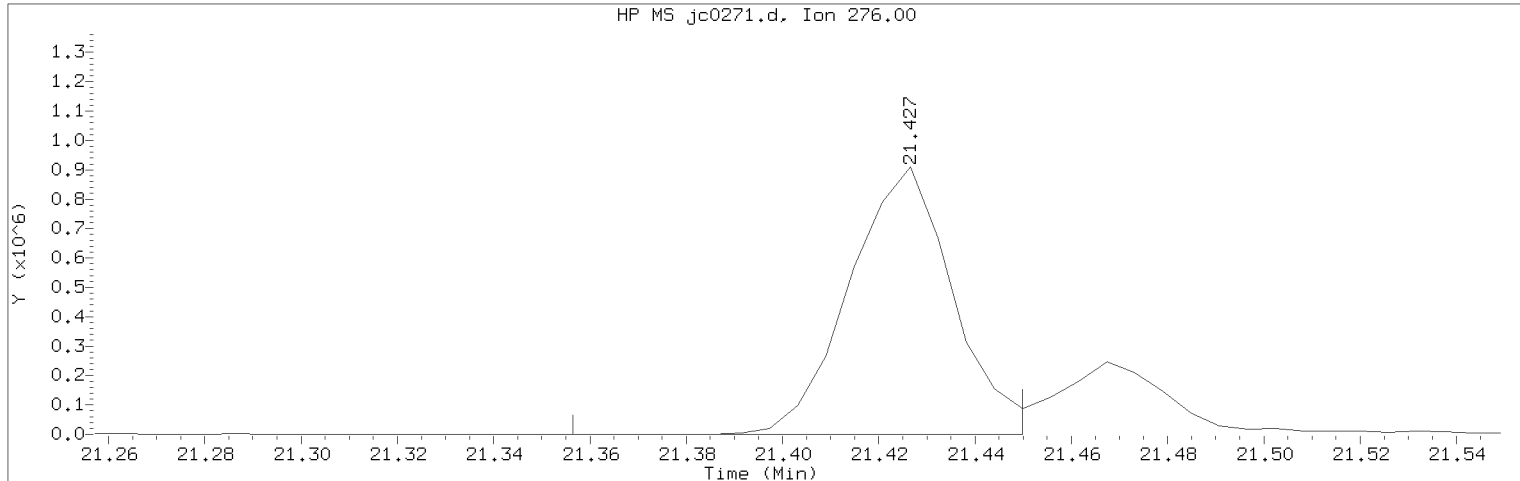
Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:34.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0271.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 10:15

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

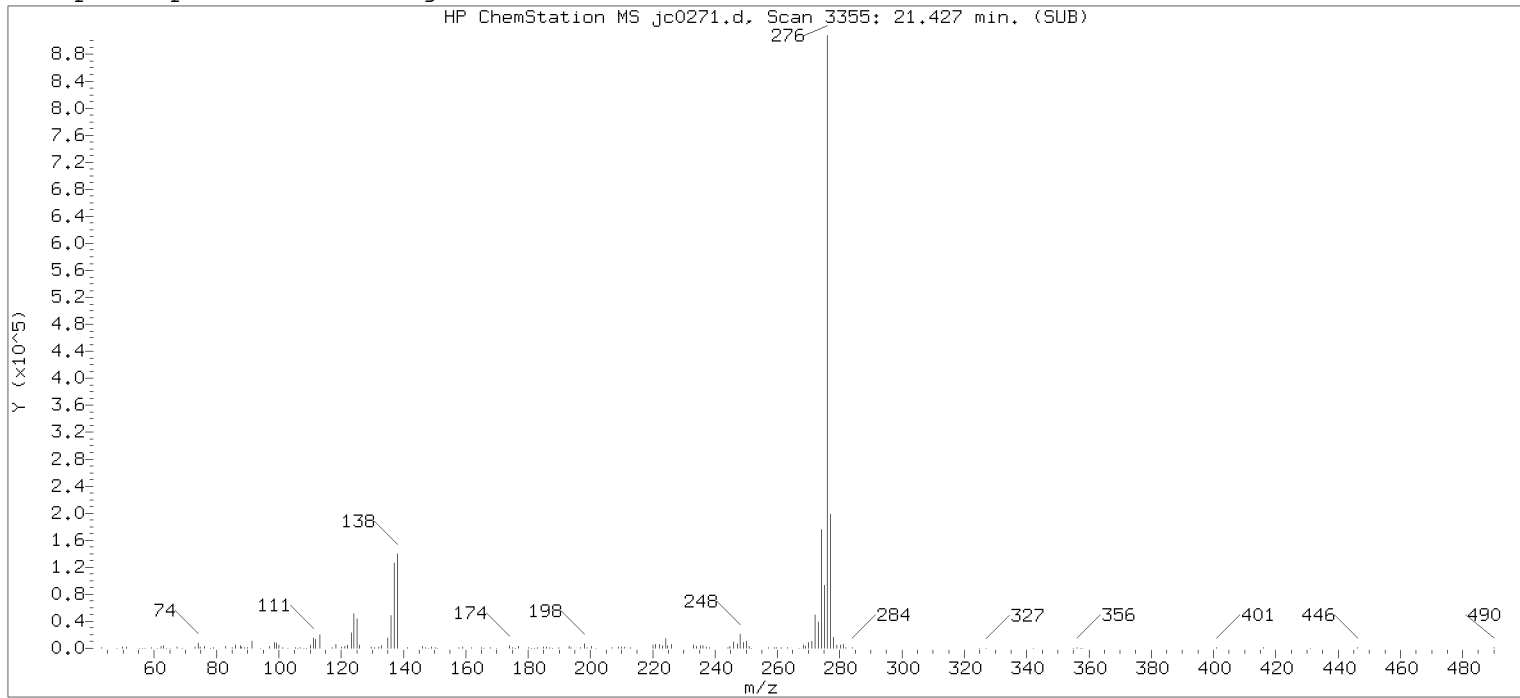
Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3355	
Retention Time (minutes)	: 21.427	
Quant Ion	: 276.00	
Area (flag)	: 1361274M	
On-Column Amount (ng/ul)	: 7.5000	
Integration start scan	: 3342	Integration stop scan: 3358
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

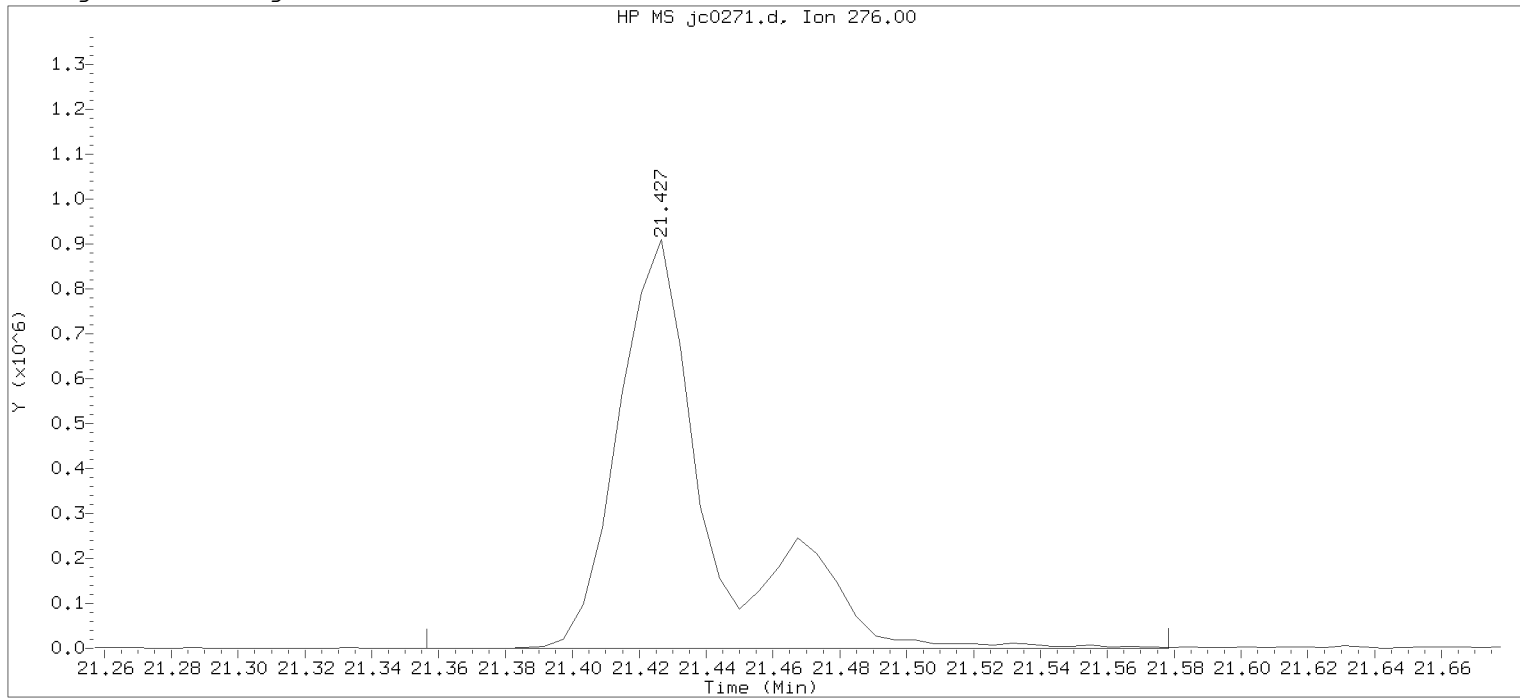
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:34.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0271.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 10:15

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 11:18

Date, time and analyst ID of latest file update: 11-Mar-2020 11:18 knb25316

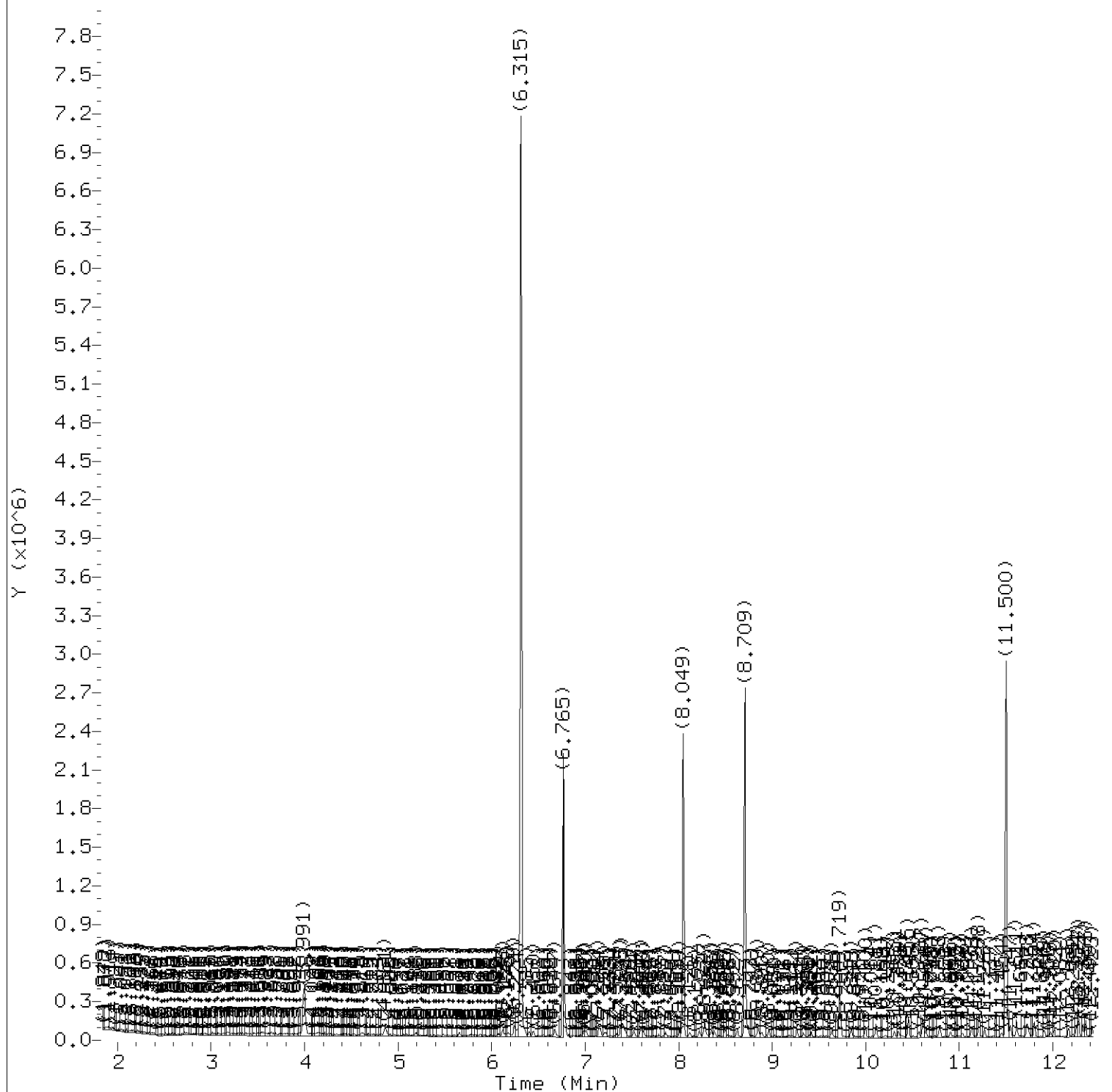
Sample Name: SSTD7.5

Lab Sample ID: RVSTD0340

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3355	
Retention Time (minutes)	: 21.427	
Quant Ion	: 276.00	
Area	: 1756138	
On-column Amount (ng/ul)	: 10.4252	
Integration start scan	: 3342	Integration stop scan: 3380
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:34.

Target 3.5 esignature use **RAF59 Page 1183 of 1506**



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0272.d
Injection date and time: 11-MAR-2020 11:14

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

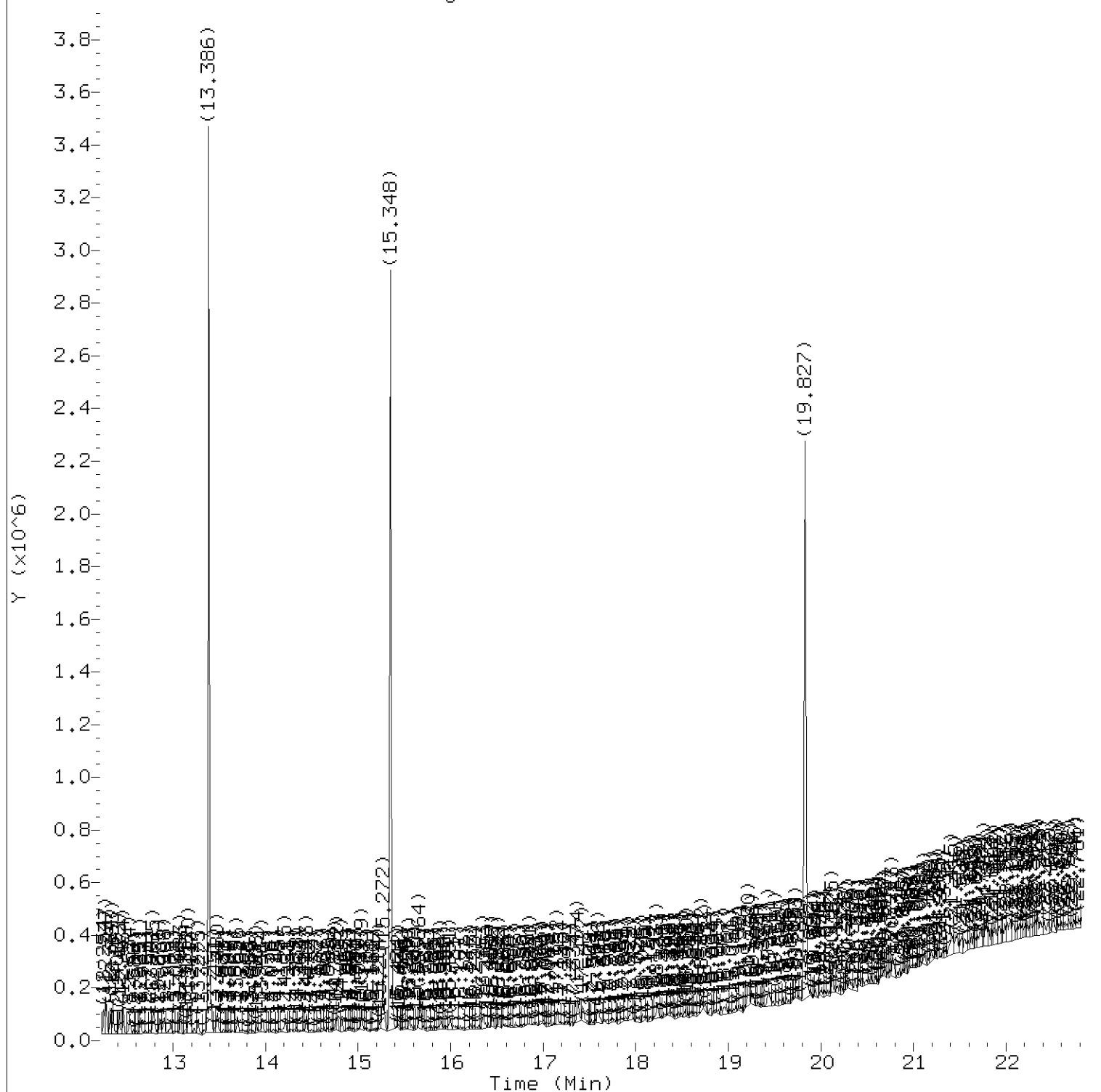
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.125

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0272.d
Injection date and time: 11-MAR-2020 11:14

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.125

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0272.d
 Injection date and time: 11-MAR-2020 11:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.125

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.152	88	14628	0.245
5) N-Nitrosodimethylamine	(1)	2.730	74	10527	0.113
6) Pyridine	(1)	2.771	79	487	0.003
8) 2-Picoline	(1)	3.985	93	13393	0.097
10) Methyl methanesulfonate	(1)	4.616	80	8888	0.098
12) \$2-Fluorophenol	(1)	4.855	112	21577	0.190
14) N-Nitrosodiethylamine	(1)	5.188	102	5271	0.096
16) Ethyl methanesulfonate	(1)	5.650	109	5714	0.108
43) Total Cresols	(1)			21591	0.192
17) Benzaldehyde	(1)	6.117	77	15308	0.130
18) \$Phenol-d6	(1)	6.239	99	32999	0.216
19) Phenol	(1)	6.263	94	15951	0.089
20) Aniline	(1)	6.280	93	23334	0.120
23) bis(2-Chloroethyl) ether	(1)	6.397	93	12457	0.104
24) 2-Chlorophenol	(1)	6.438	128	10753	0.101
25) 1,3-Dichlorobenzene	(1)	6.671	146	14279	0.120
26) *1,4-Dichlorobenzene-d4	(1)	6.771	152	362527	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	12289	0.101
28) Benzyl alcohol	(1)	6.987	108	8580	0.127
29) 1,2-Dichlorobenzene	(1)	6.998	146	13806	0.114
31) Indene	(1)	7.144	115	17658	0.107
32) 2-Methylphenol	(1)	7.168	108	9513	0.091
35) bis(2-Chloroisopropyl) ether	(1)	7.209	45	18081	0.112
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.209	45	18081	0.112
36) N-Nitrosopyrrolidine	(1)	7.343	100	6711	0.117
37) Acetophenone	(1)	7.378	105	25624	0.144
100) Isosafrole	(3)			8693	0.096
39) N-Nitroso-di-n-propylamine	(1)	7.401	70	9786	0.090
38) 4-Methylphenol	(1)	7.401	108	12078	0.102
40) N-Nitrosomorpholine	(1)	7.413	56	9103	0.107
41) o-Toluidine	(1)	7.425	106	19690	0.110
44) Hexachloroethane	(1)	7.518	117	6677	0.112
45) \$Nitrobenzene-d5	(2)	7.600	82	32713	0.220
46) Nitrobenzene	(2)	7.623	77	22658	0.155
50) N-Nitrosopiperidine	(2)	7.857	114	8018	0.176
52) Isophorone	(2)	8.009	82	27197	0.114
125) 2,4,2,6-Dinitrotoluenes	(3)			9129	0.165
53) 2-Nitrophenol	(2)	8.114	139	7076	0.143
55) 2,4-Dimethylphenol	(2)	8.213	107	11643	0.102
58) Benzoic acid	(2)	8.277	105	45441	0.816

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

RAF59 Page 1186 of 1506

page 1 of 4

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0272.d
 Injection date and time: 11-MAR-2020 11:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.125

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	5222	0.115
57) bis(2-Chloroethoxy)methane	(2)	8.376	93	16512	0.127
62) 2,4-Dichlorophenol	(2)	8.499	162	11655	0.143
65) 1,2,4-Trichlorobenzene	(2)	8.633	180	12945	0.134
68)*Naphthalene-d8	(2)	8.709	136	1290785	5.000
69) Naphthalene	(2)	8.738	128	29950	0.115
151) Diallate trans/cis	(4)			12163	0.140
70) 4-Chloroaniline	(2)	8.844	127	15137	0.137
71) 2,6-Dichlorophenol	(2)	8.849	162	7989	0.100
72) Hexachloropropene	(2)	8.884	213	8802	0.122
74) Hexachlorobutadiene	(2)	8.966	225	7917	0.121
78) Quinoline	(2)	9.264	129	20328	0.117
79) Caprolactam	(2)	9.346	113	2750	0.108
80) N-Nitrosodi-n-butylamine	(2)	9.422	84	10664	0.139
83) 4-Chloro-3-methylphenol	(2)	9.638	107	10706	0.120
85) Safrole	(2)	9.743	162	6731	0.094
86) 2-Methylnaphthalene	(2)	9.848	142	18013	0.111
87) 1-Methylnaphthalene	(2)	10.000	142	18454	0.116
88) Hexachlorocyclopentadiene	(3)	10.105	237	6738	0.089
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.116	216	10545	0.103
91) cis-Isosafrole	(3)	10.204	162	971	0.013
93) 2,4,6-Trichlorophenol	(3)	10.309	196	5325	0.080
95) 2,4,5-Trichlorophenol	(3)	10.350	196	7237	0.104
96)\$2-Fluorobiphenyl	(3)	10.455	172	48677	0.222
97) trans-Isosafrole	(3)	10.566	162	7722	0.083
98) 1,1'-Biphenyl	(3)	10.607	154	35702	0.162
99) 2-Chloronaphthalene	(3)	10.613	162	17267	0.093
101) 1-Chloronaphthalene	(3)	10.648	162	21960	0.122
103) Diphenyl ether	(3)	10.794	170	16332	0.123
104) 2-Nitroaniline	(3)	10.800	138	5750	0.104
108) 1,4-Naphthoquinone	(3)	10.905	158	7699	0.105
109) 1,4-Dinitrobenzene	(3)	11.033	168	4532	0.157
110) Dimethylphthalate	(3)	11.138	163	20962	0.098
111) 1,3-Dinitrobenzene	(3)	11.138	168	3032	0.090
113) 2,6-Dinitrotoluene	(3)	11.197	165	4020	0.085
114) Acenaphthylene	(3)	11.273	152	24836	0.110
117) 3-Nitroaniline	(3)	11.454	138	3012	0.065
118)*Acenaphthene-d10	(3)	11.500	164	649032	5.000
119) Acenaphthene	(3)	11.547	153	18053	0.110
120) 2,4-Dinitrophenol	(3)	11.617	184	15397	0.601

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0272.d
 Injection date and time: 11-MAR-2020 11:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
121) 4-Nitrophenol	(3)	11.722	109	15684	0.360
122) Pentachlorobenzene	(3)	11.740	250	11610	0.137
124) Dibenzofuran	(3)	11.798	168	26407	0.101
123) 2,4-Dinitrotoluene	(3)	11.804	165	5109	0.080
126) 1-Naphthylamine	(3)	11.909	143	15780	0.092
127) 2,3,4,6-Tetrachlorophenol	(3)	11.967	232	4242	0.081
128) 2-Naphthylamine	(3)	12.020	143	17685	0.106
129) Diethylphthalate	(3)	12.166	149	22672	0.108
131) Fluorene	(3)	12.254	166	18271	0.102
130) Thionazin	(3)	12.265	107	3567	0.097
133) 5-Nitro-o-toluidine	(3)	12.271	152	4639	0.086
134) 4-Nitroaniline	(3)	12.277	138	5937	0.118
132) 4-Chlorophenyl-phenylether	(3)	12.277	204	13047	0.130
135) 4,6-Dinitro-2-methylphenol	(4)	12.324	198	12641	0.375
136) N-Nitrosodiphenylamine	(4)	12.423	169	17421	0.109
137) NDPA as diphenylamine	(4)	12.423	169	17421	0.109
139) 1,2-Diphenylhydrazine	(4)	12.464	77	30598	0.110
140) \$2,4,6-Tribromophenol	(3)	12.534	330	6080	0.199
142) Tetraethyldithiopyrophosphate	(4)	12.651	97	4579	0.105
145) Diallate (peak 1)	(4)	12.785	86	8533	0.097
146) Phorate	(4)	12.791	75	12854	0.093
147) Phenacetin	(4)	12.802	108	8165	0.077
148) 4-Bromophenyl-phenylether	(4)	12.867	248	6114	0.108
149) Diallate (peak 2)	(4)	12.890	86	3630	0.043
150) Hexachlorobenzene	(4)	12.902	284	6772	0.114
152) Dimethoate	(4)	12.978	87	8048	0.096
153) Atrazine	(4)	13.083	200	7219	0.136
154) Pentachlorophenol	(4)	13.147	266	3246	0.084
156) Pentachloronitrobenzene	(4)	13.164	237	3579	0.110
155) 4-Aminobiphenyl	(4)	13.176	169	17107	0.097
157) Pronamide	(4)	13.275	173	9800	0.108
158) *Phenanthrene-d10	(4)	13.386	188	1173785	5.000
159) Dinoseb	(4)	13.410	211	4813	0.111
160) Phenanthrene	(4)	13.416	178	30307	0.115
162) Anthracene	(4)	13.480	178	26630	0.108
168) Carbazole	(4)	13.696	167	27611	0.107
169) Methyl parathion	(4)	13.900	109	5761	0.086
170) Di-n-butylphthalate	(4)	14.215	149	36074	0.109
172) Parathion	(4)	14.437	109	3696	0.084
173) 4-Nitroquinoline-1-oxide	(4)	14.443	190	3239	0.109

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0272.d
 Injection date and time: 11-MAR-2020 11:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
174) Octachlorostyrene	(4)	14.782	308	1830	0.070
176) Isodrin	(4)	14.829	193	4117	0.108
227) Total PAHs	(6)			471343	1.998
178) Fluoranthene	(4)	15.039	202	35592	0.117
179) Benzidine	(5)	15.272	184	134001	0.668
180)*Pyrene-d10	(5)	15.348	212	1184513	5.000
182) Pyrene	(5)	15.383	202	34021	0.114
184)\$Terphenyl-d14	(5)	15.669	244	44940	0.202
187) p-Dimethylaminoazobenzene	(5)	15.903	225	4684	0.090
190) Chlorobenzilate	(5)	15.991	139	7001	0.077
192) 3,3'-Dimethylbenzidine	(5)	16.452	212	18493	0.099
193) Butylbenzylphthalate	(5)	16.522	149	15448	0.113
196) 2-Acetylaminofluorene	(5)	16.866	181	9440	0.090
198) 3,3'-Dichlorobenzidine	(5)	17.363	252	11189	0.100
200) Benzo(a)anthracene	(5)	17.374	228	28461	0.110
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.392	231	4309	0.077
201) Chrysene	(5)	17.427	228	28376	0.108
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	15778	0.083
208) 6-Methylchrysene	(5)	18.233	242	18207	0.090
210) Di-n-octylphthalate	(6)	18.752	149	29400	0.095
211) Benzo(b)fluoranthene	(6)	19.214	252	37225	0.126
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.220	256	14694	0.117
213) Benzo(k)fluoranthene	(6)	19.255	252	26424	0.102
216) Benzo(a)pyrene	(6)	19.733	252	26306M	0.108
218)*Perylene-d12	(6)	19.833	264	1142996	5.000
220) 3-Methylcholanthrene	(6)	20.306	268	12043	0.093
222) Dibenz(a,h)acridine	(6)	21.117	279	22390	0.113
223) Dibenz(a,j)acridine	(6)	21.187	279	20781	0.097
224) Indeno(1,2,3-cd)pyrene	(6)	21.415	276	19273M	0.100
225) Dibenz(a,h)anthracene	(6)	21.468	278	27822M	0.118
226) Benzo(g,h,i)perylene	(6)	21.789	276	23329M	0.108

M = Compound was manually integrated.

* = Compound is an internal standard.

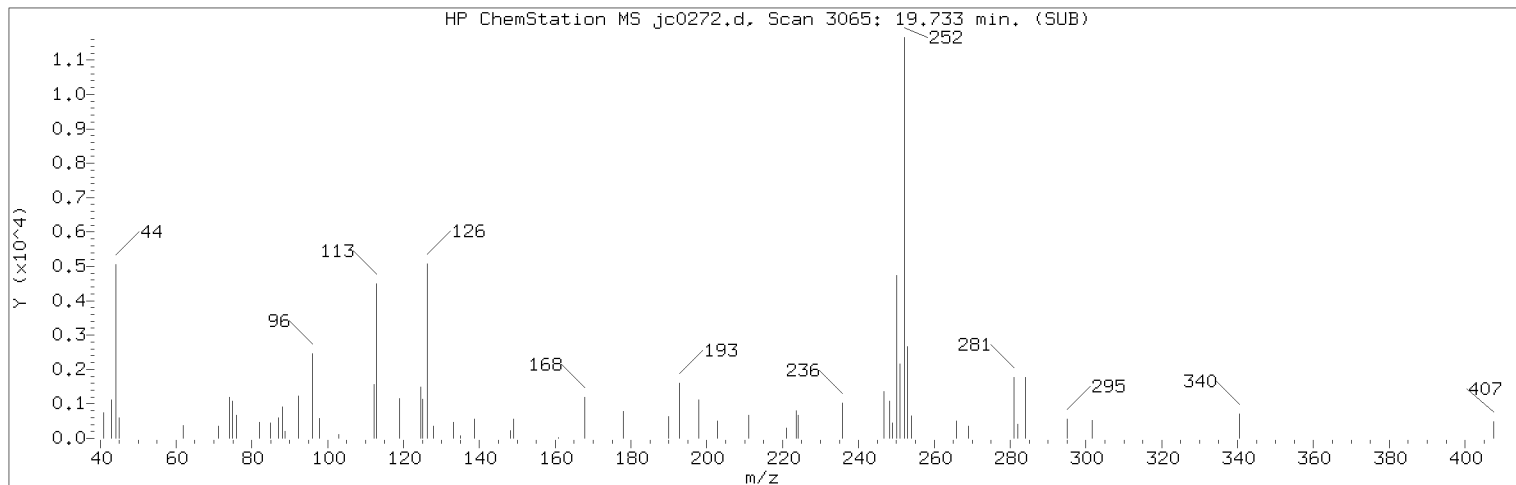
\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

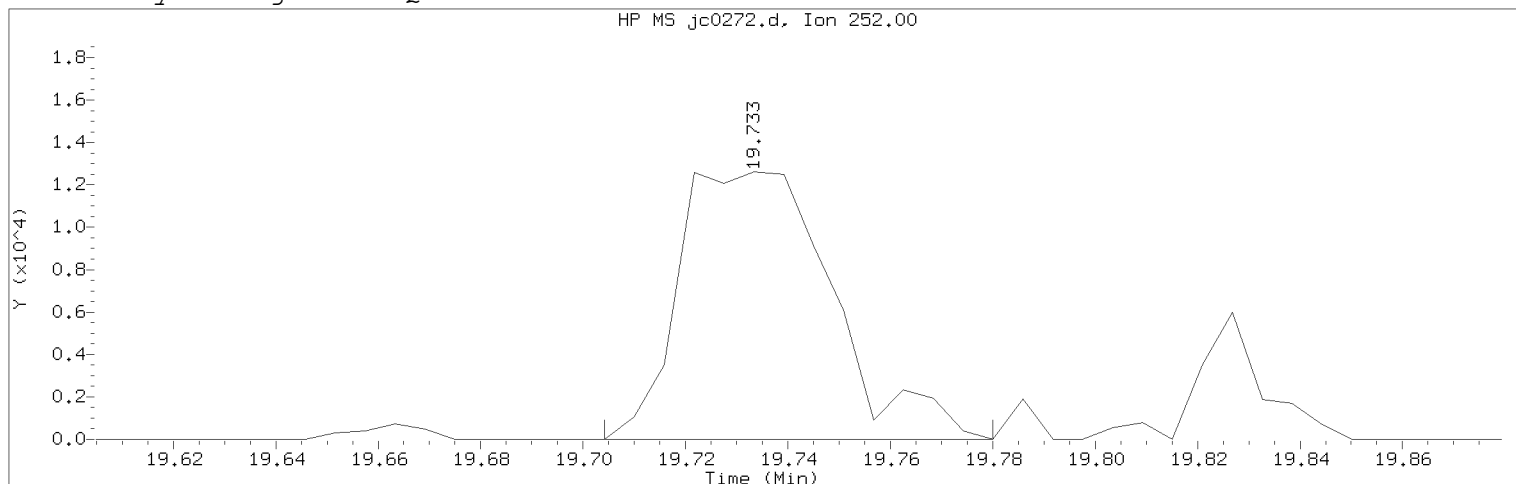
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvSTD0340

Compound Number	: 216	
Compound Name	: Benzo(a)pyrene	
Scan Number	: 3065	
Retention Time (minutes)	: 19.733	
Quant Ion	: 252.00	
Area (flag)	: 26306M	
On-Column Amount (ng/ul)	: 0.1084	
Integration start scan	: 3059	Integration stop scan: 3072
Y at integration start	: 0	Y at integration end: 0

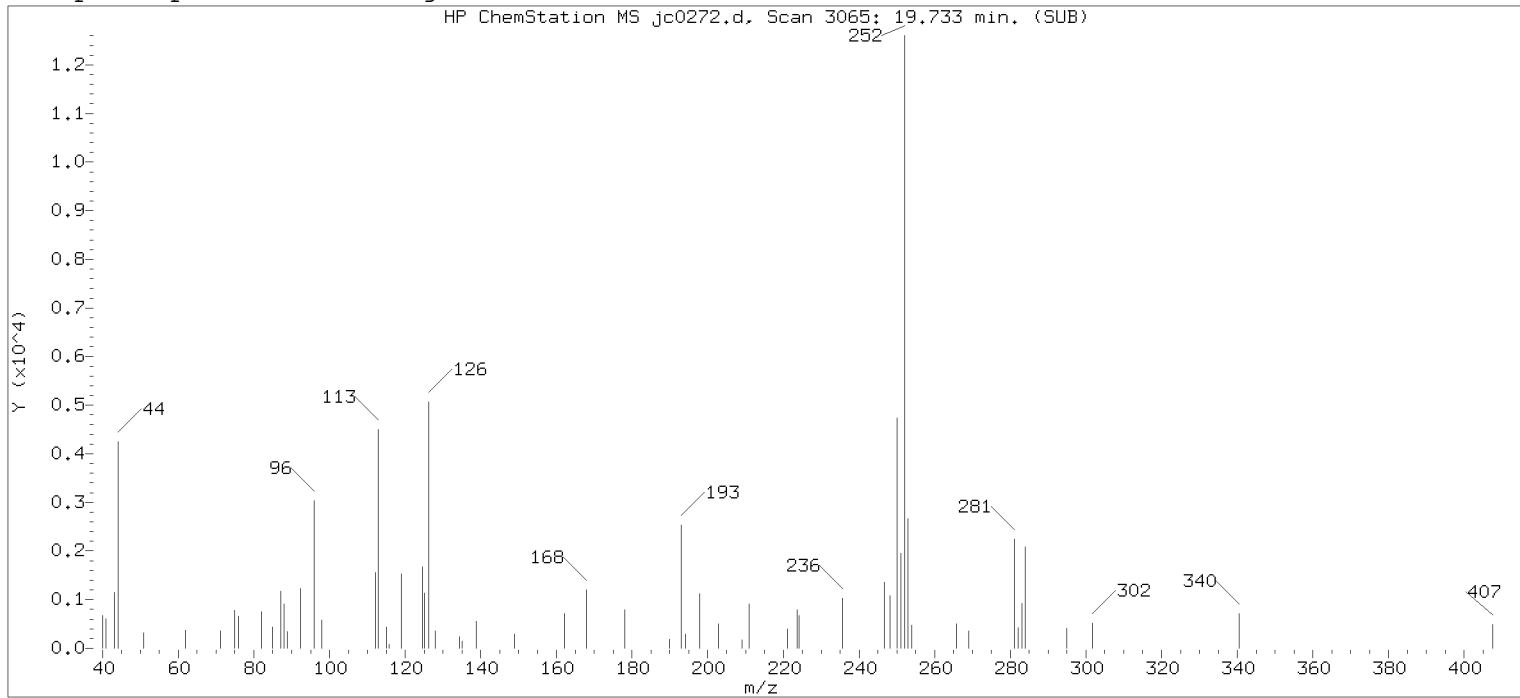
Reason for manual integration: improper integration

Analyst responsible for change:

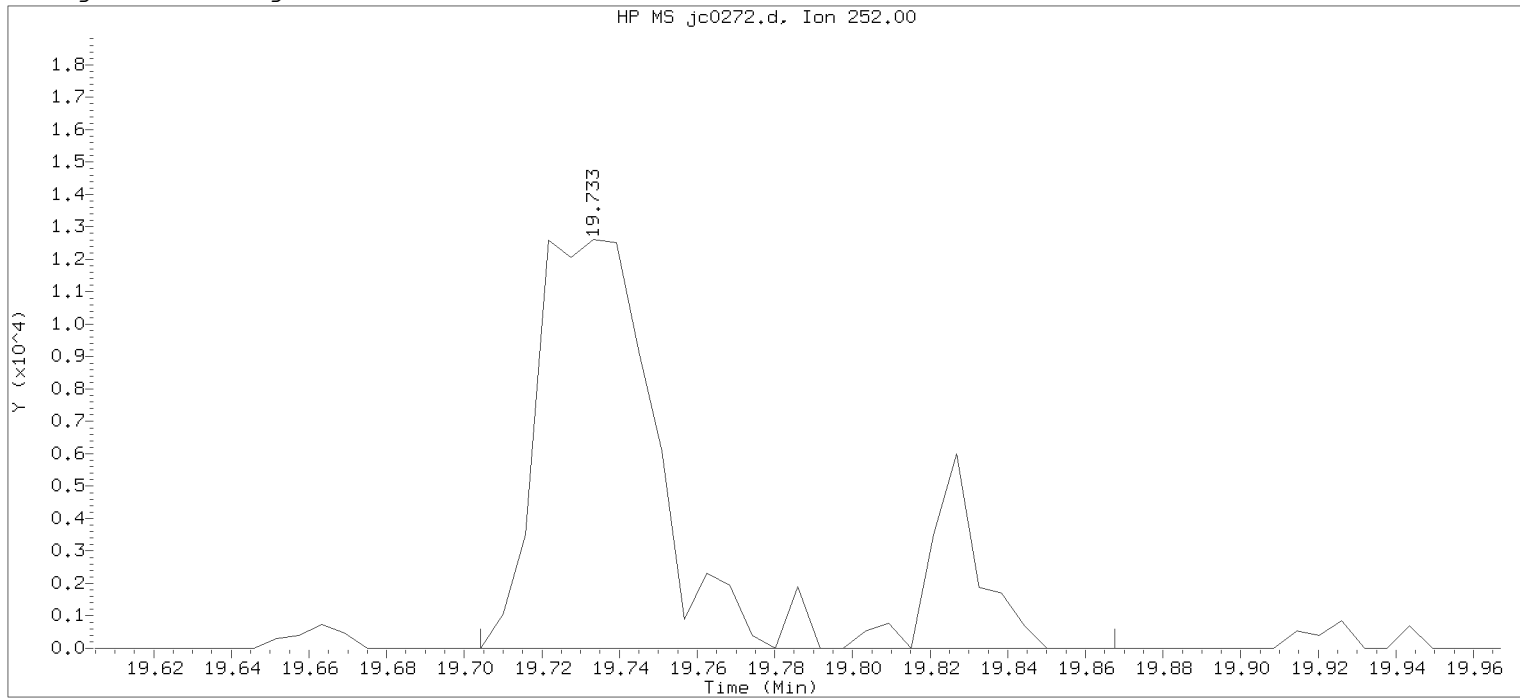
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 11:48

Date, time and analyst ID of latest file update: 11-Mar-2020 11:48 Automation

Sample Name: SSTD0.125

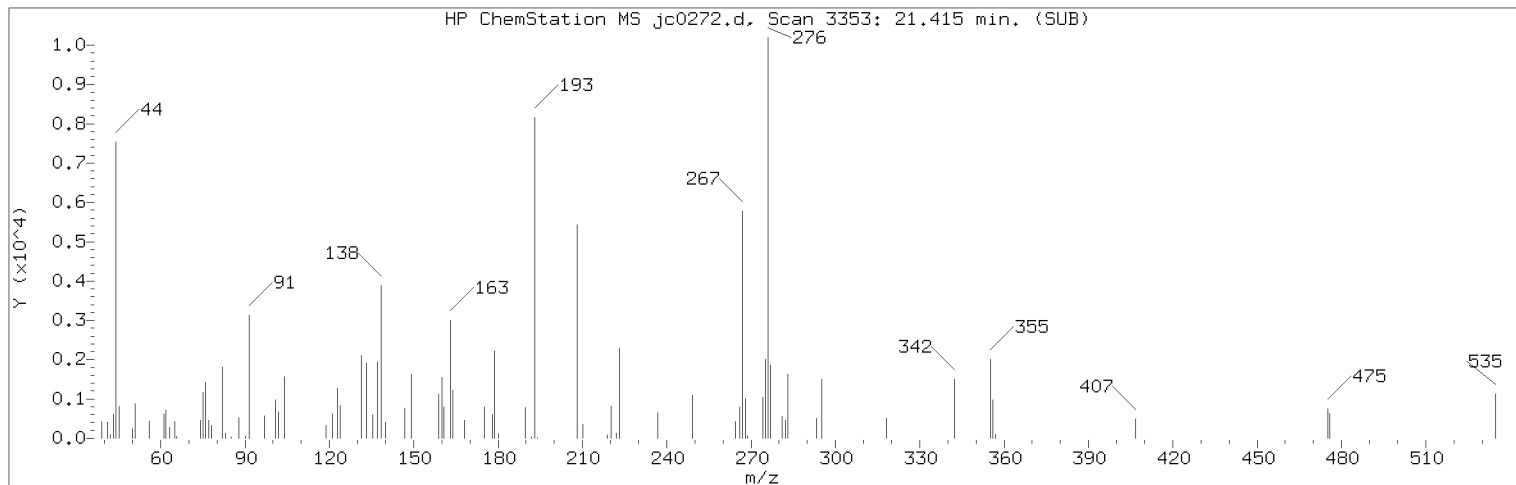
Lab Sample ID: rvSTD0340

Compound Number	: 216	
Compound Name	: Benzo(a)pyrene	
Scan Number	: 3065	
Retention Time (minutes)	: 19.733	
Quant Ion	: 252.00	
Area	: 32252	
On-column Amount (ng/ul)	: 0.1178	
Integration start scan	: 3059	Integration stop scan: 3087
Y at integration start	: 0	Y at integration end: 0

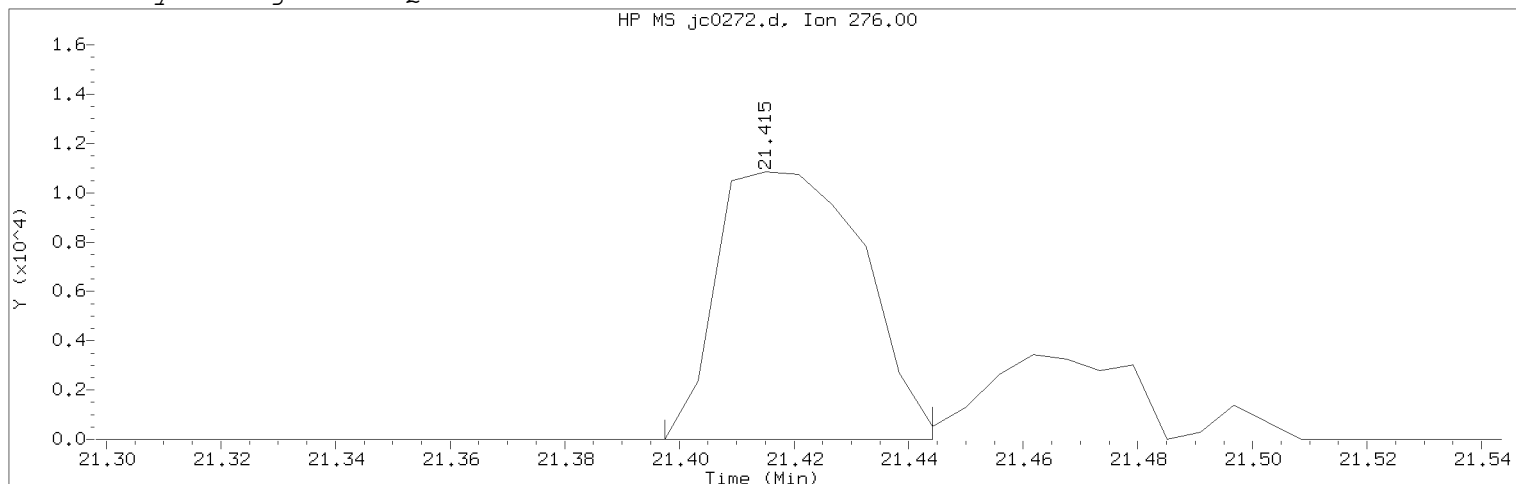
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1191 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvSTD0340

Compound Number : 224

Compound Name : Indeno(1,2,3-cd)pyrene

Scan Number : 3353

Retention Time (minutes) : 21.415

Quant Ion : 276.00

Area (flag) : 19273M

On-Column Amount (ng/ul) : 0.0995

Integration start scan : 3349

Integration stop scan: 3357

Y at integration start : 0

Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Kira N. Beck

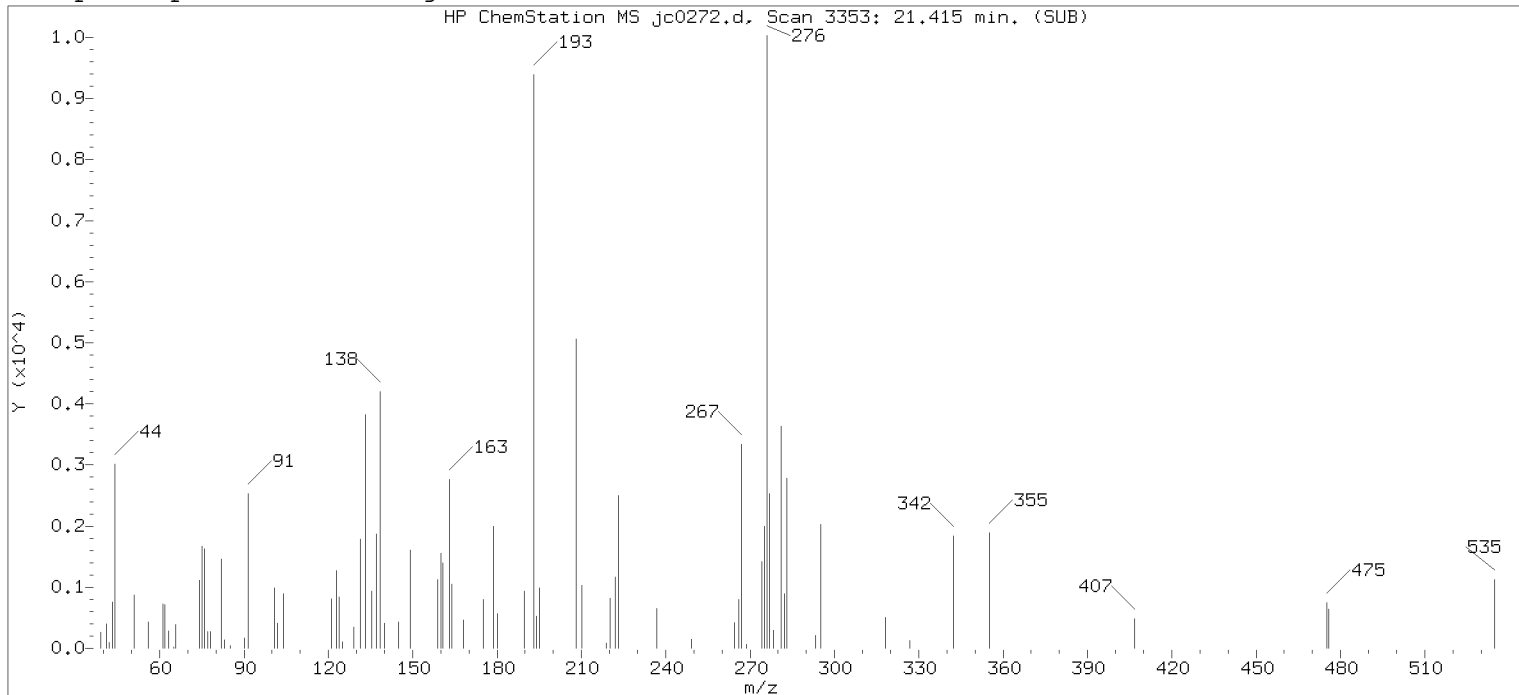
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

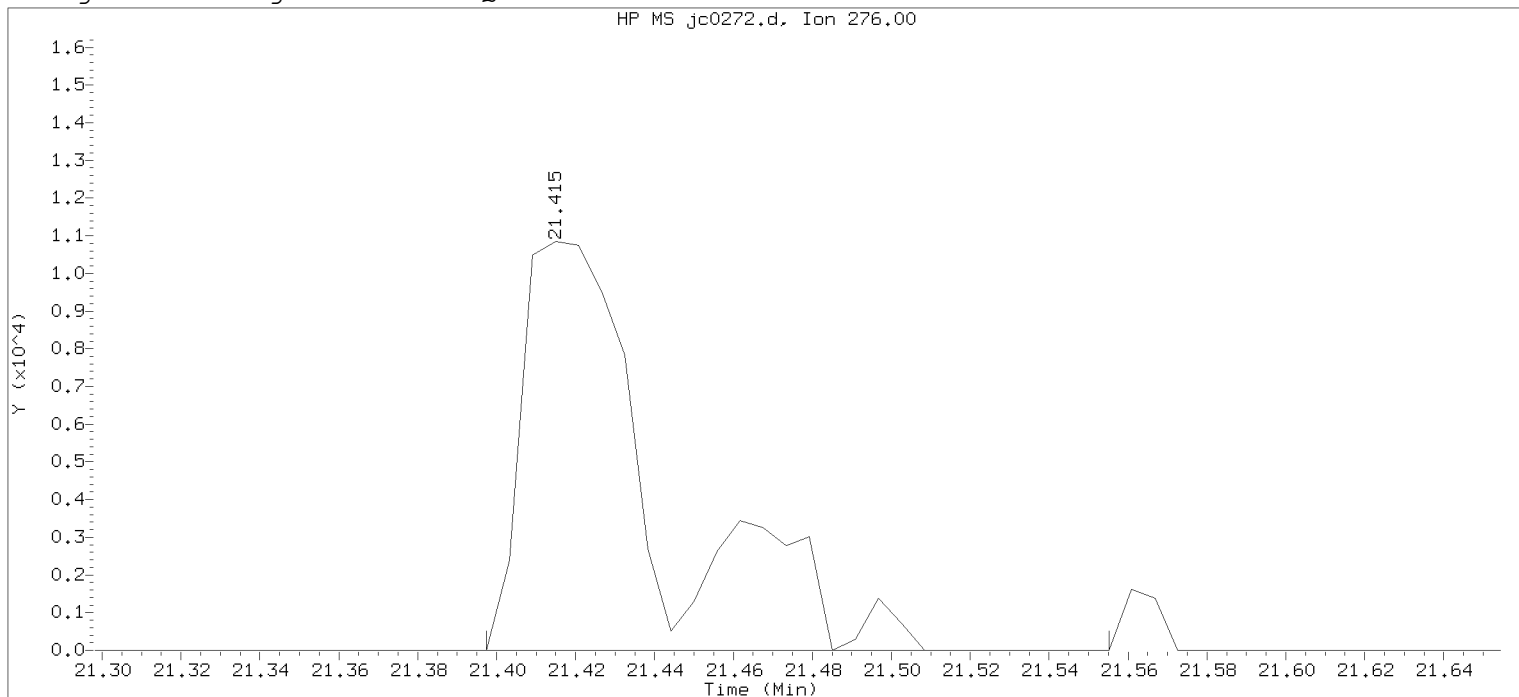
Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.

PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 11:48

Date, time and analyst ID of latest file update: 11-Mar-2020 11:48 Automation

Sample Name: SSTD0.125

Lab Sample ID: rvSTD0340

Compound Number : 224

Compound Name : Indeno(1,2,3-cd)pyrene

Scan Number : 3353

Retention Time (minutes) : 21.415

Quant Ion : 276.00

Area : 25859

On-column Amount (ng/ul) : 0.1181

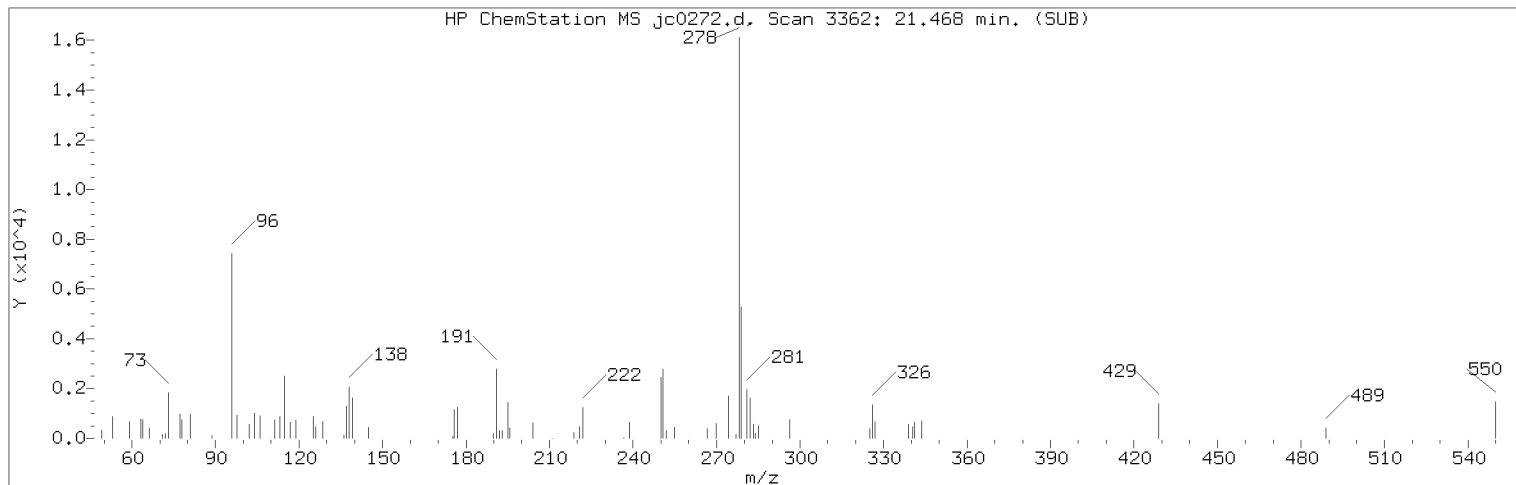
Integration start scan : 3349 Integration stop scan: 3376

Y at integration start : 0 Y at integration end: 0

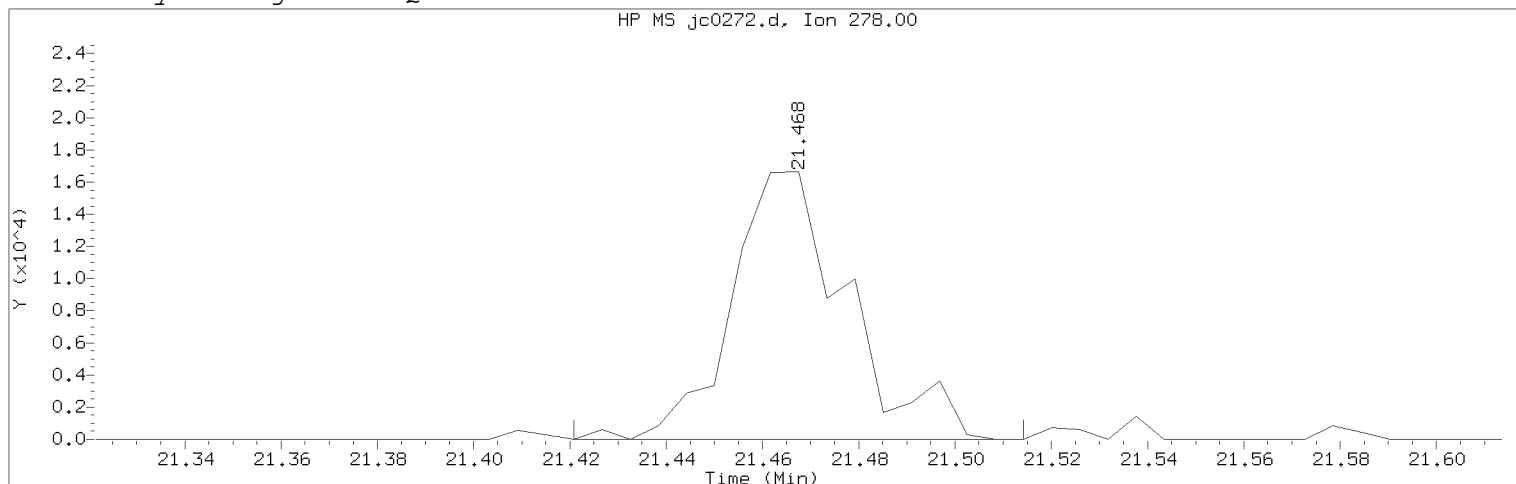
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59 Page 1193 of 1506**

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvSTD0340

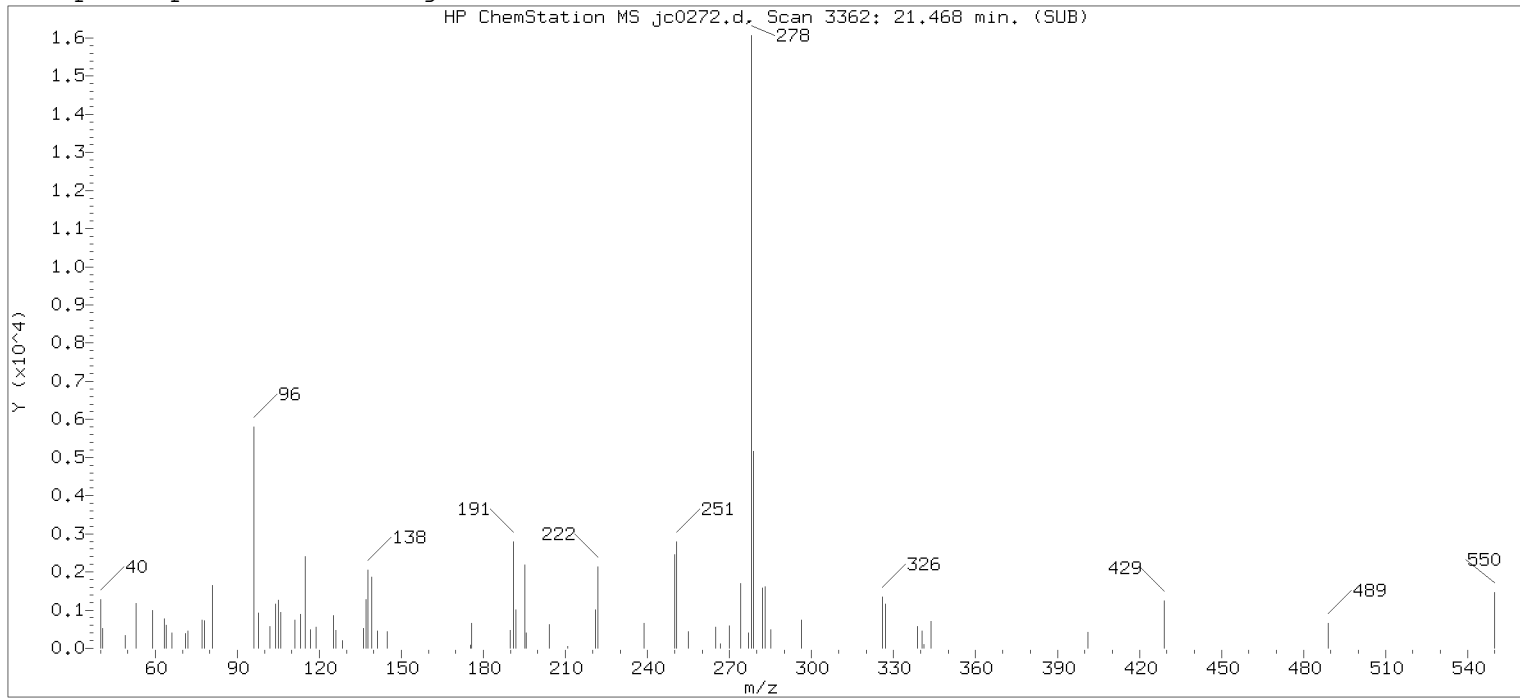
Compound Number	: 225	
Compound Name	: Dibenz(a,h)anthracene	
Scan Number	: 3362	
Retention Time (minutes)	: 21.468	
Quant Ion	: 278.00	
Area (flag)	: 27822M	
On-Column Amount (ng/ul)	: 0.1180	
Integration start scan	: 3353	Integration stop scan: 3369
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

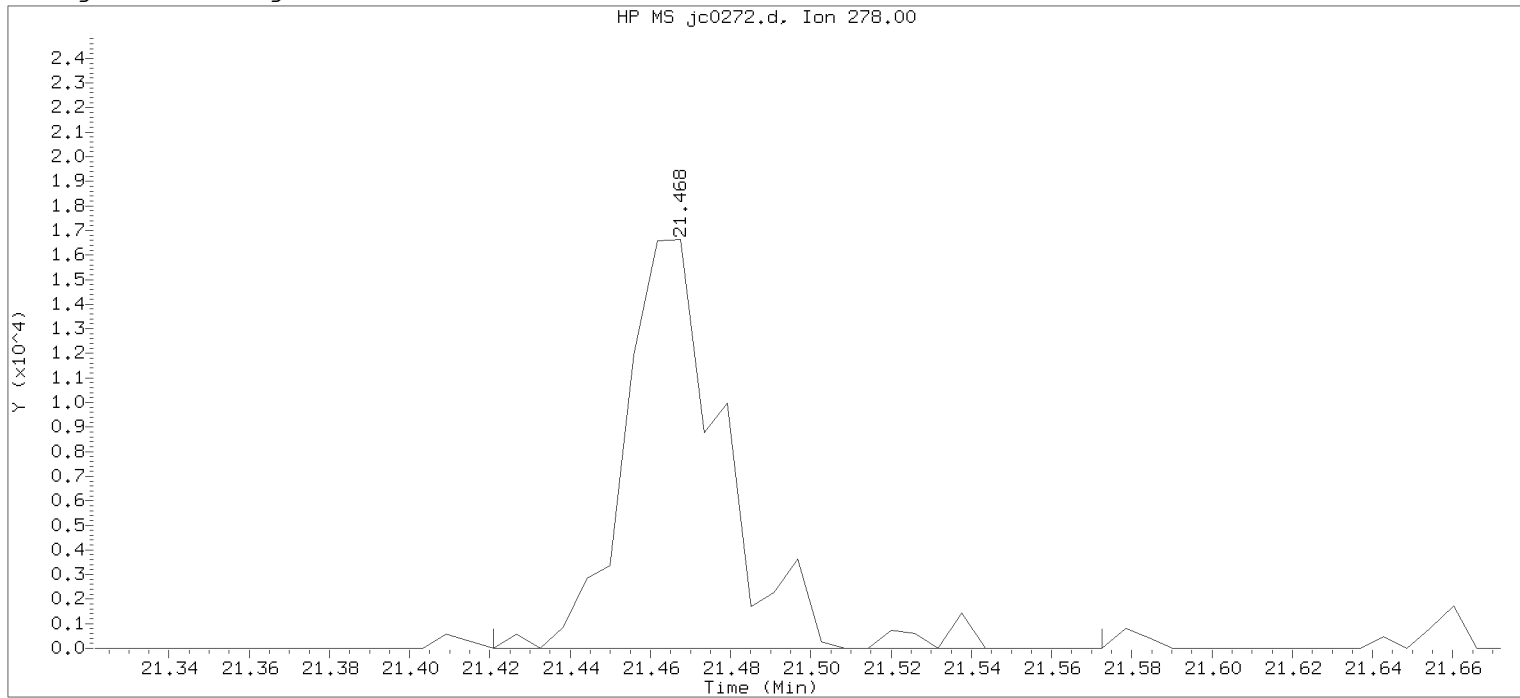
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 11:48

Date, time and analyst ID of latest file update: 11-Mar-2020 11:48 Automation

Sample Name: SSTD0.125

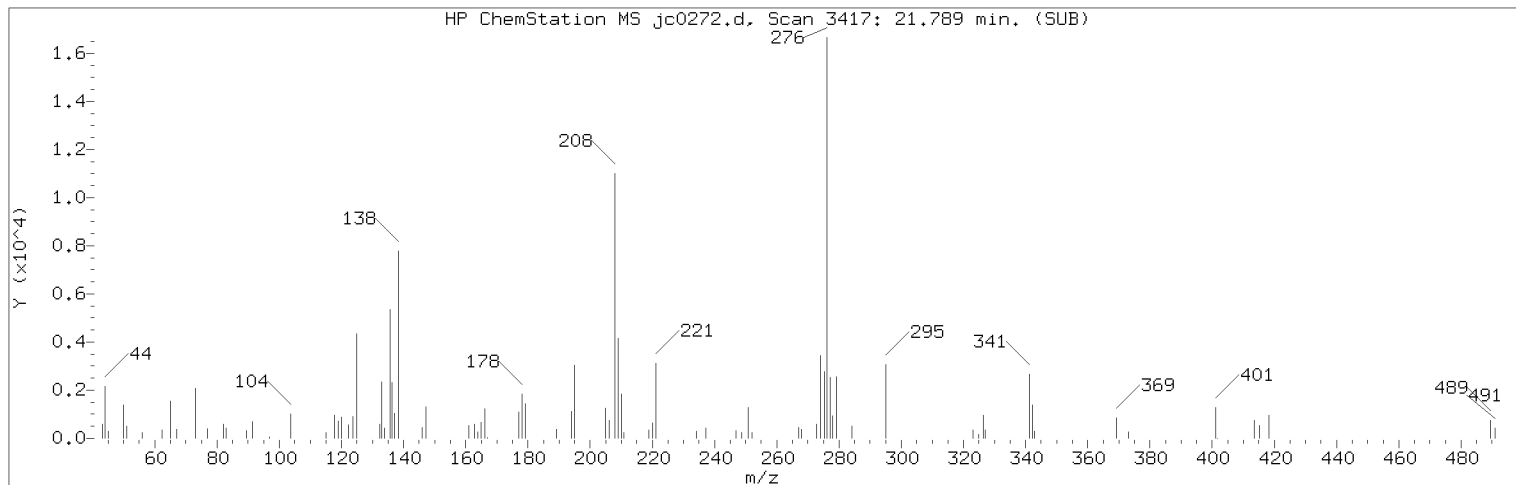
Lab Sample ID: rvSTD0340

Compound Number	: 225	
Compound Name	: Dibenz (a,h) anthracene	
Scan Number	: 3362	
Retention Time (minutes)	: 21.468	
Quant Ion	: 278.00	
Area	: 28790	
On-column Amount (ng/ul)	: 0.1252	
Integration start scan	: 3353	Integration stop scan: 3379
Y at integration start	: 0	Y at integration end: 0

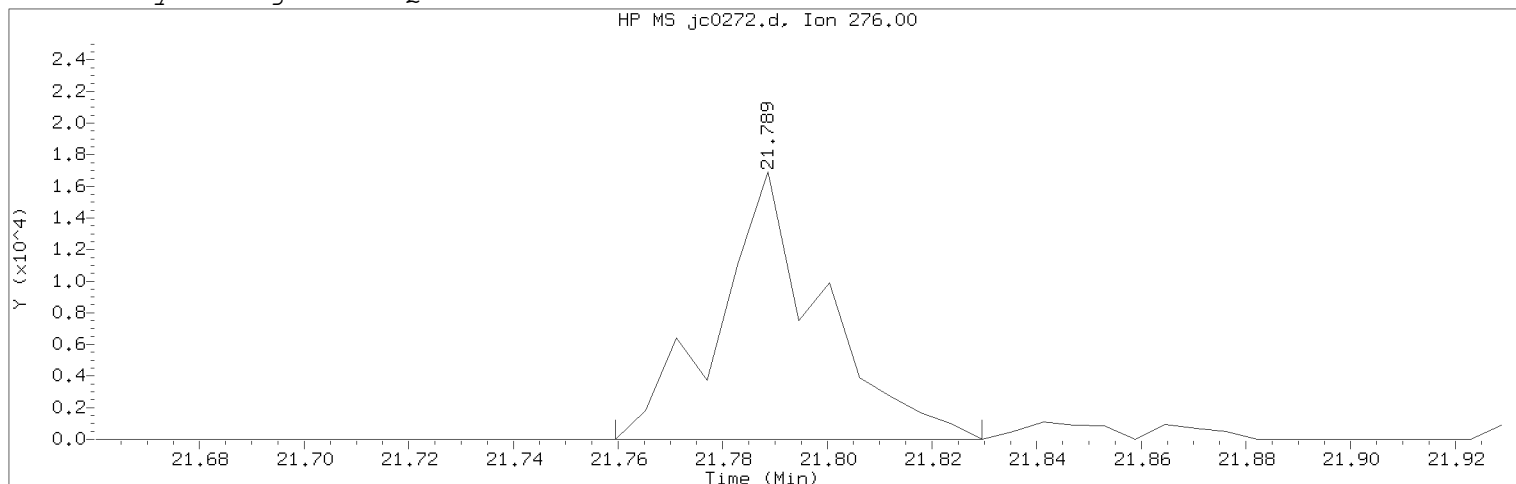
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1195 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvSTD0340

Compound Number	: 226	
Compound Name	: Benzo(g,h,i)perylene	
Scan Number	: 3417	
Retention Time (minutes)	: 21.789	
Quant Ion	: 276.00	
Area (flag)	: 23329M	
On-Column Amount (ng/ul)	: 0.1082	
Integration start scan	: 3411	Integration stop scan: 3423
Y at integration start	: 0	Y at integration end: 0

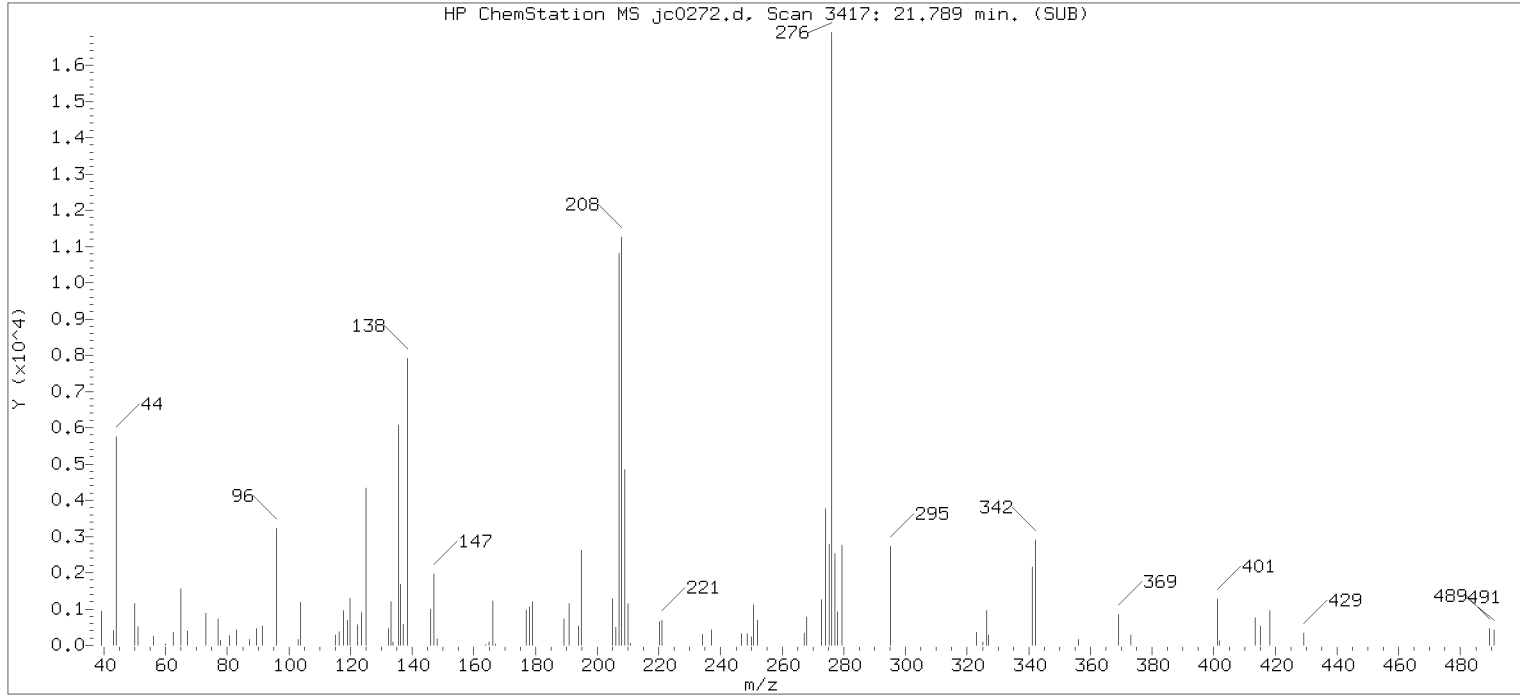
Reason for manual integration: improper integration

Analyst responsible for change:

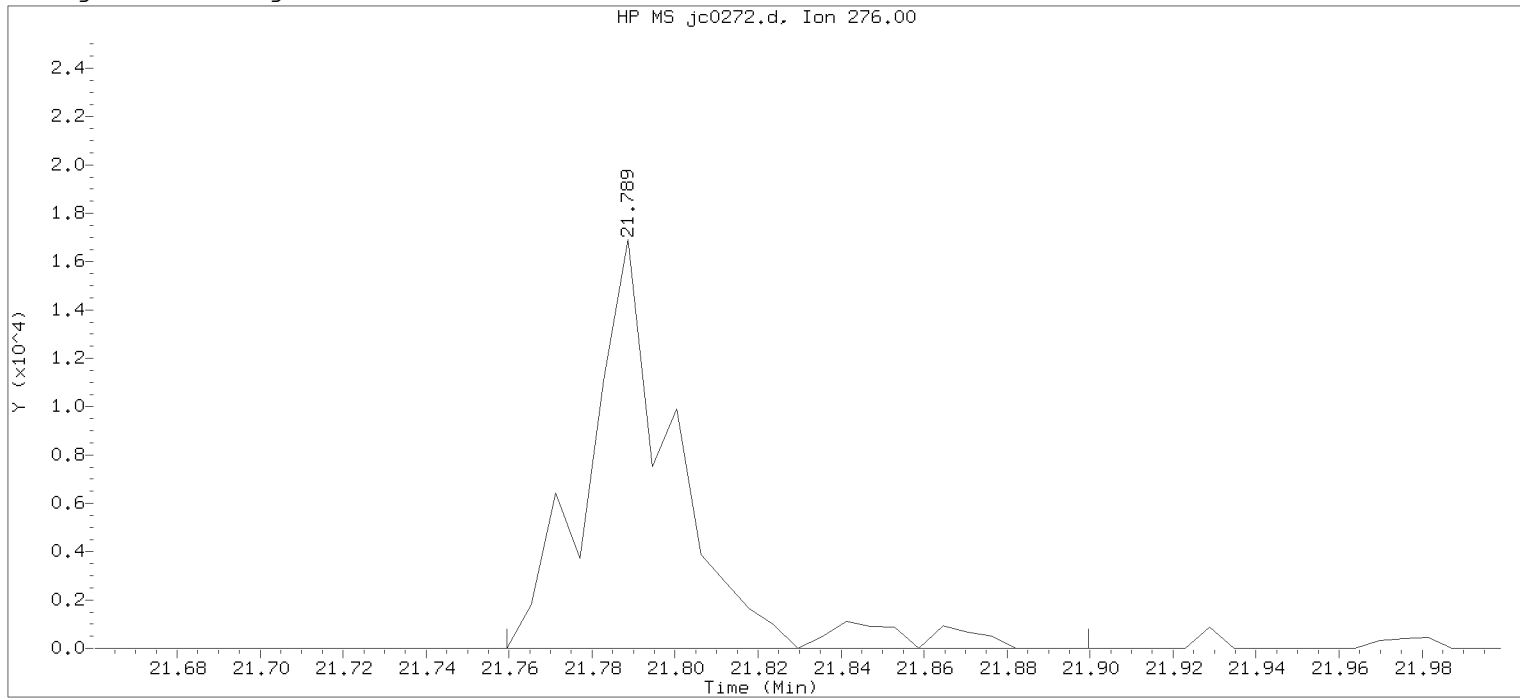
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0272.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 11:48

Date, time and analyst ID of latest file update: 11-Mar-2020 11:48 Automation

Sample Name: SSTD0.125

Lab Sample ID: rvSTD0340

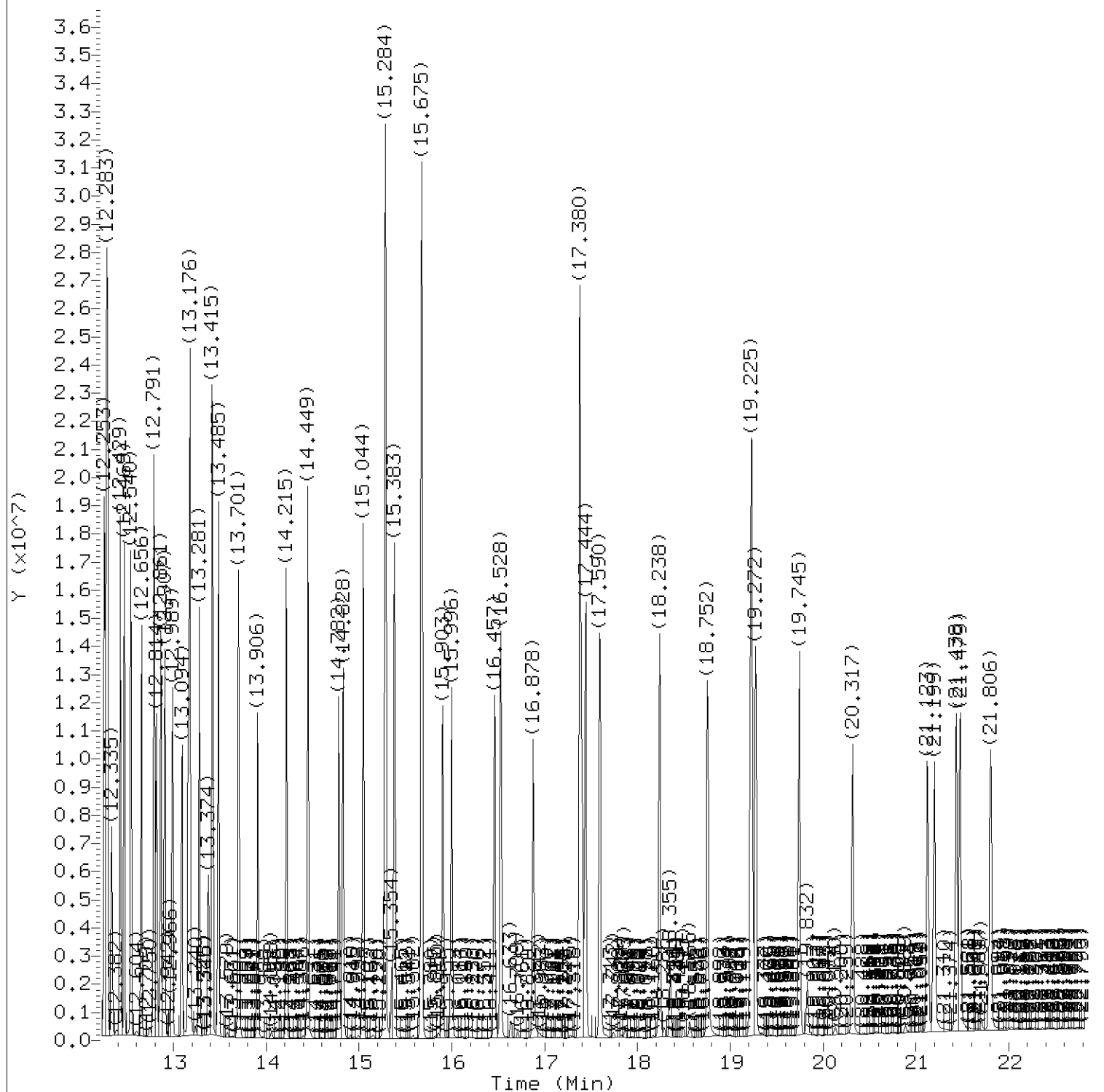
Compound Number	: 226	
Compound Name	: Benzo(g,h,i)perylene	
Scan Number	: 3417	
Retention Time (minutes)	: 21.789	
Quant Ion	: 276.00	
Area	: 25242	
On-column Amount (ng/ul)	: 0.1073	
Integration start scan	: 3411	Integration stop scan: 3435
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature use **RAF59** Page 1197 of 1506



page 1 of 2



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0273.d
Injection date and time: 11-MAR-2020 11:44

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0273.d
 Injection date and time: 11-MAR-2020 11:44

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.140	88	1400770	29.226
5) N-Nitrosodimethylamine	(1)	2.695	74	2305325	30.079
6) Pyridine	(1)	2.742	79	3631925	29.908
8) 2-Picoline	(1)	3.956	93	3322183	29.591
9) N-Nitrosomethylethylamine	(1)	4.149	88	1362909M	28.543
10) Methyl methanesulfonate	(1)	4.616	80	2026959	28.542
12) \$2-Fluorophenol	(1)	4.873	112	5354608	58.712
14) N-Nitrosodiethylamine	(1)	5.200	102	1277804	29.151
43) Total Cresols	(1)			5318996	58.850
16) Ethyl methanesulfonate	(1)	5.661	109	1297950	29.912
17) Benzaldehyde	(1)	6.122	77	1930540	23.979
18) \$Phenol-d6	(1)	6.257	99	7216260	58.694
19) Phenol	(1)	6.274	94	4040062	28.622
20) Aniline	(1)	6.286	93	4524601	29.084
23) bis(2-Chloroethyl) ether	(1)	6.409	93	2850674	29.389
24) 2-Chlorophenol	(1)	6.449	128	2488805	29.252
25) 1,3-Dichlorobenzene	(1)	6.683	146	2894868	29.777
26) *1,4-Dichlorobenzene-d4	(1)	6.771	152	298142	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	2890274	29.482
28) Benzyl alcohol	(1)	6.992	108	1686667	30.137
29) 1,2-Dichlorobenzene	(1)	7.016	146	2744019	28.783
31) Indene	(1)	7.150	115	3997716	29.660
32) 2-Methylphenol	(1)	7.179	108	2452439	29.167
35) bis(2-Chloroisopropyl) ether	(1)	7.220	45	3813383	29.291
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.220	45	3813383	29.291
36) N-Nitrosopyrrolidine	(1)	7.360	100	1367721	29.529
100) Isosafrole	(3)			2109935	28.909
37) Acetophenone	(1)	7.389	105	3824378	27.957
38) 4-Methylphenol	(1)	7.413	108	2866557	29.683
39) N-Nitroso-di-n-propylamine	(1)	7.419	70	2520983	29.035
40) N-Nitrosomorpholine	(1)	7.430	56	2027085	29.484
41) o-Toluidine	(1)	7.442	106	4253605	29.448
44) Hexachloroethane	(1)	7.524	117	1375728	29.055
45) \$Nitrobenzene-d5	(2)	7.611	82	7617665	60.469
46) Nitrobenzene	(2)	7.635	77	3839684	30.594
50) N-Nitrosopiperidine	(2)	7.868	114	1175201	30.359
52) Isophorone	(2)	8.020	82	6224922	30.506
125) 2,4,2,6-Dinitrotoluenes	(3)			2703389	59.057
53) 2-Nitrophenol	(2)	8.125	139	1265807	30.193
55) 2,4-Dimethylphenol	(2)	8.230	107	2963202	30.451

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0273.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:44

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate	(2)	8.359	198	1206985	30.789
58) Benzoic acid	(2)	8.388	105	1733616	33.145
57) bis(2-Chloroethoxy)methane	(2)	8.388	93	3436097	30.696
62) 2,4-Dichlorophenol	(2)	8.499	162	2144381	30.651
65) 1,2,4-Trichlorobenzene	(2)	8.633	180	2472870	30.182
68)*Naphthalene-d8	(2)	8.709	136	1085354	5.000
69) Naphthalene	(2)	8.744	128	6969817	31.254
151) Diallyl trans/cis	(4)			2395955	30.935
70) 4-Chloroaniline	(2)	8.849	127	2849688	30.342
71) 2,6-Dichlorophenol	(2)	8.861	162	2092564	30.507
72) Hexachloropropene	(2)	8.890	213	1911971	30.737
74) Hexachlorobutadiene	(2)	8.966	225	1596920	29.491
78) Quinoline	(2)	9.275	129	4212133	29.418
79) Caprolactam	(2)	9.398	113	603965	29.074
80) N-Nitrosodi-n-butylamine	(2)	9.427	84	2487222	33.715
83) 4-Chloro-3-methylphenol	(2)	9.649	107	2299129	30.313
85) Safrole	(2)	9.743	162	1848110	30.397
86) 2-Methylnaphthalene	(2)	9.854	142	4629258	32.460
87) 1-Methylnaphthalene	(2)	10.000	142	4310398	31.463
88) Hexachlorocyclopentadiene	(3)	10.110	237	1810609	29.286
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.116	216	2407309	28.914
91) cis-Isosafrole	(3)	10.210	162	335489	5.123
93) 2,4,6-Trichlorophenol	(3)	10.309	196	1559249	28.860
95) 2,4,5-Trichlorophenol	(3)	10.362	196	1647489	29.118
96)\$2-Fluorobiphenyl	(3)	10.467	172	10447925	58.269
97) trans-Isosafrole	(3)	10.572	162	1774446	23.786
98) 1,1'-Biphenyl	(3)	10.613	154	5296055	29.283
99) 2-Chloronaphthalene	(3)	10.624	162	4781578	30.366
101) 1-Chloronaphthalene	(3)	10.653	162	4422121	29.597
103) Diphenyl ether	(3)	10.794	170	3144241	29.090
104) 2-Nitroaniline	(3)	10.805	138	1429760	30.449
108) 1,4-Naphthoquinone	(3)	10.916	158	1812827	29.687
109) 1,4-Dinitrobenzene	(3)	11.039	168	743938	30.310
110) Dimethylphthalate	(3)	11.144	163	4955200	28.765
111) 1,3-Dinitrobenzene	(3)	11.156	168	817906	29.457
113) 2,6-Dinitrotoluene	(3)	11.214	165	1160252	29.638
114) Acenaphthylene	(3)	11.278	152	6435413	32.478
117) 3-Nitroaniline	(3)	11.459	138	1140679	29.648
118)*Acenaphthene-d10	(3)	11.500	164	545092	5.000
119) Acenaphthene	(3)	11.553	153	4531870	31.797

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0273.d
 Injection date and time: 11-MAR-2020 11:44

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
120) 2,4-Dinitrophenol	(3)	11.623	184	699098	31.190
121) 4-Nitrophenol	(3)	11.740	109	1113363	30.212
122) Pentachlorobenzene	(3)	11.745	250	2012055	29.109
124) Dibenzofuran	(3)	11.804	168	6389672	29.534
123) 2,4-Dinitrotoluene	(3)	11.815	165	1543137	29.420
126) 1-Naphthylamine	(3)	11.915	143	4301687	29.968
127) 2,3,4,6-Tetrachlorophenol	(3)	11.979	232	1274593	29.457
128) 2-Naphthylamine	(3)	12.026	143	4120962	29.641
129) Diethylphthalate	(3)	12.177	149	5011891	29.233
131) Fluorene	(3)	12.253	166	5111200	32.631
130) Thionazin	(3)	12.271	107	957710	30.489
133) 5-Nitro-o-toluidine	(3)	12.283	152	1309538	29.461
132) 4-Chlorophenyl-phenylether	(3)	12.283	204	2449710	29.526
134) 4-Nitroaniline	(3)	12.294	138	1193378	29.150
135) 4,6-Dinitro-2-methylphenol	(4)	12.335	198	911746	30.672
136) N-Nitrosodiphenylamine	(4)	12.429	169	4082594	29.804
137) NDPA as diphenylamine	(4)	12.429	169	4082594	29.804
139) 1,2-Diphenylhydrazine	(4)	12.469	77	6639695	28.780
140) \$2,4,6-Tribromophenol	(3)	12.540	330	1545005	60.074
142) Tetraethyldithiopyrophosphate	(4)	12.656	97	1133207	30.097
145) Diallate (peak 1)	(4)	12.785	86	1784772	22.810
146) Phorate	(4)	12.796	75	3777664	30.733
147) Phenacetin	(4)	12.814	108	2941690	31.108
148) 4-Bromophenyl-phenylether	(4)	12.861	248	1451176	29.849
149) Diallate (peak 2)	(4)	12.890	86	611183	8.125
150) Hexachlorobenzene	(4)	12.907	284	1593759	30.636
152) Dimethoate	(4)	12.989	87	2401929	31.459
153) Atrazine	(4)	13.094	200	1157526	27.410
154) Pentachlorophenol	(4)	13.158	266	1092948	31.379
156) Pentachloronitrobenzene	(4)	13.176	237	812371	29.408
155) 4-Aminobiphenyl	(4)	13.176	169	4598389	30.050
157) Pronamide	(4)	13.281	173	2500413	30.928
158) *Phenanthrene-d10	(4)	13.386	188	1012966	5.000
159) Dinoseb	(4)	13.415	211	1244768	31.498
160) Phenanthrene	(4)	13.421	178	7182584	31.057
162) Anthracene	(4)	13.485	178	7231914	32.453
168) Carbazole	(4)	13.701	167	6746270	30.156
169) Methyl parathion	(4)	13.906	109	1959852	31.768
170) Di-n-butylphthalate	(4)	14.215	149	8772421	30.310
173) 4-Nitroquinoline-1-oxide	(4)	14.449	190	935191	32.936

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0273.d
 Injection date and time: 11-MAR-2020 11:44

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
172) Parathion	(4)	14.449	109	1222342	31.054
174) Octachlorostyrene	(4)	14.782	308	721631	30.877
176) Isodrin	(4)	14.828	193	951364	29.399
227) Total PAHs	(6)			121065363	583.034
178) Fluoranthene	(4)	15.044	202	8538975	31.596
179) Benzidine	(5)	15.290	184	13435012	83.166
180)*Pyrene-d10	(5)	15.354	212	1026164	5.000
182) Pyrene	(5)	15.383	202	8577592	32.121
184)\$Terphenyl-d14	(5)	15.675	244	11074744	58.698
187) p-Dimethylaminoazobenzene	(5)	15.903	225	1460748	31.119
190) Chlorobenzilate	(5)	15.996	139	2727035	32.108
192) 3,3'-Dimethylbenzidine	(5)	16.457	212	5084278	30.663
193) Butylbenzylphthalate	(5)	16.528	149	3892215	31.332
196) 2-Acetylaminofluorene	(5)	16.878	181	3117652	31.972
198) 3,3'-Dichlorobenzidine	(5)	17.380	252	3080482	30.931
200) Benzo(a)anthracene	(5)	17.380	228	7817620	33.077
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.403	231	1475205	30.117
201) Chrysene	(5)	17.444	228	7593453	32.241
204) bis(2-Ethylhexyl)phthalate	(5)	17.596	149	5554345	31.800
208) 6-Methylchrysene	(5)	18.238	242	5488444	30.597
210) Di-n-octylphthalate	(6)	18.752	149	9211109	32.380
211) Benzo(b)fluoranthene	(6)	19.225	252	7960489	31.251
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.231	256	3572419	31.807
213) Benzo(k)fluoranthene	(6)	19.272	252	7599318	33.082
216) Benzo(a)pyrene	(6)	19.745	252	7504451	34.165
218)*Perylene-d12	(6)	19.832	264	962346	5.000
220) 3-Methylcholanthrene	(6)	20.317	268	3483625	30.996
222) Dibenz(a,h)acridine	(6)	21.129	279	5210852	30.629
223) Dibenz(a,j)acridine	(6)	21.199	279	5634788	30.649
224) Indeno(1,2,3-cd)pyrene	(6)	21.438	276	6201915M	34.916
225) Dibenz(a,h)anthracene	(6)	21.479	278	6362294	31.332
226) Benzo(g,h,i)perylene	(6)	21.806	276	6506802	33.662

M = Compound was manually integrated.

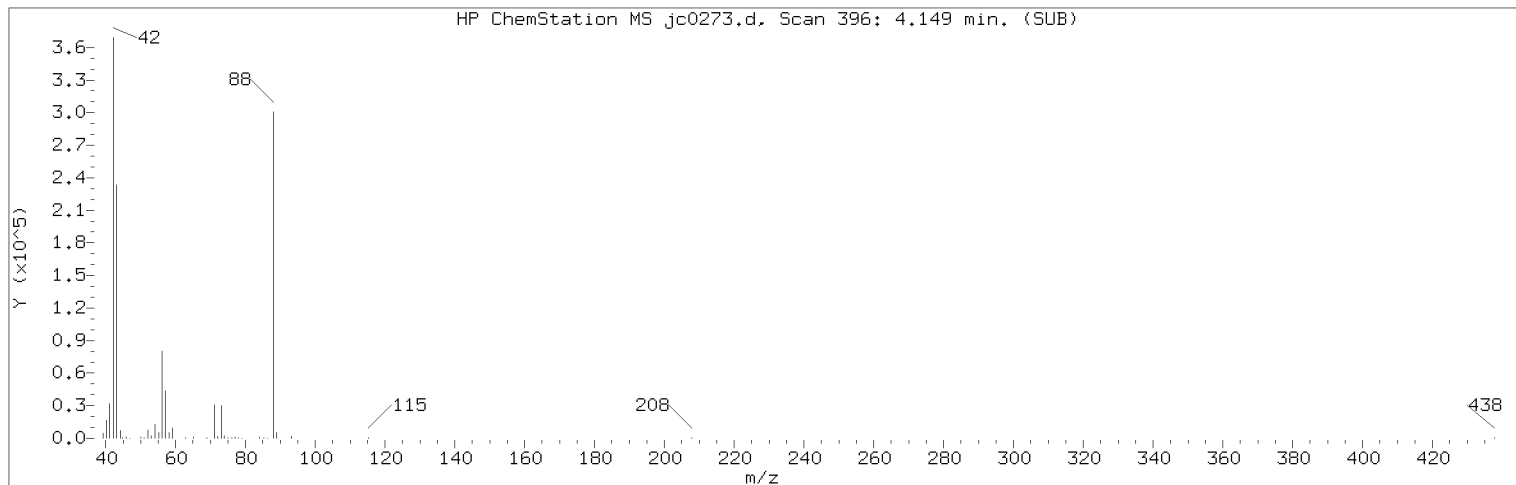
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

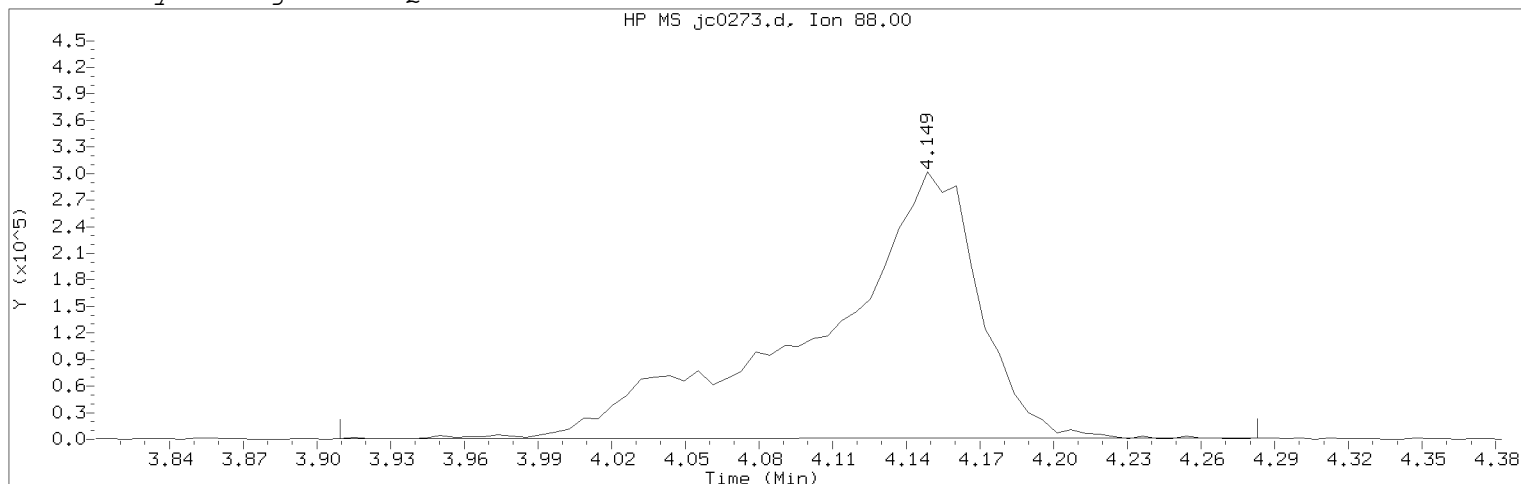
Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0273.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:44

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

Compound Number	: 9	
Compound Name	: N-Nitrosomethylethylamine	
Scan Number	: 396	
Retention Time (minutes)	: 4.149	
Quant Ion	: 88.00	
Area (flag)	: 1362909M	
On-Column Amount (ng/ul)	: 28.5426	
Integration start scan	: 354	Integration stop scan: 418
Y at integration start	: 504	Y at integration end: 1580

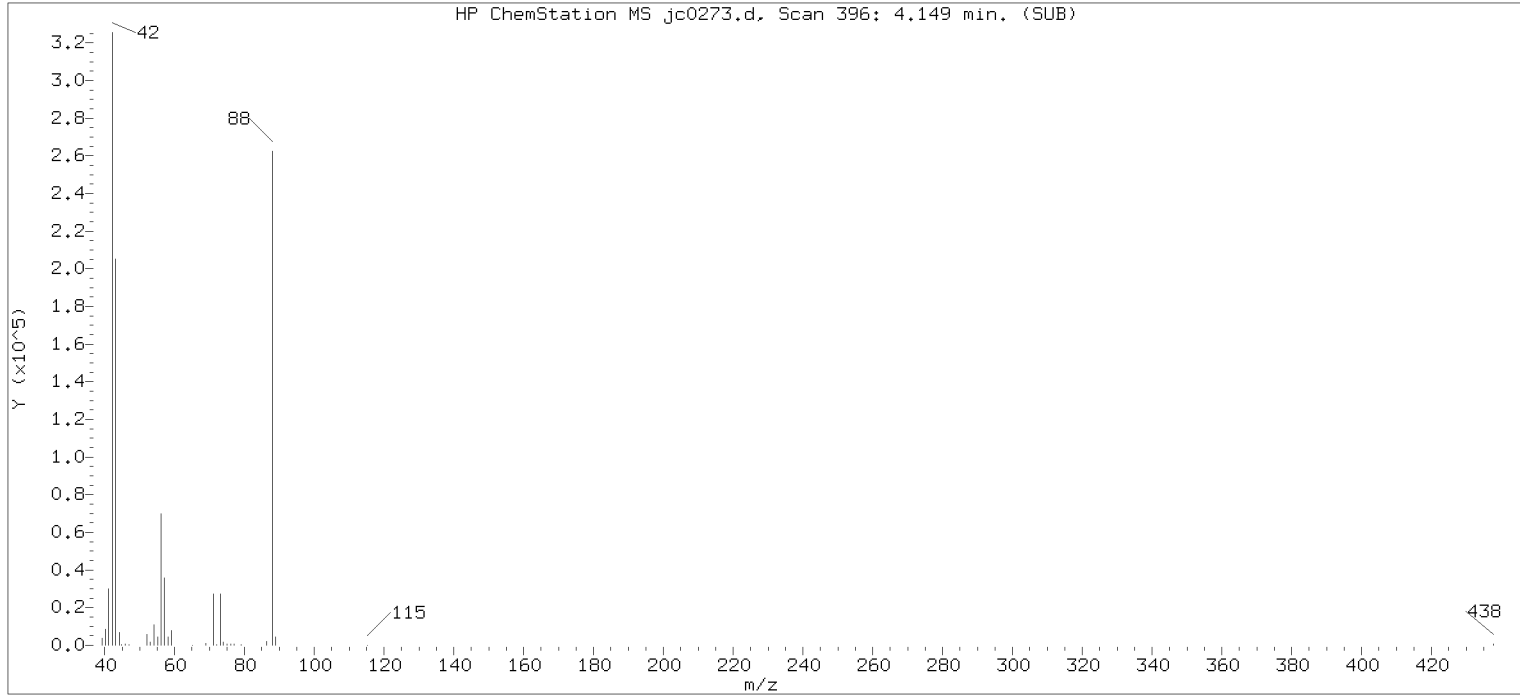
Reason for manual integration: improper integration

Analyst responsible for change:

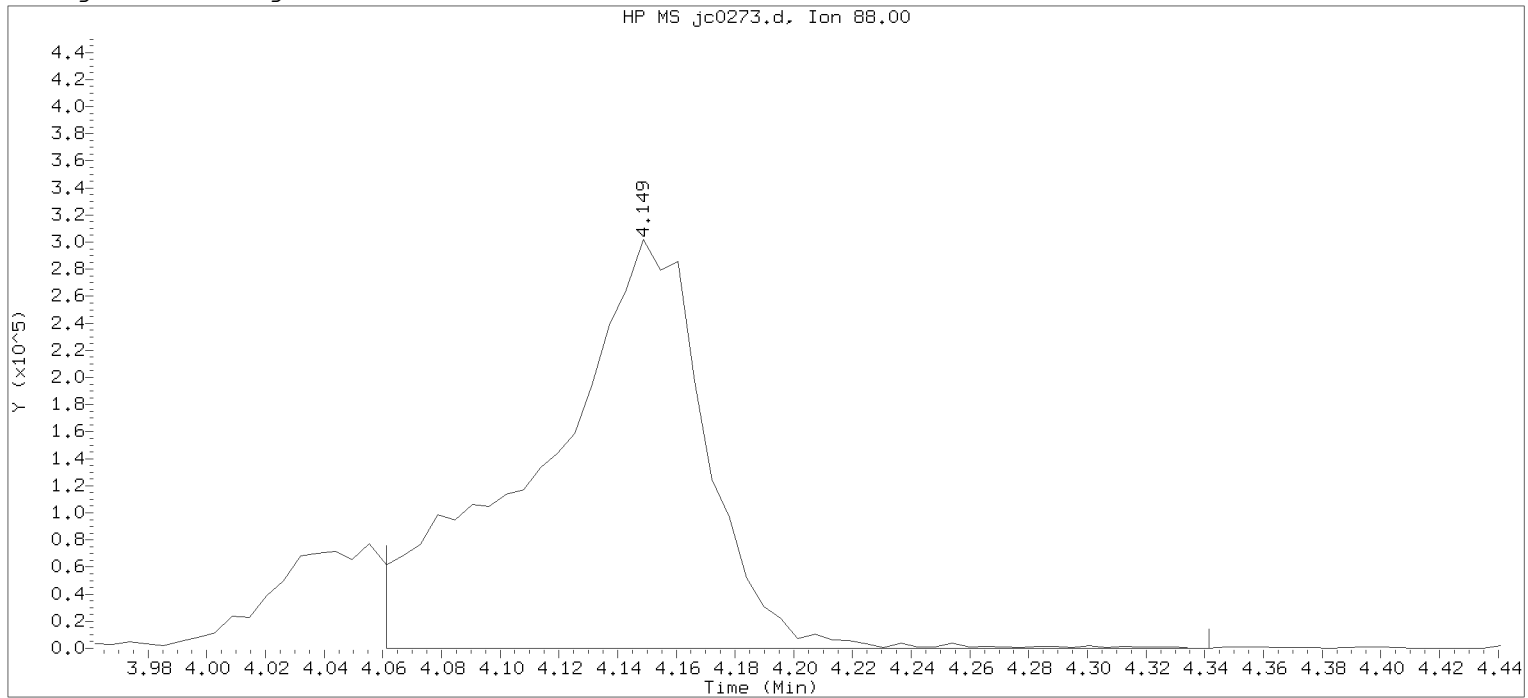
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0273.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:44

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 12:17

Date, time and analyst ID of latest file update: 11-Mar-2020 12:17 Automation

Sample Name: SSTD30

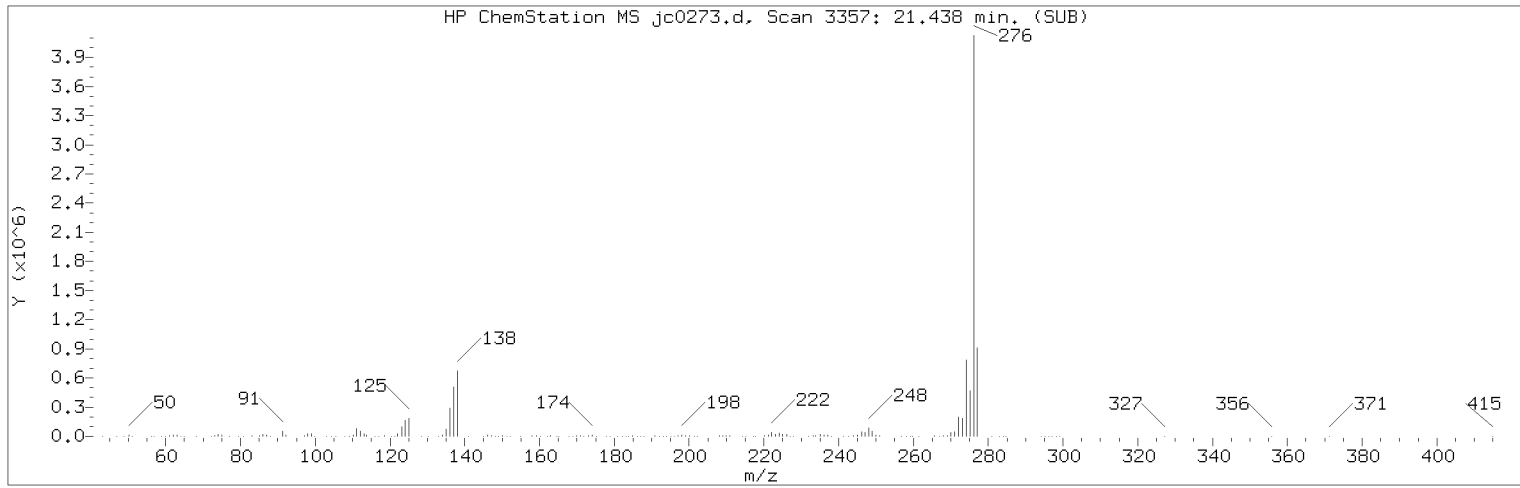
Lab Sample ID: rvSTD0340

Compound Number	: 9	
Compound Name	: N-Nitrosomethylethylamine	
Scan Number	: 396	
Retention Time (minutes)	: 4.149	
Quant Ion	: 88.00	
Area	: 1188755	
On-column Amount (ng/ul)	: 26.6288	
Integration start scan	: 380	Integration stop scan: 428
Y at integration start	: 0	Y at integration end: 0

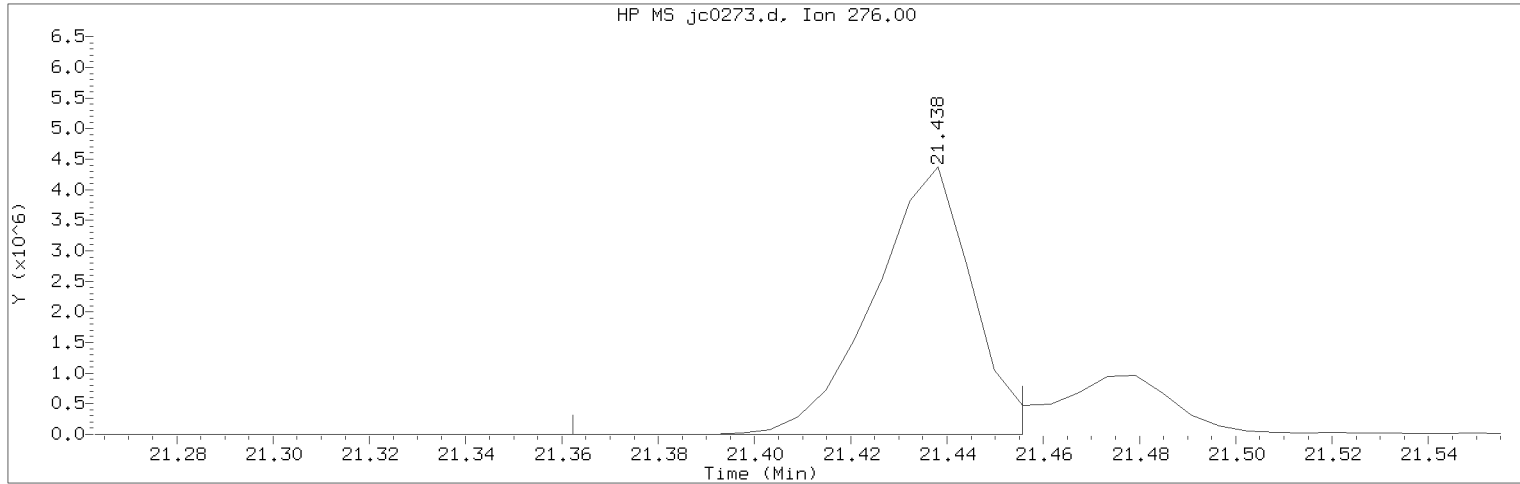
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59 Page 1205 of 1506**

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0273.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:44

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

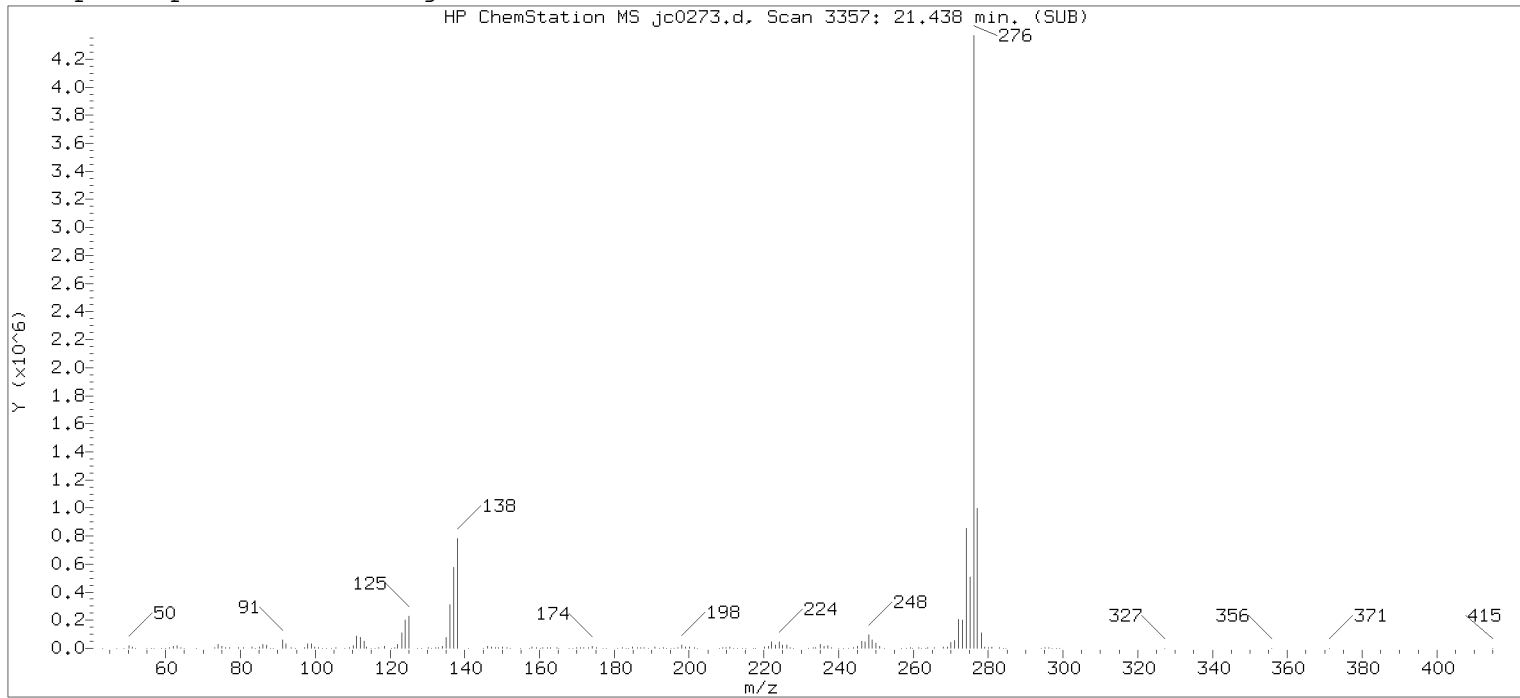
Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3357	
Retention Time (minutes)	: 21.438	
Quant Ion	: 276.00	
Area (flag)	: 6201915M	
On-Column Amount (ng/ul)	: 34.9164	
Integration start scan	: 3343	Integration stop scan: 3359
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

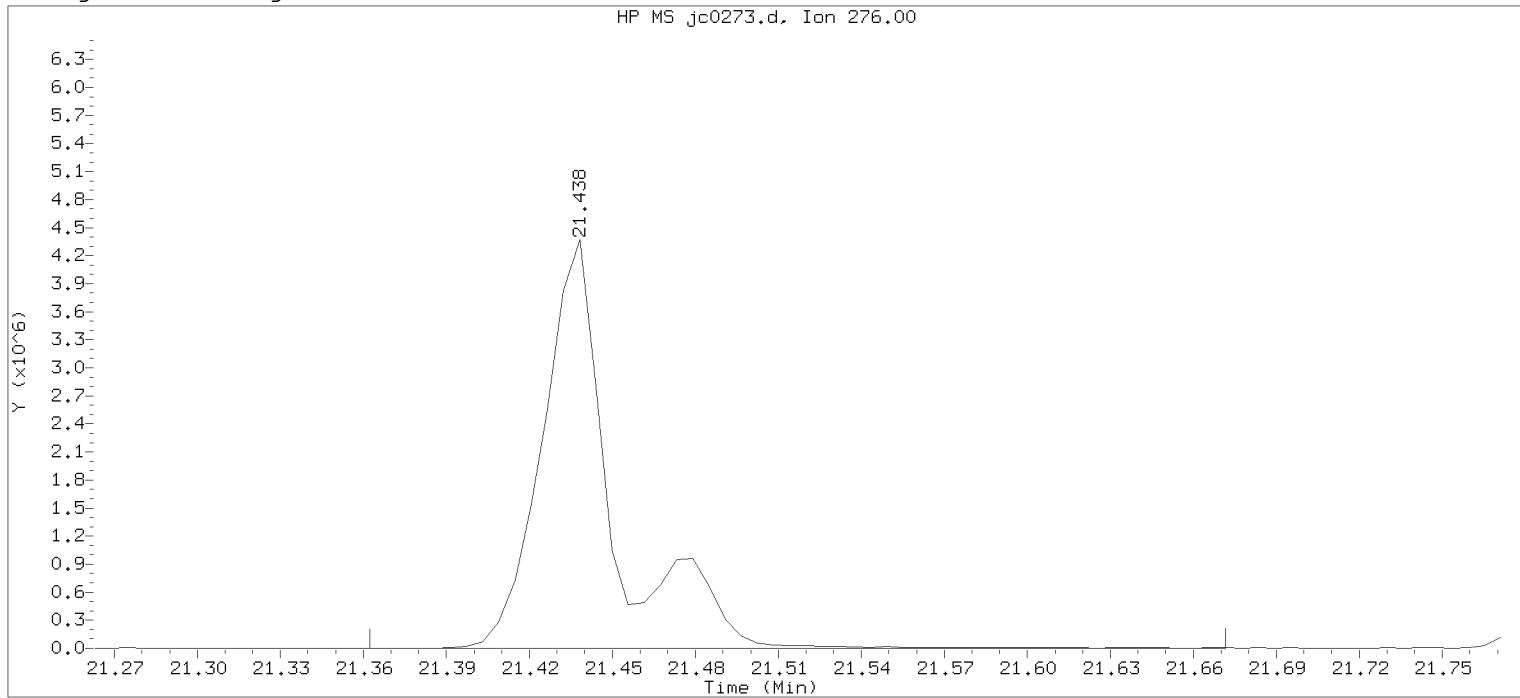
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0273.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 11:44

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 12:17

Date, time and analyst ID of latest file update: 11-Mar-2020 12:17 Automation

Sample Name: SSTD30

Lab Sample ID: rvSTD0340

Compound Number : 224

Compound Name : Indeno(1,2,3-cd)pyrene

Scan Number : 3357

Retention Time (minutes) : 21.438

Quant Ion : 276.00

Area : 7800606

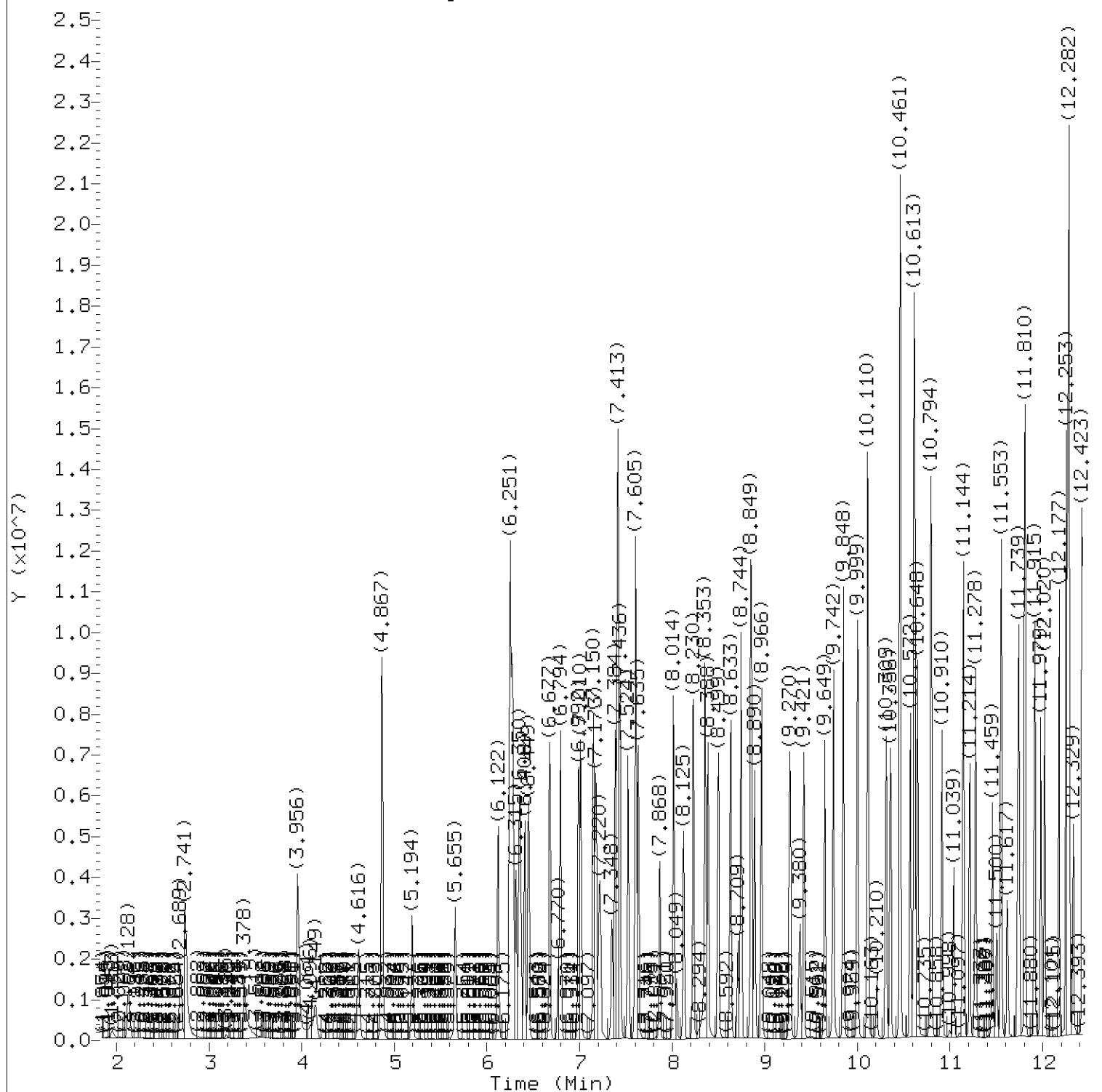
On-column Amount (ng/ul) : 41.3335

Integration start scan : 3343 Integration stop scan: 3396

Y at integration start : 0 Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59 Page 1207 of 1506**



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0274.d
Injection date and time: 11-MAR-2020 12:14

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

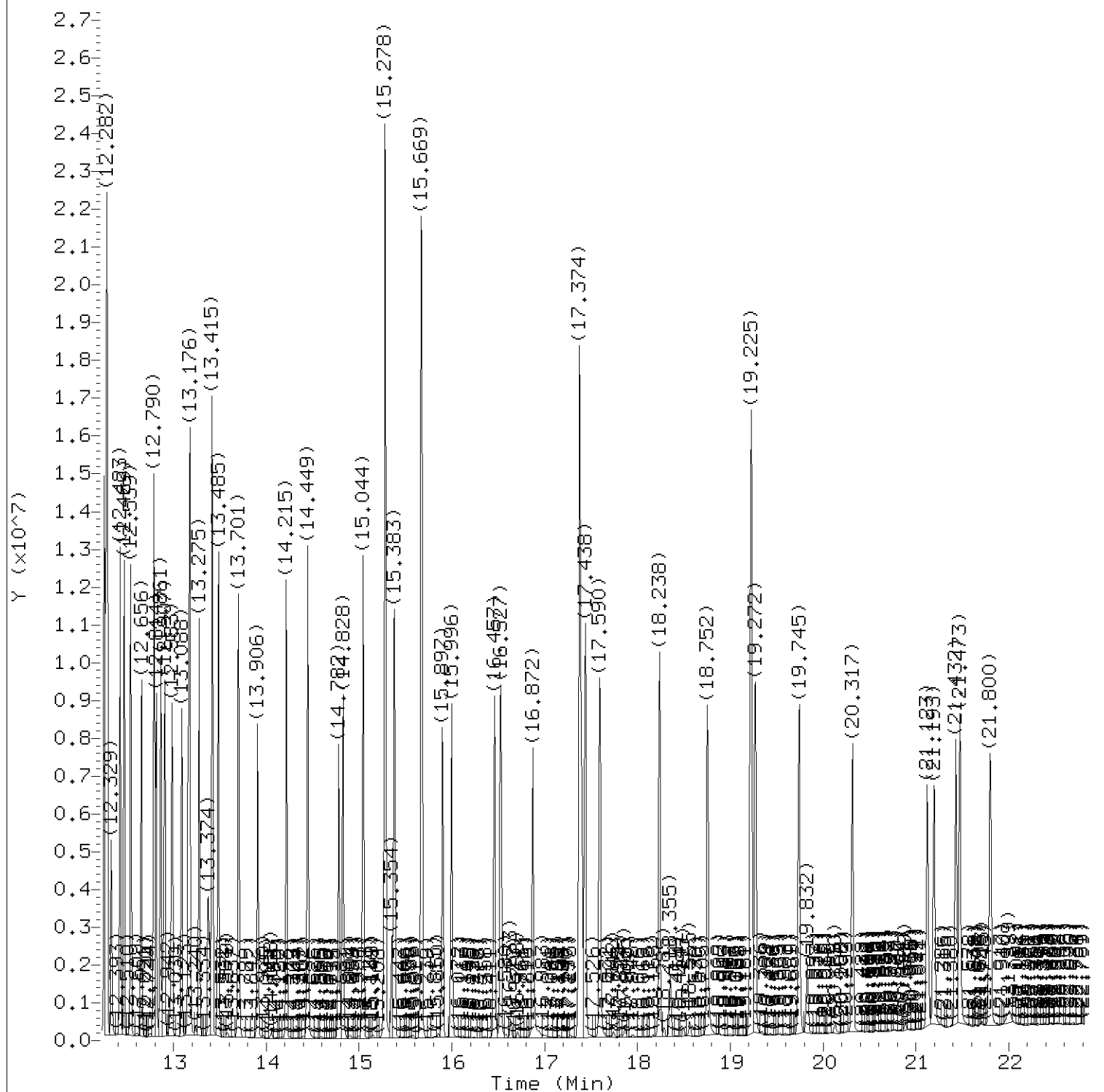
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0274.d
Injection date and time: 11-MAR-2020 12:14

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0274.d
 Injection date and time: 11-MAR-2020 12:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.134	88	888645	18.535
5) N-Nitrosodimethylamine	(1)	2.689	74	1476007	19.025
6) Pyridine	(1)	2.741	79	2389391	19.304
8) 2-Picoline	(1)	3.956	93	2237591	19.473
9) N-Nitrosomethylethylamine	(1)	4.149	88	951128	19.465
10) Methyl methanesulfonate	(1)	4.616	80	1373717	19.082
12) \$2-Fluorophenol	(1)	4.867	112	3631827	38.920
14) N-Nitrosodiethylamine	(1)	5.194	102	904734	19.936
16) Ethyl methanesulfonate	(1)	5.655	109	847169	19.203
43) Total Cresols	(1)			3755817	40.015
17) Benzaldehyde	(1)	6.122	77	1586511	19.324
18) \$Phenol-d6	(1)	6.251	99	4943272	39.173
19) Phenol	(1)	6.268	94	2760995	19.227
20) Aniline	(1)	6.280	93	3201693	19.898
23) bis(2-Chloroethyl) ether	(1)	6.408	93	2028728	20.112
24) 2-Chlorophenol	(1)	6.449	128	1734738	19.773
25) 1,3-Dichlorobenzene	(1)	6.677	146	1947439	19.540
26) *1,4-Dichlorobenzene-d4	(1)	6.770	152	309168	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	1995901	19.754
28) Benzyl alcohol	(1)	6.986	108	1172508	20.135
29) 1,2-Dichlorobenzene	(1)	7.010	146	1872035	19.278
31) Indene	(1)	7.150	115	2754469	19.804
32) 2-Methylphenol	(1)	7.173	108	1703140	19.686
35) bis(2-Chloroisopropyl) ether	(1)	7.220	45	2590485	19.451
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.220	45	2590485	19.451
36) N-Nitrosopyrrolidine	(1)	7.348	100	955179	19.924
100) Isosafrole	(3)			1528595	19.748
37) Acetophenone	(1)	7.384	105	2662823	19.164
38) 4-Methylphenol	(1)	7.413	108	2052677	20.329
39) N-Nitroso-di-n-propylamine	(1)	7.413	70	1717852	19.377
40) N-Nitrosomorpholine	(1)	7.419	56	1412342	19.873
41) o-Toluidine	(1)	7.436	106	2892417	19.535
44) Hexachloroethane	(1)	7.524	117	974542	19.898
45) \$Nitrobenzene-d5	(2)	7.605	82	5320149	39.485
46) Nitrobenzene	(2)	7.635	77	2654297	19.763
50) N-Nitrosopiperidine	(2)	7.868	114	835588	20.035
52) Isophorone	(2)	8.014	82	4414329	20.065
125) 2,4,2,6-Dinitrotoluenes	(3)			1960542	40.138
53) 2-Nitrophenol	(2)	8.125	139	907121	20.067
55) 2,4-Dimethylphenol	(2)	8.230	107	2062204	19.790

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0274.d
 Injection date and time: 11-MAR-2020 12:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	877536	20.523
58) Benzoic acid	(2)	8.370	105	1250415	21.421
57) bis(2-Chloroethoxy)methane	(2)	8.388	93	2442750	20.181
62) 2,4-Dichlorophenol	(2)	8.499	162	1504856	19.988
65) 1,2,4-Trichlorobenzene	(2)	8.633	180	1644044	19.073
68)*Naphthalene-d8	(2)	8.709	136	1168319	5.000
69) Naphthalene	(2)	8.744	128	4884974	20.261
151) Diallate trans/cis	(4)			1676449	21.144
70) 4-Chloroaniline	(2)	8.849	127	1964086	19.615
71) 2,6-Dichlorophenol	(2)	8.855	162	1436107	19.630
72) Hexachloropropene	(2)	8.890	213	1308439	19.692
74) Hexachlorobutadiene	(2)	8.966	225	1088319	19.094
78) Quinoline	(2)	9.270	129	3024100	19.745
79) Caprolactam	(2)	9.380	113	459876	20.374
80) N-Nitrosodi-n-butylamine	(2)	9.421	84	1452036	18.823
83) 4-Chloro-3-methylphenol	(2)	9.649	107	1678693	20.370
85) Safrole	(2)	9.742	162	1306468	19.975
86) 2-Methylnaphthalene	(2)	9.848	142	3223596	20.740
87) 1-Methylnaphthalene	(2)	9.999	142	3018671	20.350
88) Hexachlorocyclopentadiene	(3)	10.110	237	1264801	19.444
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.116	216	1668018	19.171
91) cis-Isosafrole	(3)	10.210	162	237516	3.400
93) 2,4,6-Trichlorophenol	(3)	10.309	196	1116493	19.577
95) 2,4,5-Trichlorophenol	(3)	10.356	196	1201310	19.936
96)\$2-Fluorobiphenyl	(3)	10.461	172	7559614	39.681
97) trans-Isosafrole	(3)	10.572	162	1291079	16.348
98) 1,1'-Biphenyl	(3)	10.613	154	3765777	19.677
99) 2-Chloronaphthalene	(3)	10.618	162	3369298	20.039
101) 1-Chloronaphthalene	(3)	10.648	162	3034838	19.351
103) Diphenyl ether	(3)	10.794	170	2155900	19.113
104) 2-Nitroaniline	(3)	10.799	138	989255	19.833
108) 1,4-Naphthoquinone	(3)	10.916	158	1339265	20.370
109) 1,4-Dinitrobenzene	(3)	11.039	168	499094	19.365
110) Dimethylphthalate	(3)	11.144	163	3572303	19.623
111) 1,3-Dinitrobenzene	(3)	11.150	168	565179	19.378
113) 2,6-Dinitrotoluene	(3)	11.214	165	851118	20.253
114) Acenaphthylene	(3)	11.278	152	4500925	20.955
117) 3-Nitroaniline	(3)	11.459	138	801030	19.676
118)*Acenaphthene-d10	(3)	11.500	164	581461	5.000
119) Acenaphthene	(3)	11.553	153	3170490	20.633

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0274.d
 Injection date and time: 11-MAR-2020 12:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
120) 2,4-Dinitrophenol	(3)	11.623	184	486462	20.229
121) 4-Nitrophenol	(3)	11.734	109	802439	20.273
122) Pentachlorobenzene	(3)	11.745	250	1443567	19.717
124) Dibenzofuran	(3)	11.804	168	4446156	19.504
123) 2,4-Dinitrotoluene	(3)	11.815	165	1109424	19.885
126) 1-Naphthylamine	(3)	11.915	143	2992623	19.694
127) 2,3,4,6-Tetrachlorophenol	(3)	11.979	232	889617	19.510
128) 2-Naphthylamine	(3)	12.020	143	2915617	19.772
129) Diethylphthalate	(3)	12.177	149	3545999	19.589
131) Fluorene	(3)	12.253	166	3598240	21.130
130) Thionazin	(3)	12.271	107	679228	20.180
133) 5-Nitro-o-toluidine	(3)	12.282	152	897395	19.271
132) 4-Chlorophenyl-phenylether	(3)	12.282	204	1775188	20.038
134) 4-Nitroaniline	(3)	12.288	138	828988	19.310
135) 4,6-Dinitro-2-methylphenol	(4)	12.329	198	624698	20.742
136) N-Nitrosodiphenylamine	(4)	12.423	169	2893067	20.810
137) NDPA as diphenylamine	(4)	12.423	169	2893067	20.810
139) 1,2-Diphenylhydrazine	(4)	12.469	77	4816401	20.652
140) \$2,4,6-Tribromophenol	(3)	12.539	330	1055792	38.977
142) Tetraethyldithiopyrophosphate	(4)	12.650	97	794571	20.799
145) Diallate (peak 1)	(4)	12.785	86	1251832	15.635
146) Phorate	(4)	12.790	75	2640292	21.040
147) Phenacetin	(4)	12.814	108	2009838	20.896
148) 4-Bromophenyl-phenylether	(4)	12.861	248	1041250	21.000
149) Diallate (peak 2)	(4)	12.890	86	424617	5.509
150) Hexachlorobenzene	(4)	12.907	284	1089021	20.779
152) Dimethoate	(4)	12.983	87	1648089	21.107
153) Atrazine	(4)	13.088	200	932724	21.422
154) Pentachlorophenol	(4)	13.158	266	769013	21.417
156) Pentachloronitrobenzene	(4)	13.170	237	571639	20.533
155) 4-Aminobiphenyl	(4)	13.176	169	3293202	21.066
157) Pronamide	(4)	13.275	173	1690941	20.678
158) *Phenanthrene-d10	(4)	13.386	188	1007260	5.000
159) Dinoseb	(4)	13.415	211	892462	21.729
160) Phenanthrene	(4)	13.421	178	4935340	21.076
162) Anthracene	(4)	13.485	178	5107943	22.205
168) Carbazole	(4)	13.701	167	4718961	20.793
169) Methyl parathion	(4)	13.906	109	1361969	21.416
170) Di-n-butylphthalate	(4)	14.215	149	6389283	21.415
172) Parathion	(4)	14.443	109	840441	20.958

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0274.d
 Injection date and time: 11-MAR-2020 12:14

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
173) 4-Nitroquinoline-1-oxide	(4)	14.449	190	621299	21.293
174) Octachlorostyrene	(4)	14.782	308	489998	20.710
176) Isodrin	(4)	14.828	193	650854	20.151
227) Total PAHs	(6)			83974666	381.198
178) Fluoranthene	(4)	15.044	202	6005289	21.710
179) Benzidine	(5)	15.284	184	10729920	60.718
180)*Pyrene-d10	(5)	15.348	212	1115819	5.000
182) Pyrene	(5)	15.383	202	5983899	20.453
184)\$Terphenyl-d14	(5)	15.675	244	8146653	39.806
187) p-Dimethylaminoazobenzene	(5)	15.903	225	1011672	19.880
190) Chlorobenzilate	(5)	15.996	139	1865173	20.130
192) 3,3'-Dimethylbenzidine	(5)	16.457	212	3646303	20.149
193) Butylbenzylphthalate	(5)	16.527	149	2686596	19.926
196) 2-Acetylaminofluorene	(5)	16.872	181	2112922	19.952
200) Benzo(a)anthracene	(5)	17.374	228	5421486	20.810
198) 3,3'-Dichlorobenzidine	(5)	17.380	252	2147535	19.887
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.397	231	1020829	19.436
201) Chrysene	(5)	17.438	228	5267827	20.424
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	3752682	19.839
208) 6-Methylchrysene	(5)	18.238	242	3782376	19.591
210) Di-n-octylphthalate	(6)	18.752	149	6196453	21.003
211) Benzo(b)fluoranthene	(6)	19.219	252	5382118	20.665
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.231	256	2445608	20.998
213) Benzo(k)fluoranthene	(6)	19.272	252	5274769	21.965
216) Benzo(a)pyrene	(6)	19.745	252	5108512	22.169
218)*Perylene-d12	(6)	19.832	264	973066	5.000
220) 3-Methylcholanthrene	(6)	20.317	268	2405659	20.765
222) Dibenz(a,h)acridine	(6)	21.123	279	3571193	20.500
223) Dibenz(a,j)acridine	(6)	21.199	279	3737753	20.071
224) Indeno(1,2,3-cd)pyrene	(6)	21.432	276	4247589M	22.618
225) Dibenz(a,h)anthracene	(6)	21.473	278	4412147	21.096
226) Benzo(g,h,i)perylene	(6)	21.800	276	4430851	21.938

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

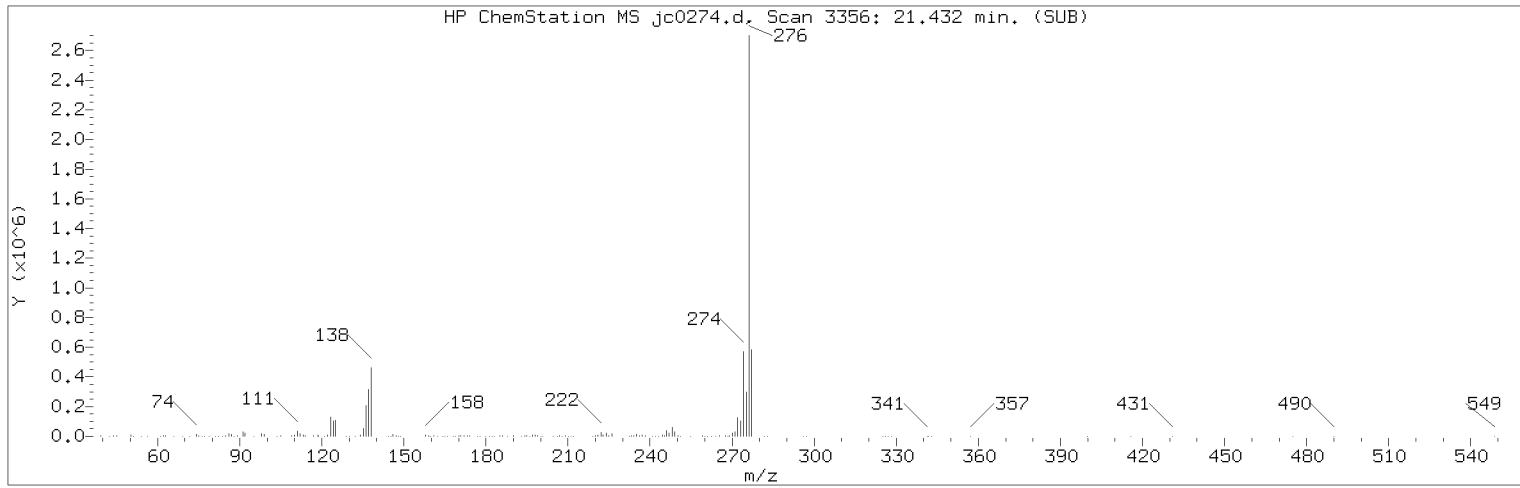
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

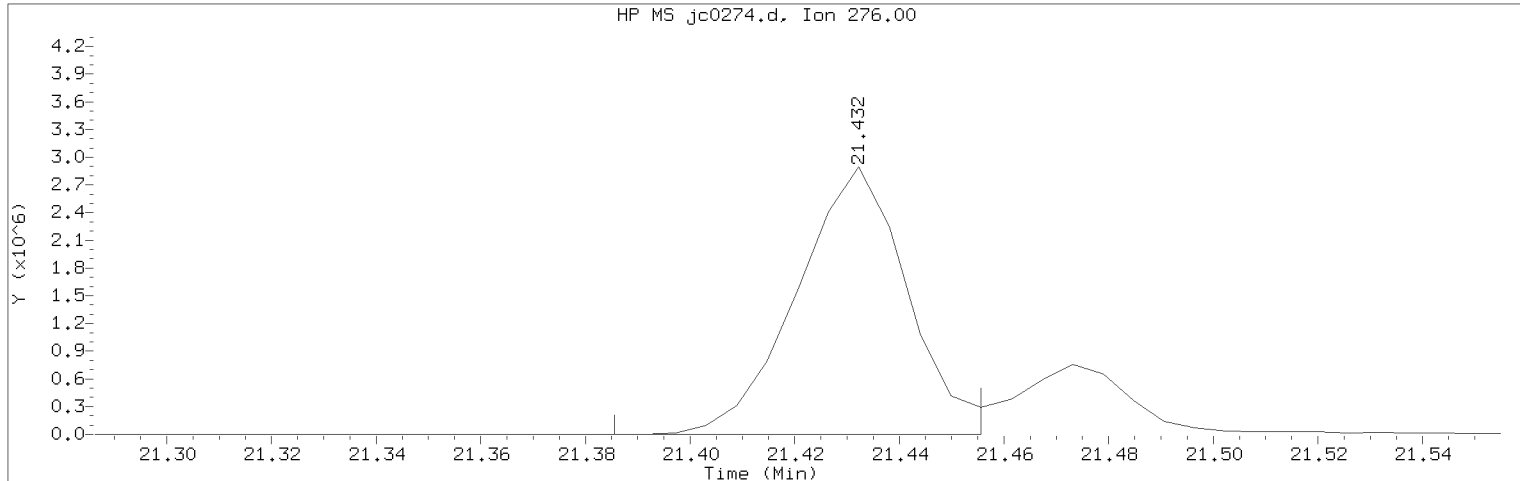
RAF59 Page 1213 of 1506

page 4 of 4

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0274.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 12:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

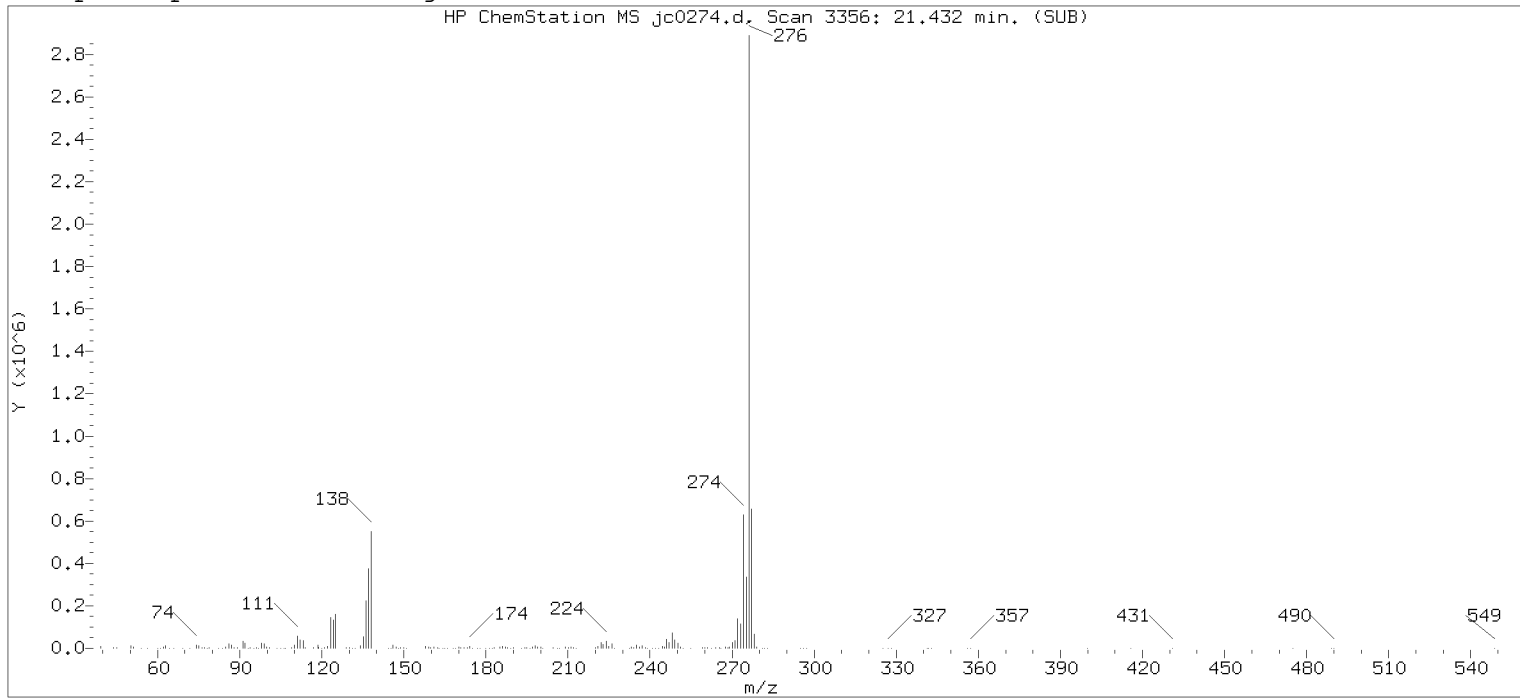
Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3356	
Retention Time (minutes)	: 21.432	
Quant Ion	: 276.00	
Area (flag)	: 4247589M	
On-Column Amount (ng/ul)	: 22.6182	
Integration start scan	: 3347	Integration stop scan: 3359
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

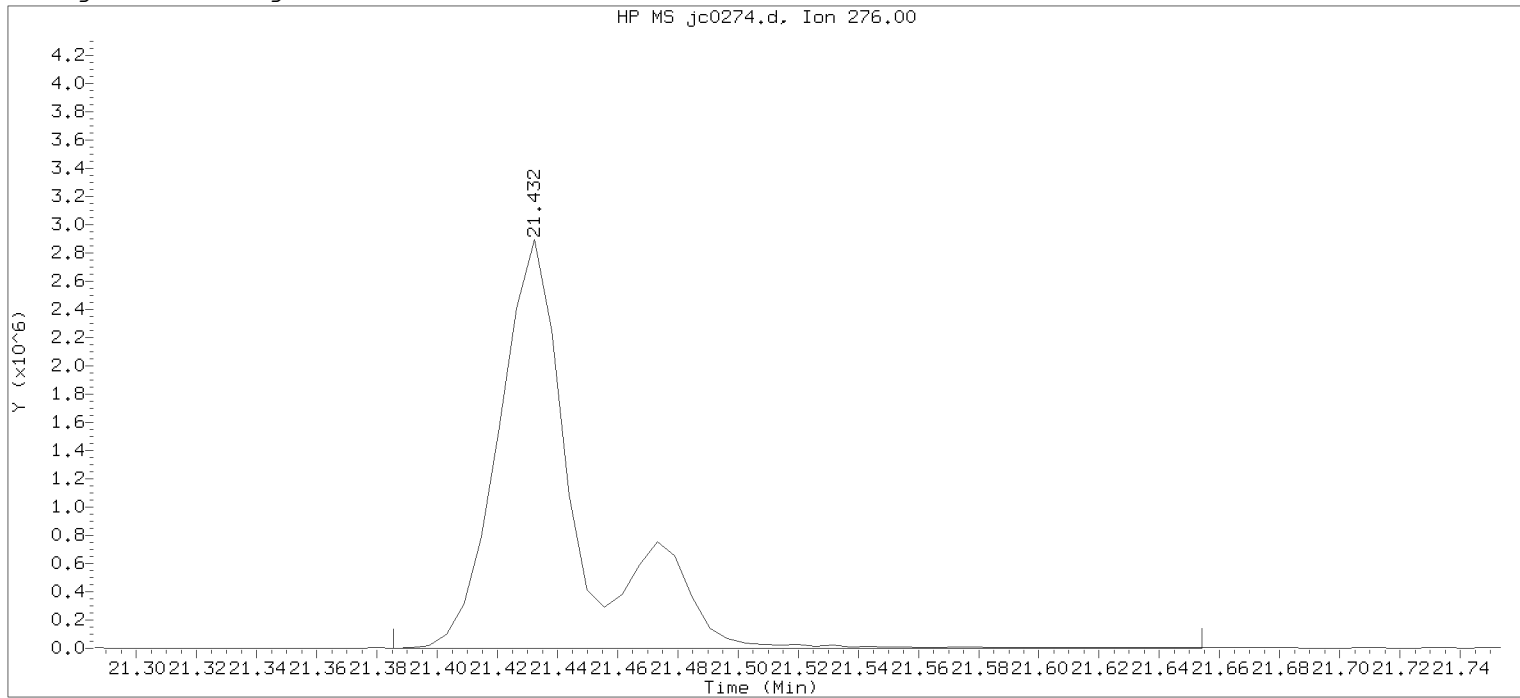
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0274.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 12:14

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 12:47

Date, time and analyst ID of latest file update: 11-Mar-2020 12:47 Automation

Sample Name: SSTD20

Lab Sample ID: rvSTD0340

Compound Number : 224

Compound Name : Indeno(1,2,3-cd)pyrene

Scan Number : 3356

Retention Time (minutes) : 21.432

Quant Ion : 276.00

Area : 5377436

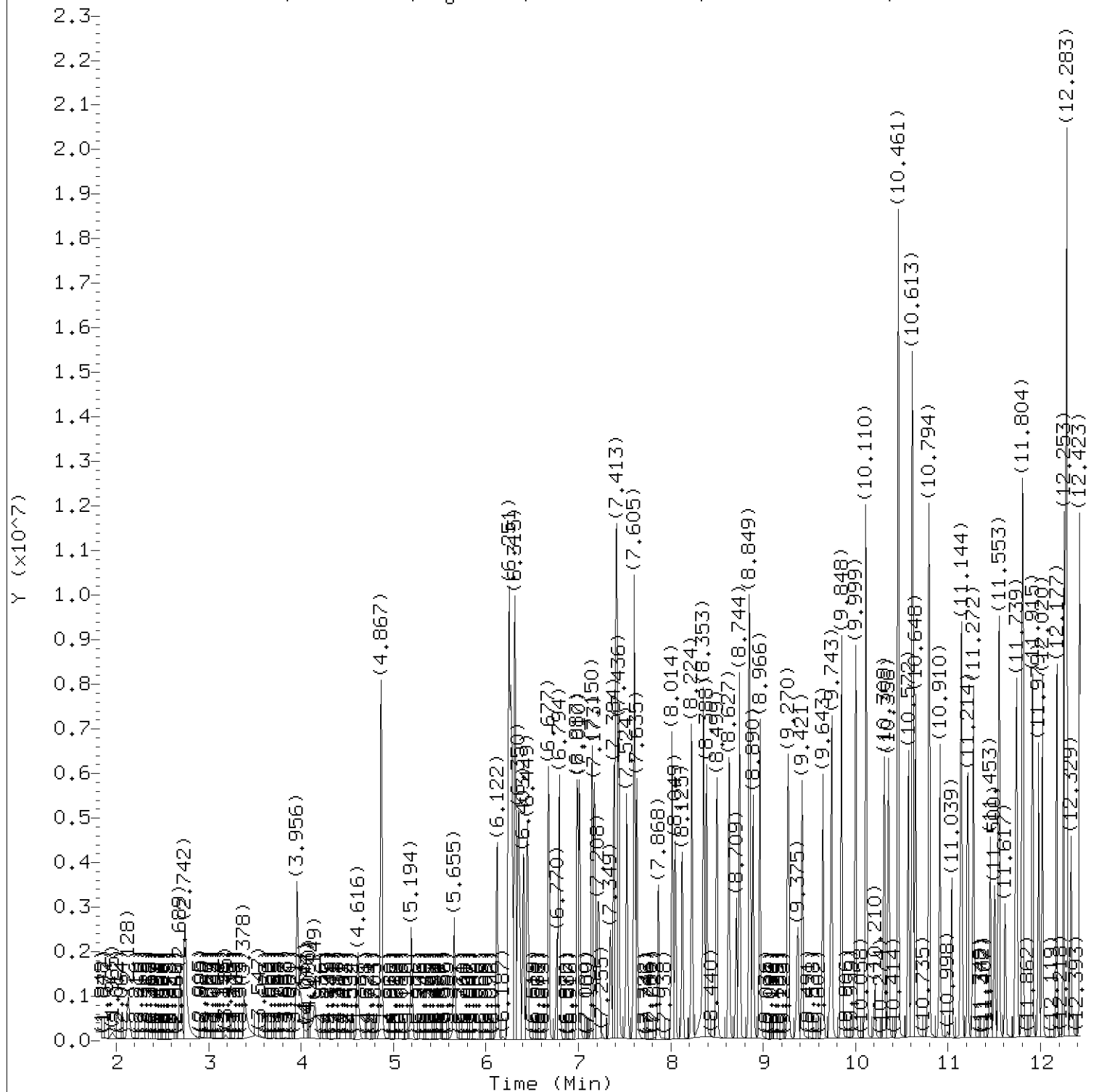
On-column Amount (ng/ul) : 27.3676

Integration start scan : 3347 Integration stop scan: 3393

Y at integration start : 0 Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1215 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0275.d
Injection date and time: 11-MAR-2020 12:43

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

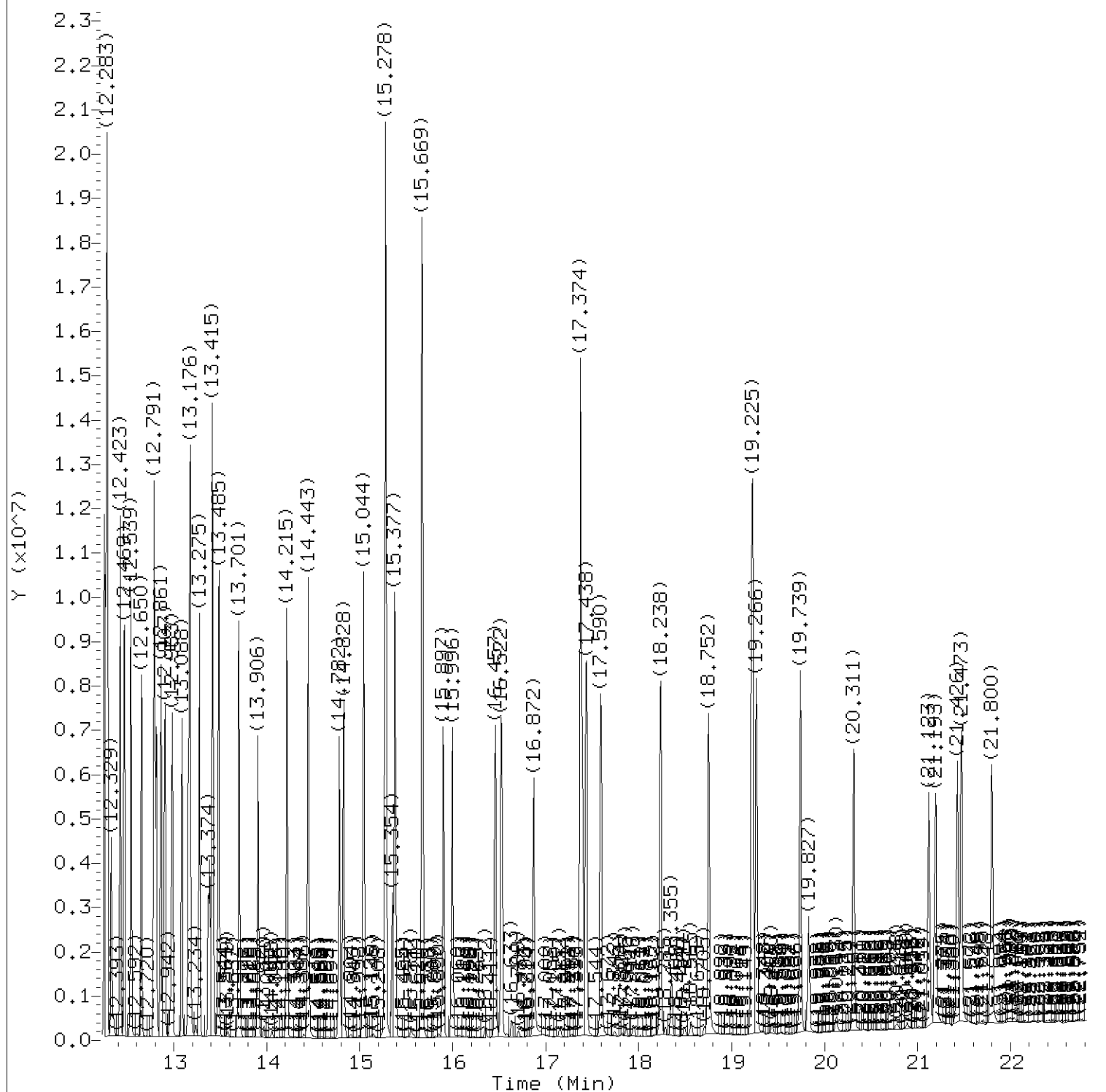
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0275.d
Injection date and time: 11-MAR-2020 12:43

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0275.d
 Injection date and time: 11-MAR-2020 12:43

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.128	88	734253	12.041
5) N-Nitrosodimethylamine	(1)	2.689	74	1171106	11.910
6) Pyridine	(1)	2.742	79	1993313	12.507
8) 2-Picoline	(1)	3.956	93	1826739	12.386
9) N-Nitrosomethylethylamine	(1)	4.149	88	783644	12.468
10) Methyl methanesulfonate	(1)	4.616	80	1165001	12.552
12) \$2-Fluorophenol	(1)	4.867	112	2959866	24.728
14) N-Nitrosodiethylamine	(1)	5.194	102	747890	12.724
16) Ethyl methanesulfonate	(1)	5.655	109	728058	12.738
43) Total Cresols	(1)			3043865	25.182
17) Benzaldehyde	(1)	6.122	77	1380945	12.919
18) \$Phenol-d6	(1)	6.251	99	4117808	25.260
19) Phenol	(1)	6.268	94	2302023	12.464
20) Aniline	(1)	6.280	93	2641868	12.689
23) bis(2-Chloroethyl) ether	(1)	6.403	93	1673947	12.791
24) 2-Chlorophenol	(1)	6.449	128	1401928	12.434
25) 1,3-Dichlorobenzene	(1)	6.677	146	1592170	12.432
26) *1,4-Dichlorobenzene-d4	(1)	6.770	152	398020	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	1609261	12.404
28) Benzyl alcohol	(1)	6.987	108	996323	13.083
29) 1,2-Dichlorobenzene	(1)	7.010	146	1506248	12.158
31) Indene	(1)	7.150	115	2306646	12.784
32) 2-Methylphenol	(1)	7.173	108	1421992	12.699
35) bis(2-Chloroisopropyl) ether	(1)	7.208	45	2131860	12.451
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.208	45	2131860	12.451
36) N-Nitrosopyrrolidine	(1)	7.349	100	802048	12.868
100) Isosafrole	(3)			1213043	12.089
37) Acetophenone	(1)	7.384	105	2142418	12.103
39) N-Nitroso-di-n-propylamine	(1)	7.407	70	1408695	12.381
38) 4-Methylphenol	(1)	7.413	108	1621873	12.482
40) N-Nitrosomorpholine	(1)	7.419	56	1155661	12.598
41) o-Toluidine	(1)	7.436	106	2425767	12.669
44) Hexachloroethane	(1)	7.524	117	785278	12.466
45) \$Nitrobenzene-d5	(2)	7.605	82	4346807	25.021
46) Nitrobenzene	(2)	7.635	77	2177030	12.556
50) N-Nitrosopiperidine	(2)	7.868	114	665790	12.413
52) Isophorone	(2)	8.014	82	3569715	12.565
125) 2,4,2,6-Dinitrotoluenes	(3)			1601814	25.042
53) 2-Nitrophenol	(2)	8.125	139	756229	12.855
55) 2,4-Dimethylphenol	(2)	8.224	107	1655590	12.369

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0275.d
 Injection date and time: 11-MAR-2020 12:43

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	708590	12.765
58) Benzoic acid	(2)	8.359	105	962883	12.721
57) bis(2-Chloroethoxy)methane	(2)	8.388	93	2011590	12.792
62) 2,4-Dichlorophenol	(2)	8.499	162	1221732	12.567
65) 1,2,4-Trichlorobenzene	(2)	8.633	180	1351856	12.249
68)*Naphthalene-d8	(2)	8.709	136	1505983	5.000
69) Naphthalene	(2)	8.744	128	4020397	12.847
151) Diallyl trans/cis	(4)			1379095	12.426
70) 4-Chloroaniline	(2)	8.849	127	1621638	12.548
71) 2,6-Dichlorophenol	(2)	8.855	162	1176120	12.479
72) Hexachloropropene	(2)	8.890	213	1060894	12.414
74) Hexachlorobutadiene	(2)	8.966	225	917249	12.488
78) Quinoline	(2)	9.270	129	2530834	12.738
79) Caprolactam	(2)	9.375	113	393095	13.243
80) N-Nitrosodi-n-butylamine	(2)	9.421	84	1198579	12.162
83) 4-Chloro-3-methylphenol	(2)	9.643	107	1351604	12.667
85) Safrole	(2)	9.743	162	1038235	12.360
86) 2-Methylnaphthalene	(2)	9.848	142	2673095	13.164
87) 1-Methylnaphthalene	(2)	9.999	142	2526785	13.065
88) Hexachlorocyclopentadiene	(3)	10.110	237	1040711	12.289
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.116	216	1363457	12.097
91) cis-Isosafrole	(3)	10.210	162	179641	2.002
93) 2,4,6-Trichlorophenol	(3)	10.309	196	922478	12.391
95) 2,4,5-Trichlorophenol	(3)	10.356	196	985558	12.494
96)\$2-Fluorobiphenyl	(3)	10.461	172	6245568	25.030
97) trans-Isosafrole	(3)	10.572	162	1033402	10.087
98) 1,1'-Biphenyl	(3)	10.613	154	3080192	12.344
99) 2-Chloronaphthalene	(3)	10.618	162	2731256	12.430
101) 1-Chloronaphthalene	(3)	10.648	162	2442443	12.041
103) Diphenyl ether	(3)	10.794	170	1795666	12.243
104) 2-Nitroaniline	(3)	10.799	138	845500	12.832
108) 1,4-Naphthoquinone	(3)	10.910	158	1063265	12.389
109) 1,4-Dinitrobenzene	(3)	11.039	168	421940	12.503
110) Dimethylphthalate	(3)	11.138	163	3033096	12.669
111) 1,3-Dinitrobenzene	(3)	11.150	168	491394	12.775
113) 2,6-Dinitrotoluene	(3)	11.214	165	697577	12.633
114) Acenaphthylene	(3)	11.272	152	3754423	13.172
117) 3-Nitroaniline	(3)	11.459	138	657182	12.372
118)*Acenaphthene-d10	(3)	11.500	164	761278	5.000
119) Acenaphthene	(3)	11.553	153	2593125	12.810

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\$ = Compound is a surrogate standard.

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 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0275.d
 Injection date and time: 11-MAR-2020 12:43

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
120) 2,4-Dinitrophenol	(3)	11.617	184	400613	12.667
121) 4-Nitrophenol	(3)	11.734	109	640015	12.387
122) Pentachlorobenzene	(3)	11.745	250	1184298	12.391
124) Dibenzofuran	(3)	11.804	168	3623393	12.228
123) 2,4-Dinitrotoluene	(3)	11.810	165	904237	12.409
126) 1-Naphthylamine	(3)	11.915	143	2497351	12.539
127) 2,3,4,6-Tetrachlorophenol	(3)	11.979	232	739889	12.420
128) 2-Naphthylamine	(3)	12.020	143	2419011	12.522
129) Diethylphthalate	(3)	12.177	149	2970813	12.526
131) Fluorene	(3)	12.253	166	2959261	13.111
130) Thionazin	(3)	12.265	107	546795	12.431
133) 5-Nitro-o-toluidine	(3)	12.283	152	751610	12.371
132) 4-Chlorophenyl-phenylether	(3)	12.283	204	1459678	12.564
134) 4-Nitroaniline	(3)	12.288	138	710701	12.608
135) 4,6-Dinitro-2-methylphenol	(4)	12.329	198	520531	12.368
136) N-Nitrosodiphenylamine	(4)	12.423	169	2406137	12.381
137) NDPA as diphenylamine	(4)	12.423	169	2406137	12.381
139) 1,2-Diphenylhydrazine	(4)	12.469	77	3981434	12.254
140) \$2,4,6-Tribromophenol	(3)	12.539	330	865199	24.544
142) Tetraethyldithiopyrophosphate	(4)	12.650	97	652329	12.256
145) Diallate (peak 1)	(4)	12.785	86	1033474	9.216
146) Phorate	(4)	12.791	75	2211994	12.552
147) Phenacetin	(4)	12.808	108	1597726	12.002
148) 4-Bromophenyl-phenylether	(4)	12.861	248	835195	12.130
149) Diallate (peak 2)	(4)	12.890	86	345621	3.210
150) Hexachlorobenzene	(4)	12.907	284	891143	12.198
152) Dimethoate	(4)	12.983	87	1351164	12.379
153) Atrazine	(4)	13.088	200	755261	12.402
154) Pentachlorophenol	(4)	13.158	266	620882	12.372
156) Pentachloronitrobenzene	(4)	13.170	237	462619	12.006
155) 4-Aminobiphenyl	(4)	13.176	169	2701476	12.367
157) Pronamide	(4)	13.275	173	1388904	12.206
158) *Phenanthrene-d10	(4)	13.386	188	1412520	5.000
159) Dinoseb	(4)	13.409	211	699053	12.226
160) Phenanthrene	(4)	13.415	178	4076101	12.430
162) Anthracene	(4)	13.485	178	4320600	13.205
168) Carbazole	(4)	13.701	167	3893494	12.299
169) Methyl parathion	(4)	13.906	109	1133700	12.658
170) Di-n-butylphthalate	(4)	14.215	149	5168046	12.389
172) Parathion	(4)	14.443	109	684051	12.247

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\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0275.d
Injection date and time: 11-MAR-2020 12:43

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
173) 4-Nitroquinoline-1-oxide	(4)	14.449	190	509751	12.469
174) Octachlorostyrene	(4)	14.782	308	400390	12.173
176) Isodrin	(4)	14.828	193	555172	12.317
227) Total PAHs	(6)			69720080	235.222
178) Fluoranthene	(4)	15.044	202	5038252	12.888
179) Benzidine	(5)	15.278	184	9371237	41.076
180)*Pyrene-d10	(5)	15.354	212	1394777	5.000
182) Pyrene	(5)	15.377	202	5002975	13.426
184)\$Terphenyl-d14	(5)	15.669	244	6724528	25.952
187) p-Dimethylaminoazobenzene	(5)	15.897	225	857755	13.224
190) Chlorobenzilate	(5)	15.996	139	1550970	13.157
192) 3,3'-Dimethylbenzidine	(5)	16.457	212	2969235	12.964
193) Butylbenzylphthalate	(5)	16.522	149	2204197	12.929
196) 2-Acetylaminofluorene	(5)	16.872	181	1706042	12.789
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	1747191	12.830
200) Benzo(a)anthracene	(5)	17.374	228	4406695	13.312
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.398	231	839487	12.714
201) Chrysene	(5)	17.438	228	4425277	13.462
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	3036144	12.754
208) 6-Methylchrysene	(5)	18.233	242	3100680	12.759
210) Di-n-octylphthalate	(6)	18.752	149	5289163	12.966
211) Benzo(b)fluoranthene	(6)	19.219	252	4479252	12.576
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.225	256	1968702	12.409
213) Benzo(k)fluoranthene	(6)	19.266	252	4343444	13.090
216) Benzo(a)pyrene	(6)	19.739	252	4214185	13.205
218)*Perylene-d12	(6)	19.827	264	1328668	5.000
220) 3-Methylcholanthrene	(6)	20.311	268	1988181	12.551
222) Dibenz(a,h)acridine	(6)	21.123	279	2941936	12.401
223) Dibenz(a,j)acridine	(6)	21.193	279	3161178	12.449
224) Indeno(1,2,3-cd)pyrene	(6)	21.432	276	3547159M	13.544
225) Dibenz(a,h)anthracene	(6)	21.473	278	3638162	12.691
226) Benzo(g,h,i)perylene	(6)	21.800	276	3700892	13.225

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

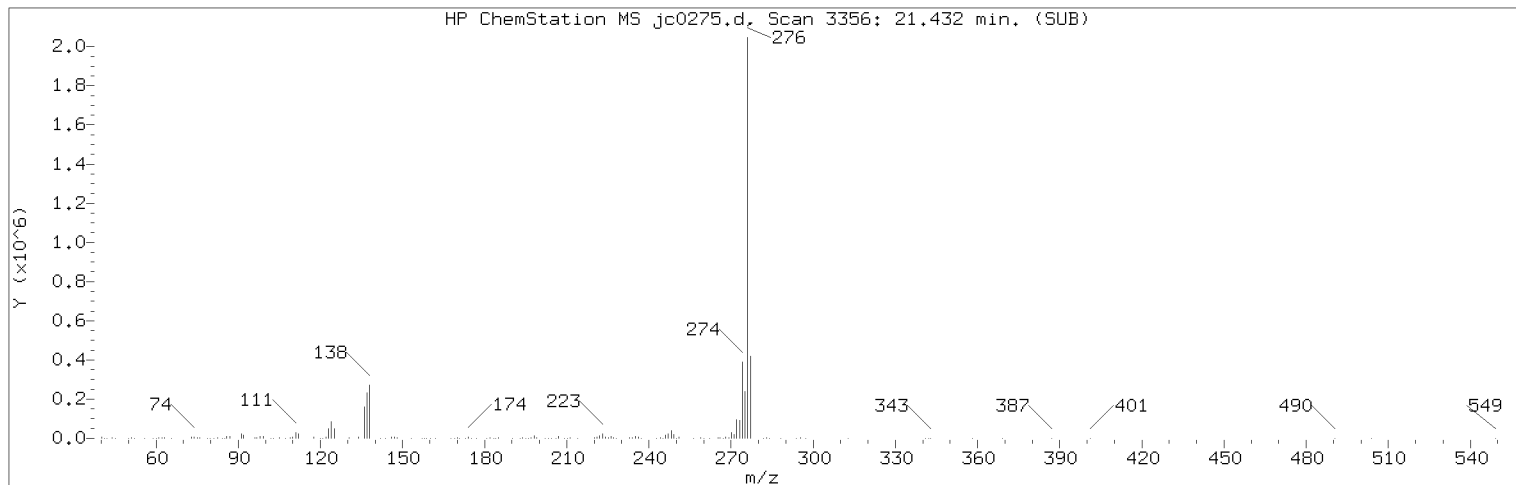
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

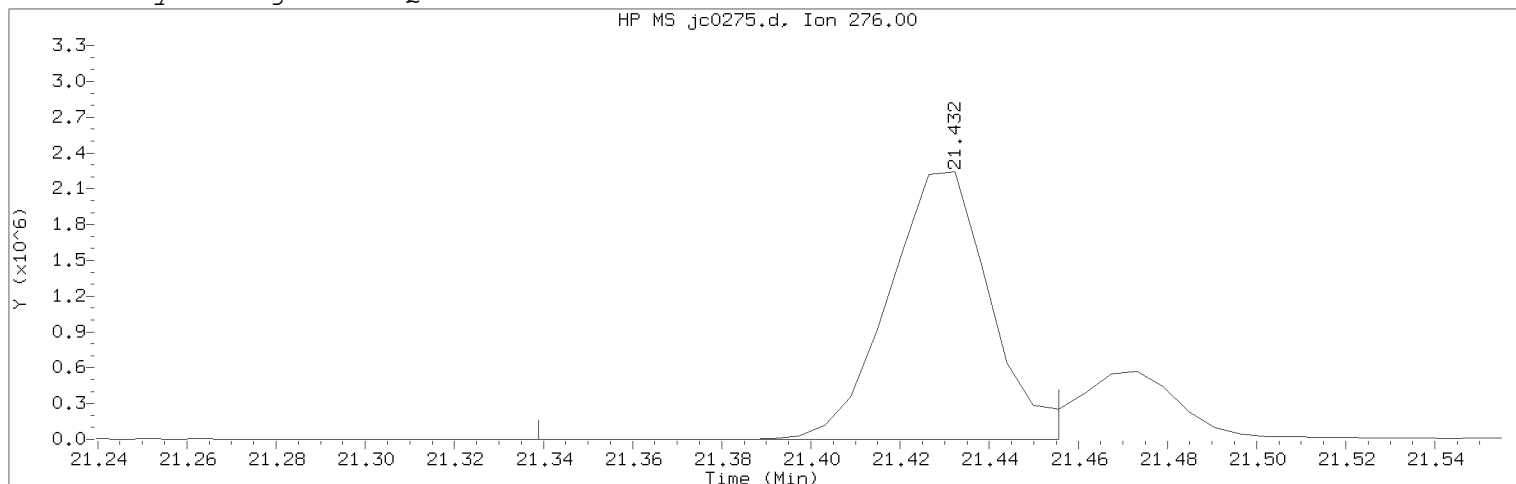
RAF59 Page 1221 of 1506

page 4 of 4

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0275.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 12:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

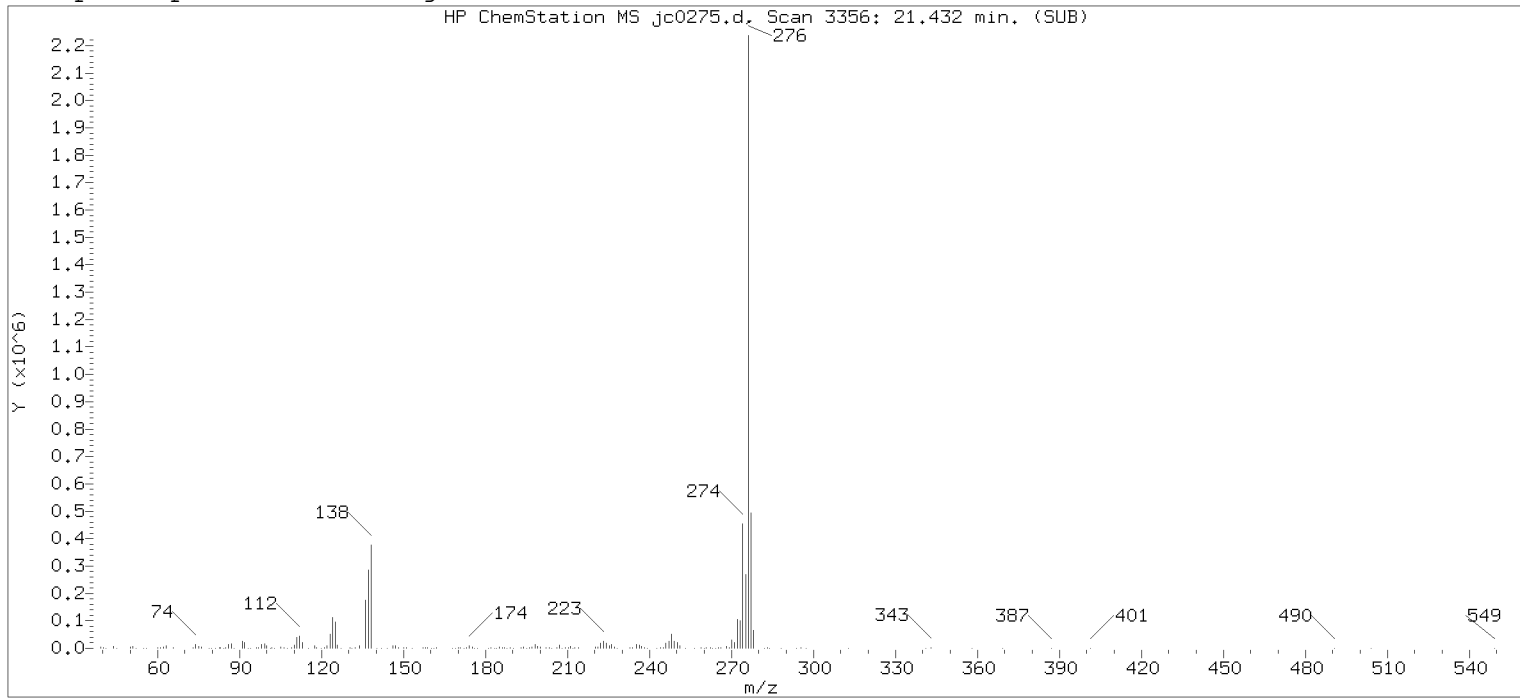
Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3356	
Retention Time (minutes)	: 21.432	
Quant Ion	: 276.00	
Area (flag)	: 3547159M	
On-Column Amount (ng/ul)	: 13.5443	
Integration start scan	: 3339	Integration stop scan: 3359
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

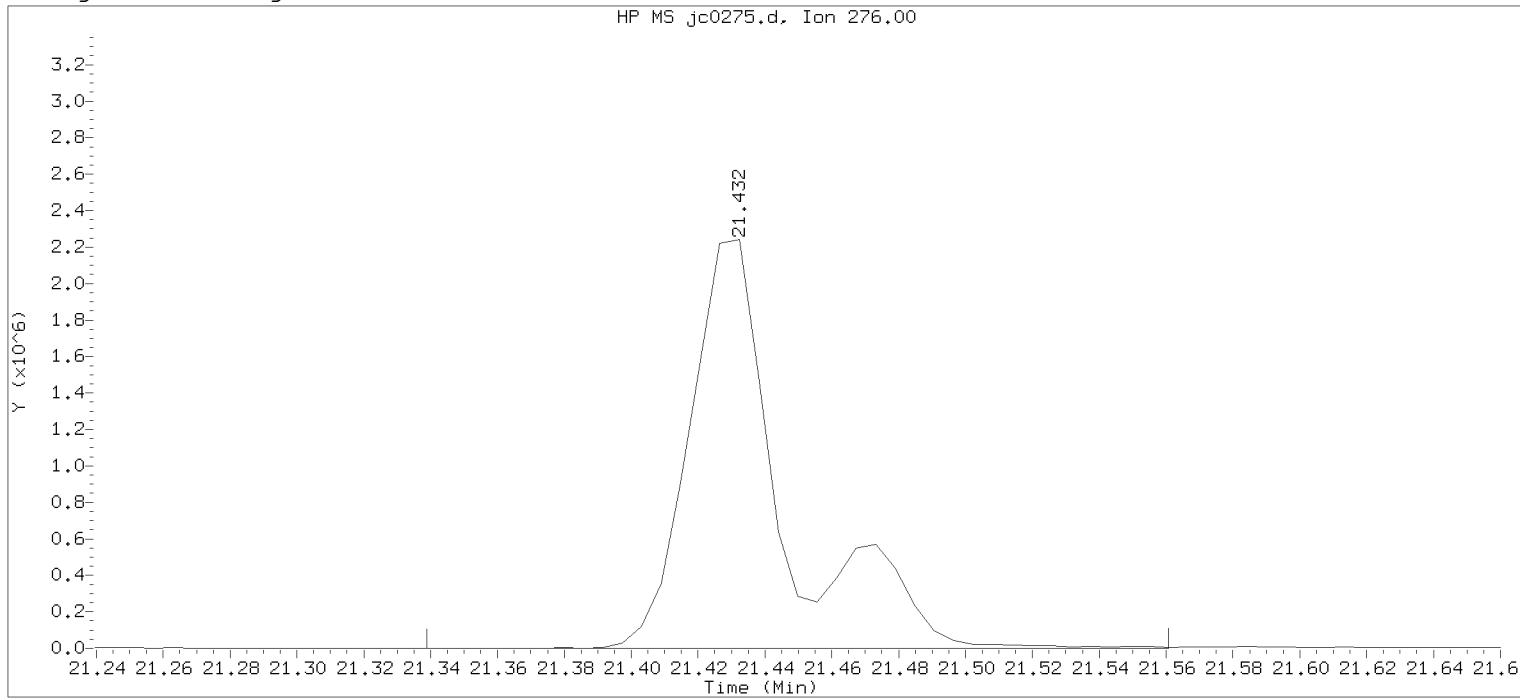
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0275.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 12:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 13:17

Date, time and analyst ID of latest file update: 11-Mar-2020 13:17 Automation

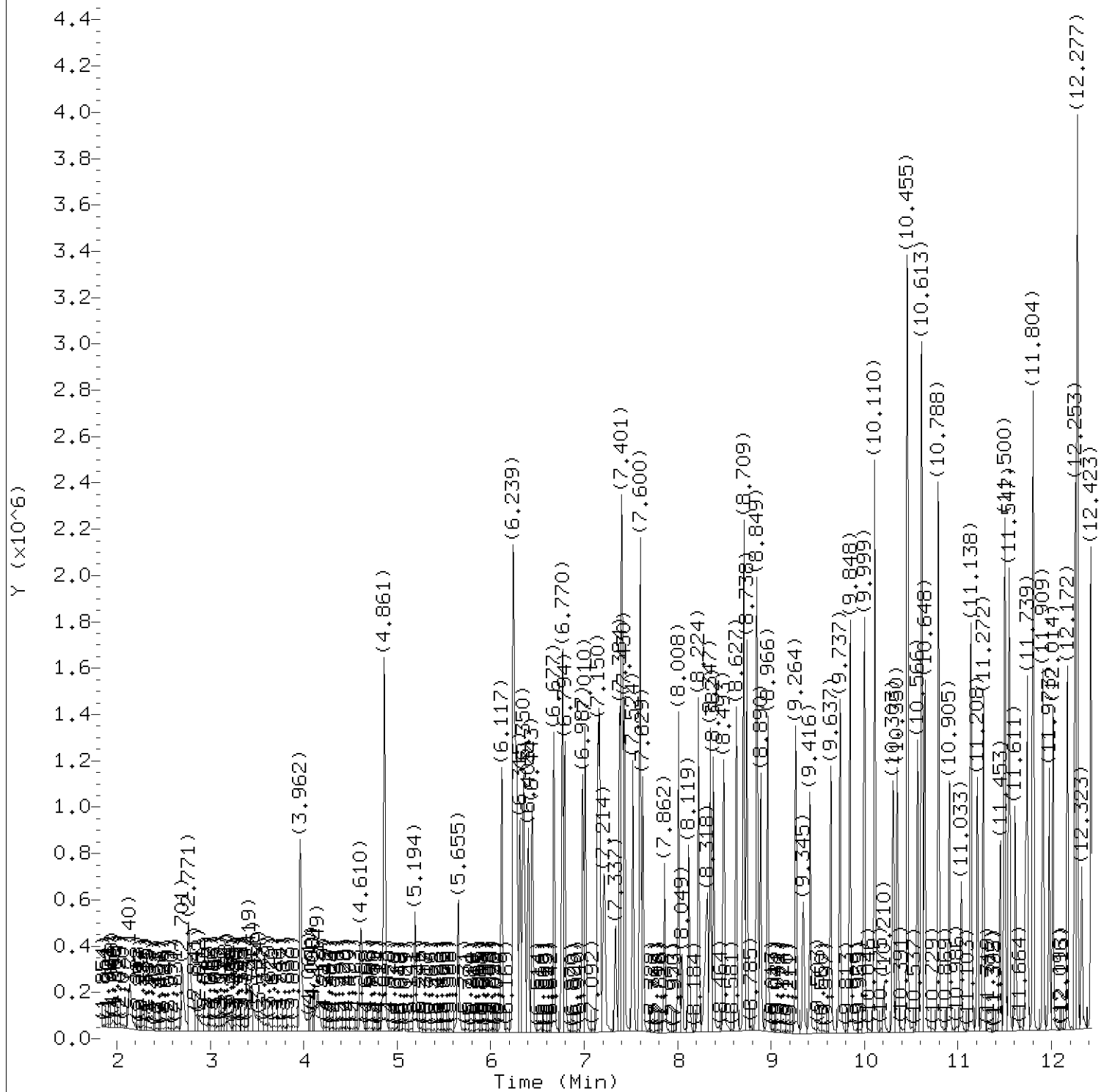
Sample Name: SSTD12.5

Lab Sample ID: rvSTD0340

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3356	
Retention Time (minutes)	: 21.432	
Quant Ion	: 276.00	
Area	: 4402695	
On-column Amount (ng/ul)	: 15.8244	
Integration start scan	: 3339	Integration stop scan: 3377
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1223 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0276.d
Injection date and time: 11-MAR-2020 13:12

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

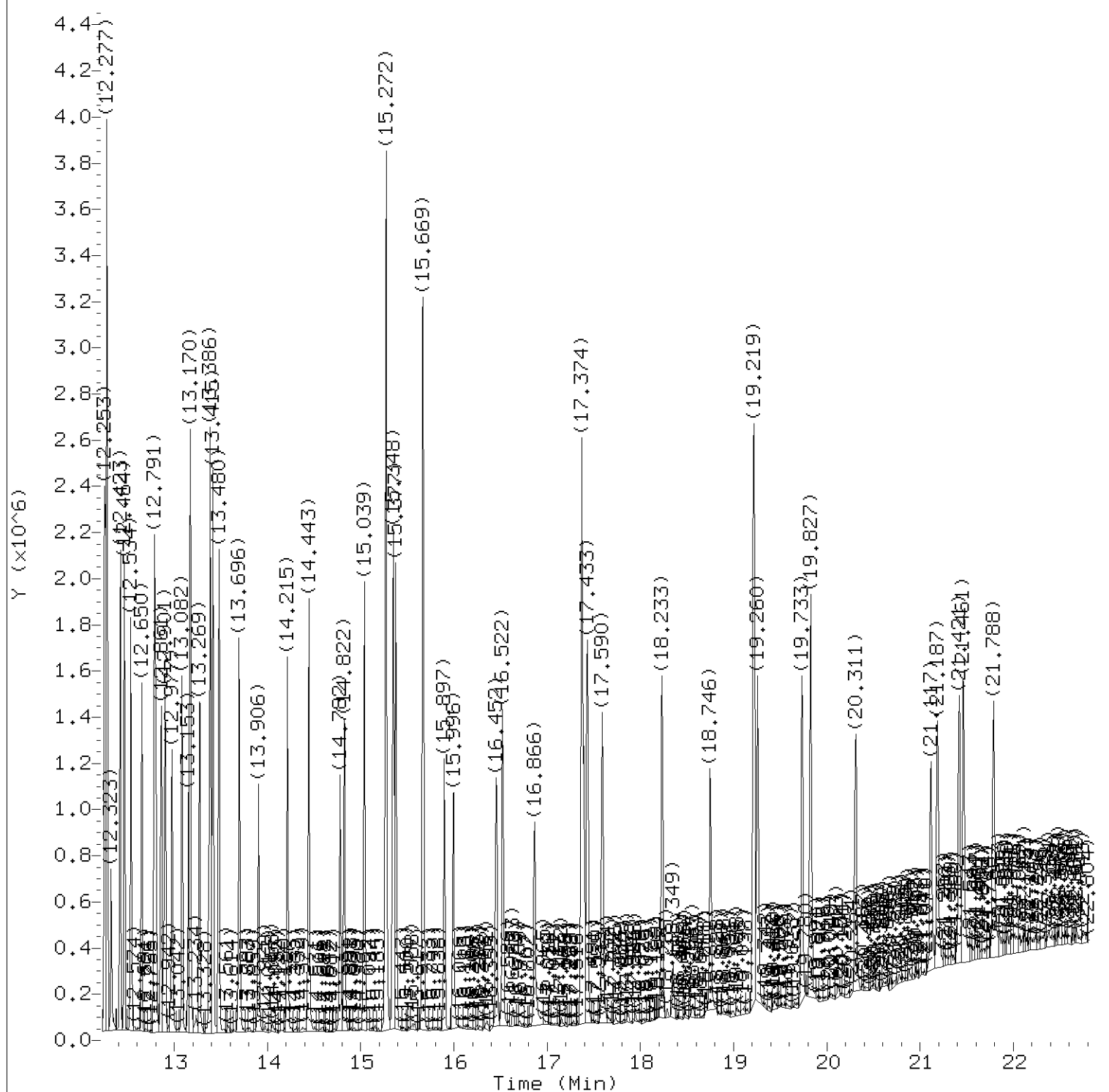
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0276.d
Injection date and time: 11-MAR-2020 13:12

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0276.d
 Injection date and time: 11-MAR-2020 13:12

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.140	88	157952	3.562
5) N-Nitrosodimethylamine	(1)	2.701	74	233252	3.315
6) Pyridine	(1)	2.771	79	375079	3.293
8) 2-Picoline	(1)	3.962	93	378442	3.535
9) N-Nitrosomethylethylamine	(1)	4.149	88	167429	3.643
10) Methyl methanesulfonate	(1)	4.610	80	236840	3.519
12) \$2-Fluorophenol	(1)	4.861	112	601194	6.947
14) N-Nitrosodiethylamine	(1)	5.194	102	150710	3.533
16) Ethyl methanesulfonate	(1)	5.649	109	149704	3.594
43) Total Cresols	(1)			604813	6.935
17) Benzaldehyde	(1)	6.117	77	334689	4.141
18) \$Phenol-d6	(1)	6.239	99	800673	6.821
19) Phenol	(1)	6.262	94	479225	3.567
20) Aniline	(1)	6.280	93	529333	3.508
23) bis(2-Chloroethyl) ether	(1)	6.403	93	339192	3.564
24) 2-Chlorophenol	(1)	6.443	128	282485	3.467
25) 1,3-Dichlorobenzene	(1)	6.677	146	323419	3.489
26) *1,4-Dichlorobenzene-d4	(1)	6.770	152	293073	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	328355	3.495
28) Benzyl alcohol	(1)	6.987	108	175534	3.237
29) 1,2-Dichlorobenzene	(1)	7.010	146	316729	3.524
31) Indene	(1)	7.150	115	453093	3.473
32) 2-Methylphenol	(1)	7.168	108	290049	3.562
35) bis(2-Chloroisopropyl) ether	(1)	7.208	45	443840	3.564
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.208	45	443840	3.564
36) N-Nitrosopyrrolidine	(1)	7.337	100	159957	3.535
100) Isosafrole	(3)			241056	3.813
37) Acetophenone	(1)	7.384	105	470762	3.639
38) 4-Methylphenol	(1)	7.401	108	314764	3.373
39) N-Nitroso-di-n-propylamine	(1)	7.401	70	276857	3.385
40) N-Nitrosomorpholine	(1)	7.407	56	231293	3.485
41) o-Toluidine	(1)	7.430	106	484182	3.493
44) Hexachloroethane	(1)	7.524	117	160207	3.509
45) \$Nitrobenzene-d5	(2)	7.600	82	864358	7.265
46) Nitrobenzene	(2)	7.629	77	409008	3.480
50) N-Nitrosopiperidine	(2)	7.862	114	140668	3.790
52) Isophorone	(2)	8.008	82	672784	3.491
125) 2,4,2,6-Dinitrotoluenes	(3)			296903	7.392
53) 2-Nitrophenol	(2)	8.119	139	155179	3.807
55) 2,4-Dimethylphenol	(2)	8.224	107	342783	3.718

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0276.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
58) Benzoic acid	(2)	8.318	105	331642	6.549
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	133351	3.531
57) bis(2-Chloroethoxy)methane	(2)	8.382	93	387318	3.603
62) 2,4-Dichlorophenol	(2)	8.493	162	236782	3.571
65) 1,2,4-Trichlorobenzene	(2)	8.627	180	271455	3.599
68)*Naphthalene-d8	(2)	8.709	136	1039420	5.000
69) Naphthalene	(2)	8.738	128	799671	3.710
151) Diallate trans/cis	(4)			259026	3.730
70) 4-Chloroaniline	(2)	8.843	127	314509	3.569
71) 2,6-Dichlorophenol	(2)	8.855	162	221628	3.470
72) Hexachloropropene	(2)	8.890	213	208647	3.578
74) Hexachlorobutadiene	(2)	8.966	225	185125	3.671
78) Quinoline	(2)	9.264	129	473880	3.511
79) Caprolactam	(2)	9.345	113	80792	3.903
80) N-Nitrosodi-n-butylamine	(2)	9.416	84	228065	3.426
83) 4-Chloro-3-methylphenol	(2)	9.637	107	239258	3.338
85) Safrole	(2)	9.737	162	207111	3.607
86) 2-Methylnaphthalene	(2)	9.848	142	519426	3.714
87) 1-Methylnaphthalene	(2)	9.999	142	501154	3.754
88) Hexachlorocyclopentadiene	(3)	10.110	237	202952	3.798
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.110	216	271524	3.814
91) cis-Isosafrole	(3)	10.210	162	40617	0.702
93) 2,4,6-Trichlorophenol	(3)	10.303	196	165931	3.583
95) 2,4,5-Trichlorophenol	(3)	10.350	196	183723	3.712
96)\$2-Fluorobiphenyl	(3)	10.461	172	1174284	7.486
97) trans-Isosafrole	(3)	10.566	162	200439	3.111
98) 1,1'-Biphenyl	(3)	10.607	154	632020	3.969
99) 2-Chloronaphthalene	(3)	10.613	162	516980	3.743
101) 1-Chloronaphthalene	(3)	10.648	162	491433	3.831
103) Diphenyl ether	(3)	10.788	170	338920	3.689
104) 2-Nitroaniline	(3)	10.794	138	139571	3.438
108) 1,4-Naphthoquinone	(3)	10.910	158	200546	3.722
109) 1,4-Dinitrobenzene	(3)	11.033	168	71315	3.431
110) Dimethylphthalate	(3)	11.132	163	552871	3.687
111) 1,3-Dinitrobenzene	(3)	11.144	168	80675	3.410
113) 2,6-Dinitrotoluene	(3)	11.208	165	127181	3.679
114) Acenaphthylene	(3)	11.272	152	702149	3.888
117) 3-Nitroaniline	(3)	11.448	138	130308	3.869
118)*Acenaphthene-d10	(3)	11.500	164	478800	5.000
119) Acenaphthene	(3)	11.547	153	478146	3.755

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0276.d
 Injection date and time: 11-MAR-2020 13:12

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
120) 2,4-Dinitrophenol	(3)	11.611	184	142472	7.228
121) 4-Nitrophenol	(3)	11.722	109	110482	3.465
122) Pentachlorobenzene	(3)	11.745	250	231783	3.834
124) Dibenzofuran	(3)	11.804	168	671208	3.630
123) 2,4-Dinitrotoluene	(3)	11.810	165	169722	3.713
126) 1-Naphthylamine	(3)	11.909	143	445861	3.596
127) 2,3,4,6-Tetrachlorophenol	(3)	11.973	232	137263	3.680
128) 2-Naphthylamine	(3)	12.014	143	458412	3.768
129) Diethylphthalate	(3)	12.172	149	517718	3.523
131) Fluorene	(3)	12.253	166	545237	3.825
130) Thionazin	(3)	12.265	107	108065	3.874
133) 5-Nitro-o-toluidine	(3)	12.271	152	144417	3.773
134) 4-Nitroaniline	(3)	12.277	138	139850	3.904
132) 4-Chlorophenyl-phenylether	(3)	12.277	204	282057	3.837
135) 4,6-Dinitro-2-methylphenol	(4)	12.323	198	88475	3.428
136) N-Nitrosodiphenylamine	(4)	12.423	169	445140	3.675
137) NDPA as diphenylamine	(4)	12.423	169	445140	3.675
139) 1,2-Diphenylhydrazine	(4)	12.464	77	761887	3.744
140) \$2,4,6-Tribromophenol	(3)	12.534	330	149946	6.899
142) Tetraethyldithiopyrophosphate	(4)	12.650	97	115556	3.519
145) Diallate (peak 1)	(4)	12.785	86	181877	2.624
146) Phorate	(4)	12.791	75	377028	3.477
147) Phenacetin	(4)	12.802	108	269973	3.328
148) 4-Bromophenyl-phenylether	(4)	12.861	248	158271	3.685
149) Diallate (peak 2)	(4)	12.884	86	77149	1.106
150) Hexachlorobenzene	(4)	12.901	284	171901	3.755
152) Dimethoate	(4)	12.977	87	220486	3.318
153) Atrazine	(4)	13.082	200	162061	4.138
154) Pentachlorophenol	(4)	13.153	266	100200	3.286
156) Pentachloronitrobenzene	(4)	13.170	237	83487	3.513
155) 4-Aminobiphenyl	(4)	13.170	169	489094	3.608
157) Pronamide	(4)	13.269	173	238775	3.423
158) *Phenanthrene-d10	(4)	13.386	188	884910	5.000
159) Dinoseb	(4)	13.409	211	107367	3.123
160) Phenanthrene	(4)	13.415	178	764725	3.727
162) Anthracene	(4)	13.480	178	792416	3.846
168) Carbazole	(4)	13.696	167	682771	3.500
169) Methyl parathion	(4)	13.906	109	184266	3.368
170) Di-n-butylphthalate	(4)	14.215	149	890383	3.471
173) 4-Nitroquinoline-1-oxide	(4)	14.443	190	69039	2.856

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\$ = Compound is a surrogate standard.

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

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page 3 of 4

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0276.d
 Injection date and time: 11-MAR-2020 13:12

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
172) Parathion	(4)	14.443	109	95081	2.876
174) Octachlorostyrene	(4)	14.782	308	67909	3.377
176) Isodrin	(4)	14.828	193	112267	3.928
227) Total PAHs	(6)			12915780	66.370
178) Fluoranthene	(4)	15.039	202	860494	3.551
179) Benzidine	(5)	15.272	184	1595188	11.049
180)*Pyrene-d10	(5)	15.348	212	886542	5.000
182) Pyrene	(5)	15.377	202	935352	3.915
184)\$Terphenyl-d14	(5)	15.669	244	1181300	7.236
187) p-Dimethylaminoazobenzene	(5)	15.897	225	147955	3.620
190) Chlorobenzilate	(5)	15.990	139	240382	3.304
192) 3,3'-Dimethylbenzidine	(5)	16.452	212	485336	3.409
193) Butylbenzylphthalate	(5)	16.522	149	360111	3.401
196) 2-Acetylaminofluorene	(5)	16.866	181	248767	3.067
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	284849	3.373
200) Benzo(a)anthracene	(5)	17.374	228	777616	3.705
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.398	231	152456	3.655
201) Chrysene	(5)	17.433	228	816393	3.880
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	516982	3.478
208) 6-Methylchrysene	(5)	18.233	242	581027	3.759
210) Di-n-octylphthalate	(6)	18.746	149	783600	2.925
211) Benzo(b)fluoranthene	(6)	19.213	252	840790	3.460
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.219	256	353041	3.307
213) Benzo(k)fluoranthene	(6)	19.260	252	850696	3.709
216) Benzo(a)pyrene	(6)	19.733	252	767256	3.514
218)*Perylene-d12	(6)	19.827	264	920556	5.000
220) 3-Methylcholanthrene	(6)	20.311	268	357407	3.345
222) Dibenz(a,h)acridine	(6)	21.117	279	515432	3.242
223) Dibenz(a,j)acridine	(6)	21.187	279	590530	3.428
224) Indeno(1,2,3-cd)pyrene	(6)	21.421	276	619577M	3.466
225) Dibenz(a,h)anthracene	(6)	21.467	278	664302	3.406
226) Benzo(g,h,i)perylene	(6)	21.794	276	680380	3.547

M = Compound was manually integrated.

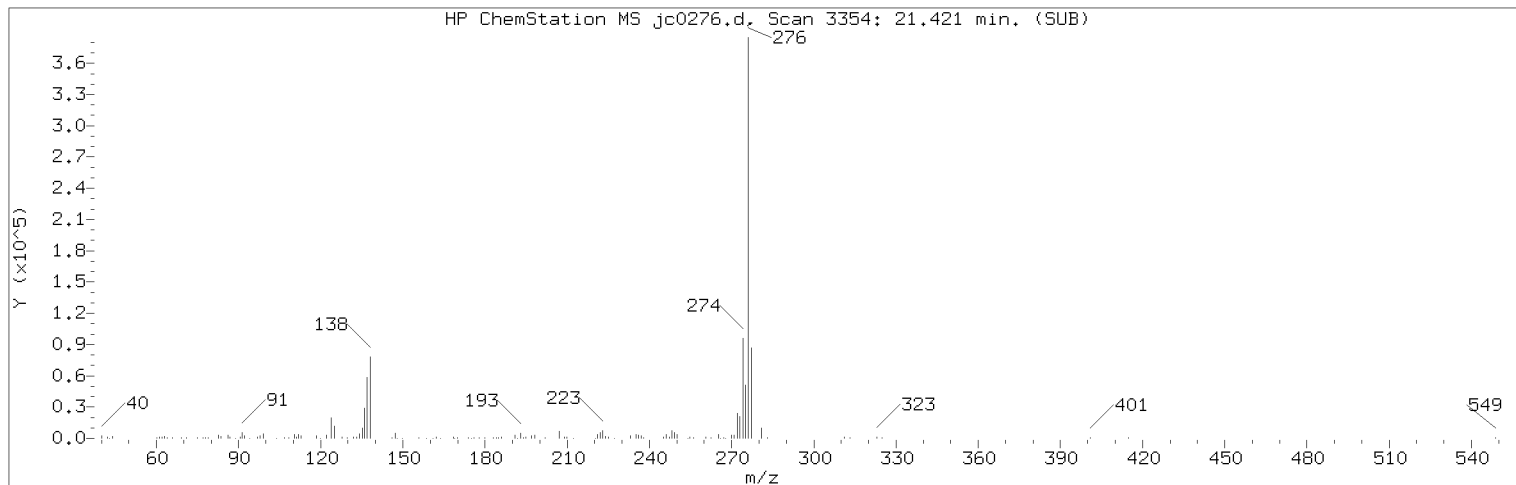
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

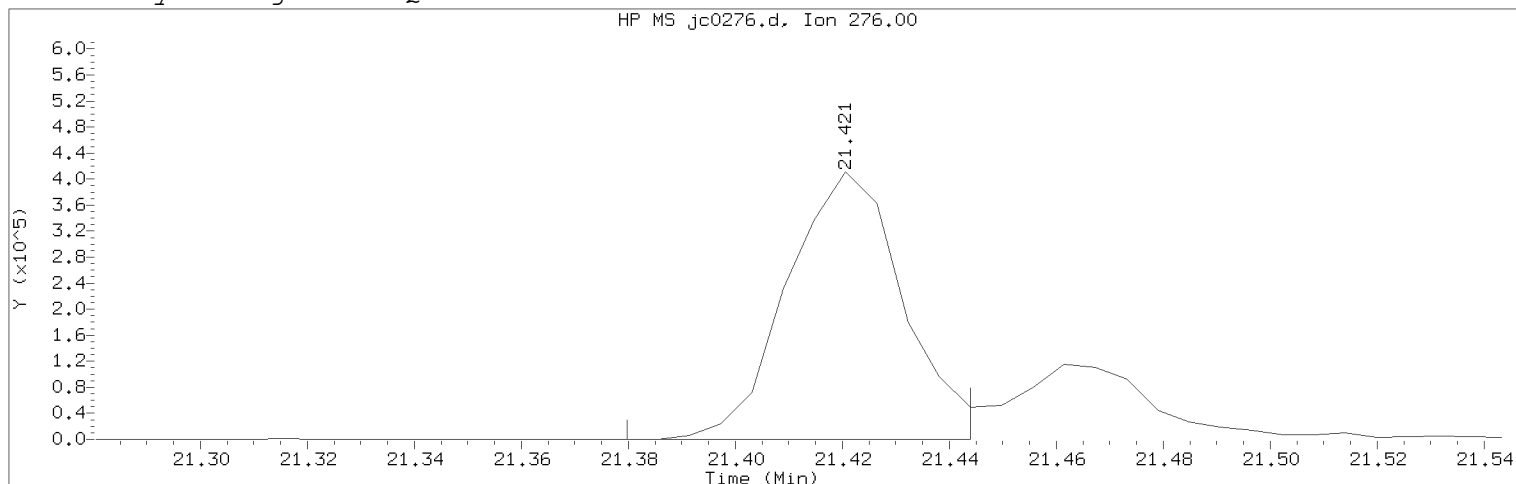
Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0276.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3354	
Retention Time (minutes)	: 21.421	
Quant Ion	: 276.00	
Area (flag)	: 619577M	
On-Column Amount (ng/ul)	: 3.4662	
Integration start scan	: 3346	Integration stop scan: 3357
Y at integration start	: 0	Y at integration end: 0

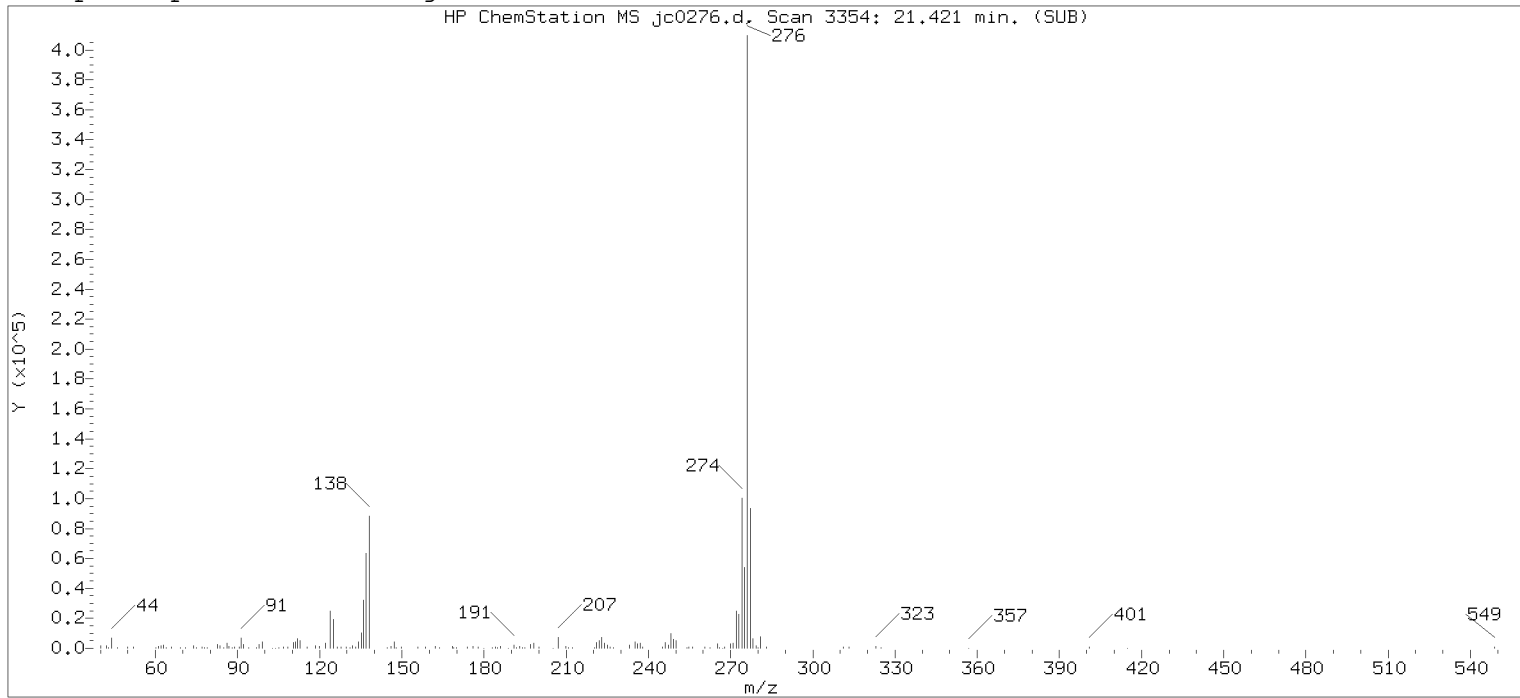
Reason for manual integration: improper integration

Analyst responsible for change:

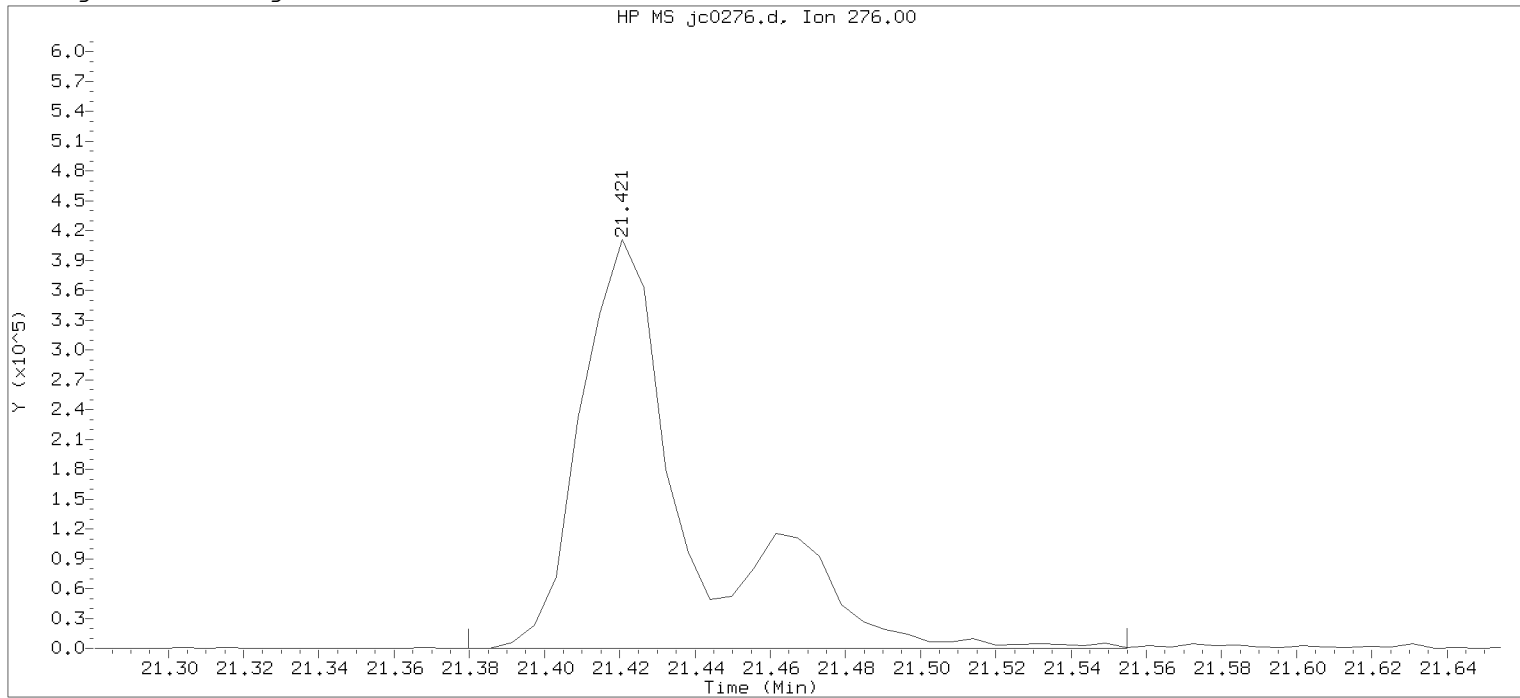
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0276.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 13:46

Date, time and analyst ID of latest file update: 11-Mar-2020 13:46 Automation

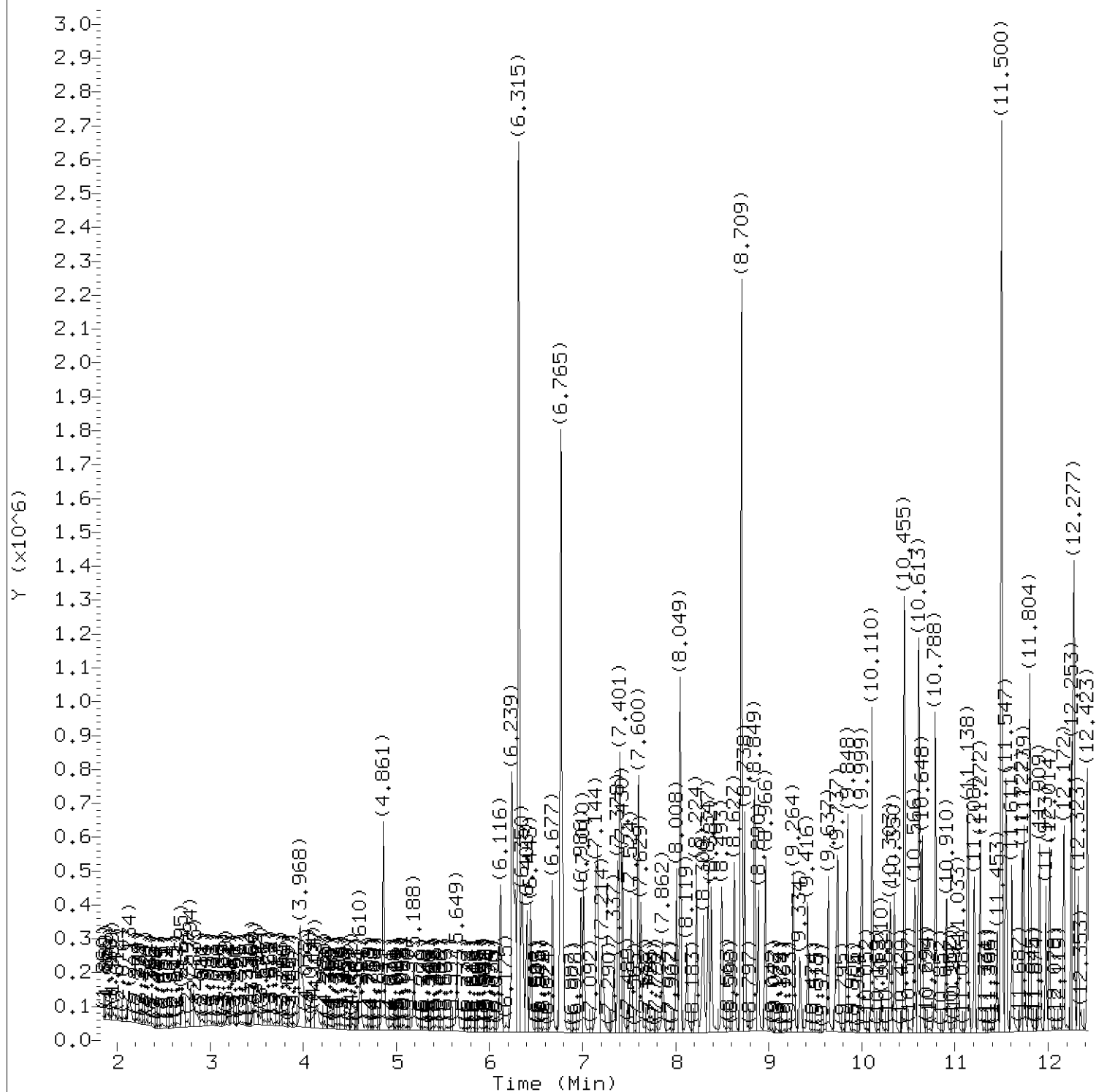
Sample Name: SSTD3.75

Lab Sample ID: rvSTD0340

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3354	
Retention Time (minutes)	: 21.421	
Quant Ion	: 276.00	
Area	: 829928	
On-column Amount (ng/ul)	: 4.0941	
Integration start scan	: 3346	Integration stop scan: 3376
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature use **RAF59** Page 1231 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0277.d
Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

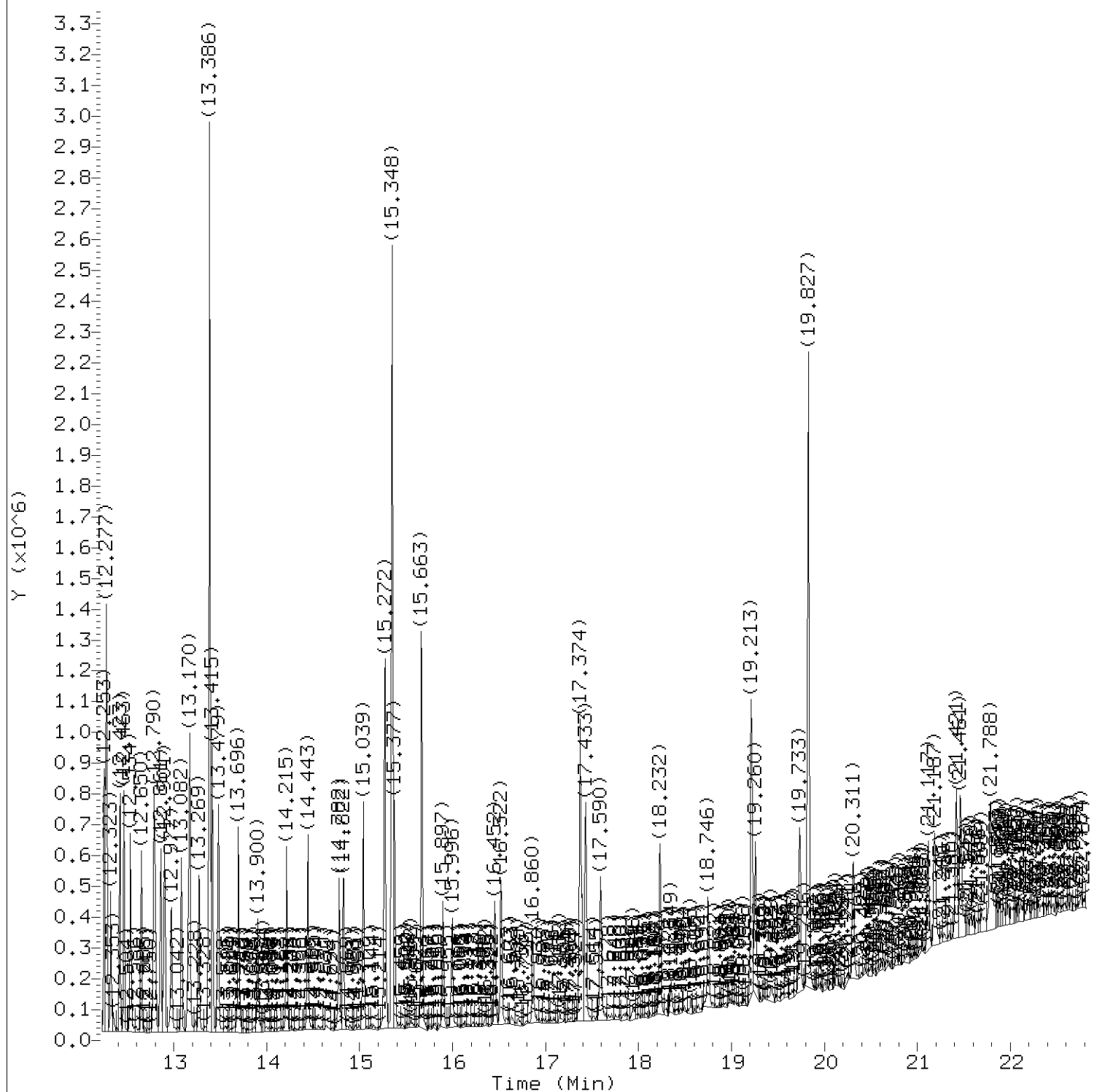
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0277.d
Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0277.d
 Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.140	88	60420	1.215
5) N-Nitrosodimethylamine	(1)	2.695	74	91354	1.166
6) Pyridine	(1)	2.835	79	120469A	0.979
8) 2-Picoline	(1)	3.968	93	133602	1.128
9) N-Nitrosomethylethylamine	(1)	4.155	88	65945M	1.269
10) Methyl methanesulfonate	(1)	4.610	80	87646	1.170
12) \$2-Fluorophenol	(1)	4.861	112	224579	2.332
14) N-Nitrosodiethylamine	(1)	5.188	102	54072	1.143
16) Ethyl methanesulfonate	(1)	5.655	109	49814	1.088
43) Total Cresols	(1)			217281	2.247
17) Benzaldehyde	(1)	6.116	77	122156	1.324
18) \$Phenol-d6	(1)	6.239	99	283478	2.194
19) Phenol	(1)	6.257	94	166361	1.121
20) Aniline	(1)	6.274	93	193117	1.153
23) bis(2-Chloroethyl) ether	(1)	6.403	93	131146	1.226
24) 2-Chlorophenol	(1)	6.443	128	103109	1.141
25) 1,3-Dichlorobenzene	(1)	6.677	146	118715	1.153
26) *1,4-Dichlorobenzene-d4	(1)	6.765	152	330545	5.000
27) 1,4-Dichlorobenzene	(1)	6.788	146	115148	1.111
28) Benzyl alcohol	(1)	6.986	108	62019	1.047
29) 1,2-Dichlorobenzene	(1)	7.010	146	113791	1.142
31) Indene	(1)	7.144	115	169349	1.166
32) 2-Methylphenol	(1)	7.167	108	99602	1.109
35) bis(2-Chloroisopropyl) ether	(1)	7.214	45	157644	1.142
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.214	45	157644	1.142
36) N-Nitrosopyrrolidine	(1)	7.337	100	49944	1.015
37) Acetophenone	(1)	7.378	105	152080	1.072
100) Isosafrole	(3)			83057	1.152
39) N-Nitroso-di-n-propylamine	(1)	7.401	70	97219	1.082
38) 4-Methylphenol	(1)	7.401	108	117679	1.138
40) N-Nitrosomorpholine	(1)	7.407	56	92061	1.233
41) o-Toluidine	(1)	7.430	106	170365	1.114
44) Hexachloroethane	(1)	7.518	117	61274	1.200
45) \$Nitrobenzene-d5	(2)	7.600	82	306959	2.445
46) Nitrobenzene	(2)	7.629	77	161138	1.286
50) N-Nitrosopiperidine	(2)	7.862	114	49524	1.257
52) Isophorone	(2)	8.008	82	240903	1.190
125) 2,4,2,6-Dinitrotoluenes	(3)			97675	2.153
53) 2-Nitrophenol	(2)	8.119	139	47135	1.115
55) 2,4-Dimethylphenol	(2)	8.224	107	123251	1.259

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0277.d
 Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
58) Benzoic acid	(2)	8.300	105	153672	2.980
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	50885	1.268
57) bis(2-Chloroethoxy)methane	(2)	8.382	93	136605	1.207
62) 2,4-Dichlorophenol	(2)	8.493	162	89501	1.269
65) 1,2,4-Trichlorobenzene	(2)	8.627	180	101670	1.268
68) *Naphthalene-d8	(2)	8.709	136	1101797	5.000
69) Naphthalene	(2)	8.738	128	297361	1.294
151) Diallyl trans/cis	(4)			94694	1.213
70) 4-Chloroaniline	(2)	8.843	127	114384	1.229
71) 2,6-Dichlorophenol	(2)	8.855	162	88277	1.295
72) Hexachloropropene	(2)	8.890	213	73901	1.204
74) Hexachlorobutadiene	(2)	8.966	225	67834	1.266
78) Quinoline	(2)	9.270	129	188686	1.307
79) Caprolactam	(2)	9.334	113	27515	1.253
80) N-Nitrosodi-n-butylamine	(2)	9.421	84	82031	1.176
83) 4-Chloro-3-methylphenol	(2)	9.637	107	89338	1.188
85) Safrole	(2)	9.742	162	82111	1.331
86) 2-Methylnaphthalene	(2)	9.848	142	185199	1.249
87) 1-Methylnaphthalene	(2)	9.999	142	175425	1.241
88) Hexachlorocyclopentadiene	(3)	10.110	237	73850	1.205
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.110	216	104637	1.268
91) cis-Isosafrole	(3)	10.210	162	12435	0.190
93) 2,4,6-Trichlorophenol	(3)	10.303	196	54582	1.052
95) 2,4,5-Trichlorophenol	(3)	10.350	196	62901	1.123
96) \$2-Fluorobiphenyl	(3)	10.455	172	445374	2.465
97) trans-Isosafrole	(3)	10.566	162	70622	0.962
98) 1,1'-Biphenyl	(3)	10.607	154	225299	1.229
99) 2-Chloronaphthalene	(3)	10.613	162	195091	1.227
101) 1-Chloronaphthalene	(3)	10.648	162	191326	1.284
103) Diphenyl ether	(3)	10.788	170	128516	1.217
104) 2-Nitroaniline	(3)	10.794	138	60561	1.284
108) 1,4-Naphthoquinone	(3)	10.910	158	66854	1.100
109) 1,4-Dinitrobenzene	(3)	11.033	168	26703	1.133
110) Dimethylphthalate	(3)	11.132	163	217756	1.256
111) 1,3-Dinitrobenzene	(3)	11.144	168	28946	1.087
113) 2,6-Dinitrotoluene	(3)	11.208	165	40274	1.042
114) Acenaphthylene	(3)	11.272	152	267091	1.276
117) 3-Nitroaniline	(3)	11.447	138	41208	1.087
118) *Acenaphthene-d10	(3)	11.500	164	553159	5.000
119) Acenaphthene	(3)	11.547	153	183283	1.246

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0277.d
 Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
120) 2,4-Dinitrophenol	(3)	11.611	184	74015	3.250
121) 4-Nitrophenol	(3)	11.722	109	74331	2.018
122) Pentachlorobenzene	(3)	11.739	250	87020	1.247
123) 2,4-Dinitrotoluene	(3)	11.804	165	57401	1.111
124) Dibenzofuran	(3)	11.804	168	262851	1.234
126) 1-Naphthylamine	(3)	11.909	143	168628	1.177
127) 2,3,4,6-Tetrachlorophenol	(3)	11.973	232	45691	1.088
128) 2-Naphthylamine	(3)	12.014	143	167784	1.194
129) Diethylphthalate	(3)	12.172	149	207550	1.227
131) Fluorene	(3)	12.253	166	210124	1.272
130) Thionazin	(3)	12.265	107	40921	1.266
133) 5-Nitro-o-toluidine	(3)	12.271	152	49329	1.136
134) 4-Nitroaniline	(3)	12.277	138	43581	1.081
132) 4-Chlorophenyl-phenylether	(3)	12.282	204	102451	1.214
135) 4,6-Dinitro-2-methylphenol	(4)	12.323	198	59135	2.025
136) N-Nitrosodiphenylamine	(4)	12.423	169	157656	1.166
137) NDPA as diphenylamine	(4)	12.423	169	157656	1.166
139) 1,2-Diphenylhydrazine	(4)	12.463	77	293501	1.271
140) \$2,4,6-Tribromophenol	(3)	12.534	330	56033	2.272
142) Tetraethyldithiopyrophosphate	(4)	12.650	97	40002	1.102
145) Diallate (peak 1)	(4)	12.785	86	70289	0.901
146) Phorate	(4)	12.790	75	125540	1.055
147) Phenacetin	(4)	12.802	108	93623	1.053
148) 4-Bromophenyl-phenylether	(4)	12.861	248	60719	1.250
149) Diallate (peak 2)	(4)	12.884	86	24405	0.312
150) Hexachlorobenzene	(4)	12.901	284	66437	1.278
152) Dimethoate	(4)	12.977	87	83267	1.129
153) Atrazine	(4)	13.082	200	55649	1.255
154) Pentachlorophenol	(4)	13.152	266	37498	1.111
156) Pentachloronitrobenzene	(4)	13.152	237	29353	1.115
155) 4-Aminobiphenyl	(4)	13.170	169	181753	1.195
157) Pronamide	(4)	13.275	173	83906	1.090
158) *Phenanthrene-d10	(4)	13.386	188	1001038	5.000
159) Dinoseb	(4)	13.409	211	43161	1.110
160) Phenanthrene	(4)	13.415	178	287887	1.242
162) Anthracene	(4)	13.479	178	273775	1.185
168) Carbazole	(4)	13.696	167	247635	1.142
169) Methyl parathion	(4)	13.900	109	61217	1.025
170) Di-n-butylphthalate	(4)	14.215	149	314700	1.109
173) 4-Nitroquinoline-1-oxide	(4)	14.443	190	24202	0.885

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

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page 3 of 4

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0277.d
 Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
172) Parathion	(4)	14.443	109	37253	1.031
174) Octachlorostyrene	(4)	14.782	308	32362	1.391
176) Isodrin	(4)	14.828	193	38726	1.206
227) Total PAHs	(6)			4794802	22.045
178) Fluoranthene	(4)	15.039	202	345111	1.258
179) Benzidine	(5)	15.272	184	579664	3.416
180)*Pyrene-d10	(5)	15.348	212	1042094	5.000
182) Pyrene	(5)	15.377	202	346388	1.236
184)\$Terphenyl-d14	(5)	15.669	244	452116	2.379
187) p-Dimethylaminoazobenzene	(5)	15.897	225	49463	1.061
190) Chlorobenzilate	(5)	15.996	139	82119	0.999
192) 3,3'-Dimethylbenzidine	(5)	16.452	212	165000	1.022
193) Butylbenzylphthalate	(5)	16.522	149	132192	1.089
196) 2-Acetylaminofluorene	(5)	16.860	181	86493	0.907
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	109525	1.125
200) Benzo(a)anthracene	(5)	17.374	228	278546	1.145
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.392	231	59812	1.220
201) Chrysene	(5)	17.433	228	307564	1.244
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	166383	0.992
208) 6-Methylchrysene	(5)	18.232	242	204507	1.145
210) Di-n-octylphthalate	(6)	18.752	149	286272	1.008
211) Benzo(b)fluoranthene	(6)	19.213	252	303082	1.148
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.219	256	137506	1.182
213) Benzo(k)fluoranthene	(6)	19.260	252	302134	1.203
216) Benzo(a)pyrene	(6)	19.733	252	289365	1.209
218)*Perylene-d12	(6)	19.827	264	1014062	5.000
220) 3-Methylcholanthrene	(6)	20.311	268	114178	1.008
222) Dibenz(a,h)acridine	(6)	21.117	279	195745	1.138
223) Dibenz(a,j)acridine	(6)	21.187	279	205749	1.109
224) Indeno(1,2,3-cd)pyrene	(6)	21.421	276	227667M	1.169
225) Dibenz(a,h)anthracene	(6)	21.467	278	251459	1.181
226) Benzo(g,h,i)perylene	(6)	21.788	276	263341	1.247

M = Compound was manually integrated.

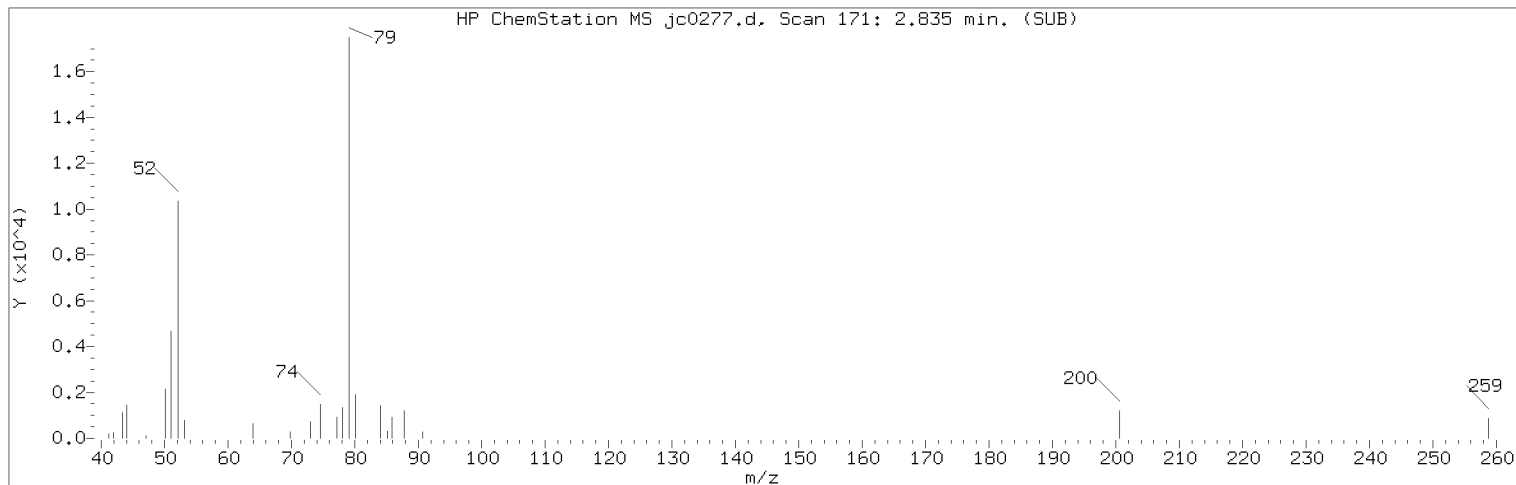
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

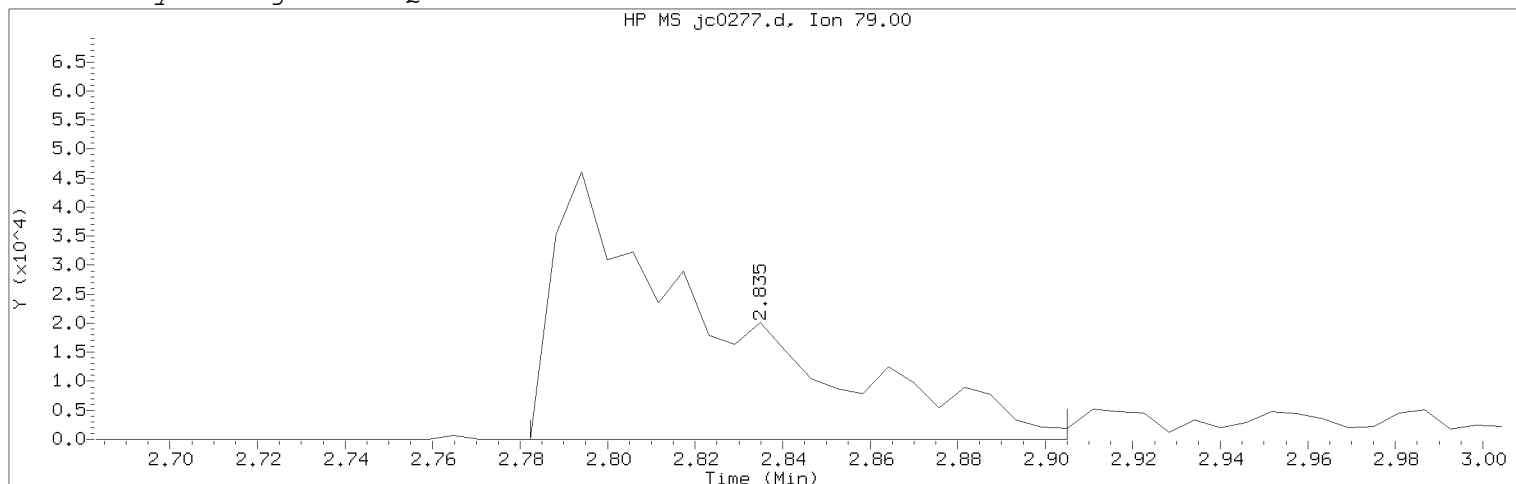
Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0277.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 171	
Retention Time (minutes)	: 2.835	
Quant Ion	: 79.00	
Area (flag)	: 120469A	
On-Column Amount (ng/ul)	: 0.9786	
Integration start scan	: 161	Integration stop scan: 182
Y at integration start	: 0	Y at integration end: 0

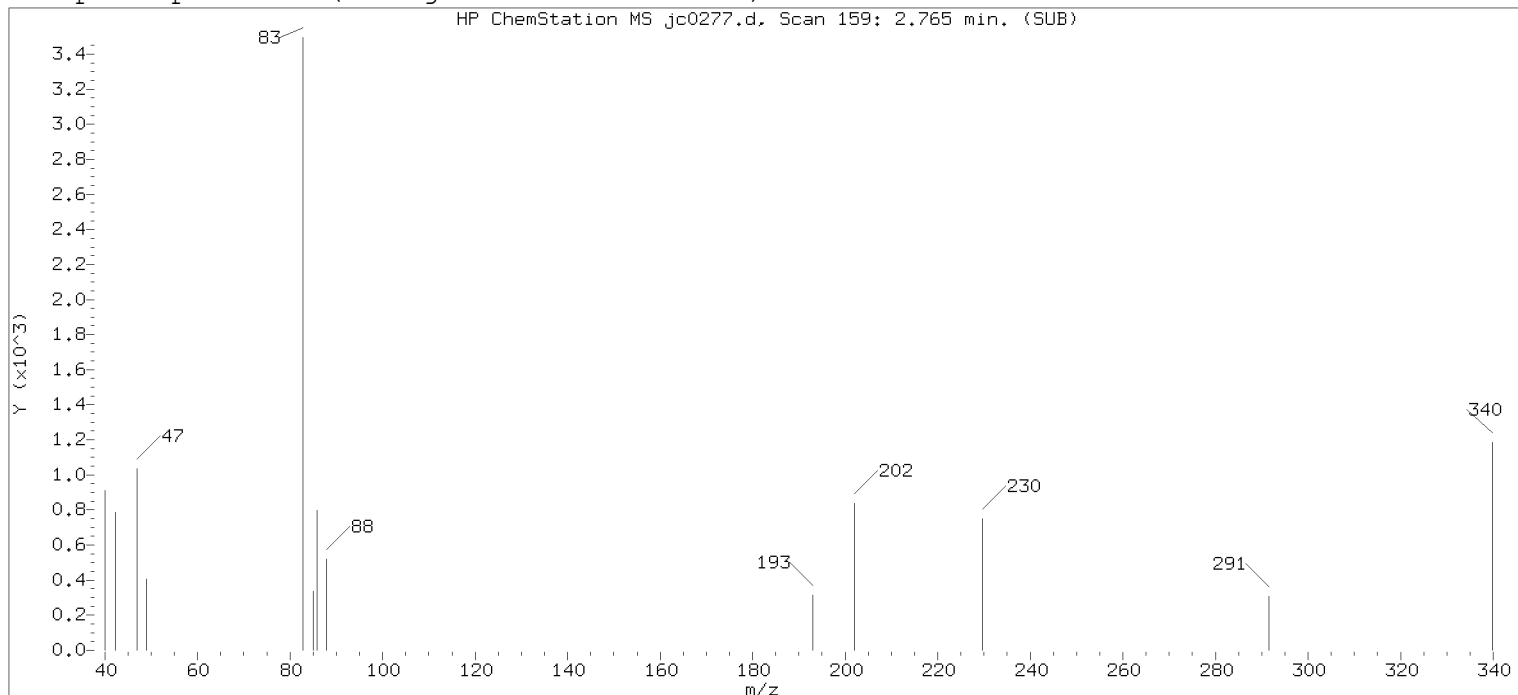
Reason for manual integration: improper integration

Analyst responsible for change:

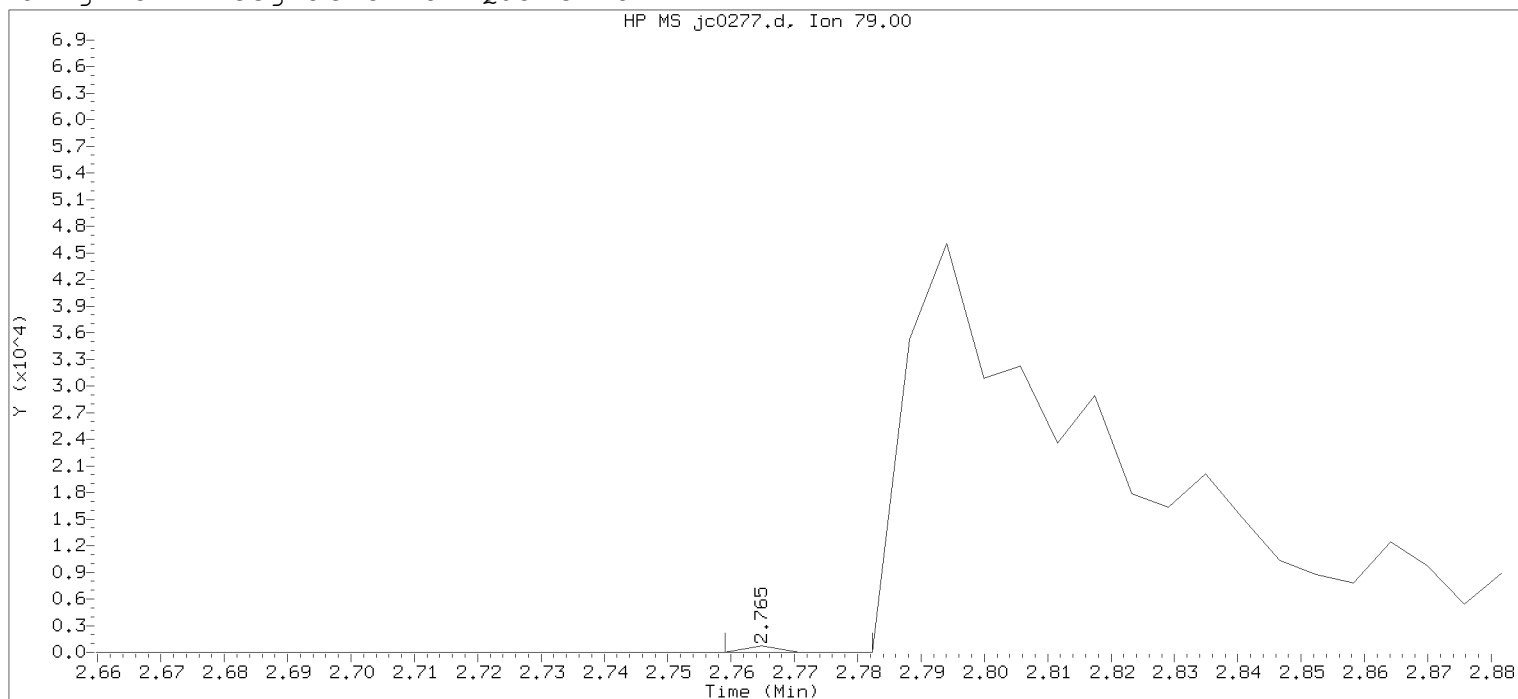
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0277.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:15

Date, time and analyst ID of latest file update: 11-Mar-2020 14:15 Automation

Sample Name: SSTD1.25

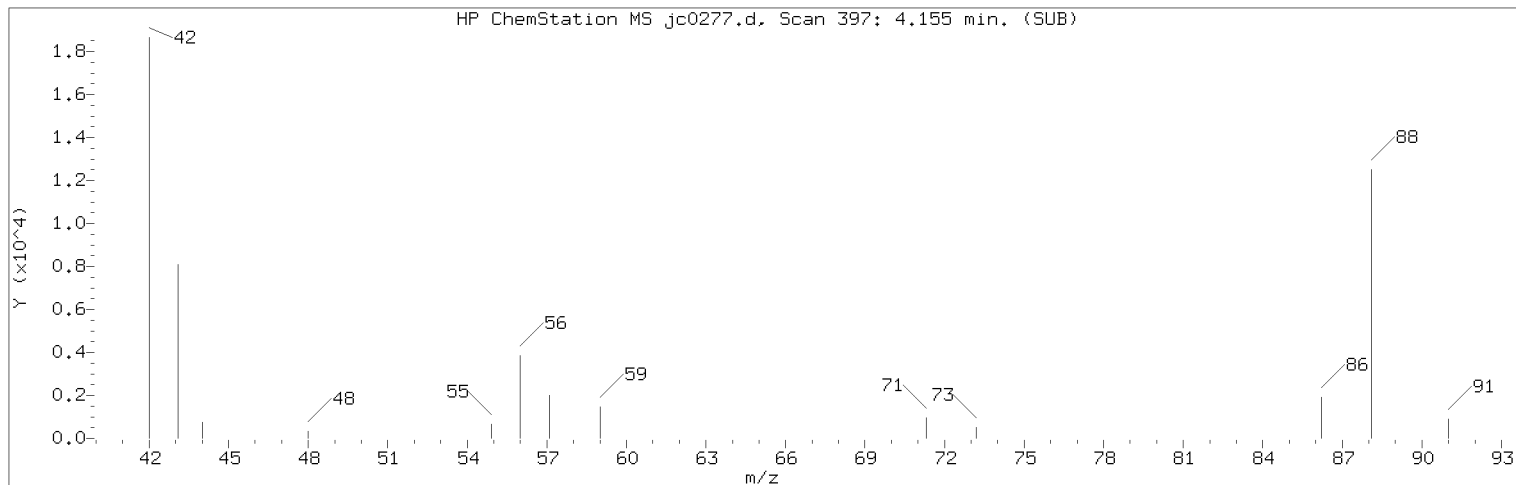
Lab Sample ID: rvSTD0340

Compound Number : 6
 Compound Name : Pyridine
 Scan Number : 159
 Retention Time (minutes) : 2.765
 Quant Ion : 79.00
 Area : 246
 On-column Amount (ng/ul) : 0.0024
 Integration start scan : 157
 Y at integration start : 0

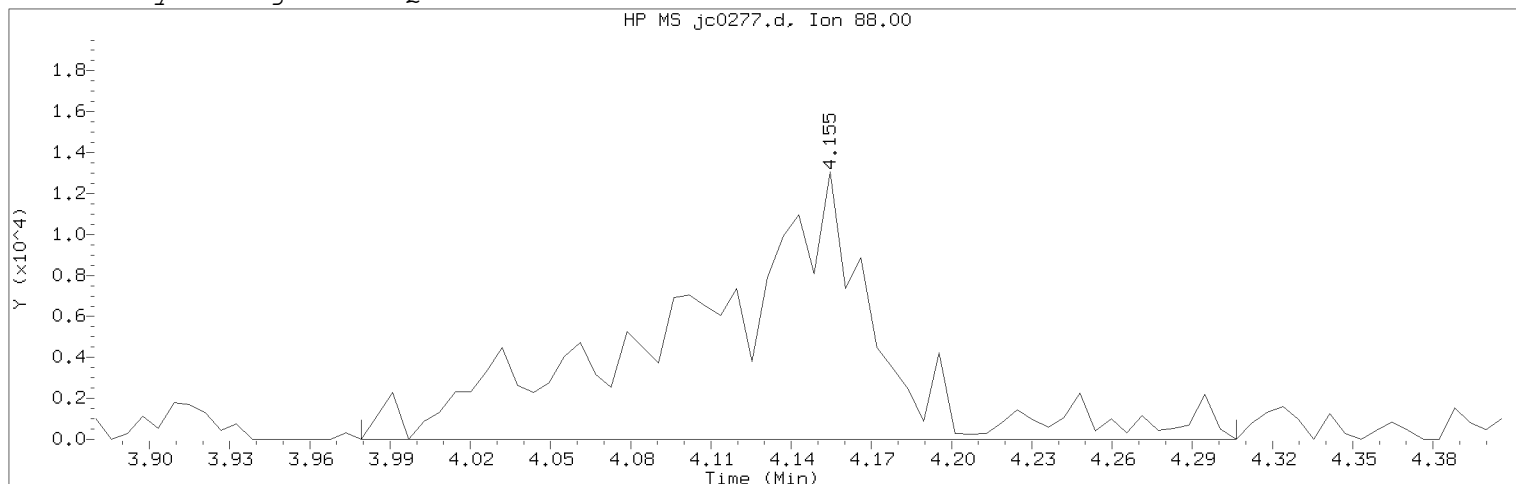
Integration stop scan: 161
 Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.
 Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0277.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

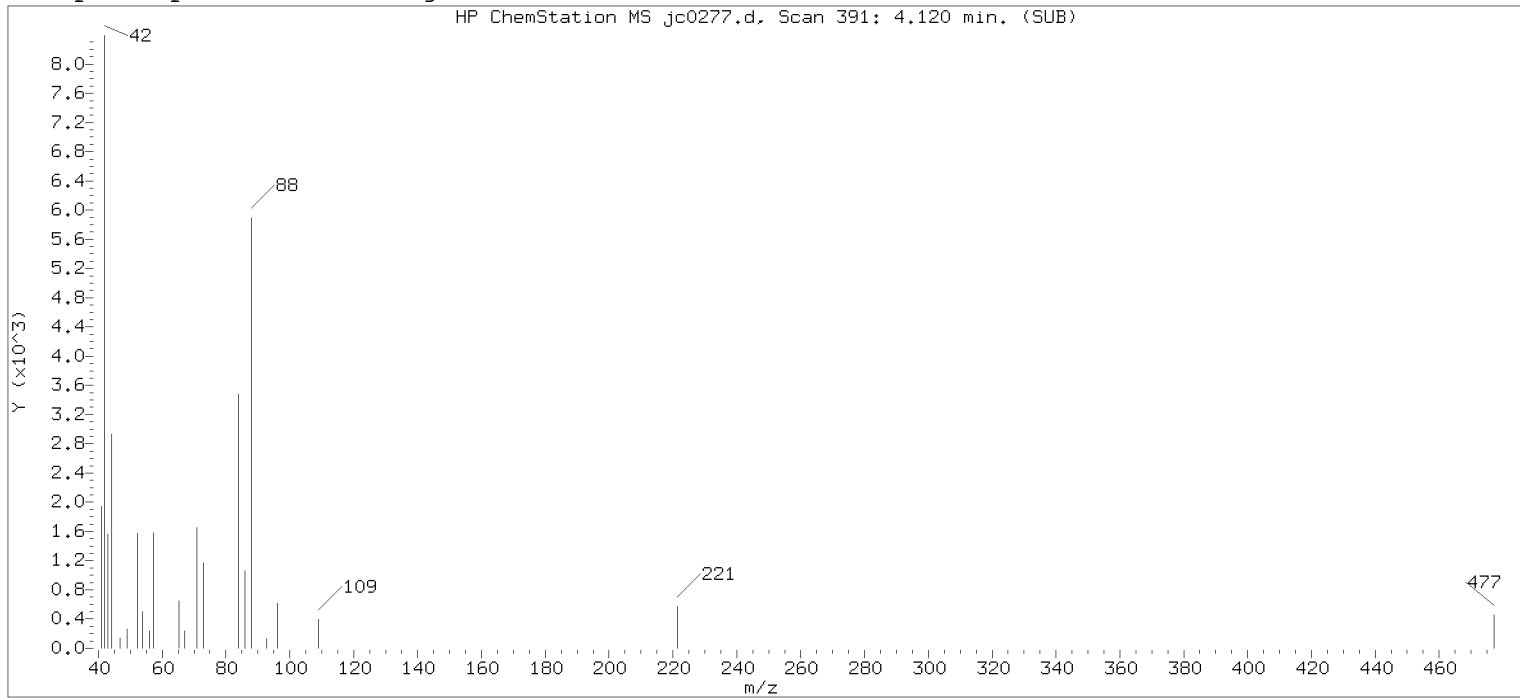
Compound Number	: 9	
Compound Name	: N-Nitrosomethylethylamine	
Scan Number	: 397	
Retention Time (minutes)	: 4.155	
Quant Ion	: 88.00	
Area (flag)	: 65945M	
On-Column Amount (ng/ul)	: 1.2686	
Integration start scan	: 366	Integration stop scan: 422
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

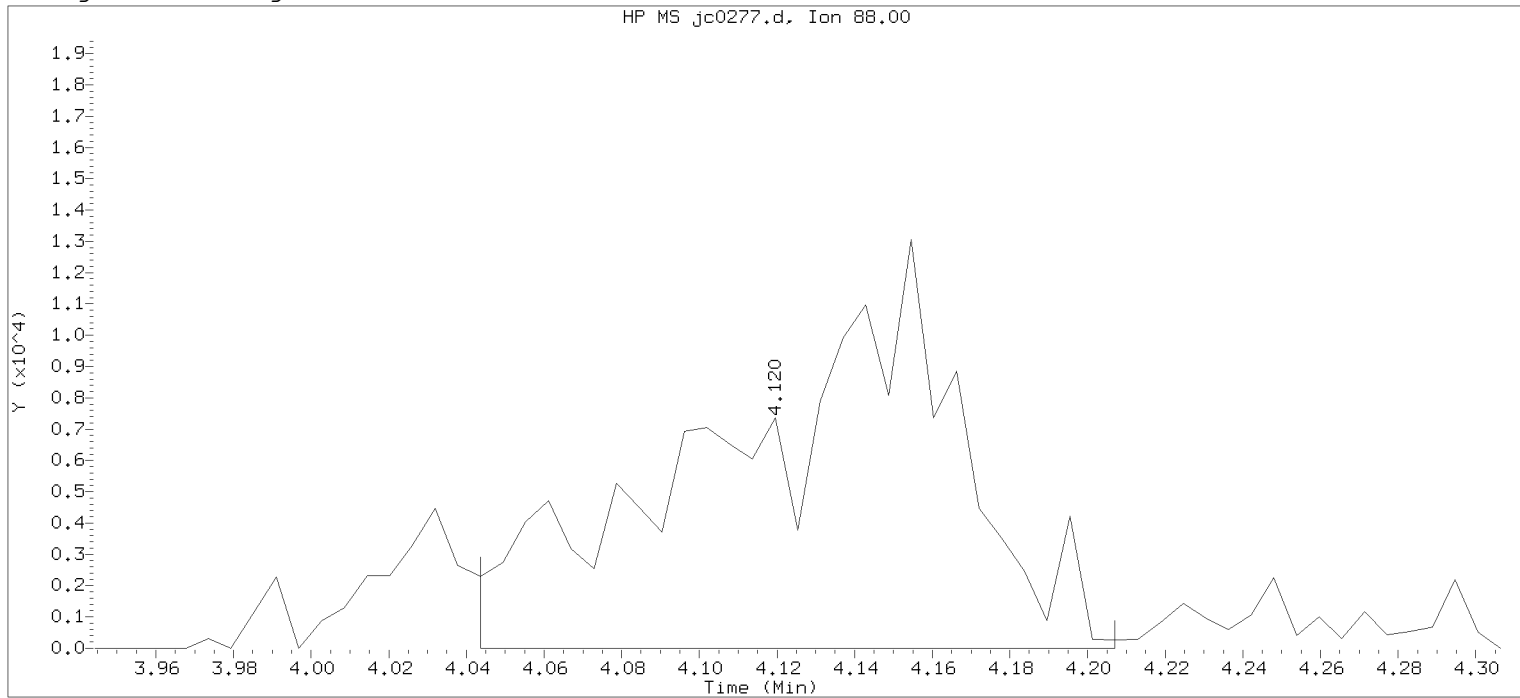
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0277.d

Injection date and time: 11-MAR-2020 13:42

Instrument ID: HP23264.i

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:15

Date, time and analyst ID of latest file update: 11-Mar-2020 14:15 Automation

Sample Name: SSTD1.25

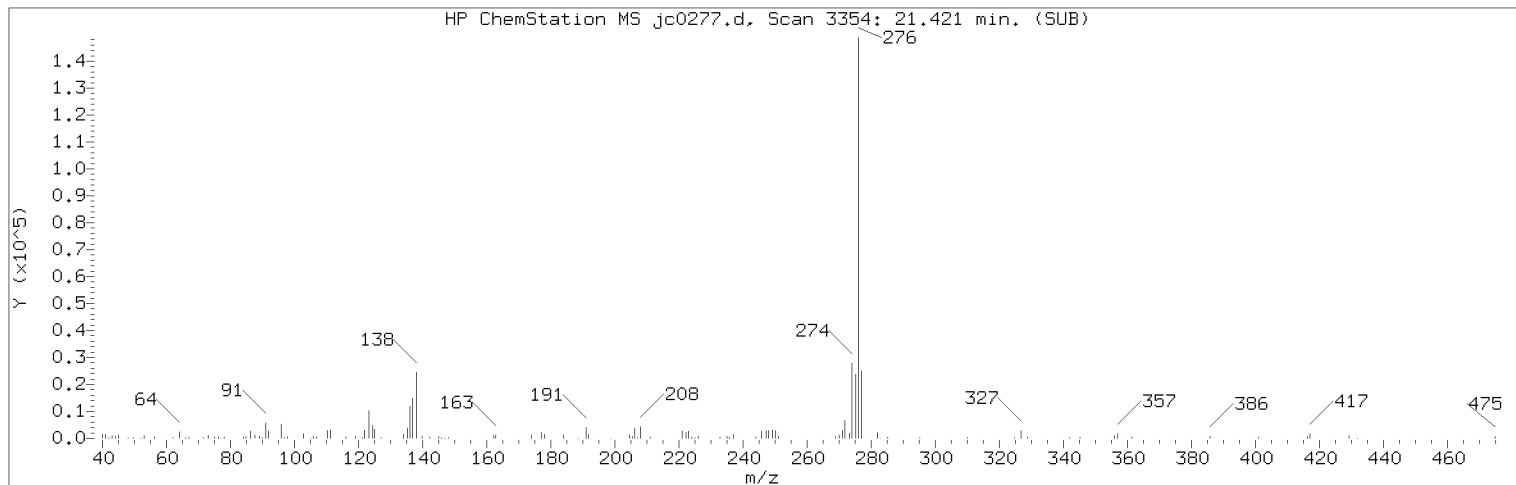
Lab Sample ID: rvSTD0340

Compound Number	: 9	
Compound Name	: N-Nitrosomethylethylamine	
Scan Number	: 391	
Retention Time (minutes)	: 4.120	
Quant Ion	: 88.00	
Area	: 53146	
On-column Amount (ng/ul)	: 1.0804	
Integration start scan	: 377	Integration stop scan: 405
Y at integration start	: 0	Y at integration end: 0

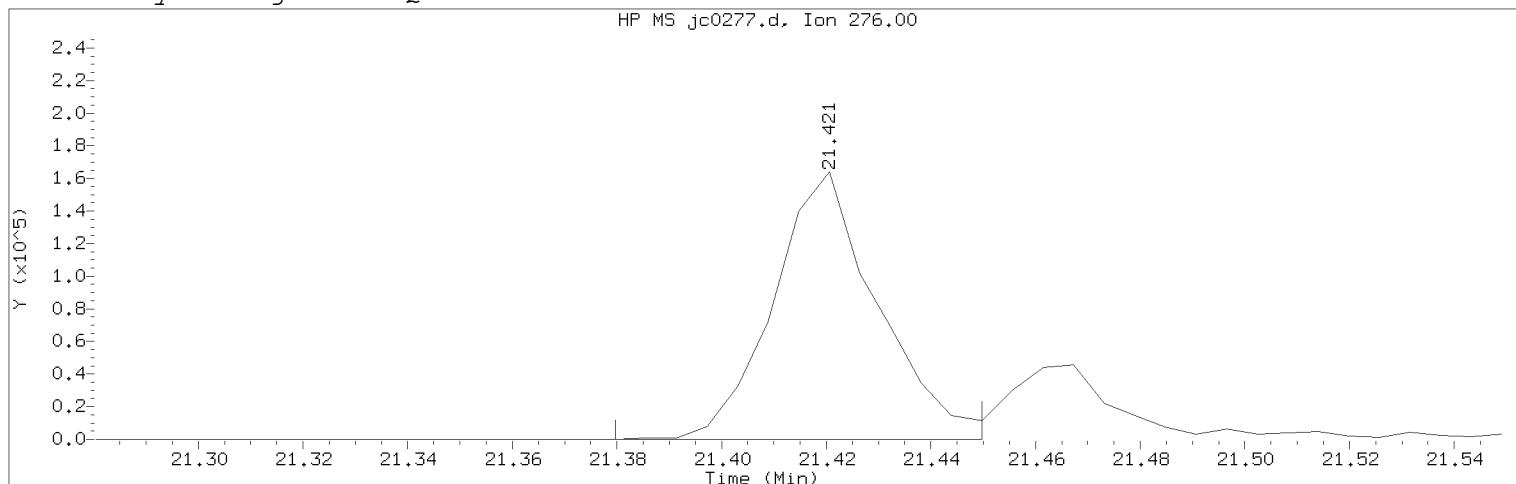
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1241 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0277.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compound Number : 224

Compound Name : Indeno(1,2,3-cd)pyrene

Scan Number : 3354

Retention Time (minutes) : 21.421

Quant Ion : 276.00

Area (flag) : 227667M

On-Column Amount (ng/ul) : 1.1688

Integration start scan : 3346 Integration stop scan: 3358

Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Kira N. Beck

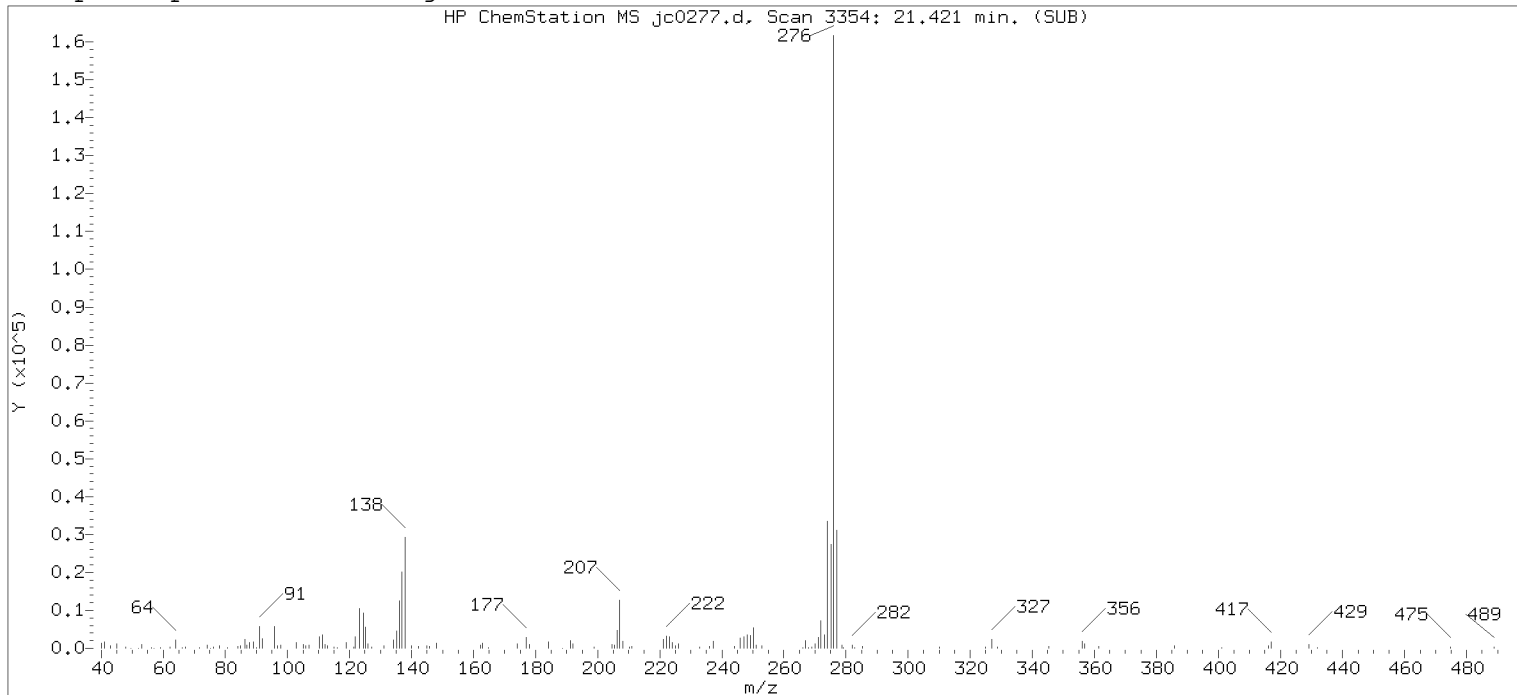
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

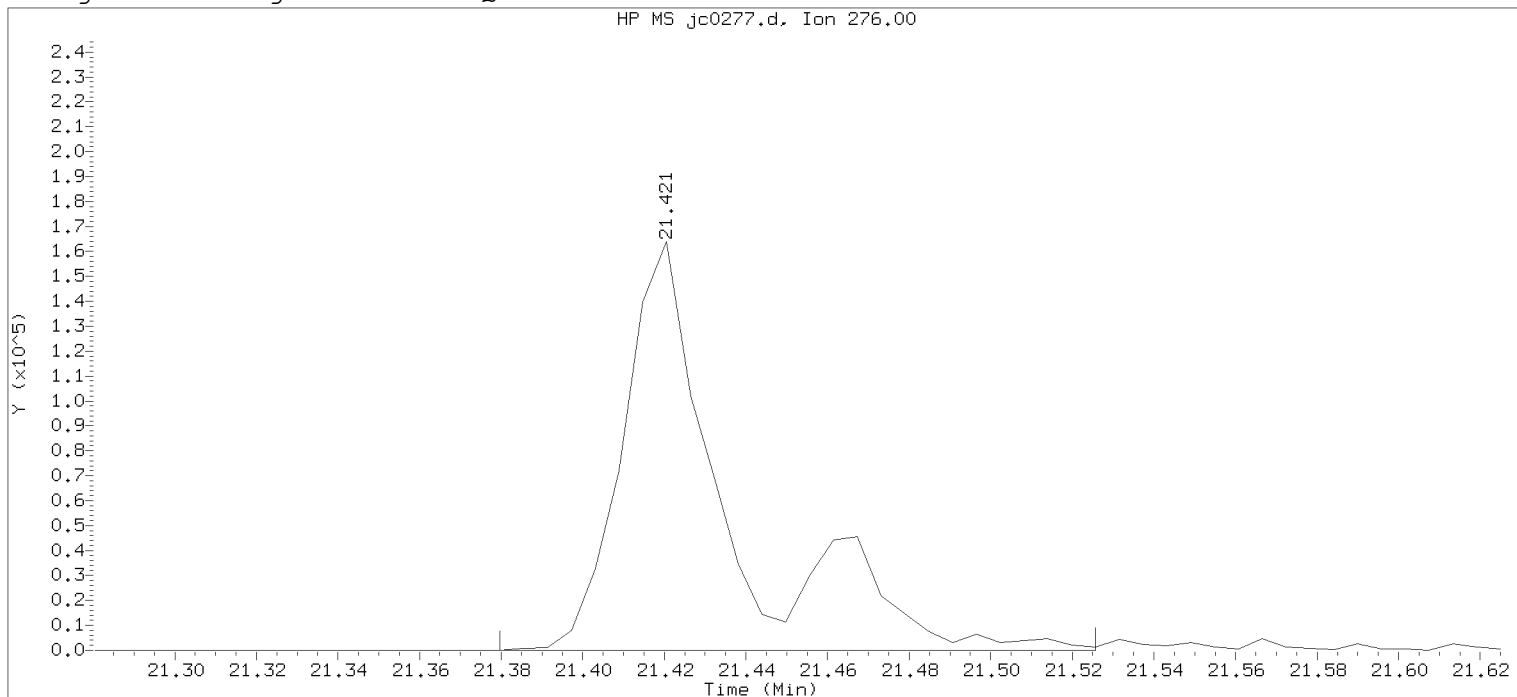
Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.

PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0277.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 13:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:15

Date, time and analyst ID of latest file update: 11-Mar-2020 14:15 Automation

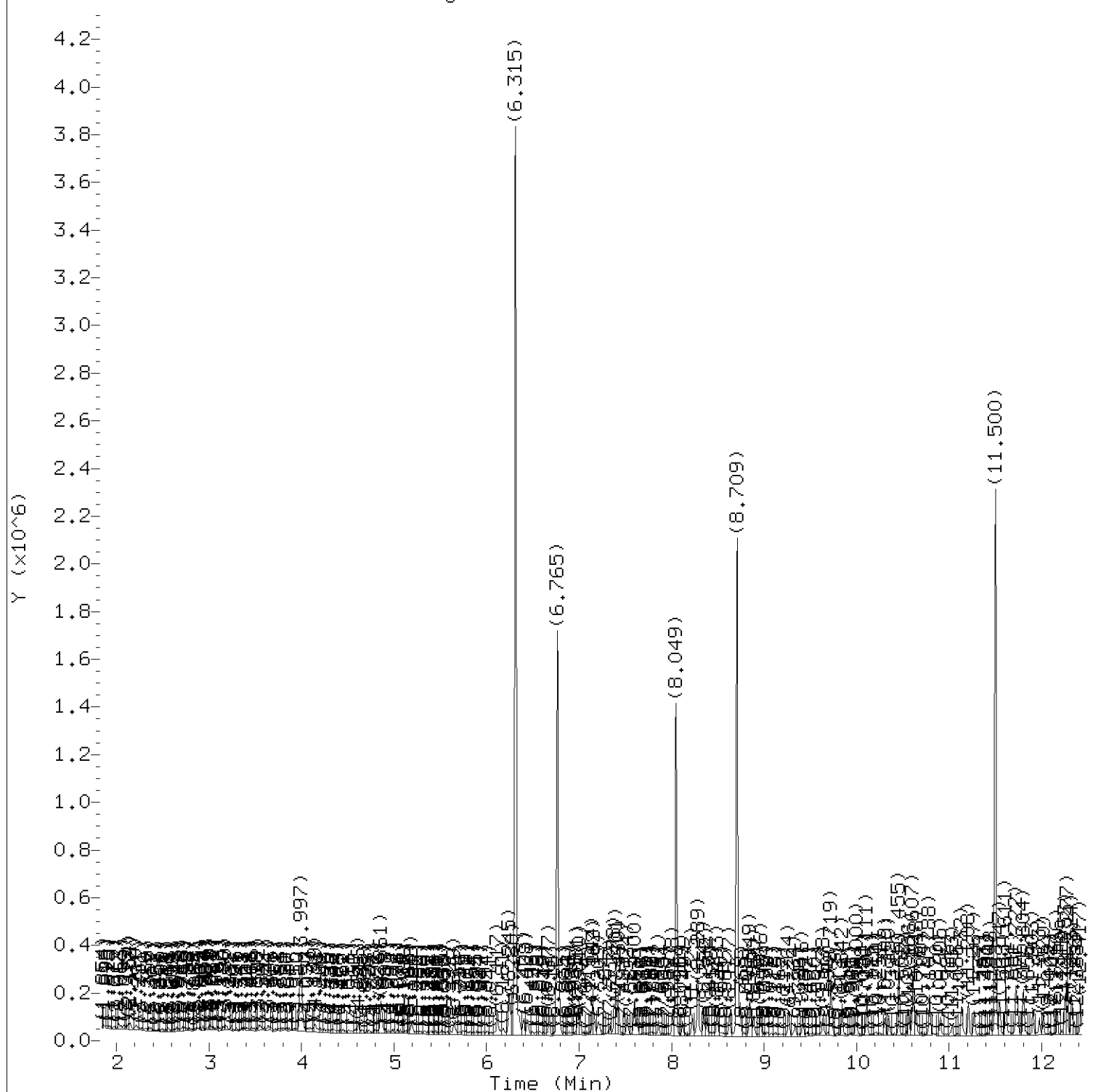
Sample Name: SSTD1.25

Lab Sample ID: rvSTD0340

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3354	
Retention Time (minutes)	: 21.421	
Quant Ion	: 276.00	
Area	: 293402	
On-column Amount (ng/ul)	: 1.2570	
Integration start scan	: 3346	Integration stop scan: 3371
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1243 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0278.d
Injection date and time: 11-MAR-2020 14:11

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

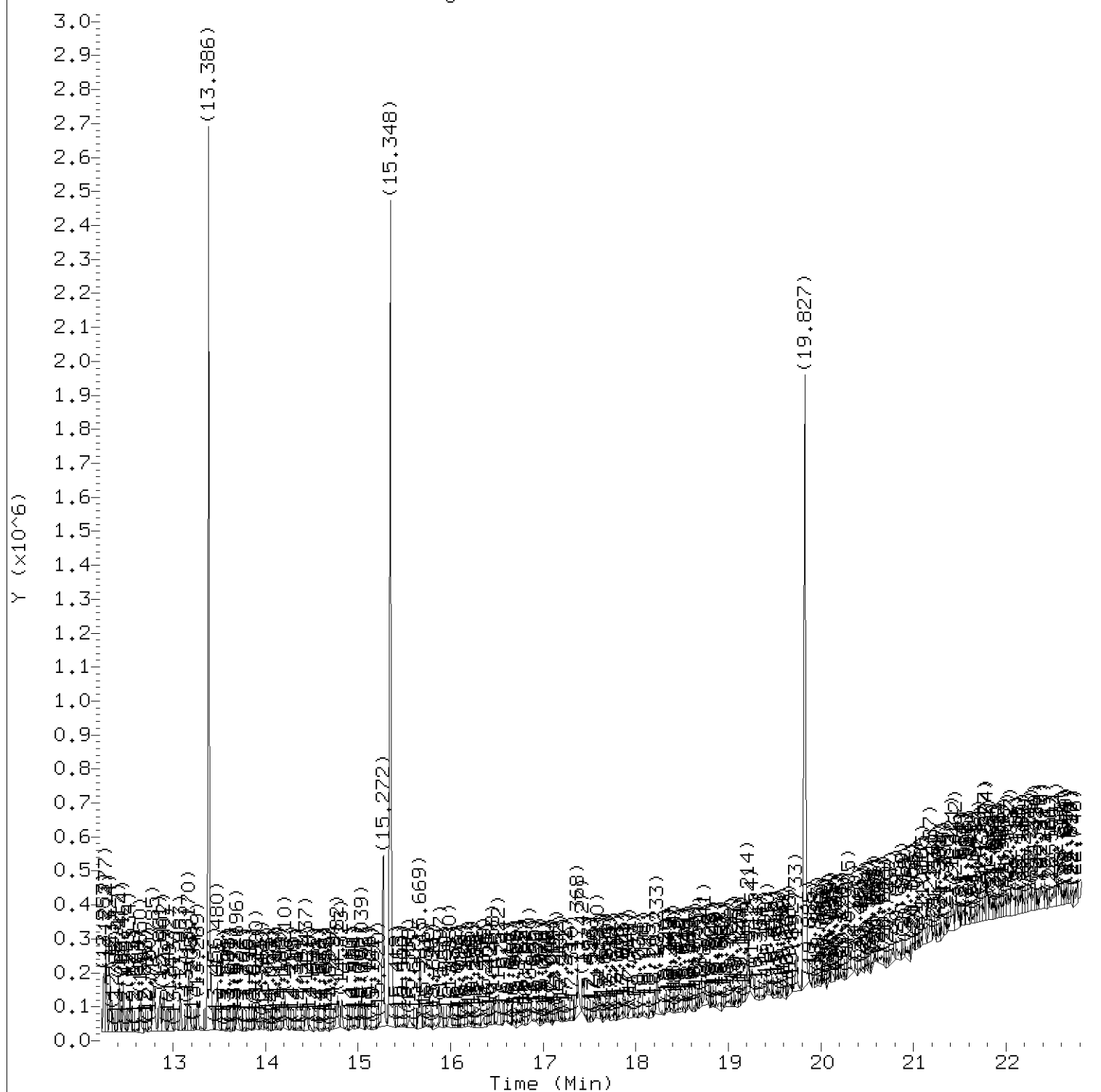
Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.25

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0278.d
Injection date and time: 11-MAR-2020 14:11

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:31

Sublist used: all1

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SST0.25

Lab Sample ID: rvSTD0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0278.d
 Injection date and time: 11-MAR-2020 14:11

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.140	88	25129M	0.568
5) N-Nitrosodimethylamine	(1)	2.730	74	14419	0.207
6) Pyridine	(1)	3.045	79	23078M	0.211
8) 2-Picoline	(1)	3.985	93	27462	0.261
9) N-Nitrosomethylethylamine	(1)	4.155	88	21706	0.469
10) Methyl methanesulfonate	(1)	4.616	80	15450	0.232
12) \$2-Fluorophenol	(1)	4.855	112	42897	0.500
14) N-Nitrosodiethylamine	(1)	5.200	102	11430	0.268
16) Ethyl methanesulfonate	(1)	5.638	109	9037	0.225
43) Total Cresols	(1)			43678	0.502
17) Benzaldehyde	(1)	6.122	77	25249	0.308
18) \$Phenol-d6	(1)	6.239	99	53920	0.473
19) Phenol	(1)	6.257	94	31471	0.240
20) Aniline	(1)	6.280	93	39352	0.262
23) bis(2-Chloroethyl) ether	(1)	6.397	93	24657	0.258
24) 2-Chlorophenol	(1)	6.444	128	15608	0.201
25) 1,3-Dichlorobenzene	(1)	6.677	146	25618	0.275
26) *1,4-Dichlorobenzene-d4	(1)	6.765	152	294163	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	27628	0.291
28) Benzyl alcohol	(1)	6.987	108	13541	0.257
29) 1,2-Dichlorobenzene	(1)	7.010	146	22034	0.249
31) Indene	(1)	7.144	115	33774	0.261
32) 2-Methylphenol	(1)	7.162	108	17686	0.225
35) bis(2-Chloroisopropyl) ether	(1)	7.214	45	34793	0.278
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.214	45	34793	0.278
36) N-Nitrosopyrrolidine	(1)	7.337	100	8206	0.194
37) Acetophenone	(1)	7.378	105	38677	0.297
100) Isosafrole	(3)			16872	0.251
39) N-Nitroso-di-n-propylamine	(1)	7.395	70	20119	0.251
38) 4-Methylphenol	(1)	7.401	108	25992	0.277
40) N-Nitrosomorpholine	(1)	7.413	56	17950	0.270
41) o-Toluidine	(1)	7.430	106	37262	0.270
44) Hexachloroethane	(1)	7.518	117	10348	0.228
45) \$Nitrobenzene-d5	(2)	7.594	82	56499	0.474
46) Nitrobenzene	(2)	7.629	77	33999	0.278
50) N-Nitrosopiperidine	(2)	7.857	114	9426	0.250
52) Isophorone	(2)	8.008	82	51229	0.262
125) 2,4,2,6-Dinitrotoluenes	(3)			18789	0.450
53) 2-Nitrophenol	(2)	8.102	139	8122	0.206
55) 2,4-Dimethylphenol	(2)	8.225	107	17389	0.193

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0278.d
 Injection date and time: 11-MAR-2020 14:11

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
58) Benzoic acid	(2)	8.289	105	86201	1.746
59) O,O,O-Triethylphosphorothioate	(2)	8.347	198	9990	0.260
57) bis(2-Chloroethoxy)methane	(2)	8.382	93	22965	0.217
62) 2,4-Dichlorophenol	(2)	8.493	162	15670	0.235
65) 1,2,4-Trichlorobenzene	(2)	8.627	180	20314	0.262
68)*Naphthalene-d8	(2)	8.709	136	1055012	5.000
69) Naphthalene	(2)	8.738	128	55839	0.253
151) Diallate trans/cis	(4)			17819	0.245
70) 4-Chloroaniline	(2)	8.843	127	20773	0.235
71) 2,6-Dichlorophenol	(2)	8.849	162	17654	0.267
72) Hexachloropropene	(2)	8.878	213	14103	0.240
74) Hexachlorobutadiene	(2)	8.972	225	13223	0.257
78) Quinoline	(2)	9.264	129	35277	0.254
79) Caprolactam	(2)	9.340	113	6696	0.319
80) N-Nitrosodi-n-butylamine	(2)	9.422	84	16689	0.250
83) 4-Chloro-3-methylphenol	(2)	9.638	107	17631	0.246
85) Safrole	(2)	9.743	162	14565	0.247
86) 2-Methylnaphthalene	(2)	9.842	142	41356	0.285
87) 1-Methylnaphthalene	(2)	10.000	142	37988	0.276
88) Hexachlorocyclopentadiene	(3)	10.105	237	10891	0.191
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.116	216	23065	0.292
91) cis-Isosafrole	(3)	10.198	162	2085	0.034
93) 2,4,6-Trichlorophenol	(3)	10.309	196	10685M	0.225
95) 2,4,5-Trichlorophenol	(3)	10.350	196	12994	0.250
96)\$2-Fluorobiphenyl	(3)	10.455	172	79191	0.475
97) trans-Isosafrole	(3)	10.566	162	14787	0.217
98) 1,1'-Biphenyl	(3)	10.607	154	56876	0.318
99) 2-Chloronaphthalene	(3)	10.613	162	42166	0.280
101) 1-Chloronaphthalene	(3)	10.648	162	35254	0.254
104) 2-Nitroaniline	(3)	10.782	138	9758	0.226
103) Diphenyl ether	(3)	10.788	170	24930	0.253
108) 1,4-Naphthoquinone	(3)	10.893	158	10859	0.192
109) 1,4-Dinitrobenzene	(3)	11.021	168	4565	0.208
110) Dimethylphthalate	(3)	11.132	163	43490	0.270
111) 1,3-Dinitrobenzene	(3)	11.132	168	5283	0.213
113) 2,6-Dinitrotoluene	(3)	11.208	165	7783	0.221
114) Acenaphthylene	(3)	11.273	152	55228	0.279
117) 3-Nitroaniline	(3)	11.442	138	7833	0.226
118)*Acenaphthene-d10	(3)	11.500	164	514193	5.000
119) Acenaphthene	(3)	11.547	153	35399	0.258

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0278.d
 Injection date and time: 11-MAR-2020 14:11

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
120) 2,4-Dinitrophenol	(3)	11.611	184	38017	1.796
121) 4-Nitrophenol	(3)	11.722	109	28780	0.840
122) Pentachlorobenzene	(3)	11.740	250	16871	0.259
123) 2,4-Dinitrotoluene	(3)	11.798	165	11006	0.229
124) Dibenzofuran	(3)	11.804	168	55049	0.274
126) 1-Naphthylamine	(3)	11.909	143	27645	0.208
127) 2,3,4,6-Tetrachlorophenol	(3)	11.973	232	9637	0.247
128) 2-Naphthylamine	(3)	12.014	143	26690	0.204
129) Diethylphthalate	(3)	12.166	149	37697	0.240
131) Fluorene	(3)	12.253	166	46208	0.293
130) Thionazin	(3)	12.259	107	5381	0.179
134) 4-Nitroaniline	(3)	12.277	138	10483	0.275
133) 5-Nitro-o-toluidine	(3)	12.277	152	10106	0.250
132) 4-Chlorophenyl-phenylether	(3)	12.277	204	17605	0.228
135) 4,6-Dinitro-2-methylphenol	(4)	12.324	198	27392	1.008
136) N-Nitrosodiphenylamine	(4)	12.417	169	28162	0.227
137) NDPA as diphenylamine	(4)	12.417	169	28162	0.227
139) 1,2-Diphenylhydrazine	(4)	12.464	77	54851	0.254
140) \$2,4,6-Tribromophenol	(3)	12.540	330	10693	0.471
142) Tetraethyldithiopyrophosphate	(4)	12.650	97	6329	0.187
145) Diallate (peak 1)	(4)	12.785	86	12416	0.171
146) Phorate	(4)	12.791	75	22636	0.210
147) Phenacetin	(4)	12.796	108	15117	0.190
148) 4-Bromophenyl-phenylether	(4)	12.861	248	13046	0.282
149) Diallate (peak 2)	(4)	12.884	86	5403	0.074
150) Hexachlorobenzene	(4)	12.907	284	13141	0.269
152) Dimethoate	(4)	12.972	87	13717	0.200
153) Atrazine	(4)	13.083	200	9063	0.220
154) Pentachlorophenol	(4)	13.153	266	7323	0.233
156) Pentachloronitrobenzene	(4)	13.164	237	6028	0.246
155) 4-Aminobiphenyl	(4)	13.176	169	29699	0.215
157) Pronamide	(4)	13.275	173	12293	0.180
158) *Phenanthrene-d10	(4)	13.386	188	931612	5.000
159) Dinoseb	(4)	13.410	211	6399	0.177
160) Phenanthrene	(4)	13.415	178	55378	0.256
162) Anthracene	(4)	13.480	178	52116	0.243
168) Carbazole	(4)	13.696	167	45555	0.229
169) Methyl parathion	(4)	13.900	109	7952	0.143
170) Di-n-butylphthalate	(4)	14.210	149	54663	0.207
173) 4-Nitroquinoline-1-oxide	(4)	14.437	190	4981	0.196

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0278.d
 Injection date and time: 11-MAR-2020 14:11

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.25

Lab Sample ID: rvSTD0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
172) Parathion	(4)	14.437	109	6116	0.182
174) Octachlorostyrene	(4)	14.776	308	7221	0.333
176) Isodrin	(4)	14.823	193	8346	0.275
227) Total PAHs	(6)			892556	4.525
178) Fluoranthene	(4)	15.039	202	57658	0.229
179) Benzidine	(5)	15.266	184	251033	1.649
180)*Pyrene-d10	(5)	15.348	212	934693	5.000
182) Pyrene	(5)	15.377	202	64347	0.255
184)\$Terphenyl-d14	(5)	15.669	244	81488	0.481
187) p-Dimethylaminoazobenzene	(5)	15.891	225	12515	0.291
190) Chlorobenzilate	(5)	15.996	139	15776	0.214
192) 3,3'-Dimethylbenzidine	(5)	16.452	212	25057	0.173
193) Butylbenzylphthalate	(5)	16.522	149	21127	0.194
196) 2-Acetylaminofluorene	(5)	16.860	181	13215	0.155
200) Benzo(a)anthracene	(5)	17.368	228	44755	0.210
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	18138	0.208
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.392	231	6992	0.159
201) Chrysene	(5)	17.433	228	55686	0.251
204) bis(2-Ethylhexyl)phthalate	(5)	17.590	149	27469	0.183
208) 6-Methylchrysene	(5)	18.233	242	39860	0.249
210) Di-n-octylphthalate	(6)	18.741	149	50029	0.197
211) Benzo(b)fluoranthene	(6)	19.214	252	53385	0.229
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.219	256	19892	0.198
213) Benzo(k)fluoranthene	(6)	19.254	252	51080	0.230
216) Benzo(a)pyrene	(6)	19.733	252	51156	0.240
218)*Perylene-d12	(6)	19.827	264	906569	5.000
220) 3-Methylcholanthrene	(6)	20.305	268	23132M	0.231
222) Dibenz(a,h)acridine	(6)	21.111	279	34706	0.226
223) Dibenz(a,j)acridine	(6)	21.187	279	42481	0.256
224) Indeno(1,2,3-cd)pyrene	(6)	21.415	276	51620	0.290
225) Dibenz(a,h)anthracene	(6)	21.467	278	38801	0.209
226) Benzo(g,h,i)perylene	(6)	21.783	276	44556	0.238

M = Compound was manually integrated.

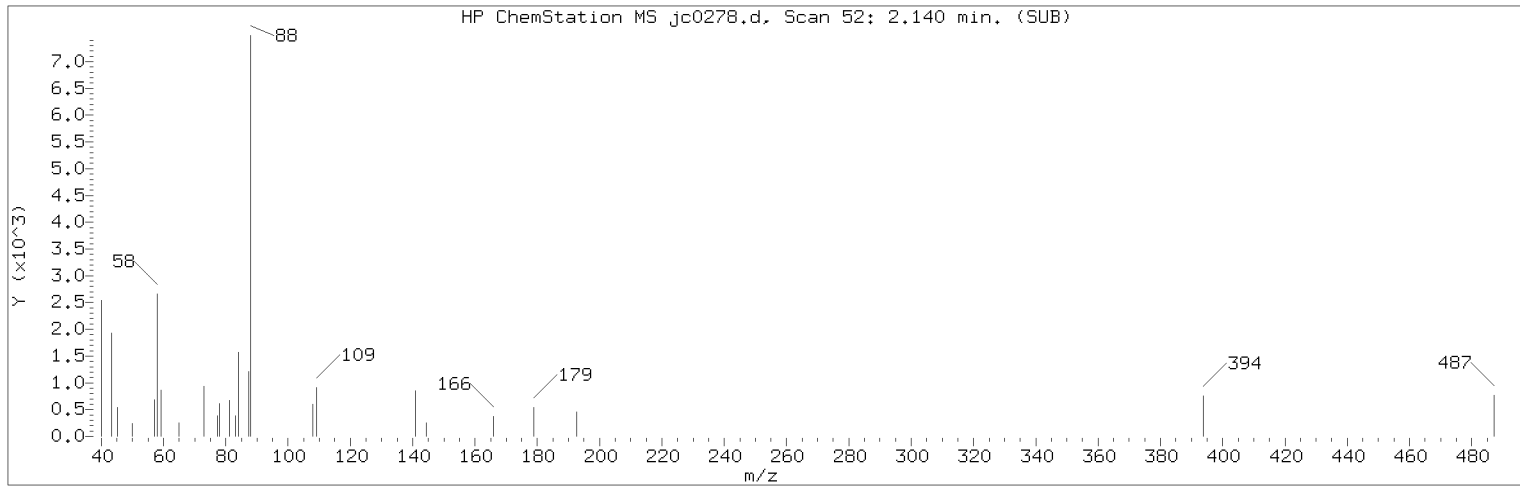
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

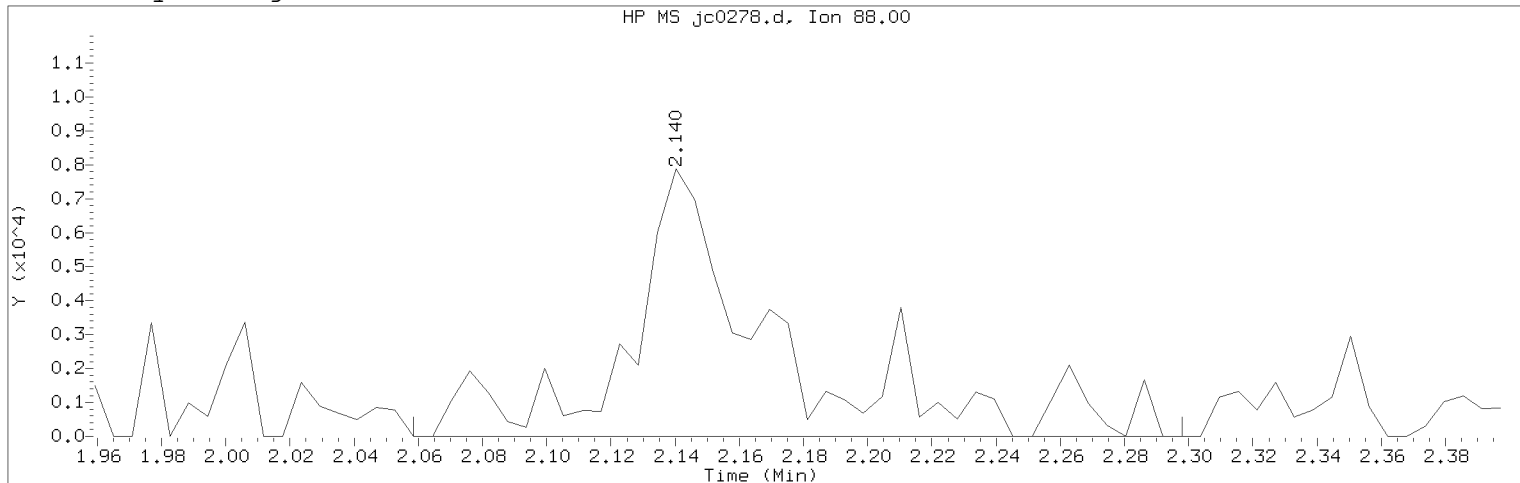
Digitally signed by Kira N. Beck
 on 03/12/2020 at 08:35.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.25

Lab Sample ID: rvSTD0340

Compound Number	: 1	
Compound Name	: 1,4-Dioxane	
Scan Number	: 52	
Retention Time (minutes)	: 2.140	
Quant Ion	: 88.00	
Area (flag)	: 25129M	
On-Column Amount (ng/ul)	: 0.5678	
Integration start scan	: 37	Integration stop scan: 78
Y at integration start	: 0	Y at integration end: 0

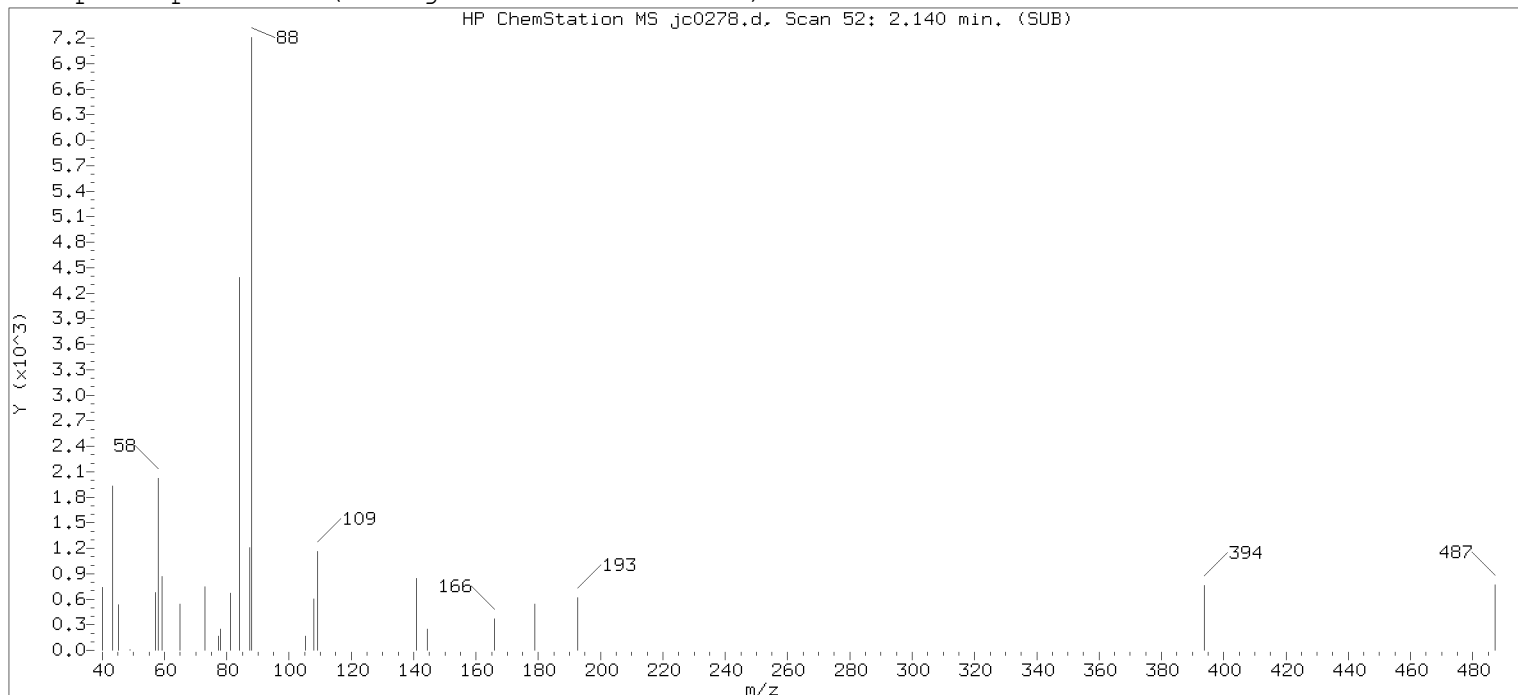
Reason for manual integration: improper integration

Analyst responsible for change:

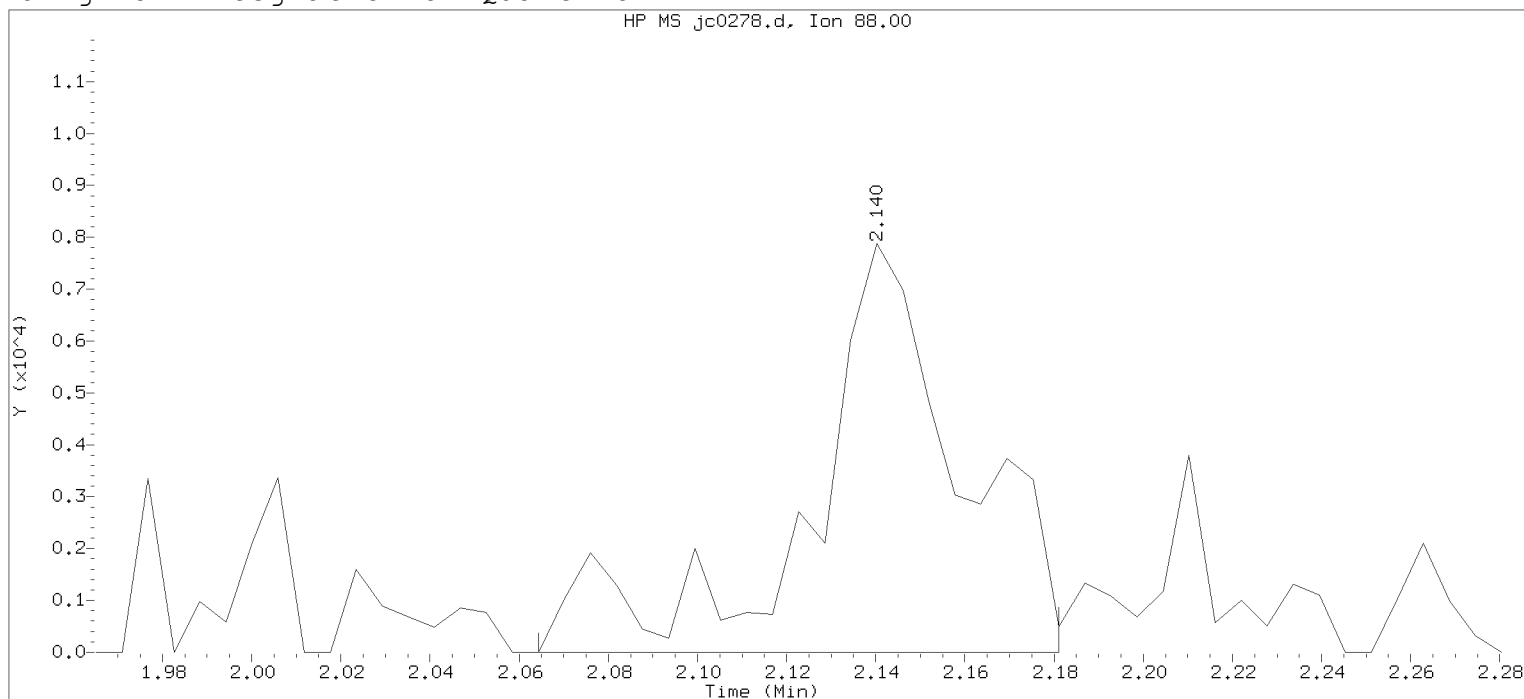
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 14:45 Automation

Sample Name: SSTD0.25

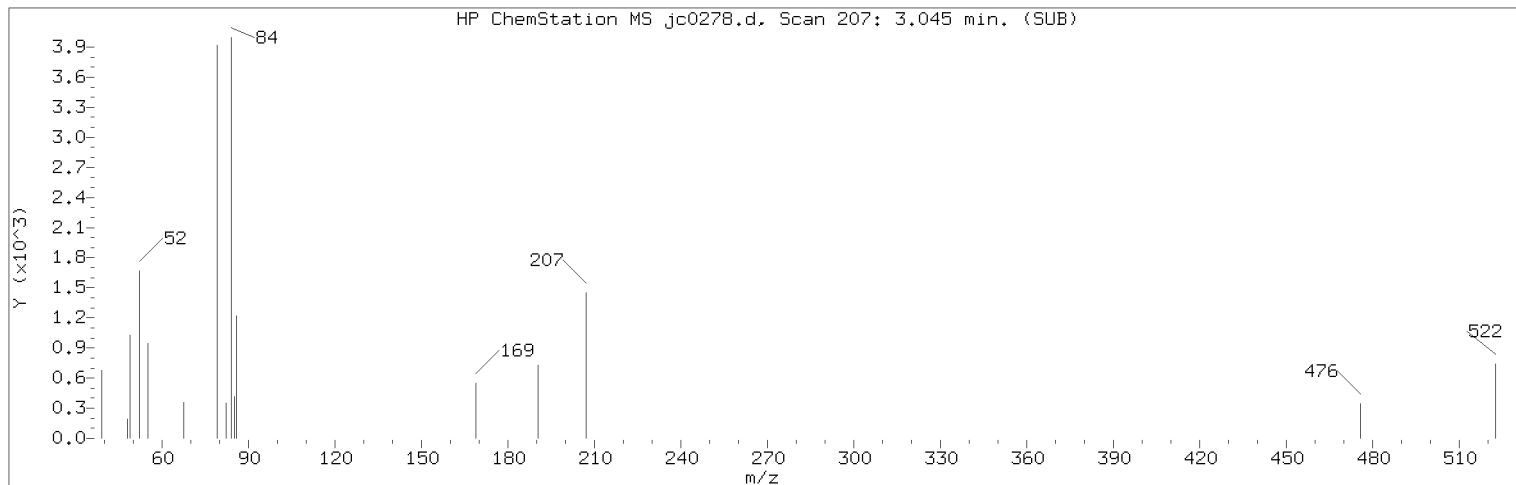
Lab Sample ID: rvSTD0340

Compound Number	: 1	
Compound Name	: 1,4-Dioxane	
Scan Number	: 52	
Retention Time (minutes)	: 2.140	
Quant Ion	: 88.00	
Area	: 18498	
On-column Amount (ng/ul)	: 0.4144	
Integration start scan	: 38	Integration stop scan: 58
Y at integration start	: 0	Y at integration end: 0

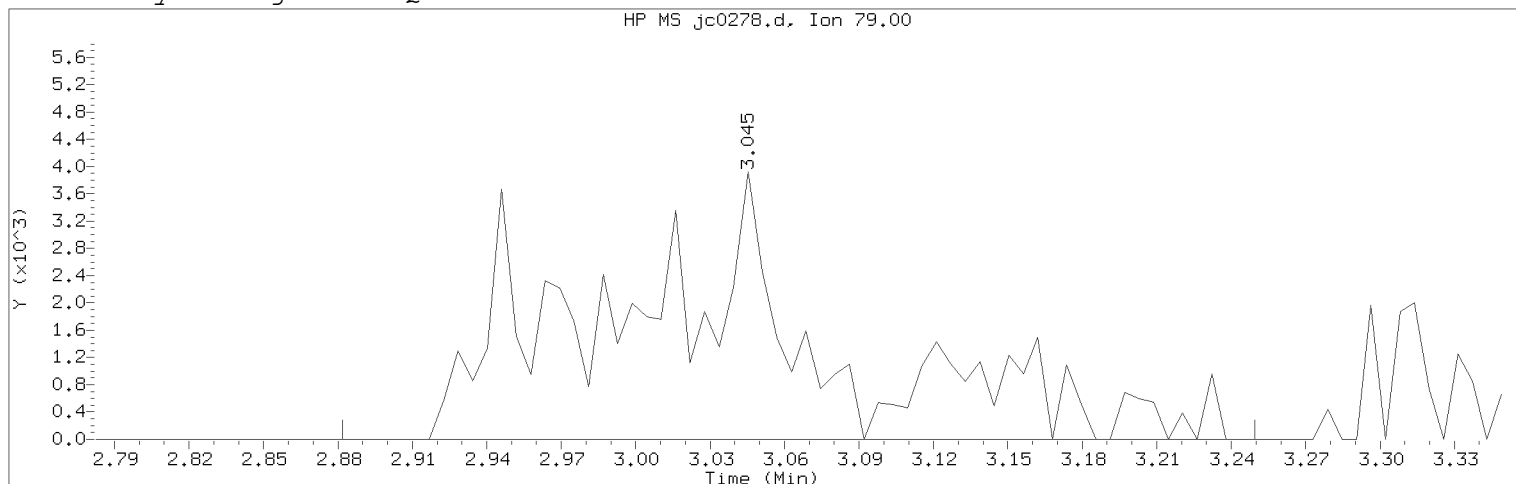
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1251 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.25

Lab Sample ID: rvSTD0340

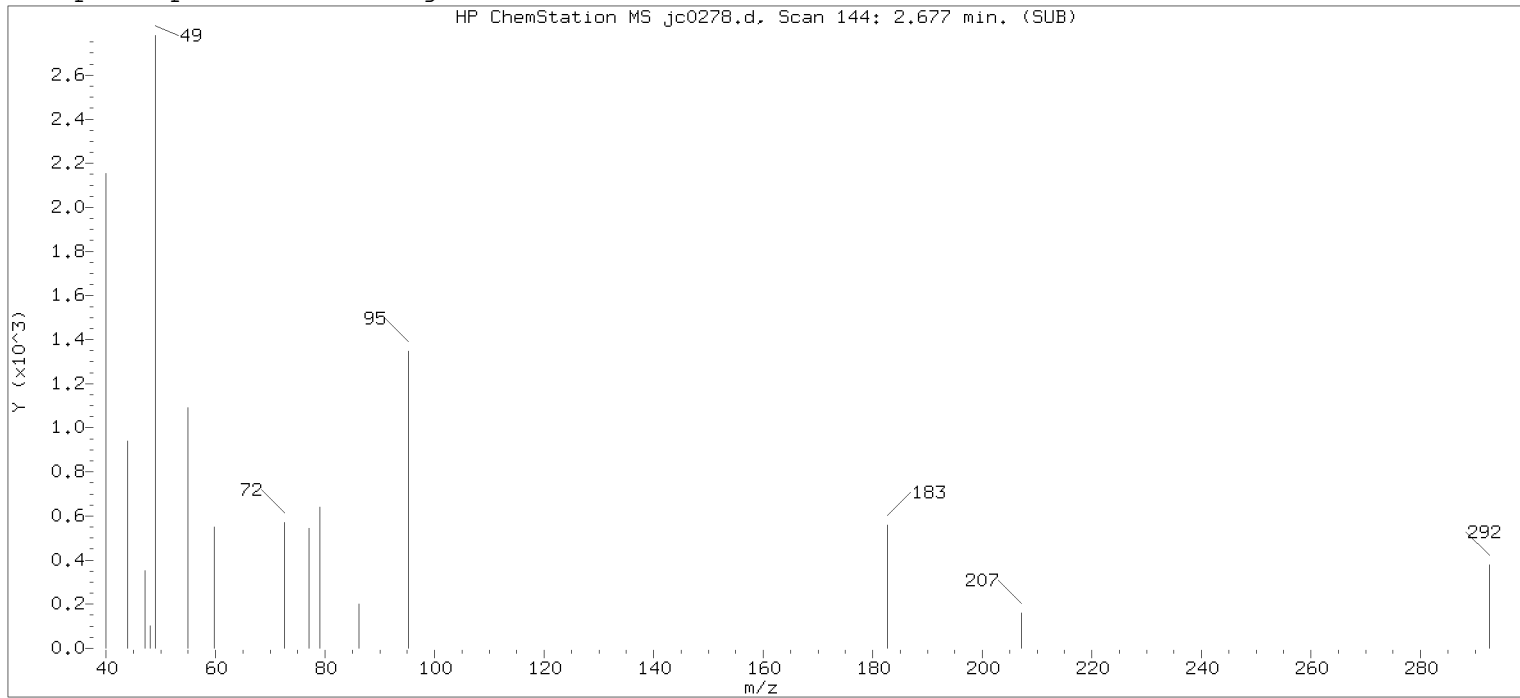
Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 207	
Retention Time (minutes)	: 3.045	
Quant Ion	: 79.00	
Area (flag)	: 23078M	
On-Column Amount (ng/ul)	: 0.2107	
Integration start scan	: 178	Integration stop scan: 241
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

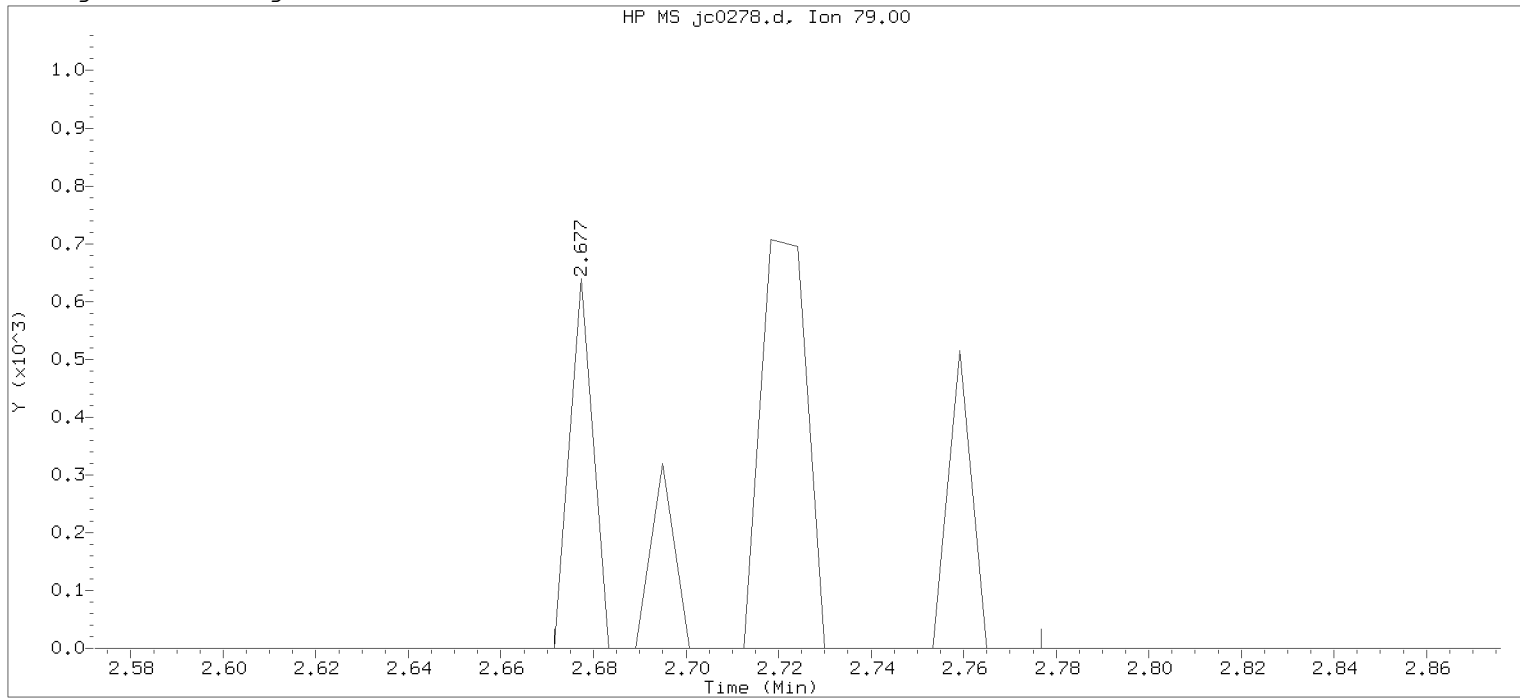
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 14:45 Automation

Sample Name: SSTD0.25

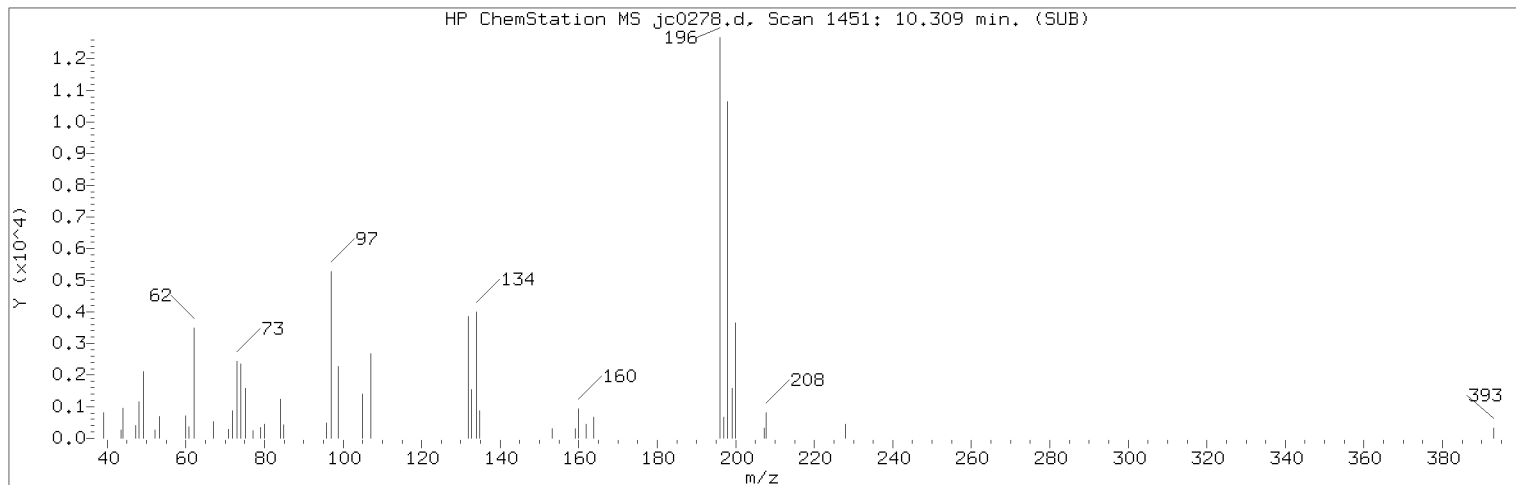
Lab Sample ID: rvSTD0340

Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 144	
Retention Time (minutes)	: 2.677	
Quant Ion	: 79.00	
Area	: 1007	
On-column Amount (ng/ul)	: 0.0108	
Integration start scan	: 142	Integration stop scan: 160
Y at integration start	: 0	Y at integration end: 0

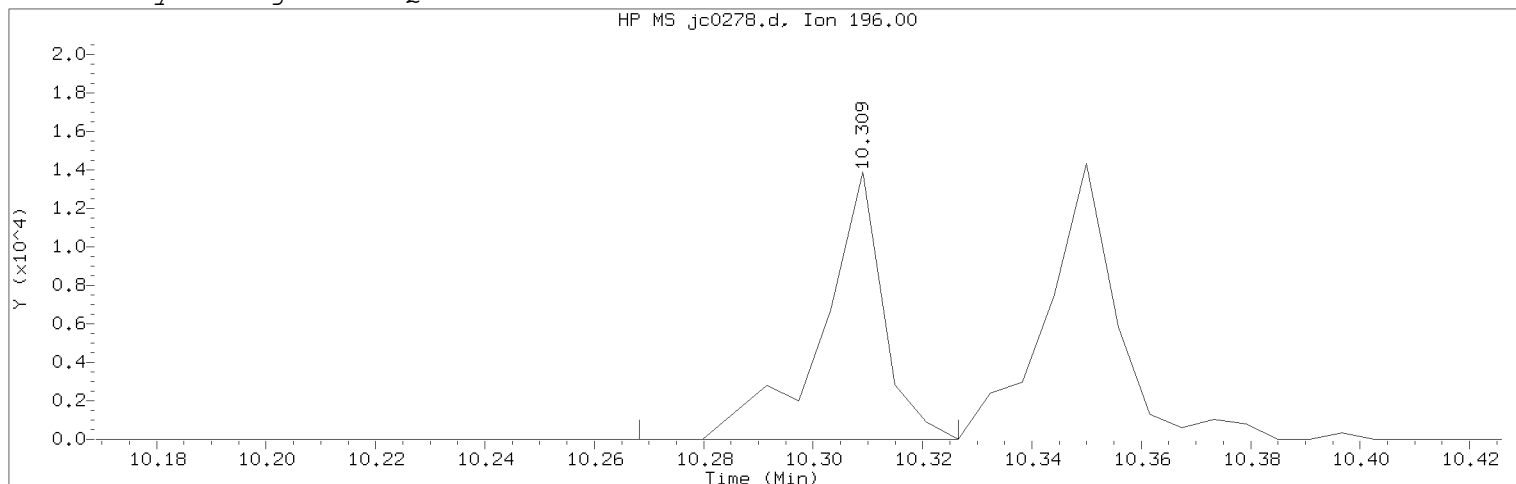
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1253 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTDO.25

Lab Sample ID: rvSTD0340

Compound Number	: 93	
Compound Name	: 2,4,6-Trichlorophenol	
Scan Number	: 1451	
Retention Time (minutes)	: 10.309	
Quant Ion	: 196.00	
Area (flag)	: 10685M	
On-Column Amount (ng/ul)	: 0.2253	
Integration start scan	: 1443	Integration stop scan: 1453
Y at integration start	: 0	Y at integration end: 0

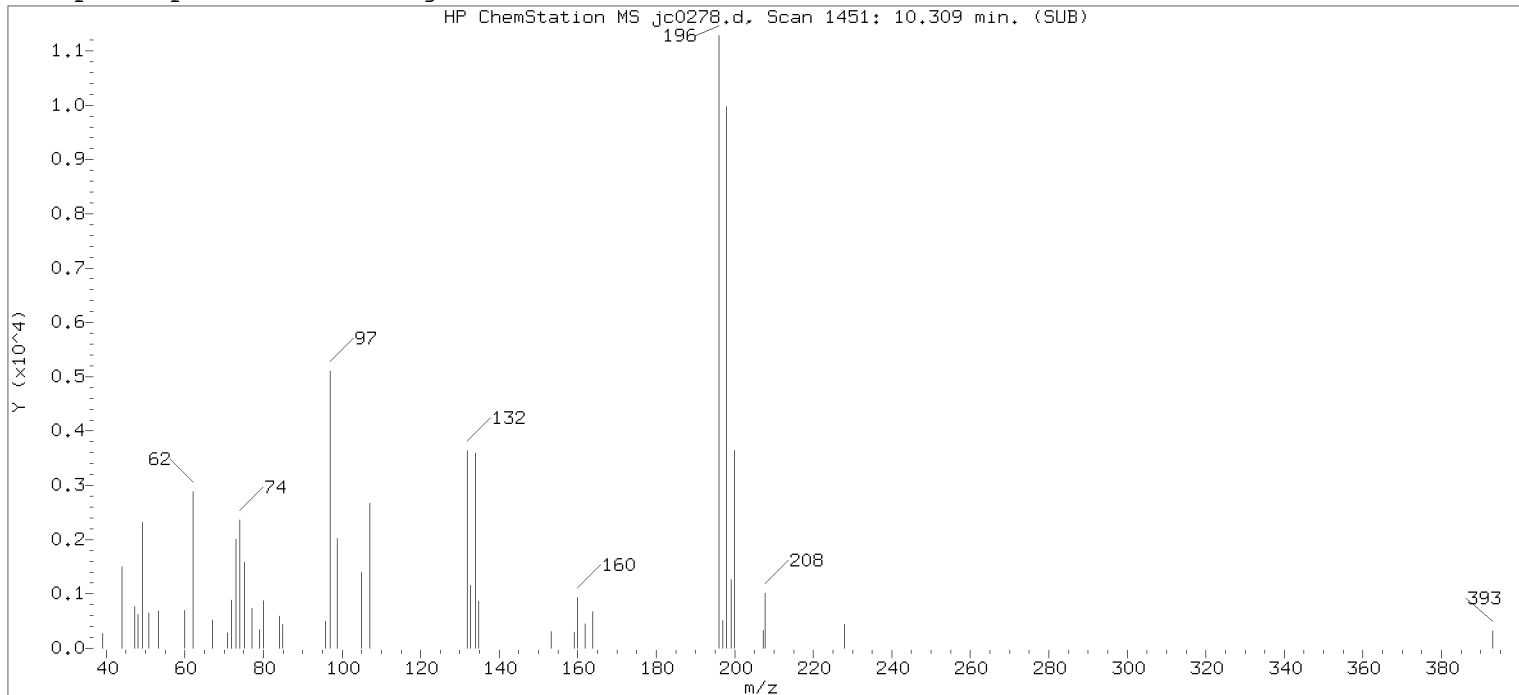
Reason for manual integration: improper integration

Analyst responsible for change:

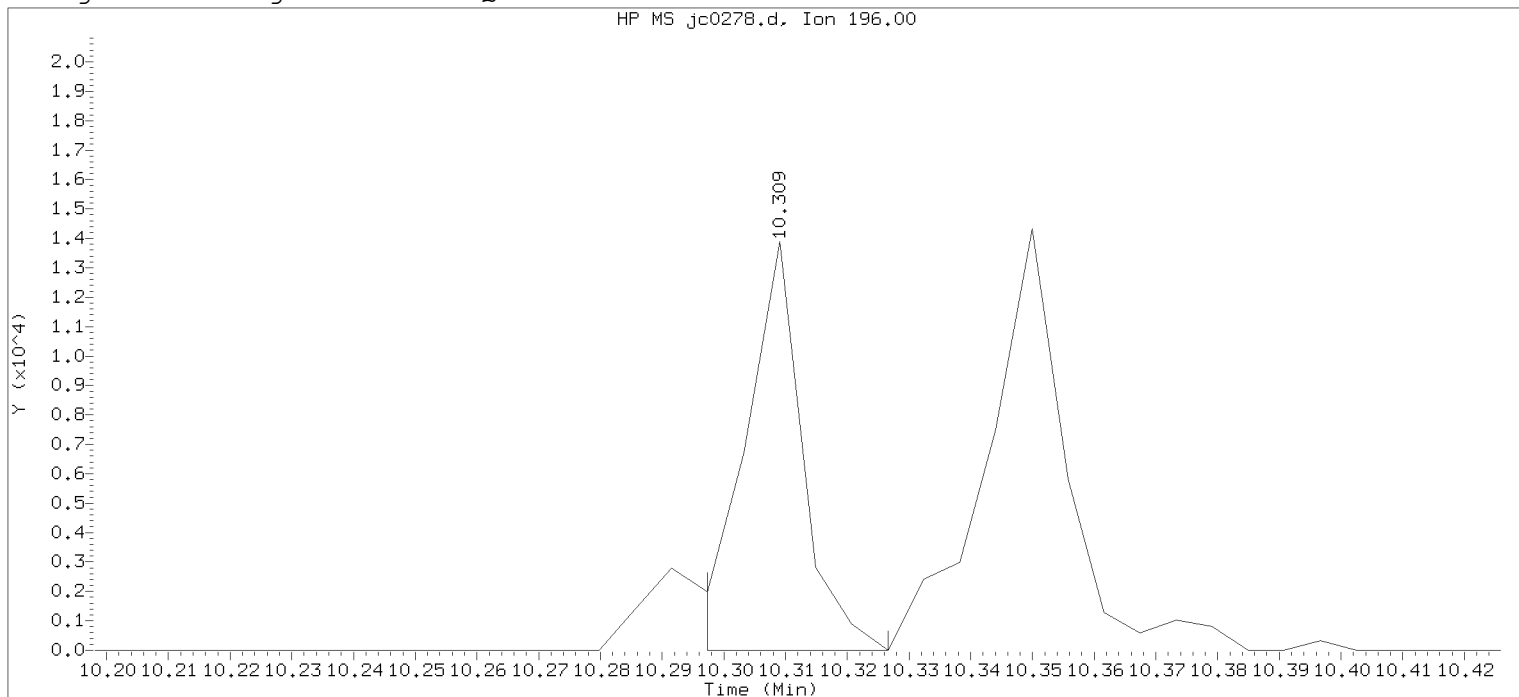
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 14:45 Automation

Sample Name: SSTD0.25

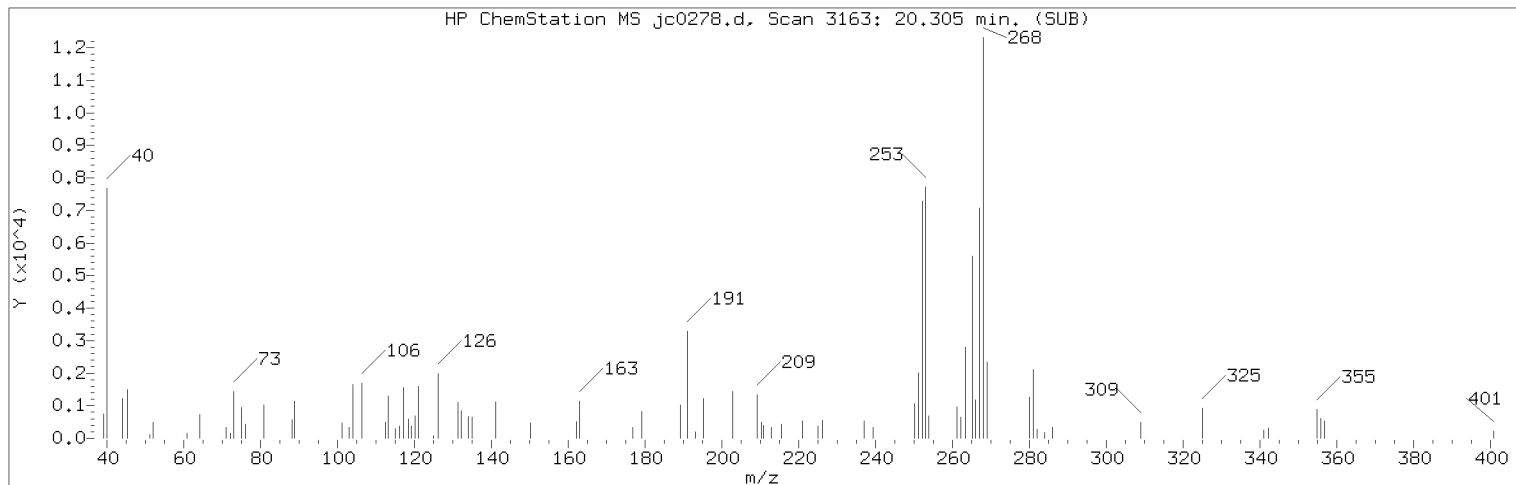
Lab Sample ID: rvSTD0340

Compound Number	: 93	
Compound Name	: 2,4,6-Trichlorophenol	
Scan Number	: 1451	
Retention Time (minutes)	: 10.309	
Quant Ion	: 196.00	
Area	: 8868	
On-column Amount (ng/ul)	: 0.1889	
Integration start scan	: 1448	Integration stop scan: 1453
Y at integration start	: 0	Y at integration end: 0

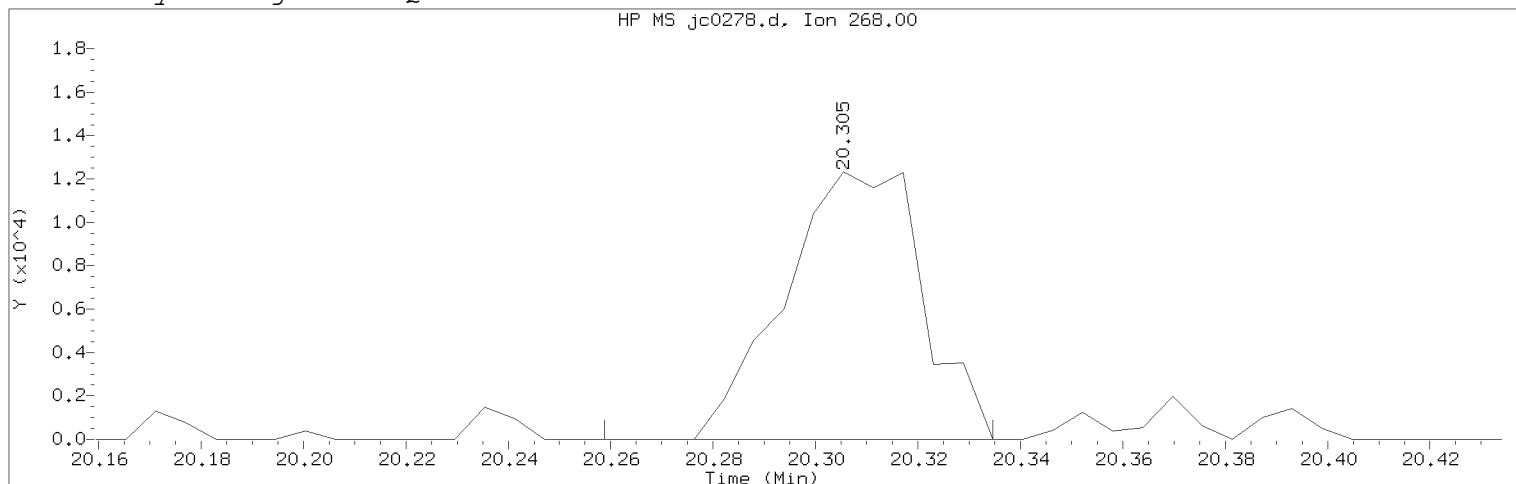
Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1255 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 12-MAR-2020 08:31

Date, time and analyst ID of latest file update: 12-Mar-2020 08:31 knb25316

Sample Name: SSTD0.25

Lab Sample ID: rvSTD0340

Compound Number	: 220	
Compound Name	: 3-Methylcholanthrene	
Scan Number	: 3163	
Retention Time (minutes)	: 20.305	
Quant Ion	: 268.00	
Area (flag)	: 23132M	
On-Column Amount (ng/ul)	: 0.2312	
Integration start scan	: 3154	Integration stop scan: 3167
Y at integration start	: 0	Y at integration end: 0

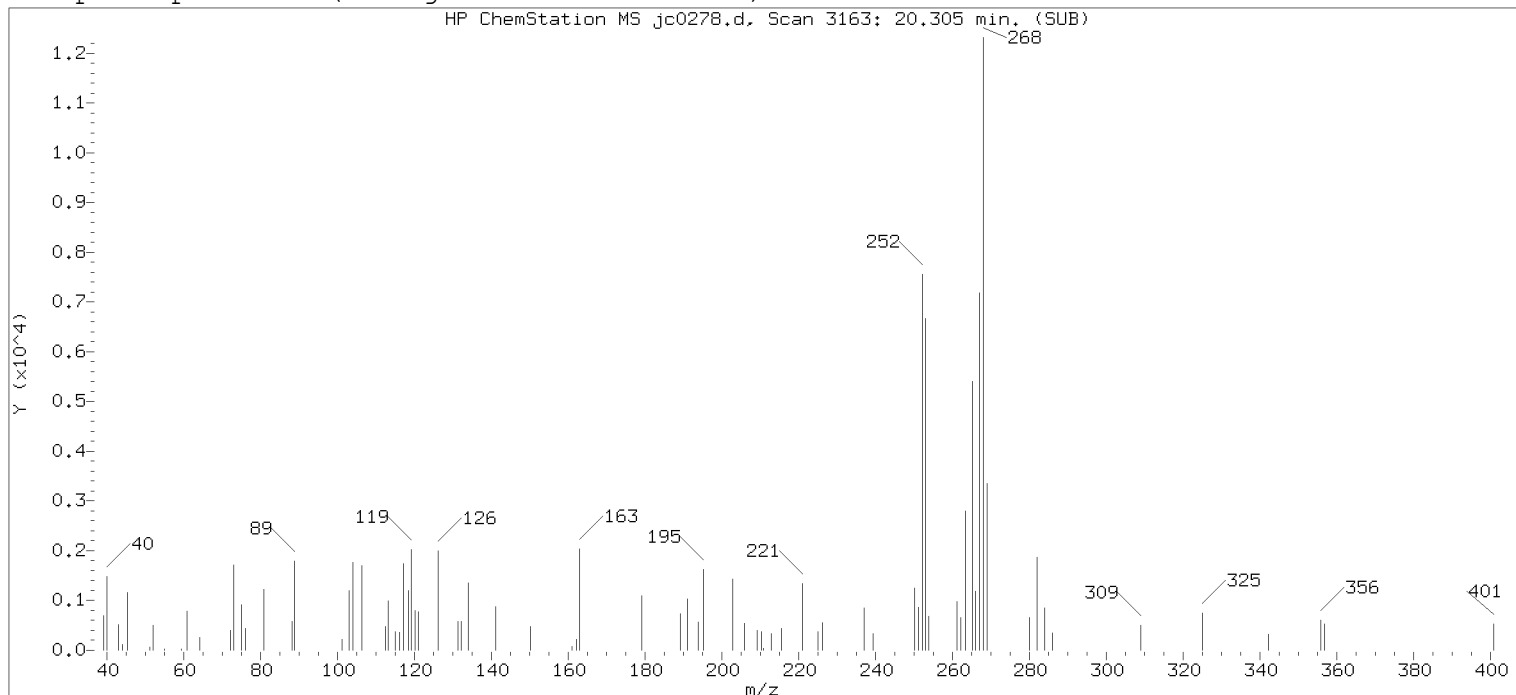
Reason for manual integration: improper integration

Analyst responsible for change:

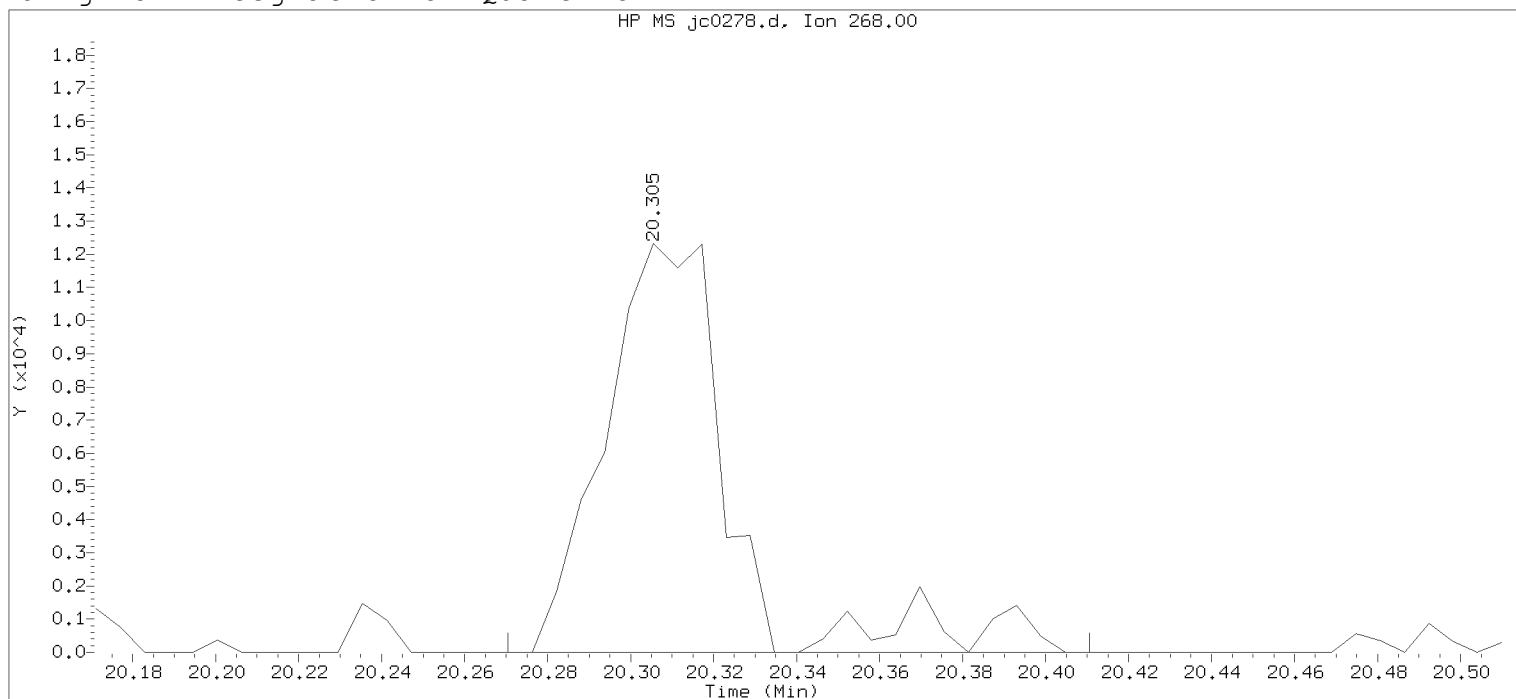
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:35.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0278.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: all1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 14:45 Automation

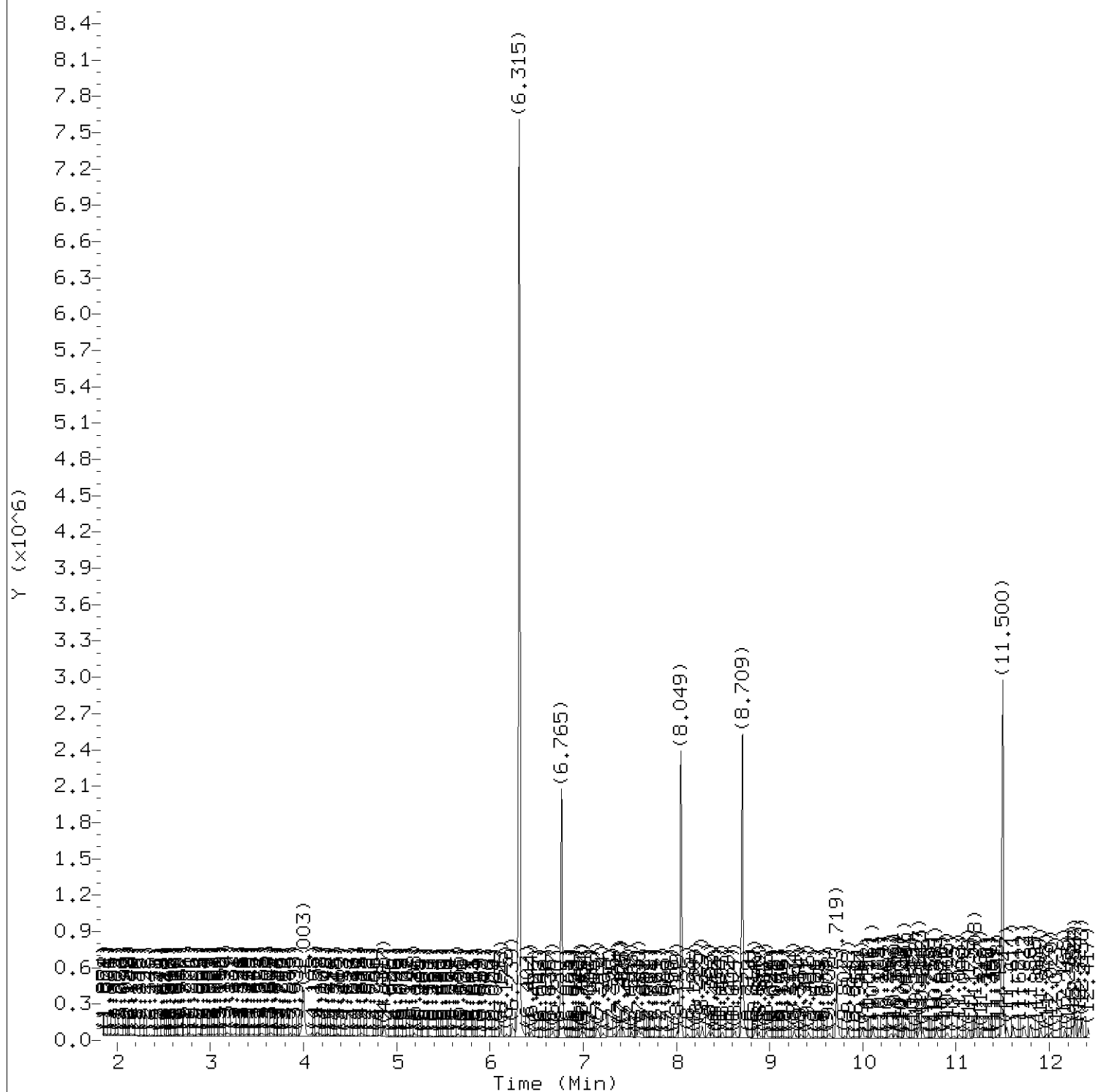
Sample Name: SSTD0.25

Lab Sample ID: rvSTD0340

Compound Number	: 220	
Compound Name	: 3-Methylcholanthrene	
Scan Number	: 3163	
Retention Time (minutes)	: 20.305	
Quant Ion	: 268.00	
Area	: 25959	
On-column Amount (ng/ul)	: 0.2537	
Integration start scan	: 3156	Integration stop scan: 3180
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:35.

Target 3.5 esignature use **RAF59** Page 1257 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0279.d
Injection date and time: 11-MAR-2020 14:41

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: mdlall1

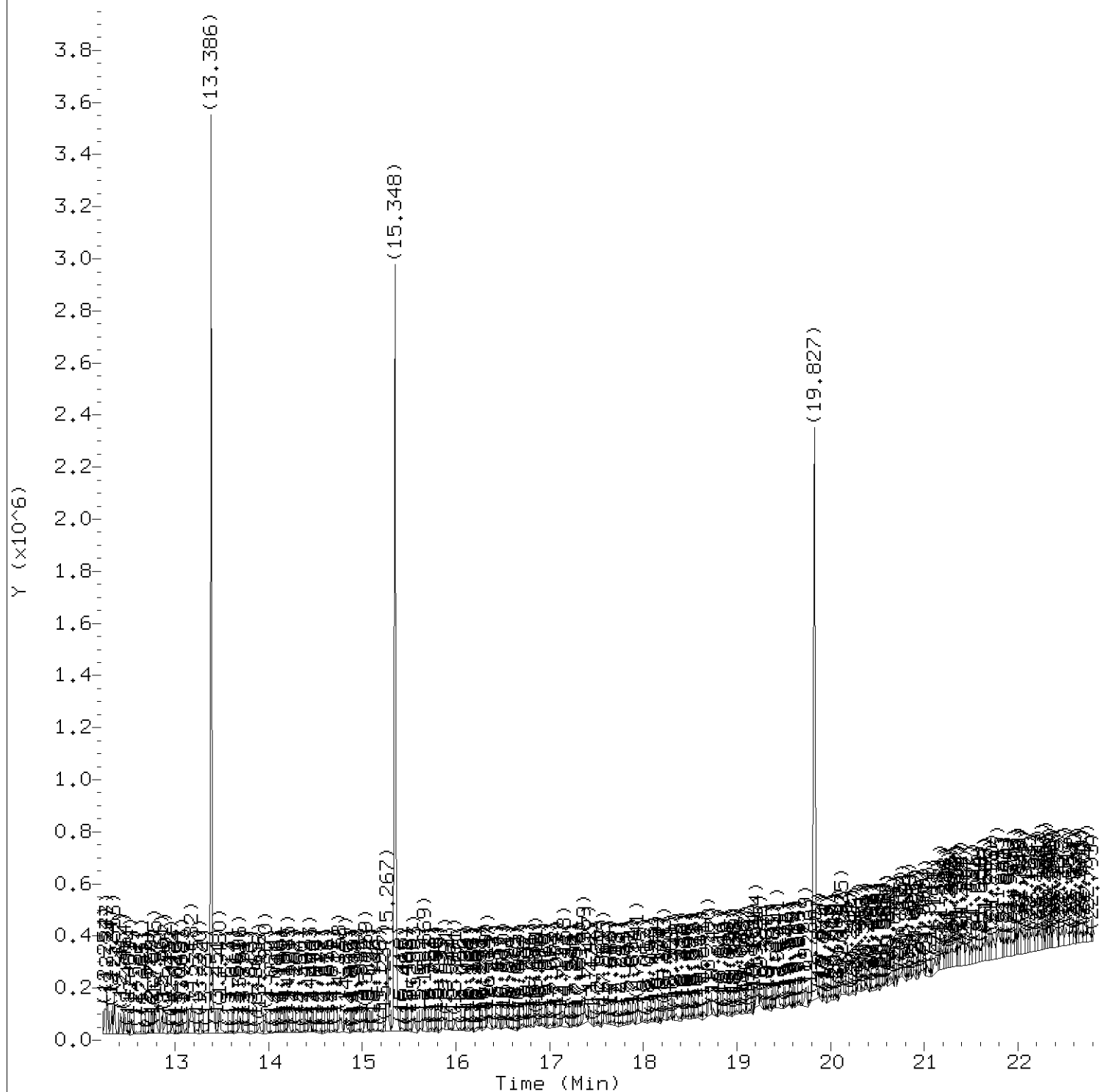
Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0279.d
Injection date and time: 11-MAR-2020 14:41

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: mdlall1

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0279.d
 Injection date and time: 11-MAR-2020 14:41

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.146	88	9418	0.183
5) N-Nitrosodimethylamine	(1)	2.724	74	10057	0.124
6) Pyridine	(1)	3.180	79	14434M	0.113
8) 2-Picoline	(1)	3.985	93	14221M	0.116
10) Methyl methanesulfonate	(1)	4.628	80	9964	0.129
12) \$2-Fluorophenol	(1)	4.855	112	20702	0.208
14) N-Nitrosodiethylamine	(1)	5.194	102	5233	0.106
16) Ethyl methanesulfonate	(1)	5.655	109	5393	0.116
43) Total Cresols	(1)			25060	0.250
17) Benzaldehyde	(1)	6.123	77	17826	0.187
18) \$Phenol-d6	(1)	6.239	99	28232	0.213
19) Phenol	(1)	6.263	94	19279	0.127
20) Aniline	(1)	6.280	93	19311	0.111
21) a-methylstyrene	(1)	6.362	118	5770	0.000
23) bis(2-Chloroethyl) ether	(1)	6.403	93	14441	0.130
24) 2-Chlorophenol	(1)	6.444	128	12316M	0.136
25) 1,3-Dichlorobenzene	(1)	6.683	146	12930	0.120
26) *1,4-Dichlorobenzene-d4	(1)	6.765	152	341498	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	13238	0.120
28) Benzyl alcohol	(1)	6.981	108	8820	0.144
29) 1,2-Dichlorobenzene	(1)	7.004	146	12646	0.123
31) Indene	(1)	7.144	115	17783	0.119
32) 2-Methylphenol	(1)	7.168	108	11175	0.122
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.214	45	19845	0.137
35) bis(2-Chloroisopropyl) ether	(1)	7.214	45	19845	0.137
36) N-Nitrosopyrrolidine	(1)	7.325	100	5186	0.106
37) Acetophenone	(1)	7.378	105	20697	0.137
100) Isosafrole	(3)			11003	0.133
39) N-Nitroso-di-n-propylamine	(1)	7.395	70	10334	0.111
38) 4-Methylphenol	(1)	7.401	108	13885M	0.128
40) N-Nitrosomorpholine	(1)	7.413	56	8348	0.108
41) o-Toluidine	(1)	7.431	106	17881	0.112
44) Hexachloroethane	(1)	7.518	117	6424	0.122
45) \$Nitrobenzene-d5	(2)	7.600	82	30103	0.206
46) Nitrobenzene	(2)	7.623	77	17255	0.115
50) N-Nitrosopiperidine	(2)	7.863	114	3654	0.079
52) Isophorone	(2)	8.009	82	25108	0.105
125) 2,4,2,6-Dinitrotoluenes	(3)			11224	0.221
53) 2-Nitrophenol	(2)	8.120	139	3685	0.077
55) 2,4-Dimethylphenol	(2)	8.225	107	15522	0.141

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0279.d
Injection date and time: 11-MAR-2020 14:41

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD0.125

Lab Sample ID: rvMDL0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
58) Benzoic acid	(2)	8.277	105	31404	0.520
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	5058	0.108
57) bis(2-Chloroethoxy)methane	(2)	8.382	93	15996	0.123
62) 2,4-Dichlorophenol	(2)	8.499	162	6432	0.079
65) 1,2,4-Trichlorobenzene	(2)	8.627	180	9928	0.105
68)*Naphthalene-d8	(2)	8.703	136	1290317	5.000
151) Diallyl trans/cis	(4)			9366	0.102
70) 4-Chloroaniline	(2)	8.838	127	10678	0.099
71) 2,6-Dichlorophenol	(2)	8.855	162	7607	0.094
72) Hexachloropropene	(2)	8.879	213	9412	0.131
74) Hexachlorobutadiene	(2)	8.966	225	7948	0.126
78) Quinoline	(2)	9.264	129	21722	0.128
80) N-Nitrosodi-n-butylamine	(2)	9.422	84	12576	0.154
83) 4-Chloro-3-methylphenol	(2)	9.638	107	8617	0.098
85) Safrole	(2)	9.737	162	9660	0.134
88) Hexachlorocyclopentadiene	(3)	10.111	237	7755	0.110
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.111	216	10886	0.112
91) cis-Isosafrole	(3)	10.204	162	1527	0.020
93) 2,4,6-Trichlorophenol	(3)	10.297	196	5385M	0.092
95) 2,4,5-Trichlorophenol	(3)	10.344	196	6179	0.096
96)\$2-Fluorobiphenyl	(3)	10.455	172	37922	0.184
97) trans-Isosafrole	(3)	10.566	162	9476	0.113
98) 1,1'-Biphenyl	(3)	10.607	154	26970	0.122
101) 1-Chloronaphthalene	(3)	10.642	162	18109	0.106
103) Diphenyl ether	(3)	10.794	170	12814	0.106
104) 2-Nitroaniline	(3)	10.794	138	4787	0.090
108) 1,4-Naphthoquinone	(3)	10.911	158	7016	0.101
109) 1,4-Dinitrobenzene	(3)	11.033	168	2765	0.102
110) Dimethylphthalate	(3)	11.138	163	26226	0.132
111) 1,3-Dinitrobenzene	(3)	11.144	168	1519	0.050
113) 2,6-Dinitrotoluene	(3)	11.203	165	5103	0.117
117) 3-Nitroaniline	(3)	11.454	138	4692	0.110
118)*Acenaphthene-d10	(3)	11.500	164	634640	5.000
120) 2,4-Dinitrophenol	(3)	11.611	184	17533	0.671
121) 4-Nitrophenol	(3)	11.722	109	13849	0.328
122) Pentachlorobenzene	(3)	11.740	250	7571	0.094
124) Dibenzofuran	(3)	11.798	168	28301	0.114
123) 2,4-Dinitrotoluene	(3)	11.810	165	6121	0.103
126) 1-Naphthylamine	(3)	11.909	143	16044	0.098
127) 2,3,4,6-Tetrachlorophenol	(3)	11.973	232	4781	0.099

M = Compound was manually integrated.

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on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

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page 2 of 4

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0279.d
 Injection date and time: 11-MAR-2020 14:41

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
128) 2-Naphthylamine	(3)	12.008	143	18530	0.115
129) Diethylphthalate	(3)	12.166	149	20270	0.104
134) 4-Nitroaniline	(3)	12.254	138	3771	0.080
130) Thionazin	(3)	12.265	107	3542	0.096
133) 5-Nitro-o-toluidine	(3)	12.271	152	4918M	0.099
132) 4-Chlorophenyl-phenylether	(3)	12.277	204	12437	0.130
135) 4,6-Dinitro-2-methylphenol	(4)	12.324	198	15477	0.453
136) N-Nitrosodiphenylamine	(4)	12.417	169	19678	0.126
137) NDPA as diphenylamine	(4)	12.417	169	19678	0.126
139) 1,2-Diphenylhydrazine	(4)	12.464	77	29795	0.110
140) \$2,4,6-Tribromophenol	(3)	12.540	330	7525	0.269
142) Tetraethyldithiopyrophosphate	(4)	12.645	97	2722	0.064
145) Diallate (peak 1)	(4)	12.779	86	6756	0.074
146) Phorate	(4)	12.791	75	13894	0.102
147) Phenacetin	(4)	12.797	108	7562	0.075
148) 4-Bromophenyl-phenylether	(4)	12.861	248	8113	0.139
149) Diallate (peak 2)	(4)	12.884	86	2610M	0.028
152) Dimethoate	(4)	12.972	87	5409	0.063
153) Atrazine	(4)	13.077	200	4448	0.086
154) Pentachlorophenol	(4)	13.153	266	6340	0.160
156) Pentachloronitrobenzene	(4)	13.164	237	3051	0.099
155) 4-Aminobiphenyl	(4)	13.176	169	16209	0.093
157) Pronamide	(4)	13.270	173	7862	0.091
158) *Phenanthrene-d10	(4)	13.386	188	1172508	5.000
159) Dinoseb	(4)	13.410	211	4165	0.091
168) Carbazole	(4)	13.696	167	28402	0.113
169) Methyl parathion	(4)	13.900	109	6438	0.092
170) Di-n-butylphthalate	(4)	14.215	149	32680	0.098
173) 4-Nitroquinoline-1-oxide	(4)	14.426	190	2655	0.083
172) Parathion	(4)	14.443	109	2535	0.060
174) Octachlorostyrene	(4)	14.776	308	4797	0.176
176) Isodrin	(4)	14.829	193	5772	0.151
179) Benzydine	(5)	15.267	184	144729	0.759
180) *Pyrene-d10	(5)	15.348	212	1171553	5.000
184) \$Terphenyl-d14	(5)	15.664	244	43339	0.204
187) p-Dimethylaminoazobenzene	(5)	15.891	225	6691	0.124
190) Chlorobenzilate	(5)	15.985	139	8785	0.095
192) 3,3'-Dimethylbenzidine	(5)	16.458	212	15234	0.084
193) Butylbenzylphthalate	(5)	16.528	149	10550	0.077
196) 2-Acetylaminofluorene	(5)	16.861	181	10604	0.099

M = Compound was manually integrated.

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on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
198) 3,3'-Dichlorobenzidine	(5)	17.369	252	8785	0.080
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.404	231	5258	0.095
204) bis(2-Ethylhexyl)phthalate	(5)	17.585	149	22073	0.117
208) 6-Methylchrysene	(5)	18.227	242	18046	0.090
210) Di-n-octylphthalate	(6)	18.752	149	28305	0.087
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214	256	12185	0.094
218) *Perylene-d12	(6)	19.827	264	1164285	5.000
220) 3-Methylcholanthrene	(6)	20.300	268	13627	0.106
222) Dibenz(a,h)acridine	(6)	21.111	279	20537	0.104
223) Dibenz(a,j)acridine	(6)	21.187	279	24661	0.116

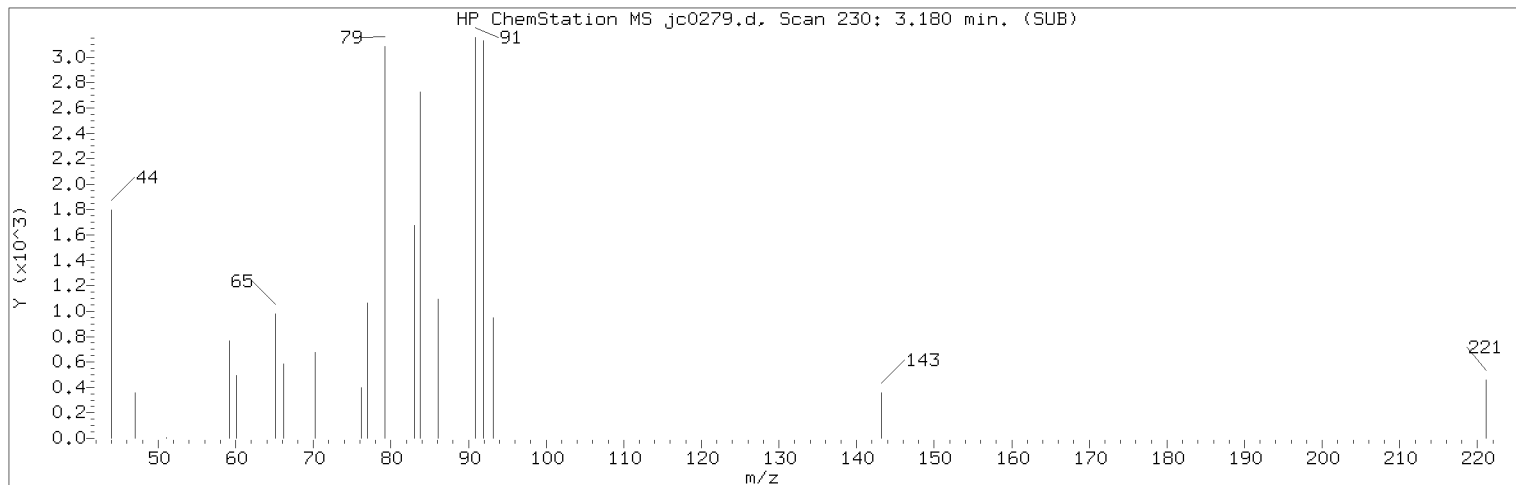
* = Compound is an internal standard.

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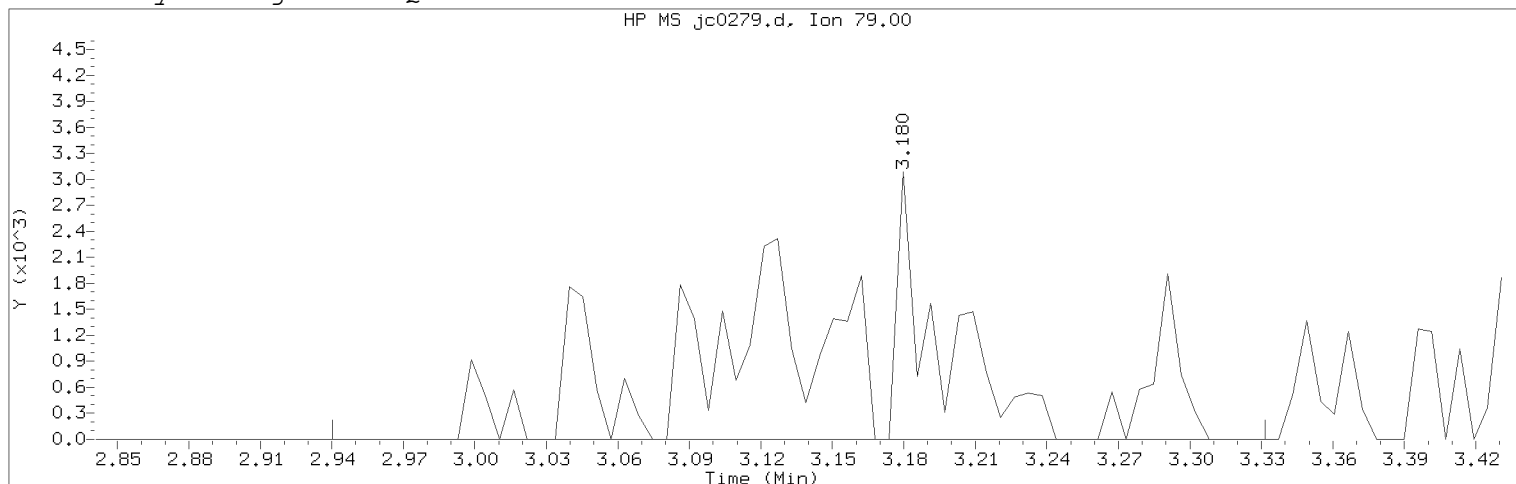
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 230	
Retention Time (minutes)	: 3.180	
Quant Ion	: 79.00	
Area (flag)	: 14434M	
On-Column Amount (ng/ul)	: 0.1135	
Integration start scan	: 188	Integration stop scan: 255
Y at integration start	: 0	Y at integration end: 0

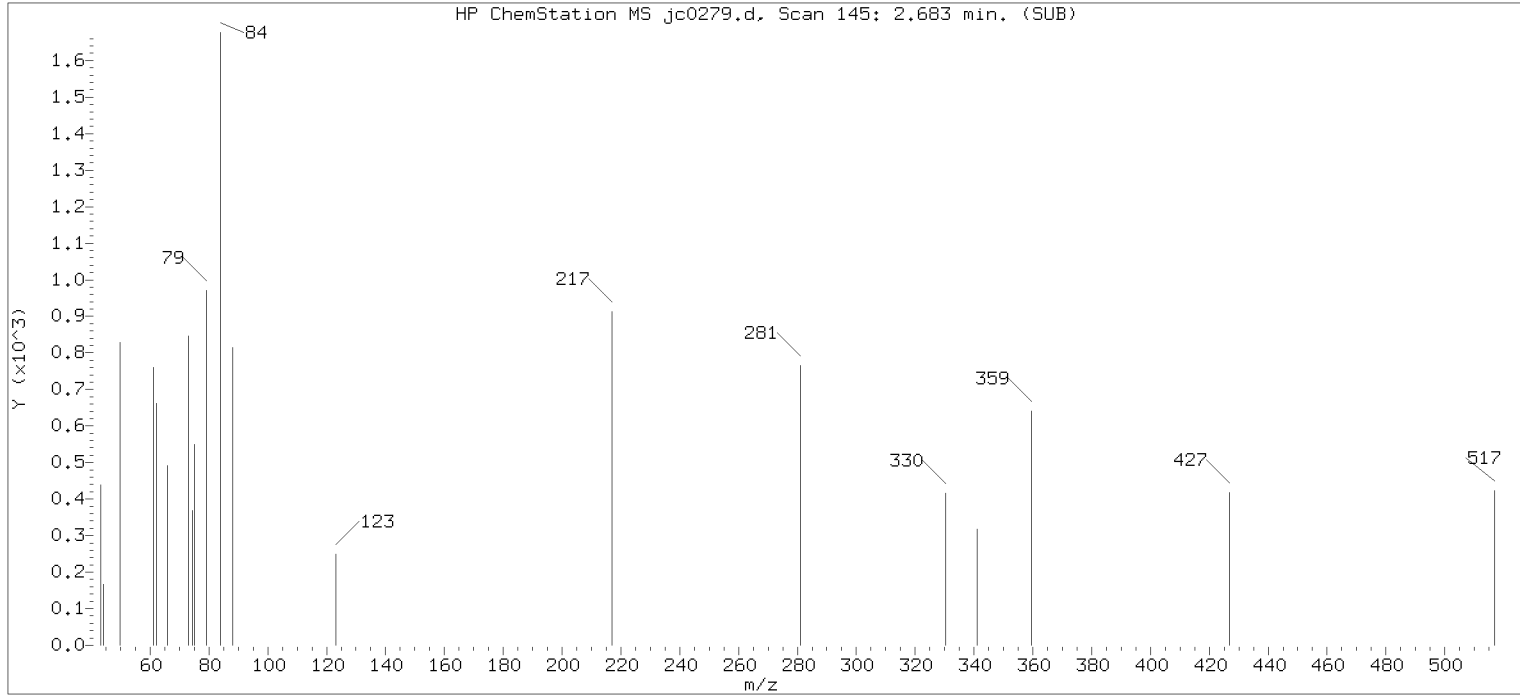
Reason for manual integration: improper integration

Analyst responsible for change:

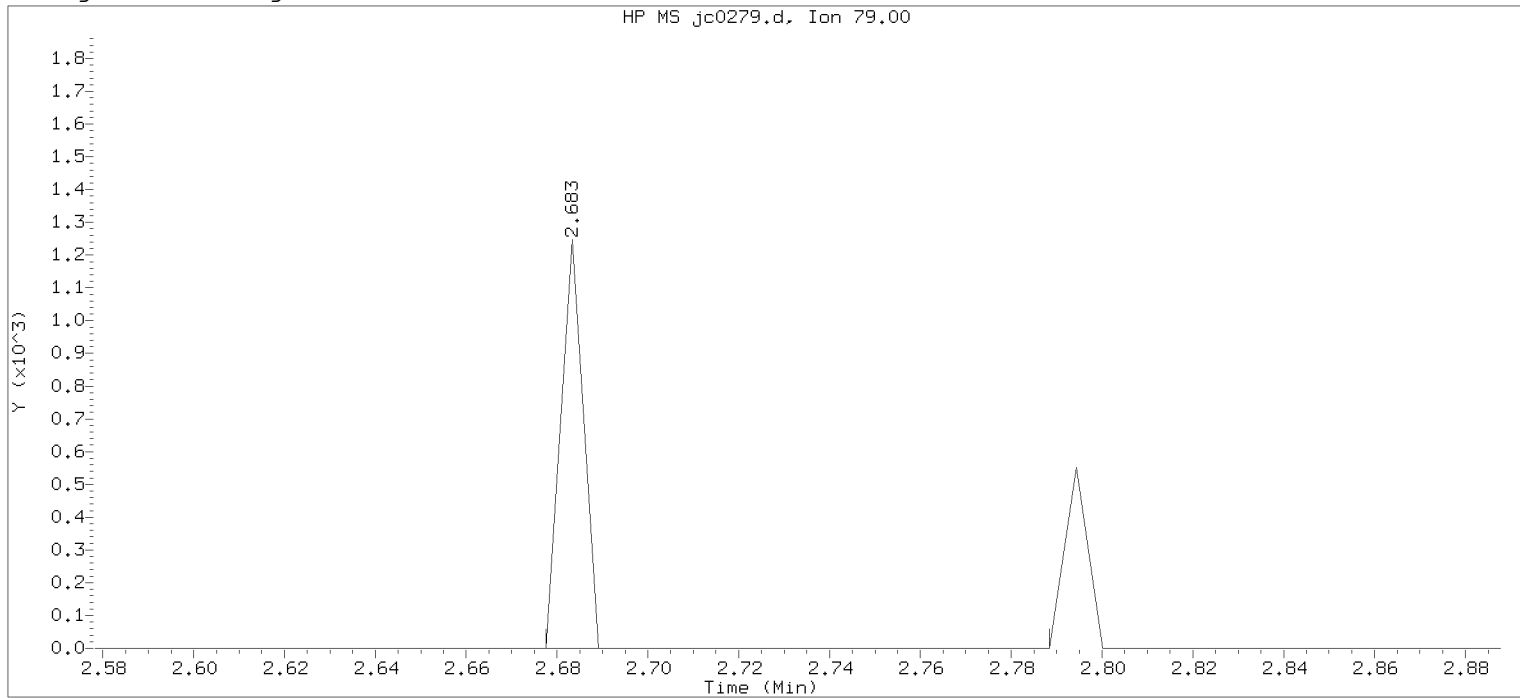
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

Sample Name: SSTDO.125

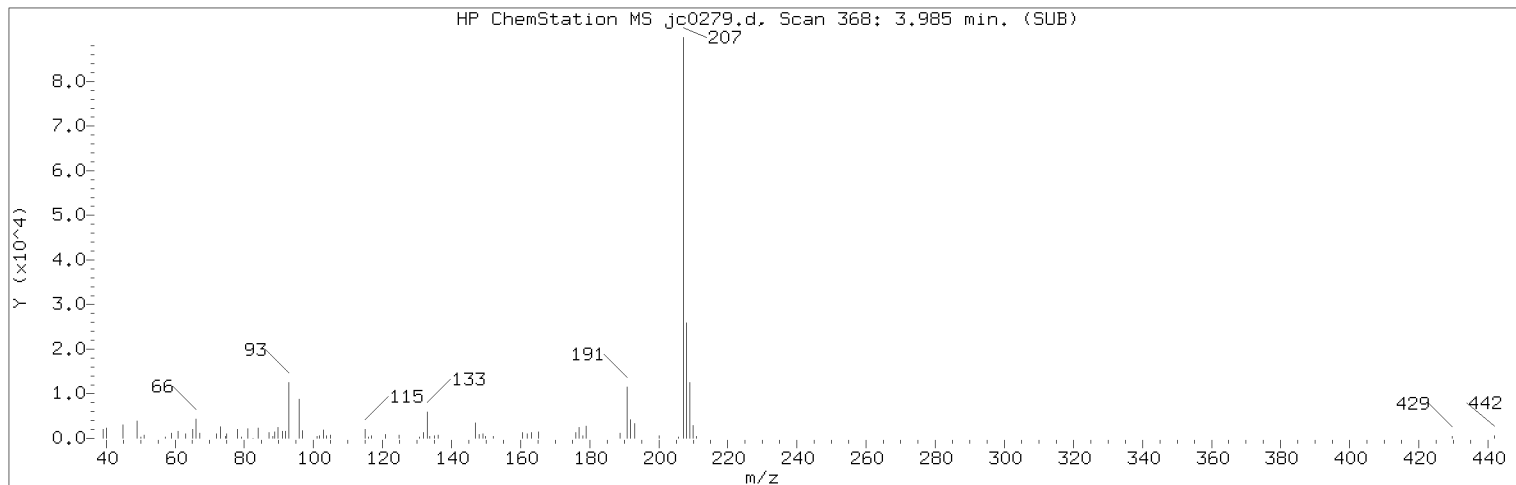
Lab Sample ID: rvMDL0340

Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 145	
Retention Time (minutes)	: 2.683	
Quant Ion	: 79.00	
Area	: 436	
On-column Amount (ng/ul)	: 0.0040	
Integration start scan	: 143	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

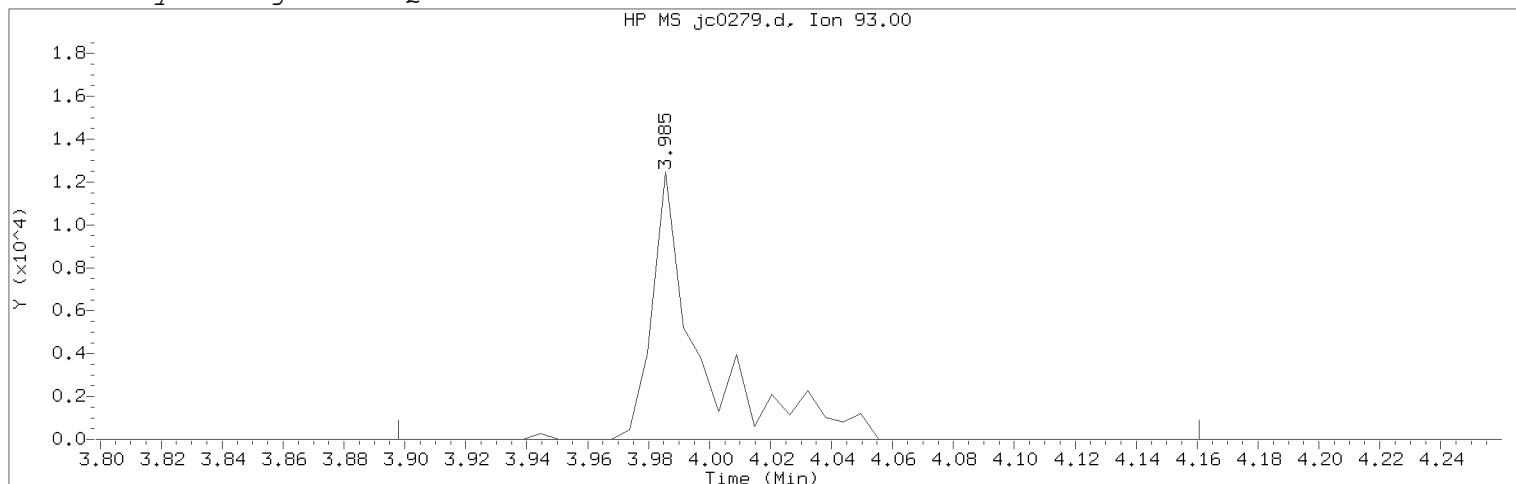
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1265 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compound Number	: 8	
Compound Name	: 2-Picoline	
Scan Number	: 368	
Retention Time (minutes)	: 3.985	
Quant Ion	: 93.00	
Area (flag)	: 14221M	
On-Column Amount (ng/ul)	: 0.1162	
Integration start scan	: 352	Integration stop scan: 397
Y at integration start	: 0	Y at integration end: 0

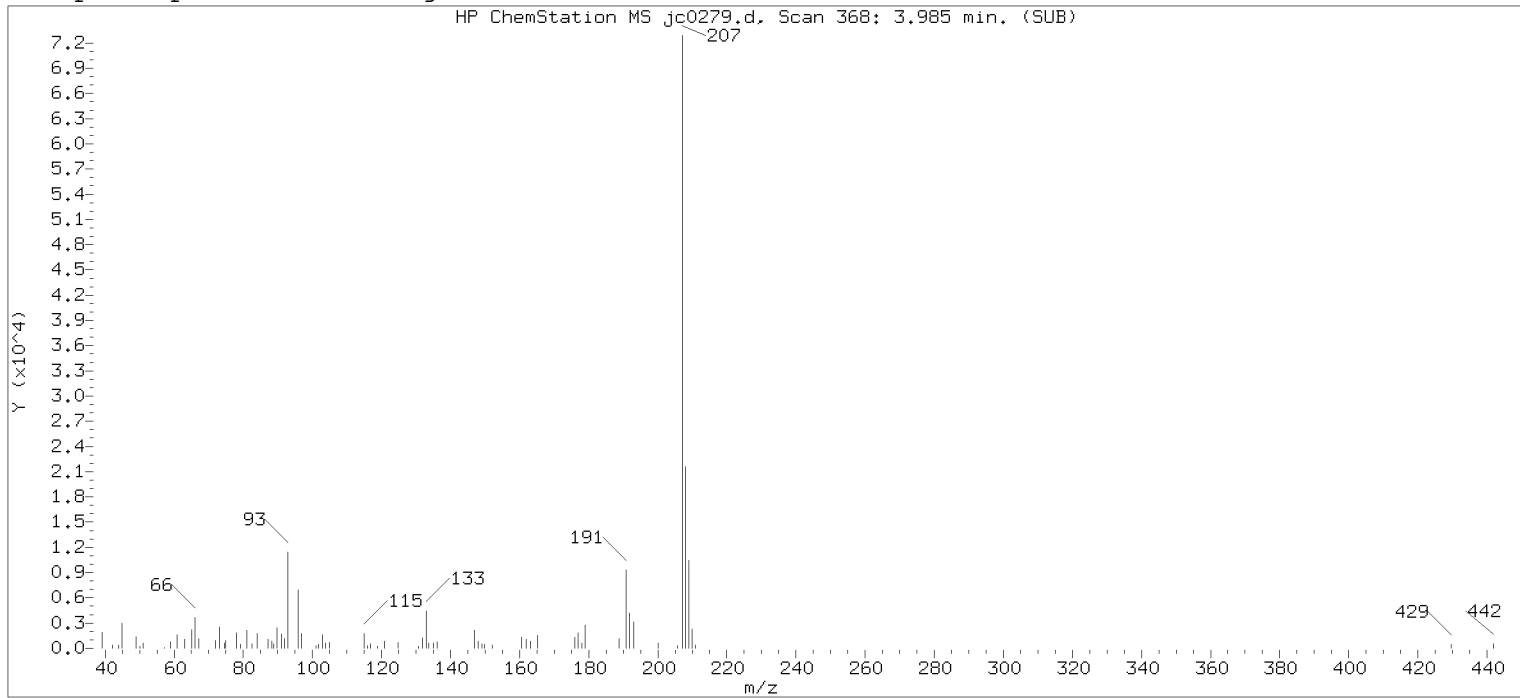
Reason for manual integration: improper integration

Analyst responsible for change:

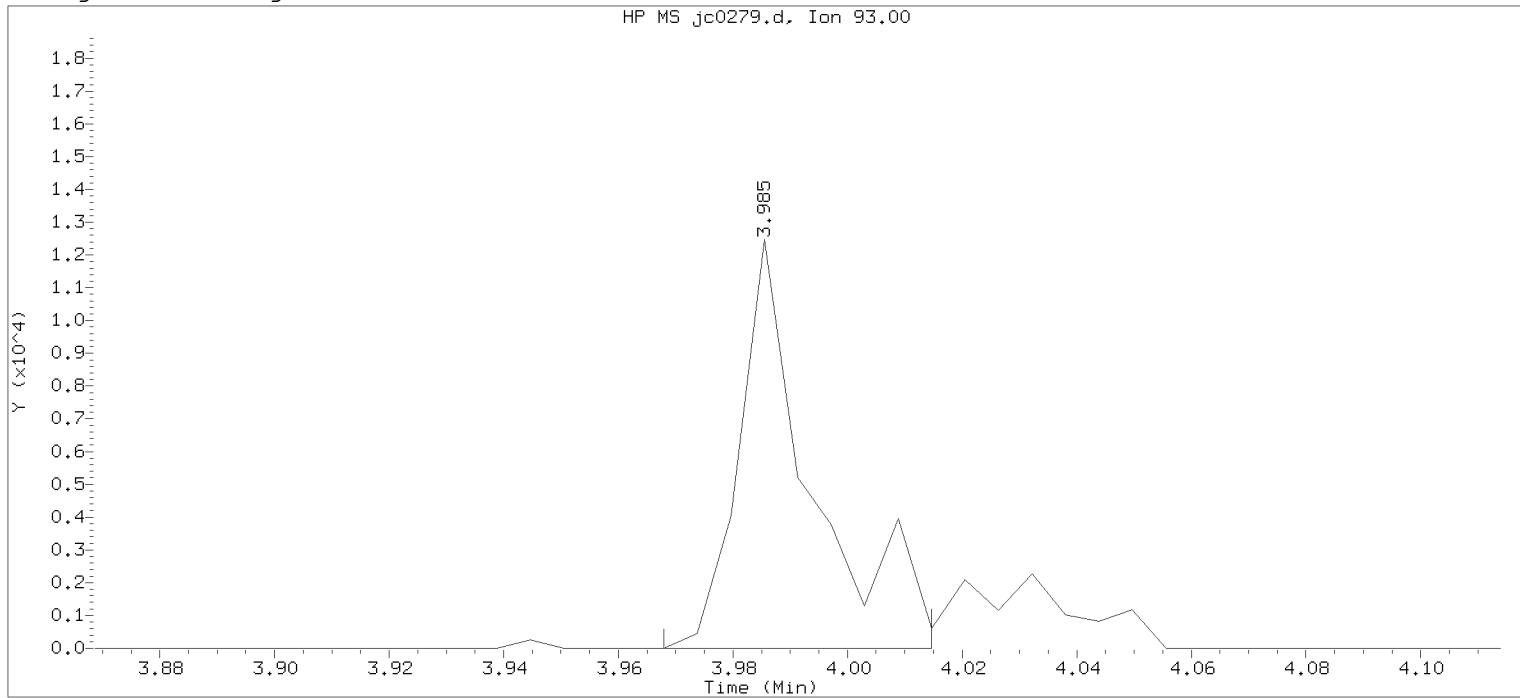
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

Sample Name: SSTDO.125

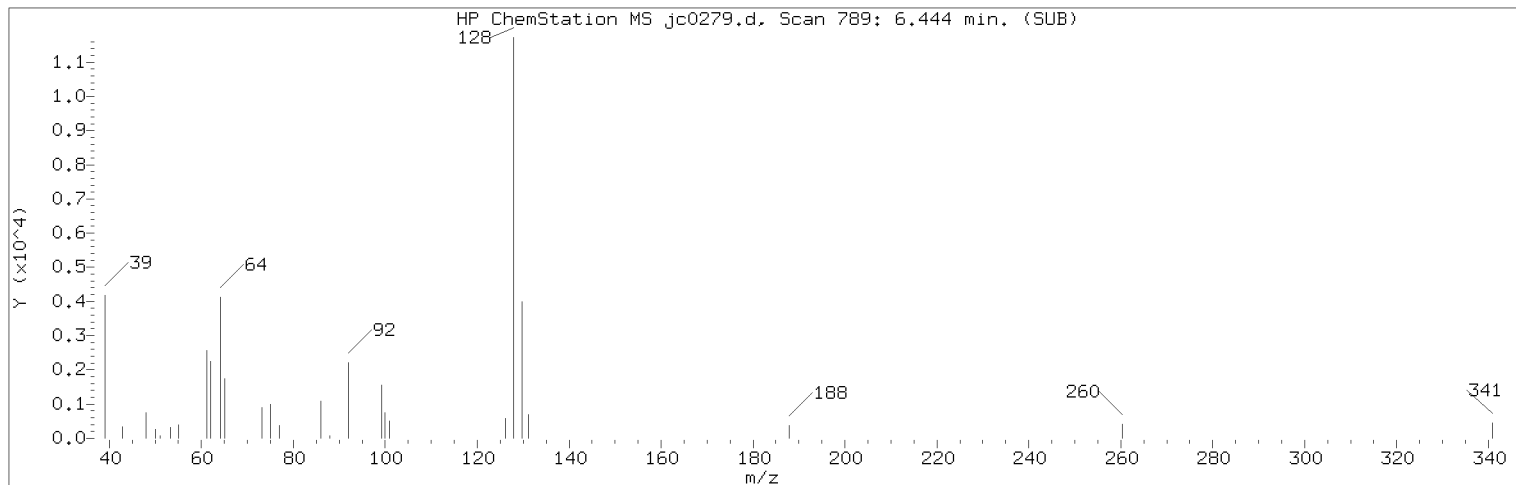
Lab Sample ID: rvMDL0340

Compound Number	: 8	
Compound Name	: 2-Picoline	
Scan Number	: 368	
Retention Time (minutes)	: 3.985	
Quant Ion	: 93.00	
Area	: 11035	
On-column Amount (ng/ul)	: 0.0896	
Integration start scan	: 364	Integration stop scan: 372
Y at integration start	: 0	Y at integration end: 0

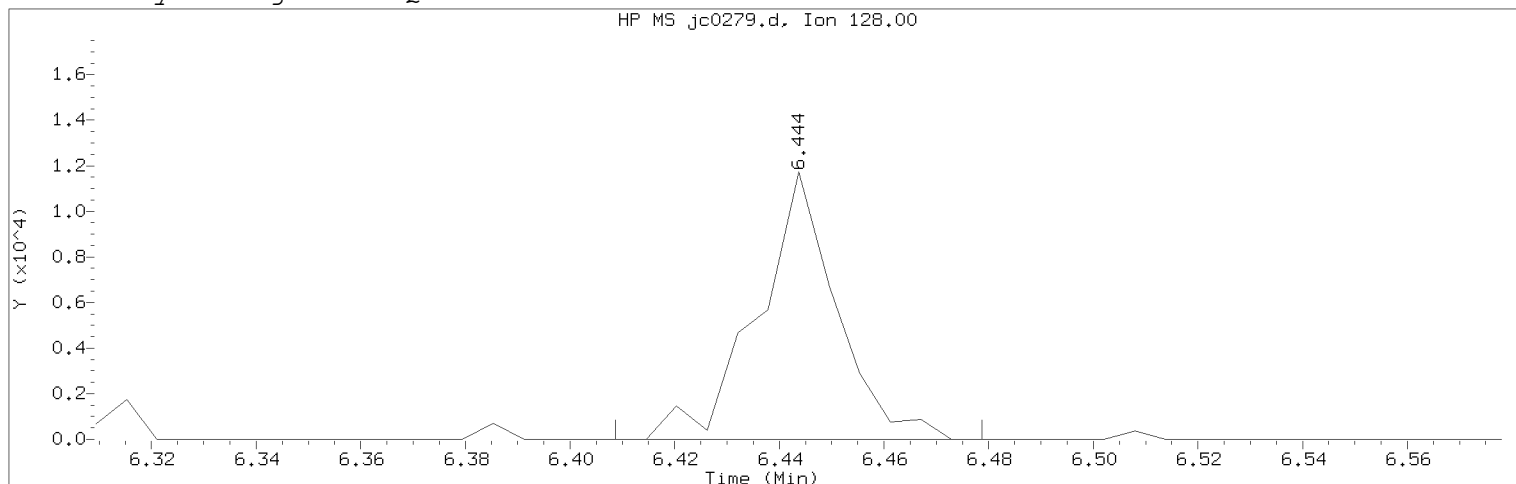
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAFS9** Page 1267 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compound Number	: 24	
Compound Name	: 2-Chlorophenol	
Scan Number	: 789	
Retention Time (minutes)	: 6.444	
Quant Ion	: 128.00	
Area (flag)	: 12316M	
On-Column Amount (ng/ul)	: 0.1363	
Integration start scan	: 782	Integration stop scan: 794
Y at integration start	: 0	Y at integration end: 0

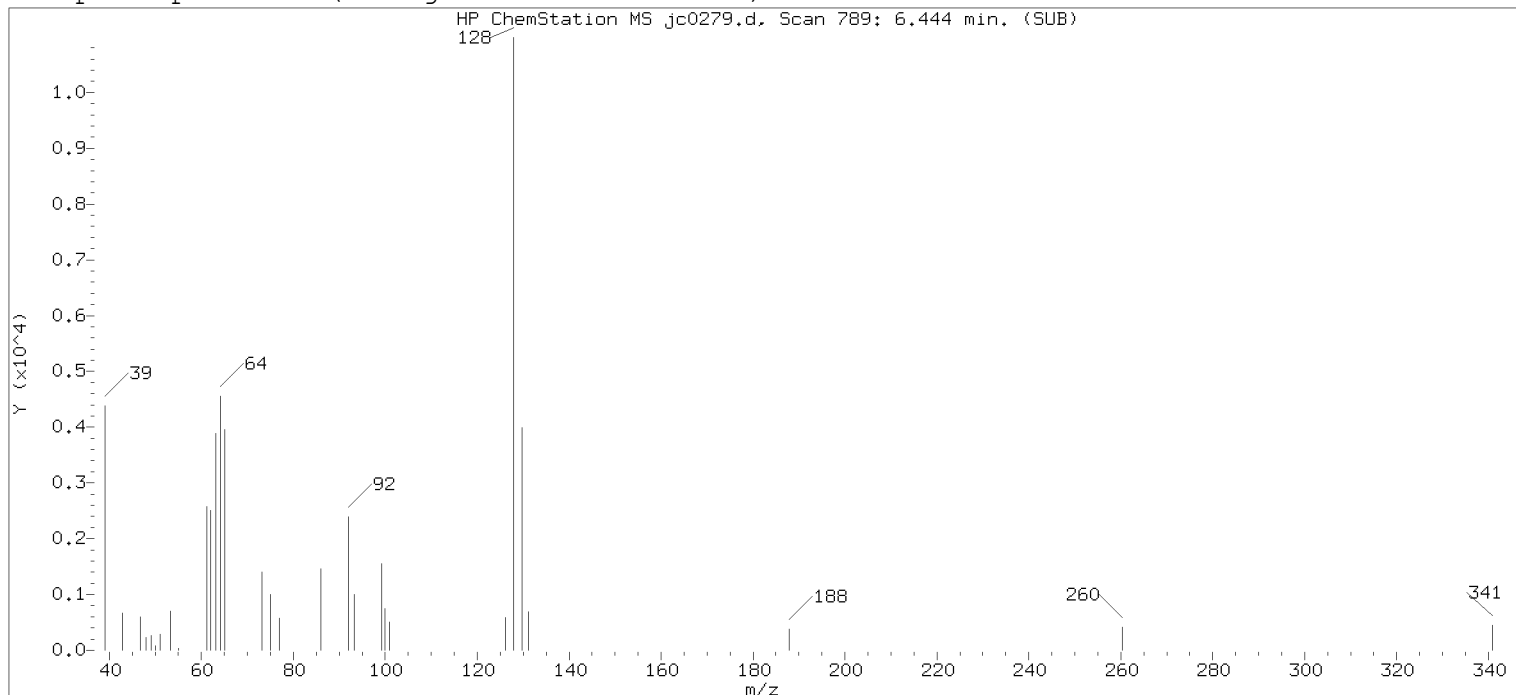
Reason for manual integration: improper integration

Analyst responsible for change:

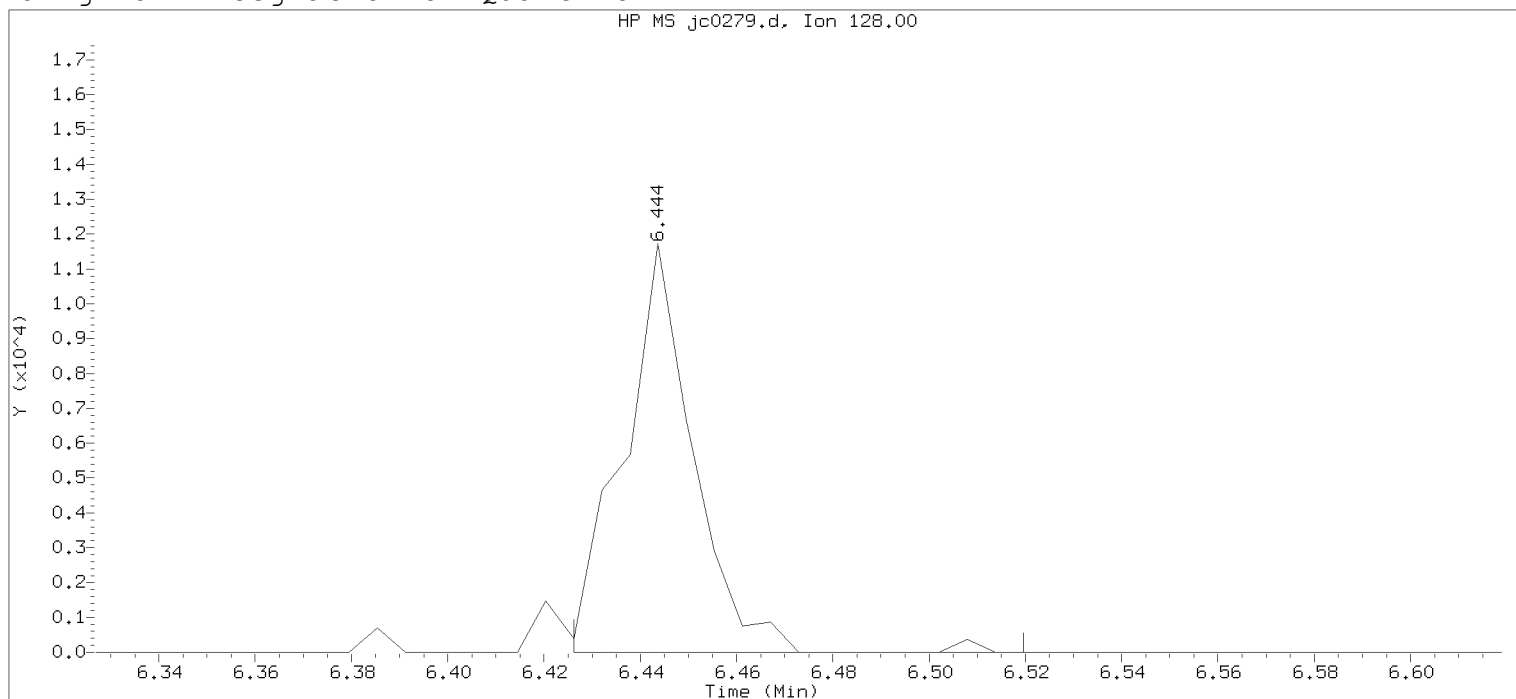
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

Sample Name: SSTDO.125

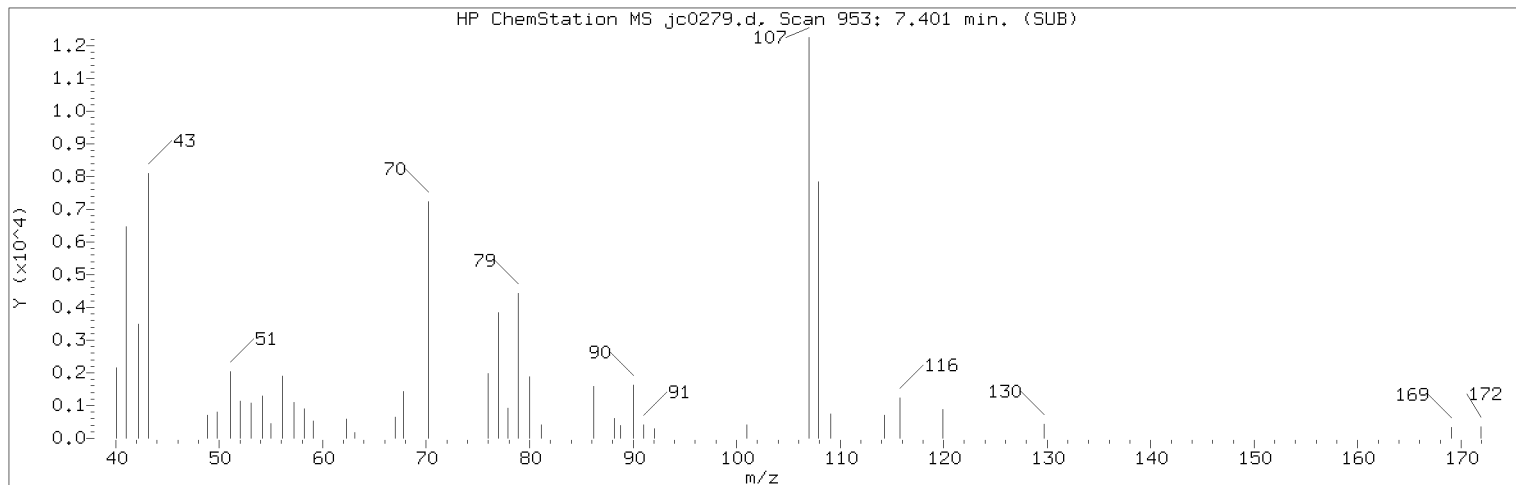
Lab Sample ID: rvMDL0340

Compound Number	: 24	
Compound Name	: 2-Chlorophenol	
Scan Number	: 789	
Retention Time (minutes)	: 6.444	
Quant Ion	: 128.00	
Area	: 11866	
On-column Amount (ng/ul)	: 0.1313	
Integration start scan	: 785	Integration stop scan: 801
Y at integration start	: 0	Y at integration end: 0

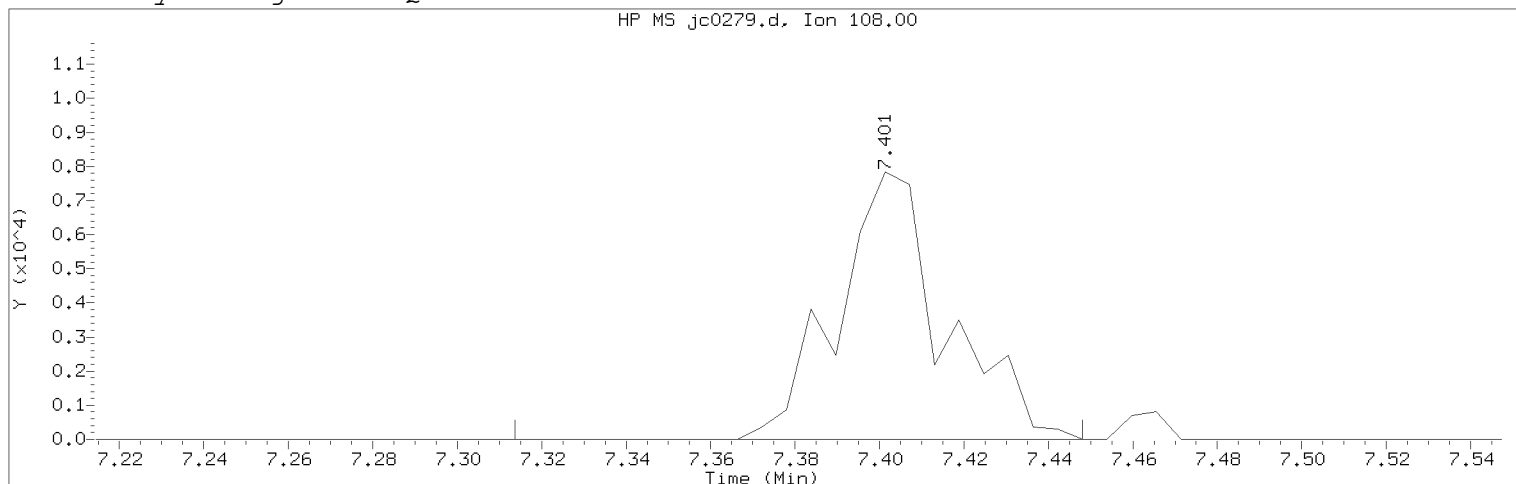
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59 Page 1269 of 1506**

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compound Number	: 38	
Compound Name	: 4-Methylphenol	
Scan Number	: 953	
Retention Time (minutes)	: 7.401	
Quant Ion	: 108.00	
Area (flag)	: 13885M	
On-Column Amount (ng/ul)	: 0.1276	
Integration start scan	: 937	Integration stop scan: 960
Y at integration start	: 0	Y at integration end: 0

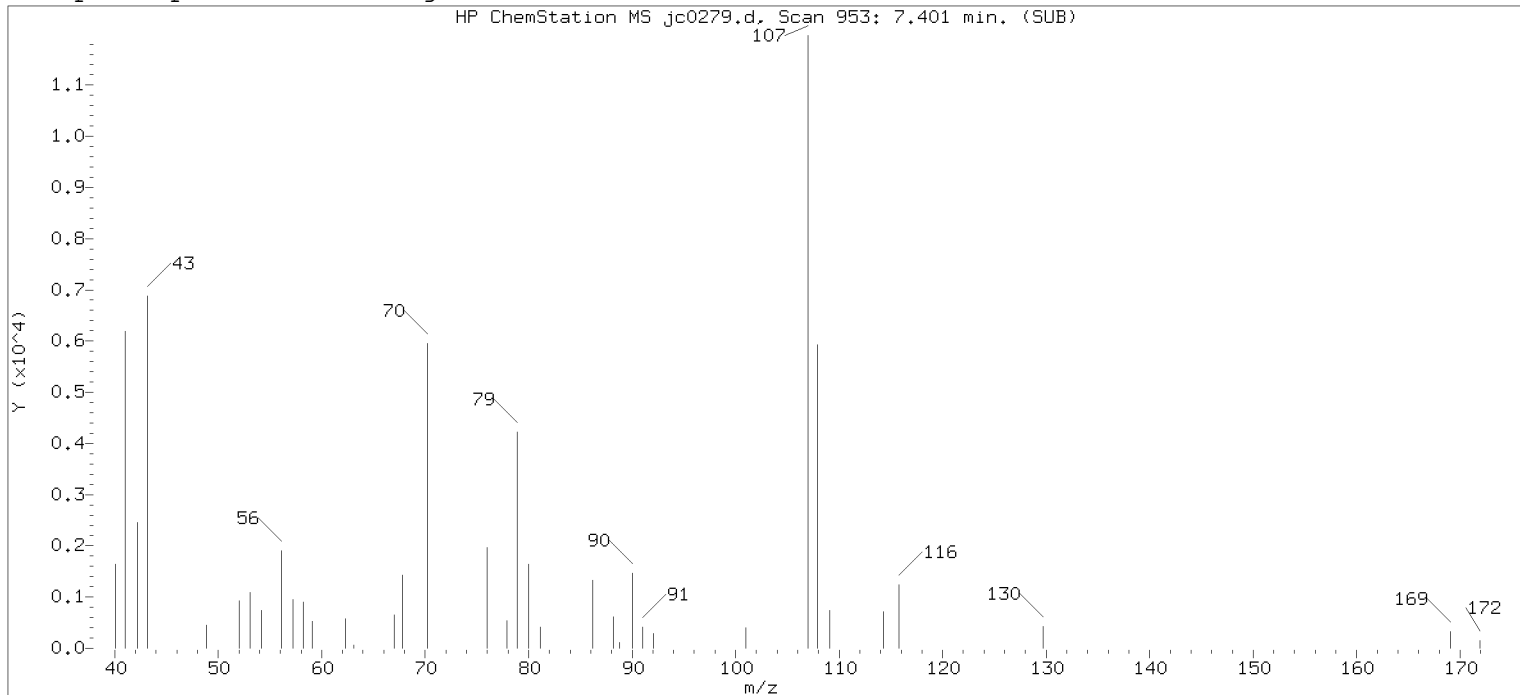
Reason for manual integration: improper integration

Analyst responsible for change:

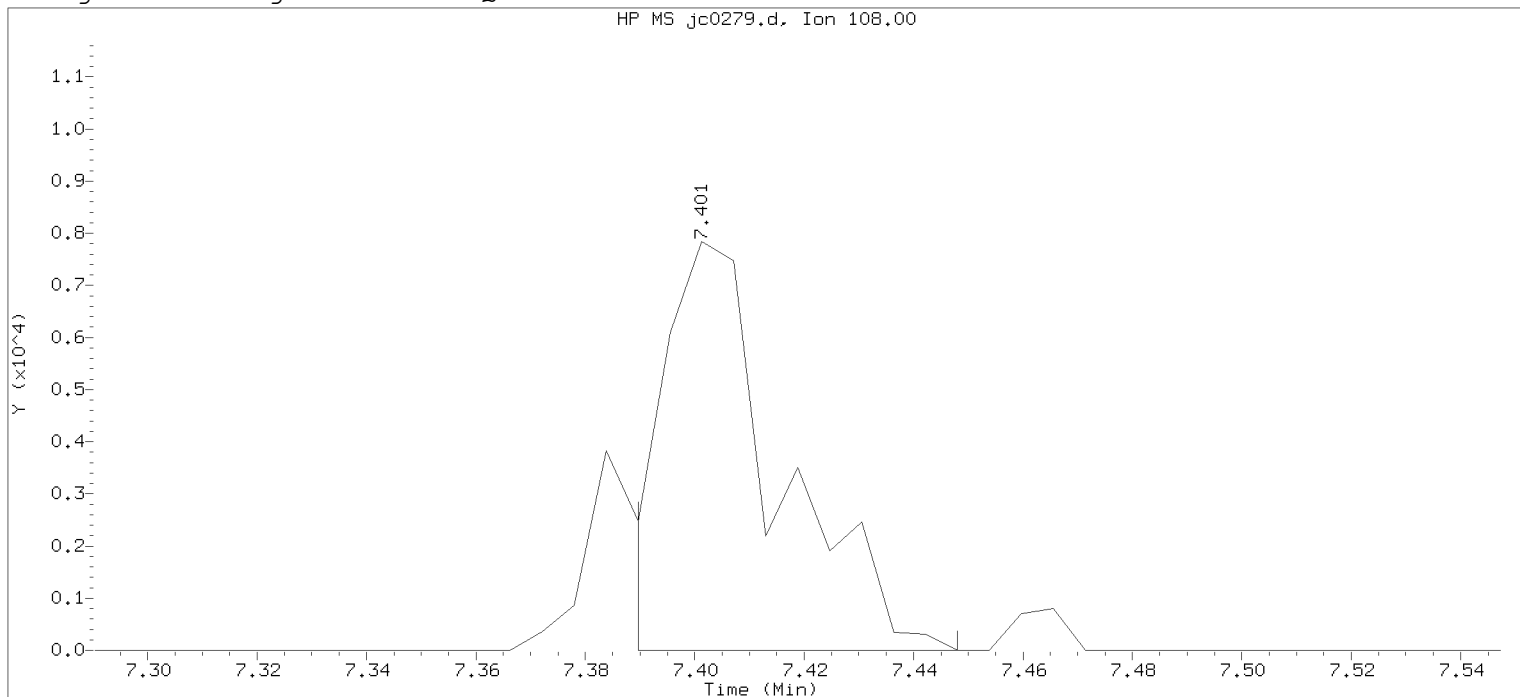
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

Sample Name: SST0.125

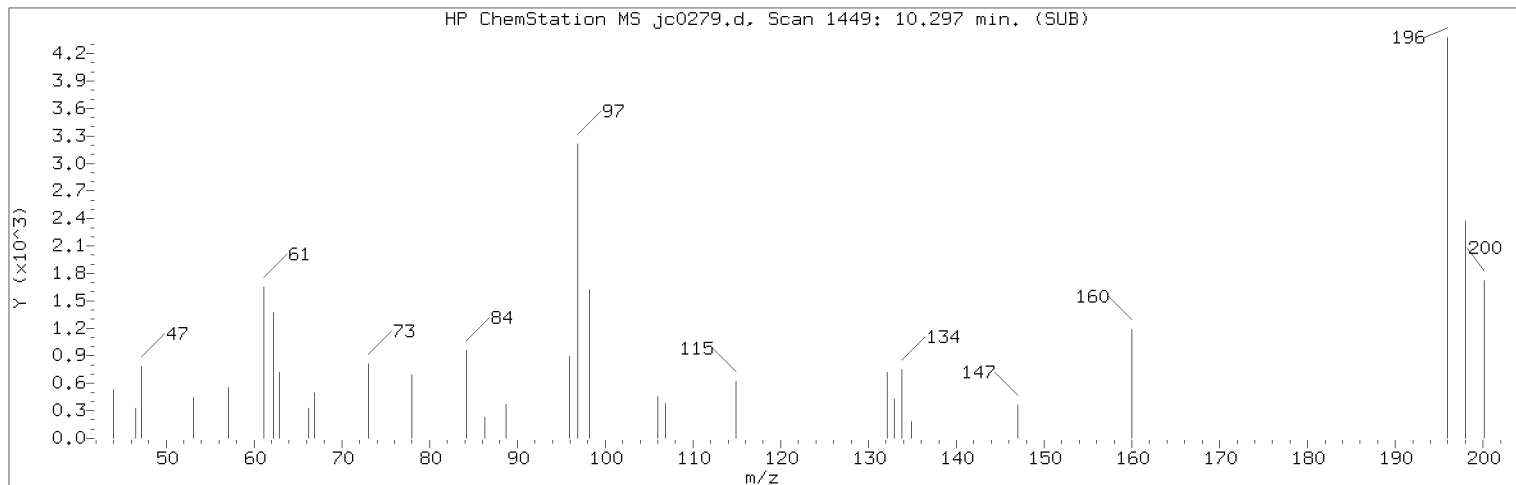
Lab Sample ID: rvMDL0340

Compound Number	: 38	
Compound Name	: 4-Methylphenol	
Scan Number	: 953	
Retention Time (minutes)	: 7.401	
Quant Ion	: 108.00	
Area	: 11685	
On-column Amount (ng/ul)	: 0.1084	
Integration start scan	: 950	Integration stop scan: 960
Y at integration start	: 0	Y at integration end: 0

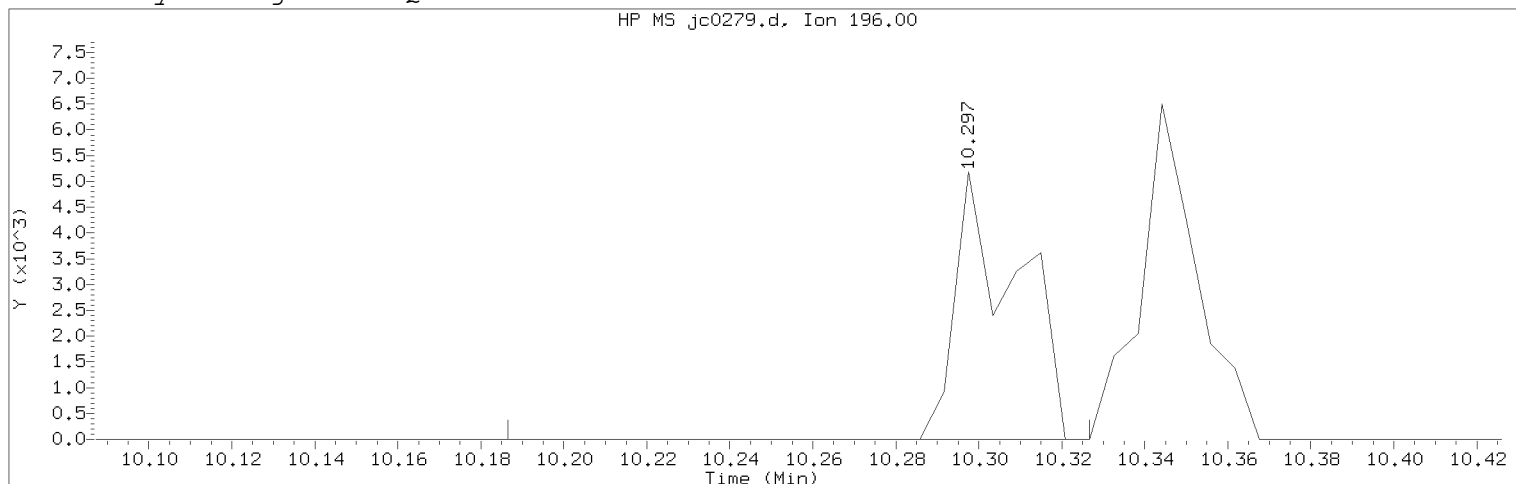
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1271 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

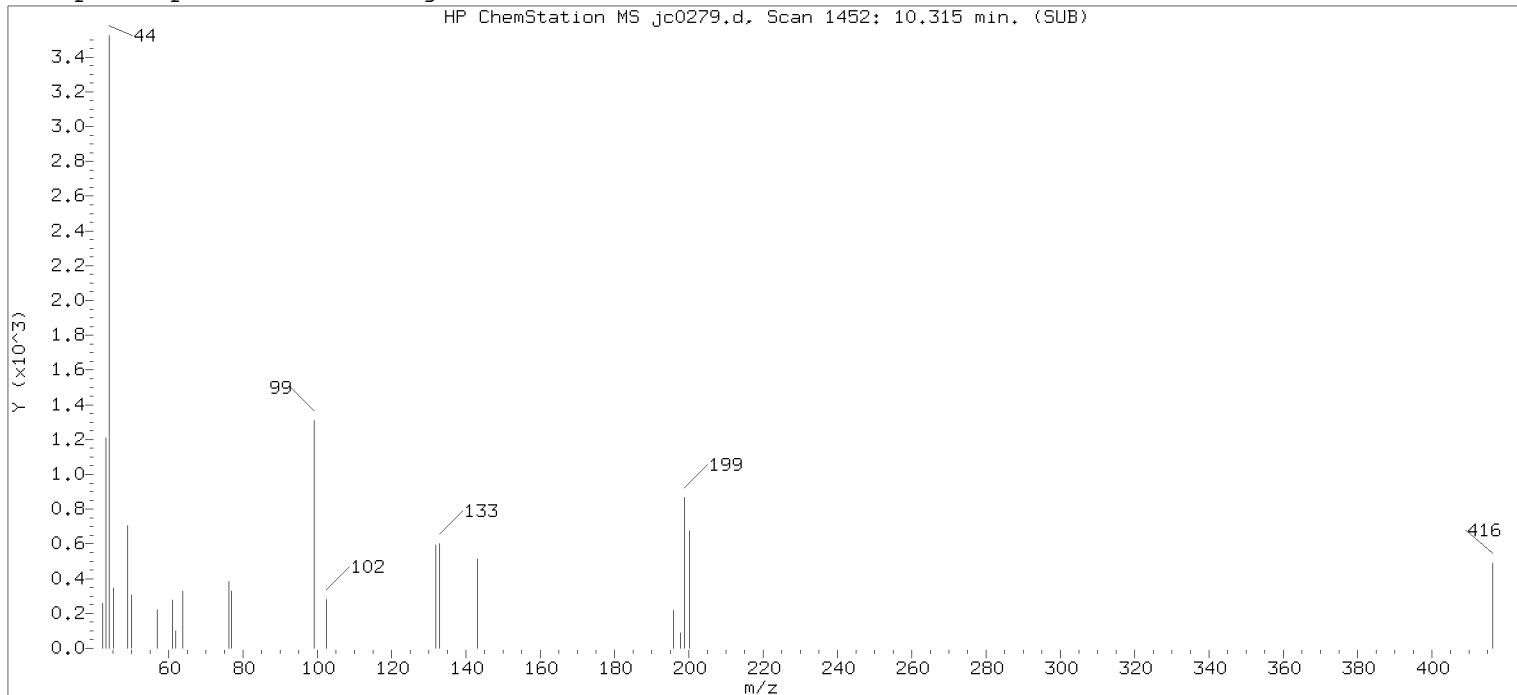
Compound Number	: 93	
Compound Name	: 2,4,6-Trichlorophenol	
Scan Number	: 1449	
Retention Time (minutes)	: 10.297	
Quant Ion	: 196.00	
Area (flag)	: 5385M	
On-Column Amount (ng/ul)	: 0.0920	
Integration start scan	: 1429	Integration stop scan: 1453
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

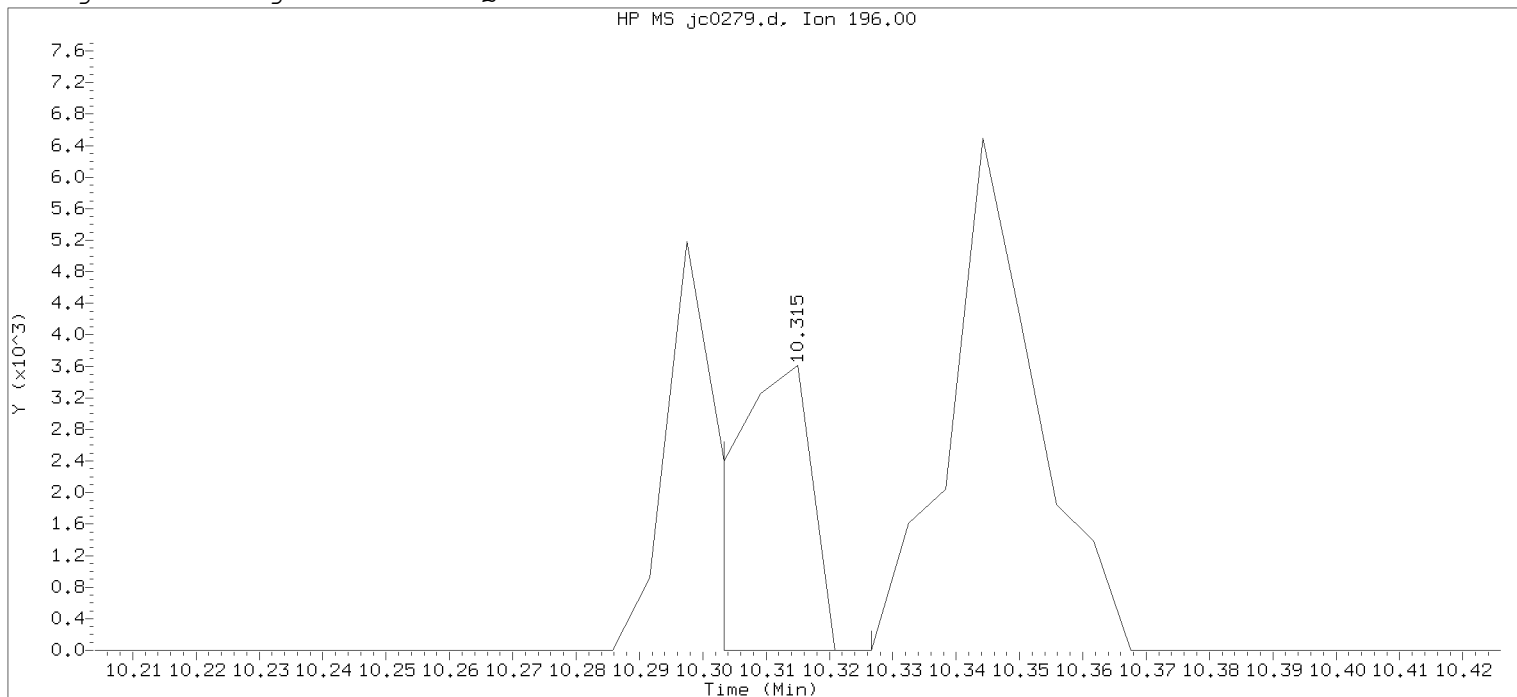
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

Sample Name: SSTDO.125

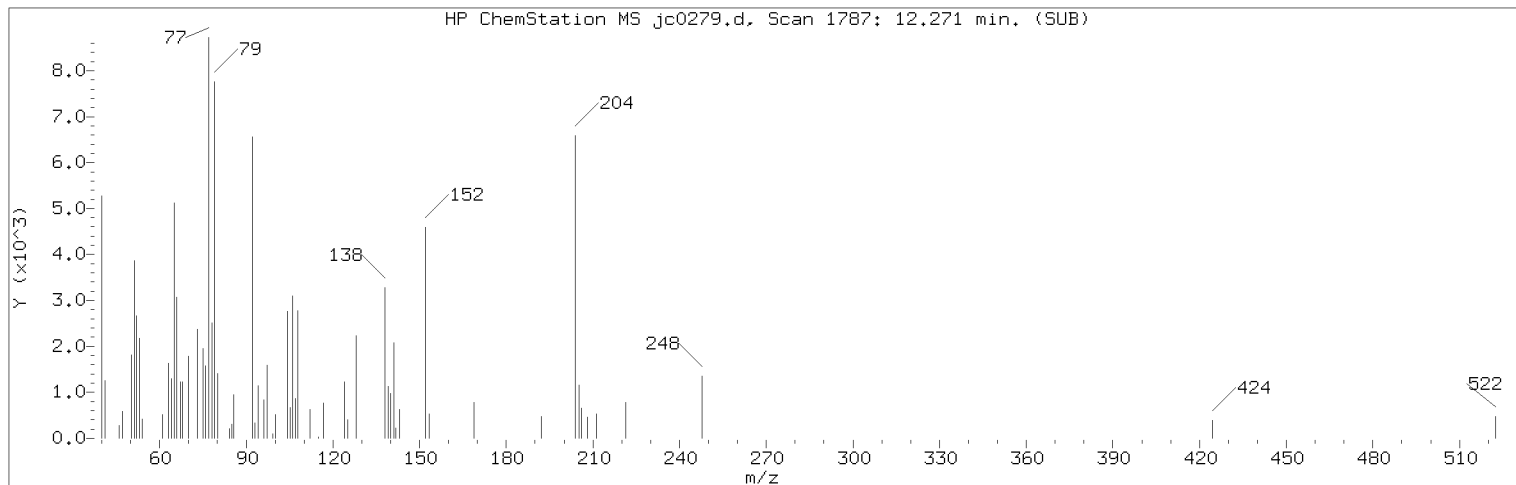
Lab Sample ID: rvMDL0340

Compound Number	: 93	
Compound Name	: 2,4,6-Trichlorophenol	
Scan Number	: 1452	
Retention Time (minutes)	: 10.315	
Quant Ion	: 196.00	
Area	: 2826	
On-column Amount (ng/ul)	: 0.0488	
Integration start scan	: 1449	Integration stop scan: 1453
Y at integration start	: 0	Y at integration end: 0

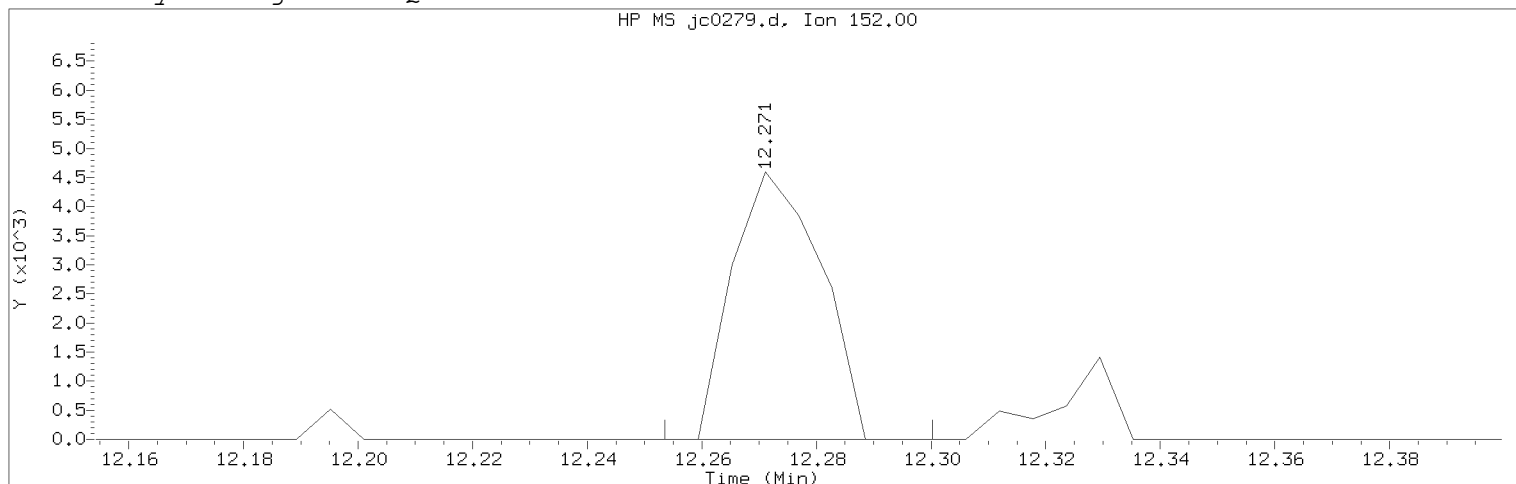
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1273 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compound Number	: 133	
Compound Name	: 5-Nitro-o-toluidine	
Scan Number	: 1787	
Retention Time (minutes)	: 12.271	
Quant Ion	: 152.00	
Area (flag)	: 4918M	
On-Column Amount (ng/ul)	: 0.0987	
Integration start scan	: 1783	Integration stop scan: 1791
Y at integration start	: 0	Y at integration end: 0

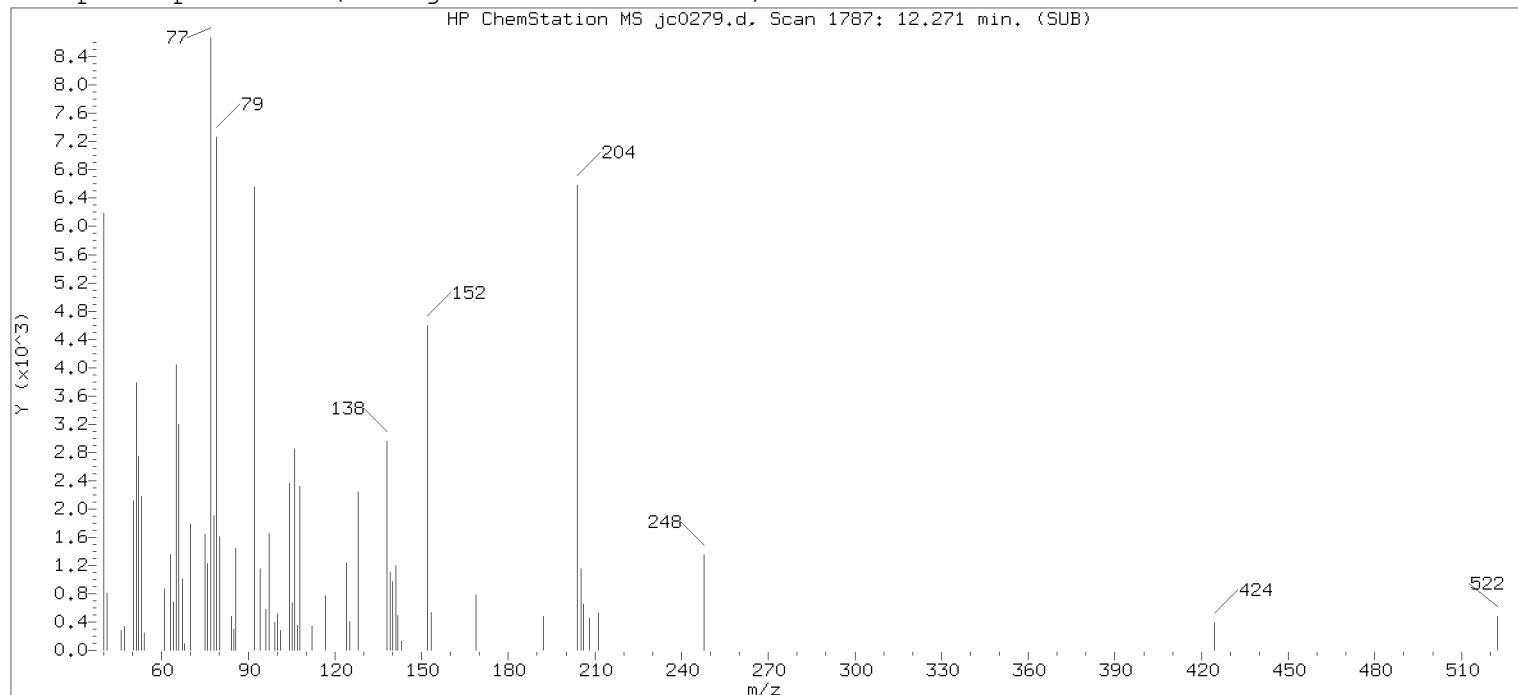
Reason for manual integration: improper integration

Analyst responsible for change:

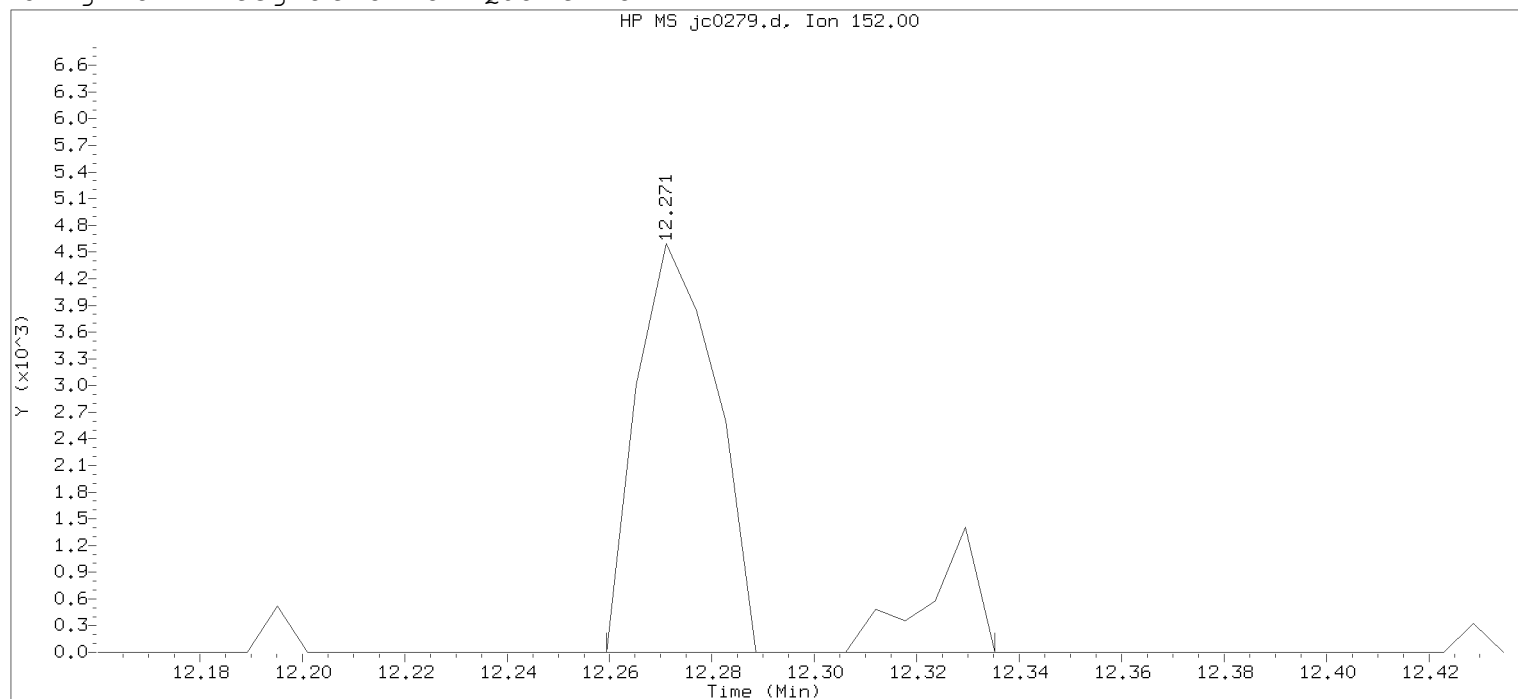
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

Sample Name: SSTDO.125

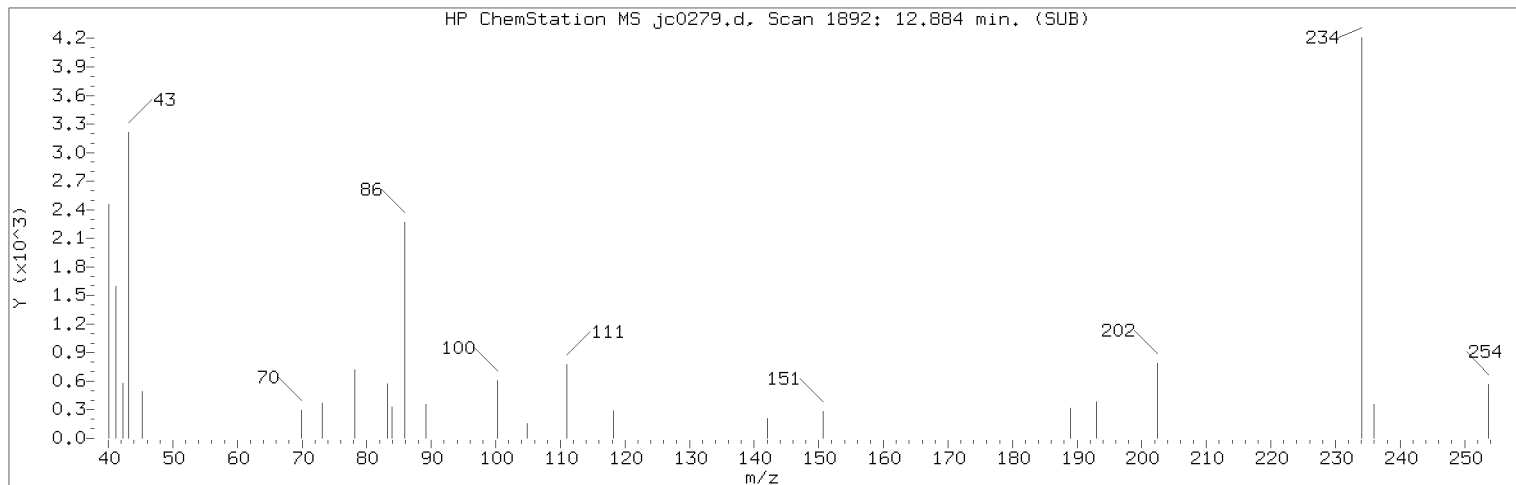
Lab Sample ID: rvMDL0340

Compound Number	: 133	
Compound Name	: 5-Nitro-o-toluidine	
Scan Number	: 1787	
Retention Time (minutes)	: 12.271	
Quant Ion	: 152.00	
Area	: 5906	
On-column Amount (ng/ul)	: 0.1192	
Integration start scan	: 1784	Integration stop scan: 1797
Y at integration start	: 0	Y at integration end: 0

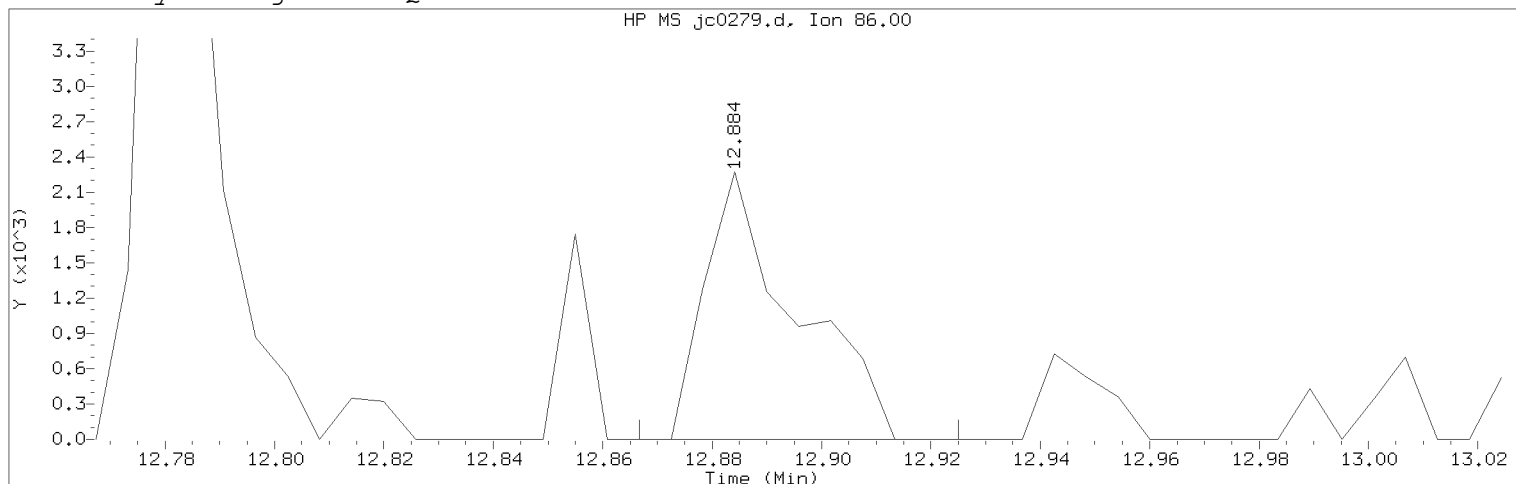
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1275 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

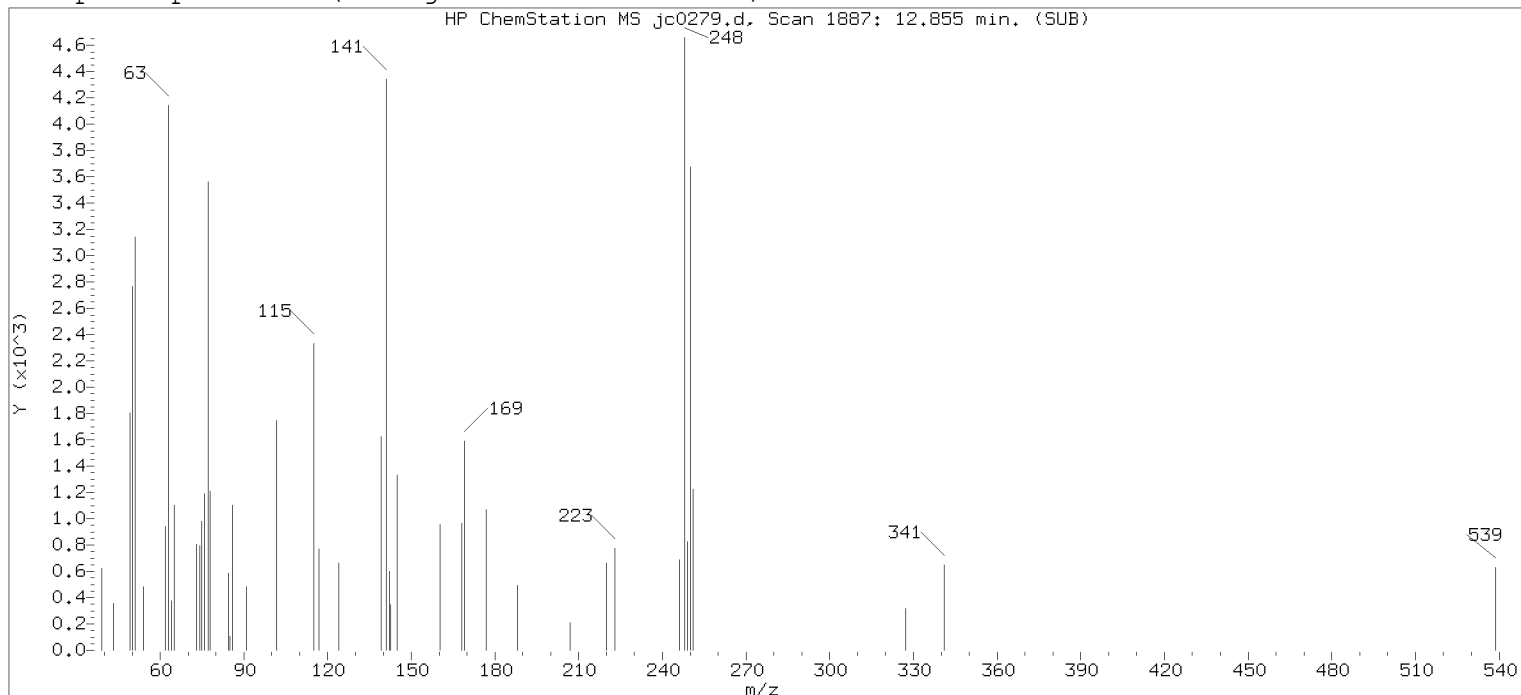
Compound Number	: 149	
Compound Name	: Diallate (peak 2)	
Scan Number	: 1892	
Retention Time (minutes)	: 12.884	
Quant Ion	: 86.00	
Area (flag)	: 2610M	
On-Column Amount (ng/ul)	: 0.0285	
Integration start scan	: 1888	Integration stop scan: 1898
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

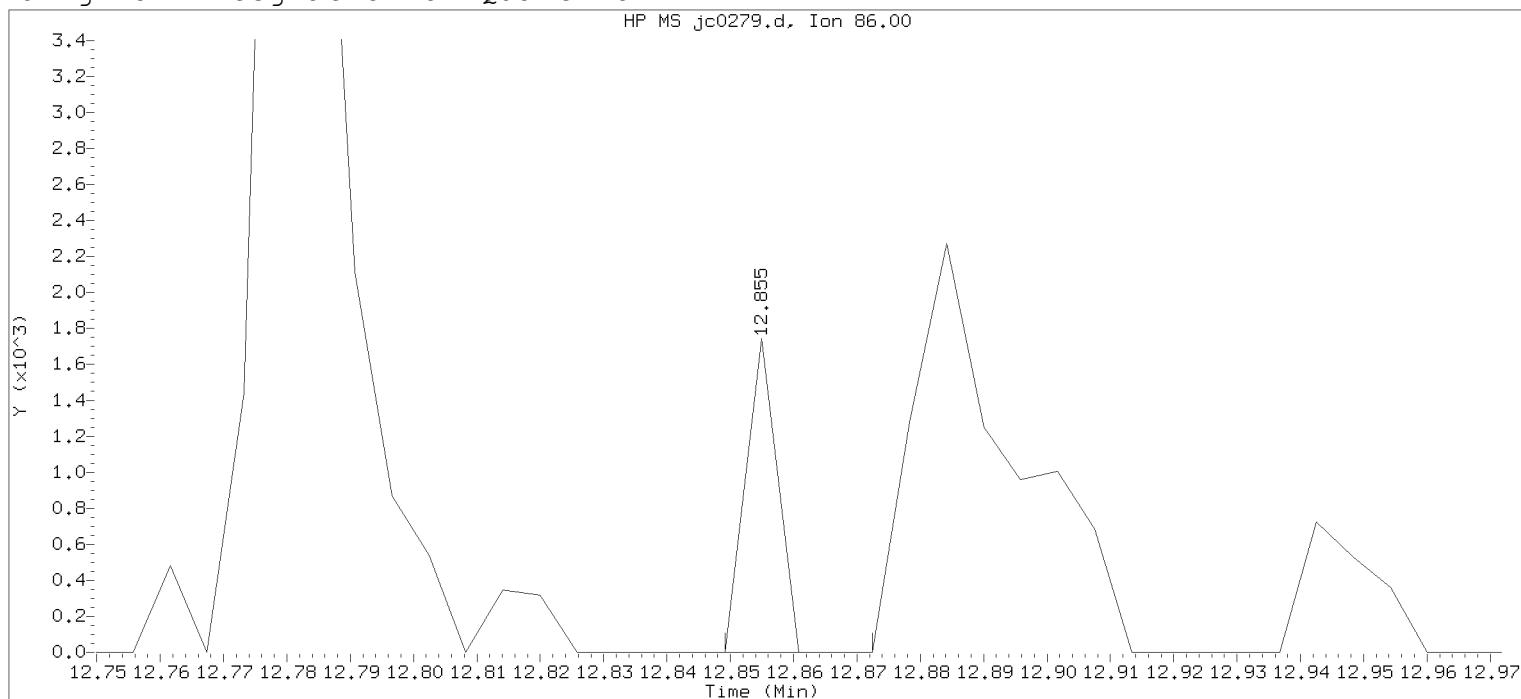
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0279.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 14:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: mdlall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:14 Automation

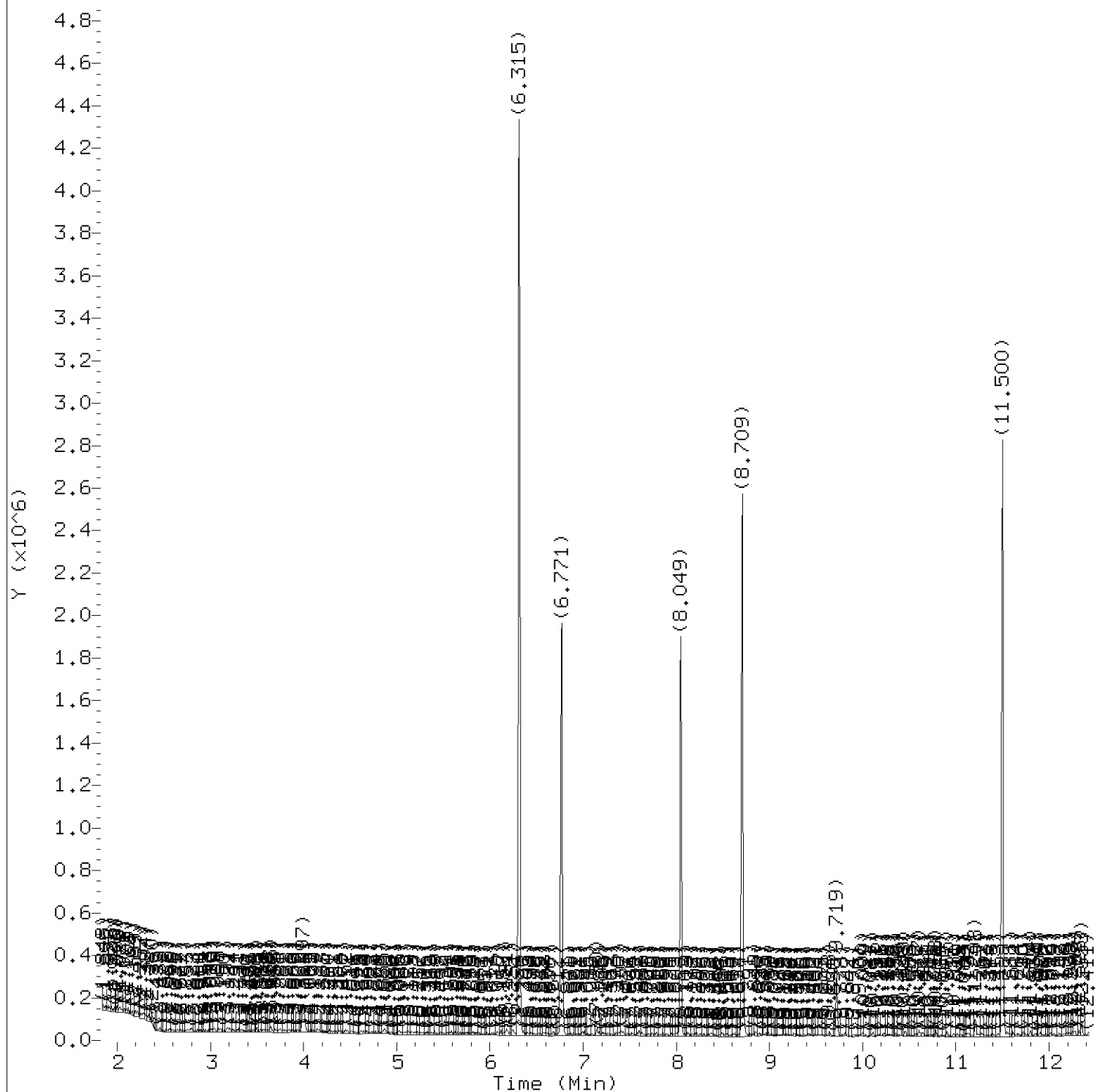
Sample Name: SSTDO.125

Lab Sample ID: rvMDL0340

Compound Number	: 149	
Compound Name	: Diallate (peak 2)	
Scan Number	: 1887	
Retention Time (minutes)	: 12.855	
Quant Ion	: 86.00	
Area	: 610	
On-column Amount (ng/ul)	: 0.0065	
Integration start scan	: 1885	Integration stop scan: 1889
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1277 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0280.d
Injection date and time: 11-MAR-2020 15:10

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: pahmdlal11

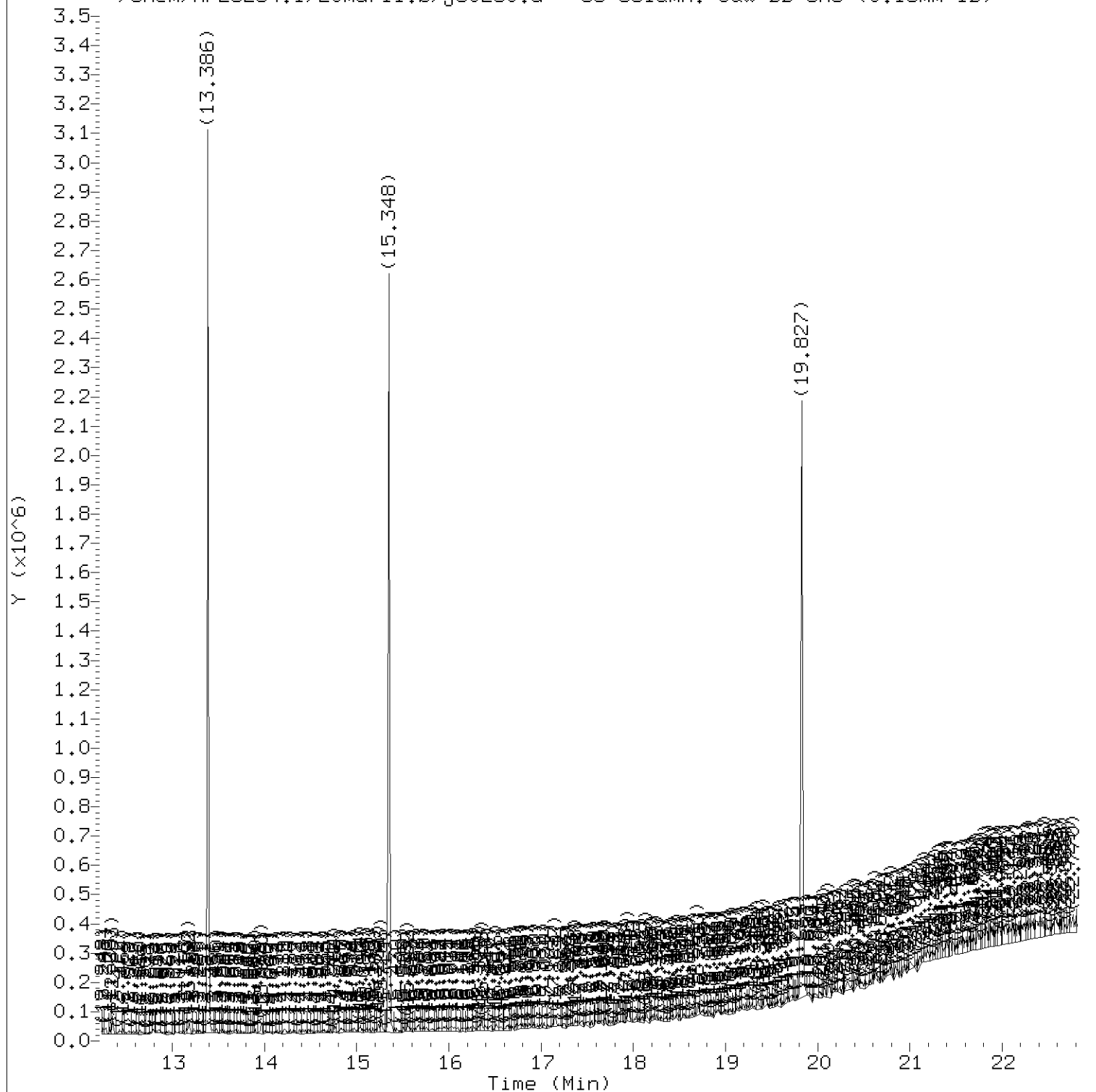
Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD0.025

Lab Sample ID: rvPAHMDL0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0280.d
Injection date and time: 11-MAR-2020 15:10

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: pahmdlal11

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD0.025

Lab Sample ID: rvPAHMDL0340

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0280.d
 Injection date and time: 11-MAR-2020 15:10

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: pahmdlall1

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.025

Lab Sample ID: rvPAHMDL0340

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.771	152	337406	5.000
45) \$Nitrobenzene-d5	(2)	7.594	82	7041	0.051
68) *Naphthalene-d8	(2)	8.709	136	1222477	5.000
69) Naphthalene	(2)	8.738	128	5116	0.020
86) 2-Methylnaphthalene	(2)	9.848	142	3733	0.022
87) 1-Methylnaphthalene	(2)	10.000	142	4604	0.029
96) \$2-Fluorobiphenyl	(3)	10.449	172	9162	0.049
99) 2-Chloronaphthalene	(3)	10.607	162	4598	0.027
114) Acenaphthylene	(3)	11.267	152	3636	0.016
118) *Acenaphthene-d10	(3)	11.500	164	576152	5.000
119) Acenaphthene	(3)	11.535	153	3196	0.021
131) Fluorene	(3)	12.253	166	4846	0.027
150) Hexachlorobenzene	(4)	12.902	284	1076	0.019
158) *Phenanthrene-d10	(4)	13.386	188	1052283	5.000
160) Phenanthrene	(4)	13.421	178	6742	0.028
162) Anthracene	(4)	13.480	178	5787	0.024
227) Total PAHs	(6)			90008	0.397
178) Fluoranthene	(4)	15.039	202	5704	0.020
180) *Pyrene-d10	(5)	15.348	212	1048293	5.000
182) Pyrene	(5)	15.377	202	5567	0.020
184) \$Terphenyl-d14	(5)	15.669	244	5584	0.029
200) Benzo(a)anthracene	(5)	17.368	228	5227	0.022
201) Chrysene	(5)	17.433	228	4213	0.017
211) Benzo(b)fluoranthene	(6)	19.219	252	6555	0.024
213) Benzo(k)fluoranthene	(6)	19.260	252	6460	0.025
216) Benzo(a)pyrene	(6)	19.733	252	6465	0.026
218) *Perylene-d12	(6)	19.827	264	1065584	5.000
224) Indeno(1,2,3-cd)pyrene	(6)	21.427	276	5037	0.024
225) Dibenz(a,h)anthracene	(6)	21.462	278	3316M	0.015
226) Benzo(g,h,i)perylene	(6)	21.789	276	3804M	0.017

M = Compound was manually integrated.

* = Compound is an internal standard.

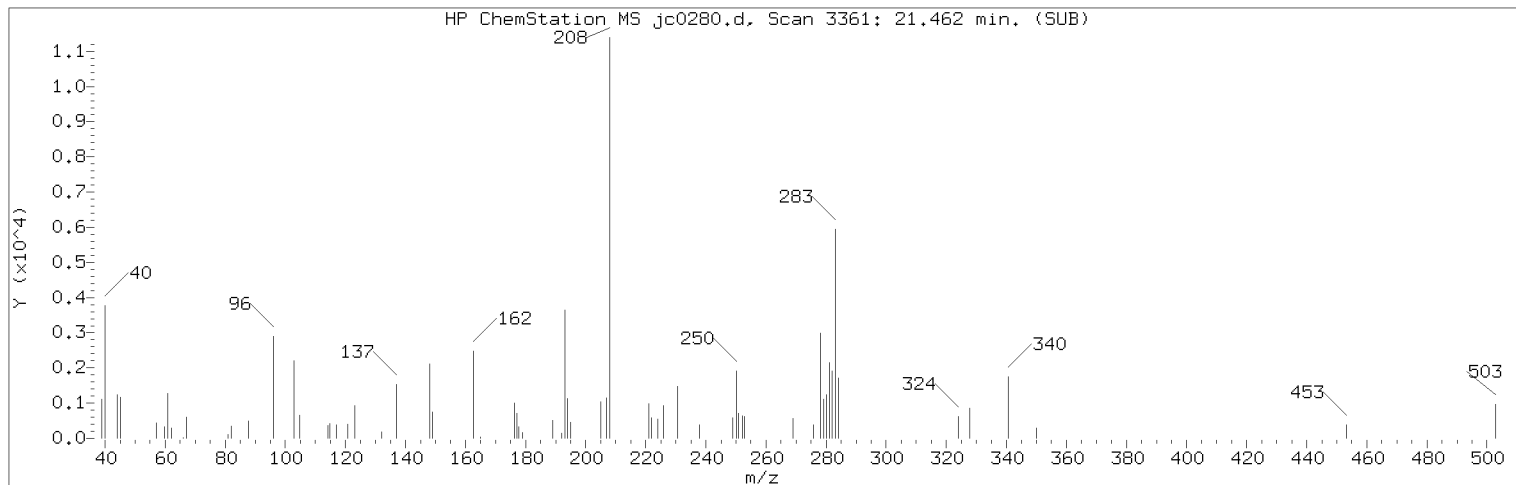
\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

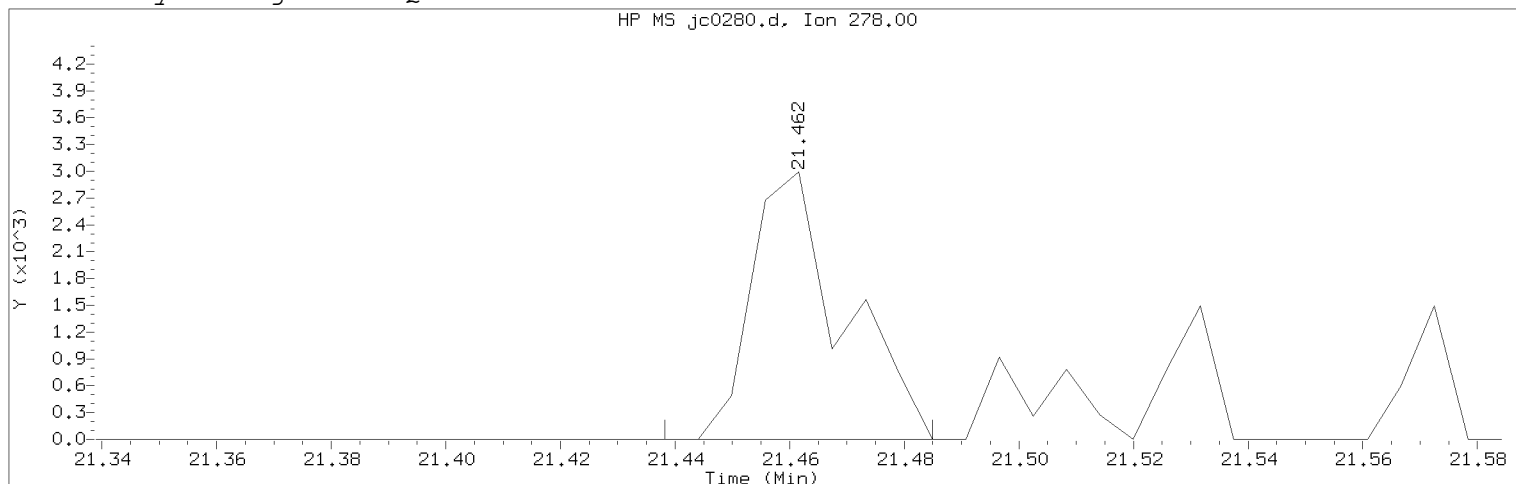
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0280.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:10

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: pahmdlal11

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.025

Lab Sample ID: rvPAHMDL0340

Compound Number	: 225	
Compound Name	: Dibenz (a,h) anthracene	
Scan Number	: 3361	
Retention Time (minutes)	: 21.462	
Quant Ion	: 278.00	
Area (flag)	: 3316M	
On-Column Amount (ng/ul)	: 0.0152	
Integration start scan	: 3356	Integration stop scan: 3364
Y at integration start	: 0	Y at integration end: 0

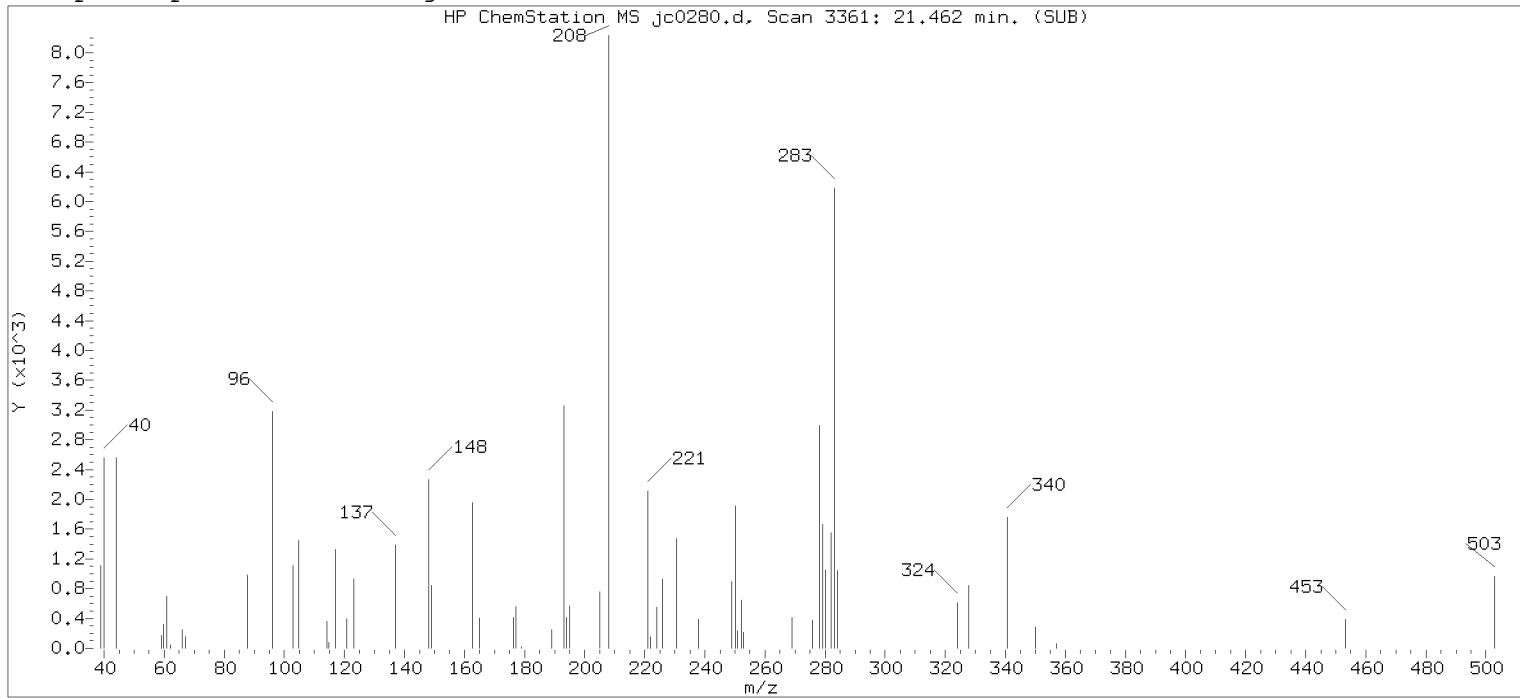
Reason for manual integration: improper integration

Analyst responsible for change:

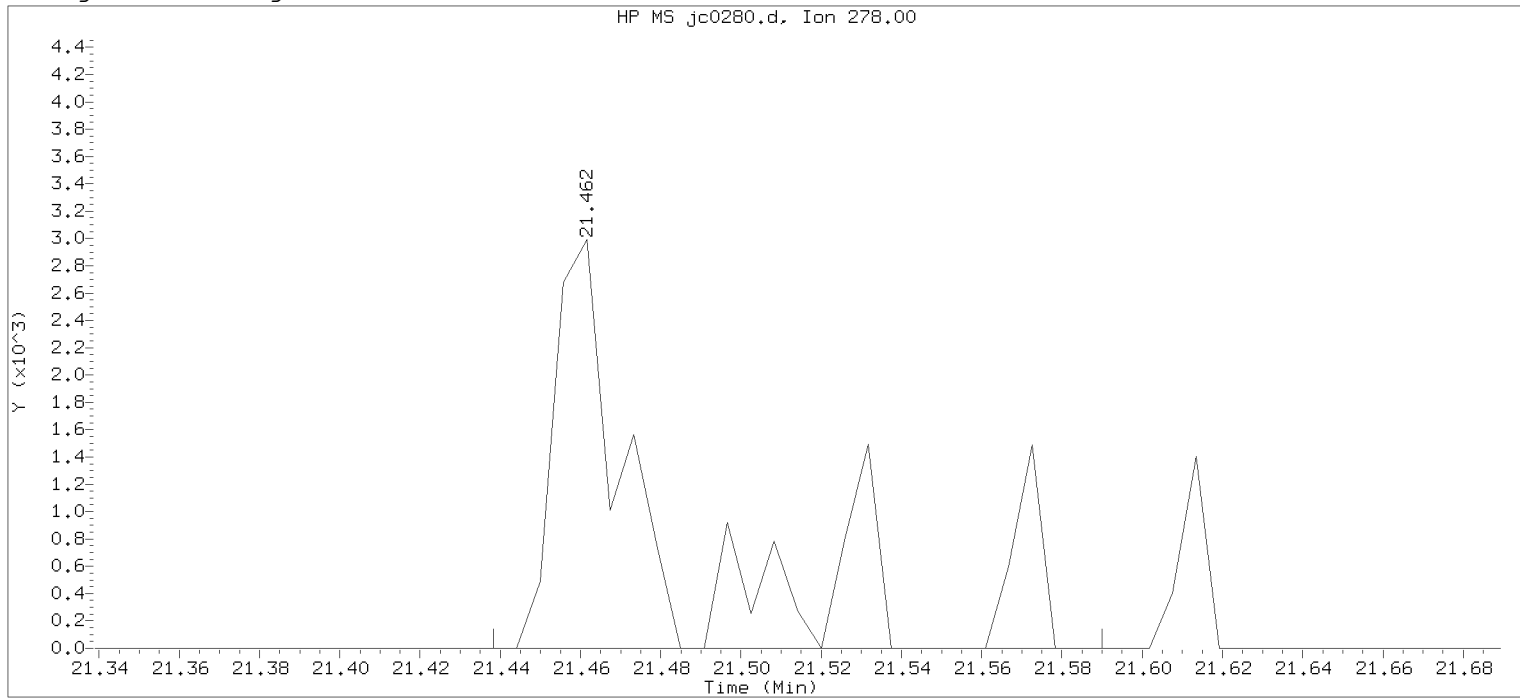
Digitally signed by Kira N. Beck
on 03/12/2020 at 08:53.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0280.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:10

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: pahmdlal11

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:44 Automation

Sample Name: SST0.025

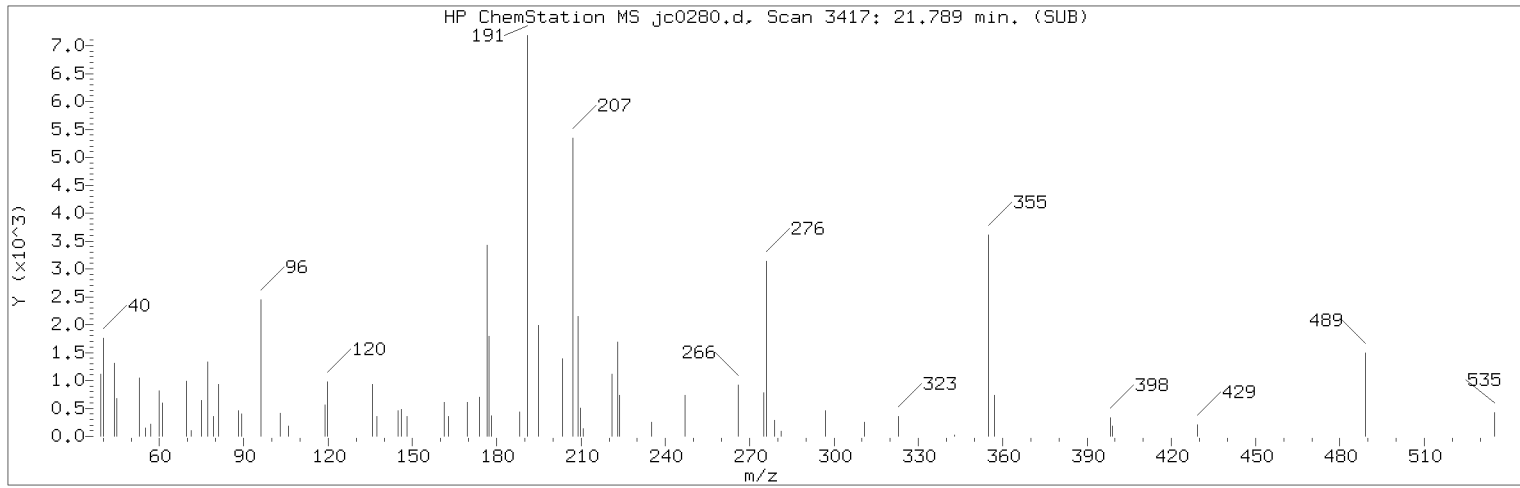
Lab Sample ID: rvPAHMDL0340

Compound Number	: 225	
Compound Name	: Dibenz(a,h)anthracene	
Scan Number	: 3361	
Retention Time (minutes)	: 21.462	
Quant Ion	: 278.00	
Area	: 5630	
On-column Amount (ng/ul)	: 0.0260	
Integration start scan	: 3356	Integration stop scan: 3382
Y at integration start	: 0	Y at integration end: 0

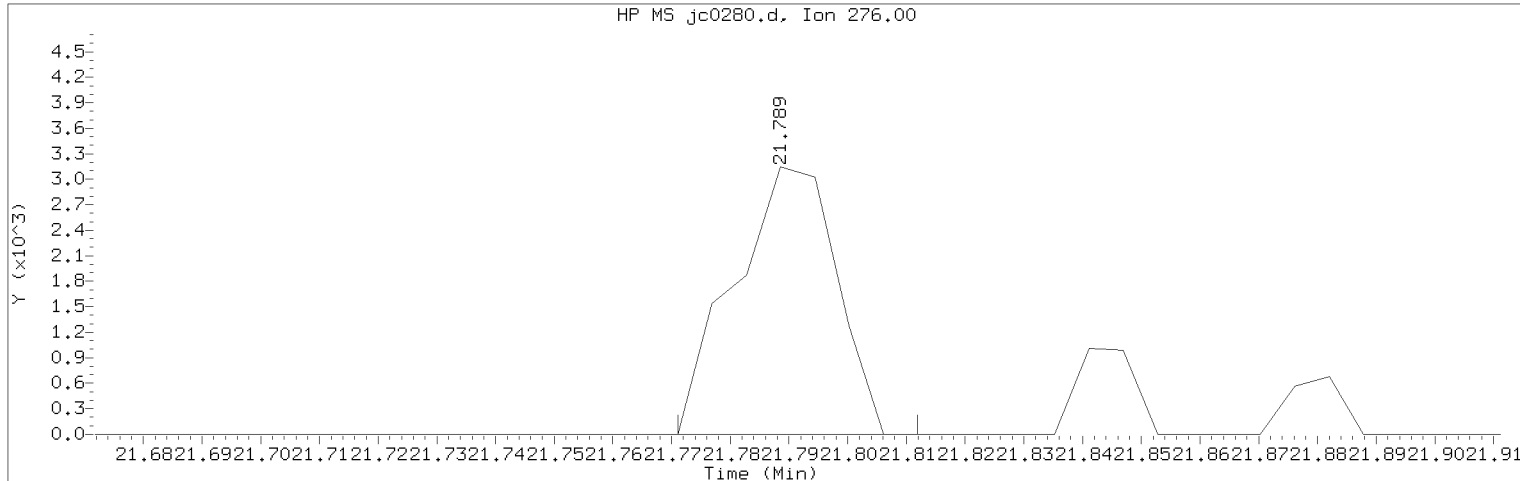
Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1282 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0280.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:10

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: pahmdlal11

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTDO.025

Lab Sample ID: rvPAHMDL0340

Compound Number : 226

Compound Name : Benzo(g,h,i)perylene

Scan Number : 3417

Retention Time (minutes) : 21.789

Quant Ion : 276.00

Area (flag) : 3804M

On-Column Amount (ng/ul) : 0.0173

Integration start scan : 3413 Integration stop scan: 3420

Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Kira N. Beck

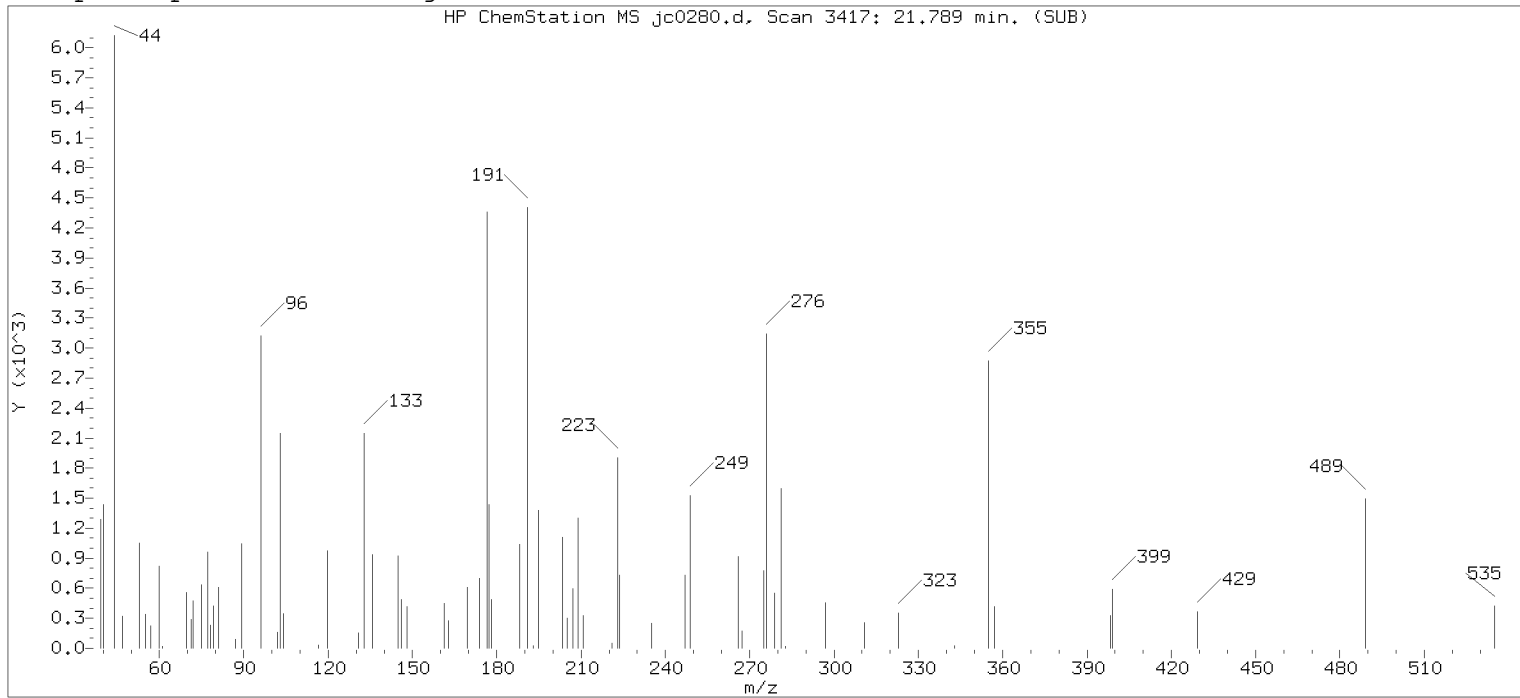
on 03/12/2020 at 08:53.

Target 3.5 esignature user ID: knb25316

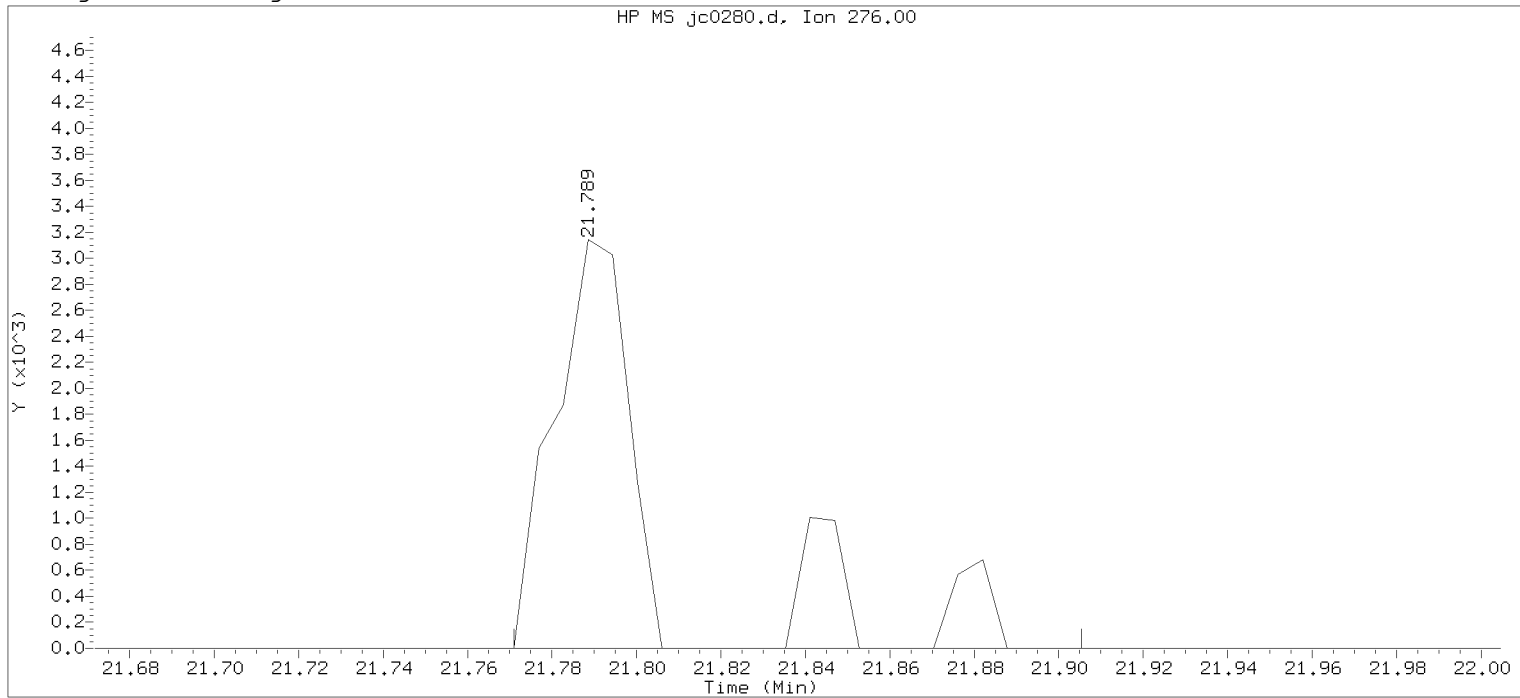
Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.

PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0280.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:10

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: pahmdlal11

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 15:44 Automation

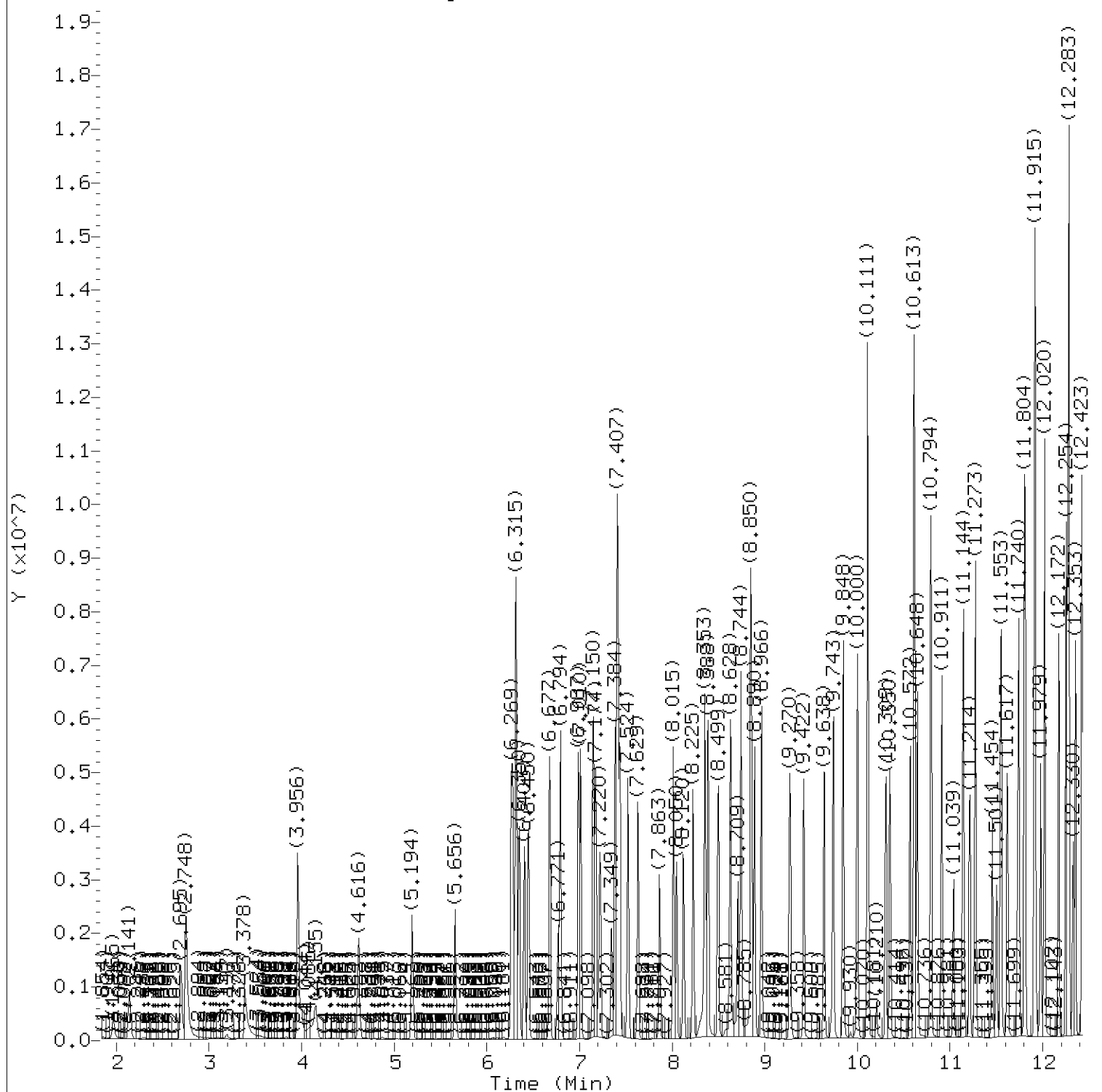
Sample Name: SST0.025

Lab Sample ID: rvPAHMDL0340

Compound Number	: 226	
Compound Name	: Benzo(g,h,i)perylene	
Scan Number	: 3417	
Retention Time (minutes)	: 21.789	
Quant Ion	: 276.00	
Area	: 4940	
On-column Amount (ng/ul)	: 0.0221	
Integration start scan	: 3413	Integration stop scan: 3436
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 08:53.

Target 3.5 esignature use **RAF59** Page 1284 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0281.d
Injection date and time: 11-MAR-2020 15:40

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall11-1

Calibration date and time: 12-MAR-2020 09:00

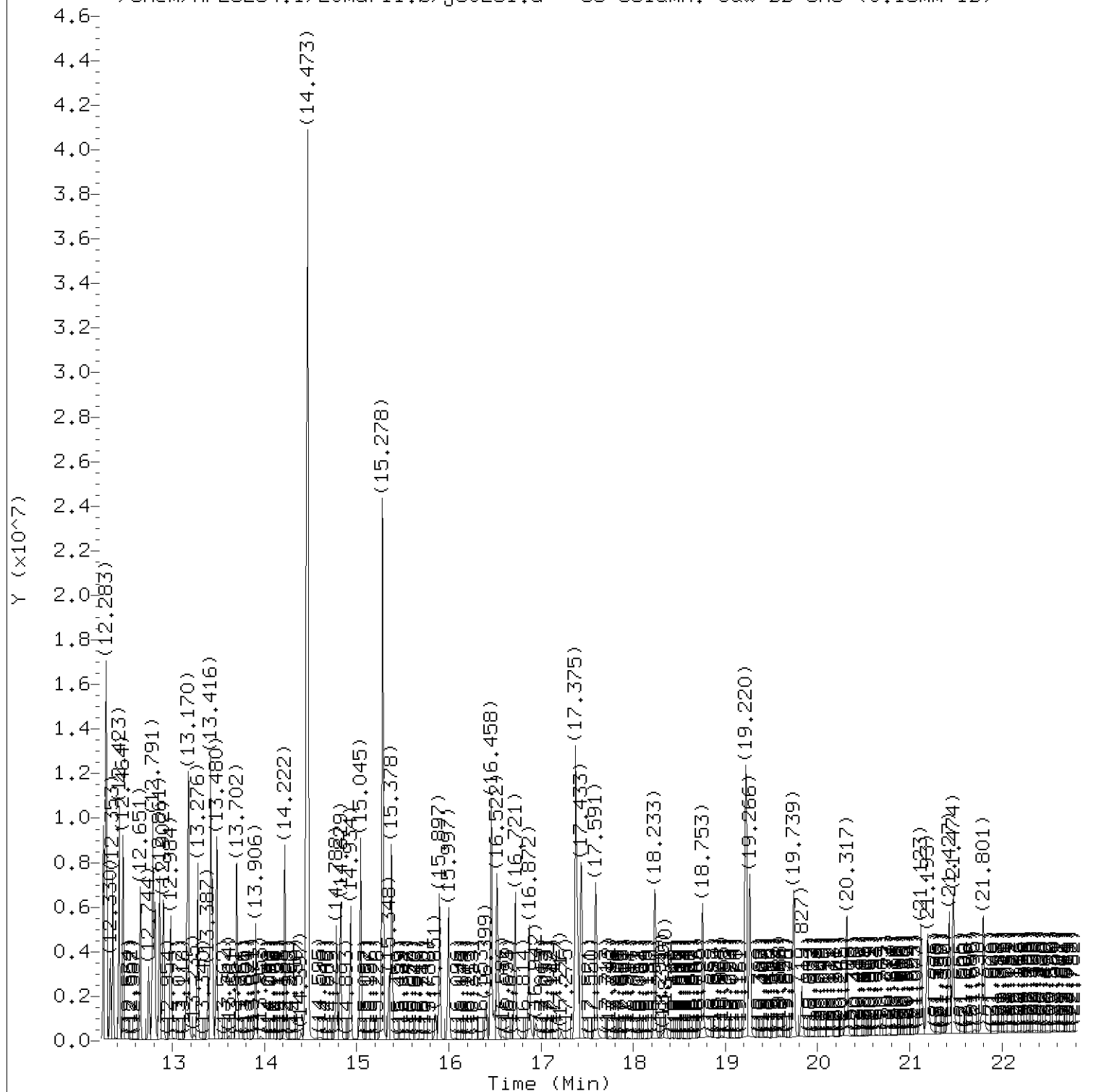
Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Digitally signed by Kira N. Beck
on 03/12/2020 at 09:01.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0281.d
Injection date and time: 11-MAR-2020 15:40

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 09:00
Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sublist used: icvall1-1

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Digitally signed by Kira N. Beck
on 03/12/2020 at 09:01.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0281.d
 Injection date and time: 11-MAR-2020 15:40

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall1-1

Calibration date and time: 12-MAR-2020 09:00

Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	2.141	88	618576	11.764
5) N-Nitrosodimethylamine	(1)	2.695	74	1078974	13.032
6) Pyridine	(1)	2.748	79	1655607	12.721
8) 2-Picoline	(1)	3.956	93	1578633	12.607
9) N-Nitrosomethylethylamine	(1)	4.149	88	656383	11.943
10) Methyl methanesulfonate	(1)	4.616	80	1088253	13.735
14) N-Nitrosodiethylamine	(1)	5.194	102	648143	12.802
16) Ethyl methanesulfonate	(1)	5.656	109	564392	11.849
43) Total Cresols	(1)	5.660	100	2489236	24.344
19) Phenol	(1)	6.263	94	1842526	11.819
20) Aniline	(1)	6.280	93	1859441	10.414
23) bis(2-Chloroethyl) ether	(1)	6.403	93	1334022	11.738
24) 2-Chlorophenol	(1)	6.450	128	1166871	12.621
25) 1,3-Dichlorobenzene	(1)	6.677	146	1379630	12.465
26) *1,4-Dichlorobenzene-d4	(1)	6.771	152	349459	5.000
27) 1,4-Dichlorobenzene	(1)	6.794	146	1408594	12.501
28) Benzyl alcohol	(1)	6.987	108	846331	13.516
29) 1,2-Dichlorobenzene	(1)	7.010	146	1287565	12.234
31) Indene	(1)	7.150	115	2214819	14.429
32) 2-Methylphenol	(1)	7.174	108	1152027	12.335
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.220	45	1816644	12.214
35) bis(2-Chloroisopropyl) ether	(1)	7.220	45	1816644	12.214
36) N-Nitrosopyrrolidine	(1)	7.349	100	651988	13.003
100) Isosafrole	(3)	7.383	162	1031106	13.038
37) Acetophenone	(1)	7.384	105	1870102	12.079
39) N-Nitroso-di-n-propylamine	(1)	7.407	70	1203192	12.657
38) 4-Methylphenol	(1)	7.407	108	1337209	12.009
40) N-Nitrosomorpholine	(1)	7.419	56	1011122	12.811
41) o-Toluidine	(1)	7.437	106	1992690	12.155
44) Hexachloroethane	(1)	7.524	117	696762	12.903
46) Nitrobenzene	(2)	7.629	77	1799812	12.680
50) N-Nitrosopiperidine	(2)	7.863	114	552325	12.616
52) Isophorone	(2)	8.015	82	2773308	12.229
125) 2,4,2,6-Dinitrotoluenes	(3)	8.050	165	1313139	26.985
53) 2-Nitrophenol	(2)	8.126	139	600596	13.150
55) 2,4-Dimethylphenol	(2)	8.225	107	1054501	10.065
59) O,O,O-Triethylphosphorothioate	(2)	8.353	198	556531	12.474
57) bis(2-Chloroethoxy) methane	(2)	8.388	93	1597311	12.982
58) Benzoic acid	(2)	8.388	105	1446554	25.242
62) 2,4-Dichlorophenol	(2)	8.499	162	1000214	12.895

* = Compound is an internal standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 09:01.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0281.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:40

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall1-1

Calibration date and time: 12-MAR-2020 09:00

Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
65) 1,2,4-Trichlorobenzene	(2)	8.628	180	1175380	13.081
68) *Naphthalene-d8	(2)	8.709	136	1224608	5.000
69) Naphthalene	(2)	8.744	128	3262014	12.746
151) Diallate trans/cis	(4)	8.775	86	1094120	12.326
70) 4-Chloroaniline	(2)	8.850	127	1289881	12.587
71) 2,6-Dichlorophenol	(2)	8.855	162	932265	12.160
72) Hexachloropropene	(2)	8.890	213	951869	13.956
74) Hexachlorobutadiene	(2)	8.966	225	781495	13.063
78) Quinoline	(2)	9.270	129	1987339	12.347
80) N-Nitrosodi-n-butylamine	(2)	9.422	84	980088	12.643
83) 4-Chloro-3-methylphenol	(2)	9.644	107	1125384	13.500
85) Safrole	(2)	9.743	162	863453	12.596
86) 2-Methylnaphthalene	(2)	9.848	142	2206709	13.121
87) 1-Methylnaphthalene	(2)	10.000	142	1999996	12.538
88) Hexachlorocyclopentadiene	(3)	10.111	237	1263761	18.884
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.117	216	1207268	13.026
91) cis-Isosafrole	(3)	10.210	162	111193	1.555
93) 2,4,6-Trichlorophenol	(3)	10.309	196	738855	13.263
95) 2,4,5-Trichlorophenol	(3)	10.350	196	813521	13.301
97) trans-Isosafrole	(3)	10.572	162	919913	11.483
98) 1,1'-Biphenyl	(3)	10.607	154	2664987	12.703
99) 2-Chloronaphthalene	(3)	10.619	162	2179021	12.304
101) 1-Chloronaphthalene	(3)	10.648	162	2048965	12.561
103) Diphenyl ether	(3)	10.794	170	1340619	11.602
104) 2-Nitroaniline	(3)	10.800	138	696368	13.739
108) 1,4-Naphthoquinone	(3)	10.911	158	1083027	16.318
109) 1,4-Dinitrobenzene	(3)	11.039	168	366424	14.239
110) Dimethylphthalate	(3)	11.138	163	2427682	12.823
111) 1,3-Dinitrobenzene	(3)	11.150	168	400450	13.769
113) 2,6-Dinitrotoluene	(3)	11.214	165	576477	13.926
114) Acenaphthylene	(3)	11.273	152	2904683	12.495
117) 3-Nitroaniline	(3)	11.460	138	555241	13.628
118) *Acenaphthene-d10	(3)	11.501	164	603976	5.000
119) Acenaphthene	(3)	11.553	153	2105555	13.055
120) 2,4-Dinitrophenol	(3)	11.617	184	706253	28.403
121) 4-Nitrophenol	(3)	11.734	109	566537	14.084
122) Pentachlorobenzene	(3)	11.746	250	1024509	13.366
124) Dibenzofuran	(3)	11.804	168	3051693	12.912
123) 2,4-Dinitrotoluene	(3)	11.816	165	736662	13.058
126) 1-Naphthylamine	(3)	11.915	143	3594694	22.984

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 09:01.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0281.d
 Injection date and time: 11-MAR-2020 15:40

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall1-1

Calibration date and time: 12-MAR-2020 09:00

Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
127) 2,3,4,6-Tetrachlorophenol	(3)	11.979	232	610970	13.348
128) 2-Naphthylamine	(3)	12.020	143	3391130	22.099
129) Diethylphthalate	(3)	12.172	149	2455383	13.295
131) Fluorene	(3)	12.254	166	2377414	12.856
130) Thionazin	(3)	12.265	107	431114	12.219
133) 5-Nitro-o-toluidine	(3)	12.283	152	659715	13.911
132) 4-Chlorophenyl-phenylether	(3)	12.283	204	1241915	13.673
134) 4-Nitroaniline	(3)	12.289	138	585502	13.084
135) 4,6-Dinitro-2-methylphenol	(4)	12.330	198	440079	13.256
136) N-Nitrosodiphenylamine	(4)	12.423	169	2068699	13.660
137) NDPA as diphenylamine	(4)	12.423	169	2068699	13.660
139) 1,2-Diphenylhydrazine	(4)	12.464	77	3451330	13.105
142) Tetraethyldithiopyrophosphate	(4)	12.651	97	509035	12.337
145) Diallate (peak 1)	(4)	12.785	86	839882	9.470
146) Phorate	(4)	12.791	75	1727239	13.112
147) Phenacetin	(4)	12.808	108	1359089	13.977
148) 4-Bromophenyl-phenylether	(4)	12.861	248	725341	12.848
149) Diallate (peak 2)	(4)	12.890	86	254238	2.856
150) Hexachlorobenzene	(4)	12.908	284	745700	12.482
152) Dimethoate	(4)	12.984	87	1026846	12.245
154) Pentachlorophenol	(4)	13.153	266	555099	14.467
156) Pentachloronitrobenzene	(4)	13.170	237	397360	13.280
155) 4-Aminobiphenyl	(4)	13.176	169	2611779	15.464
157) Pronamide	(4)	13.276	173	1125074	13.462
158) *Phenanthrene-d10	(4)	13.387	188	1138172	5.000
159) Dinoseb	(4)	13.410	211	671026	15.174
160) Phenanthrene	(4)	13.416	178	3512927	13.282
162) Anthracene	(4)	13.480	178	3546350	13.550
168) Carbazole	(4)	13.702	167	3373508	13.872
169) Methyl parathion	(4)	13.906	109	873830	12.865
170) Di-n-butylphthalate	(4)	14.222	149	4389394	13.602
172) Parathion	(4)	14.443	109	623194	15.167
173) 4-Nitroquinoline-1-oxide	(4)	14.473	190	7066154	227.281
174) Octachlorostyrene	(4)	14.782	308	335442	12.679
176) Isodrin	(4)	14.829	193	475407	12.809
227) Total PAHs	(6)	15.000	100	59076120	238.224
178) Fluoranthene	(4)	15.045	202	4199433	13.624
179) Benzidine	(5)	15.284	184	10766846	53.419
180) *Pyrene-d10	(5)	15.348	212	1237699	5.000
182) Pyrene	(5)	15.378	202	4280901	12.820

* = Compound is an internal standard.

Digitally signed by Kira N. Beck
 on 03/12/2020 at 09:01.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0281.d
 Injection date and time: 11-MAR-2020 15:40

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall1-1

Calibration date and time: 12-MAR-2020 09:00

Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
187) p-Dimethylaminoazobenzene	(5)	15.897	225	780456	13.706
190) Chlorobenzilate	(5)	15.997	139	1335787	13.678
192) 3,3'-Dimethylbenzidine	(5)	16.458	212	4350392	22.689
193) Butylbenzylphthalate	(5)	16.522	149	1952640	13.547
196) 2-Acetylaminofluorene	(5)	16.872	181	1462664	12.918
198) 3,3'-Dichlorobenzidine	(5)	17.375	252	1448031	12.528
200) Benzo(a)anthracene	(5)	17.375	228	3937027	13.937
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.398	231	736321	12.646
201) Chrysene	(5)	17.439	228	3736935	12.723
204) bis(2-Ethylhexyl)phthalate	(5)	17.591	149	2680596	13.453
208) 6-Methylchrysene	(5)	18.233	242	2629608	12.392
210) Di-n-octylphthalate	(6)	18.753	149	4388882	13.623
211) Benzo(b)fluoranthene	(6)	19.220	252	4002799	13.527
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.226	256	1723153	13.514
213) Benzo(k)fluoranthene	(6)	19.266	252	3862562	13.718
216) Benzo(a)pyrene	(6)	19.739	252	3599455	13.339
218) *Perylene-d12	(6)	19.827	264	1149968	5.000
220) 3-Methylcholanthrene	(6)	20.317	268	1796044	14.151
222) Dibenz(a,h)acridine	(6)	21.123	279	2705094	13.865
223) Dibenz(a,j)acridine	(6)	21.193	279	2590041	12.309
224) Indeno(1,2,3-cd)pyrene	(6)	21.427	276	3009265M	13.314
225) Dibenz(a,h)anthracene	(6)	21.474	278	3247297	13.768
226) Benzo(g,h,i)perylene	(6)	21.801	276	3284798	13.812

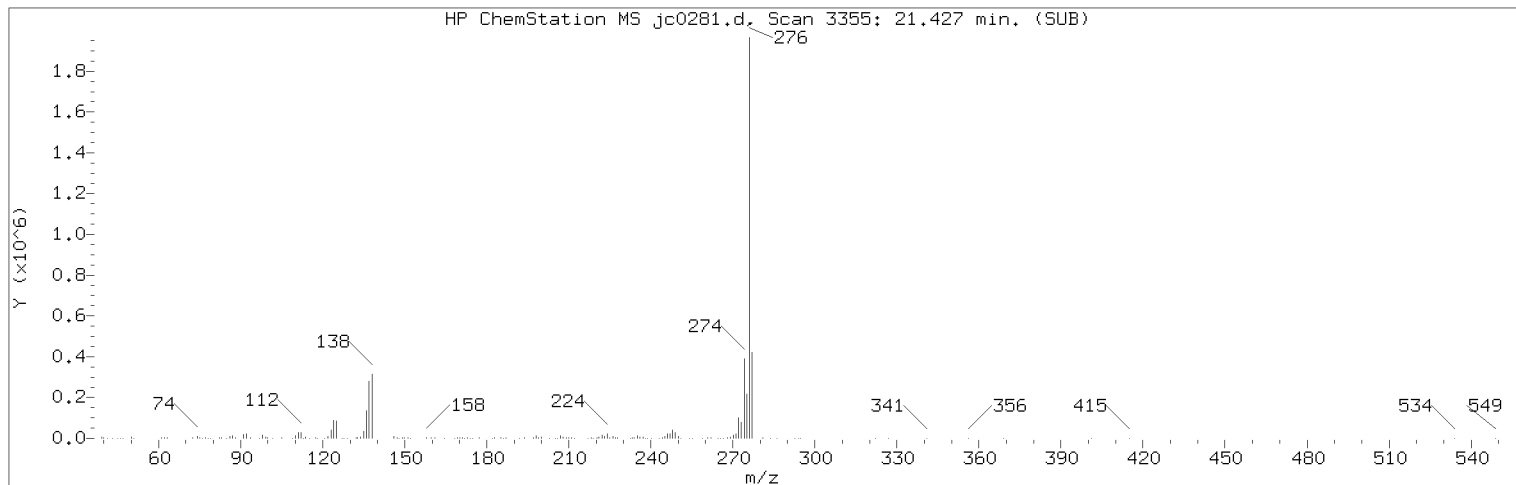
M = Compound was manually integrated.

* = Compound is an internal standard.

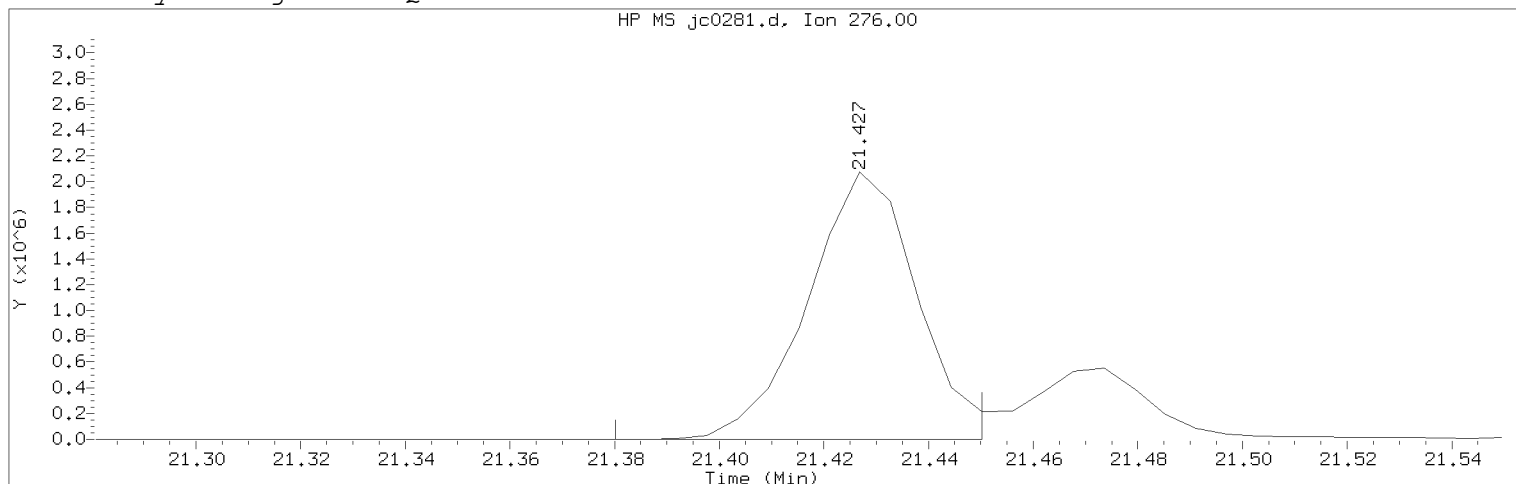
Digitally signed by Kira N. Beck
 on 03/12/2020 at 09:01.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0281.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:40

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall1-1

Calibration date and time: 12-MAR-2020 09:00

Date, time and analyst ID of latest file update: 12-Mar-2020 09:00 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

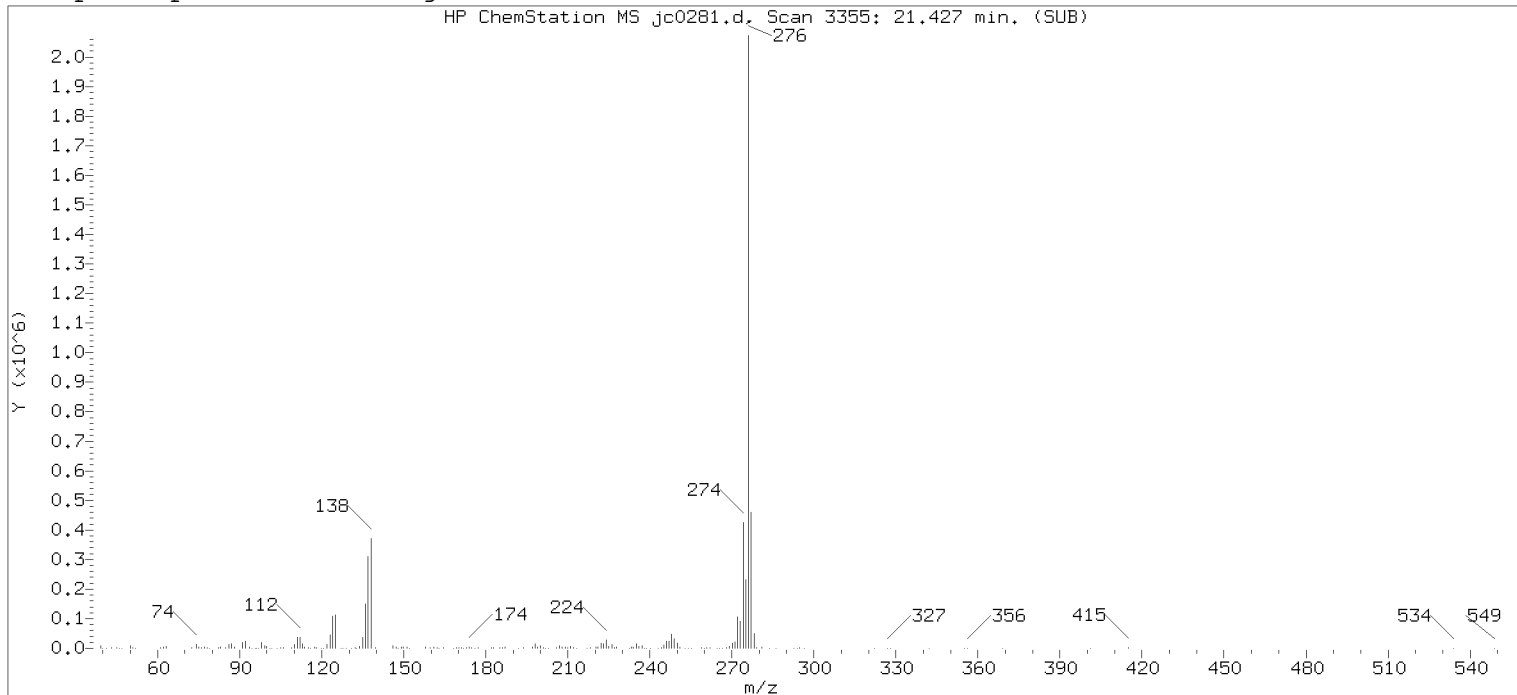
Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3355	
Retention Time (minutes)	: 21.427	
Quant Ion	: 276.00	
Area (flag)	: 3009265M	
On-Column Amount (ng/ul)	: 13.3138	
Integration start scan	: 3346	Integration stop scan: 3358
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

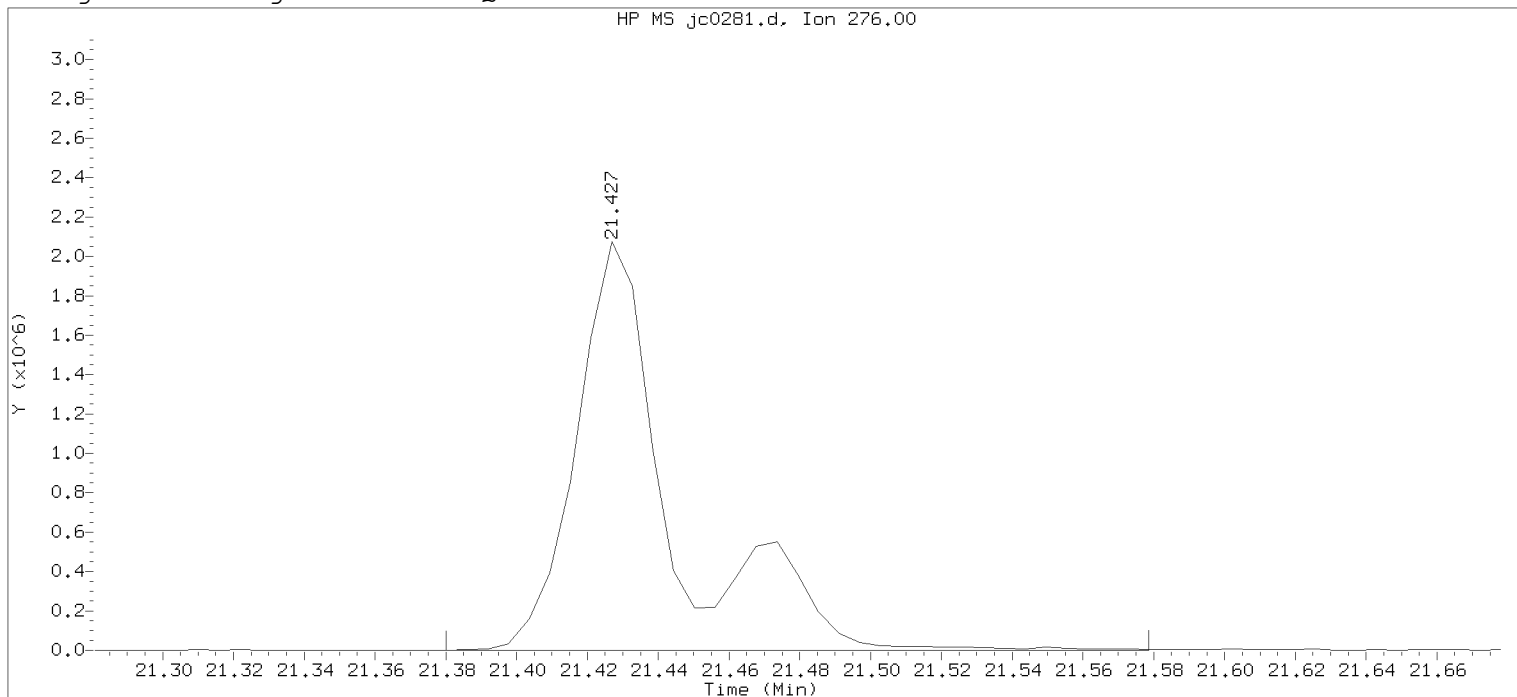
Analyst responsible for change: Digitally signed by Kira N. Beck
on 03/12/2020 at 09:01.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 03/16/2020 at 09:56.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20mar11.b/jc0281.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 15:40

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: icvall1

Calibration date and time: 11-MAR-2020 14:45

Date, time and analyst ID of latest file update: 11-Mar-2020 16:14 Automation

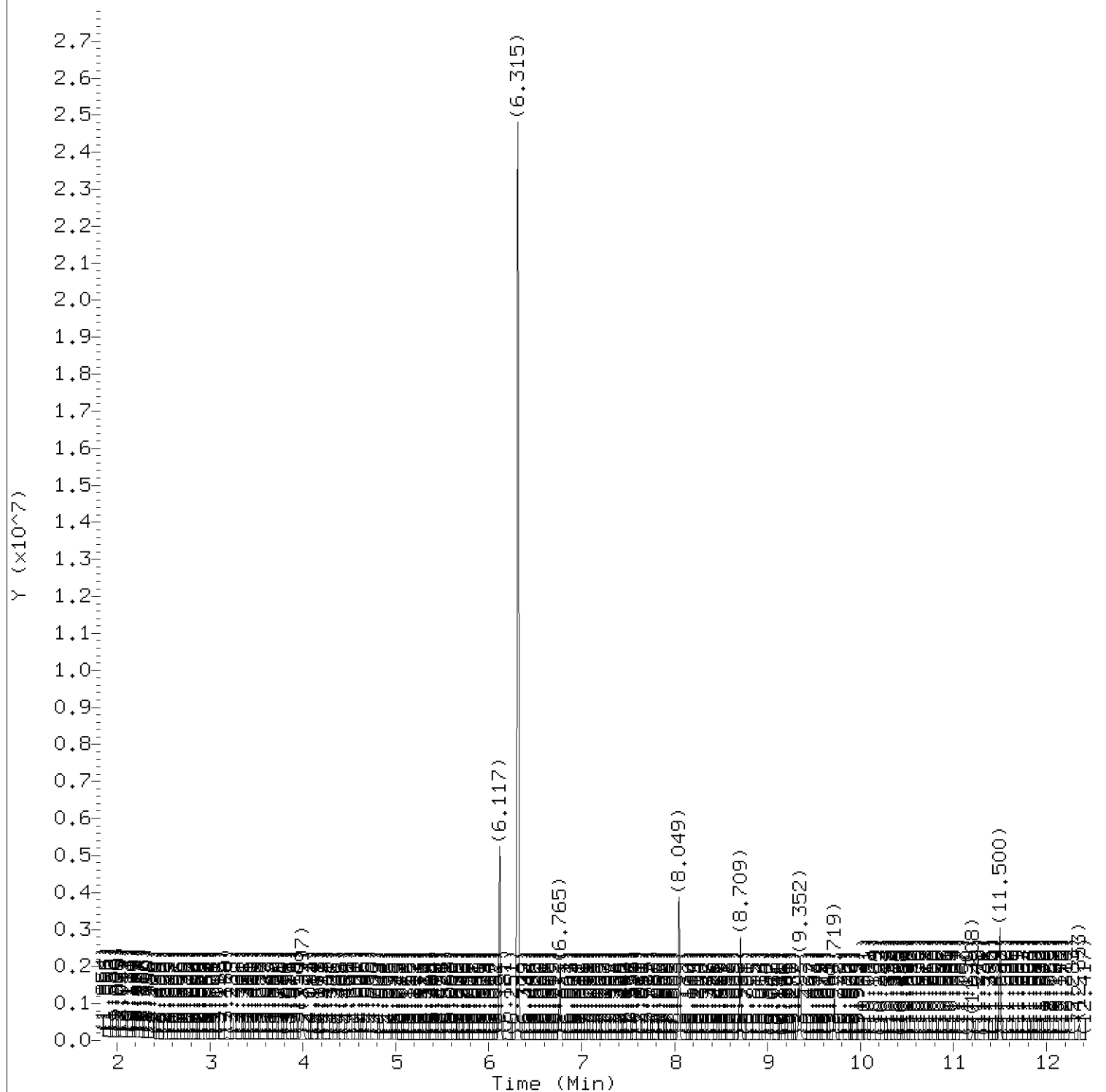
Sample Name: SSTD12.5

Lab Sample ID: rvICV3089

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3355	
Retention Time (minutes)	: 21.427	
Quant Ion	: 276.00	
Area	: 3900669	
On-column Amount (ng/ul)	: 14.3611	
Integration start scan	: 3346	Integration stop scan: 3380
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 03/12/2020 at 09:01.

Target 3.5 esignature use **RAF59** Page 1292 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0282.d
Injection date and time: 11-MAR-2020 16:09

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: basicv

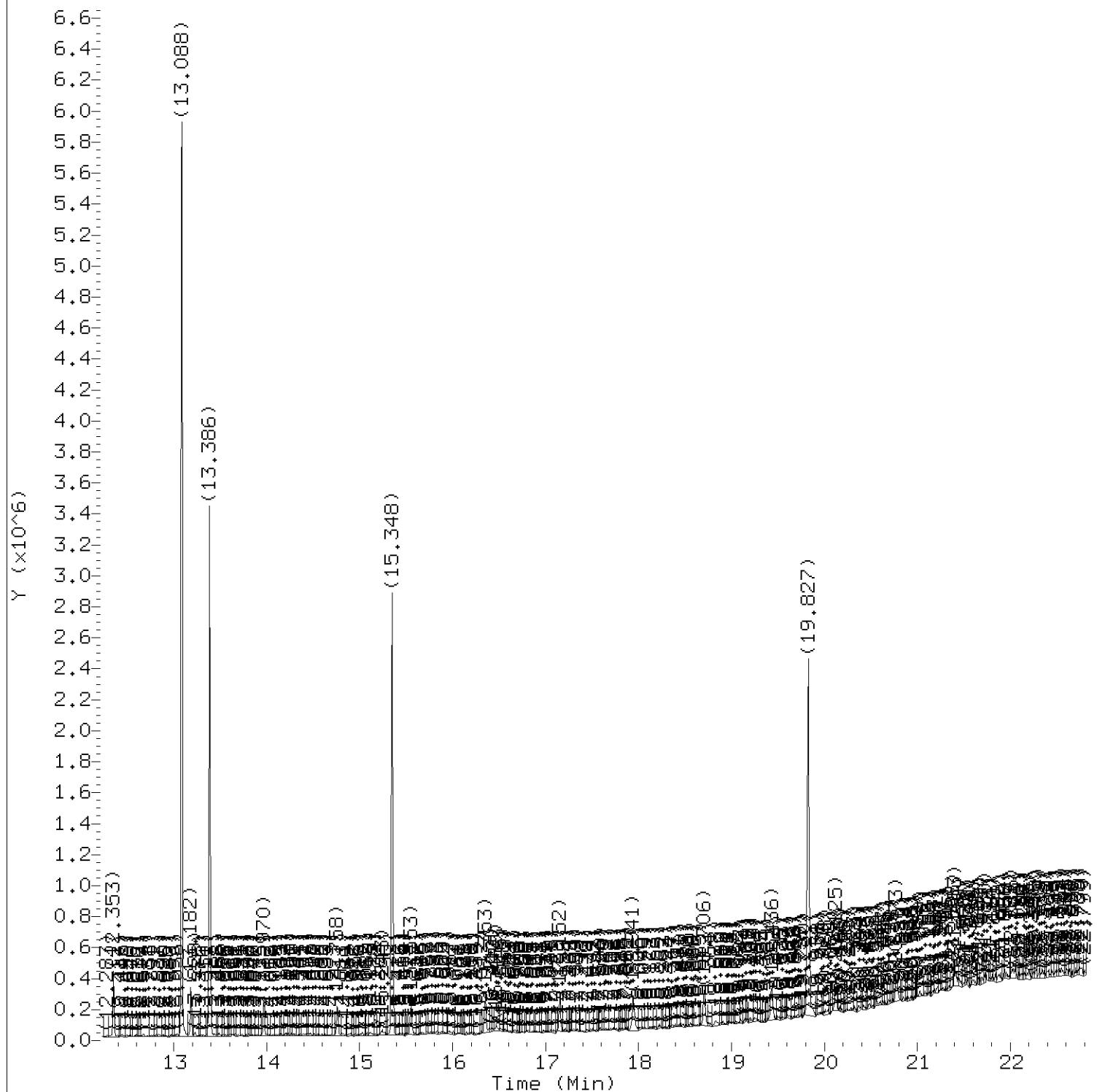
Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVBASICV2399

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0282.d
Injection date and time: 11-MAR-2020 16:09

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: basicv

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVBASICV2399

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0282.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 16:09

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: basicv

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVBASICV2399

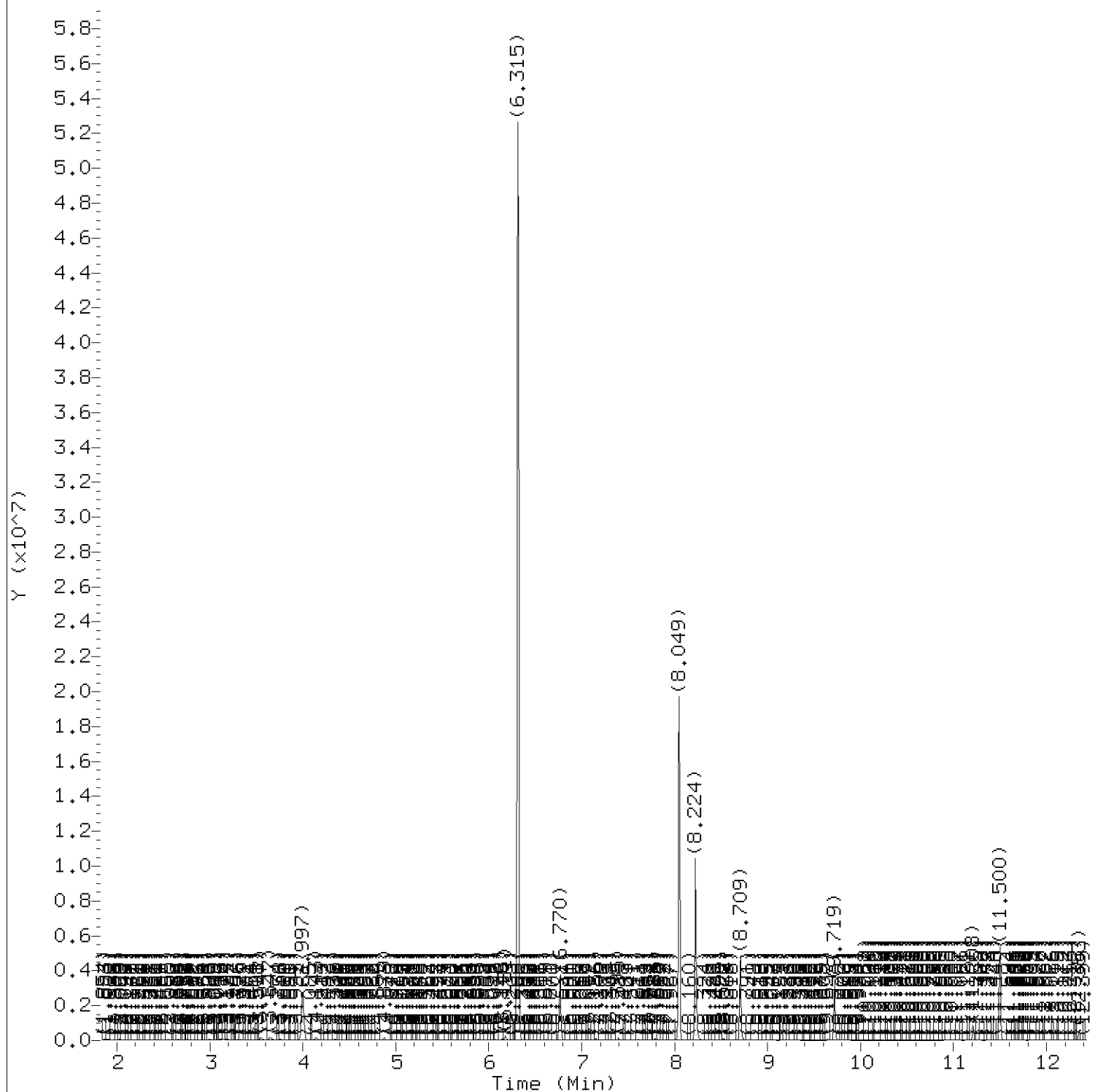
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
17) Benzaldehyde	(1)	6.117	77	1523079	16.100
26) *1,4-Dichlorobenzene-d4	(1)	6.771	152	339000	5.000
68) *Naphthalene-d8	(2)	8.709	136	1385352	5.000
79) Caprolactam	(2)	9.352	113	316481	11.466
118) *Acenaphthene-d10	(3)	11.500	164	665276	5.000
153) Atrazine	(4)	13.088	200	668048	12.852
158) *Phenanthrene-d10	(4)	13.386	188	1173519	5.000
180) *Pyrene-d10	(5)	15.348	212	1211667	5.000
218) *Perylene-d12	(6)	19.827	264	1173419	5.000

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0283.d
Injection date and time: 11-MAR-2020 16:39

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: 24dmp

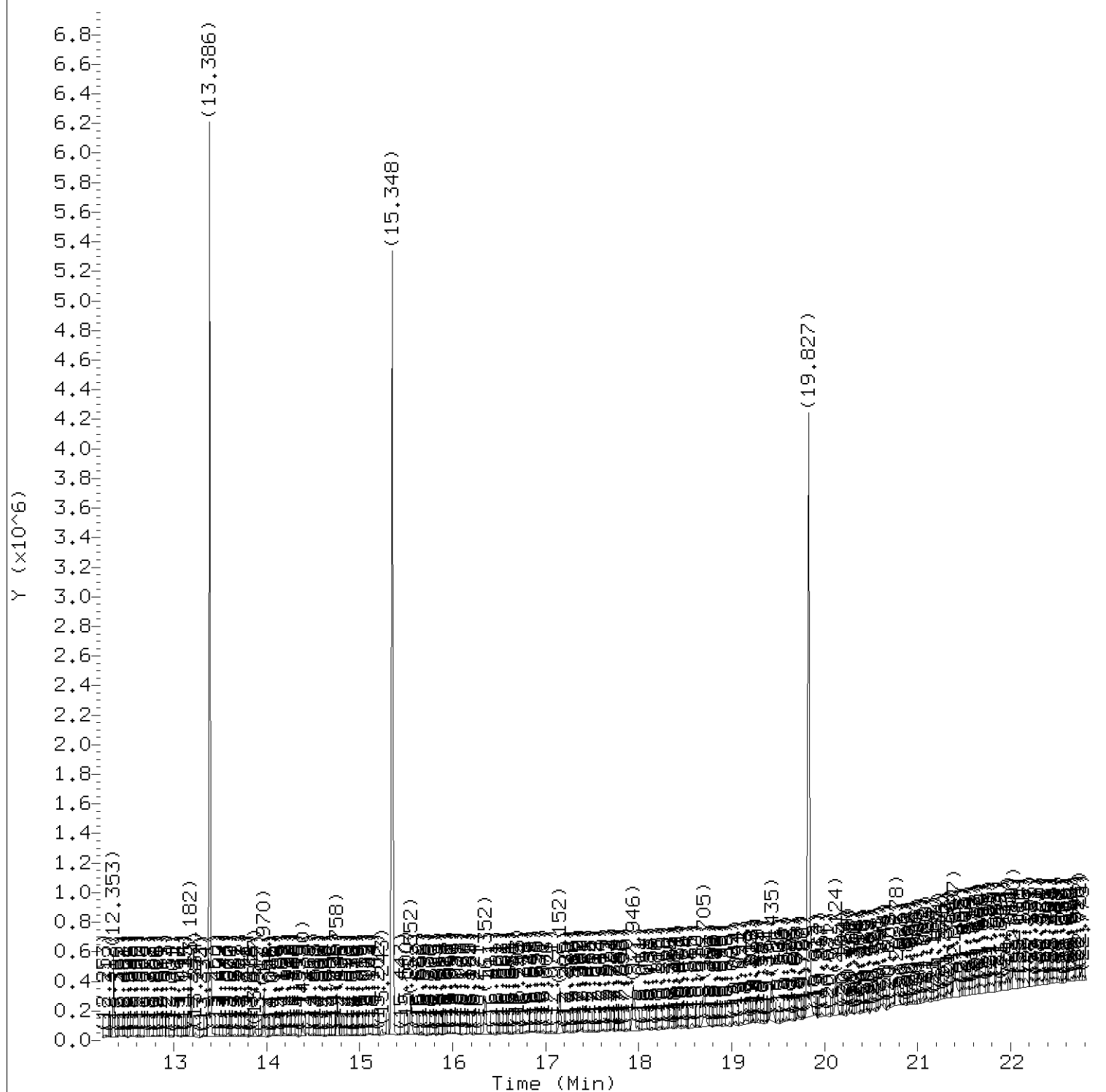
Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVDMPICV2609

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0283.d
Injection date and time: 11-MAR-2020 16:39

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: 24dmp

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVDMPICV2609

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0283.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 16:39

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: 24dmp

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVDMPICV2609

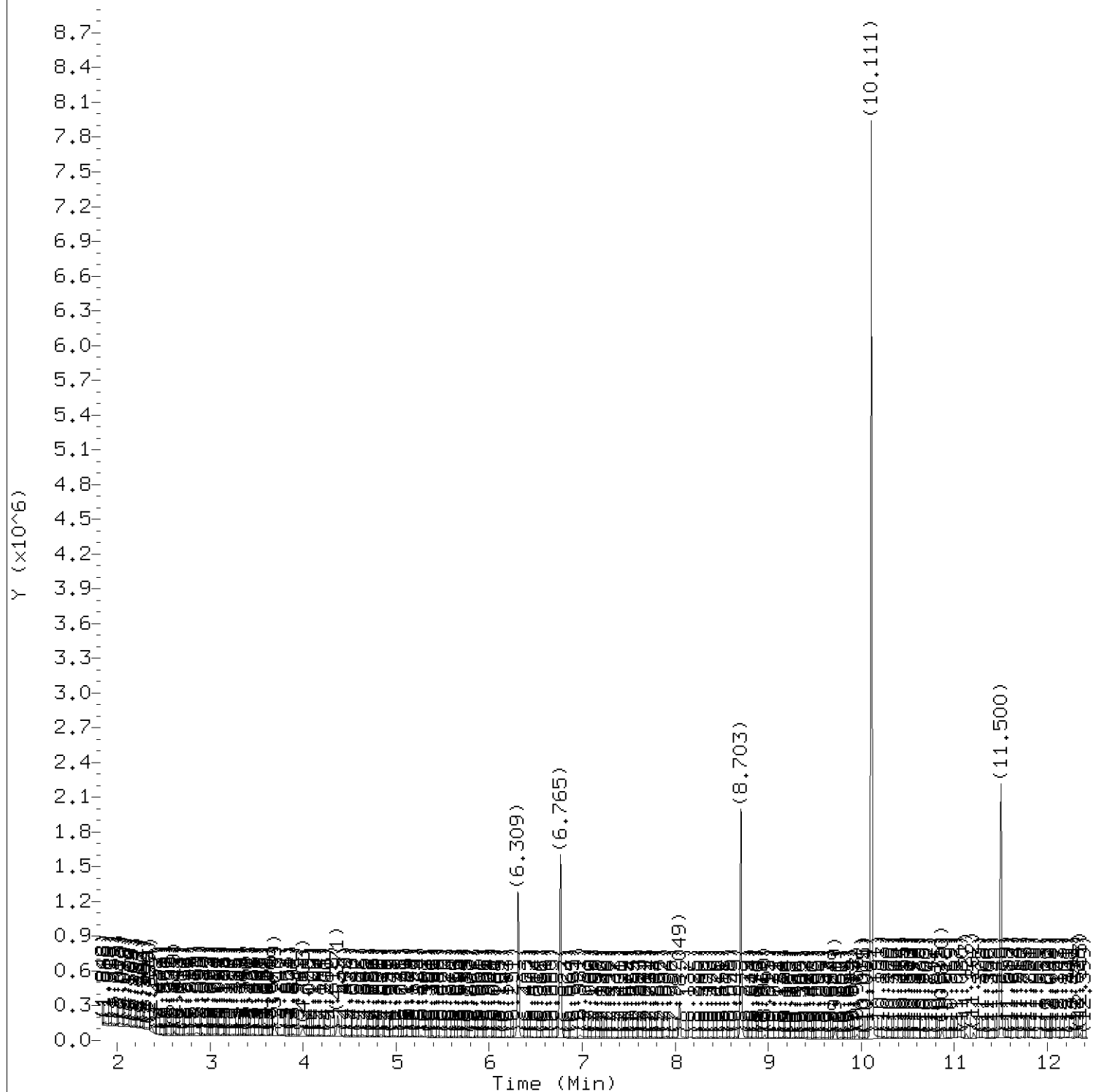
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26) *1,4-Dichlorobenzene-d4	(1)	6.770	152	667518	5.000
55) 2,4-Dimethylphenol	(2)	8.224	107	2382013	11.939
68) *Naphthalene-d8	(2)	8.709	136	2331961	5.000
118) *Acenaphthene-d10	(3)	11.500	164	1159653	5.000
158) *Phenanthrene-d10	(4)	13.386	188	2148089	5.000
180) *Pyrene-d10	(5)	15.348	212	2169499	5.000
218) *Perylene-d12	(6)	19.827	264	2068823	5.000

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0284.d
Injection date and time: 11-MAR-2020 17:08

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: hccpd

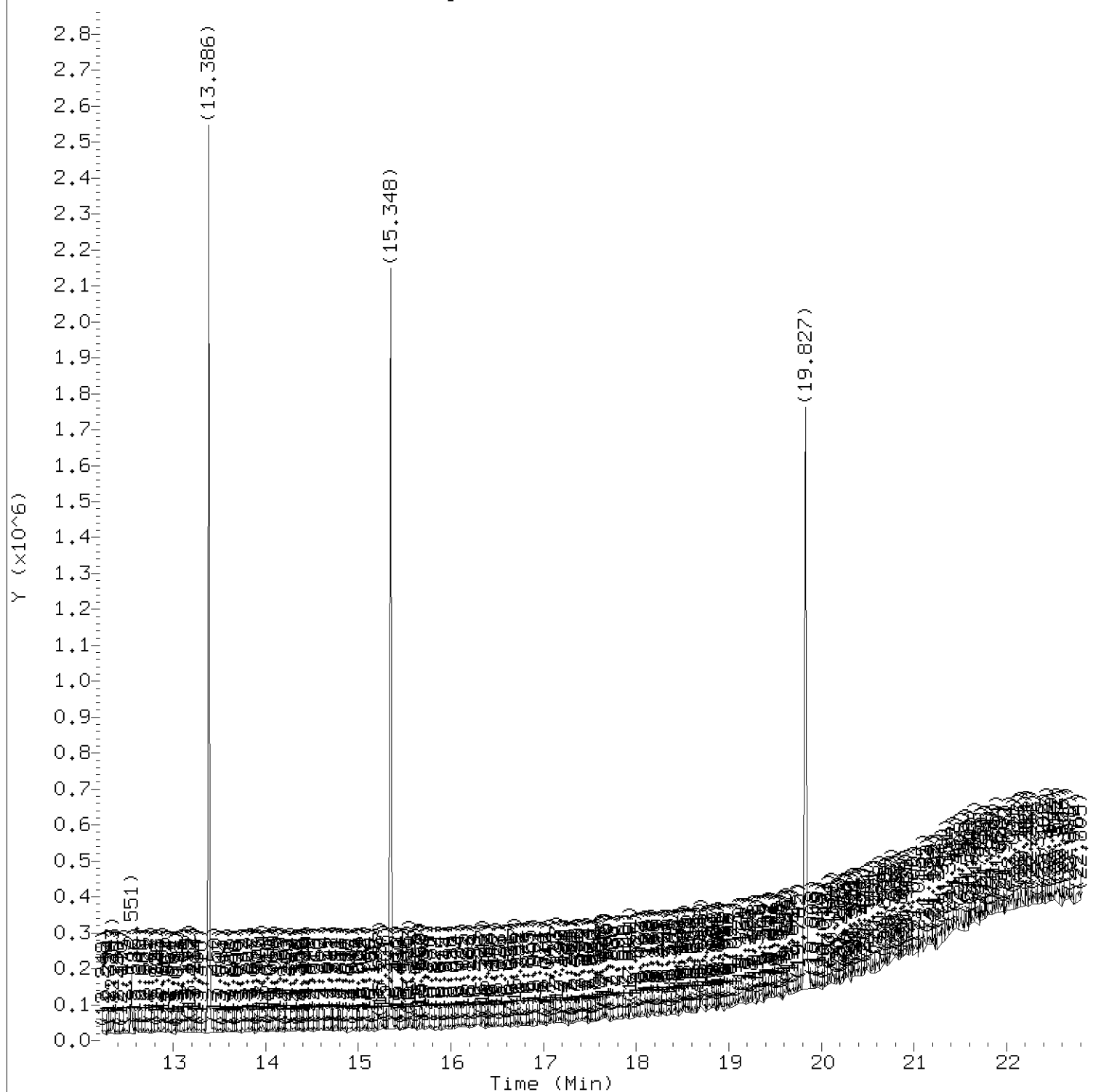
Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVHCCPDICV0350

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0284.d
Injection date and time: 11-MAR-2020 17:08

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m
Calibration date and time: 12-MAR-2020 08:34

Sublist used: hccpd

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVHCCPDICV0350

Digitally signed by Kira N. Beck
on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20mar11.b/jc0284.d

Instrument ID: HP23264.i

Injection date and time: 11-MAR-2020 17:08

Analyst ID: knb25316

Method used: /chem/HP23264.i/20mar11.b/rv8270d.m

Sublist used: hccpd

Calibration date and time: 12-MAR-2020 08:34

Date, time and analyst ID of latest file update: 12-Mar-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: RVHCCPDICV0350

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26) *1,4-Dichlorobenzene-d4	(1)	6.765	152	265499	5.000
68) *Naphthalene-d8	(2)	8.703	136	963437	5.000
88) Hexachlorocyclopentadiene	(3)	10.111	237	1438668	25.738
118) *Acenaphthene-d10	(3)	11.500	164	504478	5.000
158) *Phenanthrene-d10	(4)	13.386	188	898582	5.000
180) *Pyrene-d10	(5)	15.348	212	865228	5.000
218) *Perylene-d12	(6)	19.827	264	844590	5.000

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

on 03/12/2020 at 08:54.

Target 3.5 esignature user ID: knb25316

Date : 16-APR-2020 21:15

Client ID: DFTPP

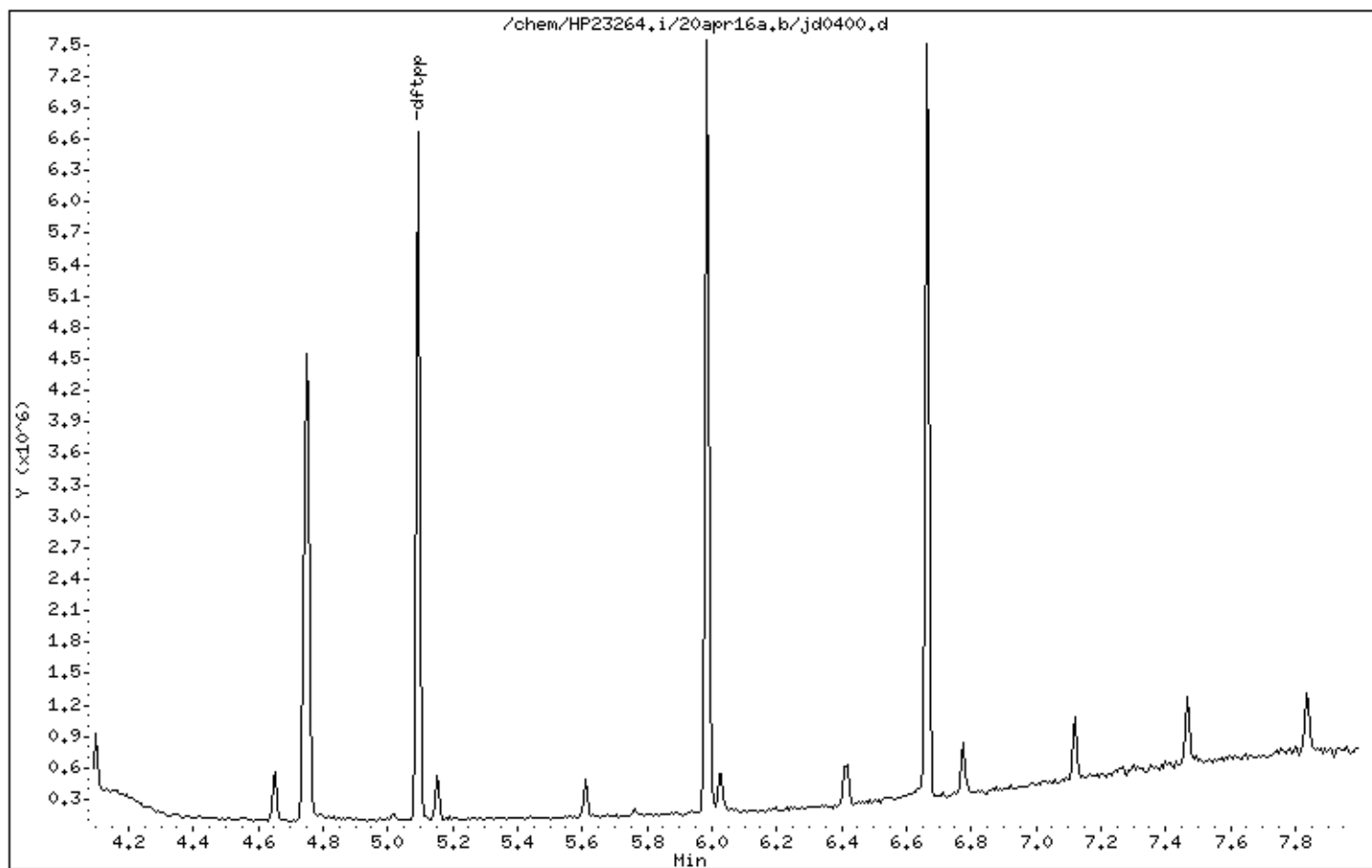
Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0,18



Date : 16-APR-2020 21:15

Client ID: DFTPP

Instrument: HP23264.i

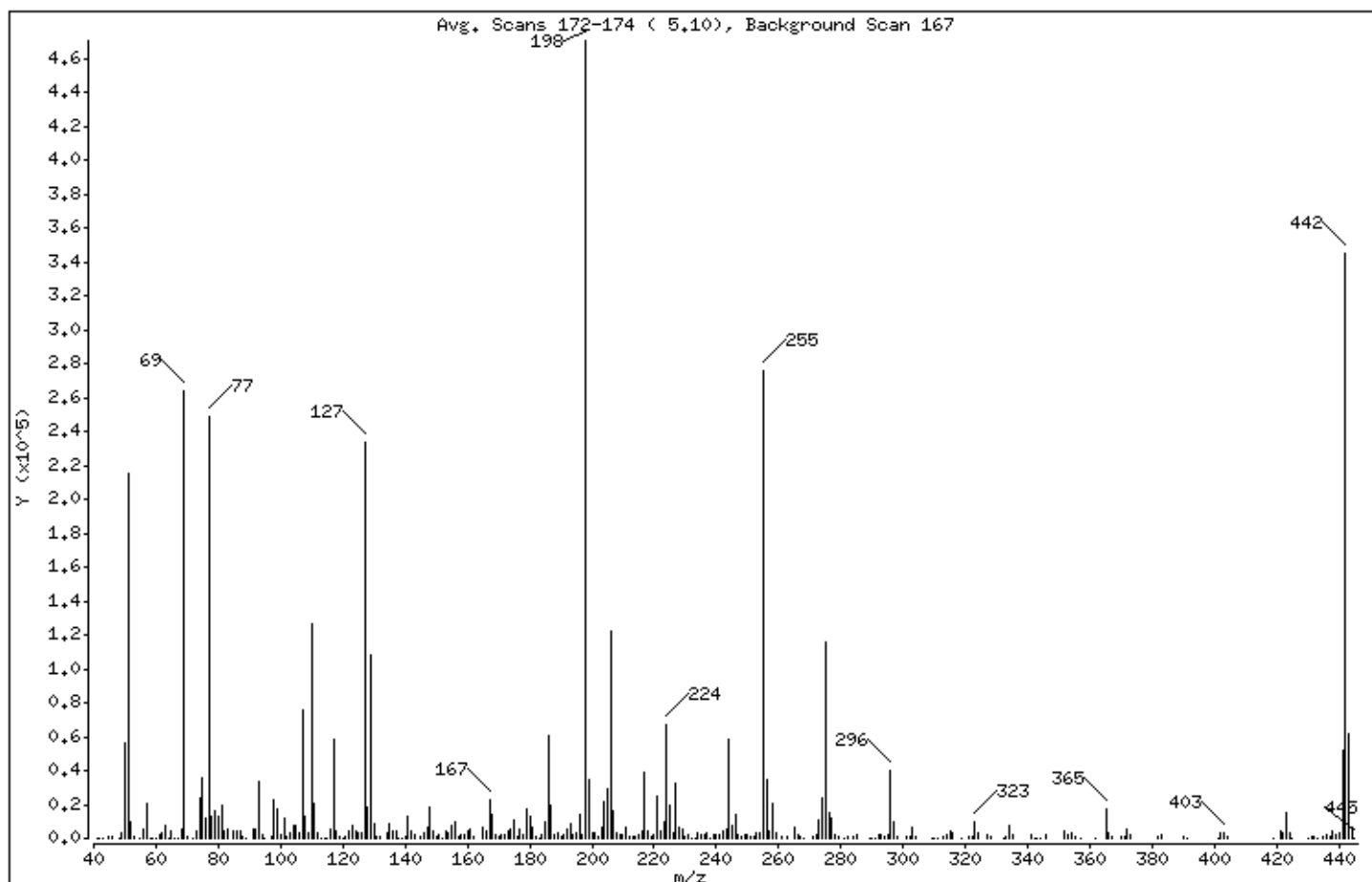
Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.67
68	Less than 2.00% of mass 69	1.07 (1.90)
69	Mass 69 relative abundance	55.98
70	Less than 2.00% of mass 69	0.29 (0.51)
127	10.00 - 80.00% of mass 198	49.55
197	Less than 2.00% of mass 198	0.53
199	5.00 - 9.00% of mass 198	7.33
275	10.00 - 60.00% of mass 198	24.60
365	Greater than 1.00% of mass 198	3.59
441	0.01 - 24.00% of mass 442	11.10 (15.14)
442	50.00 - 99.99% of mass 198	73.33
443	15.00 - 24.00% of mass 442	13.20 (17.99)

Date : 16-APR-2020 21:15

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0400.d

Spectrum: Avg. Scans 172-174 (5,10), Background Scan 167

Location of Maximum: 198,00

Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y

41,00	123	125,00	3746	206,00	122056	293,00	2574
42,00	504	126,00	3241	207,00	16712	294,00	1448
43,00	184	127,00	233280	208,00	3510	295,00	2664
45,00	1394	128,00	18920	209,00	2595	296,00	40088
46,00	570	129,00	108368	210,00	2253	297,00	9564

48,00	497	130,00	8705	211,00	6720	298,00	1235
49,00	3723	131,00	1521	212,00	1377	301,00	743
50,00	56504	132,00	1206	213,00	1025	302,00	948
51,00	214976	134,00	2957	214,00	683	303,00	6052
52,00	9708	135,00	8800	215,00	1790	304,00	981

53,00	726	136,00	4049	216,00	3948	309,00	327
55,00	120	137,00	4636	217,00	38536	310,00	440
56,00	5248	138,00	481	218,00	3941	311,00	481
57,00	20640	139,00	429	219,00	1137	313,00	616
58,00	262	140,00	542	220,00	2266	314,00	2376

59,00	241	141,00	12779	221,00	24728	315,00	4463
60,00	228	142,00	3968	222,00	3818	316,00	2859
61,00	2688	143,00	1845	223,00	10090	319,00	347
62,00	3371	145,00	609	224,00	67072	321,00	1022
63,00	7754	146,00	2805	225,00	19048	322,00	1153

64,00	424	147,00	6800	226,00	2944	323,00	9702
65,00	3982	148,00	18504	227,00	32032	324,00	2965
66,00	110	149,00	4193	228,00	6001	327,00	1660
67,00	242	150,00	1111	229,00	5547	328,00	841
68,00	5021	151,00	2541	230,00	1137	332,00	495

69,00	263552	152,00	204	231,00	2238	333,00	1086
70,00	1343	153,00	4528	232,00	512	334,00	7103
72,00	181	154,00	3549	233,00	85	335,00	1720
73,00	4239	155,00	7755	234,00	2873	341,00	2057
74,00	24336	156,00	10056	235,00	2148	342,00	474

75,00	35800	157,00	1485	236,00	2004	343,00	211
76,00	11683	158,00	1806	237,00	3508	344,00	455
77,00	248896	159,00	2193	238,00	127	346,00	2538
78,00	12799	160,00	3958	239,00	1751	352,00	4054
79,00	15853	161,00	5666	240,00	1641	353,00	2027

Date : 16-APR-2020 21:15

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0400.d

Spectrum: Avg. Scans 172-174 (5,10), Background Scan 167

Location of Maximum: 198,00

Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80,00	13394	162,00	946	241,00	2103	354,00	3101
81,00	19760	165,00	6663	242,00	3853	355,00	1422
82,00	3870	166,00	4108	243,00	5652	357,00	248
83,00	5530	167,00	22368	244,00	58312	362,00	337
85,00	4807	168,00	14001	245,00	7282	365,00	16912
86,00	4506	169,00	2282	246,00	13796	366,00	2861
87,00	3861	170,00	1540	247,00	2686	367,00	634
88,00	788	171,00	2289	248,00	1014	370,00	650
89,00	146	172,00	1778	249,00	2318	371,00	559
91,00	5458	173,00	4002	250,00	1775	372,00	5906
92,00	5686	174,00	5507	251,00	1081	373,00	2136
93,00	33560	175,00	10819	252,00	1203	382,00	596
94,00	2576	176,00	1000	253,00	3422	383,00	1742
95,00	37	177,00	5366	254,00	3071	390,00	936
97,00	925	178,00	1890	255,00	275712	391,00	531
98,00	22864	179,00	17168	256,00	35000	401,00	361
99,00	16872	180,00	12655	257,00	4106	402,00	2931
100,00	1880	181,00	6456	258,00	20280	403,00	3769
101,00	12169	182,00	1599	259,00	3015	404,00	1069
102,00	679	183,00	272	261,00	987	419,00	337
103,00	3158	184,00	1664	263,00	916	421,00	4673
104,00	7599	185,00	9626	265,00	6480	422,00	3222
105,00	8066	186,00	60392	266,00	2422	423,00	15447
106,00	3496	187,00	19640	267,00	635	424,00	3530
107,00	76200	188,00	2209	268,00	91	425,00	166
108,00	12571	189,00	3399	271,00	675	430,00	135
109,00	3490	190,00	1508	272,00	1963	431,00	628
110,00	127136	191,00	2092	273,00	10701	432,00	634
111,00	20240	192,00	5451	274,00	23856	433,00	453
112,00	3282	193,00	8221	275,00	115800	435,00	1189
113,00	206	194,00	2522	276,00	14850	436,00	1774
114,00	2	195,00	3274	277,00	12306	437,00	1536
115,00	158	196,00	14442	278,00	2508	438,00	4571
116,00	5919	197,00	2483	279,00	824	439,00	2642
117,00	58648	198,00	470784	281,00	63	440,00	2820

Date : 16-APR-2020 21:15

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0400.d

Spectrum: Avg. Scans 172-174 (5,10), Background Scan 167

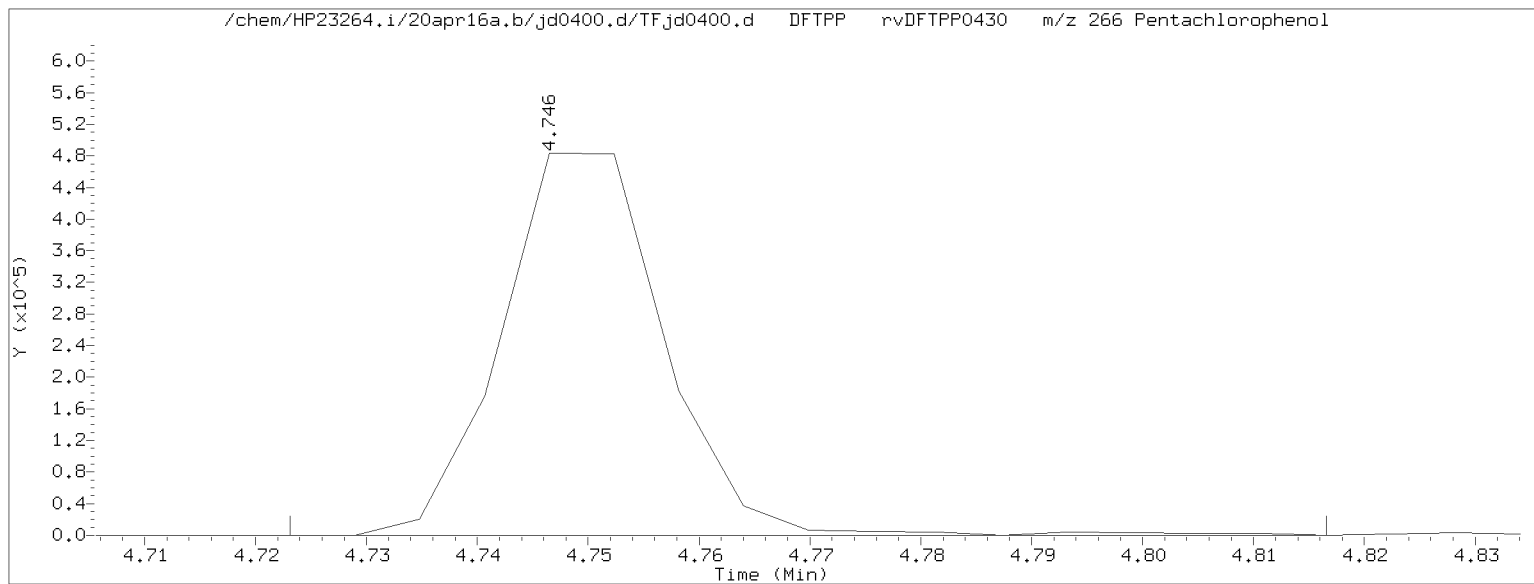
Location of Maximum: 198,00

Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118,00	4185	199,00	34496	282,00	668	441,00	52272
119,00	756	200,00	3103	284,00	1244	442,00	345216
120,00	181	201,00	3238	285,00	1882	443,00	62120
121,00	701	202,00	1489	289,00	421	444,00	5985
122,00	4288	203,00	6116	290,00	207	445,00	297
123,00	7432	204,00	21976	291,00	230		
124,00	4145	205,00	29584	292,00	1698		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP23264.i Injection Date: 16-APR-2020 21:15 Operator: art12405



Pentachlorophenol EICP peak height = 483520 EICP peak height at 10% = 48352 Pentachlorophenol EICP area = 493967

Pentachlorophenol EICP peak apex (min.) = 4.746

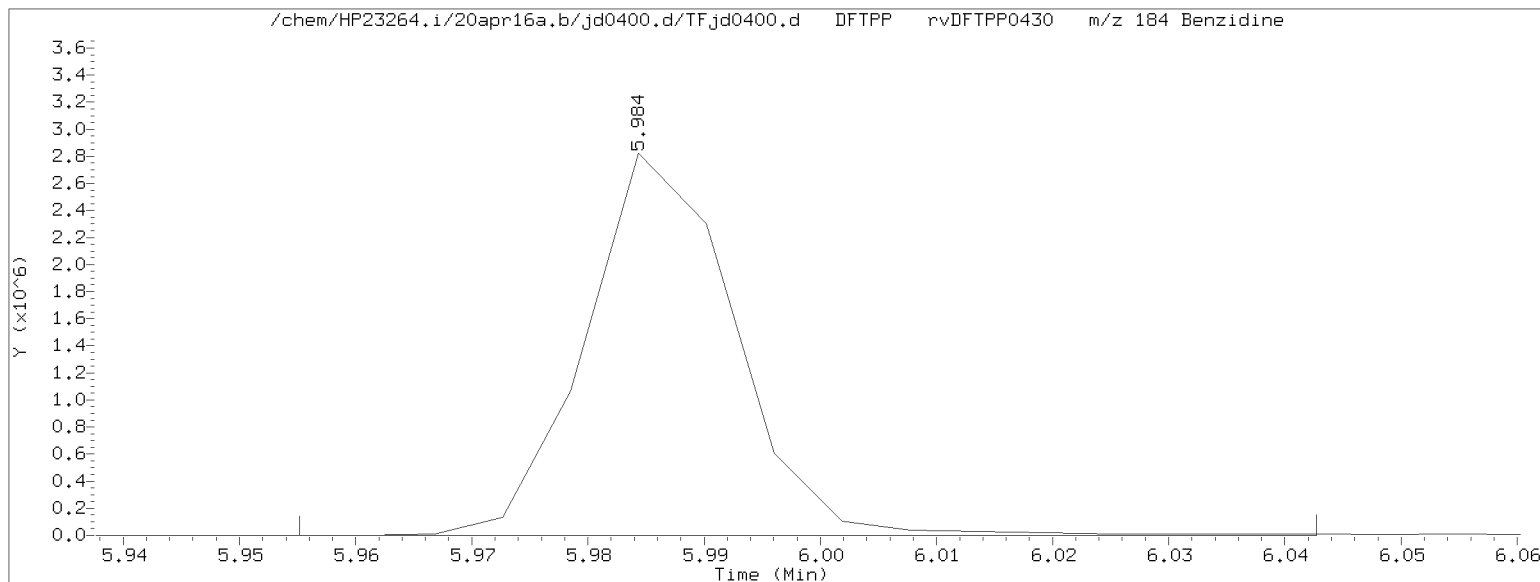
RT at 10% of front half of EICP (min.) = 4.736

RT at 10% of back half of EICP (min.) = 4.764

'Front' peak width (min.) = 0.0106166667

'Tailing' peak width (min.) = 0.0170666667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0170666667}{0.0106166667} = 1.608$$



Benzidine EICP peak height = 2823680 EICP peak height at 10% = 282368 Benzidine EICP area = 2506931

Benzidine EICP peak apex (min.) = 5.984

RT at 10% of front half of EICP (min.) = 5.974

RT at 10% of back half of EICP (min.) = 6.000

'Front' peak width (min.) = 0.0107166667

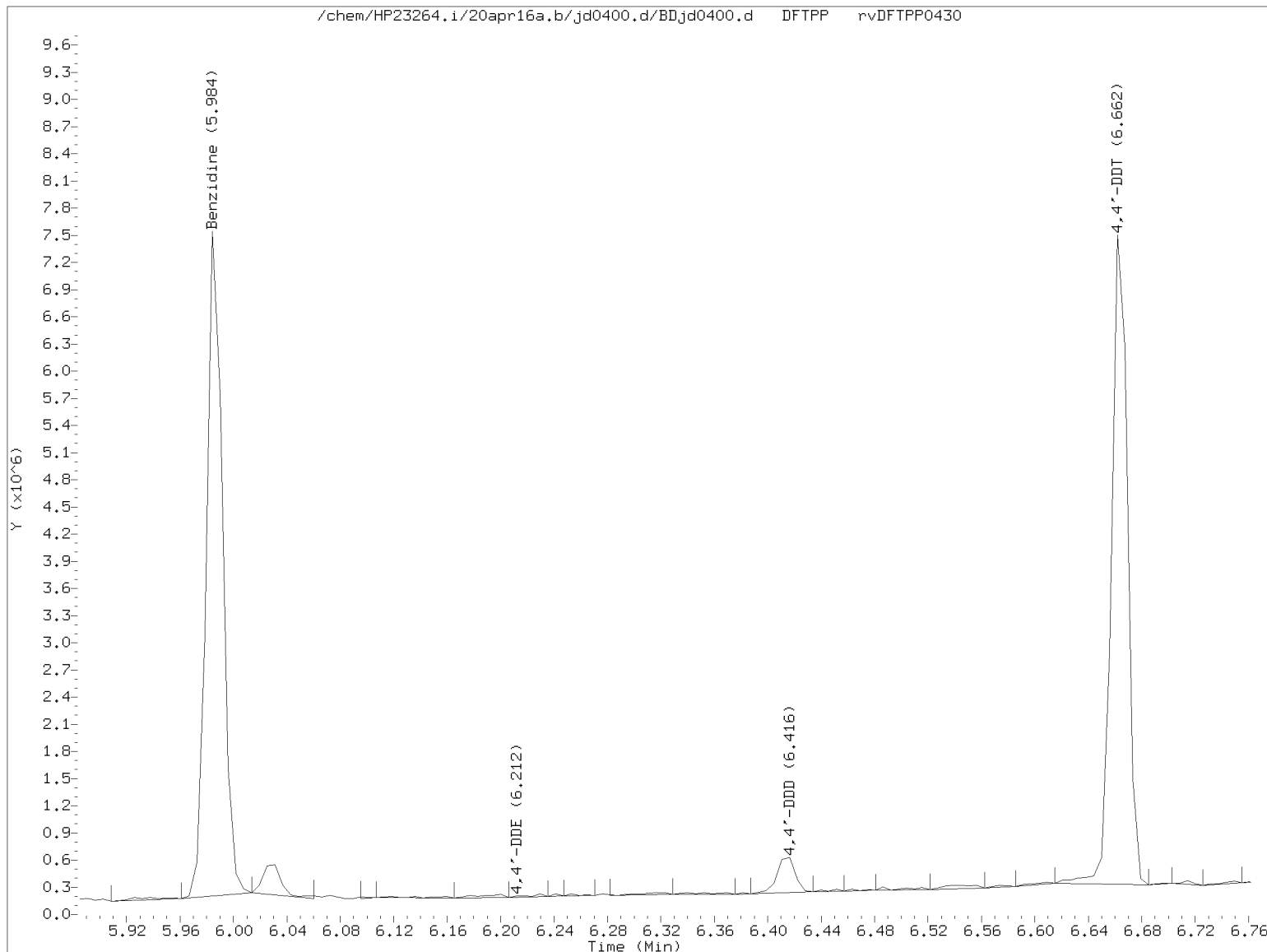
'Tailing' peak width (min.) = 0.0154166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0154166667}{0.0107166667} = 1.439$$

page 1 of 2
printed on 04/16/2020 at 21:34

Assessment of GC Column Performance and Injection Port Inertness for

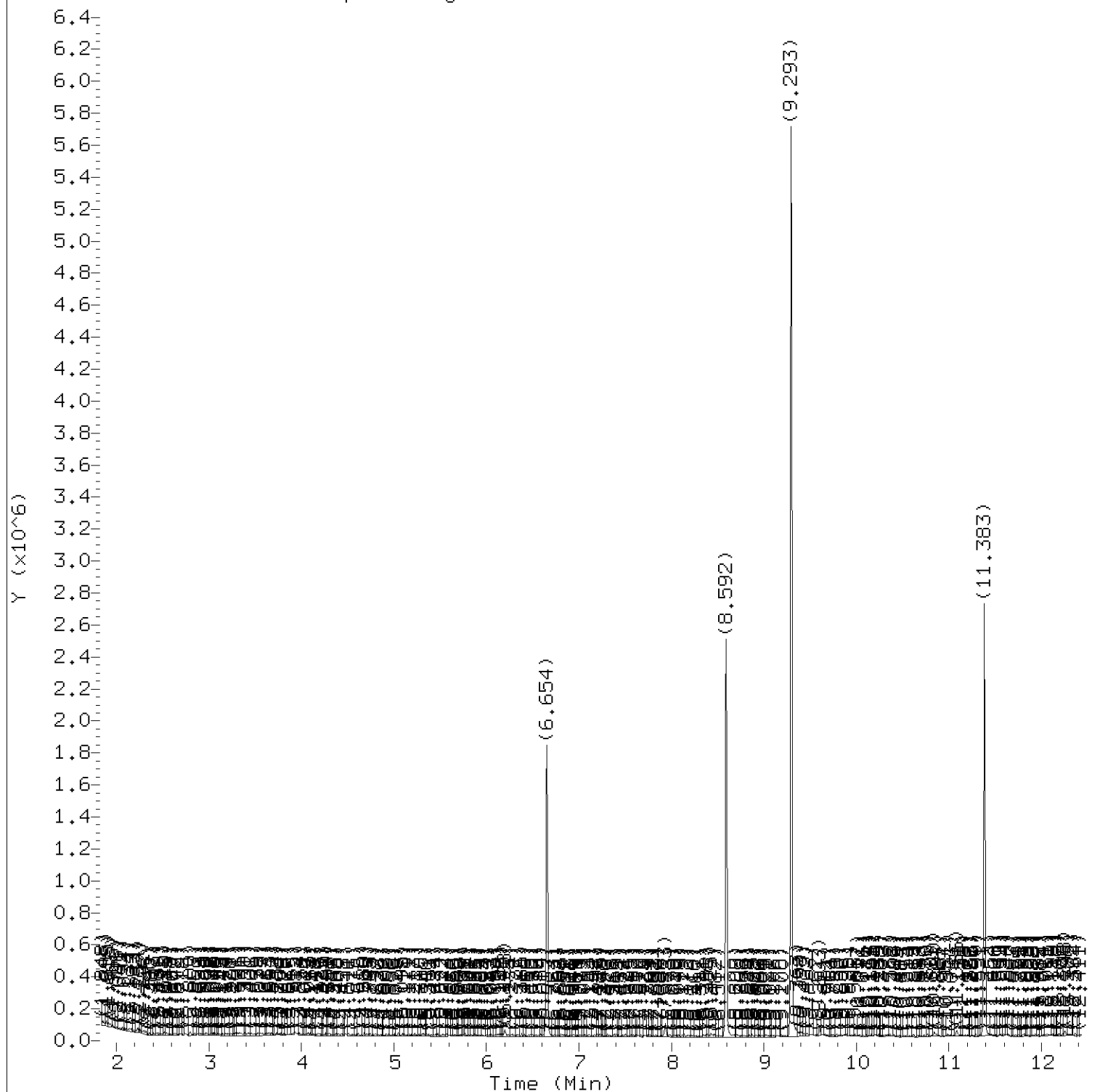
Instrument ID: HP23264.i Injection Date: 16-APR-2020 21:15 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{20598 + 372717}{20598 + 372717 + 6127932} \times 100 = 6.0$$

page 2 of 2
printed on 04/16/2020 at 21:55



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d
Injection date and time: 16-APR-2020 23:40

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

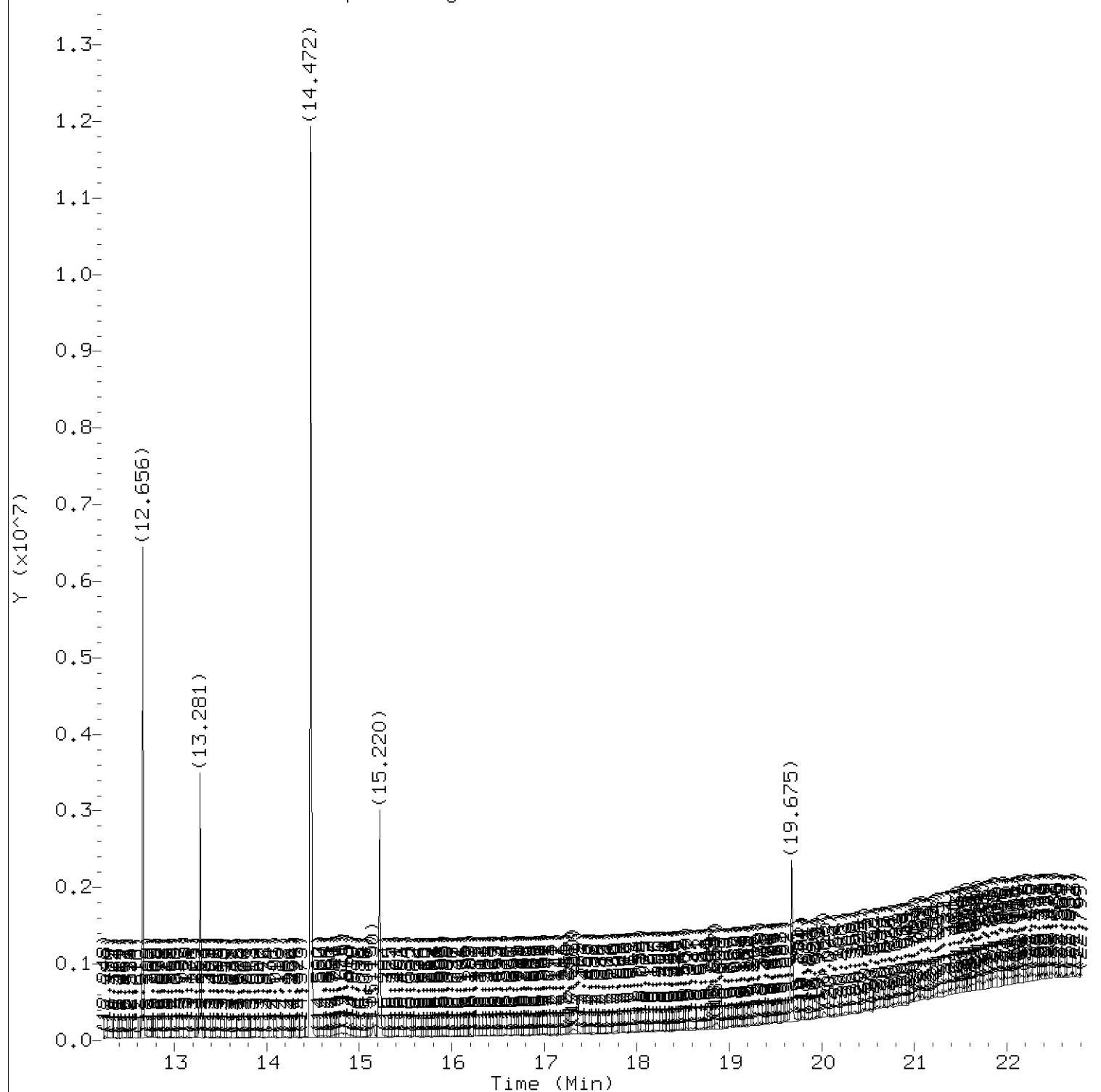
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD30

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d
Injection date and time: 16-APR-2020 23:40

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD30

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d
Injection date and time: 16-APR-2020 23:40

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD30

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	324382	5.000
68) *Naphthalene-d8	(2)	8.592	136	1225624	5.000
84) 1,4-Phenylenediamine	(2)	9.293	108	1830694M	32.618
118) *Acenaphthene-d10	(3)	11.383	164	595361	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.662	213	609067	34.089
158) *Phenanthrene-d10	(4)	13.281	188	1178948	5.000
175) Methapyrilene	(4)	14.472	97	2938472M	31.789
180) *Pyrene-d10	(5)	15.220	212	1164950	5.000
218) *Perylene-d12	(6)	19.675	264	1073150	5.000

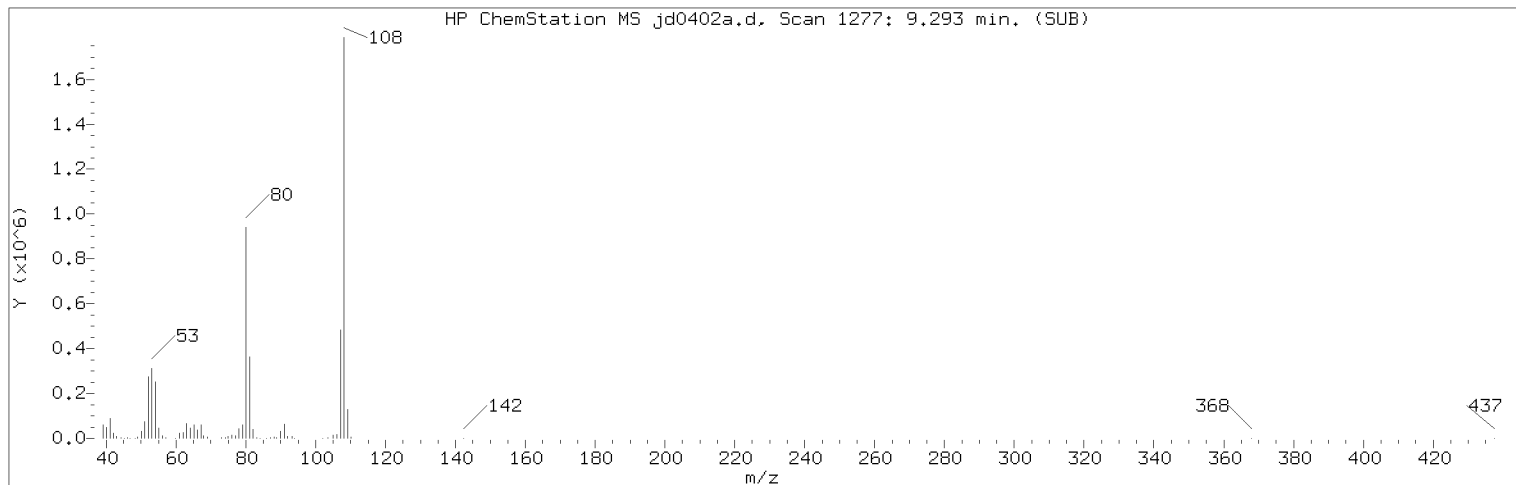
M = Compound was manually integrated.

* = Compound is an internal standard.

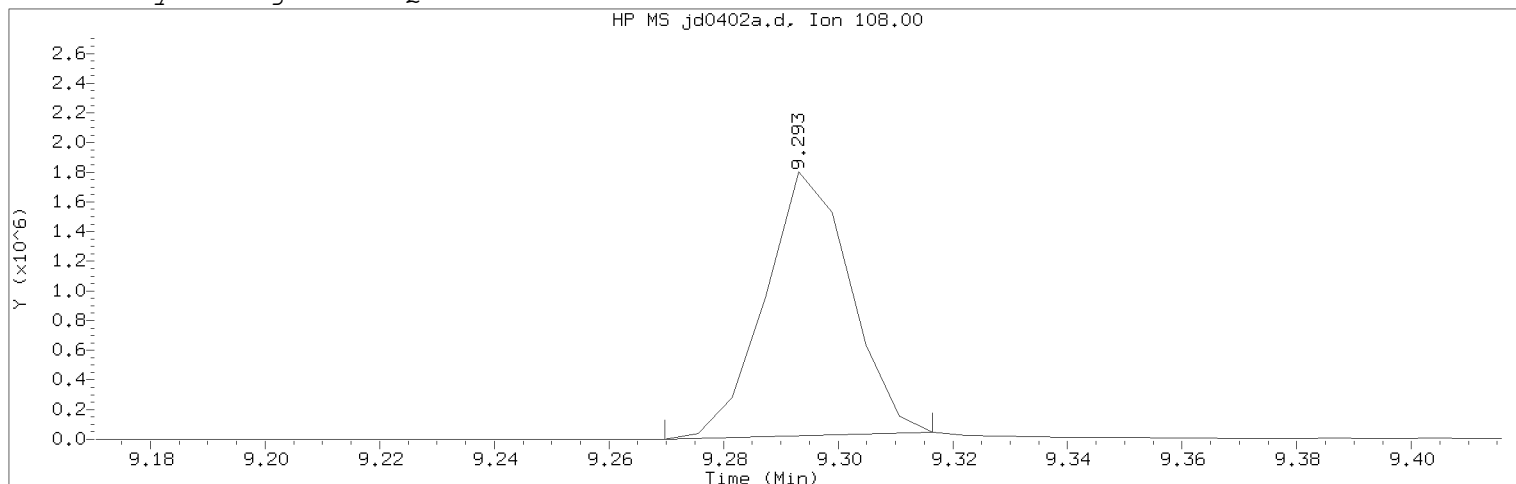
Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d

Instrument ID: HP23264.i

Injection date and time: 16-APR-2020 23:40

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD30

Lab Sample ID: rvPDA1070

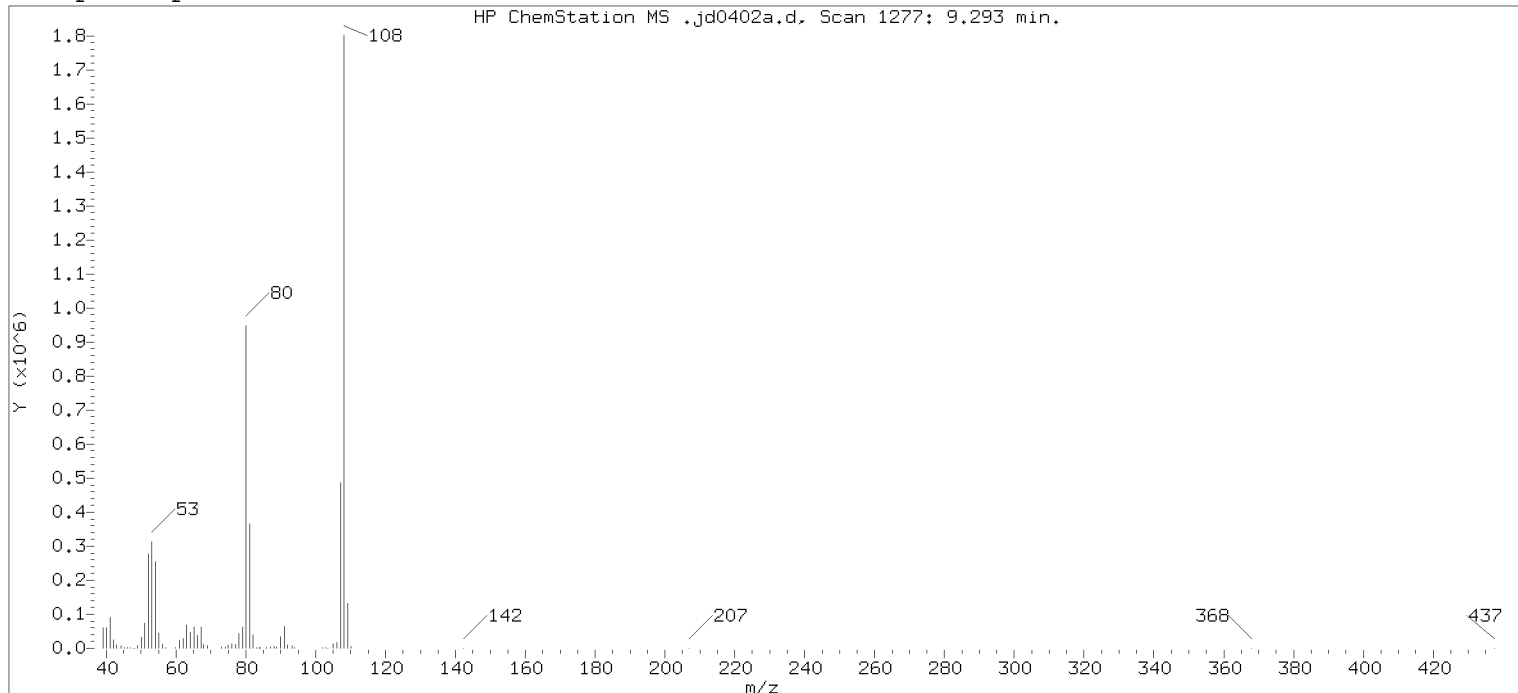
Compound Number	: 84	
Compound Name	: 1,4-Phenylenediamine	
Scan Number	: 1277	
Retention Time (minutes)	: 9.293	
Quant Ion	: 108.00	
Area (flag)	: 1830694M	
On-Column Amount (ng/ul)	: 32.6182	
Integration start scan	: 1272	Integration stop scan: 1280
Y at integration start	: 595	Y at integration end: 48672

Reason for manual integration: missed peak

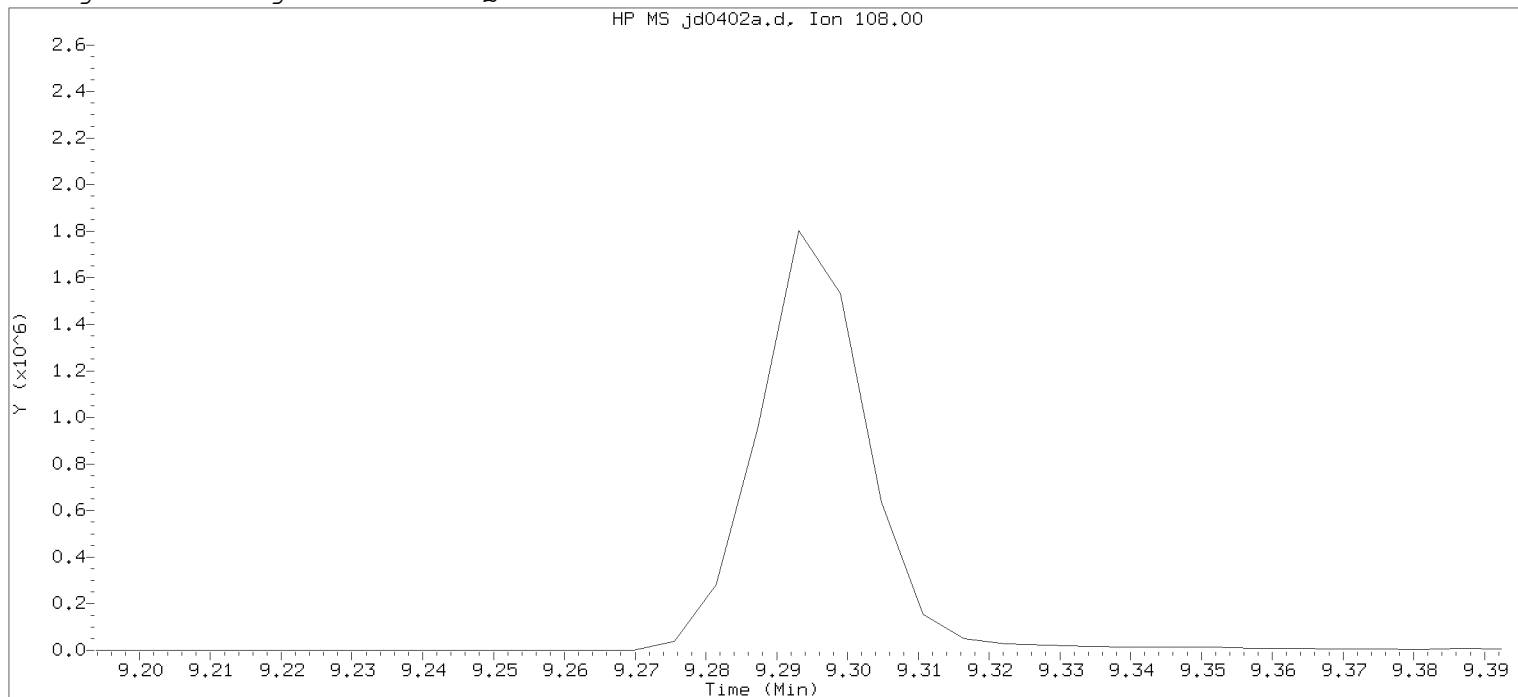
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d

Instrument ID: HP23264.i

Injection date and time: 16-APR-2020 23:40

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 00:16

Date, time and analyst ID of latest file update: 17-Apr-2020 00:16 Automation

Sample Name: SSTD30

Lab Sample ID: rvPDA1070

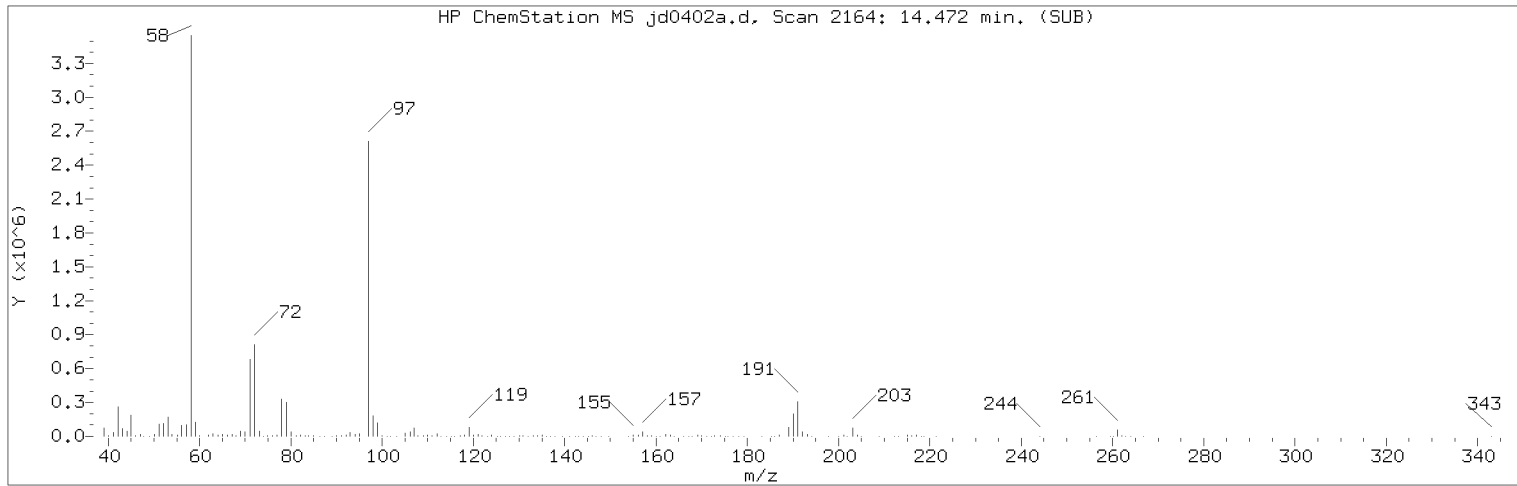
Compound Number : 84

Compound Name : 1,4-Phenylenediamine

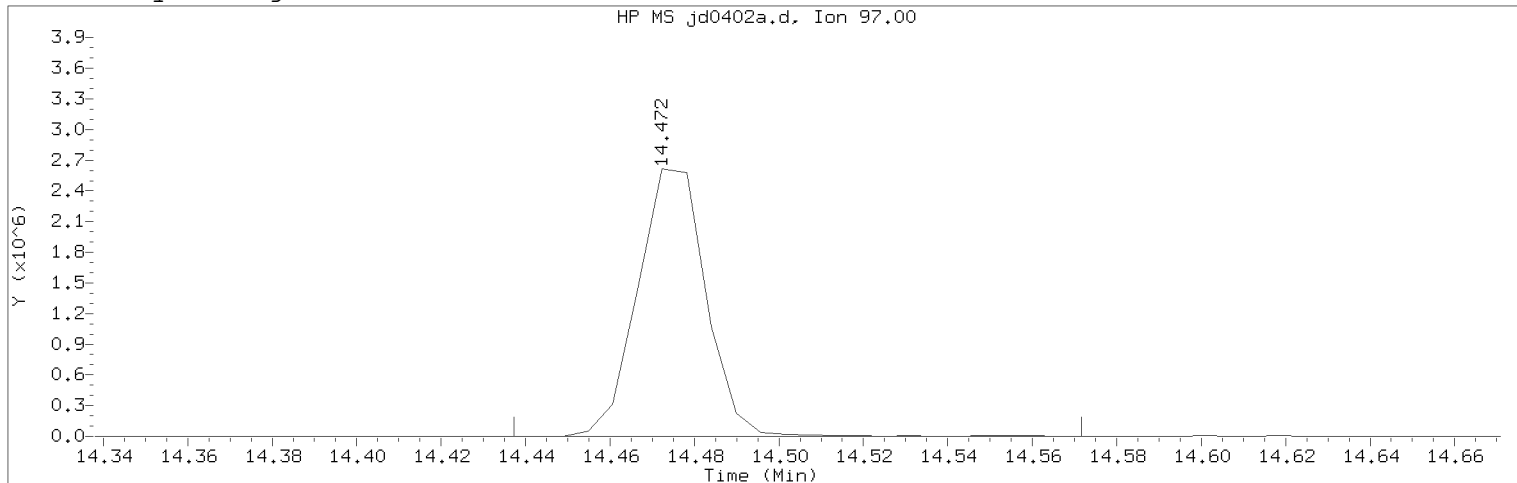
Expected RT (minutes) : 9.293

Quant Ion : 108.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d

Instrument ID: HP23264.i

Injection date and time: 16-APR-2020 23:40

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD30

Lab Sample ID: rvPDA1070

Compound Number	: 175	
Compound Name	: Methapyrilene	
Scan Number	: 2164	
Retention Time (minutes)	: 14.472	
Quant Ion	: 97.00	
Area (flag)	: 2938472M	
On-Column Amount (ng/ul)	: 31.7890	
Integration start scan	: 2157	Integration stop scan: 2180
Y at integration start	: 0	Y at integration end: 1093

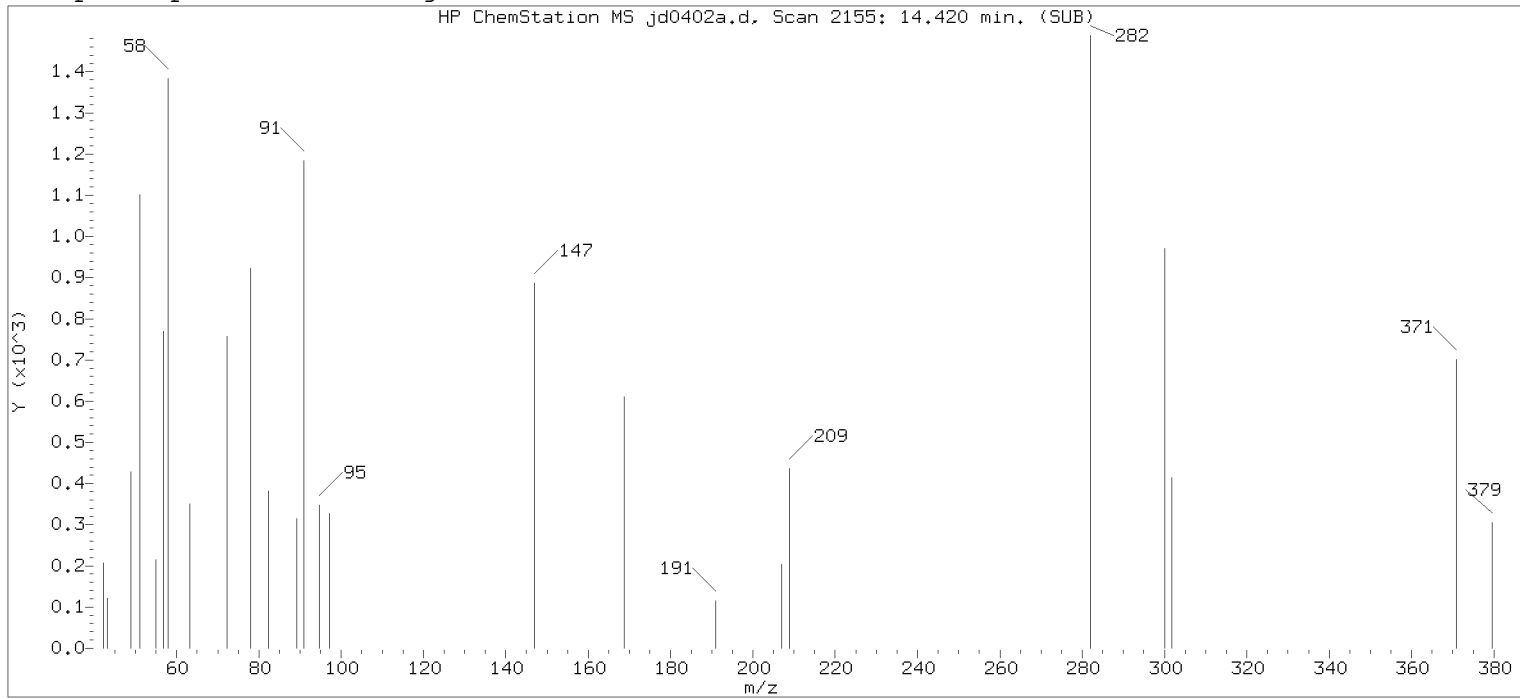
Reason for manual integration: improper integration

Analyst responsible for change:

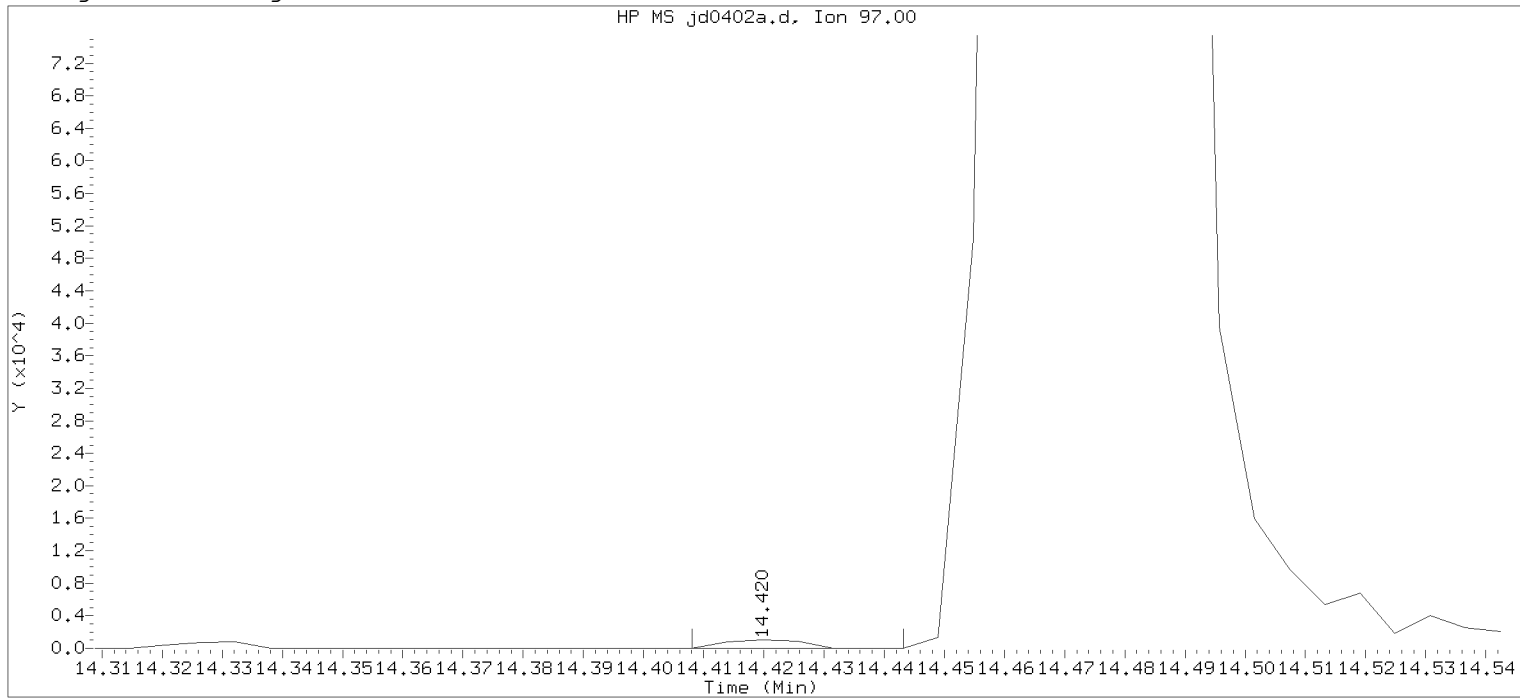
Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0402a.d

Instrument ID: HP23264.i

Injection date and time: 16-APR-2020 23:40

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 00:16

Date, time and analyst ID of latest file update: 17-Apr-2020 00:16 Automation

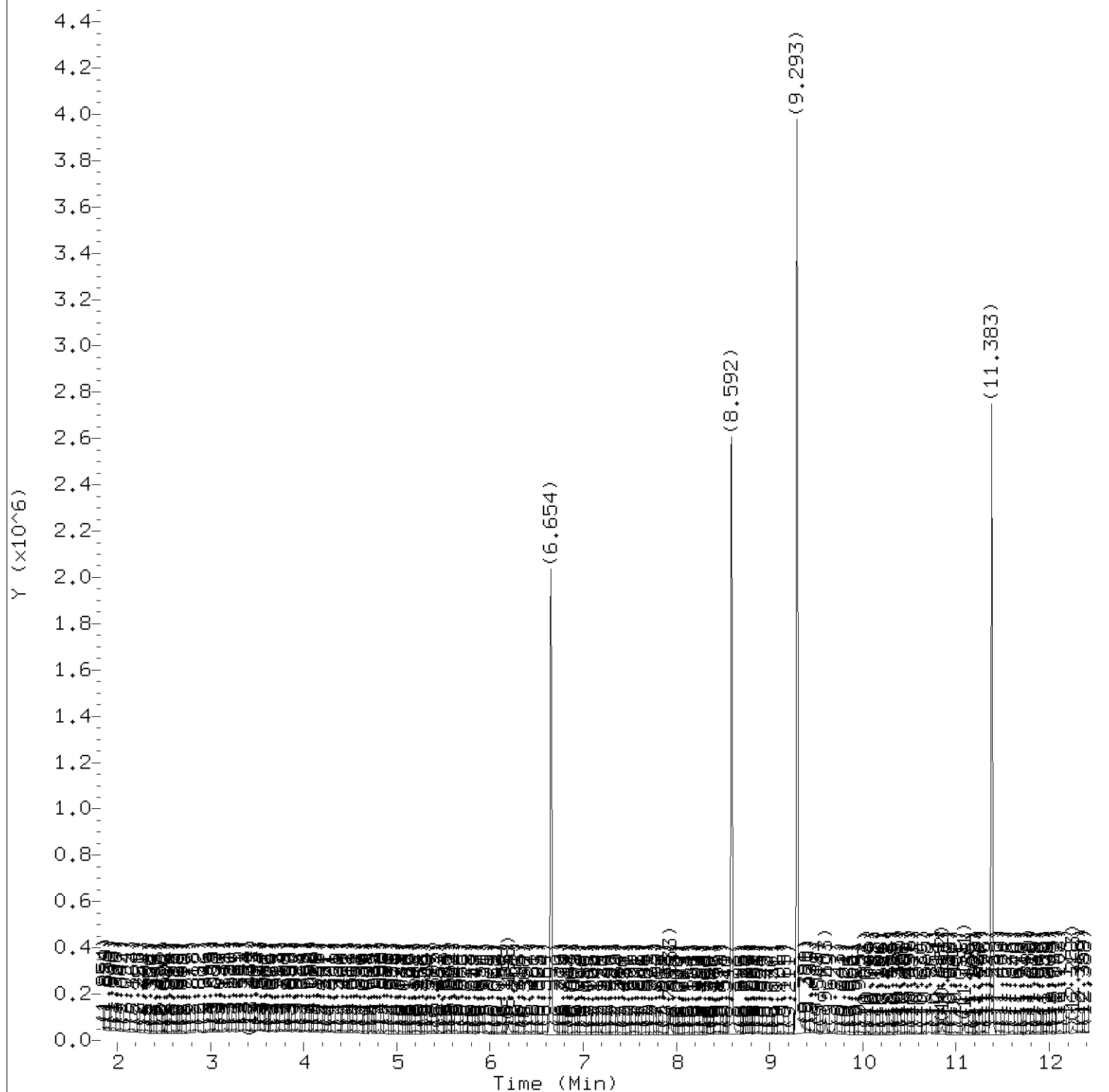
Sample Name: SSTD30

Lab Sample ID: rvPDA1070

Compound Number	: 175	
Compound Name	: Methapyrilene	
Scan Number	: 2155	
Retention Time (minutes)	: 14.420	
Quant Ion	: 97.00	
Area	: 928	
On-column Amount (ng/ul)	: 0.0000	
Integration start scan	: 2152	Integration stop scan: 2158
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 04/17/2020 at 09:06.

Target 3.5 esignature use **RAF59** Page 1315 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0403.d
Injection date and time: 17-APR-2020 00:09

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

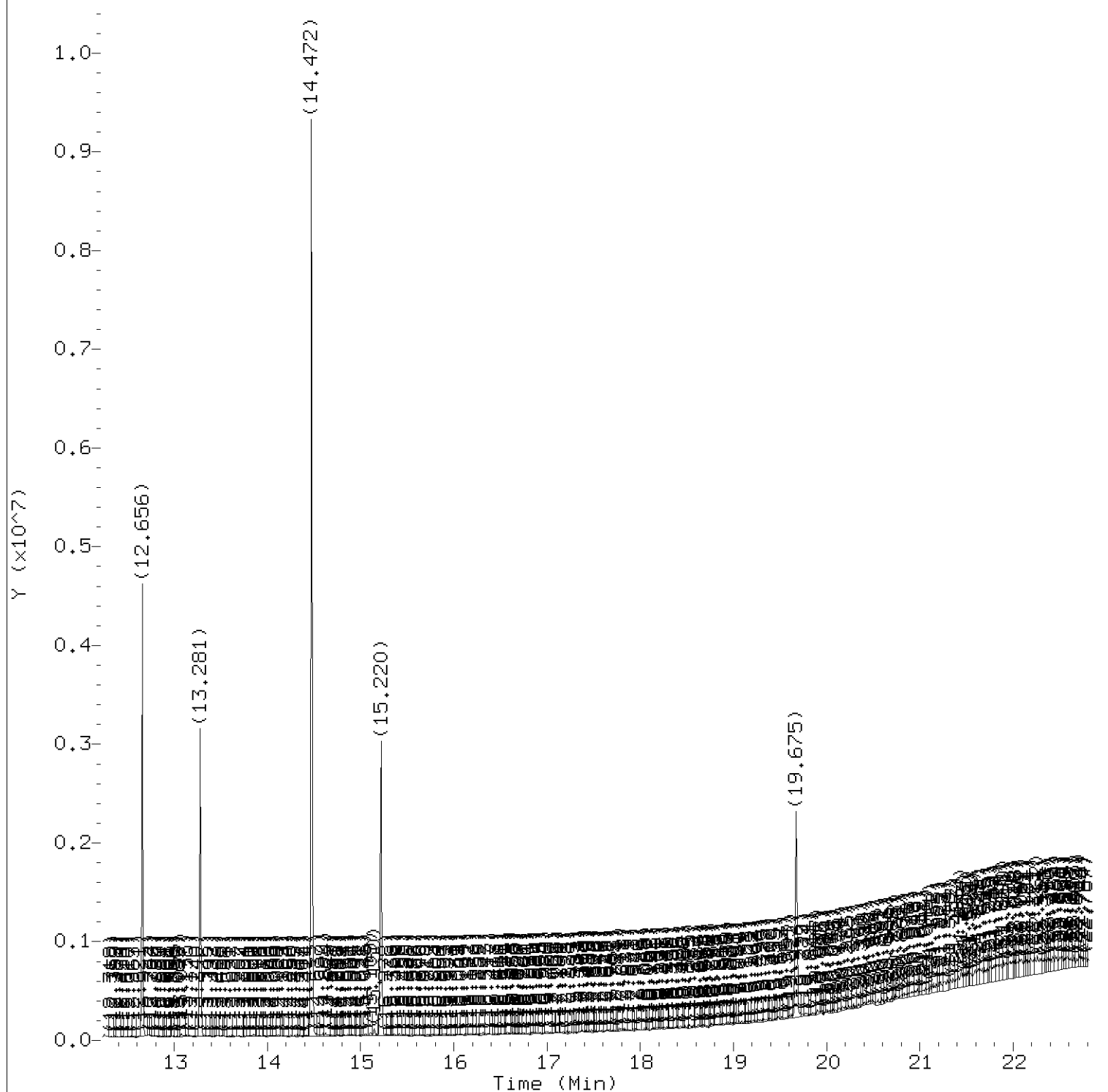
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD20

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0403.d
Injection date and time: 17-APR-2020 00:09

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD20

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0403.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 00:09

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD20

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	362631	5.000
68) *Naphthalene-d8	(2)	8.592	136	1324027	5.000
84) 1,4-Phenylenediamine	(2)	9.293	108	1335204M	22.022
118) *Acenaphthene-d10	(3)	11.383	164	633137	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.656	213	403039	23.568
158) *Phenanthrene-d10	(4)	13.281	188	1128437	5.000
175) Methapyrilene	(4)	14.472	97	2084666	23.562
180) *Pyrene-d10	(5)	15.220	212	1191977	5.000
218) *Perylene-d12	(6)	19.675	264	1092507	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

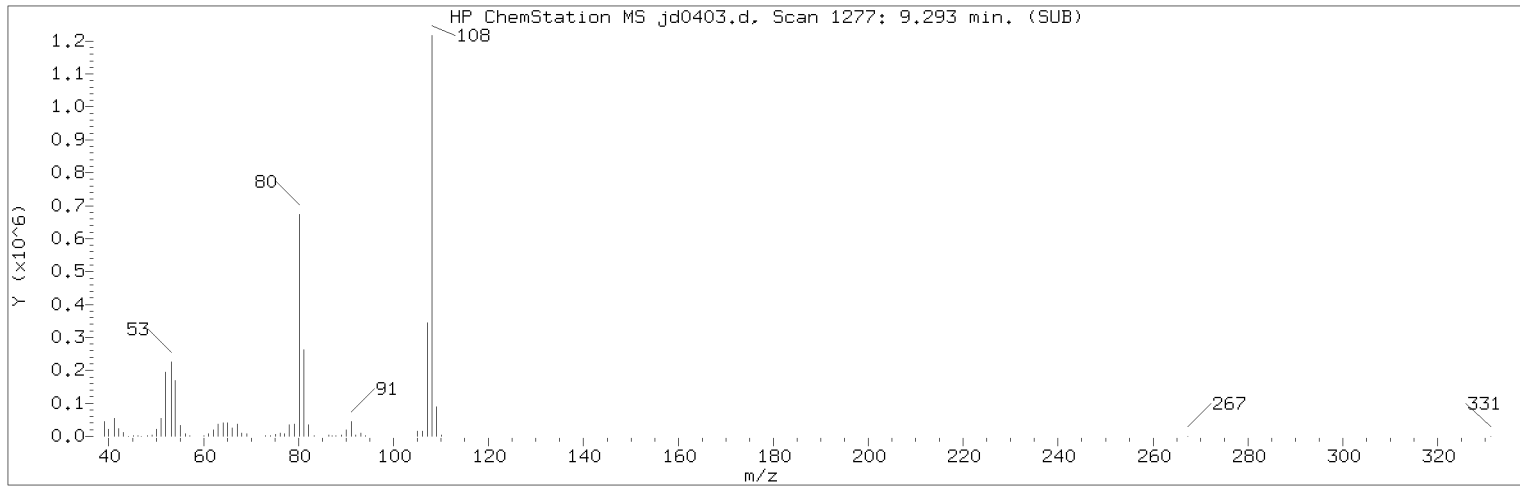
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316

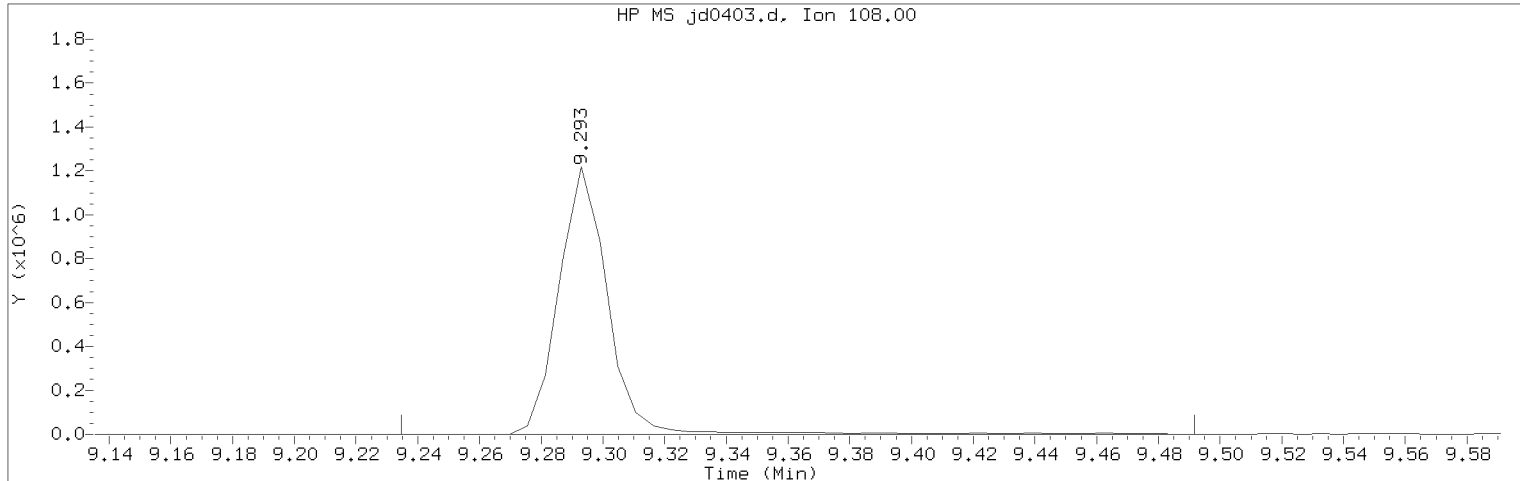
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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0403.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 00:09 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 08:34
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD20 Lab Sample ID: rvPDA1070

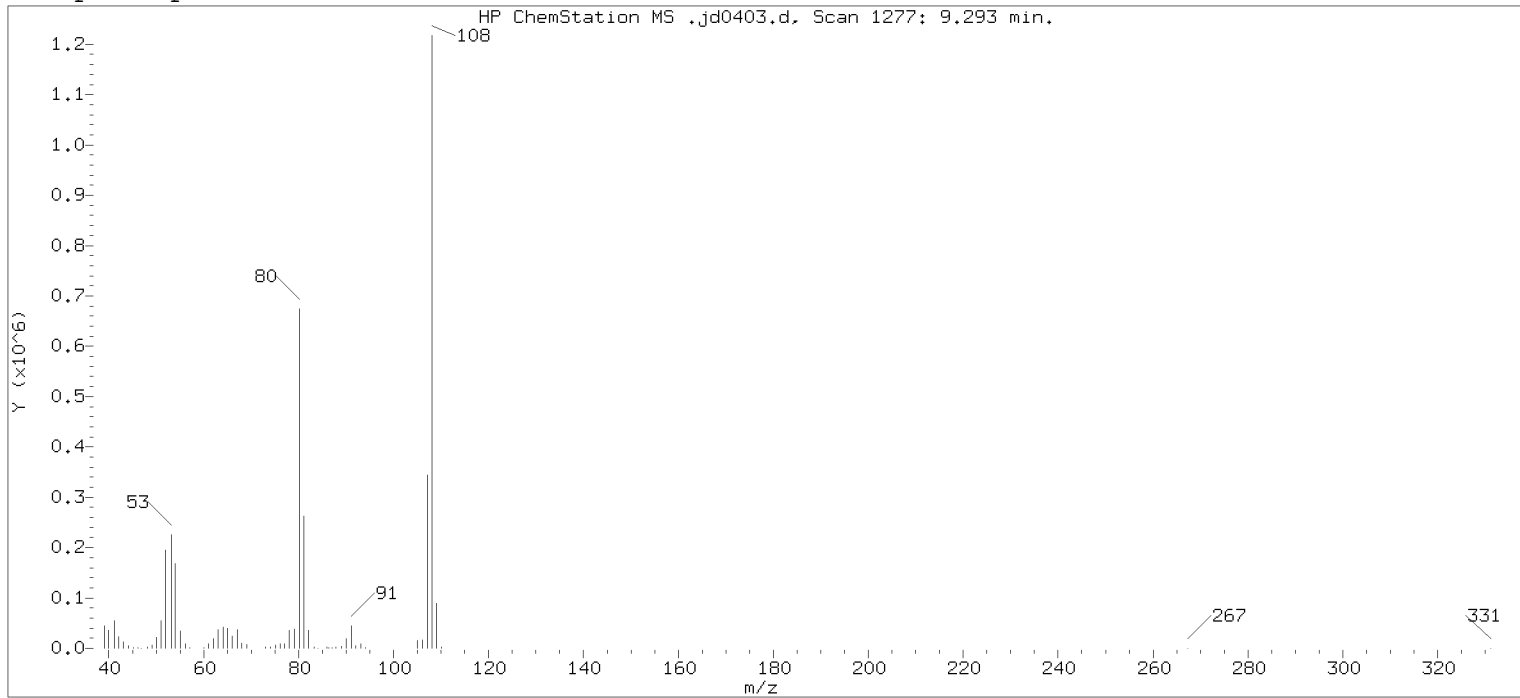
Compound Number : 84
Compound Name : 1,4-Phenylenediamine
Scan Number : 1277
Retention Time (minutes) : 9.293
Quant Ion : 108.00
Area (flag) : 1335204M
On-Column Amount (ng/ul) : 22.0218
Integration start scan : 1266 Integration stop scan: 1310
Y at integration start : 0 Y at integration end: 1287

Reason for manual integration: missed peak

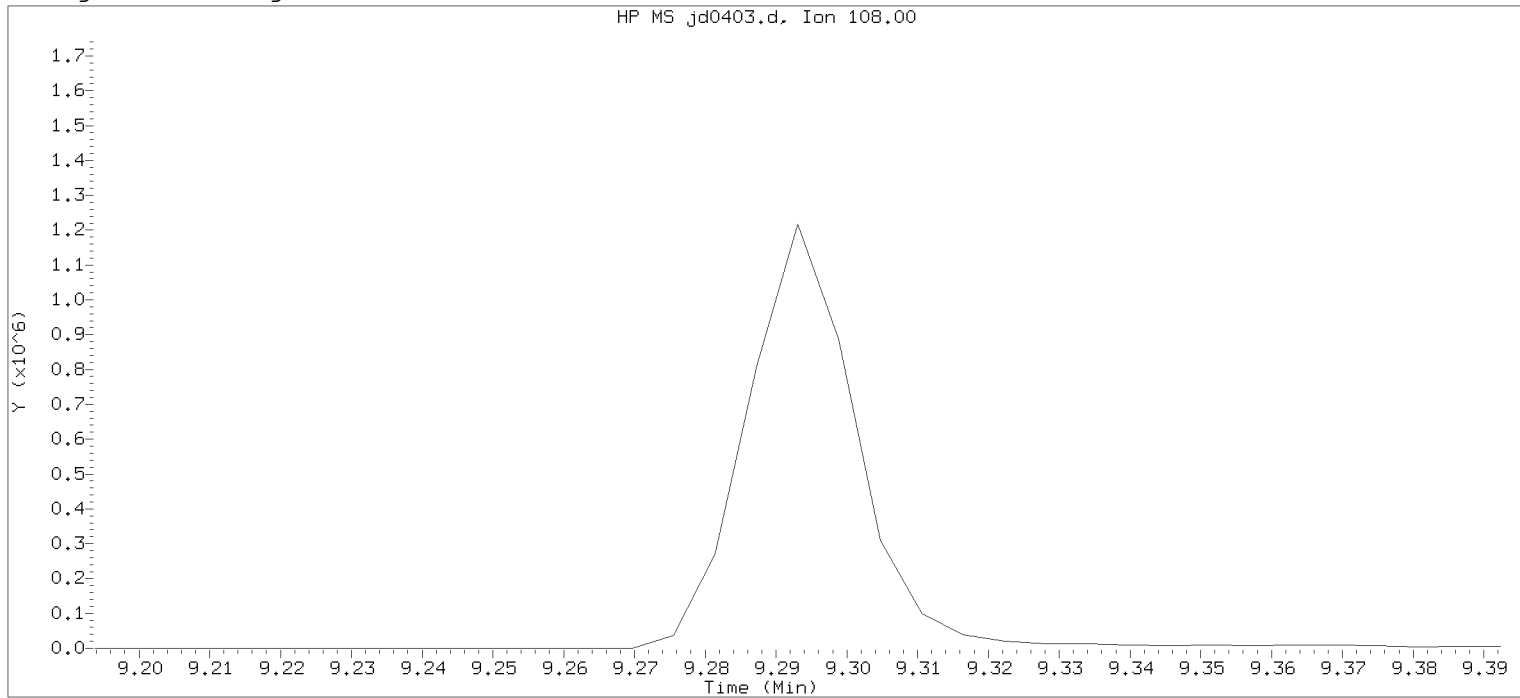
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion

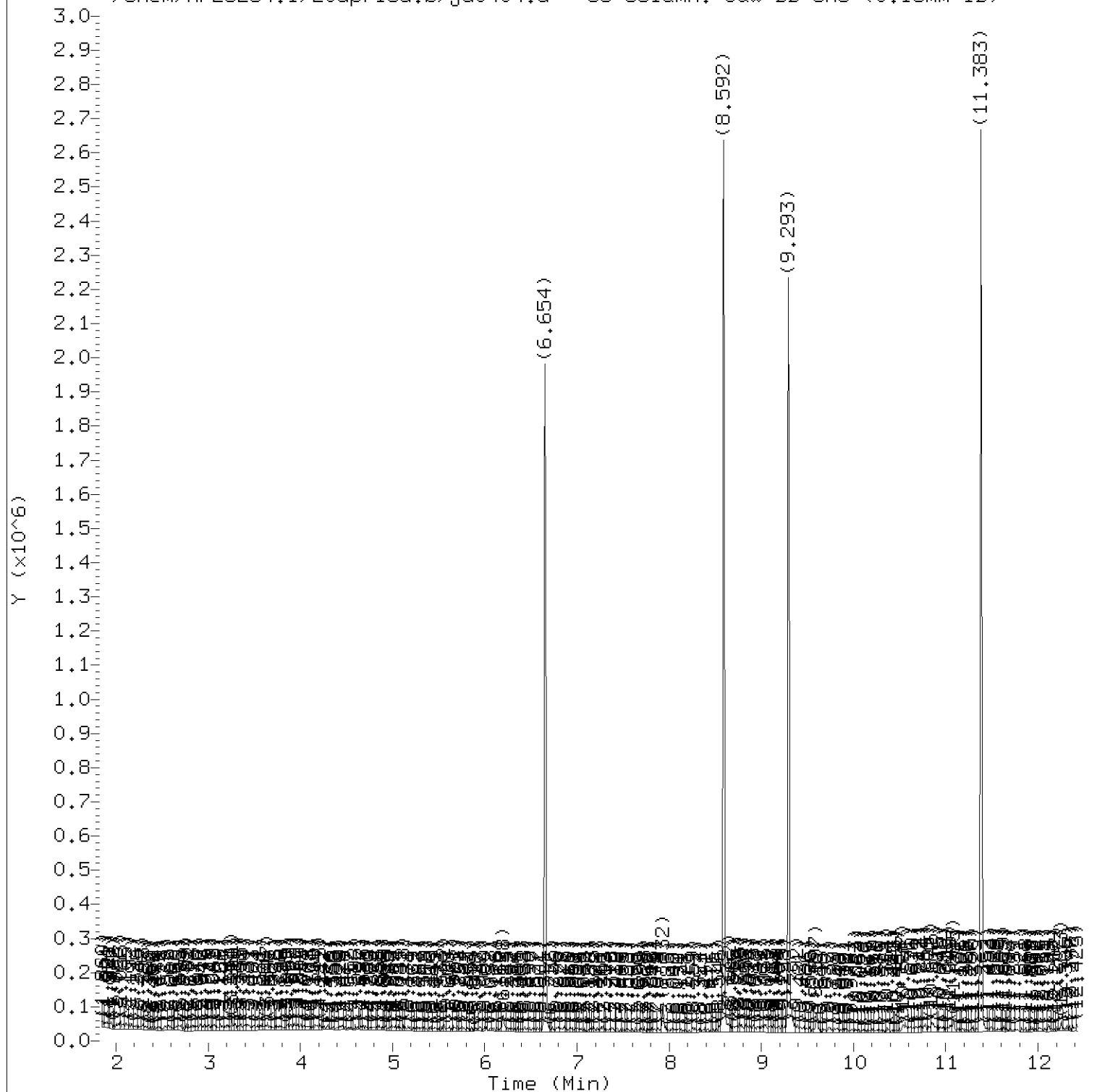


Data File: /chem/HP23264.i/20apr16a.b/jd0403.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 00:09 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 00:43
Date, time and analyst ID of latest file update: 17-Apr-2020 00:43 Automation

Sample Name: SSTD20 Lab Sample ID: rvPDA1070

Compound Number : 84
Compound Name : 1,4-Phenylenediamine
Expected RT (minutes) : 9.293
Quant Ion : 108.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0404.d
Injection date and time: 17-APR-2020 00:39

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

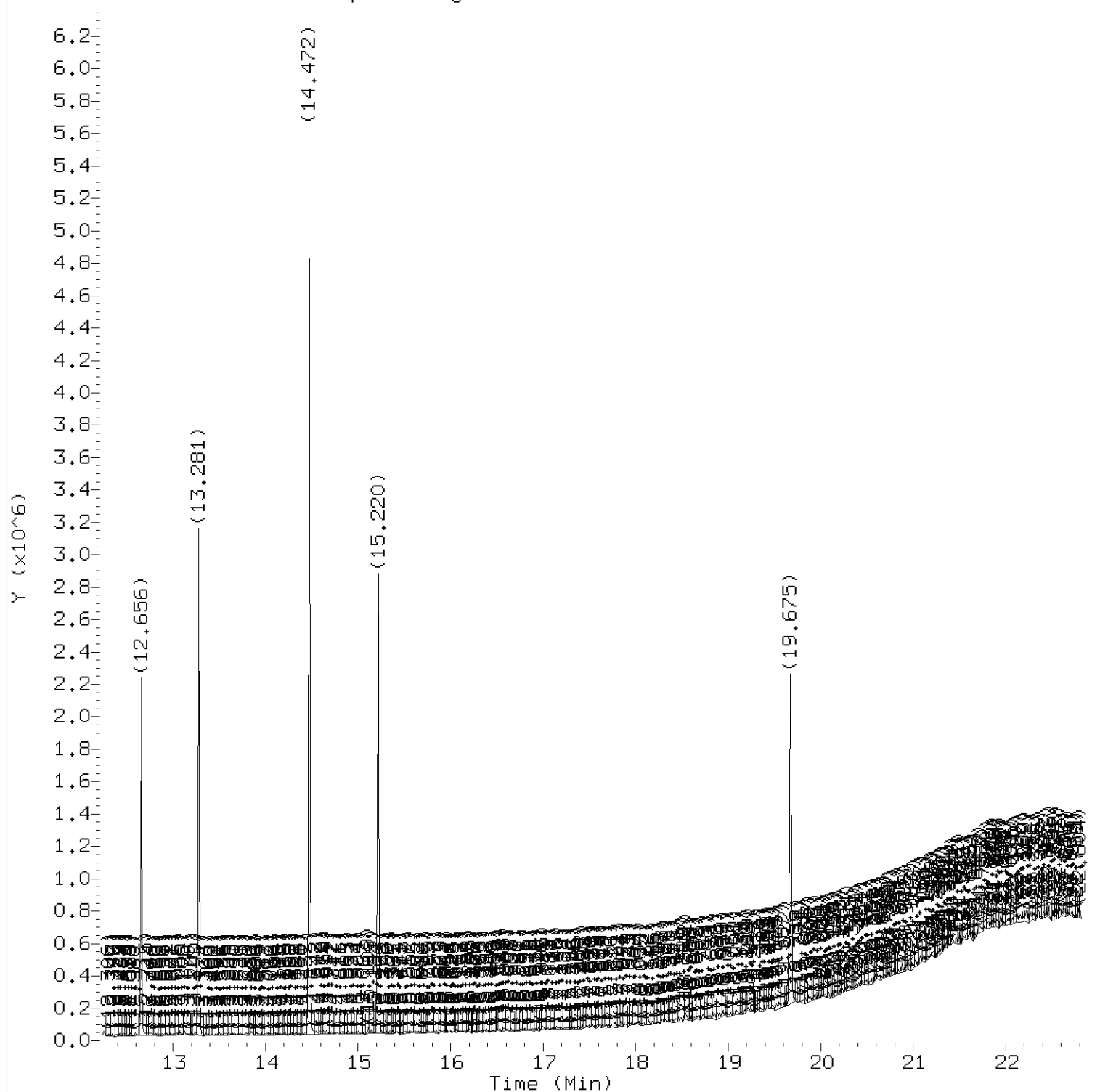
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0404.d
Injection date and time: 17-APR-2020 00:39

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0404.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 00:39

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	356502	5.000
68) *Naphthalene-d8	(2)	8.592	136	1309929	5.000
84) 1,4-Phenylenediamine	(2)	9.293	108	797553M	13.296
118) *Acenaphthene-d10	(3)	11.383	164	626492	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.662	213	204079	12.271
158) *Phenanthrene-d10	(4)	13.281	188	1097445	5.000
175) Methapyrilene	(4)	14.472	97	1223976	14.225
180) *Pyrene-d10	(5)	15.220	212	1099572	5.000
218) *Perylene-d12	(6)	19.669	264	1071904	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

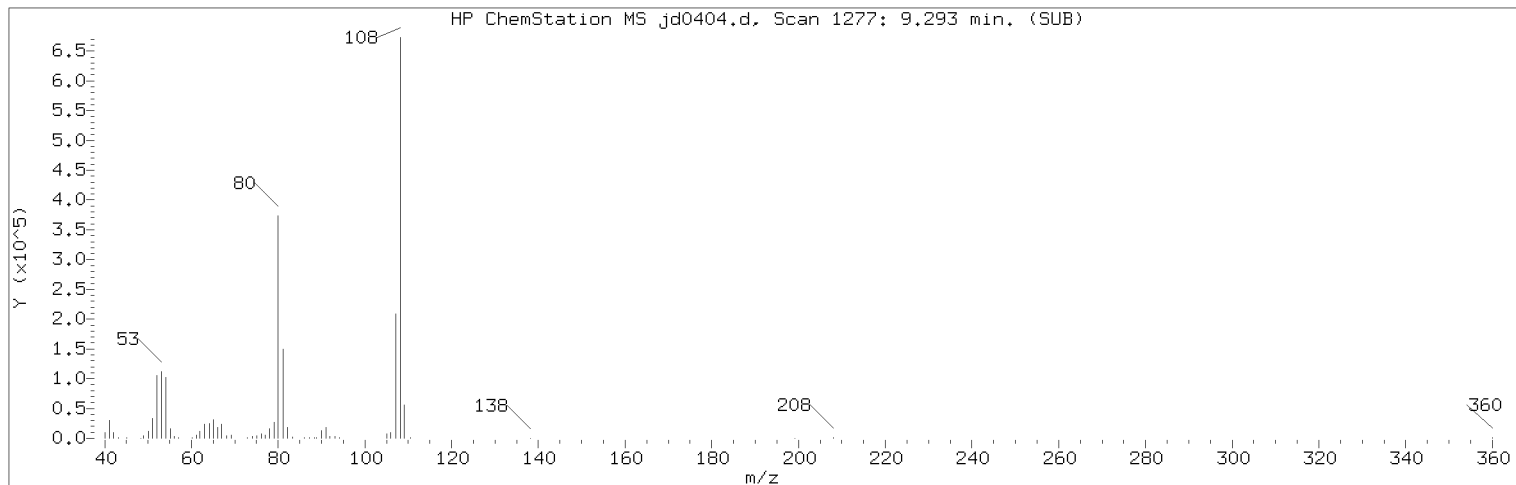
on 04/17/2020 at 09:06.

Target 3.5 esignature user ID: knb25316

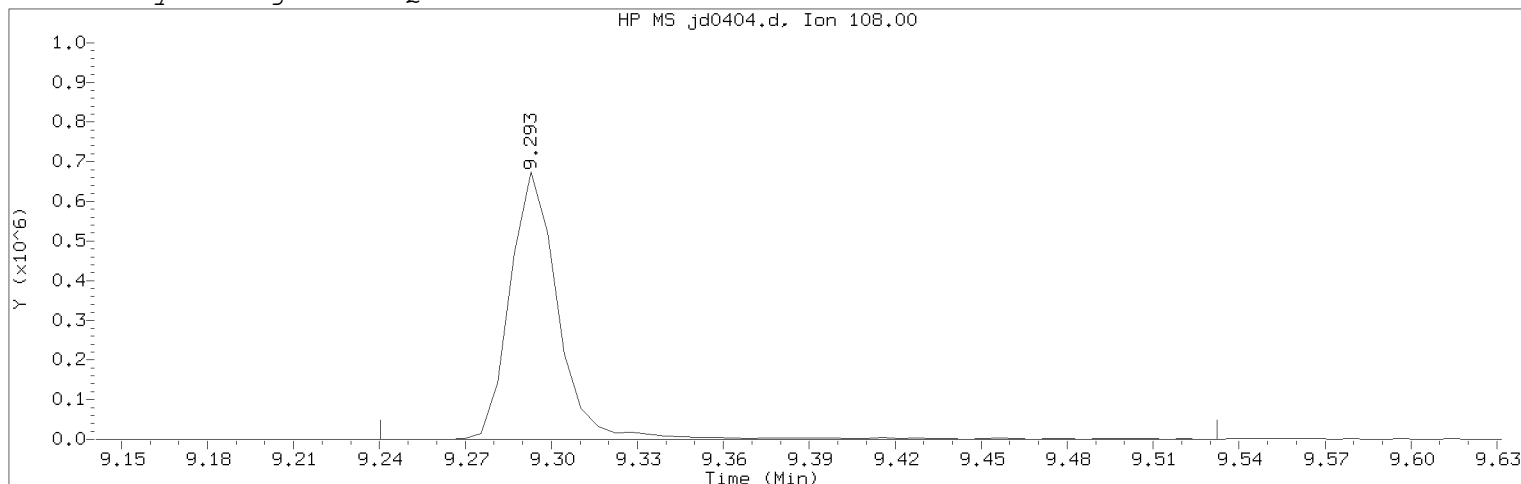
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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0404.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 00:39 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 08:34
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD12.5 Lab Sample ID: rvPDA1070

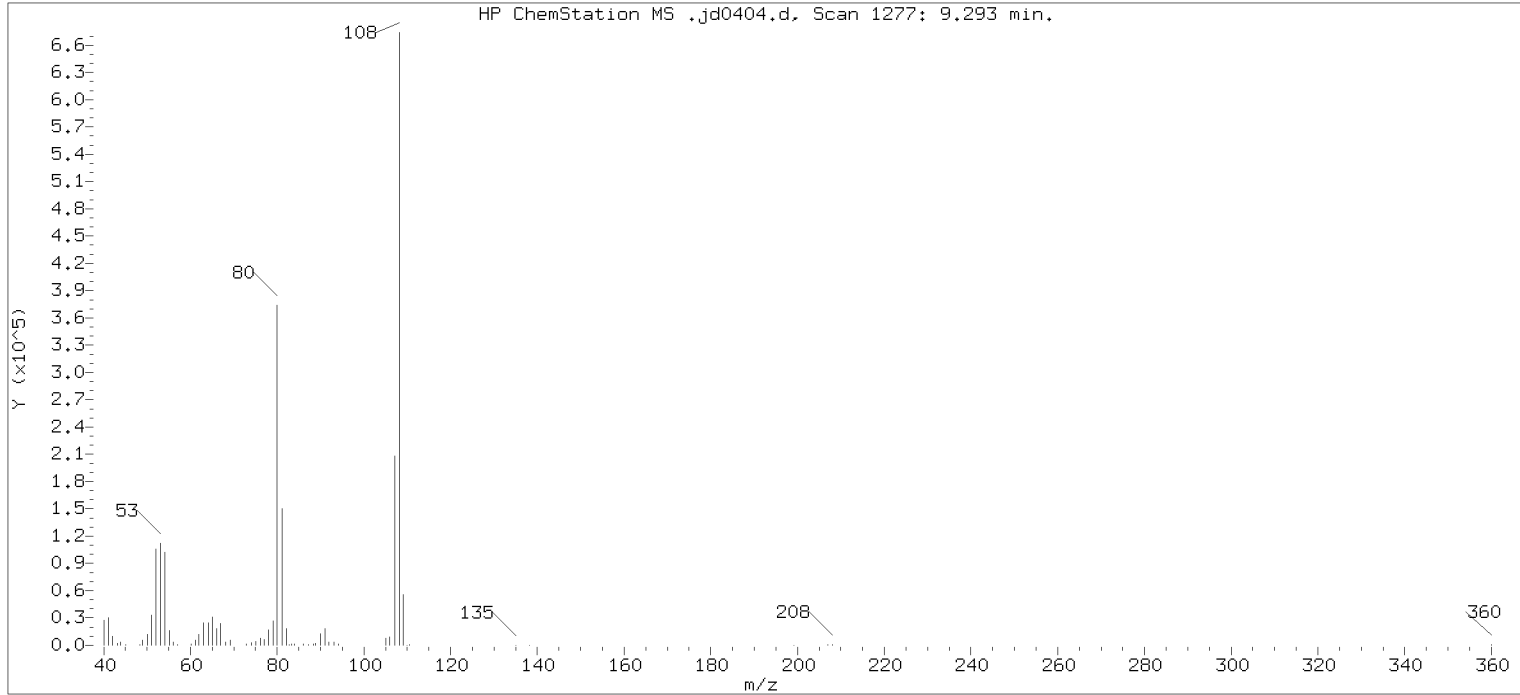
Compound Number : 84
Compound Name : 1,4-Phenylenediamine
Scan Number : 1277
Retention Time (minutes) : 9.293
Quant Ion : 108.00
Area (flag) : 797553M
On-Column Amount (ng/ul) : 13.2958
Integration start scan : 1267 Integration stop scan: 1317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

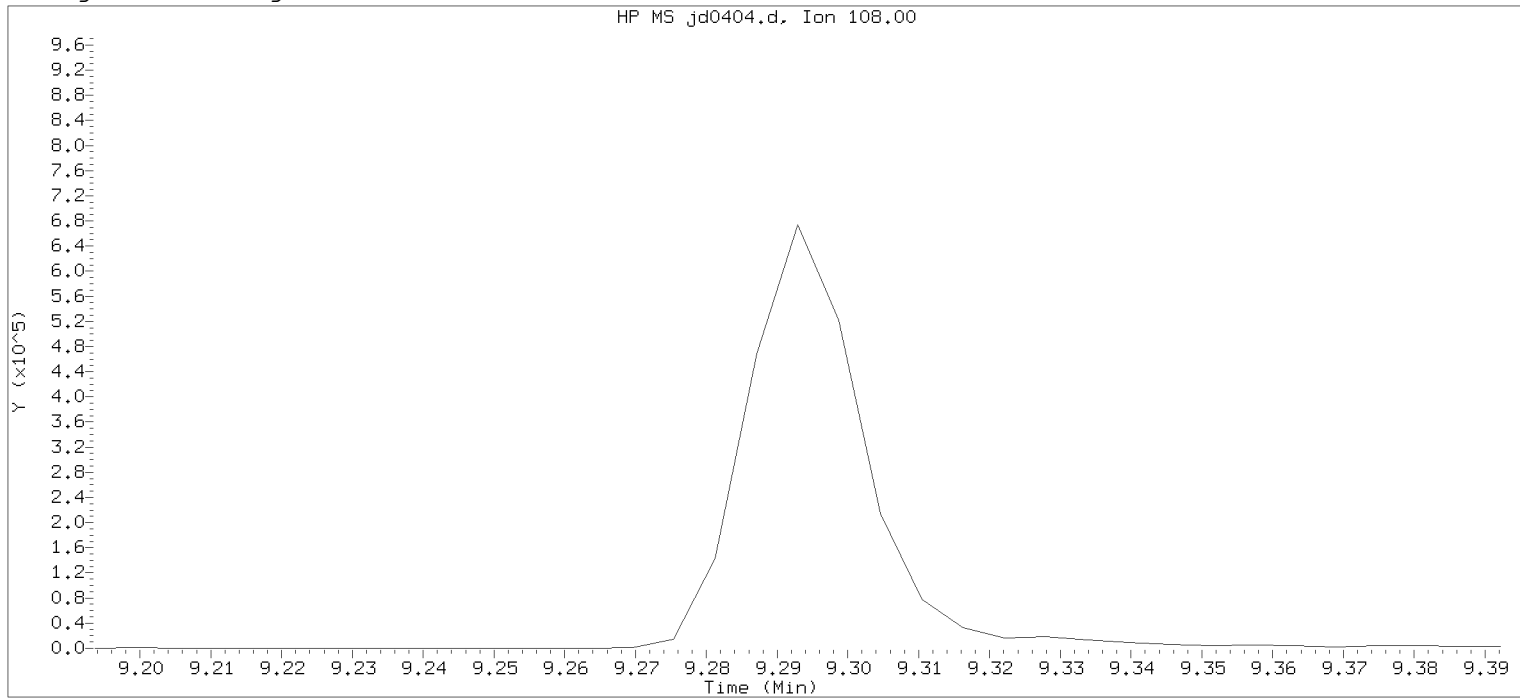
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:06.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion

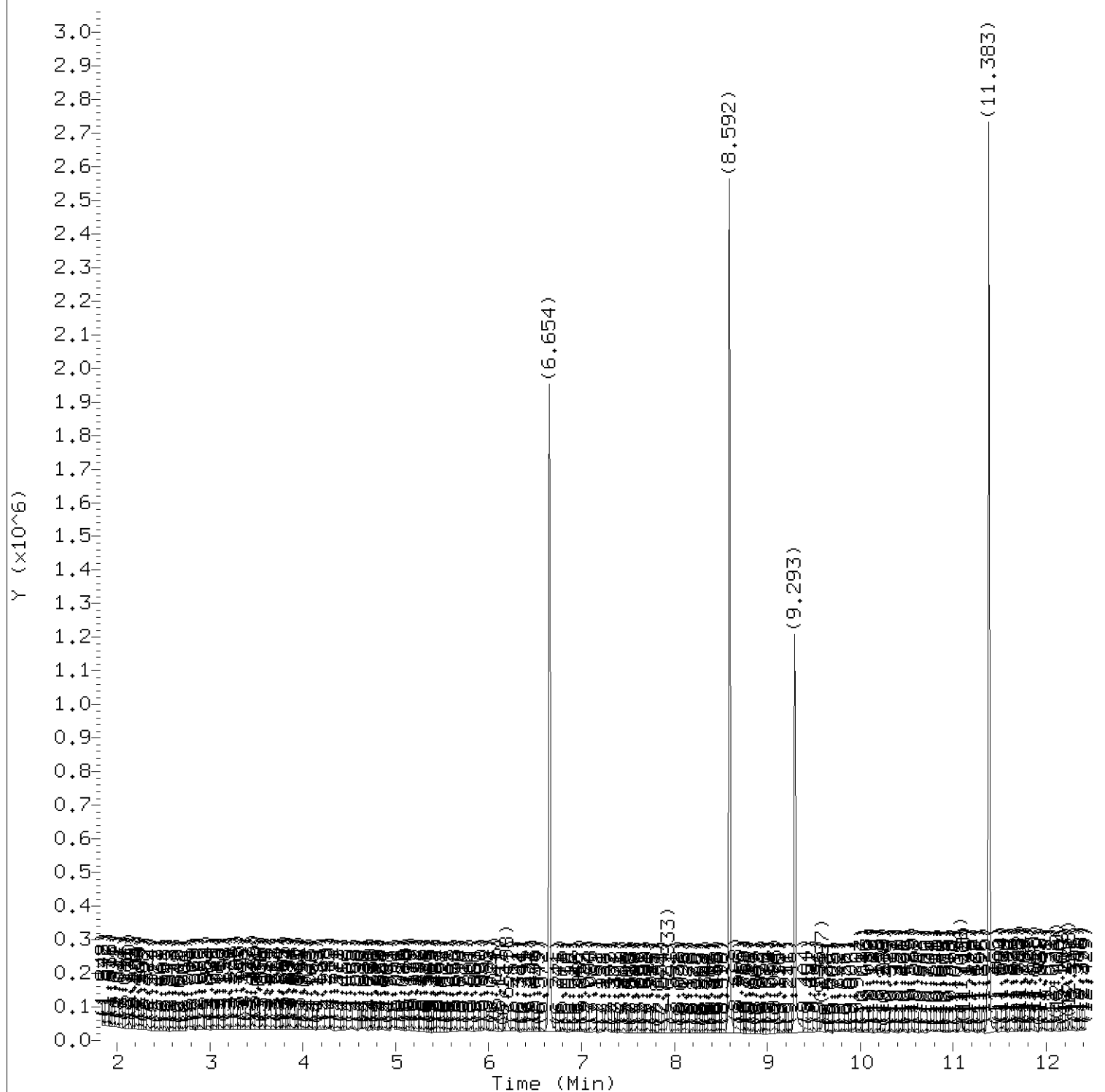


Data File: /chem/HP23264.i/20apr16a.b/jd0404.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 00:39 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 01:14
Date, time and analyst ID of latest file update: 17-Apr-2020 01:14 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvPDA1070

Compound Number : 84
Compound Name : 1,4-Phenylenediamine
Expected RT (minutes) : 9.293
Quant Ion : 108.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0405.d
Injection date and time: 17-APR-2020 01:08

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

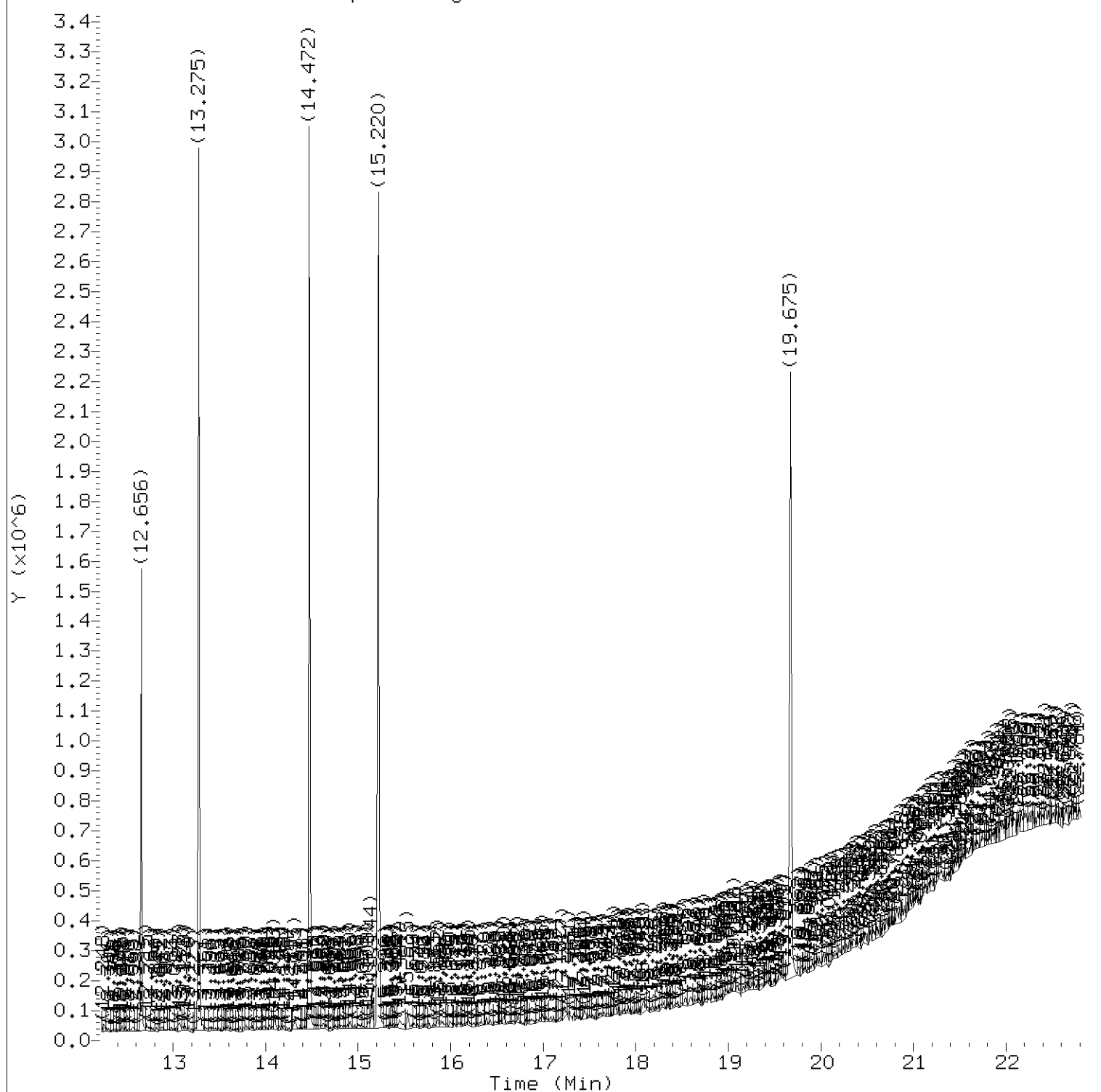
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SST7.5

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0405.d
Injection date and time: 17-APR-2020 01:08

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SST7.5

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0405.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 01:08

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD7.5

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	334599	5.000
68) *Naphthalene-d8	(2)	8.592	136	1240742	5.000
84) 1,4-Phenylenediamine	(2)	9.293	108	437729M	7.704
118) *Acenaphthene-d10	(3)	11.383	164	619560	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.656	213	125473	7.625
158) *Phenanthrene-d10	(4)	13.281	188	1085772	5.000
175) Methapyrilene	(4)	14.472	97	674141	7.919
180) *Pyrene-d10	(5)	15.220	212	1103648	5.000
218) *Perylene-d12	(6)	19.675	264	1013044	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

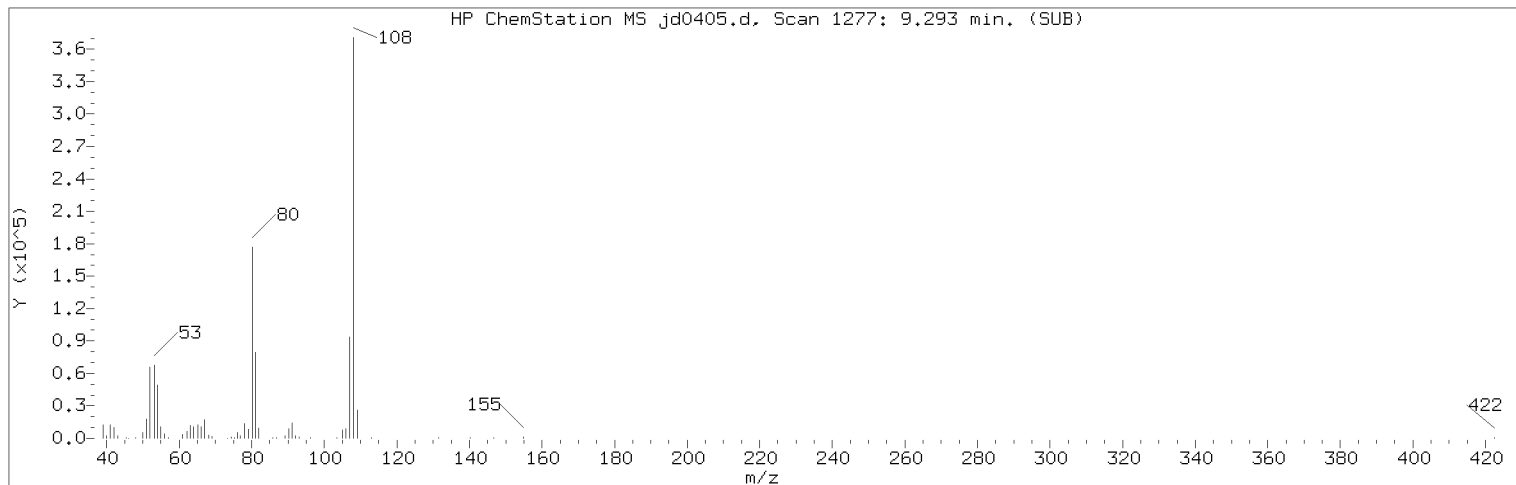
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316

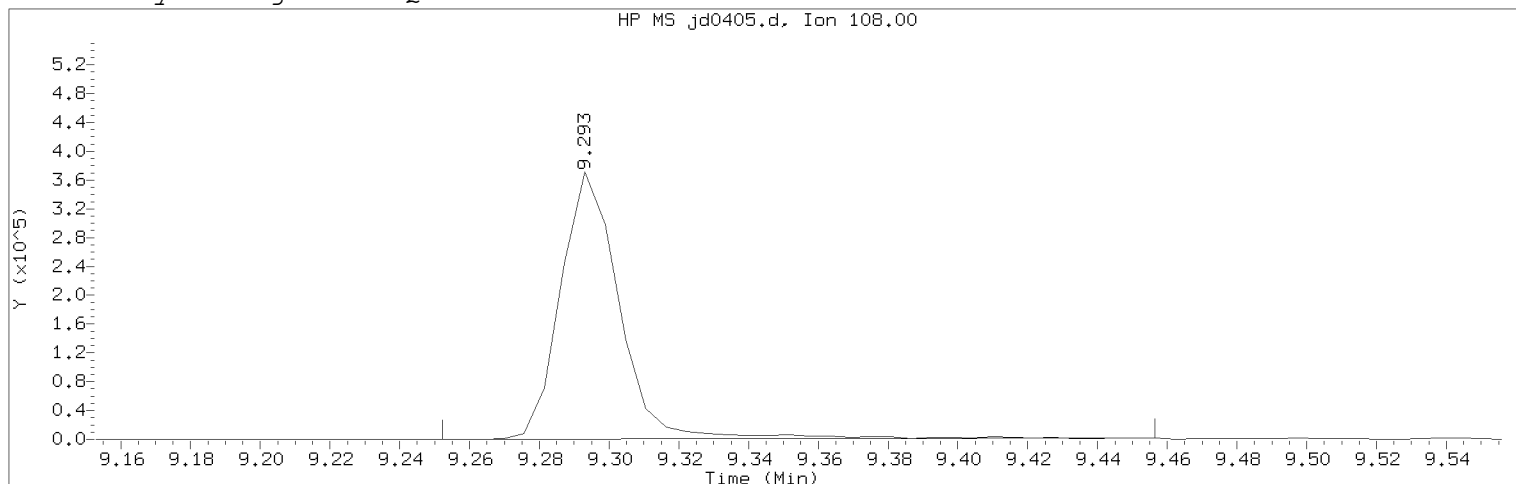
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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0405.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 01:08 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 08:34
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD7.5 Lab Sample ID: rvPDA1070

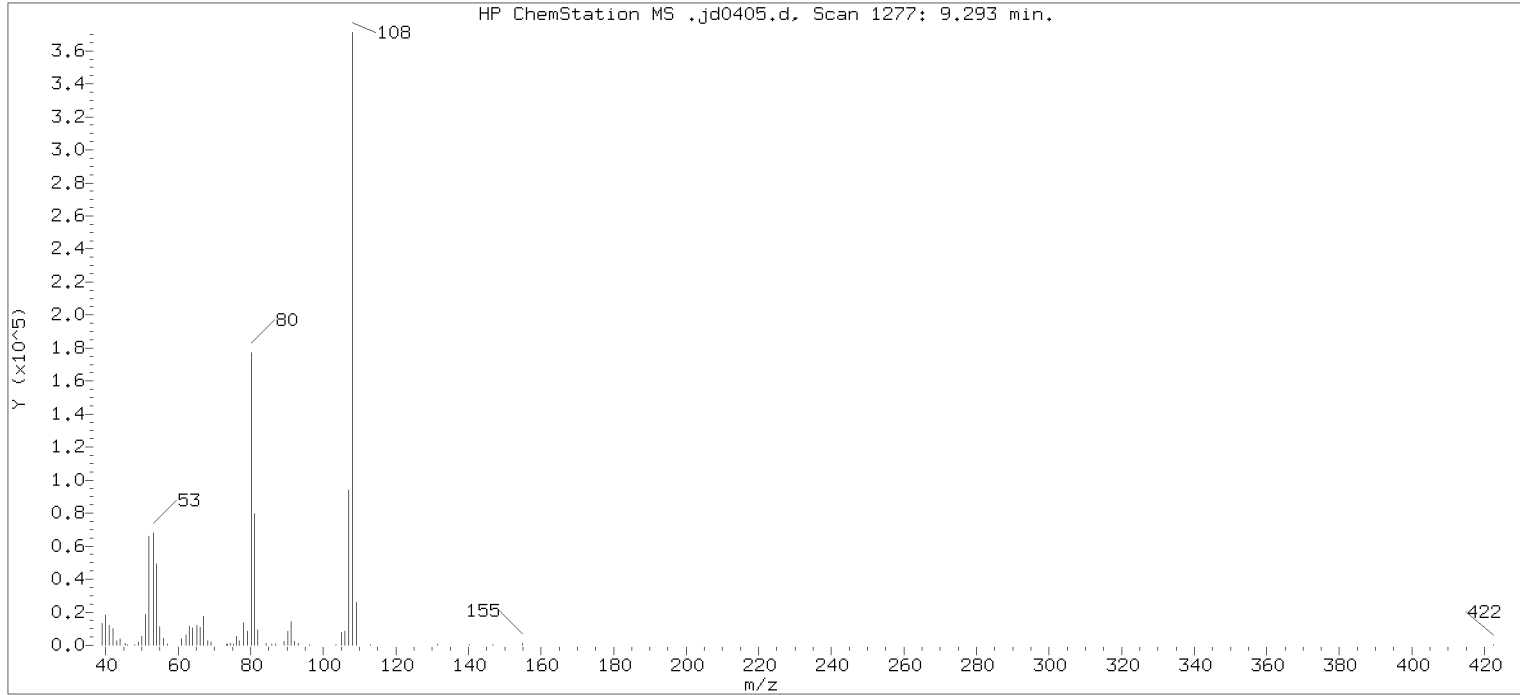
Compound Number : 84
Compound Name : 1,4-Phenylenediamine
Scan Number : 1277
Retention Time (minutes) : 9.293
Quant Ion : 108.00
Area (flag) : 437729M
On-Column Amount (ng/ul) : 7.7042
Integration start scan : 1269 Integration stop scan: 1304
Y at integration start : 0 Y at integration end: 1448

Reason for manual integration: missed peak

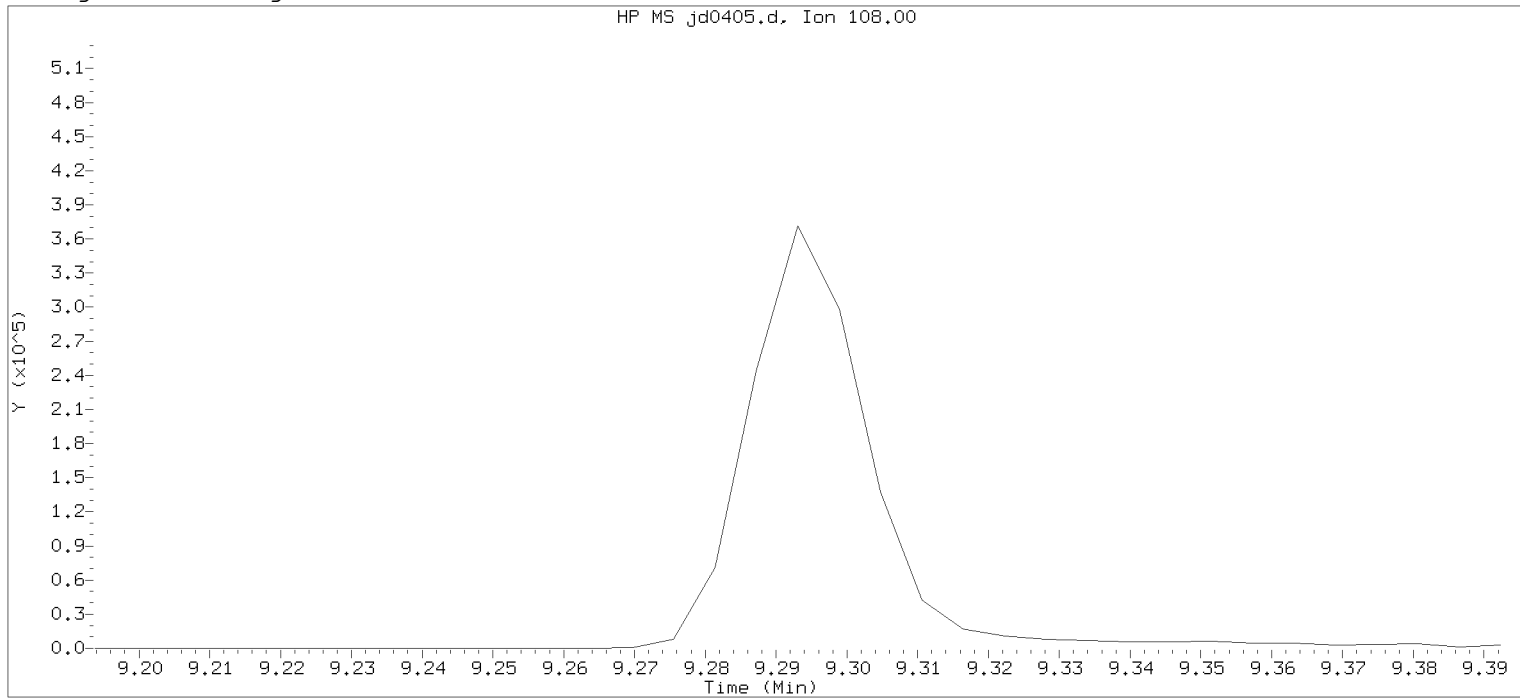
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion

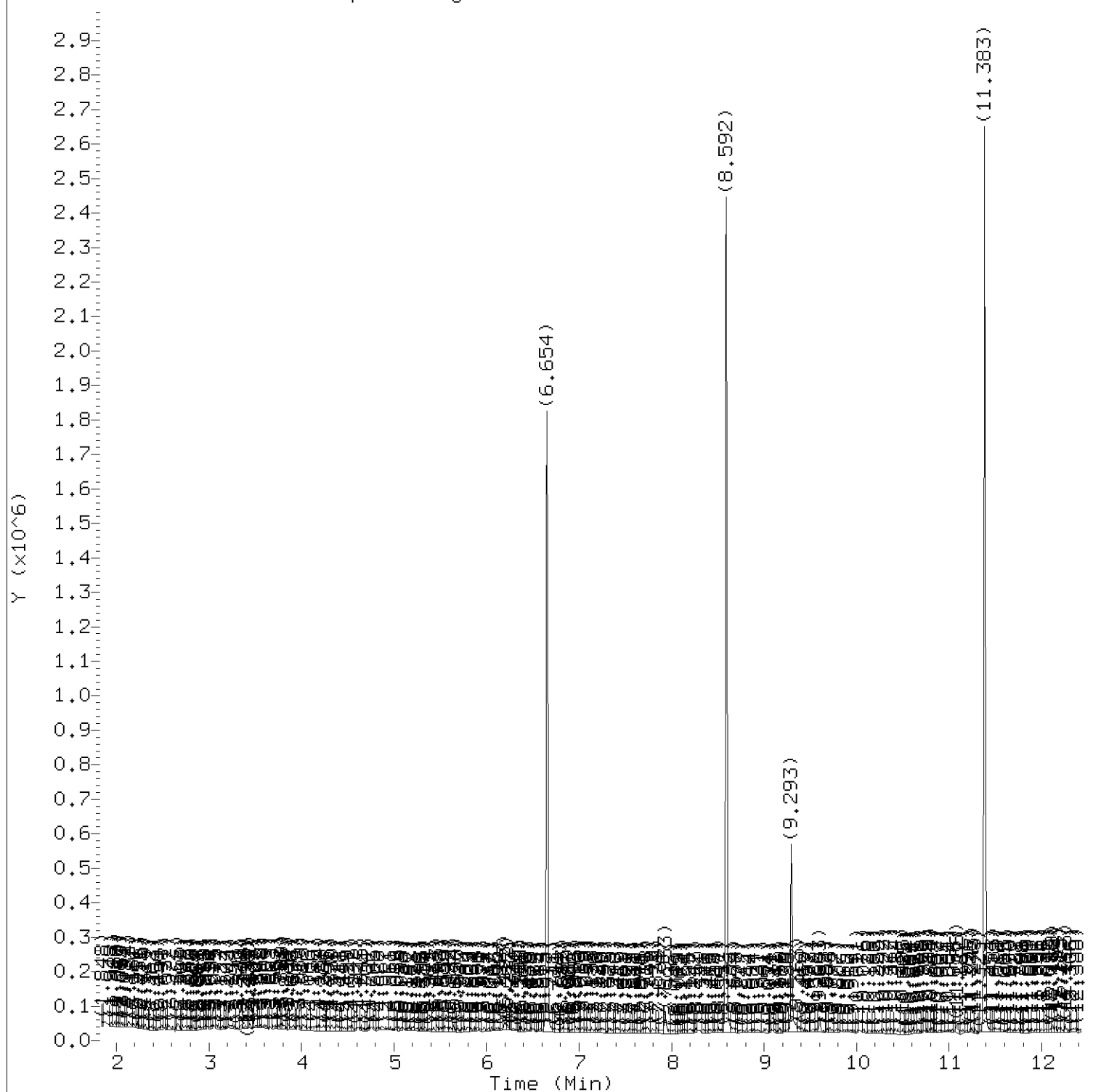


Data File: /chem/HP23264.i/20apr16a.b/jd0405.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 01:08 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 01:42
Date, time and analyst ID of latest file update: 17-Apr-2020 01:42 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvPDA1070

Compound Number : 84
Compound Name : 1,4-Phenylenediamine
Expected RT (minutes) : 9.293
Quant Ion : 108.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0406.d
Injection date and time: 17-APR-2020 01:38

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

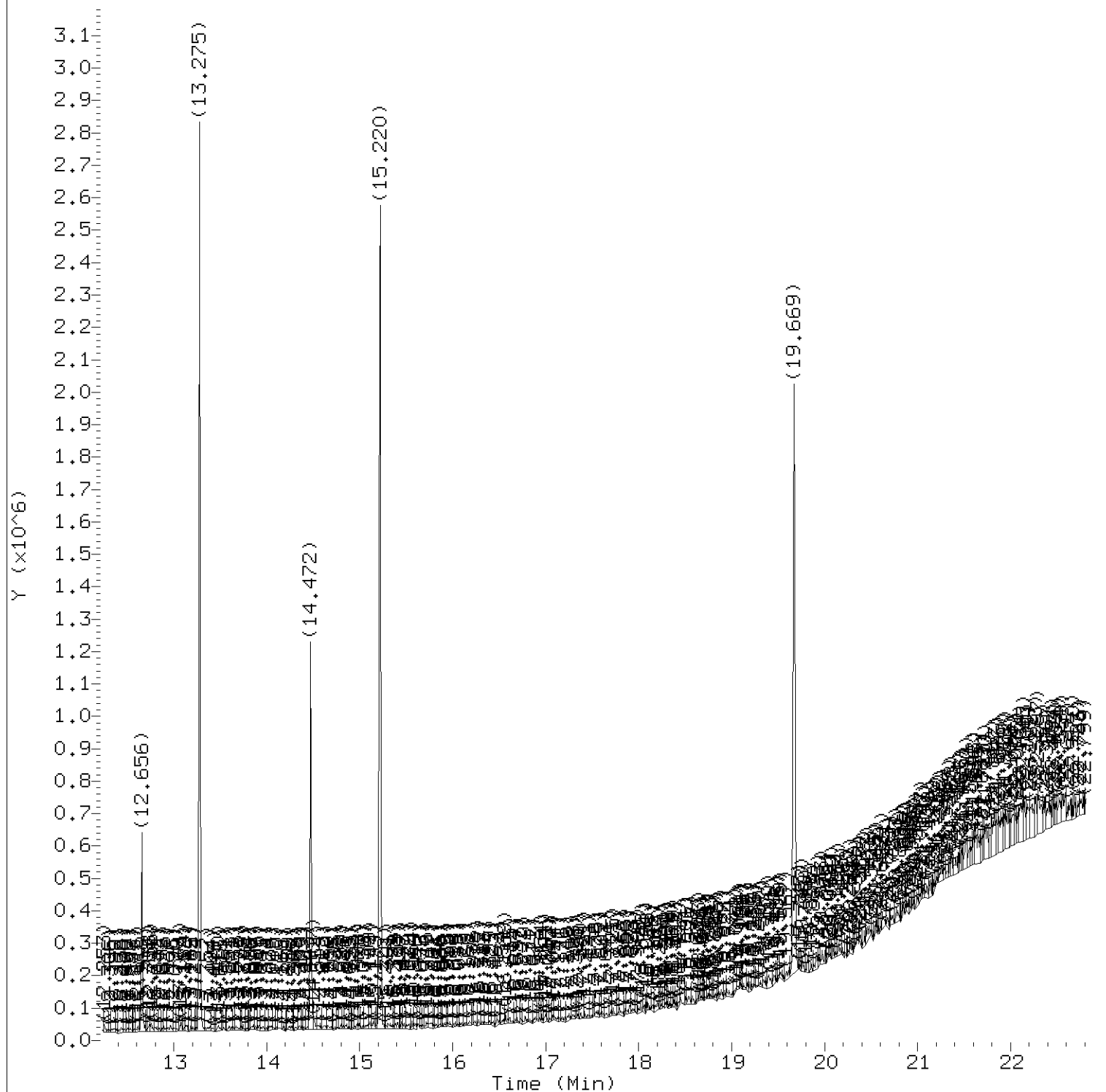
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0406.d
Injection date and time: 17-APR-2020 01:38

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0406.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 01:38

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	320428	5.000
68) *Naphthalene-d8	(2)	8.592	136	1212594	5.000
84) 1,4-Phenylenediamine	(2)	9.293	108	194783M	3.508
118) *Acenaphthene-d10	(3)	11.383	164	596389	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.656	213	50220	3.136
158) *Phenanthrene-d10	(4)	13.275	188	1056800	5.000
175) Methapyrilene	(4)	14.472	97	274257	3.310
180) *Pyrene-d10	(5)	15.220	212	1030003	5.000
218) *Perylene-d12	(6)	19.675	264	974110	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

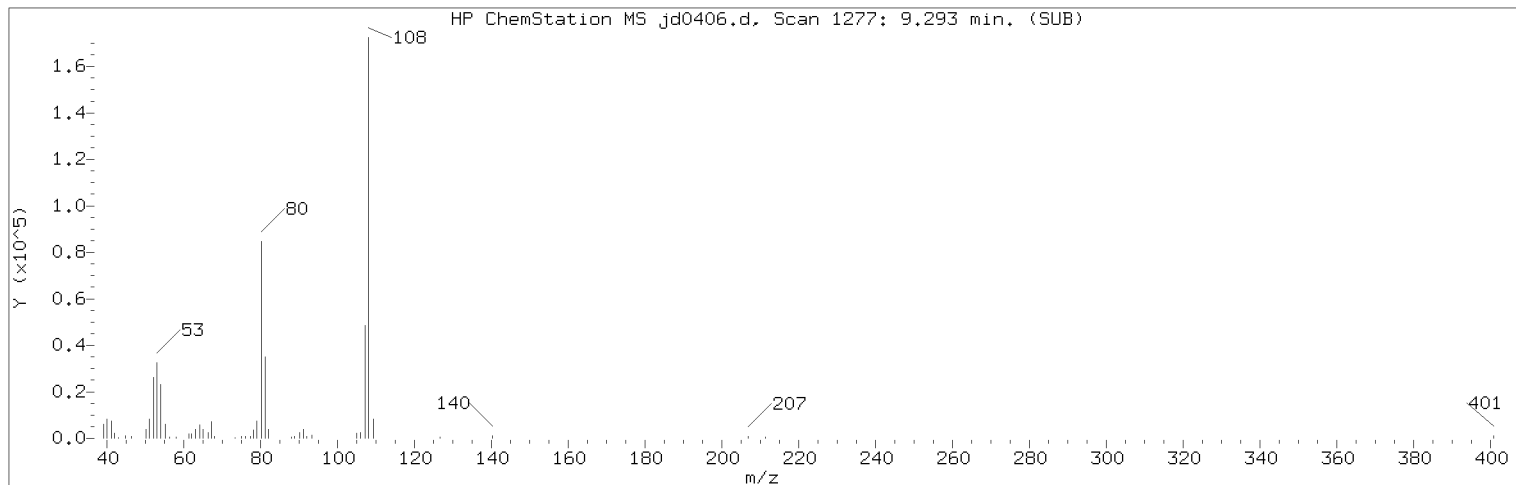
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316

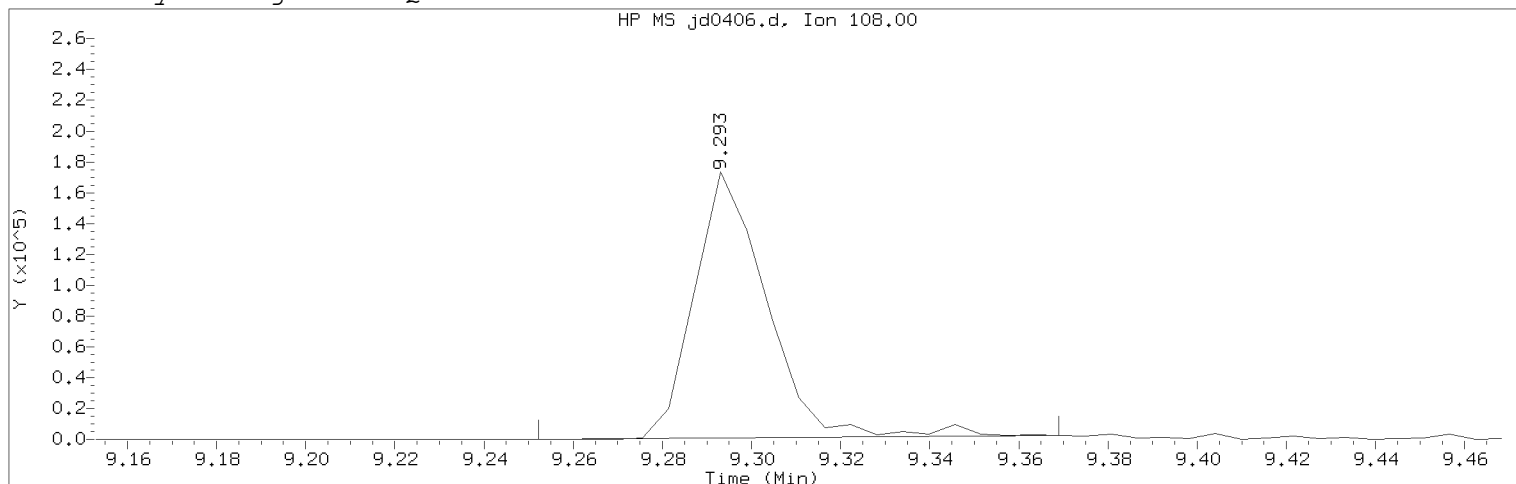
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page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0406.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 01:38 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 08:34
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD3.75 Lab Sample ID: rvPDA1070

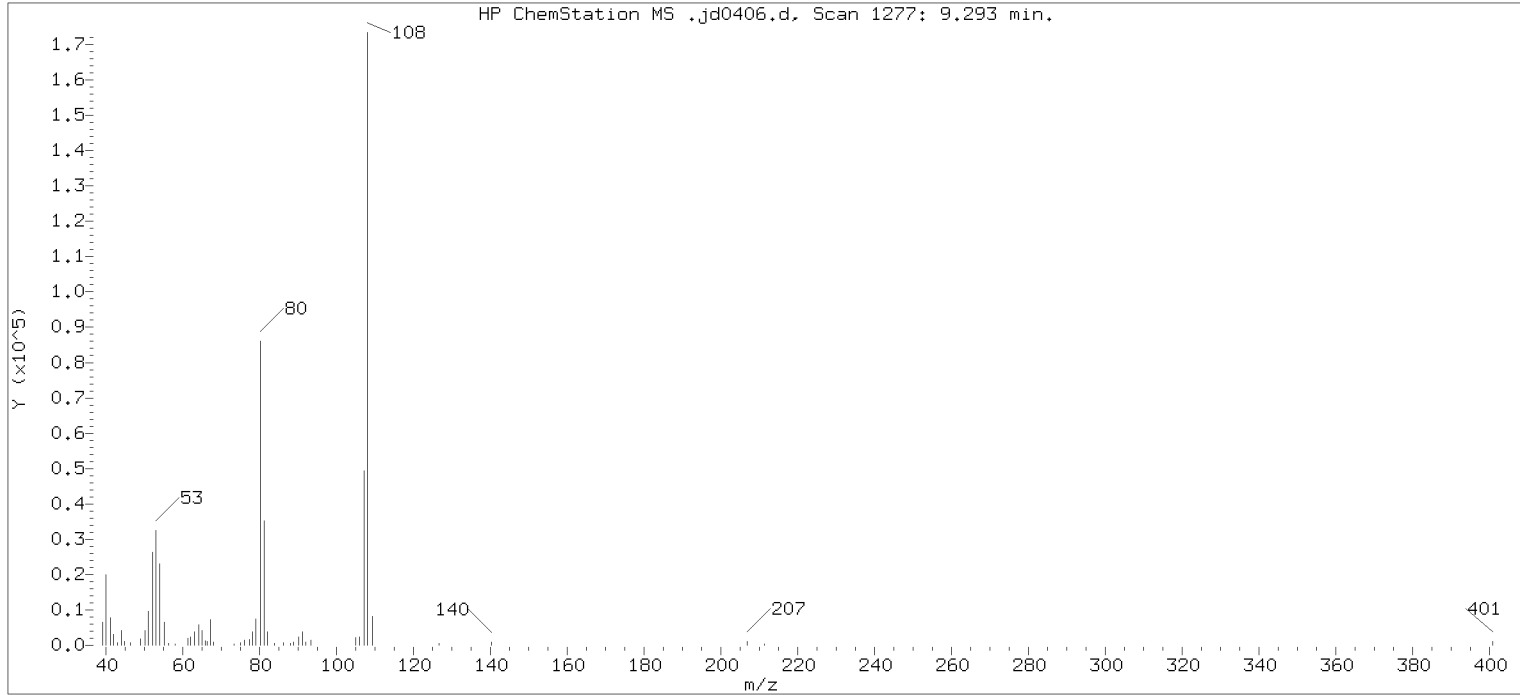
Compound Number	: 84	
Compound Name	: 1,4-Phenylenediamine	
Scan Number	: 1277	
Retention Time (minutes)	: 9.293	
Quant Ion	: 108.00	
Area (flag)	: 194783M	
On-Column Amount (ng/ul)	: 3.5078	
Integration start scan	: 1269	Integration stop scan: 1289
Y at integration start	: 0	Y at integration end: 2415

Reason for manual integration: missed peak

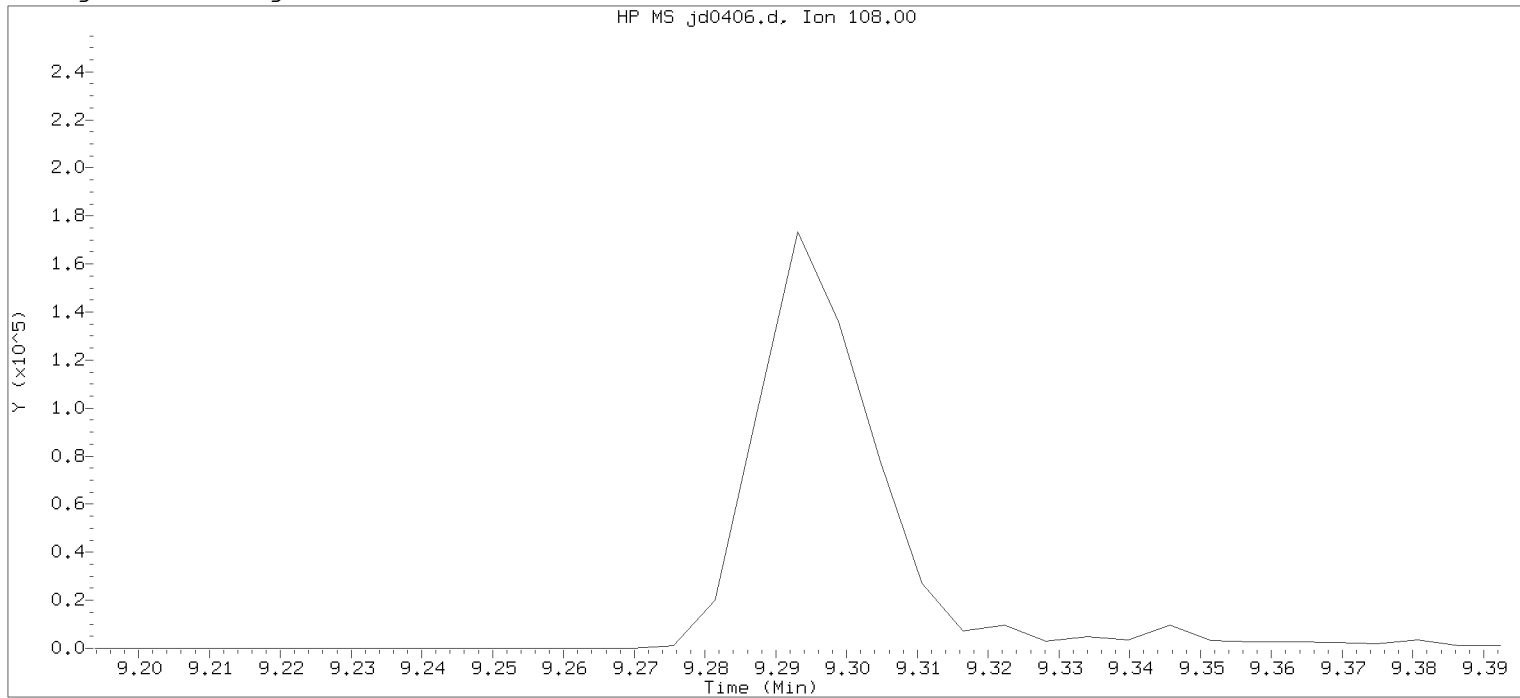
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0406.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 01:38

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

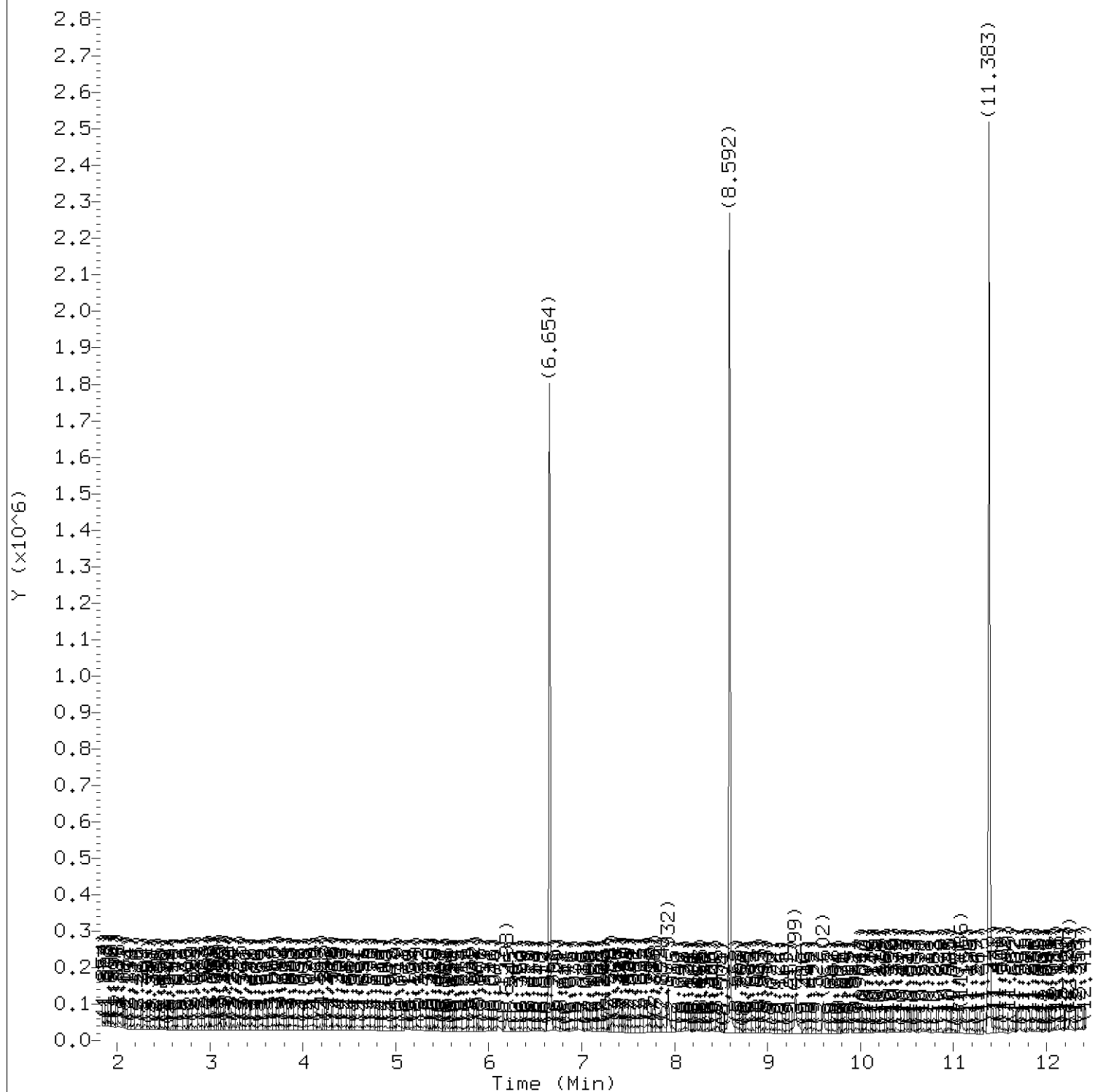
Calibration date and time: 17-APR-2020 02:11

Date, time and analyst ID of latest file update: 17-Apr-2020 02:11 Automation

Sample Name: SSTD3.75

Lab Sample ID: rvPDA1070

Compound Number : 84
 Compound Name : 1,4-Phenylenediamine
 Expected RT (minutes) : 9.293
 Quant Ion : 108.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0407.d
Injection date and time: 17-APR-2020 02:07

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

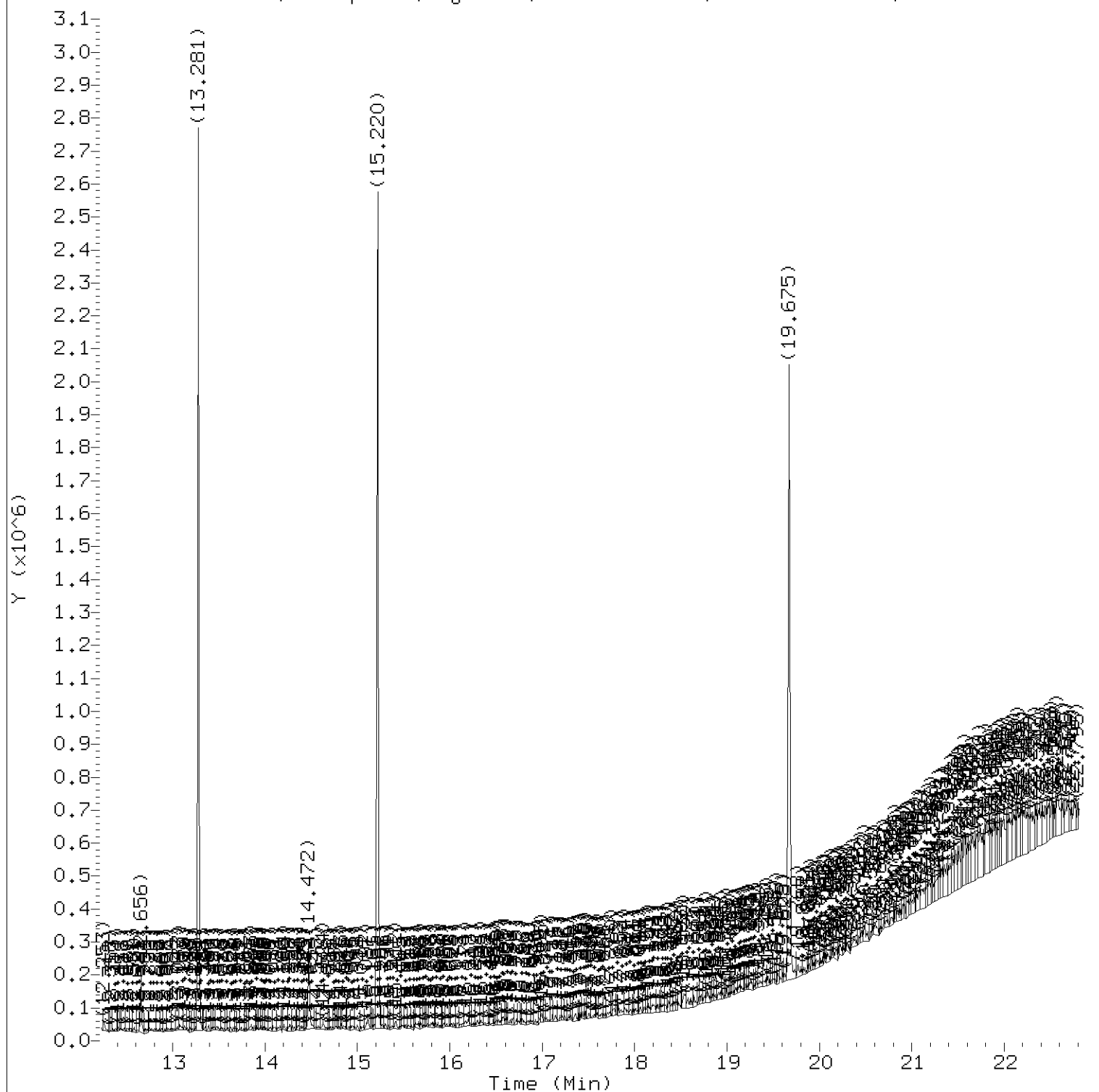
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0407.d
Injection date and time: 17-APR-2020 02:07

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 08:34

Sublist used: pda

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0407.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 02:07

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 08:34

Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	306991	5.000
68) *Naphthalene-d8	(2)	8.592	136	1153673	5.000
84) 1,4-Phenylenediamine	(2)	9.299	108	51862M	0.982
118) *Acenaphthene-d10	(3)	11.383	164	558262	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.656	213	16496	1.063
158) *Phenanthrene-d10	(4)	13.281	188	1023578	5.000
175) Methapyrilene	(4)	14.472	97	68801M	0.857
180) *Pyrene-d10	(5)	15.220	212	1015342	5.000
218) *Perylene-d12	(6)	19.675	264	963003	5.000

M = Compound was manually integrated.

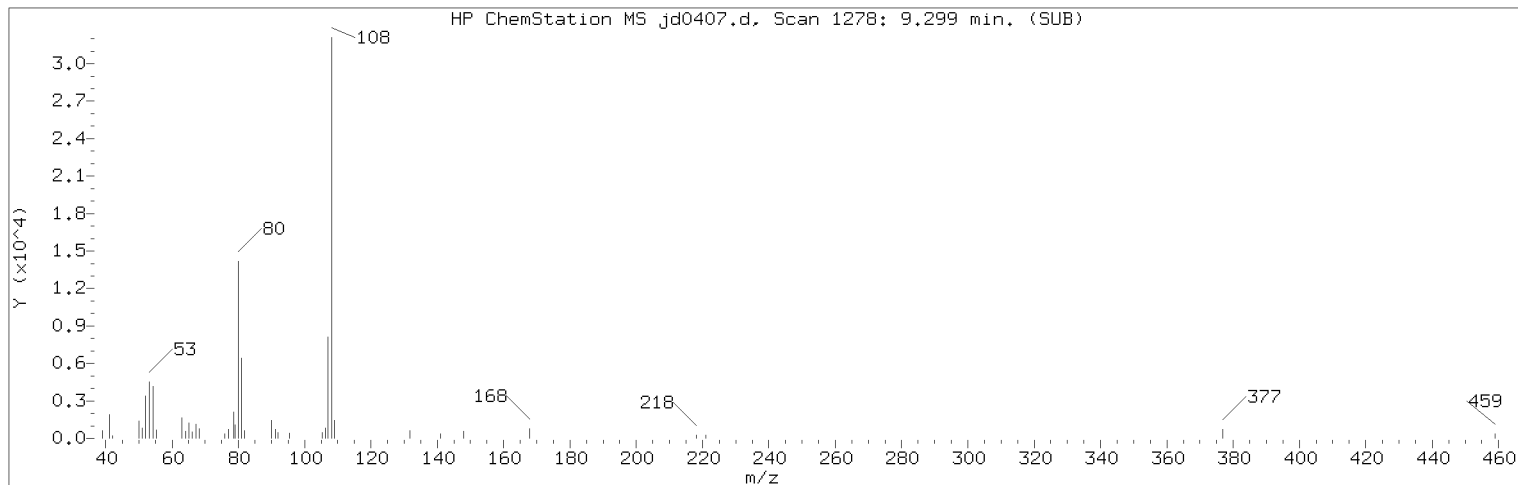
* = Compound is an internal standard.

Digitally signed by Kira N. Beck

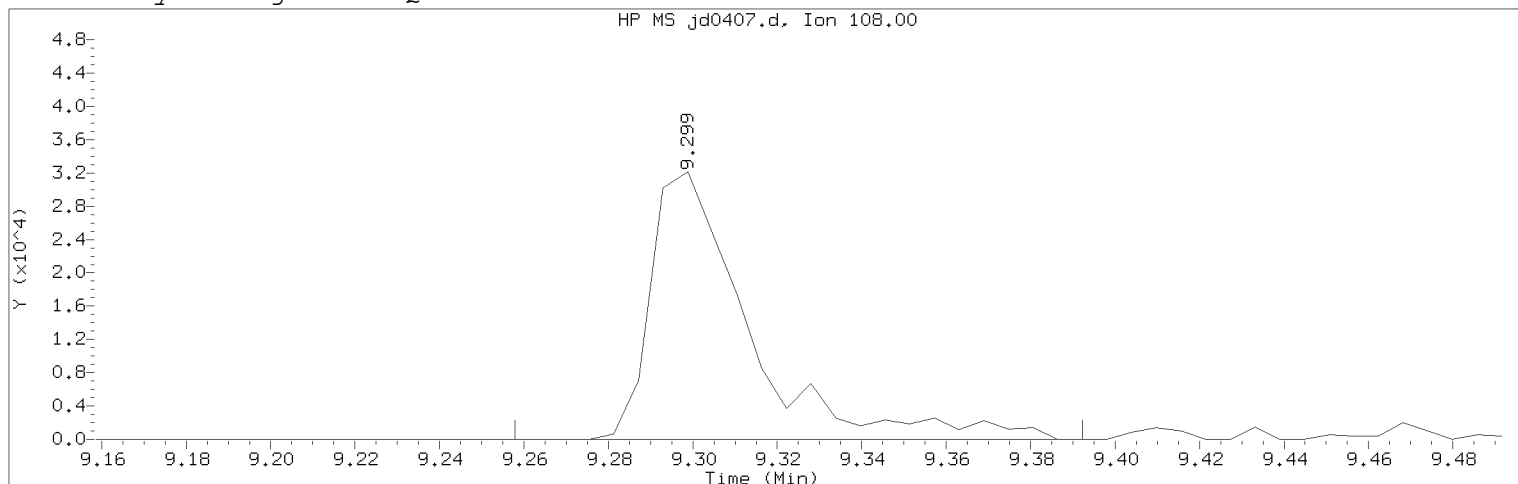
on 04/17/2020 at 09:07.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0407.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 02:07 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 08:34
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD1.25 Lab Sample ID: rvPDA1070

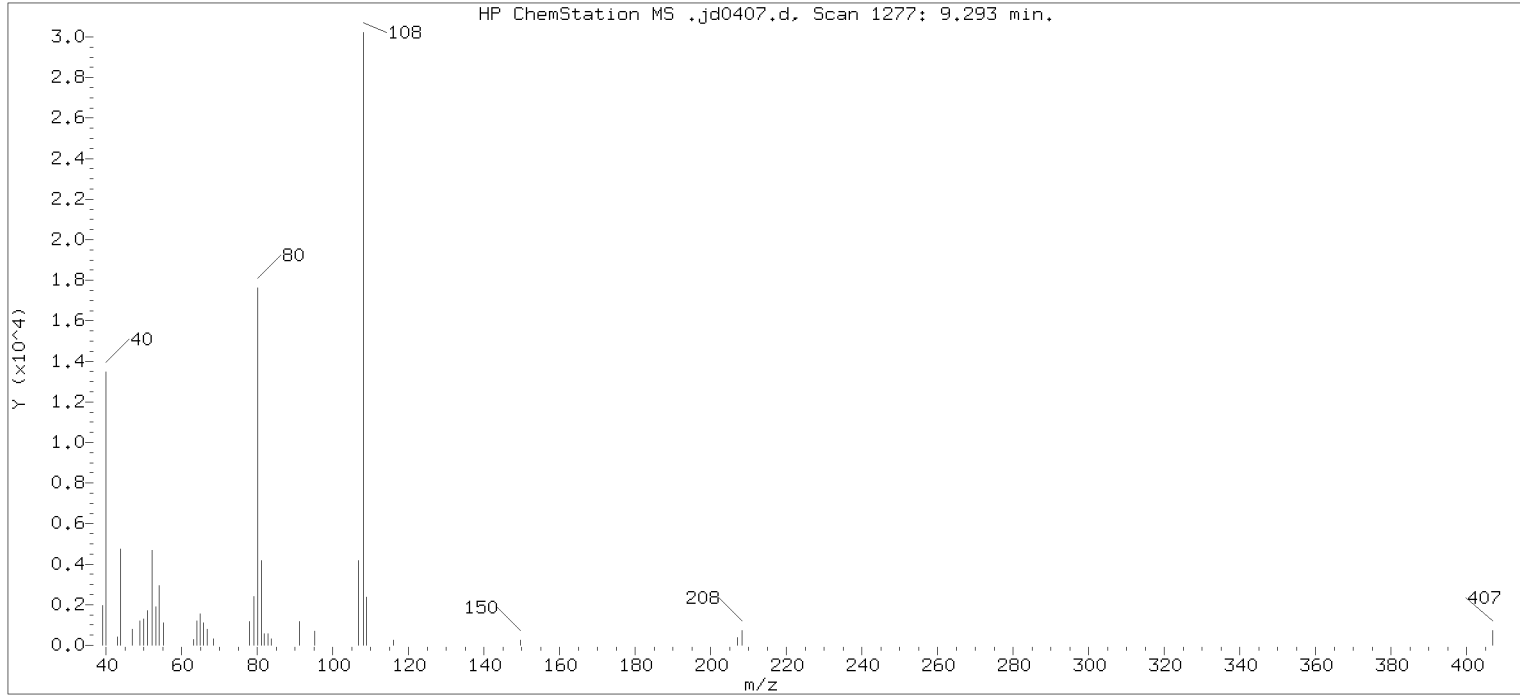
Compound Number	: 84	
Compound Name	: 1,4-Phenylenediamine	
Scan Number	: 1278	
Retention Time (minutes)	: 9.299	
Quant Ion	: 108.00	
Area (flag)	: 51862M	
On-Column Amount (ng/ul)	: 0.9817	
Integration start scan	: 1270	Integration stop scan: 1293
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

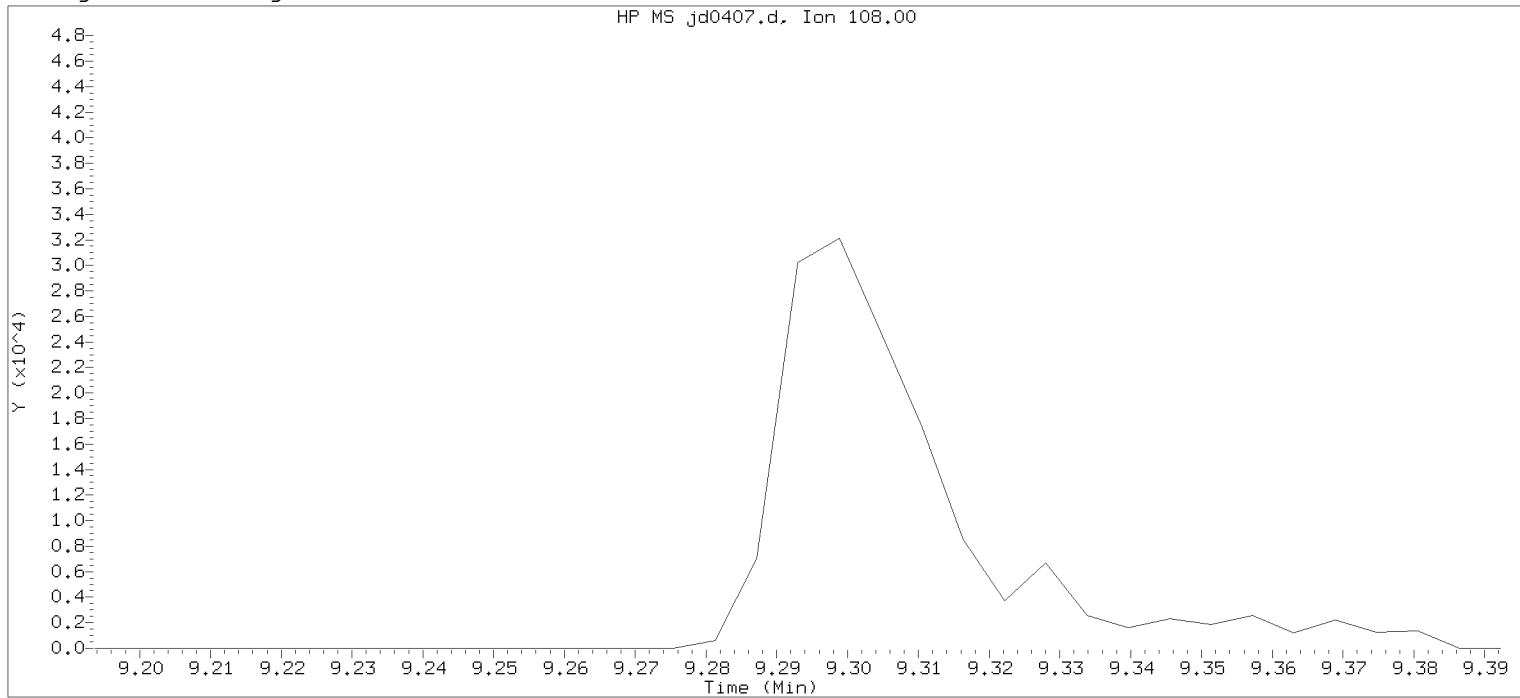
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0407.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 02:07

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 02:41

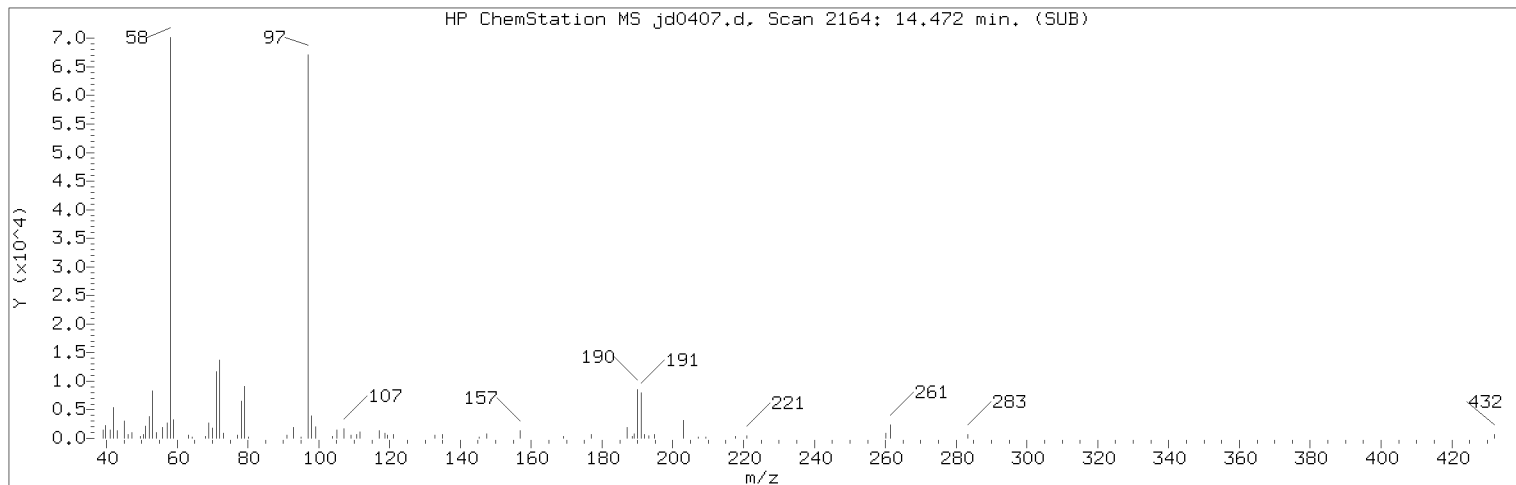
Date, time and analyst ID of latest file update: 17-Apr-2020 02:41 Automation

Sample Name: SSTD1.25

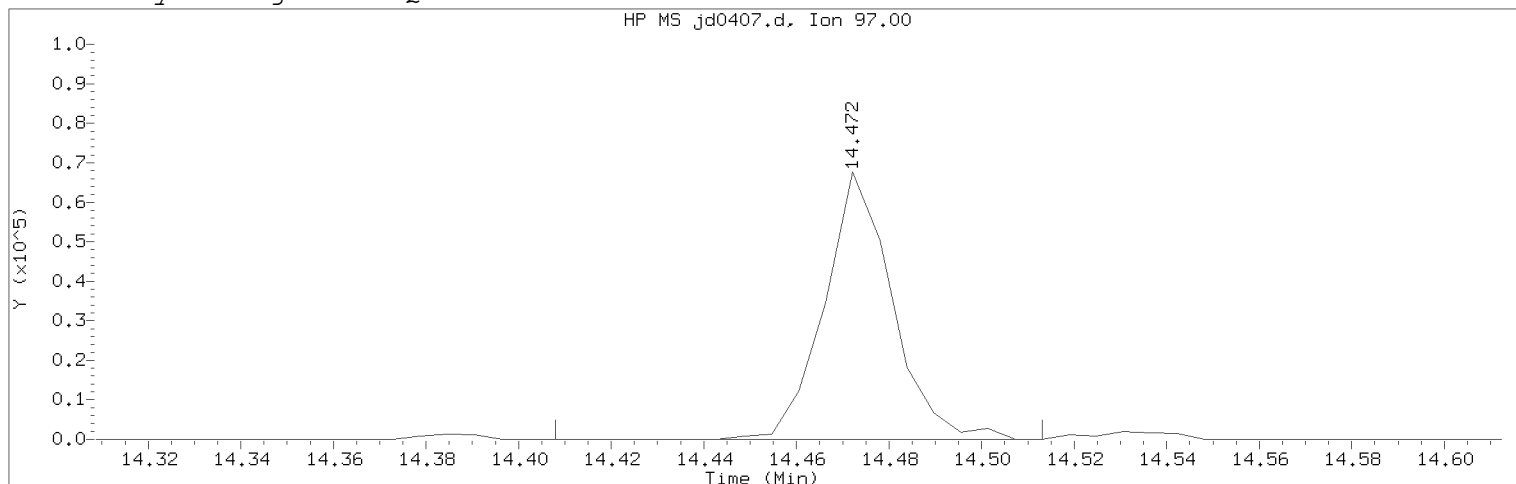
Lab Sample ID: rvPDA1070

Compound Number : 84
 Compound Name : 1,4-Phenylenediamine
 Expected RT (minutes) : 9.293
 Quant Ion : 108.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0407.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 02:07 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: pda
Calibration date and time: 17-APR-2020 08:34
Date, time and analyst ID of latest file update: 17-Apr-2020 08:34 knb25316

Sample Name: SSTD1.25 Lab Sample ID: rvPDA1070

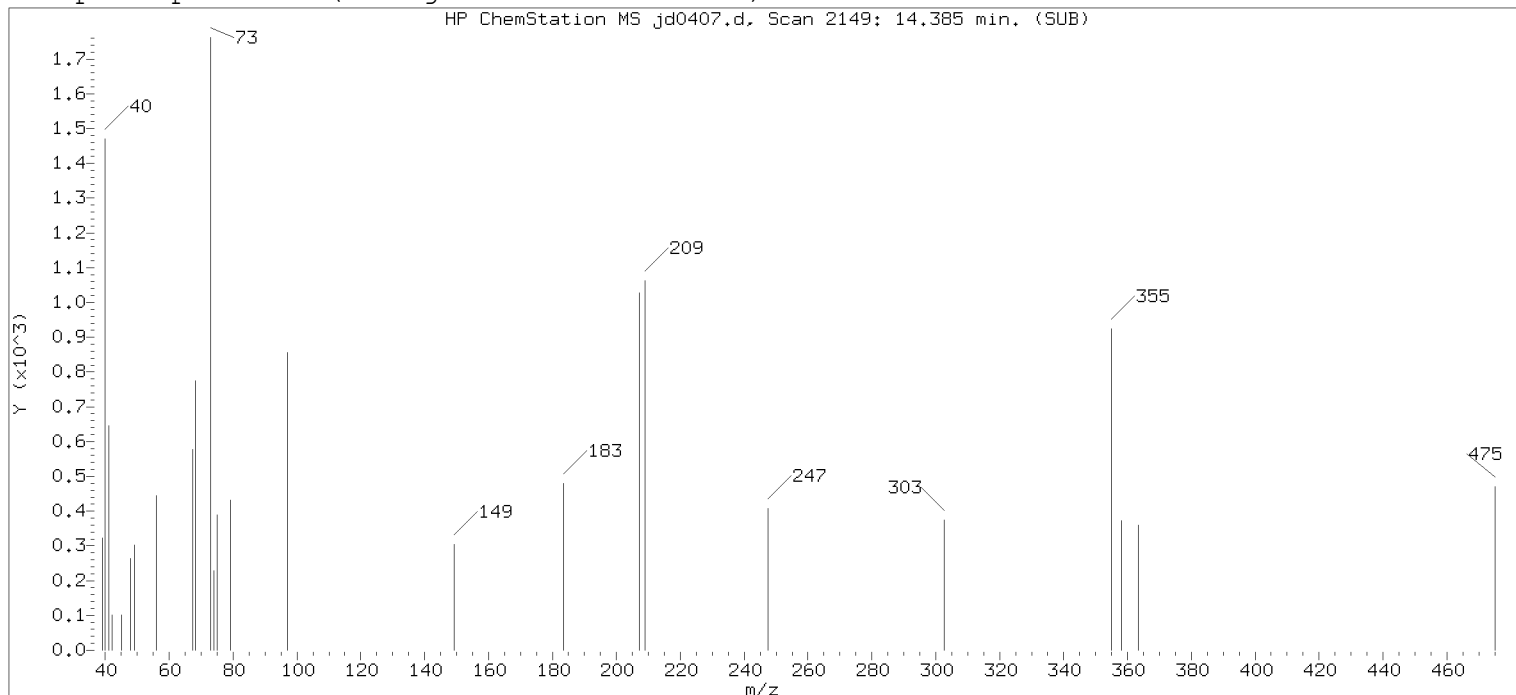
Compound Number : 175
Compound Name : Methapyrilene
Scan Number : 2164
Retention Time (minutes) : 14.472
Quant Ion : 97.00
Area (flag) : 68801M
On-Column Amount (ng/ul) : 0.8573
Integration start scan : 2152 Integration stop scan: 2170
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

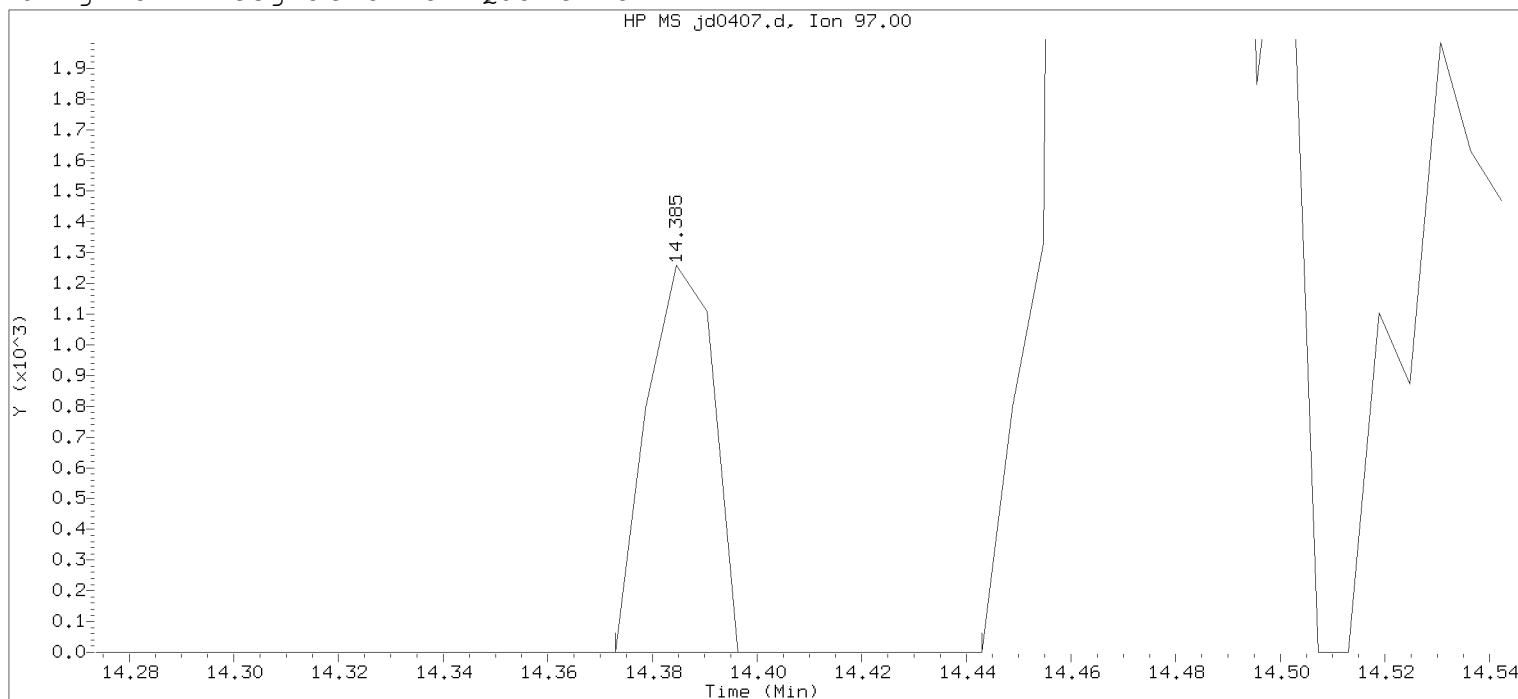
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:07.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:16.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0407.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 02:07

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: pda

Calibration date and time: 17-APR-2020 02:41

Date, time and analyst ID of latest file update: 17-Apr-2020 02:41 Automation

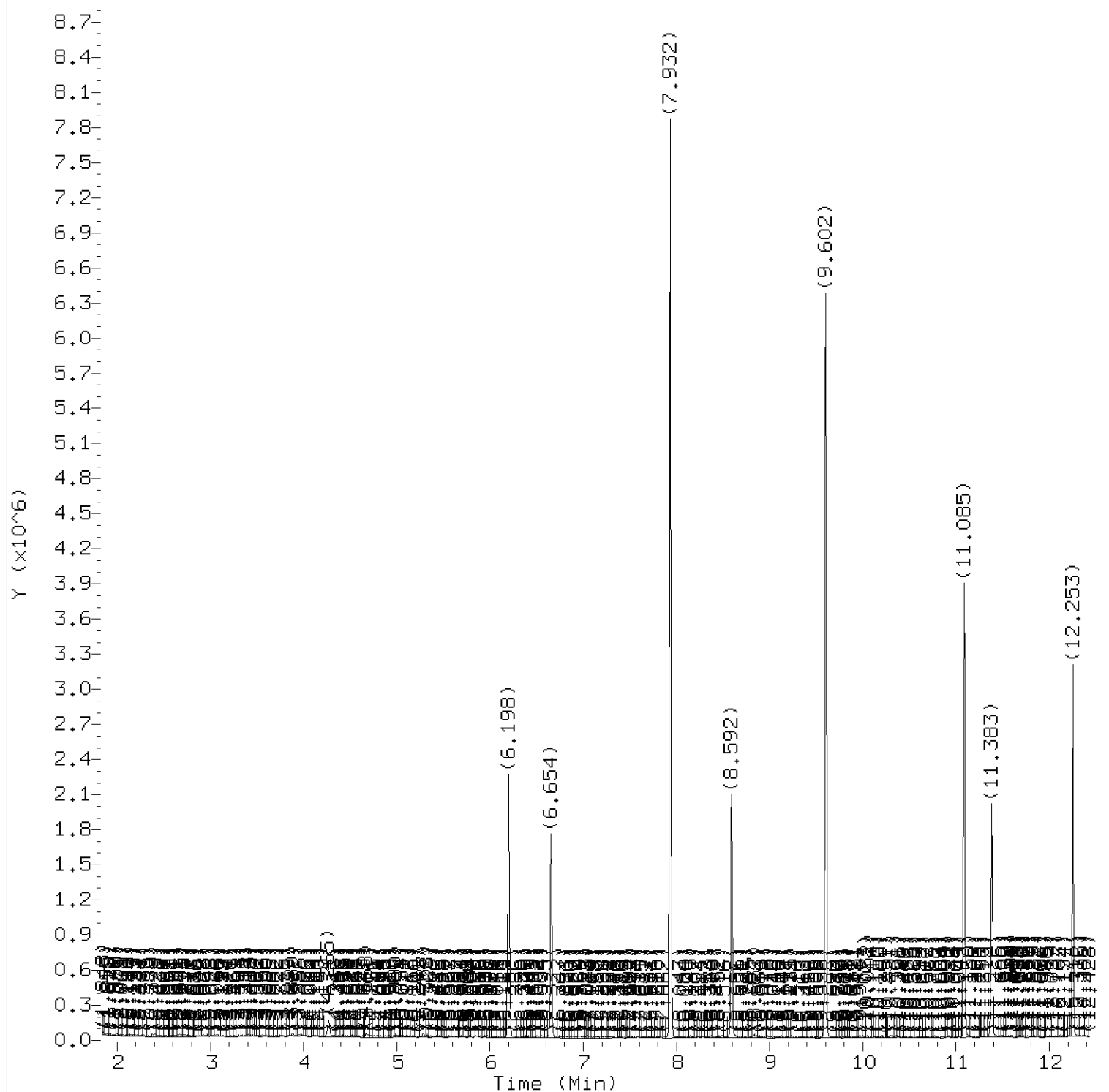
Sample Name: SSTD1.25

Lab Sample ID: rvPDA1070

Compound Number	: 175	
Compound Name	: Methapyrilene	
Scan Number	: 2149	
Retention Time (minutes)	: 14.385	
Quant Ion	: 97.00	
Area	: 1107	
On-column Amount (ng/ul)	: 0.0000	
Integration start scan	: 2146	Integration stop scan: 2158
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 04/17/2020 at 09:07.

Target 3.5 esignature use **RAF59** Page 1342 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0408.d
Injection date and time: 17-APR-2020 02:36

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

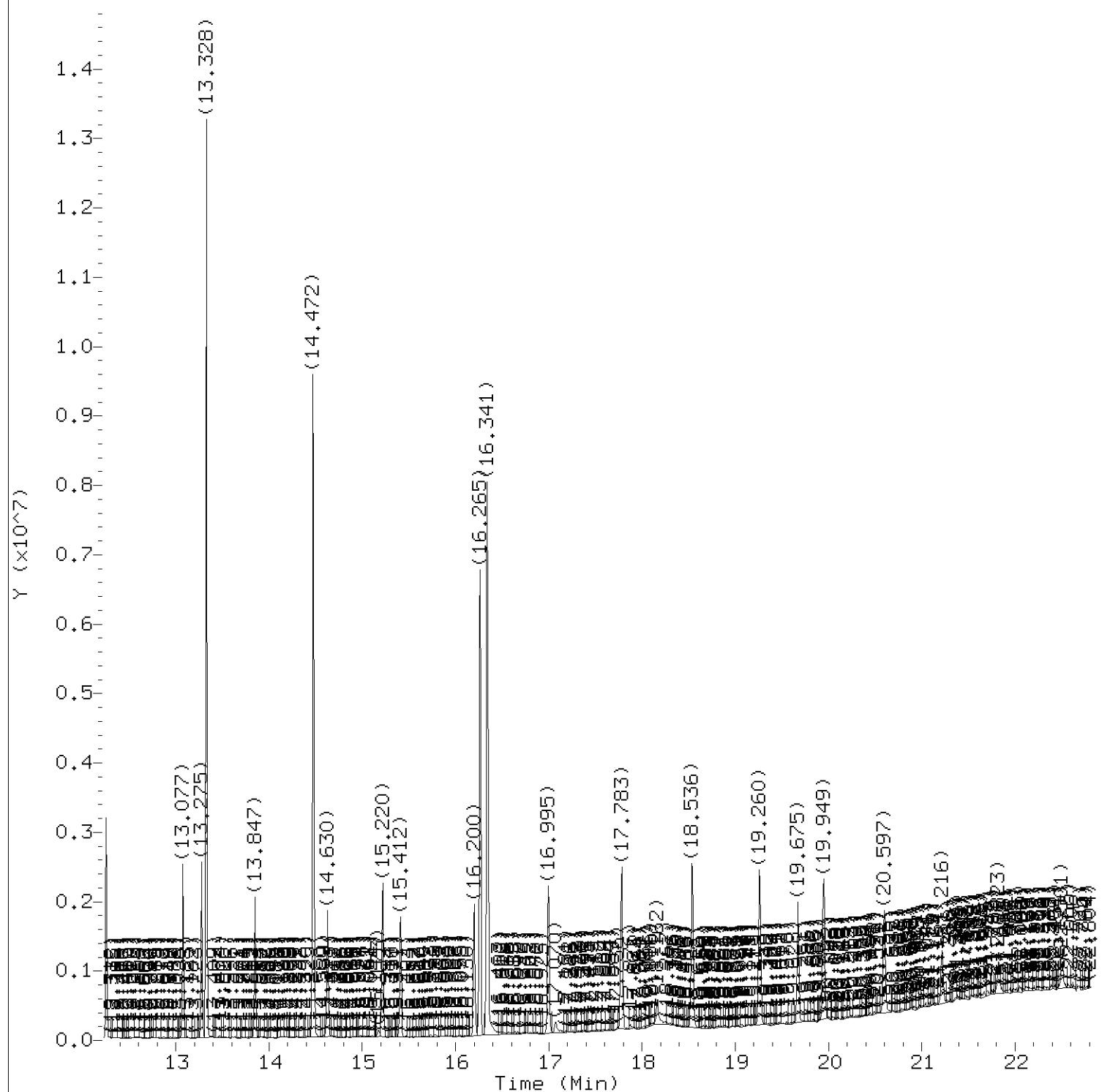
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD30

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0408.d
Injection date and time: 17-APR-2020 02:36

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD30

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0408.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 02:36

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD30

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.654	152	276865	5.000
68)*Naphthalene-d8	(2)	8.592	136	1050763	5.000
118)*Acenaphthene-d10	(3)	11.383	164	487216	5.000
158)*Phenanthrene-d10	(4)	13.275	188	906557	5.000
167) Disulfoton	(4)	13.328	88	2428805	33.687
180)*Pyrene-d10	(5)	15.220	212	913642	5.000
194) Famphur	(5)	16.265	218	2165321M	27.429
195) Kepone	(5)	16.341	272	832501M	76.399
218)*Perylene-d12	(6)	19.675	264	807252	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

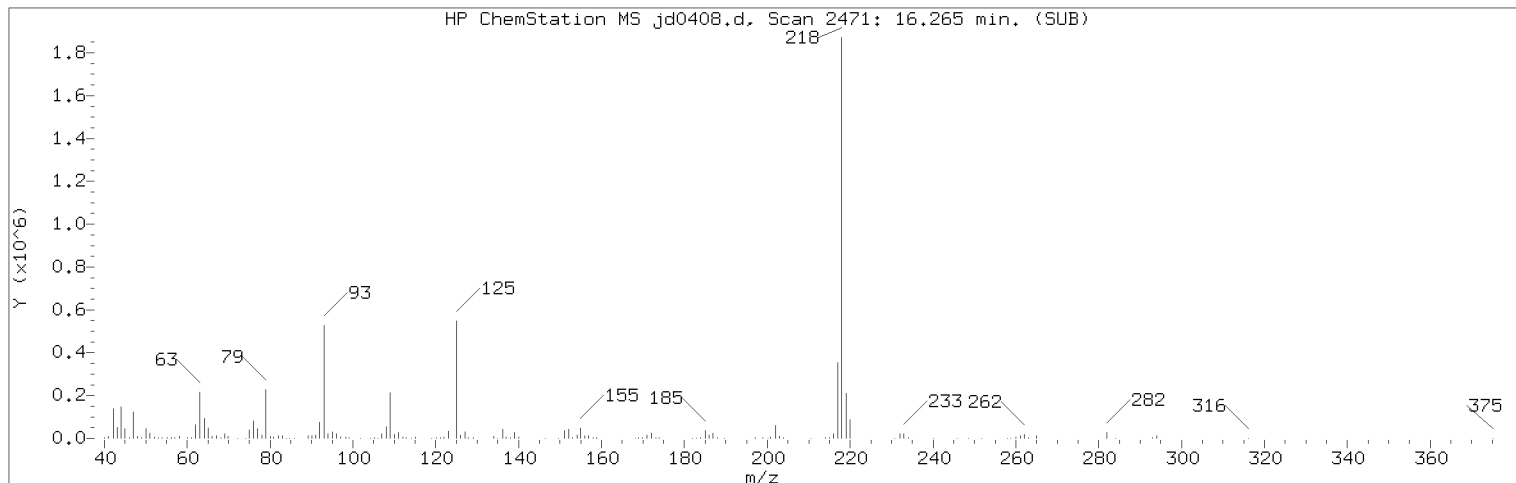
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

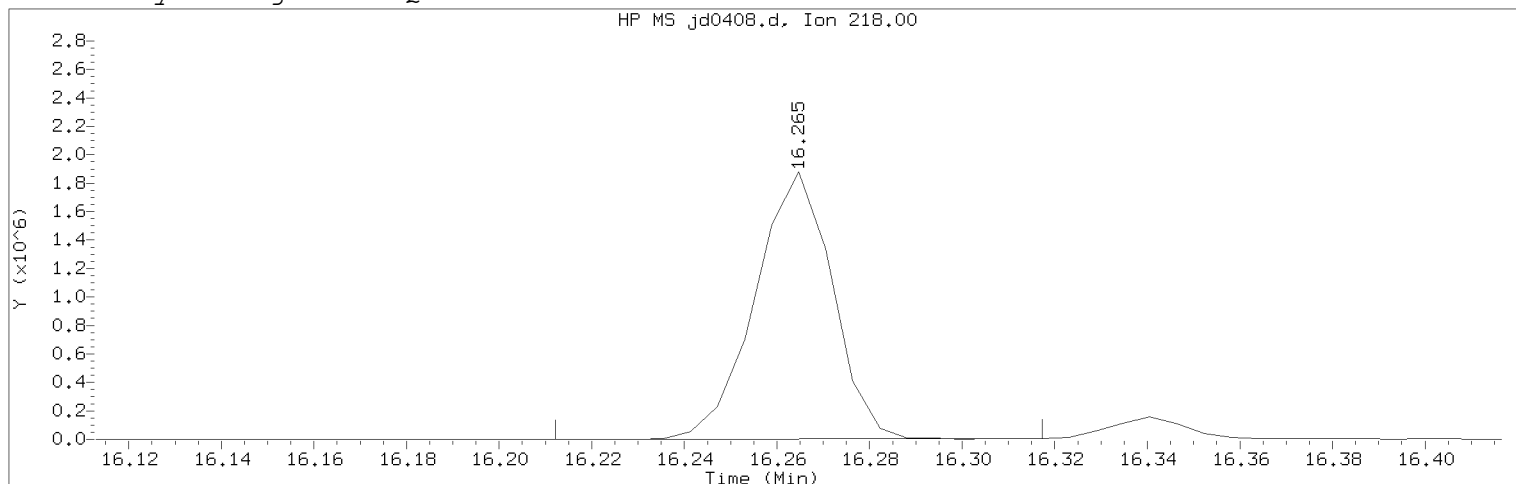
RAF59 Page 1345 of 1506

page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0408.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 02:36 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD30 Lab Sample ID: rvABC1070

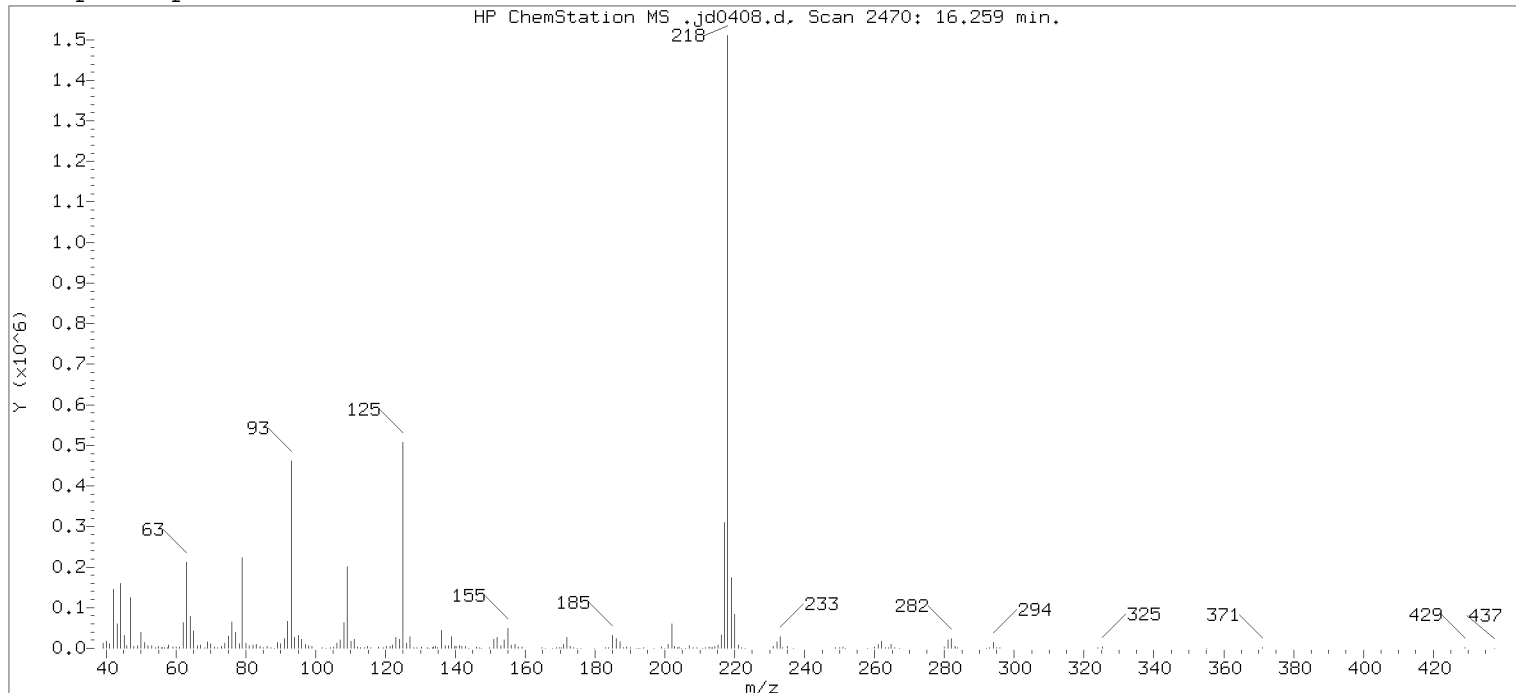
Compound Number : 194
Compound Name : Famphur
Scan Number : 2471
Retention Time (minutes) : 16.265
Quant Ion : 218.00
Area (flag) : 2165321M
On-Column Amount (ng/ul) : 27.4286
Integration start scan : 2461 Integration stop scan: 2479
Y at integration start : 340 Y at integration end: 5349

Reason for manual integration: missed peak

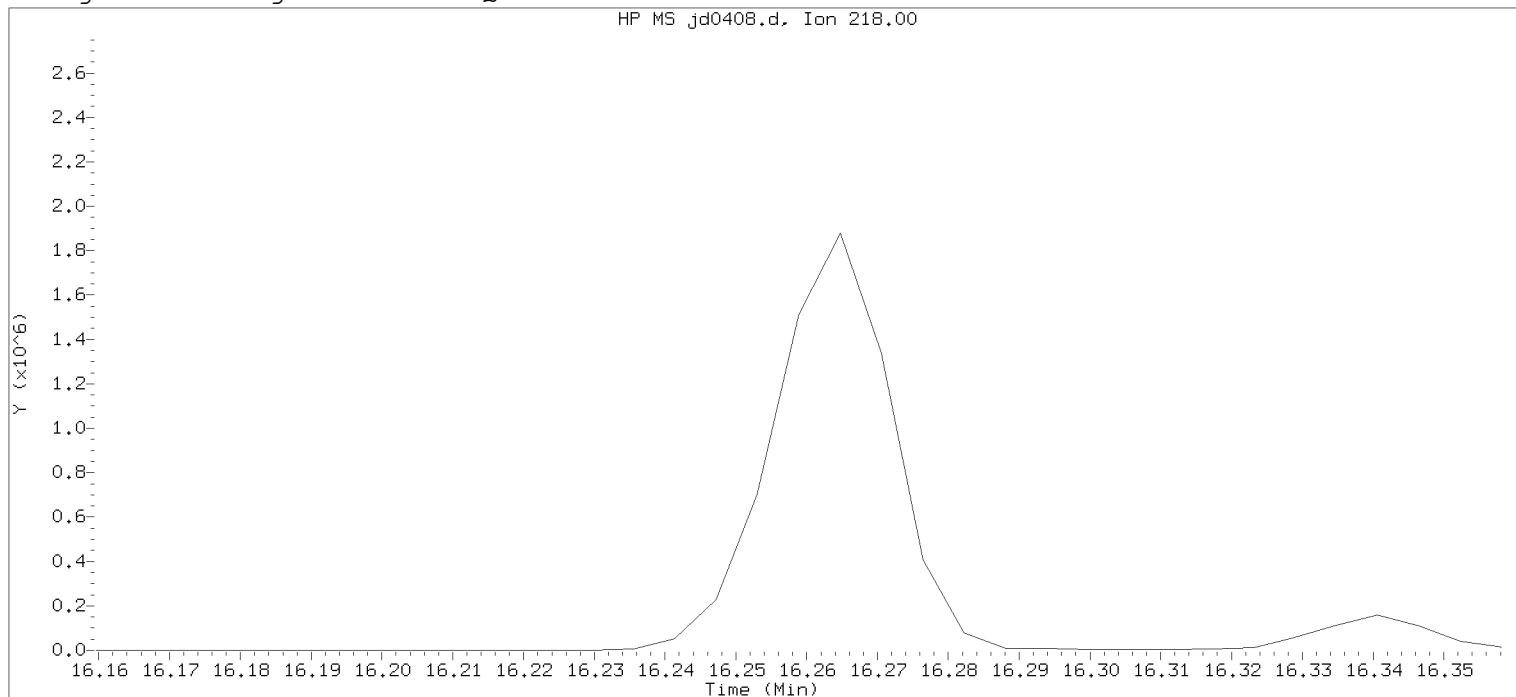
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



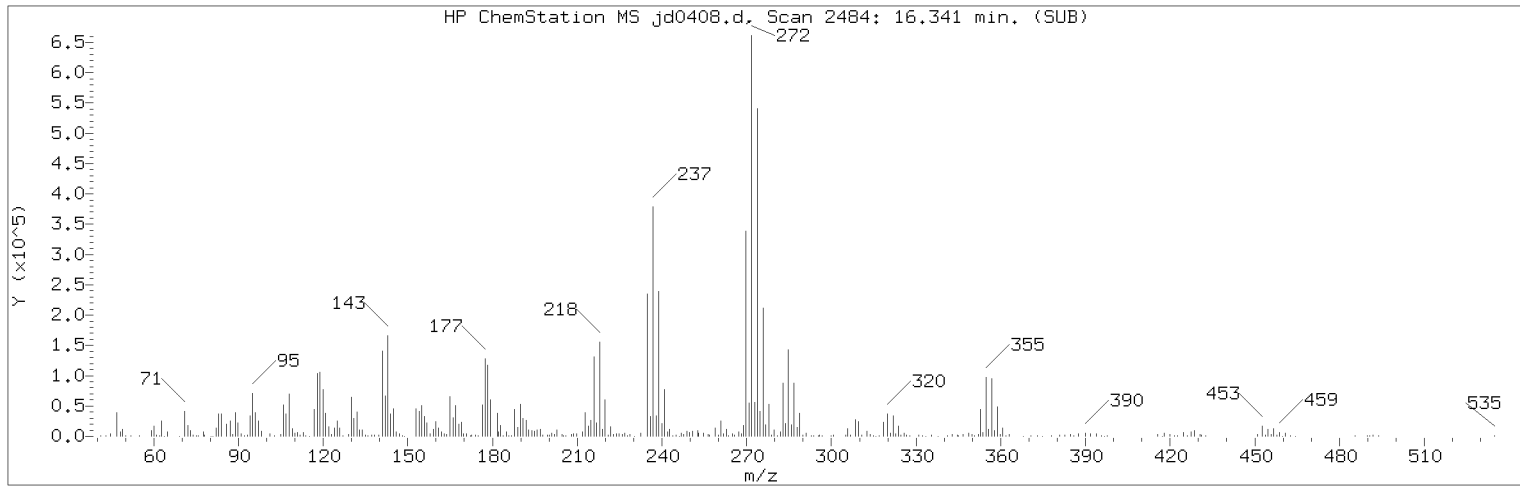
Data File: /chem/HP23264.i/20apr16a.b/jd0408.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 02:36 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 03:10
Date, time and analyst ID of latest file update: 17-Apr-2020 03:10 Automation

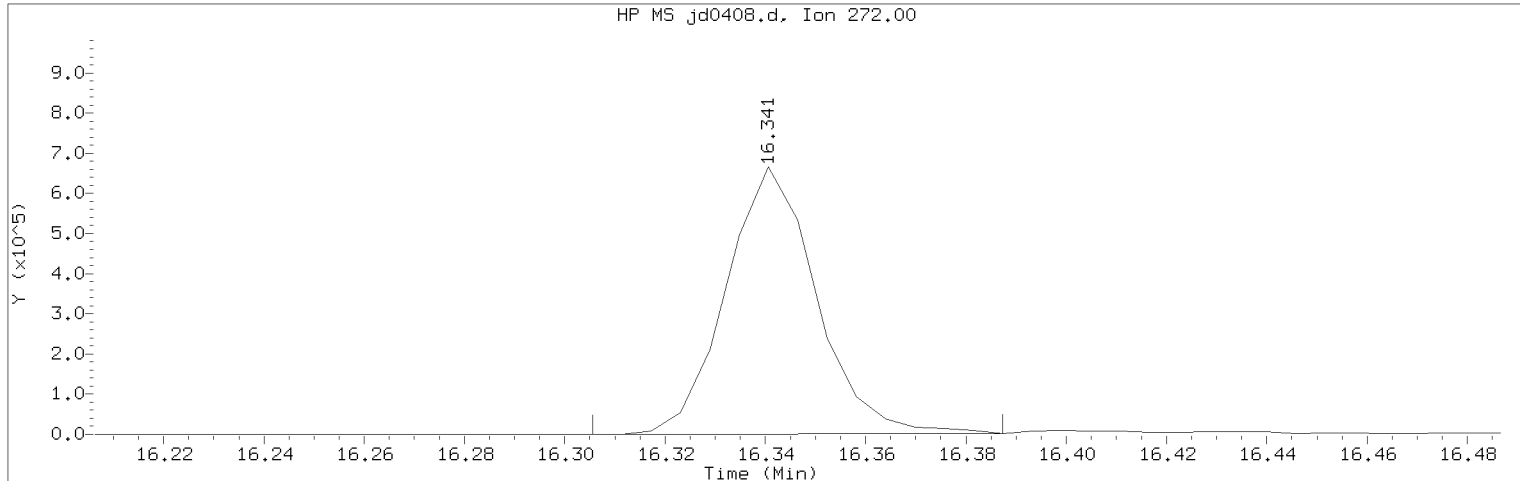
Sample Name: SSTD30 Lab Sample ID: rvABC1070

Compound Number : 194
Compound Name : Famphur
Expected RT (minutes) : 16.259
Quant Ion : 218.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0408.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 02:36 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD30 Lab Sample ID: rvABC1070

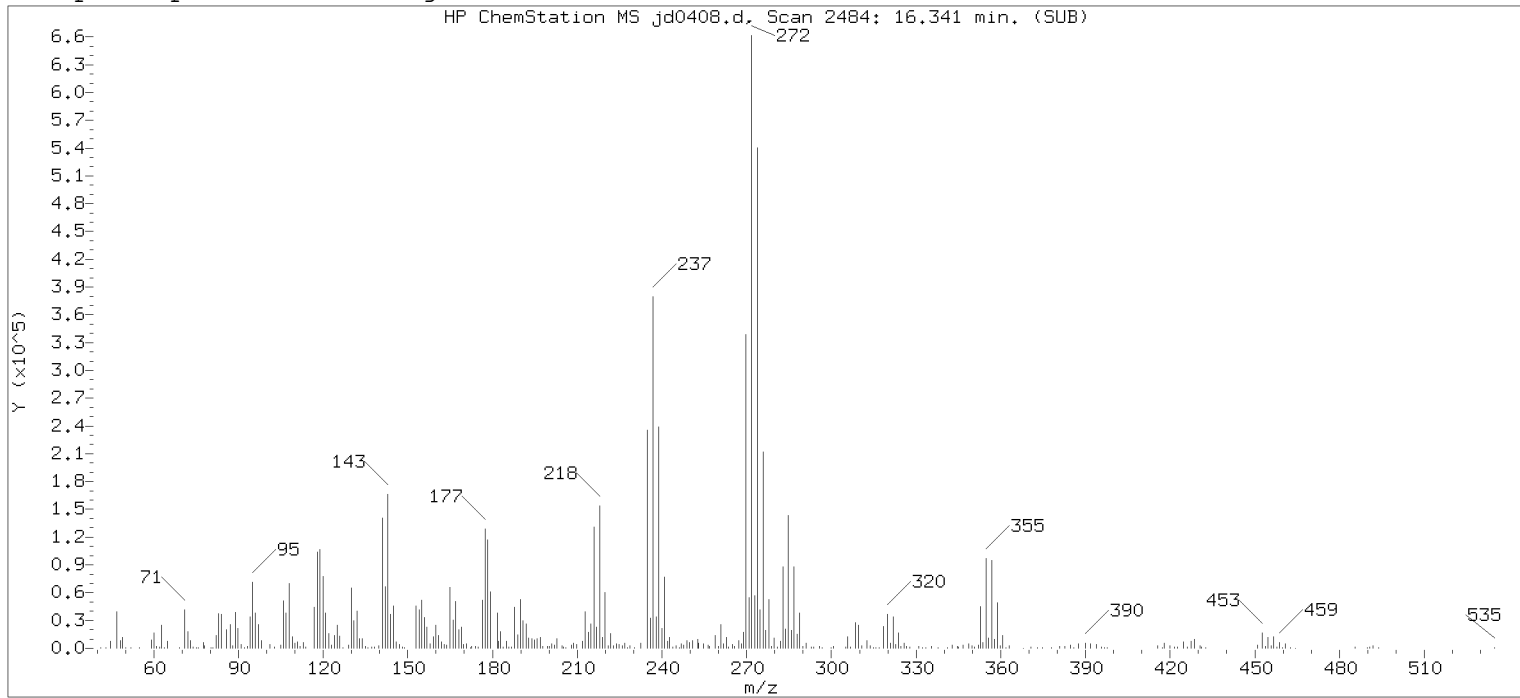
Compound Number : 195
Compound Name : Kepone
Scan Number : 2484
Retention Time (minutes) : 16.341
Quant Ion : 272.00
Area (flag) : 832501M
On-Column Amount (ng/ul) : 76.3985
Integration start scan : 2477 Integration stop scan: 2491
Y at integration start : 273 Y at integration end: 1056

Reason for manual integration: improper integration

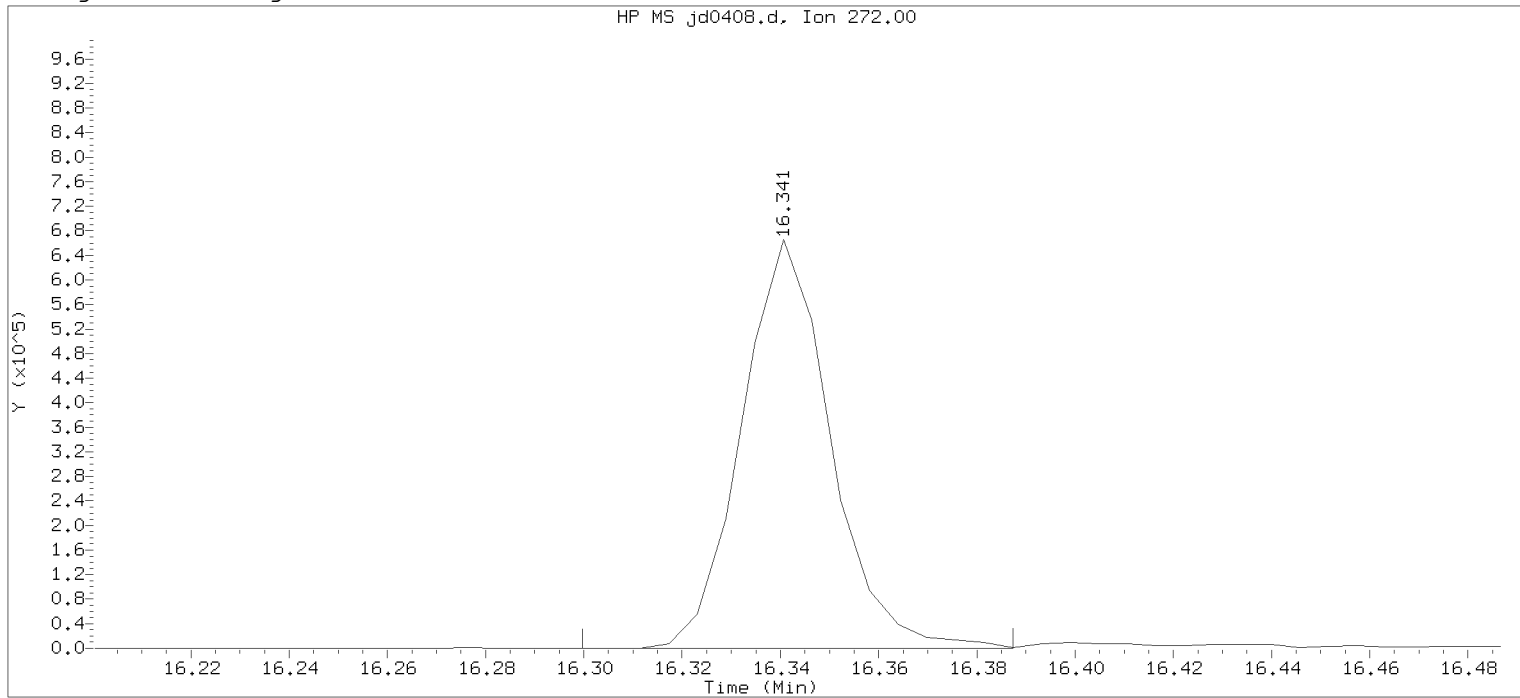
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



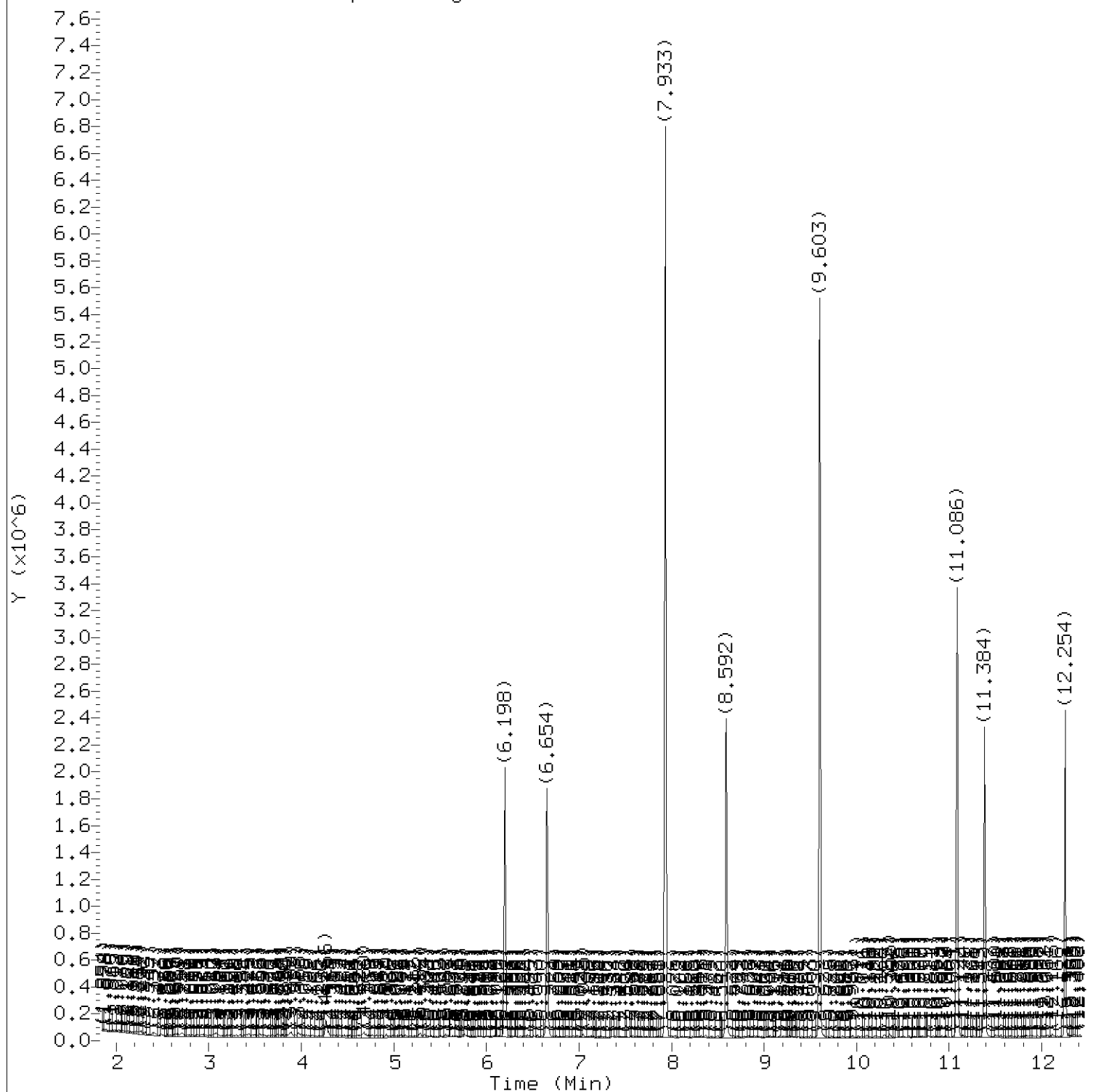
Data File: /chem/HP23264.i/20apr16a.b/jd0408.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 02:36 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 03:10
Date, time and analyst ID of latest file update: 17-Apr-2020 03:10 Automation

Sample Name: SSTD30 Lab Sample ID: rvABC1070

Compound Number	: 195	
Compound Name	: Kepone	
Scan Number	: 2484	
Retention Time (minutes)	: 16.341	
Quant Ion	: 272.00	
Area	: 835771	
On-column Amount (ng/ul)	: 0.0000	
Integration start scan	: 2476	Integration stop scan: 2491
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Kira N. Beck on 04/17/2020 at 09:02.
Target 3.5 esignature use



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0409.d
Injection date and time: 17-APR-2020 03:06

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

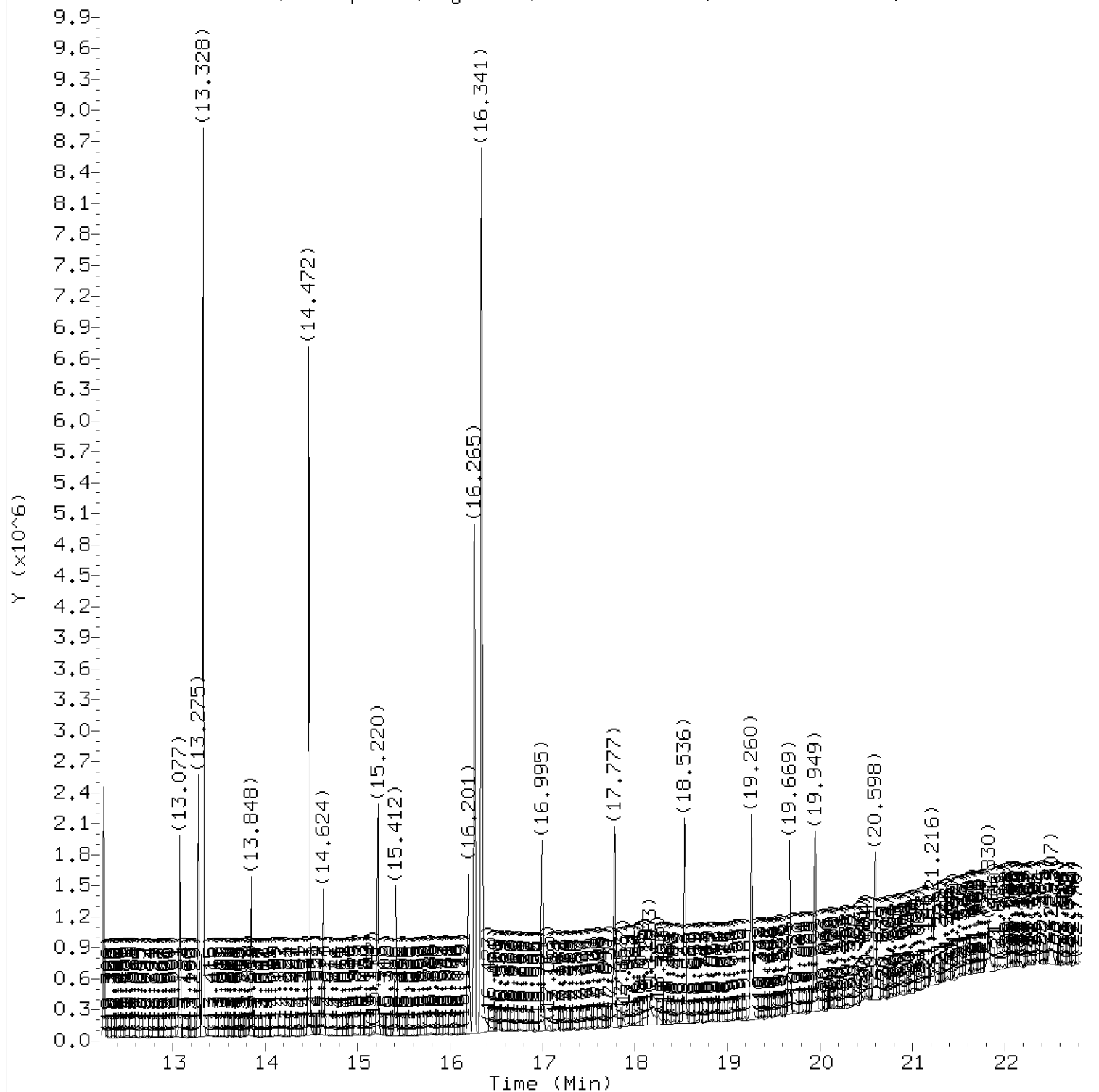
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD20

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0409.d
Injection date and time: 17-APR-2020 03:06

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD20

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0409.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 03:06

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD20

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.654	152	311168	5.000
68) *Naphthalene-d8	(2)	8.592	136	1154068	5.000
118) *Acenaphthene-d10	(3)	11.384	164	555554	5.000
158) *Phenanthrene-d10	(4)	13.275	188	957599	5.000
167) Disulfoton	(4)	13.328	88	1651092	21.680
180) *Pyrene-d10	(5)	15.220	212	921034	5.000
194) Famphur	(5)	16.265	218	1614407M	20.286
195) Kepone	(5)	16.341	272	902771	82.182
218) *Perylene-d12	(6)	19.669	264	875155	5.000

M = Compound was manually integrated.

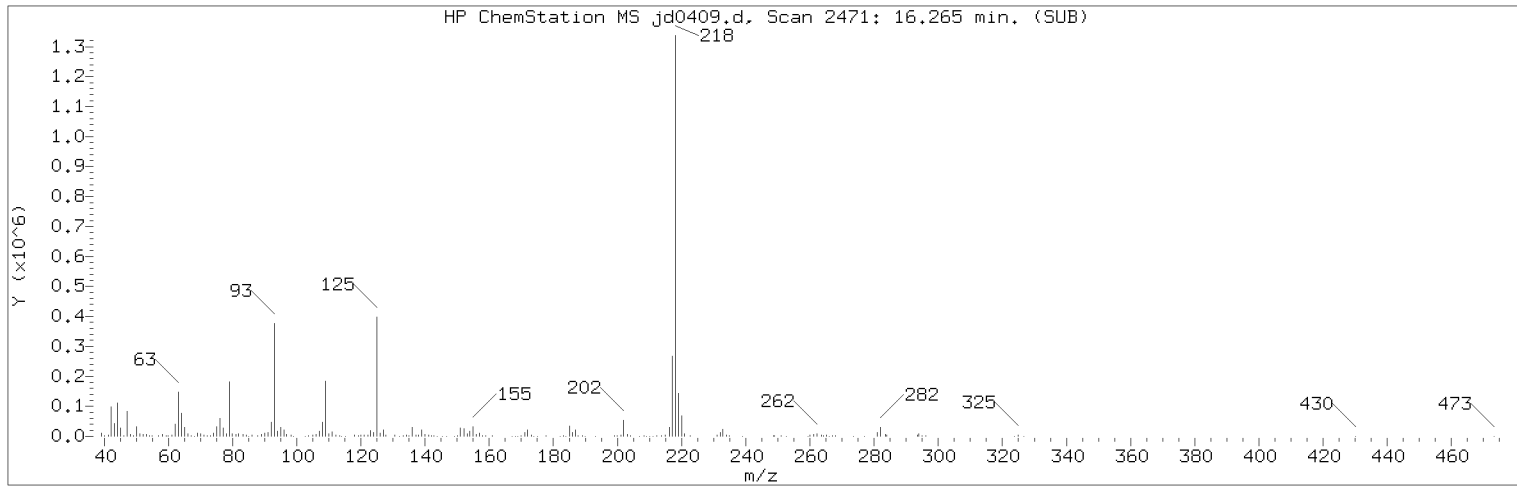
* = Compound is an internal standard.

Digitally signed by Kira N. Beck

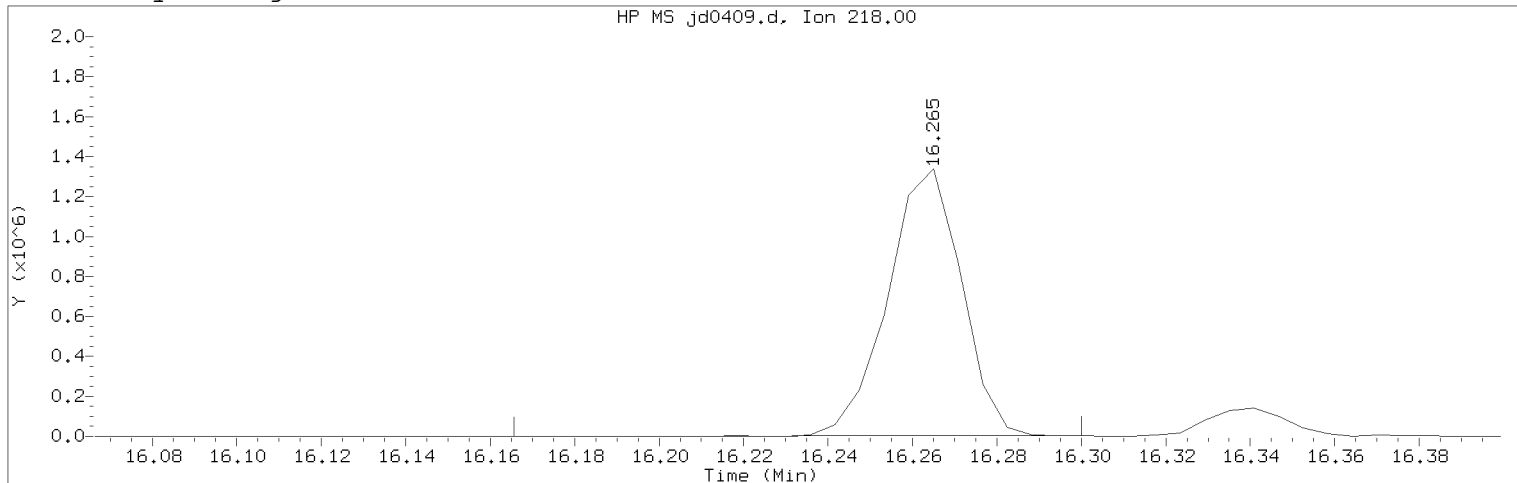
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0409.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 03:06 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD20 Lab Sample ID: rvABC1070

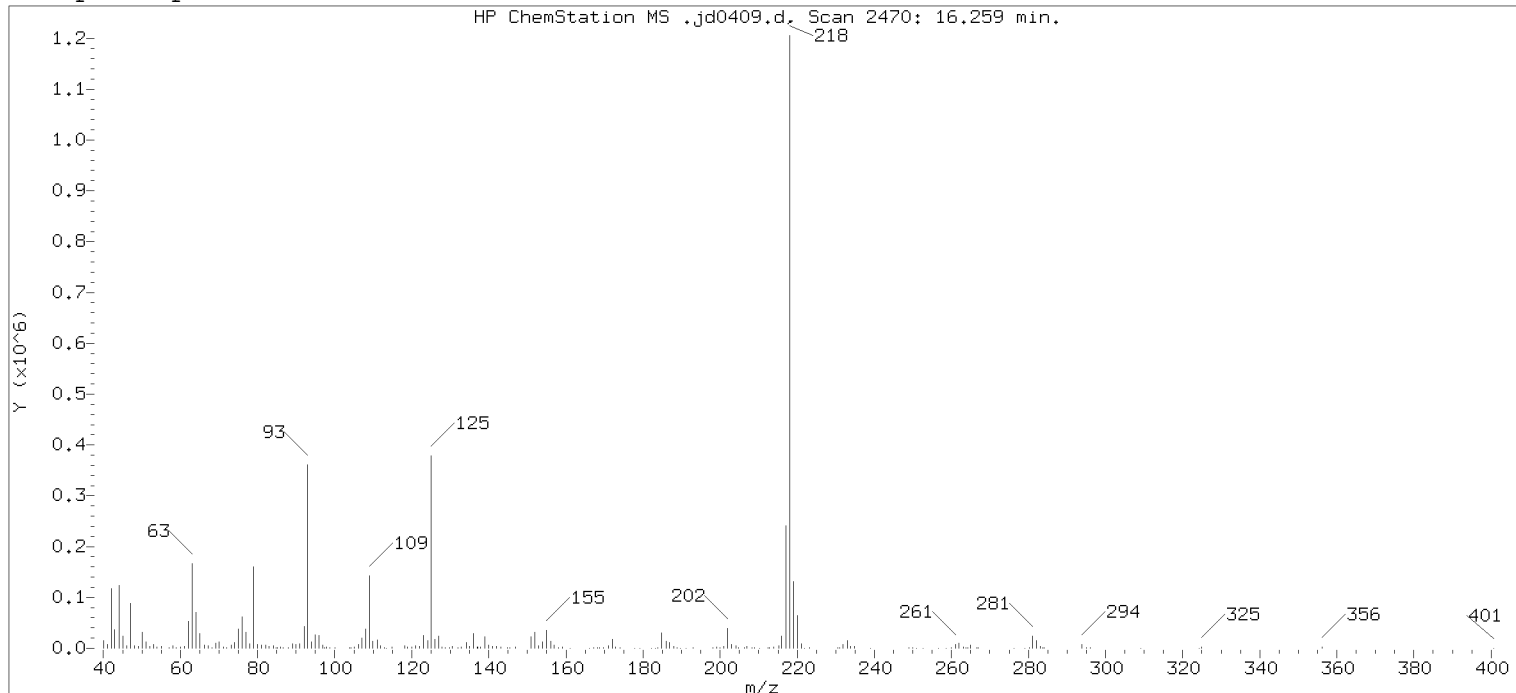
Compound Number : 194
Compound Name : Famphur
Scan Number : 2471
Retention Time (minutes) : 16.265
Quant Ion : 218.00
Area (flag) : 1614407M
On-Column Amount (ng/ul) : 20.2859
Integration start scan : 2453 Integration stop scan: 2476
Y at integration start : 0 Y at integration end: 3043

Reason for manual integration: missed peak

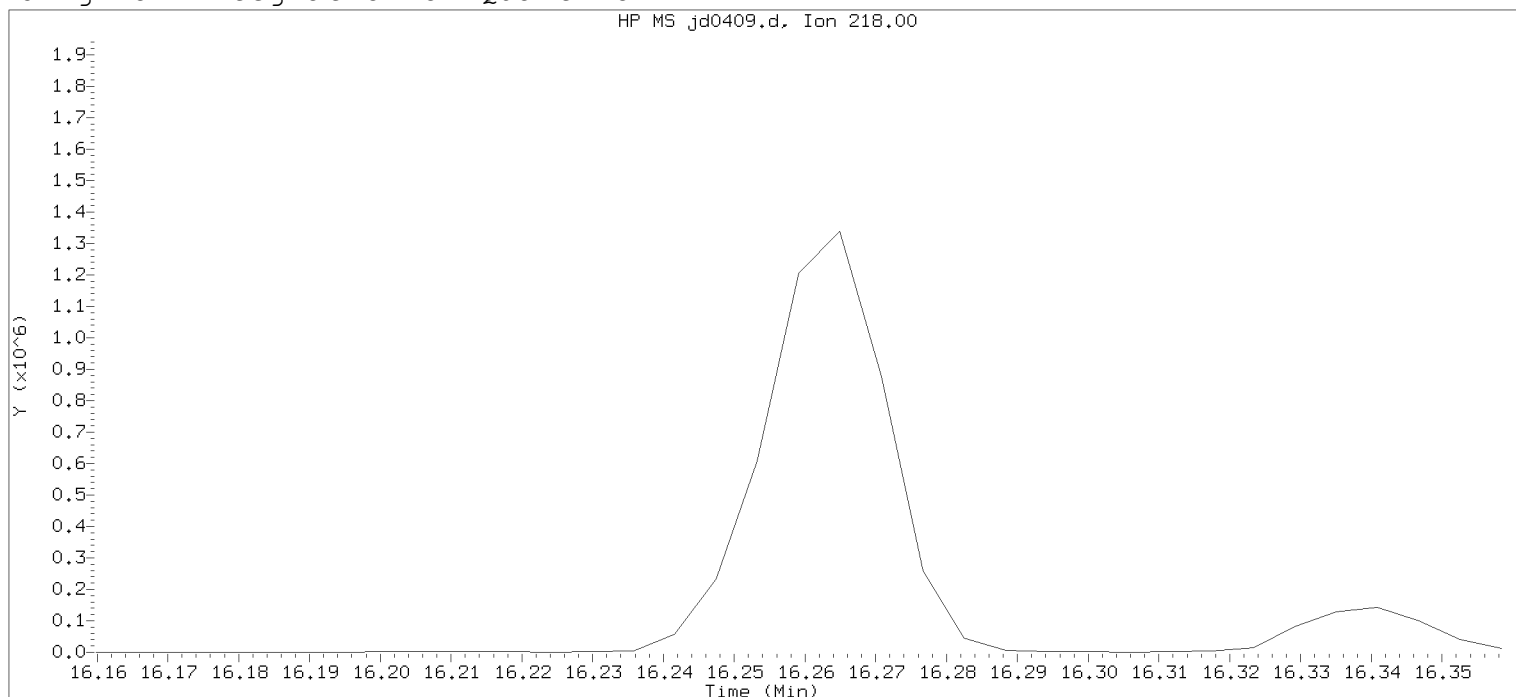
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0409.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 03:06

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

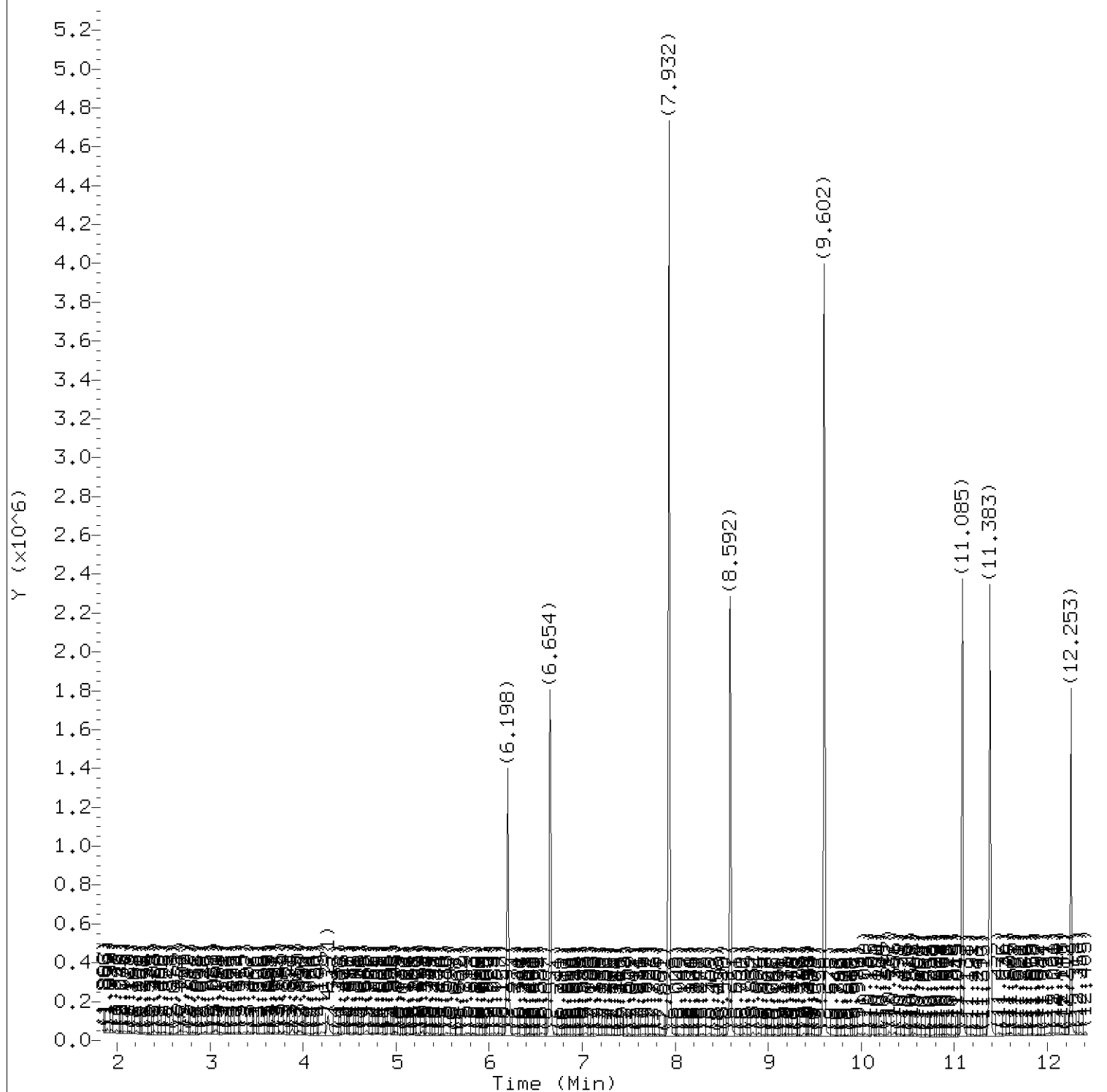
Calibration date and time: 17-APR-2020 03:39

Date, time and analyst ID of latest file update: 17-Apr-2020 03:39 Automation

Sample Name: SSTD20

Lab Sample ID: rvABC1070

Compound Number : 194
 Compound Name : Famphur
 Expected RT (minutes) : 16.259
 Quant Ion : 218.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0410.d
Injection date and time: 17-APR-2020 03:35

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

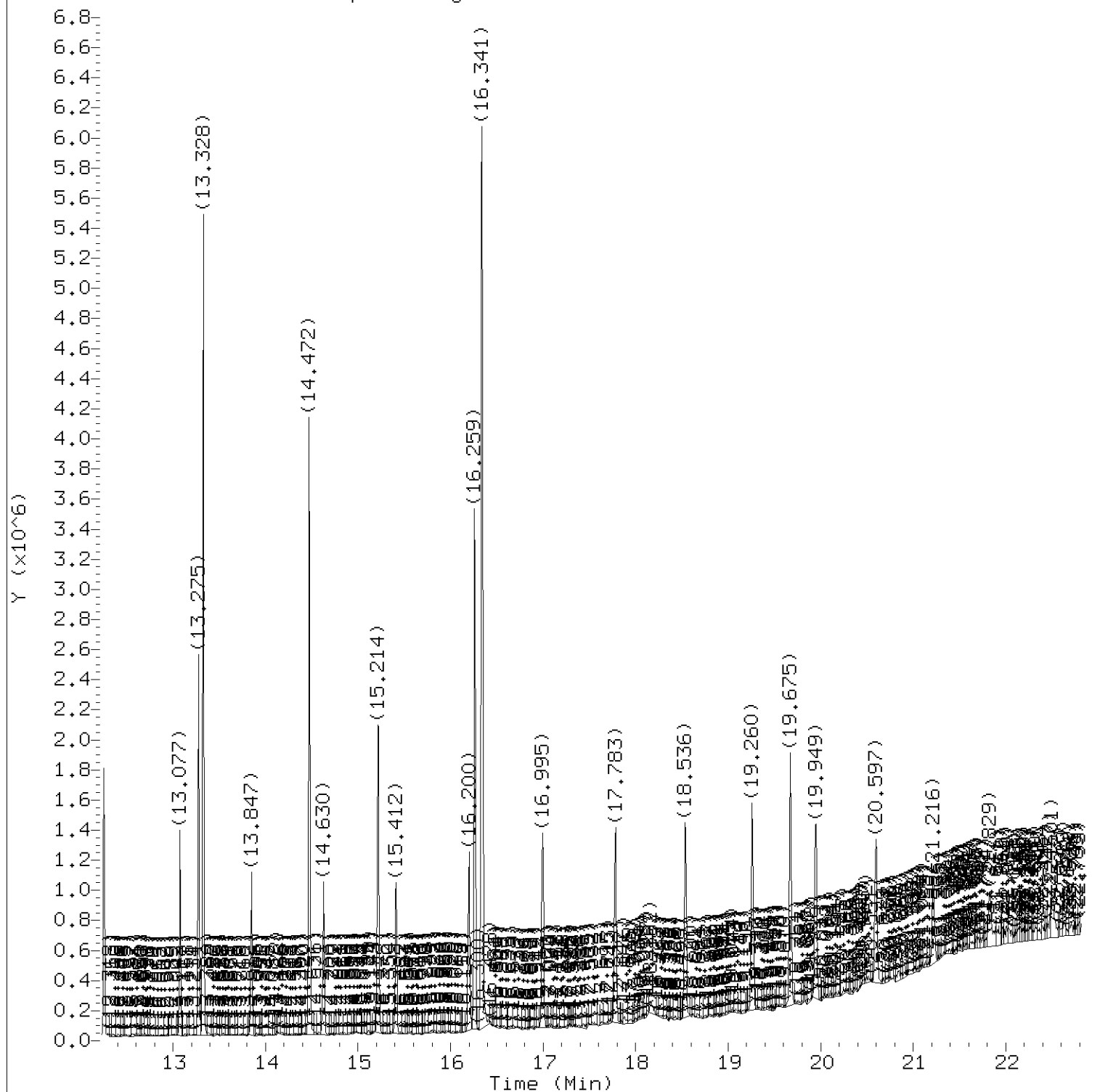
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0410.d
Injection date and time: 17-APR-2020 03:35

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0410.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 03:35

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.654	152	296986	5.000
68)*Naphthalene-d8	(2)	8.592	136	1118485	5.000
118)*Acenaphthene-d10	(3)	11.383	164	525361	5.000
158)*Phenanthrene-d10	(4)	13.275	188	959769	5.000
167) Disulfoton	(4)	13.328	88	998605	13.083
180)*Pyrene-d10	(5)	15.214	212	900108	5.000
194) Famphur	(5)	16.259	218	1094040M	14.067
195) Kepone	(5)	16.341	272	696254	64.856
218)*Perylene-d12	(6)	19.669	264	854014	5.000

M = Compound was manually integrated.

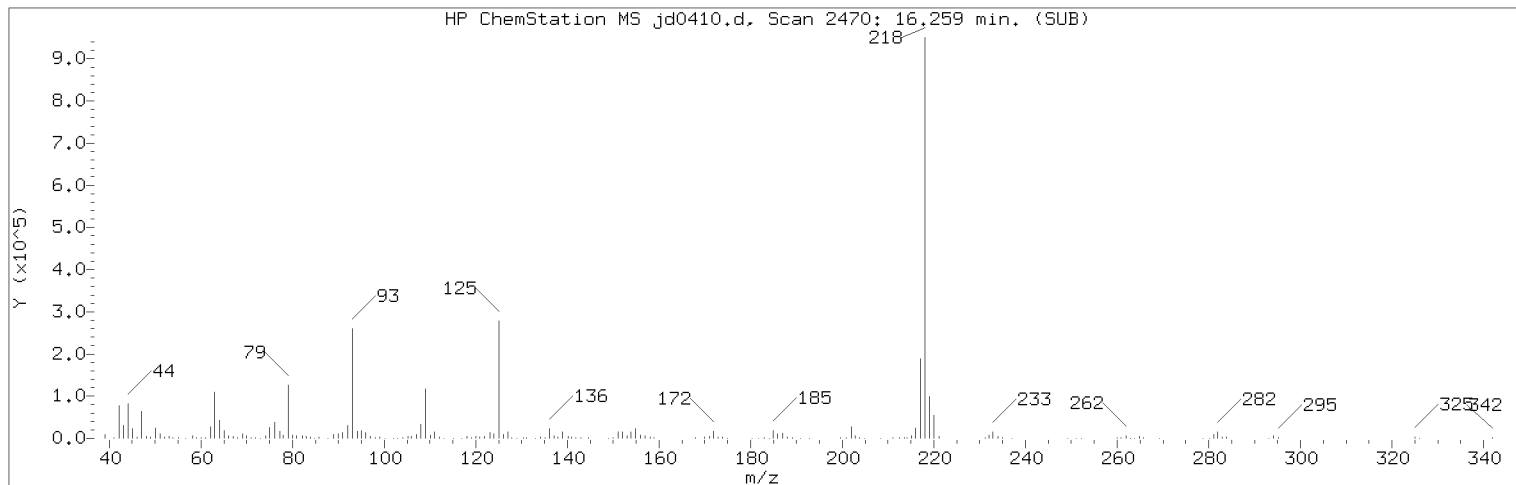
* = Compound is an internal standard.

Digitally signed by Kira N. Beck

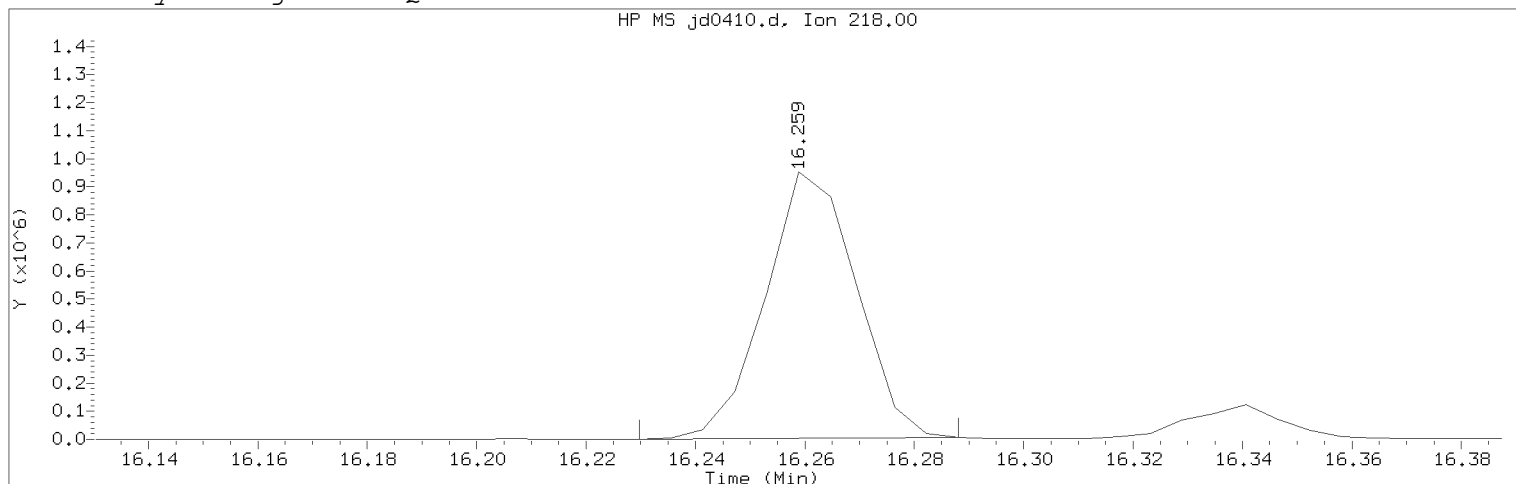
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0410.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 03:35 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD12.5 Lab Sample ID: rvABC1070

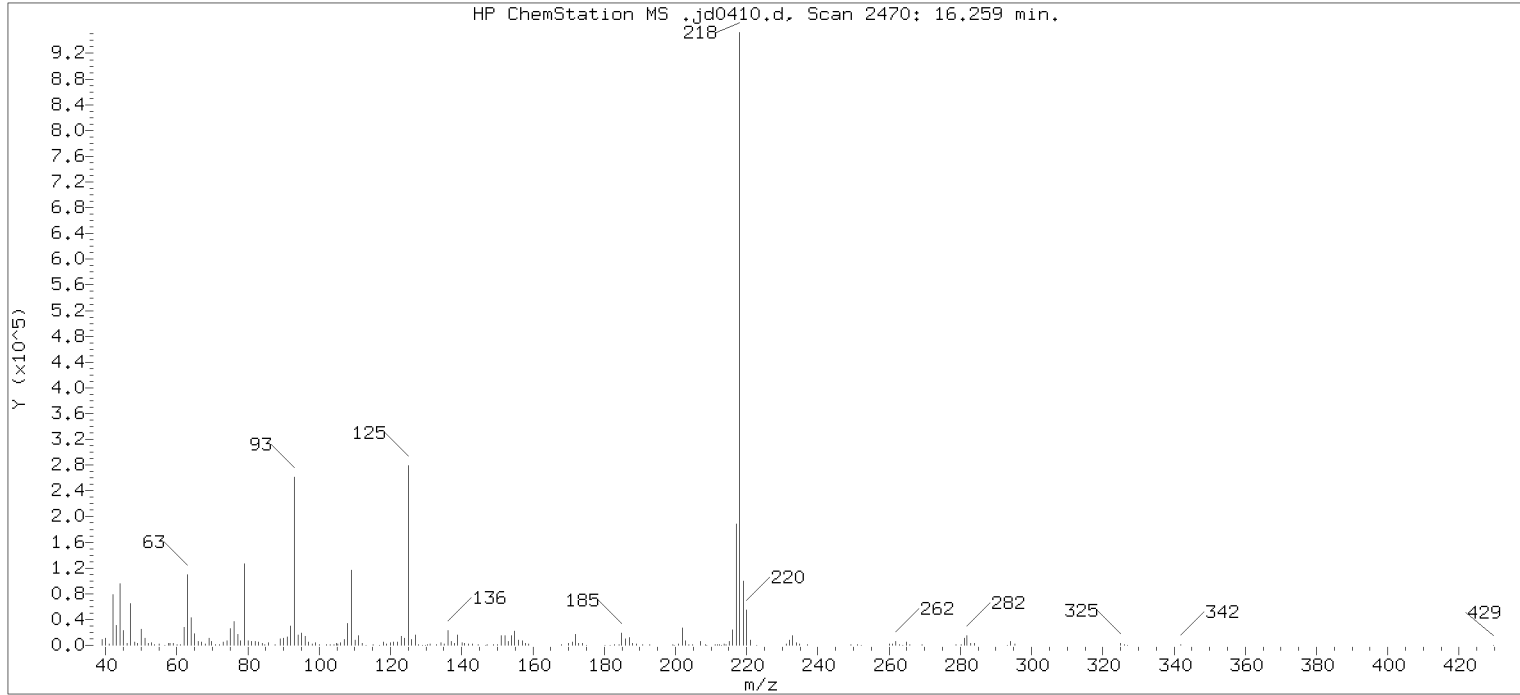
Compound Number : 194
Compound Name : Famphur
Scan Number : 2470
Retention Time (minutes) : 16.259
Quant Ion : 218.00
Area (flag) : 1094040M
On-Column Amount (ng/ul) : 14.0668
Integration start scan : 2464 Integration stop scan: 2474
Y at integration start : 288 Y at integration end: 5842

Reason for manual integration: missed peak

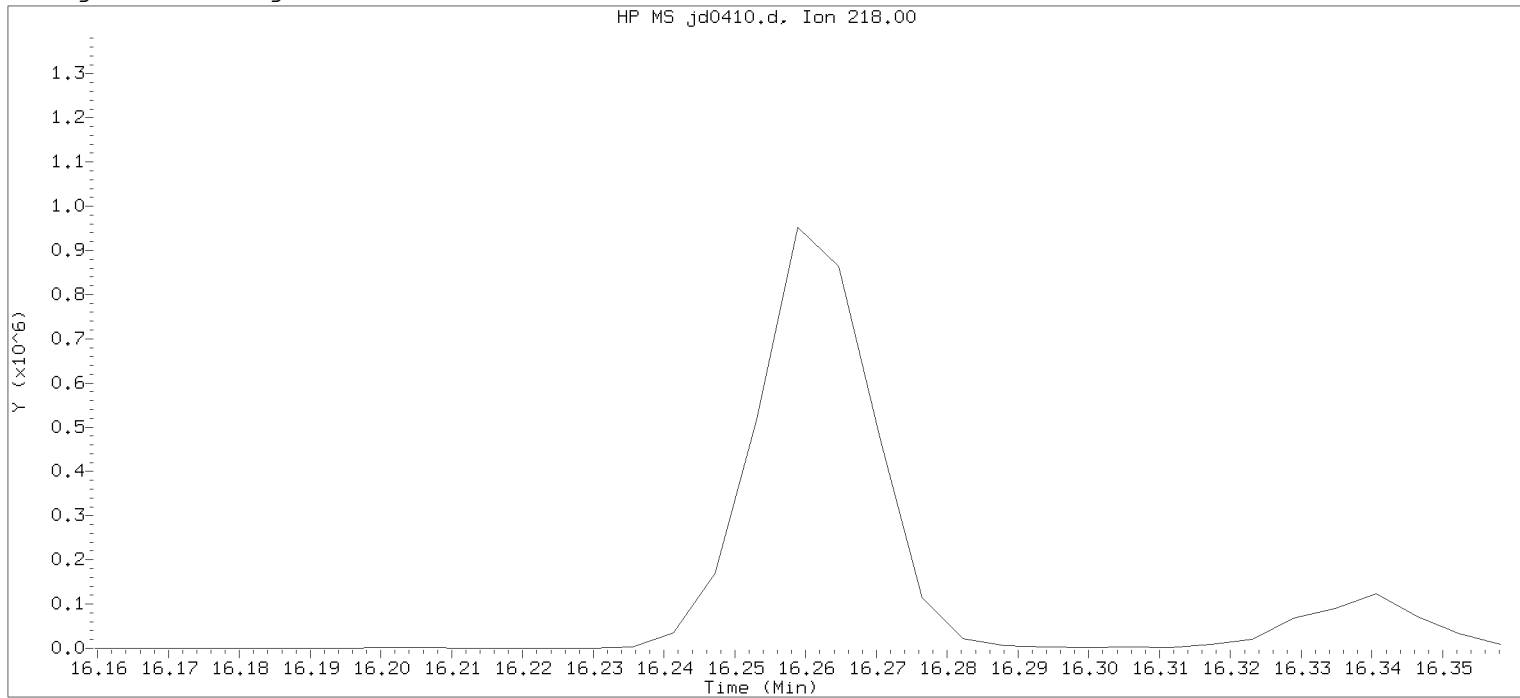
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0410.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 03:35

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

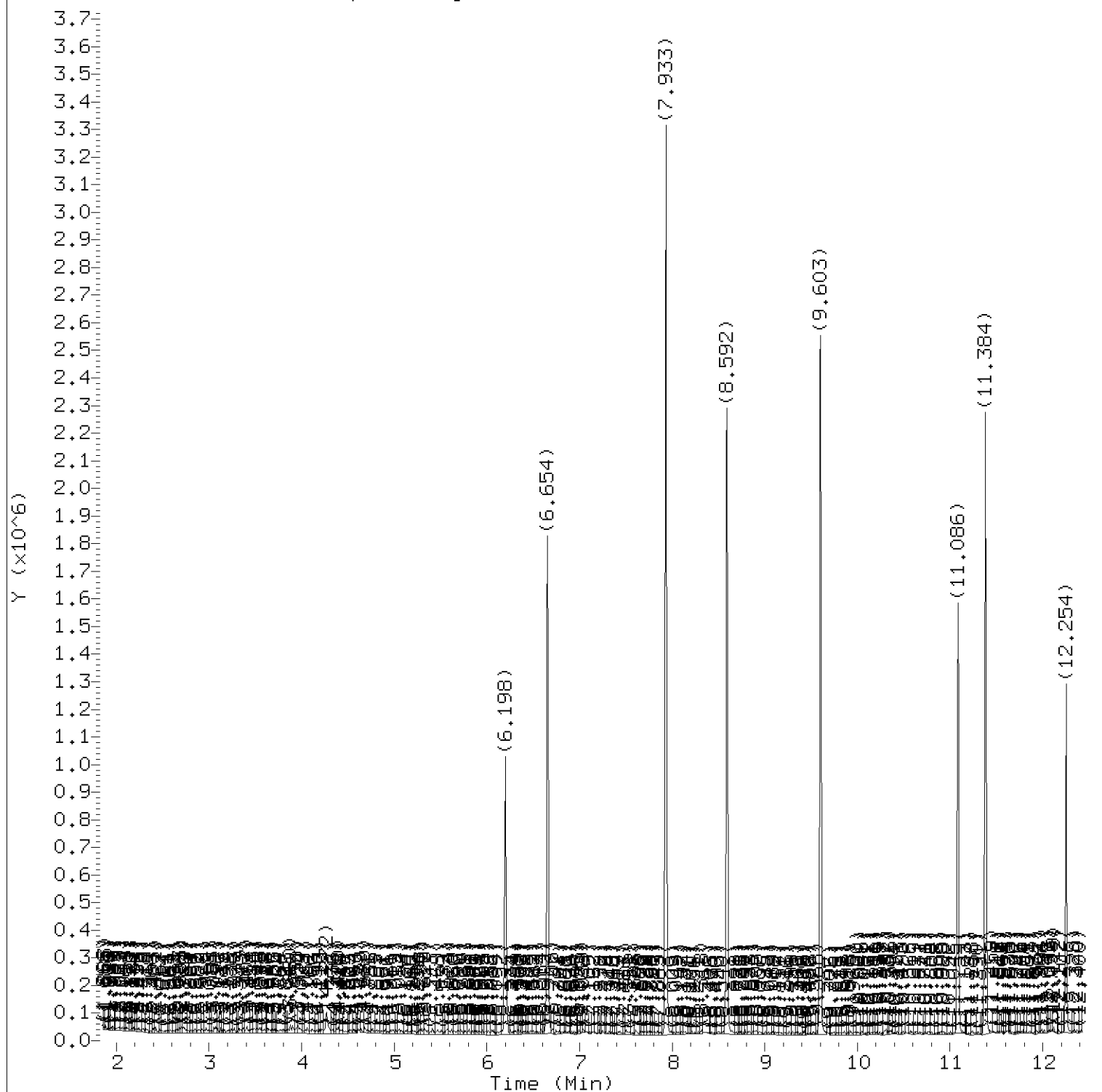
Calibration date and time: 17-APR-2020 04:09

Date, time and analyst ID of latest file update: 17-Apr-2020 04:09 Automation

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Compound Number : 194
 Compound Name : Famphur
 Expected RT (minutes) : 16.259
 Quant Ion : 218.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0411.d
Injection date and time: 17-APR-2020 04:04

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

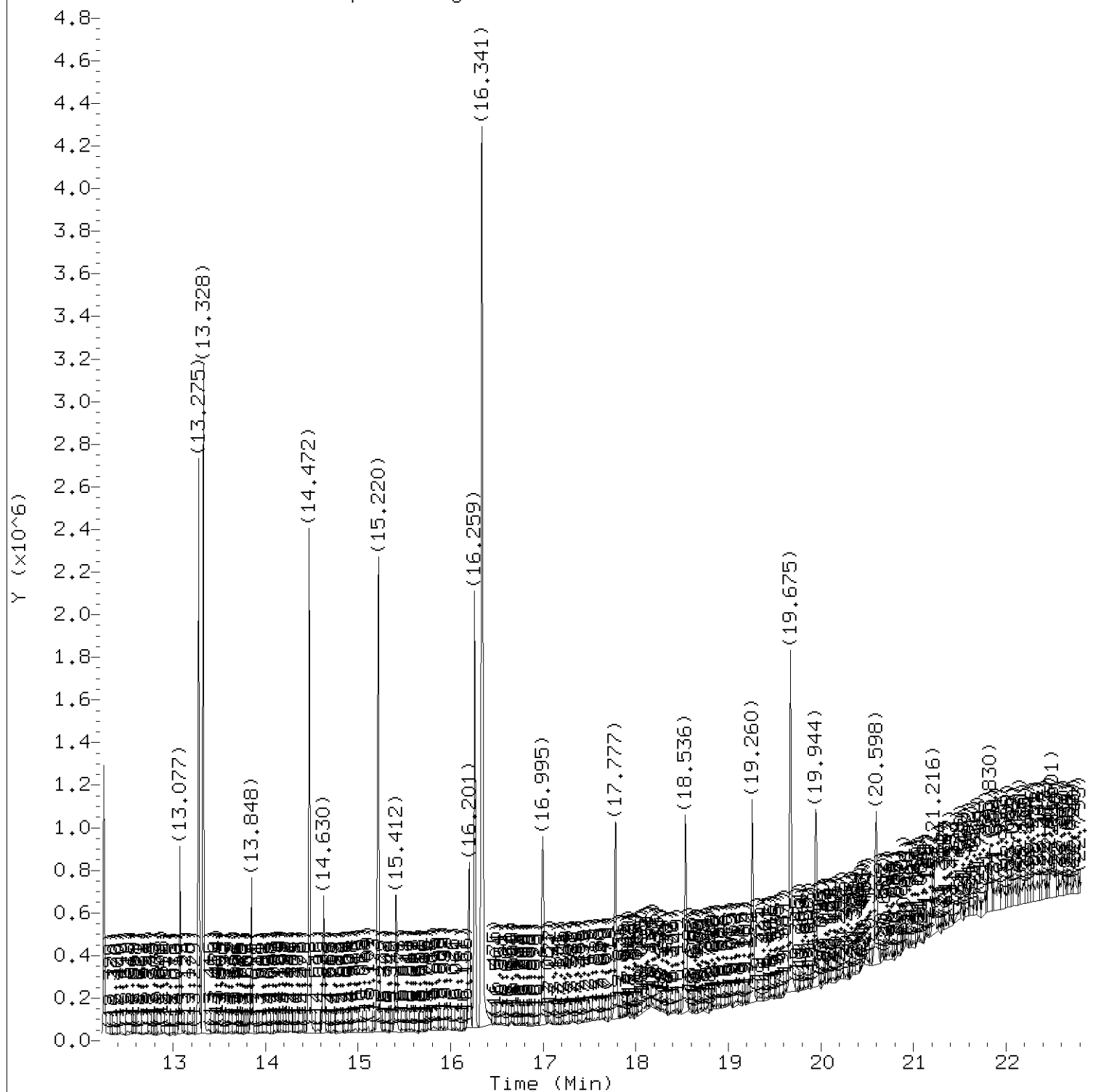
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD7.5

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0411.d
Injection date and time: 17-APR-2020 04:04

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD7.5

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0411.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 04:04

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD7.5

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.654	152	303084	5.000
68)*Naphthalene-d8	(2)	8.592	136	1105747	5.000
118)*Acenaphthene-d10	(3)	11.384	164	522155	5.000
158)*Phenanthrene-d10	(4)	13.275	188	971072	5.000
167) Disulfoton	(4)	13.328	88	578759	7.494
180)*Pyrene-d10	(5)	15.220	212	911068	5.000
194) Famphur	(5)	16.259	218	639779M	8.127
195) Kepone	(5)	16.341	272	478750	44.059
218)*Perylene-d12	(6)	19.675	264	833476	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

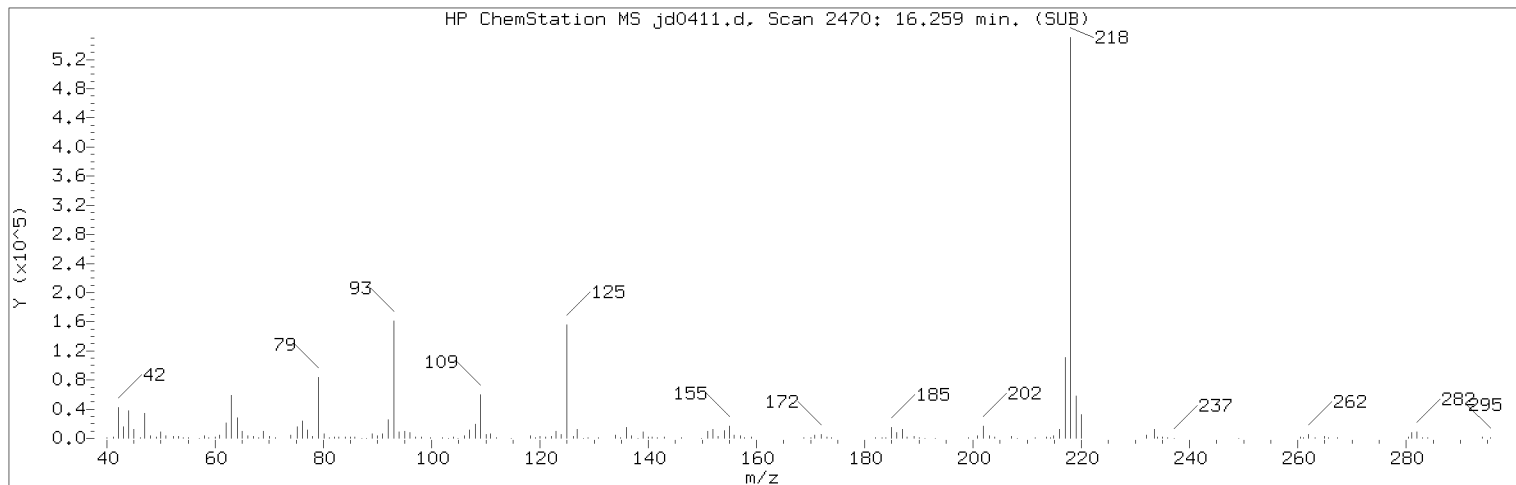
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

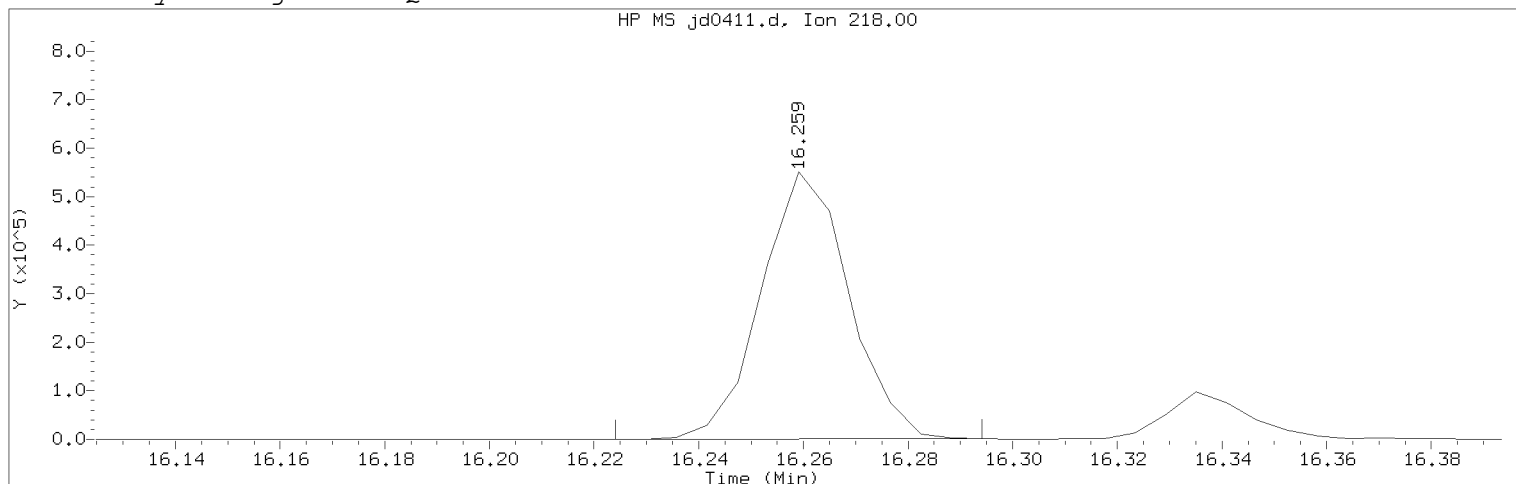
RAF59 Page 1362 of 1506

page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0411.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 04:04 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD7.5 Lab Sample ID: rvABC1070

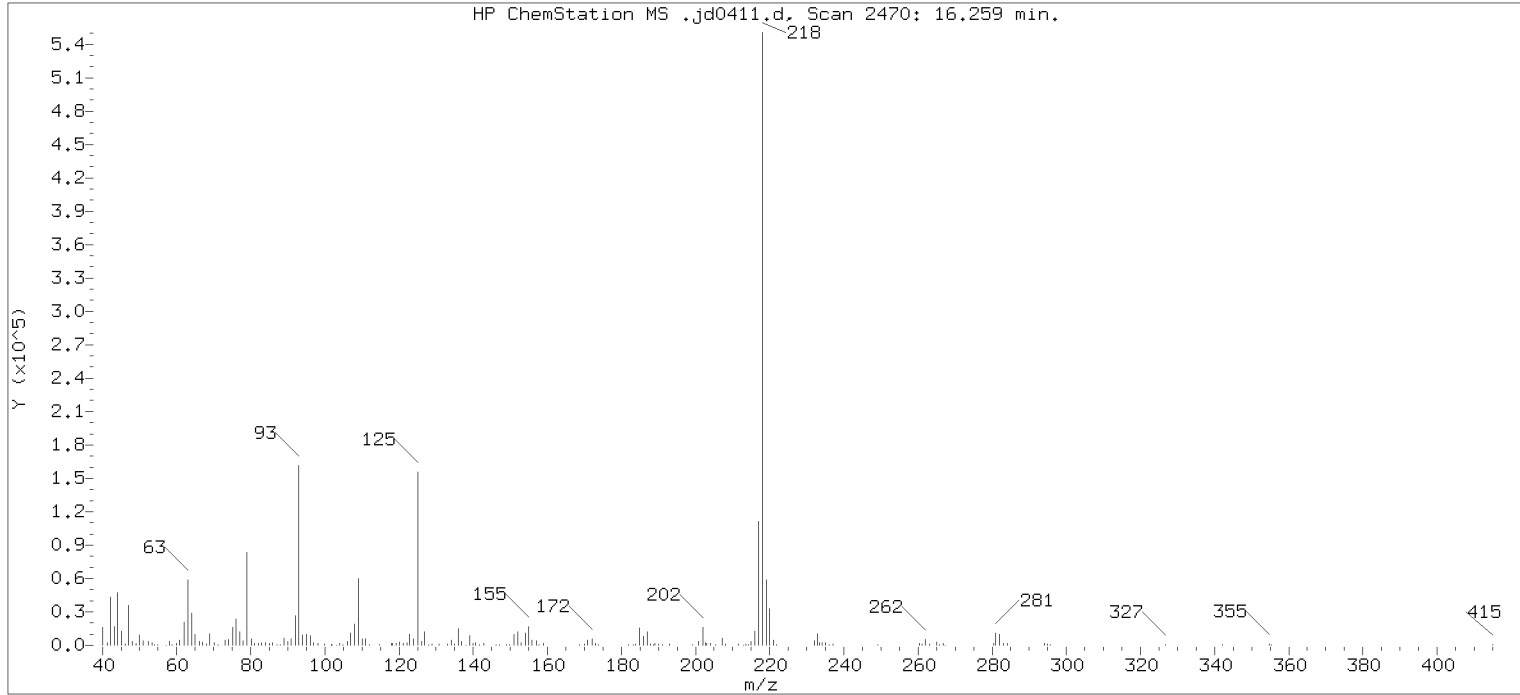
Compound Number : 194
Compound Name : Famphur
Scan Number : 2470
Retention Time (minutes) : 16.259
Quant Ion : 218.00
Area (flag) : 639779M
On-Column Amount (ng/ul) : 8.1271
Integration start scan : 2463 Integration stop scan: 2475
Y at integration start : 0 Y at integration end: 845

Reason for manual integration: missed peak

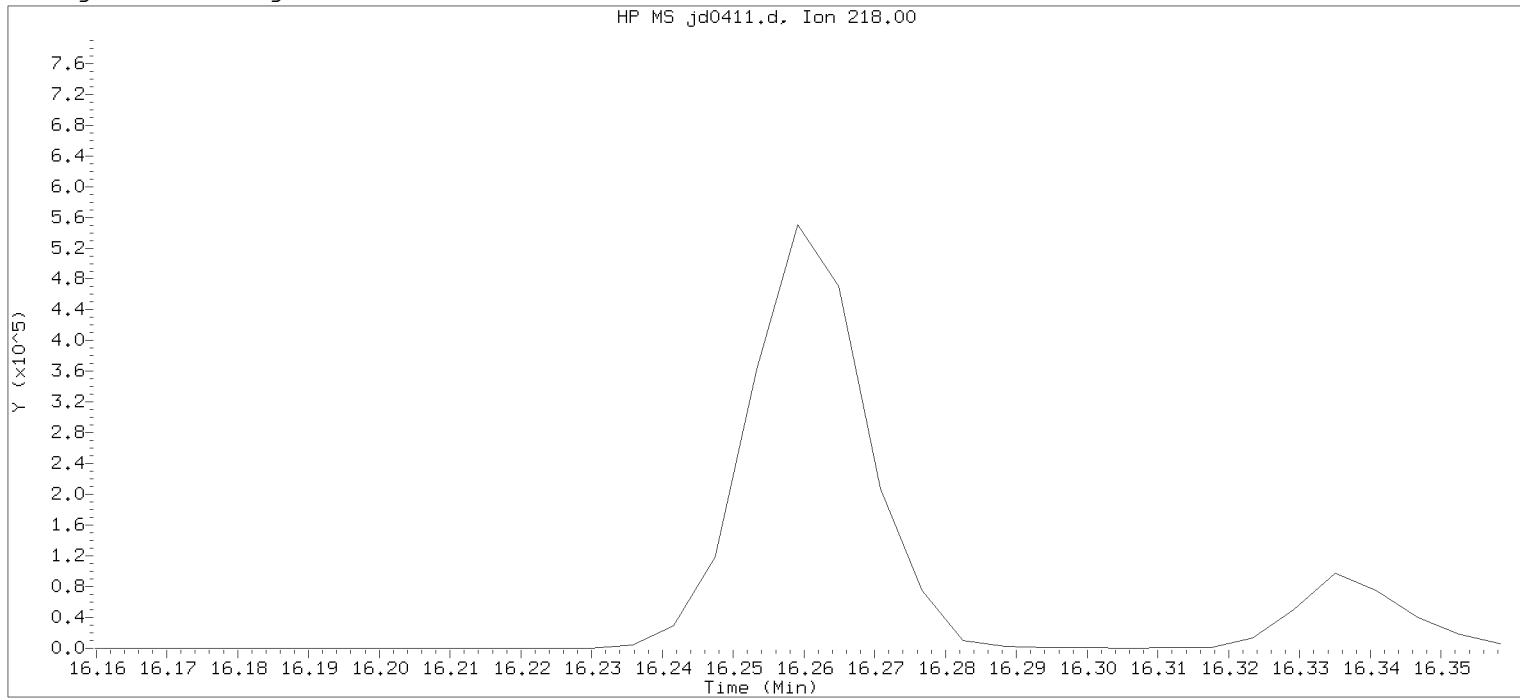
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion

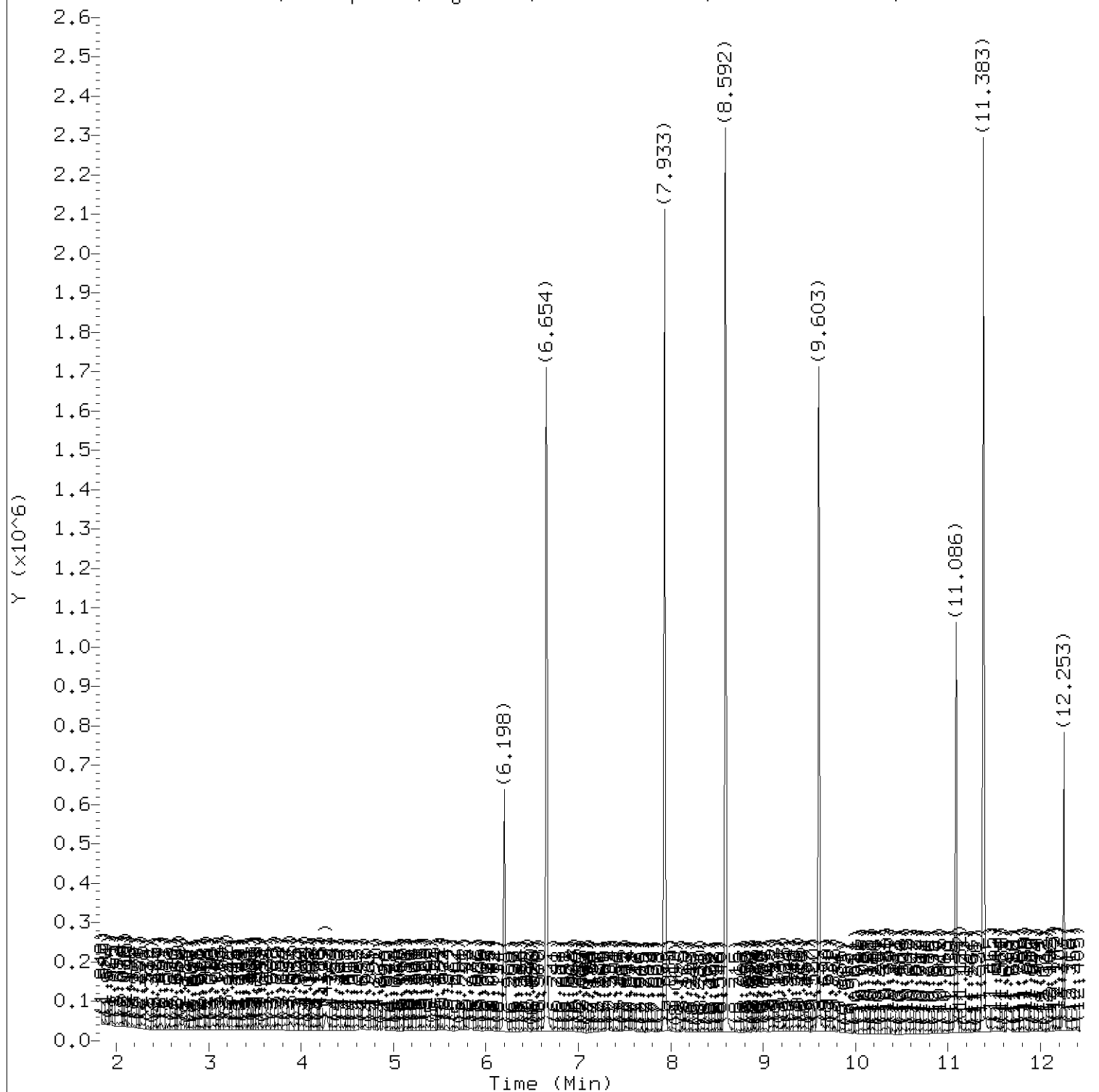


Data File: /chem/HP23264.i/20apr16a.b/jd0411.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 04:04 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 04:38
Date, time and analyst ID of latest file update: 17-Apr-2020 04:38 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvABC1070

Compound Number : 194
Compound Name : Famphur
Expected RT (minutes) : 16.259
Quant Ion : 218.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0412.d
Injection date and time: 17-APR-2020 04:34

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

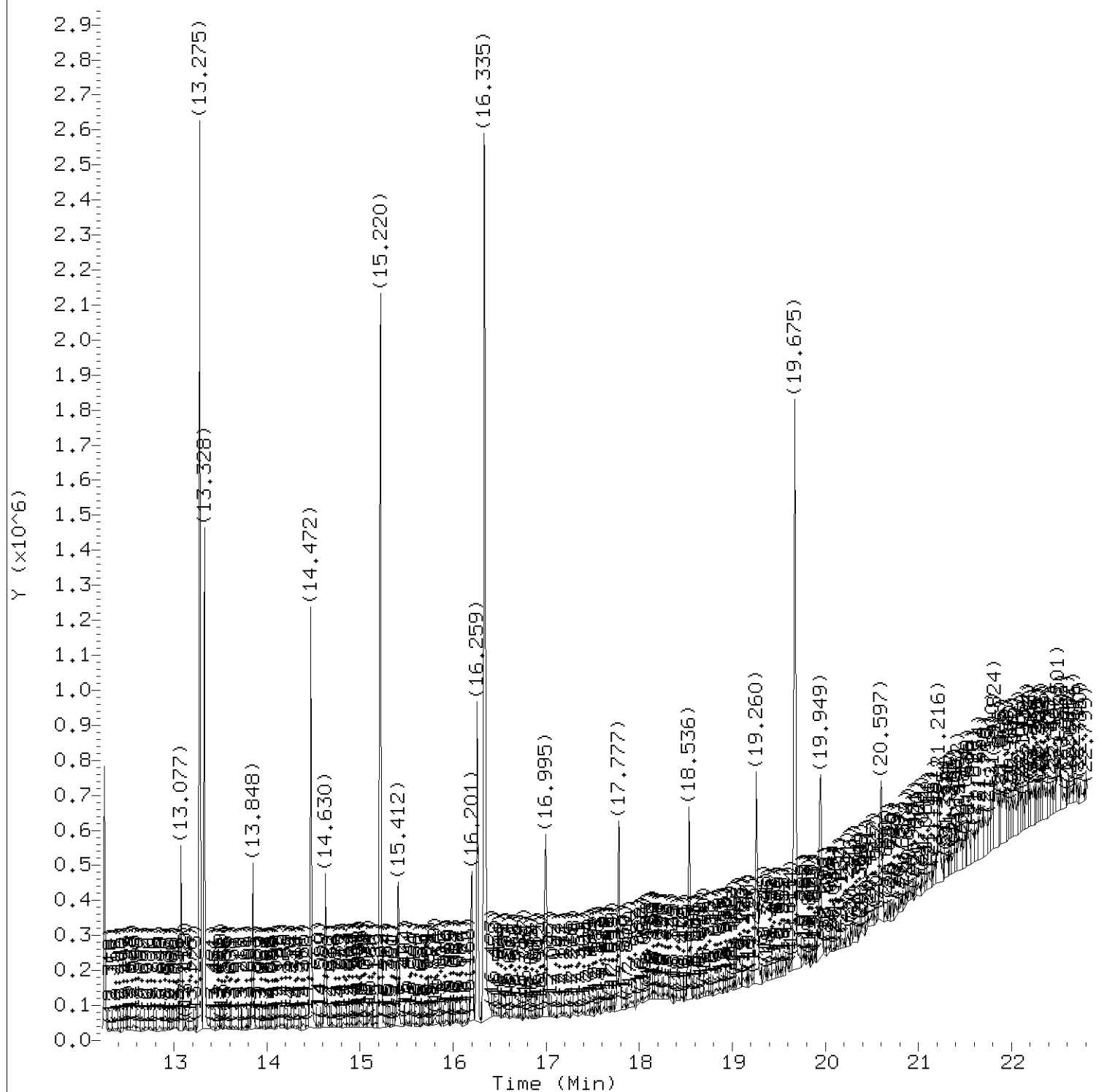
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0412.d
Injection date and time: 17-APR-2020 04:34

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0412.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 04:34

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD3.75

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.654	152	295414	5.000
68)*Naphthalene-d8	(2)	8.592	136	1108240	5.000
118)*Acenaphthene-d10	(3)	11.383	164	526590	5.000
158)*Phenanthrene-d10	(4)	13.275	188	937977	5.000
167) Disulfoton	(4)	13.328	88	257983	3.458
180)*Pyrene-d10	(5)	15.220	212	840227	5.000
194) Famphur	(5)	16.259	218	277771M	3.826
195) Kepone	(5)	16.335	272	288556	28.795
218)*Perylene-d12	(6)	19.675	264	839780	5.000

M = Compound was manually integrated.

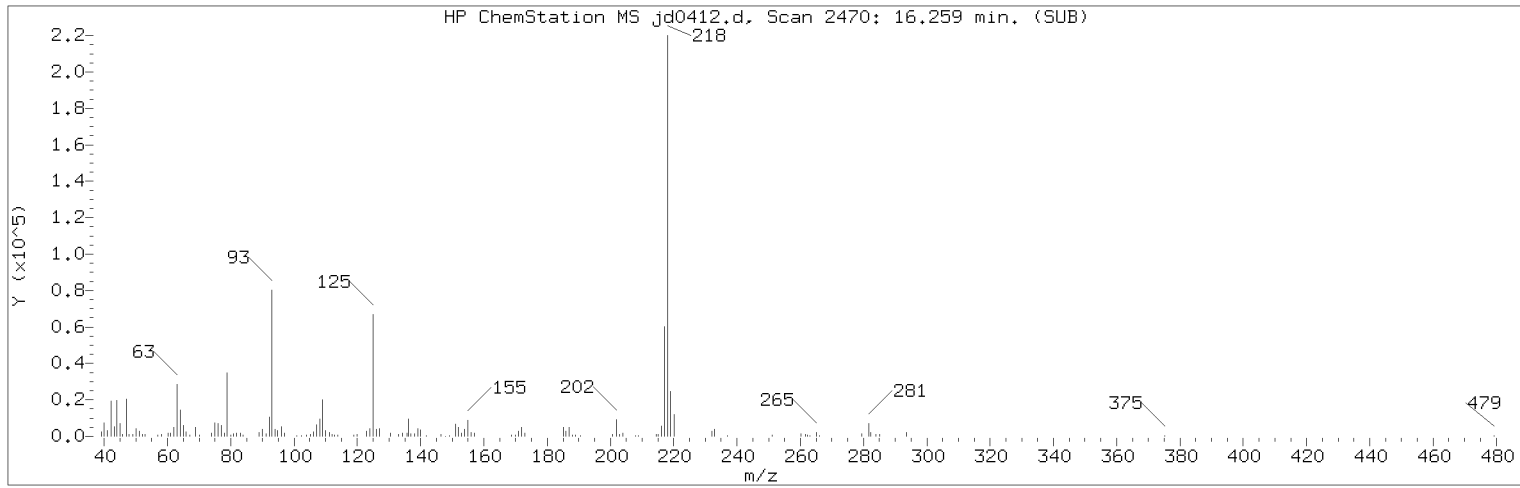
* = Compound is an internal standard.

Digitally signed by Kira N. Beck

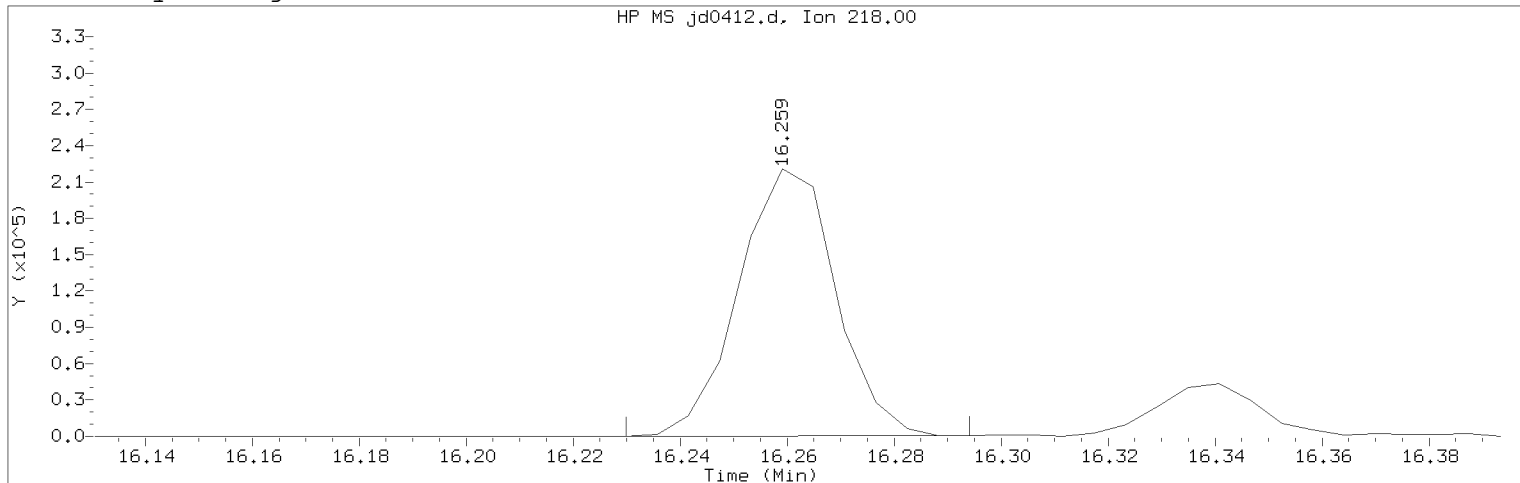
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0412.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 04:34 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD3.75 Lab Sample ID: rvABC1070

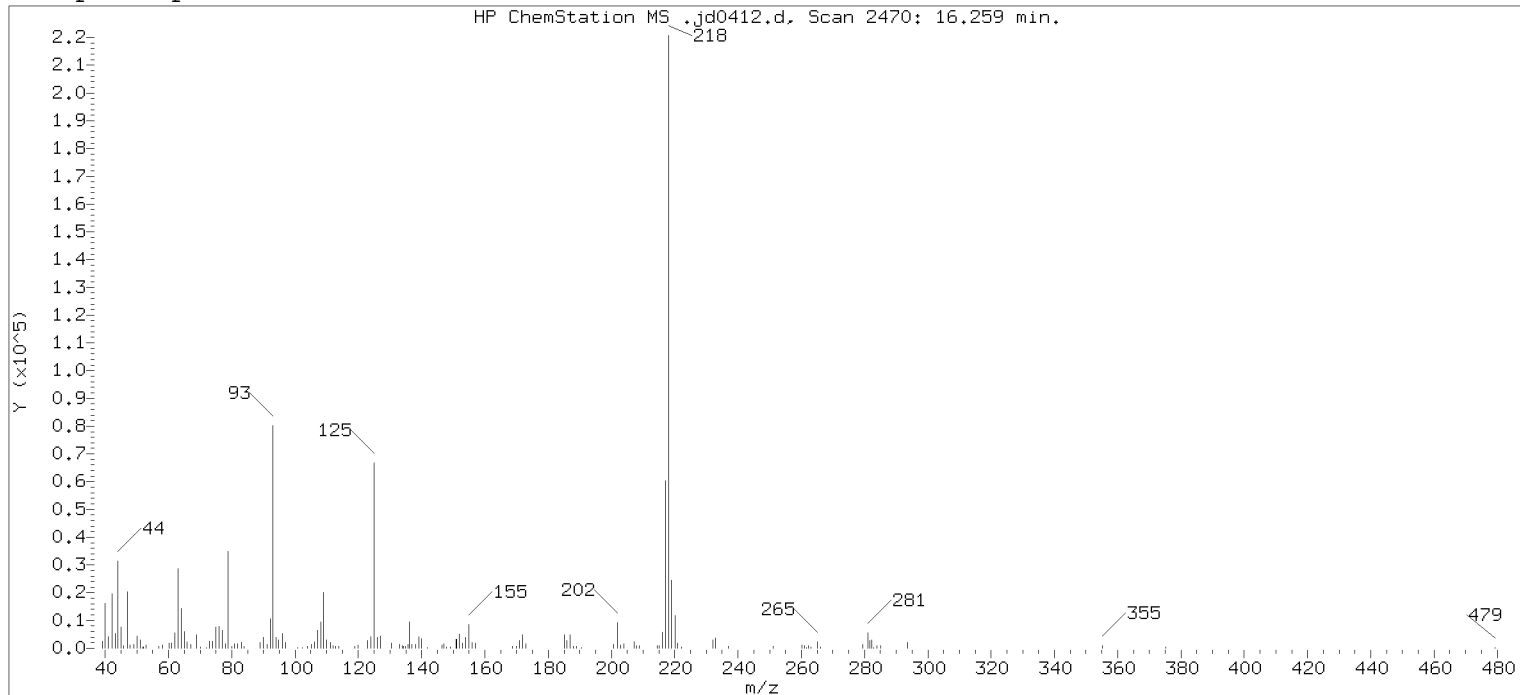
Compound Number : 194
Compound Name : Famphur
Scan Number : 2470
Retention Time (minutes) : 16.259
Quant Ion : 218.00
Area (flag) : 277771M
On-Column Amount (ng/ul) : 3.8260
Integration start scan : 2464 Integration stop scan: 2475
Y at integration start : 0 Y at integration end: 457

Reason for manual integration: missed peak

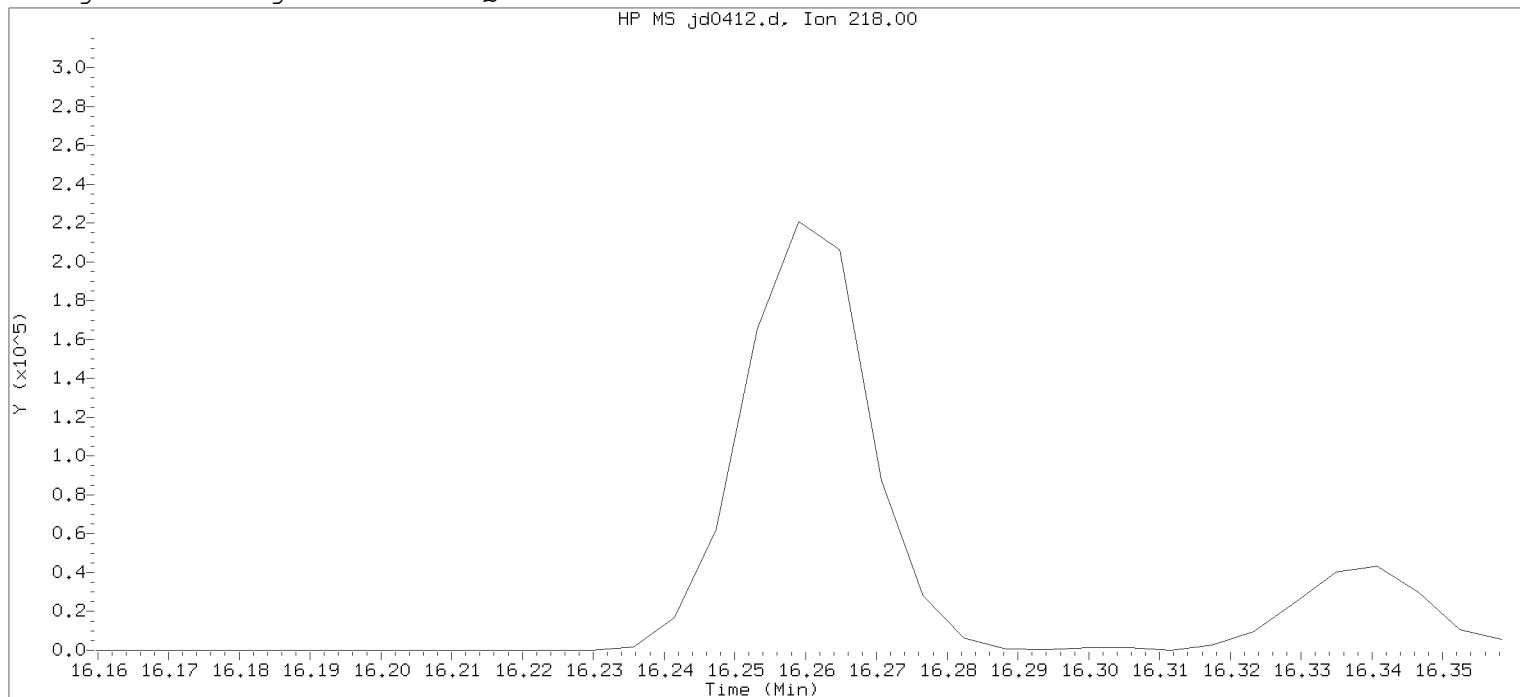
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0412.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 04:34

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

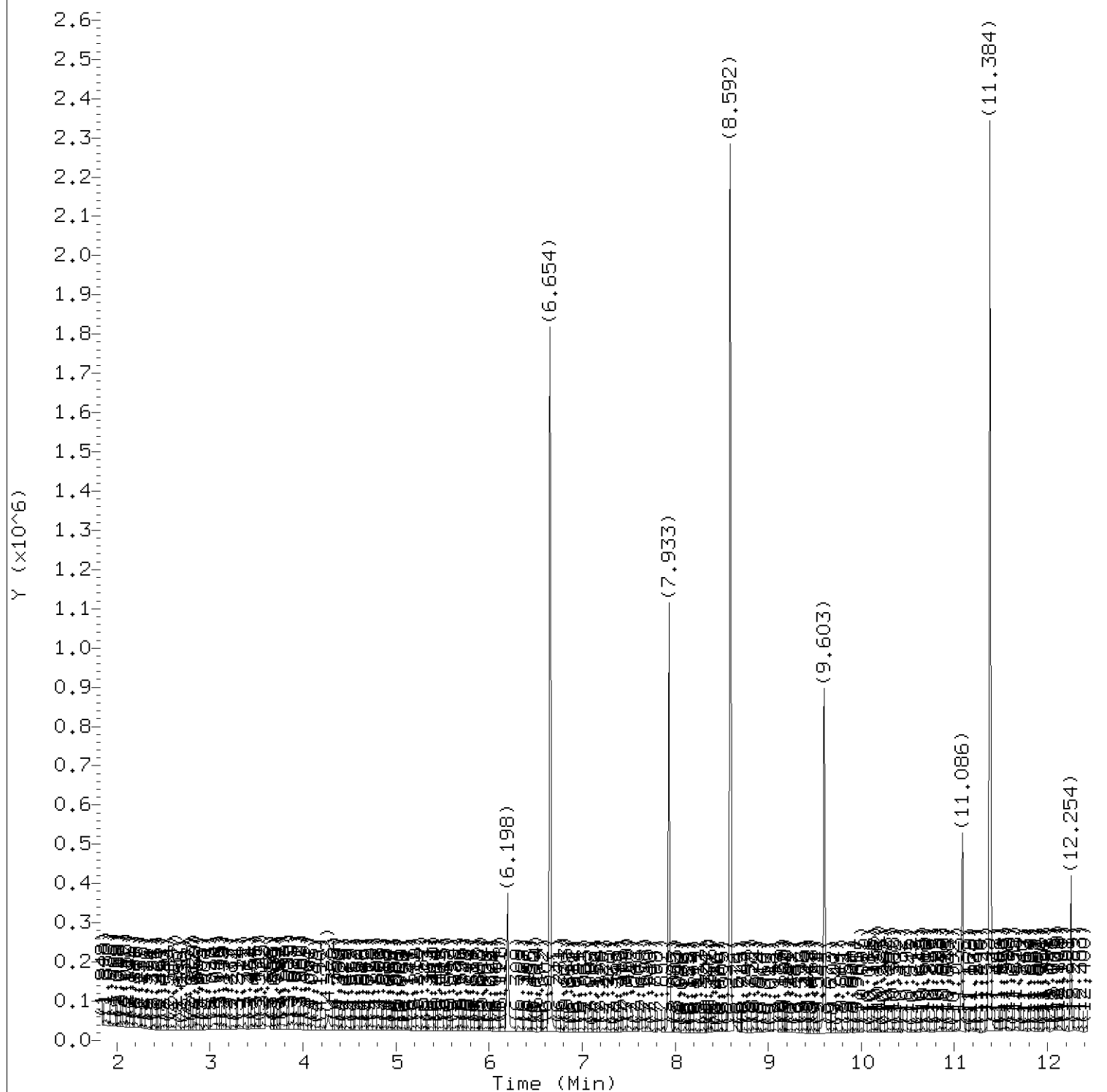
Calibration date and time: 17-APR-2020 05:07

Date, time and analyst ID of latest file update: 17-Apr-2020 05:07 Automation

Sample Name: SSTD3.75

Lab Sample ID: rvABC1070

Compound Number : 194
 Compound Name : Famphur
 Expected RT (minutes) : 16.259
 Quant Ion : 218.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0413.d
Injection date and time: 17-APR-2020 05:03

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

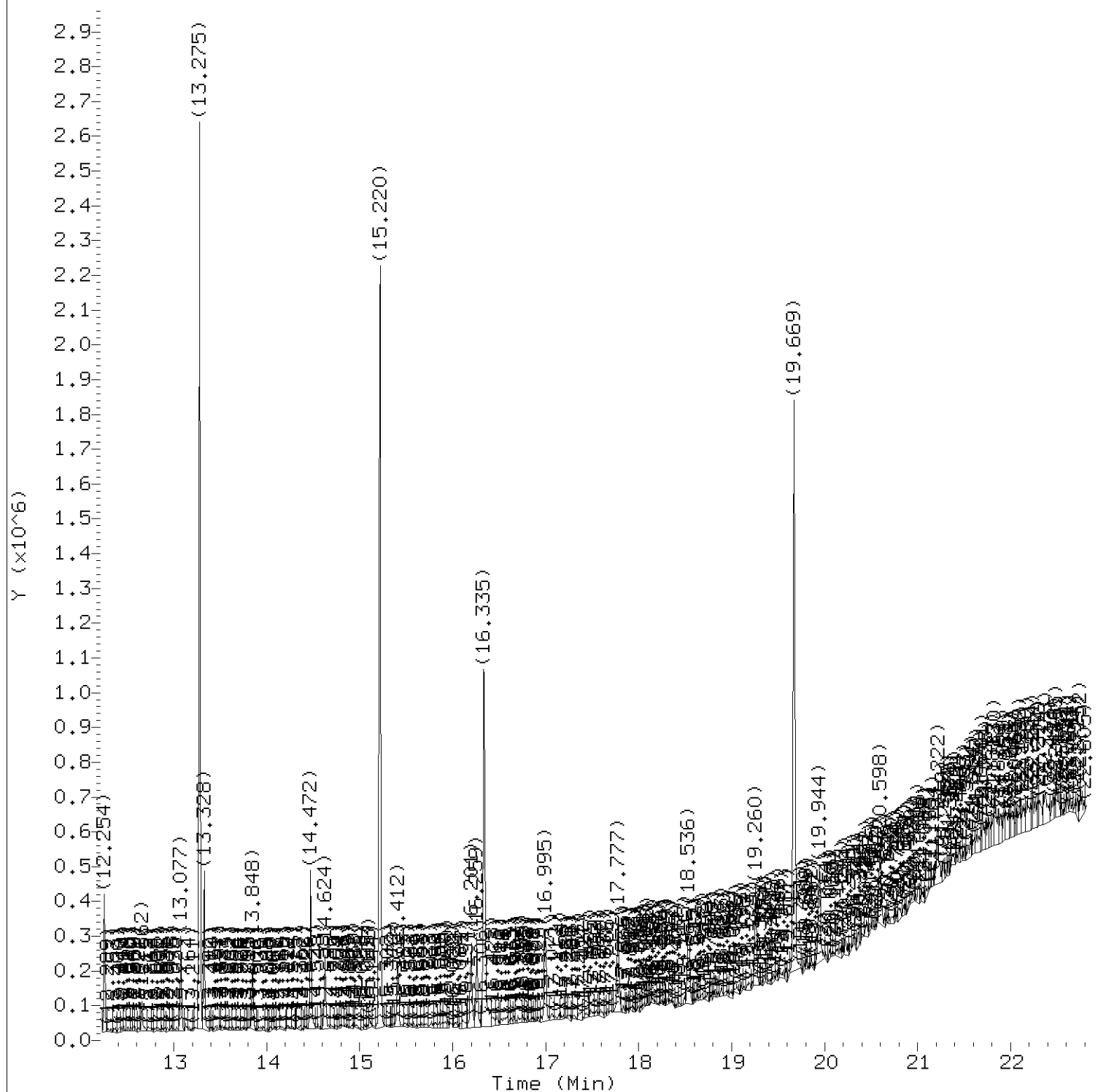
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0413.d
Injection date and time: 17-APR-2020 05:03

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0413.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 05:03

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD1.25

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.654	152	291778	5.000
68)*Naphthalene-d8	(2)	8.592	136	1088721	5.000
118)*Acenaphthene-d10	(3)	11.384	164	545368	5.000
158)*Phenanthrene-d10	(4)	13.281	188	972201	5.000
167) Disulfoton	(4)	13.328	88	79740	1.031
180)*Pyrene-d10	(5)	15.220	212	911352	5.000
194) Famphur	(5)	16.259	218	82898M	1.053
195) Kepone	(5)	16.341	272	118824	10.932
218)*Perylene-d12	(6)	19.675	264	866710	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

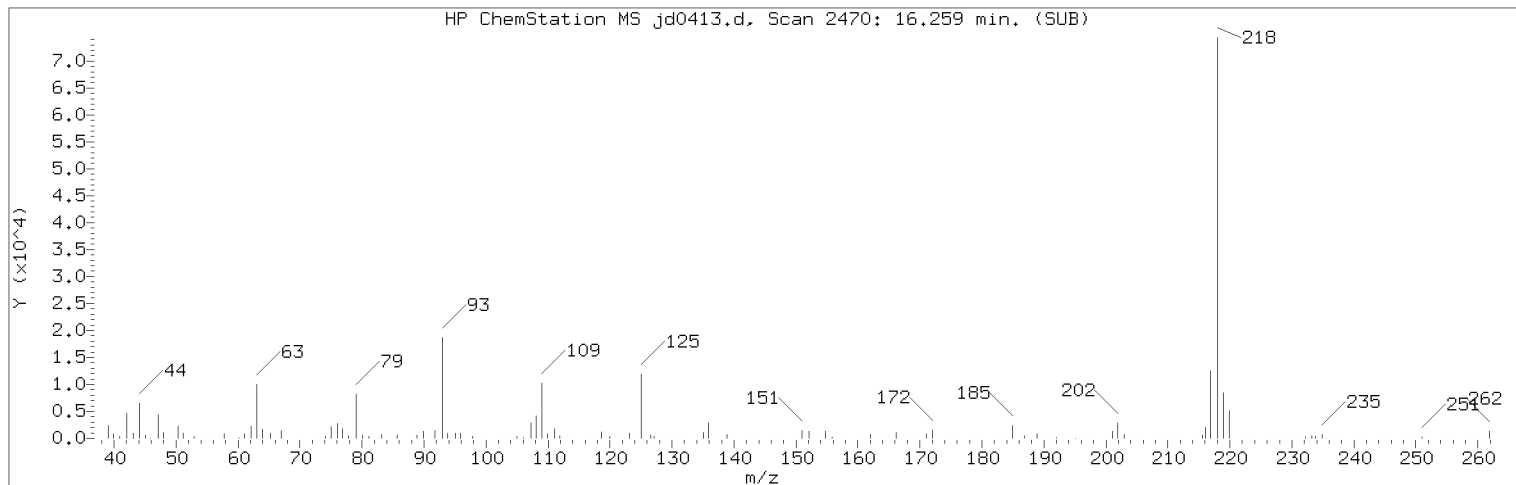
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

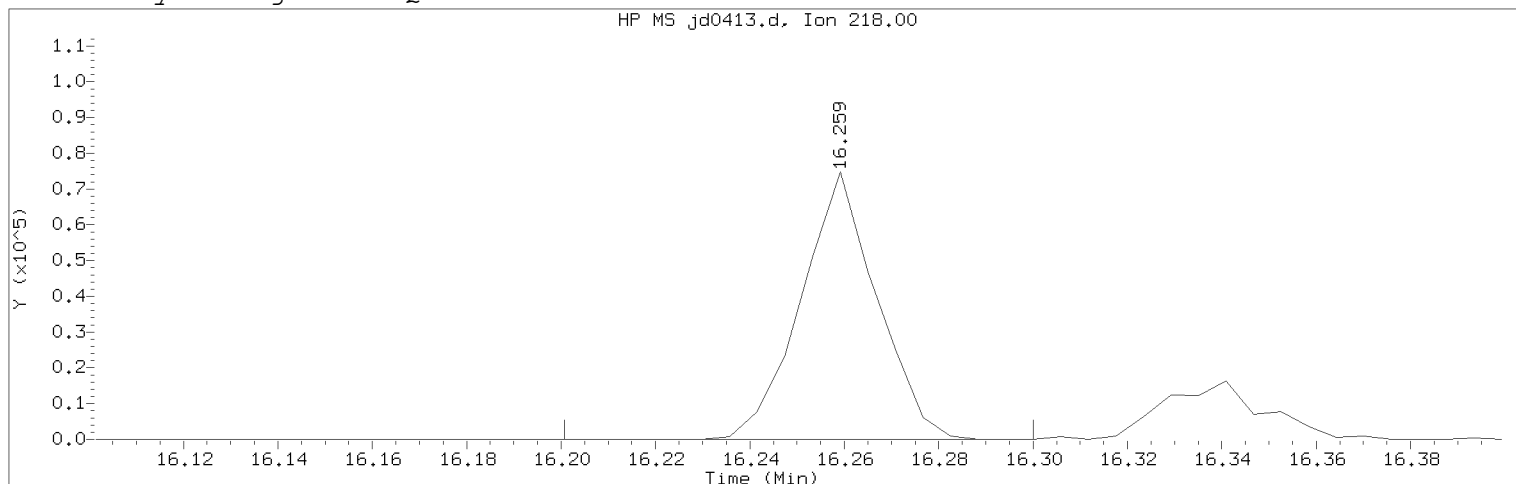
RAF59 Page 1372 of 1506

page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0413.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 05:03 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:01 knb25316

Sample Name: SSTD1.25 Lab Sample ID: rvABC1070

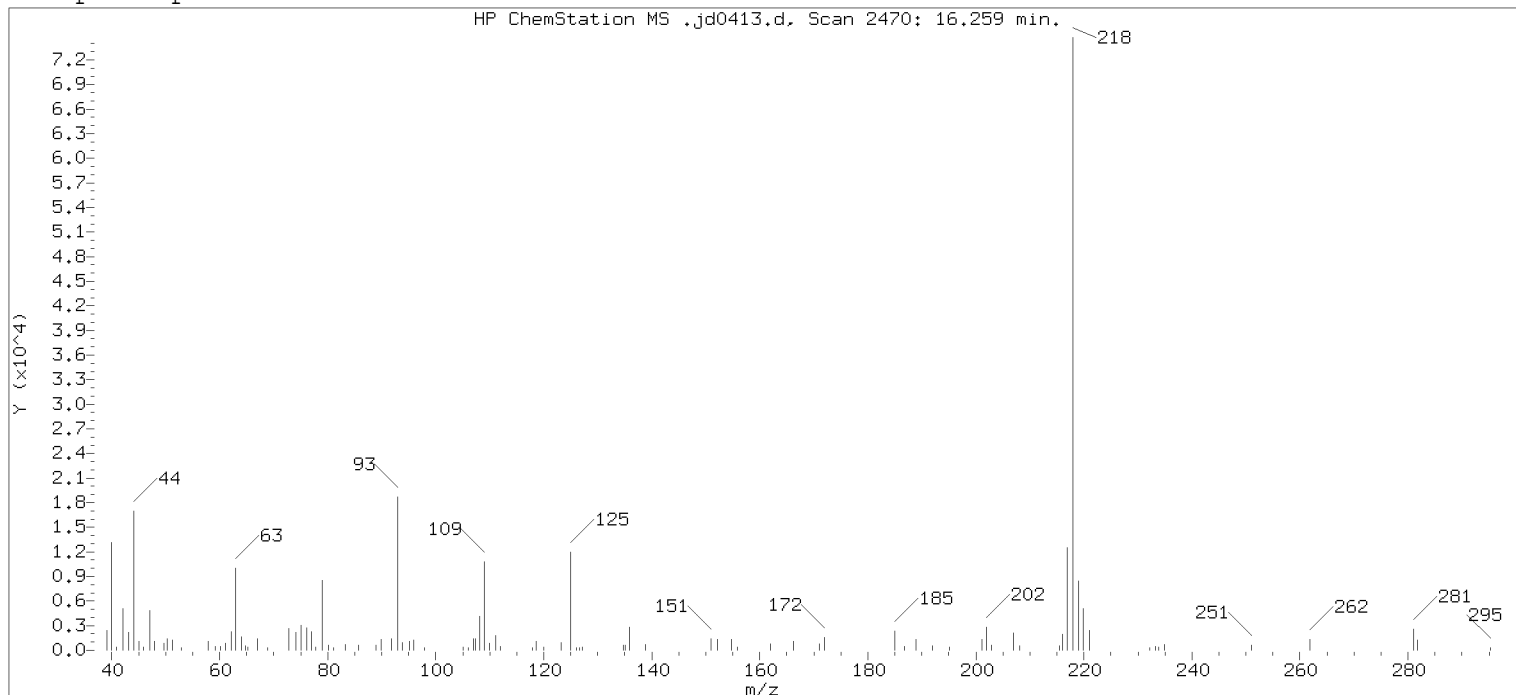
Compound Number	: 194	
Compound Name	: Famphur	
Scan Number	: 2470	
Retention Time (minutes)	: 16.259	
Quant Ion	: 218.00	
Area (flag)	: 82898M	
On-Column Amount (ng/ul)	: 1.0527	
Integration start scan	: 2459	Integration stop scan: 2476
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

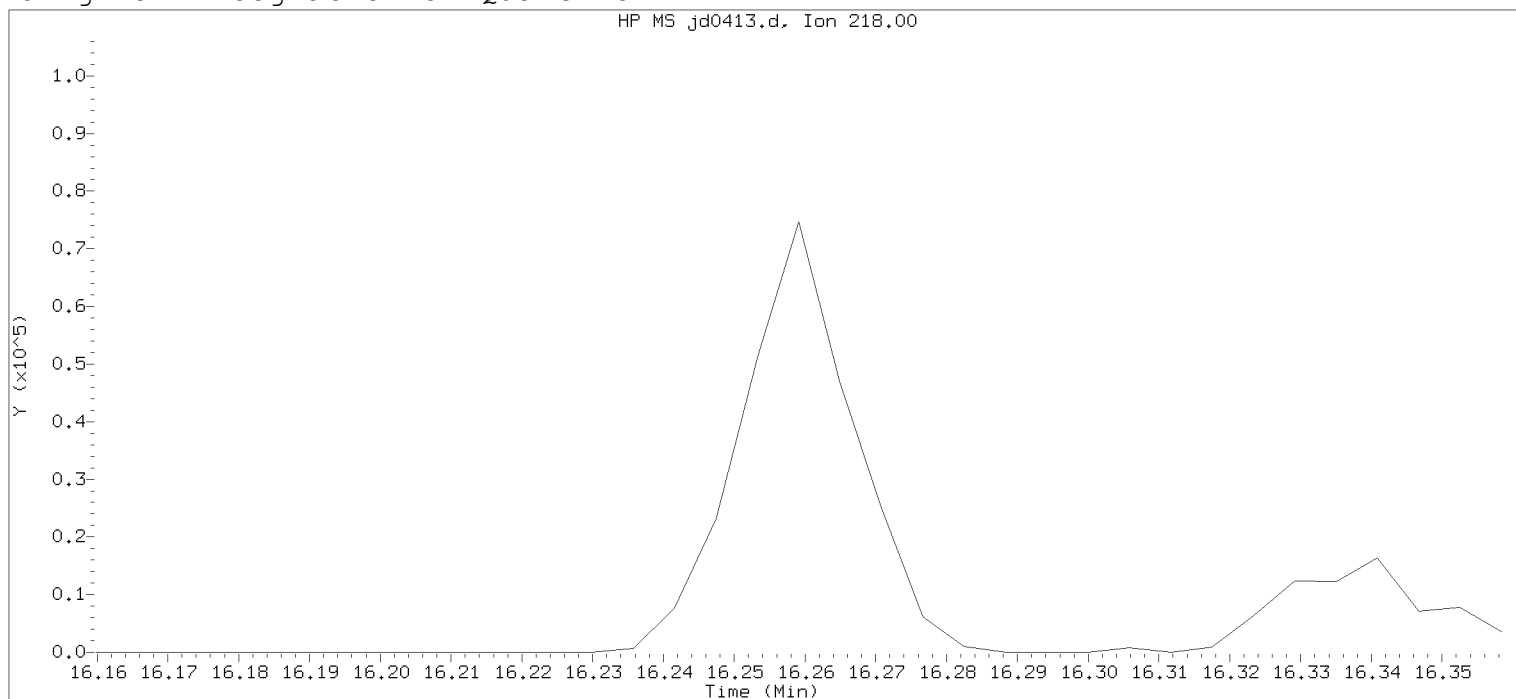
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0413.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 05:03

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

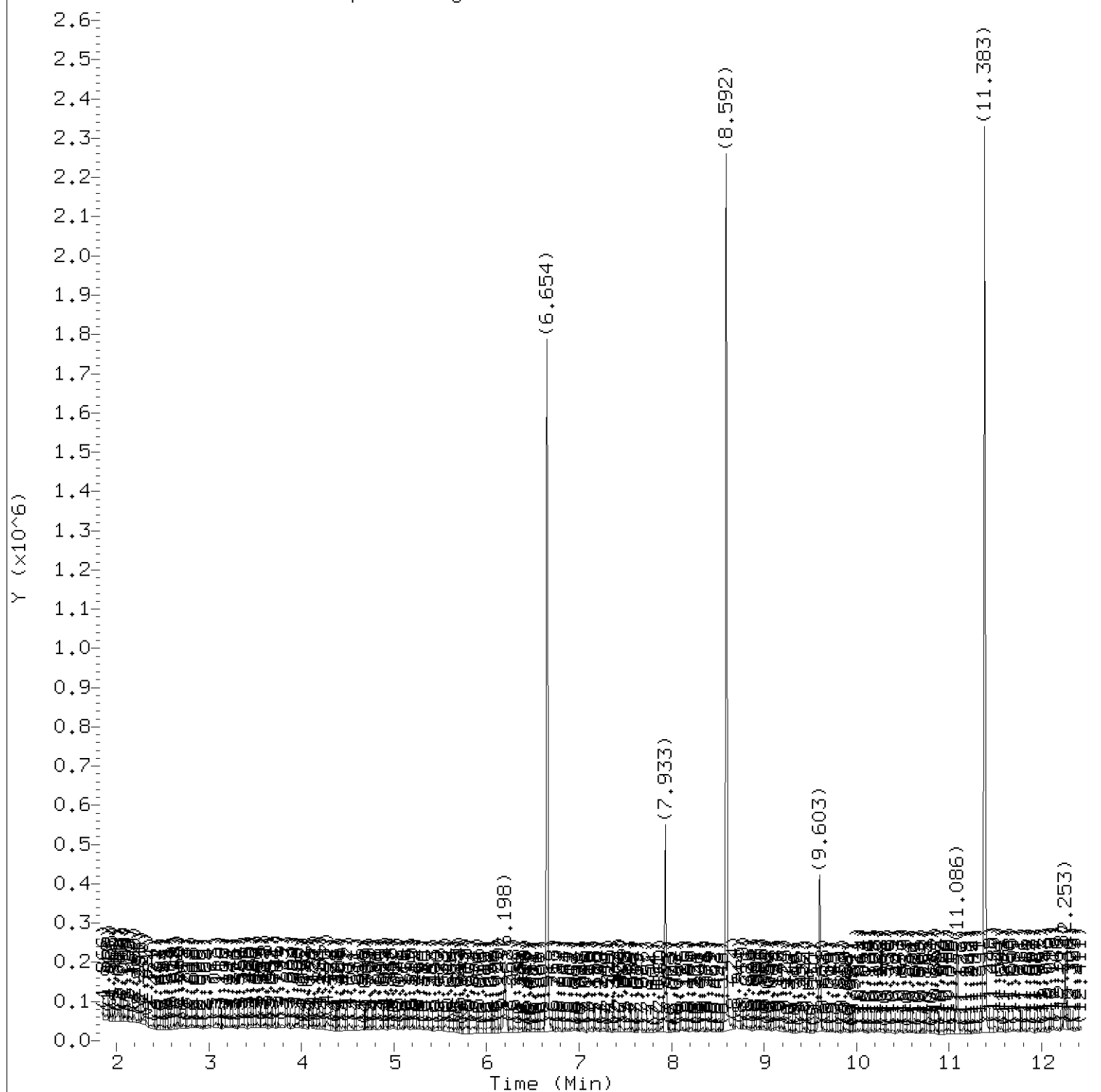
Calibration date and time: 17-APR-2020 05:38

Date, time and analyst ID of latest file update: 17-Apr-2020 05:38 Automation

Sample Name: SSTD1.25

Lab Sample ID: rvABC1070

Compound Number : 194
 Compound Name : Famphur
 Expected RT (minutes) : 16.259
 Quant Ion : 218.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0414.d
Injection date and time: 17-APR-2020 05:32

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

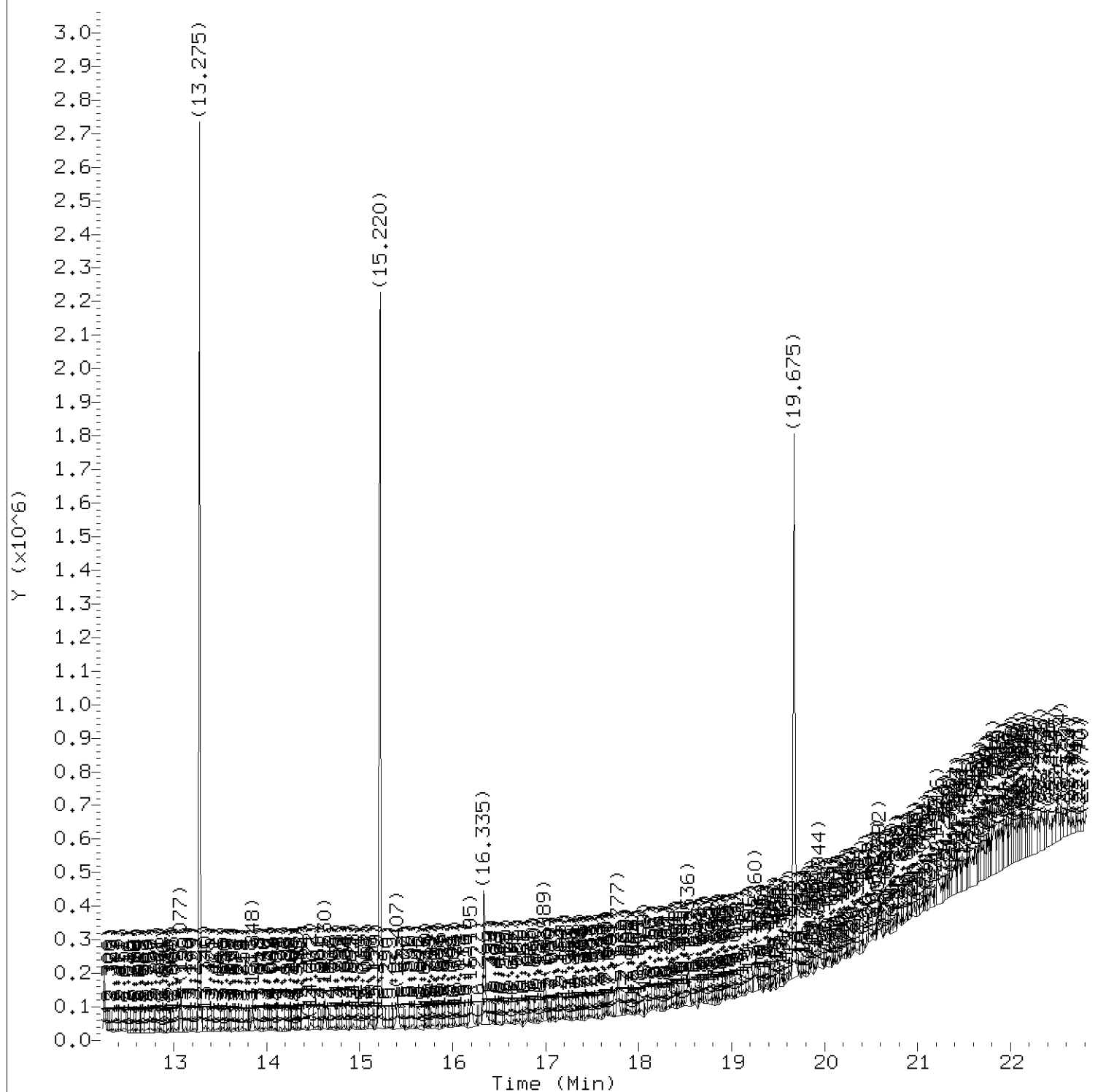
Date, time and analyst ID of latest file update: 17-Apr-2020 09:02 knb25316

Sample Name: SSTD6

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0414.d
Injection date and time: 17-APR-2020 05:32

Instrument ID: HP23264.i
Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m
Calibration date and time: 17-APR-2020 09:01

Sublist used: abc

Date, time and analyst ID of latest file update: 17-Apr-2020 09:02 knb25316

Sample Name: SSTD6

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr16a.b/jd0414.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 05:32

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:02 knb25316

Sample Name: SSTD6

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.654	152	293500	5.000
68)*Naphthalene-d8	(2)	8.592	136	1073029	5.000
118)*Acenaphthene-d10	(3)	11.383	164	526388	5.000
158)*Phenanthrene-d10	(4)	13.275	188	986193	5.000
167) Disulfoton	(4)	13.275	88	16993M	0.217
180)*Pyrene-d10	(5)	15.214	212	920562	5.000
194) Famphur	(5)	16.335	218	11321M	0.142
195) Kepone	(5)	16.341	272	48036	4.375
218)*Perylene-d12	(6)	19.675	264	841512	5.000

M = Compound was manually integrated.

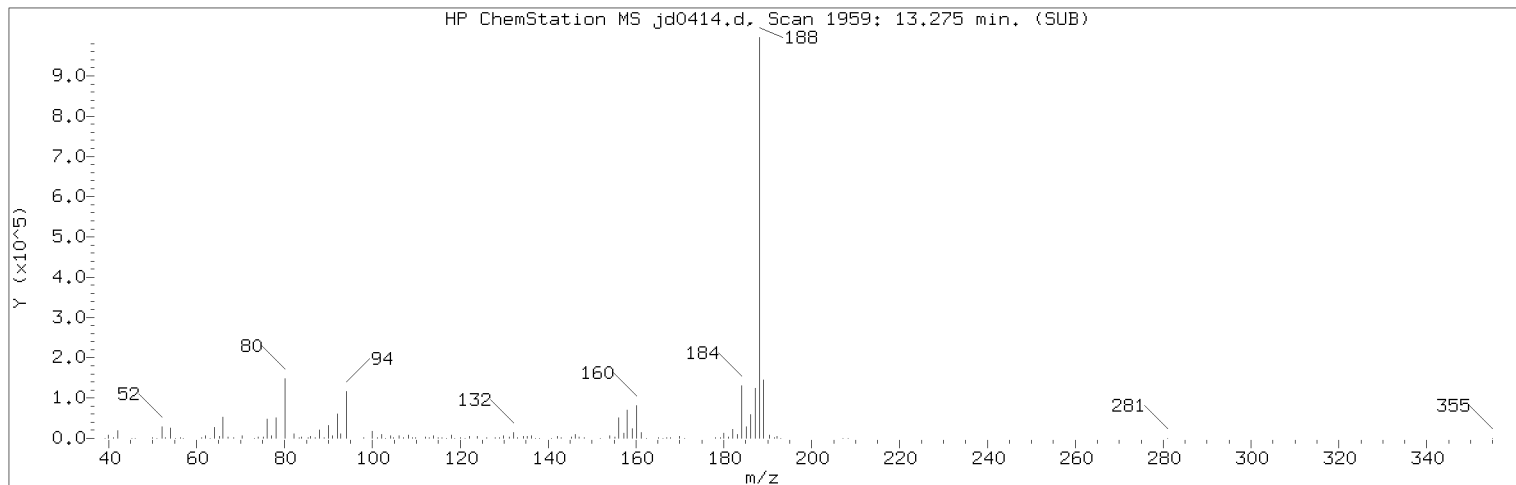
* = Compound is an internal standard.

Digitally signed by Kira N. Beck

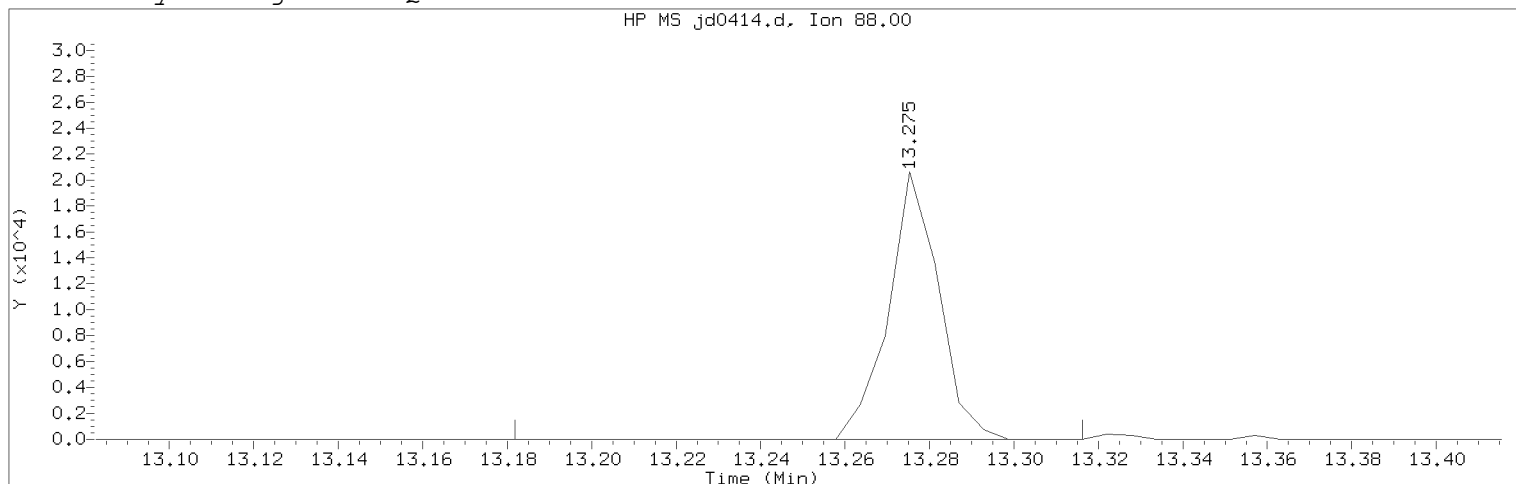
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0414.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 05:32

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 09:01

Date, time and analyst ID of latest file update: 17-Apr-2020 09:02 knb25316

Sample Name: SSTD6

Lab Sample ID: rvABC1070

Compound Number : 167

Compound Name : Disulfoton

Scan Number : 1959

Retention Time (minutes) : 13.275

Quant Ion : 88.00

Area (flag) : 16993M

On-Column Amount (ng/ul) : 0.2167

Integration start scan : 1942

Integration stop scan: 1965

Y at integration start : 0

Y at integration end: 0

Reason for manual integration: missed peak

Analyst responsible for change:

Digitally signed by Kira N. Beck

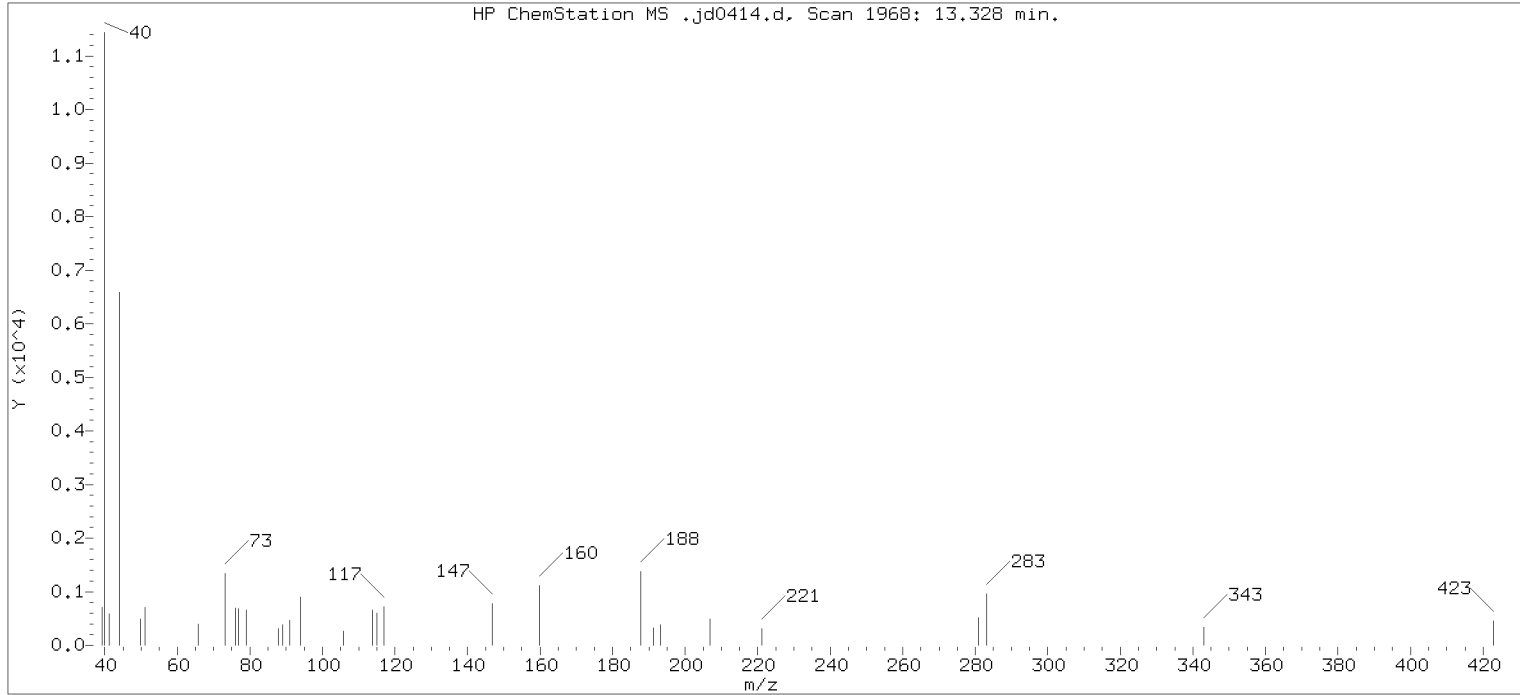
on 04/17/2020 at 09:02.

Target 3.5 esignature user ID: knb25316

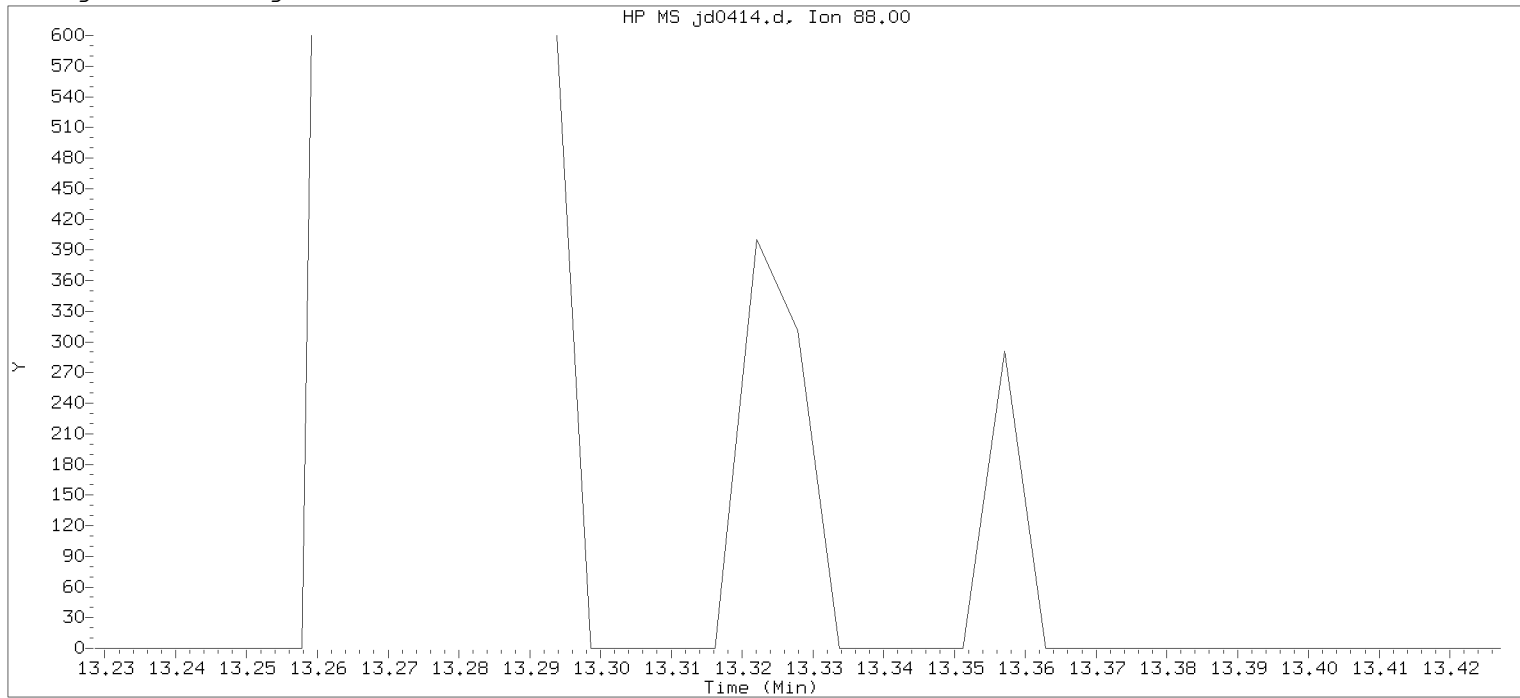
Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.

PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0414.d

Instrument ID: HP23264.i

Injection date and time: 17-APR-2020 05:32

Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m

Sublist used: abc

Calibration date and time: 17-APR-2020 06:07

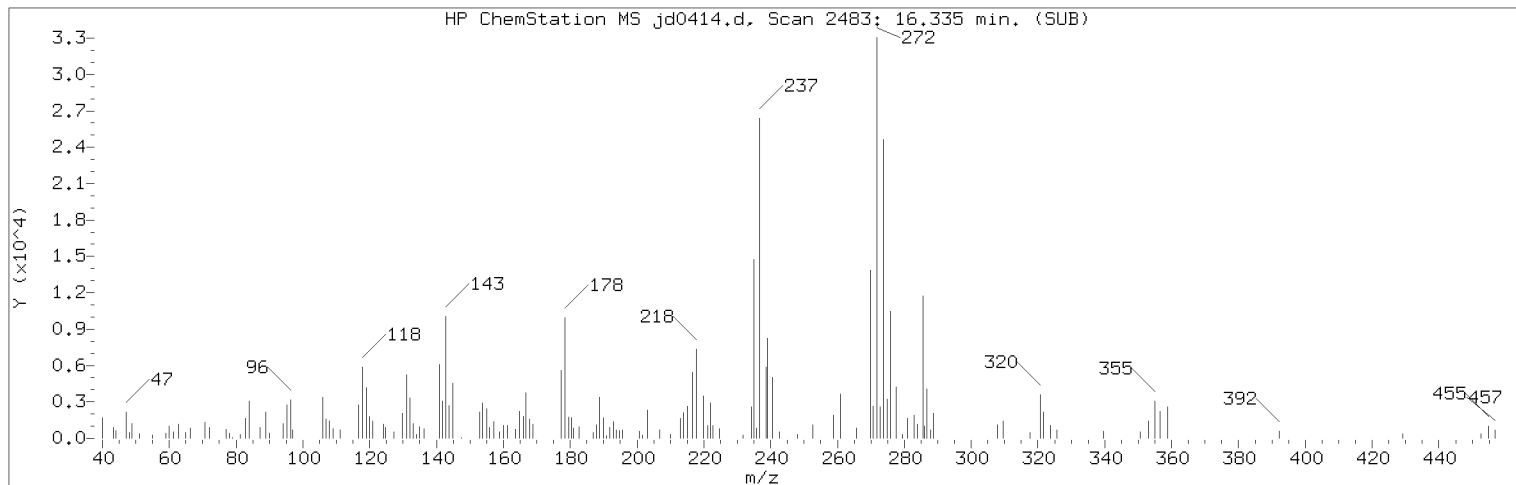
Date, time and analyst ID of latest file update: 17-Apr-2020 06:07 Automation

Sample Name: SSTD6

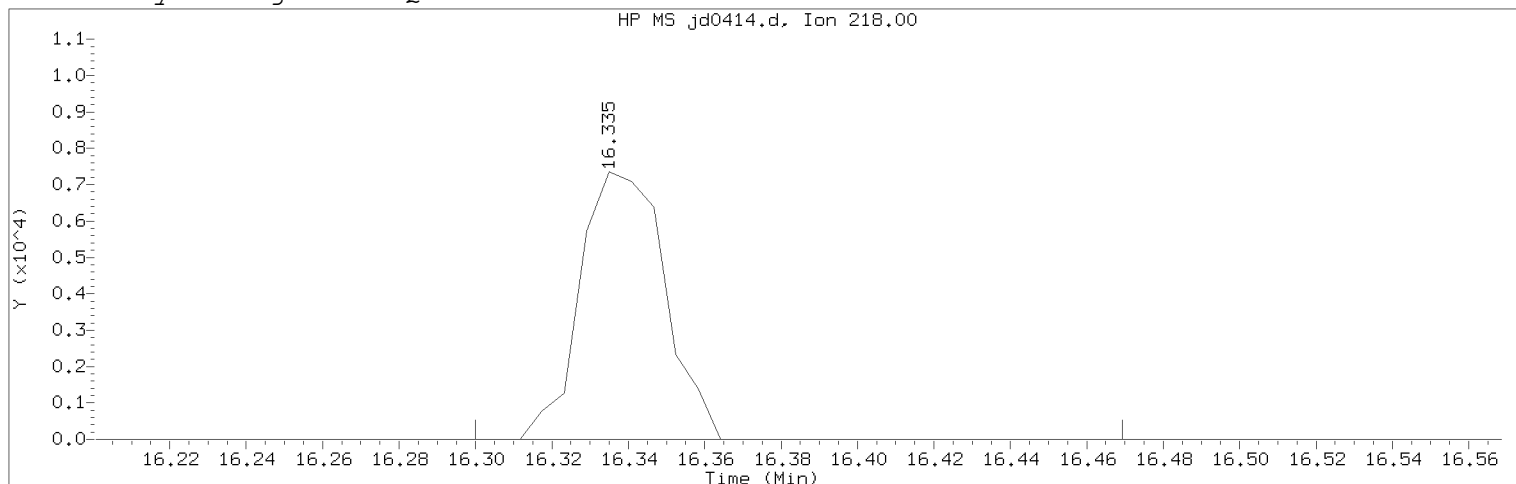
Lab Sample ID: rvABC1070

Compound Number : 167
 Compound Name : Disulfoton
 Expected RT (minutes) : 13.328
 Quant Ion : 88.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0414.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 05:32 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 09:01
Date, time and analyst ID of latest file update: 17-Apr-2020 09:02 knb25316

Sample Name: SSTD6 Lab Sample ID: rvABC1070

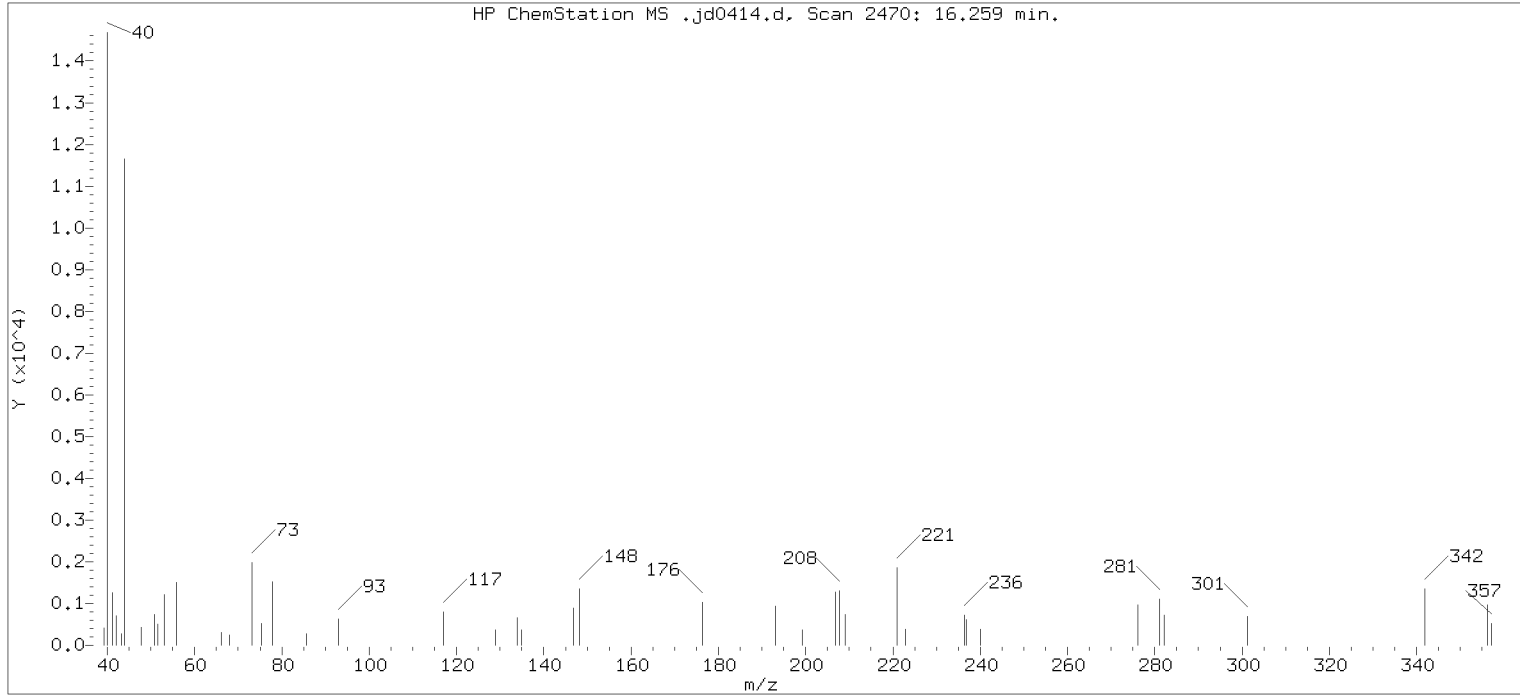
Compound Number : 194
Compound Name : Famphur
Scan Number : 2483
Retention Time (minutes) : 16.335
Quant Ion : 218.00
Area (flag) : 11321M
On-Column Amount (ng/ul) : 0.1423
Integration start scan : 2476 Integration stop scan: 2505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

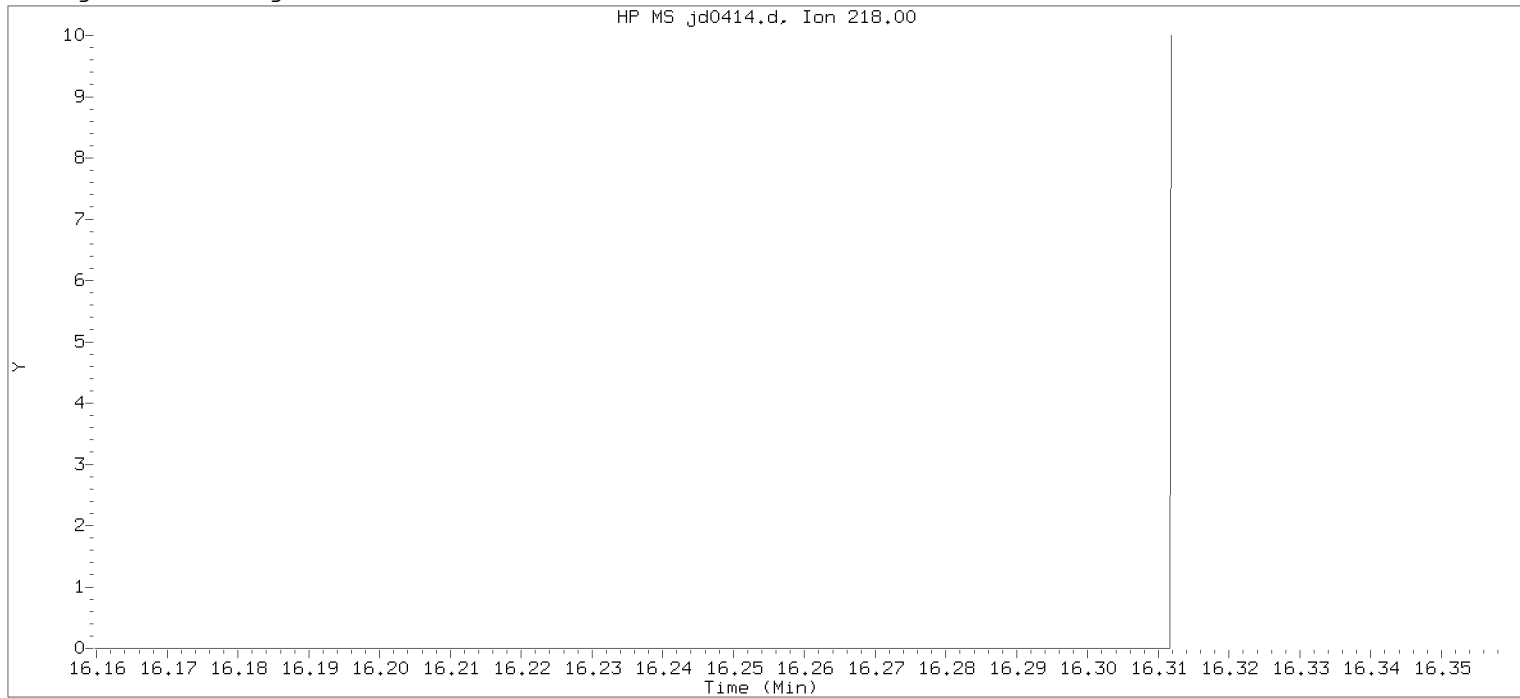
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/17/2020 at 09:02.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 04/20/2020 at 12:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr16a.b/jd0414.d Instrument ID: HP23264.i
Injection date and time: 17-APR-2020 05:32 Analyst ID: art12405

Method used: /chem/HP23264.i/20apr16a.b/rv8270d.m Sublist used: abc
Calibration date and time: 17-APR-2020 06:07
Date, time and analyst ID of latest file update: 17-Apr-2020 06:07 Automation

Sample Name: SSTD6 Lab Sample ID: rvABC1070

Compound Number : 194
Compound Name : Famphur
Expected RT (minutes) : 16.259
Quant Ion : 218.00

Date : 23-APR-2020 07:07

Client ID: DFTPP

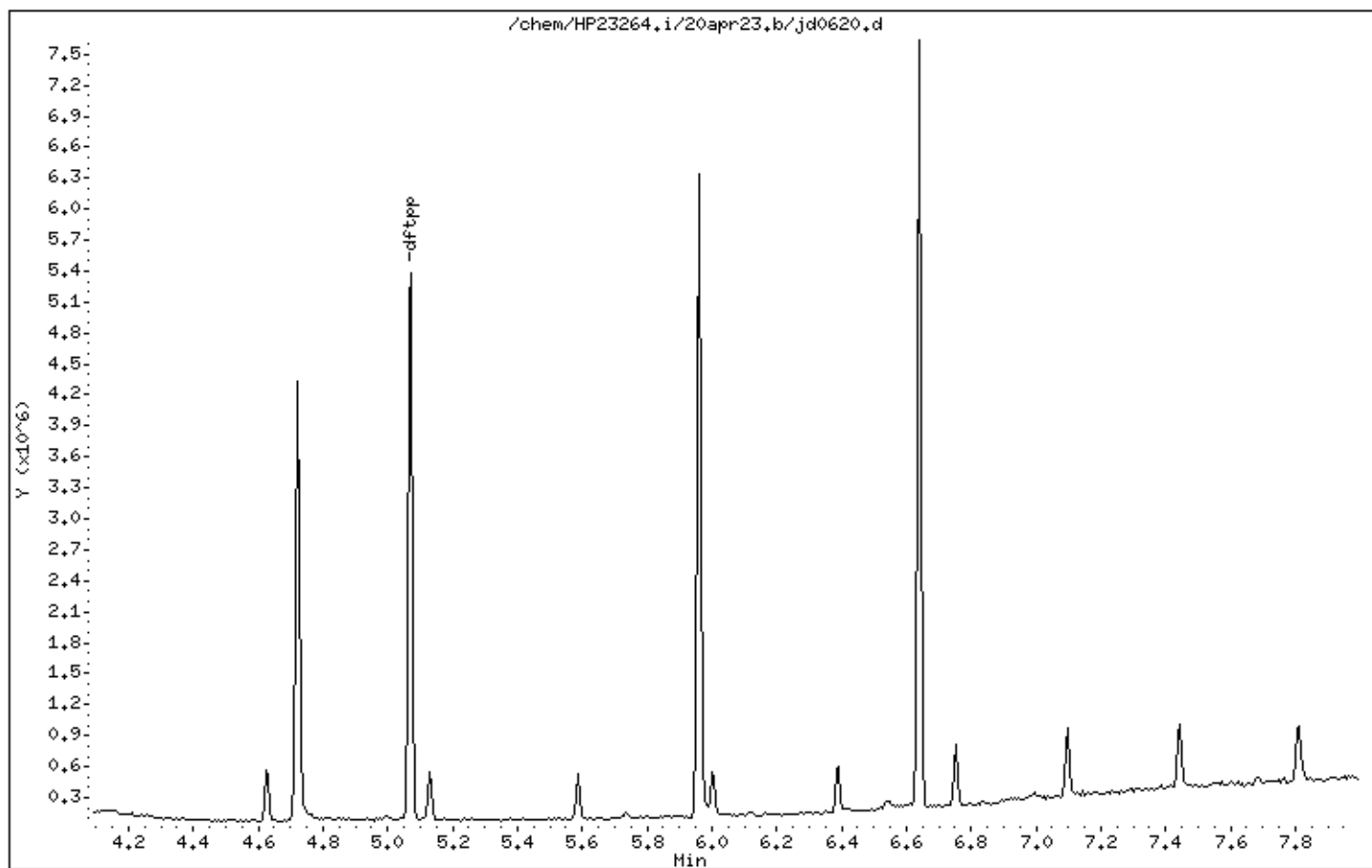
Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18



Date : 23-APR-2020 07:07

Client ID: DFTPP

Instrument: HP23264.i

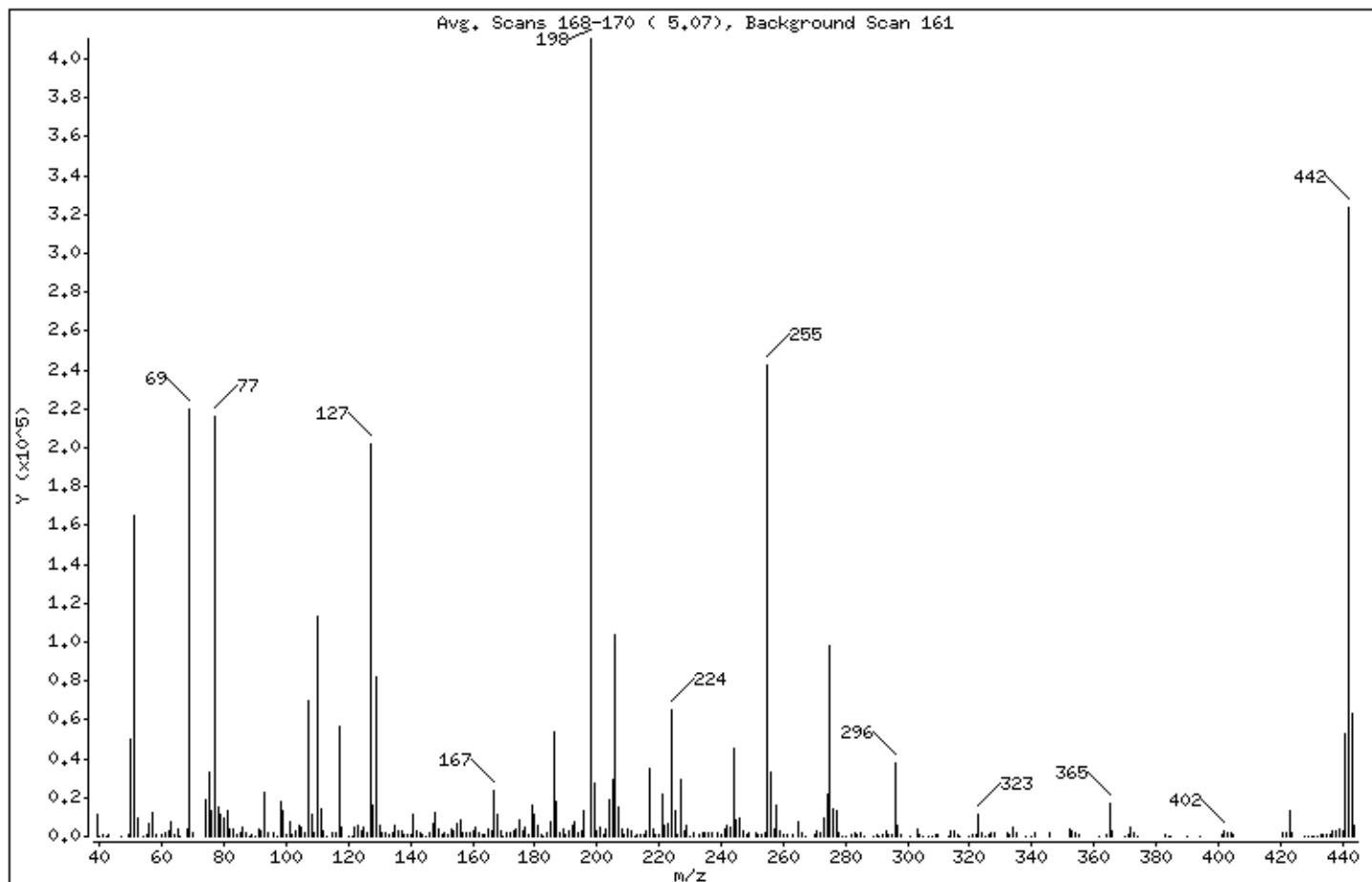
Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.26
68	Less than 2.00% of mass 69	0.84 (1.56)
69	Mass 69 relative abundance	53.66
70	Less than 2.00% of mass 69	0.37 (0.68)
127	10.00 - 80.00% of mass 198	49.14
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.58
275	10.00 - 60.00% of mass 198	23.80
365	Greater than 1.00% of mass 198	4.19
441	0.01 - 24.00% of mass 442	12.92 (16.37)
442	50.00 - 99.99% of mass 198	78.95
443	15.00 - 24.00% of mass 442	15.41 (19.52)

Date : 23-APR-2020 07:07

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0.18

Data File: jd0620.d

Spectrum: Avg. Scans 168-170 (5.07), Background Scan 161

Location of Maximum: 198.00

Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y

39.00	11026	130.00	5381	209.00	1375	297.00	5322
40.00	323	131.00	1455	210.00	3461	298.00	1039
41.00	783	132.00	1430	211.00	2744	301.00	335
42.00	393	133.00	942	212.00	308	303.00	3491
43.00	713	134.00	1568	213.00	778	304.00	1068

47.00	193	135.00	6037	214.00	518	305.00	92
49.00	742	136.00	2655	215.00	910	307.00	102
50.00	49808	137.00	3253	216.00	2968	308.00	125
51.00	165248	138.00	975	217.00	34584	309.00	599
52.00	9191	139.00	807	218.00	3823	310.00	523

54.00	91	140.00	1021	219.00	893	313.00	382
55.00	1024	141.00	11435	220.00	724	314.00	2856
56.00	6327	142.00	3023	221.00	21976	315.00	3122
57.00	12613	143.00	2294	222.00	5208	316.00	938
58.00	804	144.00	957	223.00	6946	317.00	382

60.00	992	145.00	210	224.00	64872	320.00	113
61.00	2232	146.00	2045	225.00	13327	321.00	1189
62.00	2377	147.00	6601	226.00	1389	322.00	619
63.00	7438	148.00	12243	227.00	29048	323.00	10946
64.00	1142	149.00	3729	228.00	2816	324.00	1417

65.00	3819	150.00	1026	229.00	5240	325.00	316
66.00	102	151.00	1796	230.00	350	326.00	1261
68.00	3442	152.00	911	231.00	2166	327.00	1884
69.00	220224	153.00	4102	233.00	479	328.00	1731
70.00	1499	154.00	2707	234.00	2103	332.00	1599

74.00	19080	155.00	6263	235.00	1993	333.00	730
75.00	33112	156.00	8367	236.00	1684	334.00	5167
76.00	13047	157.00	1704	237.00	2178	335.00	1710
77.00	216064	158.00	1894	239.00	1701	338.00	185
78.00	15319	159.00	2044	240.00	1123	340.00	178

79.00	11701	160.00	3295	241.00	3319	341.00	1890
80.00	9059	161.00	4633	242.00	5742	346.00	2017
81.00	13623	162.00	1851	243.00	4538	352.00	3431
82.00	3975	163.00	716	244.00	45624	353.00	2588
83.00	3408	164.00	1039	245.00	8137	354.00	2146

Date : 23-APR-2020 07:07

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0620.d

Spectrum: Avg. Scans 168-170 (5,07), Background Scan 161

Location of Maximum: 198,00

Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y

84,00	1095	165,00	3972	246,00	9551	355,00	888
85,00	2342	166,00	3176	247,00	2407	362,00	99
86,00	5180	167,00	23792	248,00	530	364,00	689
87,00	1691	168,00	11223	249,00	1868	365,00	17208
88,00	72	169,00	2678	251,00	1706	366,00	2849

89,00	798	170,00	250	252,00	768	370,00	380
90,00	130	171,00	1768	253,00	1171	371,00	1318
91,00	3486	172,00	1851	254,00	2322	372,00	4642
92,00	2947	173,00	2642	255,00	242496	373,00	1434
93,00	22360	174,00	3747	256,00	32840	374,00	188

94,00	2344	175,00	8646	257,00	4004	383,00	1049
96,00	1601	176,00	2887	258,00	16376	384,00	454
97,00	76	177,00	4514	259,00	3271	385,00	167
98,00	17696	178,00	1219	260,00	1317	390,00	168
99,00	13396	179,00	16328	261,00	482	394,00	138

100,00	853	180,00	11610	263,00	730	401,00	888
101,00	7801	181,00	5989	265,00	7695	402,00	2620
102,00	901	182,00	942	266,00	1420	403,00	1613
103,00	2929	183,00	348	267,00	106	404,00	1753
104,00	5193	184,00	1617	270,00	1156	405,00	489

105,00	4456	185,00	7373	271,00	2604	421,00	2232
106,00	1946	186,00	53712	272,00	1653	422,00	1436
107,00	70072	187,00	18104	273,00	9796	423,00	13364
108,00	11390	188,00	1696	274,00	21376	424,00	2320
109,00	2097	189,00	3635	275,00	97696	428,00	173

110,00	113208	190,00	1266	276,00	14471	429,00	274
111,00	14026	191,00	3047	277,00	12991	430,00	281
112,00	2640	192,00	5487	278,00	1709	431,00	97
113,00	295	193,00	7338	279,00	226	432,00	197
115,00	1837	194,00	1672	280,00	243	433,00	567

116,00	2124	195,00	2446	282,00	573	434,00	627
117,00	56816	196,00	12948	283,00	1462	435,00	1250
118,00	5006	198,00	410432	284,00	573	436,00	729
120,00	14	199,00	27016	285,00	1665	437,00	2766
121,00	197	200,00	2485	286,00	239	438,00	2857

Date : 23-APR-2020 07:07

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0620.d

Spectrum: Avg. Scans 168-170 (5,07), Background Scan 161

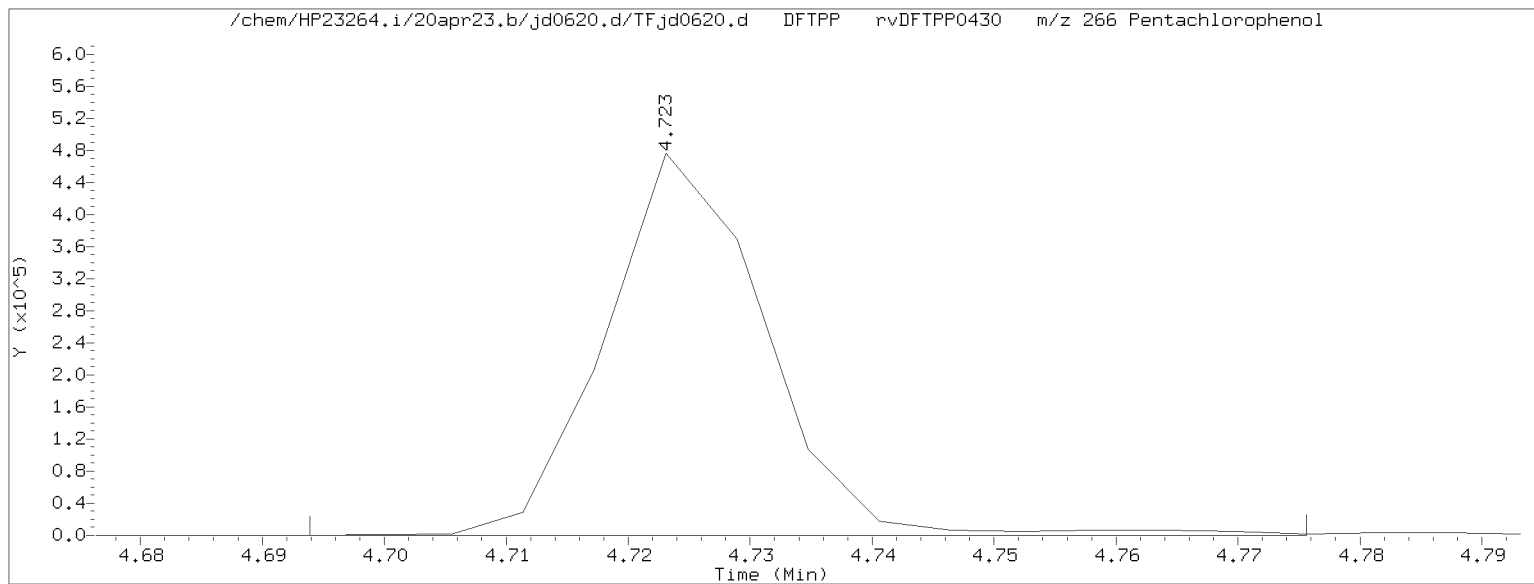
Location of Maximum: 198,00

Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122,00	4475	201,00	4329	289,00	431	439,00	4080
123,00	5846	202,00	858	290,00	1300	440,00	2375
124,00	2989	203,00	3475	291,00	181	441,00	53032
125,00	4563	204,00	18688	292,00	620	442,00	324032
126,00	1722	205,00	29528	293,00	2431	443,00	63264
127,00	201664	206,00	104032	294,00	611	444,00	5581
128,00	16374	207,00	14930	295,00	925		
129,00	81800	208,00	3379	296,00	37656		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP23264.i Injection Date: 23-APR-2020 07:07 Operator: knb25316



Pentachlorophenol EICP peak height = 476672 EICP peak height at 10% = 47667 Pentachlorophenol EICP area = 434250

Pentachlorophenol EICP peak apex (min.) = 4.723

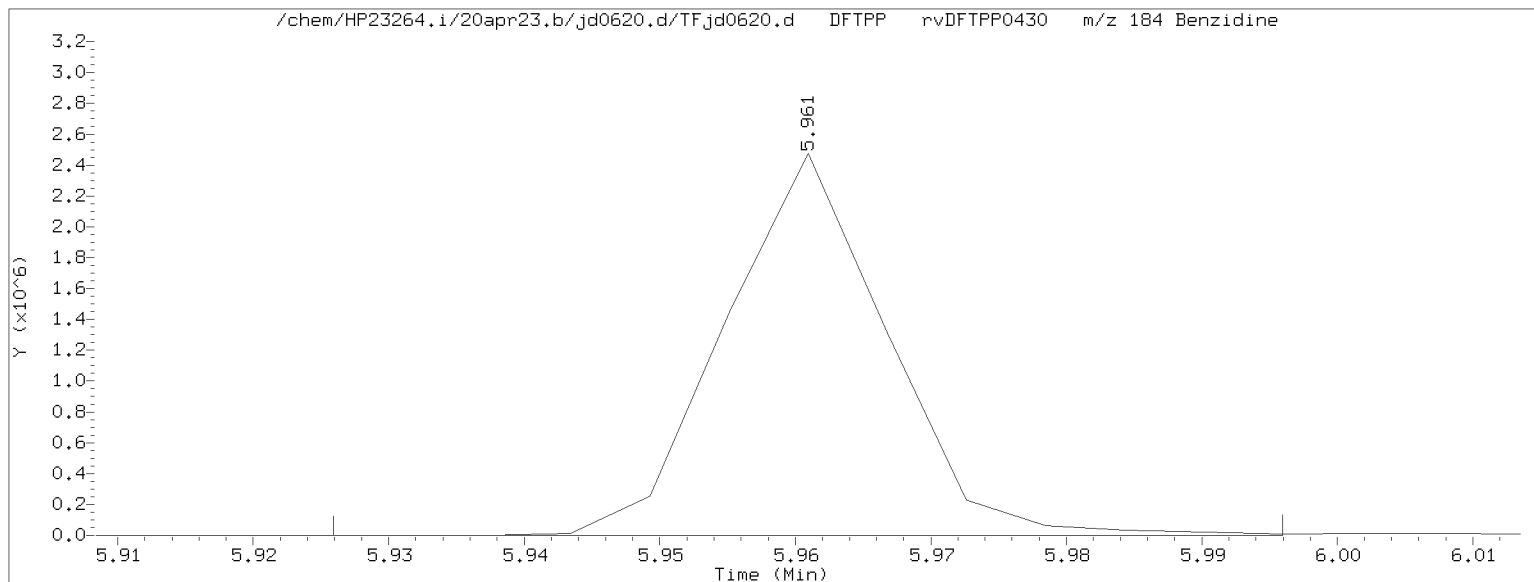
RT at 10% of front half of EICP (min.) = 4.712

RT at 10% of back half of EICP (min.) = 4.739

'Front' peak width (min.) = 0.0110500000

'Tailing' peak width (min.) = 0.0154833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0154833333}{0.0110500000} = 1.401$$



Benzidine EICP peak height = 2478080 EICP peak height at 10% = 247808 Benzidine EICP area = 2048444

Benzidine EICP peak apex (min.) = 5.961

RT at 10% of front half of EICP (min.) = 5.949

RT at 10% of back half of EICP (min.) = 5.973

'Front' peak width (min.) = 0.0116500000

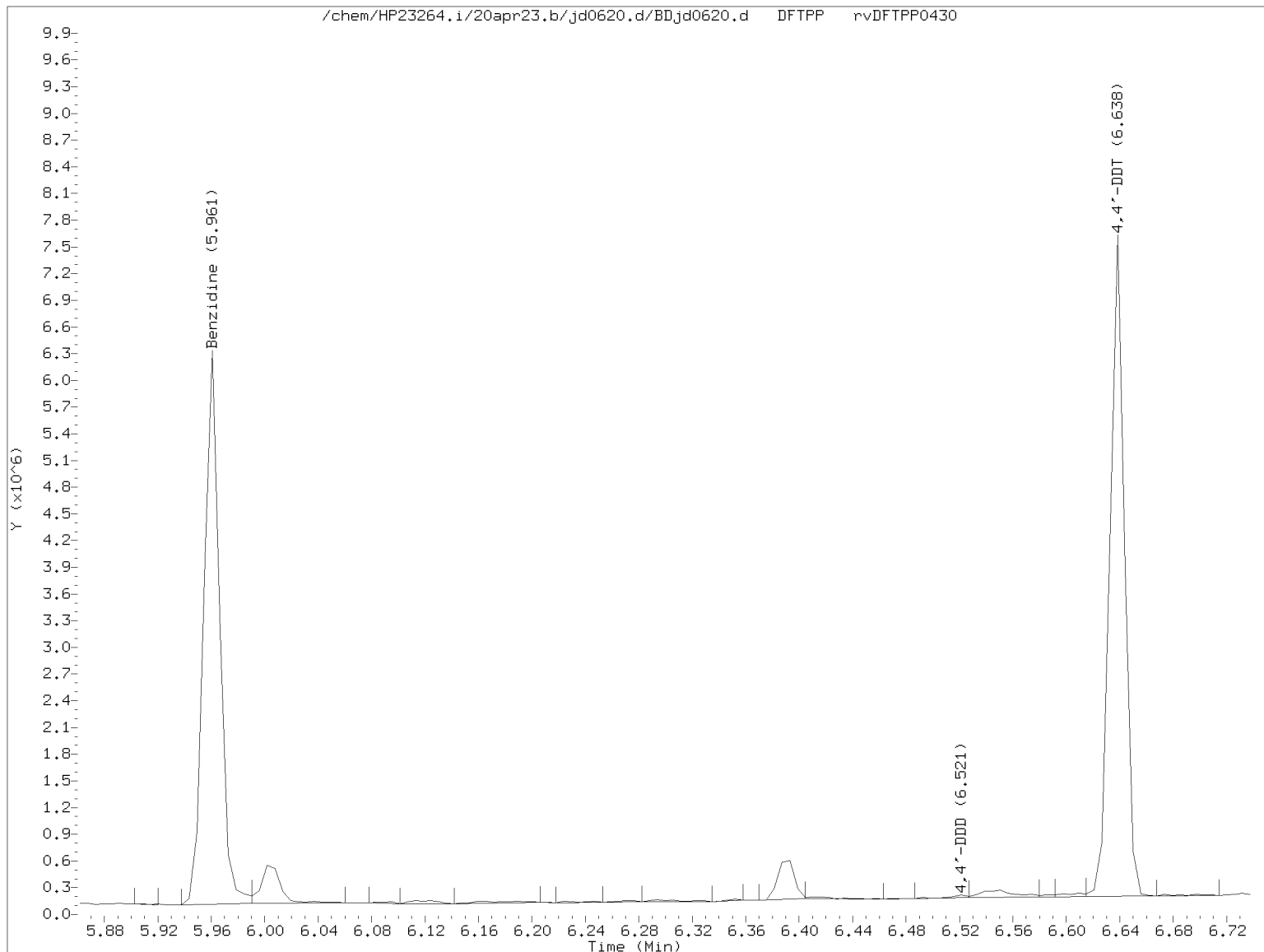
'Tailing' peak width (min.) = 0.0115500000

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0115500000}{0.0116500000} = 0.991$$

page 1 of 2
printed on 04/23/2020 at 07:26

Assessment of GC Column Performance and Injection Port Inertness for

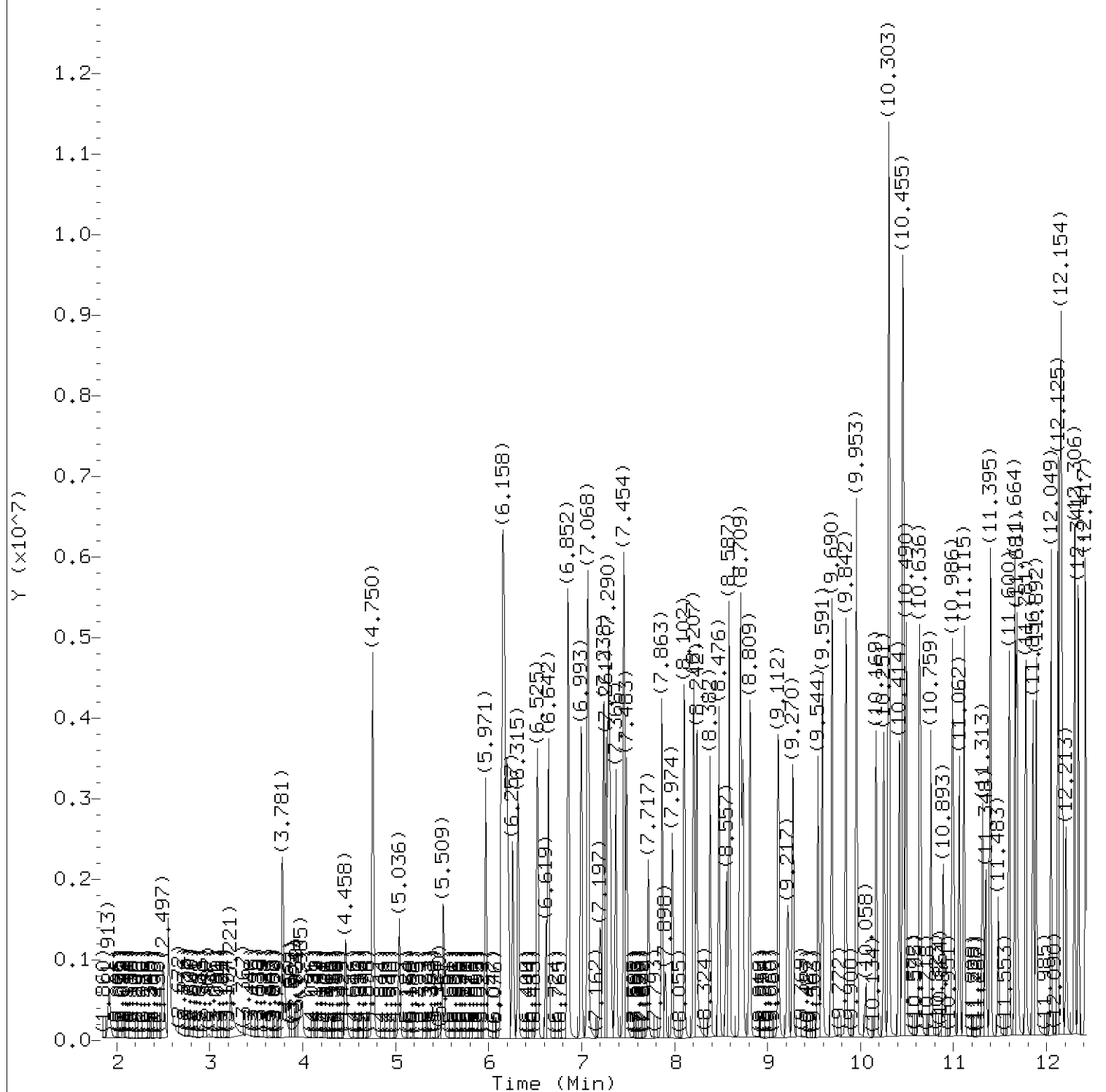
Instrument ID: HP23264.i Injection Date: 23-APR-2020 07:07 Operator: knb25316



$$\% \text{ 4,4'-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 25901}{0 + 25901 + 5717424} \times 100 = 0.5$$

page 2 of 2
printed on 04/28/2020 at 15:19



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0621.d
Injection date and time: 23-APR-2020 07:25

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 08:29

Sublist used: all1

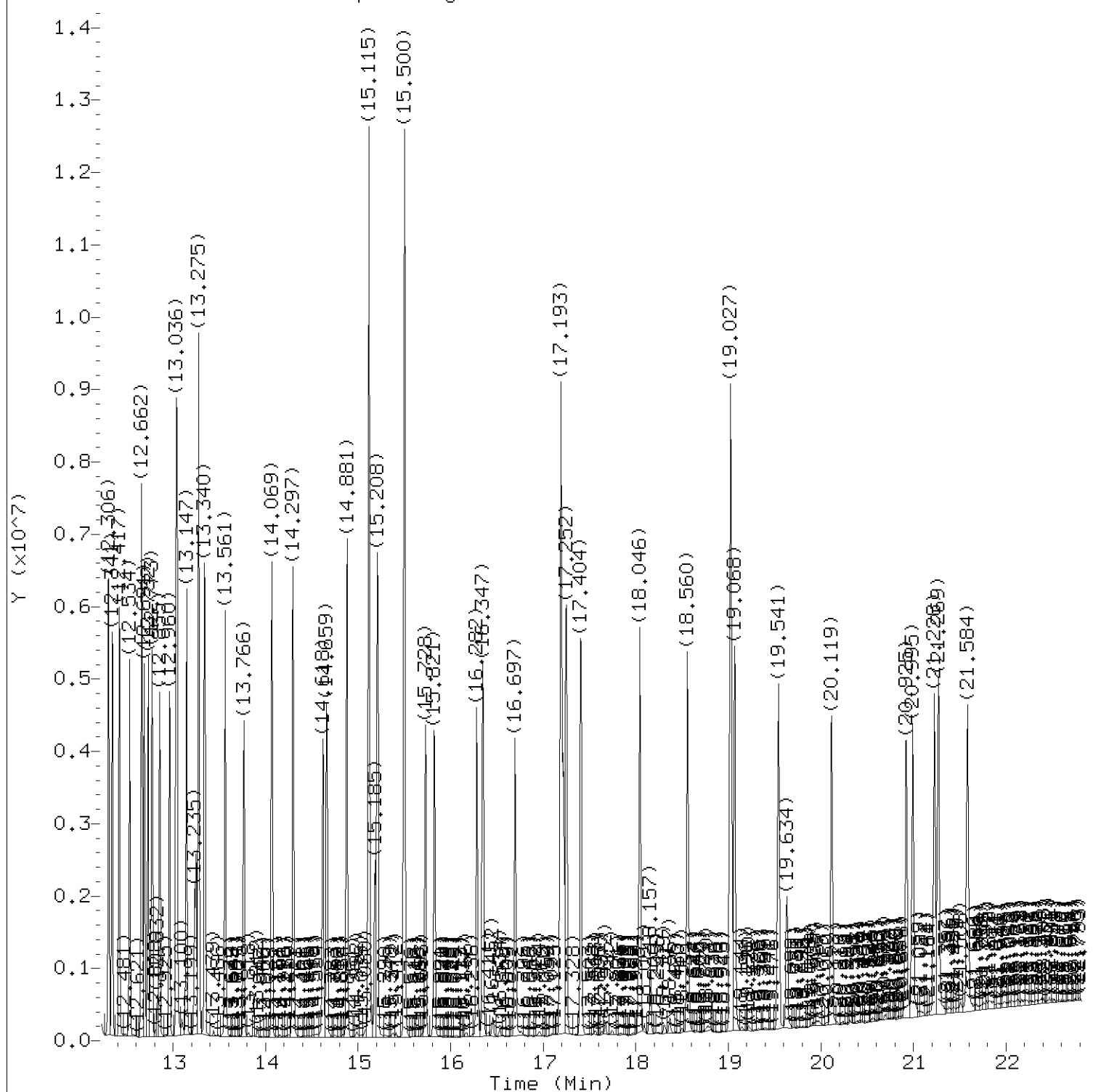
Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Digitally signed by Kira N. Beck
on 04/23/2020 at 08:31.

Target 3.5 esignature user ID: knb25316



Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0621.d
 Injection date and time: 23-APR-2020 07:25

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:29

Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	1.918	88	460581	12.090
5) N-Nitrosodimethylamine	(1)	2.497	74	739077	12.321
6) Pyridine	(1)	2.549	79	1187750	12.596
8) 2-Picoline	(1)	3.781	93	1184061	13.052
9) N-Nitrosomethylethylamine	(1)	3.991	88	467080M	11.730
10) Methyl methanesulfonate	(1)	4.458	80	652784	11.372
12) \$2-Fluorophenol	(1)	4.750	112	1856157	25.157
14) N-Nitrosodiethylamine	(1)	5.036	102	465956	12.703
16) Ethyl methanesulfonate	(1)	5.515	109	450263	13.048
43) Total Cresols	(1)			1875182	25.347
17) Benzaldehyde	(1)	5.971	77	1015423	14.371
20) Aniline	(1)	6.134	93	1594647	12.327
18) \$Phenol-d6	(1)	6.152	99	2526896	25.758
19) Phenol	(1)	6.175	94	1392543	12.329
23) bis(2-Chloroethyl) ether	(1)	6.257	93	1032443	12.538
24) 2-Chlorophenol	(1)	6.315	128	882700	13.178
25) 1,3-Dichlorobenzene	(1)	6.525	146	994503	12.402
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	253190	5.000
27) 1,4-Dichlorobenzene	(1)	6.642	146	995651	12.196
28) Benzyl alcohol	(1)	6.847	108	590110	13.007
29) 1,2-Dichlorobenzene	(1)	6.858	146	944497	12.386
31) Indene	(1)	6.993	115	1479830	13.307
35) bis(2-Chloroisopropyl) ether	(1)	7.068	45	1327822	12.322
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.068	45	1327822	12.322
32) 2-Methylphenol	(1)	7.068	108	882653	13.044
36) N-Nitrosopyrrolidine	(1)	7.197	100	499935	13.761
37) Acetophenone	(1)	7.238	105	1505080	13.418
39) N-Nitroso-di-n-propylamine	(1)	7.261	70	914996	13.285
40) N-Nitrosomorpholine	(1)	7.273	56	691360	12.090
41) o-Toluidine	(1)	7.290	106	1587597	13.366
38) 4-Methylphenol	(1)	7.302	108	992529	12.303
44) Hexachloroethane	(1)	7.366	117	476032	12.167
100) Isosafrole	(3)			768393	12.105
45) \$Nitrobenzene-d5	(2)	7.454	82	2623253	23.723
46) Nitrobenzene	(2)	7.483	77	1340991	11.821
50) N-Nitrosopiperidine	(2)	7.717	114	436180	12.466
52) Isophorone	(2)	7.863	82	2268621	12.516
53) 2-Nitrophenol	(2)	7.974	139	471995	12.930
125) 2,4,2,6-Dinitrotoluenes	(3)			1032343	26.283
55) 2,4-Dimethylphenol	(2)	8.102	107	1039419	12.413

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 04/23/2020 at 08:31.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0621.d
 Injection date and time: 23-APR-2020 07:25

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:29

Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate	(2)	8.207	198	458415	12.856
58) Benzoic acid	(2)	8.236	105	420240	9.175
57) bis(2-Chloroethoxy)methane	(2)	8.242	93	1289868	13.117
62) 2,4-Dichlorophenol	(2)	8.382	162	746637	12.044
65) 1,2,4-Trichlorobenzene	(2)	8.476	180	866551	12.066
68) *Naphthalene-d8	(2)	8.557	136	978757	5.000
69) Naphthalene	(2)	8.587	128	2537606	12.407
70) 4-Chloroaniline	(2)	8.703	127	992022	12.112
71) 2,6-Dichlorophenol	(2)	8.715	162	727218	11.868
72) Hexachloropropene	(2)	8.733	213	695889	12.766
151) Diallate trans/cis	(4)			903582	12.624
74) Hexachlorobutadiene	(2)	8.809	225	559524	11.702
78) Quinoline	(2)	9.112	129	1577000	12.259
79) Caprolactam	(2)	9.217	113	267056	13.694
80) N-Nitrosodi-n-butylamine	(2)	9.270	84	746394	12.047
83) 4-Chloro-3-methylphenol	(2)	9.544	107	832155	12.490
85) Safrole	(2)	9.591	162	662656	12.095
86) 2-Methylnaphthalene	(2)	9.690	142	1663891	12.378
87) 1-Methylnaphthalene	(2)	9.842	142	1542068	12.095
88) Hexachlorocyclopentadiene	(3)	9.953	237	650493	12.060
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959	216	879312	11.771
91) cis-Isosafrole	(3)	10.058	162	109906	1.907
93) 2,4,6-Trichlorophenol	(3)	10.169	196	584063	13.008
95) 2,4,5-Trichlorophenol	(3)	10.251	196	613855	12.453
96) \$2-Fluorobiphenyl	(3)	10.303	172	3878935	24.592
97) trans-Isosafrole	(3)	10.420	162	658487	10.198
98) 1,1'-Biphenyl	(3)	10.455	154	2074475	12.269
99) 2-Chloronaphthalene	(3)	10.461	162	1767348	12.381
101) 1-Chloronaphthalene	(3)	10.490	162	1545803	11.758
103) Diphenyl ether	(3)	10.636	170	1151524	12.364
104) 2-Nitroaniline	(3)	10.654	138	509504	12.472
108) 1,4-Naphthoquinone	(3)	10.759	158	671416	12.551
109) 1,4-Dinitrobenzene	(3)	10.893	168	277392	13.374
110) Dimethylphthalate	(3)	10.986	163	1913079	12.537
111) 1,3-Dinitrobenzene	(3)	11.004	168	304260	12.980
113) 2,6-Dinitrotoluene	(3)	11.062	165	448396	13.440
114) Acenaphthylene	(3)	11.115	152	2371634	12.658
117) 3-Nitroaniline	(3)	11.313	138	429317	13.073
118) *Acenaphthene-d10	(3)	11.348	164	486796	5.000
119) Acenaphthene	(3)	11.395	153	1651116	12.702

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
 on 04/23/2020 at 08:31.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0621.d
 Injection date and time: 23-APR-2020 07:25

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:29

Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
120) 2,4-Dinitrophenol	(3)	11.483	184	254308	12.689
122) Pentachlorobenzene	(3)	11.600	250	735840	11.911
124) Dibenzofuran	(3)	11.664	168	2344708	12.309
123) 2,4-Dinitrotoluene	(3)	11.681	165	583947	12.843
121) 4-Nitrophenol	(3)	11.687	109	333279	10.280
126) 1-Naphthylamine	(3)	11.781	143	1552973	12.320
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856	232	490418	13.293
128) 2-Naphthylamine	(3)	11.892	143	1473274	11.912
129) Diethylphthalate	(3)	12.049	149	1910873	12.837
131) Fluorene	(3)	12.125	166	1850273	12.414
130) Thionazin	(3)	12.143	107	367407	12.920
132) 4-Chlorophenyl-phenylether	(3)	12.154	204	942698	12.877
133) 5-Nitro-o-toluidine	(3)	12.160	152	494362	12.934
134) 4-Nitroaniline	(3)	12.172	138	449498	12.463
135) 4,6-Dinitro-2-methylphenol	(4)	12.213	198	351165	13.119
137) NDPA as diphenylamine	(4)	12.306	169	1509094	12.359
136) N-Nitrosodiphenylamine	(4)	12.306	169	1509094	12.359
139) 1,2-Diphenylhydrazine	(4)	12.341	77	2424382	11.417
140) \$2,4,6-Tribromophenol	(3)	12.423	330	594059	27.638
142) Tetraethyldithiopyrophosphate	(4)	12.528	97	426022	12.806
145) Diallate (peak 1)	(4)	12.656	86	671403	9.389
146) Phorate	(4)	12.662	75	1416187	13.334
147) Phenacetin	(4)	12.691	108	1014697	12.942
148) 4-Bromophenyl-phenylether	(4)	12.732	248	529577	11.634
149) Diallate (peak 2)	(4)	12.756	86	232179	3.235
150) Hexachlorobenzene	(4)	12.773	284	589126	12.231
152) Dimethoate	(4)	12.855	87	932635	13.794
153) Atrazine	(4)	12.966	200	526043	12.942
156) Pentachloronitrobenzene	(4)	13.036	237	303079	12.563
154) Pentachlorophenol	(4)	13.036	266	349063	11.283
155) 4-Aminobiphenyl	(4)	13.048	169	1549530	11.379
157) Pronamide	(4)	13.147	173	928208	13.775
158) *Phenanthrene-d10	(4)	13.246	188	917663	5.000
160) Phenanthrene	(4)	13.275	178	2650705	12.430
159) Dinoseb	(4)	13.281	211	497946	13.965
162) Anthracene	(4)	13.340	178	2671629	12.661
168) Carbazole	(4)	13.567	167	2443056	12.460
169) Methyl parathion	(4)	13.766	109	723518	13.211
170) Di-n-butylphthalate	(4)	14.069	149	3388335	13.023
172) Parathion	(4)	14.291	109	446890	13.490

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck

on 04/23/2020 at 08:31.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0621.d
 Injection date and time: 23-APR-2020 07:25

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:29

Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
173) 4-Nitroquinoline-1-oxide	(4)	14.303	190	292563	11.671
174) Octachlorostyrene	(4)	14.618	308	258490	12.118
176) Isodrin	(4)	14.659	193	350342	11.708
178) Fluoranthene	(4)	14.881	202	3190271	12.837
227) Total PAHs	(6)			44820944	229.864
179) Benzidine	(5)	15.120	184	5788208	38.124
180)*Pyrene-d10	(5)	15.185	212	932321	5.000
182) Pyrene	(5)	15.208	202	3173931	12.618
184)\$Terphenyl-d14	(5)	15.500	244	4430298	26.219
187) p-Dimethylaminoazobenzene	(5)	15.728	225	555814	12.958
190) Chlorobenzilate	(5)	15.821	139	1029826	13.999
192) 3,3'-Dimethylbenzidine	(5)	16.282	212	1912224	13.239
193) Butylbenzylphthalate	(5)	16.347	149	1446793	13.325
196) 2-Acetylaminofluorene	(5)	16.697	181	1129842	13.247
200) Benzo(a)anthracene	(5)	17.188	228	2875638	13.514
198) 3,3'-Dichlorobenzidine	(5)	17.193	252	1123115	12.900
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.217	231	571737	13.035
201) Chrysene	(5)	17.252	228	2877228	13.005
204) bis(2-Ethylhexyl)phthalate	(5)	17.409	149	2071870	13.804
208) 6-Methylchrysene	(5)	18.046	242	2110863	13.205
210) Di-n-octylphthalate	(6)	18.560	149	3644140	14.421
211) Benzo(b)fluoranthene	(6)	19.021	252	2909829	12.537
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.033	256	1262578	12.624
213) Benzo(k)fluoranthene	(6)	19.068	252	2825340	12.793
216) Benzo(a)pyrene	(6)	19.547	252	2709026	12.799
218)*Perylene-d12	(6)	19.634	264	901999	5.000
220) 3-Methylcholanthrene	(6)	20.119	268	1399346	14.057
222) Dibenz(a,h)acridine	(6)	20.925	279	2045058	13.364
223) Dibenz(a,j)acridine	(6)	20.995	279	2211585	13.400
224) Indeno(1,2,3-cd)pyrene	(6)	21.228	276	2367648M	13.355
225) Dibenz(a,h)anthracene	(6)	21.269	278	2459105	13.292
226) Benzo(g,h,i)perylene	(6)	21.584	276	2494006	13.369

M = Compound was manually integrated.

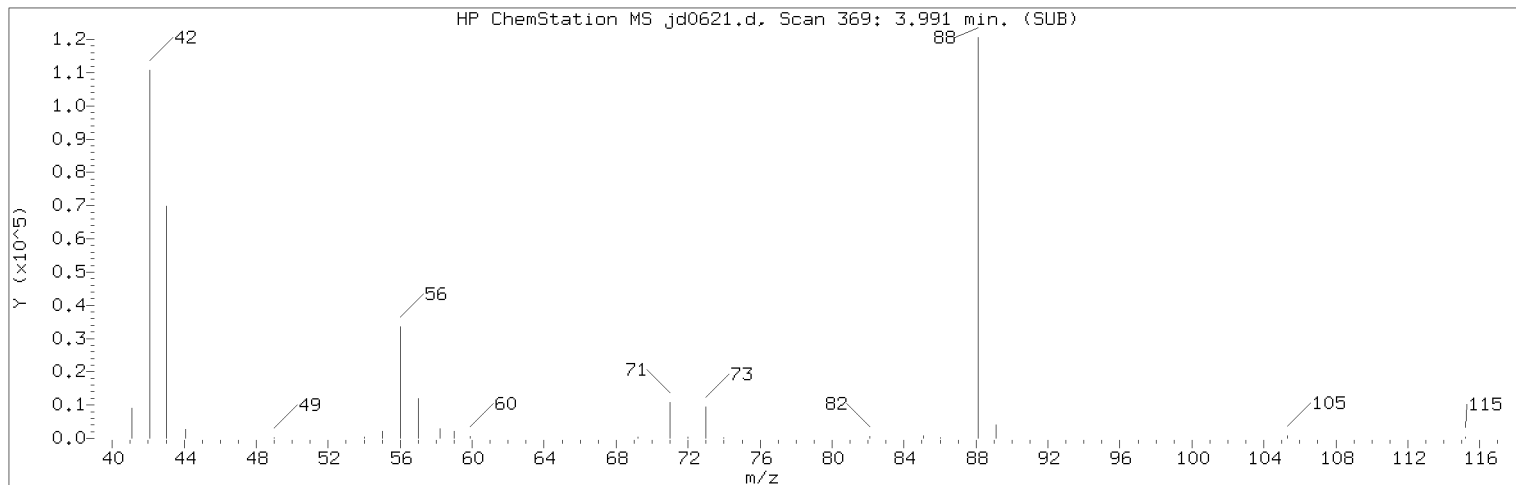
* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

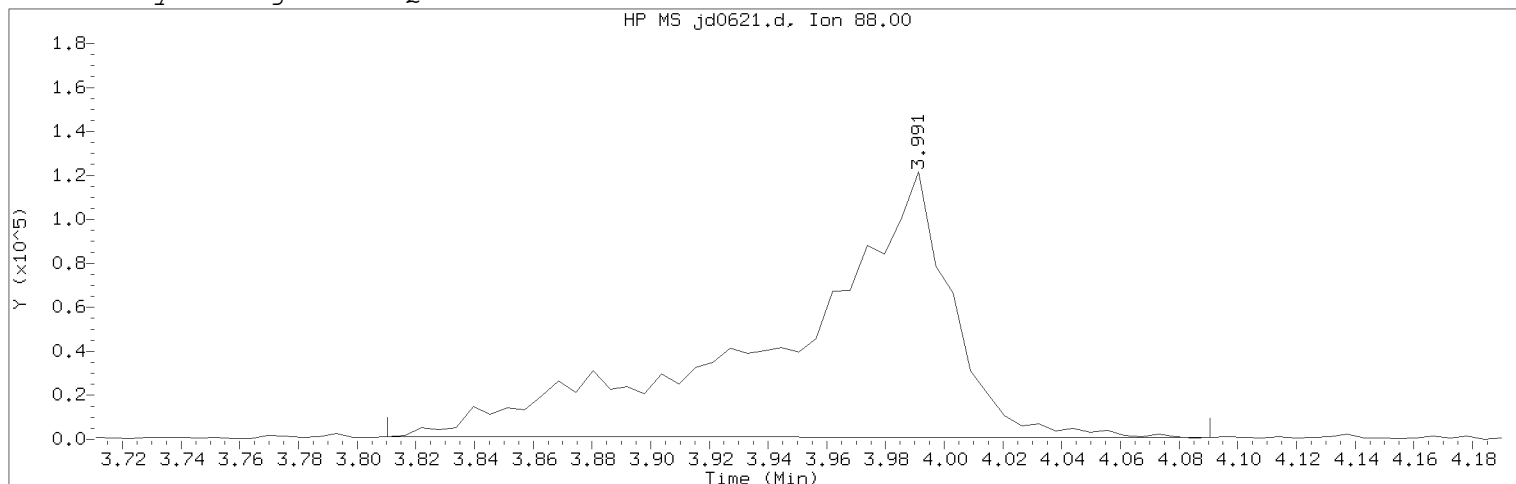
Digitally signed by Kira N. Beck
 on 04/23/2020 at 08:31.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0621.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 07:25

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:29

Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

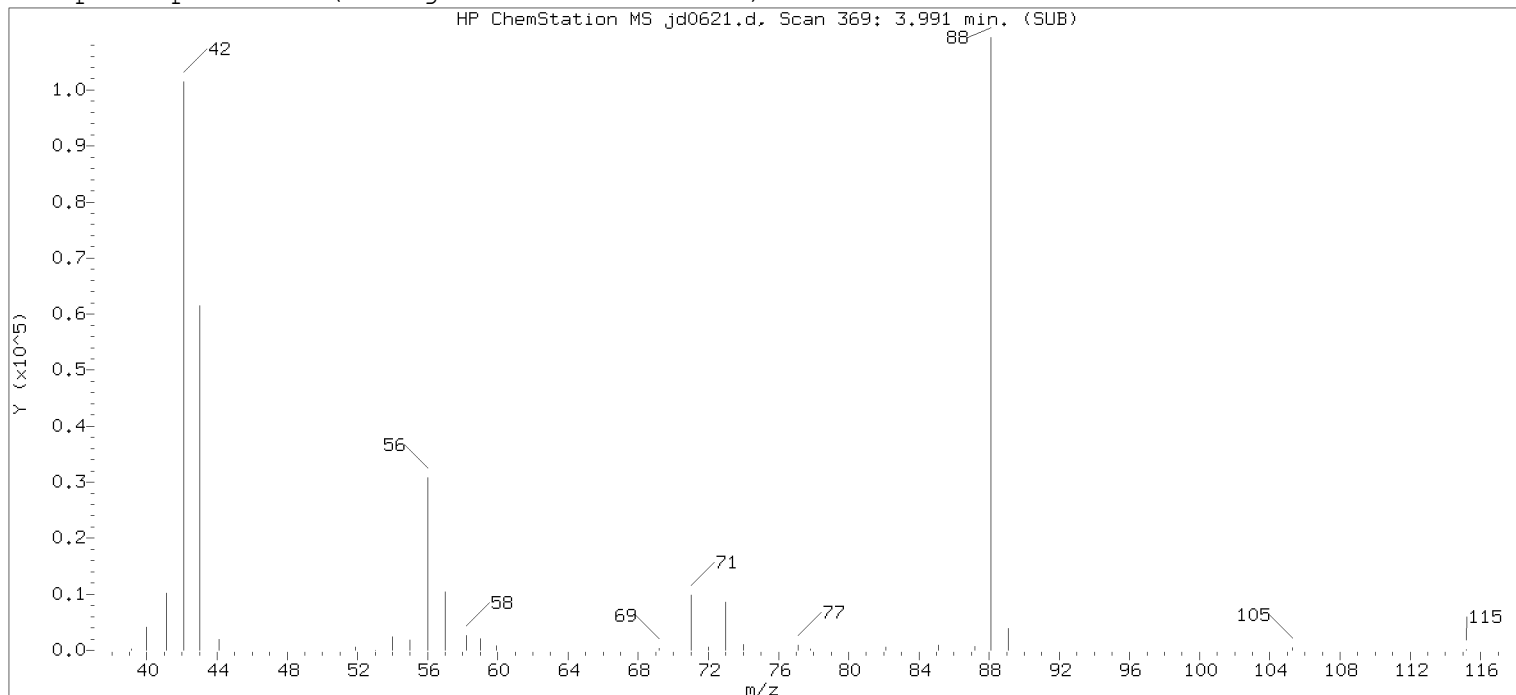
Compound Number	: 9	
Compound Name	: N-Nitrosomethylethylamine	
Scan Number	: 369	
Retention Time (minutes)	: 3.991	
Quant Ion	: 88.00	
Area (flag)	: 467080M	
On-Column Amount (ng/ul)	: 11.7304	
Integration start scan	: 337	Integration stop scan: 385
Y at integration start	: 1080	Y at integration end: 1004

Reason for manual integration: improper integration

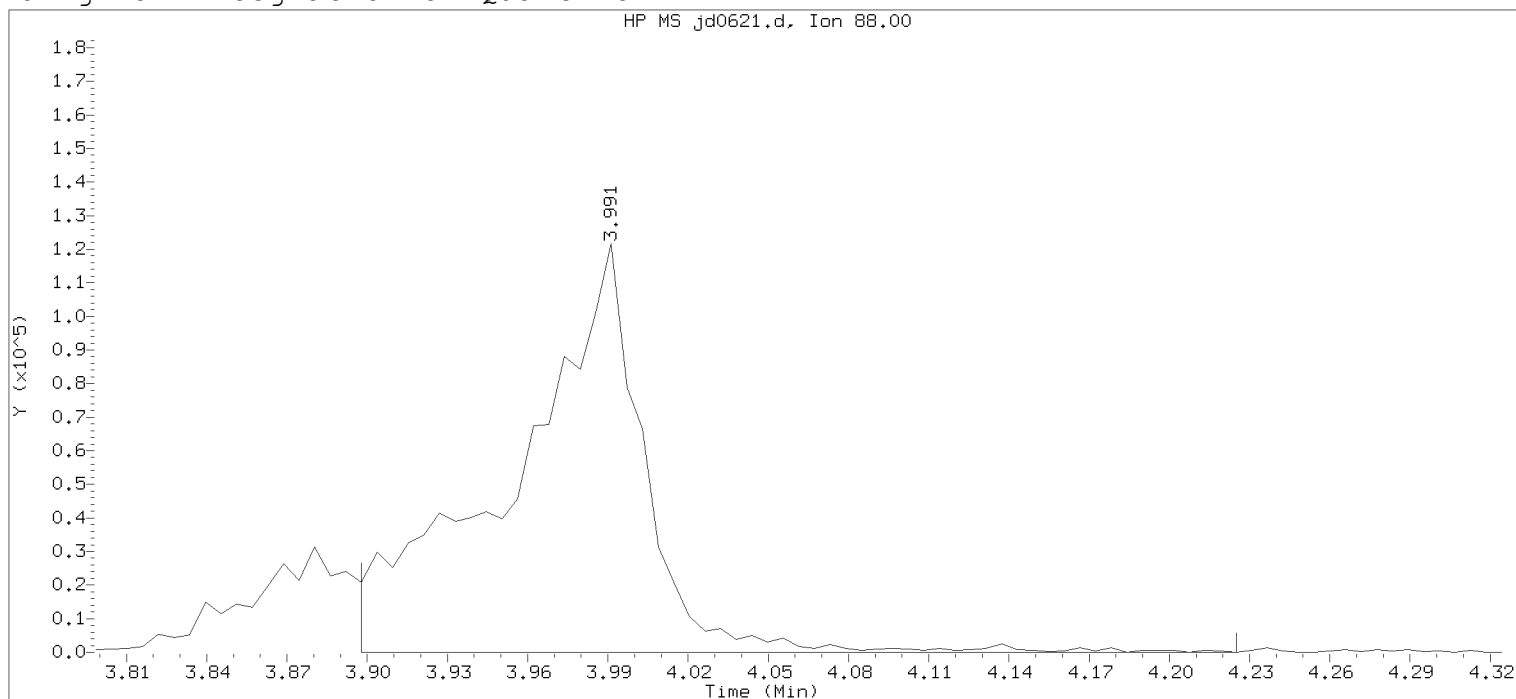
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/23/2020 at 08:31.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 15:14.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0621.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 07:25

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:28

Date, time and analyst ID of latest file update: 23-Apr-2020 08:28 knb25316

Sample Name: SSTD12.5

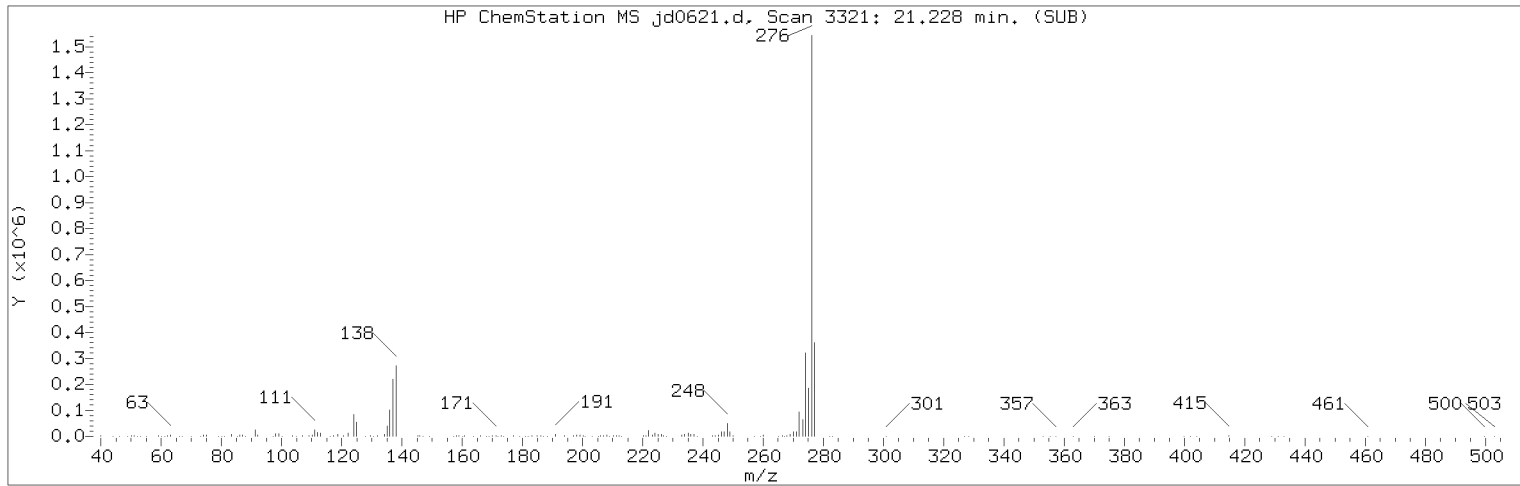
Lab Sample ID: rvSTD0940

Compound Number	: 9	
Compound Name	: N-Nitrosomethylethylamine	
Scan Number	: 369	
Retention Time (minutes)	: 3.991	
Quant Ion	: 88.00	
Area	: 410928	
On-column Amount (ng/ul)	: 10.3201	
Integration start scan	: 352	Integration stop scan: 408
Y at integration start	: 0	Y at integration end: 0

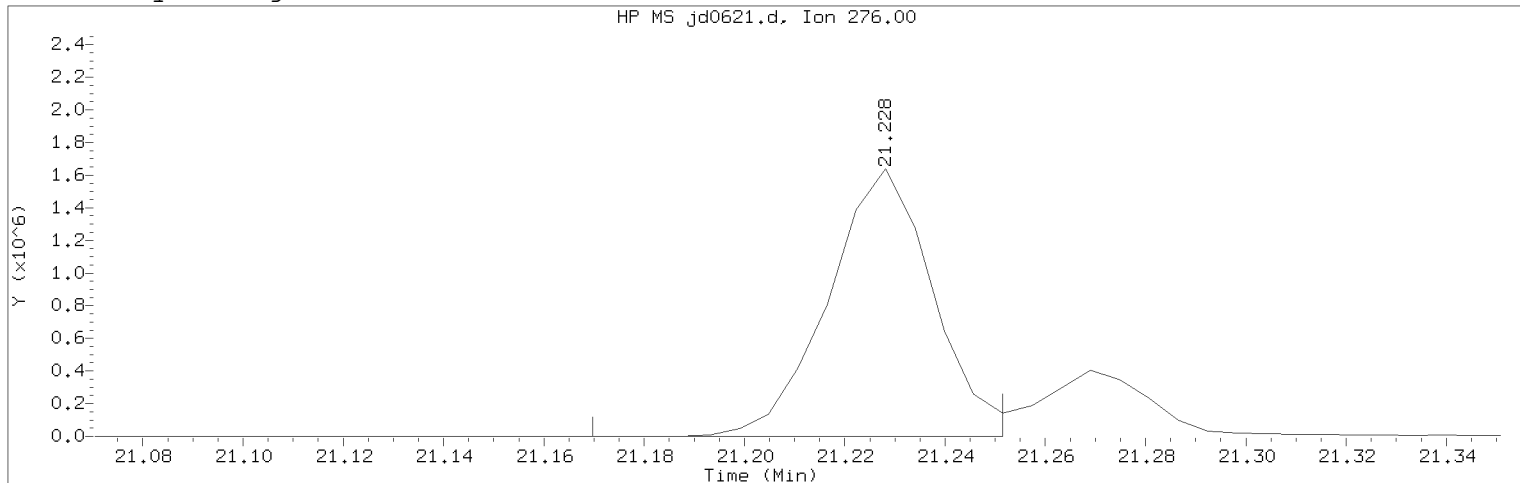
Digitally signed by Kira N. Beck on 04/23/2020 at 08:31.

Target 3.5 esignature use **RAF59** Page 1396 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0621.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 07:25

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:29

Date, time and analyst ID of latest file update: 23-Apr-2020 08:30 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

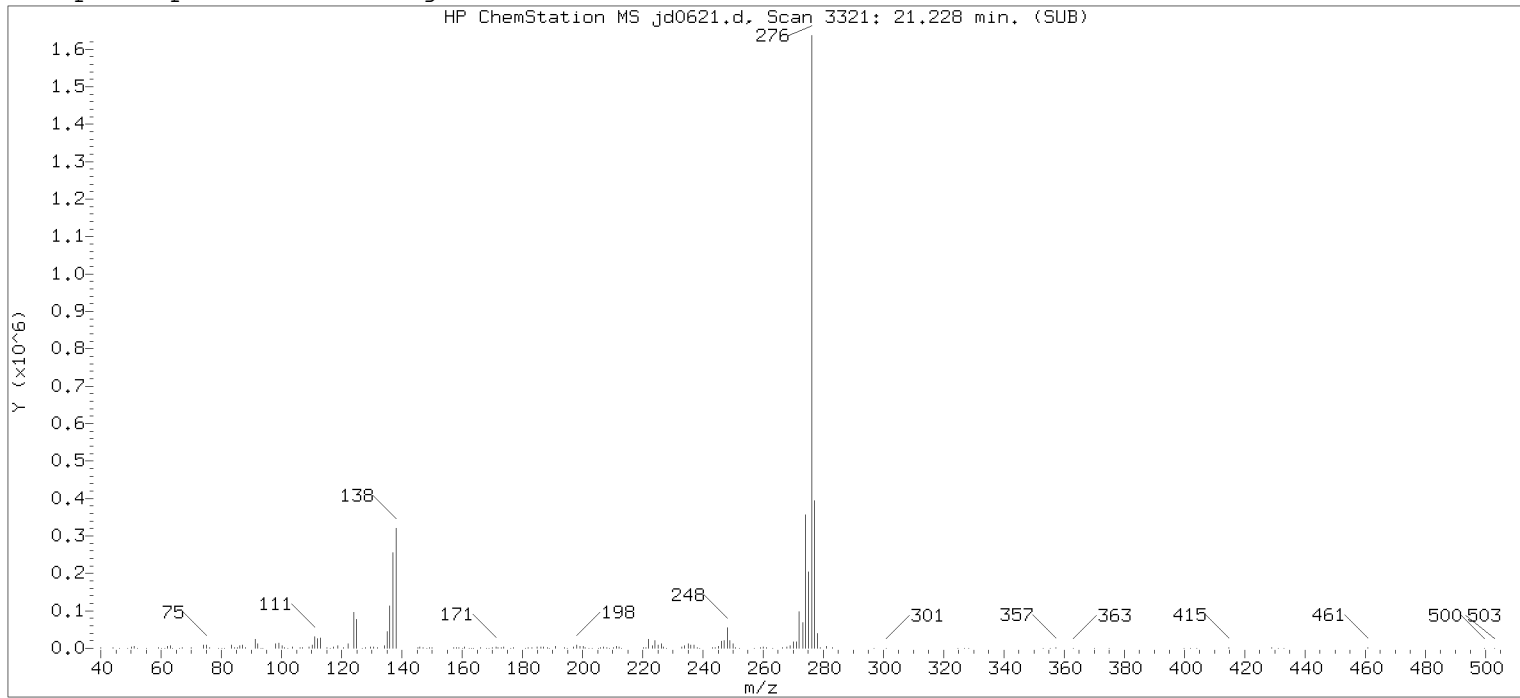
Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3321	
Retention Time (minutes)	: 21.228	
Quant Ion	: 276.00	
Area (flag)	: 2367648M	
On-Column Amount (ng/ul)	: 13.3548	
Integration start scan	: 3310	Integration stop scan: 3324
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

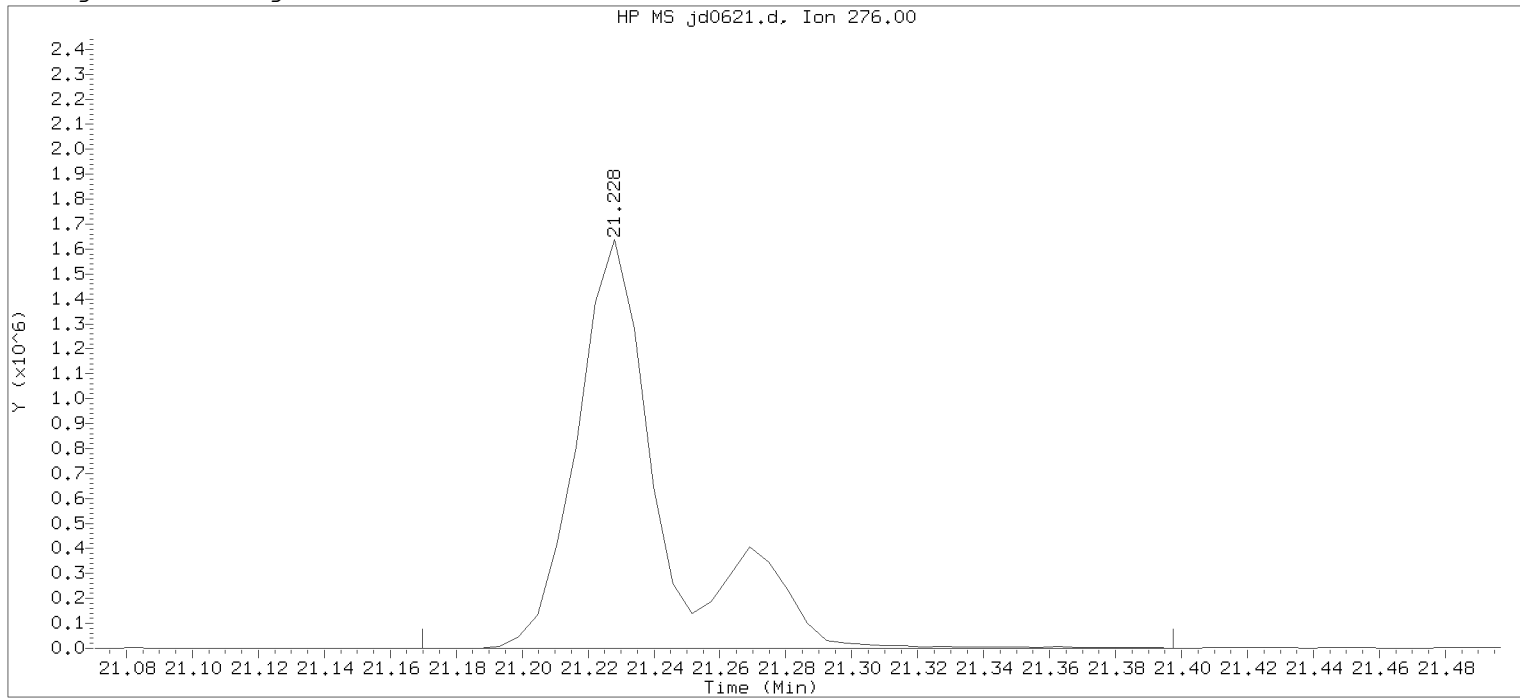
Analyst responsible for change: Digitally signed by Kira N. Beck
on 04/23/2020 at 08:31.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 15:14.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0621.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 07:25

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: all1

Calibration date and time: 23-APR-2020 08:28

Date, time and analyst ID of latest file update: 23-Apr-2020 08:28 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compound Number : 224

Compound Name : Indeno(1,2,3-cd)pyrene

Scan Number : 3321

Retention Time (minutes) : 21.228

Quant Ion : 276.00

Area : 2967528

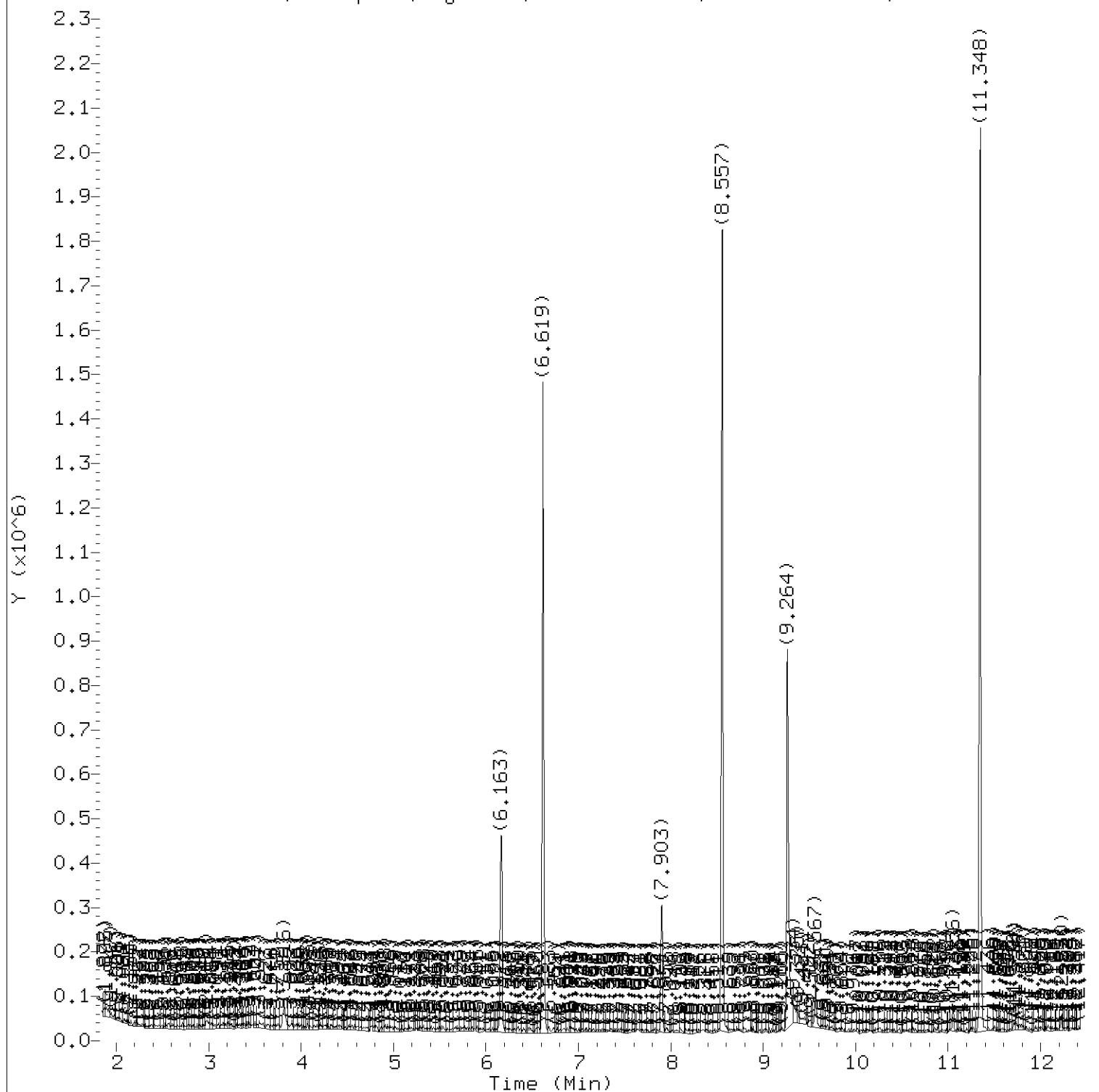
On-column Amount (ng/ul) : 16.7385

Integration start scan : 3310 Integration stop scan: 3349

Y at integration start : 0 Y at integration end: 0

Digitally signed by Kira N. Beck on 04/23/2020 at 08:31.

Target 3.5 esignature use **RAF59** Page 1398 of 1506



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0622.d
Injection date and time: 23-APR-2020 08:52

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 09:32

Sublist used: pda

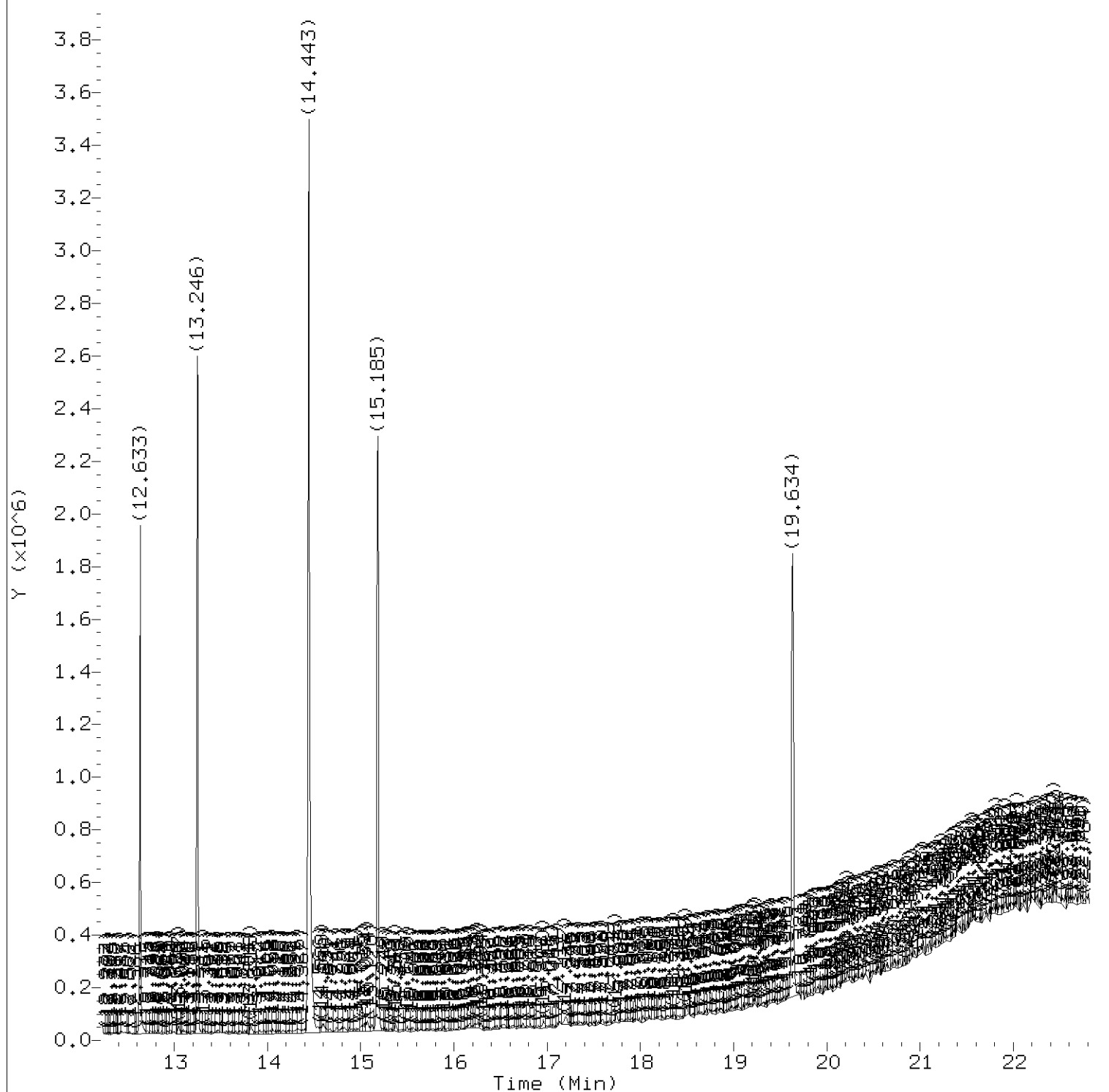
Date, time and analyst ID of latest file update: 23-Apr-2020 09:32 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/23/2020 at 10:22.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0622.d
Injection date and time: 23-APR-2020 08:52

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 09:32

Sublist used: pda

Date, time and analyst ID of latest file update: 23-Apr-2020 09:32 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Digitally signed by Kira N. Beck
on 04/23/2020 at 10:22.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0622.d
Injection date and time: 23-APR-2020 08:52

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: pda

Calibration date and time: 23-APR-2020 09:32

Date, time and analyst ID of latest file update: 23-Apr-2020 09:32 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	255261	5.000
68) *Naphthalene-d8	(2)	8.551	136	957315	5.000
84) 1,4-Phenylenediamine	(2)	9.258	108	507304M	11.572
118) *Acenaphthene-d10	(3)	11.348	164	485726	5.000
144) 1,3,5-Trinitrobenzene	(4)	12.633	213	172656	12.086
158) *Phenanthrene-d10	(4)	13.246	188	942672	5.000
175) Methapyrilene	(4)	14.443	97	1044857	14.137
180) *Pyrene-d10	(5)	15.185	212	969805	5.000
218) *Perylene-d12	(6)	19.634	264	904249	5.000

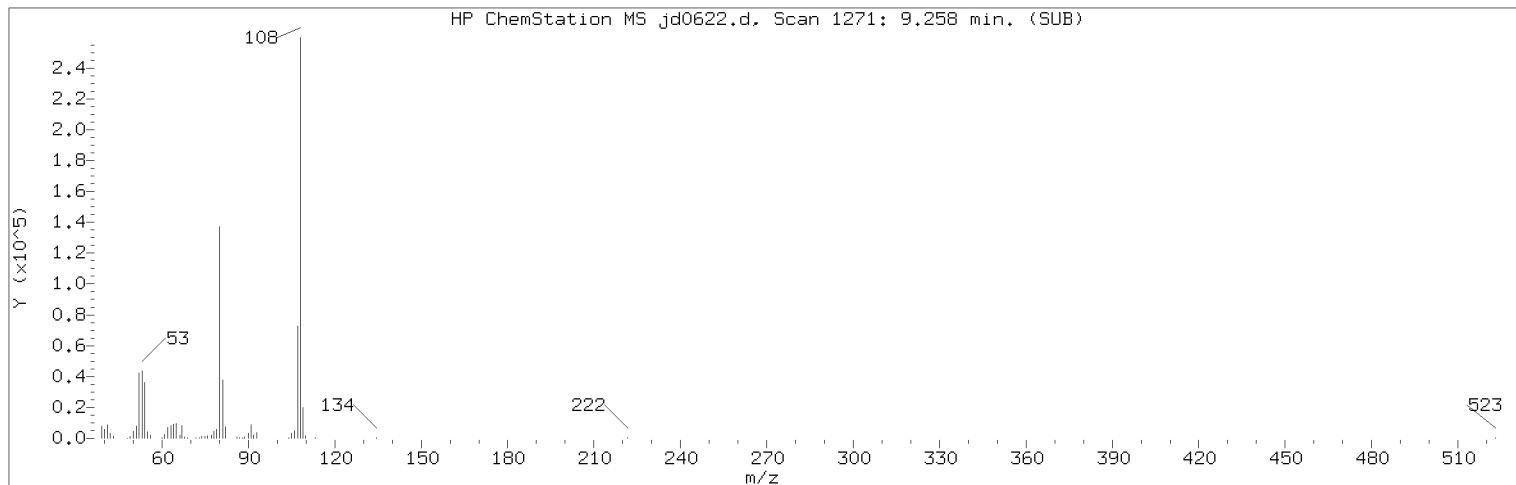
M = Compound was manually integrated.

* = Compound is an internal standard.

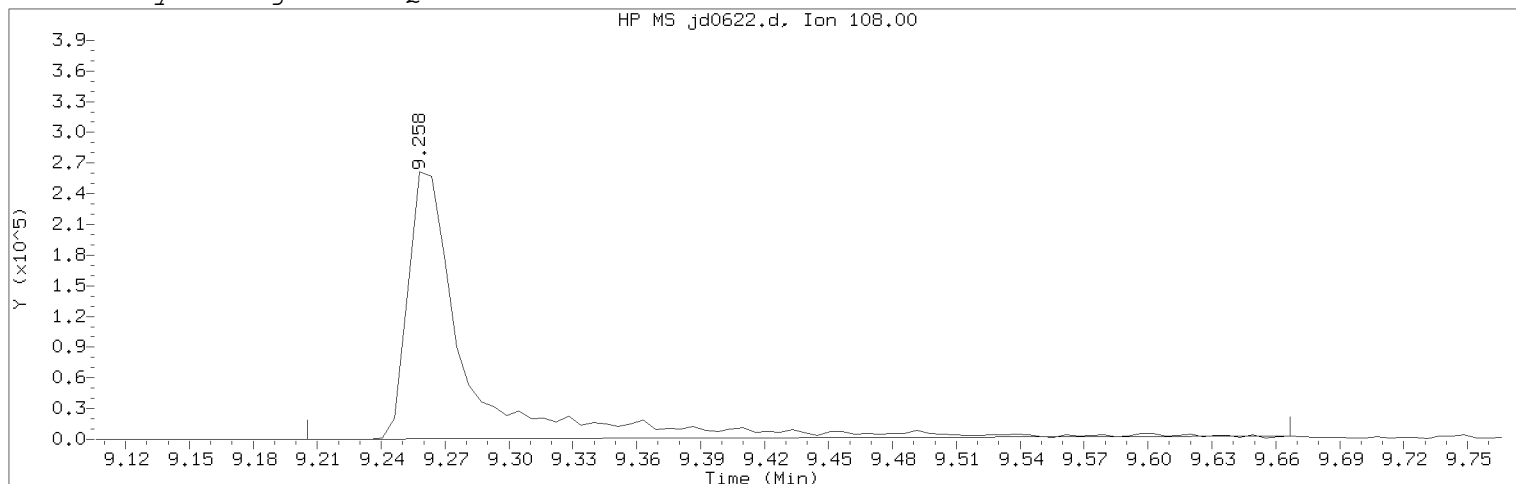
Digitally signed by Kira N. Beck
on 04/23/2020 at 10:22.

Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0622.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 08:52

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: pda

Calibration date and time: 23-APR-2020 09:32

Date, time and analyst ID of latest file update: 23-Apr-2020 09:32 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Compound Number	: 84	
Compound Name	: 1,4-Phenylenediamine	
Scan Number	: 1271	
Retention Time (minutes)	: 9.258	
Quant Ion	: 108.00	
Area (flag)	: 507304M	
On-Column Amount (ng/ul)	: 11.5722	
Integration start scan	: 1261	Integration stop scan: 1340
Y at integration start	: 0	Y at integration end: 3104

Reason for manual integration: missed peak

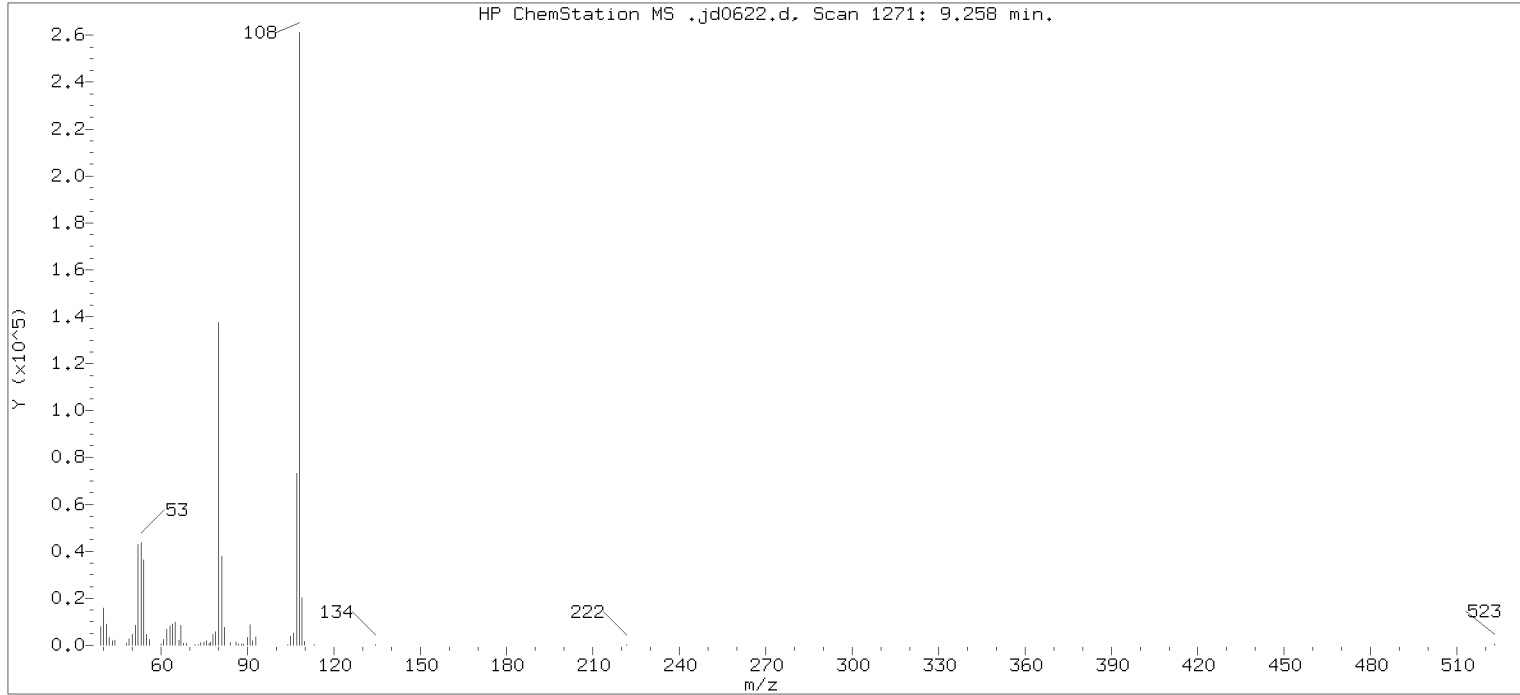
Analyst responsible for change:

Digitally signed by Kira N. Beck
on 04/23/2020 at 10:22.
Target 3.5 esignature user ID: knb25316

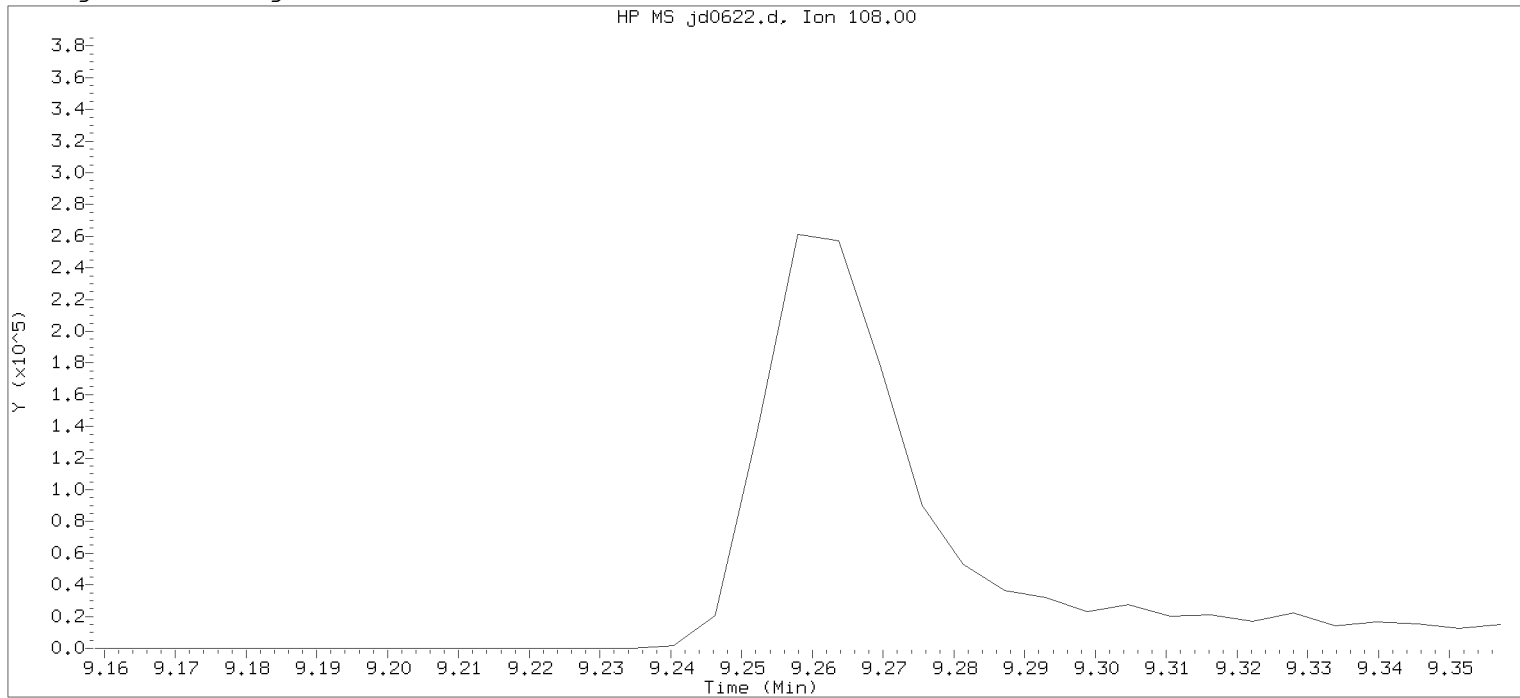
Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:04.

PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0622.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 08:52

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: pda

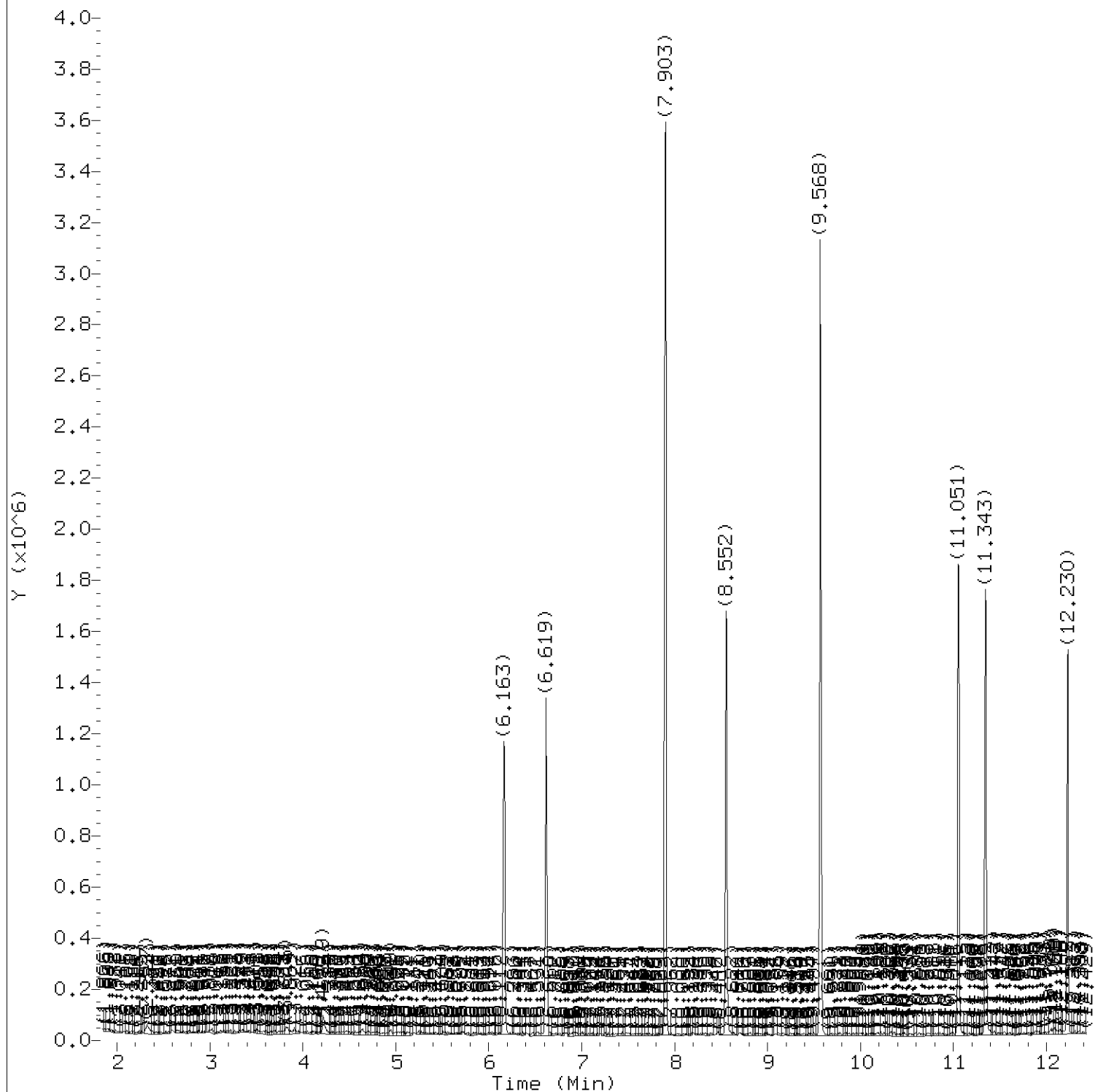
Calibration date and time: 23-APR-2020 09:25

Date, time and analyst ID of latest file update: 23-Apr-2020 09:25 Automation

Sample Name: SSTD12.5

Lab Sample ID: rvPDA1070

Compound Number : 84
 Compound Name : 1,4-Phenylenediamine
 Expected RT (minutes) : 9.258
 Quant Ion : 108.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0623.d
Injection date and time: 23-APR-2020 09:27

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 10:21

Sublist used: abc

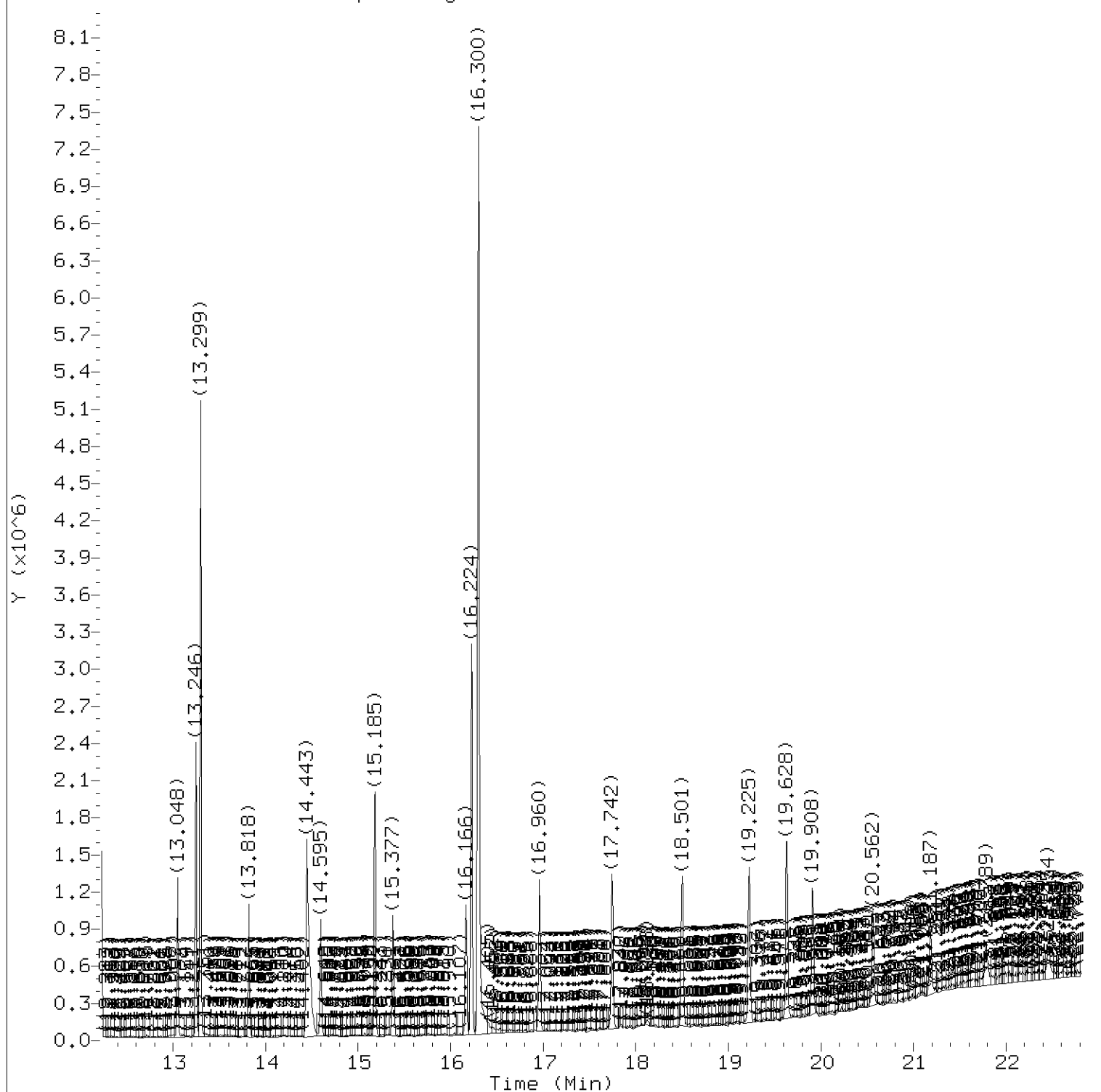
Date, time and analyst ID of latest file update: 23-Apr-2020 10:21 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/23/2020 at 10:22.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0623.d
Injection date and time: 23-APR-2020 09:27

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 10:21

Sublist used: abc

Date, time and analyst ID of latest file update: 23-Apr-2020 10:21 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Digitally signed by Kira N. Beck
on 04/23/2020 at 10:22.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0623.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 09:27

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: abc

Calibration date and time: 23-APR-2020 10:21

Date, time and analyst ID of latest file update: 23-Apr-2020 10:21 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
26)*1,4-Dichlorobenzene-d4	(1)	6.619	152	226113	5.000
68)*Naphthalene-d8	(2)	8.557	136	855356	5.000
118)*Acenaphthene-d10	(3)	11.343	164	447207	5.000
158)*Phenanthrene-d10	(4)	13.246	188	834280	5.000
167) Disulfoton	(4)	13.299	88	919982	13.866
180)*Pyrene-d10	(5)	15.179	212	842131	5.000
194) Famphur	(5)	16.224	218	979181M	13.457
195) Kepone	(5)	16.300	272	895696	89.178
218)*Perylene-d12	(6)	19.634	264	738763	5.000

M = Compound was manually integrated.

* = Compound is an internal standard.

Digitally signed by Kira N. Beck

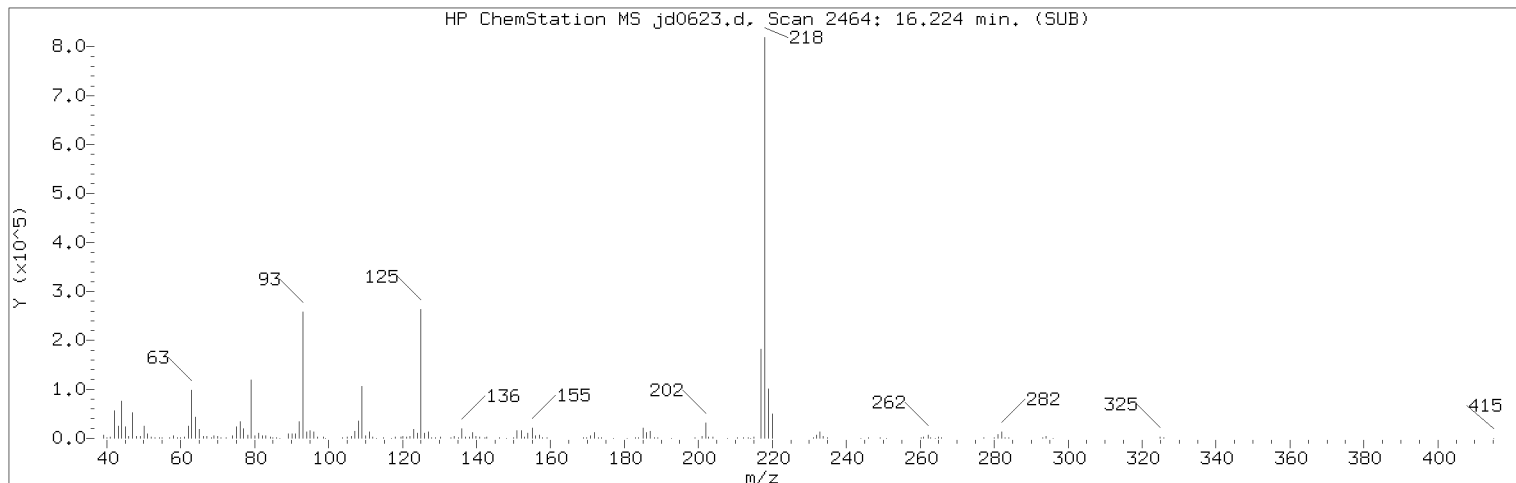
on 04/23/2020 at 10:22.

Target 3.5 esignature user ID: knb25316

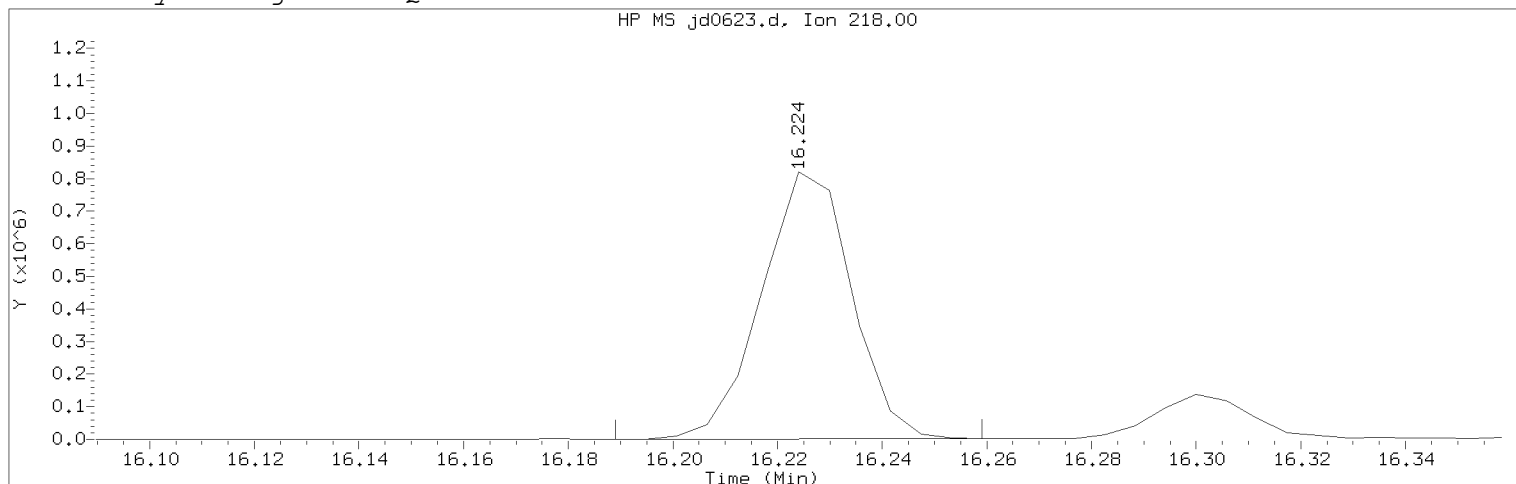
RAF59 Page 1406 of 1506

page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0623.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 09:27

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: abc

Calibration date and time: 23-APR-2020 10:21

Date, time and analyst ID of latest file update: 23-Apr-2020 10:21 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Compound Number : 194
 Compound Name : Famphur
 Scan Number : 2464
 Retention Time (minutes) : 16.224
 Quant Ion : 218.00
 Area (flag) : 979181M
 On-Column Amount (ng/ul) : 13.4568
 Integration start scan : 2457
 Y at integration start : 694

Integration stop scan: 2469
 Y at integration end: 1087

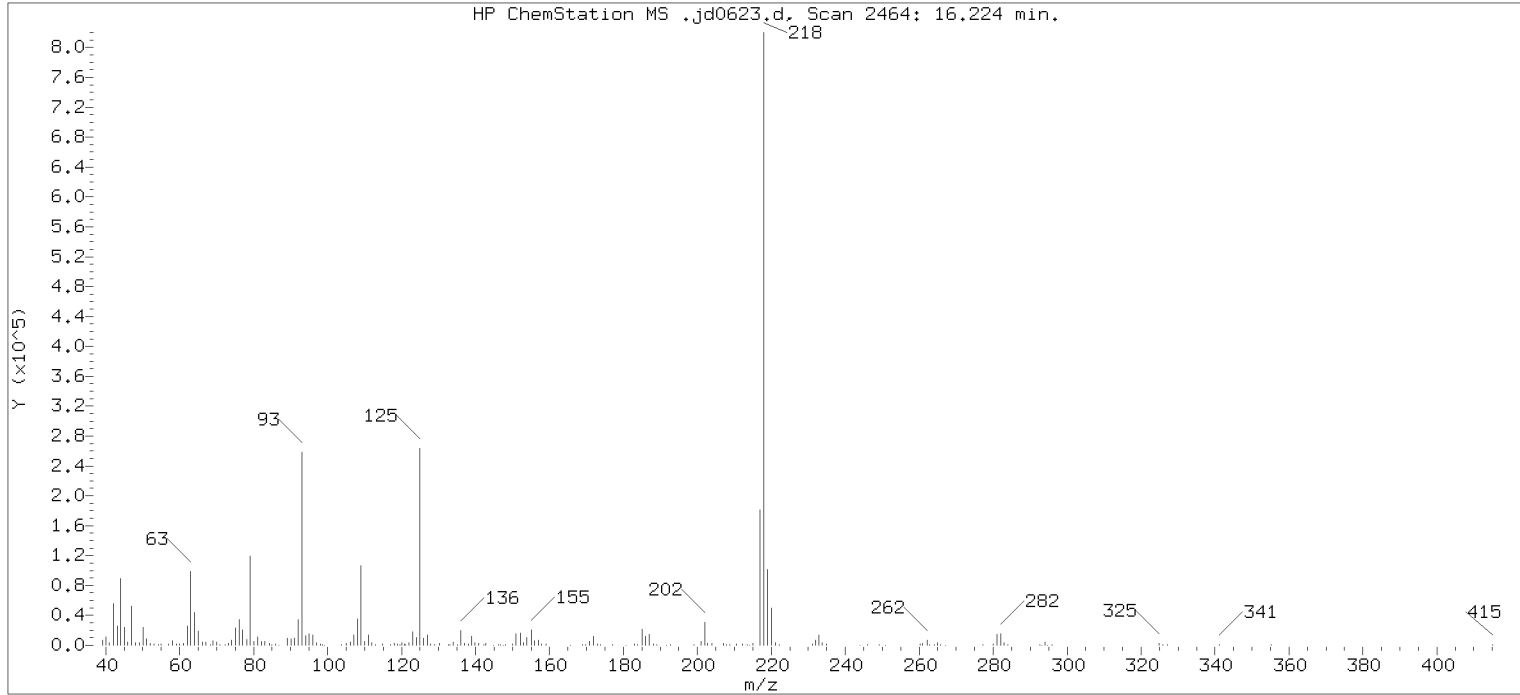
Reason for manual integration: missed peak

Analyst responsible for change:

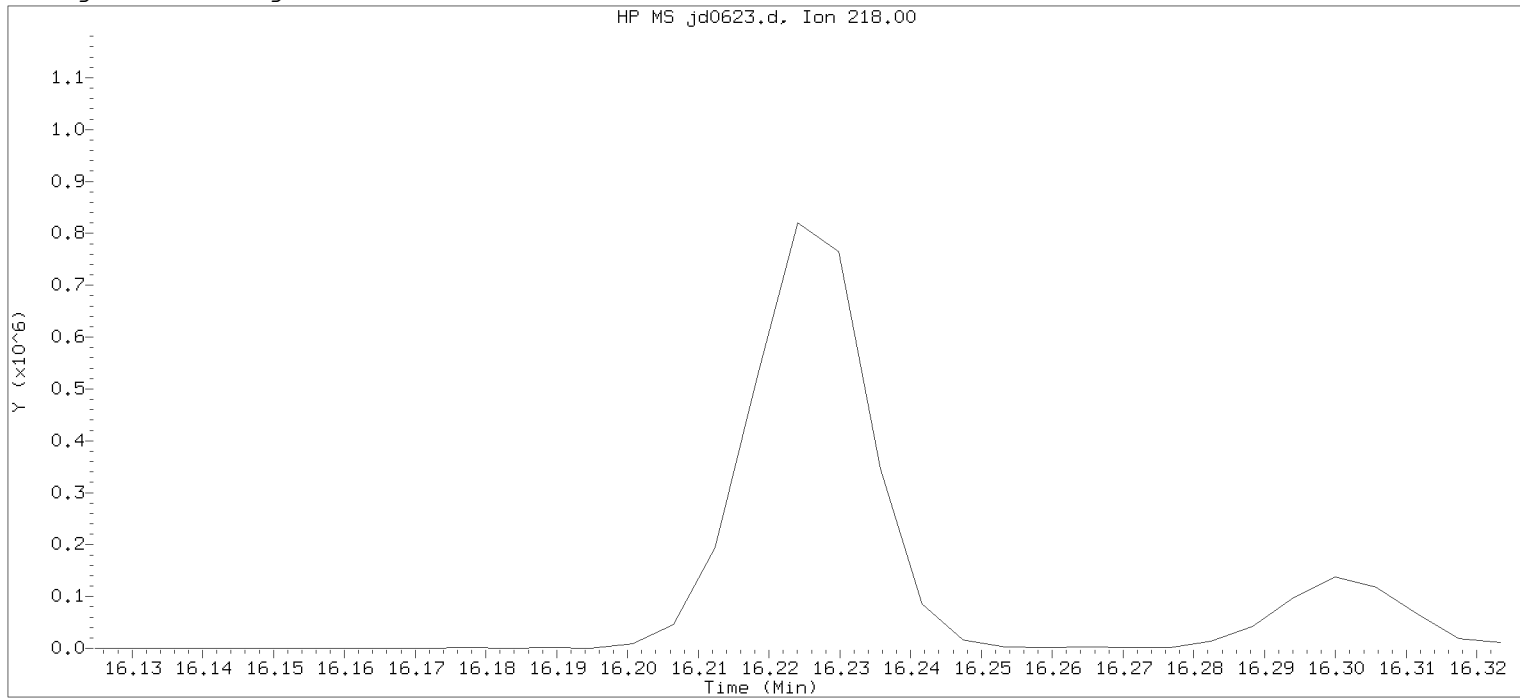
Digitally signed by Kira N. Beck
 on 04/23/2020 at 10:22.
 Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:04.
 PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0623.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 09:27

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: abc

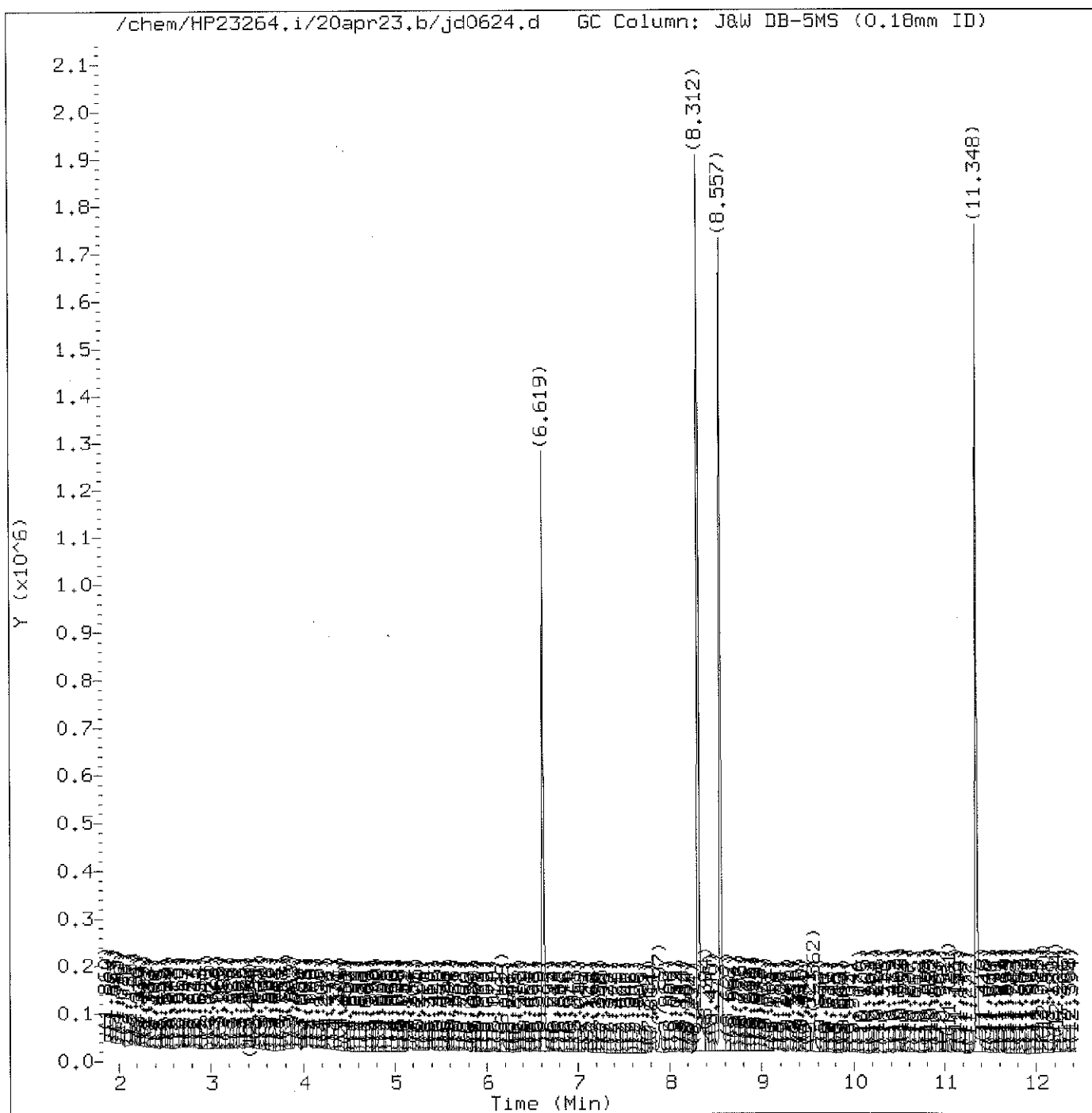
Calibration date and time: 23-APR-2020 10:18

Date, time and analyst ID of latest file update: 23-Apr-2020 10:18 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvABC1070

Compound Number : 194
 Compound Name : Famphur
 Expected RT (minutes) : 16.224
 Quant Ion : 218.00



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0624.d
Injection date and time: 23-APR-2020 10:17

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 11:09

Sublist used: aap

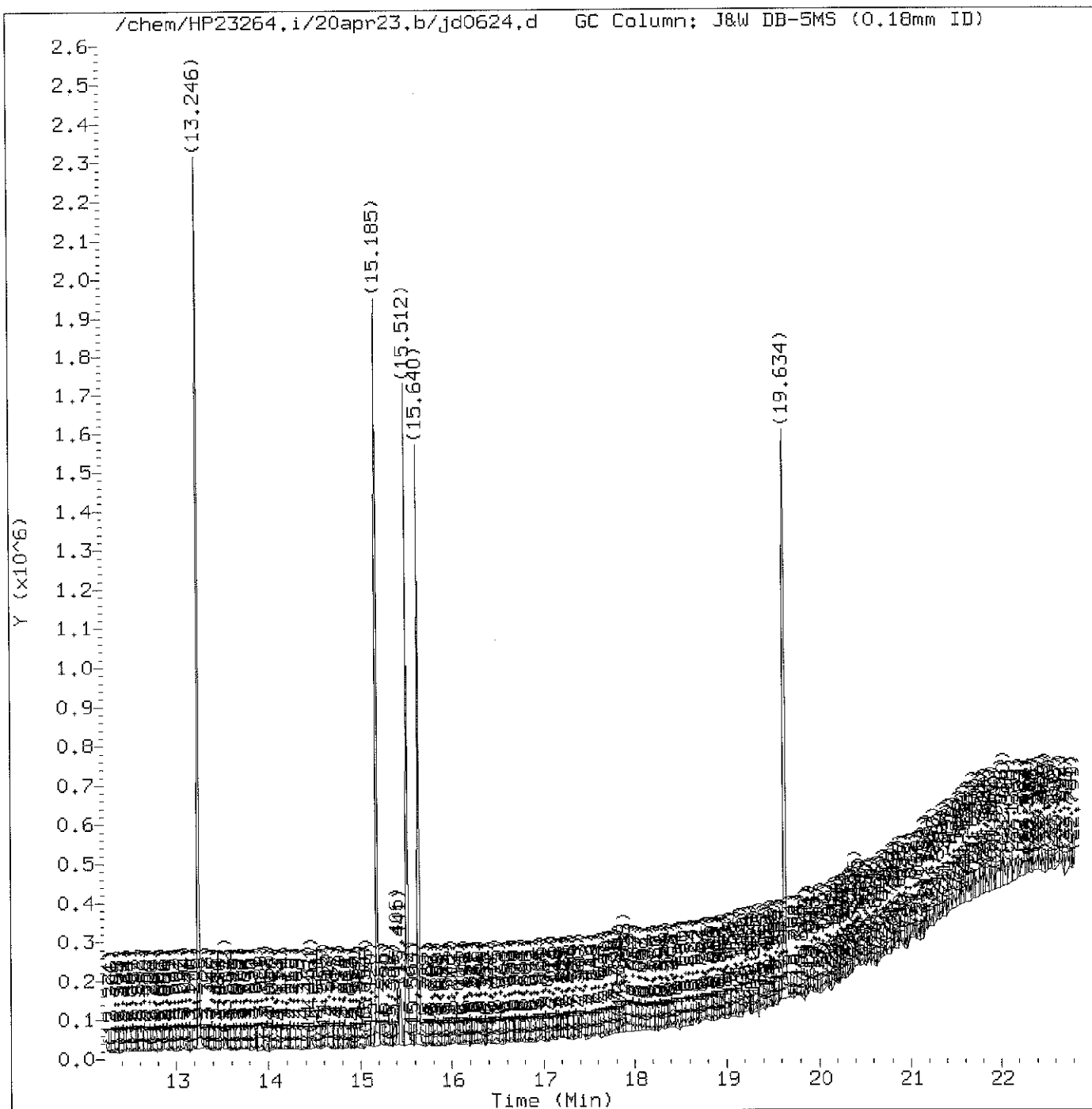
Date, time and analyst ID of latest file update: 23-Apr-2020 11:09 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvAAP1140

Digitally signed by Kira N. Beck
on 04/23/2020 at 11:10.

Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0624.d
Injection date and time: 23-APR-2020 10:17

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 23-APR-2020 11:09
Date, time and analyst ID of latest file update: 23-Apr-2020 11:09 knb25316

Sublist used: aap

Sample Name: SSTD12.5

Lab Sample ID: rvAAP1140

Digitally signed by Kira N. Beck
on 04/23/2020 at 11:10.

Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0624.d
Injection date and time: 23-APR-2020 10:17

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: aap

Calibration date and time: 23-APR-2020 11:09

Date, time and analyst ID of latest file update: 23-Apr-2020 11:09 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvAAP1140

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.619	152	230865	5.000
67) a,a-Dimethylphenethylamine	(2)	8.312	58	1254774	12.500
68)*Naphthalene-d8	(2)	8.557	136	850661	5.000
191) Aramite	(5)			290342	12.500
118)*Acenaphthene-d10	(3)	11.342	164	428623	5.000
158)*Phenanthrene-d10	(4)	13.246	188	845174	5.000
180)*Pyrene-d10	(5)	15.185	212	834143	5.000
185) Aramite (1)	(5)	15.406	185	14980	5.000
186) Aramite (2)	(5)	15.441	185	8144	5.000
188) Aramite (3)	(5)	15.512	185	119158	1.250
189) Aramite (4)	(5)	15.640	185	148060	1.250
218)*Perylene-d12	(6)	19.634	264	754493	5.000

* = Compound is an internal standard.

Digitally signed by Kira N. Beck
on 04/23/2020 at 11:10.

Target 3.5 esignature user ID: knb25316

Date : 28-APR-2020 07:05

Client ID: DFTPP

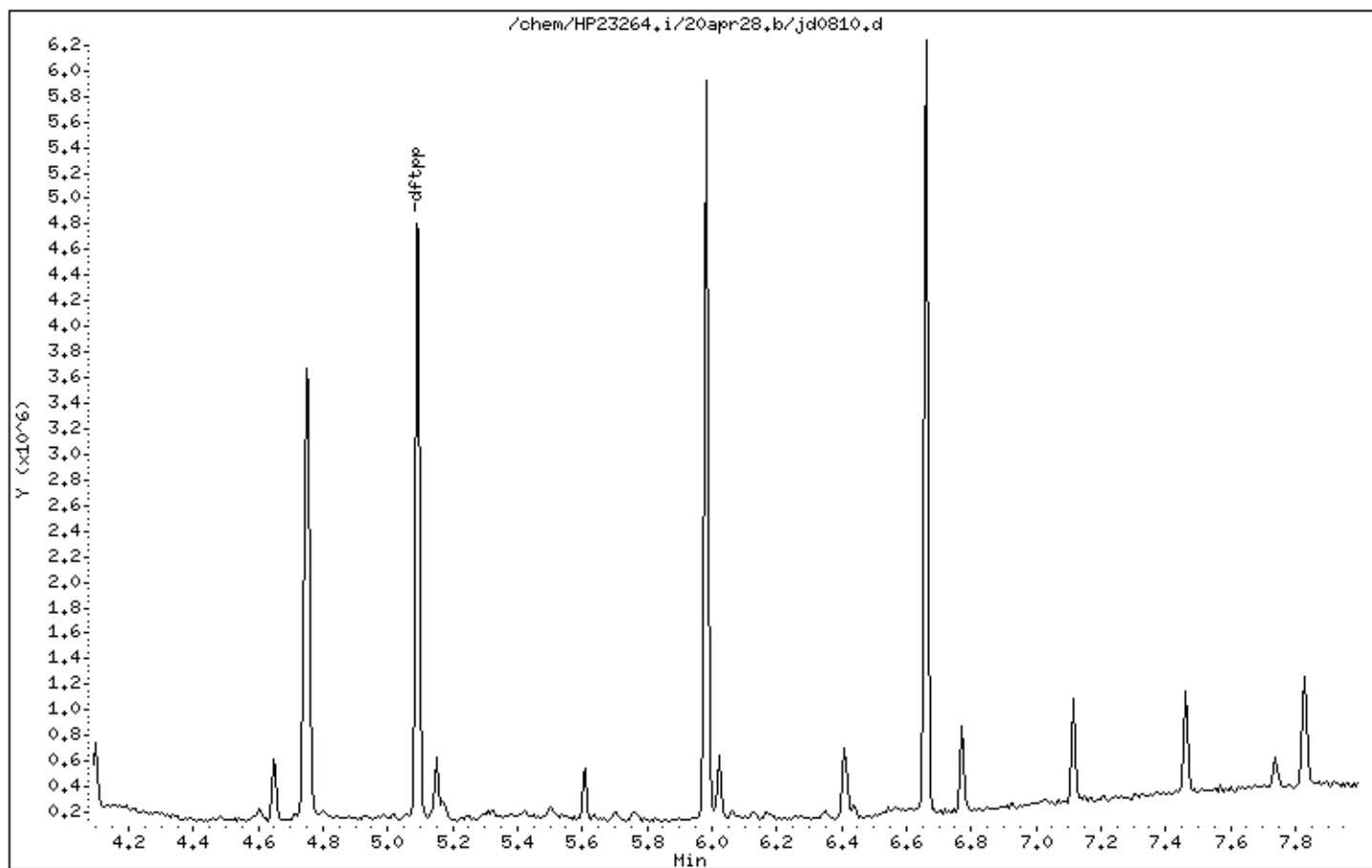
Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18



Date : 28-APR-2020 07:05

Client ID: DFTPP

Instrument: HP23264.i

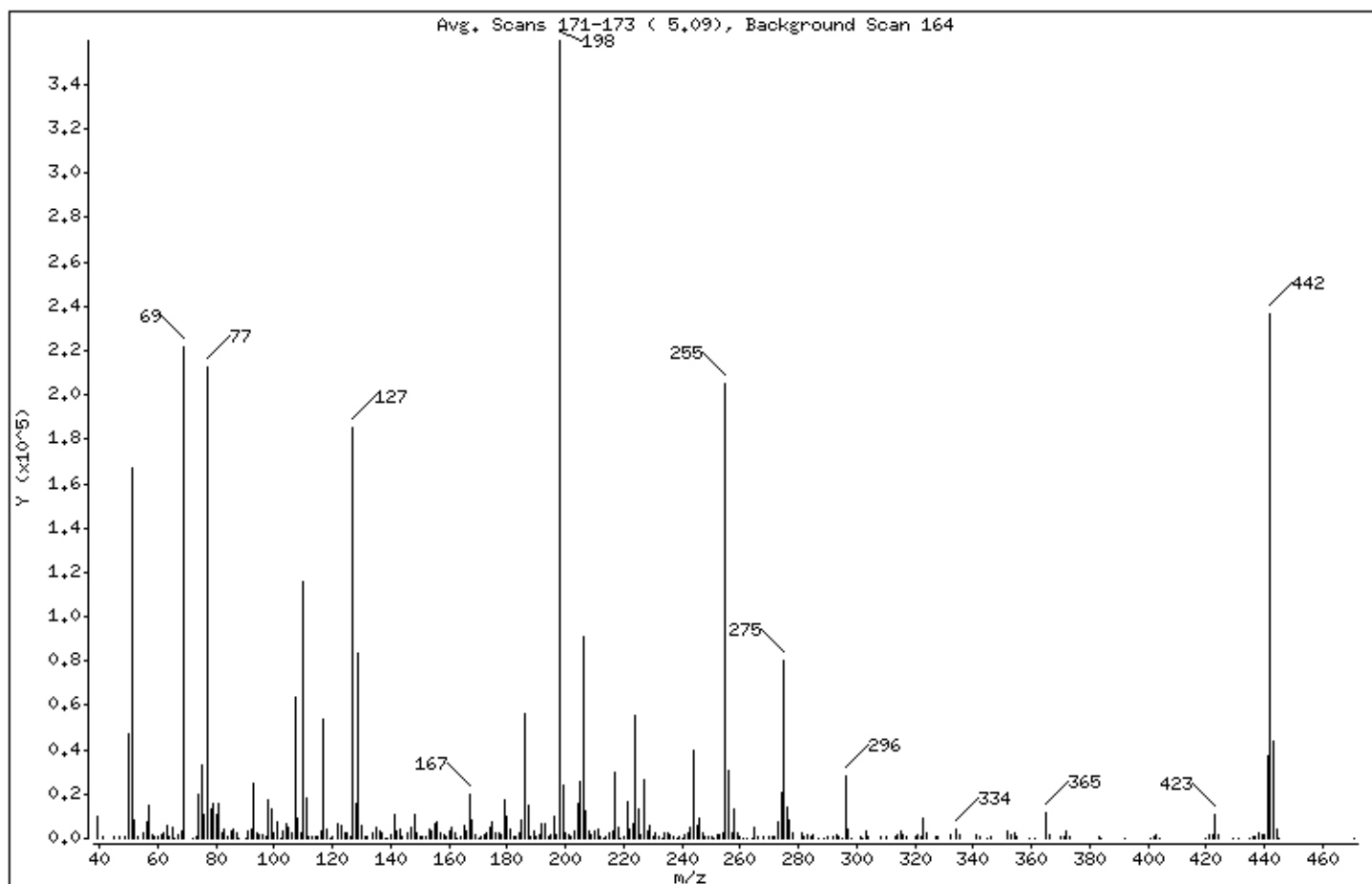
Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	46.48
68	Less than 2.00% of mass 69	0.96 (1.56)
69	Mass 69 relative abundance	61.67
70	Less than 2.00% of mass 69	0.00 (0.00)
127	10.00 - 80.00% of mass 198	51.60
197	Less than 2.00% of mass 198	0.43
199	5.00 - 9.00% of mass 198	6.73
275	10.00 - 60.00% of mass 198	22.26
365	Greater than 1.00% of mass 198	3.23
441	0.01 - 24.00% of mass 442	10.23 (15.55)
442	50.00 - 99.99% of mass 198	65.78
443	15.00 - 24.00% of mass 442	12.15 (18.47)

Date : 28-APR-2020 07:05

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0810.d

Spectrum: Avg. Scans 171-173 (5.09), Background Scan 164

Location of Maximum: 198.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	10101	126.00	799	204.00	15520	285.00	2009
41.00	999	127.00	185600	205.00	26000	287.00	383
45.00	674	128.00	15792	206.00	90936	289.00	242
47.00	575	129.00	83496	207.00	12122	290.00	753
49.00	759	130.00	5869	208.00	3032	292.00	1011
50.00	47168	131.00	1035	209.00	1959	293.00	1518
51.00	167232	132.00	777	210.00	3710	294.00	582
52.00	8351	134.00	2544	211.00	3815	295.00	362
53.00	1155	135.00	4864	212.00	775	296.00	28248
55.00	2153	136.00	3321	213.00	262	297.00	4052
56.00	7117	137.00	2237	214.00	652	298.00	167
57.00	15015	138.00	366	215.00	2546	301.00	982
58.00	1653	139.00	90	216.00	3393	302.00	209
59.00	433	140.00	1336	217.00	29544	303.00	3705
60.00	587	141.00	10408	218.00	4677	304.00	641
61.00	1265	142.00	3481	219.00	149	308.00	735
62.00	2068	143.00	4125	220.00	838	310.00	770
63.00	5678	144.00	975	221.00	16728	313.00	425
64.00	608	146.00	2732	222.00	4077	314.00	1276
65.00	4632	147.00	4611	223.00	6575	315.00	3073
66.00	312	148.00	11076	224.00	55504	316.00	1331
67.00	1539	149.00	2462	225.00	13513	317.00	1207
68.00	3465	150.00	673	226.00	1823	320.00	605
69.00	221888	151.00	1152	227.00	26096	321.00	1586
72.00	322	152.00	584	228.00	3197	322.00	593
73.00	689	153.00	3989	229.00	6113	323.00	9210
74.00	20224	154.00	3366	230.00	940	324.00	2119
75.00	32864	155.00	6394	231.00	2462	327.00	1102
76.00	10916	156.00	7229	232.00	788	328.00	789
77.00	212160	157.00	2629	233.00	131	332.00	1420
78.00	13392	158.00	2045	234.00	2223	334.00	3838
79.00	15501	159.00	995	235.00	2142	335.00	1253
80.00	10989	160.00	3312	236.00	1566	341.00	1350
81.00	15558	161.00	4615	237.00	749	342.00	858
82.00	2216	162.00	2172	238.00	170	345.00	204

Date : 28-APR-2020 07:05

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0810.d

Spectrum: Avg. Scans 171-173 (5.09), Background Scan 164

Location of Maximum: 198.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y

83.00	4213	163.00	1	239.00	1074	346.00	876
84.00	656	164.00	671	240.00	320	352.00	3349
85.00	3129	165.00	5886	241.00	1859	353.00	1410
86.00	4415	166.00	3050	242.00	2779	354.00	2654
87.00	2483	167.00	19784	243.00	5241	355.00	647

88.00	206	168.00	8240	244.00	39872	359.00	297
90.00	306	169.00	1795	245.00	5467	361.00	193
91.00	3106	170.00	272	246.00	9266	365.00	11634
92.00	3958	171.00	980	247.00	2176	366.00	1822
93.00	25088	172.00	1878	248.00	1006	370.00	497

94.00	2273	173.00	2702	249.00	665	371.00	812
95.00	1423	174.00	4750	250.00	1189	372.00	3184
96.00	1397	175.00	7045	251.00	99	373.00	659
97.00	447	176.00	2385	252.00	1724	383.00	1201
98.00	17672	177.00	2818	253.00	1529	384.00	110

99.00	13517	178.00	1760	254.00	2712	392.00	273
100.00	2295	179.00	17384	255.00	205248	401.00	91
101.00	7683	180.00	10248	256.00	30272	402.00	927
102.00	208	181.00	4192	257.00	2643	403.00	1815
103.00	2965	182.00	924	258.00	13206	404.00	331

104.00	6746	183.00	582	259.00	2303	420.00	89
105.00	4849	184.00	2092	260.00	1079	421.00	1587
106.00	2192	185.00	8229	261.00	402	422.00	1813
107.00	63944	186.00	56048	262.00	171	423.00	10502
108.00	8830	187.00	15101	264.00	365	424.00	1522

109.00	2391	188.00	904	265.00	4984	429.00	139
110.00	115656	189.00	3527	266.00	635	431.00	377
111.00	18368	190.00	573	268.00	549	435.00	396
112.00	823	191.00	2060	270.00	477	436.00	847
113.00	975	192.00	6316	271.00	776	437.00	1007

114.00	1027	193.00	6542	272.00	1020	438.00	2332
115.00	507	194.00	789	273.00	7730	439.00	1689
116.00	2941	195.00	1908	274.00	20744	440.00	1796
117.00	53760	196.00	10113	275.00	80096	441.00	36808
118.00	4279	197.00	1549	276.00	13946	442.00	236672

Date : 28-APR-2020 07:05

Client ID: DFTPP

Instrument: HP23264.i

Sample Info: DFTPP;rvDFTPP0430;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0,18

Data File: jd0810.d

Spectrum: Avg. Scans 171-173 (5.09), Background Scan 164

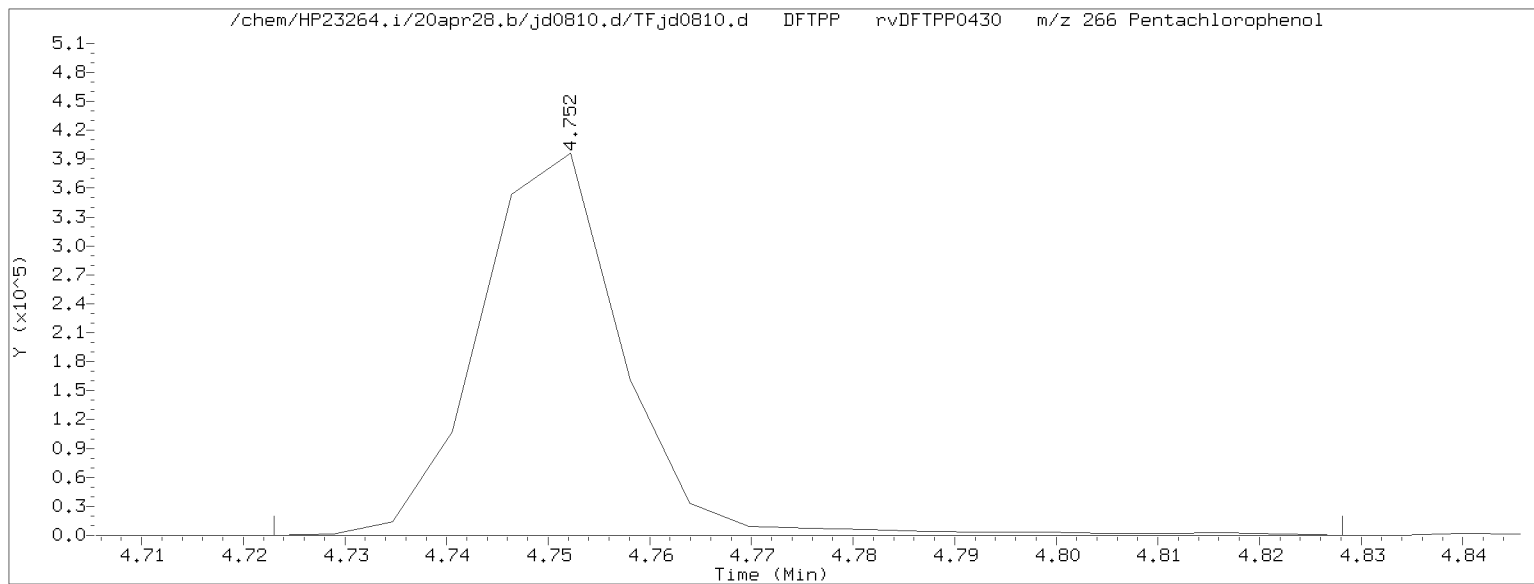
Location of Maximum: 198.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	200	198.00	359744	277.00	8367	443.00	43704
120.00	640	199.00	24224	278.00	2198	444.00	3912
122.00	6310	200.00	2550	281.00	2175	445.00	143
123.00	6061	201.00	1362	282.00	586	471.00	293
124.00	2212	202.00	1111	283.00	1406		
125.00	2535	203.00	3593	284.00	664		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP23264.i Injection Date: 28-APR-2020 07:05 Operator: knb25316



Pentachlorophenol EICP peak height = 396288 EICP peak height at 10% = 39629 Pentachlorophenol EICP area = 388675

Pentachlorophenol EICP peak apex (min.) = 4.752

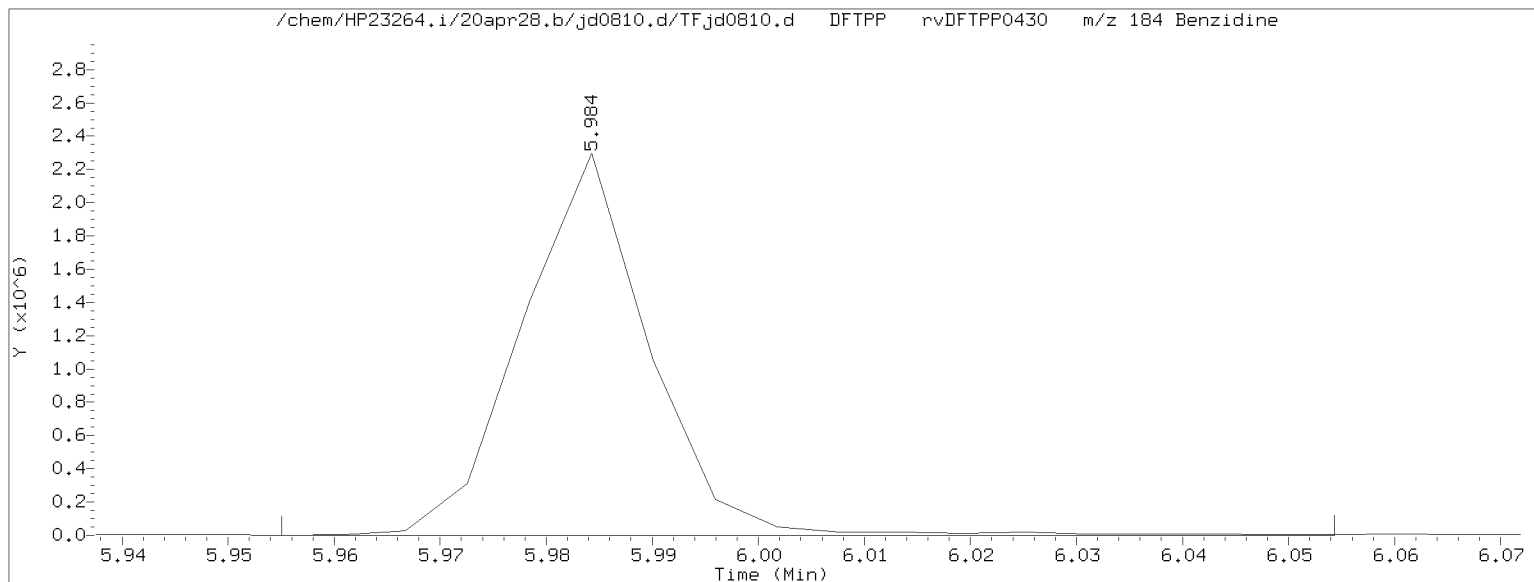
RT at 10% of front half of EICP (min.) = 4.736

RT at 10% of back half of EICP (min.) = 4.764

'Front' peak width (min.) = 0.0159166667

'Tailing' peak width (min.) = 0.0113833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0113833333}{0.0159166667} = 0.715$$



Benzidine EICP peak height = 2298368 EICP peak height at 10% = 229837 Benzidine EICP area = 1913818

Benzidine EICP peak apex (min.) = 5.984

RT at 10% of front half of EICP (min.) = 5.971

RT at 10% of back half of EICP (min.) = 5.996

'Front' peak width (min.) = 0.0133333333

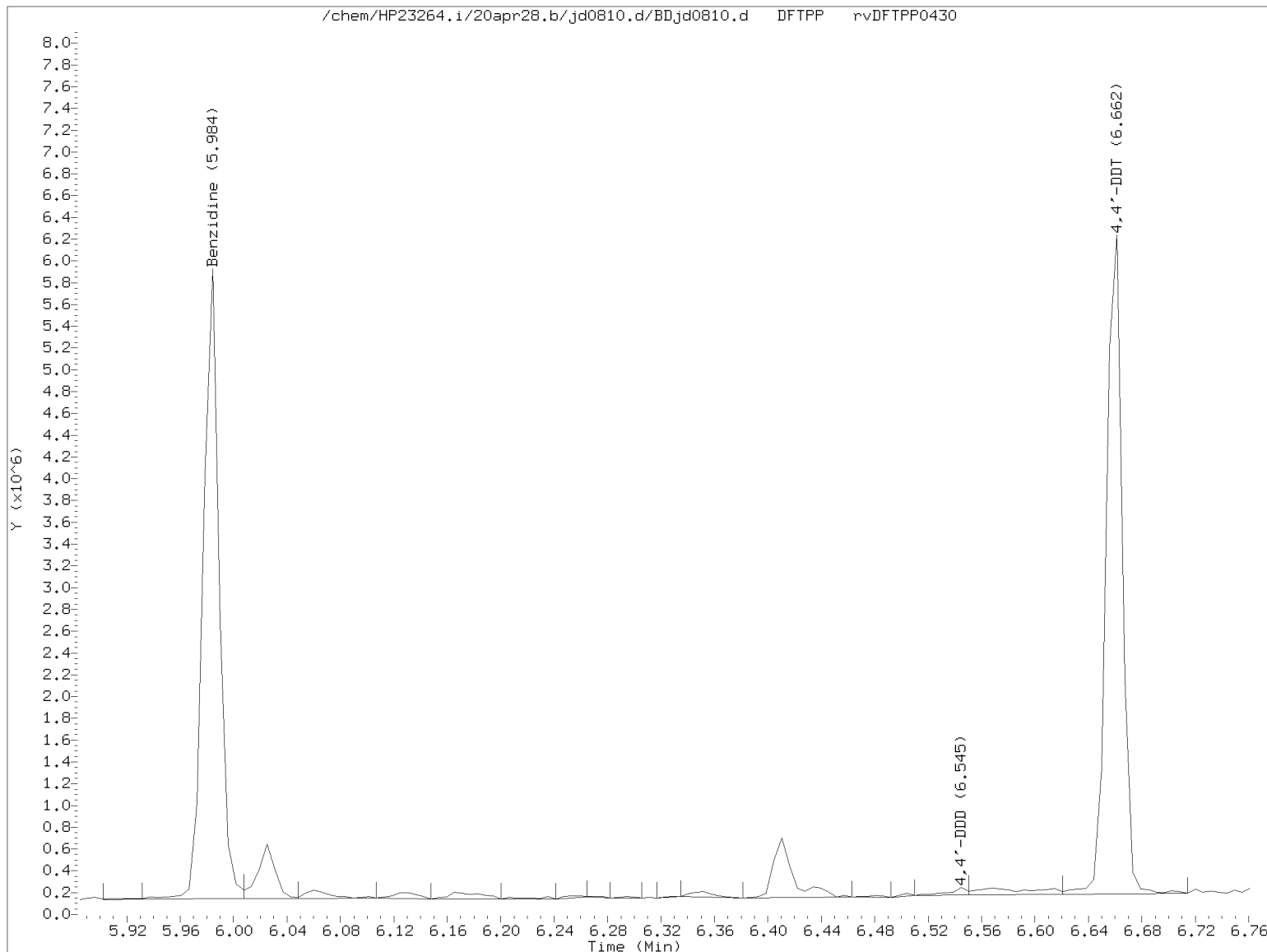
'Tailing' peak width (min.) = 0.0115333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0115333333}{0.0133333333} = 0.865$$

page 1 of 2
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Assessment of GC Column Performance and Injection Port Inertness for

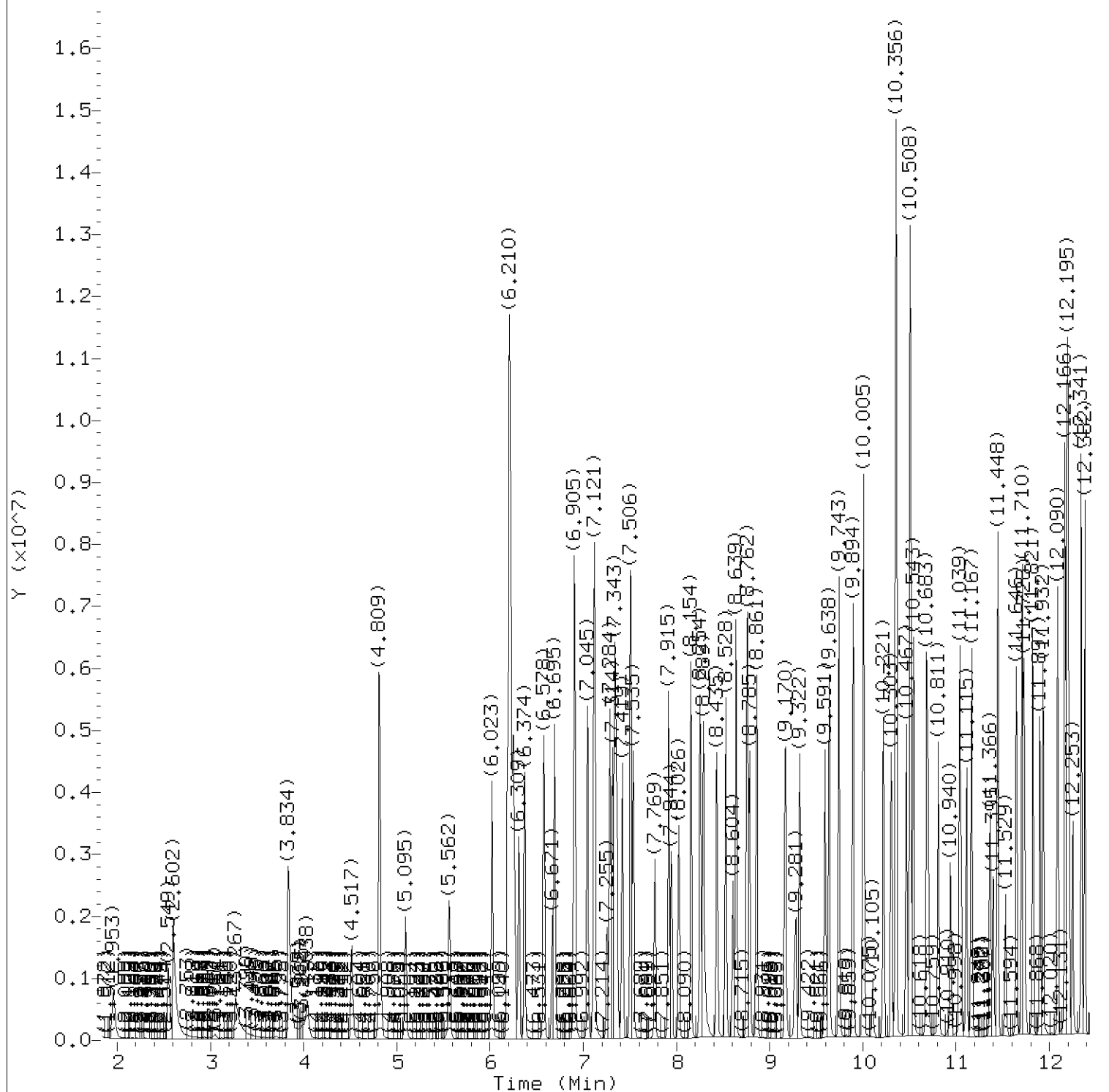
Instrument ID: HP23264.i Injection Date: 28-APR-2020 07:05 Operator: knb25316



$$\% \text{ 4,4'-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 57295}{0 + 57295 + 5195584} \times 100 = 1.1$$

page 2 of 2
printed on 04/28/2020 at 15:17



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0811.d
Injection date and time: 28-APR-2020 07:21

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 16:17

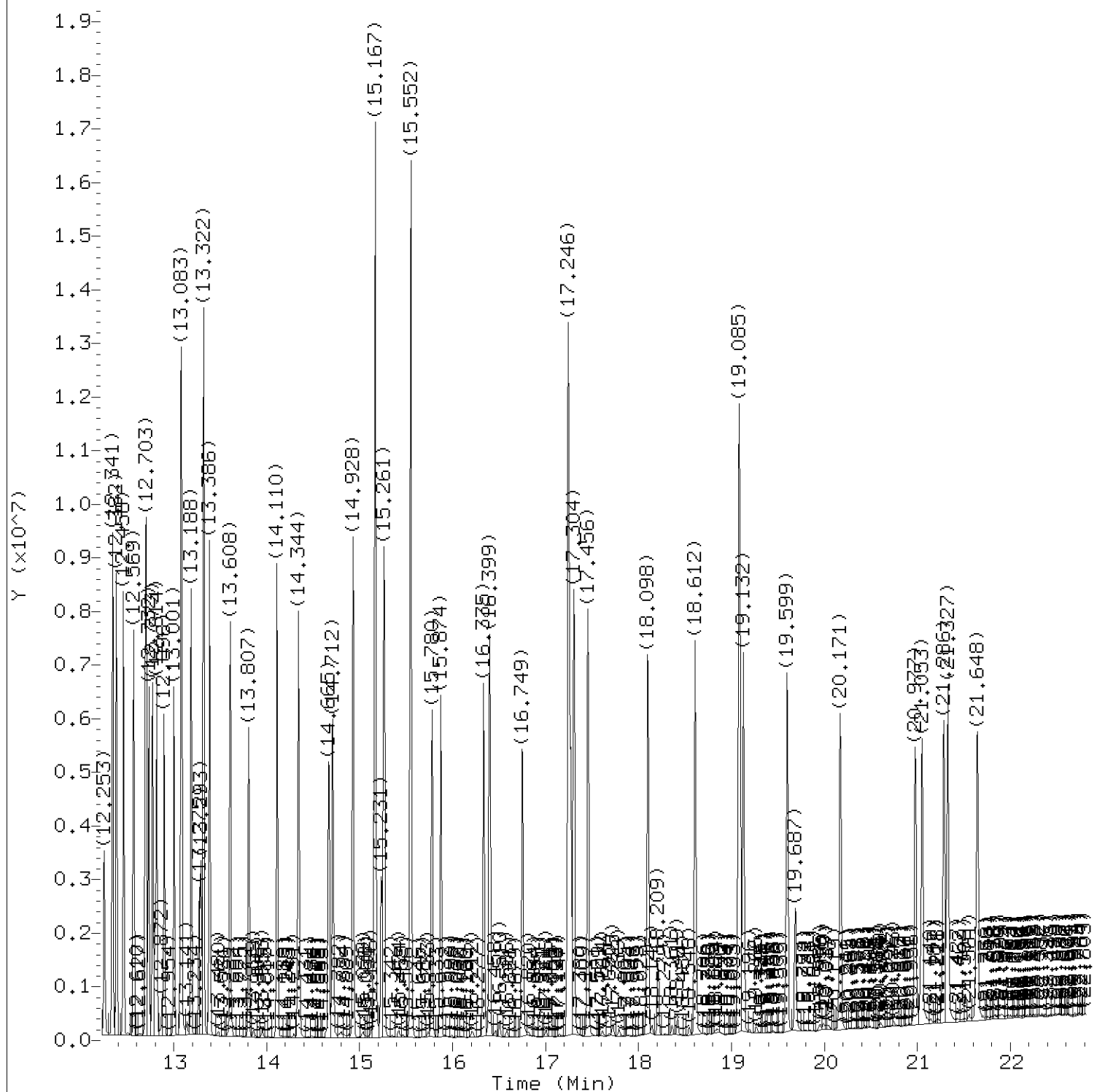
Date, time and analyst ID of latest file update: 28-Apr-2020 16:19 cam01237

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Digitally signed by Chad A. Moline
on 04/28/2020 at 16:20.

Target 3.5 esignature user ID: cam01237



Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0811.d
 Injection date and time: 28-APR-2020 07:21

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 16:17

Date, time and analyst ID of latest file update: 28-Apr-2020 16:19 cam01237

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
1) 1,4-Dioxane	(1)	1.953	88	652145	11.851
5) N-Nitrosodimethylamine	(1)	2.549	74	1059852	12.231
6) Pyridine	(1)	2.602	79	1747124	12.827
8) 2-Picoline	(1)	3.839	93	1606846	12.262
9) N-Nitrosomethylethylamine	(1)	4.038	88	601509	10.458
10) Methyl methanesulfonate	(1)	4.517	80	924189	11.145
12) \$2-Fluorophenol	(1)	4.814	112	2538779	23.821
14) N-Nitrosodiethylamine	(1)	5.095	102	622552	11.750
16) Ethyl methanesulfonate	(1)	5.562	109	614465	12.326
43) Total Cresols	(1)			2502758	23.406
17) Benzaldehyde	(1)	6.023	77	1308806	12.823
20) Aniline	(1)	6.187	93	2225766	11.911
18) \$Phenol-d6	(1)	6.204	99	3506144	24.742
19) Phenol	(1)	6.228	94	1886113	11.560
23) bis(2-Chloroethyl) ether	(1)	6.309	93	1424997	11.980
24) 2-Chlorophenol	(1)	6.374	128	1226053	12.671
25) 1,3-Dichlorobenzene	(1)	6.578	146	1387893	11.981
26) *1,4-Dichlorobenzene-d4	(1)	6.671	152	365735	5.000
27) 1,4-Dichlorobenzene	(1)	6.695	146	1420824	12.049
28) Benzyl alcohol	(1)	6.899	108	808469	12.336
29) 1,2-Dichlorobenzene	(1)	6.911	146	1303371	11.833
31) Indene	(1)	7.045	115	2052417	12.776
35) bis(2-Chloroisopropyl) ether	(1)	7.121	45	1827083	11.738
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.121	45	1827083	11.738
32) 2-Methylphenol	(1)	7.121	108	1169830	11.968
36) N-Nitrosopyrrolidine	(1)	7.255	100	694069	13.226
37) Acetophenone	(1)	7.290	105	2022996	12.485
39) N-Nitroso-di-n-propylamine	(1)	7.314	70	1196928	12.031
40) N-Nitrosomorpholine	(1)	7.325	56	908833	11.002
41) o-Toluidine	(1)	7.337	106	2085166	12.153
38) 4-Methylphenol	(1)	7.354	108	1332928	11.438
100) Isosafrole	(3)			1082225	12.893
44) Hexachloroethane	(1)	7.419	117	658050	11.644
45) \$Nitrobenzene-d5	(2)	7.506	82	3547589	24.055
46) Nitrobenzene	(2)	7.535	77	1790028	11.831
50) N-Nitrosopiperidine	(2)	7.769	114	604834	12.961
52) Isophorone	(2)	7.915	82	2952336	12.213
53) 2-Nitrophenol	(2)	8.026	139	638269	13.110
125) 2,4,2,6-Dinitrotoluenes	(3)			1335062	25.700
55) 2,4-Dimethylphenol	(2)	8.154	107	1405456	12.585

* = Compound is an internal standard.

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 on 04/28/2020 at 16:20.

Target 3.5 esignature user ID: cam01237

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page 1 of 4

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0811.d
 Injection date and time: 28-APR-2020 07:21

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 16:17

Date, time and analyst ID of latest file update: 28-Apr-2020 16:19 cam01237

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate	(2)	8.254	198	600220	12.621
57) bis(2-Chloroethoxy)methane	(2)	8.289	93	1647833	12.565
58) Benzoic acid	(2)	8.306	105	727733	11.913
62) 2,4-Dichlorophenol	(2)	8.435	162	1033621	12.502
65) 1,2,4-Trichlorobenzene	(2)	8.528	180	1166395	12.178
68) *Naphthalene-d8	(2)	8.610	136	1305342	5.000
69) Naphthalene	(2)	8.639	128	3421336	12.542
70) 4-Chloroaniline	(2)	8.756	127	1340173	12.269
71) 2,6-Dichlorophenol	(2)	8.768	162	985664	12.062
151) Diallate trans/cis	(4)			1200574	12.879
72) Hexachloropropene	(2)	8.785	213	925700	12.733
74) Hexachlorobutadiene	(2)	8.861	225	770403	12.081
78) Quinoline	(2)	9.170	129	2108535	12.290
79) Caprolactam	(2)	9.281	113	344042	13.228
80) N-Nitrosodi-n-butylamine	(2)	9.322	84	973844	11.786
83) 4-Chloro-3-methylphenol	(2)	9.591	107	1112929	12.525
85) Safrole	(2)	9.638	162	898473	12.296
86) 2-Methylnaphthalene	(2)	9.743	142	2238567	12.487
87) 1-Methylnaphthalene	(2)	9.894	142	2096486	12.330
88) Hexachlorocyclopentadiene	(3)	10.005	237	874095	12.248
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.011	216	1192140	12.062
91) cis-Isosafrole	(3)	10.105	162	160103	2.100
93) 2,4,6-Trichlorophenol	(3)	10.221	196	779581	13.123
95) 2,4,5-Trichlorophenol	(3)	10.303	196	832323	12.762
96) \$2-Fluorobiphenyl	(3)	10.356	172	5182714	24.834
97) trans-Isosafrole	(3)	10.467	162	922121	10.794
98) 1,1'-Biphenyl	(3)	10.508	154	2783008	12.440
99) 2-Chloronaphthalene	(3)	10.513	162	2368763	12.543
101) 1-Chloronaphthalene	(3)	10.543	162	2041175	11.735
103) Diphenyl ether	(3)	10.683	170	1469450	11.925
104) 2-Nitroaniline	(3)	10.706	138	688696	12.742
108) 1,4-Naphthoquinone	(3)	10.811	158	868470	12.271
109) 1,4-Dinitrobenzene	(3)	10.940	168	363310	13.239
110) Dimethylphthalate	(3)	11.039	163	2536598	12.564
111) 1,3-Dinitrobenzene	(3)	11.056	168	404915	13.056
113) 2,6-Dinitrotoluene	(3)	11.115	165	581539	13.174
114) Acenaphthylene	(3)	11.167	152	3029888	12.223
117) 3-Nitroaniline	(3)	11.366	138	549201	12.640
118) *Acenaphthene-d10	(3)	11.395	164	644065	5.000
119) Acenaphthene	(3)	11.448	153	2138712	12.435

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\$ = Compound is a surrogate standard.

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 on 04/28/2020 at 16:20.

Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0811.d
 Injection date and time: 28-APR-2020 07:21

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 16:17

Date, time and analyst ID of latest file update: 28-Apr-2020 16:19 cam01237

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
120) 2,4-Dinitrophenol	(3)	11.535	184	353327	13.325
122) Pentachlorobenzene	(3)	11.646	250	992540	12.143
124) Dibenzofuran	(3)	11.710	168	3085867	12.244
123) 2,4-Dinitrotoluene	(3)	11.728	165	753523	12.526
121) 4-Nitrophenol	(3)	11.734	109	445775	10.392
126) 1-Naphthylamine	(3)	11.821	143	2071662	12.421
127) 2,3,4,6-Tetrachlorophenol	(3)	11.897	232	618506	12.671
128) 2-Naphthylamine	(3)	11.932	143	1956632	11.957
129) Diethylphthalate	(3)	12.090	149	2447432	12.427
131) Fluorene	(3)	12.166	166	2462110	12.485
130) Thionazin	(3)	12.183	107	462592	12.295
132) 4-Chlorophenyl-phenylether	(3)	12.195	204	1259048	12.999
133) 5-Nitro-o-toluidine	(3)	12.201	152	632694	12.511
134) 4-Nitroaniline	(3)	12.213	138	579928	12.153
135) 4,6-Dinitro-2-methylphenol	(4)	12.253	198	490658	14.076
137) NDPA as diphenylamine	(4)	12.341	169	2071395	13.026
136) N-Nitrosodiphenylamine	(4)	12.341	169	2071395	13.026
139) 1,2-Diphenylhydrazine	(4)	12.382	77	3285169	11.880
140) \$2,4,6-Tribromophenol	(3)	12.458	330	757852	26.649
142) Tetraethyldithiopyrophosphate	(4)	12.569	97	549144	12.675
145) Diallate (peak 1)	(4)	12.697	86	878964	9.439
146) Phorate	(4)	12.703	75	1907263	13.789
147) Phenacetin	(4)	12.732	108	1359537	13.315
148) 4-Bromophenyl-phenylether	(4)	12.773	248	733348	12.371
149) Diallate (peak 2)	(4)	12.796	86	321609	3.441
150) Hexachlorobenzene	(4)	12.814	284	802164	12.788
152) Dimethoate	(4)	12.896	87	1227851	13.945
153) Atrazine	(4)	13.001	200	681722	12.878
154) Pentachlorophenol	(4)	13.077	266	528292	13.113
156) Pentachloronitrobenzene	(4)	13.083	237	415499	13.225
155) 4-Aminobiphenyl	(4)	13.088	169	2146847	12.106
157) Pronamide	(4)	13.188	173	1238665	14.115
158) *Phenanthrene-d10	(4)	13.293	188	1195092	5.000
160) Phenanthrene	(4)	13.322	178	3454889	12.440
159) Dinoseb	(4)	13.322	211	679363	14.630
162) Anthracene	(4)	13.386	178	3569915	12.991
168) Carbazole	(4)	13.608	167	3251141	12.732
169) Methyl parathion	(4)	13.807	109	1025523	14.379
170) Di-n-butylphthalate	(4)	14.110	149	4588678	13.543
172) Parathion	(4)	14.338	109	630028	14.603

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Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr28.b/jd0811.d
 Injection date and time: 28-APR-2020 07:21

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 16:17

Date, time and analyst ID of latest file update: 28-Apr-2020 16:19 cam01237

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
173) 4-Nitroquinoline-1-oxide	(4)	14.350	190	439975	13.478
174) Octachlorostyrene	(4)	14.665	308	330455	11.895
176) Isodrin	(4)	14.712	193	476024	12.215
178) Fluoranthene	(4)	14.928	202	4285221	13.240
227) Total PAHs	(6)			60193333	232.470
179) Benzidine	(5)	15.167	184	8080747	38.865
180)*Pyrene-d10	(5)	15.231	212	1276786	5.000
182) Pyrene	(5)	15.261	202	4293537	12.464
184)\$Terphenyl-d14	(5)	15.552	244	6040272	26.103
187) p-Dimethylaminoazobenzene	(5)	15.780	225	779081	13.263
190) Chlorobenzilate	(5)	15.874	139	1414765	14.043
192) 3,3'-Dimethylbenzidine	(5)	16.335	212	2802489	14.168
193) Butylbenzylphthalate	(5)	16.399	149	2071271	13.930
196) 2-Acetylaminofluorene	(5)	16.755	181	1555385	13.316
200) Benzo(a)anthracene	(5)	17.246	228	4031004	13.833
198) 3,3'-Dichlorobenzidine	(5)	17.252	252	1602514	13.440
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.269	231	788144	13.121
201) Chrysene	(5)	17.304	228	3909984	12.905
204) bis(2-Ethylhexyl)phthalate	(5)	17.456	149	2955011	14.376
208) 6-Methylchrysene	(5)	18.098	242	2914869	13.316
210) Di-n-octylphthalate	(6)	18.612	149	5154475	15.511
211) Benzo(b)fluoranthene	(6)	19.079	252	3913701	12.822
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.091	256	1757891	13.366
213) Benzo(k)fluoranthene	(6)	19.132	252	3899595	13.426
216) Benzo(a)pyrene	(6)	19.599	252	3659839	13.148
218)*Perylene-d12	(6)	19.687	264	1186207	5.000
220) 3-Methylcholanthrene	(6)	20.171	268	1879598	14.357
222) Dibenz(a,h)acridine	(6)	20.977	279	2757830	13.704
223) Dibenz(a,j)acridine	(6)	21.053	279	2873324	13.238
224) Indeno(1,2,3-cd)pyrene	(6)	21.286	276	3223568M	13.826
225) Dibenz(a,h)anthracene	(6)	21.327	278	3308652	13.600
226) Benzo(g,h,i)perylene	(6)	21.648	276	3256320	13.273

M = Compound was manually integrated.

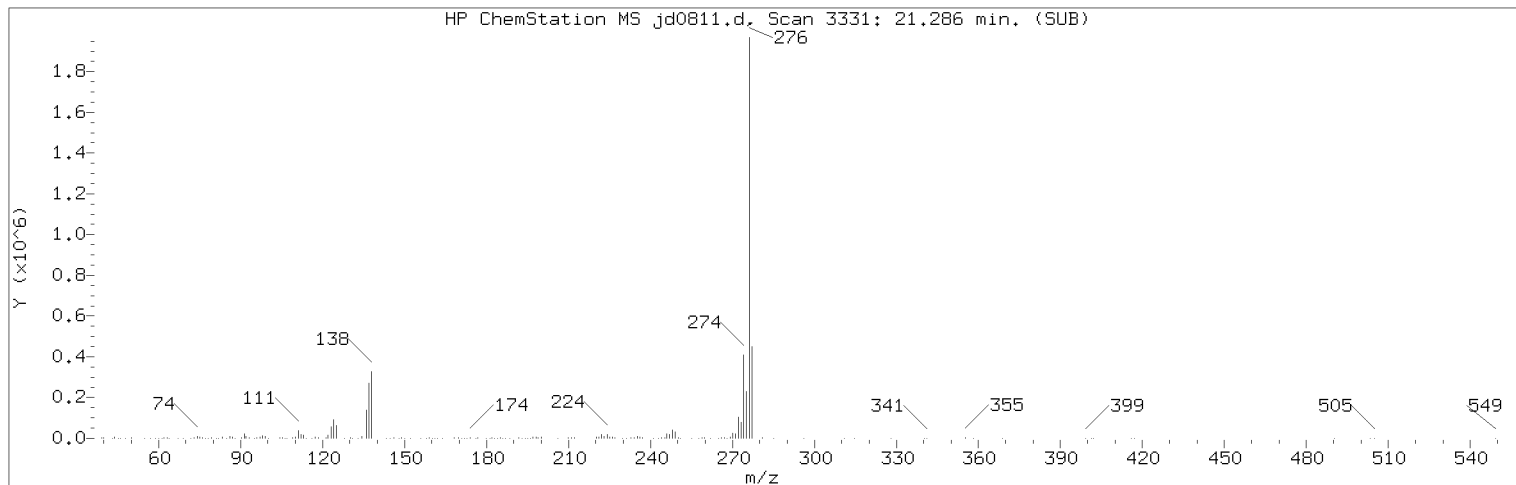
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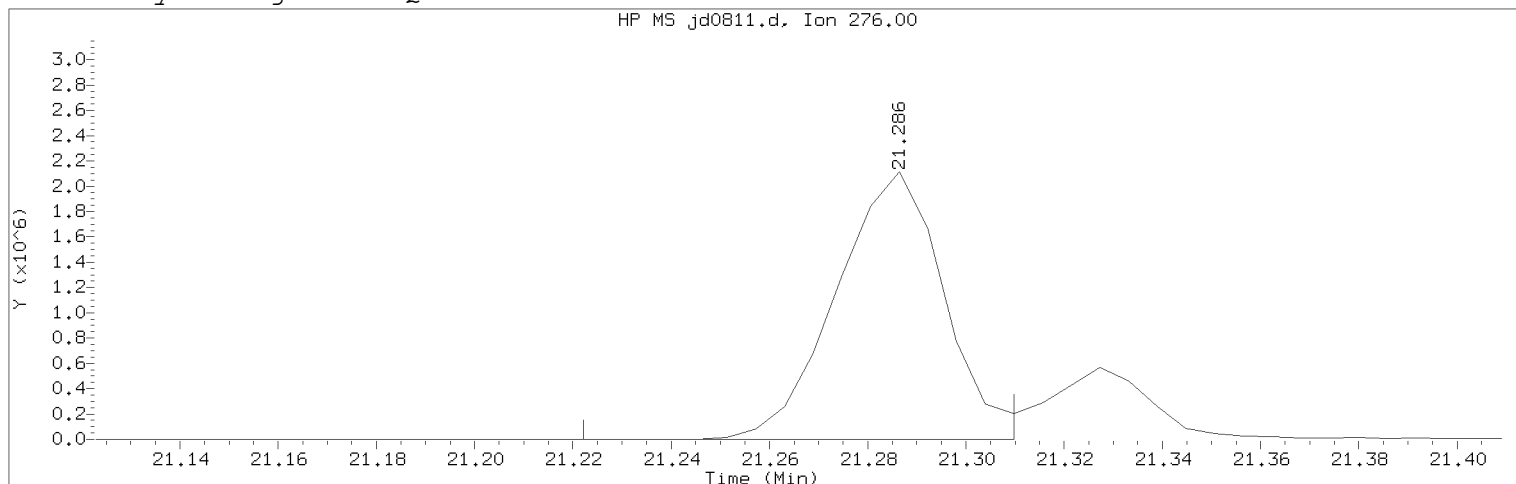
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 on 04/28/2020 at 16:20.

Target 3.5 esignature user ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr28.b/jd0811.d

Instrument ID: HP23264.i

Injection date and time: 28-APR-2020 07:21

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 16:17

Date, time and analyst ID of latest file update: 28-Apr-2020 16:19 cam01237

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3331	
Retention Time (minutes)	: 21.286	
Quant Ion	: 276.00	
Area (flag)	: 3223568M	
On-Column Amount (ng/ul)	: 13.8262	
Integration start scan	: 3319	Integration stop scan: 3334
Y at integration start	: 0	Y at integration end: 0

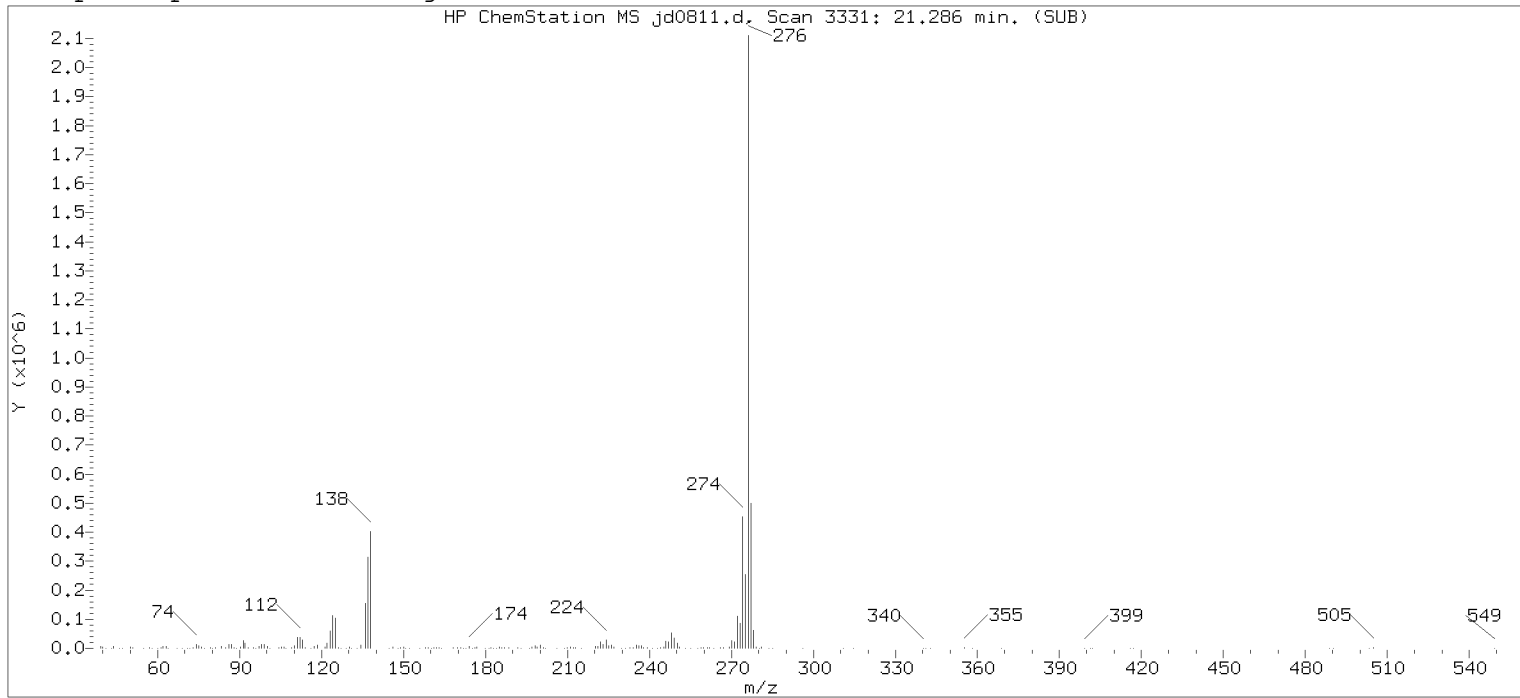
Reason for manual integration: improper integration

Analyst responsible for change:

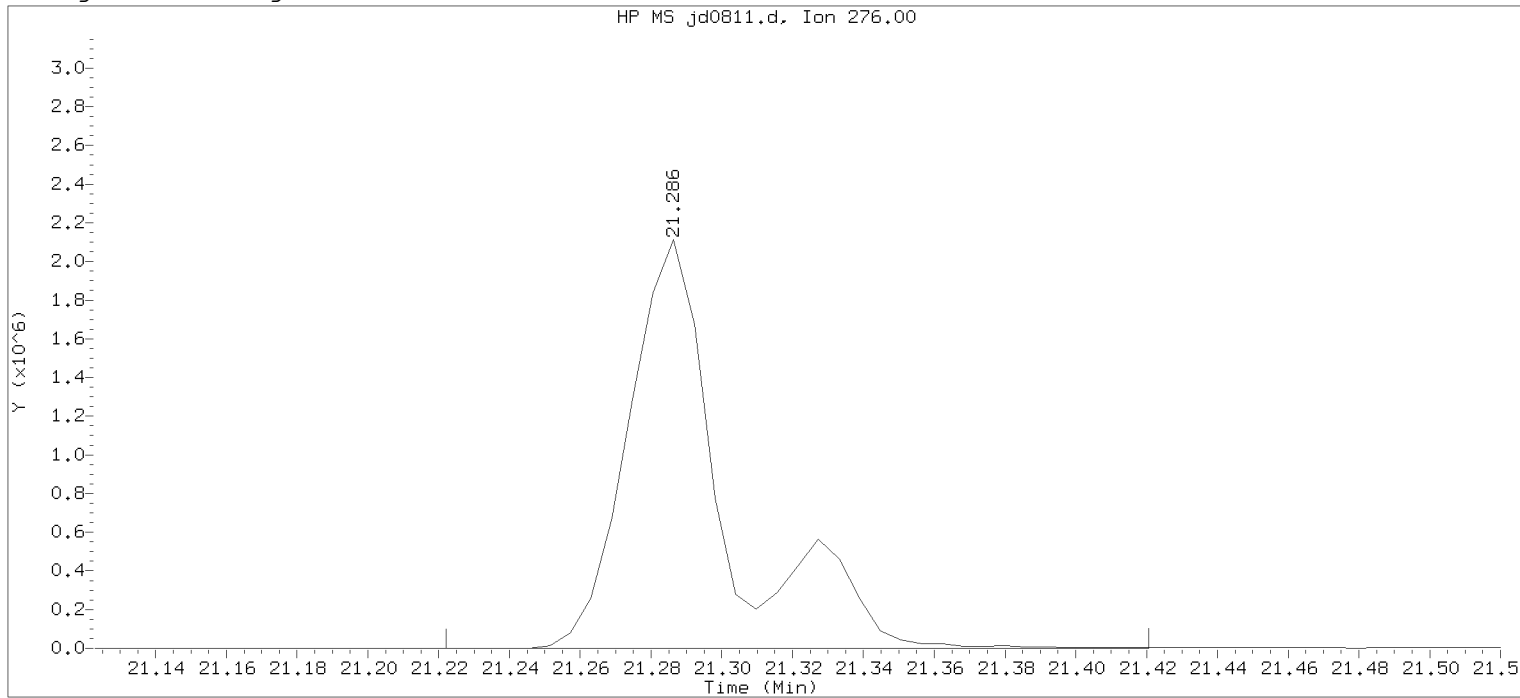
Digitally signed by Chad A. Moline
on 04/28/2020 at 16:20.
Target 3.5 esignature user ID: cam01237

Secondary review performed and digitally signed by Sarah E. Stover on 05/15/2020 at 12:48.
PARALLAX ID: ses12423

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr28.b/jd0811.d

Instrument ID: HP23264.i

Injection date and time: 28-APR-2020 07:21

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr28.b/rv8270d.m

Sublist used: all1

Calibration date and time: 28-APR-2020 08:33

Date, time and analyst ID of latest file update: 28-Apr-2020 08:33 knb25316

Sample Name: SSTD12.5

Lab Sample ID: rvSTD0940

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3331	
Retention Time (minutes)	: 21.286	
Quant Ion	: 276.00	
Area	: 4007998	
On-column Amount (ng/ul)	: 87790.6371	
Integration start scan	: 3319	Integration stop scan: 3353
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Chad A. Moline on 04/28/2020 at 16:20.

Target 3.5 esignature use **RAF59** Page 1426 of 1506

Raw QC Data

Semivolatiles by GC/MS

SBLKWH112 Lancaster Laboratories, Inc. SBLKWH112

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0625.d Injection date and time: 23-APR-2020 11:13
 Data file Sample Info. Line: SBLKWH112;SBLKWH112;1;3;BLANK;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 29-Apr-2020 11:39 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M
 Calibration date and time (Last Method Edit): 29-APR-2020 11:39
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	200555 (-21)	5.00	
68) Naphthalene-d8	8.557 (0.000)	1151	136	690087 (-29)	5.00	
118) Acenaphthene-d10	11.342 (0.006)	1628	164	353593 (-27)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	662175 (-28)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	681269 (-27)	5.00	
218) Perylene-d12	19.634 (0.000)	3048	264	625379 (-31)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
12) 2-Fluorophenol	(1)	4.756 (-0.001)	112	1275050	21.817	44%
18) Phenol-d6	(1)	6.163 (-0.002)	99	1228567	15.810	32%
45) Nitrobenzene-d5	(2)	7.454 (0.000)	82	1390307	17.832	71%
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	1866376	16.290	65%
140) 2,4,6-Tribromophenol	(3)	12.423 (-0.001)	330	692628	44.363	89%
184) Terphenyl-d14	(5)	15.500 (0.000)	244	2912666	23.590	94%

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.8
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					1
38) 4-Methylphenol	(1)			Not Detected					0.6
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					1
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.8
55) 2,4-Dimethylphenol	(2)			Not Detected					0.8
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5

SBLKWH112 Lancaster Laboratories, Inc. SBLKWH112

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0625.d Injection date and time: 23-APR-2020 11:13
 Data file Sample Info. Line: SBLKWH112;SBLKWH112;1;3;BLANK;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 29-Apr-2020 11:39 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M
 Calibration date and time (Last Method Edit): 29-APR-2020 11:39
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					1
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					3
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.3
100) Isosafrole	(3)				Not Detected					1
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.5
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.8
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					4
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					2
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					1
128) 2-Naphthylamine	(3)				Not Detected					2
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					2
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.2
137) NDPA as diphenylamine	(4)				Not Detected					0.2
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					24
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8
154) Pentachlorophenol	(4)				Not Detected					0.7

SBLKWH112 Lancaster Laboratories, Inc. SBLKWH112

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0625.d Injection date and time: 23-APR-2020 11:13
 Data file Sample Info. Line: SBLKWH112;SBLKWH112;1;3;BLANK;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 29-Apr-2020 11:39 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M
 Calibration date and time (Last Method Edit): 29-APR-2020 11:39
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

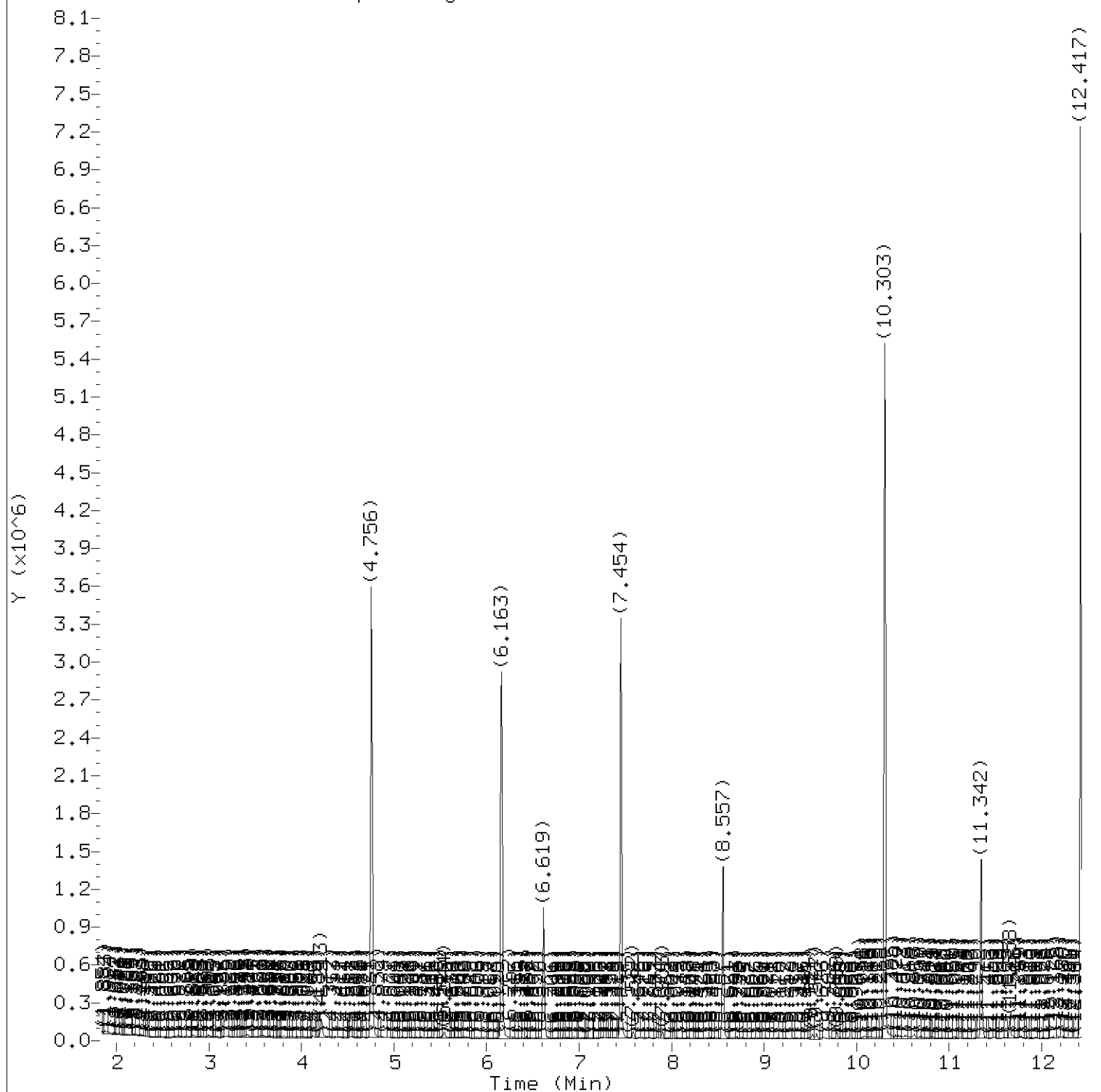
Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
200) Benzo (a) anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis (2-Ethylhexyl)phthalate	(5)			Not Detected					1
210) Di-n-octylphthalate	(6)			Not Detected					1
211) Benzo (b) fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
213) Benzo (k) fluoranthene	(6)			Not Detected					0.4
216) Benzo (a) pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno (1,2,3-cd) pyrene	(6)			Not Detected					0.04
225) Dibenzo (a,h) anthracene	(6)			Not Detected					0.1
226) Benzo (g,h,i) perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:41. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0625.d
Injection date and time: 23-APR-2020 11:13

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

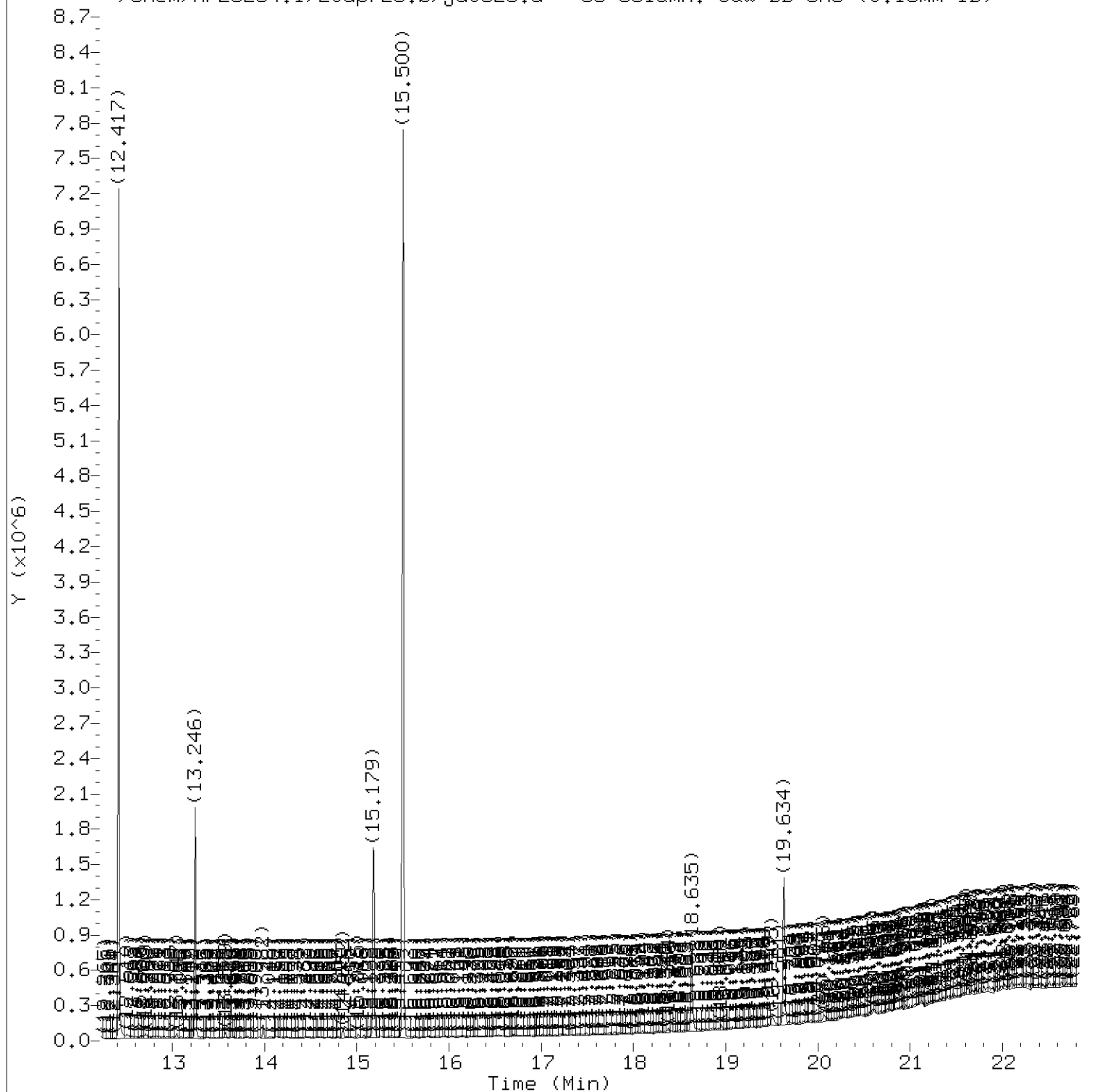
Date, time and analyst ID of latest file update: 29-Apr-2020 11:39 whs02991

Sample Name: SBLKWH112

Lab Sample ID: SBLKWH112

Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0625.d
Injection date and time: 23-APR-2020 11:13

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

Date, time and analyst ID of latest file update: 29-Apr-2020 11:39 whs02991

Sample Name: SBLKWH112

Lab Sample ID: SBLKWH112

Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0625.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 11:13

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:39 whs02991

Sample Name: SBLKWH112

Lab Sample ID: SBLKWH112

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
12) \$2-Fluorophenol	(1)	4.756	112	1275050	21.817
18) \$Phenol-d6	(1)	6.163	99	1228567	15.810
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	200555	5.000
45) \$Nitrobenzene-d5	(2)	7.454	82	1390307	17.832
68) *Naphthalene-d8	(2)	8.557	136	690087	5.000
96) \$2-Fluorobiphenyl	(3)	10.303	172	1866376	16.290
118) *Acenaphthene-d10	(3)	11.342	164	353593	5.000
140) \$2,4,6-Tribromophenol	(3)	12.423	330	692628	44.363
158) *Phenanthrene-d10	(4)	13.246	188	662175	5.000
180) *Pyrene-d10	(5)	15.179	212	681269	5.000
184) \$Terphenyl-d14	(5)	15.500	244	2912666	23.590
218) *Perylene-d12	(6)	19.634	264	625379	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

59R04MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300798

Data file: /chem/HP23264.i/20apr23.b/jd0630.d

Injection date and time: 23-APR-2020 13:41

Data file Sample Info. Line: 59R04MS;1300798;1;3;MS;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	223184 (-12)	5.00	
68) Naphthalene-d8	8.552 (0.006)	1150	136	831870 (-15)	5.00	
118) Acenaphthene-d10	11.348 (0.000)	1629	164	429756 (-12)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	827139 (-10)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	834243 (-11)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	782429 (-13)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.768 (-0.003)	112	397877	6.118	12%		10 - 84
18) Phenol-d6	(1)	6.163 (-0.002)	99	1365152	15.787	32%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1798701	19.138	77%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2685180	19.283	77%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.001)	330	117856	6.211	12%	*	18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	2795415	18.489	74%		34 - 128

* = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.531 (-0.005)	74	330426A	6.249	25.20			0.5
6) Pyridine	(1)	2.619 (-0.010)	79	283430A	3.410	13.75			0.5
8) 2-Picoline	(1)	3.798 (-0.002)	93	587788	7.350	29.64			0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)	6.187 (-0.001)	94	382104	3.838	15.48			0.2
20) Aniline	(1)	6.140 (-0.000)	93	516830	4.532	18.28			0.8
23) bis(2-Chloroethyl)ether	(1)	6.257 (0.000)	93	726997	10.016	40.39			0.1
24) 2-Chlorophenol	(1)	6.321 (-0.000)	128	244083	4.134	16.67			0.2
28) Benzyl alcohol	(1)	6.852 (-0.000)	108	392865	9.824	39.61			3
32) 2-Methylphenol	(1)	7.068 (-0.000)	108	533838	8.950	36.09			0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.074 (-0.000)	45	931081M	9.802	39.52			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.074 (-0.000)	45	936205	9.856	39.74			0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)	7.232 (0.000)	105	990804	10.020	40.40			1
38) 4-Methylphenol	(1)	7.308 (-0.000)	108	534200	7.512	30.29			0.6
39) N-Nitroso-di-n-propylamine	(1)	7.255 (0.000)	70	660308	10.876	43.86			0.2
40) N-Nitrosomorpholine	(1)	7.255 (0.002)	56	40863	0.811	3.27		J	0.5
41) o-Toluidine	(1)	7.284 (0.000)	106	586298	5.600	22.58			1
46) Nitrobenzene	(2)	7.483 (-0.000)	77	934554	9.693	39.08			0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)	7.862 (-0.000)	82	1646815	10.690	43.10			0.1
53) 2-Nitrophenol	(2)	7.979 (-0.001)	139	317794	10.243	41.30			0.8
55) 2,4-Dimethylphenol	(2)	8.108 (-0.001)	107	587322	8.252	33.28			0.8

A = User selected an alternate peak. M = Compound was manually integrated.

59R04MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300798

Data file: /chem/HP23264.i/20apr23.b/jd0630.d

Injection date and time: 23-APR-2020 13:41

Data file Sample Info. Line: 59R04MS;1300798;1;3;MS;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
59) O,O,O-Triethylphosphorothioate(2)	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)	8.242(-0.000)	93	926583	11.086	44.70			0.1
62) 2,4-Dichlorophenol	(2)	8.382(-0.000)	162	192688	3.657	14.75			0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)	8.703(-0.000)	127	439098	6.308	25.43			1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)	9.538(-0.000)	107	565777	9.991	40.29			0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)	9.690(-0.000)	142	1164810	10.196	41.11			0.07
88) Hexachlorocyclopentadiene	(3)	9.953(0.000)	237	516860	10.854	43.77			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959(0.000)	216	575989	8.734	35.22			0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)	10.169(0.000)	196	51838	1.308	5.27		J	0.2
95) 2,4,5-Trichlorophenol	(3)	10.256(-0.000)	196	139206	3.199	12.90			0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)	10.461(0.000)	162	1155507	9.169	36.97			0.1
104) 2-Nitroaniline	(3)	10.648(0.000)	138	403326	11.183	45.09			0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)	10.986(0.000)	163	1437525	10.671	43.03			0.5
111) 1,3-Dinitrobenzene	(3)	11.004(0.000)	168	256038	12.373	49.89			0.5
113) 2,6-Dinitrotoluene	(3)	11.062(0.000)	165	351346	11.929	48.10			0.1
114) Acenaphthylene	(3)	11.115(0.000)	152	1775599	10.735	43.29			0.1
117) 3-Nitroaniline	(3)	11.313(0.000)	138	296965	10.243	41.30			0.8
119) Acenaphthene	(3)	11.395(-0.000)	153	1216115	10.597	42.73			0.09
120) 2,4-Dinitrophenol	(3)	11.483(-0.000)	184	414296	23.416	94.42			4
121) 4-Nitrophenol	(3)	11.693(-0.000)	109	167856	5.865	23.65		J	3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)	11.681(0.000)	165	460619	11.475	46.27			0.3
124) Dibenzofuran	(3)	11.664(0.000)	168	1790778	10.649	42.94			0.1
126) 1-Naphthylamine	(3)	11.775(0.000)	143	774145	6.956	28.05			2
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856(-0.000)	232	51577	1.584	6.39		J	1
128) 2-Naphthylamine	(3)	11.891(-0.000)	143	648612	5.940	23.95			2
129) Diethylphthalate	(3)	12.049(-0.000)	149	1474612	11.221	45.25			0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)	12.125(0.000)	166	1429440	10.863	43.80			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.154(0.000)	204	716369	11.085	44.70			0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)	12.166(0.000)	138	293961	9.232	37.23			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.213(-0.000)	198	282785	11.721	47.26			2
136) N-Nitrosodiphenylamine	(4)	12.300(0.000)	169	1152869	10.475	42.24			0.2
137) NDPA as diphenylamine	(4)	12.300(0.000)	169	1142559M	10.382	41.86			0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)	12.732(-0.000)	248	419264	10.219	41.21			0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)	12.773(0.000)	284	442985	10.203	41.14			0.2
152) Dimethoate	(4)			Not Detected					0.8

M = Compound was manually integrated.

59R04MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300798

Data file: /chem/HP23264.i/20apr23.b/jd0630.d

Injection date and time: 23-APR-2020 13:41

Data file Sample Info. Line: 59R04MS;1300798;1;3;MS;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
154) Pentachlorophenol	(4)	13.030(0.000)	266	63705	2.285	9.21		J	0.7
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)	13.275(-0.000)	178	2071518	10.777	43.46			0.1
162) Anthracene	(4)	13.340(-0.000)	178	2045589	10.755	43.37			0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)	14.069(-0.000)	149	2576701	10.988	44.30			0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)	14.875(0.000)	202	2510629	11.208	45.19			0.1
182) Pyrene	(5)	15.208(-0.000)	202	2420668	10.755	43.37			0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.347(-0.000)	149	1117072	11.498	46.36			0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)	17.193(-0.000)	252	541946	6.956	28.05			0.8
200) Benzo(a)anthracene	(5)	17.187(-0.000)	228	2217768	11.647	46.97			0.1
201) Chrysene	(5)	17.246(-0.000)	228	2156115	10.891	43.92			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.404(-0.000)	149	1549136	11.534	46.51			1
210) Di-n-octylphthalate	(6)	18.560(-0.000)	149	2598815	11.856	47.81			1
211) Benzo(b)fluoranthene	(6)	19.021(-0.000)	252	2193755	10.896	43.94			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.027(0.000)	256	890474	10.264	41.39			1
213) Benzo(k)fluoranthene	(6)	19.068(-0.000)	252	2058716	10.746	43.33			0.4
216) Benzo(a)pyrene	(6)	19.540(0.000)	252	1805678	9.835	39.66			0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)	21.222(-0.000)	276	1659140M	10.789	43.50			0.04
225) Dibenz(a,h)anthracene	(6)	21.269(-0.000)	278	1753609	10.927	44.06			0.1
226) Benzo(g,h,i)perylene	(6)	21.584(-0.000)	276	1649841	10.196	41.11			0.1

M = Compound was manually integrated.

59R04MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300798

Data file: /chem/HP23264.i/20apr23.b/jd0630.d

Injection date and time: 23-APR-2020 13:41

Data file Sample Info. Line: 59R04MS;1300798;1;3;MS;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 248 ml

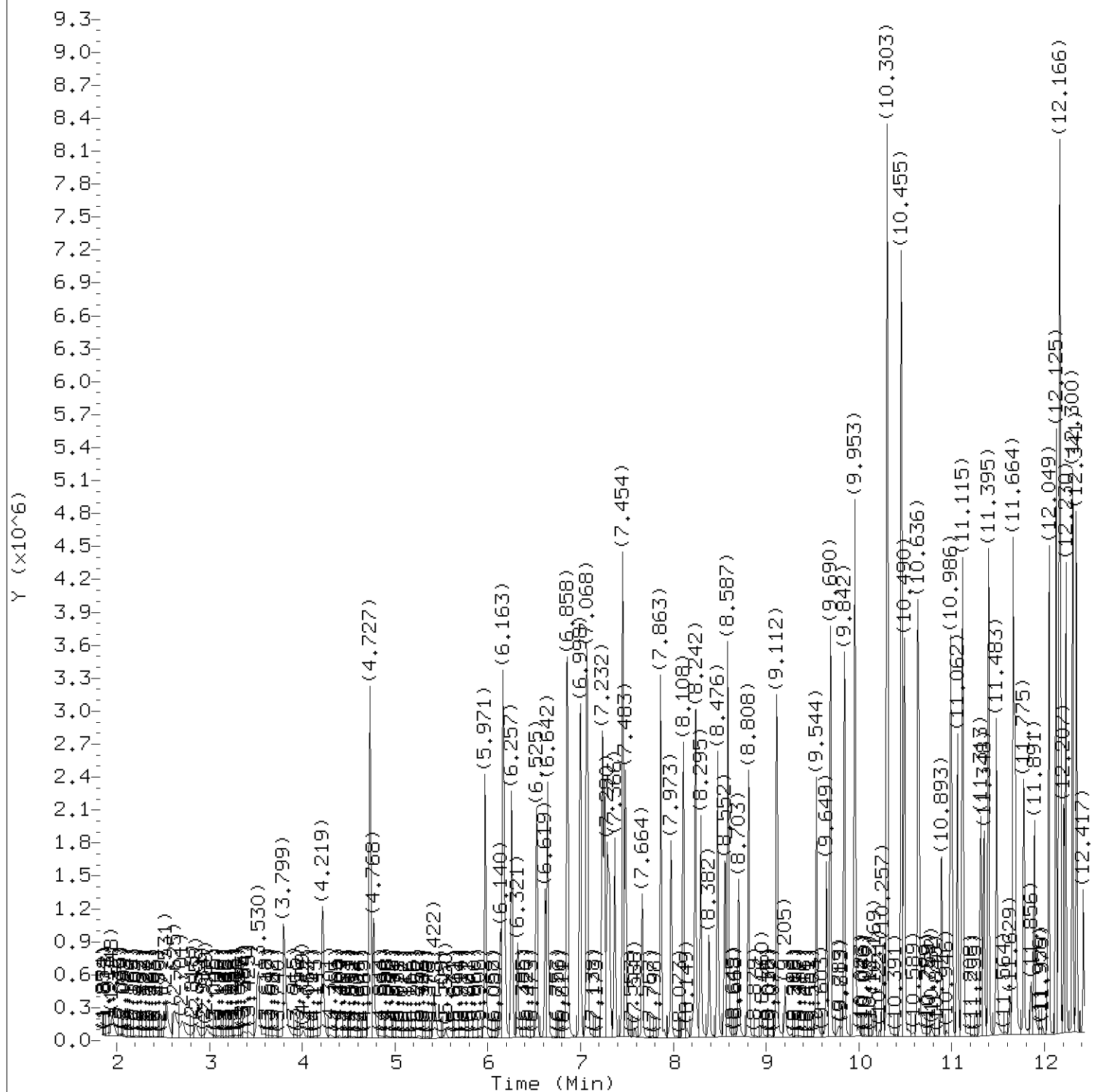
Volume Injected (Vi): 0.5 ul

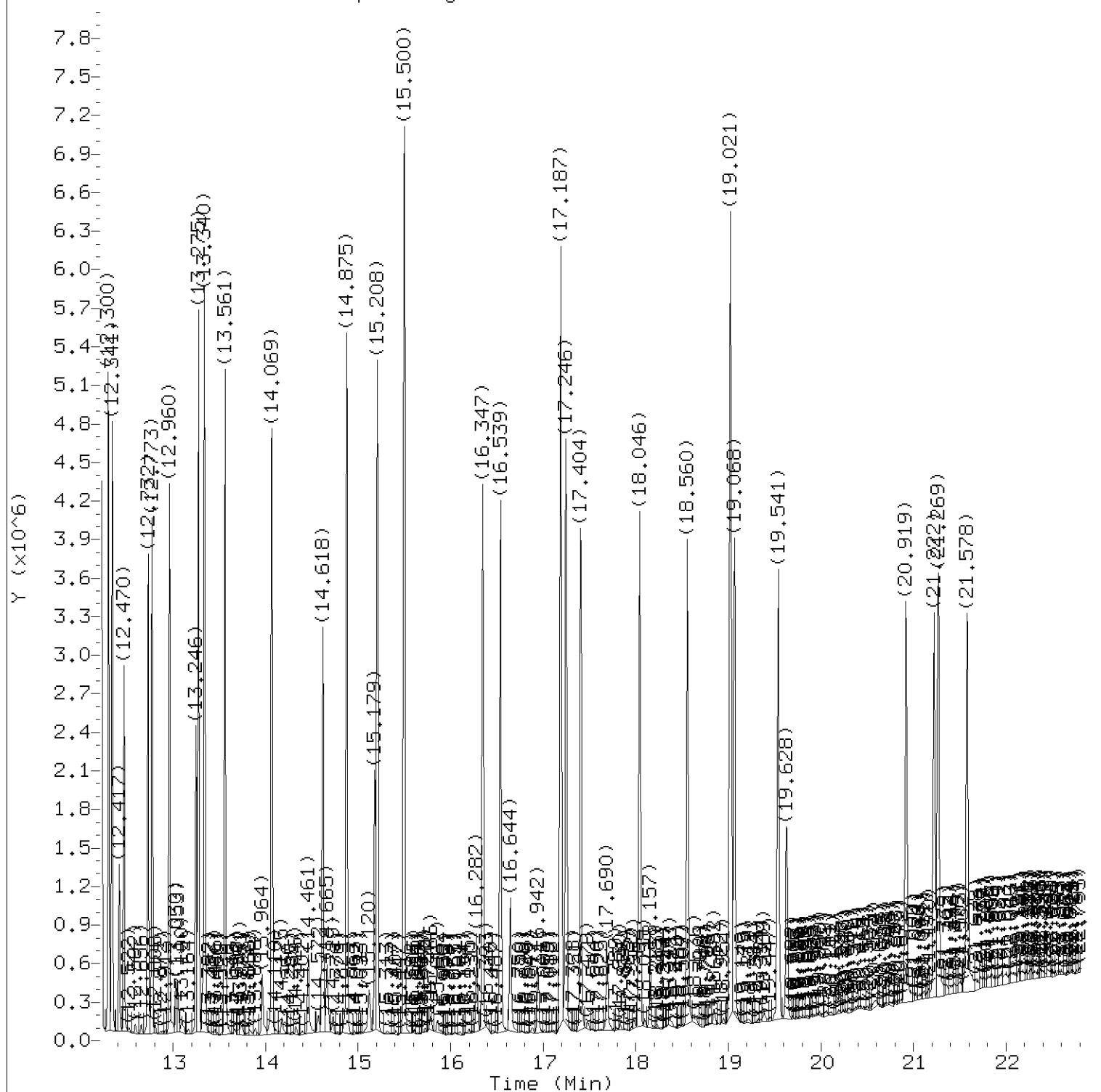
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BLANK INTENTIONALLY

Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:41. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34. PARALLAX ID: cam01237





Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0630.d
Injection date and time: 23-APR-2020 13:41

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0630.d
 Injection date and time: 23-APR-2020 13:41

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
5) N-Nitrosodimethylamine	(1)	2.531	74	330426A	6.249
6) Pyridine	(1)	2.619	79	283430A	3.410
8) 2-Picoline	(1)	3.799	93	587788	7.350
12) \$2-Fluorophenol	(1)	4.768	112	397877	6.118
20) Aniline	(1)	6.140	93	516830	4.532
18) \$Phenol-d6	(1)	6.163	99	1365152	15.787
19) Phenol	(1)	6.187	94	382104	3.838
23) bis(2-Chloroethyl) ether	(1)	6.257	93	726997	10.016
24) 2-Chlorophenol	(1)	6.321	128	244083	4.134
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	223184	5.000
28) Benzyl alcohol	(1)	6.852	108	392865	9.824
32) 2-Methylphenol	(1)	7.068	108	533838	8.950
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.074	45	931081M	9.802
35) bis(2-Chloroisopropyl) ether	(1)	7.074	45	936205	9.856
37) Acetophenone	(1)	7.232	105	990804	10.020
40) N-Nitrosomorpholine	(1)	7.255	56	40863	0.811
39) N-Nitroso-di-n-propylamine	(1)	7.255	70	660308	10.876
41) o-Toluidine	(1)	7.284	106	586298	5.600
38) 4-Methylphenol	(1)	7.308	108	534200	7.512
45) \$Nitrobenzene-d5	(2)	7.454	82	1798701	19.138
46) Nitrobenzene	(2)	7.483	77	934554	9.693
52) Isophorone	(2)	7.863	82	1646815	10.690
53) 2-Nitrophenol	(2)	7.979	139	317794	10.243
55) 2,4-Dimethylphenol	(2)	8.108	107	587322	8.252
57) bis(2-Chloroethoxy) methane	(2)	8.242	93	926583	11.086
62) 2,4-Dichlorophenol	(2)	8.382	162	192688	3.657
68) *Naphthalene-d8	(2)	8.552	136	831870	5.000
70) 4-Chloroaniline	(2)	8.703	127	439098	6.308
83) 4-Chloro-3-methylphenol	(2)	9.538	107	565777	9.991
86) 2-Methylnaphthalene	(2)	9.690	142	1164810	10.196
88) Hexachlorocyclopentadiene	(3)	9.953	237	516860	10.854
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959	216	575989	8.734
93) 2,4,6-Trichlorophenol	(3)	10.169	196	51838	1.308
95) 2,4,5-Trichlorophenol	(3)	10.257	196	139206	3.199
96) \$2-Fluorobiphenyl	(3)	10.303	172	2685180	19.283
99) 2-Chloronaphthalene	(3)	10.461	162	1155507	9.169
104) 2-Nitroaniline	(3)	10.648	138	403326	11.183
110) Dimethylphthalate	(3)	10.986	163	1437525	10.671
111) 1,3-Dinitrobenzene	(3)	11.004	168	256038	12.373
113) 2,6-Dinitrotoluene	(3)	11.062	165	351346	11.929

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0630.d
 Injection date and time: 23-APR-2020 13:41

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
114) Acenaphthylene	(3)	11.115	152	1775599	10.735
117) 3-Nitroaniline	(3)	11.313	138	296965	10.243
118)*Acenaphthene-d10	(3)	11.348	164	429756	5.000
119) Acenaphthene	(3)	11.395	153	1216115	10.597
120) 2,4-Dinitrophenol	(3)	11.483	184	414296	23.416
124) Dibenzofuran	(3)	11.664	168	1790778	10.649
123) 2,4-Dinitrotoluene	(3)	11.681	165	460619	11.475
121) 4-Nitrophenol	(3)	11.693	109	167856	5.865
126) 1-Naphthylamine	(3)	11.775	143	774145	6.956
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856	232	51577	1.584
128) 2-Naphthylamine	(3)	11.891	143	648612	5.940
129) Diethylphthalate	(3)	12.049	149	1474612	11.221
131) Fluorene	(3)	12.125	166	1429440	10.863
132) 4-Chlorophenyl-phenylether	(3)	12.154	204	716369	11.085
134) 4-Nitroaniline	(3)	12.166	138	293961	9.232
135) 4,6-Dinitro-2-methylphenol	(4)	12.213	198	282785	11.721
137) NDPA as diphenylamine	(4)	12.300	169	1142559M	10.382
136) N-Nitrosodiphenylamine	(4)	12.300	169	1152869	10.475
140)\$2,4,6-Tribromophenol	(3)	12.417	330	117856	6.211
148) 4-Bromophenyl-phenylether	(4)	12.732	248	419264	10.219
150) Hexachlorobenzene	(4)	12.773	284	442985	10.203
154) Pentachlorophenol	(4)	13.030	266	63705	2.285
158)*Phenanthrene-d10	(4)	13.246	188	827139	5.000
160) Phenanthrene	(4)	13.275	178	2071518	10.777
162) Anthracene	(4)	13.340	178	2045589	10.755
170) Di-n-butylphthalate	(4)	14.069	149	2576701	10.988
178) Fluoranthene	(4)	14.875	202	2510629	11.208
180)*Pyrene-d10	(5)	15.179	212	834243	5.000
182) Pyrene	(5)	15.208	202	2420668	10.755
184)\$Terphenyl-d14	(5)	15.500	244	2795415	18.489
193) Butylbenzylphthalate	(5)	16.347	149	1117072	11.498
200) Benzo(a)anthracene	(5)	17.187	228	2217768	11.647
198) 3,3'-Dichlorobenzidine	(5)	17.193	252	541946	6.956
201) Chrysene	(5)	17.246	228	2156115	10.891
204) bis(2-Ethylhexyl)phthalate	(5)	17.404	149	1549136	11.534
210) Di-n-octylphthalate	(6)	18.560	149	2598815	11.856
211) Benzo(b)fluoranthene	(6)	19.021	252	2193755	10.896
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.027	256	890474	10.264
213) Benzo(k)fluoranthene	(6)	19.068	252	2058716	10.746
216) Benzo(a)pyrene	(6)	19.541	252	1805678	9.835

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
 on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
218) *Perylene-d12	(6)	19.628	264	782429	5.000
224) Indeno(1,2,3-cd)pyrene	(6)	21.222	276	1659140M	10.789
225) Dibenz(a,h)anthracene	(6)	21.269	278	1753609	10.927
226) Benzo(g,h,i)perylene	(6)	21.584	276	1649841	10.196

M = Compound was manually integrated.

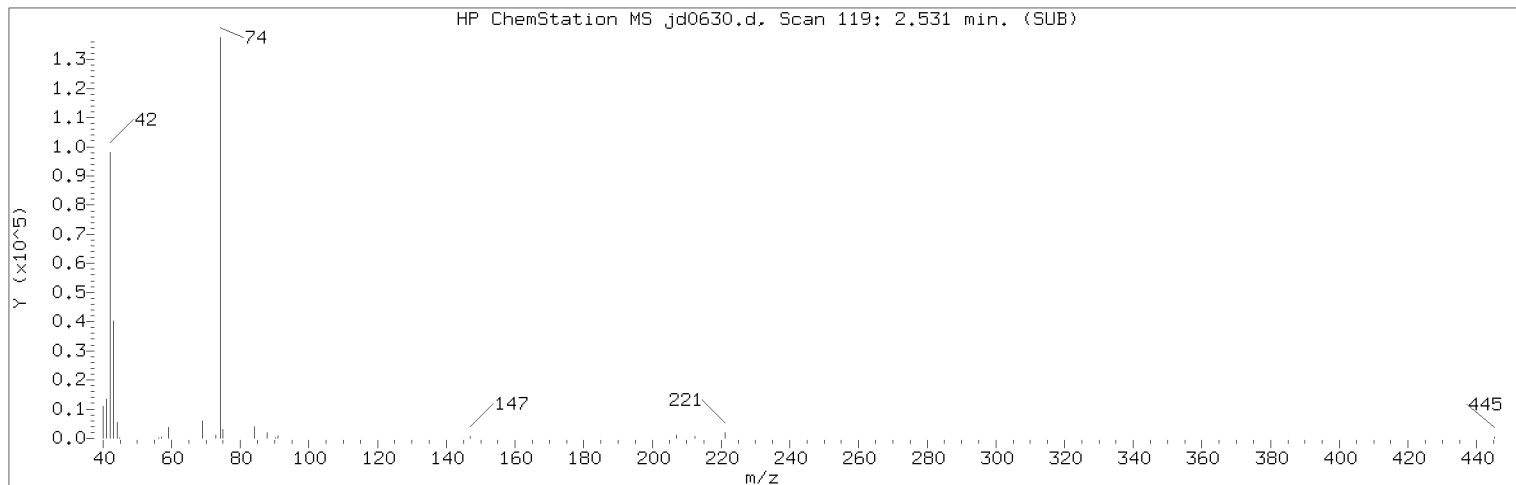
* = Compound is an internal standard.

Digitally signed by William H Saadeh

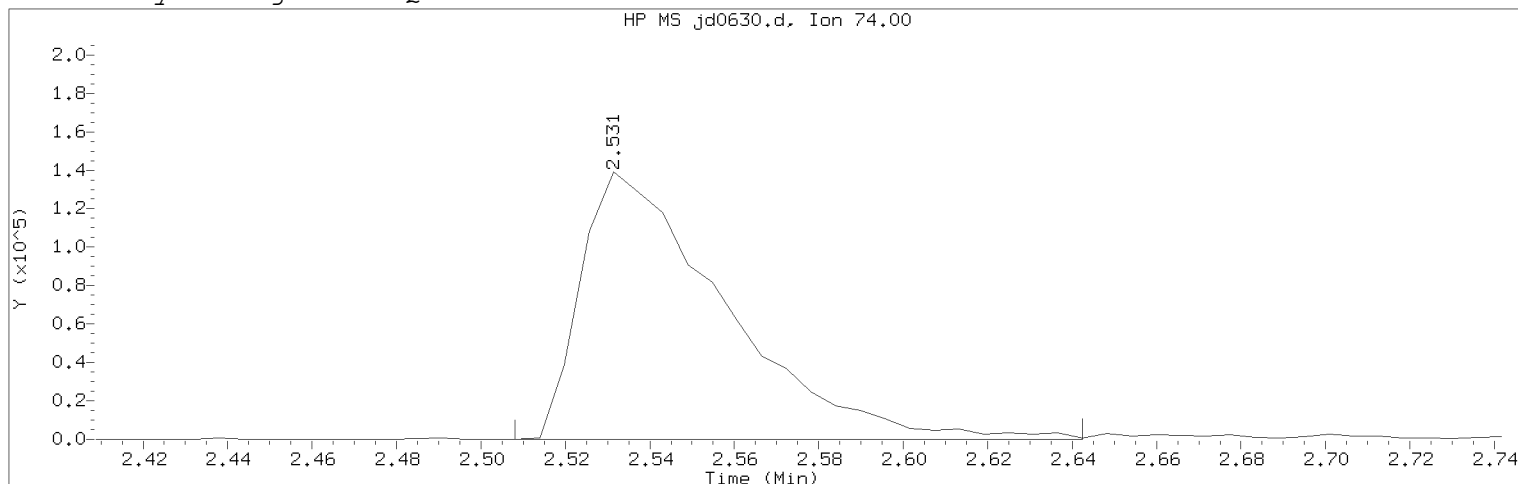
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compound Number	: 5	
Compound Name	: N-Nitrosodimethylamine	
Scan Number	: 119	
Retention Time (minutes)	: 2.531	
Quant Ion	: 74.00	
Area (flag)	: 330426A	
On-Column Amount (ng/ul)	: 6.2488	
Integration start scan	: 114	Integration stop scan: 137
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

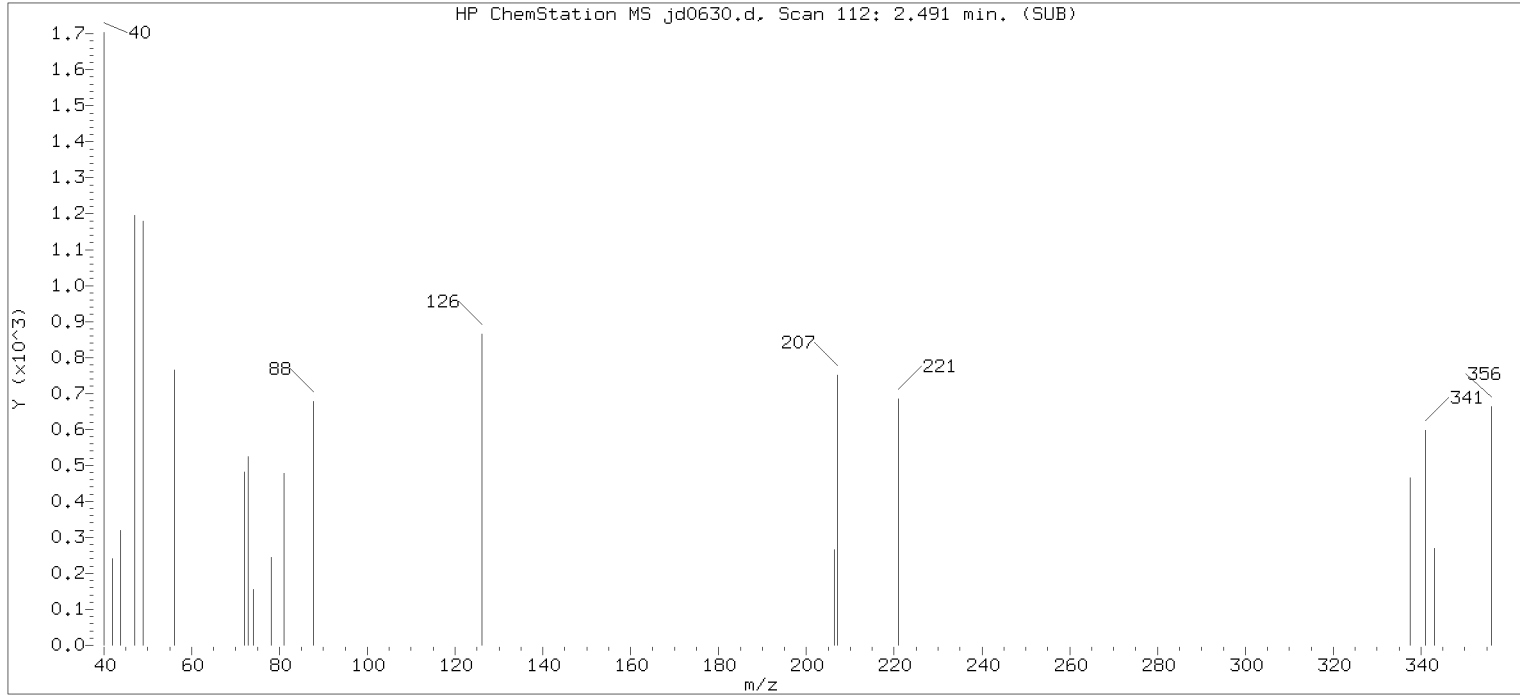
Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

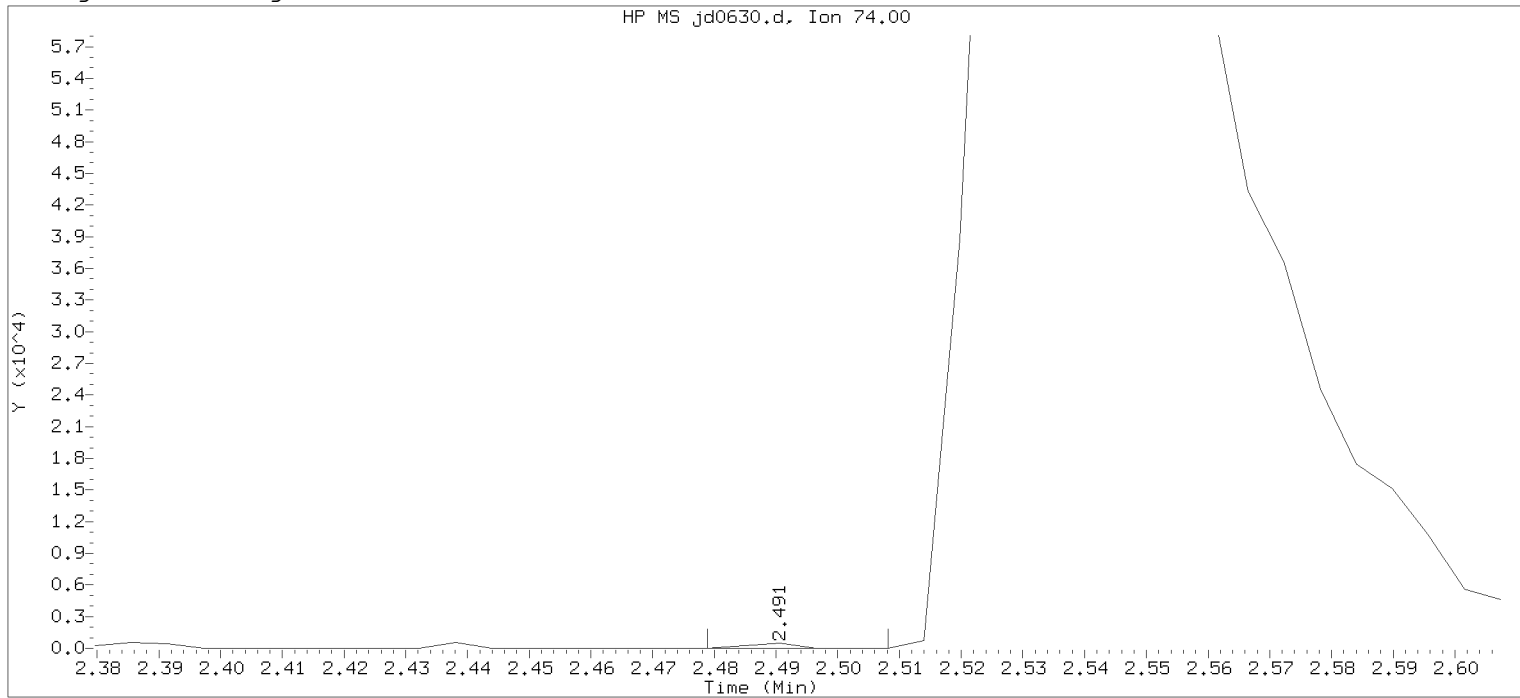
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

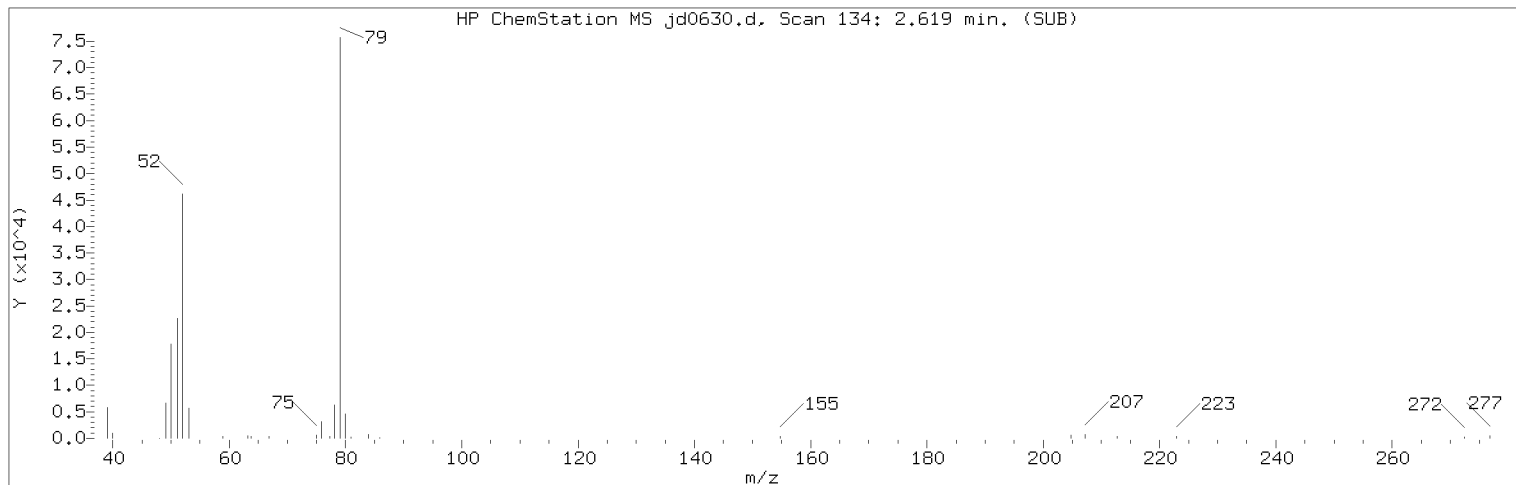
Sample Name: 59R04MS

Lab Sample ID: 1300798

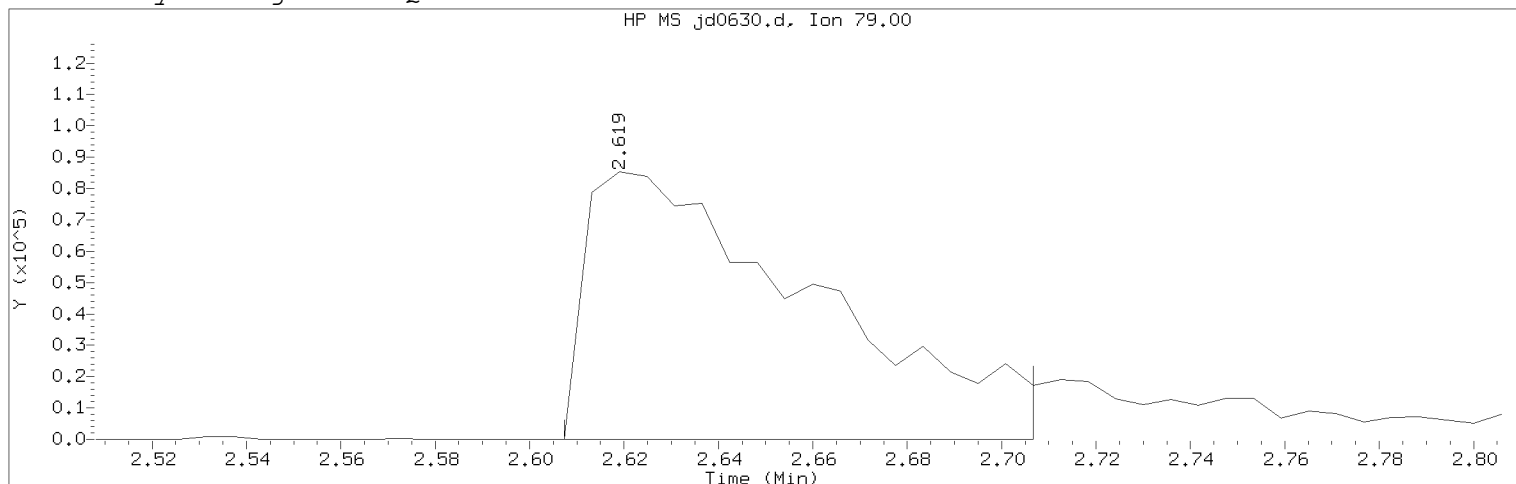
Compound Number	: 5	
Compound Name	: N-Nitrosodimethylamine	
Scan Number	: 112	
Retention Time (minutes)	: 2.491	
Quant Ion	: 74.00	
Area	: 268	
On-column Amount (ng/ul)	: 0.0051	
Integration start scan	: 109	Integration stop scan: 114
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:41.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

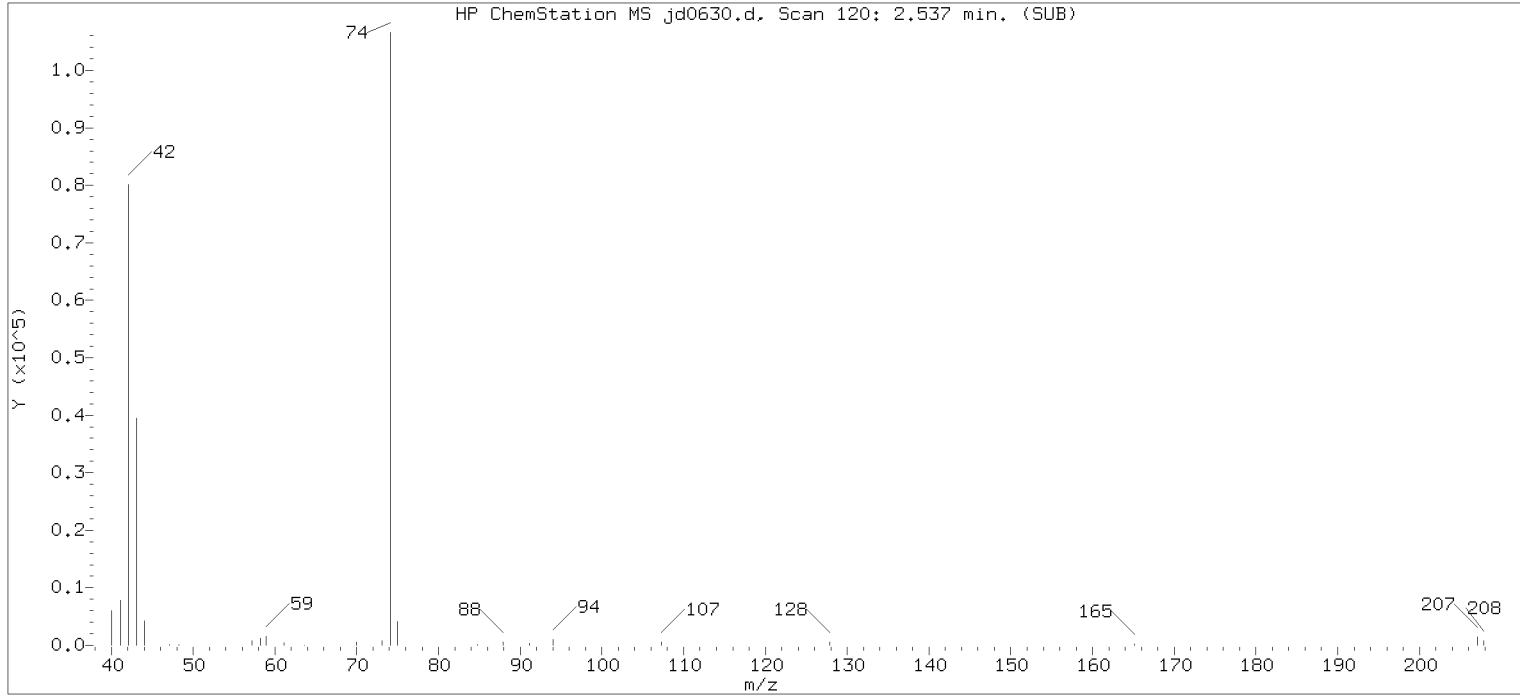
Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 134	
Retention Time (minutes)	: 2.619	
Quant Ion	: 79.00	
Area (flag)	: 283430A	
On-Column Amount (ng/ul)	: 3.4099	
Integration start scan	: 131	Integration stop scan: 148
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

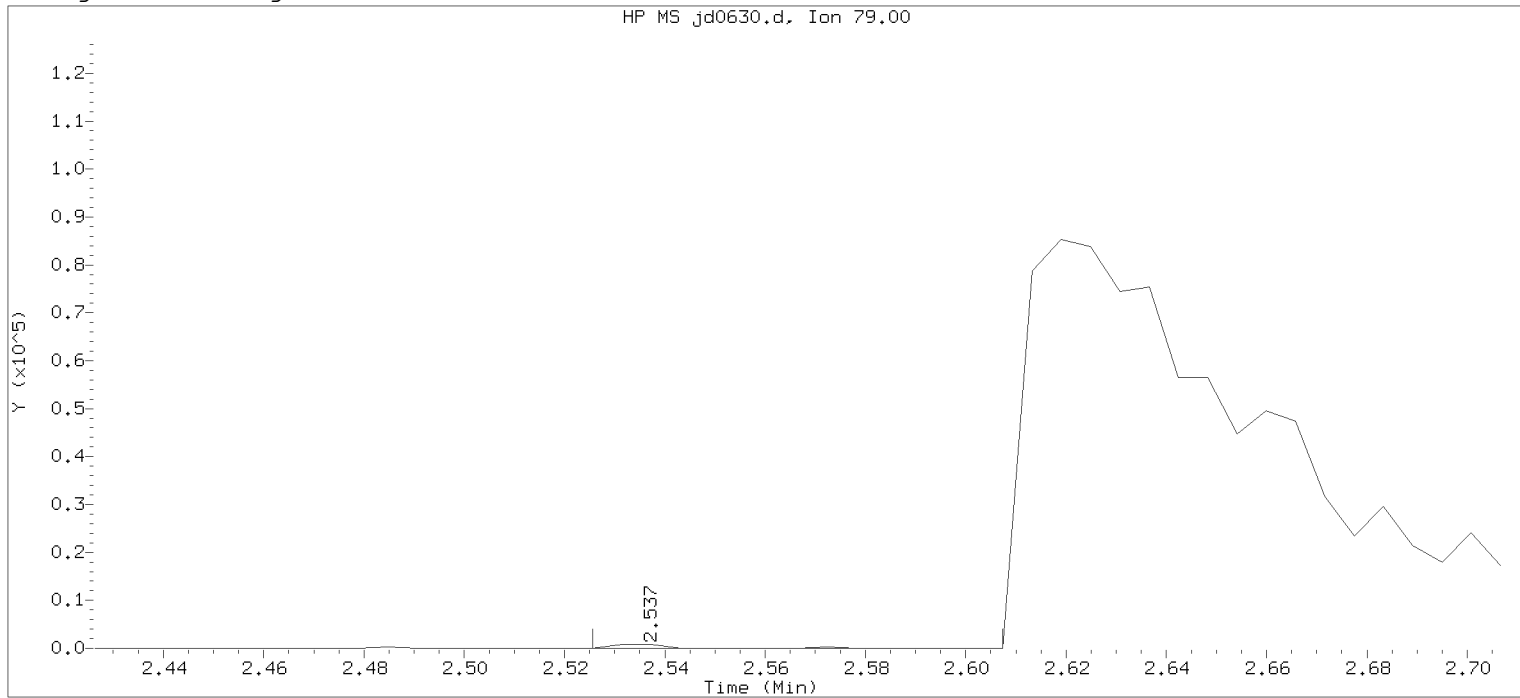
Analyst responsible for change: Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

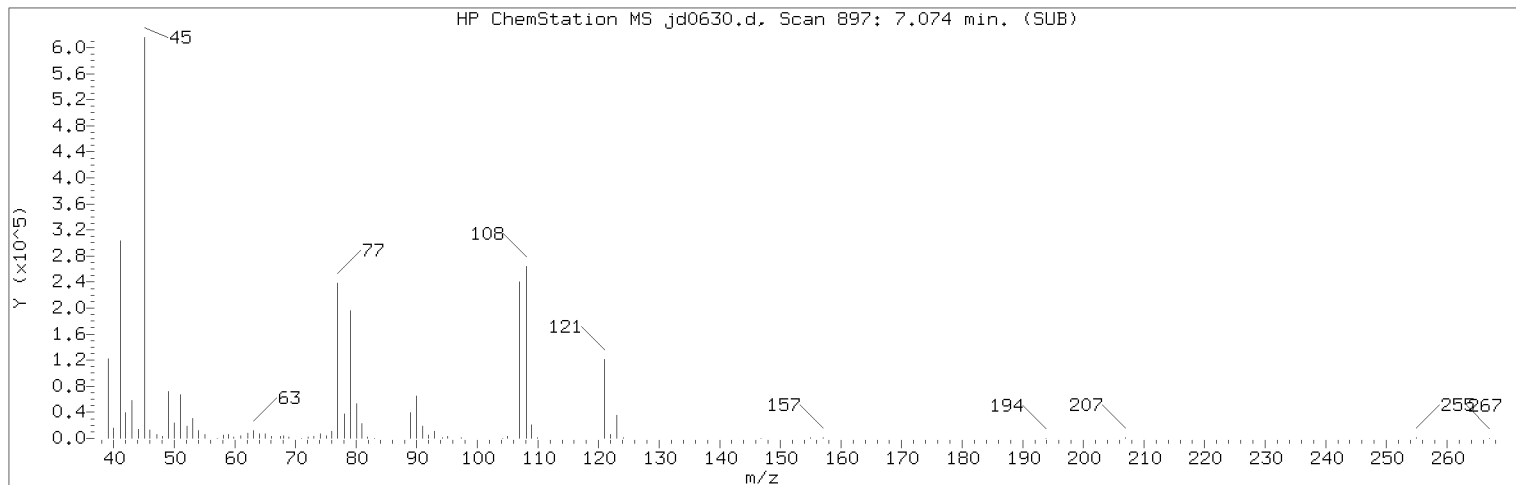
Sample Name: 59R04MS

Lab Sample ID: 1300798

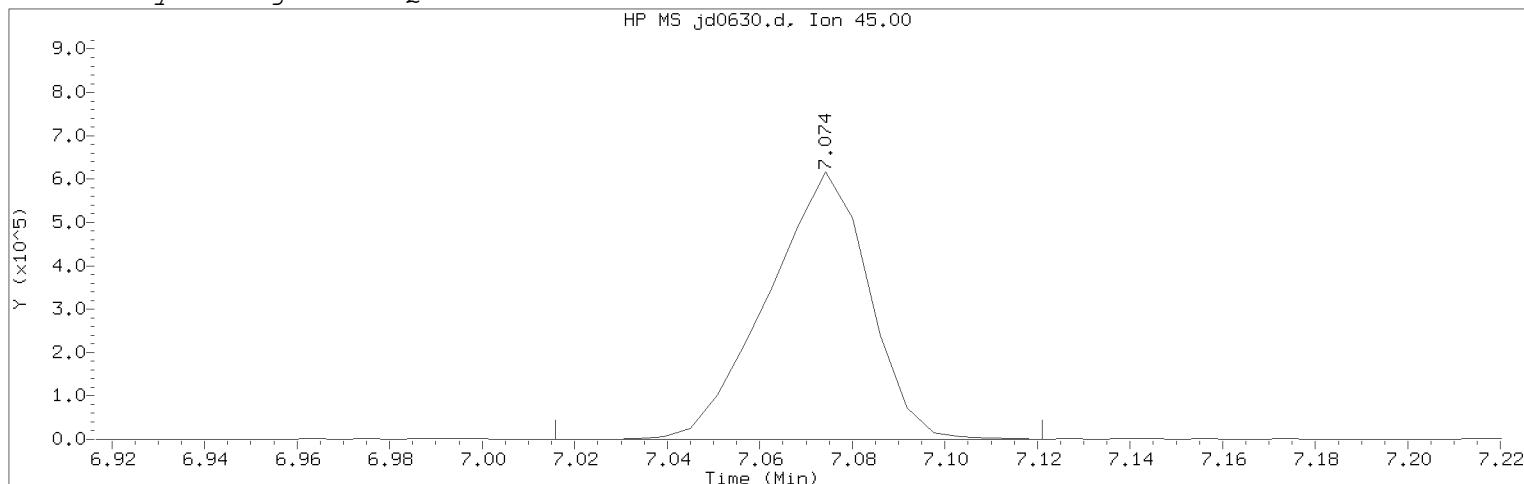
Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 120	
Retention Time (minutes)	: 2.537	
Quant Ion	: 79.00	
Area	: 627	
On-column Amount (ng/ul)	: 0.0075	
Integration start scan	: 117	Integration stop scan: 131
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:41.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

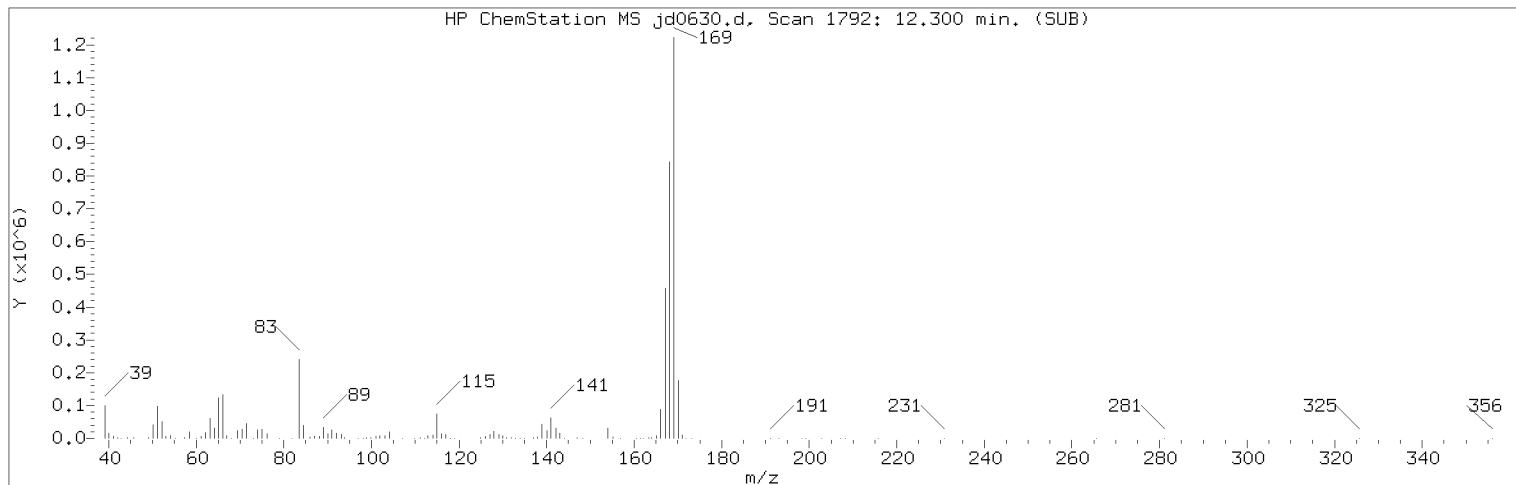
Compound Number	: 34	
Compound Name	: 2,2'-oxybis(1-Chloropropane)	
Scan Number	: 897	
Retention Time (minutes)	: 7.074	
Quant Ion	: 45.00	
Area (flag)	: 931081M	
On-Column Amount (ng/ul)	: 9.8019	
Integration start scan	: 886	Integration stop scan: 904
Y at integration start	: 0	Y at integration end: 718

Reason for manual integration: compound not in processing sublist

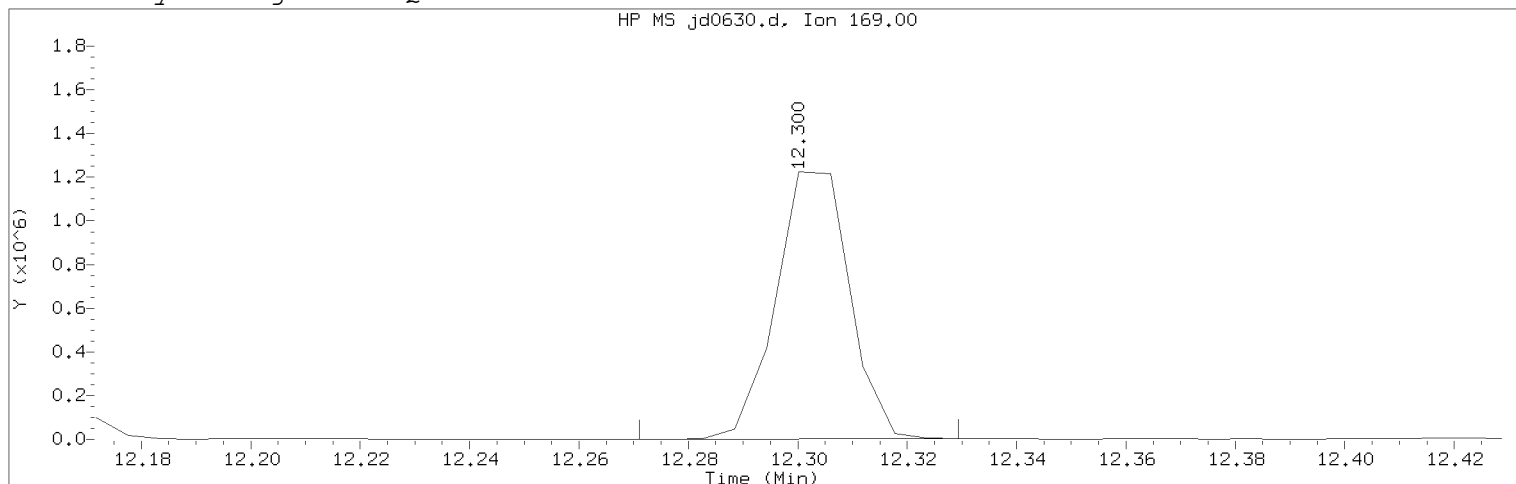
Analyst responsible for change: Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compound Number	: 137	
Compound Name	: NDPA as diphenylamine	
Scan Number	: 1792	
Retention Time (minutes)	: 12.300	
Quant Ion	: 169.00	
Area (flag)	: 1142559M	
On-Column Amount (ng/ul)	: 10.3816	
Integration start scan	: 1786	Integration stop scan: 1796
Y at integration start	: 0	Y at integration end: 2767

Reason for manual integration: compound not in processing sublist

Analyst responsible for change:

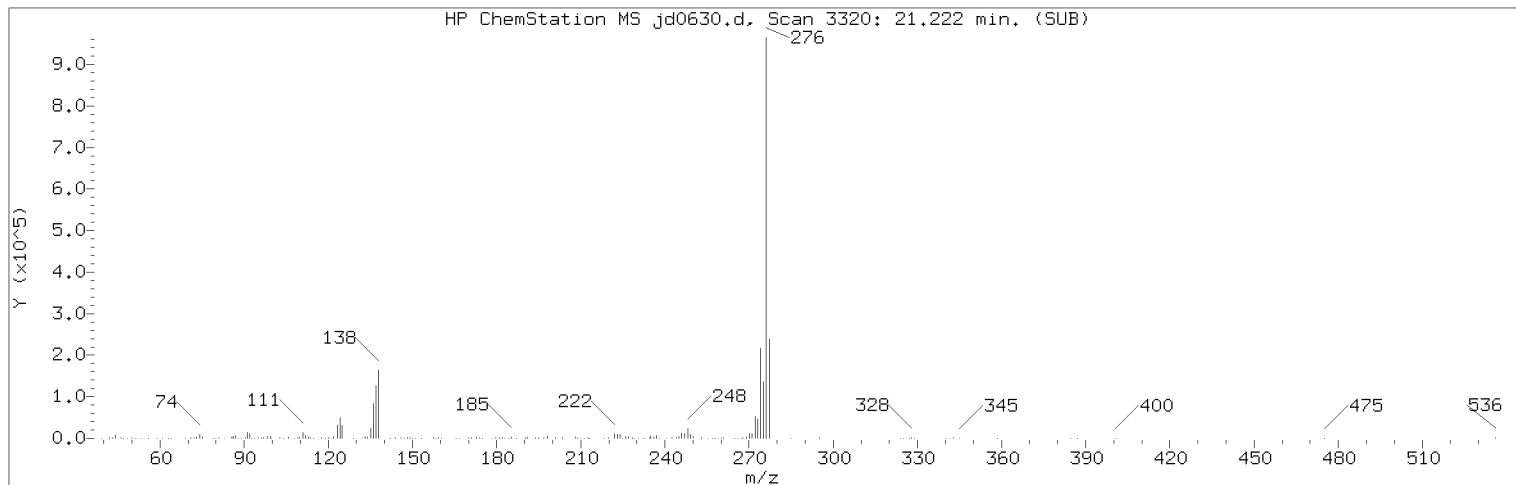
Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

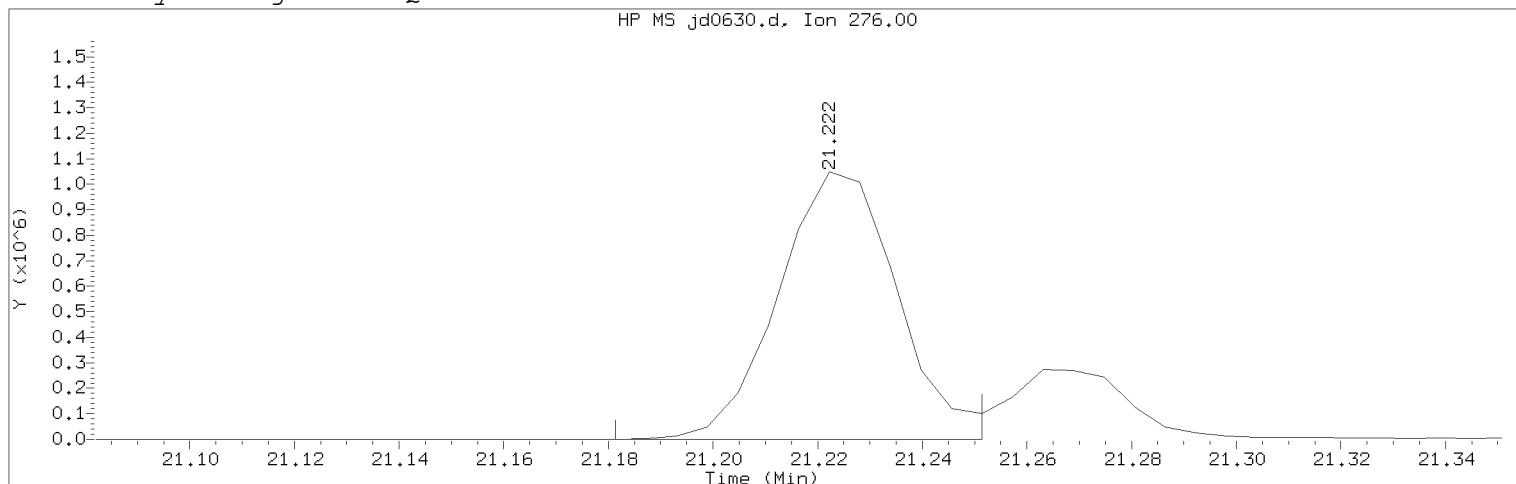
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3320	
Retention Time (minutes)	: 21.222	
Quant Ion	: 276.00	
Area (flag)	: 1659140M	
On-Column Amount (ng/ul)	: 10.7886	
Integration start scan	: 3312	Integration stop scan: 3324
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

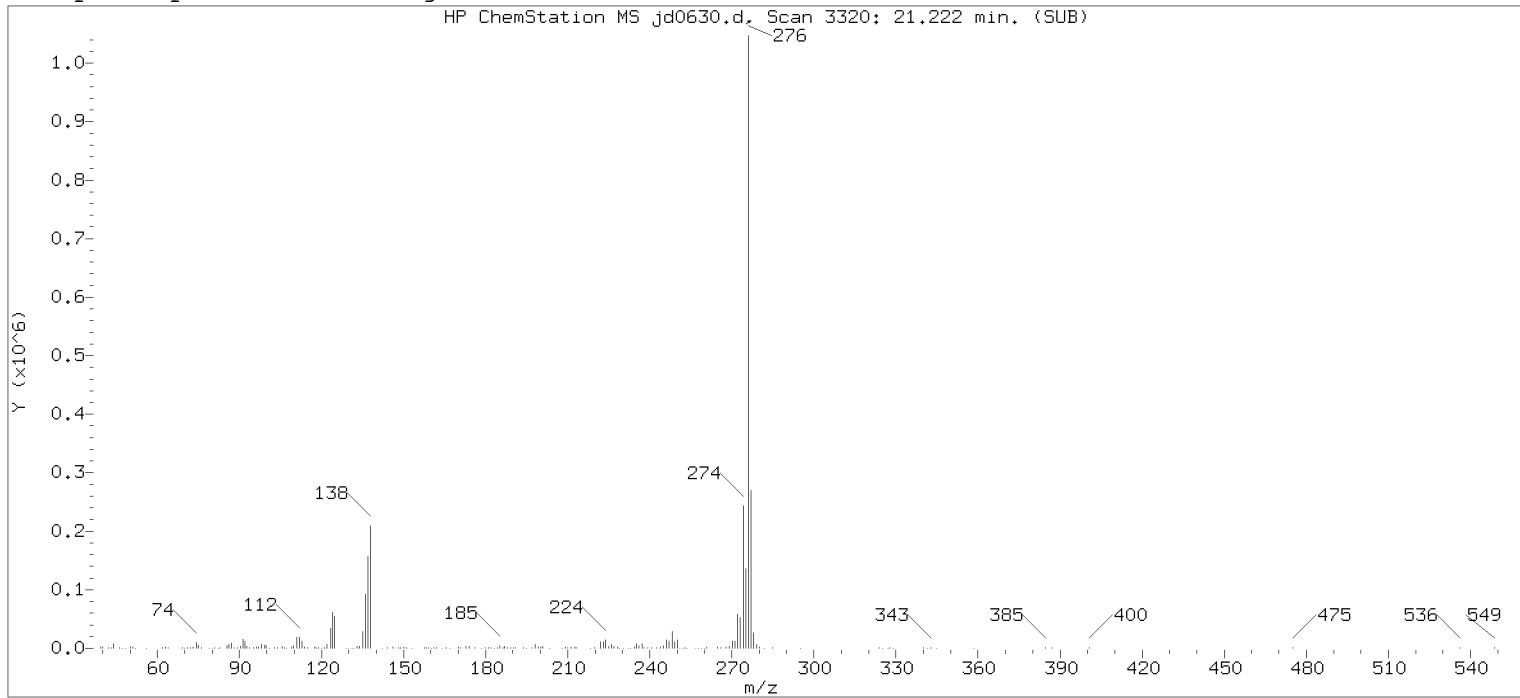
Digitally signed by William H Saadeh
on 04/29/2020 at 11:41.

Target 3.5 esignature user ID: whs02991

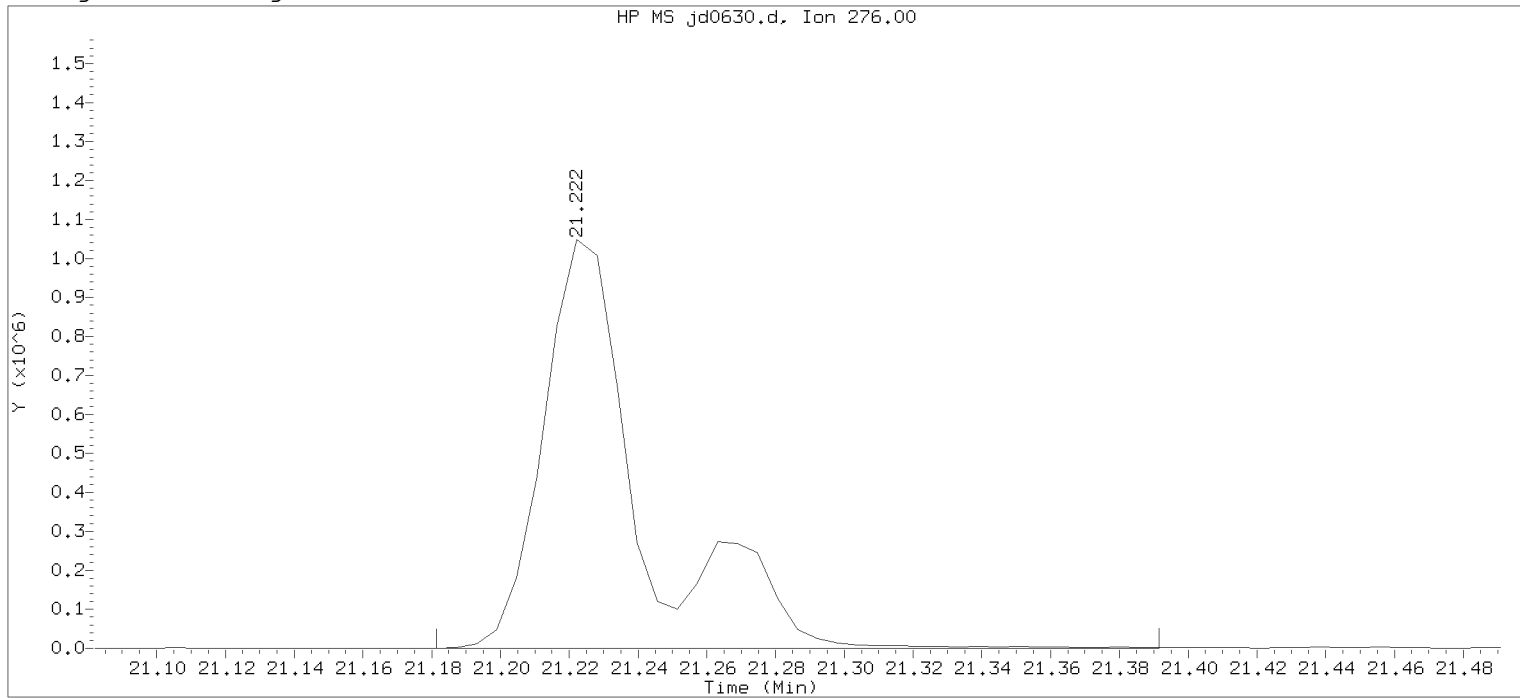
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0630.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 13:41

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

Sample Name: 59R04MS

Lab Sample ID: 1300798

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3320	
Retention Time (minutes)	: 21.222	
Quant Ion	: 276.00	
Area	: 2090056	
On-column Amount (ng/ul)	: 13.5907	
Integration start scan	: 3312	Integration stop scan: 3348
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:41.
Target 3.5 esignature use

59R04MSD

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300799

Data file: /chem/HP23264.i/20apr23.b/jd0631.d

Injection date and time: 23-APR-2020 14:11

Data file Sample Info. Line: 59R04MSD;1300799;1;3;MSD;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 247 ml

Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	222635 (-12)	5.00	
68) Naphthalene-d8	8.557 (0.000)	1151	136	874145 (-11)	5.00	
118) Acenaphthene-d10	11.348 (0.000)	1629	164	466701 (-4)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	848239 (-8)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	919180 (-1)	5.00	
218) Perylene-d12	19.634 (0.000)	3048	264	805092 (-11)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.768 (-0.003)	112	476284A	7.341	15%		10 - 84
18) Phenol-d6	(1)	6.163 (-0.002)	99	1488647	17.257	35%		10 - 67
45) Nitrobenzene-d5	(2)	7.454 (0.000)	82	1826302	18.492	74%		38 - 113
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2779676	18.381	74%		44 - 102
140) 2,4,6-Tribromophenol	(3)	12.417 (0.001)	330	132862	6.447	13%	*	18 - 141
184) Terphenyl-d14	(5)	15.500 (0.000)	244	2707901	16.255	65%		34 - 128

A = User selected an alternate peak. * = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.537 (-0.006)	74	342823A	6.499	26.31			0.5
6) Pyridine	(1)	2.619 (-0.010)	79	343266A	4.140	16.76			0.5
8) 2-Picoline	(1)	3.804 (-0.003)	93	607713	7.618	30.84			0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)	6.186 (-0.001)	94	432403	4.354	17.63			0.2
20) Aniline	(1)	6.140 (-0.000)	93	633338	5.568	22.54			0.8
23) bis(2-Chloroethyl)ether	(1)	6.257 (0.000)	93	738476	10.199	41.29			0.1
24) 2-Chlorophenol	(1)	6.321 (-0.000)	128	294527	5.000	20.24			0.2
28) Benzyl alcohol	(1)	6.852 (-0.000)	108	392341	9.835	39.82			3
32) 2-Methylphenol	(1)	7.068 (-0.000)	108	535370	8.998	36.43			0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.074 (-0.000)	45	941710M	9.938	40.24			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.074 (-0.000)	45	943464	9.957	40.31			0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)	7.232 (0.000)	105	1017741	10.318	41.77			1
38) 4-Methylphenol	(1)	7.308 (-0.000)	108	567903	8.005	32.41			0.6
39) N-Nitroso-di-n-propylamine	(1)	7.255 (0.000)	70	674493	11.137	45.09			0.2
40) N-Nitrosomorpholine	(1)	7.255 (0.002)	56	39505	0.786	3.18		J	0.5
41) o-Toluidine	(1)	7.284 (0.000)	106	724884	6.940	28.10			1
46) Nitrobenzene	(2)	7.483 (0.000)	77	972841	9.602	38.87			0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)	7.862 (0.000)	82	1656917	10.235	41.44			0.1
53) 2-Nitrophenol	(2)	7.973 (0.000)	139	332894	10.211	41.34			0.8
55) 2,4-Dimethylphenol	(2)	8.108 (-0.000)	107	605290	8.094	32.77			0.8

A = User selected an alternate peak. M = Compound was manually integrated.

59R04MSD

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

1300799

Data file: /chem/HP23264.i/20apr23.b/jd0631.d

Injection date and time: 23-APR-2020 14:11

Data file Sample Info. Line: 59R04MSD;1300799;1;3;MSD;;RAAP;

Instrument ID: HP23264.i Batch: 20112WAH

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M

Calibration date and time (Last Method Edit): 29-APR-2020 11:39

Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1

Unit Correction Factor (Uf): 1

Final Extract Volume (Vt): 1000 ul

Sample Volume (Vo): 247 ml

Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate(2)	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)	8.242(0.000)	93	970714	11.053	44.75			0.1
62) 2,4-Dichlorophenol	(2)	8.382(-0.000)	162	217098	3.921	15.87			0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)	8.703(-0.000)	127	507884	6.943	28.11			1
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)	9.544(-0.000)	107	578213	9.717	39.34			0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)	9.690(-0.000)	142	1181216	9.839	39.84			0.07
88) Hexachlorocyclopentadiene	(3)	9.953(0.000)	237	521795	10.091	40.85			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959(0.000)	216	590203	8.241	33.36			0.5
91) cis-Isosafrole	(3)			Not Detected					0.3
93) 2,4,6-Trichlorophenol	(3)	10.169(0.000)	196	57774	1.342	5.43		J	0.2
95) 2,4,5-Trichlorophenol	(3)	10.256(-0.000)	196	162317	3.435	13.91			0.2
97) trans-Isosafrole	(3)			Not Detected					0.3
100) Isosafrole	(3)			Not Detected					1
99) 2-Chloronaphthalene	(3)	10.461(0.000)	162	1295989	9.470	38.34			0.1
104) 2-Nitroaniline	(3)	10.653(0.000)	138	425357	10.861	43.97			0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)	10.986(0.000)	163	1502406	10.270	41.58			0.5
111) 1,3-Dinitrobenzene	(3)	11.004(0.000)	168	258170	11.488	46.51			0.5
113) 2,6-Dinitrotoluene	(3)	11.062(0.000)	165	354896	11.095	44.92			0.1
114) Acenaphthylene	(3)	11.115(0.000)	152	1811282	10.084	40.82			0.1
117) 3-Nitroaniline	(3)	11.313(0.000)	138	313703	9.964	40.34			0.8
119) Acenaphthene	(3)	11.395(0.000)	153	1222618	9.810	39.72			0.09
120) 2,4-Dinitrophenol	(3)	11.482(0.000)	184	437116	22.750	92.11			4
121) 4-Nitrophenol	(3)	11.693(-0.000)	109	181082	5.826	23.59		J	3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)	11.681(0.000)	165	476767	10.937	44.28			0.3
124) Dibenzofuran	(3)	11.664(0.000)	168	1813461	9.930	40.20			0.1
126) 1-Naphthylamine	(3)	11.780(0.000)	143	994495	8.229	33.32			2
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856(0.000)	232	50111	1.417	5.74		J	1
128) 2-Naphthylamine	(3)	11.891(0.000)	143	816695	6.888	27.88			2
129) Diethylphthalate	(3)	12.049(-0.000)	149	1493130	10.463	42.36			0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)	12.125(0.000)	166	1413491	9.892	40.05			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.154(0.000)	204	723661	10.311	41.74			0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					1
134) 4-Nitroaniline	(3)	12.172(0.000)	138	305187	8.826	35.73			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.212(0.000)	198	285634	11.545	46.74			2
136) N-Nitrosodiphenylamine	(4)	12.300(0.000)	169	1224440	10.849	43.92			0.2
137) NDPA as diphenylamine	(4)	12.300(0.000)	169	1219466M	10.805	43.74			0.2
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)	12.732(-0.000)	248	420242	9.988	40.44			0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)	12.773(0.000)	284	437381	9.823	39.77			0.2
152) Dimethoate	(4)			Not Detected					0.8

M = Compound was manually integrated.

59R04MSD Lancaster Laboratories, Inc. 1300799

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0631.d Injection date and time: 23-APR-2020 14:11
 Data file Sample Info. Line: 59R04MSD;1300799;1;3;MSD;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M
 Calibration date and time (Last Method Edit): 29-APR-2020 11:39
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
154) Pentachlorophenol	(4)	13.030(0.000)	266	38043	1.330	5.39		J	0.7
155) 4-Aminobiphenyl	(4)			Not Detected					1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)	13.275(-0.000)	178	2134535	10.829	43.84			0.1
162) Anthracene	(4)	13.339(-0.000)	178	2081165	10.670	43.20			0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)	14.069(-0.000)	149	2630256	10.937	44.28			0.5
172) Parathion	(4)			Not Detected					1
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)	14.659(-0.000)	193	10808	0.391	1.58		J	0.1
178) Fluoranthene	(4)	14.875(0.000)	202	2492512	10.851	43.93			0.1
182) Pyrene	(5)	15.208(-0.000)	202	2510626	10.124	40.99			0.1
185) Aramite (1)	(5)	15.418(-0.001)	185	1059	0.321	1.30		J	0.3
186) Aramite (2)	(5)	15.418(0.001)	185	1059	0.590	2.39		J	0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.346(-0.000)	149	1111189	10.381	42.03			0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					3
198) 3,3'-Dichlorobenzidine	(5)	17.193(-0.000)	252	618610	7.207	29.18			0.8
200) Benzo(a)anthracene	(5)	17.187(-0.000)	228	2202423	10.498	42.50			0.1
201) Chrysene	(5)	17.246(-0.000)	228	2172479	9.960	40.32			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.409(-0.000)	149	1541725	10.418	42.18			1
210) Di-n-octylphthalate	(6)	18.560(0.000)	149	2614558	11.592	46.93			1
211) Benzo(b)fluoranthene	(6)	19.021(0.000)	252	2194979	10.595	42.90			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.027(0.000)	256	883831	9.901	40.09			1
213) Benzo(k)fluoranthene	(6)	19.068(0.000)	252	2044629	10.372	41.99			0.4
216) Benzo(a)pyrene	(6)	19.540(0.000)	252	1821758	9.643	39.04			0.4
220) 3-Methylcholanthrene	(6)			Not Detected					1
224) Indeno(1,2,3-cd)pyrene	(6)	21.222(0.000)	276	1663852M	10.515	42.57			0.04
225) Dibenz(a,h)anthracene	(6)	21.269(-0.000)	278	1758291	10.648	43.11			0.1
226) Benzo(g,h,i)perylene	(6)	21.584(-0.000)	276	1676351	10.068	40.76			0.1

M = Compound was manually integrated.

Data file: /chem/HP23264.i/20apr23.b/jd0631.d Injection date and time: 23-APR-2020 14:11
Data file Sample Info. Line: 59R04MSD;1300799;1;3;MSD;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090M
Calibration date and time (Last Method Edit): 29-APR-2020 11:39
Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

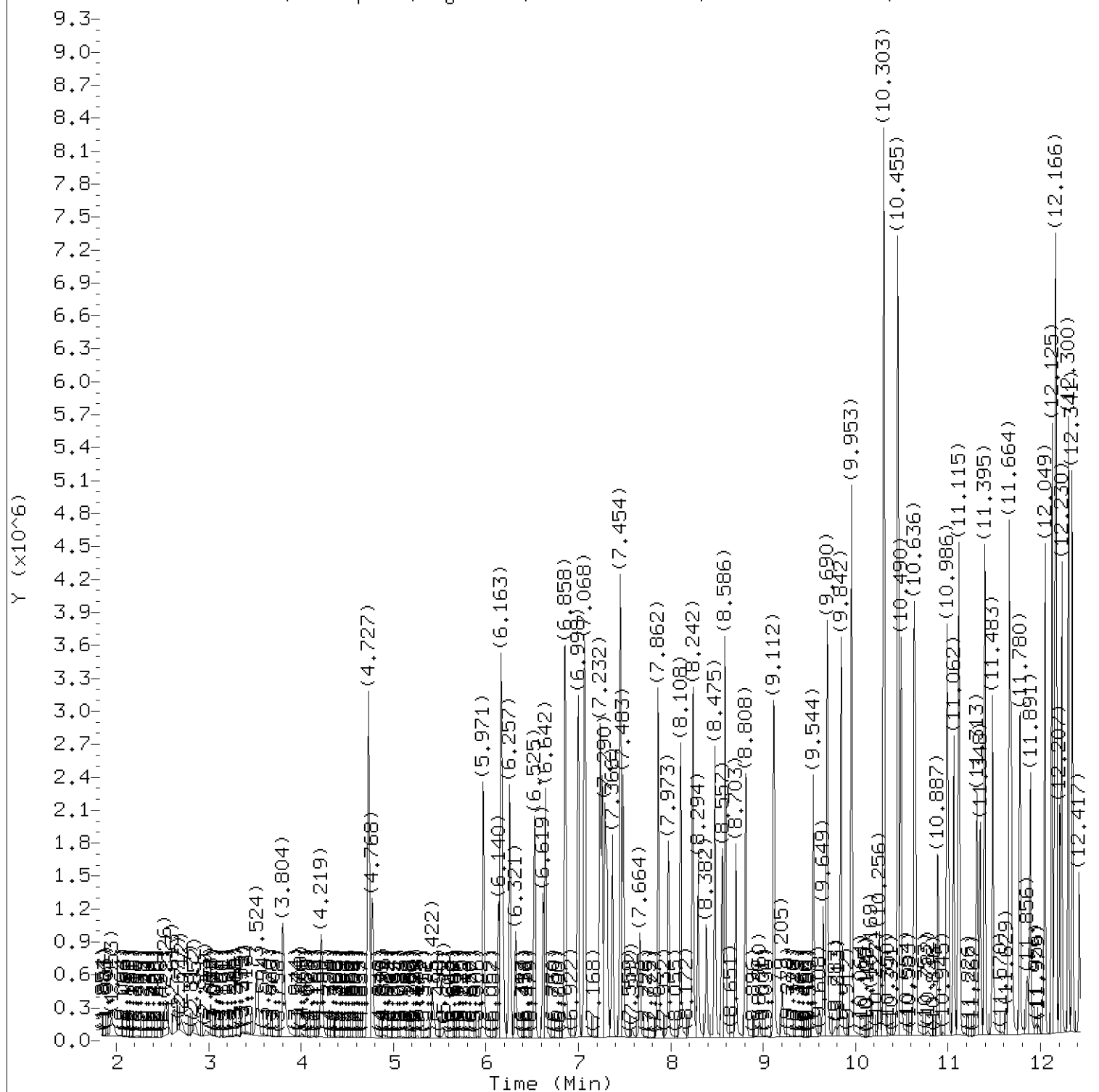
Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

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Total number of targets = 120

Digitally signed by William H Saadeh on 04/29/2020 at 11:42. Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0631.d
Injection date and time: 23-APR-2020 14:11

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 29-APR-2020 11:39

Sublist used: 27090M

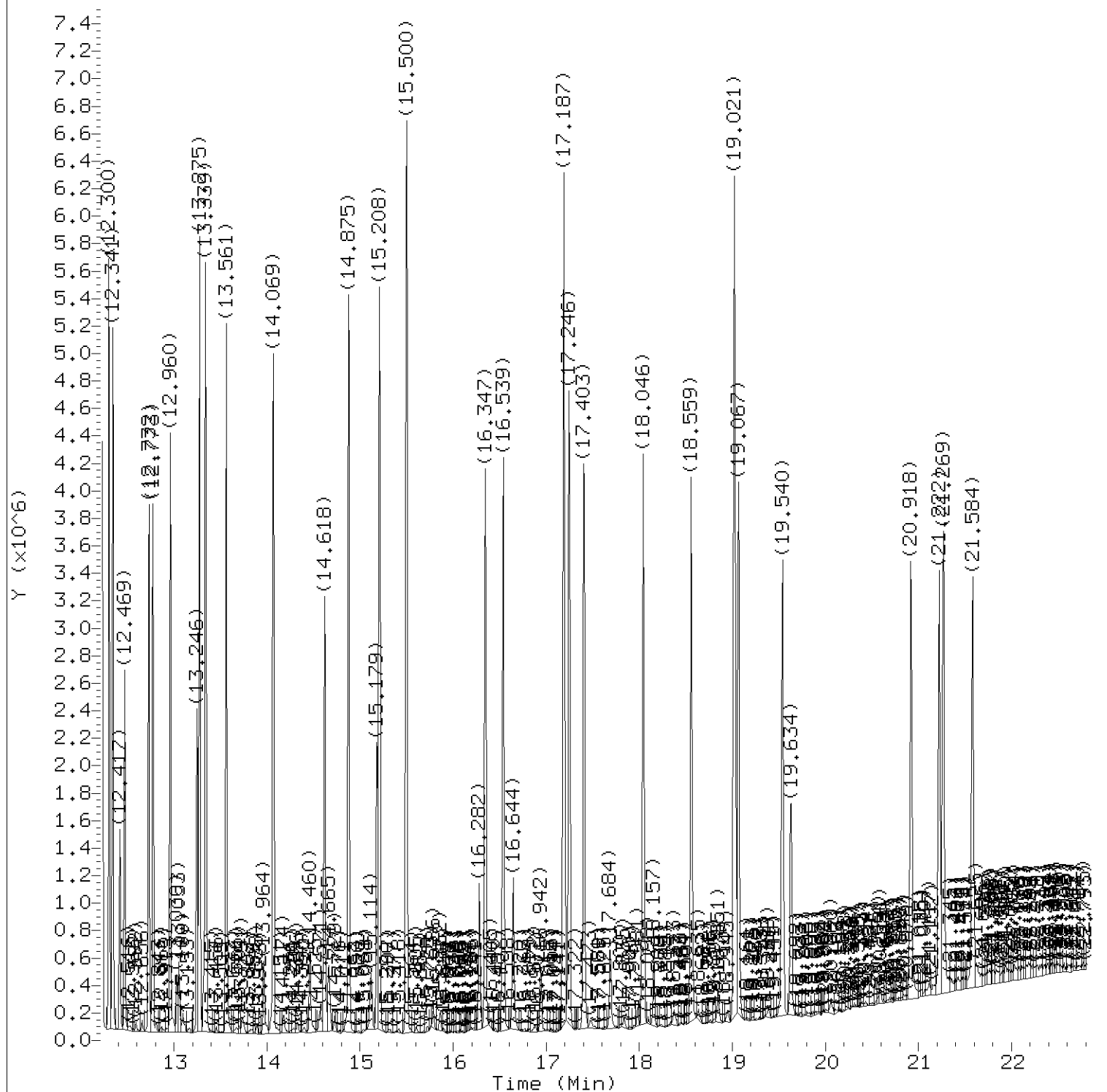
Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0631.d
Injection date and time: 23-APR-2020 14:11

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0631.d
 Injection date and time: 23-APR-2020 14:11

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
5) N-Nitrosodimethylamine	(1)	2.537	74	342823A	6.499
6) Pyridine	(1)	2.619	79	343266A	4.140
8) 2-Picoline	(1)	3.804	93	607713	7.618
12) \$2-Fluorophenol	(1)	4.768	112	476284A	7.341
20) Aniline	(1)	6.140	93	633338	5.568
18) \$Phenol-d6	(1)	6.163	99	1488647	17.257
19) Phenol	(1)	6.187	94	432403	4.354
23) bis(2-Chloroethyl) ether	(1)	6.257	93	738476	10.199
24) 2-Chlorophenol	(1)	6.321	128	294527	5.000
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	222635	5.000
28) Benzyl alcohol	(1)	6.852	108	392341	9.835
32) 2-Methylphenol	(1)	7.068	108	535370	8.998
35) bis(2-Chloroisopropyl) ether	(1)	7.074	45	943464	9.957
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.074	45	941710M	9.938
37) Acetophenone	(1)	7.232	105	1017741	10.318
39) N-Nitroso-di-n-propylamine	(1)	7.255	70	674493	11.137
40) N-Nitrosomorpholine	(1)	7.255	56	39505	0.786
41) o-Toluidine	(1)	7.284	106	724884	6.940
38) 4-Methylphenol	(1)	7.308	108	567903	8.005
45) \$Nitrobenzene-d5	(2)	7.454	82	1826302	18.492
46) Nitrobenzene	(2)	7.483	77	972841	9.602
52) Isophorone	(2)	7.862	82	1656917	10.235
53) 2-Nitrophenol	(2)	7.973	139	332894	10.211
55) 2,4-Dimethylphenol	(2)	8.108	107	605290	8.094
57) bis(2-Chloroethoxy) methane	(2)	8.242	93	970714	11.053
62) 2,4-Dichlorophenol	(2)	8.382	162	217098	3.921
68) *Naphthalene-d8	(2)	8.557	136	874145	5.000
70) 4-Chloroaniline	(2)	8.703	127	507884	6.943
83) 4-Chloro-3-methylphenol	(2)	9.544	107	578213	9.717
86) 2-Methylnaphthalene	(2)	9.690	142	1181216	9.839
88) Hexachlorocyclopentadiene	(3)	9.953	237	521795	10.091
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959	216	590203	8.241
93) 2,4,6-Trichlorophenol	(3)	10.169	196	57774	1.342
95) 2,4,5-Trichlorophenol	(3)	10.256	196	162317	3.435
96) \$2-Fluorobiphenyl	(3)	10.303	172	2779676	18.381
99) 2-Chloronaphthalene	(3)	10.461	162	1295989	9.470
104) 2-Nitroaniline	(3)	10.653	138	425357	10.861
110) Dimethylphthalate	(3)	10.986	163	1502406	10.270
111) 1,3-Dinitrobenzene	(3)	11.004	168	258170	11.488
113) 2,6-Dinitrotoluene	(3)	11.062	165	354896	11.095

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0631.d
 Injection date and time: 23-APR-2020 14:11

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
114) Acenaphthylene	(3)	11.115	152	1811282	10.084
117) 3-Nitroaniline	(3)	11.313	138	313703	9.964
118)*Acenaphthene-d10	(3)	11.348	164	466701	5.000
119) Acenaphthene	(3)	11.395	153	1222618	9.810
120) 2,4-Dinitrophenol	(3)	11.483	184	437116	22.750
124) Dibenzofuran	(3)	11.664	168	1813461	9.930
123) 2,4-Dinitrotoluene	(3)	11.681	165	476767	10.937
121) 4-Nitrophenol	(3)	11.693	109	181082	5.826
126) 1-Naphthylamine	(3)	11.780	143	994495	8.229
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856	232	50111	1.417
128) 2-Naphthylamine	(3)	11.891	143	816695	6.888
129) Diethylphthalate	(3)	12.049	149	1493130	10.463
131) Fluorene	(3)	12.125	166	1413491	9.892
132) 4-Chlorophenyl-phenylether	(3)	12.154	204	723661	10.311
134) 4-Nitroaniline	(3)	12.172	138	305187	8.826
135) 4,6-Dinitro-2-methylphenol	(4)	12.212	198	285634	11.545
137) NDPA as diphenylamine	(4)	12.300	169	1219466M	10.805
136) N-Nitrosodiphenylamine	(4)	12.300	169	1224440	10.849
140)\$2,4,6-Tribromophenol	(3)	12.417	330	132862	6.447
148) 4-Bromophenyl-phenylether	(4)	12.732	248	420242	9.988
150) Hexachlorobenzene	(4)	12.773	284	437381	9.823
154) Pentachlorophenol	(4)	13.030	266	38043	1.330
158)*Phenanthrene-d10	(4)	13.246	188	848239	5.000
160) Phenanthrene	(4)	13.275	178	2134535	10.829
162) Anthracene	(4)	13.339	178	2081165	10.670
170) Di-n-butylphthalate	(4)	14.069	149	2630256	10.937
176) Isodrin	(4)	14.659	193	10808	0.391
178) Fluoranthene	(4)	14.875	202	2492512	10.851
180)*Pyrene-d10	(5)	15.179	212	919180	5.000
182) Pyrene	(5)	15.208	202	2510626	10.124
185) Aramite (1)	(5)	15.418	185	1059	0.321
186) Aramite (2)	(5)	15.418	185	1059	0.590
184)\$Terphenyl-d14	(5)	15.500	244	2707901	16.255
193) Butylbenzylphthalate	(5)	16.347	149	1111189	10.381
200) Benzo(a)anthracene	(5)	17.187	228	2202423	10.498
198) 3,3'-Dichlorobenzidine	(5)	17.193	252	618610	7.207
201) Chrysene	(5)	17.246	228	2172479	9.960
204) bis(2-Ethylhexyl)phthalate	(5)	17.409	149	1541725	10.418
210) Di-n-octylphthalate	(6)	18.559	149	2614558	11.592
211) Benzo(b)fluoranthene	(6)	19.021	252	2194979	10.595

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
 on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.027	256	883831	9.901
213) Benzo(k)fluoranthene	(6)	19.067	252	2044629	10.372
216) Benzo(a)pyrene	(6)	19.540	252	1821758	9.643
218) *Perylene-d12	(6)	19.634	264	805092	5.000
224) Indeno(1,2,3-cd)pyrene	(6)	21.222	276	1663852M	10.515
225) Dibenz(a,h)anthracene	(6)	21.269	278	1758291	10.648
226) Benzo(g,h,i)perylene	(6)	21.584	276	1676351	10.068

M = Compound was manually integrated.

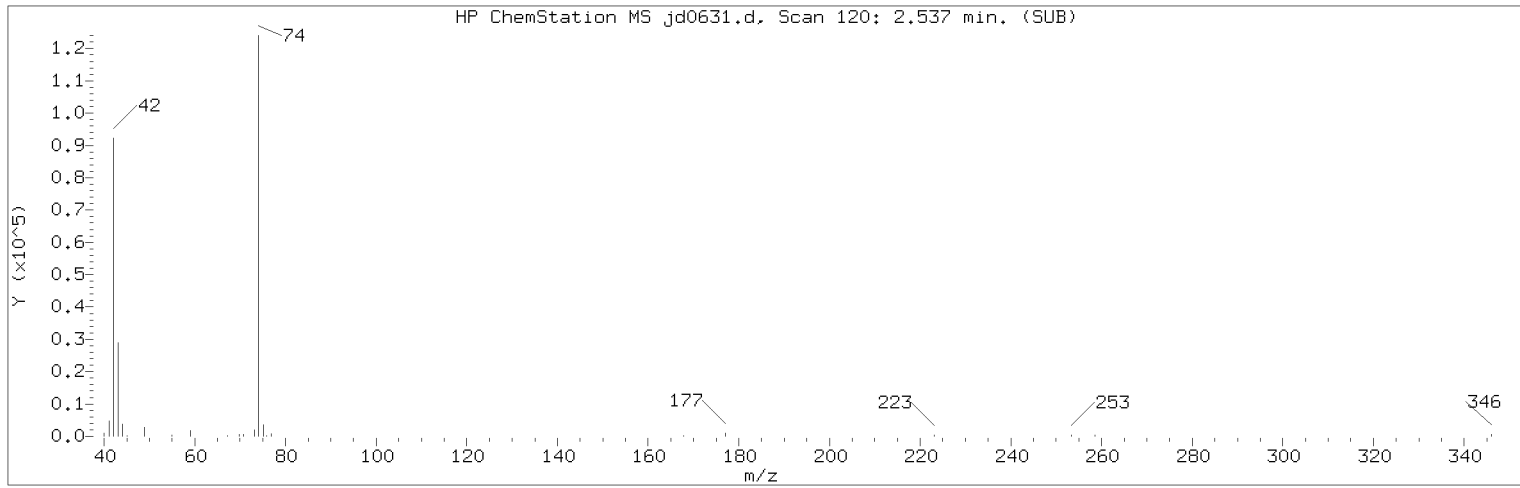
* = Compound is an internal standard.

Digitally signed by William H Saadeh

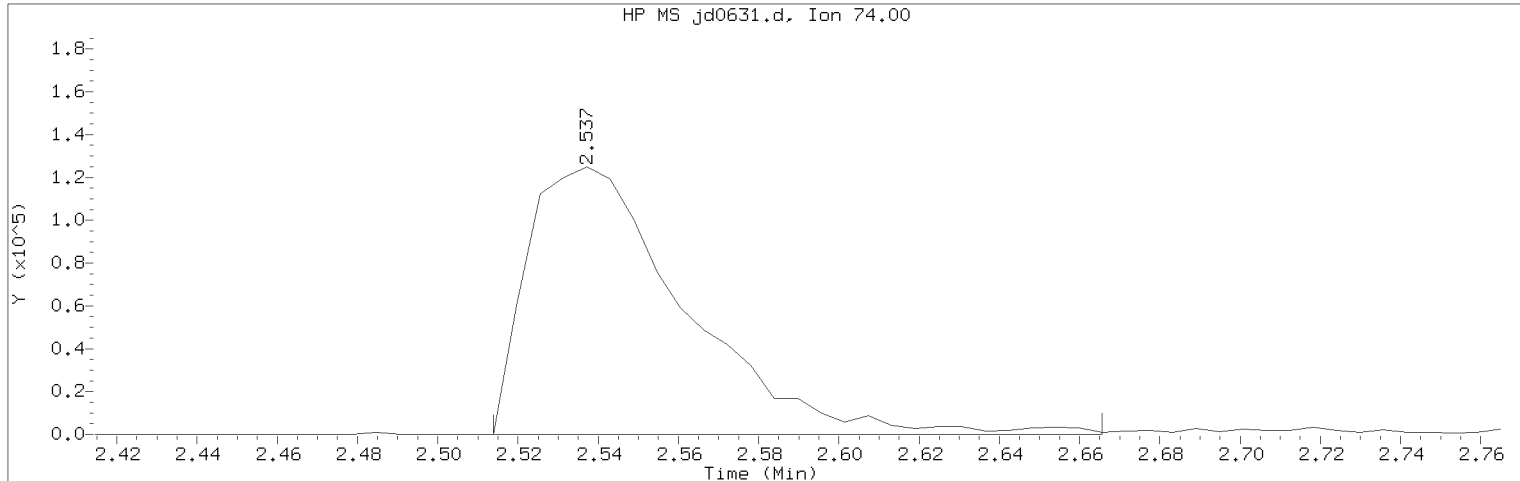
on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compound Number	: 5	
Compound Name	: N-Nitrosodimethylamine	
Scan Number	: 120	
Retention Time (minutes)	: 2.537	
Quant Ion	: 74.00	
Area (flag)	: 342823A	
On-Column Amount (ng/ul)	: 6.4993	
Integration start scan	: 115	Integration stop scan: 141
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

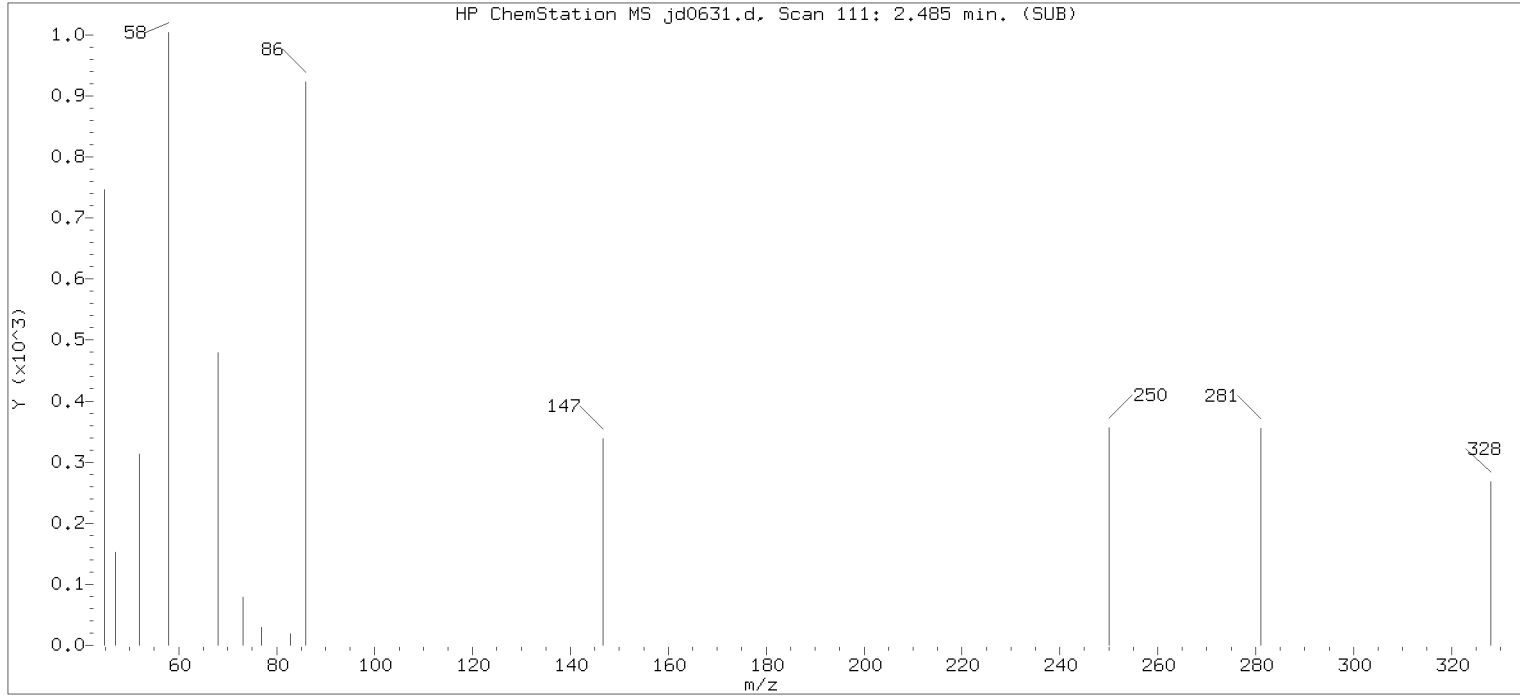
Analyst responsible for change:

Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.
Target 3.5 esignature user ID: whs02991

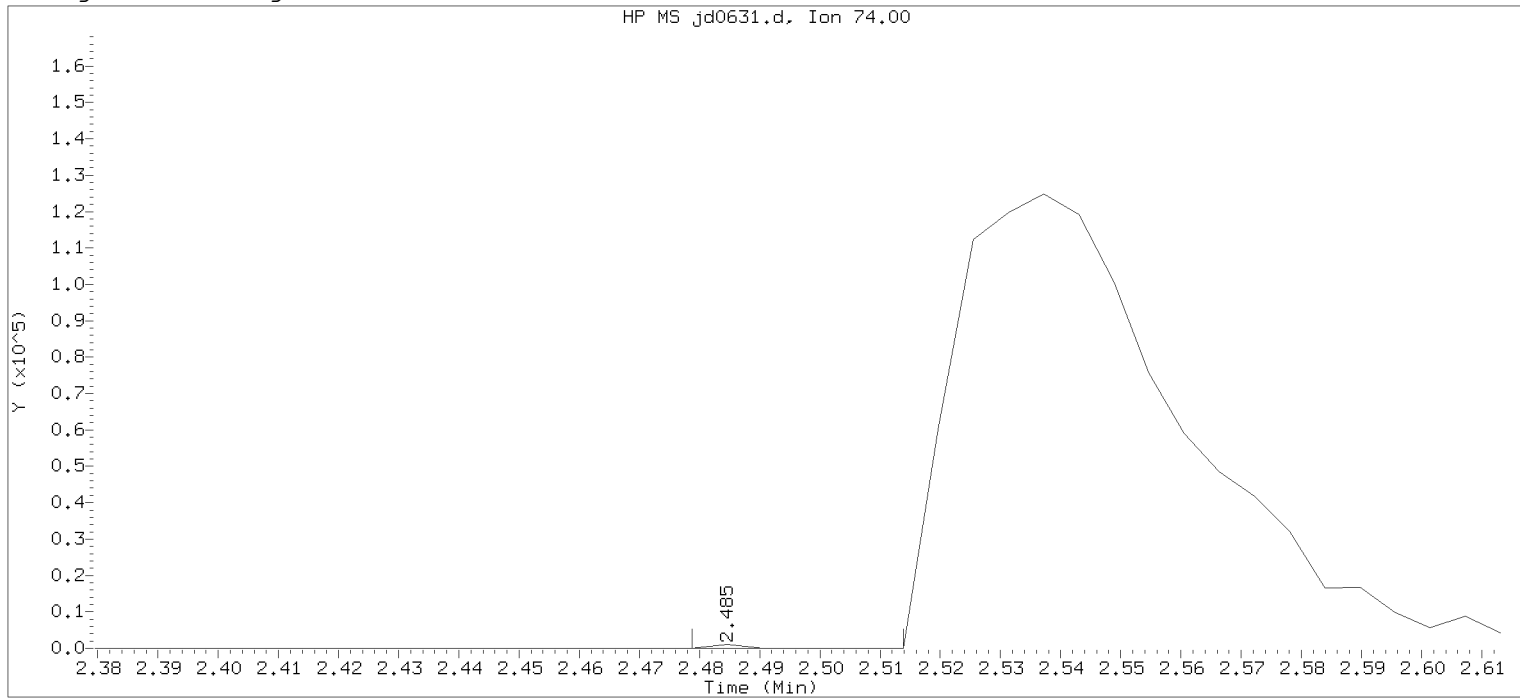
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

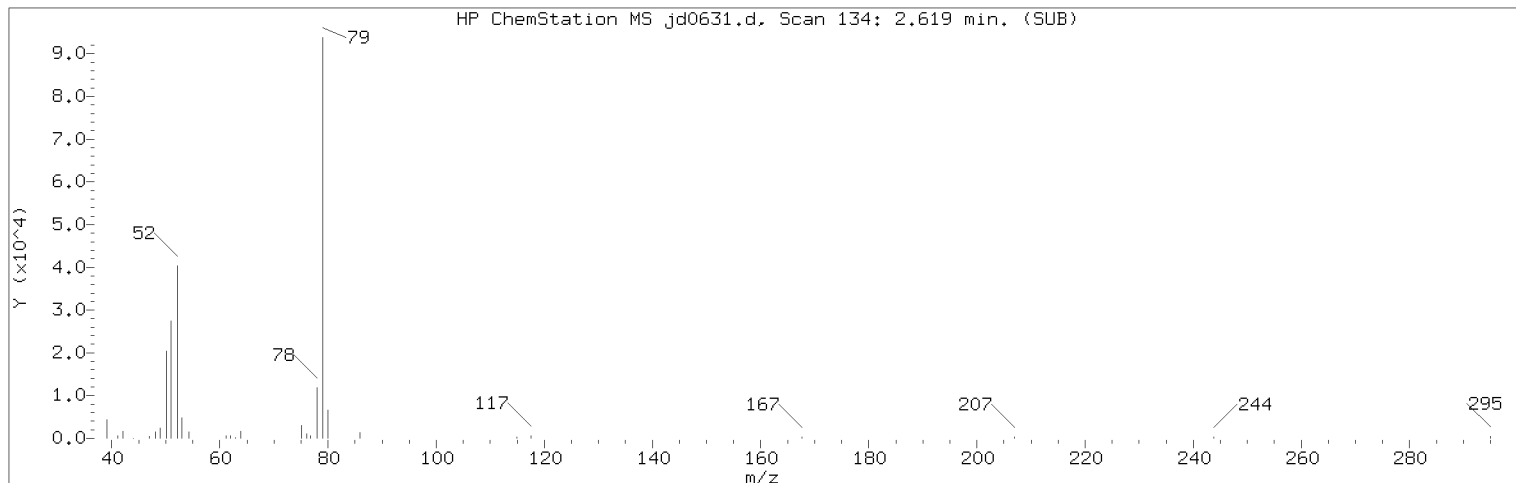
Sample Name: 59R04MSD

Lab Sample ID: 1300799

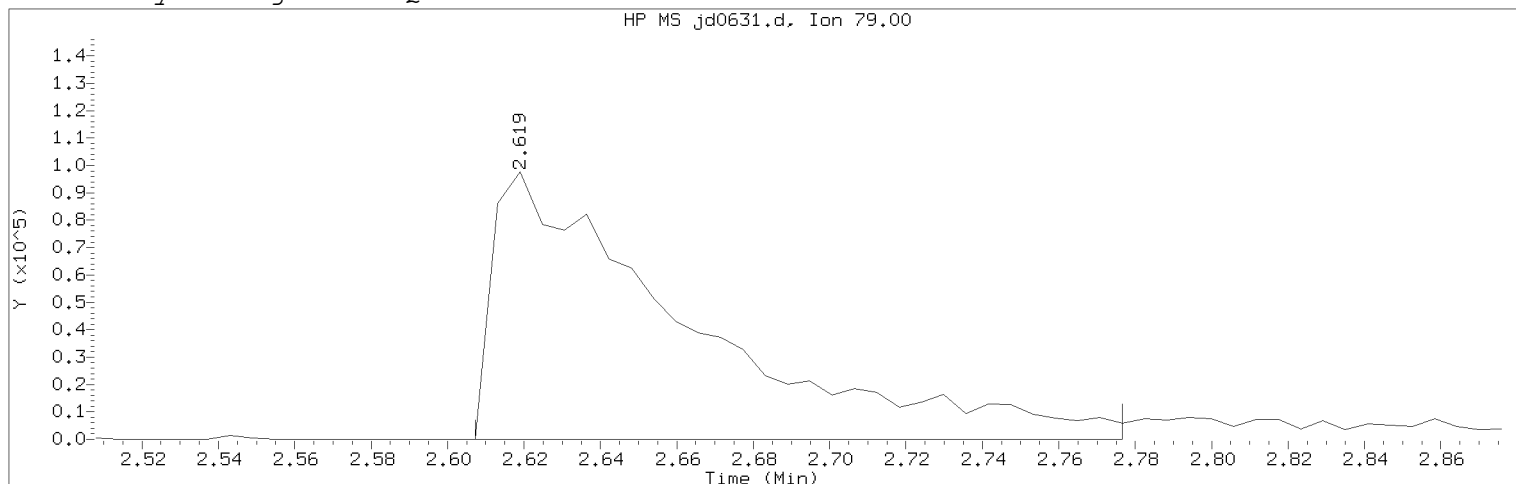
Compound Number	: 5	
Compound Name	: N-Nitrosodimethylamine	
Scan Number	: 111	
Retention Time (minutes)	: 2.485	
Quant Ion	: 74.00	
Area	: 349	
On-column Amount (ng/ul)	: 0.0066	
Integration start scan	: 109	Integration stop scan: 115
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:42.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 134	
Retention Time (minutes)	: 2.619	
Quant Ion	: 79.00	
Area (flag)	: 343266A	
On-Column Amount (ng/ul)	: 4.1400	
Integration start scan	: 131	Integration stop scan: 160
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by William H Saadeh

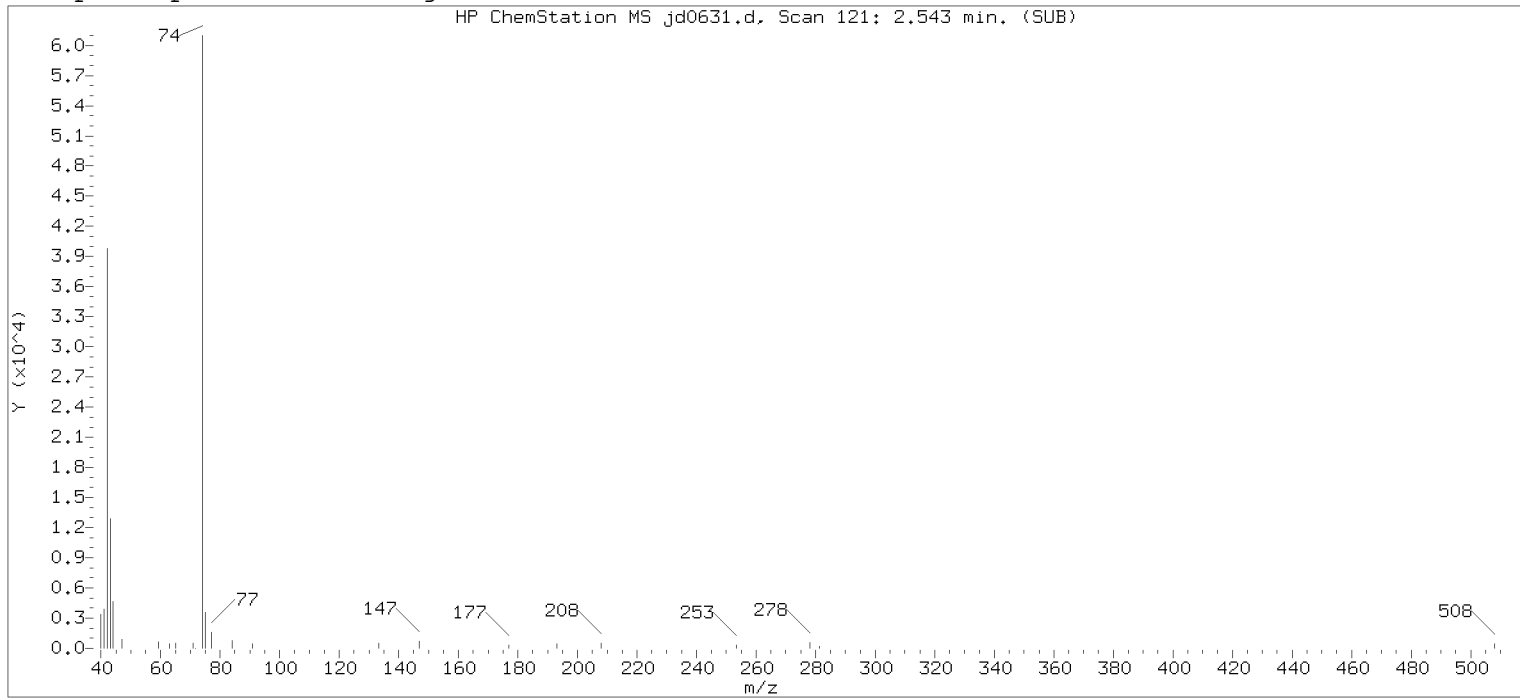
on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

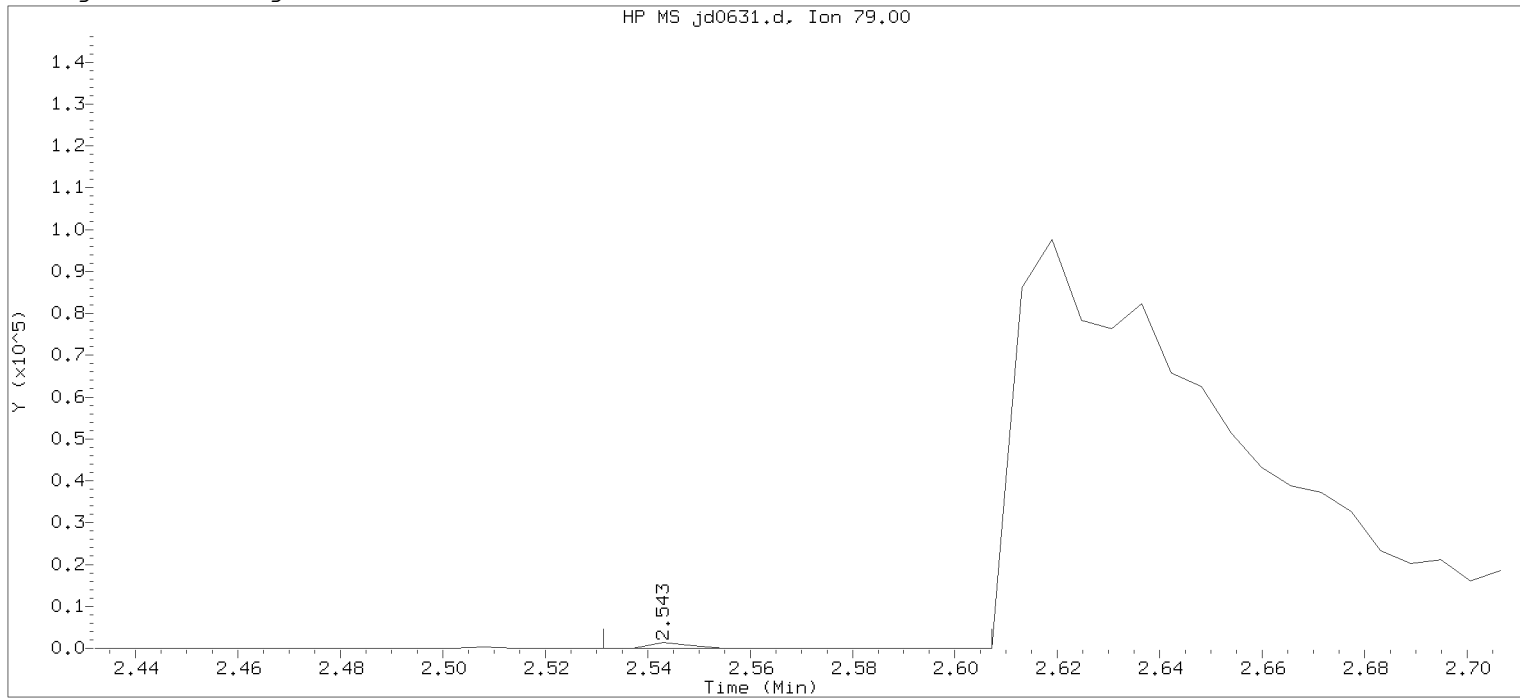
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

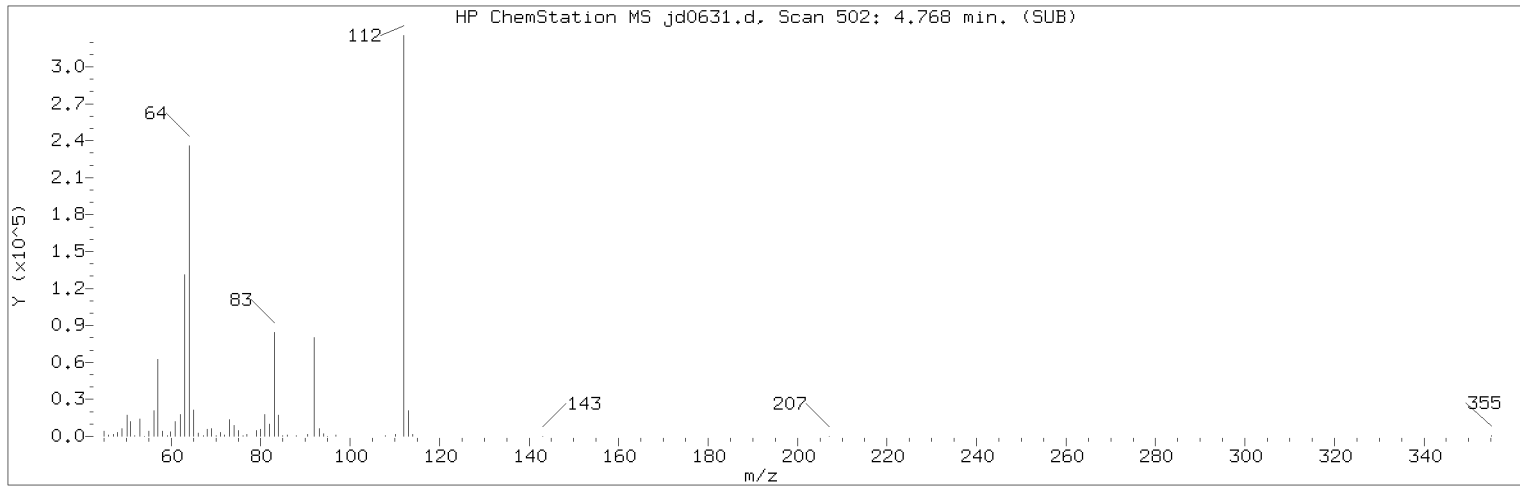
Sample Name: 59R04MSD

Lab Sample ID: 1300799

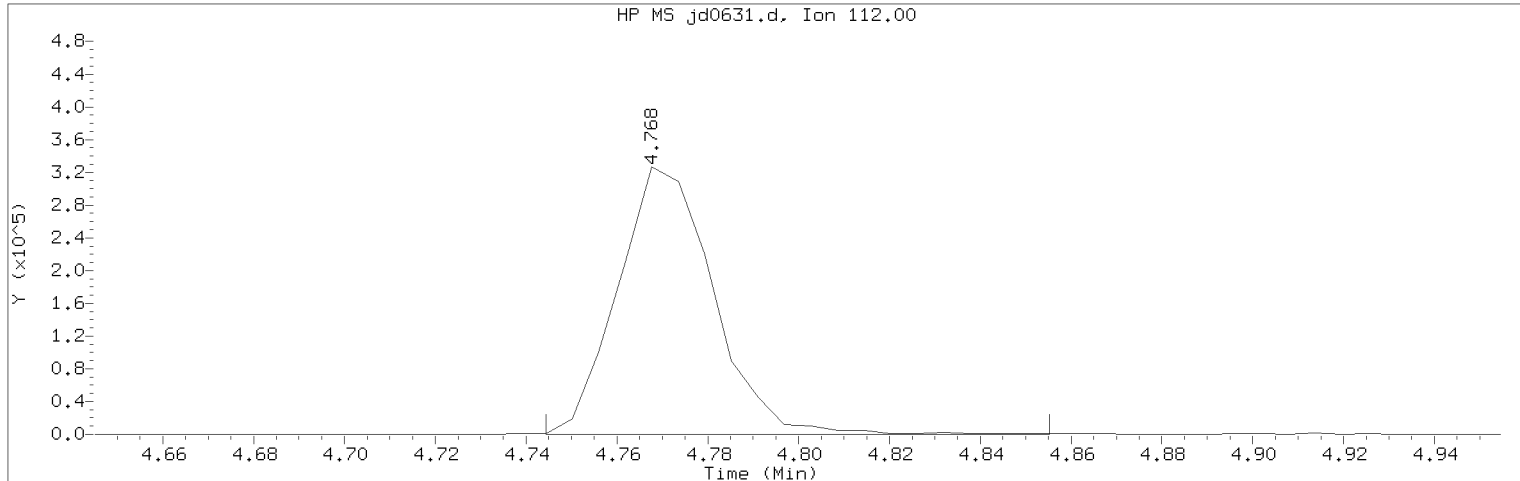
Compound Number	: 6	
Compound Name	: Pyridine	
Scan Number	: 121	
Retention Time (minutes)	: 2.543	
Quant Ion	: 79.00	
Area	: 688	
On-column Amount (ng/ul)	: 0.0083	
Integration start scan	: 118	Integration stop scan: 131
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:42.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compound Number	: 12	
Compound Name	: 2-Fluorophenol	
Scan Number	: 502	
Retention Time (minutes)	: 4.768	
Quant Ion	: 112.00	
Area (flag)	: 476284A	
On-Column Amount (ng/ul)	: 7.3412	
Integration start scan	: 497	Integration stop scan: 516
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

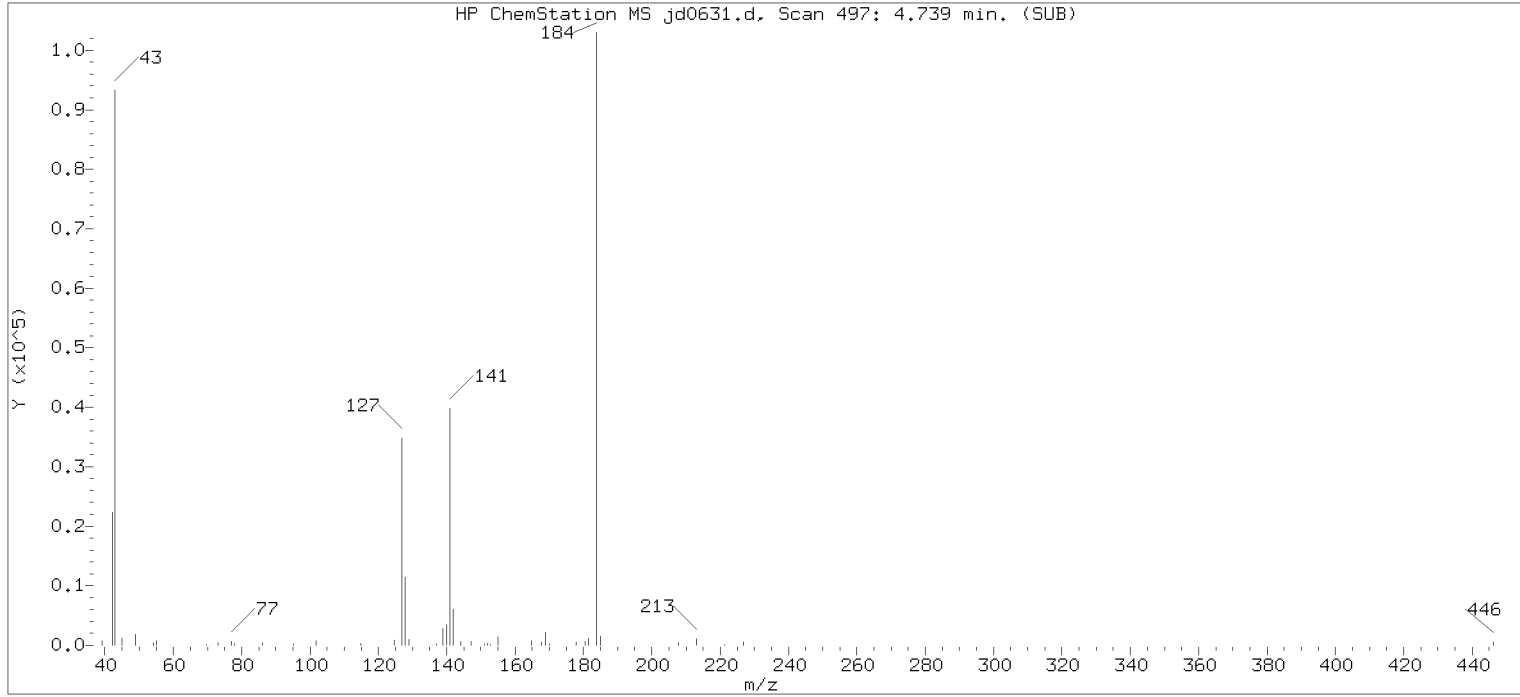
Analyst responsible for change:

Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.
Target 3.5 esignature user ID: whs02991

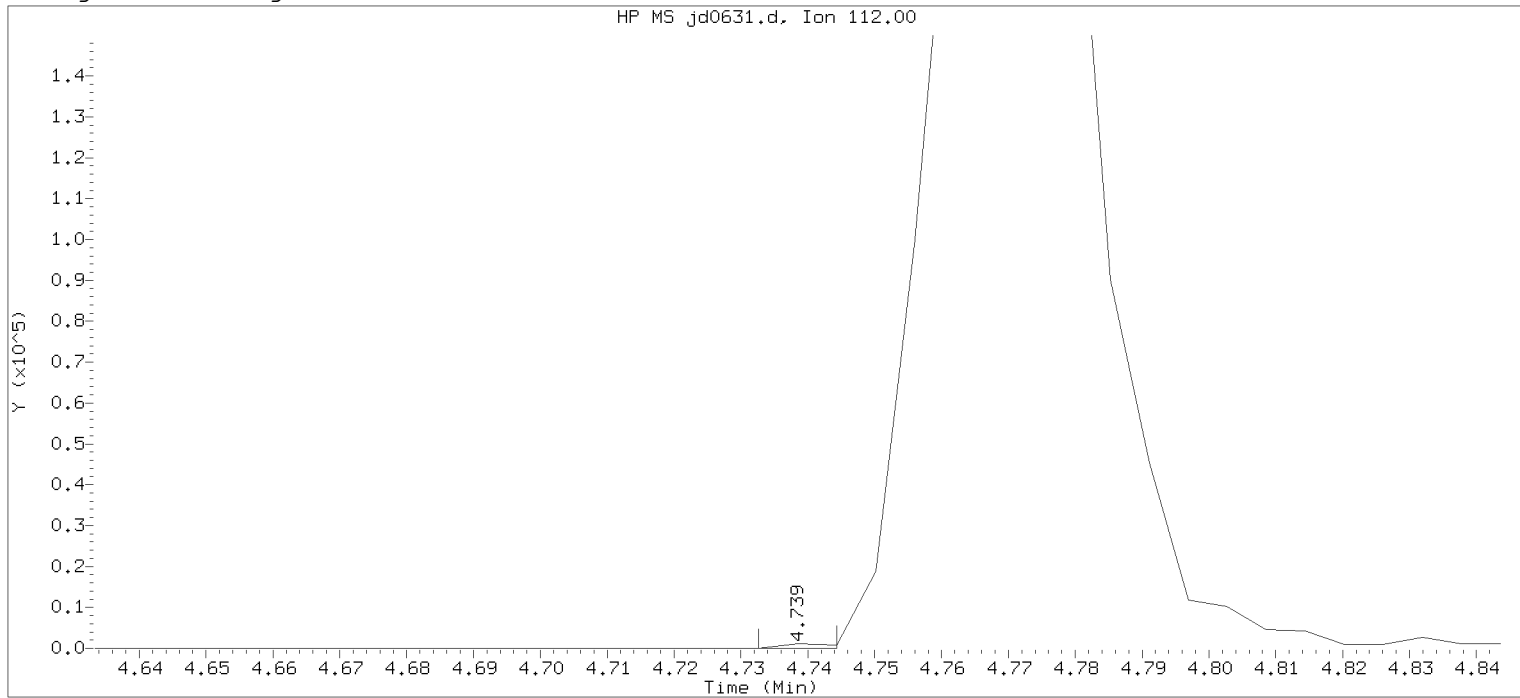
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

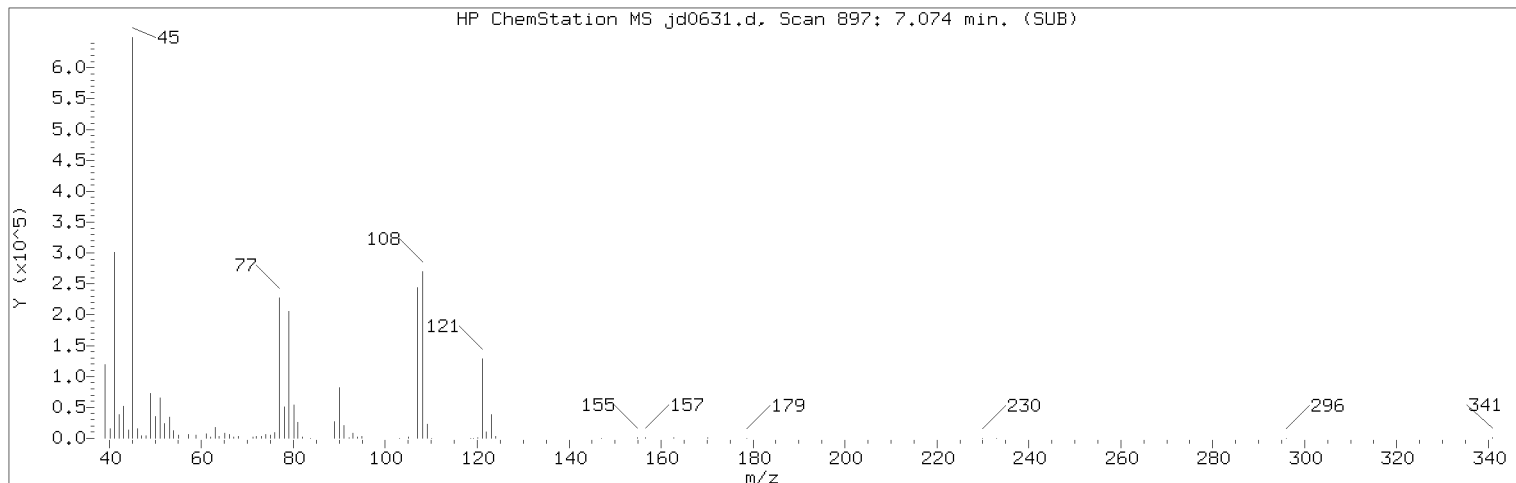
Sample Name: 59R04MSD

Lab Sample ID: 1300799

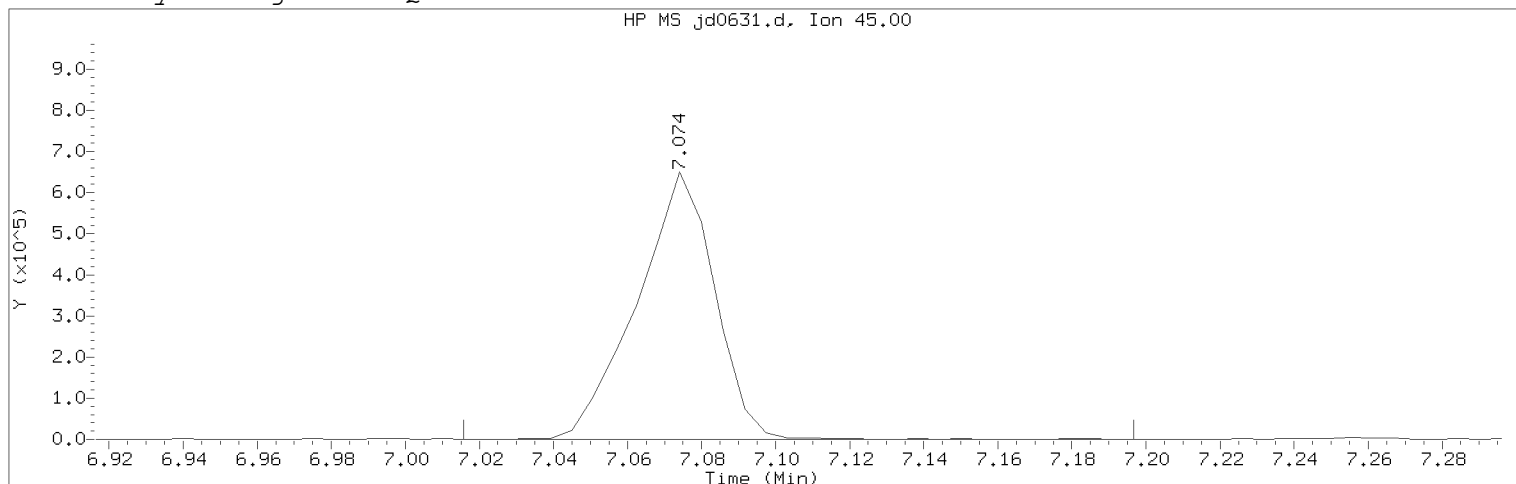
Compound Number	: 12	
Compound Name	: 2-Fluorophenol	
Scan Number	: 497	
Retention Time (minutes)	: 4.739	
Quant Ion	: 112.00	
Area	: 538	
On-column Amount (ng/ul)	: 0.0083	
Integration start scan	: 495	Integration stop scan: 497
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:42.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

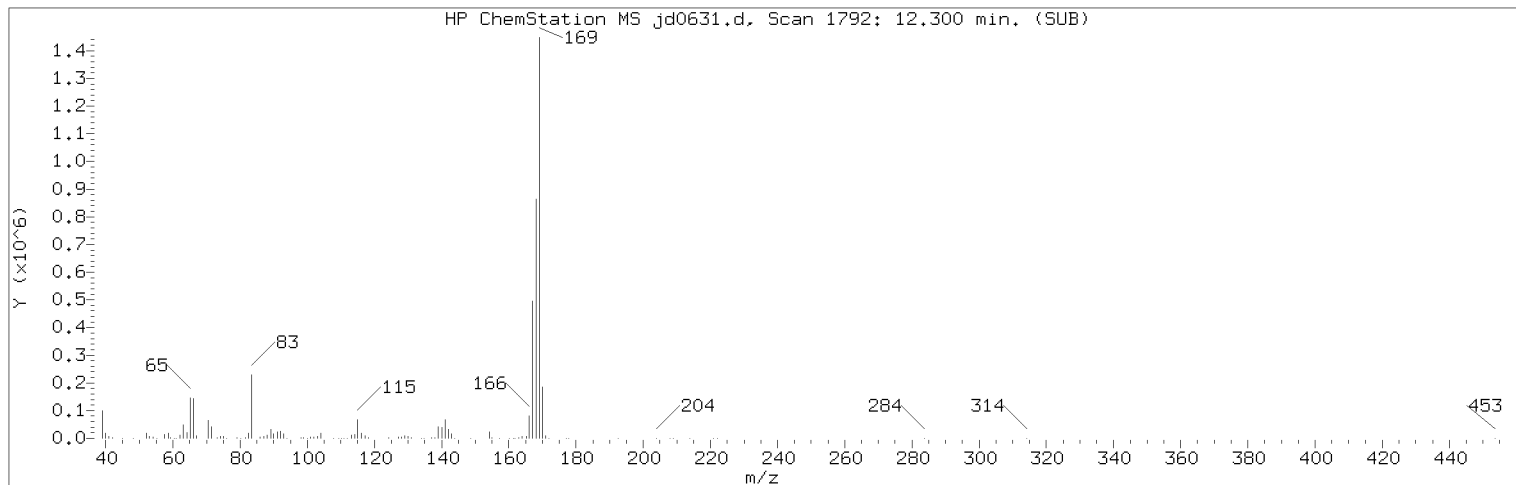
Compound Number	: 34	
Compound Name	: 2,2'-oxybis(1-Chloropropane)	
Scan Number	: 897	
Retention Time (minutes)	: 7.074	
Quant Ion	: 45.00	
Area (flag)	: 941710M	
On-Column Amount (ng/ul)	: 9.9383	
Integration start scan	: 886	Integration stop scan: 917
Y at integration start	: 0	Y at integration end: 681

Reason for manual integration: compound not in processing sublist

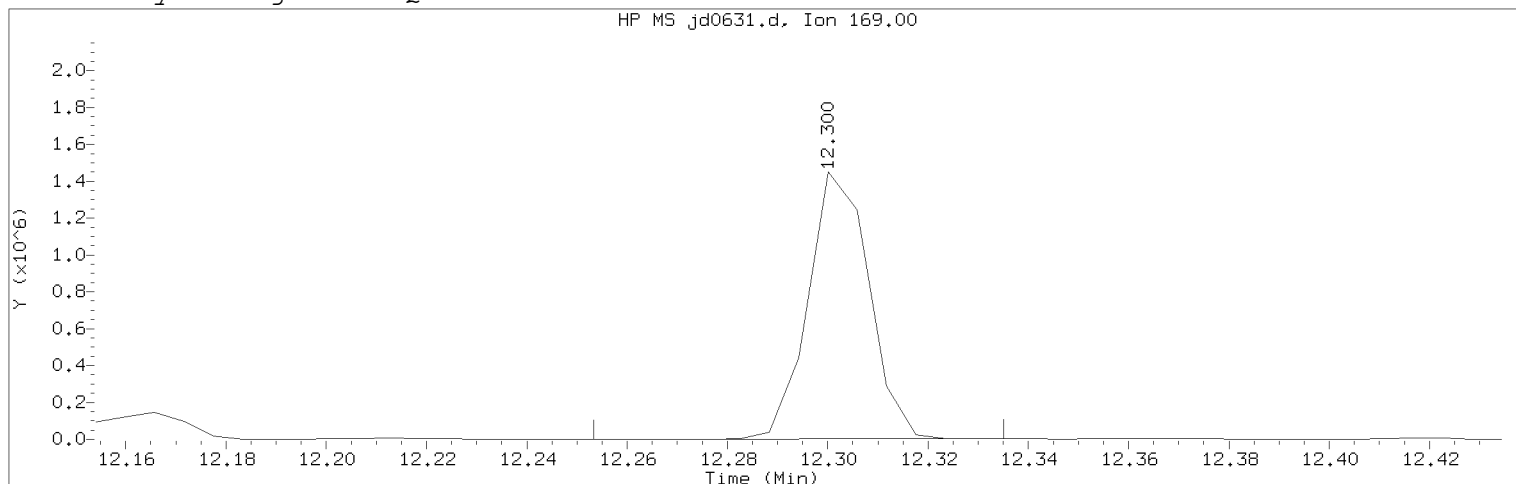
Analyst responsible for change: Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compound Number	: 137	
Compound Name	: NDPA as diphenylamine	
Scan Number	: 1792	
Retention Time (minutes)	: 12.300	
Quant Ion	: 169.00	
Area (flag)	: 1219466M	
On-Column Amount (ng/ul)	: 10.8047	
Integration start scan	: 1783	Integration stop scan: 1797
Y at integration start	: 0	Y at integration end: 2348

Reason for manual integration: compound not in processing sublist

Analyst responsible for change:

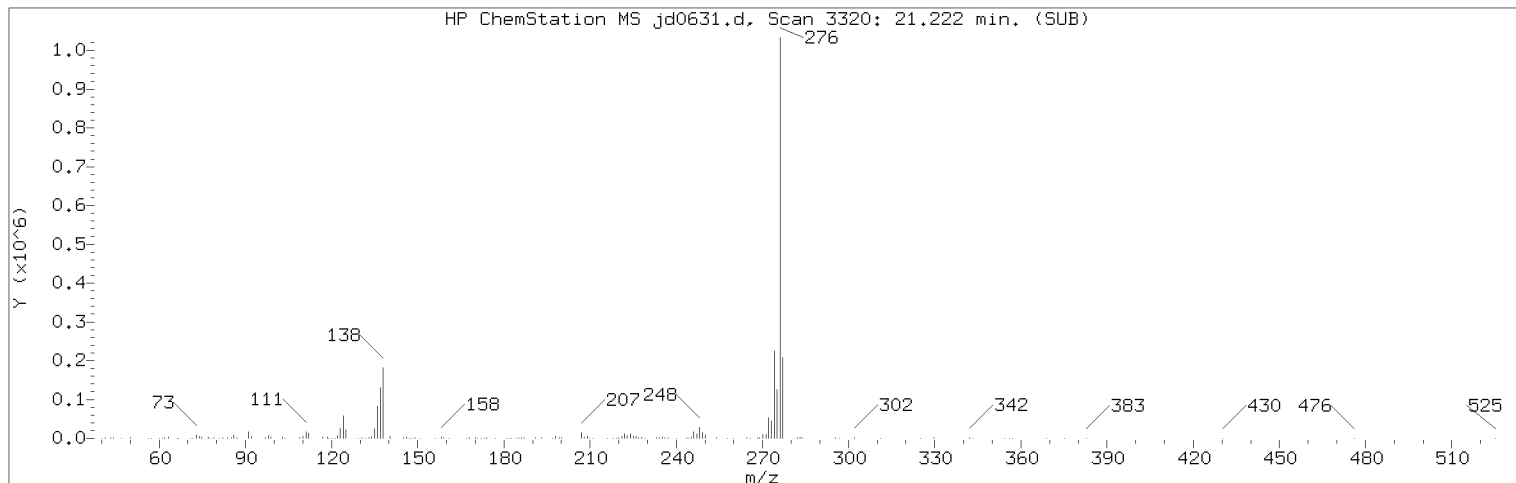
Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

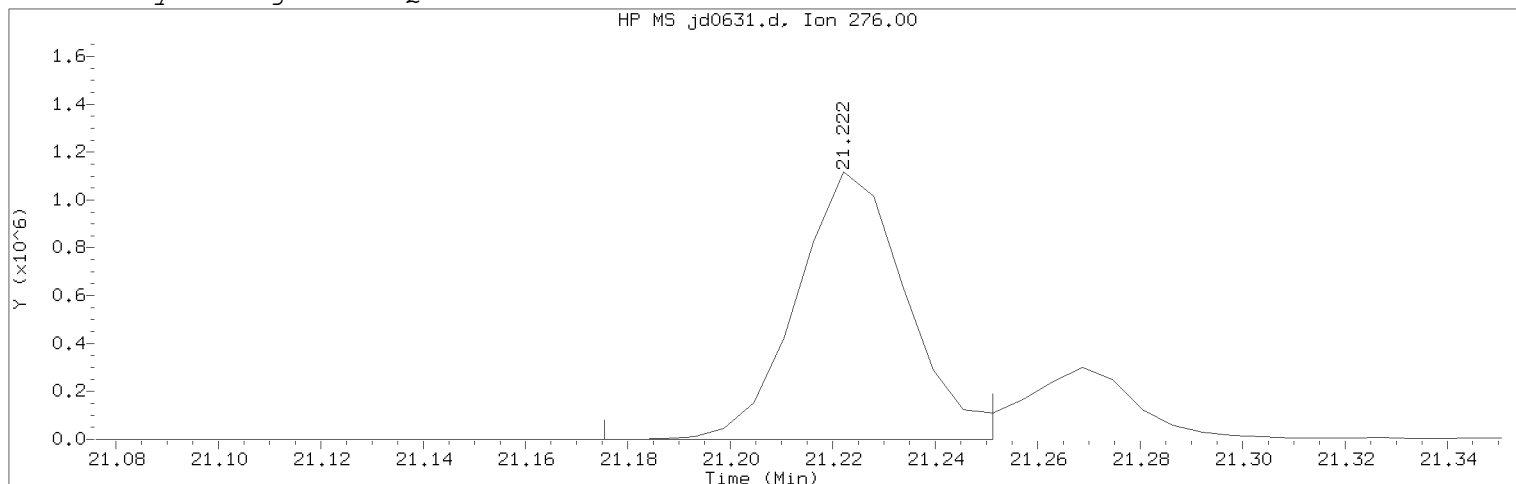
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 29-APR-2020 11:39

Date, time and analyst ID of latest file update: 29-Apr-2020 11:40 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3320	
Retention Time (minutes)	: 21.222	
Quant Ion	: 276.00	
Area (flag)	: 1663852M	
On-Column Amount (ng/ul)	: 10.5147	
Integration start scan	: 3311	Integration stop scan: 3324
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

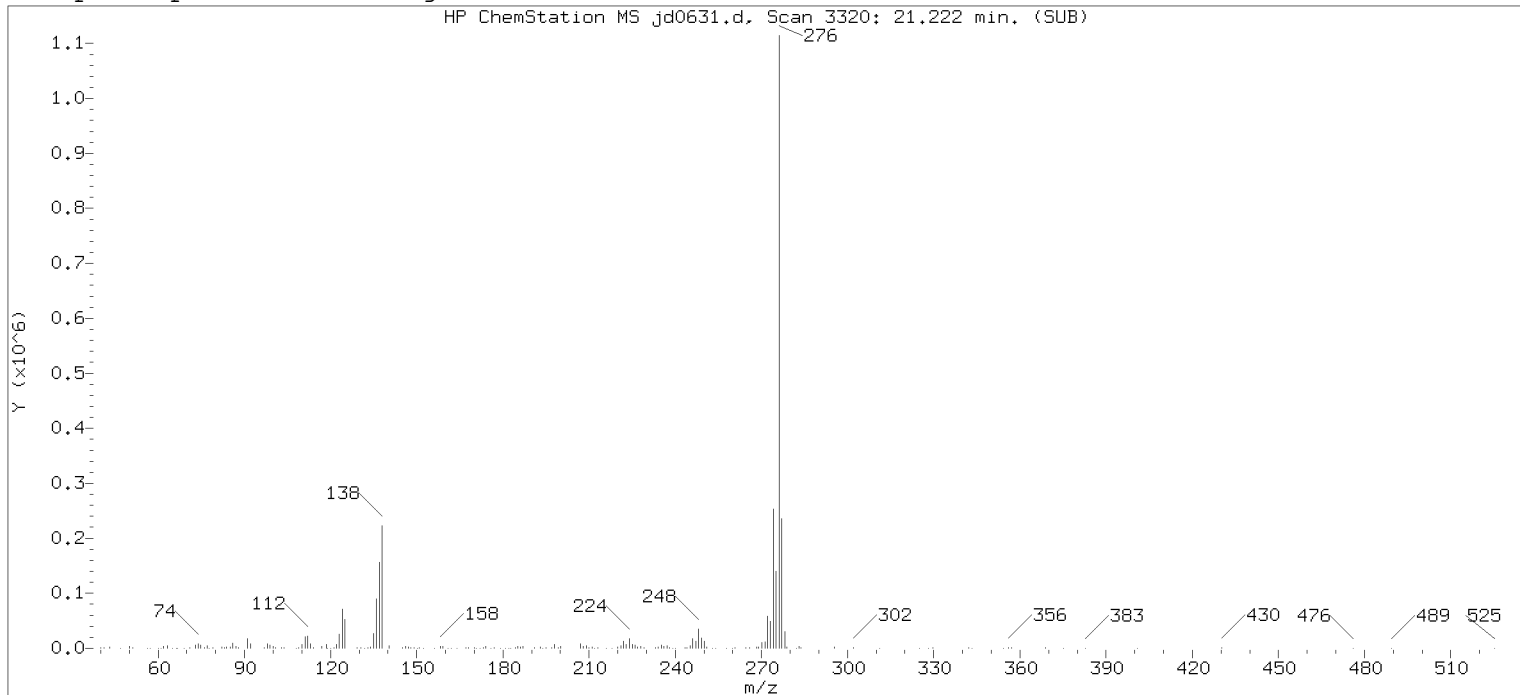
Digitally signed by William H Saadeh
on 04/29/2020 at 11:42.

Target 3.5 esignature user ID: whs02991

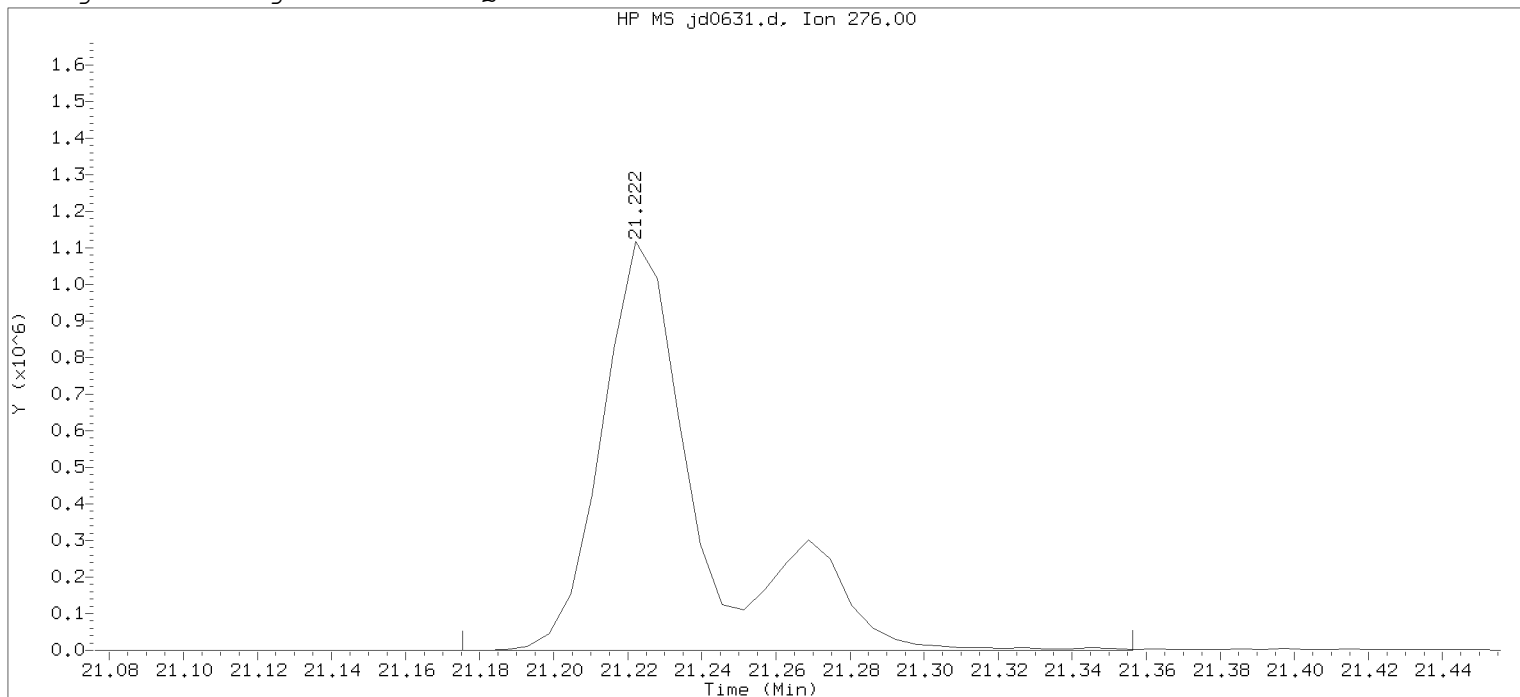
Secondary review performed and digitally signed by Chad A. Moline on 04/29/2020 at 11:34.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0631.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 14:11

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:44 whs02991

Sample Name: 59R04MSD

Lab Sample ID: 1300799

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3320	
Retention Time (minutes)	: 21.222	
Quant Ion	: 276.00	
Area	: 2097755	
On-column Amount (ng/ul)	: 13.2567	
Integration start scan	: 3311	Integration stop scan: 3342
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/29/2020 at 11:42.
Target 3.5 esignature use

112WHLCS Lancaster Laboratories, Inc. 112WHLCS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0626.d Injection date and time: **23-APR-2020 11:43**
 Data file Sample Info. Line: 112WHLCS;112WHLCS;1;3;LCS;;RAAP; Instrument ID: **HP23264.i** Batch: **20112WAH**
 Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: **27090Ma**
 Calibration date and time (Last Method Edit): 28-APR-2020 15:19
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619(0.000)	819	152	192542 (-24)	5.00	
68) Naphthalene-d8	8.557(0.000)	1151	136	752858 (-23)	5.00	
118) Acenaphthene-d10	11.348(0.000)	1629	164	404654 (-17)	5.00	
158) Phenanthrene-d10	13.246(0.000)	1954	188	794014 (-13)	5.00	
180) Pyrene-d10	15.179(0.006)	2285	212	848968 (-9)	5.00	
218) Perylene-d12	19.634(0.000)	3048	264	769258 (-15)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
12) 2-Fluorophenol	(1)	4.762(-0.002)	112	1706916	30.422	61%
18) Phenol-d6	(1)	6.157(-0.001)	99	1881256	25.217	50%
45) Nitrobenzene-d5	(2)	7.454(0.000)	82	1680150	19.753	79%
96) 2-Fluorobiphenyl	(3)	10.303(0.000)	172	2541445	19.383	78%
140) 2,4,6-Tribromophenol	(3)	12.423(0.000)	330	887468	49.670	99%
184) Terphenyl-d14	(5)	15.500(0.000)	244	3907005	25.392	102%

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.531(-0.005)	74	328662A	7.205	28.82			0.5
6) Pyridine	(1)	2.613(-0.009)	79	337154	4.702	18.81			0.5
8) 2-Picoline	(1)	3.798(-0.002)	93	562914	8.159	32.64			0.5
19) Phenol	(1)	6.181(-0.000)	94	519220	6.045	24.18			0.2
20) Aniline	(1)	6.134(0.000)	93	665281	6.763	27.05			0.8
23) bis(2-Chloroethyl)ether	(1)	6.262(-0.000)	93	683621	10.917	43.67			0.1
24) 2-Chlorophenol	(1)	6.321(-0.000)	128	556735	10.930	43.72			0.2
28) Benzyl alcohol	(1)	6.852(-0.000)	108	397673	11.526	46.11			3
32) 2-Methylphenol	(1)	7.062(0.000)	108	564849	10.977	43.91			0.2
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.074(-0.000)	45	875851	10.688	42.75			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.074(-0.000)	45	875851	10.688	42.75			0.1
37) Acetophenone	(1)	7.232(0.000)	105	975704	11.438	45.75			1
38) 4-Methylphenol	(1)	7.308(-0.000)	108	591005	9.633	38.53			0.6
39) N-Nitroso-di-n-propylamine	(1)	7.255(0.000)	70	632843	12.083	48.33			0.2
41) o-Toluidine	(1)	7.284(0.000)	106	749141	8.294	33.17			1
46) Nitrobenzene	(2)	7.483(0.000)	77	861680	9.875	39.50			0.1
52) Isophorone	(2)	7.862(0.000)	82	1532893	10.995	43.98			0.1
53) 2-Nitrophenol	(2)	7.973(0.000)	139	323779	11.531	46.12			0.8
55) 2,4-Dimethylphenol	(2)	8.108(-0.000)	107	586071	9.099	36.40			0.8
57) bis(2-Chloroethoxy)methane	(2)	8.236(0.000)	93	899544	11.892	47.57			0.1
62) 2,4-Dichlorophenol	(2)	8.382(-0.000)	162	516858	10.839	43.36			0.4
70) 4-Chloroaniline	(2)	8.703(-0.000)	127	540669	8.582	34.33			1
83) 4-Chloro-3-methylphenol	(2)	9.538(0.000)	107	585937	11.433	45.73			0.3
86) 2-Methylnaphthalene	(2)	9.690(-0.000)	142	1073699	10.385	41.54			0.07
88) Hexachlorocyclopentadiene	(3)	9.953(0.000)	237	267051	5.956	23.82			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959(0.000)	216	559142	9.005	36.02			0.5
93) 2,4,6-Trichlorophenol	(3)	10.169(0.000)	196	424659	11.378	45.51			0.2

A = User selected an alternate peak.

112WHLCS Lancaster Laboratories, Inc. 112WHLCS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0626.d Injection date and time: 23-APR-2020 11:43
 Data file Sample Info. Line: 112WHLCS;112WHLCS;1;3;LCS;;RAAP; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090Ma
 Calibration date and time (Last Method Edit): 28-APR-2020 15:19
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
95) 2,4,5-Trichlorophenol	(3)	10.251(0.000)	196	447305	10.916	43.66			0.2
99) 2-Chloronaphthalene	(3)	10.461(0.000)	162	1147597	9.672	38.69			0.1
104) 2-Nitroaniline	(3)	10.654(0.000)	138	386927	11.394	45.58			0.5
110) Dimethylphthalate	(3)	10.986(0.000)	163	890242	7.018	28.07			0.5
111) 1,3-Dinitrobenzene	(3)	11.004(0.000)	168	234297	12.025	48.10			0.5
113) 2,6-Dinitrotoluene	(3)	11.062(0.000)	165	344384	12.418	49.67			0.1
114) Acenaphthylene	(3)	11.115(0.000)	152	1667856	10.709	42.84			0.1
117) 3-Nitroaniline	(3)	11.313(0.000)	138	302008	11.064	44.25			0.8
119) Acenaphthene	(3)	11.395(-0.000)	153	1166919	10.799	43.20			0.09
120) 2,4-Dinitrophenol	(3)	11.483(-0.000)	184	394282	23.668	94.67			4
121) 4-Nitrophenol	(3)	11.687(-0.000)	109	194211	7.206	28.82		J	3
123) 2,4-Dinitrotoluene	(3)	11.681(-0.000)	165	428405	11.335	45.34			0.3
124) Dibenzofuran	(3)	11.664(-0.000)	168	1754242	11.079	44.32			0.1
126) 1-Naphthylamine	(3)	11.780(-0.000)	143	1259351	12.018	48.07			2
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856(-0.000)	232	367931	11.997	47.99			1
128) 2-Naphthylamine	(3)	11.891(-0.000)	143	1048384	10.197	40.79			2
129) Diethylphthalate	(3)	12.049(-0.000)	149	1199605	9.695	38.78			0.5
131) Fluorene	(3)	12.125(-0.000)	166	1338965	10.807	43.23			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.154(-0.000)	204	695124	11.423	45.69			0.1
134) 4-Nitroaniline	(3)	12.172(-0.000)	138	282607	9.426	37.70			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.212(0.000)	198	265755	11.475	45.90			2
136) N-Nitrosodiphenylamine	(4)	12.306(-0.000)	169	1142691	10.816	43.26			0.2
137) NDPA as diphenylamine	(4)	12.306(-0.000)	169	1142691	10.816	43.26			0.2
148) 4-Bromophenyl-phenylether	(4)	12.732(-0.000)	248	404877	10.280	41.12			0.1
150) Hexachlorobenzene	(4)	12.773(0.000)	284	437364	10.494	41.98			0.2
154) Pentachlorophenol	(4)	13.030(0.000)	266	270939	10.122	40.49			0.7
160) Phenanthrene	(4)	13.275(-0.000)	178	2057643	11.152	44.61			0.1
162) Anthracene	(4)	13.339(-0.000)	178	2069274	11.333	45.33			0.1
170) Di-n-butylphthalate	(4)	14.069(-0.000)	149	2506498	11.134	44.54			0.5
178) Fluoranthene	(4)	14.875(0.000)	202	2461723	11.448	45.79			0.1
182) Pyrene	(5)	15.208(-0.000)	202	2573707	11.236	44.95			0.1
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.346(-0.000)	149	920986	9.315	37.26			0.5
198) 3,3'-Dichlorobenzidine	(5)	17.193(-0.000)	252	610933	7.706	30.82			0.8
200) Benzo(a)anthracene	(5)	17.187(-0.000)	228	2368423	12.223	48.89			0.1
201) Chrysene	(5)	17.246(-0.000)	228	2245884	11.148	44.59			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.403(-0.000)	149	1674123	12.249	48.99			1
210) Di-n-octylphthalate	(6)	18.560(0.000)	149	2836481	13.162	52.65			1
211) Benzo(b)fluoranthene	(6)	19.021(0.000)	252	2338694	11.815	47.26			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.027(0.000)	256	964116	11.304	45.21			1
213) Benzo(k)fluoranthene	(6)	19.068(0.000)	252	2231393	11.847	47.39			0.4
216) Benzo(a)pyrene	(6)	19.540(0.000)	252	2016585	11.172	44.69			0.4
224) Indeno(1,2,3-cd)pyrene	(6)	21.228(-0.000)	276	1791139M	11.846	47.39			0.04
225) Dibenz(a,h)anthracene	(6)	21.269(-0.000)	278	1918801	12.162	48.65			0.1
226) Benzo(g,h,i)perylene	(6)	21.584(-0.000)	276	1905716	11.979	47.91			0.1

M = Compound was manually integrated.

112WHLCS Lancaster Laboratories, Inc. 112WHLCS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP23264.i/20apr23.b/jd0626.d Injection date and time: **23-APR-2020 11:43**
Data file Sample Info. Line: 112WHLCS;112WHLCS;1;3;LCS;;RAAP; Instrument ID: **HP23264.i** Batch: **20112WAH**
Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: **27090Ma**
Calibration date and time (Last Method Edit): 28-APR-2020 15:19
Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

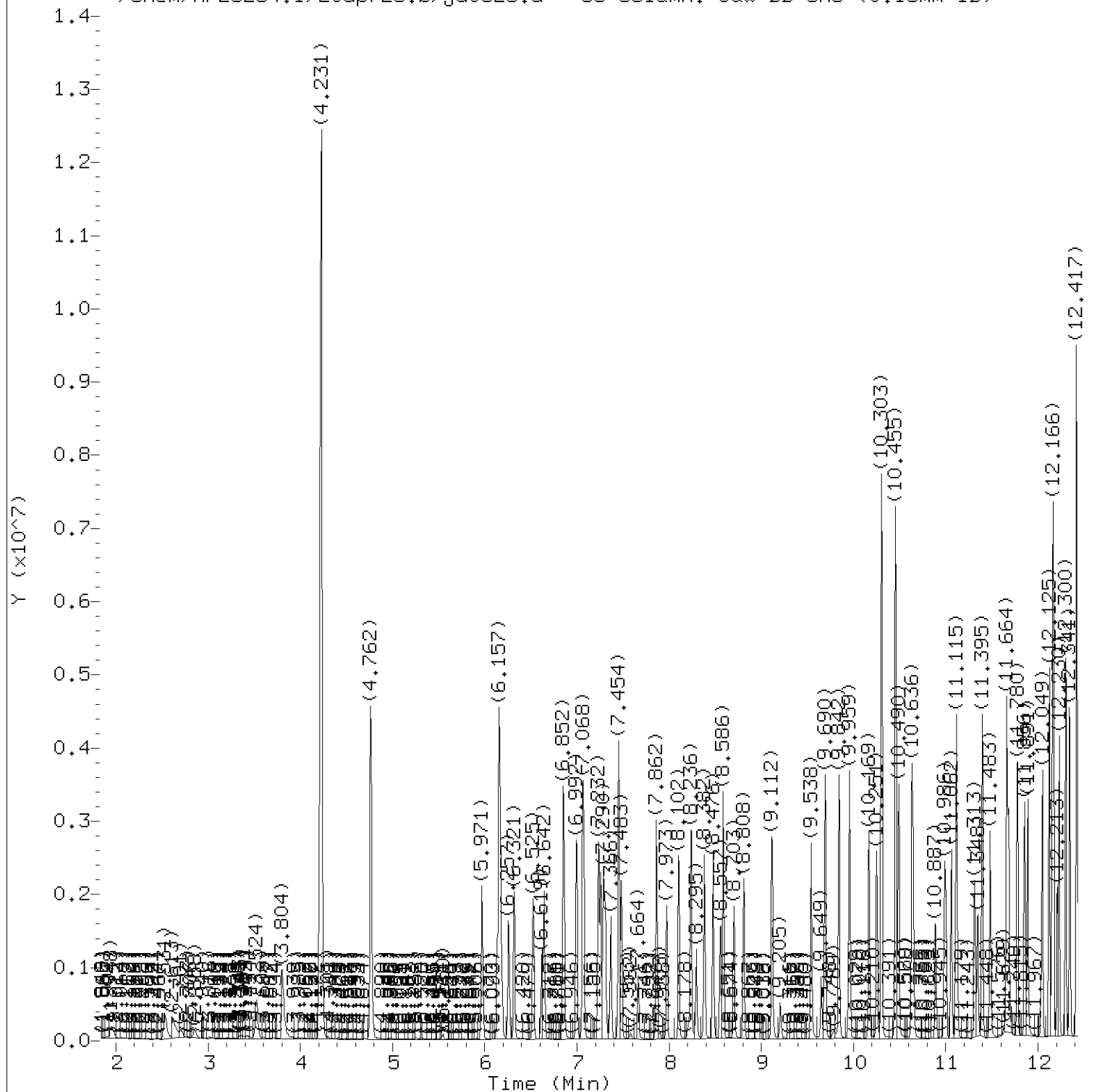
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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Total number of targets = 72

Digitally signed by William H Saadeh on 04/28/2020 at 15:25. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0626.d
Injection date and time: 23-APR-2020 11:43

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:19
Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

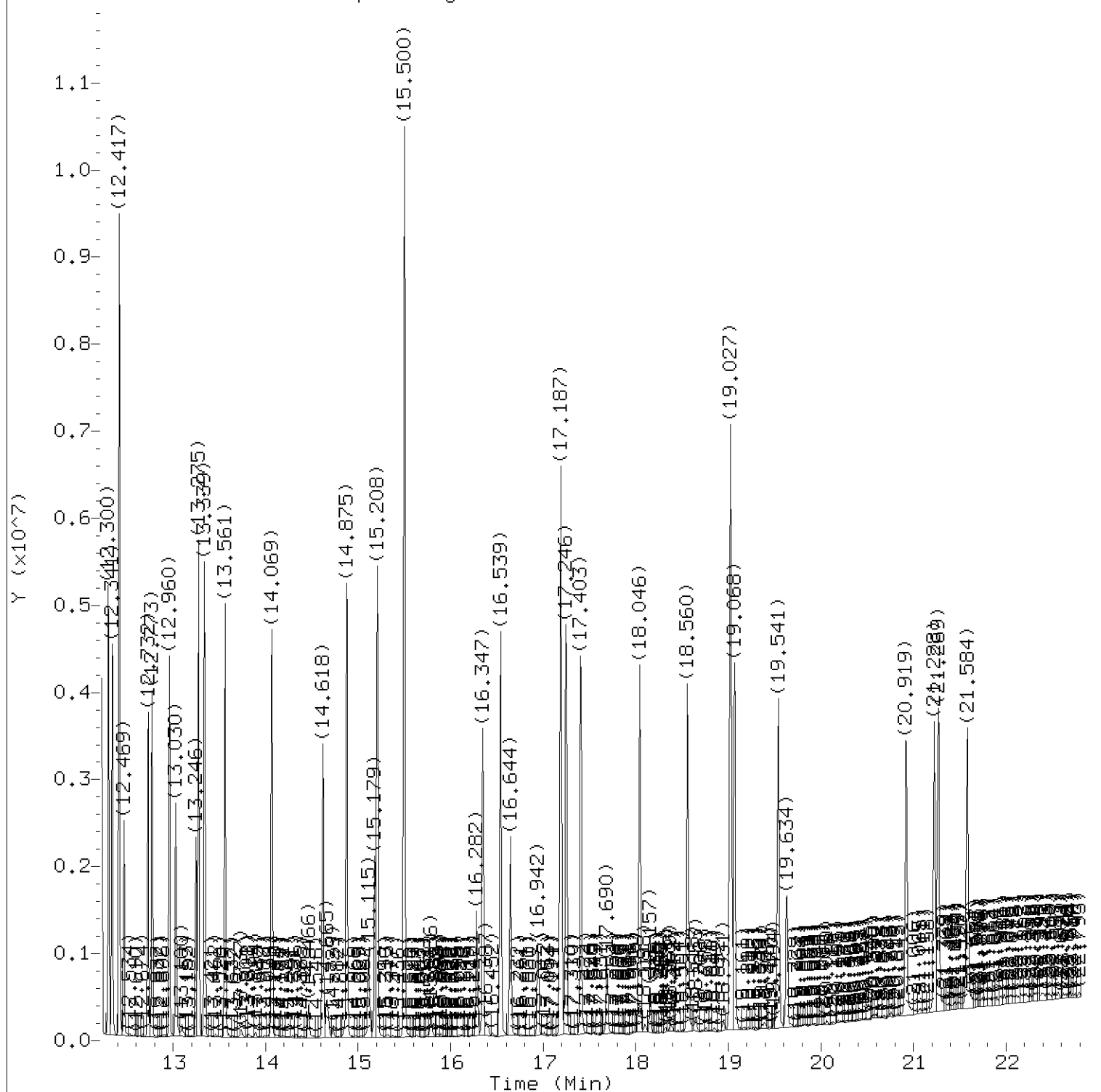
Sublist used: 27090Ma

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Digitally signed by William H Saadeh
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0626.d
Injection date and time: 23-APR-2020 11:43

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:19

Sublist used: 27090Ma

Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Digitally signed by William H Saadeh
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0626.d
 Injection date and time: 23-APR-2020 11:43

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Ma

Calibration date and time: 28-APR-2020 15:19

Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
5) N-Nitrosodimethylamine	(1)	2.531	74	328662A	7.205
6) Pyridine	(1)	2.613	79	337154	4.702
8) 2-Picoline	(1)	3.798	93	562914	8.159
12) \$2-Fluorophenol	(1)	4.762	112	1706916	30.422
20) Aniline	(1)	6.134	93	665281	6.763
18) \$Phenol-d6	(1)	6.157	99	1881256	25.217
19) Phenol	(1)	6.181	94	519220	6.045
23) bis(2-Chloroethyl) ether	(1)	6.263	93	683621	10.917
24) 2-Chlorophenol	(1)	6.321	128	556735	10.930
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	192542	5.000
28) Benzyl alcohol	(1)	6.852	108	397673	11.526
32) 2-Methylphenol	(1)	7.062	108	564849	10.977
35) bis(2-Chloroisopropyl) ether	(1)	7.074	45	875851	10.688
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.074	45	875851	10.688
37) Acetophenone	(1)	7.232	105	975704	11.438
39) N-Nitroso-di-n-propylamine	(1)	7.255	70	632843	12.083
41) o-Toluidine	(1)	7.284	106	749141	8.294
38) 4-Methylphenol	(1)	7.308	108	591005	9.633
45) \$Nitrobenzene-d5	(2)	7.454	82	1680150	19.753
46) Nitrobenzene	(2)	7.483	77	861680	9.875
52) Isophorone	(2)	7.862	82	1532893	10.995
53) 2-Nitrophenol	(2)	7.973	139	323779	11.531
55) 2,4-Dimethylphenol	(2)	8.108	107	586071	9.099
57) bis(2-Chloroethoxy) methane	(2)	8.236	93	899544	11.892
62) 2,4-Dichlorophenol	(2)	8.382	162	516858	10.839
68) *Naphthalene-d8	(2)	8.557	136	752858	5.000
70) 4-Chloroaniline	(2)	8.703	127	540669	8.582
83) 4-Chloro-3-methylphenol	(2)	9.538	107	585937	11.433
86) 2-Methylnaphthalene	(2)	9.690	142	1073699	10.385
88) Hexachlorocyclopentadiene	(3)	9.953	237	267051	5.956
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.959	216	559142	9.005
93) 2,4,6-Trichlorophenol	(3)	10.169	196	424659	11.378
95) 2,4,5-Trichlorophenol	(3)	10.251	196	447305	10.916
96) \$2-Fluorobiphenyl	(3)	10.303	172	2541445	19.383
99) 2-Chloronaphthalene	(3)	10.461	162	1147597	9.672
104) 2-Nitroaniline	(3)	10.654	138	386927	11.394
110) Dimethylphthalate	(3)	10.986	163	890242	7.018
111) 1,3-Dinitrobenzene	(3)	11.004	168	234297	12.025
113) 2,6-Dinitrotoluene	(3)	11.062	165	344384	12.418
114) Acenaphthylene	(3)	11.115	152	1667856	10.709

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
 on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0626.d
 Injection date and time: 23-APR-2020 11:43

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Ma

Calibration date and time: 28-APR-2020 15:19

Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
117) 3-Nitroaniline	(3)	11.313	138	302008	11.064
118) *Acenaphthene-d10	(3)	11.348	164	404654	5.000
119) Acenaphthene	(3)	11.395	153	1166919	10.799
120) 2,4-Dinitrophenol	(3)	11.483	184	394282	23.668
124) Dibenzofuran	(3)	11.664	168	1754242	11.079
123) 2,4-Dinitrotoluene	(3)	11.681	165	428405	11.335
121) 4-Nitrophenol	(3)	11.687	109	194211	7.206
126) 1-Naphthylamine	(3)	11.780	143	1259351	12.018
127) 2,3,4,6-Tetrachlorophenol	(3)	11.856	232	367931	11.997
128) 2-Naphthylamine	(3)	11.891	143	1048384	10.197
129) Diethylphthalate	(3)	12.049	149	1199605	9.695
131) Fluorene	(3)	12.125	166	1338965	10.807
132) 4-Chlorophenyl-phenylether	(3)	12.154	204	695124	11.423
134) 4-Nitroaniline	(3)	12.172	138	282607	9.426
135) 4,6-Dinitro-2-methylphenol	(4)	12.213	198	265755	11.475
137) NDPA as diphenylamine	(4)	12.306	169	1142691	10.816
136) N-Nitrosodiphenylamine	(4)	12.306	169	1142691	10.816
140) \$2,4,6-Tribromophenol	(3)	12.423	330	887468	49.670
148) 4-Bromophenyl-phenylether	(4)	12.732	248	404877	10.280
150) Hexachlorobenzene	(4)	12.773	284	437364	10.494
154) Pentachlorophenol	(4)	13.030	266	270939	10.122
158) *Phenanthrene-d10	(4)	13.246	188	794014	5.000
160) Phenanthrene	(4)	13.275	178	2057643	11.152
162) Anthracene	(4)	13.339	178	2069274	11.333
170) Di-n-butylphthalate	(4)	14.069	149	2506498	11.134
178) Fluoranthene	(4)	14.875	202	2461723	11.448
180) *Pyrene-d10	(5)	15.179	212	848968	5.000
182) Pyrene	(5)	15.208	202	2573707	11.236
184) \$Terphenyl-d14	(5)	15.500	244	3907005	25.392
193) Butylbenzylphthalate	(5)	16.347	149	920986	9.315
200) Benzo(a)anthracene	(5)	17.187	228	2368423	12.223
198) 3,3'-Dichlorobenzidine	(5)	17.193	252	610933	7.706
201) Chrysene	(5)	17.246	228	2245884	11.148
204) bis(2-Ethylhexyl)phthalate	(5)	17.403	149	1674123	12.249
210) Di-n-octylphthalate	(6)	18.560	149	2836481	13.162
211) Benzo(b)fluoranthene	(6)	19.021	252	2338694	11.815
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.027	256	964116	11.304
213) Benzo(k)fluoranthene	(6)	19.068	252	2231393	11.847
216) Benzo(a)pyrene	(6)	19.541	252	2016585	11.172
218) *Perylene-d12	(6)	19.634	264	769258	5.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
 on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0626.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 11:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Ma

Calibration date and time: 28-APR-2020 15:19

Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
224) Indeno(1,2,3-cd)pyrene	(6)	21.228	276	1791139M	11.846
225) Dibenz(a,h)anthracene	(6)	21.269	278	1918801	12.162
226) Benzo(g,h,i)perylene	(6)	21.584	276	1905716	11.979

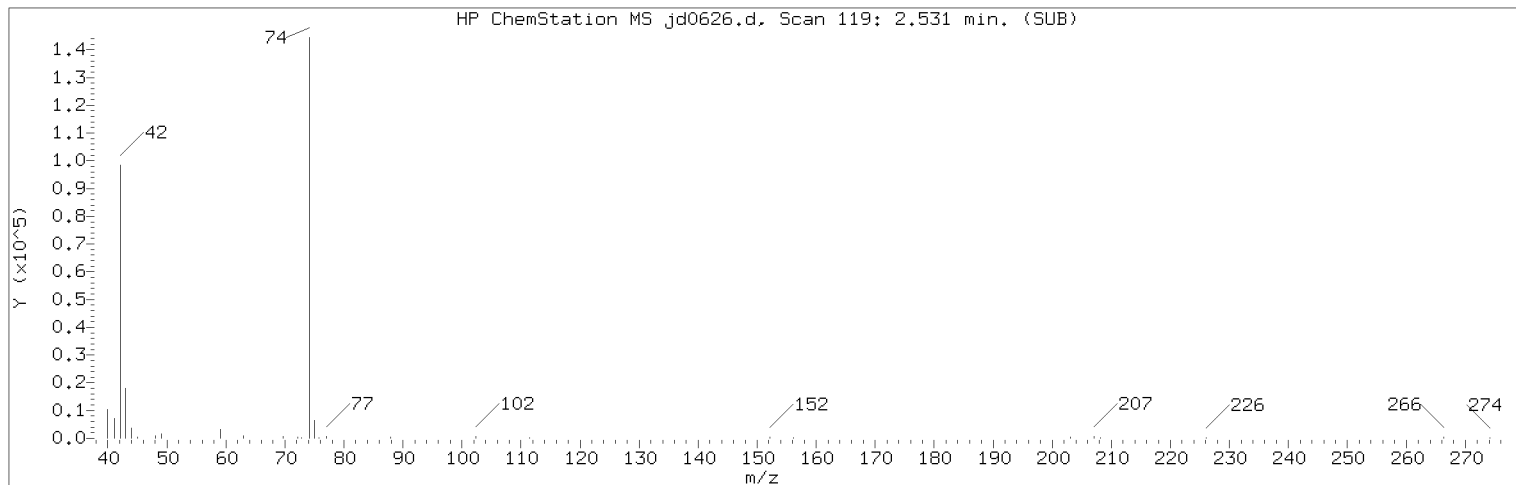
M = Compound was manually integrated.

Digitally signed by William H Saadeh

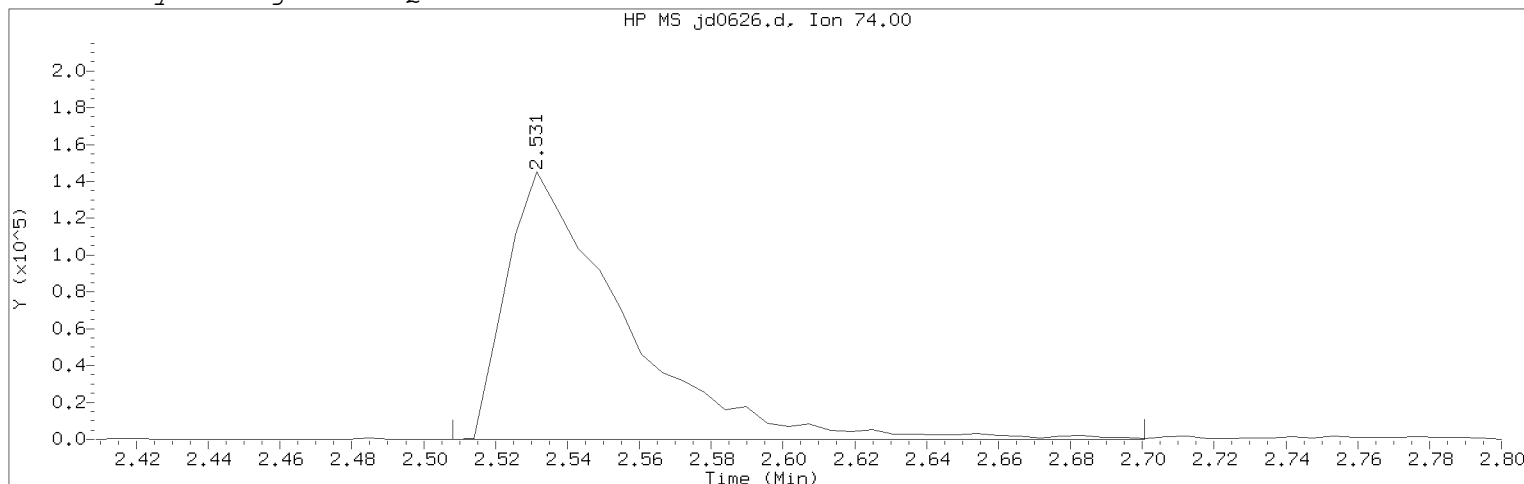
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0626.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 11:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Ma

Calibration date and time: 28-APR-2020 15:19

Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Compound Number	: 5	
Compound Name	: N-Nitrosodimethylamine	
Scan Number	: 119	
Retention Time (minutes)	: 2.531	
Quant Ion	: 74.00	
Area (flag)	: 328662A	
On-Column Amount (ng/ul)	: 7.2046	
Integration start scan	: 114	Integration stop scan: 147
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by William H Saadeh

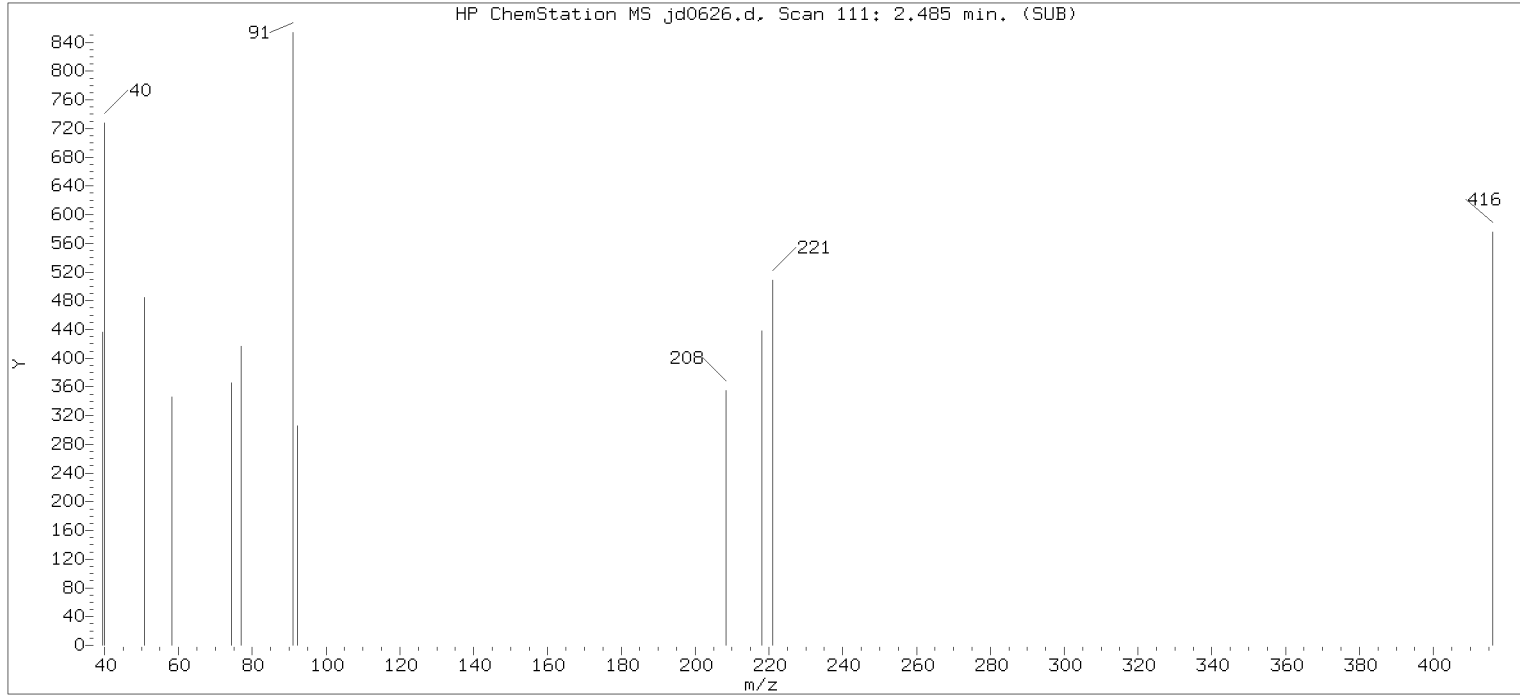
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

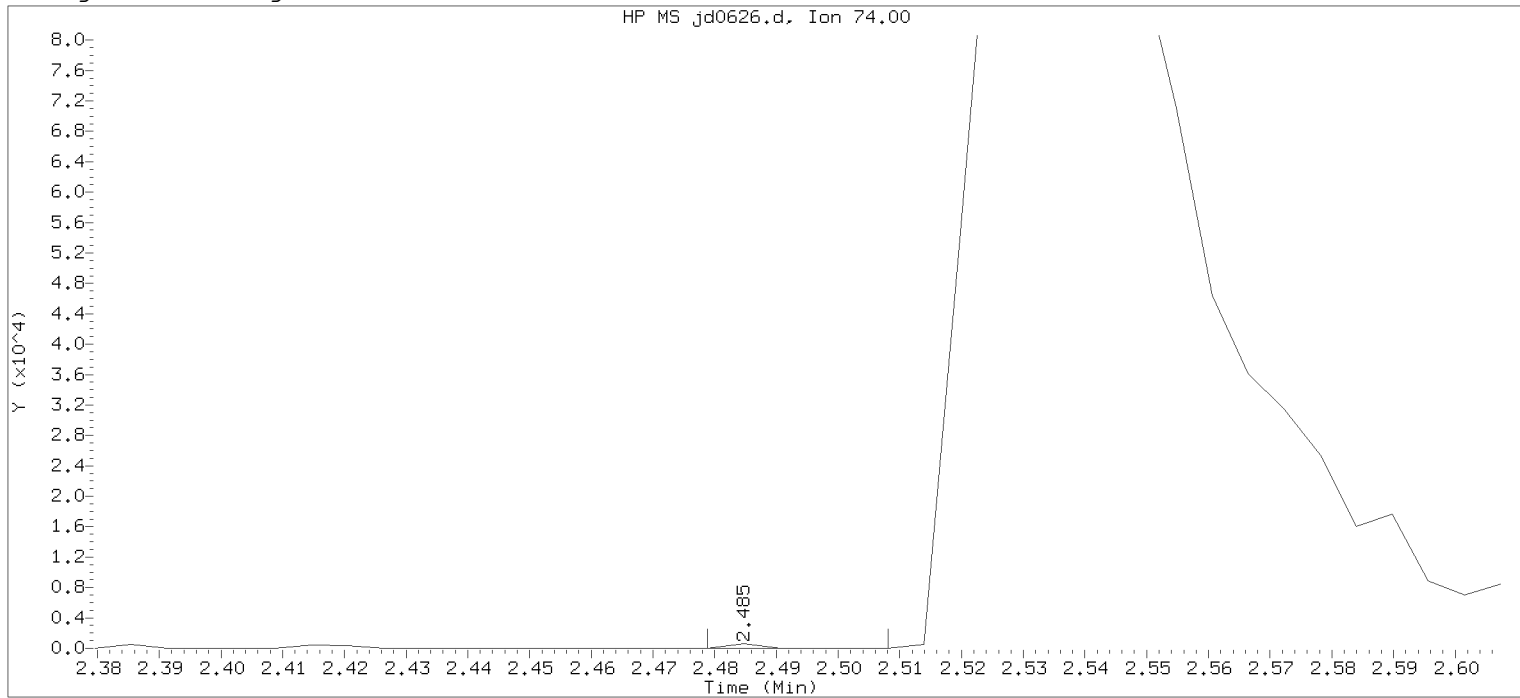
Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0626.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 11:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 28-APR-2020 08:32

Date, time and analyst ID of latest file update: 28-Apr-2020 13:59 whs02991

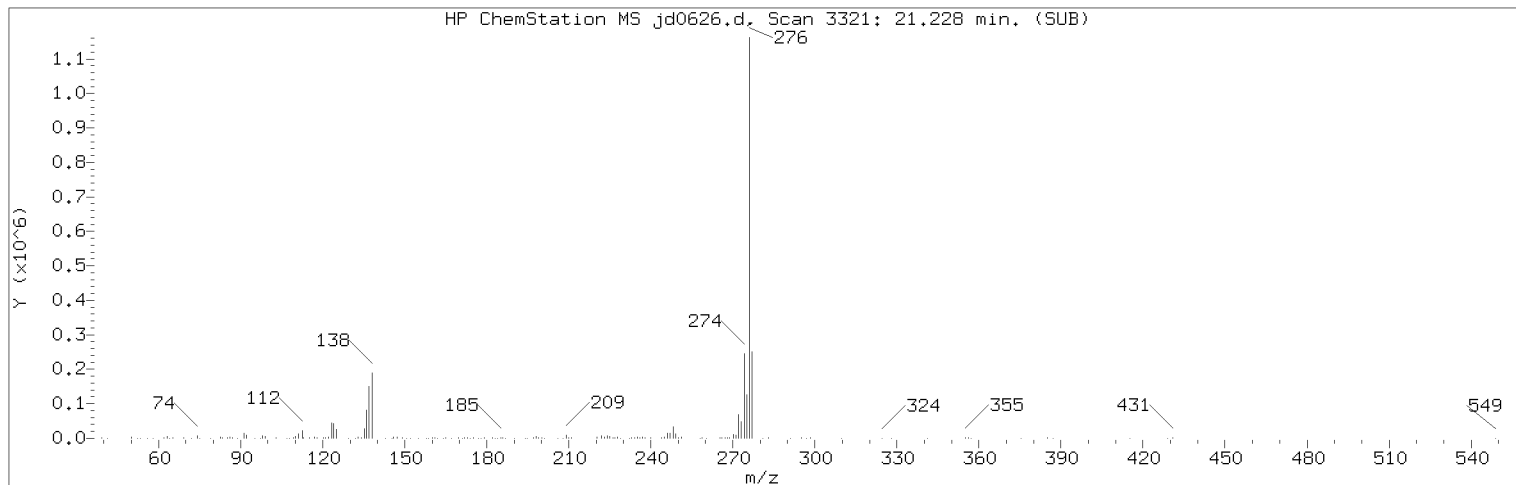
Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

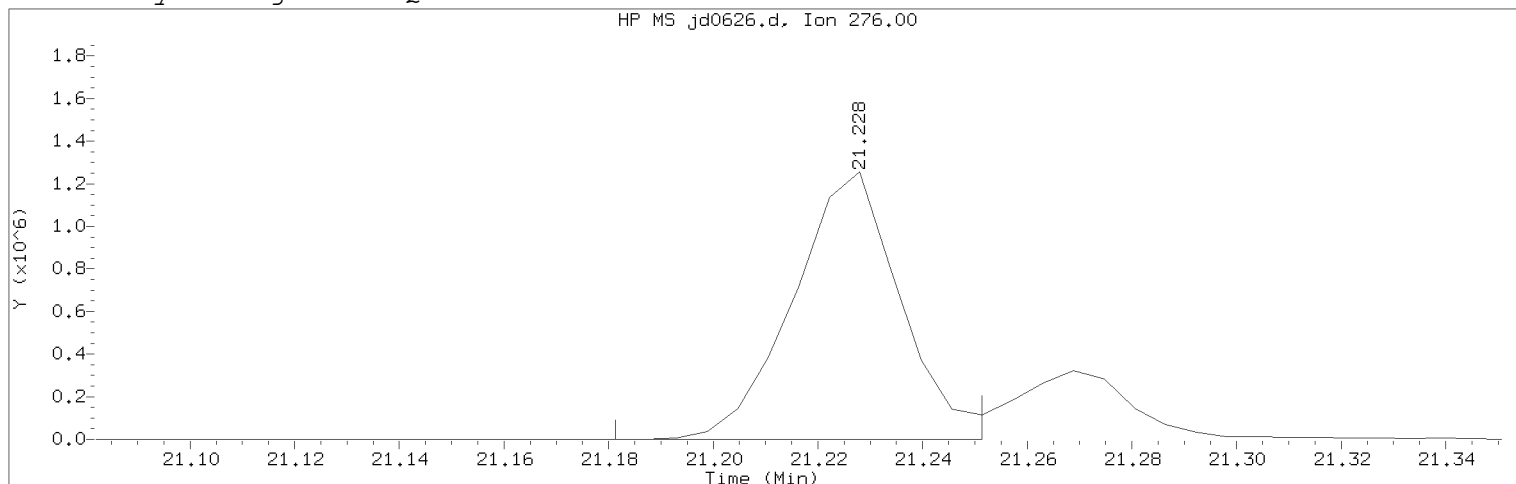
Compound Number	: 5	
Compound Name	: N-Nitrosodimethylamine	
Scan Number	: 111	
Retention Time (minutes)	: 2.485	
Quant Ion	: 74.00	
Area	: 213	
On-column Amount (ng/ul)	: 0.0047	
Integration start scan	: 109	Integration stop scan: 114
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/28/2020 at 15:25.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0626.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 11:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Ma

Calibration date and time: 28-APR-2020 15:19

Date, time and analyst ID of latest file update: 28-Apr-2020 15:19 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3321	
Retention Time (minutes)	: 21.228	
Quant Ion	: 276.00	
Area (flag)	: 1791139M	
On-Column Amount (ng/ul)	: 11.8464	
Integration start scan	: 3312	Integration stop scan: 3324
Y at integration start	: 0	Y at integration end: 0

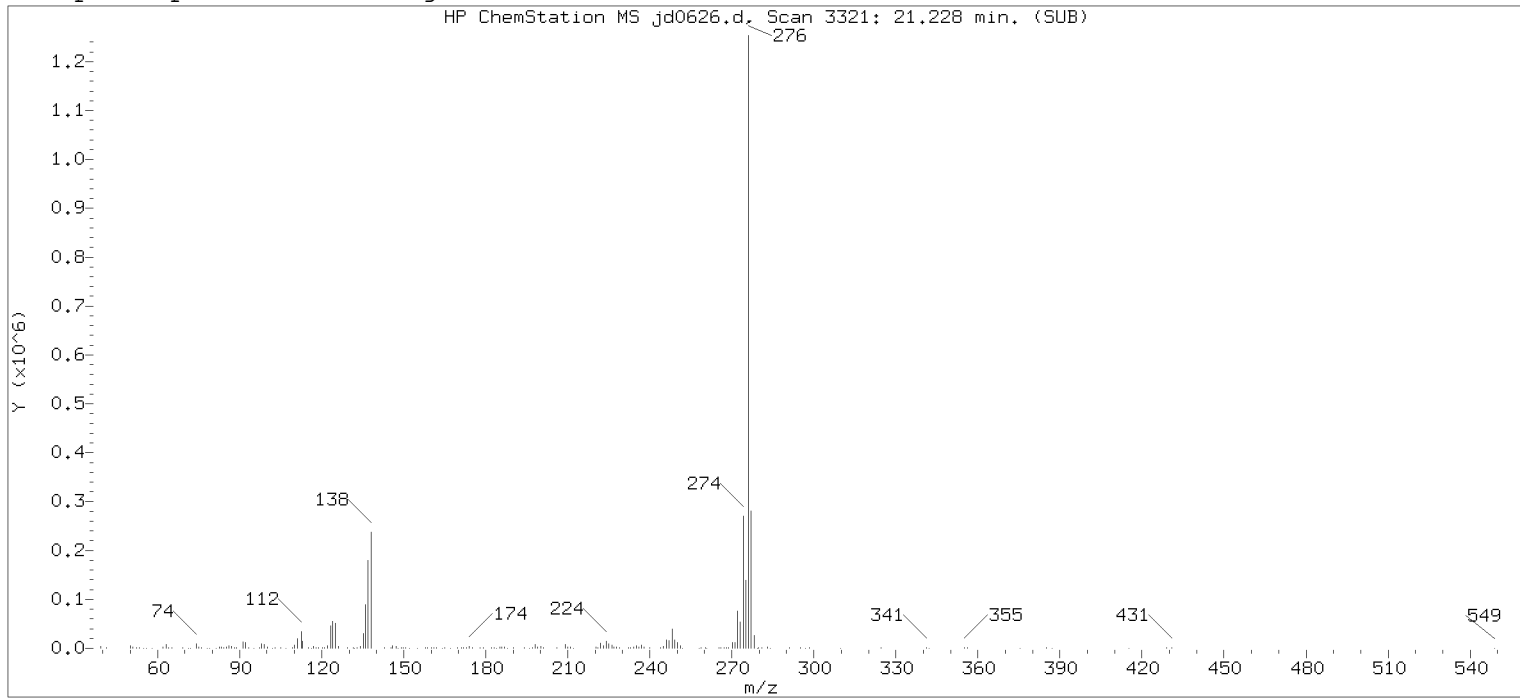
Reason for manual integration: improper integration

Analyst responsible for change:

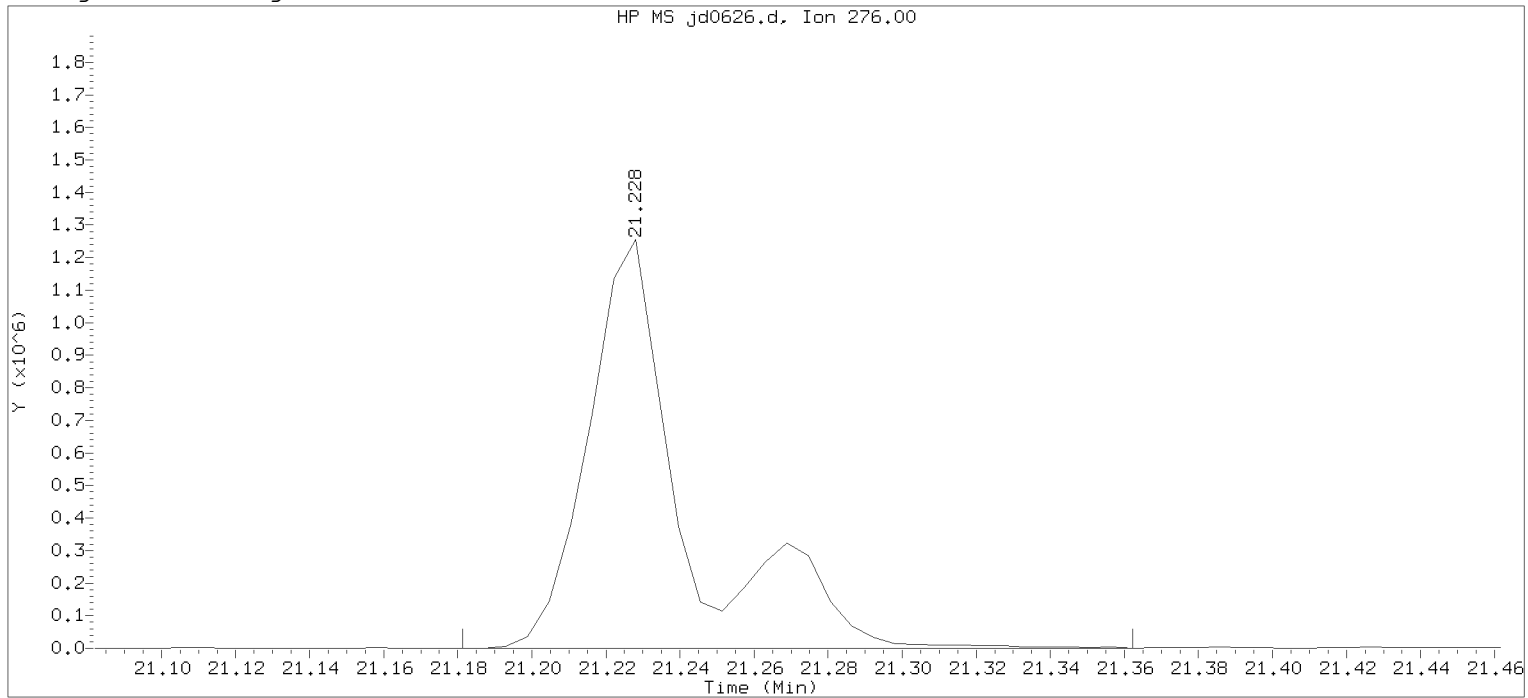
Digitally signed by William H Saadeh
on 04/28/2020 at 15:25.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0626.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 11:43

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090M

Calibration date and time: 28-APR-2020 08:32

Date, time and analyst ID of latest file update: 28-Apr-2020 13:59 whs02991

Sample Name: 112WHLCS

Lab Sample ID: 112WHLCS

Compound Number	: 224	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3321	
Retention Time (minutes)	: 21.228	
Quant Ion	: 276.00	
Area	: 2273938	
On-column Amount (ng/ul)	: 15.0395	
Integration start scan	: 3312	Integration stop scan: 3343
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/28/2020 at 15:25.
Target 3.5 esignature use

112WHLCS1 Lancaster Laboratories, Inc. Analysis Summary for GC/MS Semivolatiles 112WHLCS1

Data file: /chem/HP23264.i/20apr23.b/jd0627.d Injection date and time: 23-APR-2020 12:12
 Data file Sample Info. Line: 112WHLCS1;112WHLCS1;1;3;LCS;;RAAPVA; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090Mb
 Calibration date and time (Last Method Edit): 28-APR-2020 15:12
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	217274 (-14)	5.00	
68) Naphthalene-d8	8.557 (0.000)	1151	136	851290 (-13)	5.00	
118) Acenaphthene-d10	11.343 (0.006)	1628	164	422185 (-13)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	799264 (-13)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	798843 (-14)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	763366 (-15)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
12) 2-Fluorophenol	(1)	4.768 (-0.003)	112	1746757	27.588	55%
18) Phenol-d6	(1)	6.163 (-0.002)	99	1886408	22.408	45%
45) Nitrobenzene-d5	(2)	7.454 (0.000)	82	1864352	19.384	78%
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2780189	20.323	81%
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	858262	46.040	92%
184) Terphenyl-d14	(5)	15.500 (0.000)	244	3655331	25.247	101%

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
9) N-Nitrosomethylethylamine	(1)	3.997 (-0.000)	88	350085	10.245	40.98			0.5
10) Methyl methanesulfonate	(1)	4.470 (-0.001)	80	424271	8.613	34.45			0.3
14) N-Nitrosodiethylamine	(1)	5.042 (-0.000)	102	343869	10.924	43.70			0.1
16) Ethyl methanesulfonate	(1)	5.515 (0.000)	109	349680	11.808	47.23			0.1
36) N-Nitrosopyrrolidine	(1)	7.197 (0.000)	100	382294	12.263	49.05			0.1
40) N-Nitrosomorpholine	(1)	7.267 (0.000)	56	454562	9.263	37.05			0.5
50) N-Nitrosopiperidine	(2)	7.716 (-0.000)	114	349135	11.472	45.89			0.1
59) O,O,O-Triethylphosphorothioate	(2)	8.207 (-0.000)	198	348254	11.229	44.91			0.5
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)	8.715 (-0.000)	162	572180	10.736	42.95			0.1
72) Hexachloropropene	(2)	8.732 (-0.000)	213	225302	4.752	19.01			0.5
80) N-Nitrosodi-n-butylamine	(2)	9.270 (-0.000)	84	580493	10.772	43.09			3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
85) Safrrole	(2)	9.591 (-0.000)	162	504932	10.596	42.39			0.5
91) cis-Isosafrole	(3)	10.052 (0.000)	162	62441	1.249	5.00			0.3
97) trans-Isosafrole	(3)	10.414 (0.000)	162	534730	9.549	38.19			0.3
100) Isosafrole	(3)			597171	10.798	43.19			1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
122) Pentachlorobenzene	(3)	11.599 (-0.000)	250	553883	10.337	41.35			0.1
130) Thionazin	(3)	12.142 (-0.000)	107	286498	11.617	46.47			0.5
133) 5-Nitro-o-toluidine	(3)	12.160 (-0.000)	152	385720	11.636	46.54			1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)	12.656 (0.000)	86	531737	8.538	34.15			0.06
146) Phorate	(4)	12.662 (-0.000)	75	1107037	11.967	47.87			0.5
147) Phenacetin	(4)	12.691 (-0.000)	108	789785	11.566	46.26			0.1
149) Diallate (peak 2)	(4)	12.756 (0.000)	86	174465	2.791	11.16			0.06
151) Diallate trans/cis	(4)			706202	11.328	45.31			0.3

112WHLCS1 Lancaster Laboratories, Inc. Analysis Summary for GC/MS Semivolatiles 112WHLCS1

Data file: /chem/HP23264.i/20apr23.b/jd0627.d Injection date and time: 23-APR-2020 12:12
Data file Sample Info. Line: 112WHLCS1;112WHLCS1;1;3;LCS;;RAAPVA; Instrument ID: HP23264.i Batch: 20112WAH
Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090Mb
Calibration date and time (Last Method Edit): 28-APR-2020 15:12
Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

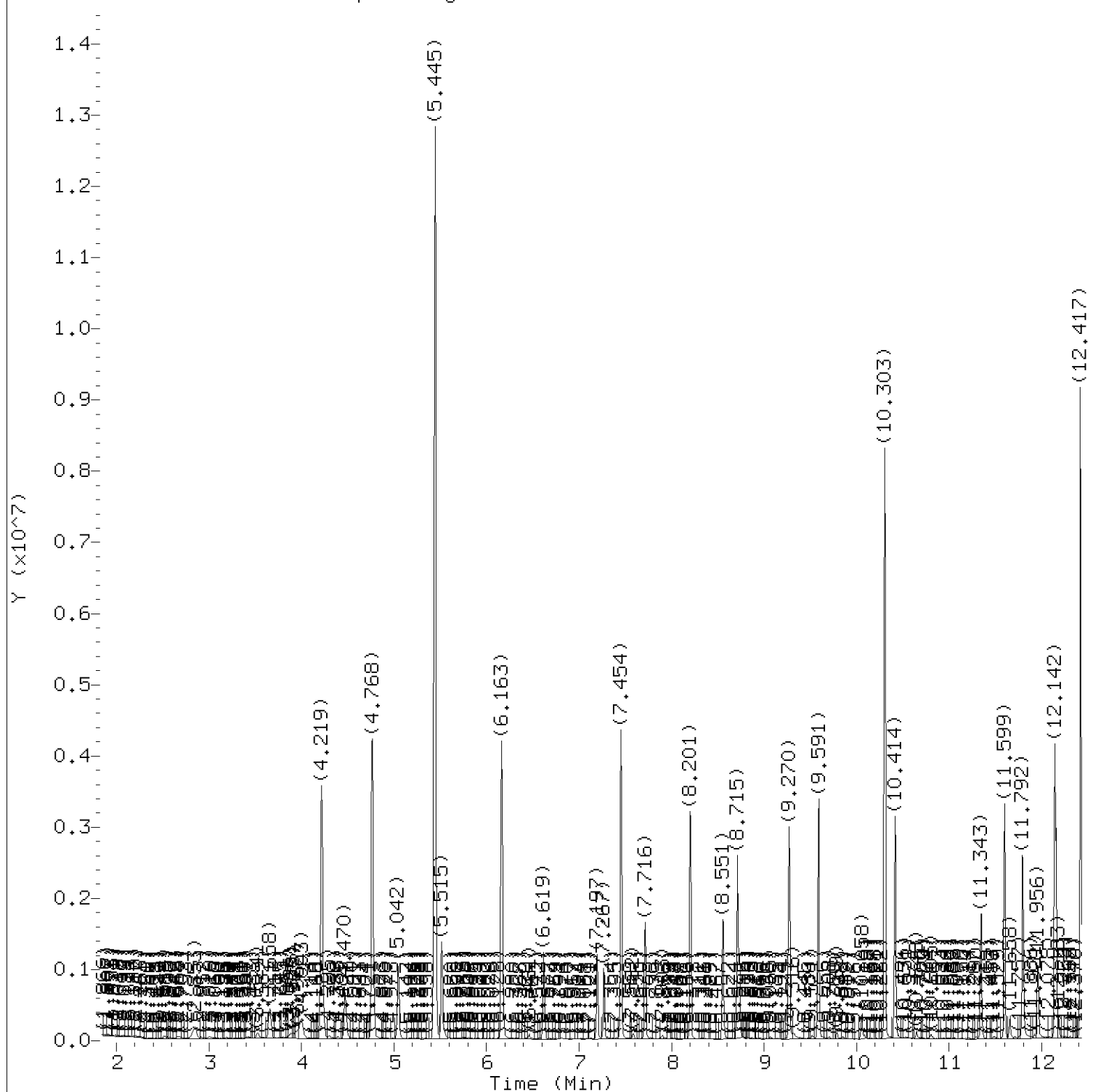
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
152) Dimethoate	(4)	12.849(0.000)	87	311393	5.288	21.15			0.8
155) 4-Aminobiphenyl	(4)	13.042(0.000)	169	813544	6.859	27.44			1
156) Pentachloronitrobenzene	(4)	13.036(-0.000)	237	225257	10.720	42.88			0.5
157) Pronamide	(4)	13.147(0.000)	173	710751	12.110	48.44			0.3
167) Disulfoton	(4)	13.299(-0.000)	88	1647020	25.911	103.64			6
169) Methyl parathion	(4)	13.766(-0.000)	109	519213	10.885	43.54			1
172) Parathion	(4)	14.297(-0.000)	109	373185	12.934	51.74			2
173) 4-Nitroquinoline-1-oxide	(4)	14.315(-0.000)	190	2940082	134.666	538.66		E	5
175) Methapyrilene	(4)	14.443(-0.000)	97	3403579	54.312	217.25		E	4
176) Isodrin	(4)	14.659(-0.000)	193	278274	10.677	42.71			0.1
185) Aramite (1)	(5)	15.383(0.001)	185	1185	0.413	1.65		J	0.3
186) Aramite (2)	(5)	15.447(-0.000)	185	589	0.378	1.51		J	0.3
188) Aramite (3)	(5)	15.512(-0.000)	185	54906	0.601	2.41		J	0.3
189) Aramite (4)	(5)	15.640(-0.000)	185	51832	0.457	1.83		J	0.3
191) Aramite	(5)			108512	1.849	7.40		J	1
187) p-Dimethylaminoazobenzene	(5)	15.728(-0.000)	225	450632	12.261	49.04			1
190) Chlorobenzilate	(5)	15.821(-0.000)	139	382748	6.072	24.29			0.8
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)	16.323(-0.001)	272	88804M	9.321	37.28		J	6
196) 2-Acetylaminofluorene	(5)	16.697(-0.000)	181	857559	11.735	46.94			3
220) 3-Methylcholanthrene	(6)	20.113(-0.000)	268	1068299	12.680	50.72			1

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by William H Saadeh on 04/28/2020 at 15:25. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0627.d
Injection date and time: 23-APR-2020 12:12

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:12

Sublist used: 27090Mb

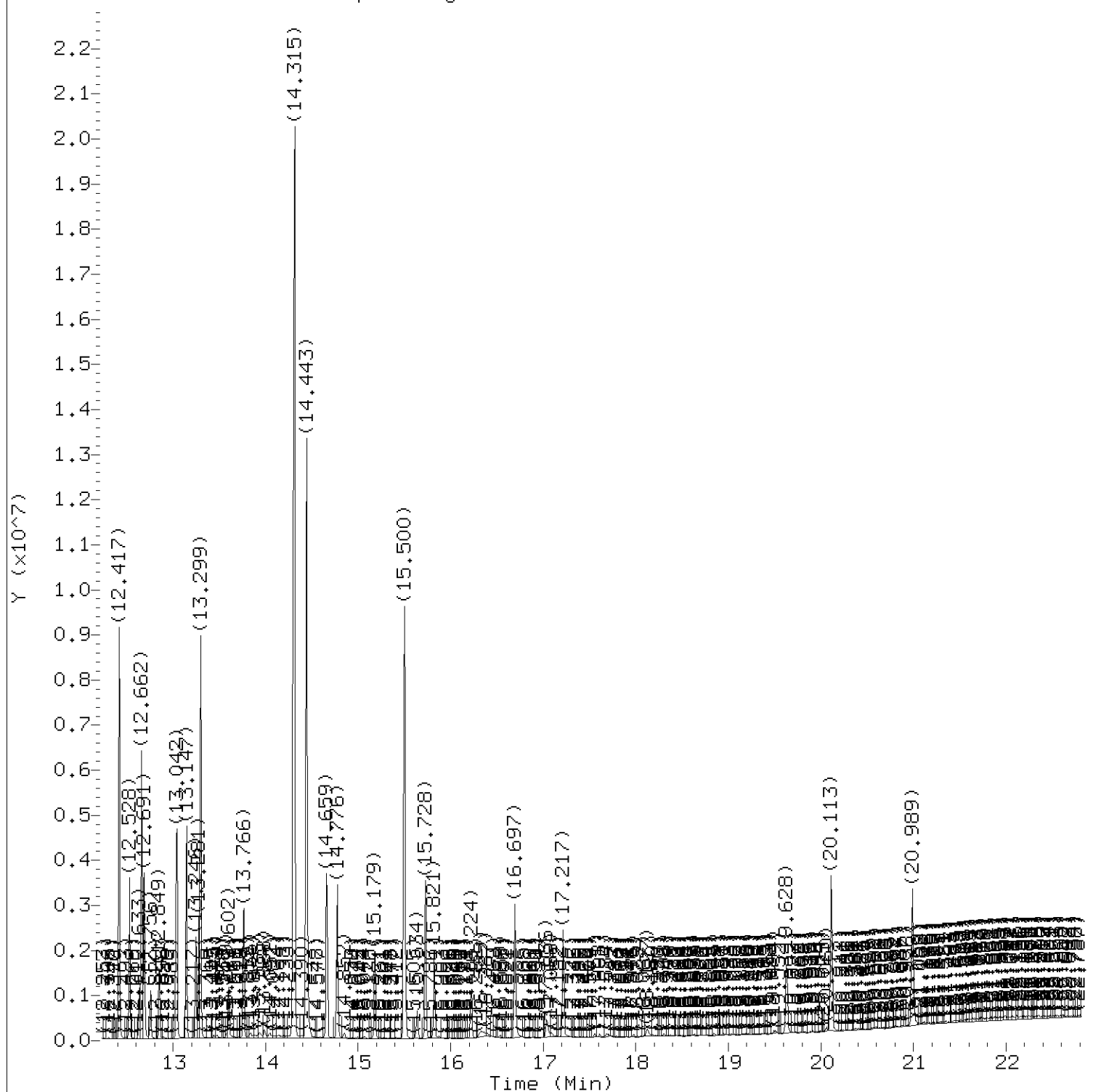
Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Digitally signed by William H Saadeh
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0627.d
Injection date and time: 23-APR-2020 12:12

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:12
Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sublist used: 27090Mb

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Digitally signed by William H Saadeh
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0627.d
 Injection date and time: 23-APR-2020 12:12

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
9) N-Nitrosomethylethylamine	(1)	3.997	88	350085	10.245
10) Methyl methanesulfonate	(1)	4.470	80	424271	8.613
12) \$2-Fluorophenol	(1)	4.768	112	1746757	27.588
14) N-Nitrosodiethylamine	(1)	5.042	102	343869	10.924
16) Ethyl methanesulfonate	(1)	5.515	109	349680	11.808
18) \$Phenol-d6	(1)	6.163	99	1886408	22.408
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	217274	5.000
36) N-Nitrosopyrrolidine	(1)	7.197	100	382294	12.263
40) N-Nitrosomorpholine	(1)	7.267	56	454562	9.263
100) Isosafrole	(3)			597171	10.798
45) \$Nitrobenzene-d5	(2)	7.454	82	1864352	19.384
50) N-Nitrosopiperidine	(2)	7.716	114	349135	11.472
59) O,O,O-Triethylphosphorothioate	(2)	8.207	198	348254	11.229
68) *Naphthalene-d8	(2)	8.557	136	851290	5.000
71) 2,6-Dichlorophenol	(2)	8.715	162	572180	10.736
72) Hexachloropropene	(2)	8.732	213	225302	4.752
151) Diallate trans/cis	(4)			706202	11.328
80) N-Nitrosodi-n-butylamine	(2)	9.270	84	580493	10.772
85) Safrole	(2)	9.591	162	504932	10.596
91) cis-Isosafrole	(3)	10.052	162	62441	1.249
96) \$2-Fluorobiphenyl	(3)	10.303	172	2780189	20.323
97) trans-Isosafrole	(3)	10.414	162	534730	9.549
191) Aramite	(5)			108512	1.849
118) *Acenaphthene-d10	(3)	11.343	164	422185	5.000
122) Pentachlorobenzene	(3)	11.599	250	553883	10.337
130) Thionazin	(3)	12.142	107	286498	11.617
133) 5-Nitro-o-toluidine	(3)	12.160	152	385720	11.636
140) \$2,4,6-Tribromophenol	(3)	12.417	330	858262	46.040
145) Diallate (peak 1)	(4)	12.656	86	531737	8.538
146) Phorate	(4)	12.662	75	1107037	11.967
147) Phenacetin	(4)	12.691	108	789785	11.566
149) Diallate (peak 2)	(4)	12.756	86	174465	2.791
152) Dimethoate	(4)	12.849	87	311393	5.288
156) Pentachloronitrobenzene	(4)	13.036	237	225257	10.720
155) 4-Aminobiphenyl	(4)	13.042	169	813544	6.859
157) Pronamide	(4)	13.147	173	710751	12.110
158) *Phenanthrene-d10	(4)	13.246	188	799264	5.000
167) Disulfoton	(4)	13.299	88	1647020	25.911
169) Methyl parathion	(4)	13.766	109	519213	10.885
172) Parathion	(4)	14.297	109	373185	12.934

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
 on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0627.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
173) 4-Nitroquinoline-1-oxide	(4)	14.315	190	2940082	134.666
175) Methapyrilene	(4)	14.443	97	3403579	54.312
176) Isodrin	(4)	14.659	193	278274	10.677
180)*Pyrene-d10	(5)	15.179	212	798843	5.000
185) Aramite (1)	(5)	15.383	185	1185	0.413
186) Aramite (2)	(5)	15.447	185	589	0.378
184)\$Terphenyl-d14	(5)	15.500	244	3655331	25.247
188) Aramite (3)	(5)	15.512	185	54906	0.601
189) Aramite (4)	(5)	15.640	185	51832	0.457
187) p-Dimethylaminoazobenzene	(5)	15.728	225	450632	12.261
190) Chlorobenzilate	(5)	15.821	139	382748	6.072
195) Kepone	(5)	16.323	272	88804M	9.321
196) 2-Acetylaminofluorene	(5)	16.697	181	857559	11.735
218)*Perylene-d12	(6)	19.628	264	763366	5.000
220) 3-Methylcholanthrene	(6)	20.113	268	1068299	12.680

M = Compound was manually integrated.

* = Compound is an internal standard.

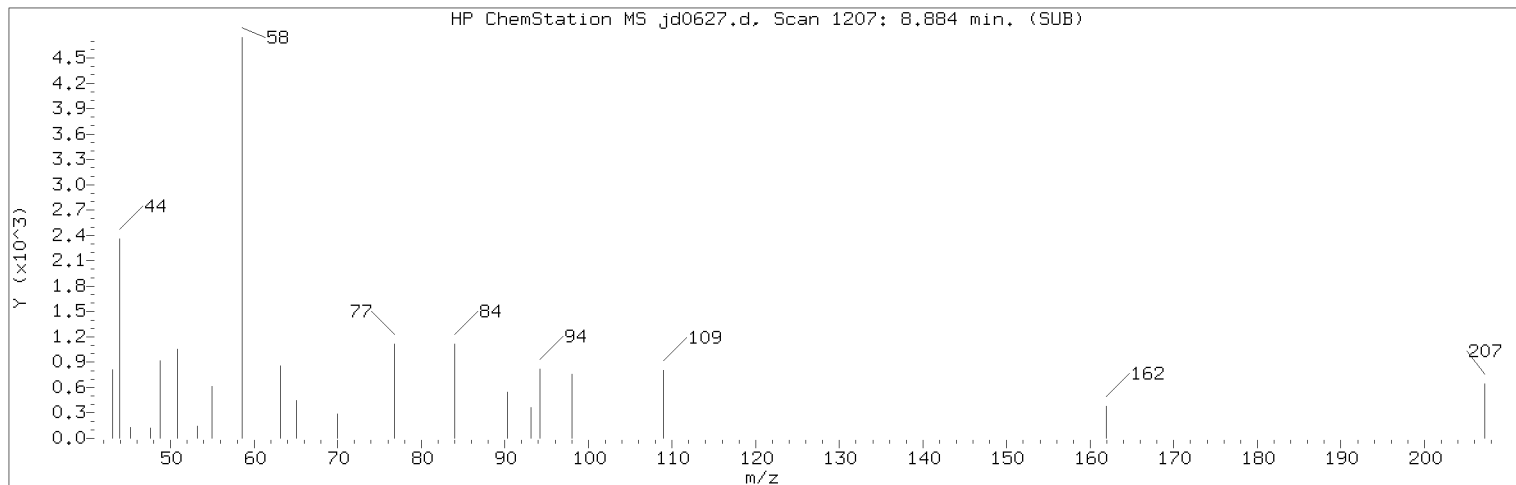
\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

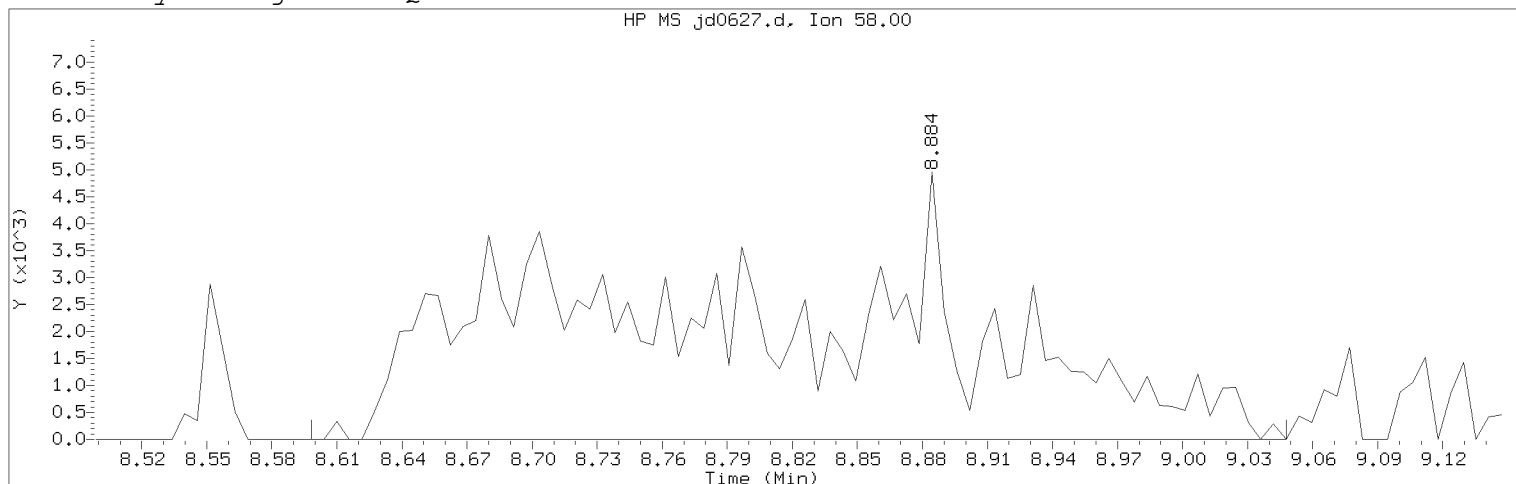
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0627.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number	: 67	
Compound Name	: a,a-Dimethylphenethylamine	
Scan Number	: 1207	
Retention Time (minutes)	: 8.884	
Quant Ion	: 58.00	
Area (flag)	: 47005MA	
On-Column Amount (ng/ul)	: 0.4679	
Integration start scan	: 1157	Integration stop scan: 1234
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

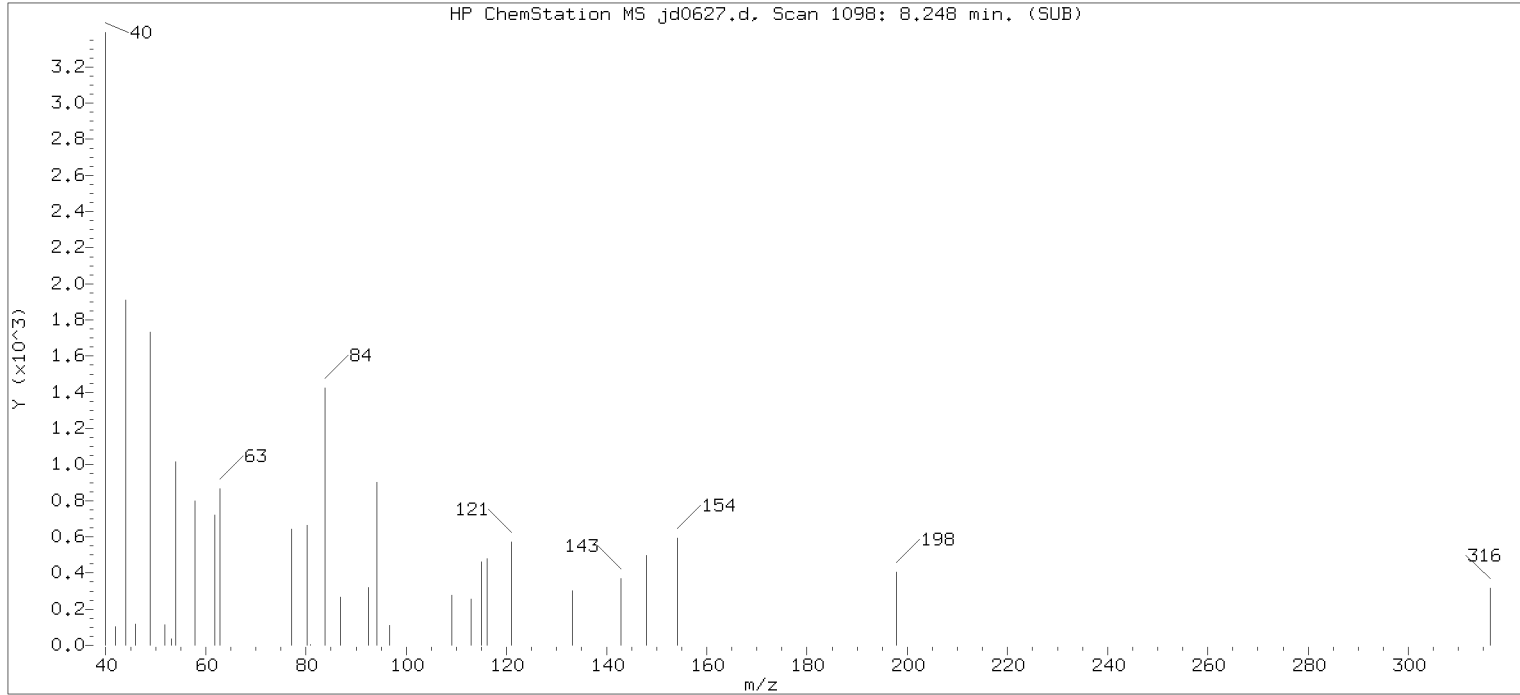
Digitally signed by William H Saadeh
on 04/28/2020 at 15:25.

Target 3.5 esignature user ID: whs02991

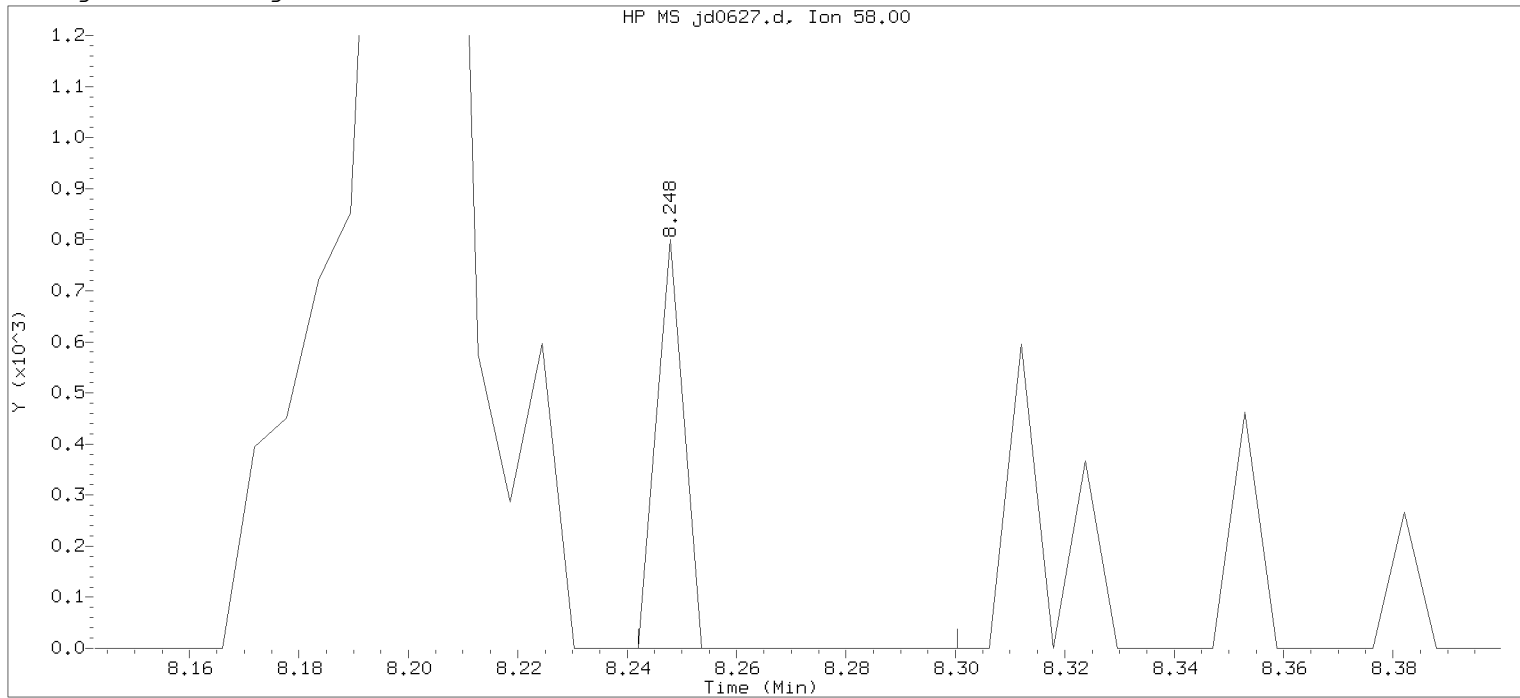
Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0627.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:43 whs02991

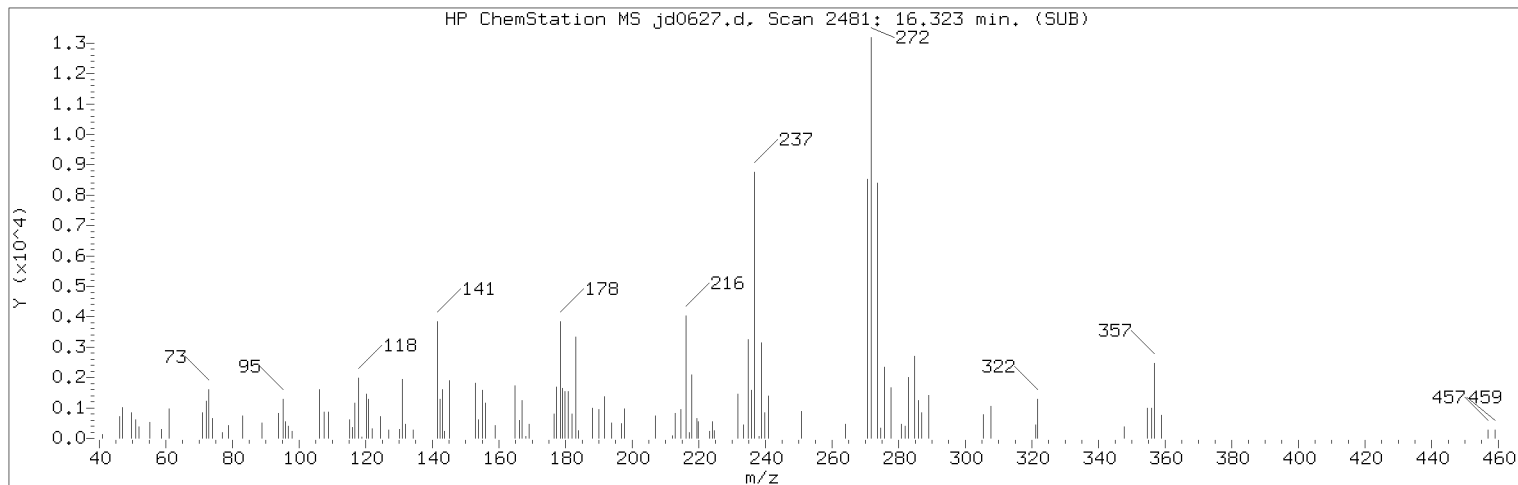
Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

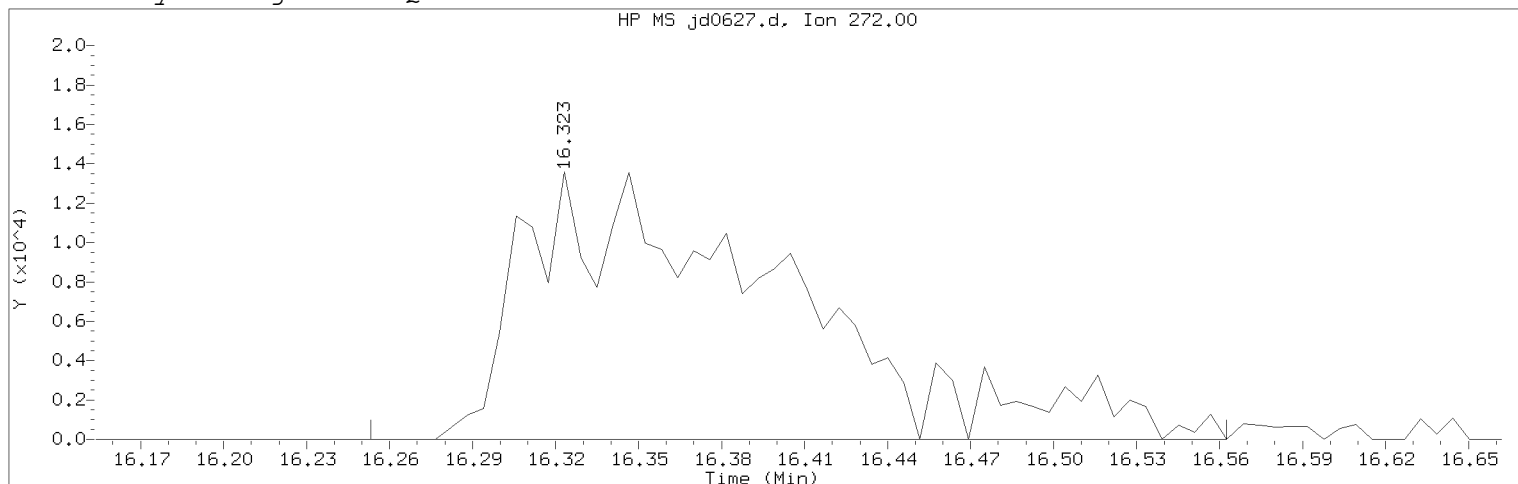
Compound Number	: 67	
Compound Name	: a,a-Dimethylphenethylamine	
Scan Number	: 1098	
Retention Time (minutes)	: 8.248	
Quant Ion	: 58.00	
Area	: 280	
On-column Amount (ng/ul)	: 0.0028	
Integration start scan	: 1096	Integration stop scan: 1106
Y at integration start	: 0	Y at integration end: 0

Digitally signed by William H Saadeh on 04/28/2020 at 15:25.
Target 3.5 esignature use

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0627.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number : 195
 Compound Name : Kepone
 Scan Number : 2481
 Retention Time (minutes) : 16.323
 Quant Ion : 272.00
 Area (flag) : 88804M
 On-Column Amount (ng/ul) : 9.3207
 Integration start scan : 2468
 Y at integration start : 0

Integration stop scan: 2521
 Y at integration end: 0

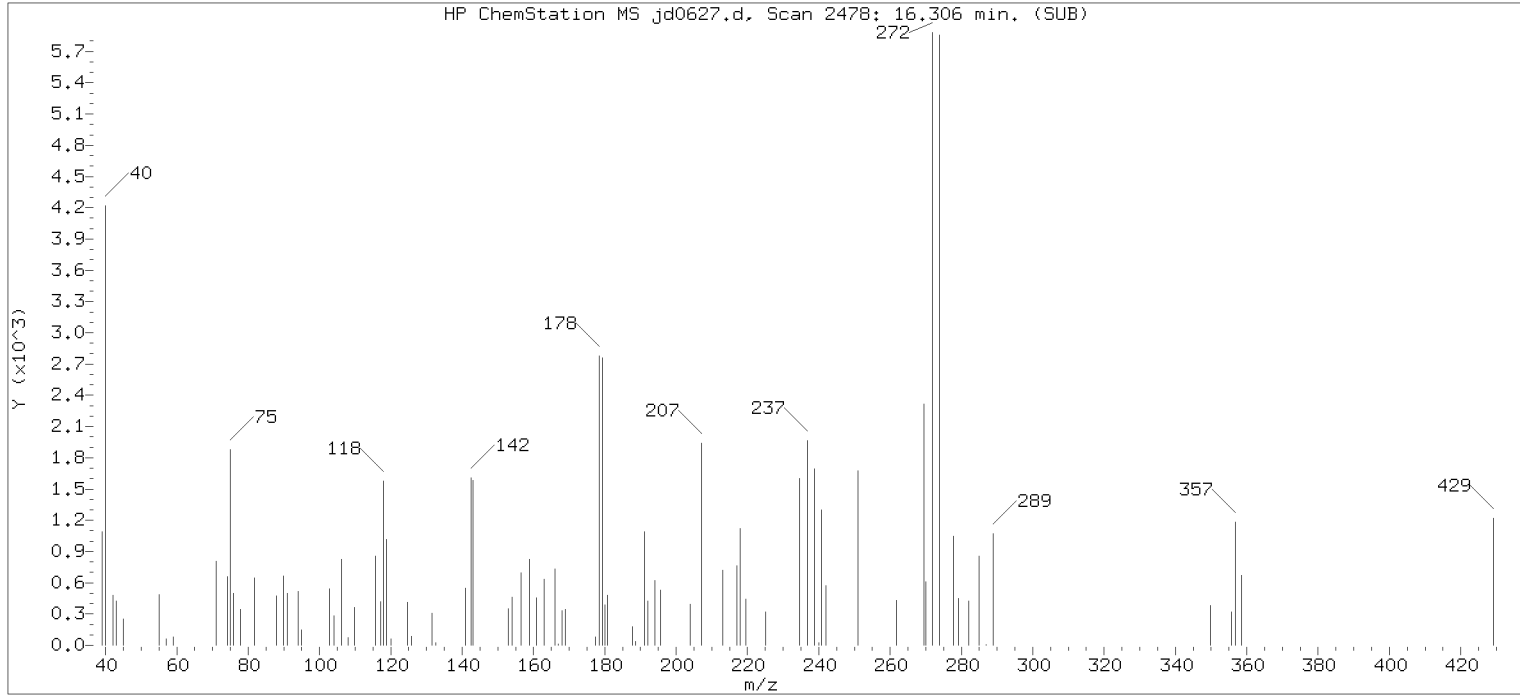
Reason for manual integration: improper integration

Analyst responsible for change:

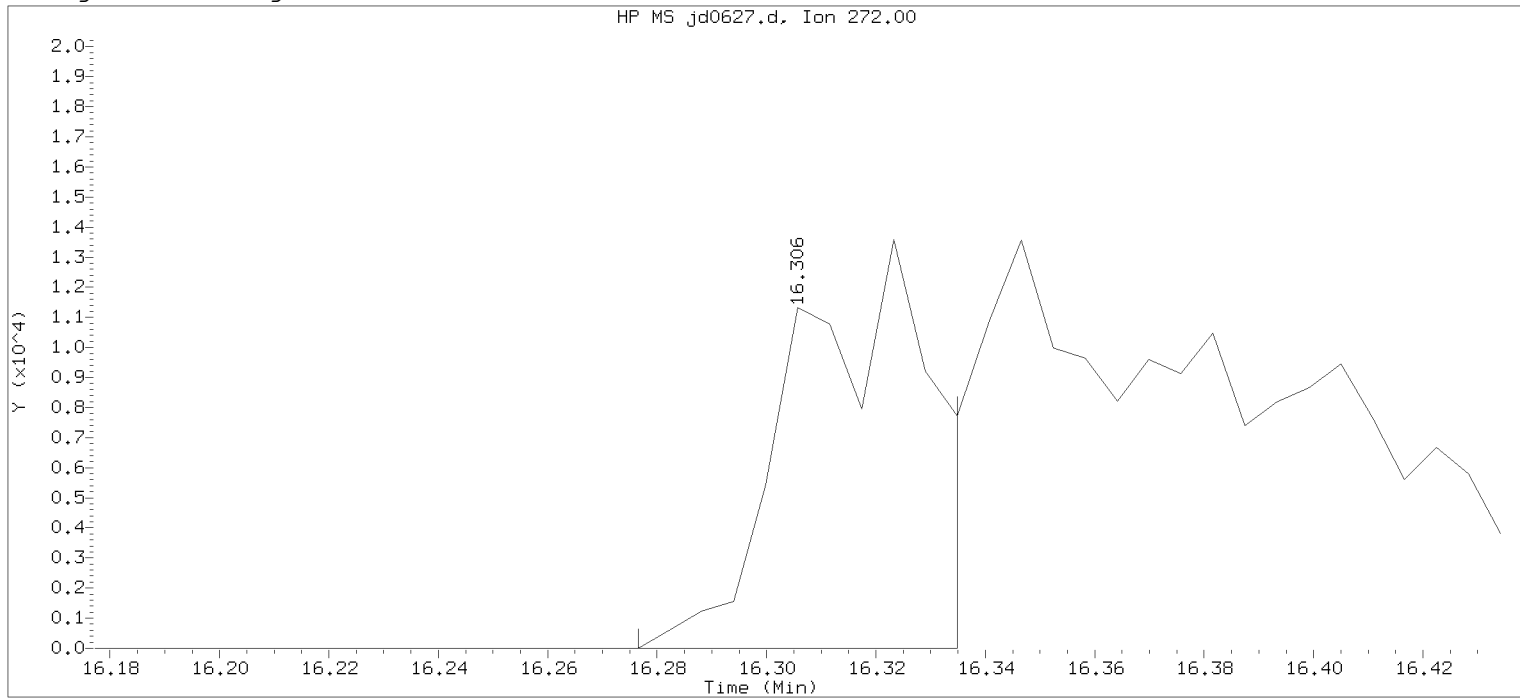
Digitally signed by William H Saadeh
 on 04/28/2020 at 15:25.
 Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.
 PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0627.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:12

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:43 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number : 195
 Compound Name : Kepone
 Scan Number : 2478
 Retention Time (minutes) : 16.306
 Quant Ion : 272.00
 Area : 22972
 On-column Amount (ng/ul) : 2.4112
 Integration start scan : 2472
 Y at integration start : 0

Integration stop scan: 2482
 Y at integration end: 0

Digitally signed by William H Saadeh on 04/28/2020 at 15:25.
 Target 3.5 esignature use

112WHLCDSD1 Analysis Summary for GC/MS Semivolatiles 112WHLCDSD1

Data file: /chem/HP23264.i/20apr23.b/jd0628.d Injection date and time: 23-APR-2020 12:42
 Data file Sample Info. Line: 112WHLCDSD1;112WHLCDSD1;1;3;LCSD;;RAAPVA; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090Mb
 Calibration date and time (Last Method Edit): 28-APR-2020 15:12
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.619 (0.000)	819	152	227156 (-10)	5.00	
68) Naphthalene-d8	8.552 (0.006)	1150	136	885995 (-9)	5.00	
118) Acenaphthene-d10	11.343 (0.006)	1628	164	463585 (-5)	5.00	
158) Phenanthrene-d10	13.246 (0.000)	1954	188	851764 (-7)	5.00	
180) Pyrene-d10	15.179 (0.006)	2285	212	882198 (-5)	5.00	
218) Perylene-d12	19.628 (0.006)	3047	264	804999 (-11)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
12) 2-Fluorophenol	(1)	4.762 (-0.002)	112	1996774	30.165	60%
18) Phenol-d6	(1)	6.164 (-0.002)	99	2089080	23.736	47%
45) Nitrobenzene-d5	(2)	7.454 (-0.001)	82	1971752	19.698	79%
96) 2-Fluorobiphenyl	(3)	10.303 (0.000)	172	2849542	18.970	76%
140) 2,4,6-Tribromophenol	(3)	12.417 (0.000)	330	882425	43.109	86%
184) Terphenyl-d14	(5)	15.500 (0.000)	244	3917198	24.500	98%

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
9) N-Nitrosomethylethylamine	(1)	4.003 (-0.001)	88	383444	10.734	42.93			0.5
10) Methyl methanesulfonate	(1)	4.470 (-0.001)	80	450491	8.747	34.99			0.3
14) N-Nitrosodiethylamine	(1)	5.048 (-0.001)	102	379415	11.529	46.12			0.1
16) Ethyl methanesulfonate	(1)	5.515 (-0.000)	109	357755	11.555	46.22			0.1
36) N-Nitrosopyrrolidine	(1)	7.197 (0.000)	100	416583	12.781	51.12			0.1
40) N-Nitrosomorpholine	(1)	7.267 (0.000)	56	478620	9.329	37.32			0.5
50) N-Nitrosopiperidine	(2)	7.717 (-0.000)	114	355630	11.228	44.91			0.1
59) O,O,O-Triethylphosphorothioate	(2)	8.201 (0.000)	198	370973	11.493	45.97			0.5
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
71) 2,6-Dichlorophenol	(2)	8.715 (-0.000)	162	604504	10.899	43.59			0.1
72) Hexachloropropene	(2)	8.733 (-0.000)	213	226474	4.590	18.36			0.5
80) N-Nitrosodi-n-butylamine	(2)	9.270 (-0.000)	84	618758	11.033	44.13			3
84) 1,4-Phenylenediamine	(2)			Not Detected					19
85) Safrrole	(2)	9.591 (-0.000)	162	533882	10.765	43.06			0.5
91) cis-Isosafrole	(3)	10.058 (-0.000)	162	55216	1.006	4.02			0.3
97) trans-Isosafrole	(3)	10.414 (0.000)	162	592655	9.638	38.55			0.3
100) Isosafrole	(3)			647871	10.644	42.58			1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
122) Pentachlorobenzene	(3)	11.600 (-0.000)	250	551855	9.380	37.52			0.1
130) Thionazin	(3)	12.143 (-0.000)	107	294907	10.890	43.56			0.5
133) 5-Nitro-o-toluidine	(3)	12.160 (-0.000)	152	391662	10.760	43.04			1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
145) Diallate (peak 1)	(4)	12.656 (-0.000)	86	592901	8.933	35.73			0.06
146) Phorate	(4)	12.662 (-0.000)	75	1144420	11.609	46.44			0.5
147) Phenacetin	(4)	12.686 (0.000)	108	876281	12.042	48.17			0.1
149) Diallate (peak 2)	(4)	12.756 (-0.000)	86	195469	2.934	11.74			0.06
151) Diallate trans/cis	(4)			788370	11.867	47.47			0.3

112WHLCS1 Analysis Summary for GC/MS Semivolatiles 112WHLCS1

Data file: /chem/HP23264.i/20apr23.b/jd0628.d Injection date and time: 23-APR-2020 12:42
 Data file Sample Info. Line: 112WHLCS1;112WHLCS1;1;3;LCSD;;RAAPVA; Instrument ID: HP23264.i Batch: 20112WAH
 Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Blank Data file reference: /chem/HP23264.i/20apr23.b/jd0625.d

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m Sublist used: 27090Mb
 Calibration date and time (Last Method Edit): 28-APR-2020 15:12
 Mid Level Daily Calibration Standard Reference: /chem/HP23264.i/20apr23.b/jd0621.d

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
 Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

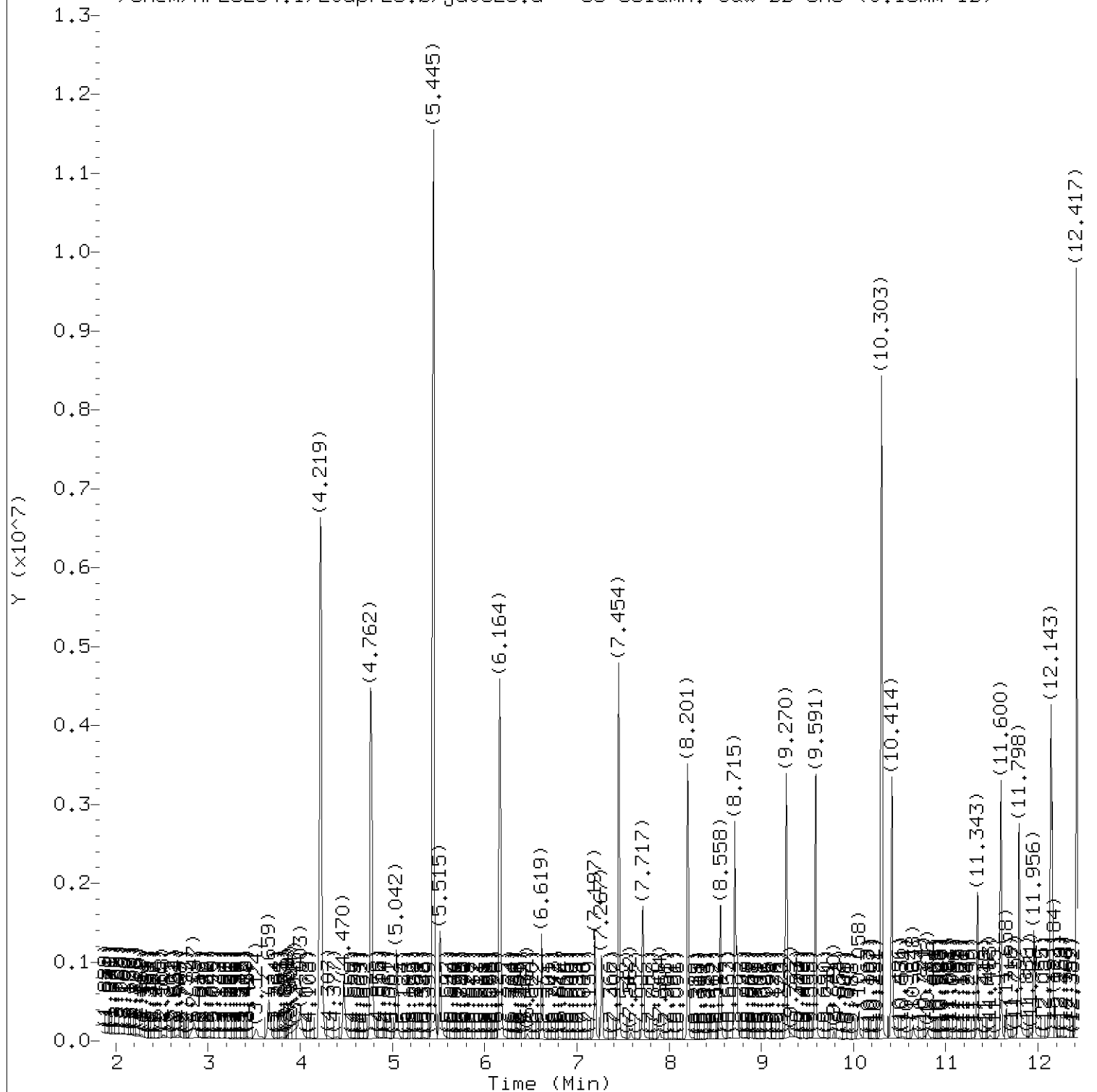
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
152) Dimethoate	(4)	12.849(0.000)	87	221277	3.526	14.10			0.8
155) 4-Aminobiphenyl	(4)	13.042(0.000)	169	698693	5.528	22.11			1
156) Pentachloronitrobenzene	(4)	13.036(-0.000)	237	242141	10.814	43.25			0.5
157) Pronamide	(4)	13.147(-0.000)	173	784735	12.547	50.19			0.3
167) Disulfoton	(4)	13.299(-0.000)	88	1772676	26.169	104.67			6
169) Methyl parathion	(4)	13.766(0.000)	109	559912	11.015	44.06			1
172) Parathion	(4)	14.297(-0.000)	109	409021	13.302	53.21			2
173) 4-Nitroquinoline-1-oxide	(4)	14.315(-0.000)	190	3190396	137.124	548.50		E	5
175) Methapyrilene	(4)	14.443(-0.000)	97	4112006	61.572	246.29		E	4
176) Isodrin	(4)	14.659(-0.000)	193	297574	10.714	42.86			0.1
185) Aramite (1)	(5)	15.401(-0.000)	185	1514	0.478	1.91		J	0.3
186) Aramite (2)	(5)	15.436(-0.000)	185	1230	0.714	2.86		J	0.3
188) Aramite (3)	(5)	15.512(-0.000)	185	53647	0.532	2.13		J	0.3
189) Aramite (4)	(5)	15.640(-0.000)	185	45322	0.362	1.45		J	0.3
191) Aramite	(5)			101713	2.086	8.34		J	1
187) p-Dimethylaminoazobenzene	(5)	15.728(-0.000)	225	485406	11.959	47.84			1
190) Chlorobenzilate	(5)	15.821(-0.000)	139	286422	4.115	16.46			0.8
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)	16.341(-0.003)	272	72091M	6.852	27.41		J	6
196) 2-Acetylaminofluorene	(5)	16.697(-0.000)	181	931344	11.540	46.16			3
220) 3-Methylcholanthrene	(6)	20.113(-0.000)	268	1163428	13.095	52.38			1

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by William H Saadeh on 04/28/2020 at 15:26. Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0628.d
Injection date and time: 23-APR-2020 12:42

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

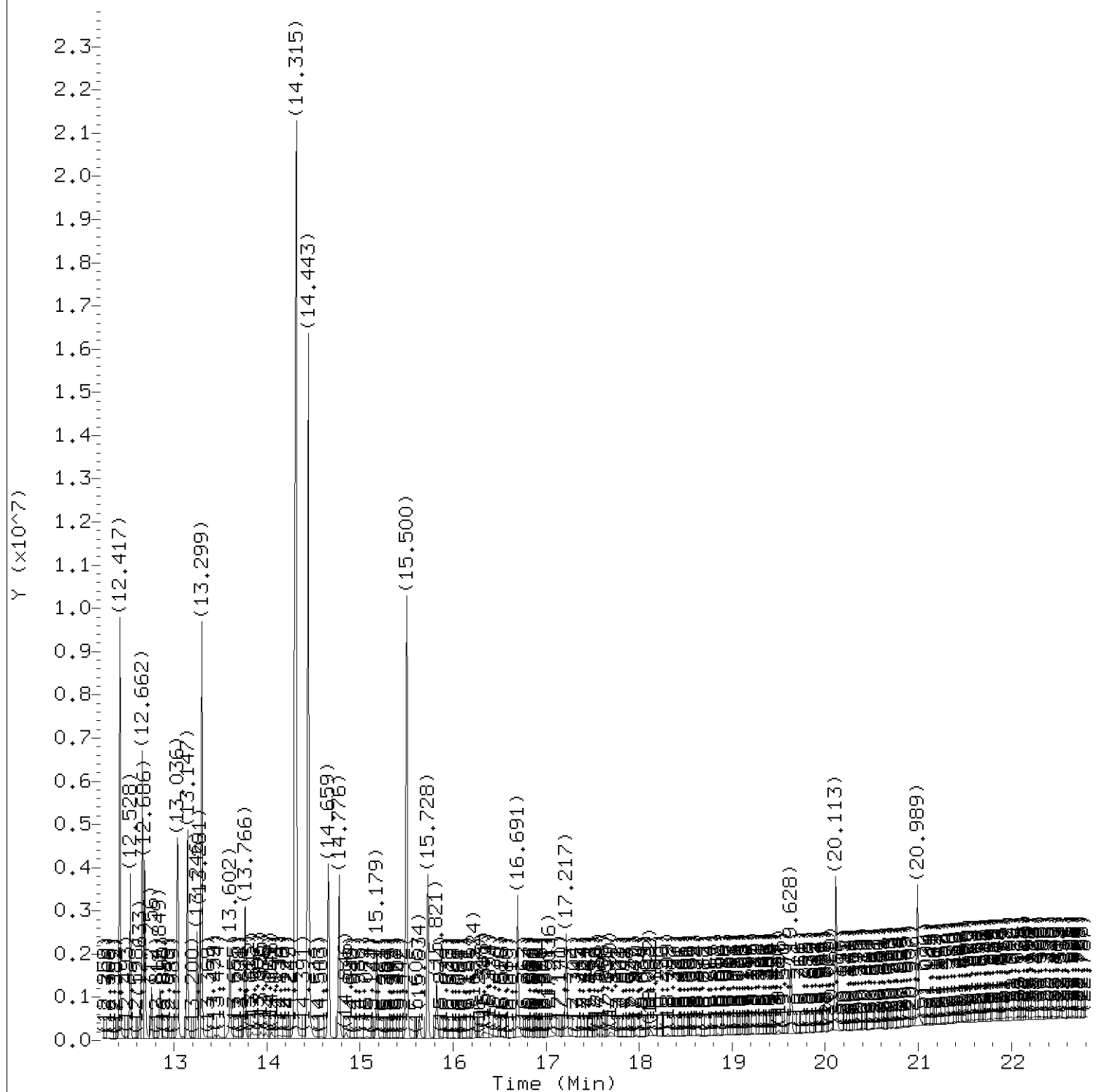
Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Digitally signed by William H Saadeh
on 04/28/2020 at 15:26.

Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0628.d
Injection date and time: 23-APR-2020 12:42

Instrument ID: HP23264.i
Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m
Calibration date and time: 28-APR-2020 15:12
Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sublist used: 27090Mb

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Digitally signed by William H Saadeh
on 04/28/2020 at 15:26.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0628.d
 Injection date and time: 23-APR-2020 12:42

Instrument ID: HP23264.i
 Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCSd1

Lab Sample ID: 112WHLCSd1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
9) N-Nitrosomethylethylamine	(1)	4.003	88	383444	10.734
10) Methyl methanesulfonate	(1)	4.470	80	450491	8.747
12) \$2-Fluorophenol	(1)	4.762	112	1996774	30.165
14) N-Nitrosodiethylamine	(1)	5.048	102	379415	11.529
16) Ethyl methanesulfonate	(1)	5.515	109	357755	11.555
18) \$Phenol-d6	(1)	6.164	99	2089080	23.736
26) *1,4-Dichlorobenzene-d4	(1)	6.619	152	227156	5.000
36) N-Nitrosopyrrolidine	(1)	7.197	100	416583	12.781
40) N-Nitrosomorpholine	(1)	7.267	56	478620	9.329
100) Isosafrole	(3)			647871	10.644
45) \$Nitrobenzene-d5	(2)	7.454	82	1971752	19.698
50) N-Nitrosopiperidine	(2)	7.717	114	355630	11.228
59) O,O,O-Triethylphosphorothioate	(2)	8.201	198	370973	11.493
68) *Naphthalene-d8	(2)	8.552	136	885995	5.000
71) 2,6-Dichlorophenol	(2)	8.715	162	604504	10.899
72) Hexachloropropene	(2)	8.733	213	226474	4.590
151) Diallate trans/cis	(4)			788370	11.867
80) N-Nitrosodi-n-butylamine	(2)	9.270	84	618758	11.033
85) Safrole	(2)	9.591	162	533882	10.765
91) cis-Isosafrole	(3)	10.058	162	55216	1.006
96) \$2-Fluorobiphenyl	(3)	10.303	172	2849542	18.970
97) trans-Isosafrole	(3)	10.414	162	592655	9.638
191) Aramite	(5)			101713	2.086
118) *Acenaphthene-d10	(3)	11.343	164	463585	5.000
122) Pentachlorobenzene	(3)	11.600	250	551855	9.380
130) Thionazin	(3)	12.143	107	294907	10.890
133) 5-Nitro-o-toluidine	(3)	12.160	152	391662	10.760
140) \$2,4,6-Tribromophenol	(3)	12.417	330	882425	43.109
145) Diallate (peak 1)	(4)	12.657	86	592901	8.933
146) Phorate	(4)	12.662	75	1144420	11.609
147) Phenacetin	(4)	12.686	108	876281	12.042
149) Diallate (peak 2)	(4)	12.756	86	195469	2.934
152) Dimethoate	(4)	12.849	87	221277	3.526
156) Pentachloronitrobenzene	(4)	13.036	237	242141	10.814
155) 4-Aminobiphenyl	(4)	13.042	169	698693	5.528
157) Pronamide	(4)	13.147	173	784735	12.547
158) *Phenanthrene-d10	(4)	13.246	188	851764	5.000
167) Disulfoton	(4)	13.299	88	1772676	26.169
169) Methyl parathion	(4)	13.766	109	559912	11.015
172) Parathion	(4)	14.297	109	409021	13.302

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
 on 04/28/2020 at 15:26.

Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCSd1

Lab Sample ID: 112WHLCSd1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
=====	=====	=====	=====	=====	=====
173) 4-Nitroquinoline-1-oxide	(4)	14.315	190	3190396	137.124
175) Methapyrilene	(4)	14.443	97	4112006	61.572
176) Isodrin	(4)	14.659	193	297574	10.714
180)*Pyrene-d10	(5)	15.179	212	882198	5.000
185) Aramite (1)	(5)	15.401	185	1514	0.478
186) Aramite (2)	(5)	15.436	185	1230	0.714
184)\$Terphenyl-d14	(5)	15.500	244	3917198	24.500
188) Aramite (3)	(5)	15.512	185	53647	0.532
189) Aramite (4)	(5)	15.640	185	45322	0.362
187) p-Dimethylaminoazobenzene	(5)	15.728	225	485406	11.959
190) Chlorobenzilate	(5)	15.821	139	286422	4.115
195) Kepone	(5)	16.341	272	72091M	6.852
196) 2-Acetylaminofluorene	(5)	16.697	181	931344	11.540
218)*Perylene-d12	(6)	19.628	264	804999	5.000
220) 3-Methylcholanthrene	(6)	20.113	268	1163428	13.095

M = Compound was manually integrated.

* = Compound is an internal standard.

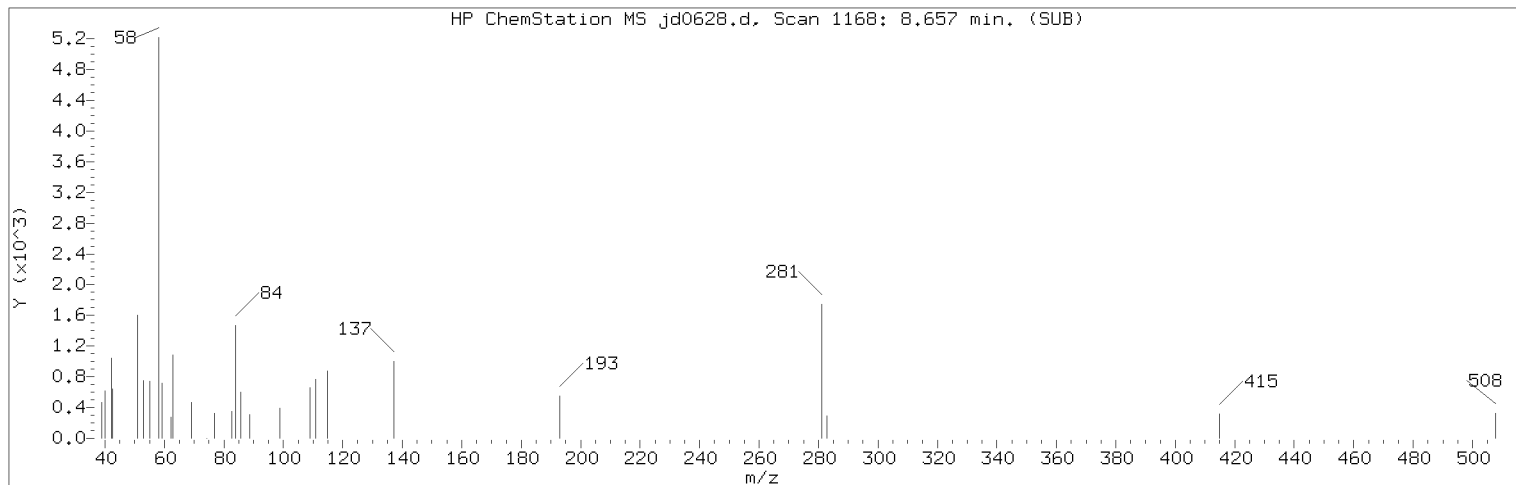
\$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh

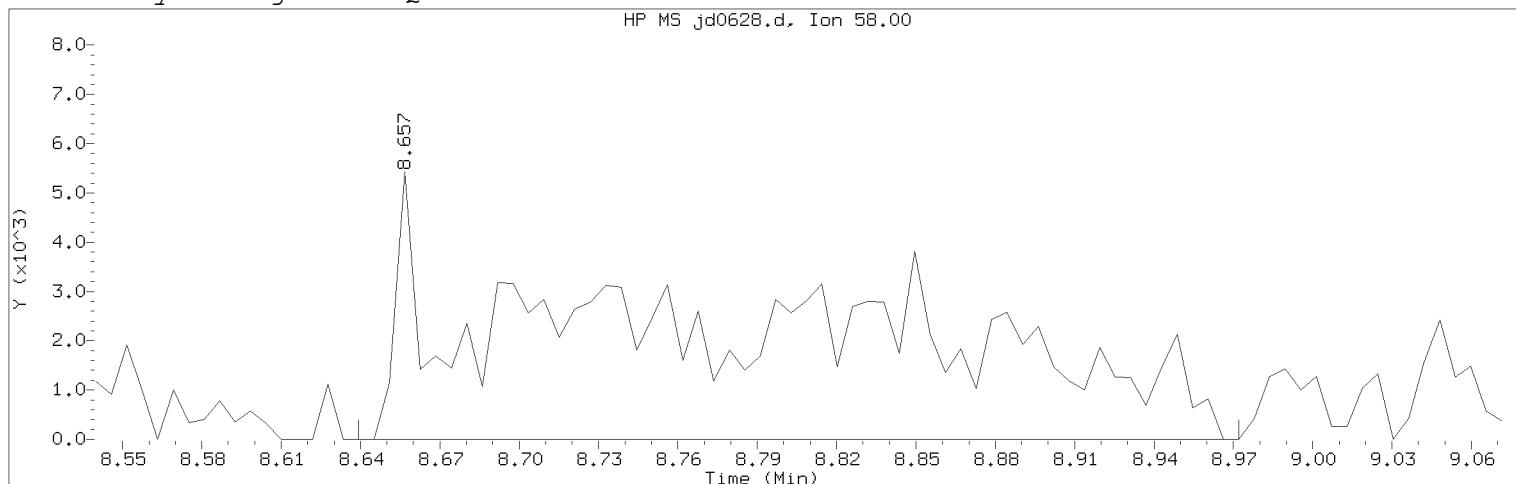
on 04/28/2020 at 15:26.

Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number	: 67	
Compound Name	: a,a-Dimethylphenethylamine	
Scan Number	: 1168	
Retention Time (minutes)	: 8.657	
Quant Ion	: 58.00	
Area (flag)	: 39841M	
On-Column Amount (ng/ul)	: 0.3811	
Integration start scan	: 1164	Integration stop scan: 1221
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by William H Saadeh

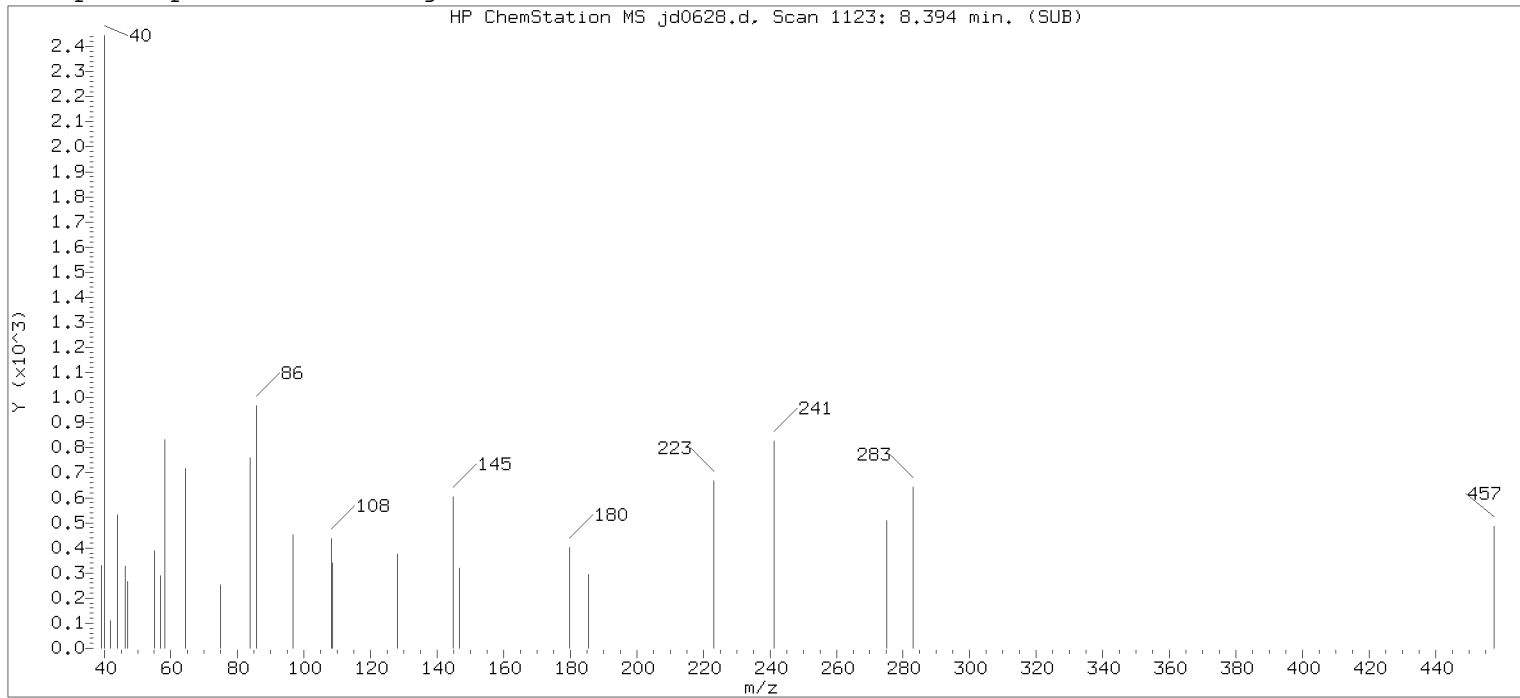
on 04/28/2020 at 15:26.

Target 3.5 esignature user ID: whs02991

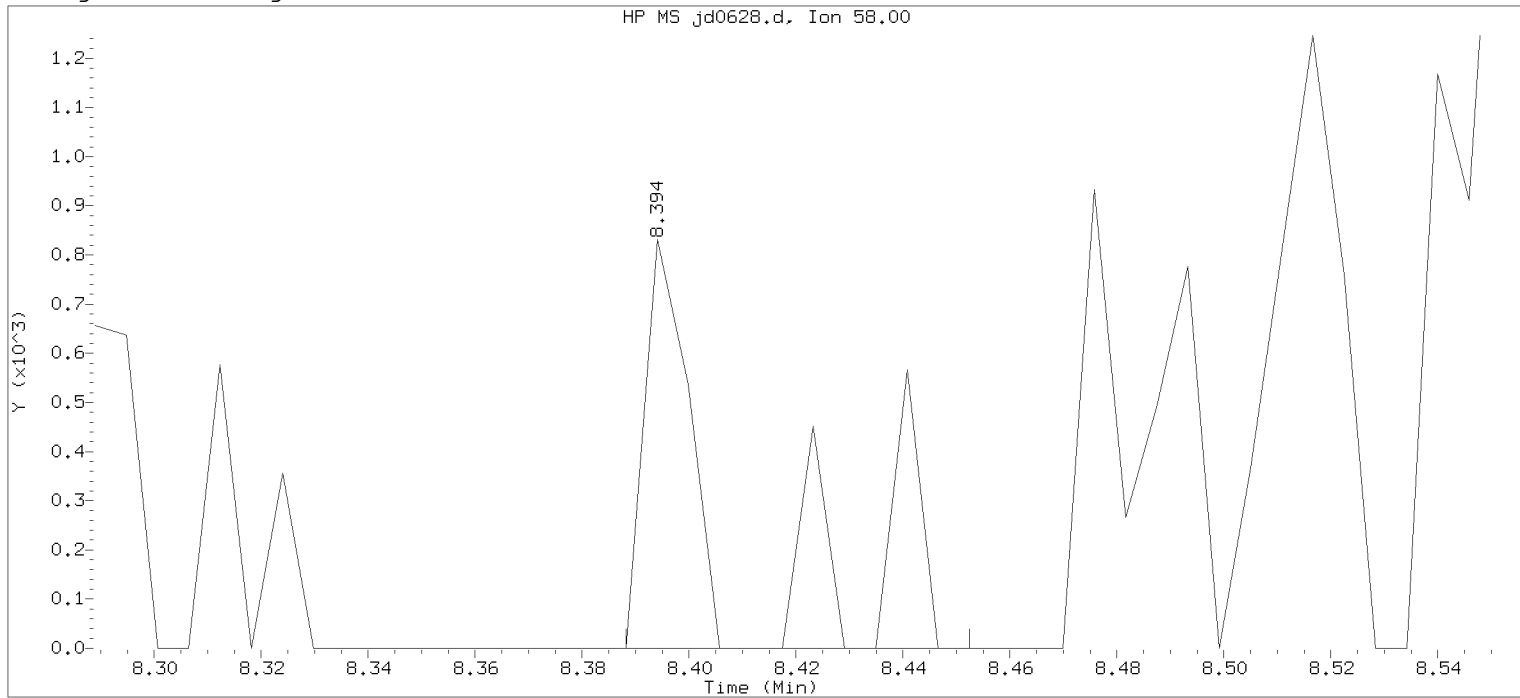
Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:43 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number : 67

Compound Name : a,a-Dimethylphenethylamine

Scan Number : 1123

Retention Time (minutes) : 8.394

Quant Ion : 58.00

Area : 835

On-column Amount (ng/ul) : 0.0080

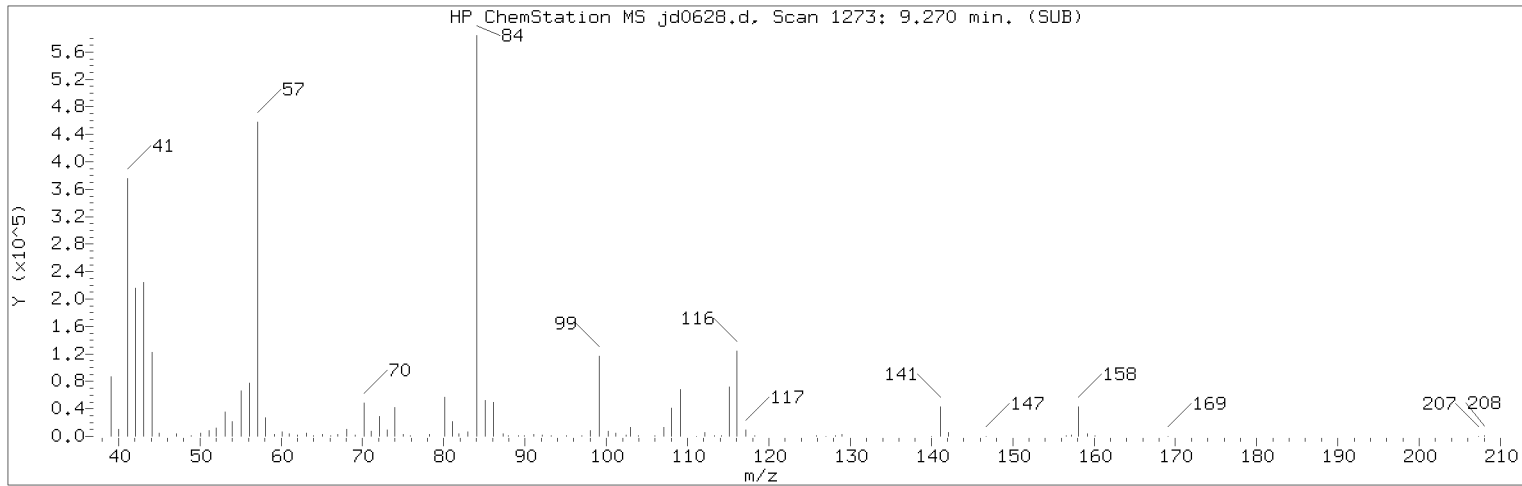
Integration start scan : 1121 Integration stop scan: 1132

Y at integration start : 0 Y at integration end: 0

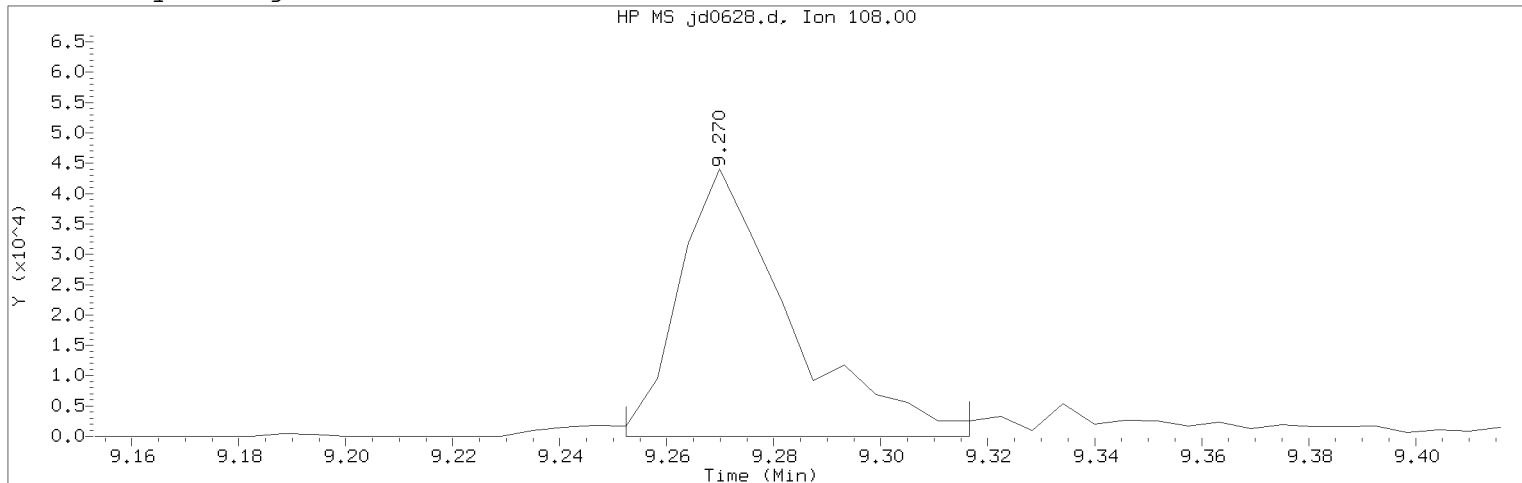
Digitally signed by William H Saadeh on 04/28/2020 at 15:26.

Target 3.5 esignature use **RAF59** Page 1499 of 1506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

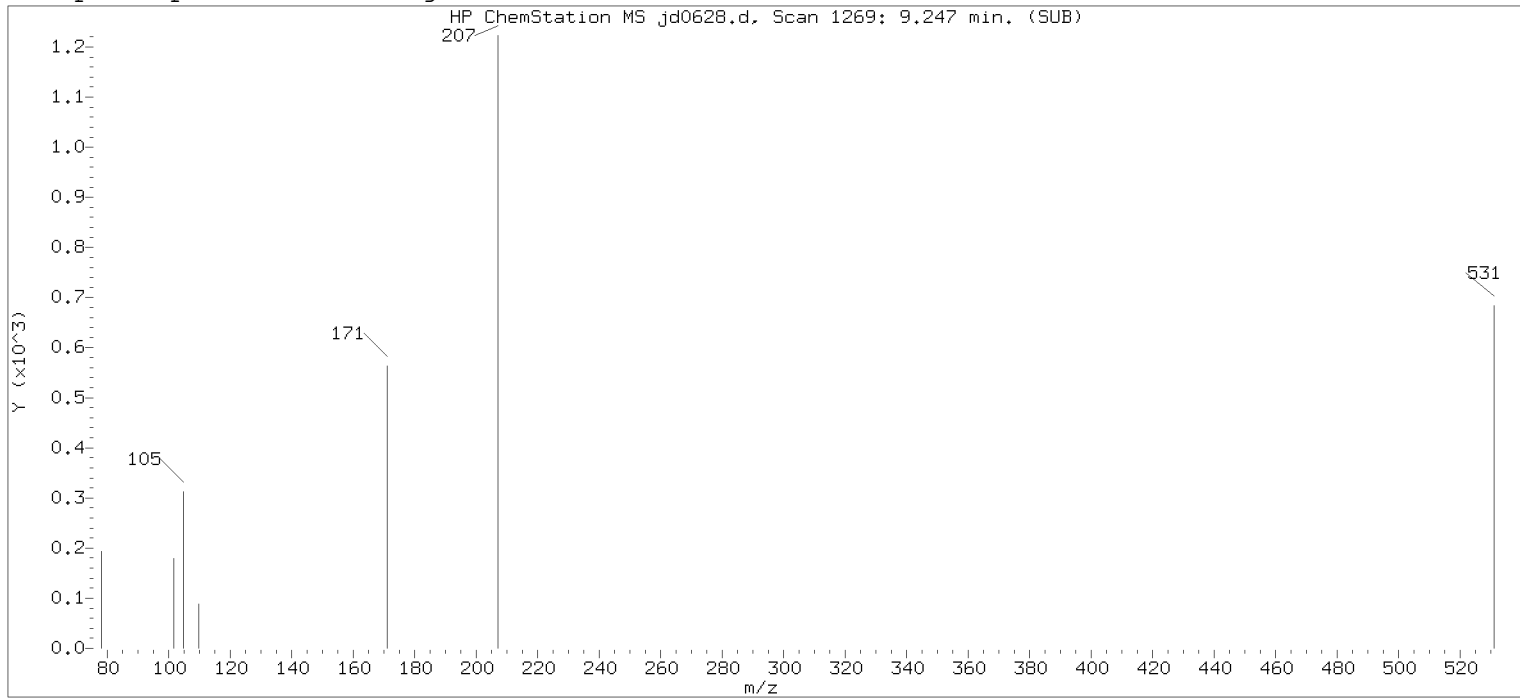
Compound Number	: 84	
Compound Name	: 1,4-Phenylenediamine	
Scan Number	: 1273	
Retention Time (minutes)	: 9.270	
Quant Ion	: 108.00	
Area (flag)	: 62708A	
On-Column Amount (ng/ul)	: 1.5456	
Integration start scan	: 1269	Integration stop scan: 1280
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

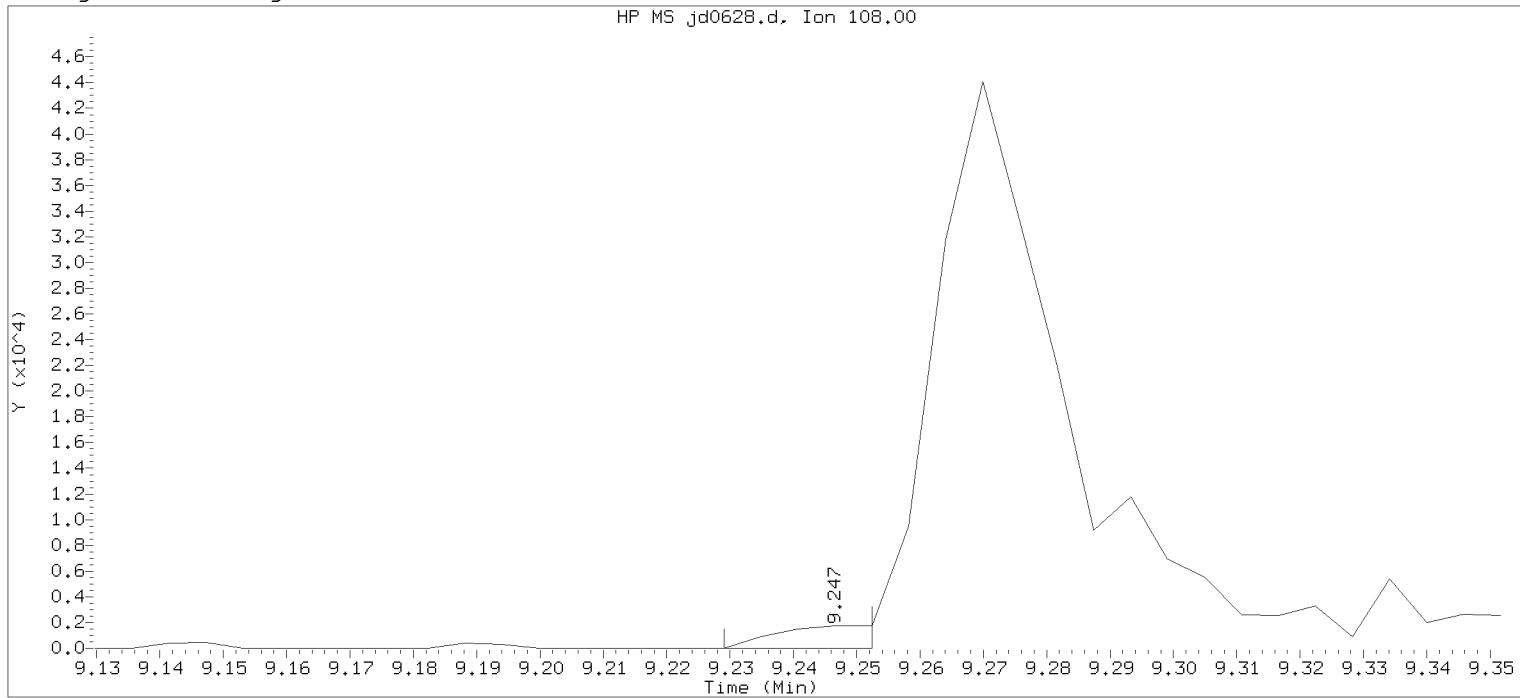
Analyst responsible for change: Digitally signed by William H Saadeh
on 04/28/2020 at 15:26.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:43 whs02991

Sample Name: 112WHLCS1

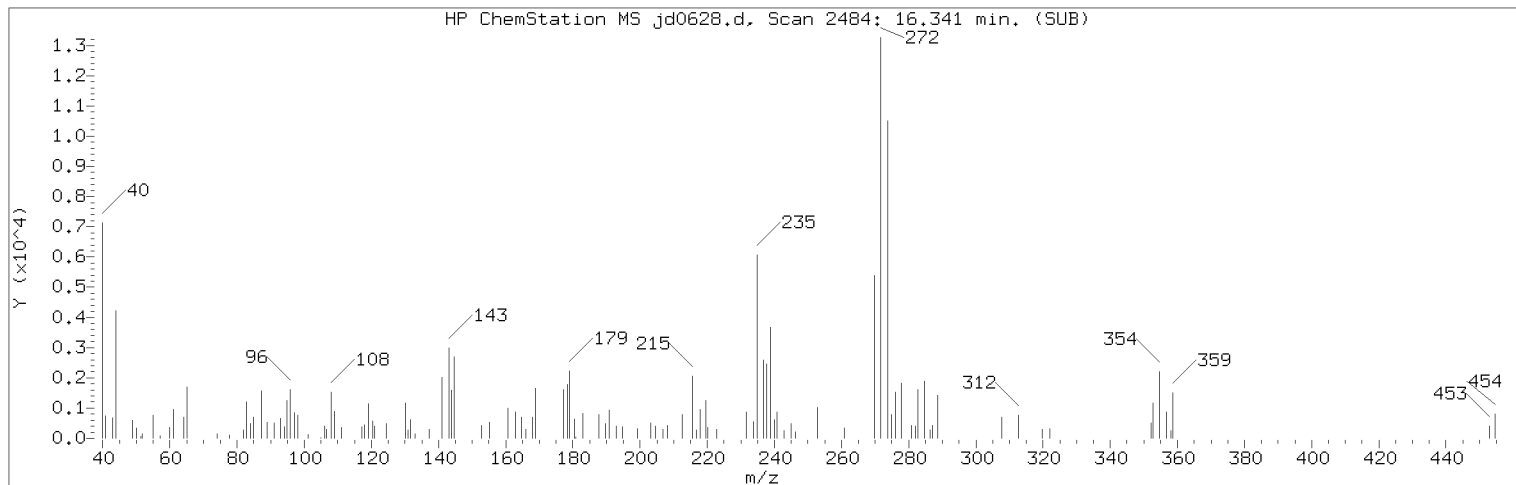
Lab Sample ID: 112WHLCS1

Compound Number	: 84	
Compound Name	: 1,4-Phenylenediamine	
Scan Number	: 1269	
Retention Time (minutes)	: 9.247	
Quant Ion	: 108.00	
Area	: 1770	
On-column Amount (ng/ul)	: 0.0436	
Integration start scan	: 1265	Integration stop scan: 1269
Y at integration start	: 0	Y at integration end: 0

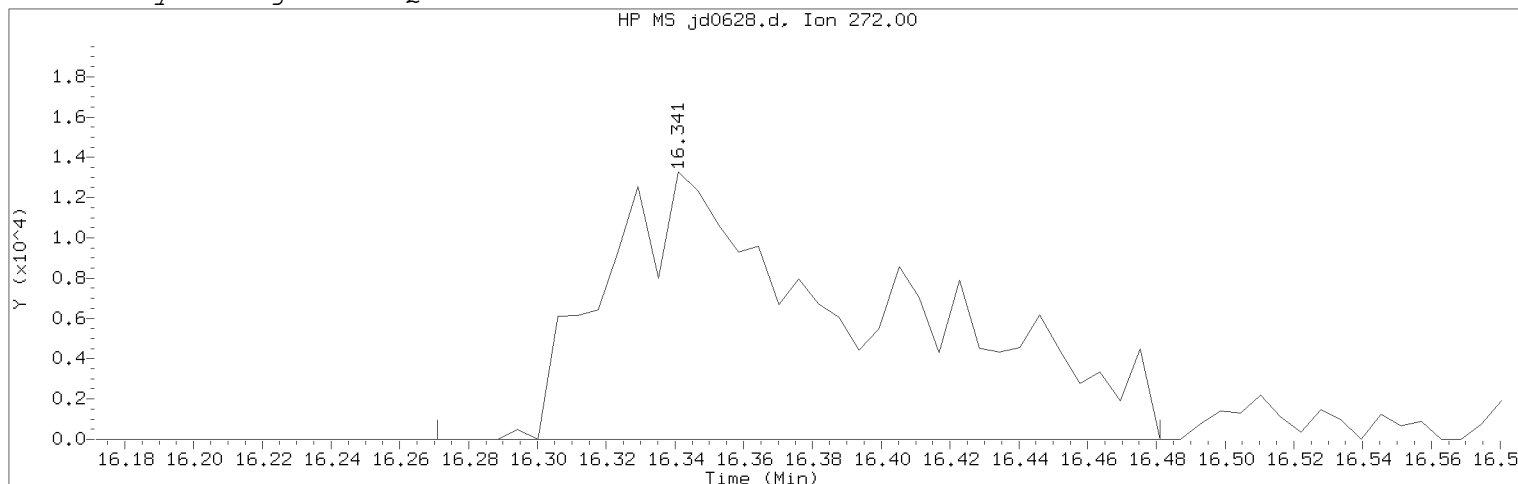
Digitally signed by William H Saadeh on 04/28/2020 at 15:26.

Target 3.5 esignature use **RAF59 Page 1501 of 1506**

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 27090Mb

Calibration date and time: 28-APR-2020 15:12

Date, time and analyst ID of latest file update: 28-Apr-2020 15:13 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number : 195
 Compound Name : Kepone
 Scan Number : 2484
 Retention Time (minutes) : 16.341
 Quant Ion : 272.00
 Area (flag) : 72091M
 On-Column Amount (ng/ul) : 6.8516
 Integration start scan : 2471
 Y at integration start : 0

Integration stop scan: 2507
 Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

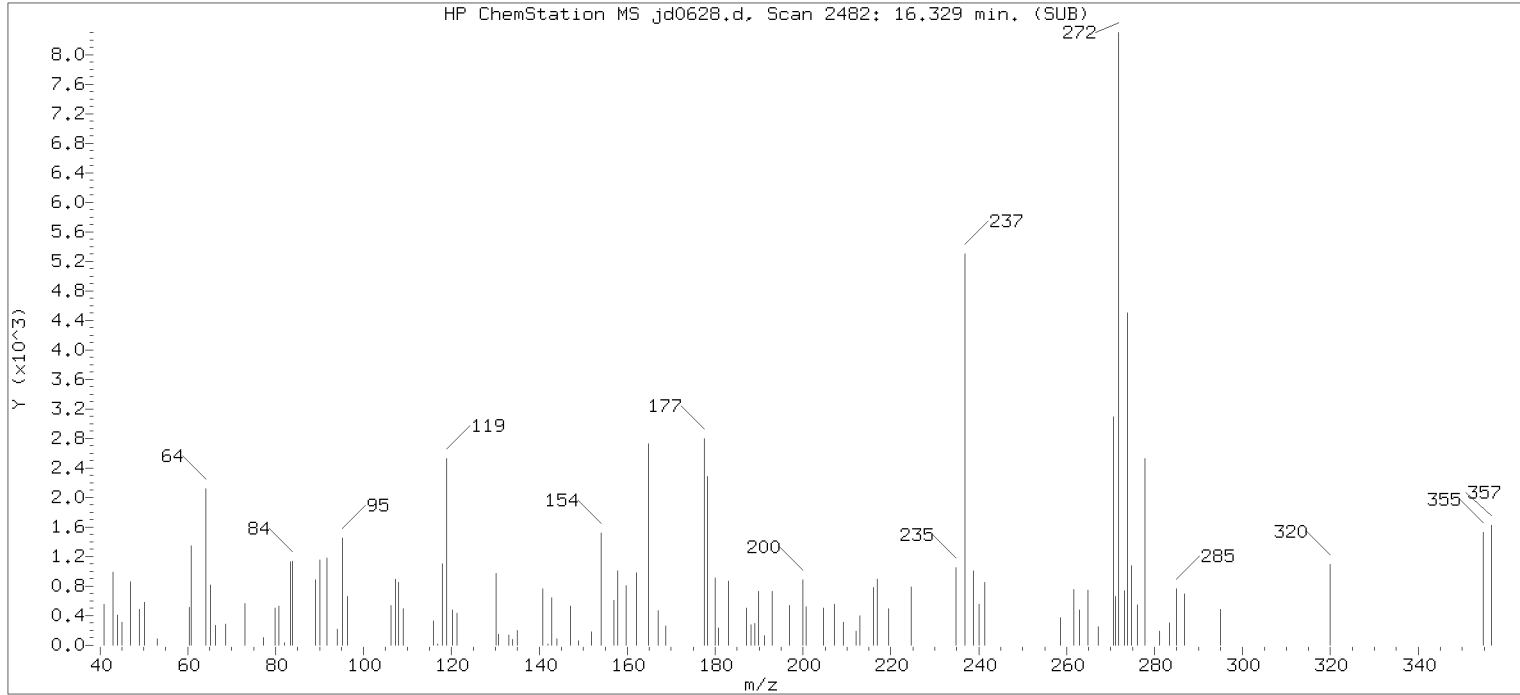
Digitally signed by William H Saadeh
 on 04/28/2020 at 15:26.

Target 3.5 esignature user ID: whs02991

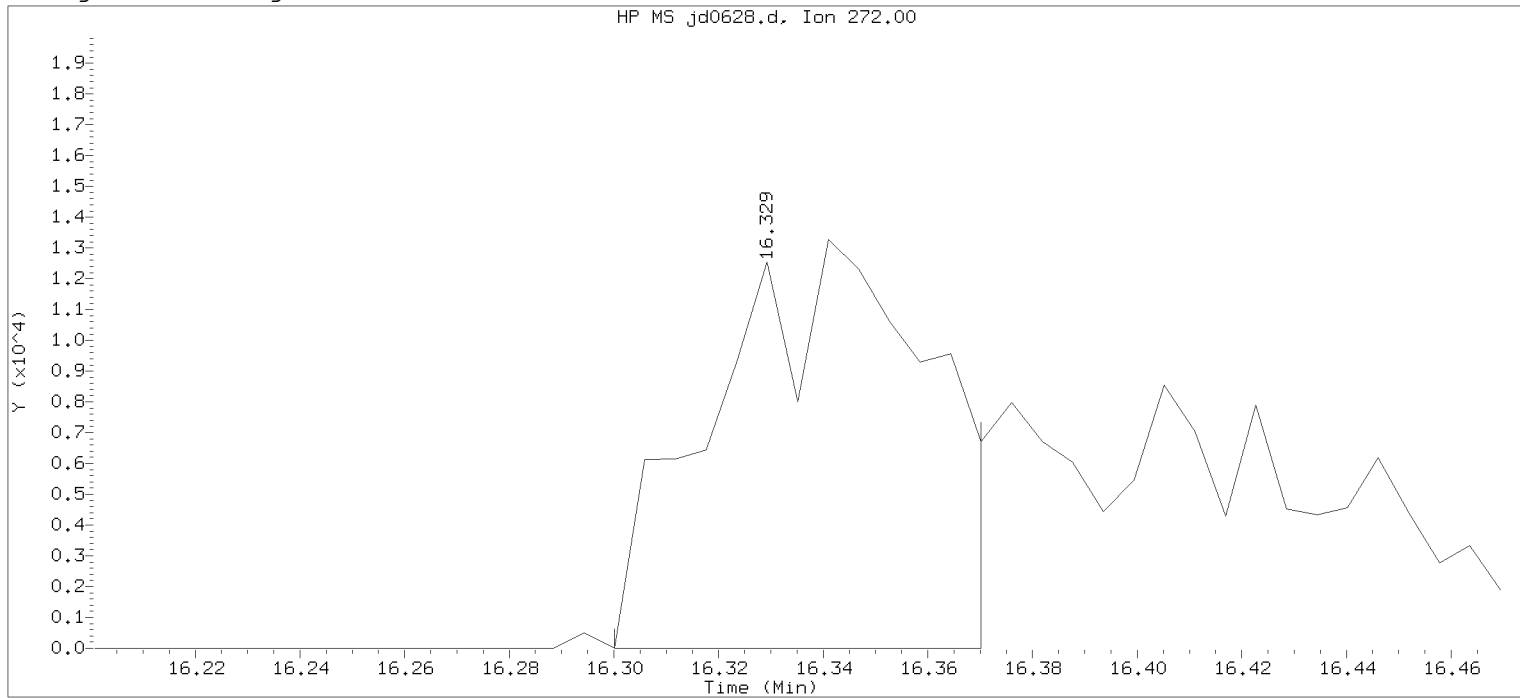
Secondary review performed and digitally signed by Chad A. Moline on 04/28/2020 at 16:05.

PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP23264.i/20apr23.b/jd0628.d

Instrument ID: HP23264.i

Injection date and time: 23-APR-2020 12:42

Analyst ID: knb25316

Method used: /chem/HP23264.i/20apr23.b/rv8270d.m

Sublist used: 24841M

Calibration date and time: 27-APR-2020 13:45

Date, time and analyst ID of latest file update: 27-Apr-2020 18:43 whs02991

Sample Name: 112WHLCS1

Lab Sample ID: 112WHLCS1

Compound Number : 195
 Compound Name : Kepone
 Scan Number : 2482
 Retention Time (minutes) : 16.329
 Quant Ion : 272.00
 Area : 37485
 On-column Amount (ng/ul) : 3.5627
 Integration start scan : 2476
 Y at integration start : 0

Integration stop scan: 2488
 Y at integration end: 0

Digitally signed by William H Saadeh on 04/28/2020 at 15:26.
 Target 3.5 esignature use

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction										SVOAS 8270D/E MINI			
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments		
1300798MS	59R04	248	SS2010126A	1.0	MS2010426D	1.0	1	✓	✓	13A	yellow		
1300799MSD	59R04	247	SS2010126A	1	MS2010426D	1.0	1	✓	✓	13A	yellow		
BLANKA	SBLKWH112	150	SS2010126A				1	✓	✓		teqwater		
LCSA	112WHLCS	250	SS2010126A		MS2010426D	1.0	1	✓	✓				
LCSAPI	112WHLCS	250	SS2010126A		MS2009926B	1.0	1	✓	✓				
LCSDAPI	112WHLCS	250	SS2010126A		MS2009926B	1.0	1	✓	✓				

8 Samples split to 20112WAH026 CBAS310 4.23.20

Solvent Used	Lot No.
10N NaOH	4908648
Methylene Chloride	200508
Sodium Sulfate	20111A
Sulfuric Acid	194547

Spike Solutions: MS2009926B APPIX #1 MINI SPIKE
 MS2010126A APPIX MIX #2
 MS2010726A MINI SEP. LCS SPIKE #1
 MS2010426D MINI SEP. LCS SPIKE #2
 SS2010126A MINI SEP. BNA SURROGATE

Witness: _____

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio	H/A
11300599	47611	248	SS2010126A	1.0	1	✓	✓	13A	cloudy	14241	21238	04/27/2020	N	N
21300600	47612	245	SS2010126A	1	1	✓	✓	13A	yellow	14241	21238	04/27/2020	N	N
31300601	47613	241	SS2010126A	1	1	✓	✓	13A	clear	14241	21238	04/27/2020	N	N
41300794	59R01	247	SS2010126A	1	1	✓	✓	13A	clear	14241	24841	04/28/2020	N	N
51300795	59R02	248	SS2010126A	1	1	✓	✓	13A	clear	14241	24841	04/28/2020	N	N
61300796	59R03	244	SS2010126A	1	1	✓	✓	13A	clear	14241	24841	04/28/2020	N	N
71300797BKG	59R04	248	SS2010126A	1	1	✓	✓	13A	light yellow	14241	24841	04/28/2020	N	N
81300800	59R05	248	SS2010126A	1	1	✓	✓	13A	light yellow	14241	24841	04/28/2020	N	N
91300801	59R06	248	SS2010126A	1	1	✓	✓	13A	clear	14241	24841	04/28/2020	N	N
101300802	59R07	250	SS2010126A	1	1	✓	✓	13A	clear	14241	22230	04/28/2020	N	N
111300803	59R08	249	SS2010126A	1	1	✓	✓	13A	clear	14241	22230	04/28/2020	N	N
121300804	59R09	248	SS2010126A	1	1	✓	✓	13A	clear	14241	22230	04/28/2020	N	N

Bench# 8 Bench# 7 Bench# 6

Rack ID: Work Station 4

Internal Standard 25996 Balance # 25996 Micro Temp 100? ☒

R-VAP ID 4 90° C R-VAP ID 5 90° C R-VAP ID 3 90° C

S-bath ID C S-bath ID C N-Evap C M-veg C

20112WAH026

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio	H	A	Q
131300805	59R10	24.7	SS2010126A	1.0	1	✓		✓		14241	22230	04/28/2020	N	N	N	N
141300806	59R11	24.6	SS2010126A	1	1	✓	✓	✓	153A	14241	22230	04/28/2020	N	N	N	N

N/A

CG12385

4-22-20

Bench# 6	Bench#	Bench#
Rack ID:	Work Station	Micro Temp
Internal Standard	Balance #	100?

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C
S-bath ID	C	S-bath ID	C	N-Evap	C
M-vap			C	20112VAH026	

Type I Data Package

Prepared for:

Draper Aden Associates, Inc.

2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA Permit 353

Groundwater Sample

Collected on 05/07/20

SDG# RAF64

GROUP	SAMPLE NUMBERS
2100327	1318659

PA Cert. # 36-00037

NY Cert. # 10670

NJ Cert. # PA011

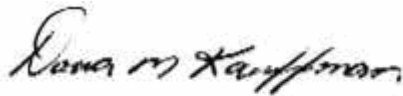
NC Cert. # 521

TX Cert. # T104704194-20-35

AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:



Date: 06/11/2020

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

Table of Contents for SDG# RAF64

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**Sample Reference List for SDG Number RAF64
with a Data Package Type of I****11200 - Draper Aden Associates, Inc.**
Project: RAAP - Radford, VA Permit 353

Lab Sample Number	Client Sample ID	Collection Date	Date Received
1318659	16-3	05/07/2020 11:50	05/21/2020 18:06

Sample pH Log

SDG: RAF64

<u>LLI Sample Number</u>	<u>Bottle Code</u>	<u>Actual pH</u>	<u>Exp. pH</u>	<u>*pH Check Code</u>	<u>Adj. pH</u>	<u>Adjusted Date</u>	<u>Adjusted Time</u>	<u>Preservative Added</u>	<u>Preservative Lot #</u>	<u>LLI Supplied Bottle?</u>	<u>Sulfide Present?</u>	<u>Corrective Substance</u>	<u>CS Lot #</u>	<u>**Chlorine Present?</u>	<u>Corrective Substance</u>	<u>CS Lot #</u>	<u>Record Date</u>	<u>Employee</u>
1318659	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/22/2020 7:11:23AM	9052

*pH Check Code Key

PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key

NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 23, 2020 18:37

Project: RAAP - Radford, VA Permit 353

Account #: 11200
Group Number: 2100327
SDG: RAF64
State of Sample Origin: VA

Electronic Copy To Draper Aden Associates, Inc.
Electronic Copy To Draper Aden Associates, Inc.

Attn: Janet Frazier
Attn: Kathy Olsen

Respectfully Submitted,



Barbara A. Weyandt
Specialist

(717) 556-7264

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

Client Sample Description

16-3 Grab Groundwater

Sample Collection

Date/Time

05/07/2020 11:50

ELLE#

1318659

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: RAAP - Radford, VA Permit 353
ELLE Group #: 2100327

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260C 25mL purge, GC/MS Volatiles****Sample #s: 1318659**

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: dichlorodifluoromethane.

Sample Description: 16-3 Grab Groundwater
Semiannual 2020 Phase II Monitoring Event
RAAP - Radford, VA Permit 353

Draper Aden Associates, Inc.
ELLE Sample #: WW 1318659
ELLE Group #: 2100327
Matrix: Groundwater

Project Name: RAAP - Radford, VA Permit 353

Submittal Date/Time: 05/21/2020 18:06
Collection Date/Time: 05/07/2020 11:50
SDG#: RAF64-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260C 25mL	ug/l	ug/l	ug/l	
		purge				
11996	Benzene	71-43-2	N.D.	0.05	1.0	1
11996	2-Butanone	78-93-3	N.D.	0.6	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.07	1.0	1
11996	Chloroethane	75-00-3	N.D.	0.07	1.0	1
11996	Chloromethane	74-87-3	N.D.	0.06	1.0	1
11996	Dichlorodifluoromethane	75-71-8	0.2 J	0.05	1.0	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.07	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.06	1.0	1
11996	Dimethyl ether	115-10-6	N.D.	0.04	13	1
11996	Ethyl ether	60-29-7	N.D.	0.05	13	1
11996	Ethylbenzene	100-41-4	N.D.	0.06	1.0	1
11996	Freon 113	76-13-1	N.D.	0.06	1.0	1
11996	Methylene Chloride	75-09-2	0.2 J	0.07	1.0	1
11996	Tetrachloroethene	127-18-4	N.D.	0.06	1.0	1
11996	Tetrahydrofuran	109-99-9	N.D.	0.8	25	1
11996	Toluene	108-88-3	N.D.	0.07	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.06	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.06	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.05	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: dichlorodifluoromethane.

Sample Comments

This sample was originally submitted to the laboratory on 05/08/20 at 09:55. We received authorization for further testing on 05/21/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL	1	H201424AA	05/21/2020 23:24	Miranda Campbell	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H201424AA	05/21/2020 23:23	Miranda Campbell	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/23/2020 18:37

Group Number: 2100327

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	MDL** ug/l	LOQ ug/l
Batch number: H201424AA	Sample number(s): 1318659		
Benzene	N.D.	0.05	1.0
2-Butanone	N.D.	0.6	10
Carbon Tetrachloride	N.D.	0.07	1.0
Chloroethane	N.D.	0.07	1.0
Chloromethane	N.D.	0.06	1.0
Dichlorodifluoromethane	N.D.	0.05	1.0
1,1-Dichloroethane	N.D.	0.07	1.0
1,1-Dichloroethene	N.D.	0.06	1.0
Dimethyl ether	N.D.	0.04	13
Ethyl ether	N.D.	0.05	13
Ethylbenzene	N.D.	0.06	1.0
Freon 113	N.D.	0.06	1.0
Methylene Chloride	N.D.	0.07	1.0
Tetrachloroethene	N.D.	0.06	1.0
Tetrahydrofuran	N.D.	0.8	25
Toluene	N.D.	0.07	1.0
1,1,1-Trichloroethane	N.D.	0.06	1.0
Trichloroethene	N.D.	0.06	1.0
Trichlorofluoromethane	N.D.	0.05	1.0
Xylene (Total)	N.D.	0.2	3.0

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: H201424AA	Sample number(s): 1318659								
Benzene	5.00	5.19	5.00	5.28	104	106	80-120	2	30
2-Butanone	37.5	35.28	37.5	36.07	94	96	59-141	2	30
Carbon Tetrachloride	5.00	5.13	5.00	5.27	103	105	64-141	3	30
Chloroethane	5.00	5.50	5.00	5.56	110	111	63-120	1	30
Chloromethane	5.00	5.45	5.00	5.49	109	110	56-124	1	30
Dichlorodifluoromethane	5.00	4.51	5.00	4.56	90	91	43-123	1	30
1,1-Dichloroethane	5.00	5.28	5.00	5.33	106	107	74-120	1	30
1,1-Dichloroethene	5.00	4.84	5.00	4.79	97	96	80-131	1	30
Dimethyl ether	5.00	5.45	5.00	5.54	109	111	70-130	2	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc.
Reported: 05/23/2020 18:37

Group Number: 2100327

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ethyl ether	5.00	4.99	5.00	5.18	100	104	72-121	4	30
Ethylbenzene	5.00	4.95	5.00	4.96	99	99	80-120	0	30
Freon 113	5.00	4.83	5.00	4.78	97	96	75-133	1	30
Methylene Chloride	5.00	5.18	5.00	5.16	104	103	80-120	0	30
Tetrachloroethene	5.00	4.91	5.00	4.97	98	99	80-120	1	30
Tetrahydrofuran	25	24.42	25	24.8	98	99	67-137	2	30
Toluene	5.00	5.01	5.00	5.02	100	100	80-120	0	30
1,1,1-Trichloroethane	5.00	4.93	5.00	5.02	99	100	78-126	2	30
Trichloroethene	5.00	5.02	5.00	5.19	100	104	80-120	3	30
Trichlorofluoromethane	5.00	6.05	5.00	6.11	121	122	62-136	1	30
Xylene (Total)	15	14.96	15	15	100	100	80-120	0	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)
Batch number: H201424AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1318659	106	108	97	93
Blank	105	107	99	94
LCS	101	100	100	97
LCSD	101	105	100	96
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

CHAIN OF CUSTODY RECORD

NR
5-5-2020 1/3
NR (re-entry th)

2098929

2/3

SWMU353
Radford Army Ammunition Plant
Semiannual Monitoring Event

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS - CLASS: VOLATILE

No.	Analyte	CAS RN
1.	Acetone	67-64-1
2.	Acrylonitrile	107-13-1
3.	Benzene	71-43-2
4.	Bromochloromethane	74-97-5
5.	Bromodichloromethane	75-27-4
6.	Bromoform (tribromomethane)	75-25-2
7.	Bromomethane; (Methyl bromide)	74-83-9
8.	2-butanone (methyl ethyl ketone - MEK)	78-93-3
9.	Carbon disulfide	75-15-0
10.	Carbon tetrachloride	56-23-5
11.	Chlorobenzene	108-90-7
12.	Chloroethane (ethyl chloride)	75-00-3
13.	Chloroform (trichloromethane)	67-66-3
14.	chloromethane ; (Methyl chloride)	74-87-3
15.	Dibromochloromethane	124-48-1
16.	dibromomethane, (Methylene bromide)	74-95-3
17.	1,2-dichlorobenzene; (o-dichlorobenzene)	95-50-1
18.	1,4-dichlorobenzene; (p-dichlorobenzene)	106-46-7
19.	trans-1,4-dichloro-2-butene	110-57-6
20.	1,1-dichloroethane	75-34-3
21.	1,2-dichloroethane	107-06-2
22.	1,1-dichloroethene (vinylidene chloride)	75-35-4
23.	cis-1,2-dichloroethene	156-59-2
24.	trans-1,2-dichloroethene	156-60-5
25.	1,2-dichloropropane	78-87-5
26.	cis-1,3-dichloropropene	10061-01-5
27.	trans-1,3-dichloropropene	10061-02-6
28.	Ethylbenzene	100-41-4
29.	2-hexanone (methyl butyl ketone - MBK)	591-78-6
30.	Iodomethane; (Methyl iodide)	74-88-4
31.	4-methyl-2-pentanone (methyl isobutyl ketone)	108-10-1
32.	Styrene (phenylethene)	100-42-5
33.	1,1,1,2-tetrachloroethane	630-20-6
34.	1,1,2,2-tetrachloroethane	79-34-5
35.	Tetrachloroethene	127-18-4
36.	Toluene (methyl benzene)	108-88-3
37.	1,1,1-trichloroethane (methyl chloroform)	71-55-6
38.	1,1,2-trichloroethane	79-00-5
39.	Trichloroethene	79-01-6
40.	Trichlorofluoromethane (CFC-11)	75-69-4
41.	1,2,3-trichloropropane	96-18-4
42.	Vinyl acetate	108-05-4
43.	Xylenes (total)	1330-20-7
44.	methylene chloride	75-09-2
45.	Vinyl chloride	75-01-4

2098929

3/3

SWMU353
Radford Army Ammunition Plant
Semiannual Monitoring Event

ANALYTICAL METHOD: 8011
TYPE METHOD: GC
CLASS: VOLATILE

No.	Analyte	CAS RN
1	1,2-dibromo-3-chloropropane (DBCP)	96-12-8
2	1,2-dibromoethane (EDB)	106-93-4

Sample Administration
Receipt Documentation Log

Doc Log ID: 283979



Group Number(s): 2100327

Client: DRAPER ADEN ASSOCIATES**Delivery and Receipt Information**

Delivery Method:	<u>UPS</u>	Arrival Date:	<u>05/08/2020</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>Virginia</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	HCI
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Julissa Rivera-Santa***Samples Chilled Details***Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	46730060WS	0.3	IR	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF64

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix			Comments
		Liquid	Solid	DF	
1318659	16-3	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

(Sample number(s): 1318659: Analysis: 11996)
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
dichlorodifluoromethane.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF64

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF64

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
8260C (25 ml)	H201424AA	VBLKH11	05/21/2020 22:53
		LCSH11	05/21/2020 21:04
		LCDH11	05/21/2020 21:26
		LCSH12	05/21/2020 21:47
		LCDH12	05/21/2020 22:09
		1318659	05/21/2020 23:24

Fraction: Volatiles by GC/MS

H201424AA / VBLKH11 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	05/21/20	N.D.	ug/l	0.05	1.0
Chloromethane	05/21/20	N.D.	ug/l	0.06	1.0
Chloroethane	05/21/20	N.D.	ug/l	0.07	1.0
Trichlorofluoromethane	05/21/20	N.D.	ug/l	0.05	1.0
Ethyl ether	05/21/20	N.D.	ug/l	0.05	13
1,1-Dichloroethene	05/21/20	N.D.	ug/l	0.06	1.0
Freon 113	05/21/20	N.D.	ug/l	0.06	1.0
Methylene Chloride	05/21/20	N.D.	ug/l	0.07	1.0
1,1-Dichloroethane	05/21/20	N.D.	ug/l	0.07	1.0
2-Butanone	05/21/20	N.D.	ug/l	0.6	10
Tetrahydrofuran	05/21/20	N.D.	ug/l	0.8	25
1,1,1-Trichloroethane	05/21/20	N.D.	ug/l	0.06	1.0
Carbon Tetrachloride	05/21/20	N.D.	ug/l	0.07	1.0
Benzene	05/21/20	N.D.	ug/l	0.05	1.0
Trichloroethene	05/21/20	N.D.	ug/l	0.06	1.0
Toluene	05/21/20	N.D.	ug/l	0.07	1.0
Tetrachloroethene	05/21/20	N.D.	ug/l	0.06	1.0
Ethylbenzene	05/21/20	N.D.	ug/l	0.06	1.0
Xylene (Total)	05/21/20	N.D.	ug/l	0.2	3.0
Dimethyl ether	05/21/20	N.D.	ug/l	0.04	13

Fraction: Volatiles by GC/MS

H201424AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH11	107	80 - 120	94	80 - 120	105	80 - 120	99	80 - 120
LCSH11	100	80 - 120	97	80 - 120	101	80 - 120	100	80 - 120
LCDH11	105	80 - 120	96	80 - 120	101	80 - 120	100	80 - 120
1318659	108	80 - 120	93	80 - 120	106	80 - 120	97	80 - 120

SDG: RAF64
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH11 LCSD: LCDH11 Analyte	Batch: H201424AA (Sample number(s): 1318659)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Dichlorodifluoromethane	5.00	4.51	4.56	90	91	43-123	1	30
Chloromethane	5.00	5.45	5.49	109	110	56-124	1	30
Chloroethane	5.00	5.50	5.56	110	111	63-120	1	30
Trichlorofluoromethane	5.00	6.05	6.11	121	122	62-136	1	30
Ethyl ether	5.00	4.99 J	5.18 J	100	104	72-121	4	30
1,1-Dichloroethene	5.00	4.84	4.79	97	96	80-131	1	30
Freon 113	5.00	4.83	4.78	97	96	75-133	1	30
Methylene Chloride	5.00	5.18	5.16	104	103	80-120	0	30
1,1-Dichloroethane	5.00	5.28	5.33	106	107	74-120	1	30
2-Butanone	37.5	35.28	36.07	94	96	59-141	2	30
Tetrahydrofuran	25	24.42 J	24.8 J	98	99	67-137	2	30
1,1,1-Trichloroethane	5.00	4.93	5.02	99	100	78-126	2	30
Carbon Tetrachloride	5.00	5.13	5.27	103	105	64-141	3	30
Benzene	5.00	5.19	5.28	104	106	80-120	2	30
Trichloroethene	5.00	5.02	5.19	100	104	80-120	3	30
Toluene	5.00	5.01	5.02	100	100	80-120	0	30
Tetrachloroethene	5.00	4.91	4.97	98	99	80-120	1	30
Ethylbenzene	5.00	4.95	4.96	99	99	80-120	0	30
Xylene (Total)	15	14.96	15	100	100	80-120	0	30

LCS: LCSH12 LCSD: LCDH12 Analyte	Batch: H201424AA (Sample number(s): 1318659)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Dimethyl ether	5.00	5.45 J	5.54 J	109	111	70-130	2	30

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.05	1.0	ug/l
Chloromethane	0.06	1.0	ug/l
Chloroethane	0.07	1.0	ug/l
Trichlorofluoromethane	0.05	1.0	ug/l
Ethyl ether	0.05	13	ug/l
1,1-Dichloroethene	0.06	1.0	ug/l
Freon 113	0.06	1.0	ug/l
Methylene Chloride	0.07	1.0	ug/l
1,1-Dichloroethane	0.07	1.0	ug/l
2-Butanone	0.6	10	ug/l
Tetrahydrofuran	0.8	25	ug/l
1,1,1-Trichloroethane	0.06	1.0	ug/l
Carbon Tetrachloride	0.07	1.0	ug/l
Benzene	0.05	1.0	ug/l
Trichloroethene	0.06	1.0	ug/l
Toluene	0.07	1.0	ug/l
Tetrachloroethene	0.06	1.0	ug/l
Ethylbenzene	0.06	1.0	ug/l
Xylene (Total)	0.2	3.0	ug/l
Dimethyl ether	0.04	13	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: hj06t01.d BFB Injection Date: 01/06/20
 Instrument ID: HP19094 BFB Injection Time: 10:35
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.27
75	30.0 - 60.0% of mass 95	46.81
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.87 (1.05)1
174	Greater than 50.0% of mass 95	83.57
175	5.0 - 9.0% of mass 174	6.30 (7.54)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.22 (98.38)1
177	5.0 - 9.0% of mass 176	5.38 (6.54)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hj06i11.d	01/06/20	11:19
02	VSTD10	hj06i12.d	01/06/20	11:41
03	VSTD5	hj06i13.d	01/06/20	12:02
04	VSTD2	hj06i14.d	01/06/20	12:24
05	VSTD1	hj06i15.d	01/06/20	12:46
06	VSTD.5	hj06i16.d	01/06/20	13:07
07	VSTD.2	hj06i17.d	01/06/20	13:29
08	ICVH01	hj06v11.d	01/06/20	13:51
09	VSTD25	hj06i01.d	01/06/20	14:34
10	VSTD10	hj06i02.d	01/06/20	14:56
11	VSTD5	hj06i03.d	01/06/20	15:18
12	VSTD2	hj06i04.d	01/06/20	15:39
13	VSTD1	hj06i05.d	01/06/20	16:01
14	VSTD.5	hj06i06.d	01/06/20	16:23
15	VSTD.2	hj06i07.d	01/06/20	16:44
16	ICVH00	hj06v01.d	01/06/20	17:06

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: hy21t06.d BFB Injection Date: 05/21/20
 Instrument ID: HP19094 BFB Injection Time: 19:47
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.90
75	30.0 - 60.0% of mass 95	47.37
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.89 (0.99)1
174	Greater than 50.0% of mass 95	89.75
175	5.0 - 9.0% of mass 174	6.66 (7.42)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.31 (98.40)1
177	5.0 - 9.0% of mass 176	5.88 (6.65)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hy21c01.d	05/21/20	20:21
02	VSTD10	hy21c02.d	05/21/20	20:43
03	LCSH11	hy21l01.d	05/21/20	21:04
04	LCSH13	hy21l31.d	05/21/20	21:04
05	LCSH15	hy21l61.d	05/21/20	21:04
06	LCDH11	hy21l02.d	05/21/20	21:26
07	LCDH13	hy21l32.d	05/21/20	21:26
08	LCDH15	hy21l62.d	05/21/20	21:26
09	LCSH12	hy21l03.d	05/21/20	21:47
10	LCSH14	hy21l33.d	05/21/20	21:47
11	LCDH12	hy21l04.d	05/21/20	22:09
12	LCDH14	hy21l34.d	05/21/20	22:09
13	RLVH13 - RLVH13	hy21r01.d	05/21/20	22:31
14	VBLKH11	hy21b01.d	05/21/20	22:53
15	VBLKH13	hy21b30.d	05/21/20	22:53
16	VBLKH15	hy21b60.d	05/21/20	22:53
17	1318659	hy21s02.d	05/21/20	23:24
18	1315273	hy21s35.d	05/21/20	23:45
19	1315274	hy21s37.d	05/22/20	00:29
20	1316684	hy21s63.d	05/22/20	01:12
21	1315433	hy21s65.d	05/22/20	01:55
22	1316680	hy21s66.d	05/22/20	02:17

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: hy21t06.d BFB Injection Date: 05/21/20
 Instrument ID: HP19094 BFB Injection Time: 19:47
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.90
75	30.0 - 60.0% of mass 95	47.37
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.54
173	Less than 2.0% of mass 174	0.89 (0.99)1
174	Greater than 50.0% of mass 95	89.75
175	5.0 - 9.0% of mass 174	6.66 (7.42)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.31 (98.40)1
177	5.0 - 9.0% of mass 176	5.88 (6.65)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1316681MS	hy21s67.d	05/22/20	02:39
24	1316682MSD	hy21s68.d	05/22/20	03:01
25	1316683	hy21s69.d	05/22/20	03:22
26	1313731	hy21s70.d	05/22/20	03:44
27	1314438	hy21s71.d	05/22/20	04:05
28	1315431	hy21s76.d	05/22/20	05:54
29	1315431DL	hy21s77.d	05/22/20	06:16
30	SECC010	hy21ec1.d	05/22/20	06:37

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20

Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID:		RRF0.2= hj06i07.d		RRF0.5= hj06i06.d		RRF 1 = hj06i05.d					
RRF 2 = hj06i04.d		RRF 5 = hj06i03.d		RRF 10= hj06i02.d		RRF 25= hj06i01.d					
										%	CAL.
COMPOUND		RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	RSD	METHOD
=====		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Dichlorodifluoromethane	#0.3097	0.3849	0.3783	0.3762	0.3923	0.3917	0.3909	0.3749		8	AVG
Chloromethane	#0.3844	0.3706	0.3648	0.3602	0.3703	0.3727	0.3674	0.3700		2	AVG
Vinyl Chloride	#0.3387	0.3441	0.3484	0.3494	0.3624	0.3634	0.3575	0.3520		3	AVG
1,3-Butadiene	0.2904	0.2466	0.2826	0.2753	0.2838	0.2863	0.2813	0.2781		5	AVG
Bromomethane	#0.2624	0.2576	0.2458	0.2474	0.2514	0.2534	0.2470	0.2521		2	AVG
Chloroethane	#0.2030	0.2012	0.2031	0.2003	0.2060	0.2087	0.2045	0.2039		1	AVG
Dichlorofluoromethane	0.5189	0.4924	0.4752	0.4782	0.4800	0.4783	0.4657	0.4841		4	AVG
Trichlorofluoromethane	#0.3499	0.4155	0.4012	0.4126	0.4146	0.4171	0.4009	0.4017		6	AVG
Ethyl ether	0.1775	0.1704	0.1750	0.1761	0.1810	0.1853	0.1791	0.1778		3	AVG
Freon 123a	0.3167	0.2815	0.3200	0.3089	0.3200	0.3184	0.3084	0.3106		4	AVG
Acrolein	2.2893	2.2311	2.2350	2.1747	2.3312	2.2106	2.2888	2.2515		2	AVG
1,1-Dichloroethene	#0.2463	0.2301	0.2481	0.2428	0.2504	0.2501	0.2423	0.2443		3	AVG
Freon 113	#0.2400	0.2146	0.2713	0.2610	0.2726	0.2672	0.2610	0.2554		8	AVG
Acetone	#3.2700	3.4833	3.1681	2.8864	2.9450	2.7454	2.7687	3.0381		9	AVG
Methyl Iodide	0.4685	0.4375	0.4809	0.4716	0.4833	0.4821	0.4763	0.4715		3	AVG
Bromoethane	0.2191	0.2159	0.2059	0.2076	0.2148	0.2163	0.2125	0.2131		2	AVG
Carbon Disulfide	#0.7928	0.6951	0.7570	0.7457	0.7536	0.7497	0.7377	0.7474		4	AVG
Allyl Chloride	0.4734	0.4034	0.4117	0.3979	0.4100	0.4070	0.4017	0.4150		6	AVG
Methyl Acetate	#	7.4161	9.1355	7.3807	7.4710	7.0045	7.5915	7.6666		10	AVG
Methylene Chloride	#0.2800	0.2558	0.2667	0.2588	0.2602	0.2619	0.2573	0.2630		3	AVG
t-Butyl Alcohol	1.0663	1.0365	1.0727	1.0640	1.0491	1.0866	1.0123	1.0554		2	AVG
Acrylonitrile	3.6438	3.7208	3.7153	3.6754	3.7852	3.6366	3.7748	3.7074		2	AVG
trans-1,2-Dichloroethene	#0.2864	0.2546	0.2680	0.2637	0.2708	0.2705	0.2661	0.2686		4	AVG
Methyl Tertiary Butyl Ether	#0.5512	0.5319	0.5663	0.5659	0.5663	0.5757	0.5526	0.5586		3	AVG
n-Hexane	0.3699	0.3341	0.3889	0.3819	0.3991	0.3915	0.3863	0.3788		6	AVG
1,1-Dichloroethane	#0.4964	0.4403	0.4886	0.4815	0.4974	0.4971	0.4929	0.4849		4	AVG
di-Isopropyl Ether	0.8052	0.7480	0.8030	0.7976	0.8161	0.8179	0.8029	0.7987		3	AVG
2-Chloro-1,3-Butadiene	0.4129	0.3836	0.4208	0.4118	0.4293	0.4264	0.4213	0.4152		4	AVG
Ethyl t-butyl ether	0.7495	0.7218	0.7503	0.7485	0.7595	0.7704	0.7486	0.7498		2	AVG
cis-1,2-Dichloroethene	#0.3007	0.2855	0.3035	0.2938	0.3037	0.3023	0.2996	0.2984		2	AVG
2,2-Dichloropropane	0.4256	0.3737	0.4168	0.4103	0.4257	0.4229	0.4132	0.4126		4	AVG
2-Butanone	#5.1154	4.8469	4.7174	4.5786	4.7595	4.5295	4.7056	4.7504		4	AVG
Propionitrile	1.3075	1.2477	1.3026	1.2681	1.3494	1.3095	1.3240	1.3013		3	AVG
Methacrylonitrile	4.4887	4.5935	4.6153	4.5782	4.8968	4.5862	4.8192	4.6540		3	AVG
Bromochloromethane	0.1274	0.1253	0.1269	0.1251	0.1275	0.1270	0.1229	0.1260		1	AVG
Tetrahydrofuran	1.3100	1.2888	1.2986	1.3006	1.3566	1.2936	1.3388	1.3124		2	AVG
Chloroform	#0.4667	0.4470	0.4748	0.4828	0.4833	0.4813	0.4767	0.4732		3	AVG
1,1,1-Trichloroethane	#0.4444	0.4107	0.4449	0.4407	0.4498	0.4454	0.4447	0.4401		3	AVG
Cyclohexane	#0.4672	0.4316	0.4834	0.4694	0.4843	0.4803	0.4740	0.4700		4	AVG
Cyclohexane (2)	#0.3806	0.3420	0.4231	0.4091	0.4294	0.4200	0.4139	0.4026		8	AVG
Cyclohexane (3)	#0.1465	0.1257	0.1545	0.1478	0.1525	0.1493	0.1478	0.1463		7	AVG
1,1-Dichloropropene	0.3558	0.3395	0.3774	0.3744	0.3874	0.3848	0.3844	0.3720		5	AVG
Carbon Tetrachloride	#0.3738	0.3438	0.3839	0.3764	0.3884	0.3885	0.3866	0.3773		4	AVG
Isobutyl Alcohol	0.4694	0.3757	0.3606	0.3497	0.3405	0.3387	0.3262	0.3658		13	AVG
Benzene	#1.0846	1.0211	1.1054	1.0888	1.1082	1.1041	1.1019	1.0877		3	AVG
1,2-Dichloroethane	#0.3049	0.2745	0.2857	0.2728	0.2767	0.2762	0.2722	0.2804		4	AVG
t-Amyl methyl ether	0.6357	0.6339	0.6616	0.6652	0.6592	0.6697	0.6524	0.6539		2	AVG
n-Heptane	0.4155	0.3385	0.4126	0.3960	0.4081	0.4090	0.4019	0.3974		7	AVG
n-Butanol	0.2834	0.2883	0.3017	0.3008	0.3100	0.2997	0.2775	0.2945		4	AVG
Trichloroethene	#0.2904	0.2556	0.2917	0.2844	0.2927	0.2902	0.2918	0.2852		5	AVG
Methylcyclohexane	#0.4544	0.5019	0.5117	0.5207	0.5375	0.5283	0.5227	0.5110		5	AVG
1,2-Dichloropropane	#0.2696	0.2531	0.2739	0.2730	0.2707	0.2731	0.2702	0.2691		3	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20
Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID:	RRF0.2= hj06i07.d	RRF0.5= hj06i06.d	RRF 1 = hj06i05.d	RRF 2 = hj06i04.d	RRF 5 = hj06i03.d	RRF 10= hj06i02.d	RRF 25= hj06i01.d		%	CAL.
COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	RSD	METHOD
Methyl Methacrylate	9.0900	9.3502	9.3021	9.1910	9.7770	9.1723	9.6522	9.3621	3	AVG
Dibromomethane	0.1212	0.1183	0.1293	0.1233	0.1238	0.1234	0.1219	0.1230	3	AVG
1,4-Dioxane		0.0573	0.0723	0.0808	0.0838	0.0754	0.0565	0.0710	16	AVG
Bromodichloromethane	#0.3205	0.3236	0.3371	0.3352	0.3352	0.3419	0.3468	0.3343	3	AVG
2-Nitropropane	3.2316	3.0276	2.9775	2.9749	3.1206	3.0117	3.1811	3.0750	3	AVG
1-Bromo-2-chloroethane	0.2432	0.2568	0.2489	0.2508	0.2551	0.2578	0.2580	0.2529	2	AVG
cis-1,3-Dichloropropene	#0.3694	0.3660	0.3991	0.3952	0.4065	0.4135	0.4143	0.3948	5	AVG
4-Methyl-2-Pentanone	#11.689	11.445	11.679	11.451	12.107	11.578	12.010	11.708	2	AVG
Toluene	#0.9582	0.8631	0.9491	0.9424	0.9593	0.9462	0.9328	0.9359	4	AVG
trans-1,3-Dichloropropene	#0.4385	0.3983	0.4332	0.4356	0.4404	0.4462	0.4485	0.4344	4	AVG
Ethyl Methacrylate	0.3239	0.3247	0.3481	0.3371	0.3376	0.3463	0.3393	0.3367	3	AVG
1,1,2-Trichloroethane	#0.2405	0.2274	0.2363	0.2325	0.2353	0.2385	0.2355	0.2351	2	AVG
Tetrachloroethene	#0.4363	0.3889	0.4380	0.4243	0.4306	0.4324	0.4272	0.4254	4	AVG
1,3-Dichloropropane	0.4043	0.3821	0.4191	0.4064	0.4034	0.4094	0.4031	0.4040	3	AVG
2-Hexanone	#7.9283	7.9187	8.1810	7.8730	8.2441	7.7916	8.0670	8.0005	2	AVG
Dibromochloromethane	#0.2937	0.2799	0.3032	0.2987	0.3062	0.3128	0.3131	0.3011	4	AVG
1,2-Dibromoethane	#0.2153	0.2140	0.2251	0.2255	0.2286	0.2342	0.2302	0.2247	3	AVG
1-Chlorohexane	0.6423	0.5286	0.5784	0.5490	0.5560	0.5478	0.5475	0.5642	7	AVG
Chlorobenzene	#1.0386	0.9715	1.0468	1.0269	1.0395	1.0244	1.0099	1.0225	2	AVG
1,1,1,2-Tetrachloroethane	0.3747	0.3370	0.3630	0.3634	0.3733	0.3703	0.3642	0.3637	3	AVG
Ethylbenzene	#1.8831	1.7348	1.8850	1.8440	1.8692	1.8503	1.8248	1.8416	3	AVG
m+p-Xylene	#0.7059	0.6564	0.7237	0.7167	0.7198	0.7099	0.6969	0.7042	3	AVG
o-Xylene	#0.6857	0.6423	0.7052	0.7025	0.7087	0.7057	0.6970	0.6924	3	AVG
Styrene	#1.0823	1.0546	1.1453	1.1483	1.1530	1.1521	1.1302	1.1237	3	AVG
Bromoform	#0.1633	0.1645	0.1757	0.1781	0.1782	0.1852	0.1834	0.1755	5	AVG
Isopropylbenzene	#1.8487	1.7689	1.9137	1.8892	1.9361	1.9068	1.8732	1.8767	3	AVG
1,1,2,2-Tetrachloroethane	#0.4994	0.4980	0.5251	0.5207	0.5272	0.5453	0.5391	0.5221	3	AVG
Bromobenzene	0.8059	0.7131	0.7937	0.7855	0.8114	0.8121	0.8029	0.7892	4	AVG
trans-1,4-Dichloro-2-butene	4.1891	4.2507	4.3730	4.3458	4.6463	4.3757	4.6071	4.3982	4	AVG
1,2,3-Trichloropropane	0.1329	0.1349	0.1383	0.1456	0.1436	0.1429	0.1406	0.1398	3	AVG
n-Propylbenzene	4.0038	3.7608	4.1898	4.1439	4.3013	4.2499	4.1984	4.1211	4	AVG
2-Chlorotoluene	0.8233	0.7428	0.8120	0.8069	0.8423	0.8318	0.8324	0.8131	4	AVG
1,3,5-Trimethylbenzene	2.8683	2.7354	3.0313	2.9795	3.1123	3.1073	3.0940	2.9897	5	AVG
4-Chlorotoluene	0.8217	0.7498	0.8101	0.8115	0.8336	0.8310	0.8225	0.8115	4	AVG
tert-Butylbenzene	0.5960	0.5587	0.6274	0.6022	0.6546	0.6445	0.6449	0.6183	6	AVG
Pentachloroethane	0.5351	0.5182	0.5016	0.5034	0.5370	0.5464	0.5471	0.5270	4	AVG
1,2,4-Trimethylbenzene	3.0470	2.8069	3.1134	3.0700	3.2193	3.1924	3.1614	3.0872	4	AVG
sec-Butylbenzene	3.6634	3.4932	3.9040	3.8869	4.0805	4.0498	4.0364	3.8735	6	AVG
1,3-Dichlorobenzene	#1.5516	1.4564	1.5818	1.5697	1.6170	1.6185	1.6149	1.5728	4	AVG
p-Isopropyltoluene	3.2134	2.9781	3.3743	3.3312	3.5064	3.4772	3.4553	3.3337	6	AVG
1,4-Dichlorobenzene	#1.5411	1.4393	1.5240	1.5288	1.5664	1.5739	1.5662	1.5342	3	AVG
1,2,3-Trimethylbenzene	1.3591	1.2555	1.2679	1.2337	1.3070	1.2919	1.2966	1.2874	3	AVG
Benzyl Chloride	0.2076	0.1893	0.2210	0.2156	0.2297	0.2352	0.2380	0.2195	8	AVG
n-Butylbenzene	1.5451	1.4501	1.6692	1.6573	1.7438	1.7424	1.7279	1.6480	7	AVG
1,2-Dichlorobenzene	#1.3261	1.3151	1.4032	1.4162	1.4151	1.4260	1.4033	1.3864	3	AVG
1,2-Dibromo-3-chloropropane	#2.2552	2.1963	2.5713	2.5323	2.6799	2.5504	2.7733	2.5084	8	AVG
1,3,5-Trichlorobenzene	1.1407	1.0902	1.2060	1.1954	1.3088	1.3191	1.3559	1.2309	8	AVG
1,2,4-Trichlorobenzene	#1.0027	0.9074	0.9860	0.9977	1.0738	1.1222	1.1358	1.0322	8	AVG
Hexachlorobutadiene	0.5135	0.4561	0.5355	0.5284	0.5712	0.5840	0.5821	0.5387	9	AVG
Naphthalene	1.6782	1.6582	1.8169	1.7840	1.8578	1.9200	1.8943	1.8013	6	AVG
1,2,3-Trichlorobenzene	0.7996	0.8006	0.8629	0.8740	0.9308	0.9483	0.9518	0.8811	7	AVG
Dibromofluoromethane	0.2477	0.2456	0.2483	0.2493	0.2486	0.2509	0.2497	0.2486	1	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20
Heated Purge: (Y/N) Y Calibration Times: 14:34 16:44
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID:		RRF0.2= hj06i07.d		RRF0.5= hj06i06.d		RRF 1 = hj06i05.d					
RRF 2 = hj06i04.d		RRF 5 = hj06i03.d		RRF 10= hj06i02.d		RRF 25= hj06i01.d					
COMPOUND		RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	%	CAL.
										RSD	METHOD
=====		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Dibromofluoromethane (2)		0.2549	0.2544	0.2555	0.2559	0.2536	0.2572	0.2563	0.2554	0	AVG
1,2-Dichloroethane-d4		0.0472	0.0483	0.0482	0.0489	0.0480	0.0483	0.0483	0.0482	1	AVG
1,2-Dichloroethane-d4 (2)		0.2204	0.2241	0.2240	0.2252	0.2192	0.2227	0.2204	0.2223	1	AVG
1,2-Dichloroethane-d4 (3)		0.0301	0.0306	0.0309	0.0310	0.0300	0.0304	0.0306	0.0305	1	AVG
Toluene-d8		1.3324	1.3300	1.3321	1.3440	1.3324	1.3267	1.3286	1.3323	0	AVG
Toluene-d8 (2)		0.8602	0.8569	0.8641	0.8678	0.8646	0.8582	0.8598	0.8616	0	AVG
4-Bromofluorobenzene		0.4987	0.4950	0.4949	0.4985	0.4896	0.4877	0.4860	0.4929	1	AVG
4-Bromofluorobenzene (2)		0.4239	0.4230	0.4242	0.4248	0.4203	0.4167	0.4195	0.4218	1	AVG
Average %RSD		4									

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/20jan06i.b/hj06i01.d	VSTD025
/chem2/HP19094.i/20jan06i.b/hj06i02.d	VSTD010
/chem2/HP19094.i/20jan06i.b/hj06i03.d	VSTD005
/chem2/HP19094.i/20jan06i.b/hj06i04.d	VSTD002
/chem2/HP19094.i/20jan06i.b/hj06i05.d	VSTD001
/chem2/HP19094.i/20jan06i.b/hj06i06.d	VSTD0.5
/chem2/HP19094.i/20jan06i.b/hj06i07.d	VSTD0.2

Area Summary

File ID:

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Internal Standard Name	hj06i01.d	hj06i02.d	hj06i03.d	hj06i04.d	hj06i05.d	hj06i06.d	hj06i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	113987	123863	115826	125392	124021	118243	115841	119596	4	Yes
Fluorobenzene	1932435	1942157	1972661	1989998	1989646	1956262	1935544	1959815	1	Yes
Chlorobenzene-d5	1455879	1453618	1473060	1474389	1476031	1457562	1434543	1460726	1	Yes
1,4-Dichlorobenzene-d4	746931	753053	772144	794109	798465	784772	777924	775343	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

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Internal Standard Name	hj06i01.d	hj06i02.d	hj06i03.d	hj06i04.d	hj06i05.d	hj06i06.d	hj06i07.d	Avg. RT
t-Butyl Alcohol-d10	4.476	4.464	4.483	4.458	4.458	4.464	4.470	4.468
Fluorobenzene	7.964	7.964	7.964	7.957	7.958	7.957	7.957	7.960
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.384	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.255	13.255	13.255	13.255	13.255	13.255	13.255

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 01/08/2020 at 10:31.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06
 Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3749	0.3201	4.27	5	-15 #
# Chloromethane	0.3700	0.3393	4.58	5	-8 #
# Vinyl Chloride	0.3520	0.3408	4.84	5	-3 #
1,3-Butadiene	0.2781	0.3046	5.48	5	10
# Bromomethane	0.2521	0.2433	4.82	5	-4 #
# Chloroethane	0.2039	0.2045	5.02	5	0 #
Dichlorofluoromethane	0.4841	0.4759	4.92	5	-2
# Trichlorofluoromethane	0.4017	0.4334	5.39	5	8 #
Ethyl ether	0.1778	0.1796	5.05	5	1
Freon 123a	0.3106	0.3259	5.25	5	5
Acrolein	2.2515	2.2144	36.88	37.5	-2
# 1,1-Dichloroethene	0.2443	0.2488	5.09	5	2 #
# Freon 113	0.2554	0.2674	5.24	5	5 #
# Acetone	3.0381	2.7604	34.07	37.5	-9 #
Methyl Iodide	0.4715	0.4682	4.97	5	-1
Bromoethane	0.2131	0.2262	5.31	5	6
# Carbon Disulfide	0.7474	0.7334	4.91	5	-2 #
Allyl Chloride	0.4150	0.3969	4.78	5	-4
# Methyl Acetate	7.6666	7.4992	4.89	5	-2 #
# Methylene Chloride	0.2630	0.2662	5.06	5	1 #
t-Butyl Alcohol	1.0554	1.0288	48.74	50	-3
Acrylonitrile	3.7074	3.7529	25.31	25	1
# trans-1,2-Dichloroethene	0.2686	0.2708	5.04	5	1 #
# Methyl Tertiary Butyl Ether	0.5586	0.5830	5.22	5	4 #
n-Hexane	0.3788	0.3874	5.11	5	2
# 1,1-Dichloroethane	0.4849	0.5023	5.18	5	4 #
di-Isopropyl Ether	0.7987	0.8120	5.08	5	2
2-Chloro-1,3-Butadiene	0.4152	0.4299	5.18	5	4
Ethyl t-butyl ether	0.7498	0.7685	5.12	5	2
# cis-1,2-Dichloroethene	0.2984	0.3237	5.42	5	8 #
2,2-Dichloropropane	0.4126	0.4213	5.11	5	2
# 2-Butanone	4.7504	4.6847	36.98	37.5	-1 #
Propionitrile	1.3013	1.3348	38.47	37.5	3
Methacrylonitrile	4.6540	4.9263	39.69	37.5	6
Bromochloromethane	0.1260	0.1227	4.87	5	-3
Tetrahydrofuran	1.3124	1.3898	26.47	25	6

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06
 Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
# Chloroform	0.4732	0.4985	5.27	5	5 #
# 1,1,1-Trichloroethane	0.4401	0.4474	5.08	5	2 #
# Cyclohexane	0.4700	0.4695	4.99	5	0 #
# 1,1-Dichloropropene	0.3720	0.3846	5.17	5	3 #
# Carbon Tetrachloride	0.3773	0.3969	5.26	5	5 #
# Isobutyl Alcohol	0.3658	0.3294	112.57	125	-10 #
# Benzene	1.0877	1.1105	5.10	5	2 #
# 1,2-Dichloroethane	0.2804	0.2841	5.07	5	1 #
# t-Amyl methyl ether	0.6539	0.6666	5.10	5	2 #
# n-Heptane	0.3974	0.3827	4.81	5	-4 #
# n-Butanol	0.2945	0.2562	217.49	250	-13 #
# Trichloroethene	0.2852	0.2961	5.19	5	4 #
# Methylcyclohexane	0.5110	0.5002	4.89	5	-2 #
# 1,2-Dichloropropane	0.2691	0.2785	5.17	5	3 #
# Methyl Methacrylate	9.3621	9.9193	5.30	5	6 #
# Dibromomethane	0.1230	0.1261	5.13	5	3 #
# 1,4-Dioxane	0.0710	0.0596	104.88	125	-16 #
# Bromodichloromethane	0.3343	0.3516	5.26	5	5 #
# 2-Nitropropane	3.0750	3.1165	5.07	5	1 #
# 1-Bromo-2-Chloroethane	0.2529	0.2590	5.04	5	0 #
# cis-1,3-Dichloropropene	0.3948	0.4096	5.19	5	4 #
# 4-Methyl-2-Pentanone	11.7080	11.9190	25.45	25	2 #
# Toluene	0.9359	0.9616	5.14	5	3 #
# trans-1,3-Dichloropropene	0.4344	0.4412	5.08	5	2 #
# Ethyl Methacrylate	0.3367	0.3344	4.97	5	-1 #
# 1,1,2-Trichloroethane	0.2351	0.2437	5.18	5	4 #
# Tetrachloroethene	0.4254	0.4467	5.25	5	5 #
# 1,3-Dichloropropane	0.4040	0.4093	5.07	5	1 #
# 2-Hexanone	8.0005	8.4443	26.39	25	6 #
# Dibromochloromethane	0.3011	0.3198	5.31	5	6 #
# 1,2-Dibromoethane	0.2247	0.2335	5.20	5	4 #
# 1-Chlorohexane	0.5642	0.5459	4.84	5	-3 #
# Chlorobenzene	1.0225	1.0544	5.16	5	3 #
# 1,1,1,2-Tetrachloroethane	0.3637	0.3717	5.11	5	2 #
# Ethylbenzene	1.8416	1.8833	5.11	5	2 #
# m+p-Xylene	0.7042	0.7318	10.39	10	4 #
# o-Xylene	0.6924	0.7141	5.16	5	3 #

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 17:06
 Lab File ID: hj06v01.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Styrene	1.1237	1.1749	5.23	5	5 #
# Bromoform	0.1755	0.1814	5.17	5	3 #
# Isopropylbenzene	1.8767	1.9613	5.23	5	5 #
# 1,1,2,2-Tetrachloroethane	0.5221	0.5351	5.12	5	2 #
Bromobenzene	0.7892	0.8162	5.17	5	3
trans-1,4-Dichloro-2-butene	4.3982	4.6890	26.65	25	7
1,2,3-Trichloropropane	0.1398	0.1491	5.33	5	7
n-Propylbenzene	4.1211	4.3318	5.26	5	5
2-Chlorotoluene	0.8131	0.8455	5.20	5	4
1,3,5-Trimethylbenzene	2.9897	3.0960	5.18	5	4
4-Chlorotoluene	0.8115	0.8366	5.15	5	3
tert-Butylbenzene	0.6183	0.6465	5.23	5	5
Pentachloroethane	0.5270	0.5198	4.93	5	-1
1,2,4-Trimethylbenzene	3.0872	3.1484	5.10	5	2
sec-Butylbenzene	3.8735	4.0509	5.23	5	5
# 1,3-Dichlorobenzene	1.5728	1.6190	5.15	5	3 #
p-Isopropyltoluene	3.3337	3.4736	5.21	5	4
# 1,4-Dichlorobenzene	1.5342	1.6011	5.22	5	4 #
1,2,3-Trimethylbenzene	1.2874	1.2871	5.00	5	0
Benzyl Chloride	0.2195	0.1994	4.54	5	-9
n-Butylbenzene	1.6480	1.7077	5.18	5	4
# 1,2-Dichlorobenzene	1.3864	1.4475	5.22	5	4 #
# 1,2-Dibromo-3-chloropropane	2.5084	2.7000	5.38	5	8 #
1,3,5-Trichlorobenzene	1.2309	1.2744	5.18	5	4
# 1,2,4-Trichlorobenzene	1.0322	1.0719	5.19	5	4 #
Hexachlorobutadiene	0.5387	0.5618	5.21	5	4
Naphthalene	1.8013	1.8460	5.12	5	2
1,2,3-Trichlorobenzene	0.8811	0.9152	5.19	5	4

Average %Drift 4

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 Calibration Date(s): 01/06/20 01/06/20
 Heated Purge: (Y/N) Y Calibration Times: 11:19 13:29
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID:		RRF0.2= hj06i17.d		RRF0.5= hj06i16.d		RRF 1 = hj06i15.d					
RRF 2 = hj06i14.d		RRF 5 = hj06i13.d		RRF 10= hj06i12.d		RRF 25= hj06i11.d					
COMPOUND		RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
=====		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Dimethyl ether		0.3998	0.3387	0.3320	0.3461	0.3052	0.2862	0.3240	0.3331	11	AVG
Acetonitrile		1.5838	1.4151	1.2242	1.1782	1.0861	1.0648	0.9703	1.2175	18	AVG
Vinyl Acetate		0.3620	0.3800	0.3496	0.3501	0.3394	0.3474	0.3559	0.3549	4	AVG
Methyl Acrylate		0.1129	0.1234	0.1207	0.1259	0.1210	0.1264	0.1276	0.1226	4	AVG
1-Chlorobutane		0.4565	0.5141	0.5084	0.5204	0.5050	0.5218	0.5151	0.5059	4	AVG
Chloroacetonitrile		0.0059	0.0065	0.0067	0.0073	0.0068	0.0068	0.0065	0.0066	7	AVG
2-Chloroethyl vinyl ether		0.0952	0.1188	0.1148	0.1200	0.1189	0.1234	0.1148	0.1151	8	AVG
cis-1,4-Dichloro-2-butene		4.7683	6.0287	5.9725	6.1156	6.4363	7.0066	6.5836	6.1302	11	AVG
Cyclohexanone		0.3507	0.3635	0.3792	0.4300	0.3742	0.3503	0.2508	0.3569	15	AVG

Average %RSD 9

Compounds with required minimum RRF.
 All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/20jan06i.b/hj06i11.d	VSTD025
/chem2/HP19094.i/20jan06i.b/hj06i12.d	VSTD010
/chem2/HP19094.i/20jan06i.b/hj06i13.d	VSTD005
/chem2/HP19094.i/20jan06i.b/hj06i14.d	VSTD002
/chem2/HP19094.i/20jan06i.b/hj06i15.d	VSTD001
/chem2/HP19094.i/20jan06i.b/hj06i16.d	VSTD0.5
/chem2/HP19094.i/20jan06i.b/hj06i17.d	VSTD0.2

Area Summary

File ID:

=====

Internal Standard Name	hj06i11.d	hj06i12.d	hj06i13.d	hj06i14.d	hj06i15.d	hj06i16.d	hj06i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	119574	113216	116853	119527	115307	112993	120535	116858	3	Yes
Fluorobenzene	1935181	1966967	2003060	1969431	1963066	1958073	1930427	1960886	1	Yes
Chlorobenzene-d5	1527614	1484003	1501115	1478019	1468428	1468028	1436470	1480525	2	Yes
1,4-Dichlorobenzene-d4	793148	785939	807265	799344	795533	798270	784103	794800	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	hj06i11.d	hj06i12.d	hj06i13.d	hj06i14.d	hj06i15.d	hj06i16.d	hj06i17.d	Avg. RT
t-Butyl Alcohol-d10	4.458	4.464	4.476	4.458	4.470	4.464	4.476	4.467
Fluorobenzene	7.963	7.964	7.957	7.958	7.957	7.957	7.957	7.959
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.384	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.255	13.255	13.255	13.255	13.255	13.255	13.255

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 01/07/2020 at 19:08.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 ICV Date: 01/06/20 Time: 13:51
 Lab File ID: hj06v11.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3331	0.3461	5.19	5	4
Acetonitrile	1.2175	1.2646	38.95	37.5	4
Vinyl Acetate	0.3549	0.3129	11.02	12.5	-12
Methyl Acrylate	0.1226	0.1330	27.12	25	8
1-Chlorobutane	0.5059	0.4909	4.85	5	-3
Chloroacetonitrile	0.0066	0.0065	245.98	250	-2
2-Chloroethyl vinyl ether	0.1151	0.1100	4.78	5	-4
cis-1,4-Dichloro-2-butene	6.1302	6.1352	12.51	12.5	0
Cyclohexanone	0.3569	0.3240	113.45	125	-9

Average %Drift 5

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

page 1 of 1

FORM VII VOA

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem2/HP19094.i/20jan06i.b/hj06i07.d
/chem2/HP19094.i/20jan06i.b/hj06i06.d
/chem2/HP19094.i/20jan06i.b/hj06i05.d
/chem2/HP19094.i/20jan06i.b/hj06i04.d
/chem2/HP19094.i/20jan06i.b/hj06i03.d
/chem2/HP19094.i/20jan06i.b/hj06i02.d
/chem2/HP19094.i/20jan06i.b/hj06i01.d

```

File /chem2/HP19094.i/20jan06i.b/hj06i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20may21b.b/hy21c01.d

RT Summary

File ID:

=====

Internal Standard Name	hy21c01.d	ICAL RT	In Spec
=====	=====	=====	=====
t-Butyl Alcohol-d10	4.452	4.464	Yes
Fluorobenzene	7.945	7.964	Yes
Chlorobenzene-d5	11.372	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	hy21c01.d	ICAL Area	Low Limit	High Limit	In Spec
=====	=====	=====	=====	=====	=====
t-Butyl Alcohol-d10	106581	123863	61932	247726	Yes
Fluorobenzene	1579583	1942157	971078	3884314	Yes
Chlorobenzene-d5	1209967	1453618	726809	2907236	Yes
1,4-Dichlorobenzene-d4	633161	753053	376526	1506106	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:

report generated on 05/21/2020 at 20:52

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 05/21/20 Time: 20:21

Lab File ID: hy21c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====					
# Dichlorodifluoromethane	0.3749	0.4755	12.69	10	27 #<-
# Chloromethane	0.3700	0.4625	12.50	10	25 #<-
# Vinyl Chloride	0.3520	0.4343	12.34	10	23 #<-
1,3-Butadiene	0.2781	0.5951	21.40	10	114 <-
# Bromomethane	0.2521	0.2849	11.30	10	13 #
# Chloroethane	0.2039	0.2343	11.49	10	15 #
Dichlorofluoromethane	0.4841	0.4785	9.88	10	-1
# Trichlorofluoromethane	0.4017	0.4728	11.77	10	18 #
Ethyl ether	0.1778	0.1944	10.93	10	9
Freon 123a	0.3106	0.3311	10.66	10	7
Acrolein	2.2515	2.0572	456.84	500	-9
# 1,1-Dichloroethene	0.2443	0.2330	9.54	10	-5 #
# Freon 113	0.2554	0.2665	10.43	10	4 #
# Acetone	3.0381	2.6249	86.40	100	-14 #
Methyl Iodide	0.4715	0.4532	9.61	10	-4
Bromoethane	0.2131	0.2153	10.10	10	1
# Carbon Disulfide	0.7474	0.7275	9.73	10	-3 #
Allyl Chloride	0.4150	0.4073	9.81	10	-2
# Methyl Acetate	7.6666	7.2828	9.50	10	-5 #
# Methylene Chloride	0.2630	0.2628	10.00	10	0 #
t-Butyl Alcohol	1.0554	0.9226	174.84	200	-13
Acrylonitrile	3.7074	3.6312	48.97	50	-2
# trans-1,2-Dichloroethene	0.2686	0.2618	9.75	10	-3 #
# Methyl Tertiary Butyl Ether	0.5586	0.5516	9.88	10	-1 #
n-Hexane	0.3788	0.3989	10.53	10	5
# 1,1-Dichloroethane	0.4849	0.5030	10.37	10	4 #
di-Isopropyl Ether	0.7987	0.8439	10.57	10	6
2-Chloro-1,3-Butadiene	0.4152	0.4266	10.28	10	3
Ethyl t-butyl ether	0.7498	0.7326	9.77	10	-2
# cis-1,2-Dichloroethene	0.2984	0.2968	9.95	10	-1 #
2,2-Dichloropropane	0.4126	0.4023	9.75	10	-2
# 2-Butanone	4.7504	4.5154	95.05	100	-5 #
Propionitrile	1.3013	1.3697	210.53	200	5
Methacrylonitrile	4.6540	4.6360	99.61	100	0
Bromochloromethane	0.1260	0.1248	9.91	10	-1
Tetrahydrofuran	1.3124	1.2676	96.59	100	-3

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 05/21/20 Time: 20:21

Lab File ID: hy21c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====					
# Chloroform	0.4732	0.4841	10.23	10	2 #
# 1,1,1-Trichloroethane	0.4401	0.4275	9.71	10	-3 #
# Cyclohexane	0.4700	0.4999	10.64	10	6 #
# Cyclohexane(2)	0.4026	0.4156	10.32	10	3 #
# Cyclohexane(3)	0.1463	0.1500	10.25	10	3 #
1,1-Dichloropropene	0.3720	0.3774	10.15	10	1
# Carbon Tetrachloride	0.3773	0.3804	10.08	10	1 #
Isobutyl Alcohol	0.3658	0.3517	480.69	500	-4
# Benzene	1.0877	1.1164	10.26	10	3 #
# 1,2-Dichloroethane	0.2804	0.2776	9.90	10	-1 #
t-Amyl methyl ether	0.6539	0.6413	9.81	10	-2
n-Heptane	0.3974	0.4420	11.12	10	11
n-Butanol	0.2945	0.3161	1073.35	1000	7
# Trichloroethene	0.2852	0.2851	9.99	10	0 #
# Methylcyclohexane	0.5110	0.5283	10.34	10	3 #
# 1,2-Dichloropropane	0.2691	0.2869	10.66	10	7 #
Methyl Methacrylate	9.3621	8.5332	9.11	10	-9
Dibromomethane	0.1230	0.1232	10.02	10	0
1,4-Dioxane	0.0710	0.0719	506.30	500	1
# Bromodichloromethane	0.3343	0.3373	10.09	10	1 #
2-Nitropropane	3.0750	2.5387	82.56	100	-17
1-Bromo-2-chloroethane	0.2529	0.2756	10.89	10	9
# cis-1,3-Dichloropropene	0.3948	0.3828	9.70	10	-3 #
# 4-Methyl-2-Pentanone	11.7080	11.4363	97.68	100	-2 #
# Toluene	0.9359	0.9223	9.86	10	-1 #
# trans-1,3-Dichloropropene	0.4344	0.4005	9.22	10	-8 #
Ethyl Methacrylate	0.3367	0.3237	9.61	10	-4
# 1,1,2-Trichloroethane	0.2351	0.2318	9.86	10	-1 #
# Tetrachloroethene	0.4254	0.4115	9.67	10	-3 #
1,3-Dichloropropane	0.4040	0.4029	9.97	10	0
# 2-Hexanone	8.0005	7.7885	97.35	100	-3 #
# Dibromochloromethane	0.3011	0.2791	9.27	10	-7 #
# 1,2-Dibromoethane	0.2247	0.2239	9.97	10	0 #
1-Chlorohexane	0.5642	0.5184	9.19	10	-8
# Chlorobenzene	1.0225	0.9985	9.76	10	-2 #
1,1,1,2-Tetrachloroethane	0.3637	0.3544	9.74	10	-3

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 05/21/20 Time: 20:21

Lab File ID: hy21c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====					
# Ethylbenzene	1.8416	1.8092	9.82	10	-2 #
# m+p-Xylene	0.7042	0.6959	19.76	20	-1 #
# o-Xylene	0.6924	0.6796	9.81	10	-2 #
# Styrene	1.1237	1.1393	10.14	10	1 #
# Bromoform	0.1755	0.1535	8.75	10	-13 #
# Isopropylbenzene	1.8767	1.7985	9.58	10	-4 #
# 1,1,2,2-Tetrachloroethane	0.5221	0.5317	10.18	10	2 #
Bromobenzene	0.7892	0.7745	9.81	10	-2
trans-1,4-Dichloro-2-butene	4.3982	2.9594	67.29	100	-33 <-
1,2,3-Trichloropropane	0.1398	0.1435	10.27	10	3
n-Propylbenzene	4.1211	4.1479	10.06	10	1
2-Chlorotoluene	0.8131	0.8023	9.87	10	-1
1,3,5-Trimethylbenzene	2.9897	2.9666	9.92	10	-1
4-Chlorotoluene	0.8115	0.8155	10.05	10	0
tert-Butylbenzene	0.6183	0.6193	10.02	10	0
Pentachloroethane	0.5270	0.4972	9.43	10	-6
1,2,4-Trimethylbenzene	3.0872	3.0689	9.94	10	-1
sec-Butylbenzene	3.8735	3.8648	9.98	10	0
# 1,3-Dichlorobenzene	1.5728	1.5686	9.97	10	0 #
p-Isopropyltoluene	3.3337	3.2776	9.83	10	-2
# 1,4-Dichlorobenzene	1.5342	1.5282	9.96	10	0 #
1,2,3-Trimethylbenzene	1.2874	1.2836	9.97	10	0
Benzyl Chloride	0.2195	0.2275	10.36	10	4
n-Butylbenzene	1.6480	1.7185	10.43	10	4
# 1,2-Dichlorobenzene	1.3864	1.3820	9.97	10	0 #
# 1,2-Dibromo-3-chloropropane	2.5084	2.2136	8.82	10	-12 #
1,3,5-Trichlorobenzene	1.2309	1.1839	9.62	10	-4
# 1,2,4-Trichlorobenzene	1.0322	0.9695	9.39	10	-6 #
Hexachlorobutadiene	0.5387	0.5202	9.66	10	-3
Naphthalene	1.8013	1.6587	9.21	10	-8
1,2,3-Trichlorobenzene	0.8811	0.8046	9.13	10	-9
=====					
Dibromofluoromethane	0.2486	0.2478	9.97	10	0
Dibromofluoromethane(2)	0.2554	0.2545	9.96	10	0
1,2-Dichloroethane-d4	0.0482	0.0480	9.97	10	0
1,2-Dichloroethane-d4(2)	0.2223	0.2256	10.15	10	2

Compounds with required minimum RRF.

All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP19094 Calibration Date: 05/21/20 Time: 20:21

Lab File ID: hy21c01.d Init. Calib. Date(s): 01/06/20 01/06/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
1,2-Dichloroethane-d4 (3)	0.0305	0.0301	9.87	10	-1
Toluene-d8	1.3323	1.3211	9.92	10	-1
Toluene-d8 (2)	0.8616	0.8475	9.84	10	-2
4-Bromofluorobenzene	0.4929	0.4710	9.55	10	-4
4-Bromofluorobenzene (2)	0.4218	0.4048	9.60	10	-4

Average %Drift 6

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem2/HP19094.i/20jan06i.b/hj06i17.d
/chem2/HP19094.i/20jan06i.b/hj06i16.d
/chem2/HP19094.i/20jan06i.b/hj06i15.d
/chem2/HP19094.i/20jan06i.b/hj06i14.d
/chem2/HP19094.i/20jan06i.b/hj06i13.d
/chem2/HP19094.i/20jan06i.b/hj06i12.d
/chem2/HP19094.i/20jan06i.b/hj06i11.d

```

File /chem2/HP19094.i/20jan06i.b/hj06i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/20may21b.b/hy21c02.d

RT Summary

File ID:

=====

Internal Standard Name	hy21c02.d	ICAL RT	In Spec
=====	=====	=====	=====
t-Butyl Alcohol-d10	4.440	4.464	Yes
Fluorobenzene	7.945	7.964	Yes
Chlorobenzene-d5	11.371	11.384	Yes
1,4-Dichlorobenzene-d4	13.243	13.255	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	hy21c02.d	ICAL Area	Low Limit	High Limit	In Spec
=====	=====	=====	=====	=====	=====
t-Butyl Alcohol-d10	107724	113216	56608	226432	Yes
Fluorobenzene	1559230	1966967	983484	3933934	Yes
Chlorobenzene-d5	1198054	1484003	742002	2968006	Yes
1,4-Dichlorobenzene-d4	626349	785939	392970	1571878	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

report generated on 05/21/2020 at 21:12

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP19094 Calibration Date: 05/21/20 Time: 20:43
 Lab File ID: hy21c02.d Init. Calib. Date(s): 01/06/20 01/06/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3331	0.3765	11.30	10	13
Acetonitrile	1.2175	1.2210	401.15	400	0
Vinyl Acetate	0.3549	0.3361	9.47	10	-5
Methyl Acrylate	0.1226	0.1290	52.64	50	5
1-Chlorobutane	0.5059	0.4916	9.72	10	-3
Chloroacetonitrile	0.0066	0.0080	602.56	500	21
2-Chloroethyl vinyl ether	0.1151	0.1160	10.07	10	1
cis-1,4-Dichloro-2-butene	6.1302	3.0426	9.93	20	-50
Cyclohexanone	0.3569	0.3074	430.63	500	-14

Average %Drift 12

Compounds with required minimum RRF.
 All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): hy21c01.d Date Analyzed: 05/21/20
 Instrument ID: HP19094 Time Analyzed: 20:21
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	12 HOUR STD	106581	4.452	1579583	7.945	1209967	11.372	633161	13.243
	UPPER LIMIT	213162	4.952	3159166	8.445	2419934	11.872	1266322	13.743
	LOWER LIMIT	53290	3.952	789792	7.445	604984	10.872	316580	12.743
	LAB SAMPLE ID								
01	LCSH11	105353	4.464	1594684	7.945	1209783	11.371	637589	13.243
02	LCSH13	105353	4.464	1594684	7.945	1209783	11.371	637589	13.243
03	LCSH15	105353	4.464	1594684	7.945	1209783	11.371	637589	13.243
04	LCDH11	108029	4.452	1560771	7.945	1204254	11.372	636764	13.243
05	LCDH13	108029	4.452	1560771	7.945	1204254	11.372	636764	13.243
06	LCDH15	108029	4.452	1560771	7.945	1204254	11.372	636764	13.243
07	LCSH12	93812	4.470	1567394	7.951	1197121	11.371	627252	13.243
08	LCSH14	102562	4.470	1567394	7.951	1197121	11.371	627252	13.243
09	LCDH12	107751	4.440	1565716	7.939	1194194	11.372	628092	13.243
10	LCDH14	107751	4.440	1565716	7.939	1194194	11.372	628092	13.243
11	RLVH13 - RL	102448	4.458	1549680	7.945	1185630	11.371	633544	13.243
12	VBLKH11	108784	4.458	1519191	7.945	1168366	11.372	618519	13.243
13	VBLKH13	108784	4.458	1519191	7.945	1168366	11.372	618519	13.243
14	VBLKH15	108784	4.458	1519191	7.945	1168366	11.372	618519	13.243
15	1318659	111944	4.446	1508213	7.945	1182475	11.372	626263	13.243
16	1315273	99748	4.470	1473624	7.945	1147019	11.371	619052	13.243
17	1315274	54823	4.452	1502446	7.945	1112577	11.372	566204	13.243
18	1316684	50829	* 4.452	1488273	7.945	1095508	11.371	537048	13.243
19	1315433	50732	* 4.458	1487950	7.945	1100058	11.372	541397	13.243
20	1316680	51310	* 4.452	1489748	7.945	1112459	11.372	547973	13.243
21	1316681MS	50543	* 4.458	1557311	7.945	1133154	11.372	562181	13.243
22	1316682MSD	52649	* 4.470	1564117	7.945	1124876	11.372	558529	13.243

IS1 (TBA)=t-Butyl Alcohol-d10 UPPER LIMIT = + 100%
 IS2 (FBZ)=Fluorobenzene of internal standard area.
 IS3 (CBZ)=Chlorobenzene-d5 LOWER LIMIT = - 50%
 IS4 (DCB)=1,4-Dichlorobenzene-d4 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): hy21c01.d Date Analyzed: 05/21/20
 Instrument ID: HP19094 Time Analyzed: 20:21
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA) AREA #	RT #	IS2 (FBZ) AREA #	RT #	IS3 (CBZ) AREA #	RT #	IS4 (DCB) AREA #	RT #
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	12 HOUR STD	106581	4.452	1579583	7.945	1209967	11.372	633161	13.243
	UPPER LIMIT	213162	4.952	3159166	8.445	2419934	11.872	1266322	13.743
	LOWER LIMIT	53290	3.952	789792	7.445	604984	10.872	316580	12.743
	=====	=====	=====	=====	=====	=====	=====	=====	=====
	LAB SAMPLE ID								
	=====	=====	=====	=====	=====	=====	=====	=====	=====
23	1316683	51725 *	4.446	1491196	7.951	1107910	11.371	545941	13.243
24	1313731	94332	4.464	1494180	7.945	1169572	11.371	600380	13.243
25	1314438	80733	4.446	1492783	7.945	1140831	11.371	592174	13.243
26	1315431	53191 *	4.446	1546892	7.945	1106575	11.371	540722	13.243
27	1315431DL	50905 *	4.440	1516544	7.945	1080226	11.371	526819	13.243
28	SECC010	52753 *	4.476	1548191	7.952	1123731	11.372	551677	13.243

IS1 (TBA)=t-Butyl Alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.
 page 2 of 2

FORM VIII VOA

Sample Data

Volatiles by GC/MS

R6401

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1318659

Data file: /chem2/HP19094.i/20may21b.b/hy21s02.d

Injection date and time: 21-MAY-2020 23:24

Data file Sample Info. Line: R6401;1318659;1;0;;RAF64;DRAPERLOQ;;hy21b01; Instrument ID: HP19094.i Batch: H201424AA

Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9179

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.446(0.006)	469	65	111944 (5)	50.00	
64) Fluorobenzene	7.945(0.000)	1043	96	1508213 (-5)	10.00	
98) Chlorobenzene-d5	11.372(0.000)	1605	117	1182475 (-2)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	626263 (-1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055(-0.001)	113	398549	10.630	106%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513(0.000)	102	78475	10.800	108%		80 - 120
83) Toluene-d8	(3)	9.939(-0.001)	98	1522600	9.665	97%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	542296	9.304	93%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.074(0.000)	85	14089	0.249	0.25		J	0.05 1
4) Dimethyl ether	(2)			Not Detected					0.04 13
2) Chloromethane	(2)			Not Detected					0.06 1
8) Chloroethane	(2)			Not Detected					0.07 1
10) Trichlorofluoromethane	(2)			Not Detected					0.05 1
11) Ethyl ether	(2)			Not Detected					0.05 13
15) 1,1-Dichloroethene	(2)			Not Detected					0.06 1
16) Freon 113	(2)			Not Detected					0.06 1
24) Methylene Chloride	(2)	4.458(-0.001)	84	9294	0.234	0.23		J	0.07 1
34) 1,1-Dichloroethane	(2)			Not Detected					0.07 1
39) 2-Butanone	(1)			Not Detected					0.6 10
49) Tetrahydrofuran	(1)			Not Detected					0.8 25
52) 1,1,1-Trichloroethane	(2)			Not Detected					0.06 1
55) Carbon Tetrachloride	(2)			Not Detected					0.07 1
59) Benzene	(2)			Not Detected					0.05 1
68) Trichloroethene	(2)			Not Detected					0.06 1
84) Toluene	(3)			Not Detected					0.07 1
90) Tetrachloroethene	(3)			Not Detected					0.06 1
101) Ethylbenzene	(3)			Not Detected					0.06 1
102) m+p-Xylene	(3)			Not Detected					0.1 0.5
105) o-Xylene	(3)			Not Detected					0.05 0.5
106) Xylene (Total)	(3)			Not Detected					0.2 3

R6401

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1318659

Data file: /chem2/HP19094.i/20may21b.b/hy21s02.d

Injection date and time: **21-MAY-2020 23:24**

Data file Sample Info. Line: R6401;1318659;1;0;;RAF64;DRAPERLOQ;;hy21b01; Instrument ID: **HP19094.i** Batch: **H201424AA**
Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: **22469**

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

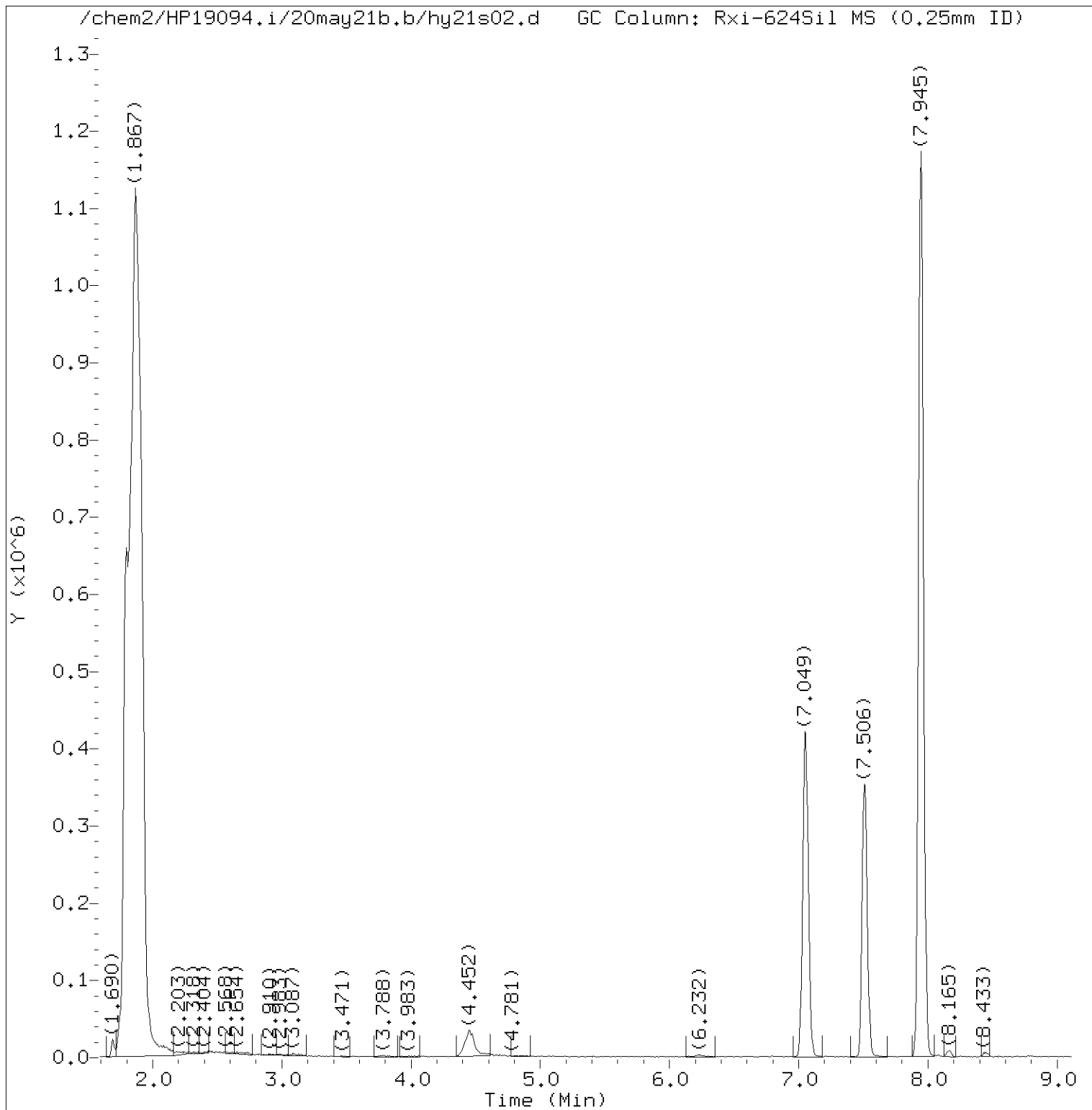
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 05/22/2020 at 06:48. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21s02.d
Injection date and time: 21-MAY-2020 23:24

Instrument ID: HP19094.i
Analyst ID: mec29284

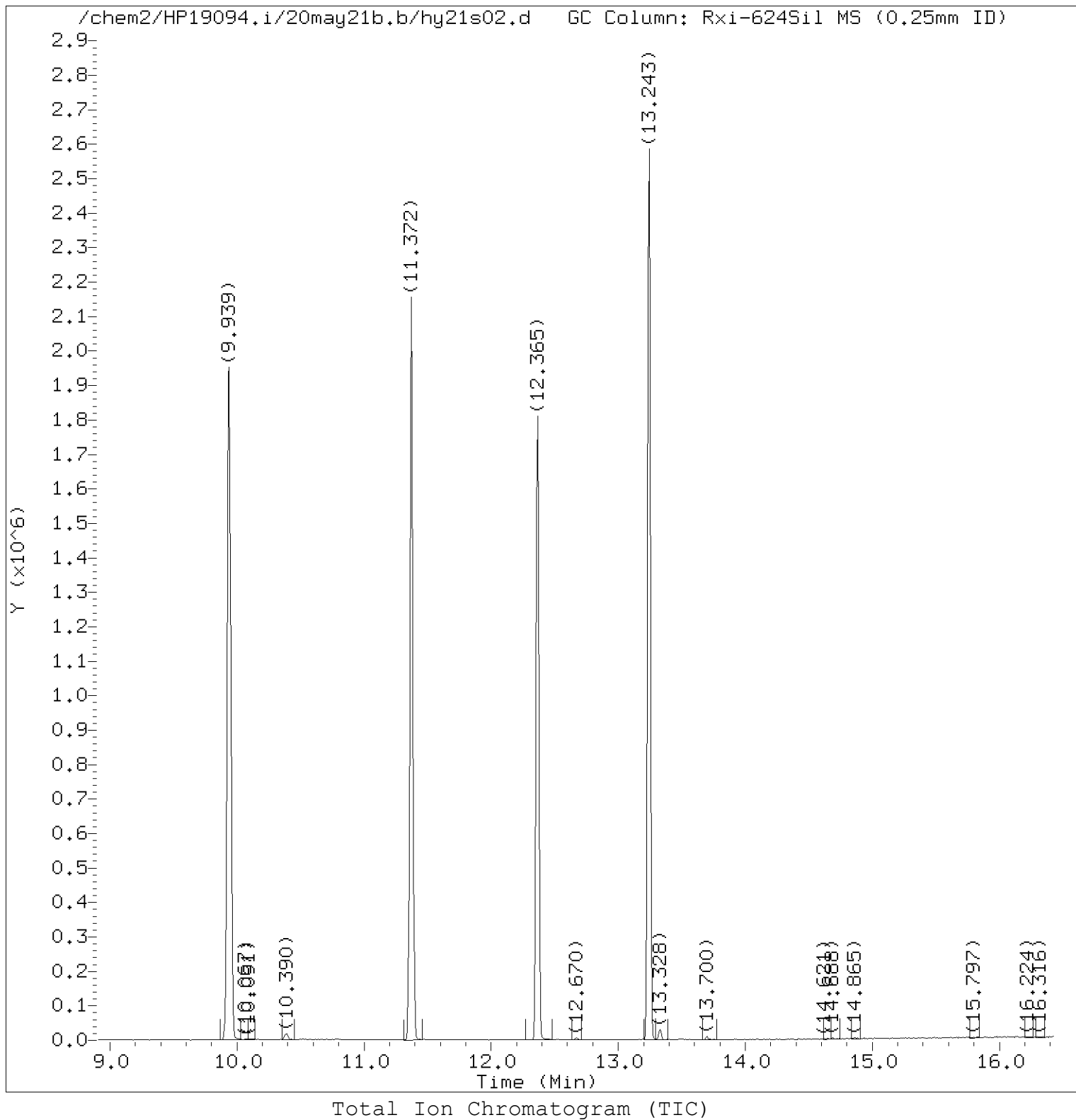
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Sample Name: R6401

Lab Sample ID: 1318659

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 06:48.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21s02.d
Injection date and time: 21-MAY-2020 23:24

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Sample Name: R6401

Lab Sample ID: 1318659

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 06:48.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21s02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 23:24

Analyst ID: mec29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Sample Name: R6401

Lab Sample ID: 1318659

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.075	85	14089	0.249
27) *t-Butyl Alcohol-d10	(1)	4.446	65	111944	50.000
24) Methylene Chloride	(2)	4.458	84	9294	0.234
51) \$Dibromofluoromethane	(2)	7.055	113	398549	10.630
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	78475	10.800
64) *Fluorobenzene	(2)	7.945	96	1508213	10.000
83) \$Toluene-d8	(3)	9.939	98	1522600	9.665
98) *Chlorobenzene-d5	(3)	11.372	117	1182475	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	542296	9.304
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	626263	10.000

* = Compound is an internal standard.

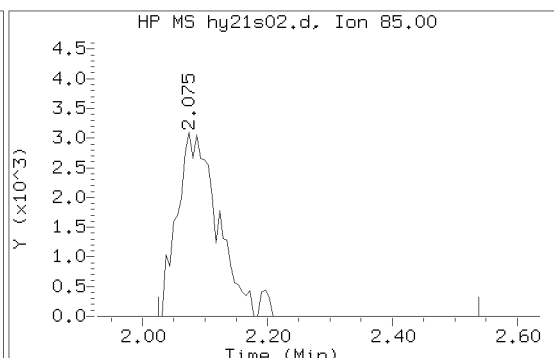
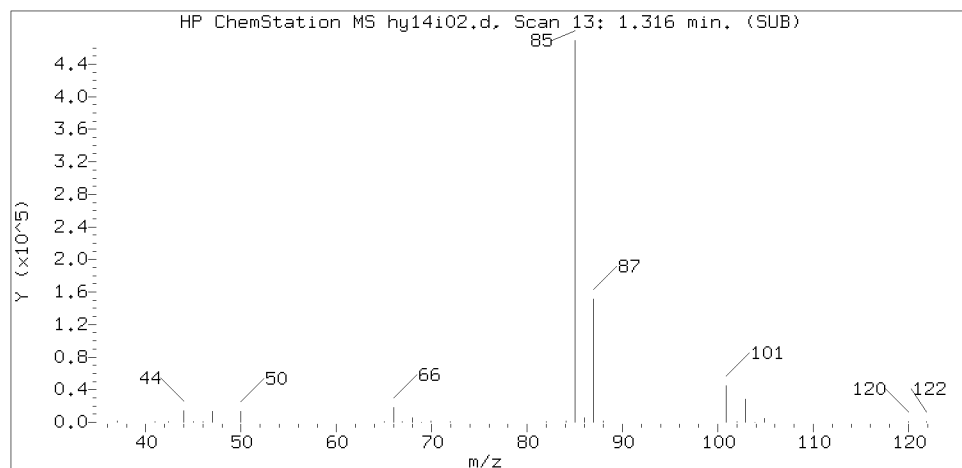
\$ = Compound is a surrogate standard.

page 1 of 1

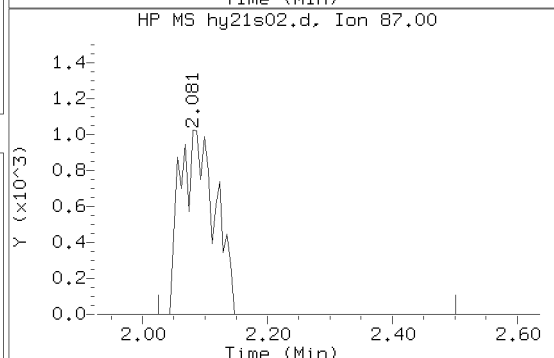
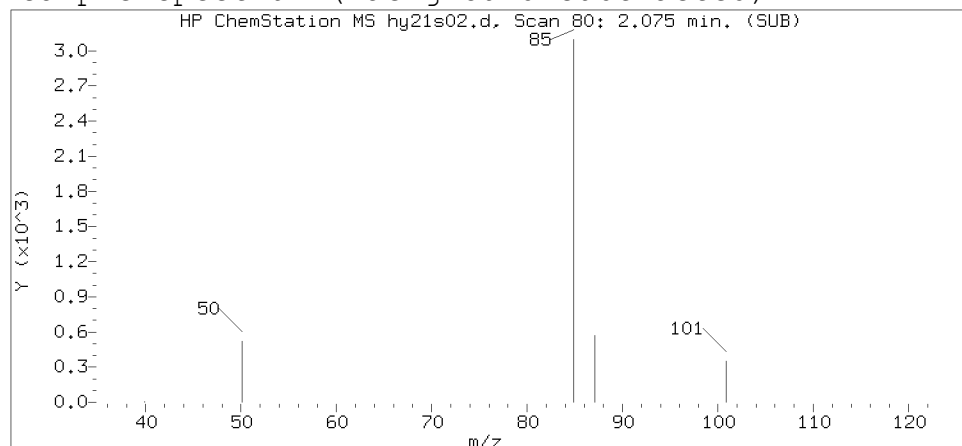
Digitally signed by Jennifer K. Howe
on 05/22/2020 at 06:48.

Target 3.5 esignature user ID: jkh09052

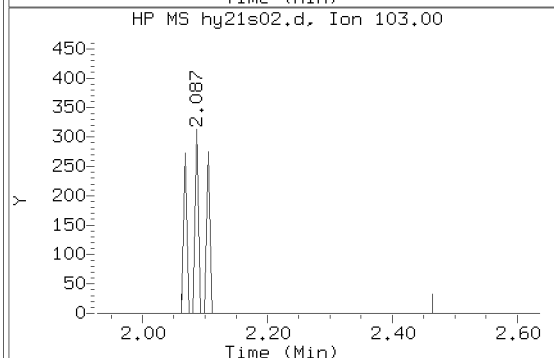
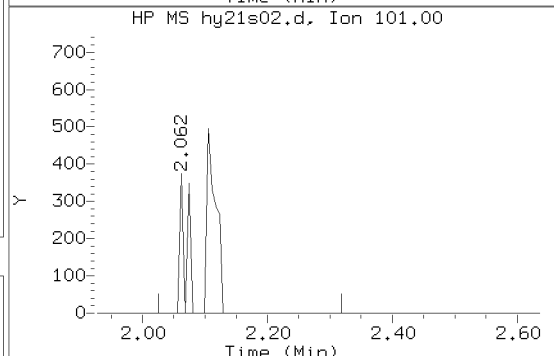
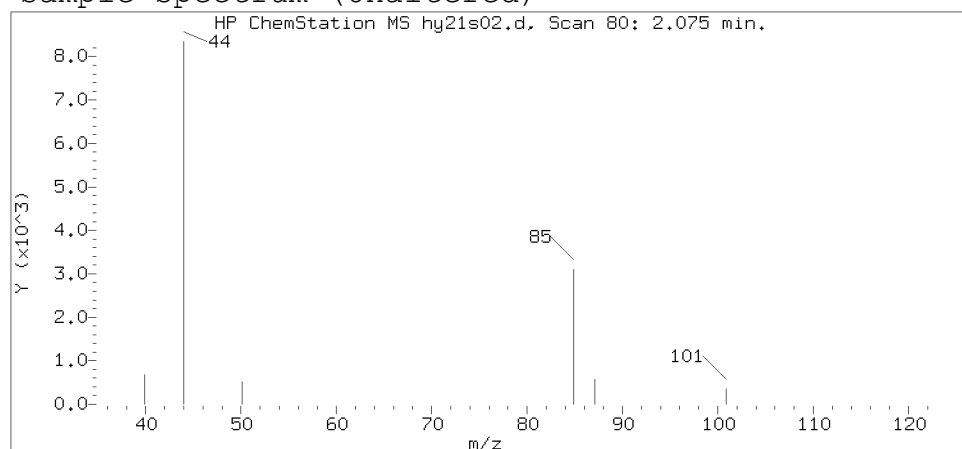
Reference Standard Spectrum for Dichlorodifluoromethane



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20may21b.b/hy21s02.d
Injection date and time: 21-MAY-2020 23:24

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Sample Name: R6401

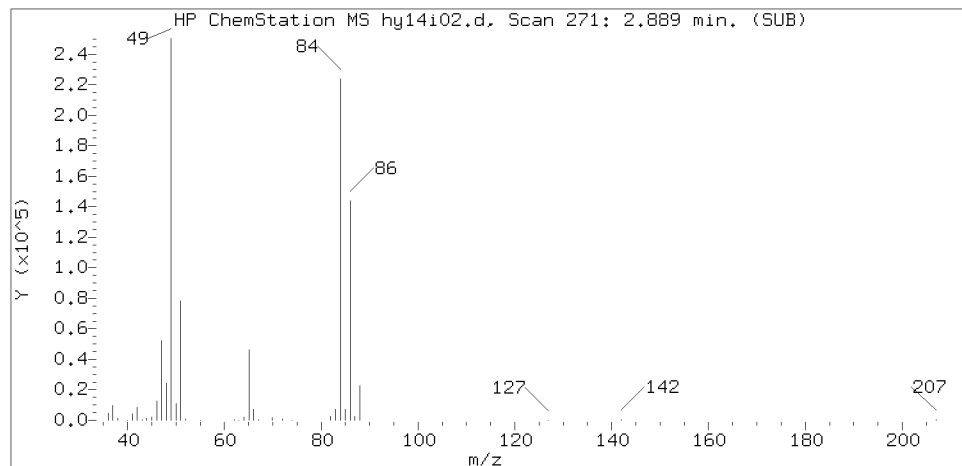
Lab Sample ID: 1318659

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Relative Retention Time : 0.00077
Quant Ion : 85.00
Area (flag) : 14089
On-Column Amount (ng) : 0.2492

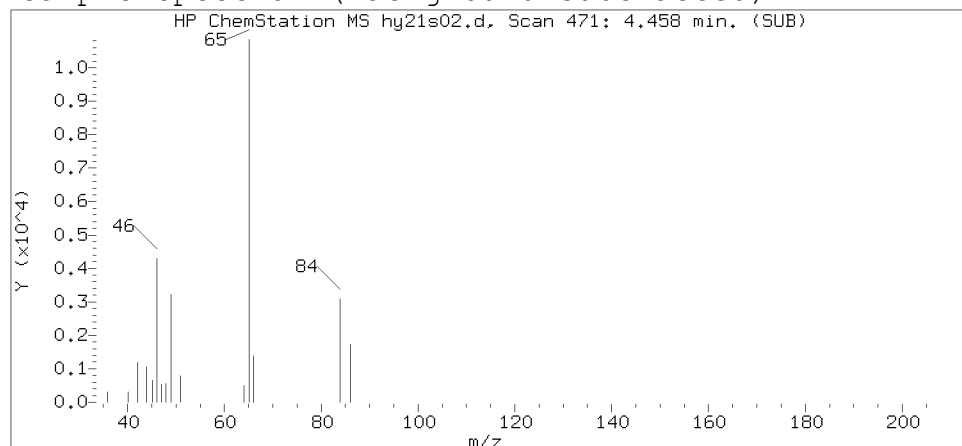
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Target 3.5 esignature user ID: jkh09052

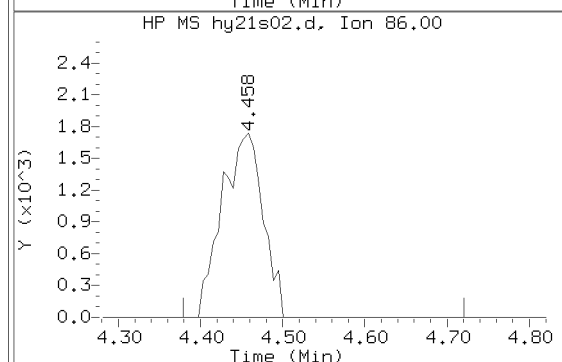
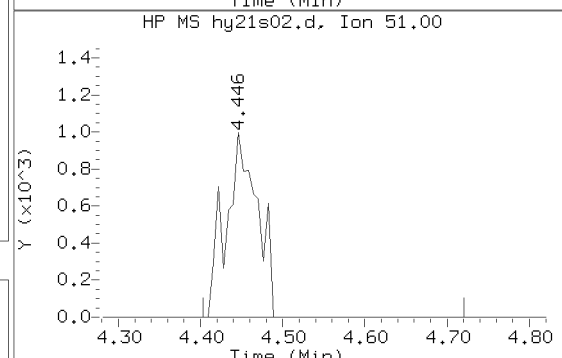
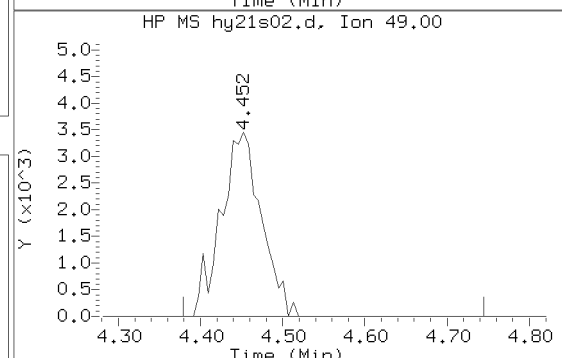
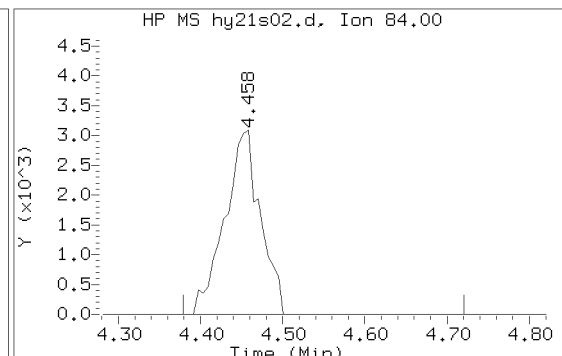
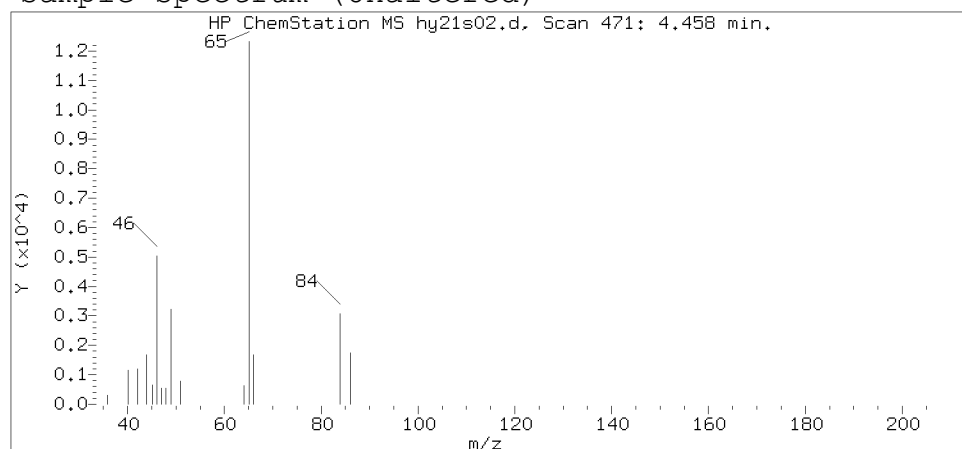
Reference Standard Spectrum for Methylene Chloride



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/20may21b.b/hy21s02.d
Injection date and time: 21-MAY-2020 23:24

Instrument ID: HP19094.i
Analyst ID: mec29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 22-May-2020 06:44 jkh09052

Sample Name: R6401

Lab Sample ID: 1318659

Compound Number : 24
Compound Name : Methylene Chloride
Scan Number : 471
Retention Time (minutes): 4.458
Relative Retention Time : -0.00153
Quant Ion : 84.00
Area (flag) : 9294
On-Column Amount (ng) : 0.2343

Digitally signed by Jennifer K. Howe on 05/22/2020 at 06:48.

Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20jan06i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	HJ06T01.D	BFB AUG 02 2019	01/06/2020	10:35		
JKH09052	HJ06X00.D	blk	01/06/2020	10:57		
JKH09052	HJ06I11.D	VSTD025	01/06/2020	11:19		
JKH09052	HJ06I12.D	VSTD010	01/06/2020	11:41		
JKH09052	HJ06I13.D	VSTD005	01/06/2020	12:02		
JKH09052	HJ06I14.D	VSTD002	01/06/2020	12:24		
JKH09052	HJ06I15.D	VSTD001	01/06/2020	12:46		
JKH09052	HJ06I16.D	VSTD0.5	01/06/2020	13:07		
JKH09052	HJ06I17.D	VSTD0.2	01/06/2020	13:29		
JKH09052	HJ06V11.D	ICVH00	01/06/2020	13:51		
JKH09052	HJ06X01.D	blk	01/06/2020	14:13		
JKH09052	HJ06I01.D	VSTD025	01/06/2020	14:34		
JKH09052	HJ06I02.D	VSTD010	01/06/2020	14:56		
JKH09052	HJ06I03.D	VSTD005	01/06/2020	15:18		
JKH09052	HJ06I04.D	VSTD002	01/06/2020	15:39		
JKH09052	HJ06I05.D	VSTD001	01/06/2020	16:01		
JKH09052	HJ06I06.D	VSTD0.5	01/06/2020	16:23		
JKH09052	HJ06I07.D	VSTD0.2	01/06/2020	16:44		
JKH09052	HJ06V01.D	ICVH01	01/06/2020	17:06		
JKH09052	HJ06X02.D	blk	01/06/2020	17:28		
JKH09052	HJ06B01.D	blk	01/06/2020	17:50		
JKH09052	HJ06M01.D	MDL0.1	01/06/2020	18:11		
JKH09052	HJ06M02.D	MDL0.1	01/06/2020	18:33		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\20may21b\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
mec29284	HY21T05.D	BFB JAN 28 2020	05/21/2020	19:38		
mec29284	HY21T06.D	BFB JAN 28 2020	05/21/2020	19:47		
MEC29284	HY21X00.D	BLK	05/21/2020	19:59	H201424AA	
MEC29284	HY21C01.D	VSTD010	05/21/2020	20:21	H201424AA	
MEC29284	HY21C02.D	VSTD010	05/21/2020	20:43	H201424AA	
MEC29284	HY21L01.D	LCSH11	05/21/2020	21:04	H201424AA	
MEC29284	HY21L02.D	LCDH11	05/21/2020	21:26	H201424AA	
MEC29284	HY21L03.D	LCSH12	05/21/2020	21:47	H201424AA	
MEC29284	HY21L04.D	LCDH12	05/21/2020	22:09	H201424AA	
MEC29284	HY21R01.D	RLVH11	05/21/2020	22:31	H201424AA	
MEC29284	HY21B01.D	VLKH11	05/21/2020	22:53	H201424AA	
mec29284	HY21S02.D	1318659	05/21/2020	23:24	H201424AA	
mec29284	HY21S35.D	1315273	05/21/2020	23:45	H201425AA	25
mec29284	HY21S36.D	1315273DL	05/22/2020	00:07	H201425AA	250
mec29284	HY21S37.D	1315274	05/22/2020	00:29	H201425AA	25
mec29284	HY21S38.D	1315274DL	05/22/2020	00:50	H201425AA	250
mec29284	HY21S63.D	1316684	05/22/2020	01:12	H201426AA	
mec29284	HY21S64.D	1316447	05/22/2020	01:33	H201426AA	
mec29284	HY21S65.D	1315433	05/22/2020	01:55	H201426AA	
mec29284	HY21S66.D	1316680	05/22/2020	02:17	H201426AA	
mec29284	HY21S67.D	1316681MS	05/22/2020	02:39	H201426AA	
mec29284	HY21S68.D	1316682MSD	05/22/2020	03:01	H201426AA	
mec29284	HY21S69.D	1316683	05/22/2020	03:22	H201426AA	
mec29284	HY21S70.D	1313731	05/22/2020	03:44	H201426AA	
mec29284	HY21S71.D	1314438	05/22/2020	04:05	H201426AA	
mec29284	HY21S72.D	1315427	05/22/2020	04:27	H201426AA	20
mec29284	HY21S73.D	1315427DL	05/22/2020	04:49	H201426AA	200
mec29284	HY21S74.D	1315429	05/22/2020	05:10	H201426AA	10
mec29284	HY21S75.D	1315429DL	05/22/2020	05:32	H201426AA	100
mec29284	HY21S76.D	1315431	05/22/2020	05:54	H201426AA	2
mec29284	HY21S77.D	1315431DL	05/22/2020	06:16	H201426AA	20
mec29284	HY21EC1.D	SECC010	05/22/2020	06:37	H201426AA	

Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Page 1

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

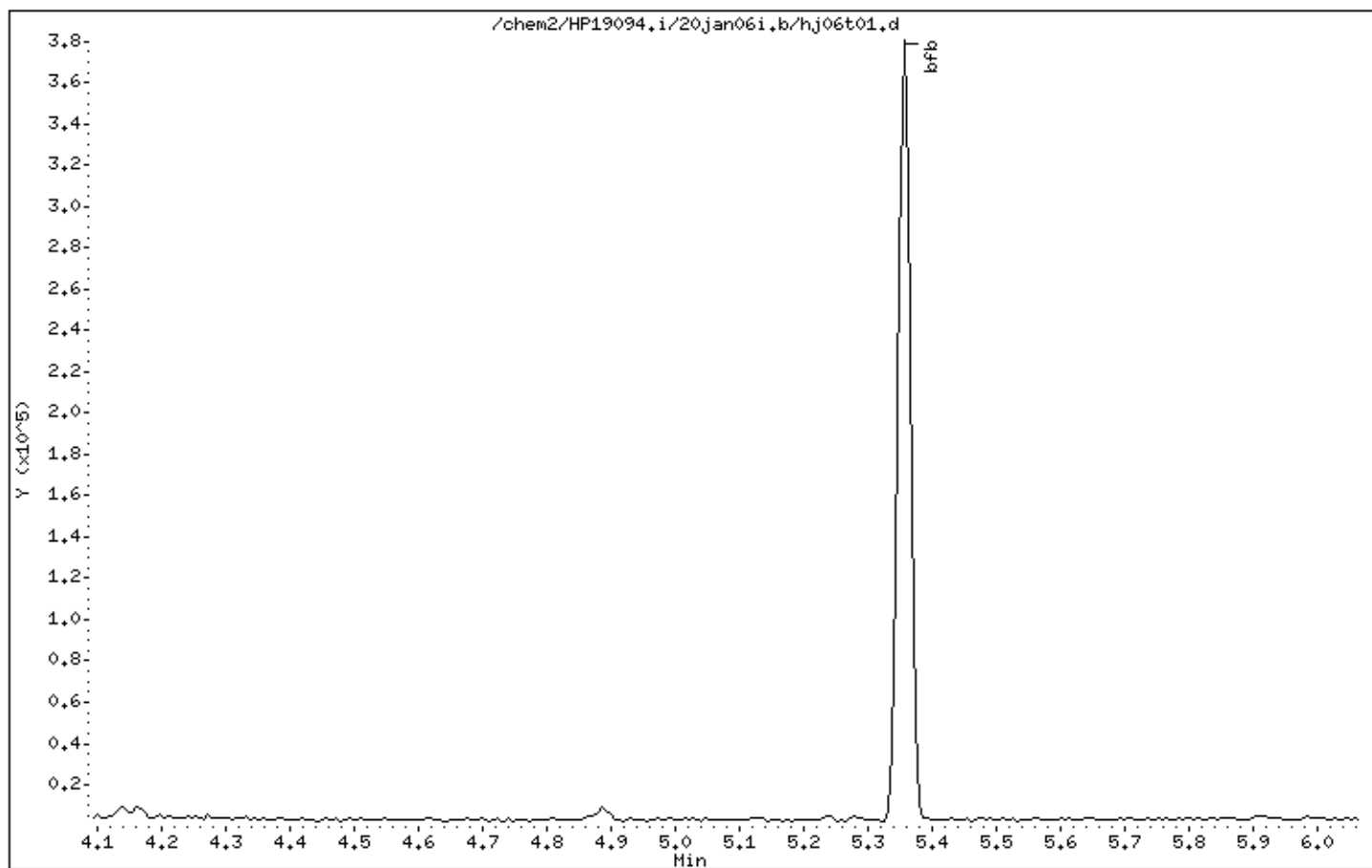
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25



Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

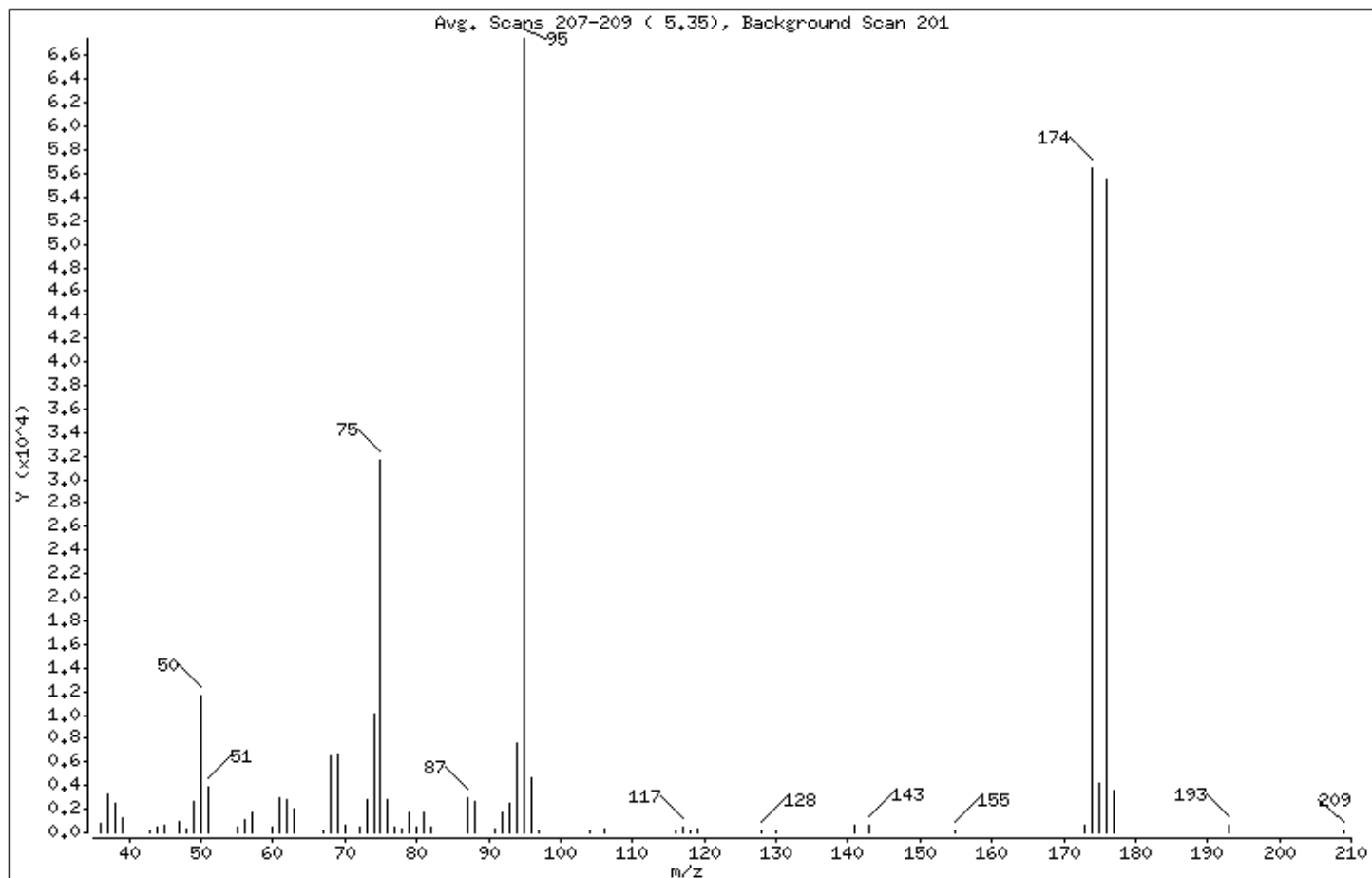
Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.81
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.87 (1.05)
174	50.00 - 100.00% of mass 95	83.57
175	5.00 - 9.00% of mass 174	6.30 (7.54)
176	95.00 - 101.00% of mass 174	82.22 (98.38)
177	5.00 - 9.00% of mass 176	5.38 (6.54)

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

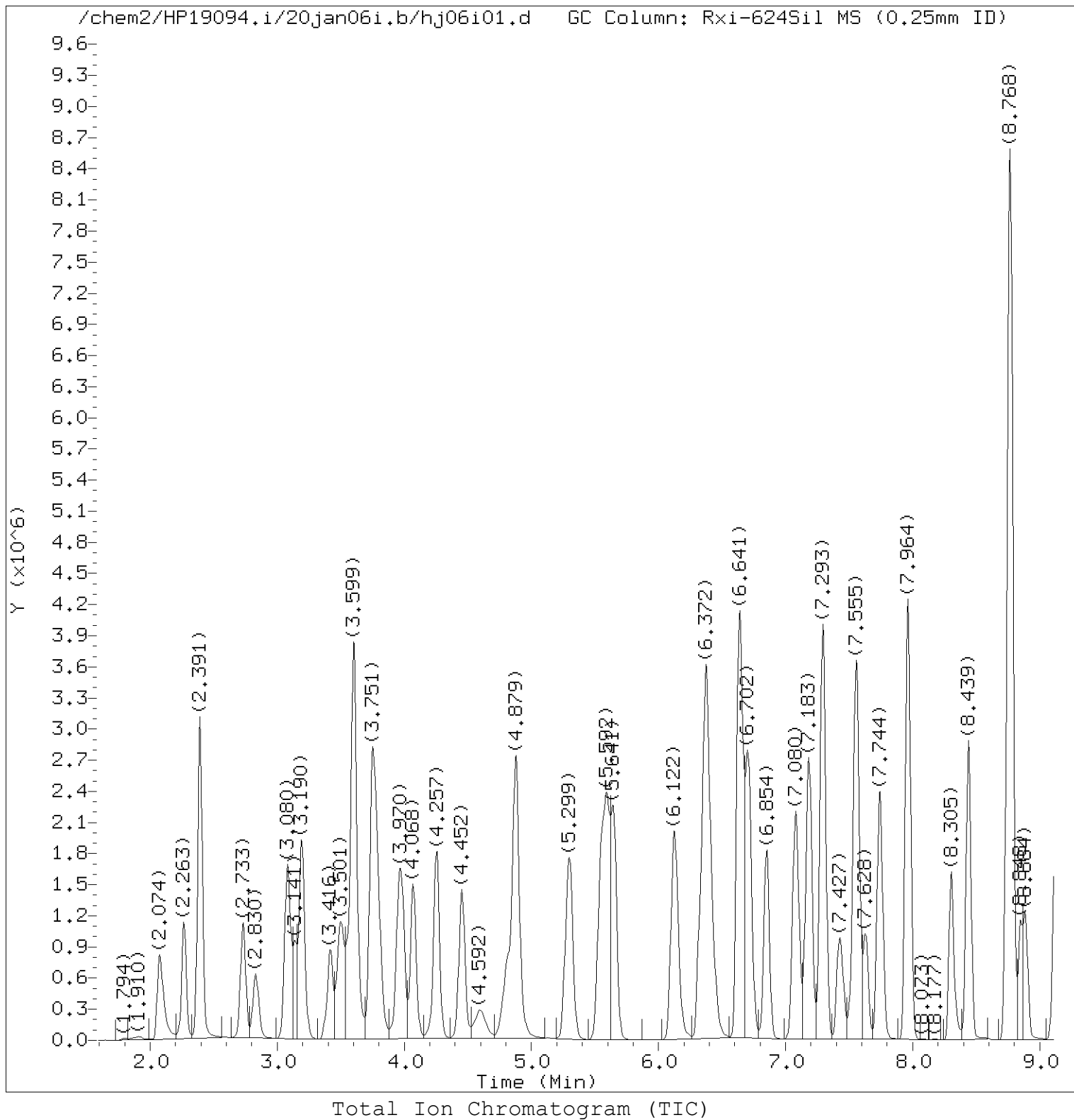
Data File: hj06t01.d

Spectrum: Avg. Scans 207-209 (5,35), Background Scan 201

Location of Maximum: 95,00

Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	728	61,00	3008	81,00	1673	119,00	311
37,00	3211	62,00	2746	82,00	464	128,00	179
38,00	2548	63,00	2022	87,00	2913	130,00	83
39,00	1276	67,00	141	88,00	2633	141,00	588
43,00	92	68,00	6446	91,00	362	143,00	676
44,00	477	69,00	6605	92,00	1689	155,00	88
45,00	580	70,00	566	93,00	2528	173,00	590
47,00	876	72,00	410	94,00	7552	174,00	56384
48,00	366	73,00	2820	95,00	67472	175,00	4254
49,00	2645	74,00	10007	96,00	4591	176,00	55472
50,00	11651	75,00	31584	97,00	183	177,00	3628
51,00	3893	76,00	2766	104,00	180	193,00	604
55,00	413	77,00	463	106,00	329	209,00	154
56,00	1070	78,00	272	116,00	96		
57,00	1740	79,00	1750	117,00	427		
60,00	500	80,00	538	118,00	84		



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

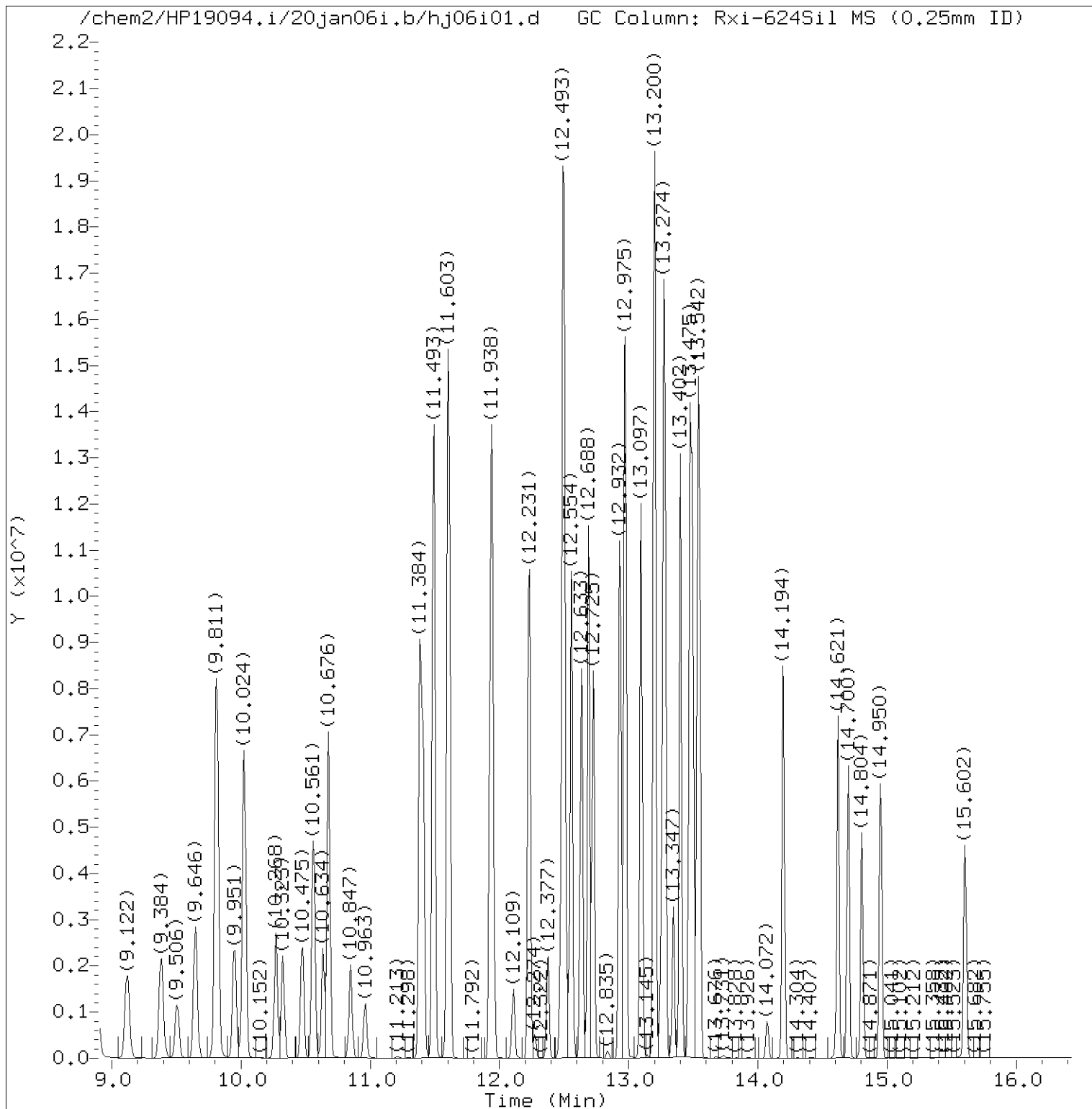
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
 Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.074	85	1888431M	26.070
2) Chloromethane	(2)	2.263	50	1774739	24.819
6) 1,3-Butadiene	(2)	2.391	39	1358999	25.292
5) Vinyl Chloride	(2)	2.391	62	1727148	25.393
7) Bromomethane	(2)	2.733	94	1193329	24.492
8) Chloroethane	(2)	2.830	64	988051	25.082
9) Dichlorofluoromethane	(2)	3.080	67	2249717	24.048
10) Trichlorofluoromethane	(2)	3.135	101	1936642	24.949
11) Ethyl ether	(2)	3.416	59	865011	25.180
12) Freon 123a	(2)	3.501	67	1489859	24.825
13) Acrolein	(1)	3.605	56	6522303	1270.686
15) 1,1-Dichloroethene	(2)	3.745	96	1170732	24.798
14) Acetone	(1)	3.781	43	1577967M	227.830
16) Freon 113	(2)	3.781	101	1260863	25.549
17) Methyl Iodide	(2)	3.958	142	2301223	25.258
18) Bromoethane	(2)	3.983	108	1026514M	24.921
19) Carbon Disulfide	(2)	4.068	76	3564017	24.678
22) Methyl Acetate	(1)	4.226	43	432665	24.755
23) Allyl Chloride	(2)	4.257	41	1940516	24.196
24) Methylene Chloride	(2)	4.452	84	1243110	24.464
27)*t-Butyl Alcohol-d10	(1)	4.476	65	113987M	50.000
29) t-Butyl Alcohol	(1)	4.598	59	1153887	479.599
30) Acrylonitrile	(1)	4.800	53	1075695	127.272
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	2669747	24.734
32) trans-1,2-Dichloroethene	(2)	4.885	96	1285392	24.767
33) n-Hexane	(2)	5.299	57	1866448	25.497
34) 1,1-Dichloroethane	(2)	5.543	63	2381394	25.415
35) di-Isopropyl Ether	(2)	5.592	45	3878957	25.133
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	2035507	25.371
41) 1,2-Dichloroethene (Total)	(2)		96	2732662	49.862
38) Ethyl t-butyl ether	(2)	6.122	59	3616764	24.961
39) 2-Butanone	(1)	6.330	43	2681869	247.640
40) cis-1,2-Dichloroethene	(2)	6.372	96	1447270	25.095
42) 2,2-Dichloropropane	(2)	6.391	77	1996218	25.037
43) Propionitrile	(1)	6.421	54	1509137	508.720
46) Methacrylonitrile	(1)	6.641	67	2746656	258.877
48) Bromochloromethane	(2)	6.702	128	593671	24.382
49) Tetrahydrofuran	(1)	6.708	71	763010	255.020

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
 Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	2302782	25.181
51) \$Dibromofluoromethane	(2)	7.067	113	482524	10.045
51) \$Dibromofluoromethane	(2)	7.067	111	495256	10.035
52) 1,1,1-Trichloroethane	(2)	7.086	97	2148440	25.262
53) Cyclohexane	(2)	7.183	56	2289885	25.210
53) Cyclohexane	(2)	7.183	84	1999561	25.701
53) Cyclohexane	(2)	7.183	69	713908	25.255
56) 1,1-Dichloropropene	(2)	7.293	75	1857069	25.837
55) Carbon Tetrachloride	(2)	7.293	117	1867884	25.616
57) Isobutyl Alcohol	(1)	7.427	41	929458	1114.509
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	93327	10.024
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	425818	9.913
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59128	10.027
59) Benzene	(2)	7.561	78	5323567	25.327
60) 1,2-Dichloroethane	(2)	7.628	62	1315186M	24.269
61) t-Amyl methyl ether	(2)	7.744	73	3151720	24.940
63) n-Heptane	(2)	7.964	43	1941468	25.282
64) *Fluorobenzene	(2)	7.964	96	1932435	10.000
66) n-Butanol	(1)	8.305	56	1581544	2355.676
68) Trichloroethene	(2)	8.439	95	1409523	25.571
70) Methylcyclohexane	(2)	8.750	83	2525018	25.569
71) 1,2-Dichloropropane	(2)	8.780	63	1305552	25.106
72) Methyl Methacrylate	(1)	8.848	69	550111	25.775
73) 1,4-Dioxane	(1)	8.860	88	161139M	995.125
74) Dibromomethane	(2)	8.890	93	588855	24.771
75) Bromodichloromethane	(2)	9.122	83	1675482	25.933
77) 2-Nitropropane	(1)	9.384	41	1813026	258.627
80) 1-Bromo-2-chloroethane	(2)	9.506	63	1246645M	25.504
81) cis-1,3-Dichloropropene	(2)	9.646	75	2001367	26.231
82) 4-Methyl-2-Pentanone	(1)	9.811	43	6845018	256.442
83) \$Toluene-d8	(3)	9.951	98	1934295	9.972
83) \$Toluene-d8	(3)	9.951	100	1251812	9.979
84) Toluene	(3)	10.024	92	3395076	24.917
86) 1,3-Dichloropropene (total)	(3)		75	3633907	52.045
85) trans-1,3-Dichloropropene	(3)	10.268	75	1632540	25.814
87) Ethyl Methacrylate	(3)	10.323	69	1234931	25.192
89) 1,1,2-Trichloroethane	(3)	10.475	97	856983	25.034
90) Tetrachloroethene	(3)	10.561	166	1554796	25.105

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d
 Injection date and time: 06-JAN-2020 14:34

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	1467070	24.945
92) 2-Hexanone	(1)	10.676	43	4597643	252.076
94) Dibromochloromethane	(3)	10.847	129	1139436	25.995
96) 1,2-Dibromoethane	(3)	10.963	107	837813	25.610
97) 1-Chlorohexane	(3)	11.384	91	1992892	24.260
98) *Chlorobenzene-d5	(3)	11.384	117	1455879	10.000
99) Chlorobenzene	(3)	11.408	112	3675871	24.692
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	1325399	25.032
101) Ethylbenzene	(3)	11.493	91	6641855	24.772
102) m+p-Xylene	(3)	11.603	106	5072744	49.480
106) Xylene (Total)	(3)		106	7609455	74.638
105) o-Xylene	(3)	11.932	106	2536711	25.163
107) Styrene	(3)	11.944	104	4113469	25.144
108) Bromoform	(3)	12.109	173	667346	26.121
109) Isopropylbenzene	(3)	12.231	105	6817861	24.954
112) \$4-Bromofluorobenzene	(3)	12.377	95	707521	9.860
112) \$4-Bromofluorobenzene	(3)	12.377	174	610743	9.946
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	1006708M	25.815
115) Bromobenzene	(4)	12.493	156	1499258	25.433
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	2625732A	261.870
117) 1,2,3-Trichloropropane	(4)	12.524	110	262588	25.145
118) n-Propylbenzene	(4)	12.554	91	7839823	25.469
120) 2-Chlorotoluene	(4)	12.633	126	1554434	25.595
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	5777458	25.872
123) 4-Chlorotoluene	(4)	12.725	126	1535913	25.341
126) tert-Butylbenzene	(4)	12.932	134	1204251	26.074
127) Pentachloroethane	(4)	12.969	167	1021562	25.954
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	5903452	25.601
129) sec-Butylbenzene	(4)	13.097	105	7537250	26.052
133) p-Isopropyltoluene	(4)	13.200	119	6452104	25.912
132) 1,3-Dichlorobenzene	(4)	13.200	146	3015496	25.668
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	746931	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	2924687	25.521
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	2421094	25.178
137) Benzyl Chloride	(4)	13.347	126	444448	27.109
139) n-Butylbenzene	(4)	13.493	92	3226649	26.213
140) 1,2-Dichlorobenzene	(4)	13.530	146	2620490	25.305
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	158060	27.640

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

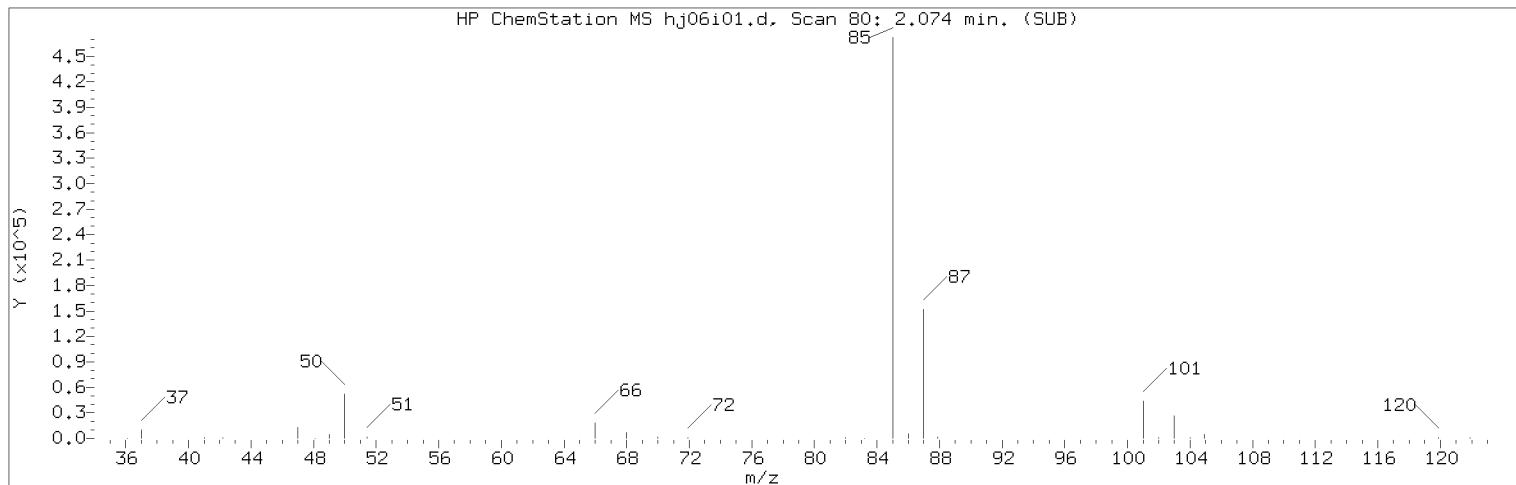
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.194	180	2531869	27.539
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	2120885	27.508
147) Hexachlorobutadiene	(4)	14.700	225	1087011	27.015
148) Naphthalene	(4)	14.804	128	3537363	26.291
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	1777387	27.005

page 4 of 4

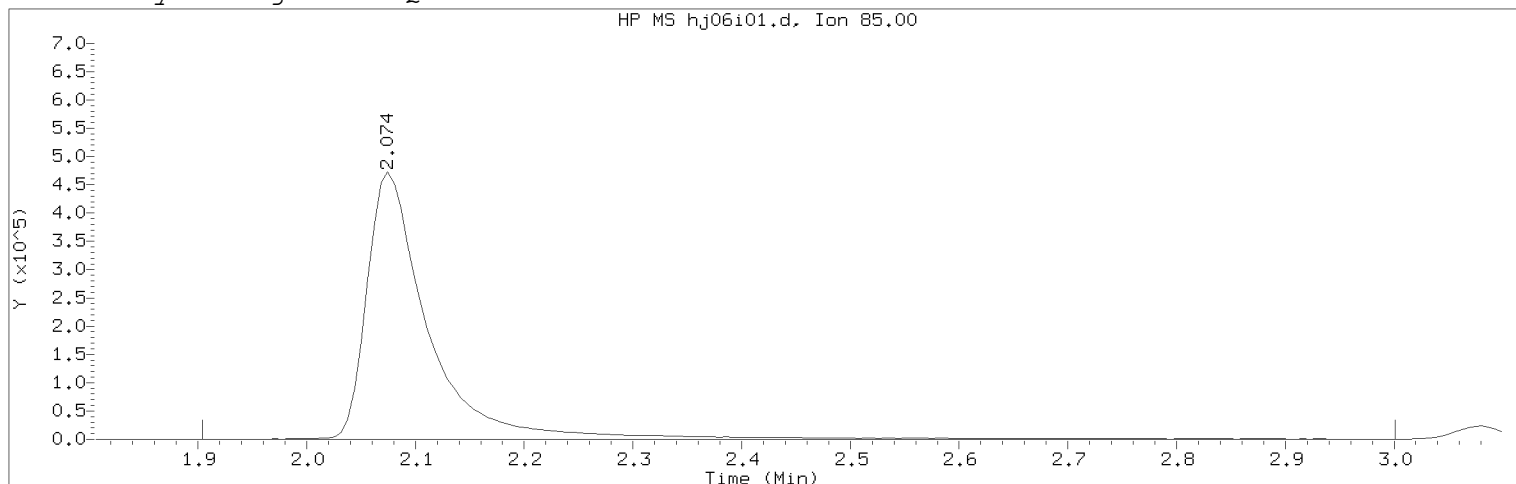
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

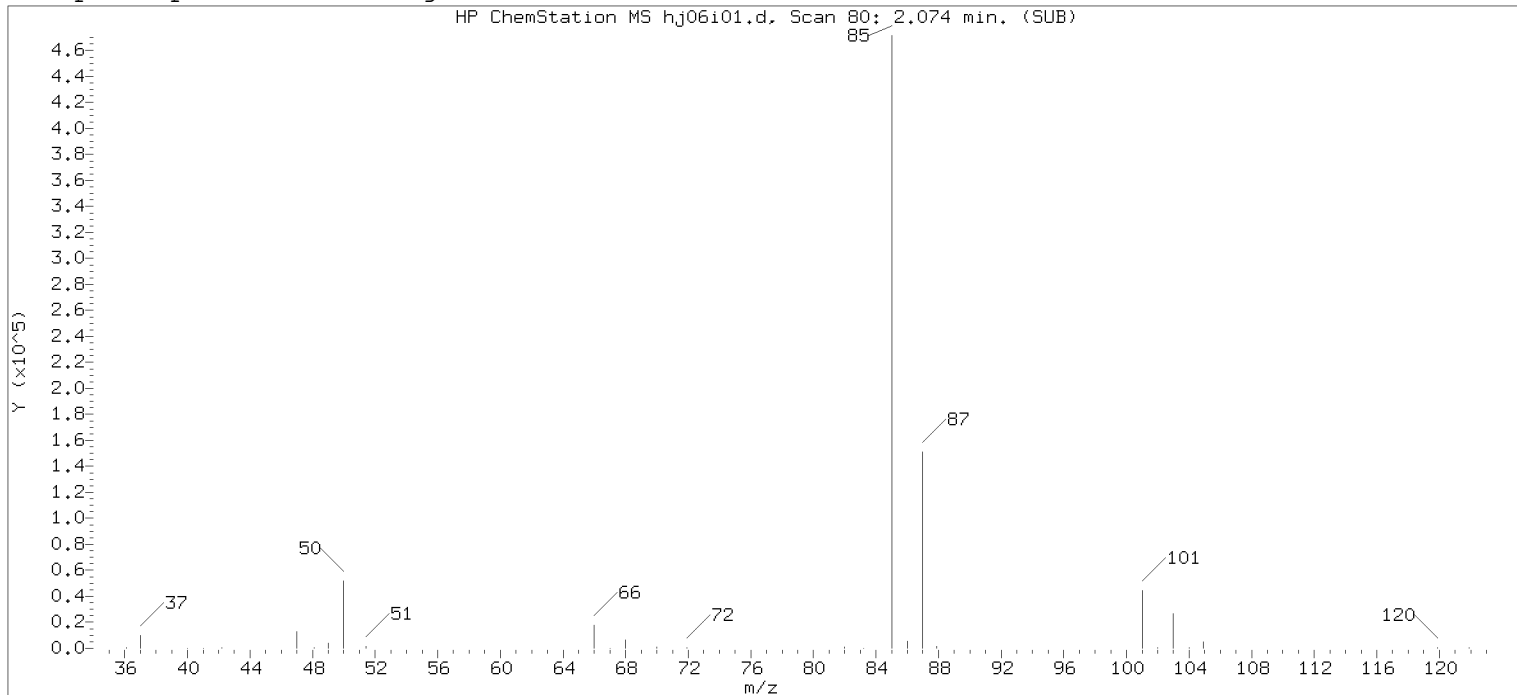
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area (flag) : 1888431M
On-Column Amount (ng) : 26.0698
Integration start scan : 51 Integration stop scan: 231
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

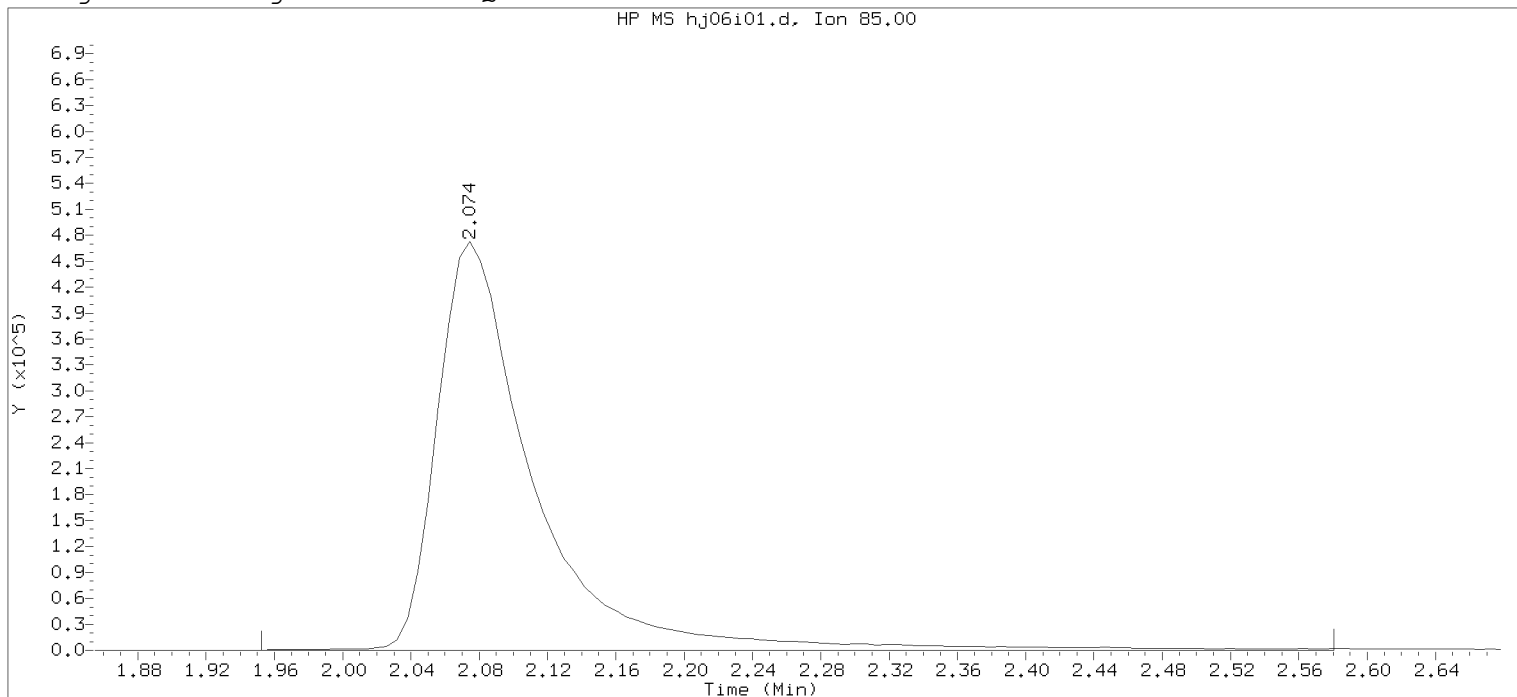
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

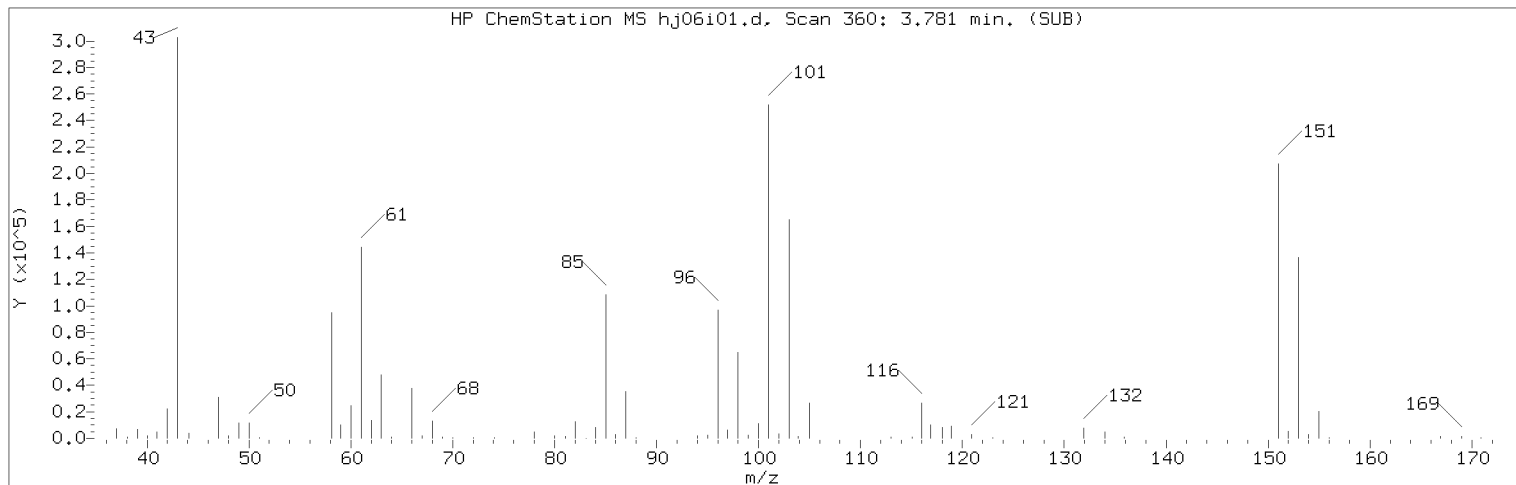
Sample Name: VSTD025

Lab Sample ID: VSTD025

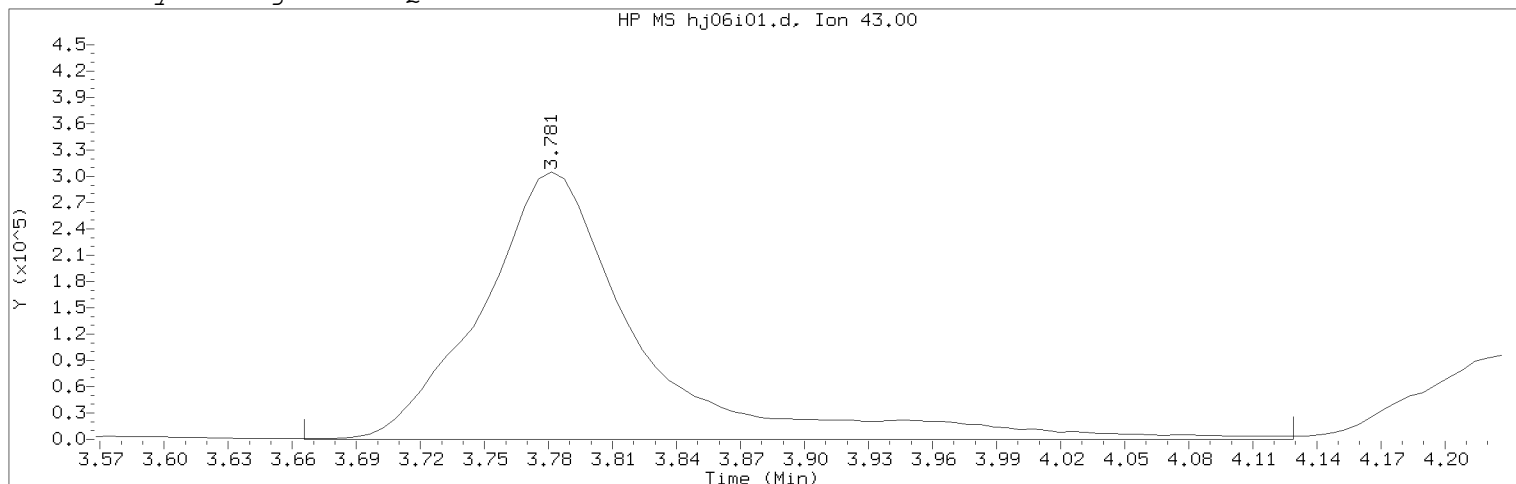
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 80	
Retention Time (minutes)	: 2.074	
Quant Ion	: 85.00	
Area	: 1866572	
On-column Amount (ng)	: 25.8333	
Integration start scan	: 59	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAJ-64-Page 074 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

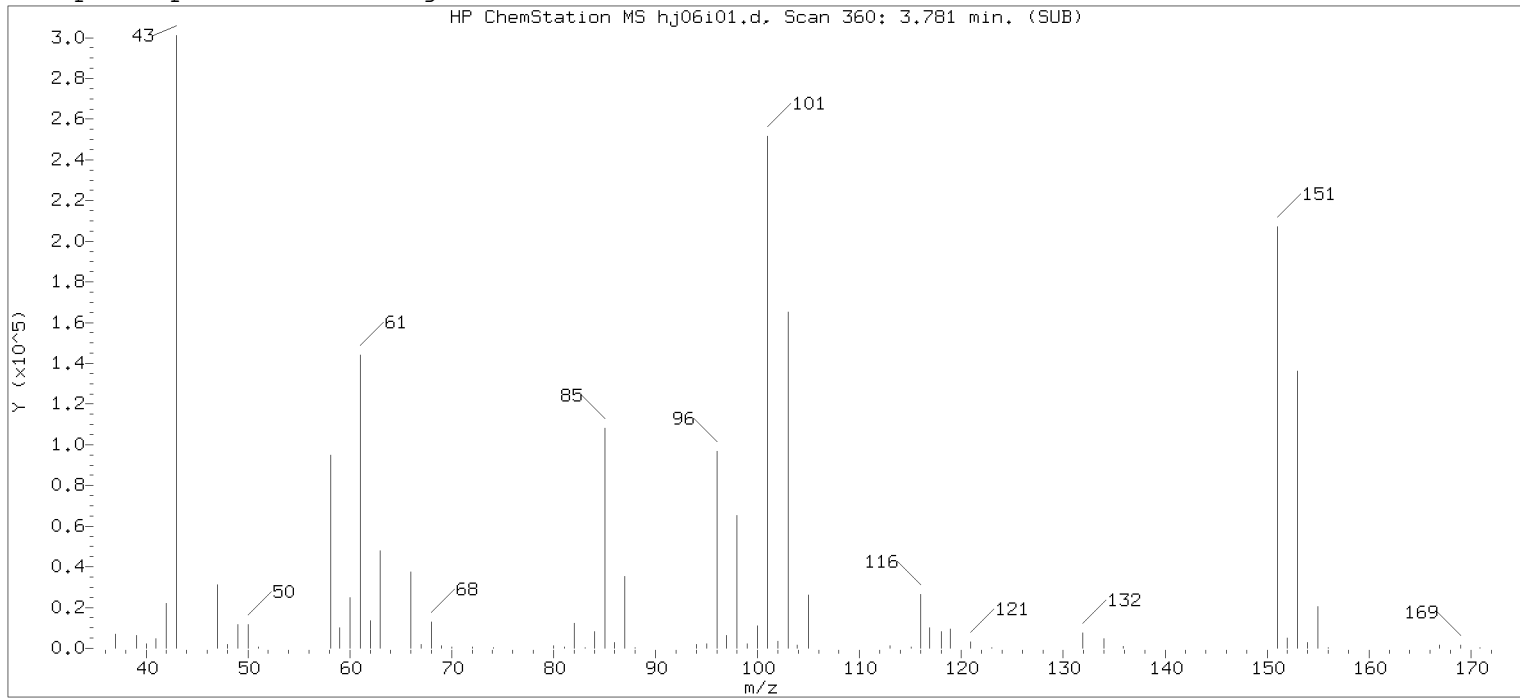
Compound Number	: 14	
Compound Name	: Acetone	
Scan Number	: 360	
Retention Time (minutes)	: 3.781	
Quant Ion	: 43.00	
Area (flag)	: 1577967M	
On-Column Amount (ng)	: 227.8298	
Integration start scan	: 340	Integration stop scan: 416
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

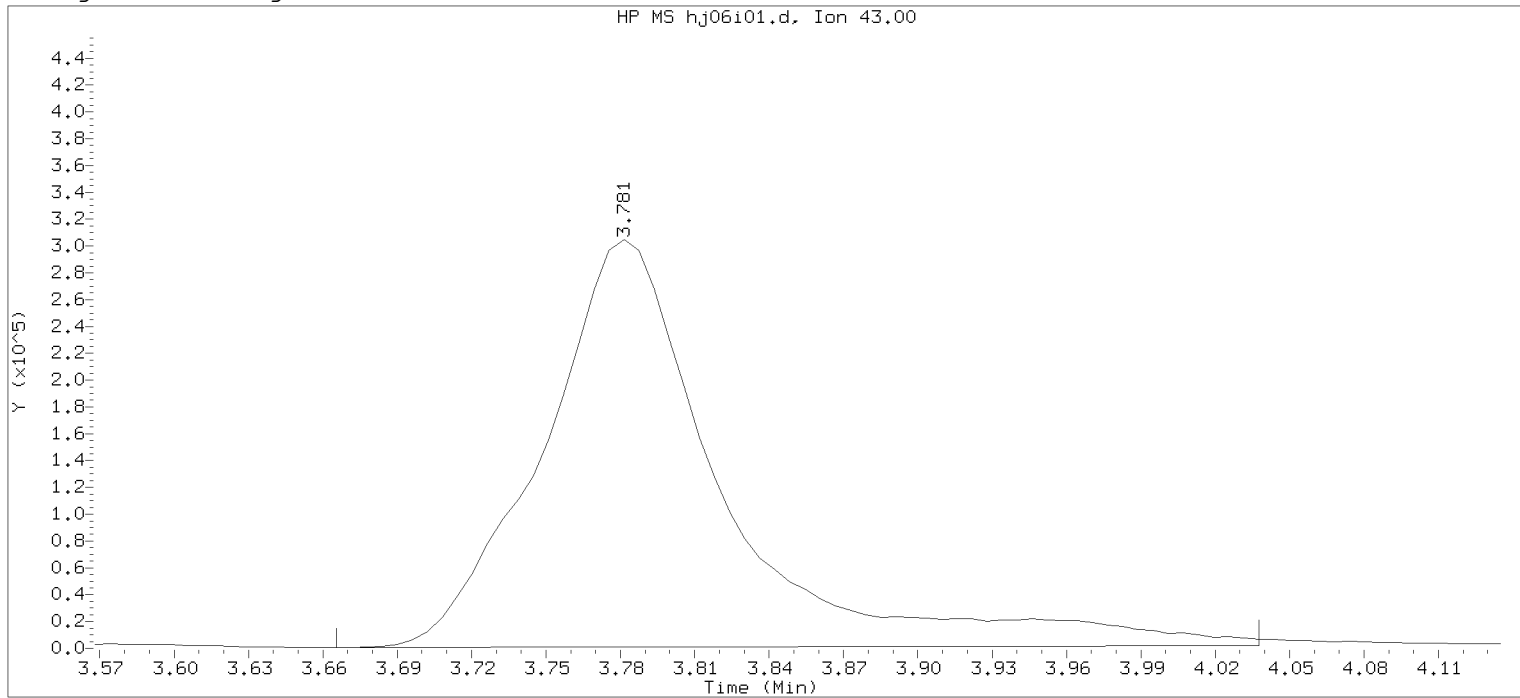
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

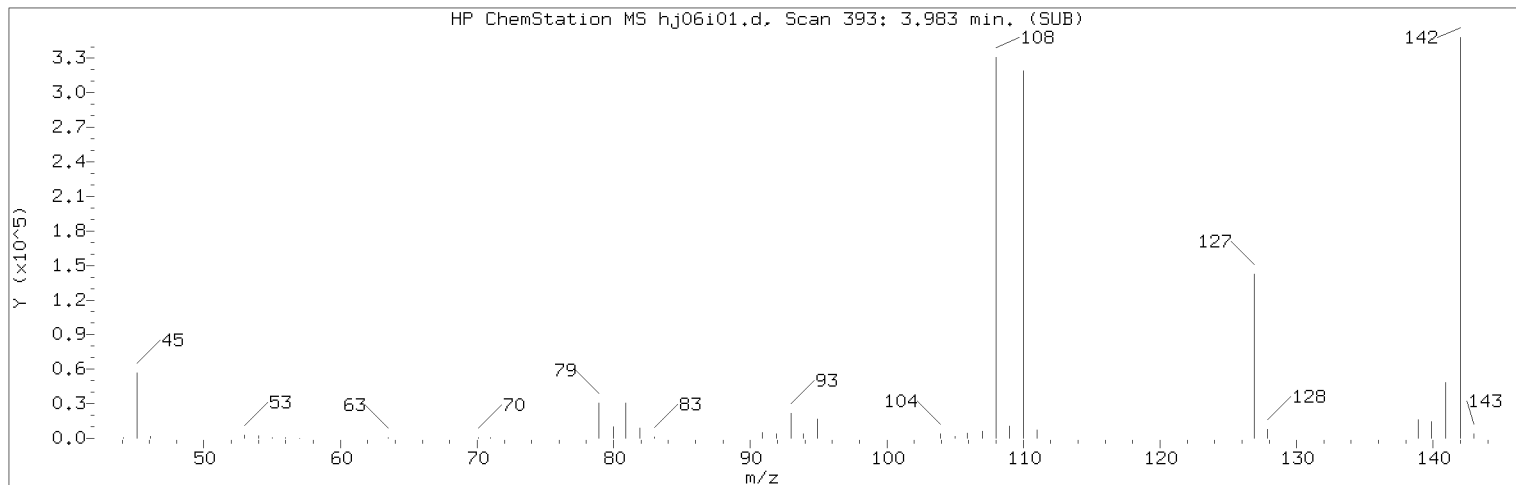
Lab Sample ID: VSTD025

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 360
 Retention Time (minutes): 3.781
 Quant Ion : 43.00
 Area : 1526309
 On-column Amount (ng) : 209.3158
 Integration start scan : 340
 Y at integration start : 368

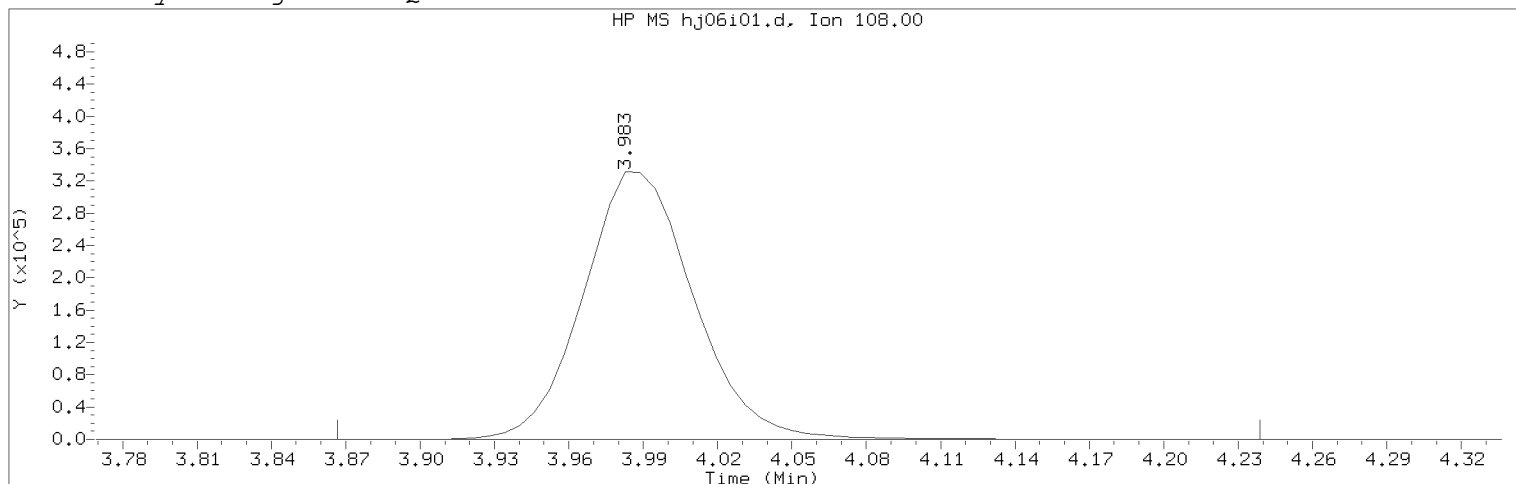
Integration stop scan: 401
 Y at integration end: 1908

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 Target 3.5 esignature user RAJ-64-Page 76 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

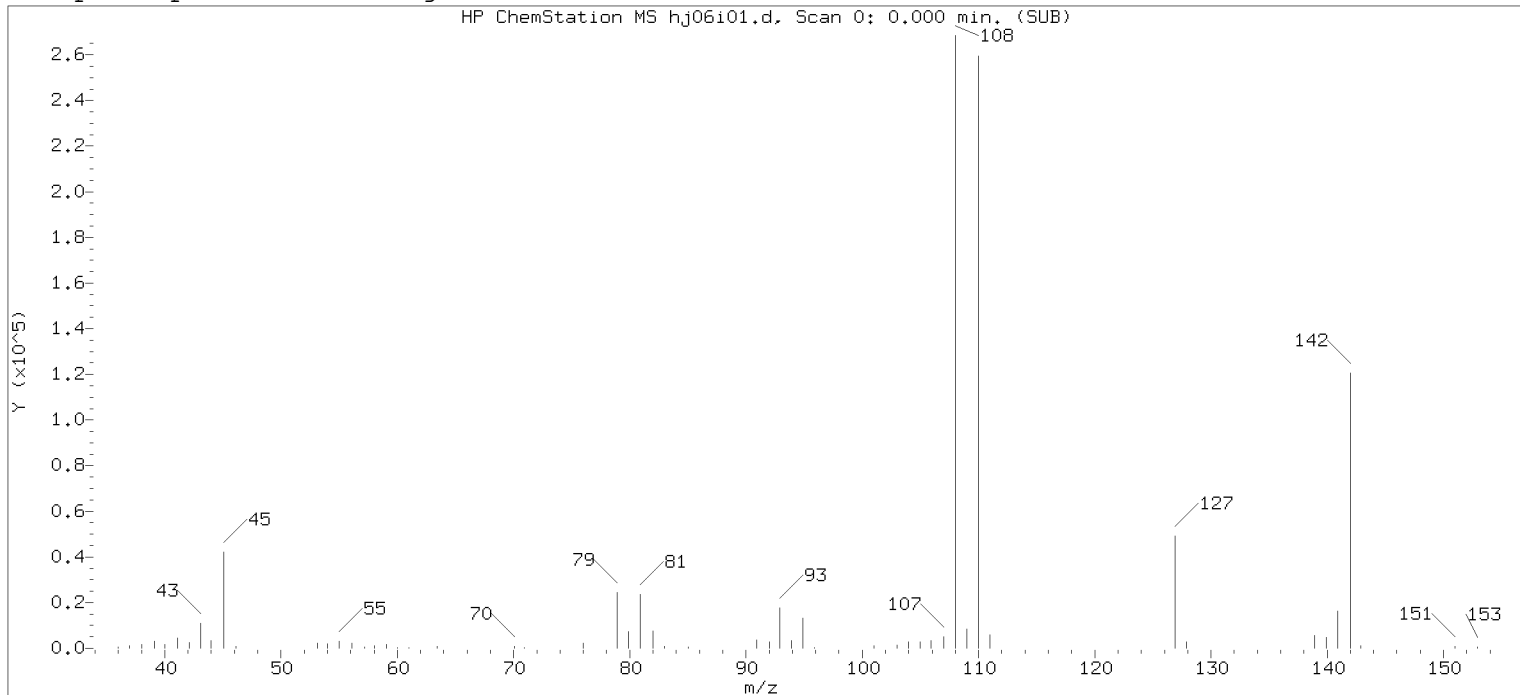
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 108.00
Area (flag) : 1026514M
On-Column Amount (ng) : 24.9213
Integration start scan : 373 Integration stop scan: 434
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

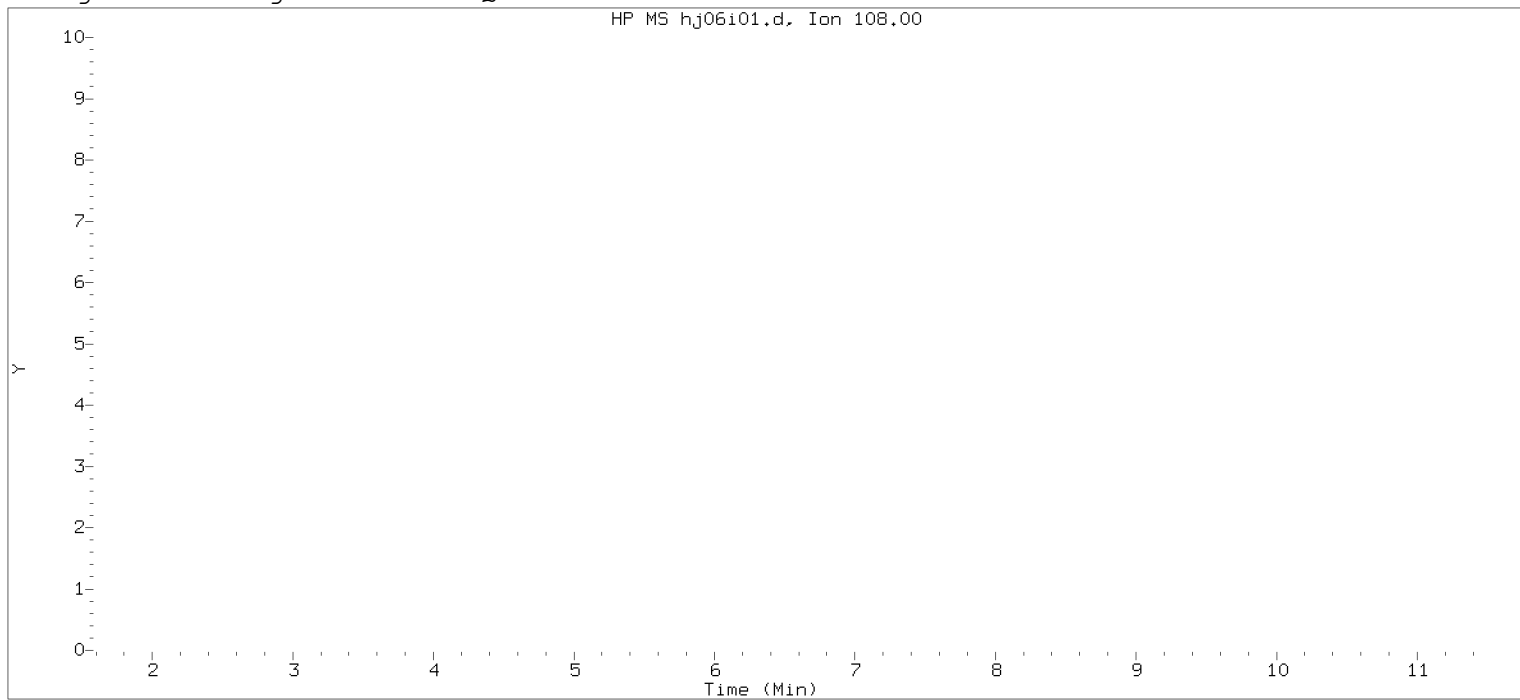
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

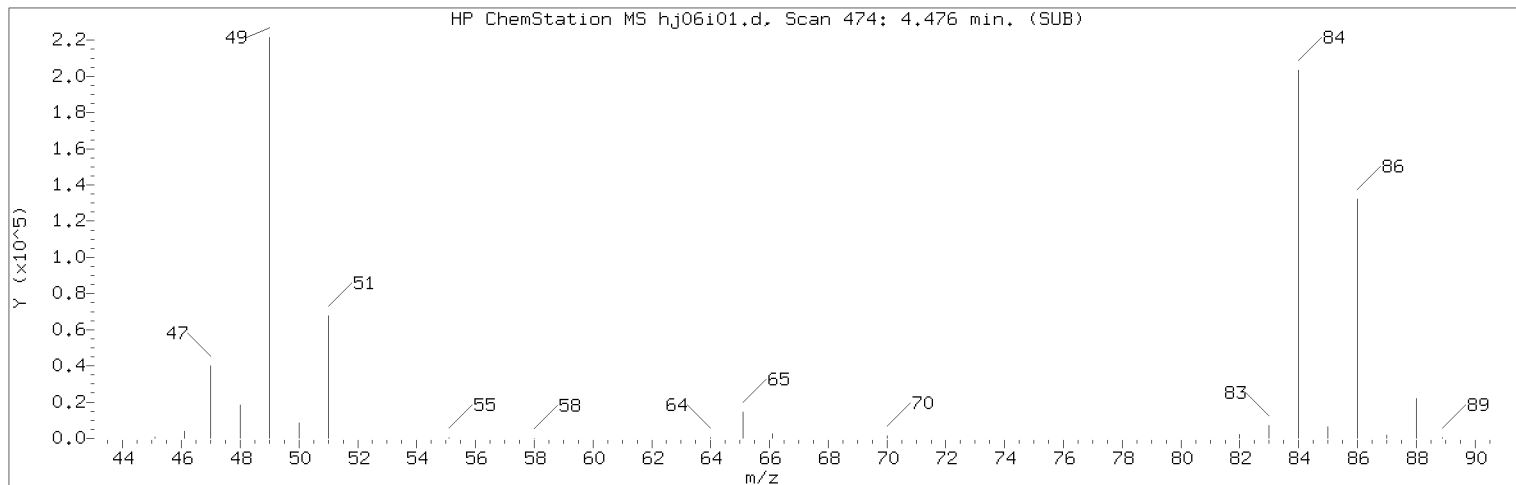
Lab Sample ID: VSTD025

Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0
Y at integration start : 0

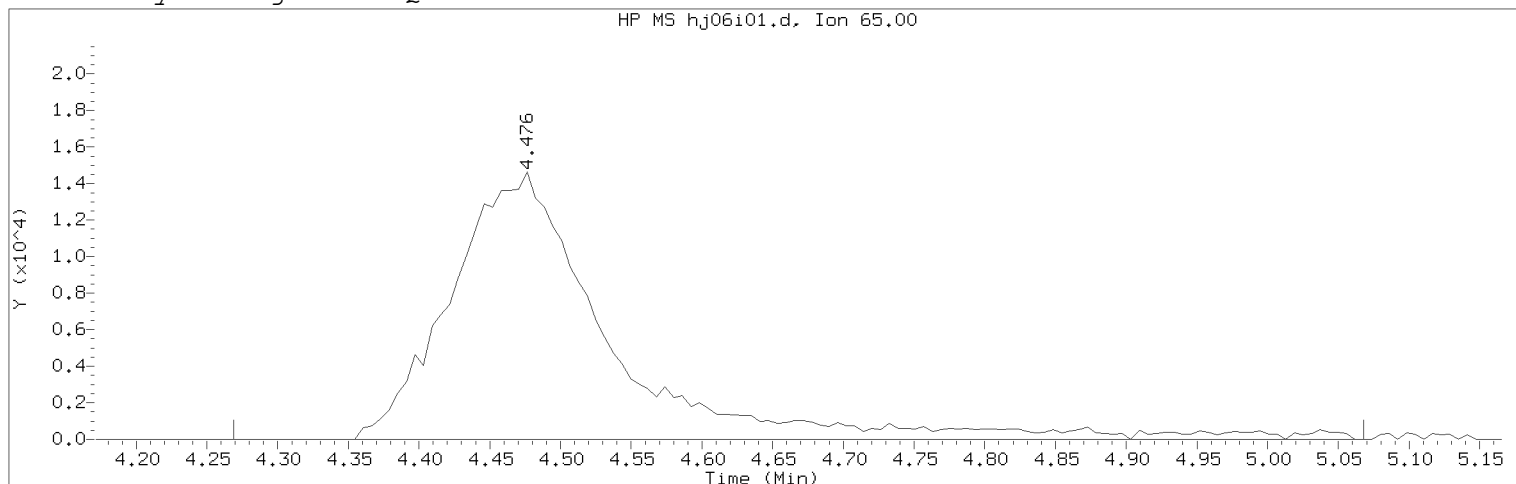
Integration stop scan: 0
Y at integration end: 0

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Target 3.5 esignature user RAJ-see Page 78 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

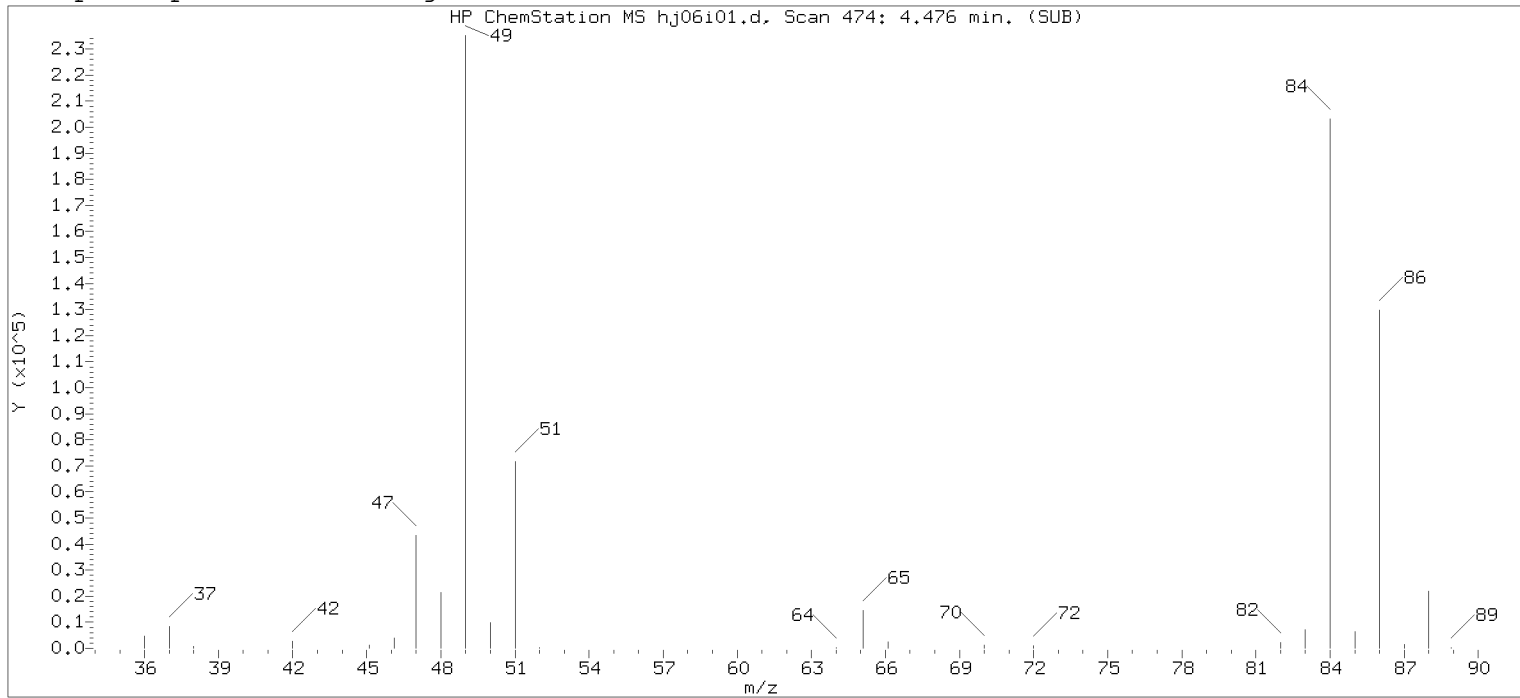
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area (flag) : 113987M
On-Column Amount (ng) : 50.0000
Integration start scan : 439 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

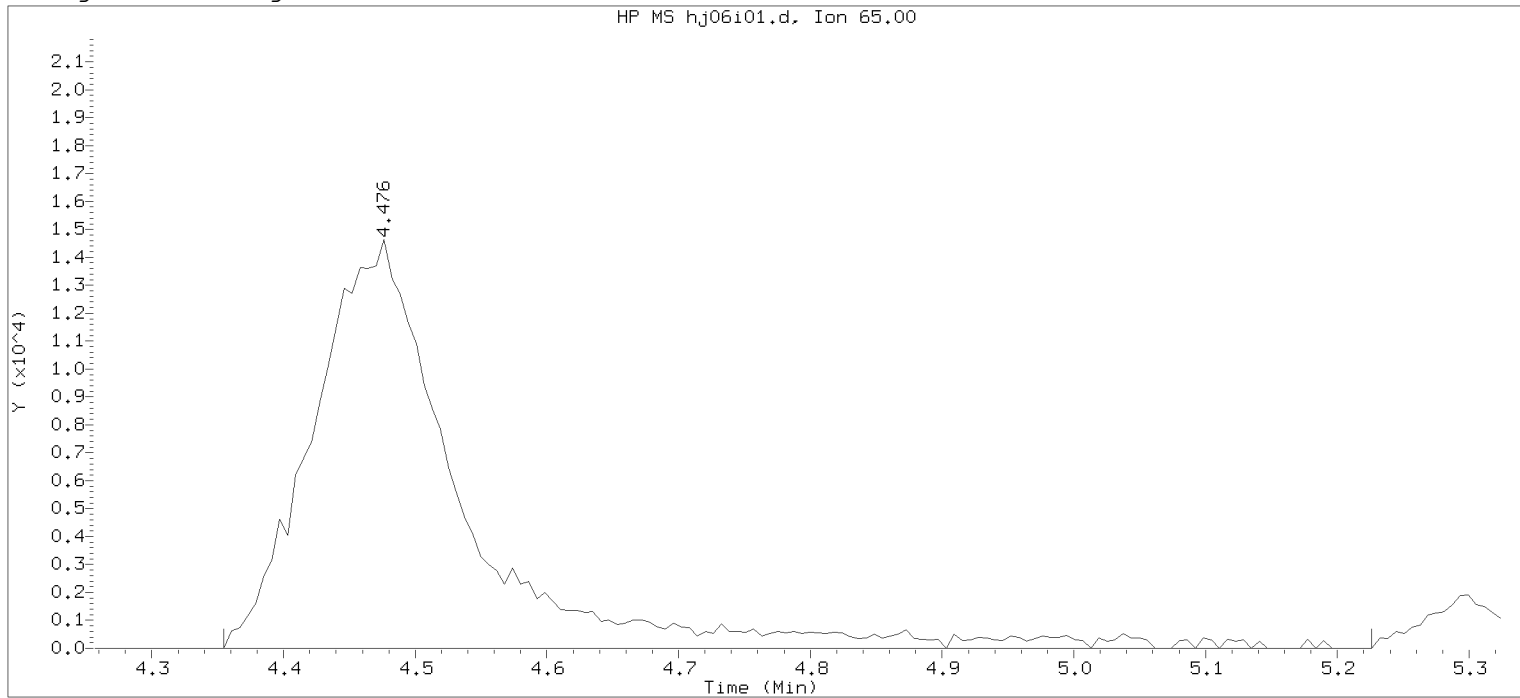
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

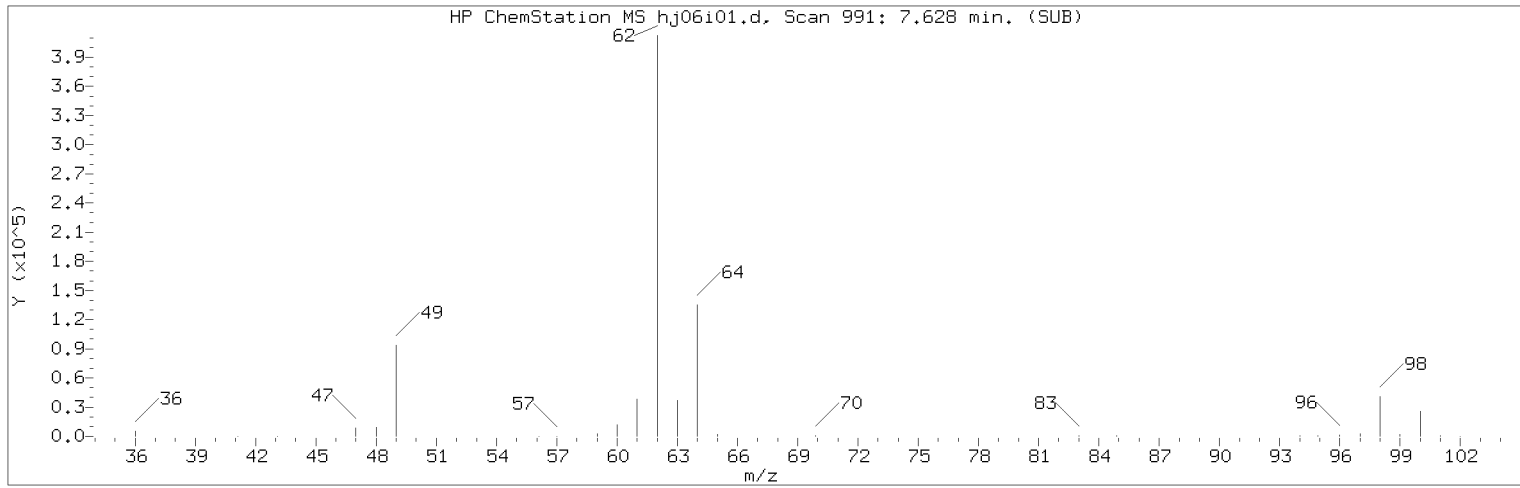
Sample Name: VSTD025

Lab Sample ID: VSTD025

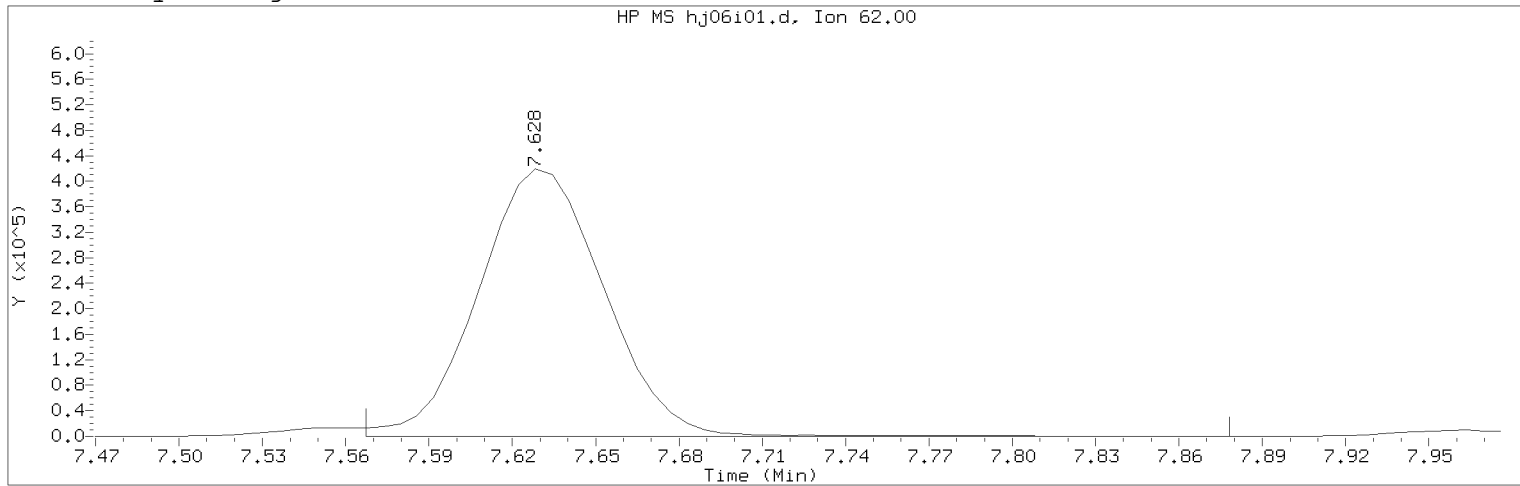
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area : 115073
On-column Amount (ng) : 50.0000
Integration start scan : 453 Integration stop scan: 596
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAJ-see Page 80 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

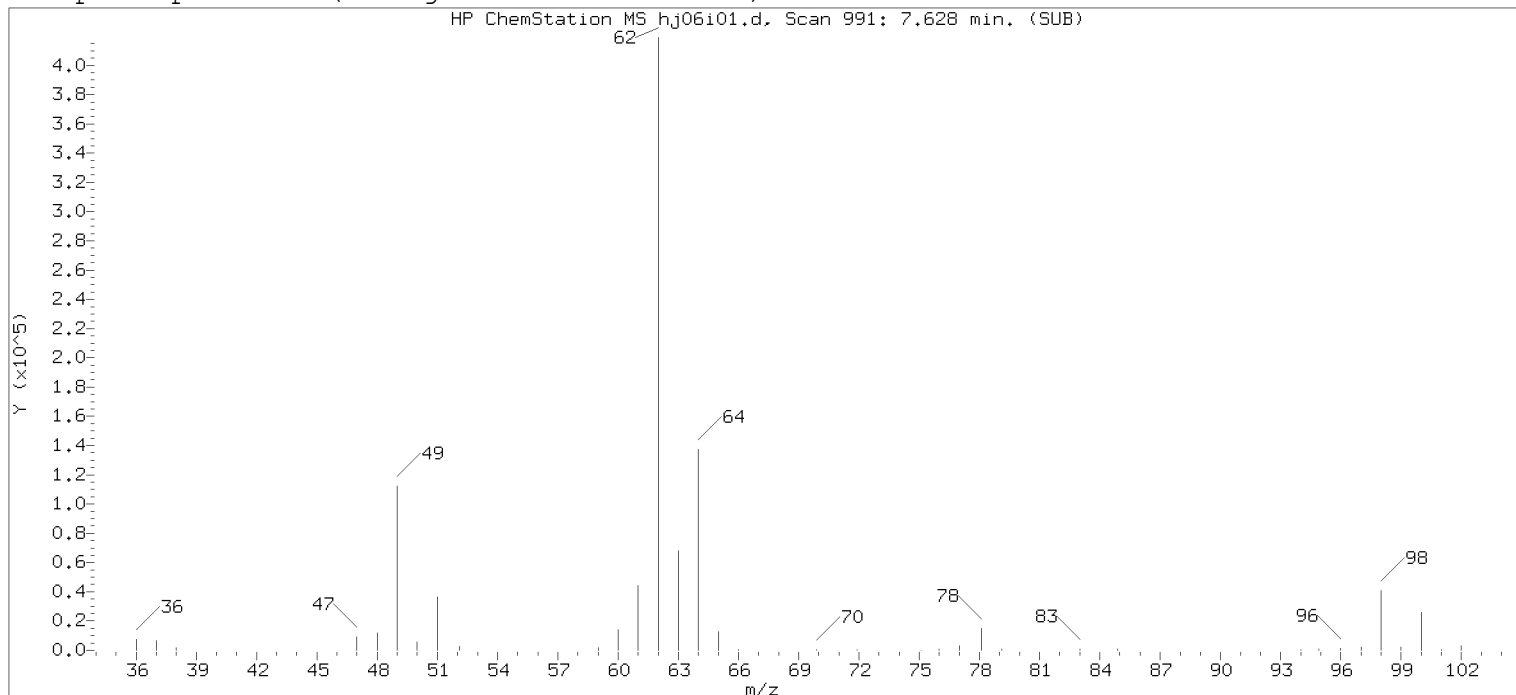
Compound Number : 60
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 1315186M
On-Column Amount (ng) : 24.2692
Integration start scan : 980 Integration stop scan: 1031
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

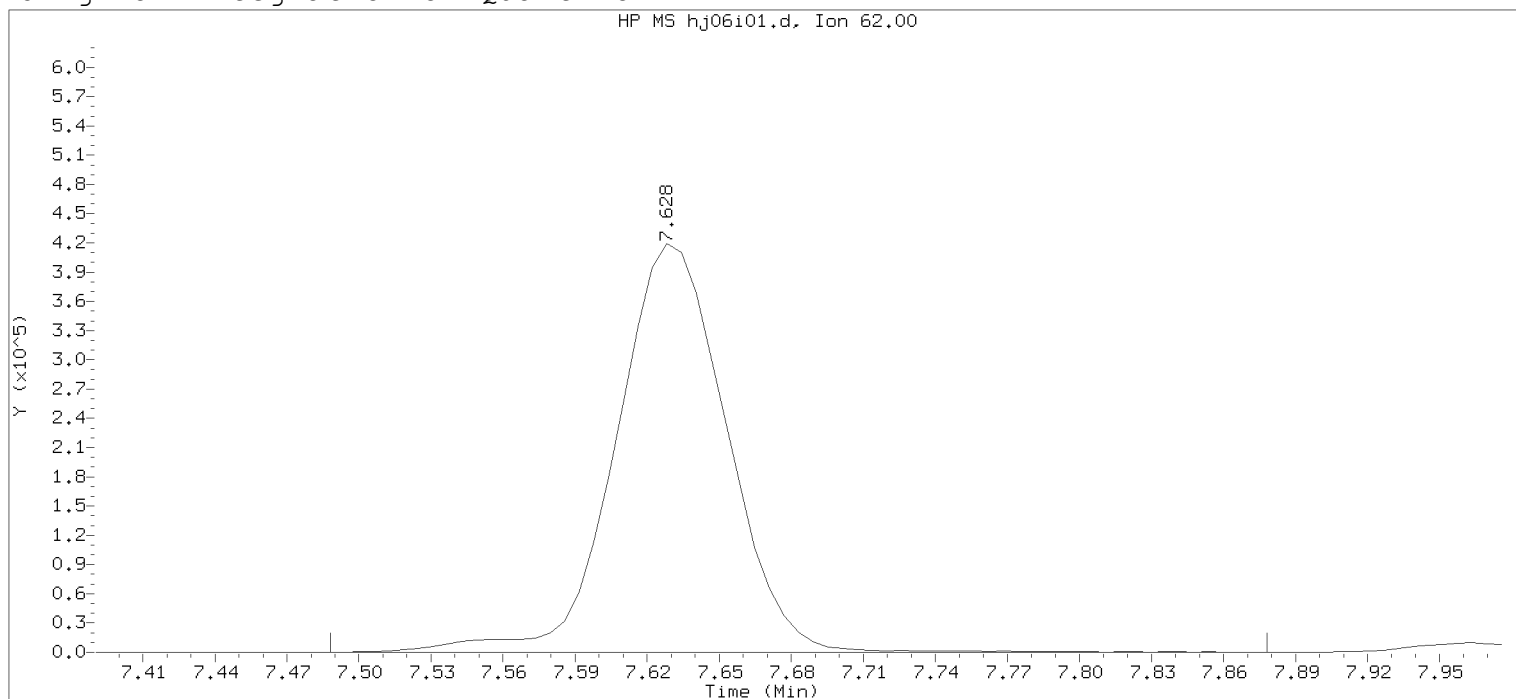
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

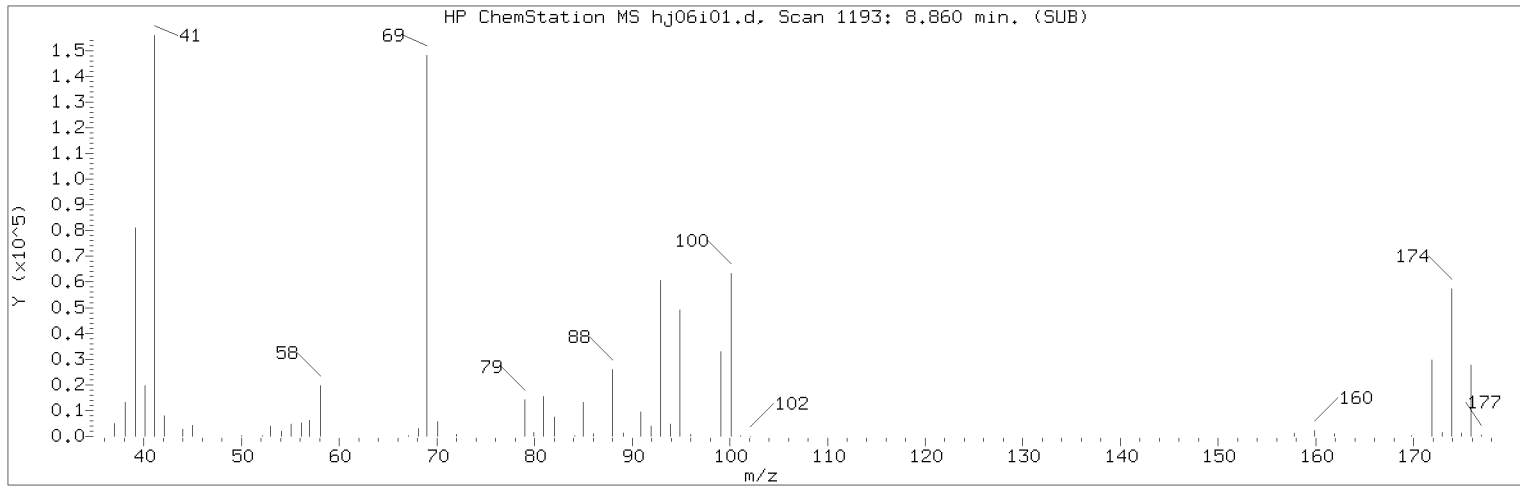
Sample Name: VSTD025

Lab Sample ID: VSTD025

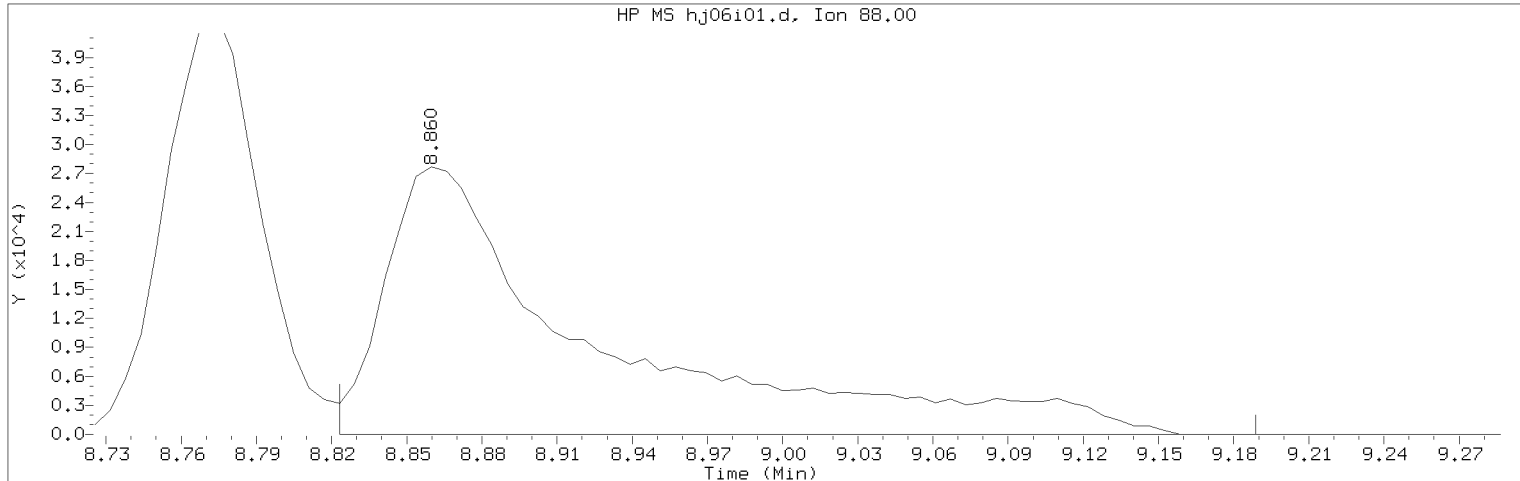
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area	: 1341880	
On-column Amount (ng)	: 24.6923	
Integration start scan	: 967	Integration stop scan: 1031
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAJ-64-Page 082 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

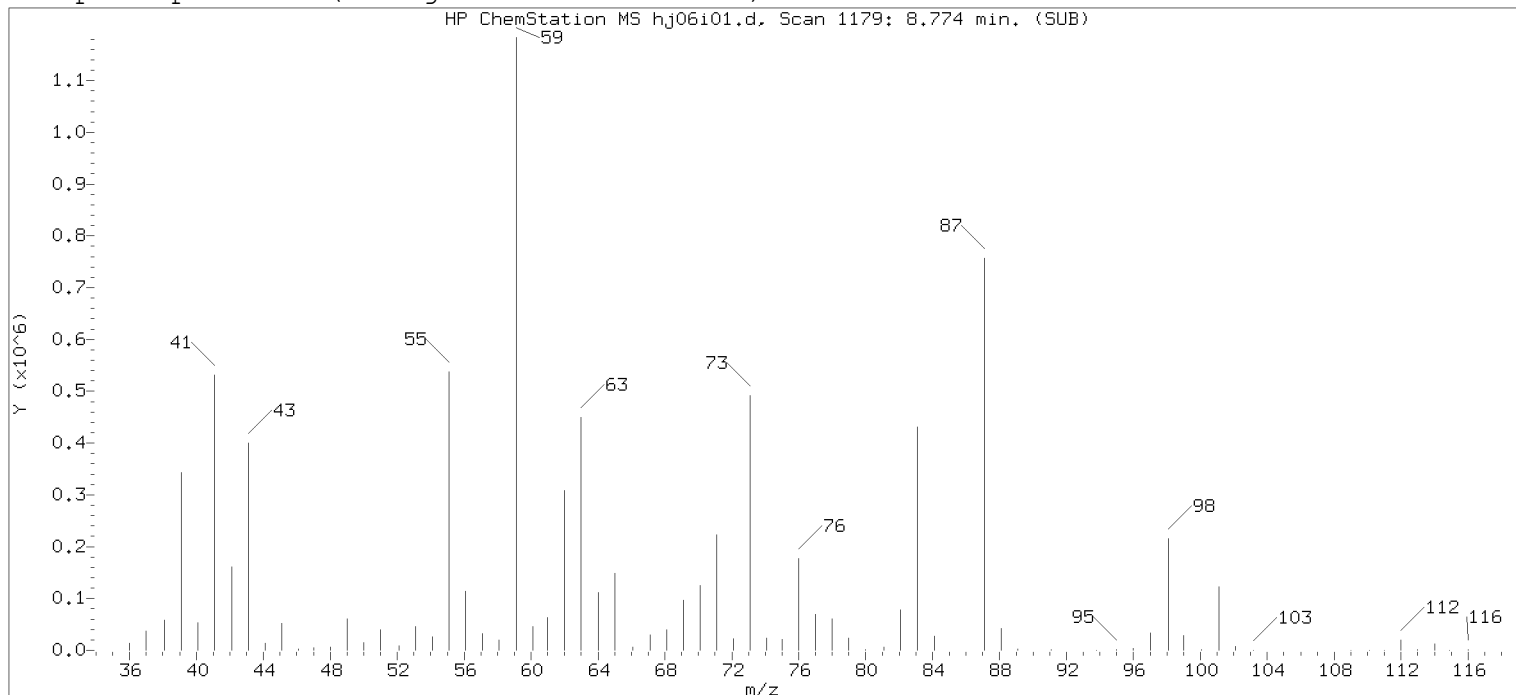
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 161139M
On-Column Amount (ng) : 995.1248
Integration start scan : 1186 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

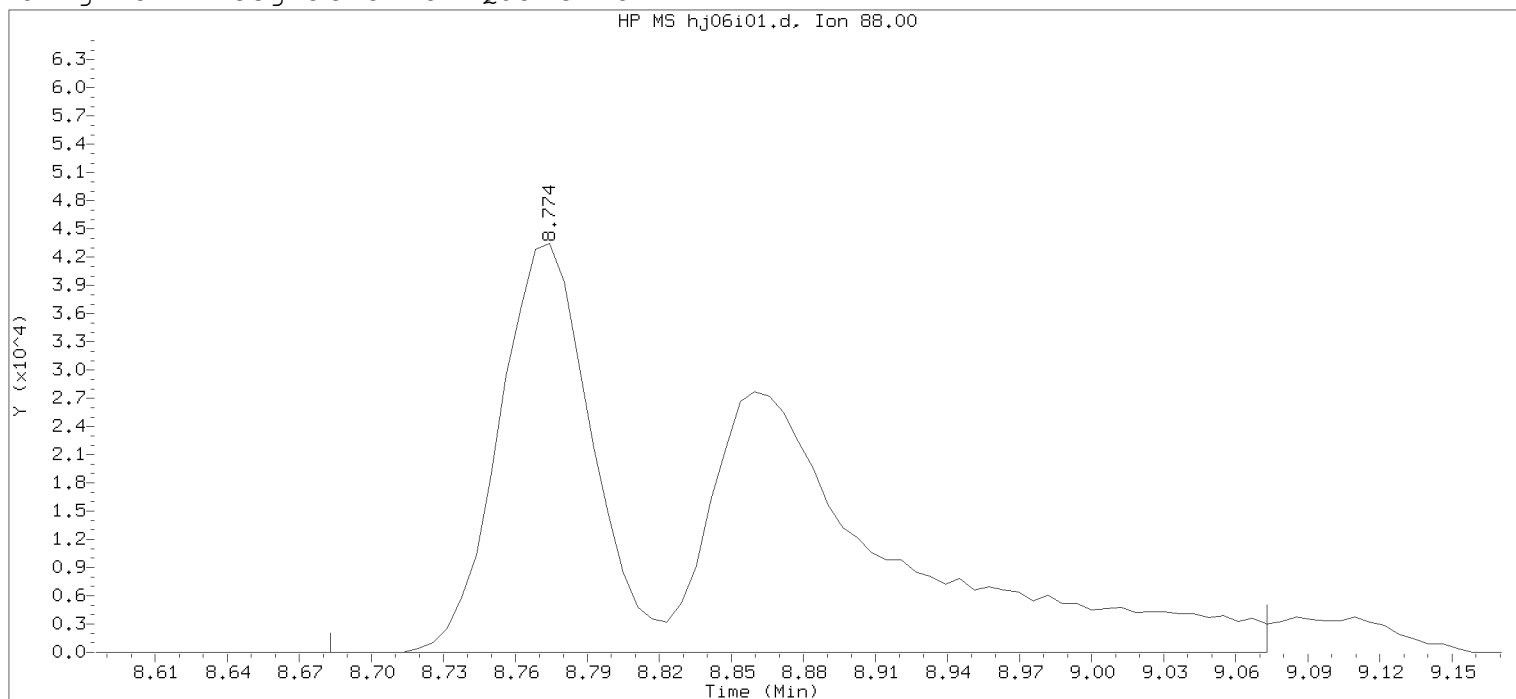
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: ms101251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

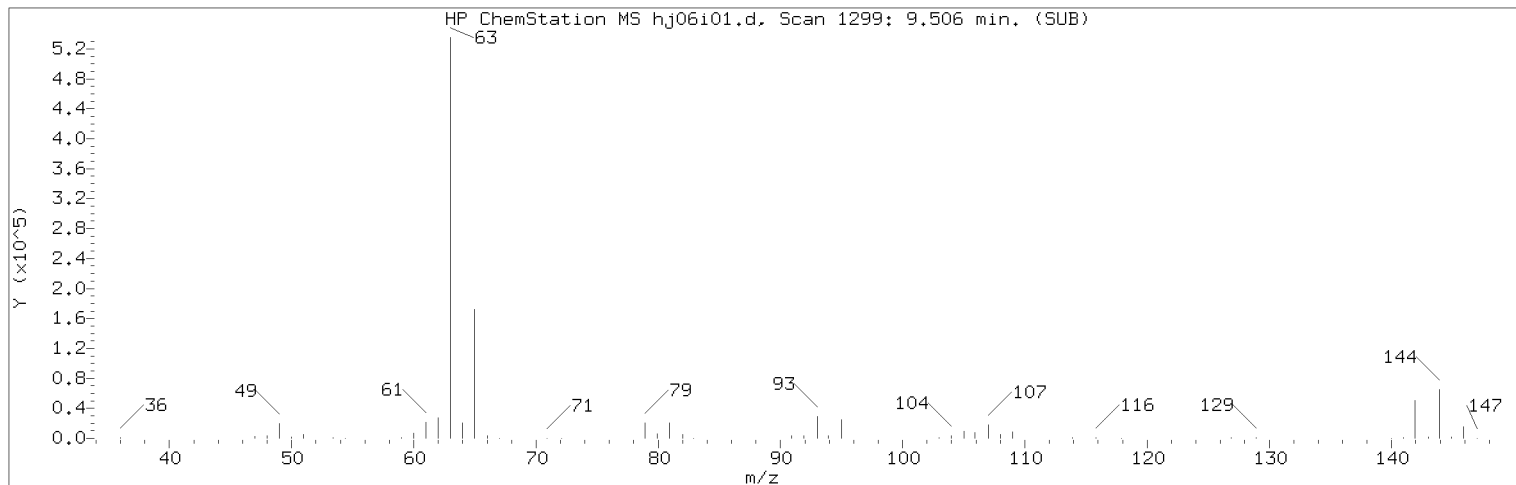
Lab Sample ID: VSTD025

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1179	
Retention Time (minutes)	: 8.774	
Quant Ion	: 88.00	
Area	: 263699	
On-column Amount (ng)	: 1564.0069	
Integration start scan	: 1163	Integration stop scan: 1227
Y at integration start	: 0	Y at integration end: 0

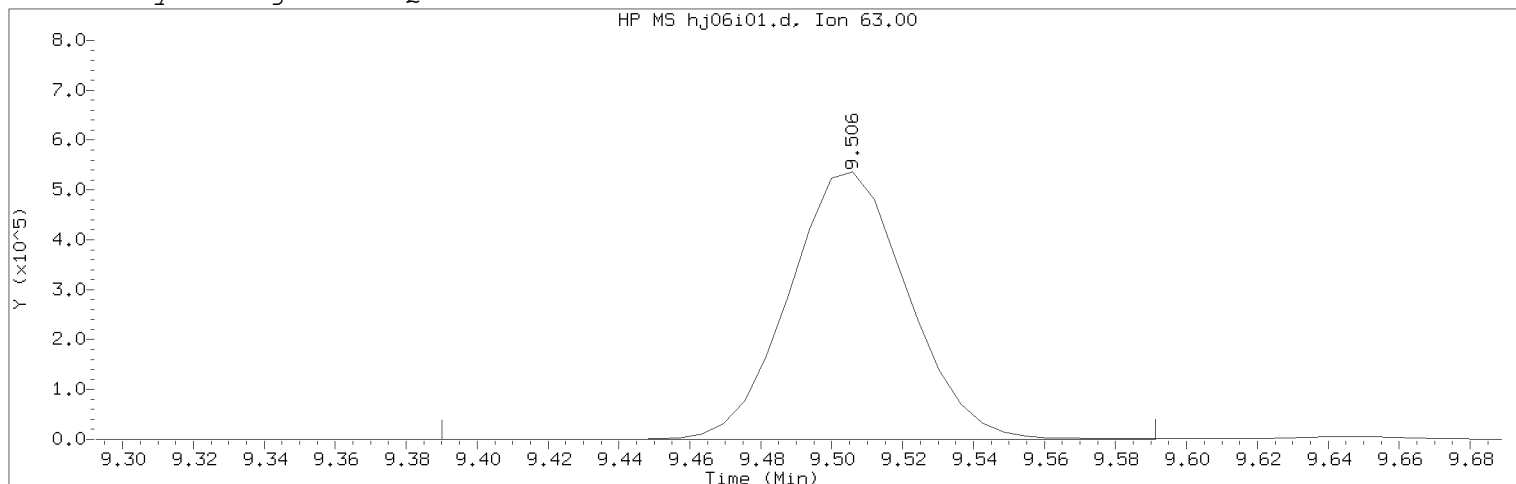
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE64-Page 084 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

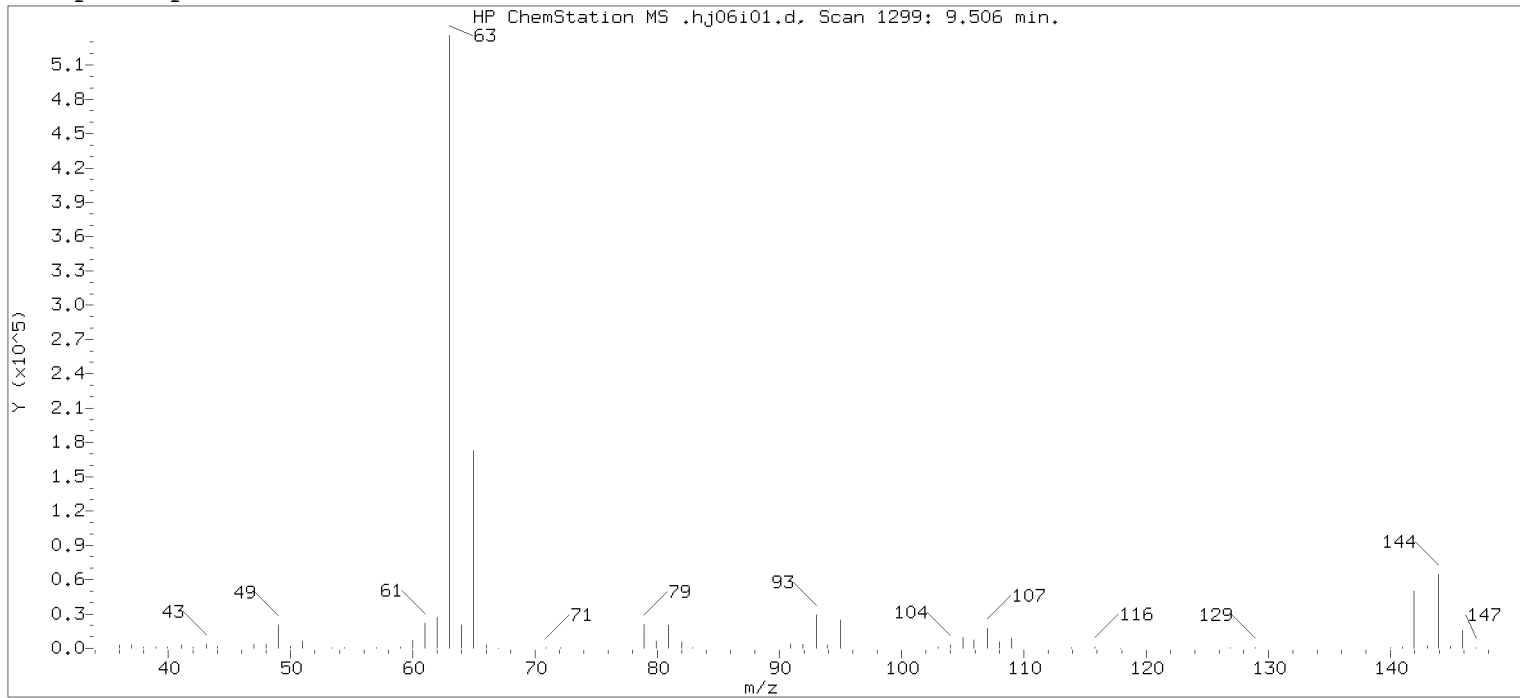
Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 1246645M	
On-Column Amount (ng)	: 25.5039	
Integration start scan	: 1279	Integration stop scan: 1312
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

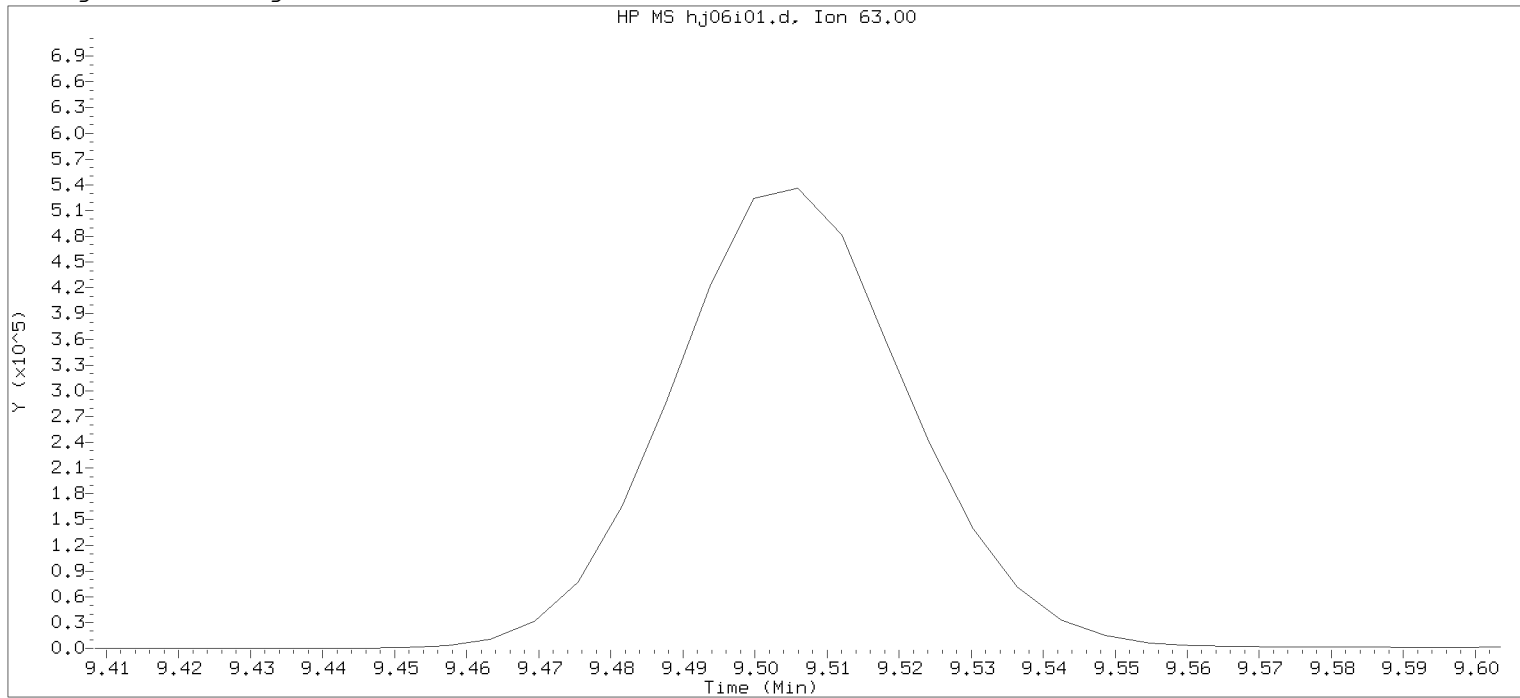
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

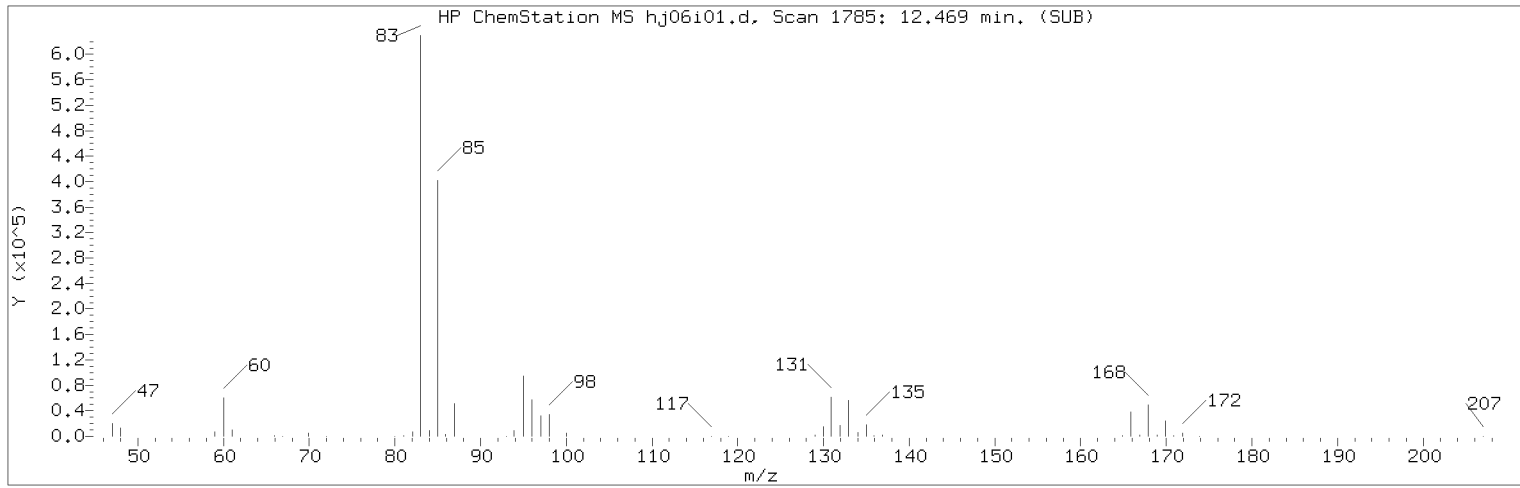
Sample Name: VSTD025

Lab Sample ID: VSTD025

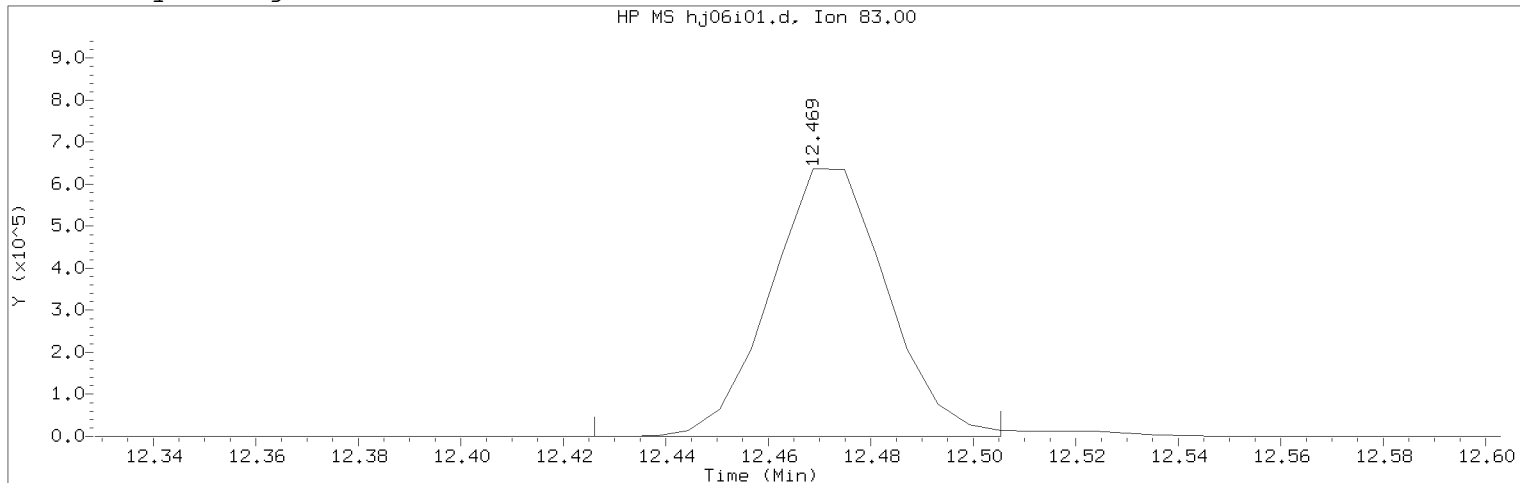
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

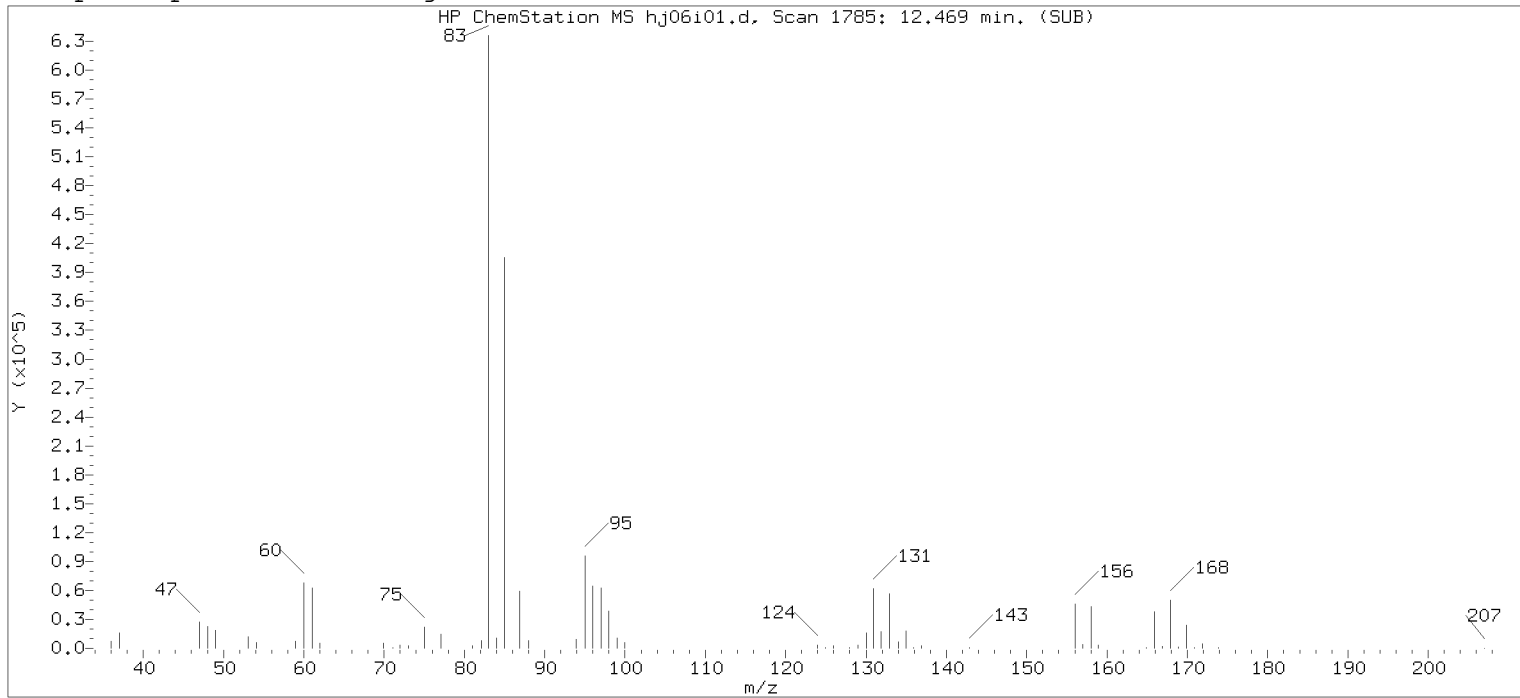
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 1006708M
On-Column Amount (ng) : 25.8147
Integration start scan : 1777 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

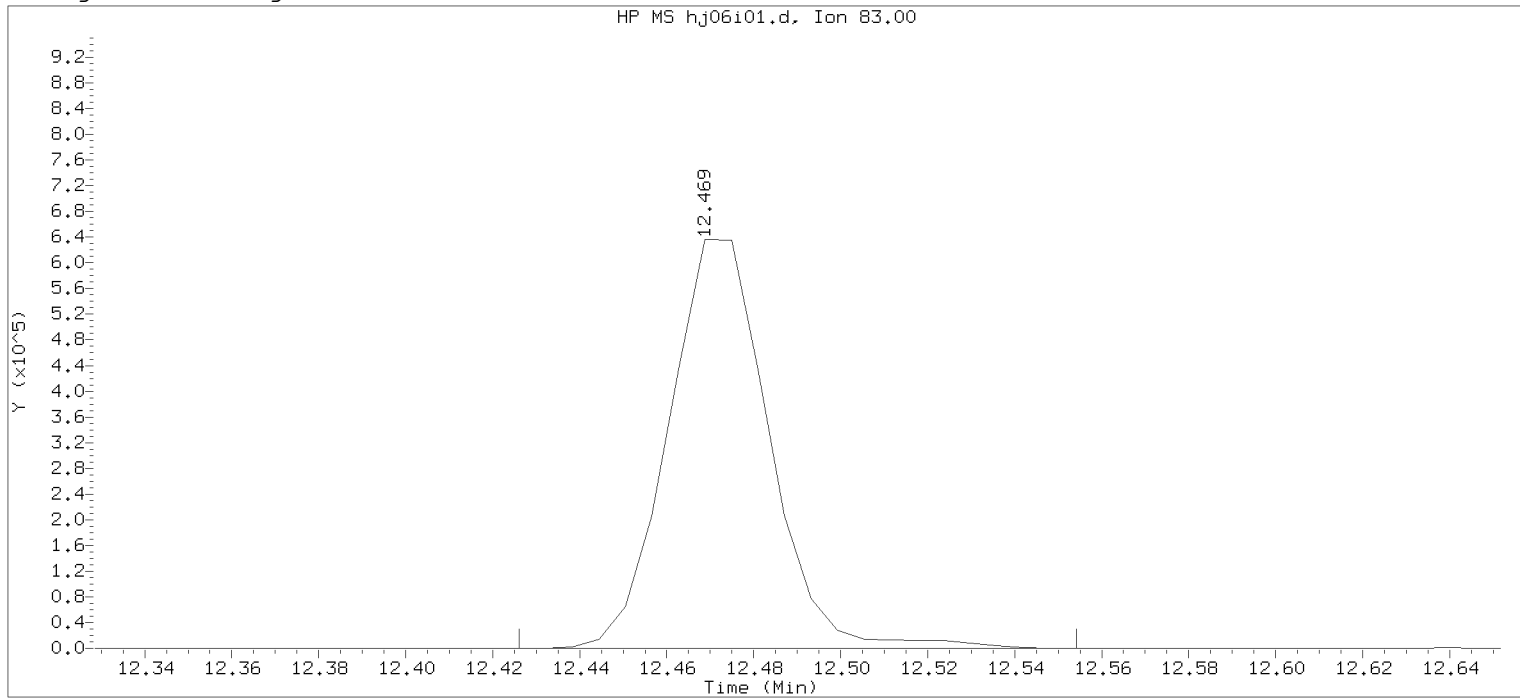
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:34 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

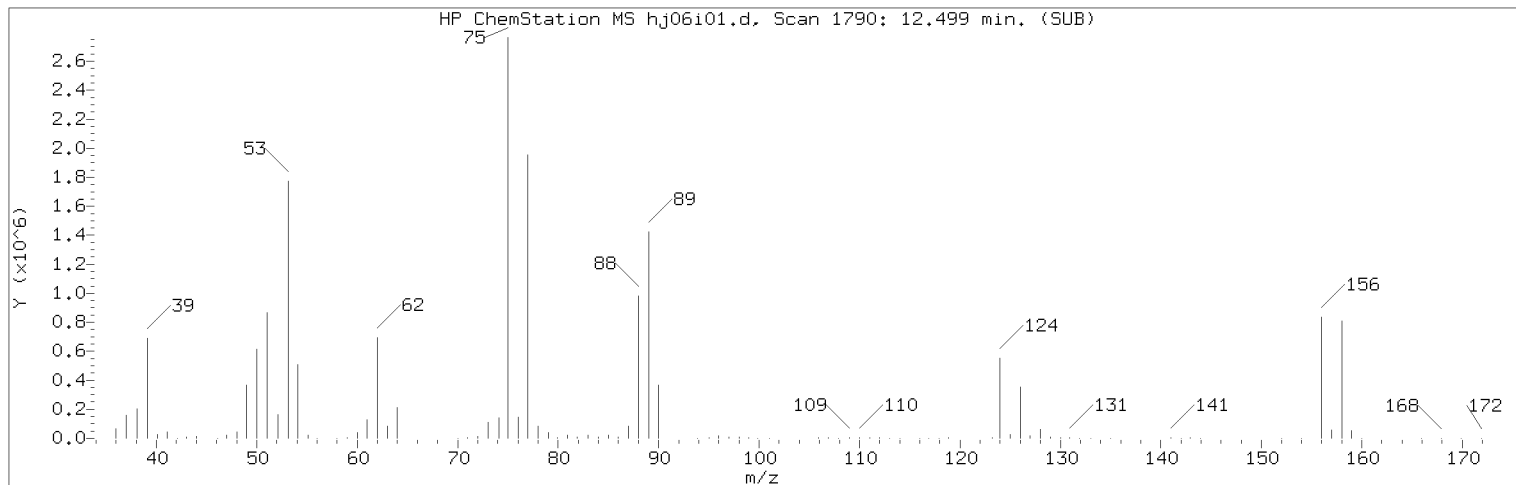
Sample Name: VSTD025

Lab Sample ID: VSTD025

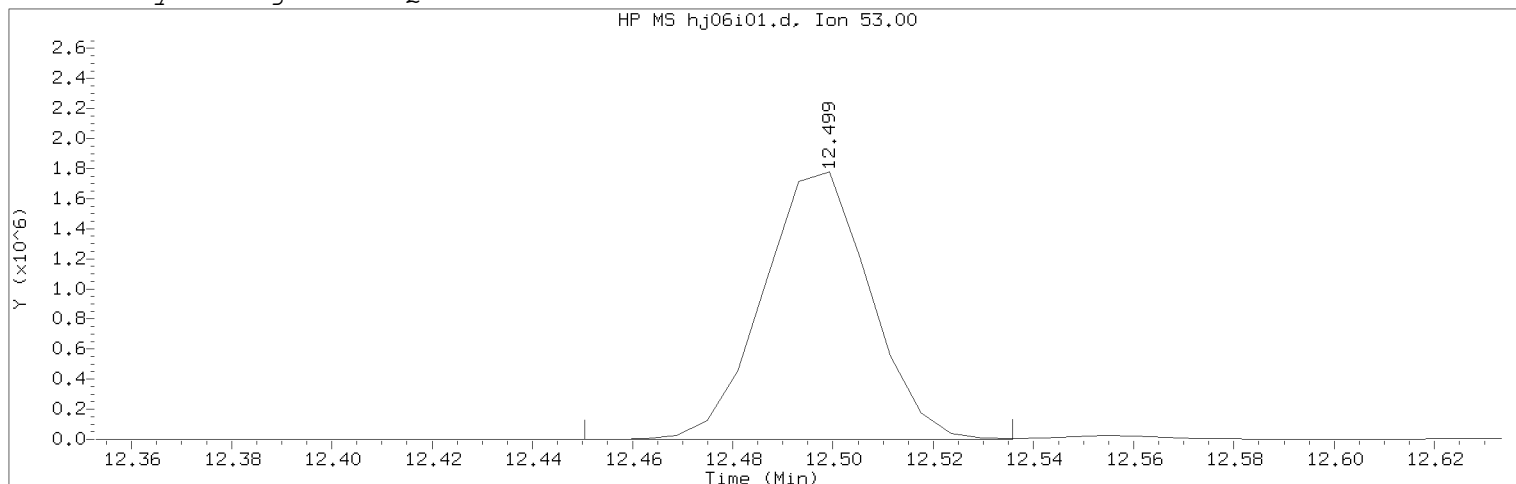
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 1024892
On-column Amount (ng) : 25.0000
Integration start scan : 1777 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user RA-64-Page 088 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:48 sej02002

Sample Name: VSTD025

Lab Sample ID: VSTD025

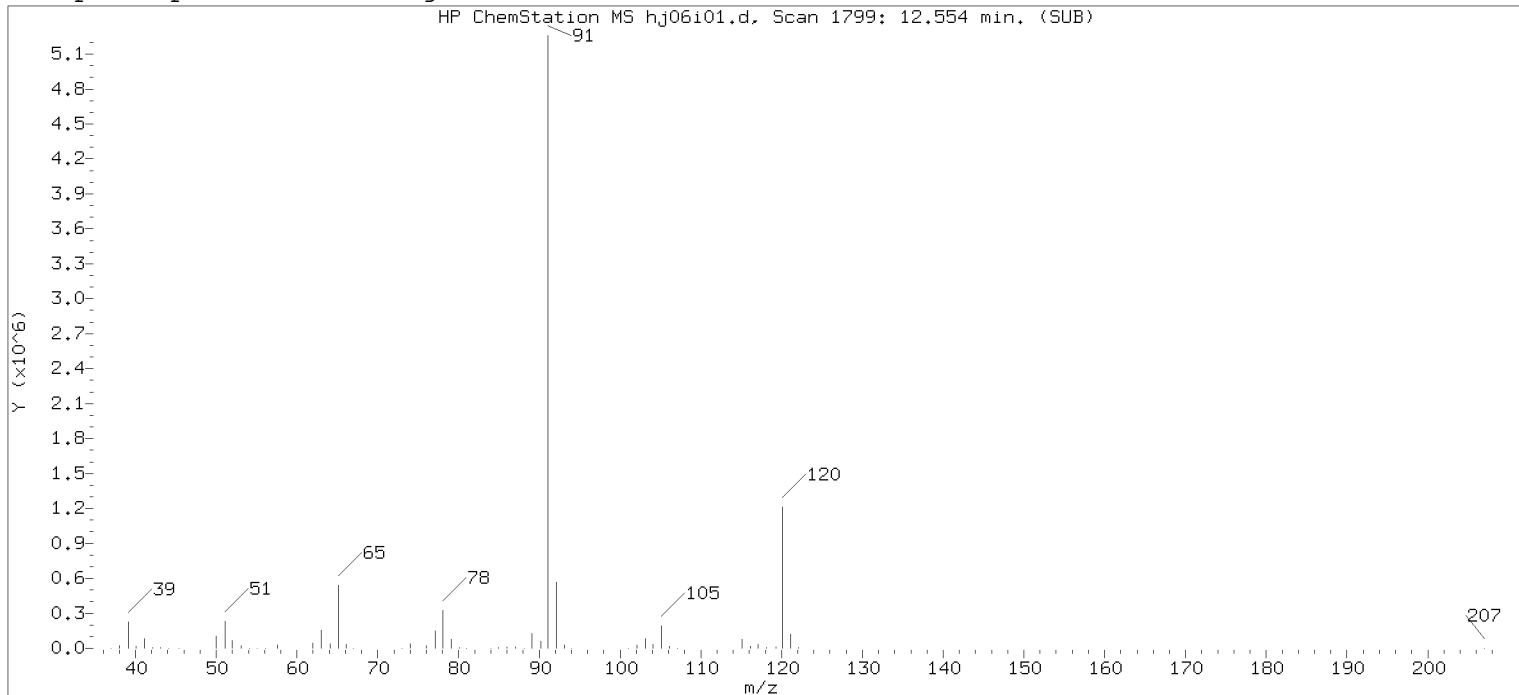
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1790	
Retention Time (minutes)	: 12.499	
Quant Ion	: 53.00	
Area (flag)	: 2625732A	
On-Column Amount (ng)	: 261.8701	
Integration start scan	: 1781	Integration stop scan: 1795
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

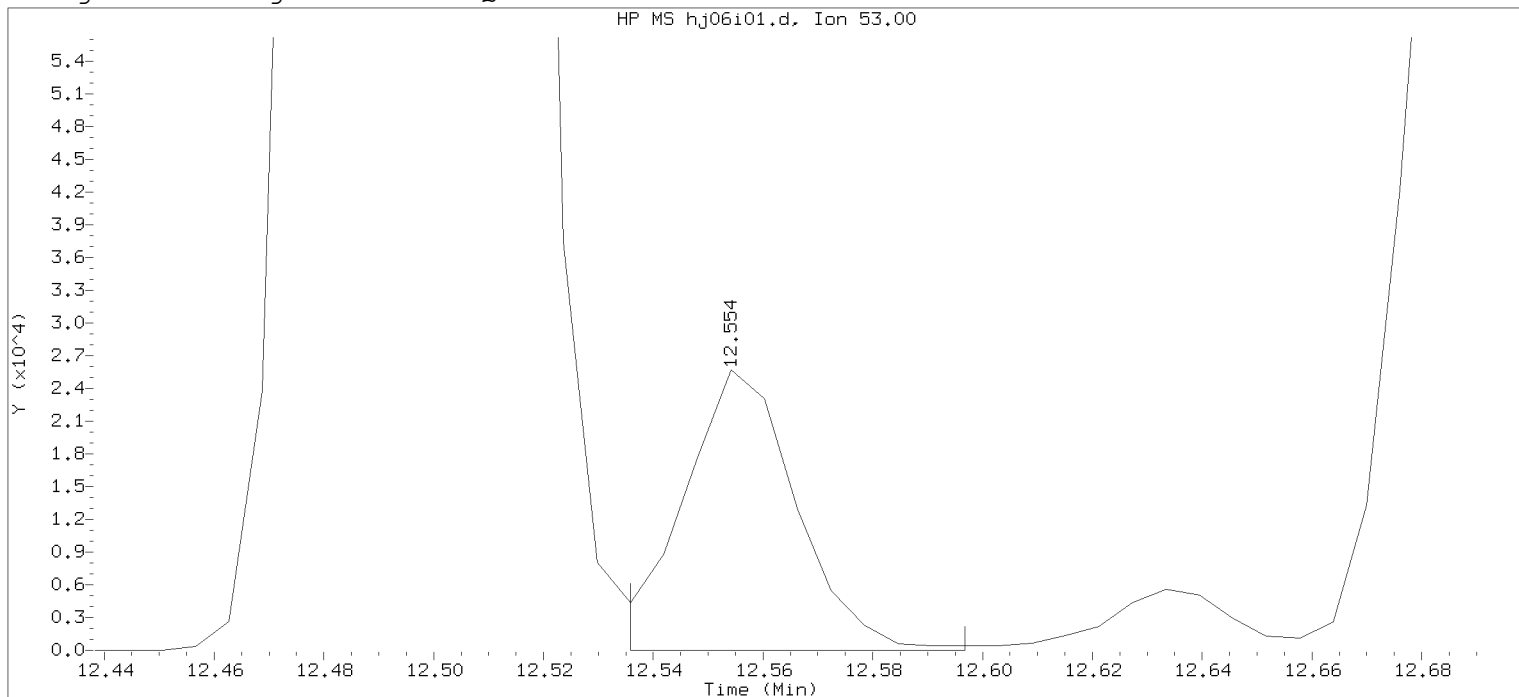
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:34

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

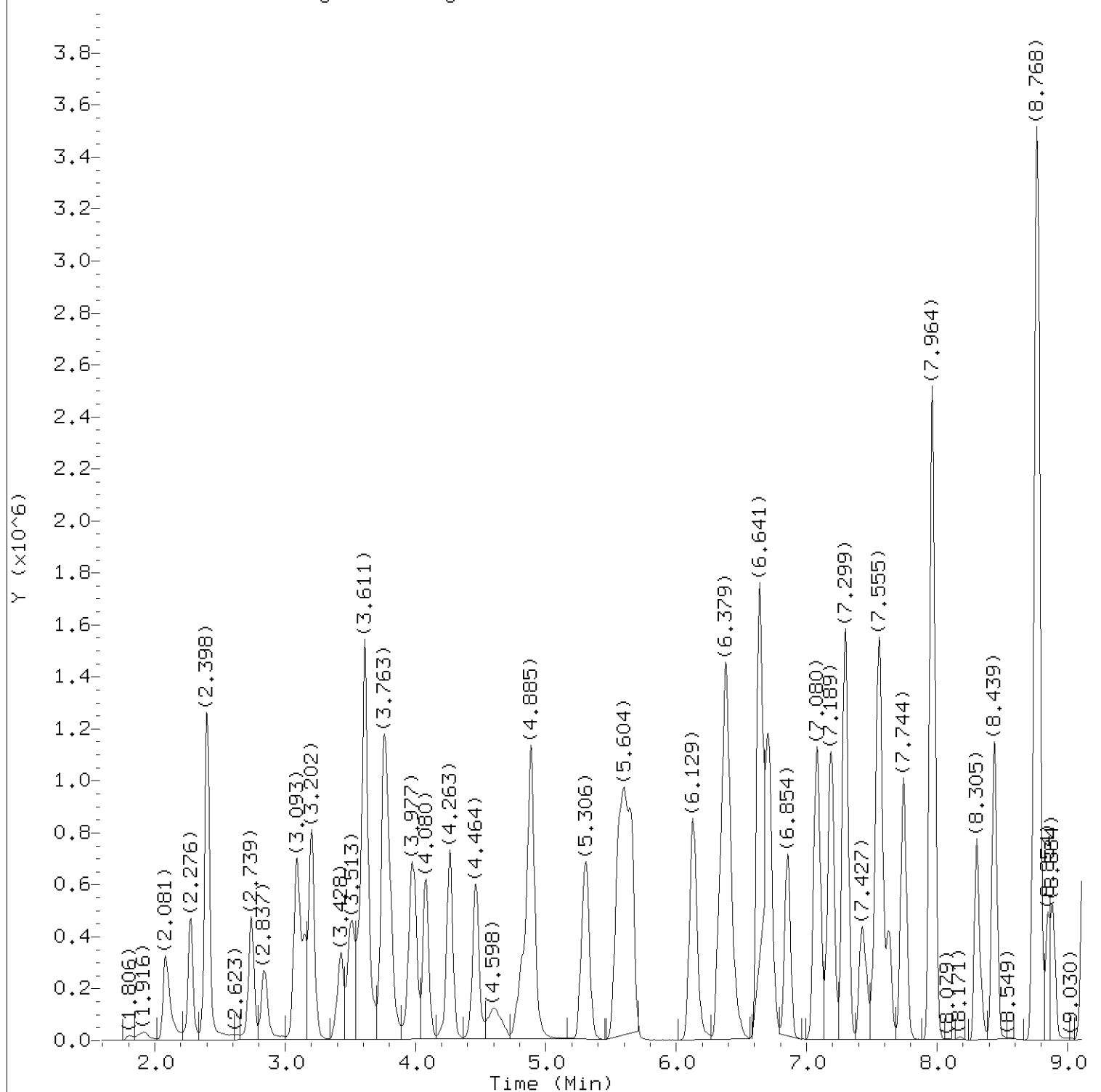
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1799	
Retention Time (minutes)	: 12.554	
Quant Ion	: 53.00	
Area	: 36305	
On-column Amount (ng)	: 250.0000	
Integration start scan	: 1795	Integration stop scan: 1805
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAJ-64-Page 90 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

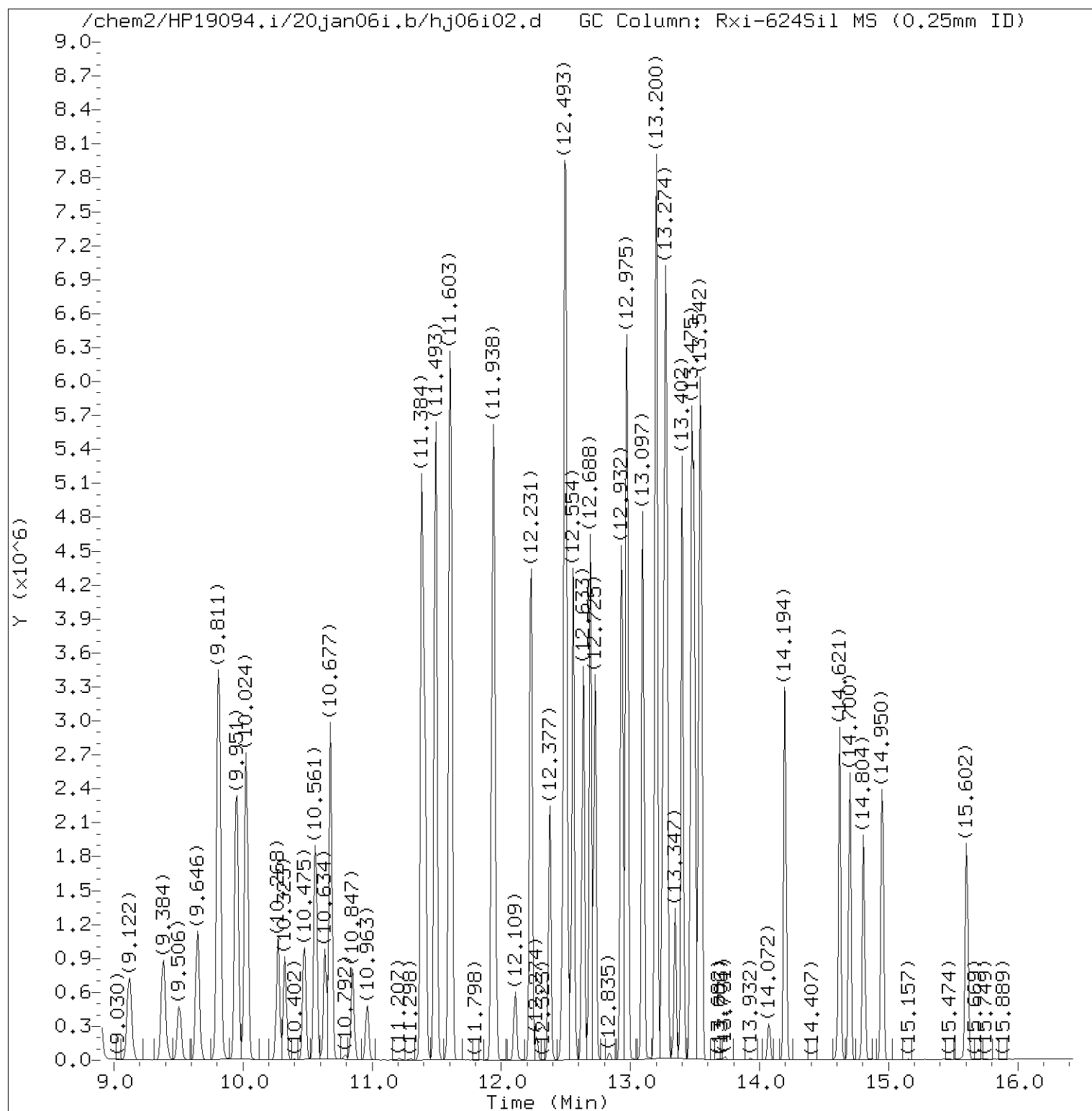
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	760677M	10.449
2) Chloromethane	(2)	2.276	50	723816	10.071
5) Vinyl Chloride	(2)	2.398	62	705685	10.323
6) 1,3-Butadiene	(2)	2.404	39	556101M	10.298
7) Bromomethane	(2)	2.739	94	492084	10.049
8) Chloroethane	(2)	2.843	64	405350	10.238
9) Dichlorofluoromethane	(2)	3.087	67	928944	9.880
10) Trichlorofluoromethane	(2)	3.147	101	810077	10.384
11) Ethyl ether	(2)	3.428	59	359873	10.423
12) Freon 123a	(2)	3.507	67	618460	10.254
13) Acrolein	(1)	3.611	56	2738099	490.908
15) 1,1-Dichloroethene	(2)	3.757	96	485755	10.238
16) Freon 113	(2)	3.781	101	518962	10.463
14) Acetone	(1)	3.788	43	680105M	90.365
17) Methyl Iodide	(2)	3.964	142	936249	10.225
18) Bromoethane	(2)	4.001	108	420057M	10.147
19) Carbon Disulfide	(2)	4.080	76	1456070	10.031
22) Methyl Acetate	(1)	4.233	43	173520	9.136
23) Allyl Chloride	(2)	4.263	41	790437	9.807
24) Methylene Chloride	(2)	4.464	84	508726	9.961
27)*t-Butyl Alcohol-d10	(1)	4.464	65	123863	50.000
29) t-Butyl Alcohol	(1)	4.604	59	538353	205.919
30) Acrylonitrile	(1)	4.806	53	450445	49.045
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	1118152	10.307
32) trans-1,2-Dichloroethene	(2)	4.891	96	525358	10.072
33) n-Hexane	(2)	5.306	57	760285	10.334
34) 1,1-Dichloroethane	(2)	5.543	63	965481	10.252
35) di-Isopropyl Ether	(2)	5.598	45	1588448	10.240
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	828227	10.272
41) 1,2-Dichloroethene (Total)	(2)		96	1112521	20.202
38) Ethyl t-butyl ether	(2)	6.129	59	1496284	10.275
39) 2-Butanone	(1)	6.330	43	1122078	95.350
40) cis-1,2-Dichloroethene	(2)	6.379	96	587163	10.130
42) 2,2-Dichloropropane	(2)	6.391	77	821251	10.249
43) Propionitrile	(1)	6.421	54	648800	201.268
46) Methacrylonitrile	(1)	6.641	67	1136111	98.542
48) Bromochloromethane	(2)	6.708	128	246581	10.076
49) Tetrahydrofuran	(1)	6.714	71	320458	98.567

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
 Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:48
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	934761	10.171
51) \$Dibromofluoromethane	(2)	7.074	113	487337	10.094
51) \$Dibromofluoromethane	(2)	7.067	111	499455	10.069
52) 1,1,1-Trichloroethane	(2)	7.086	97	865028	10.120
53) Cyclohexane	(2)	7.189	56	932893	10.219
53) Cyclohexane	(2)	7.189	84	815738	10.433
53) Cyclohexane	(2)	7.189	69	289935	10.205
56) 1,1-Dichloropropene	(2)	7.293	75	747294	10.345
55) Carbon Tetrachloride	(2)	7.299	117	754553	10.296
57) Isobutyl Alcohol	(1)	7.427	41	419476	462.887
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	93717	10.016
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	432514	10.018
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59118	9.975
59) Benzene	(2)	7.561	78	2144318	10.150
60) 1,2-Dichloroethane	(2)	7.634	62	536476M	9.850
61) t-Amyl methyl ether	(2)	7.744	73	1300717	10.241
63) n-Heptane	(2)	7.964	43	794361	10.293
64) *Fluorobenzene	(2)	7.964	96	1942157	10.000
66) n-Butanol	(1)	8.305	56	742424	1017.654
68) Trichloroethene	(2)	8.445	95	563519	10.172
70) Methylcyclohexane	(2)	8.756	83	1026004	10.338
71) 1,2-Dichloropropane	(2)	8.781	63	530369	10.148
72) Methyl Methacrylate	(1)	8.848	69	227222	9.797
73) 1,4-Dioxane	(1)	8.860	88	93413M	530.882
74) Dibromomethane	(2)	8.890	93	239624	10.029
75) Bromodichloromethane	(2)	9.122	83	664074	10.227
77) 2-Nitropropane	(1)	9.384	41	746083	97.942
80) 1-Bromo-2-chloroethane	(2)	9.506	63	500661M	10.191
81) cis-1,3-Dichloropropene	(2)	9.646	75	803099	10.473
82) 4-Methyl-2-Pentanone	(1)	9.811	43	2868230M	98.888
83) \$Toluene-d8	(3)	9.951	98	1928498	9.958
83) \$Toluene-d8	(3)	9.951	100	1247558	9.960
84) Toluene	(3)	10.024	92	1375434	10.110
86) 1,3-Dichloropropene (total)	(3)		75	1451695	20.745
85) trans-1,3-Dichloropropene	(3)	10.274	75	648596	10.272
87) Ethyl Methacrylate	(3)	10.323	69	503375	10.285
89) 1,1,2-Trichloroethane	(3)	10.475	97	346693	10.143
90) Tetrachloroethene	(3)	10.561	166	628570	10.165

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d
Injection date and time: 06-JAN-2020 14:56

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	595157	10.135
92) 2-Hexanone	(1)	10.677	43	1930183M	97.389
94) Dibromochloromethane	(3)	10.847	129	454667	10.389
96) 1,2-Dibromoethane	(3)	10.963	107	340506	10.425
97) 1-Chlorohexane	(3)	11.384	91	796363	9.710
98) *Chlorobenzene-d5	(3)	11.384	117	1453618	10.000
99) Chlorobenzene	(3)	11.408	112	1489084	10.018
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	538246	10.181
101) Ethylbenzene	(3)	11.493	91	2689588	10.047
102) m+p-Xylene	(3)	11.603	106	2063900	20.163
106) Xylene (Total)	(3)		106	3089747	30.353
105) o-Xylene	(3)	11.932	106	1025847	10.192
107) Styrene	(3)	11.951	104	1674658	10.252
108) Bromoform	(3)	12.109	173	269204	10.553
109) Isopropylbenzene	(3)	12.231	105	2771739	10.161
112) \$4-Bromofluorobenzene	(3)	12.377	95	708877	9.894
112) \$4-Bromofluorobenzene	(3)	12.377	174	605782	9.881
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	410607	10.443
115) Bromobenzene	(4)	12.493	156	611540	10.290
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	1083985	99.488
117) 1,2,3-Trichloropropane	(4)	12.524	110	107587M	10.219
118) n-Propylbenzene	(4)	12.554	91	3200410	10.312
120) 2-Chlorotoluene	(4)	12.633	126	626427	10.231
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	2339950	10.393
123) 4-Chlorotoluene	(4)	12.725	126	625771	10.240
126) tert-Butylbenzene	(4)	12.932	134	485332	10.423
127) Pentachloroethane	(4)	12.969	167	411479	10.369
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	2404012	10.341
129) sec-Butylbenzene	(4)	13.097	105	3049687	10.455
133) p-Isopropyltoluene	(4)	13.200	119	2618528	10.431
132) 1,3-Dichlorobenzene	(4)	13.200	146	1218850	10.291
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	753053	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	1185214	10.258
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	972849	10.035
137) Benzyl Chloride	(4)	13.347	126	177107	10.715
139) n-Butylbenzene	(4)	13.493	92	1312133	10.573
140) 1,2-Dichlorobenzene	(4)	13.530	146	1073891	10.286
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	63180	10.167

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

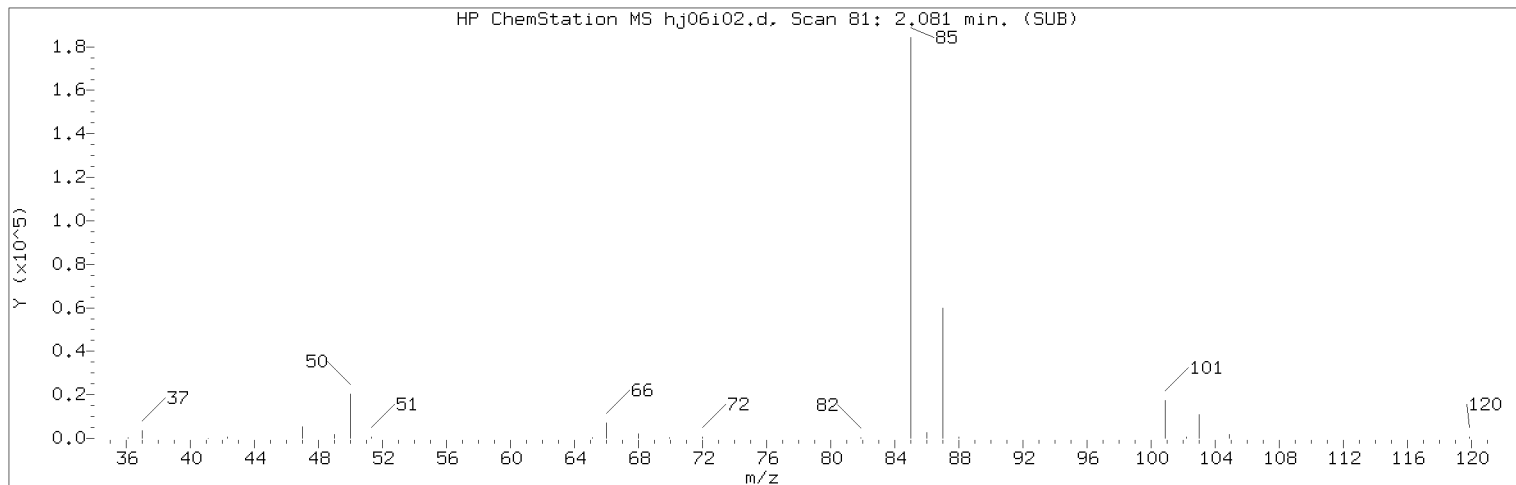
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	993380	10.717
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	845107	10.872
147) Hexachlorobutadiene	(4)	14.700	225	439808	10.842
148) Naphthalene	(4)	14.804	128	1445887	10.659
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	714131	10.762

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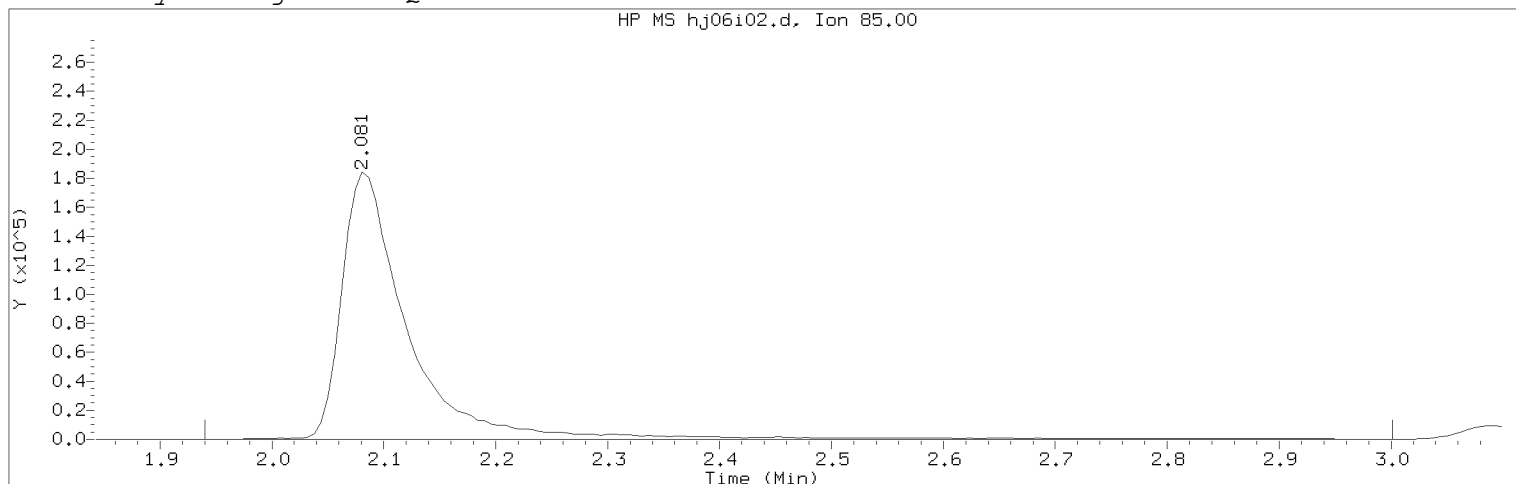
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

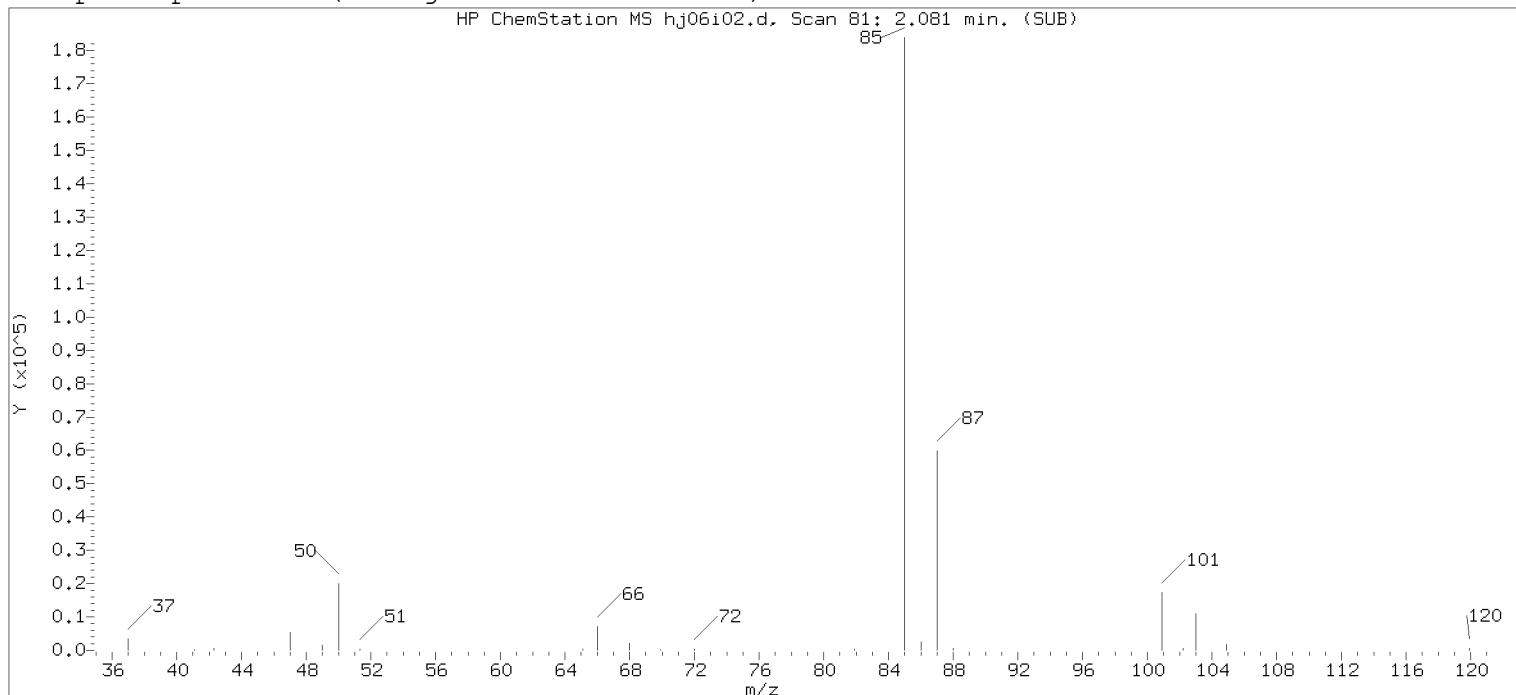
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area (flag)	: 760677M	
On-Column Amount (ng)	: 10.4486	
Integration start scan	: 57	Integration stop scan: 231
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

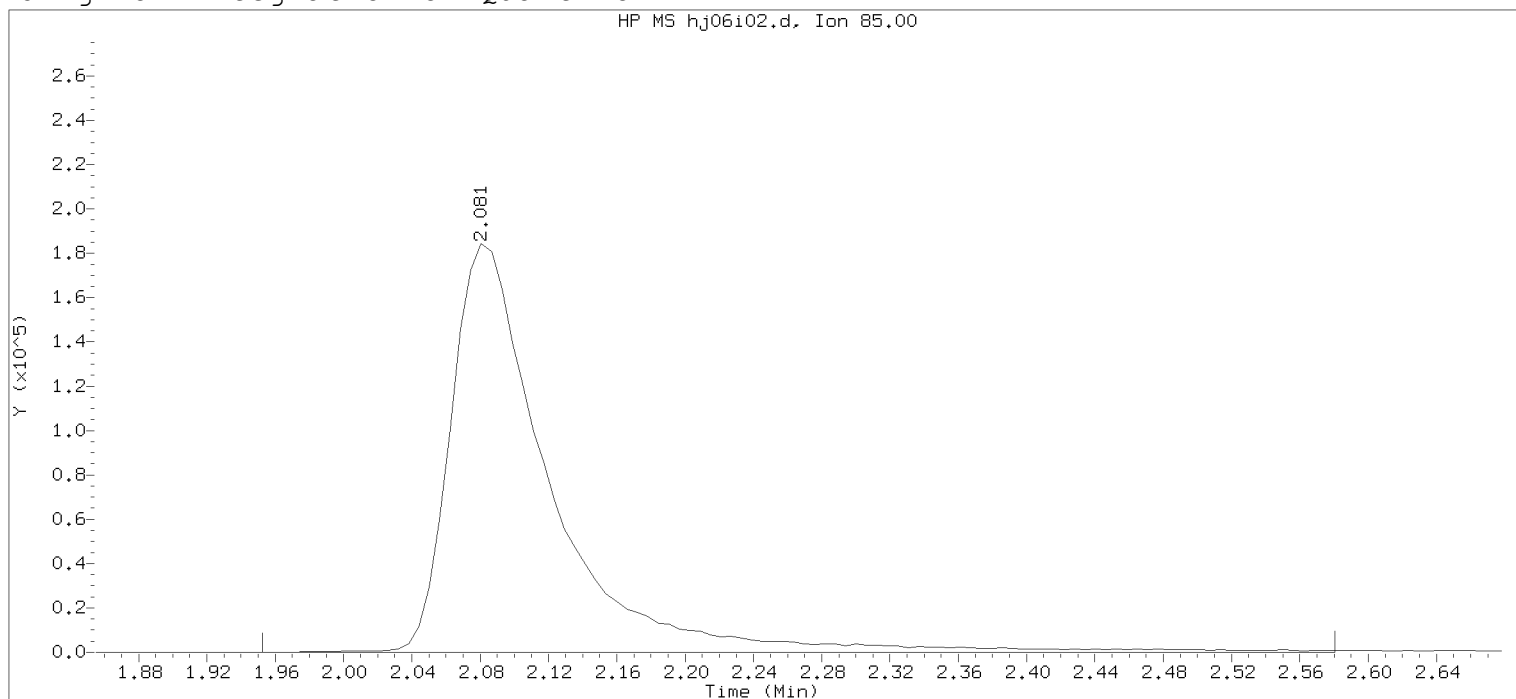
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

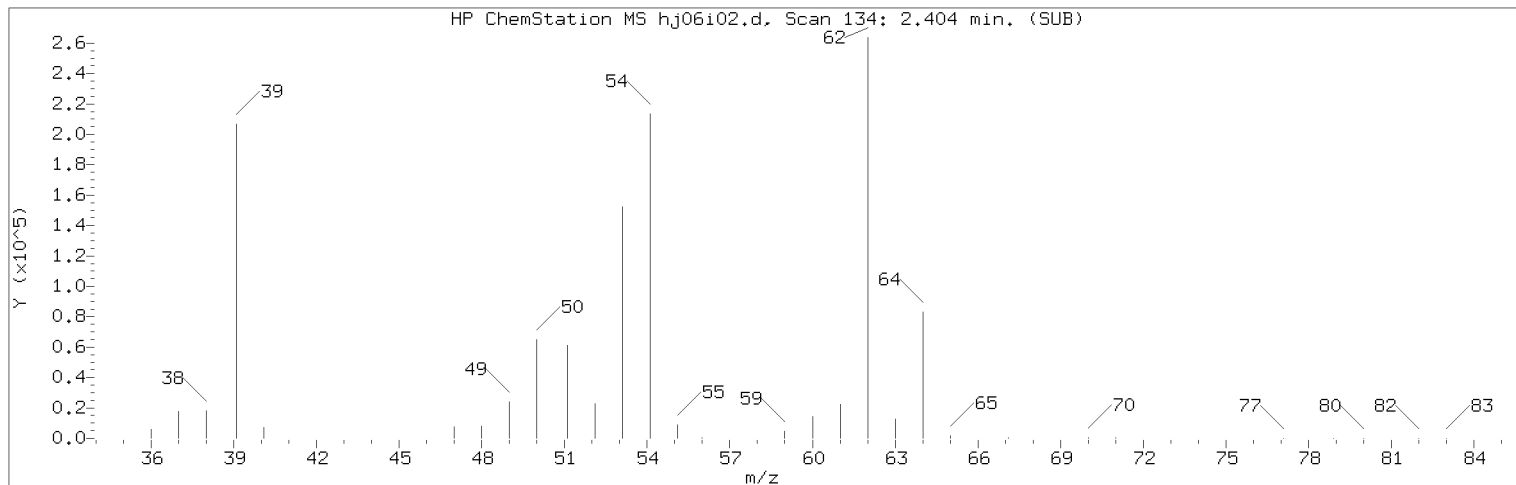
Lab Sample ID: VSTD010

Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area	: 750056	
On-column Amount (ng)	: 10.3504	
Integration start scan	: 59	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

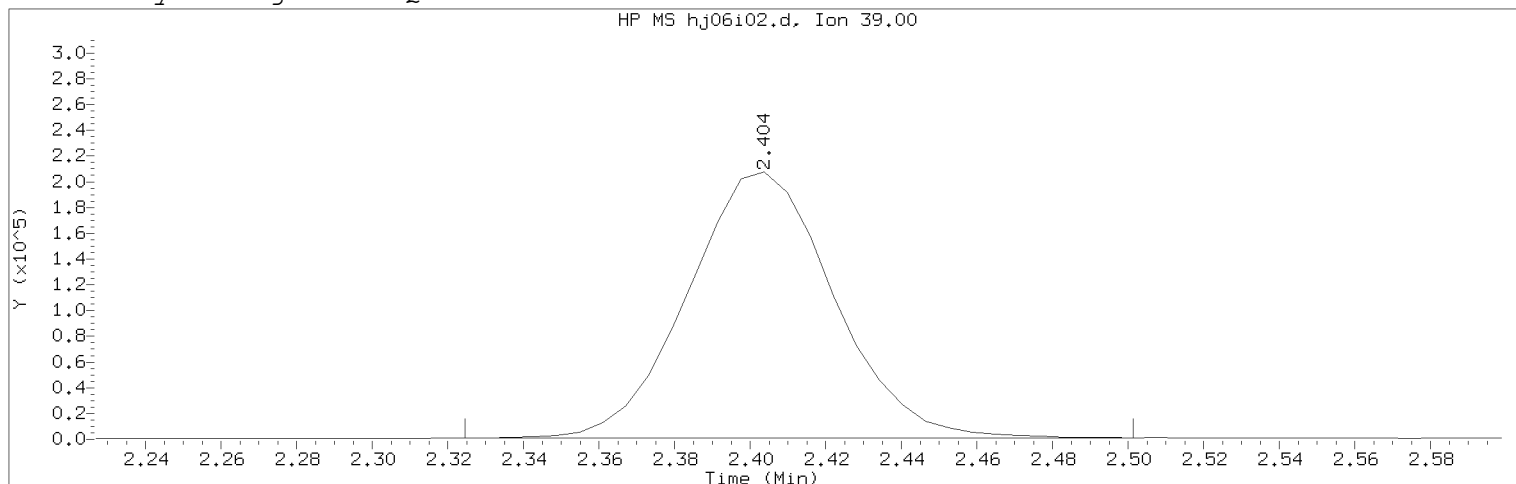
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RAE64-Page 98 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

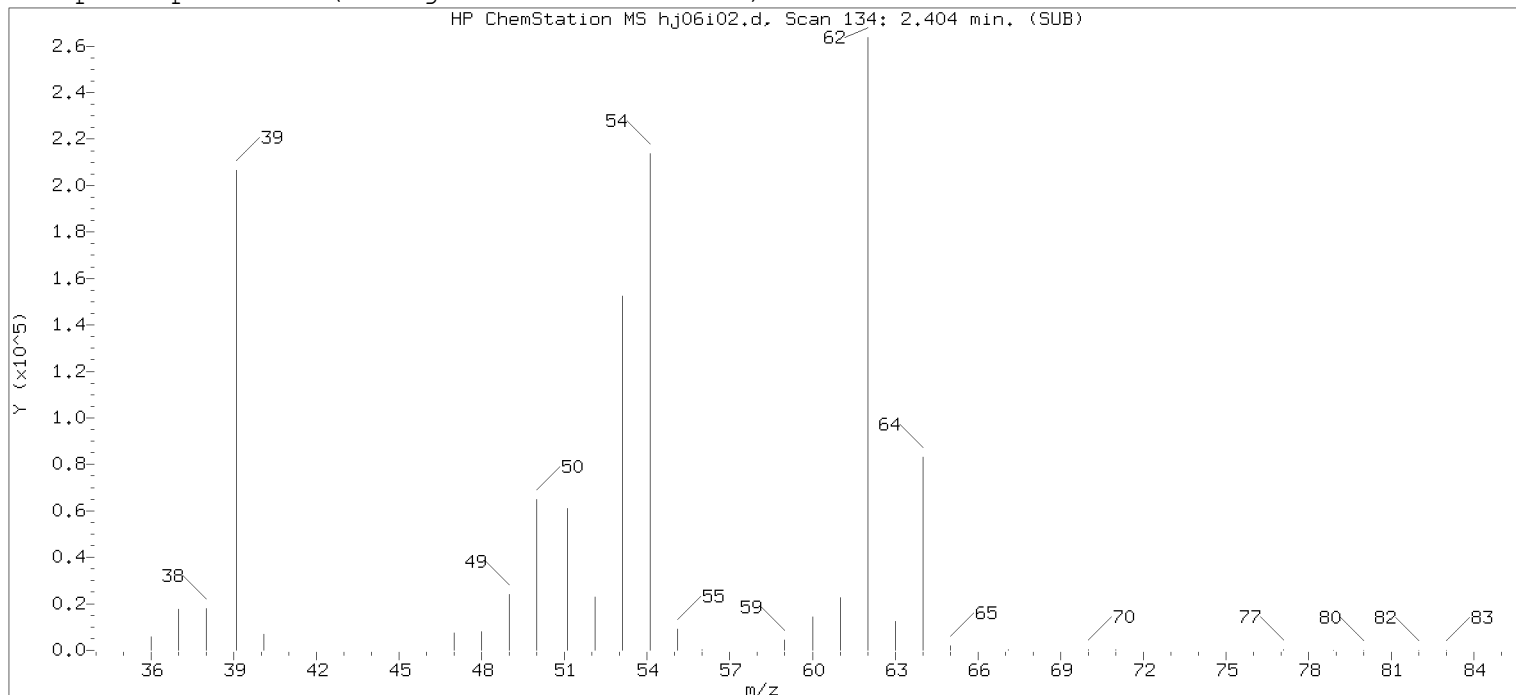
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area (flag)	: 556101M	
On-Column Amount (ng)	: 10.2978	
Integration start scan	: 120	Integration stop scan: 149
Y at integration start	: 805	Y at integration end: 805

Reason for manual integration: improper integration

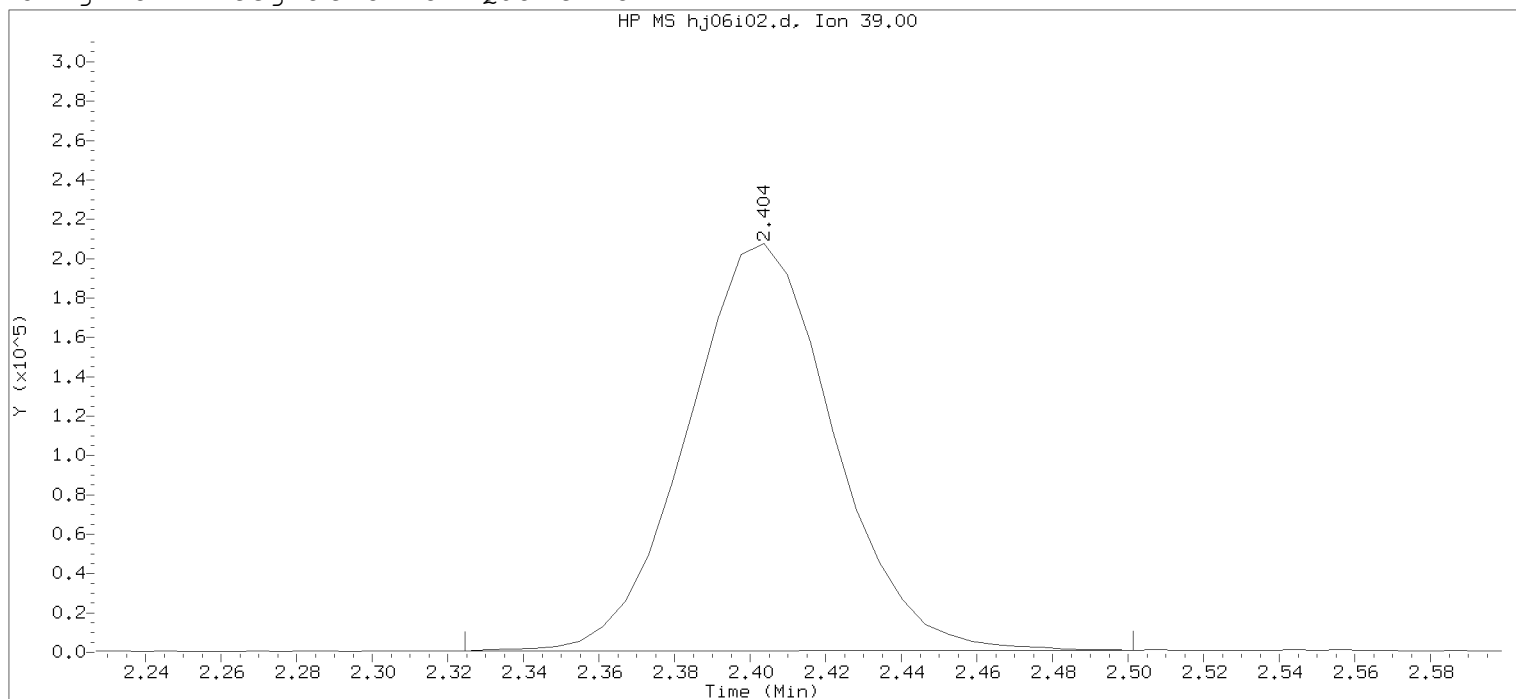
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 6

Compound Name : 1,3-Butadiene

Scan Number : 134

Retention Time (minutes): 2.404

Quant Ion : 39.00

Area : 554271

On-column Amount (ng) : 10.3624

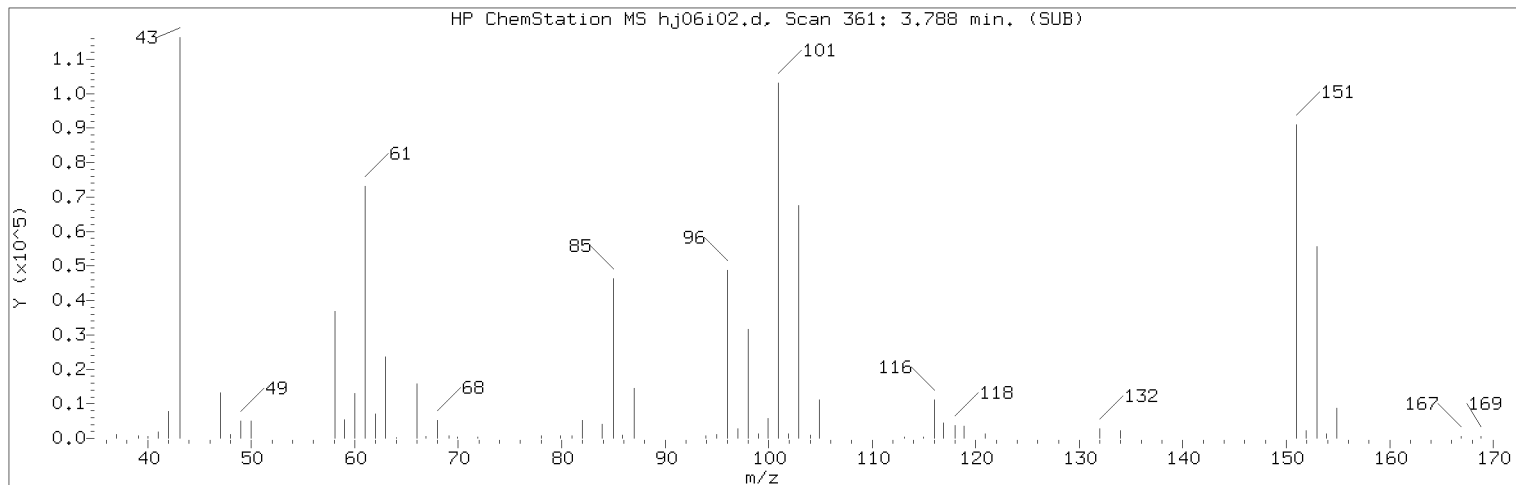
Integration start scan : 120 Integration stop scan: 149

Y at integration start : 806 Y at integration end: 1138

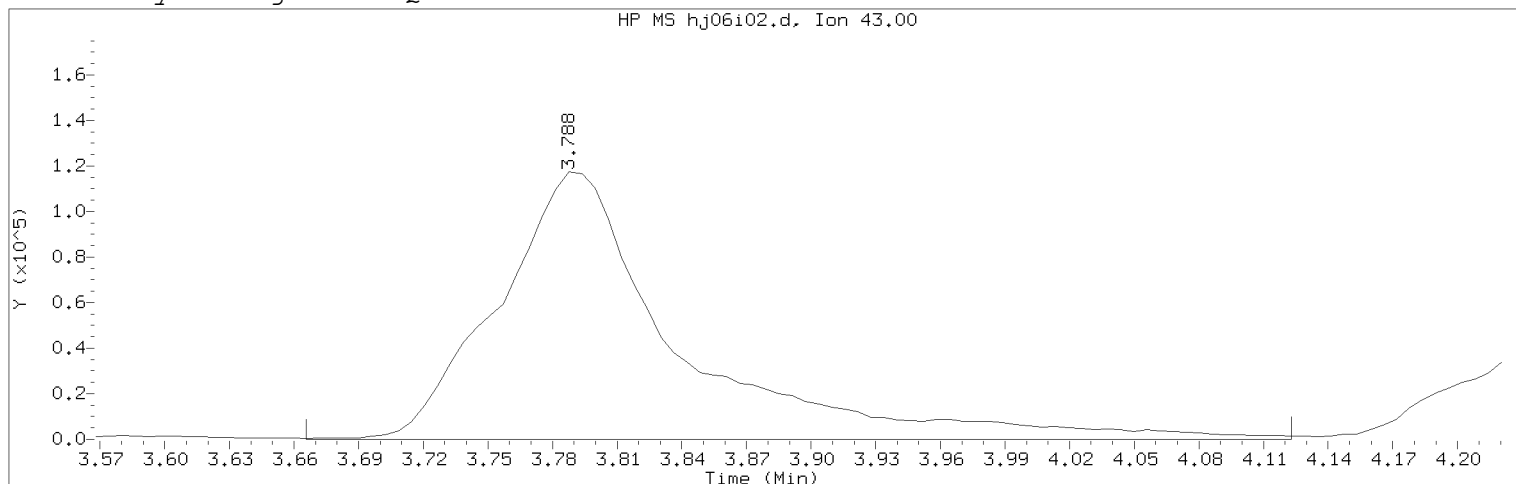
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RA64s Page 100 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area (flag) : 680105M
 On-Column Amount (ng) : 90.3654
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 415
 Y at integration end: 0

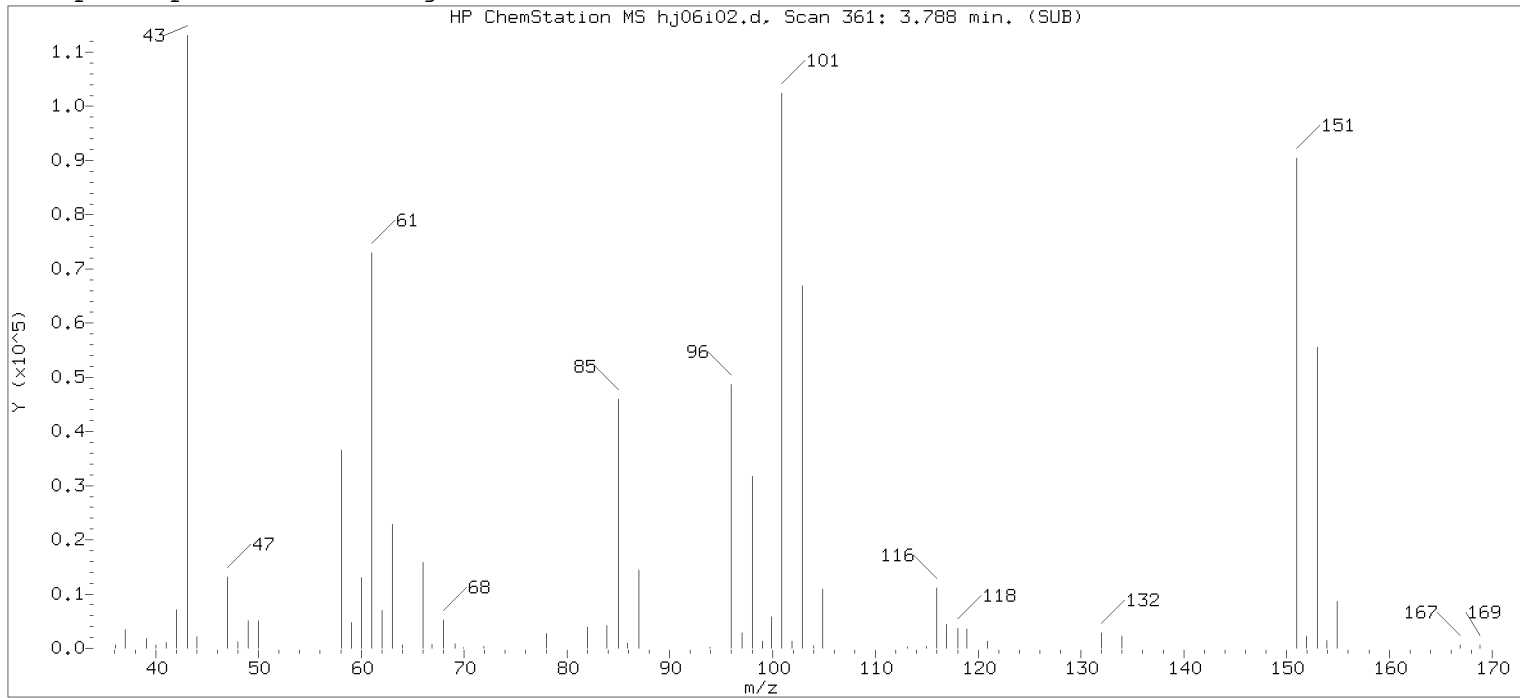
Reason for manual integration: improper integration

Analyst responsible for change:

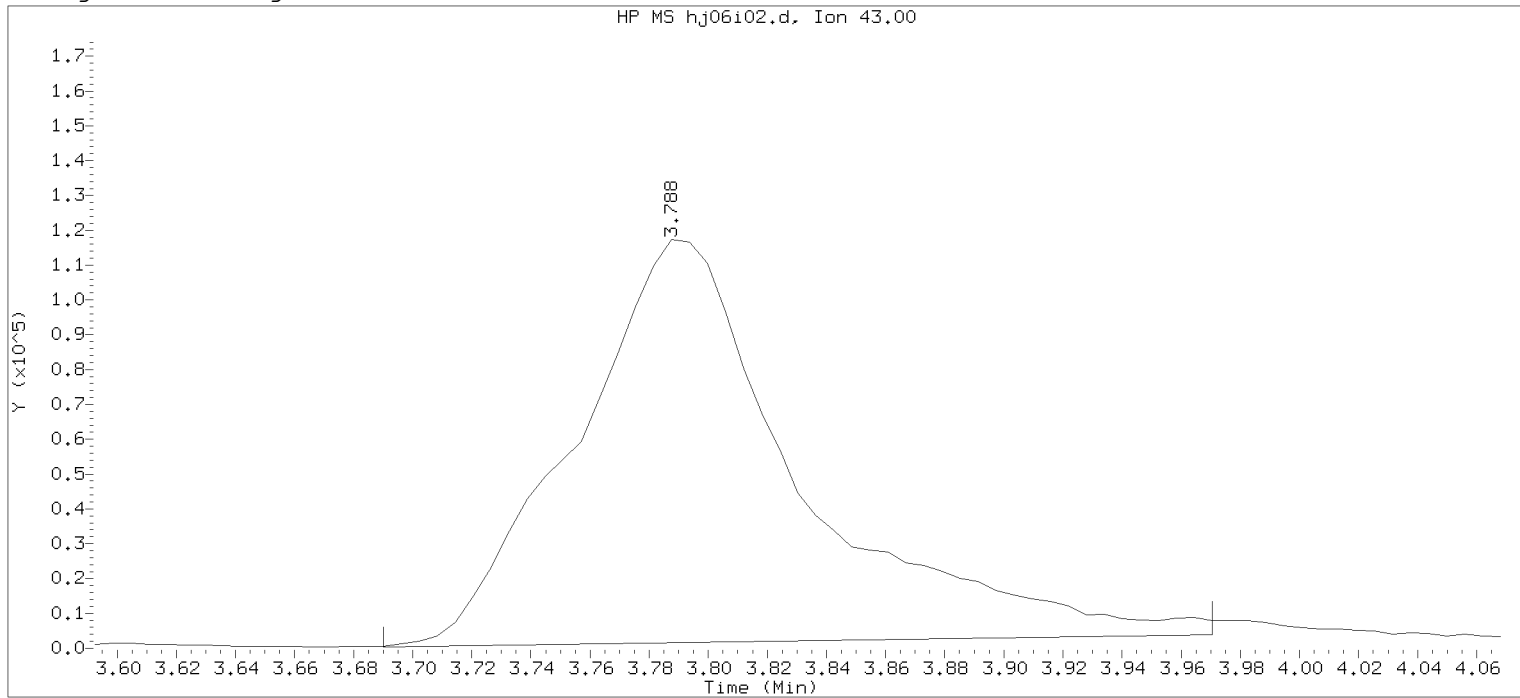
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

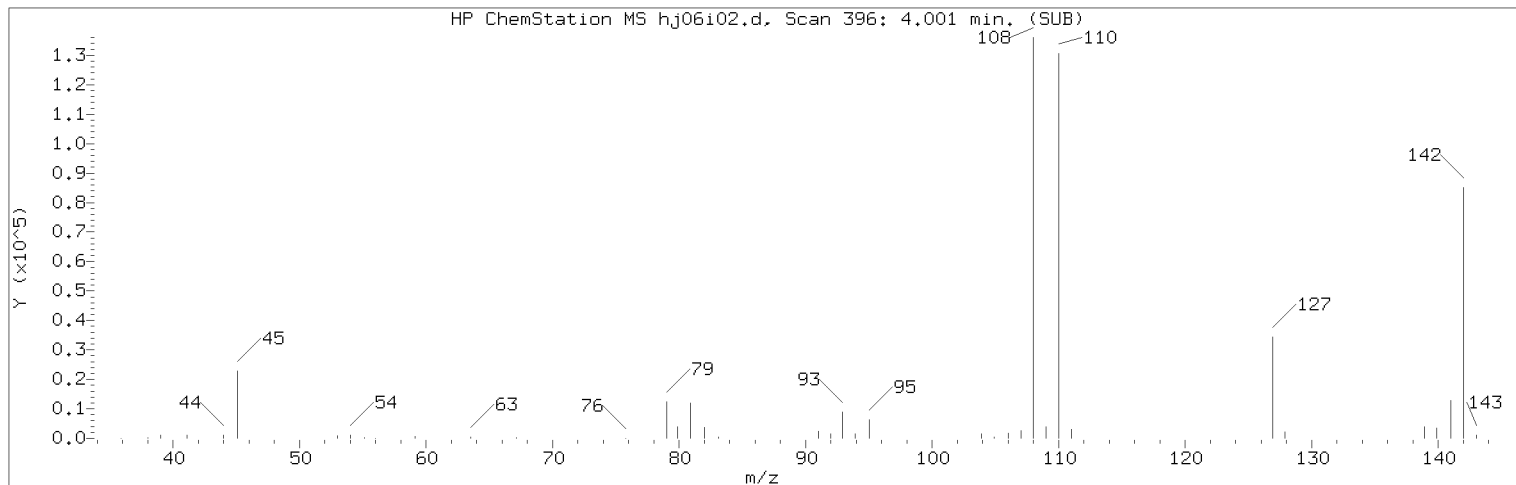
Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area : 604987
 On-column Amount (ng) : 77.9708
 Integration start scan : 344
 Y at integration start : 396

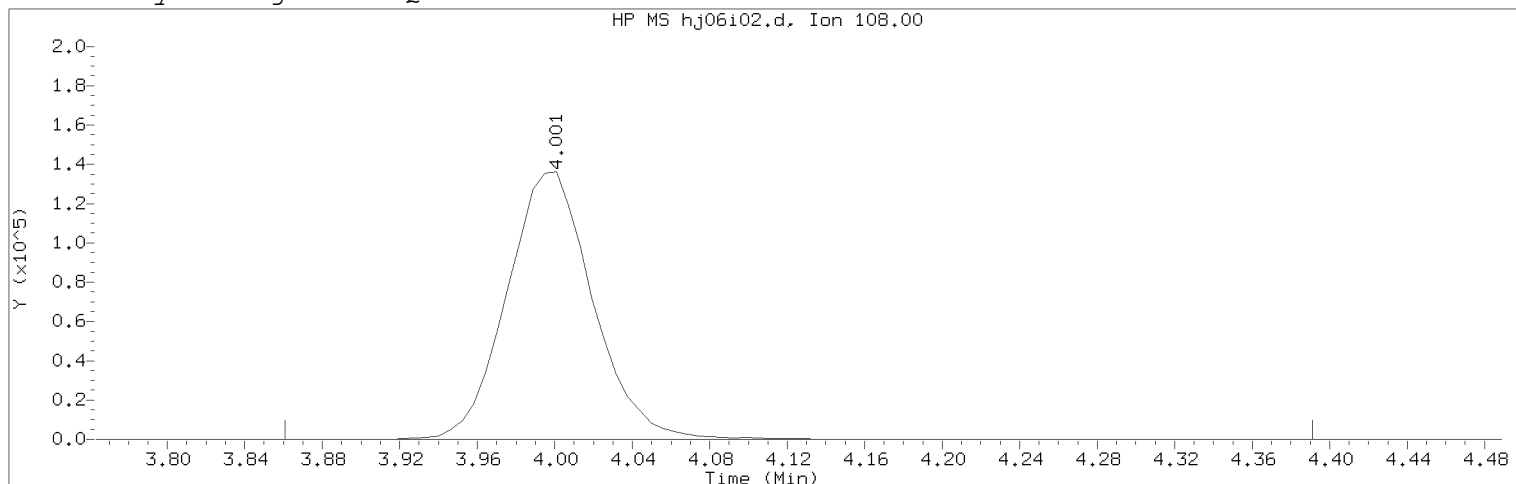
Integration stop scan: 390
 Y at integration end: 3820

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 Target 3.5 esignature user RA564s Page 102 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

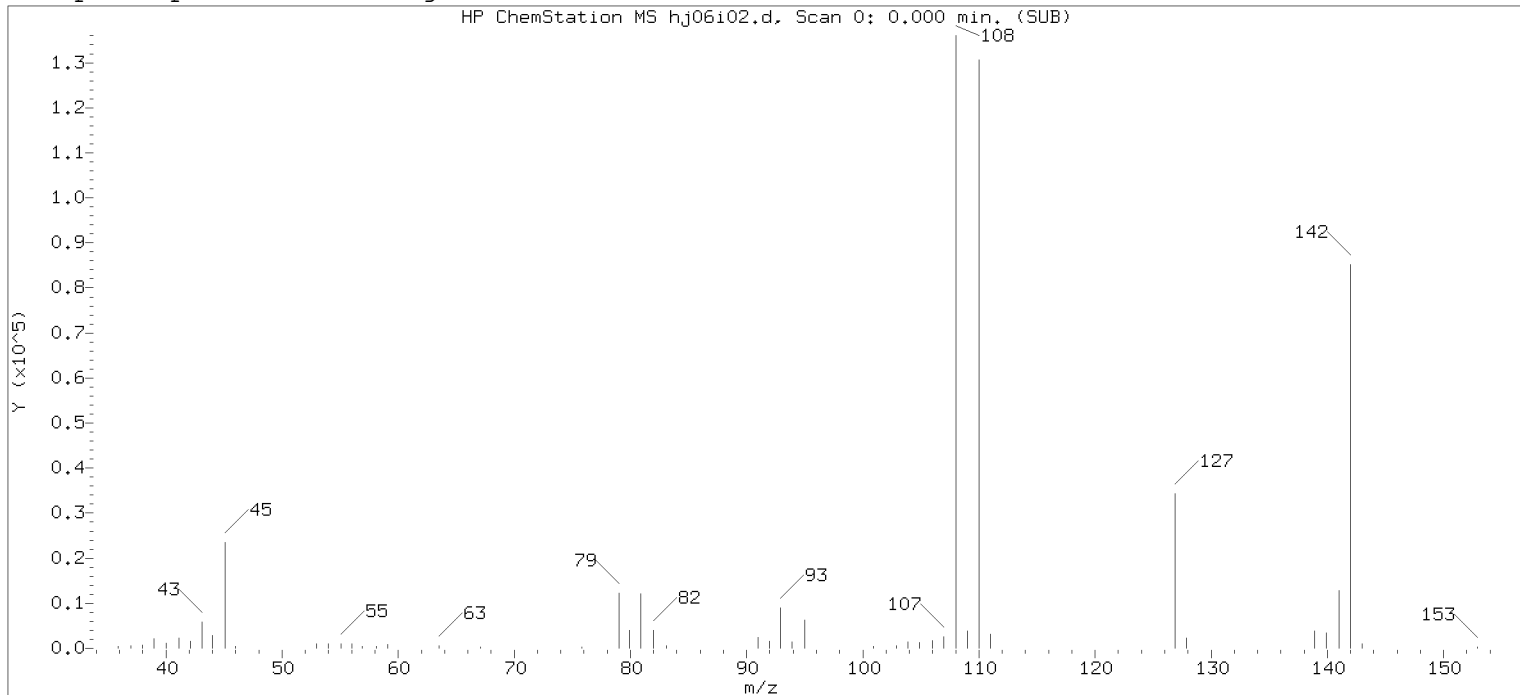
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 108.00
Area (flag) : 420057M
On-Column Amount (ng) : 10.1469
Integration start scan : 372 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

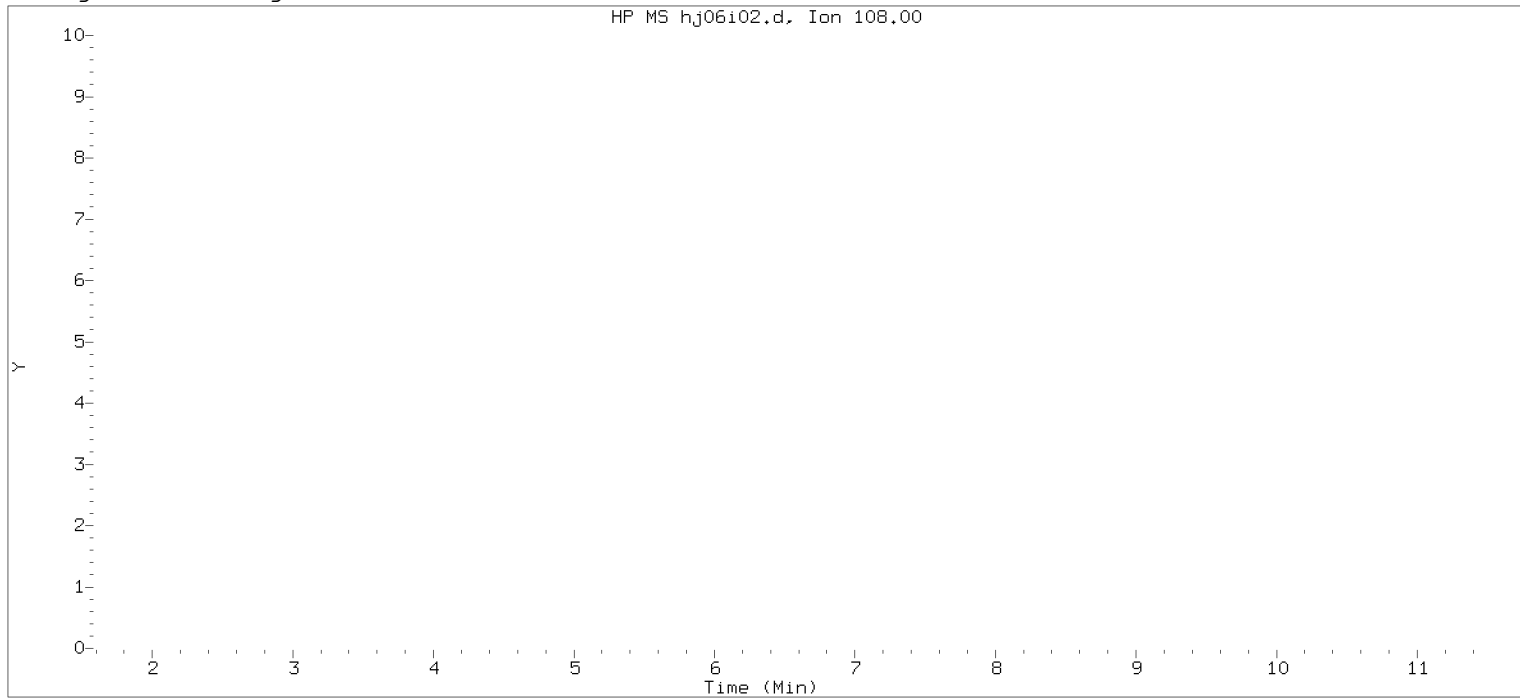
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

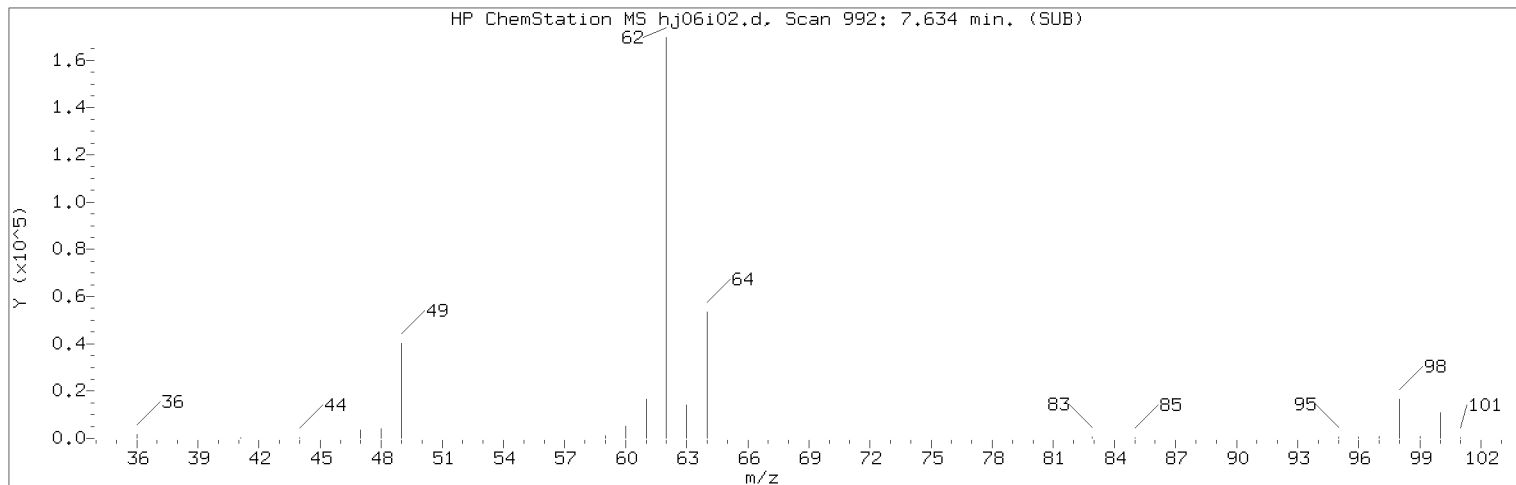
Sample Name: VSTD010

Lab Sample ID: VSTD010

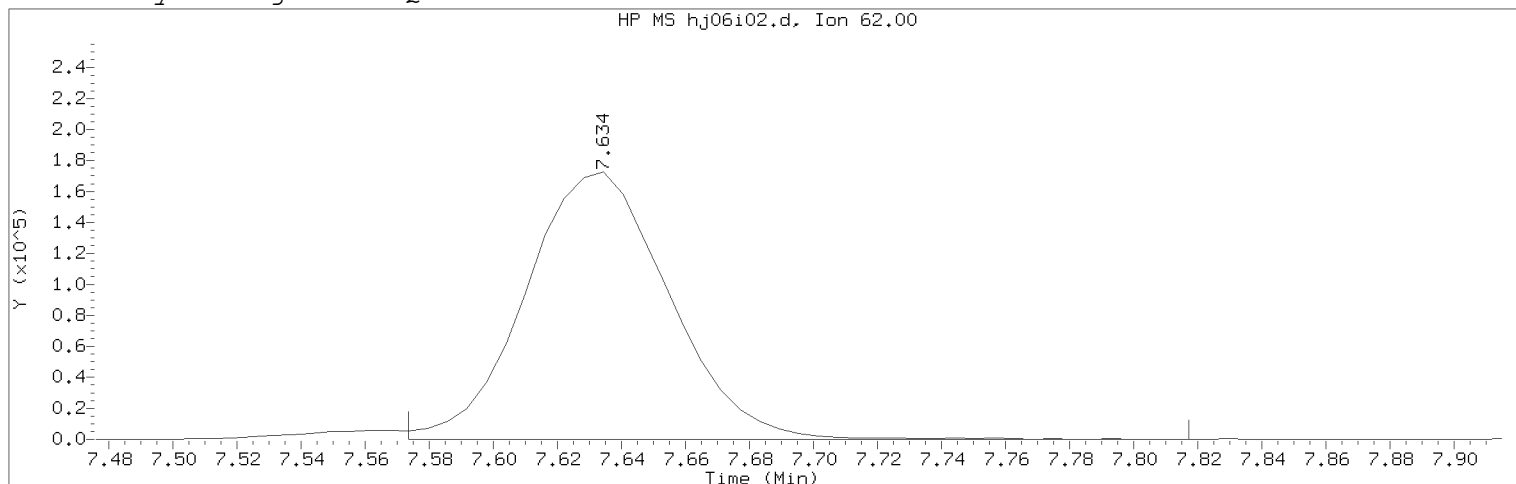
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 104 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

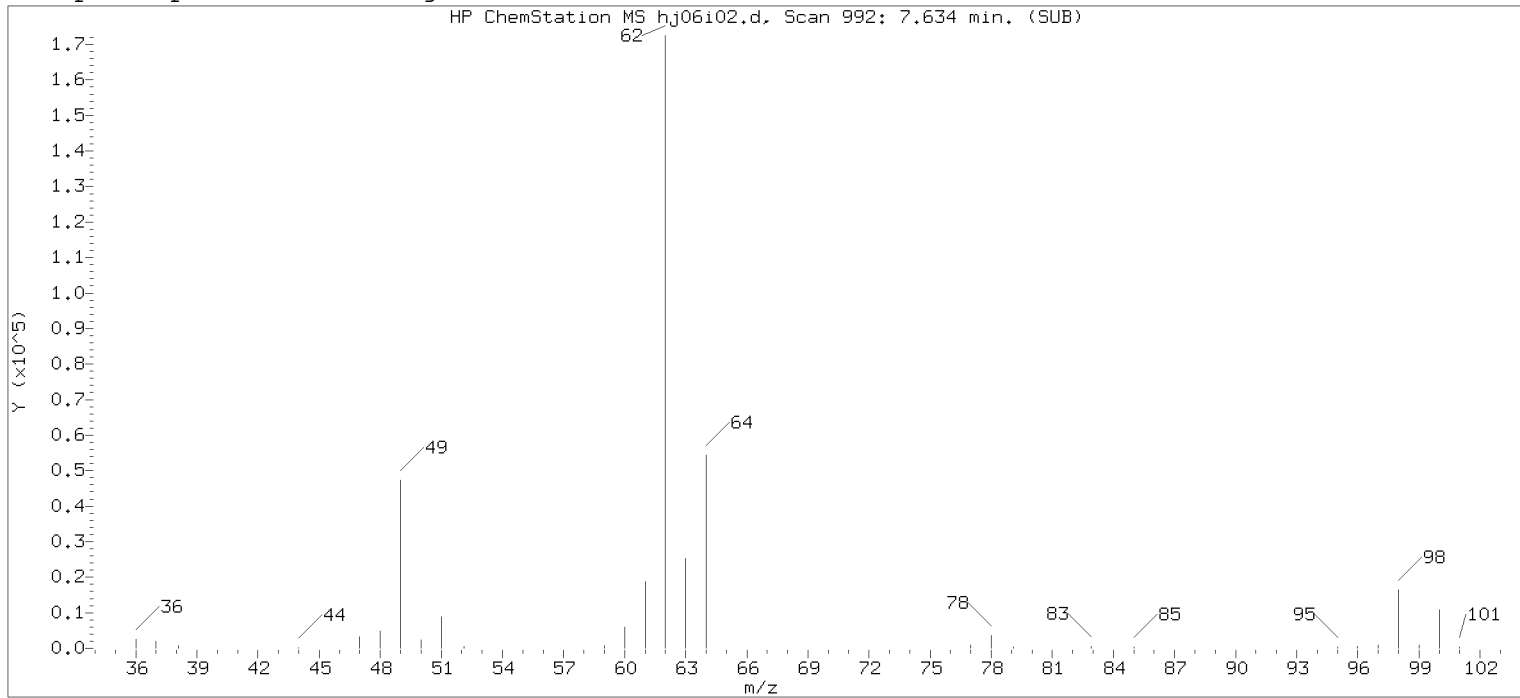
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 992	
Retention Time (minutes)	: 7.634	
Quant Ion	: 62.00	
Area (flag)	: 536476M	
On-Column Amount (ng)	: 9.8501	
Integration start scan	: 981	Integration stop scan: 1021
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

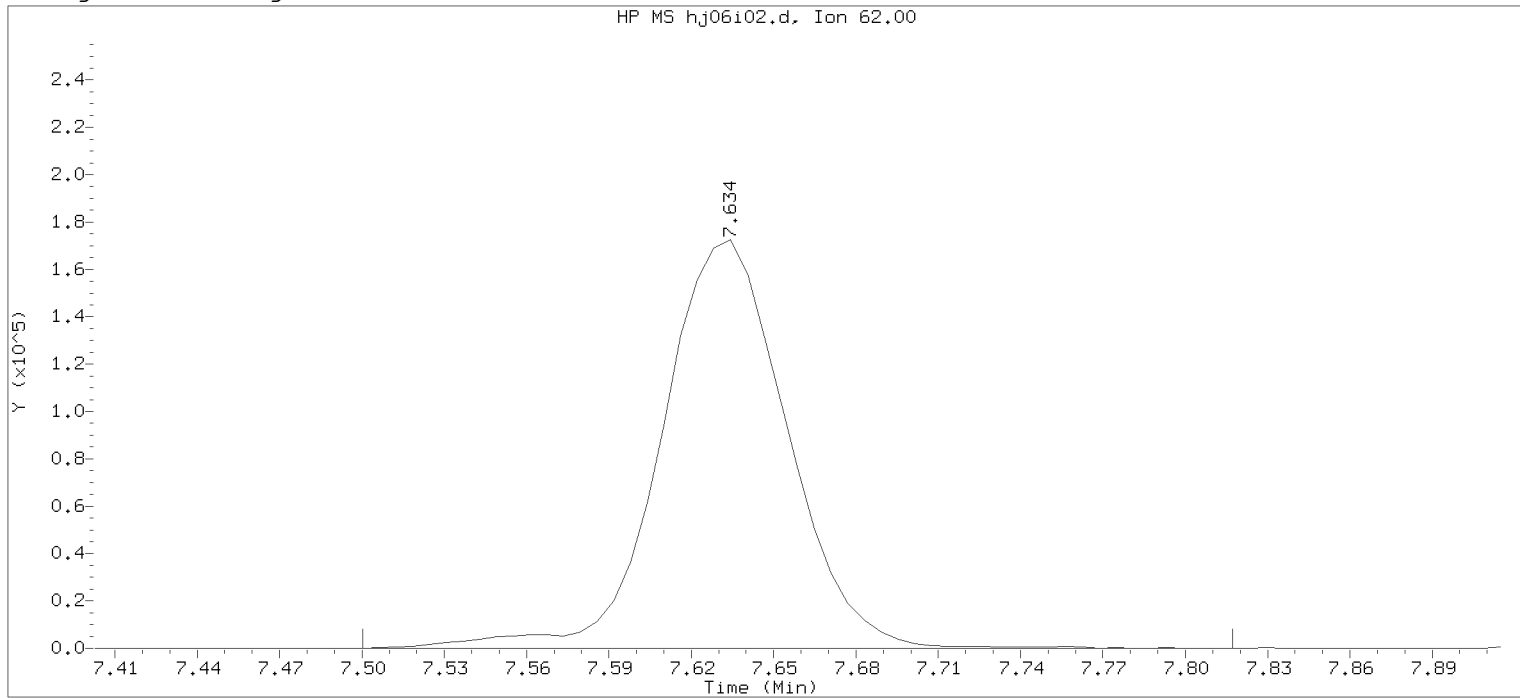
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

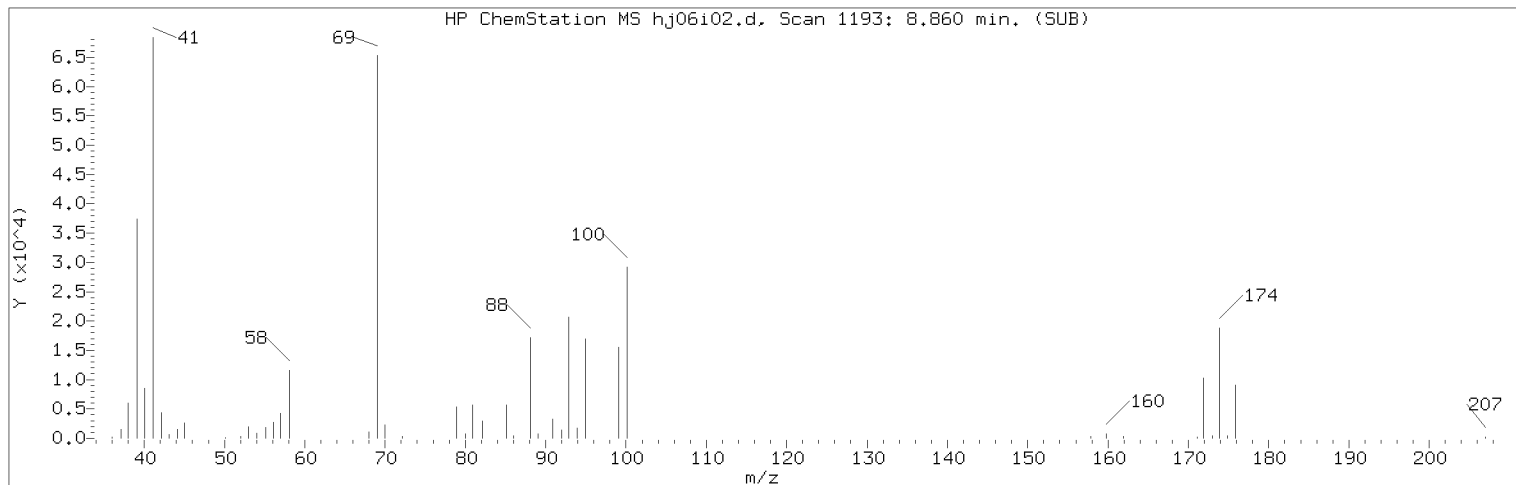
Sample Name: VSTD010

Lab Sample ID: VSTD010

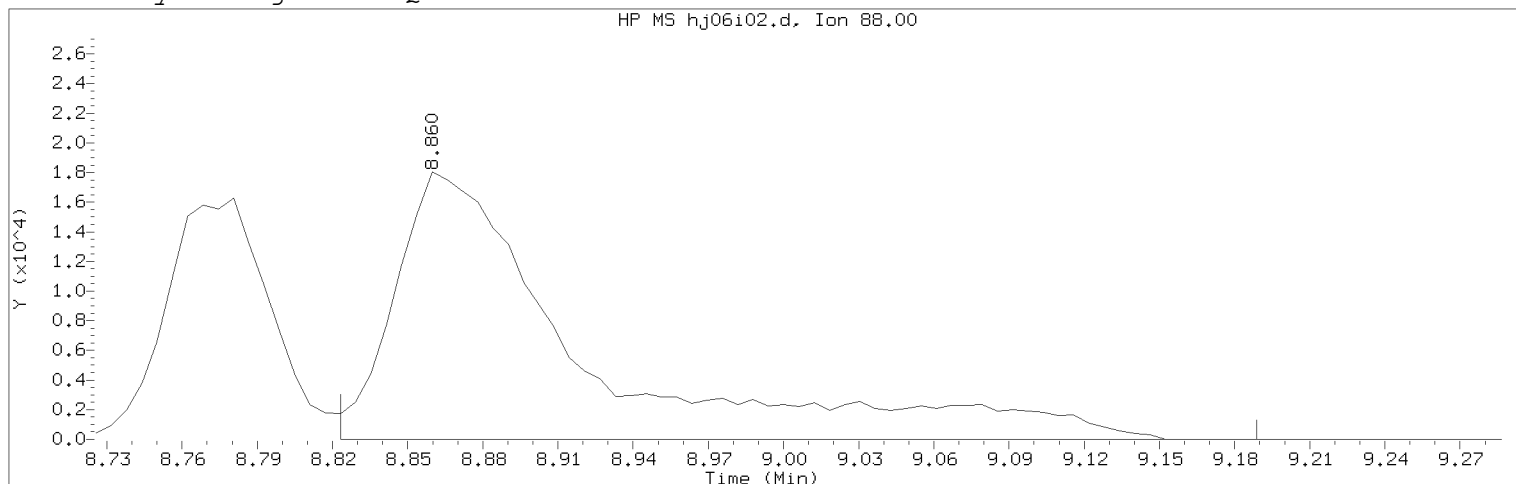
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 992	
Retention Time (minutes)	: 7.634	
Quant Ion	: 62.00	
Area	: 548873	
On-column Amount (ng)	: 10.0169	
Integration start scan	: 969	Integration stop scan: 1021
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 106 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

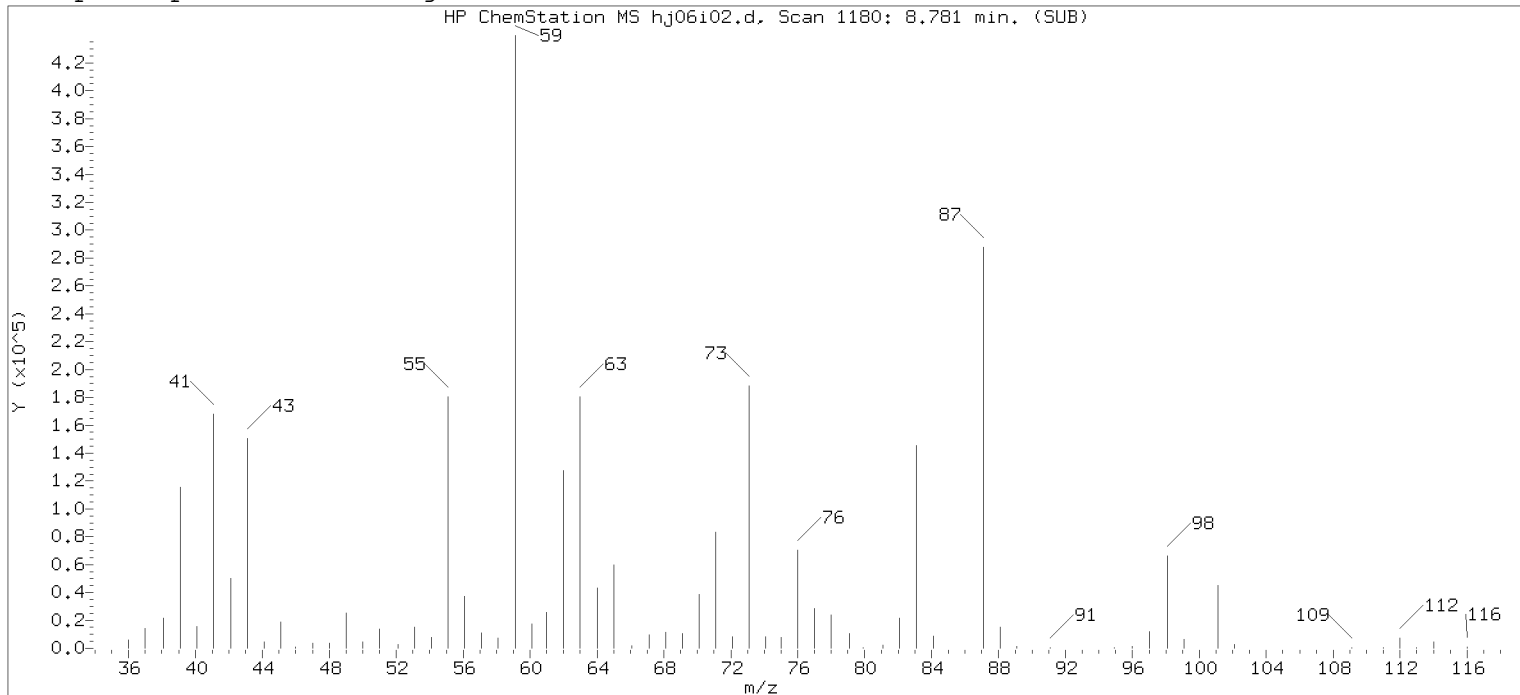
Compound Number : 73
Compound Name : 1,4-Dioxane
Scan Number : 1193
Retention Time (minutes): 8.860
Quant Ion : 88.00
Area (flag) : 93413M
On-Column Amount (ng) : 530.8819
Integration start scan : 1186 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

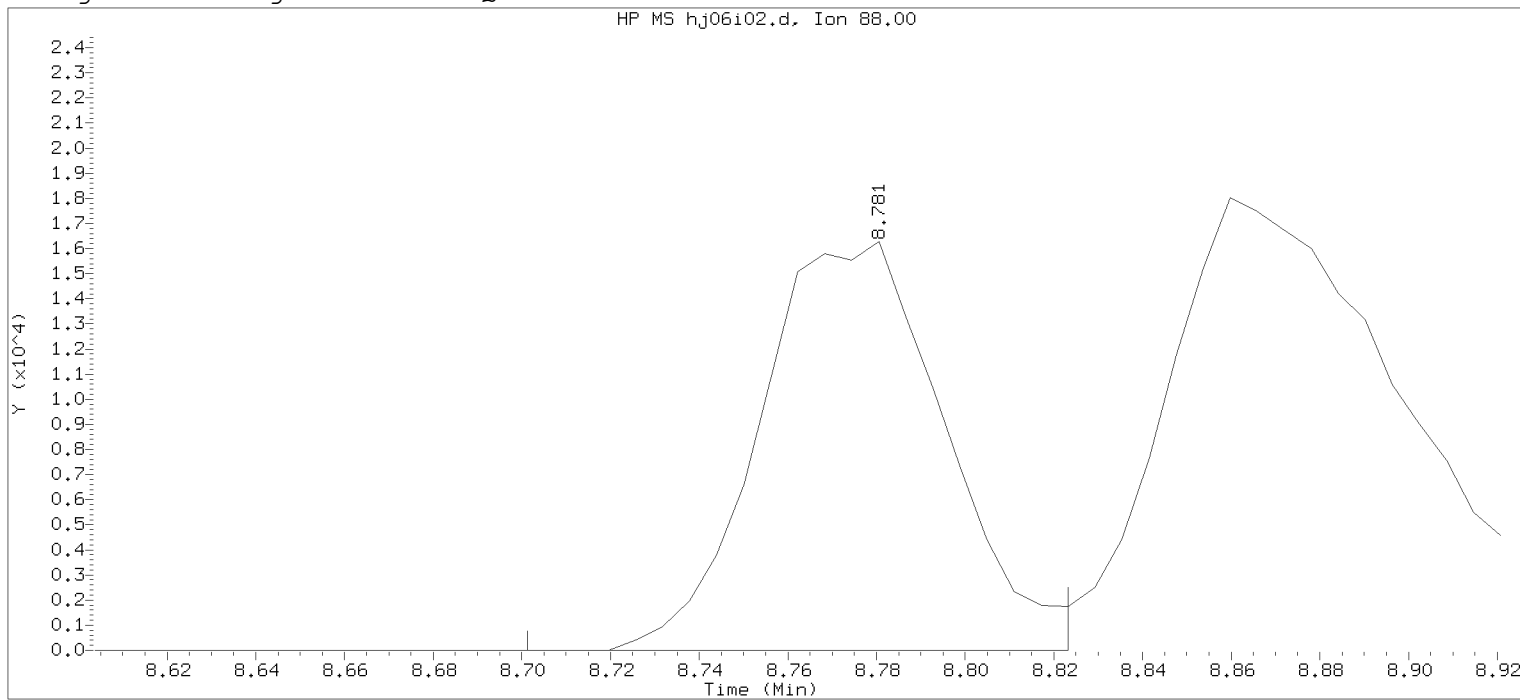
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

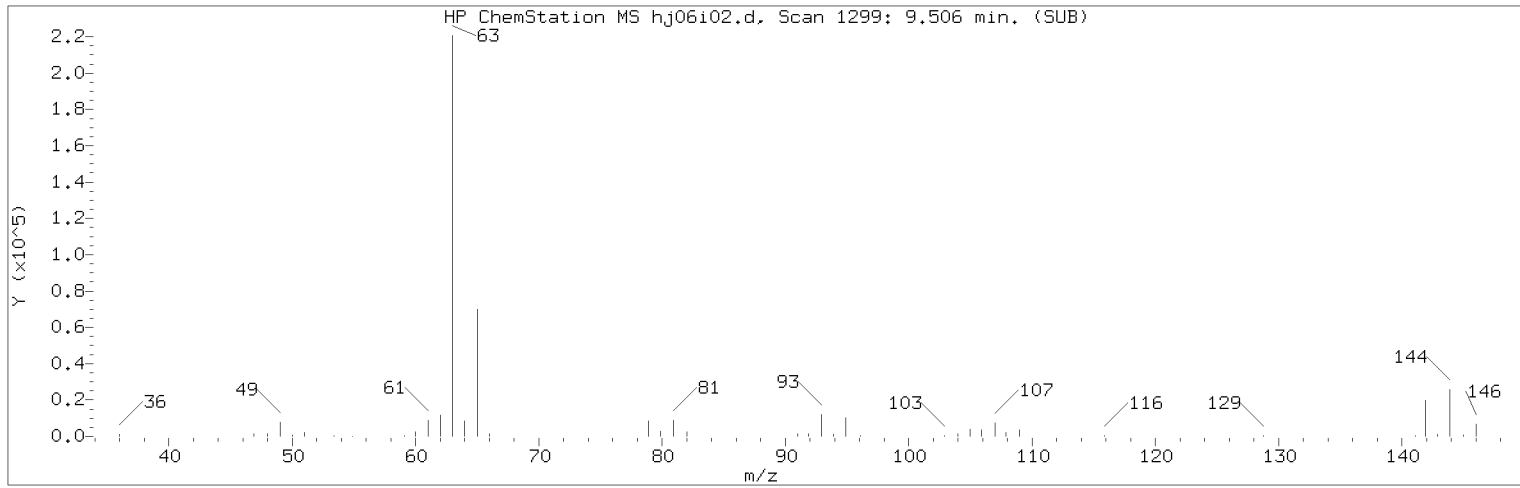
Sample Name: VSTD010

Lab Sample ID: VSTD010

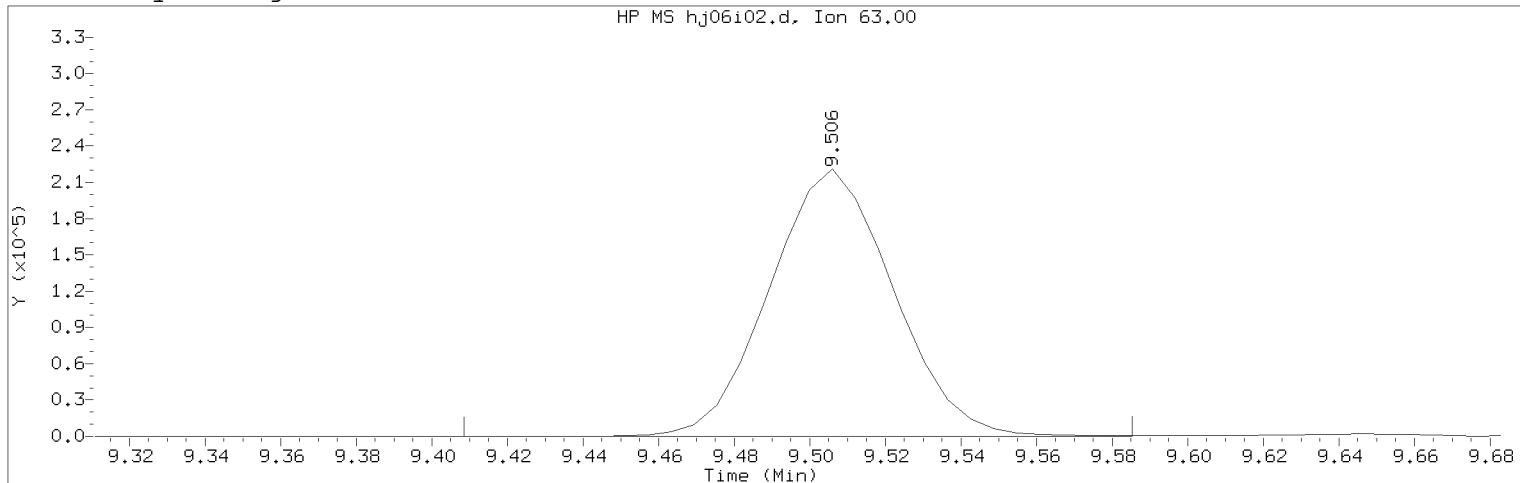
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1180	
Retention Time (minutes)	: 8.781	
Quant Ion	: 88.00	
Area	: 46706	
On-column Amount (ng)	: 277.6322	
Integration start scan	: 1166	Integration stop scan: 1186
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

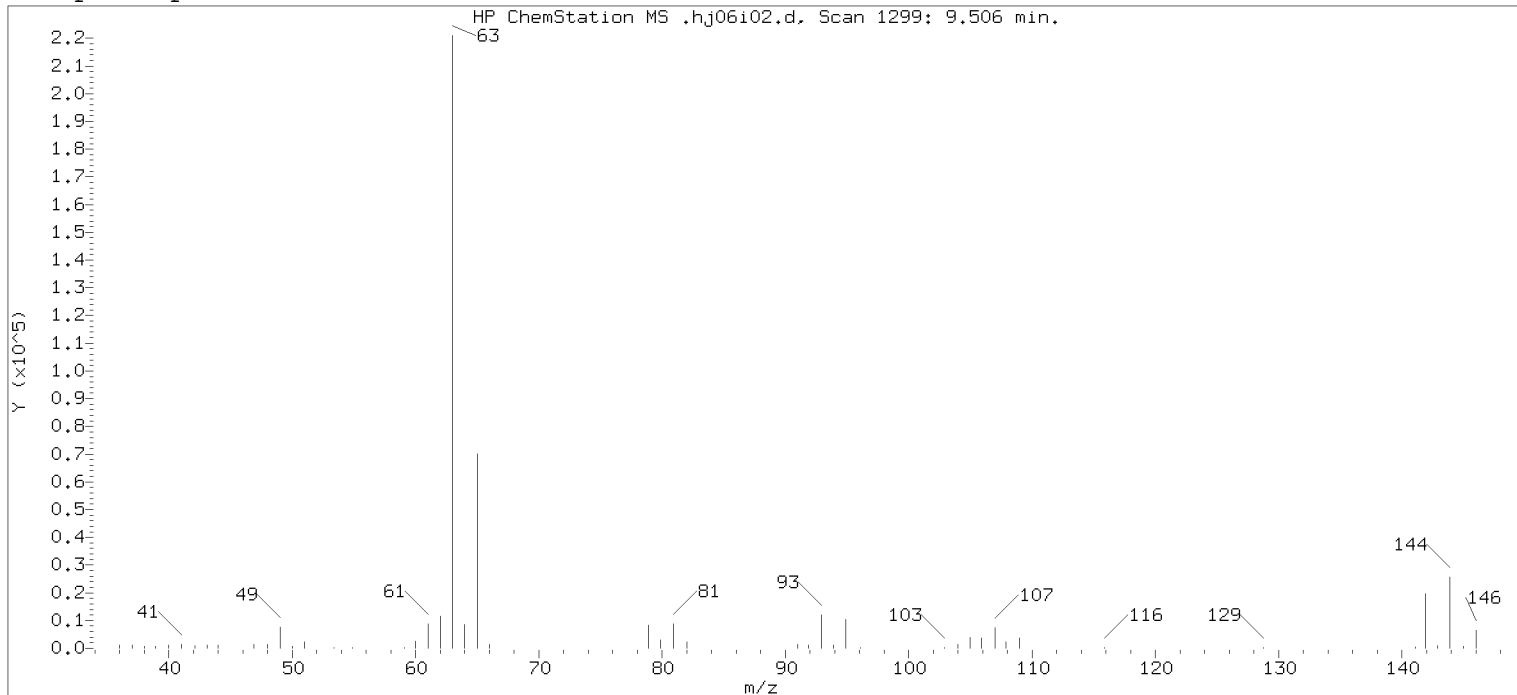
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 500661M
On-Column Amount (ng) : 10.1913
Integration start scan : 1282 Integration stop scan: 1311
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

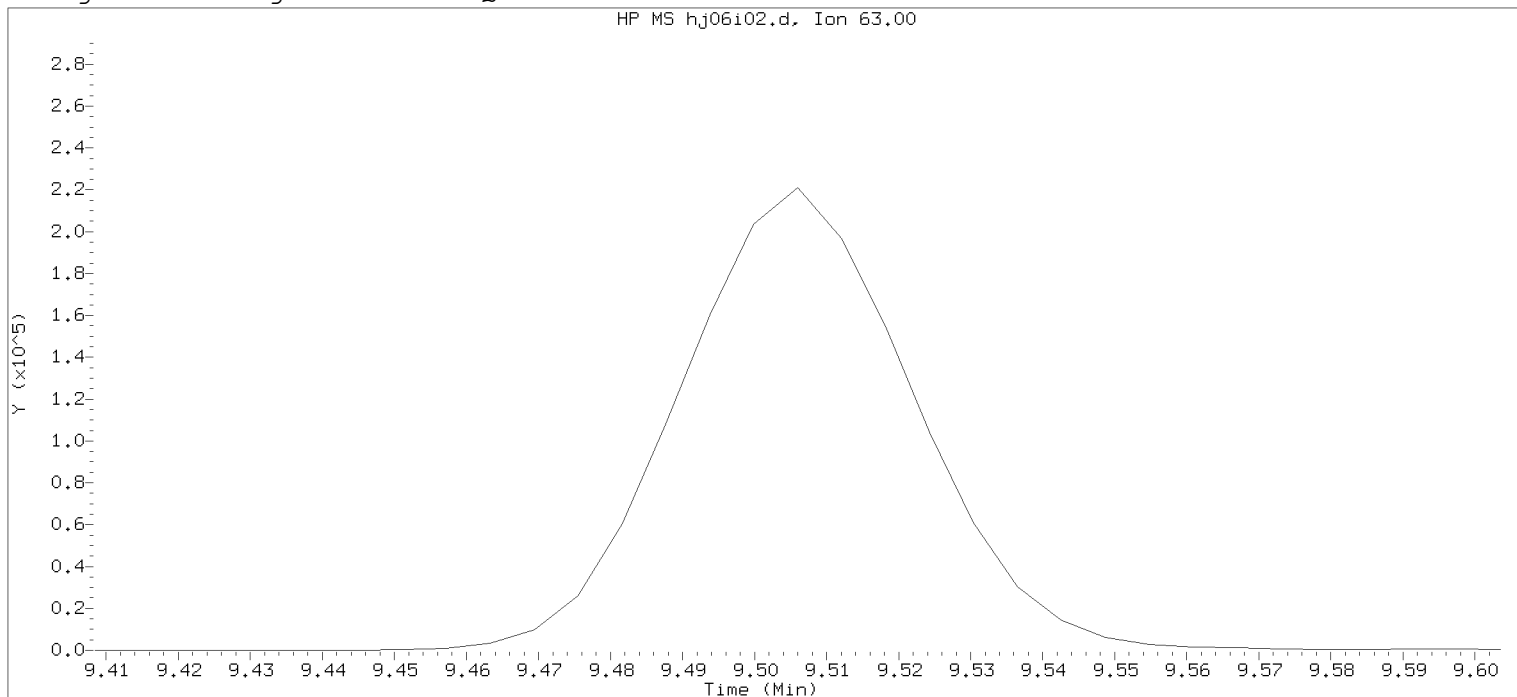
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 80

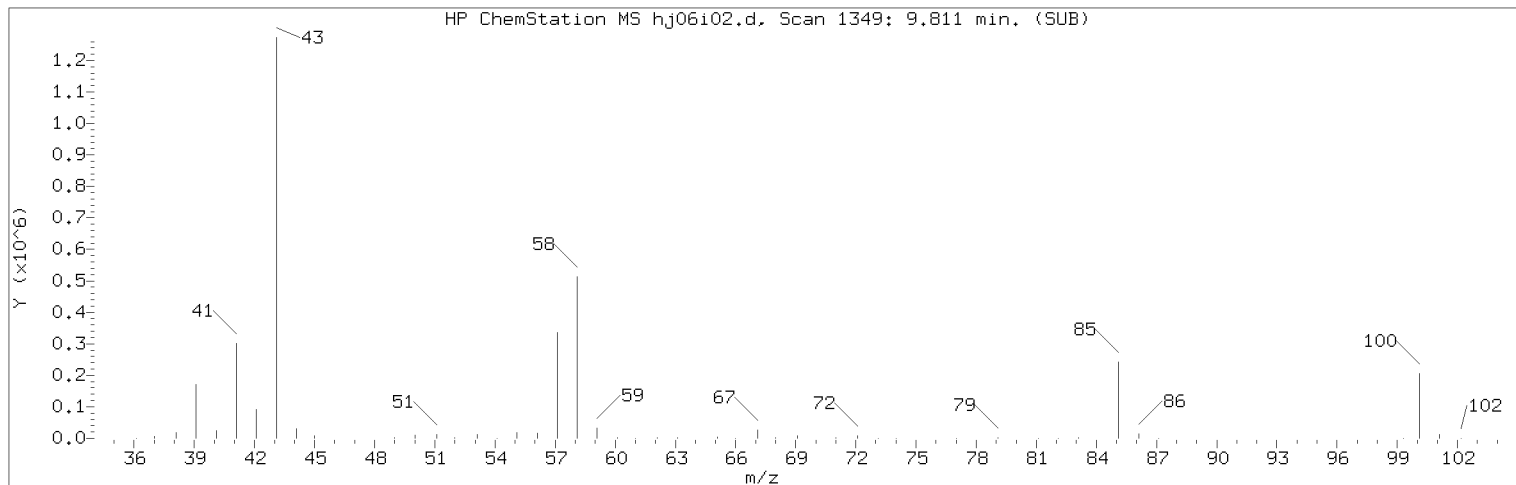
Compound Name : 1-Bromo-2-chloroethane

Expected RT (minutes) : 9.506

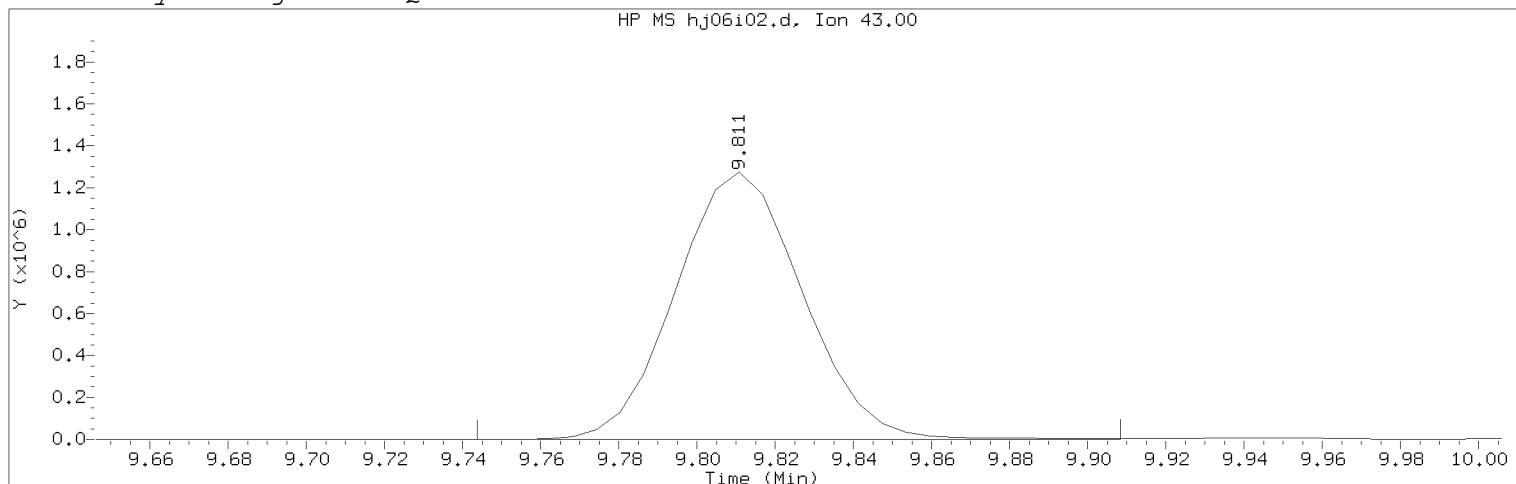
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 14:56

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:48

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

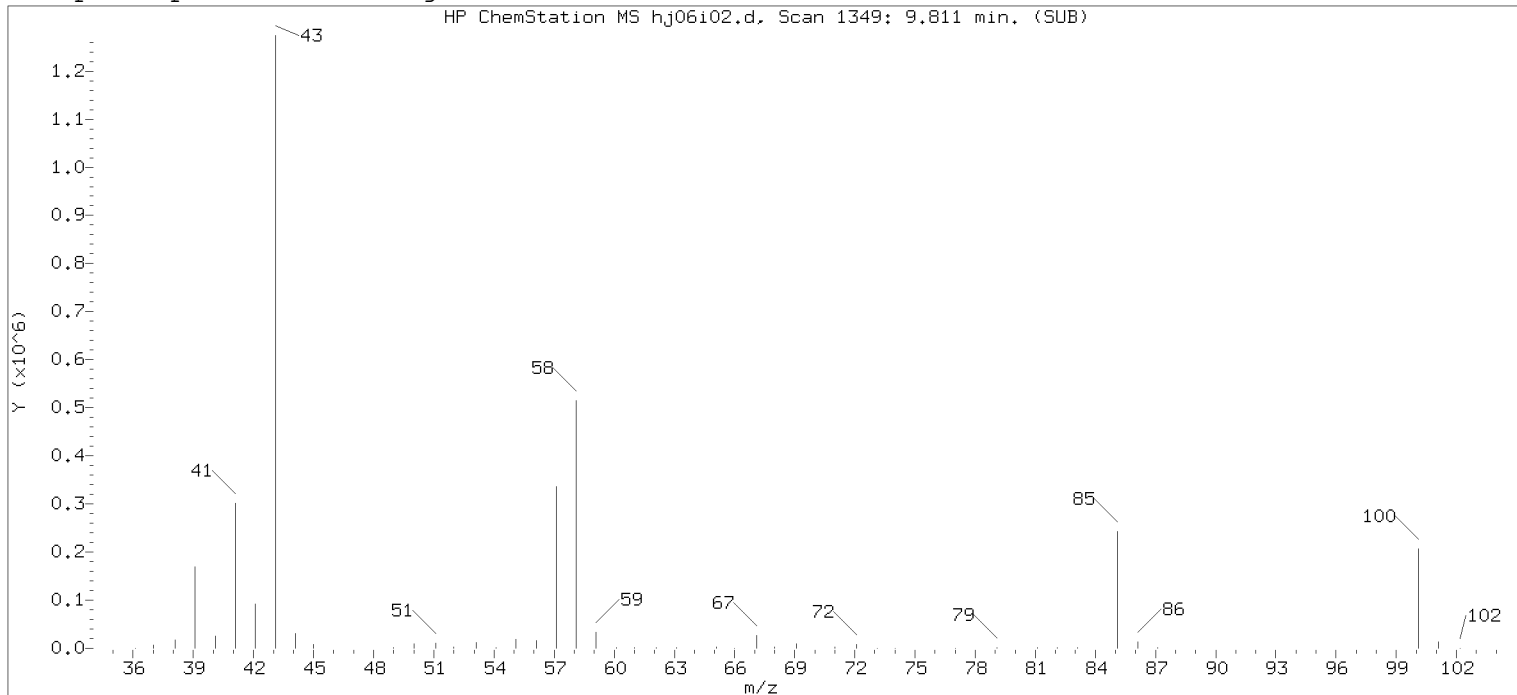
Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1349	
Retention Time (minutes)	: 9.811	
Quant Ion	: 43.00	
Area (flag)	: 2868230M	
On-Column Amount (ng)	: 98.8878	
Integration start scan	: 1337	Integration stop scan: 1364
Y at integration start	: 0	Y at integration end: 60

Reason for manual integration: improper integration

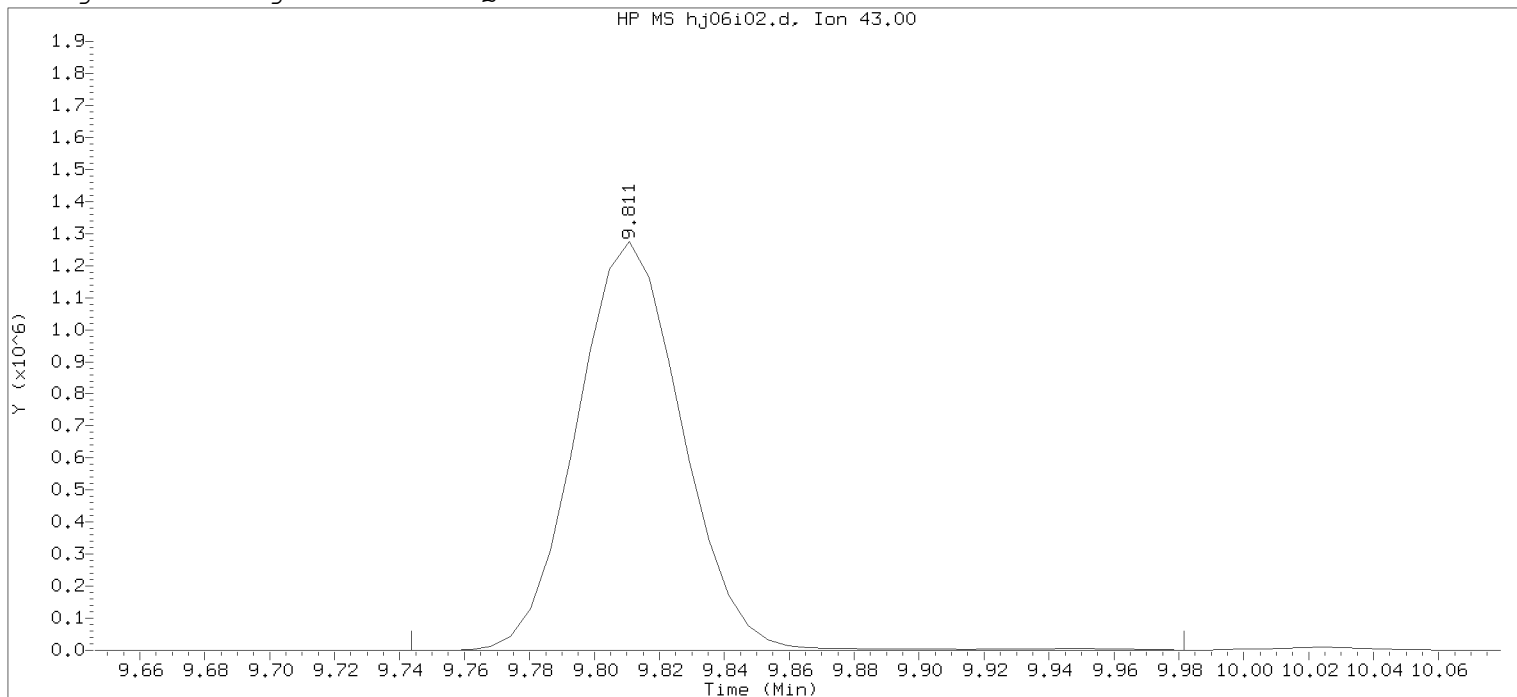
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

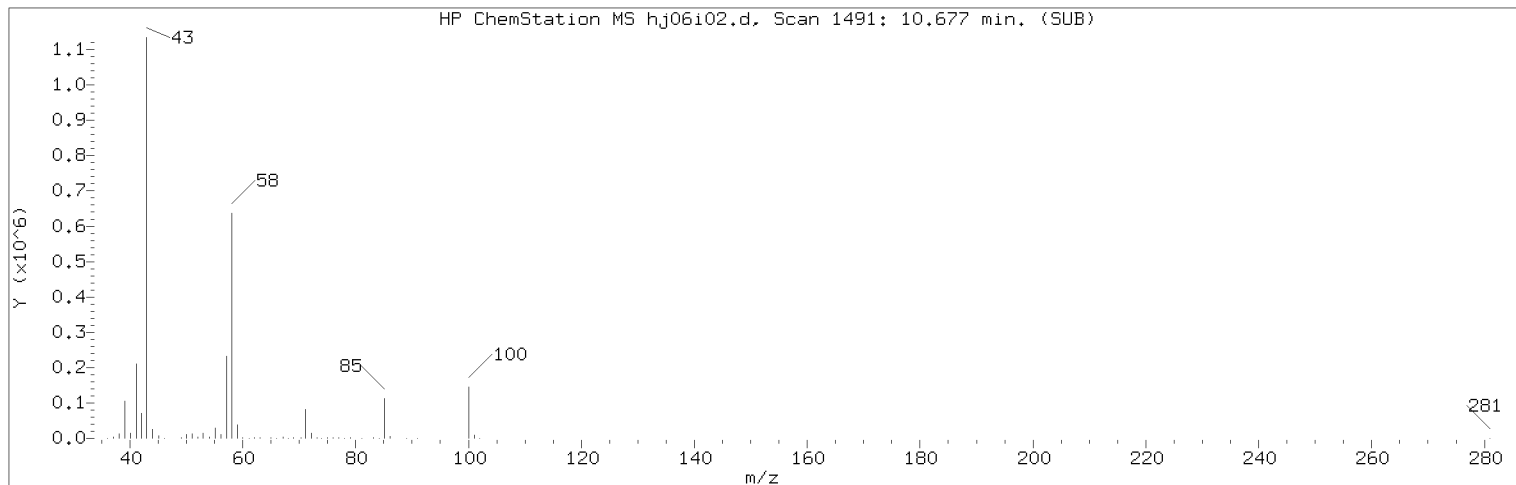
Sample Name: VSTD010

Lab Sample ID: VSTD010

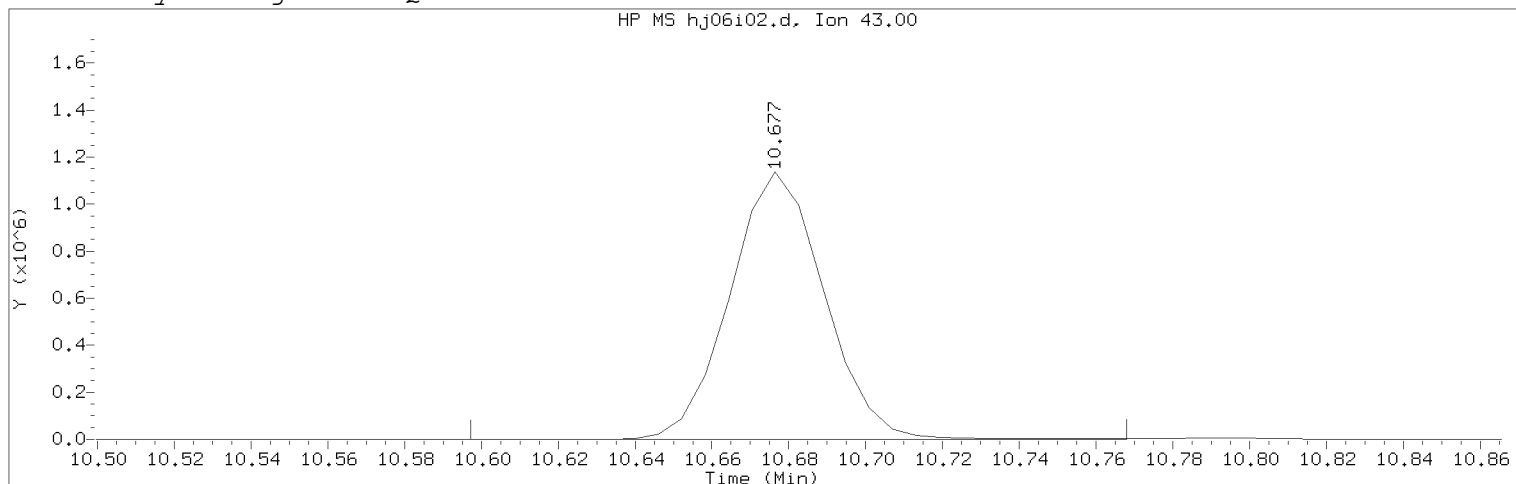
Compound Number	: 82	
Compound Name	: 4-Methyl-2-Pentanone	
Scan Number	: 1349	
Retention Time (minutes)	: 9.811	
Quant Ion	: 43.00	
Area	: 2883241	
On-column Amount (ng)	: 99.9942	
Integration start scan	: 1337	Integration stop scan: 1376
Y at integration start	: 0	Y at integration end: 87

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Target 3.5 esignature user RA664s Page 112 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

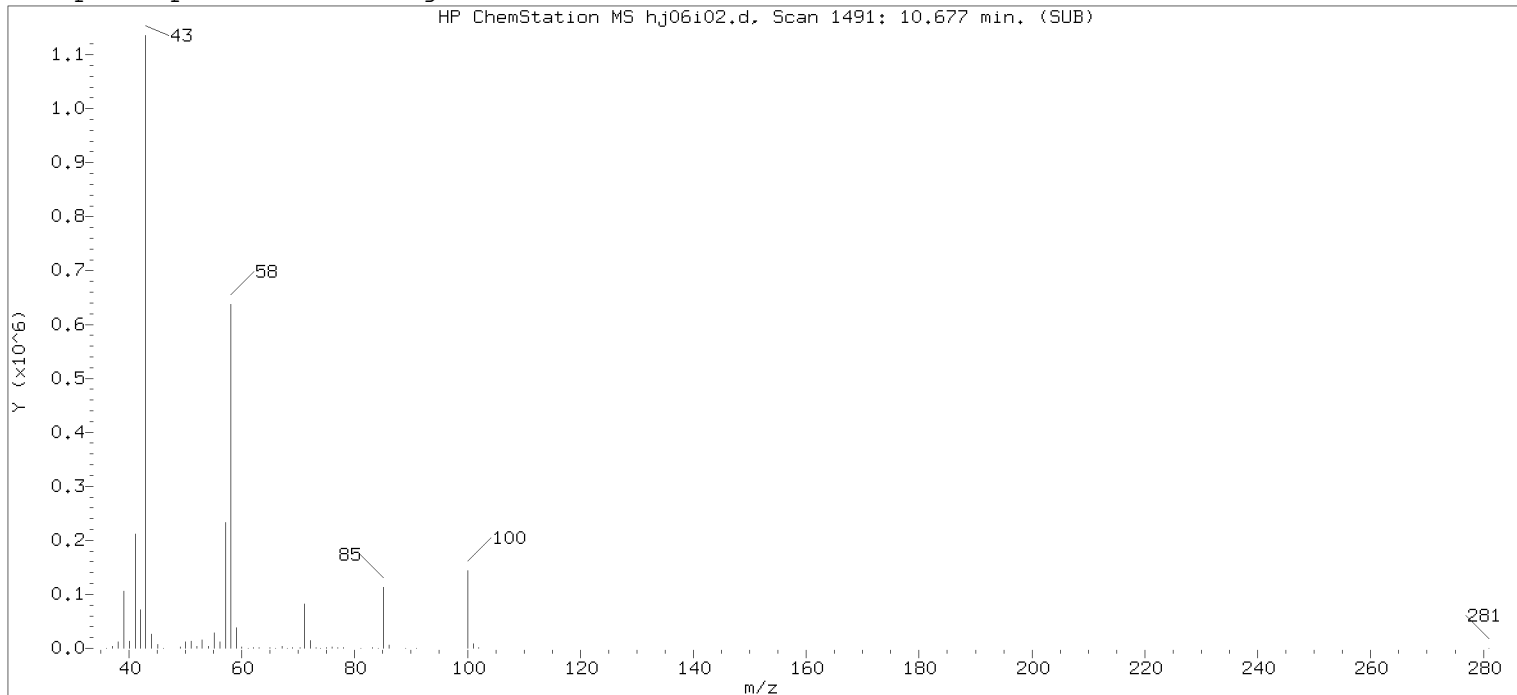
Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area (flag) : 1930183M
On-Column Amount (ng) : 97.3887
Integration start scan : 1477 Integration stop scan: 1505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

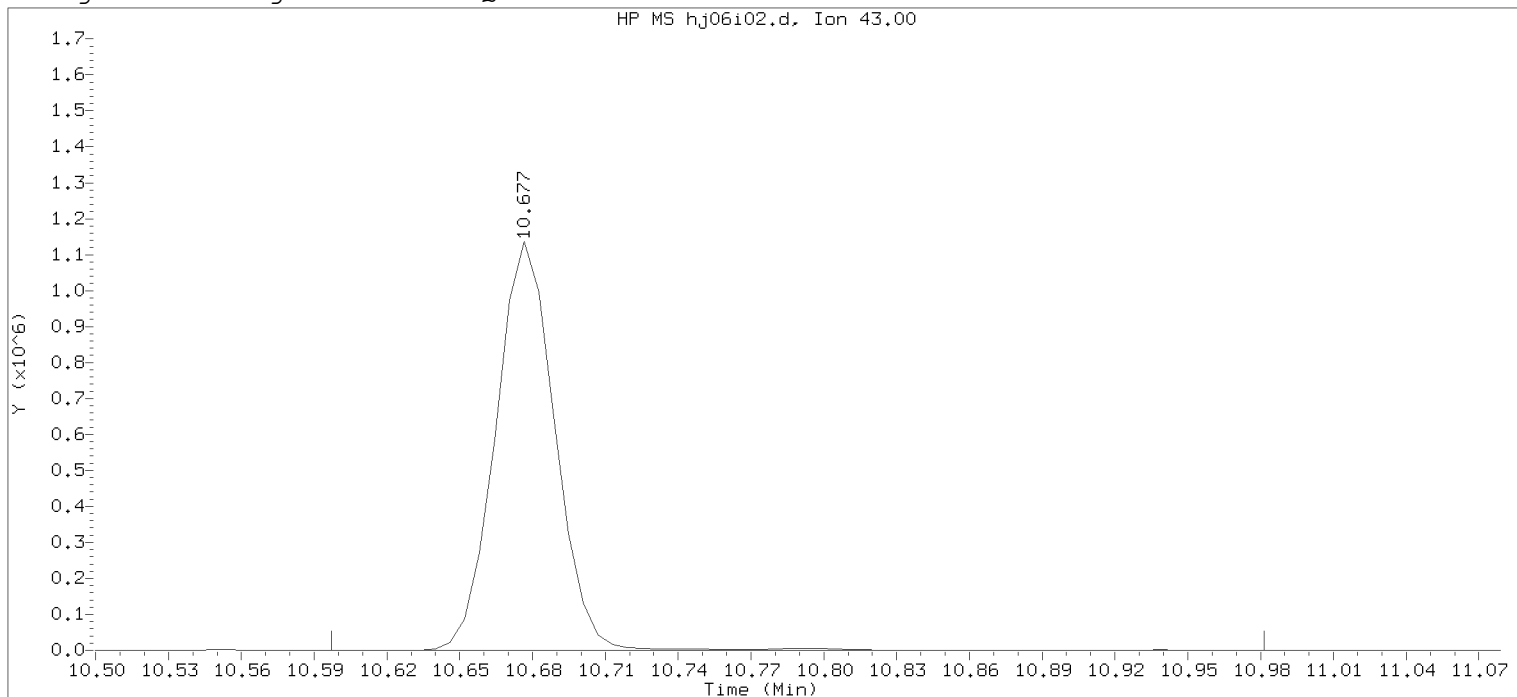
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

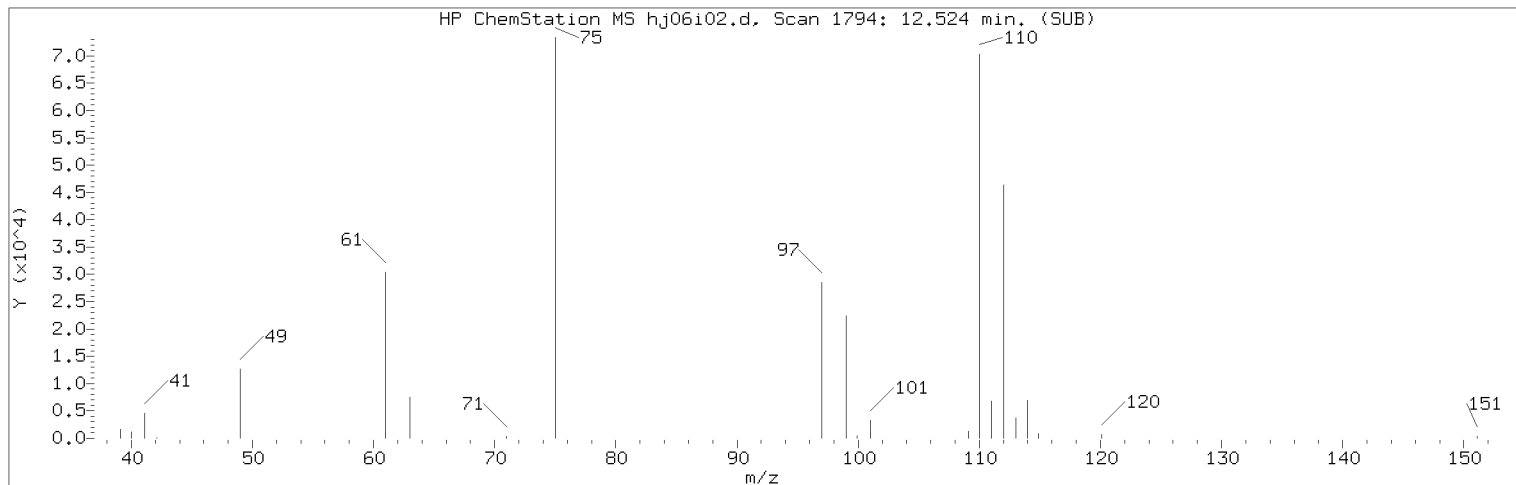
Sample Name: VSTD010

Lab Sample ID: VSTD010

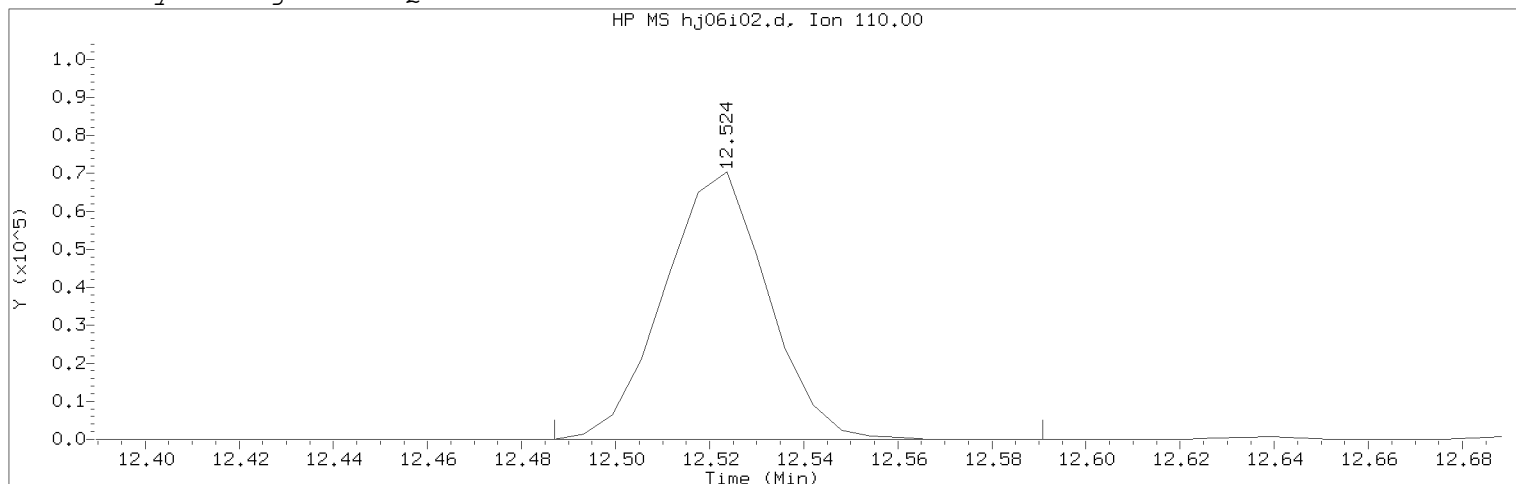
Compound Number	: 92	
Compound Name	: 2-Hexanone	
Scan Number	: 1491	
Retention Time (minutes)	: 10.677	
Quant Ion	: 43.00	
Area	: 1946858	
On-column Amount (ng)	: 97.2432	
Integration start scan	: 1477	Integration stop scan: 1540
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA64s Page 114 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:48
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

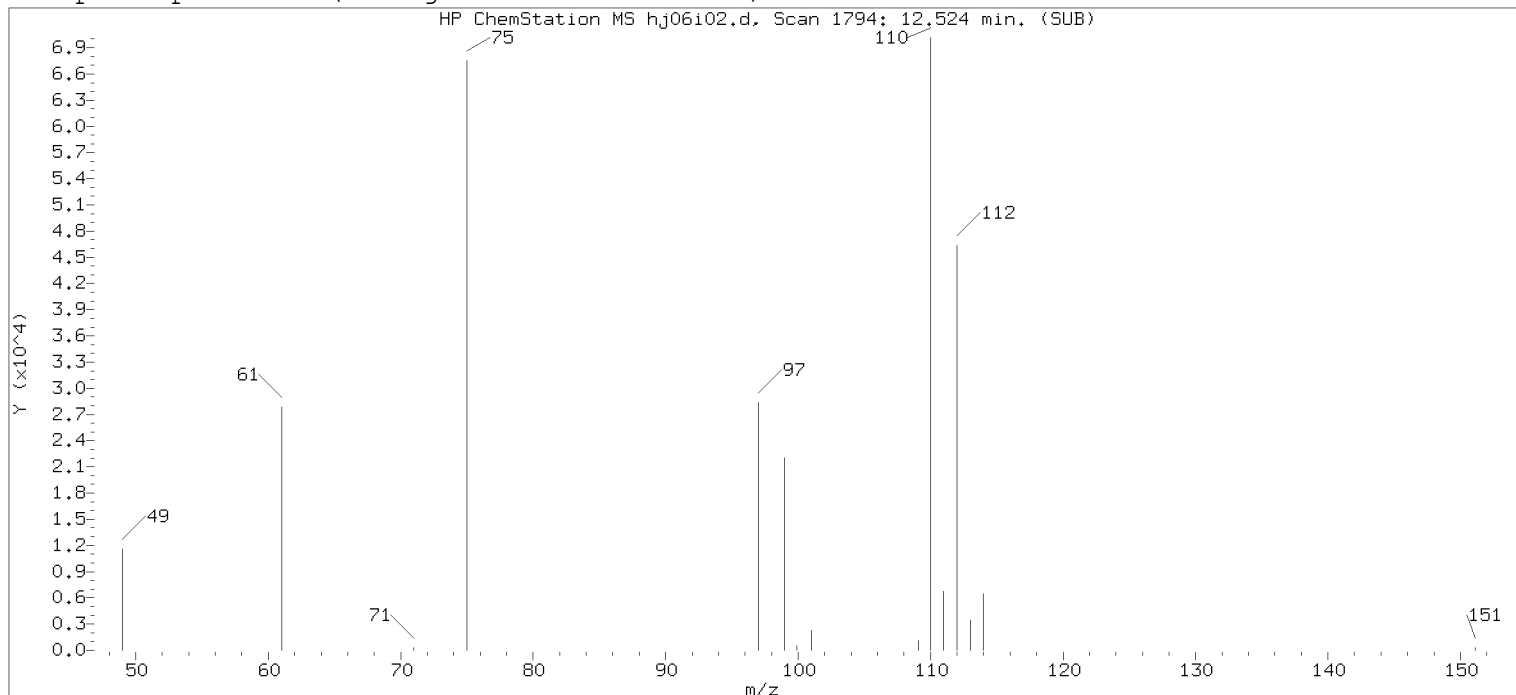
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 107587M
On-Column Amount (ng) : 10.2186
Integration start scan : 1787 Integration stop scan: 1804
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

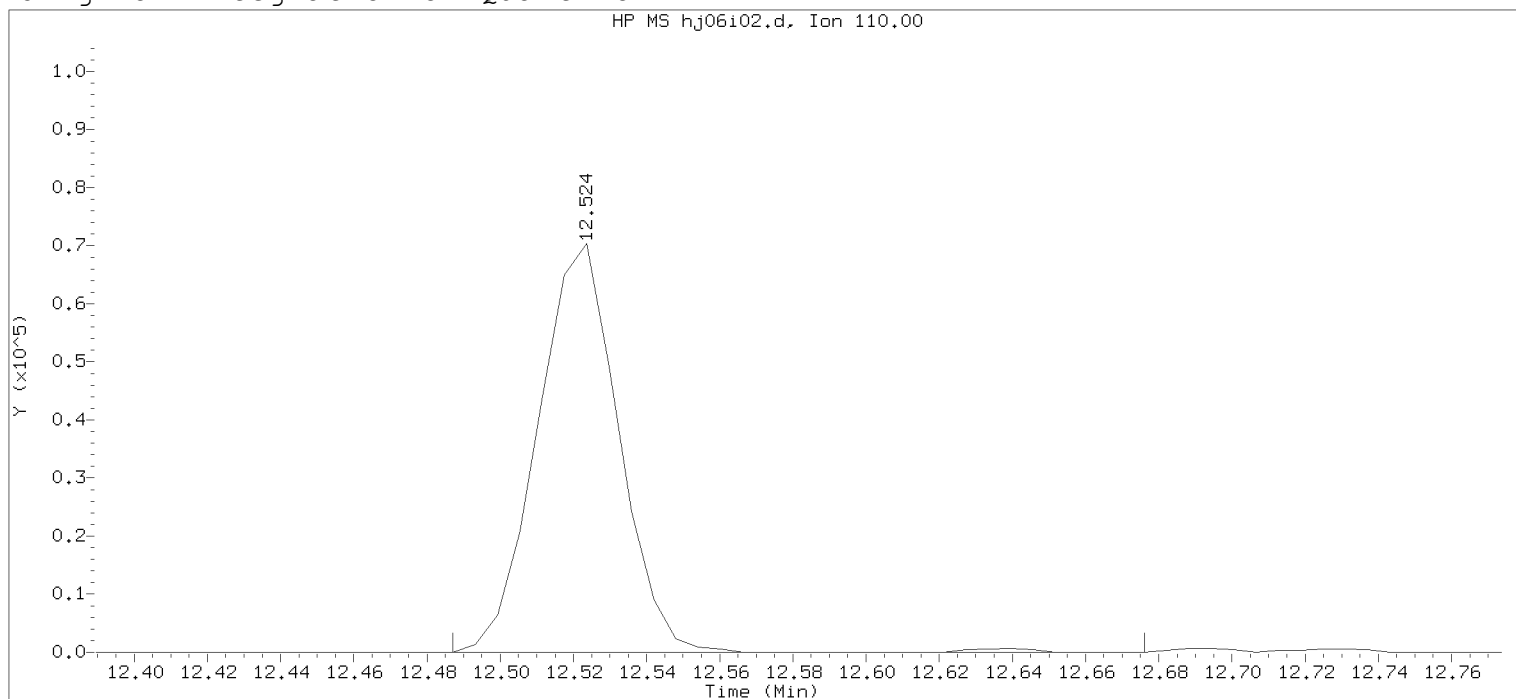
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i02.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 14:56 Analyst ID: JKH09052

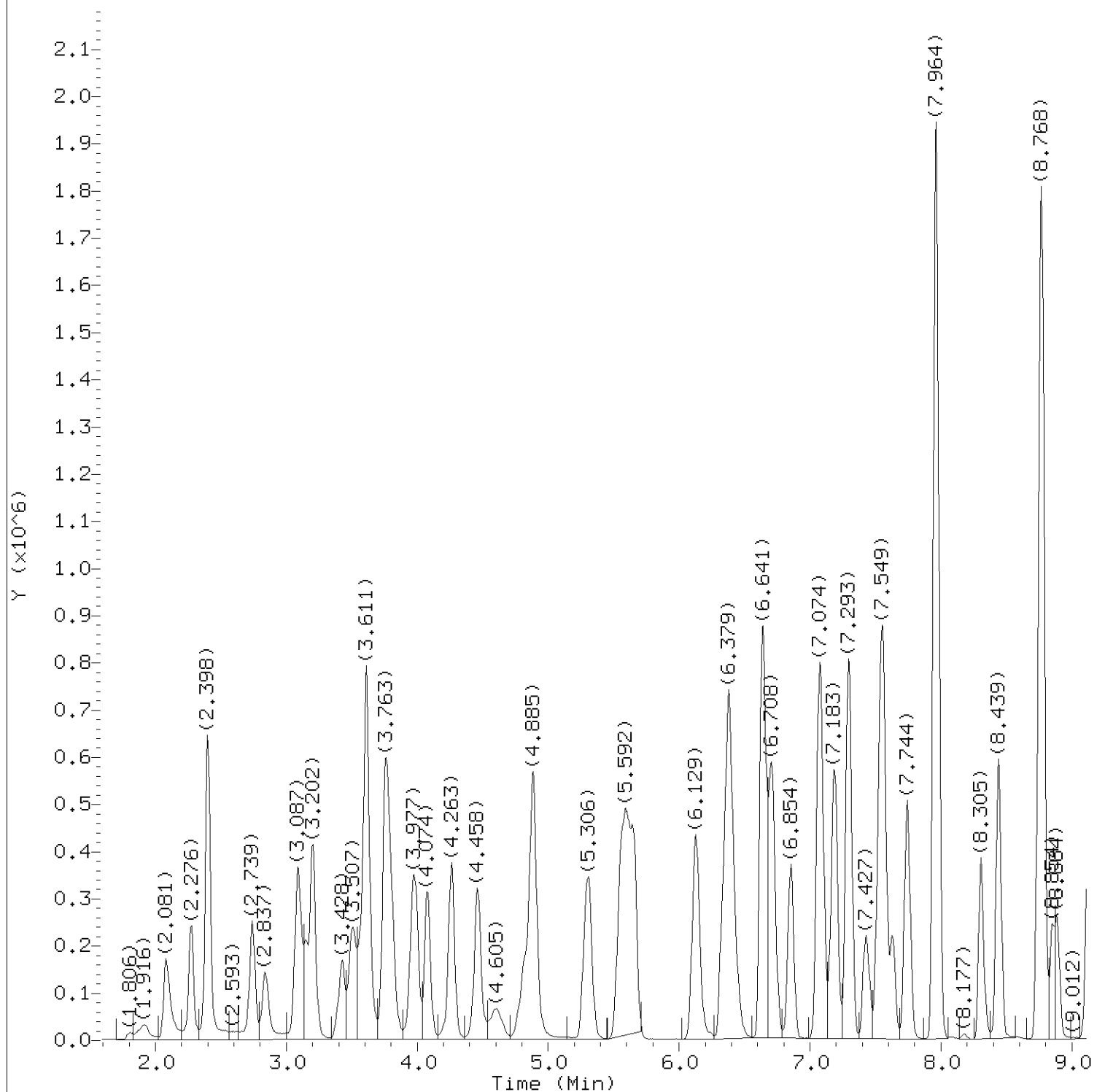
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1794	
Retention Time (minutes)	: 12.524	
Quant Ion	: 110.00	
Area	: 108318	
On-column Amount (ng)	: 10.1131	
Integration start scan	: 1787	Integration stop scan: 1818
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RAE64s Page 116 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
Analyst ID: JKH09052

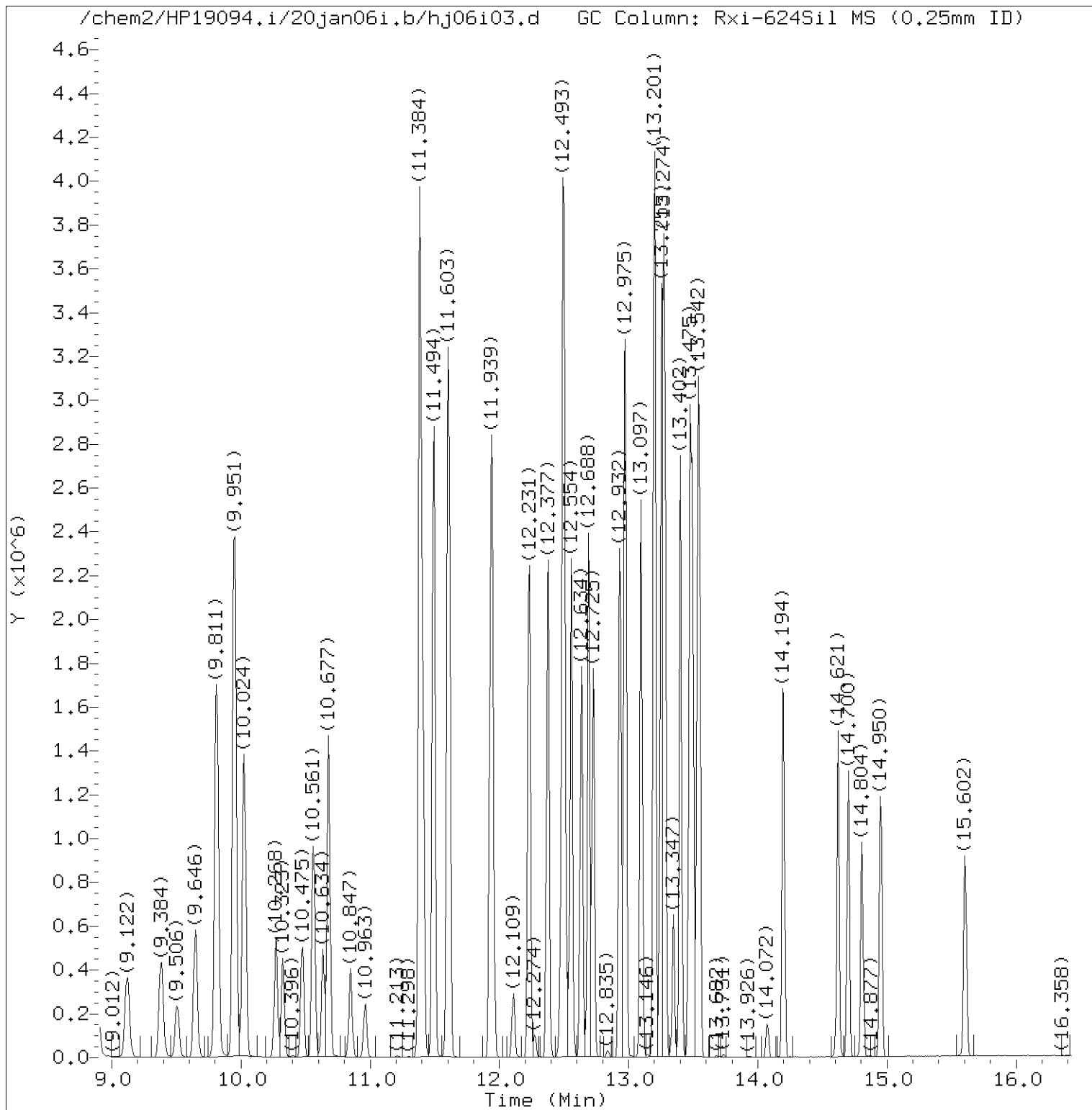
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
 Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	386923M	5.233
2) Chloromethane	(2)	2.270	50	365241	5.004
5) Vinyl Chloride	(2)	2.398	62	357439	5.148
6) 1,3-Butadiene	(2)	2.404	39	279939M	5.104
7) Bromomethane	(2)	2.739	94	248006	4.986
8) Chloroethane	(2)	2.837	64	203219	5.054
9) Dichlorofluoromethane	(2)	3.087	67	473464	4.958
10) Trichlorofluoromethane	(2)	3.148	101	408902	5.160
11) Ethyl ether	(2)	3.422	59	178519	5.091
12) Freon 123a	(2)	3.507	67	315642	5.152
13) Acrolein	(1)	3.611	56	1350061	258.845
15) 1,1-Dichloroethene	(2)	3.751	96	246959	5.124
14) Acetone	(1)	3.788	43	341103M	48.467
16) Freon 113	(2)	3.788	101	268851	5.337
17) Methyl Iodide	(2)	3.965	142	476700	5.126
18) Bromoethane	(2)	3.995	108	211837M	5.038
19) Carbon Disulfide	(2)	4.080	76	743252	5.041
22) Methyl Acetate	(1)	4.233	43	86534	4.872
23) Allyl Chloride	(2)	4.263	41	404402	4.940
24) Methylene Chloride	(2)	4.458	84	256647	4.948
27)*t-Butyl Alcohol-d10	(1)	4.483	65	115826M	50.000
29) t-Butyl Alcohol	(1)	4.611	59	243025	99.407
30) Acrylonitrile	(1)	4.812	53	219211	25.524
31) Methyl Tertiary Butyl Ether	(2)	4.873	73	558561	5.069
32) trans-1,2-Dichloroethene	(2)	4.891	96	267093	5.041
33) n-Hexane	(2)	5.306	57	393617	5.267
34) 1,1-Dichloroethane	(2)	5.550	63	490572	5.129
35) di-Isopropyl Ether	(2)	5.598	45	804988	5.109
36) 2-Chloro-1,3-Butadiene	(2)	5.659	53	423401	5.170
41) 1,2-Dichloroethene (Total)	(2)		96	566643	10.130
38) Ethyl t-butyl ether	(2)	6.129	59	749137	5.065
39) 2-Butanone	(1)	6.330	43	551271	50.095
40) cis-1,2-Dichloroethene	(2)	6.379	96	299550	5.088
42) 2,2-Dichloropropane	(2)	6.397	77	419833	5.158
43) Propionitrile	(1)	6.427	54	312594	103.700
46) Methacrylonitrile	(1)	6.641	67	567177	52.609
48) Bromochloromethane	(2)	6.708	128	125757	5.059
49) Tetrahydrofuran	(1)	6.714	71	157126	51.682

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
 Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	476727	5.107
51) \$Dibromofluoromethane	(2)	7.068	113	490436	10.001
51) \$Dibromofluoromethane	(2)	7.068	111	500245	9.929
52) 1,1,1-Trichloroethane	(2)	7.086	97	443696M	5.111
53) Cyclohexane	(2)	7.183	56	477669	5.152
53) Cyclohexane	(2)	7.183	84	423569	5.333
53) Cyclohexane	(2)	7.189	69	150395	5.212
56) 1,1-Dichloropropene	(2)	7.293	75	382122	5.208
55) Carbon Tetrachloride	(2)	7.299	117	383131	5.147
57) Isobutyl Alcohol	(1)	7.427	41	197211	232.720
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	94766	9.971
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	432473	9.863
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59241	9.841
59) Benzene	(2)	7.561	78	1093041	5.094
60) 1,2-Dichloroethane	(2)	7.628	62	272967M	4.934
61) t-Amyl methyl ether	(2)	7.744	73	650141	5.040
64) *Fluorobenzene	(2)	7.964	96	1972661	10.000
63) n-Heptane	(2)	7.970	43	402551	5.135
66) n-Butanol	(1)	8.305	56	359098	526.377
68) Trichloroethene	(2)	8.439	95	288728	5.131
70) Methylcyclohexane	(2)	8.756	83	530176	5.259
71) 1,2-Dichloropropane	(2)	8.775	63	267031	5.030
72) Methyl Methacrylate	(1)	8.848	69	113243	5.222
73) 1,4-Dioxane	(1)	8.866	88	48534M	294.966
74) Dibromomethane	(2)	8.890	93	122074	5.030
75) Bromodichloromethane	(2)	9.122	83	330628	5.013
77) 2-Nitropropane	(1)	9.378	41	361445M	50.741
80) 1-Bromo-2-chloroethane	(2)	9.506	63	251630M	5.043
81) cis-1,3-Dichloropropene	(2)	9.646	75	400903	5.147
82) 4-Methyl-2-Pentanone	(1)	9.811	43	1402329	51.703
83) \$Toluene-d8	(3)	9.951	98	1962704	10.001
83) \$Toluene-d8	(3)	9.951	100	1273541	10.034
84) Toluene	(3)	10.024	92	706549	5.125
86) 1,3-Dichloropropene (total)	(3)		75	725243	10.216
85) trans-1,3-Dichloropropene	(3)	10.268	75	324340	5.069
87) Ethyl Methacrylate	(3)	10.323	69	248630	5.013
89) 1,1,2-Trichloroethane	(3)	10.475	97	173317	5.004
90) Tetrachloroethene	(3)	10.561	166	317187	5.062

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d
 Injection date and time: 06-JAN-2020 15:18

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	297105	4.993
92) 2-Hexanone	(1)	10.677	43	954886	51.523
94) Dibromochloromethane	(3)	10.847	129	225534	5.085
96) 1,2-Dibromoethane	(3)	10.963	107	168362	5.086
97) 1-Chlorohexane	(3)	11.384	91	409531	4.927
98) *Chlorobenzene-d5	(3)	11.384	117	1473060	10.000
99) Chlorobenzene	(3)	11.408	112	765651	5.083
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	274917	5.132
101) Ethylbenzene	(3)	11.494	91	1376755	5.075
102) m+p-Xylene	(3)	11.603	106	1060302	10.222
106) Xylene (Total)	(3)		106	1582292	15.339
105) o-Xylene	(3)	11.932	106	521990	5.117
107) Styrene	(3)	11.945	104	849232	5.130
108) Bromoform	(3)	12.109	173	131247	5.077
109) Isopropylbenzene	(3)	12.231	105	1426025	5.158
112) \$4-Bromofluorobenzene	(3)	12.377	95	721170	9.933
112) \$4-Bromofluorobenzene	(3)	12.377	174	619060	9.964
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	203525M	5.049
115) Bromobenzene	(4)	12.493	156	313243	5.140
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	538157A	52.819
117) 1,2,3-Trichloropropane	(4)	12.518	110	55435M	5.135
118) n-Propylbenzene	(4)	12.554	91	1660624	5.219
120) 2-Chlorotoluene	(4)	12.634	126	325179	5.180
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	1201583	5.205
123) 4-Chlorotoluene	(4)	12.725	126	321829	5.136
126) tert-Butylbenzene	(4)	12.932	134	252740M	5.294
127) Pentachloroethane	(4)	12.969	167	207328	5.095
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	1242864	5.214
129) sec-Butylbenzene	(4)	13.097	105	1575368	5.267
133) p-Isopropyltoluene	(4)	13.201	119	1353718	5.259
132) 1,3-Dichlorobenzene	(4)	13.201	146	624292	5.140
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	772144	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	604762	5.105
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	504611	5.076
137) Benzyl Chloride	(4)	13.347	126	88697M	5.233
139) n-Butylbenzene	(4)	13.493	92	673217	5.291
140) 1,2-Dichlorobenzene	(4)	13.530	146	546317	5.103
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	31040	5.342

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

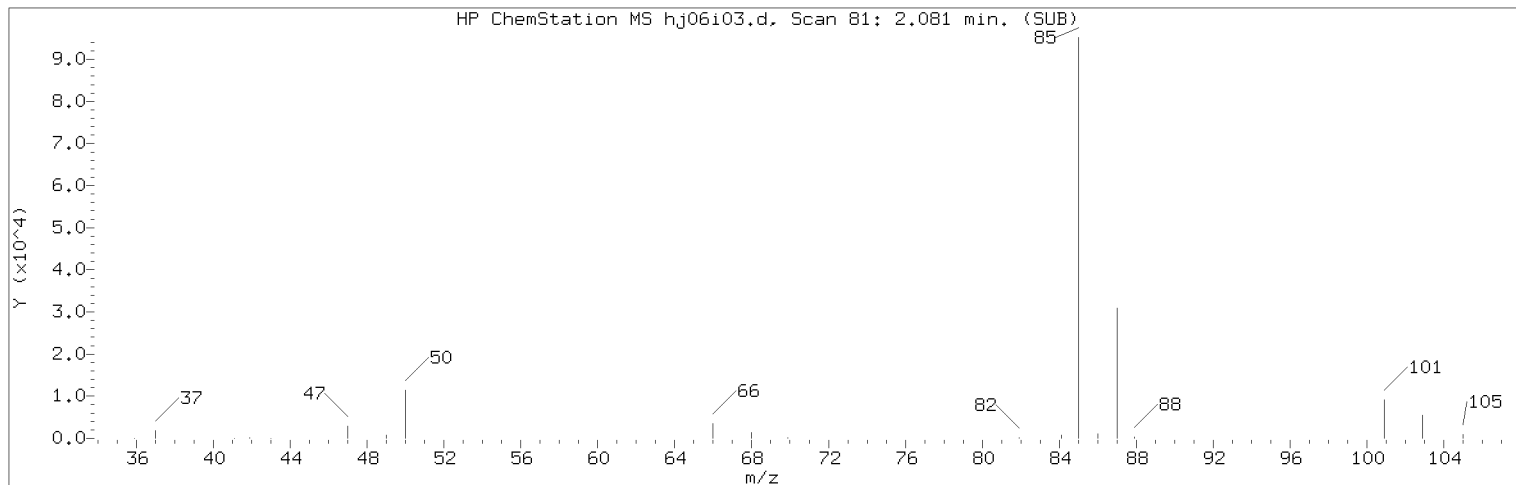
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	505280	5.316
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	414558	5.201
147) Hexachlorobutadiene	(4)	14.700	225	220536	5.302
148) Naphthalene	(4)	14.804	128	717239	5.157
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	359355	5.282

page 4 of 4

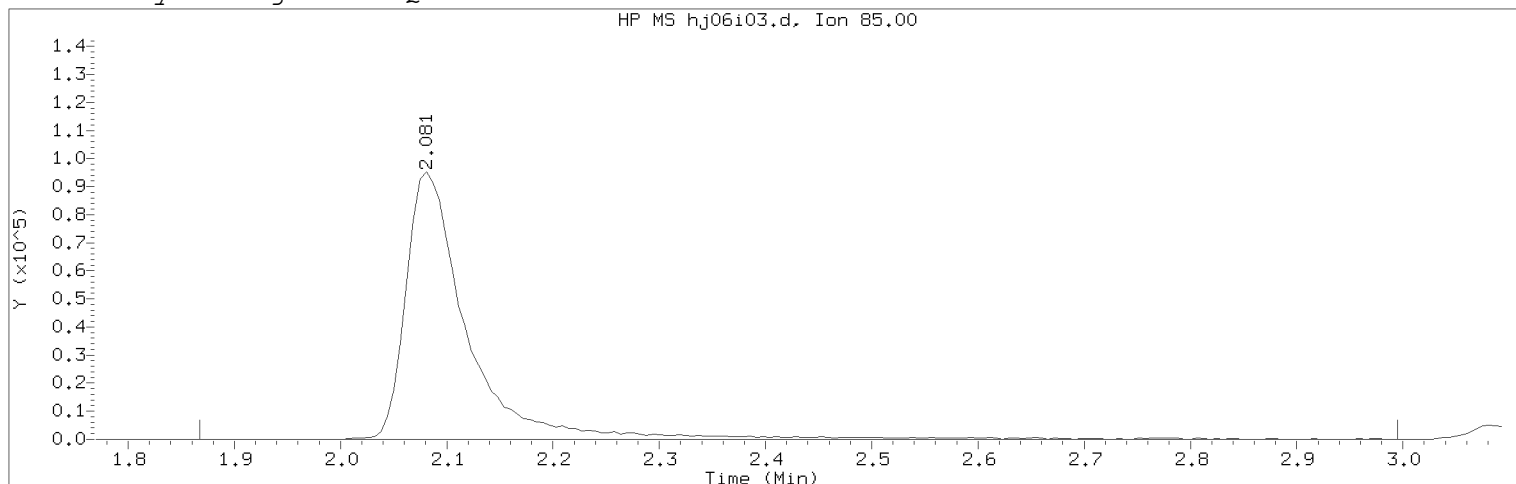
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area (flag)	: 386923M	
On-Column Amount (ng)	: 5.2325	
Integration start scan	: 45	Integration stop scan: 230
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

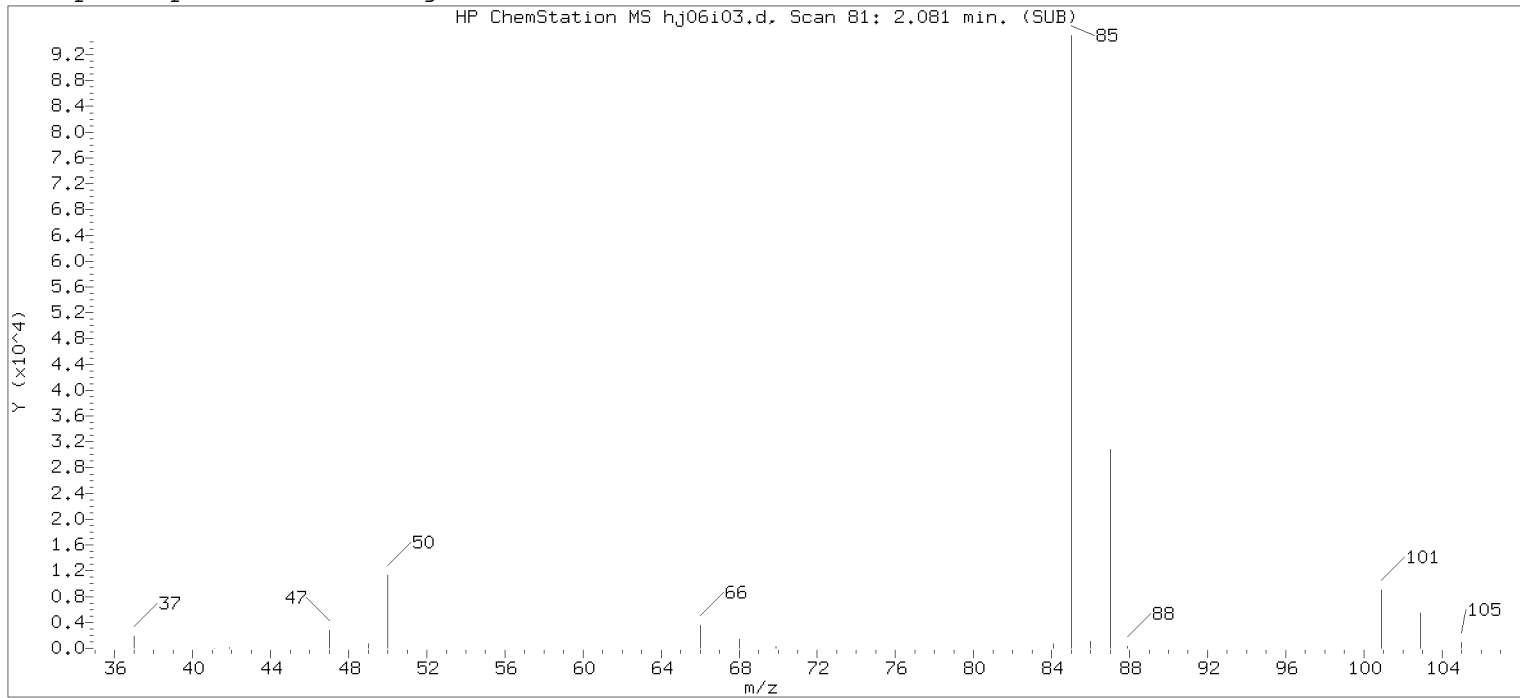
Analyst responsible for change:

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

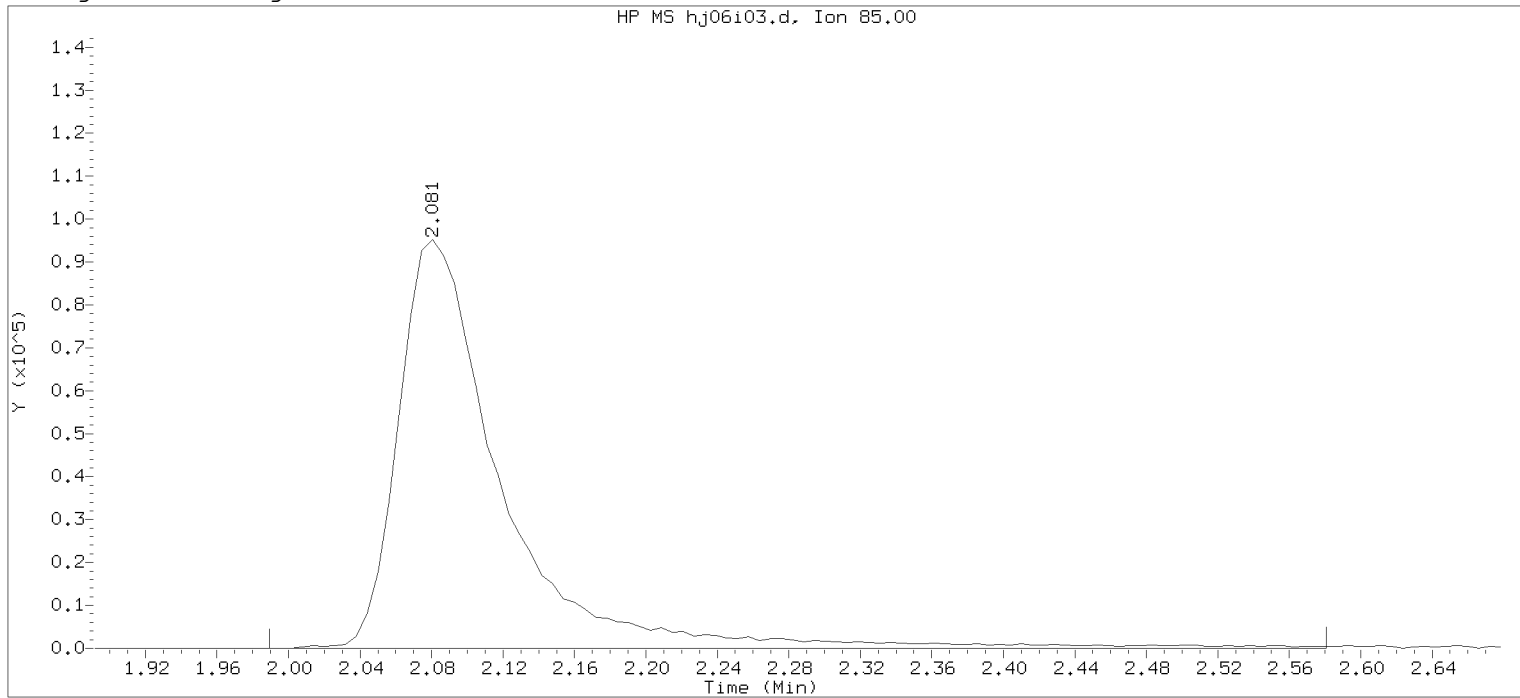
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

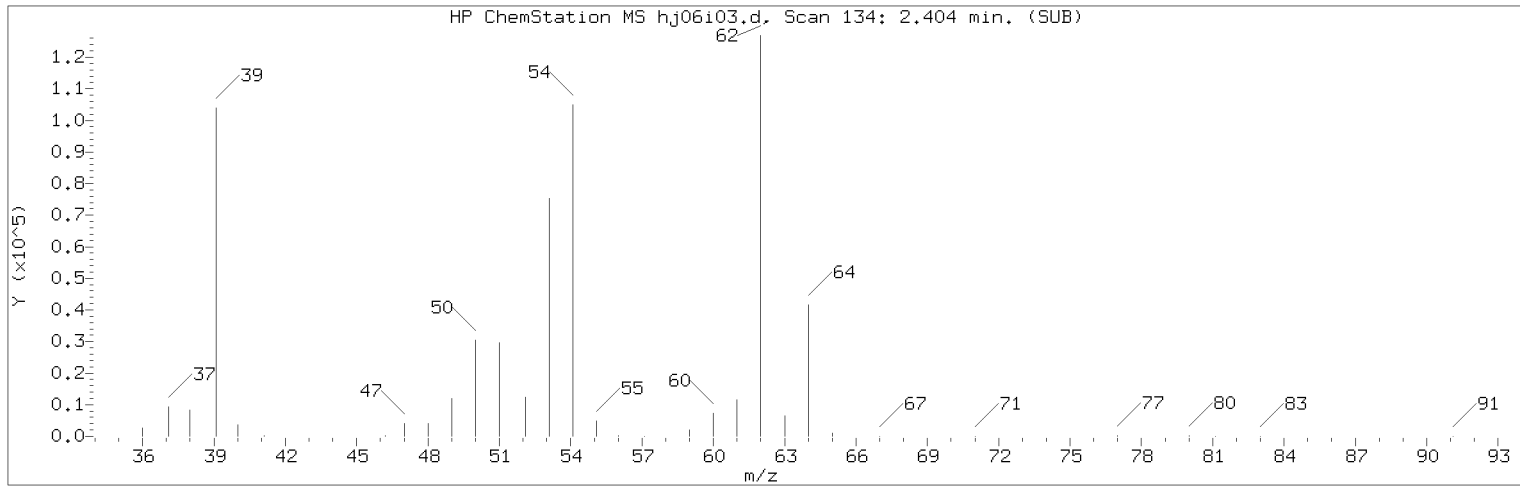
Sample Name: VSTD005

Lab Sample ID: VSTD005

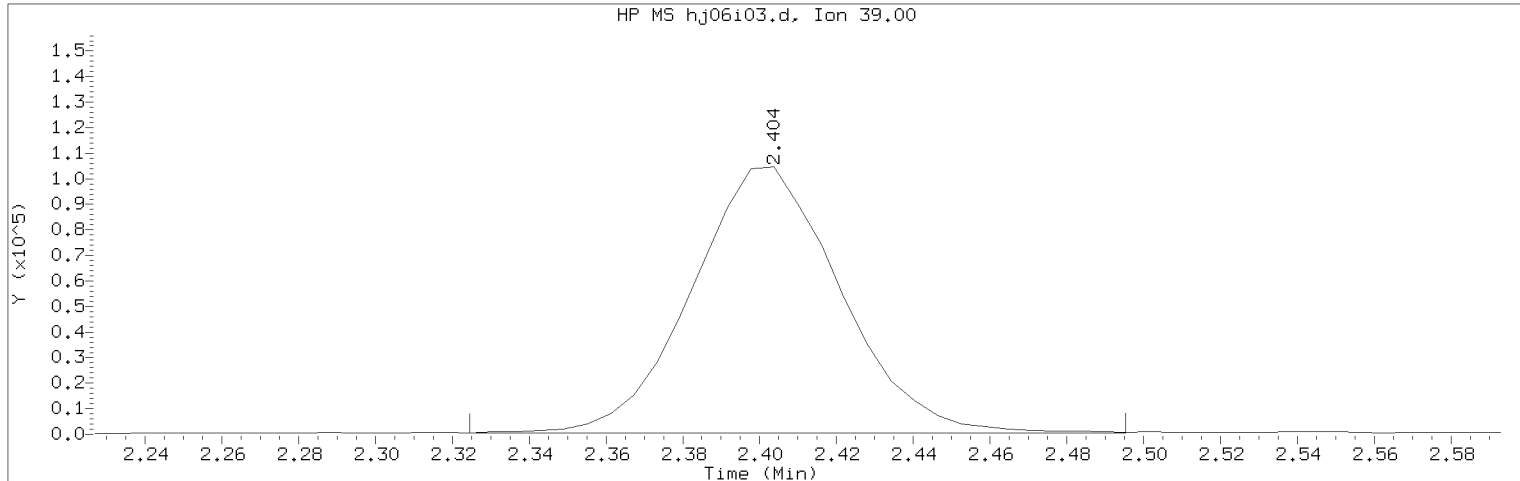
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 81	
Retention Time (minutes)	: 2.081	
Quant Ion	: 85.00	
Area	: 381559	
On-column Amount (ng)	: 5.1947	
Integration start scan	: 65	Integration stop scan: 162
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA664s Page 124 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

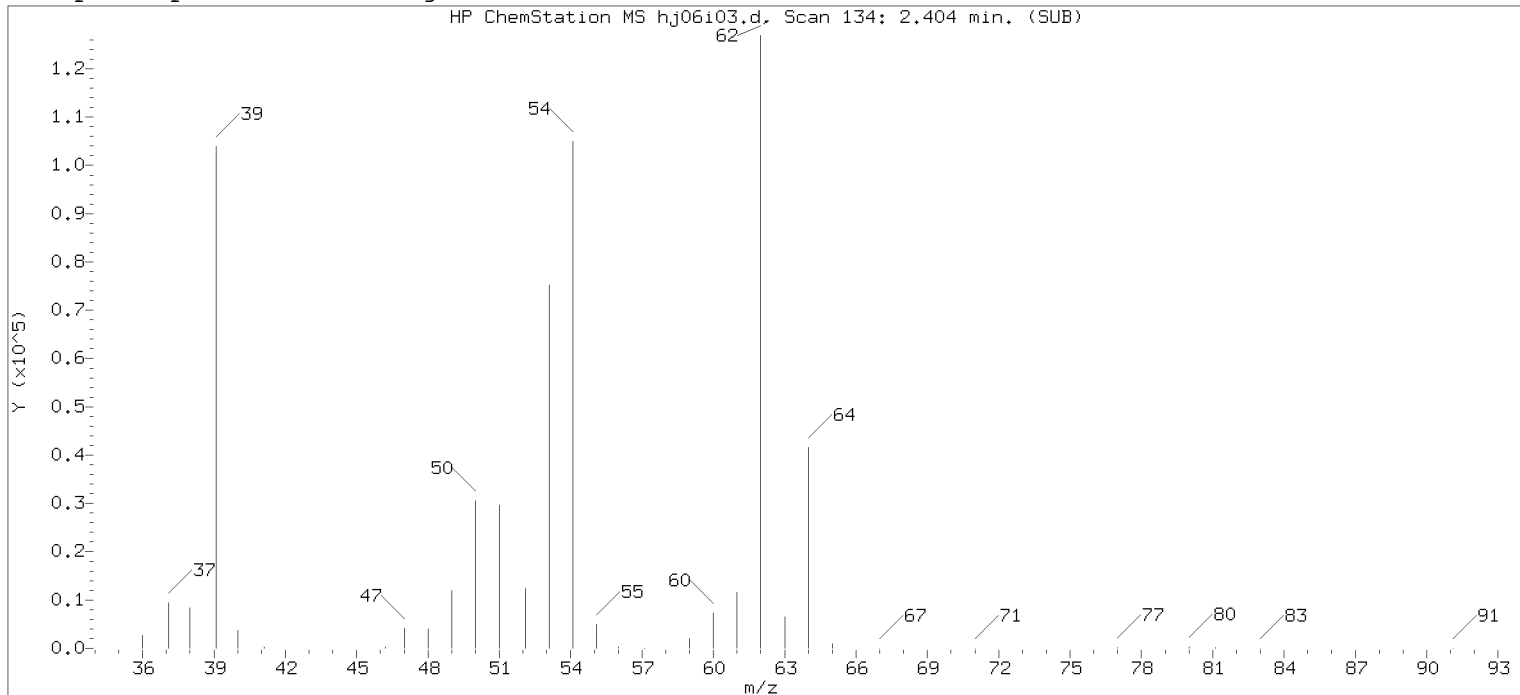
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area (flag)	: 279939M	
On-Column Amount (ng)	: 5.1037	
Integration start scan	: 120	Integration stop scan: 148
Y at integration start	: 562	Y at integration end: 562

Reason for manual integration: improper integration

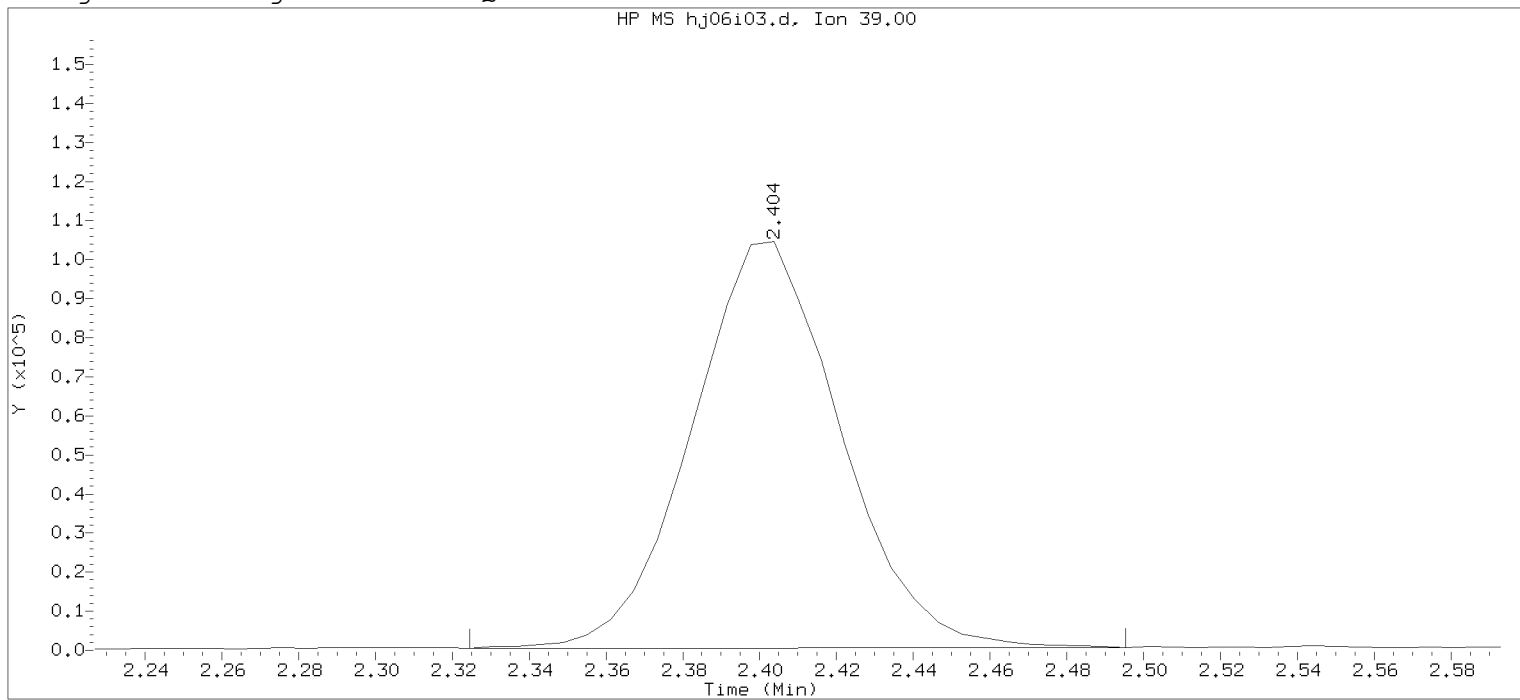
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number : 6

Compound Name : 1,3-Butadiene

Scan Number : 134

Retention Time (minutes): 2.404

Quant Ion : 39.00

Area : 279245

On-column Amount (ng) : 5.1399

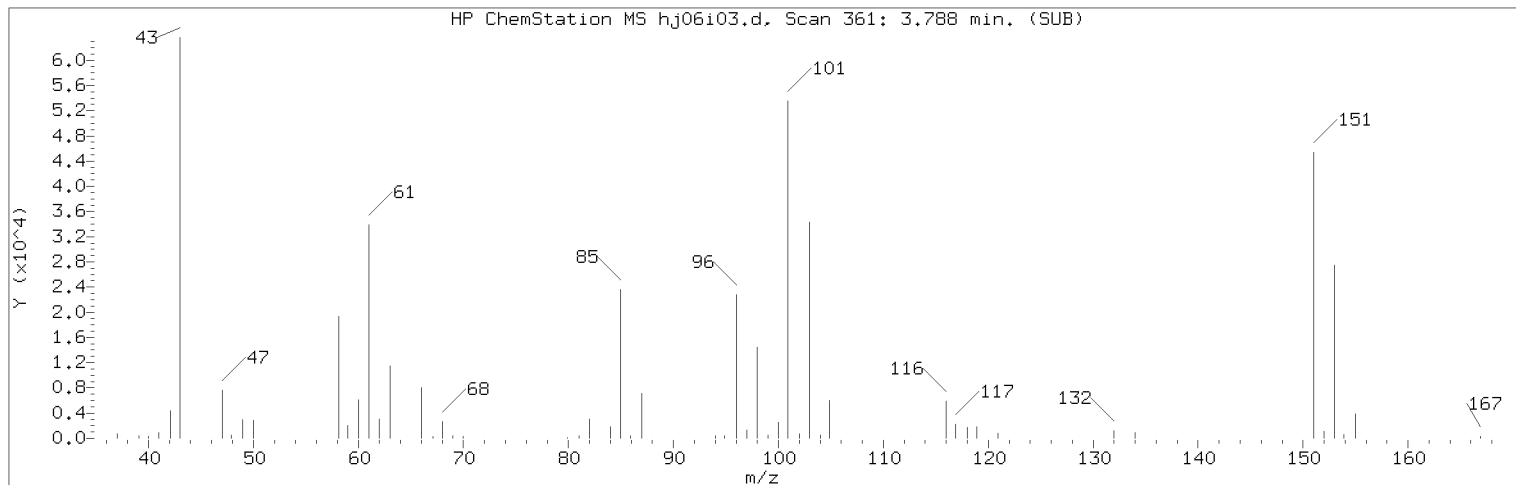
Integration start scan : 120 Integration stop scan: 148

Y at integration start : 563 Y at integration end: 692

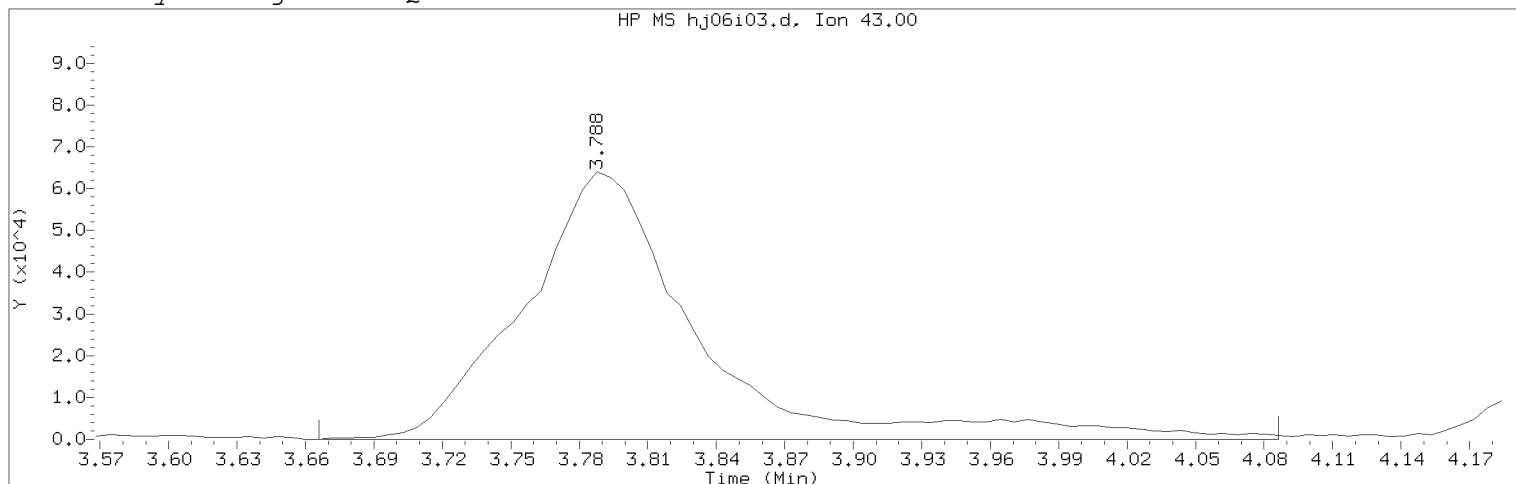
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature userRAF64sPage 126 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area (flag) : 341103M
 On-Column Amount (ng) : 48.4671
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 409
 Y at integration end: 0

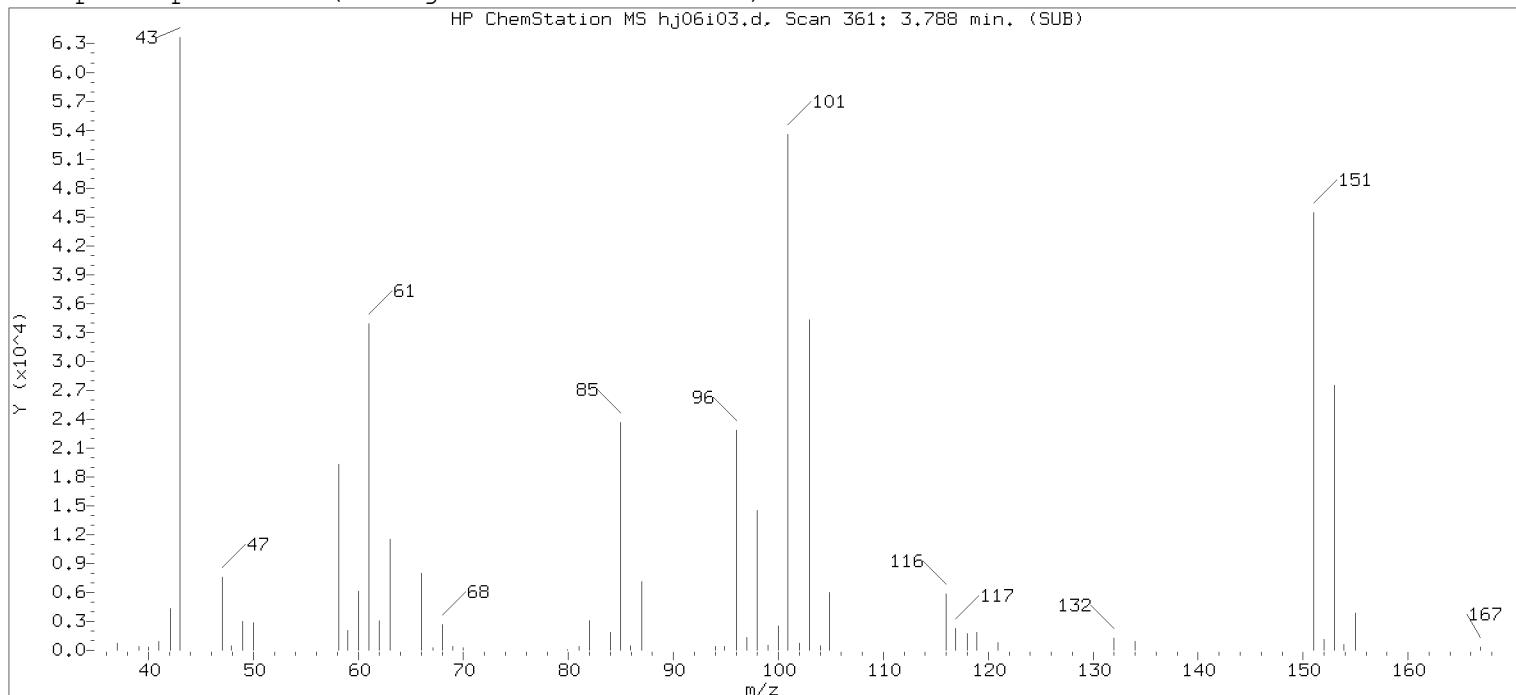
Reason for manual integration: improper integration

Analyst responsible for change:

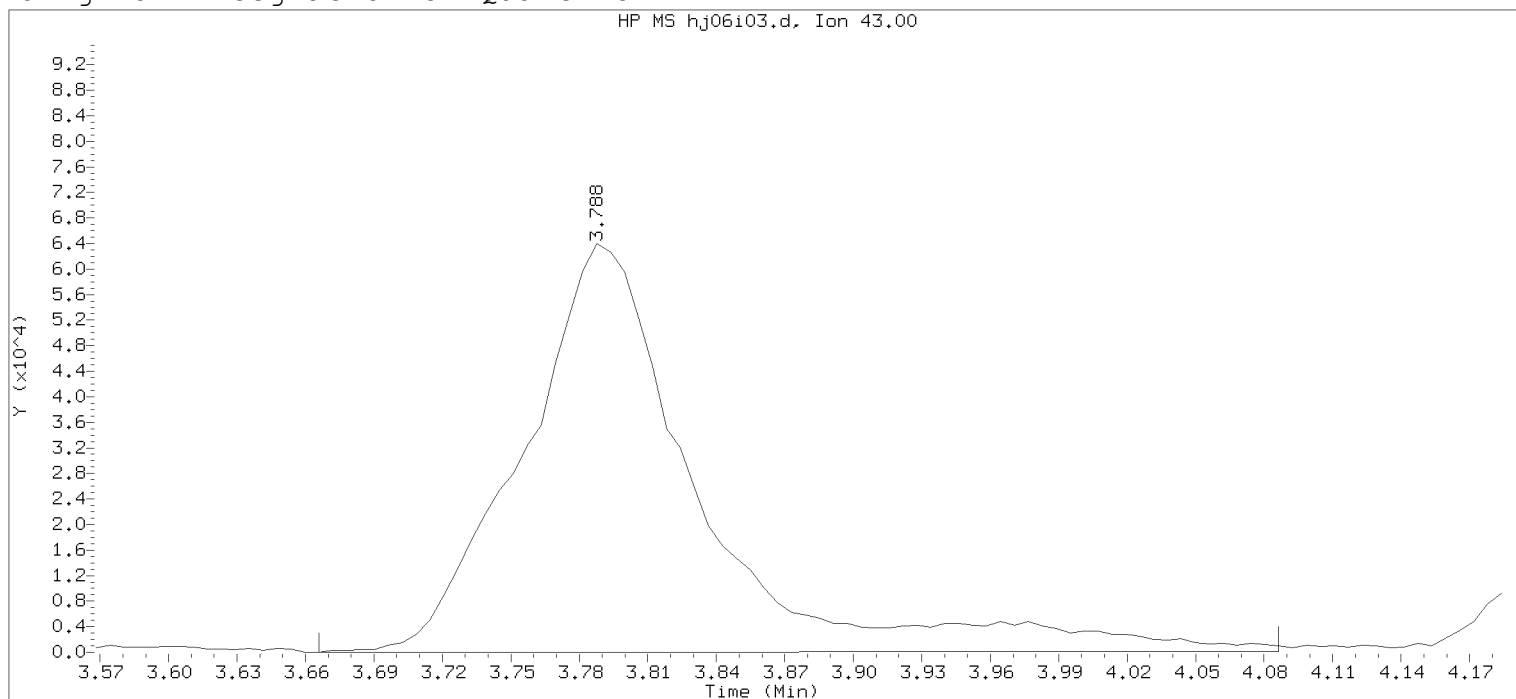
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

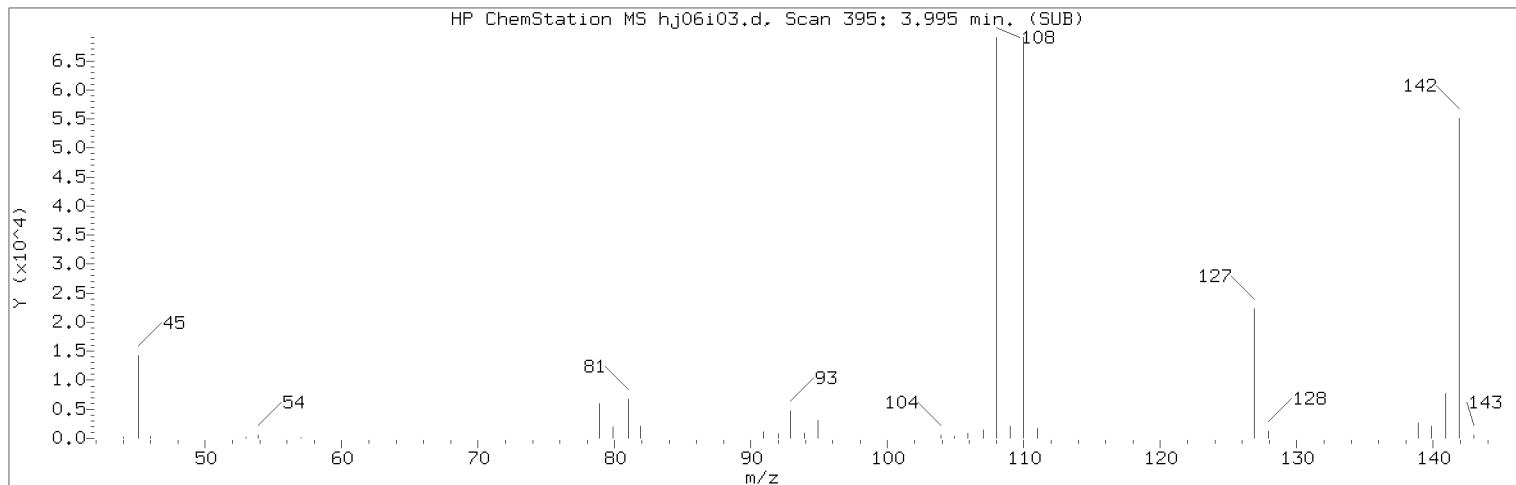
Lab Sample ID: VSTD005

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area : 339300
 On-column Amount (ng) : 44.9898
 Integration start scan : 340
 Y at integration start : 0

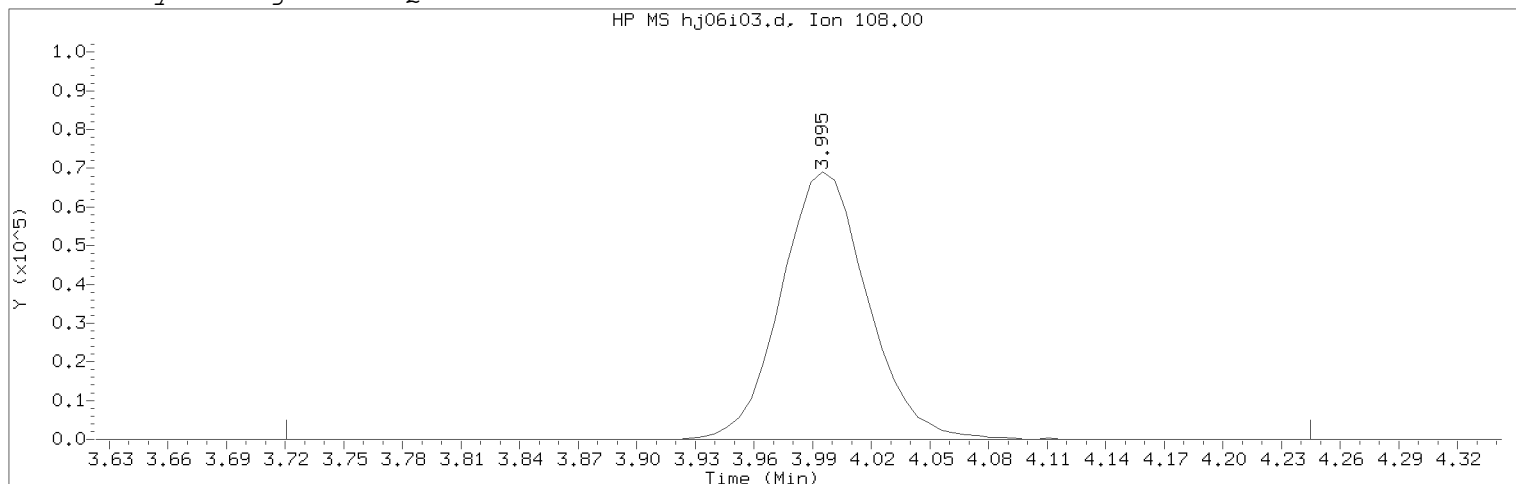
Integration stop scan: 409
 Y at integration end: 129

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
 Target 3.5 esignature user RA664s

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

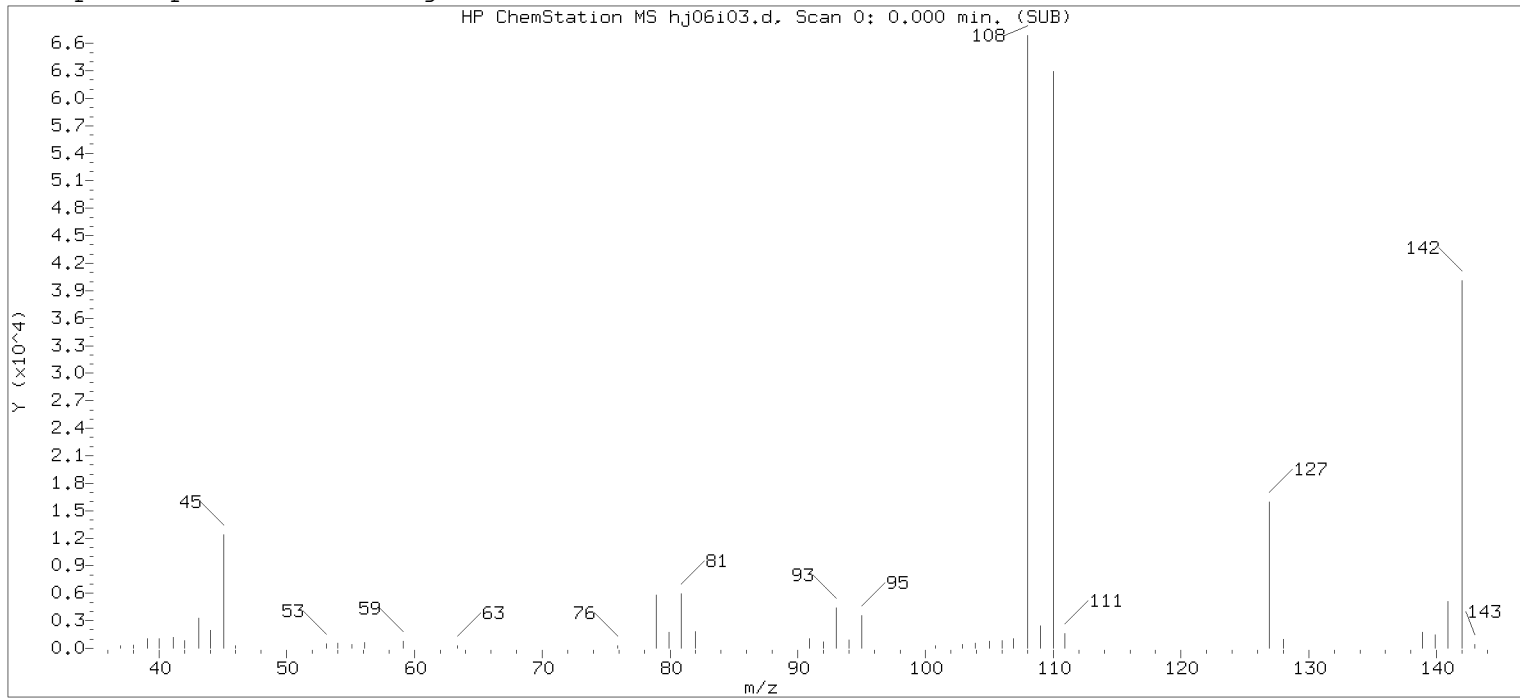
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 395	
Retention Time (minutes)	: 3.995	
Quant Ion	: 108.00	
Area (flag)	: 211837M	
On-Column Amount (ng)	: 5.0380	
Integration start scan	: 349	Integration stop scan: 435
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

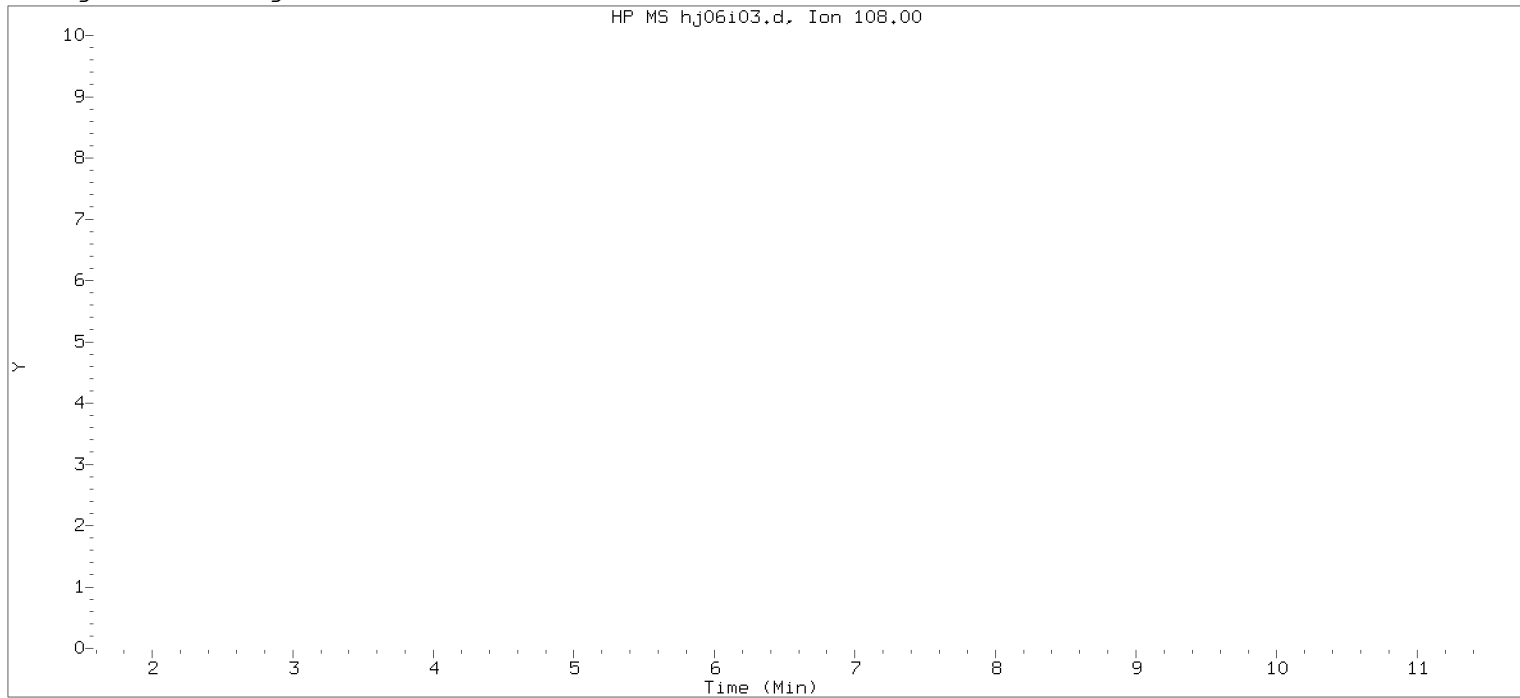
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

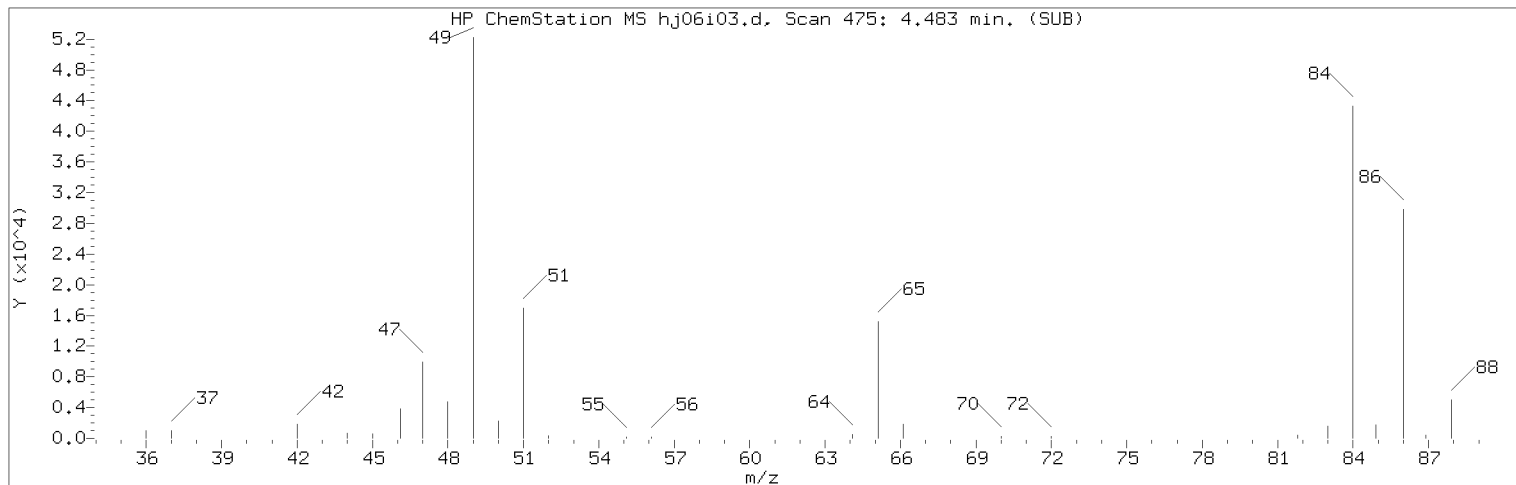
Sample Name: VSTD005

Lab Sample ID: VSTD005

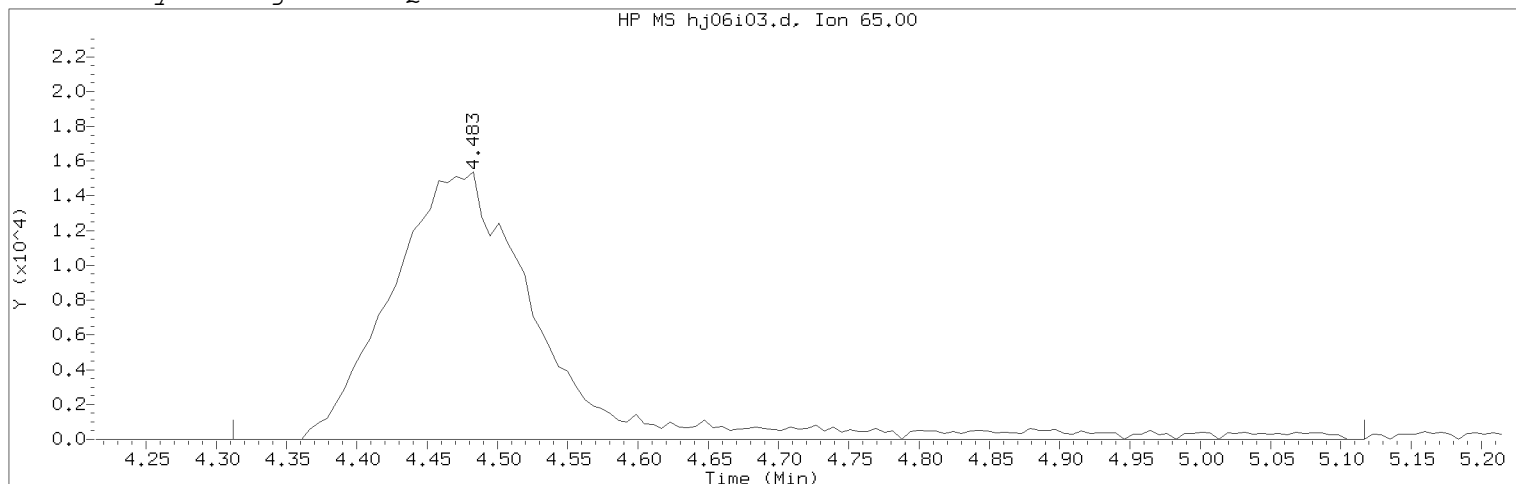
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 130 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

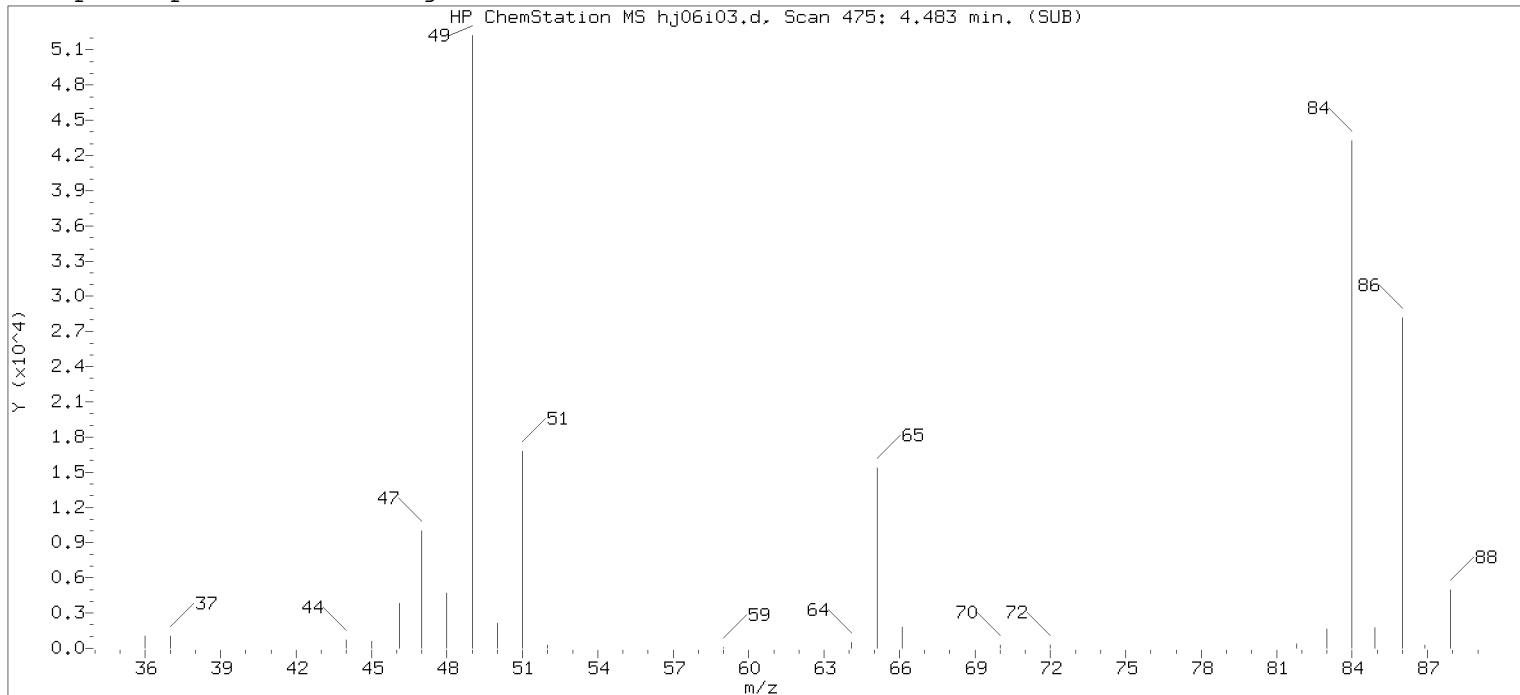
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 475	
Retention Time (minutes)	: 4.483	
Quant Ion	: 65.00	
Area (flag)	: 115826M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 578
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

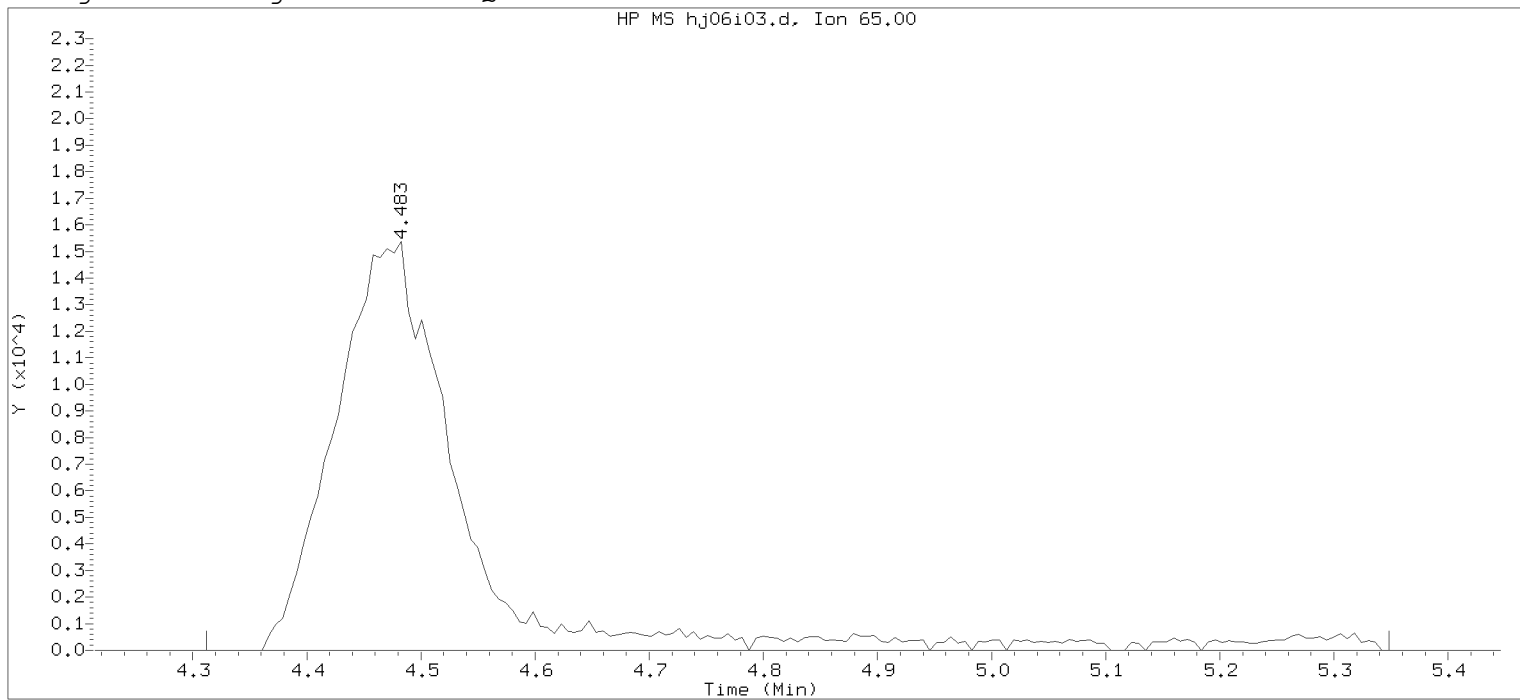
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

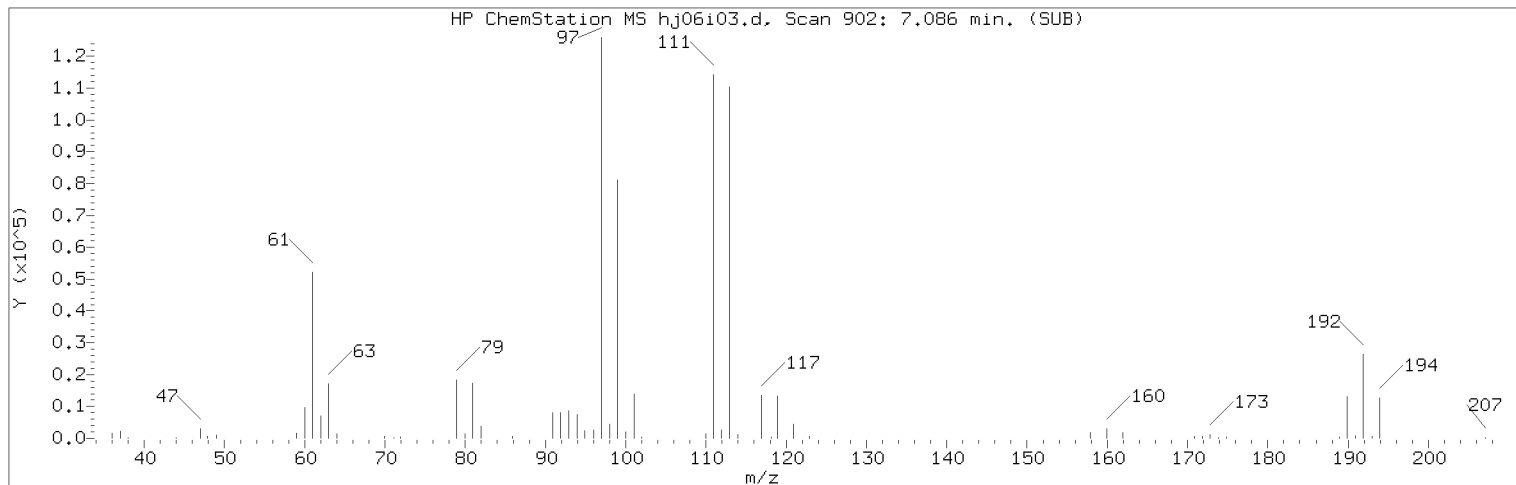
Sample Name: VSTD005

Lab Sample ID: VSTD005

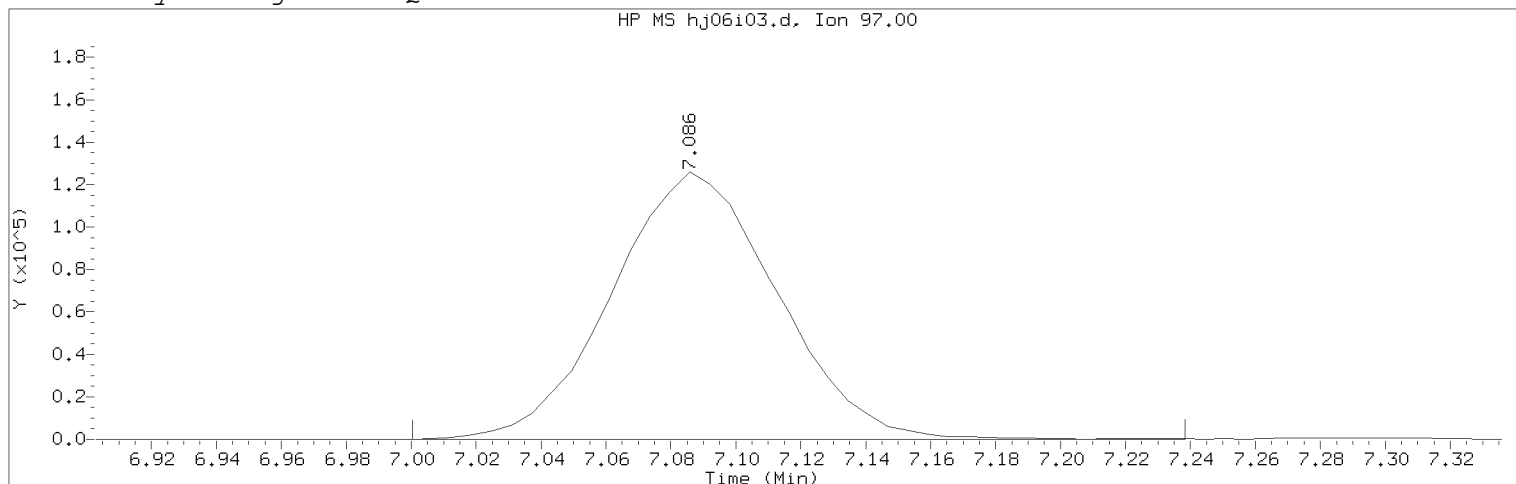
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 475	
Retention Time (minutes)	: 4.483	
Quant Ion	: 65.00	
Area	: 120597	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 616
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA664s

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

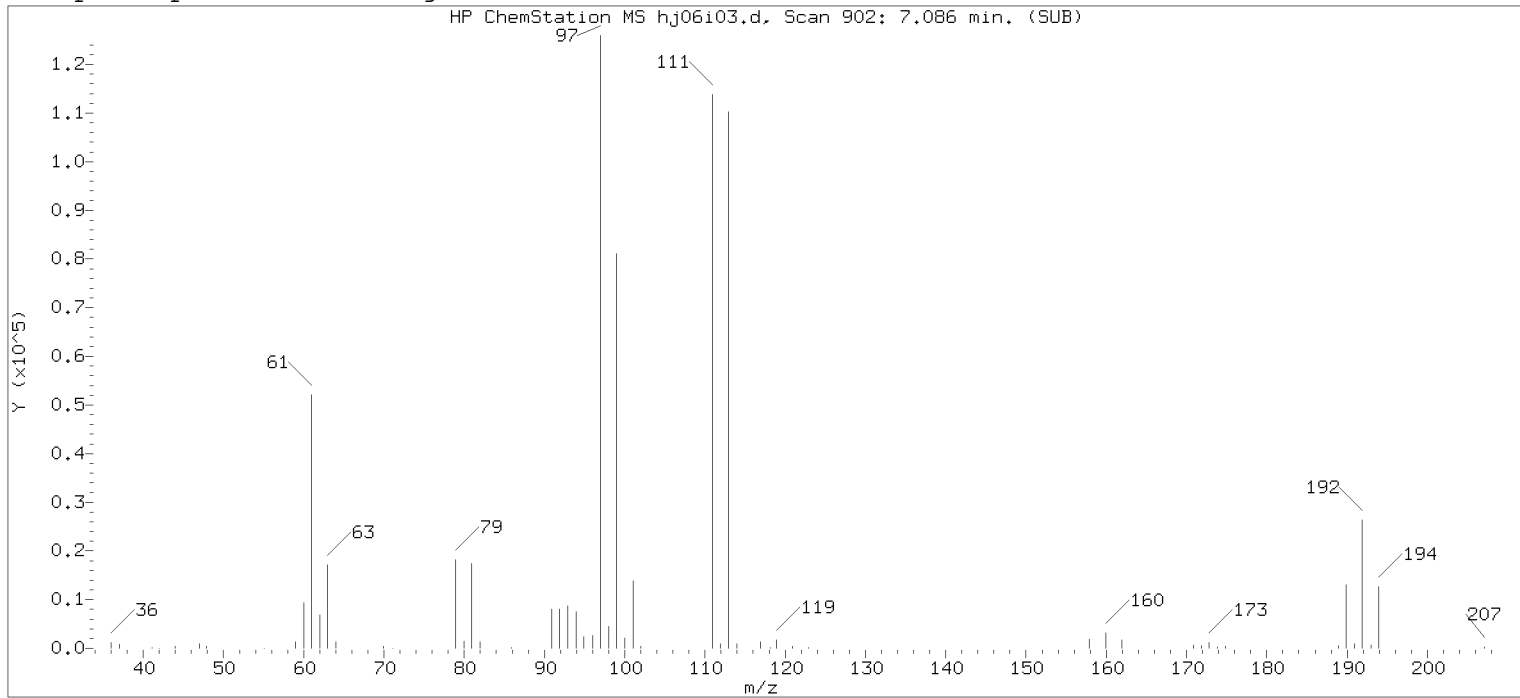
Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area (flag)	: 443696M	
On-Column Amount (ng)	: 5.1107	
Integration start scan	: 887	Integration stop scan: 926
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

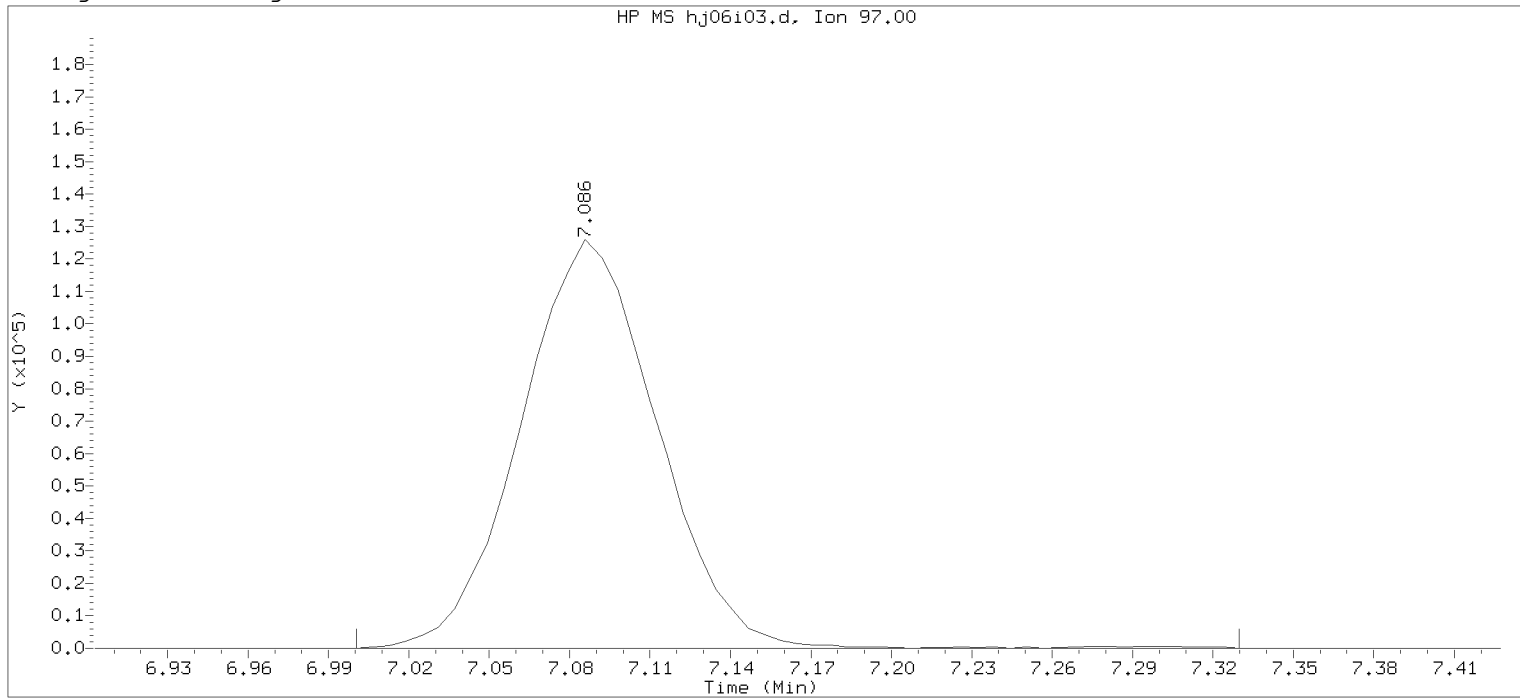
Analyst responsible for change:	Digitally signed by Sara E. Johnson
	on 01/15/2020 at 17:50.
	Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

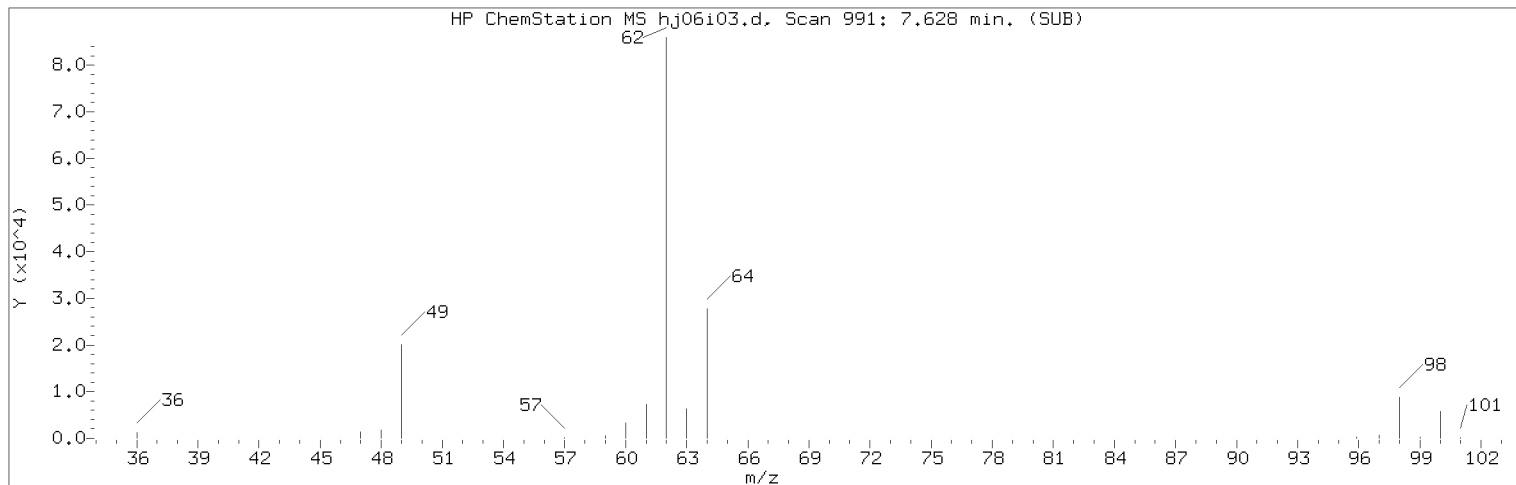
Sample Name: VSTD005

Lab Sample ID: VSTD005

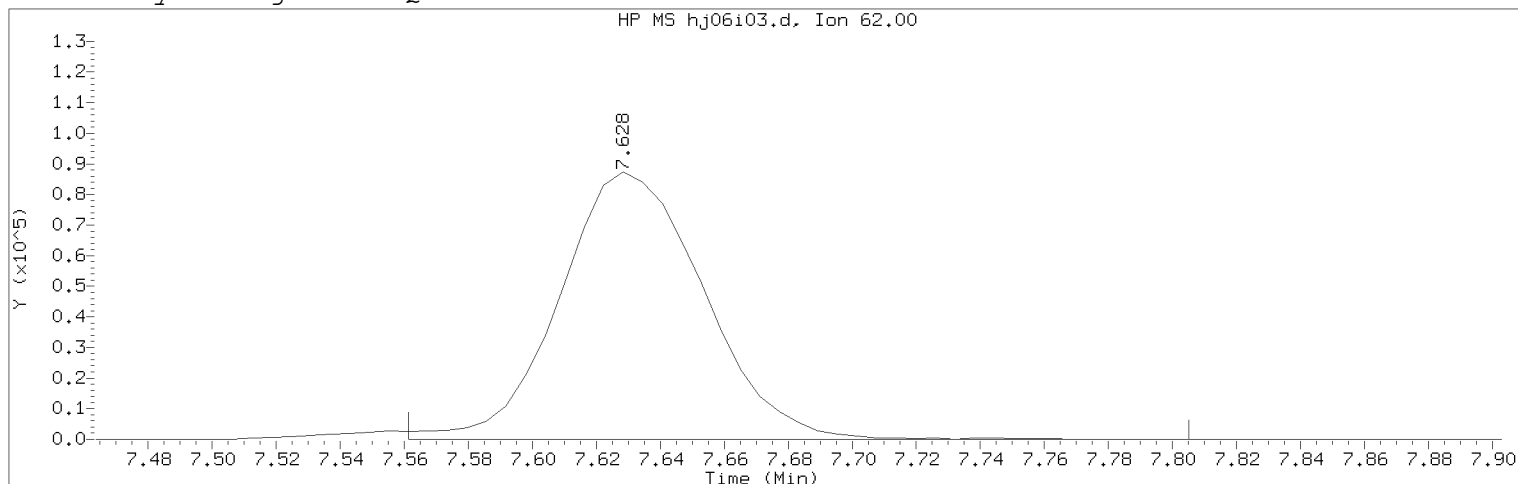
Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area	: 445768	
On-column Amount (ng)	: 5.1311	
Integration start scan	: 887	Integration stop scan: 941
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 134 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

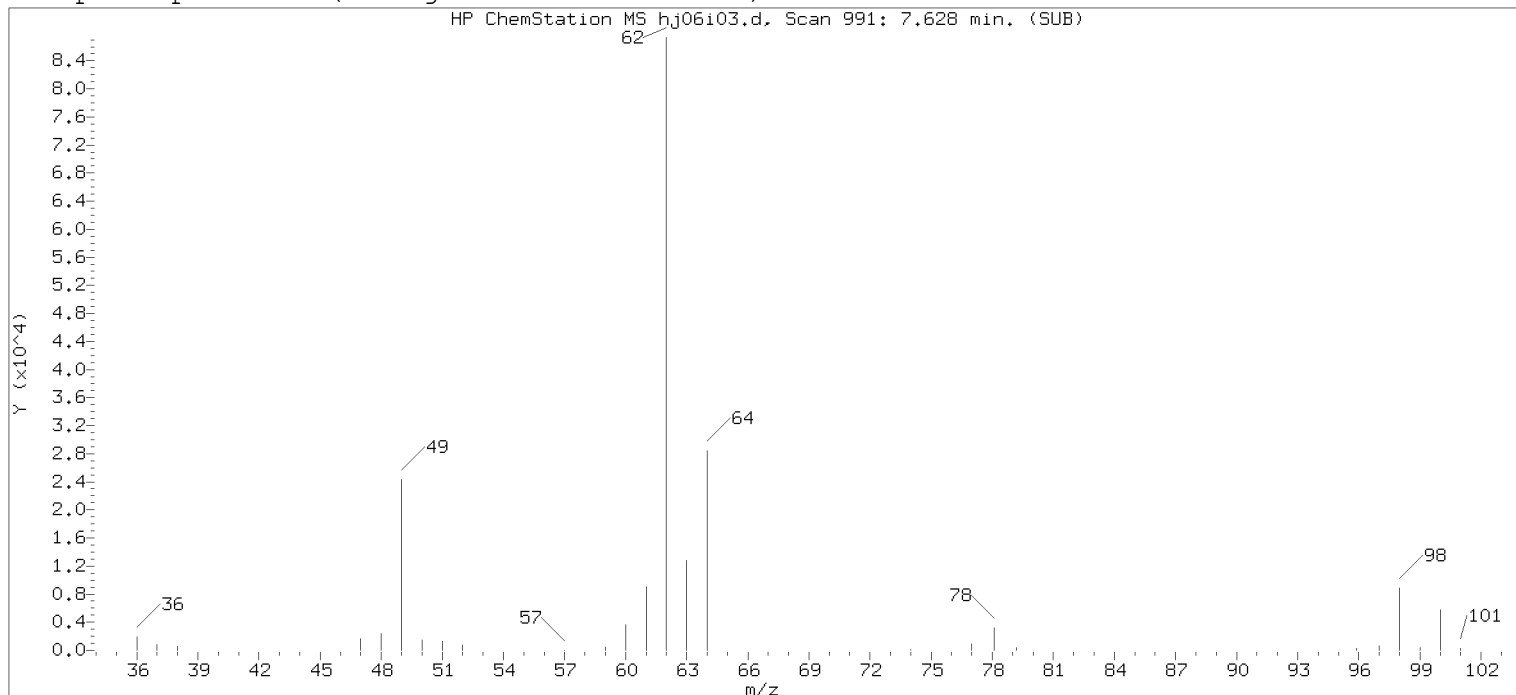
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area (flag)	: 272967M	
On-Column Amount (ng)	: 4.9344	
Integration start scan	: 979	Integration stop scan: 1019
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

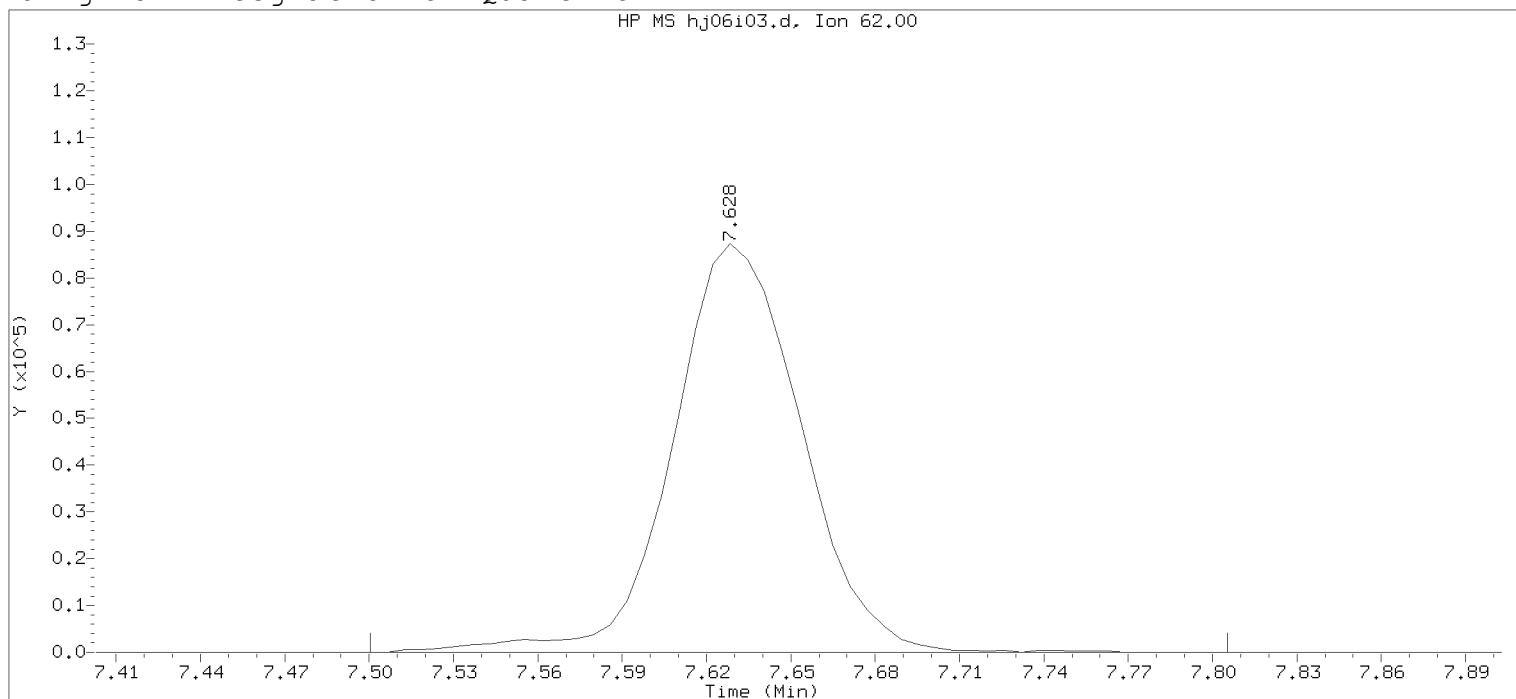
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

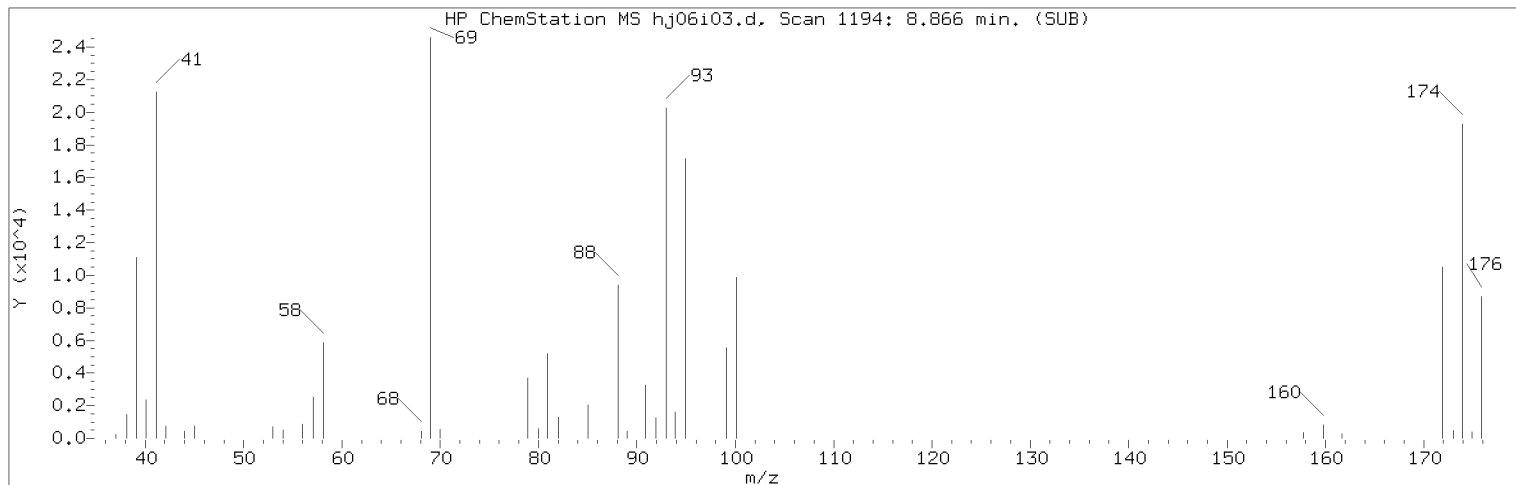
Sample Name: VSTD005

Lab Sample ID: VSTD005

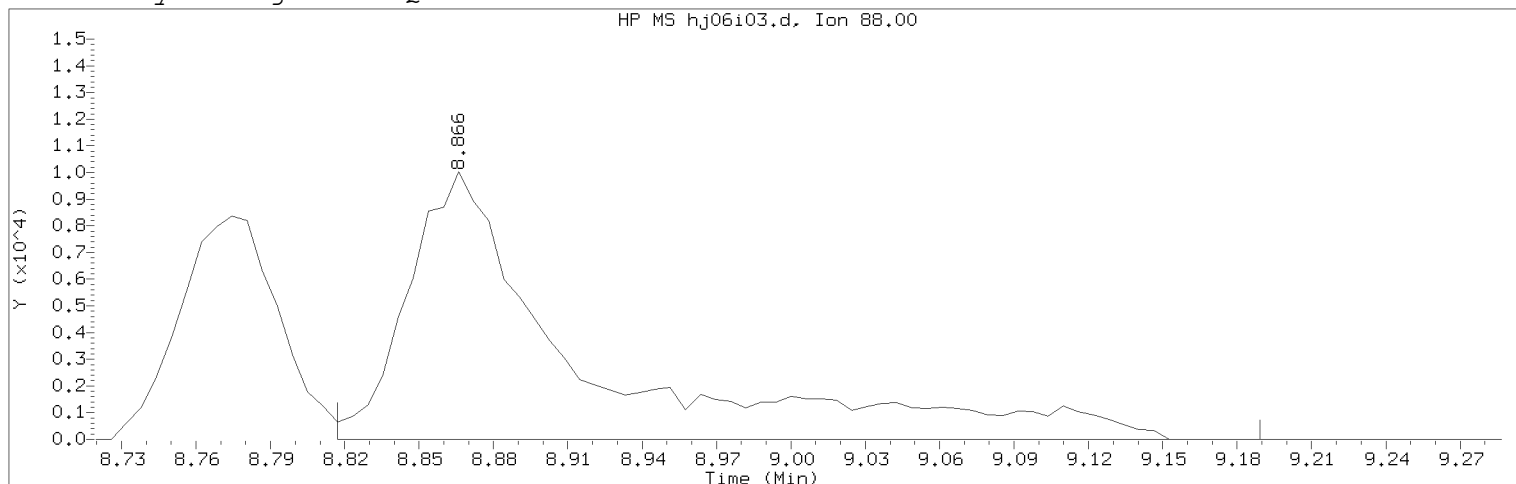
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area	: 277238	
On-column Amount (ng)	: 4.9705	
Integration start scan	: 969	Integration stop scan: 1019
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA664s Page 136 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

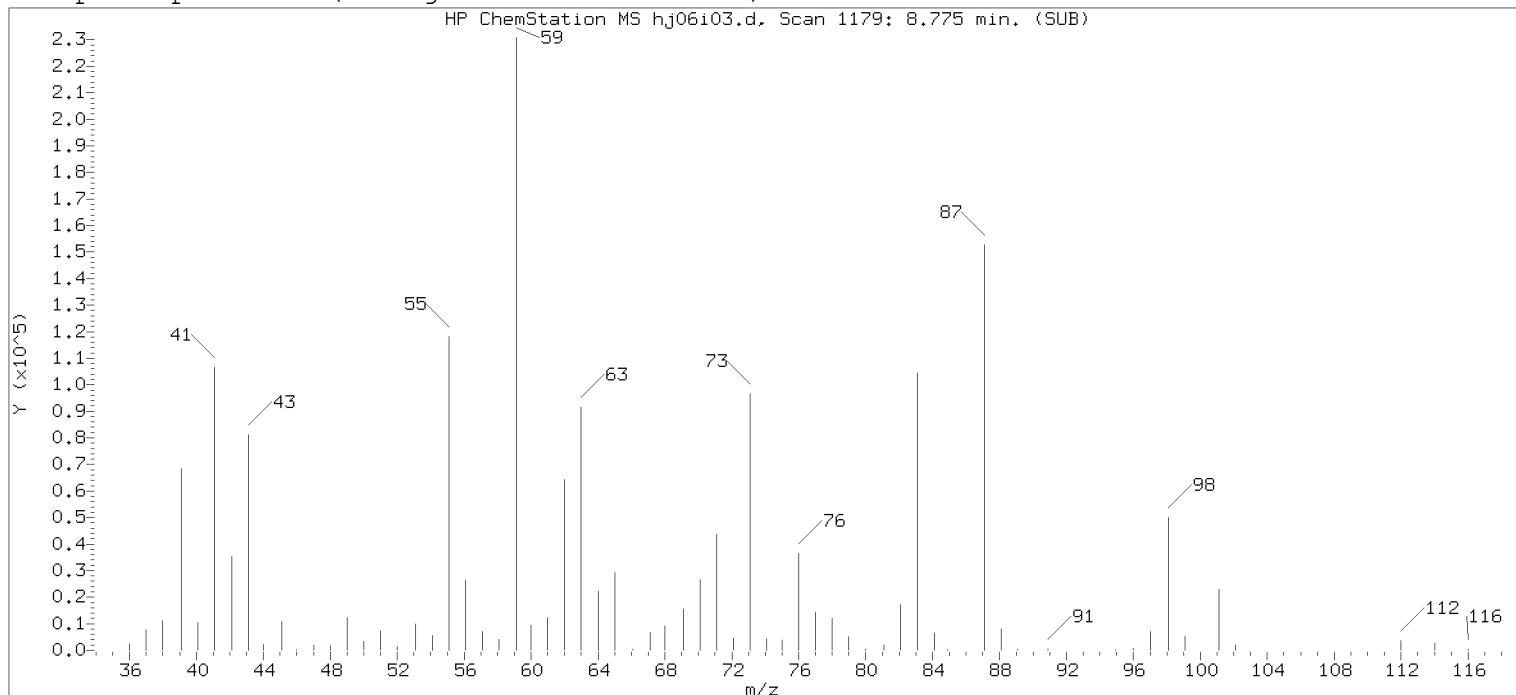
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1194	
Retention Time (minutes)	: 8.866	
Quant Ion	: 88.00	
Area (flag)	: 48534M	
On-Column Amount (ng)	: 294.9662	
Integration start scan	: 1185	Integration stop scan: 1246
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

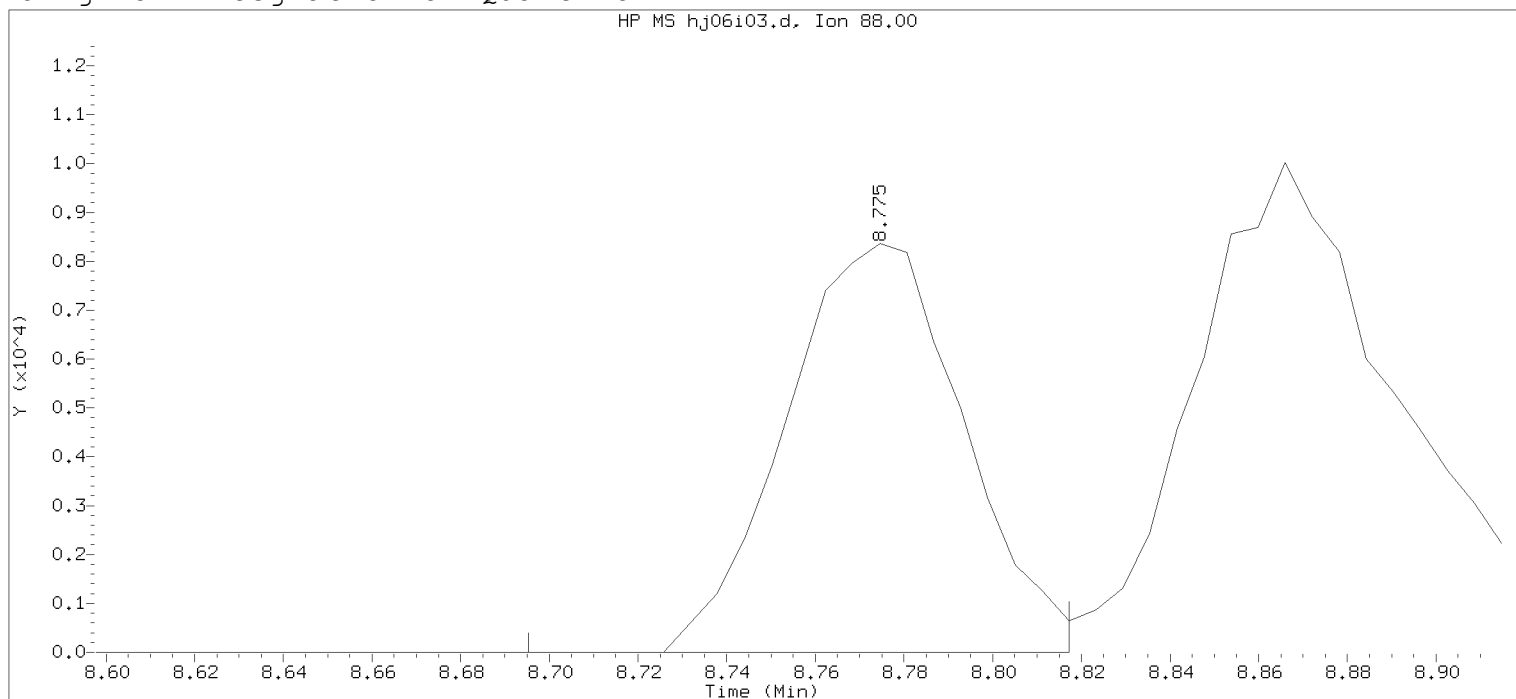
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

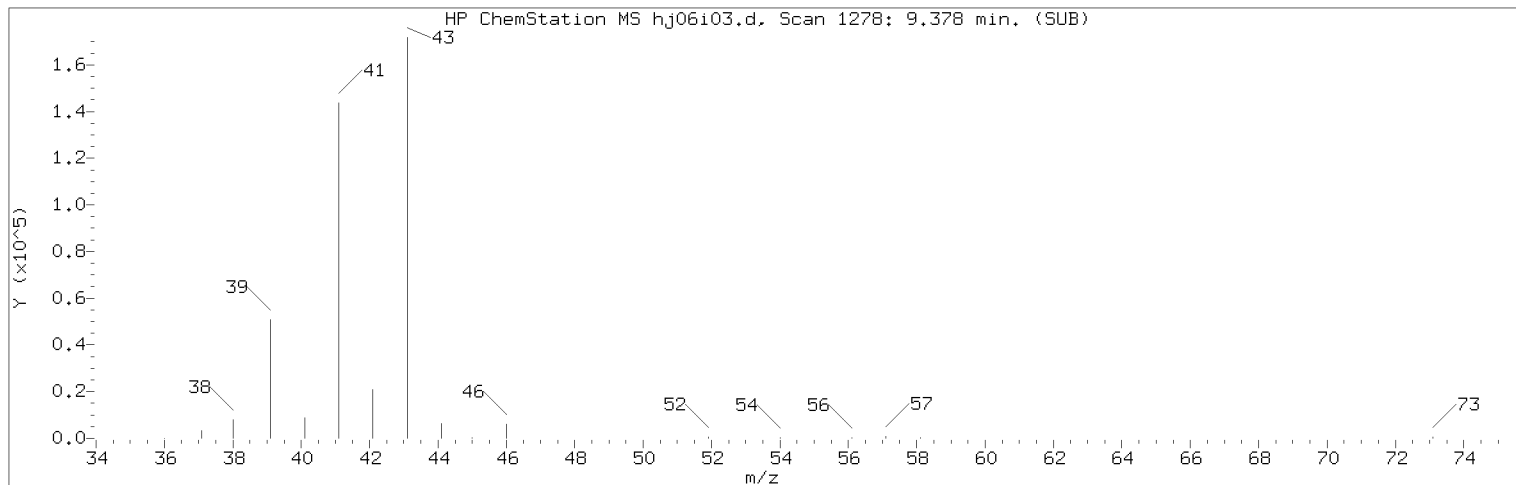
Sample Name: VSTD005

Lab Sample ID: VSTD005

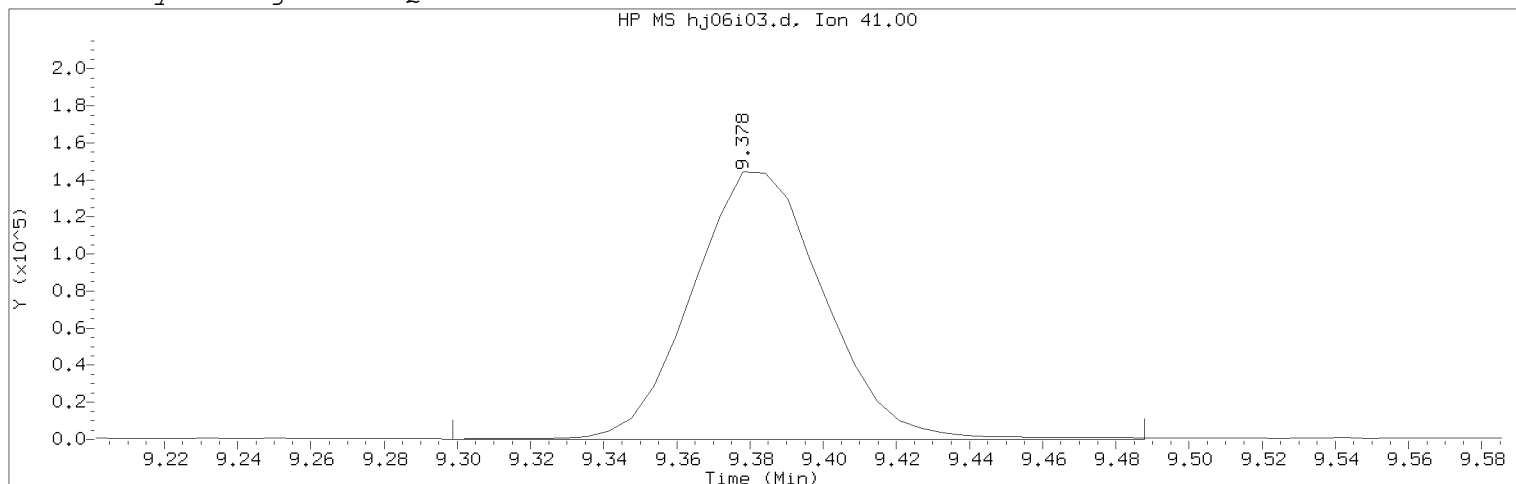
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1179	
Retention Time (minutes)	: 8.775	
Quant Ion	: 88.00	
Area	: 23165	
On-column Amount (ng)	: 155.1606	
Integration start scan	: 1165	Integration stop scan: 1185
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA64s

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

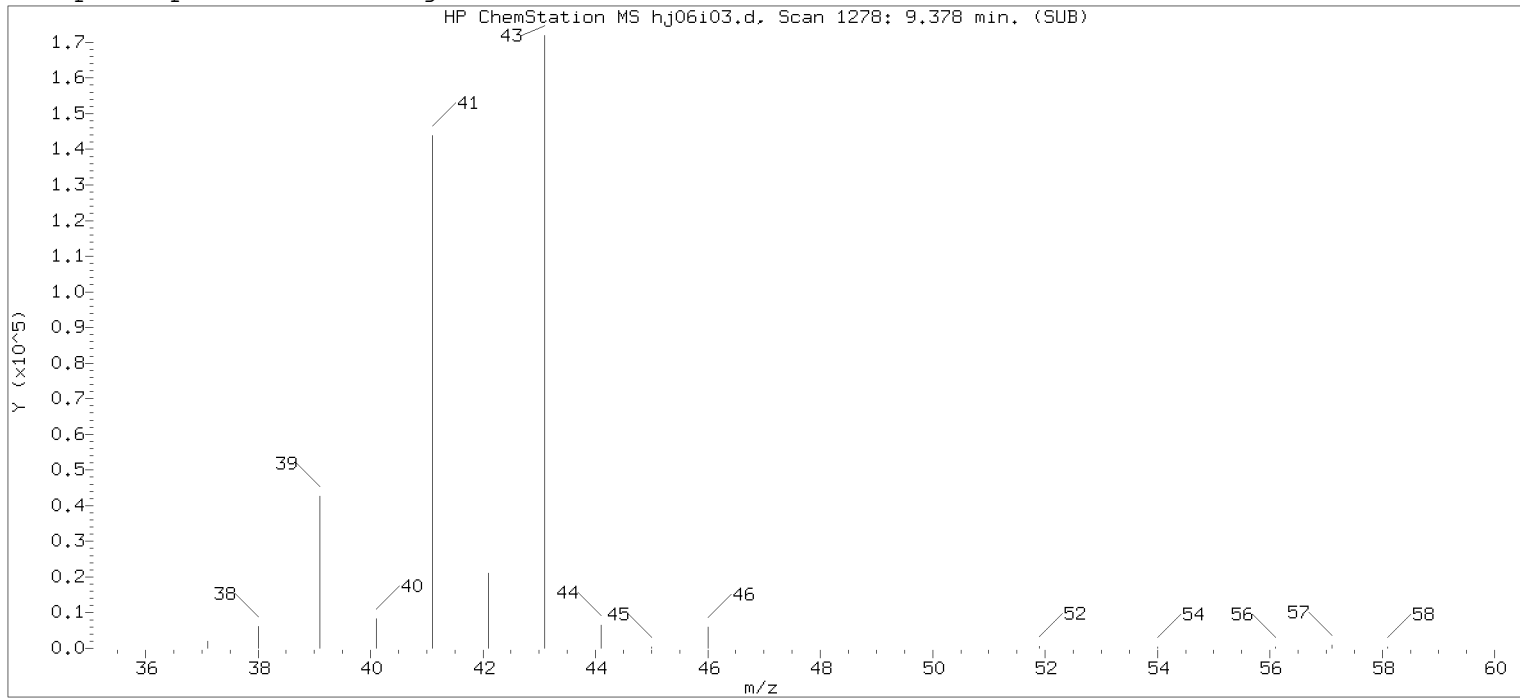
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 361445M
On-Column Amount (ng) : 50.7412
Integration start scan : 1264 Integration stop scan: 1295
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

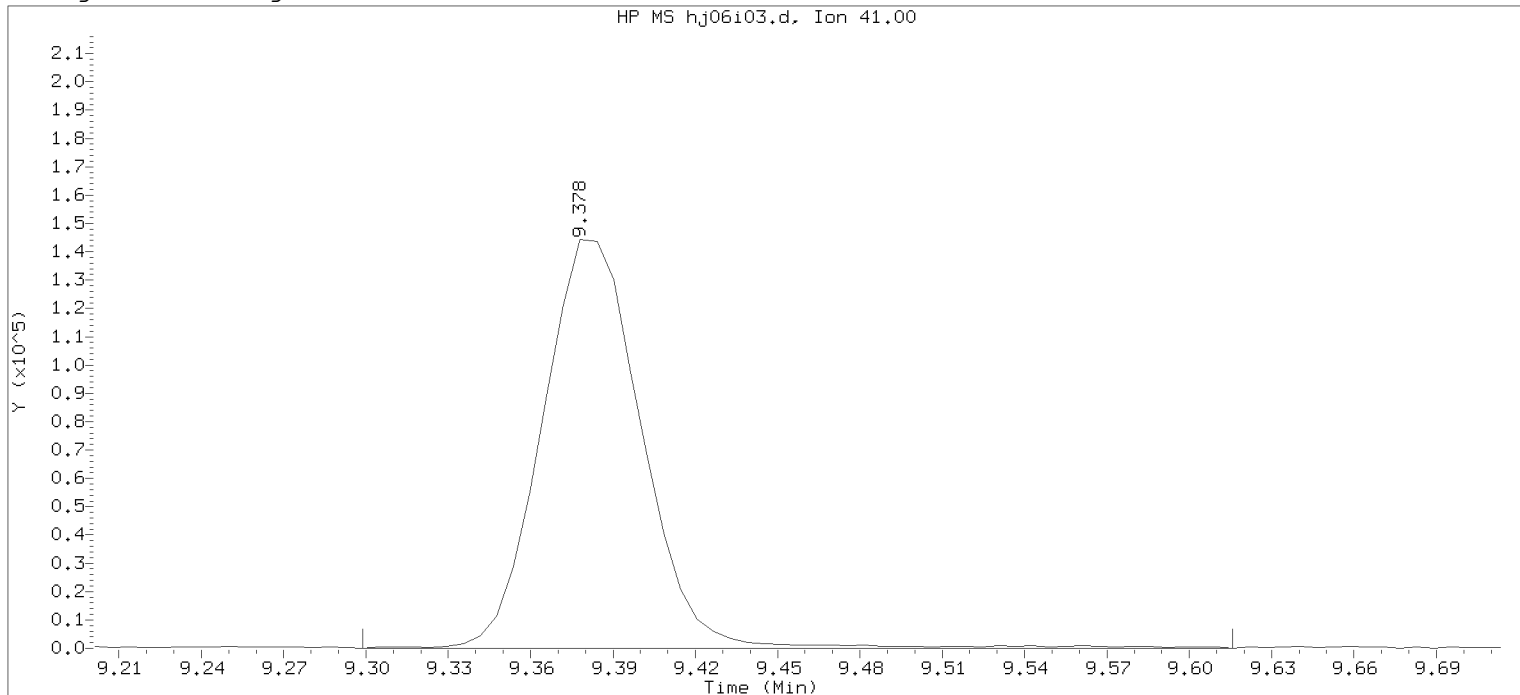
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

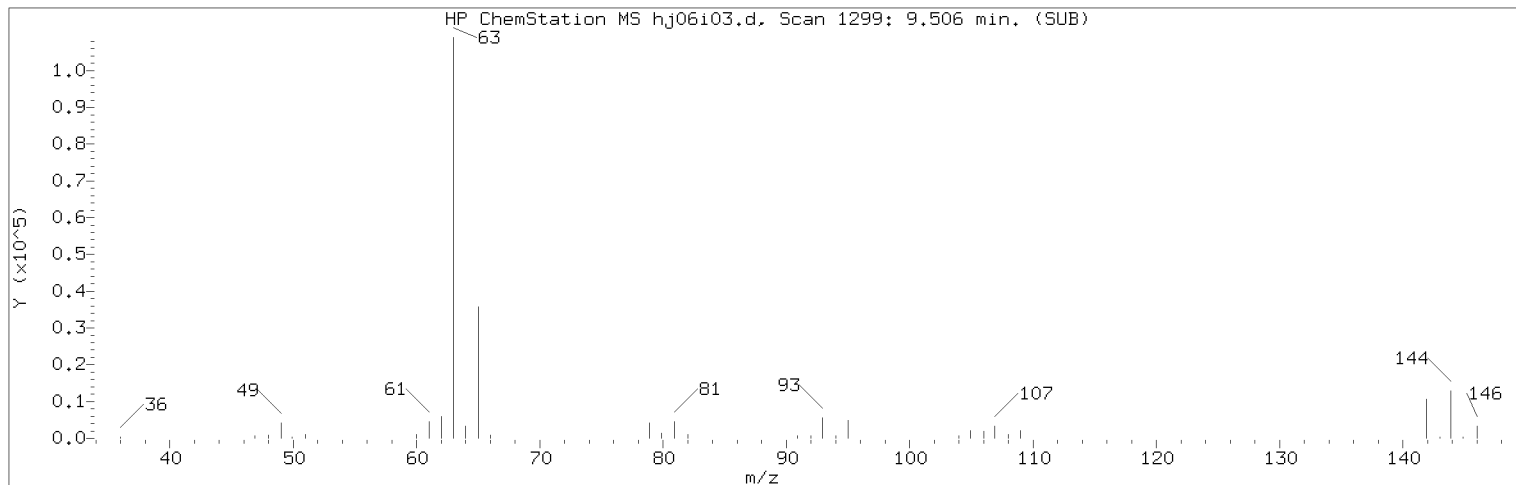
Sample Name: VSTD005

Lab Sample ID: VSTD005

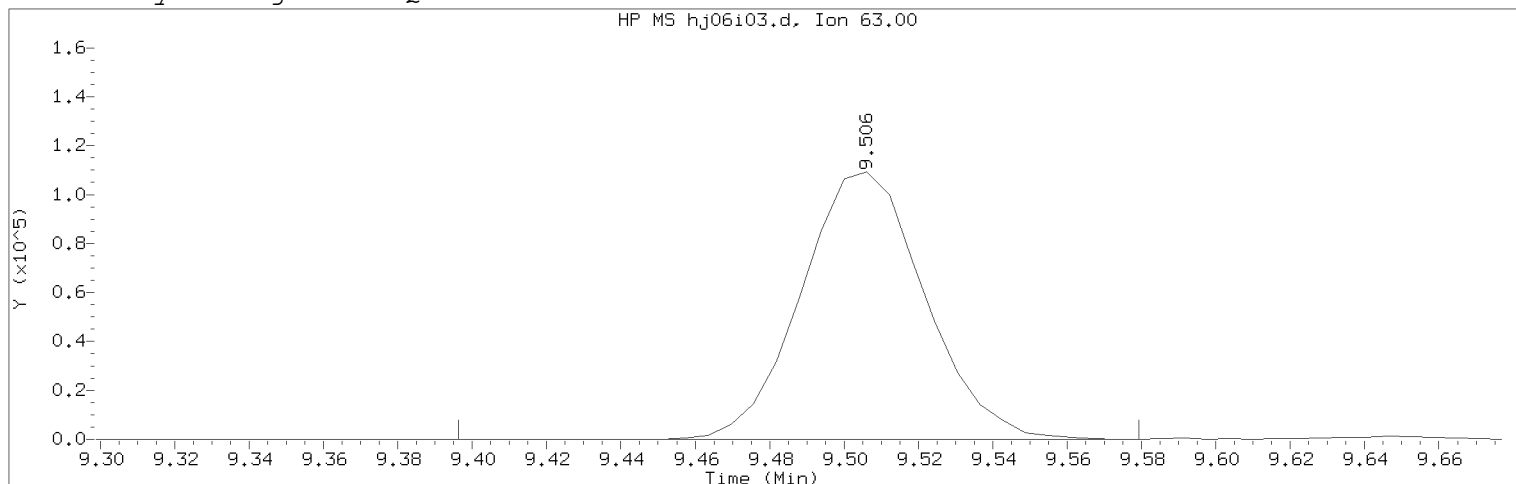
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 365903	
On-column Amount (ng)	: 48.6326	
Integration start scan	: 1264	Integration stop scan: 1316
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA664s Page 140 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 251630M	
On-Column Amount (ng)	: 5.0429	
Integration start scan	: 1280	Integration stop scan: 1310
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

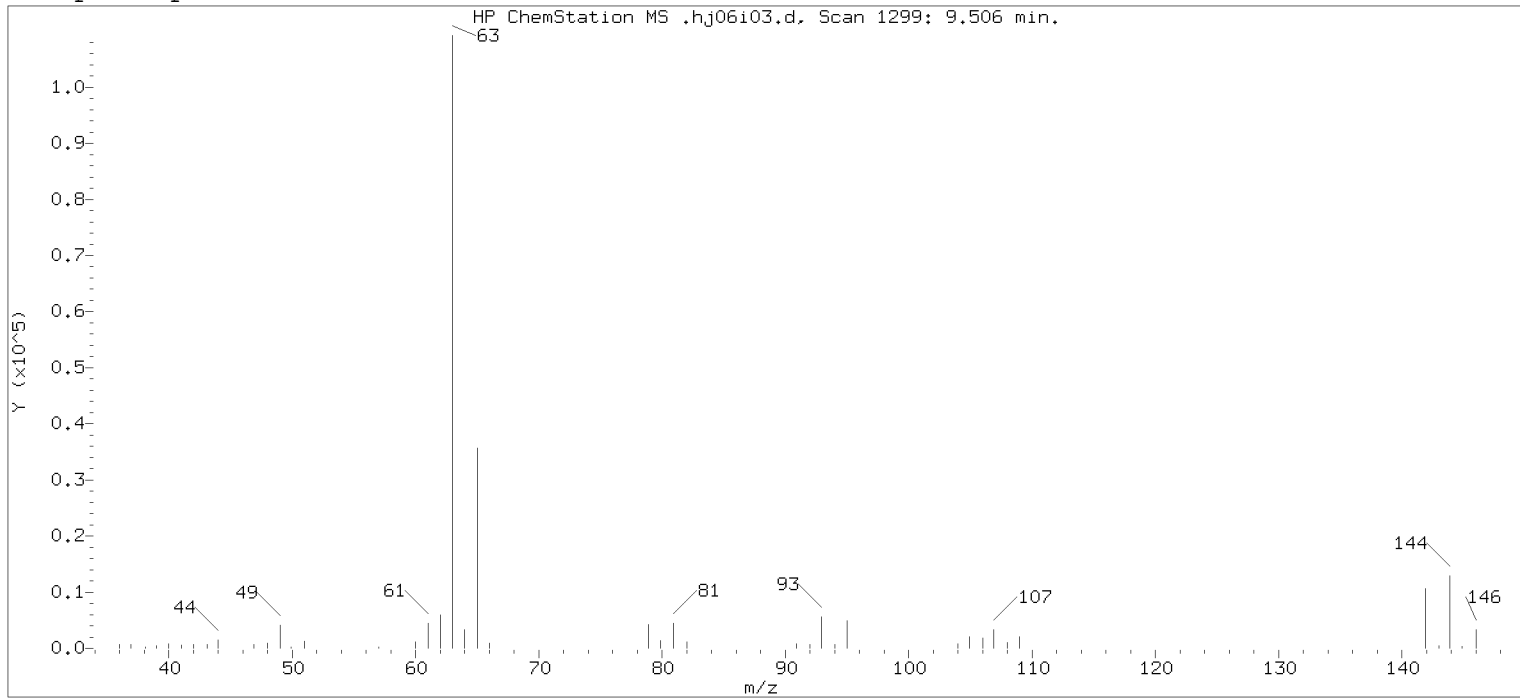
Analyst responsible for change:

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

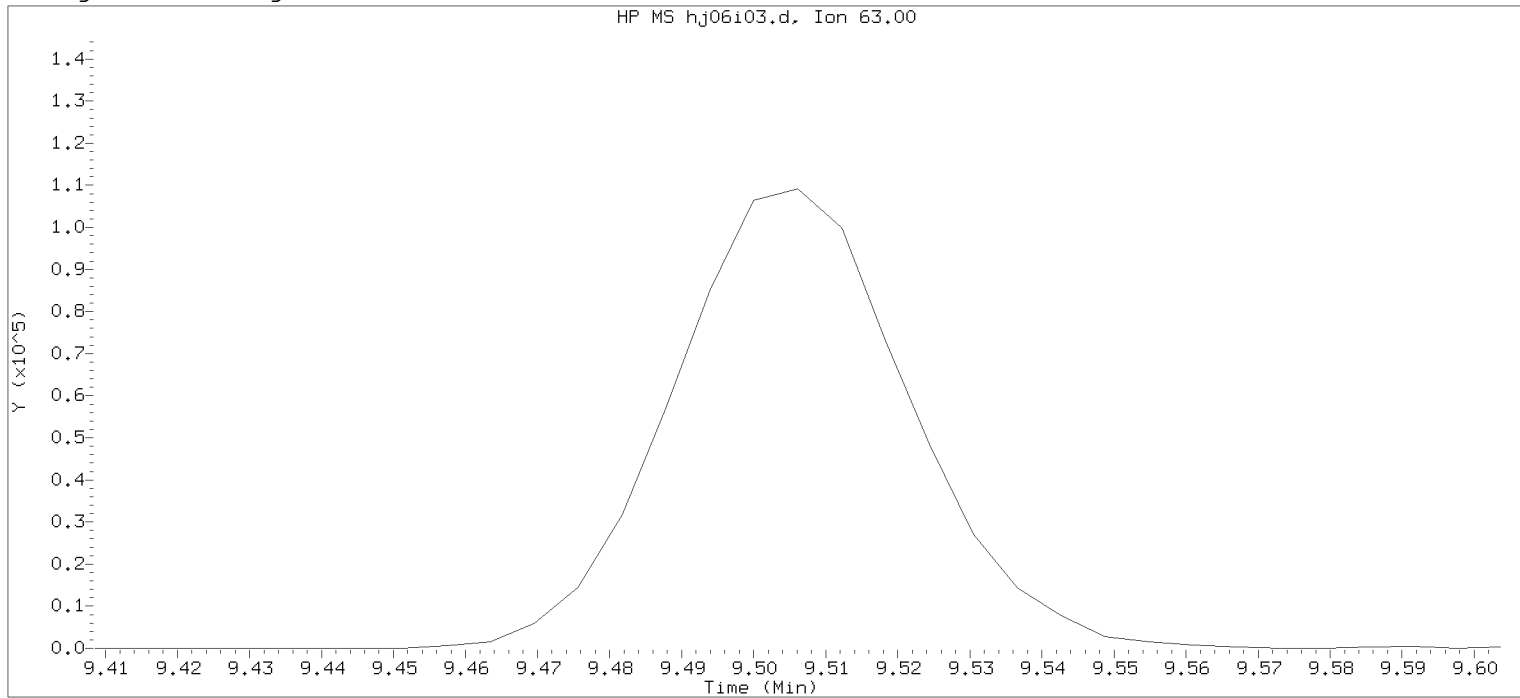
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

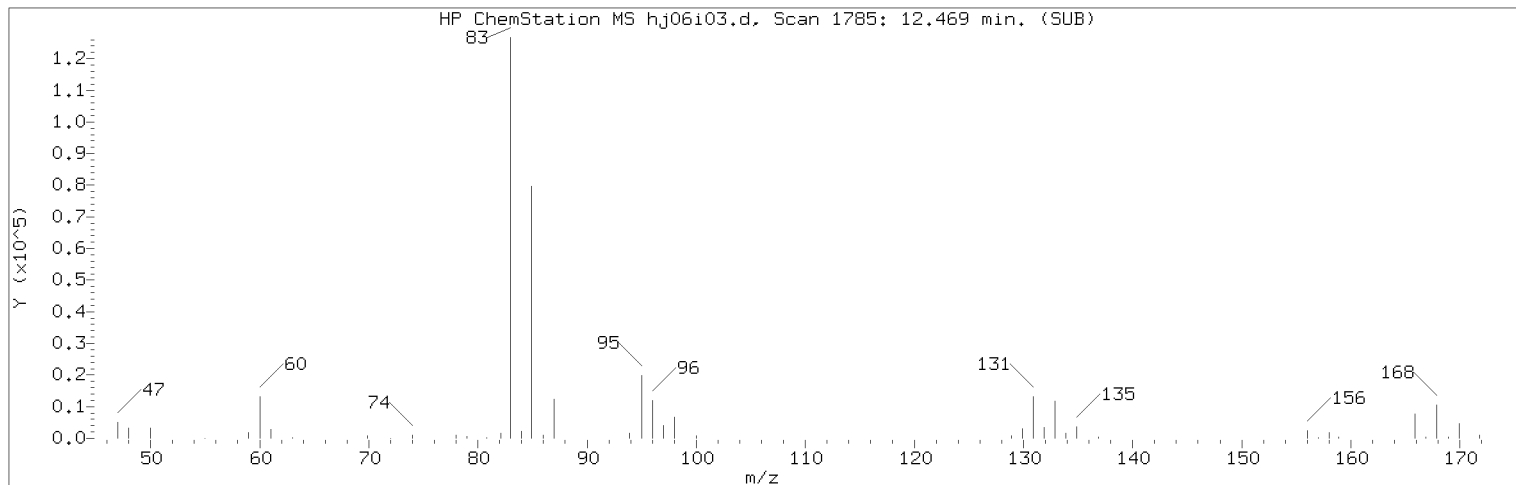
Sample Name: VSTD005

Lab Sample ID: VSTD005

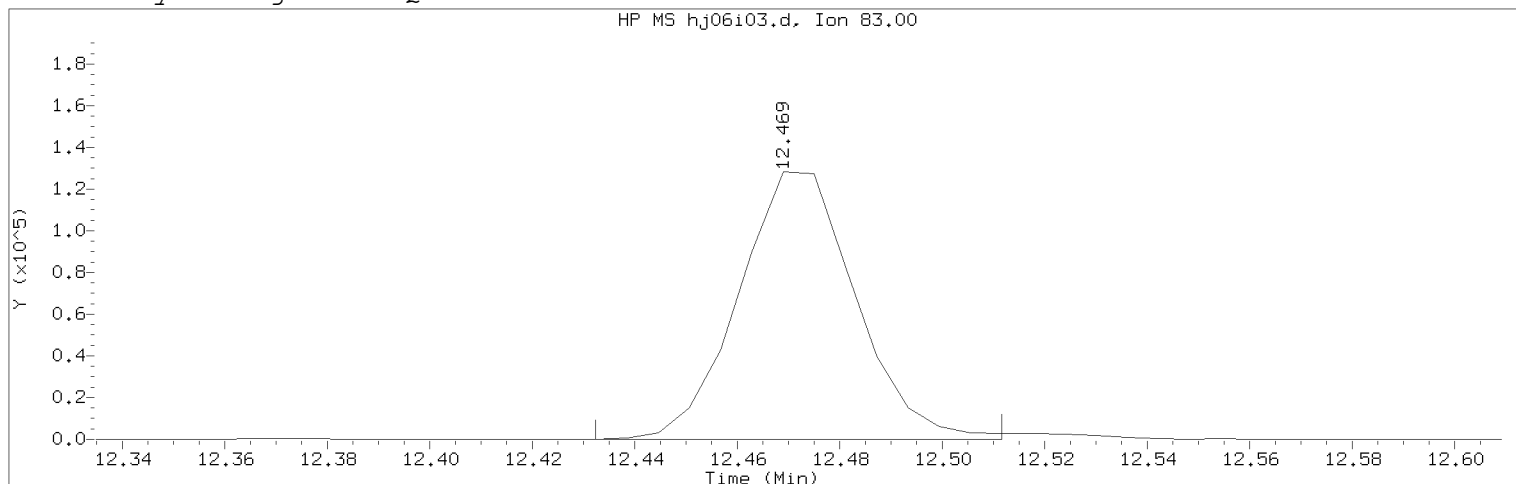
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

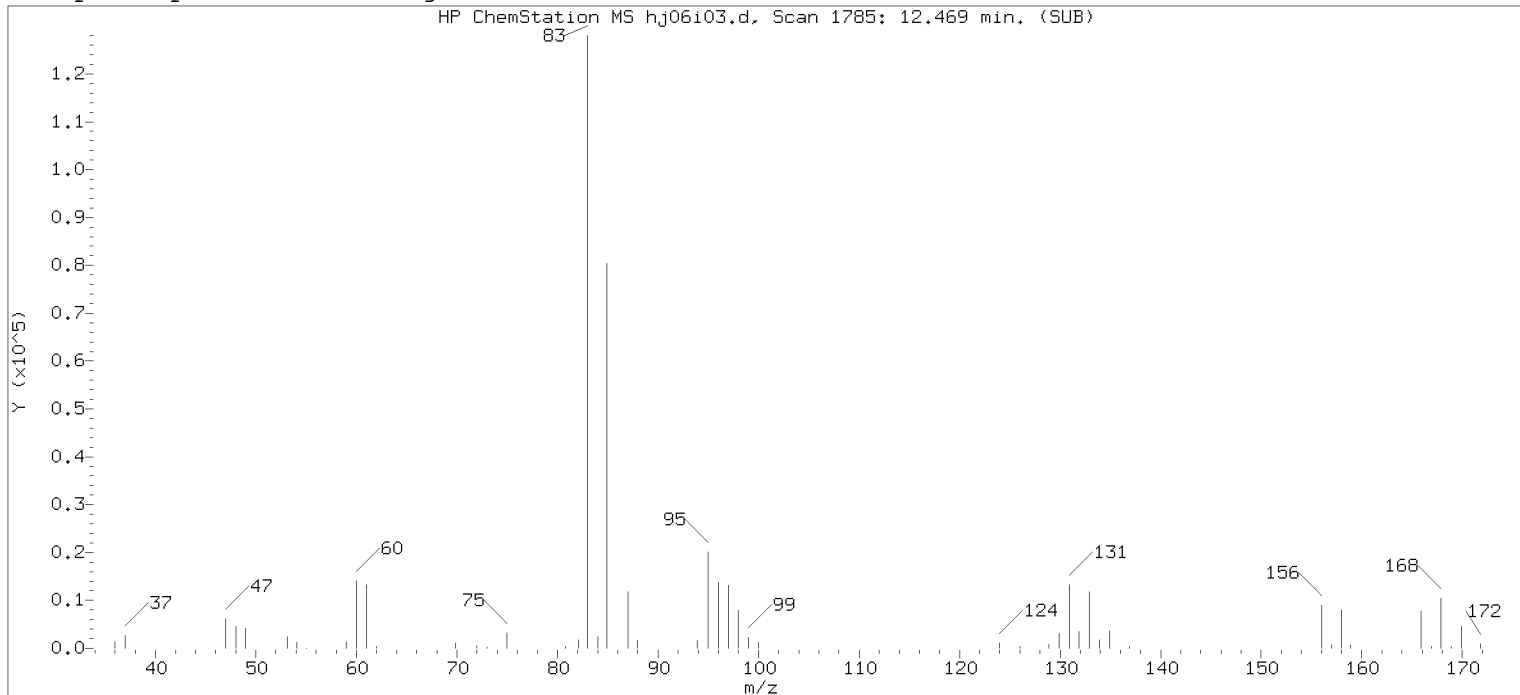
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 203525M
On-Column Amount (ng) : 5.0485
Integration start scan : 1778 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

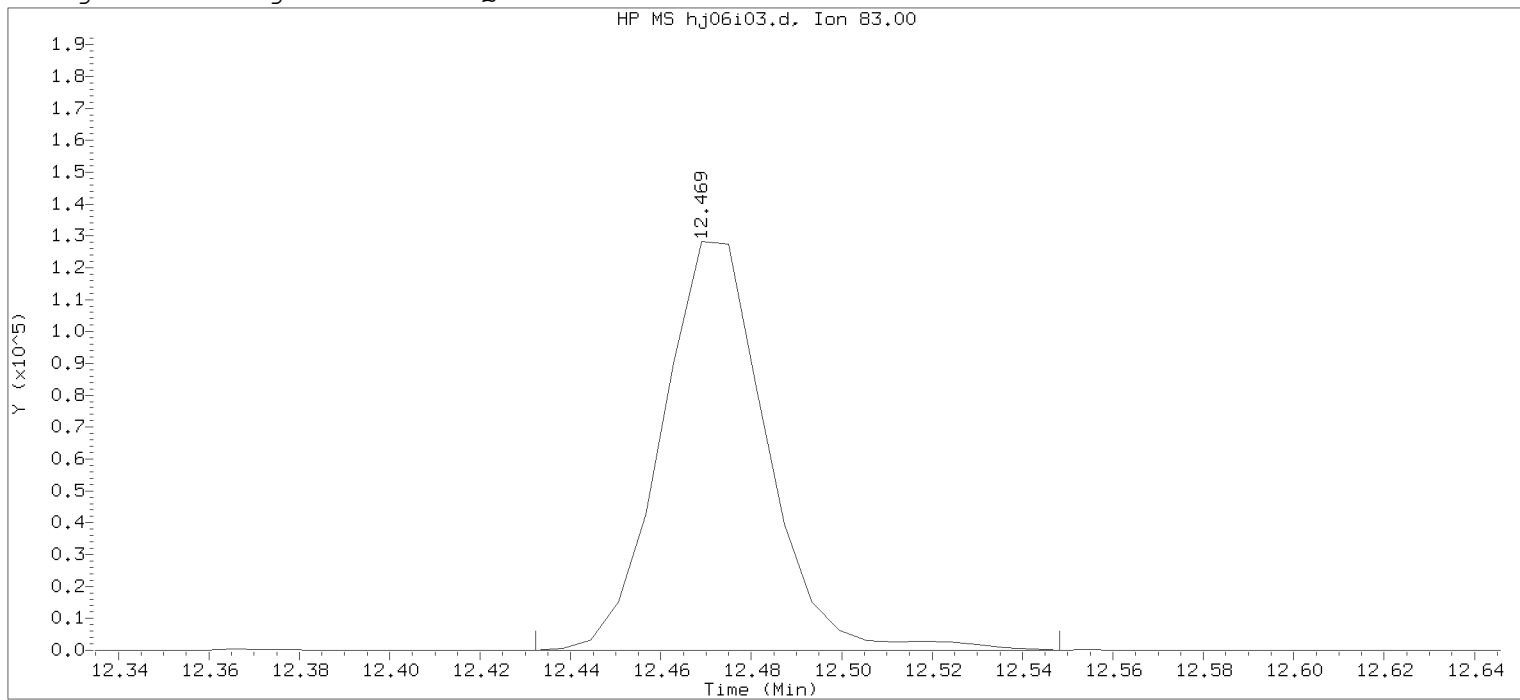
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

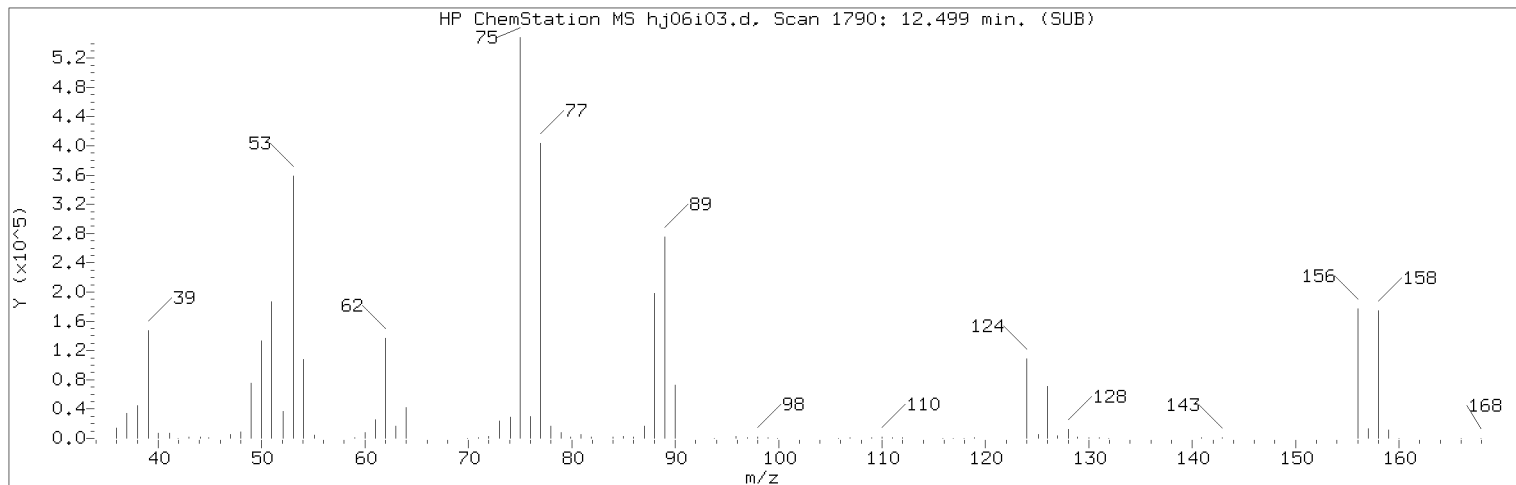
Sample Name: VSTD005

Lab Sample ID: VSTD005

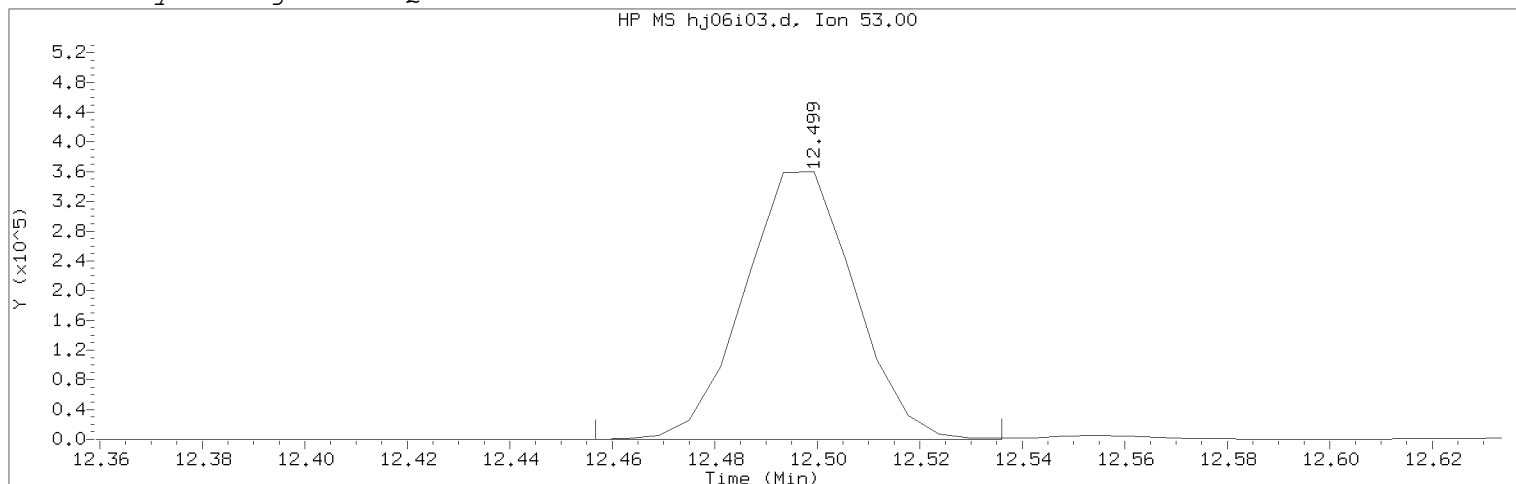
Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1785	
Retention Time (minutes)	: 12.469	
Quant Ion	: 83.00	
Area	: 206626	
On-column Amount (ng)	: 4.9272	
Integration start scan	: 1778	Integration stop scan: 1797
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 144 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

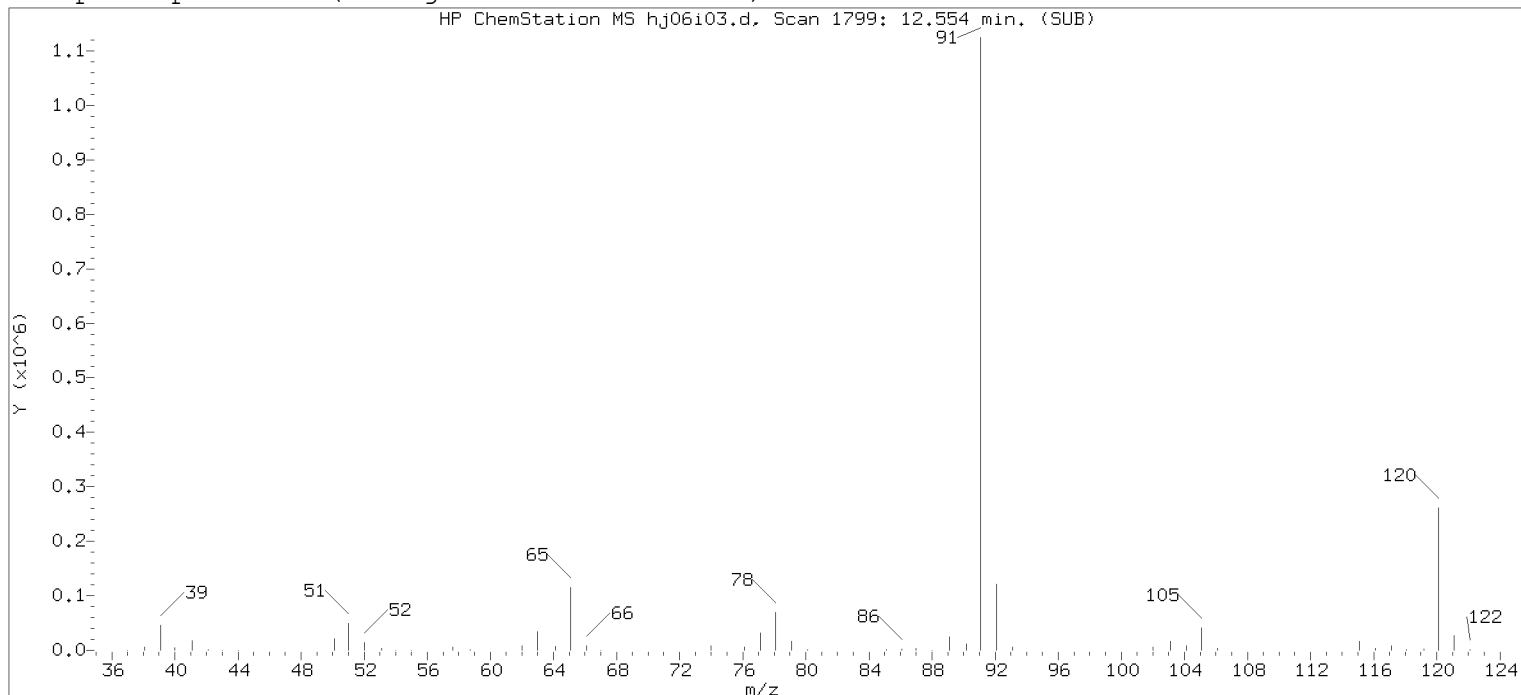
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1790	
Retention Time (minutes)	: 12.499	
Quant Ion	: 53.00	
Area (flag)	: 538157A	
On-Column Amount (ng)	: 52.8194	
Integration start scan	: 1782	Integration stop scan: 1795
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

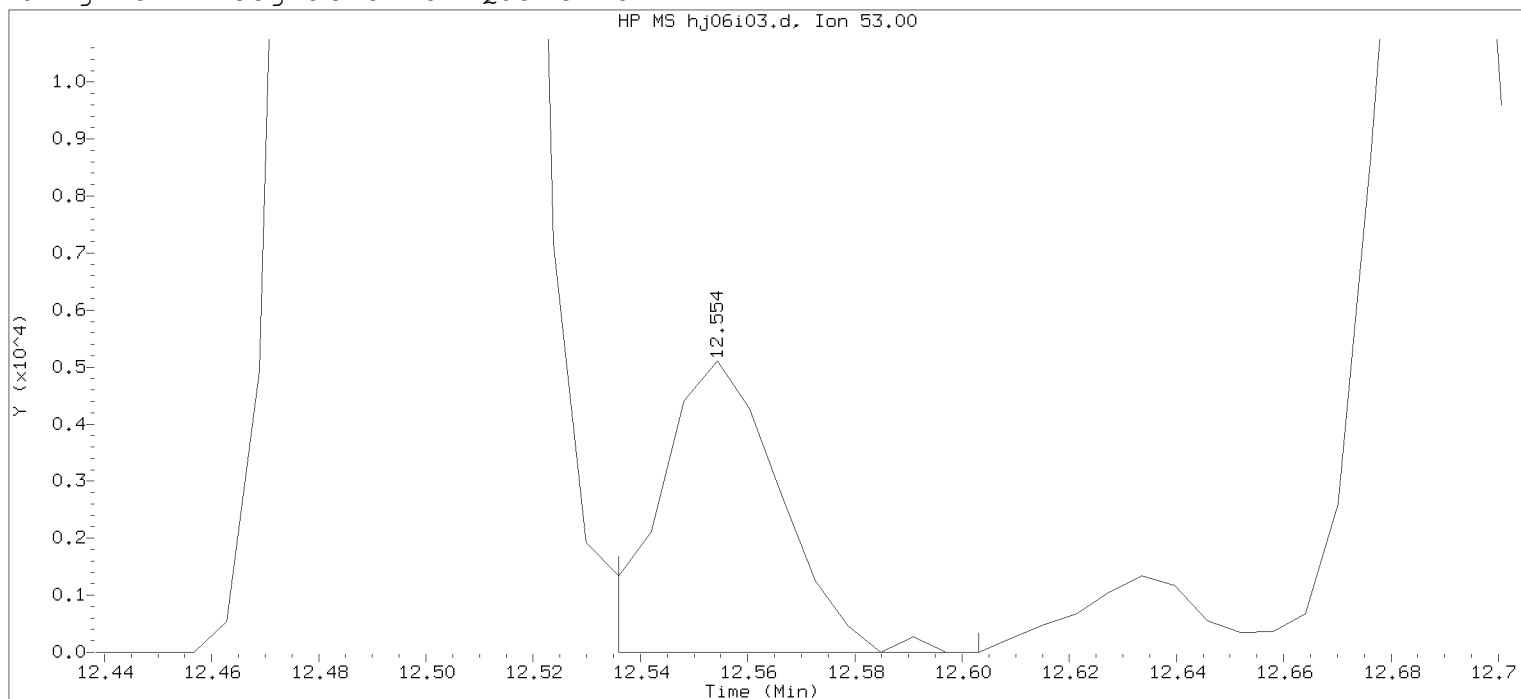
Analyst responsible for change:	Digitally signed by Sara E. Johnson
	on 01/15/2020 at 17:50.
	Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

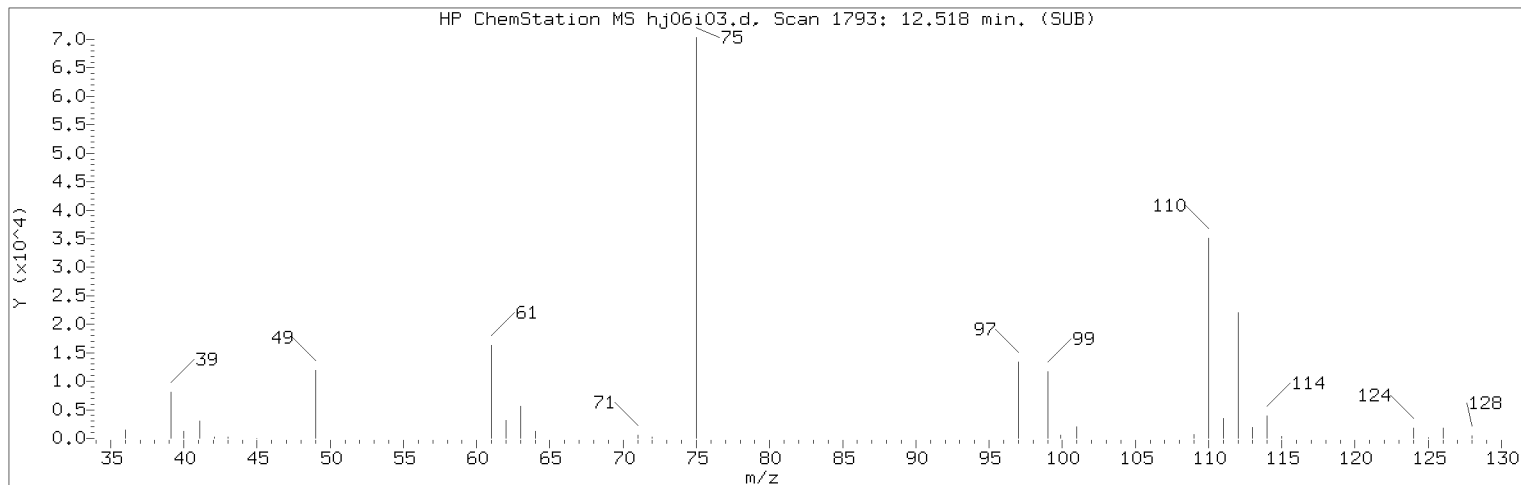
Sample Name: VSTD005

Lab Sample ID: VSTD005

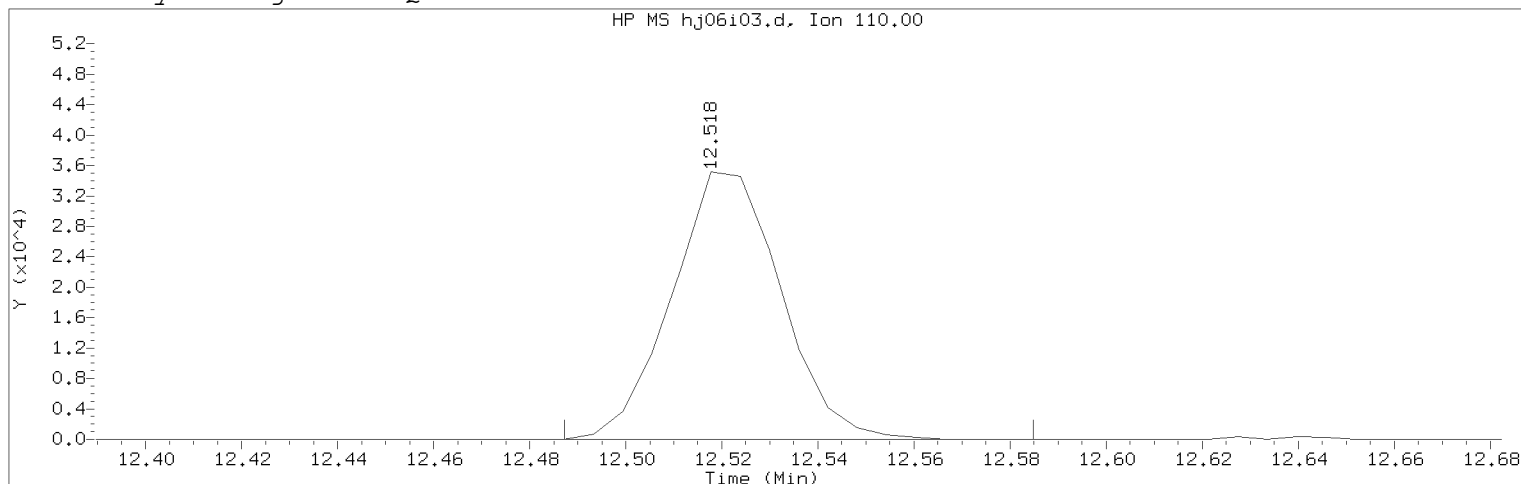
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1799	
Retention Time (minutes)	: 12.554	
Quant Ion	: 53.00	
Area	: 7791	
On-column Amount (ng)	: 2.1518	
Integration start scan	: 1795	Integration stop scan: 1806
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64sPage 146 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

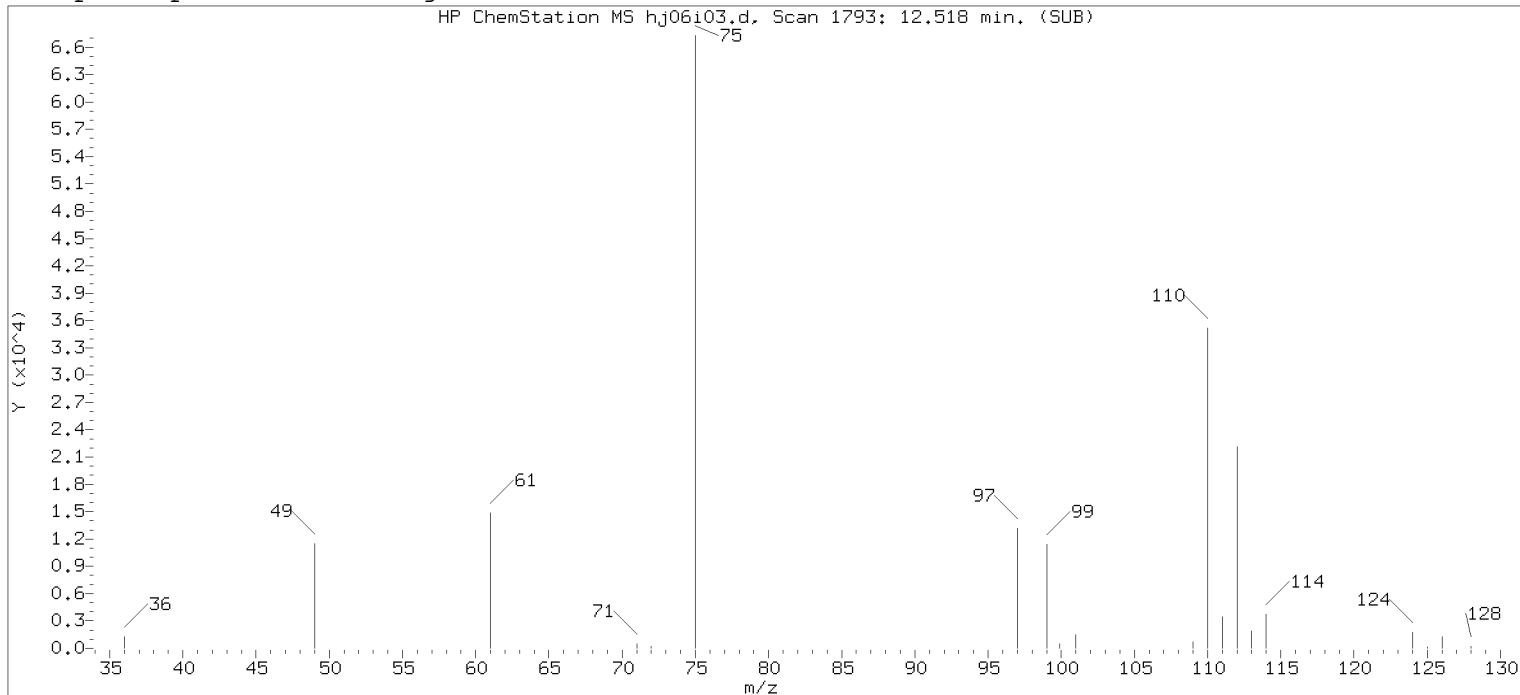
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1793	
Retention Time (minutes)	: 12.518	
Quant Ion	: 110.00	
Area (flag)	: 55435M	
On-Column Amount (ng)	: 5.1350	
Integration start scan	: 1787	Integration stop scan: 1803
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

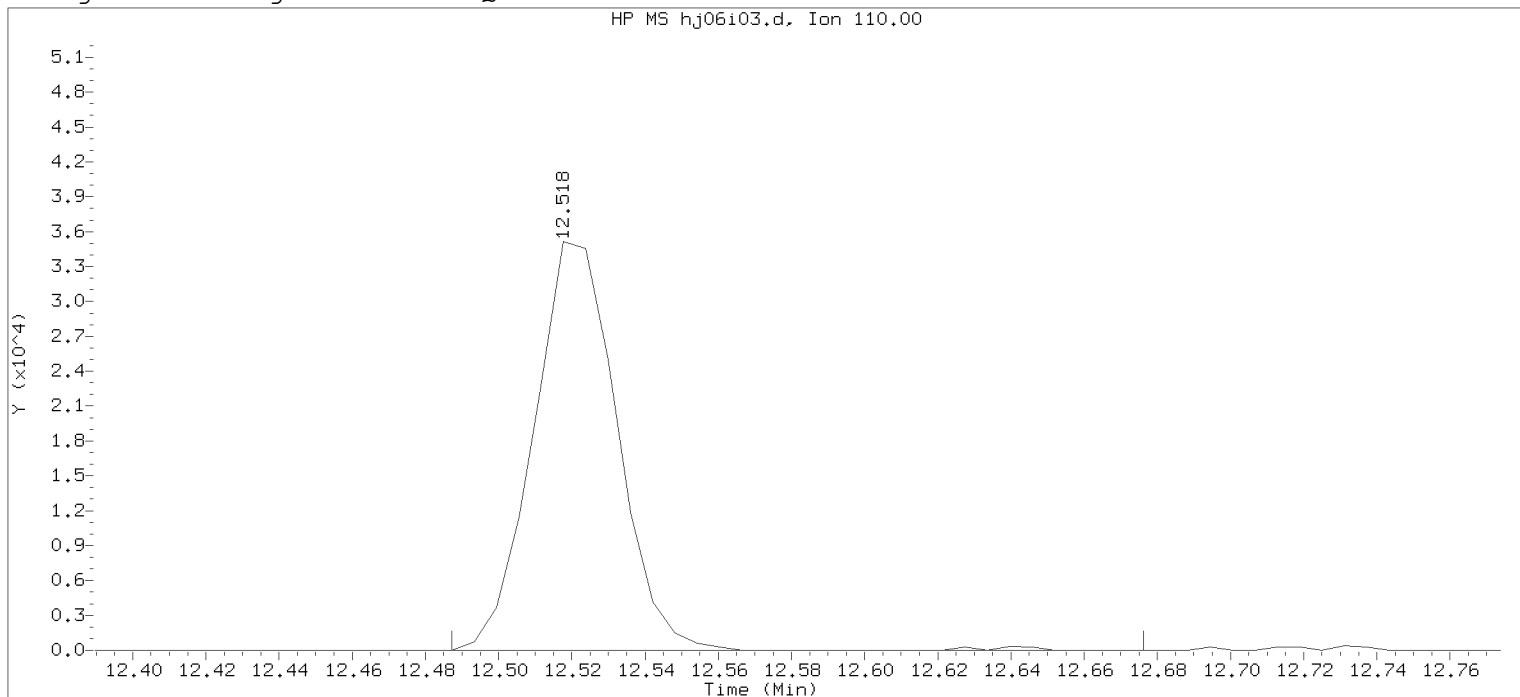
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

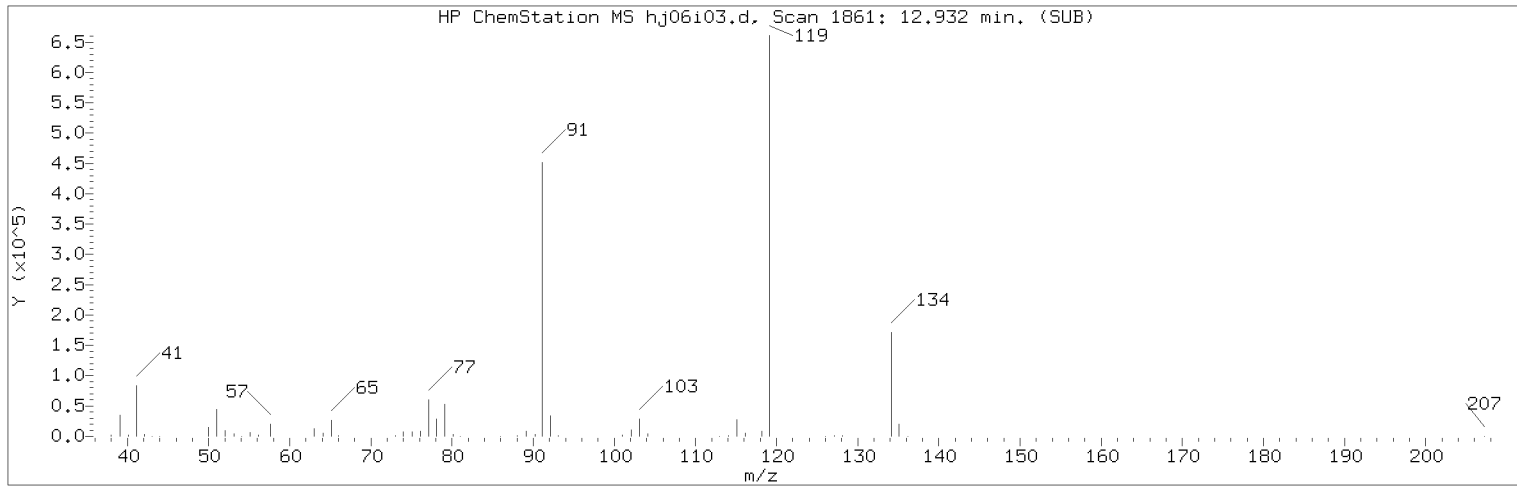
Sample Name: VSTD005

Lab Sample ID: VSTD005

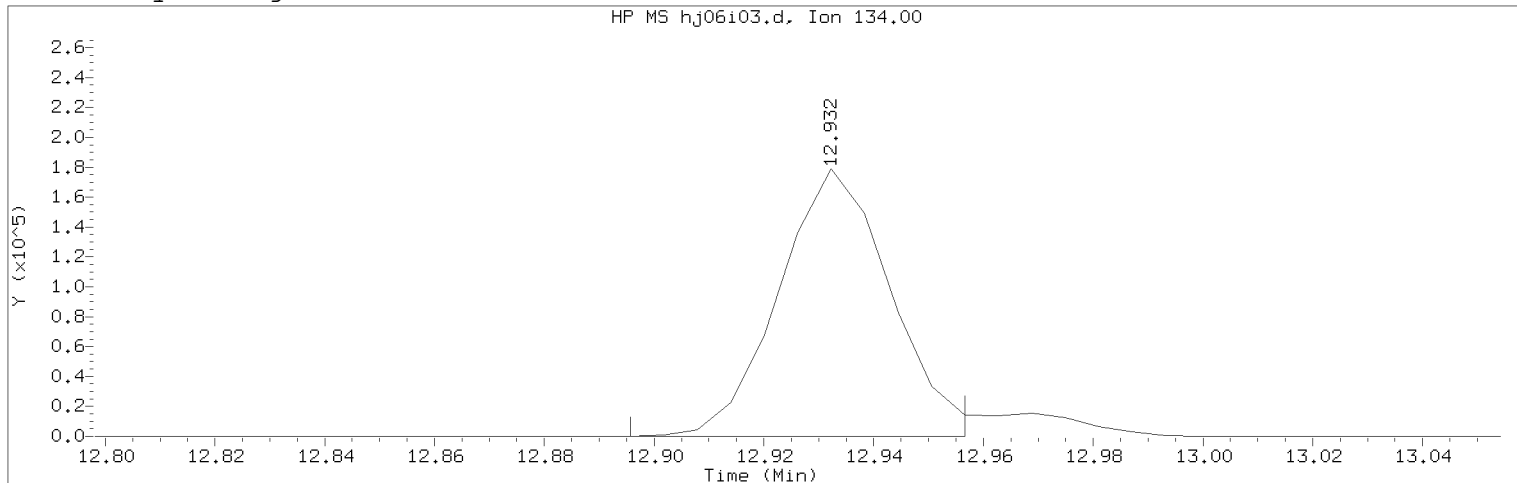
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1793	
Retention Time (minutes)	: 12.518	
Quant Ion	: 110.00	
Area	: 55764	
On-column Amount (ng)	: 5.0515	
Integration start scan	: 1787	Integration stop scan: 1818
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 148 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

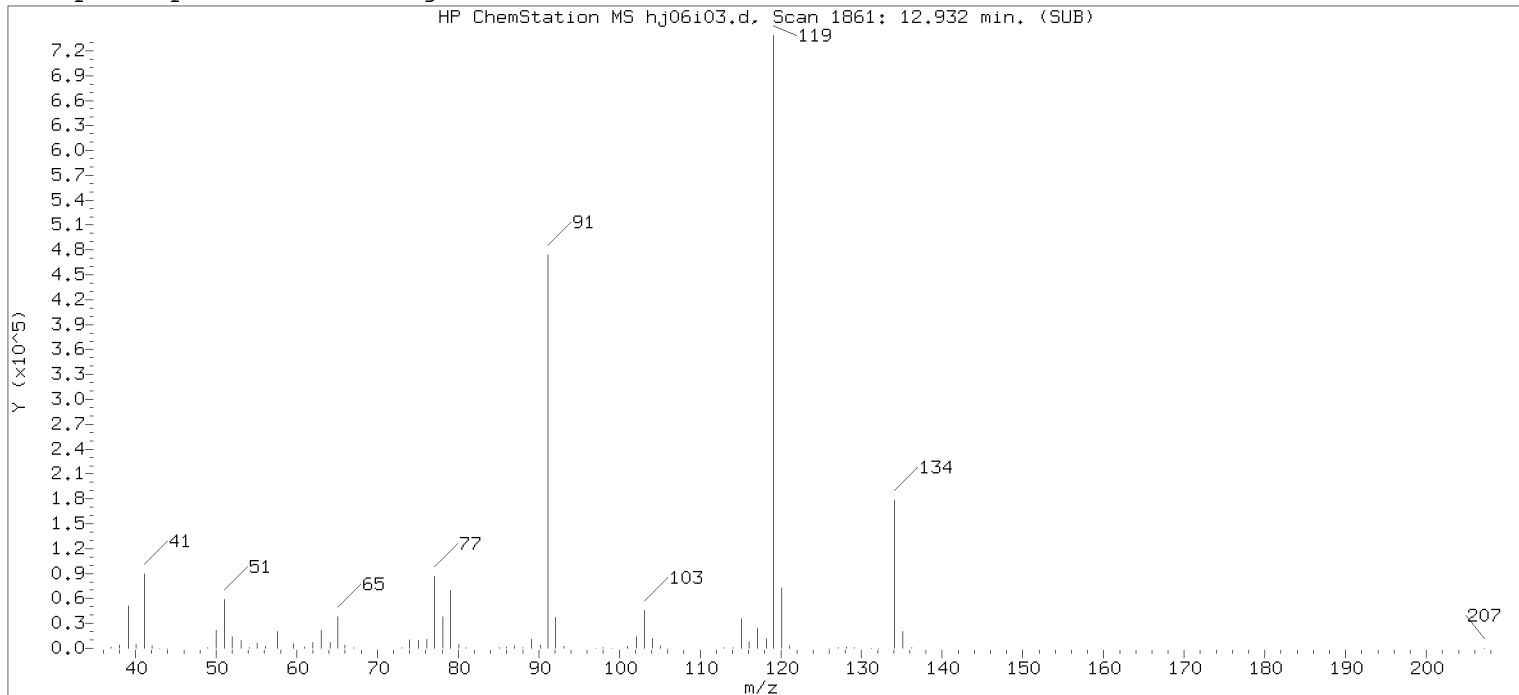
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 252740M
On-Column Amount (ng) : 5.2936
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

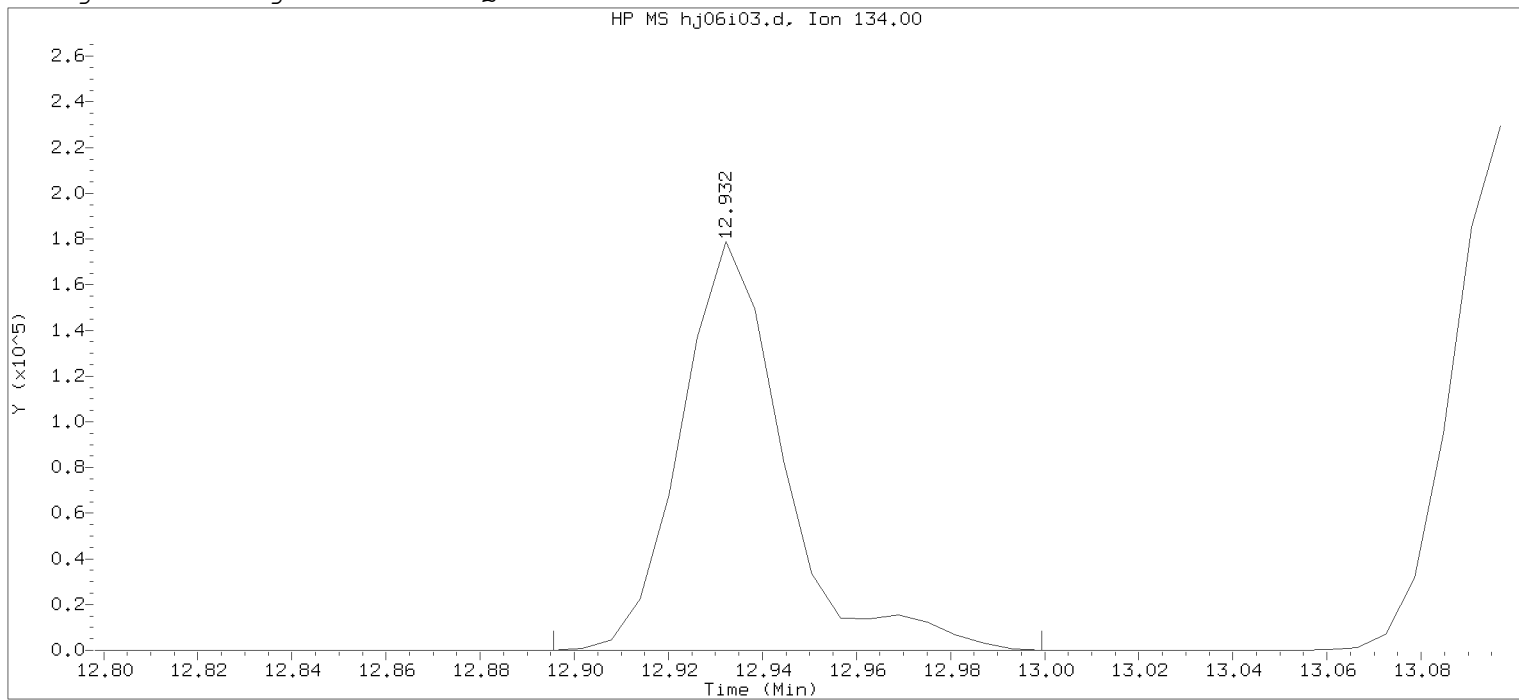
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

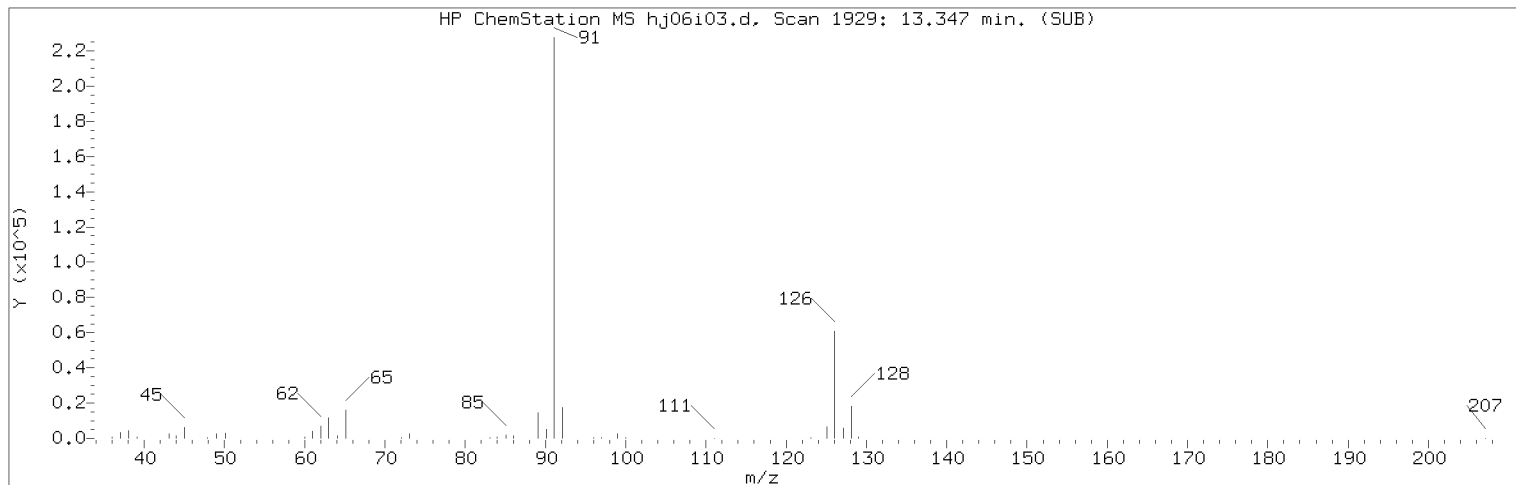
Sample Name: VSTD005

Lab Sample ID: VSTD005

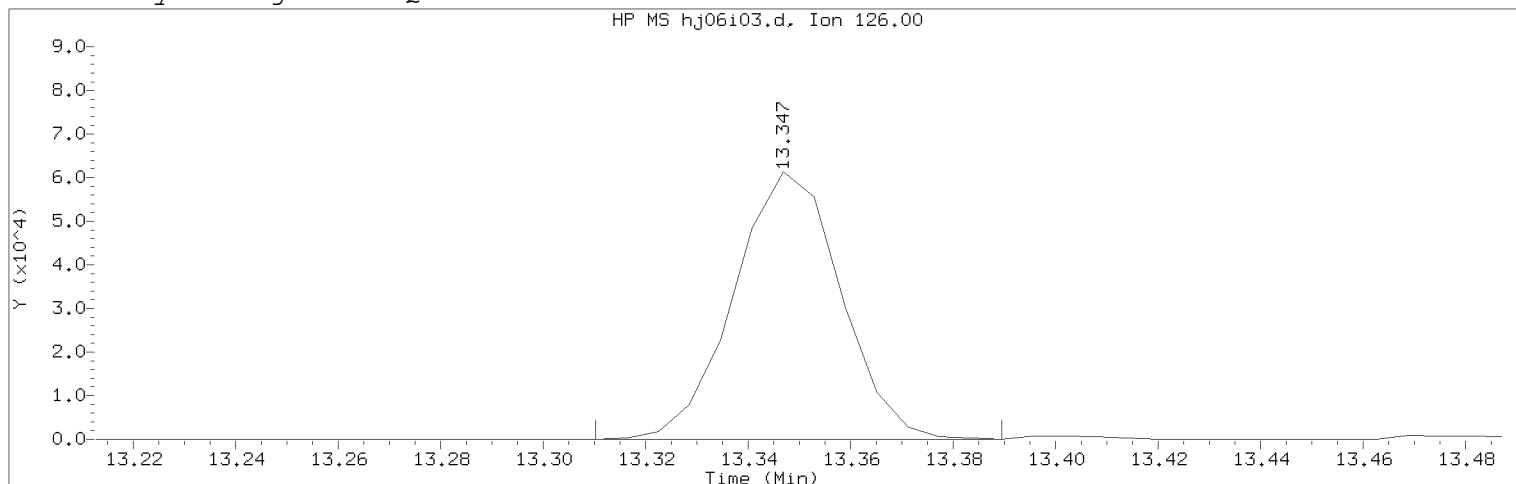
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1861	
Retention Time (minutes)	: 12.932	
Quant Ion	: 134.00	
Area	: 271783	
On-column Amount (ng)	: 5.2974	
Integration start scan	: 1854	Integration stop scan: 1871
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 150 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:18

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD005

Lab Sample ID: VSTD005

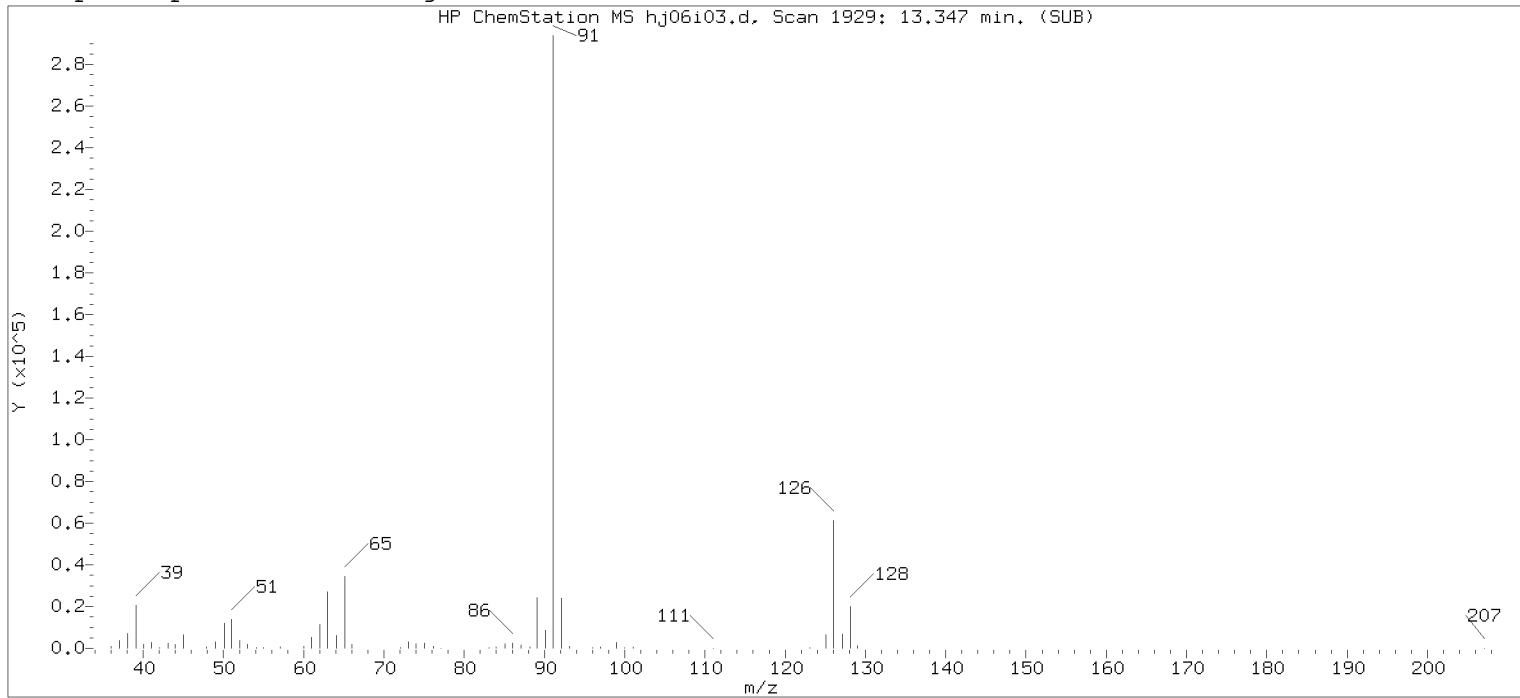
Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area (flag)	: 88697M	
On-Column Amount (ng)	: 5.2335	
Integration start scan	: 1922	Integration stop scan: 1935
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

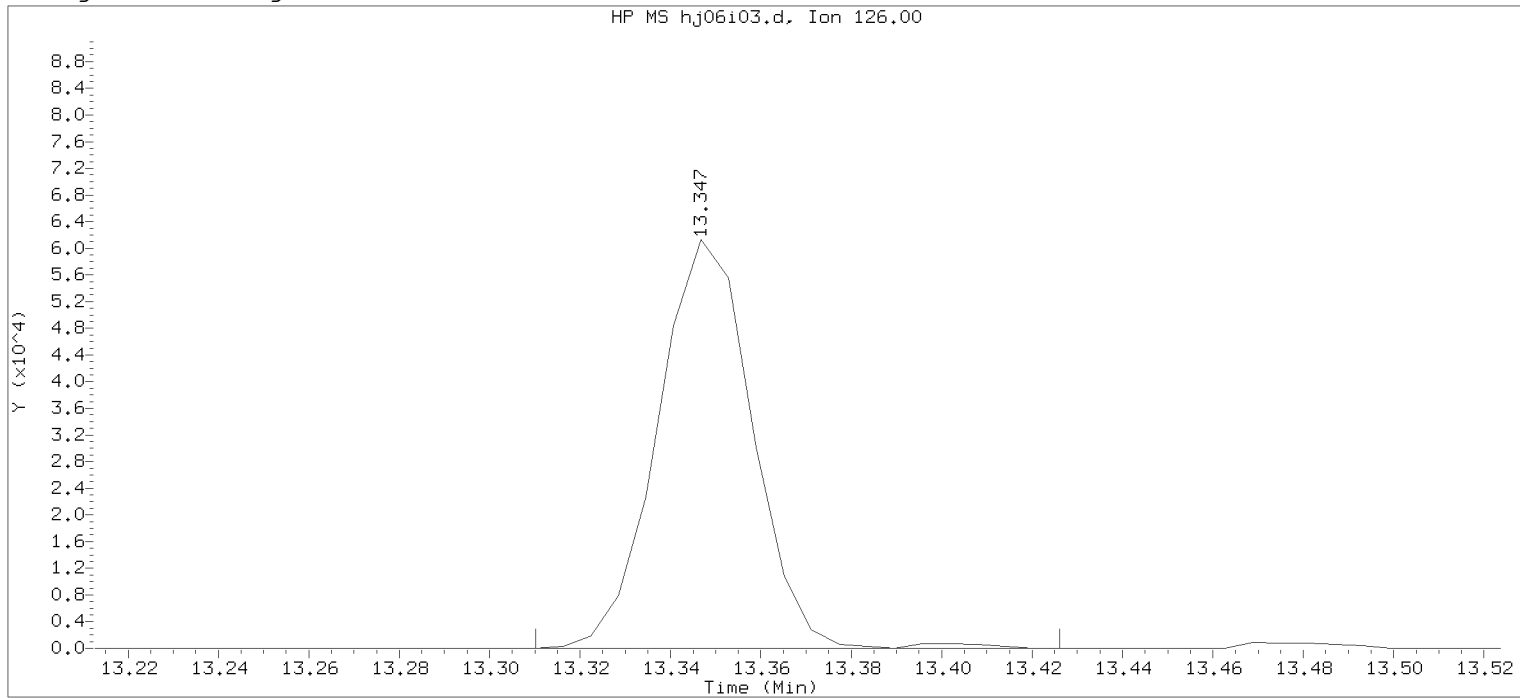
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i03.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:18 Analyst ID: JKH09052

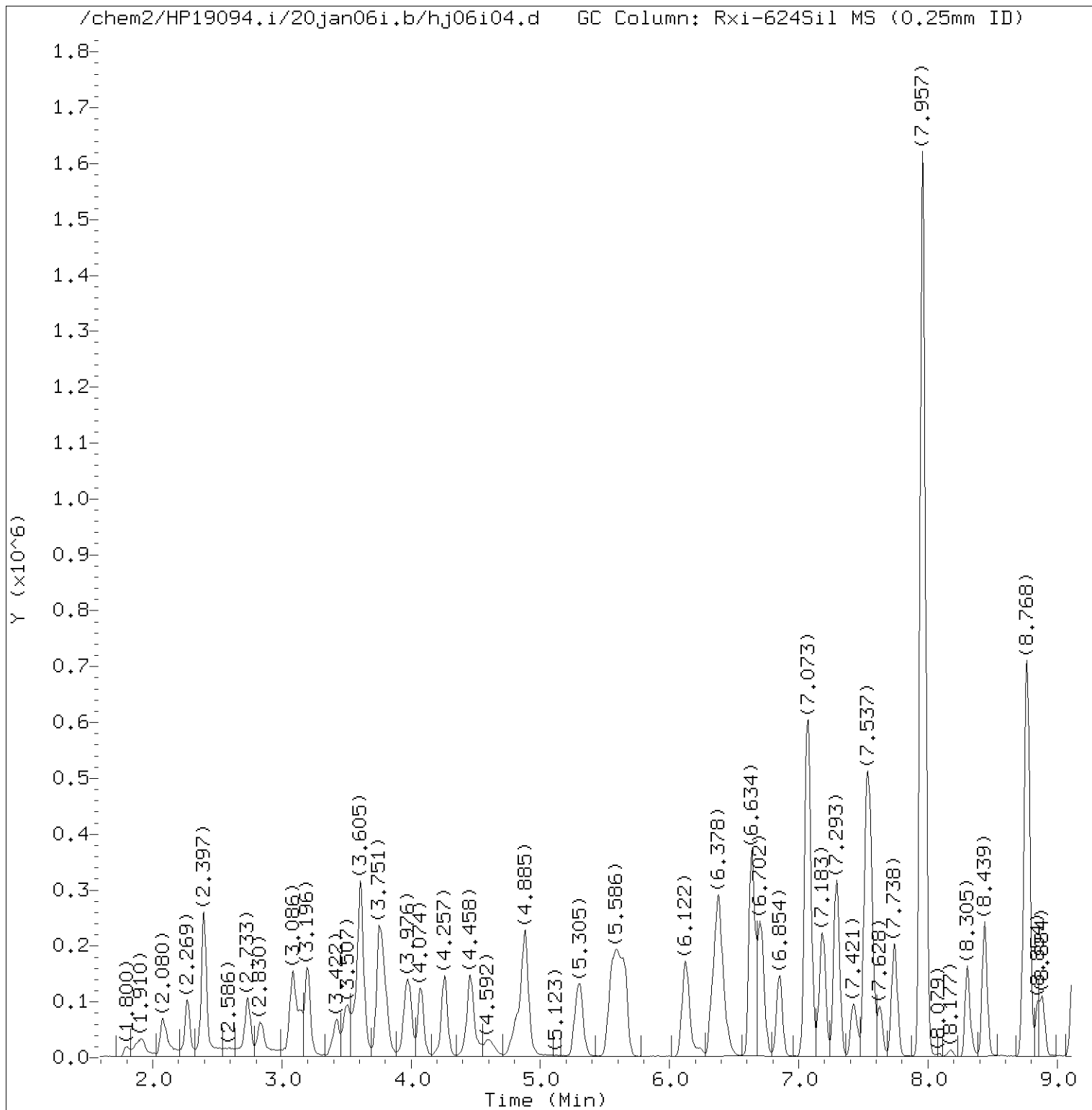
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:16 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area	: 89552	
On-column Amount (ng)	: 4.9342	
Integration start scan	: 1922	Integration stop scan: 1941
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 152 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
Analyst ID: JKH09052

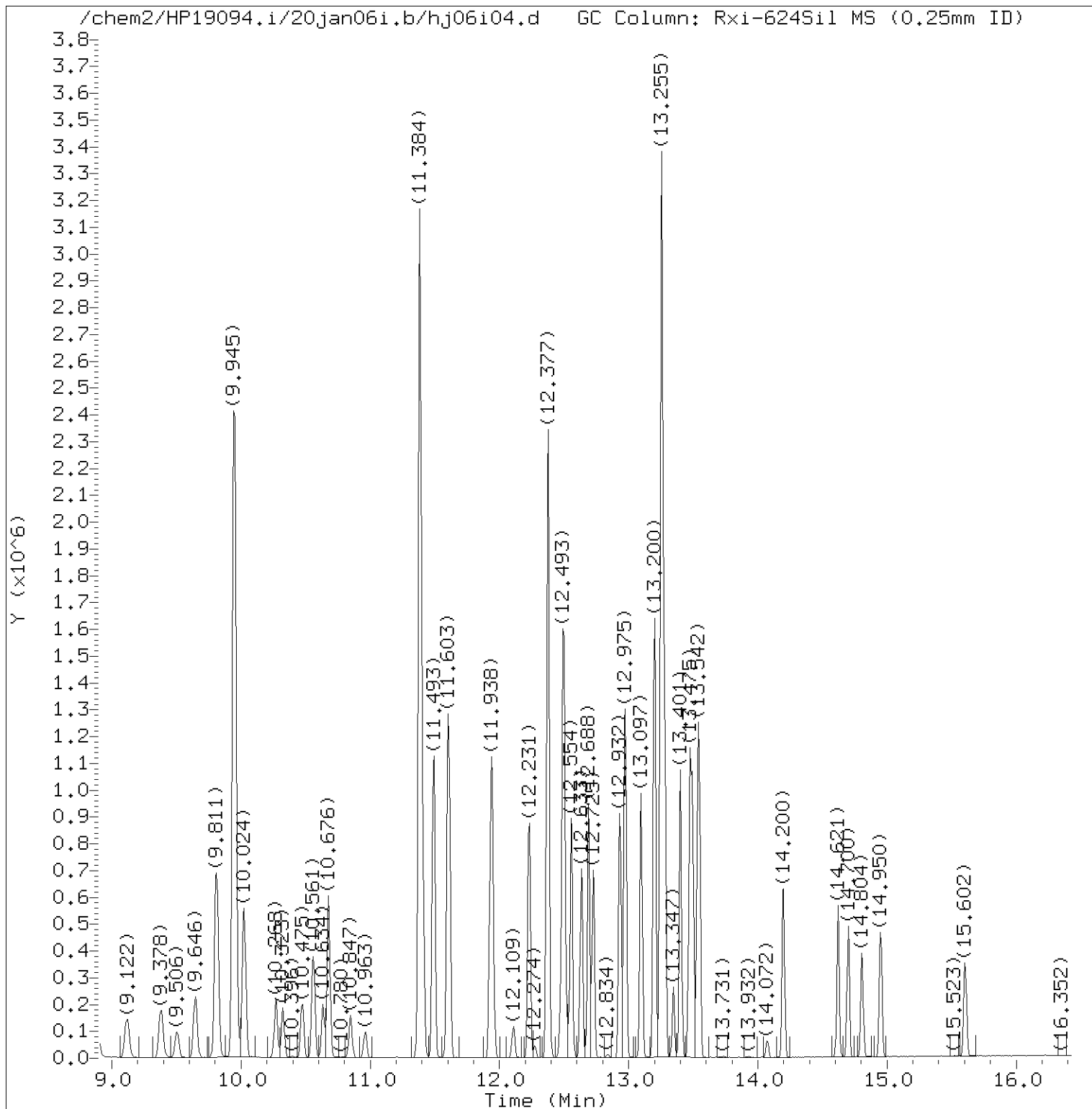
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

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on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
 Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.074	85	149722M	2.007
2) Chloromethane	(2)	2.269	50	143350	1.947
5) Vinyl Chloride	(2)	2.391	62	139052	1.985
6) 1,3-Butadiene	(2)	2.397	39	109568M	1.980
7) Bromomethane	(2)	2.733	94	98480	1.963
8) Chloroethane	(2)	2.830	64	79733	1.966
9) Dichlorofluoromethane	(2)	3.080	67	190321	1.976
10) Trichlorofluoromethane	(2)	3.147	101	164218M	2.054
11) Ethyl ether	(2)	3.422	59	70074	1.981
12) Freon 123a	(2)	3.507	67	122953	1.989
13) Acrolein	(1)	3.605	56	545377	96.587
15) 1,1-Dichloroethene	(2)	3.751	96	96615	1.987
16) Freon 113	(2)	3.781	101	103861	2.044
14) Acetone	(1)	3.787	43	144771M	19.001
17) Methyl Iodide	(2)	3.958	142	187692	2.001
18) Bromoethane	(2)	3.989	108	82628M	1.948
19) Carbon Disulfide	(2)	4.074	76	296775	1.995
22) Methyl Acetate	(1)	4.233	43	37019	1.925
23) Allyl Chloride	(2)	4.263	41	158359	1.917
24) Methylene Chloride	(2)	4.458	84	102992	1.968
27)*t-Butyl Alcohol-d10	(1)	4.458	65	125392	50.000
29) t-Butyl Alcohol	(1)	4.592	59	106730	40.326
30) Acrylonitrile	(1)	4.806	53	92174	9.914
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	225215	2.026
32) trans-1,2-Dichloroethene	(2)	4.885	96	104955	1.964
33) n-Hexane	(2)	5.305	57	151979	2.016
34) 1,1-Dichloroethane	(2)	5.549	63	191645	1.986
35) di-Isopropyl Ether	(2)	5.592	45	317427	1.997
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	163907	1.984
41) 1,2-Dichloroethene (Total)	(2)		96	221882	3.933
38) Ethyl t-butyl ether	(2)	6.122	59	297914	1.997
39) 2-Butanone	(1)	6.330	43	229650	19.277
40) cis-1,2-Dichloroethene	(2)	6.372	96	116927	1.969
42) 2,2-Dichloropropane	(2)	6.391	77	163308	1.989
43) Propionitrile	(1)	6.421	54	127206	38.980
46) Methacrylonitrile	(1)	6.634	67	229628	19.674
48) Bromochloromethane	(2)	6.702	128	49796	1.986
49) Tetrahydrofuran	(1)	6.708	71	65232	19.819

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
 Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	192171	2.041
51) \$Dibromofluoromethane	(2)	7.067	113	496104	10.029
51) \$Dibromofluoromethane	(2)	7.067	111	509210	10.019
52) 1,1,1-Trichloroethane	(2)	7.086	97	175404M	2.003
53) Cyclohexane	(2)	7.183	56	186820	1.997
53) Cyclohexane	(2)	7.177	84	162834	2.032
53) Cyclohexane	(2)	7.183	69	58825	2.021
56) 1,1-Dichloropropene	(2)	7.293	75	148995M	2.013
55) Carbon Tetrachloride	(2)	7.299	117	149793	1.995
57) Isobutyl Alcohol	(1)	7.427	41	87698	95.594
58) \$1,2-Dichloroethane-d4	(2)	7.518	102	97406M	10.160
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	448109	10.130
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	61677	10.157
59) Benzene	(2)	7.555	78	433340	2.002
60) 1,2-Dichloroethane	(2)	7.628	62	108570	1.945
61) t-Amyl methyl ether	(2)	7.738	73	264747	2.034
64) *Fluorobenzene	(2)	7.957	96	1989998	10.000
63) n-Heptane	(2)	7.963	43	157624	1.993
66) n-Butanol	(1)	8.305	56	150886	204.300
68) Trichloroethene	(2)	8.439	95	113182	1.994
70) Methylcyclohexane	(2)	8.750	83	207251	2.038
71) 1,2-Dichloropropane	(2)	8.774	63	108667	2.029
72) Methyl Methacrylate	(1)	8.847	69	46099	1.963
73) 1,4-Dioxane	(1)	8.872	88	20263M	113.754
74) Dibromomethane	(2)	8.890	93	49061	2.004
75) Bromodichloromethane	(2)	9.122	83	133411	2.005
77) 2-Nitropropane	(1)	9.384	41	149212	19.349
80) 1-Bromo-2-chloroethane	(2)	9.506	63	99821M	1.983
81) cis-1,3-Dichloropropene	(2)	9.646	75	157293	2.002
82) 4-Methyl-2-Pentanone	(1)	9.811	43	574351	19.560
83) \$Toluene-d8	(3)	9.945	98	1981567	10.088
83) \$Toluene-d8	(3)	9.945	100	1279443	10.071
84) Toluene	(3)	10.024	92	277903	2.014
86) 1,3-Dichloropropene (total)	(3)		75	285756	4.008
85) trans-1,3-Dichloropropene	(3)	10.268	75	128463	2.006
87) Ethyl Methacrylate	(3)	10.323	69	99403	2.002
89) 1,1,2-Trichloroethane	(3)	10.475	97	68554	1.977
90) Tetrachloroethene	(3)	10.561	166	125130	1.995

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d
 Injection date and time: 06-JAN-2020 15:39

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	119837	2.012
92) 2-Hexanone	(1)	10.676	43	394884	19.681
94) Dibromochloromethane	(3)	10.847	129	88084	1.984
96) 1,2-Dibromoethane	(3)	10.963	107	66500	2.007
97) 1-Chlorohexane	(3)	11.384	91	161874	1.946
98) *Chlorobenzene-d5	(3)	11.384	117	1474389	10.000
99) Chlorobenzene	(3)	11.408	112	302801	2.008
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	107151	1.998
101) Ethylbenzene	(3)	11.493	91	543741	2.003
102) m+p-Xylene	(3)	11.603	106	422690	4.071
106) Xylene (Total)	(3)		106	629842	6.100
105) o-Xylene	(3)	11.932	106	207152	2.029
107) Styrene	(3)	11.944	104	338620	2.044
108) Bromoform	(3)	12.109	173	52526	2.030
109) Isopropylbenzene	(3)	12.231	105	557084	2.013
112) \$4-Bromofluorobenzene	(3)	12.377	95	734942	10.113
112) \$4-Bromofluorobenzene	(3)	12.377	174	626350	10.072
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	82697M	1.995
115) Bromobenzene	(4)	12.493	156	124753	1.991
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	217970	19.761
117) 1,2,3-Trichloropropane	(4)	12.524	110	23119	2.082
118) n-Propylbenzene	(4)	12.554	91	658135	2.011
120) 2-Chlorotoluene	(4)	12.633	126	128157	1.985
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	473210	1.993
123) 4-Chlorotoluene	(4)	12.725	126	128885	2.000
126) tert-Butylbenzene	(4)	12.932	134	95646	1.948
127) Pentachloroethane	(4)	12.969	167	79946	1.910
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	487578	1.989
129) sec-Butylbenzene	(4)	13.097	105	617331	2.007
133) p-Isopropyltoluene	(4)	13.200	119	529063	1.998
132) 1,3-Dichlorobenzene	(4)	13.200	146	249296	1.996
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	794109	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	242806	1.993
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	195936	1.917
137) Benzyl Chloride	(4)	13.347	126	34248M	1.965
139) n-Butylbenzene	(4)	13.493	92	263210	2.011
140) 1,2-Dichlorobenzene	(4)	13.529	146	224925	2.043
144) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	12701	2.019

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

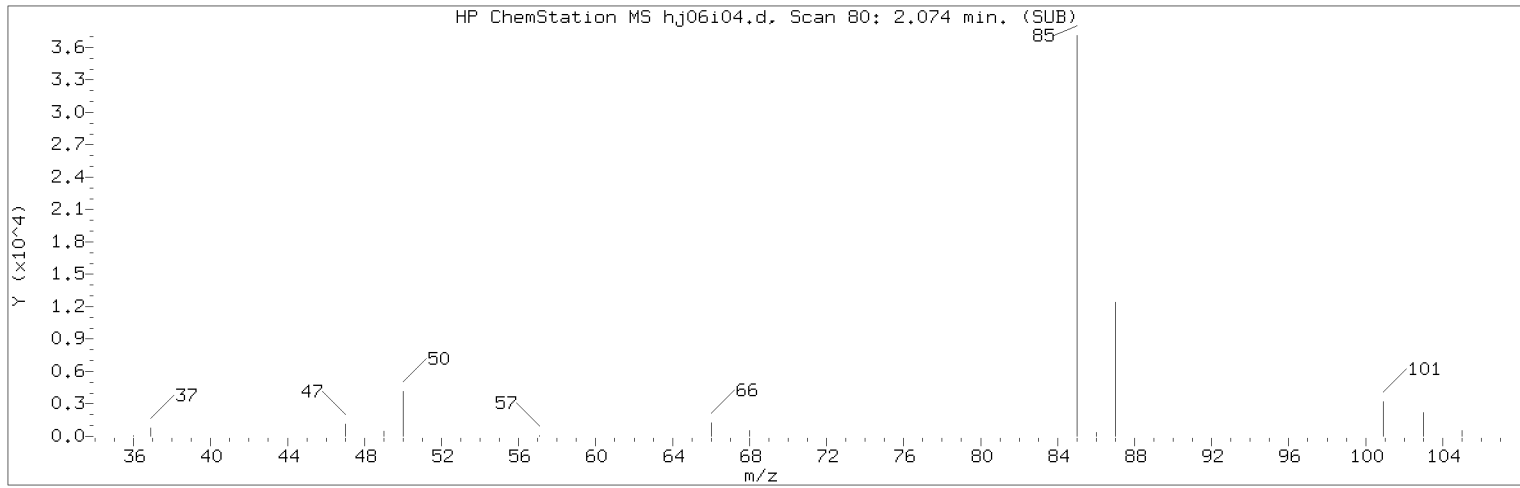
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	189855	1.942
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	158452	1.933
147) Hexachlorobutadiene	(4)	14.700	225	83917	1.962
148) Naphthalene	(4)	14.804	128	283346	1.981
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	138804	1.984

page 4 of 4

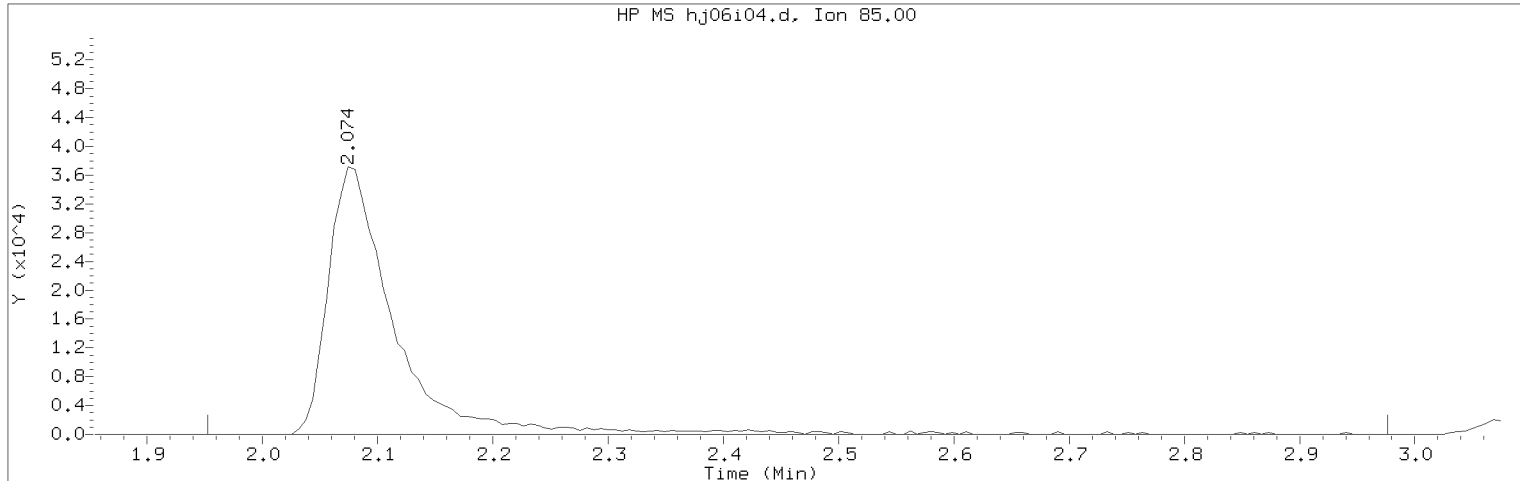
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

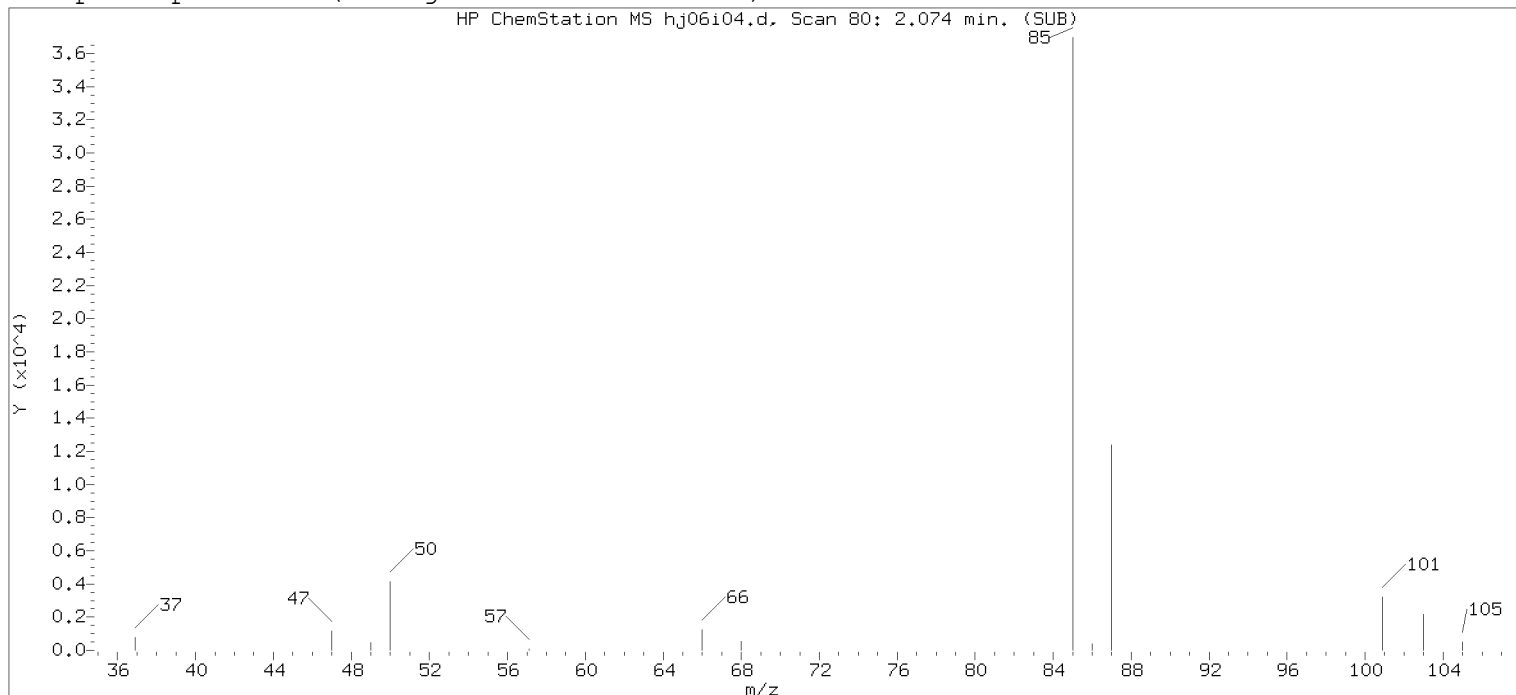
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.074
Quant Ion : 85.00
Area (flag) : 149722M
On-Column Amount (ng) : 2.0071
Integration start scan : 59 Integration stop scan: 227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

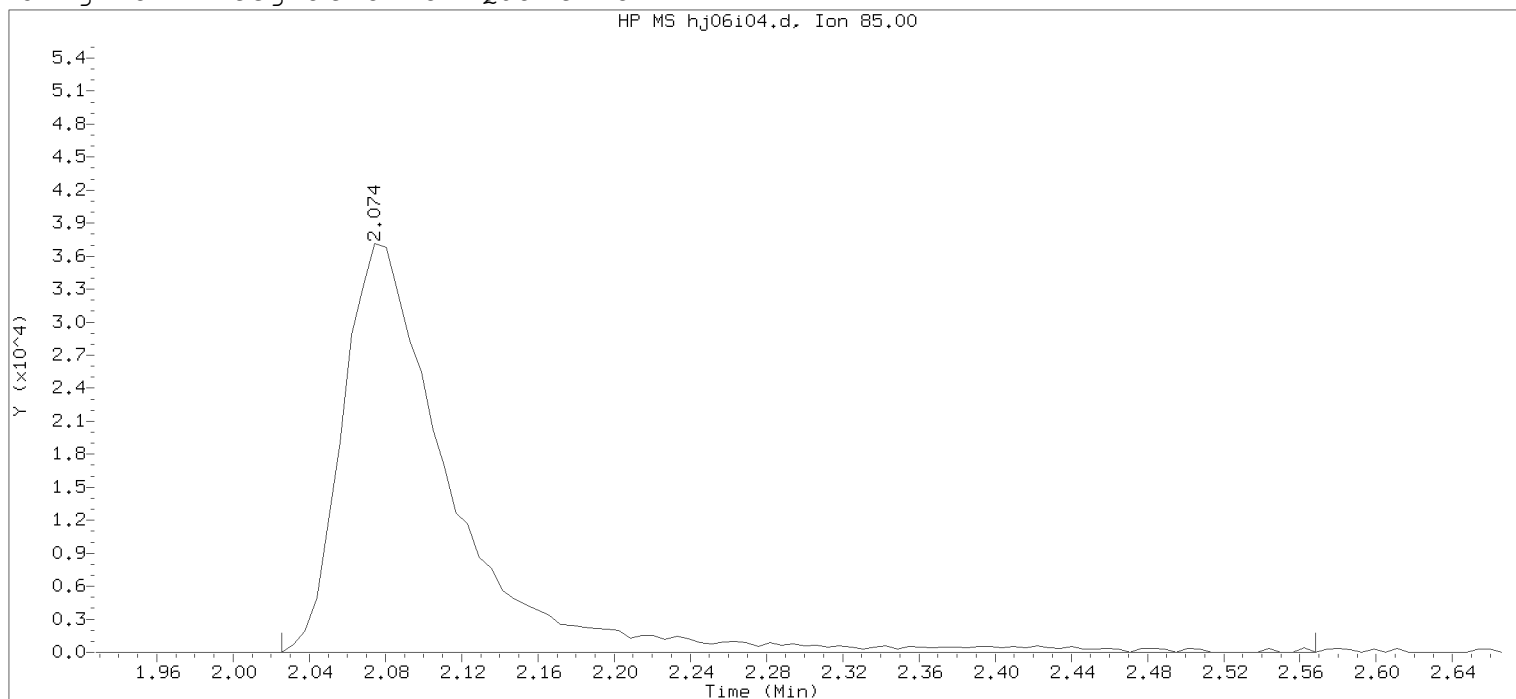
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

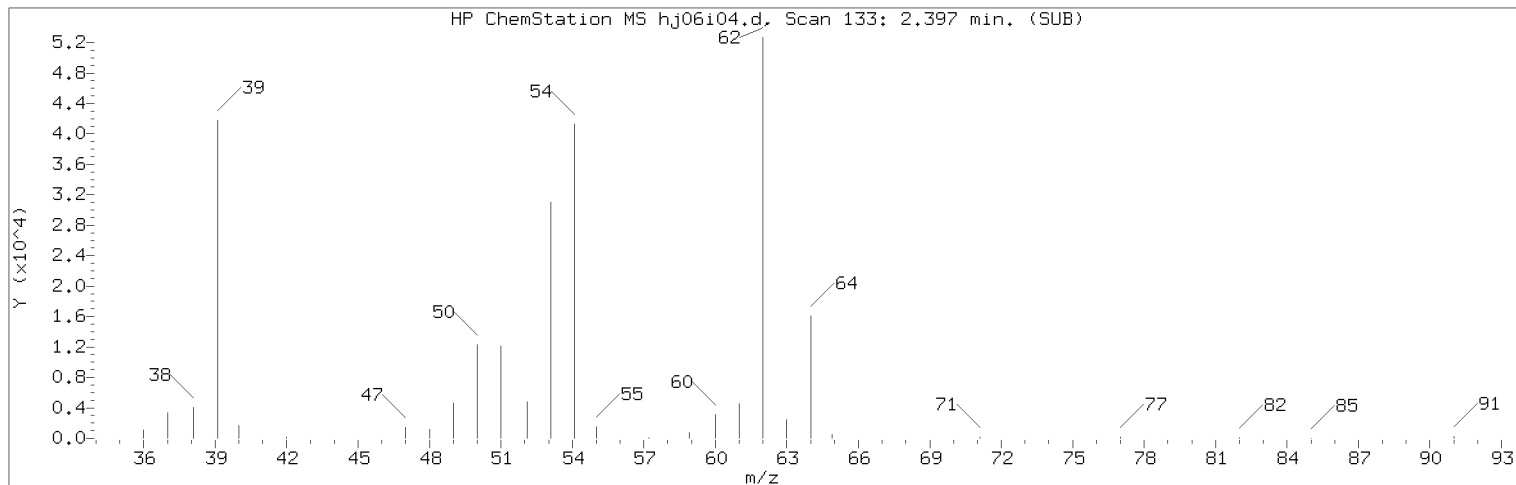
Sample Name: VSTD002

Lab Sample ID: VSTD002

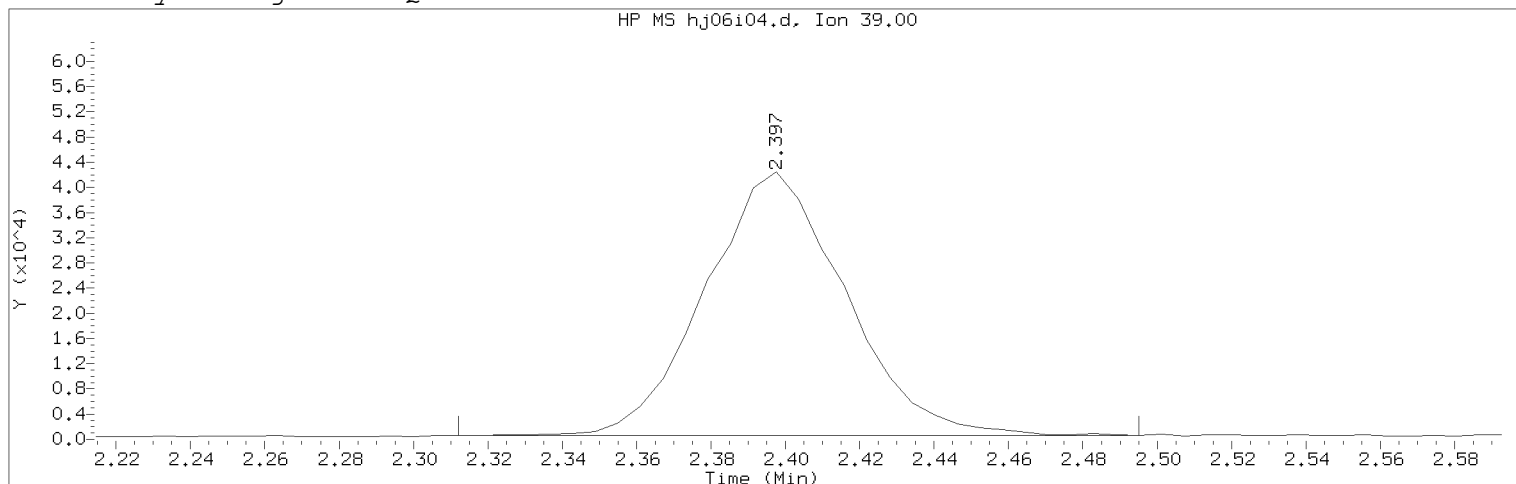
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 80	
Retention Time (minutes)	: 2.074	
Quant Ion	: 85.00	
Area	: 148084	
On-column Amount (ng)	: 2.0017	
Integration start scan	: 71	Integration stop scan: 160
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 160 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

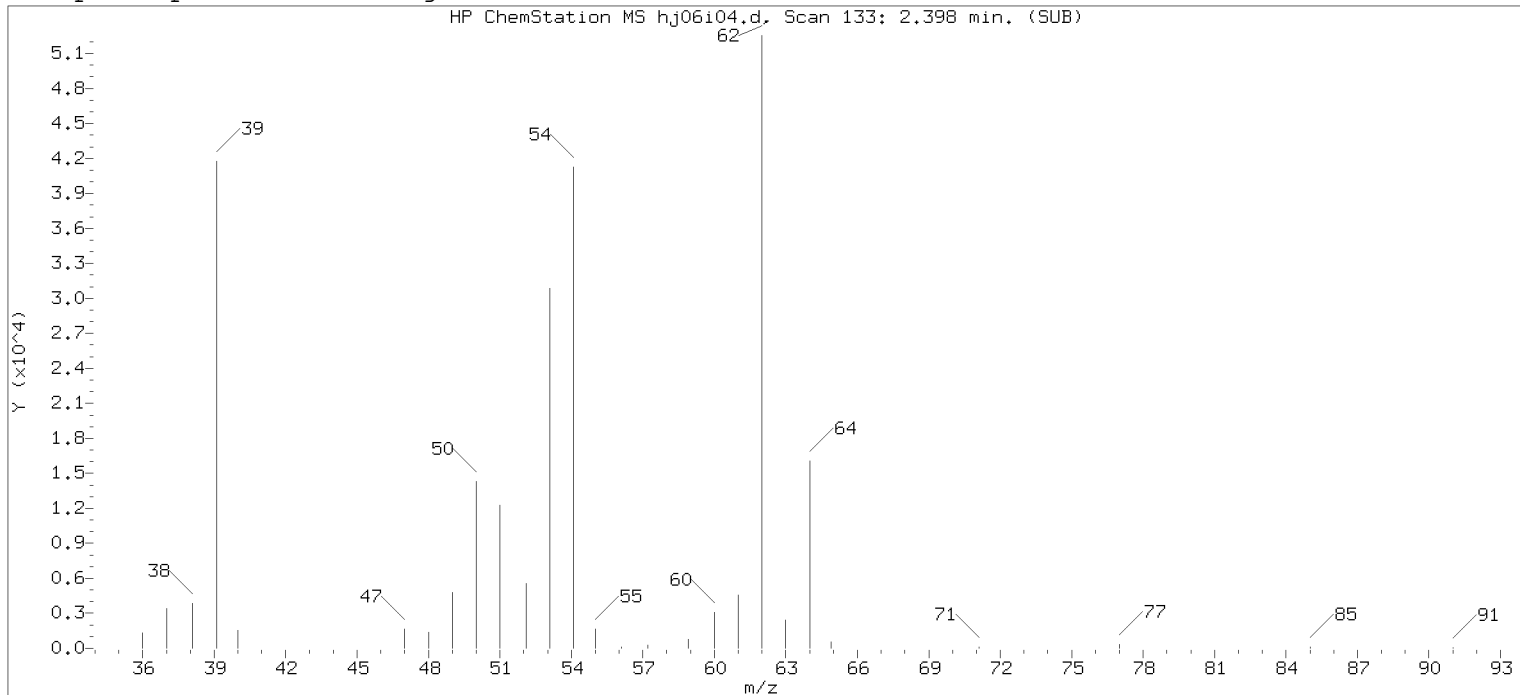
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 133
Retention Time (minutes): 2.397
Quant Ion : 39.00
Area (flag) : 109568M
On-Column Amount (ng) : 1.9802
Integration start scan : 118 Integration stop scan: 148
Y at integration start : 568 Y at integration end: 568

Reason for manual integration: improper integration

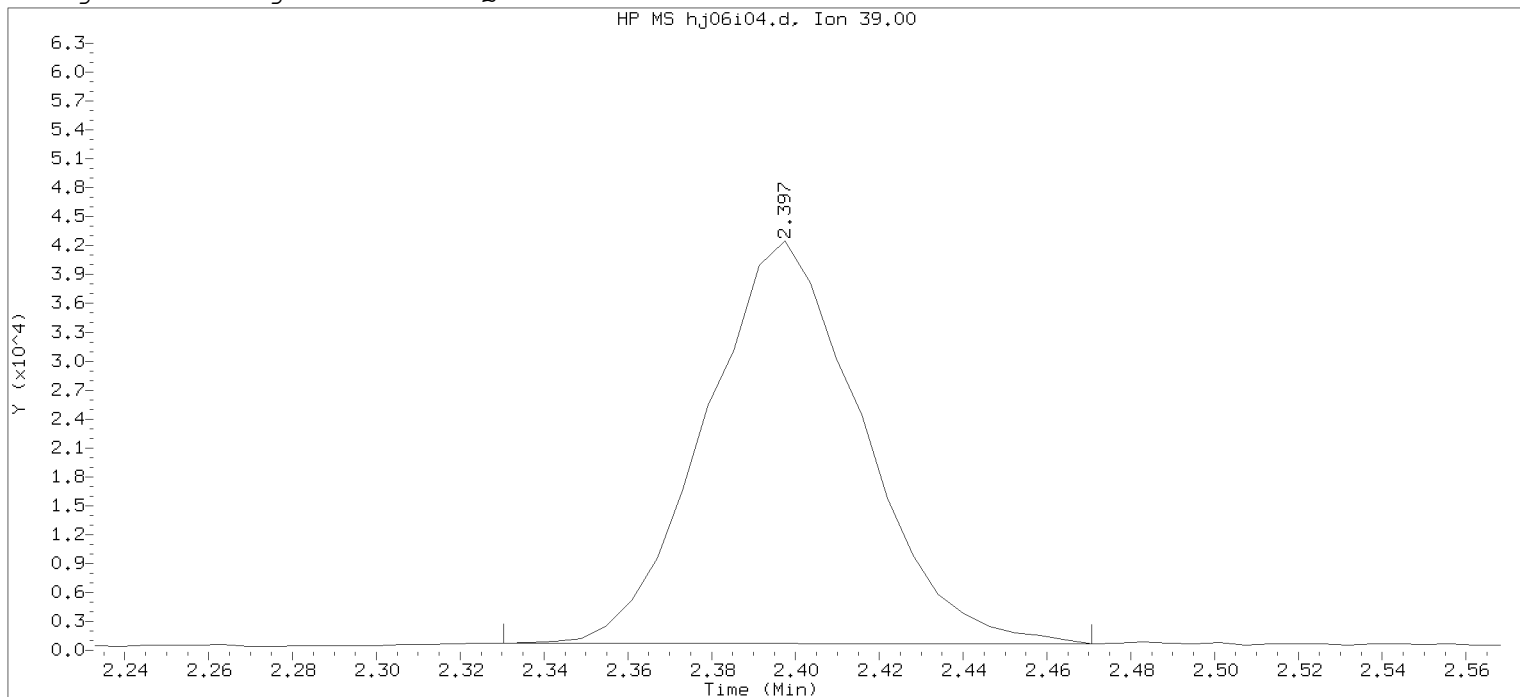
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

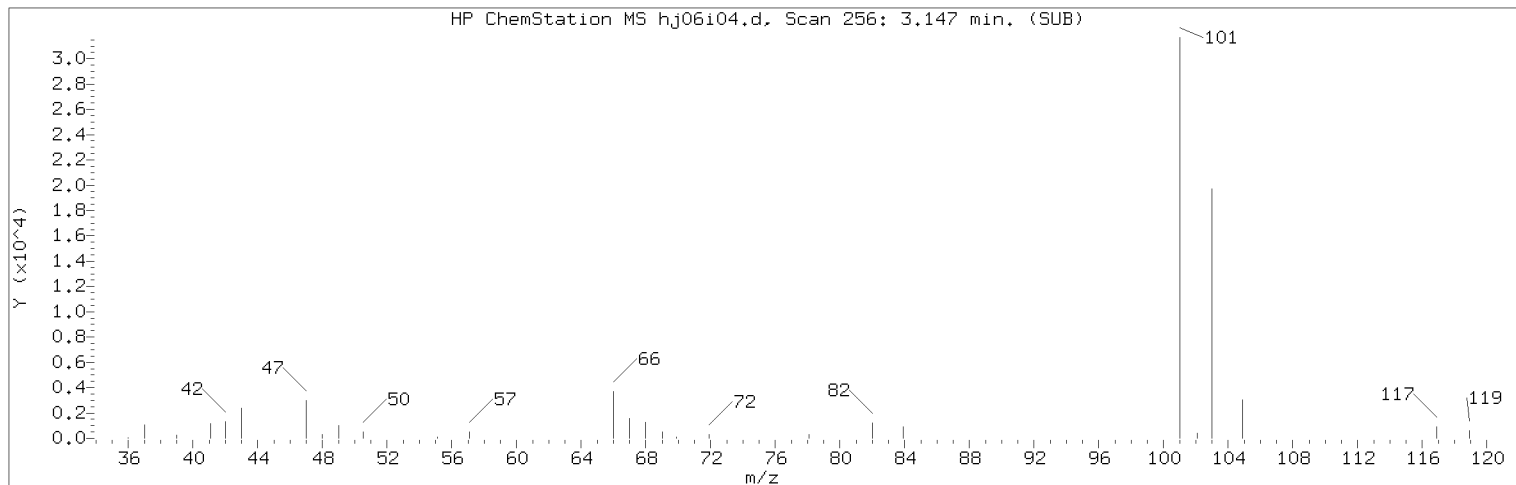
Sample Name: VSTD002

Lab Sample ID: VSTD002

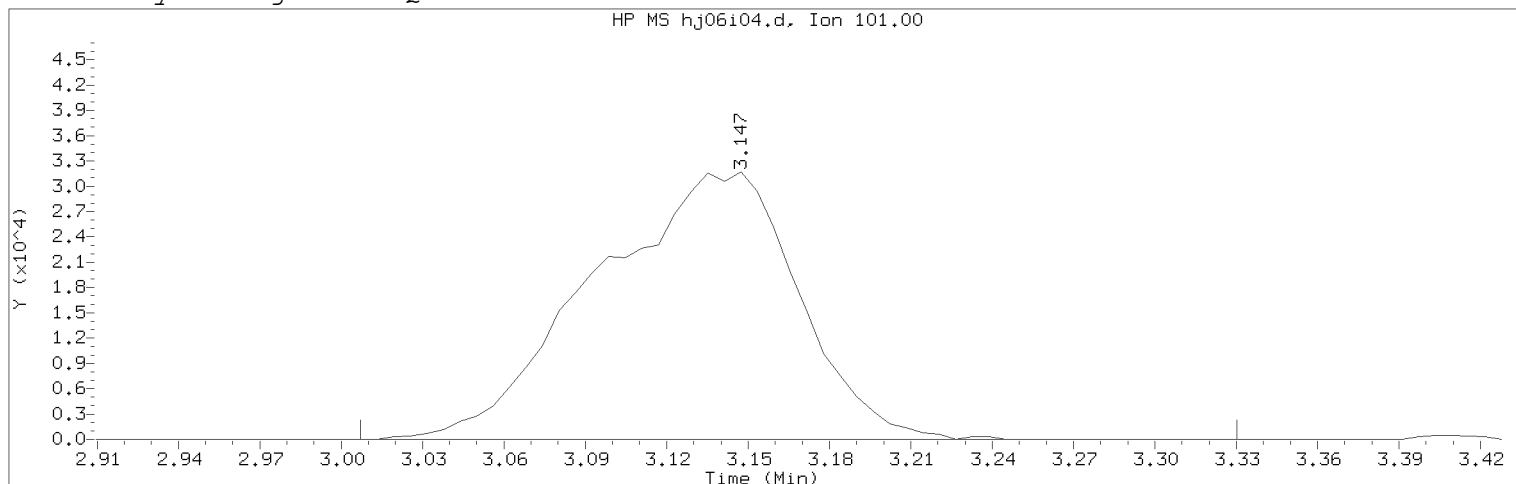
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 133	
Retention Time (minutes)	: 2.397	
Quant Ion	: 39.00	
Area	: 108129	
On-column Amount (ng)	: 1.9729	
Integration start scan	: 121	Integration stop scan: 144
Y at integration start	: 715	Y at integration end: 668

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Target 3.5 esignature user RA64s Page 162 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

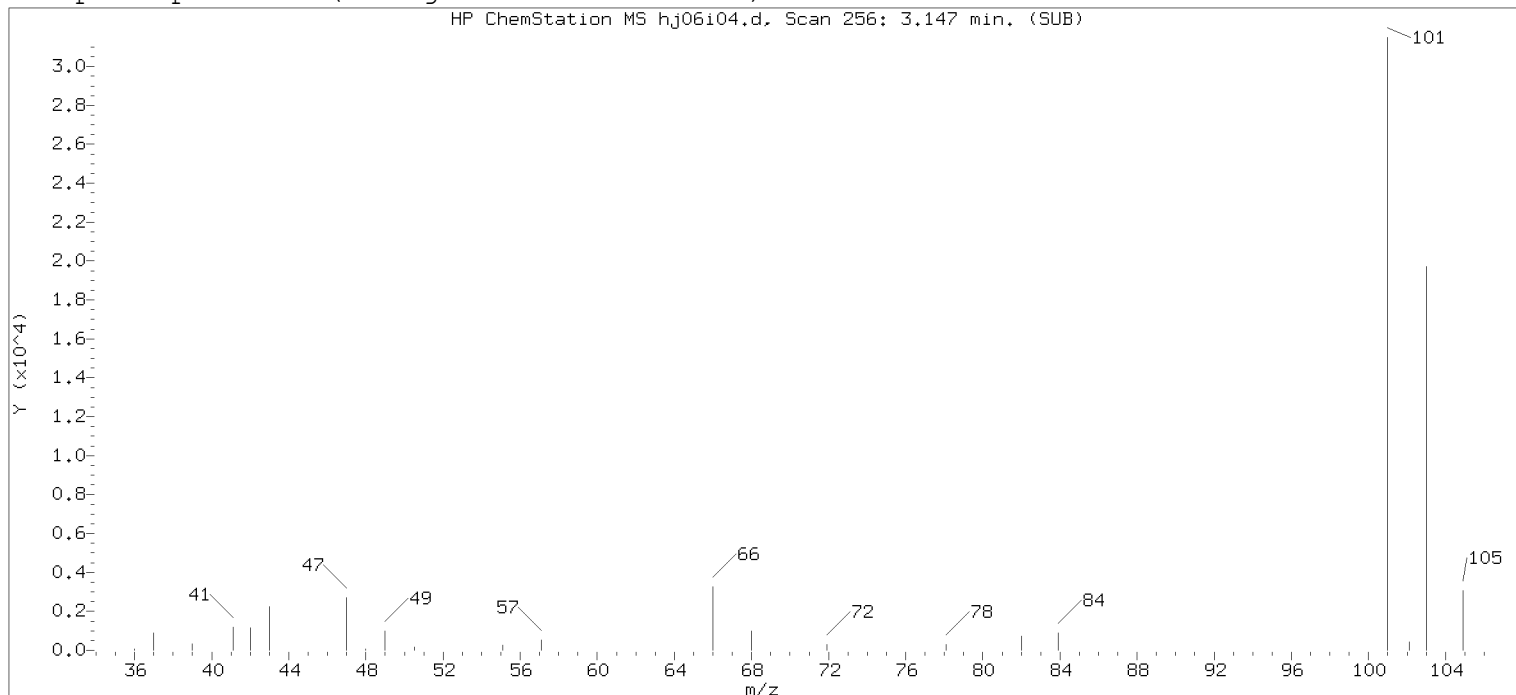
Compound Number	: 10	
Compound Name	: Trichlorofluoromethane	
Scan Number	: 256	
Retention Time (minutes)	: 3.147	
Quant Ion	: 101.00	
Area (flag)	: 164218M	
On-Column Amount (ng)	: 2.0544	
Integration start scan	: 232	Integration stop scan: 285
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

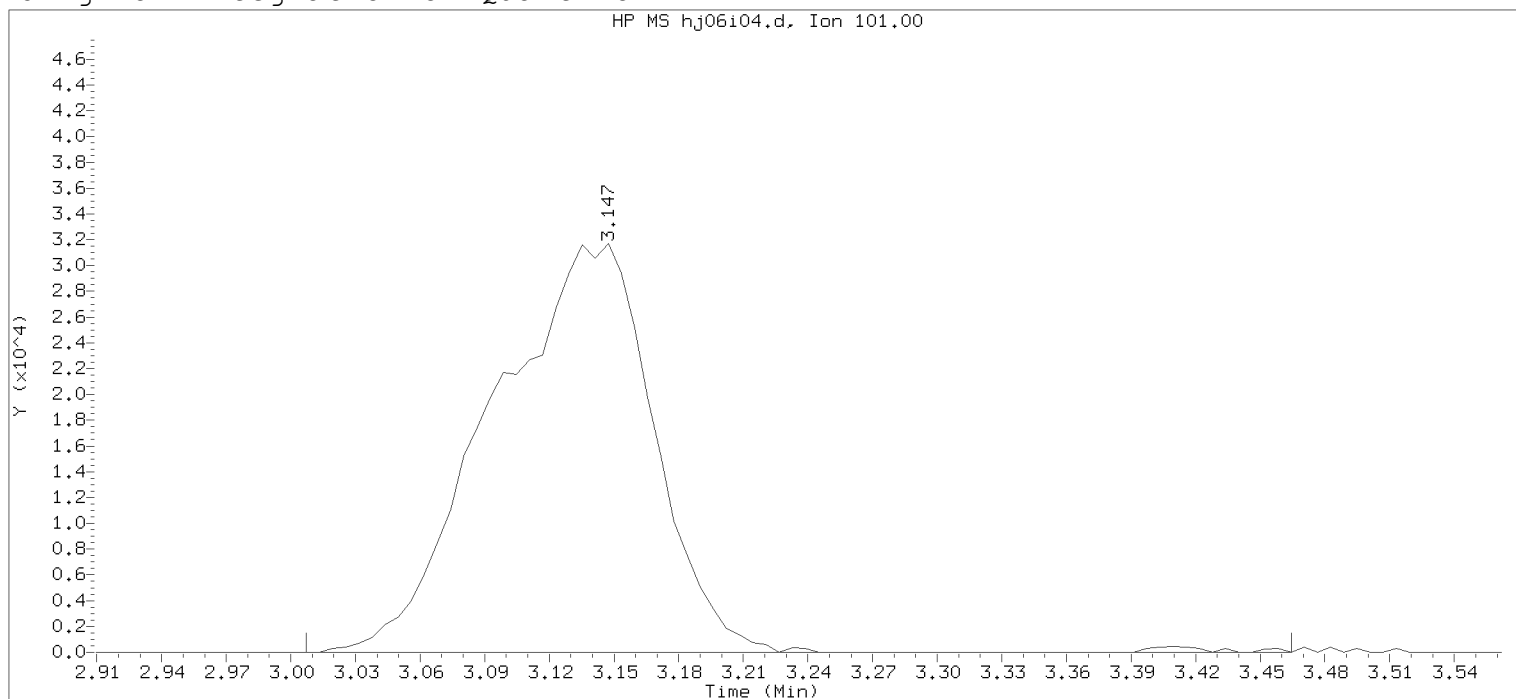
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

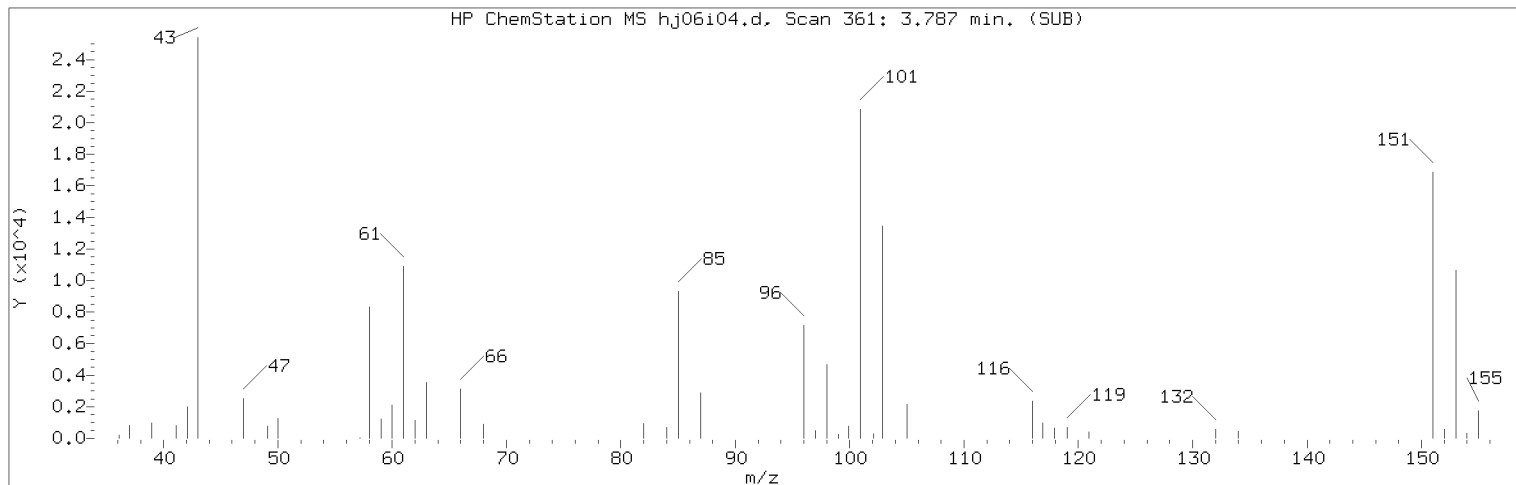
Sample Name: VSTD002

Lab Sample ID: VSTD002

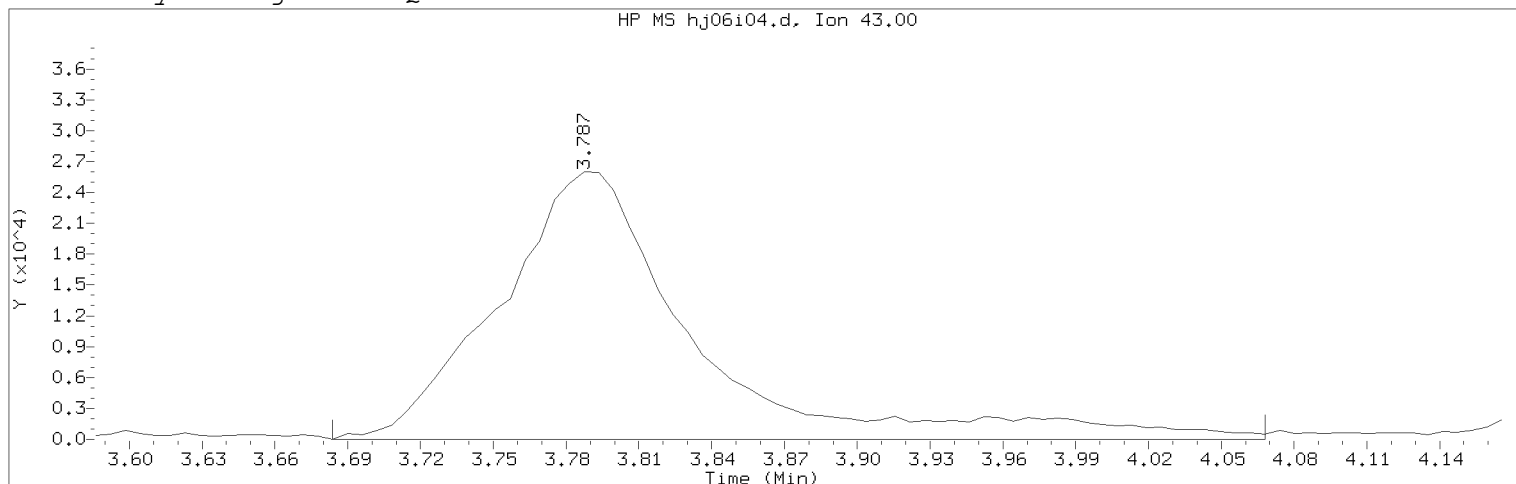
Compound Number	: 10	
Compound Name	: Trichlorofluoromethane	
Scan Number	: 256	
Retention Time (minutes)	: 3.147	
Quant Ion	: 101.00	
Area	: 165205	
On-column Amount (ng)	: 2.0649	
Integration start scan	: 232	Integration stop scan: 307
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 164 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.787
 Quant Ion : 43.00
 Area (flag) : 144771M
 On-Column Amount (ng) : 19.0011
 Integration start scan : 343
 Y at integration start : 0

Integration stop scan: 406
 Y at integration end: 0

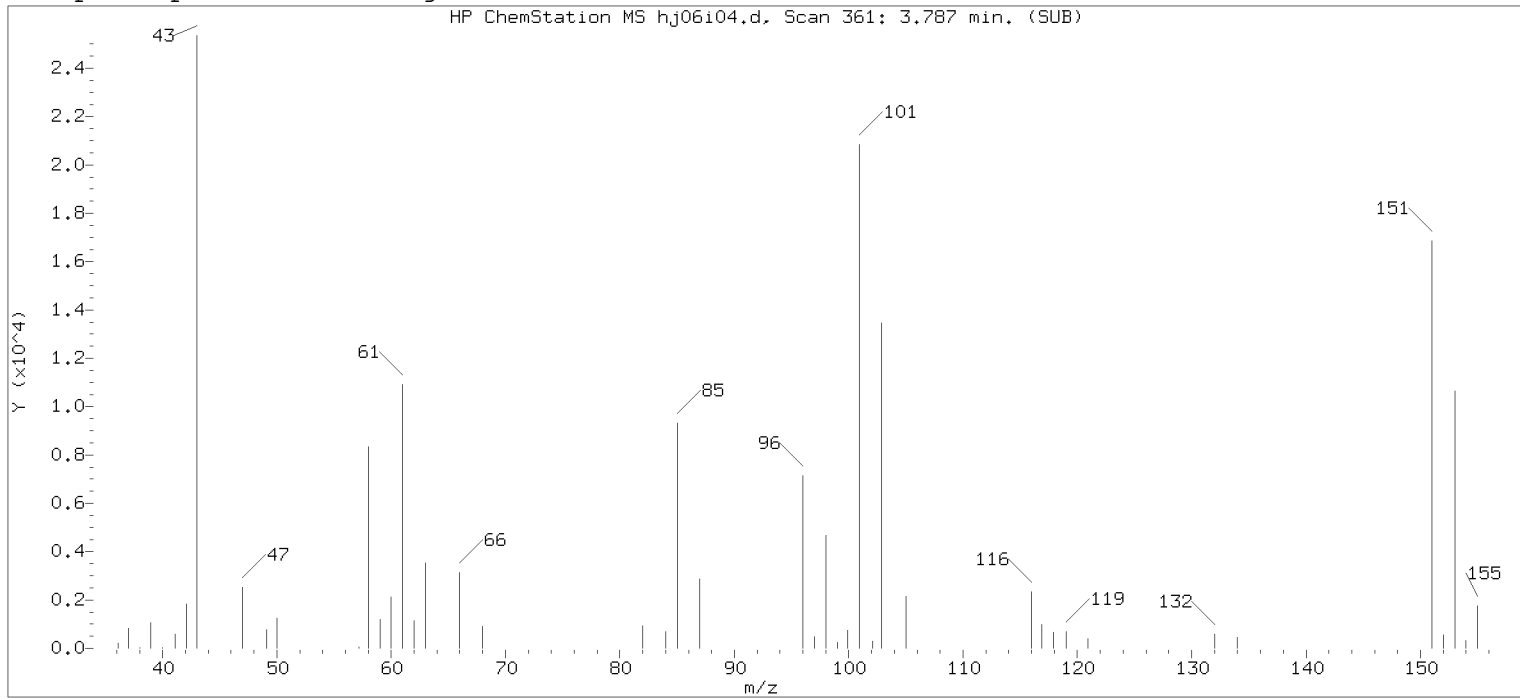
Reason for manual integration: improper integration

Analyst responsible for change:

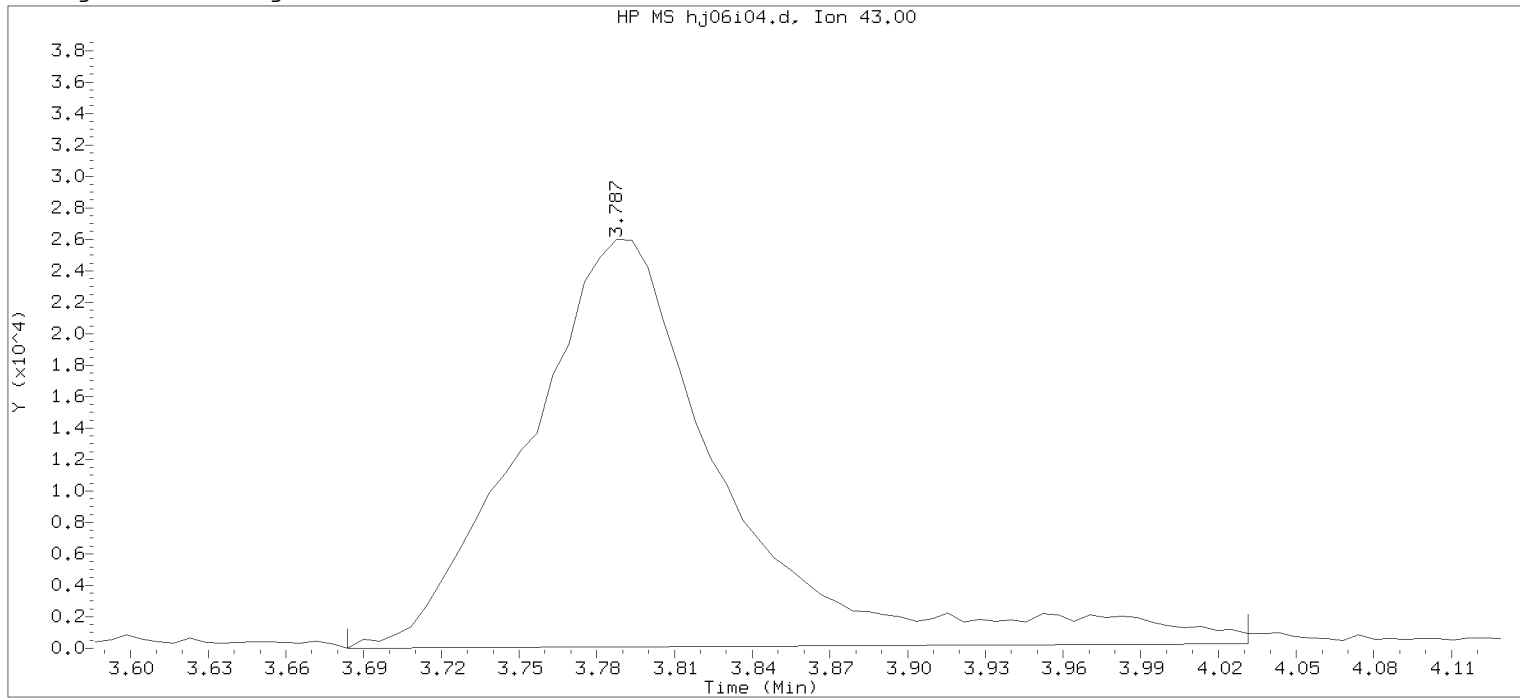
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

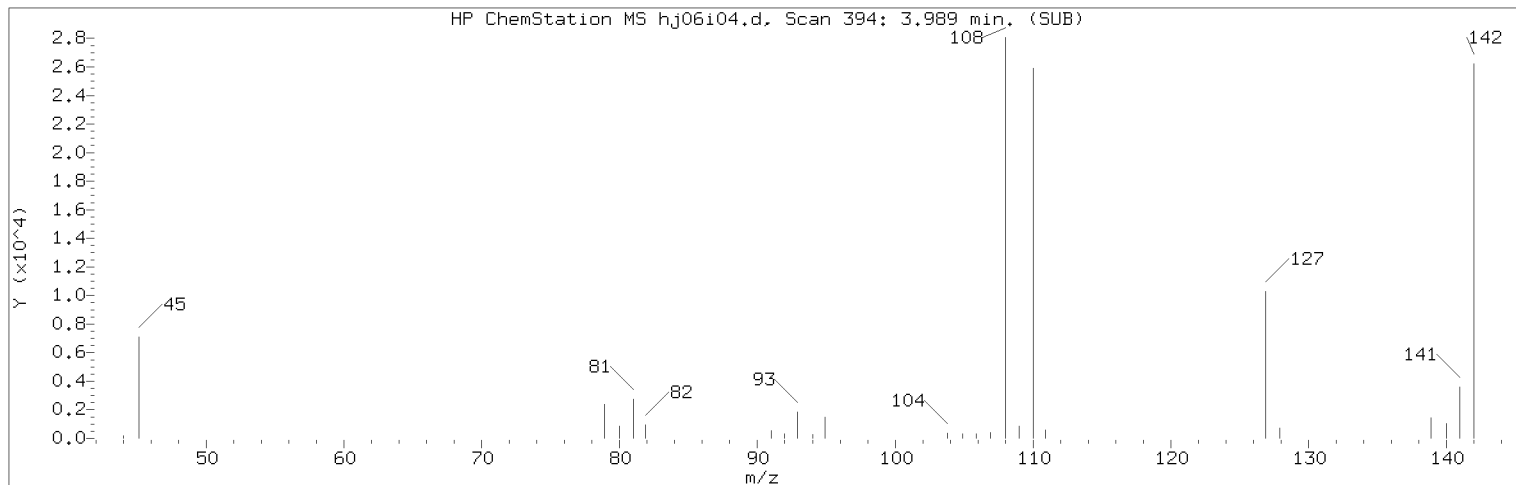
Lab Sample ID: VSTD002

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.787
 Quant Ion : 43.00
 Area : 139824
 On-column Amount (ng) : 17.9521
 Integration start scan : 343
 Y at integration start : 0

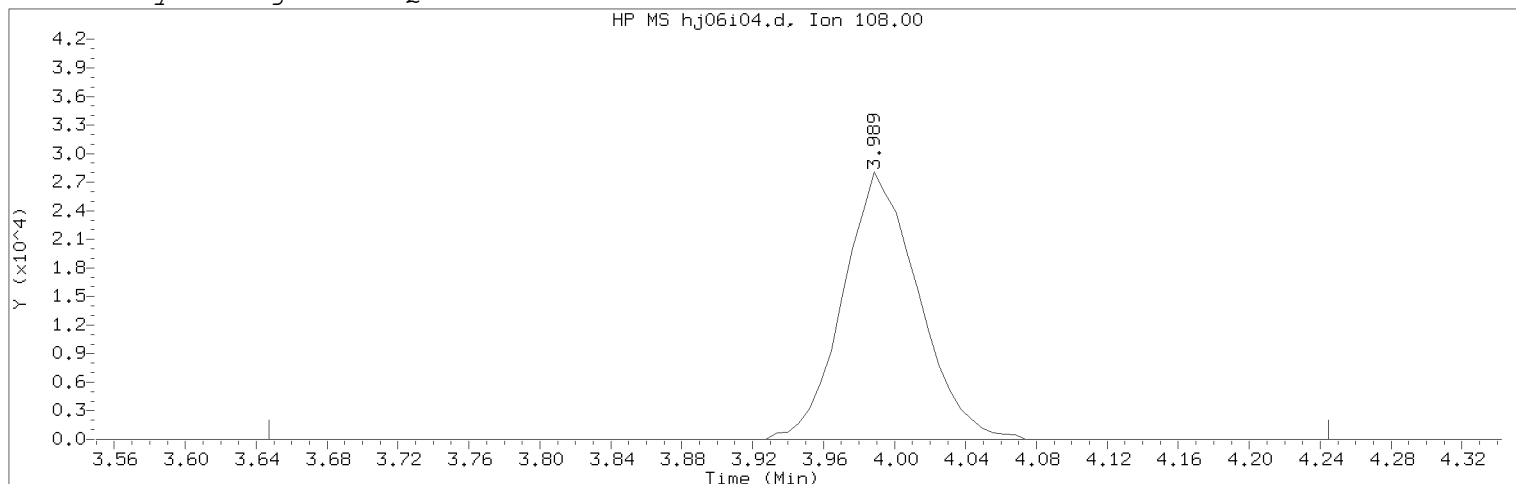
Integration stop scan: 400
 Y at integration end: 304

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 Target 3.5 esignature user RA664s Page 166 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

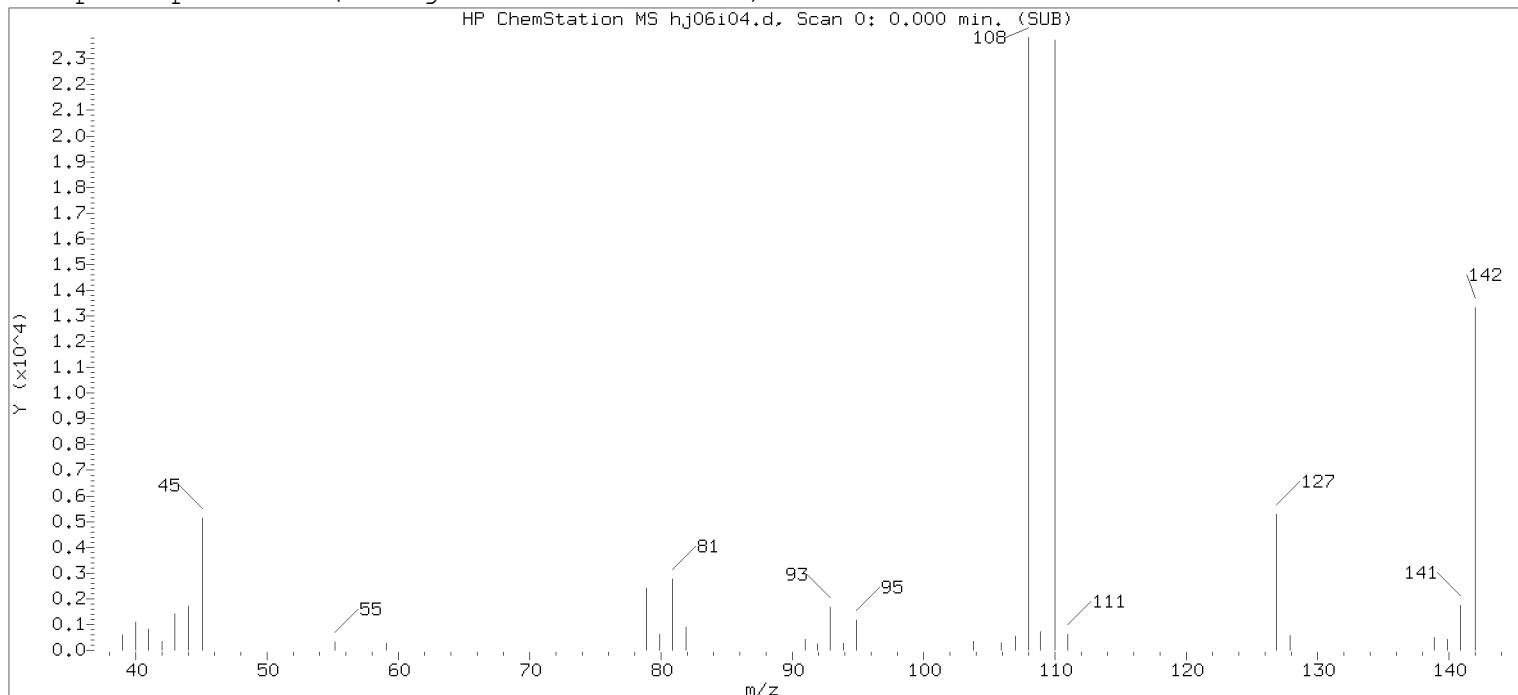
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 82628M	
On-Column Amount (ng)	: 1.9480	
Integration start scan	: 337	Integration stop scan: 435
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

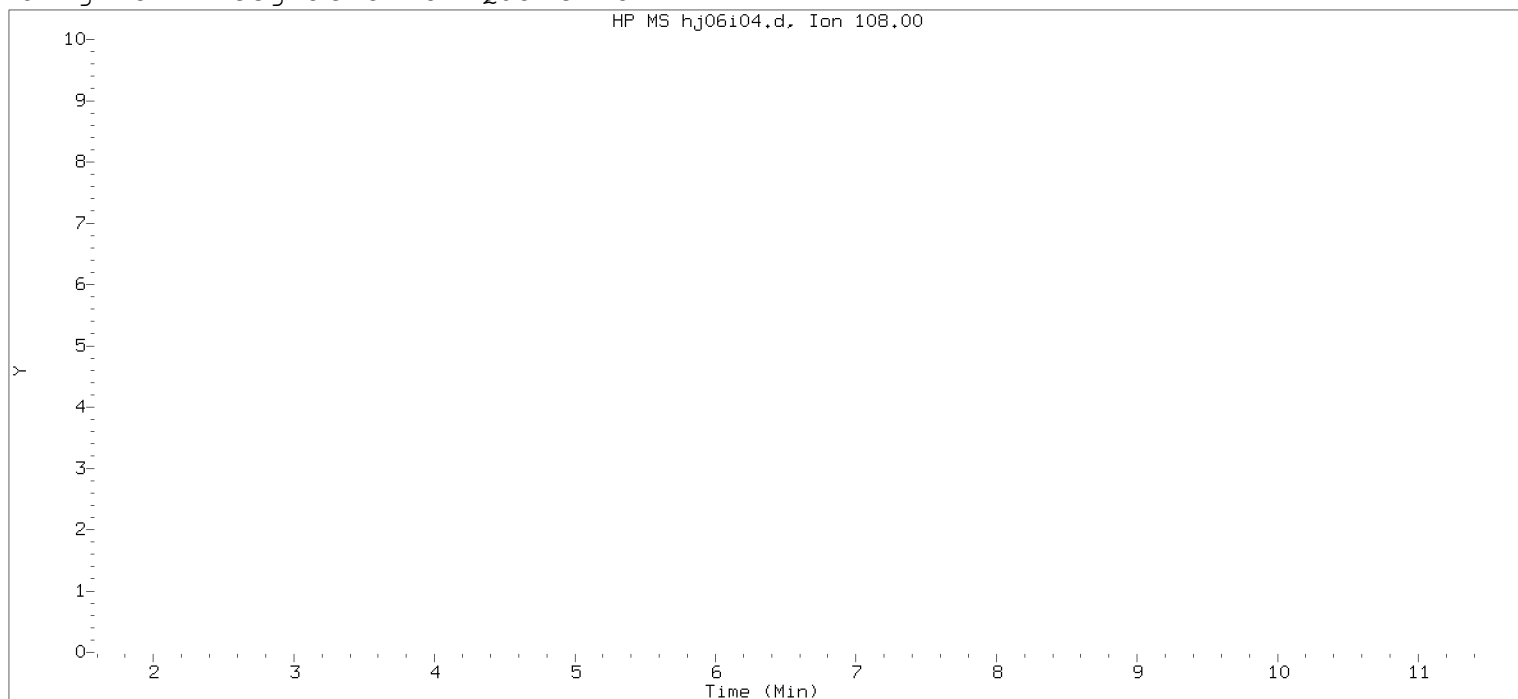
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

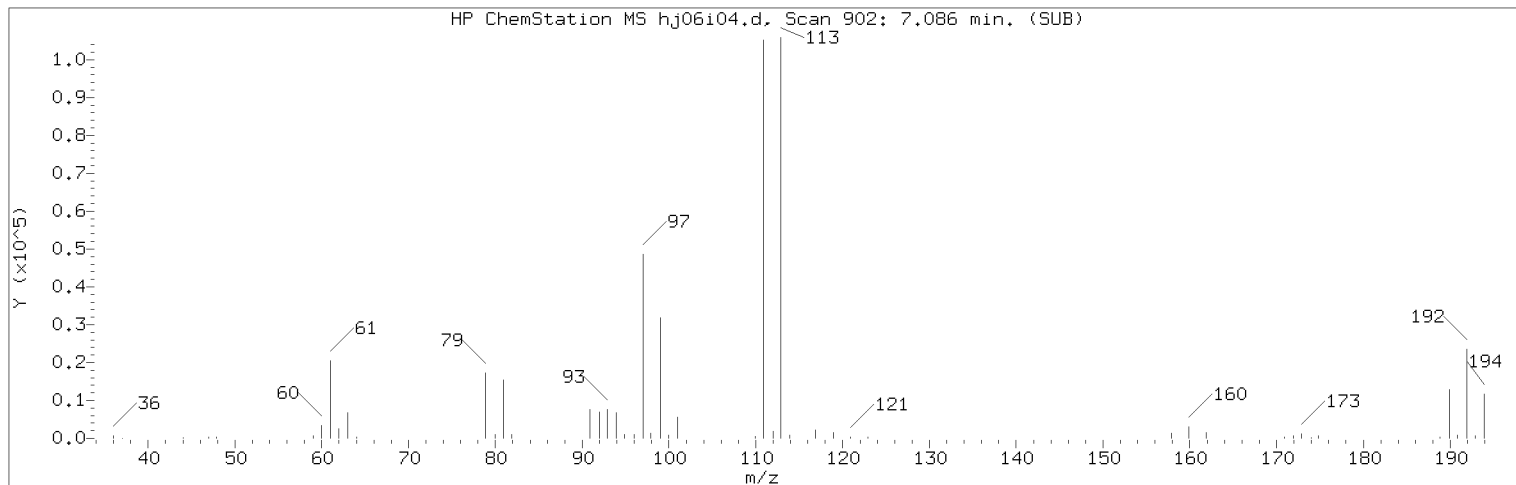
Sample Name: VSTD002

Lab Sample ID: VSTD002

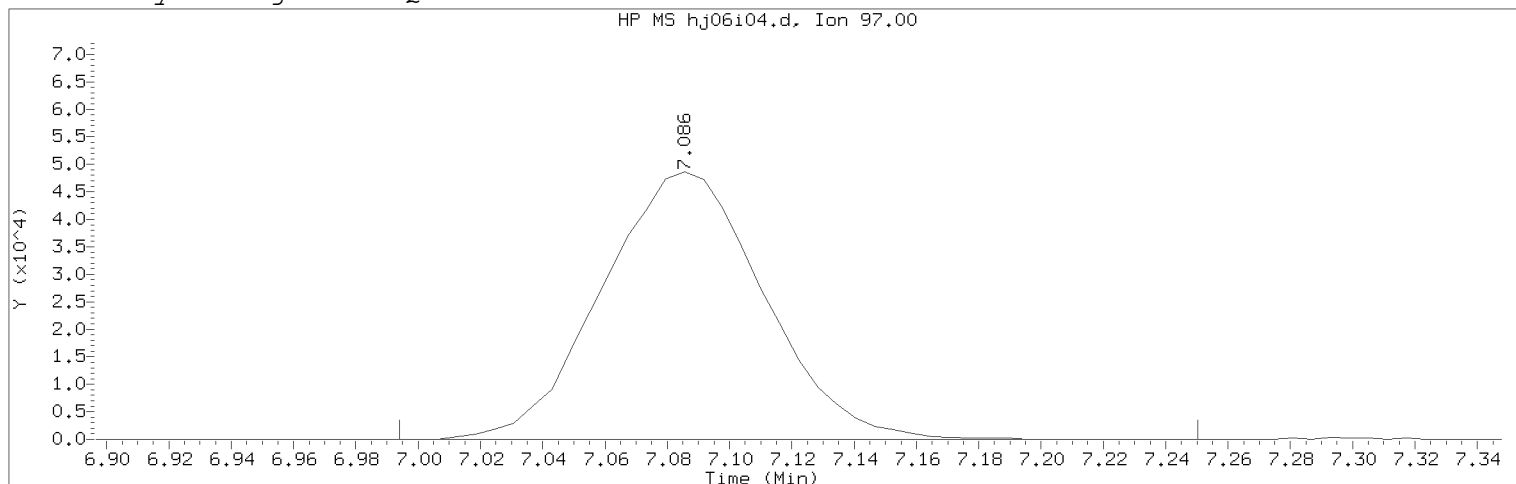
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 168 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

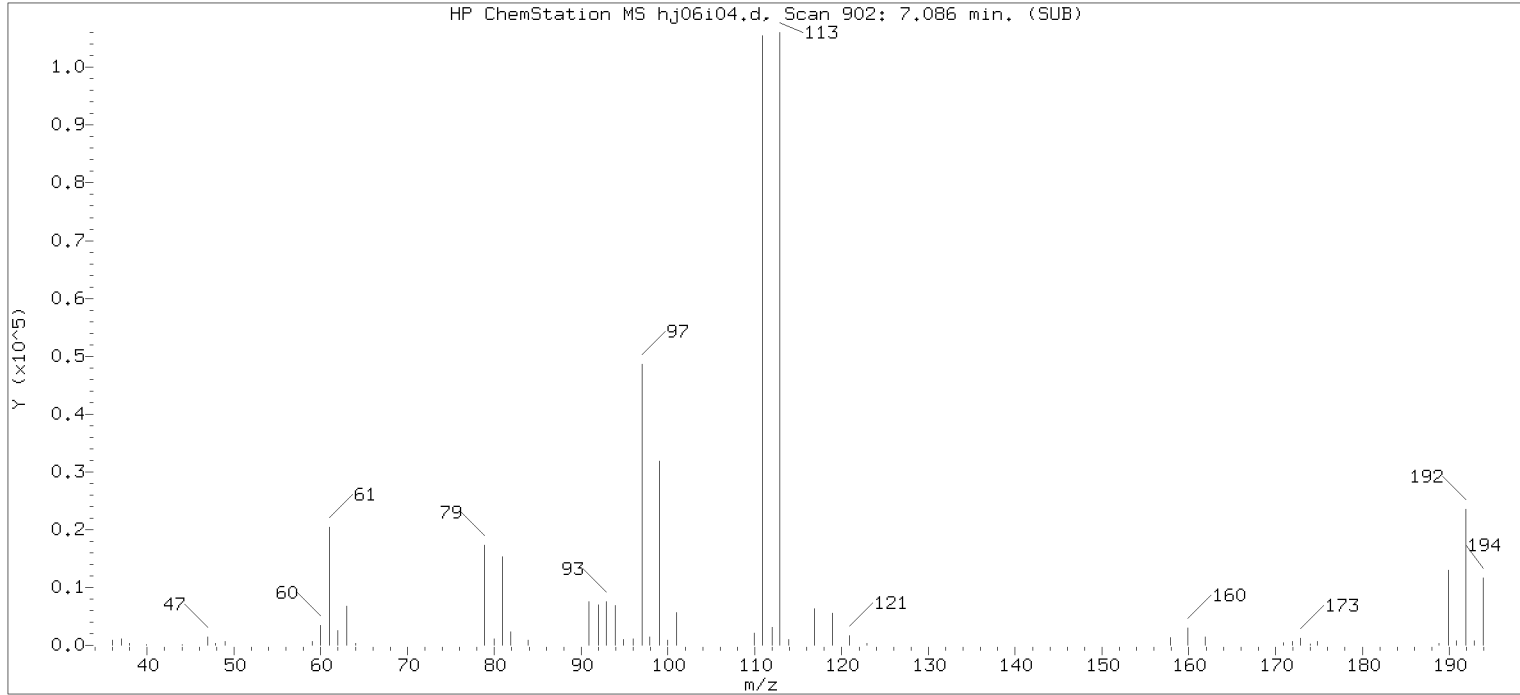
Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area (flag)	: 175404M	
On-Column Amount (ng)	: 2.0028	
Integration start scan	: 886	Integration stop scan: 928
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

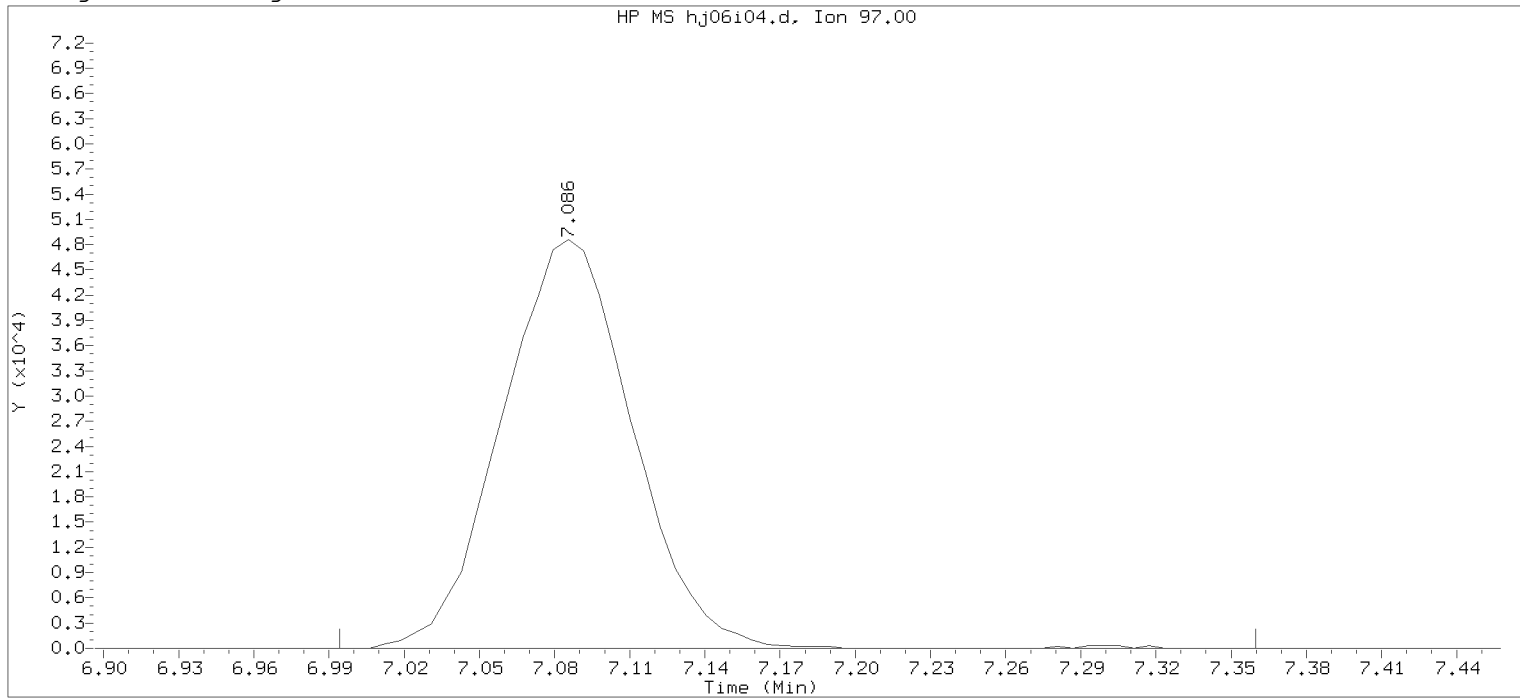
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

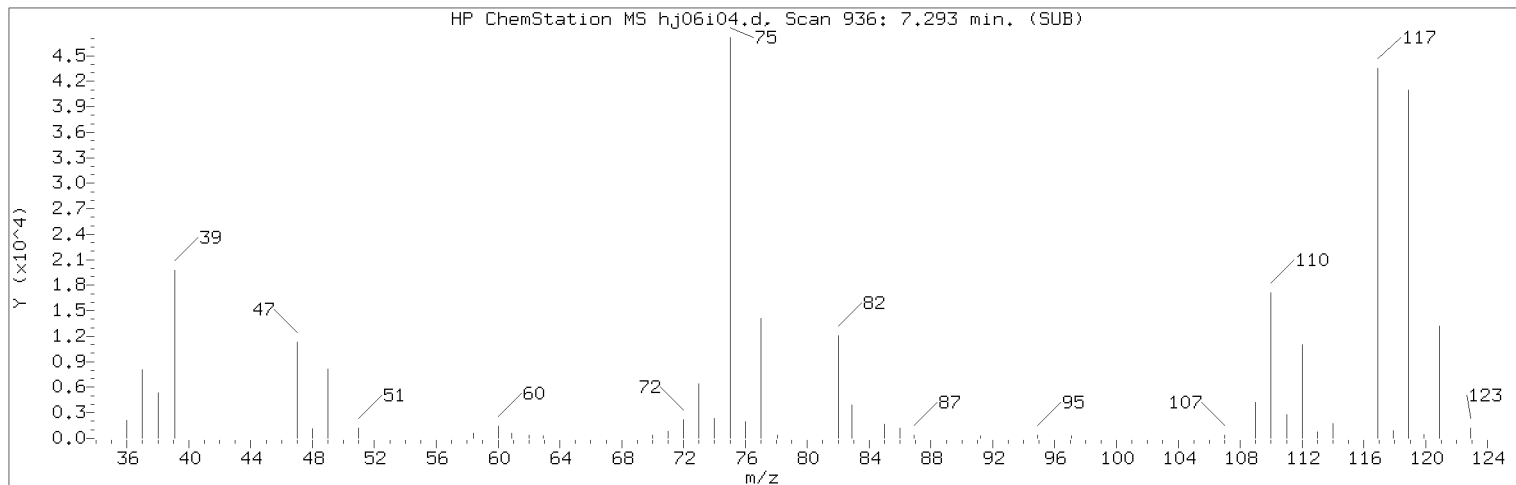
Sample Name: VSTD002

Lab Sample ID: VSTD002

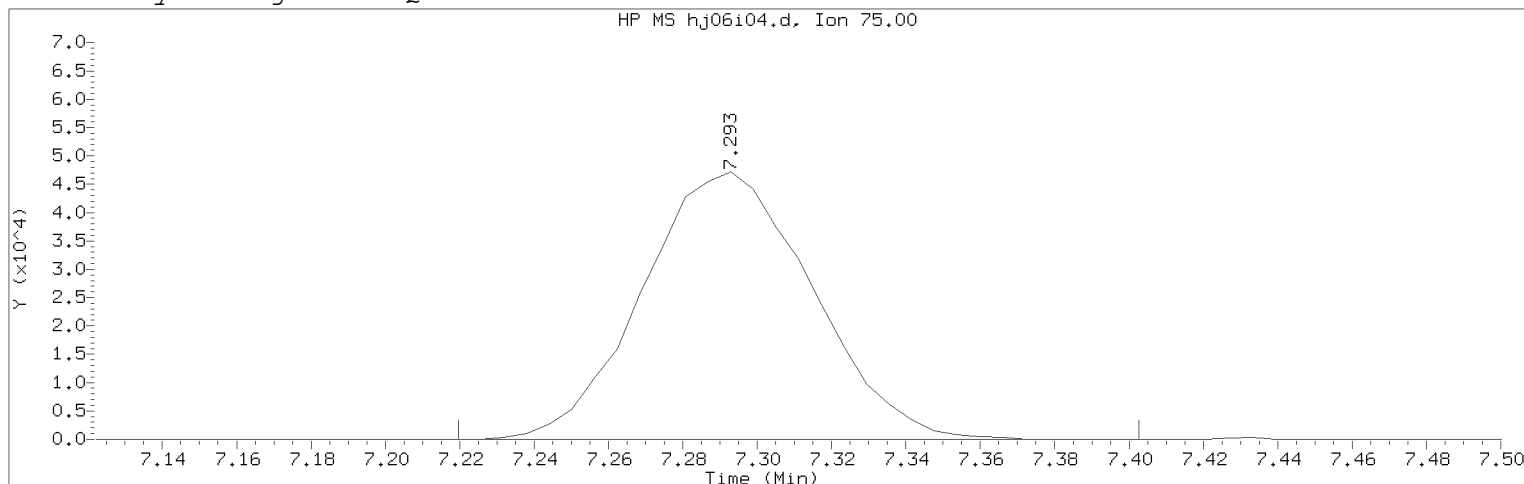
Compound Number	: 52	
Compound Name	: 1,1,1-Trichloroethane	
Scan Number	: 902	
Retention Time (minutes)	: 7.086	
Quant Ion	: 97.00	
Area	: 175914	
On-column Amount (ng)	: 2.0064	
Integration start scan	: 886	Integration stop scan: 946
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 170 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

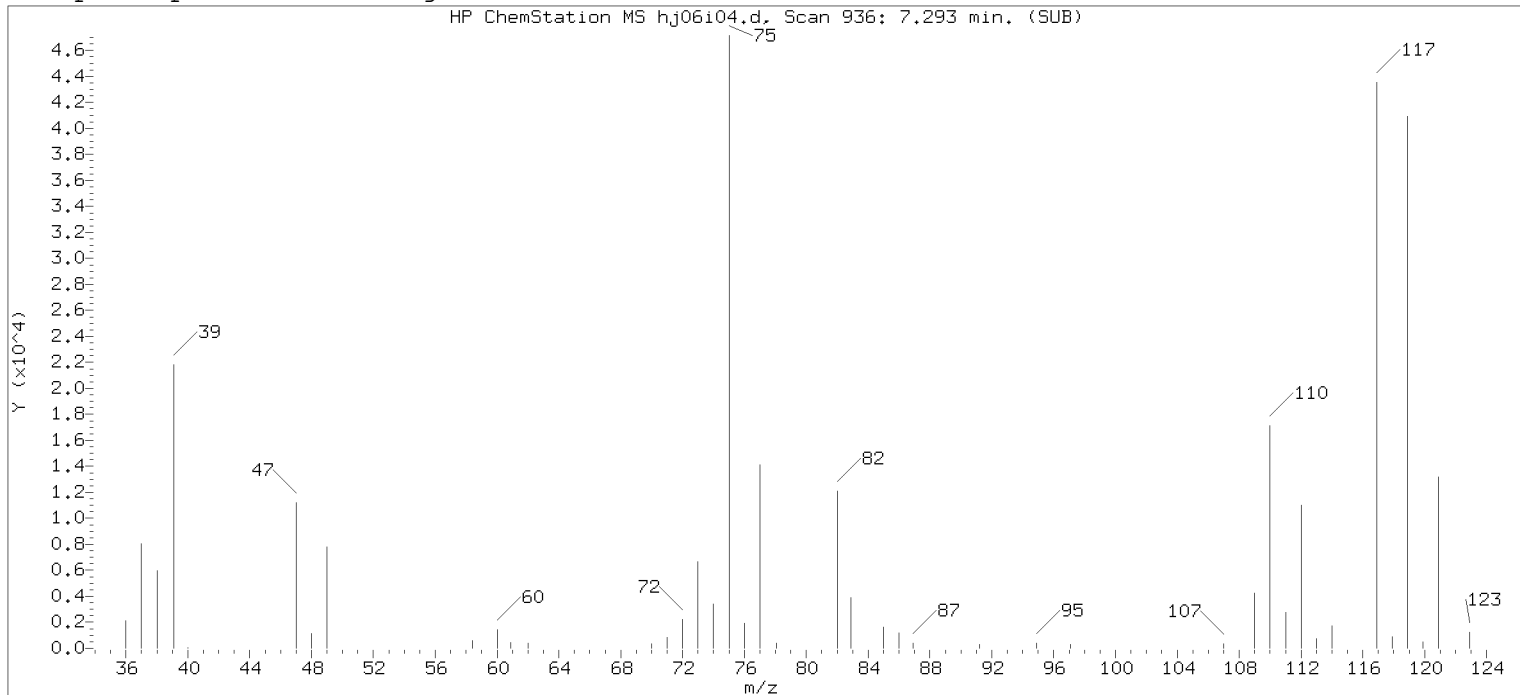
Compound Number	: 56	
Compound Name	: 1,1-Dichloropropene	
Scan Number	: 936	
Retention Time (minutes)	: 7.293	
Quant Ion	: 75.00	
Area (flag)	: 148995M	
On-Column Amount (ng)	: 2.0130	
Integration start scan	: 923	Integration stop scan: 953
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

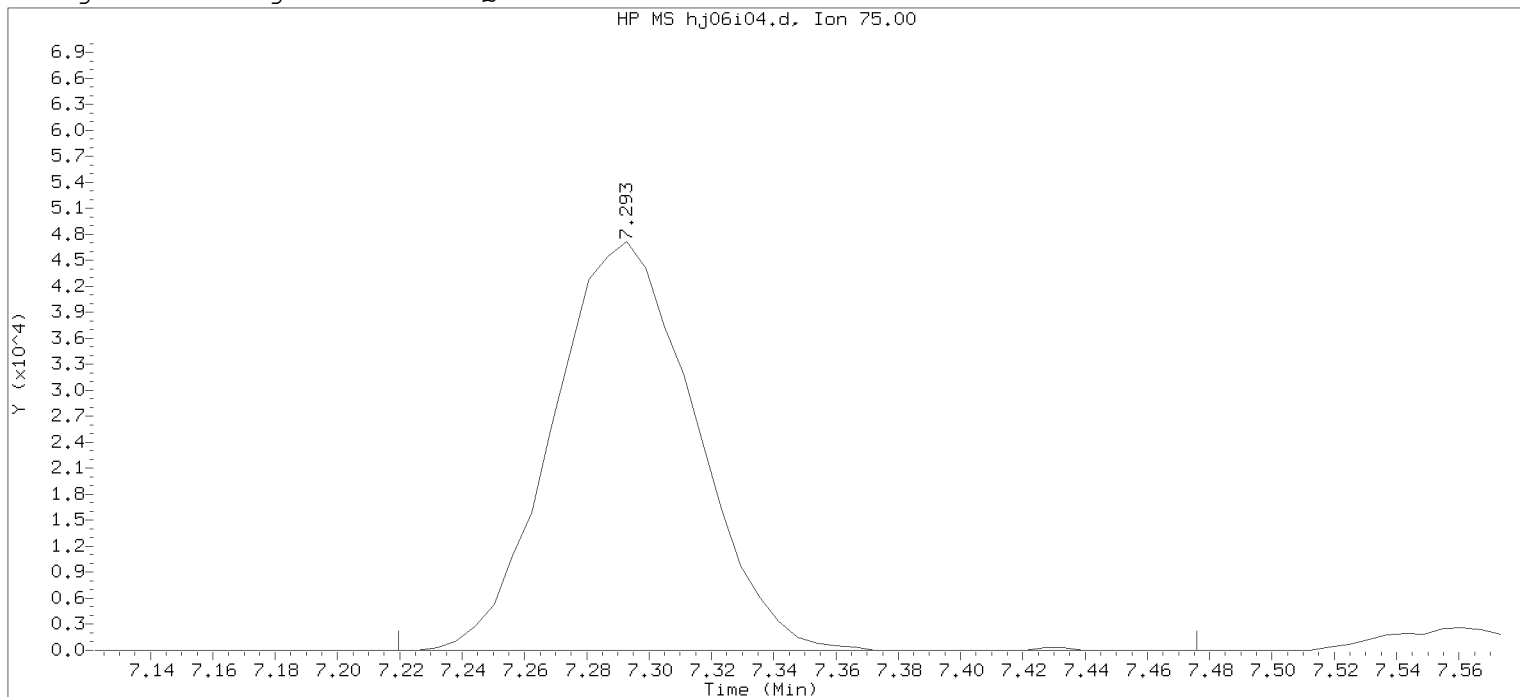
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

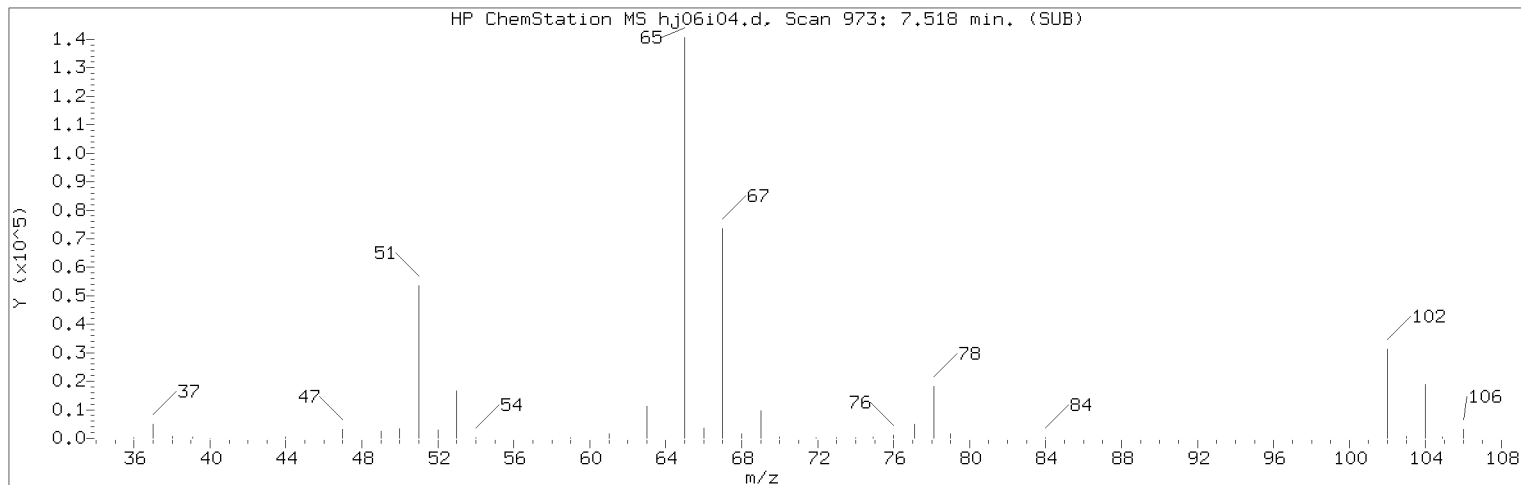
Sample Name: VSTD002

Lab Sample ID: VSTD002

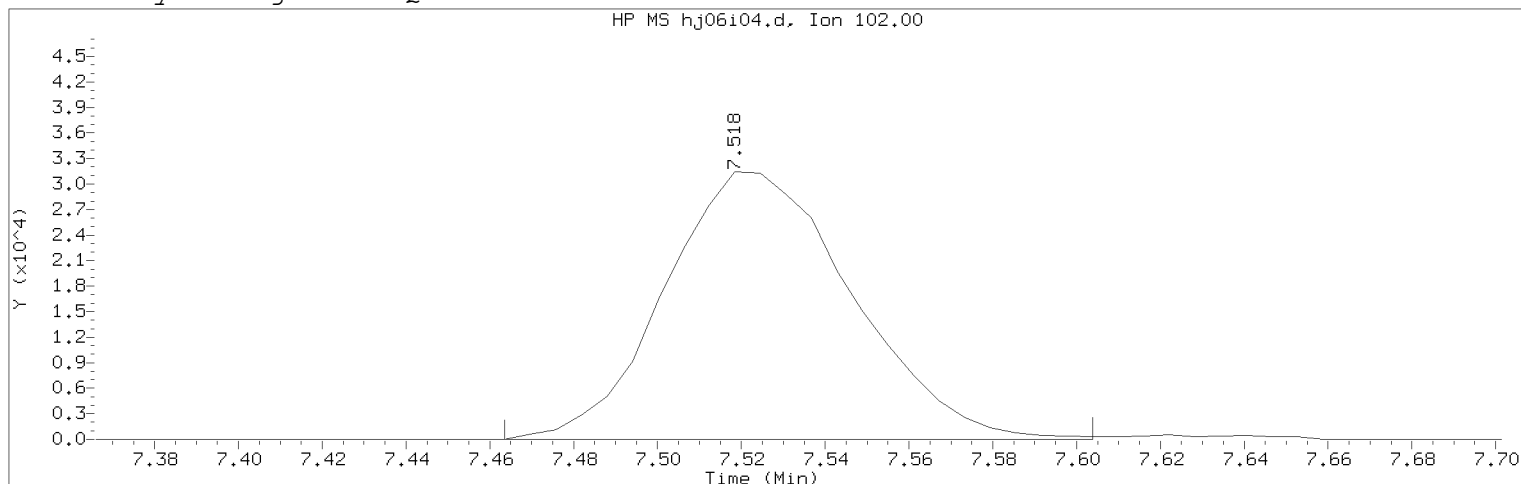
Compound Number	: 56	
Compound Name	: 1,1-Dichloropropene	
Scan Number	: 936	
Retention Time (minutes)	: 7.293	
Quant Ion	: 75.00	
Area	: 149204	
On-column Amount (ng)	: 2.0154	
Integration start scan	: 923	Integration stop scan: 965
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 172 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

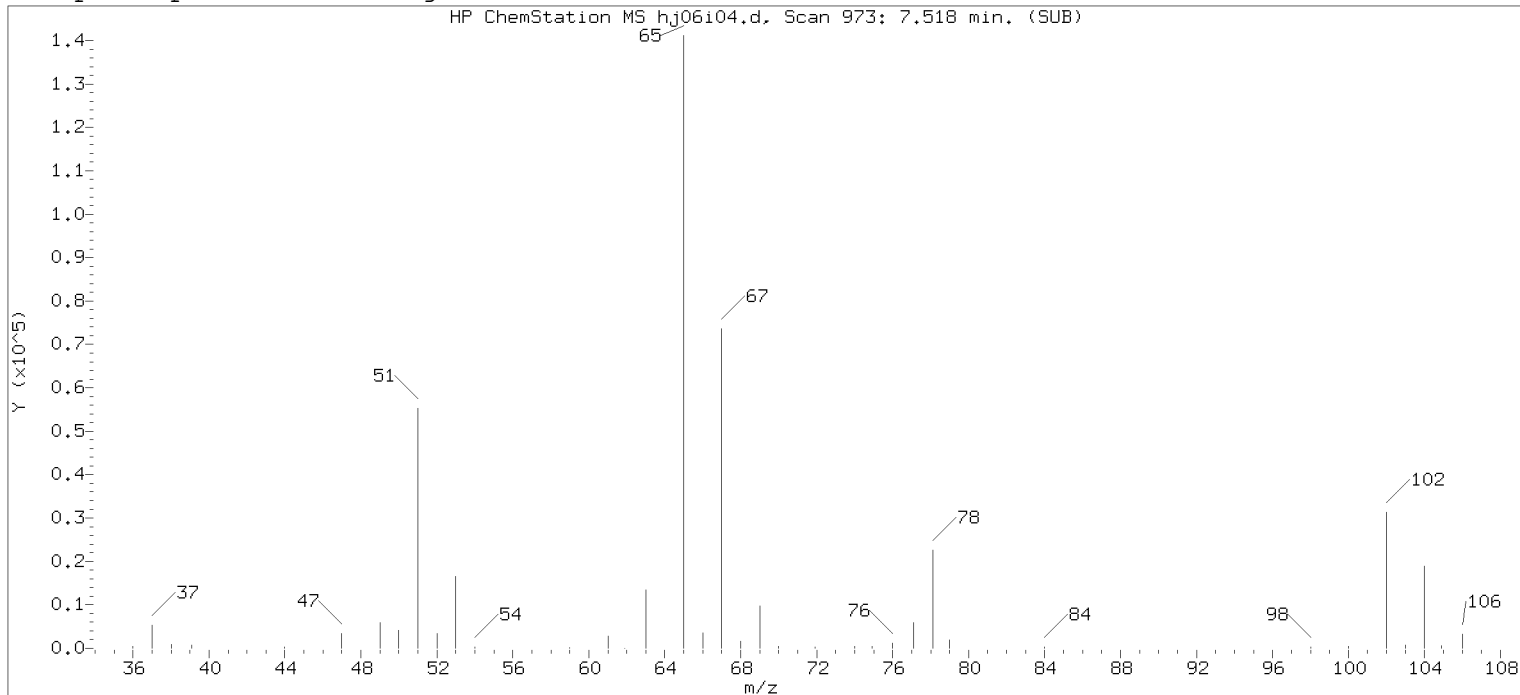
Compound Number	: 58	
Compound Name	: 1,2-Dichloroethane-d4	
Scan Number	: 973	
Retention Time (minutes)	: 7.518	
Quant Ion	: 102.00	
Area (flag)	: 97406M	
On-Column Amount (ng)	: 10.1598	
Integration start scan	: 963	Integration stop scan: 986
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

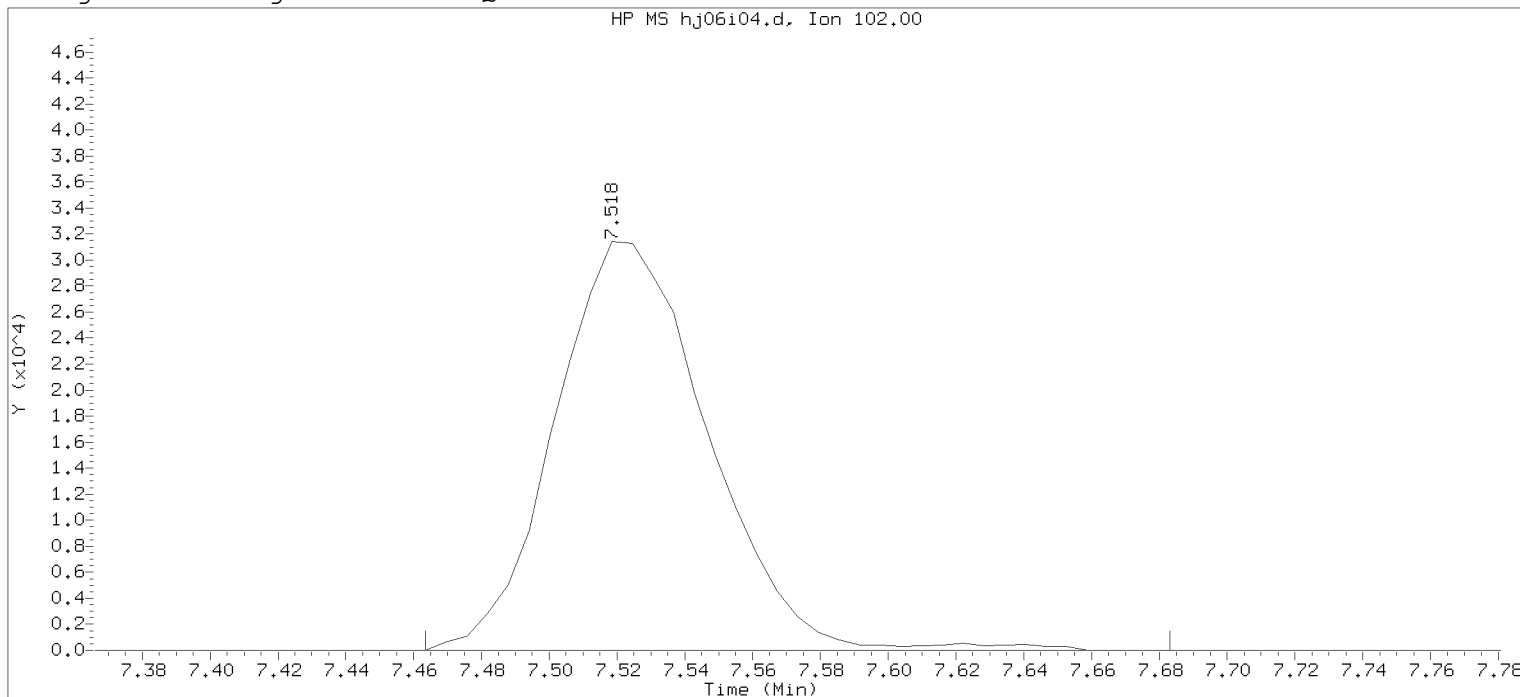
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

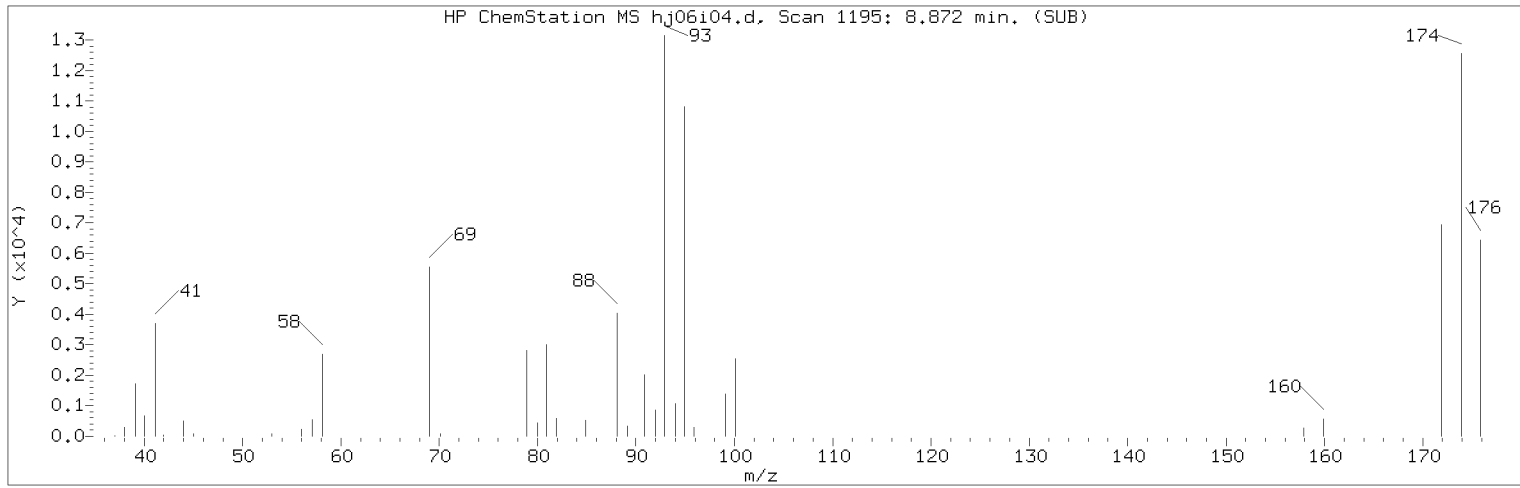
Sample Name: VSTD002

Lab Sample ID: VSTD002

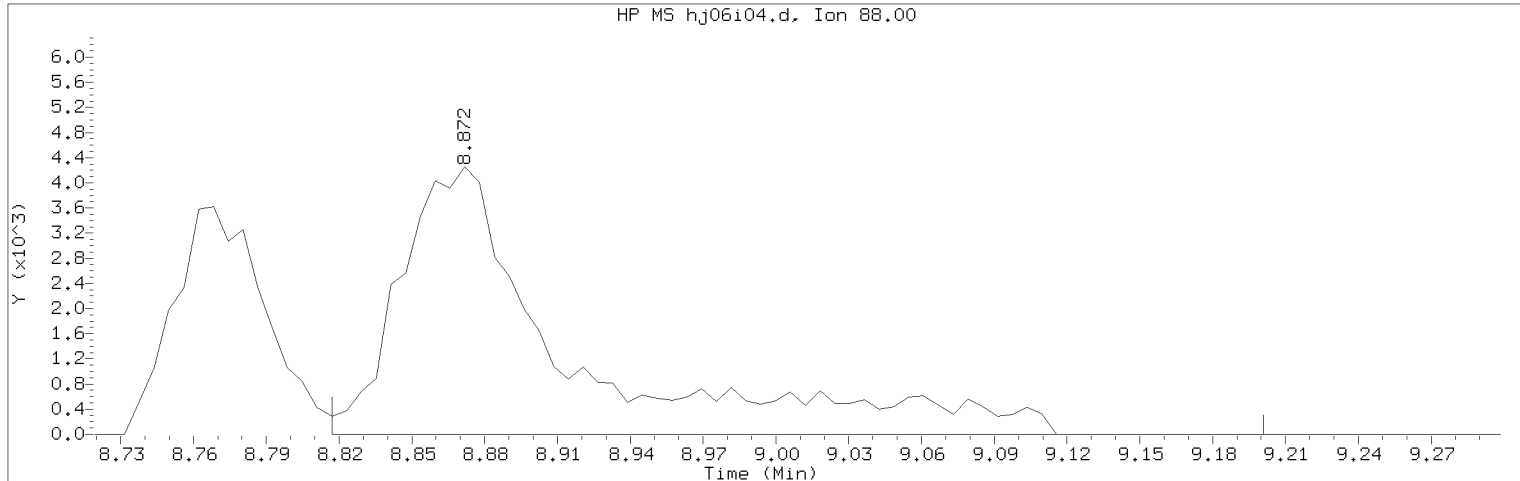
Compound Number	: 58	
Compound Name	: 1,2-Dichloroethane-d4	
Scan Number	: 973	
Retention Time (minutes)	: 7.518	
Quant Ion	: 102.00	
Area	: 98495	
On-column Amount (ng)	: 10.2568	
Integration start scan	: 963	Integration stop scan: 999
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 174 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

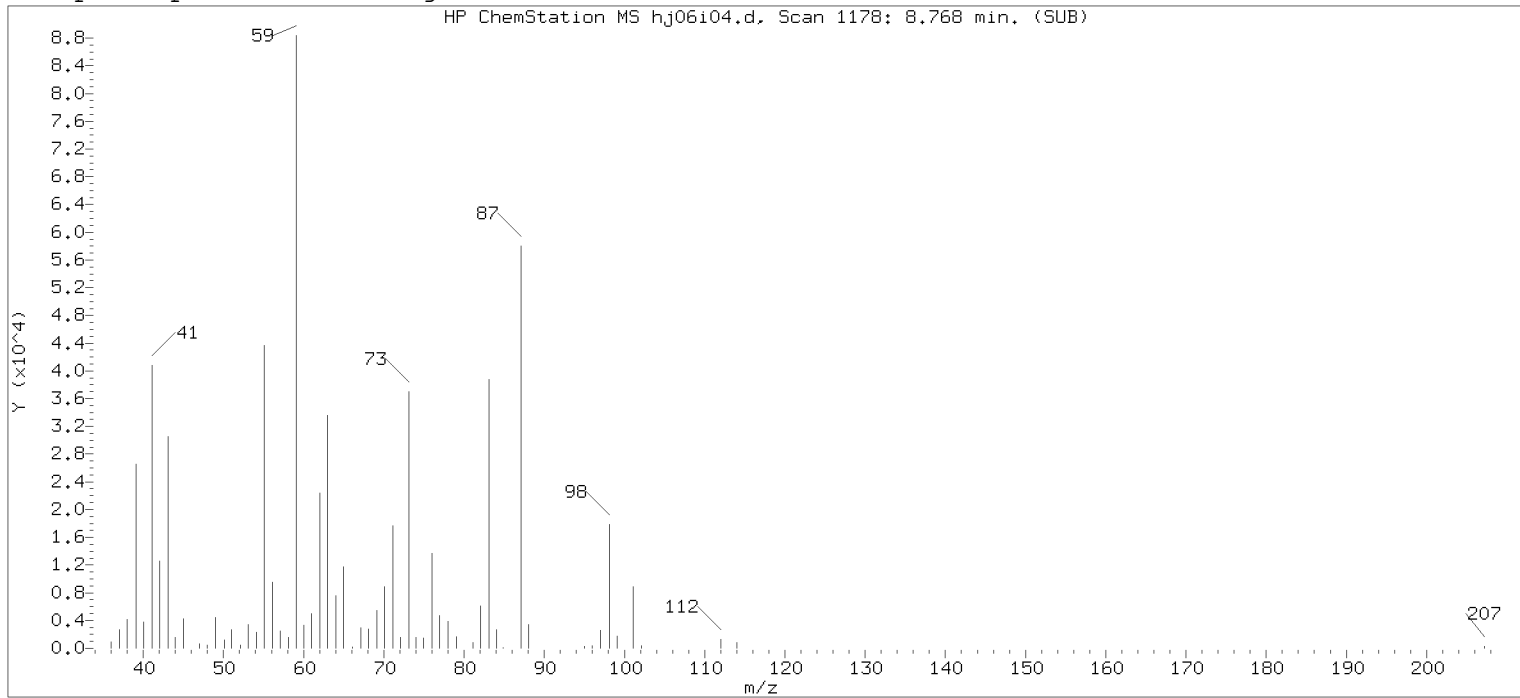
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1195	
Retention Time (minutes)	: 8.872	
Quant Ion	: 88.00	
Area (flag)	: 20263M	
On-Column Amount (ng)	: 113.7539	
Integration start scan	: 1185	Integration stop scan: 1248
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

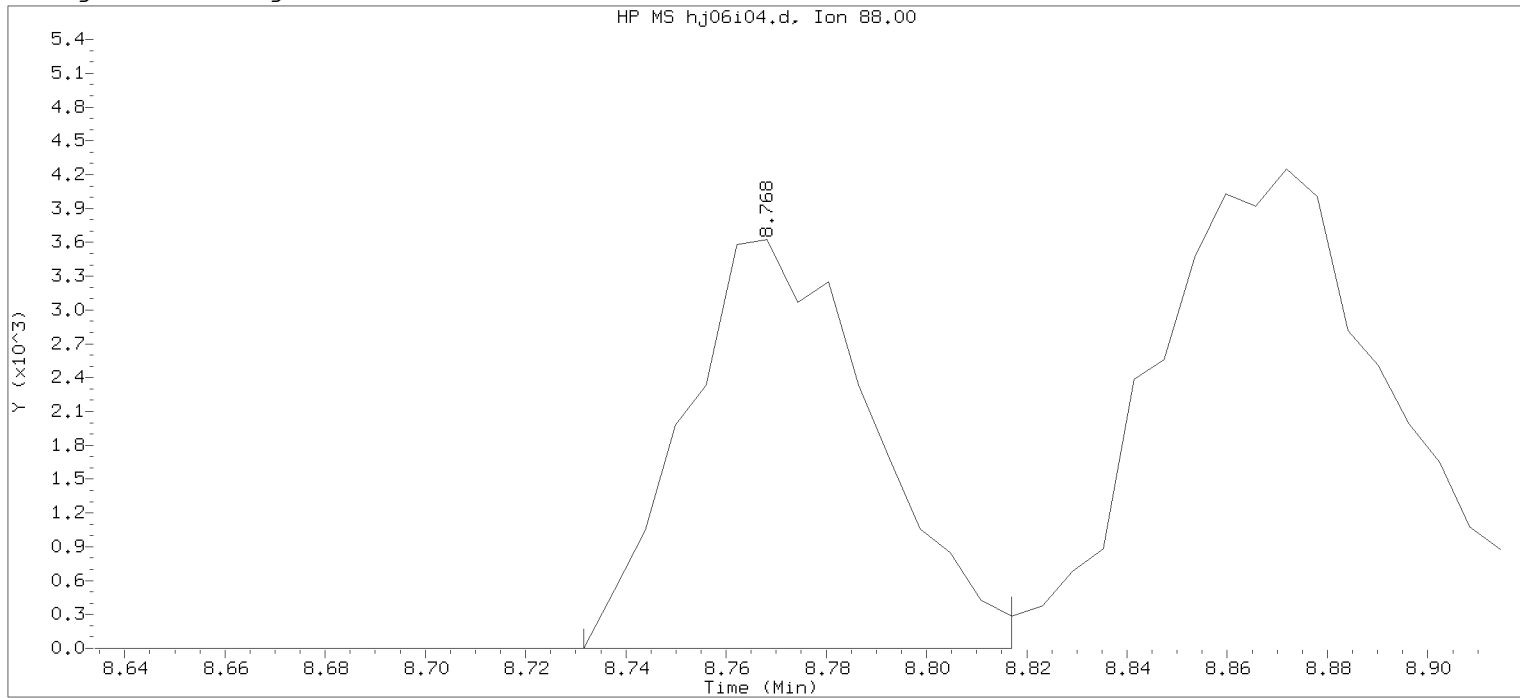
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

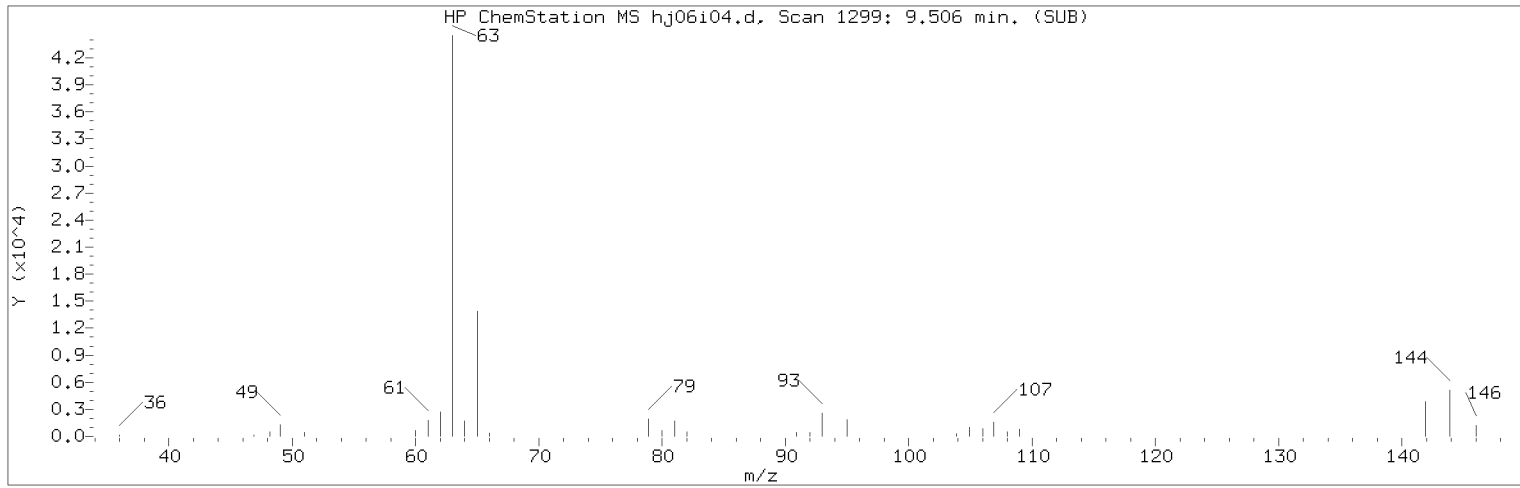
Sample Name: VSTD002

Lab Sample ID: VSTD002

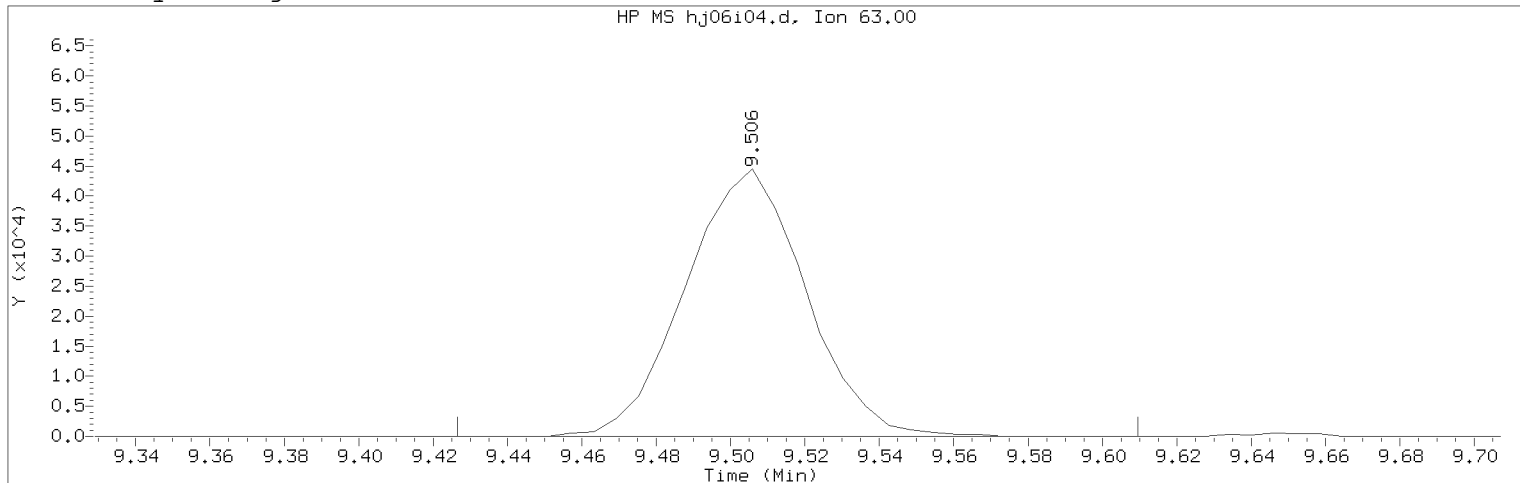
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1178	
Retention Time (minutes)	: 8.768	
Quant Ion	: 88.00	
Area	: 9474	
On-column Amount (ng)	: 67.7250	
Integration start scan	: 1171	Integration stop scan: 1185
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 176 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

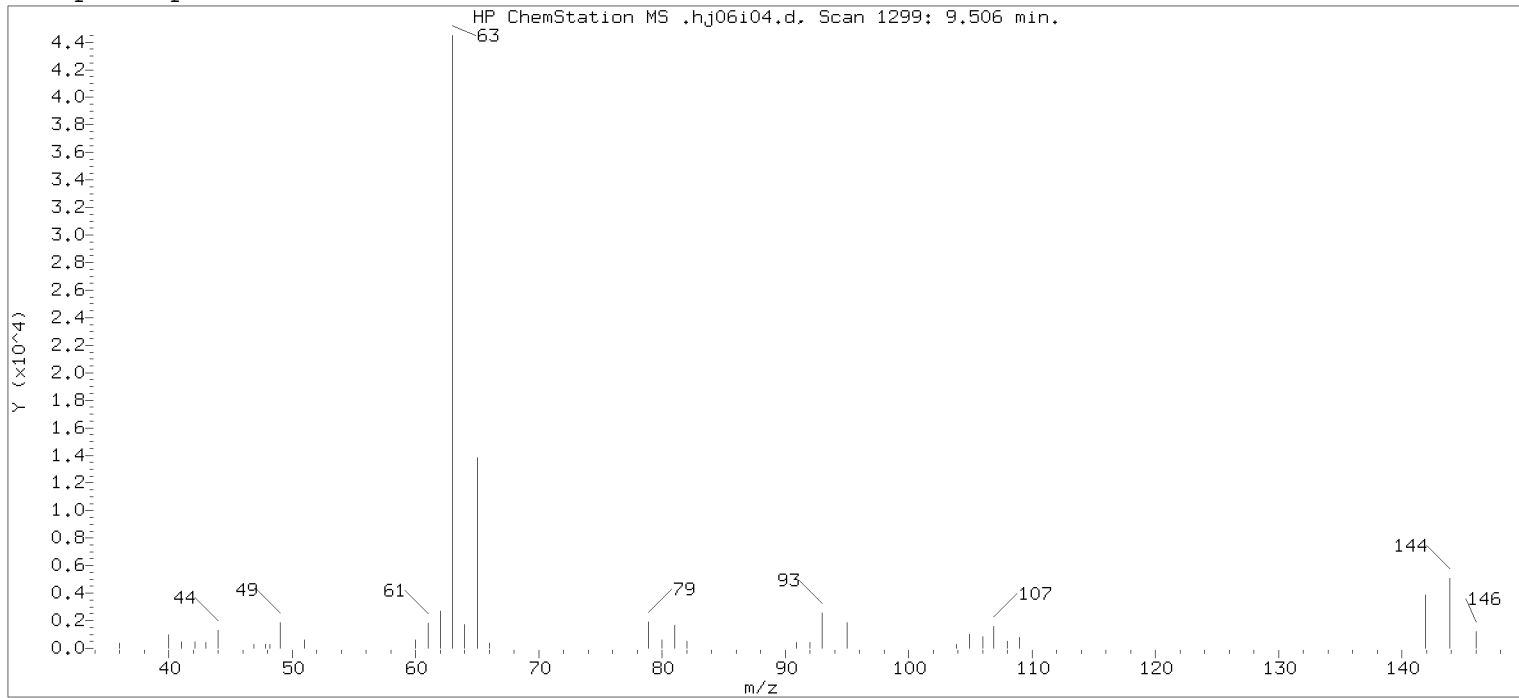
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Scan Number : 1299
Retention Time (minutes): 9.506
Quant Ion : 63.00
Area (flag) : 99821M
On-Column Amount (ng) : 1.9831
Integration start scan : 1285 Integration stop scan: 1315
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

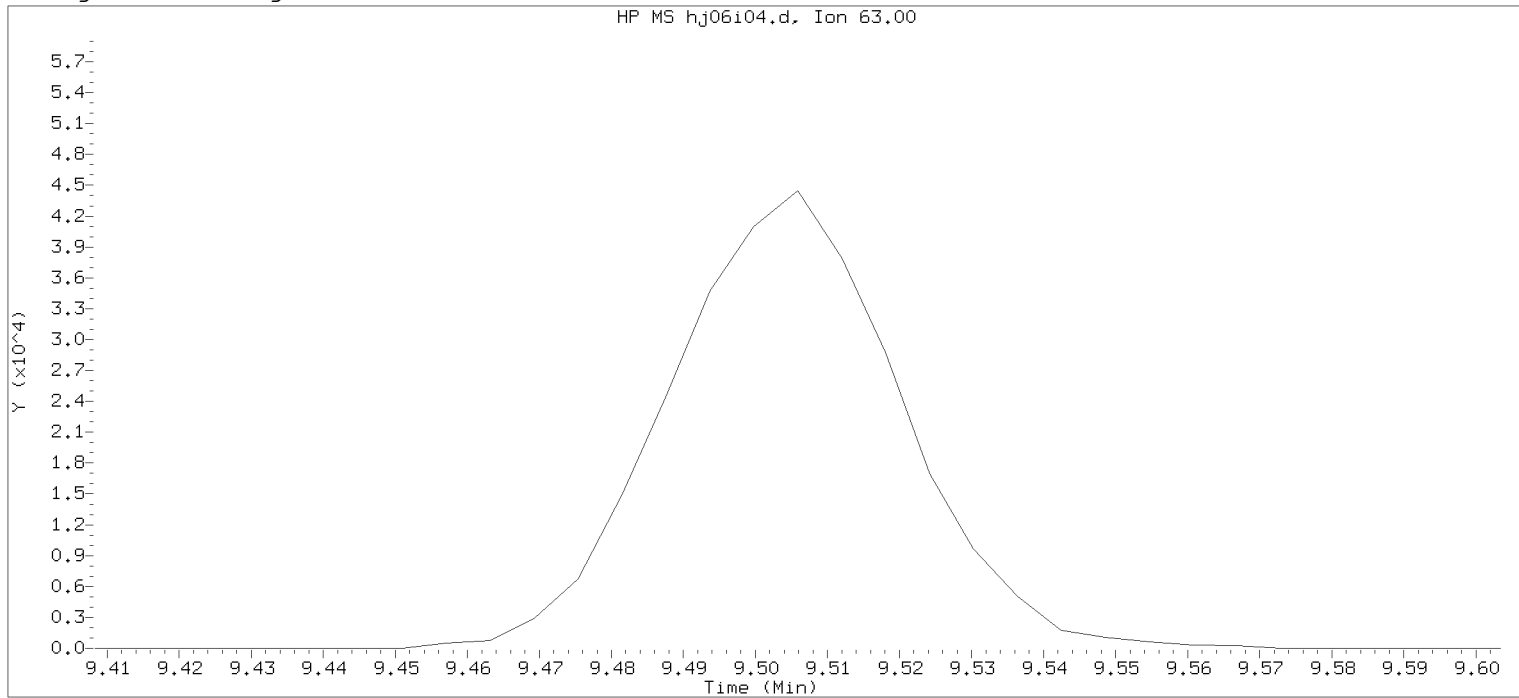
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

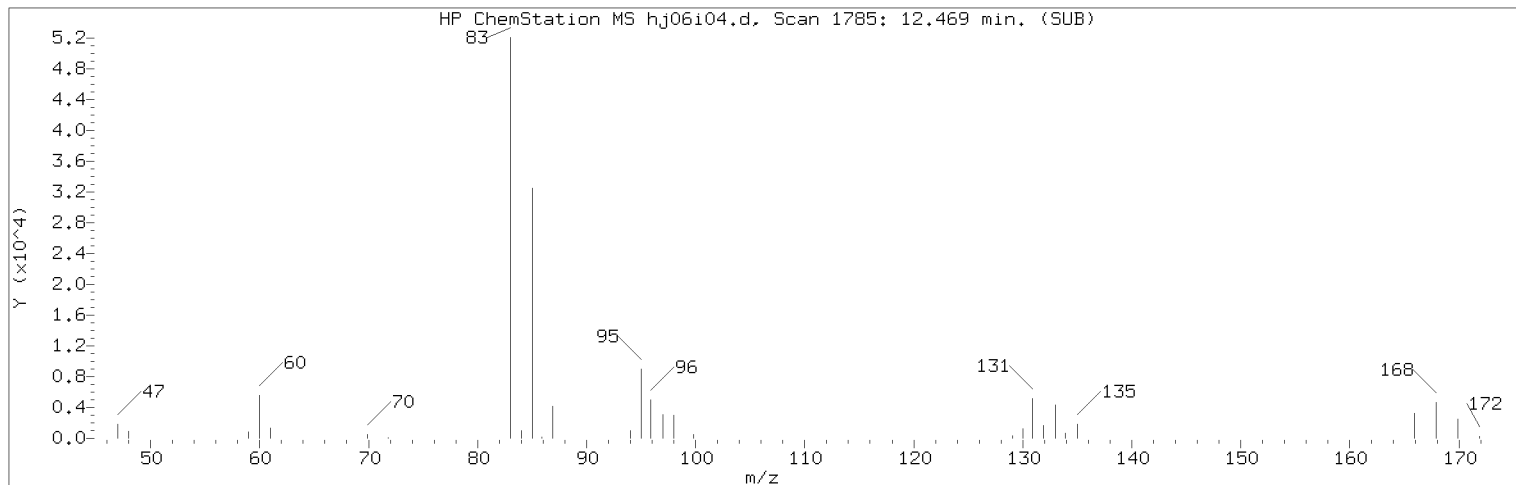
Sample Name: VSTD002

Lab Sample ID: VSTD002

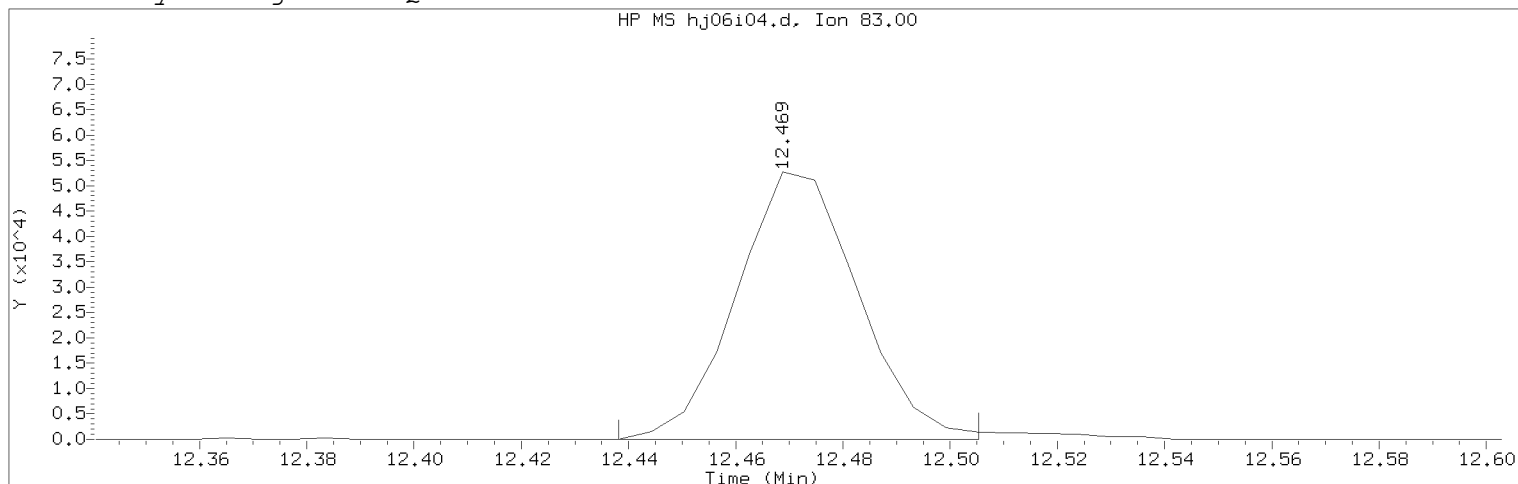
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

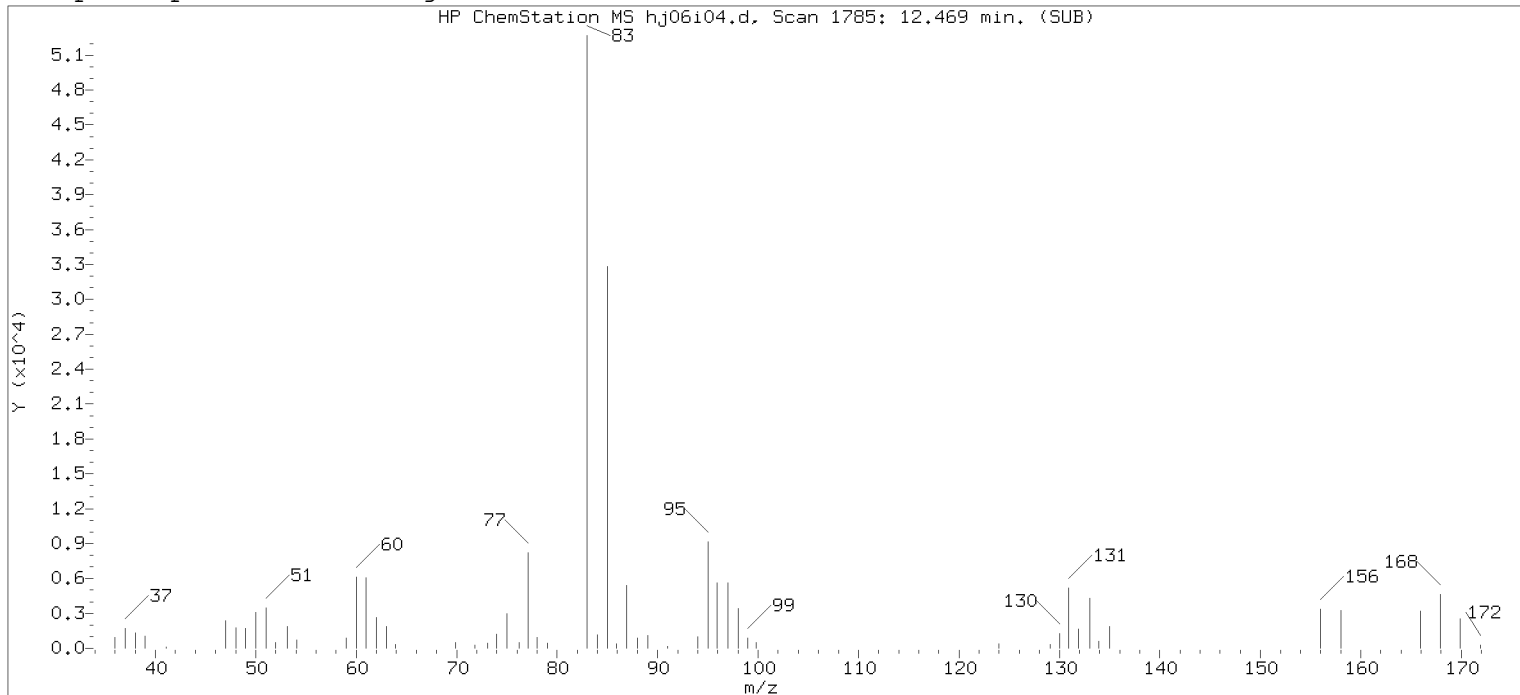
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 82697M
On-Column Amount (ng) : 1.9946
Integration start scan : 1779 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

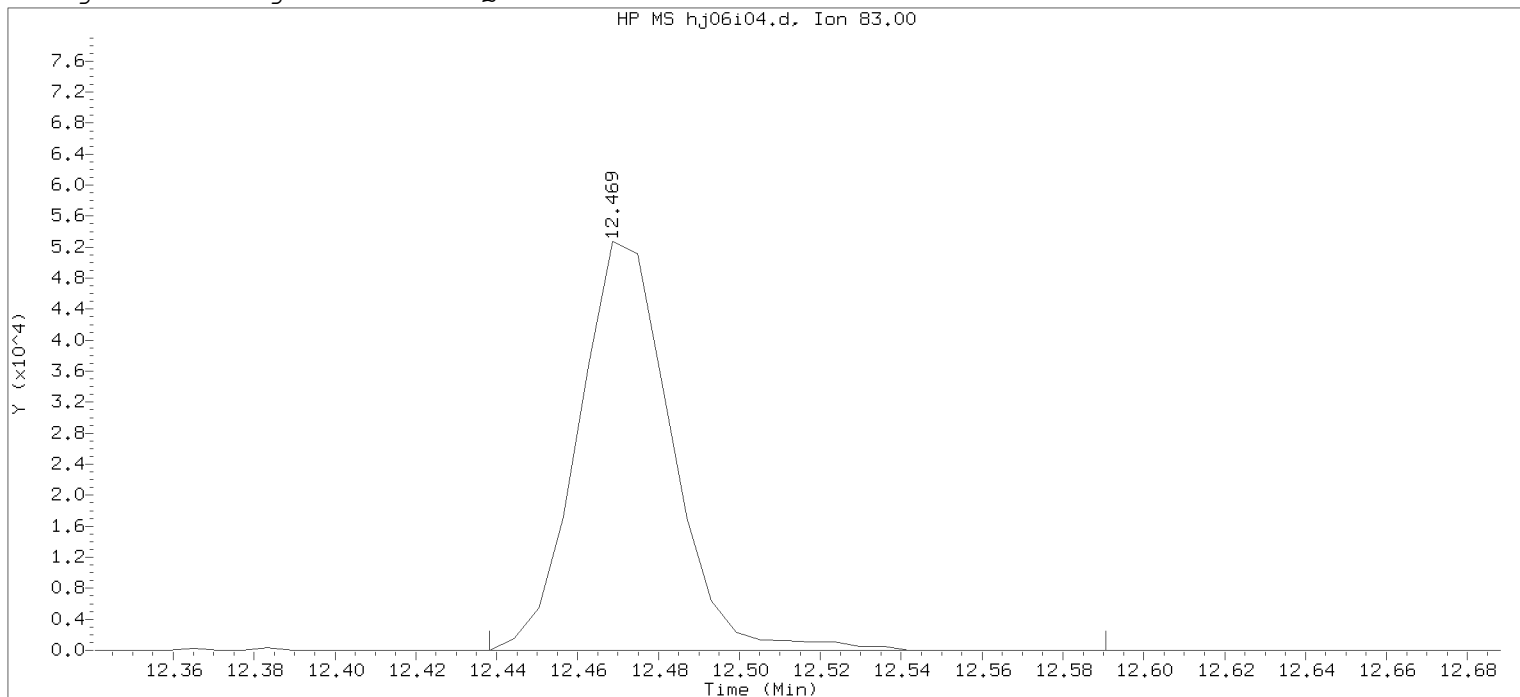
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:16

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number : 114

Compound Name : 1,1,2,2-Tetrachloroethane

Scan Number : 1785

Retention Time (minutes): 12.469

Quant Ion : 83.00

Area : 84320

On-column Amount (ng) : 1.9661

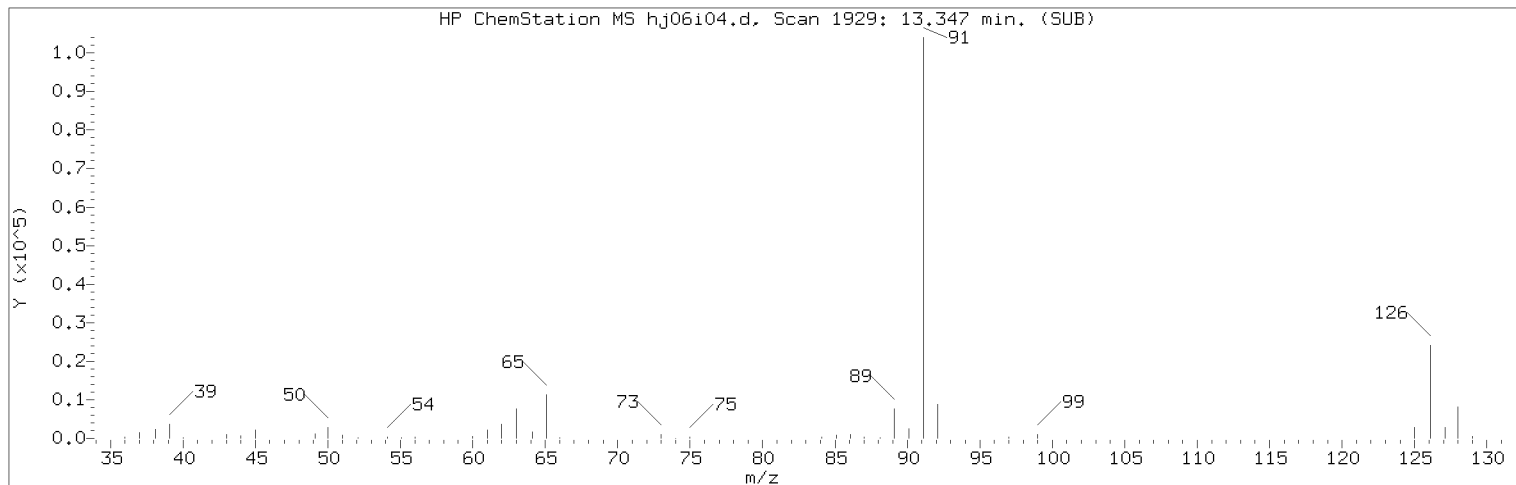
Integration start scan : 1779 Integration stop scan: 1804

Y at integration start : 0 Y at integration end: 0

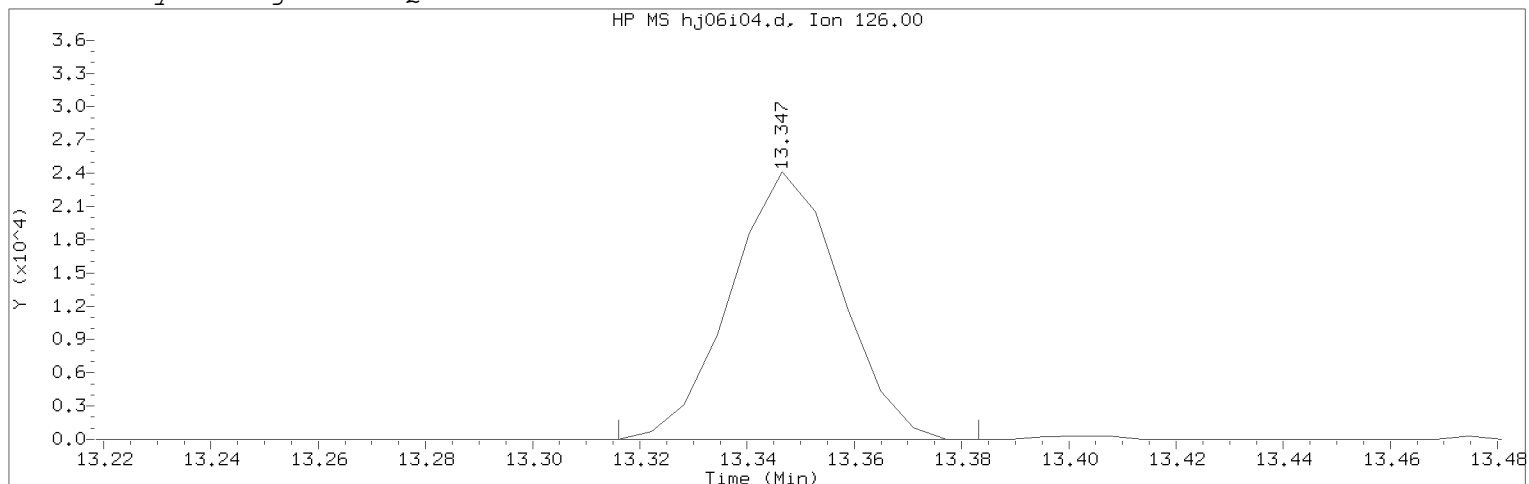
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature userRAF64sPage 180 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 15:39

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD002

Lab Sample ID: VSTD002

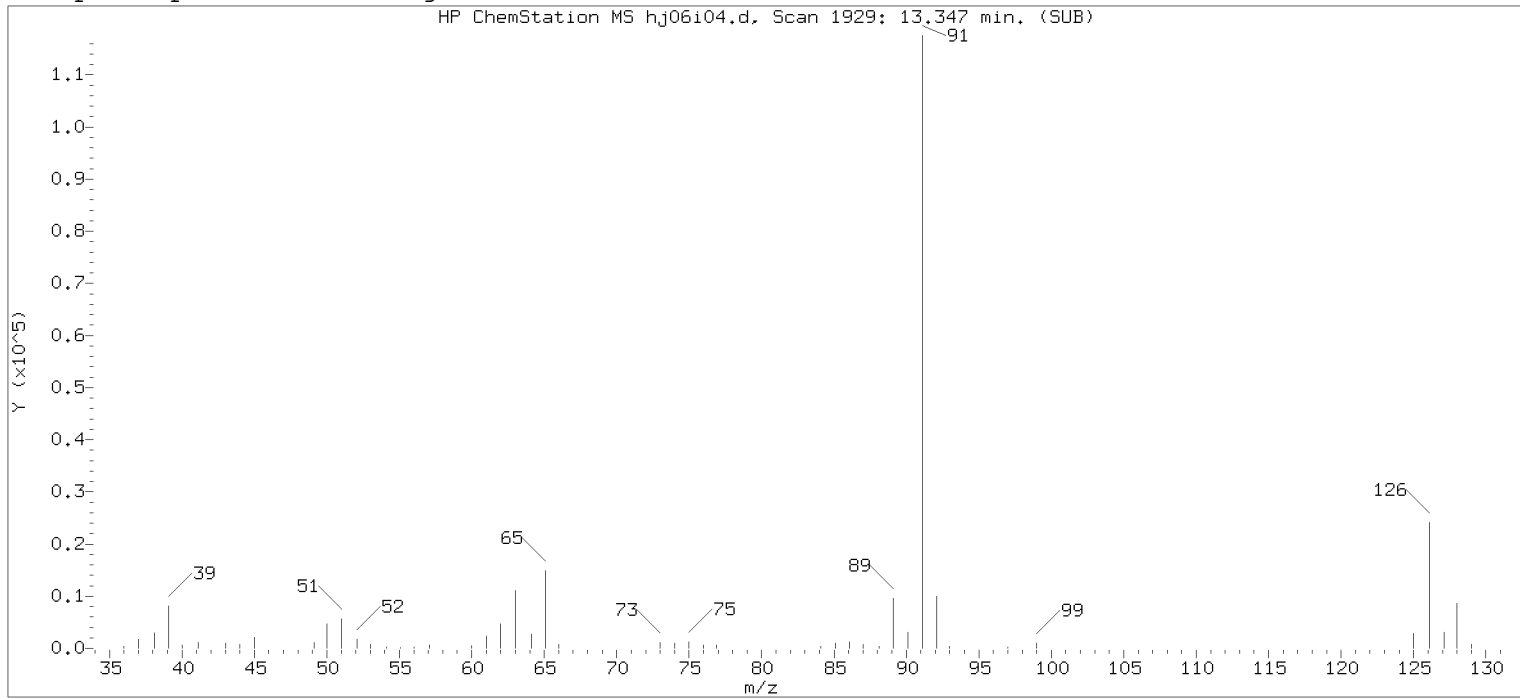
Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area (flag)	: 34248M	
On-Column Amount (ng)	: 1.9649	
Integration start scan	: 1923	Integration stop scan: 1934
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

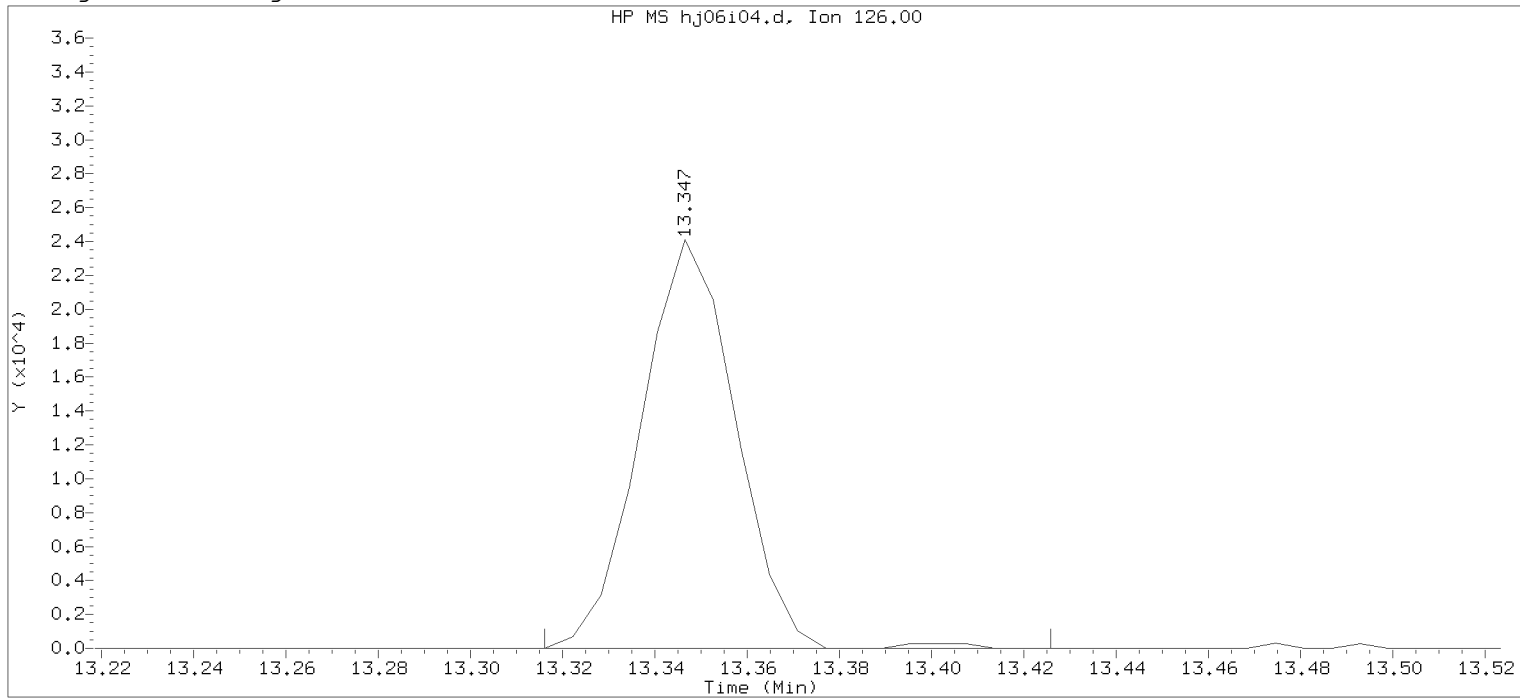
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i04.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 15:39 Analyst ID: JKH09052

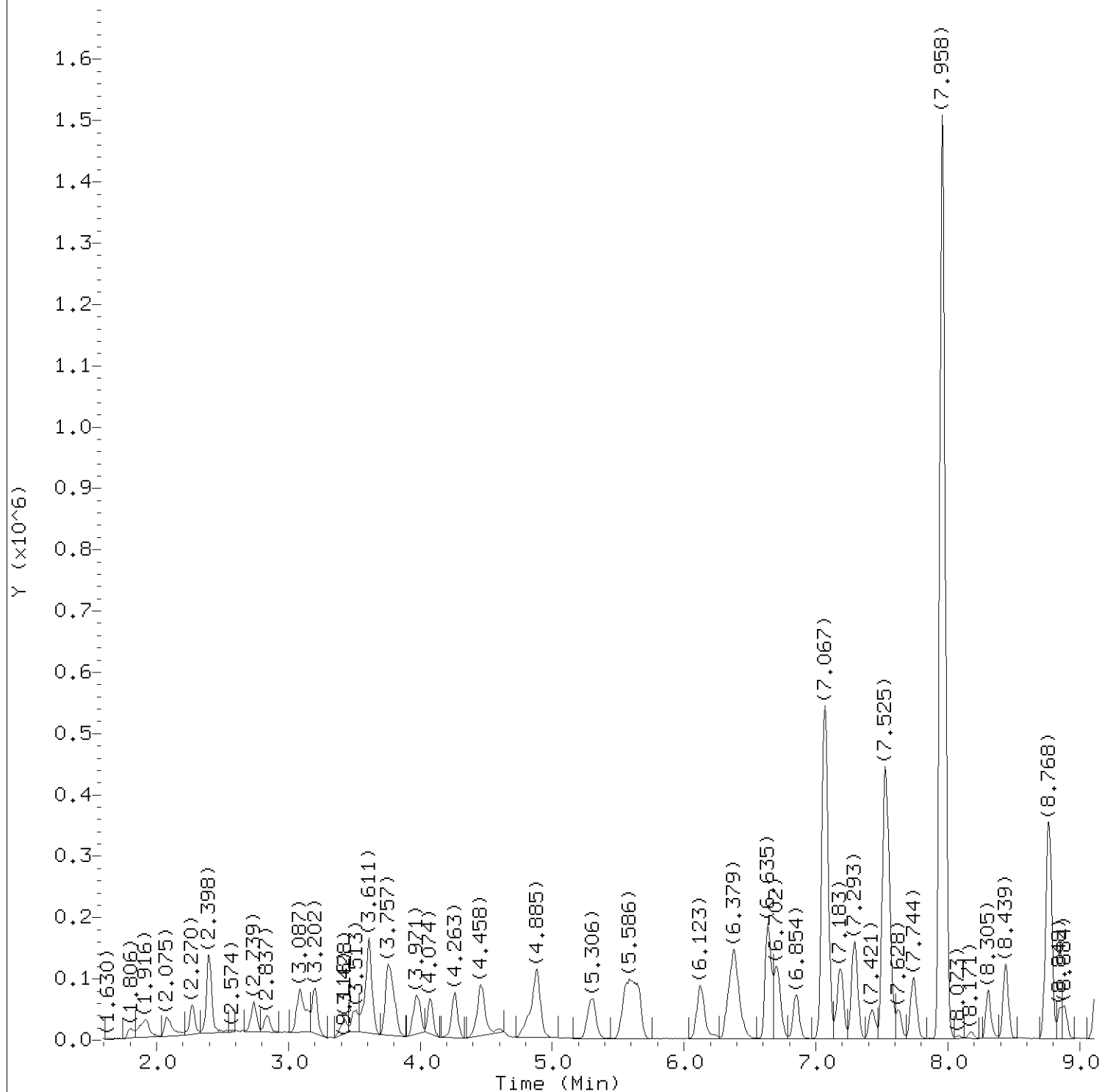
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:16
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number	: 137	
Compound Name	: Benzyl Chloride	
Scan Number	: 1929	
Retention Time (minutes)	: 13.347	
Quant Ion	: 126.00	
Area	: 34536	
On-column Amount (ng)	: 1.8856	
Integration start scan	: 1923	Integration stop scan: 1941
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA664s Page 182 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
Analyst ID: JKH09052

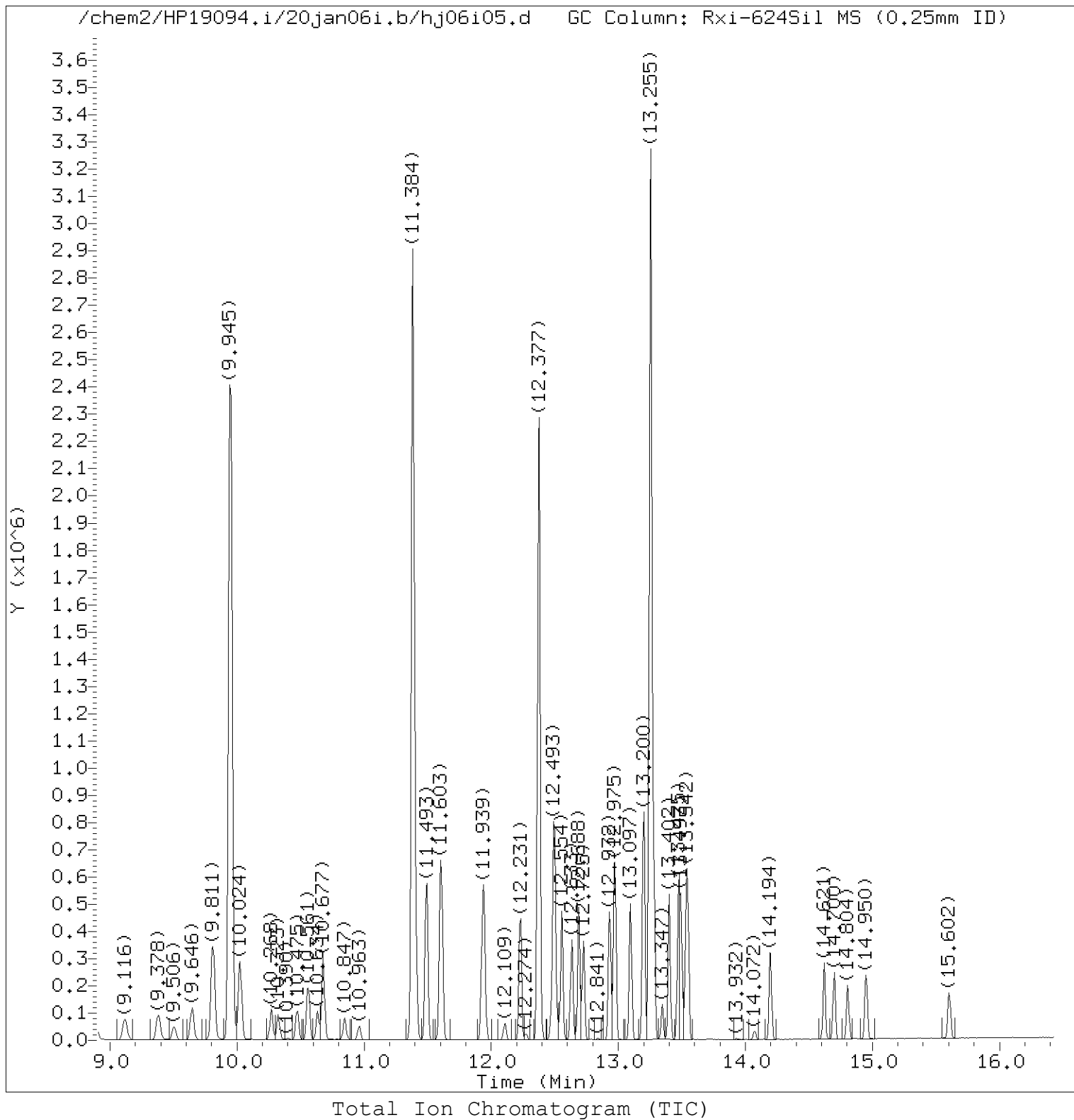
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
 Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.075	85	75278M	1.009
2) Chloromethane	(2)	2.270	50	72579	0.986
6) 1,3-Butadiene	(2)	2.398	39	56225M	1.016
5) Vinyl Chloride	(2)	2.398	62	69313	0.990
7) Bromomethane	(2)	2.739	94	48903	0.975
8) Chloroethane	(2)	2.843	64	40416	0.996
9) Dichlorofluoromethane	(2)	3.087	67	94550	0.982
10) Trichlorofluoromethane	(2)	3.148	101	79828M	0.999
11) Ethyl ether	(2)	3.428	59	34825	0.985
12) Freon 123a	(2)	3.513	67	63672	1.030
13) Acrolein	(1)	3.611	56	277191	49.634
15) 1,1-Dichloroethene	(2)	3.757	96	49369	1.016
14) Acetone	(1)	3.794	43	78581M	10.428
16) Freon 113	(2)	3.794	101	53987	1.063
17) Methyl Iodide	(2)	3.964	142	95675	1.020
18) Bromoethane	(2)	3.995	108	40968M	0.966
19) Carbon Disulfide	(2)	4.074	76	150610	1.013
22) Methyl Acetate	(1)	4.233	43	22660	1.192
23) Allyl Chloride	(2)	4.263	41	81917	0.992
24) Methylene Chloride	(2)	4.452	84	53061	1.014
27)*t-Butyl Alcohol-d10	(1)	4.458	65	124021	50.000
29) t-Butyl Alcohol	(1)	4.605	59	53216	20.329
30) Acrylonitrile	(1)	4.806	53	46077	5.011
31) Methyl Tertiary Butyl Ether	(2)	4.879	73	112679	1.014
32) trans-1,2-Dichloroethene	(2)	4.885	96	53314	0.998
33) n-Hexane	(2)	5.300	57	77385	1.027
34) 1,1-Dichloroethane	(2)	5.550	63	97205	1.008
35) di-Isopropyl Ether	(2)	5.592	45	159773	1.005
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	83728	1.014
41) 1,2-Dichloroethene (Total)	(2)		96	113693	2.015
38) Ethyl t-butyl ether	(2)	6.123	59	149284	1.001
39) 2-Butanone	(1)	6.330	43	117011	9.930
40) cis-1,2-Dichloroethene	(2)	6.373	96	60379	1.017
42) 2,2-Dichloropropane	(2)	6.391	77	82933	1.010
43) Propionitrile	(1)	6.427	54	64622	20.021
46) Methacrylonitrile	(1)	6.635	67	114480	9.917
48) Bromochloromethane	(2)	6.702	128	25252	1.007
49) Tetrahydrofuran	(1)	6.708	71	32211	9.895

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
 Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.848	83	94470	1.003
51) \$Dibromofluoromethane	(2)	7.067	113	493947	9.987
51) \$Dibromofluoromethane	(2)	7.067	111	508390	10.005
52) 1,1,1-Trichloroethane	(2)	7.086	97	88523	1.011
53) Cyclohexane	(2)	7.183	56	96178	1.028
53) Cyclohexane	(2)	7.189	84	84186M	1.051
53) Cyclohexane	(2)	7.189	69	30740	1.056
56) 1,1-Dichloropropene	(2)	7.287	75	75086	1.015
55) Carbon Tetrachloride	(2)	7.299	117	76382	1.017
57) Isobutyl Alcohol	(1)	7.421	41	44722	49.287
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	95955	10.010
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	445732	10.078
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	61459	10.123
59) Benzene	(2)	7.555	78	219939	1.016
60) 1,2-Dichloroethane	(2)	7.628	62	56848	1.019
61) t-Amyl methyl ether	(2)	7.738	73	131629	1.012
64) *Fluorobenzene	(2)	7.958	96	1989646	10.000
63) n-Heptane	(2)	7.964	43	82099	1.038
66) n-Butanol	(1)	8.305	56	74822	102.429
68) Trichloroethene	(2)	8.439	95	58033	1.023
70) Methylcyclohexane	(2)	8.750	83	101808	1.001
71) 1,2-Dichloropropane	(2)	8.774	63	54490	1.018
72) Methyl Methacrylate	(1)	8.848	69	23073	0.994
73) 1,4-Dioxane	(1)	8.860	88	8963M	50.873
74) Dibromomethane	(2)	8.890	93	25735	1.051
75) Bromodichloromethane	(2)	9.116	83	67078	1.008
77) 2-Nitropropane	(1)	9.378	41	73855M	9.683
80) 1-Bromo-2-chloroethane	(2)	9.506	63	49514M	0.984
81) cis-1,3-Dichloropropene	(2)	9.646	75	79397	1.011
82) 4-Methyl-2-Pentanone	(1)	9.811	43	289676	9.974
83) \$Toluene-d8	(3)	9.945	98	1966268	9.999
83) \$Toluene-d8	(3)	9.945	100	1275487	10.029
84) Toluene	(3)	10.024	92	140089	1.014
86) 1,3-Dichloropropene (total)	(3)		75	143344	2.008
85) trans-1,3-Dichloropropene	(3)	10.268	75	63947	0.997
87) Ethyl Methacrylate	(3)	10.323	69	51380	1.034
89) 1,1,2-Trichloroethane	(3)	10.475	97	34882M	1.005
90) Tetrachloroethene	(3)	10.561	166	64653	1.030

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d
 Injection date and time: 06-JAN-2020 16:01

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	61860	1.037
92) 2-Hexanone	(1)	10.677	43	202922	10.226
94) Dibromochloromethane	(3)	10.847	129	44756	1.007
96) 1,2-Dibromoethane	(3)	10.963	107	33220	1.002
97) 1-Chlorohexane	(3)	11.384	91	85376	1.025
98) *Chlorobenzene-d5	(3)	11.384	117	1476031	10.000
99) Chlorobenzene	(3)	11.408	112	154513	1.024
100) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	53585	0.998
101) Ethylbenzene	(3)	11.493	91	278238	1.024
102) m+p-Xylene	(3)	11.603	106	213632	2.055
106) Xylene (Total)	(3)		106	317727	3.074
105) o-Xylene	(3)	11.932	106	104095	1.018
107) Styrene	(3)	11.945	104	169055	1.019
108) Bromoform	(3)	12.109	173	25941	1.001
109) Isopropylbenzene	(3)	12.231	105	282474	1.020
112) \$4-Bromofluorobenzene	(3)	12.377	95	730449	10.040
112) \$4-Bromofluorobenzene	(3)	12.377	174	626077	10.057
114) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	41928M	1.006
115) Bromobenzene	(4)	12.493	156	63374	1.006
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	108468	9.943
117) 1,2,3-Trichloropropane	(4)	12.524	110	11040	0.989
118) n-Propylbenzene	(4)	12.554	91	334540	1.017
120) 2-Chlorotoluene	(4)	12.633	126	64837	0.999
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	242036	1.014
123) 4-Chlorotoluene	(4)	12.725	126	64685	0.998
126) tert-Butylbenzene	(4)	12.932	134	50094	1.015
127) Pentachloroethane	(4)	12.969	167	40050	0.952
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	248595	1.008
129) sec-Butylbenzene	(4)	13.097	105	311718	1.008
133) p-Isopropyltoluene	(4)	13.200	119	269425	1.012
132) 1,3-Dichlorobenzene	(4)	13.200	146	126298	1.006
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	798465	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	121684	0.993
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	101239M	0.985
137) Benzyl Chloride	(4)	13.347	126	17647	1.007
139) n-Butylbenzene	(4)	13.493	92	133283	1.013
140) 1,2-Dichlorobenzene	(4)	13.530	146	112044	1.012
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	6378	1.025

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

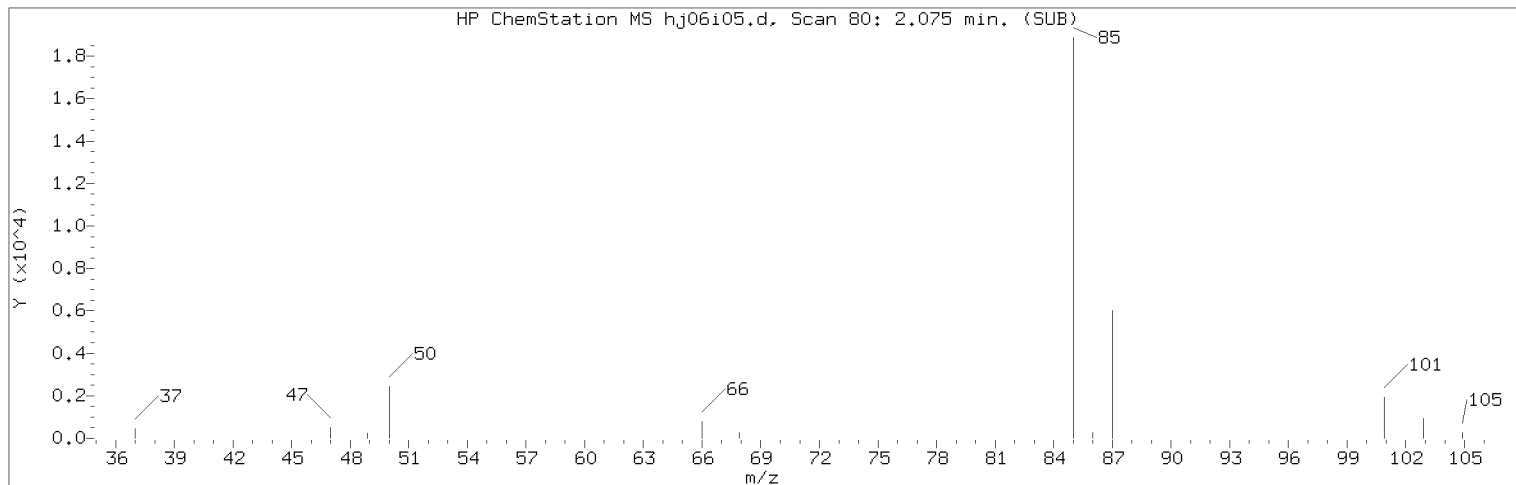
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	96296	0.980
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	78732	0.955
147) Hexachlorobutadiene	(4)	14.700	225	42759	0.994
148) Naphthalene	(4)	14.804	128	145072	1.009
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	68903	0.979

page 4 of 4

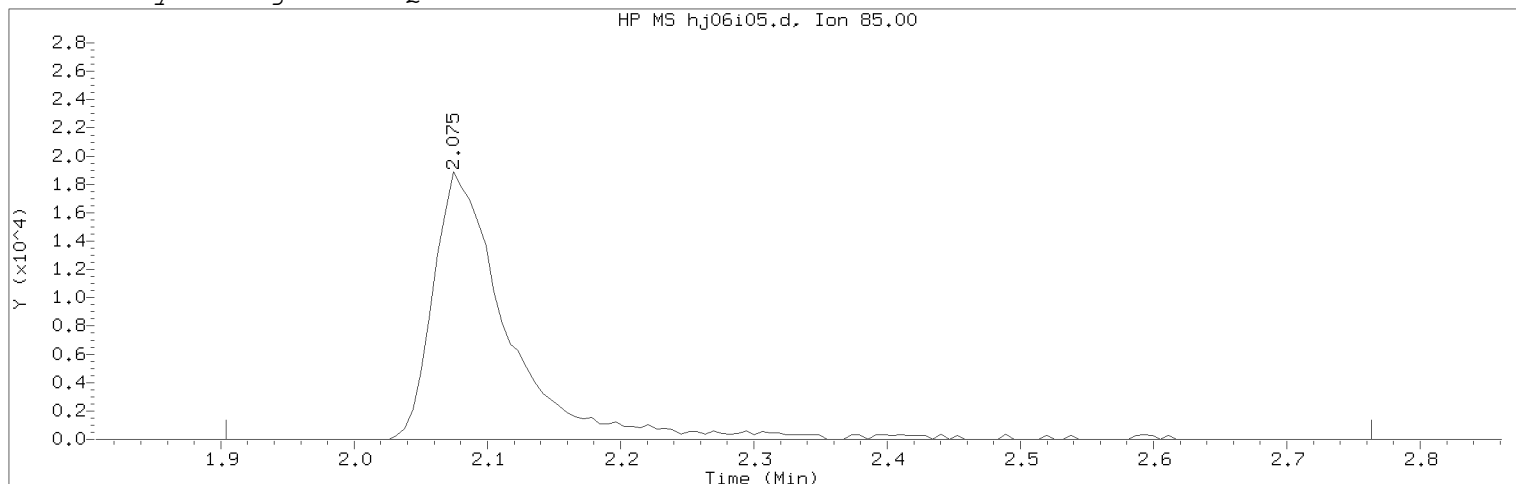
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

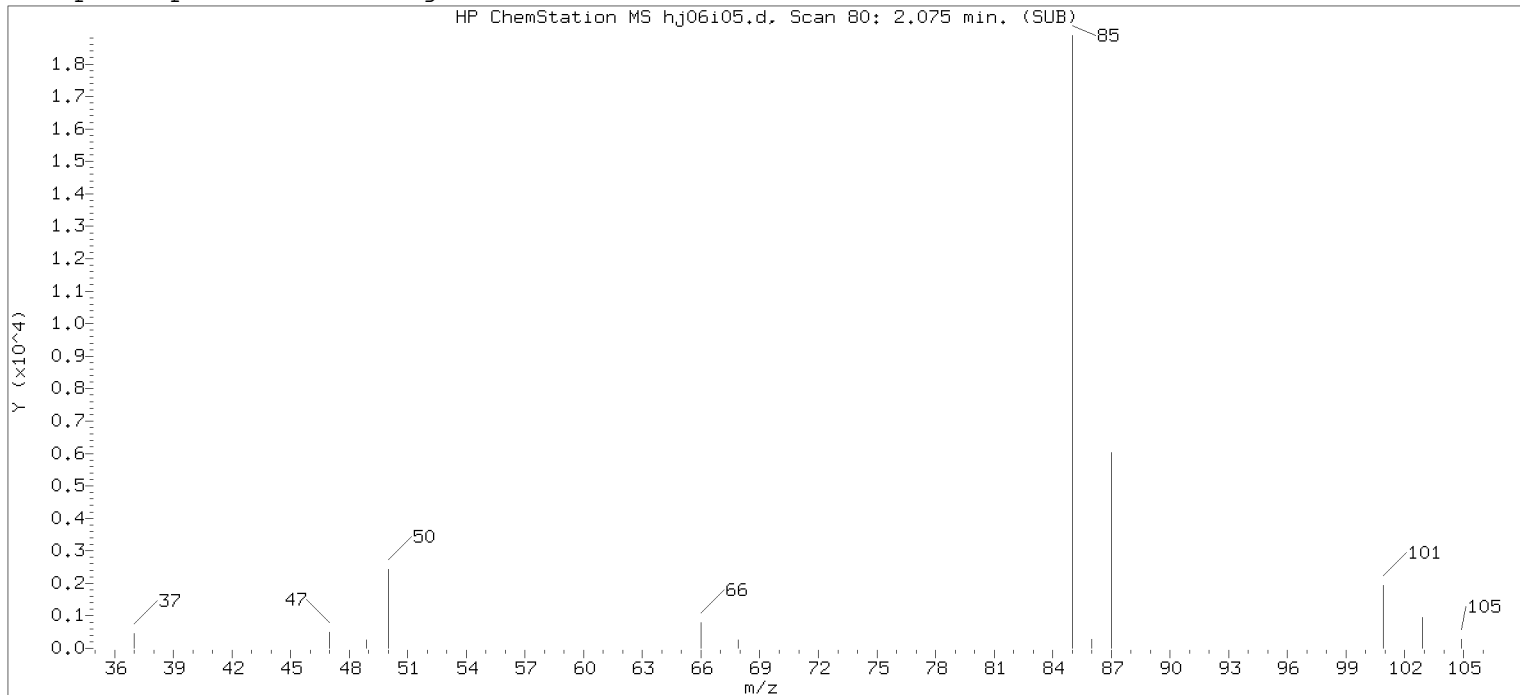
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Quant Ion : 85.00
Area (flag) : 75278M
On-Column Amount (ng) : 1.0093
Integration start scan : 51 Integration stop scan: 192
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

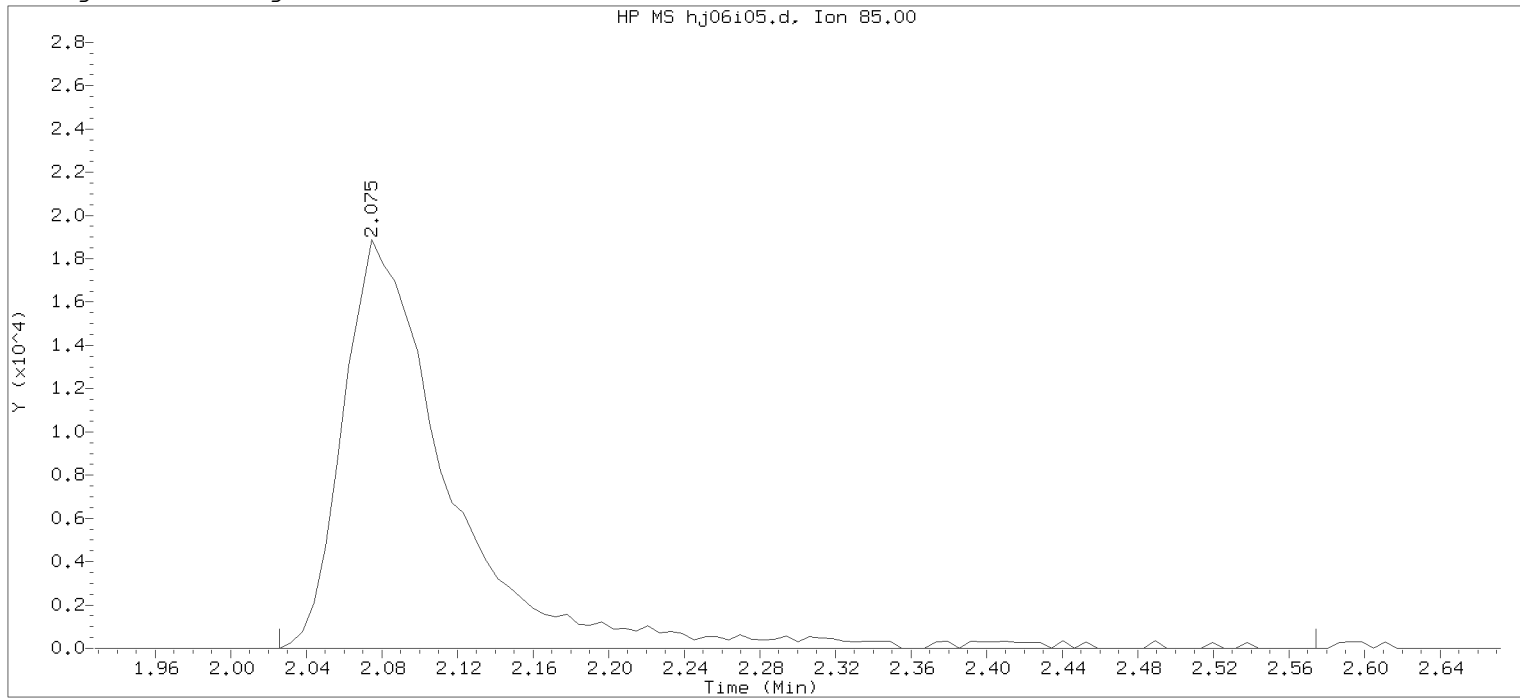
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

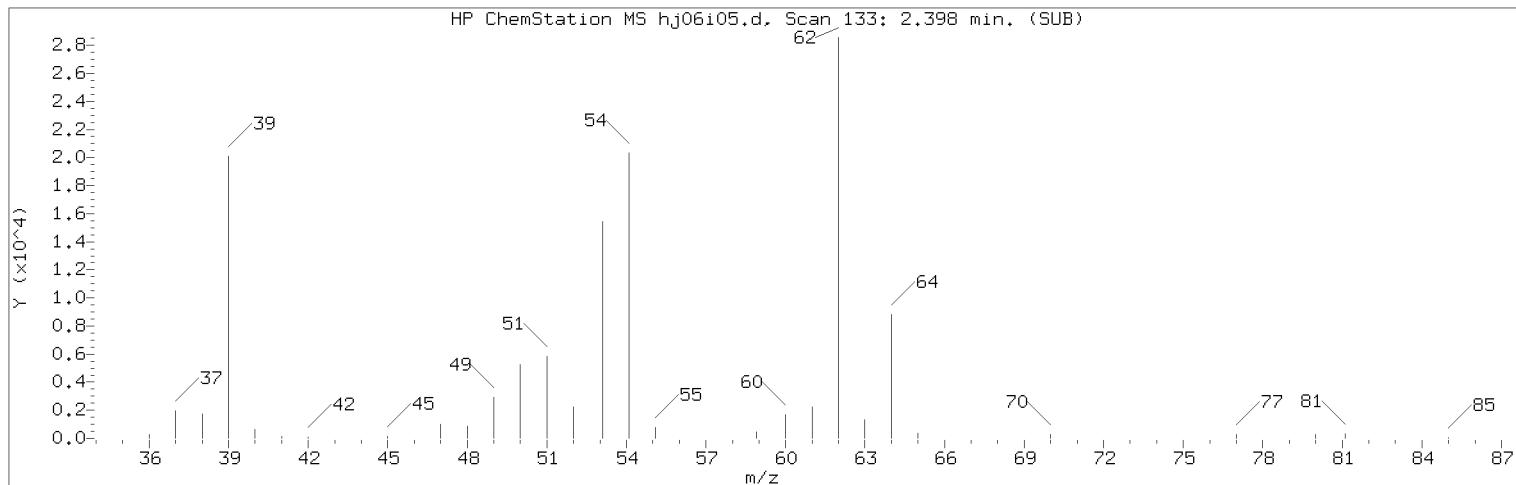
Sample Name: VSTD001

Lab Sample ID: VSTD001

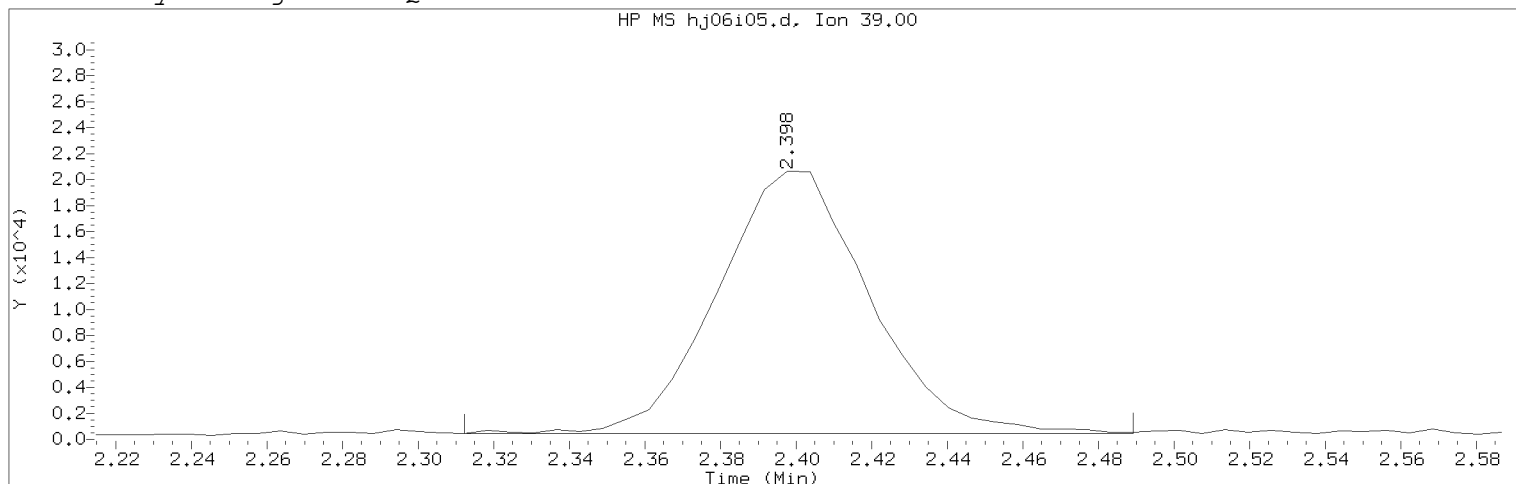
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 80	
Retention Time (minutes)	: 2.075	
Quant Ion	: 85.00	
Area	: 74859	
On-column Amount (ng)	: 1.0121	
Integration start scan	: 71	Integration stop scan: 161
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA564s Page 190 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 133	
Retention Time (minutes)	: 2.398	
Quant Ion	: 39.00	
Area (flag)	: 56225M	
On-Column Amount (ng)	: 1.0163	
Integration start scan	: 118	Integration stop scan: 147
Y at integration start	: 463	Y at integration end: 463

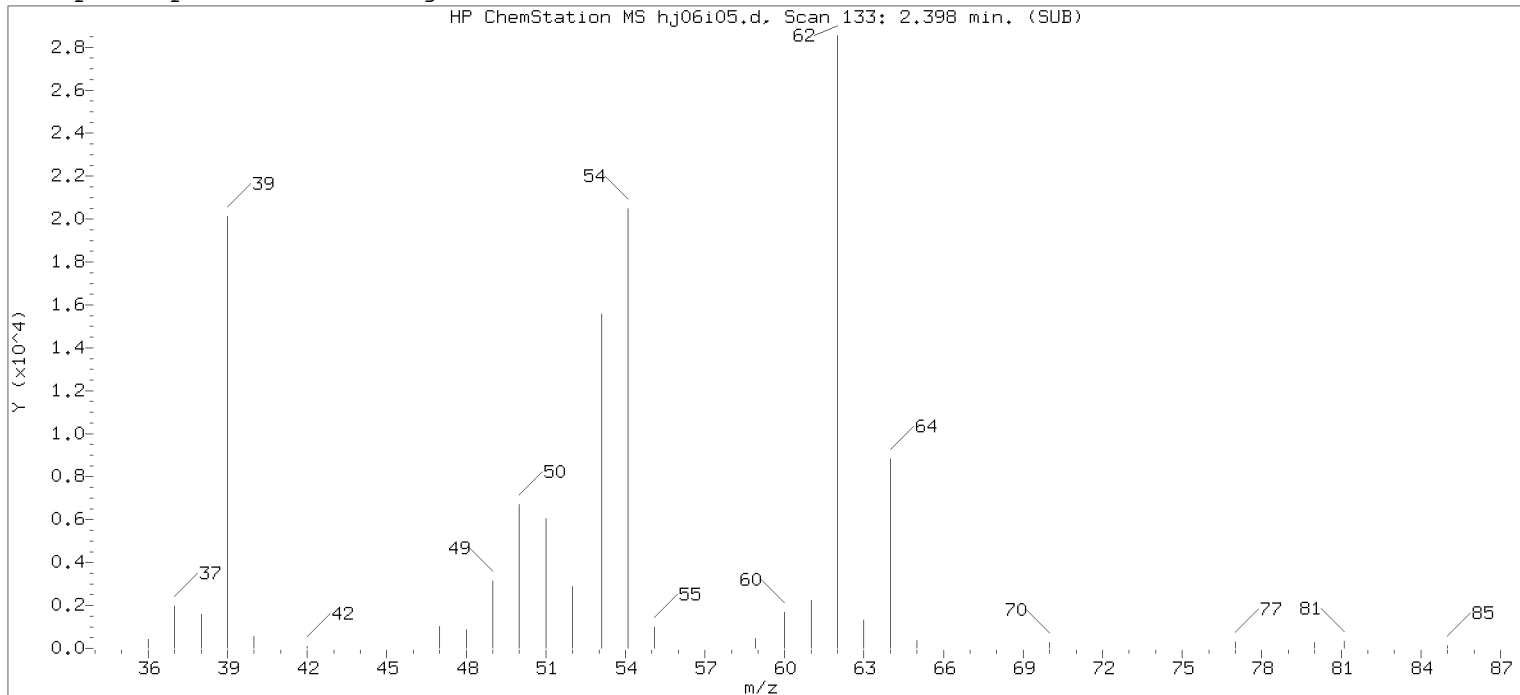
Reason for manual integration: improper integration

Analyst responsible for change:

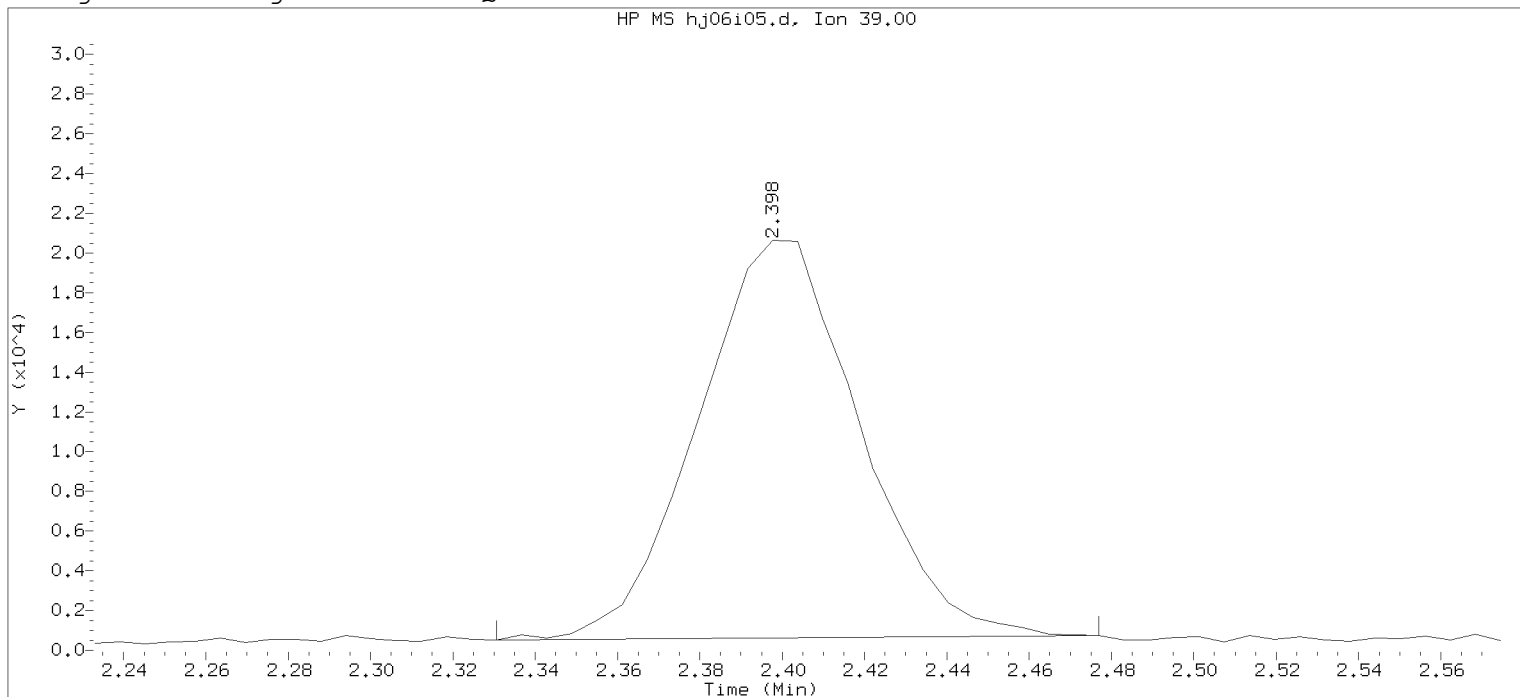
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 6

Compound Name : 1,3-Butadiene

Scan Number : 133

Retention Time (minutes): 2.398

Quant Ion : 39.00

Area : 54561

On-column Amount (ng) : 0.9985

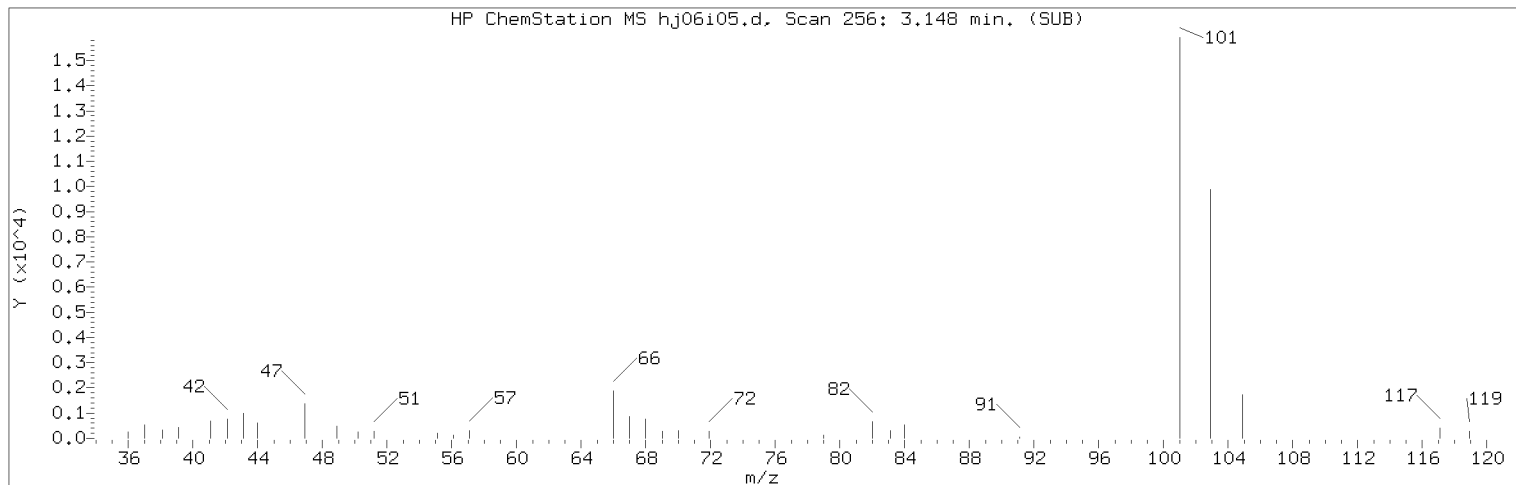
Integration start scan : 121 Integration stop scan: 145

Y at integration start : 515 Y at integration end: 741

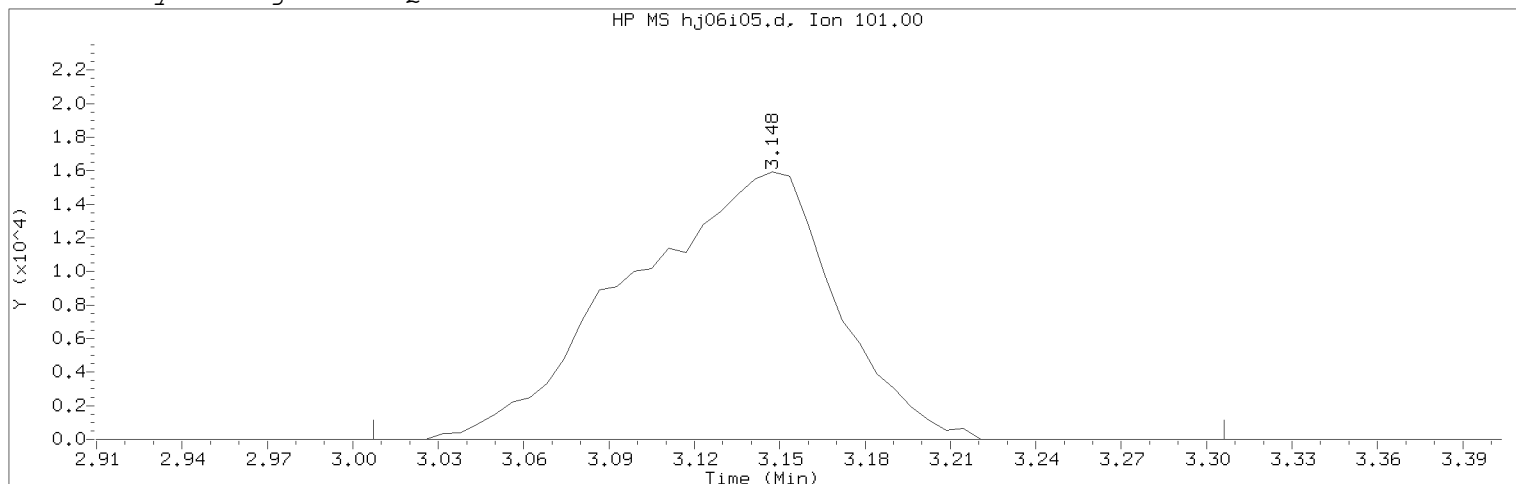
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RA664s Page 192 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

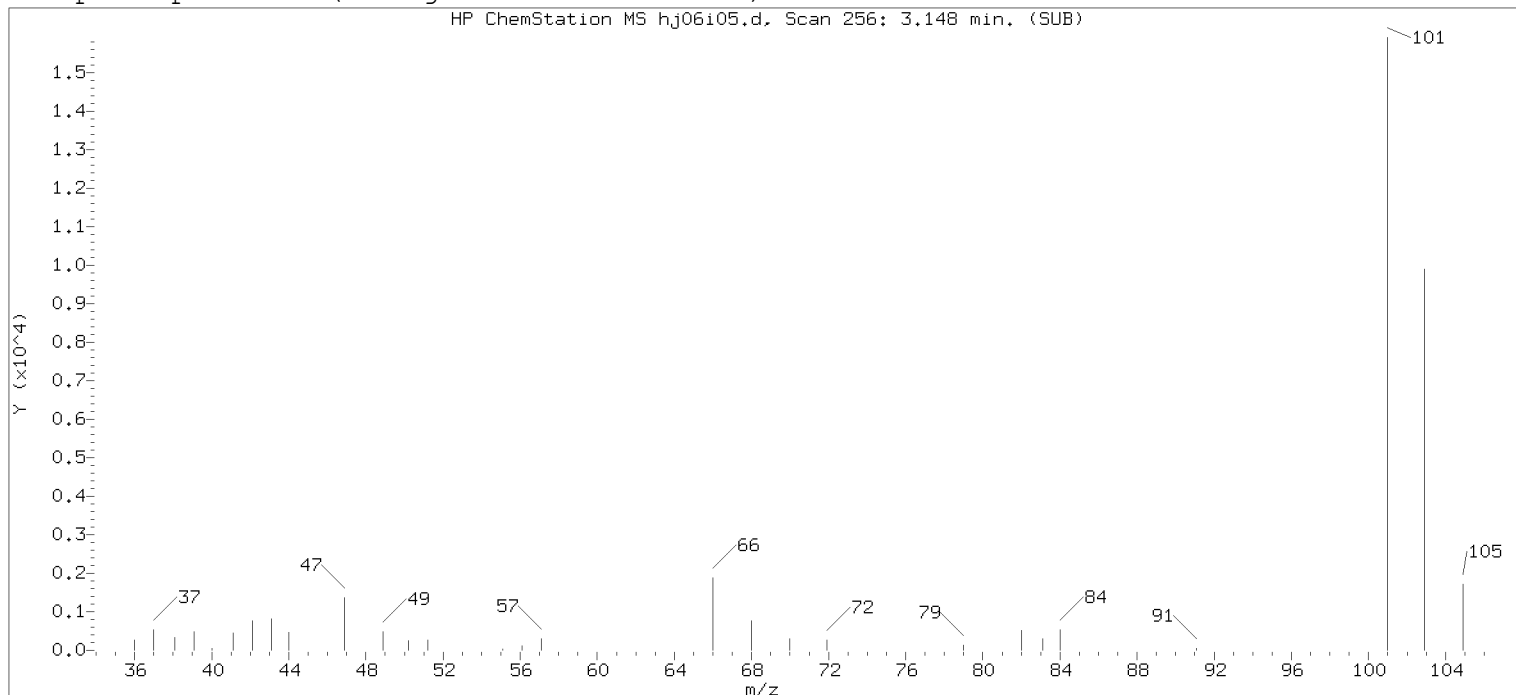
Compound Number	: 10	
Compound Name	: Trichlorofluoromethane	
Scan Number	: 256	
Retention Time (minutes)	: 3.148	
Quant Ion	: 101.00	
Area (flag)	: 79828M	
On-Column Amount (ng)	: 0.9988	
Integration start scan	: 232	Integration stop scan: 281
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

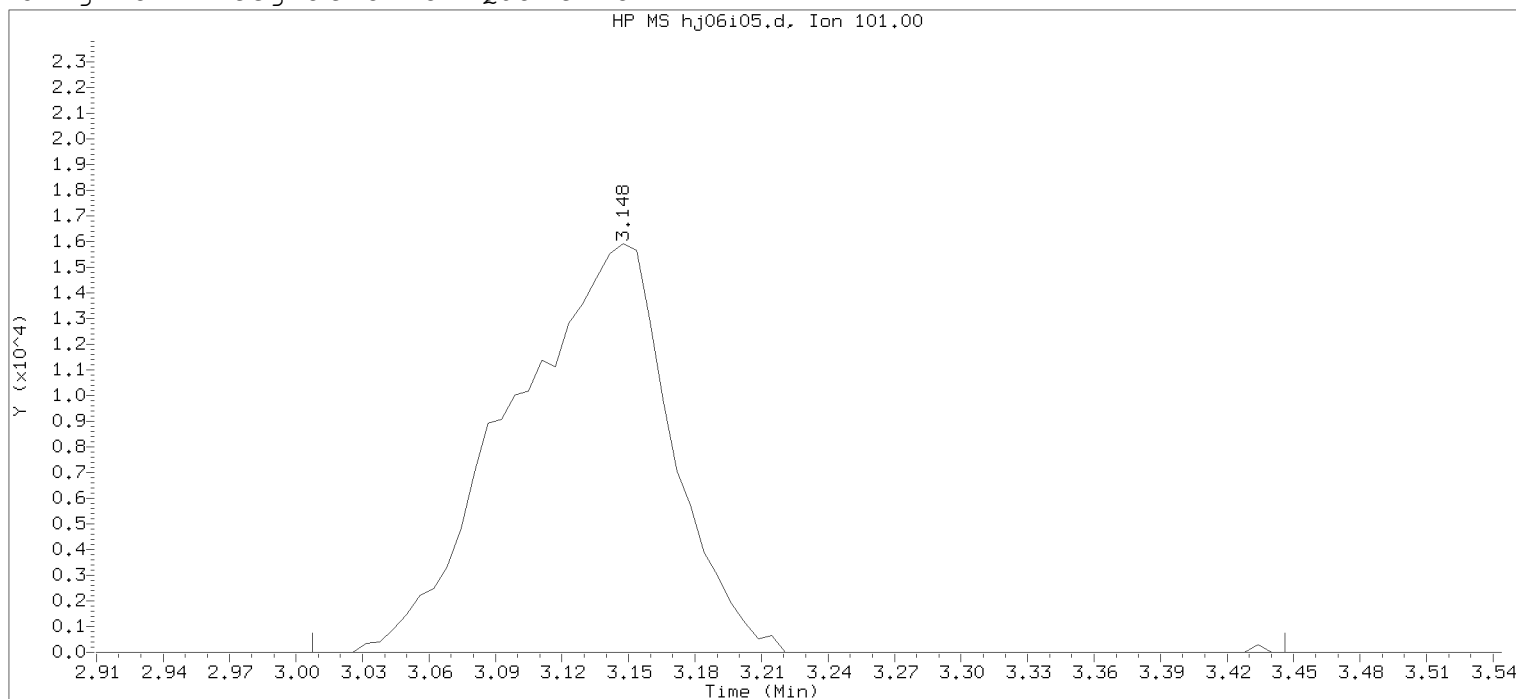
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 10

Compound Name : Trichlorofluoromethane

Scan Number : 256

Retention Time (minutes): 3.148

Quant Ion : 101.00

Area : 79941

On-column Amount (ng) : 0.9992

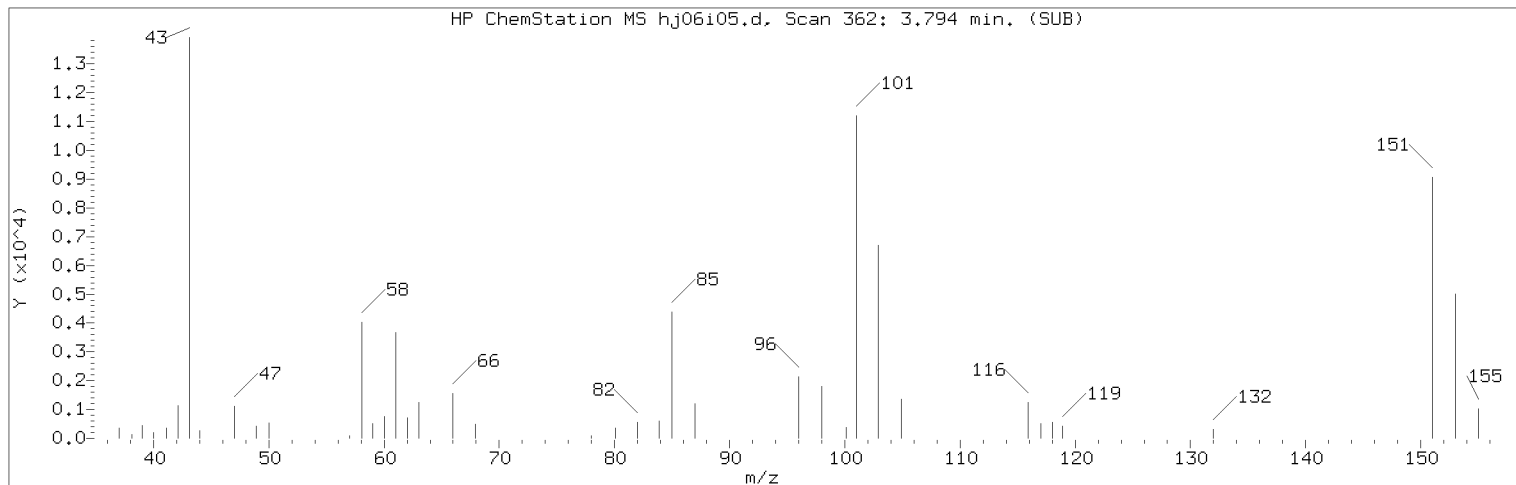
Integration start scan : 232 Integration stop scan: 304

Y at integration start : 0 Y at integration end: 0

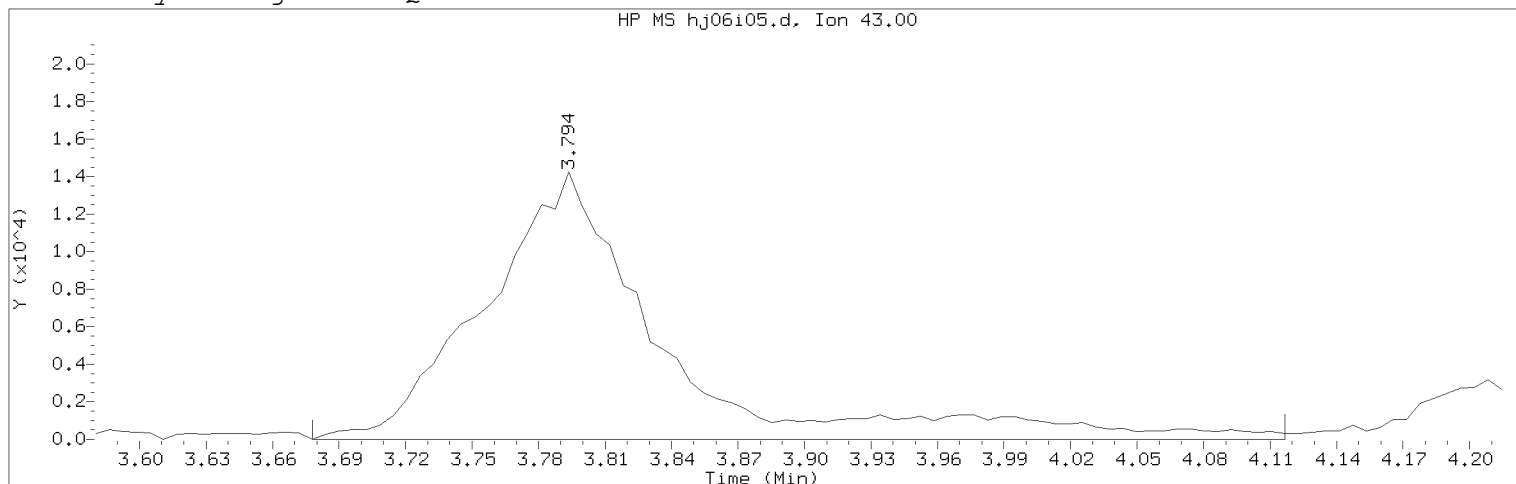
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature user RA64s Page 194 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area (flag) : 78581M
 On-Column Amount (ng) : 10.4277
 Integration start scan : 342
 Y at integration start : 0

Integration stop scan: 414
 Y at integration end: 0

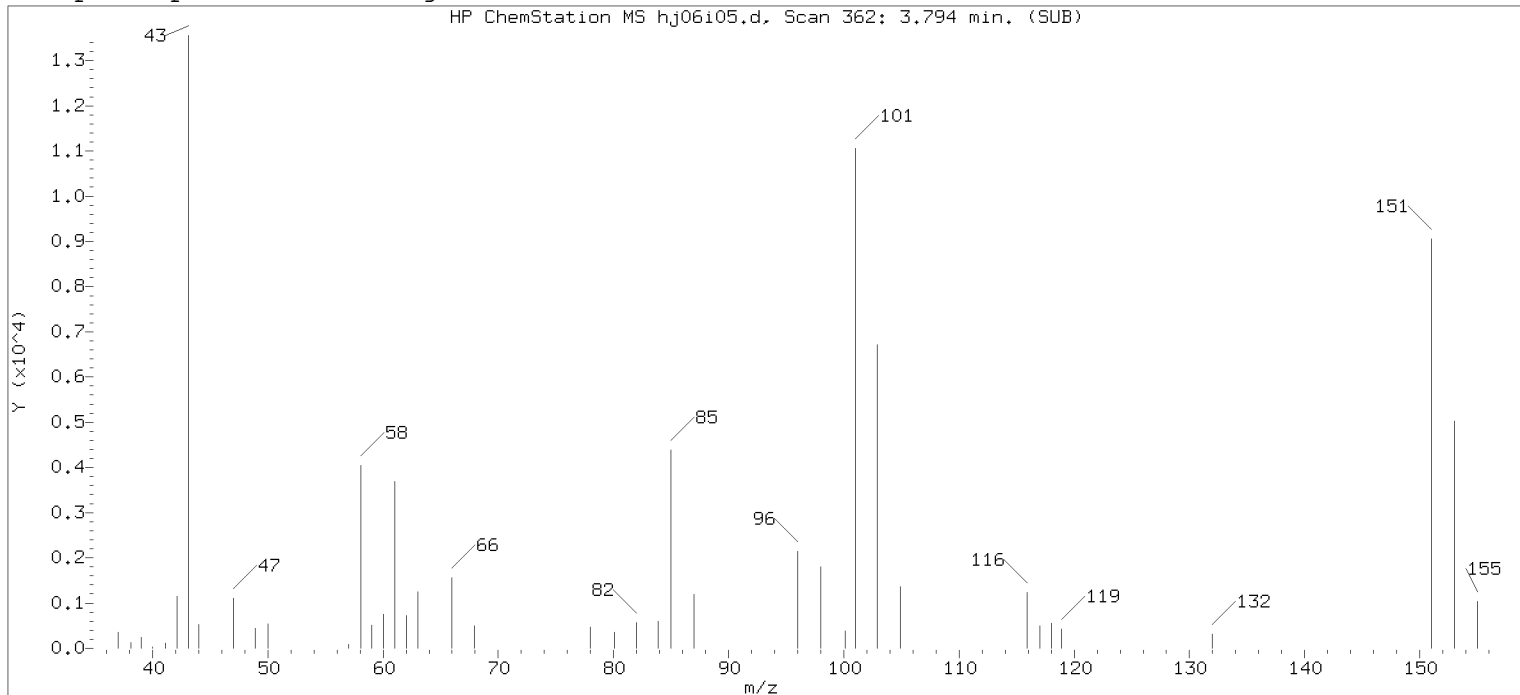
Reason for manual integration: improper integration

Analyst responsible for change:

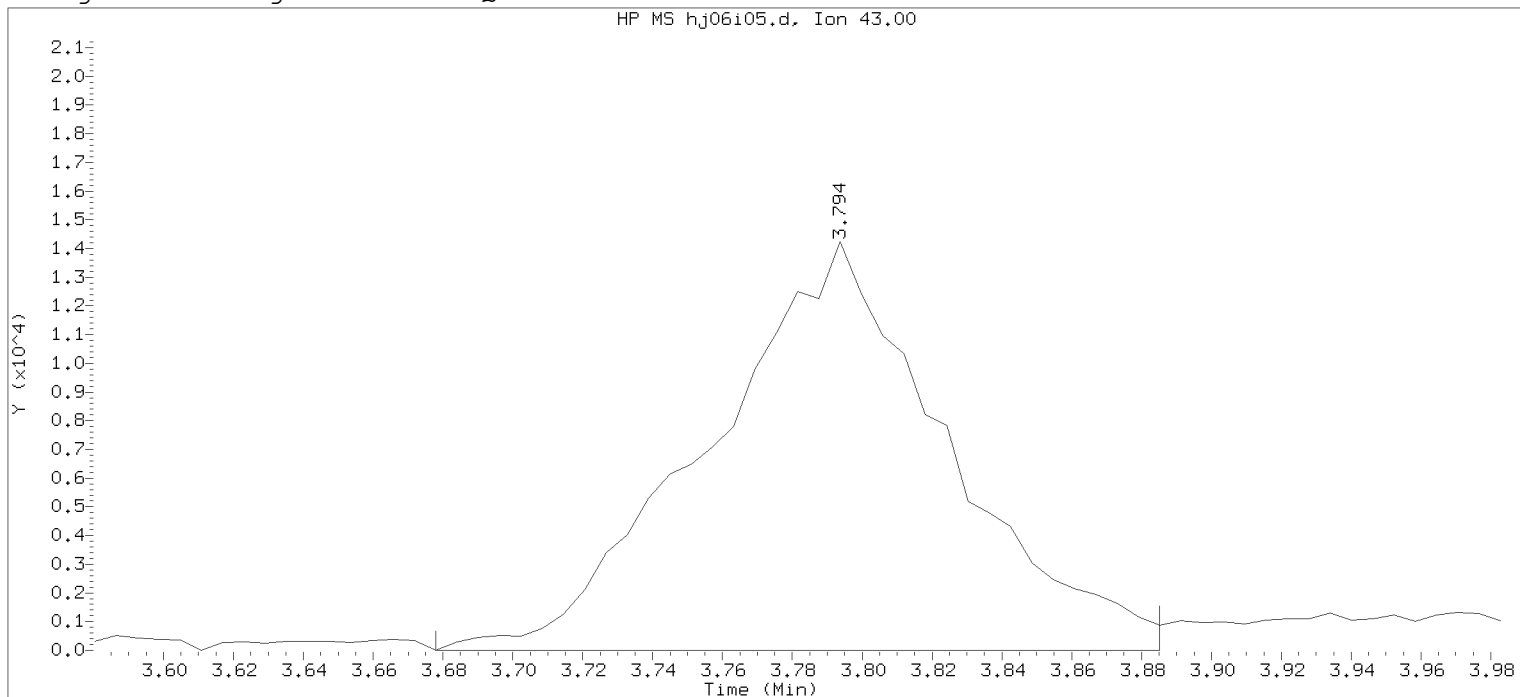
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:50.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: ms101251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

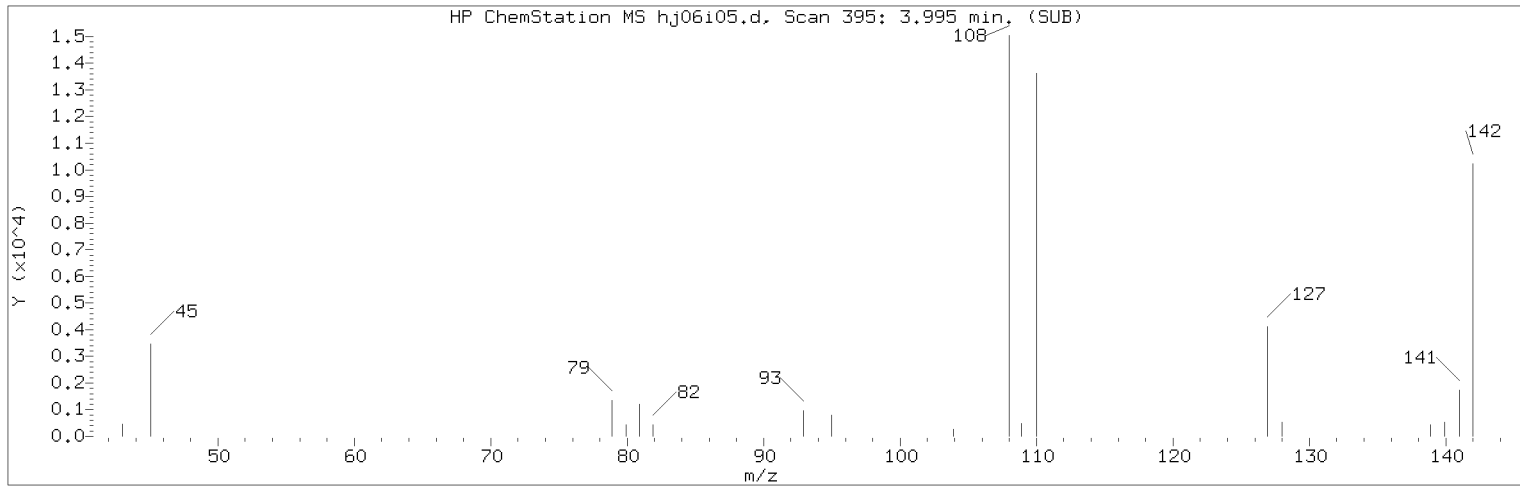
Lab Sample ID: VSTD001

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area : 66893
 On-column Amount (ng) : 8.8758
 Integration start scan : 342
 Y at integration start : 0

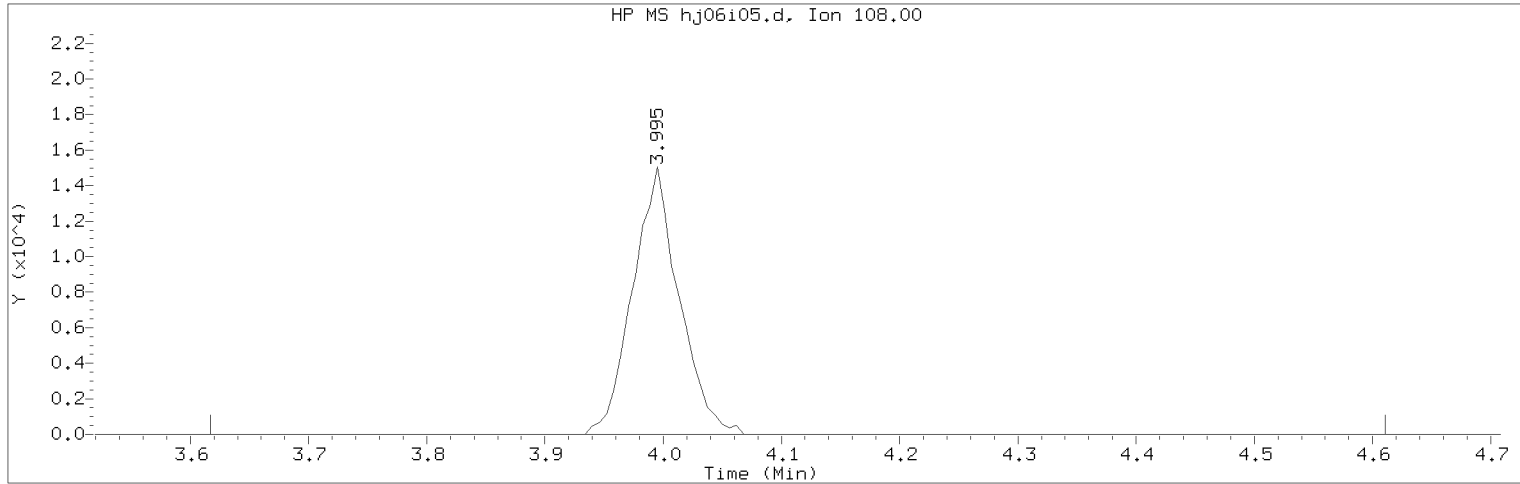
Integration stop scan: 376
 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
 Target 3.5 esignature user RA664s Page 196 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

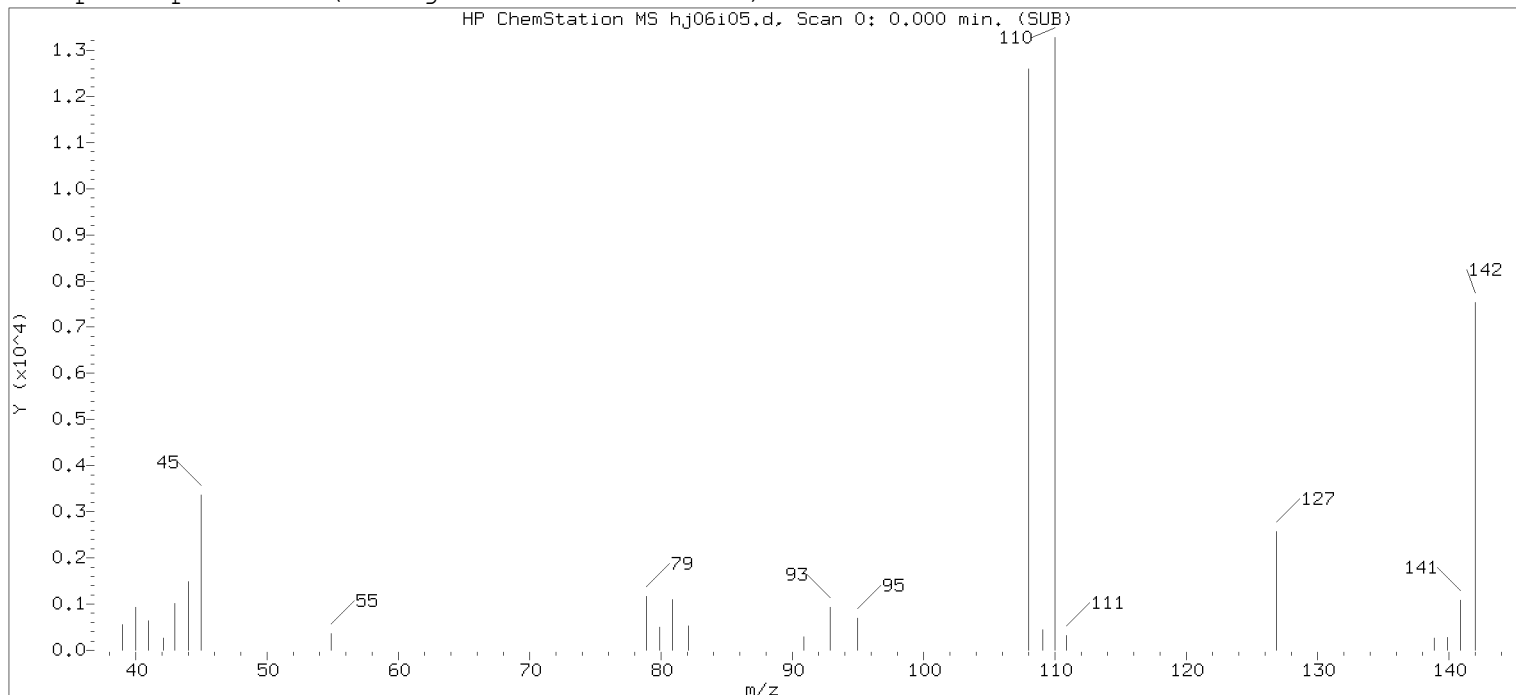
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 395	
Retention Time (minutes)	: 3.995	
Quant Ion	: 108.00	
Area (flag)	: 40968M	
On-Column Amount (ng)	: 0.9660	
Integration start scan	: 332	Integration stop scan: 495
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

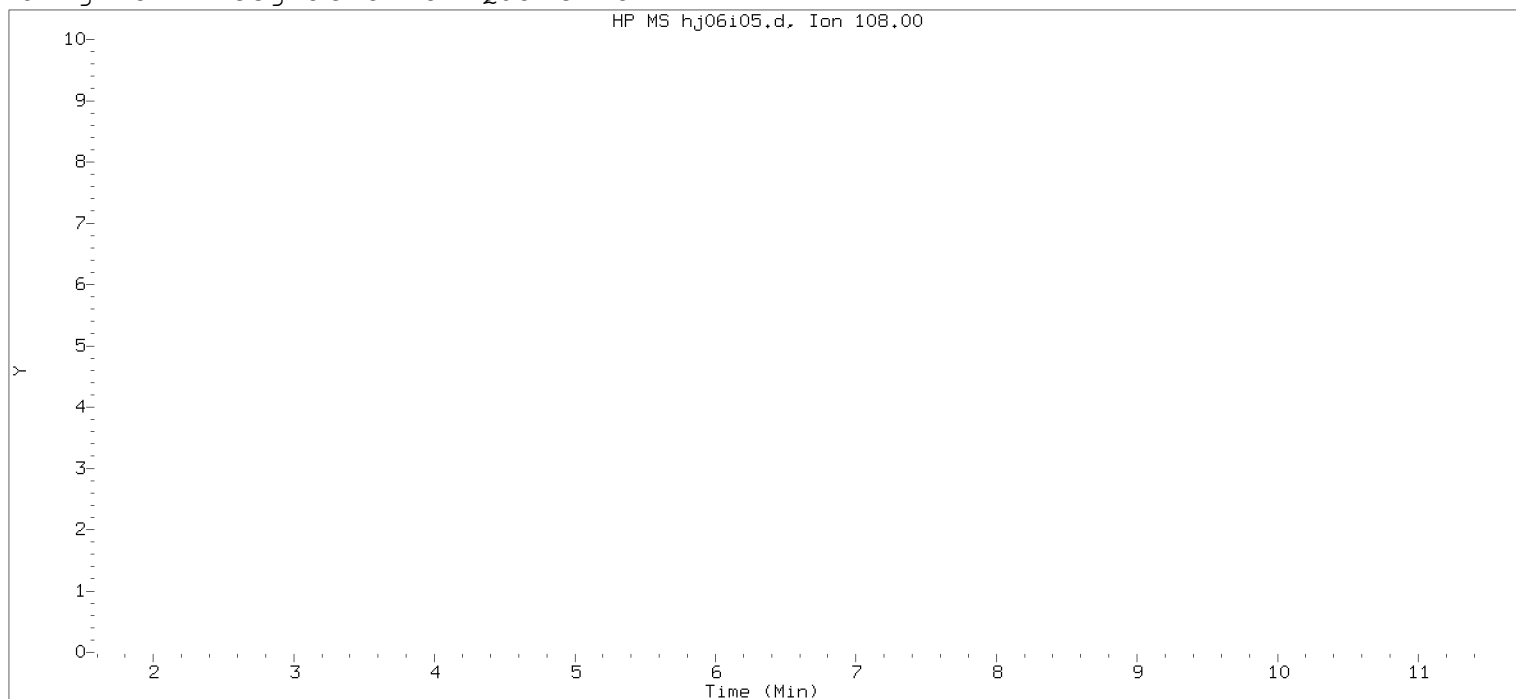
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

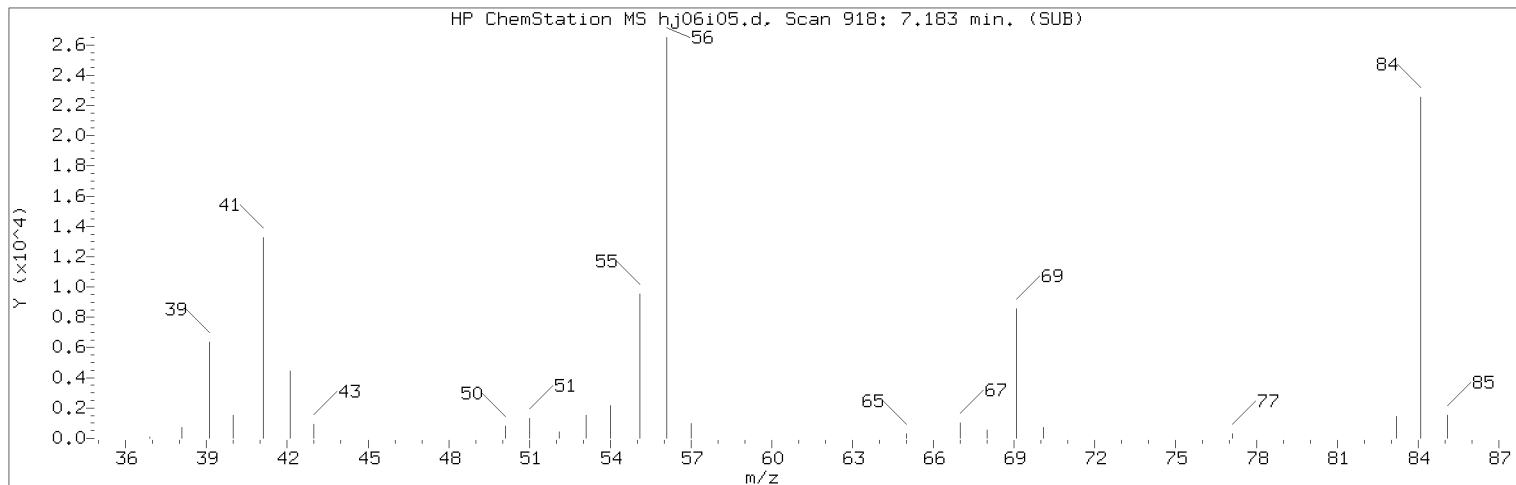
Sample Name: VSTD001

Lab Sample ID: VSTD001

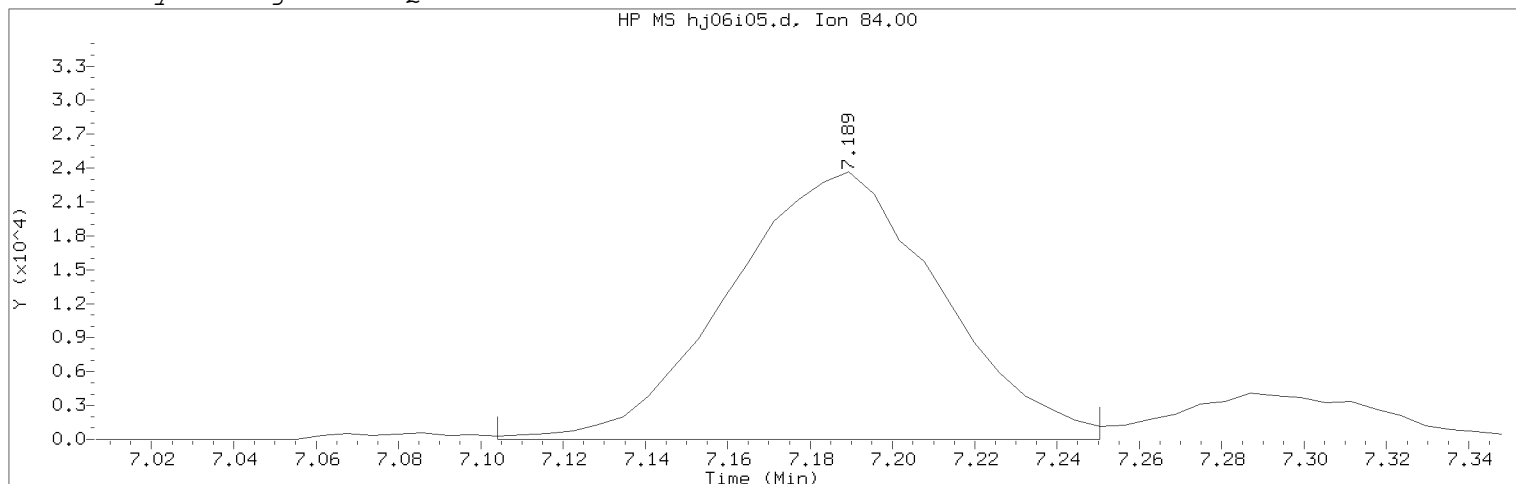
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA664s Page 198 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

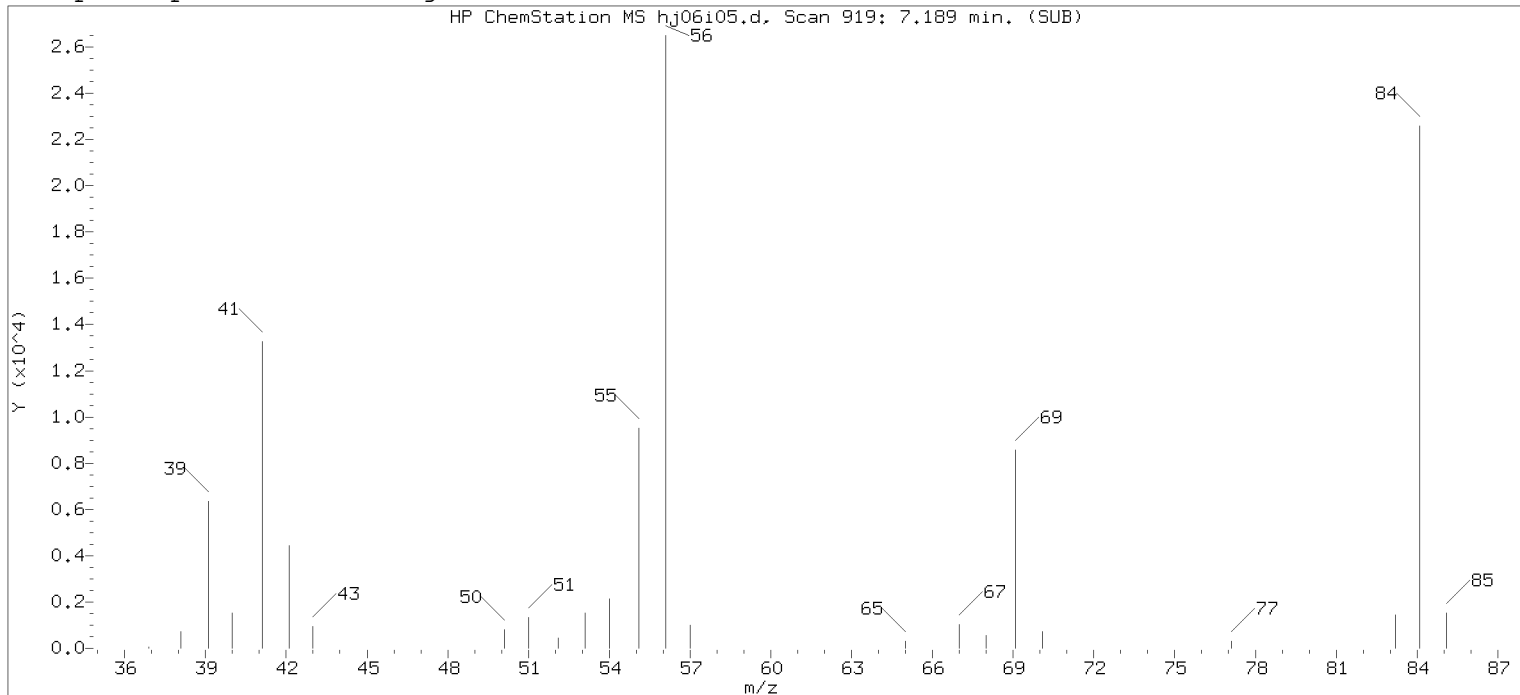
Compound Number	: 53	
Compound Name	: Cyclohexane	
Scan Number	: 919	
Retention Time (minutes)	: 7.189	
Quant Ion	: 84.00	
Area (flag)	: 84186M	
On-Column Amount (ng)	: 1.0510	
Integration start scan	: 904	Integration stop scan: 928
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

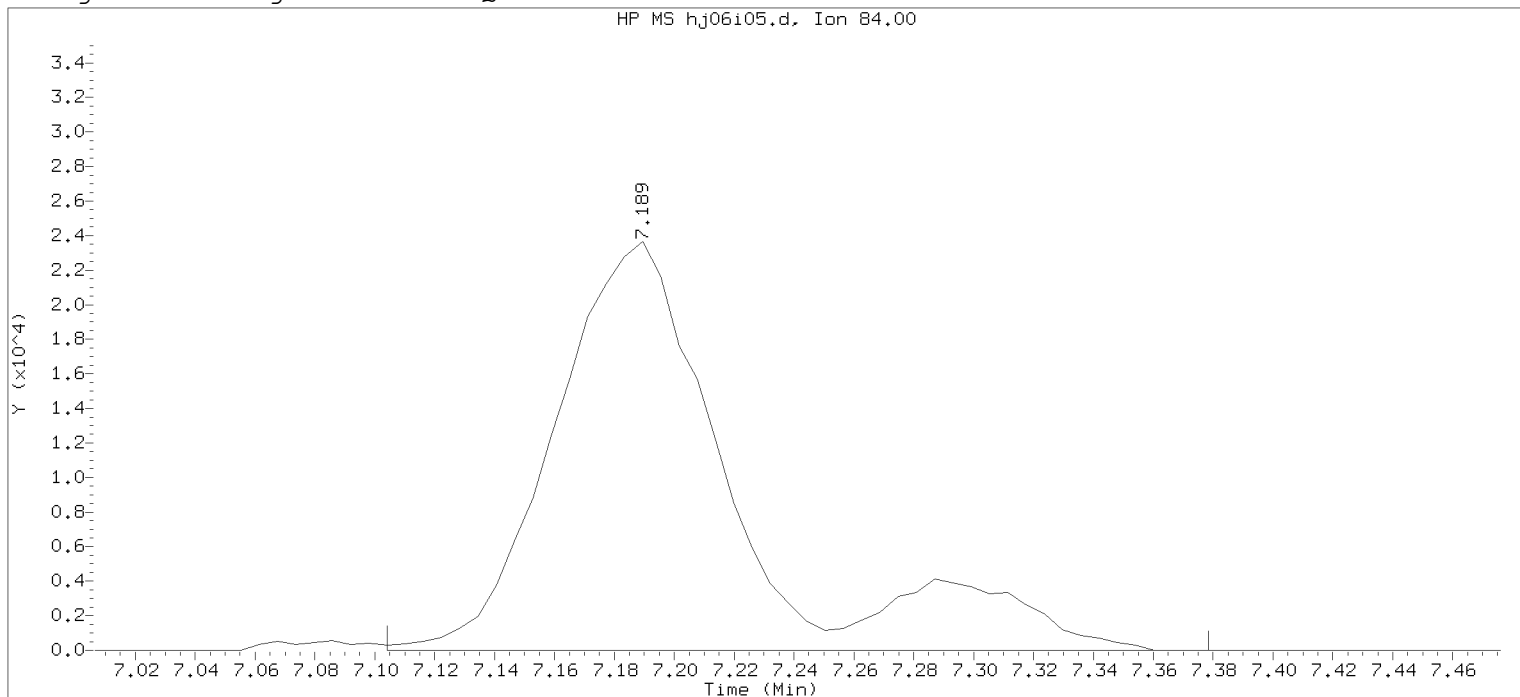
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

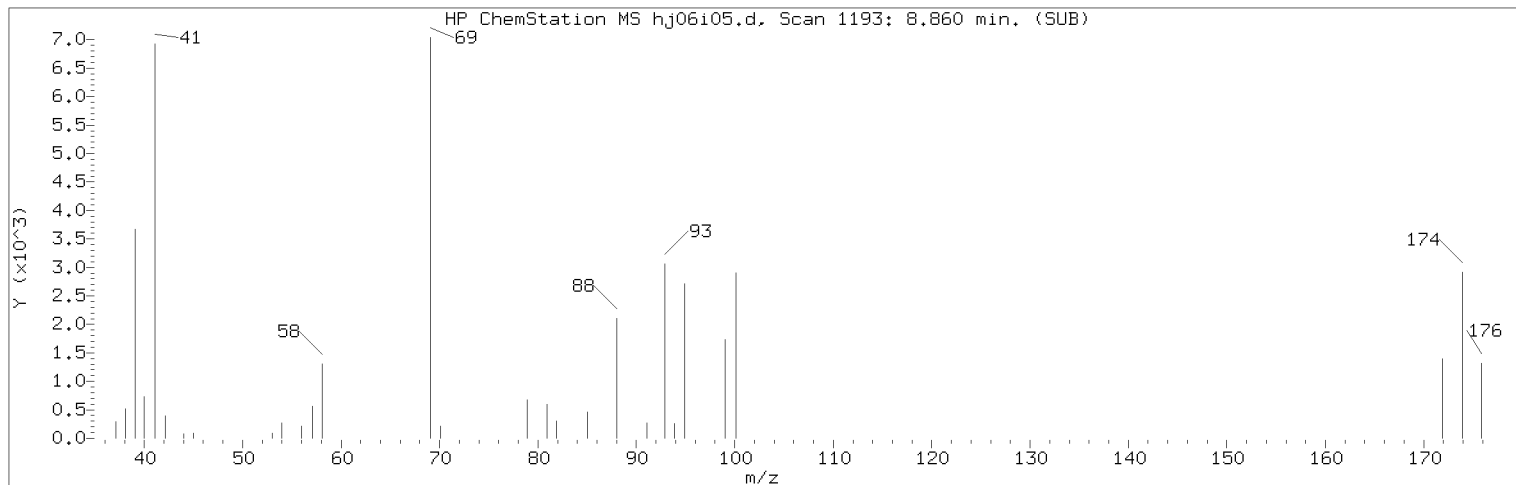
Sample Name: VSTD001

Lab Sample ID: VSTD001

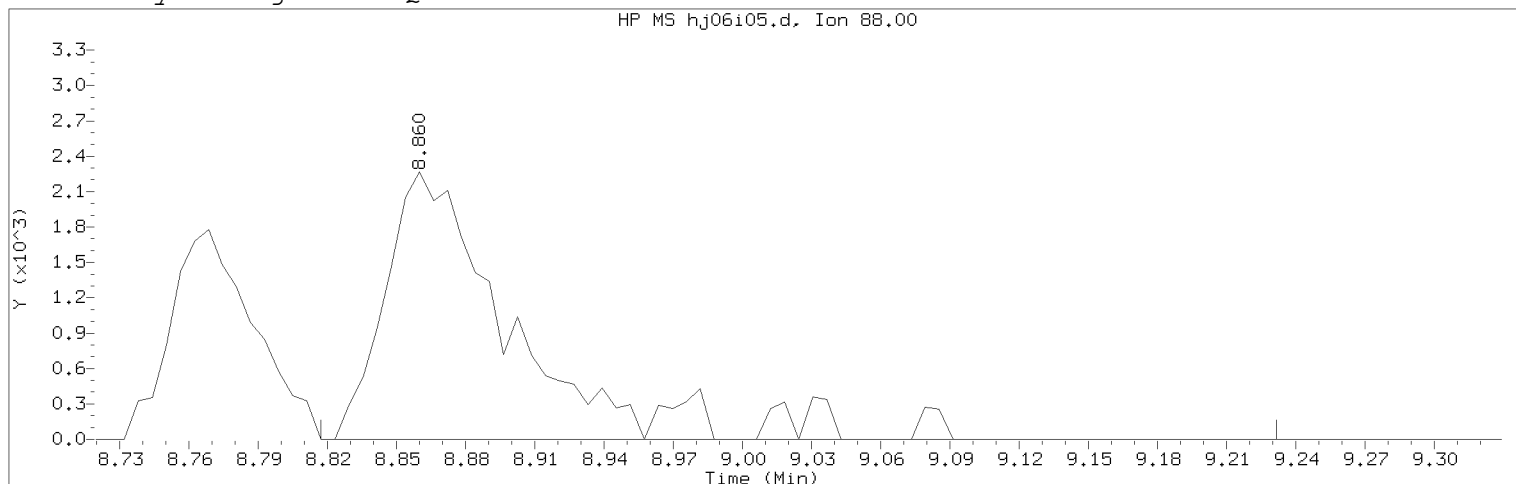
Compound Number	: 53	
Compound Name	: Cyclohexane	
Scan Number	: 919	
Retention Time (minutes)	: 7.189	
Quant Ion	: 84.00	
Area	: 98090	
On-column Amount (ng)	: 1.1949	
Integration start scan	: 904	Integration stop scan: 949
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 200 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

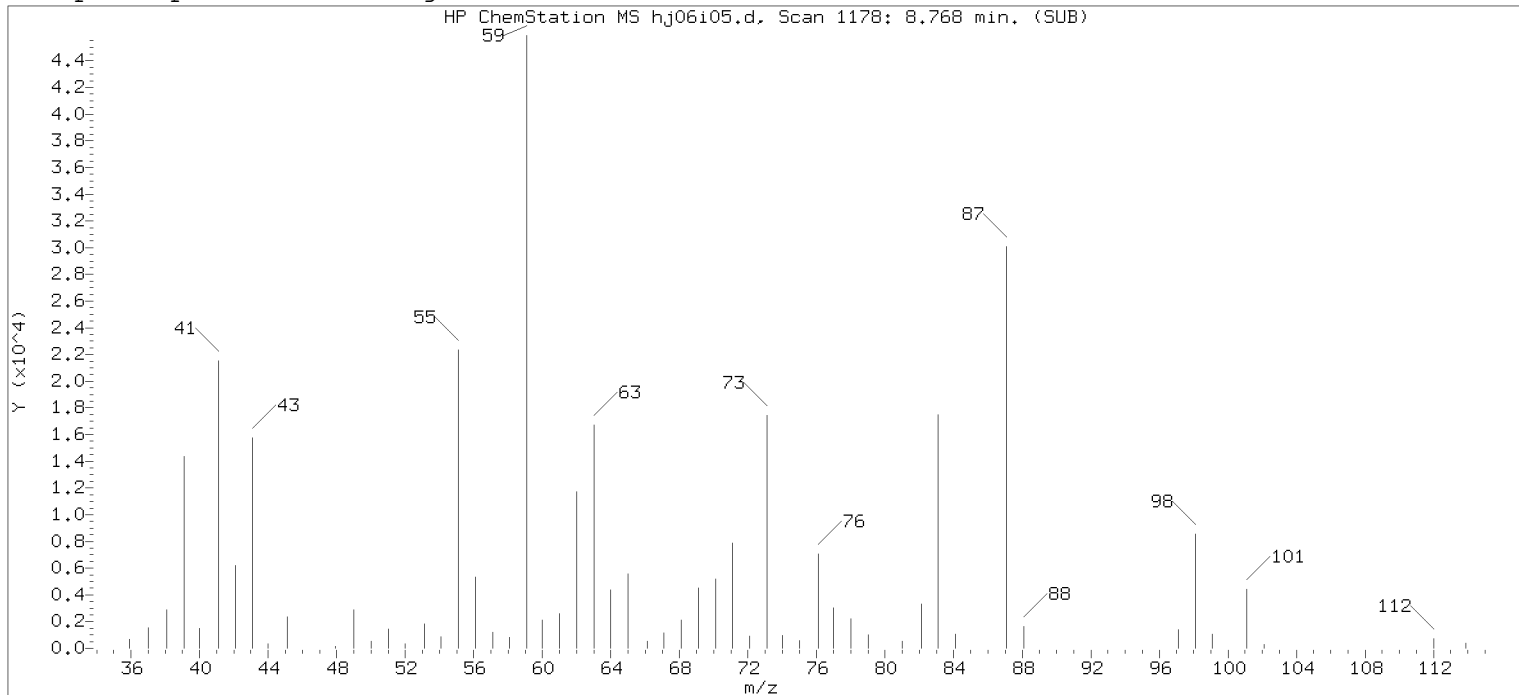
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 8963M	
On-Column Amount (ng)	: 50.8734	
Integration start scan	: 1185	Integration stop scan: 1253
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

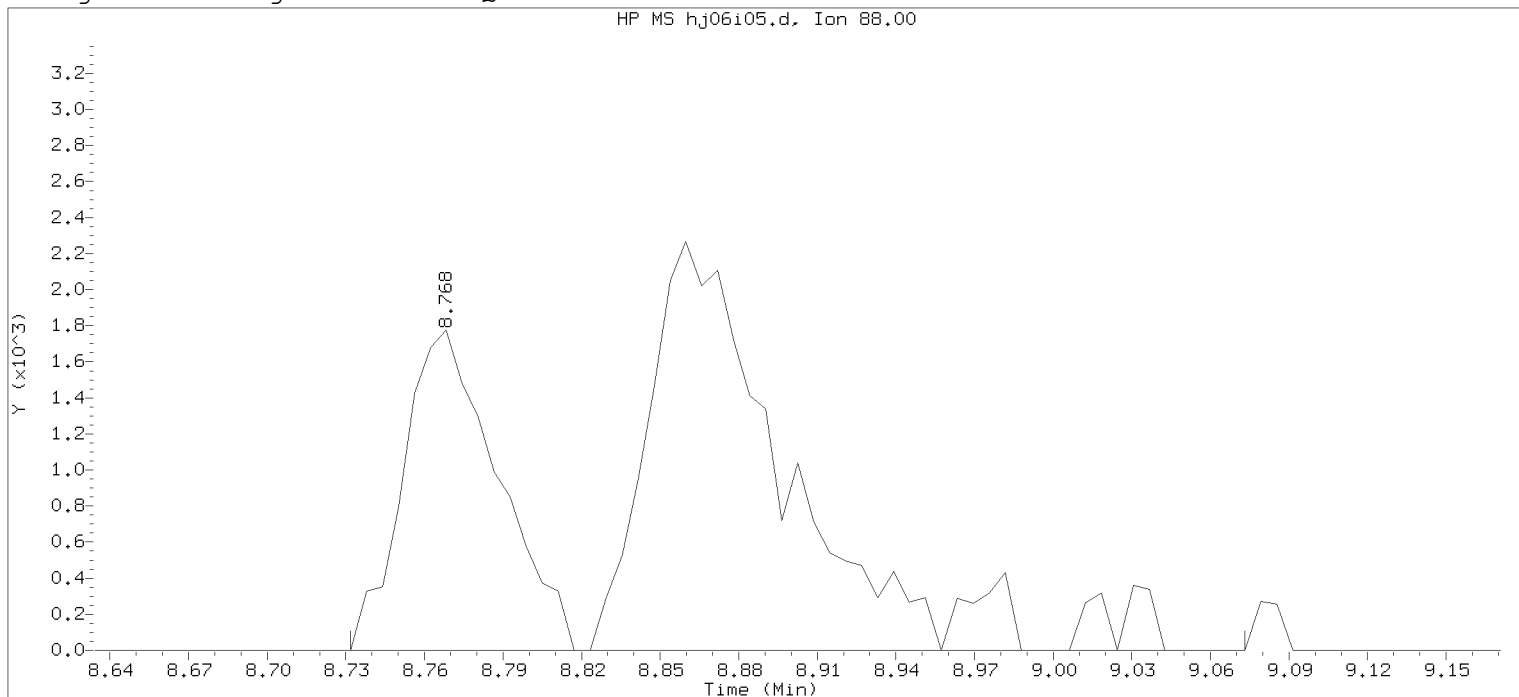
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

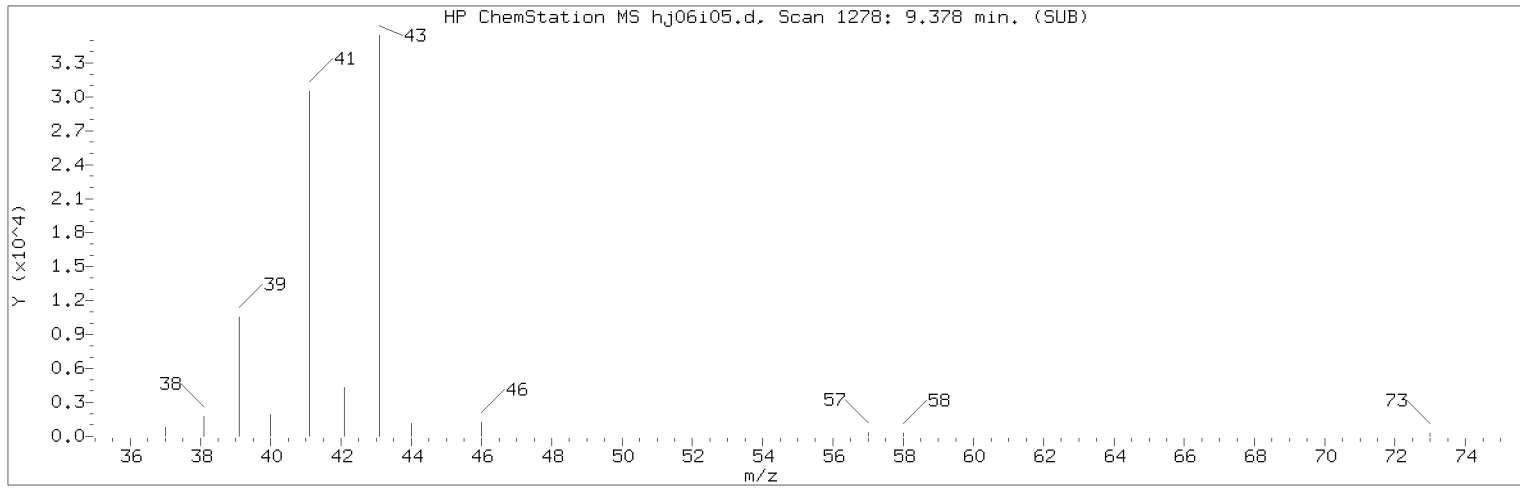
Sample Name: VSTD001

Lab Sample ID: VSTD001

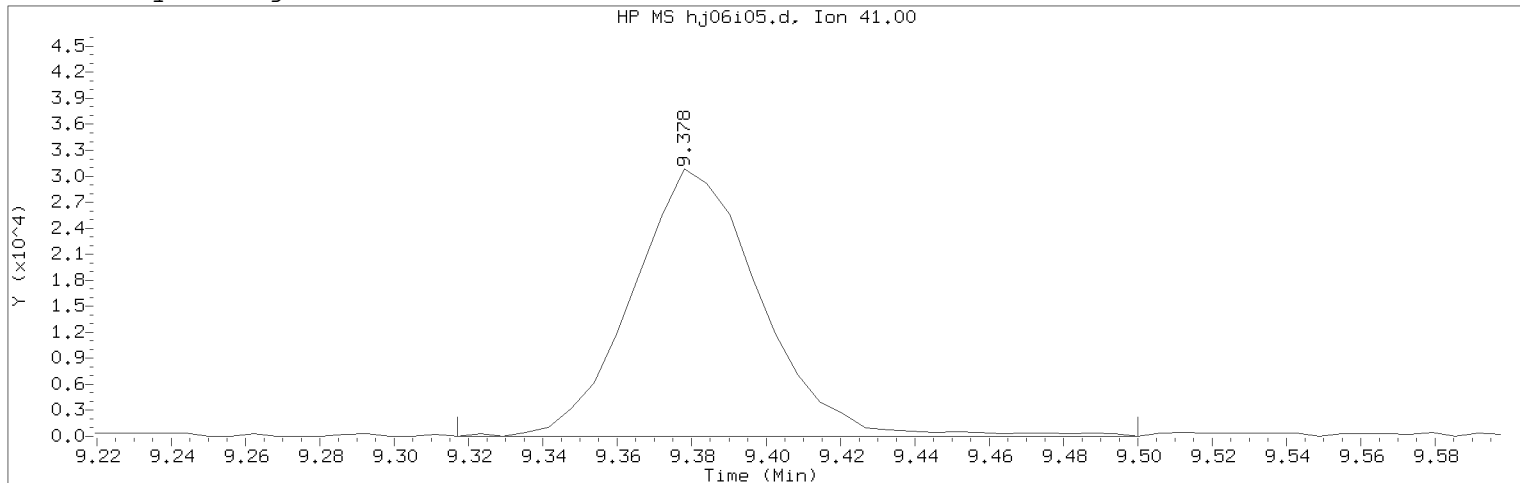
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1178	
Retention Time (minutes)	: 8.768	
Quant Ion	: 88.00	
Area	: 13253	
On-column Amount (ng)	: 87.9916	
Integration start scan	: 1171	Integration stop scan: 1227
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 202 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

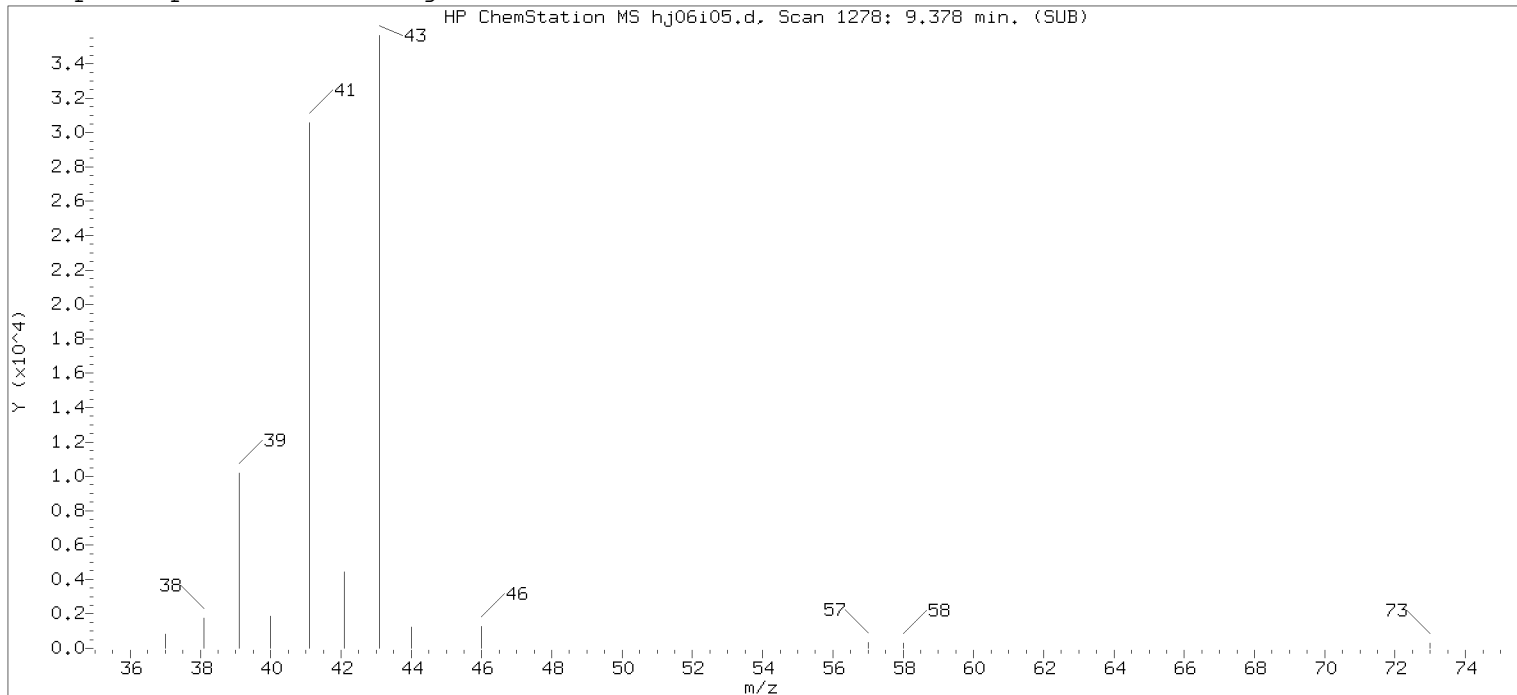
Compound Number : 77
Compound Name : 2-Nitropropane
Scan Number : 1278
Retention Time (minutes): 9.378
Quant Ion : 41.00
Area (flag) : 73855M
On-Column Amount (ng) : 9.6830
Integration start scan : 1267 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

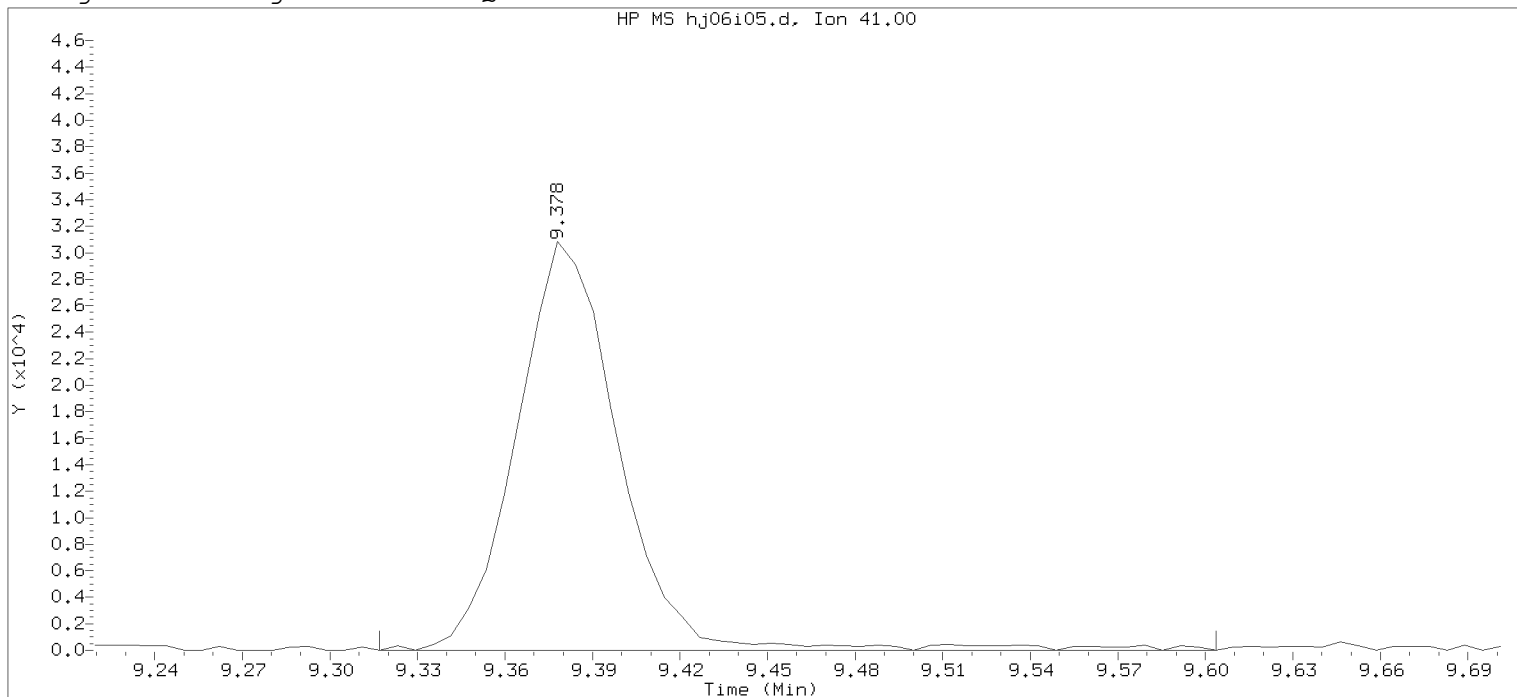
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

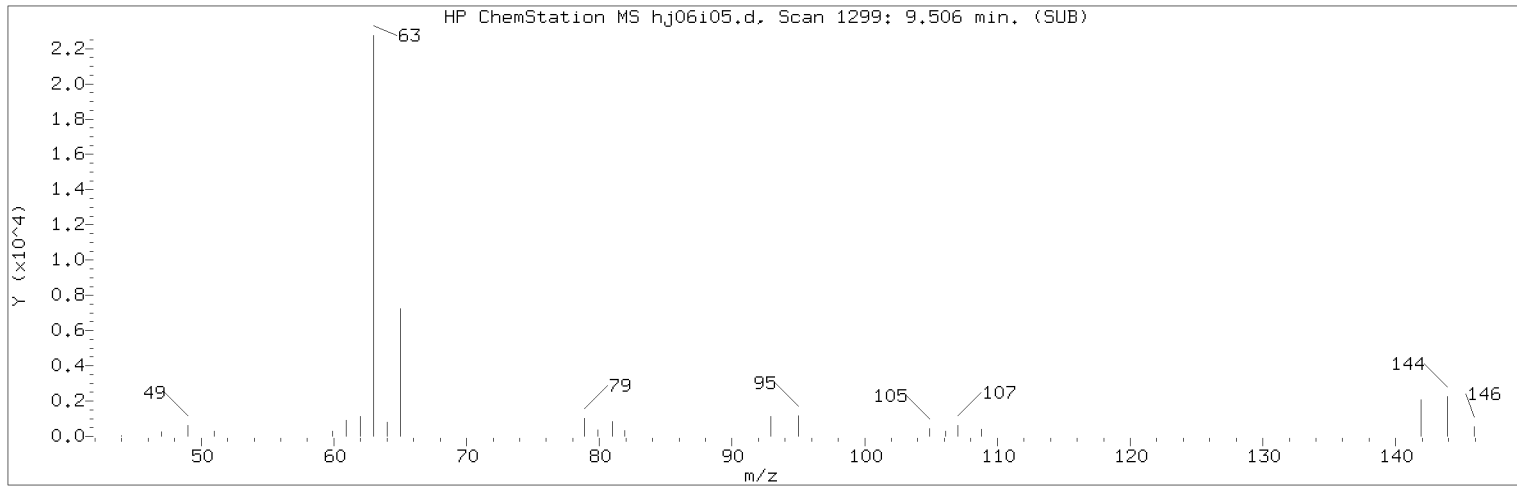
Sample Name: VSTD001

Lab Sample ID: VSTD001

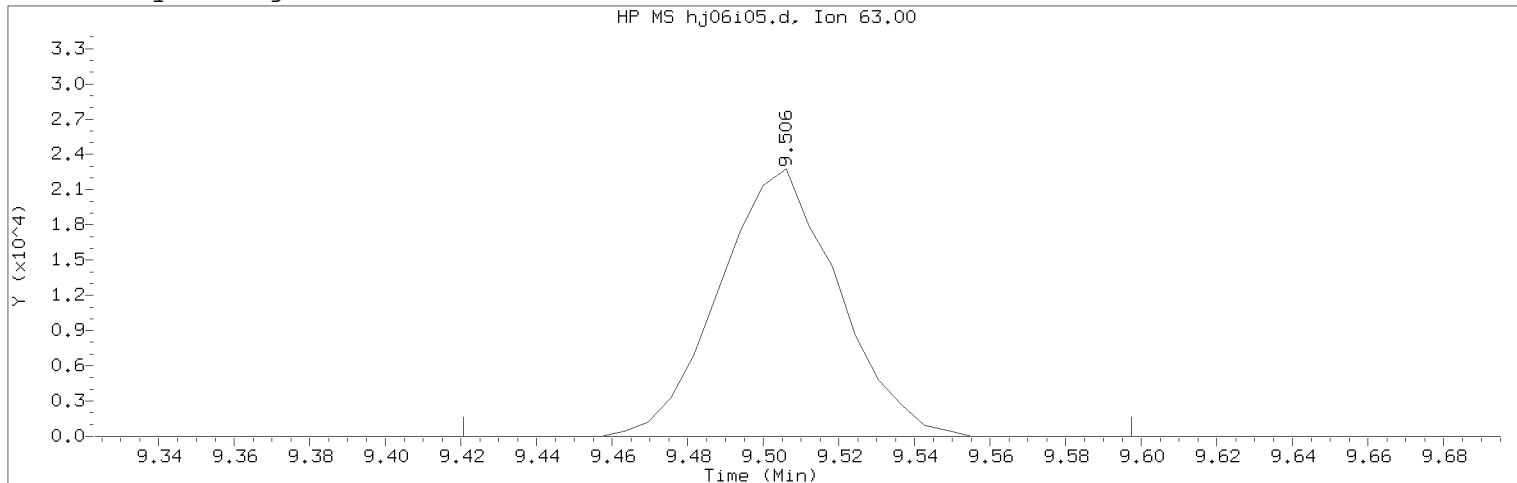
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 75580	
On-column Amount (ng)	: 9.7682	
Integration start scan	: 1267	Integration stop scan: 1314
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 204 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

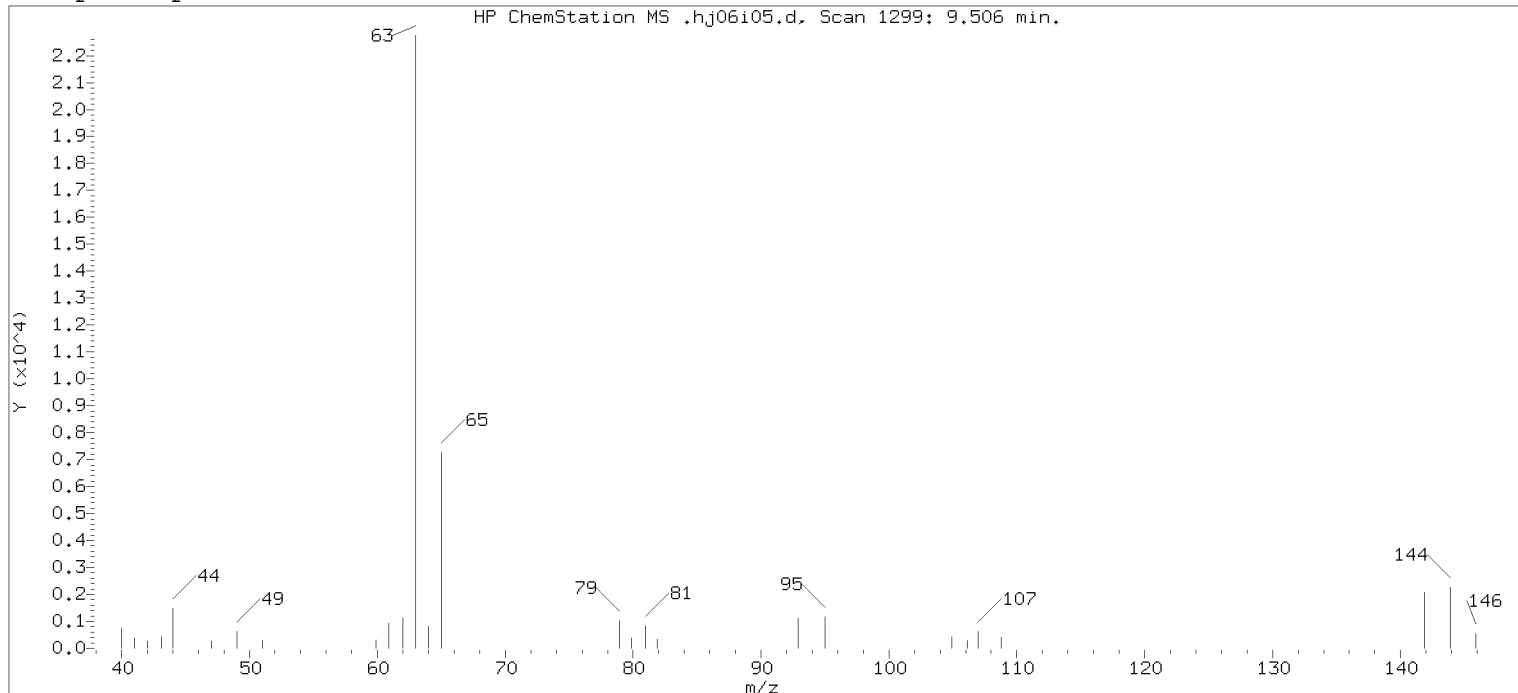
Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 49514M	
On-Column Amount (ng)	: 0.9838	
Integration start scan	: 1284	Integration stop scan: 1313
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

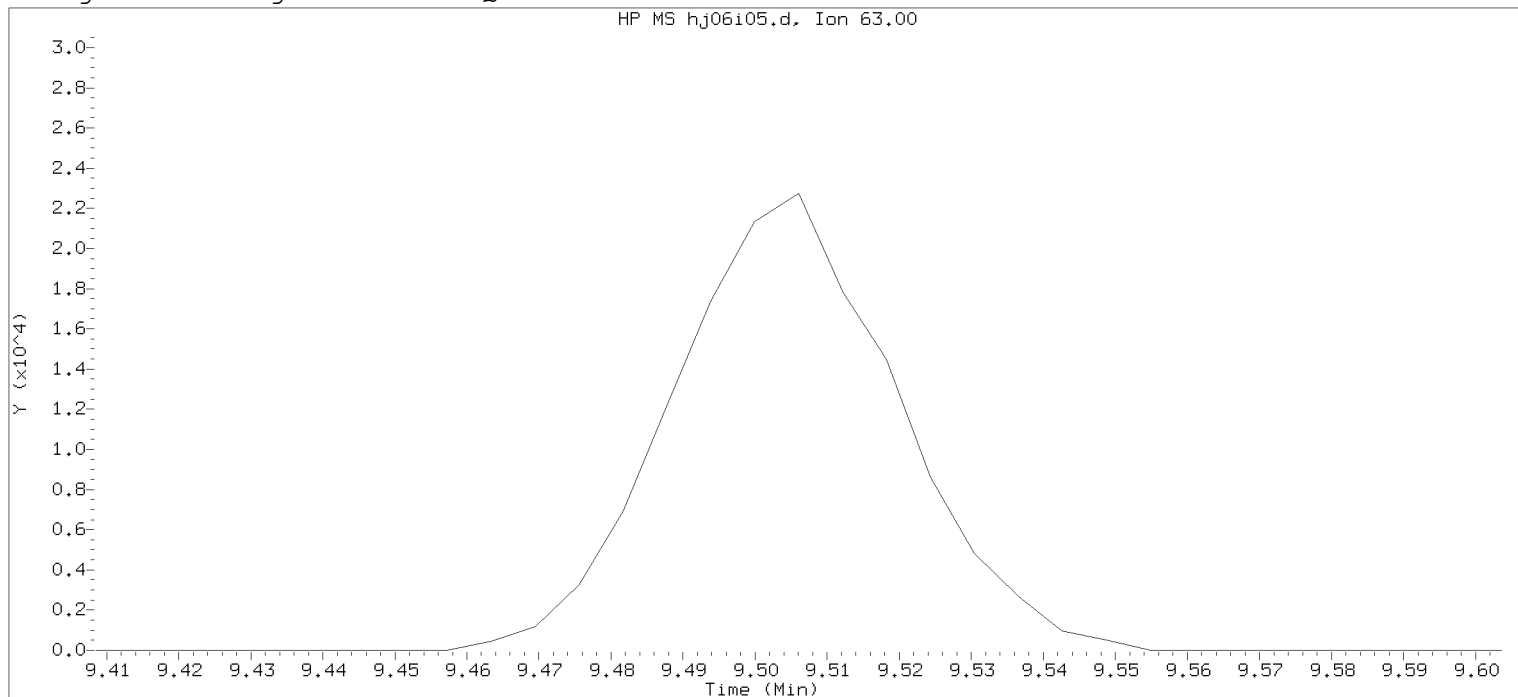
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

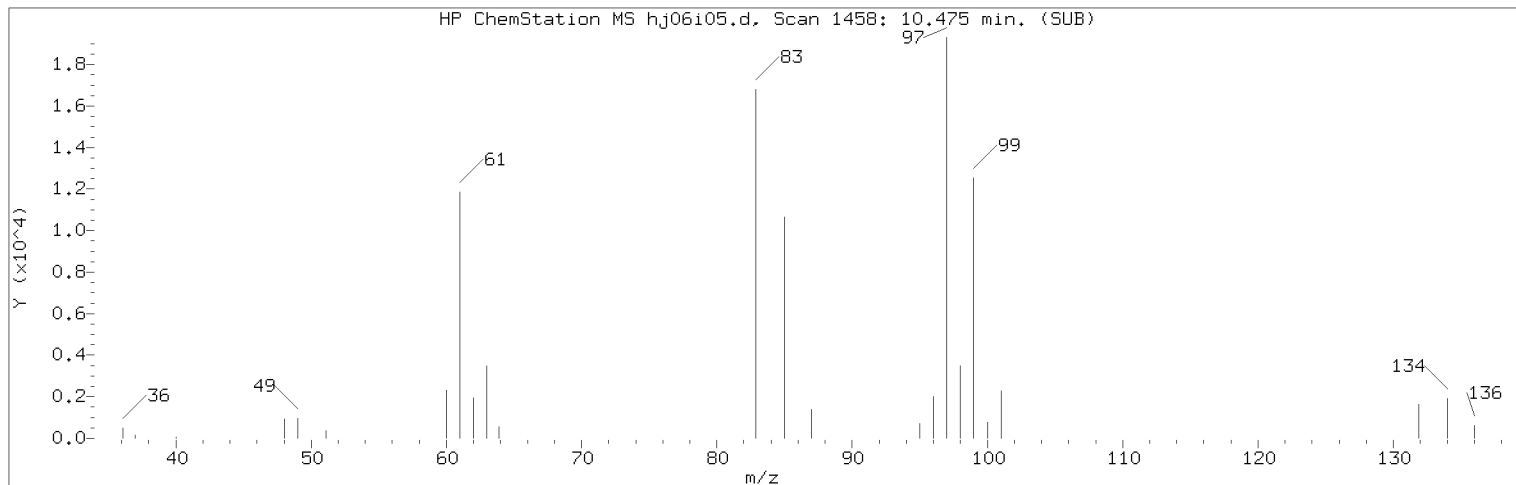
Sample Name: VSTD001

Lab Sample ID: VSTD001

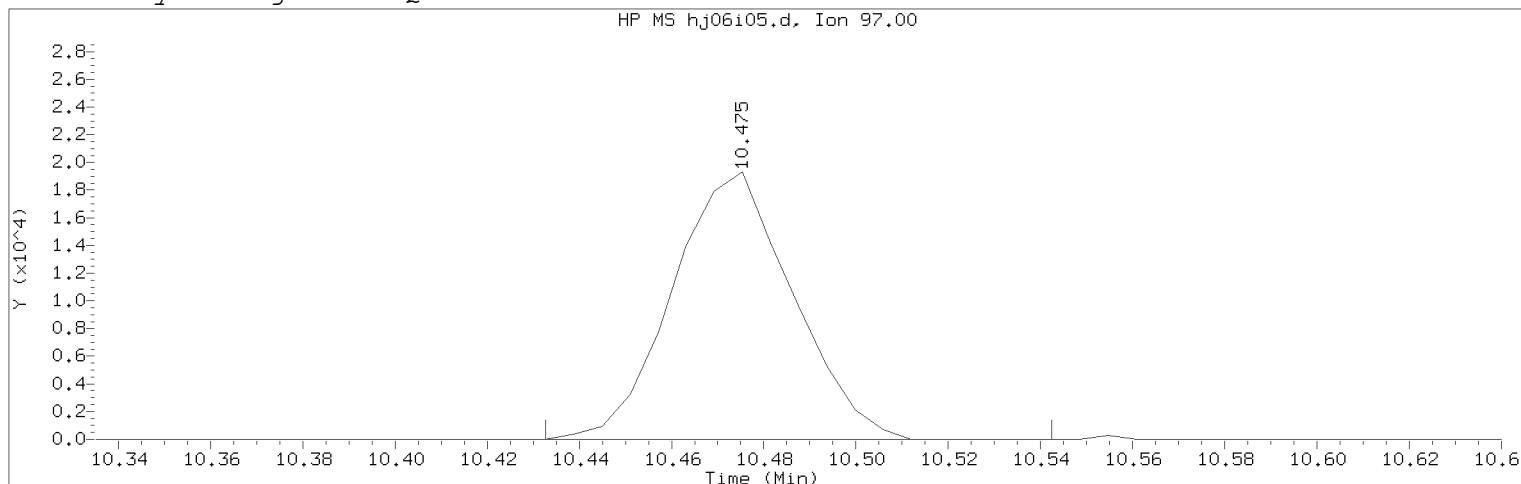
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

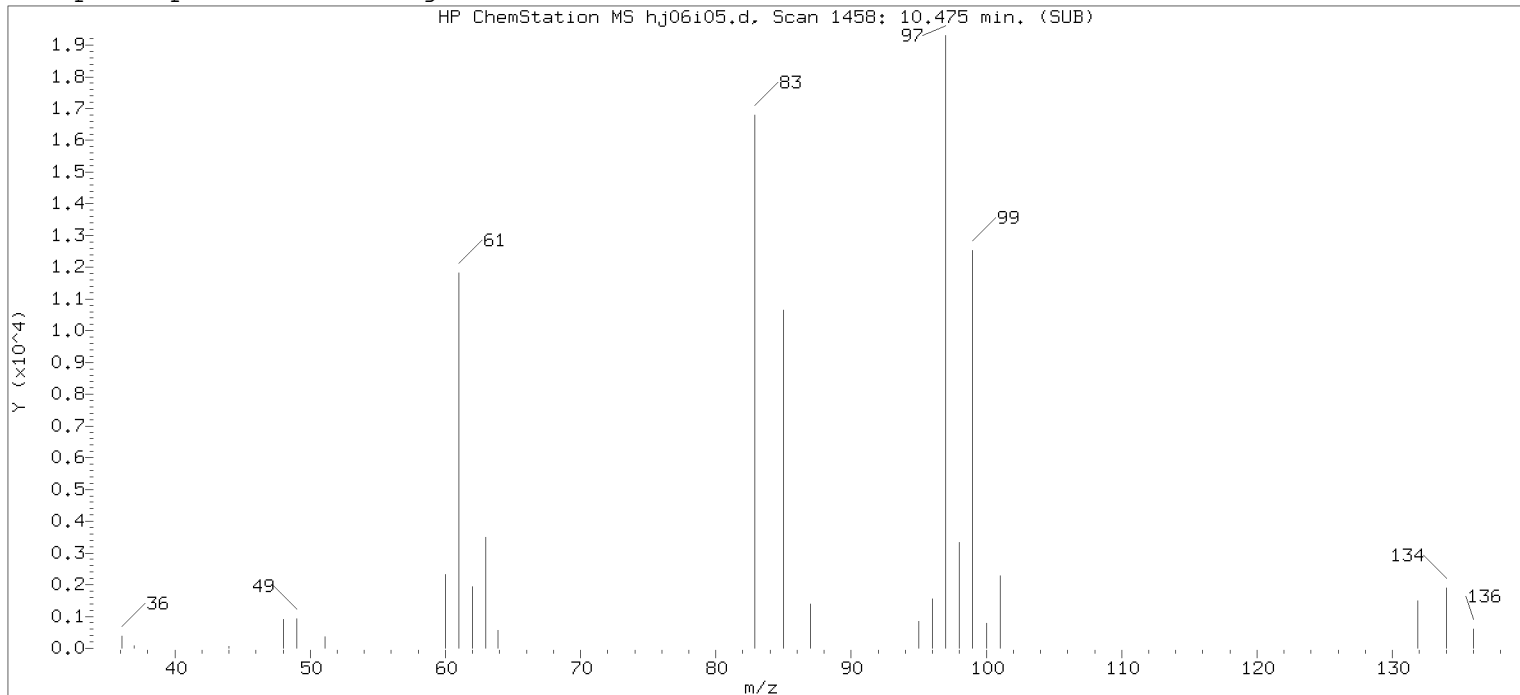
Compound Number : 89
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1458
Retention Time (minutes): 10.475
Quant Ion : 97.00
Area (flag) : 34882M
On-Column Amount (ng) : 1.0050
Integration start scan : 1450 Integration stop scan: 1468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

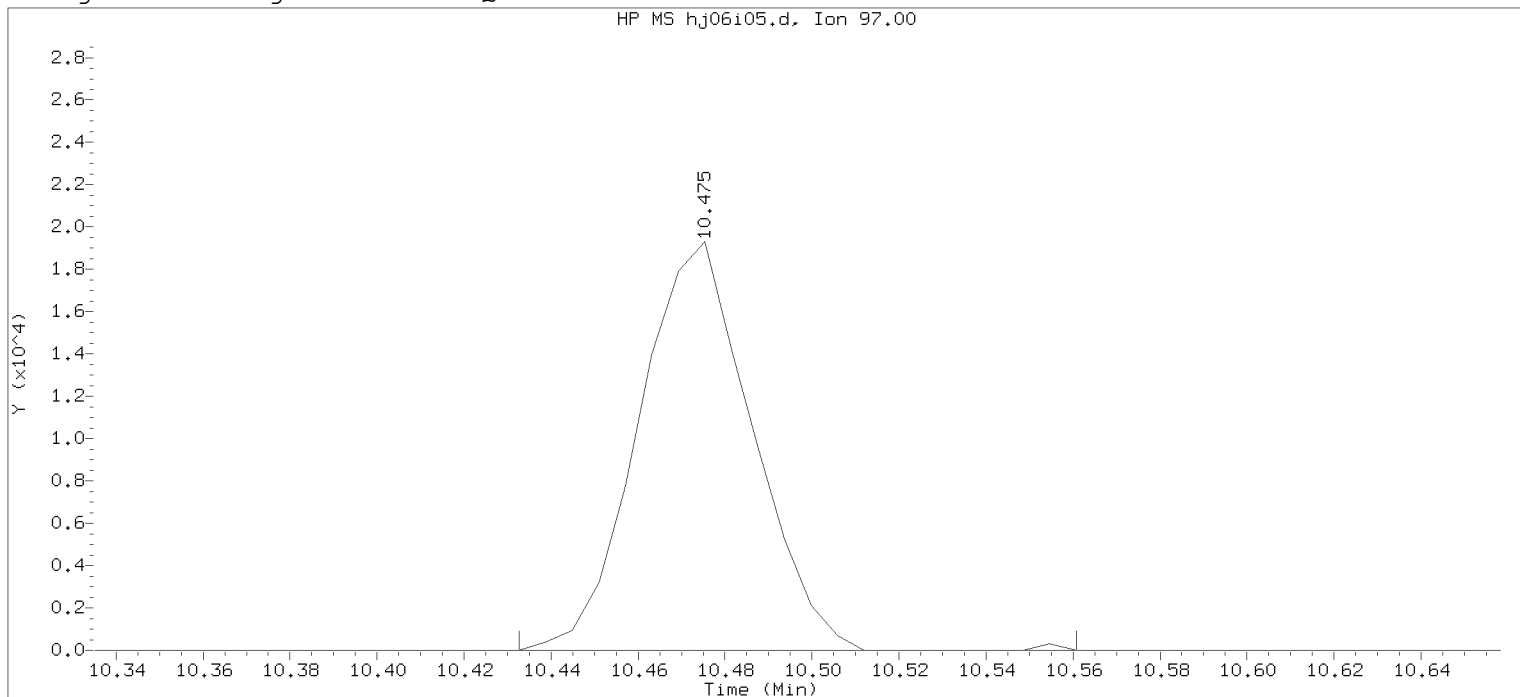
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

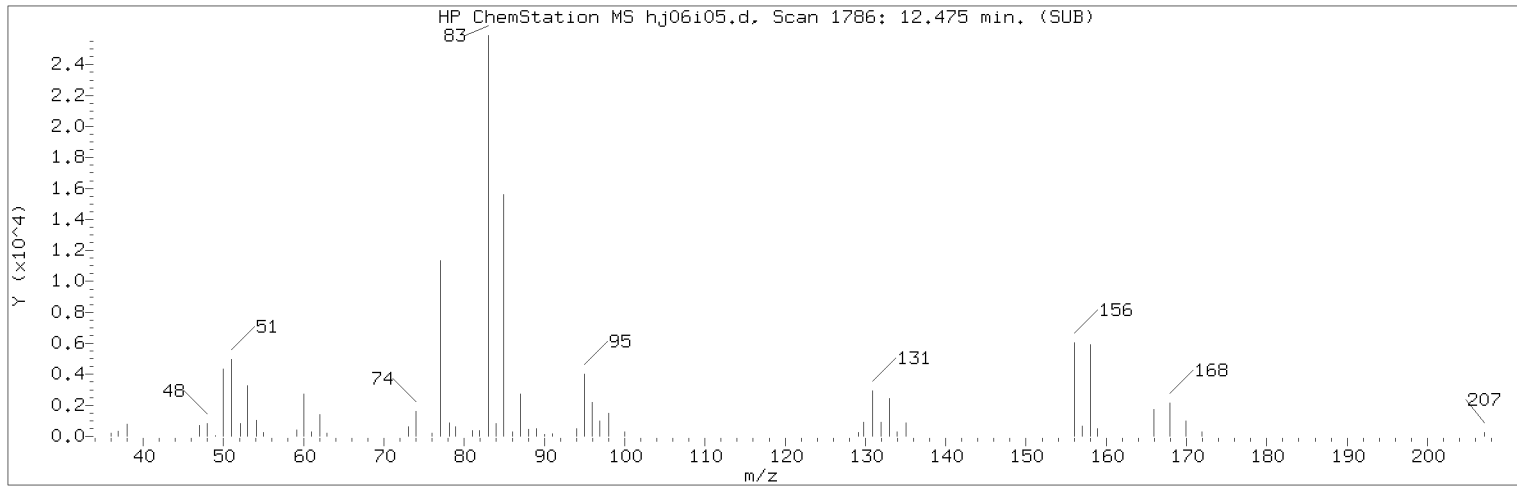
Sample Name: VSTD001

Lab Sample ID: VSTD001

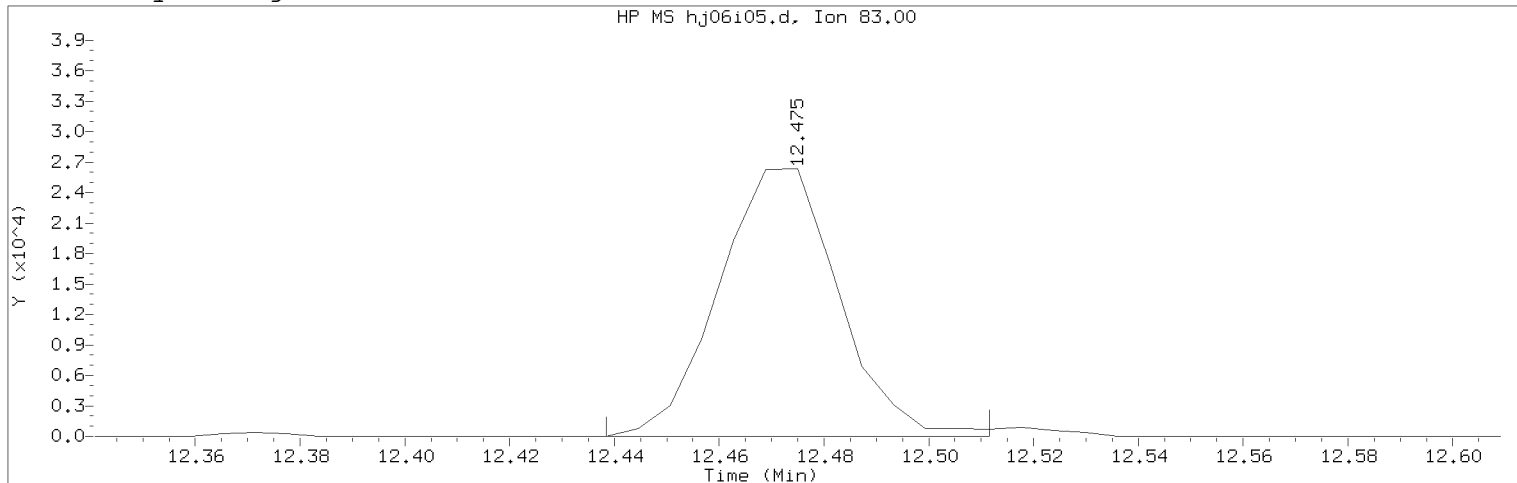
Compound Number	: 89	
Compound Name	: 1,1,2-Trichloroethane	
Scan Number	: 1458	
Retention Time (minutes)	: 10.475	
Quant Ion	: 97.00	
Area	: 34988	
On-column Amount (ng)	: 1.0115	
Integration start scan	: 1450	Integration stop scan: 1471
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RA64s Page 208 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

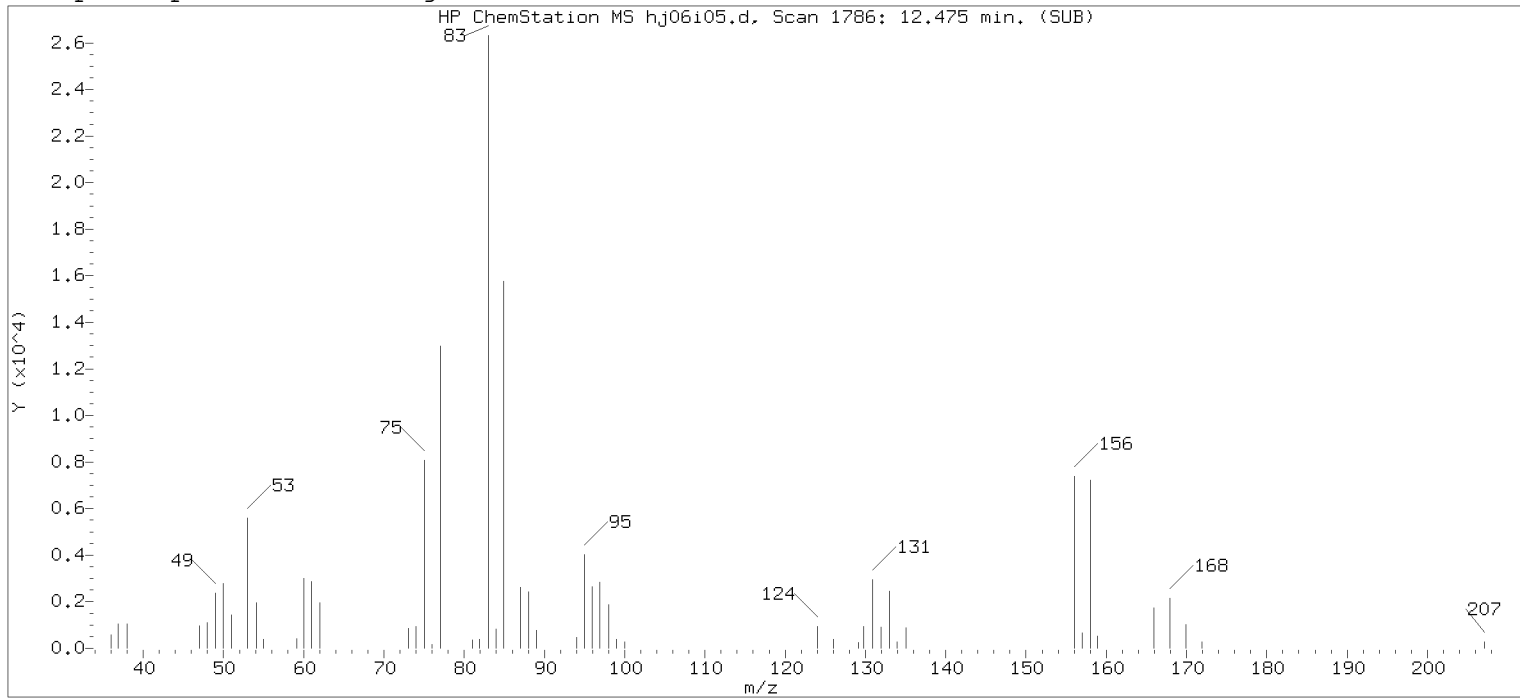
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 41928M
On-Column Amount (ng) : 1.0058
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

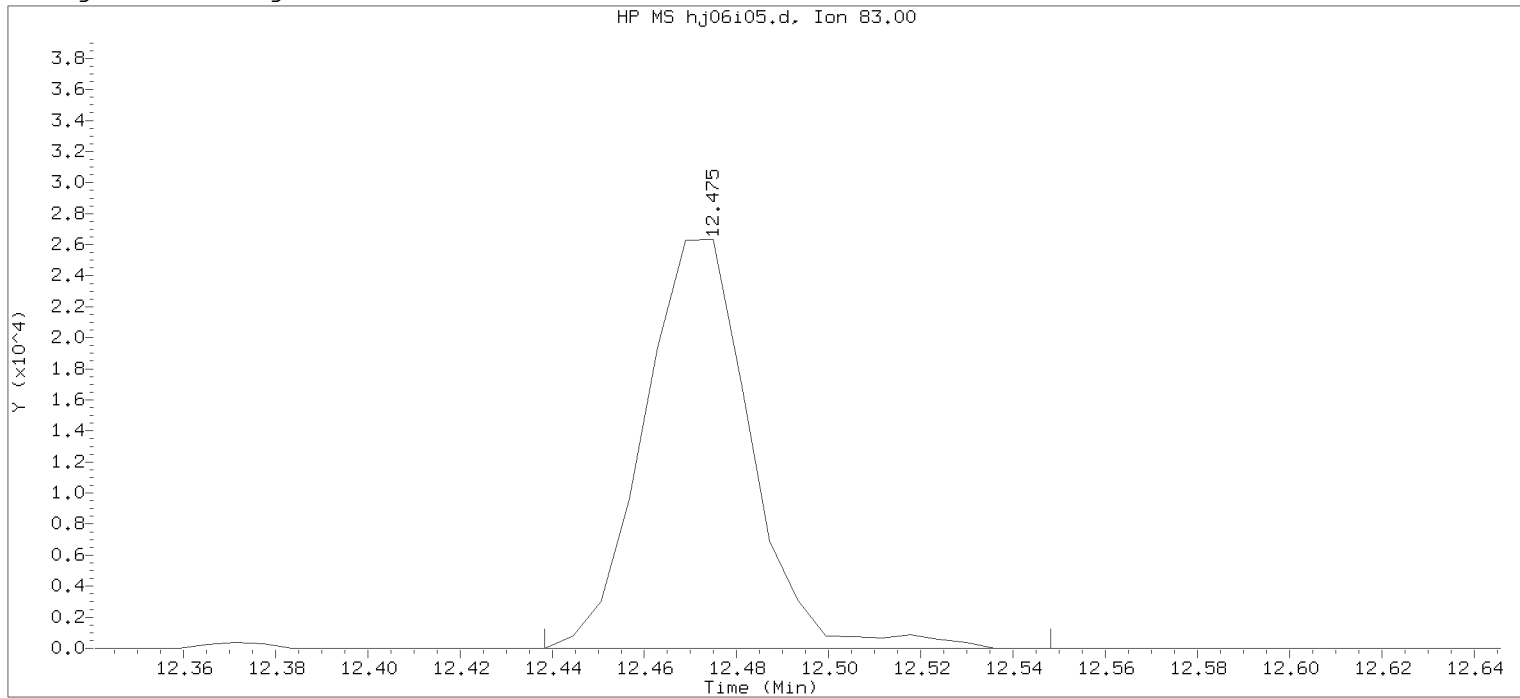
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

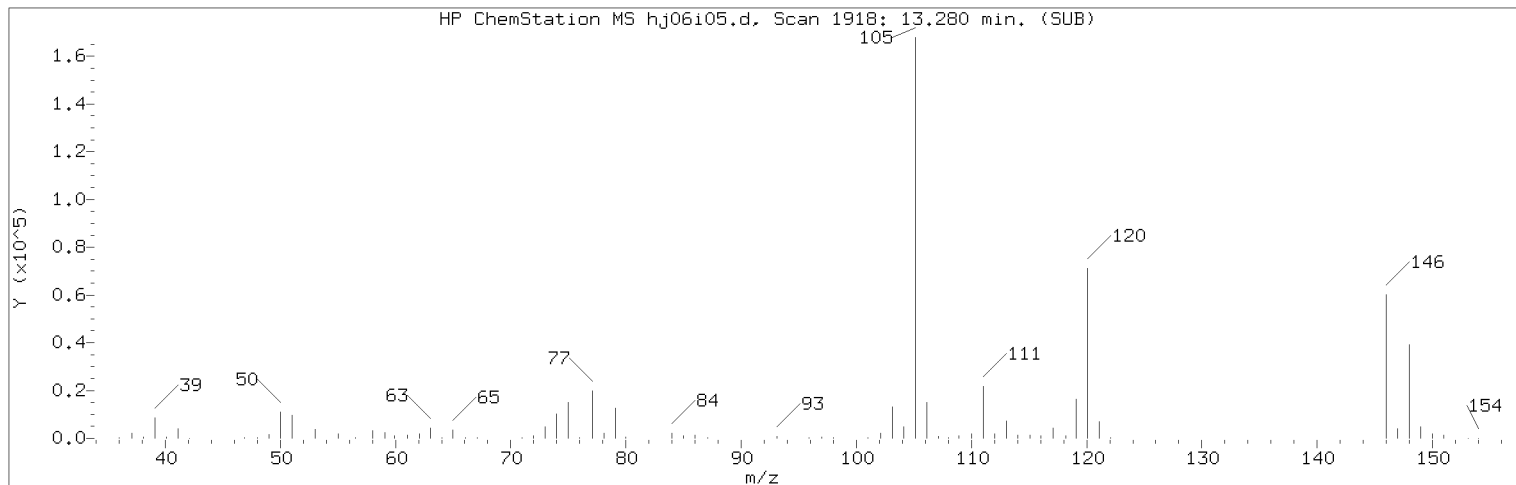
Sample Name: VSTD001

Lab Sample ID: VSTD001

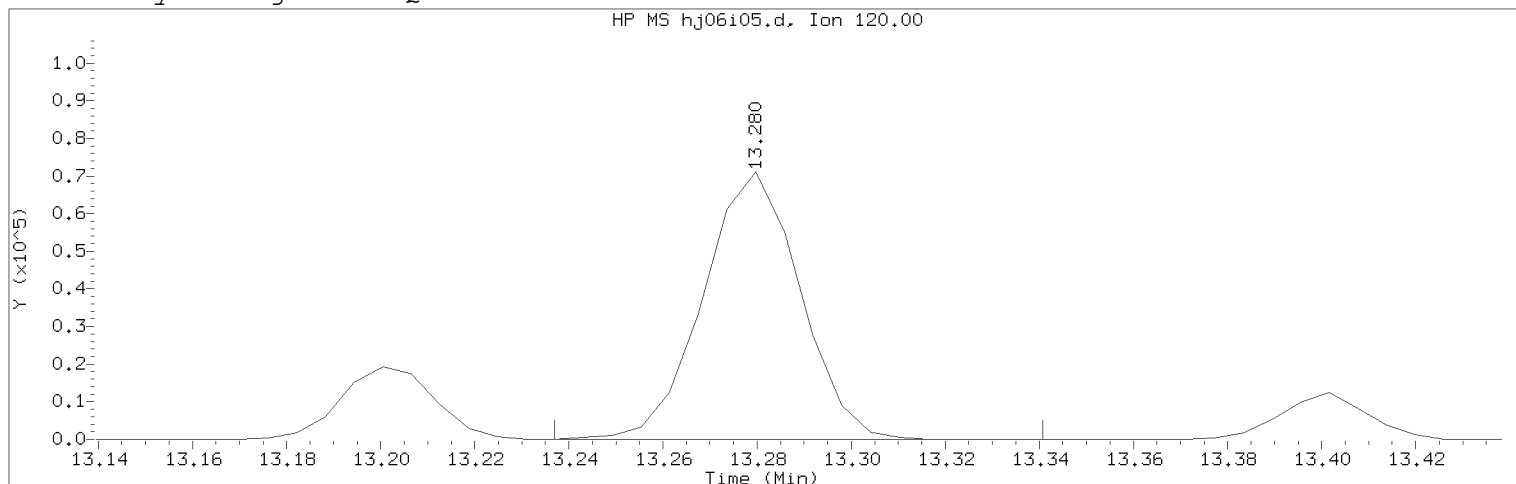
Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1786	
Retention Time (minutes)	: 12.475	
Quant Ion	: 83.00	
Area	: 42599	
On-column Amount (ng)	: 0.9903	
Integration start scan	: 1779	Integration stop scan: 1797
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.
Target 3.5 esignature user RAE64s Page 210 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 136	
Compound Name	: 1,2,3-Trimethylbenzene	
Scan Number	: 1918	
Retention Time (minutes)	: 13.280	
Quant Ion	: 120.00	
Area (flag)	: 101239M	
On-Column Amount (ng)	: 0.9849	
Integration start scan	: 1910	Integration stop scan: 1927
Y at integration start	: 0	Y at integration end: 0

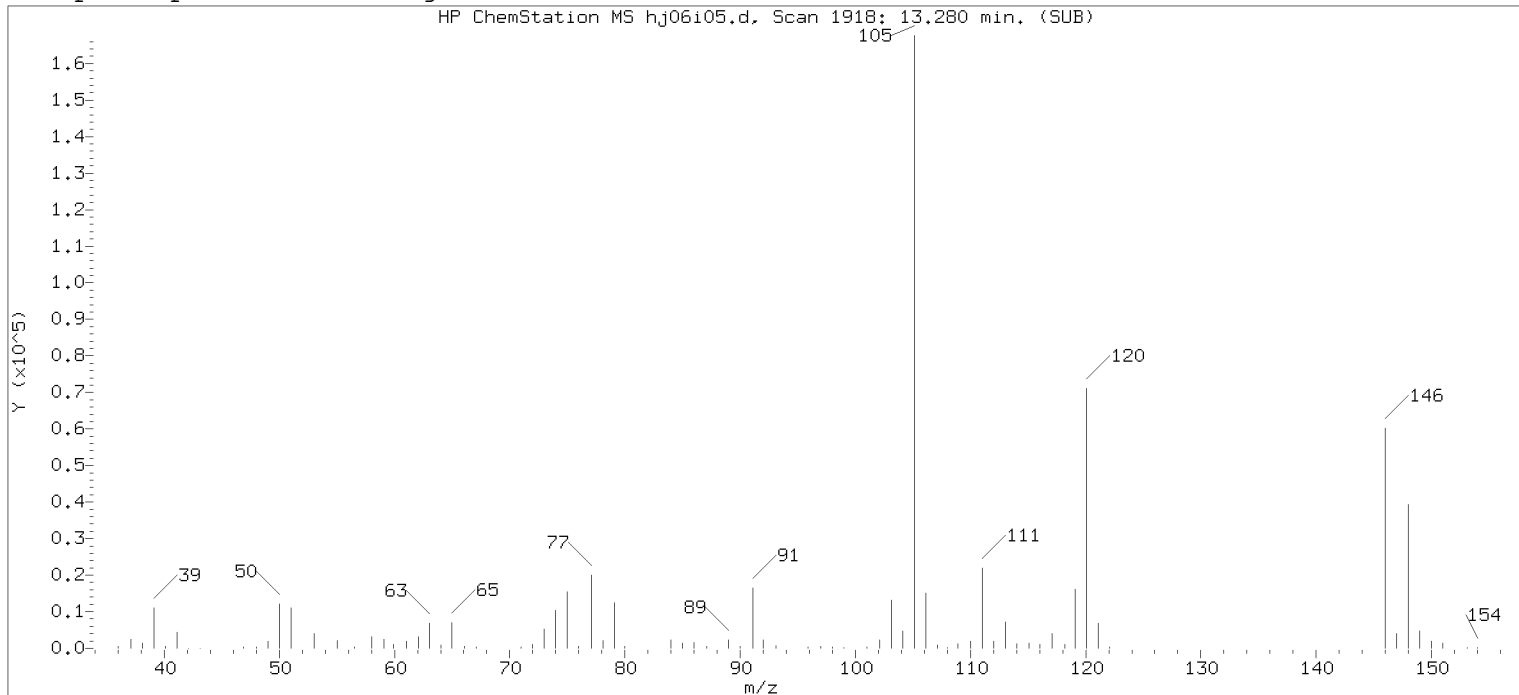
Reason for manual integration: improper integration

Analyst responsible for change:

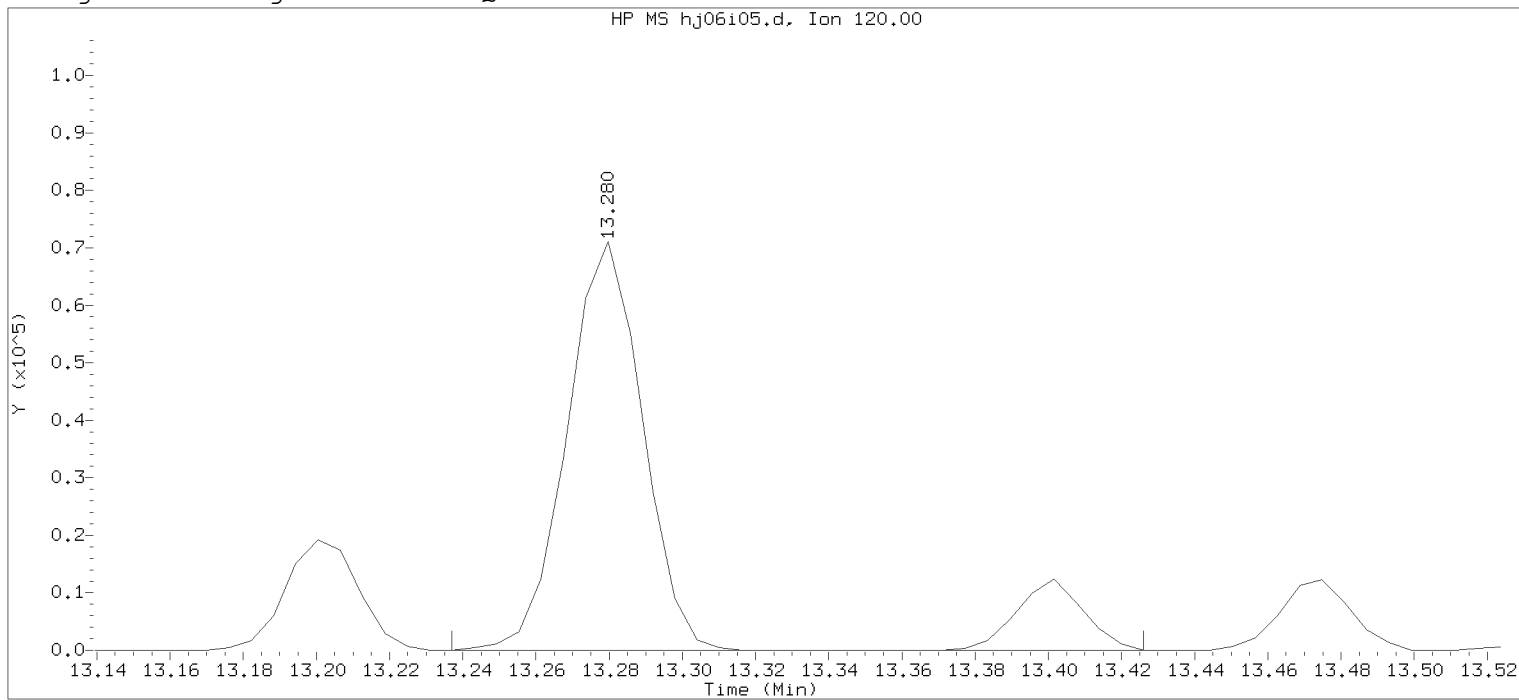
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:50.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i05.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:01

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 136

Compound Name : 1,2,3-Trimethylbenzene

Scan Number : 1918

Retention Time (minutes): 13.280

Quant Ion : 120.00

Area : 116939

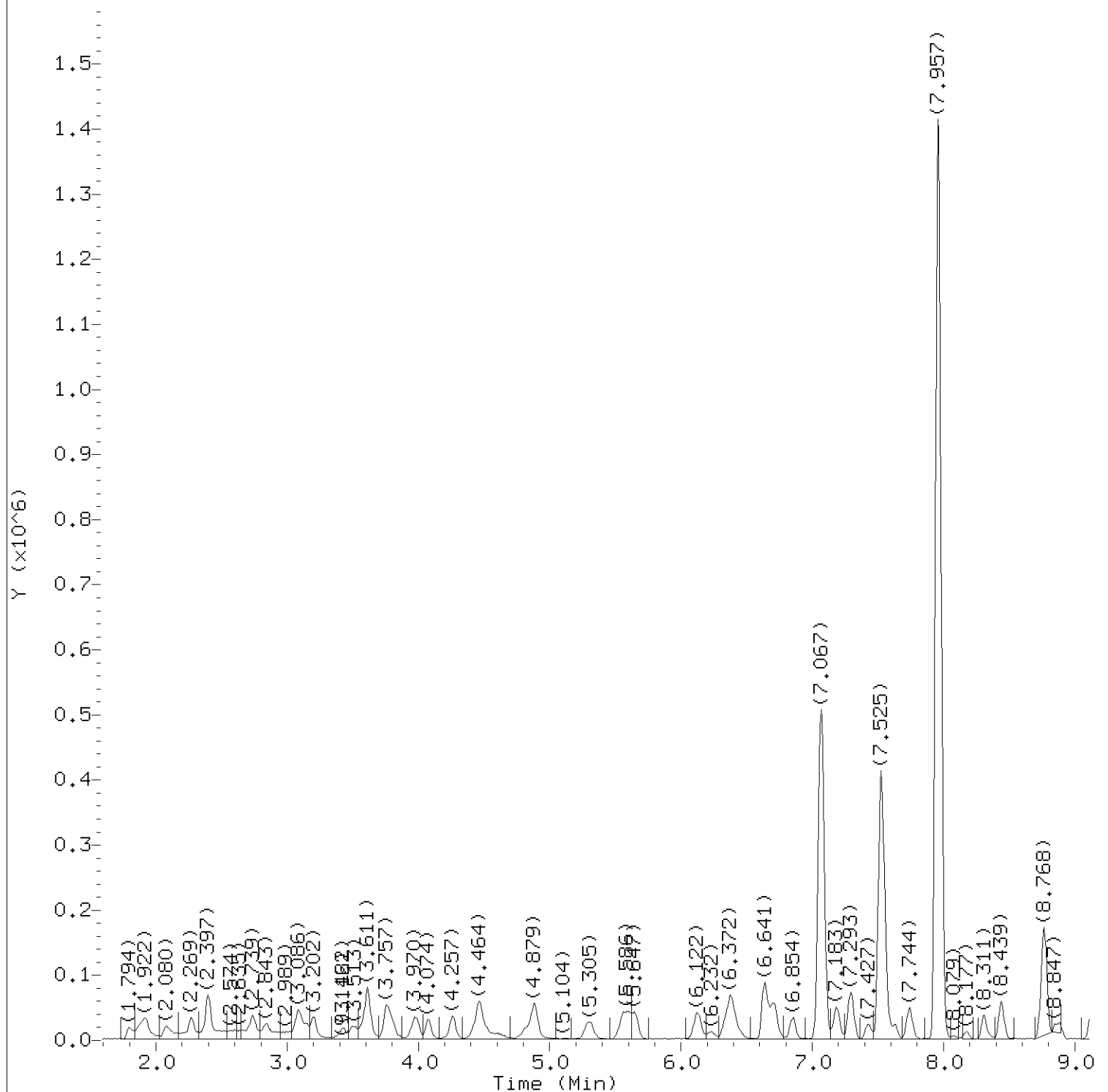
On-column Amount (ng) : 1.1106

Integration start scan : 1910 Integration stop scan: 1941

Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:50.

Target 3.5 esignature userRAF64sPage 212 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
Analyst ID: JKH09052

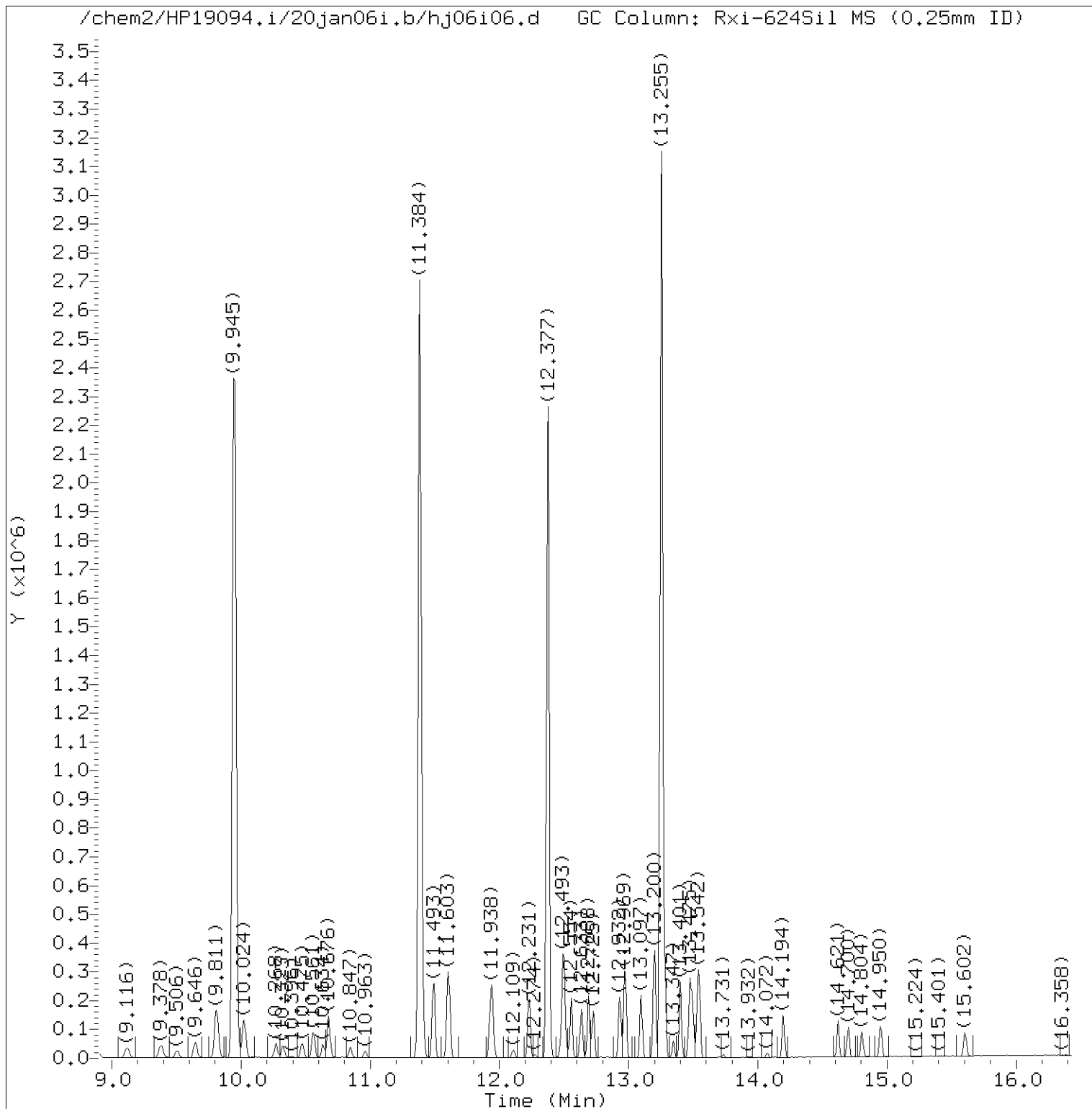
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
 Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.080	85	37646	0.513
2) Chloromethane	(2)	2.269	50	36253	0.501
5) Vinyl Chloride	(2)	2.391	62	33658	0.489
6) 1,3-Butadiene	(2)	2.404	39	24120M	0.443
7) Bromomethane	(2)	2.739	94	25193	0.511
8) Chloroethane	(2)	2.836	64	19680	0.494
9) Dichlorofluoromethane	(2)	3.080	67	48168	0.509
10) Trichlorofluoromethane	(2)	3.147	101	40642	0.517
11) Ethyl ether	(2)	3.422	59	16672	0.479
12) Freon 123a	(2)	3.513	67	27531	0.453
13) Acrolein	(1)	3.611	56	131907	24.773
15) 1,1-Dichloroethene	(2)	3.757	96	22510	0.471
14) Acetone	(1)	3.794	43	41187M	5.733
16) Freon 113	(2)	3.800	101	20991	0.420
17) Methyl Iodide	(2)	3.970	142	42798	0.464
18) Bromoethane	(2)	3.989	108	21118M	0.506
19) Carbon Disulfide	(2)	4.074	76	67993	0.465
22) Methyl Acetate	(1)	4.239	43	8769M	0.484
23) Allyl Chloride	(2)	4.257	41	39456	0.486
24) Methylene Chloride	(2)	4.458	84	25019	0.486
27)*t-Butyl Alcohol-d10	(1)	4.464	65	118243	50.000
29) t-Butyl Alcohol	(1)	4.617	59	24512	9.821
30) Acrylonitrile	(1)	4.812	53	21998	2.509
31) Methyl Tertiary Butyl Ether	(2)	4.867	73	52026	0.476
32) trans-1,2-Dichloroethene	(2)	4.885	96	24900	0.474
33) n-Hexane	(2)	5.312	57	32680	0.441
34) 1,1-Dichloroethane	(2)	5.543	63	43072	0.454
35) di-Isopropyl Ether	(2)	5.592	45	73167	0.468
36) 2-Chloro-1,3-Butadiene	(2)	5.653	53	37519	0.462
41) 1,2-Dichloroethene (Total)	(2)		96	52826	0.952
38) Ethyl t-butyl ether	(2)	6.122	59	70601	0.481
39) 2-Butanone	(1)	6.330	43	57311	5.102
40) cis-1,2-Dichloroethene	(2)	6.372	96	27926	0.478
42) 2,2-Dichloropropane	(2)	6.391	77	36548	0.453
43) Propionitrile	(1)	6.427	54	29507	9.589
46) Methacrylonitrile	(1)	6.641	67	54315	4.935
48) Bromochloromethane	(2)	6.695	128	12252	0.497
49) Tetrahydrofuran	(1)	6.708	71	15239	4.910

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
 Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	43720	0.472
51) \$Dibromofluoromethane	(2)	7.067	113	480514	9.881
51) \$Dibromofluoromethane	(2)	7.067	111	497632	9.960
52) 1,1,1-Trichloroethane	(2)	7.092	97	40175	0.467
53) Cyclohexane	(2)	7.183	56	42220	0.459
53) Cyclohexane	(2)	7.189	84	33452	0.425
53) Cyclohexane	(2)	7.189	69	12293	0.430
55) Carbon Tetrachloride	(2)	7.293	117	33625	0.456
56) 1,1-Dichloropropene	(2)	7.299	75	33208	0.456
57) Isobutyl Alcohol	(1)	7.421	41	22212	25.676
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	94461	10.023
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	438476	10.083
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	59826	10.022
59) Benzene	(2)	7.555	78	99873	0.469
60) 1,2-Dichloroethane	(2)	7.634	62	26845	0.489
61) t-Amyl methyl ether	(2)	7.744	73	61999	0.485
64) *Fluorobenzene	(2)	7.957	96	1956262	10.000
63) n-Heptane	(2)	7.970	43	33106	0.426
66) n-Butanol	(1)	8.305	56	34095	48.956
68) Trichloroethene	(2)	8.439	95	24997	0.448
70) Methylcyclohexane	(2)	8.750	83	49093	0.491
71) 1,2-Dichloropropane	(2)	8.774	63	24757	0.470
72) Methyl Methacrylate	(1)	8.847	69	11056	0.499
73) 1,4-Dioxane	(1)	8.866	88	3390M	20.182
74) Dibromomethane	(2)	8.878	93	11571	0.481
75) Bromodichloromethane	(2)	9.116	83	31654	0.484
77) 2-Nitropropane	(1)	9.378	41	35799M	4.923
80) 1-Bromo-2-chloroethane	(2)	9.500	63	25119M	0.508
81) cis-1,3-Dichloropropene	(2)	9.646	75	35796	0.463
82) 4-Methyl-2-Pentanone	(1)	9.811	43	135330	4.888
83) \$Toluene-d8	(3)	9.951	98	1938593	9.983
83) \$Toluene-d8	(3)	9.945	100	1248997	9.945
84) Toluene	(3)	10.024	92	62903	0.461
86) 1,3-Dichloropropene (total)	(3)		75	64821	0.922
85) trans-1,3-Dichloropropene	(3)	10.274	75	29025	0.458
87) Ethyl Methacrylate	(3)	10.323	69	23667	0.482
89) 1,1,2-Trichloroethane	(3)	10.469	97	16570	0.483
90) Tetrachloroethene	(3)	10.561	166	28341	0.457

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d
 Injection date and time: 06-JAN-2020 16:23

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	27848	0.473
92) 2-Hexanone	(1)	10.676	43	93633M	4.949
94) Dibromochloromethane	(3)	10.847	129	20398	0.465
96) 1,2-Dibromoethane	(3)	10.963	107	15595	0.476
97) 1-Chlorohexane	(3)	11.384	91	38520	0.468
98) *Chlorobenzene-d5	(3)	11.384	117	1457562	10.000
99) Chlorobenzene	(3)	11.408	112	70804	0.475
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	24559	0.463
101) Ethylbenzene	(3)	11.493	91	126427	0.471
102) m+p-Xylene	(3)	11.603	106	95677	0.932
106) Xylene (Total)	(3)		106	142489	1.396
105) o-Xylene	(3)	11.932	106	46812	0.464
107) Styrene	(3)	11.944	104	76860	0.469
108) Bromoform	(3)	12.109	173	11985	0.469
109) Isopropylbenzene	(3)	12.231	105	128912	0.471
112) \$4-Bromofluorobenzene	(3)	12.377	95	721534	10.043
112) \$4-Bromofluorobenzene	(3)	12.377	174	616551	10.029
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	19540M	0.477
115) Bromobenzene	(4)	12.493	156	27982	0.452
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	50262M	4.832
117) 1,2,3-Trichloropropane	(4)	12.524	110	5294	0.483
118) n-Propylbenzene	(4)	12.554	91	147570	0.456
120) 2-Chlorotoluene	(4)	12.633	126	29146	0.457
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	107335	0.457
123) 4-Chlorotoluene	(4)	12.725	126	29421	0.462
126) tert-Butylbenzene	(4)	12.932	134	21922	0.452
127) Pentachloroethane	(4)	12.969	167	20333	0.492
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	110138	0.455
129) sec-Butylbenzene	(4)	13.097	105	137070M	0.451
133) p-Isopropyltoluene	(4)	13.200	119	116856	0.447
132) 1,3-Dichlorobenzene	(4)	13.200	146	57146	0.463
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	784772	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	56476	0.469
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	49264	0.488
137) Benzyl Chloride	(4)	13.347	126	7426	0.431
139) n-Butylbenzene	(4)	13.493	92	56899	0.440
140) 1,2-Dichlorobenzene	(4)	13.529	146	51602	0.474
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	2597	0.438

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

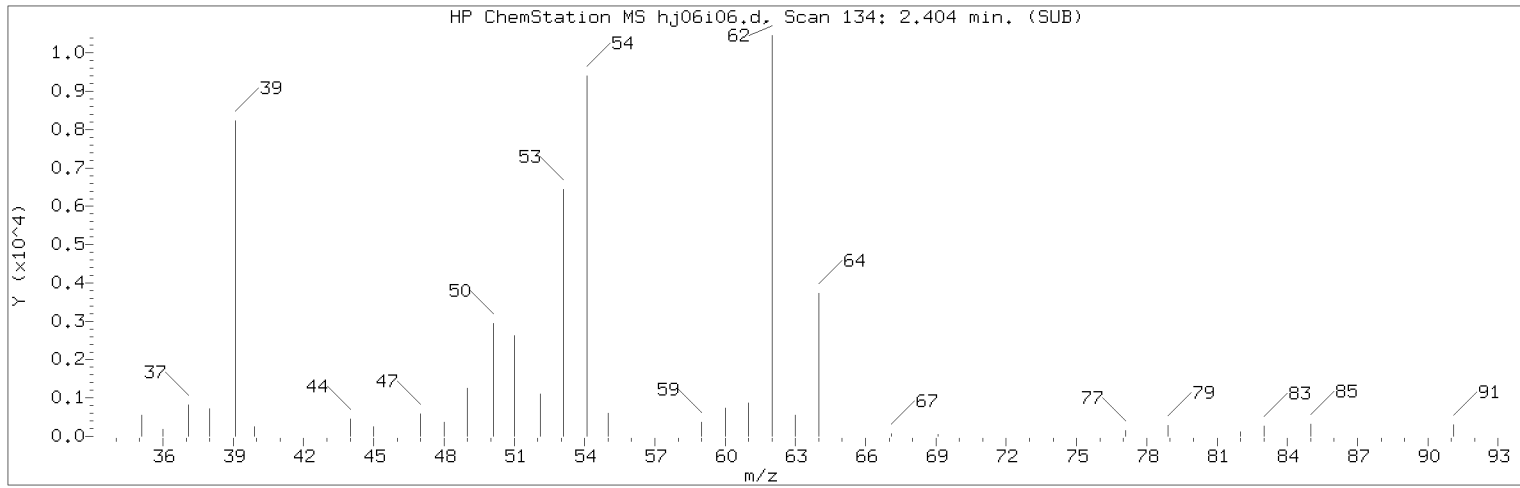
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	42778	0.443
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	35605	0.440
147) Hexachlorobutadiene	(4)	14.700	225	17895	0.423
148) Naphthalene	(4)	14.804	128	65064	0.460
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	31413	0.454

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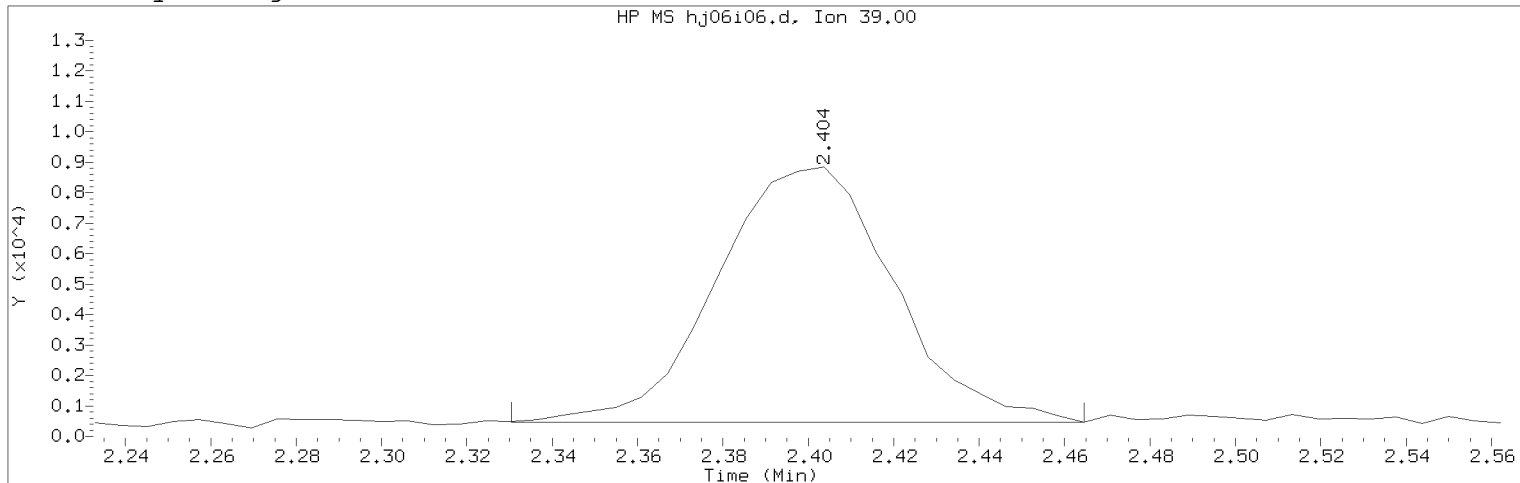
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

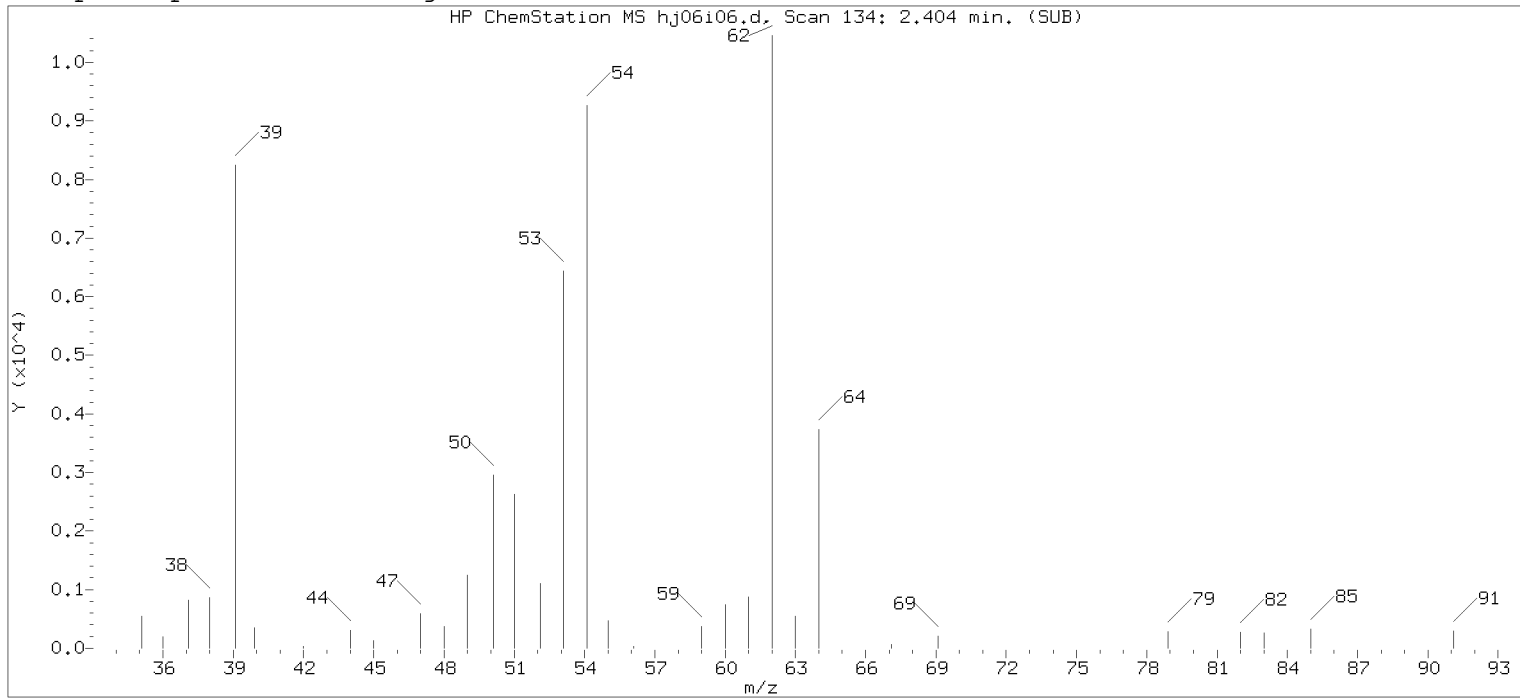
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area (flag)	: 24120M	
On-Column Amount (ng)	: 0.4434	
Integration start scan	: 121	Integration stop scan: 143
Y at integration start	: 453	Y at integration end: 453

Reason for manual integration: improper integration

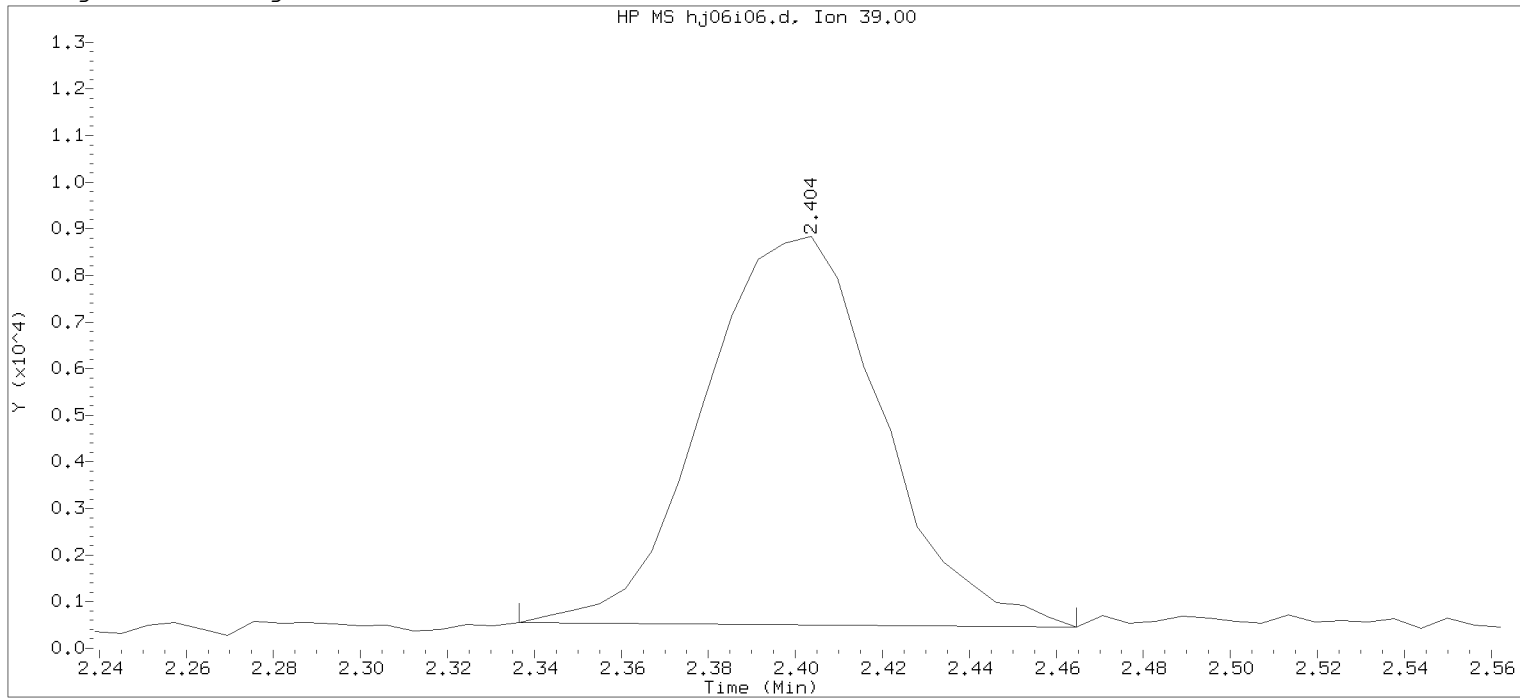
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 6

Compound Name : 1,3-Butadiene

Scan Number : 134

Retention Time (minutes): 2.404

Quant Ion : 39.00

Area : 23728

On-column Amount (ng) : 0.4429

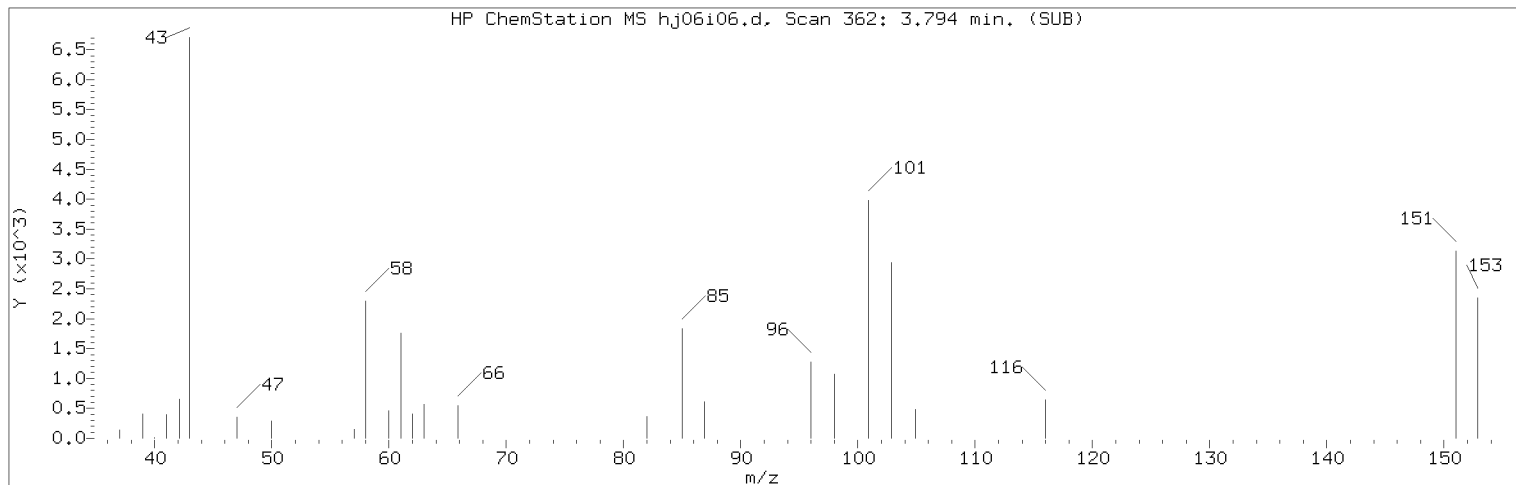
Integration start scan : 122 Integration stop scan: 143

Y at integration start : 545 Y at integration end: 455

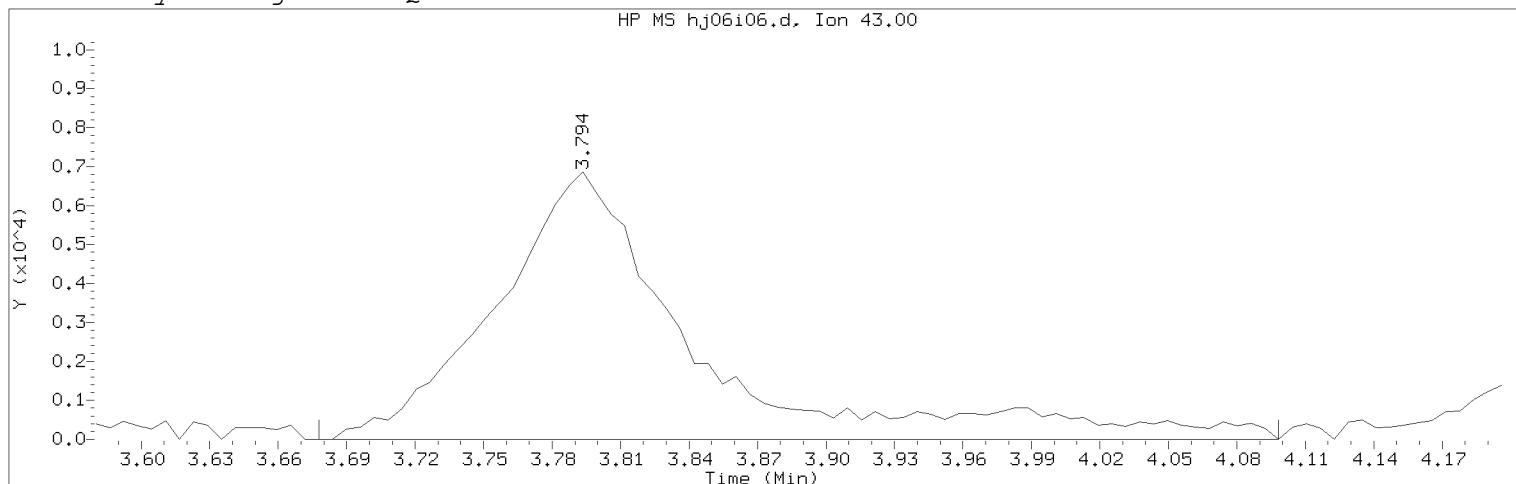
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature userRAF64sPage 220 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area (flag) : 41187M
 On-Column Amount (ng) : 5.7326
 Integration start scan : 342
 Y at integration start : 0

Integration stop scan: 411
 Y at integration end: 0

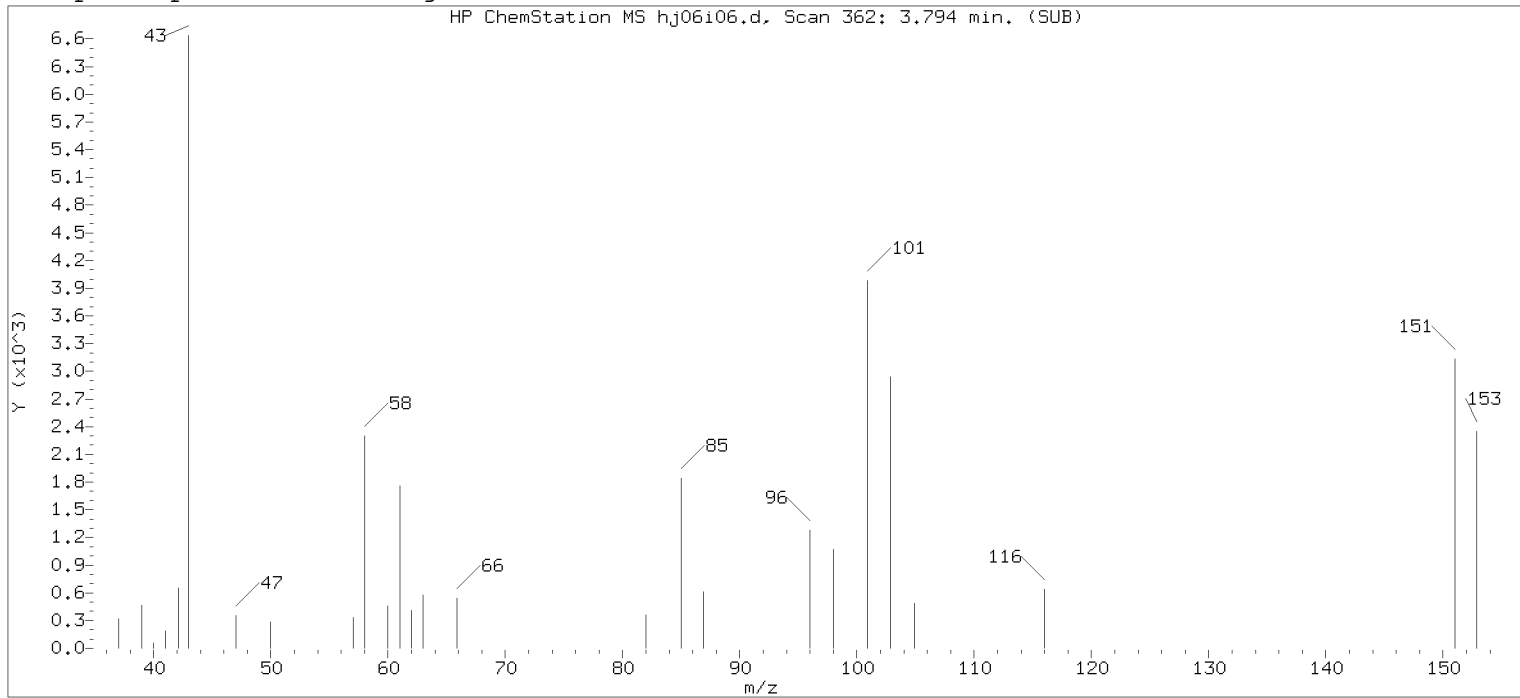
Reason for manual integration: improper integration

Analyst responsible for change:

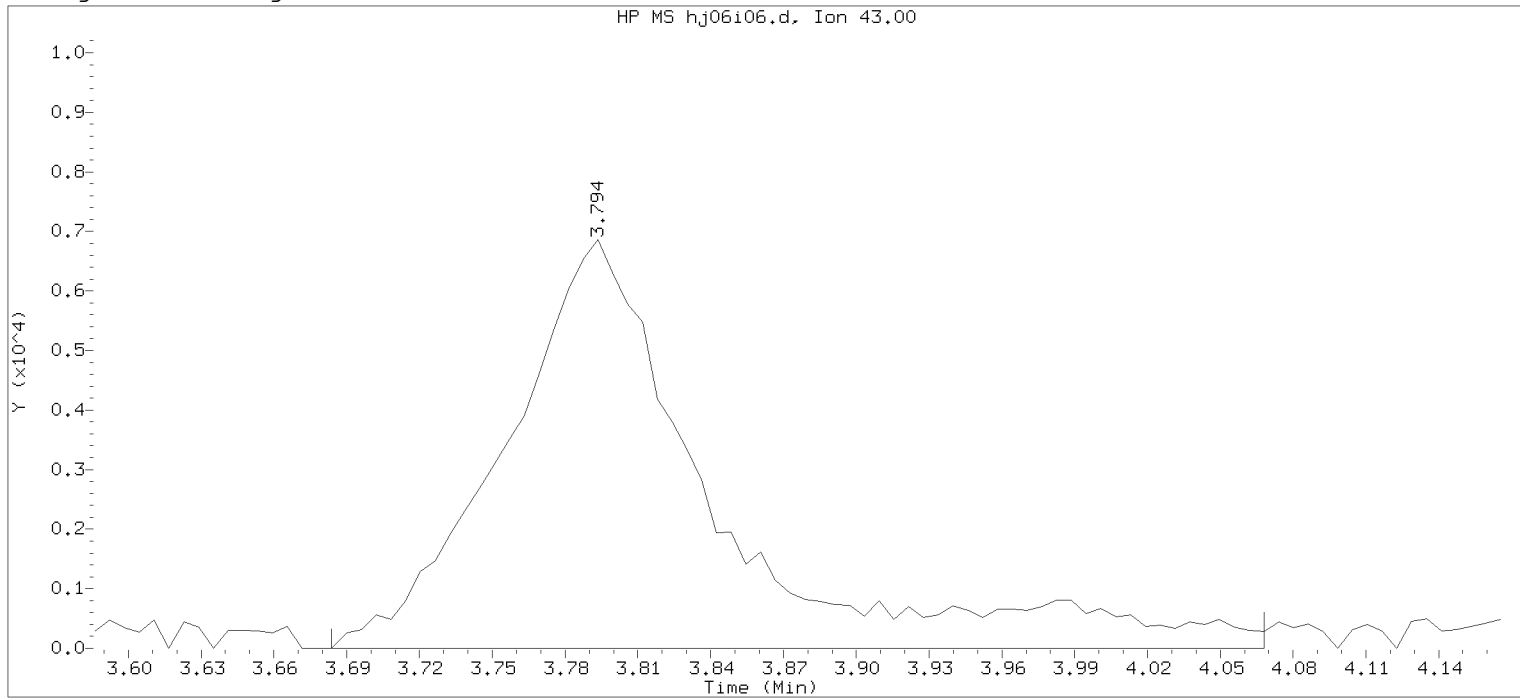
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

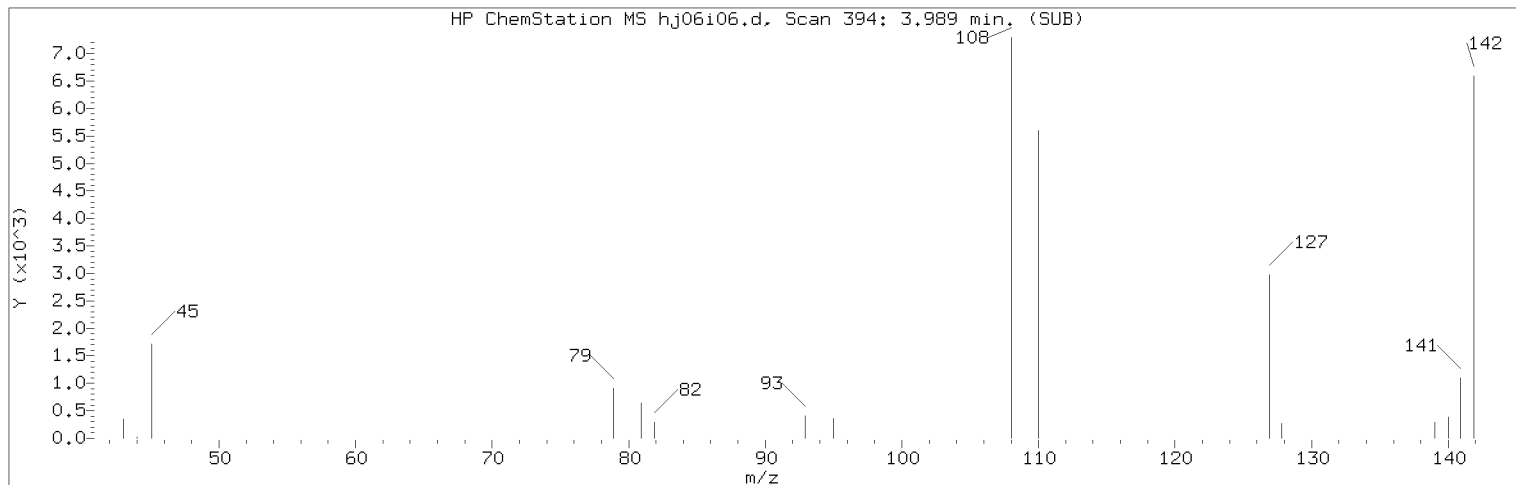
Lab Sample ID: VSTD0.5

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 362
 Retention Time (minutes): 3.794
 Quant Ion : 43.00
 Area : 40599
 On-column Amount (ng) : 5.6634
 Integration start scan : 343
 Y at integration start : 0

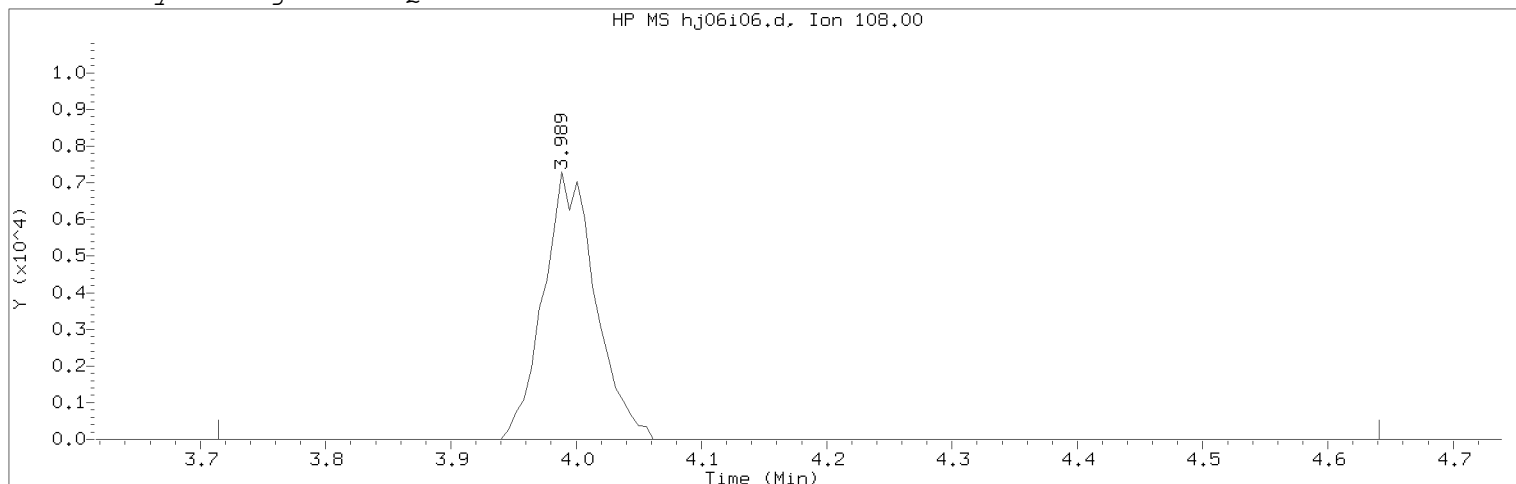
Integration stop scan: 406
 Y at integration end: 0

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 Target 3.5 esignature user RA64s Page 222 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

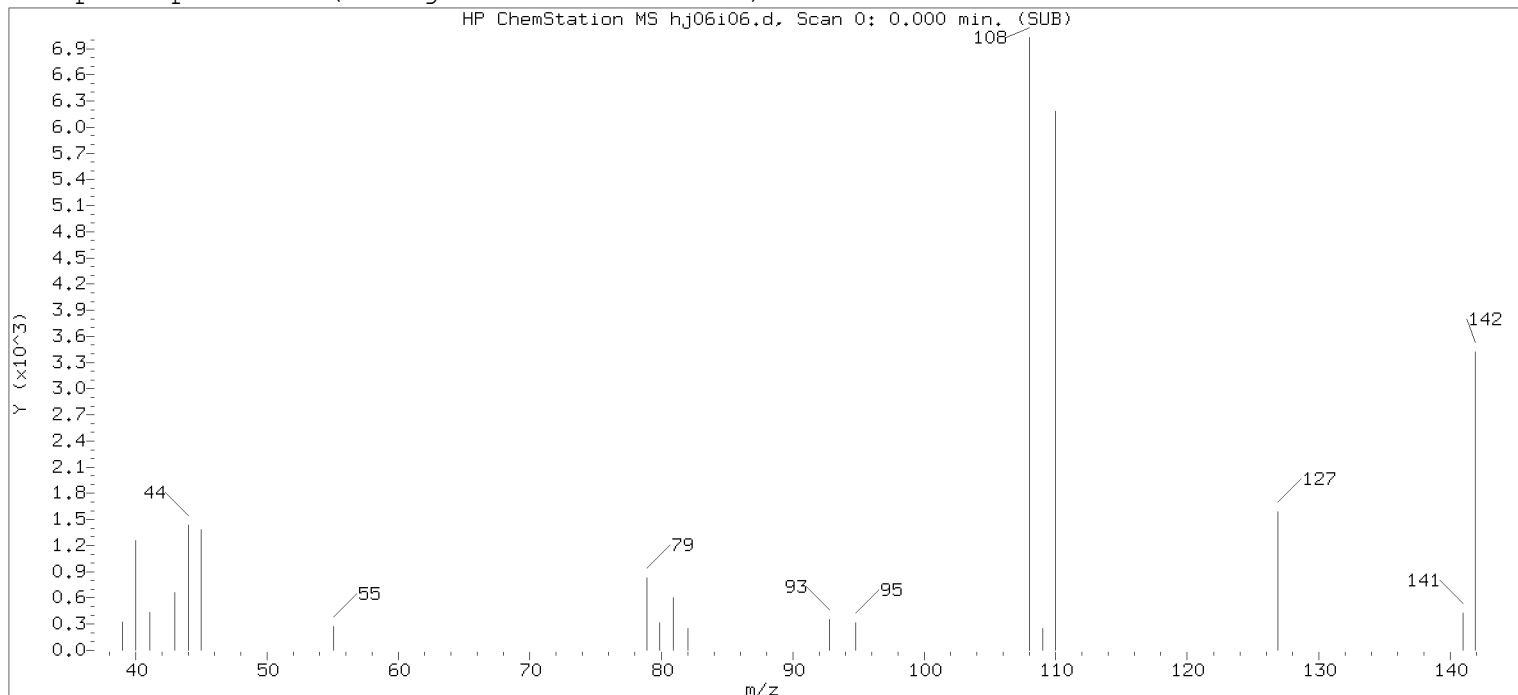
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 21118M	
On-Column Amount (ng)	: 0.5064	
Integration start scan	: 348	Integration stop scan: 500
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

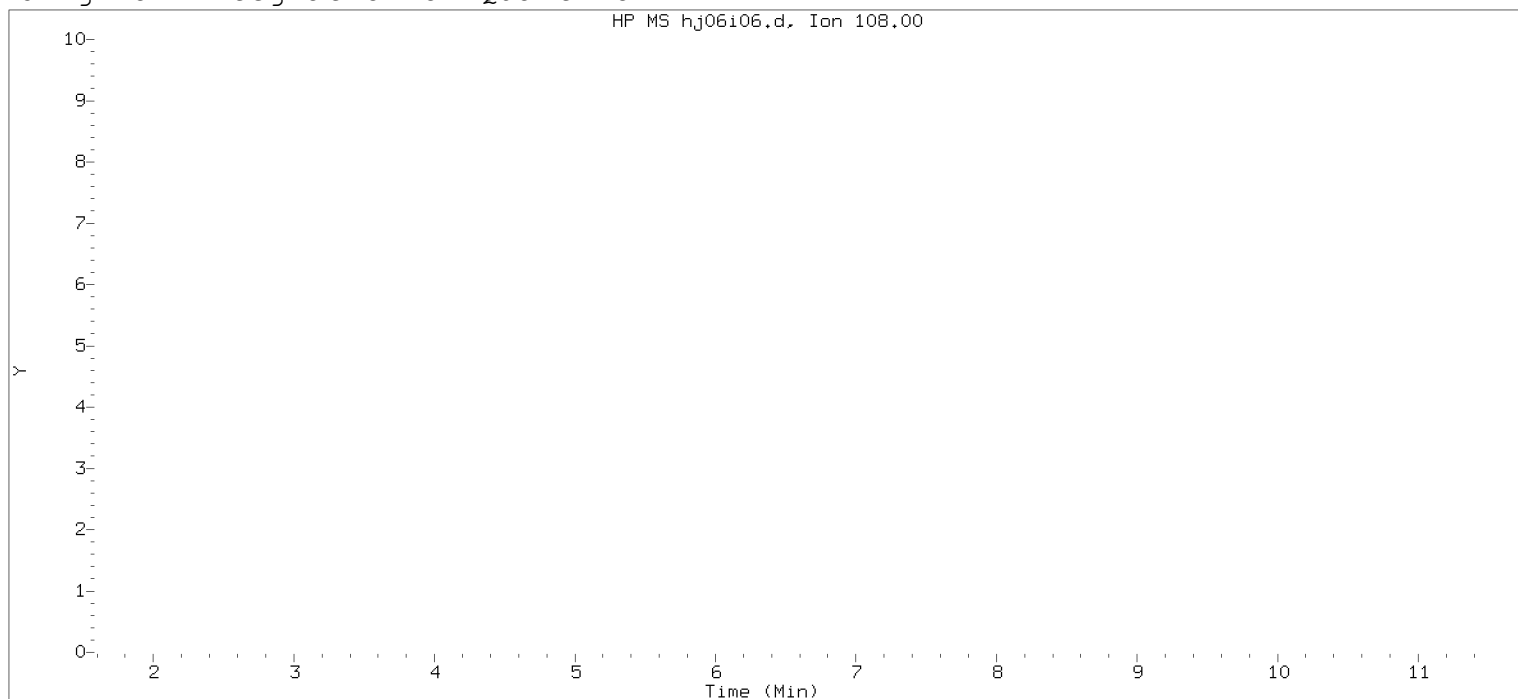
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

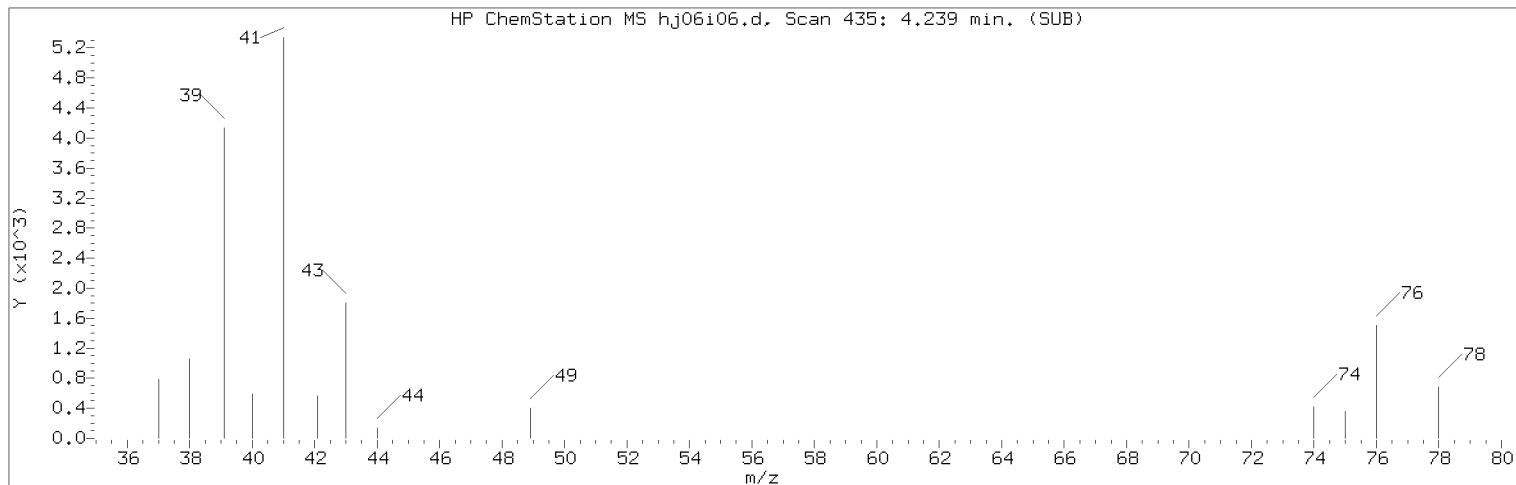
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

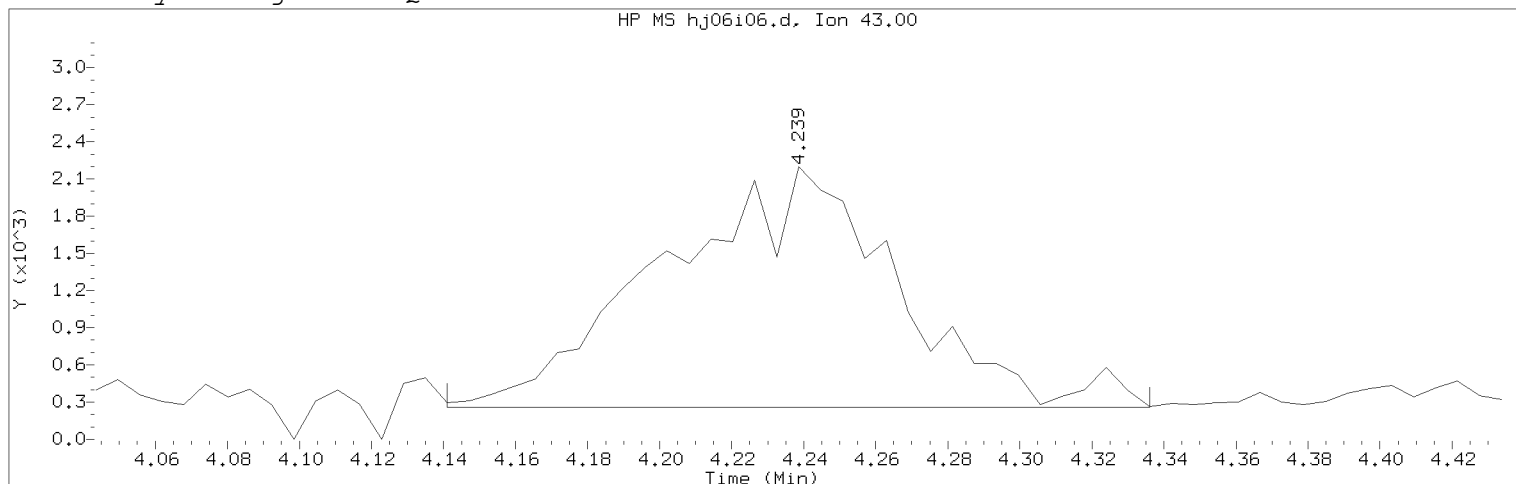
Lab Sample ID: VSTD0.5

Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 566707 Integration stop scan: 477822
Y at integration start : 0 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

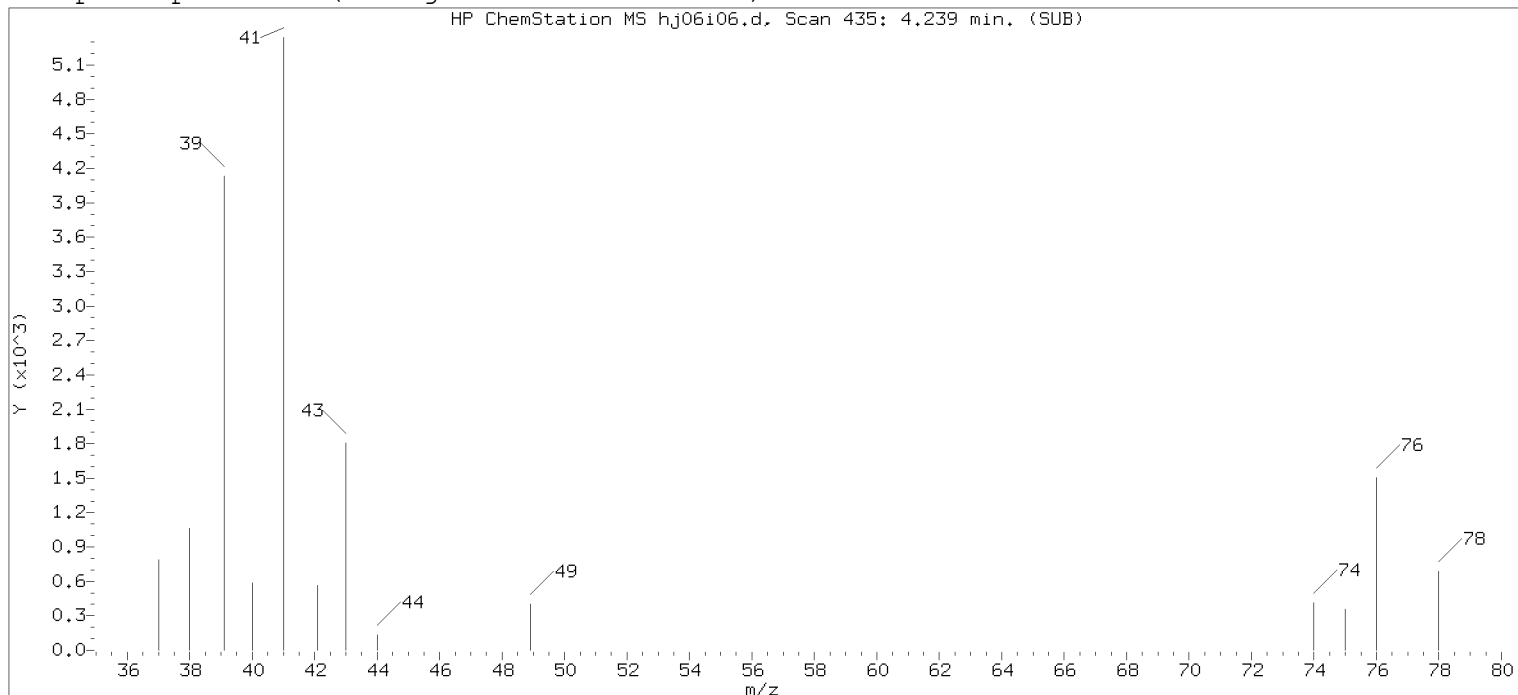
Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area (flag)	: 8769M	
On-Column Amount (ng)	: 0.4837	
Integration start scan	: 418	Integration stop scan: 450
Y at integration start	: 258	Y at integration end: 258

Reason for manual integration: improper integration

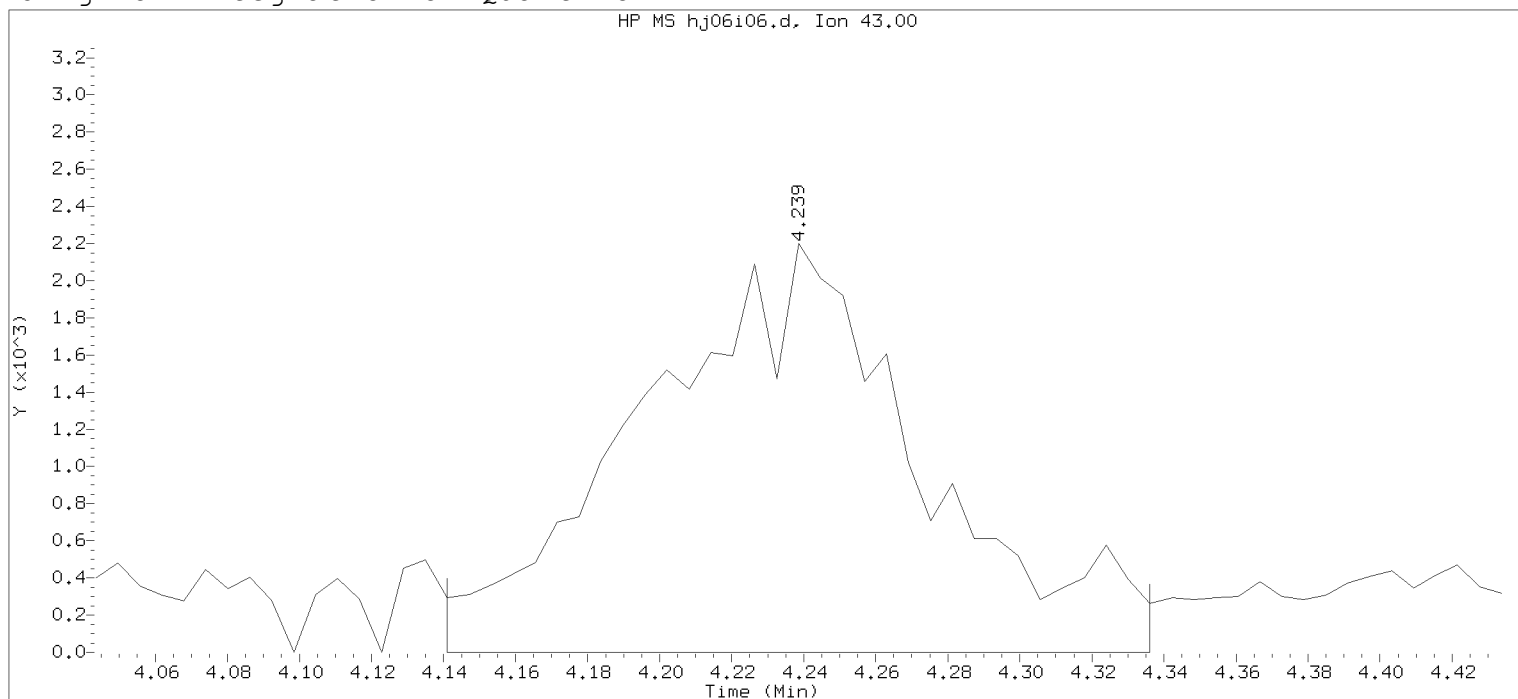
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 22

Compound Name : Methyl Acetate

Scan Number : 435

Retention Time (minutes): 4.239

Quant Ion : 43.00

Area : 11782

On-column Amount (ng) : 0.5416

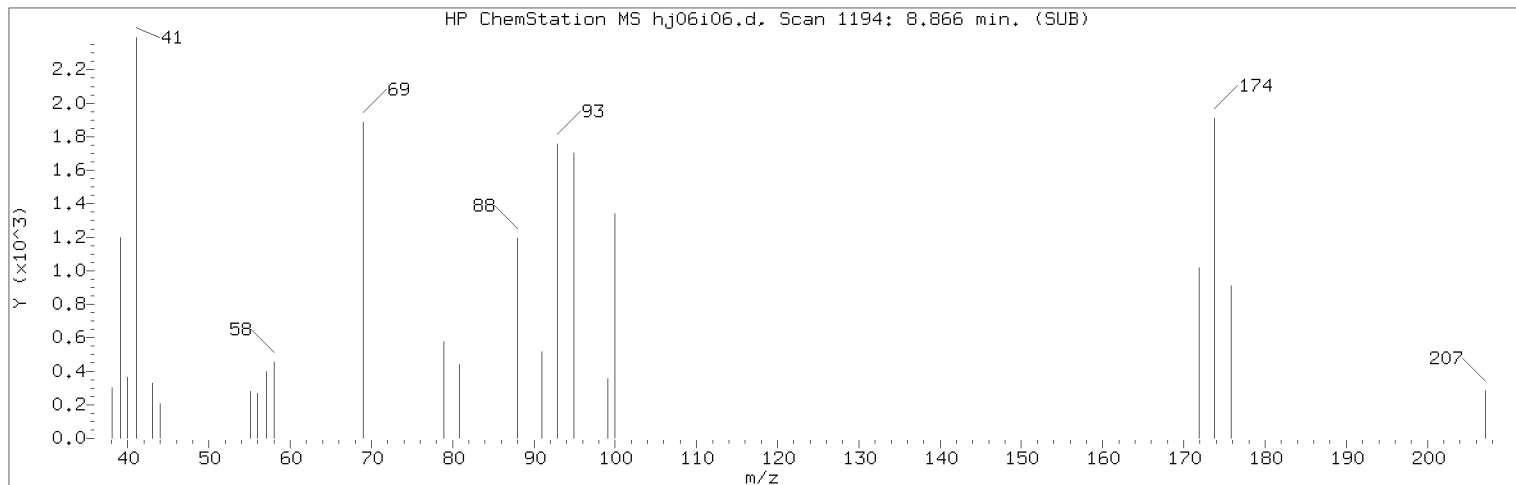
Integration start scan : 418 Integration stop scan: 450

Y at integration start : 0 Y at integration end: 0

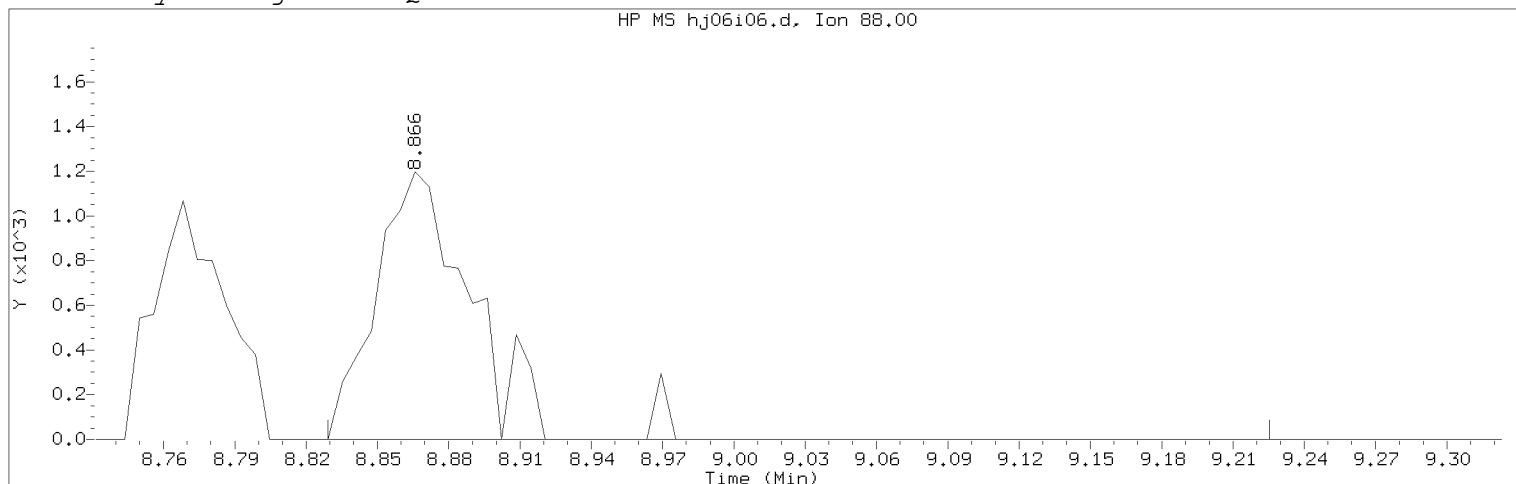
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature userRAF64sPage 226 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

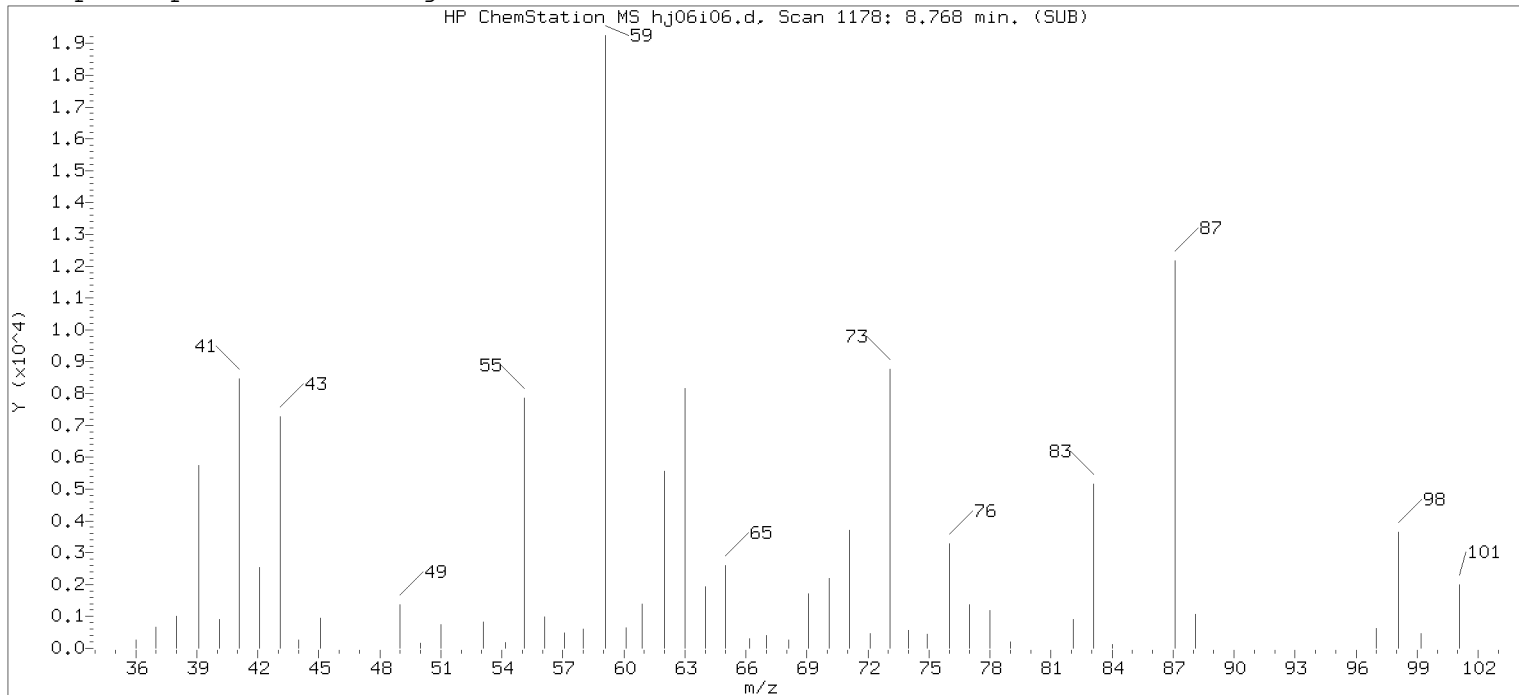
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1194	
Retention Time (minutes)	: 8.866	
Quant Ion	: 88.00	
Area (flag)	: 3390M	
On-Column Amount (ng)	: 20.1816	
Integration start scan	: 1187	Integration stop scan: 1252
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

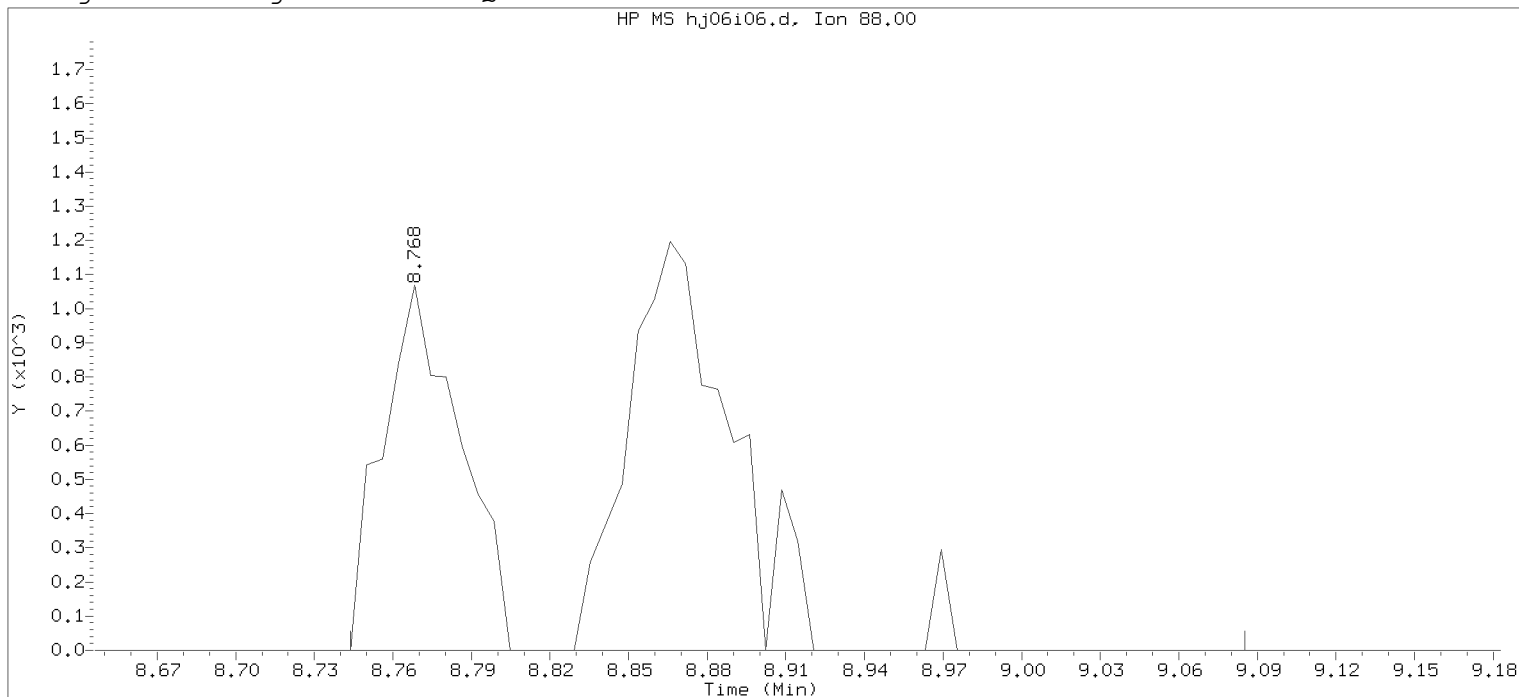
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

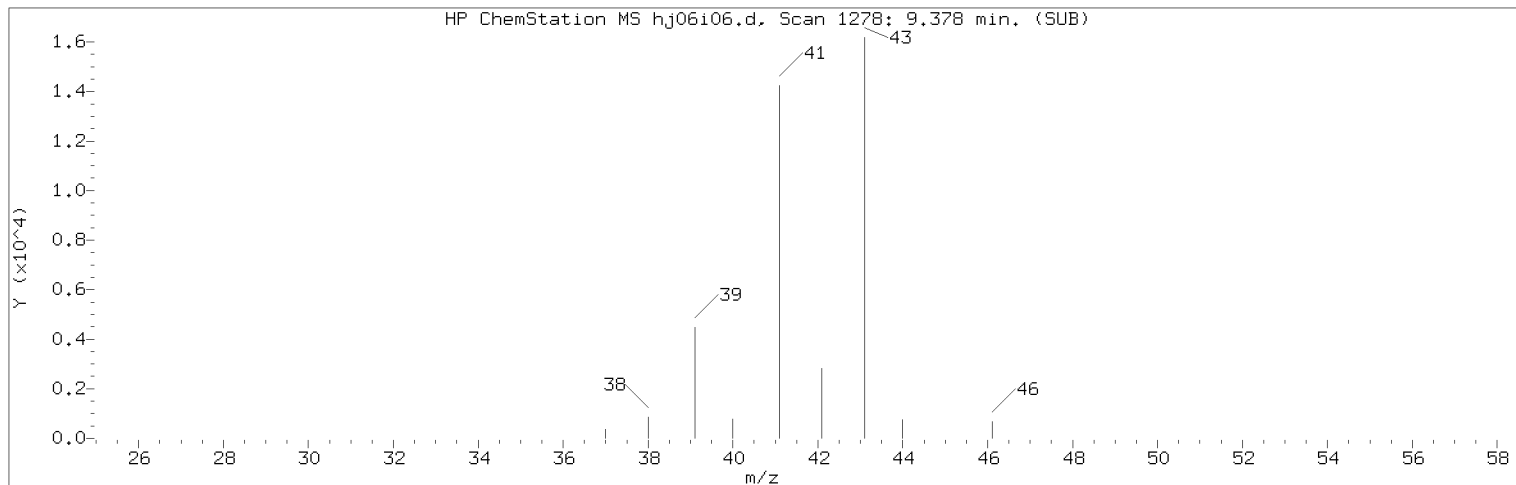
Lab Sample ID: VSTD0.5

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1178
 Retention Time (minutes): 8.768
 Quant Ion : 88.00
 Area : 5603
 On-column Amount (ng) : 35.8595
 Integration start scan : 1173
 Y at integration start : 0

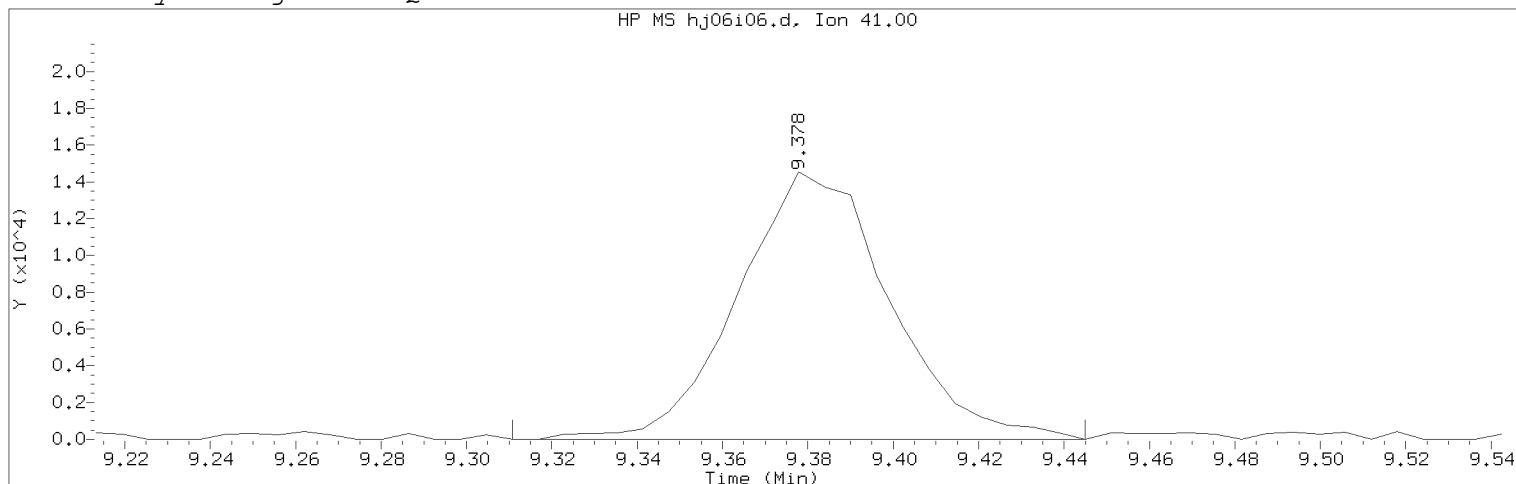
Integration stop scan: 1229
 Y at integration end: 0

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 Target 3.5 esignature user RA64s

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area (flag)	: 35799M	
On-Column Amount (ng)	: 4.9229	
Integration start scan	: 1266	Integration stop scan: 1288
Y at integration start	: 0	Y at integration end: 0

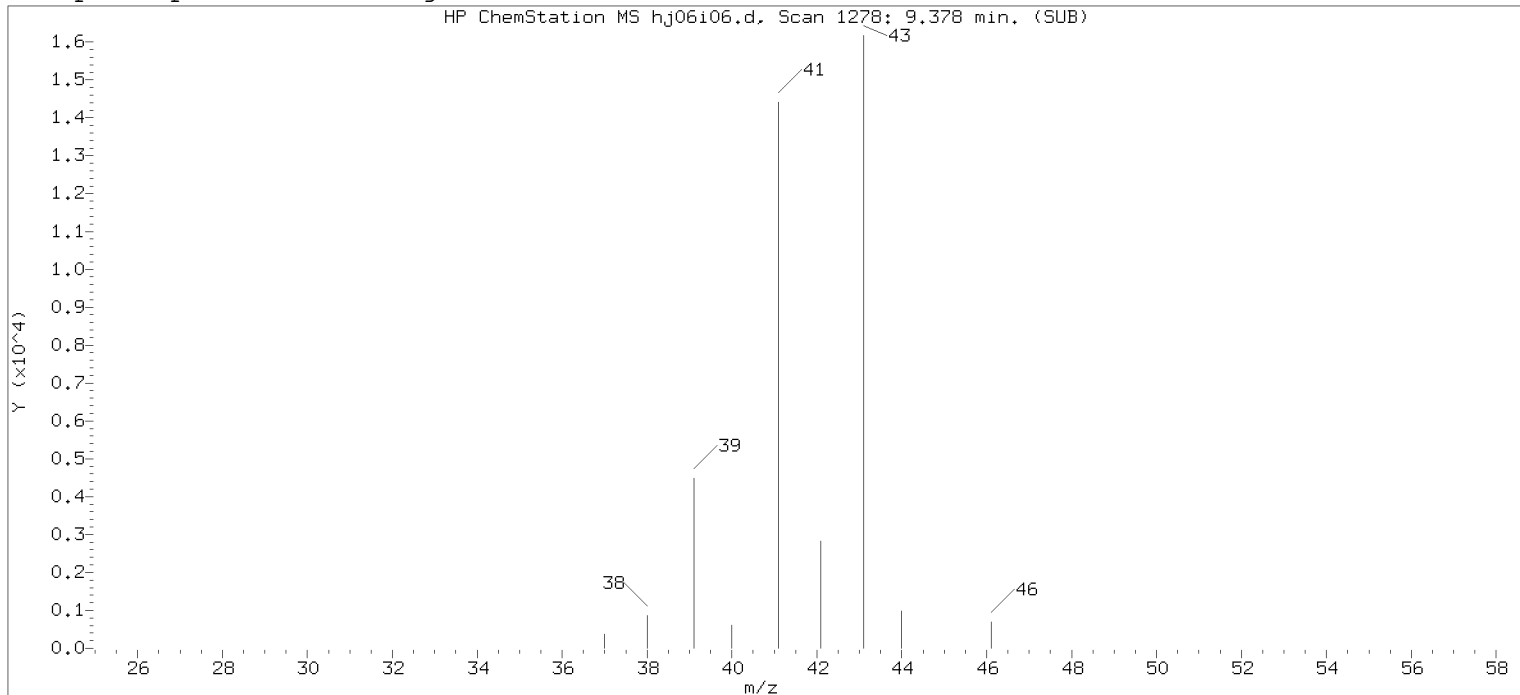
Reason for manual integration: improper integration

Analyst responsible for change:

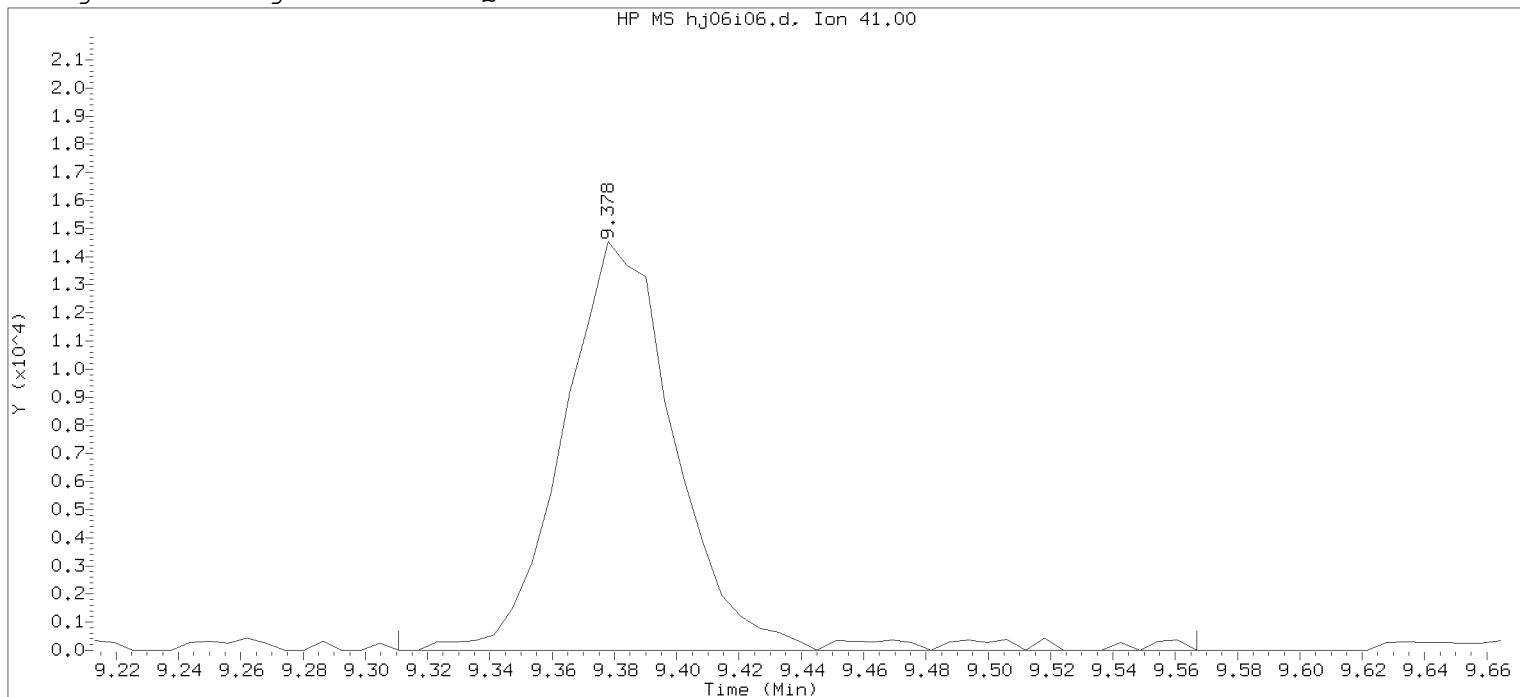
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

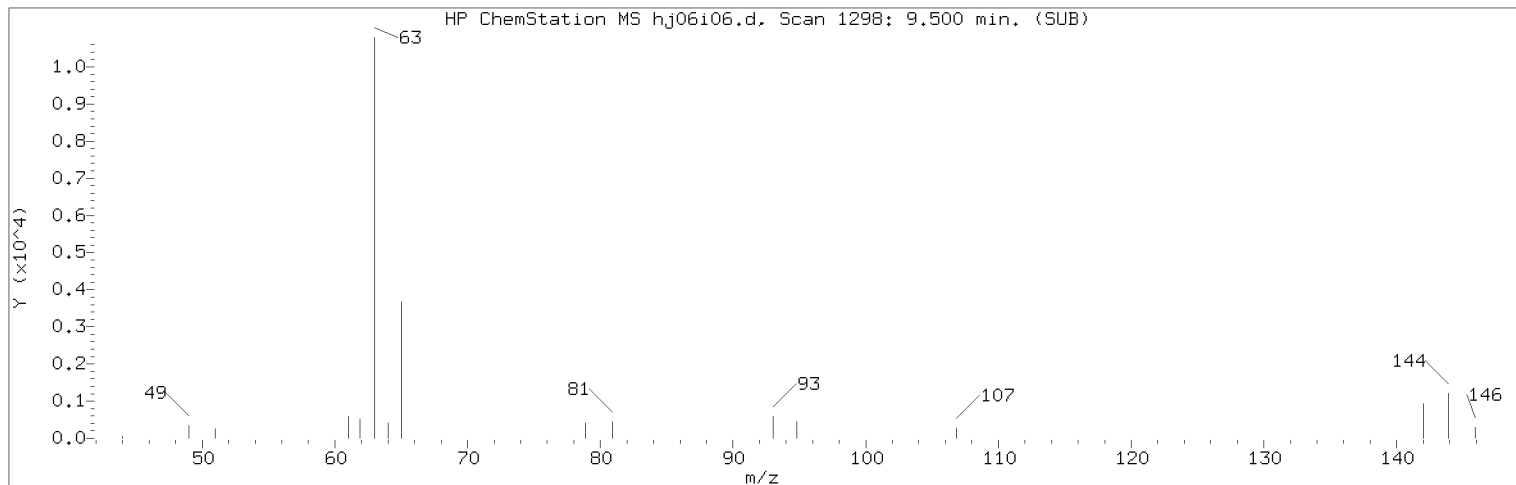
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

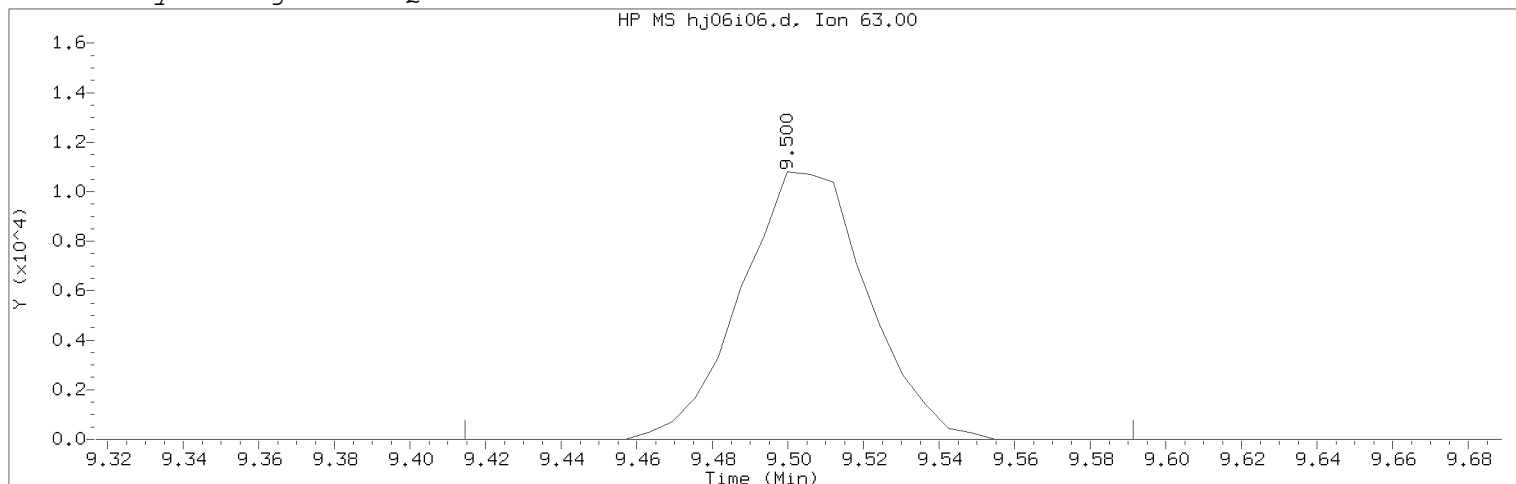
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 37377	
On-column Amount (ng)	: 5.0667	
Integration start scan	: 1266	Integration stop scan: 1308
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA664s Page 230 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

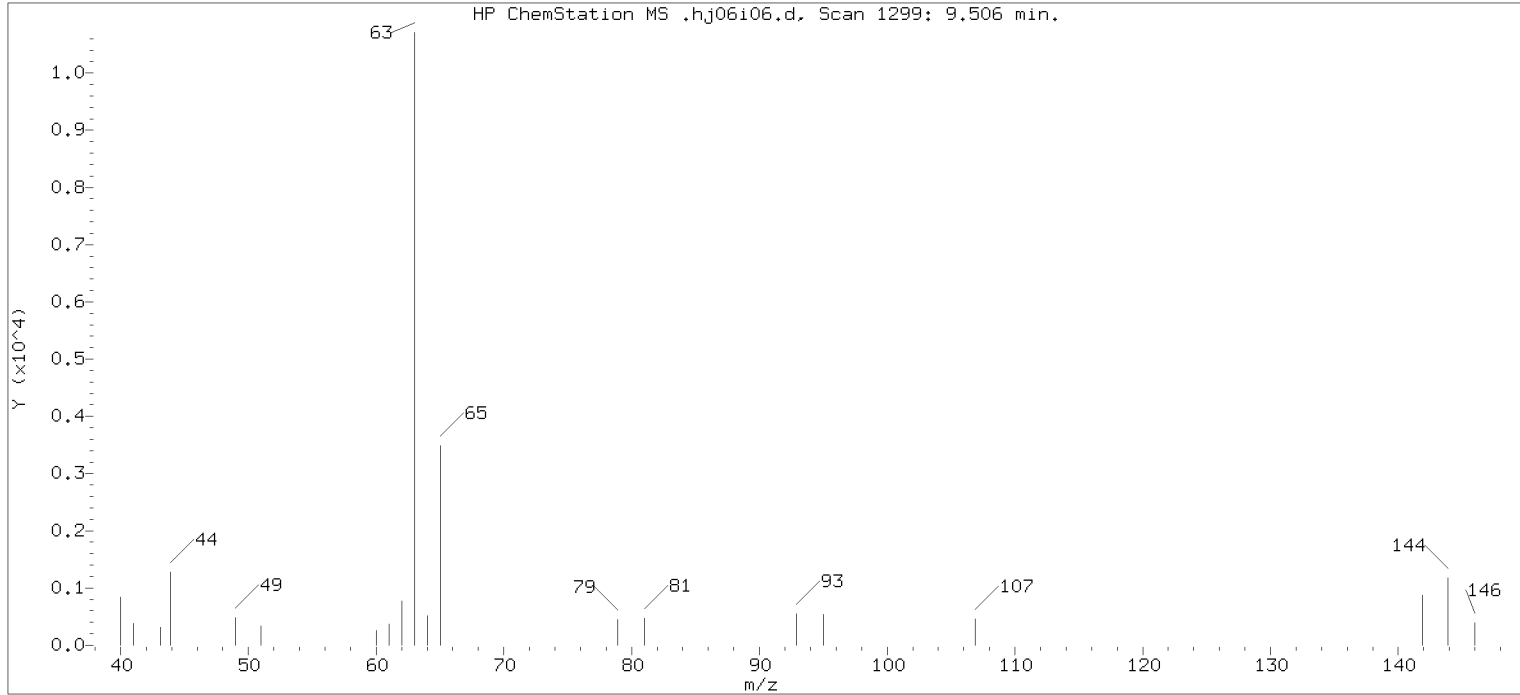
Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1298	
Retention Time (minutes)	: 9.500	
Quant Ion	: 63.00	
Area (flag)	: 25119M	
On-Column Amount (ng)	: 0.5076	
Integration start scan	: 1283	Integration stop scan: 1312
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

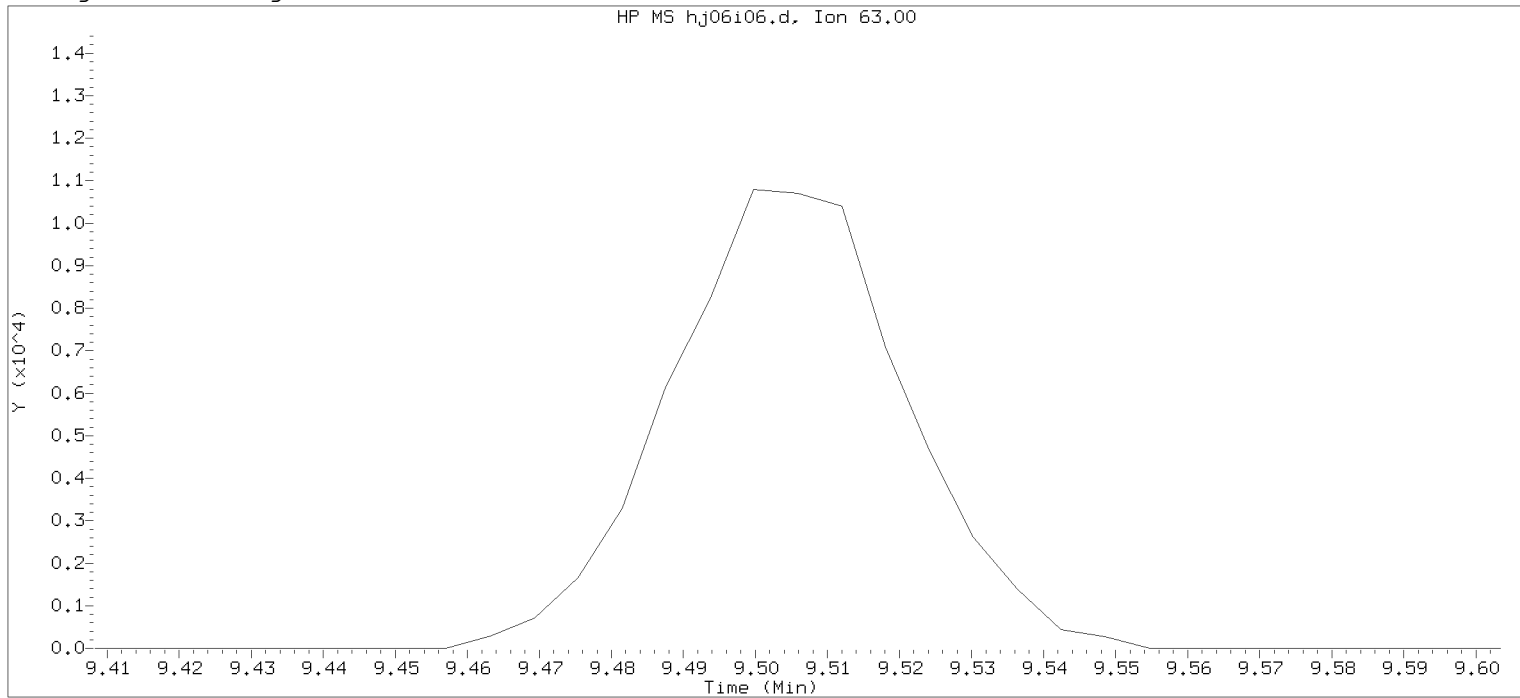
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

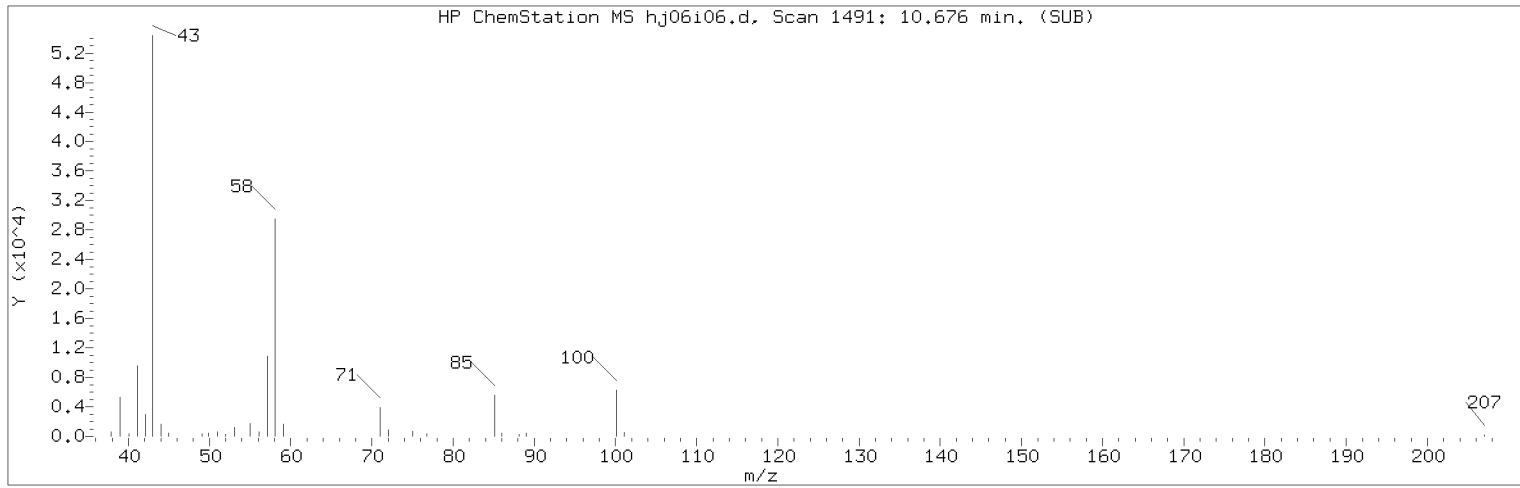
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

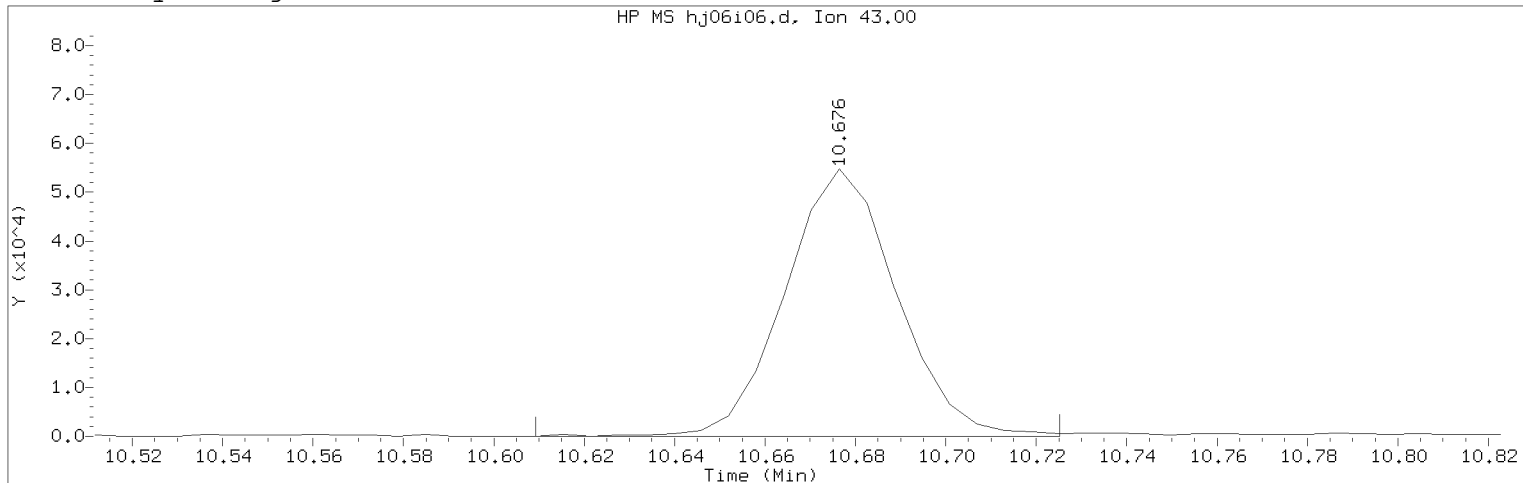
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number : 92
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.676
Quant Ion : 43.00
Area (flag) : 93633M
On-Column Amount (ng) : 4.9489
Integration start scan : 1479
Y at integration start : 0

Integration stop scan: 1498
Y at integration end: 0

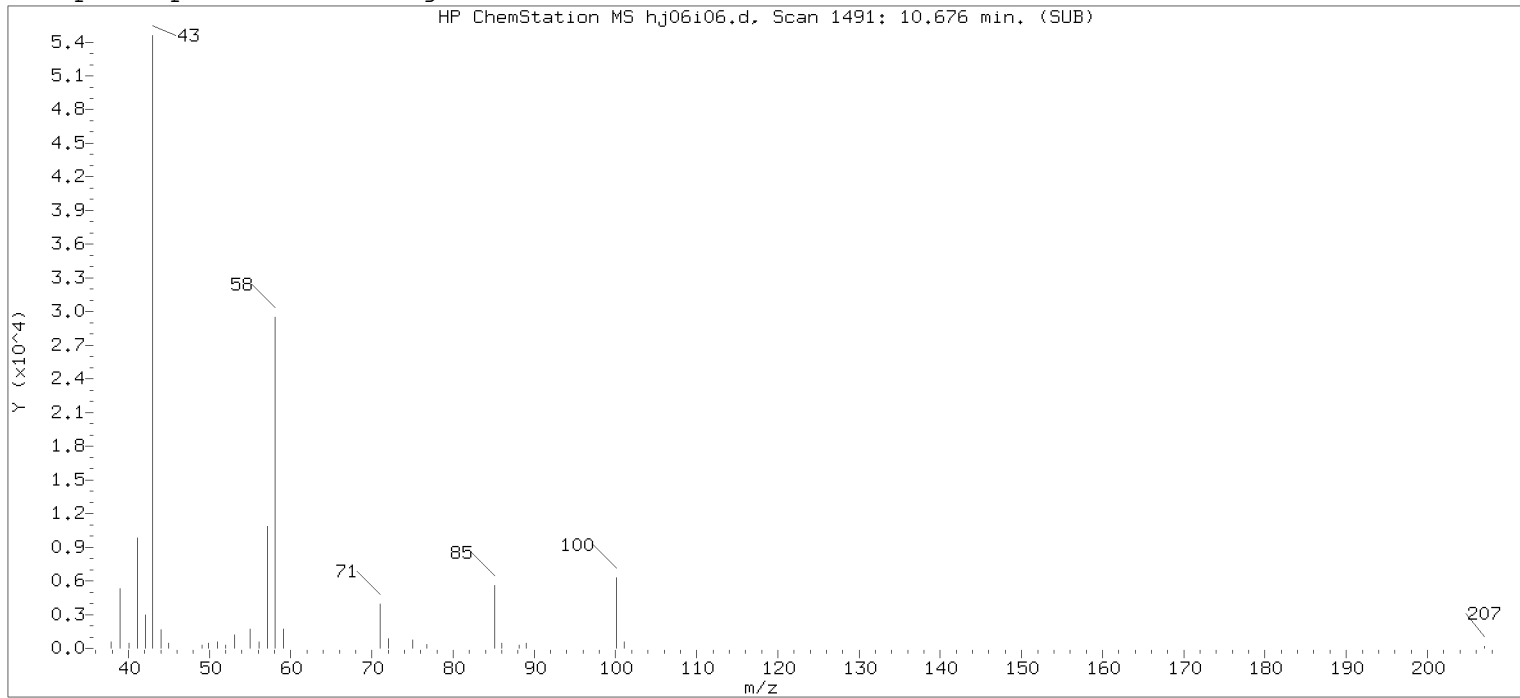
Reason for manual integration: improper integration

Analyst responsible for change:

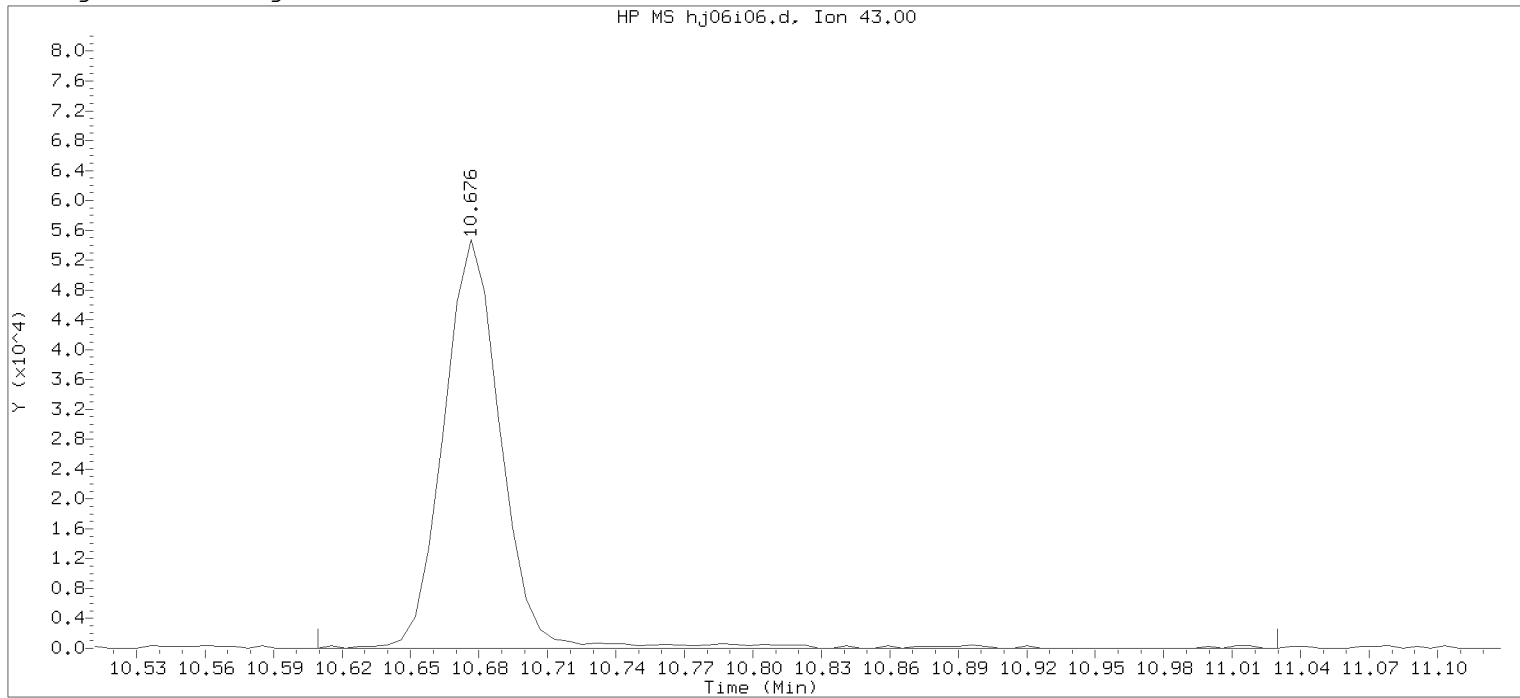
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

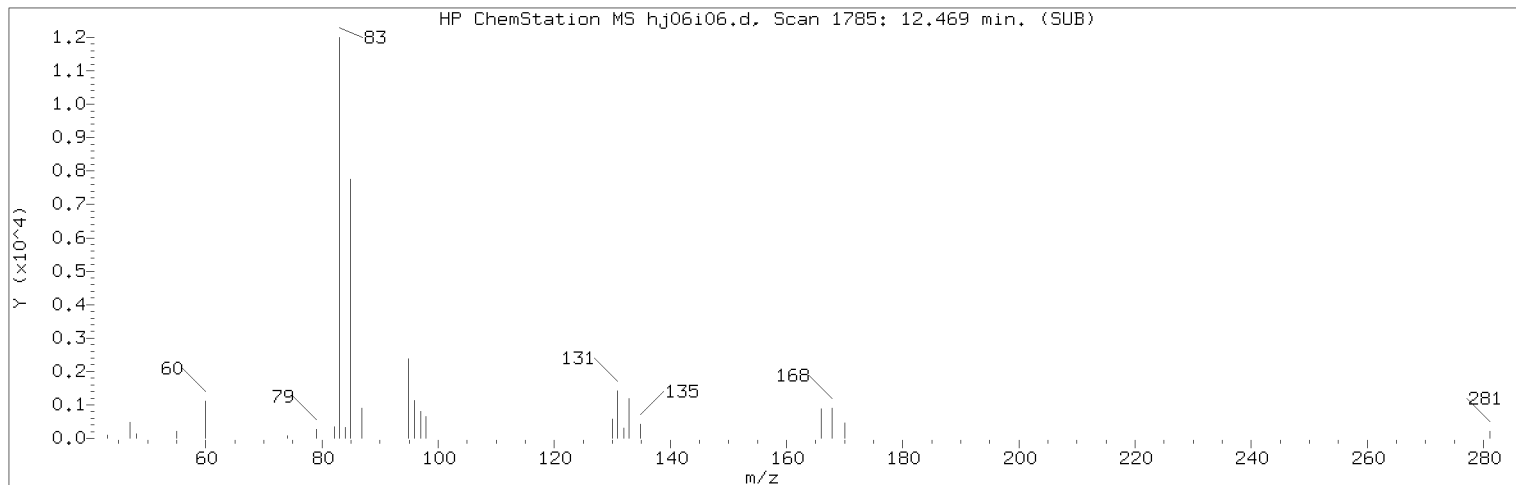
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

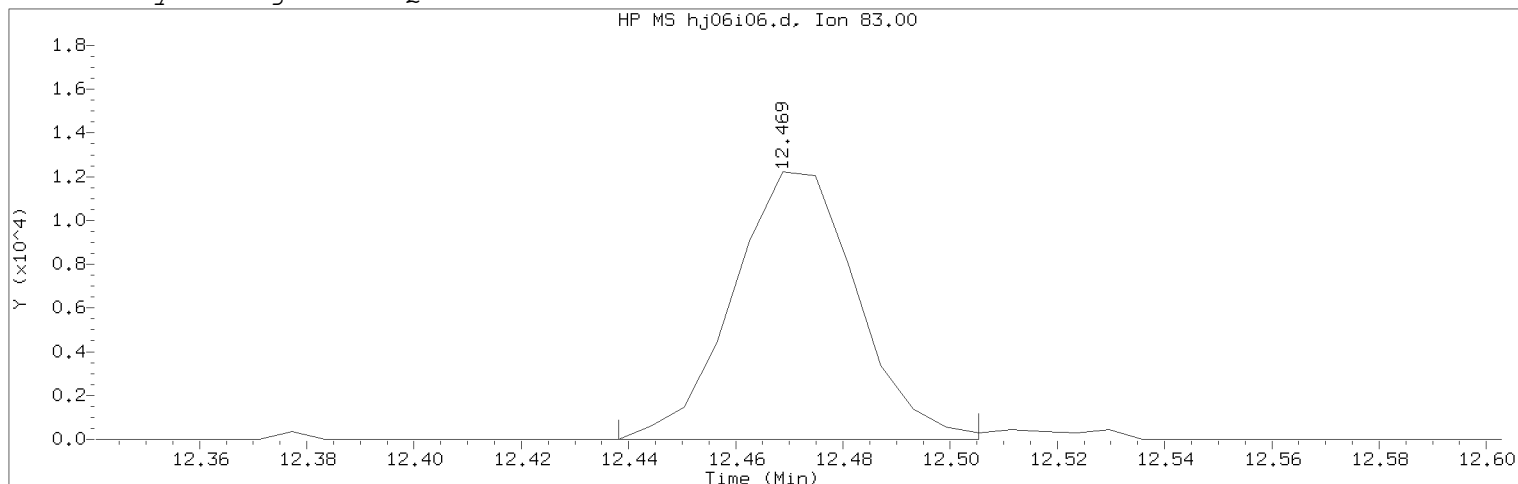
Compound Number	: 92	
Compound Name	: 2-Hexanone	
Scan Number	: 1491	
Retention Time (minutes)	: 10.676	
Quant Ion	: 43.00	
Area	: 97785	
On-column Amount (ng)	: 5.0909	
Integration start scan	: 1479	Integration stop scan: 1548
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 234 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

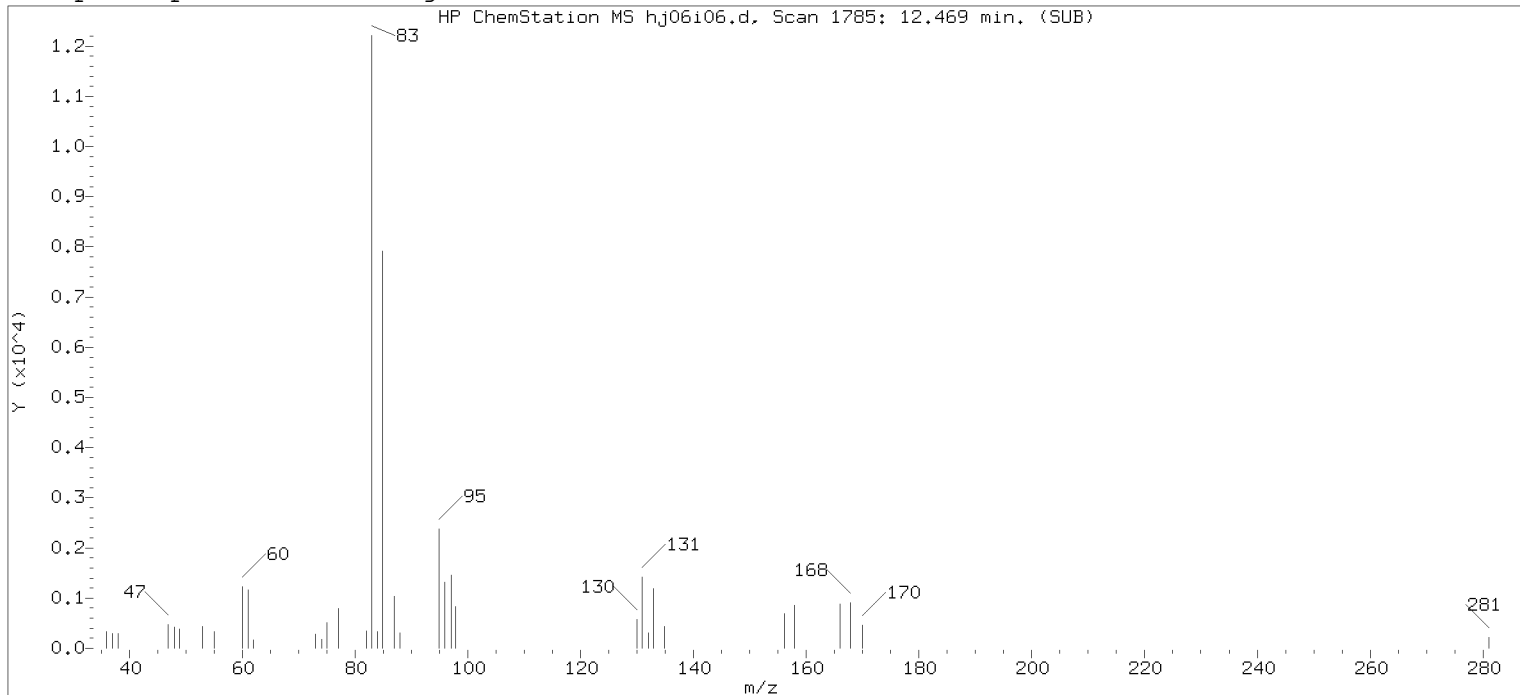
Compound Number : 114
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 19540M
On-Column Amount (ng) : 0.4769
Integration start scan : 1779 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

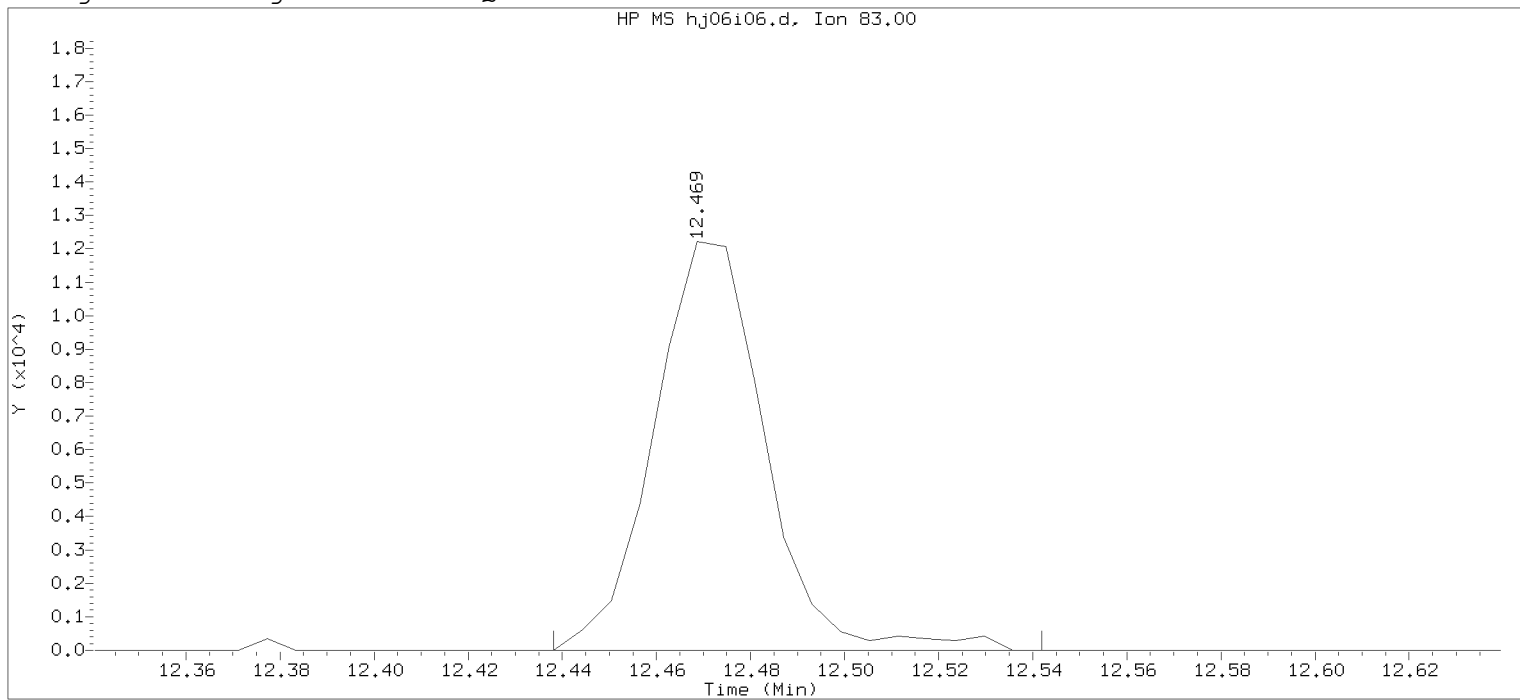
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

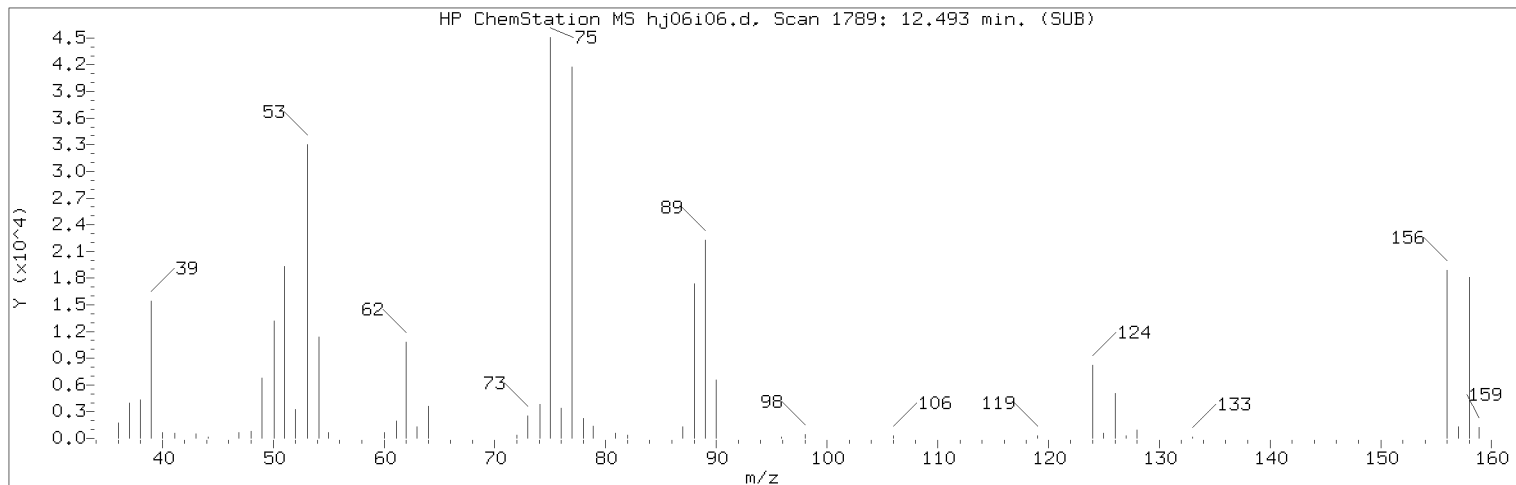
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

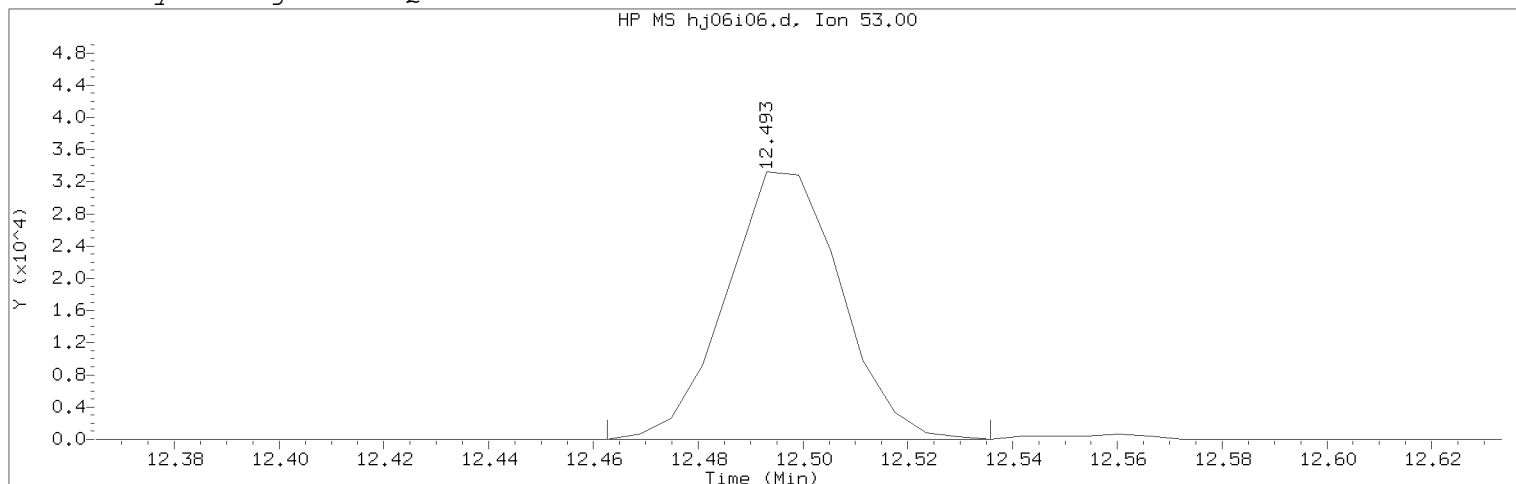
Compound Number	: 114	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 1785	
Retention Time (minutes)	: 12.469	
Quant Ion	: 83.00	
Area	: 20088	
On-column Amount (ng)	: 0.4791	
Integration start scan	: 1779	Integration stop scan: 1796
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA64s Page 236 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:23

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

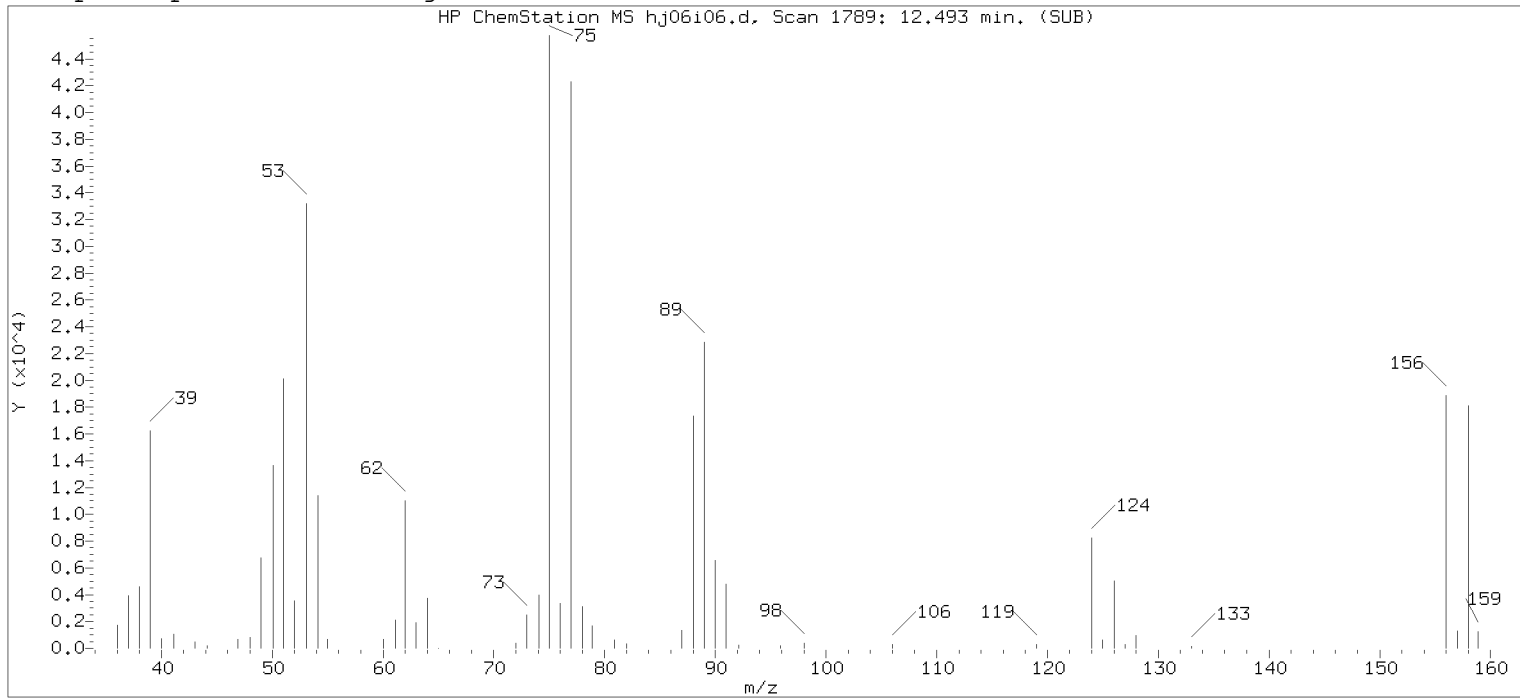
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area (flag)	: 50262M	
On-Column Amount (ng)	: 4.8323	
Integration start scan	: 1783	Integration stop scan: 1795
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

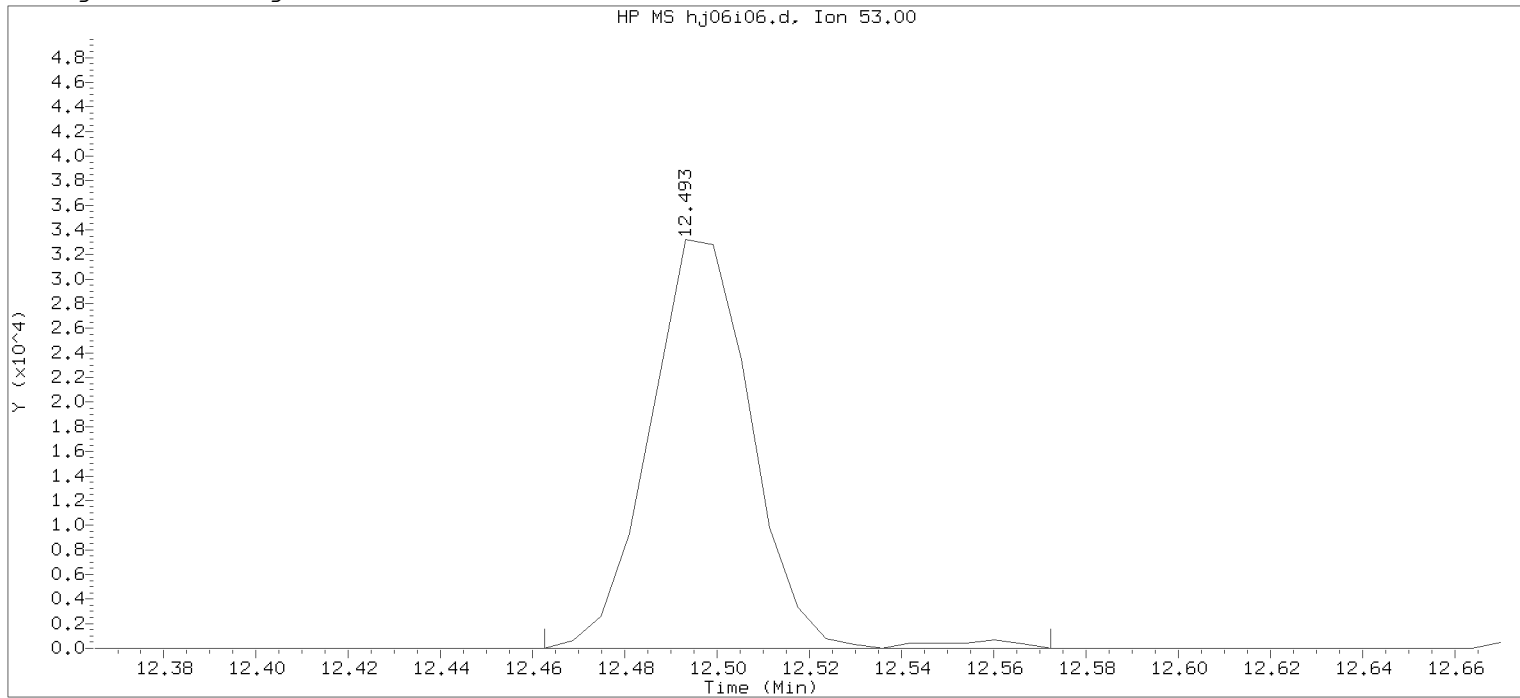
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: ms101251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

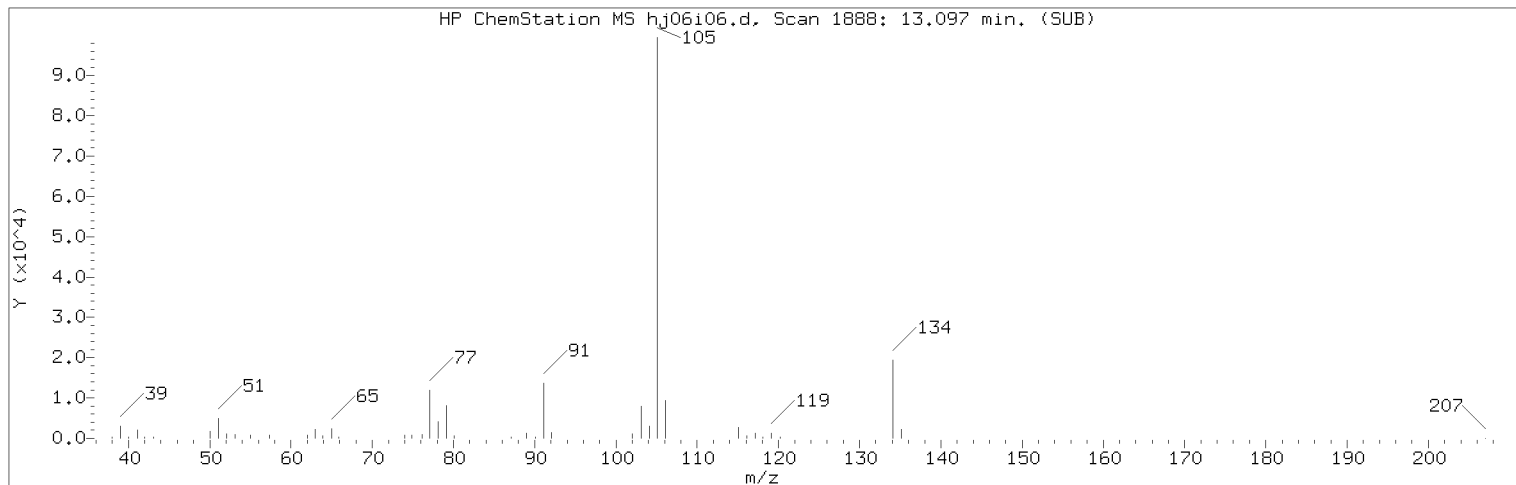
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

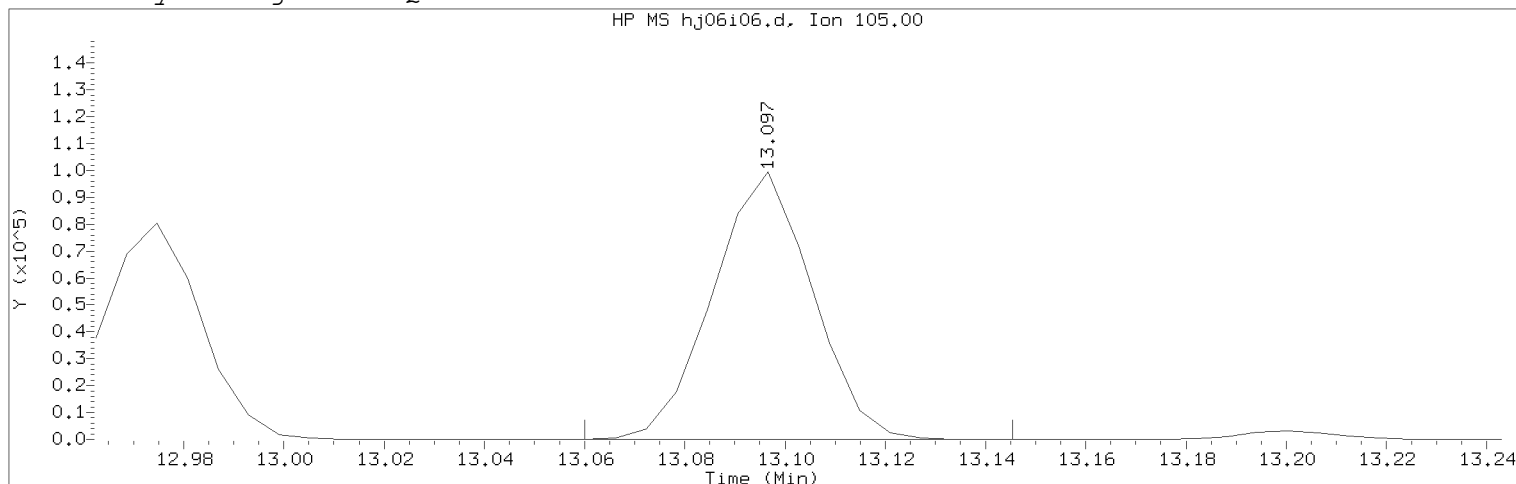
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area	: 51107	
On-column Amount (ng)	: 7.3908	
Integration start scan	: 1783	Integration stop scan: 1801
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA664s Page 238 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

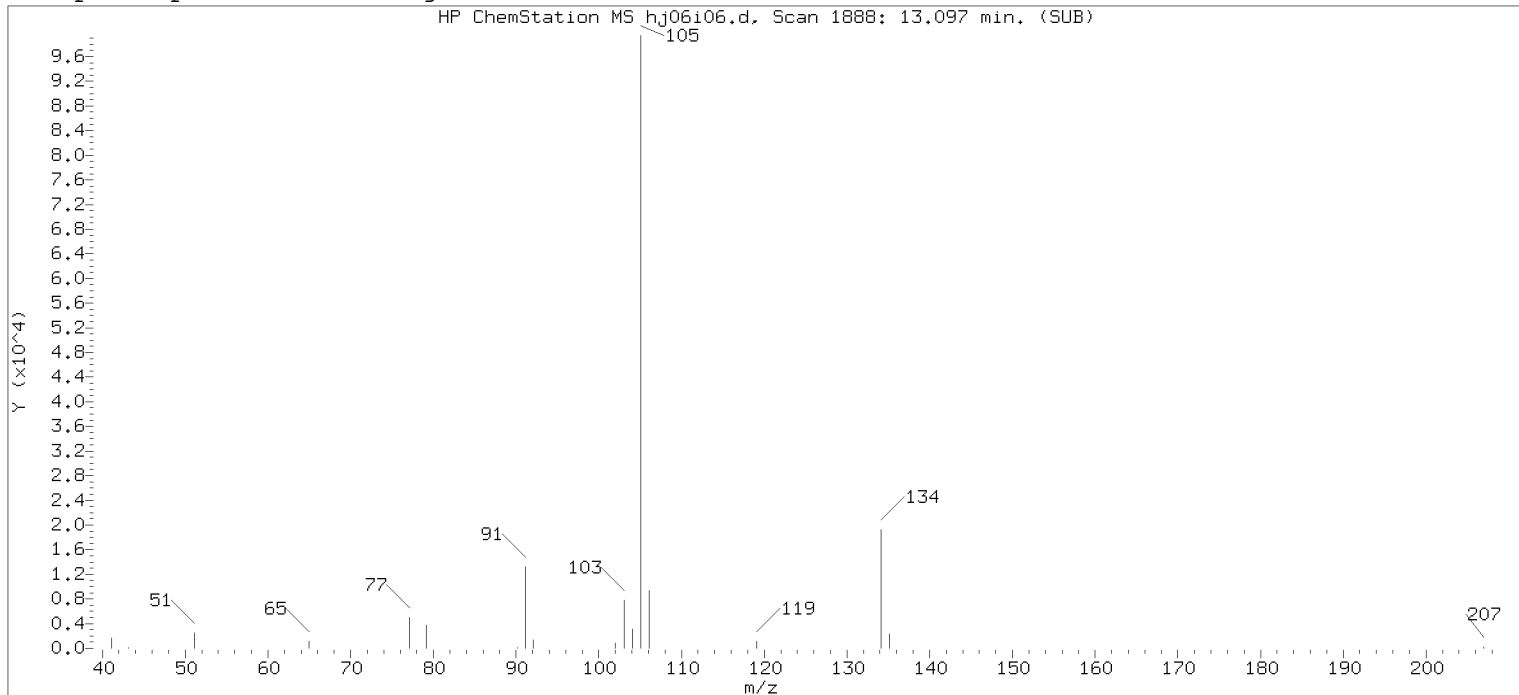
Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area (flag)	: 137070M	
On-Column Amount (ng)	: 0.4509	
Integration start scan	: 1881	Integration stop scan: 1895
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

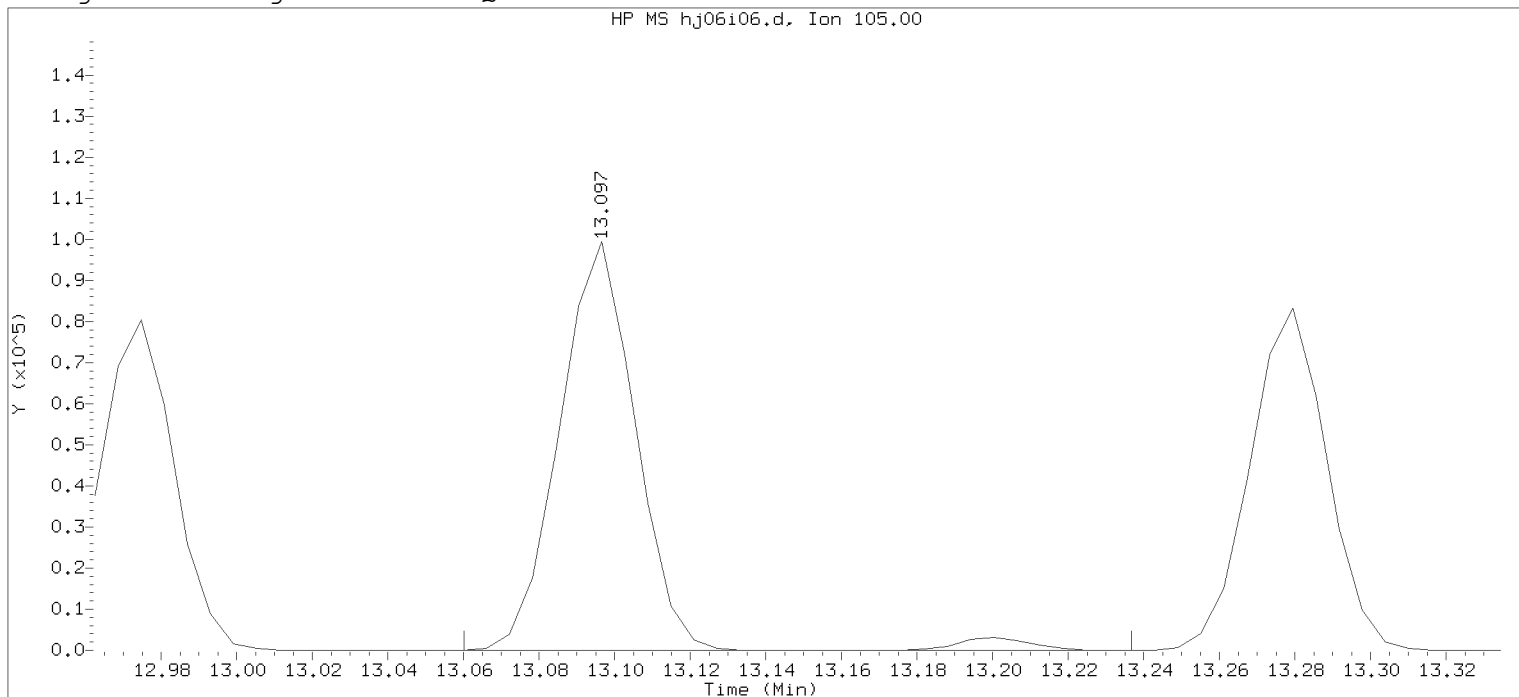
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i06.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:23 Analyst ID: JKH09052

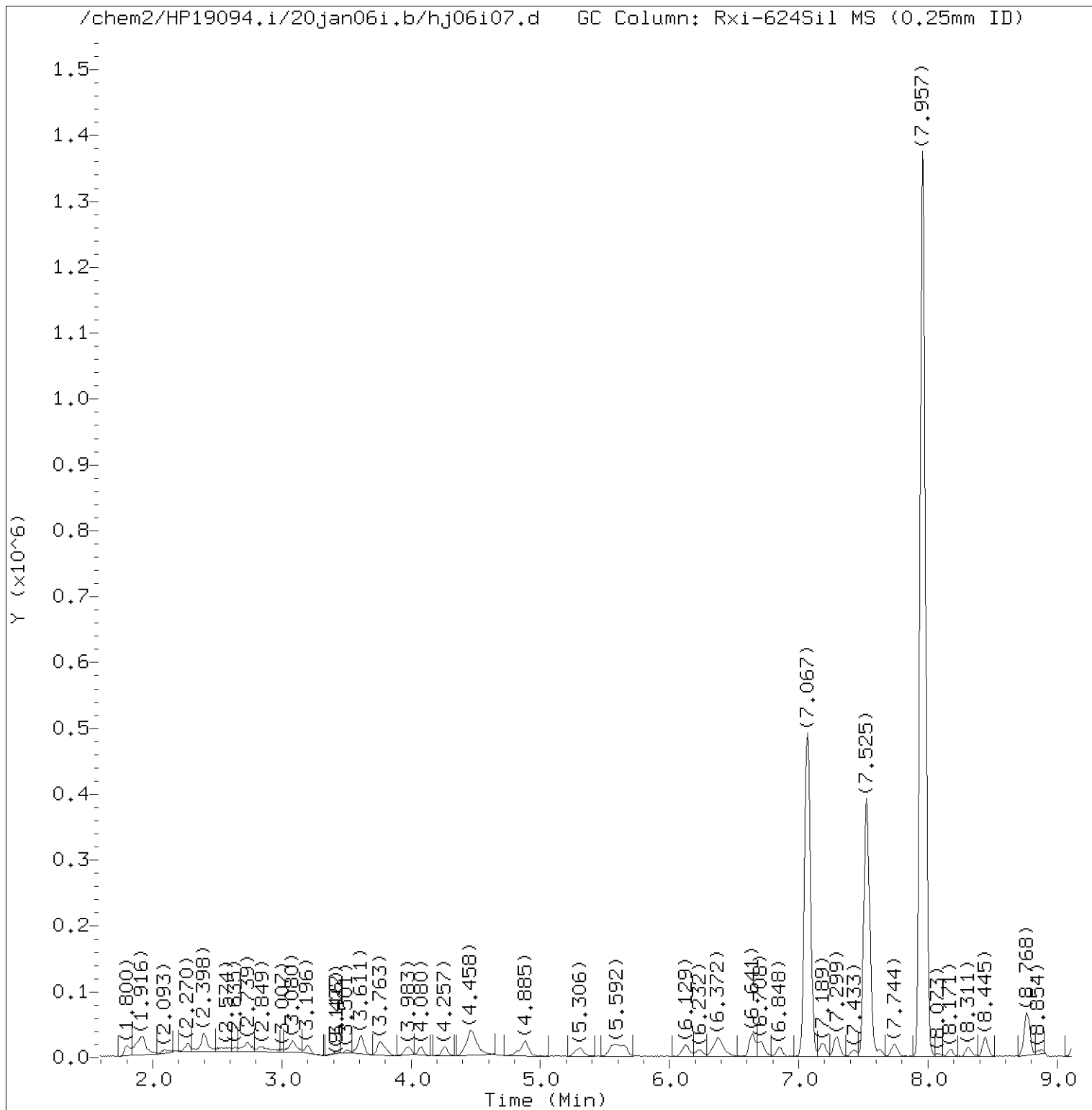
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area	: 141150	
On-column Amount (ng)	: 0.4582	
Integration start scan	: 1881	Integration stop scan: 1910
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA64s Page 240 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
Analyst ID: JKH09052

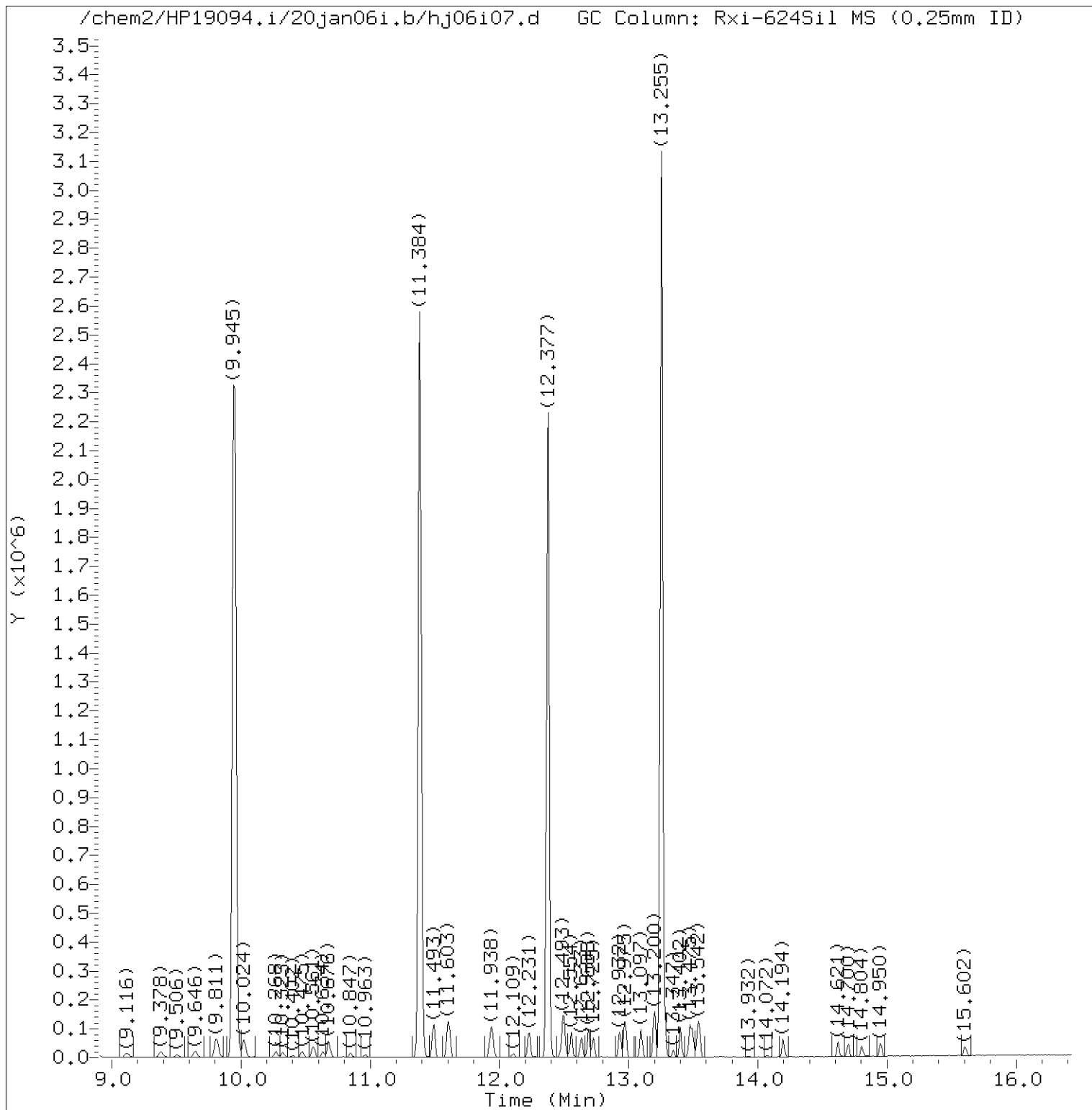
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
 Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	11989	0.165
2) Chloromethane	(2)	2.270	50	14879	0.208
5) Vinyl Chloride	(2)	2.391	62	13112	0.192
6) 1,3-Butadiene	(2)	2.404	39	11243M	0.209
7) Bromomethane	(2)	2.733	94	10156M	0.208
8) Chloroethane	(2)	2.830	64	7859	0.199
9) Dichlorofluoromethane	(2)	3.086	67	20087	0.214
10) Trichlorofluoromethane	(2)	3.147	101	13546	0.174
11) Ethyl ether	(2)	3.422	59	6871	0.200
12) Freon 123a	(2)	3.507	67	12258	0.204
13) Acrolein	(1)	3.611	56	53039	10.168
15) 1,1-Dichloroethene	(2)	3.757	96	9534	0.202
16) Freon 113	(2)	3.775	101	9289	0.188
14) Acetone	(1)	3.806	43	15152M	2.153
17) Methyl Iodide	(2)	3.964	142	18138	0.199
18) Bromoethane	(2)	3.989	108	8482M	0.206
19) Carbon Disulfide	(2)	4.080	76	30690	0.212
22) Methyl Acetate	(1)	4.239	43	5507M	0.310
23) Allyl Chloride	(2)	4.257	41	18327	0.228
24) Methylene Chloride	(2)	4.458	84	10838	0.213
27)*t-Butyl Alcohol-d10	(1)	4.470	65	115841M	50.000
29) t-Butyl Alcohol	(1)	4.611	59	9882M	4.042
30) Acrylonitrile	(1)	4.800	53	8442	0.983
32) trans-1,2-Dichloroethene	(2)	4.879	96	11087	0.213
31) Methyl Tertiary Butyl Ether	(2)	4.885	73	21337	0.197
33) n-Hexane	(2)	5.306	57	14319M	0.195
34) 1,1-Dichloroethane	(2)	5.549	63	19215	0.205
35) di-Isopropyl Ether	(2)	5.586	45	31171	0.202
36) 2-Chloro-1,3-Butadiene	(2)	5.665	53	15984	0.199
41) 1,2-Dichloroethene (Total)	(2)		96	22727	0.415
38) Ethyl t-butyl ether	(2)	6.122	59	29014	0.200
39) 2-Butanone	(1)	6.330	43	23703	2.154
40) cis-1,2-Dichloroethene	(2)	6.372	96	11640	0.202
42) 2,2-Dichloropropane	(2)	6.397	77	16477	0.206
43) Propionitrile	(1)	6.433	54	12117	4.019
46) Methacrylonitrile	(1)	6.635	67	20799	1.929
49) Tetrahydrofuran	(1)	6.702	71	6070	1.996
48) Bromochloromethane	(2)	6.702	128	4931	0.202

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
 Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.854	83	18066	0.197
51) \$Dibromofluoromethane	(2)	7.067	113	479375	9.963
51) \$Dibromofluoromethane	(2)	7.067	111	493409	9.982
52) 1,1,1-Trichloroethane	(2)	7.092	97	17203	0.202
53) Cyclohexane	(2)	7.189	56	18085	0.199
53) Cyclohexane	(2)	7.195	84	14733	0.189
53) Cyclohexane	(2)	7.183	69	5670	0.200
56) 1,1-Dichloropropene	(2)	7.287	75	13774	0.191
55) Carbon Tetrachloride	(2)	7.305	117	14470	0.198
57) Isobutyl Alcohol	(1)	7.433	41	10874	12.830
58) \$1,2-Dichloroethane-d4	(2)	7.525	102	91347	9.796
58) \$1,2-Dichloroethane-d4	(2)	7.525	65	426576	9.915
58) \$1,2-Dichloroethane-d4	(2)	7.525	104	58205	9.855
59) Benzene	(2)	7.555	78	41985	0.199
60) 1,2-Dichloroethane	(2)	7.634	62	11801	0.217
61) t-Amyl methyl ether	(2)	7.744	73	24609	0.194
64) *Fluorobenzene	(2)	7.957	96	1935544	10.000
63) n-Heptane	(2)	7.964	43	16086M	0.209
66) n-Butanol	(1)	8.311	56	13133M	19.248
68) Trichloroethene	(2)	8.445	95	11243	0.204
70) Methylcyclohexane	(2)	8.756	83	17590	0.178
71) 1,2-Dichloropropane	(2)	8.787	63	10438	0.200
72) Methyl Methacrylate	(1)	8.841	69	4212	0.194
73) 1,4-Dioxane	(1)	8.860	88	978M	5.943
74) Dibromomethane	(2)	8.884	93	4691	0.197
75) Bromodichloromethane	(2)	9.116	83	12406	0.192
77) 2-Nitropropane	(1)	9.378	41	14974M	2.102
80) 1-Bromo-2-chloroethane	(2)	9.506	63	9415M	0.192
81) cis-1,3-Dichloropropene	(2)	9.646	75	14299	0.187
82) 4-Methyl-2-Pentanone	(1)	9.805	43	54162	1.997
83) \$Toluene-d8	(3)	9.945	98	1911418	10.001
83) \$Toluene-d8	(3)	9.945	100	1233939	9.983
84) Toluene	(3)	10.024	92	27492	0.205
86) 1,3-Dichloropropene (total)	(3)		75	26879	0.389
85) trans-1,3-Dichloropropene	(3)	10.274	75	12580	0.202
87) Ethyl Methacrylate	(3)	10.323	69	9292	0.192
89) 1,1,2-Trichloroethane	(3)	10.475	97	6901	0.205
90) Tetrachloroethene	(3)	10.561	166	12517	0.205

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d
 Injection date and time: 06-JAN-2020 16:44

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.634	76	11599	0.200
92) 2-Hexanone	(1)	10.676	43	36737M	1.982
94) Dibromochloromethane	(3)	10.847	129	8426	0.195
96) 1,2-Dibromoethane	(3)	10.963	107	6178	0.192
97) 1-Chlorohexane	(3)	11.384	91	18428	0.228
98) *Chlorobenzene-d5	(3)	11.384	117	1434543	10.000
99) Chlorobenzene	(3)	11.408	112	29799	0.203
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	10751	0.206
101) Ethylbenzene	(3)	11.493	91	54029	0.205
102) m+p-Xylene	(3)	11.603	106	40506	0.401
106) Xylene (Total)	(3)		106	60180	0.599
105) o-Xylene	(3)	11.932	106	19674	0.198
107) Styrene	(3)	11.944	104	31053	0.193
108) Bromoform	(3)	12.109	173	4686	0.186
109) Isopropylbenzene	(3)	12.231	105	53040	0.197
112) \$4-Bromofluorobenzene	(3)	12.377	95	715402	10.118
112) \$4-Bromofluorobenzene	(3)	12.377	174	608061	10.050
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	7770	0.191
115) Bromobenzene	(4)	12.493	156	12538	0.204
116) trans-1,4-Dichloro-2-butene	(1)	12.493	53	19411M	1.905
117) 1,2,3-Trichloropropane	(4)	12.524	110	2067	0.190
118) n-Propylbenzene	(4)	12.554	91	62293	0.194
120) 2-Chlorotoluene	(4)	12.639	126	12809	0.203
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	44627	0.192
123) 4-Chlorotoluene	(4)	12.725	126	12785	0.203
126) tert-Butylbenzene	(4)	12.932	134	9273M	0.193
127) Pentachloroethane	(4)	12.969	167	8325	0.203
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	47406	0.197
129) sec-Butylbenzene	(4)	13.097	105	56997M	0.189
133) p-Isopropyltoluene	(4)	13.200	119	49995	0.193
132) 1,3-Dichlorobenzene	(4)	13.200	146	24141	0.197
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	777924	10.000
135) 1,4-Dichlorobenzene	(4)	13.273	146	23977	0.201
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	21146	0.211
137) Benzyl Chloride	(4)	13.347	126	3230	0.189
139) n-Butylbenzene	(4)	13.493	92	24039	0.188
140) 1,2-Dichlorobenzene	(4)	13.530	146	20632	0.191
144) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	1045	0.180

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

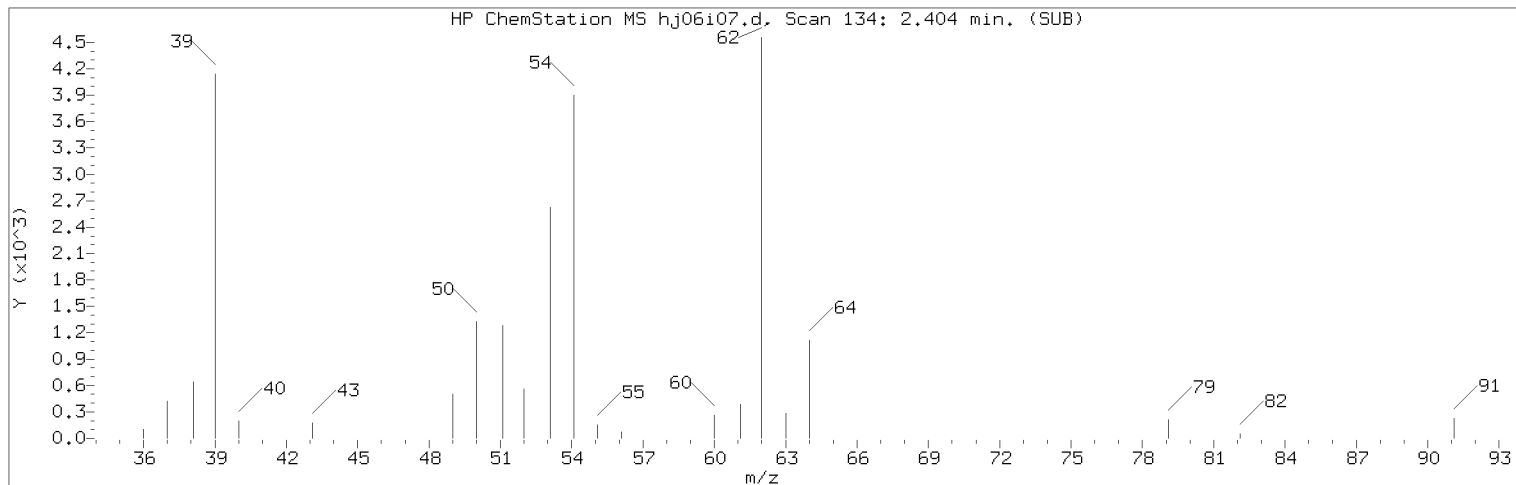
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.194	180	17748	0.185
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	15600	0.194
147) Hexachlorobutadiene	(4)	14.700	225	7990	0.191
148) Naphthalene	(4)	14.804	128	26111	0.186
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	12441	0.181

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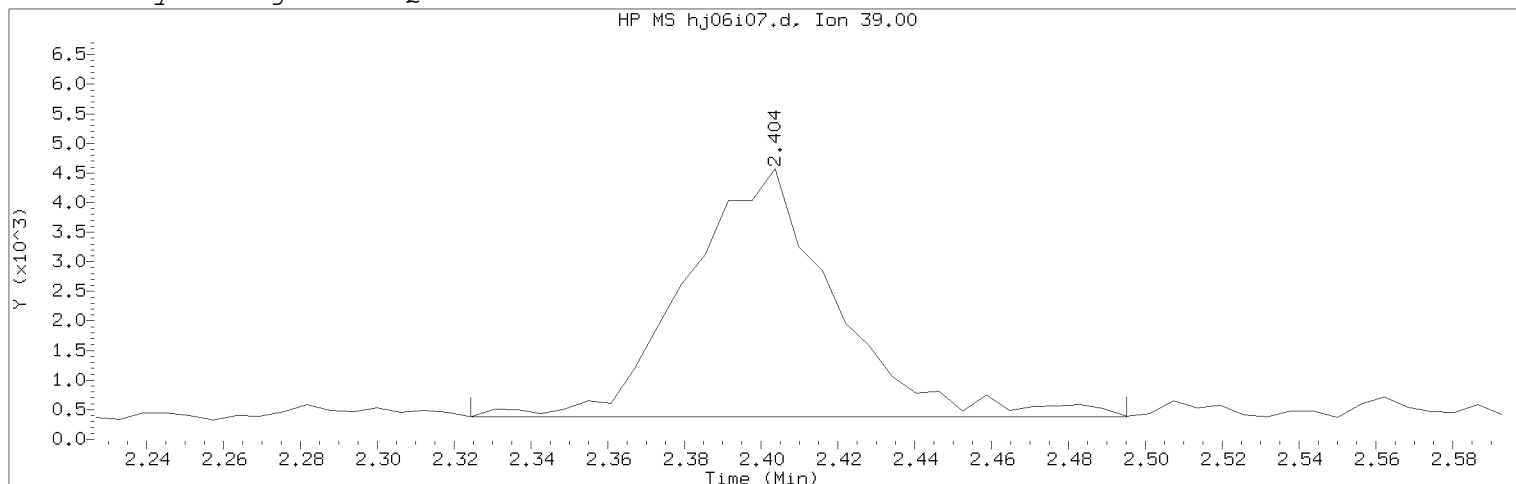
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

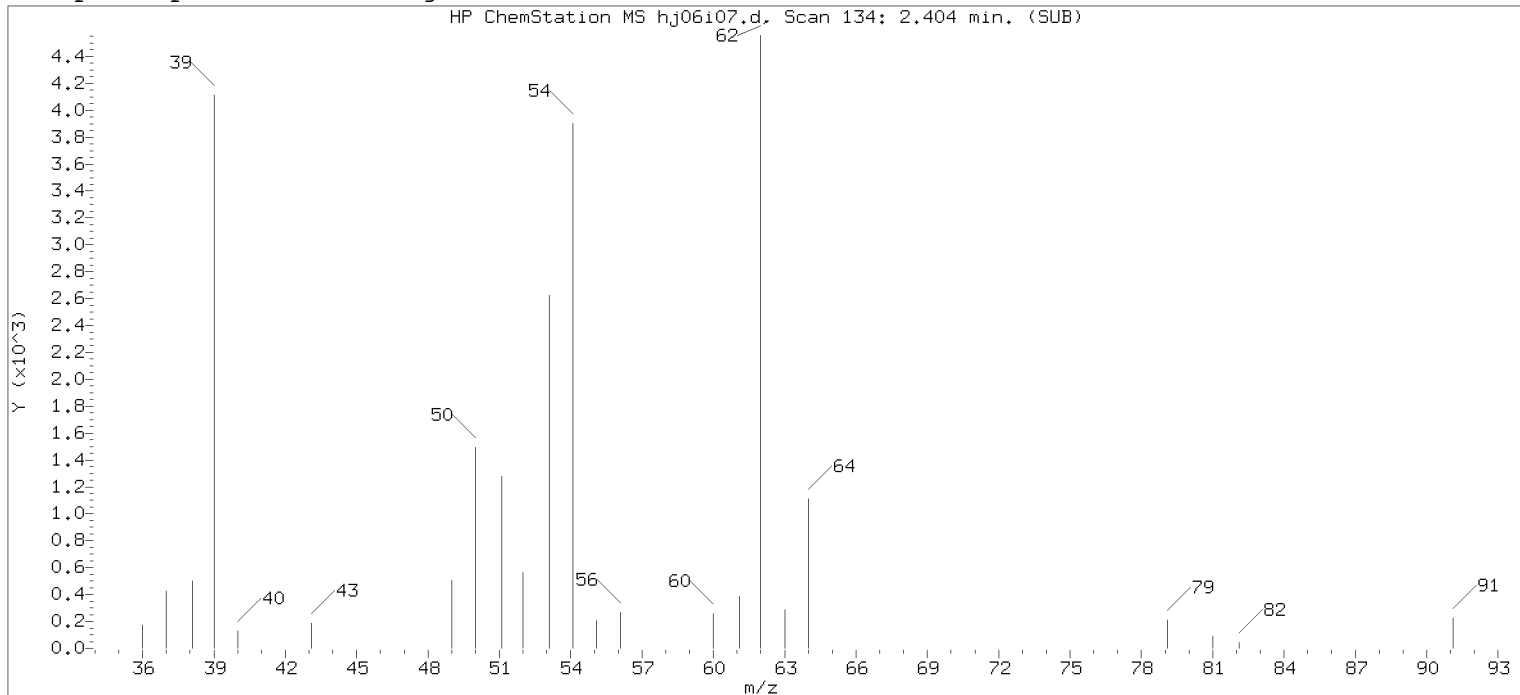
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 39.00
Area (flag) : 11243M
On-Column Amount (ng) : 0.2089
Integration start scan : 120 Integration stop scan: 148
Y at integration start : 379 Y at integration end: 379

Reason for manual integration: improper integration

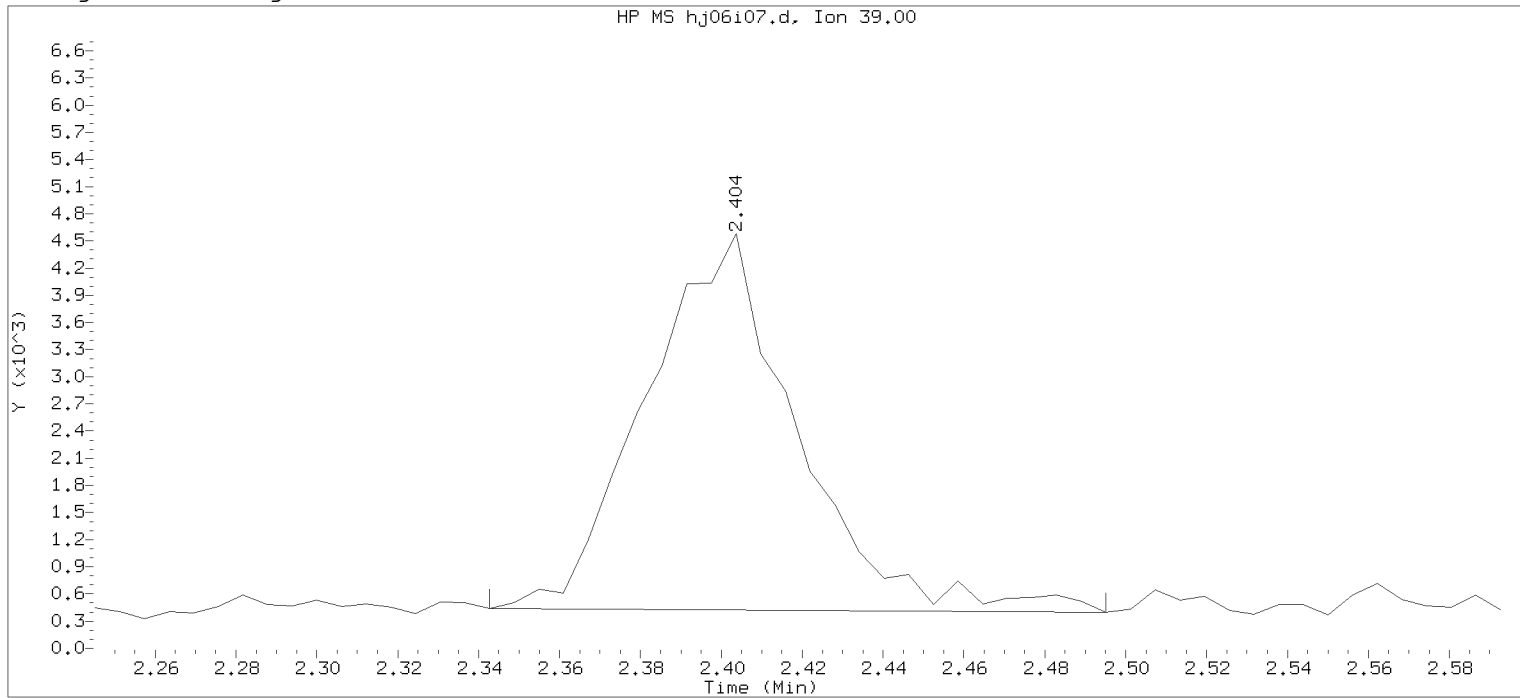
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

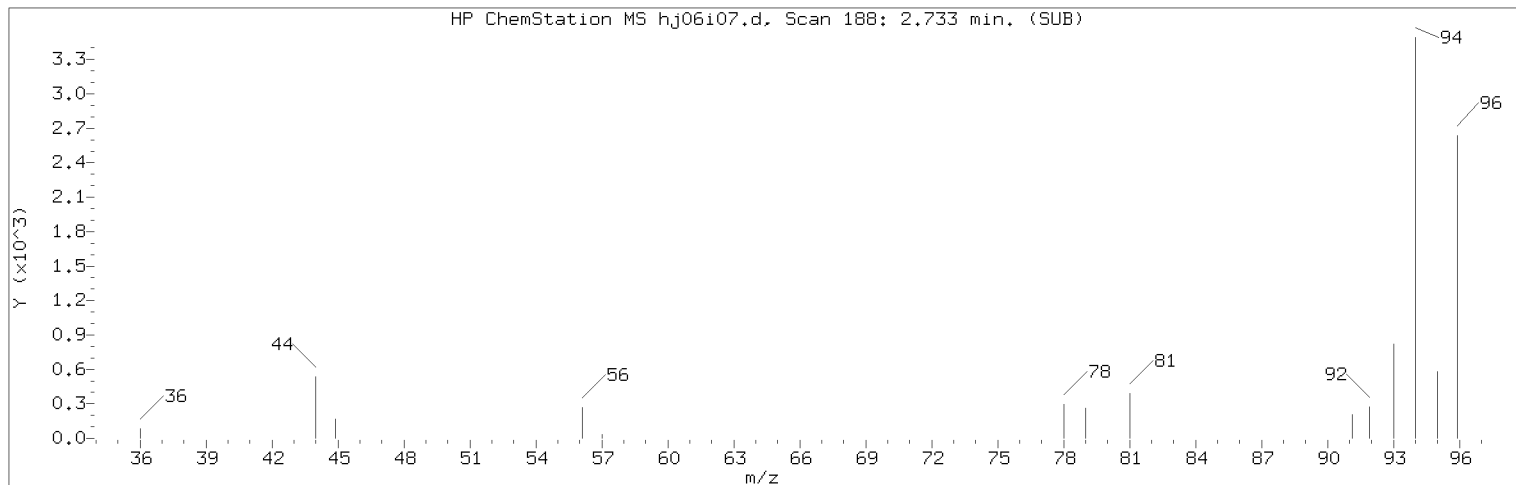
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

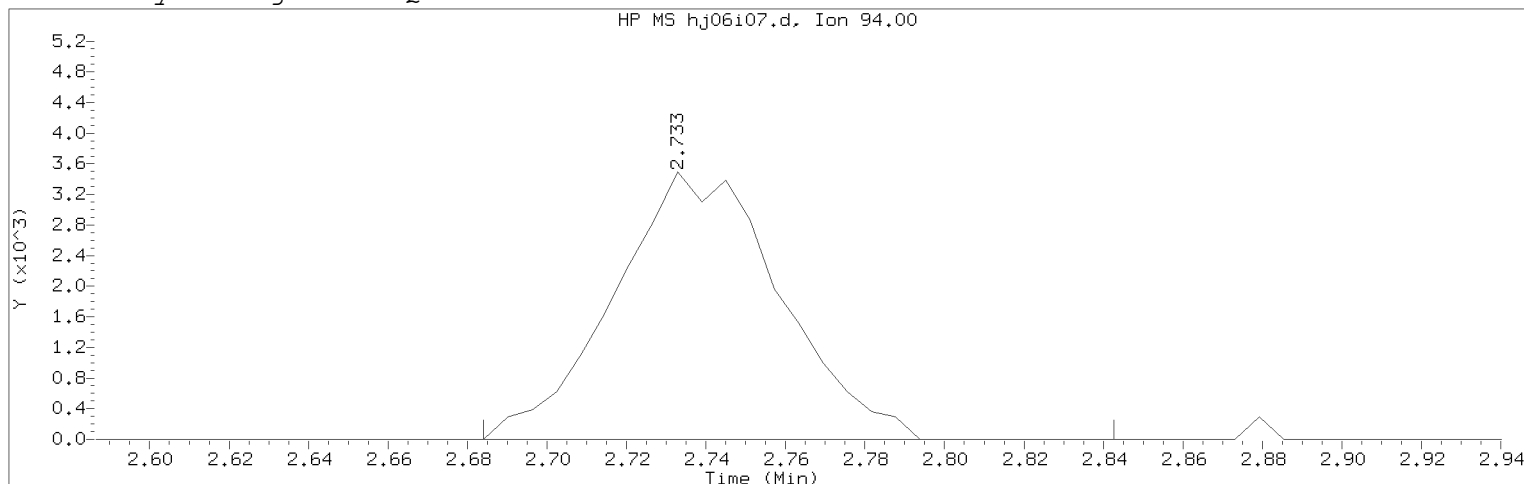
Compound Number	: 6	
Compound Name	: 1,3-Butadiene	
Scan Number	: 134	
Retention Time (minutes)	: 2.404	
Quant Ion	: 39.00	
Area	: 10798	
On-column Amount (ng)	: 0.2037	
Integration start scan	: 123	Integration stop scan: 148
Y at integration start	: 438	Y at integration end: 394

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Target 3.5 esignature user RA64s Page 248 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

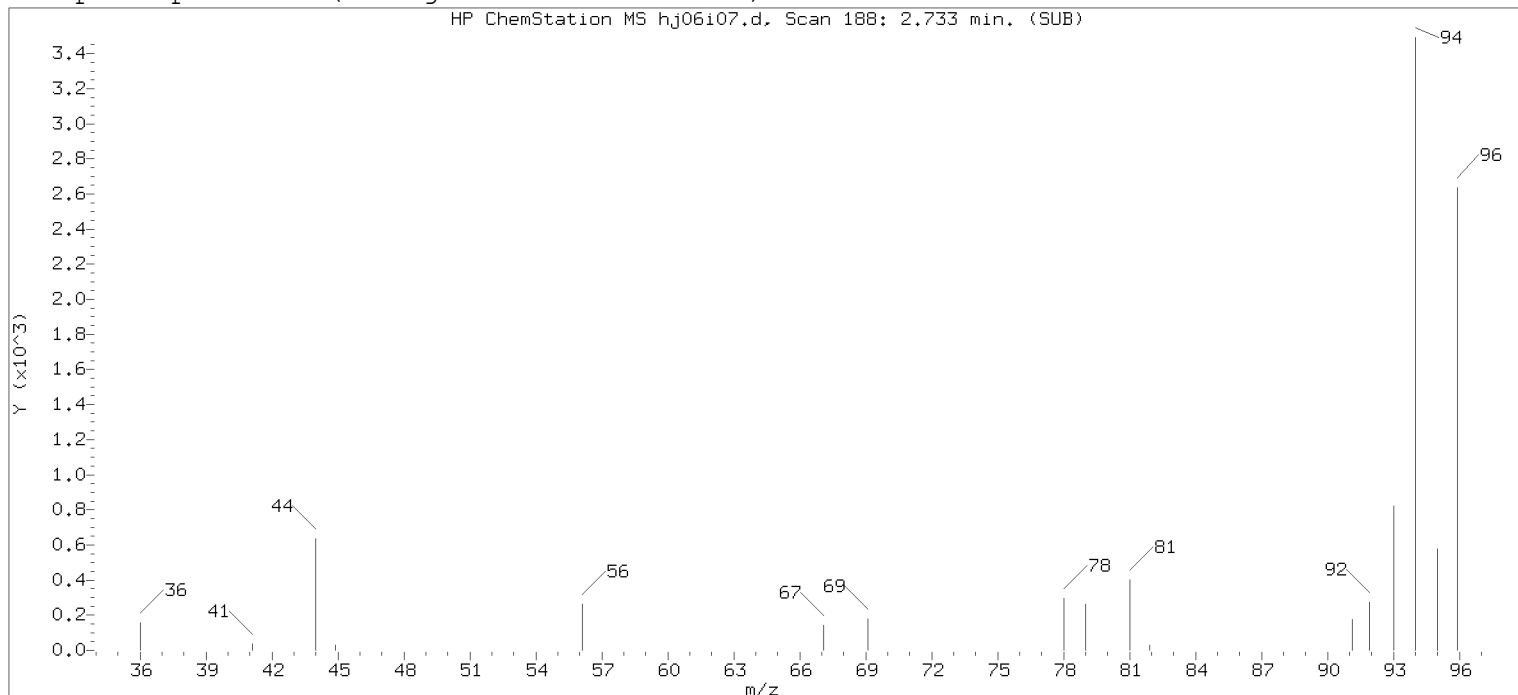
Compound Number	: 7	
Compound Name	: Bromomethane	
Scan Number	: 188	
Retention Time (minutes)	: 2.733	
Quant Ion	: 94.00	
Area (flag)	: 10156M	
On-Column Amount (ng)	: 0.2081	
Integration start scan	: 179	Integration stop scan: 205
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

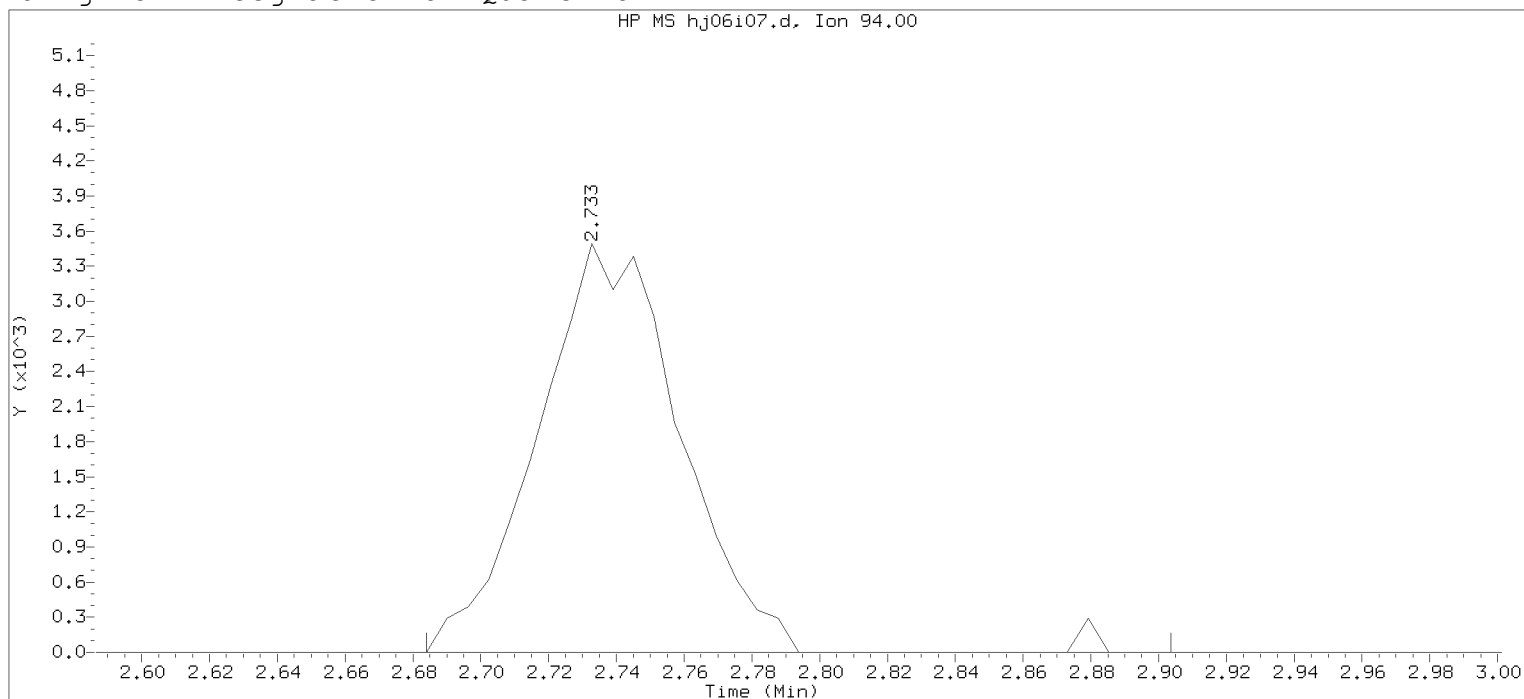
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 7

Compound Name : Bromomethane

Scan Number : 188

Retention Time (minutes): 2.733

Quant Ion : 94.00

Area : 10263

On-column Amount (ng) : 0.2100

Integration start scan : 179

Integration stop scan: 215

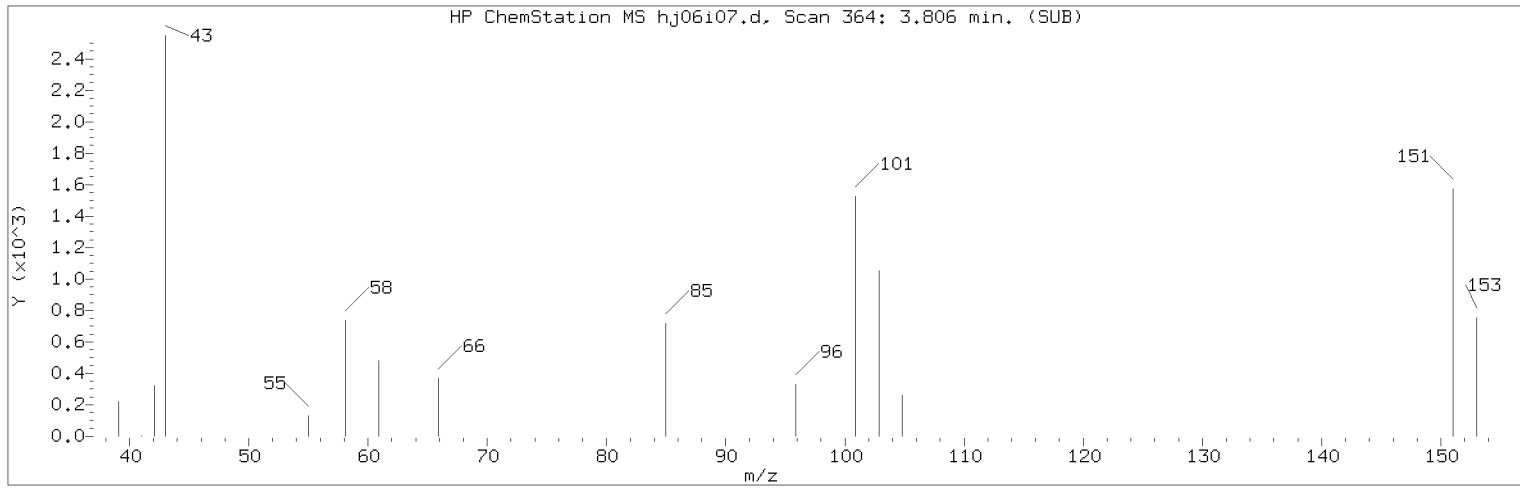
Y at integration start : 0

Y at integration end: 0

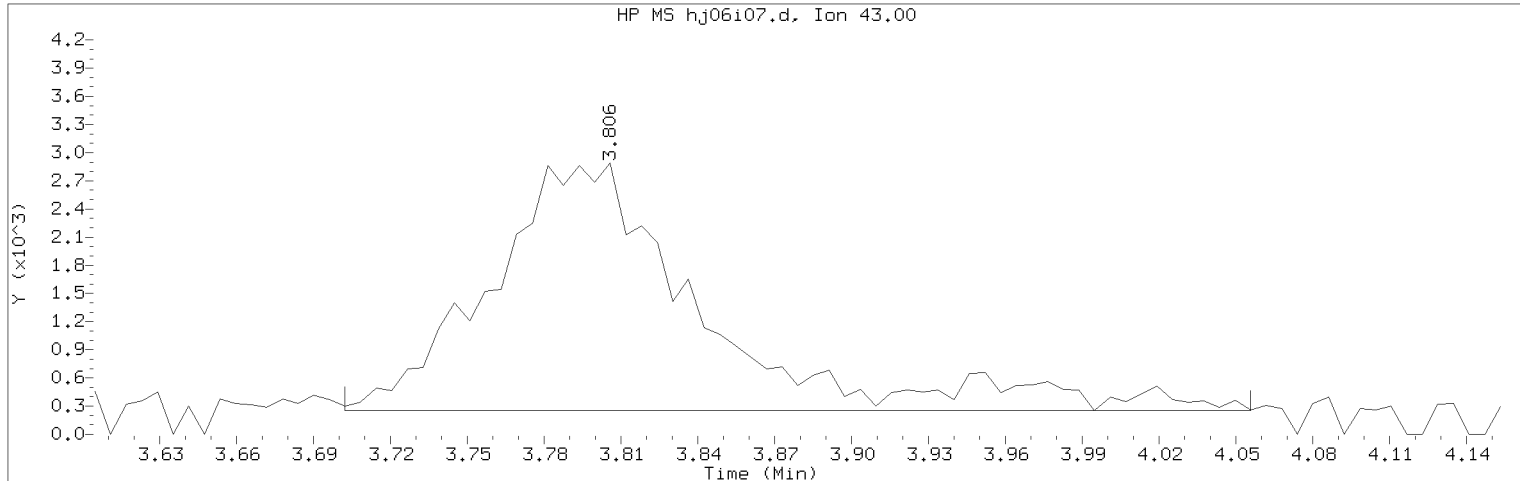
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature user RAE64s Page 250 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 364
 Retention Time (minutes): 3.806
 Quant Ion : 43.00
 Area (flag) : 15152M
 On-Column Amount (ng) : 2.1527
 Integration start scan : 346
 Y at integration start : 254

Integration stop scan: 404
 Y at integration end: 254

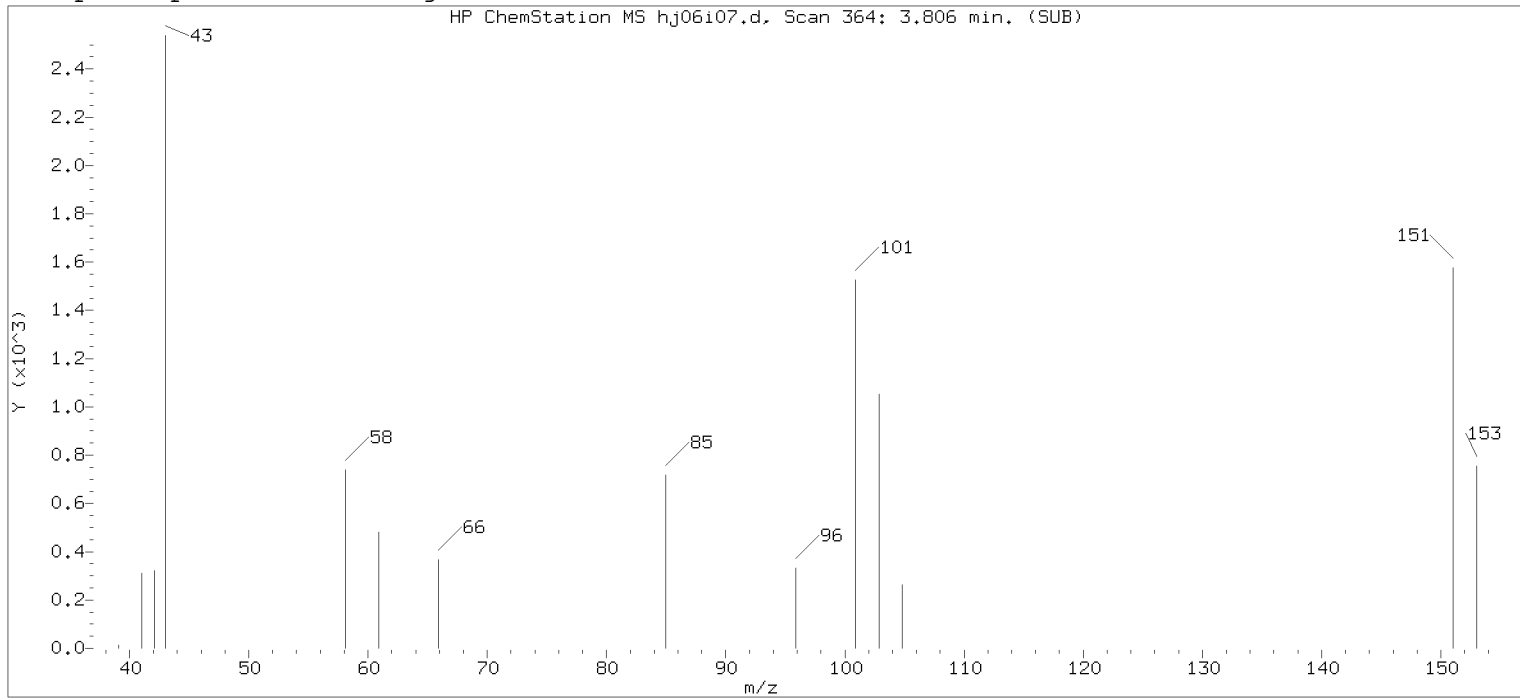
Reason for manual integration: improper integration

Analyst responsible for change:

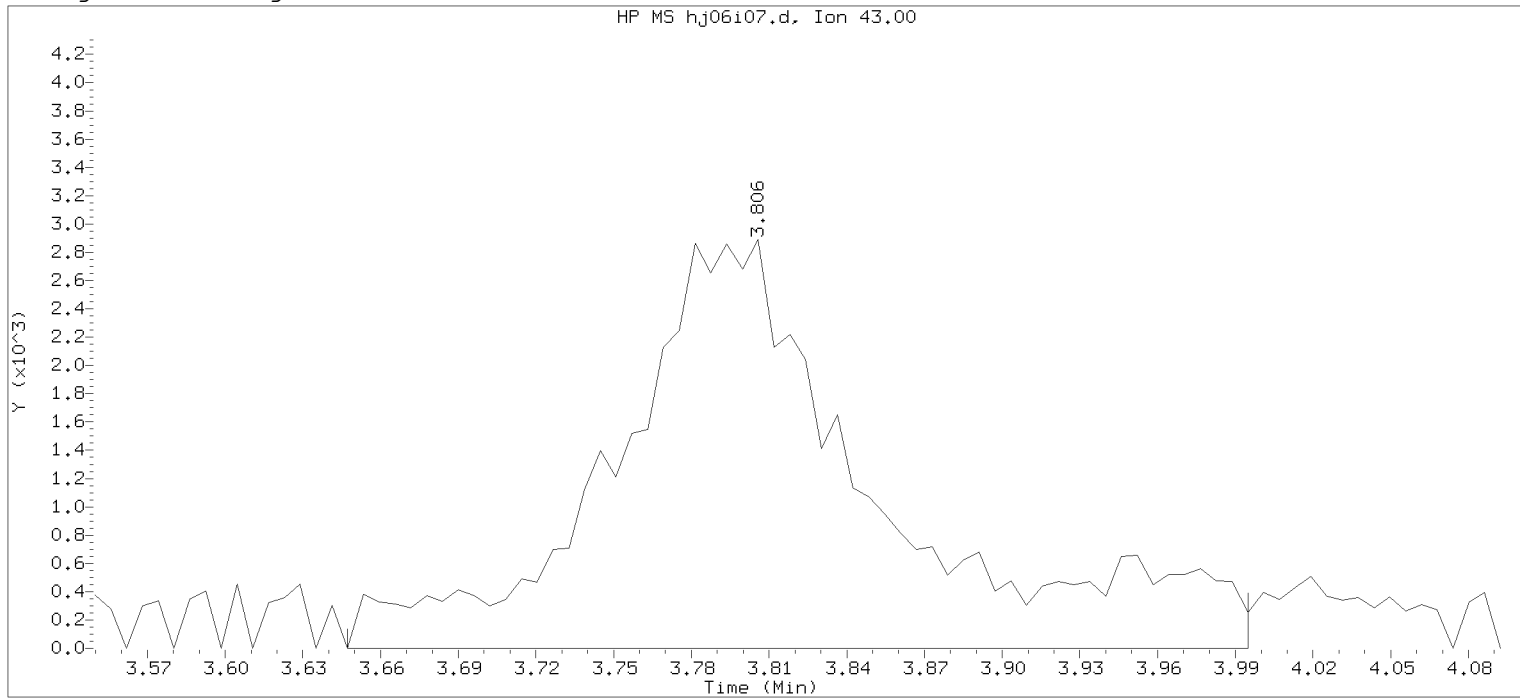
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

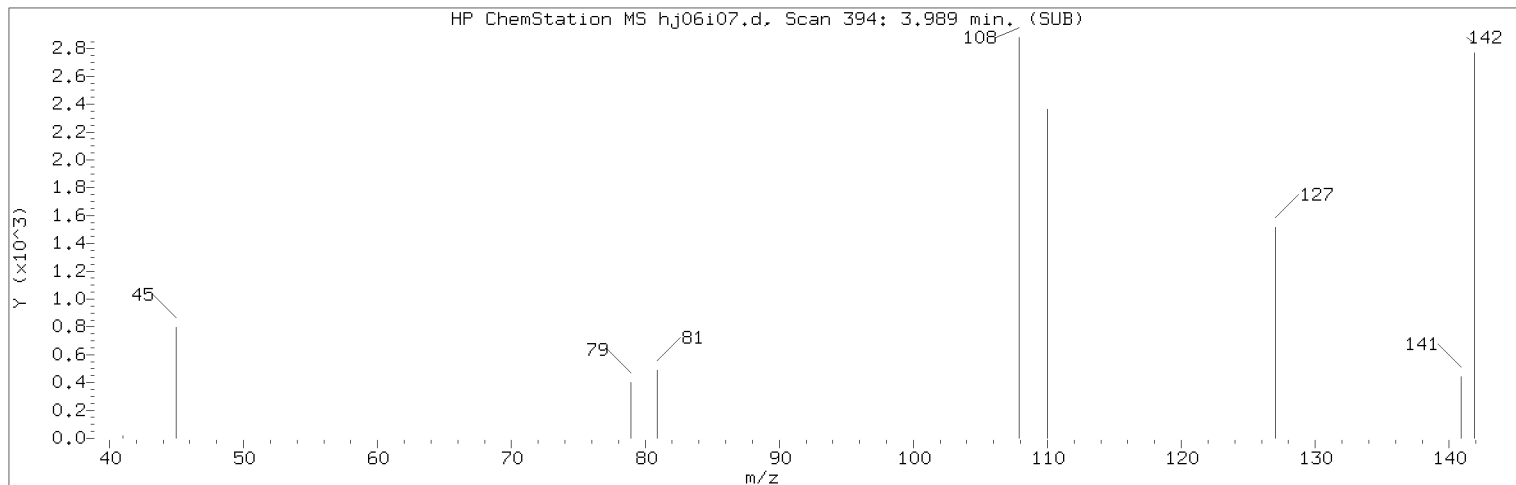
Lab Sample ID: VSTD0.2

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 364
 Retention Time (minutes): 3.806
 Quant Ion : 43.00
 Area : 20270
 On-column Amount (ng) : 2.8983
 Integration start scan : 337
 Y at integration start : 0

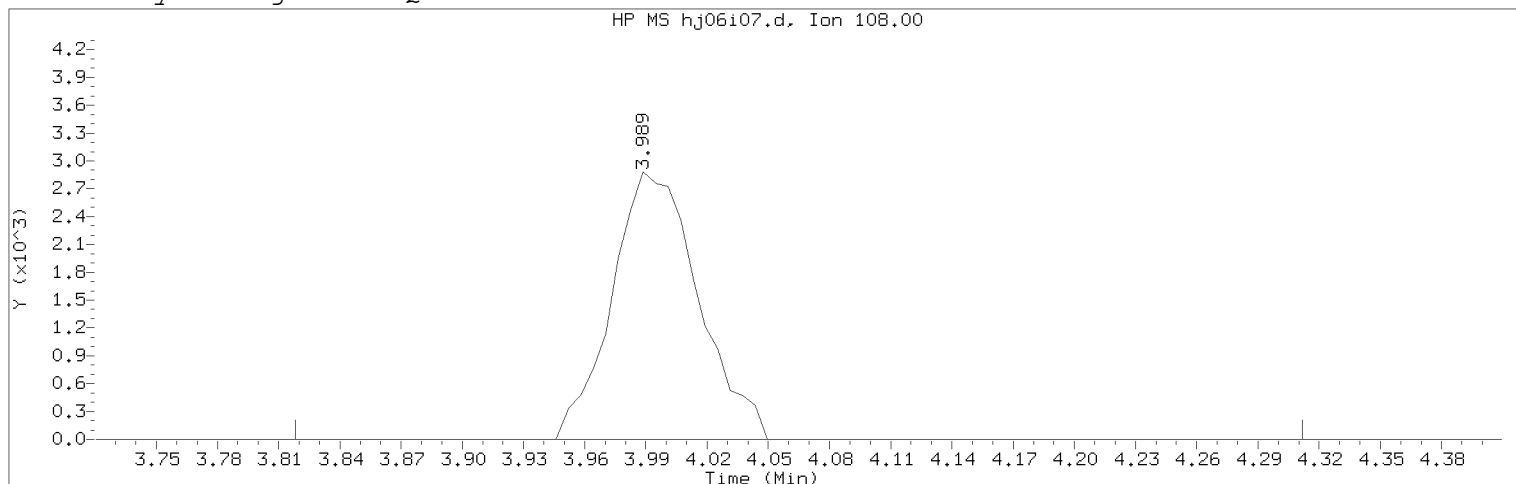
Integration stop scan: 394
 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
 Target 3.5 esignature user RA664s Page 252 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

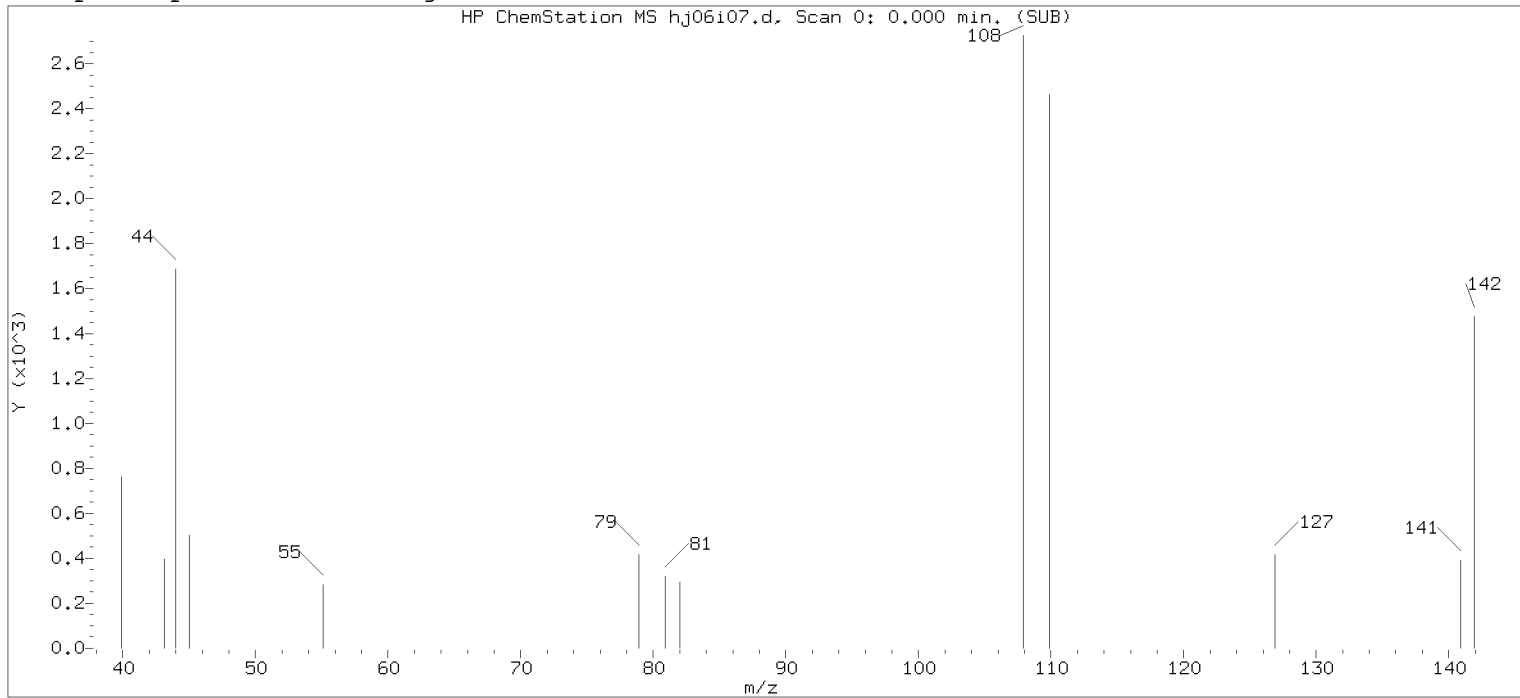
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 394	
Retention Time (minutes)	: 3.989	
Quant Ion	: 108.00	
Area (flag)	: 8482M	
On-Column Amount (ng)	: 0.2056	
Integration start scan	: 365	Integration stop scan: 446
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

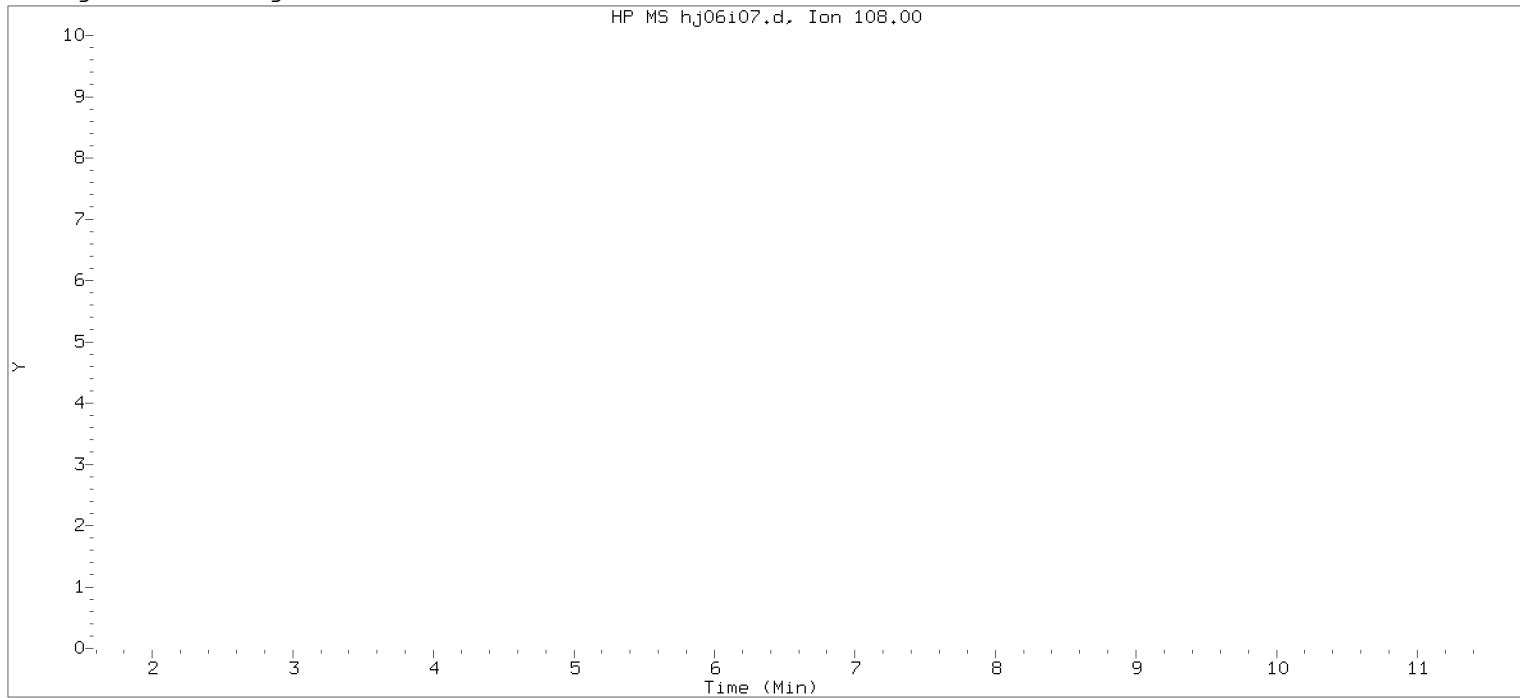
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

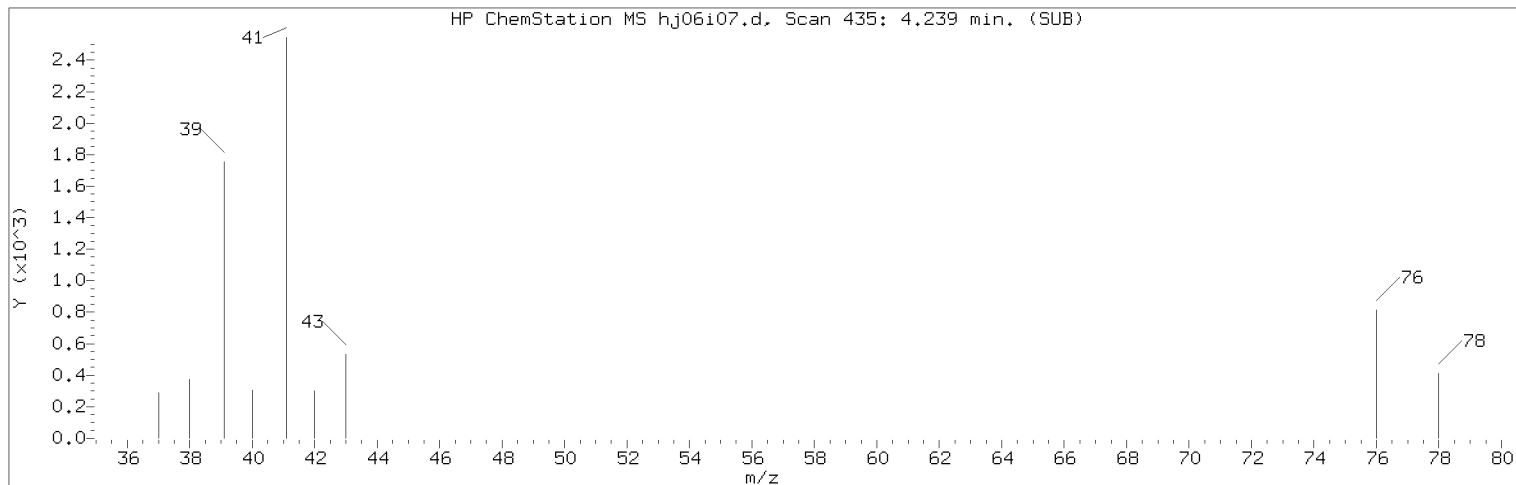
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

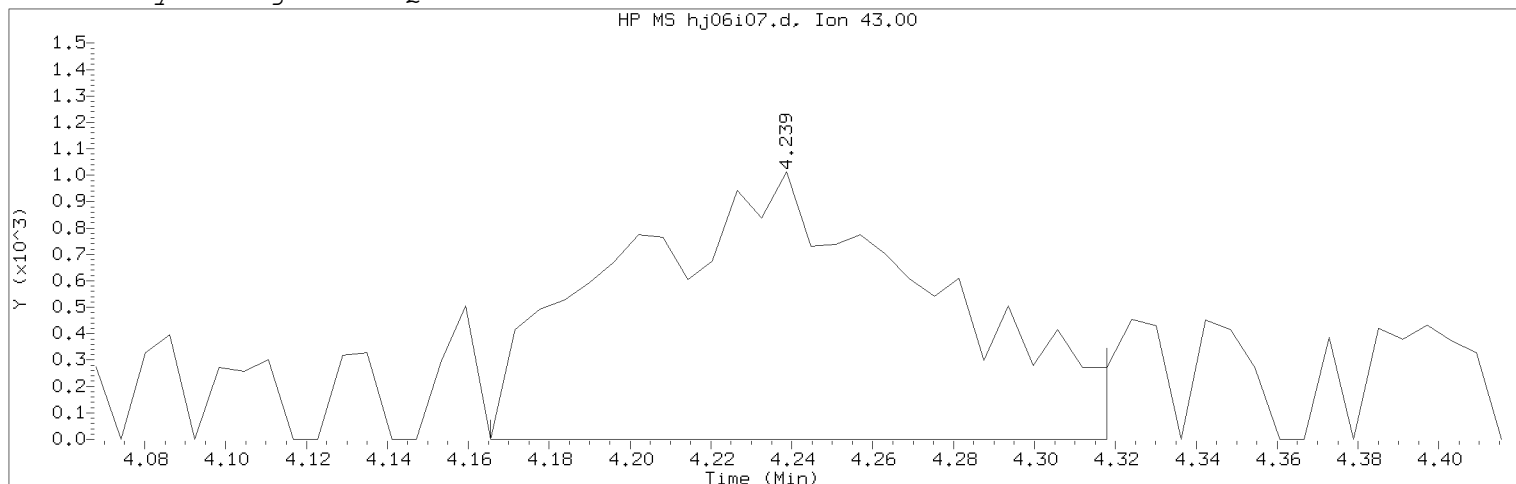
Compound Number	: 18	
Compound Name	: Bromoethane	
Scan Number	: 0	
Retention Time (minutes)	: 0.000	
Quant Ion	: 108.00	
Area	: 0	
On-column Amount (ng)	: 0.0000	
Integration start scan	: 0	Integration stop scan: 0
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA664s Page 254 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

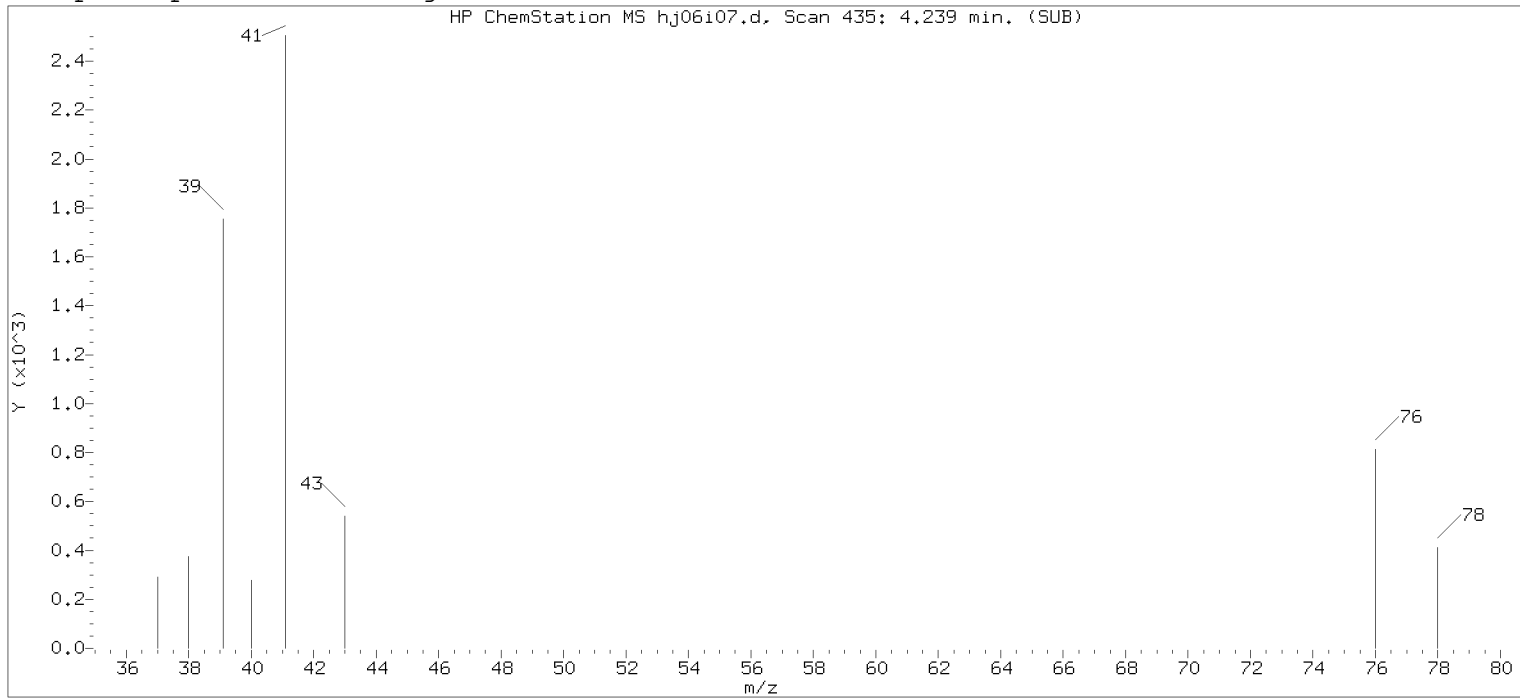
Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area (flag)	: 5507M	
On-Column Amount (ng)	: 0.3100	
Integration start scan	: 422	Integration stop scan: 447
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

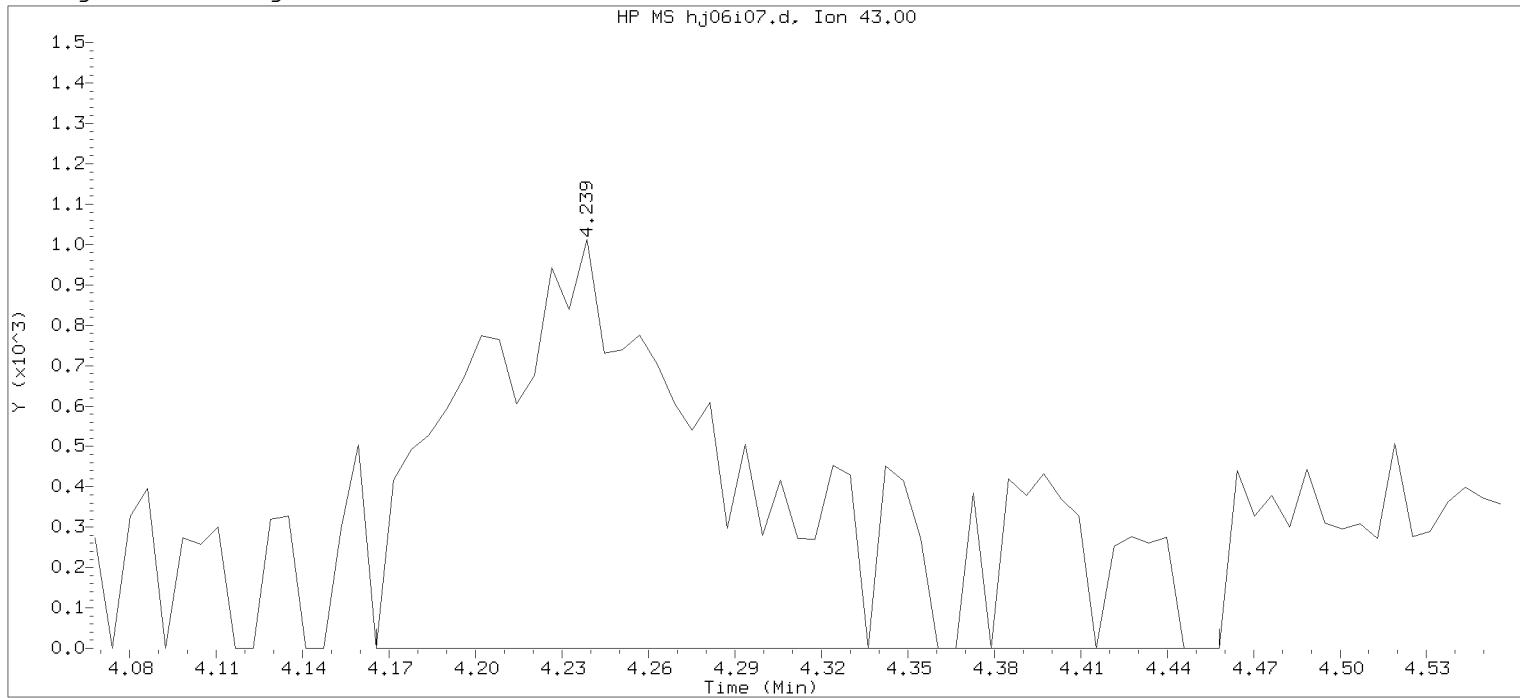
Analyst responsible for change:	Digitally signed by Sara E. Johnson
	on 01/15/2020 at 17:51.
	Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

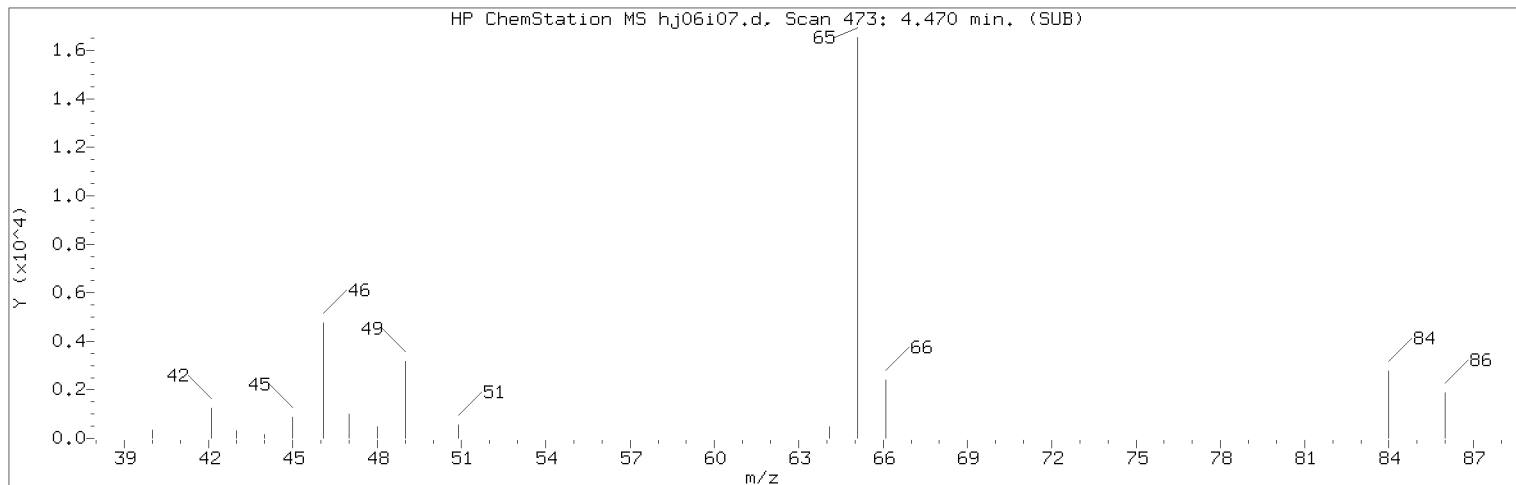
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

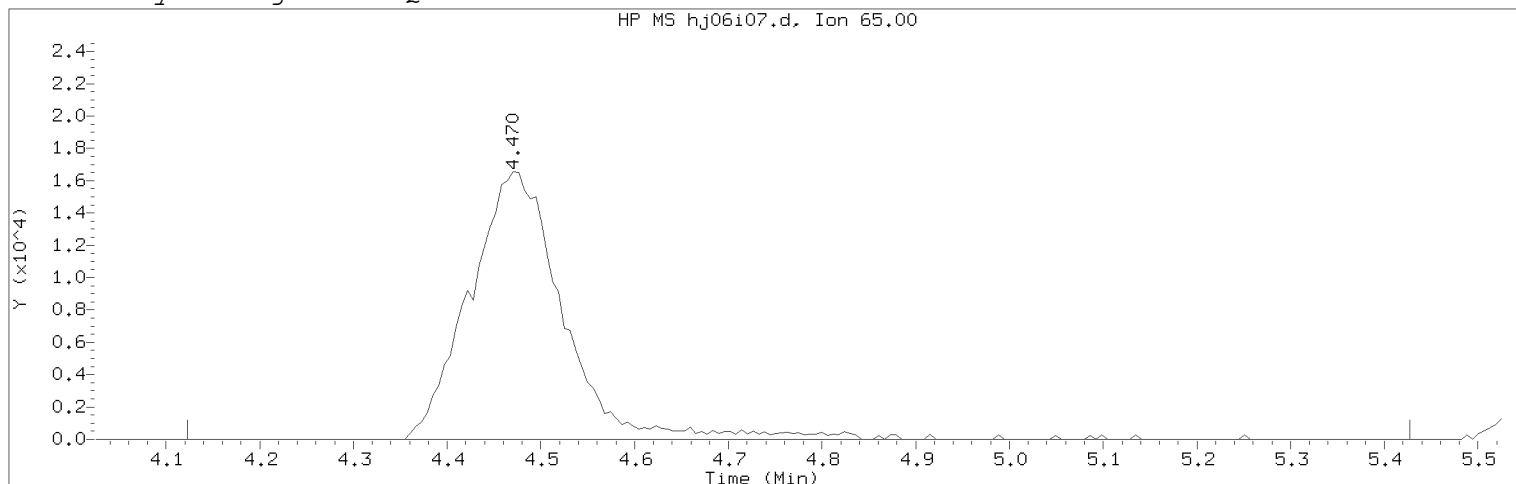
Compound Number	: 22	
Compound Name	: Methyl Acetate	
Scan Number	: 435	
Retention Time (minutes)	: 4.239	
Quant Ion	: 43.00	
Area	: 7482	
On-column Amount (ng)	: 0.3525	
Integration start scan	: 422	Integration stop scan: 470
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 256 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

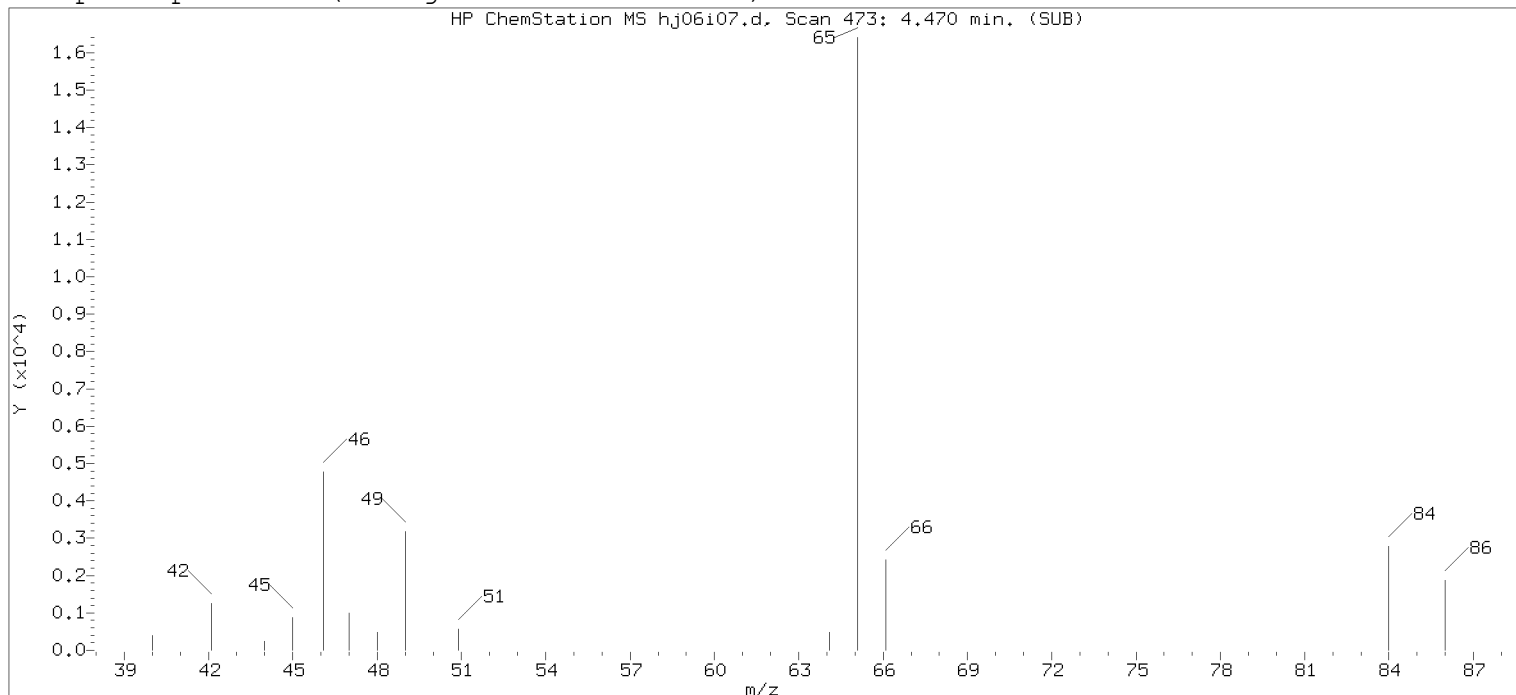
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 473	
Retention Time (minutes)	: 4.470	
Quant Ion	: 65.00	
Area (flag)	: 115841M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 415	Integration stop scan: 629
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

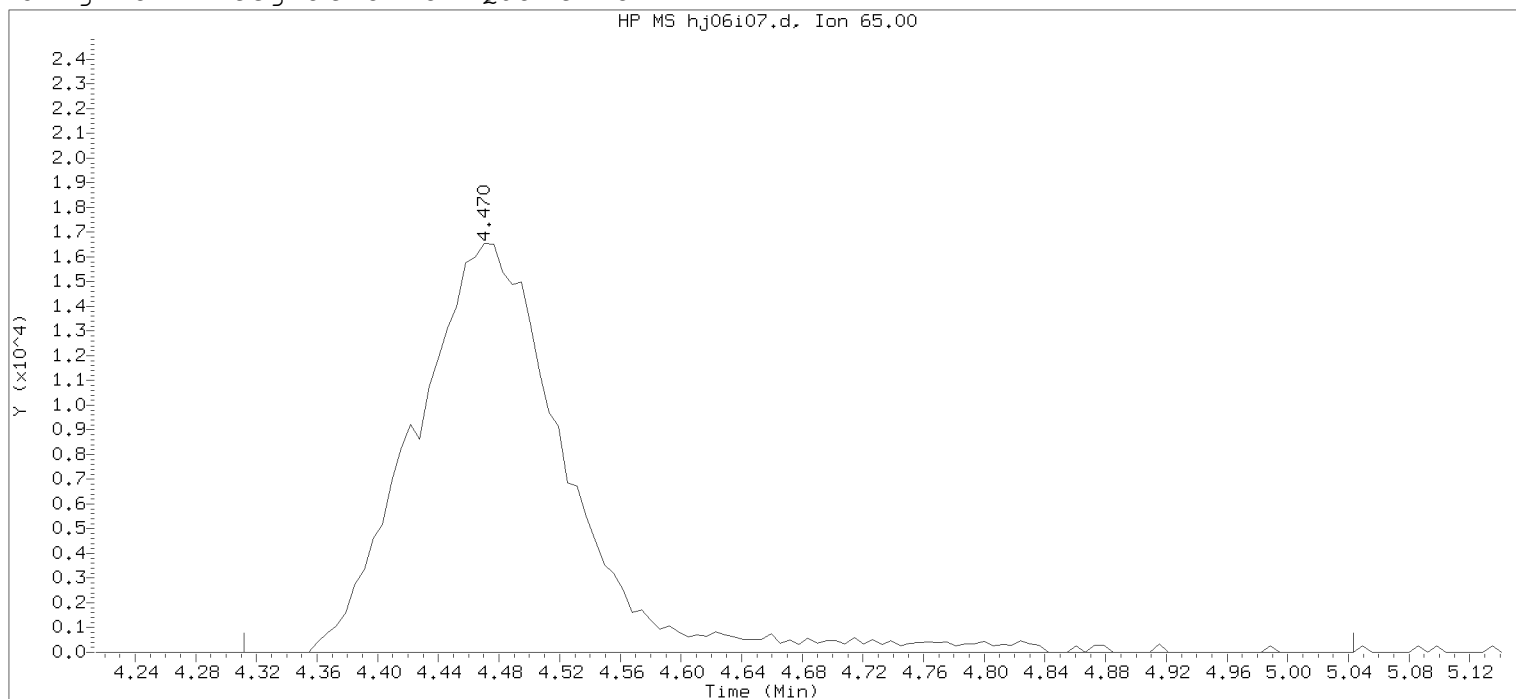
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 473

Retention Time (minutes): 4.470

Quant Ion : 65.00

Area : 115359

On-column Amount (ng) : 50.0000

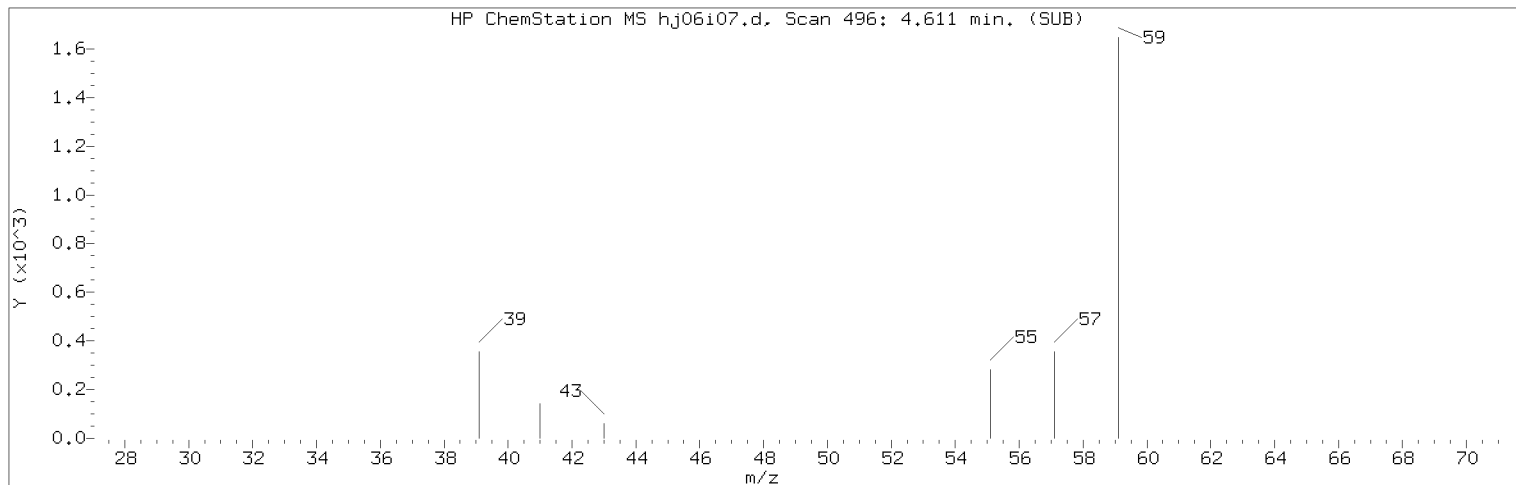
Integration start scan : 446 Integration stop scan: 566

Y at integration start : 0 Y at integration end: 0

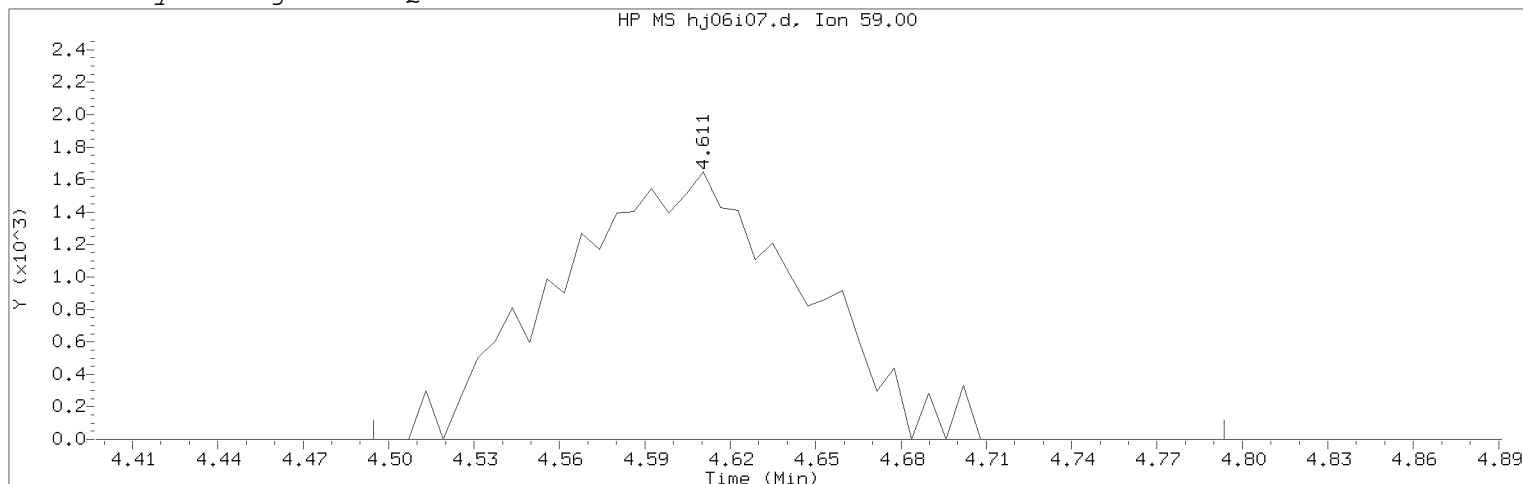
Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.

Target 3.5 esignature userRAF64sPage 258 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

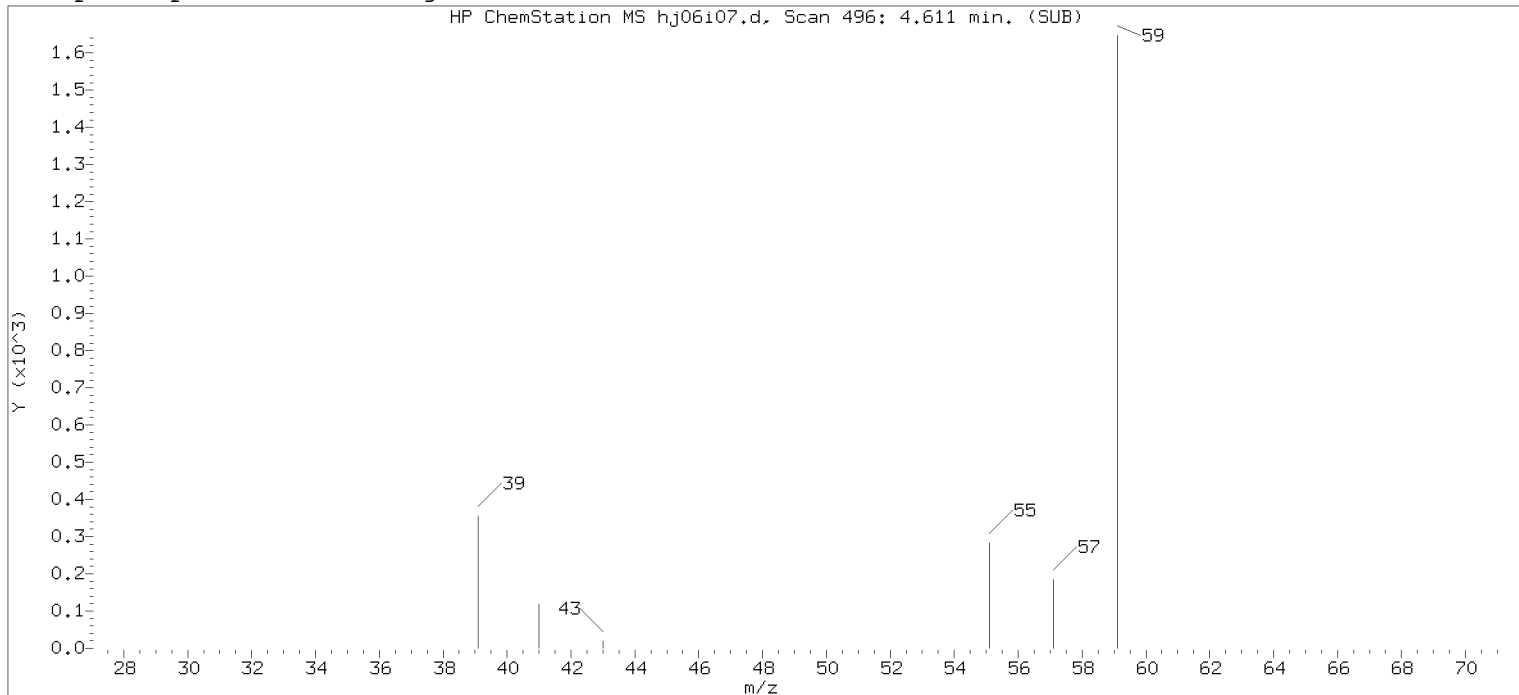
Compound Number	: 29	
Compound Name	: t-Butyl Alcohol	
Scan Number	: 496	
Retention Time (minutes)	: 4.611	
Quant Ion	: 59.00	
Area (flag)	: 9882M	
On-Column Amount (ng)	: 4.0416	
Integration start scan	: 476	Integration stop scan: 525
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

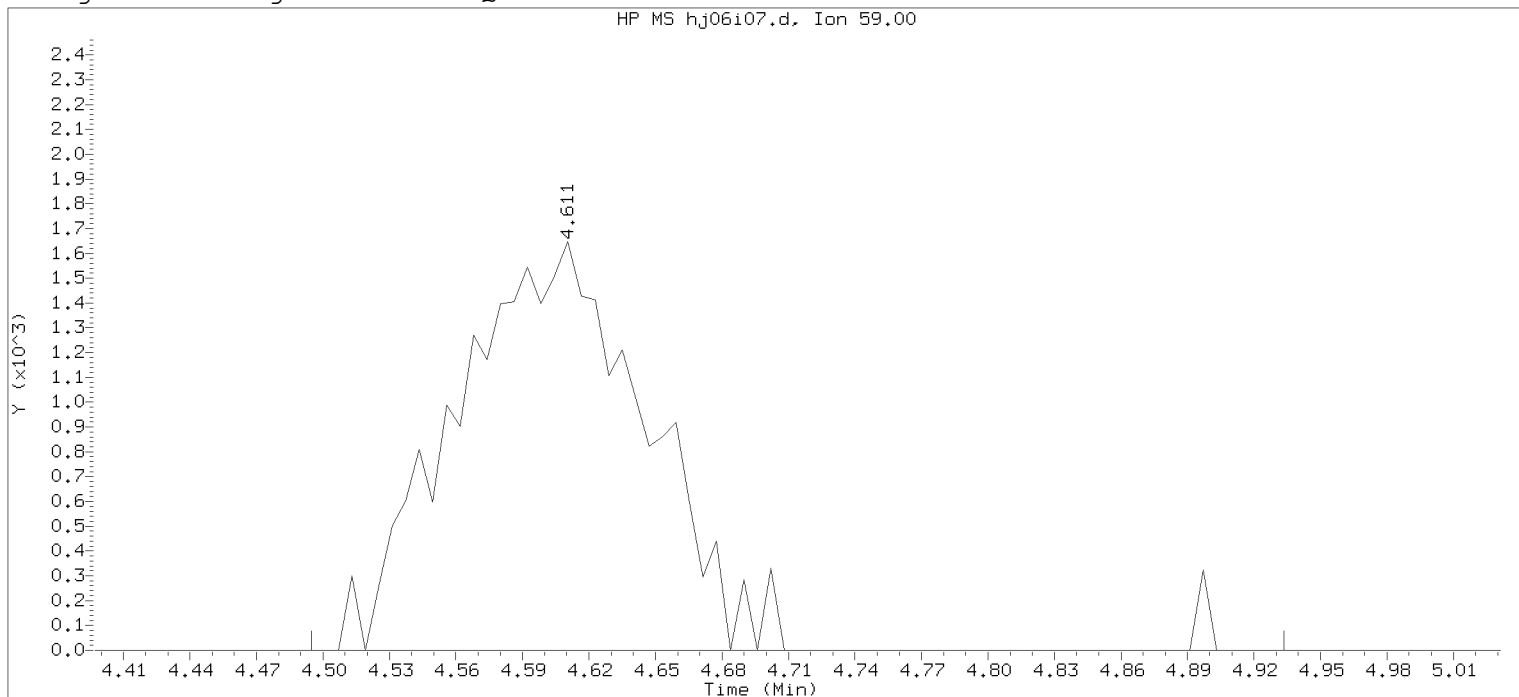
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

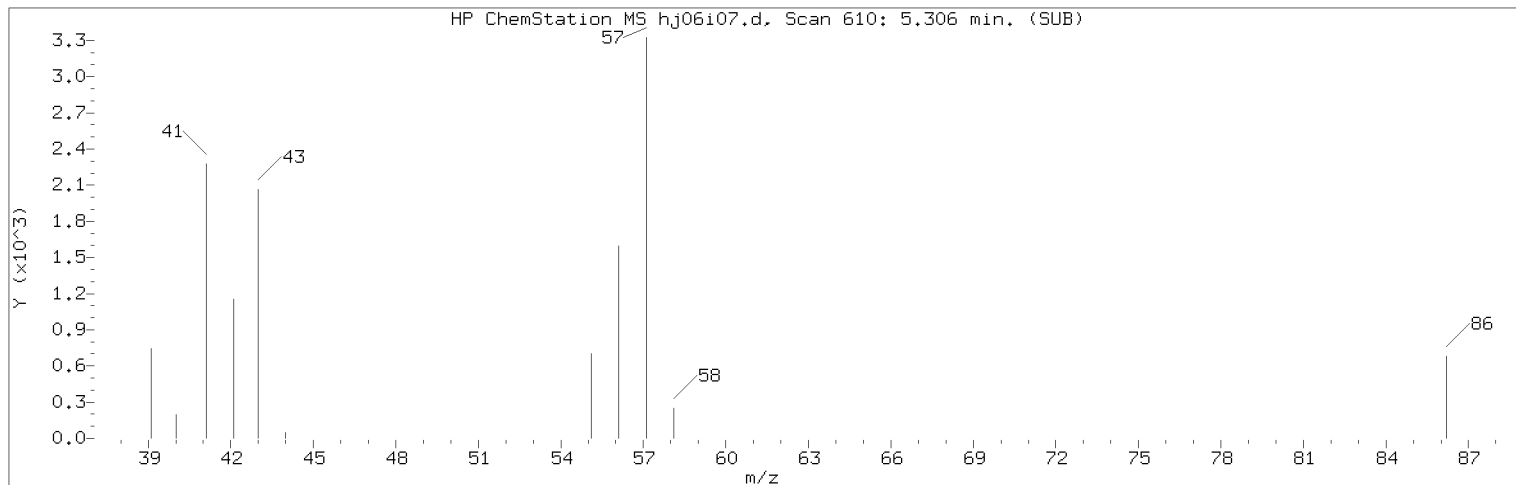
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

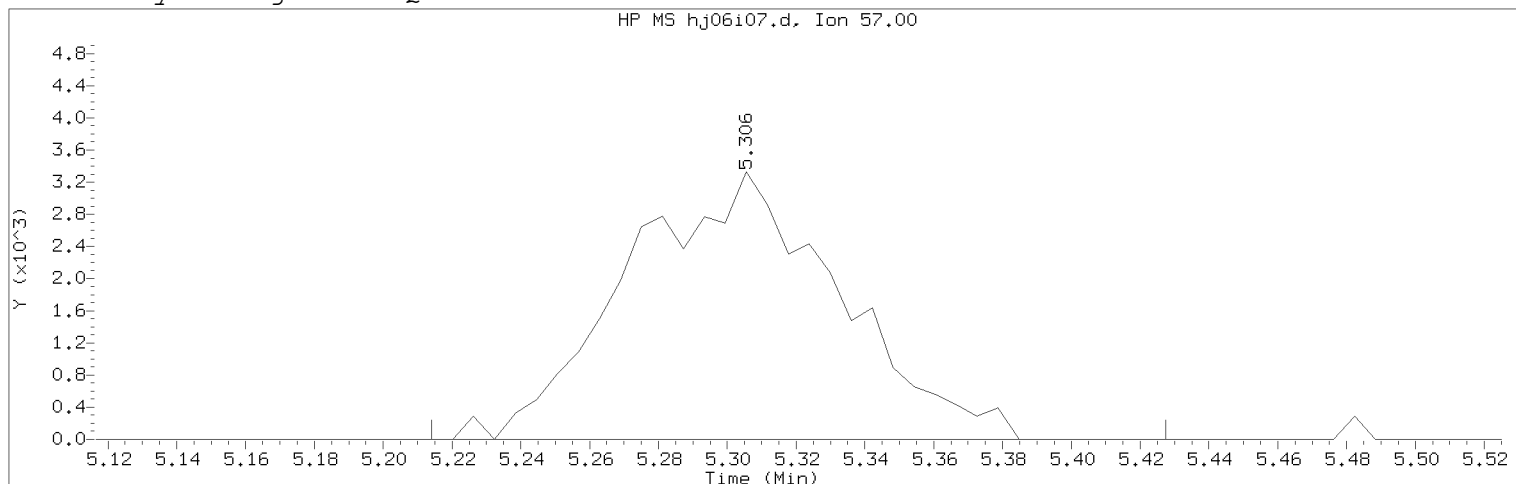
Compound Number	: 29	
Compound Name	: t-Butyl Alcohol	
Scan Number	: 496	
Retention Time (minutes)	: 4.611	
Quant Ion	: 59.00	
Area	: 10000	
On-column Amount (ng)	: 4.1260	
Integration start scan	: 476	Integration stop scan: 548
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 260 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 33
 Compound Name : n-Hexane
 Scan Number : 610
 Retention Time (minutes): 5.306
 Quant Ion : 57.00
 Area (flag) : 14319M
 On-Column Amount (ng) : 0.1953
 Integration start scan : 594
 Y at integration start : 0

Integration stop scan: 629
 Y at integration end: 0

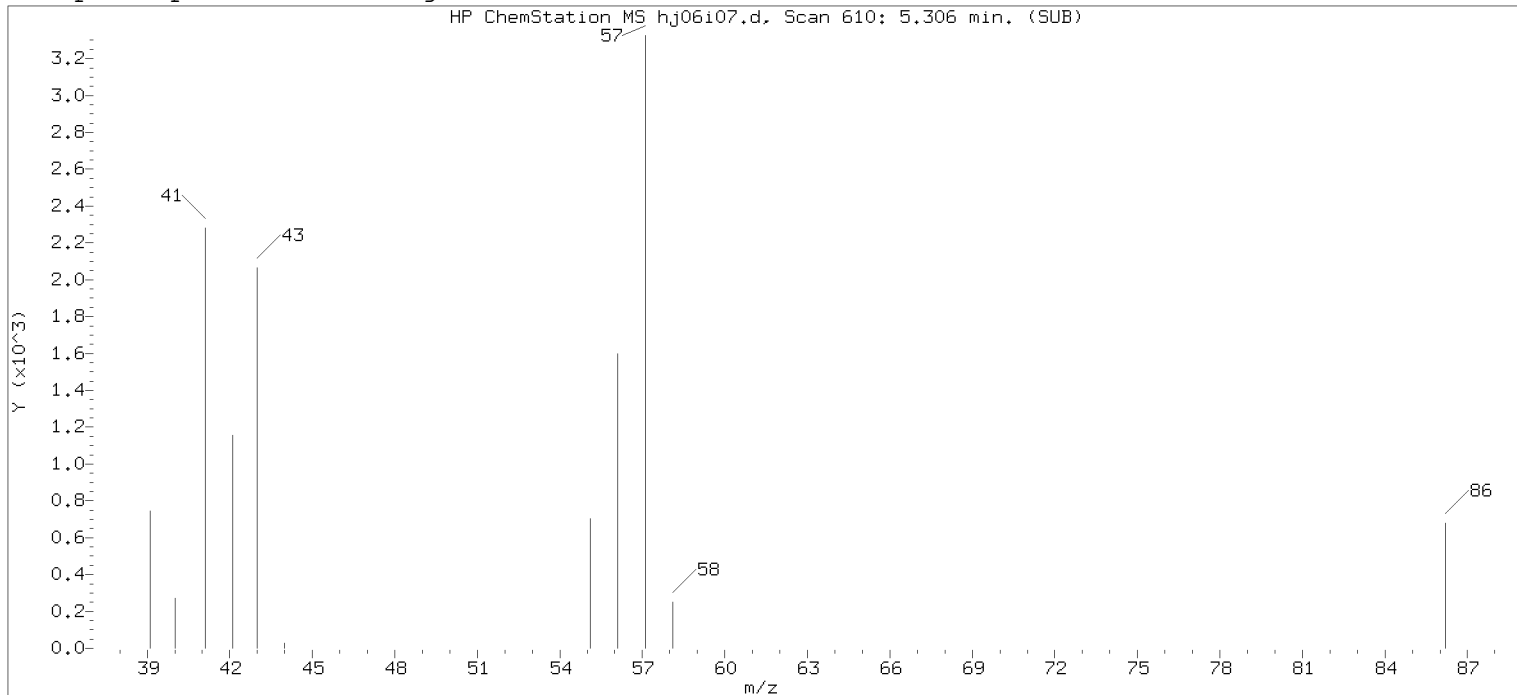
Reason for manual integration: improper integration

Analyst responsible for change:

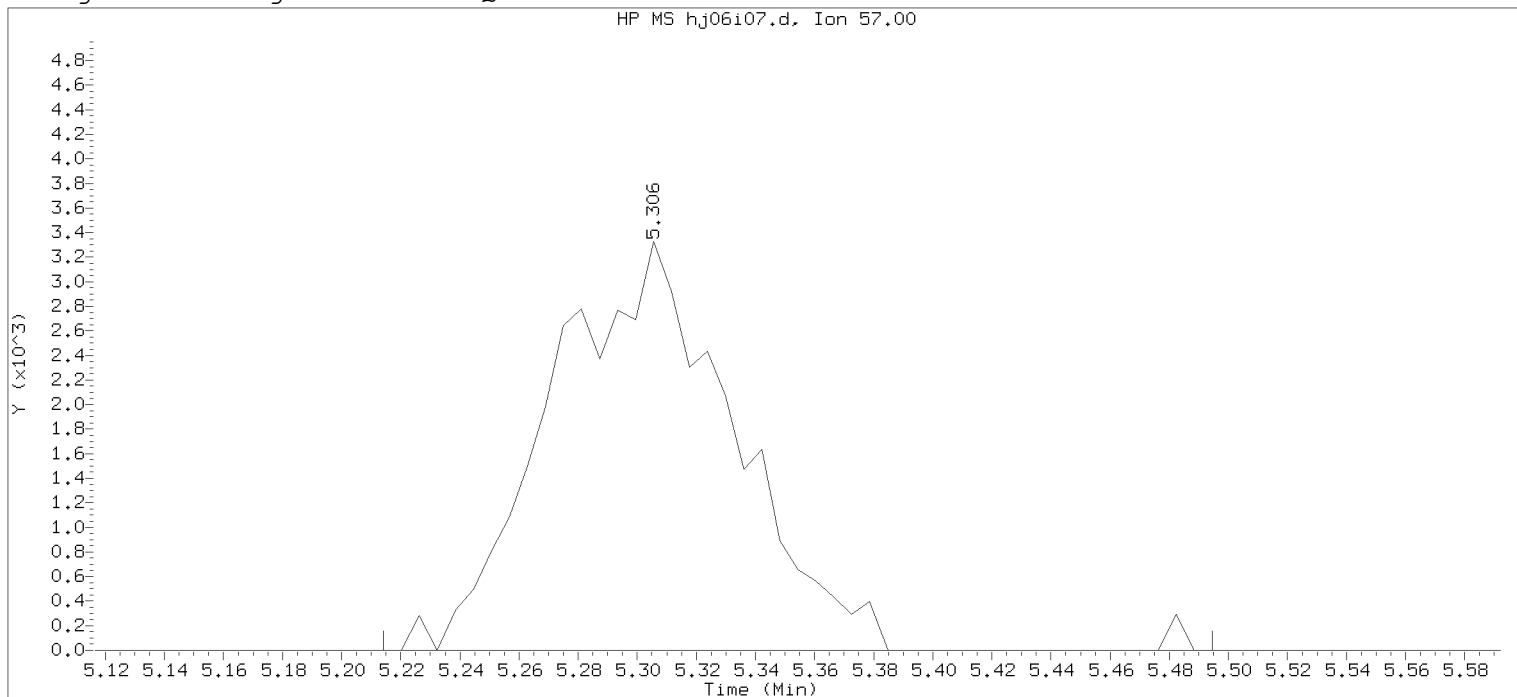
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

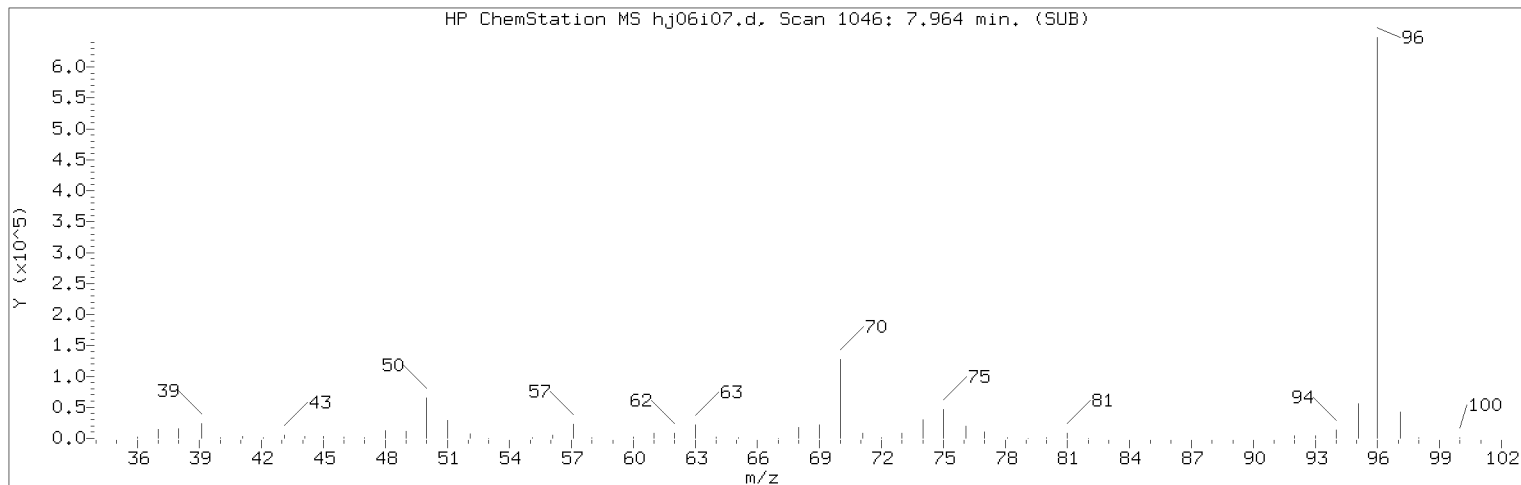
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

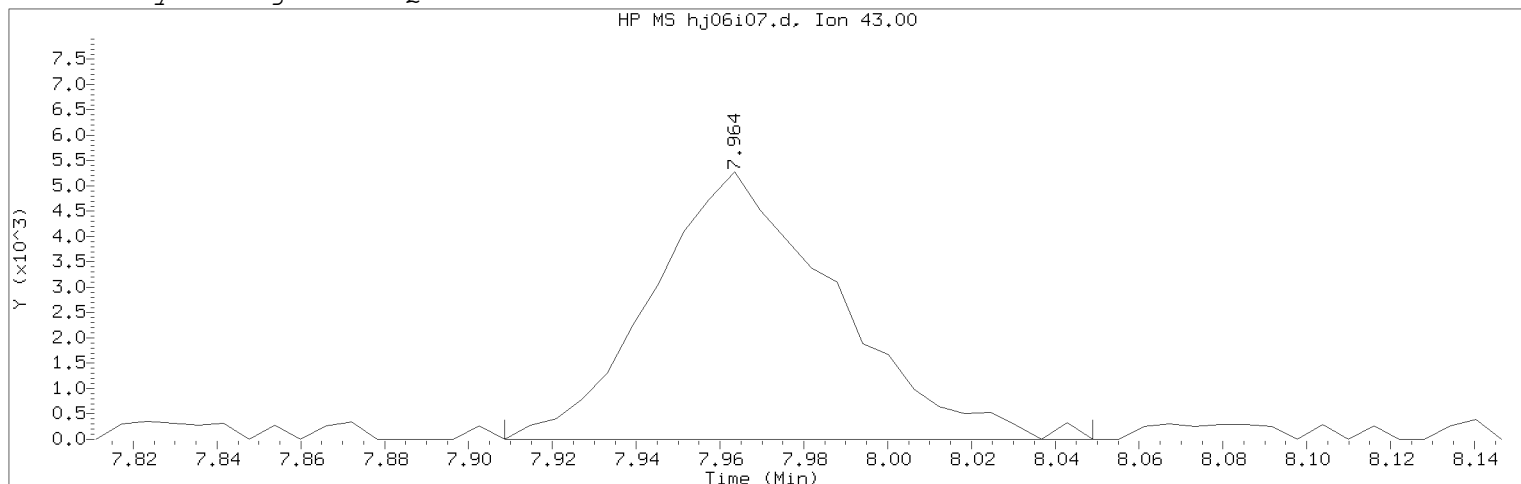
Compound Number : 33
 Compound Name : n-Hexane
 Scan Number : 610
 Retention Time (minutes): 5.306
 Quant Ion : 57.00
 Area : 14425
 On-column Amount (ng) : 0.1965
 Integration start scan : 594
 Y at integration start : 0

Integration stop scan: 640
 Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 63
 Compound Name : n-Heptane
 Scan Number : 1046
 Retention Time (minutes): 7.964
 Quant Ion : 43.00
 Area (flag) : 16086M
 On-Column Amount (ng) : 0.2091
 Integration start scan : 1036
 Y at integration start : 0

Integration stop scan: 1059
 Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

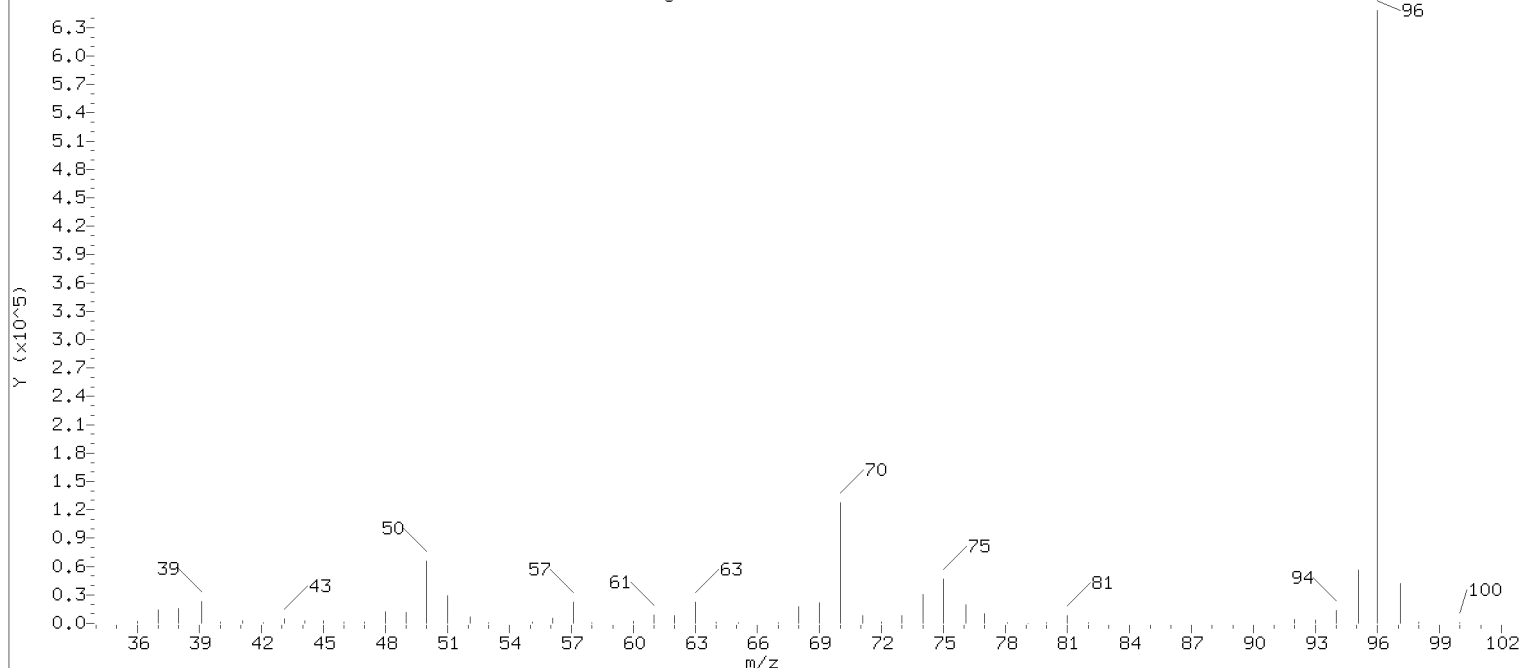
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

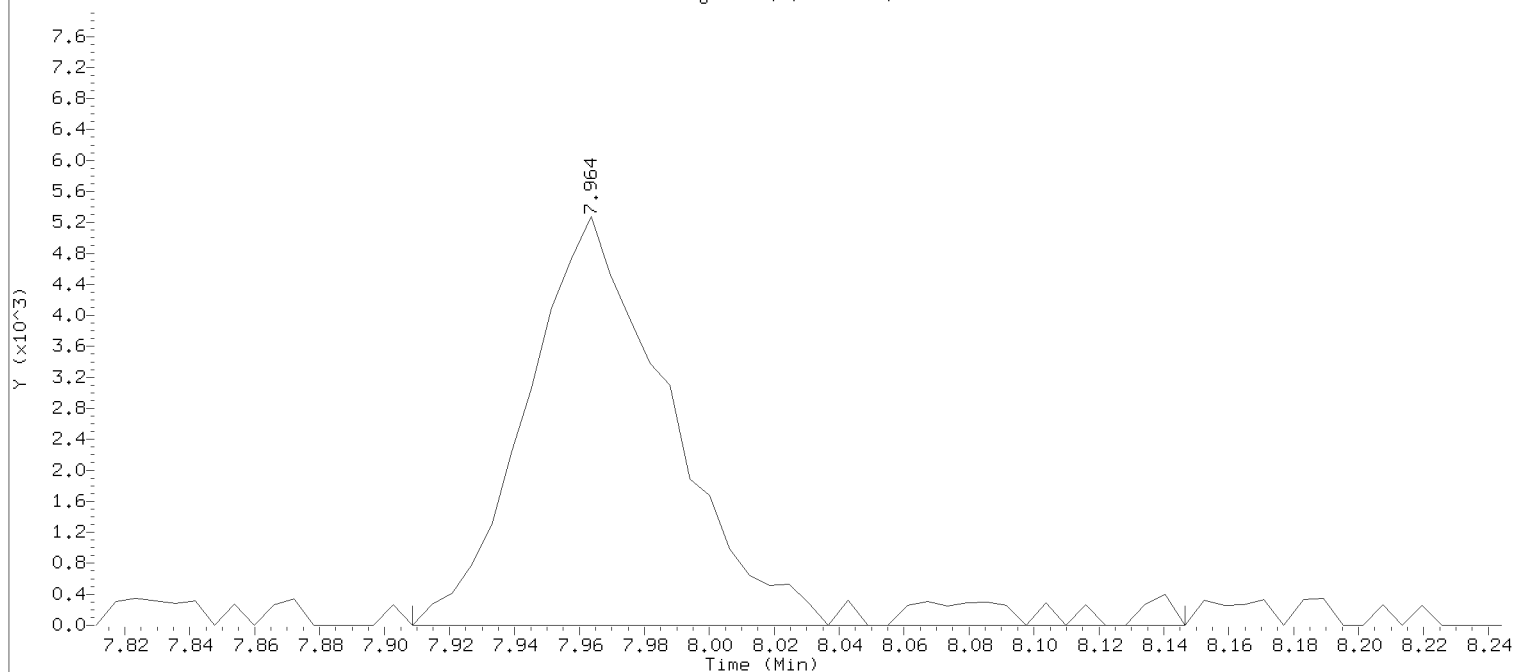
Sample Spectrum (Background Subtracted)

HP ChemStation MS hj06i07.d, Scan 1046: 7.964 min. (SUB)



Original Integration of Quant Ion

HP MS hj06i07.d, Ion 43.00



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

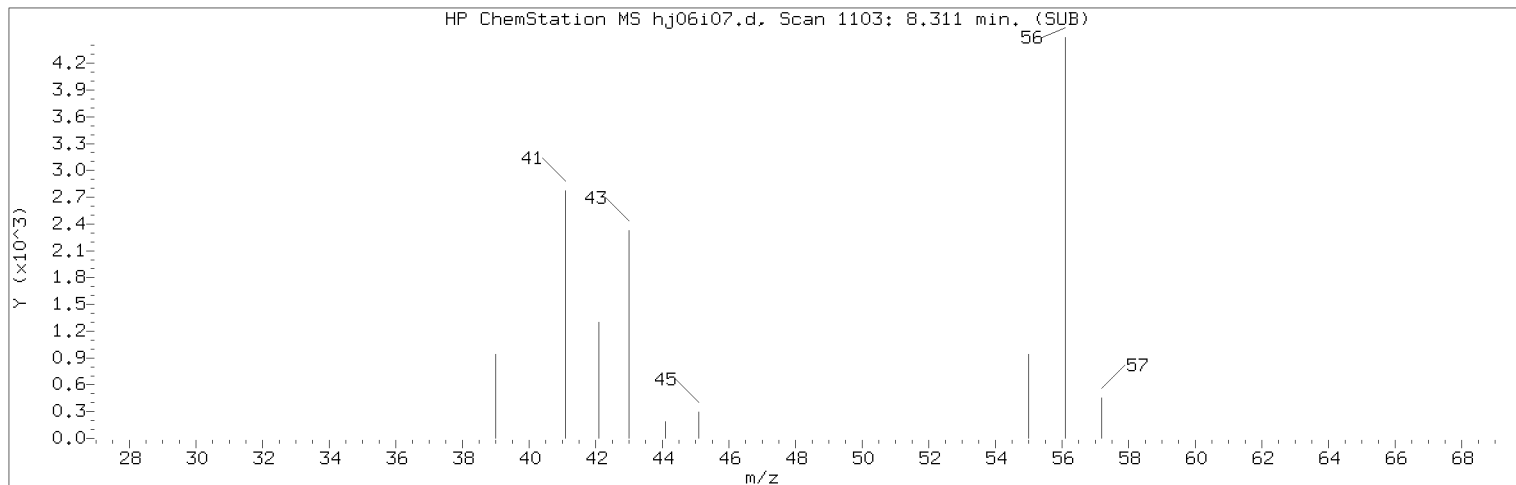
Lab Sample ID: VSTD0.2

Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area : 17141
On-column Amount (ng) : 0.2207
Integration start scan : 1036
Y at integration start : 0

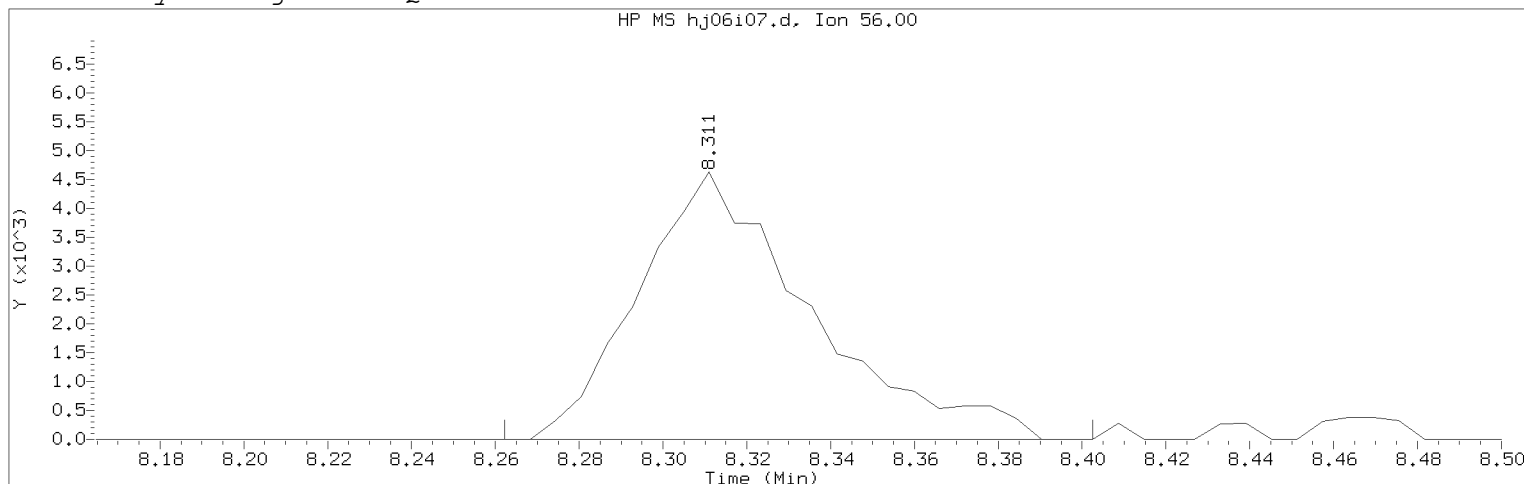
Integration stop scan: 1075
Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA664s Page 264 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 66	
Compound Name	: n-Butanol	
Scan Number	: 1103	
Retention Time (minutes)	: 8.311	
Quant Ion	: 56.00	
Area (flag)	: 13133M	
On-Column Amount (ng)	: 19.2483	
Integration start scan	: 1094	Integration stop scan: 1117
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Sara E. Johnson

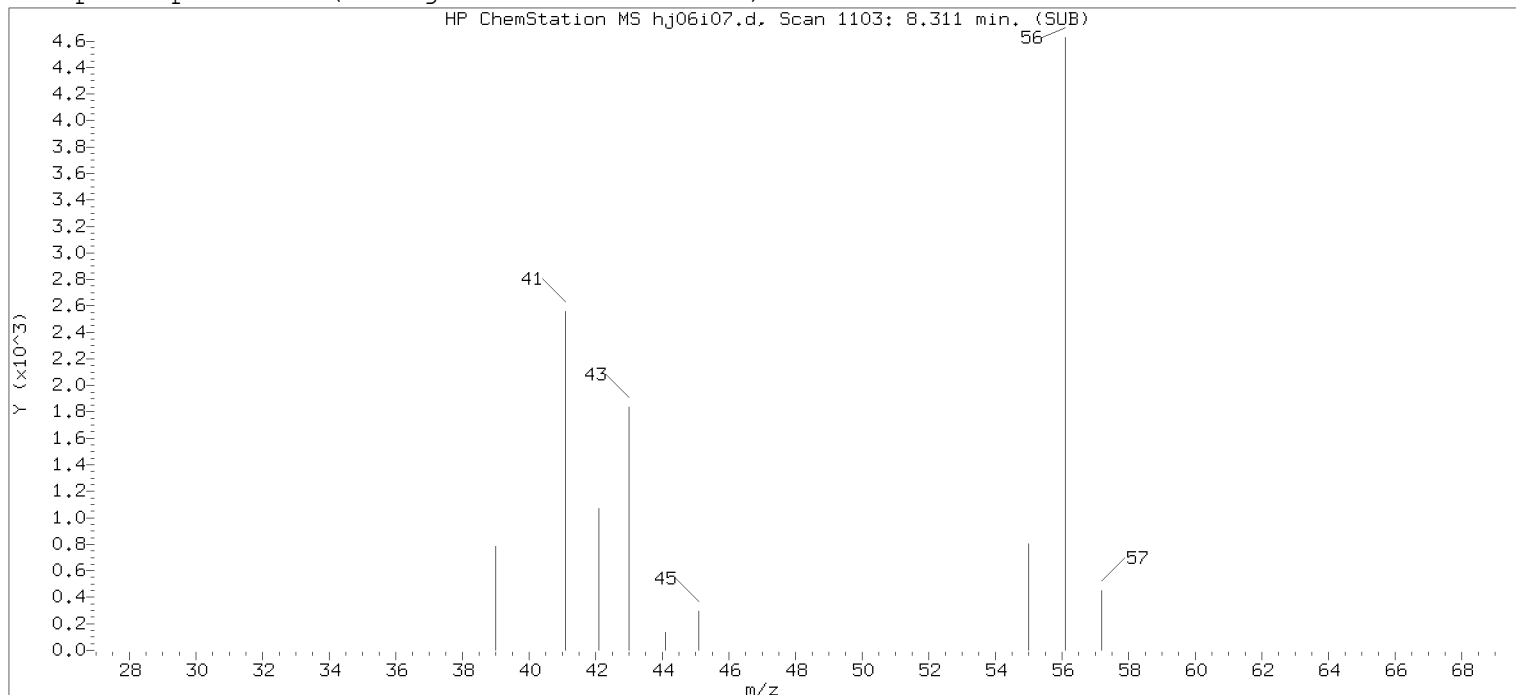
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

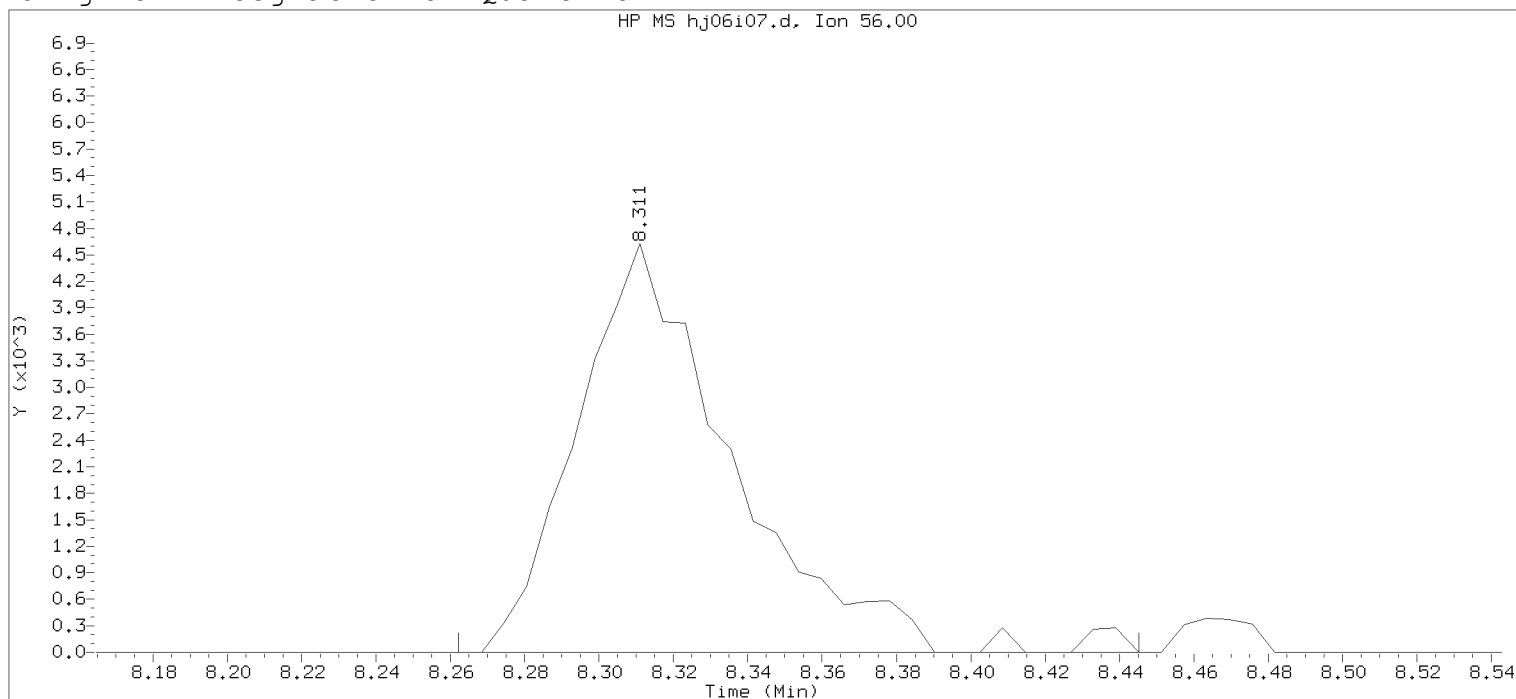
Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.

PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

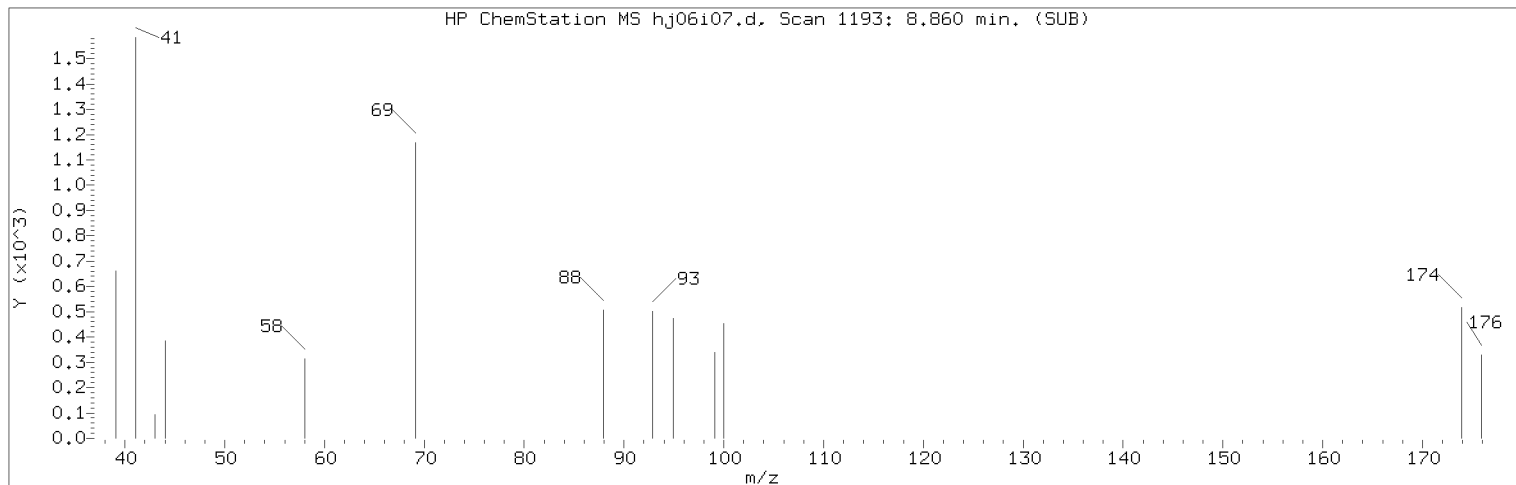
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

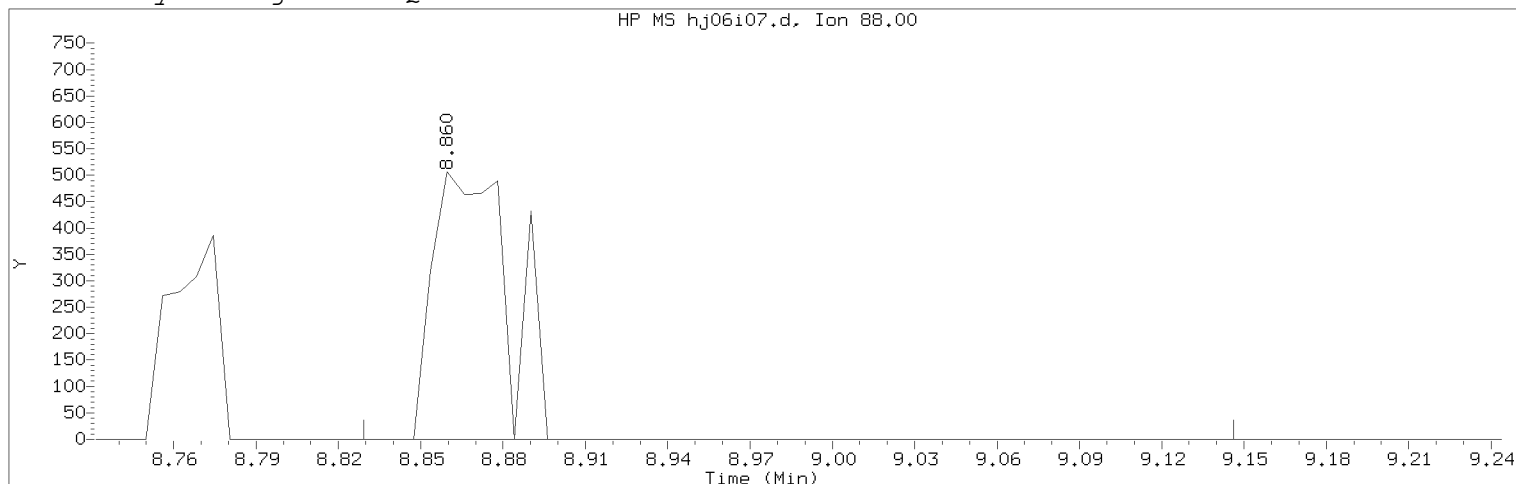
Compound Number	: 66	
Compound Name	: n-Butanol	
Scan Number	: 1103	
Retention Time (minutes)	: 8.311	
Quant Ion	: 56.00	
Area	: 13430	
On-column Amount (ng)	: 19.8365	
Integration start scan	: 1094	Integration stop scan: 1124
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
Target 3.5 esignature user RA564s Page 266 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1193
 Retention Time (minutes): 8.860
 Quant Ion : 88.00
 Area (flag) : 978M
 On-Column Amount (ng) : 5.9430
 Integration start scan : 1187
 Y at integration start : 0

Integration stop scan: 1239
 Y at integration end: 0

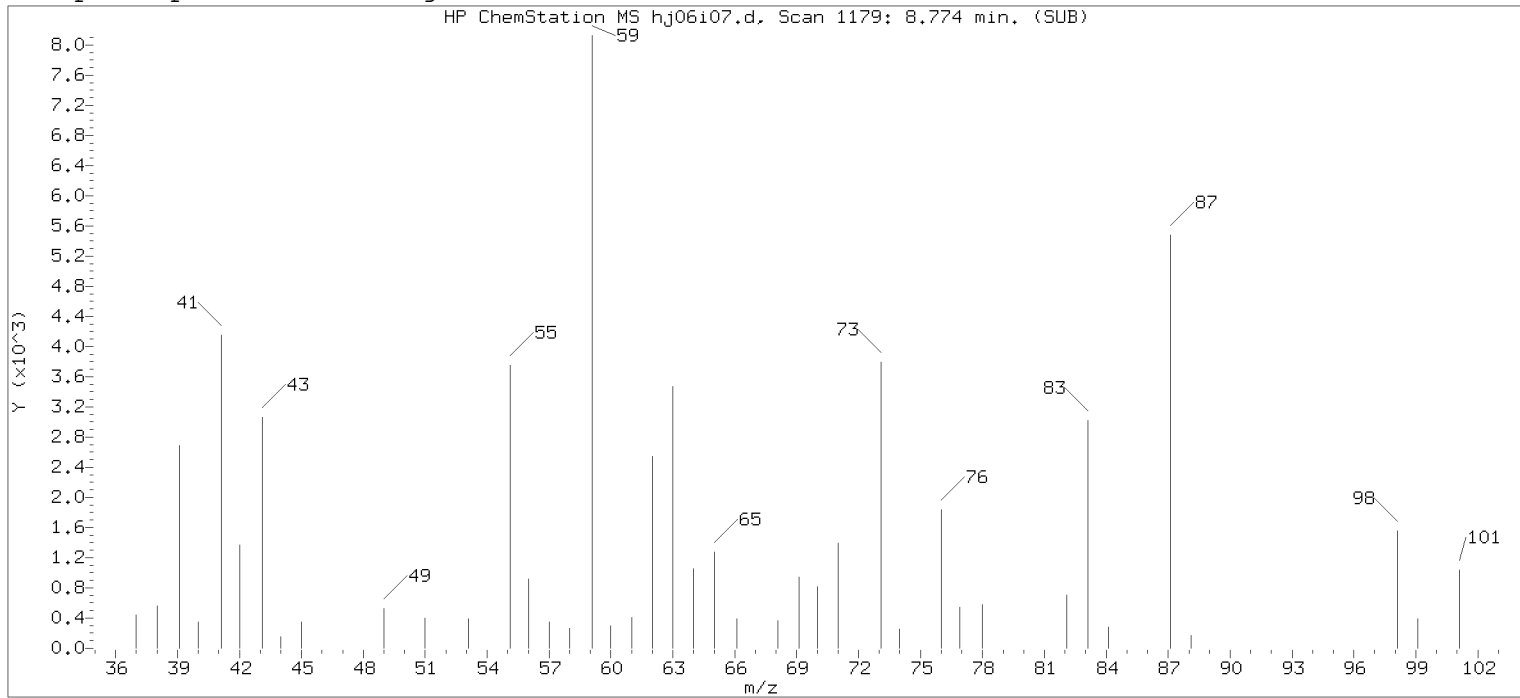
Reason for manual integration: improper integration

Analyst responsible for change:

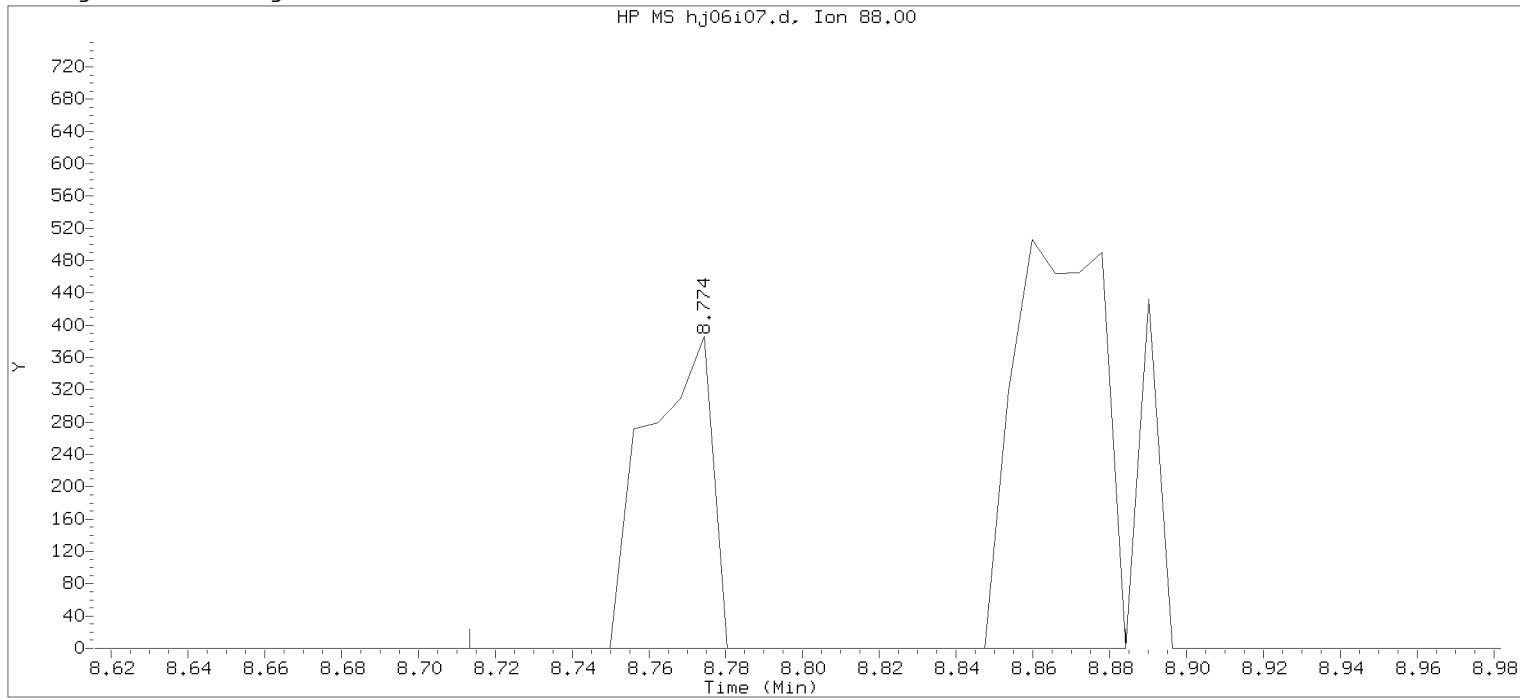
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:51.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

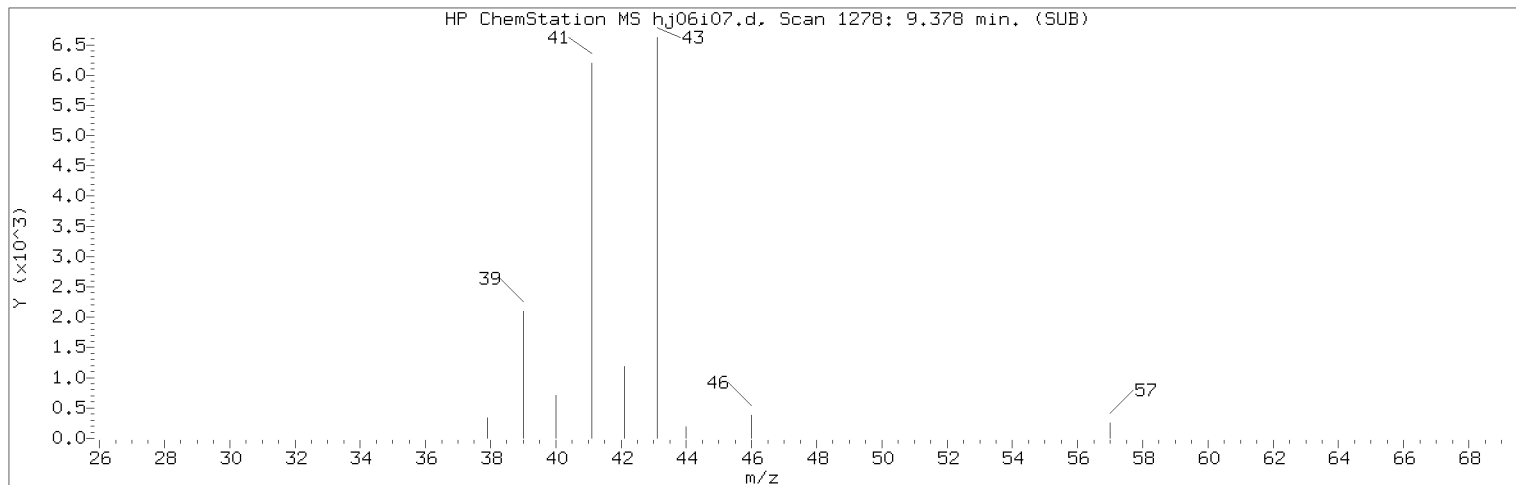
Lab Sample ID: VSTD0.2

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1179
 Retention Time (minutes): 8.774
 Quant Ion : 88.00
 Area : 1276
 On-column Amount (ng) : 8.3739
 Integration start scan : 1168
 Y at integration start : 0

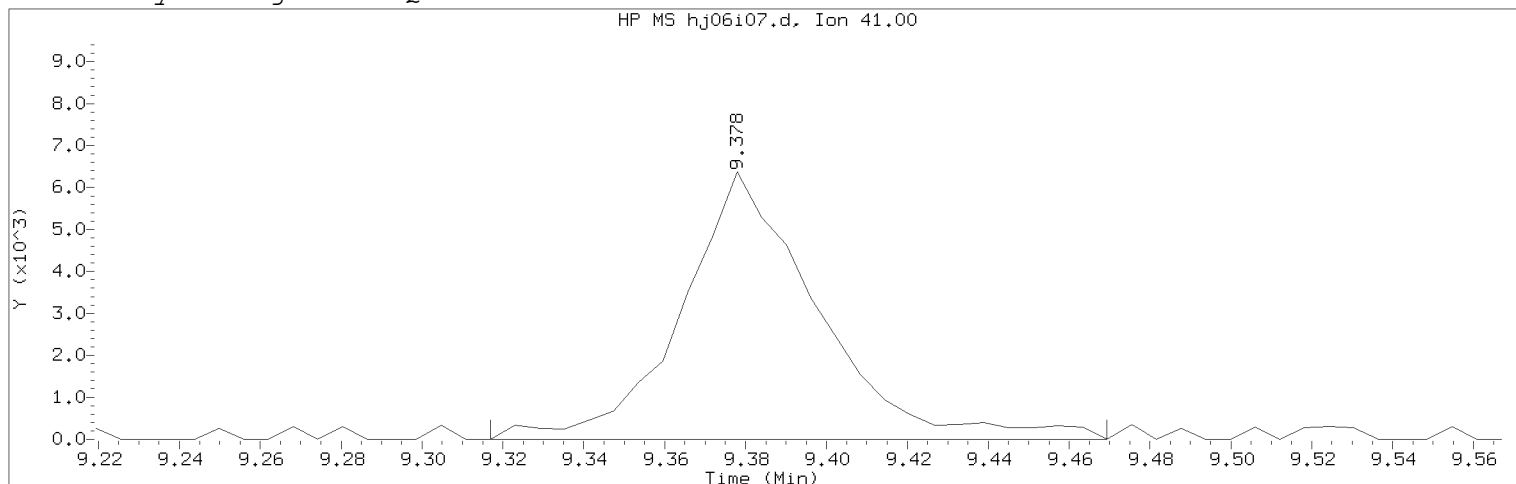
Integration stop scan: 1196
 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:51.
 Target 3.5 esignature user RA64s

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area (flag)	: 14974M	
On-Column Amount (ng)	: 2.1018	
Integration start scan	: 1267	Integration stop scan: 1292
Y at integration start	: 0	Y at integration end: 0

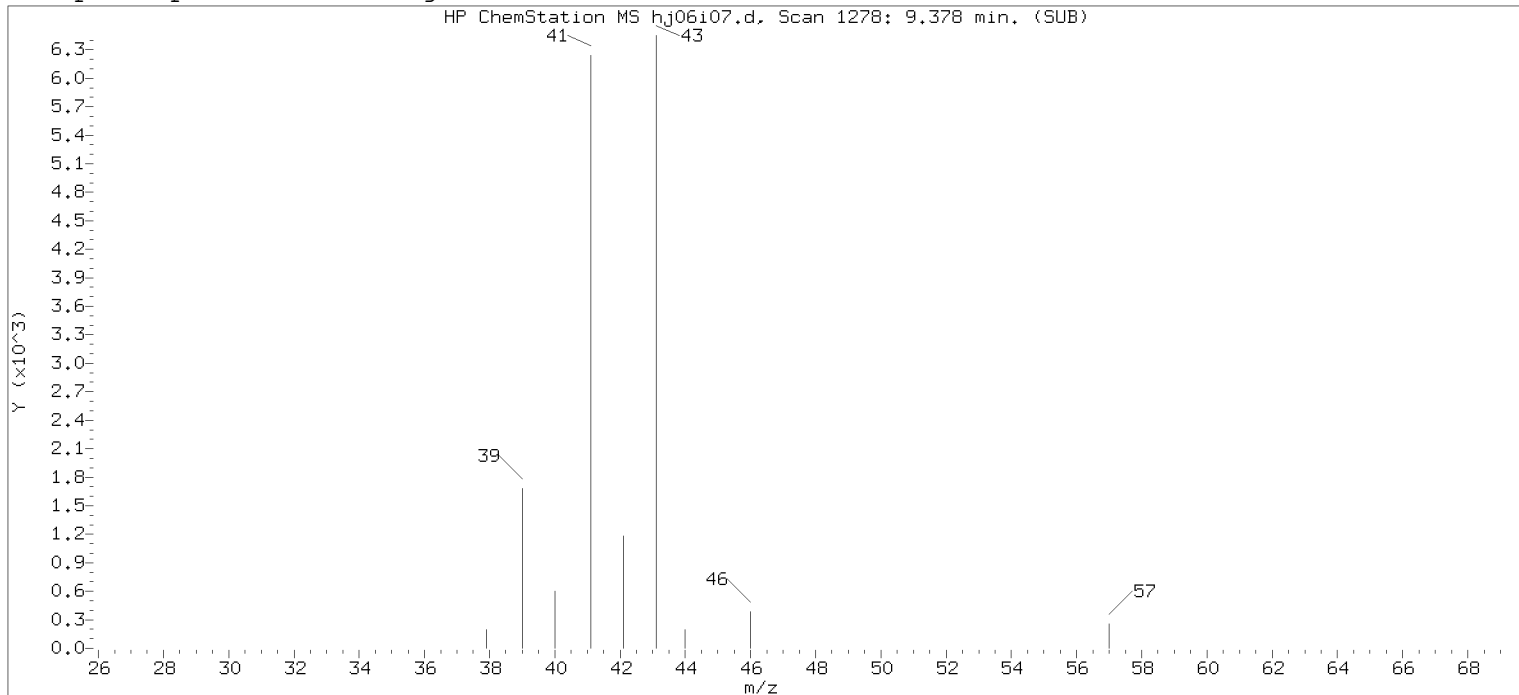
Reason for manual integration: improper integration

Analyst responsible for change:

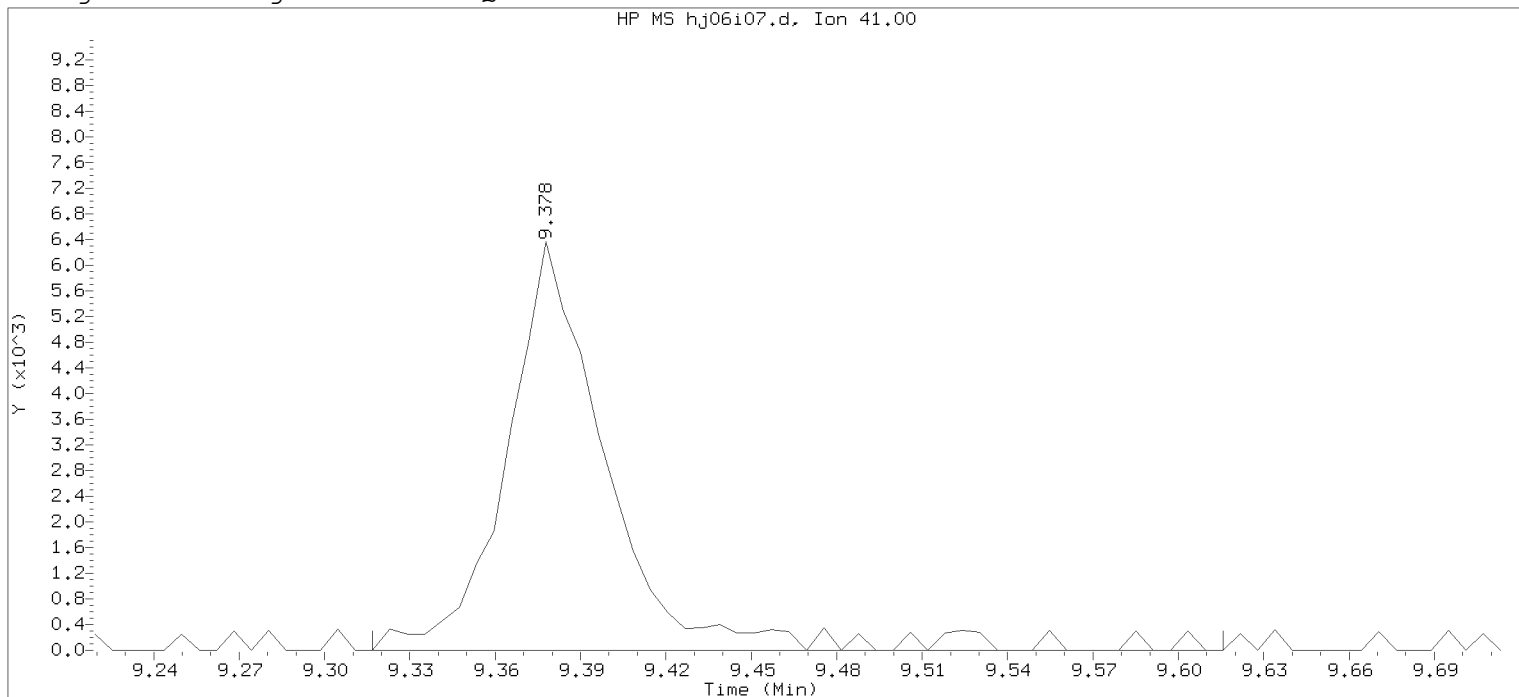
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

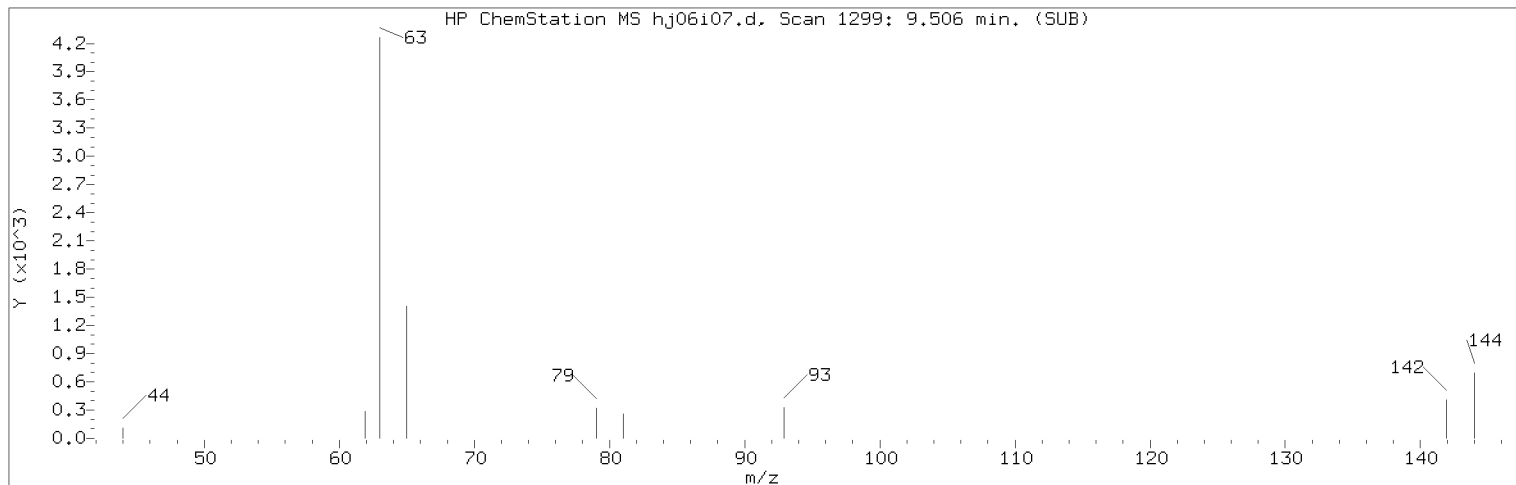
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

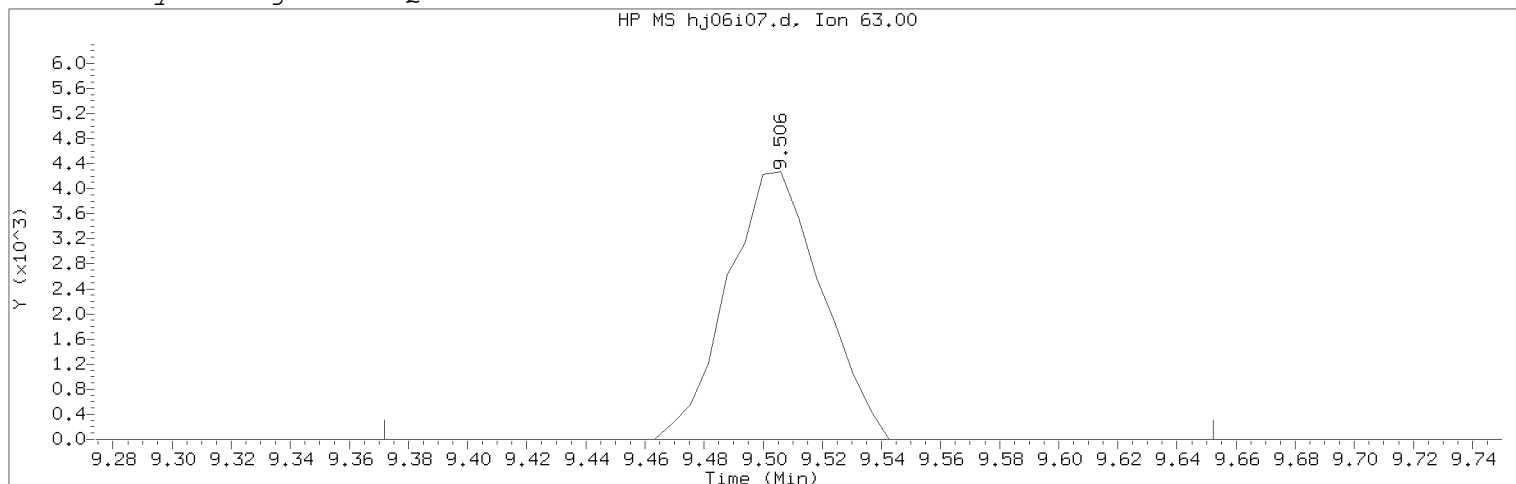
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 15947	
On-column Amount (ng)	: 2.2158	
Integration start scan	: 1267	Integration stop scan: 1316
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 270 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 9415M	
On-Column Amount (ng)	: 0.1923	
Integration start scan	: 1276	Integration stop scan: 1322
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: missed peak

Analyst responsible for change:

Digitally signed by Sara E. Johnson

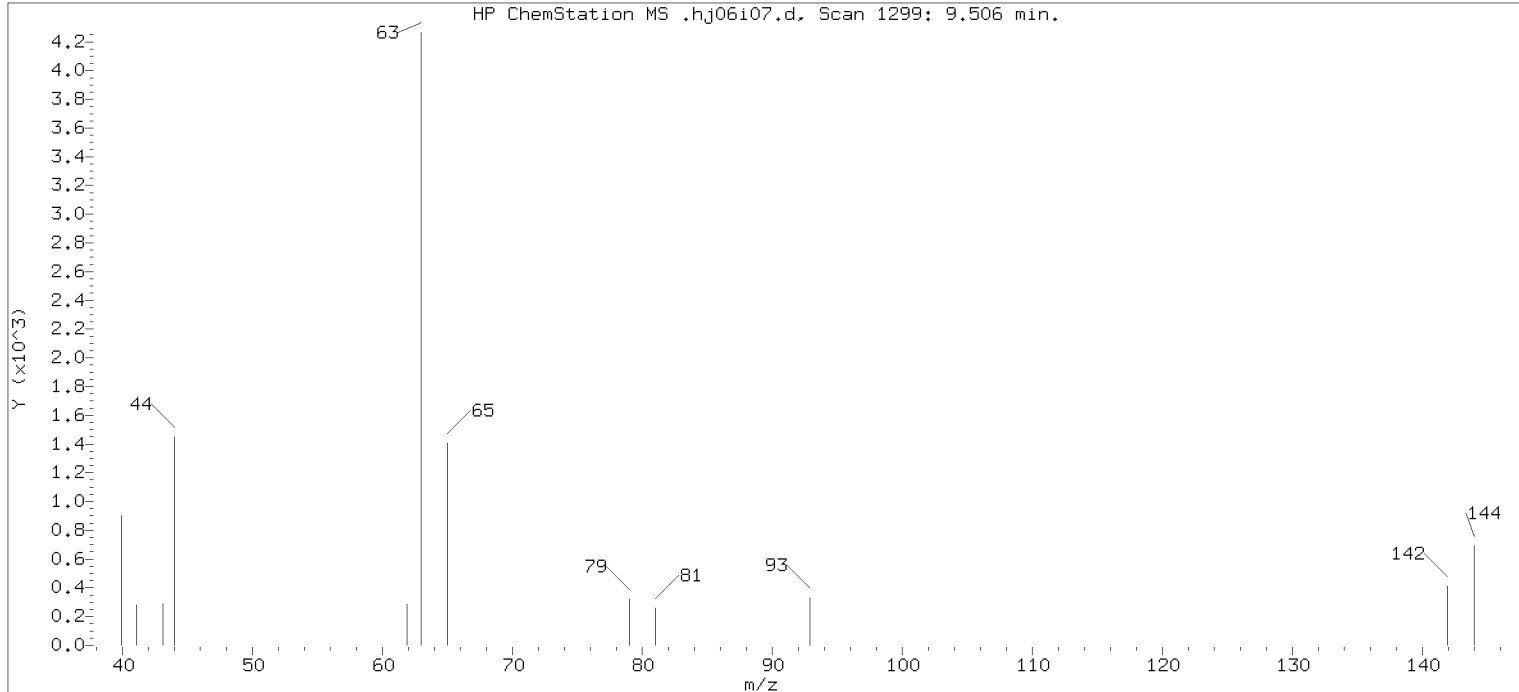
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

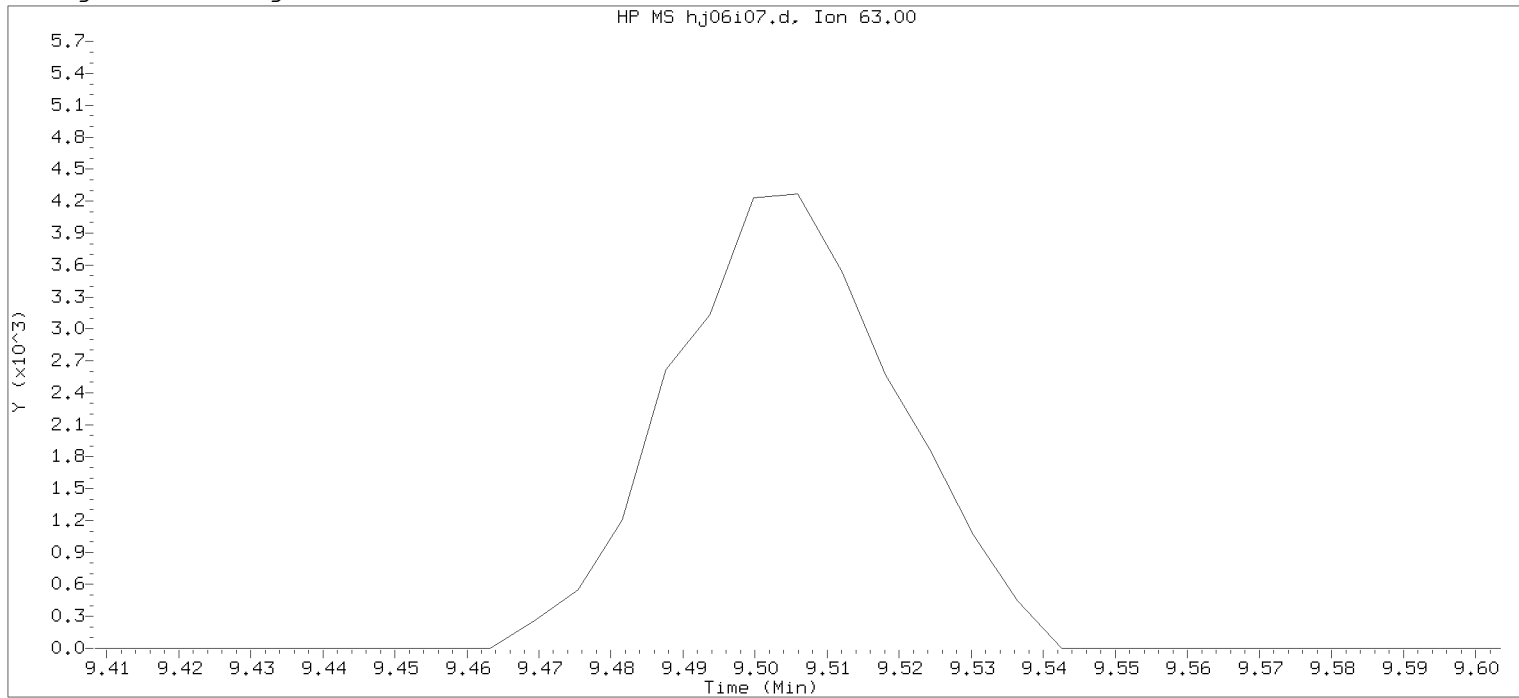
Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.

PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 80

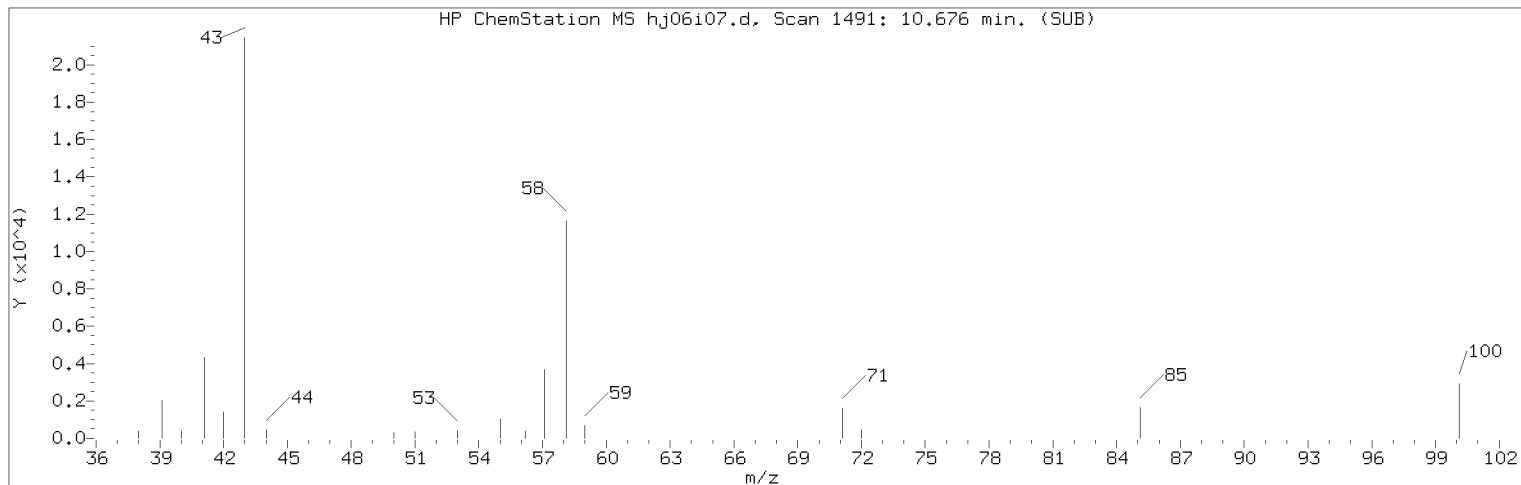
Compound Name : 1-Bromo-2-chloroethane

Expected RT (minutes) : 9.506

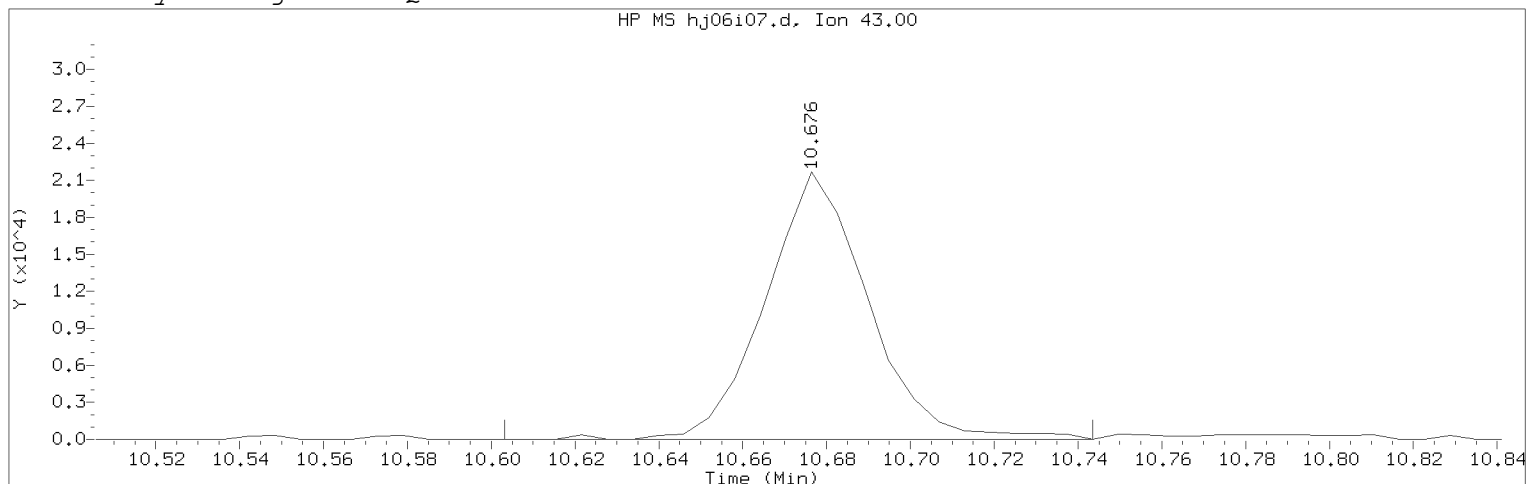
Quant Ion : 63.00

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Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 92	
Compound Name	: 2-Hexanone	
Scan Number	: 1491	
Retention Time (minutes)	: 10.676	
Quant Ion	: 43.00	
Area (flag)	: 36737M	
On-Column Amount (ng)	: 1.9820	
Integration start scan	: 1478	Integration stop scan: 1501
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Sara E. Johnson

on 01/15/2020 at 17:51.

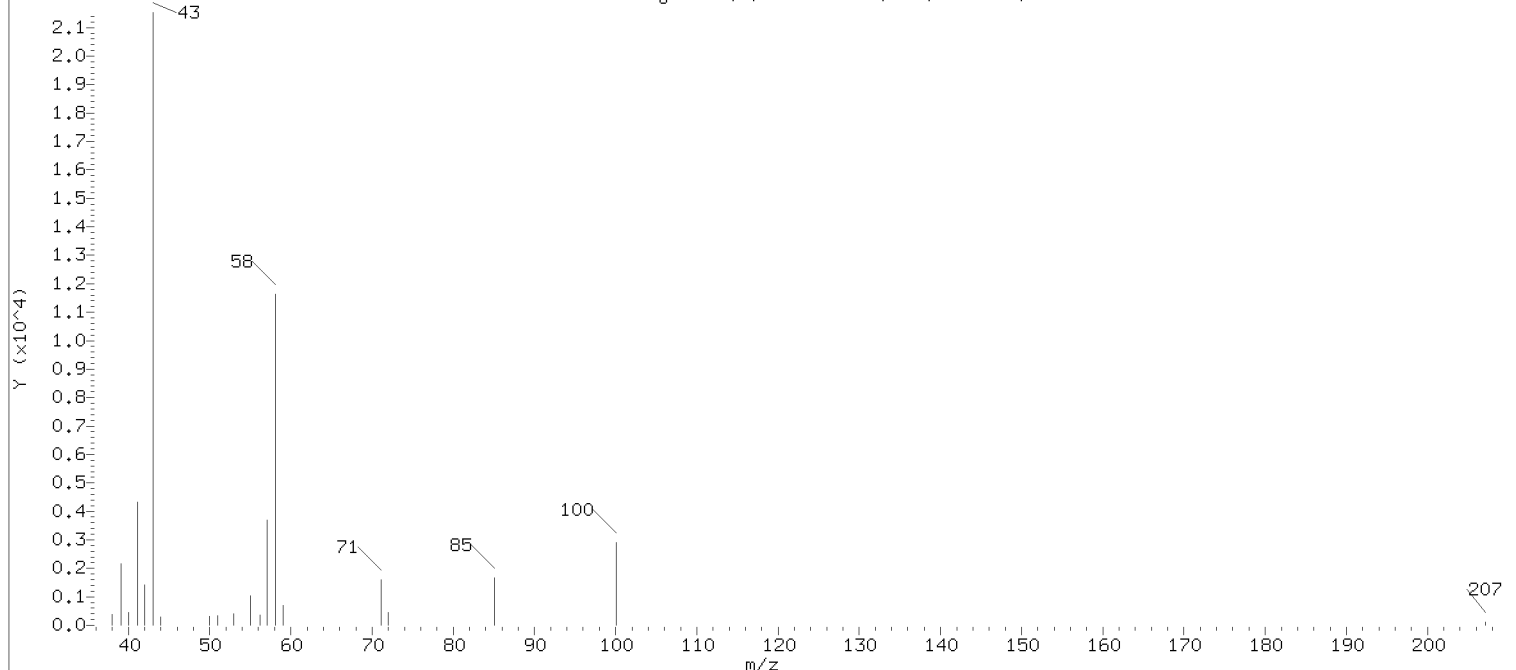
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.

PARALLAX ID: msl01251

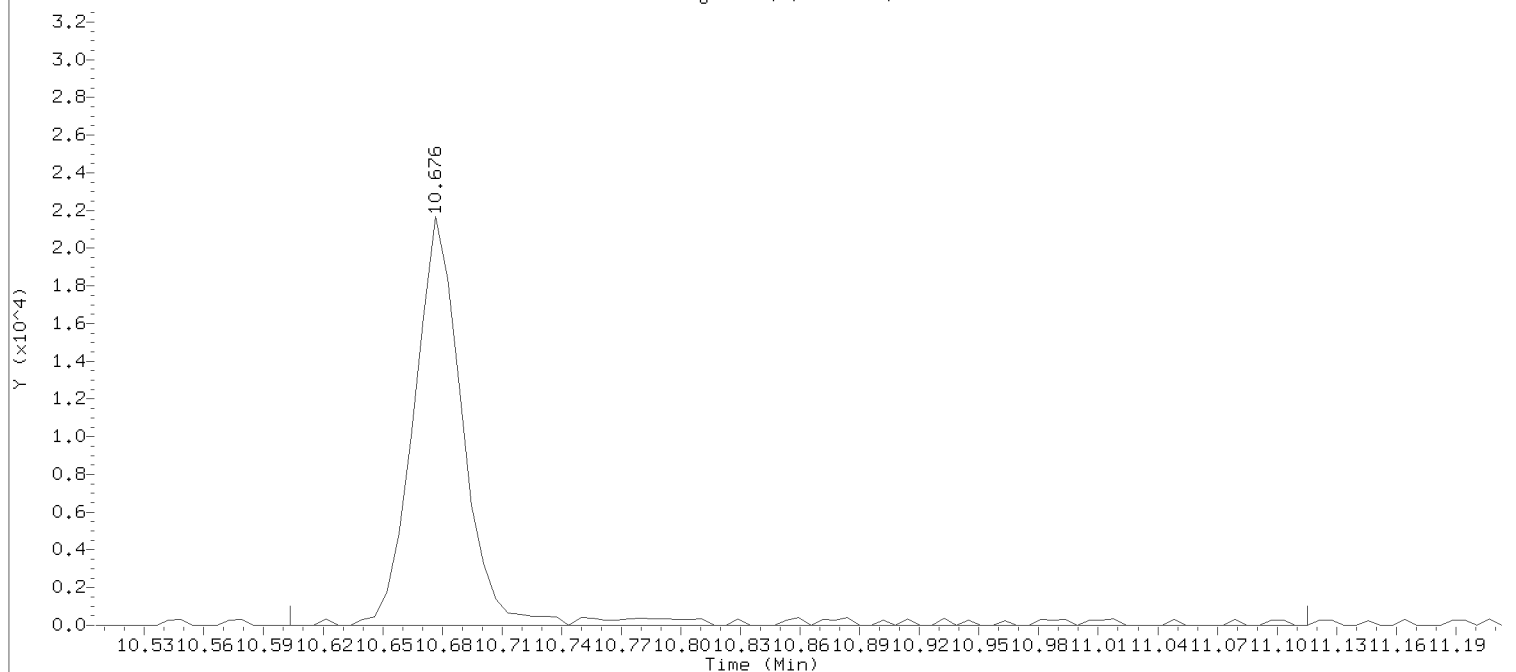
Sample Spectrum (Background Subtracted)

HP ChemStation MS hj06i07.d, Scan 1491: 10.676 min. (SUB)



Original Integration of Quant Ion

HP MS hj06i07.d, Ion 43.00



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:17

Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

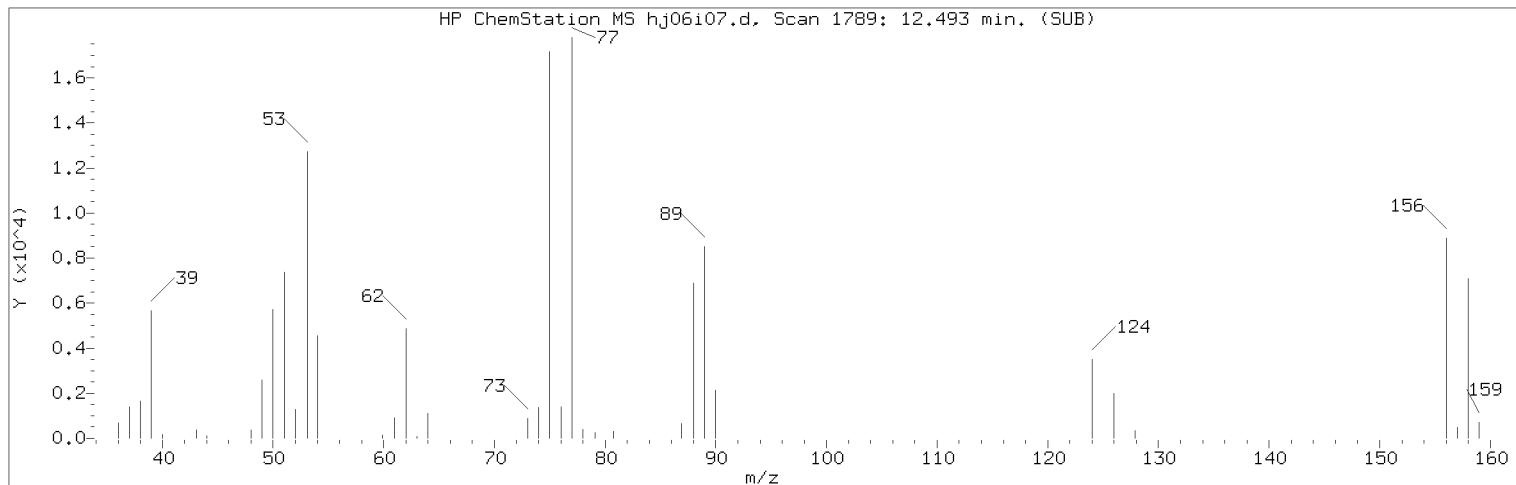
Lab Sample ID: VSTD0.2

Compound Number : 92
 Compound Name : 2-Hexanone
 Scan Number : 1491
 Retention Time (minutes): 10.676
 Quant Ion : 43.00
 Area : 40437
 On-column Amount (ng) : 2.1579
 Integration start scan : 1478
 Y at integration start : 0

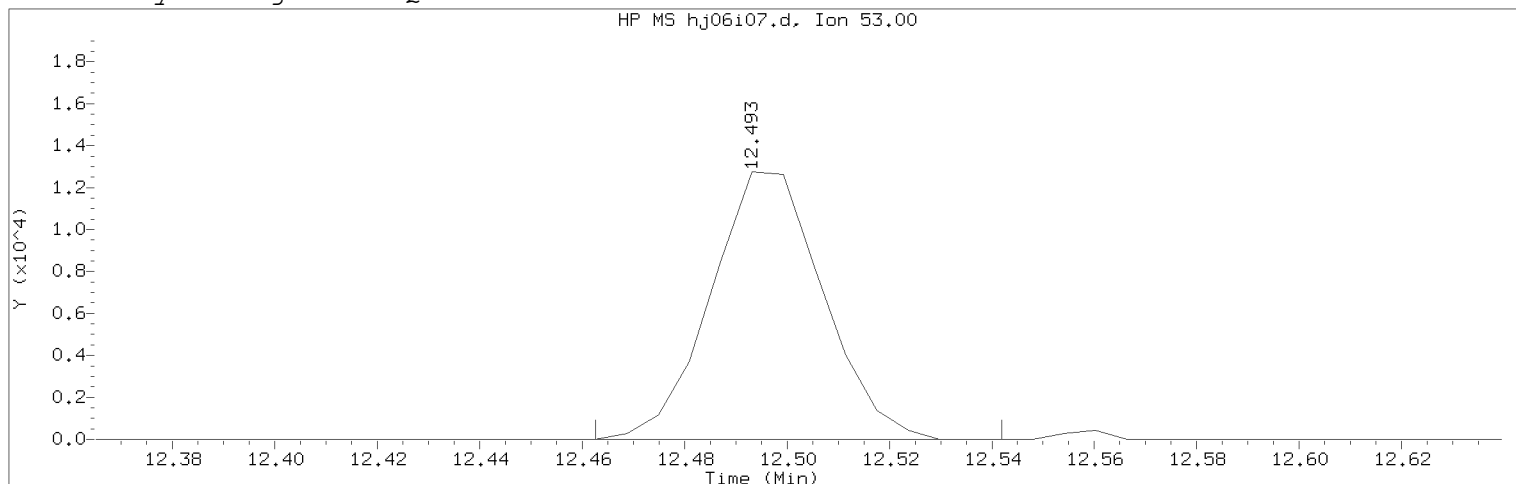
Integration stop scan: 1562
 Y at integration end: 0

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 Target 3.5 esignature user RA564s Page 274 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area (flag)	: 19411M	
On-Column Amount (ng)	: 1.9049	
Integration start scan	: 1783	Integration stop scan: 1796
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Sara E. Johnson

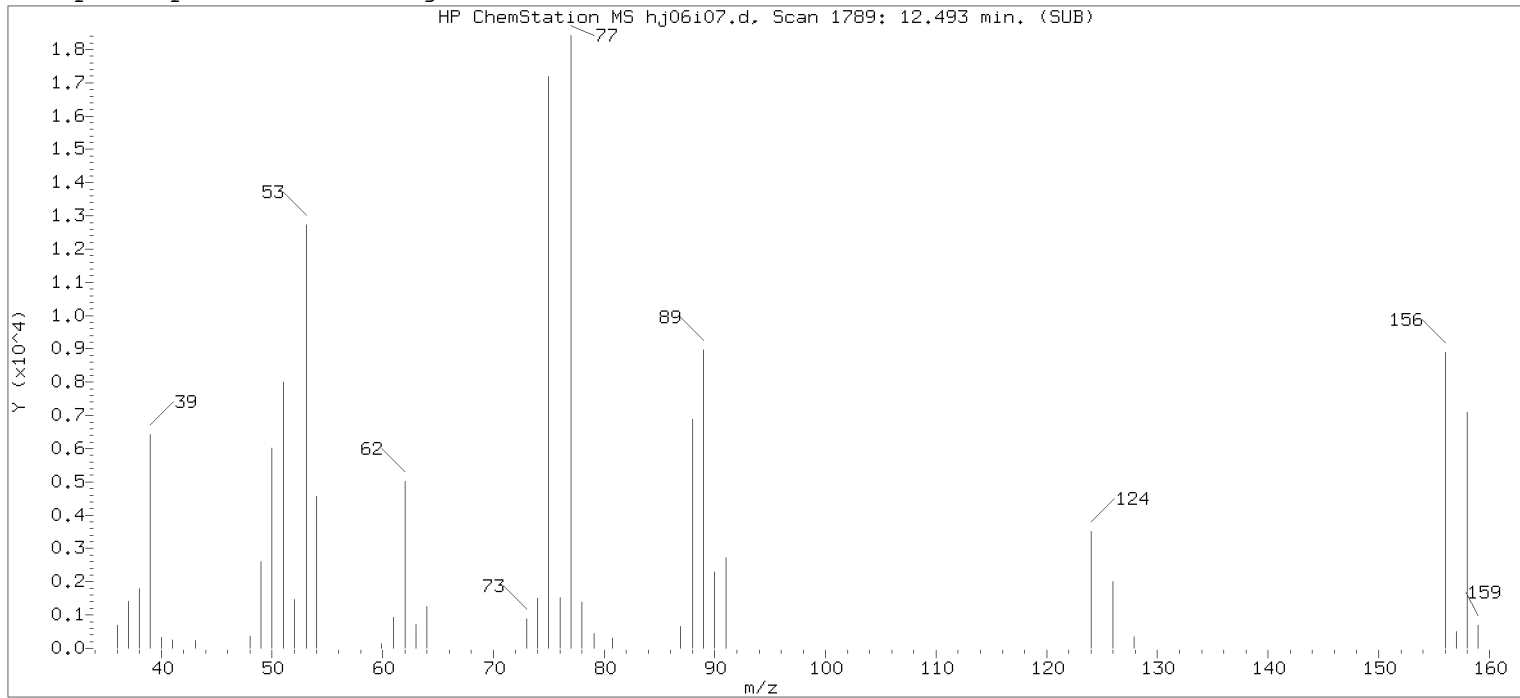
on 01/15/2020 at 17:51.

Target 3.5 esignature user ID: sej02002

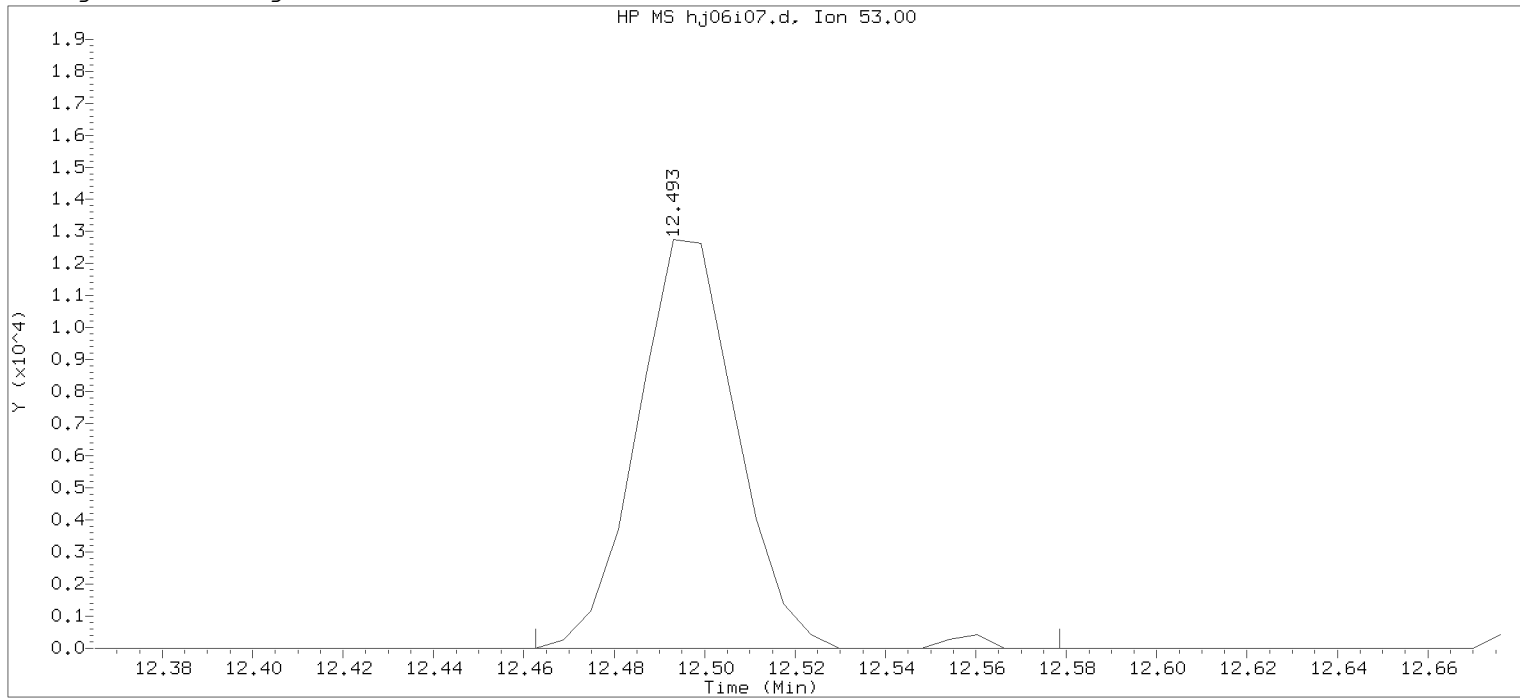
Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.

PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

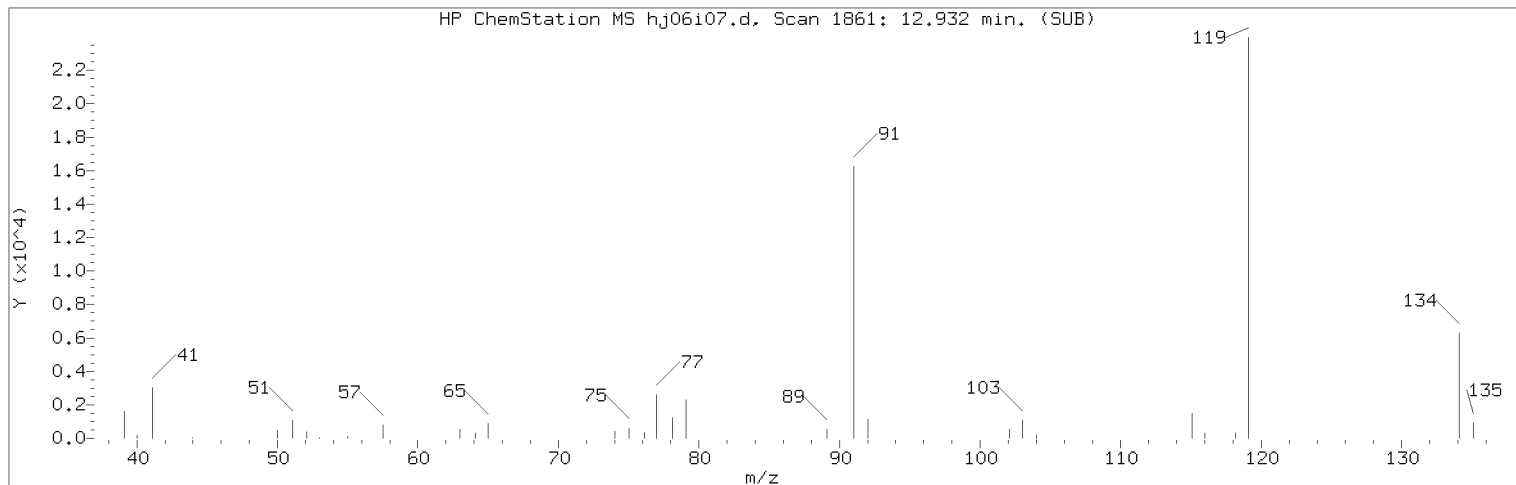
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

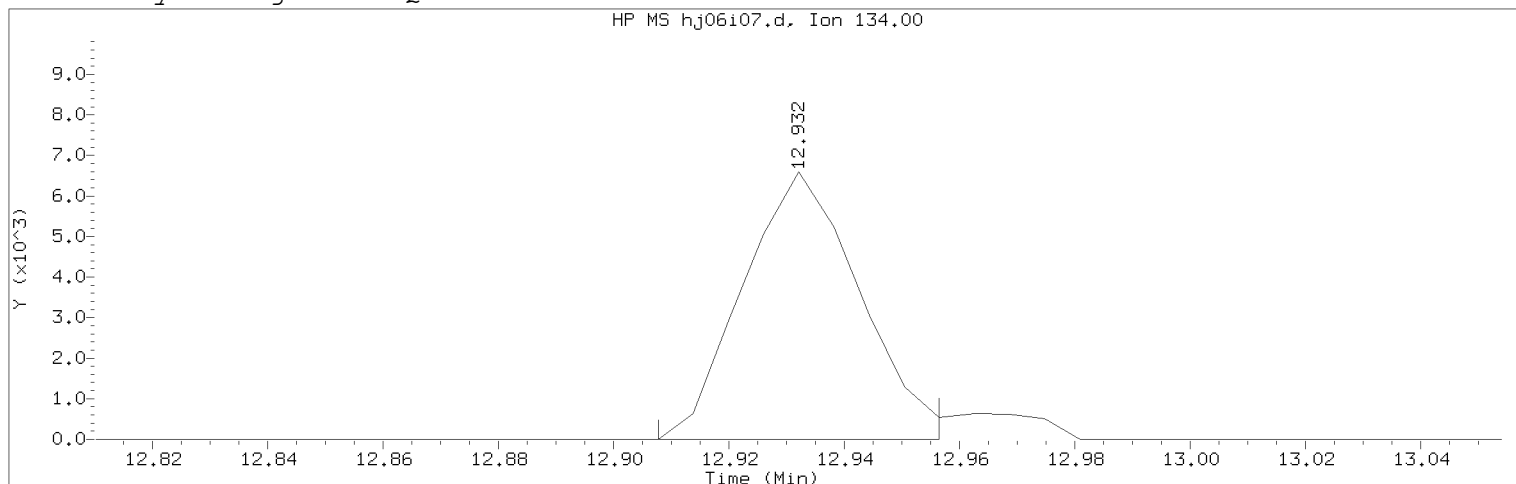
Compound Number	: 116	
Compound Name	: trans-1,4-Dichloro-2-butene	
Scan Number	: 1789	
Retention Time (minutes)	: 12.493	
Quant Ion	: 53.00	
Area	: 19667	
On-column Amount (ng)	: 2.7364	
Integration start scan	: 1783	Integration stop scan: 1802
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 276 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

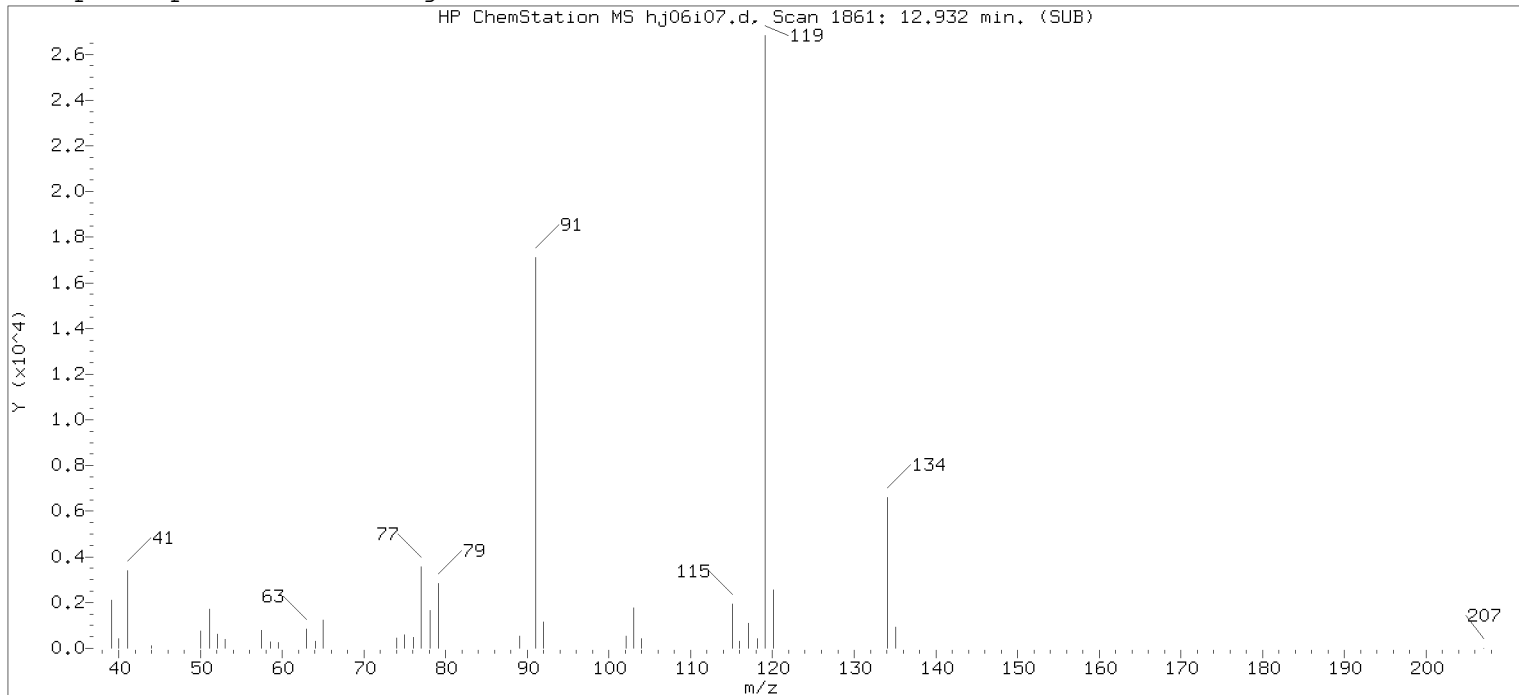
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1861	
Retention Time (minutes)	: 12.932	
Quant Ion	: 134.00	
Area (flag)	: 9273M	
On-Column Amount (ng)	: 0.1928	
Integration start scan	: 1856	Integration stop scan: 1864
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

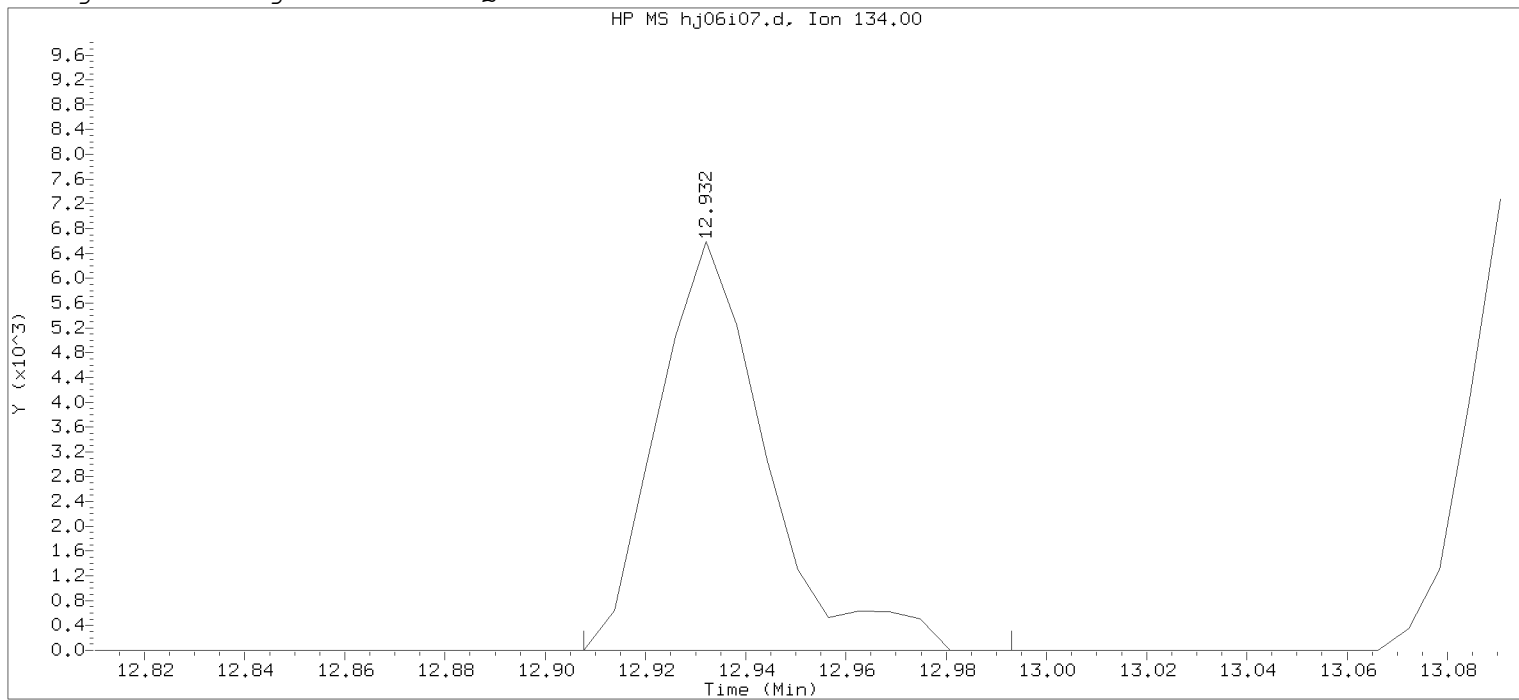
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

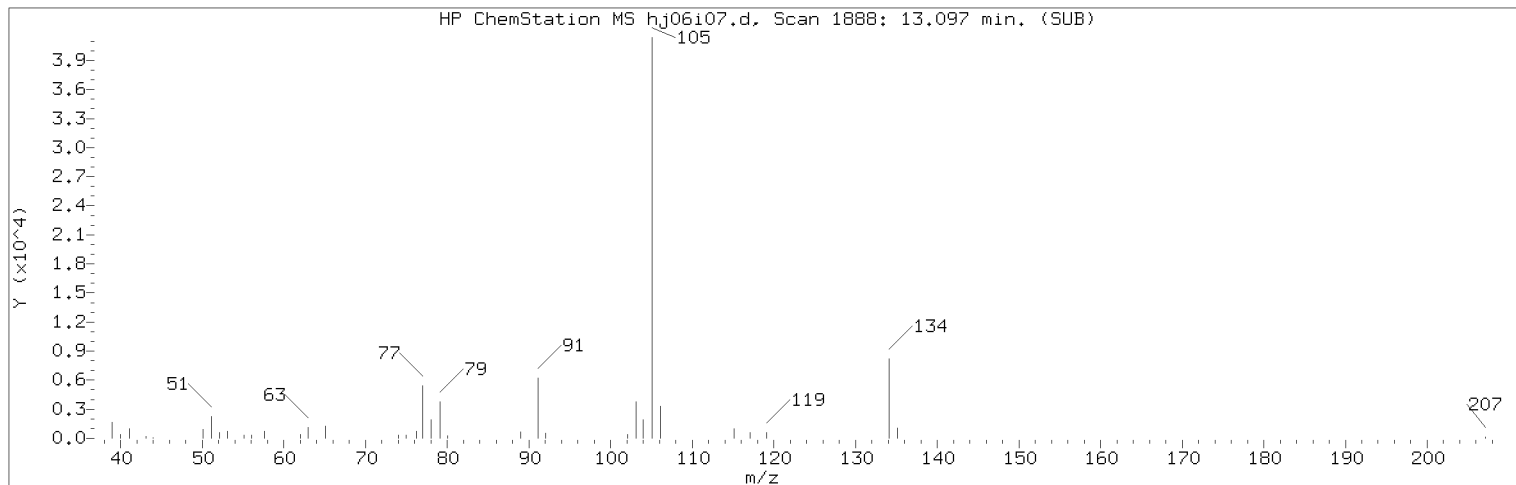
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

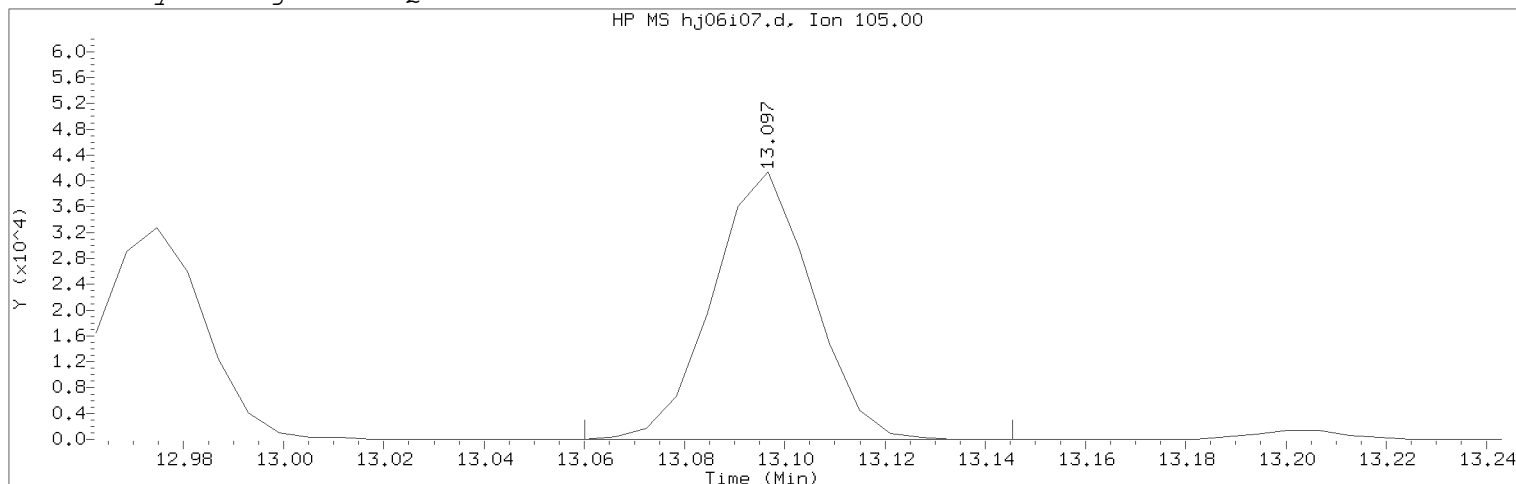
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1861	
Retention Time (minutes)	: 12.932	
Quant Ion	: 134.00	
Area	: 9916	
On-column Amount (ng)	: 0.2019	
Integration start scan	: 1856	Integration stop scan: 1870
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 278 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 16:44

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:49 sej02002

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area (flag)	: 56997M	
On-Column Amount (ng)	: 0.1892	
Integration start scan	: 1881	Integration stop scan: 1895
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

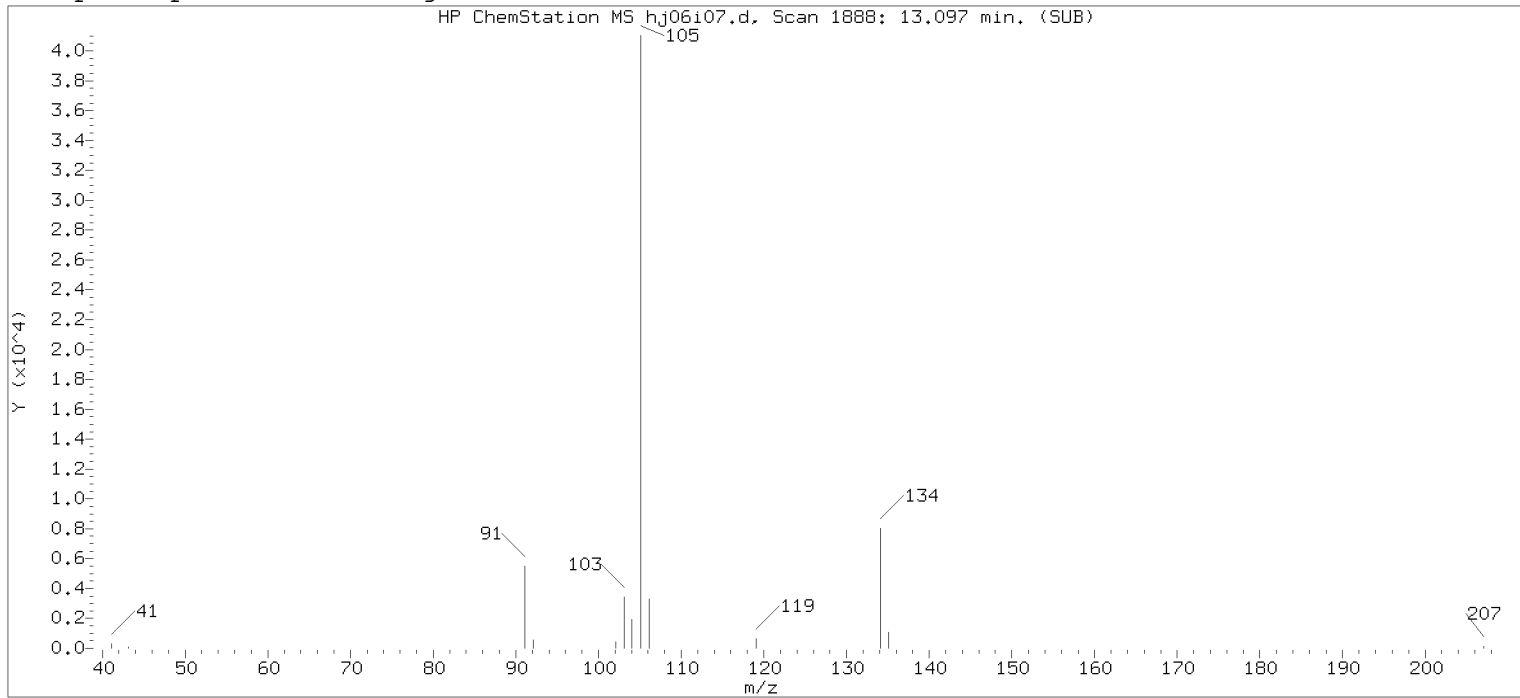
Analyst responsible for change:

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:51.

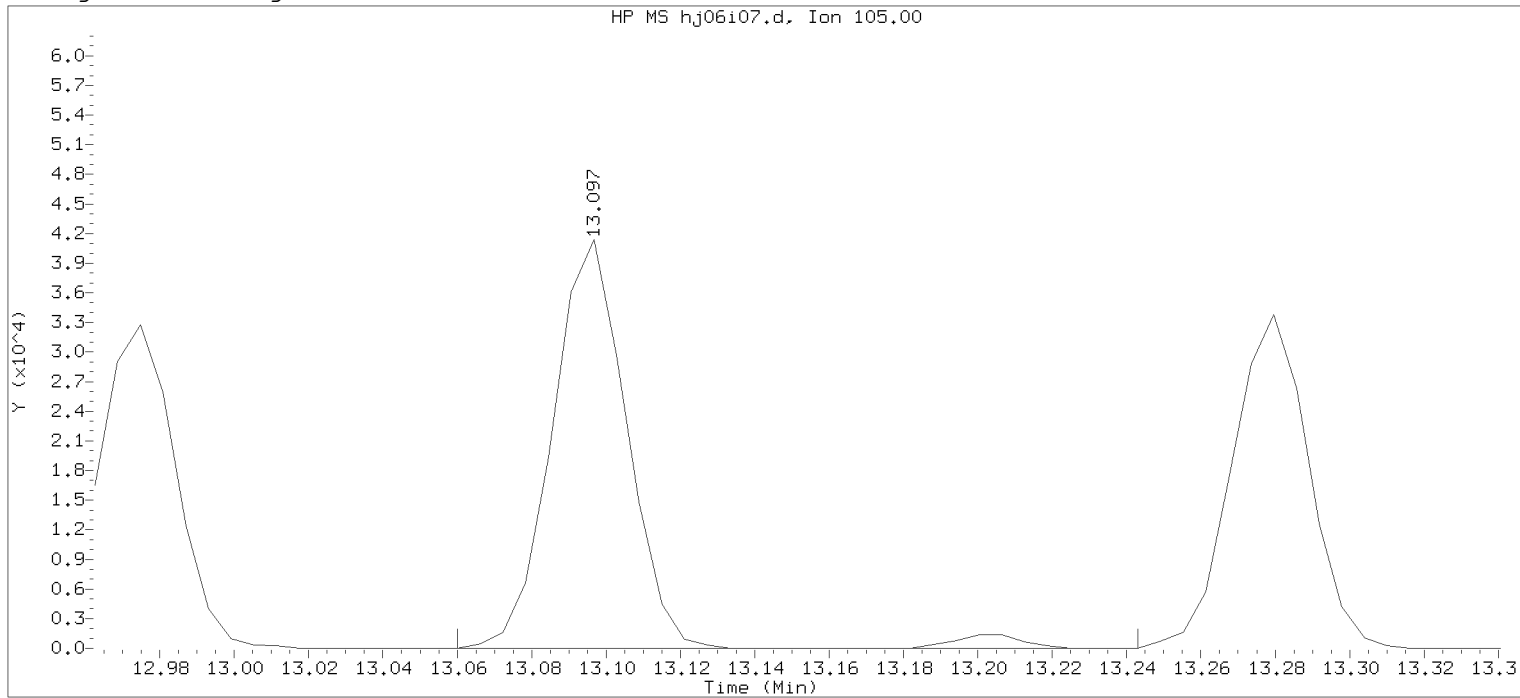
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i07.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 16:44 Analyst ID: JKH09052

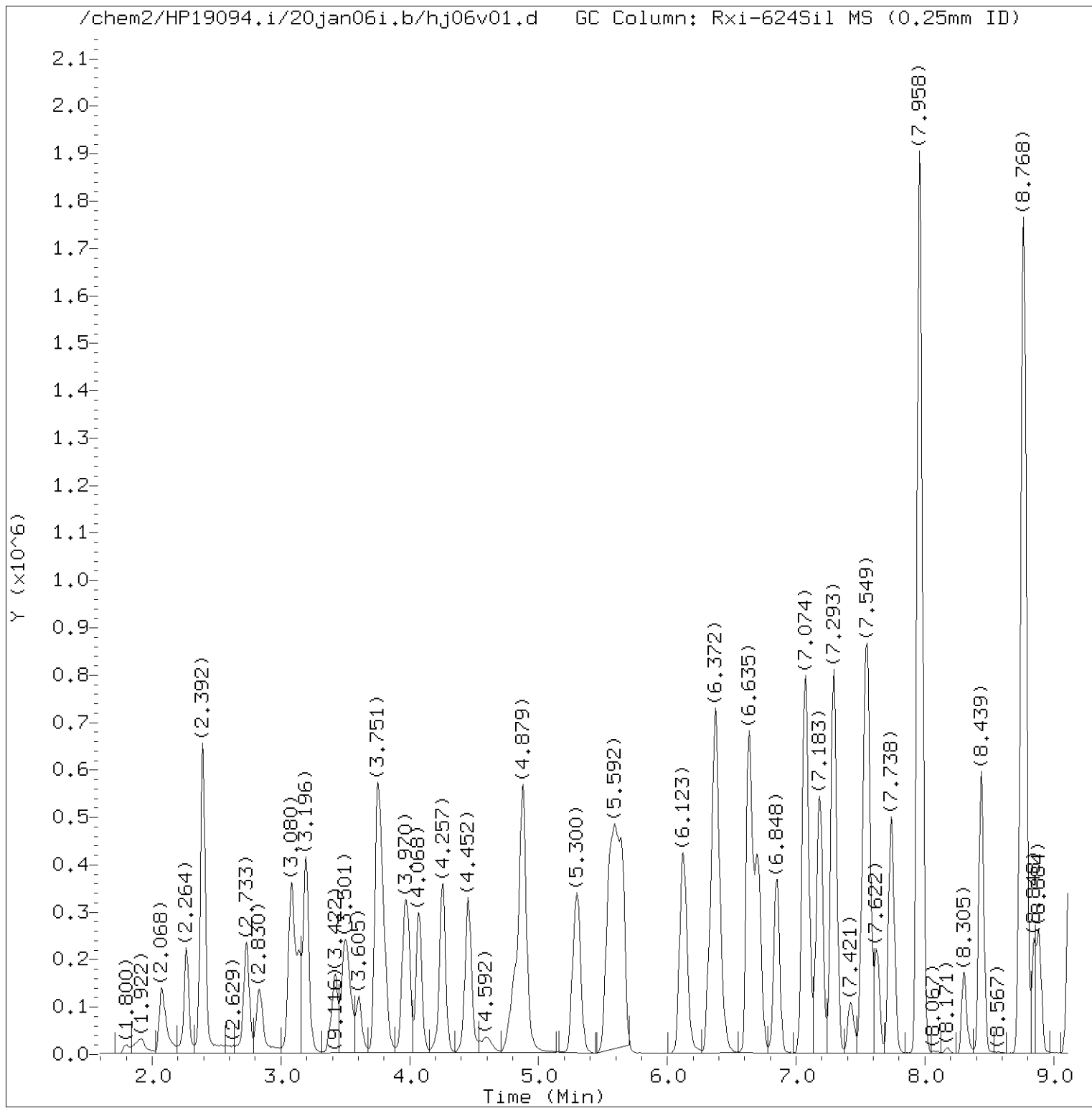
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:17
Date, time and analyst ID of latest file update: 07-Jan-2020 13:17 jml01693

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 129	
Compound Name	: sec-Butylbenzene	
Scan Number	: 1888	
Retention Time (minutes)	: 13.097	
Quant Ion	: 105.00	
Area	: 58739	
On-column Amount (ng)	: 0.1934	
Integration start scan	: 1881	Integration stop scan: 1911
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA64s Page 280 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
Analyst ID: JKH09052

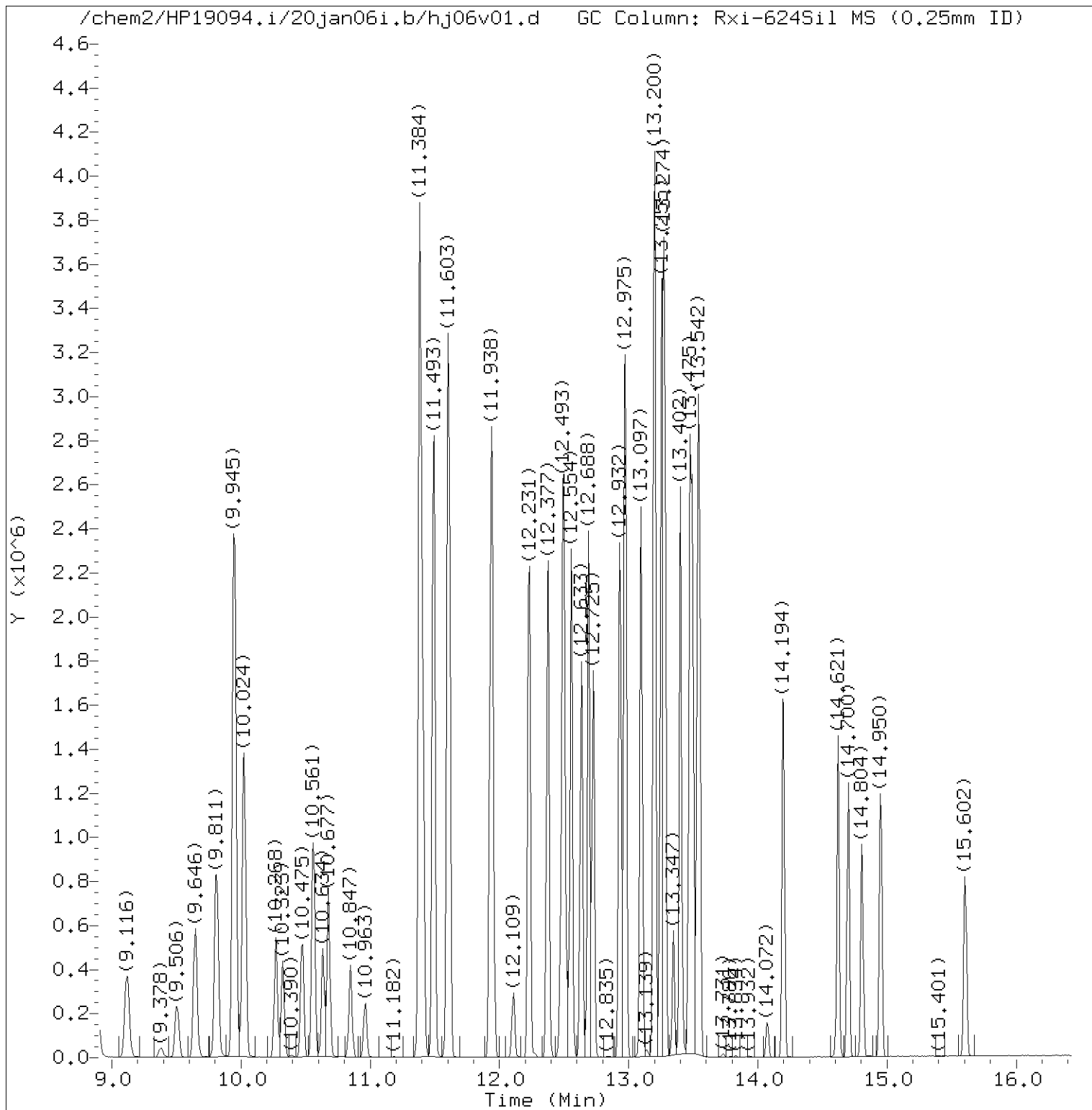
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
 Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.068	85	312946M	4.270
2) Chloromethane	(2)	2.264	50	331733	4.585
5) Vinyl Chloride	(2)	2.392	62	333154	4.841
6) 1,3-Butadiene	(2)	2.398	39	297778	5.477
7) Bromomethane	(2)	2.733	94	237855	4.824
8) Chloroethane	(2)	2.830	64	199931	5.016
9) Dichlorofluoromethane	(2)	3.080	67	465314	4.916
10) Trichlorofluoromethane	(2)	3.141	101	423736	5.395
11) Ethyl ether	(2)	3.422	59	175545	5.050
12) Freon 123a	(2)	3.501	67	318598	5.247
13) Acrolein	(1)	3.605	56	194313	36.882
15) 1,1-Dichloroethene	(2)	3.751	96	243211	5.091
16) Freon 113	(2)	3.782	101	261455	5.236
14) Acetone	(1)	3.788	43	242221M	34.072
17) Methyl Iodide	(2)	3.958	142	457754	4.965
18) Bromoethane	(2)	3.989	108	221120M	5.305
19) Carbon Disulfide	(2)	4.068	76	716993	4.906
22) Methyl Acetate	(1)	4.227	43	87739	4.891
23) Allyl Chloride	(2)	4.257	41	388062	4.782
24) Methylene Chloride	(2)	4.452	84	260231	5.061
27)*t-Butyl Alcohol-d10	(1)	4.464	65	116998M	50.000
29) t-Butyl Alcohol	(1)	4.592	59	120368	48.742
30) Acrylonitrile	(1)	4.806	53	219540	25.307
31) Methyl Tertiary Butyl Ether	(2)	4.861	73	570006	5.219
32) trans-1,2-Dichloroethene	(2)	4.885	96	264736	5.041
33) n-Hexane	(2)	5.300	57	378770	5.114
34) 1,1-Dichloroethane	(2)	5.537	63	491073	5.179
35) di-Isopropyl Ether	(2)	5.592	45	793854	5.083
36) 2-Chloro-1,3-Butadiene	(2)	5.647	53	420278	5.177
41) 1,2-Dichloroethene (Total)	(2)		96	581205	10.464
38) Ethyl t-butyl ether	(2)	6.123	59	751383	5.125
39) 2-Butanone	(1)	6.324	43	411075	36.981
40) cis-1,2-Dichloroethene	(2)	6.372	96	316469	5.423
42) 2,2-Dichloropropane	(2)	6.385	77	411925	5.106
43) Propionitrile	(1)	6.415	54	117128	38.467
46) Methacrylonitrile	(1)	6.635	67	432272	39.694
48) Bromochloromethane	(2)	6.702	128	119932	4.868
49) Tetrahydrofuran	(1)	6.708	71	81302	26.474

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
 Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.848	83	487364	5.267
51) \$Dibromofluoromethane	(2)	7.067	113	491795	10.118
52) 1,1,1-Trichloroethane	(2)	7.086	97	437394	5.083
53) Cyclohexane	(2)	7.183	56	459015	4.994
56) 1,1-Dichloropropene	(2)	7.293	75	376002	5.170
55) Carbon Tetrachloride	(2)	7.293	117	388052	5.259
57) Isobutyl Alcohol	(1)	7.421	41	96355	112.565
58) \$1,2-Dichloroethane-d4	(2)	7.519	102	94524	10.034
59) Benzene	(2)	7.555	78	1085702	5.105
60) 1,2-Dichloroethane	(2)	7.628	62	277749M	5.065
61) t-Amyl methyl ether	(2)	7.738	73	651737	5.097
64) *Fluorobenzene	(2)	7.958	96	1955366	10.000
63) n-Heptane	(2)	7.964	43	374113M	4.815
66) n-Butanol	(1)	8.305	56	149877	217.493
68) Trichloroethene	(2)	8.439	95	289520	5.191
70) Methylcyclohexane	(2)	8.750	83	489000	4.894
71) 1,2-Dichloropropane	(2)	8.781	63	272288	5.175
72) Methyl Methacrylate	(1)	8.848	69	116054	5.298
73) 1,4-Dioxane	(1)	8.860	88	17432M	104.882
74) Dibromomethane	(2)	8.884	93	123299	5.126
75) Bromodichloromethane	(2)	9.122	83	343766	5.258
77) 2-Nitropropane	(1)	9.378	41	36462M	5.067
80) 1-Bromo-2-chloroethane	(2)	9.506	63	253199M	5.119
81) cis-1,3-Dichloropropene	(2)	9.646	75	400425	5.187
82) 4-Methyl-2-Pentanone	(1)	9.805	43	697252	25.450
83) \$Toluene-d8	(3)	9.945	98	1944618	10.029
84) Toluene	(3)	10.024	92	699711	5.137
86) 1,3-Dichloropropene (total)	(3)		75	721435	10.264
85) trans-1,3-Dichloropropene	(3)	10.268	75	321010	5.078
87) Ethyl Methacrylate	(3)	10.323	69	243318	4.965
89) 1,1,2-Trichloroethane	(3)	10.475	97	177313	5.181
90) Tetrachloroethene	(3)	10.561	166	325053	5.251
91) 1,3-Dichloropropane	(3)	10.634	76	297803	5.065
92) 2-Hexanone	(1)	10.677	43	493986	26.387
94) Dibromochloromethane	(3)	10.847	129	232732	5.311
96) 1,2-Dibromoethane	(3)	10.963	107	169893	5.195
97) 1-Chlorohexane	(3)	11.384	91	397229	4.837
98) *Chlorobenzene-d5	(3)	11.384	117	1455329	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d
 Injection date and time: 06-JAN-2020 17:06

Instrument ID: HP19094.i
 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 15-JAN-2020 17:49
 Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
99) Chlorobenzene	(3)	11.408	112	767246	5.156
100) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	270472	5.110
101) Ethylbenzene	(3)	11.493	91	1370398	5.113
102) m+p-Xylene	(3)	11.603	106	1064975	10.392
106) Xylene (Total)	(3)		106	1584607	15.548
105) o-Xylene	(3)	11.932	106	519632	5.156
107) Styrene	(3)	11.945	104	854957	5.228
108) Bromoform	(3)	12.109	173	131963	5.167
109) Isopropylbenzene	(3)	12.231	105	1427155	5.225
112) \$4-Bromofluorobenzene	(3)	12.377	95	715490	9.974
114) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	205652	5.125
115) Bromobenzene	(4)	12.493	156	313664	5.171
116) trans-1,4-Dichloro-2-butene	(1)	12.499	53	274302	26.653
117) 1,2,3-Trichloropropane	(4)	12.524	110	57312M	5.333
118) n-Propylbenzene	(4)	12.554	91	1664747	5.256
120) 2-Chlorotoluene	(4)	12.633	126	324946	5.200
122) 1,3,5-Trimethylbenzene	(4)	12.688	105	1189822	5.178
123) 4-Chlorotoluene	(4)	12.725	126	321514	5.155
126) tert-Butylbenzene	(4)	12.932	134	248450	5.228
127) Pentachloroethane	(4)	12.969	167	199764	4.932
128) 1,2,4-Trimethylbenzene	(4)	12.975	105	1209946	5.099
129) sec-Butylbenzene	(4)	13.097	105	1556811	5.229
133) p-Isopropyltoluene	(4)	13.200	119	1334943	5.210
132) 1,3-Dichlorobenzene	(4)	13.200	146	622186	5.147
134) *1,4-Dichlorobenzene-d4	(4)	13.255	152	768618	10.000
135) 1,4-Dichlorobenzene	(4)	13.274	146	615335	5.218
136) 1,2,3-Trimethylbenzene	(4)	13.280	120	494653	4.999
137) Benzyl Chloride	(4)	13.347	126	76618	4.542
139) n-Butylbenzene	(4)	13.493	92	656303	5.181
140) 1,2-Dichlorobenzene	(4)	13.530	146	556271	5.220
144) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	31589	5.382
145) 1,3,5-Trichlorobenzene	(4)	14.200	180	489765	5.177
146) 1,2,4-Trichlorobenzene	(4)	14.621	180	411933	5.192
147) Hexachlorobutadiene	(4)	14.700	225	215902	5.214
148) Naphthalene	(4)	14.804	128	709427	5.124
149) 1,2,3-Trichlorobenzene	(4)	14.950	180	351724	5.193

M = Compound was manually integrated.

* = Compound is an internal standard.

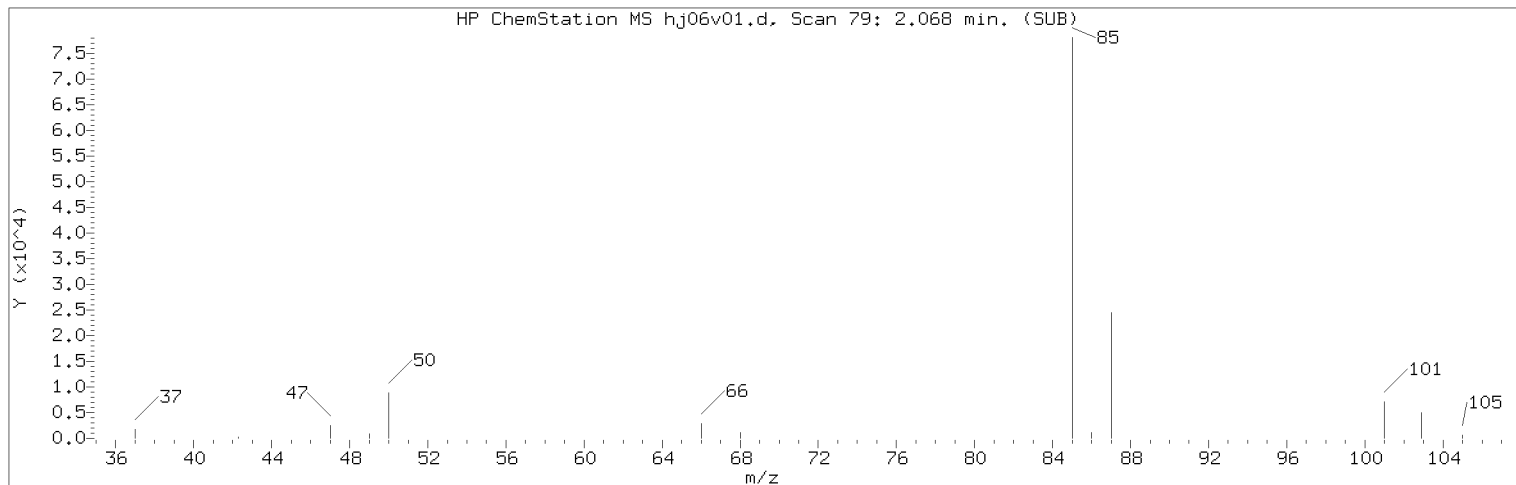
\$ = Compound is a surrogate standard.

page 3 of 3

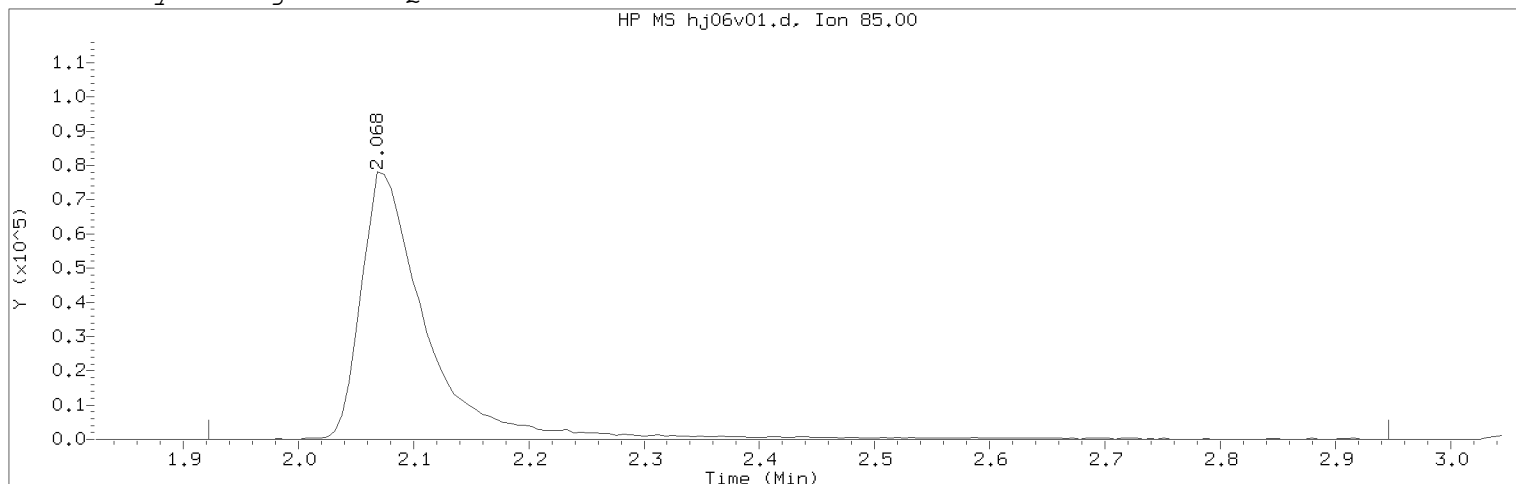
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:52.

Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

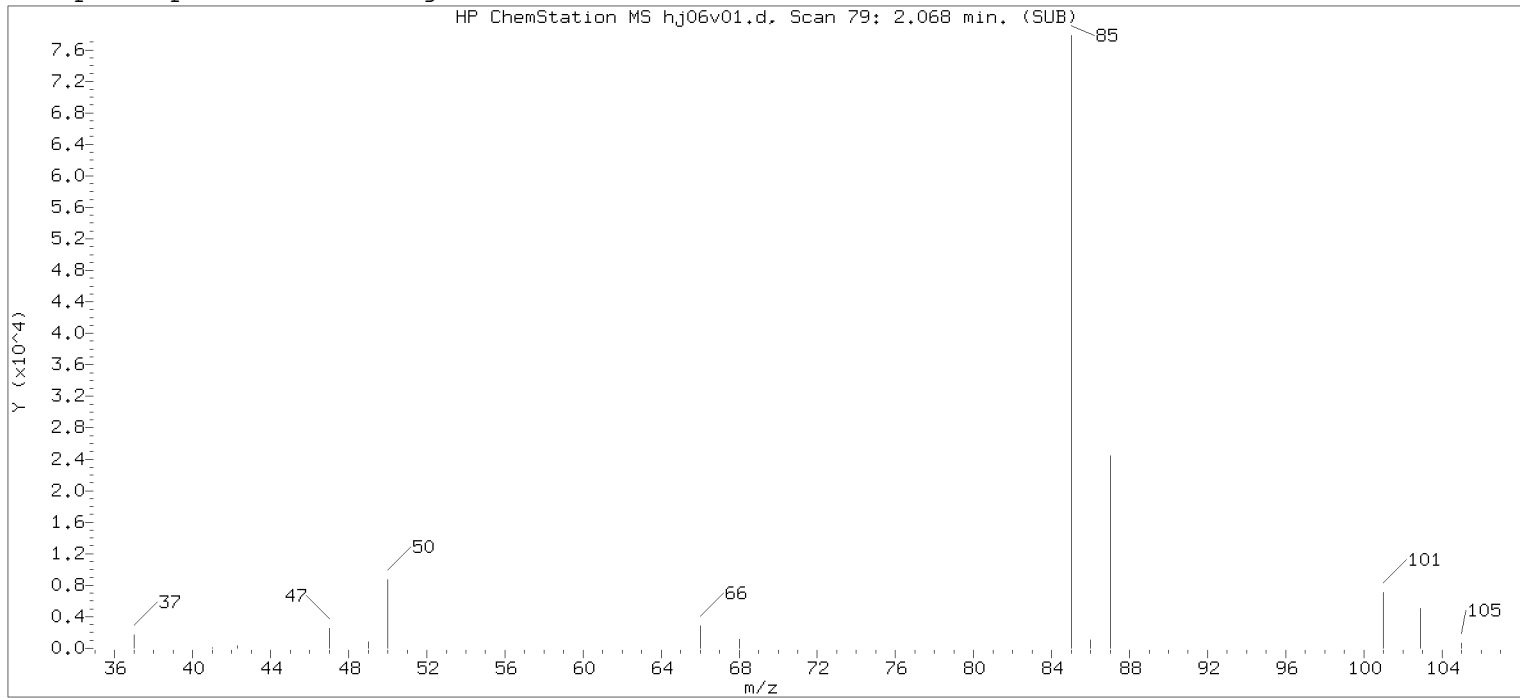
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 79
Retention Time (minutes): 2.068
Quant Ion : 85.00
Area (flag) : 312946M
On-Column Amount (ng) : 4.2695
Integration start scan : 54 Integration stop scan: 222
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

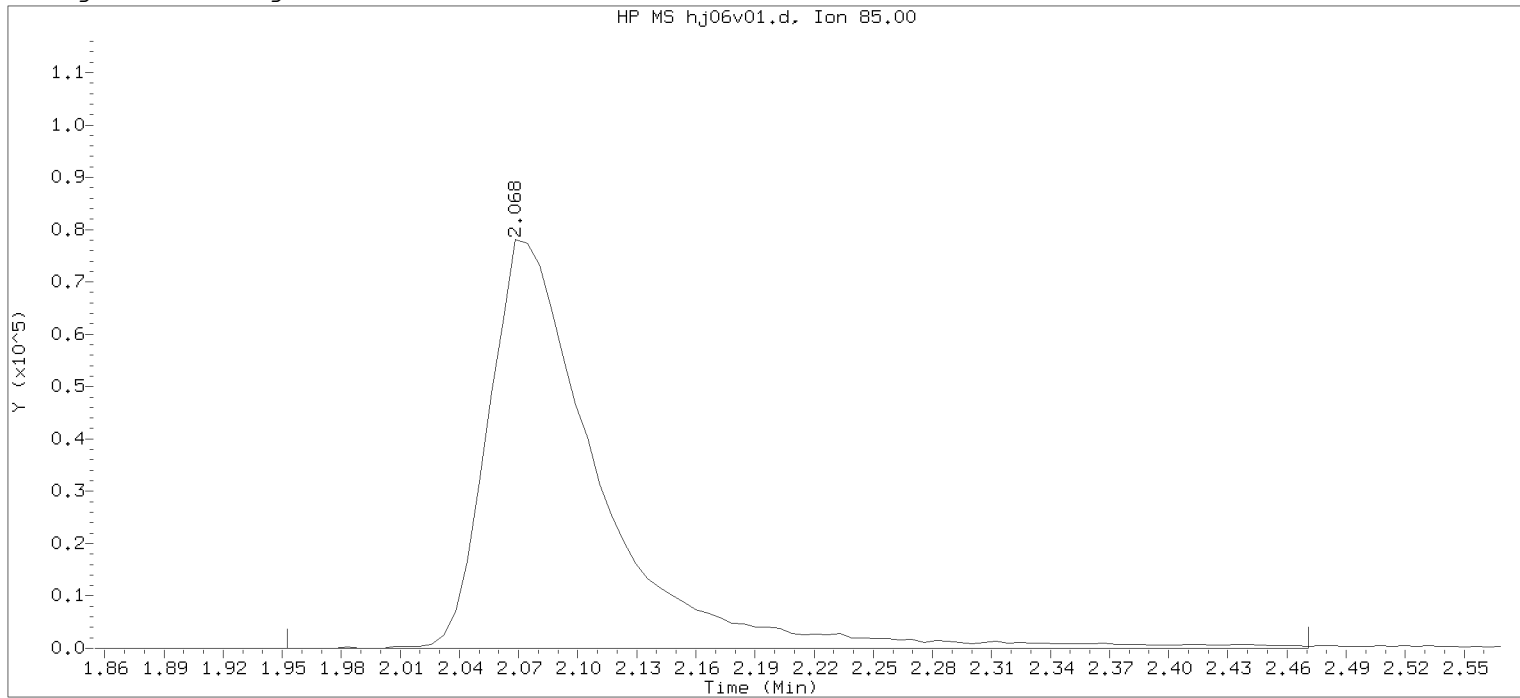
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

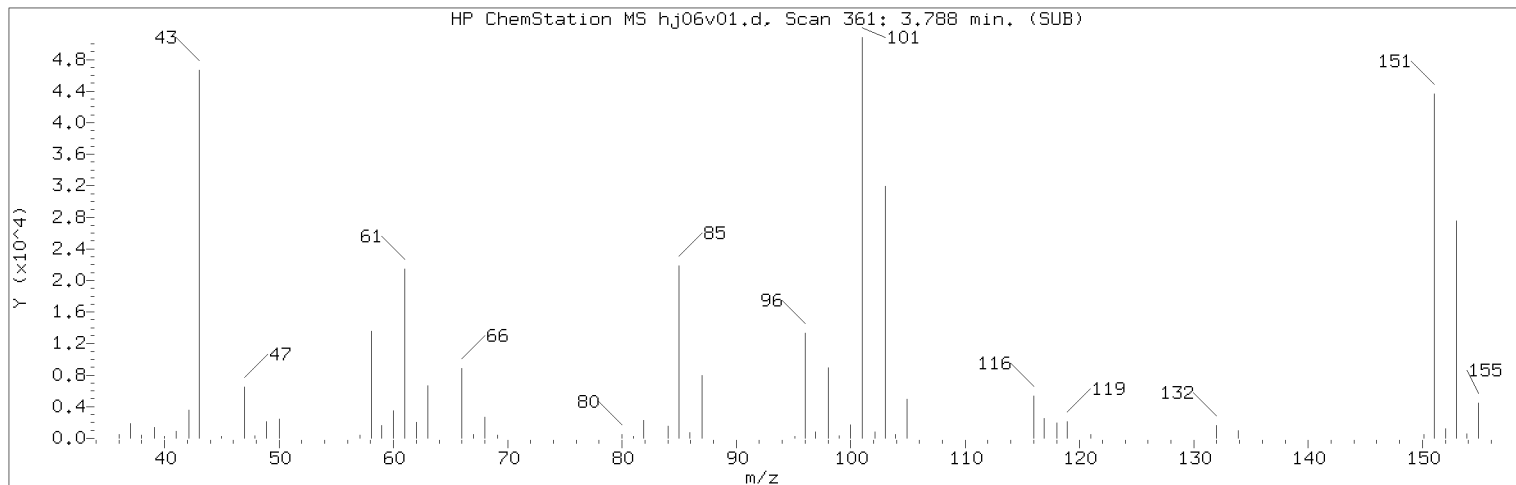
Sample Name: ICVH00

Lab Sample ID: ICVH00

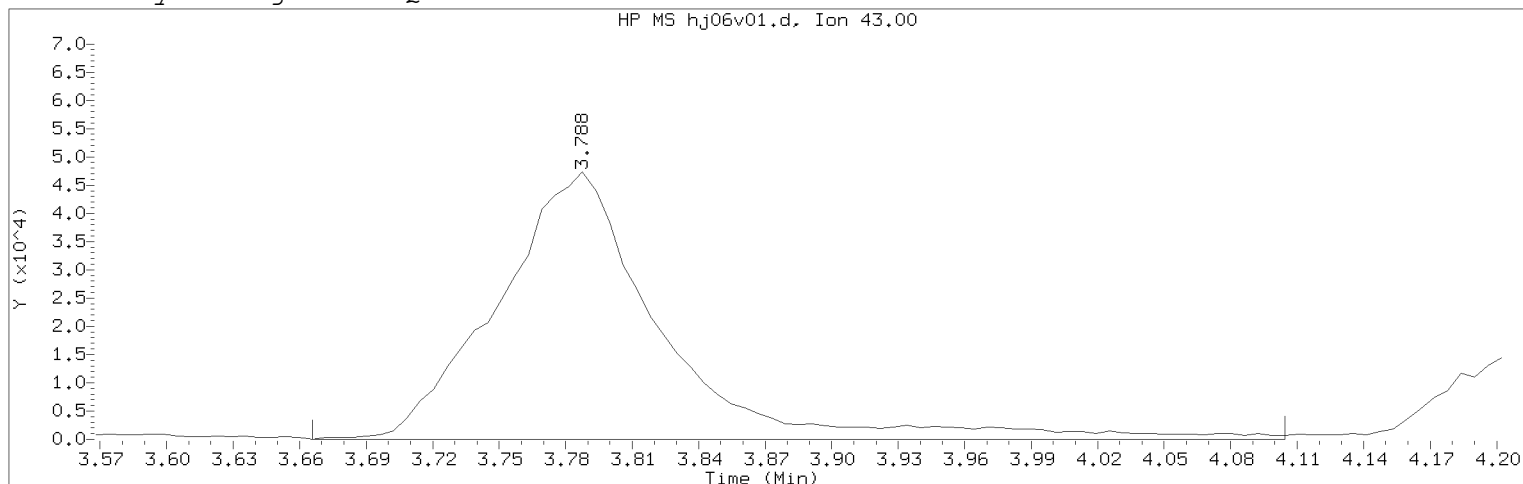
Compound Number	: 1	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 79	
Retention Time (minutes)	: 2.068	
Quant Ion	: 85.00	
Area	: 306455	
On-column Amount (ng)	: 4.1810	
Integration start scan	: 59	Integration stop scan: 144
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA664s Page 287 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area (flag) : 242221M
 On-Column Amount (ng) : 34.0723
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 412
 Y at integration end: 0

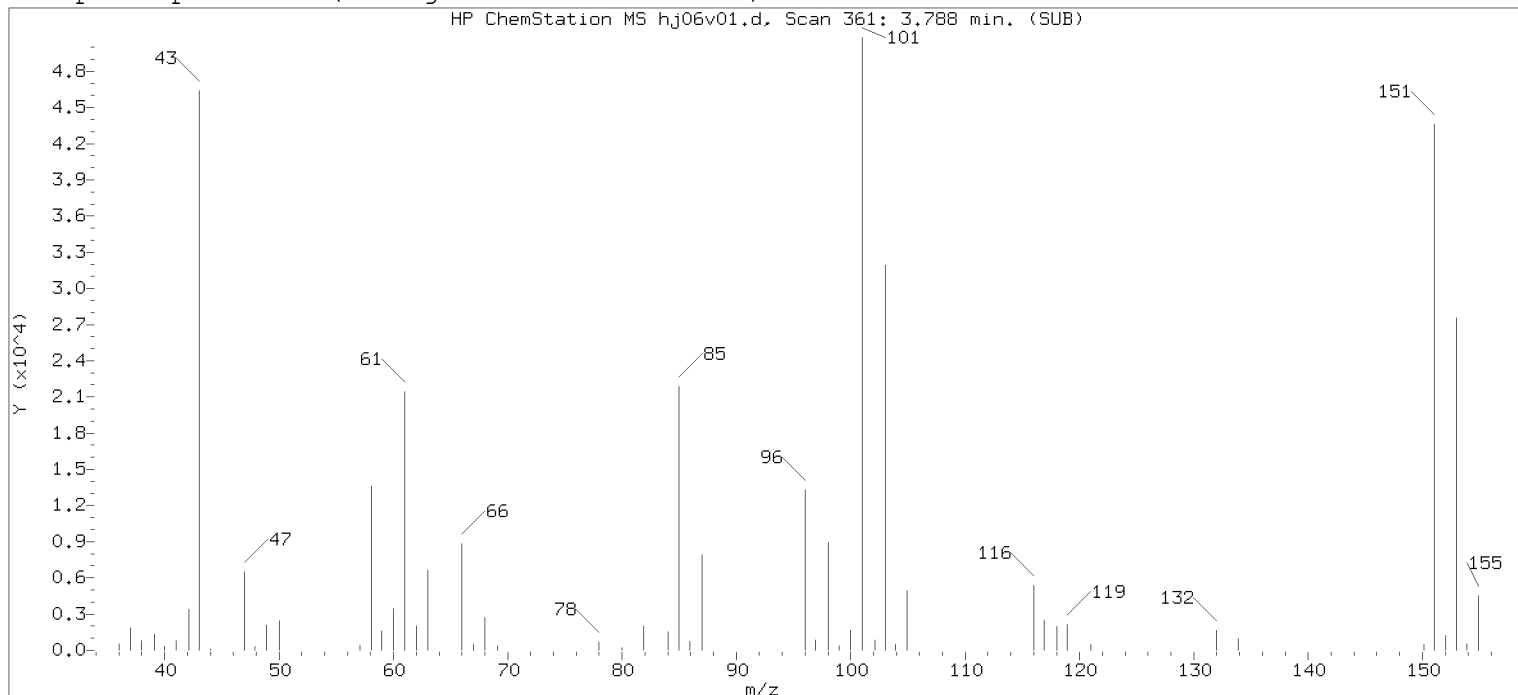
Reason for manual integration: improper integration

Analyst responsible for change:

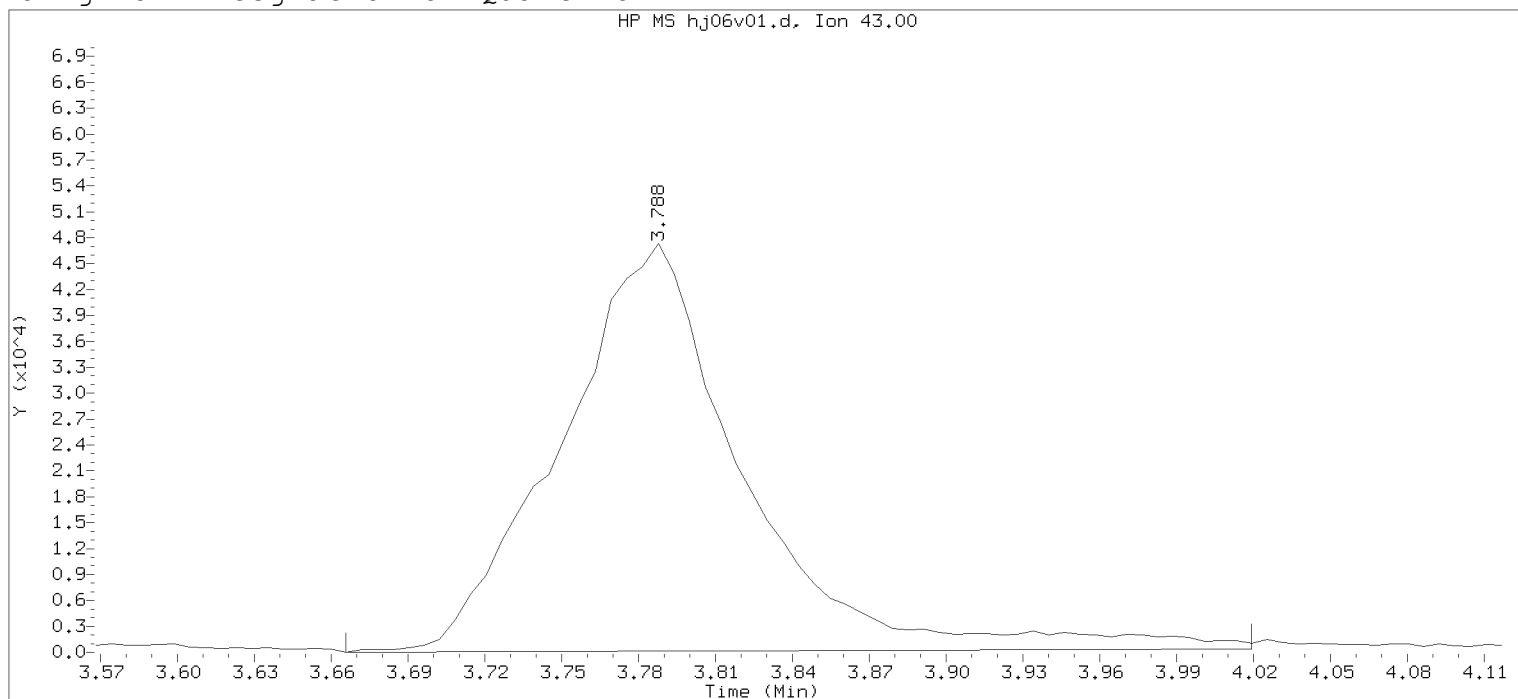
Digitally signed by Sara E. Johnson
 on 01/15/2020 at 17:52.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
 PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

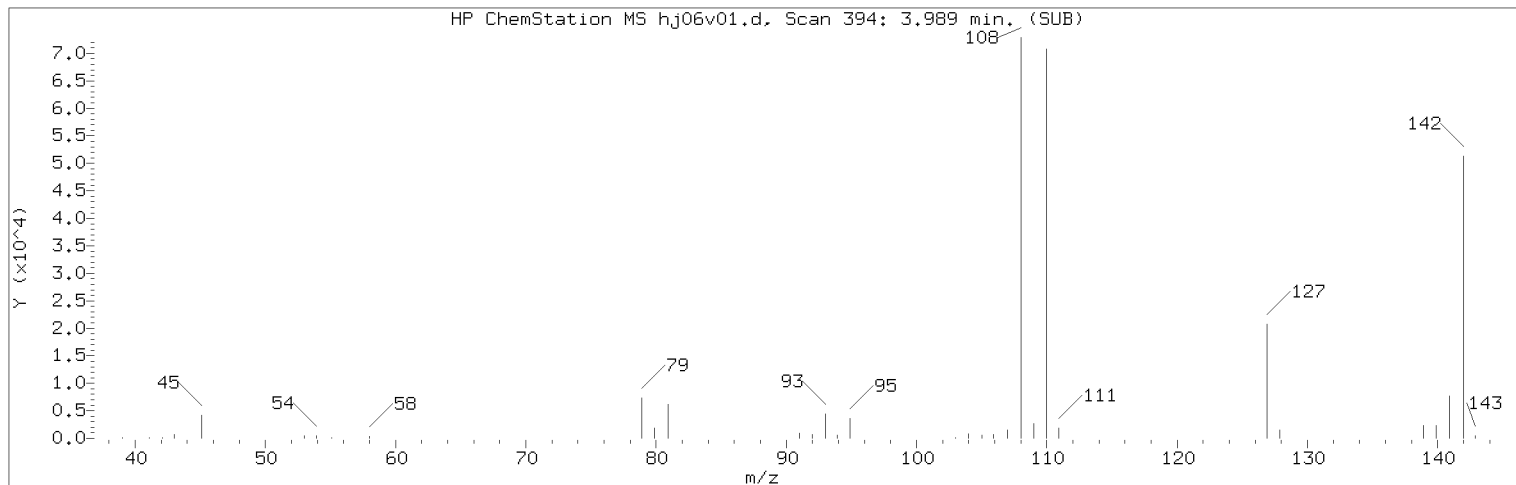
Lab Sample ID: ICVH00

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 361
 Retention Time (minutes): 3.788
 Quant Ion : 43.00
 Area : 233636
 On-column Amount (ng) : 33.2885
 Integration start scan : 340
 Y at integration start : 0

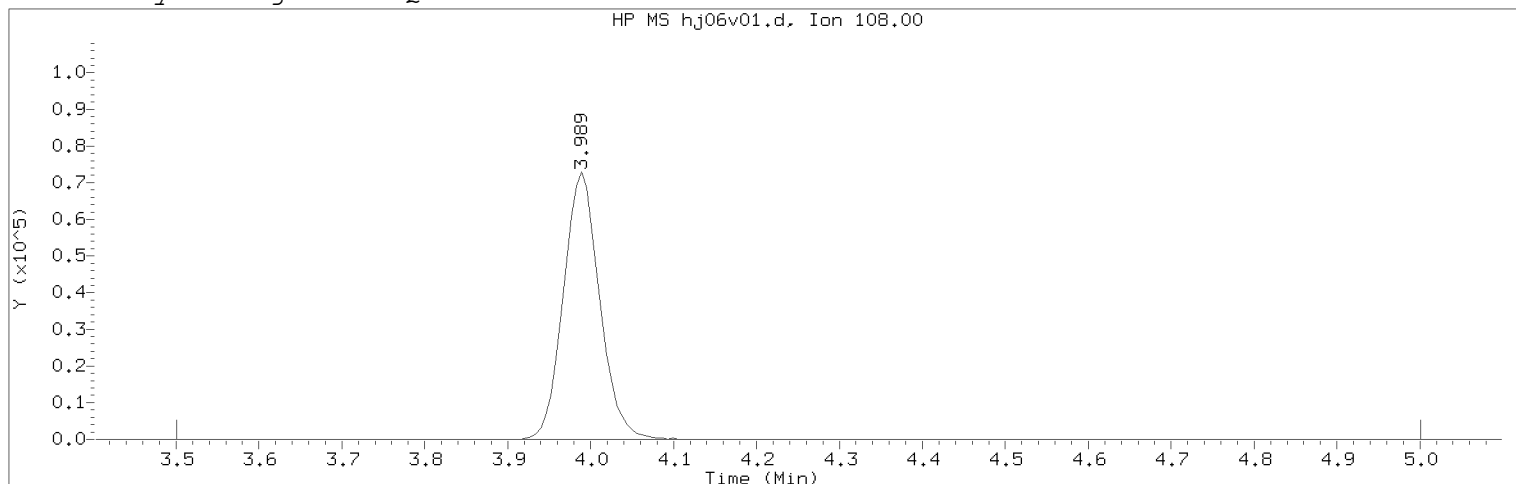
Integration stop scan: 398
 Y at integration end: 335

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 Target 3.5 esignature user RA664s Page 289 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

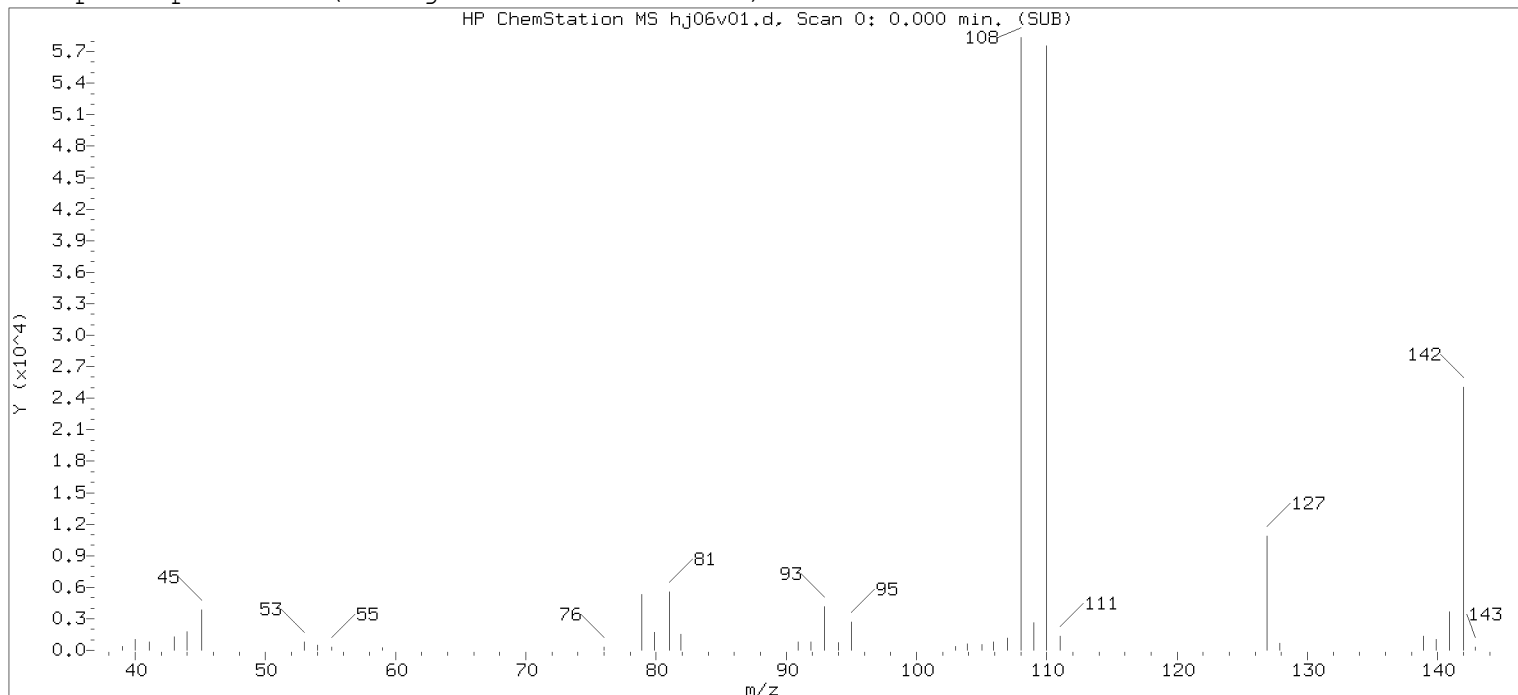
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 108.00
Area (flag) : 221120M
On-Column Amount (ng) : 5.3053
Integration start scan : 313 Integration stop scan: 559
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

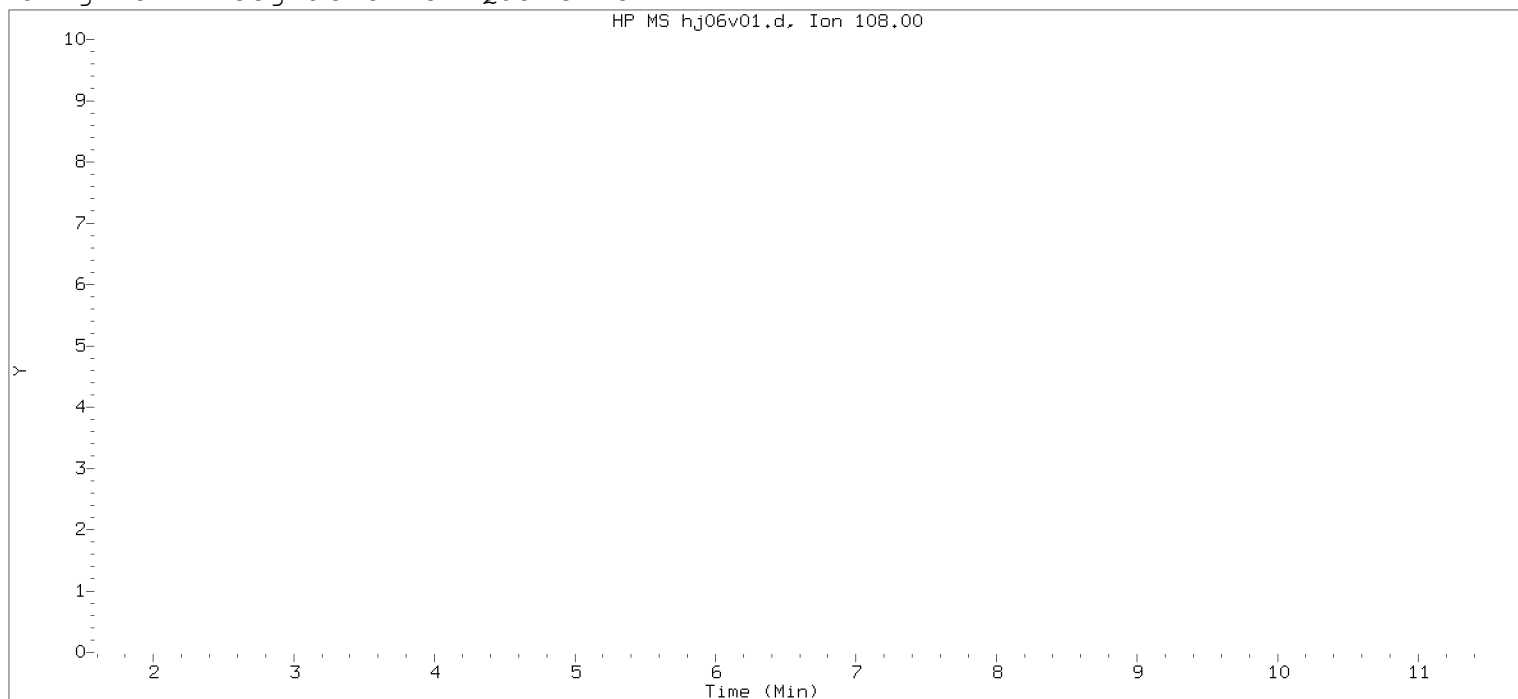
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

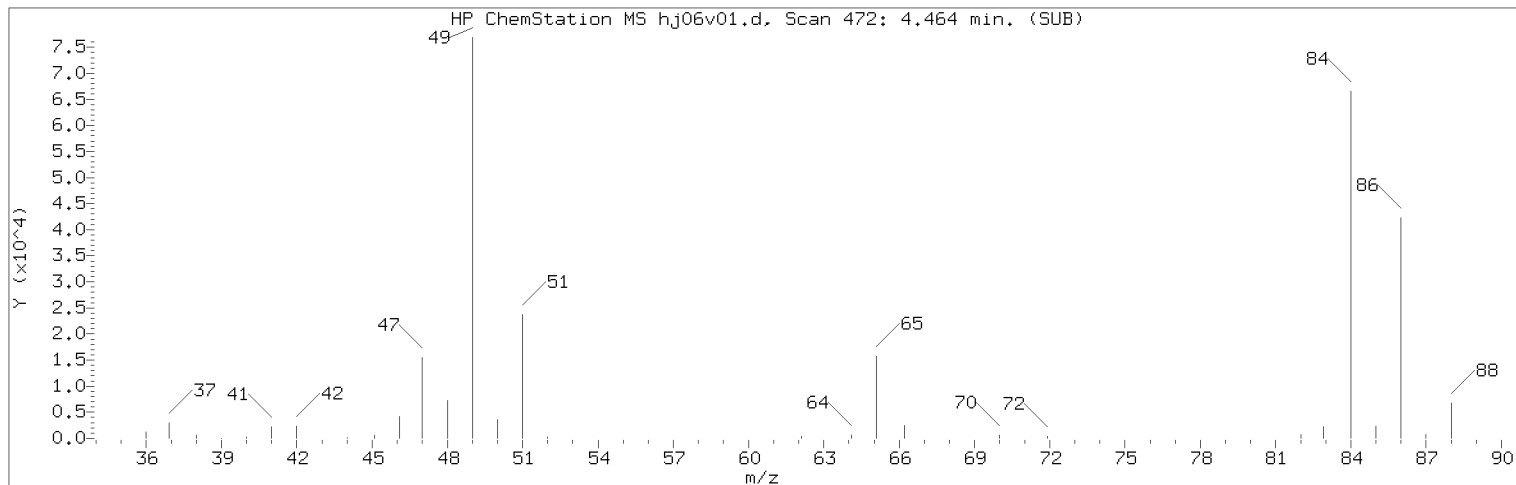
Sample Name: ICVH00

Lab Sample ID: ICVH00

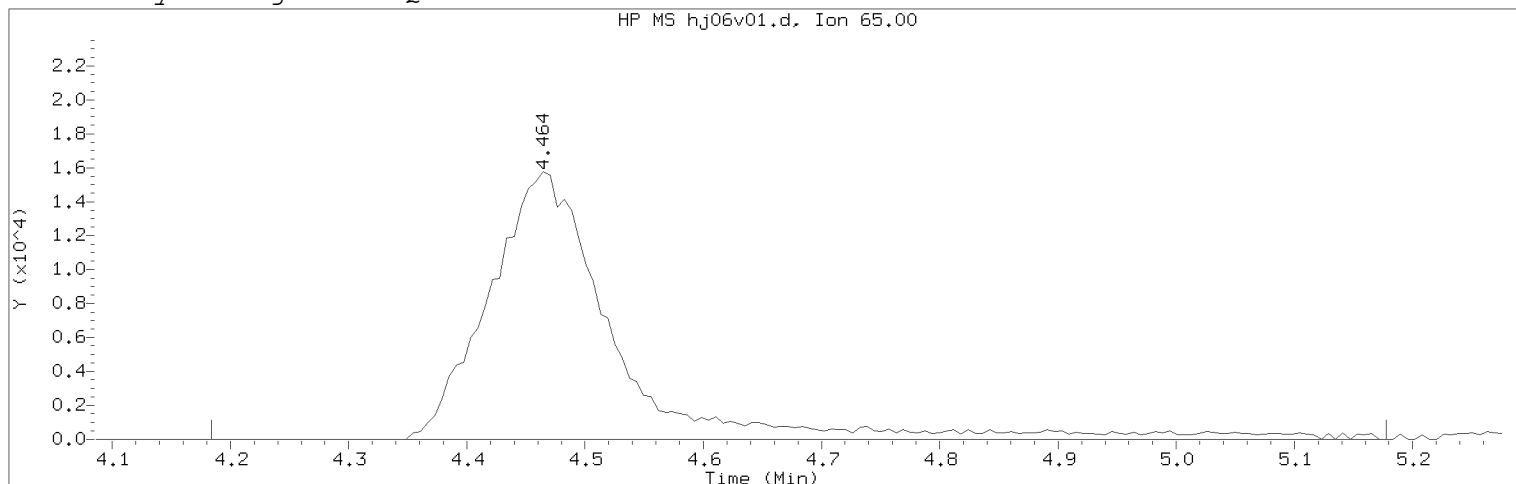
Compound Number : 18
Compound Name : Bromoethane
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 108.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 1112014848 Integration stop scan: 195124375
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA664s Page 291 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

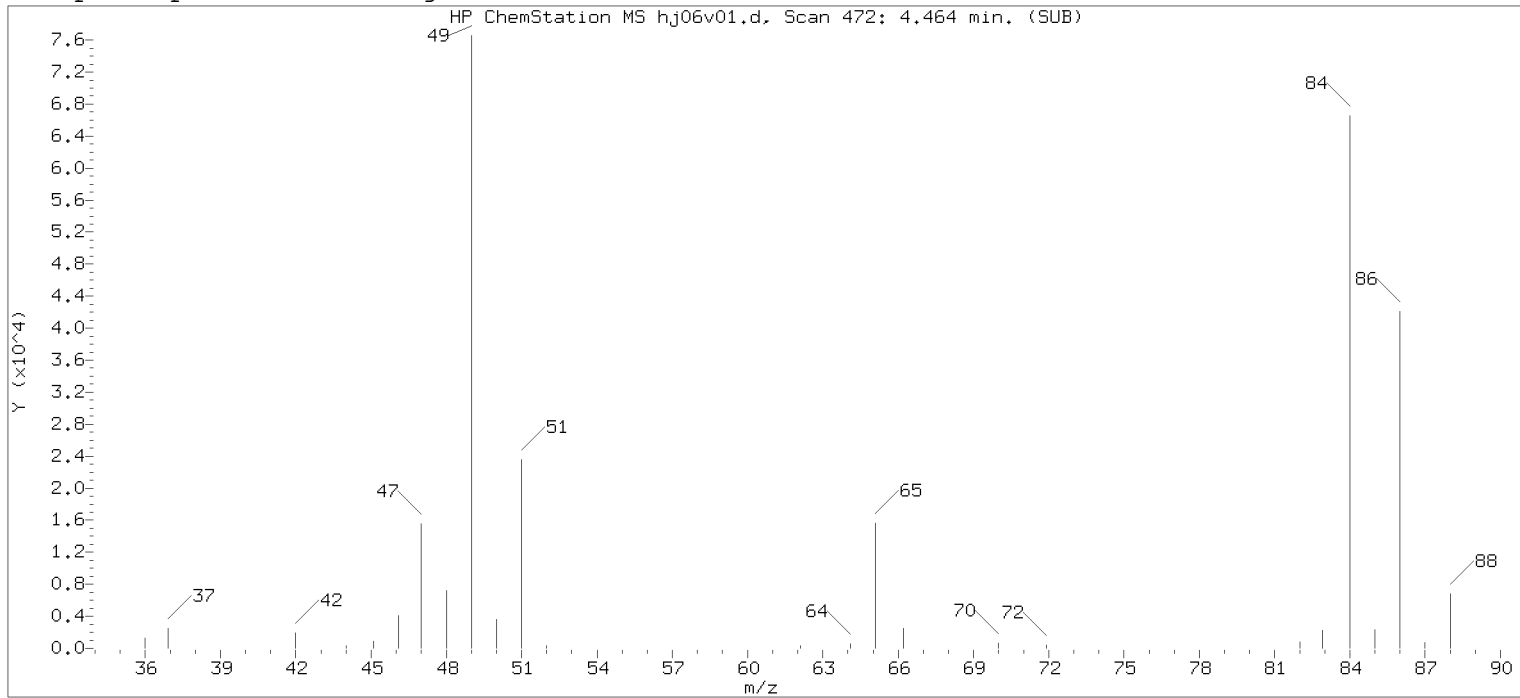
Compound Number : 27
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area (flag) : 116998M
On-Column Amount (ng) : 50.0000
Integration start scan : 425 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

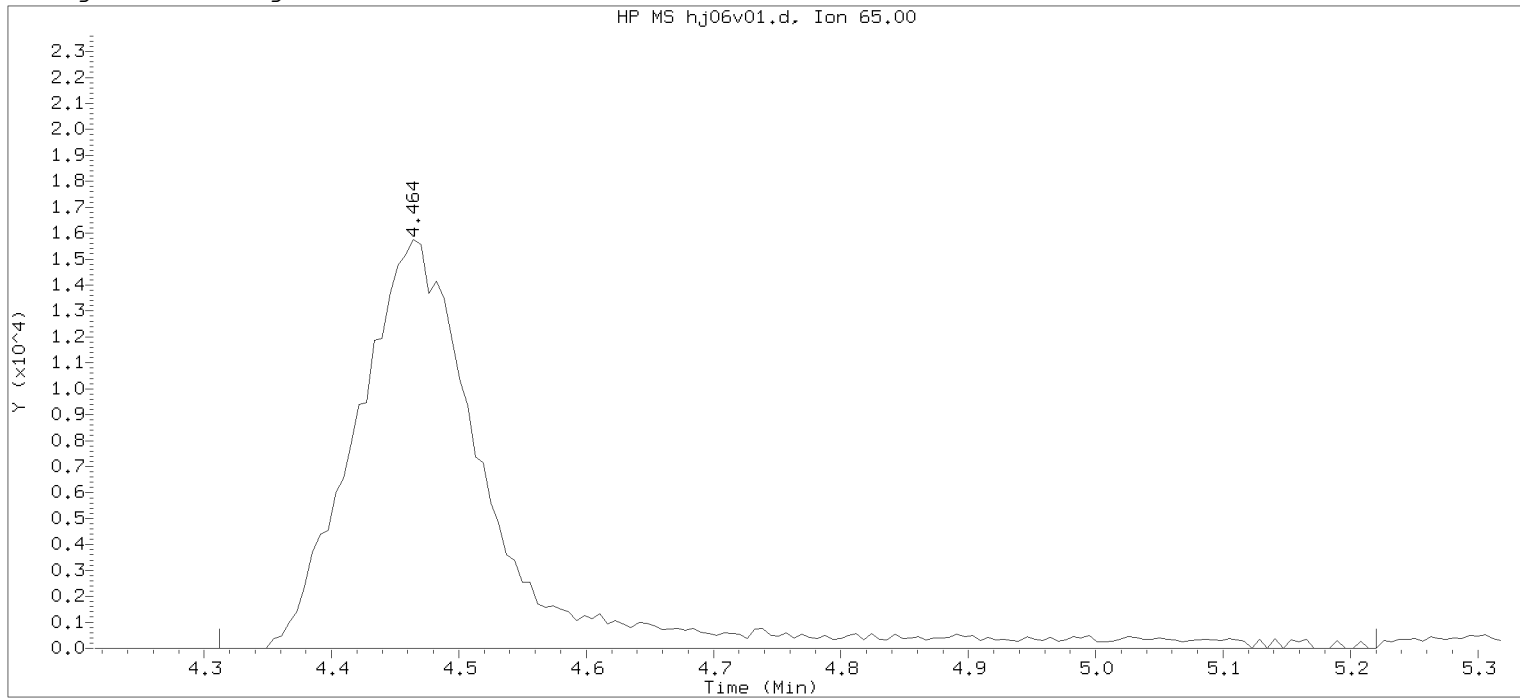
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

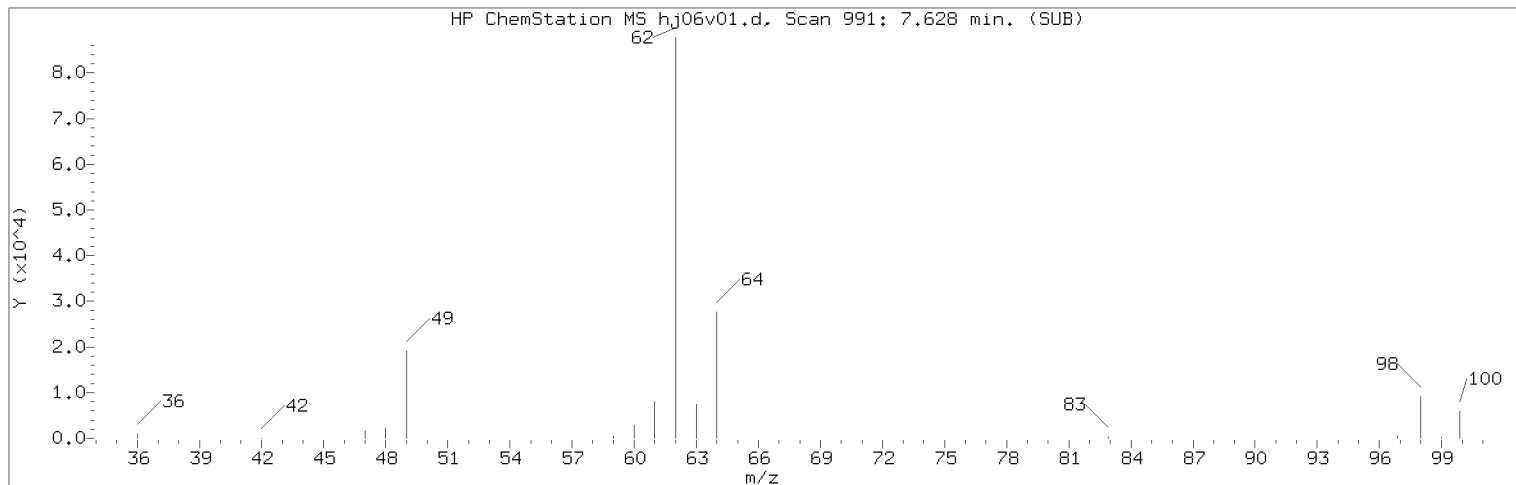
Sample Name: ICVH00

Lab Sample ID: ICVH00

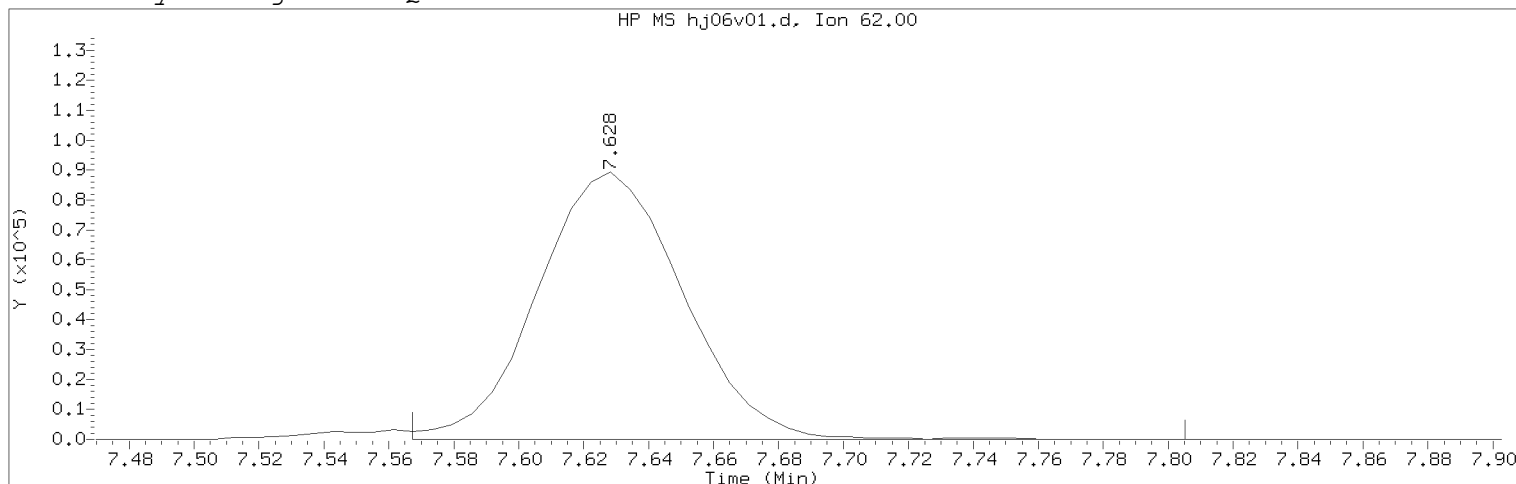
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 472	
Retention Time (minutes)	: 4.464	
Quant Ion	: 65.00	
Area	: 117211	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 595
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA64s Page 293 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

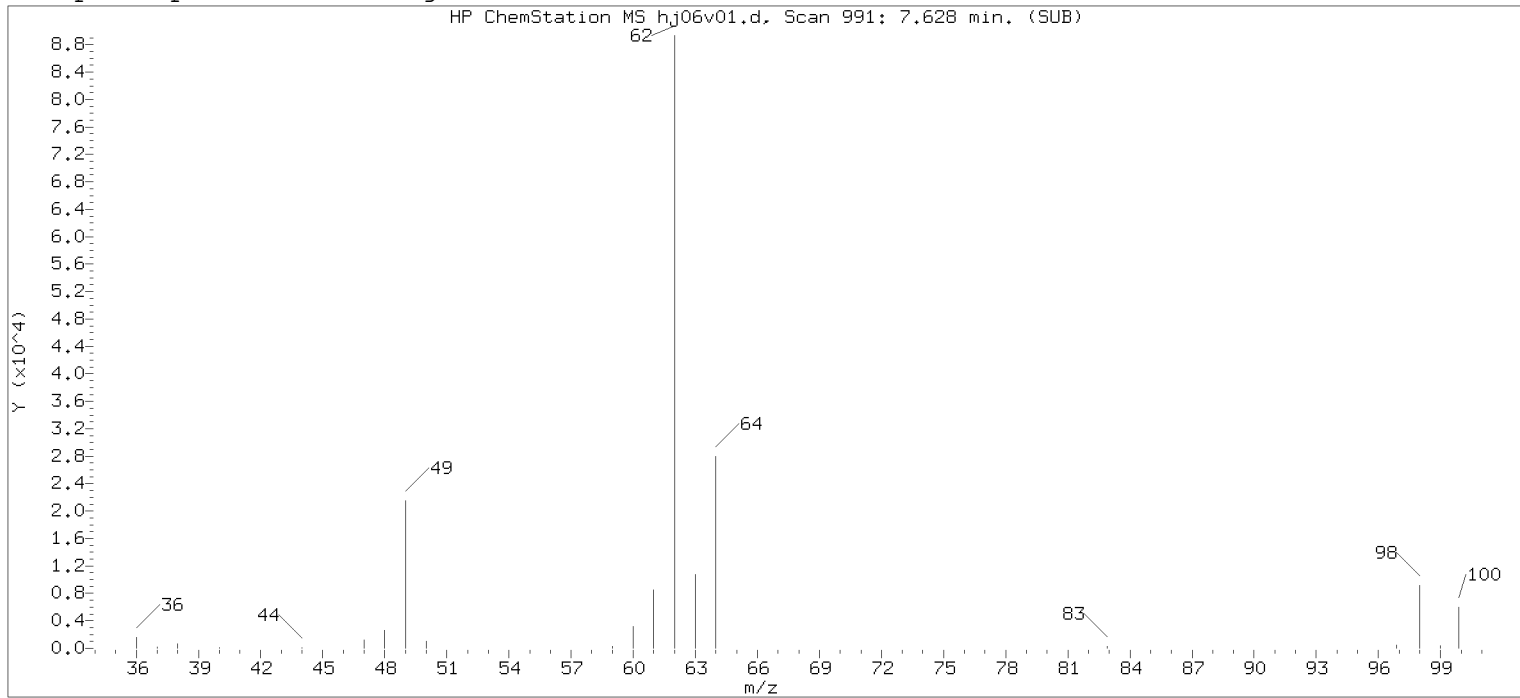
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area (flag)	: 277749M	
On-Column Amount (ng)	: 5.0652	
Integration start scan	: 980	Integration stop scan: 1019
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

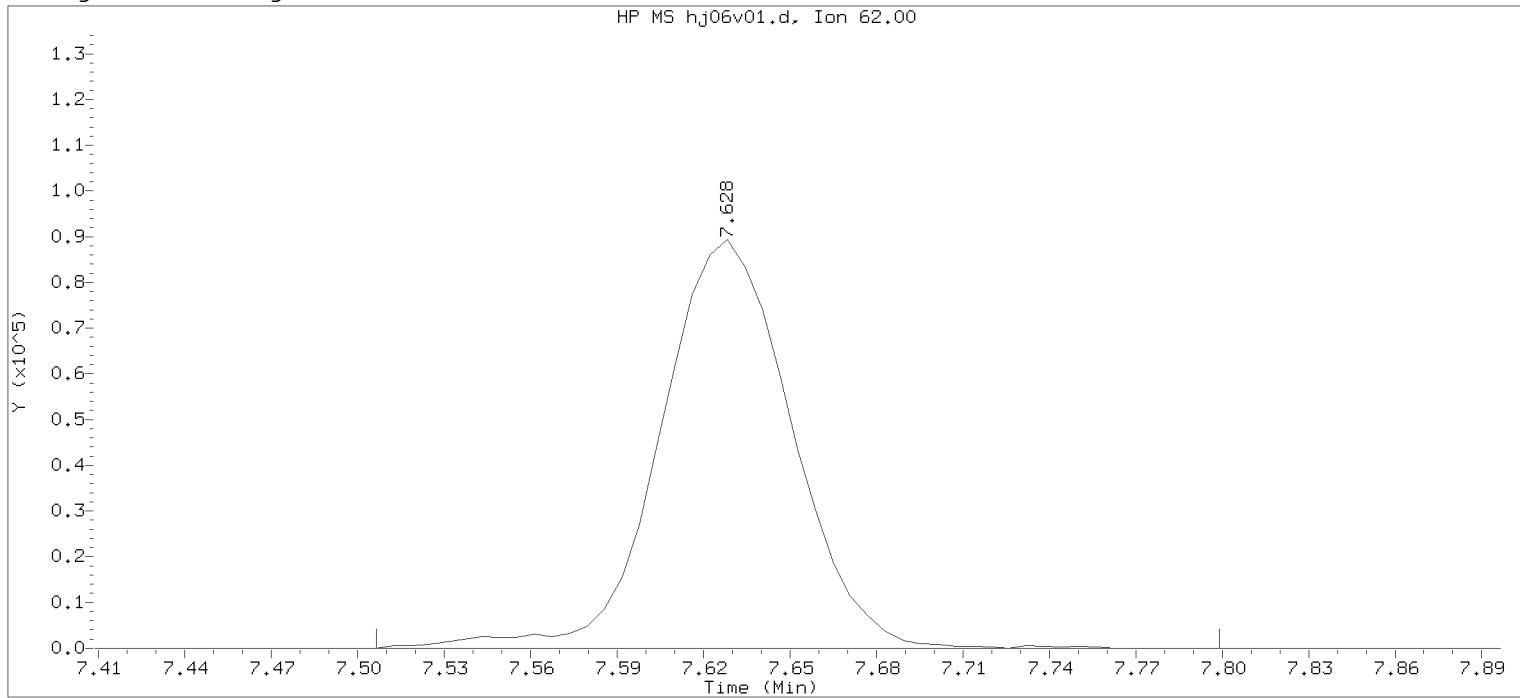
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

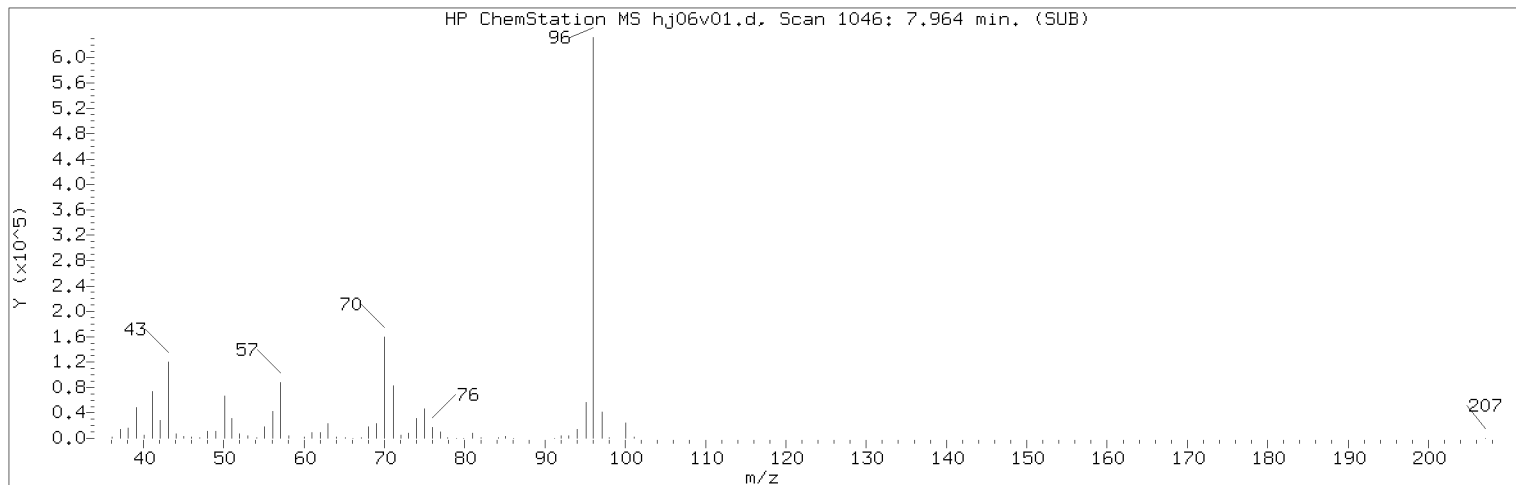
Sample Name: ICVH00

Lab Sample ID: ICVH00

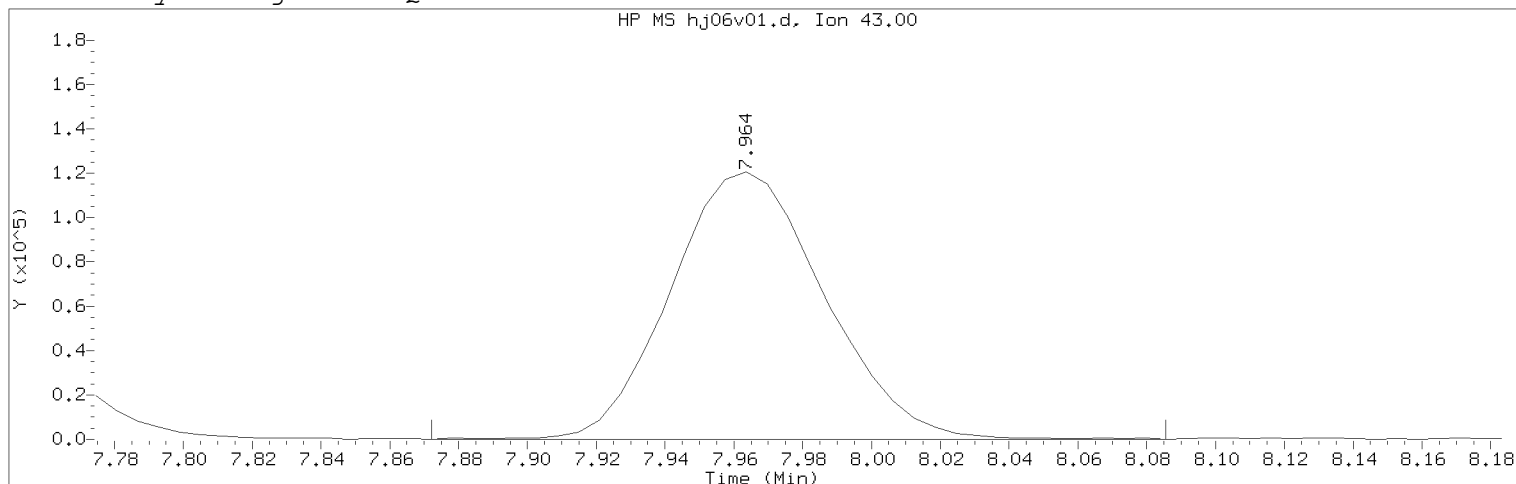
Compound Number	: 60	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 991	
Retention Time (minutes)	: 7.628	
Quant Ion	: 62.00	
Area	: 283519	
On-column Amount (ng)	: 5.1704	
Integration start scan	: 970	Integration stop scan: 1018
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA64s Page 295 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 15-JAN-2020 17:49
Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

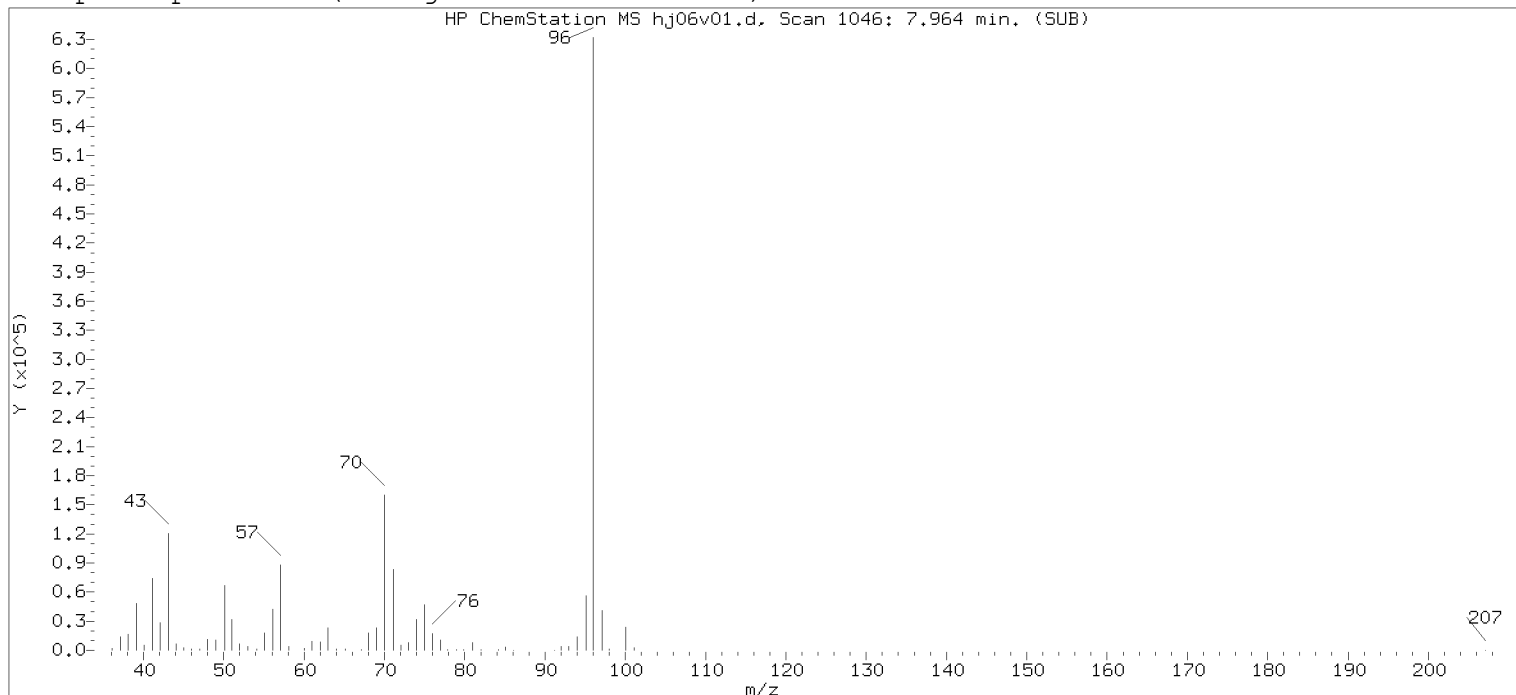
Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 374113M
On-Column Amount (ng) : 4.8147
Integration start scan : 1030 Integration stop scan: 1065
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

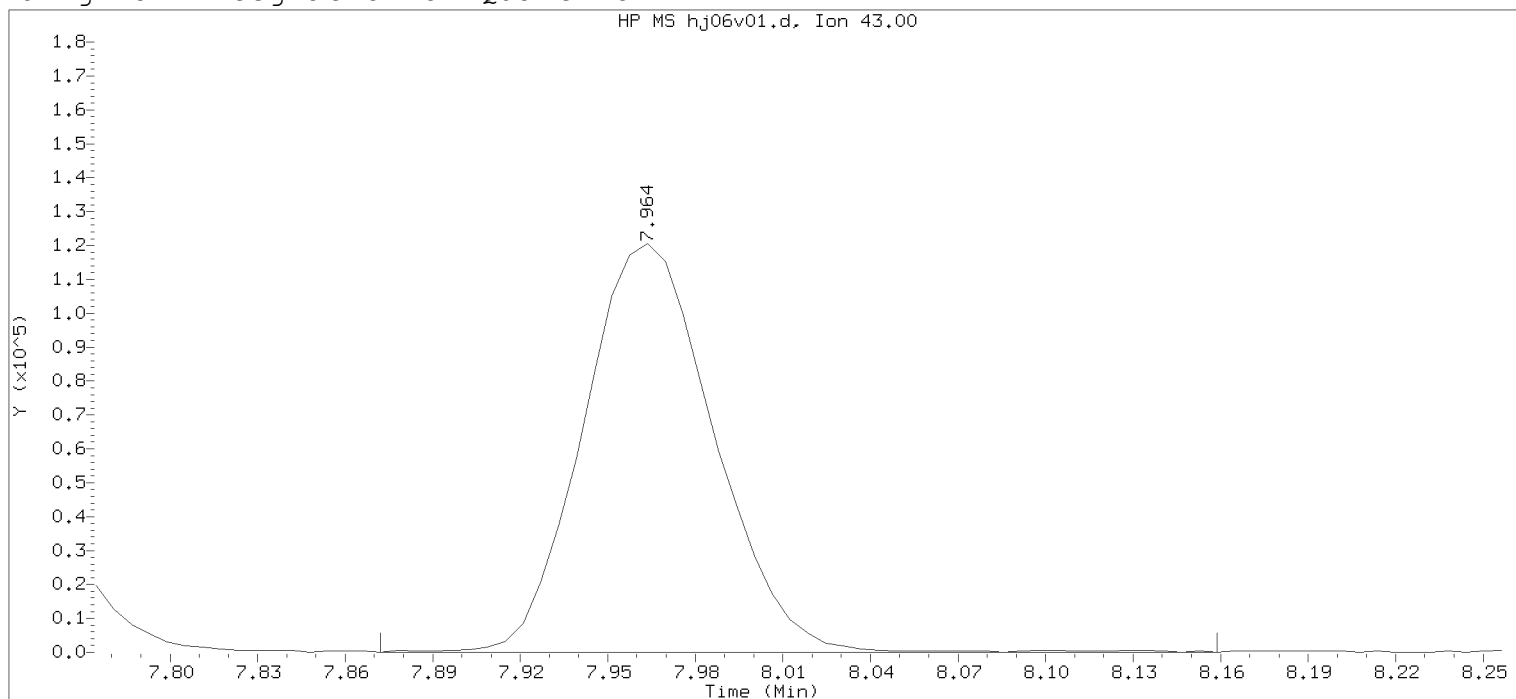
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

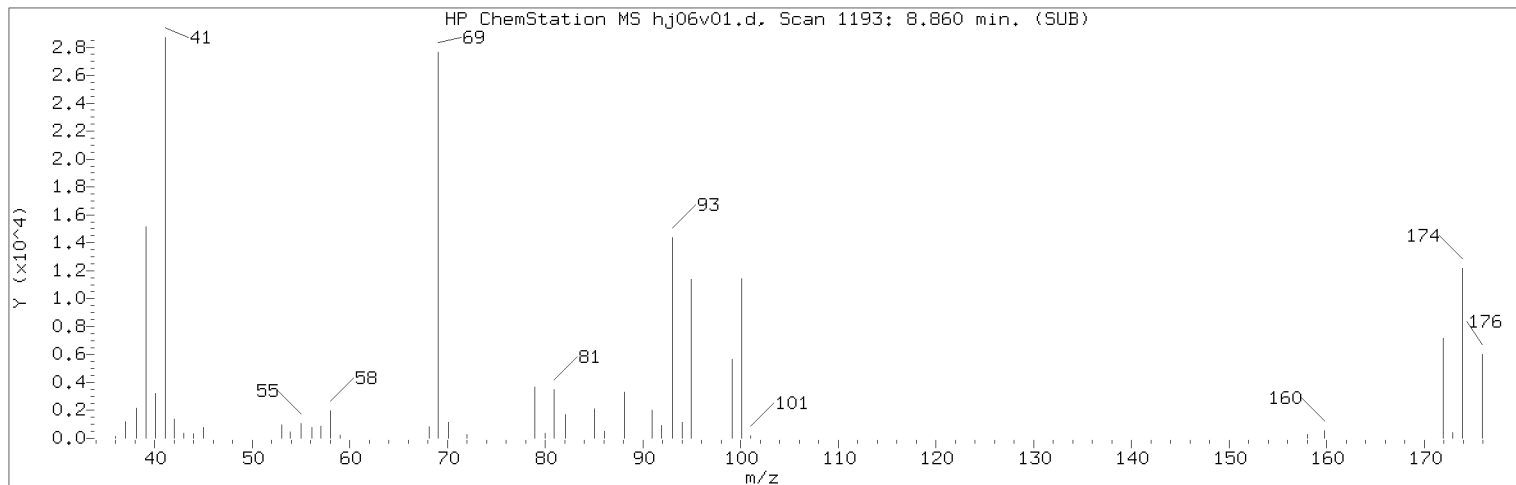
Sample Name: ICVH00

Lab Sample ID: ICVH00

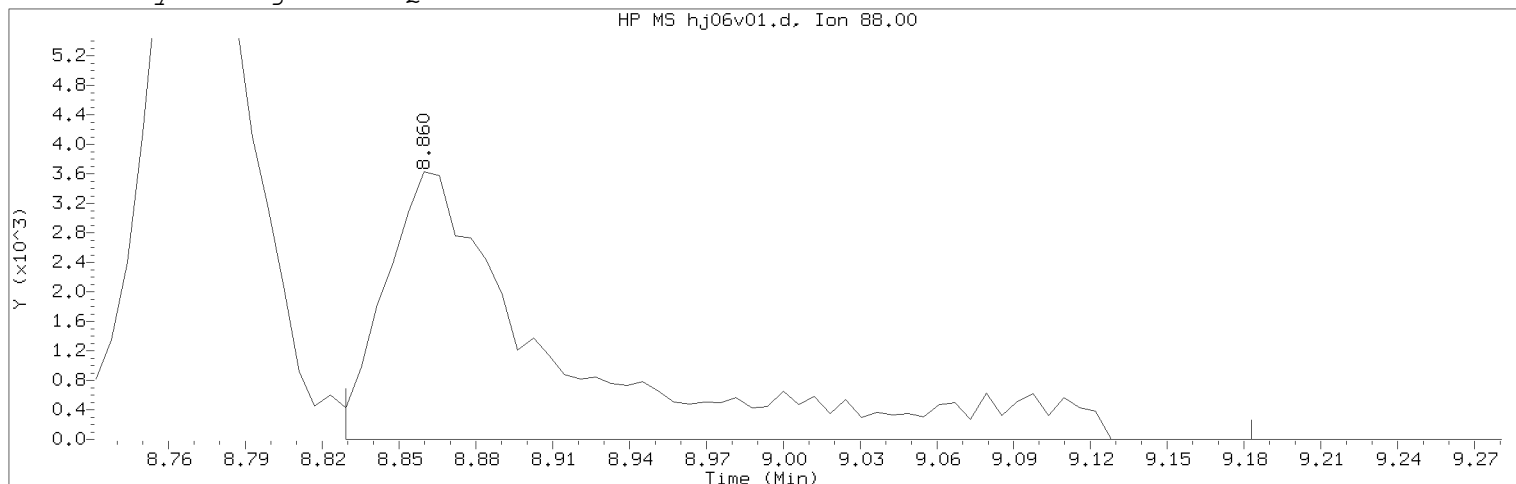
Compound Number : 63
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area : 375659
On-column Amount (ng) : 4.8345
Integration start scan : 1030 Integration stop scan: 1077
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA664s Page 297 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

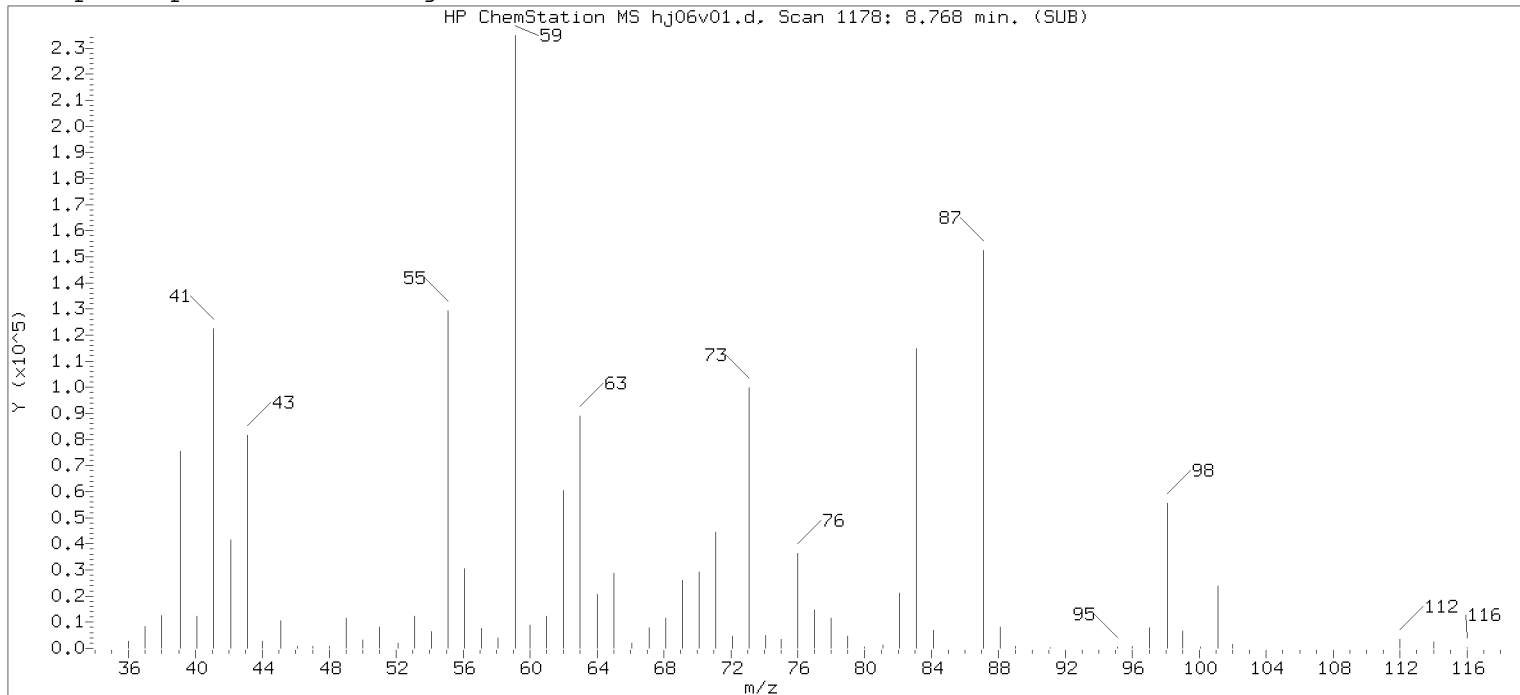
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 17432M	
On-Column Amount (ng)	: 104.8820	
Integration start scan	: 1187	Integration stop scan: 1245
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

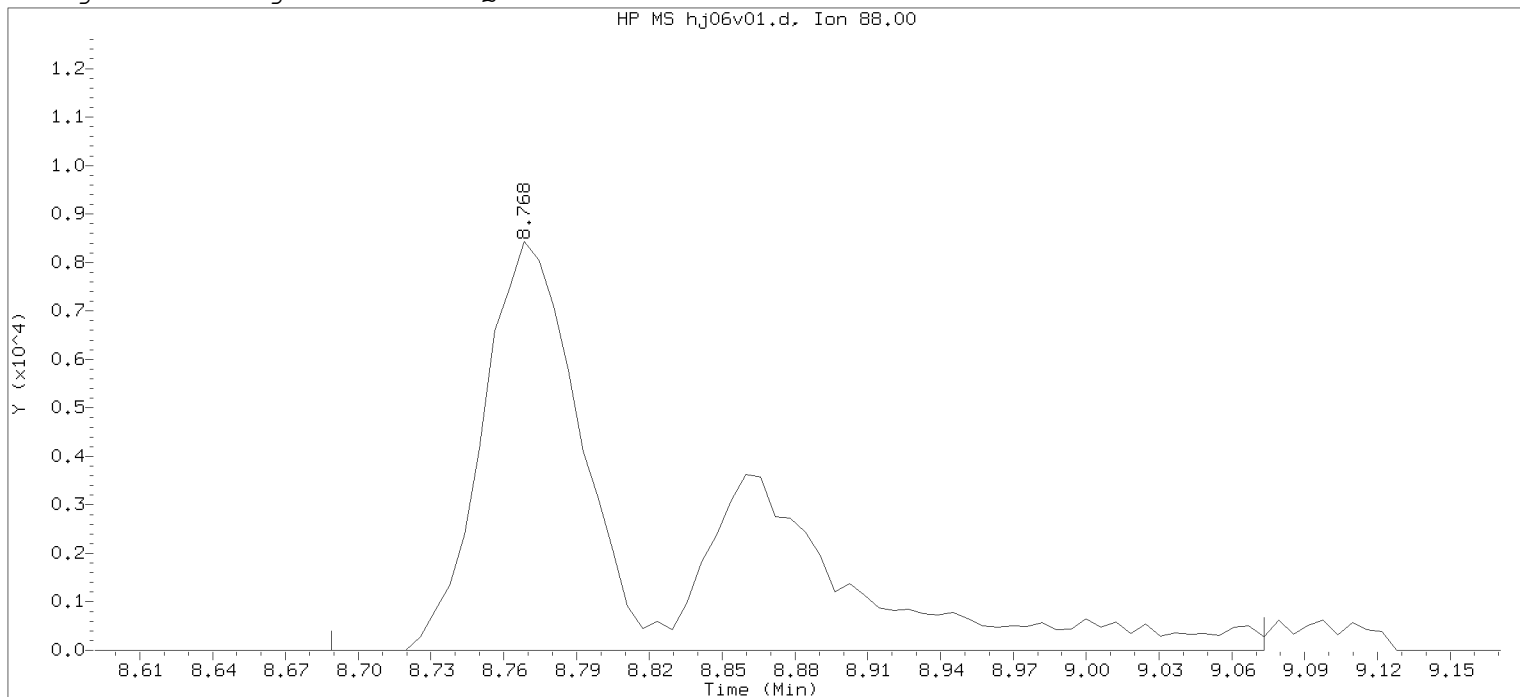
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

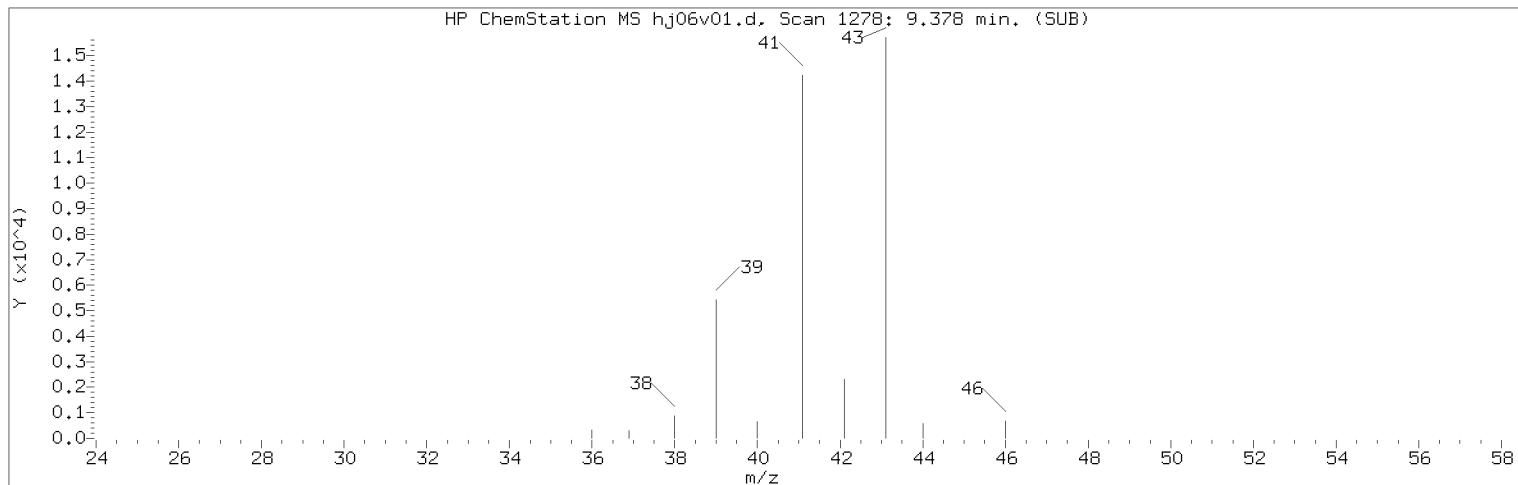
Sample Name: ICVH00

Lab Sample ID: ICVH00

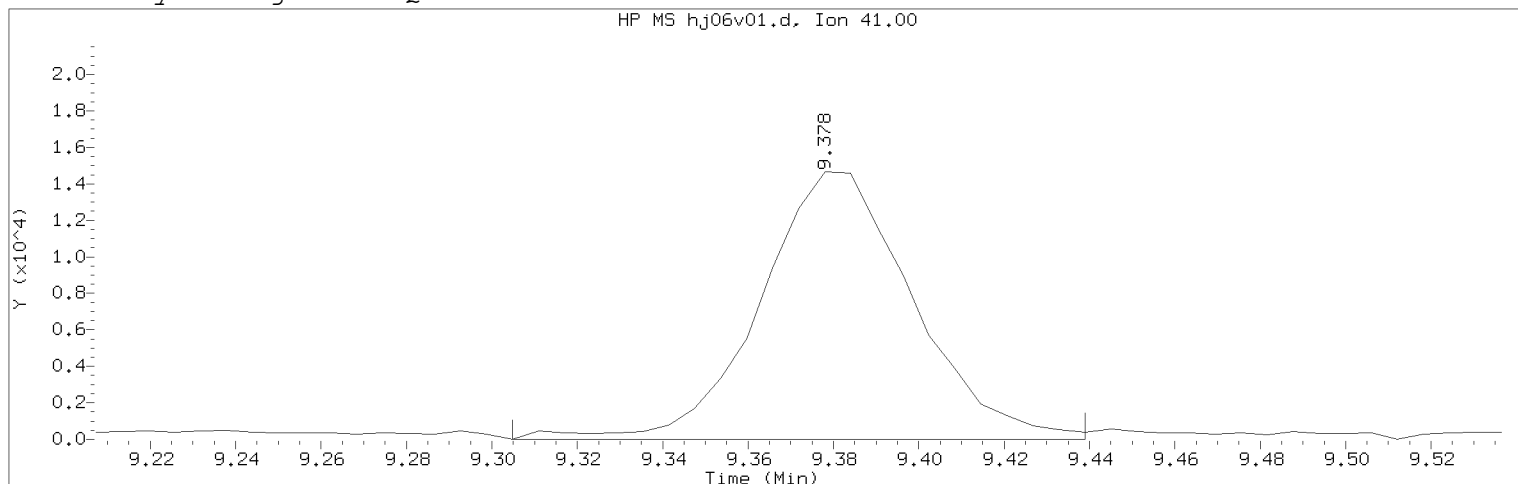
Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1178	
Retention Time (minutes)	: 8.768	
Quant Ion	: 88.00	
Area	: 39311	
On-column Amount (ng)	: 240.1787	
Integration start scan	: 1164	Integration stop scan: 1227
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA664s Page 299 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area (flag)	: 36462M	
On-Column Amount (ng)	: 5.0674	
Integration start scan	: 1265	Integration stop scan: 1287
Y at integration start	: 0	Y at integration end: 0

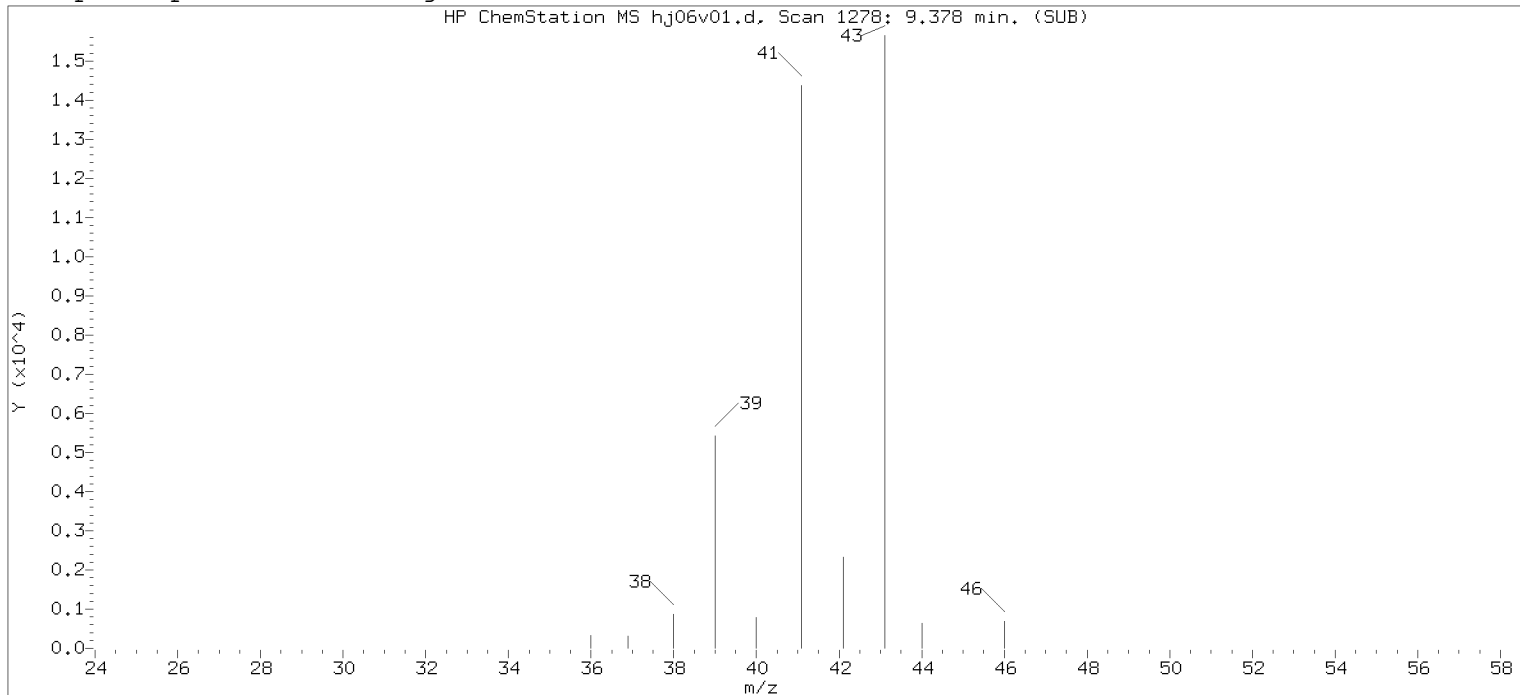
Reason for manual integration: improper integration

Analyst responsible for change:

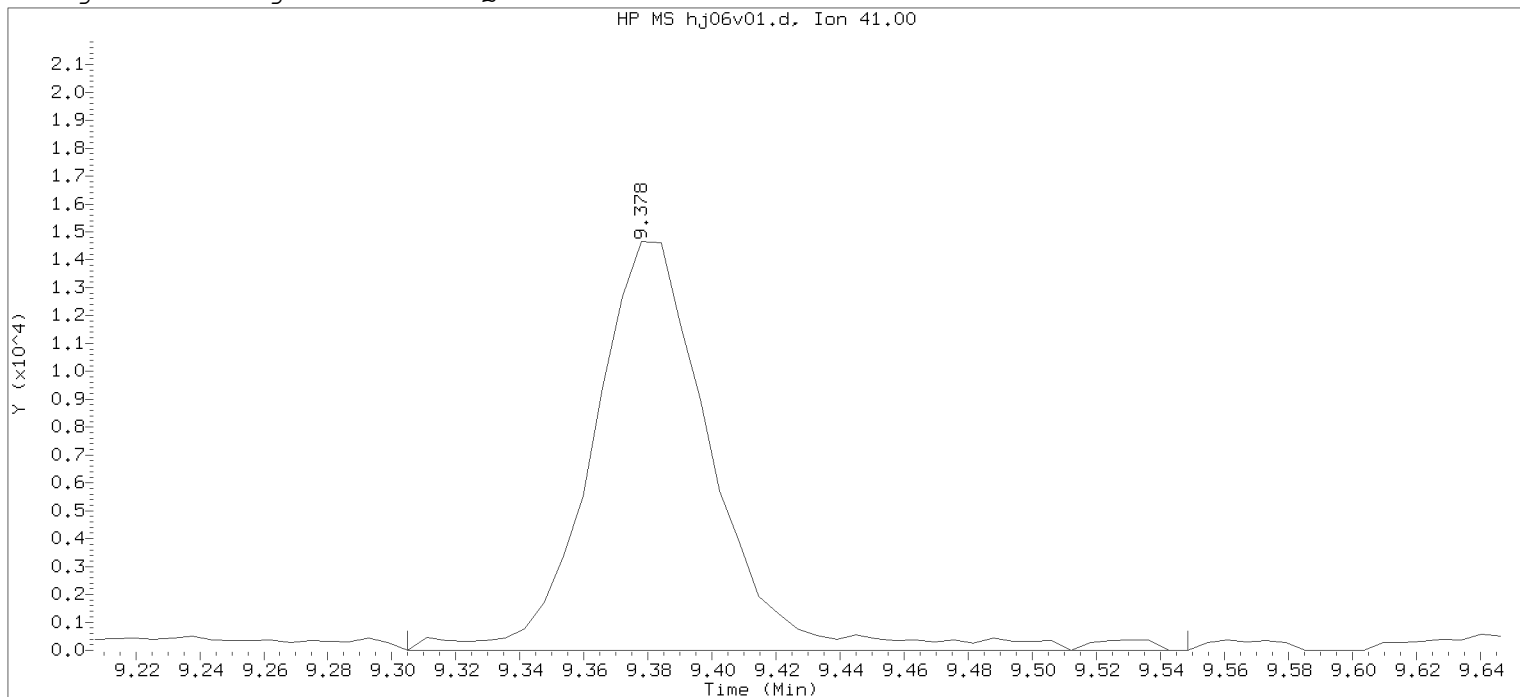
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 07-JAN-2020 13:50

Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

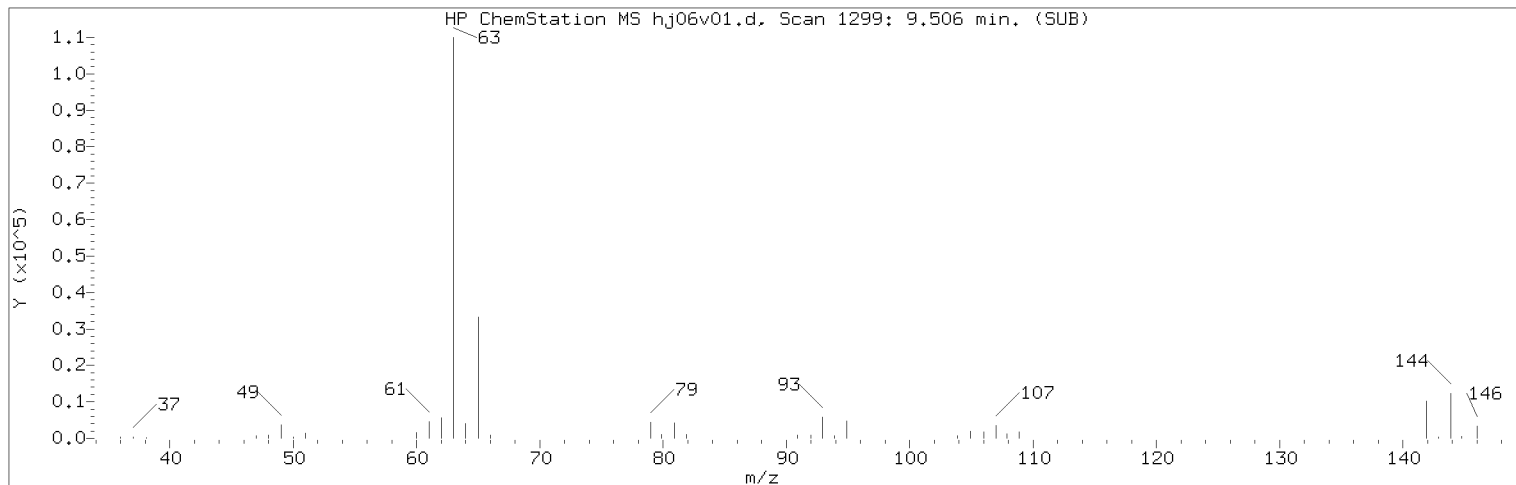
Sample Name: ICVH00

Lab Sample ID: ICVH00

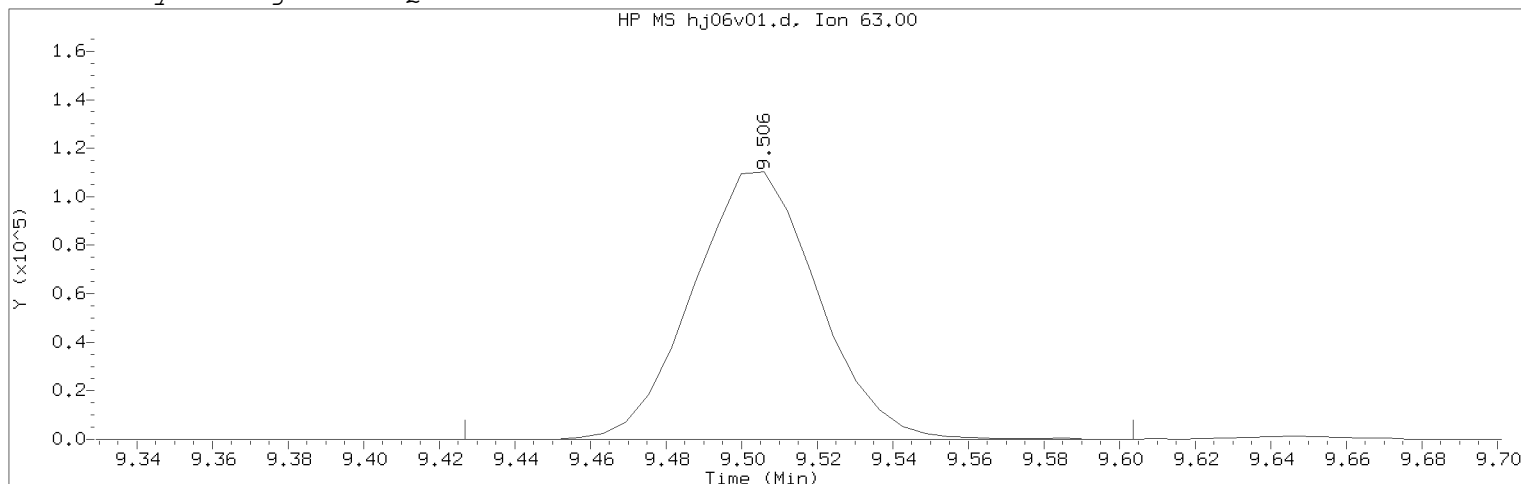
Compound Number	: 77	
Compound Name	: 2-Nitropropane	
Scan Number	: 1278	
Retention Time (minutes)	: 9.378	
Quant Ion	: 41.00	
Area	: 38430	
On-column Amount (ng)	: 5.4180	
Integration start scan	: 1265	Integration stop scan: 1305
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA664s Page 301 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1299	
Retention Time (minutes)	: 9.506	
Quant Ion	: 63.00	
Area (flag)	: 253199M	
On-Column Amount (ng)	: 5.1192	
Integration start scan	: 1285	Integration stop scan: 1314
Y at integration start	: 0	Y at integration end: 0

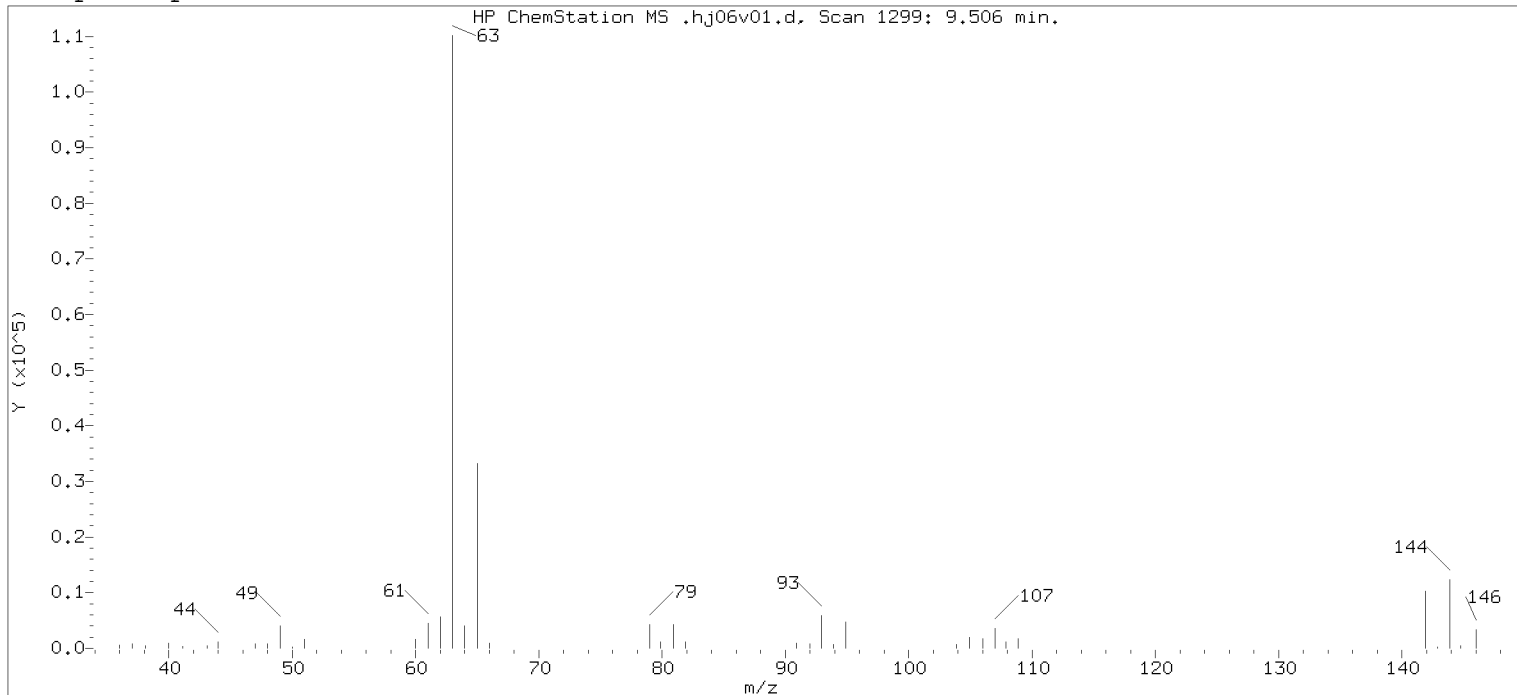
Reason for manual integration: missed peak

Analyst responsible for change:

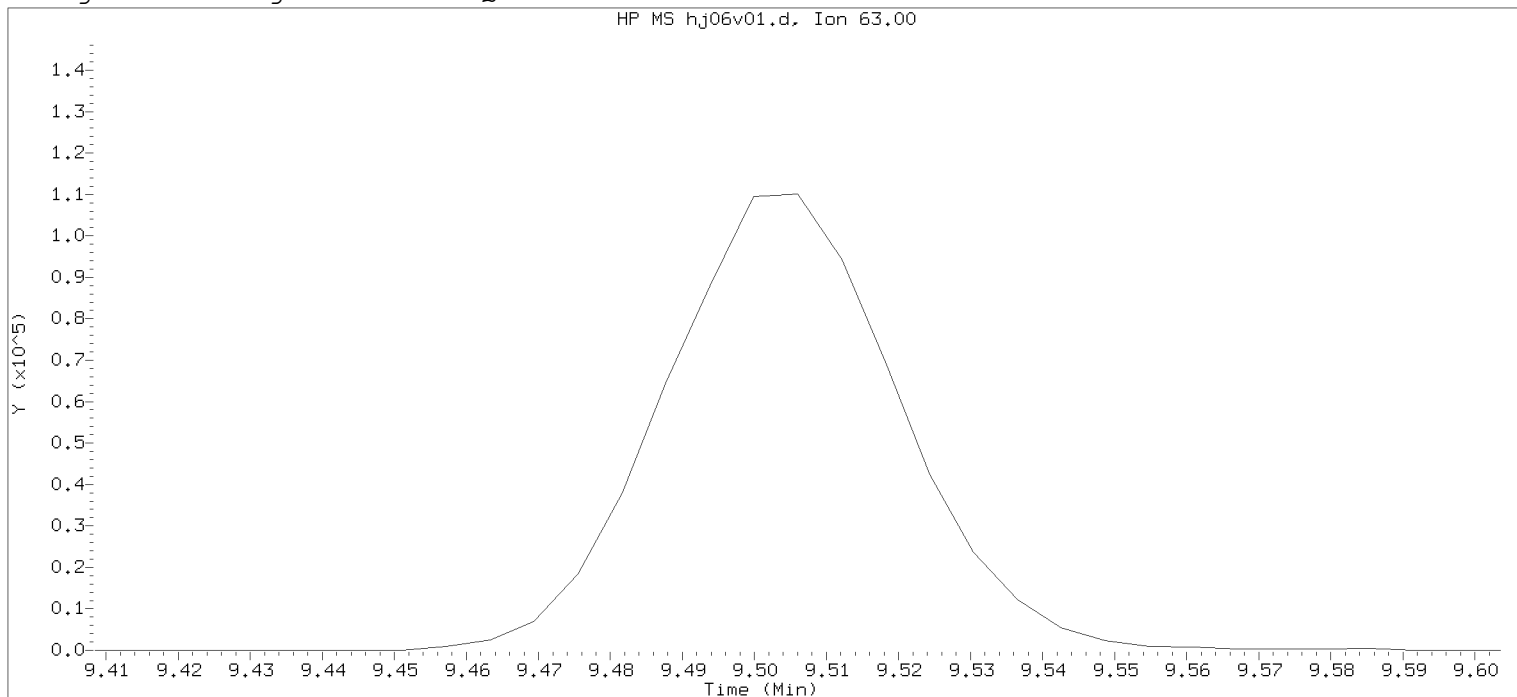
Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

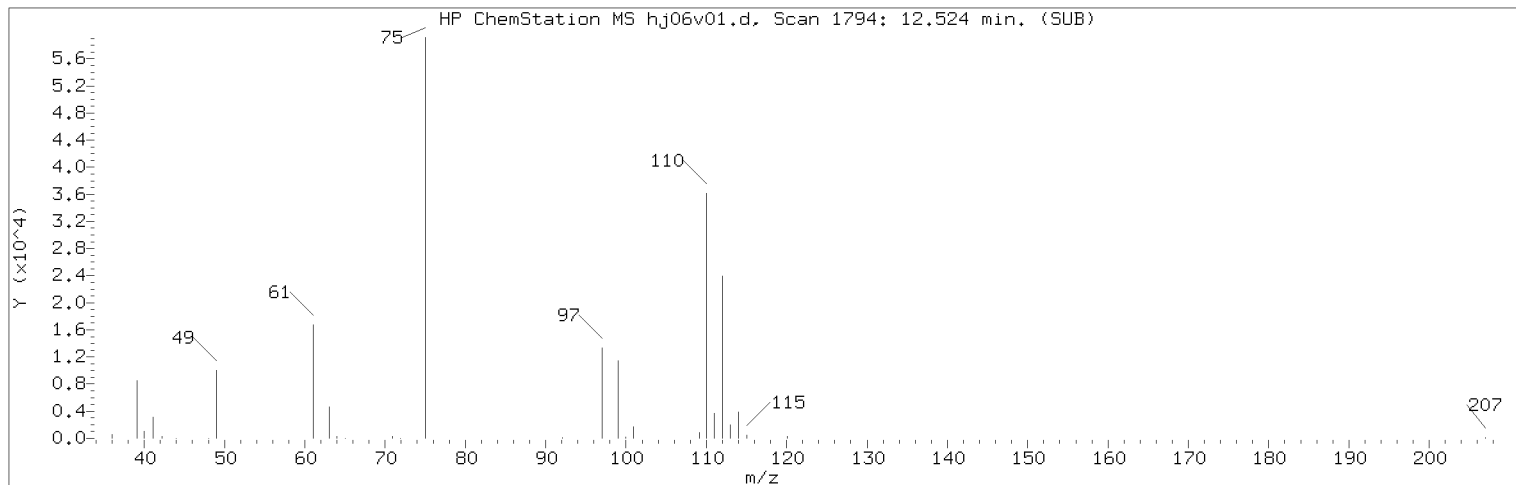
Sample Name: ICVH00

Lab Sample ID: ICVH00

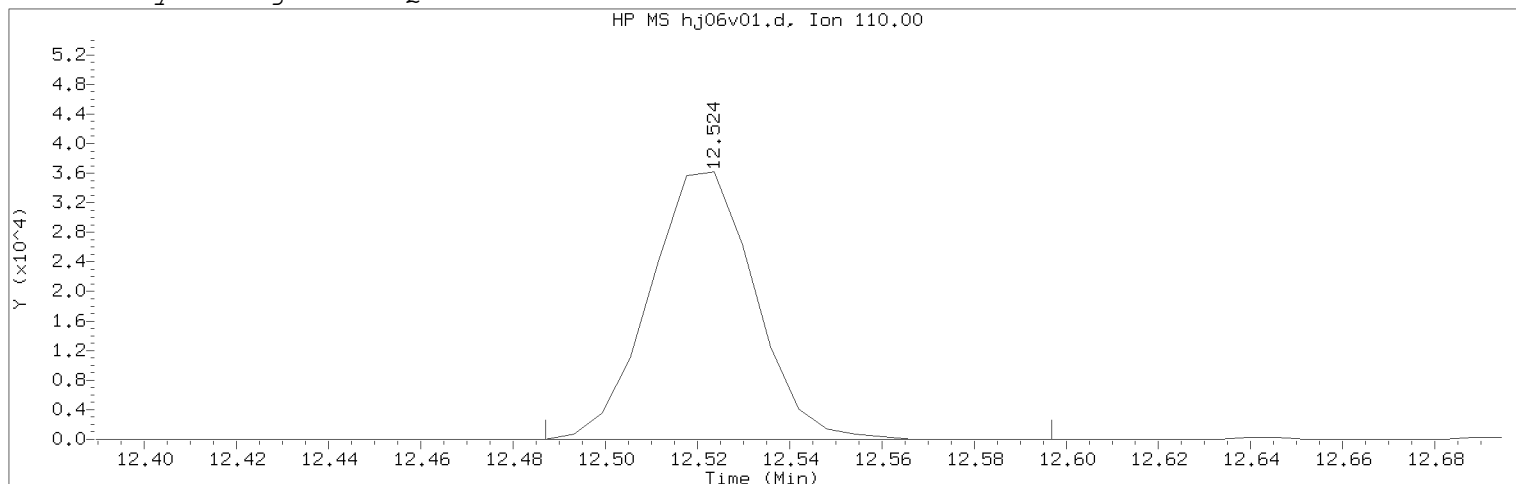
Compound Number : 80
Compound Name : 1-Bromo-2-chloroethane
Expected RT (minutes) : 9.506
Quant Ion : 63.00

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 17:06

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 15-JAN-2020 17:49

Date, time and analyst ID of latest file update: 15-Jan-2020 17:52 sej02002

Sample Name: ICVH00

Lab Sample ID: ICVH00

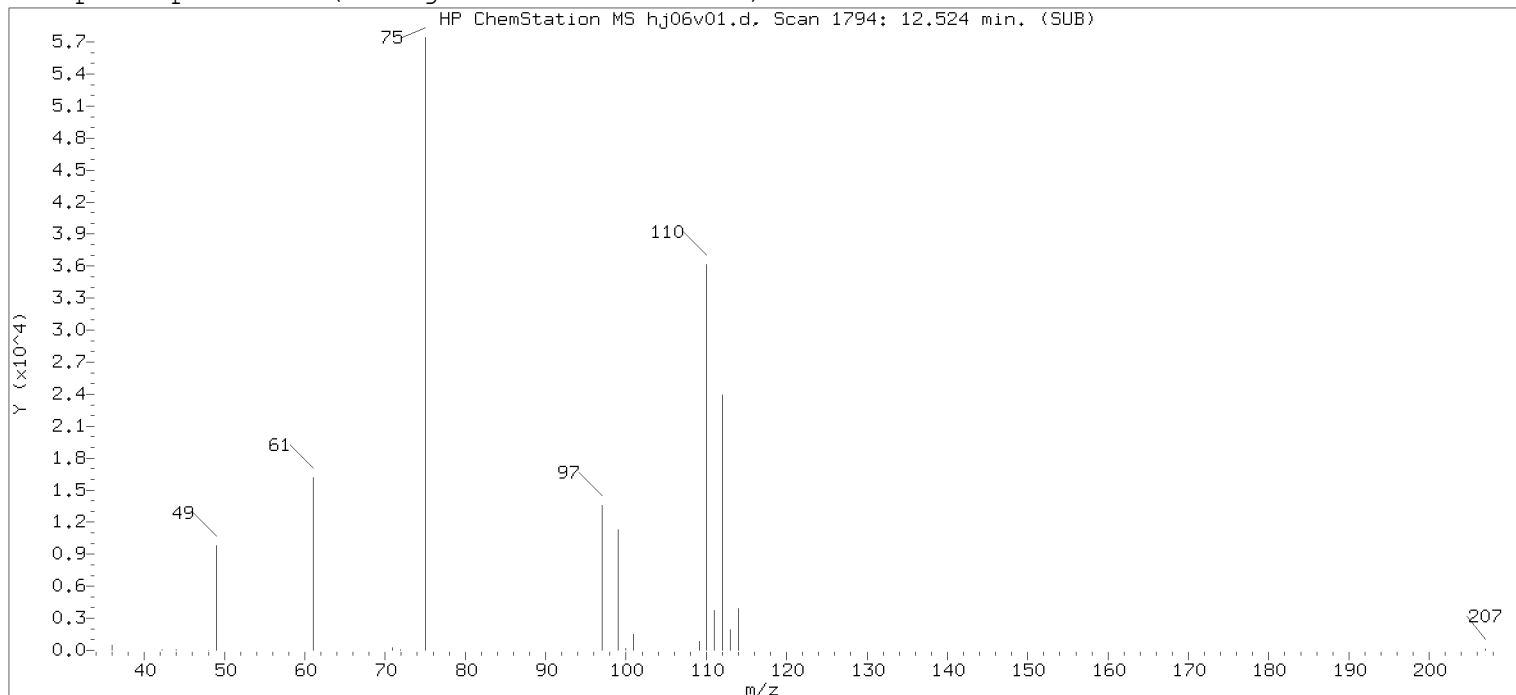
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1794	
Retention Time (minutes)	: 12.524	
Quant Ion	: 110.00	
Area (flag)	: 57312M	
On-Column Amount (ng)	: 5.3333	
Integration start scan	: 1787	Integration stop scan: 1805
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

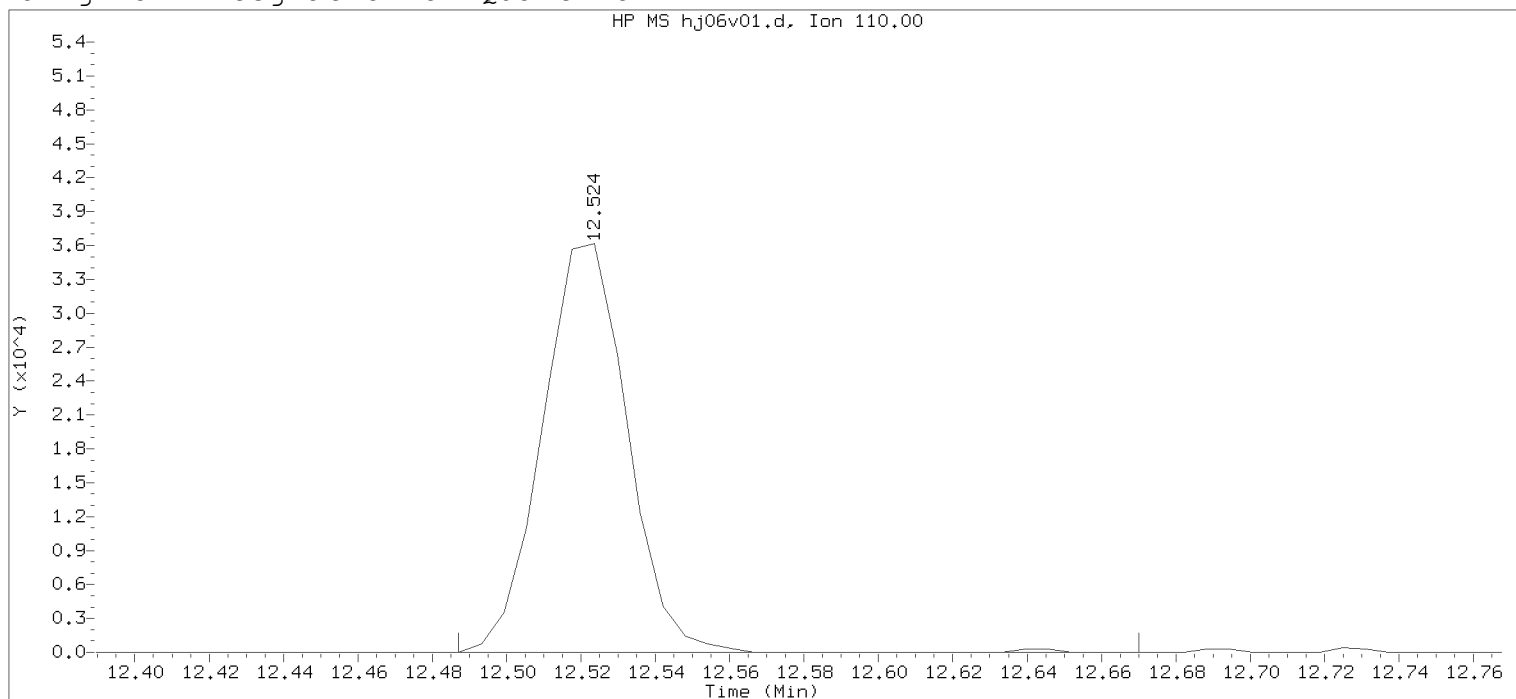
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 01/15/2020 at 17:52.
Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 01/15/2020 at 19:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v01.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 17:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 07-JAN-2020 13:50
Date, time and analyst ID of latest file update: 07-Jan-2020 13:50 jkh09052

Sample Name: ICVH00

Lab Sample ID: ICVH00

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1794	
Retention Time (minutes)	: 12.524	
Quant Ion	: 110.00	
Area	: 57524	
On-column Amount (ng)	: 5.3530	
Integration start scan	: 1787	Integration stop scan: 1817
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 01/15/2020 at 17:52.
Target 3.5 esignature user RA664s Page 305 of 448

Page 1

Client ID: 50NG BFB

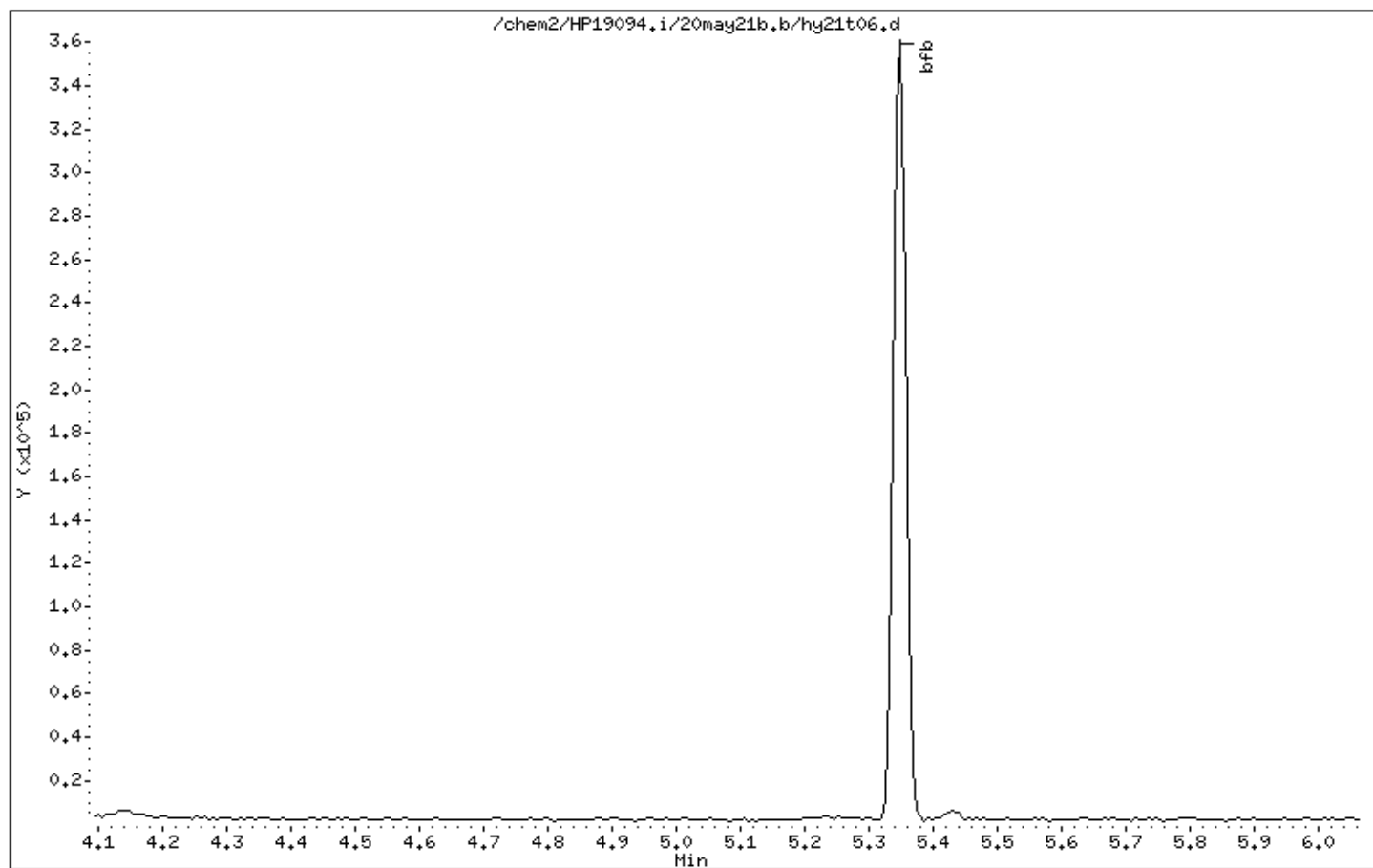
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB JAN 28 2020 ;1;3;+;+;

Operator: mec29284

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Date : 21-MAY-2020 19:47

Client ID: 50NG BFB

Instrument: HP19094.i

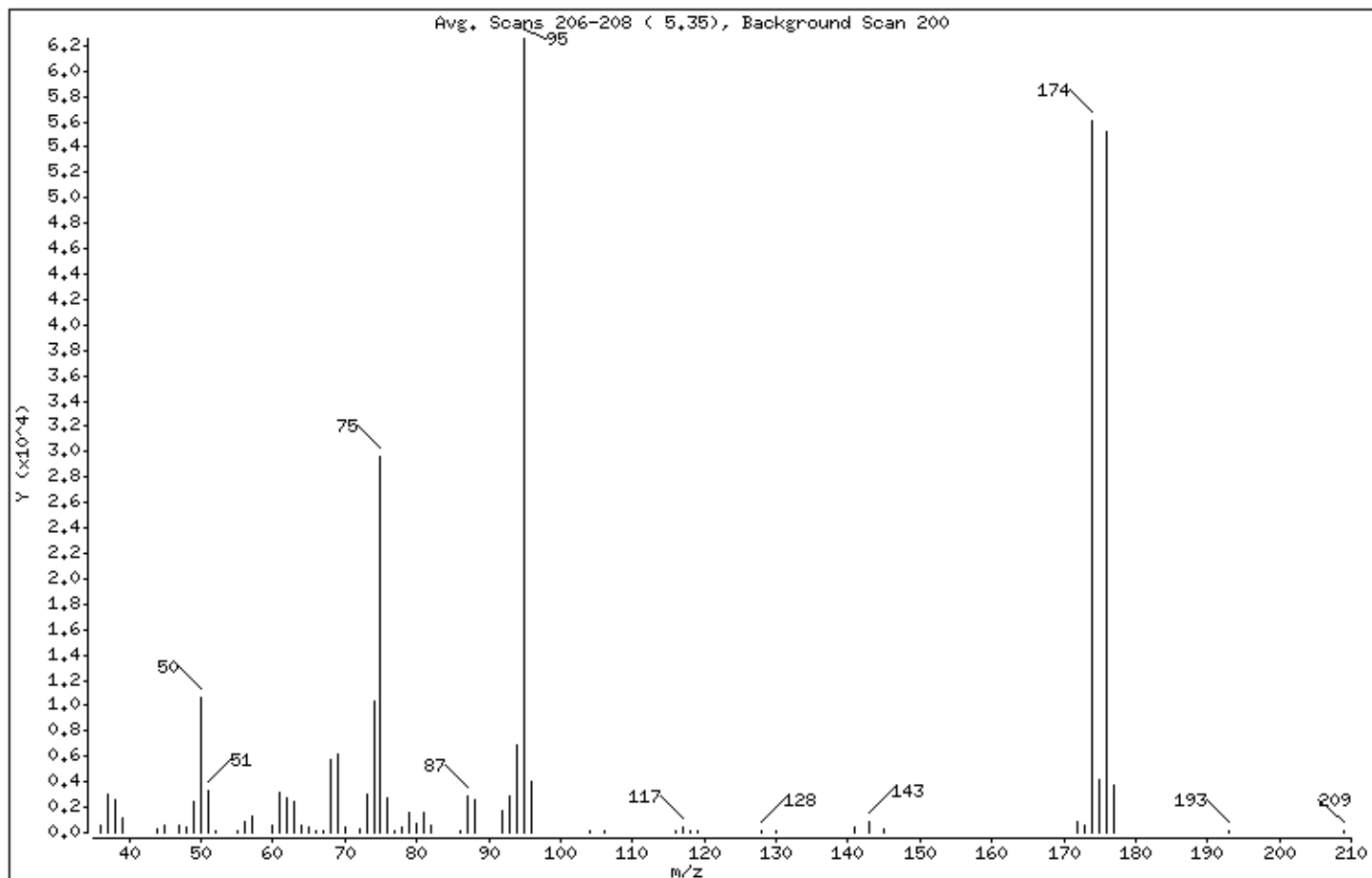
Sample Info: 50NG BFB;BFB JAN 28 2020 ;1;3; ; ; ; ;

Operator: mec29284

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.90
75	30.00 - 60.00% of mass 95	47.37
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.89 (0.99)
174	50.00 - 100.00% of mass 95	89.75
175	5.00 - 9.00% of mass 174	6.66 (7.42)
176	95.00 - 101.00% of mass 174	88.31 (98.40)
177	5.00 - 9.00% of mass 176	5.88 (6.65)

Date : 21-MAY-2020 19:47

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB JAN 28 2020 ;1;3;3;3;3

Operator: mec29284

Column phase: Rxi-624Sil MS

Column diameter: 0,25

Data File: hy21t06.d

Spectrum: Avg. Scans 206-208 (5,35), Background Scan 200

Location of Maximum: 95,00

Number of points: 64

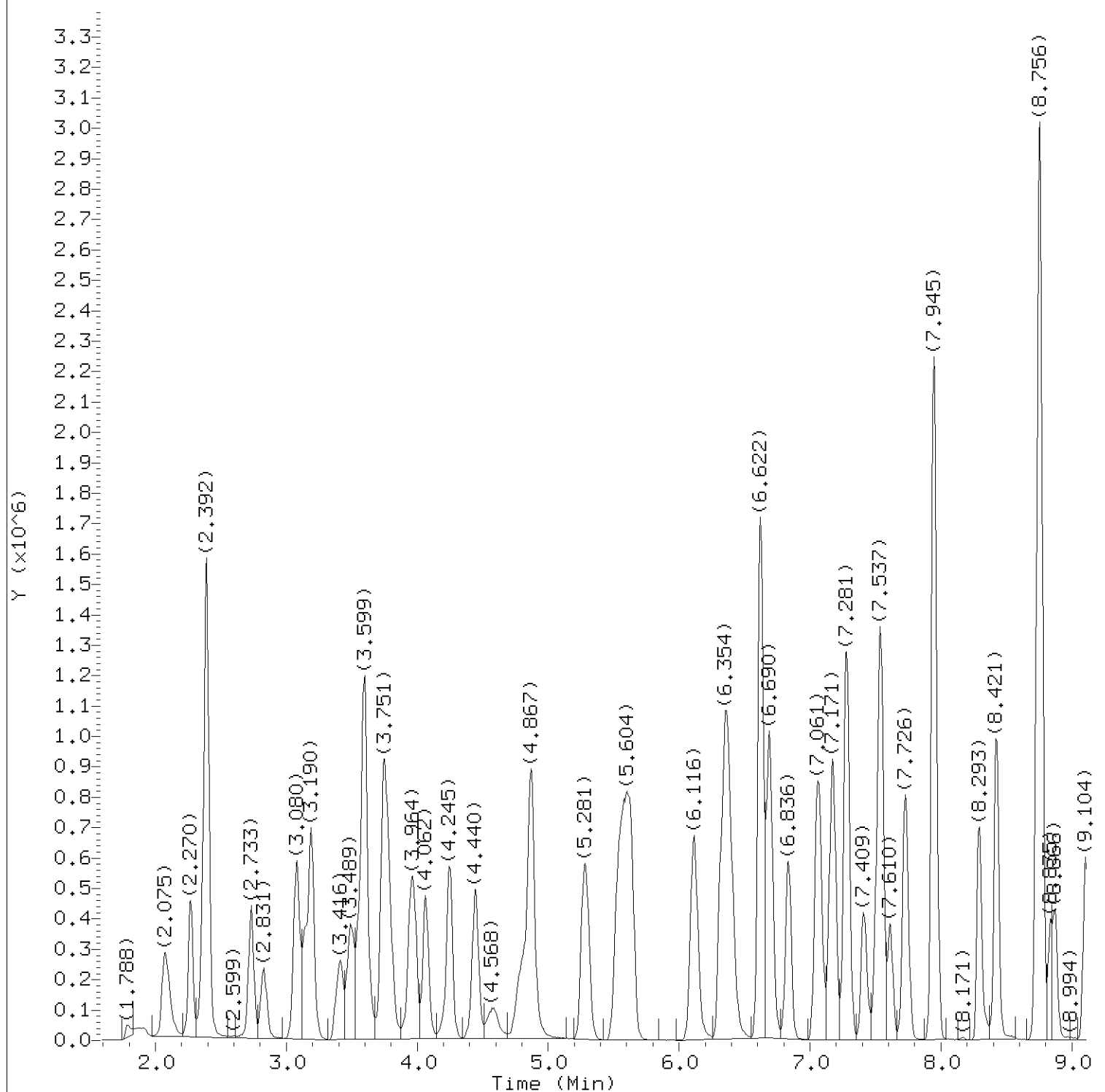
m/z	Y	m/z	Y	m/z	Y	m/z	Y

36,00	645	62,00	2762	80,00	732	128,00	103
37,00	2958	63,00	2413	81,00	1534	130,00	99
38,00	2634	64,00	514	82,00	506	141,00	416
39,00	1131	65,00	491	86,00	180	143,00	921
44,00	250	66,00	100	87,00	2903	145,00	273

45,00	560	67,00	126	88,00	2549	172,00	870
47,00	624	68,00	5799	92,00	1770	173,00	557
48,00	486	69,00	6220	93,00	2831	174,00	56136
49,00	2500	70,00	442	94,00	6836	175,00	4168
50,00	10573	72,00	225	95,00	62544	176,00	55232

51,00	3362	73,00	2952	96,00	4088	177,00	3675
52,00	118	74,00	10387	104,00	97	193,00	126
55,00	105	75,00	29624	106,00	102	209,00	104
56,00	797	76,00	2746	116,00	206		
57,00	1322	77,00	200	117,00	445		

60,00	559	78,00	383	118,00	95		
61,00	3158	79,00	1610	119,00	148		



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d
Injection date and time: 21-MAY-2020 20:21

Instrument ID: HP19094.i
Analyst ID: MEC29284

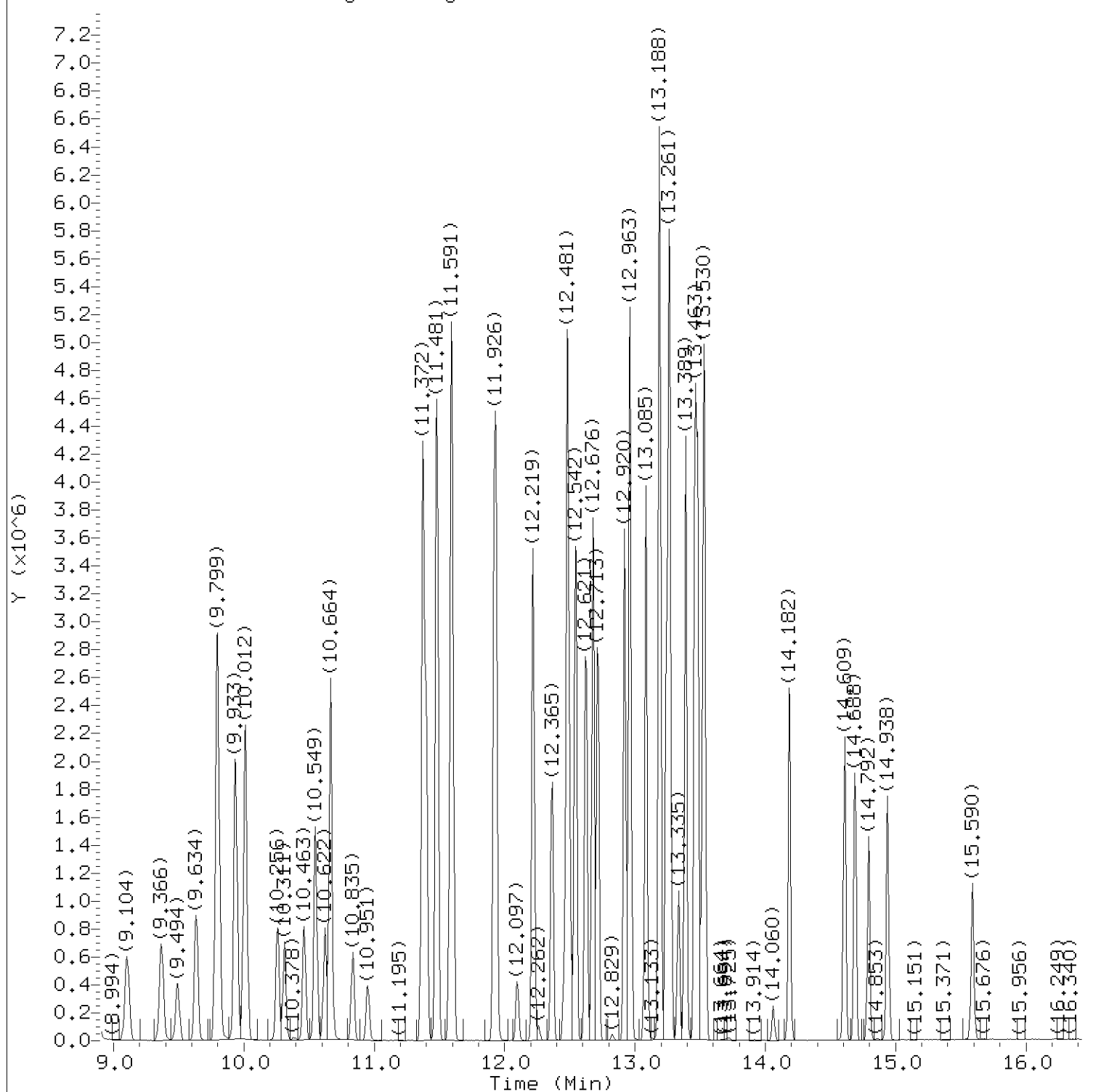
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d
Injection date and time: 21-MAY-2020 20:21

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d
Injection date and time: 21-MAY-2020 20:21

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	751167M	12.686
2) Chloromethane	(2)	2.270	50	730558	12.499
6) 1,3-Butadiene	(2)	2.385	39	939988	21.402
5) Vinyl Chloride	(2)	2.392	62	686037	12.339
7) Bromomethane	(2)	2.733	94	450023	11.299
8) Chloroethane	(2)	2.831	64	370100	11.494
9) Dichlorofluoromethane	(2)	3.080	67	755870	9.885
10) Trichlorofluoromethane	(2)	3.141	101	746877	11.771
11) Ethyl ether	(2)	3.416	59	307031	10.934
12) Freon 123a	(2)	3.489	67	522927	10.660
13) Acrolein	(1)	3.599	56	2192547	456.837
15) 1,1-Dichloroethene	(2)	3.739	96	368109	9.539
14) Acetone	(1)	3.769	43	559532M	86.400
16) Freon 113	(2)	3.775	101	420886	10.434
17) Methyl Iodide	(2)	3.946	142	715809	9.612
18) Bromoethane	(2)	3.977	108	340049	10.100
19) Carbon Disulfide	(2)	4.062	76	1149120	9.734
22) Methyl Acetate	(1)	4.208	43	155242	9.499
23) Allyl Chloride	(2)	4.245	41	643303	9.813
24) Methylene Chloride	(2)	4.446	84	415184	9.996
27)*t-Butyl Alcohol-d10	(1)	4.452	65	106581M	50.000
29) t-Butyl Alcohol	(1)	4.586	59	393321	174.839
30) Acrylonitrile	(1)	4.787	53	387015	48.972
31) Methyl Tertiary Butyl Ether	(2)	4.855	73	871300	9.875
32) trans-1,2-Dichloroethene	(2)	4.867	96	413551	9.748
33) n-Hexane	(2)	5.281	57	630145	10.531
34) 1,1-Dichloroethane	(2)	5.531	63	794490	10.373
35) di-Isopropyl Ether	(2)	5.580	45	1333004	10.566
36) 2-Chloro-1,3-Butadiene	(2)	5.629	53	673841	10.275
41) 1,2-Dichloroethene (Total)	(2)		96	882379	19.694
38) Ethyl t-butyl ether	(2)	6.116	59	1157158	9.770
39) 2-Butanone	(1)	6.312	43	962510	95.053
40) cis-1,2-Dichloroethene	(2)	6.354	96	468828	9.945
42) 2,2-Dichloropropane	(2)	6.379	77	635516	9.751
43) Propionitrile	(1)	6.409	54	583956	210.526
46) Methacrylonitrile	(1)	6.622	67	988214	99.613
48) Bromochloromethane	(2)	6.690	128	197187	9.907
49) Tetrahydrofuran	(1)	6.696	71	270210	96.588

M = Compound was manually integrated.

* = Compound is an internal standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d
 Injection date and time: 21-MAY-2020 20:21

Instrument ID: HP19094.i
 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 21-MAY-2020 21:25
 Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Chloroform	(2)	6.830	83	764615	10.229
51) \$Dibromofluoromethane	(2)	7.049	113	391472	9.970
51) \$Dibromofluoromethane	(2)	7.049	111	401997	9.965
52) 1,1,1-Trichloroethane	(2)	7.074	97	675336	9.715
53) Cyclohexane	(2)	7.171	56	789625	10.635
53) Cyclohexane	(2)	7.177	84	656470	10.323
53) Cyclohexane	(2)	7.171	69	236907	10.253
56) 1,1-Dichloropropene	(2)	7.275	75	596119	10.146
55) Carbon Tetrachloride	(2)	7.281	117	600858	10.081
57) Isobutyl Alcohol	(1)	7.409	41	374830	480.689
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	75866	9.969
58) \$1,2-Dichloroethane-d4	(2)	7.513	65	356408	10.151
58) \$1,2-Dichloroethane-d4	(2)	7.513	104	47562	9.867
59) Benzene	(2)	7.543	78	1763404	10.263
60) 1,2-Dichloroethane	(2)	7.616	62	438458	9.898
61) t-Amyl methyl ether	(2)	7.726	73	1012991	9.807
63) n-Heptane	(2)	7.945	43	698113	11.122
64) *Fluorobenzene	(2)	7.945	96	1579583	10.000
66) n-Butanol	(1)	8.293	56	673803	1073.353
68) Trichloroethene	(2)	8.427	95	450269	9.993
70) Methylcyclohexane	(2)	8.744	83	834505	10.338
71) 1,2-Dichloropropane	(2)	8.762	63	453124	10.660
72) Methyl Methacrylate	(1)	8.835	69	181895	9.115
73) 1,4-Dioxane	(1)	8.860	88	76658M	506.302
74) Dibromomethane	(2)	8.872	93	194647	10.017
75) Bromodichloromethane	(2)	9.104	83	532854	10.090
77) 2-Nitropropane	(1)	9.366	41	541157	82.560
80) 1-Bromo-2-chloroethane	(2)	9.488	63	435282M	10.894
81) cis-1,3-Dichloropropene	(2)	9.634	75	604690	9.696
82) 4-Methyl-2-Pentanone	(1)	9.793	43	2437785	97.676
83) \$Toluene-d8	(3)	9.933	98	1598471	9.916
83) \$Toluene-d8	(3)	9.933	100	1025456	9.836
84) Toluene	(3)	10.012	92	1116004	9.855
86) 1,3-Dichloropropene (total)	(3)		75	1089295	18.916
85) trans-1,3-Dichloropropene	(3)	10.256	75	484605	9.220
87) Ethyl Methacrylate	(3)	10.311	69	391623	9.613
89) 1,1,2-Trichloroethane	(3)	10.463	97	280466	9.858
90) Tetrachloroethene	(3)	10.549	166	497871	9.673

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d
 Injection date and time: 21-MAY-2020 20:21

Instrument ID: HP19094.i
 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
 Calibration date and time: 21-MAY-2020 21:25
 Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
91) 1,3-Dichloropropane	(3)	10.622	76	487502	9.974
92) 2-Hexanone	(1)	10.664	43	1660208	97.350
94) Dibromochloromethane	(3)	10.835	129	337746	9.271
96) 1,2-Dibromoethane	(3)	10.951	107	270970	9.966
97) 1-Chlorohexane	(3)	11.372	91	627285	9.188
98) *Chlorobenzene-d5	(3)	11.372	117	1209967	10.000
99) Chlorobenzene	(3)	11.396	112	1208129	9.765
100) 1,1,1,2-Tetrachloroethane	(3)	11.475	131	428781	9.744
101) Ethylbenzene	(3)	11.481	91	2189029	9.824
102) m+p-Xylene	(3)	11.591	106	1683978	19.764
106) Xylene (Total)	(3)		106	2506235	29.579
105) o-Xylene	(3)	11.920	106	822257	9.814
107) Styrene	(3)	11.939	104	1378489	10.139
108) Bromoform	(3)	12.097	173	185785	8.750
109) Isopropylbenzene	(3)	12.219	105	2176174	9.584
112) \$4-Bromofluorobenzene	(3)	12.365	95	569834	9.555
112) \$4-Bromofluorobenzene	(3)	12.365	174	489753	9.597
114) 1,1,2,2-Tetrachloroethane	(4)	12.457	83	336634	10.183
115) Bromobenzene	(4)	12.481	156	490379	9.813
116) trans-1,4-Dichloro-2-butene	(1)	12.487	53	630829	67.286
117) 1,2,3-Trichloropropane	(4)	12.512	110	90881M	10.266
118) n-Propylbenzene	(4)	12.548	91	2626278	10.065
120) 2-Chlorotoluene	(4)	12.627	126	507990	9.867
122) 1,3,5-Trimethylbenzene	(4)	12.676	105	1878317	9.923
123) 4-Chlorotoluene	(4)	12.713	126	516342	10.050
126) tert-Butylbenzene	(4)	12.920	134	392116M	10.016
127) Pentachloroethane	(4)	12.957	167	314791	9.435
128) 1,2,4-Trimethylbenzene	(4)	12.963	105	1943081	9.941
129) sec-Butylbenzene	(4)	13.085	105	2447021	9.978
132) 1,3-Dichlorobenzene	(4)	13.188	146	993171	9.973
133) p-Isopropyltoluene	(4)	13.188	119	2075271	9.832
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	633161	10.000
135) 1,4-Dichlorobenzene	(4)	13.261	146	967569	9.960
136) 1,2,3-Trimethylbenzene	(4)	13.268	120	812739	9.971
137) Benzyl Chloride	(4)	13.335	126	144037	10.364
139) n-Butylbenzene	(4)	13.481	92	1088110	10.428
140) 1,2-Dichlorobenzene	(4)	13.517	146	875057	9.968
144) 1,2-Dibromo-3-chloropropane	(1)	14.060	155	47186	8.825

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:21 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

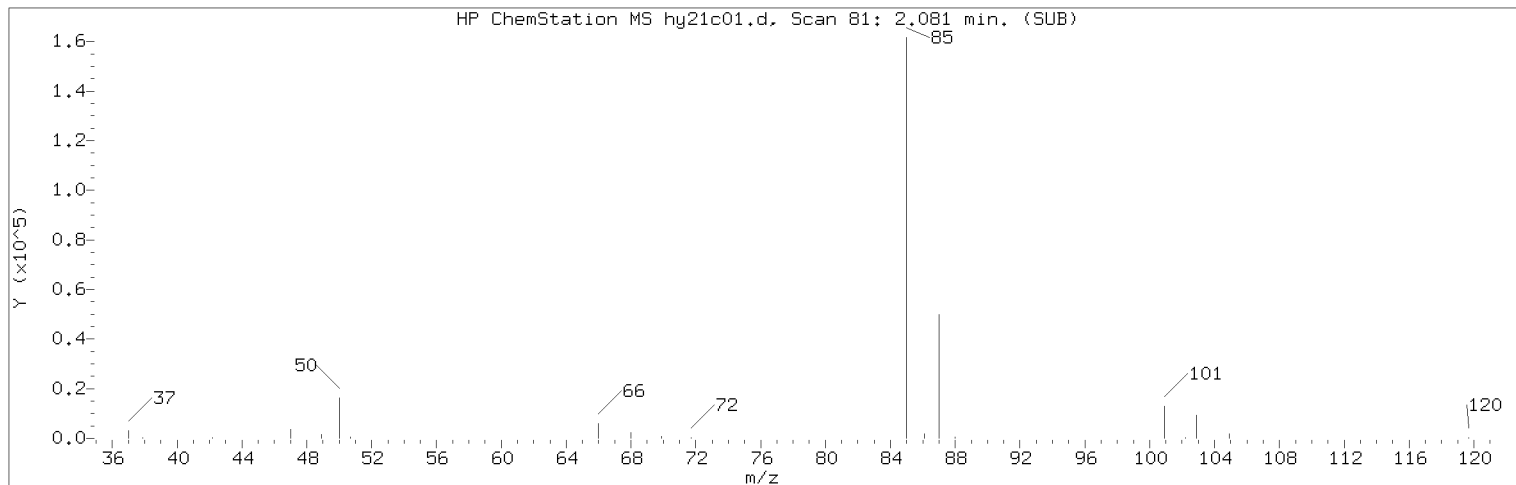
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
145) 1,3,5-Trichlorobenzene	(4)	14.188	180	749603	9.618
146) 1,2,4-Trichlorobenzene	(4)	14.609	180	613872	9.393
147) Hexachlorobutadiene	(4)	14.688	225	329374	9.657
148) Naphthalene	(4)	14.792	128	1050225	9.208
149) 1,2,3-Trichlorobenzene	(4)	14.938	180	509463	9.132

page 4 of 4

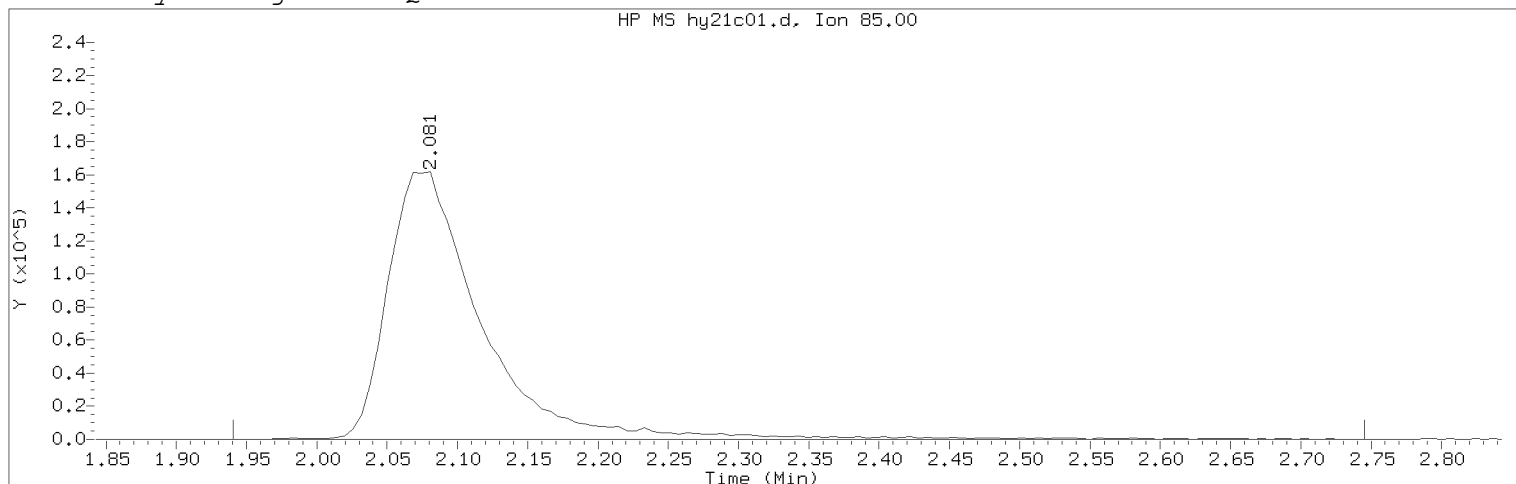
Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:21 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

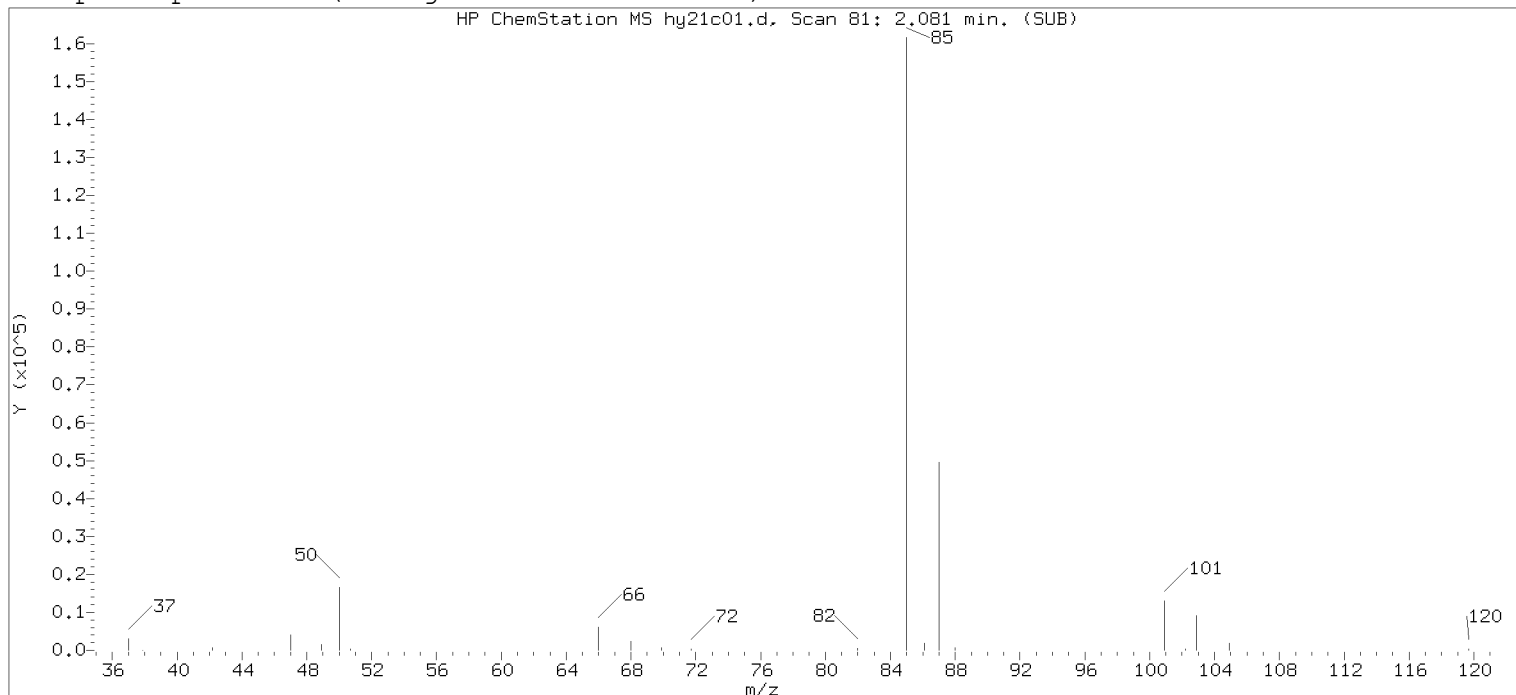
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 81
Retention Time (minutes): 2.081
Quant Ion : 85.00
Area (flag) : 751167M
On-Column Amount (ng) : 12.6863
Integration start scan : 57 Integration stop scan: 189
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

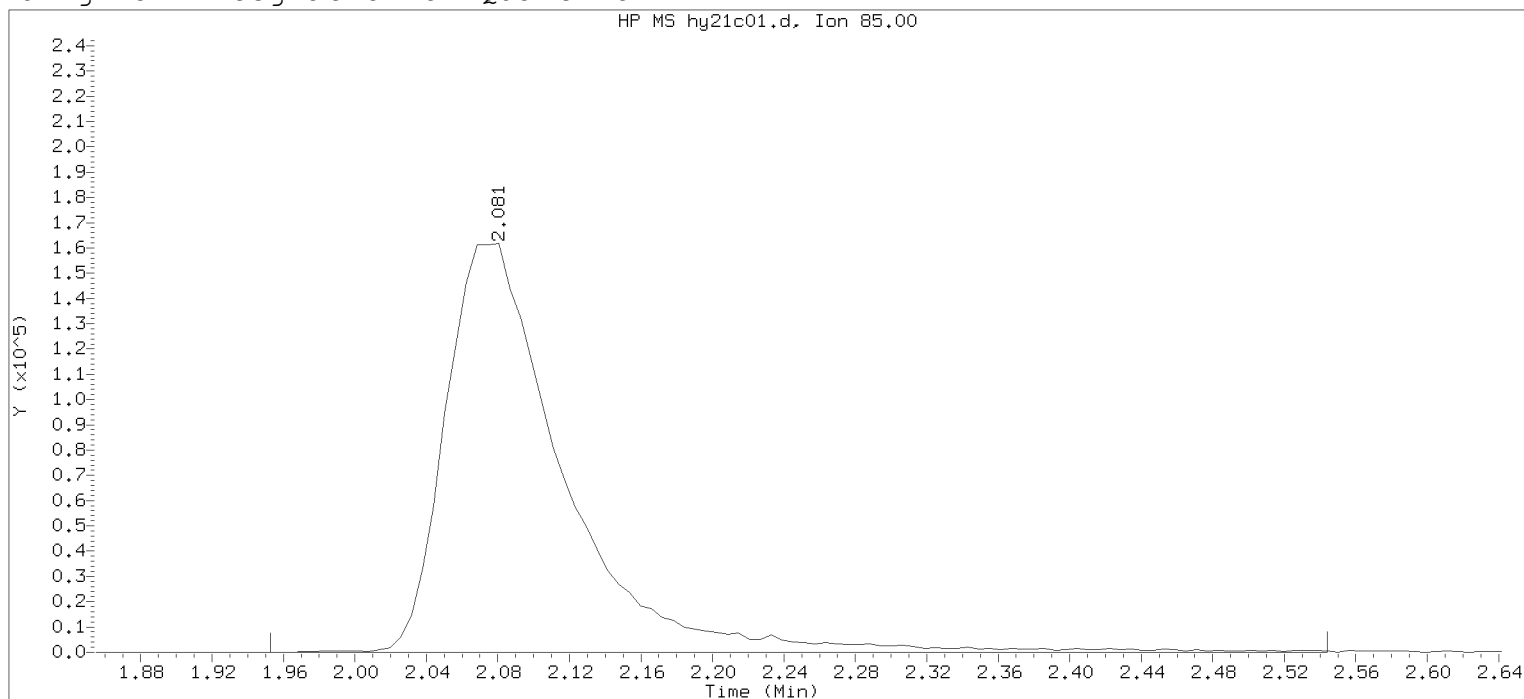
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 20:40

Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 1

Compound Name : Dichlorodifluoromethane

Scan Number : 81

Retention Time (minutes): 2.081

Quant Ion : 85.00

Area : 747842

On-column Amount (ng) : 12.6301

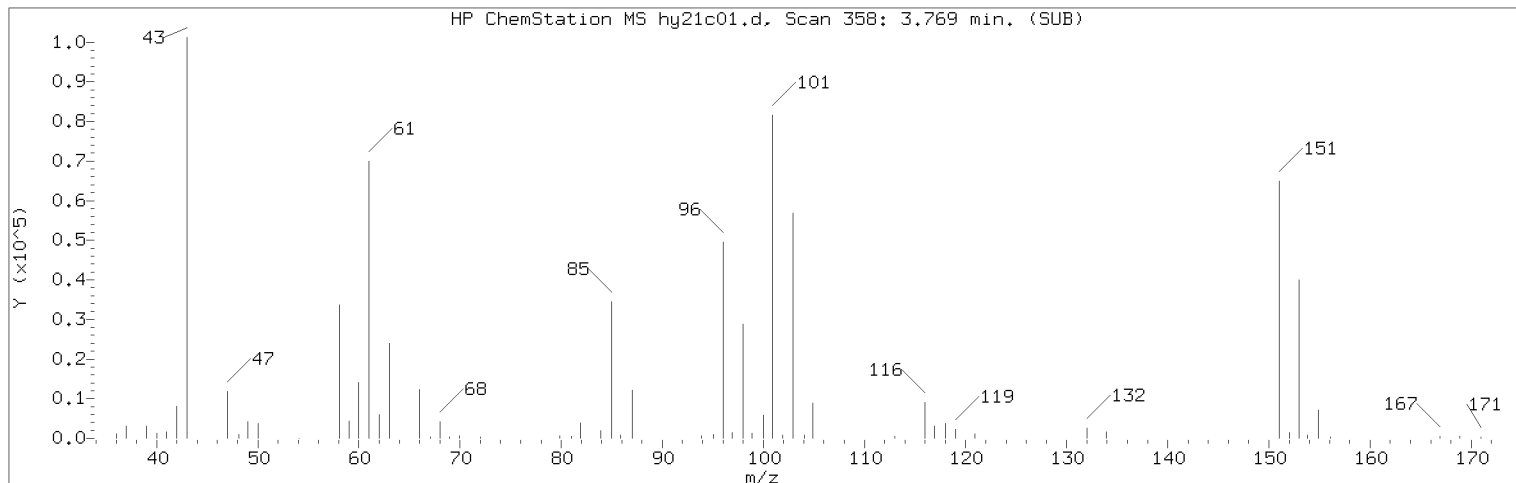
Integration start scan : 59 Integration stop scan: 156

Y at integration start : 0 Y at integration end: 0

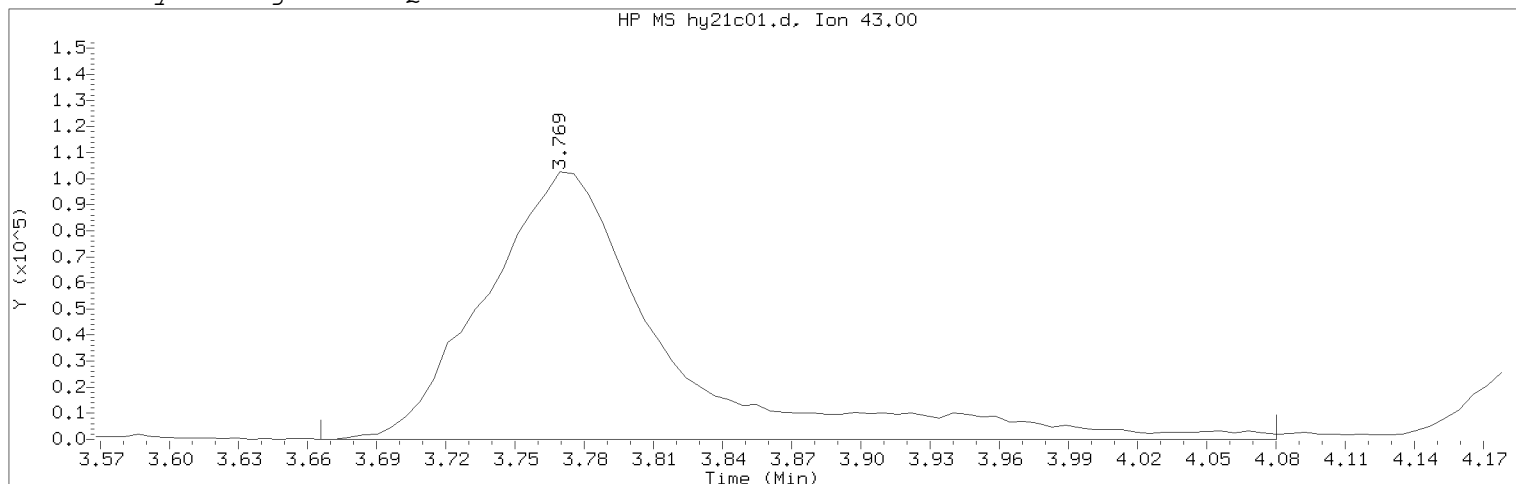
Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12.

Target 3.5 esignature user RA564j Page 316 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 21:25

Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 358
 Retention Time (minutes): 3.769
 Quant Ion : 43.00
 Area (flag) : 559532M
 On-Column Amount (ng) : 86.3999
 Integration start scan : 340
 Y at integration start : 0

Integration stop scan: 408
 Y at integration end: 0

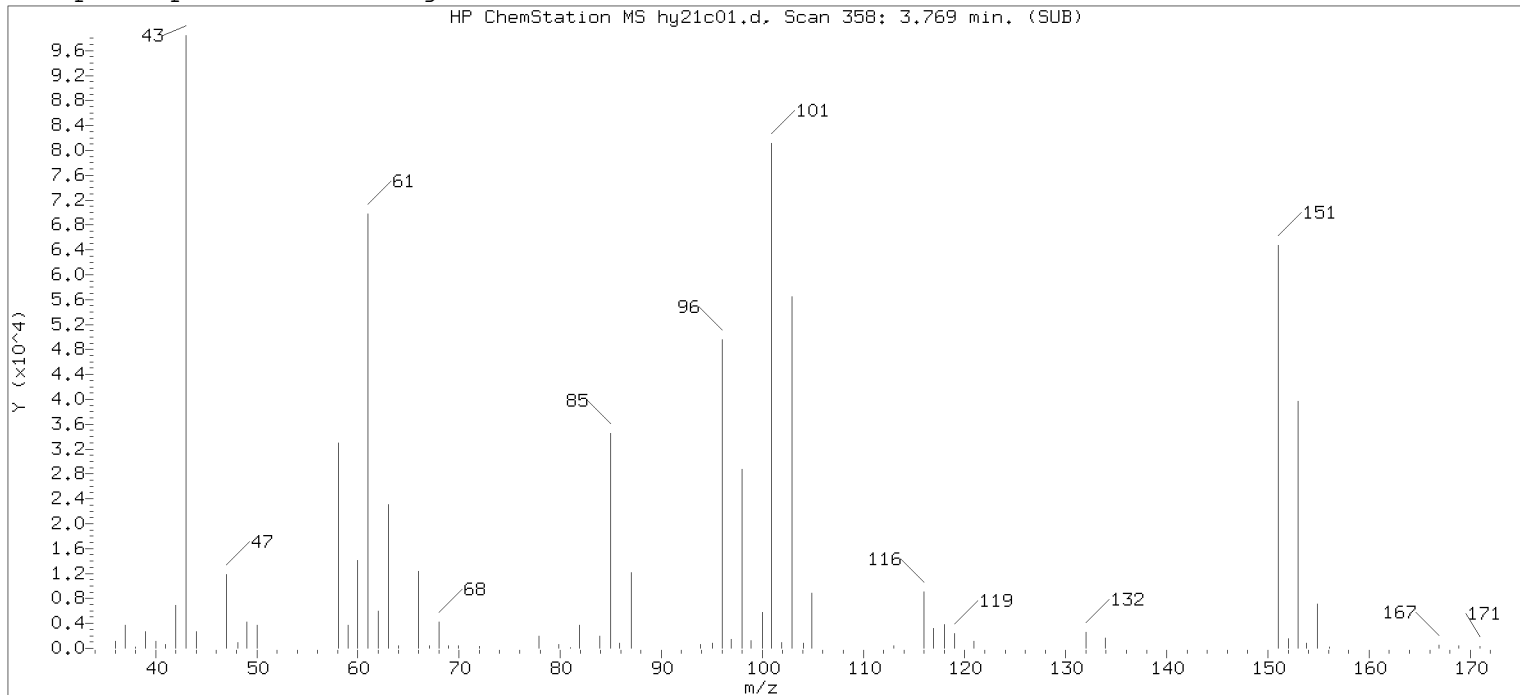
Reason for manual integration: improper integration

Analyst responsible for change:

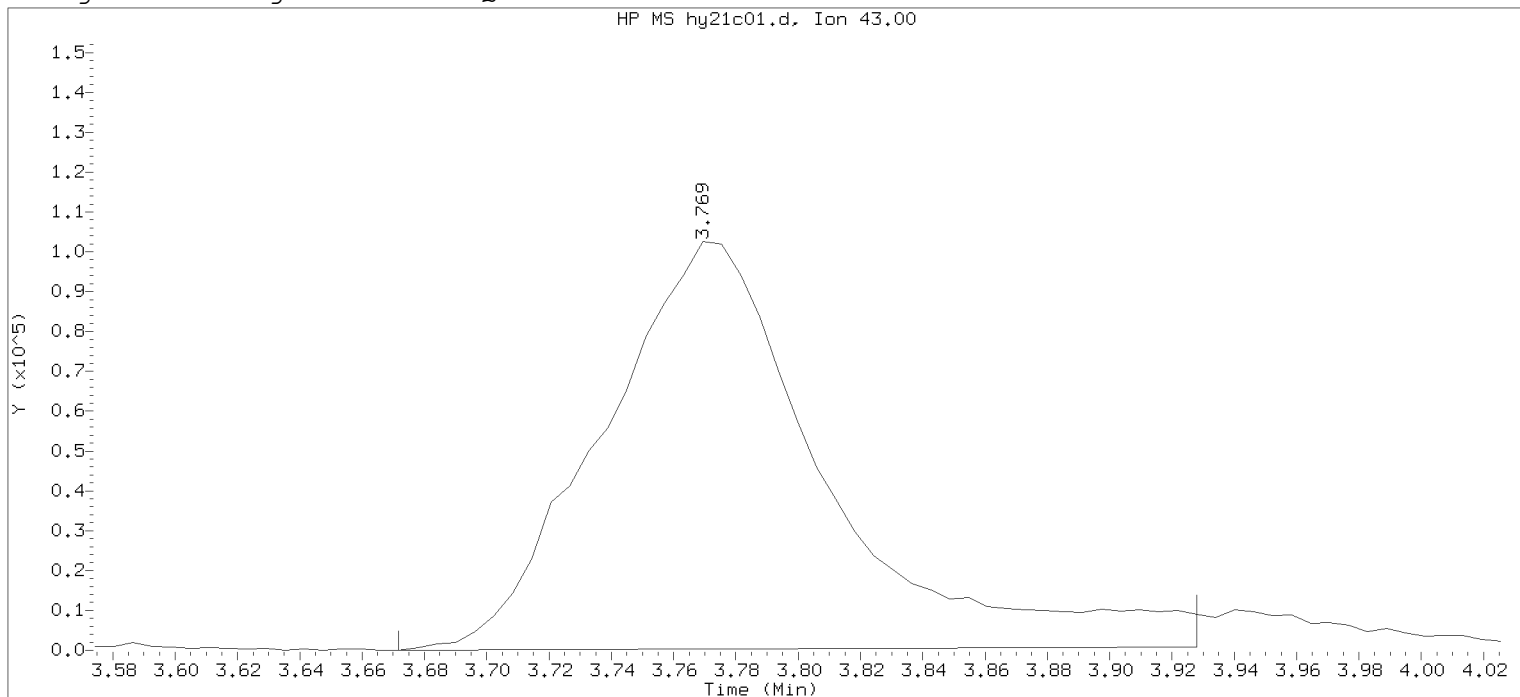
Digitally signed by Jennifer K. Howe
 on 05/22/2020 at 07:12.
 Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
 PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 20:40

Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

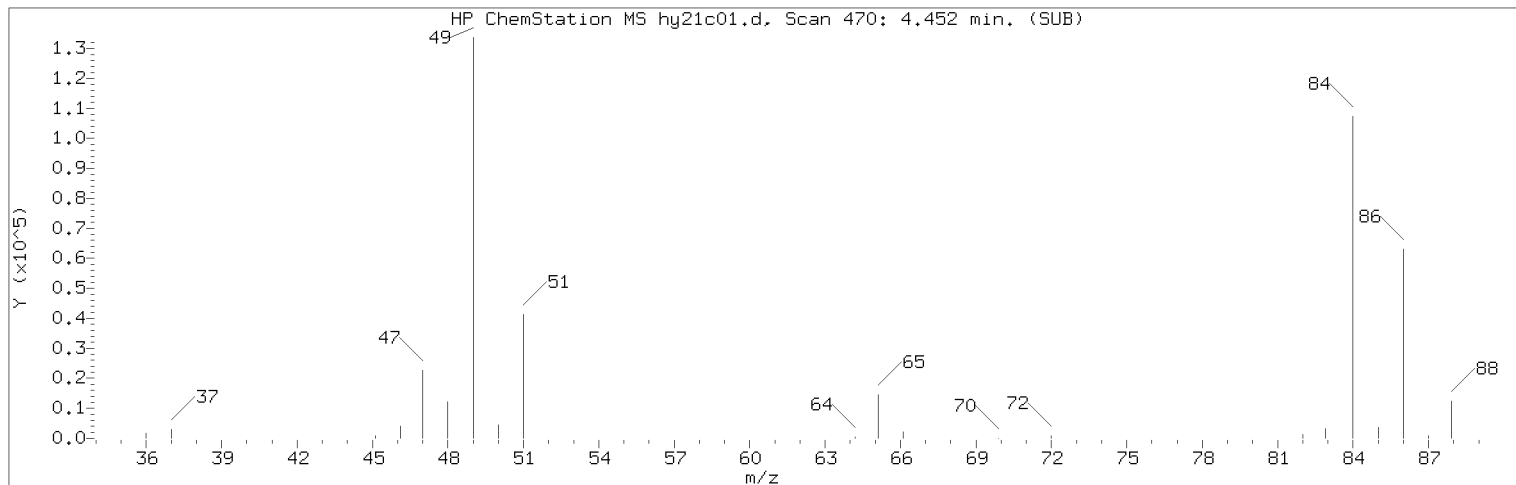
Lab Sample ID: VSTD010

Compound Number : 14
 Compound Name : Acetone
 Scan Number : 358
 Retention Time (minutes): 3.769
 Quant Ion : 43.00
 Area : 508266
 On-column Amount (ng) : 82.9054
 Integration start scan : 341
 Y at integration start : 0

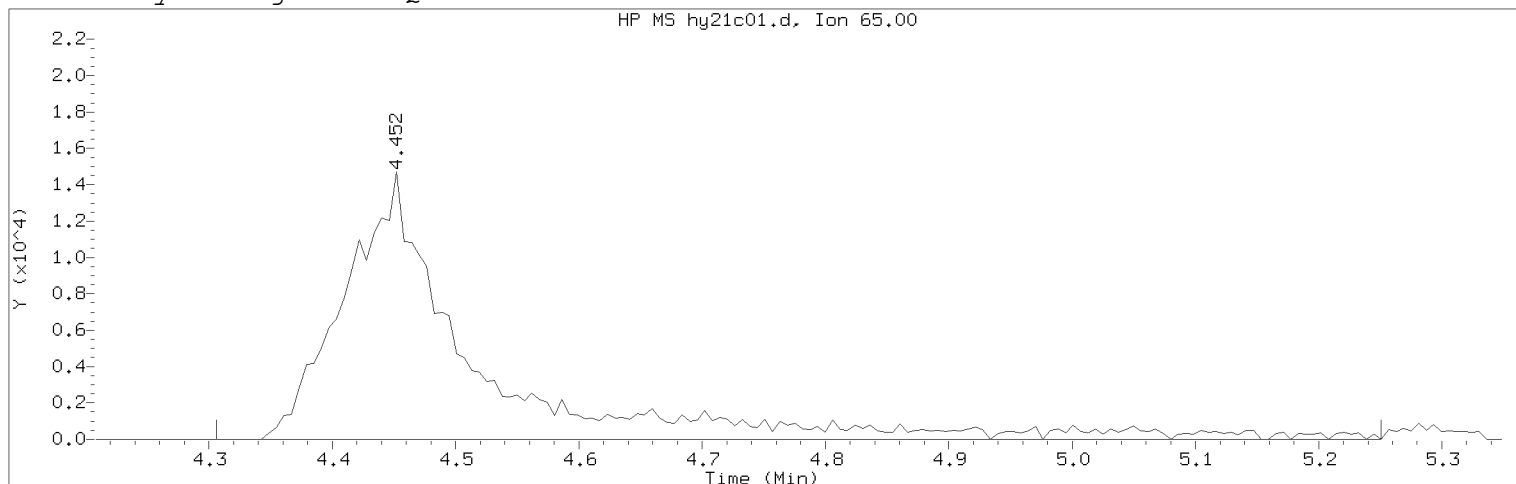
Integration stop scan: 383
 Y at integration end: 732

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 Target 3.5 esignature user RA564j Page 318 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 21:25

Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

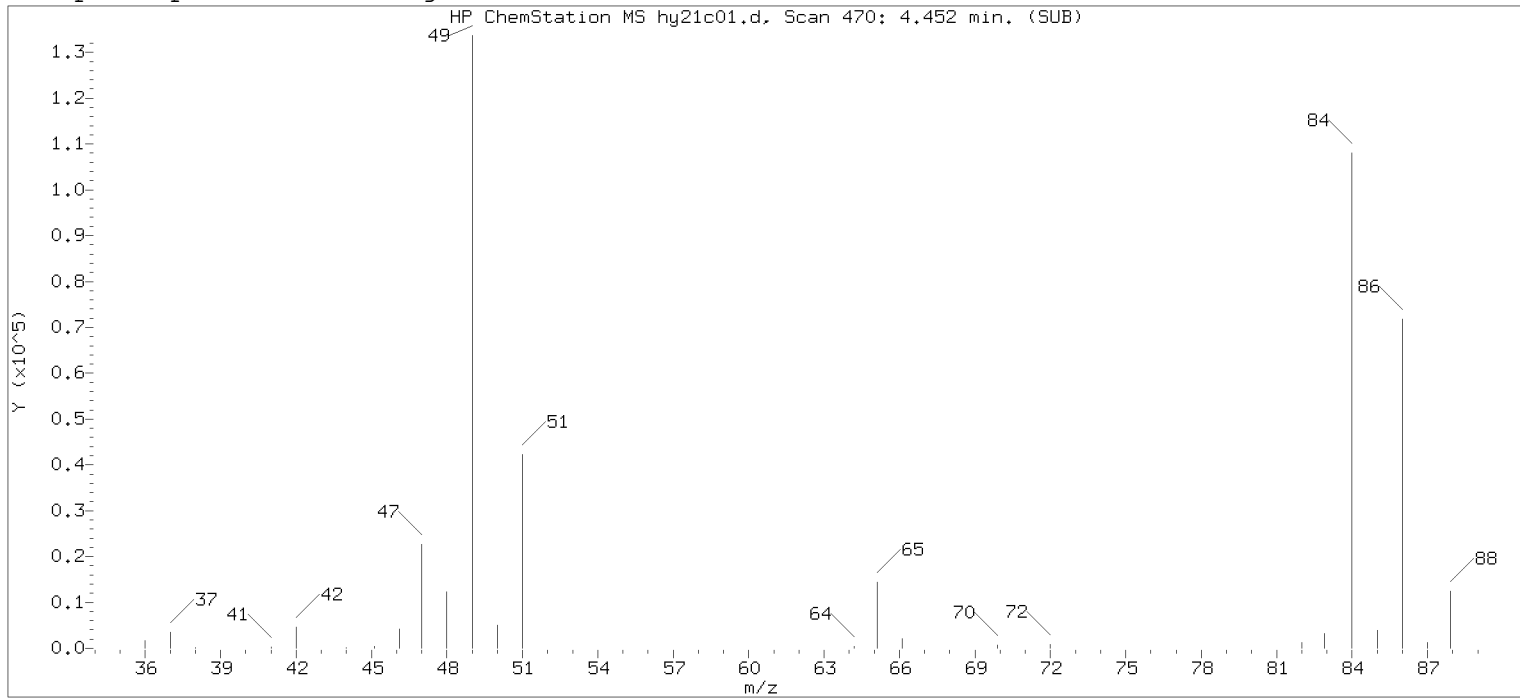
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 470	
Retention Time (minutes)	: 4.452	
Quant Ion	: 65.00	
Area (flag)	: 106581M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 445	Integration stop scan: 600
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

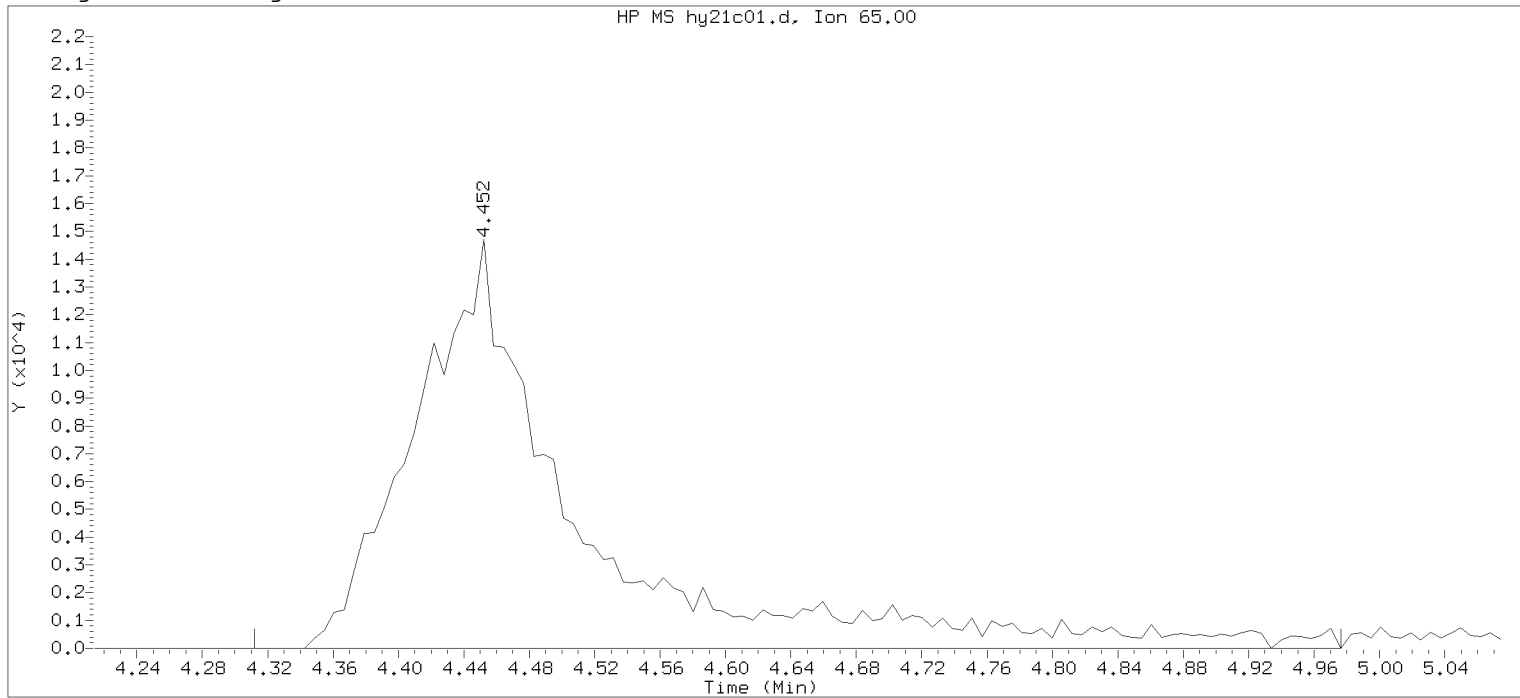
Analyst responsible for change:	Digitally signed by Jennifer K. Howe
	on 05/22/2020 at 07:12.
	Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 20:40

Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 27

Compound Name : t-Butyl Alcohol-d10

Scan Number : 470

Retention Time (minutes): 4.452

Quant Ion : 65.00

Area : 100896

On-column Amount (ng) : 50.0000

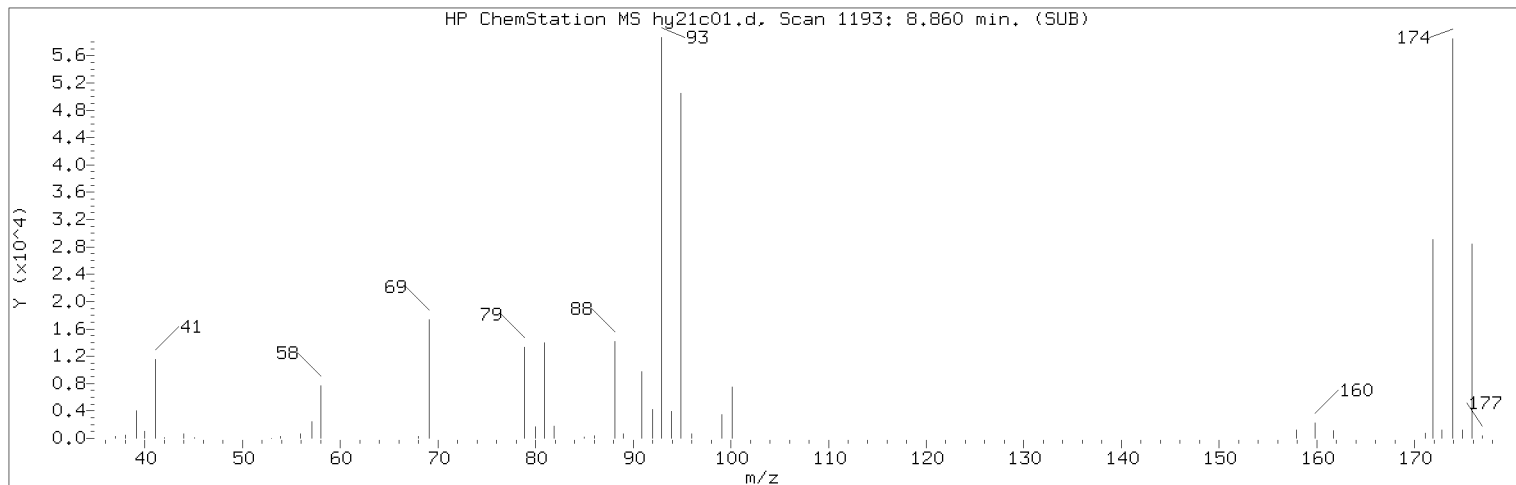
Integration start scan : 446 Integration stop scan: 555

Y at integration start : 0 Y at integration end: 0

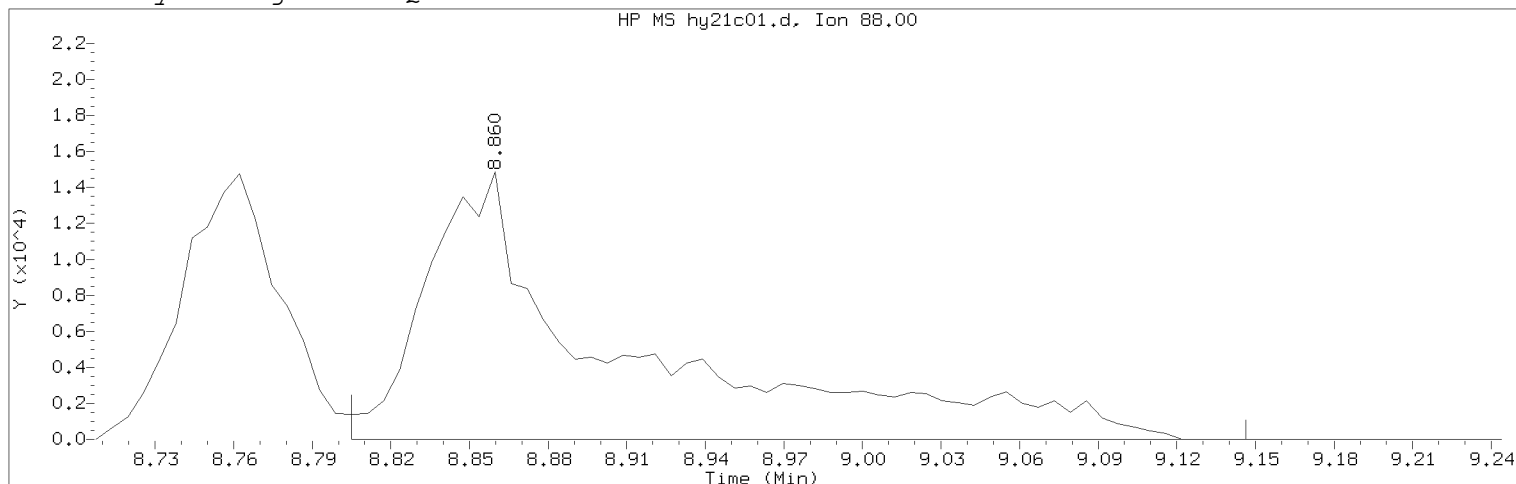
Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12.

Target 3.5 esignature user RA564j Page 320 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 21:25

Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 73	
Compound Name	: 1,4-Dioxane	
Scan Number	: 1193	
Retention Time (minutes)	: 8.860	
Quant Ion	: 88.00	
Area (flag)	: 76658M	
On-Column Amount (ng)	: 506.3023	
Integration start scan	: 1183	Integration stop scan: 1239
Y at integration start	: 0	Y at integration end: 0

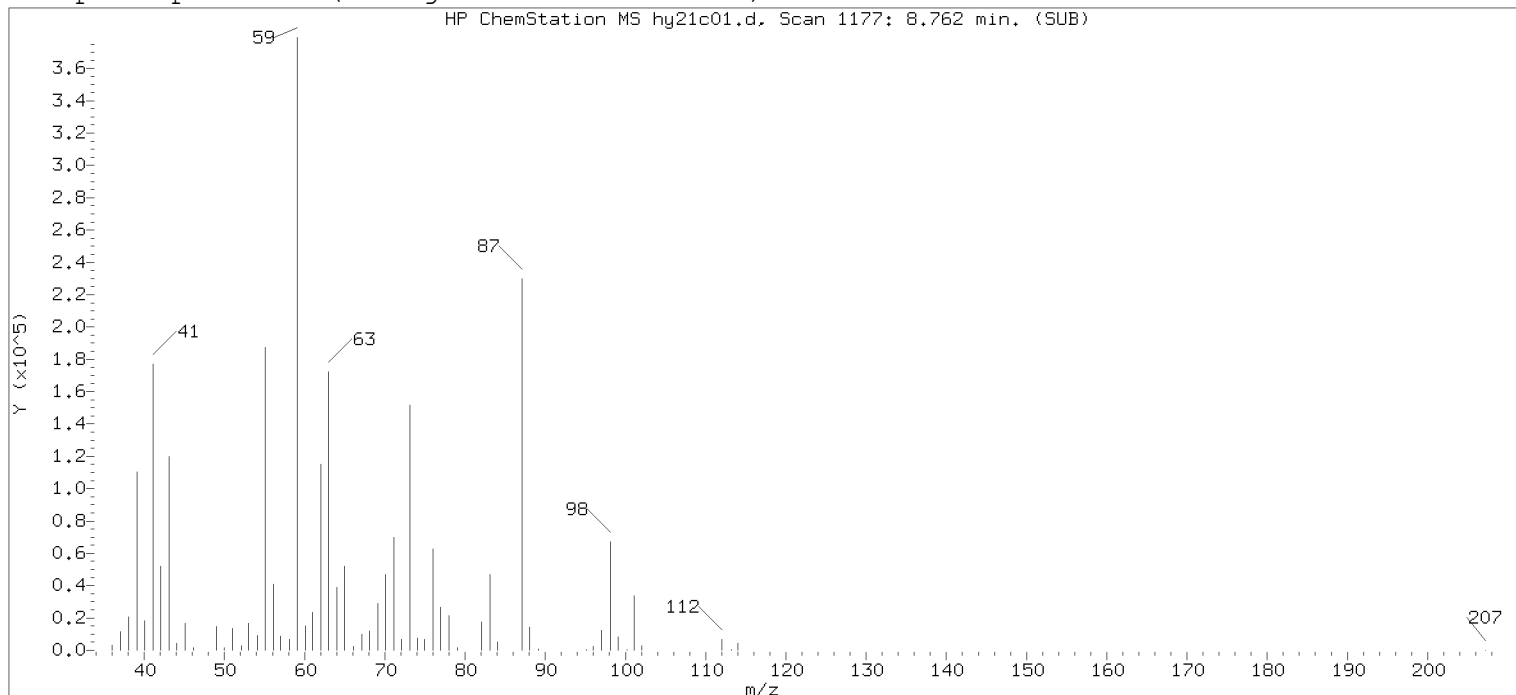
Reason for manual integration: improper integration

Analyst responsible for change:

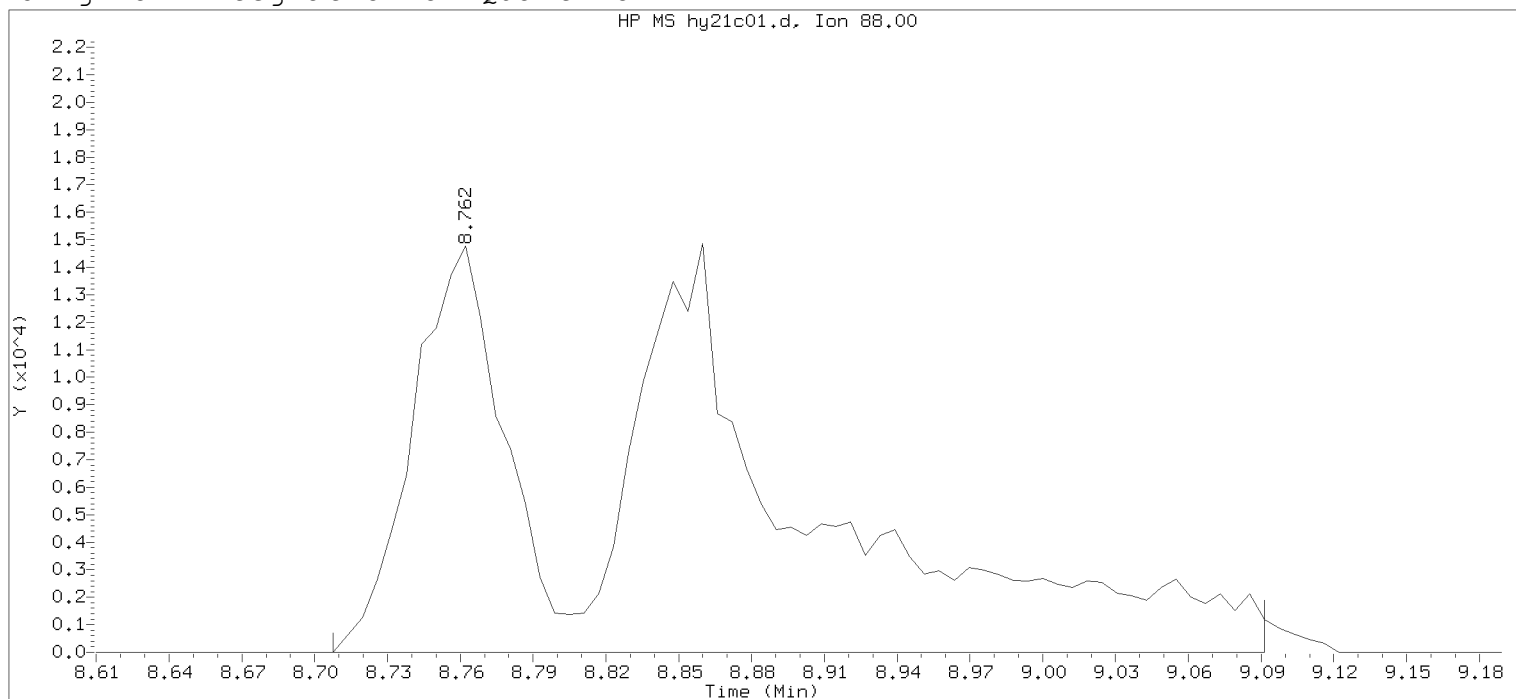
Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 20:40

Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

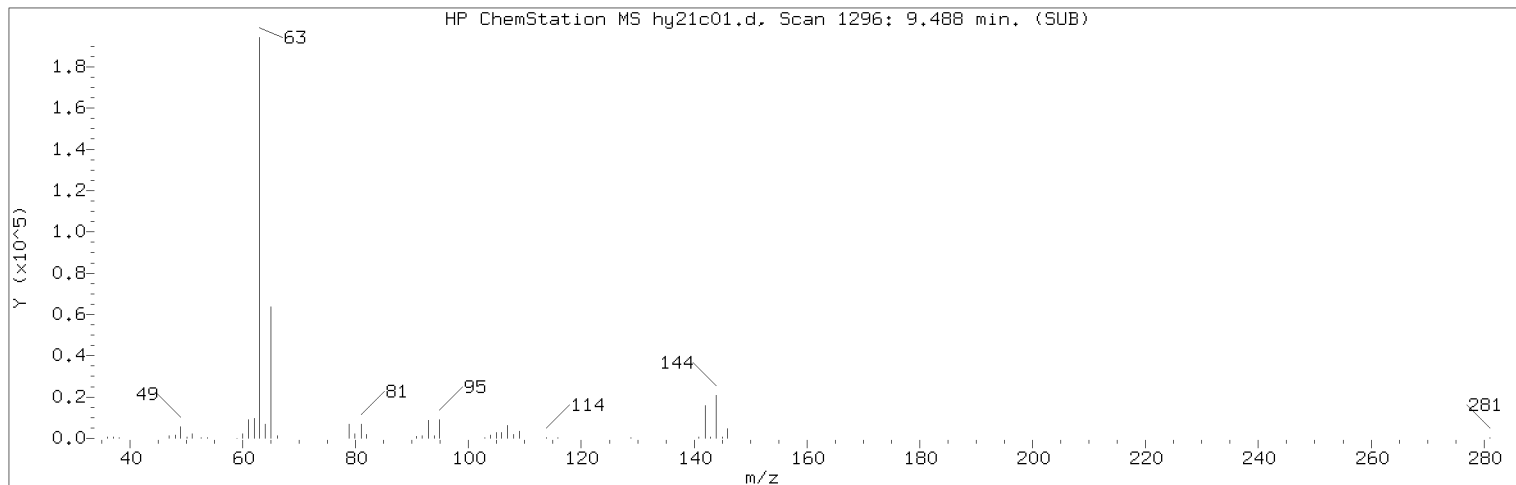
Lab Sample ID: VSTD010

Compound Number : 73
 Compound Name : 1,4-Dioxane
 Scan Number : 1177
 Retention Time (minutes): 8.762
 Quant Ion : 88.00
 Area : 113914
 On-column Amount (ng) : 794.7564
 Integration start scan : 1167
 Y at integration start : 0

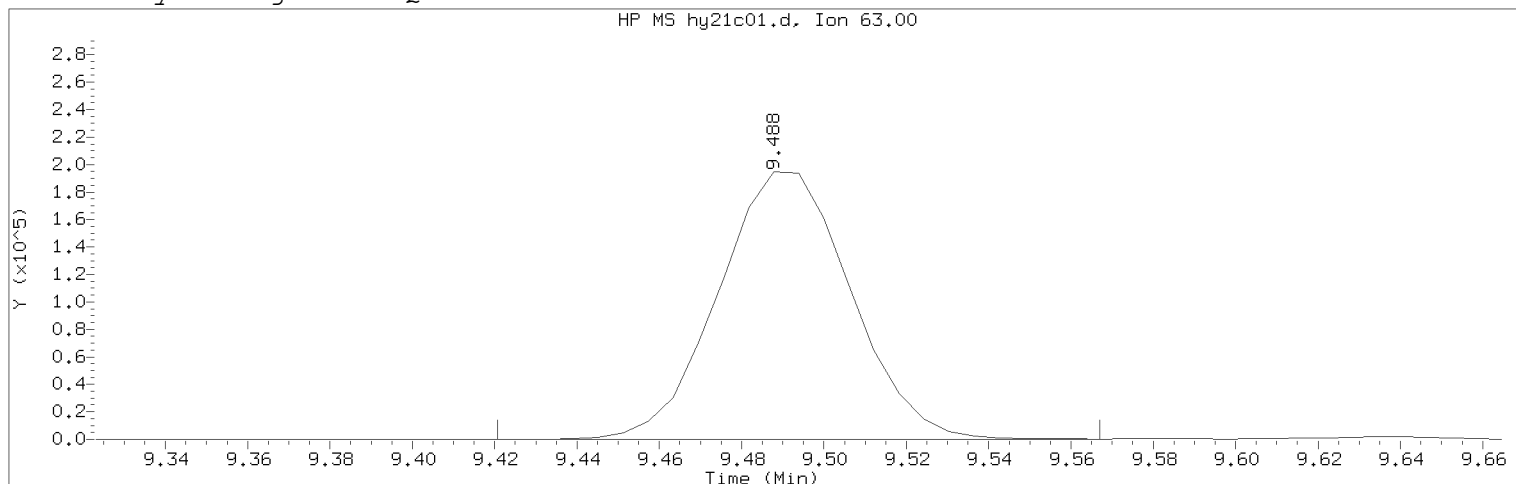
Integration stop scan: 1230
 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12.
 Target 3.5 esignature user RA564j Page 322 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 21:25

Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1296	
Retention Time (minutes)	: 9.488	
Quant Ion	: 63.00	
Area (flag)	: 435282M	
On-Column Amount (ng)	: 10.8943	
Integration start scan	: 1284	Integration stop scan: 1308
Y at integration start	: 0	Y at integration end: 0

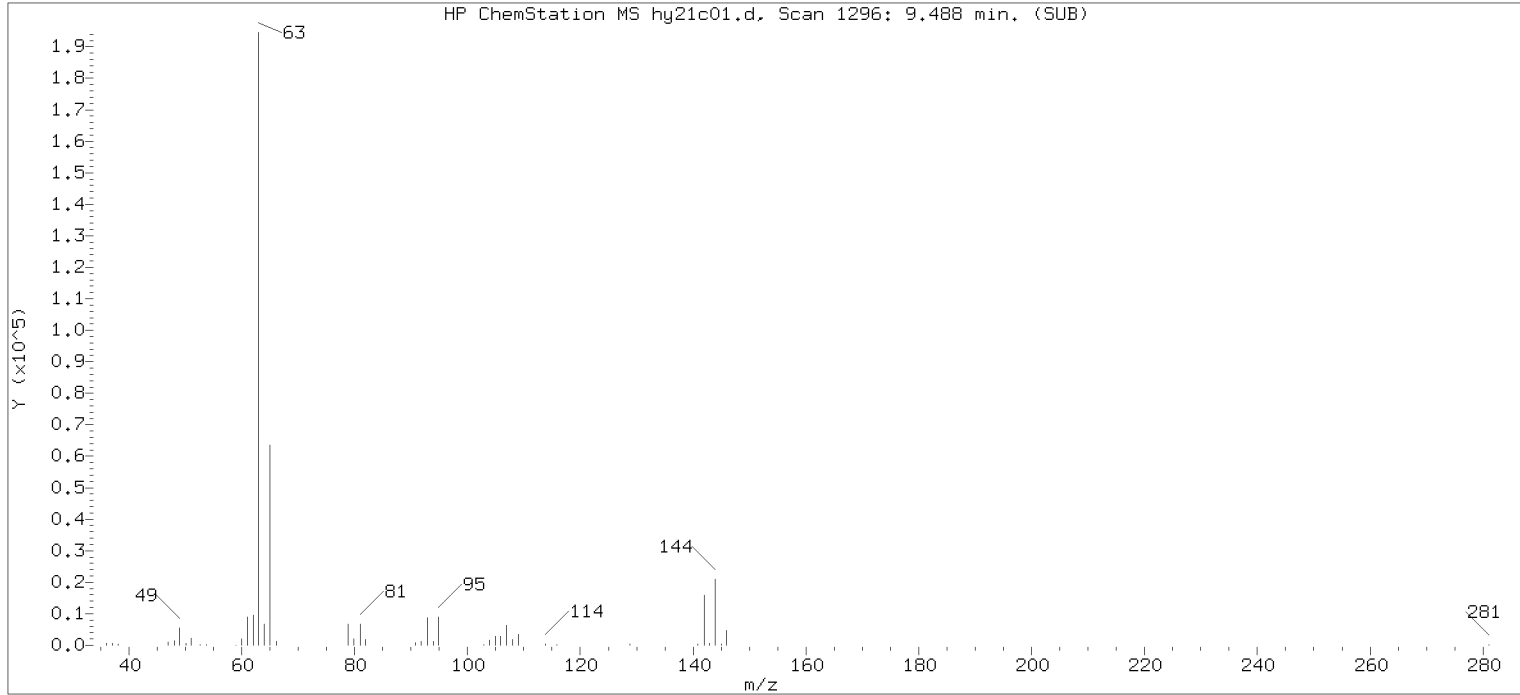
Reason for manual integration: improper integration

Analyst responsible for change:

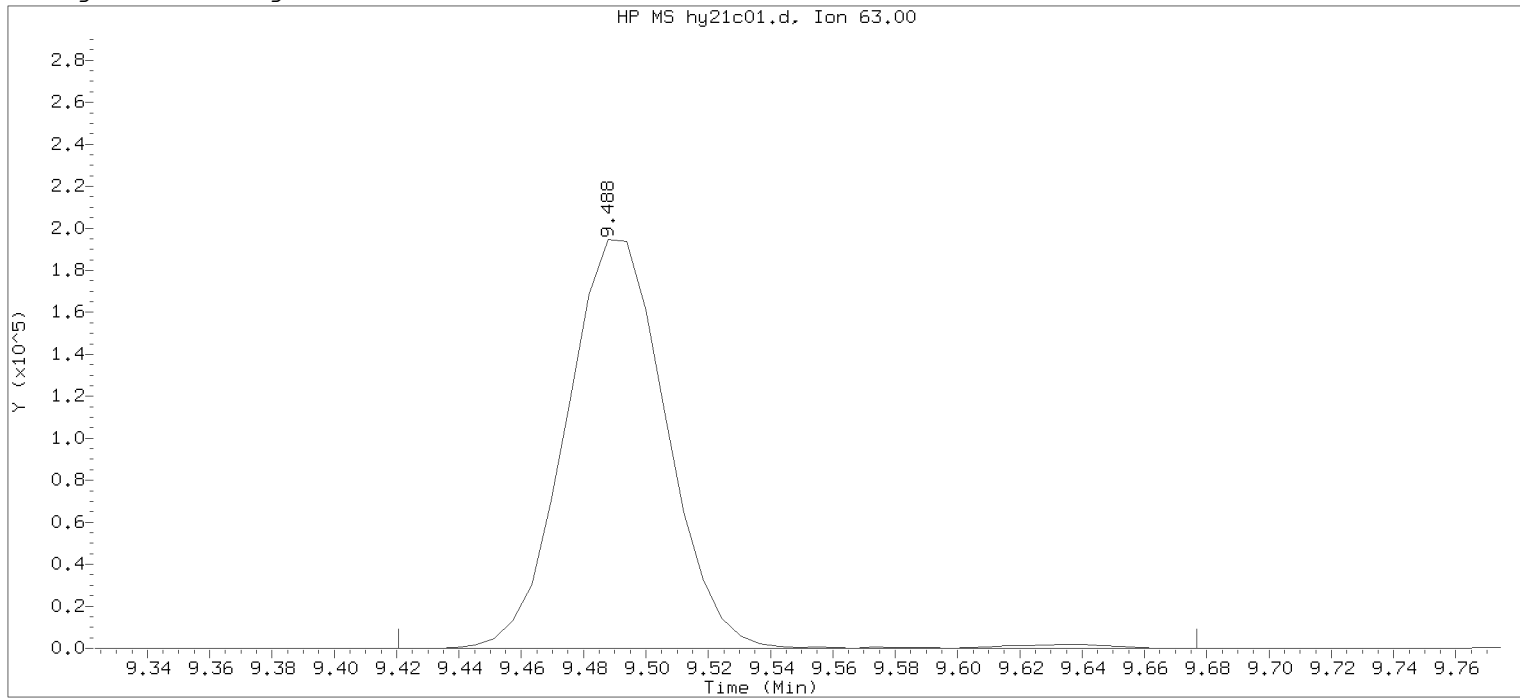
Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:21 Analyst ID: MEC29284

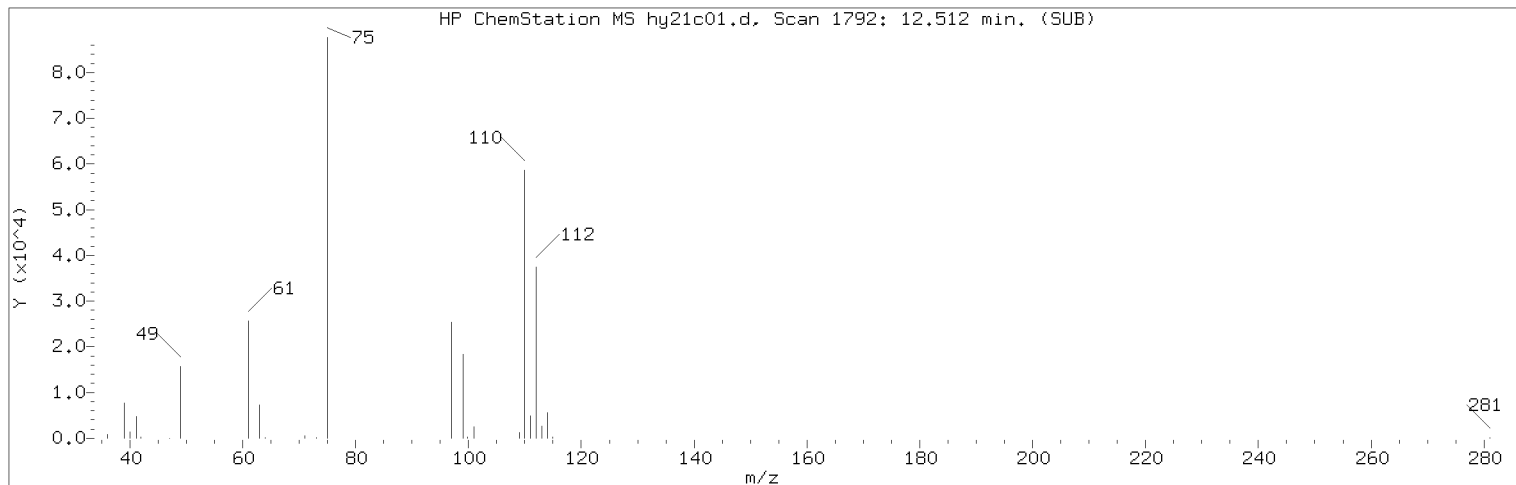
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 20:40
Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

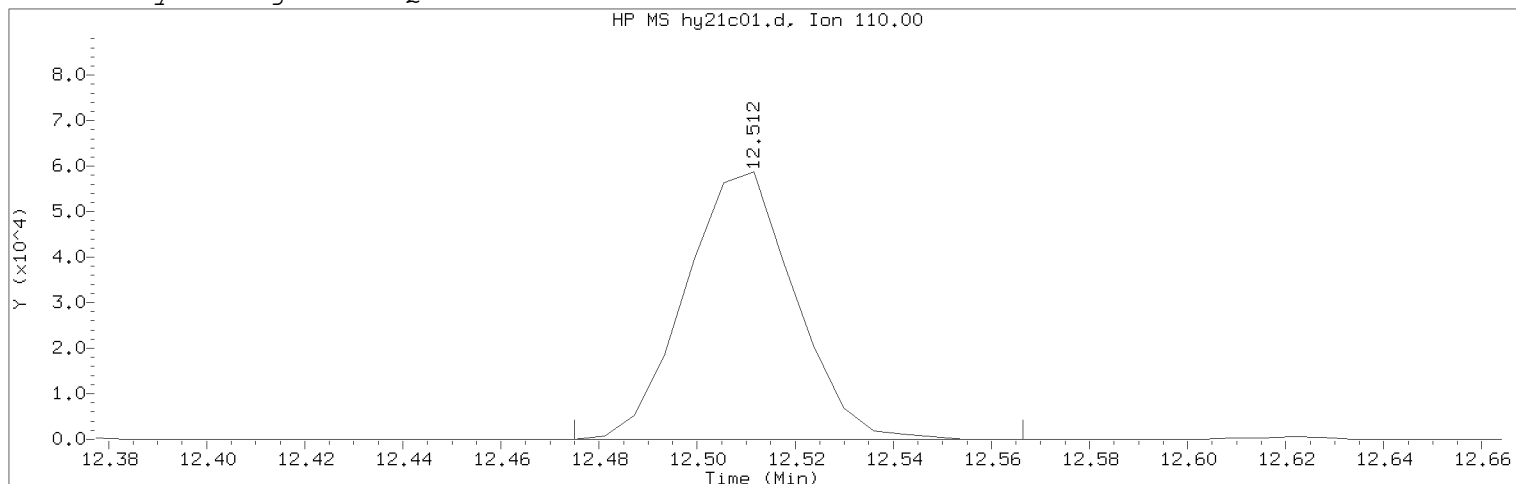
Lab Sample ID: VSTD010

Compound Number	: 80	
Compound Name	: 1-Bromo-2-chloroethane	
Scan Number	: 1296	
Retention Time (minutes)	: 9.488	
Quant Ion	: 63.00	
Area	: 439817	
On-column Amount (ng)	: 11.0077	
Integration start scan	: 1284	Integration stop scan: 1326
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:21 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

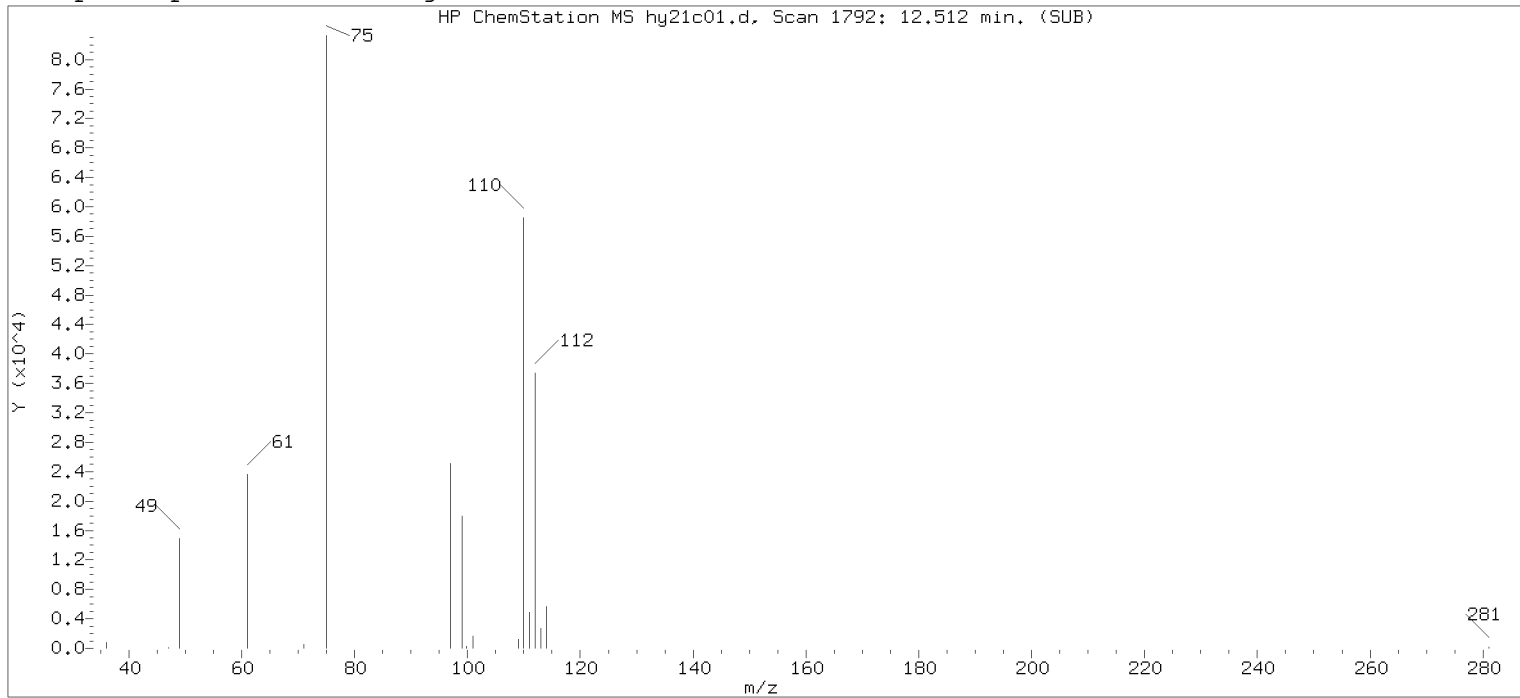
Compound Number : 117
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1792
Retention Time (minutes): 12.512
Quant Ion : 110.00
Area (flag) : 90881M
On-Column Amount (ng) : 10.2664
Integration start scan : 1785 Integration stop scan: 1800
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

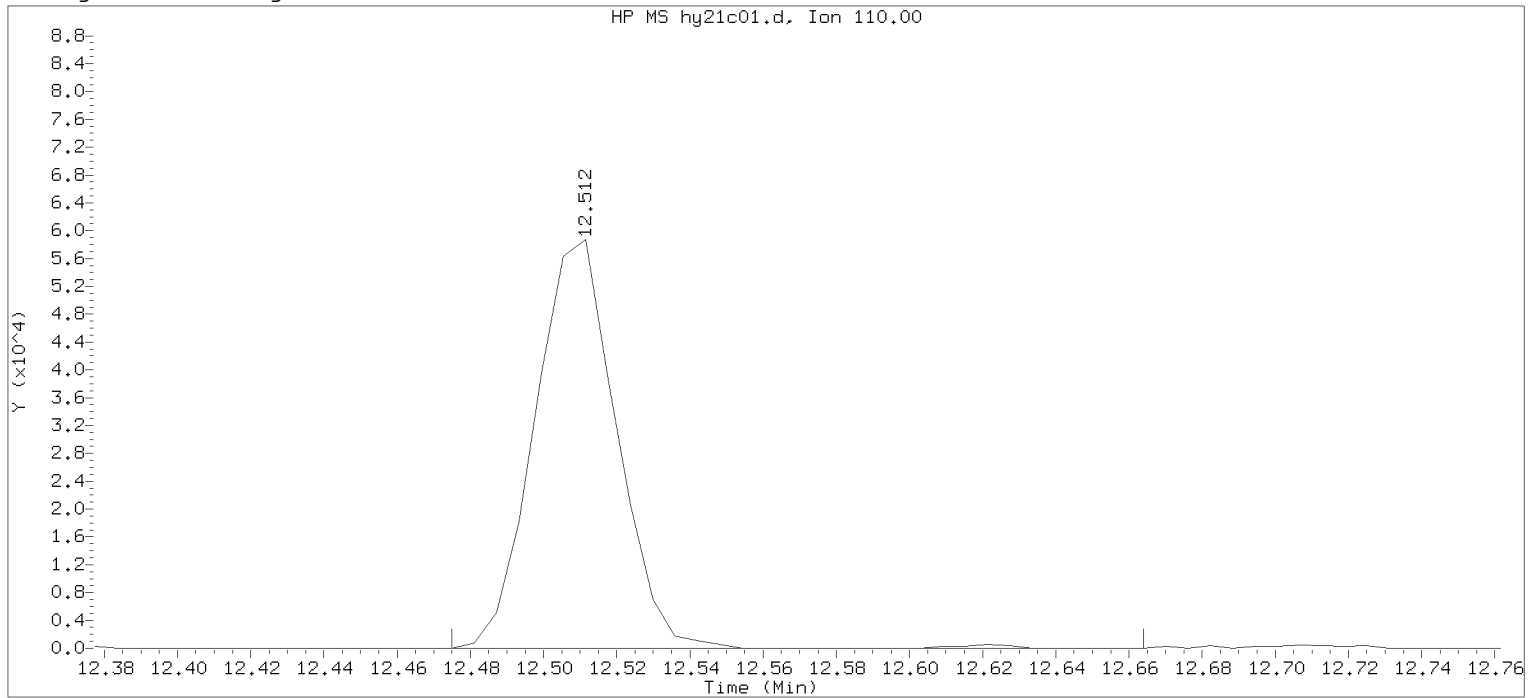
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 20:40

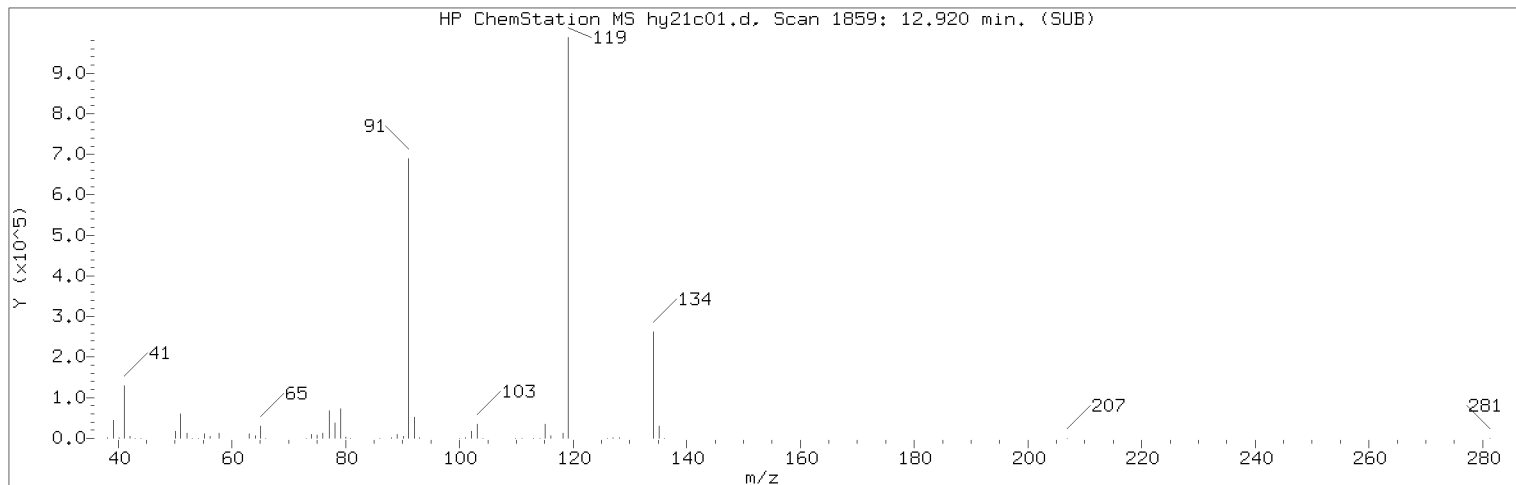
Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

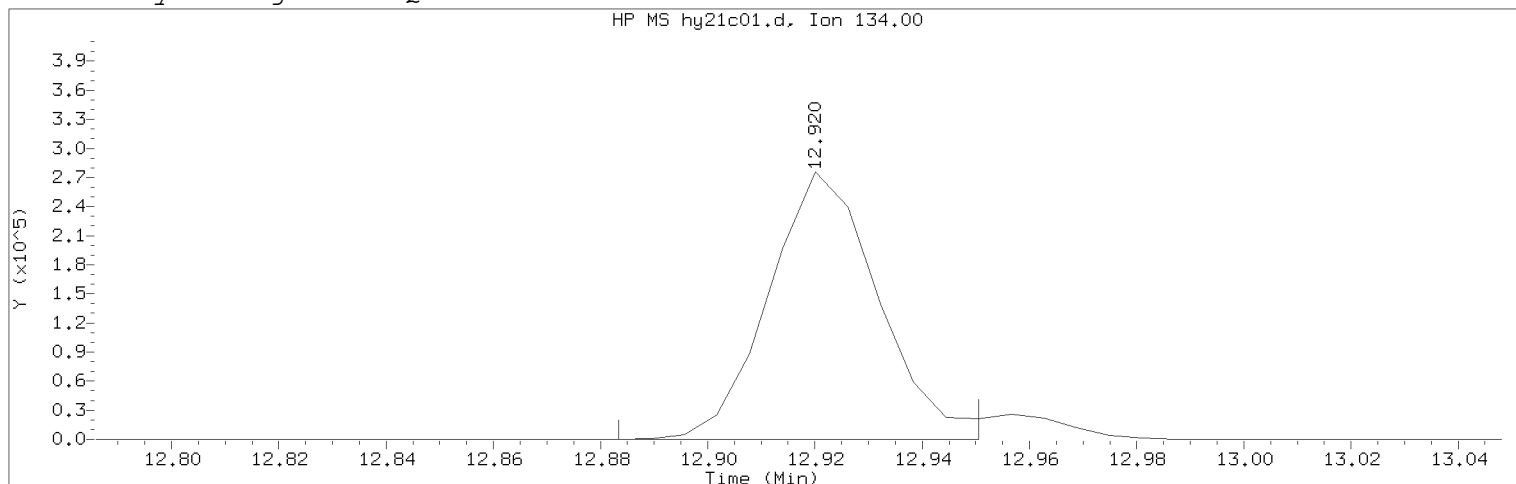
Lab Sample ID: VSTD010

Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 1792	
Retention Time (minutes)	: 12.512	
Quant Ion	: 110.00	
Area	: 91414	
On-column Amount (ng)	: 10.3266	
Integration start scan	: 1785	Integration stop scan: 1816
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:21 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-MAY-2020 21:25
Date, time and analyst ID of latest file update: 21-May-2020 21:25 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

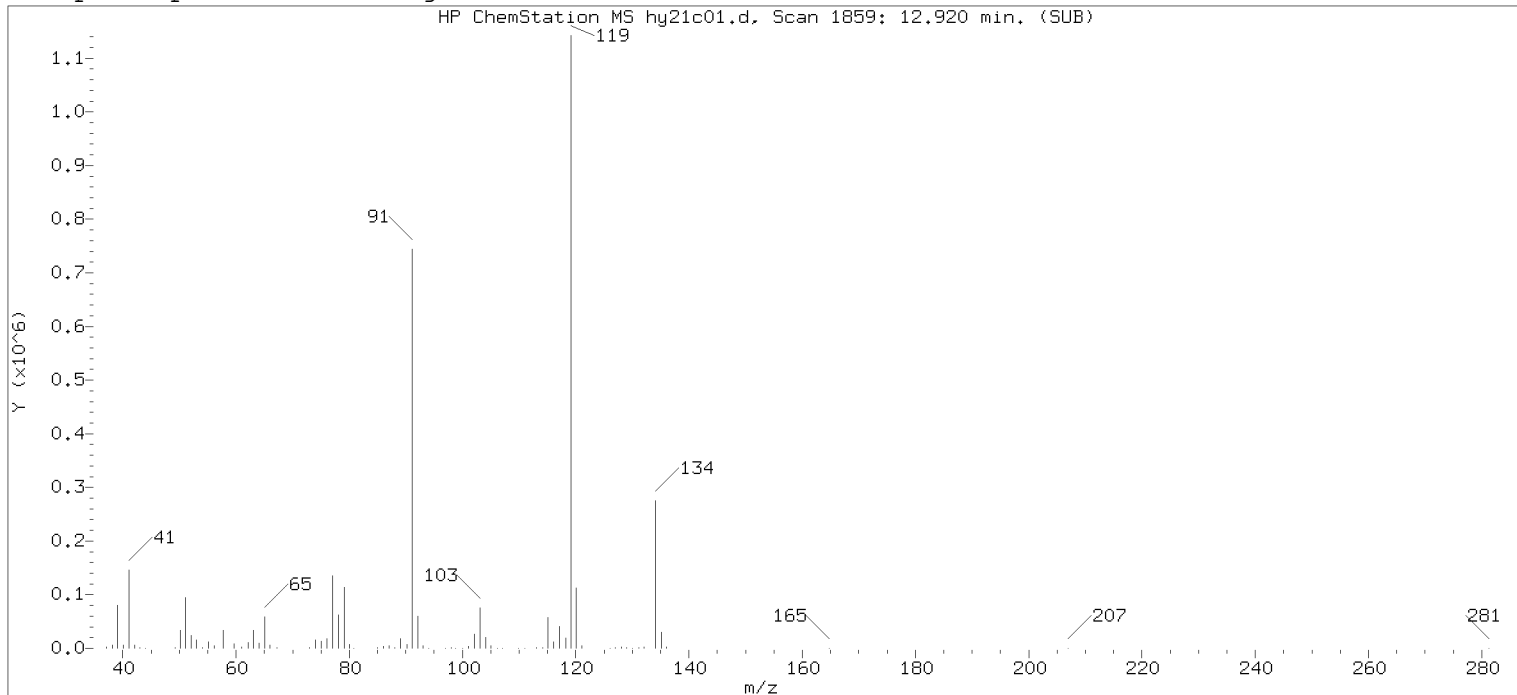
Compound Number	: 126	
Compound Name	: tert-Butylbenzene	
Scan Number	: 1859	
Retention Time (minutes)	: 12.920	
Quant Ion	: 134.00	
Area (flag)	: 392116M	
On-Column Amount (ng)	: 10.0156	
Integration start scan	: 1852	Integration stop scan: 1863
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

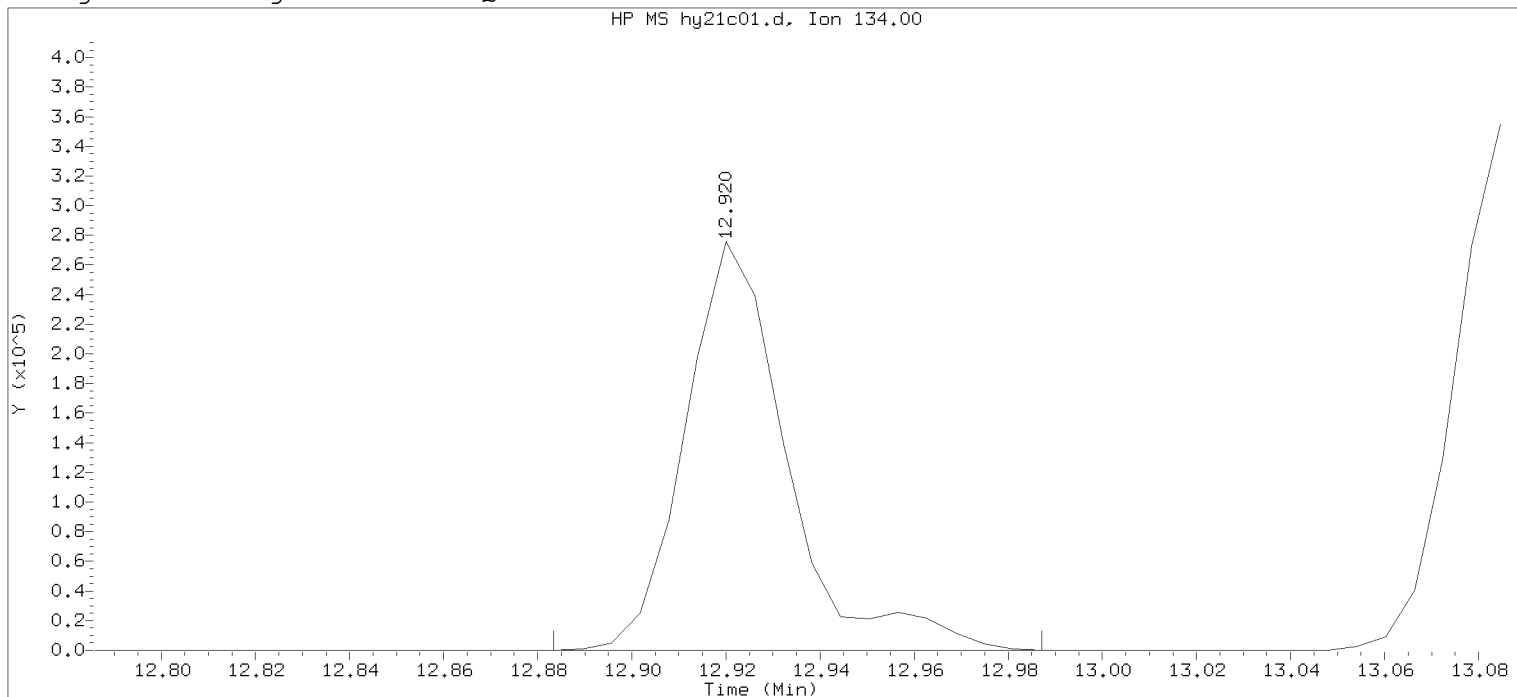
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:21

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 8260W25

Calibration date and time: 21-MAY-2020 20:40

Date, time and analyst ID of latest file update: 21-May-2020 20:40 chemist

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 126

Compound Name : tert-Butylbenzene

Scan Number : 1859

Retention Time (minutes): 12.920

Quant Ion : 134.00

Area : 415558

On-column Amount (ng) : 10.6144

Integration start scan : 1852 Integration stop scan: 1869

Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12.

Target 3.5 esignature user RA564j Page 328 of 448

Data File: /chem2/HP19094.i/20jan06i.b/hj06t01.d

Page 1

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

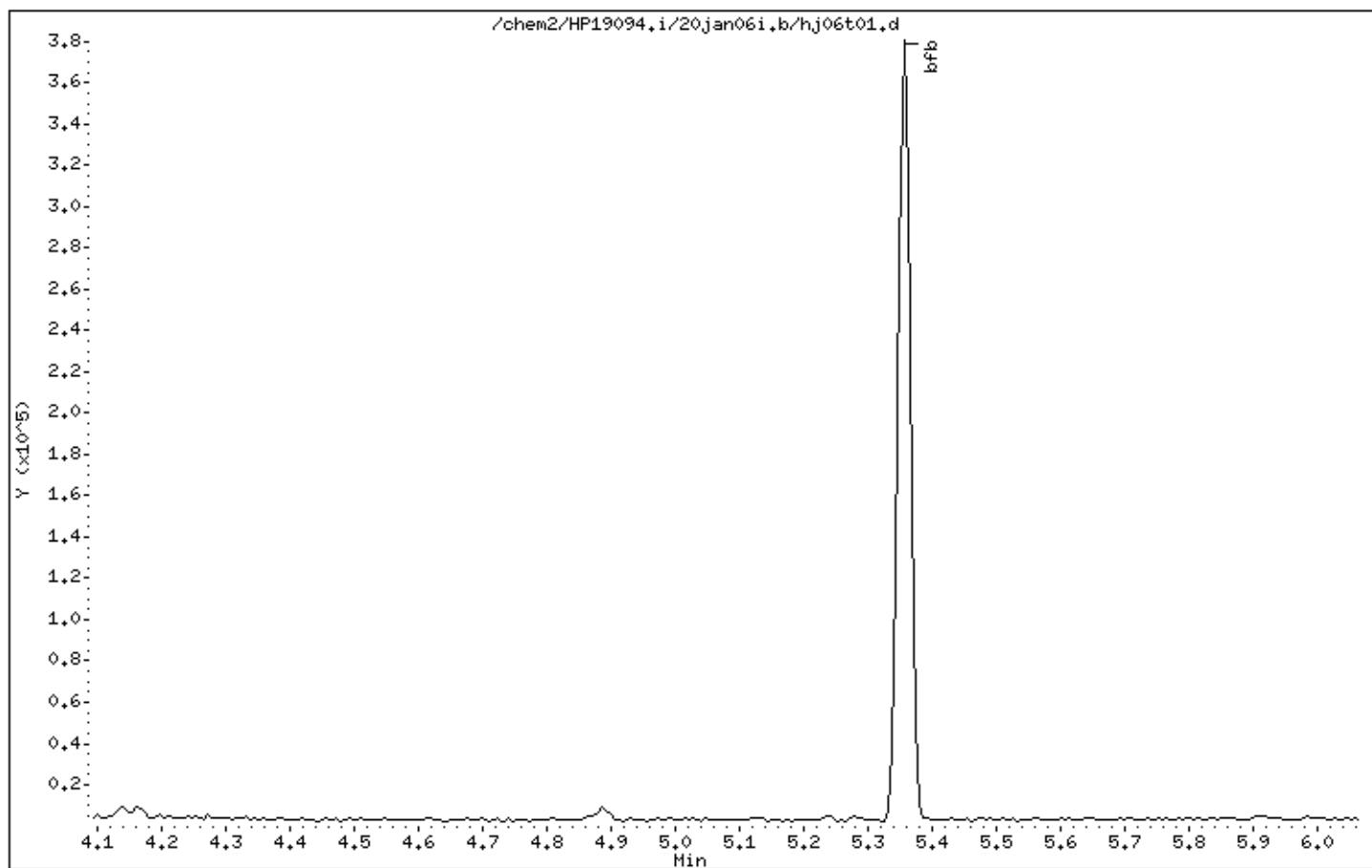
Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25



Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

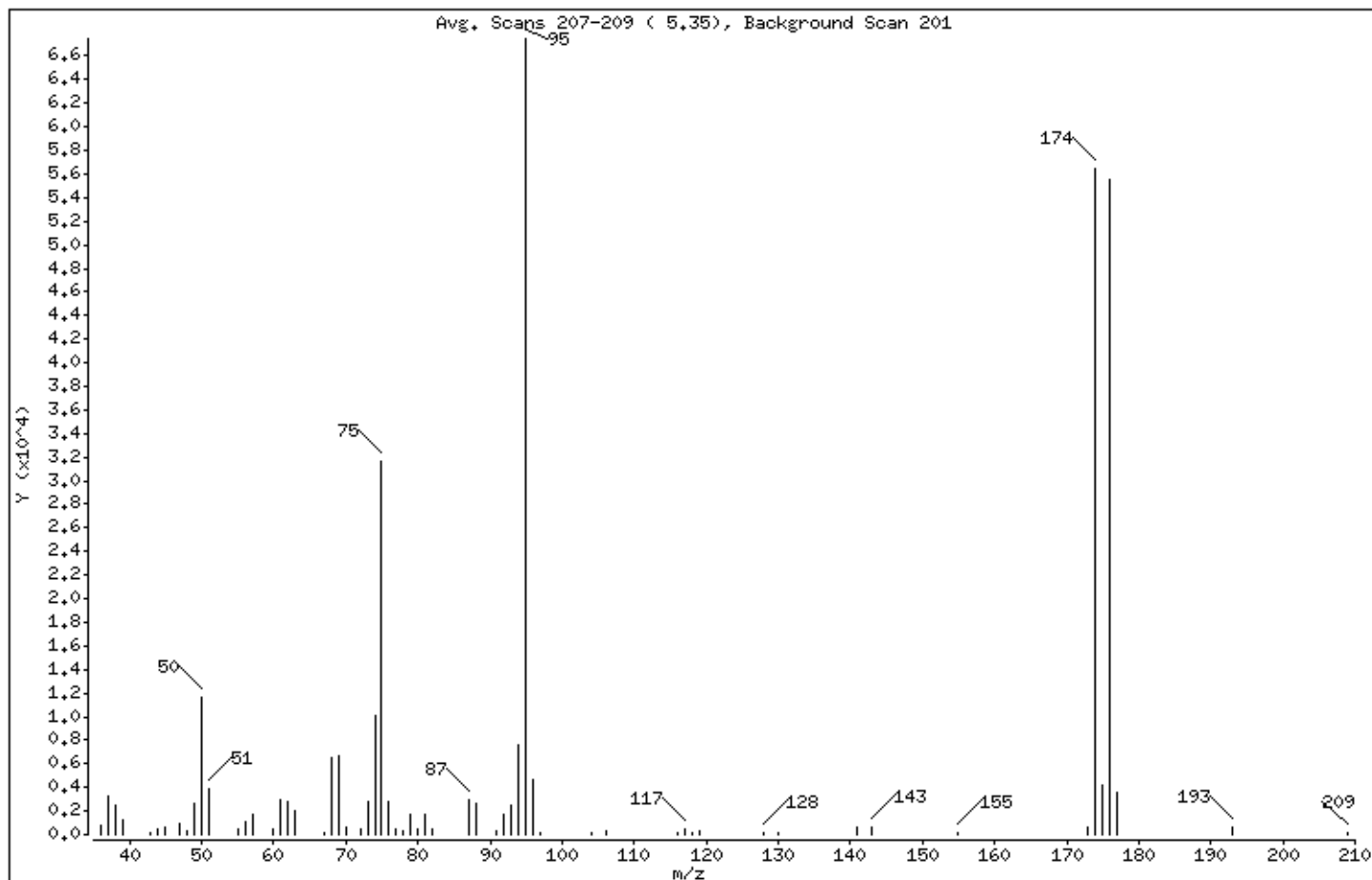
Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.27
75	30.00 - 60.00% of mass 95	46.81
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.87 (1.05)
174	50.00 - 100.00% of mass 95	83.57
175	5.00 - 9.00% of mass 174	6.30 (7.54)
176	95.00 - 101.00% of mass 174	82.22 (98.38)
177	5.00 - 9.00% of mass 176	5.38 (6.54)

Date : 06-JAN-2020 10:35

Client ID: 50NG BFB

Instrument: HP19094.i

Sample Info: 50NG BFB;BFB AUG 02 2019 ;1;3;3;3;3

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0,25

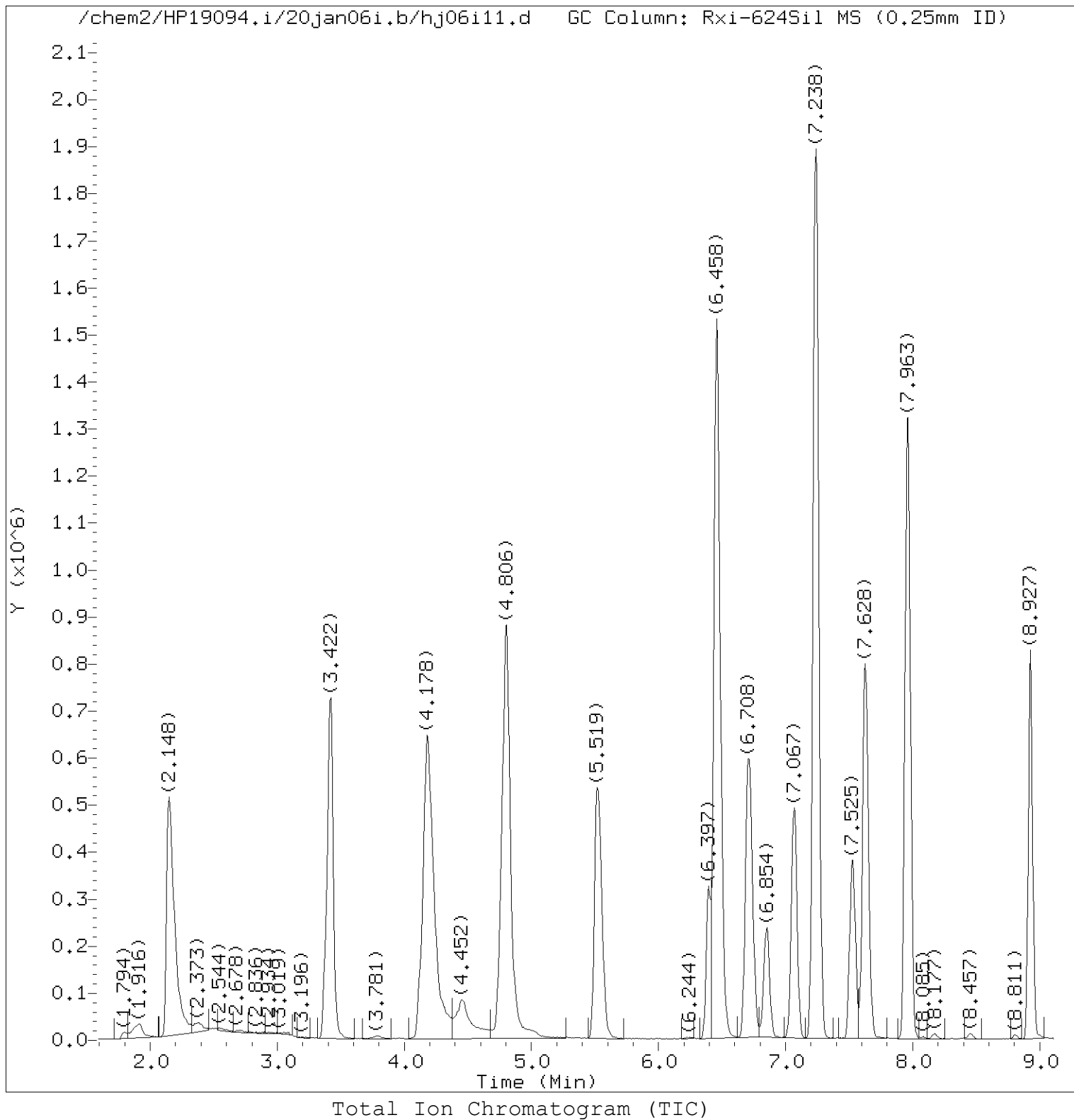
Data File: hj06t01.d

Spectrum: Avg. Scans 207-209 (5.35), Background Scan 201

Location of Maximum: 95.00

Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	728	61.00	3008	81.00	1673	119.00	311
37.00	3211	62.00	2746	82.00	464	128.00	179
38.00	2548	63.00	2022	87.00	2913	130.00	83
39.00	1276	67.00	141	88.00	2633	141.00	588
43.00	92	68.00	6446	91.00	362	143.00	676
44.00	477	69.00	6605	92.00	1689	155.00	88
45.00	580	70.00	566	93.00	2528	173.00	590
47.00	876	72.00	410	94.00	7552	174.00	56384
48.00	366	73.00	2820	95.00	67472	175.00	4254
49.00	2645	74.00	10007	96.00	4591	176.00	55472
50.00	11651	75.00	31584	97.00	183	177.00	3628
51.00	3893	76.00	2766	104.00	180	193.00	604
55.00	413	77.00	463	106.00	329	209.00	154
56.00	1070	78.00	272	116.00	96		
57.00	1740	79.00	1750	117.00	427		
60.00	500	80.00	538	118.00	84		



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d
Injection date and time: 06-JAN-2020 11:19

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

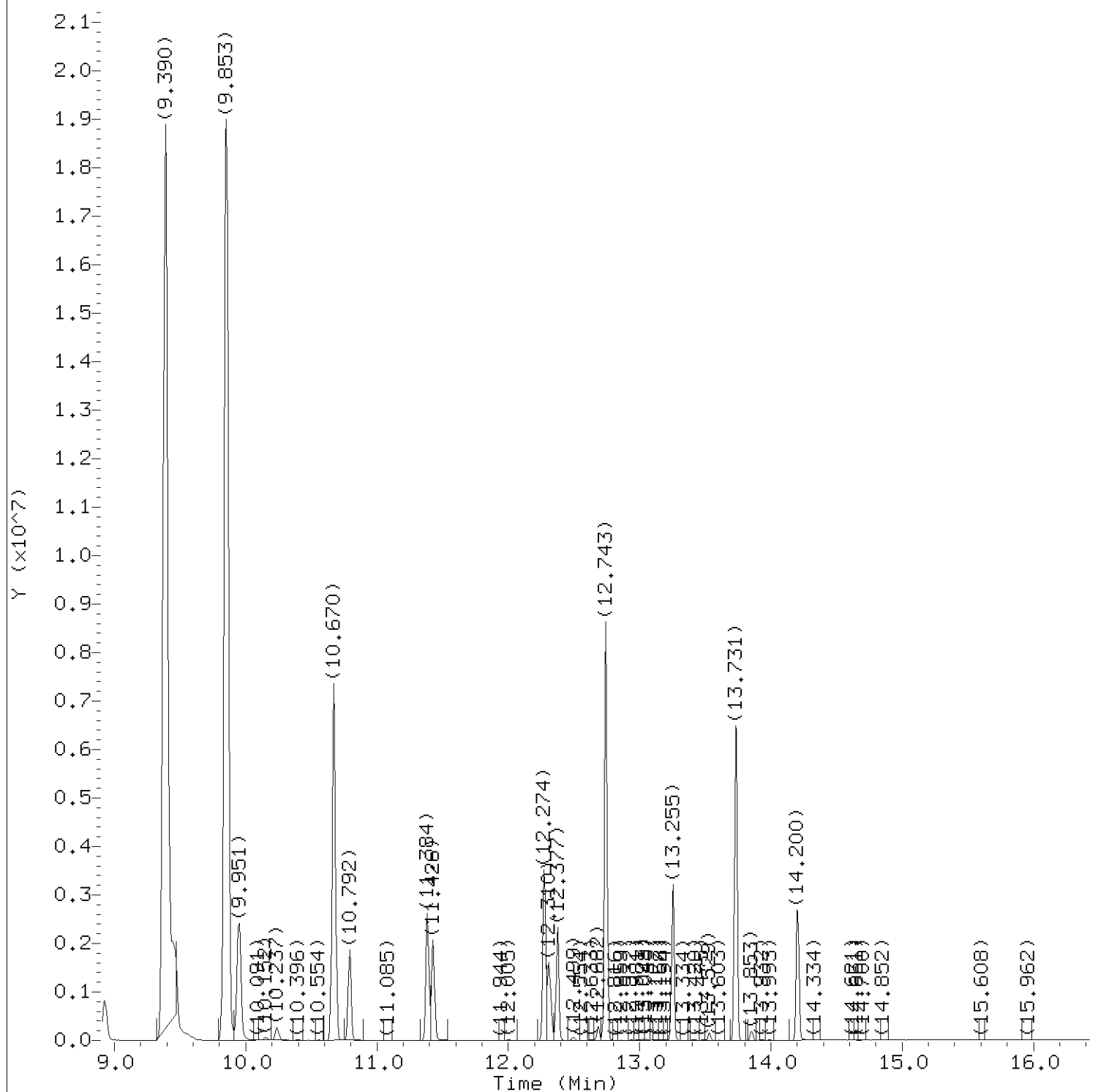
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d
Injection date and time: 06-JAN-2020 11:19

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:19

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	1567293M	25.000
25) Acetonitrile	(1)	4.178	41	2320400M	1000.000
26)*t-Butyl Alcohol-d10	(1)	4.458	65	119574	50.000
36) Vinyl Acetate	(2)	5.519	43	1721874	25.000
43) Methyl Acrylate	(2)	6.458	55	3085421M	125.000
53) 1-Chlorobutane	(2)	7.238	56	2492014	25.000
63)*Fluorobenzene	(2)	7.963	96	1935181	10.000
77) Chloroacetonitrile	(2)	9.439	75	1561287	1250.000
78) 2-Chloroethyl vinyl ether	(2)	9.469	63	555274	25.000
97)*Chlorobenzene-d5	(3)	11.384	117	1527614	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	787230	50.000
112) Cyclohexanone	(1)	12.310	55	749673M	1250.000
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	793148	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

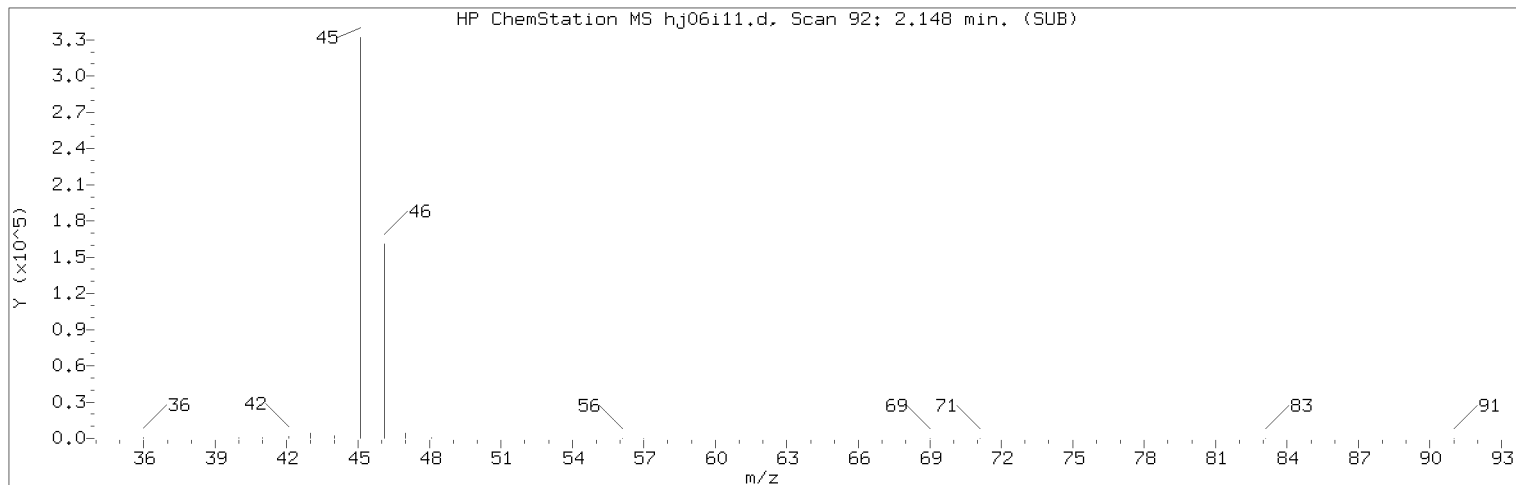
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

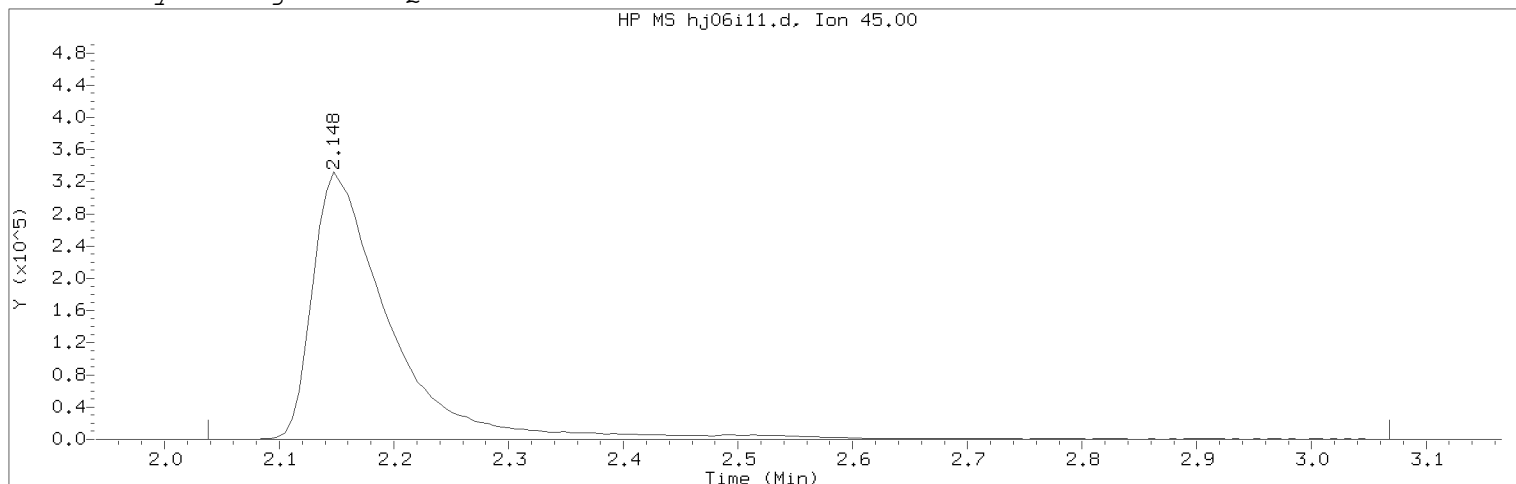
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

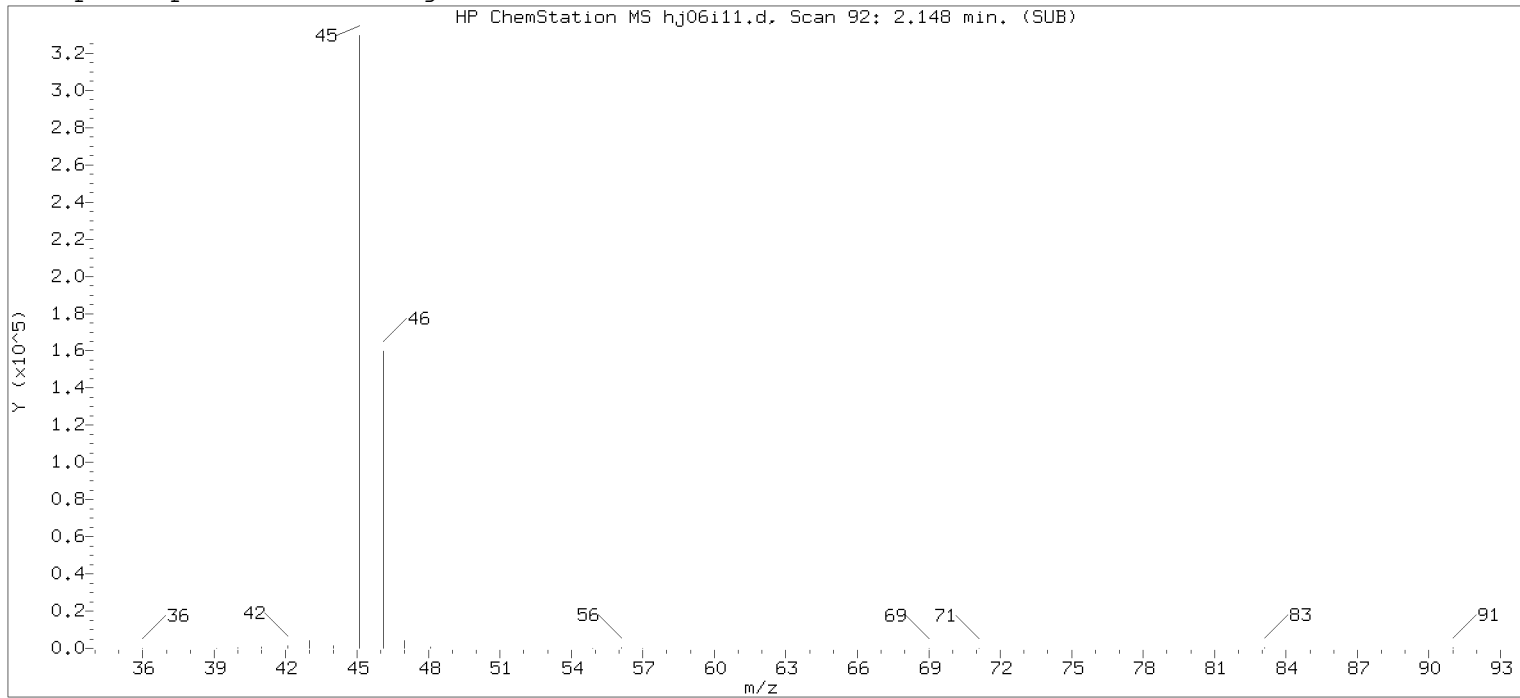
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 1567293M
On-Column Amount (ng) : 25.0000
Integration start scan : 73 Integration stop scan: 242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

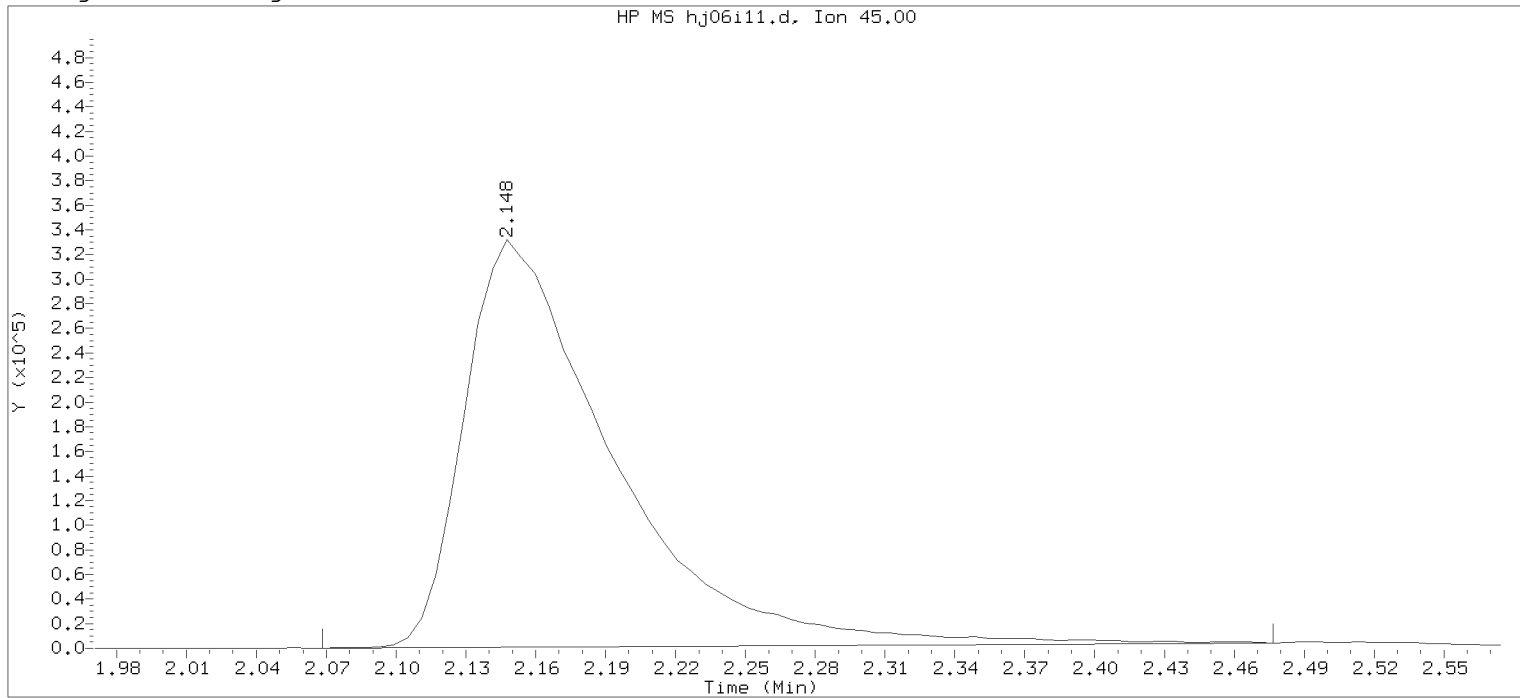
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

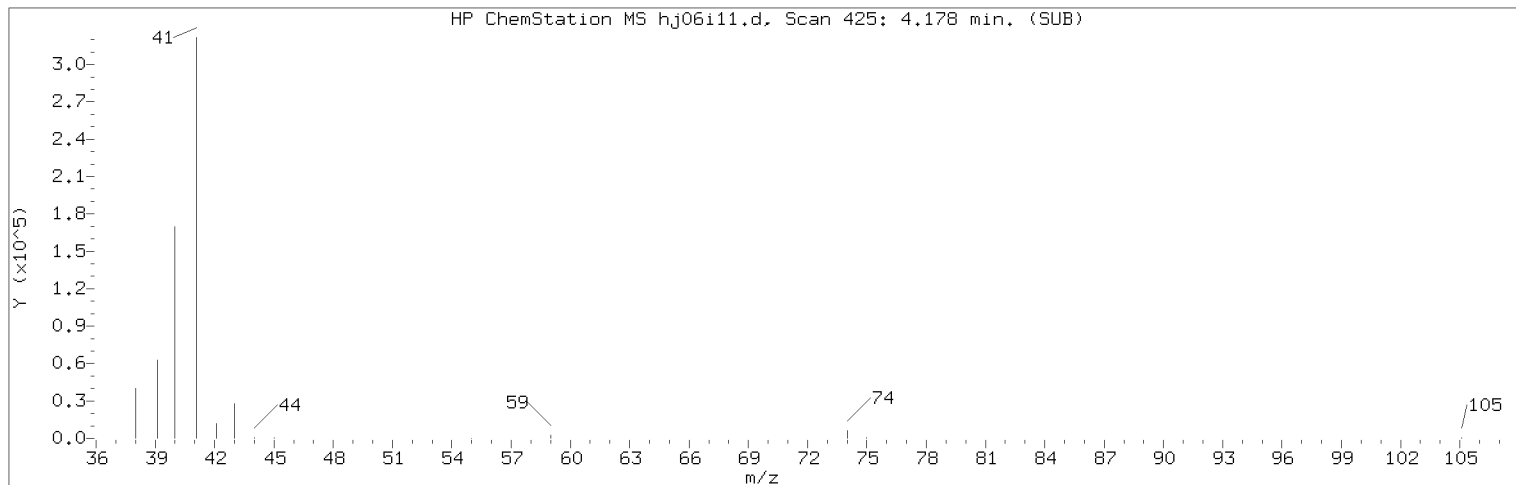
Sample Name: VSTD025

Lab Sample ID: VSTD025

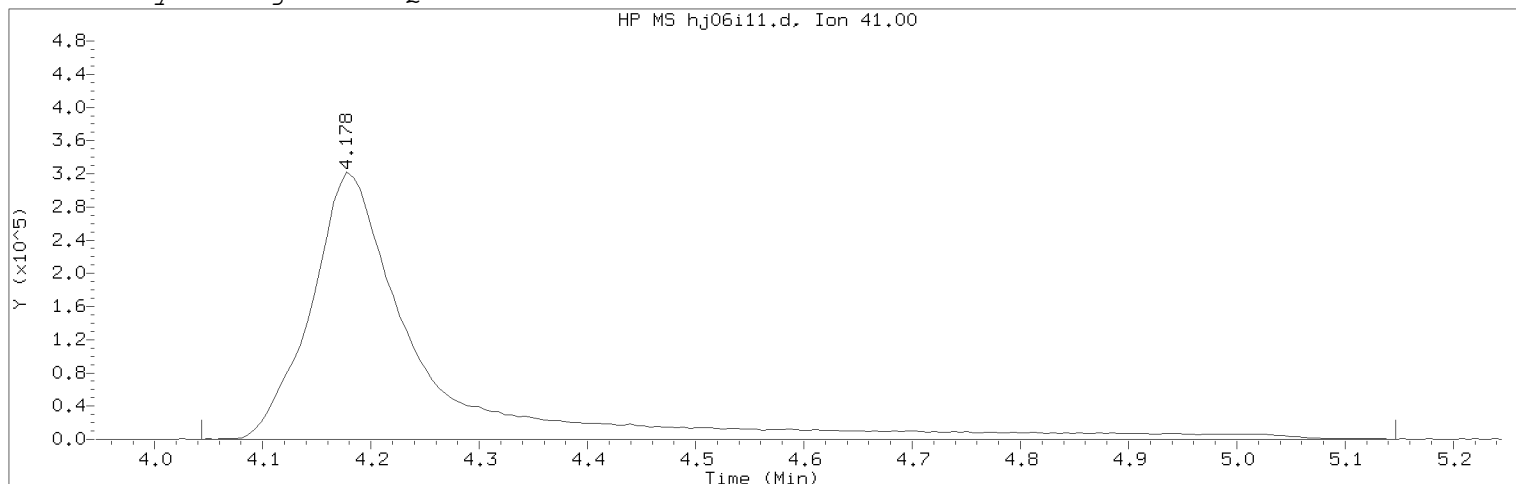
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 1471270	
On-column Amount (ng)	: 25.4615	
Integration start scan	: 78	Integration stop scan: 145
Y at integration start	: 0	Y at integration end: 4362

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.
Target 3.5 esignature user RA564j Page 336 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

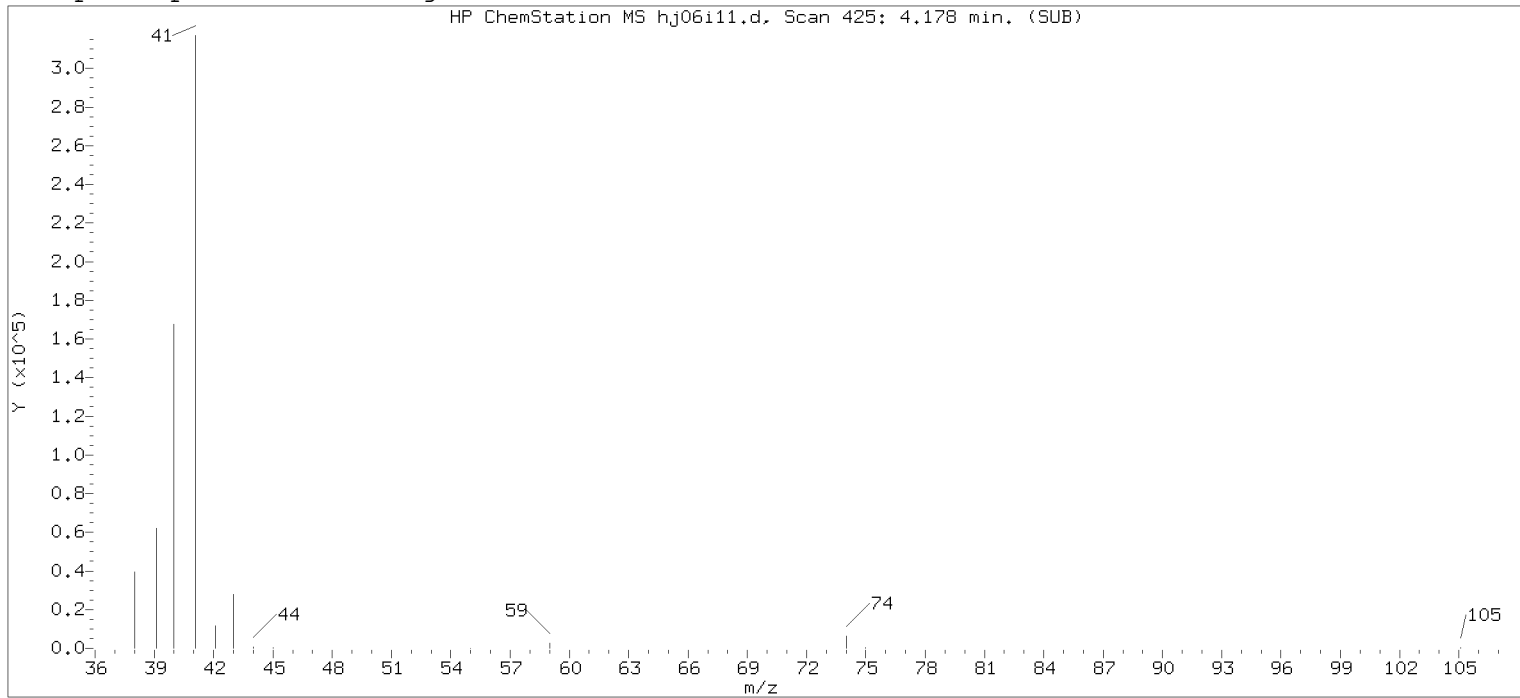
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area (flag) : 2320400M
On-Column Amount (ng) : 1000.0000
Integration start scan : 402 Integration stop scan: 583
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

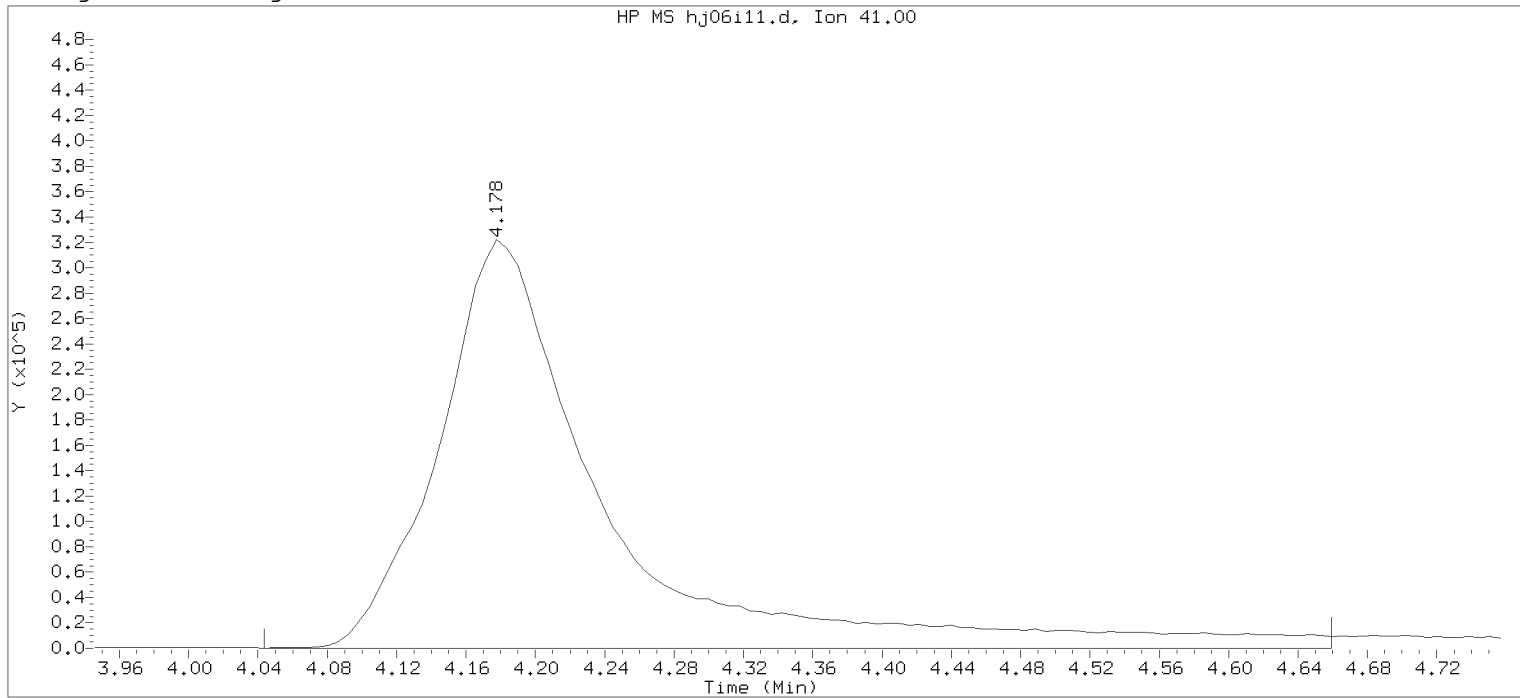
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

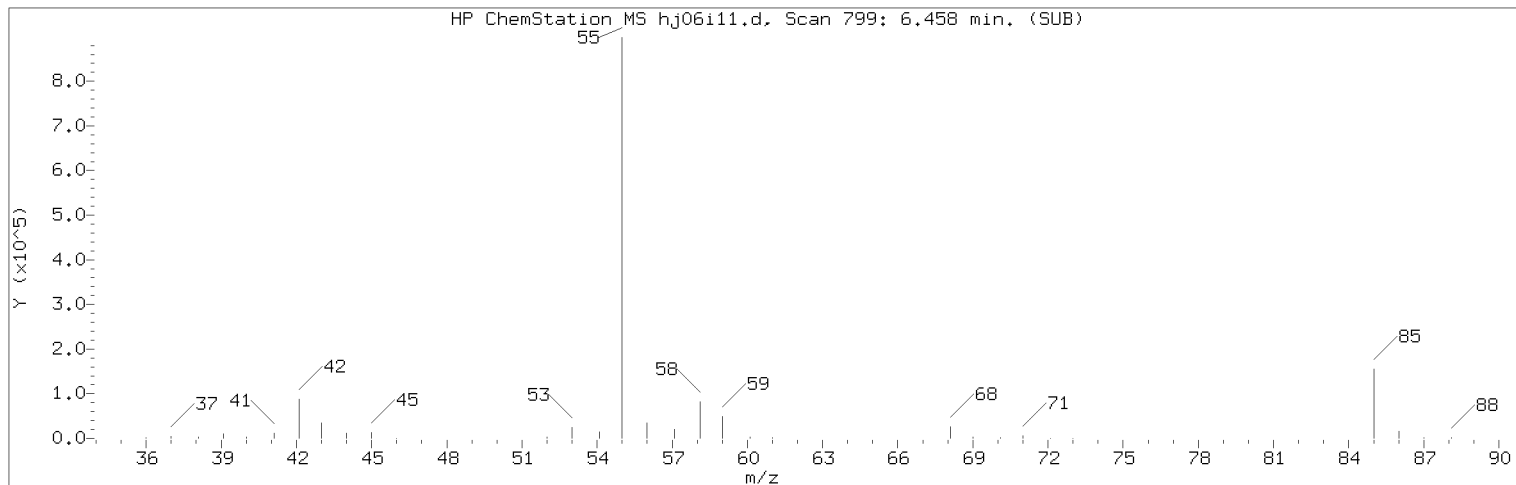
Sample Name: VSTD025

Lab Sample ID: VSTD025

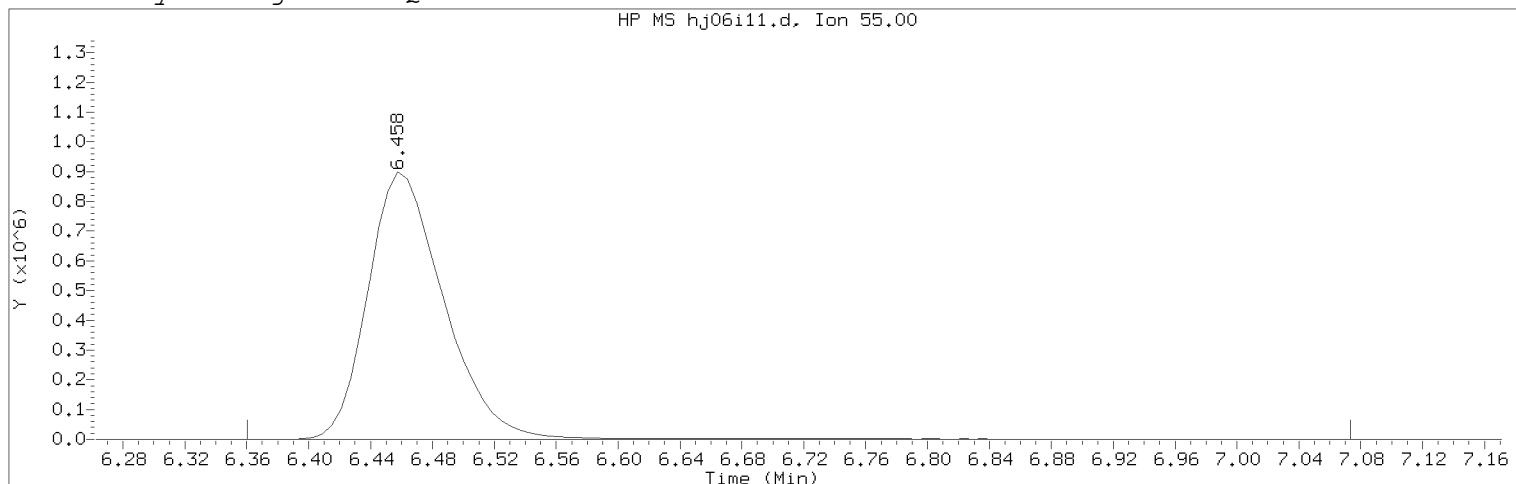
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area : 2141775
On-column Amount (ng) : 897.1952
Integration start scan : 402 Integration stop scan: 503
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.
Target 3.5 esignature user RA564j Page 338 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

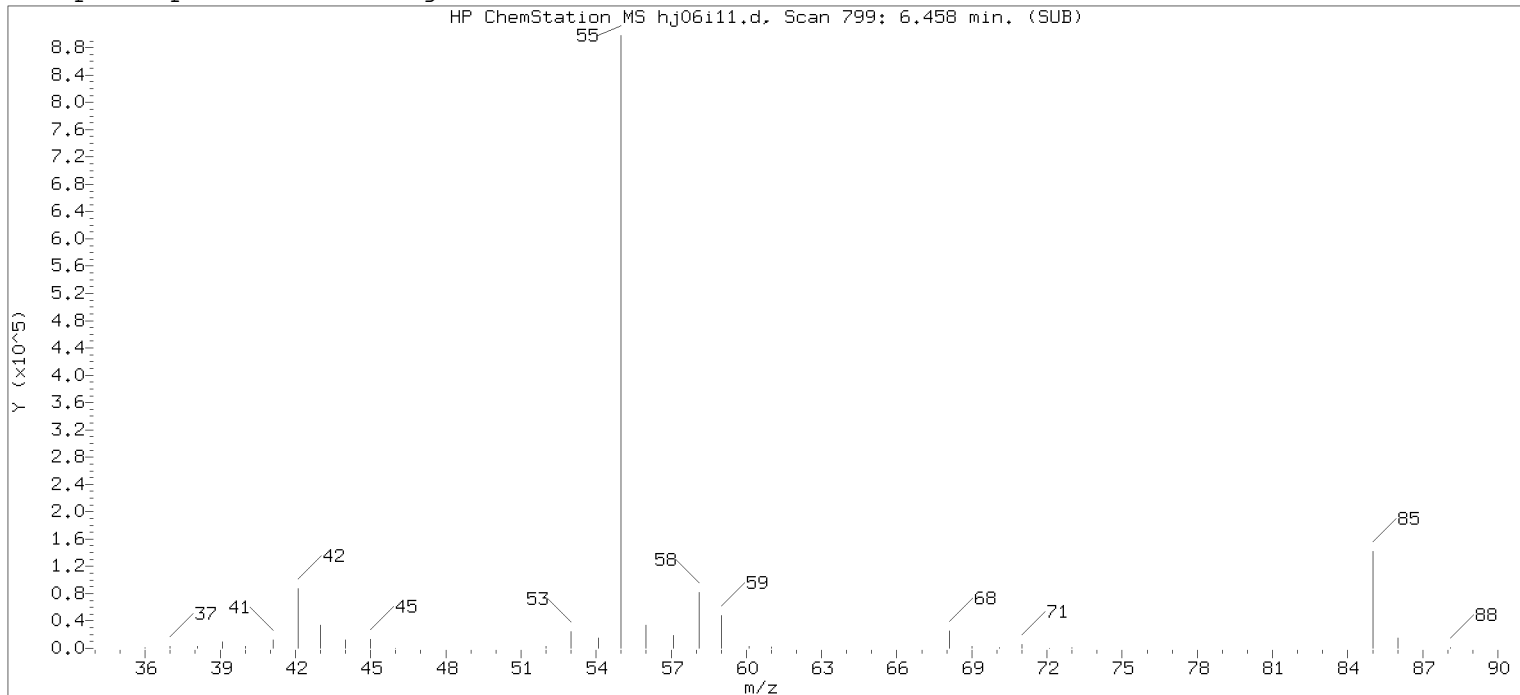
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 799
Retention Time (minutes): 6.458
Quant Ion : 55.00
Area (flag) : 3085421M
On-Column Amount (ng) : 125.0000
Integration start scan : 782 Integration stop scan: 899
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

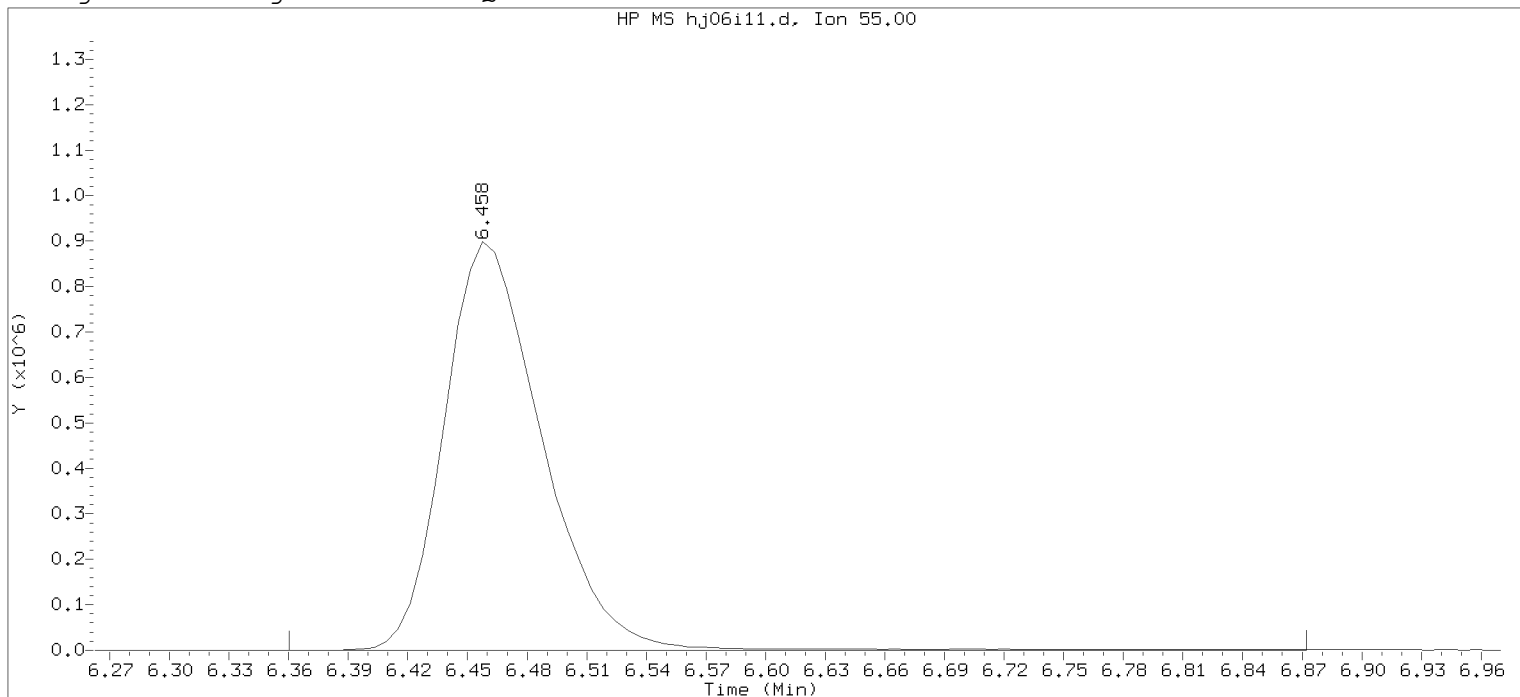
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

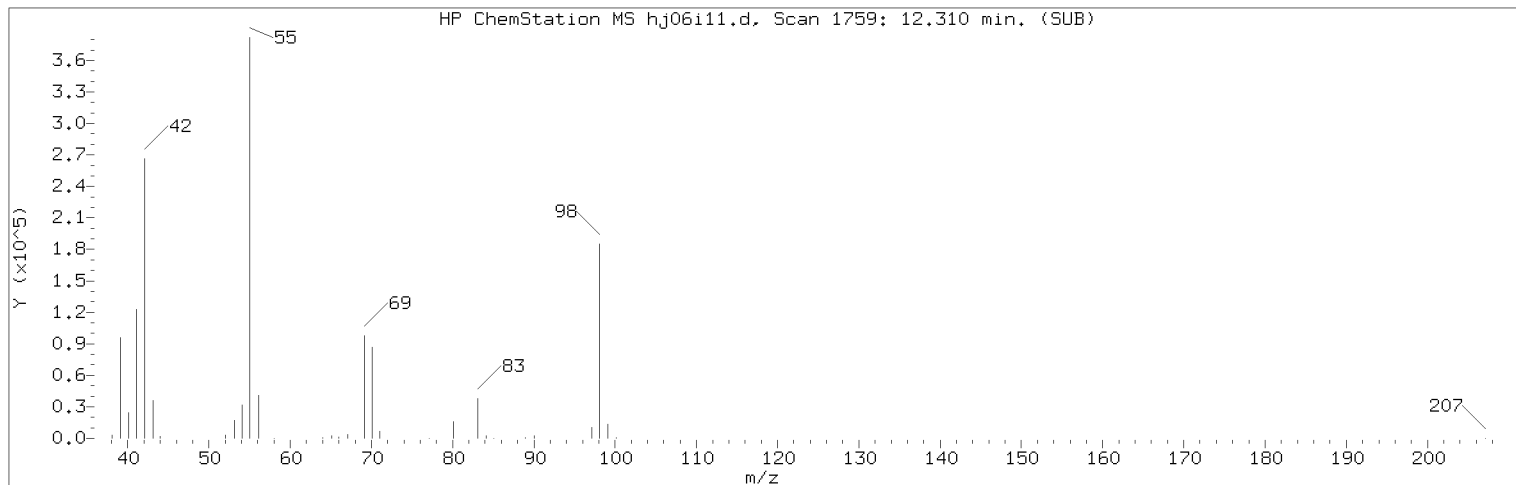
Sample Name: VSTD025

Lab Sample ID: VSTD025

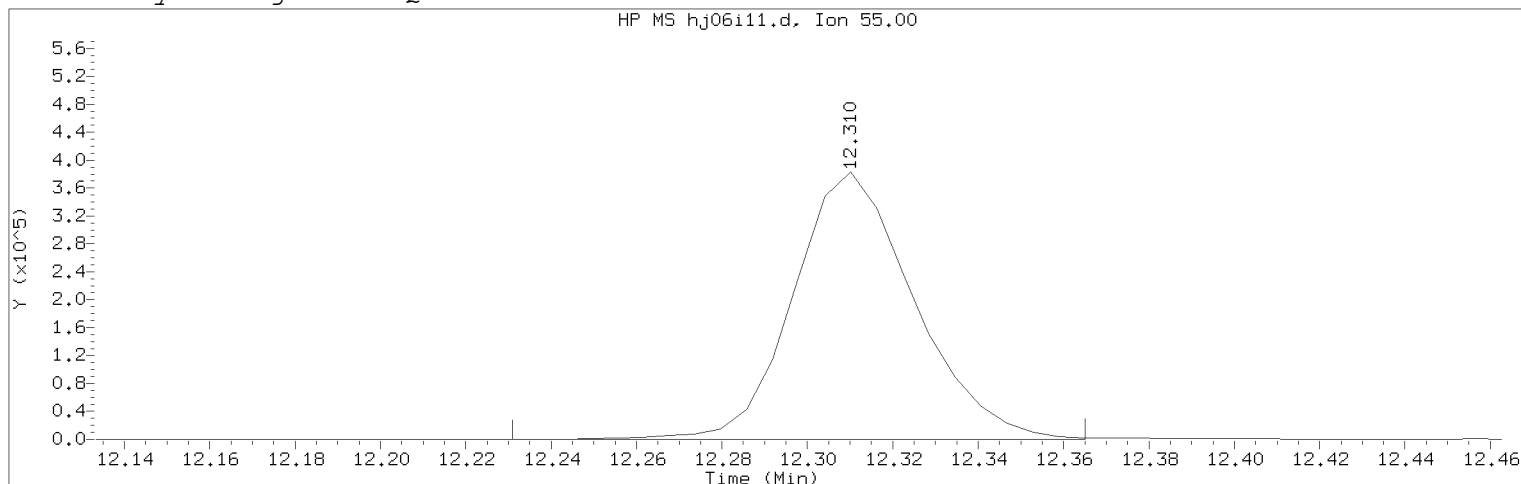
Compound Number	: 43	
Compound Name	: Methyl Acrylate	
Scan Number	: 799	
Retention Time (minutes)	: 6.458	
Quant Ion	: 55.00	
Area	: 3074426	
On-column Amount (ng)	: 125.6136	
Integration start scan	: 782	Integration stop scan: 866
Y at integration start	: 0	Y at integration end: 258

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.
Target 3.5 esignature user RAE64j Page 340 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

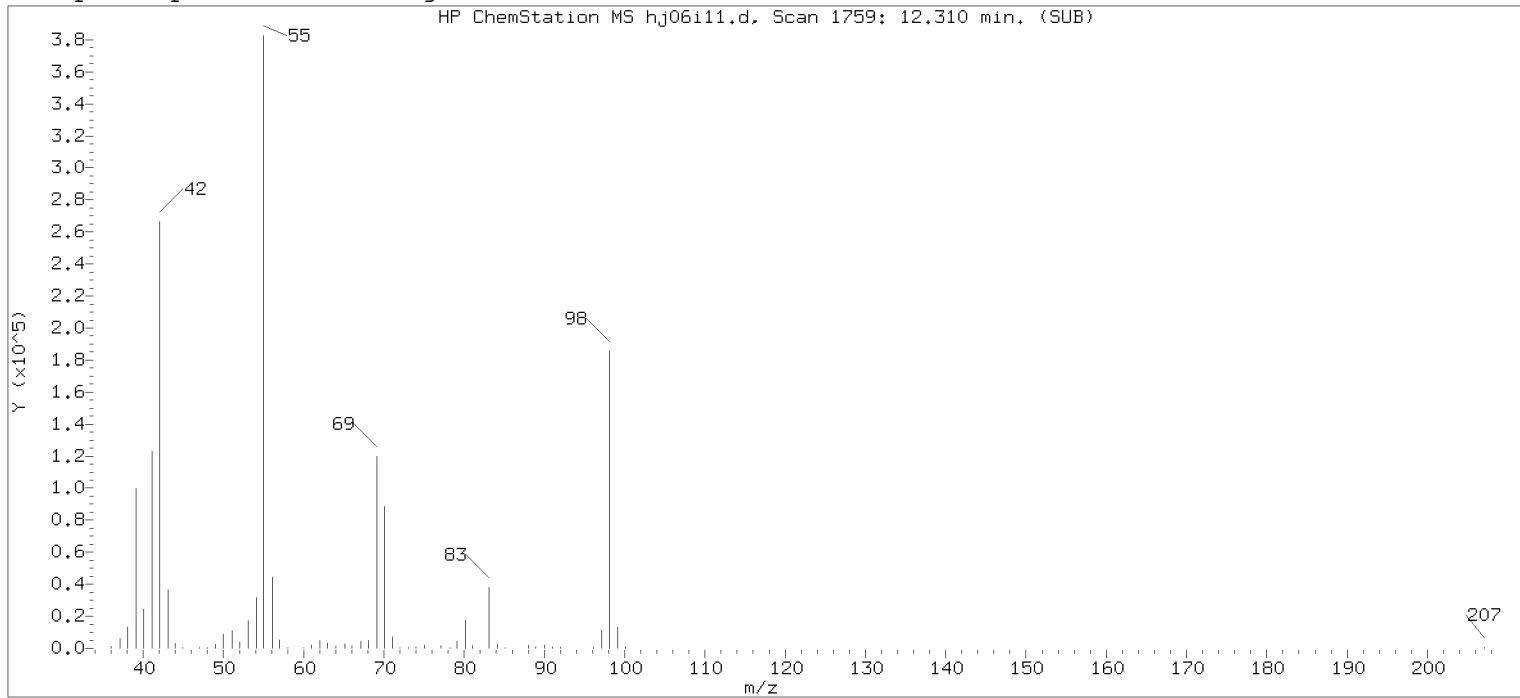
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 749673M
On-Column Amount (ng) : 1250.0000
Integration start scan : 1745 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

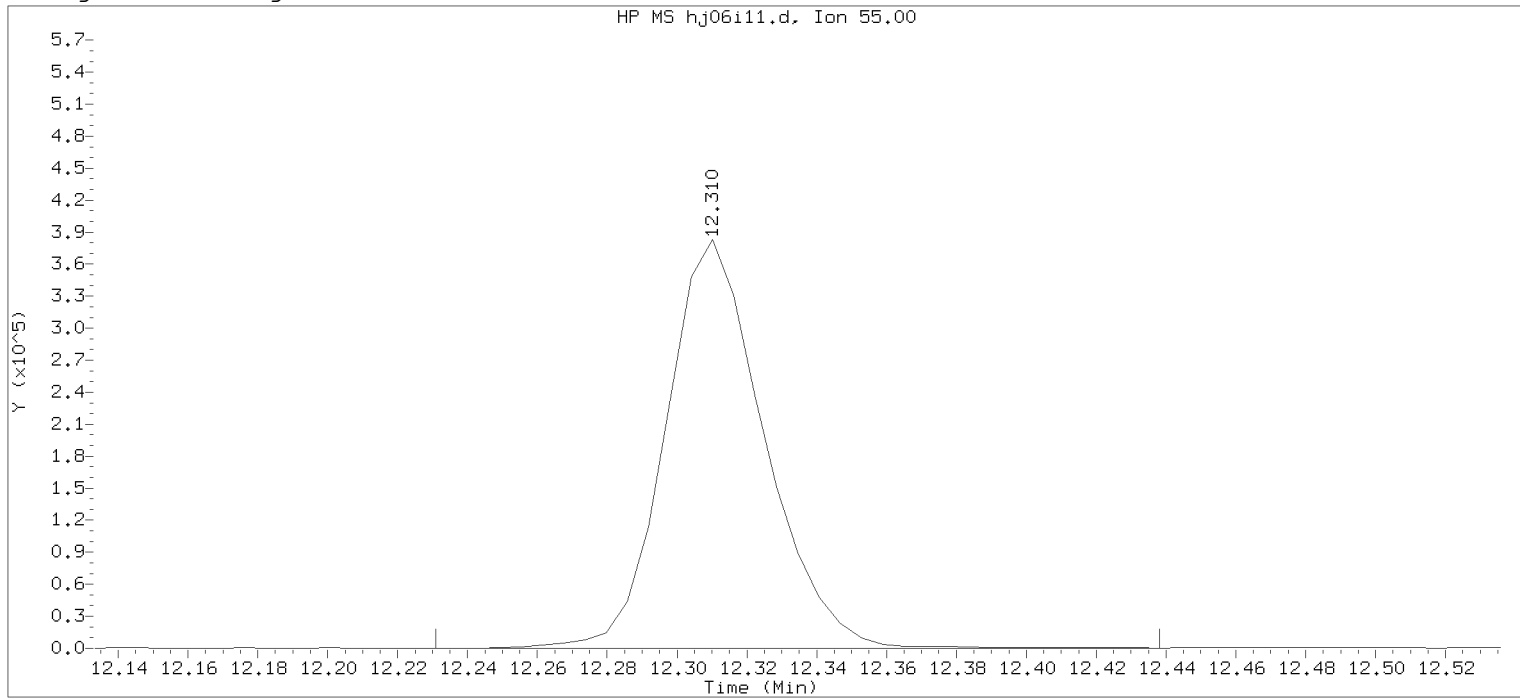
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:19 Analyst ID: JKH09052

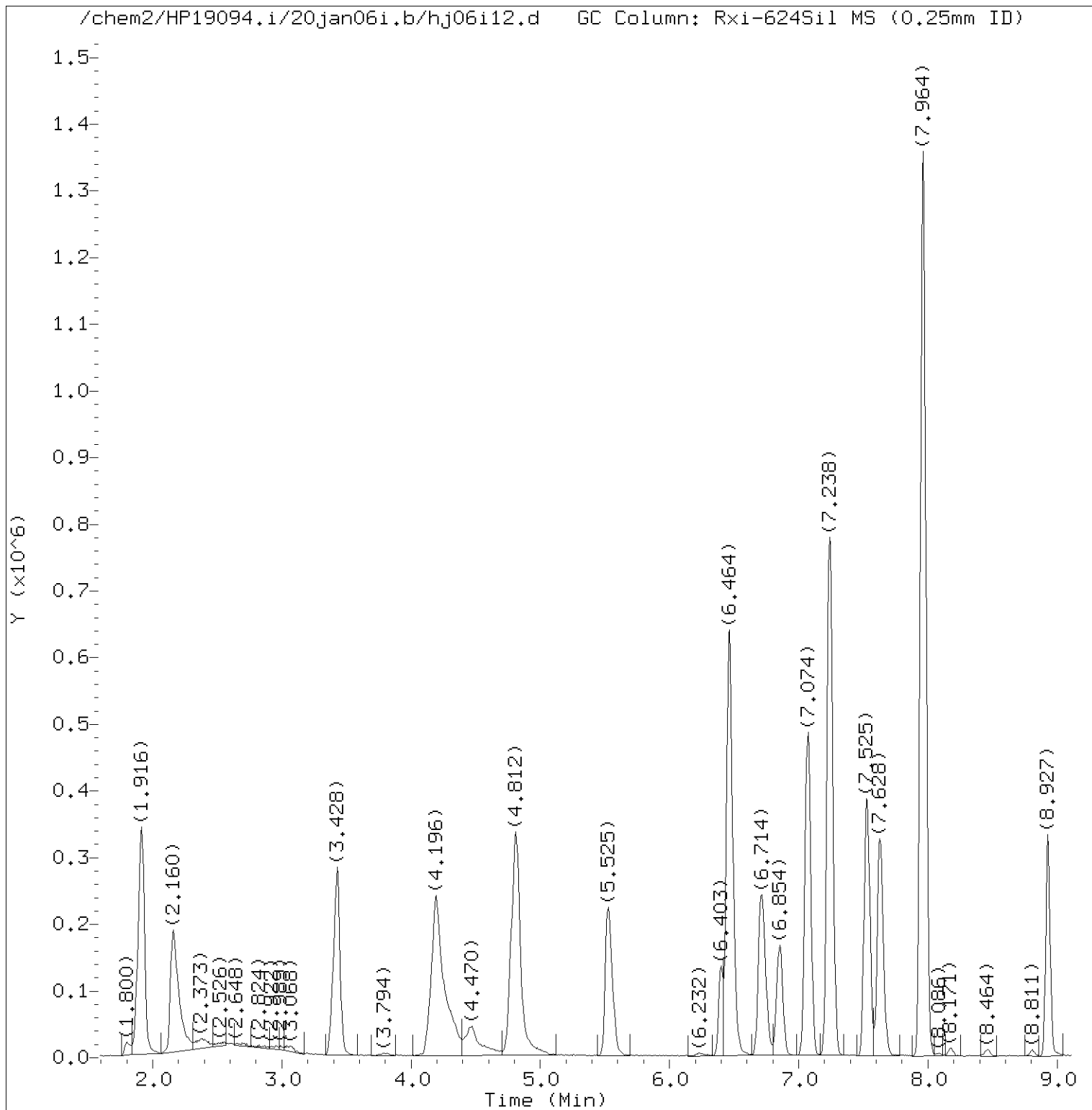
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD025

Lab Sample ID: VSTD025

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 752786	
On-column Amount (ng)	: 912.1339	
Integration start scan	: 1745	Integration stop scan: 1779
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.
Target 3.5 esignature user RA564j Page 342 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d
Injection date and time: 06-JAN-2020 11:41

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

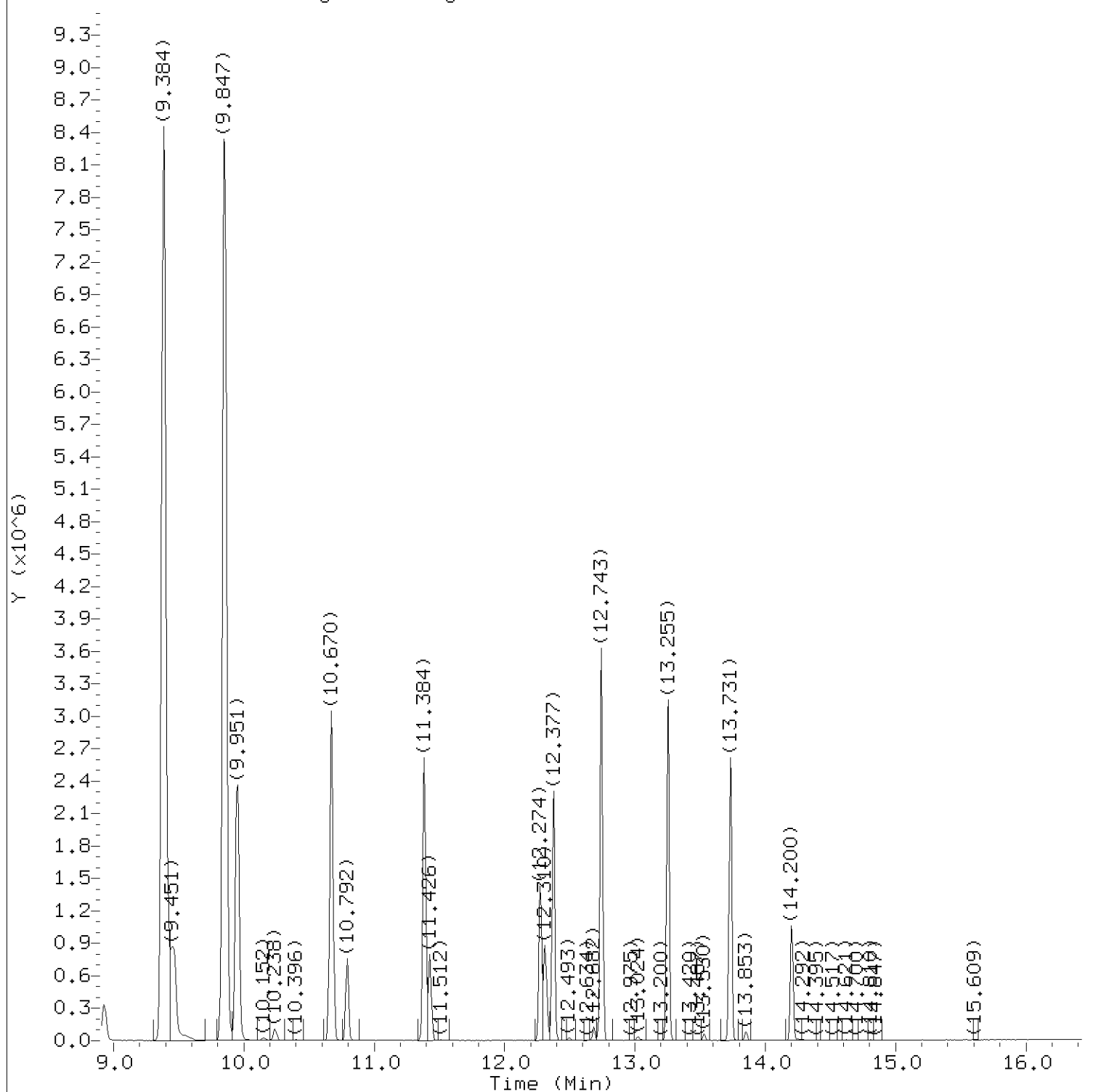
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d
Injection date and time: 06-JAN-2020 11:41

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.160	45	562958M	9.381
25) Acetonitrile	(1)	4.196	41	964447M	418.584
26)*t-Butyl Alcohol-d10	(1)	4.464	65	113216M	50.000
36) Vinyl Acetate	(2)	5.525	43	683409	9.880
43) Methyl Acrylate	(2)	6.464	55	1243208	49.775
53) 1-Chlorobutane	(2)	7.238	56	1026298	10.064
63)*Fluorobenzene	(2)	7.964	96	1966967	10.000
77) Chloroacetonitrile	(2)	9.445	75	668780	513.044
78) 2-Chloroethyl vinyl ether	(2)	9.470	63	242776	10.363
97)*Chlorobenzene-d5	(3)	11.384	117	1484003	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	317303	20.622
112) Cyclohexanone	(1)	12.310	55	396626M	582.802
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	785939	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

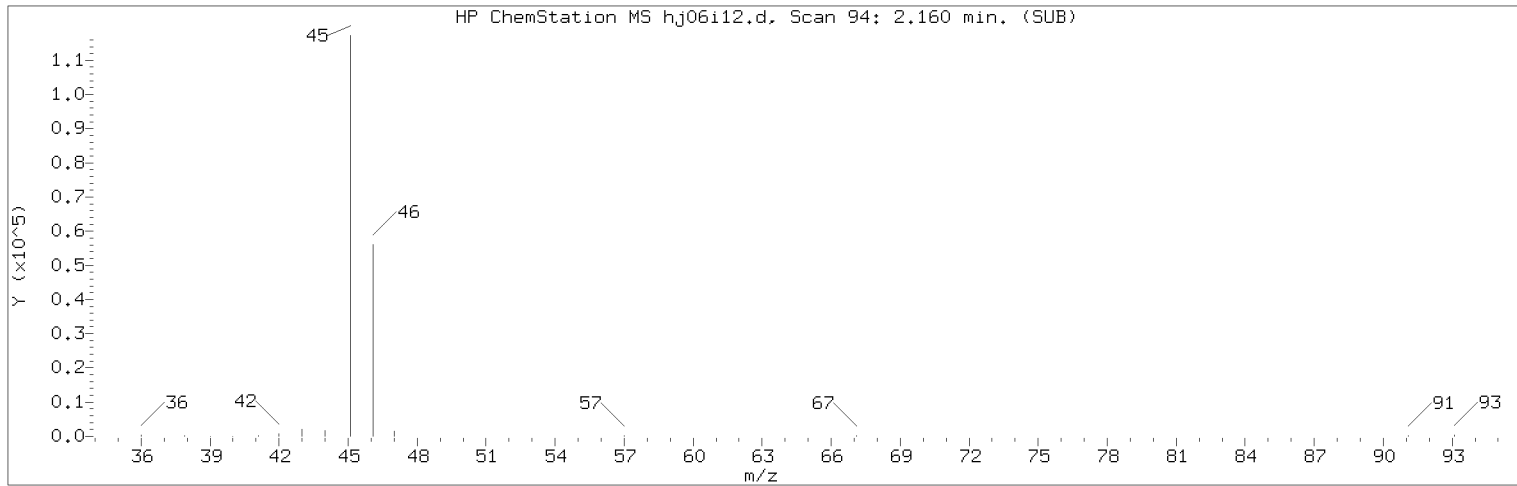
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

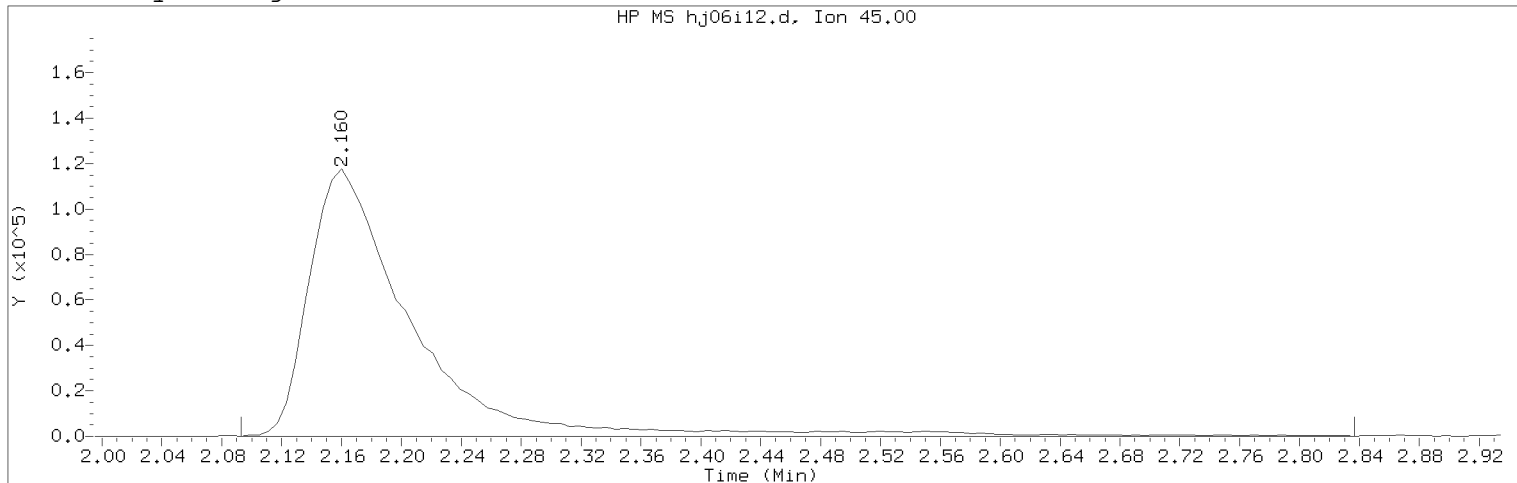
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

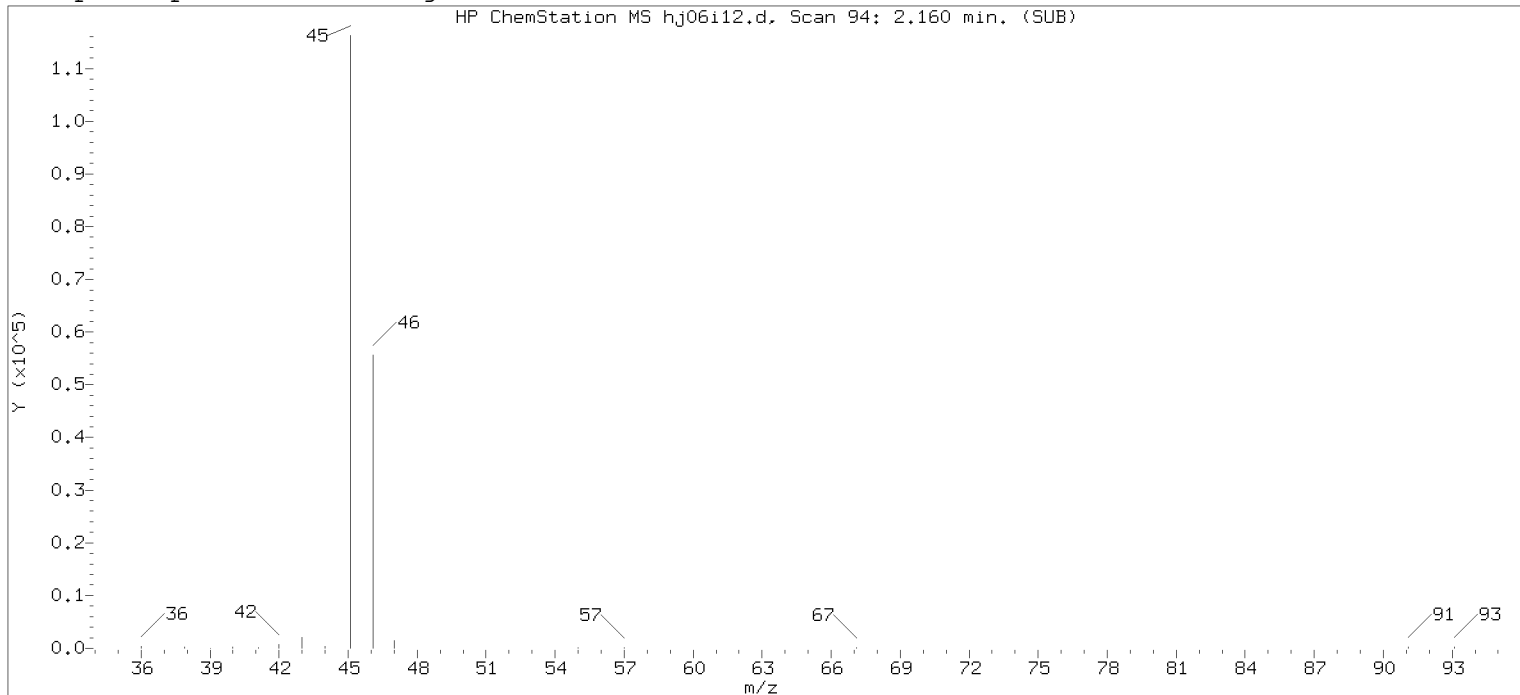
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 562958M
On-Column Amount (ng) : 9.3813
Integration start scan : 82 Integration stop scan: 204
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

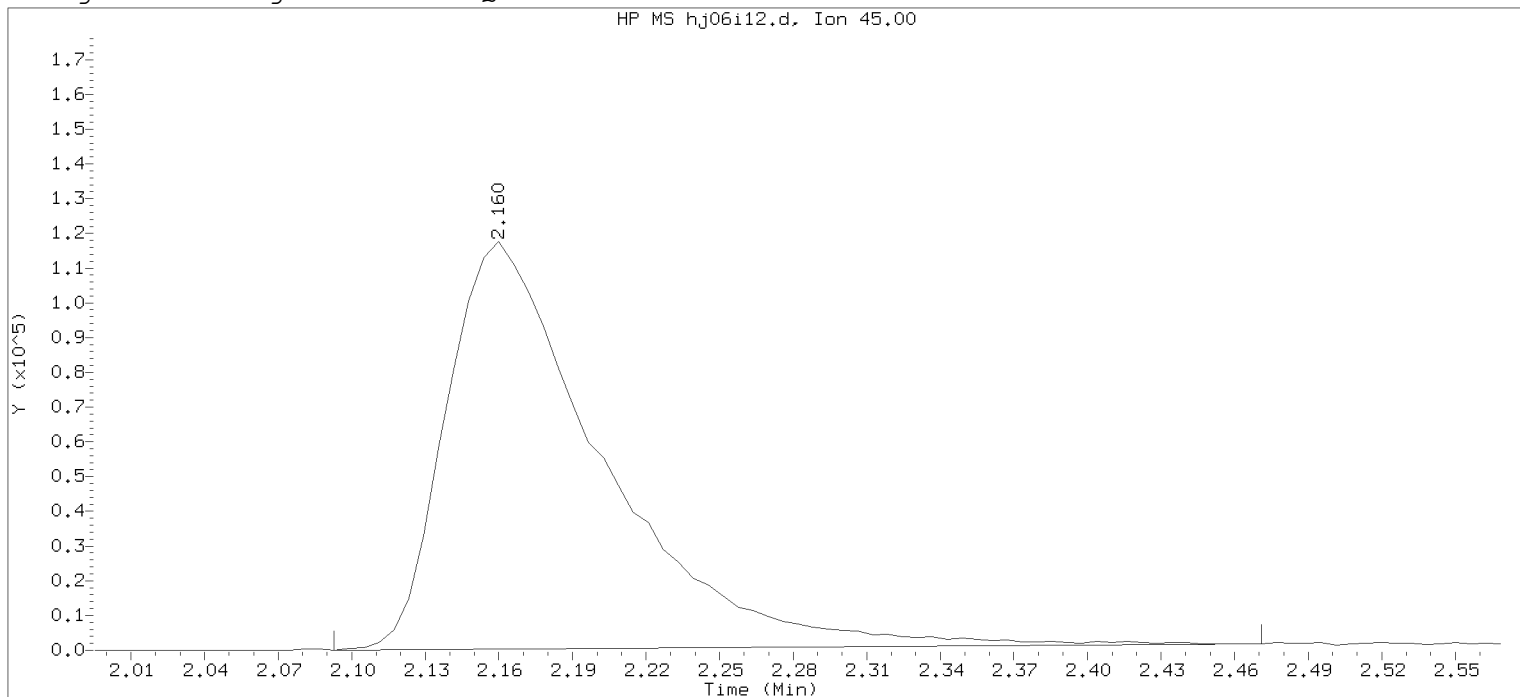
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 11:58

Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

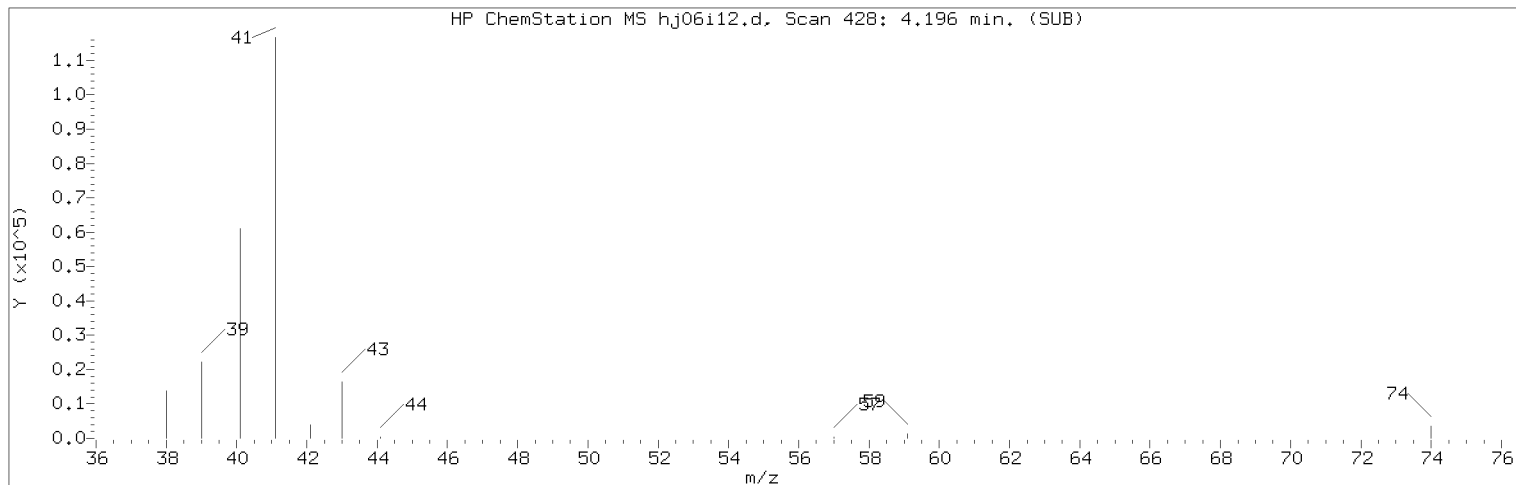
Sample Name: VSTD010

Lab Sample ID: VSTD010

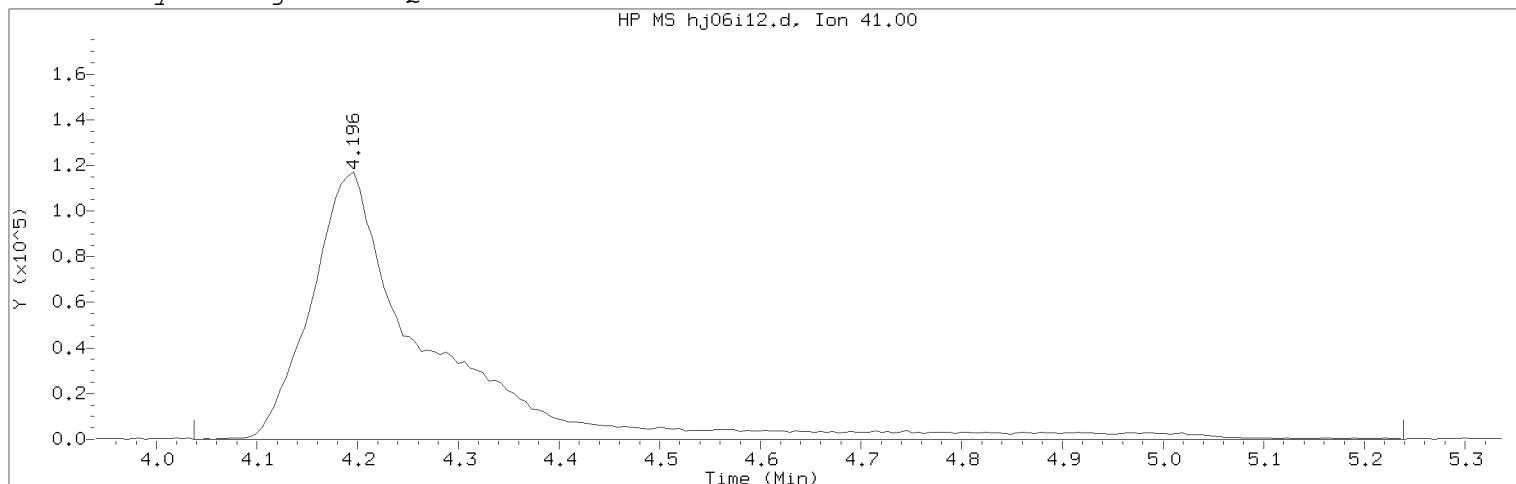
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 94	
Retention Time (minutes)	: 2.160	
Quant Ion	: 45.00	
Area	: 521719	
On-column Amount (ng)	: 7.5770	
Integration start scan	: 82	Integration stop scan: 144
Y at integration start	: 0	Y at integration end: 1789

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Target 3.5 esignature user RA564j Page 347 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

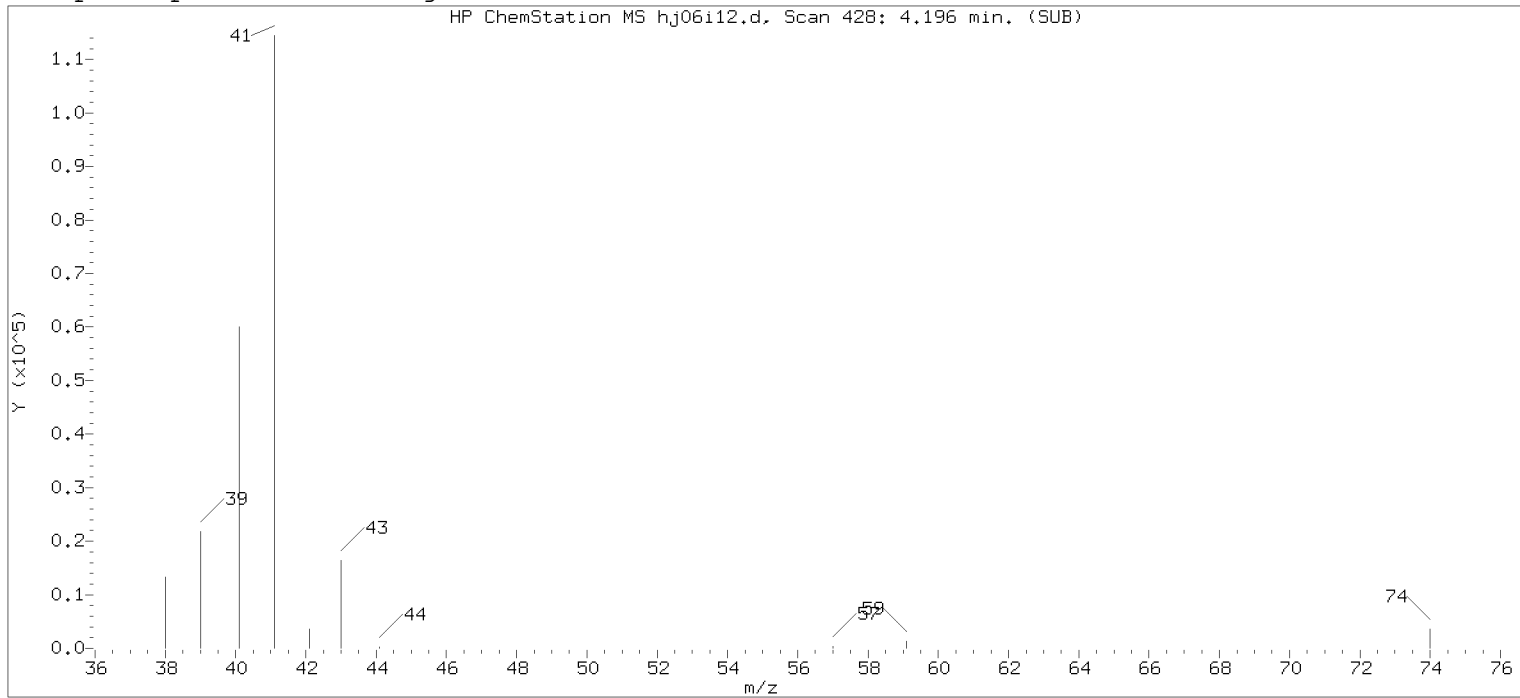
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area (flag) : 964447M
On-Column Amount (ng) : 418.5843
Integration start scan : 401 Integration stop scan: 598
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

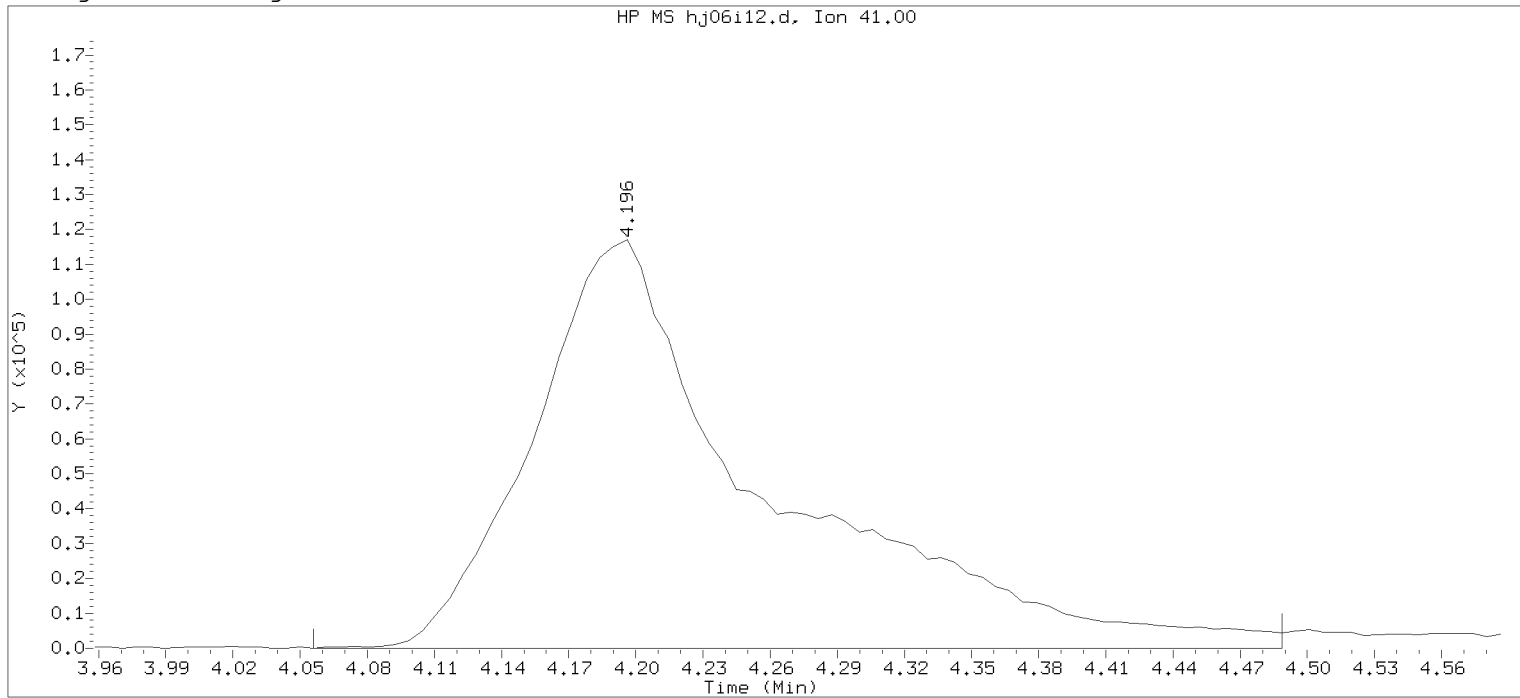
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 11:58

Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 25

Compound Name : Acetonitrile

Scan Number : 428

Retention Time (minutes): 4.196

Quant Ion : 41.00

Area : 853172

On-column Amount (ng) : 330.8568

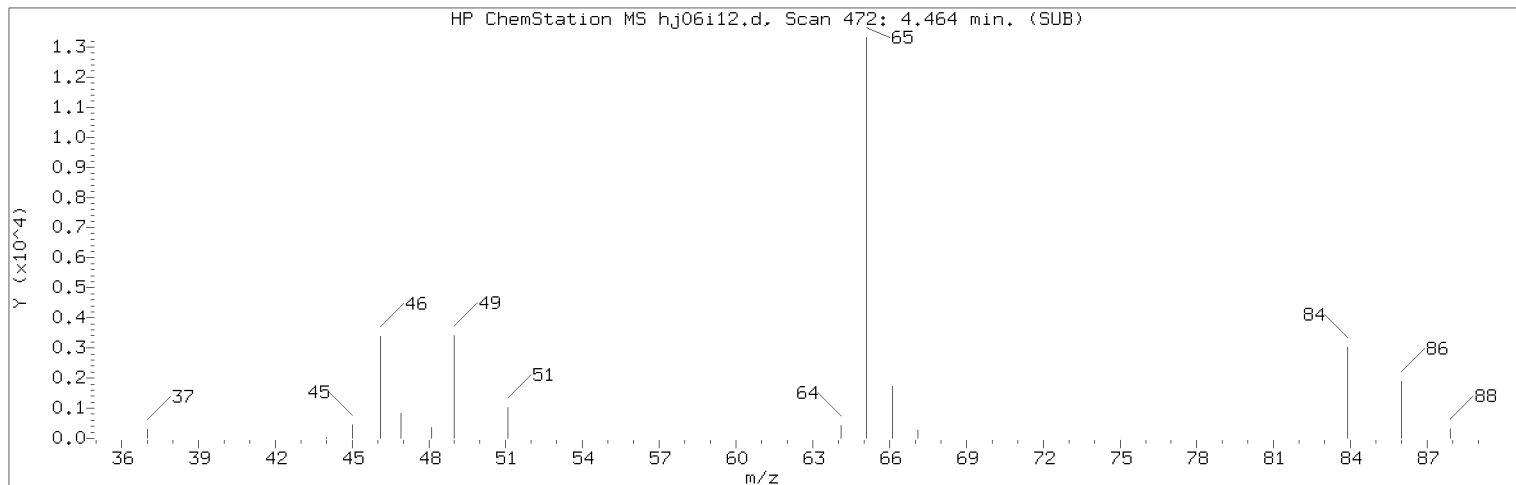
Integration start scan : 404 Integration stop scan: 475

Y at integration start : 0 Y at integration end: 0

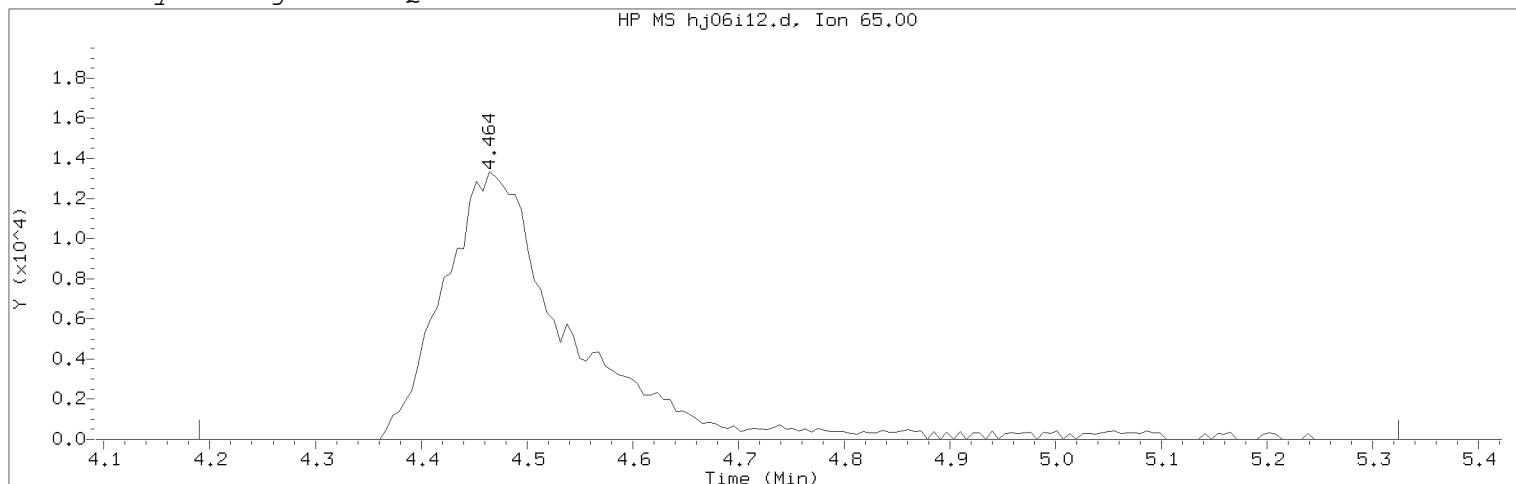
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature userRAF64jPage 349 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

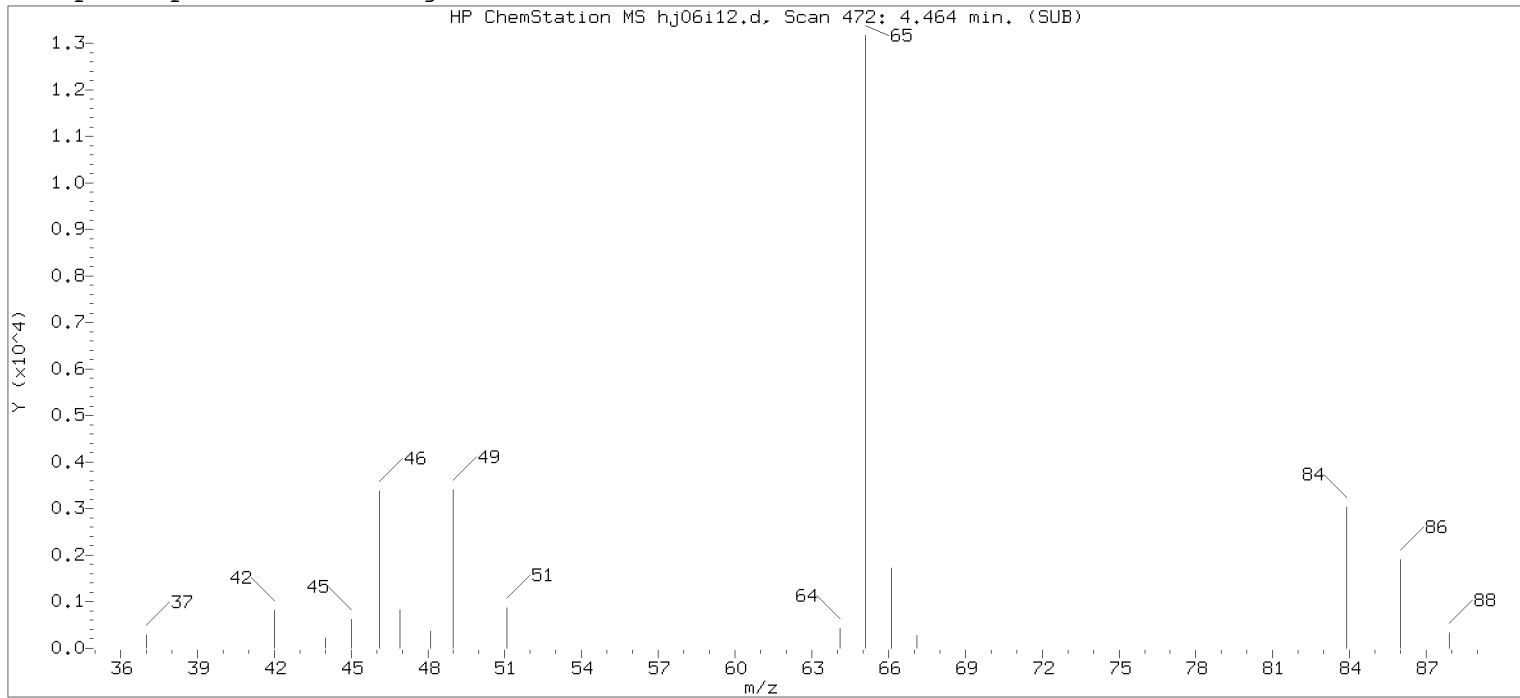
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area (flag) : 113216M
On-Column Amount (ng) : 50.0000
Integration start scan : 426 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

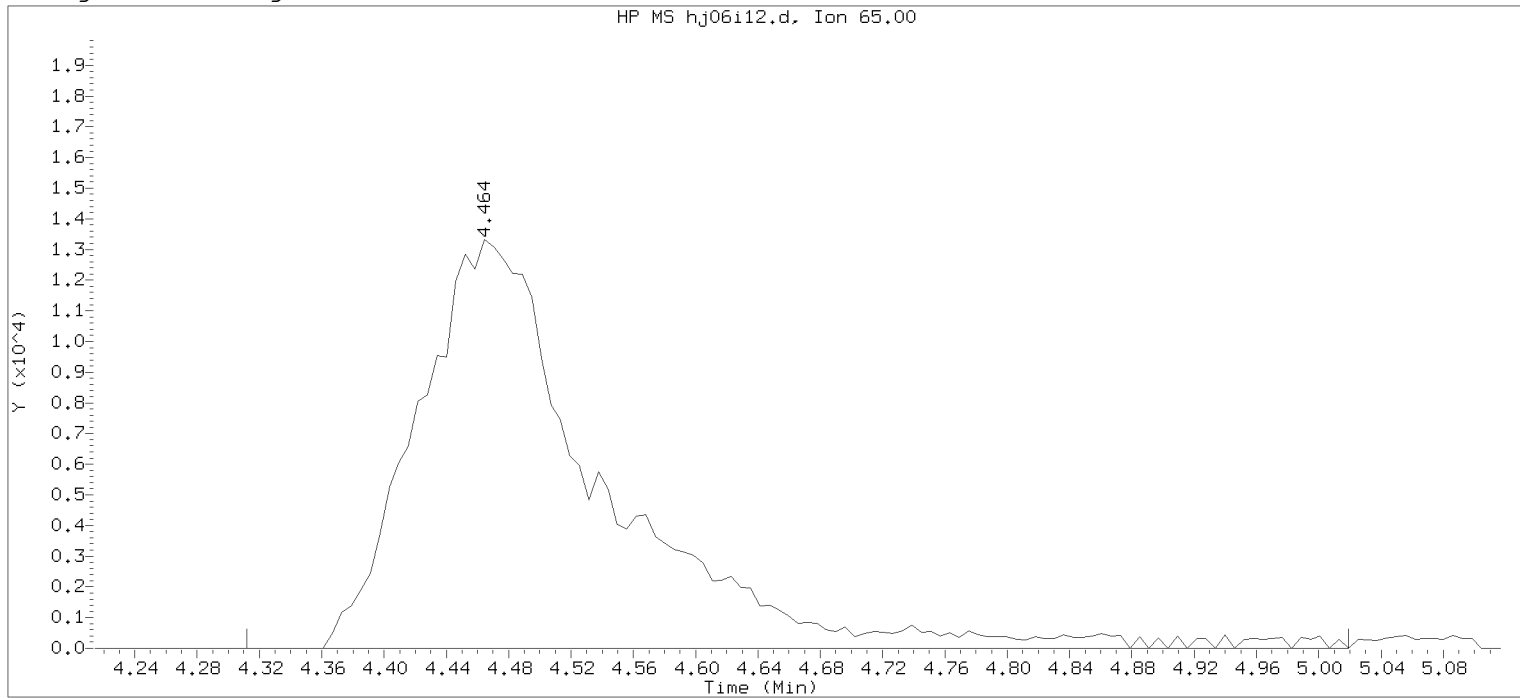
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 11:41

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 11:58

Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number

: 26

Compound Name

: t-Butyl Alcohol-d10

Scan Number

: 472

Retention Time (minutes)

: 4.464

Quant Ion

: 65.00

Area

: 110853

On-column Amount (ng)

: 50.0000

Integration start scan

: 446

Integration stop scan: 562

Y at integration start

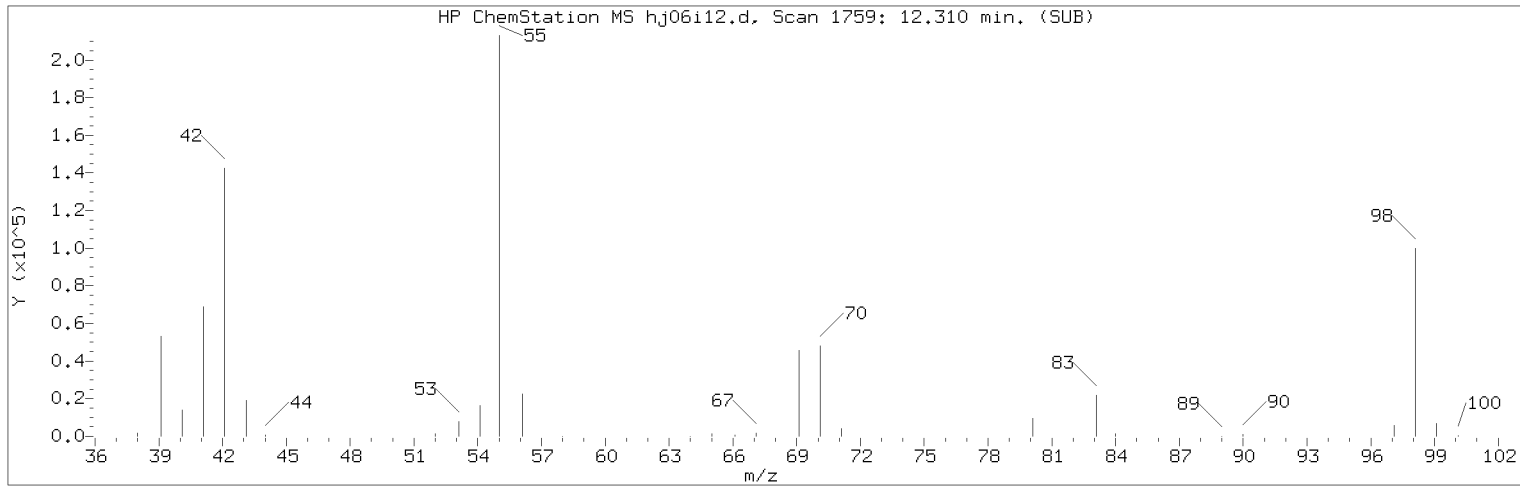
: 0

Y at integration end: 0

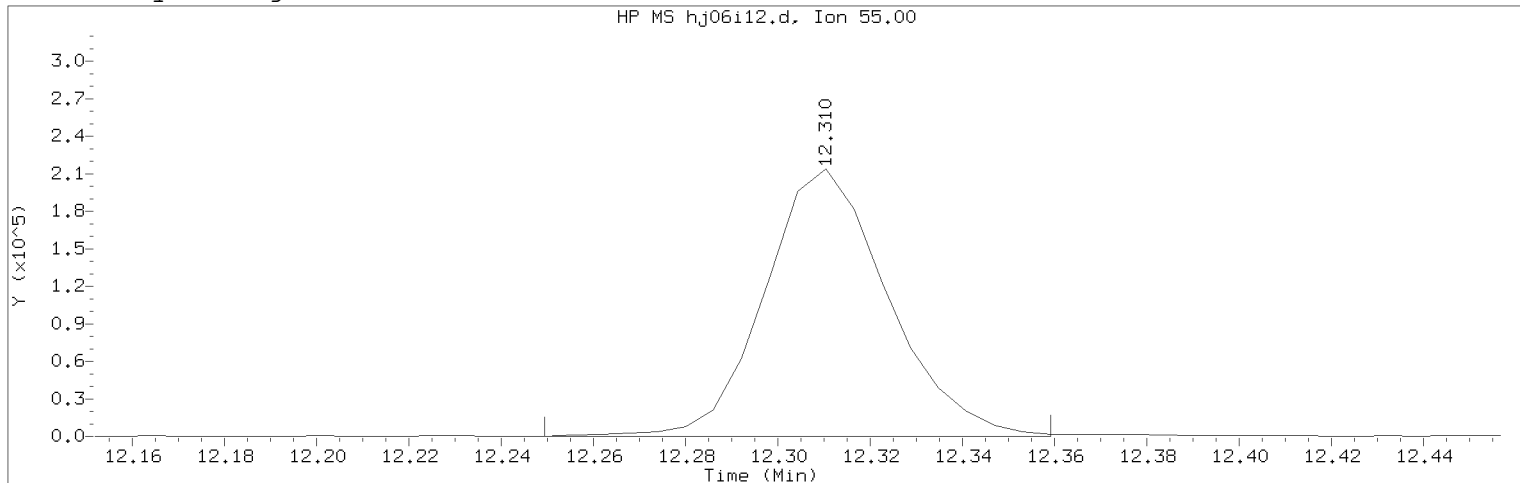
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RAE64j Page 351 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD010

Lab Sample ID: VSTD010

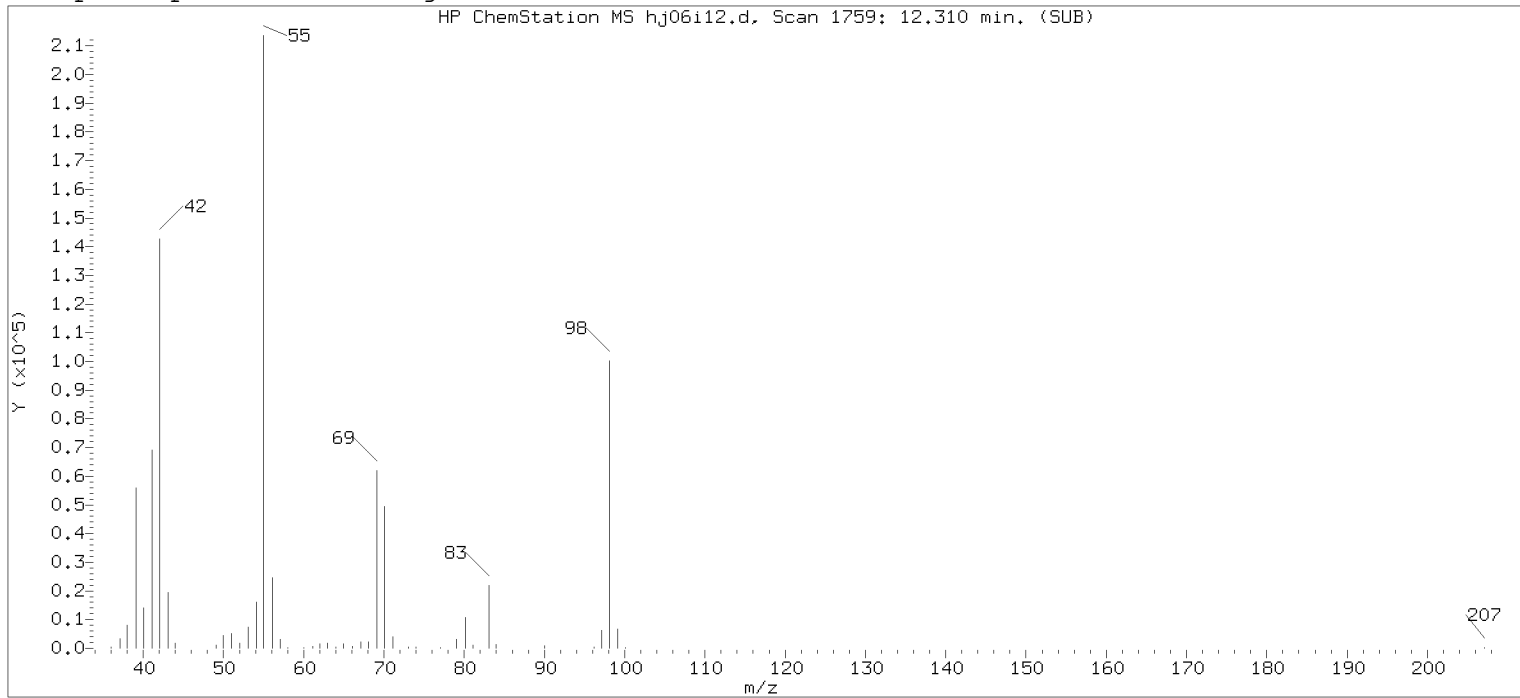
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 396626M
On-Column Amount (ng) : 582.8017
Integration start scan : 1748 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

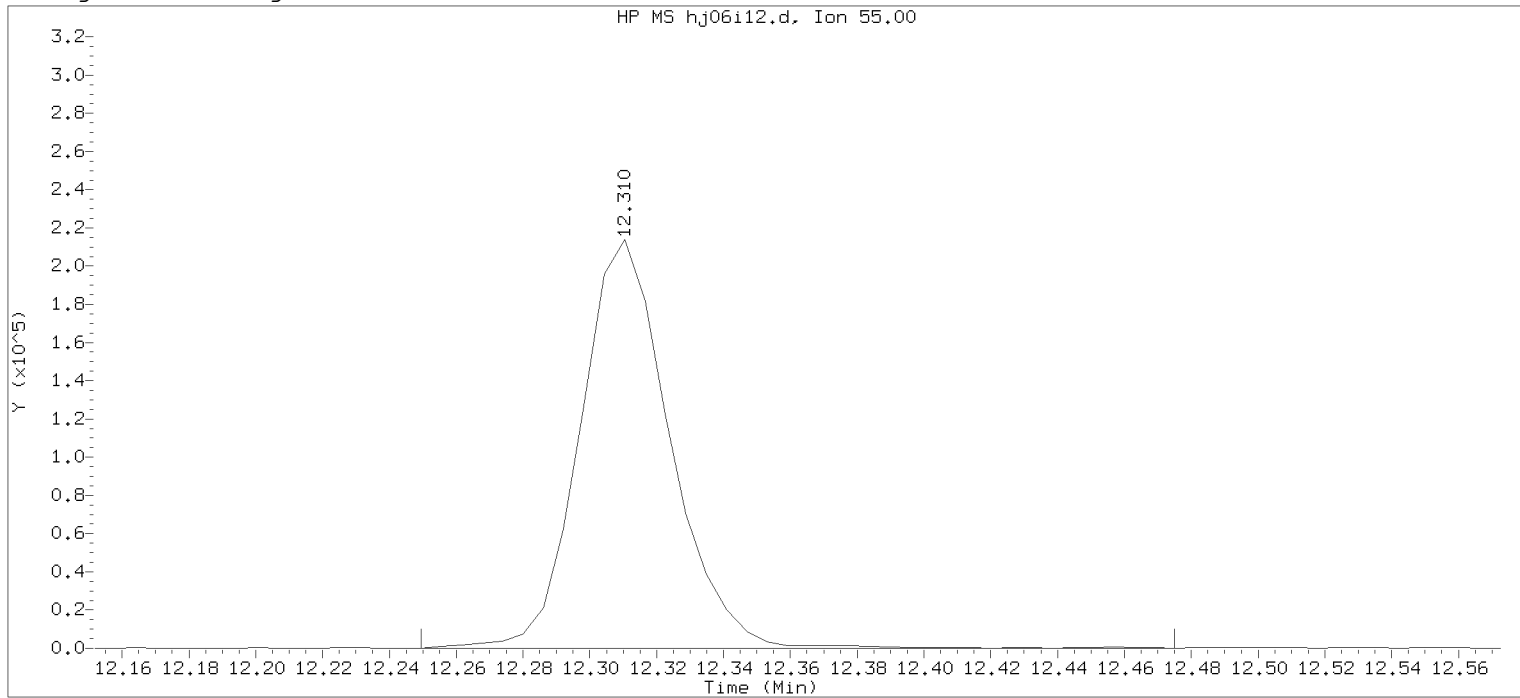
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



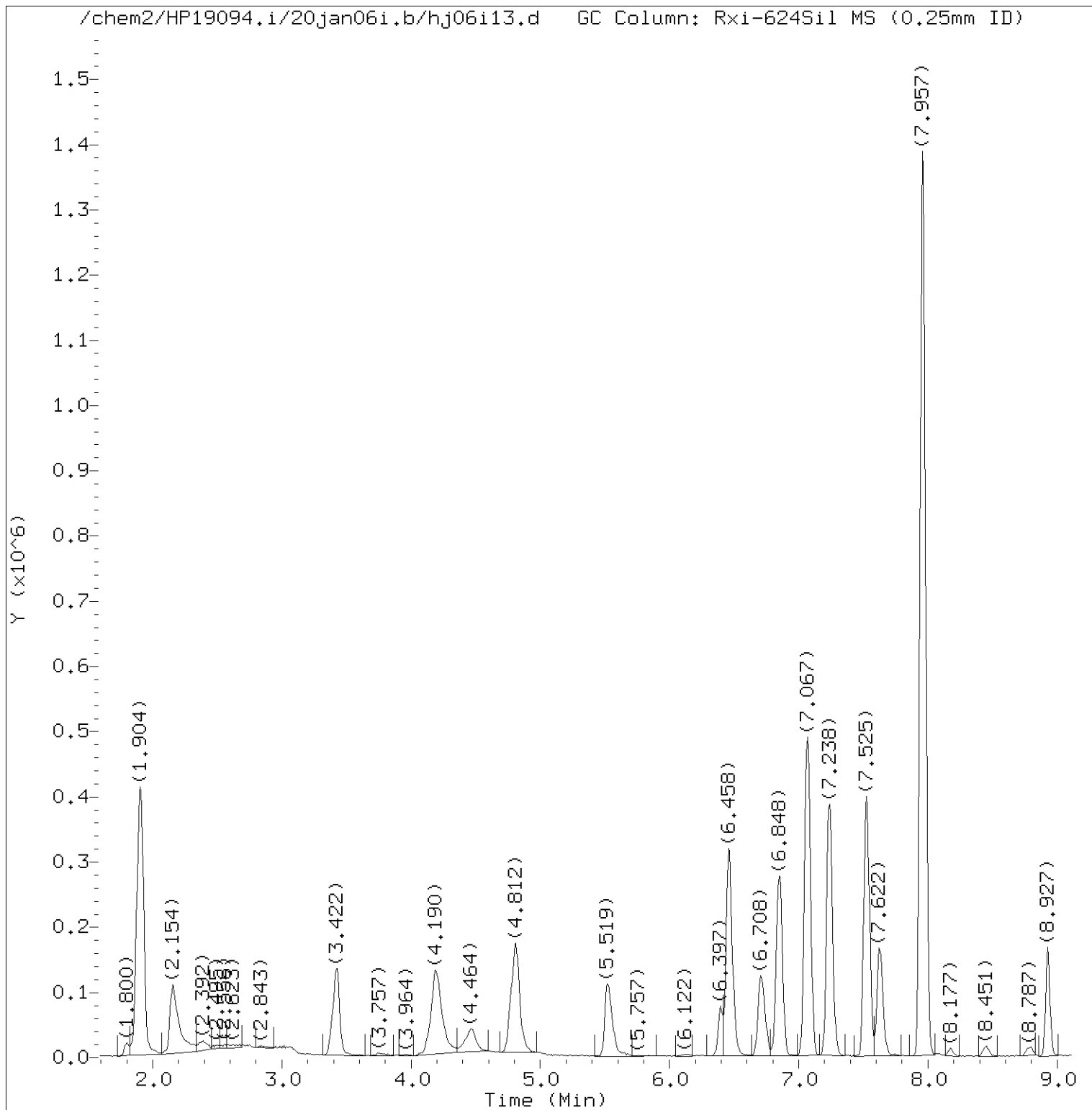
Data File: /chem2/HP19094.i/20jan06i.b/hj06i12.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 11:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 11:58
Date, time and analyst ID of latest file update: 06-Jan-2020 11:58 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 400207	
On-column Amount (ng)	: 510.8582	
Integration start scan	: 1748	Integration stop scan: 1785
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d
Injection date and time: 06-JAN-2020 12:02

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

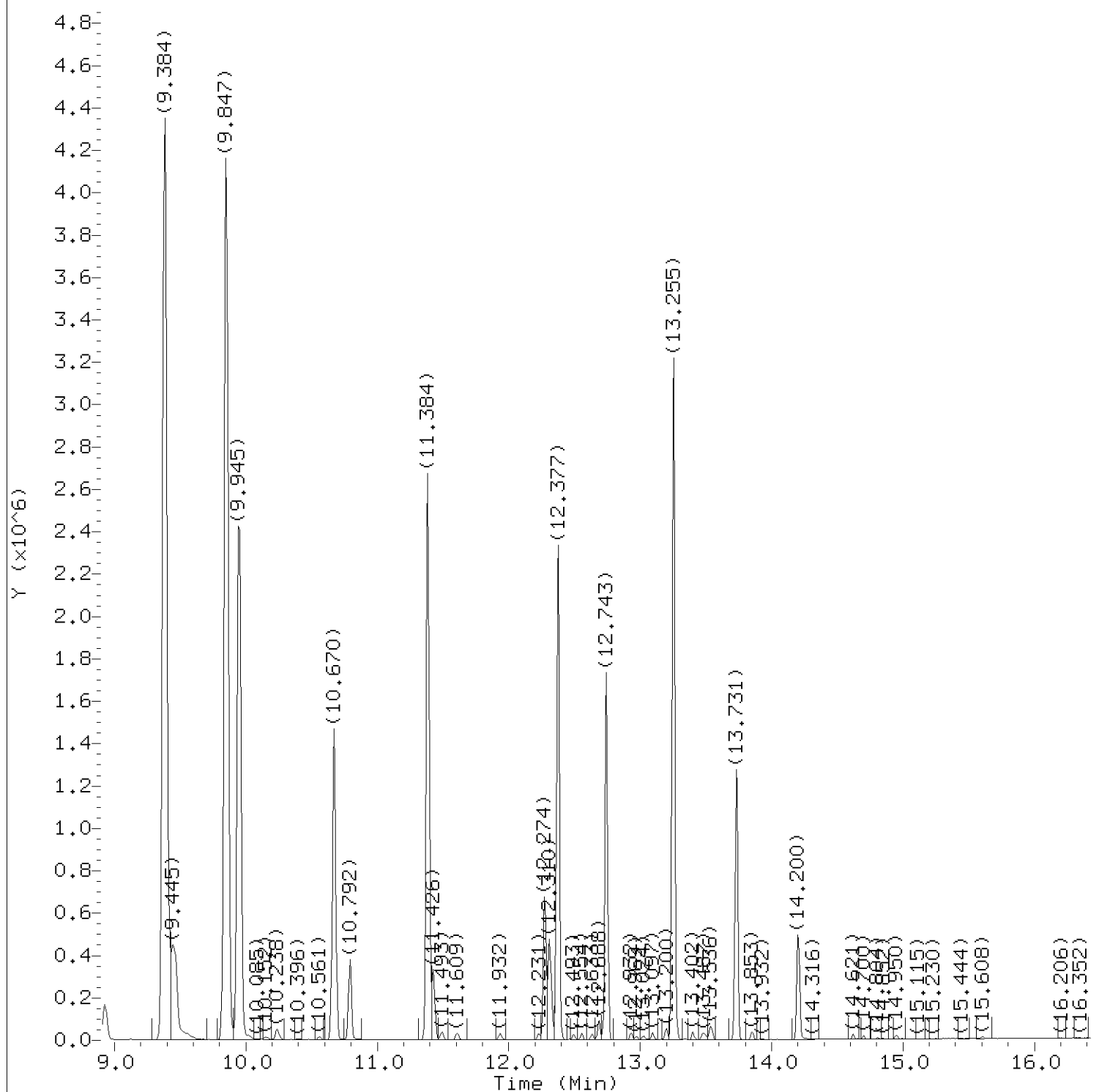
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d
Injection date and time: 06-JAN-2020 12:02

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:02

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	305633M	5.001
25) Acetonitrile	(1)	4.190	41	507655M	208.784
26)*t-Butyl Alcohol-d10	(1)	4.476	65	116853	50.000
36) Vinyl Acetate	(2)	5.519	43	339937	4.882
43) Methyl Acrylate	(2)	6.458	55	606068	24.206
53) 1-Chlorobutane	(2)	7.232	56	505754	4.913
63)*Fluorobenzene	(2)	7.957	96	2003060	10.000
77) Chloroacetonitrile	(2)	9.439	75	341092	254.590
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	119048	4.993
97)*Chlorobenzene-d5	(3)	11.384	117	1501115	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	150421	9.642
112) Cyclohexanone	(1)	12.310	55	218604M	287.733
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	807265	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

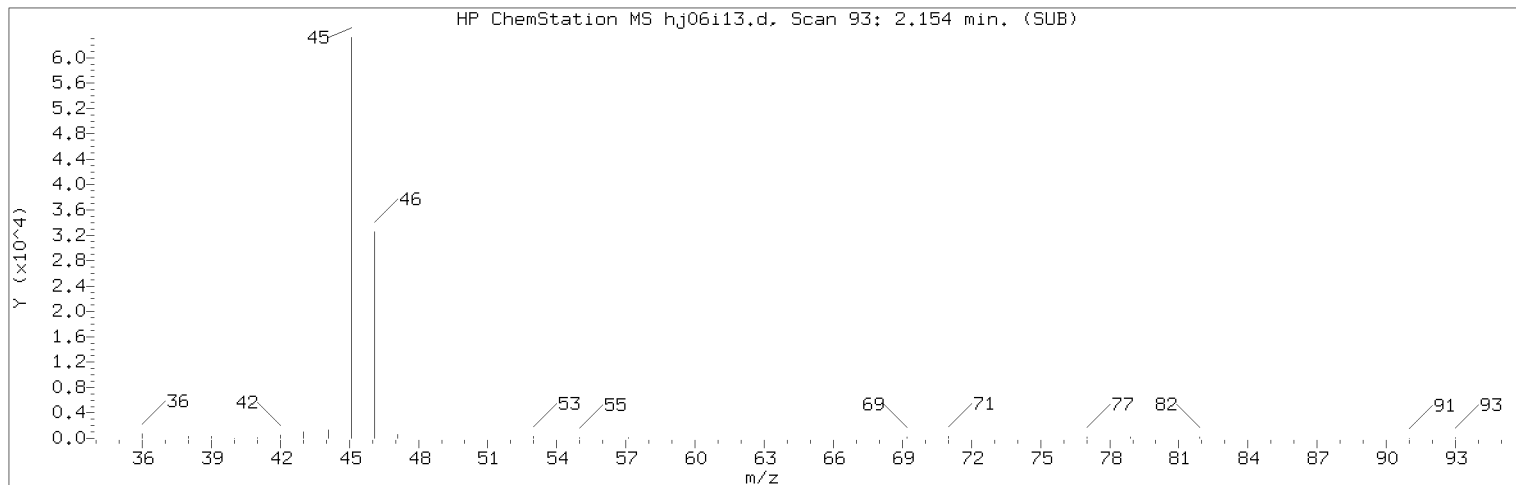
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

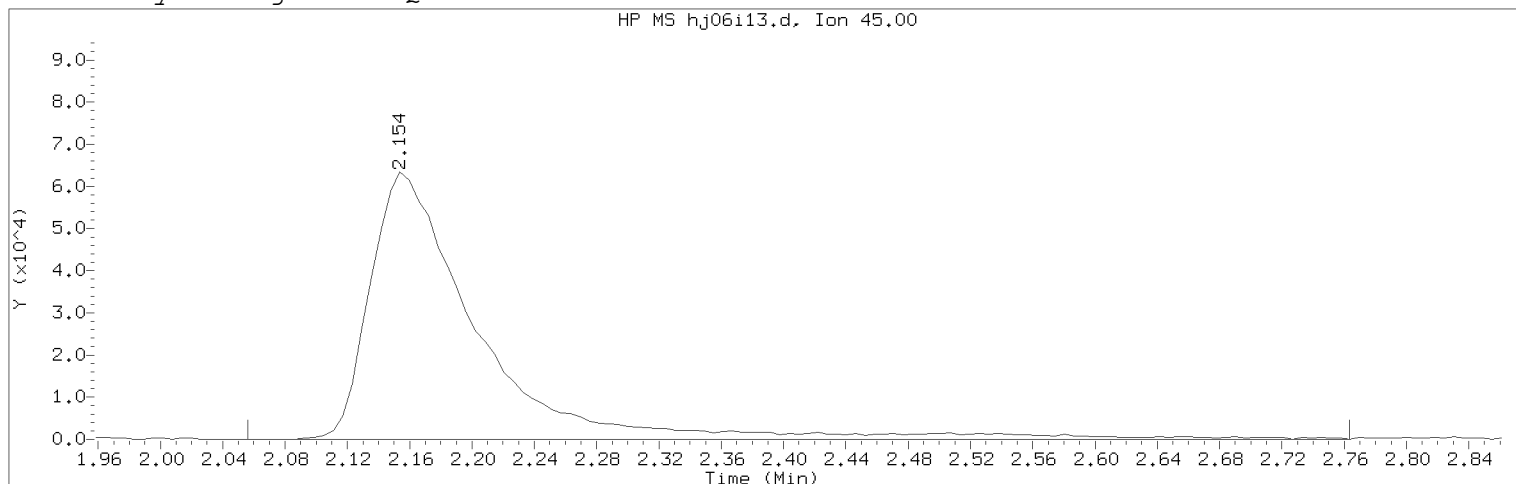
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

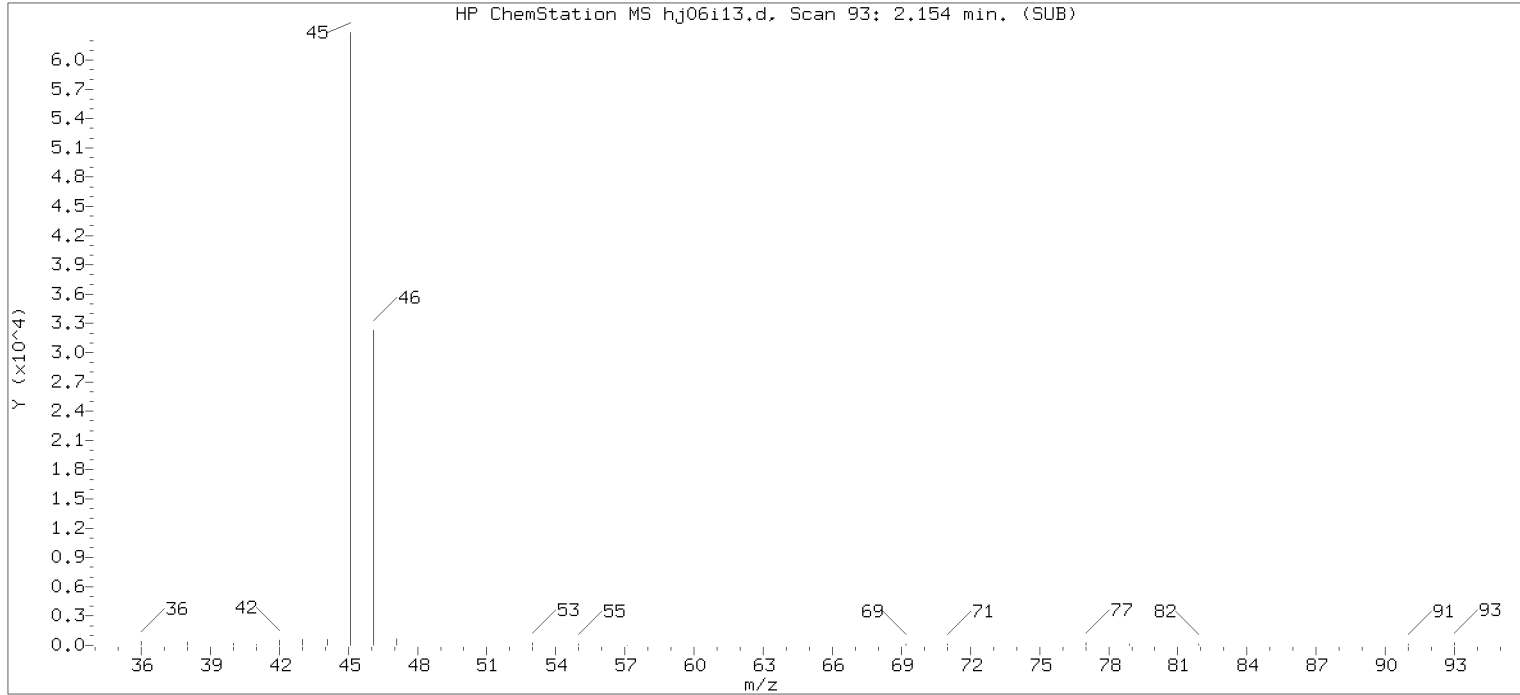
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 305633M
On-Column Amount (ng) : 5.0009
Integration start scan : 76 Integration stop scan: 192
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

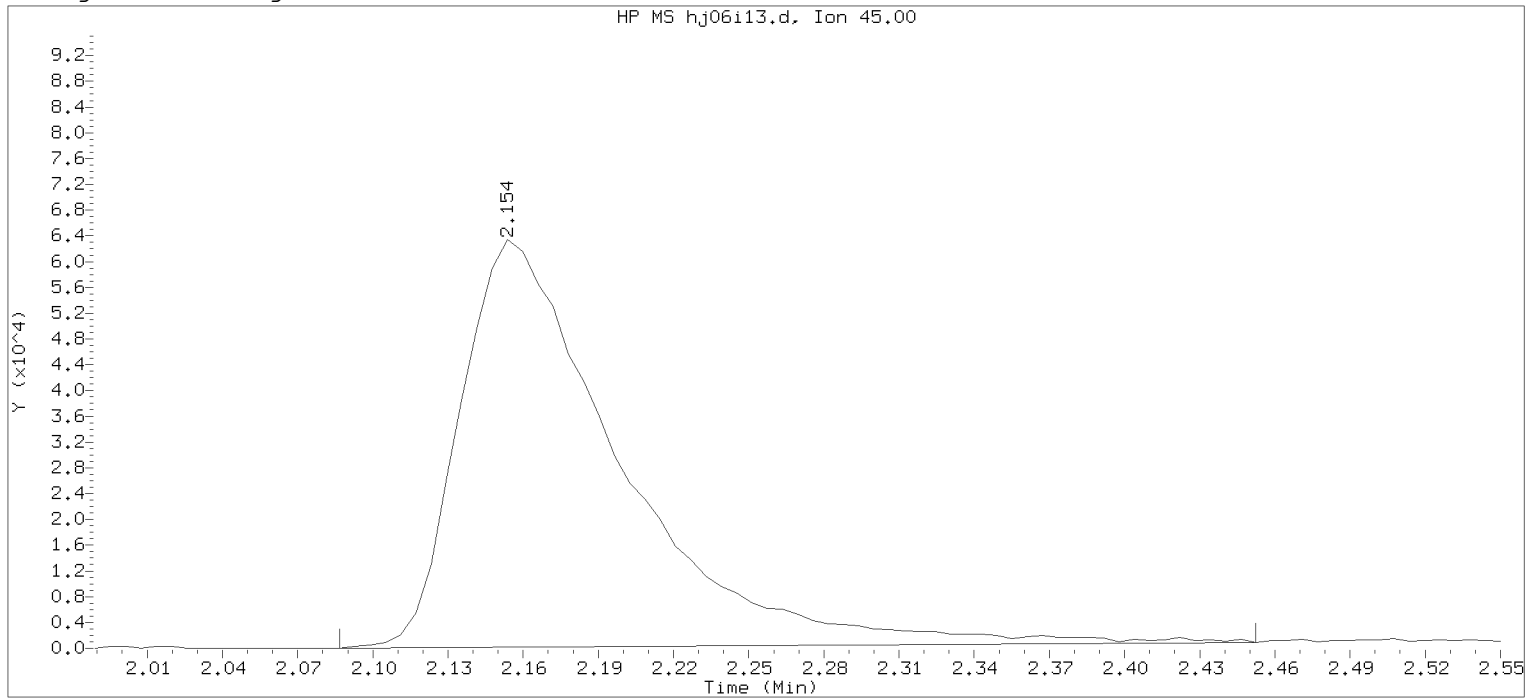
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

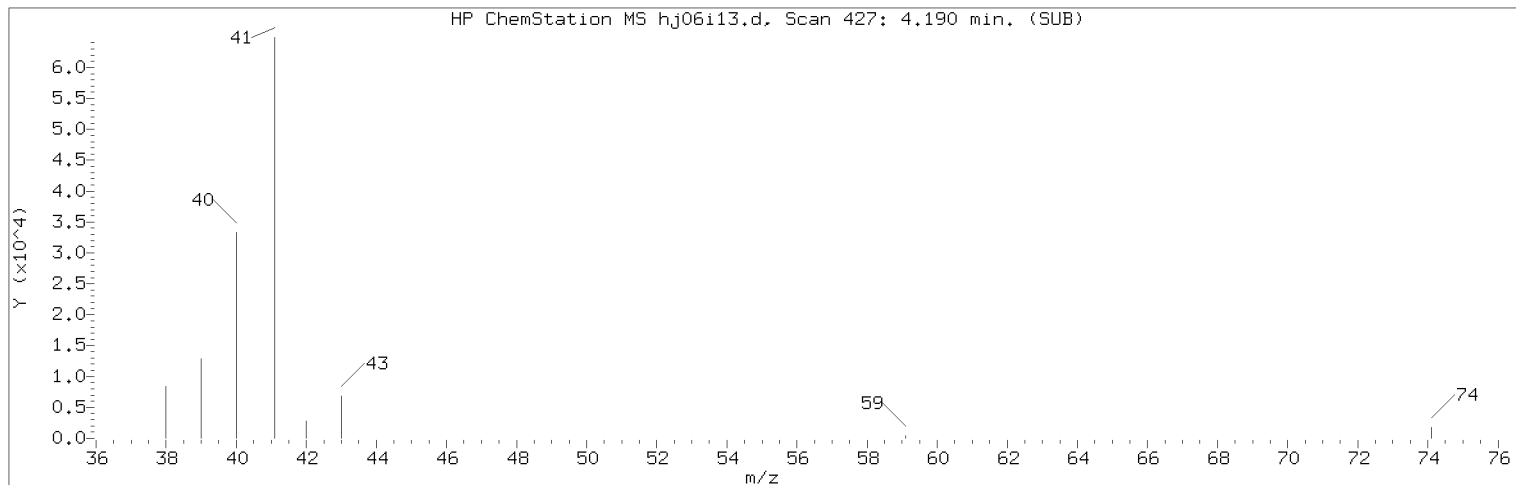
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD005

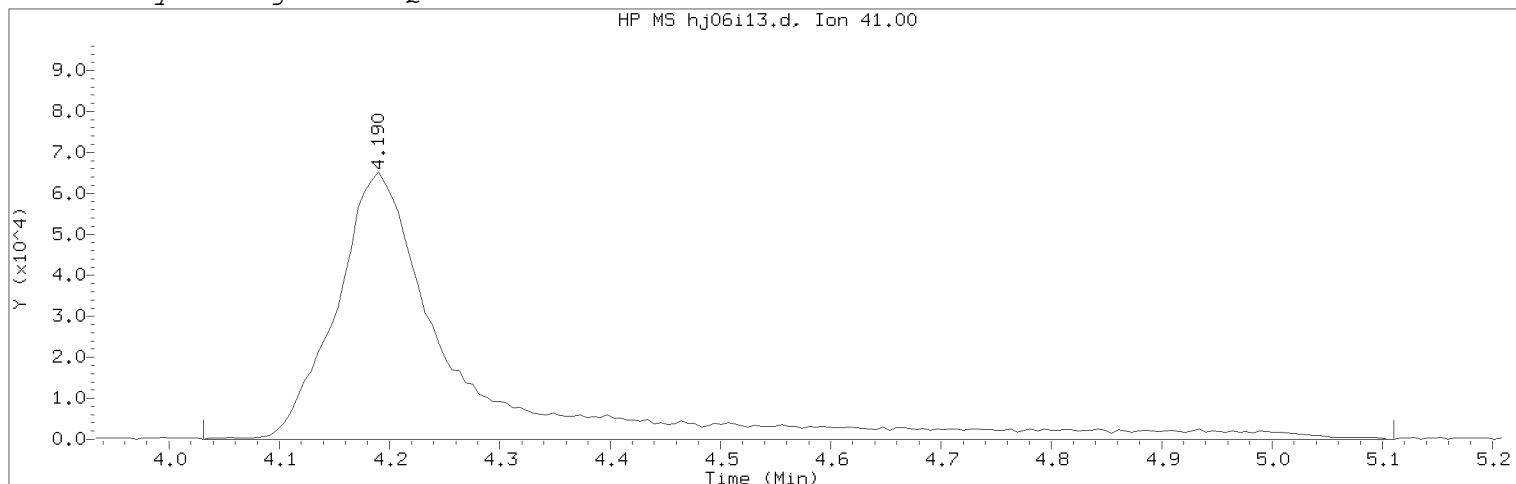
Lab Sample ID: VSTD005

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area	: 281228	
On-column Amount (ng)	: 4.7731	
Integration start scan	: 81	Integration stop scan: 141
Y at integration start	: 0	Y at integration end: 937

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

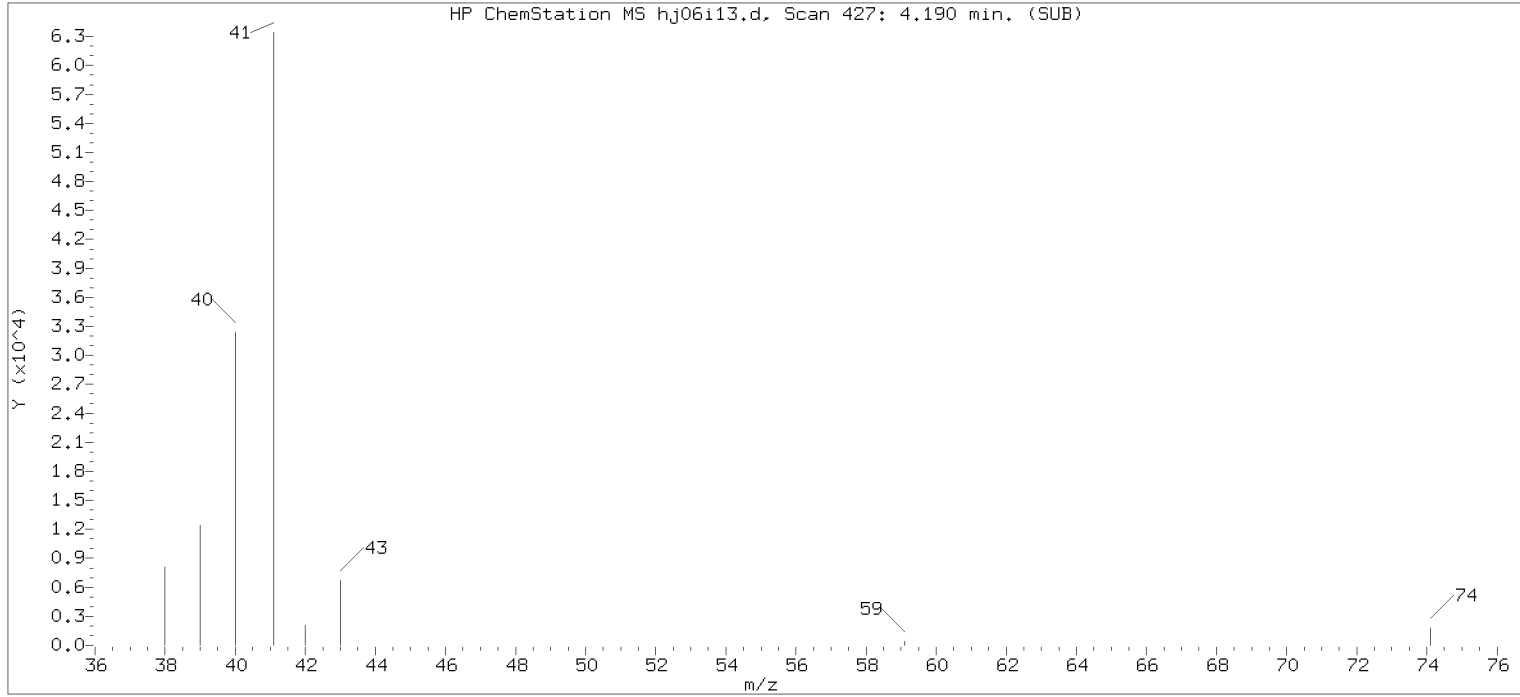
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 427
Retention Time (minutes): 4.190
Quant Ion : 41.00
Area (flag) : 507655M
On-Column Amount (ng) : 208.7842
Integration start scan : 400 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

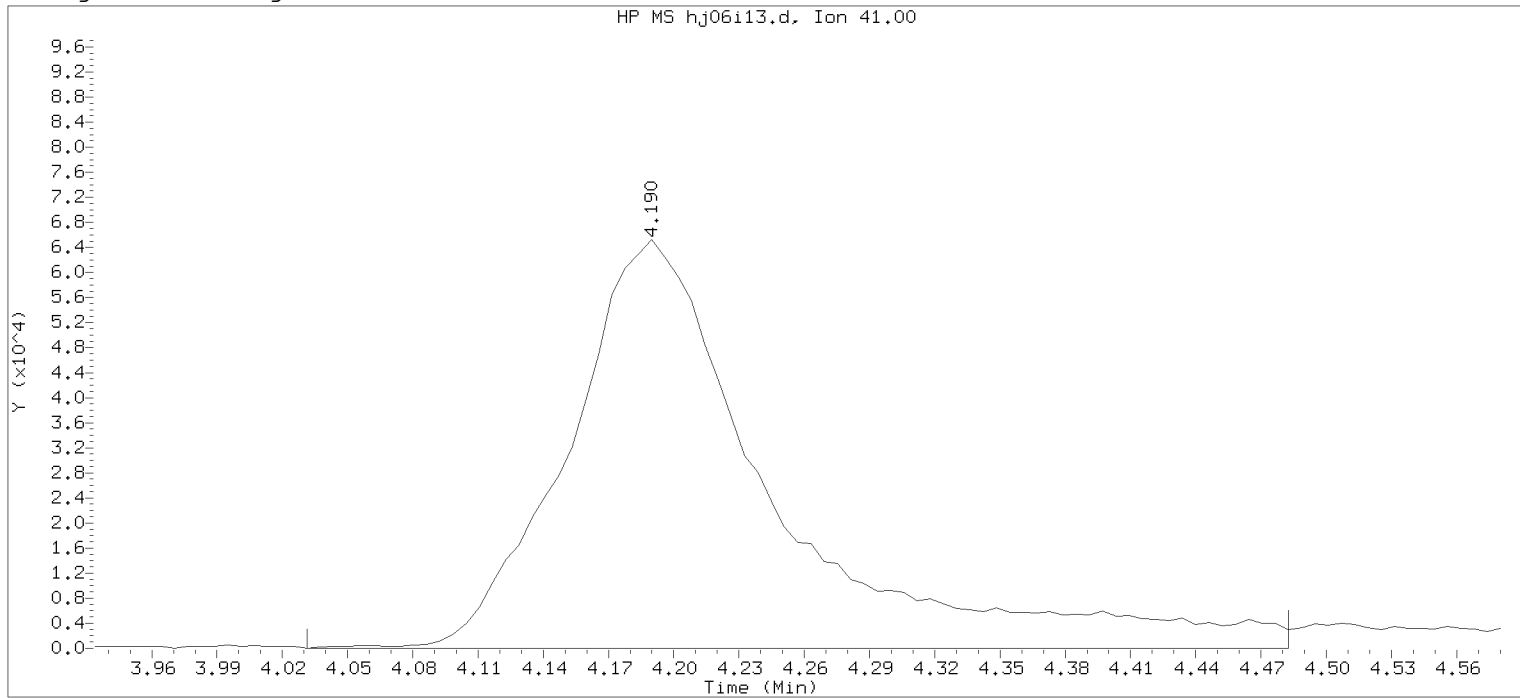
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:02 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

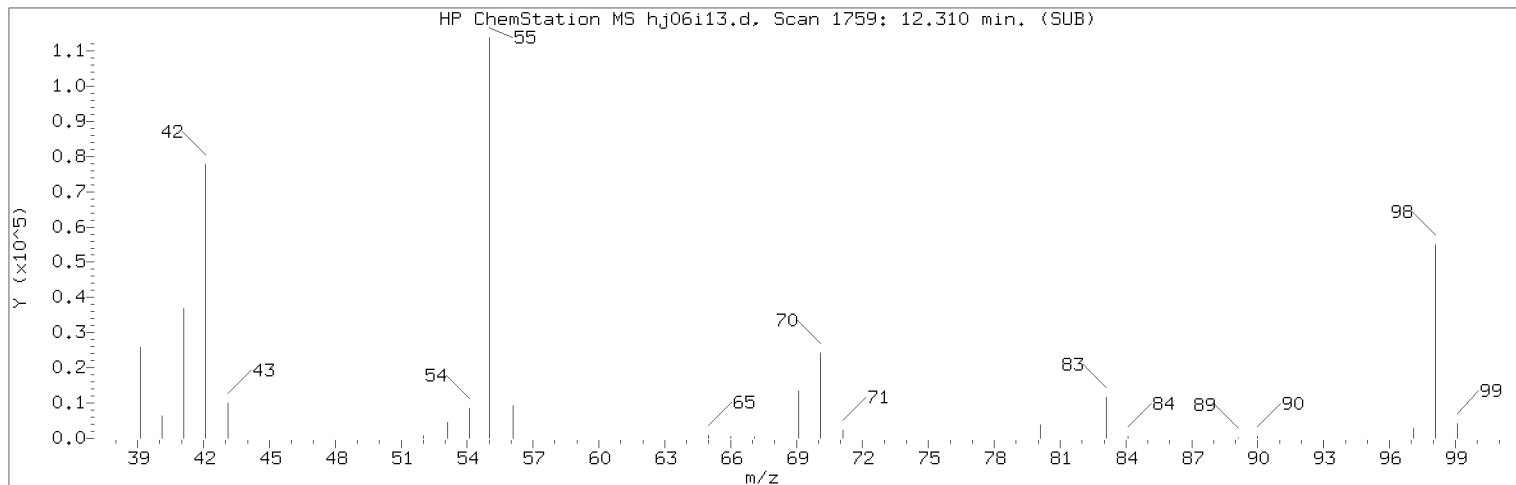
Sample Name: VSTD005

Lab Sample ID: VSTD005

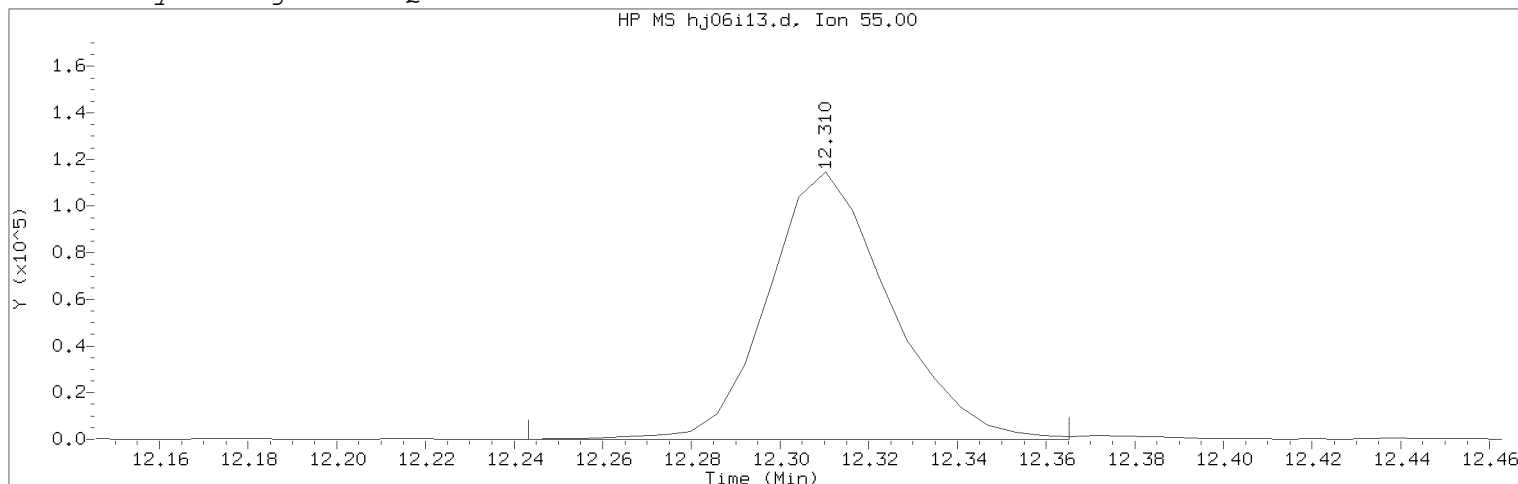
Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 427	
Retention Time (minutes)	: 4.190	
Quant Ion	: 41.00	
Area	: 425452	
On-column Amount (ng)	: 186.4808	
Integration start scan	: 400	Integration stop scan: 474
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA564j Page 360 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:02

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

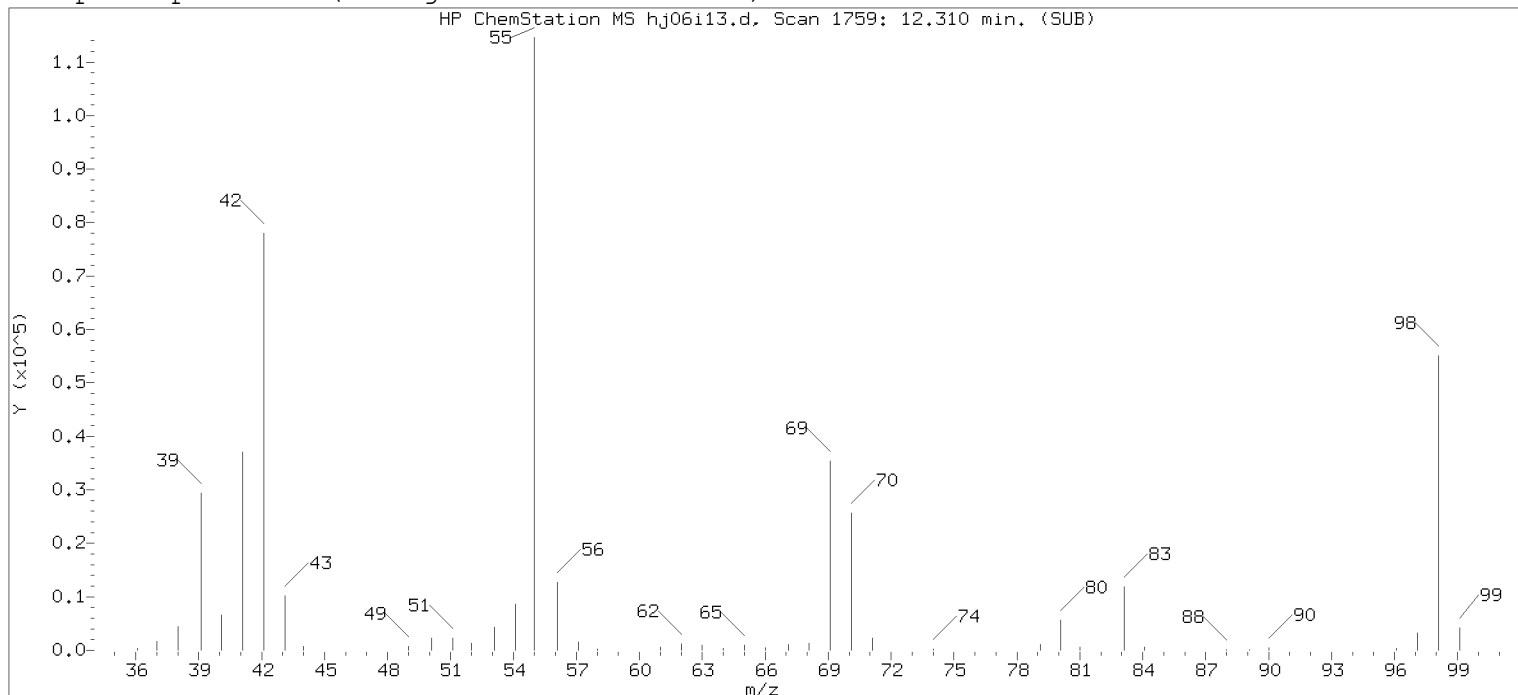
Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area (flag)	: 218604M	
On-Column Amount (ng)	: 287.7325	
Integration start scan	: 1747	Integration stop scan: 1767
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

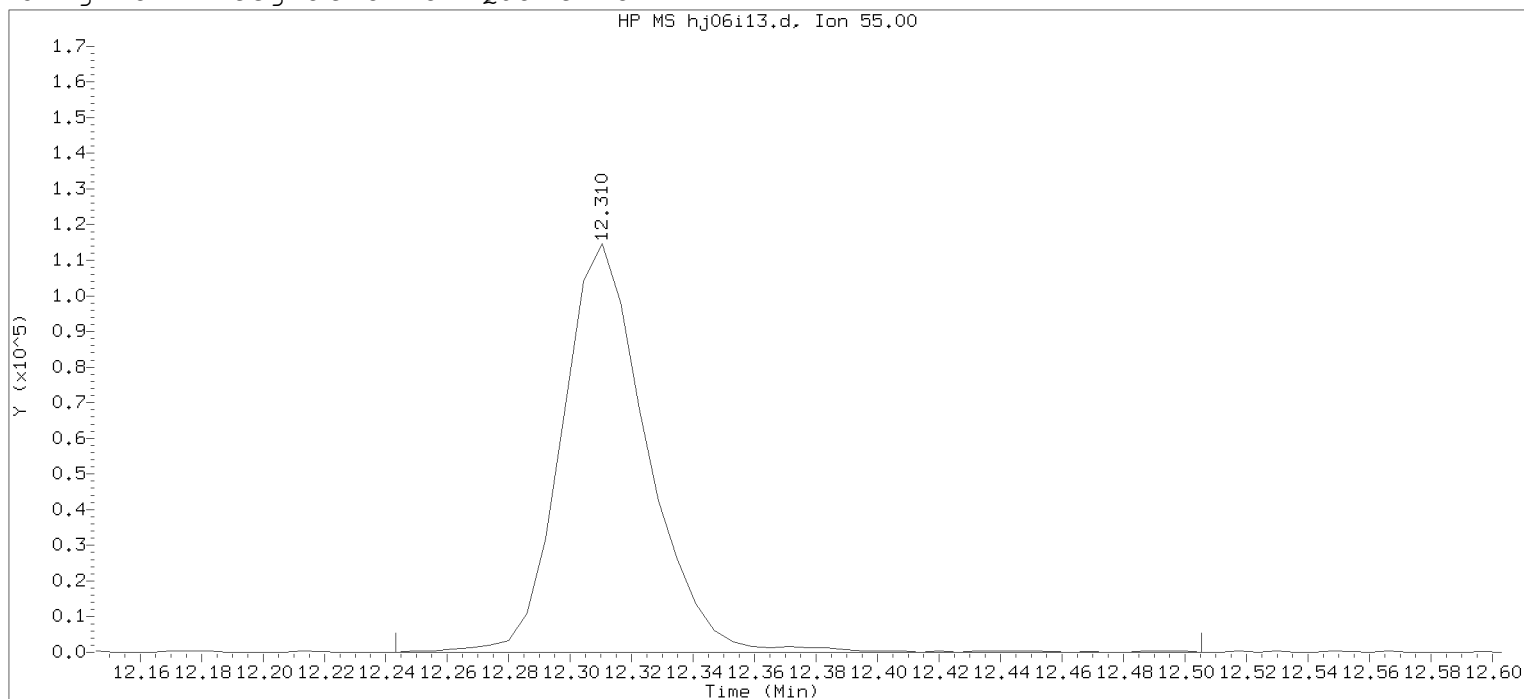
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i13.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:02

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 12:55

Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD005

Lab Sample ID: VSTD005

Compound Number : 112

Compound Name : Cyclohexanone

Scan Number : 1759

Retention Time (minutes): 12.310

Quant Ion : 55.00

Area : 221925

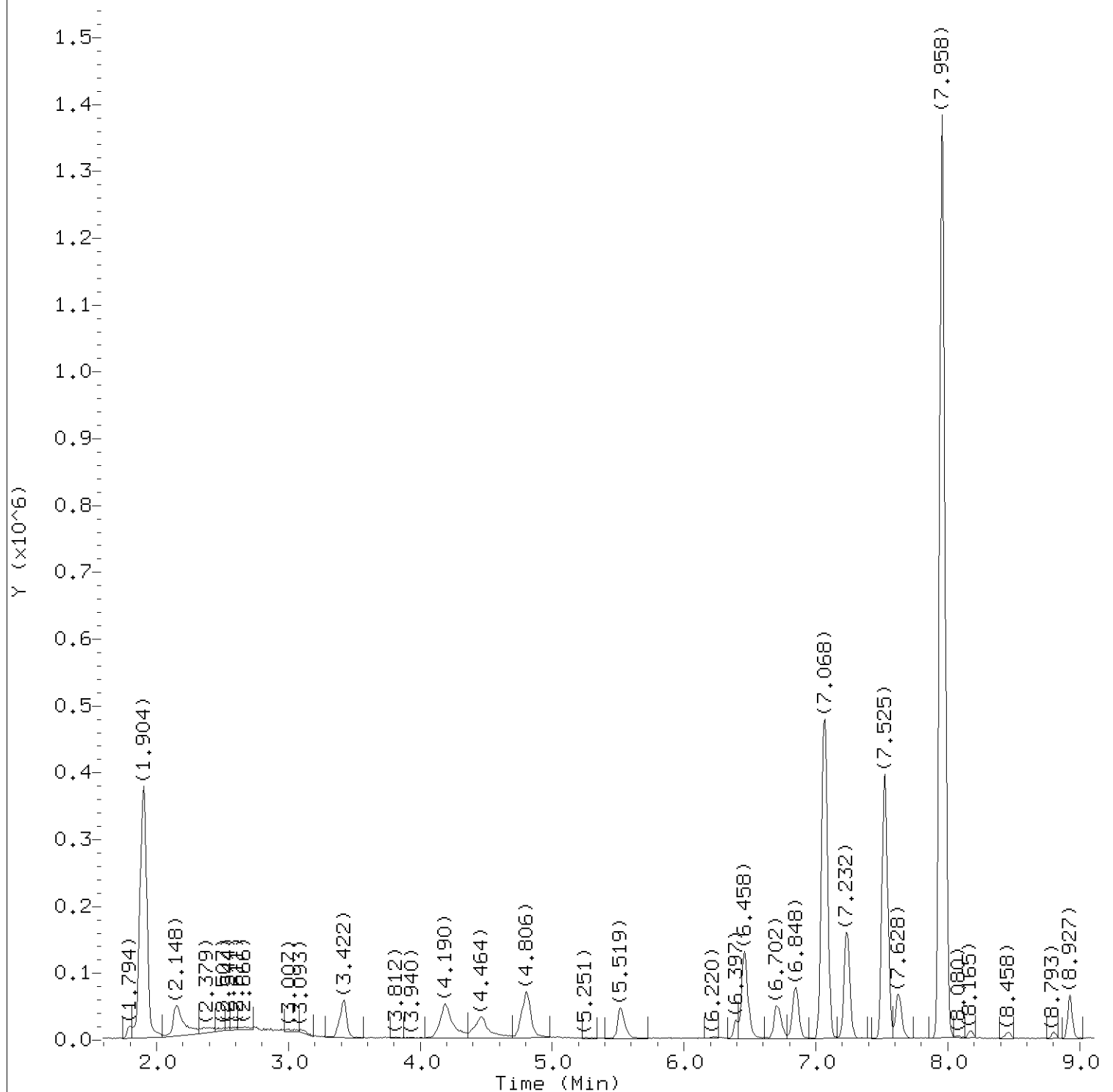
On-column Amount (ng) : 268.4080

Integration start scan : 1747 Integration stop scan: 1790

Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user RA664j Page 362 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d
Injection date and time: 06-JAN-2020 12:24

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

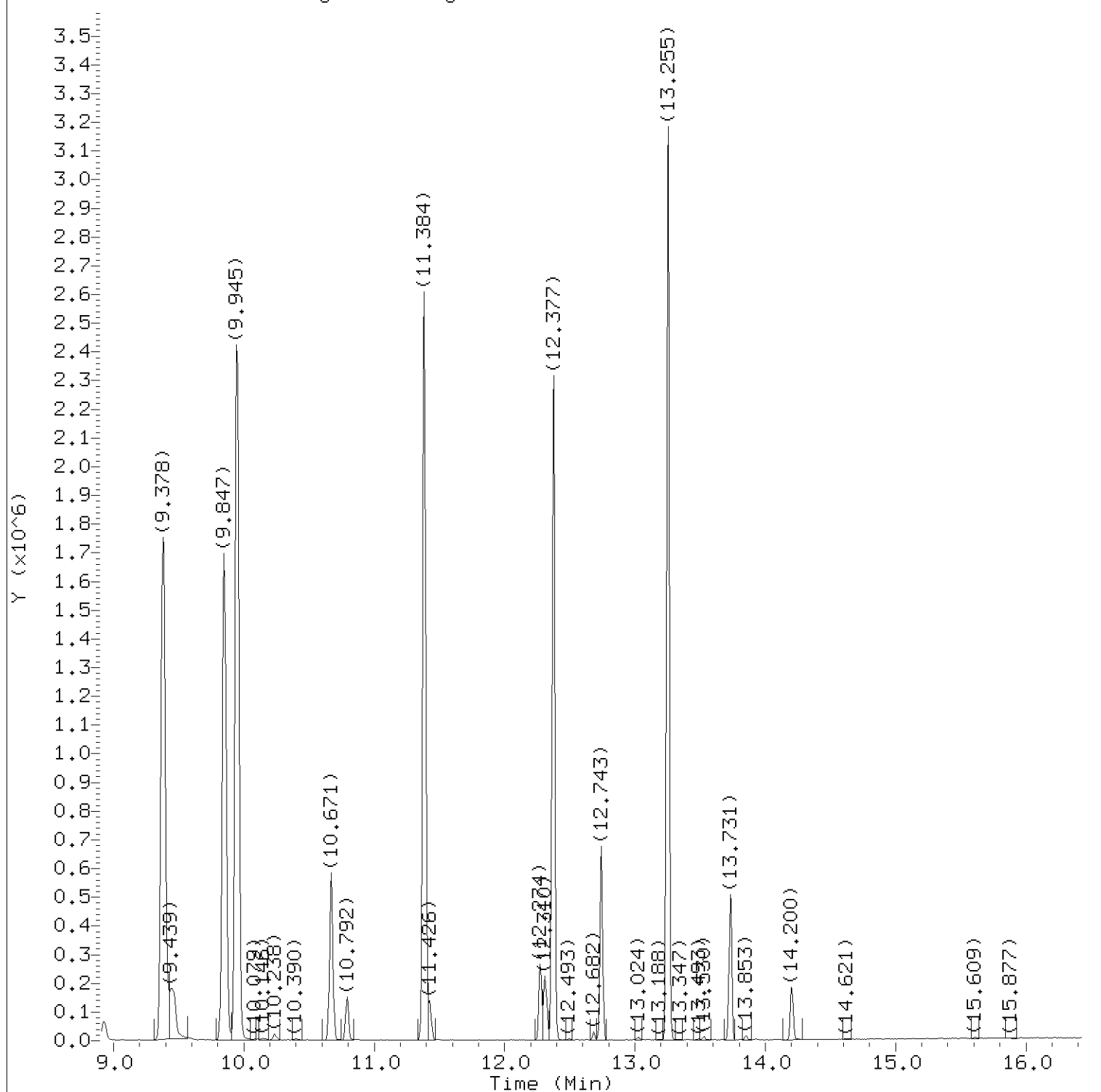
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d
Injection date and time: 06-JAN-2020 12:24

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:24

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	136325M	2.195
25) Acetonitrile	(1)	4.190	41	225320M	87.691
26)*t-Butyl Alcohol-d10	(1)	4.458	65	119527	50.000
36) Vinyl Acetate	(2)	5.519	43	137908	2.011
43) Methyl Acrylate	(2)	6.458	55	247993	10.055
53) 1-Chlorobutane	(2)	7.232	56	204968	2.019
63)*Fluorobenzene	(2)	7.958	96	1969431	10.000
77) Chloroacetonitrile	(2)	9.439	75	144376	107.033
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	47253	2.012
97)*Chlorobenzene-d5	(3)	11.384	117	1478019	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	58478	3.743
112) Cyclohexanone	(1)	12.310	55	102791	122.395
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	799344	10.000

M = Compound was manually integrated.

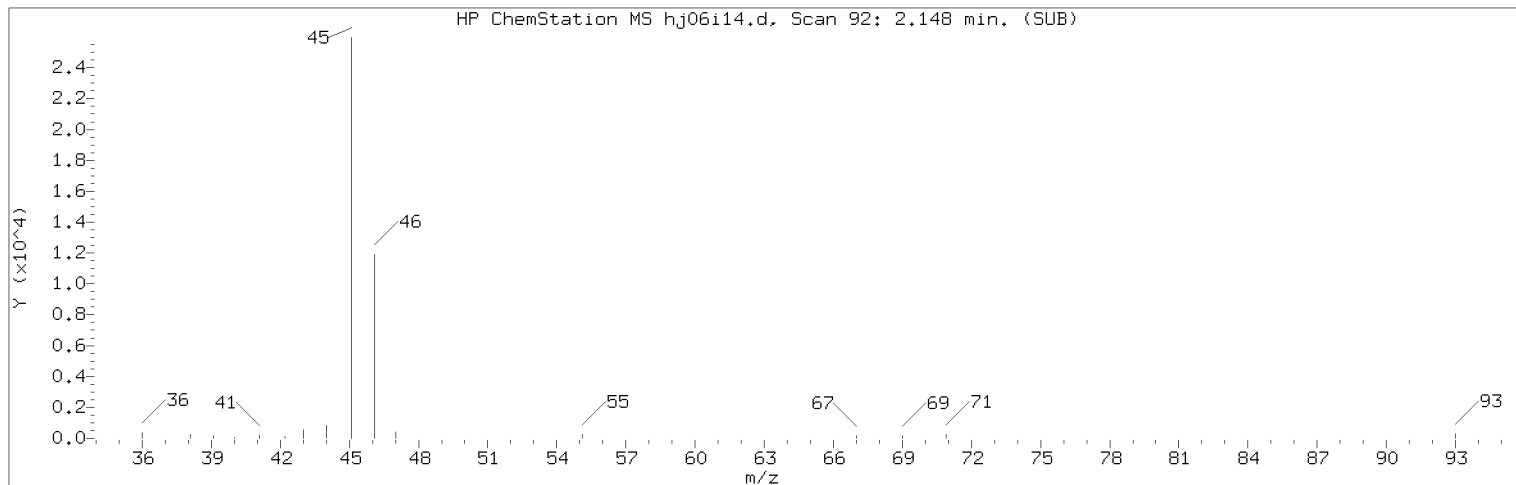
* = Compound is an internal standard.

page 1 of 1

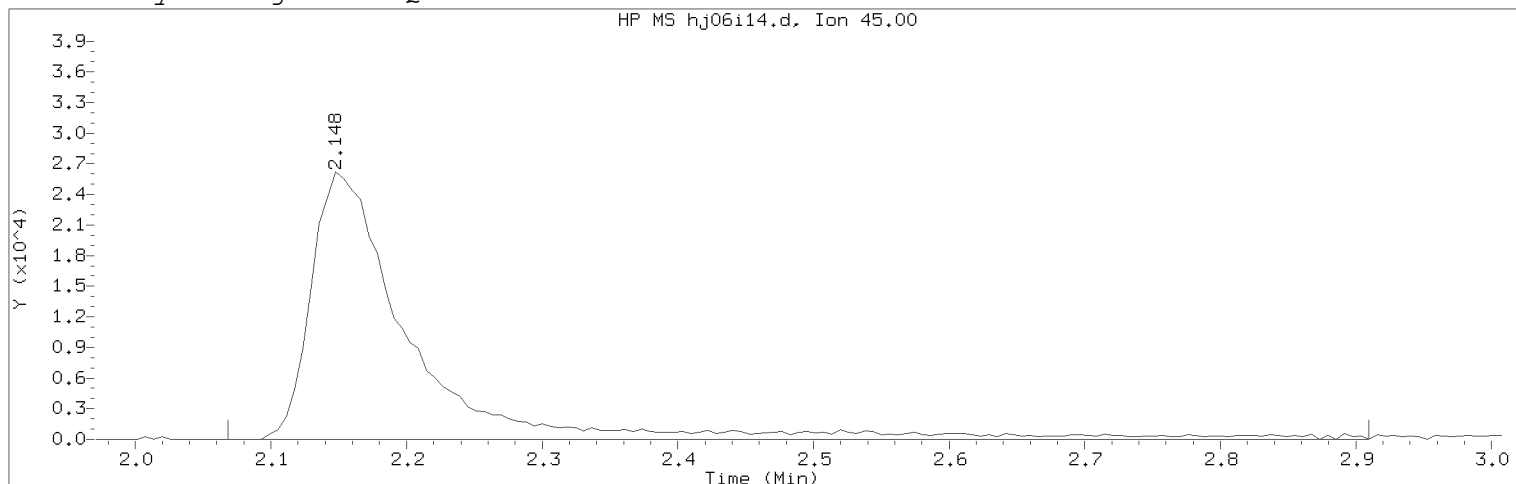
Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

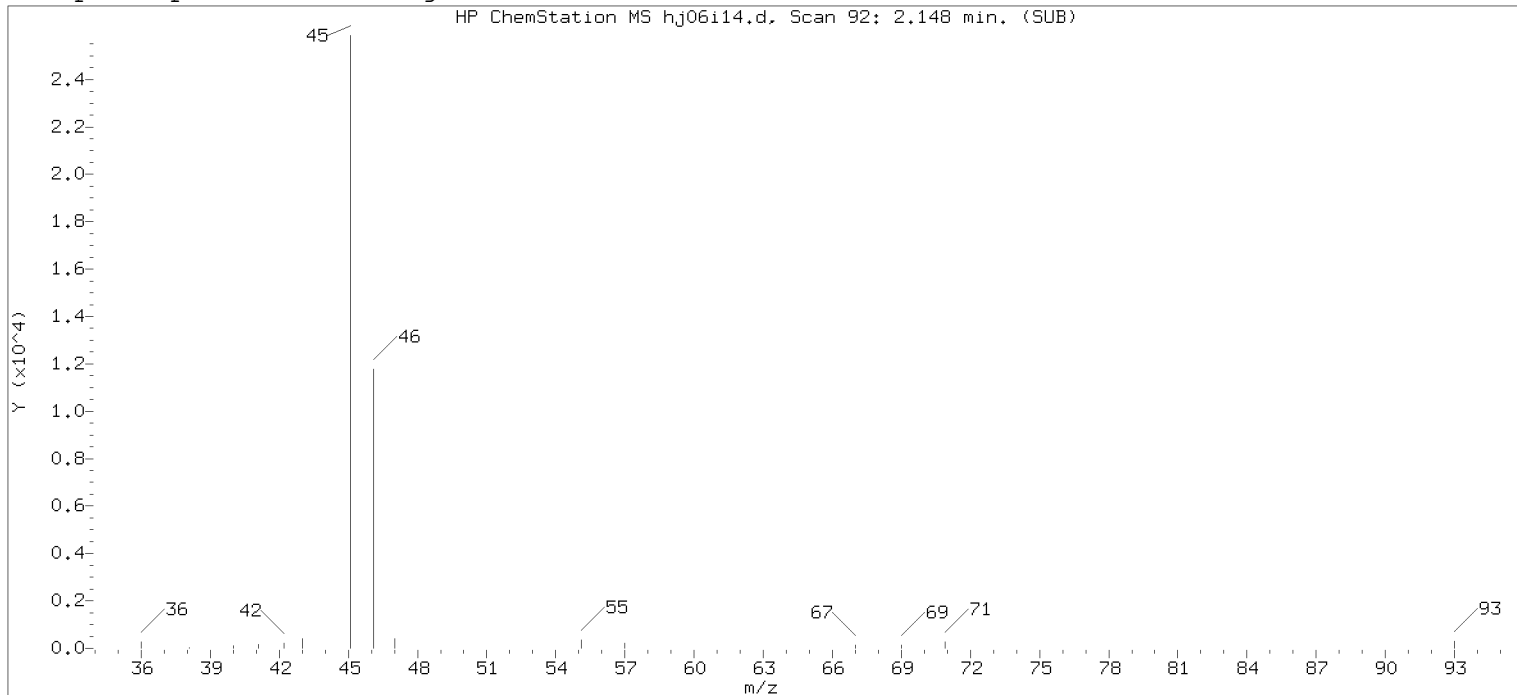
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 136325M
On-Column Amount (ng) : 2.1950
Integration start scan : 78 Integration stop scan: 216
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

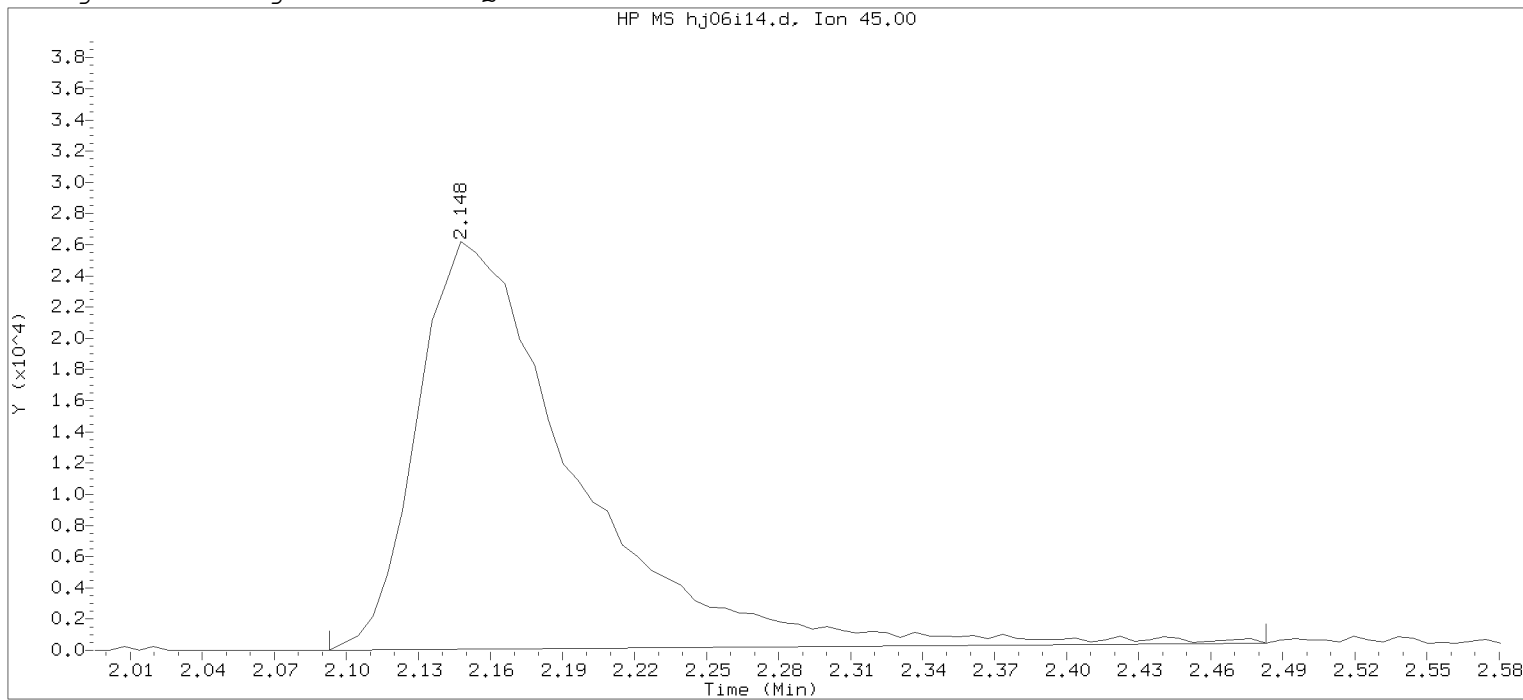
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

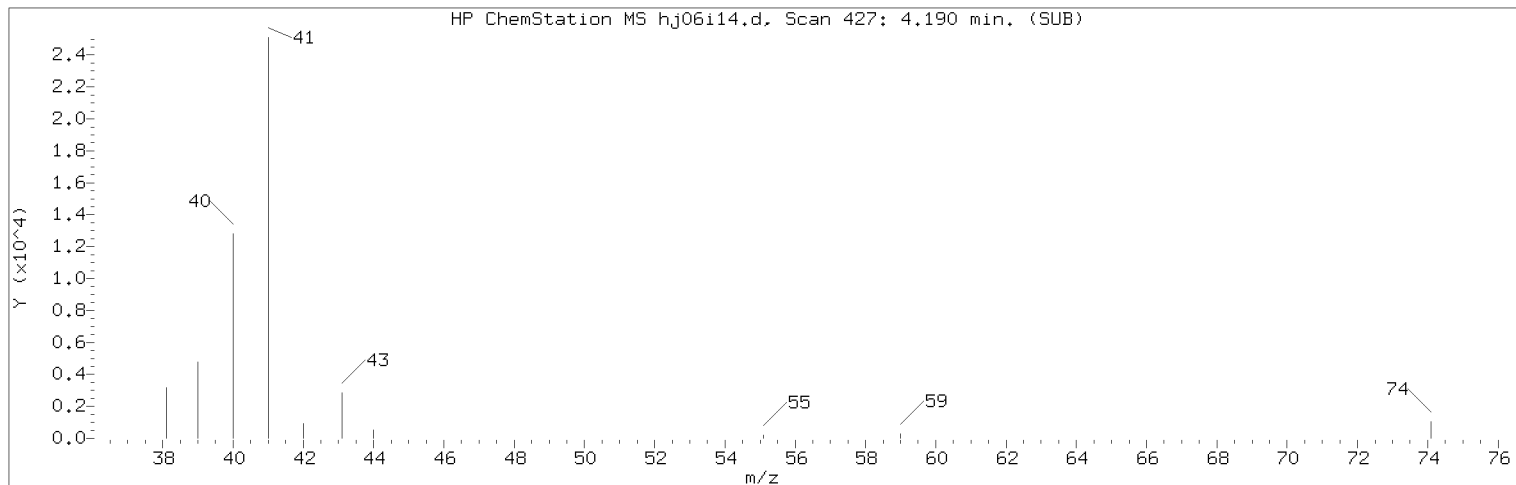
Sample Name: VSTD002

Lab Sample ID: VSTD002

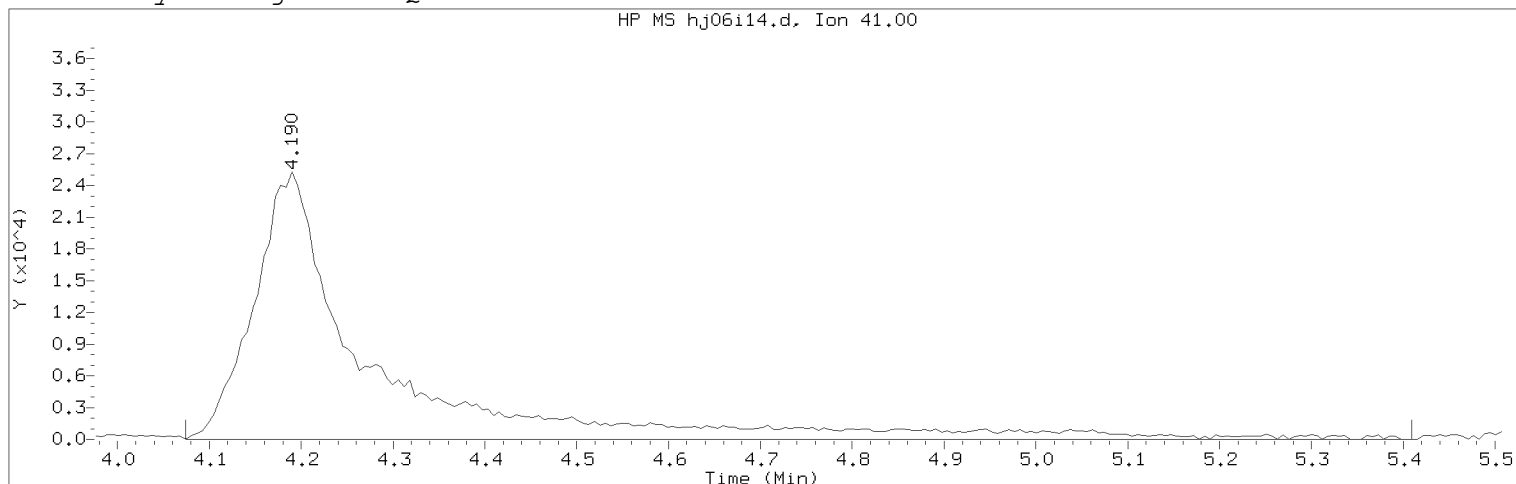
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area : 120324
On-column Amount (ng) : 2.0771
Integration start scan : 82 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 455

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Target 3.5 esignature user RAE64j Page 367 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

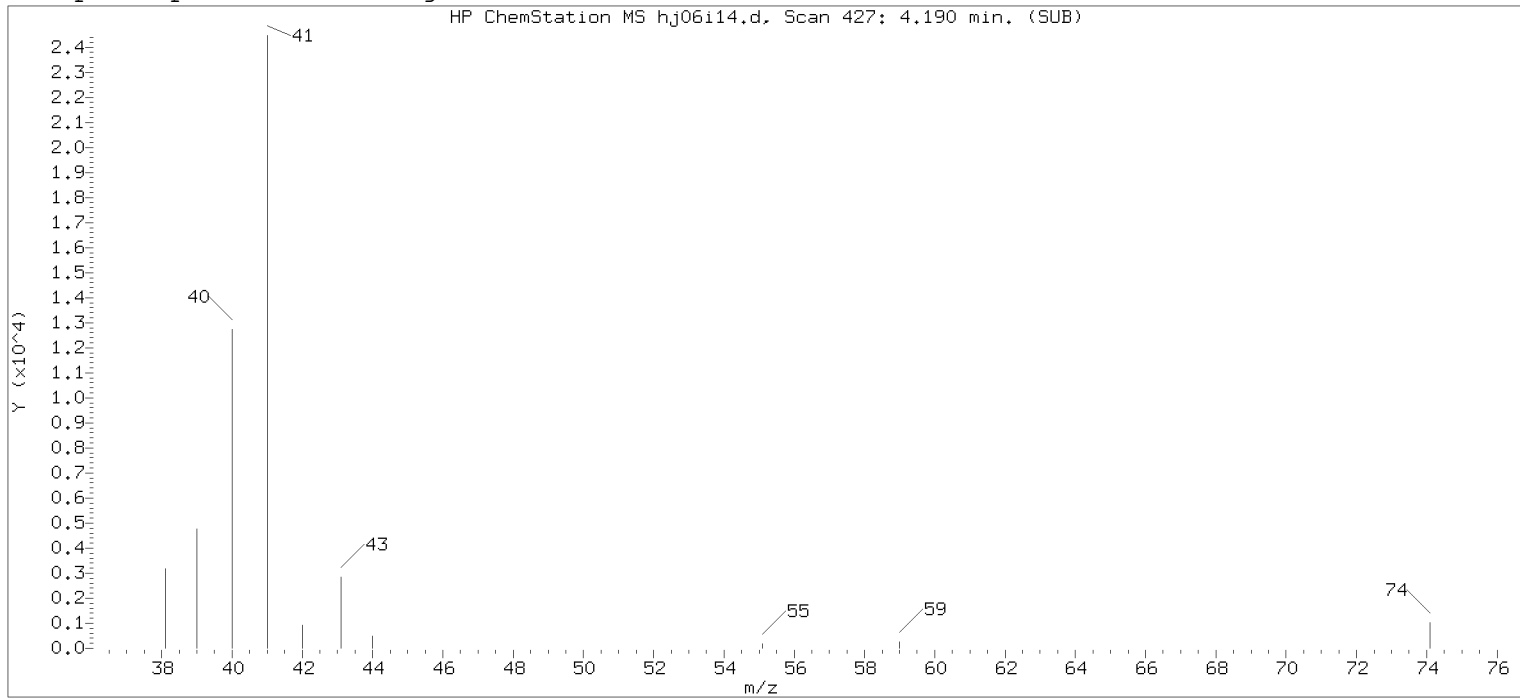
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 427
Retention Time (minutes): 4.190
Quant Ion : 41.00
Area (flag) : 225320M
On-Column Amount (ng) : 87.6913
Integration start scan : 407 Integration stop scan: 626
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

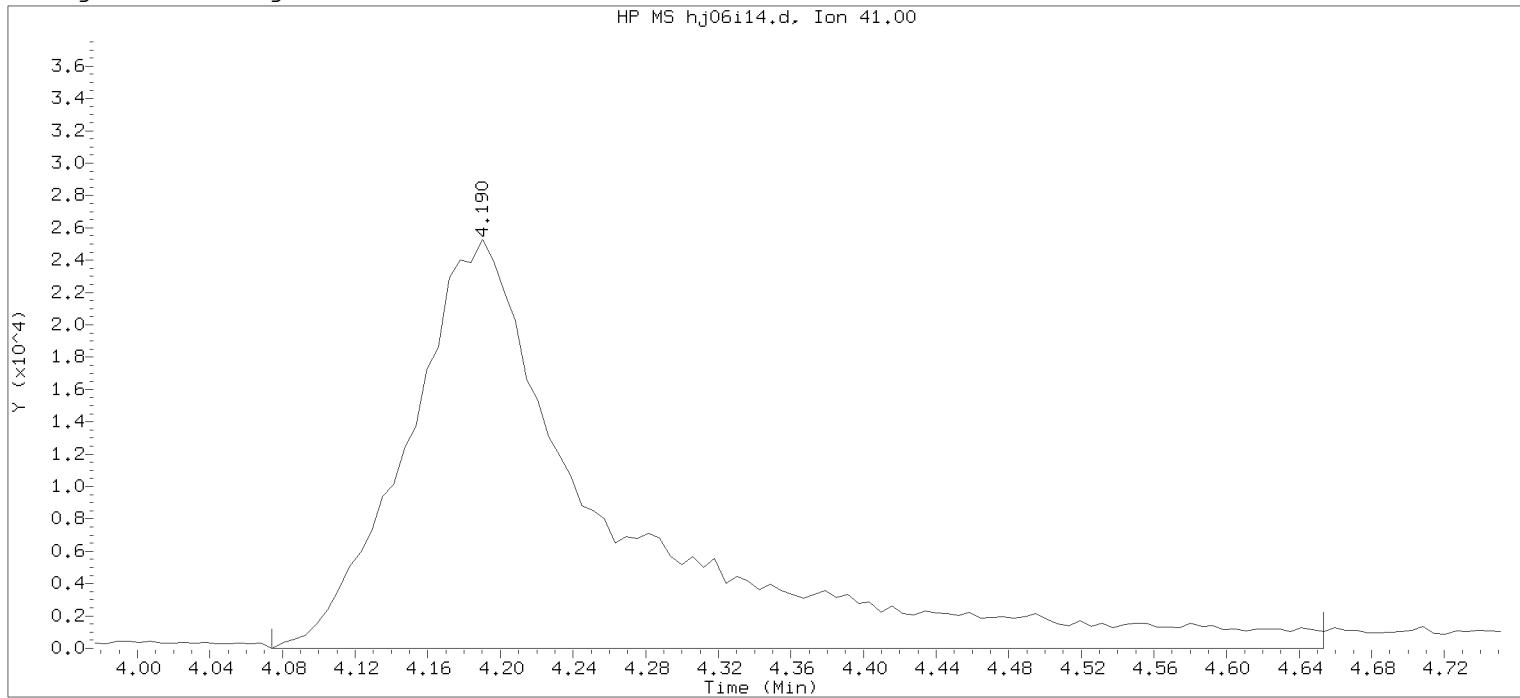
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i14.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:24 Analyst ID: JKH09052

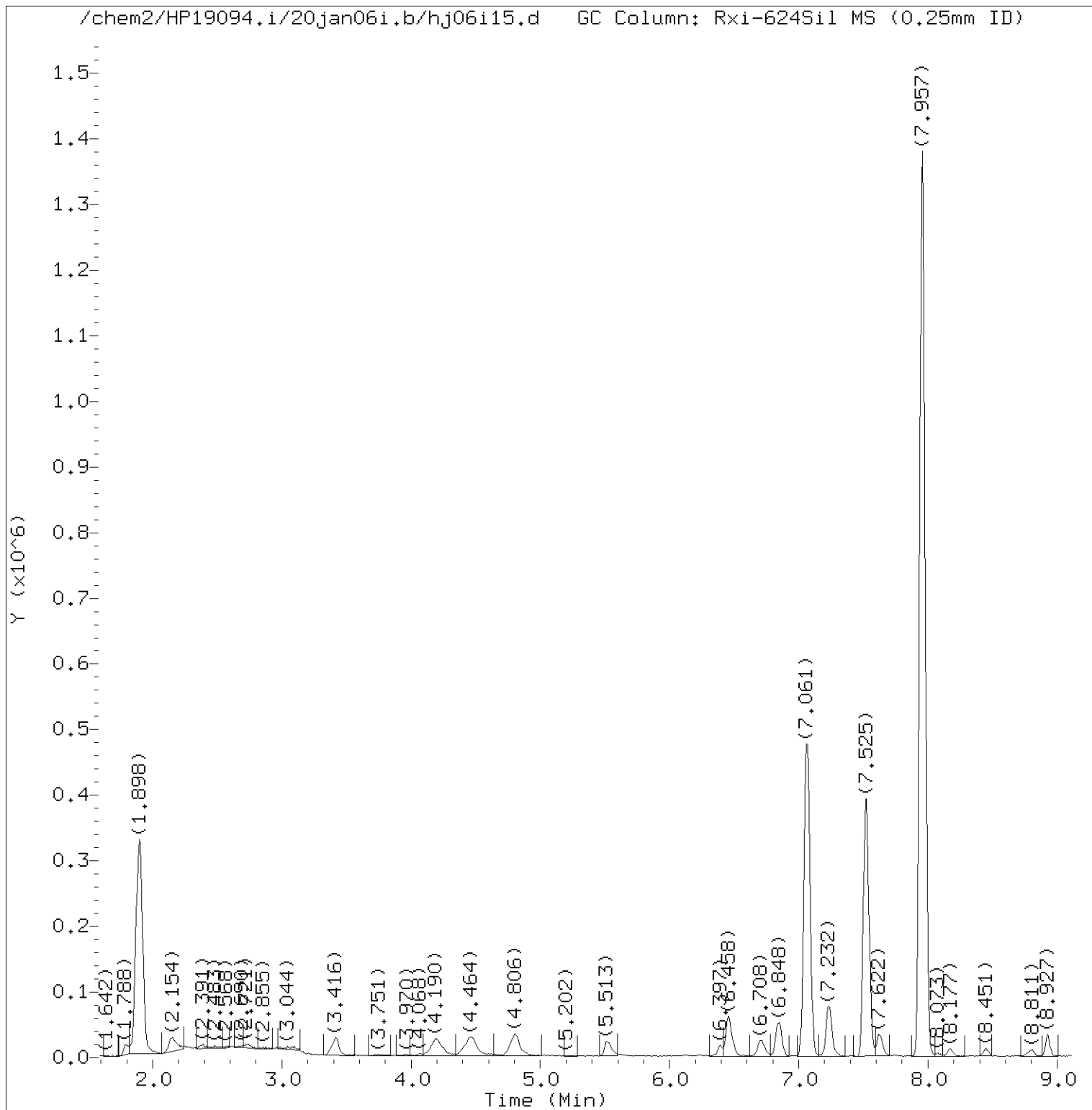
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 12:55
Date, time and analyst ID of latest file update: 06-Jan-2020 12:55 jkh09052

Sample Name: VSTD002

Lab Sample ID: VSTD002

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 427	
Retention Time (minutes)	: 4.190	
Quant Ion	: 41.00	
Area	: 197784	
On-column Amount (ng)	: 84.7521	
Integration start scan	: 407	Integration stop scan: 502
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA564j Page 369 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d
Injection date and time: 06-JAN-2020 12:46

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

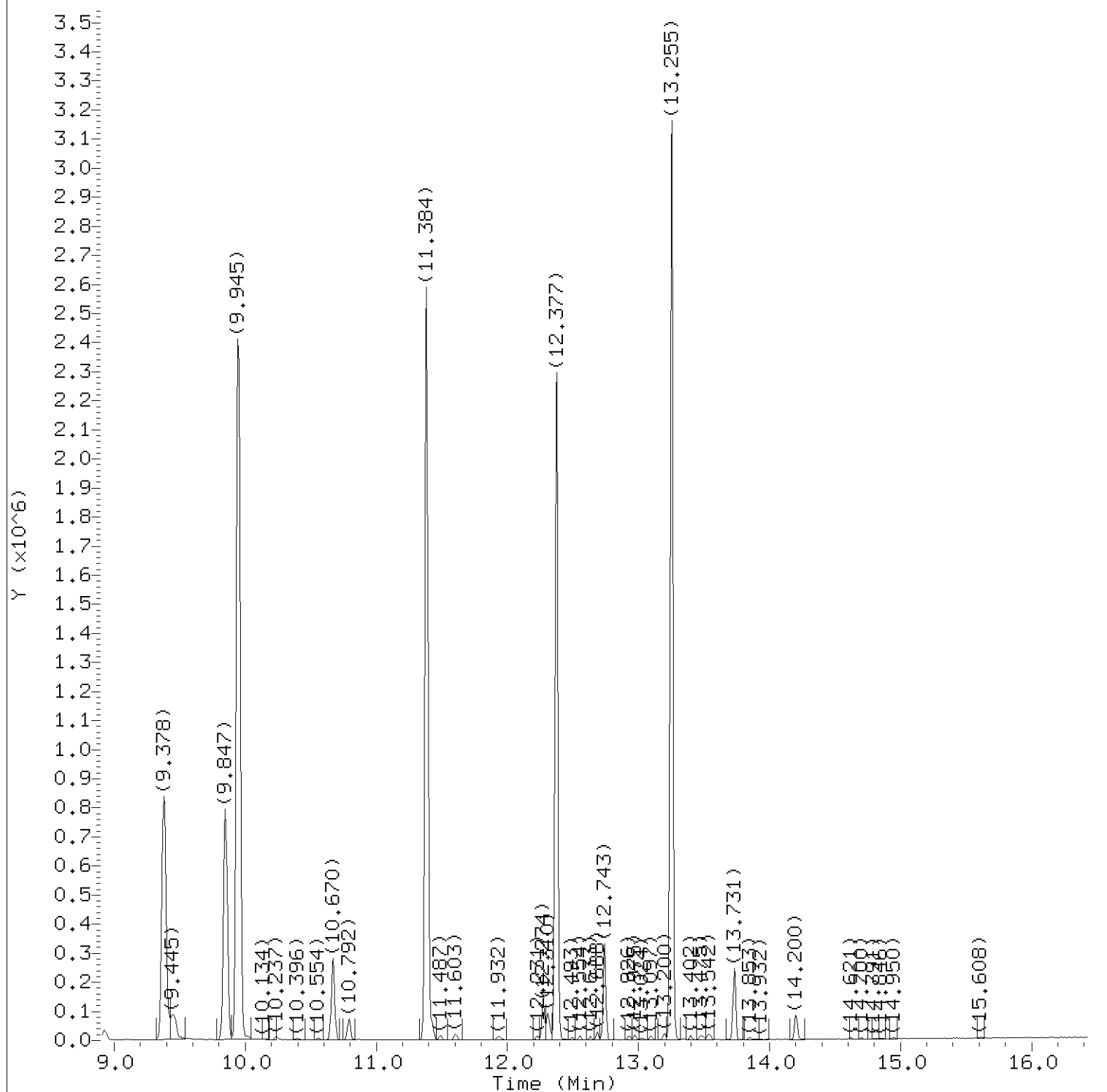
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d
Injection date and time: 06-JAN-2020 12:46

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	65177M	1.042
25) Acetonitrile	(1)	4.196	41	112928M	44.327
26)*t-Butyl Alcohol-d10	(1)	4.470	65	115307M	50.000
36) Vinyl Acetate	(2)	5.513	43	68630	1.003
43) Methyl Acrylate	(2)	6.458	55	118440	4.853
53) 1-Chlorobutane	(2)	7.232	56	99808	0.989
63)*Fluorobenzene	(2)	7.957	96	1963066	10.000
77) Chloroacetonitrile	(2)	9.439	75	65666	49.067
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	22535	0.970
97)*Chlorobenzene-d5	(3)	11.384	117	1468428	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	27547	1.860
112) Cyclohexanone	(1)	12.310	55	43720M	53.121
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	795533	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

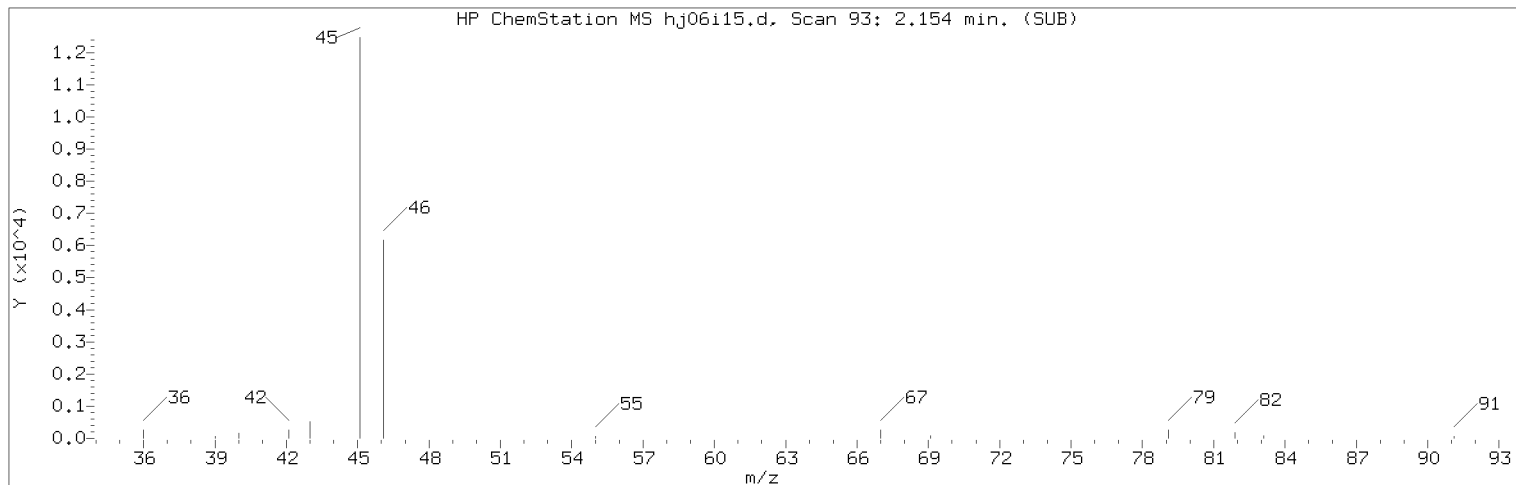
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

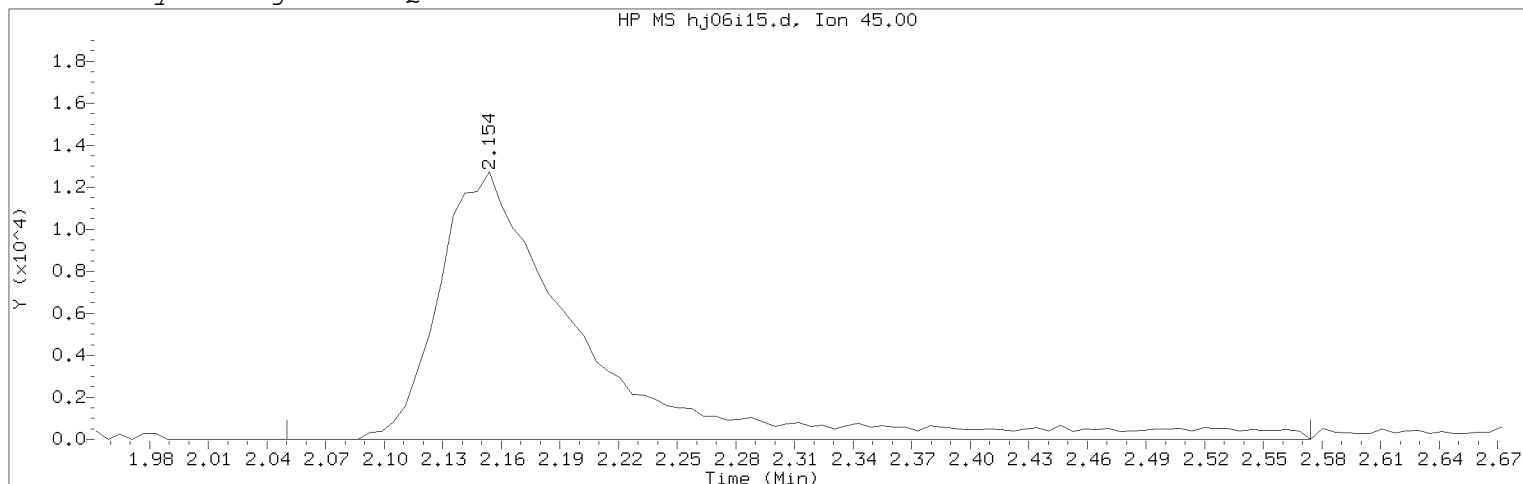
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area (flag)	: 65177M	
On-Column Amount (ng)	: 1.0418	
Integration start scan	: 75	Integration stop scan: 161
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Jennifer K. Howe

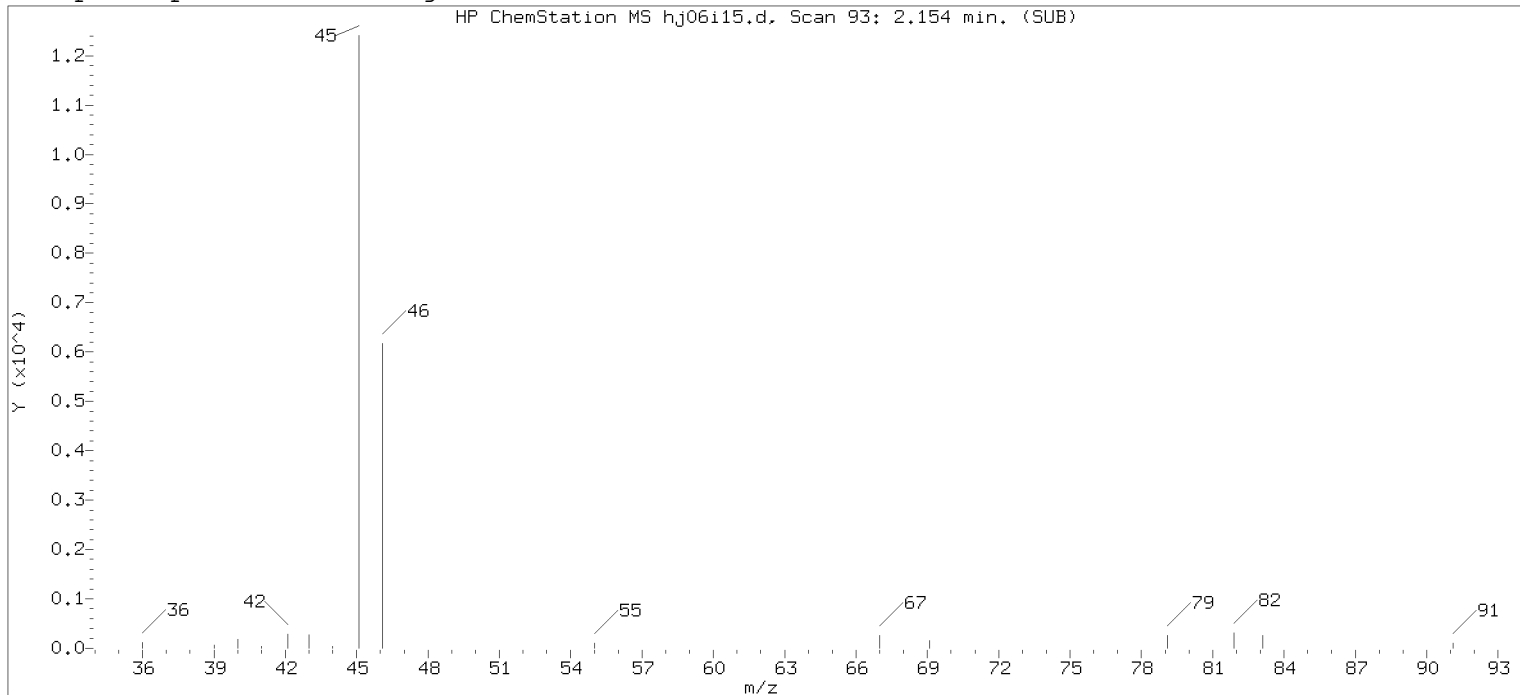
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

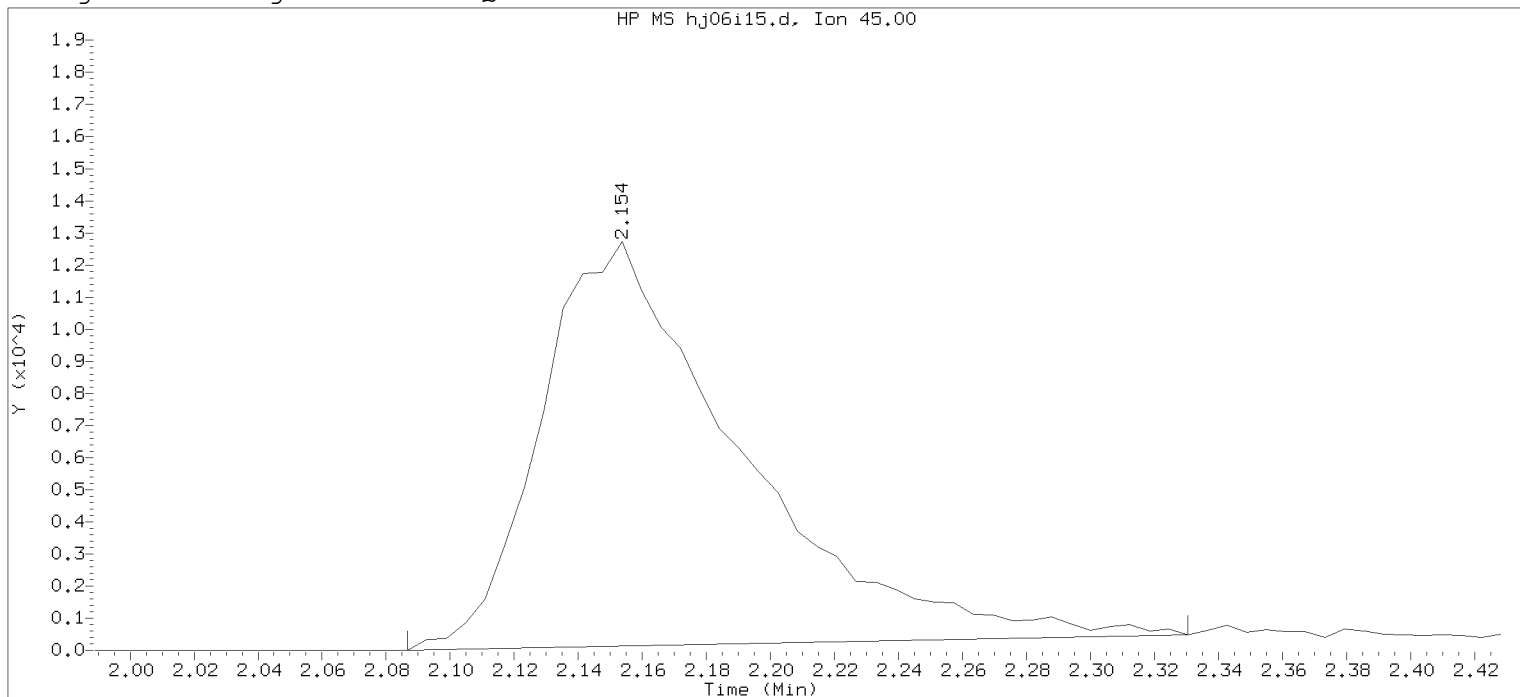
Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:04
Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

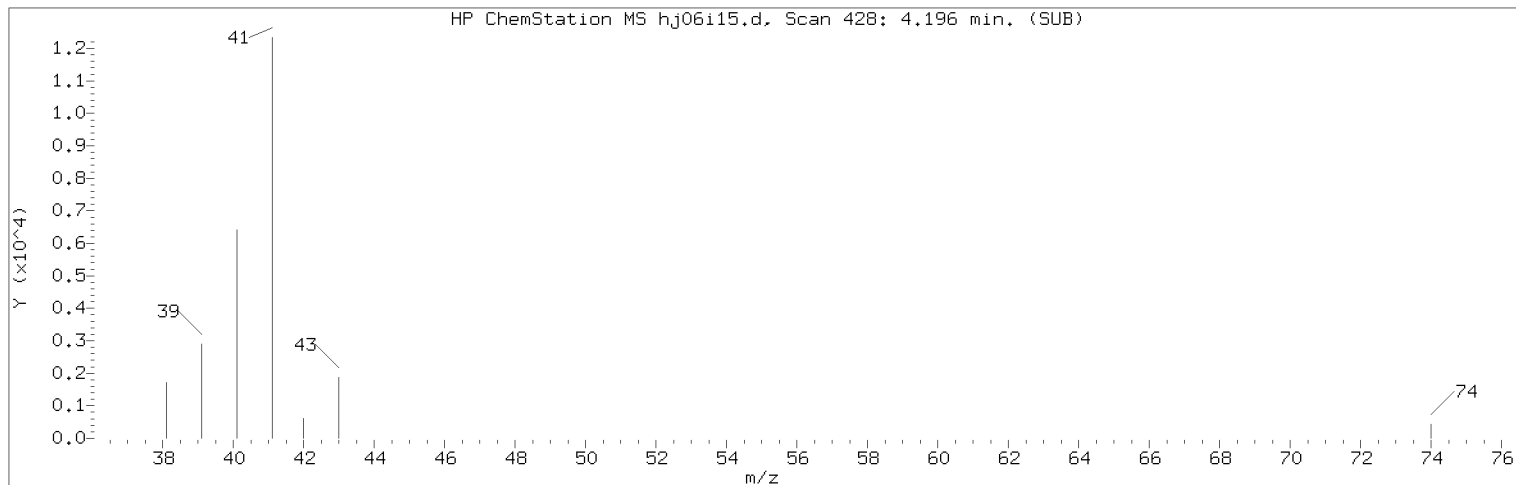
Sample Name: VSTD001

Lab Sample ID: VSTD001

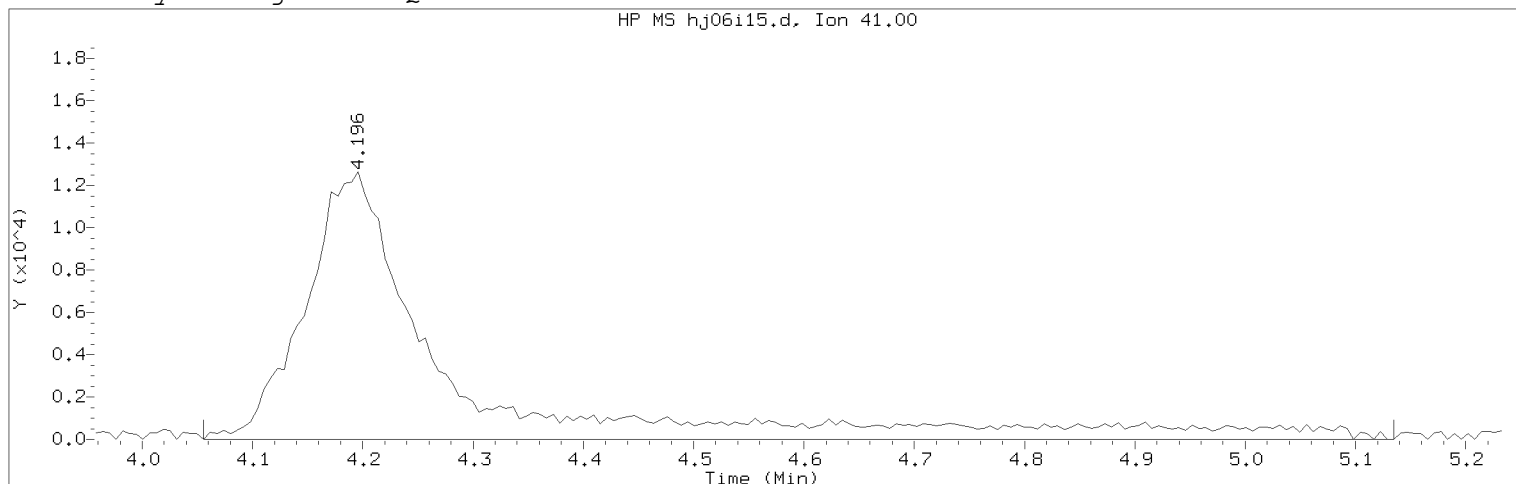
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area	: 54478	
On-column Amount (ng)	: 0.9016	
Integration start scan	: 81	Integration stop scan: 121
Y at integration start	: 0	Y at integration end: 479

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.
Target 3.5 esignature user RA564j Page 374 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

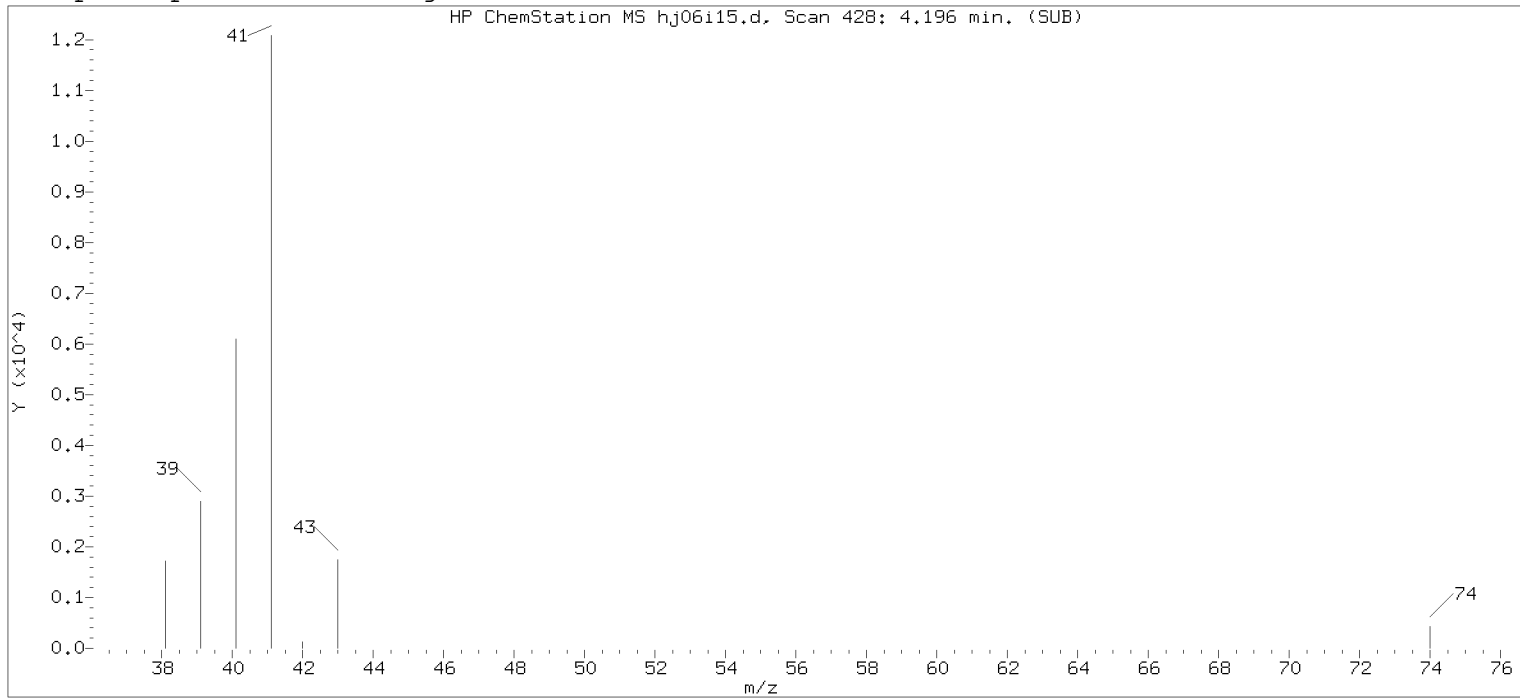
Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 428	
Retention Time (minutes)	: 4.196	
Quant Ion	: 41.00	
Area (flag)	: 112928M	
On-Column Amount (ng)	: 44.3265	
Integration start scan	: 404	Integration stop scan: 581
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

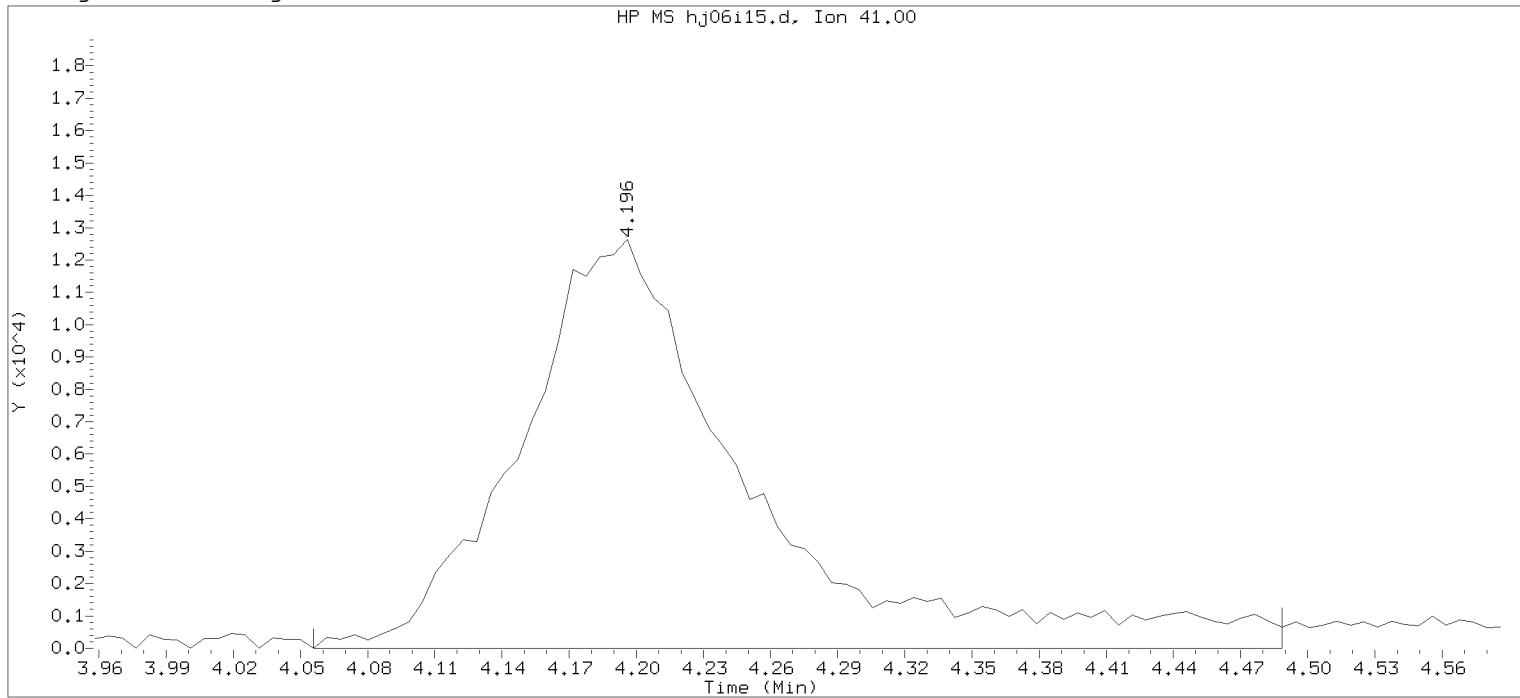
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

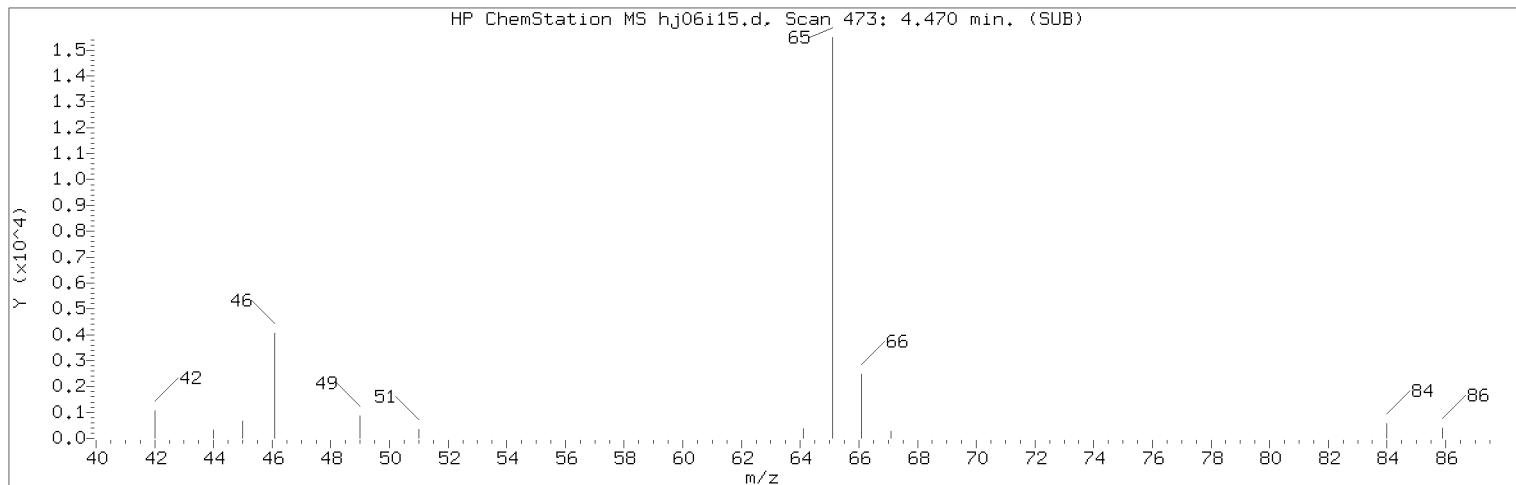
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:04
Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

Sample Name: VSTD001

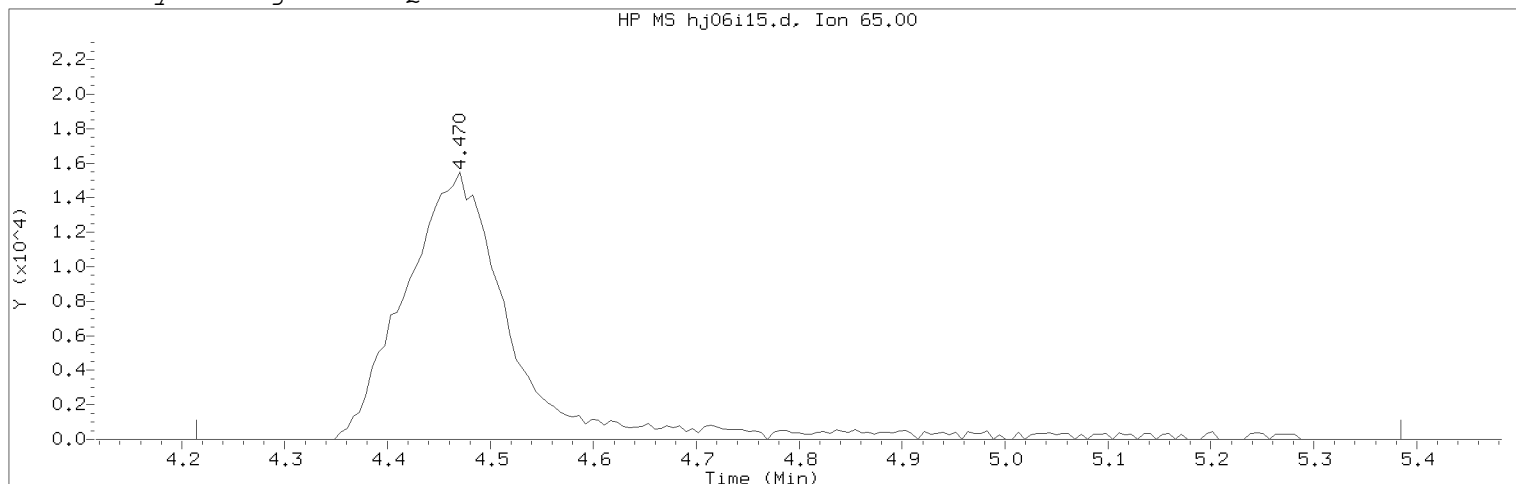
Lab Sample ID: VSTD001

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 428	
Retention Time (minutes)	: 4.196	
Quant Ion	: 41.00	
Area	: 89840	
On-column Amount (ng)	: 37.4705	
Integration start scan	: 404	Integration stop scan: 475
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 12:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

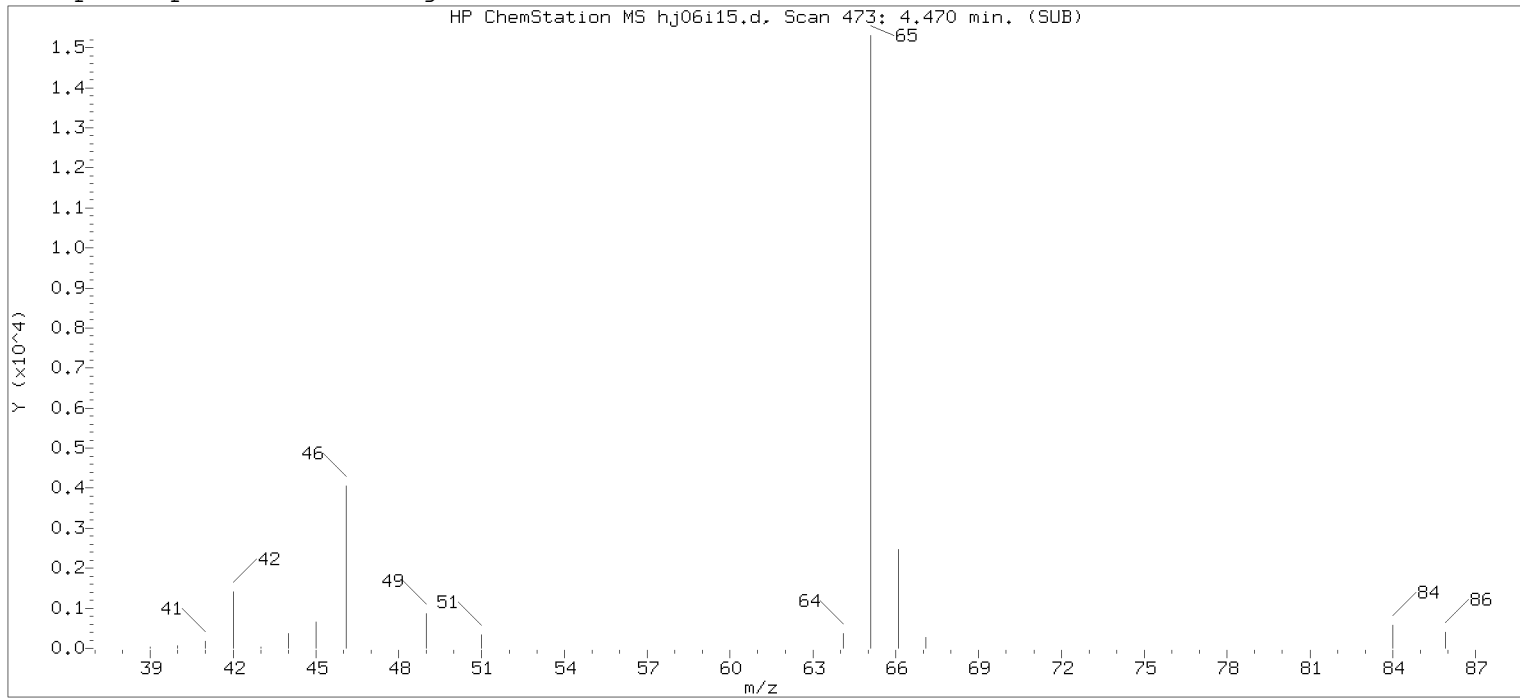
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 115307M
On-Column Amount (ng) : 50.0000
Integration start scan : 430 Integration stop scan: 622
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

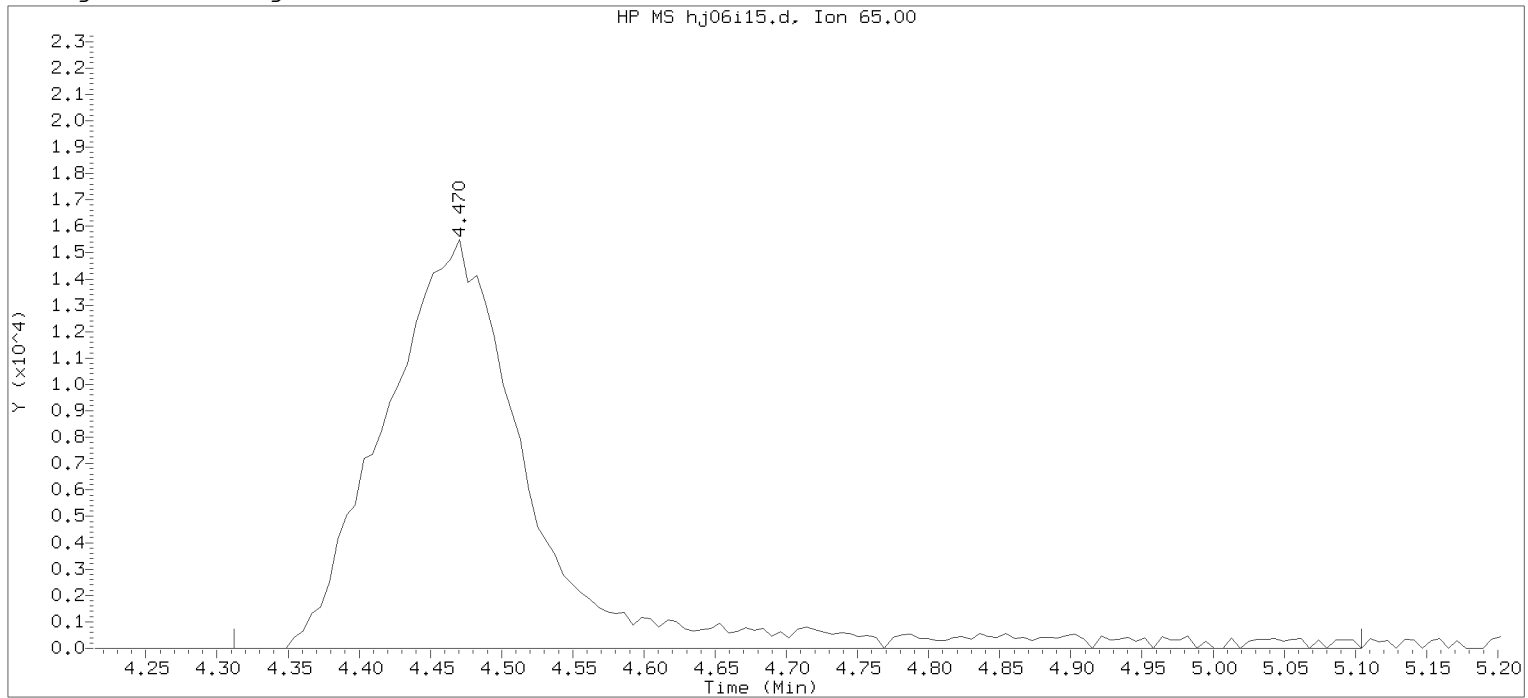
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:04

Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

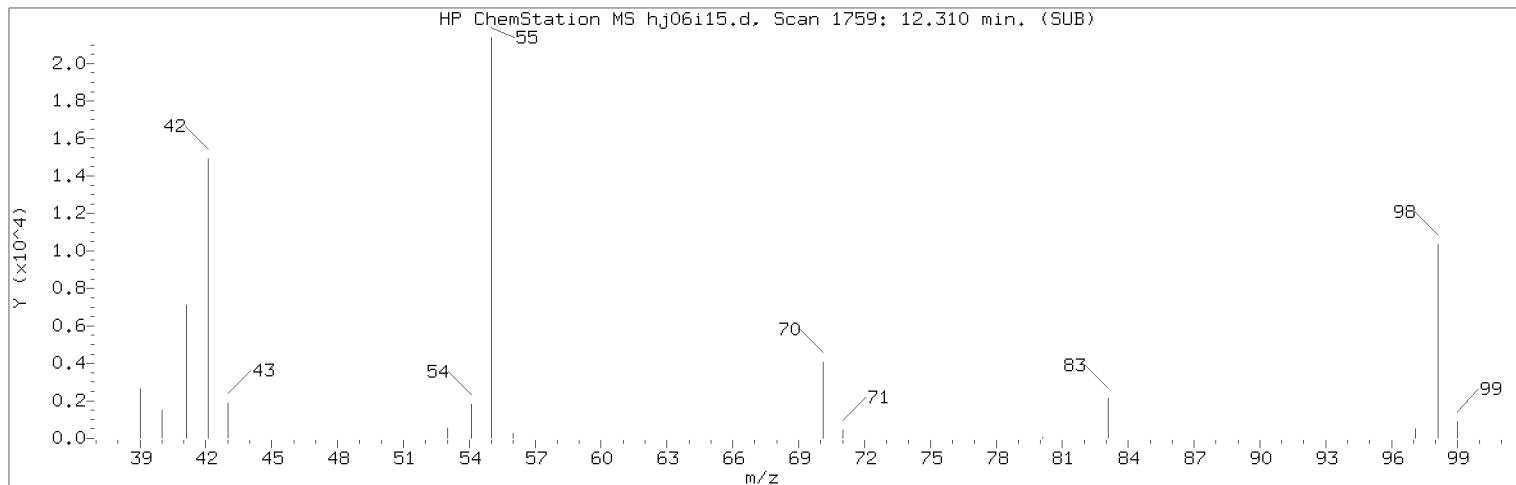
Sample Name: VSTD001

Lab Sample ID: VSTD001

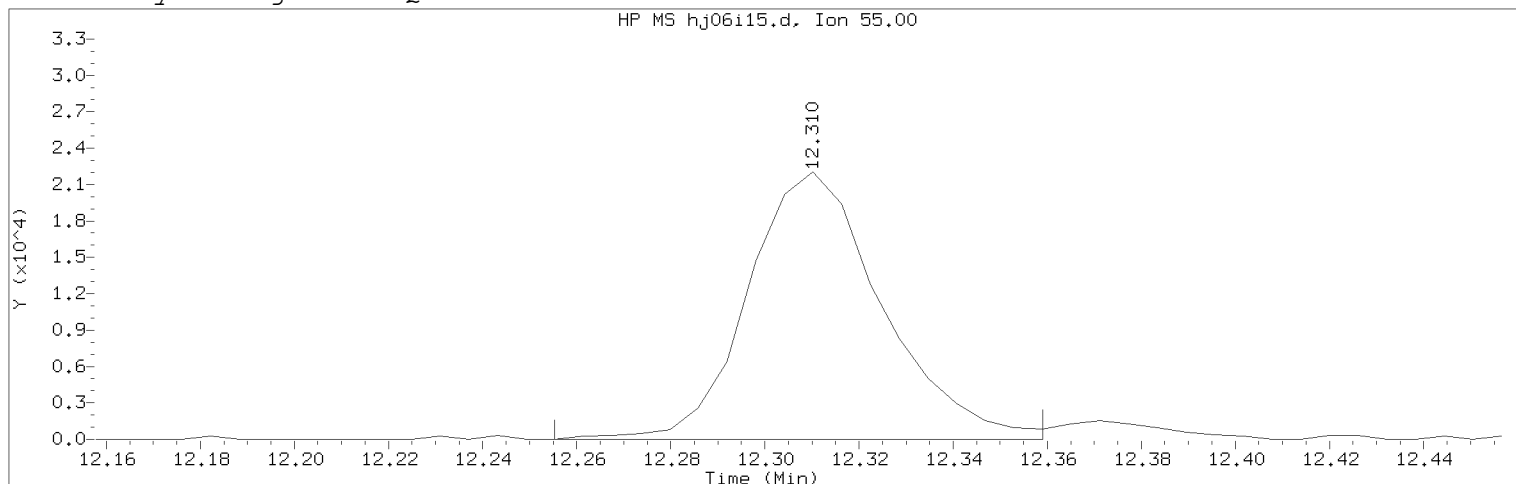
Compound Number	: 26	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 473	
Retention Time (minutes)	: 4.470	
Quant Ion	: 65.00	
Area	: 113296	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 576
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA564j Page 378 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD001

Lab Sample ID: VSTD001

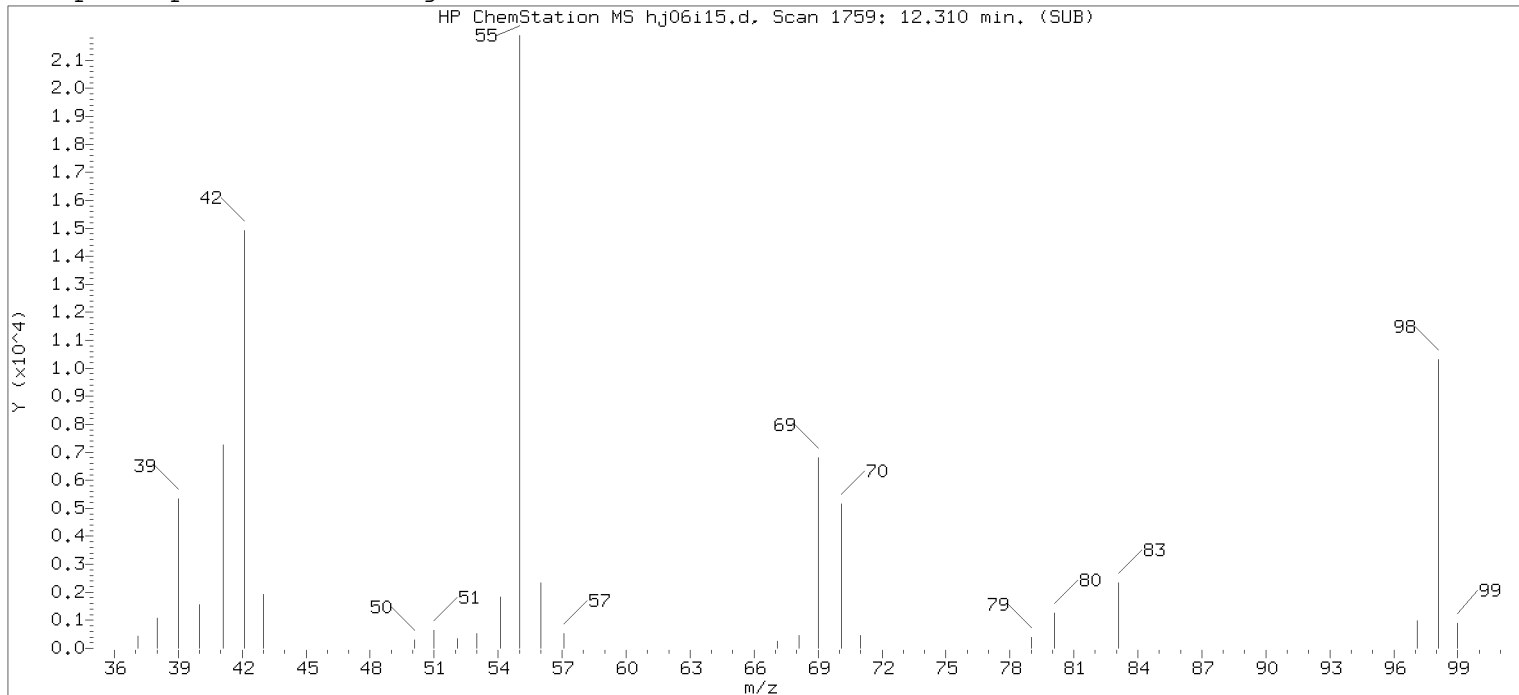
Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area (flag)	: 43720M	
On-Column Amount (ng)	: 53.1214	
Integration start scan	: 1749	Integration stop scan: 1766
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

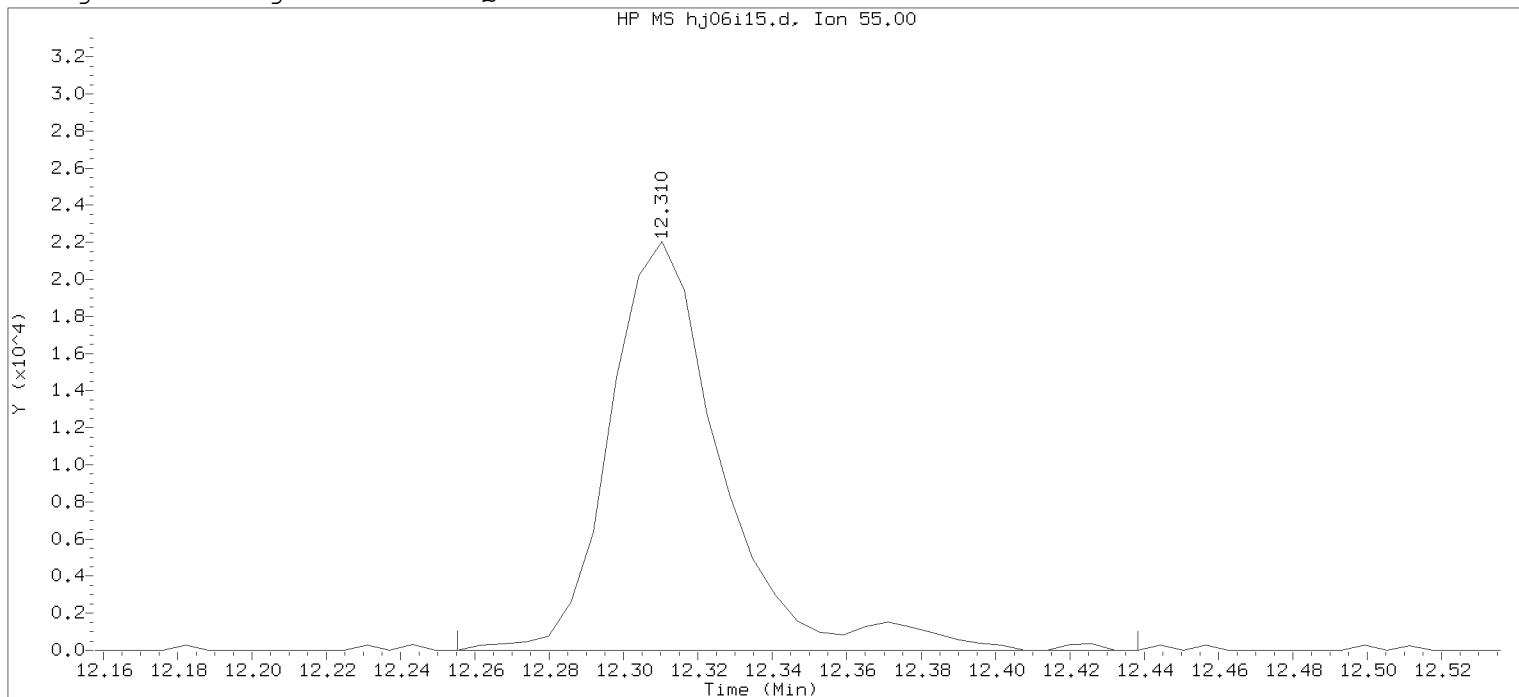
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i15.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 12:46

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:04

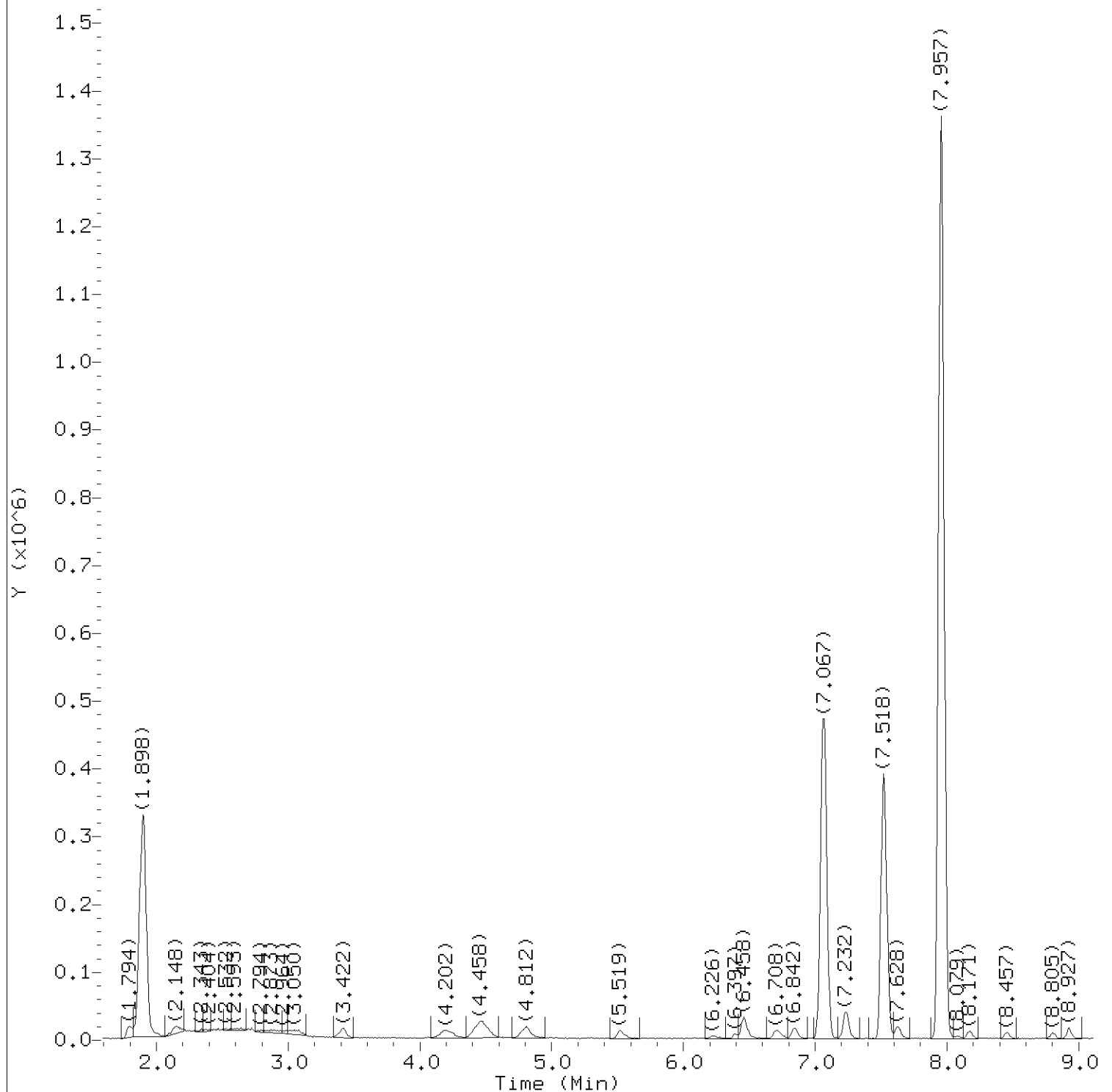
Date, time and analyst ID of latest file update: 06-Jan-2020 13:04 Automation

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 46239	
On-column Amount (ng)	: 56.2664	
Integration start scan	: 1749	Integration stop scan: 1779
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA564j Page 380 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d
Injection date and time: 06-JAN-2020 13:07

Instrument ID: HP19094.i
Analyst ID: JKH09052

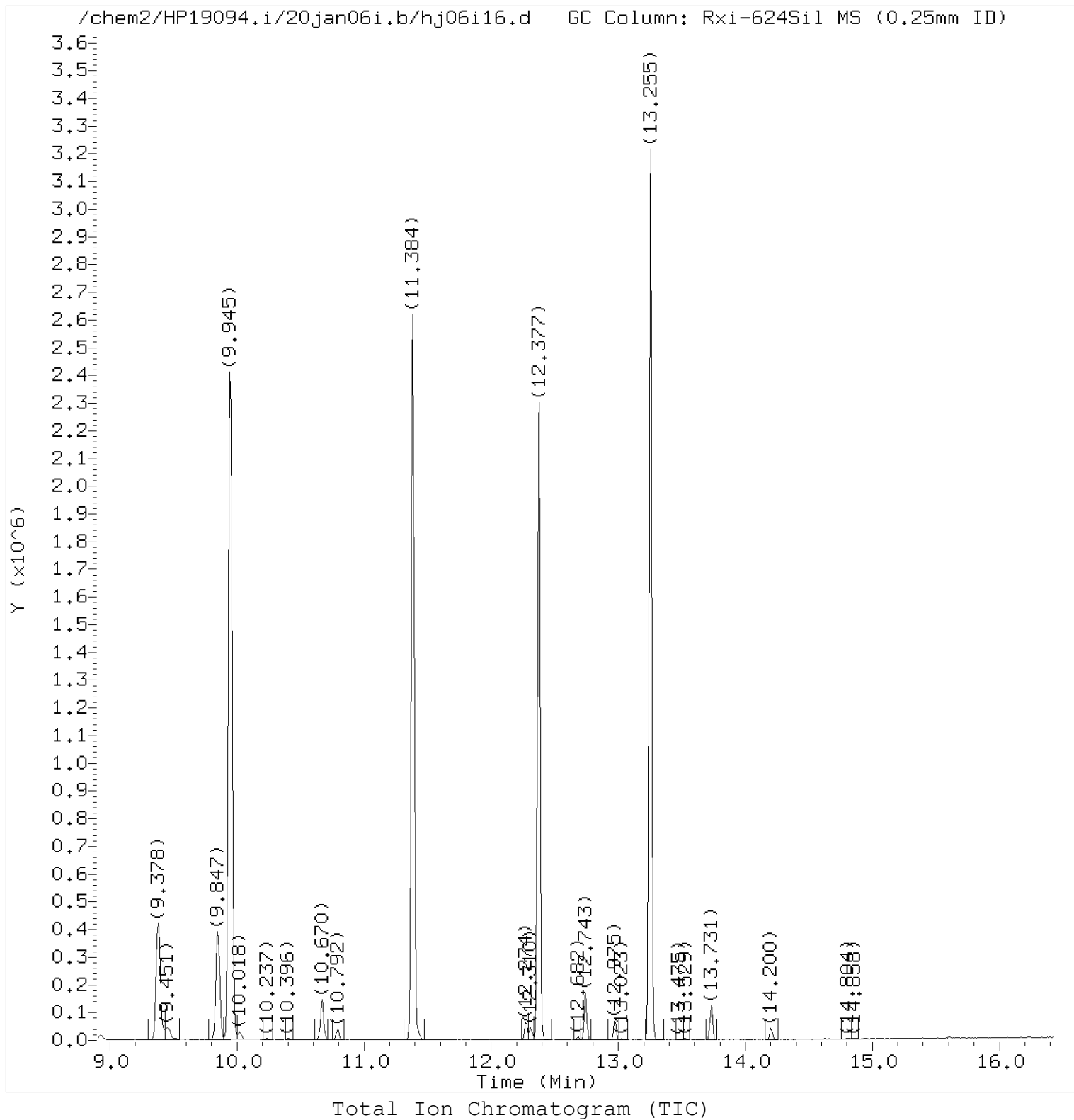
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d
Injection date and time: 06-JAN-2020 13:07

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d
Injection date and time: 06-JAN-2020 13:07

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	33159M	0.526
25) Acetonitrile	(1)	4.202	41	63960M	24.474
26)*t-Butyl Alcohol-d10	(1)	4.464	65	112993	50.000
36) Vinyl Acetate	(2)	5.513	43	37205	0.537
43) Methyl Acrylate	(2)	6.458	55	60411	2.485
53) 1-Chlorobutane	(2)	7.232	56	50335	0.500
63)*Fluorobenzene	(2)	7.957	96	1958073	10.000
77) Chloroacetonitrile	(2)	9.439	75	31737M	23.971
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	11634	0.502
97)*Chlorobenzene-d5	(3)	11.384	117	1468028	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	13624	0.948
112) Cyclohexanone	(1)	12.310	55	20534M	25.383
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	798270	10.000

M = Compound was manually integrated.

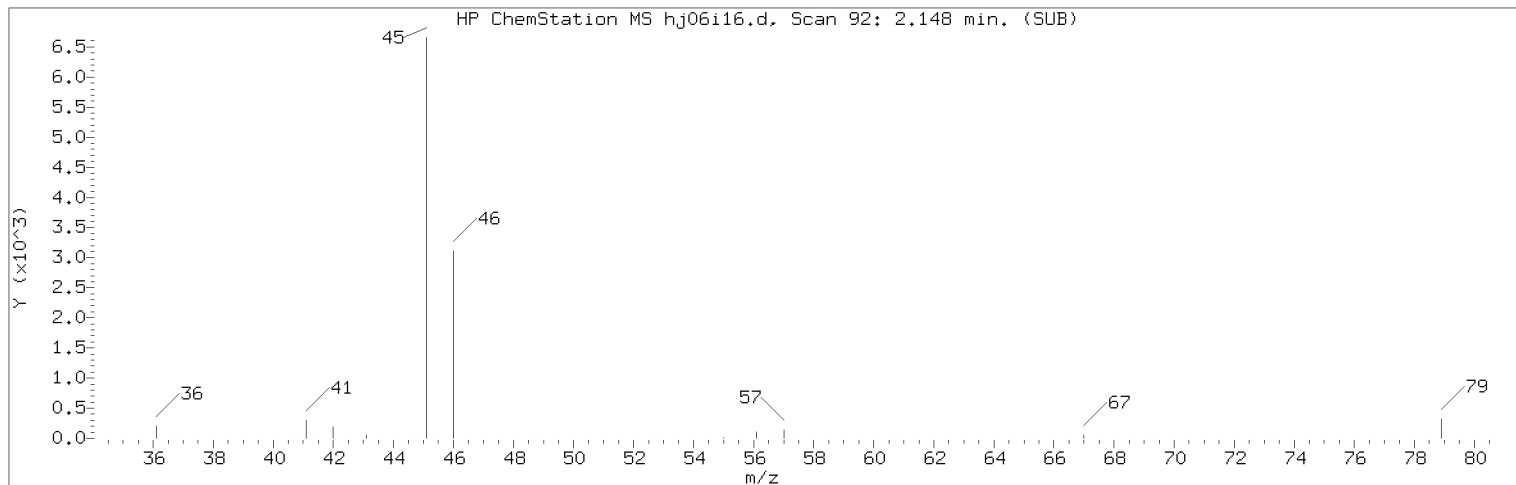
* = Compound is an internal standard.

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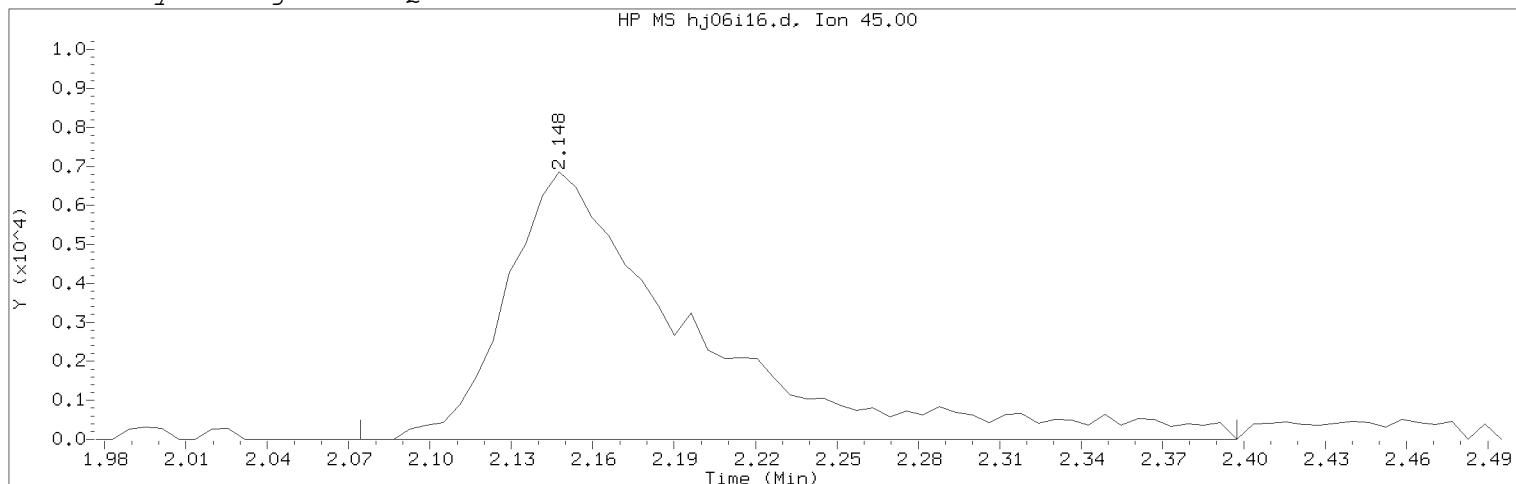
Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

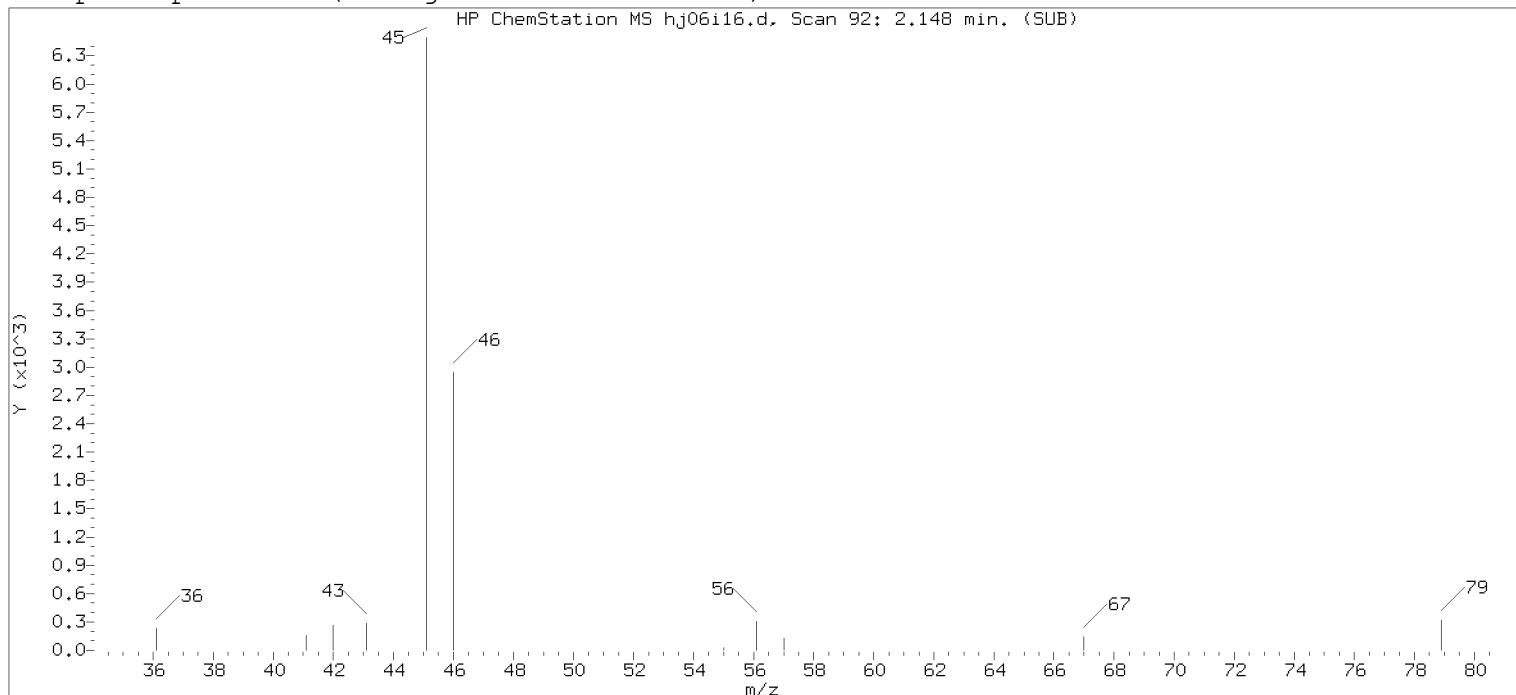
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area (flag)	: 33159M	
On-Column Amount (ng)	: 0.5259	
Integration start scan	: 79	Integration stop scan: 132
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

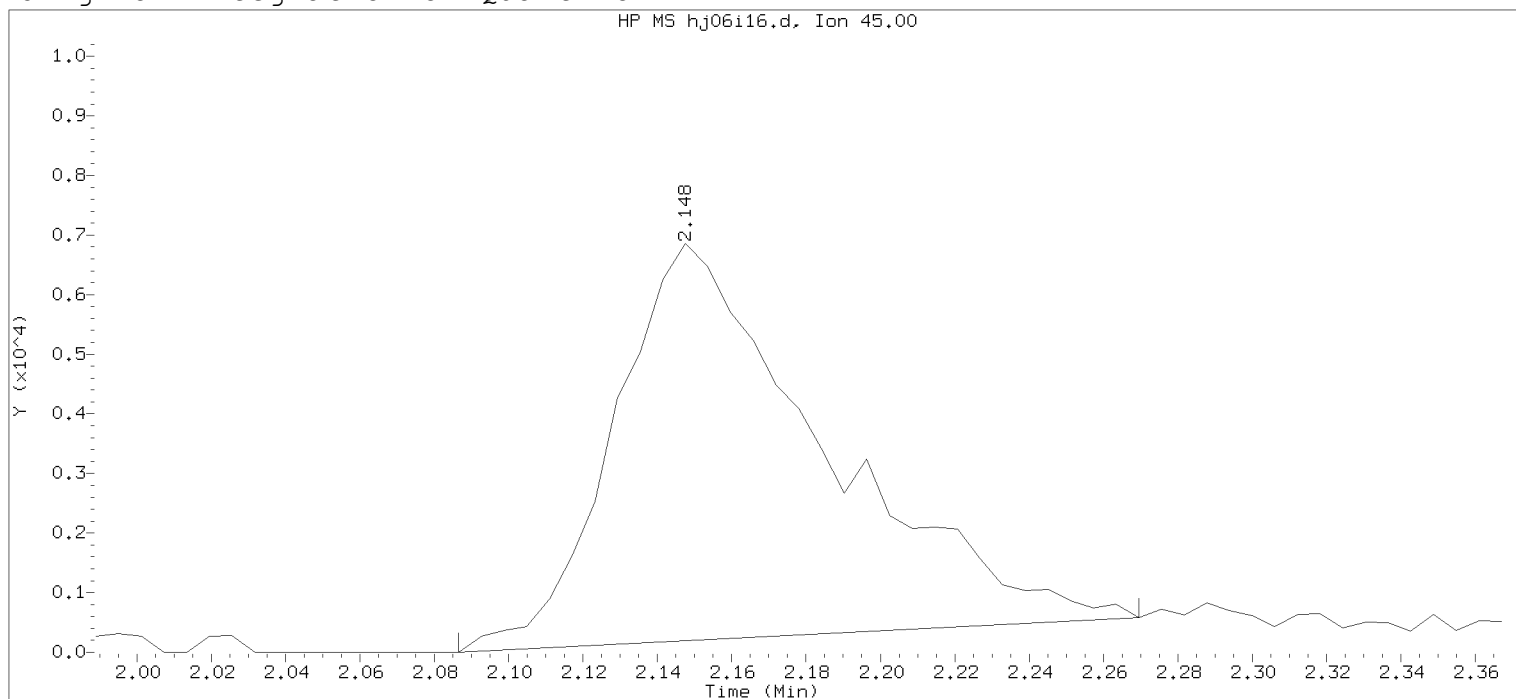
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:25
Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

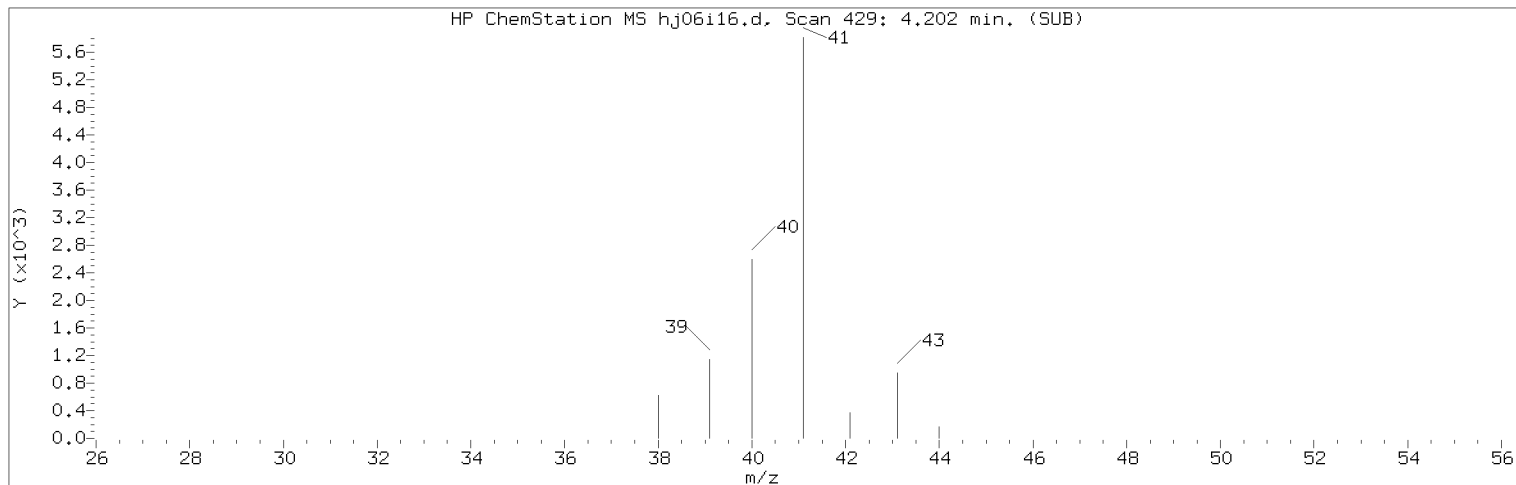
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

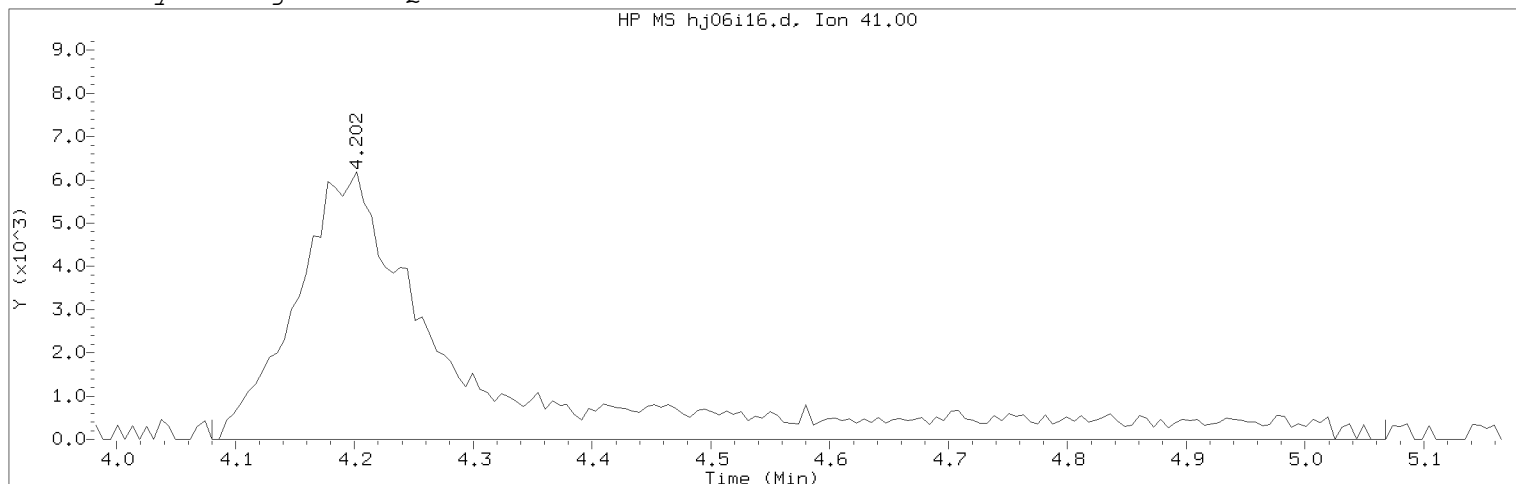
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 26016	
On-column Amount (ng)	: 0.4288	
Integration start scan	: 81	Integration stop scan: 111
Y at integration start	: 0	Y at integration end: 581

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Target 3.5 esignature user RA564j Page 385 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

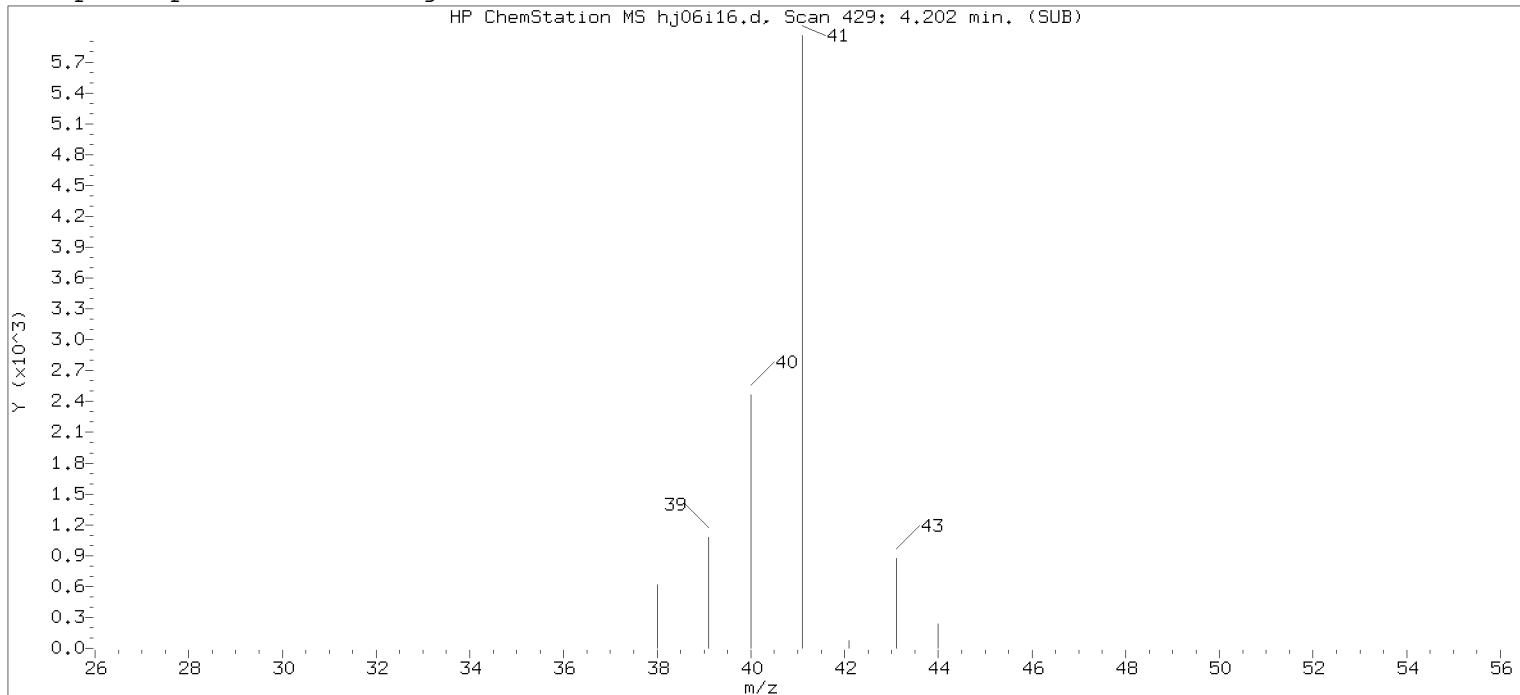
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area (flag) : 63960M
On-Column Amount (ng) : 24.4736
Integration start scan : 408 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

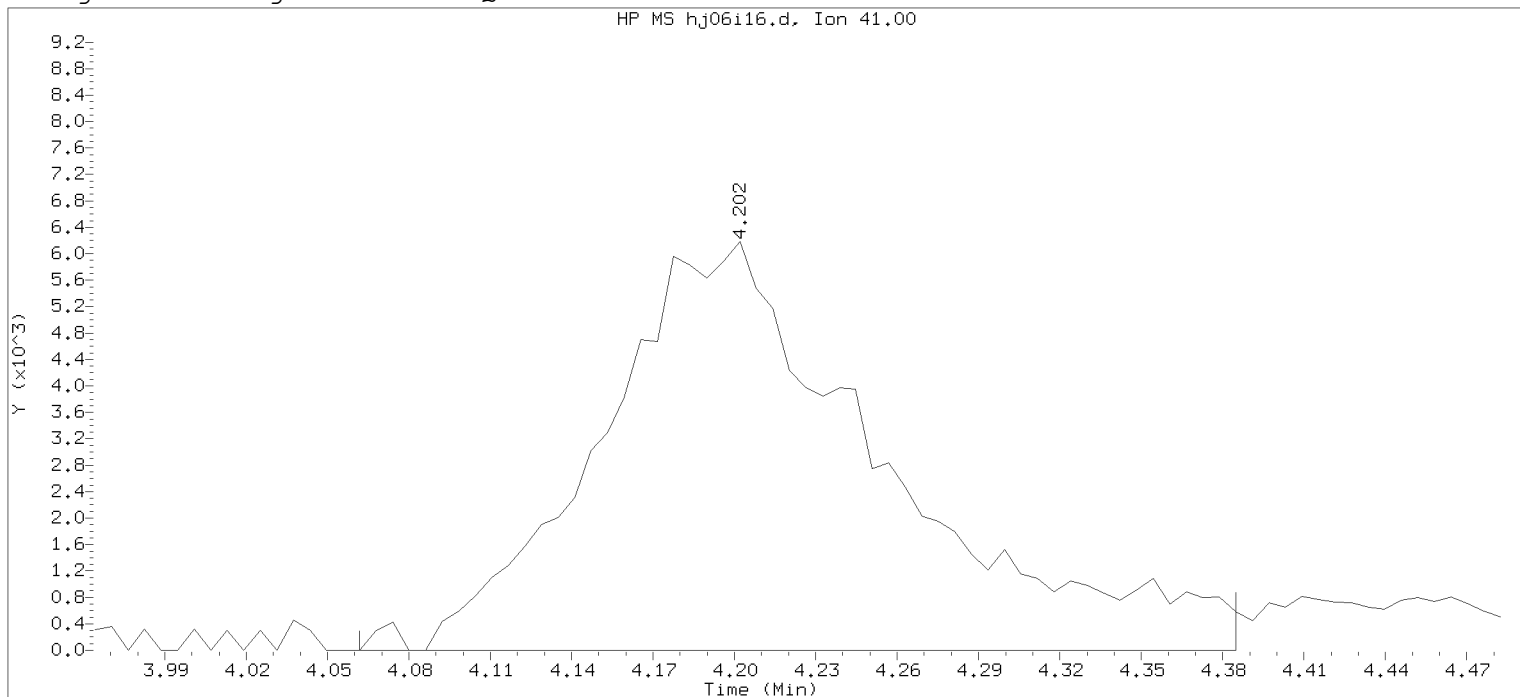
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:25

Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number

: 25

Compound Name

: Acetonitrile

Scan Number

: 429

Retention Time (minutes)

: 4.202

Quant Ion

: 41.00

Area

: 44862

On-column Amount (ng)

: 18.2792

Integration start scan

: 405

Integration stop scan: 458

Y at integration start

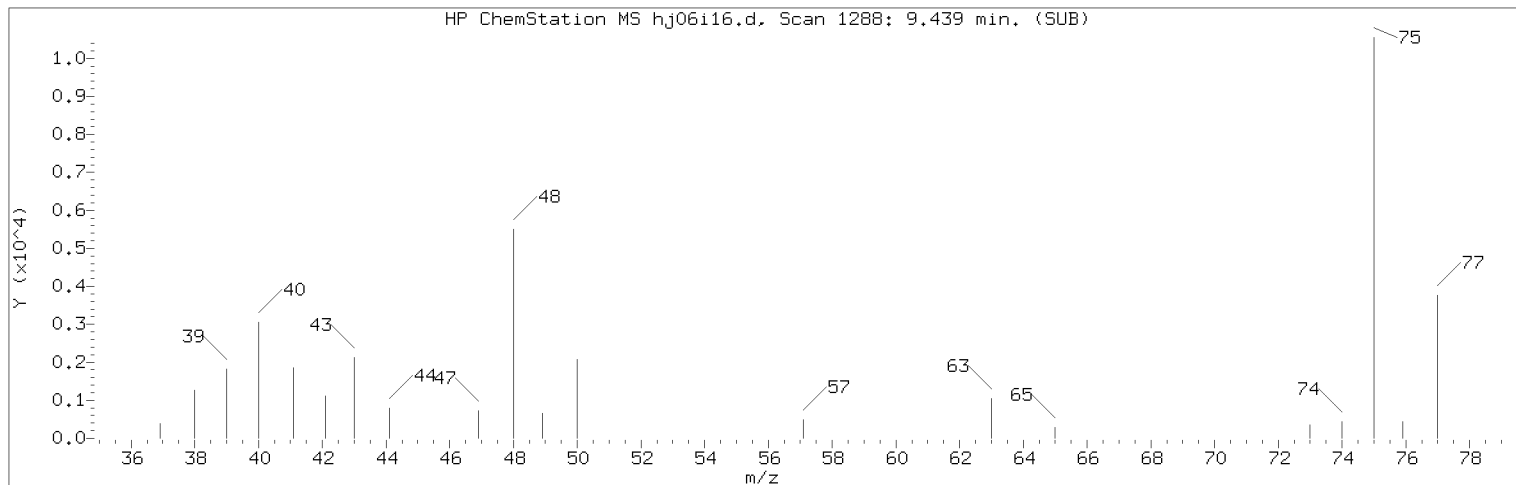
: 0

Y at integration end: 0

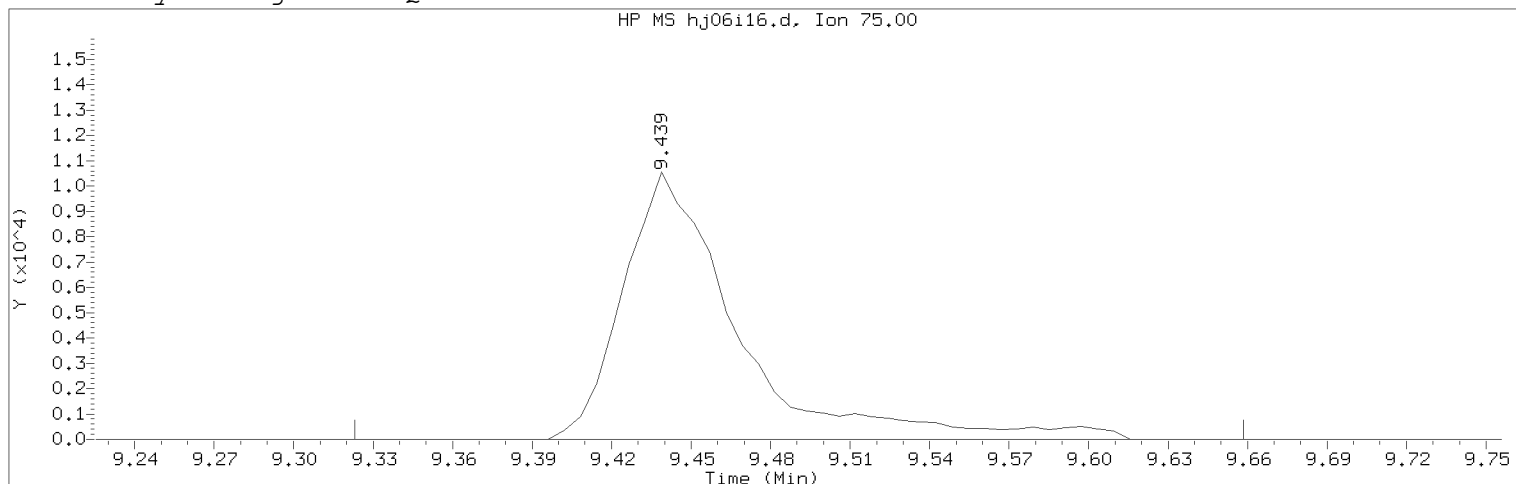
Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RA564j Page 387 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

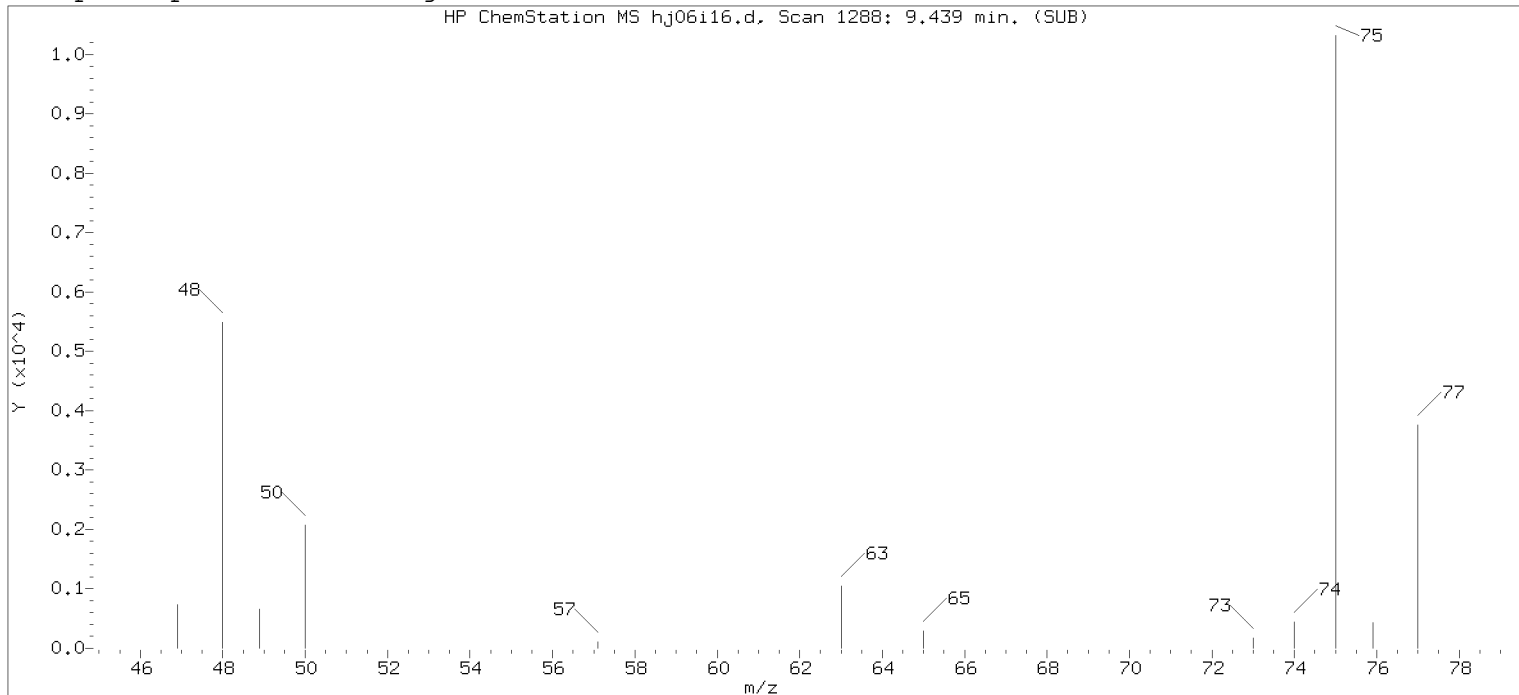
Compound Number	: 77	
Compound Name	: Chloroacetonitrile	
Scan Number	: 1288	
Retention Time (minutes)	: 9.439	
Quant Ion	: 75.00	
Area (flag)	: 31737M	
On-Column Amount (ng)	: 23.9707	
Integration start scan	: 1268	Integration stop scan: 1323
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

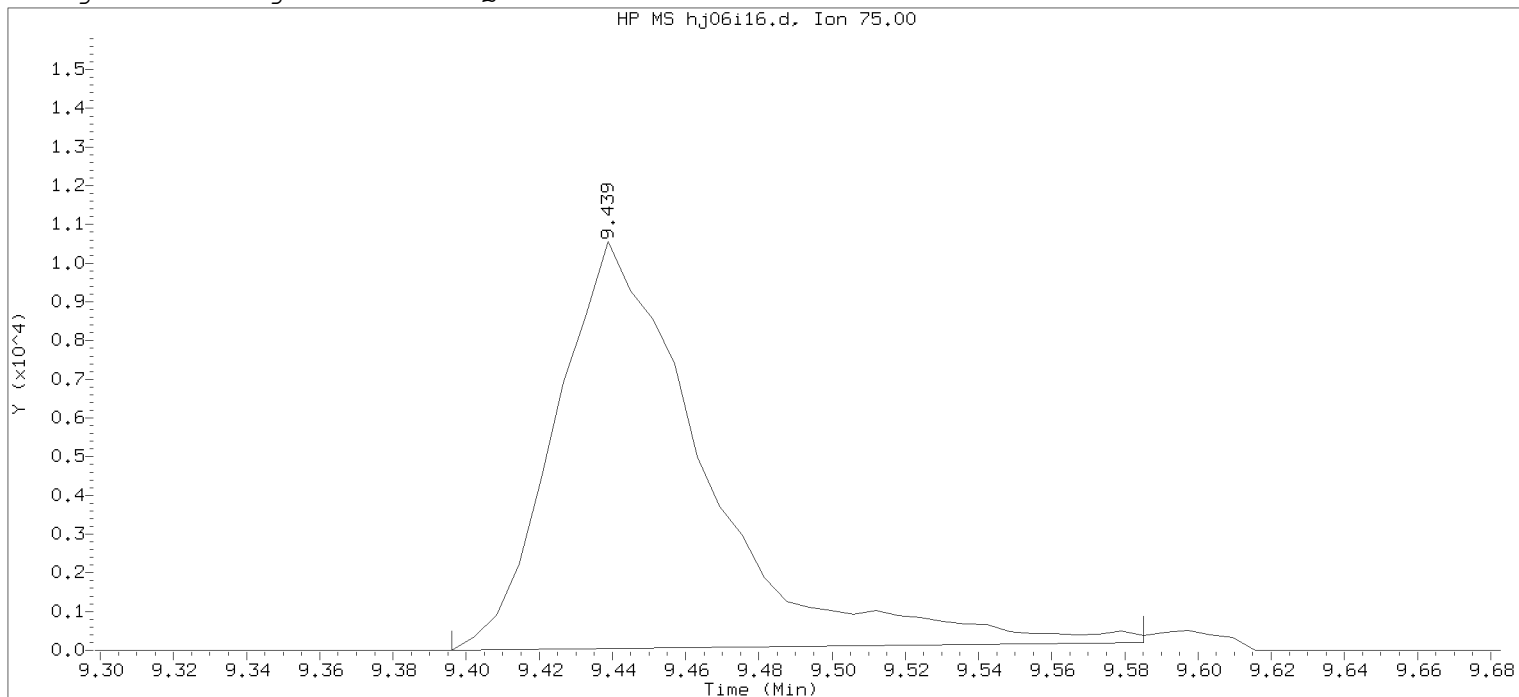
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:07

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:25

Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

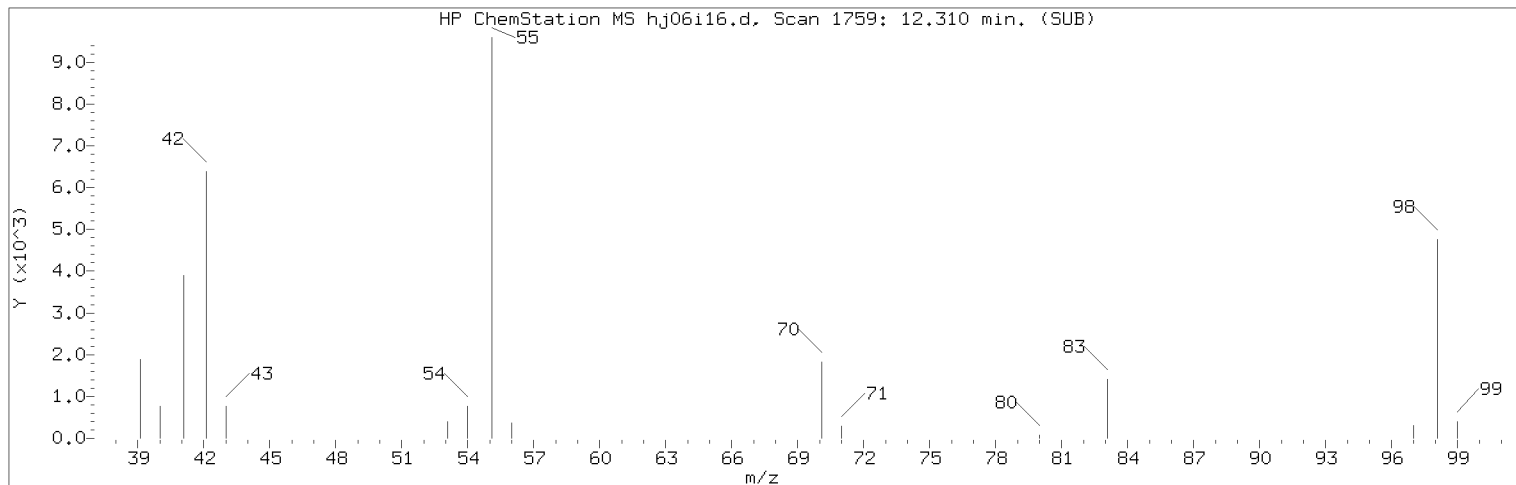
Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

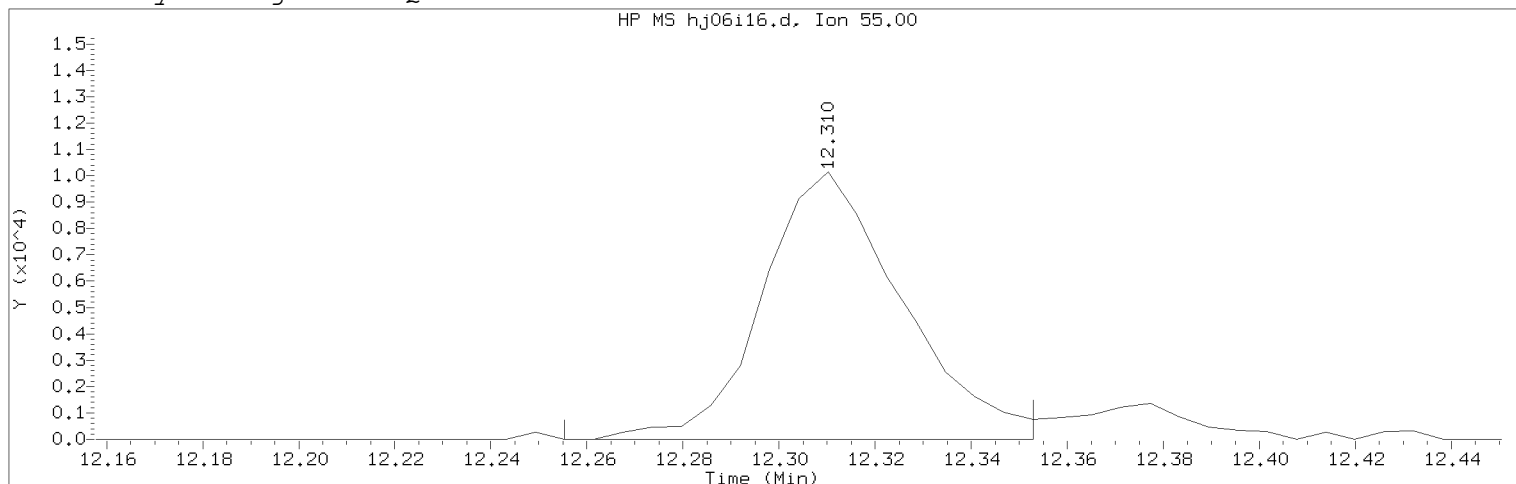
Compound Number	: 77	
Compound Name	: Chloroacetonitrile	
Scan Number	: 1288	
Retention Time (minutes)	: 9.439	
Quant Ion	: 75.00	
Area	: 29943	
On-column Amount (ng)	: 22.8222	
Integration start scan	: 1280	Integration stop scan: 1311
Y at integration start	: 0	Y at integration end: 194

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Target 3.5 esignature user RA564j Page 389 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

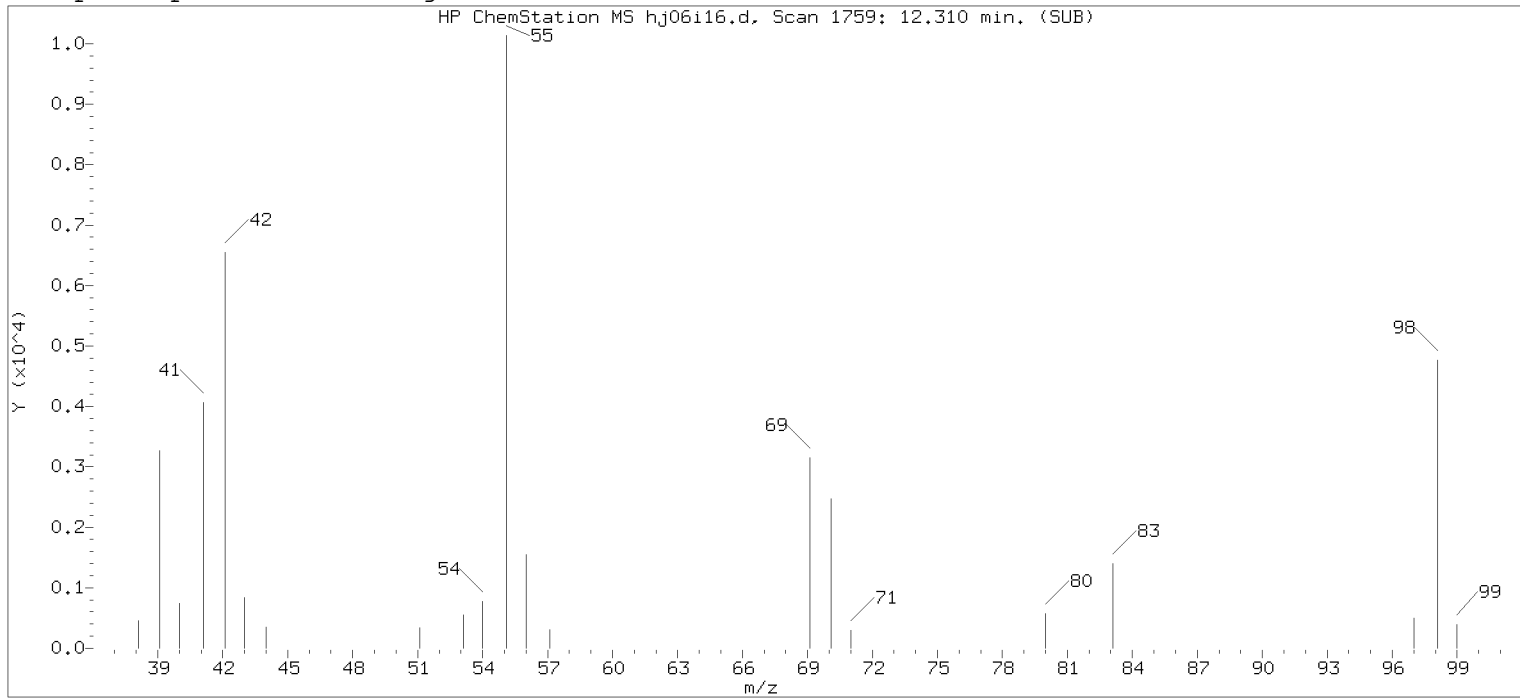
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 20534M
On-Column Amount (ng) : 25.3826
Integration start scan : 1749 Integration stop scan: 1765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

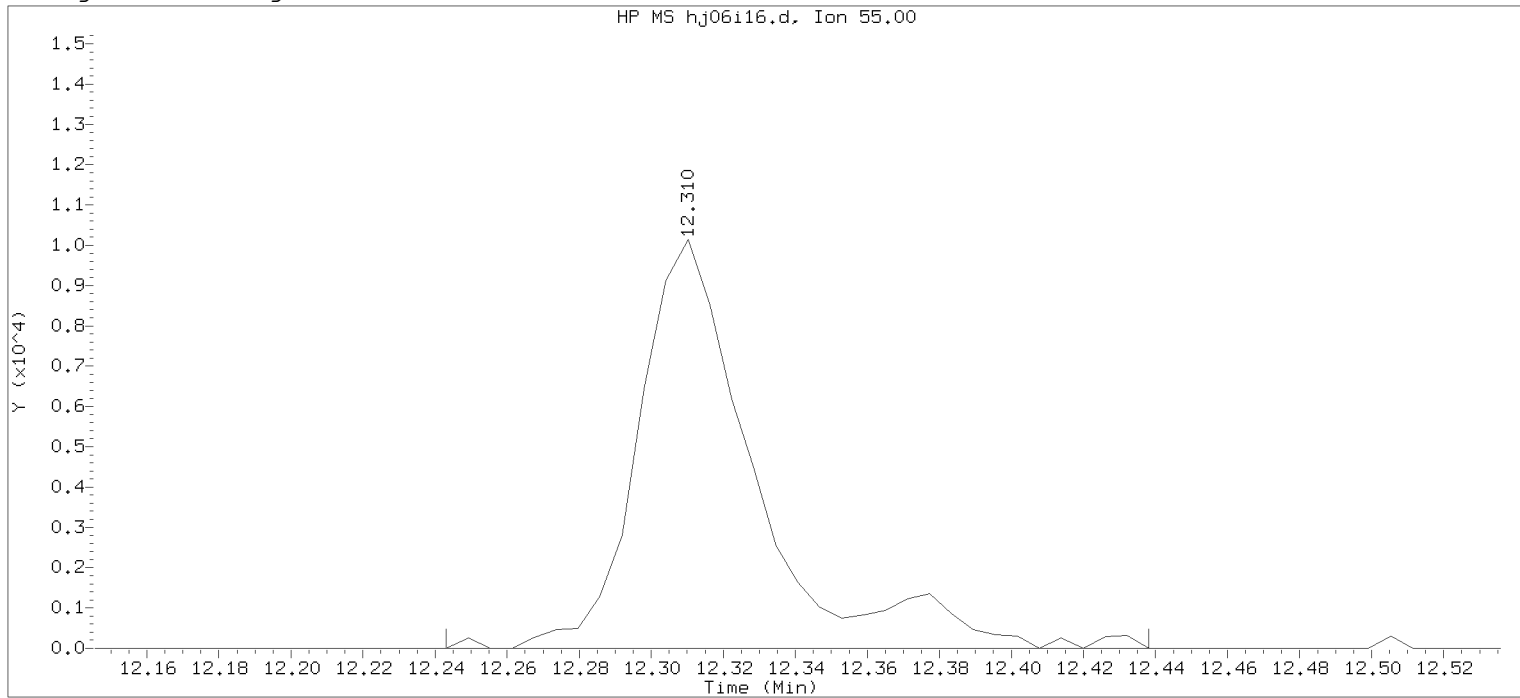
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



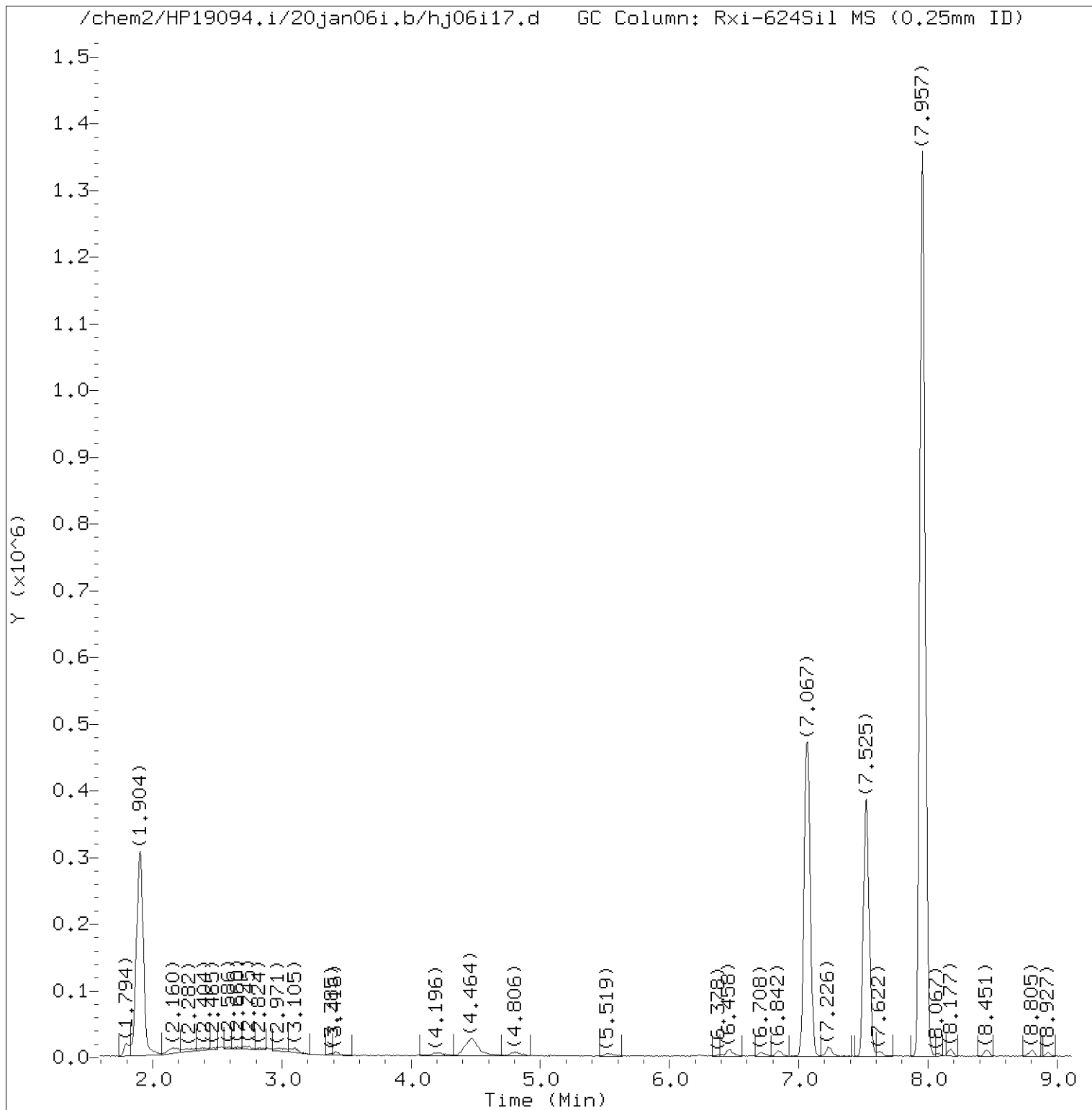
Data File: /chem2/HP19094.i/20jan06i.b/hj06i16.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:07 Analyst ID: JKH09052

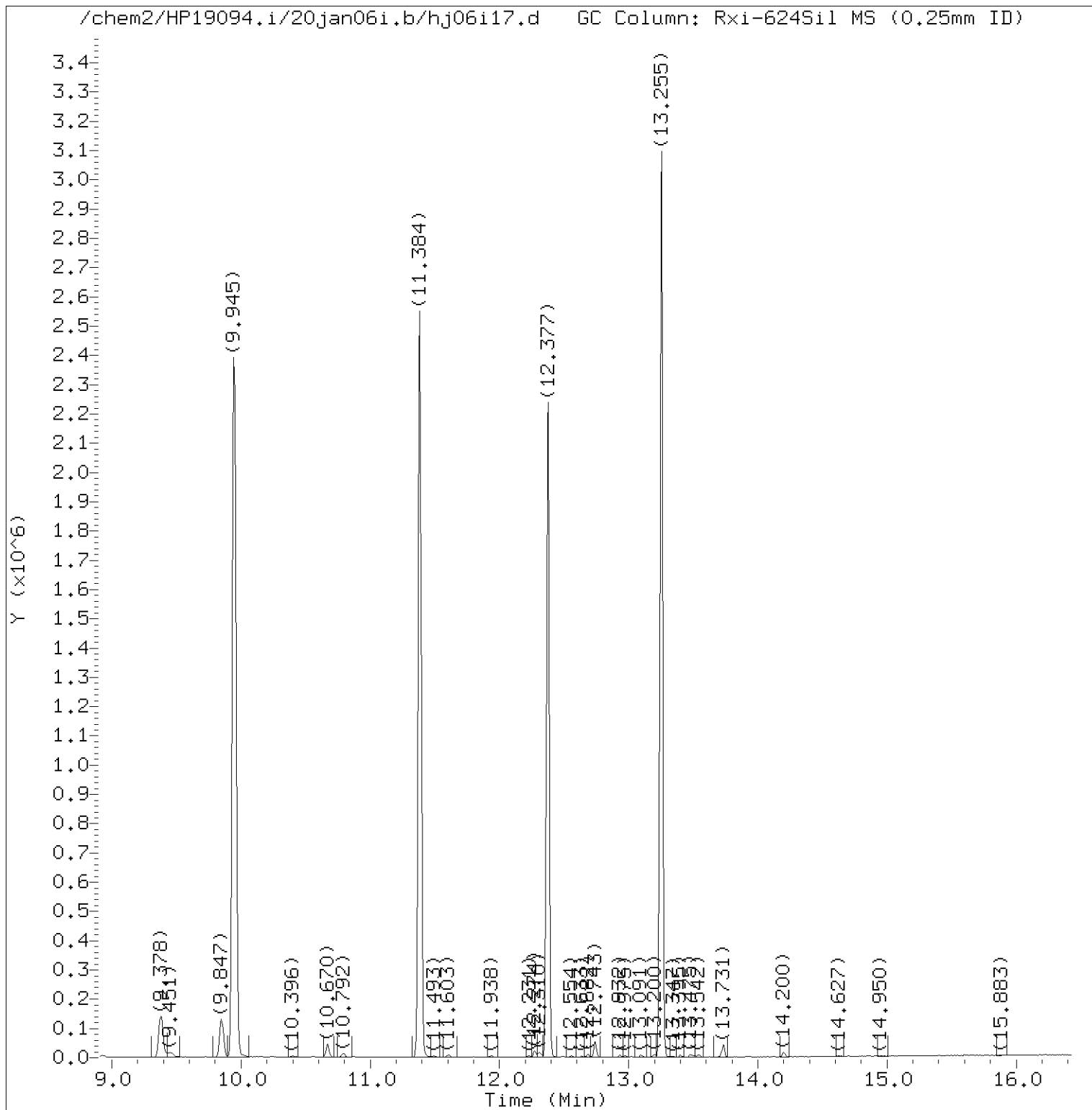
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:25
Date, time and analyst ID of latest file update: 06-Jan-2020 13:25 Automation

Sample Name: VSTD0.5

Lab Sample ID: VSTD0.5

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 23247	
On-column Amount (ng)	: 28.1085	
Integration start scan	: 1747	Integration stop scan: 1779
Y at integration start	: 0	Y at integration end: 0





Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d
Injection date and time: 06-JAN-2020 13:29

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 14:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.160	45	15436M	0.240
25) Acetonitrile	(1)	4.196	41	30544M	10.407
26)*t-Butyl Alcohol-d10	(1)	4.476	65	120535	50.000
36) Vinyl Acetate	(2)	5.519	43	13976	0.204
43) Methyl Acrylate	(2)	6.452	55	21793	0.921
53) 1-Chlorobutane	(2)	7.226	56	17623	0.180
63)*Fluorobenzene	(2)	7.957	96	1930427	10.000
77) Chloroacetonitrile	(2)	9.445	75	11339	8.853
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	3676	0.165
97)*Chlorobenzene-d5	(3)	11.384	117	1436470	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	4598	0.311
112) Cyclohexanone	(1)	12.310	55	8454A	9.825
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	784103	10.000

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

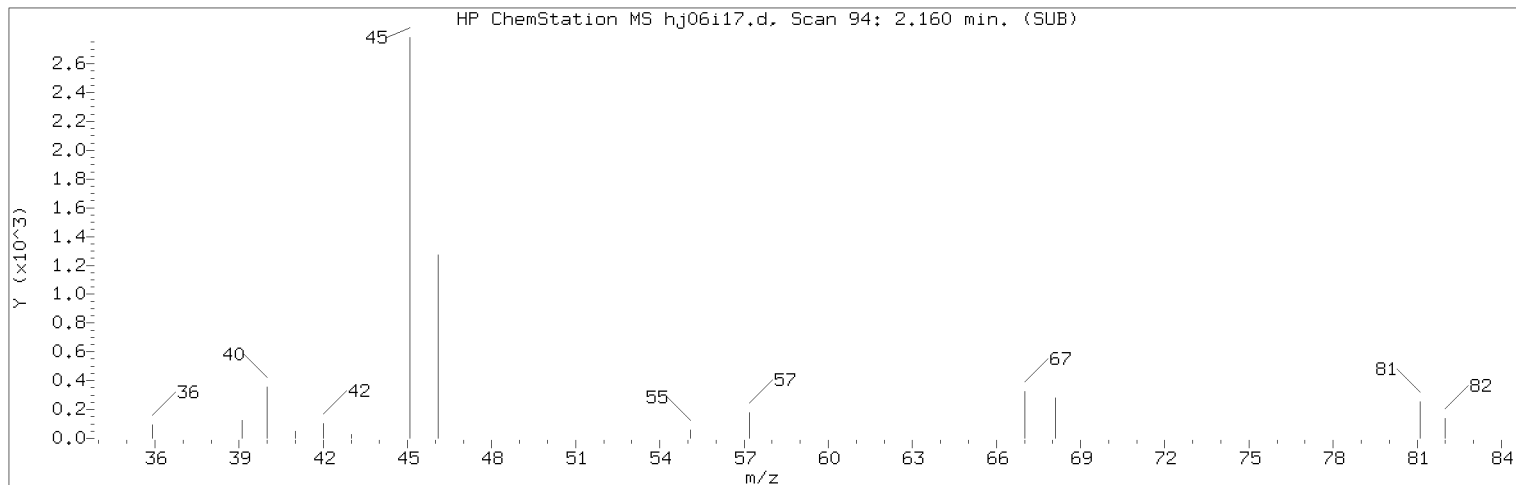
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.

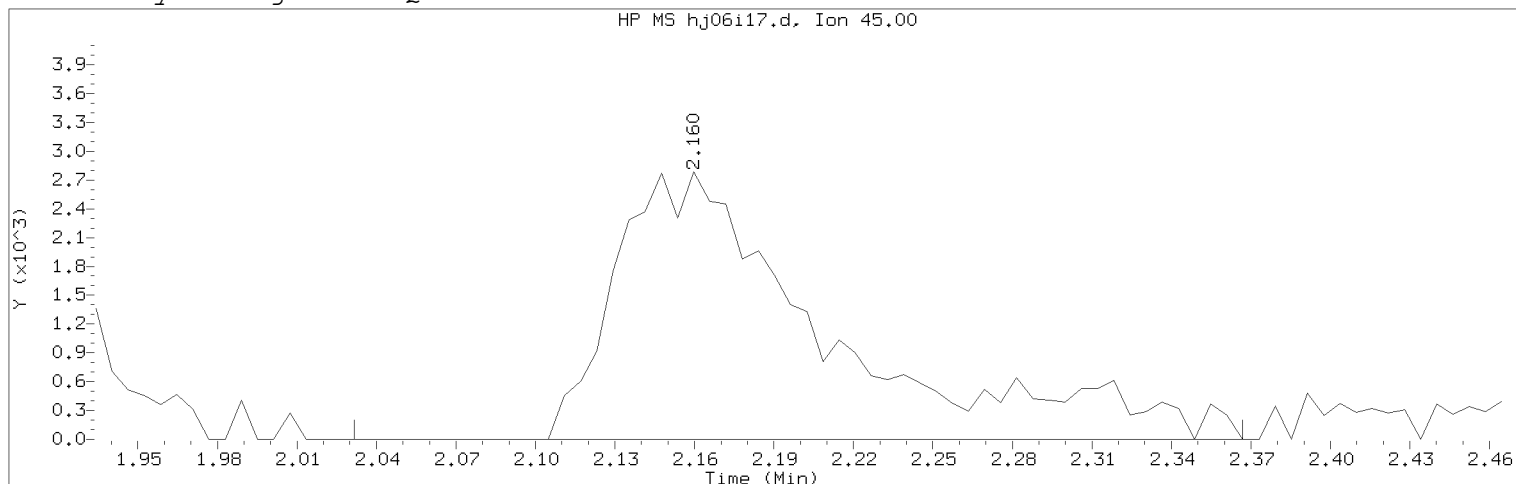
Target 3.5 esignature user ID: jkh09052

RAF64 Page 394 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 14:01

Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 94	
Retention Time (minutes)	: 2.160	
Quant Ion	: 45.00	
Area (flag)	: 15436M	
On-Column Amount (ng)	: 0.2400	
Integration start scan	: 72	Integration stop scan: 127
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change:

Digitally signed by Jennifer K. Howe

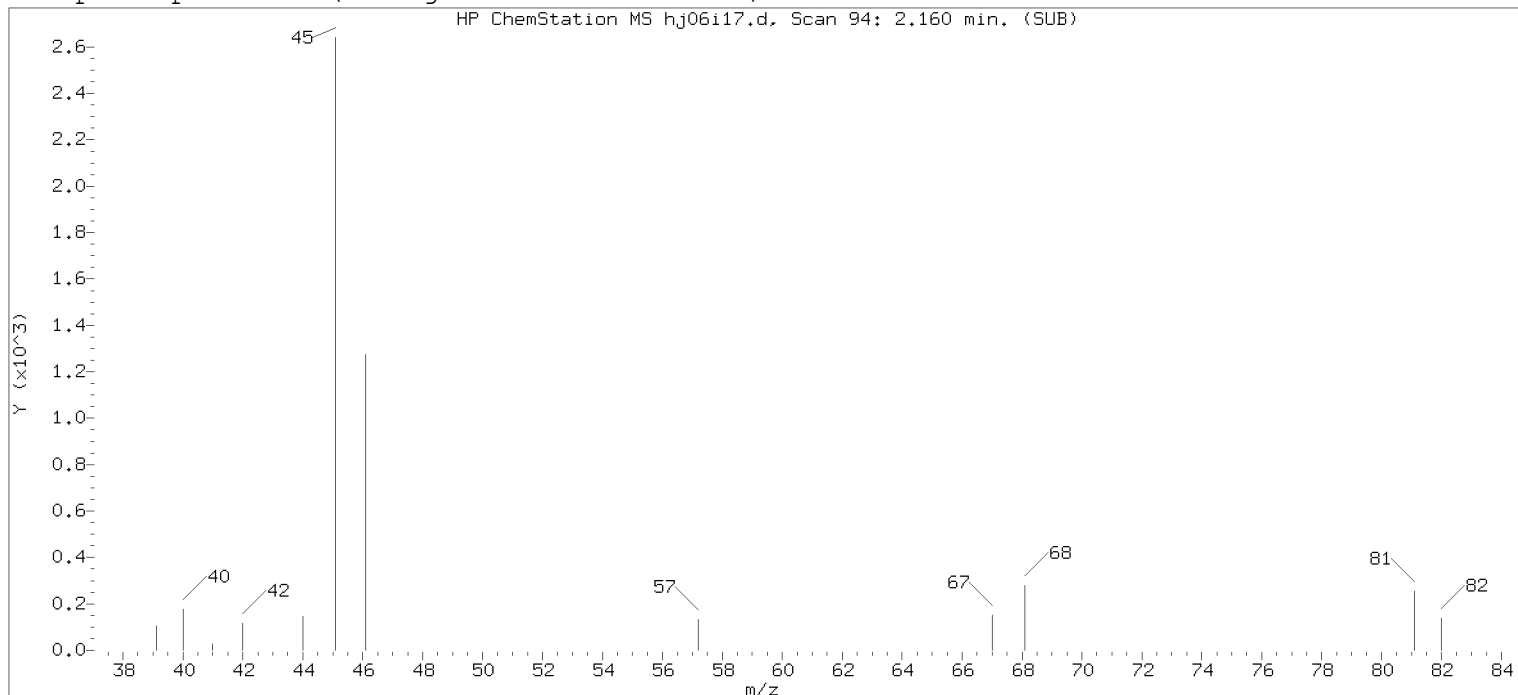
on 01/06/2020 at 14:02.

Target 3.5 esignature user ID: jkh09052

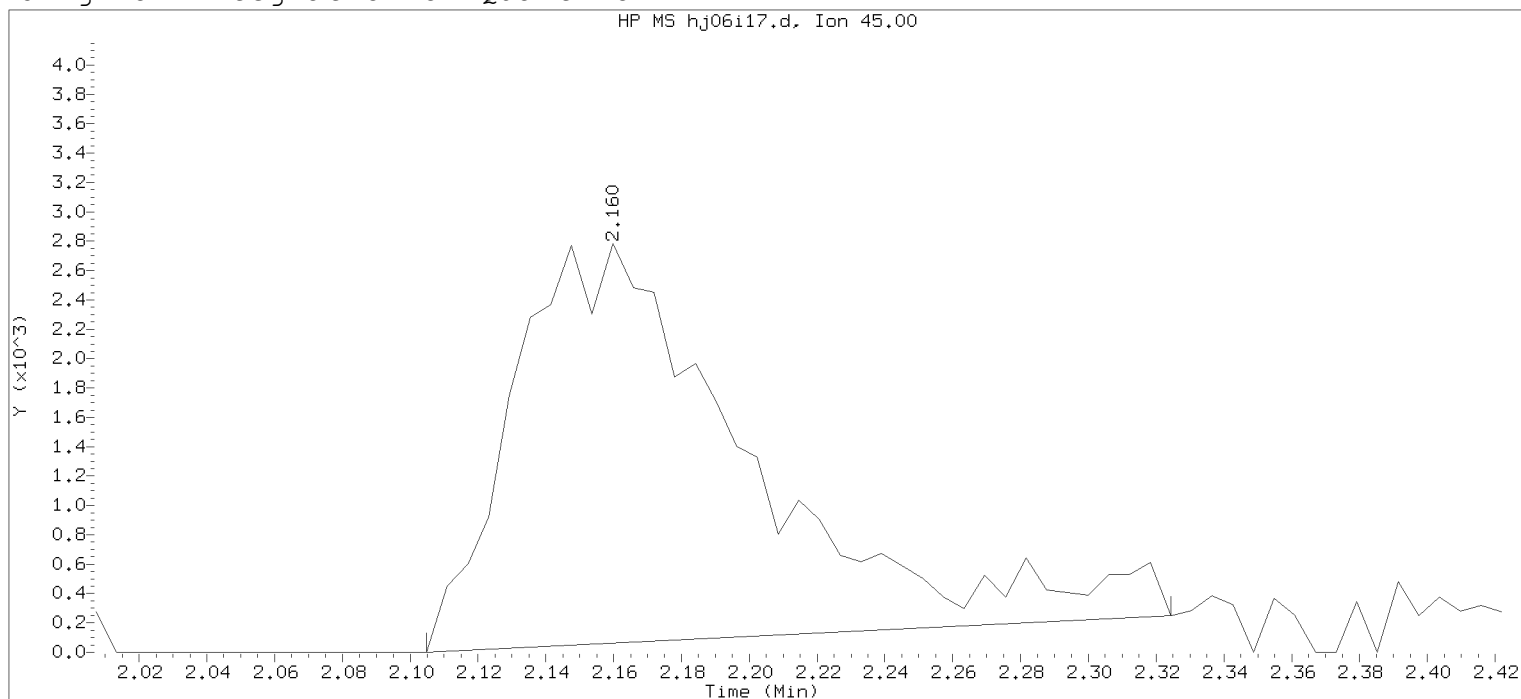
Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:47

Date, time and analyst ID of latest file update: 06-Jan-2020 13:47 Automation

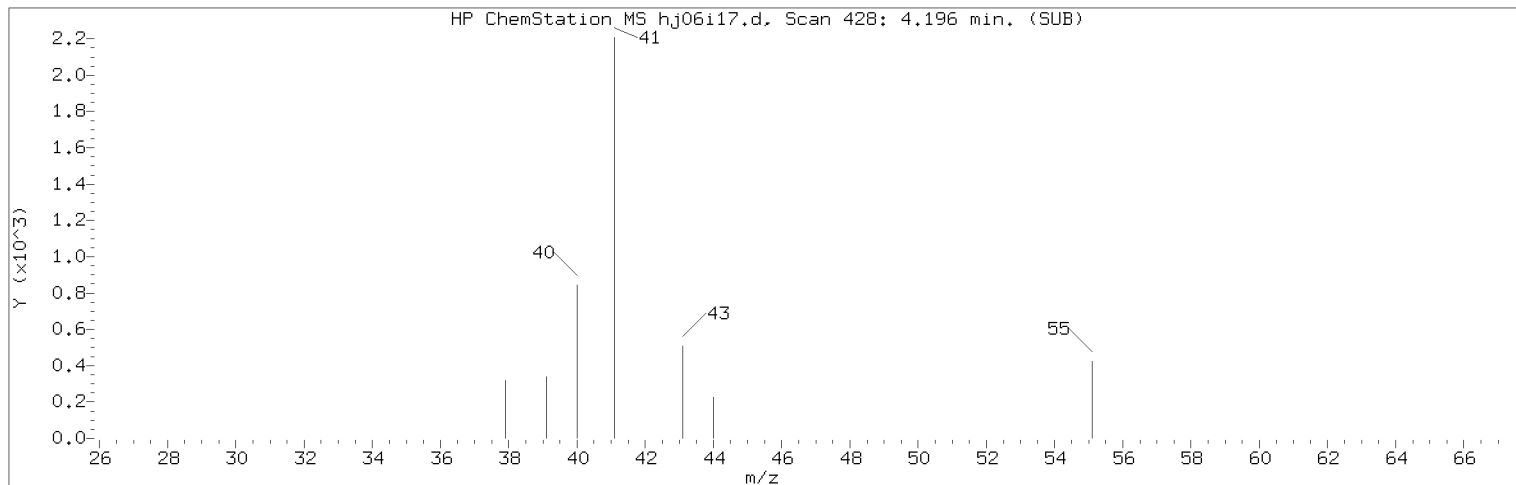
Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

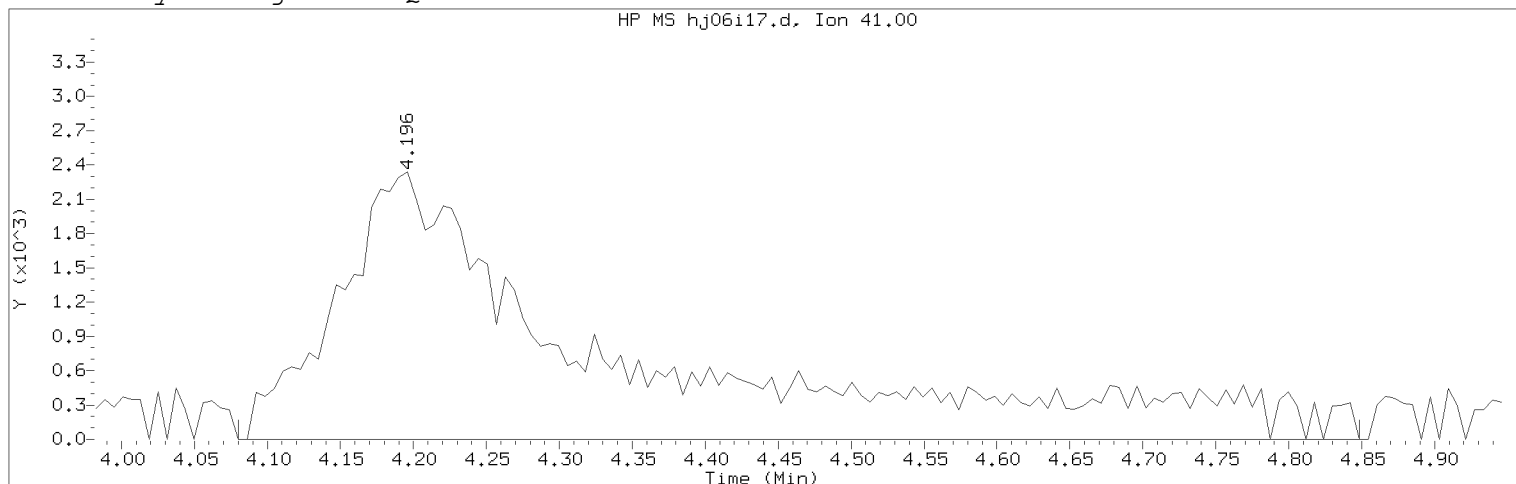
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 94	
Retention Time (minutes)	: 2.160	
Quant Ion	: 45.00	
Area	: 13148	
On-column Amount (ng)	: 0.2098	
Integration start scan	: 84	Integration stop scan: 120
Y at integration start	: 0	Y at integration end: 251

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Target 3.5 esignature user RA564j Page 396 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

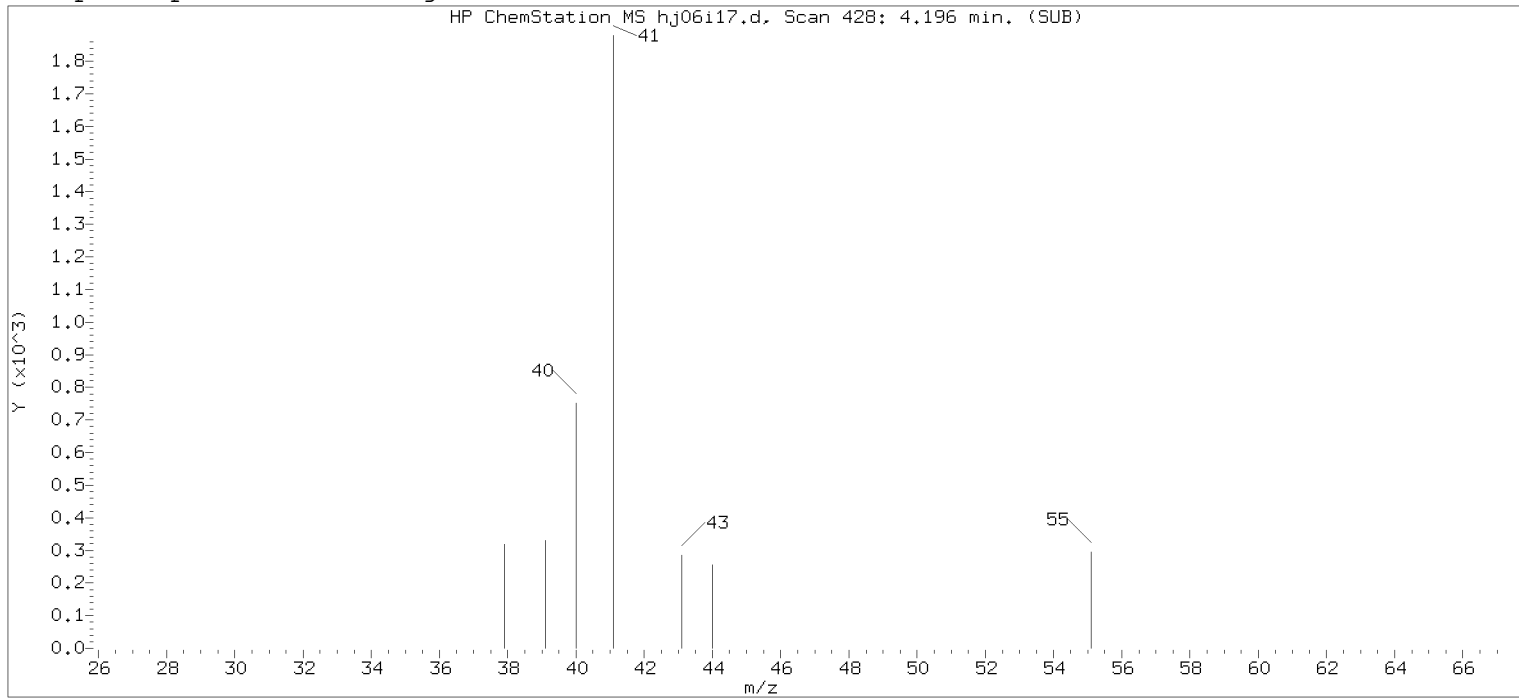
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area (flag) : 30544M
On-Column Amount (ng) : 10.4067
Integration start scan : 408 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

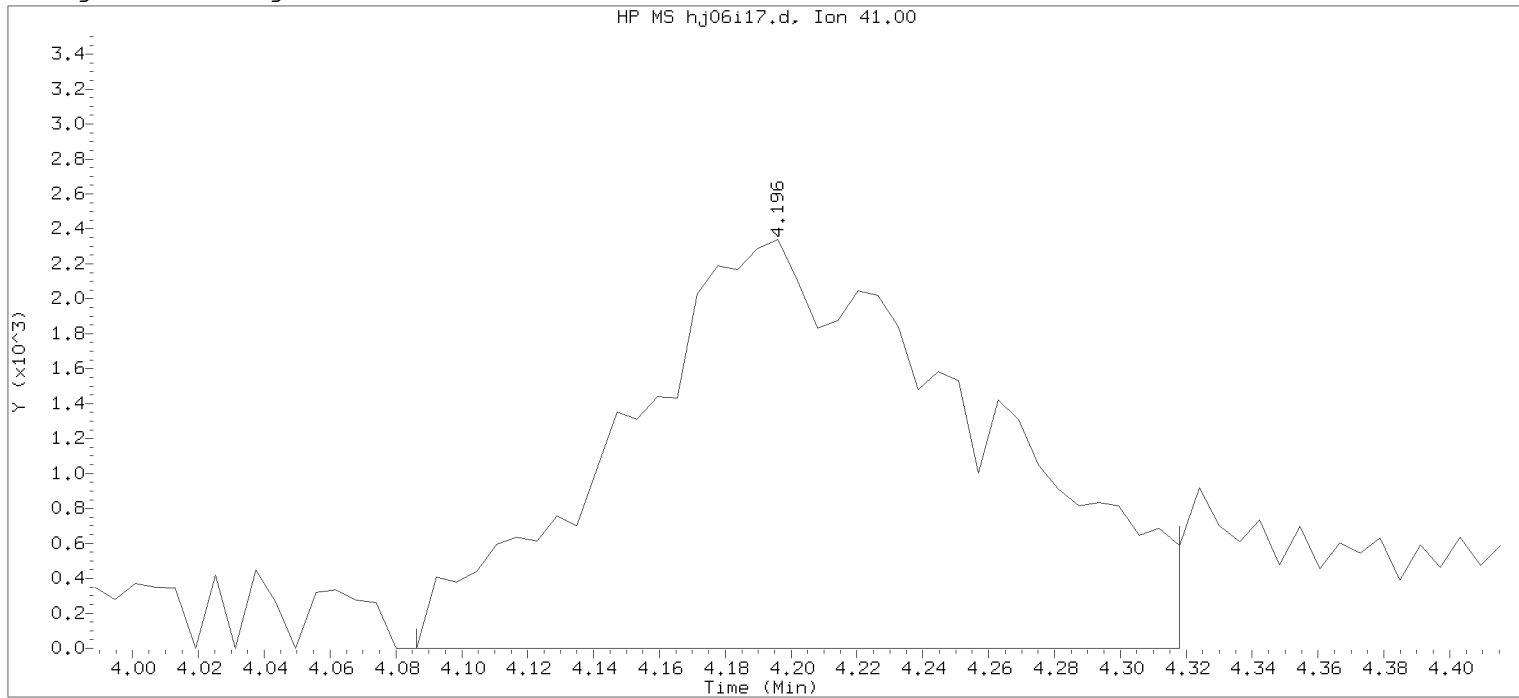
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:29 Analyst ID: JKH09052

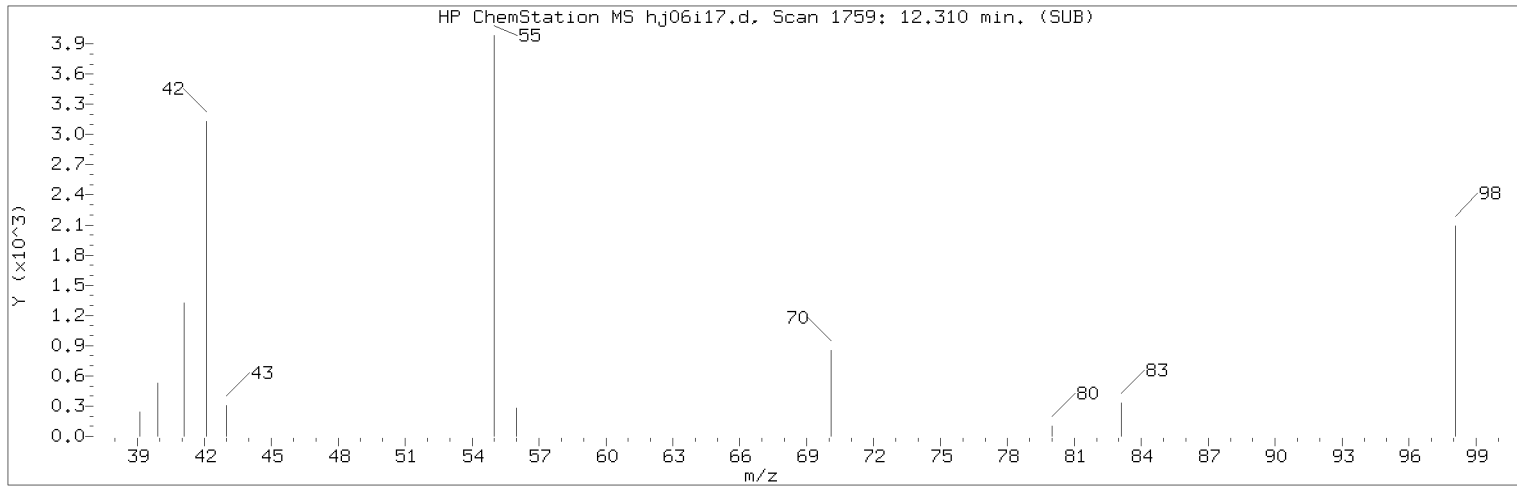
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 13:47
Date, time and analyst ID of latest file update: 06-Jan-2020 13:47 Automation

Sample Name: VSTD0.2

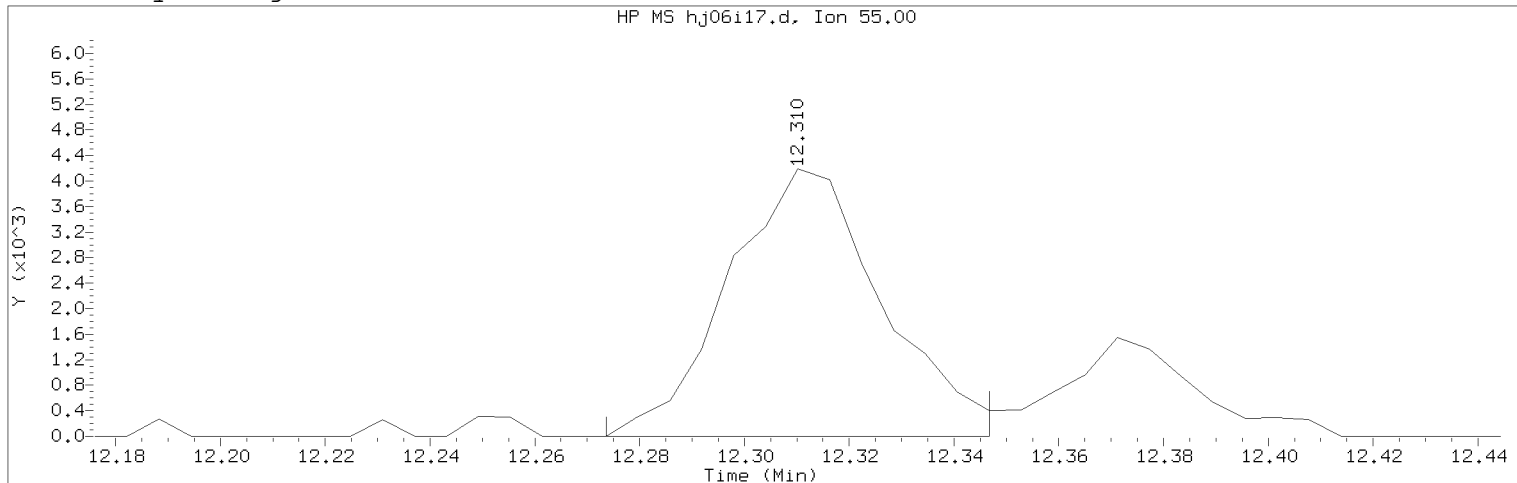
Lab Sample ID: VSTD0.2

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 428	
Retention Time (minutes)	: 4.196	
Quant Ion	: 41.00	
Area	: 17625	
On-column Amount (ng)	: 6.5176	
Integration start scan	: 409	Integration stop scan: 447
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 06-JAN-2020 14:01
Date, time and analyst ID of latest file update: 06-Jan-2020 14:01 jkh09052

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

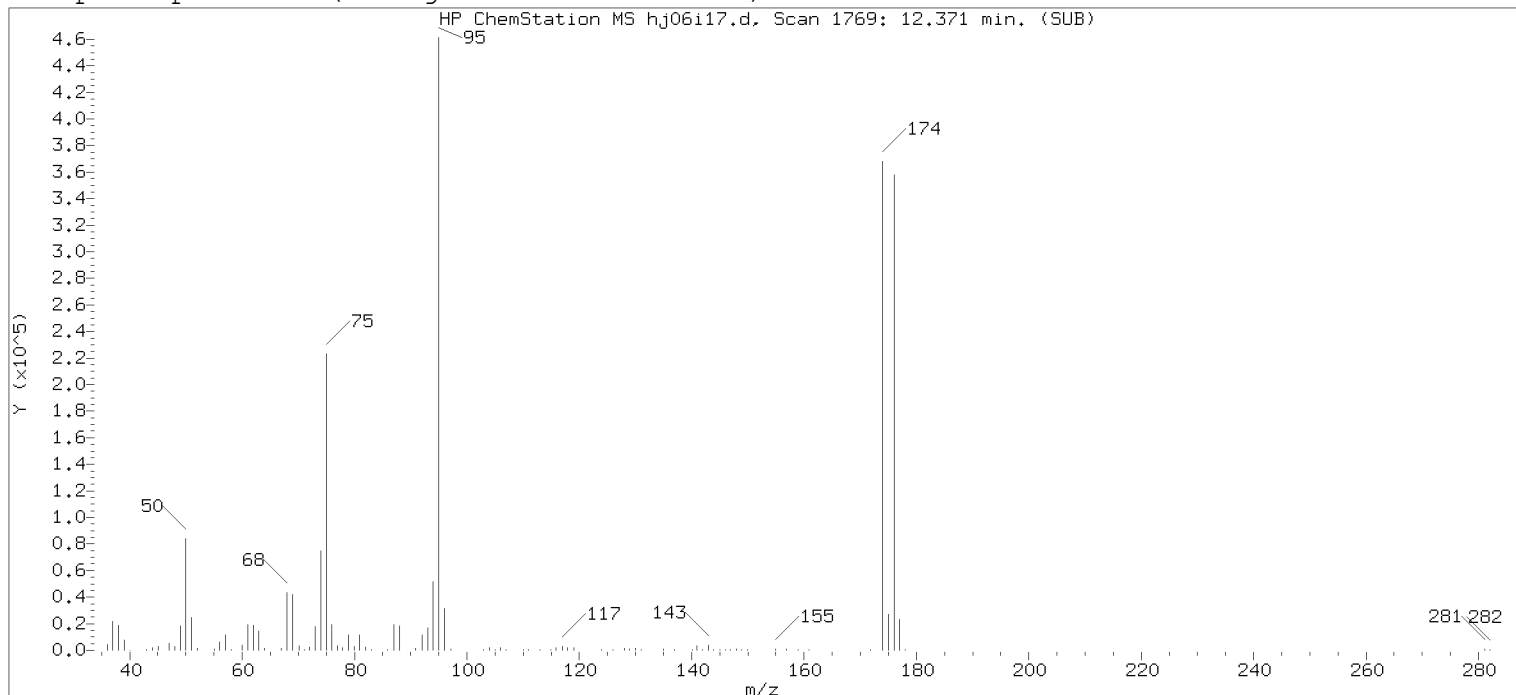
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 8454A
On-Column Amount (ng) : 9.8249
Integration start scan : 1752 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

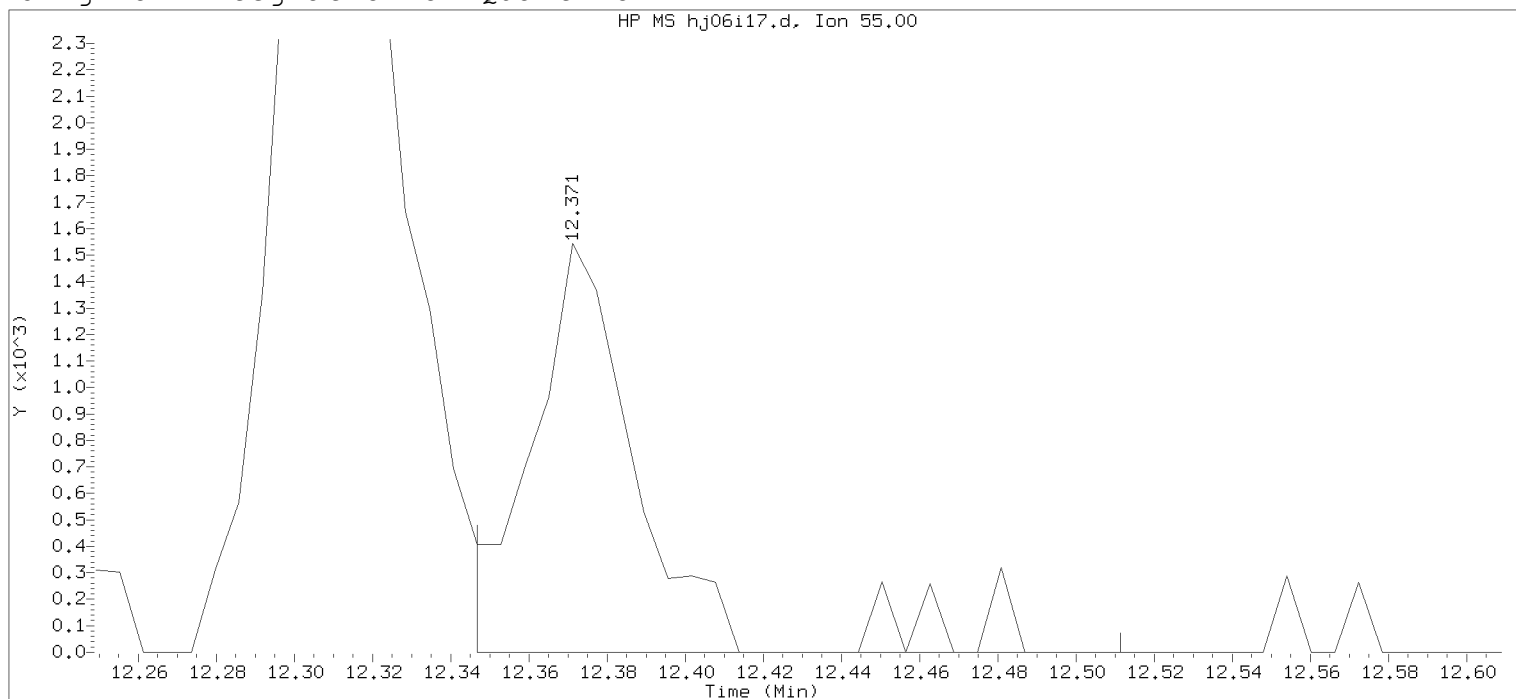
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/06/2020 at 14:02.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:57.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06i17.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:29

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 06-JAN-2020 13:47

Date, time and analyst ID of latest file update: 06-Jan-2020 13:47 Automation

Sample Name: VSTD0.2

Lab Sample ID: VSTD0.2

Compound Number : 112

Compound Name : Cyclohexanone

Scan Number : 1769

Retention Time (minutes): 12.371

Quant Ion : 55.00

Area : 3049

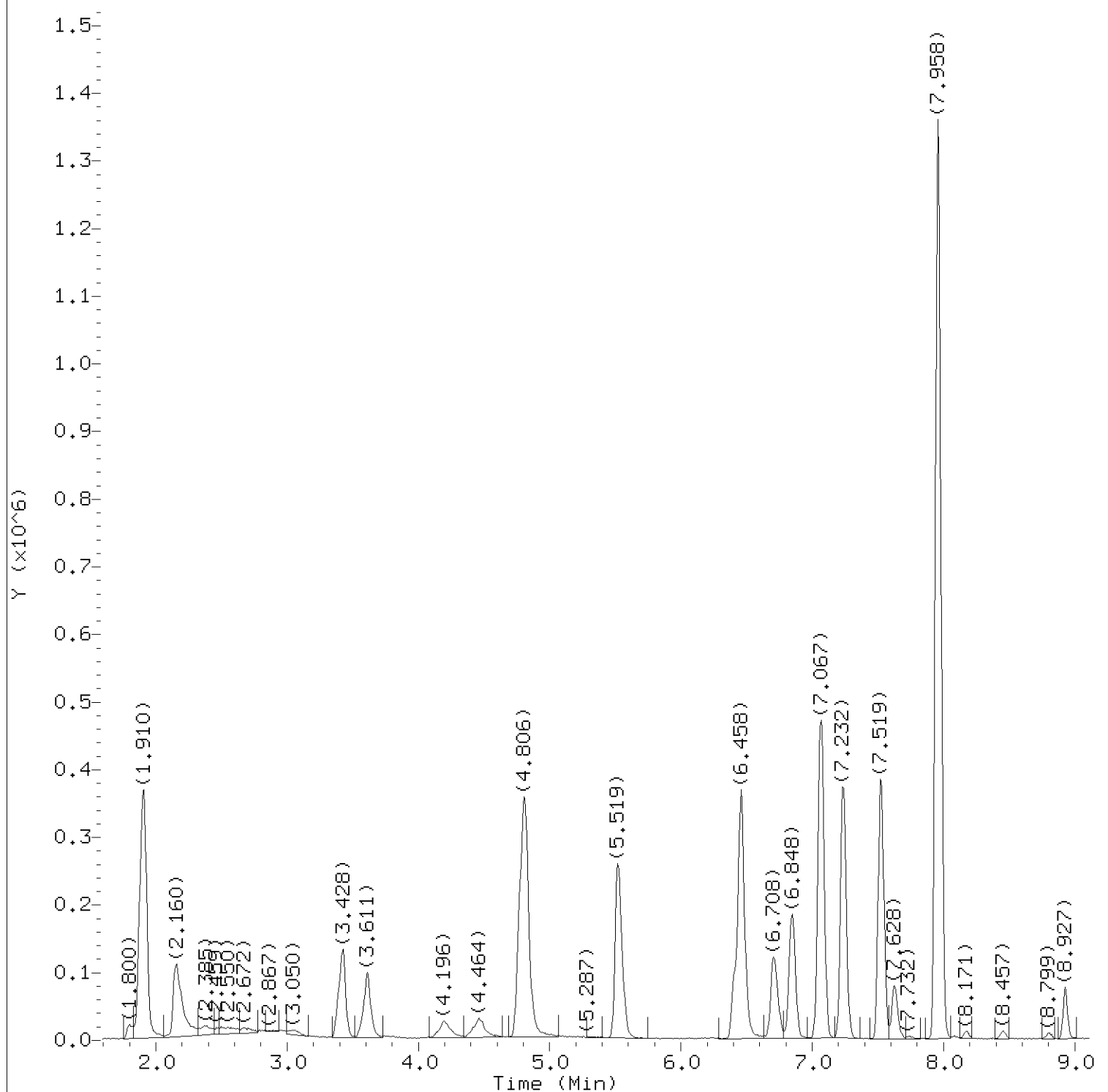
On-column Amount (ng) : 3.8934

Integration start scan : 1764 Integration stop scan: 1791

Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 01/06/2020 at 14:02.

Target 3.5 esignature user RAE64j Page 400 of 448



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d
Injection date and time: 06-JAN-2020 13:51

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 17:02

Sublist used: SMQC

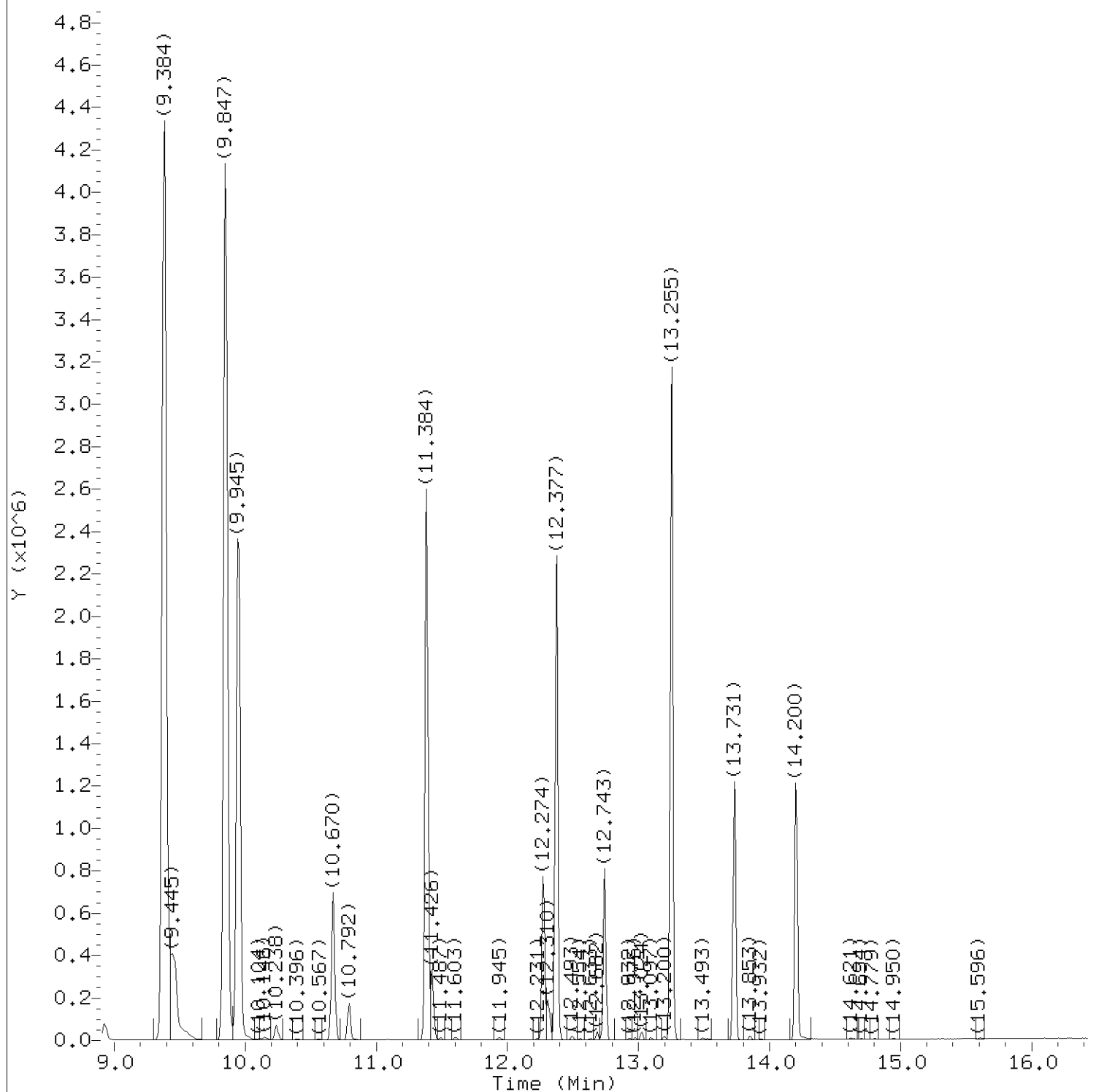
Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d
Injection date and time: 06-JAN-2020 13:51

Instrument ID: HP19094.i
Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m
Calibration date and time: 06-JAN-2020 17:02

Sublist used: SMQC

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	333019M	5.194
25) Acetonitrile	(1)	4.184	41	106822M	38.950
26)*t-Butyl Alcohol-d10	(1)	4.464	65	112632	50.000
36) Vinyl Acetate	(2)	5.519	43	752759	11.019
43) Methyl Acrylate	(2)	6.458	55	639729	27.121
50)\$Dibromofluoromethane	(2)	7.067	113	481701	10.068
53) 1-Chlorobutane	(2)	7.232	56	472374	4.851
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	92697	9.981
63)*Fluorobenzene	(2)	7.958	96	1924670	10.000
77) Chloroacetonitrile	(2)	9.439	75	314109	245.976
78) 2-Chloroethyl vinyl ether	(2)	9.463	63	105855	4.777
82)\$Toluene-d8	(3)	9.945	98	1900646	9.720
97)*Chlorobenzene-d5	(3)	11.384	117	1467623	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	172755	12.510
112) Cyclohexanone	(1)	12.310	55	91222M	113.454
111)\$4-Bromofluorobenzene	(3)	12.377	95	731452	10.111
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	793132	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

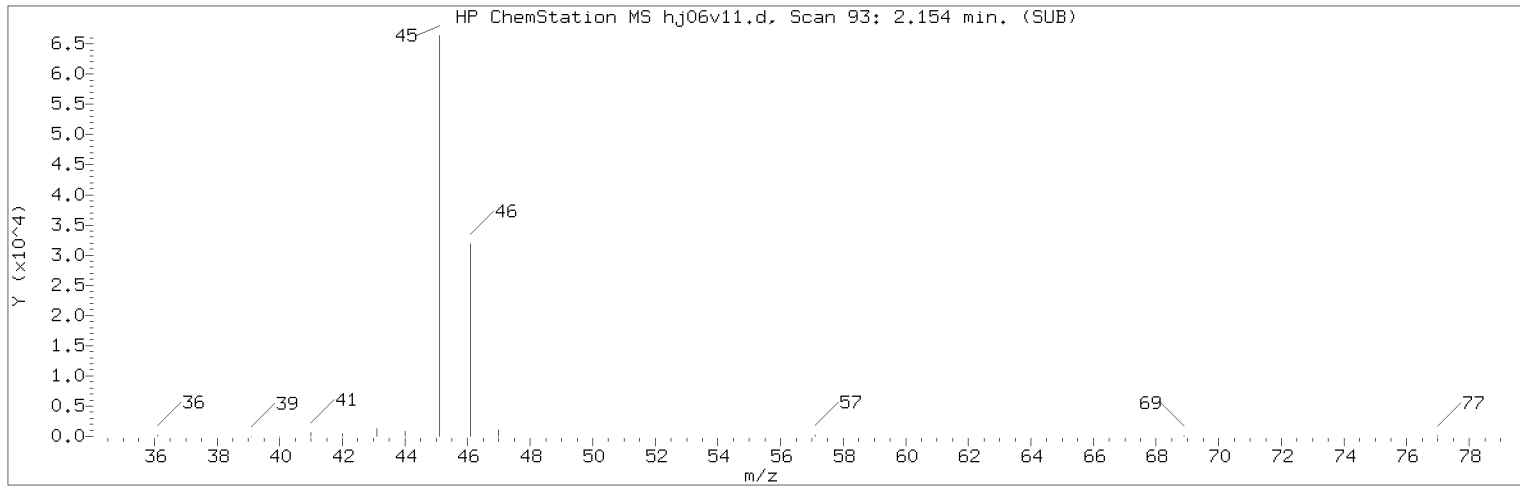
page 1 of 1

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

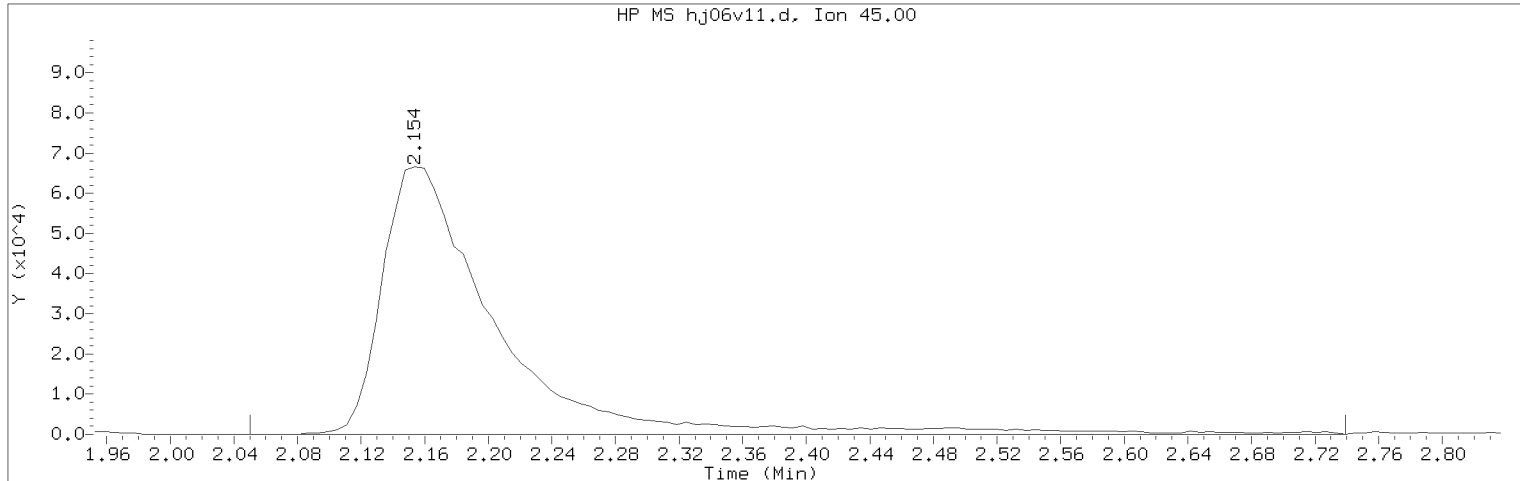
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01 Lab Sample ID: ICVH01

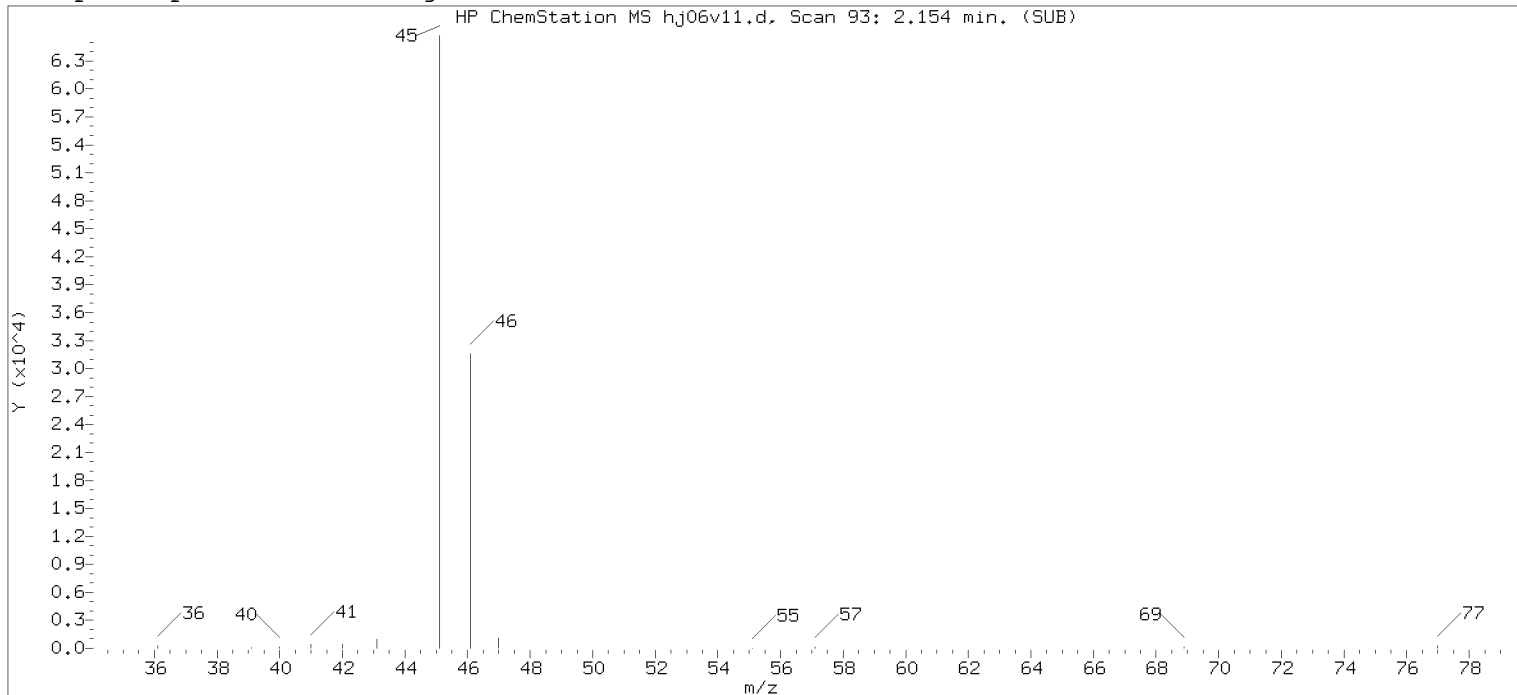
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 333019M
On-Column Amount (ng) : 5.1939
Integration start scan : 75 Integration stop scan: 188
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

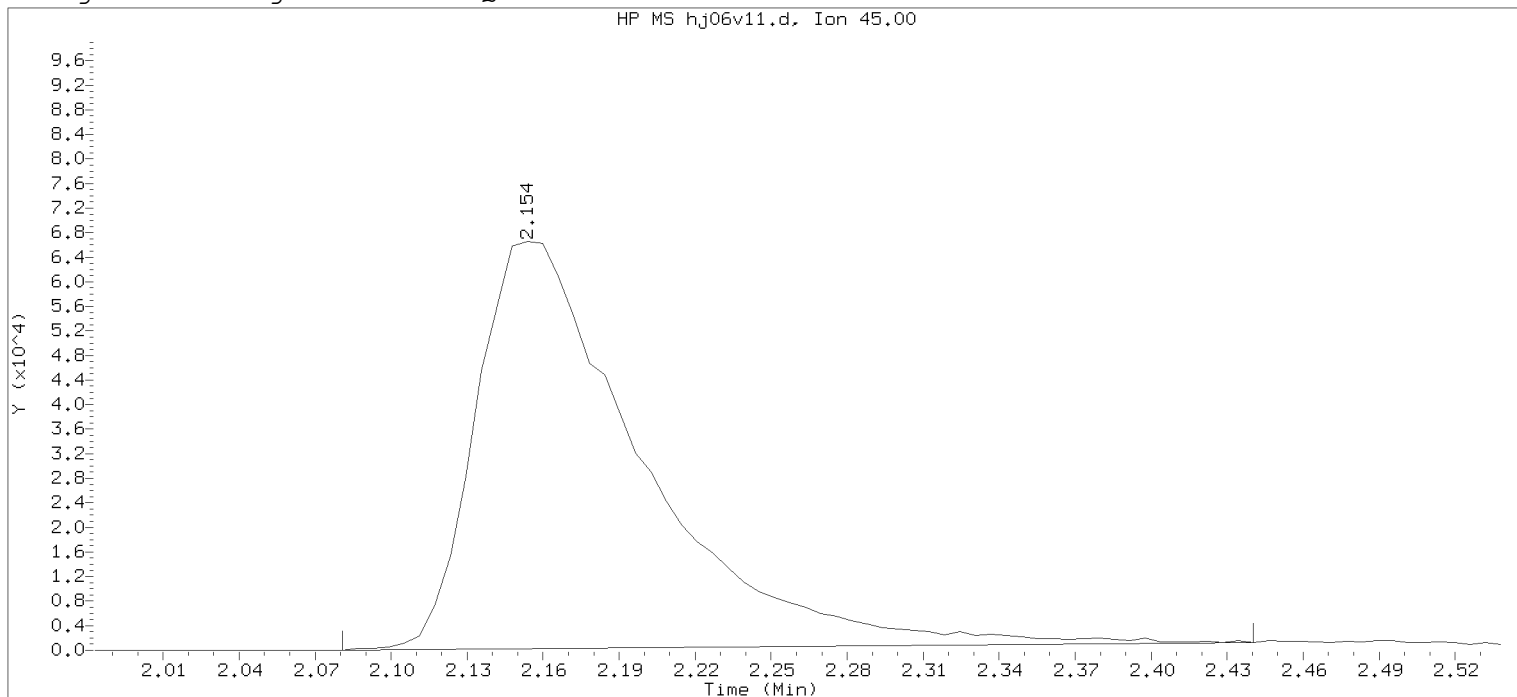
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

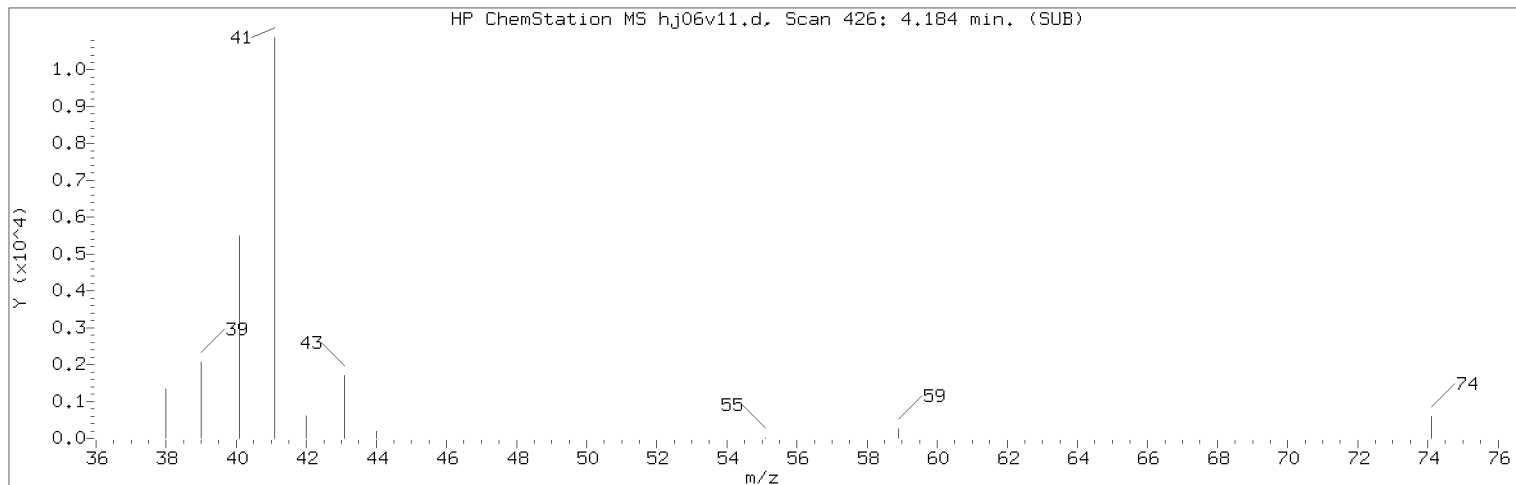
Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:27 jkh09052

Sample Name: ICVH01

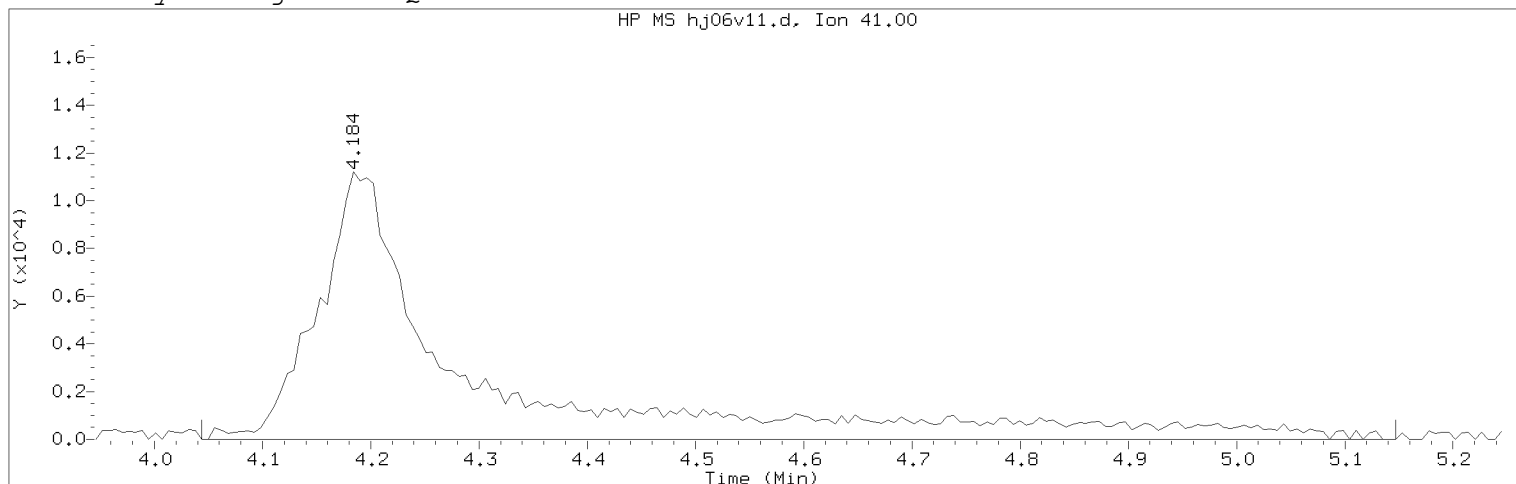
Lab Sample ID: ICVH01

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area	: 305023	
On-column Amount (ng)	: 4.7573	
Integration start scan	: 80	Integration stop scan: 139
Y at integration start	: 0	Y at integration end: 1217

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number	: 25	
Compound Name	: Acetonitrile	
Scan Number	: 426	
Retention Time (minutes)	: 4.184	
Quant Ion	: 41.00	
Area (flag)	: 106822M	
On-Column Amount (ng)	: 38.9496	
Integration start scan	: 402	Integration stop scan: 583
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

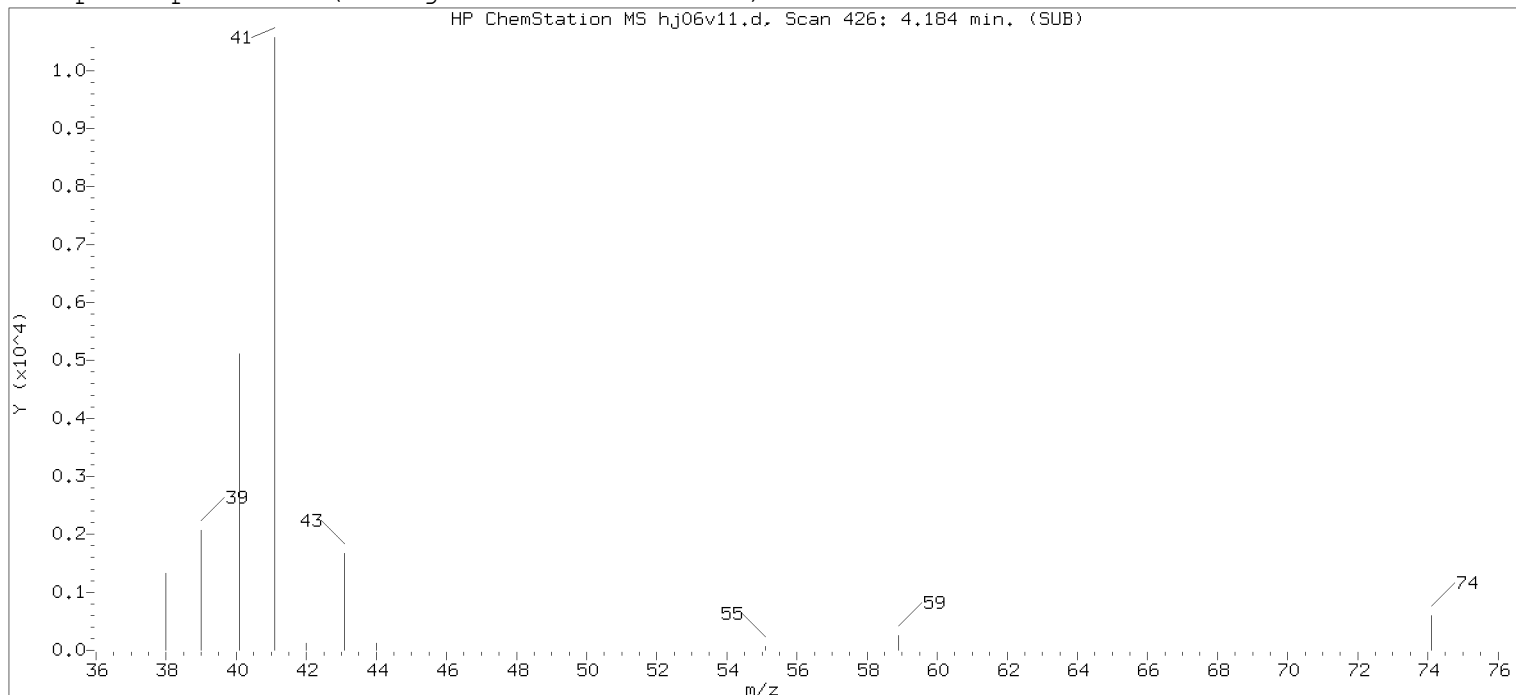
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.

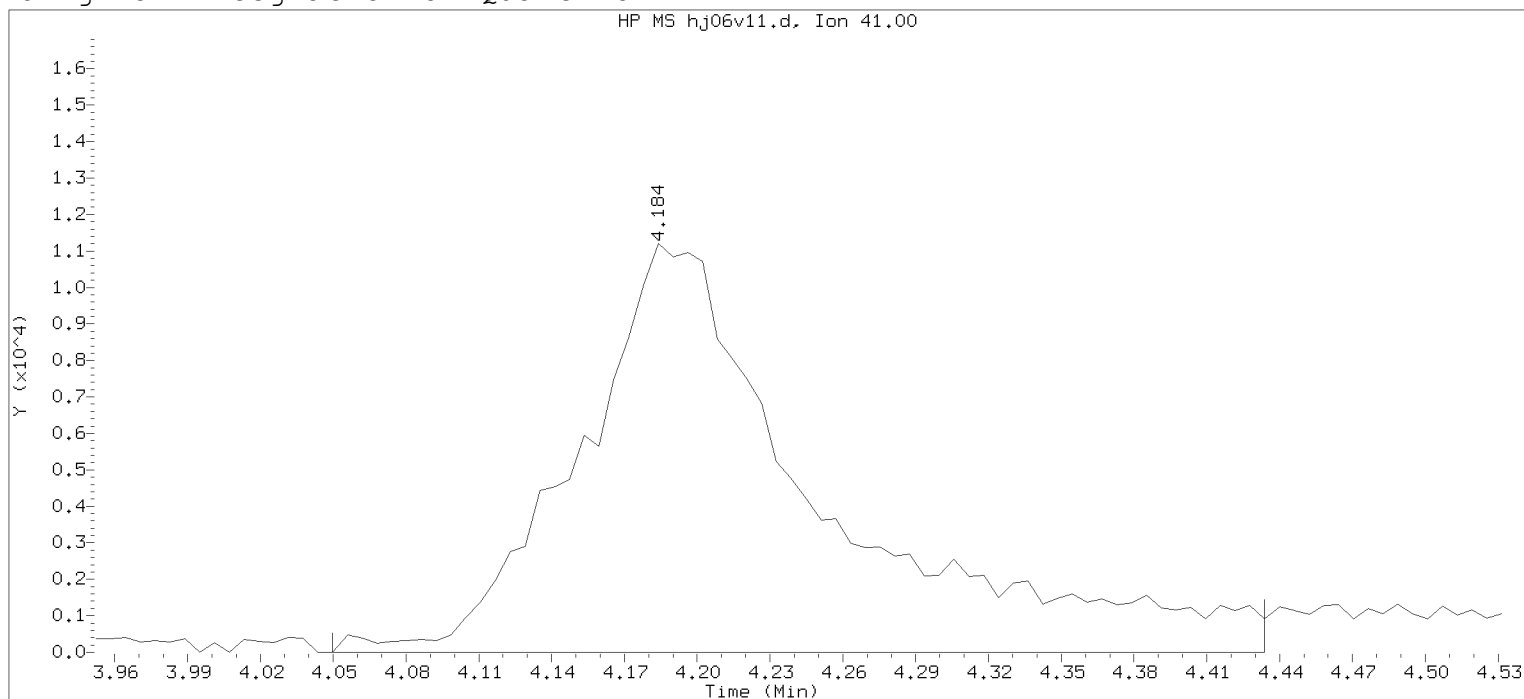
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d

Instrument ID: HP19094.i

Injection date and time: 06-JAN-2020 13:51

Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m

Sublist used: SMQC

Calibration date and time: 06-JAN-2020 17:02

Date, time and analyst ID of latest file update: 07-Jan-2020 10:27 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number : 25

Compound Name : Acetonitrile

Scan Number : 426

Retention Time (minutes): 4.184

Quant Ion : 41.00

Area : 77184

On-column Amount (ng) : 28.1428

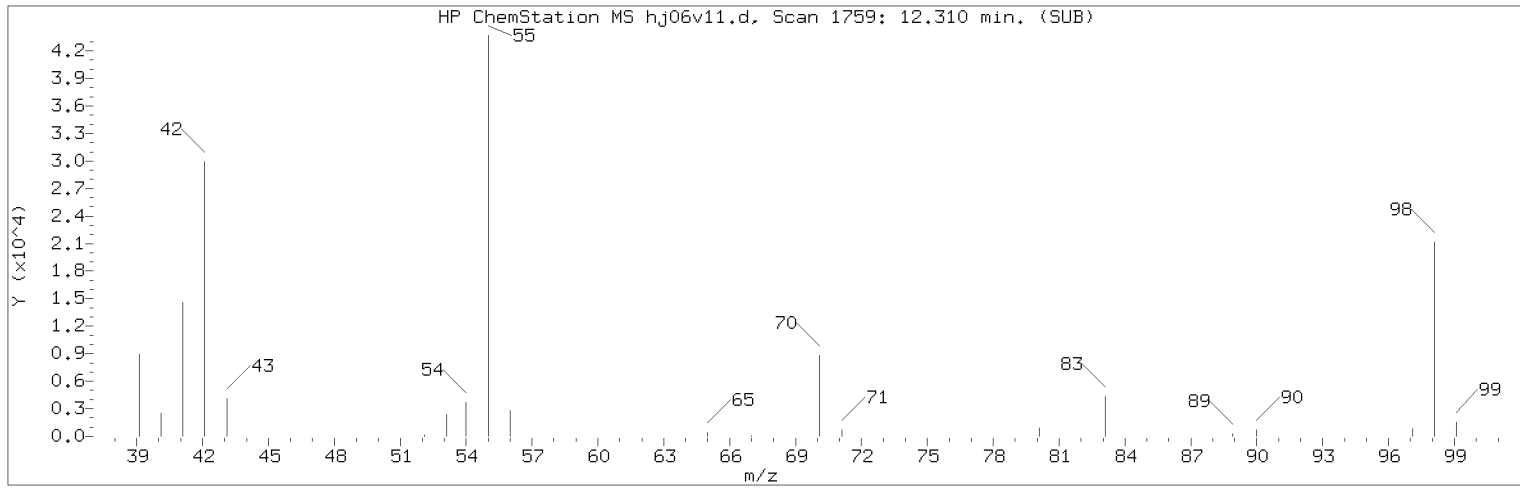
Integration start scan : 403 Integration stop scan: 466

Y at integration start : 0 Y at integration end: 0

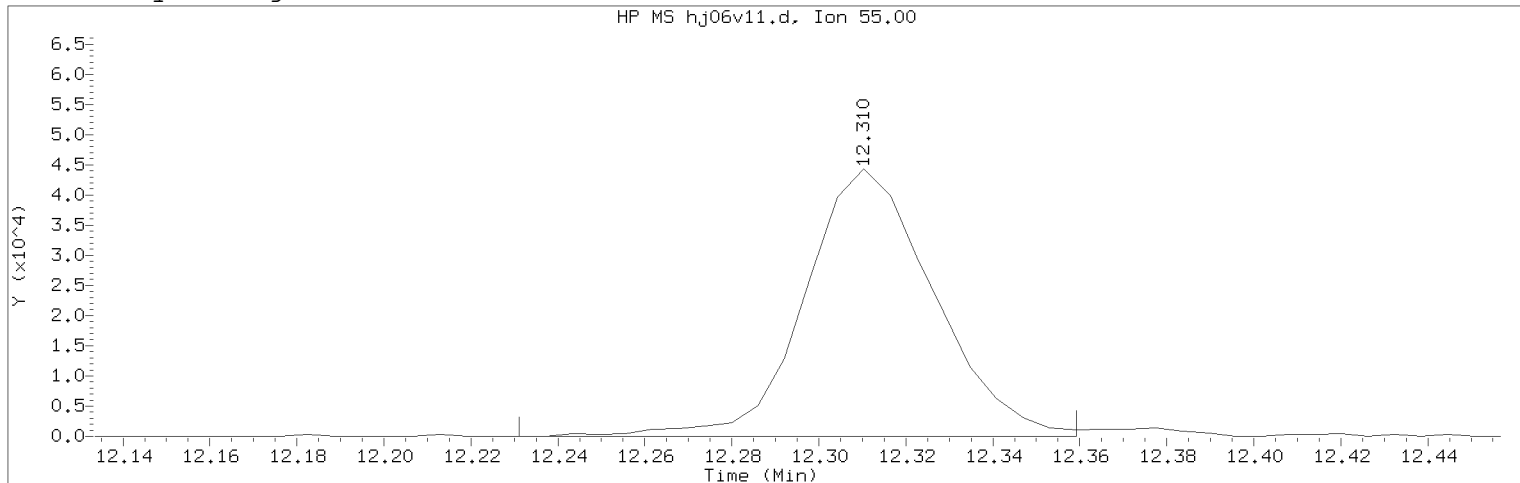
Digitally signed by Jennifer K. Howe on 01/07/2020 at 10:28.

Target 3.5 esignature user RA564j Page 407 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:28 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

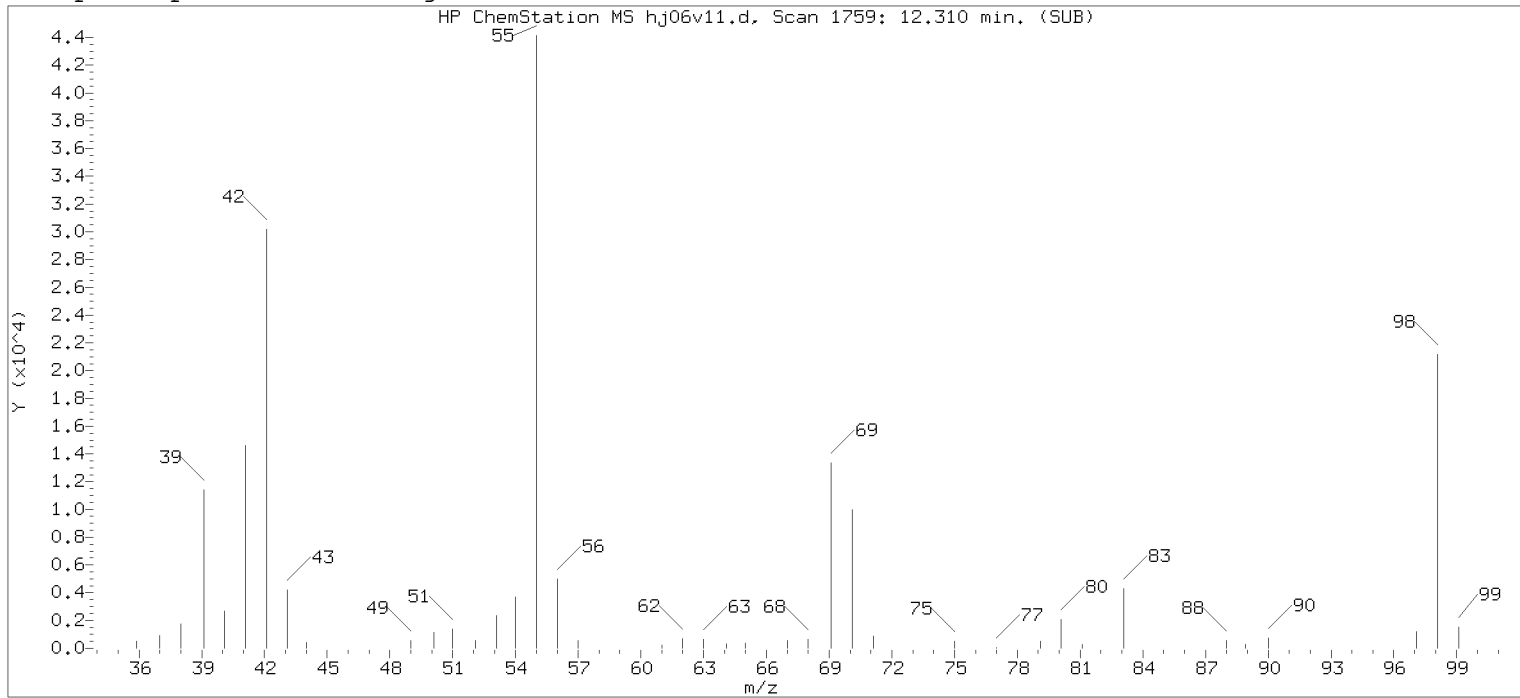
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 91222M
On-Column Amount (ng) : 113.4537
Integration start scan : 1745 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

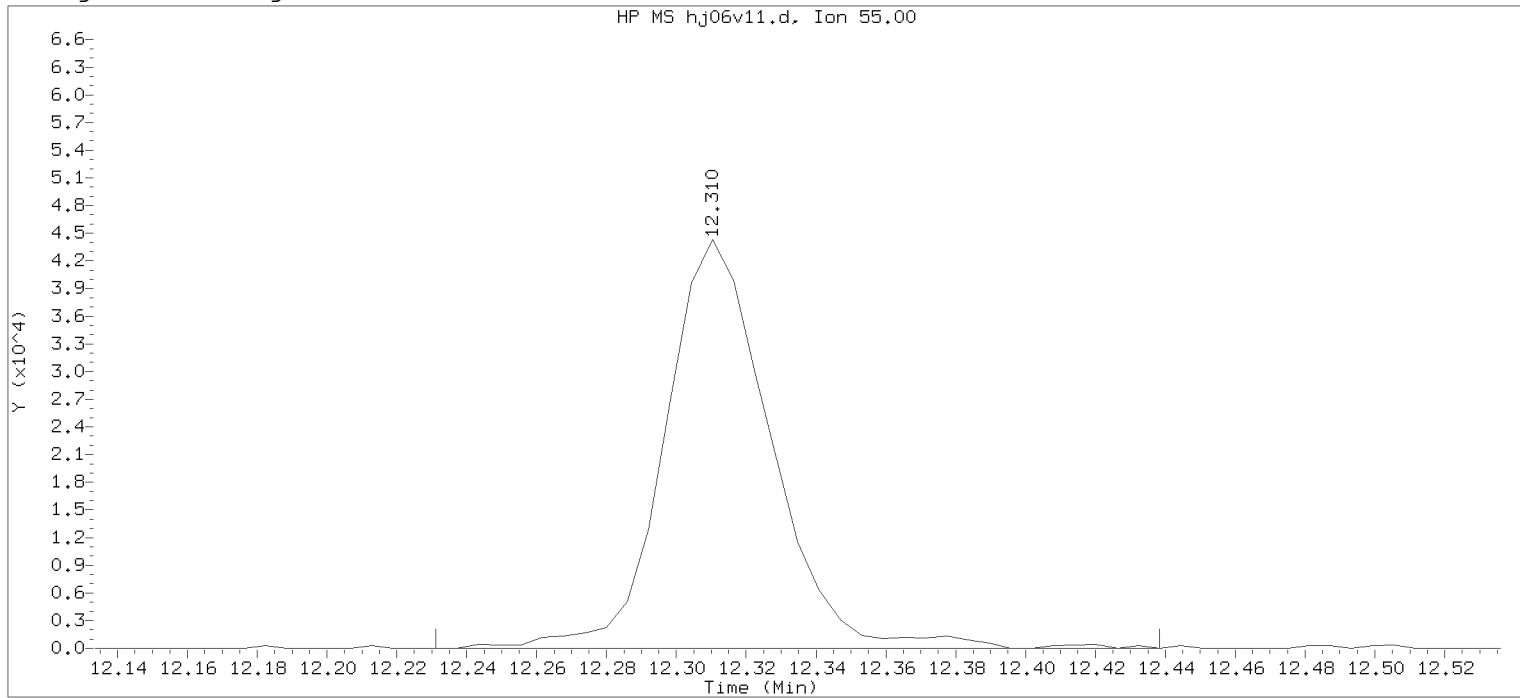
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 01/07/2020 at 10:28.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Kelly E. Keller on 01/08/2020 at 12:59.
PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



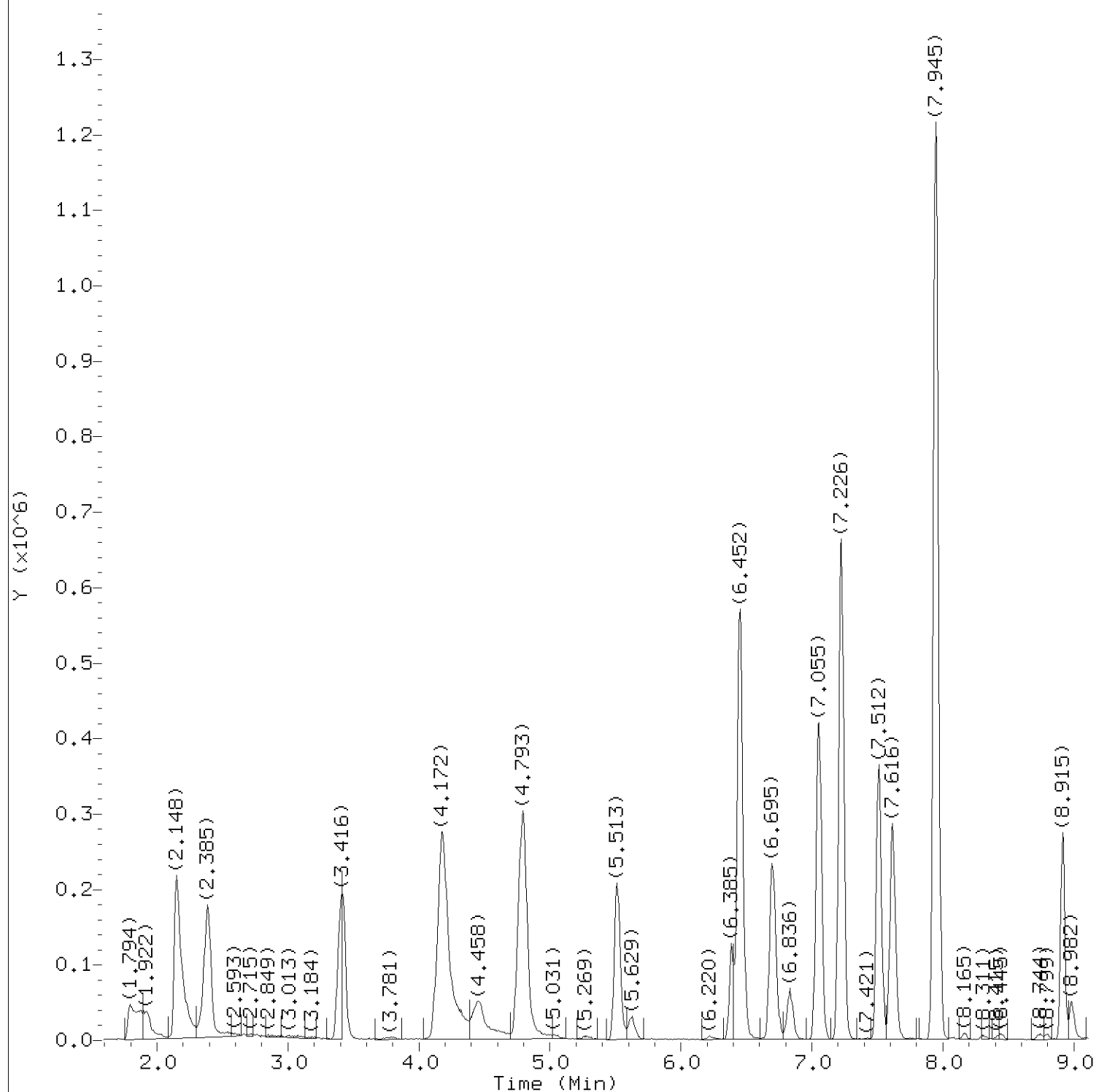
Data File: /chem2/HP19094.i/20jan06i.b/hj06v11.d Instrument ID: HP19094.i
Injection date and time: 06-JAN-2020 13:51 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/20jan06i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 06-JAN-2020 17:02
Date, time and analyst ID of latest file update: 07-Jan-2020 10:27 jkh09052

Sample Name: ICVH01

Lab Sample ID: ICVH01

Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 1759	
Retention Time (minutes)	: 12.310	
Quant Ion	: 55.00	
Area	: 93561	
On-column Amount (ng)	: 116.3633	
Integration start scan	: 1745	Integration stop scan: 1779
Y at integration start	: 0	Y at integration end: 0



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d
Injection date and time: 21-MAY-2020 20:43

Instrument ID: HP19094.i
Analyst ID: MEC29284

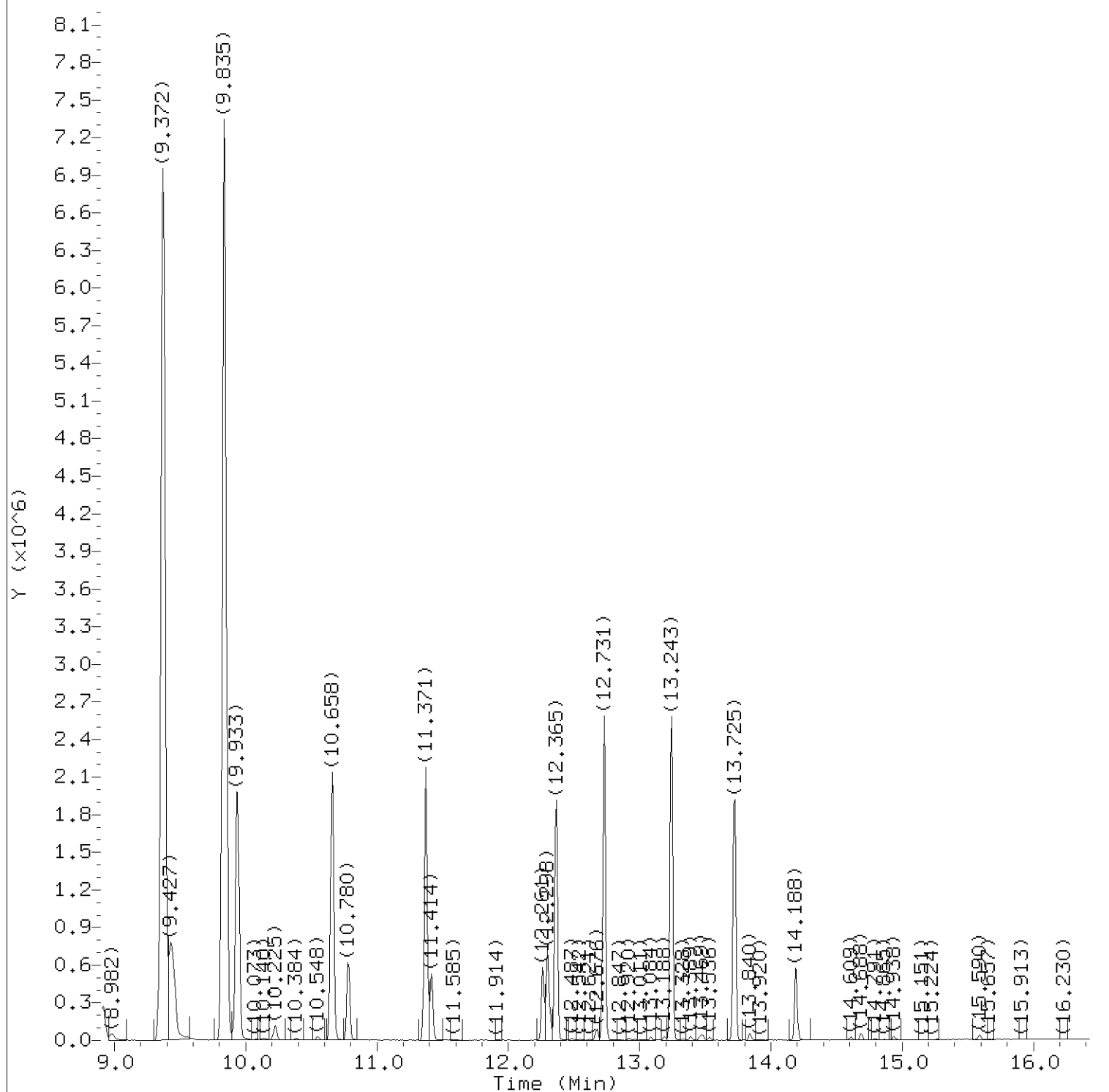
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 21-MAY-2020 21:01
Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d
Injection date and time: 21-MAY-2020 20:43

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m
Calibration date and time: 21-MAY-2020 21:01

Sublist used: SMICAL

Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:43

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 21-MAY-2020 21:01

Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.148	45	587047M	11.302
26) Acetonitrile	(1)	4.172	41	1052266M	401.154
27)*t-Butyl Alcohol-d10	(1)	4.440	65	107724M	50.000
37) Vinyl Acetate	(2)	5.513	43	523979	9.468
44) Methyl Acrylate	(2)	6.452	55	1005923	52.641
54) 1-Chlorobutane	(2)	7.226	56	766492	9.717
64)*Fluorobenzene	(2)	7.945	96	1559230	10.000
78) Chloroacetonitrile	(2)	9.427	75	623367	602.562
79) 2-Chloroethyl vinyl ether	(2)	9.451	63	180843	10.075
98)*Chlorobenzene-d5	(3)	11.371	117	1198054	10.000
110) cis-1,4-Dichloro-2-butene	(1)	12.261	88	131107	9.927
113) Cyclohexanone	(1)	12.298	55	331161M	430.629
134)*1,4-Dichlorobenzene-d4	(4)	13.243	152	626349	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

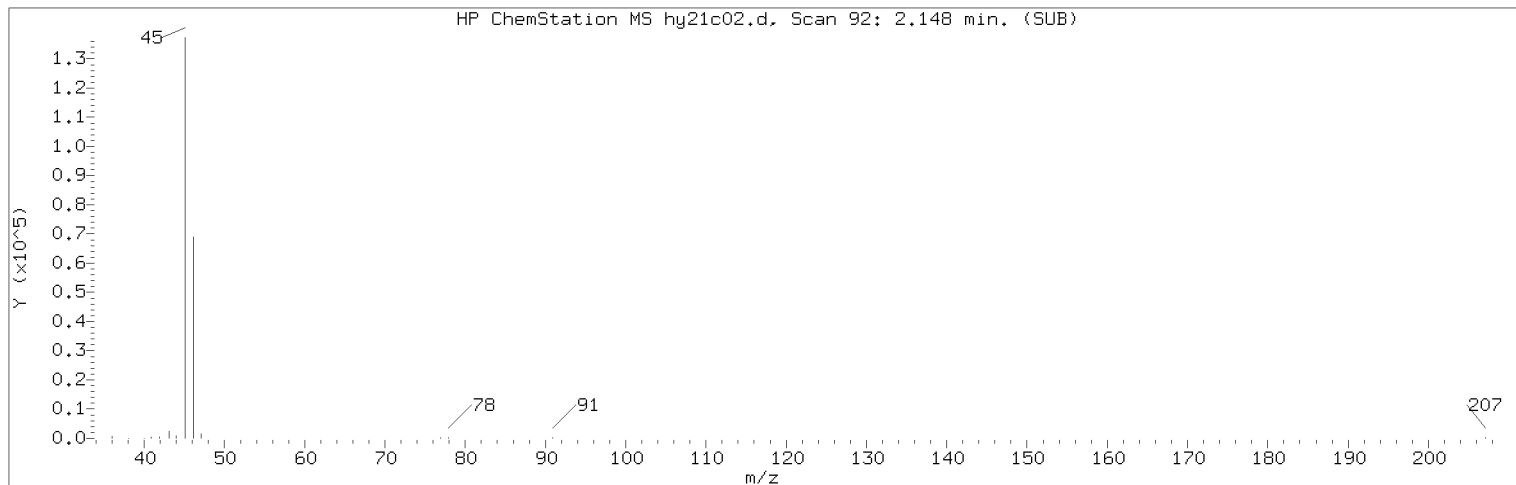
page 1 of 1

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.

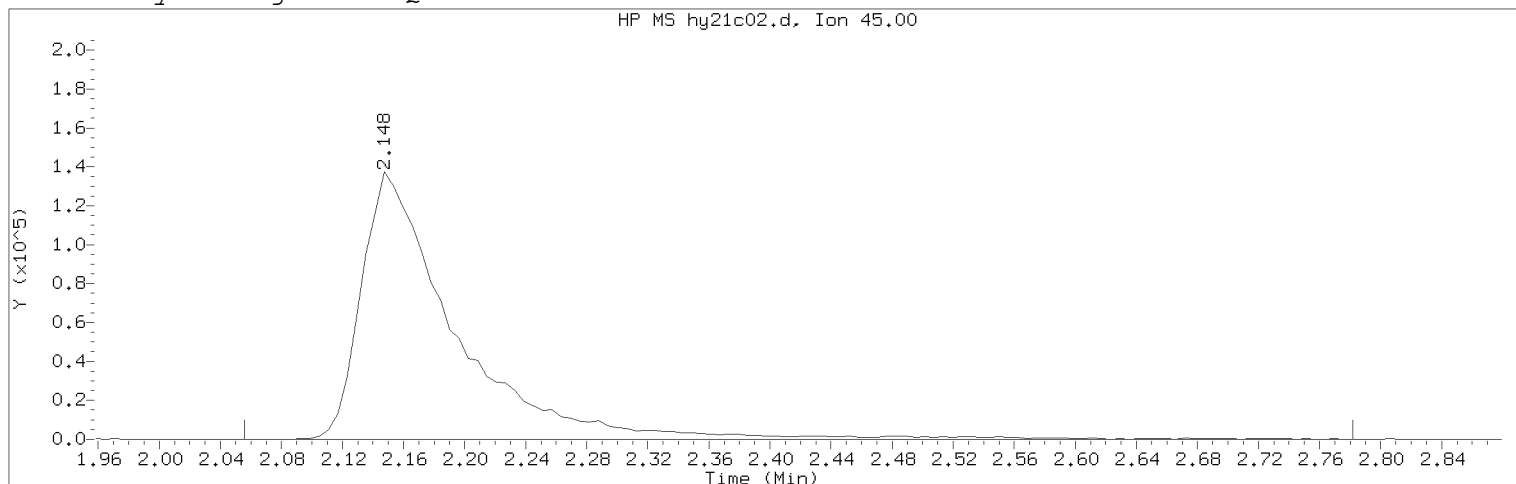
Target 3.5 esignature user ID: jkh09052

RAF64 Page 412 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:43

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 21-MAY-2020 21:01

Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area (flag)	: 587047M	
On-Column Amount (ng)	: 11.3017	
Integration start scan	: 76	Integration stop scan: 195
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

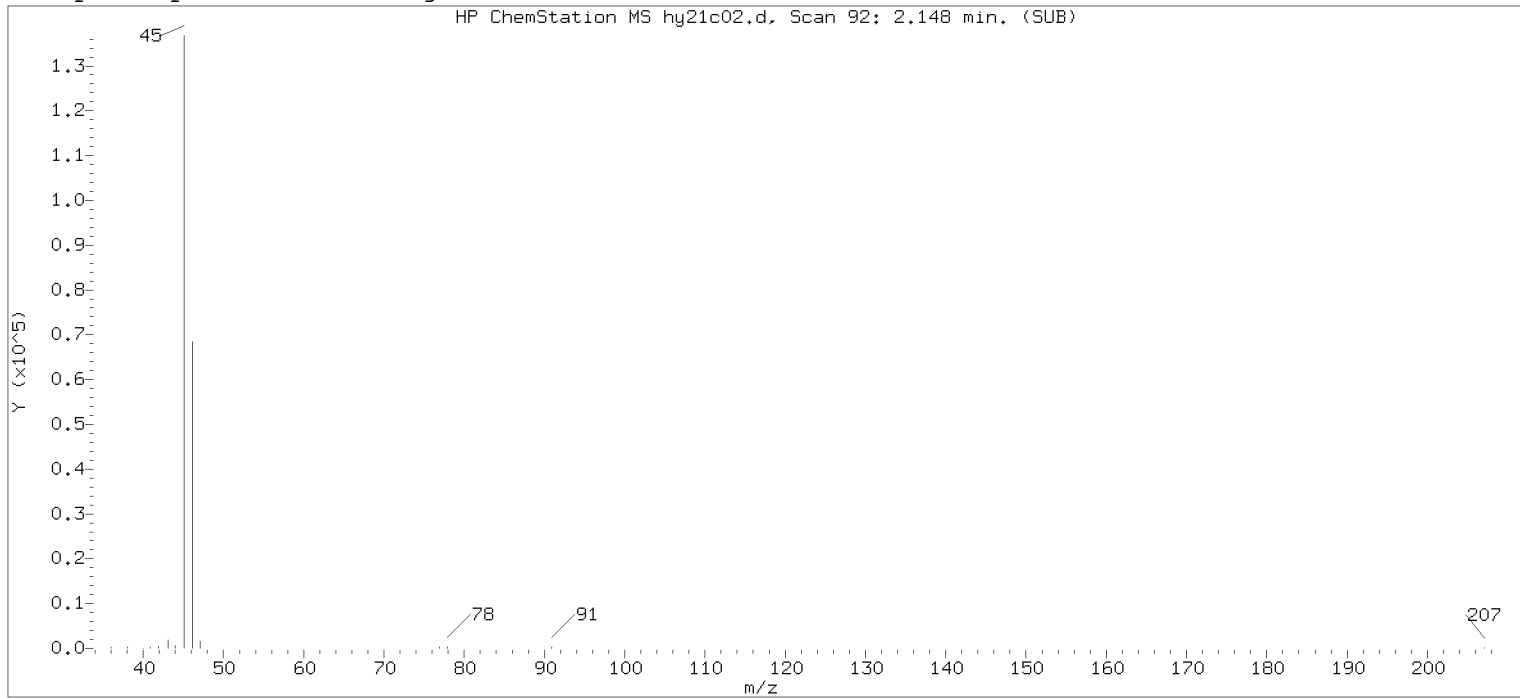
Analyst responsible for change:

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.

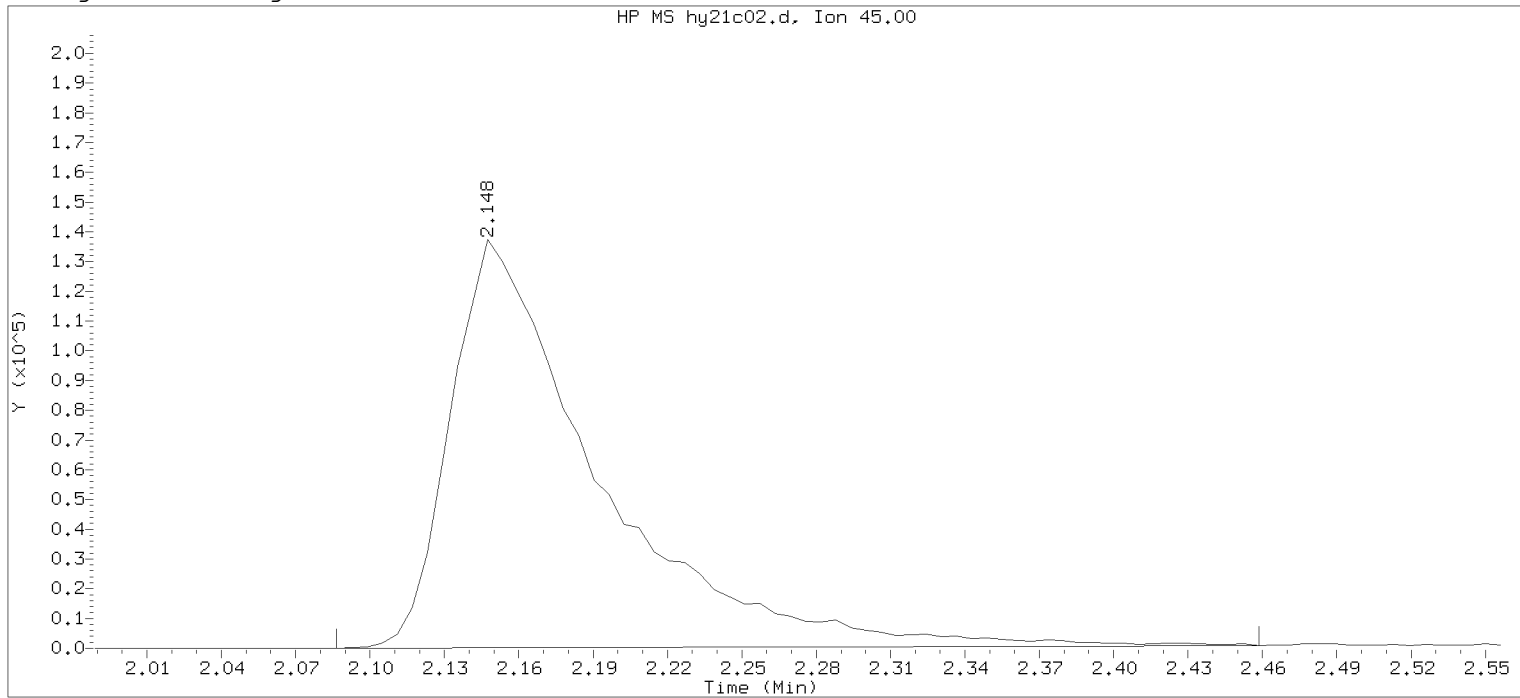
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:43

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 21-MAY-2020 21:01

Date, time and analyst ID of latest file update: 21-May-2020 21:01 chemist

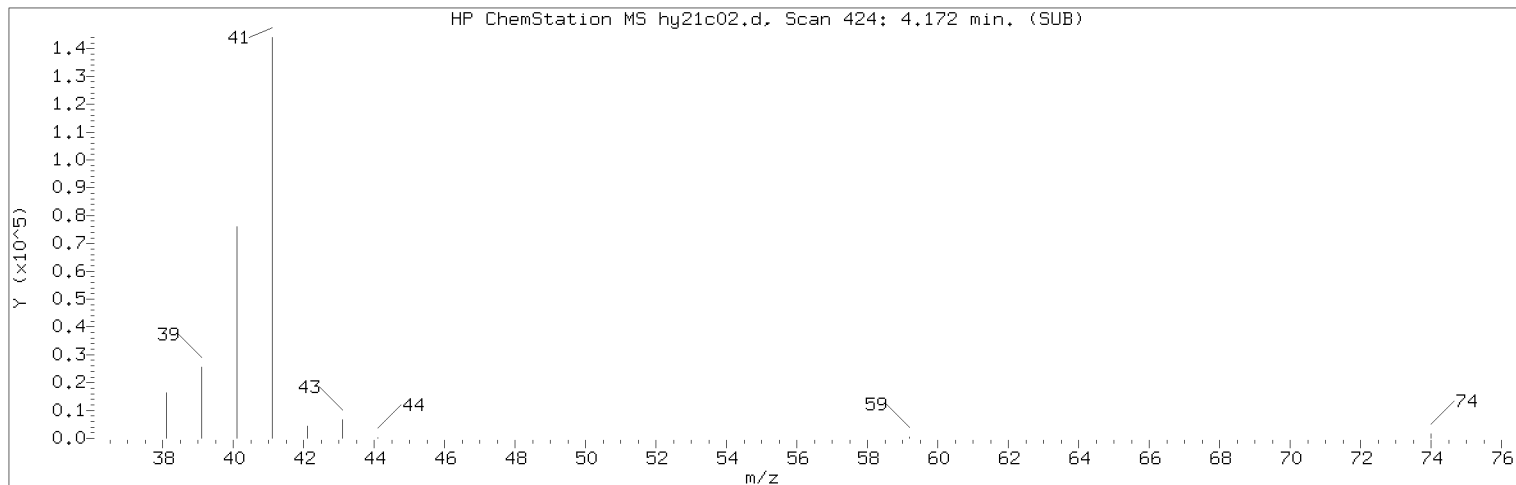
Sample Name: VSTD010

Lab Sample ID: VSTD010

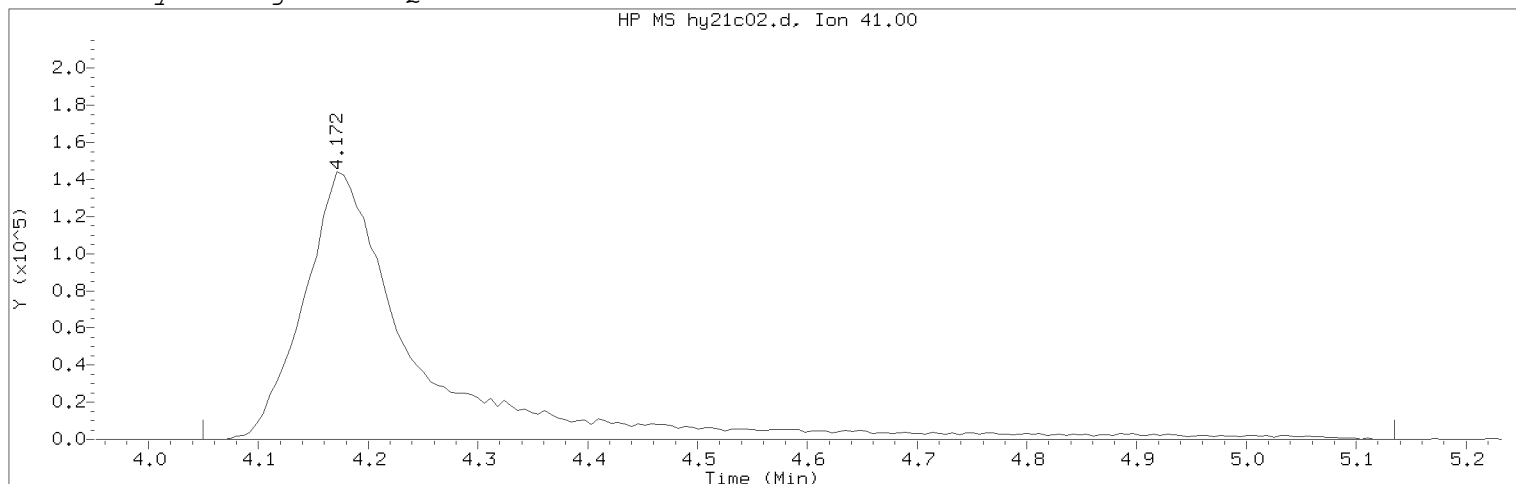
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 92	
Retention Time (minutes)	: 2.148	
Quant Ion	: 45.00	
Area	: 564772	
On-column Amount (ng)	: 10.8728	
Integration start scan	: 81	Integration stop scan: 142
Y at integration start	: 0	Y at integration end: 969

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:13.
Target 3.5 esignature user RA564j Page 414 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:43

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 21-MAY-2020 21:01

Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

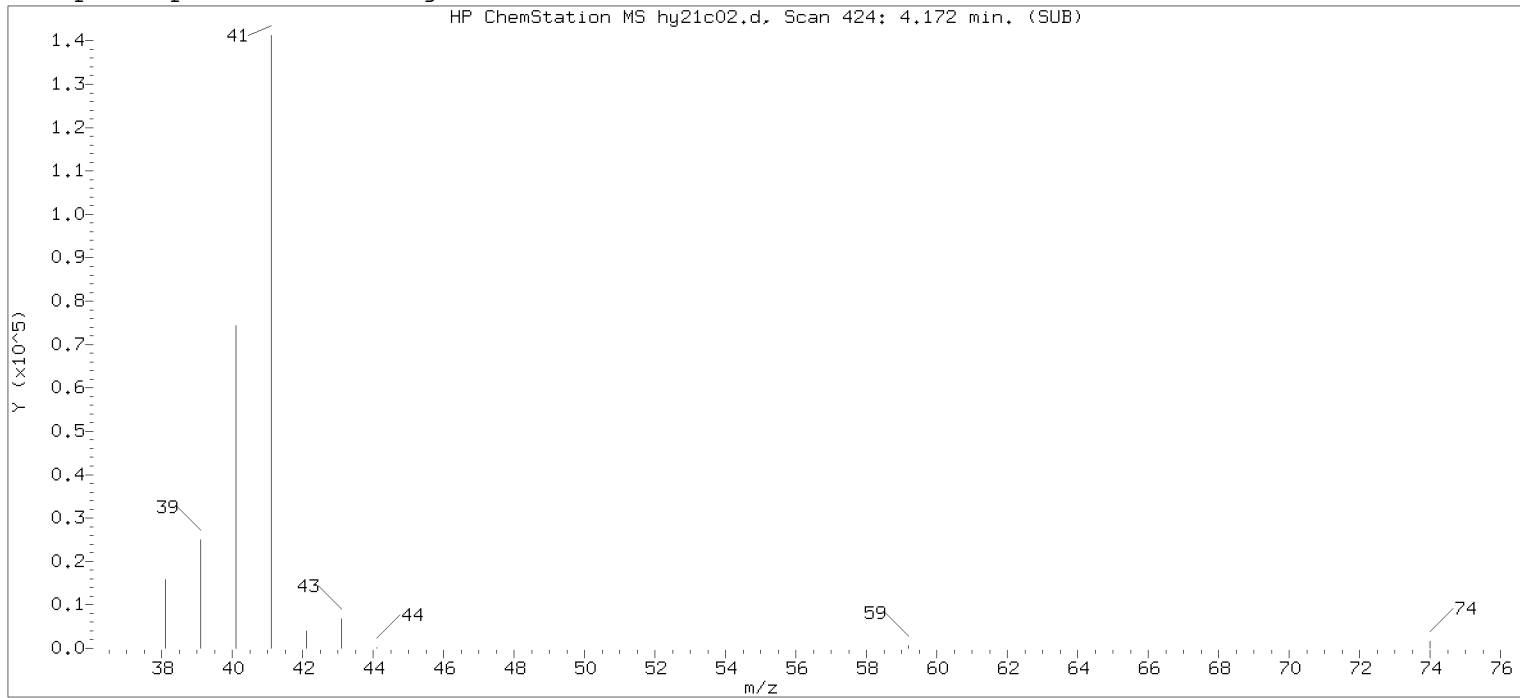
Compound Number	: 26	
Compound Name	: Acetonitrile	
Scan Number	: 424	
Retention Time (minutes)	: 4.172	
Quant Ion	: 41.00	
Area (flag)	: 1052266M	
On-Column Amount (ng)	: 401.1535	
Integration start scan	: 403	Integration stop scan: 581
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

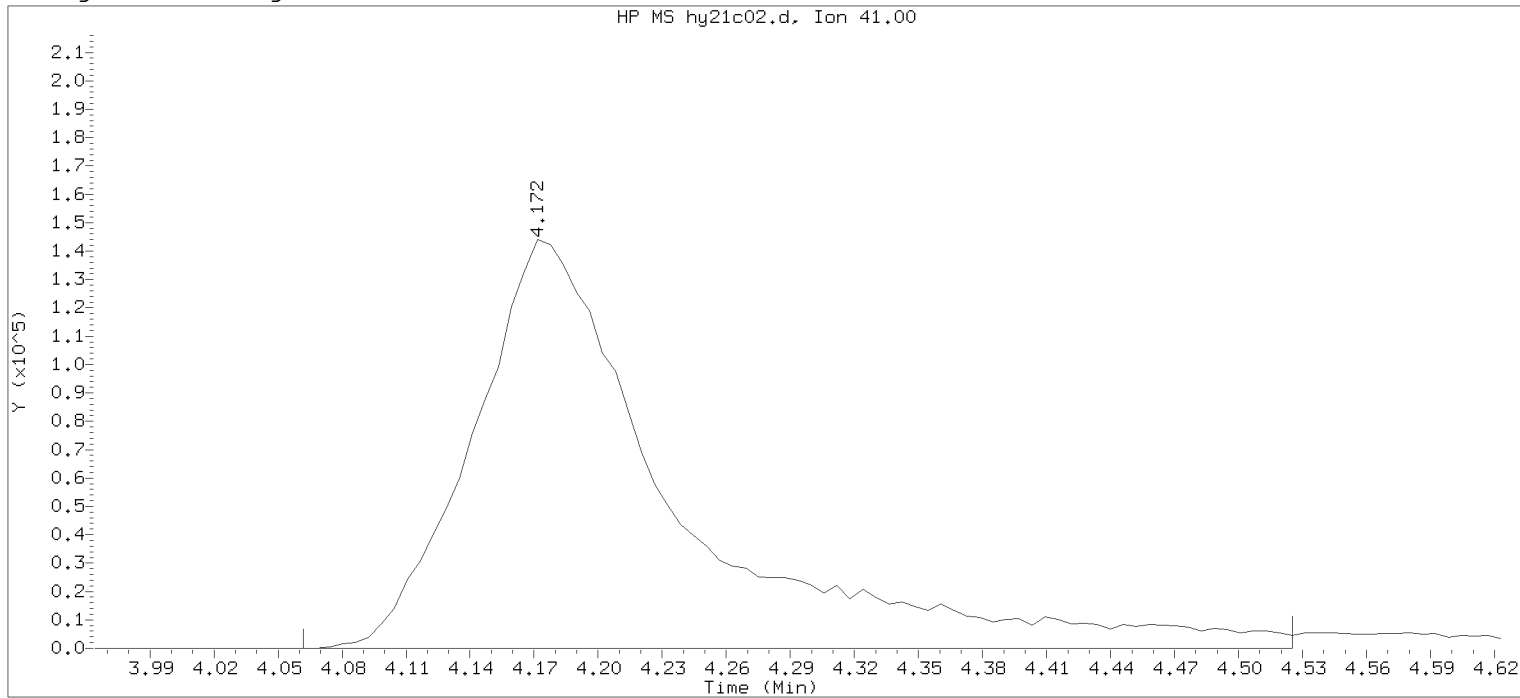
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:43

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 21-MAY-2020 21:01

Date, time and analyst ID of latest file update: 21-May-2020 21:01 chemist

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 26

Compound Name : Acetonitrile

Scan Number : 424

Retention Time (minutes): 4.172

Quant Ion : 41.00

Area : 951461

On-column Amount (ng) : 395.0925

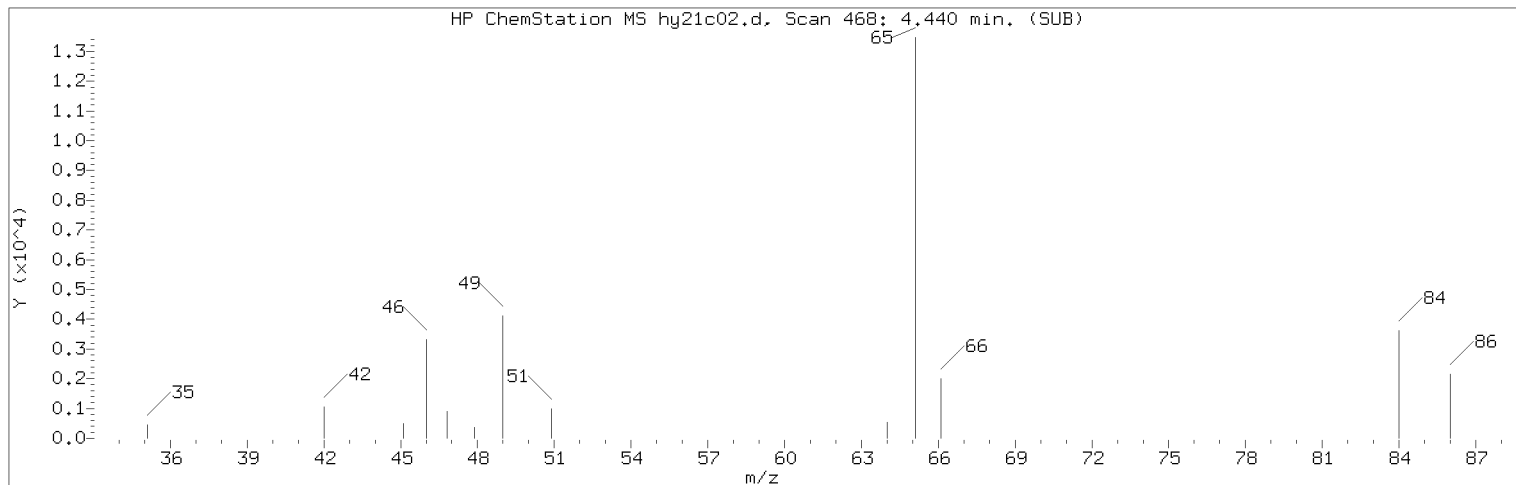
Integration start scan : 405 Integration stop scan: 481

Y at integration start : 0 Y at integration end: 0

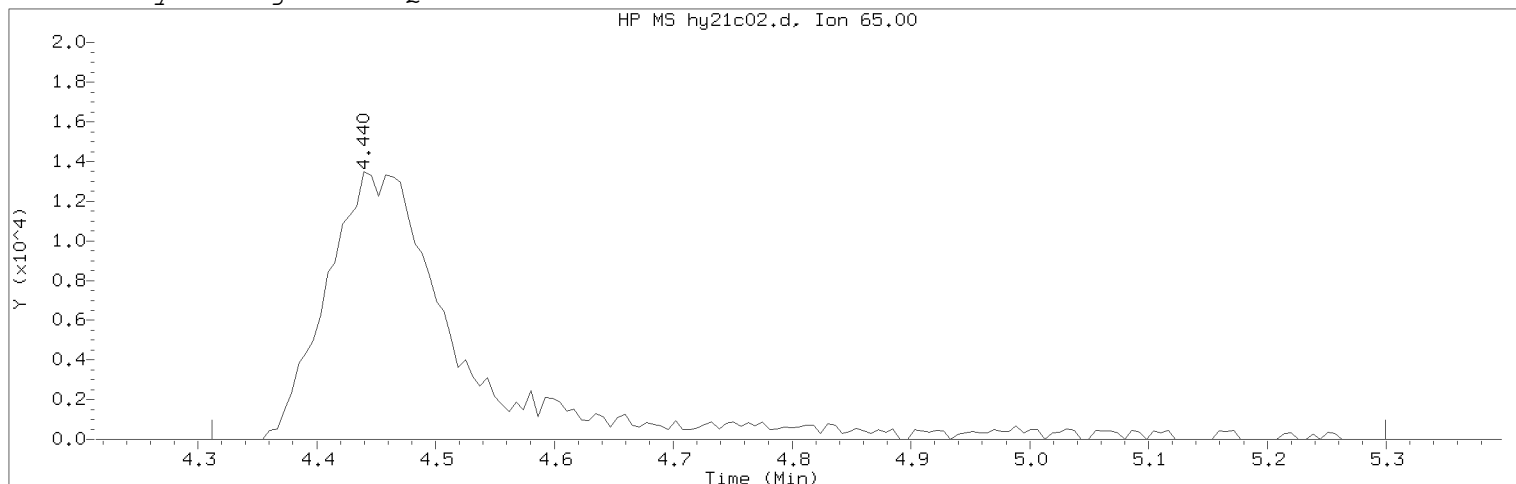
Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:13.

Target 3.5 esignature userRAF64jPage 416 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 20:43

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: SMICAL

Calibration date and time: 21-MAY-2020 21:01

Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 468	
Retention Time (minutes)	: 4.440	
Quant Ion	: 65.00	
Area (flag)	: 107724M	
On-Column Amount (ng)	: 50.0000	
Integration start scan	: 446	Integration stop scan: 608
Y at integration start	: 0	Y at integration end: 0

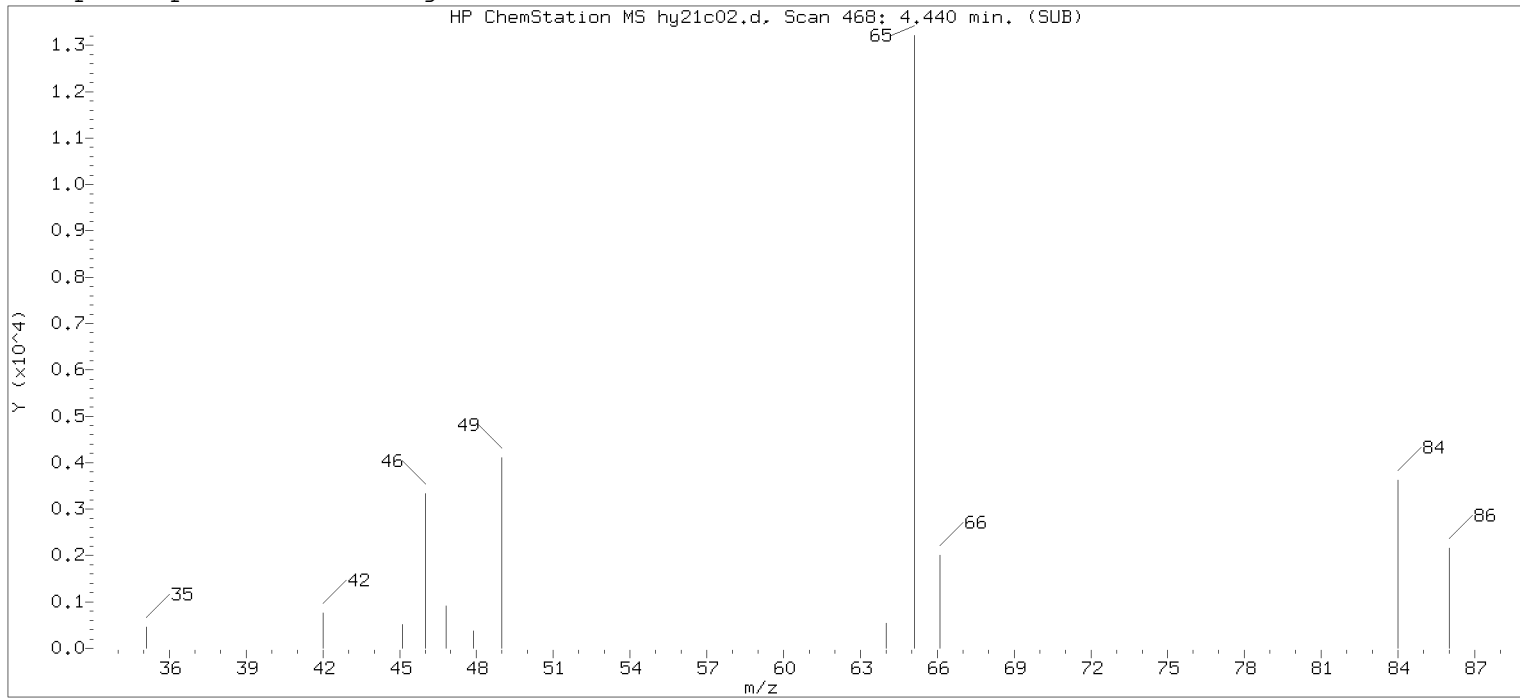
Reason for manual integration: improper integration

Analyst responsible for change:

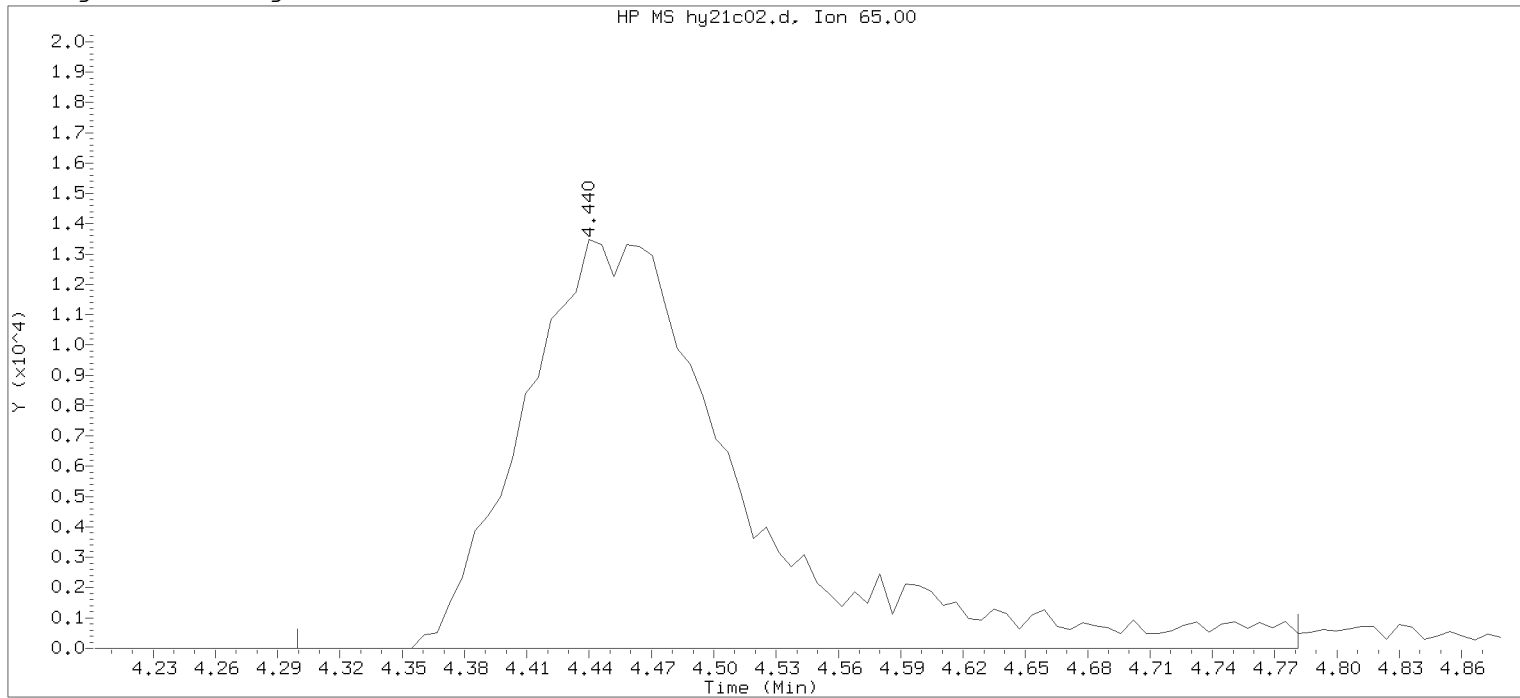
Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:43 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 21-MAY-2020 21:01
Date, time and analyst ID of latest file update: 21-May-2020 21:01 chemist

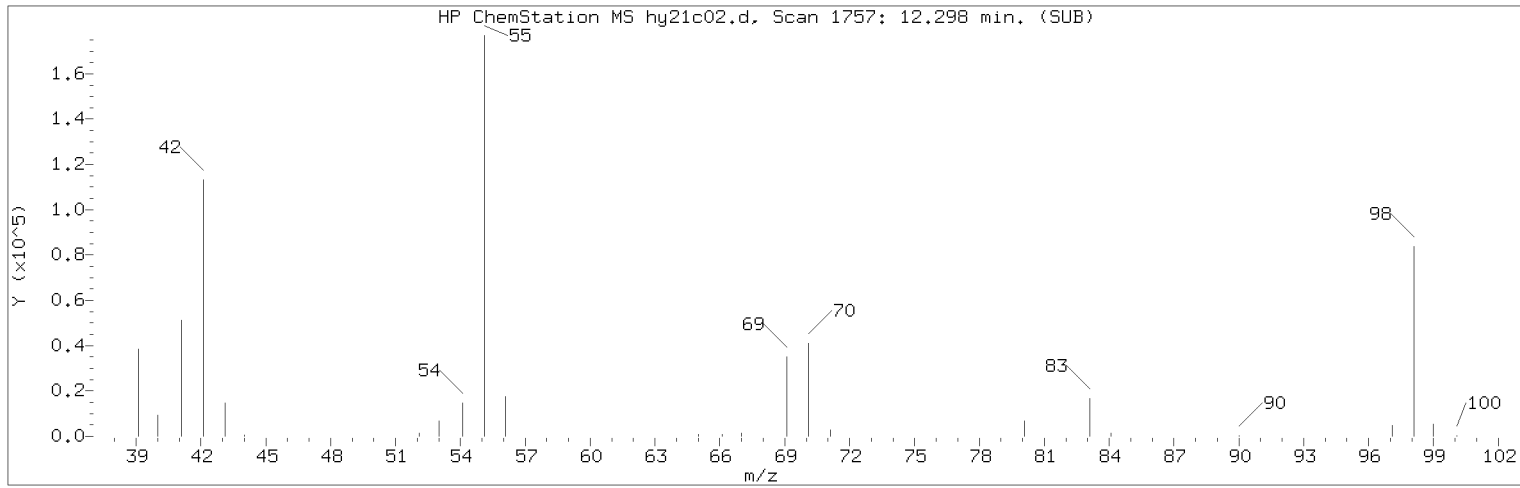
Sample Name: VSTD010

Lab Sample ID: VSTD010

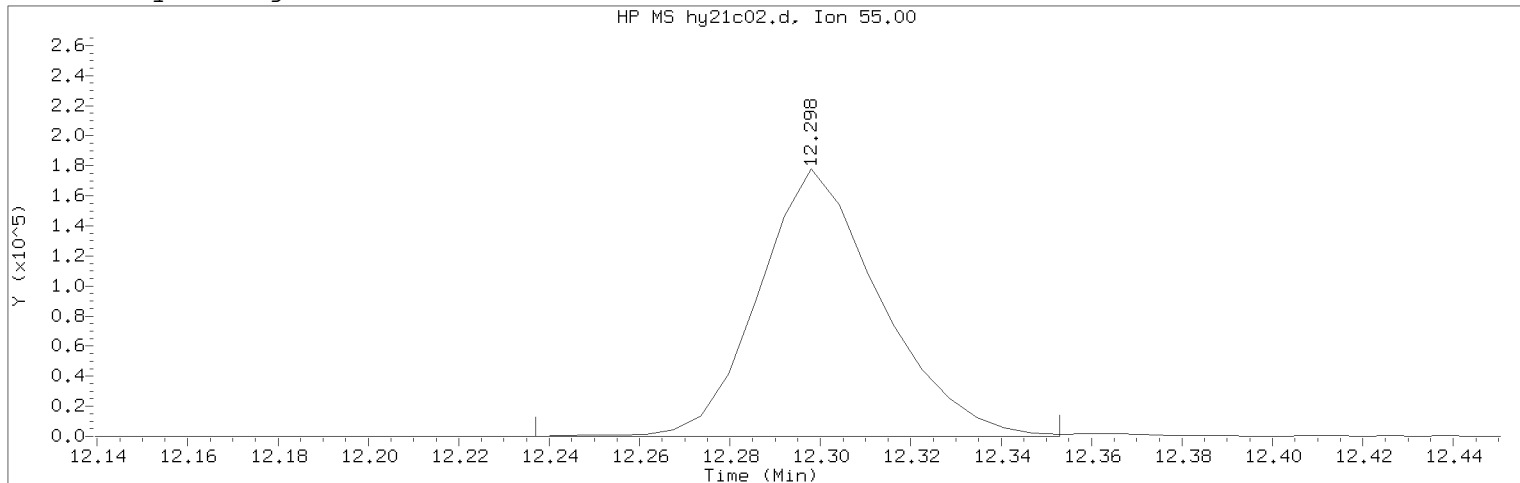
Compound Number	: 27	
Compound Name	: t-Butyl Alcohol-d10	
Scan Number	: 468	
Retention Time (minutes)	: 4.440	
Quant Ion	: 65.00	
Area	: 98899	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 444	Integration stop scan: 523
Y at integration start	: 0	Y at integration end: 0

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Target 3.5 esignature user RA564j Page 418 of 448

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:43 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 21-MAY-2020 21:01
Date, time and analyst ID of latest file update: 21-May-2020 21:12 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

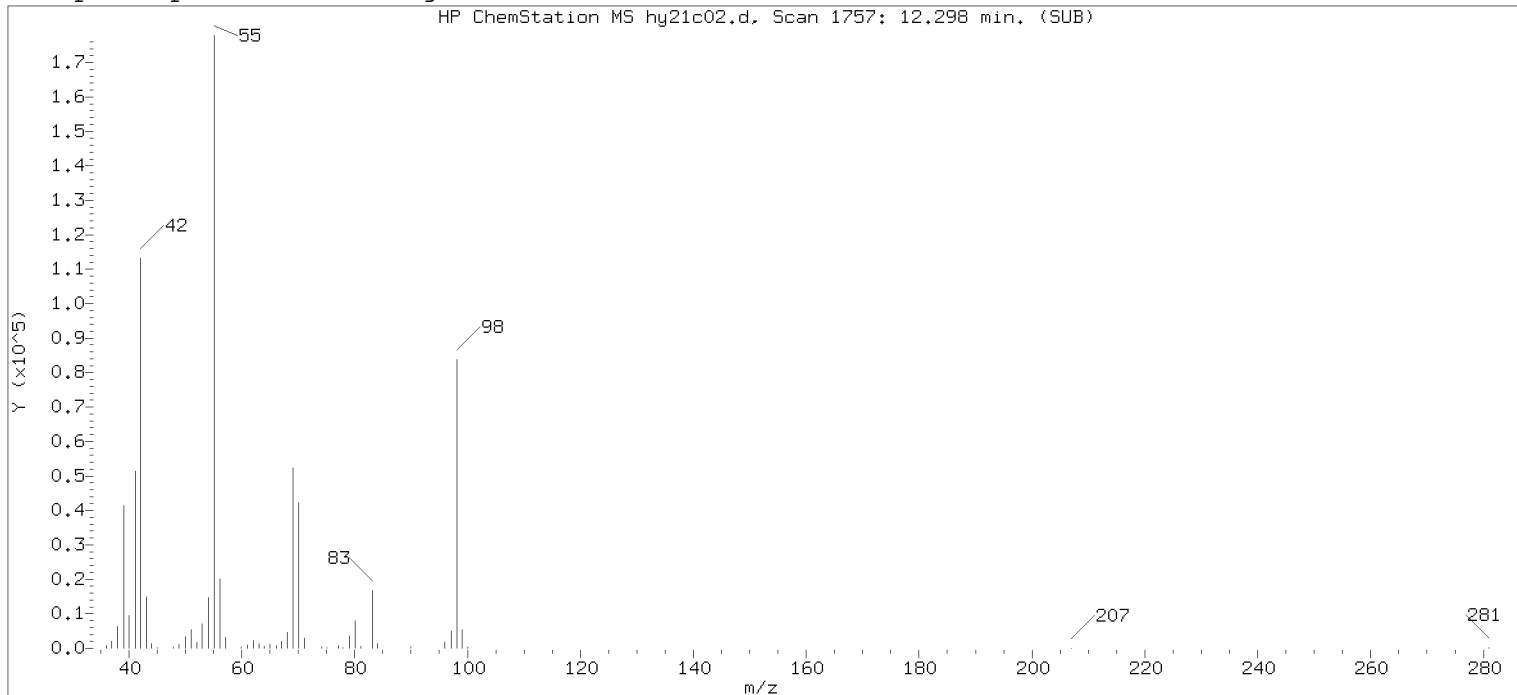
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1757
Retention Time (minutes): 12.298
Quant Ion : 55.00
Area (flag) : 331161M
On-Column Amount (ng) : 430.6291
Integration start scan : 1746 Integration stop scan: 1765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

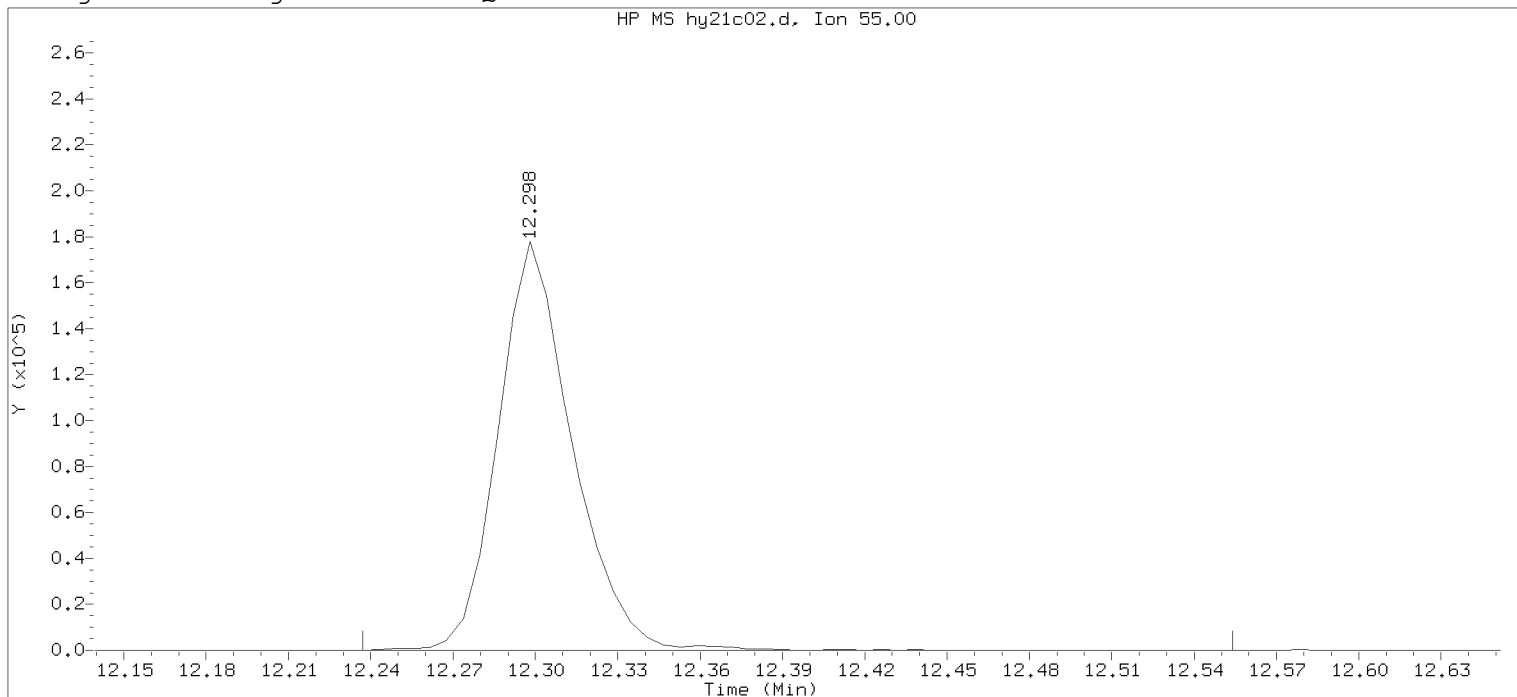
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:13.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21c02.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 20:43 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 21-MAY-2020 21:01
Date, time and analyst ID of latest file update: 21-May-2020 21:01 chemist

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 113	
Compound Name	: Cyclohexanone	
Scan Number	: 1757	
Retention Time (minutes)	: 12.298	
Quant Ion	: 55.00	
Area	: 333912	
On-column Amount (ng)	: 472.9544	
Integration start scan	: 1746	Integration stop scan: 1798
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:13.
Target 3.5 esignature user RA564j Page 420 of 448

Raw QC Data

Volatiles by GC/MS

VBLKH11

Data file: /chem2/HP19094.i/20may21b.b/hy21b01.d

Injection date and time: 21-MAY-2020 22:53

Data file Sample Info. Line: VBLKH11;VBLKH11;1;3;;;DRAPERLOQ;;;

Instrument ID: **HP19094.i** Batch: **H201424AA**

Date, time and analyst ID of latest file update: 21-May-2020 23:17 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: **22469**

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml

Sample Volume (V_o): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.458 (-0.006)	471	65	108784 (2)	50.00	
64) Fluorobenzene	7.945 (0.000)	1043	96	1519191 (-4)	10.00	
98) Chlorobenzene-d5	11.372 (0.000)	1605	117	1168366 (-3)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	618519 (-2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
=====									
51) Dibromofluoromethane	(2)	7.043	(0.001)	113	397296	10.520	105%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513	(0.000)	102	78561	10.734	107%		80 - 120
83) Toluene-d8	(3)	9.939	(-0.001)	98	1533303	9.850	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365	(0.000)	95	540549	9.386	94%		80 - 120

Target Compounds	I.S.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
	Ref.									Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
24) Methylene Chloride	(2)				Not Detected					0.07	1
34) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
39) 2-Butanone	(1)				Not Detected					0.6	10
49) Tetrahydrofuran	(1)				Not Detected					0.8	25
52) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
55) Carbon Tetrachloride	(2)				Not Detected					0.07	1
59) Benzene	(2)				Not Detected					0.05	1
68) Trichloroethene	(2)				Not Detected					0.06	1
84) Toluene	(3)				Not Detected					0.07	1
90) Tetrachloroethene	(3)				Not Detected					0.06	1
101) Ethylbenzene	(3)				Not Detected					0.06	1
102) m+p-Xylene	(3)				Not Detected					0.1	0.5
105) o-Xylene	(3)				Not Detected					0.05	0.5
106) Xylene (Total)	(3)				Not Detected					0.2	3

VBLKH11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH11

Data file: /chem2/HP19094.i/20may21b.b/hy21b01.d

Injection date and time: **21-MAY-2020 22:53**

Data file Sample Info. Line: VBLKH11;VBLKH11;1;3;;;DRAPERLOQ;;;

Instrument ID: **HP19094.i** Batch: **H201424AA**

Date, time and analyst ID of latest file update: 21-May-2020 23:17 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: **22469**

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml

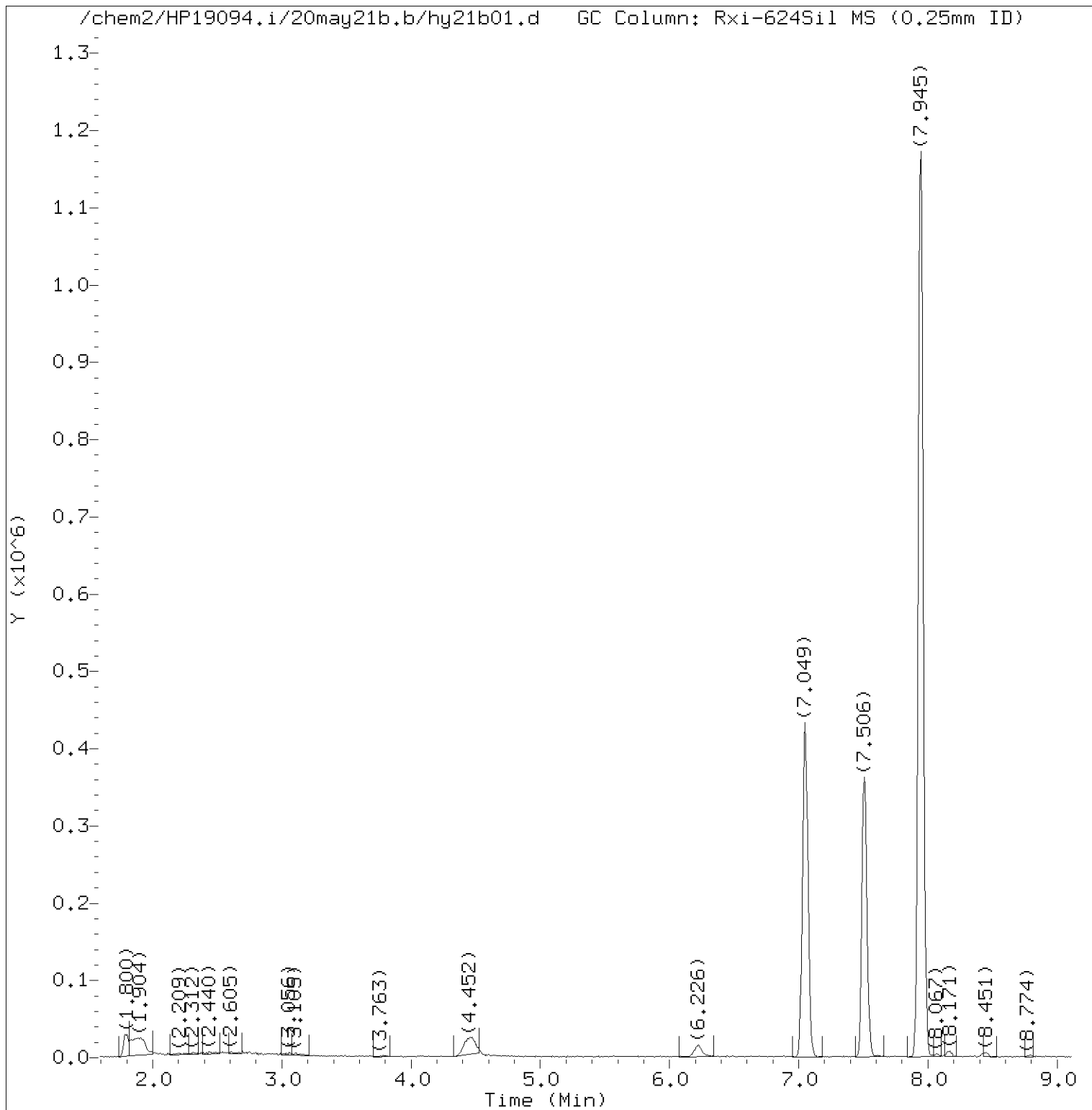
Sample Volume (Vo): 25 ml

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BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21b01.d
Injection date and time: 21-MAY-2020 22:53

Instrument ID: HP19094.i
Analyst ID: MEC29284

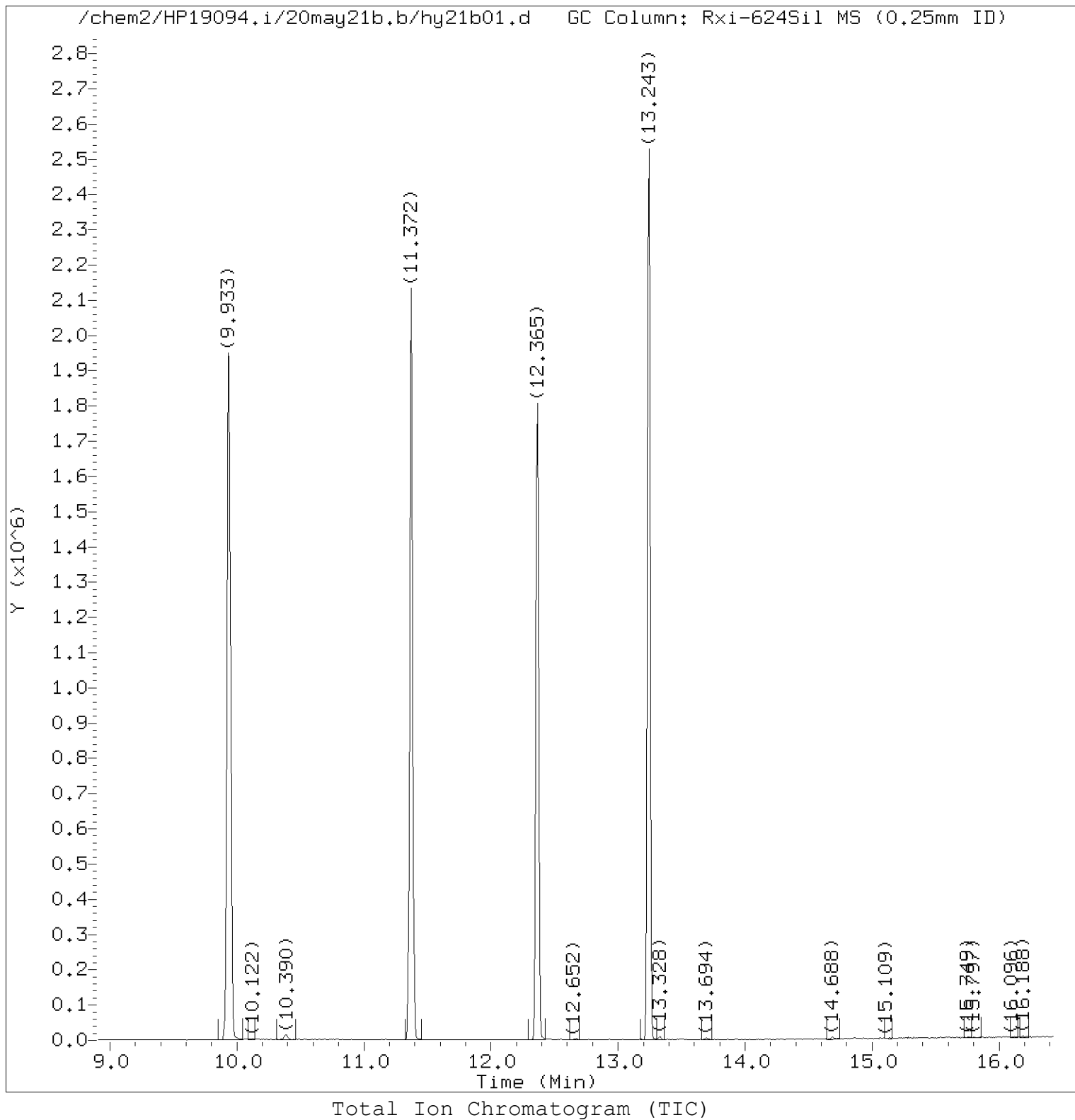
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:17 mec29284

Sample Name: VBLKH11

Lab Sample ID: VBLKH11

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21b01.d
Injection date and time: 21-MAY-2020 22:53

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:17 mec29284

Sample Name: VBLKH11

Lab Sample ID: VBLKH11

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21b01.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 22:53

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 21-May-2020 23:17 mec29284

Sample Name: VBLKH11

Lab Sample ID: VBLKH11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
27) *t-Butyl Alcohol-d10	(1)	4.458	65	108784	50.000
51) \$Dibromofluoromethane	(2)	7.043	113	397296	10.520
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	78561	10.734
64) *Fluorobenzene	(2)	7.945	96	1519191	10.000
83) \$Toluene-d8	(3)	9.939	98	1533303	9.850
98) *Chlorobenzene-d5	(3)	11.372	117	1168366	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	540549	9.386
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	618519	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

LCSH12

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH12

Data file: /chem2/HP19094.i/20may21b.b/hy21l03.d Injection date and time: **21-MAY-2020 21:47**
Data file Sample Info. Line: LCSH12;LCSH12;1;3;LCS;;DRAPERLOQ;;hy21b01; Instrument ID: **HP19094.i** Batch: **H201424AA**
Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 21-MAY-2020 22:54
Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.470 (-0.018)	473	65	93812 (-12)	50.00	
64) Fluorobenzene	7.951 (-0.006)	1044	96	1567394 (-1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1197121 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	627252 (-1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (0.000)	113	397654	10.206	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512 (0.001)	102	76049	10.071	101%		80 - 120
83) Toluene-d8	(3)	9.939 (-0.001)	98	1576789	9.886	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	567859	9.624	96%		80 - 120

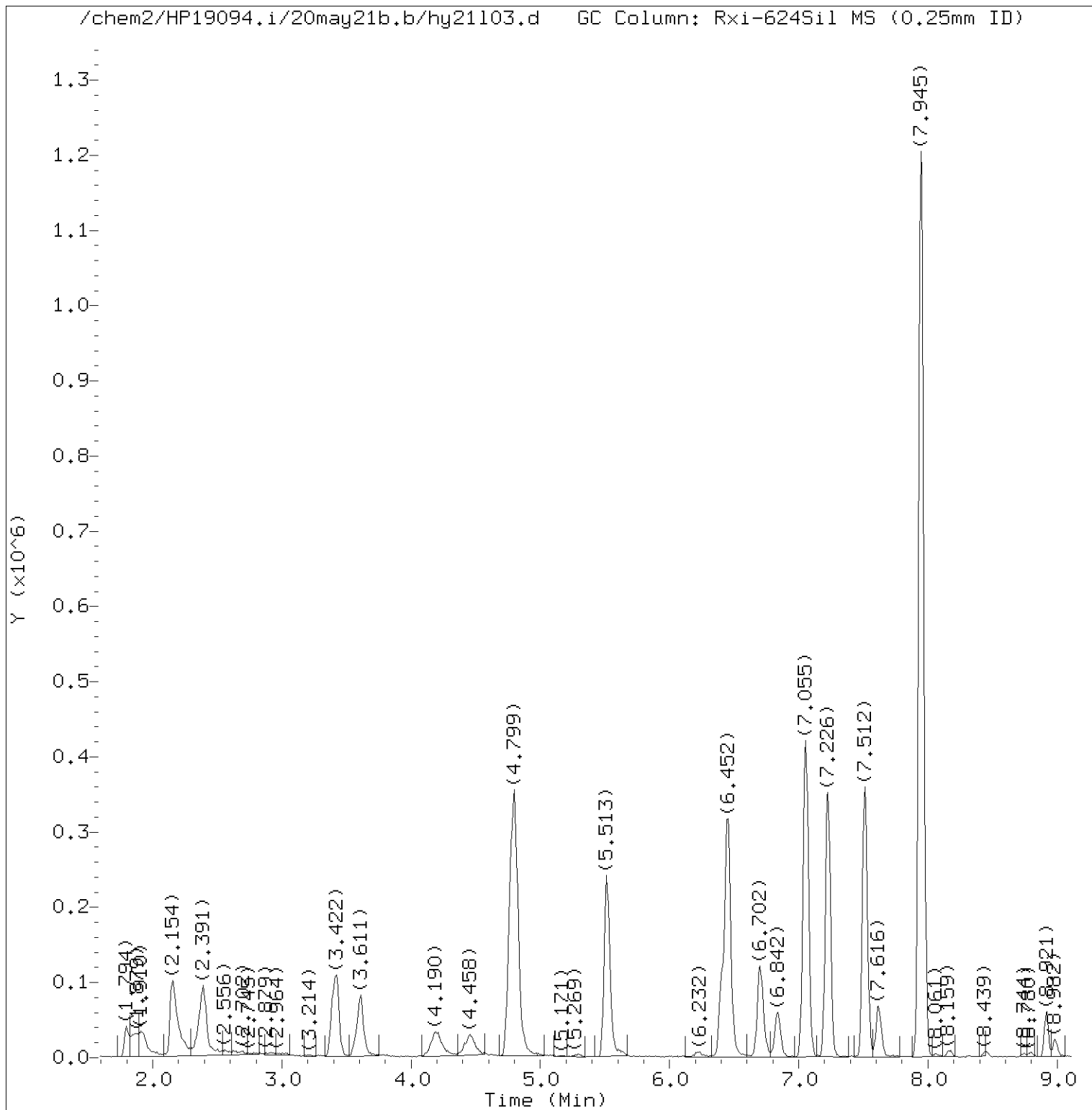
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.154 (-0.000)	45	284614M	5.451	5.45		J	0.04	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21103.d
Injection date and time: 21-MAY-2020 21:47

Instrument ID: HP19094.i
Analyst ID: MEC29284

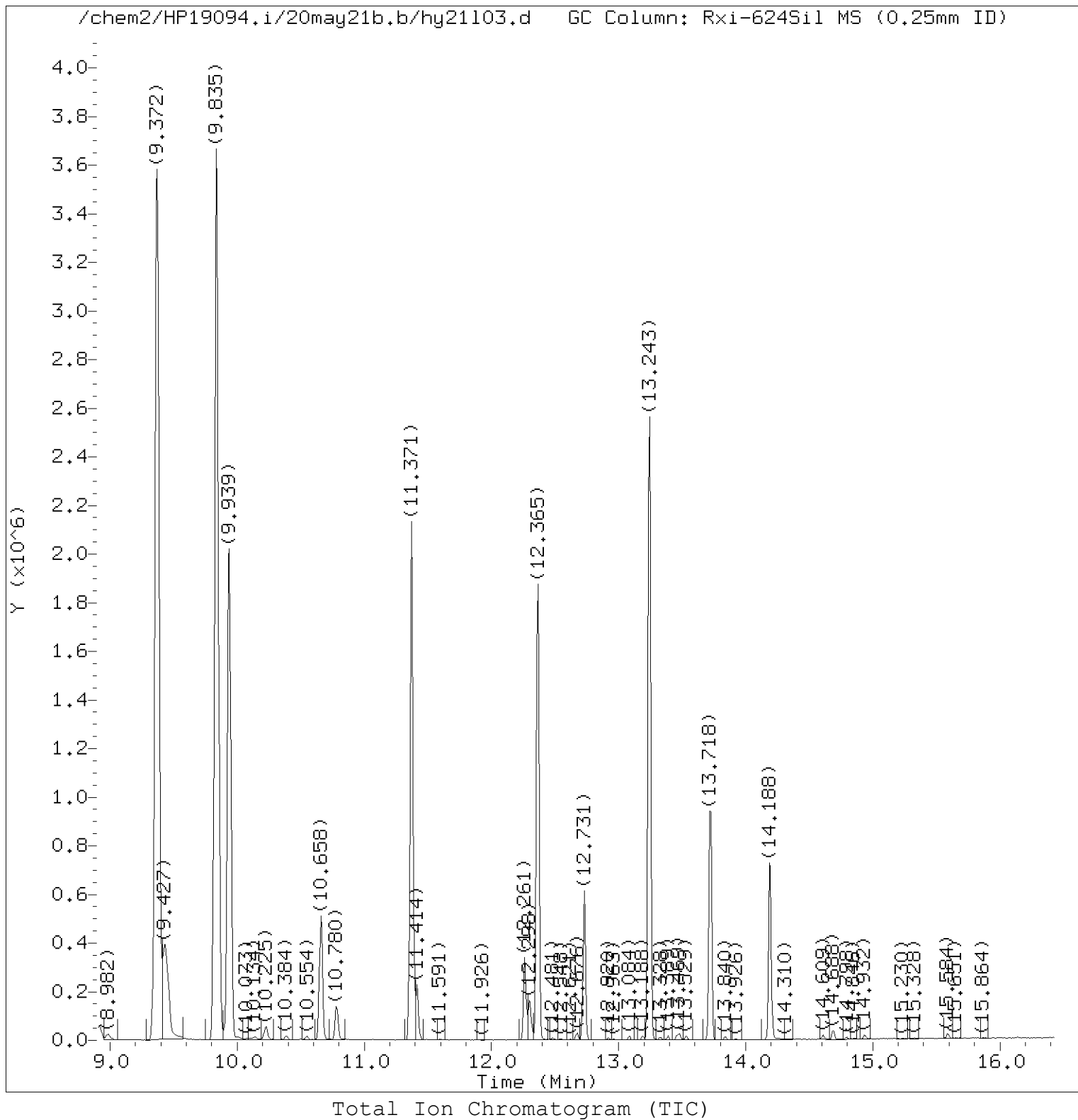
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCSH12

Lab Sample ID: LCSH12

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052



Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21103.d
Injection date and time: 21-MAY-2020 21:47

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCSH12

Lab Sample ID: LCSH12

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21103.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 21:47

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469SM

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCSH12

Lab Sample ID: LCSH12

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.154	45	284614M	5.451
27) *t-Butyl Alcohol-d10	(1)	4.470	65	93812	50.000
51) \$Dibromofluoromethane	(2)	7.055	113	397654	10.206
58) \$1,2-Dichloroethane-d4	(2)	7.512	102	76049	10.071
64) *Fluorobenzene	(2)	7.951	96	1567394	10.000
83) \$Toluene-d8	(3)	9.939	98	1576789	9.886
98) *Chlorobenzene-d5	(3)	11.371	117	1197121	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	567859	9.624
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	627252	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

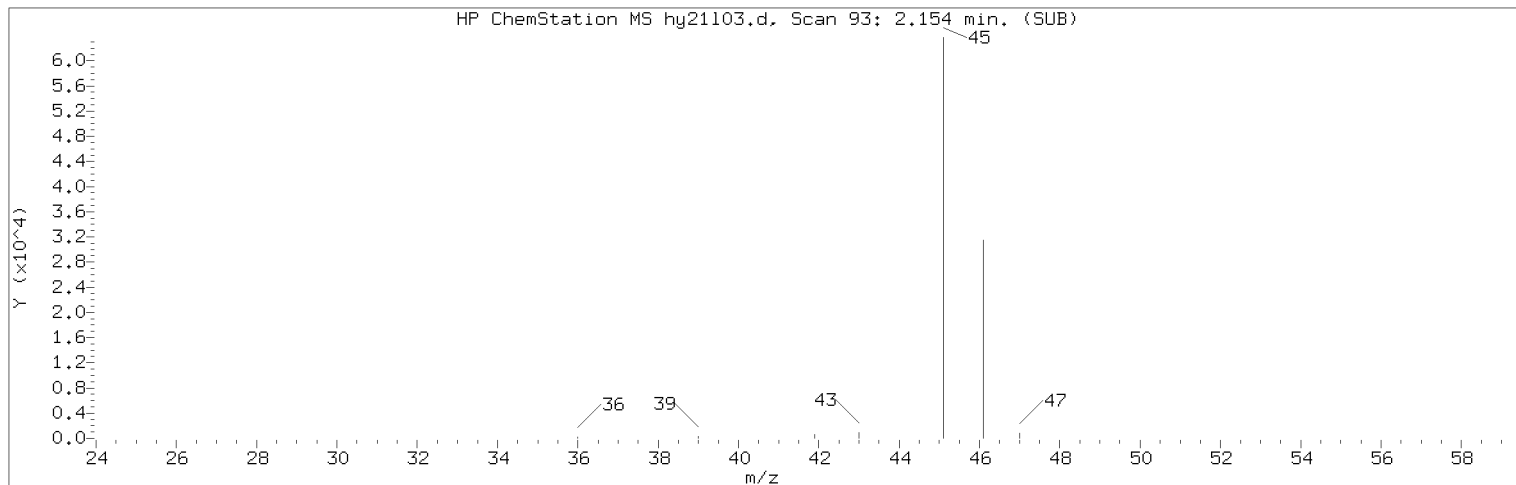
page 1 of 1

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

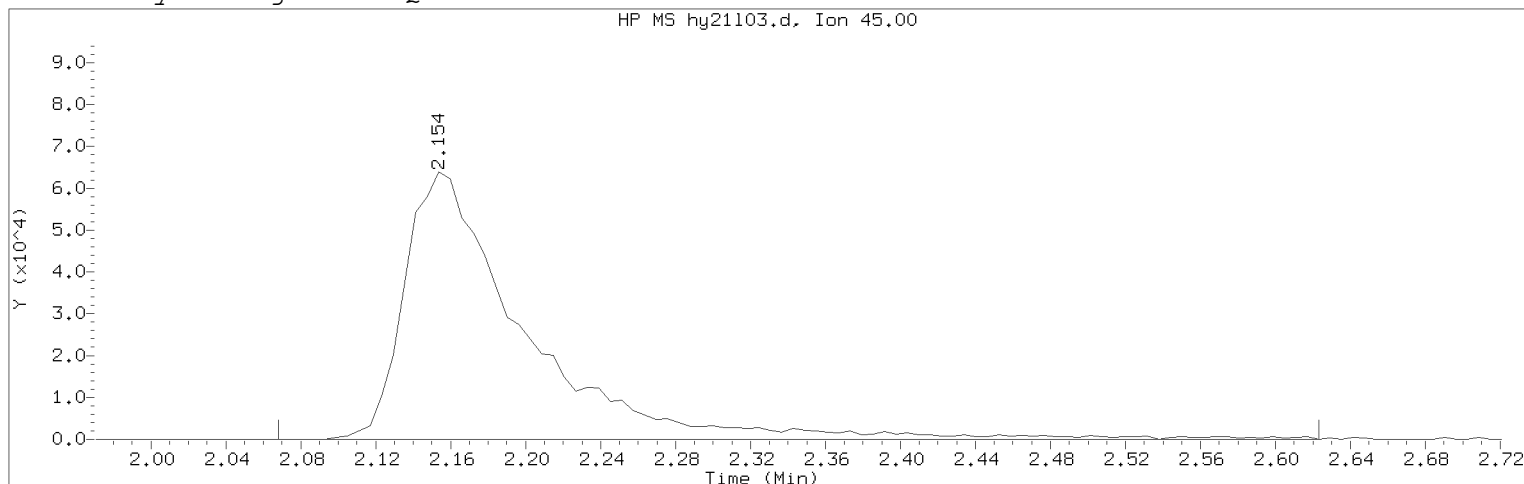
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21103.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 21:47

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469SM

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCSH12

Lab Sample ID: LCSH12

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 93	
Retention Time (minutes)	: 2.154	
Quant Ion	: 45.00	
Area (flag)	: 284614M	
On-Column Amount (ng)	: 5.4508	
Integration start scan	: 78	Integration stop scan: 169
Y at integration start	: 0	Y at integration end: 0

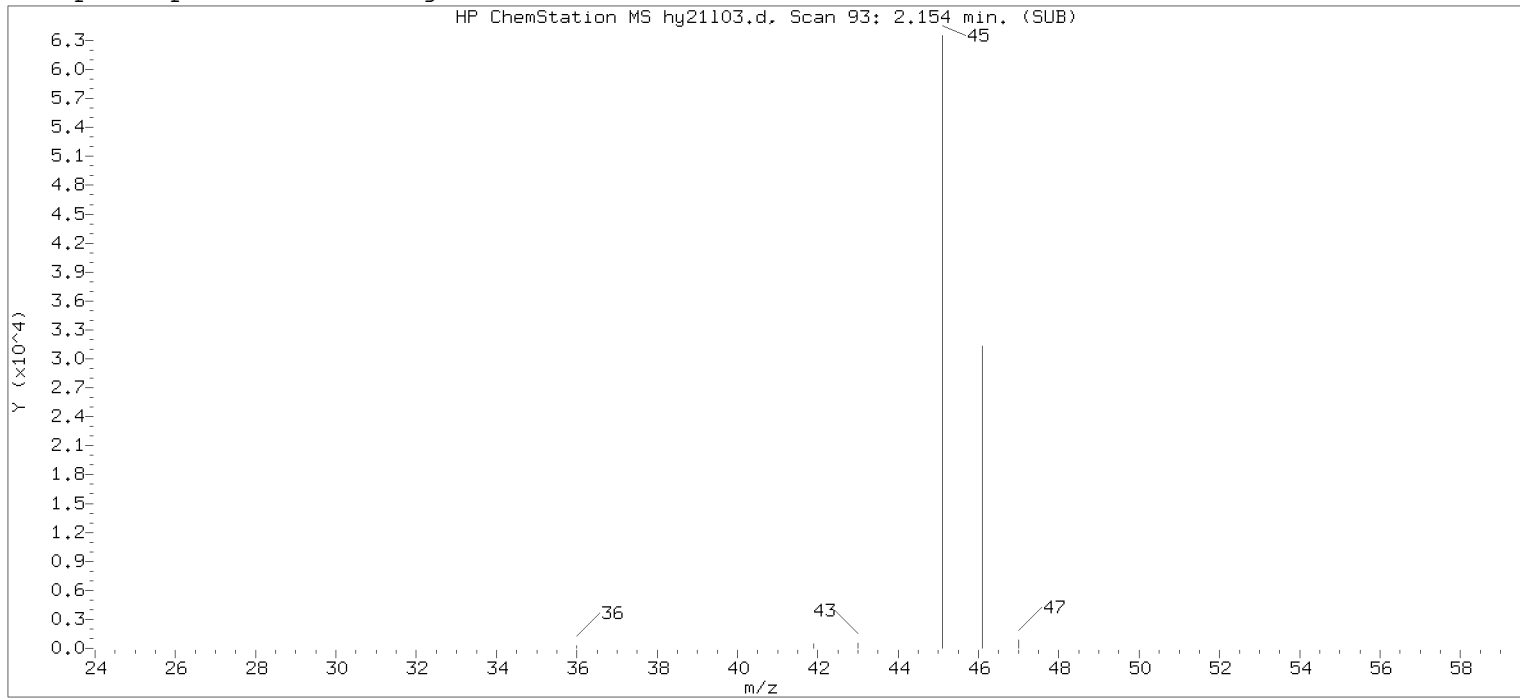
Reason for manual integration: improper integration

Analyst responsible for change:

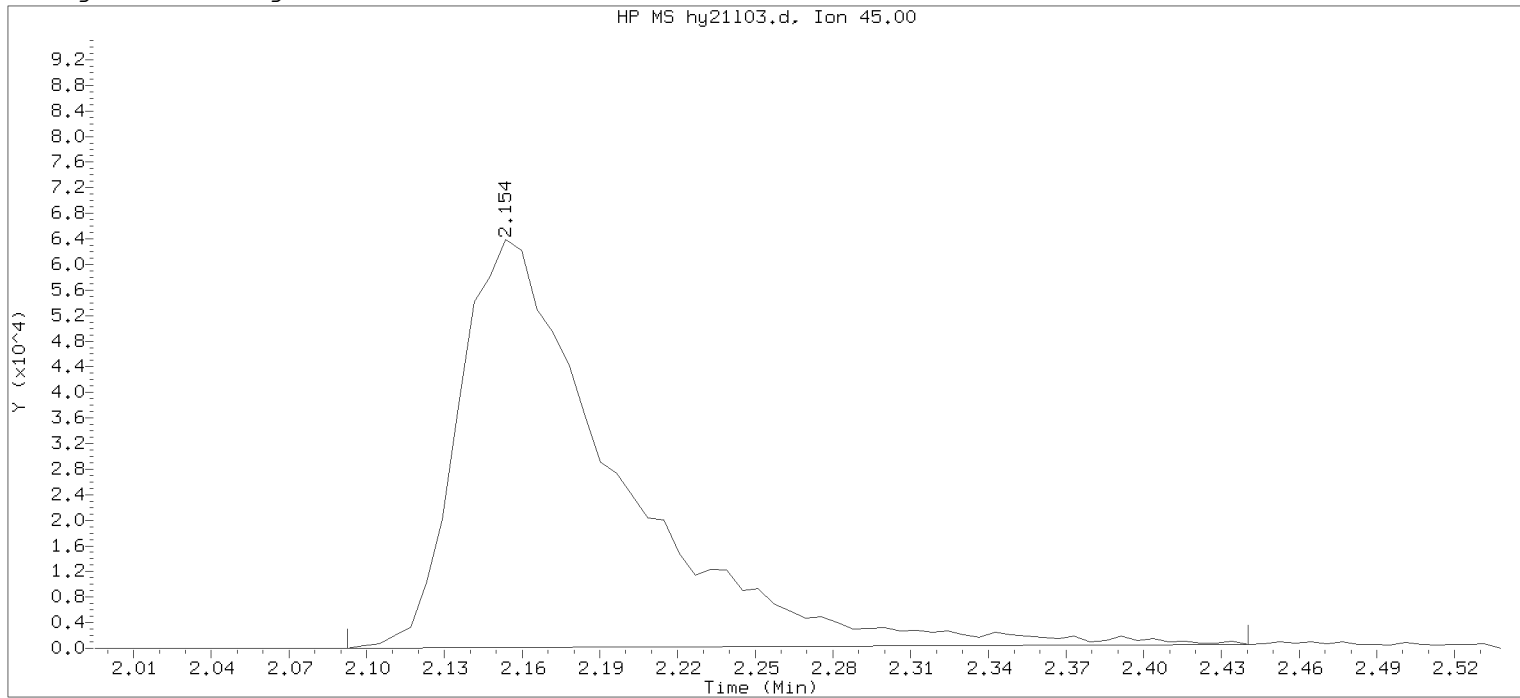
Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21103.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 21:47

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469SM

Calibration date and time: 21-MAY-2020 21:25

Date, time and analyst ID of latest file update: 21-May-2020 22:07 chemist

Sample Name: LCSH12

Lab Sample ID: LCSH12

Compound Number	:	4	
Compound Name	:	Dimethyl ether	
Scan Number	:	93	
Retention Time (minutes)	:	2.154	
Quant Ion	:	45.00	
Area	:	271560	
On-column Amount (ng)	:	5.2008	
Integration start scan	:	82	Integration stop scan: 139
Y at integration start	:	0	Y at integration end: 632

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12.
Target 3.5 esignature user RA564j Page 432 of 448

LCDH12

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDH12

Data file: /chem2/HP19094.i/20may21b.b/hy21l04.d

Injection date and time: 21-MAY-2020 22:09

Data file Sample Info. Line: LCDH12;LCDH12;1;3;LCSD;;DRAPERLOQ;;hy21b01; Instrument ID: HP19094.i Batch: H201424AA

Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469SM

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.440 (0.012)	468	65	107751 (1)	50.00	
64) Fluorobenzene	7.939 (0.006)	1042	96	1565716 (-1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1194194 (-1)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	628092 (-1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.049 (-0.001)	113	395845	10.170	102%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.506 (0.000)	102	80822	10.714	107%		80 - 120
83) Toluene-d8	(3)	9.933 (0.000)	98	1576073	9.906	99%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	564430	9.589	96%		80 - 120

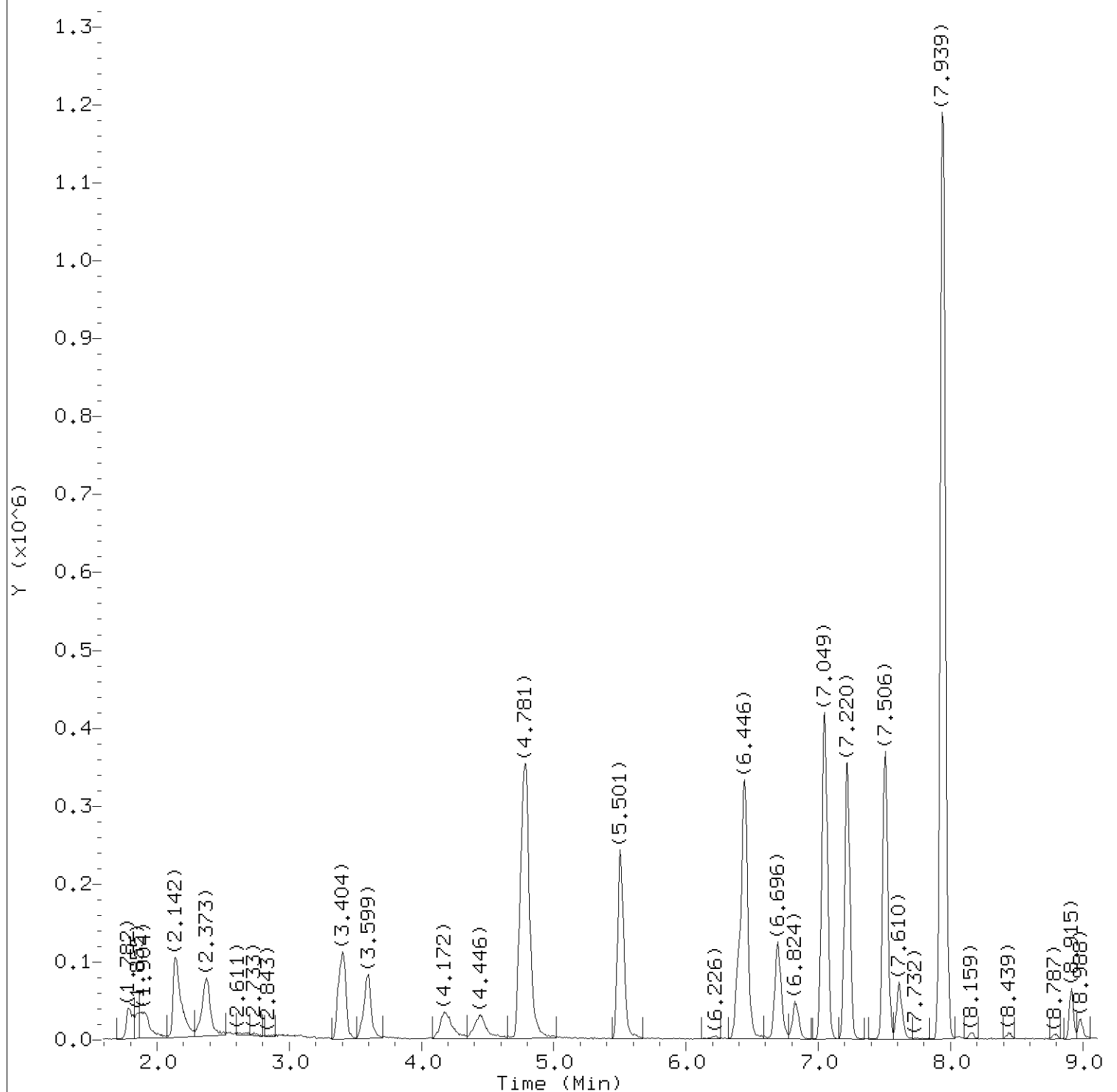
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.142 (0.000)	45	288840M	5.538	5.54		J	0.04	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22. PARALLAX ID: rcr00559



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21104.d
Injection date and time: 21-MAY-2020 22:09

Instrument ID: HP19094.i
Analyst ID: MEC29284

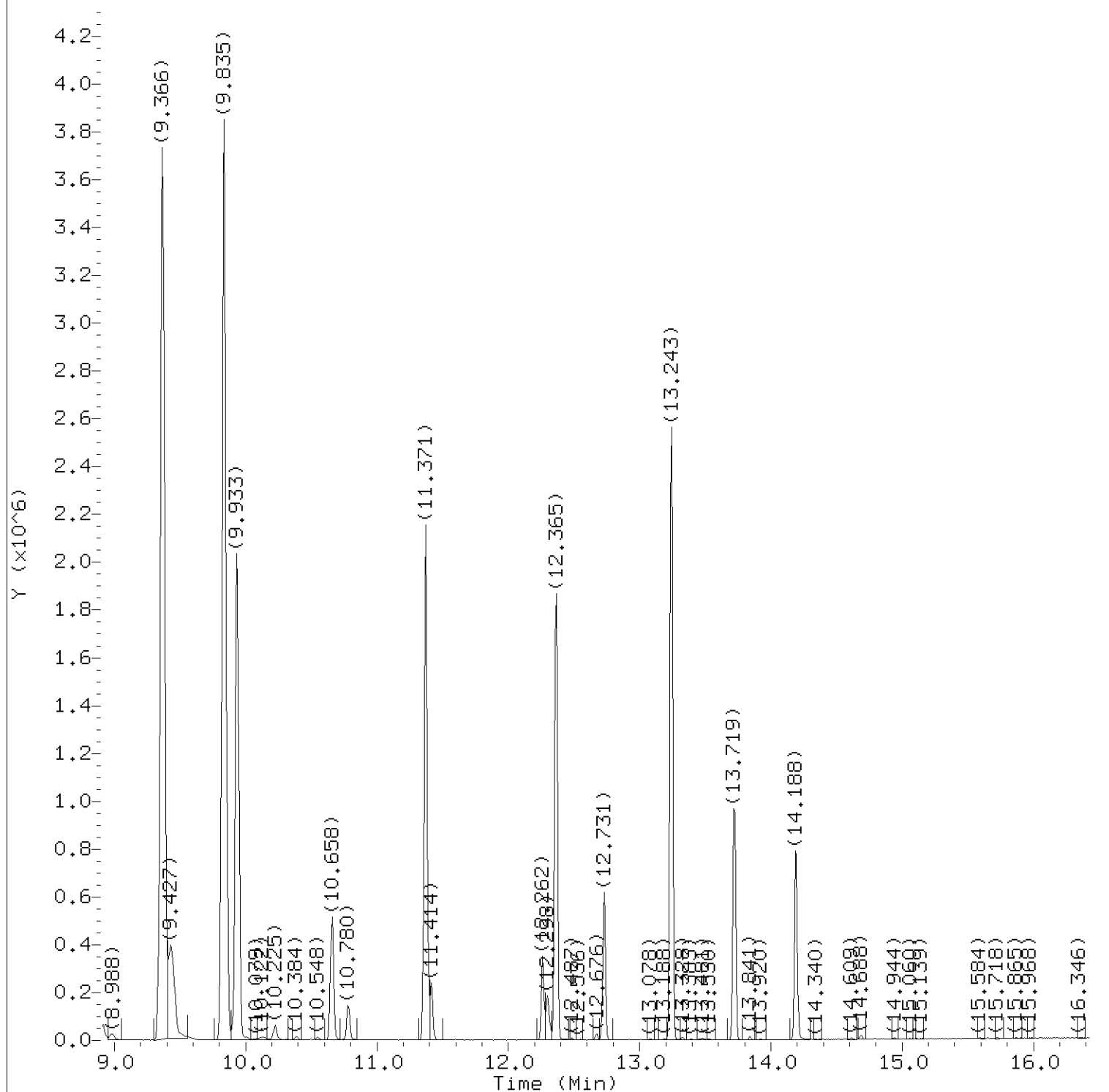
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCDH12

Lab Sample ID: LCDH12

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21104.d
Injection date and time: 21-MAY-2020 22:09

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCDH12

Lab Sample ID: LCDH12

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21104.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 22:09

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469SM

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCDH12

Lab Sample ID: LCDH12

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
4) Dimethyl ether	(2)	2.142	45	288840M	5.538
27) *t-Butyl Alcohol-d10	(1)	4.440	65	107751	50.000
51) \$Dibromofluoromethane	(2)	7.049	113	395845	10.170
58) \$1,2-Dichloroethane-d4	(2)	7.506	102	80822	10.714
64) *Fluorobenzene	(2)	7.939	96	1565716	10.000
83) \$Toluene-d8	(3)	9.933	98	1576073	9.906
98) *Chlorobenzene-d5	(3)	11.371	117	1194194	10.000
112) \$4-Bromofluorobenzene	(3)	12.365	95	564430	9.589
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	628092	10.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

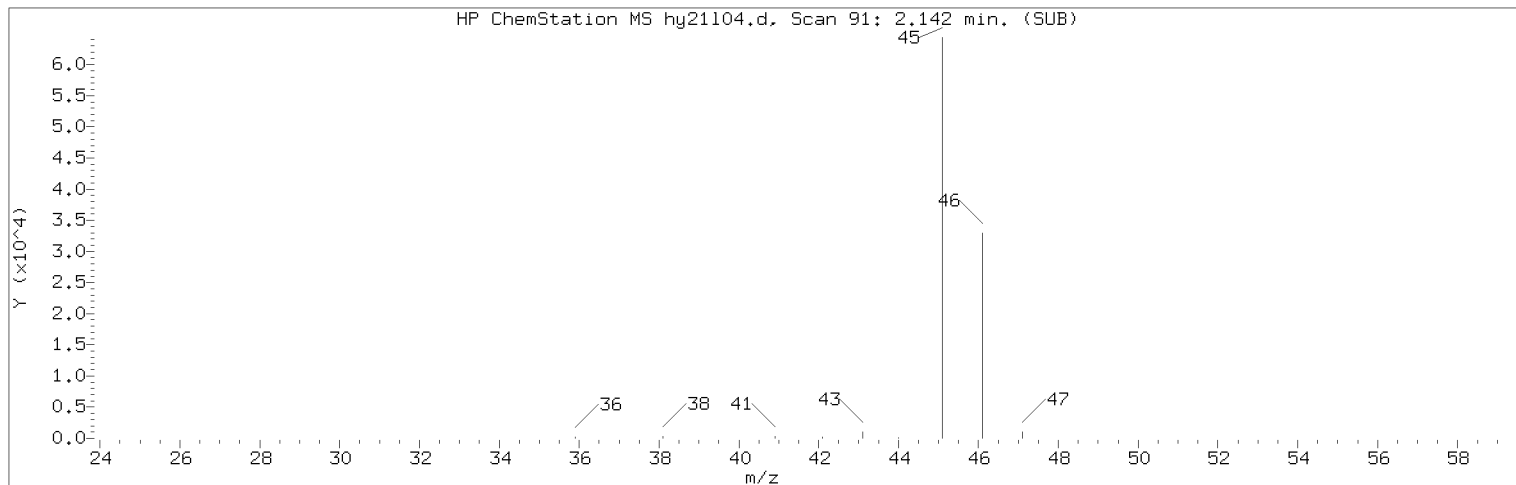
page 1 of 1

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

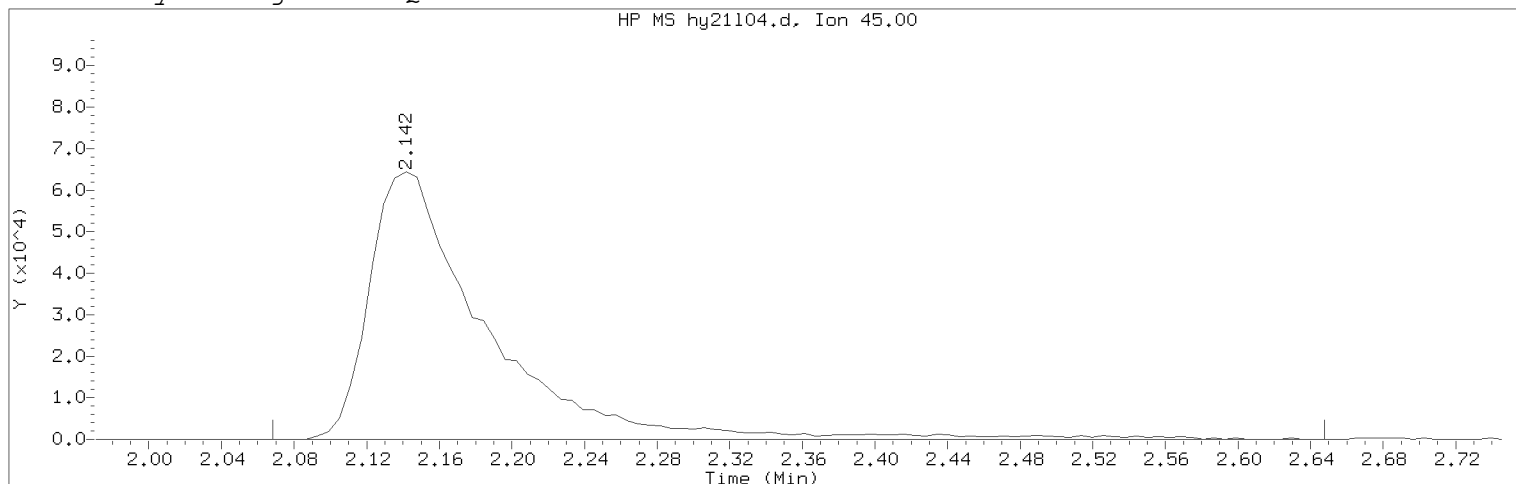
Target 3.5 esignature user ID: jkh09052

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21104.d Instrument ID: HP19094.i
Injection date and time: 21-MAY-2020 22:09 Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:21 mec29284

Sample Name: LCDH12

Lab Sample ID: LCDH12

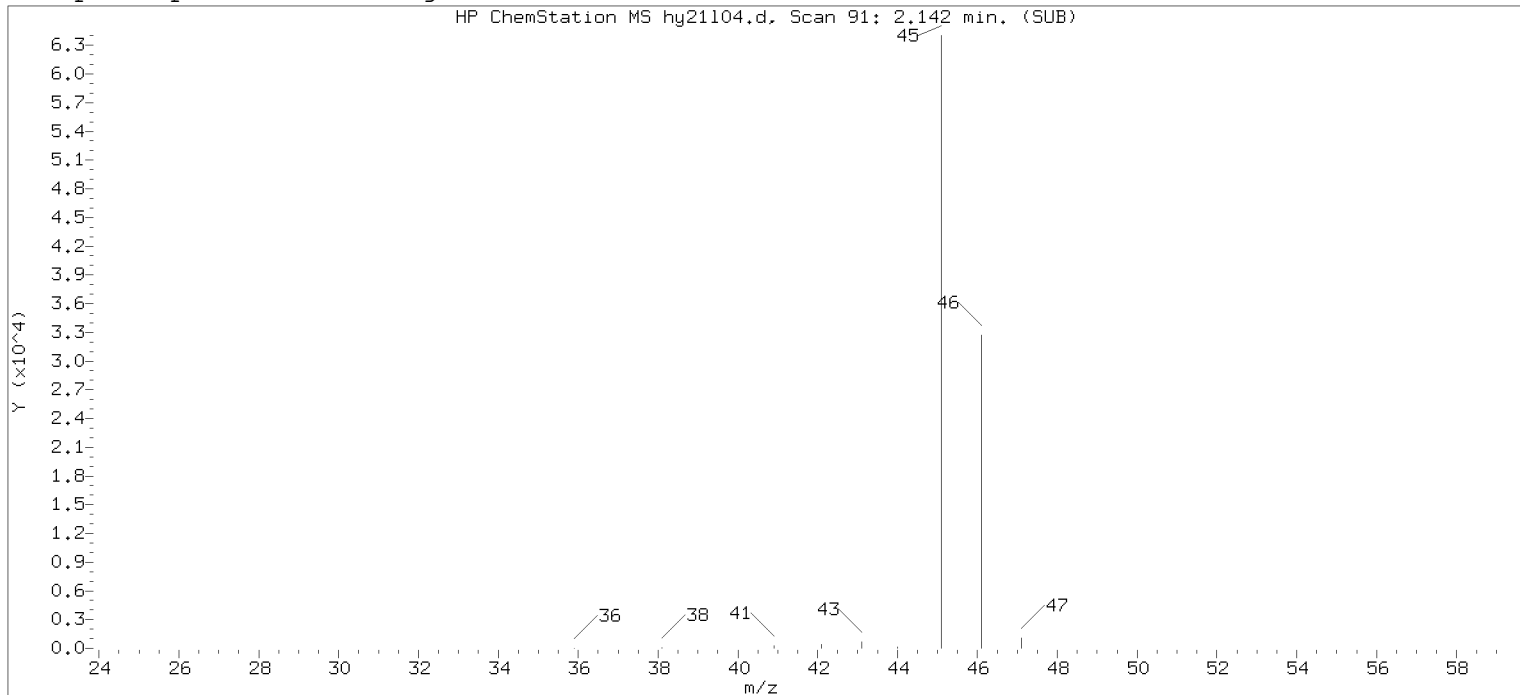
Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 91	
Retention Time (minutes)	: 2.142	
Quant Ion	: 45.00	
Area (flag)	: 288840M	
On-Column Amount (ng)	: 5.5376	
Integration start scan	: 78	Integration stop scan: 173
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

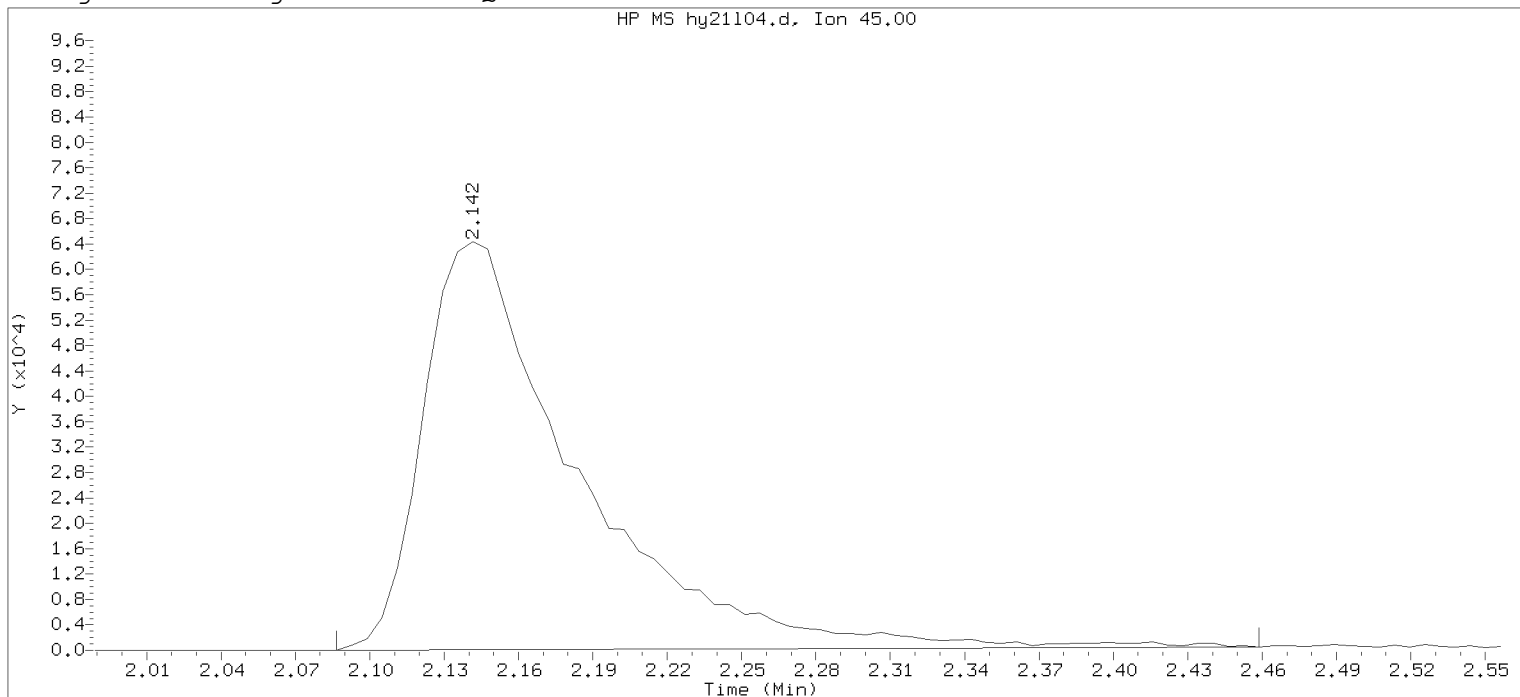
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22.
PARALLAX ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/20may21b.b/hy21104.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 22:09

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469SM

Calibration date and time: 21-MAY-2020 21:25

Date, time and analyst ID of latest file update: 21-May-2020 22:28 chemist

Sample Name: LCDH12

Lab Sample ID: LCDH12

Compound Number	: 4	
Compound Name	: Dimethyl ether	
Scan Number	: 91	
Retention Time (minutes)	: 2.142	
Quant Ion	: 45.00	
Area	: 277911	
On-column Amount (ng)	: 5.3281	
Integration start scan	: 81	Integration stop scan: 142
Y at integration start	: 0	Y at integration end: 548

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12.
Target 3.5 esignature user RAE64j Page 438 of 448

LCSH11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH11

Data file: /chem2/HP19094.i/20may21b.b/hy21l01.d

Injection date and time: 21-MAY-2020 21:04

Data file Sample Info. Line: LCSH11;LCSH11;1;3;LCS;;DRAPERLOQ;;hy21b01; Instrument ID: HP19094.i Batch: H201424AA

Date, time and analyst ID of latest file update: 21-May-2020 23:19 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469-SM

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.464 (-0.012)	472	65	105353 (-1)	50.00	
64) Fluorobenzene	7.945 (0.000)	1043	96	1594684 (1)	10.00	
98) Chlorobenzene-d5	11.371 (0.000)	1605	117	1209783 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243 (0.000)	1912	152	637589 (1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.055 (-0.001)	113	398964	10.064	101%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.512 (0.000)	102	76656	9.978	100%		80 - 120
83) Toluene-d8	(3)	9.933 (0.000)	98	1616667	10.030	100%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365 (0.000)	95	577508	9.685	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.081 (0.000)	85	269480	4.508	4.51			0.05	1
2) Chloromethane	(2)	2.276 (-0.000)	50	321311	5.445	5.45			0.06	1
8) Chloroethane	(2)	2.836 (-0.000)	64	178848	5.502	5.50			0.07	1
10) Trichlorofluoromethane	(2)	3.141 (0.000)	101	387567	6.050	6.05			0.05	1
11) Ethyl ether	(2)	3.410 (0.000)	59	141582	4.994	4.99		J	0.05	13
15) 1,1-Dichloroethene	(2)	3.751 (-0.001)	96	188617	4.841	4.84			0.06	1
16) Freon 113	(2)	3.782 (-0.000)	101	196575	4.827	4.83			0.06	1
24) Methylene Chloride	(2)	4.452 (-0.000)	84	217243	5.181	5.18			0.07	1
34) 1,1-Dichloroethane	(2)	5.531 (0.000)	63	408099	5.278	5.28			0.07	1
39) 2-Butanone	(1)	6.324 (0.001)	43	353138	35.281	35.28			0.6	10
49) Tetrahydrofuran	(1)	6.708 (0.001)	71	67541	24.424	24.42		J	0.8	25
52) 1,1,1-Trichloroethane	(2)	7.074 (0.000)	97	345746	4.926	4.93			0.06	1
55) Carbon Tetrachloride	(2)	7.293 (-0.001)	117	308690	5.130	5.13			0.07	1
59) Benzene	(2)	7.543 (0.000)	78	901076	5.195	5.19			0.05	1
68) Trichloroethene	(2)	8.427 (-0.000)	95	228402	5.021	5.02			0.06	1
84) Toluene	(3)	10.012 (0.000)	92	566880	5.007	5.01			0.07	1
90) Tetrachloroethene	(3)	10.548 (0.000)	166	252929	4.915	4.91			0.06	1
101) Ethylbenzene	(3)	11.481 (-0.000)	91	1103215	4.952	4.95			0.06	1
102) m+p-Xylene	(3)	11.591 (-0.000)	106	861392	10.111	10.11			0.1	0.5
105) o-Xylene	(3)	11.920 (-0.000)	106	406208	4.849	4.85			0.05	0.5
106) Xylene (Total)	(3)		106	1267600	14.960	14.96			0.2	3

LCSH11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH11

Data file: /chem2/HP19094.i/20may21b.b/hy21101.d

Injection date and time: **21-MAY-2020 21:04**Data file Sample Info. Line: LCSH11;LCSH11;1;3;LCS;;DRAPERLOQ;;hy21b01; Instrument ID: **HP19094.i** Batch: **H201424AA**
Date, time and analyst ID of latest file update: 21-May-2020 23:19 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: **22469-SM**

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml

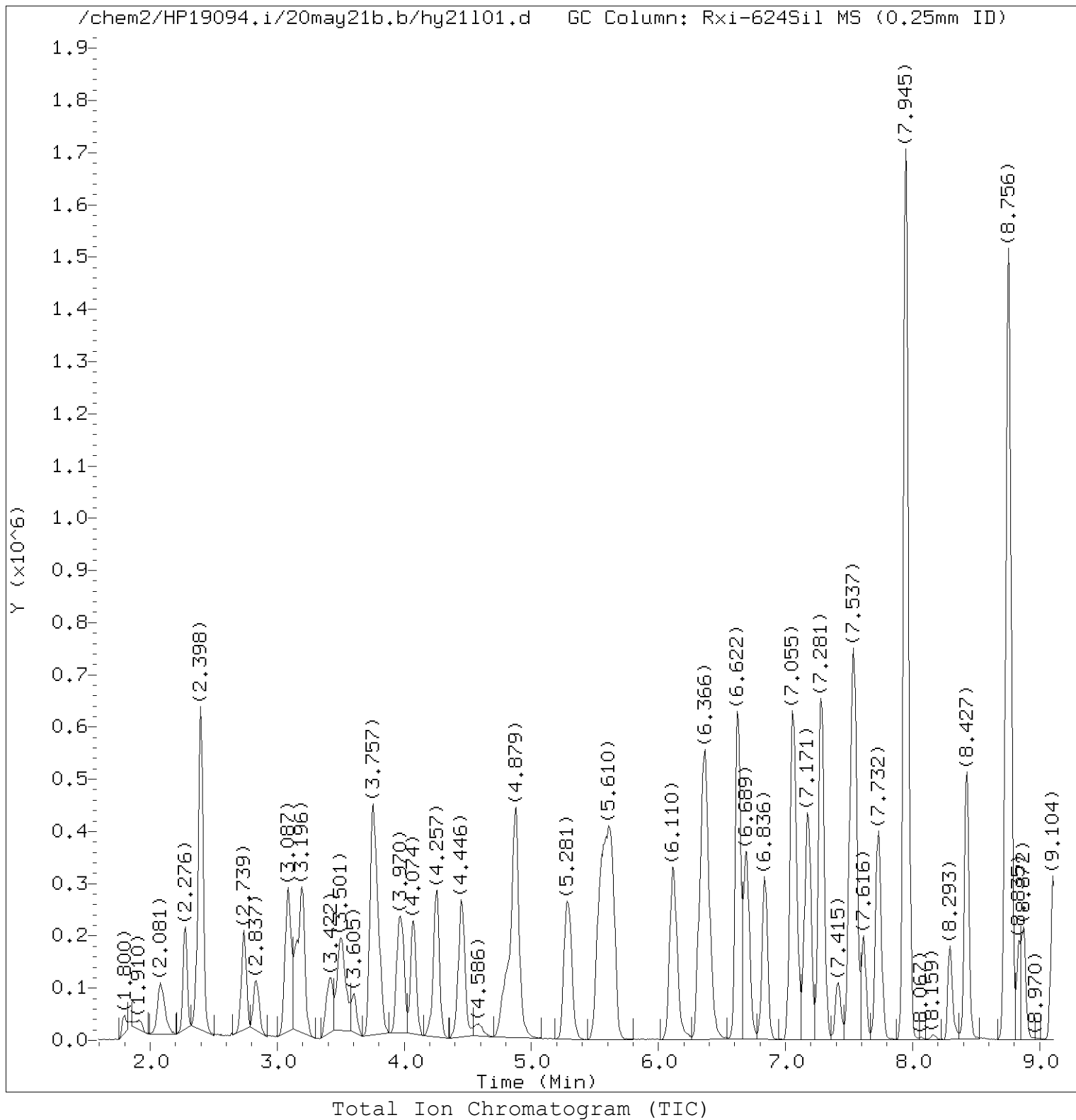
Sample Volume (Vo): 25 ml

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Total number of targets = 21

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:11. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22. PARALLAX ID: rcr00559



Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21101.d
Injection date and time: 21-MAY-2020 21:04

Instrument ID: HP19094.i
Analyst ID: MEC29284

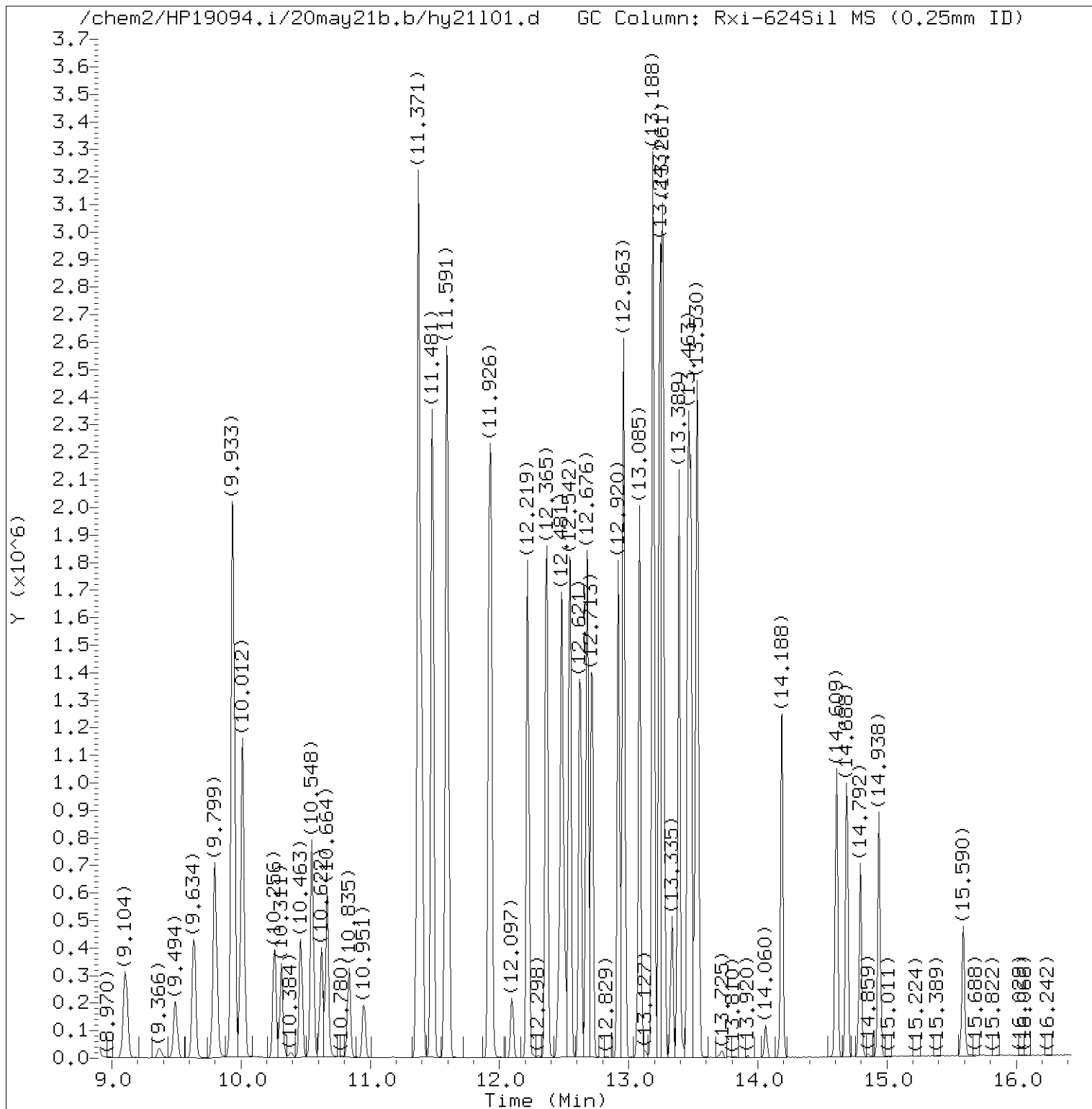
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:19 mec29284

Sample Name: LCSH11

Lab Sample ID: LCSH11

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:11.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21101.d
Injection date and time: 21-MAY-2020 21:04

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:19 mec29284

Sample Name: LCSH11

Lab Sample ID: LCSH11

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:11.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21101.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 21:04

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469-SM

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 21-May-2020 23:19 mec29284

Sample Name: LCSH11

Lab Sample ID: LCSH11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	269480	4.508
2) Chloromethane	(2)	2.276	50	321311	5.445
8) Chloroethane	(2)	2.837	64	178848	5.502
10) Trichlorofluoromethane	(2)	3.141	101	387567	6.050
11) Ethyl ether	(2)	3.410	59	141582	4.994
15) 1,1-Dichloroethene	(2)	3.751	96	188617	4.841
16) Freon 113	(2)	3.781	101	196575	4.827
24) Methylene Chloride	(2)	4.452	84	217243	5.181
27) *t-Butyl Alcohol-d10	(1)	4.464	65	105353	50.000
34) 1,1-Dichloroethane	(2)	5.531	63	408099	5.278
39) 2-Butanone	(1)	6.324	43	353138	35.281
49) Tetrahydrofuran	(1)	6.708	71	67541	24.424
51) \$Dibromofluoromethane	(2)	7.055	113	398964	10.064
52) 1,1,1-Trichloroethane	(2)	7.074	97	345746	4.926
55) Carbon Tetrachloride	(2)	7.293	117	308690	5.130
58) \$1,2-Dichloroethane-d4	(2)	7.512	102	76656	9.978
59) Benzene	(2)	7.543	78	901076	5.195
64) *Fluorobenzene	(2)	7.945	96	1594684	10.000
68) Trichloroethene	(2)	8.427	95	228402	5.021
83) \$Toluene-d8	(3)	9.933	98	1616667	10.030
84) Toluene	(3)	10.012	92	566880	5.007
90) Tetrachloroethene	(3)	10.548	166	252929	4.915
98) *Chlorobenzene-d5	(3)	11.371	117	1209783	10.000
101) Ethylbenzene	(3)	11.481	91	1103215	4.952
102) m+p-Xylene	(3)	11.591	106	861392	10.111
106) Xylene (Total)	(3)		106	1267600	14.960
105) o-Xylene	(3)	11.920	106	406208	4.849
112) \$4-Bromofluorobenzene	(3)	12.365	95	577508	9.685
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	637589	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 05/22/2020 at 07:11.

Target 3.5 esignature user ID: jkh09052

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LCDH11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDH11

Data file: /chem2/HP19094.i/20may21b.b/hy21l02.d

Injection date and time: 21-MAY-2020 21:26

Data file Sample Info. Line: LCDH11;LCDH11;1;3;LCSD;;DRAPERLOQ;;hy21b01; Instrument ID: HP19094.i Batch: H201424AA

Date, time and analyst ID of latest file update: 21-May-2020 23:20 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469-SM

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
27) t-Butyl Alcohol-d10	4.452(0.000)	470	65	108029 (1)	50.00	
64) Fluorobenzene	7.945(0.000)	1043	96	1560771 (-1)	10.00	
98) Chlorobenzene-d5	11.372(0.000)	1605	117	1204254 (0)	10.00	
134) 1,4-Dichlorobenzene-d4	13.243(0.000)	1912	152	636764 (1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
51) Dibromofluoromethane	(2)	7.049(0.000)	113	391096	10.080	101%		80 - 120
58) 1,2-Dichloroethane-d4	(2)	7.513(0.000)	102	78934	10.497	105%		80 - 120
83) Toluene-d8	(3)	9.933(0.000)	98	1601209	9.980	100%		80 - 120
112) 4-Bromofluorobenzene	(3)	12.365(0.000)	95	570428	9.610	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.081(-0.000)	85	266624	4.557	4.56			0.05 1
2) Chloromethane	(2)	2.270(-0.000)	50	316980	5.488	5.49			0.06 1
8) Chloroethane	(2)	2.831(-0.000)	64	176772	5.556	5.56			0.07 1
10) Trichlorofluoromethane	(2)	3.135(0.000)	101	382857	6.107	6.11			0.05 1
11) Ethyl ether	(2)	3.416(-0.000)	59	143592	5.175	5.18		J	0.05 13
15) 1,1-Dichloroethene	(2)	3.745(-0.000)	96	182811	4.794	4.79			0.06 1
16) Freon 113	(2)	3.769(0.000)	101	190528	4.780	4.78			0.06 1
24) Methylene Chloride	(2)	4.446(-0.000)	84	211923	5.164	5.16			0.07 1
34) 1,1-Dichloroethane	(2)	5.525(0.000)	63	403528	5.332	5.33			0.07 1
39) 2-Butanone	(1)	6.318(-0.001)	43	370229	36.072	36.07			0.6 10
49) Tetrahydrofuran	(1)	6.696(0.000)	71	70324	24.801	24.80		J	0.8 25
52) 1,1,1-Trichloroethane	(2)	7.074(-0.000)	97	345002	5.023	5.02			0.06 1
55) Carbon Tetrachloride	(2)	7.281(-0.000)	117	310295	5.269	5.27			0.07 1
59) Benzene	(2)	7.543(0.000)	78	896751	5.282	5.28			0.05 1
68) Trichloroethene	(2)	8.421(0.000)	95	230971	5.188	5.19			0.06 1
84) Toluene	(3)	10.012(-0.000)	92	566028	5.022	5.02			0.07 1
90) Tetrachloroethene	(3)	10.549(-0.000)	166	254524	4.968	4.97			0.06 1
101) Ethylbenzene	(3)	11.481(0.000)	91	1098928	4.955	4.96			0.06 1
102) m+p-Xylene	(3)	11.591(0.000)	106	856868	10.104	10.10			0.1 0.5
105) o-Xylene	(3)	11.920(0.000)	106	408581	4.900	4.90			0.05 0.5
106) Xylene (Total)	(3)		106	1265449	15.004	15.00			0.2 3

LCDH11

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDH11

Data file: /chem2/HP19094.i/20may21b.b/hy21102.d

Injection date and time: **21-MAY-2020 21:26**Data file Sample Info. Line: LCDH11;LCDH11;1;3;LCSD;;DRAPERLOQ;;hy21b01; Instrument ID: **HP19094.i** Batch: **H201424AA**
Date, time and analyst ID of latest file update: 21-May-2020 23:20 mec29284

Blank Data file reference: /chem2/HP19094.i/20may21b.b/hy21b01.d

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: **22469-SM**

Calibration date and time (Last Method Edit): 21-MAY-2020 22:54

Mid Level Daily Calibration Standard Reference: /chem2/HP19094.i/20may21b.b/hy21c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml

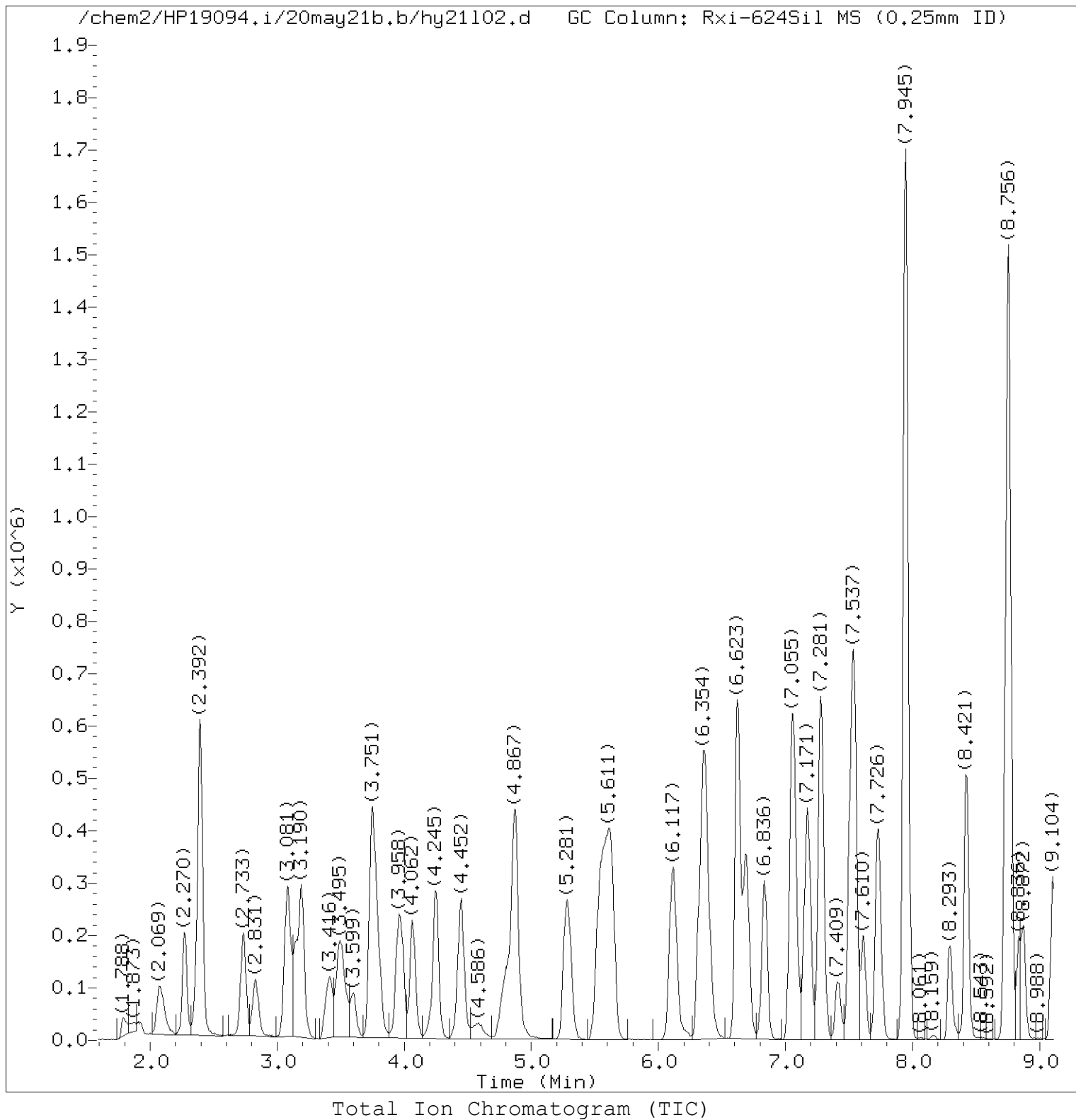
Sample Volume (Vo): 25 ml

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Total number of targets = 21

Digitally signed by Jennifer K. Howe on 05/22/2020 at 07:12. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Robin C. Runkle on 05/22/2020 at 09:22. PARALLAX ID: rcr00559



Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21102.d
Injection date and time: 21-MAY-2020 21:26

Instrument ID: HP19094.i
Analyst ID: MEC29284

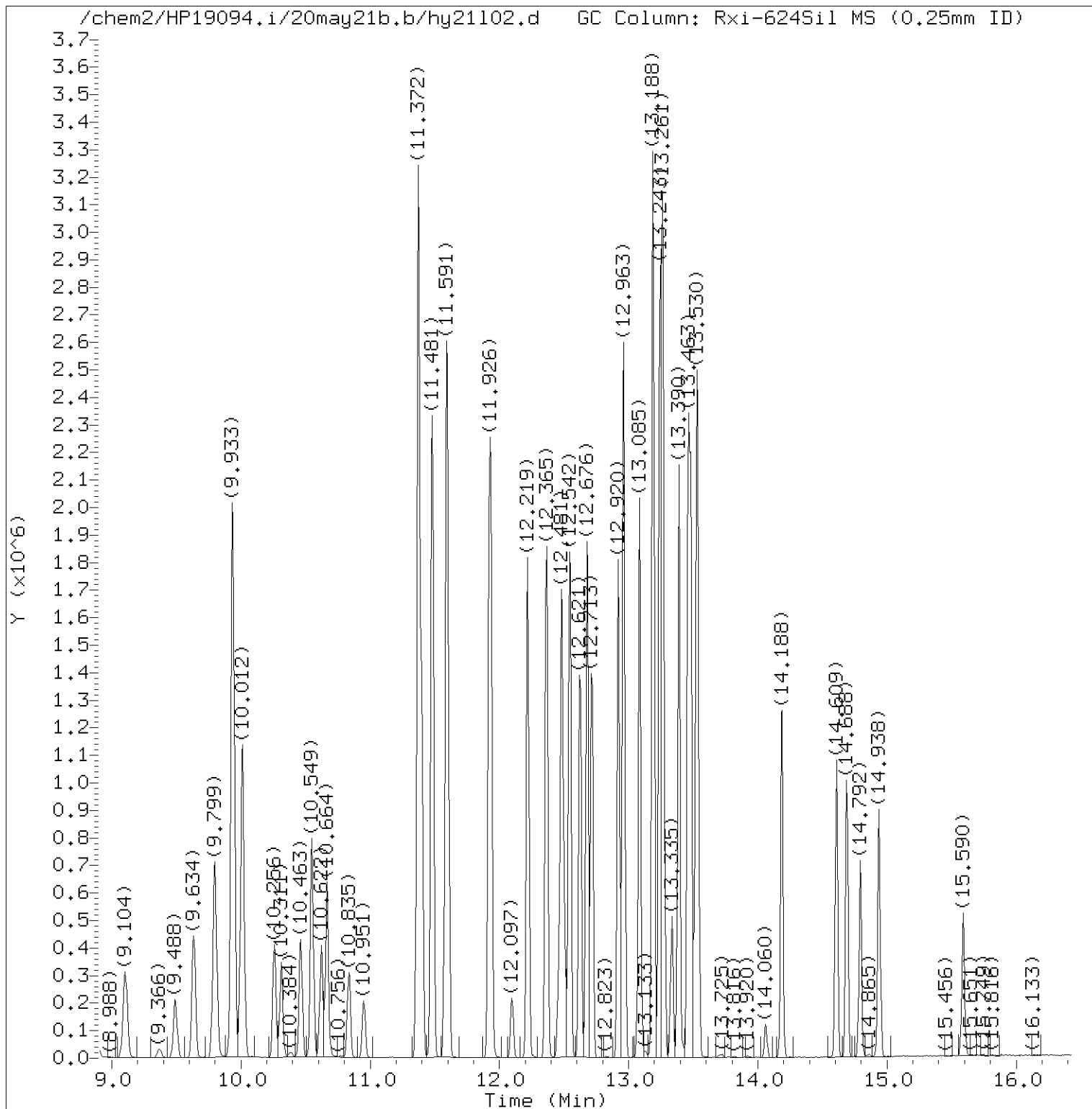
Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:20 mec29284

Sample Name: LCDH11

Lab Sample ID: LCDH11

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21102.d
Injection date and time: 21-MAY-2020 21:26

Instrument ID: HP19094.i
Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 21-MAY-2020 22:54
Date, time and analyst ID of latest file update: 21-May-2020 23:20 mec29284

Sample Name: LCDH11

Lab Sample ID: LCDH11

Digitally signed by Jennifer K. Howe
on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/20may21b.b/hy21102.d

Instrument ID: HP19094.i

Injection date and time: 21-MAY-2020 21:26

Analyst ID: MEC29284

Method used: /chem2/HP19094.i/20may21b.b/m8260c25.m

Sublist used: 22469-SM

Calibration date and time: 21-MAY-2020 22:54

Date, time and analyst ID of latest file update: 21-May-2020 23:20 mec29284

Sample Name: LCDH11

Lab Sample ID: LCDH11

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
1) Dichlorodifluoromethane	(2)	2.081	85	266624	4.557
2) Chloromethane	(2)	2.270	50	316980	5.488
8) Chloroethane	(2)	2.831	64	176772	5.556
10) Trichlorofluoromethane	(2)	3.135	101	382857	6.107
11) Ethyl ether	(2)	3.416	59	143592	5.175
15) 1,1-Dichloroethene	(2)	3.745	96	182811	4.794
16) Freon 113	(2)	3.769	101	190528	4.780
24) Methylene Chloride	(2)	4.446	84	211923	5.164
27) *t-Butyl Alcohol-d10	(1)	4.452	65	108029	50.000
34) 1,1-Dichloroethane	(2)	5.525	63	403528	5.332
39) 2-Butanone	(1)	6.318	43	370229	36.072
49) Tetrahydrofuran	(1)	6.696	71	70324	24.801
51) \$Dibromofluoromethane	(2)	7.049	113	391096	10.080
52) 1,1,1-Trichloroethane	(2)	7.074	97	345002	5.023
55) Carbon Tetrachloride	(2)	7.281	117	310295	5.269
58) \$1,2-Dichloroethane-d4	(2)	7.513	102	78934	10.497
59) Benzene	(2)	7.543	78	896751	5.282
64) *Fluorobenzene	(2)	7.945	96	1560771	10.000
68) Trichloroethene	(2)	8.421	95	230971	5.188
83) \$Toluene-d8	(3)	9.933	98	1601209	9.980
84) Toluene	(3)	10.012	92	566028	5.022
90) Tetrachloroethene	(3)	10.549	166	254524	4.968
98) *Chlorobenzene-d5	(3)	11.372	117	1204254	10.000
101) Ethylbenzene	(3)	11.481	91	1098928	4.955
102) m+p-Xylene	(3)	11.591	106	856868	10.104
106) Xylene (Total)	(3)		106	1265449	15.004
105) o-Xylene	(3)	11.920	106	408581	4.900
112) \$4-Bromofluorobenzene	(3)	12.365	95	570428	9.610
134) *1,4-Dichlorobenzene-d4	(4)	13.243	152	636764	10.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 05/22/2020 at 07:12.

Target 3.5 esignature user ID: jkh09052

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Microbac Laboratories Inc., - Marietta, OH

Level IV QA/QC Data Package

Laboratory Report Number:

M0D1189

Client Project ID:

Draper Aden Associates

For:

Janet Frazier

Draper Aden Associates

2206 South Main Street

Blacksburg, VA 24060

Project Requested Certification:

Microbac Laboratories Inc., - Marietta, OH

460187

Virginia Department of General Services

Project State of Origin: Virginia

All test results meet the requirements of the QAPP and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Laboratory Project Manager:

Michelle Taylor

Project Manager

Michelle.Taylor@microbac.com

Authorized By:

Michelle Taylor

Project Manager

Issued: 05/01/2020

Microbac Laboratories, Inc.

158 Starlite Drive | Marietta, OH 45750 | 800.373.4071 p | www.microbac.com



Laboratory Report Number: MOD1189

Client Project ID: Draper Aden Associates

Microbac Laboratories Inc., - Marietta, OH

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 3.2°C

Cooler ID: New Cooler

Temp: 2.4°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

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Sample Summary

Sample Summary**Laboratory Report Number: M0D1189****Client Project ID: Draper Aden Associates****Microbac Laboratories Inc., - Marietta, OH**

Client Sample ID:	Lab Sample ID:	Sampled:
16C1	M0D1189-01	04/16/20 12:05
16MW8	M0D1189-02	04/15/20 11:05
16MW9	M0D1189-03	04/16/20 11:05
16WC1A	M0D1189-04	04/16/20 09:25
16WDUP	M0D1189-05	04/16/20 09:50
16WC1B	M0D1189-06	04/16/20 08:35

Holding Time Summary



Specific Method: EPA 8270C

Hold Time

Laboratory Report Number: M0D1189

Matrix: Aqueous

Client Project ID: Draper Aden Associates

Microbac Laboratories Inc., - Marietta, OH

Laboratory ID	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
16C1	04/16/20 12:05	04/17/20 09:45	04/20/20 13:00	4.00	7.00	04/22/20 14:40	2.07	40.00	
16MW8	04/15/20 11:05	04/17/20 09:45	04/20/20 13:00	5.00	7.00	04/22/20 15:11	2.09	40.00	
16MW9	04/16/20 11:05	04/17/20 09:45	04/20/20 13:00	4.00	7.00	04/22/20 15:46	2.12	40.00	
16WC1A	04/16/20 09:25	04/17/20 09:45	04/20/20 13:00	4.00	7.00	04/22/20 16:18	2.14	40.00	
16WDUP	04/16/20 09:50	04/17/20 09:45	04/20/20 13:00	4.00	7.00	04/22/20 17:58	2.21	40.00	
16WC1B	04/16/20 08:35	04/17/20 09:45	04/20/20 13:00	4.00	7.00	04/22/20 18:29	2.23	40.00	

* - Holding time exceeded.

Microbac Laboratories, Inc.

158 Starlite Drive | Marietta, OH 45750 | 800.373.4071 | www.microbac.com



Analysis Class

GCMS Semivolatiles



GCMS Semivolatiles - Class Narrative and Notes

All test results meet the requirements of the QAPP and other applicable contract terms and conditions. Any exceptions are listed below in the sample and qc notes sections. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request.

Sample Notes

EPA 8270C

U The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Hexachlorophene - Estimated

M0D1189-01	16C1	M0D1189-02	16MW8
M0D1189-03	16MW9	M0D1189-04	16WC1A
M0D1189-05	16WDUP	M0D1189-06	16WC1B

QC Sample Notes

I1 Internal standard was outside of acceptance limits.

EPA 8270C

Perylene-d12

S0D0475-CVA1 Cal Check Mix A

S1 Surrogate recovery is above acceptance limits.

EPA 8270C

2,4,6-Tribromophenol

B0D1025-BS2 LCS B0D1025-MS1 Matrix Spike

S2 Surrogate recovery is below acceptance limits.

EPA 8270C

p-Terphenyl-d14

S0C0514-ICV3 Initial Cal Check

U The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

EPA 8270C

Hexachlorophene - Estimated

B0D1025-BLK2 Blank



GCMS Semivolatiles EPA 8270C



FORM I: GCMS Semivolatiles EPA 8270C RESULTS SUMMARY



Laboratory Report Number: M0D1189
Client Project ID: Draper Aden Associates
Microbac Laboratories Inc., - Marietta, OH
Semivolatile Organic Compounds by GCMS

CERTIFICATE OF ANALYSIS
FORM I

Client ID: 16C1	Collection Date: 04/16/2020 12:05
Laboratory ID: M0D1189-01	Prep Date: 04/20/2020 13:00
Matrix: Aqueous	Analyzed: 04/22/2020 14:40
Batch / Sequence: B0D1025 / S0D0475	Calibration: 20C0029
Instrument: MSD12	File ID: 12M77039.D
Analyst: SCB	
Prep Method: EPA 3510C	
Analytical Method: EPA 8270C	
Units: ug/L	
Dilution: 1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Hexachloroethane	67-72-1	ND	2.72	5.43	U	
Hexachlorophene - Estimated	70-30-4	ND		54.3	U	
Sulfotepp	3689-24-5	ND	1.09	10.9	U	

Surrogate	Recovery	Limits	Units	Q	Qualifier	
2-Fluorobiphenyl	74.4	43-116	% Rec			
2-Fluorophenol	46.7	19-119	% Rec			
Nitrobenzene-d5	75.0	35-114	% Rec			
Phenol-d5	32.1	10-120	% Rec			
p-Terphenyl-d14	85.0	10-130	% Rec			
2,4,6-Tribromophenol	129	22-142	% Rec			

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

U: Analyte included in the analysis, but not detected

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

ug/L: Micrograms per Liter

ug/mL: Micrograms per Milliliter

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Laboratory Report Number: M0D1189
Client Project ID: Draper Aden Associates
Microbac Laboratories Inc., - Marietta, OH
Semivolatile Organic Compounds by GCMS

CERTIFICATE OF ANALYSIS
FORM I

Client ID: 16MW8	Collection Date: 04/15/2020 11:05
Laboratory ID: M0D1189-02	Prep Date: 04/20/2020 13:00
Matrix: Aqueous	Analyzed: 04/22/2020 15:11
Batch / Sequence: B0D1025 / S0D0475	Calibration: 20C0029
Instrument: MSD12	File ID: 12M77040.D
Analyst: SCB	
Prep Method: EPA 3510C	
Analytical Method: EPA 8270C	
Units: ug/L	
Dilution: 1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Hexachloroethane	67-72-1	ND	2.50	5.00	U	
Hexachlorophene - Estimated	70-30-4	ND		50.0	U	
Sulfotepp	3689-24-5	ND	1.00	10.0	U	

Surrogate	Recovery	Limits	Units	Q	Qualifier	
<i>p</i> -Terphenyl-d14	75.9	10-130	% Rec			
Phenol-d5	29.9	10-120	% Rec			
2-Fluorophenol	45.5	19-119	% Rec			
2-Fluorobiphenyl	79.9	43-116	% Rec			
2,4,6-Tribromophenol	130	22-142	% Rec			
Nitrobenzene-d5	80.6	35-114	% Rec			

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

U: Analyte included in the analysis, but not detected

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

ug/L: Micrograms per Liter

ug/mL: Micrograms per Milliliter

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Laboratory Report Number: M0D1189

CERTIFICATE OF ANALYSIS

Client Project ID: Draper Aden Associates

FORM I

Microbac Laboratories Inc., - Marietta, OH

Semivolatile Organic Compounds by GCMS

Client ID: 16MW9	Collection Date: 04/16/2020 11:05
Laboratory ID: M0D1189-03	Prep Date: 04/20/2020 13:00
Matrix: Aqueous	Analyzed: 04/22/2020 15:46
Batch / Sequence: B0D1025 / S0D0475	Calibration: 20C0029
Instrument: MSD12	File ID: 12M77041.D
Analyst: SCB	
Prep Method: EPA 3510C	
Analytical Method: EPA 8270C	
Units: ug/L	
Dilution: 1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Hexachloroethane	67-72-1	ND	2.50	5.00	U	
Hexachlorophene - Estimated	70-30-4	ND		50.0	U	
Sulfotepp	3689-24-5	ND	1.00	10.0	U	

Surrogate	Recovery	Limits	Units	Q	Qualifier	
<i>p</i> -Terphenyl-d14	66.5	10-130	% Rec			
2,4,6-Tribromophenol	130	22-142	% Rec			
2-Fluorobiphenyl	76.5	43-116	% Rec			
2-Fluorophenol	48.9	19-119	% Rec			
Nitrobenzene-d5	79.5	35-114	% Rec			
Phenol-d5	33.0	10-120	% Rec			

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

U: Analyte included in the analysis, but not detected

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

ug/L: Micrograms per Liter

ug/mL: Micrograms per Milliliter

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Laboratory Report Number: M0D1189
Client Project ID: Draper Aden Associates
Microbac Laboratories Inc., - Marietta, OH
Semivolatile Organic Compounds by GCMS

CERTIFICATE OF ANALYSIS
FORM I

Client ID: 16WC1A	Collection Date: 04/16/2020 09:25
Laboratory ID: M0D1189-04	Prep Date: 04/20/2020 13:00
Matrix: Aqueous	Analyzed: 04/22/2020 16:18
Batch / Sequence: B0D1025 / S0D0475	Calibration: 20C0029
Instrument: MSD12	File ID: 12M77042.D
Analyst: SCB	
Prep Method: EPA 3510C	
Analytical Method: EPA 8270C	
Units: ug/L	
Dilution: 1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Hexachloroethane	67-72-1	ND	2.55	5.10	U	
Hexachlorophene - Estimated	70-30-4	ND		51.0	U	
Sulfotepp	3689-24-5	ND	1.02	10.2	U	

Surrogate	Recovery	Limits	Units	Q	Qualifier	
2-Fluorobiphenyl	79.2	43-116	% Rec			
2-Fluorophenol	50.3	19-119	% Rec			
Nitrobenzene-d5	78.7	35-114	% Rec			
Phenol-d5	33.9	10-120	% Rec			
p-Terphenyl-d14	65.6	10-130	% Rec			
2,4,6-Tribromophenol	130	22-142	% Rec			

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

U: Analyte included in the analysis, but not detected

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

ug/L: Micrograms per Liter

ug/mL: Micrograms per Milliliter

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Laboratory Report Number: M0D1189

CERTIFICATE OF ANALYSIS

Client Project ID: Draper Aden Associates

FORM I

Microbac Laboratories Inc., - Marietta, OH

Semivolatile Organic Compounds by GCMS

Client ID: 16WDUP	Collection Date: 04/16/2020 09:50
Laboratory ID: M0D1189-05	Prep Date: 04/20/2020 13:00
Matrix: Aqueous	Analyzed: 04/22/2020 17:58
Batch / Sequence: B0D1025 / S0D0475	Calibration: 20C0029
Instrument: MSD12	File ID: 12M77045.D
Analyst: SCB	
Prep Method: EPA 3510C	
Analytical Method: EPA 8270C	
Units: ug/L	
Dilution: 1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Hexachloroethane	67-72-1	ND	2.78	5.56	U	
Hexachlorophene - Estimated	70-30-4	ND		55.6	U	
Sulfotepp	3689-24-5	ND	1.11	11.1	U	

Surrogate	Recovery	Limits	Units	Q	Qualifier
<i>p</i> -Terphenyl-d14	69.0	10-130	% Rec		
<i>Phenol</i> -d5	29.6	10-120	% Rec		
<i>2</i> -Fluorophenol	38.6	19-119	% Rec		
<i>2</i> -Fluorobiphenyl	67.9	43-116	% Rec		
<i>2,4,6</i> -Tribromophenol	125	22-142	% Rec		
<i>Nitrobenzene</i> -d5	65.4	35-114	% Rec		

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

U: Analyte included in the analysis, but not detected

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

ug/L: Micrograms per Liter

ug/mL: Micrograms per Milliliter

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Laboratory Report Number: M0D1189

CERTIFICATE OF ANALYSIS

Client Project ID: Draper Aden Associates

FORM I

Microbac Laboratories Inc., - Marietta, OH

Semivolatile Organic Compounds by GCMS

Client ID: 16WC1B	Collection Date: 04/16/2020 08:35
Laboratory ID: M0D1189-06	Prep Date: 04/20/2020 13:00
Matrix: Aqueous	Analyzed: 04/22/2020 18:29
Batch / Sequence: B0D1025 / S0D0475	Calibration: 20C0029
Instrument: MSD12	File ID: 12M77046.D
Analyst: SCB	
Prep Method: EPA 3510C	
Analytical Method: EPA 8270C	
Units: ug/L	
Dilution: 1	

Analyte	CAS Number	Result	MDL	RL	Flag	Qualifier
Hexachloroethane	67-72-1	ND	2.50	5.00	U	
Hexachlorophene - Estimated	70-30-4	ND		50.0	U	
Sulfotepp	3689-24-5	ND	1.00	10.0	U	

Surrogate	Recovery	Limits	Units	Q	Qualifier	
2,4,6-Tribromophenol	126	22-142	% Rec			
2-Fluorobiphenyl	65.4	43-116	% Rec			
2-Fluorophenol	44.7	19-119	% Rec			
Nitrobenzene-d5	73.4	35-114	% Rec			
Phenol-d5	31.4	10-120	% Rec			
p-Terphenyl-d14	58.7	10-130	% Rec			

Notes and Definitions

MDL: Method Detection Limit

RL: Reporting Limit

U: Analyte included in the analysis, but not detected

U: The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

ug/L: Micrograms per Liter

ug/mL: Micrograms per Milliliter

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FORM II: GCMS Semivolatiles EPA 8270C SURROGATE SUMMARY



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**SURROGATE STANDARD RECOVERY
FORM IIC**

Instrument: MSD12

Method: EPA 8270C

Sequence: S0C0514

Calibration: 20C0029

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	Q
Initial Cal Check (S0C0514-ICV1) Lab File ID: 12M76634.D Analyzed: 03/27/20 15:55				
2-Fluorophenol	50.0	103	70 - 130	
Phenol-d5	50.0	99.4	70 - 130	
Nitrobenzene-d5	50.0	84.2	70 - 130	
2-Fluorobiphenyl	50.0	81.2	70 - 130	
2,4,6-Tribromophenol	50.0	102	70 - 130	
p-Terphenyl-d14	50.0	74.4	70 - 130	
Initial Cal Check (S0C0514-ICV3) Lab File ID: 12M76643.D Analyzed: 03/27/20 20:52				
2-Fluorophenol	50.0	95.0	70 - 130	
Phenol-d5	50.0	95.5	70 - 130	
Nitrobenzene-d5	50.0	83.1	70 - 130	
2-Fluorobiphenyl	50.0	79.0	70 - 130	
2,4,6-Tribromophenol	50.0	102	70 - 130	
p-Terphenyl-d14	50.0	69.7	70 - 130	*



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**SURROGATE STANDARD RECOVERY
FORM IIC**

Instrument: MSD12

Method: EPA 8270C

Sequence: S0D0475

Calibration: 20C0029

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	Q
Calibration Check (S0D0475-CCV1) Lab File ID: 12M77031.D Analyzed: 04/22/20 10:19				
2-Fluorophenol	50.0	85.3	60 - 140	
Phenol-d5	50.0	86.8	60 - 140	
Nitrobenzene-d5	50.0	97.3	60 - 140	
2-Fluorobiphenyl	50.0	95.7	60 - 140	
2,4,6-Tribromophenol	50.0	90.9	60 - 140	
p-Terphenyl-d14	50.0	95.9	60 - 140	
Blank (B0D1025-BLK2) Lab File ID: 12M77034.D Analyzed: 04/22/20 11:58				
2-Fluorophenol	100	46.2	19 - 119	
Phenol-d5	100	30.9	10 - 120	
Nitrobenzene-d5	50.0	75.7	35 - 114	
2-Fluorobiphenyl	50.0	69.5	43 - 116	
2,4,6-Tribromophenol	100	115	22 - 142	
p-Terphenyl-d14	50.0	91.8	10 - 130	
LCS (B0D1025-BS2) Lab File ID: 12M77035.D Analyzed: 04/22/20 12:29				
2-Fluorophenol	100	43.1	19 - 119	
Phenol-d5	100	30.6	10 - 120	
Nitrobenzene-d5	50.0	66.7	35 - 114	
2-Fluorobiphenyl	50.0	70.2	43 - 116	
2,4,6-Tribromophenol	100	148	22 - 142	*
p-Terphenyl-d14	50.0	87.8	10 - 130	
16C1 (M0D1189-01) Lab File ID: 12M77039.D Analyzed: 04/22/20 14:40				
2-Fluorophenol	109	46.7	19 - 119	
Phenol-d5	109	32.1	10 - 120	
Nitrobenzene-d5	54.3	75.0	35 - 114	
2-Fluorobiphenyl	54.3	74.4	43 - 116	
2,4,6-Tribromophenol	109	129	22 - 142	
p-Terphenyl-d14	54.3	85.0	10 - 130	
16MW8 (M0D1189-02) Lab File ID: 12M77040.D Analyzed: 04/22/20 15:11				
2-Fluorophenol	100	45.5	19 - 119	
Phenol-d5	100	29.9	10 - 120	
Nitrobenzene-d5	50.0	80.6	35 - 114	
2-Fluorobiphenyl	50.0	79.9	43 - 116	
2,4,6-Tribromophenol	100	130	22 - 142	
p-Terphenyl-d14	50.0	75.9	10 - 130	

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Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**SURROGATE STANDARD RECOVERY
FORM IIC**

Instrument: MSD12

Method: EPA 8270C

Sequence: S0D0475

Calibration: 20C0029

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	Q
16MW9 (M0D1189-03) Lab File ID: 12M77041.D Analyzed: 04/22/20 15:46				
2-Fluorophenol	100	48.9	19 - 119	
Phenol-d5	100	33.0	10 - 120	
Nitrobenzene-d5	50.0	79.5	35 - 114	
2-Fluorobiphenyl	50.0	76.5	43 - 116	
2,4,6-Tribromophenol	100	130	22 - 142	
p-Terphenyl-d14	50.0	66.5	10 - 130	
16WC1A (M0D1189-04) Lab File ID: 12M77042.D Analyzed: 04/22/20 16:18				
2-Fluorophenol	102	50.3	19 - 119	
Phenol-d5	102	33.9	10 - 120	
Nitrobenzene-d5	51.0	78.7	35 - 114	
2-Fluorobiphenyl	51.0	79.2	43 - 116	
2,4,6-Tribromophenol	102	130	22 - 142	
p-Terphenyl-d14	51.0	65.6	10 - 130	
Matrix Spike (B0D1025-MS1) Lab File ID: 12M77043.D Analyzed: 04/22/20 16:53				
2-Fluorophenol	105	52.4	19 - 119	
Phenol-d5	105	36.3	10 - 120	
Nitrobenzene-d5	52.6	79.3	35 - 114	
2-Fluorobiphenyl	52.6	78.4	43 - 116	
2,4,6-Tribromophenol	105	146	22 - 142	*
p-Terphenyl-d14	52.6	69.8	10 - 130	
Matrix Spike Dup (B0D1025-MSD1) Lab File ID: 12M77044.D Analyzed: 04/22/20 17:24				
2-Fluorophenol	111	56.4	19 - 119	
Phenol-d5	111	38.7	10 - 120	
Nitrobenzene-d5	55.6	82.4	35 - 114	
2-Fluorobiphenyl	55.6	80.6	43 - 116	
2,4,6-Tribromophenol	111	142	22 - 142	
p-Terphenyl-d14	55.6	63.3	10 - 130	
16WDUP (M0D1189-05) Lab File ID: 12M77045.D Analyzed: 04/22/20 17:58				
2-Fluorophenol	111	38.6	19 - 119	
Phenol-d5	111	29.6	10 - 120	
Nitrobenzene-d5	55.6	65.4	35 - 114	
2-Fluorobiphenyl	55.6	67.9	43 - 116	
2,4,6-Tribromophenol	111	125	22 - 142	
p-Terphenyl-d14	55.6	69.0	10 - 130	

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Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**SURROGATE STANDARD RECOVERY
FORM IIC**

Instrument: MSD12

Method: EPA 8270C

Sequence: S0D0475

Calibration: 20C0029

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	Q
16WC1B (M0D1189-06) Lab File ID: 12M77046.D Analyzed: 04/22/20 18:29				
2-Fluorophenol	100	44.7	19 - 119	
Phenol-d5	100	31.4	10 - 120	
Nitrobenzene-d5	50.0	73.4	35 - 114	
2-Fluorobiphenyl	50.0	65.4	43 - 116	
2,4,6-Tribromophenol	100	126	22 - 142	
p-Terphenyl-d14	50.0	58.7	10 - 130	

* - Does not meet acceptance criteria.



**FORM III:
GCMS Semivolatiles
EPA 8270C
BS/BSD, MS/MSD, DUP**



Laboratory Report Number: M0D1189

Matrix Spike/Duplicate (MS/MSD)

Client Project ID: Draper Aden Associates

FORM IIIA

Method: EPA 8270C		Parent				Spike		Duplicate			
Batch: B0D1025		Sample ID: M0D1189-04				B0D1025-MS1		B0D1025-MSD1			
Matrix: Aqueous		Prepared: 04/20/2020 13:00				04/20/20 13:00		04/20/20 13:00			
Units: ug/L		Analyzed: 04/22/2020 16:18				04/22/20 16:53		04/22/20 17:24			
Instrument: MSD12		File ID: 12M77042.D				12M77043.D		12M77044.D			
Calibration: 20C0029		Dilution: 1				1		1			
Analyst: SCB											
Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limts	RPD Limit	Q
Hexachloroethane	ND	52.6	14.5	27.5	55.6	17.5	31.5	19.0	21 - 115	30	
Sulfotepp	ND	52.6	63.0	120	55.6	63.3	114	0.558	70 - 135	30	

Surrogate	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limts	RPD Limit	Q
2,4,6-Tribromophenol		105	153	146	111	157	142		22 - 142		*
2-Fluorobiphenyl		52.6	41.3	78.4	55.6	44.8	80.6		43 - 116		
2-Fluorophenol		105	55.2	52.4	111	62.7	56.4		19 - 119		
Nitrobenzene-d5		52.6	41.8	79.3	55.6	45.8	82.4		35 - 114		
Phenol-d5		105	38.2	36.3	111	43.0	38.7		10 - 120		
p-Terphenyl-d14		52.6	36.7	69.8	55.6	35.2	63.3		10 - 130		

* - Exceeds %Rec Limit

- Exceeds RPD Limit



Laboratory Report Number: M0D1189

BLANK SPIKE (BS)

Client Project ID: Draper Aden Associates

FORM IIIB

Method: EPA 8270C		Blank Spike			
Batch: B0D1025		Spike ID: B0D1025-BS2			
Analyst: SCB		Prepared: 04/20/20 13:00			
Matrix: Aqueous		Analyzed: 04/22/20 12:29			
Units: ug/L		File ID: 12M77035.D			
Instrument: MSD12		Initial/Final: 1000mL/1mL			
Calibration: 20C0029					
Analyte	BS Spiked	BS Found	BS %Rec	%Rec Limts	Q
Hexachloroethane	50.0	13.9	27.8	21 - 115	
Sulfotepp	50.0	61.5	123	70 - 135	

Surrogate	BS Spiked	BS Found	BS %Rec	%Rec Limts	Q
2,4,6-Tribromophenol	100	148	148	22 - 142	*
2-Fluorobiphenyl	50.0	35.1	70.2	43 - 116	
2-Fluorophenol	100	43.1	43.1	19 - 119	
Nitrobenzene-d5	50.0	33.3	66.7	35 - 114	
Phenol-d5	100	30.6	30.6	10 - 120	
p-Terphenyl-d14	50.0	43.9	87.8	10 - 130	

* - Does not meet %Rec acceptance criteria.

- Does not meet RPD acceptance criteria.

NS - Analyte Not Spiked

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FORM IV: GCMS Semivolatiles EPA 8270C METHOD BLANK SUMMARY



Laboratory Report Number: M0D1189
 Client Project ID: Draper Aden Associates

**METHOD BLANK SUMMARY
 FORM IVA**

Blank ID: B0D1025-BLK2
Blank File ID: 12M77034.D
Prepared: 04/20/2020 13:00
Analyzed: 04/22/2020 11:58

Batch: B0D1025
Instrument: MSD12
Method: EPA 8270C
Analyst: SCB

This Method Blank Applies To The Following Samples:

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
Blank	B0D1025-BLK2	12M77034.D	04/22/2020 11:58
LCS	B0D1025-BS2	12M77035.D	04/22/2020 12:29
16C1	M0D1189-01	12M77039.D	04/22/2020 14:40
16MW8	M0D1189-02	12M77040.D	04/22/2020 15:11
16MW9	M0D1189-03	12M77041.D	04/22/2020 15:46
16WC1A	M0D1189-04	12M77042.D	04/22/2020 16:18
Matrix Spike	B0D1025-MS1	12M77043.D	04/22/2020 16:53
Matrix Spike Dup	B0D1025-MSD1	12M77044.D	04/22/2020 17:24
16WDUP	M0D1189-05	12M77045.D	04/22/2020 17:58
16WC1B	M0D1189-06	12M77046.D	04/22/2020 18:29



Laboratory Report Number: M0D1189

METHOD BLANK

Client Project ID: Draper Aden Associates

FORM IVB

Sample ID: B0D1025-BLK2	Prep Date: 04/20/20 13:00	Matrix: Aqueous
Instrument: MSD12	Analyzed: 04/22/20 11:58	Method: EPA 8270C
File ID: 12M77034.D	Sequence: S0D0475	Analyst: SCB
Batch: B0D1025	Units: ug/L	Calibration: 20C0029

Analyte	Result	MDL	RL	Dilution	Flag	Q
Hexachloroethane	2.50	2.50	5.00	1	U	
Hexachlorophene - Estimated			50.0	1	U	
Sulfotepp	1.00	1.00	10.0	1	U	

Surrogate	Recovery	Limits	PASS/FAIL
2,4,6-Tribromophenol	115	22 - 142	PASS
2-Fluorobiphenyl	69.5	43 - 116	PASS
2-Fluorophenol	46.2	19 - 119	PASS
Nitrobenzene-d5	75.7	35 - 114	PASS
Phenol-d5	30.9	10 - 120	PASS
p-Terphenyl-d14	91.8	10 - 130	PASS

* - Detected in the associated method Blank at a concentration >= RL

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FORM V: GCMS Semivolatiles EPA 8270C TUNE SUMMARY

Laboratory Report Number: M0D1189

**MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
FORM V**

Client Project ID: Draper Aden Associates

Lab File ID: 12M76624.D		Injection Date: 03/27/20	
Instrument ID: MSD12		Injection Time: 10:22	
Sequence: S0C0514		Lab Sample ID: S0C0514-TUN1	
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	37.3	PASS
68	Less than 2% of 69	0	PASS
70	Less than 2% of 69	0	PASS
127	40 - 60% of 198	53.1	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.1	PASS
275	10 - 30% of 198	23.7	PASS
365	1 - 100% of 198	3.26	PASS
441	0.01 - 100% of 443	80.8	PASS
442	40 - 100% of 198	79.7	PASS
443	17 - 23% of 442	19.6	PASS
69	Less than 100% of 198	36	PASS

Laboratory ID	Client ID#	Run Date
S0C0514-TUN1	MS Tune	3/27/20 10:22
S0C0514-CAL4	Cal Standard	3/27/20 10:42
S0C0514-CAL1	Cal Standard	3/27/20 11:17
S0C0514-CAL2	Cal Standard	3/27/20 11:52
S0C0514-CAL3	Cal Standard	3/27/20 12:26
S0C0514-CAL5	Cal Standard	3/27/20 13:01
S0C0514-CAL6	Cal Standard	3/27/20 13:36
S0C0514-CAL7	Cal Standard	3/27/20 14:11
S0C0514-CAL8	Cal Standard	3/27/20 14:46
S0C0514-CAL9	Cal Standard	3/27/20 15:21
S0C0514-ICV1	Initial Cal Check	3/27/20 15:55
S0C0514-ICV2	Initial Cal Check	3/27/20 16:30
S0C0514-CALD	Cal Standard	3/27/20 17:04
S0C0514-CALG	Cal Standard	3/27/20 17:37
S0C0514-CALF	Cal Standard	3/27/20 18:09
S0C0514-CALE	Cal Standard	3/27/20 18:42
S0C0514-CALC	Cal Standard	3/27/20 19:15
S0C0514-CALB	Cal Standard	3/27/20 19:47
S0C0514-CALA	Cal Standard	3/27/20 20:19
S0C0514-ICV3	Initial Cal Check	3/27/20 20:52
S0C0514-ICV4	Initial Cal Check	3/27/20 21:24

Laboratory Report Number: M0D1189
**MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
FORM V**
Client Project ID: Draper Aden Associates

Lab File ID: 12M77030.D		Injection Date: 04/22/20	
Instrument ID: MSD12		Injection Time: 09:58	
Sequence: S0D0475		Lab Sample ID: S0D0475-TUN1	
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	47.8	PASS
68	Less than 2% of 69	0	PASS
70	Less than 2% of 69	0.385	PASS
127	40 - 60% of 198	58.6	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.07	PASS
275	10 - 30% of 198	24.3	PASS
365	1 - 100% of 198	4.42	PASS
441	0.01 - 100% of 443	82.1	PASS
442	40 - 100% of 198	64	PASS
443	17 - 23% of 442	18.8	PASS
69	Less than 100% of 198	41.6	PASS

Laboratory ID	Client ID#	Run Date
S0D0475-TUN1	MS Tune	4/22/20 9:58
S0D0475-CCV1	Calibration Check	4/22/20 10:19
S0D0475-CCV2	Calibration Check	4/22/20 10:52
S0D0475-CVA1	Cal Check Mix A	4/22/20 11:27
B0D1025-BLK2	Blank	4/22/20 11:58
B0D1025-BS2	LCS	4/22/20 12:29
M0D1189-01	16C1	4/22/20 14:40
M0D1189-02	16MW8	4/22/20 15:11
M0D1189-03	16MW9	4/22/20 15:46
M0D1189-04	16WC1A	4/22/20 16:18
B0D1025-MS1	Matrix Spike	4/22/20 16:53
B0D1025-MSD1	Matrix Spike Dup	4/22/20 17:24
M0D1189-05	16WDUP	4/22/20 17:58
M0D1189-06	16WC1B	4/22/20 18:29



FORM VII: GCMS Semivolatiles EPA 8270C ICV/CCV



Laboratory Report Number: M0D1189

Initial Calibration Verification (ICV)

Client Project ID: Draper Aden Associates

FORM VIIA

Sample ID: S0C0514-ICV1		Analyzed: 03/27/20 15:55		Method: EPA 8270C				
Instrument: MSD12		Calibration: 20C0029		Sequence: S0C0514				
File ID: 12M76634.D		Units: ug/mL		Analyst: SCB				
Analyte	Response	Limit	Q	Expected	Found	% Drift	UCL	Q
Hexachloroethane	154.8819	0.30		50.0	47.5	-5.0	30	
2,4,6-Tribromophenol	43.68109			50.0	51.0	2.1	30	
2-Fluorobiphenyl	325.8684			50.0	40.6	-18.8	30	
2-Fluorophenol	377.9182			50.0	51.3	2.5	30	
Nitrobenzene-d5	94.24809			50.0	42.1	-15.8	30	
Phenol-d5	406.5472			50.0	49.7	-0.6	30	
p-Terphenyl-d14	225.7627			50.0	37.2	-25.6	30	

Sample ID: S0C0514-ICV2		Analyzed: 03/27/20 16:30		Method: EPA 8270C				
Instrument: MSD12		Calibration: 20C0029		Sequence: S0C0514				
File ID: 12M76635.D		Units: ug/mL		Analyst: SCB				
Analyte	Response	Limit	Q	Expected	Found	% Drift	UCL	Q
2,4,6-Tribromophenol	43.78666			50.0	51.2	2.3	30	
2-Fluorobiphenyl	316.8576			50.0	39.5	-21.0	30	
2-Fluorophenol	350.2806			50.0	47.5	-5.0	30	
Nitrobenzene-d5	93.03742			50.0	41.6	-16.9	30	
Phenol-d5	390.8114			50.0	47.8	-4.5	30	
p-Terphenyl-d14	211.4768			50.0	34.8	-30.3	30	*
Sulfotepp	33.36744			50.0	46.2	-7.6	30	

Sample ID: S0C0514-ICV3		Analyzed: 03/27/20 20:52		Method: EPA 8270C				
Instrument: MSD12		Calibration: 20C0029		Sequence: S0C0514				
File ID: 12M76643.D		Units: ug/mL		Analyst: SCB				
Analyte	Response	Limit	Q	Expected	Found	% Drift	UCL	Q
2,4,6-Tribromophenol	43.78666			50.0	51.2	2.3	30	
2-Fluorobiphenyl	316.8576			50.0	39.5	-21.0	30	
2-Fluorophenol	350.2806			50.0	47.5	-5.0	30	
Nitrobenzene-d5	93.03742			50.0	41.6	-16.9	30	
Phenol-d5	390.8114			50.0	47.8	-4.5	30	
p-Terphenyl-d14	211.4768			50.0	34.8	-30.3	30	*
Sulfotepp	33.36744			50.0	46.2	-7.6	30	

Sample ID: S0C0514-ICV4		Analyzed: 03/27/20 21:24		Method: EPA 8270C				
Instrument: MSD12		Calibration: 20C0029		Sequence: S0C0514				
File ID: 12M76644.D		Units: ug/mL		Analyst: SCB				
Analyte	Response	Limit	Q	Expected	Found	% Drift	UCL	Q

* - Does not meet acceptance criteria.

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Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

Continuing Calibration Verification (CCV)
FORM VIIB

Laboratory ID: S0D0475-CCV1		Analyzed: 04/22/20 10:19		Method: EPA 8270C				
Instrument: MSD12		Calibration: 20C0029		Sequence: S0D0475				
File ID: 12M77031.D		Units: ug/mL		Analyst: SCB				
Analyte	Response	Limit	Q	Expected	Found	% Drift	UCL	Q
2,4,6-Tribromophenol	38.89617			50.0	45.4	-9.1	40	
2-Fluorobiphenyl	383.9756			50.0	47.8	-4.3	40	
2-Fluorophenol	314.5366			50.0	42.7	-14.7	40	
Hexachloroethane	163.0067	0.30		50.0	50.0	0.03	40	
Nitrobenzene-d5	108.9478			50.0	48.7	-2.7	40	
Phenol-d5	354.9786			50.0	43.4	-13.2	40	
p-Terphenyl-d14	290.8632			50.0	47.9	-4.1	40	

* - Does not meet acceptance criteria.

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Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

Continuing Calibration Verification (CCV)

FORM VIIB

Laboratory ID: S0D0475-CCV2		Analyzed: 04/22/20 10:52			Method: EPA 8270C			
Instrument: MSD12		Calibration: 20C0029			Sequence: S0D0475			
File ID: 12M77032.D		Units: ug/mL			Analyst: SCB			
Analyte	Response	Limit	Q	Expected	Found	% Drift	UCL	Q
Sulfotepp	34.69622			50.0	48.1	-3.9	40	

* - Does not meet acceptance criteria.

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Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

Continuing Calibration Verification (CCV)

FORM VIIB

Laboratory ID: S0D0475-CVA1		Analyzed: 04/22/20 11:27		Method: EPA 8270C		
Instrument: MSD12		Calibration: 20C0029		Sequence: S0D0475		
File ID: 12M77033.D		Units: ug/mL				
Analyte	Expected	Found	Recovery	LCL	UCL	Q
Hexachlorophene - Estimated	500	500	100	60	140	

* - Does not meet acceptance criteria.

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FORM VIII: GCMS Semivolatiles EPA 8270C Internal Standard Area and RT



Laboratory Report Number: MOD1189

INTERNAL STANDARD AREA SUMMARY

Client Project ID: Draper Aden Associates

FORM VIIIA

Laboratory:	Microbac Laboratories Inc., - Marietta, OH	SDG:	MOD1189
Client:	Draper Aden Associates	Project:	8270 Sulfotepp-Hexachlorophene
Sequence:	S0C0514	Instrument:	MSD12
		Calibration:	20C0029

Initial Cal Check (S0C0514-ICV1)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	101631	7.727	126920	7.727	80	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	209862	10.82	241282	10.815	87	50 - 200		0.0050	+/-0.50	
Chrysene-d12	307996	16.066	356165	16.066	86	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	374119	9.015	455195	9.015	82	50 - 200		0.0000	+/-0.50	
Perylene-d12	317859	18.775	398073	18.78	80	50 - 200		-0.0050	+/-0.50	
Phenanthrene-d10	357980	12.407	426235	12.412	84	50 - 200		-0.0050	+/-0.50	

Initial Cal Check (S0C0514-ICV2)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	122527	7.727	126920	7.727	97	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	244956	10.815	241282	10.815	102	50 - 200		0.0000	+/-0.50	
Chrysene-d12	370957	16.066	356165	16.066	104	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	433180	9.015	455195	9.015	95	50 - 200		0.0000	+/-0.50	
Perylene-d12	391228	18.775	398073	18.78	98	50 - 200		-0.0050	+/-0.50	
Phenanthrene-d10	417012	12.407	426235	12.412	98	50 - 200		-0.0050	+/-0.50	

Initial Cal Check (S0C0514-ICV3)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	118320	7.727	118320	7.727	100	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	241754	10.815	241754	10.815	100	50 - 200		0.0000	+/-0.50	
Chrysene-d12	359037	16.066	359037	16.066	100	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	425848	9.014	425848	9.014	100	50 - 200		0.0000	+/-0.50	
Perylene-d12	346647	18.775	346647	18.775	100	50 - 200		0.0000	+/-0.50	
Phenanthrene-d10	404664	12.412	404664	12.412	100	50 - 200		0.0000	+/-0.50	

Initial Cal Check (S0C0514-ICV4)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	98287	7.727	98287	7.727	100	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	199196	10.815	199196	10.815	100	50 - 200		0.0000	+/-0.50	
Chrysene-d12	295029	16.066	295029	16.066	100	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	361199	9.014	361199	9.014	100	50 - 200		0.0000	+/-0.50	
Perylene-d12	282968	18.769	282968	18.769	100	50 - 200		0.0000	+/-0.50	
Phenanthrene-d10	338578	12.407	338578	12.407	100	50 - 200		0.0000	+/-0.50	

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Laboratory Report Number: M0D1189

INTERNAL STANDARD AREA SUMMARY

Client Project ID: Draper Aden Associates

FORM VIIIA

Laboratory:	Microbac Laboratories Inc., - Marietta, OH	SDG:	M0D1189
Client:	Draper Aden Associates	Project:	8270 Sulfotepp-Hexachlorophene
Sequence:	S0D0475	Instrument:	MSD12
		Calibration:	20C0029

Blank (B0D1025-BLK2)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	64572	7.716	59100	7.716	109	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	139476	10.809	127966	10.809	109	50 - 200		0.0000	+/-0.50	
Chrysene-d12	196862	16.056	190195	16.055	104	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	240010	9.004	223843	9.004	107	50 - 200		0.0000	+/-0.50	
Perylene-d12	208962	18.759	55609	18.759	376	50 - 200	*	0.0000	+/-0.50	
Phenanthrene-d10	243415	12.401	227045	12.401	107	50 - 200		0.0000	+/-0.50	

LCS (B0D1025-BS2)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	63296	7.716	59100	7.716	107	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	133542	10.81	127966	10.809	104	50 - 200		0.0010	+/-0.50	
Chrysene-d12	179194	16.056	190195	16.055	94	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	233274	9.009	223843	9.004	104	50 - 200		0.0050	+/-0.50	
Perylene-d12	179312	18.764	55609	18.759	322	50 - 200	*	0.0050	+/-0.50	
Phenanthrene-d10	221755	12.402	227045	12.401	98	50 - 200		0.0010	+/-0.50	

Matrix Spike (B0D1025-MS1)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	62900	7.716	59100	7.716	106	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	132663	10.809	127966	10.809	104	50 - 200		0.0000	+/-0.50	
Chrysene-d12	177237	16.056	190195	16.055	93	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	229831	9.009	223843	9.004	103	50 - 200		0.0050	+/-0.50	
Perylene-d12	180003	18.764	55609	18.759	324	50 - 200	*	0.0050	+/-0.50	
Phenanthrene-d10	218900	12.401	227045	12.401	96	50 - 200		0.0000	+/-0.50	

Matrix Spike Dup (B0D1025-MSD1)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	59076	7.716	59100	7.716	100	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	124533	10.809	127966	10.809	97	50 - 200		0.0000	+/-0.50	
Chrysene-d12	165954	16.056	190195	16.055	87	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	219537	9.009	223843	9.004	98	50 - 200		0.0050	+/-0.50	
Perylene-d12	169822	18.764	55609	18.759	305	50 - 200	*	0.0050	+/-0.50	
Phenanthrene-d10	205950	12.401	227045	12.401	91	50 - 200		0.0000	+/-0.50	

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Laboratory Report Number: M0D1189

INTERNAL STANDARD AREA SUMMARY

Client Project ID: Draper Aden Associates

FORM VIIIA

16C1 (M0D1189-01)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	60644	7.722	59100	7.716	103	50 - 200		0.0060	+/-0.50	
Acenaphthene-d10	131169	10.809	127966	10.809	103	50 - 200		0.0000	+/-0.50	
Chrysene-d12	185282	16.056	190195	16.055	97	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	226039	9.009	223843	9.004	101	50 - 200		0.0050	+/-0.50	
Perylene-d12	196868	18.753	55609	18.759	354	50 - 200	*	-0.0060	+/-0.50	
Phenanthrene-d10	232600	12.401	227045	12.401	102	50 - 200		0.0000	+/-0.50	

16MW8 (M0D1189-02)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	61759	7.722	59100	7.716	104	50 - 200		0.0060	+/-0.50	
Acenaphthene-d10	132360	10.809	127966	10.809	103	50 - 200		0.0000	+/-0.50	
Chrysene-d12	182583	16.055	190195	16.055	96	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	228047	9.004	223843	9.004	102	50 - 200		0.0000	+/-0.50	
Perylene-d12	200614	18.753	55609	18.759	361	50 - 200	*	-0.0060	+/-0.50	
Phenanthrene-d10	231368	12.401	227045	12.401	102	50 - 200		0.0000	+/-0.50	

16MW9 (M0D1189-03)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	63849	7.716	59100	7.716	108	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	137029	10.81	127966	10.809	107	50 - 200		0.0010	+/-0.50	
Chrysene-d12	196358	16.056	190195	16.055	103	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	235219	9.004	223843	9.004	105	50 - 200		0.0000	+/-0.50	
Perylene-d12	207411	18.753	55609	18.759	373	50 - 200	*	-0.0060	+/-0.50	
Phenanthrene-d10	240729	12.396	227045	12.401	106	50 - 200		-0.0050	+/-0.50	

16WC1A (M0D1189-04)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	62436	7.716	59100	7.716	106	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	132495	10.81	127966	10.809	104	50 - 200		0.0010	+/-0.50	
Chrysene-d12	191640	16.056	190195	16.055	101	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	230626	9.004	223843	9.004	103	50 - 200		0.0000	+/-0.50	
Perylene-d12	204539	18.753	55609	18.759	368	50 - 200	*	-0.0060	+/-0.50	
Phenanthrene-d10	232995	12.402	227045	12.401	103	50 - 200		0.0010	+/-0.50	



Laboratory Report Number: M0D1189

INTERNAL STANDARD AREA SUMMARY
FORM VIIIA

Client Project ID: Draper Aden Associates

16WDUP (M0D1189-05)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	63902	7.716	59100	7.716	108	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	134582	10.81	127966	10.809	105	50 - 200		0.0010	+/-0.50	
Chrysene-d12	188216	16.056	190195	16.055	99	50 - 200		0.0010	+/-0.50	
Naphthalene-d8	233955	9.004	223843	9.004	105	50 - 200		0.0000	+/-0.50	
Perylene-d12	199812	18.753	55609	18.759	359	50 - 200	*	-0.0060	+/-0.50	
Phenanthrene-d10	235610	12.396	227045	12.401	104	50 - 200		-0.0050	+/-0.50	

16WC1B (M0D1189-06)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	60826	7.716	59100	7.716	103	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	131241	10.809	127966	10.809	103	50 - 200		0.0000	+/-0.50	
Chrysene-d12	182703	16.05	190195	16.055	96	50 - 200		-0.0050	+/-0.50	
Naphthalene-d8	227020	9.004	223843	9.004	101	50 - 200		0.0000	+/-0.50	
Perylene-d12	196057	18.753	55609	18.759	353	50 - 200	*	-0.0060	+/-0.50	
Phenanthrene-d10	229839	12.401	227045	12.401	101	50 - 200		0.0000	+/-0.50	

Calibration Check (S0D0475-CCV1)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	81539	7.722	81539	7.722	100	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	176331	10.815	176331	10.815	100	50 - 200		0.0000	+/-0.50	
Chrysene-d12	243476	16.061	243476	16.061	100	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	302444	9.009	302444	9.009	100	50 - 200		0.0000	+/-0.50	
Perylene-d12	258248	18.764	258248	18.764	100	50 - 200		0.0000	+/-0.50	
Phenanthrene-d10	306550	12.401	306550	12.401	100	50 - 200		0.0000	+/-0.50	

Calibration Check (S0D0475-CCV2)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	69352	7.722	69352	7.722	100	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	146616	10.809	146616	10.809	100	50 - 200		0.0000	+/-0.50	
Chrysene-d12	209250	16.055	209250	16.055	100	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	253690	9.009	253690	9.009	100	50 - 200		0.0000	+/-0.50	
Perylene-d12	225122	18.759	225122	18.759	100	50 - 200		0.0000	+/-0.50	
Phenanthrene-d10	257273	12.401	257273	12.401	100	50 - 200		0.0000	+/-0.50	



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**INTERNAL STANDARD AREA SUMMARY
FORM VIIIA**
Cal Check Mix A (S0D0475-CVA1)

Analyte	Resp	RT	RefResp	RefRT	Area%	ISAreaLimit	Flg	RTDiff	RTDiffLimit	Flg
1,4-Dichlorobenzene-d4	59100	7.716	59100	7.716	100	50 - 200		0.0000	+/-0.50	
Acenaphthene-d10	127966	10.809	127966	10.809	100	50 - 200		0.0000	+/-0.50	
Chrysene-d12	190195	16.055	190195	16.055	100	50 - 200		0.0000	+/-0.50	
Naphthalene-d8	223843	9.004	223843	9.004	100	50 - 200		0.0000	+/-0.50	
Perylene-d12	55609	18.759	55609	18.759	100	50 - 200		0.0000	+/-0.50	
Phenanthrene-d10	227045	12.401	227045	12.401	100	50 - 200		0.0000	+/-0.50	



Section A:
GCMS Semivolatiles
EPA 8270C
Batch / Sequence Raw Data



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**BATCH LOG SUMMARY
SECTION A1**

Batch: B0D1025

Matrix: Aqueous

Method: EPA 8270C

SOP: EXB08

Prepared: 4/20/2020 1:00:00PM

Prepared By: SCB

Preparation: EPA 3510C

Laboratory ID	Client / Source ID	Initial	Final	pH					Spike(s)
B0D1025-BLK2		1000 mL	1.00 mL	<2/>10					
B0D1025-BS2		1000 mL	1.00 mL	<2/>10					0004325 1000µL
M0D1189-01	16C1	920 mL	1.00 mL	<2/>10					
M0D1189-02	16MW8	1000 mL	1.00 mL	<2/>10					
M0D1189-03	16MW9	1000 mL	1.00 mL	<2/>10					
M0D1189-04	16WC1A	980 mL	1.00 mL	<2/>10					
B0D1025-MS1	M0D1189-04	950 mL	1.00 mL	<2/>10					0004325 1000µL
B0D1025-MSD1	M0D1189-04	900 mL	1.00 mL	<2/>10					0004325 1000µL
M0D1189-05	16WDUP	900 mL	1.00 mL	<2/>10					
M0D1189-06	16WC1B	1000 mL	1.00 mL	<2/>10					

Standards used in the batch:

Standard ID	Description	Date Prepared	Prepared By
0004325	A9/MIXC/HEXACHLOROPHENE	4/20/2020 10:50:26AM	Chris Hill

Reagents used in the batch:

Reagent ID	Description	Prepared	Prepared By
0002687	1:1 H2SO4	3/4/2020 9:21:56AM	Alex Klintworth
0003735	Sodium Sulfate, Anhydrous, Granular	4/2/2020 8:52:28AM	** Vendor **
0004071	10N NaOH	4/13/2020 9:50:17AM	Alex Klintworth
0004229	Methylene Chloride	4/16/2020 9:26:07AM	** Vendor **

Surrogates used in the batch:

Surrogate Spiked 1: 500.00 µL

Surrogate ID	Description	Prepared	Prepared By
0002654	8270 Surrogate Solution	1/27/2020 1:13:07PM	** Vendor **



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

SEQUENCE LOG SUMMARY
SECTION A2
Sequence: S0C0514**Instrument:** MSD12**Calibration:** 20C0029**Analyst 1:** SCB**Method:** EPA 8270C**SOP:** EXA02

#	File ID	Laboratory ID	Client ID	Analyzed	Reference	Standard
1	12M76624.D	S0C0514-TUN1	MS Tune	03/27/20 10:22		0001469
2	12M76625.D	S0C0514-CAL4	Cal Standard	03/27/20 10:42		0002259
3	12M76626.D	S0C0514-CAL1	Cal Standard	03/27/20 11:17		0002256
4	12M76627.D	S0C0514-CAL2	Cal Standard	03/27/20 11:52		0002257
5	12M76628.D	S0C0514-CAL3	Cal Standard	03/27/20 12:26		0002258
6	12M76629.D	S0C0514-CAL5	Cal Standard	03/27/20 13:01		0002260
7	12M76630.D	S0C0514-CAL6	Cal Standard	03/27/20 13:36		0002261
8	12M76631.D	S0C0514-CAL7	Cal Standard	03/27/20 14:11		0002262
9	12M76632.D	S0C0514-CAL8	Cal Standard	03/27/20 14:46		0002263
10	12M76633.D	S0C0514-CAL9	Cal Standard	03/27/20 15:21		0002264
11	12M76634.D	S0C0514-ICV1	Initial Cal Check	03/27/20 15:55		0000107
12	12M76635.D	S0C0514-ICV2	Initial Cal Check	03/27/20 16:30		9006893
13	12M76636.D	S0C0514-CALD	Cal Standard	03/27/20 17:04		0001926
14	12M76637.D	S0C0514-CALG	Cal Standard	03/27/20 17:37		9007875
15	12M76638.D	S0C0514-CALF	Cal Standard	03/27/20 18:09		9007873
16	12M76639.D	S0C0514-CALE	Cal Standard	03/27/20 18:42		9007872
17	12M76640.D	S0C0514-CALC	Cal Standard	03/27/20 19:15		9007870
18	12M76641.D	S0C0514-CALB	Cal Standard	03/27/20 19:47		9007869
19	12M76642.D	S0C0514-CALA	Cal Standard	03/27/20 20:19		9007868
20	12M76643.D	S0C0514-ICV3	Initial Cal Check	03/27/20 20:52		9006891
21	12M76644.D	S0C0514-ICV4	Initial Cal Check	03/27/20 21:24		9008994



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

**SEQUENCE LOG SUMMARY
SECTION A2**
Sequence Standards

Standard ID	Description	Prepared	PreparedBy	Expires
0000107	8270 ALT SRC 50PPM	01/03/2020	Sarah Bogolin	07/03/2020
0001469	8270 50PPM DFTTP	02/05/2020	Sarah Bogolin	08/05/2020
0001926	8270 TCL+A9 ICAL #4 50PPM CCV	02/14/2020	Sarah Bogolin	03/31/2020
0002256	8270 CAL1 120PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002257	8270 CAL2 100 PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002258	8270 CAL3 80 PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002259	8270 CAL4 50 PPM CCV	02/25/2020	Sarah Bogolin	06/30/2020
0002260	8270 CAL5 25 PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002261	8270 CAL6 15PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002262	8270 CAL7 10 PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002263	8270 CAL8 3 PPM	02/25/2020	Sarah Bogolin	06/30/2020
0002264	8270 CAL9 1PPM	02/25/2020	Sarah Bogolin	06/30/2020
9006891	8270 TCL ALT SRC STD 50PPM	10/02/2019	Sarah Bogolin	04/02/2020
9006893	8270 MP,A9,BENZ ALT SRC 50PPM	10/02/2019	Sarah Bogolin	04/02/2020
9007868	8270 TCL+A9 ICAL #1 120PPM	10/31/2019	Sarah Bogolin	03/31/2020
9007869	8270 TCL+A9 ICAL #2 100PPM	10/31/2019	Sarah Bogolin	03/31/2020
9007870	8270 TCL+A9 ICAL #3 80PPM	10/31/2019	Sarah Bogolin	03/31/2020
9007872	8270 TCL+A9 ICAL #5 25PPM	10/31/2019	Sarah Bogolin	03/31/2020
9007873	8270 TCL+A9 ICAL #6 10PPM	10/31/2019	Sarah Bogolin	03/31/2020
9007875	8270 TCL+A9 ICAL #7 3PPM	10/31/2019	Sarah Bogolin	03/31/2020
9008994	8270 1,4-Dioxane ALT Source 50PPM	12/03/2019	Sarah Bogolin	06/03/2020

Sequence Internal Standard

Standard ID	Description	Prepared	PreparedBy	Expires
0001666	8270 Internal Standard 40PPM	02/10/2020	Sarah Bogolin	11/26/2029



Laboratory Report Number: M0D1189

Client Project ID: Draper Aden Associates

SEQUENCE LOG SUMMARY
SECTION A2

Sequence: S0D0475

Analyst 1: SCB

Instrument: MSD12

Method: EPA 8270C

Calibration: 20C0029

SOP: EXA02

#	File ID	Laboratory ID	Client ID	Analyzed	Reference	Standard
1	12M77030.D	S0D0475-TUN1	MS Tune	04/22/20 09:58		0001469
2	12M77031.D	S0D0475-CCV1	Calibration Check	04/22/20 10:19		0002259
3	12M77032.D	S0D0475-CCV2	Calibration Check	04/22/20 10:52		0003599
4	12M77033.D	S0D0475-CVA1	Cal Check Mix A	04/22/20 11:27		9008789
5	12M77034.D	B0D1025-BLK2	Blank	04/22/20 11:58		
6	12M77035.D	B0D1025-BS2	LCS	04/22/20 12:29		
10	12M77039.D	M0D1189-01	16C1	04/22/20 14:40		
11	12M77040.D	M0D1189-02	16MW8	04/22/20 15:11		
12	12M77041.D	M0D1189-03	16MW9	04/22/20 15:46		
13	12M77042.D	M0D1189-04	16WC1A	04/22/20 16:18		
14	12M77043.D	B0D1025-MS1	16WC1A	04/22/20 16:53	M0D1189-04	
15	12M77044.D	B0D1025-MSD1	16WC1A	04/22/20 17:24	M0D1189-04	
16	12M77045.D	M0D1189-05	16WDUP	04/22/20 17:58		
17	12M77046.D	M0D1189-06	16WC1B	04/22/20 18:29		

Sequence Standards

Standard ID	Description	Prepared	PreparedBy	Expires
0001469	8270 50PPM DFTPP	02/05/2020	Sarah Bogolin	08/05/2020
0002259	8270 CAL4 50 PPM CCV	02/25/2020	Sarah Bogolin	06/30/2020
0003599	8270 TCL CALD 50PPM CCV	03/31/2020	Sarah Bogolin	07/31/2020
9008789	8270 Kepone/Hexachlorophene STD	11/22/2019	Mary Schilling	05/22/2020

Sequence Internal Standard

Standard ID	Description	Prepared	PreparedBy	Expires
0003545	8270 Internal Standard 40PPM	03/30/2020	Sarah Bogolin	11/26/2029



Section B: GCMS Semivolatiles EPA 8270C Sample Raw Data

Data File : I:\MSDCHEM\1\DATA\042220\12M77039.D

Vial: 10

Acq On : 22 Apr 2020 2:40 pm

Operator: SCB

Sample : MOD1189-01

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:23:30 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.722	152	60644	40.0000	ug/ml	0.011
8) Naphthalene-d8	9.009	136	226039	40.0000	ug/ml	0.011
15) Acenaphthene-d10	10.809	164	131169	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.401	188	232600	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	185282	40.0000	ug/ml	0.016
42) Perylene-d12	18.753	264	196859	40.0000	ug/ml	0.016

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.55	88	1106	1.0902	ug/ml	92
33) Disulfoton	12.40	88	3703	Below Cal	#	37

Data File : I:\MSDCHEM\1\DATA\042220\12M77039.D

Vial: 10

Acq On : 22 Apr 2020 2:40 pm

Operator: SCB

Sample : MOD1189-01

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:29 2020

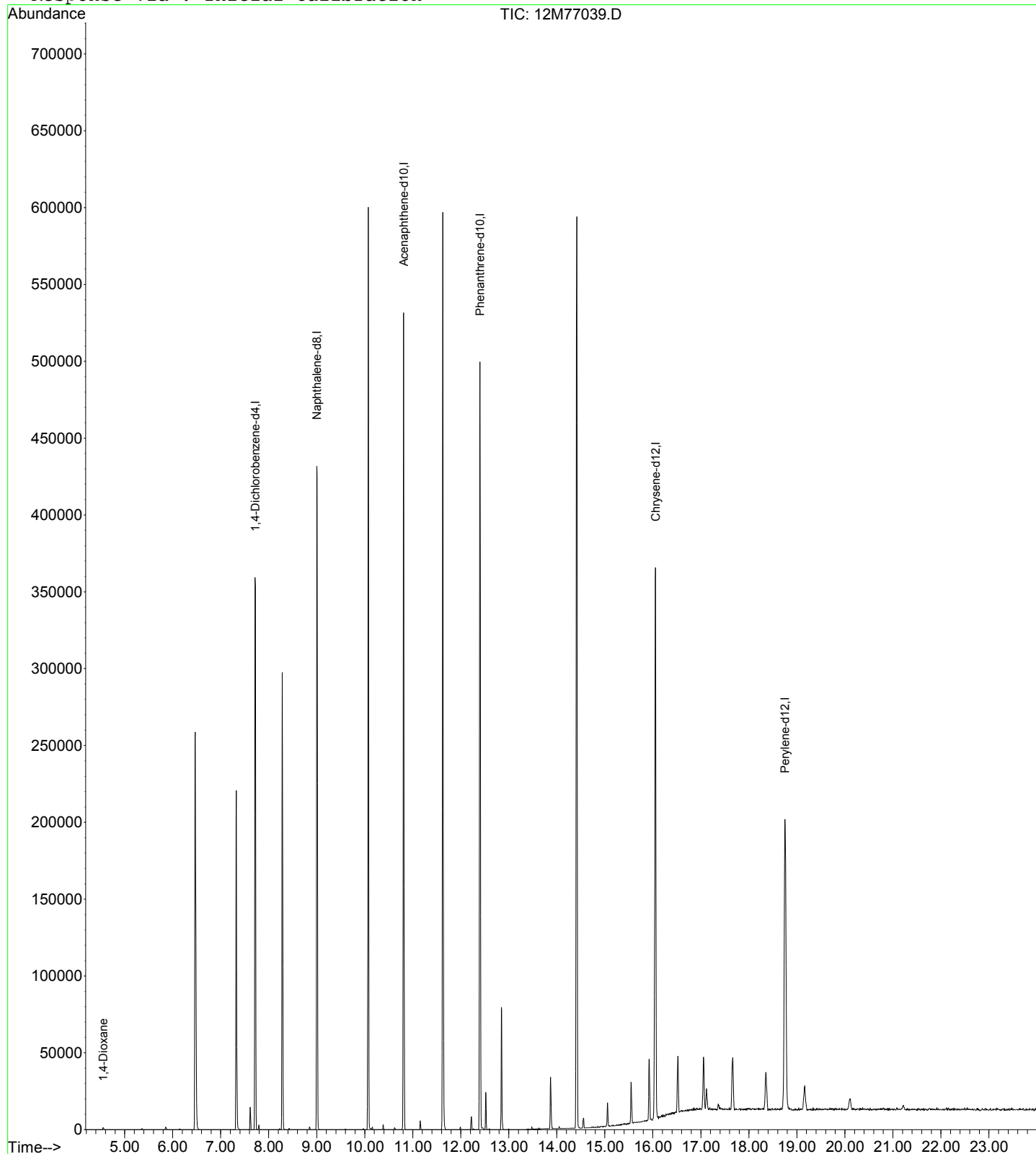
Quant Results File: TCL.RES

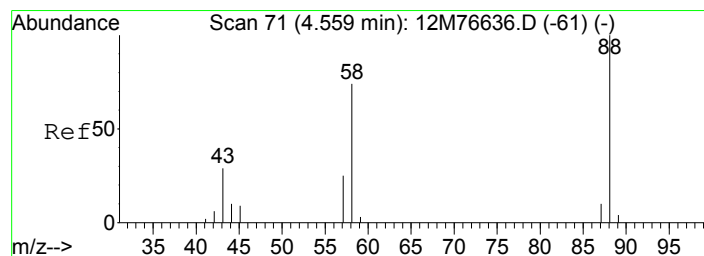
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

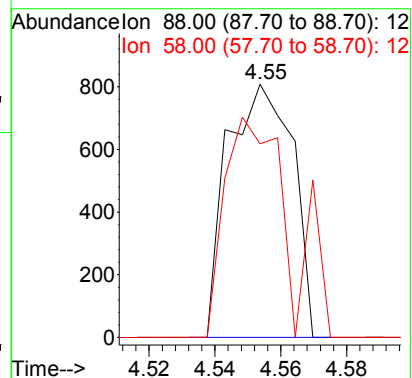
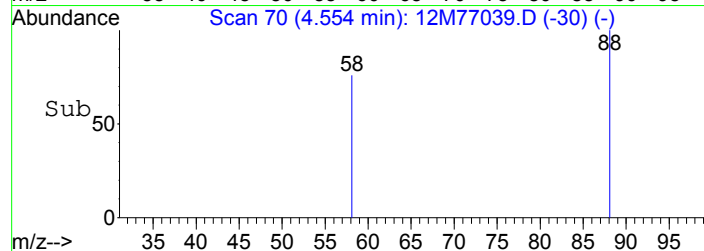
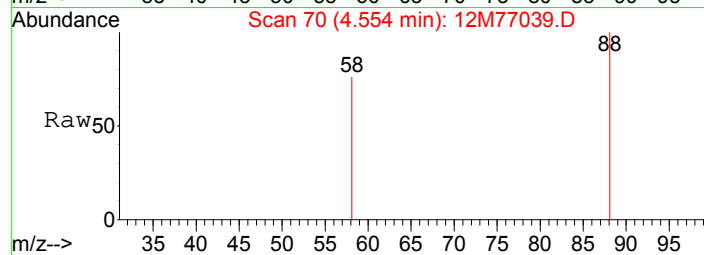
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 1.0902 ug/ml
RT: 4.55 min Scan# 70
Delta R.T. 0.01 min
Lab File: 12M77039.D
Acq: 22 Apr 2020 2:40 pm

Tgt Ion: 88 Resp: 1106
Ion Ratio Lower Upper
88 100
58 86.1 47.5 110.9



Data File : I:\MSDCHEM\1\DATA\042220\12M77039.D Vial: 10
Acq On : 22 Apr 2020 2:40 pm Operator: SCB
Sample : MOD1189-01 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:26 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	185282	40.0000	ug/L	0.016
3) Perylene-d12	18.753	264	196868	40.0000	ug/L	0.016

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77039.D

Vial: 10

Acq On : 22 Apr 2020 2:40 pm

Operator: SCB

Sample : MOD1189-01

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

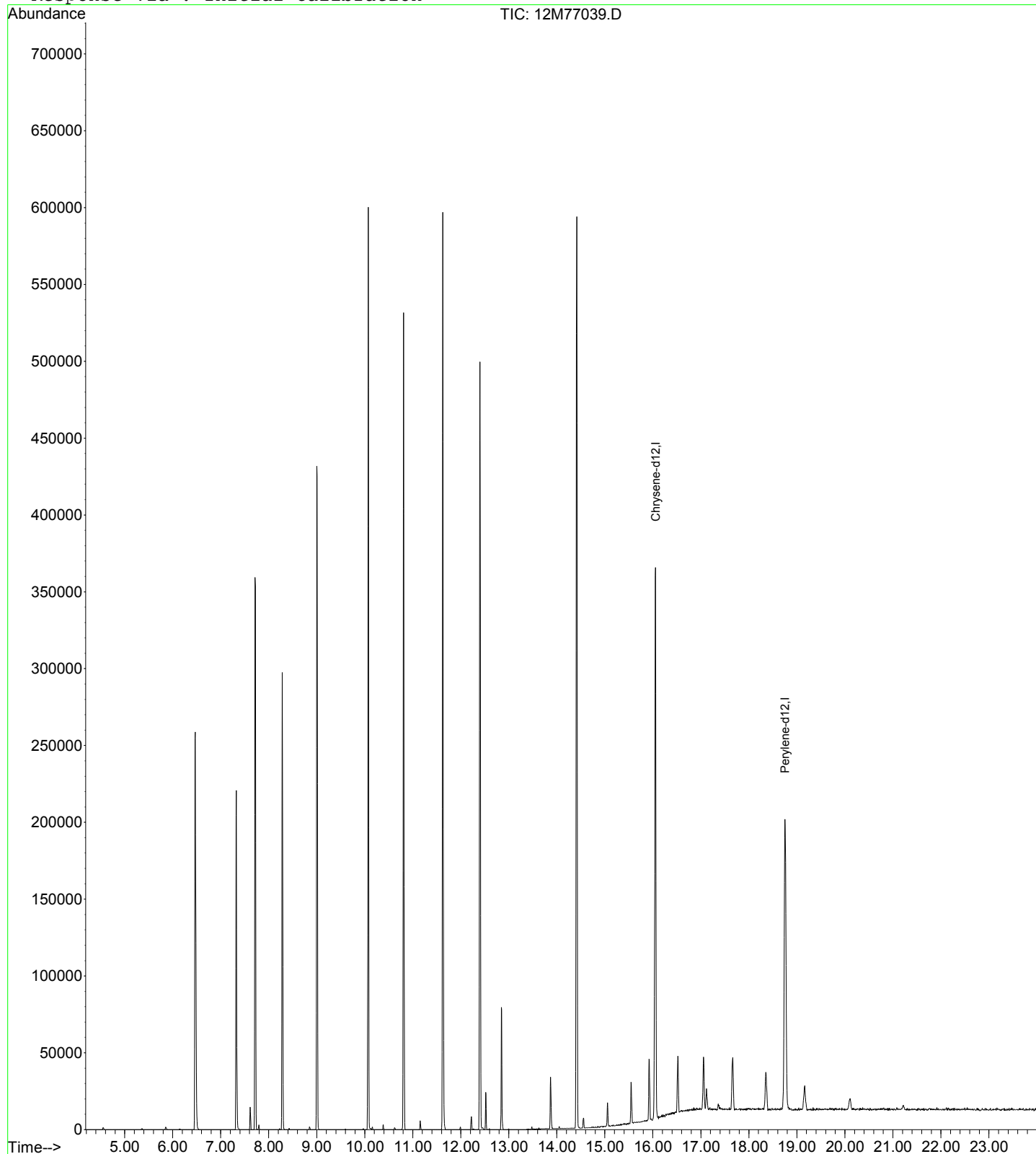
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77040.D Vial: 11
Acq On : 22 Apr 2020 3:11 pm Operator: SCB
Sample : MOD1189-02 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 24 14:23:32 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Apr 24 10:20:42 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.722	152	61759	40.0000	ug/ml	0.011
8) Naphthalene-d8	9.004	136	228047	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.809	164	132360	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.401	188	231368	40.0000	ug/ml	0.000
38) Chrysene-d12	16.055	240	182583	40.0000	ug/ml	0.016
42) Perylene-d12	18.753	264	200452	40.0000	ug/ml	0.016

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
33) Disulfoton	12.40	88	3482	Below Cal	#	37

Data File : I:\MSDCHEM\1\DATA\042220\12M77040.D

Vial: 11

Acq On : 22 Apr 2020 3:11 pm

Operator: SCB

Sample : M0D1189-02

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:29 2020

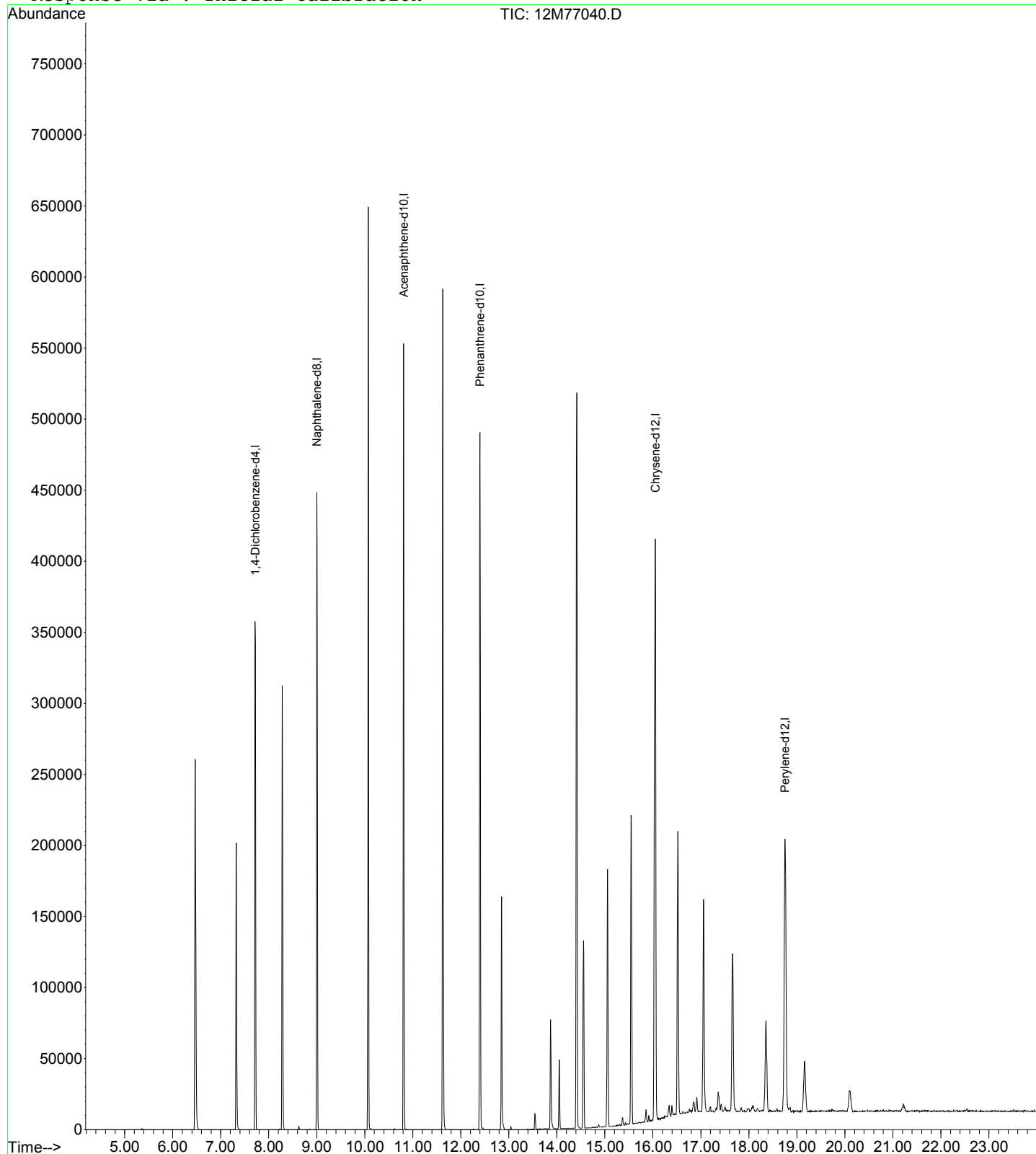
Quant Results File: TCL.RES

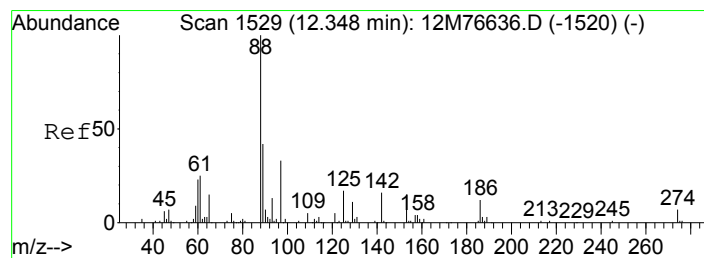
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

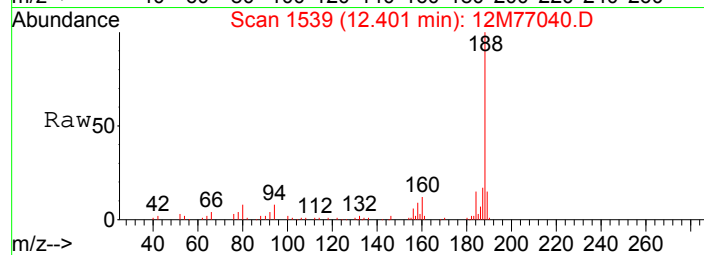
Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration

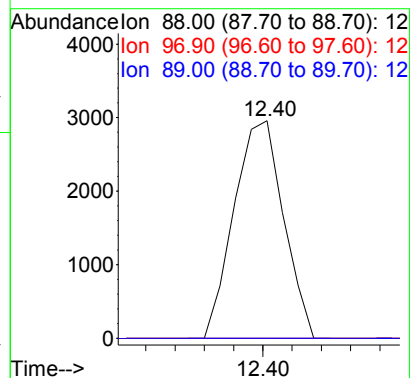
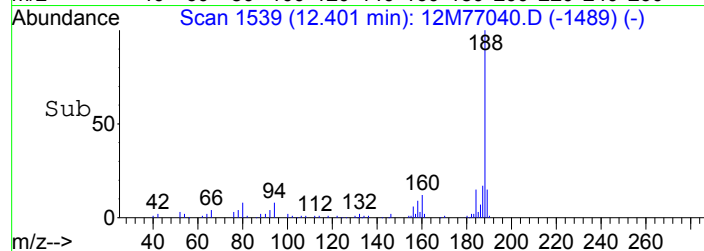




#33
Disulfoton
Concen: Below Cal
RT: 12.40 min Scan# 1539
Delta R.T. 0.07 min
Lab File: 12M77040.D
Acq: 22 Apr 2020 3:11 pm



Tgt Ion	Ratio	Lower	Upper
88	100		
97	0.0	26.6	40.0#
89	0.0	33.4	50.0#



Data File : I:\MSDCHEM\1\DATA\042220\12M77040.D Vial: 11
Acq On : 22 Apr 2020 3:11 pm Operator: SCB
Sample : MOD1189-02 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:26 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.055	240	182583	40.0000	ug/L	0.016
3) Perylene-d12	18.753	264	200614	40.0000	ug/L	0.016

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77040.D

Vial: 11

Acq On : 22 Apr 2020 3:11 pm

Operator: SCB

Sample : M0D1189-02

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

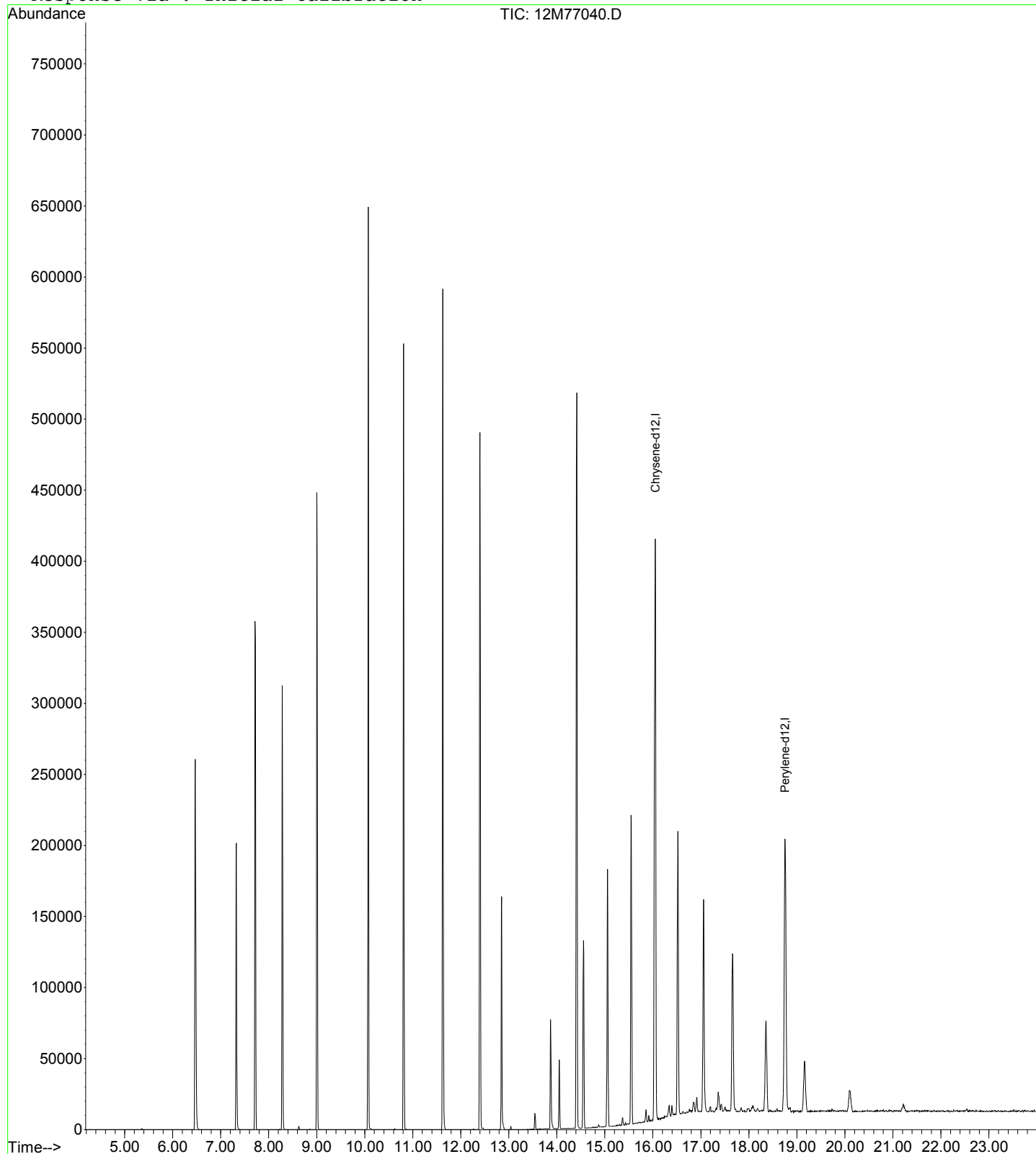
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77041.D Vial: 12
Acq On : 22 Apr 2020 3:46 pm Operator: SCB
Sample : MOD1189-03 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 24 14:23:33 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Apr 24 10:20:42 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	63849	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.004	136	235219	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.810	164	137029	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.396	188	240729	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	196358	40.0000	ug/ml	0.017
42) Perylene-d12	18.753	264	207412	40.0000	ug/ml	0.017

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.55	88	1667	1.5608	ug/ml	93
33) Disulfoton	12.40	88	3674	Below Cal	#	37

Data File : I:\MSDCHEM\1\DATA\042220\12M77041.D

Vial: 12

Acq On : 22 Apr 2020 3:46 pm

Operator: SCB

Sample : MOD1189-03

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:30 2020

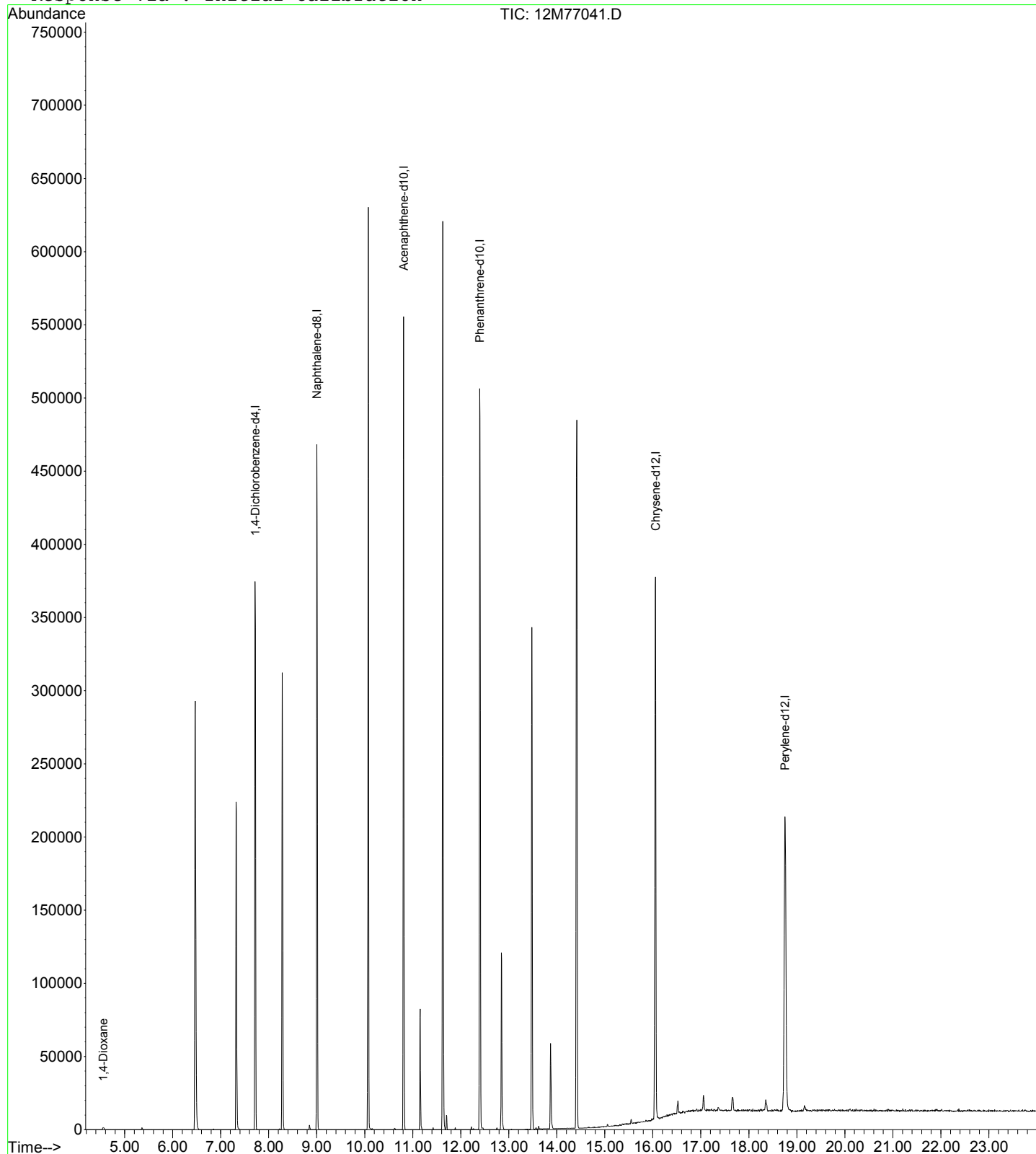
Quant Results File: TCL.RES

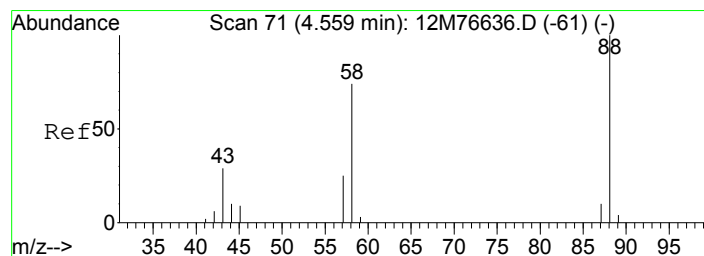
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

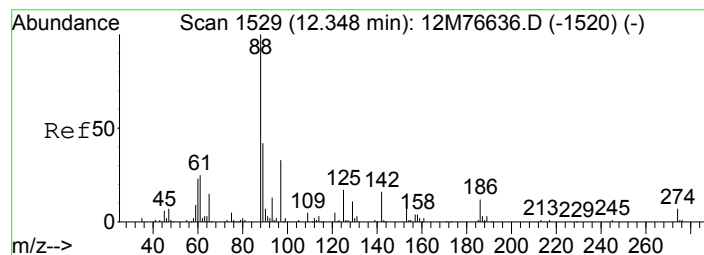
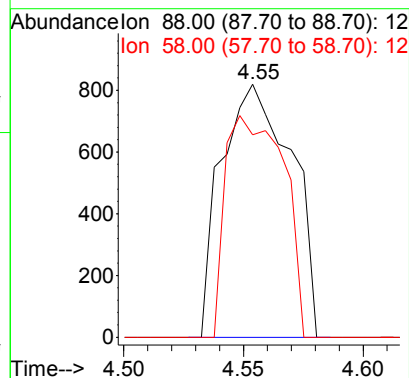
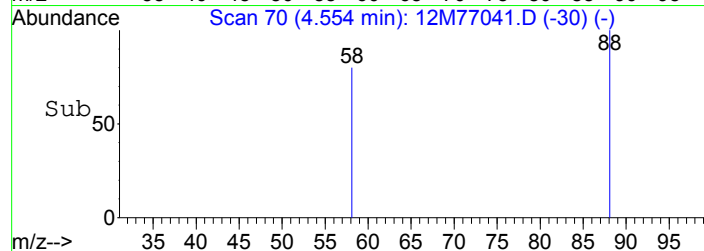
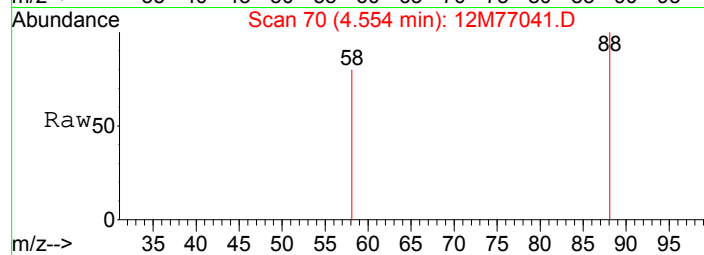
Response via : Initial Calibration





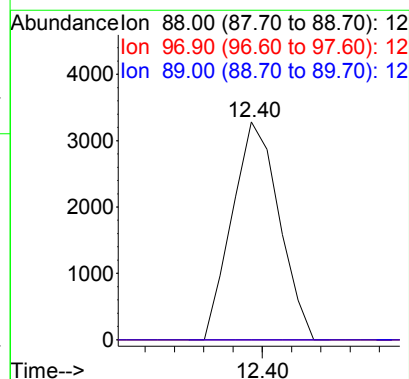
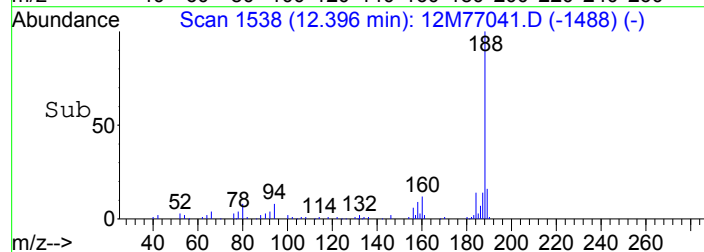
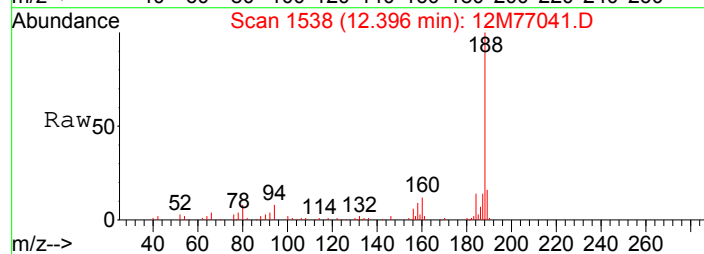
#2
 1,4-Dioxane
 Concen: 1.5608 ug/ml
 RT: 4.55 min Scan# 70
 Delta R.T. 0.01 min
 Lab File: 12M77041.D
 Acq: 22 Apr 2020 3:46 pm

Tgt Ion: 88 Resp: 1667
 Ion Ratio Lower Upper
 88 100
 58 73.0 47.5 110.9



#33
 Disulfoton
 Concen: Below Cal
 RT: 12.40 min Scan# 1538
 Delta R.T. 0.06 min
 Lab File: 12M77041.D
 Acq: 22 Apr 2020 3:46 pm

Tgt Ion: 88 Resp: 3674
 Ion Ratio Lower Upper
 88 100
 97 0.0 26.6 40.0#
 89 0.0 33.4 50.0#



Data File : I:\MSDCHEM\1\DATA\042220\12M77041.D Vial: 12
Acq On : 22 Apr 2020 3:46 pm Operator: SCB
Sample : MOD1189-03 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:27 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	196358	40.0000	ug/L	0.016
3) Perylene-d12	18.753	264	207411	40.0000	ug/L	0.016

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77041.D

Vial: 12

Acq On : 22 Apr 2020 3:46 pm

Operator: SCB

Sample : MOD1189-03

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

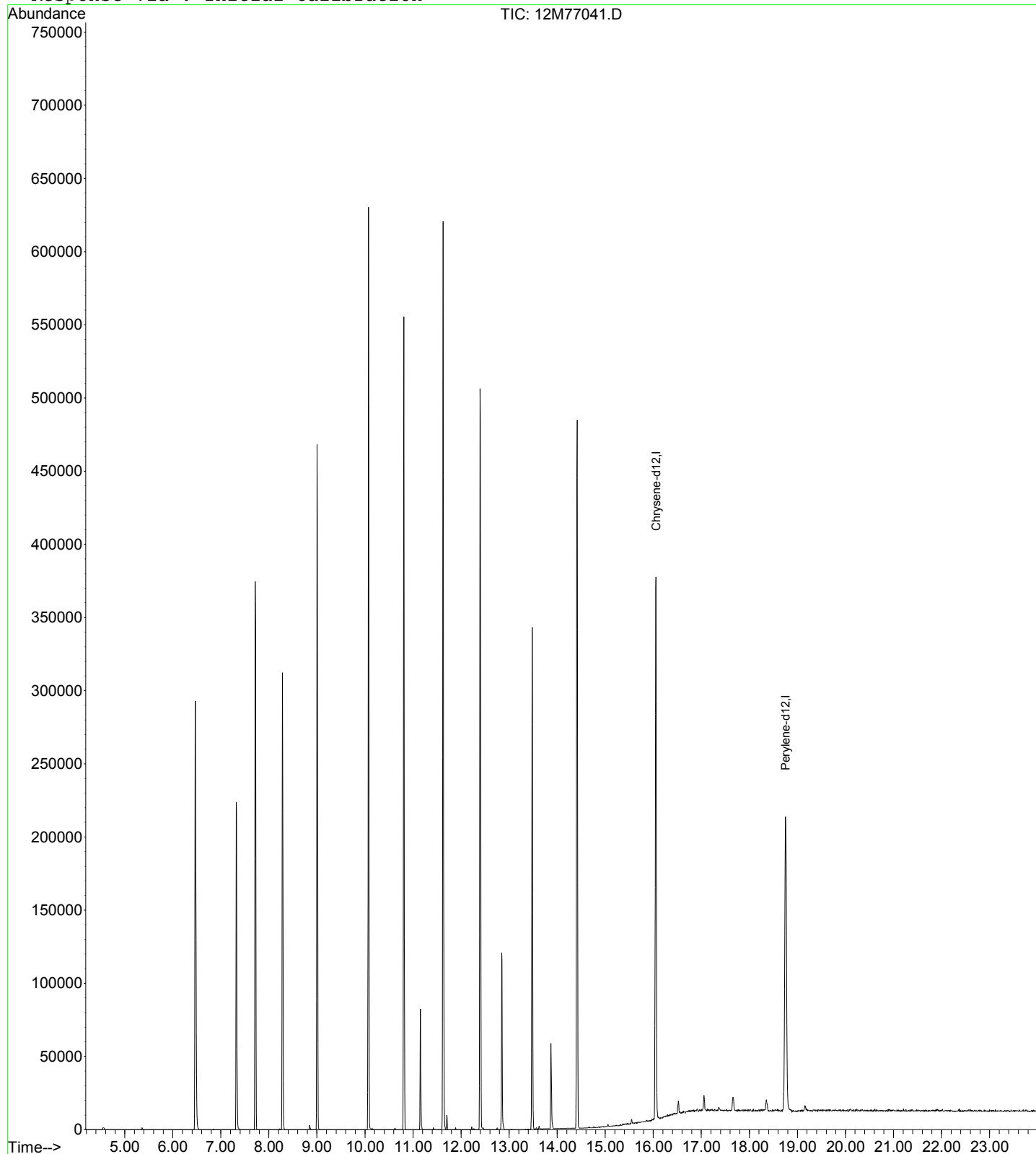
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77042.D Vial: 13
Acq On : 22 Apr 2020 4:18 pm Operator: SCB
Sample : MOD1189-04 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 24 14:23:34 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Apr 24 10:20:42 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	62436	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.004	136	230626	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.810	164	132495	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.402	188	232995	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	191640	40.0000	ug/ml	0.017
42) Perylene-d12	18.753	264	204549	40.0000	ug/ml	0.017

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
33) Disulfoton	12.40	88	3639	Below Cal	#	41

Data File : I:\MSDCHEM\1\DATA\042220\12M77042.D

Vial: 13

Acq On : 22 Apr 2020 4:18 pm

Operator: SCB

Sample : MOD1189-04

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:23 2020

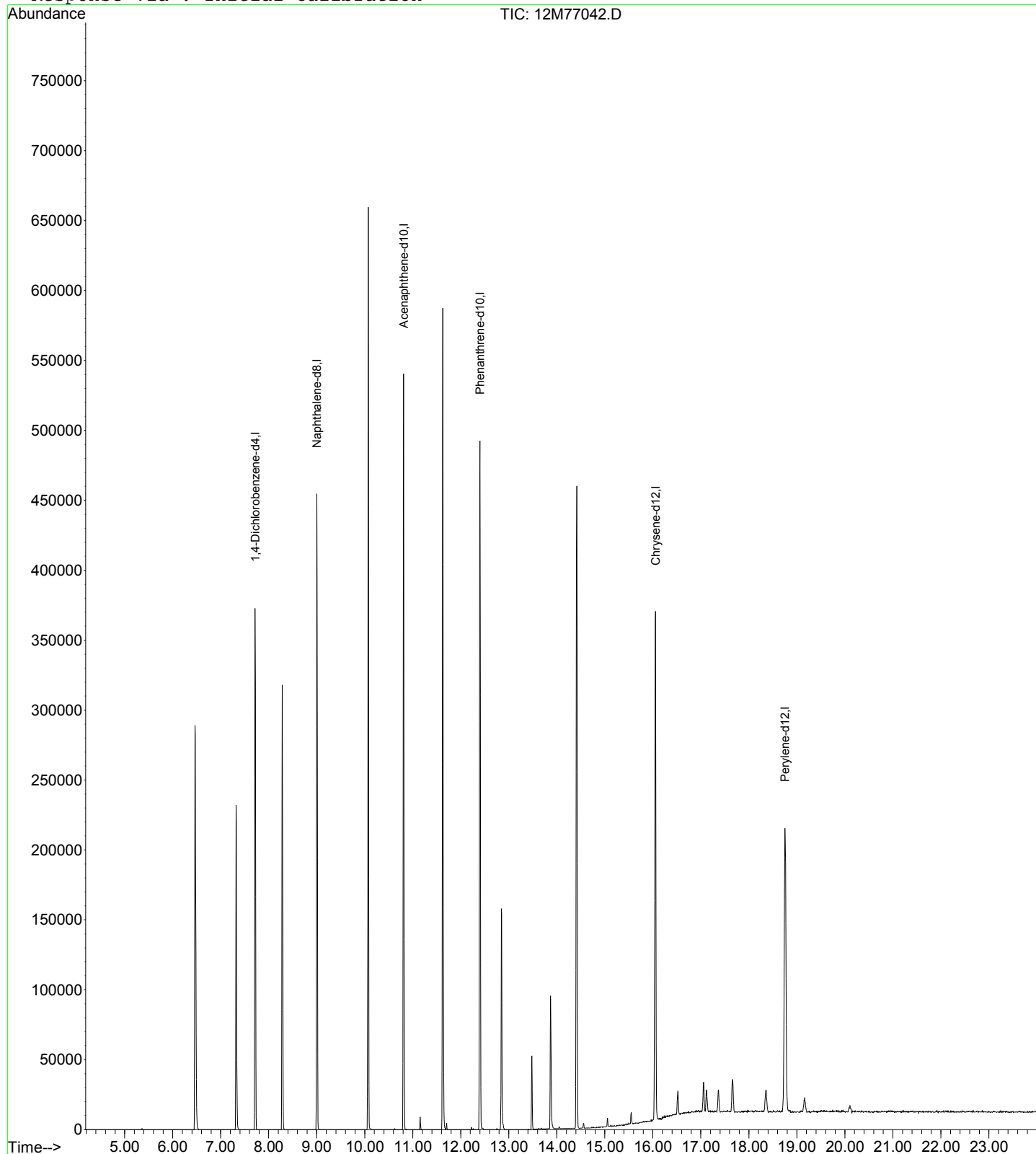
Quant Results File: TCL.RES

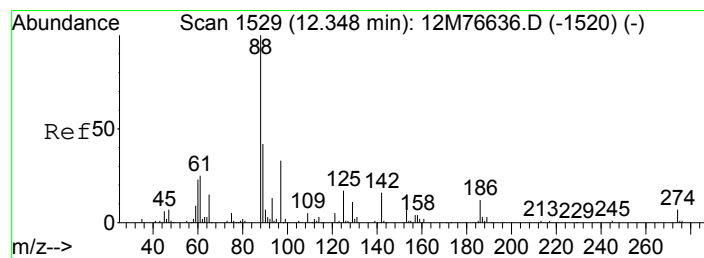
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

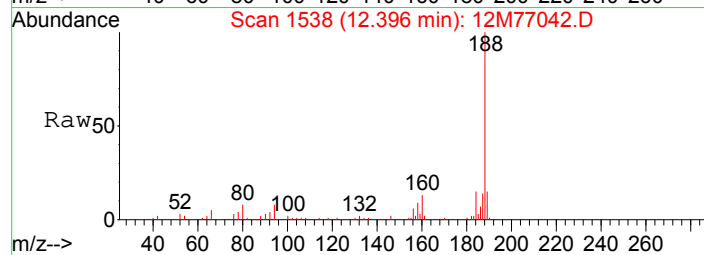
Response via : Initial Calibration





#33
Disulfoton
Concen: Below Cal
RT: 12.40 min Scan# 1538
Delta R.T. 0.06 min
Lab File: 12M77042.D
Acq: 22 Apr 2020 4:18 pm

Tgt Ion	88	Resp	3639
Ion Ratio	100		
Lower			
Upper			
97	0.0	26.6	40.0#
89	4.4	33.4	50.0#

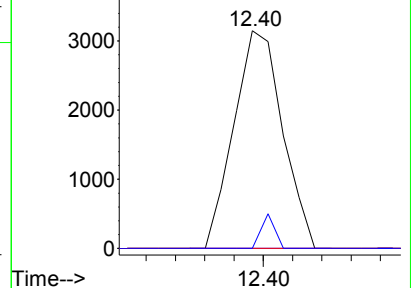
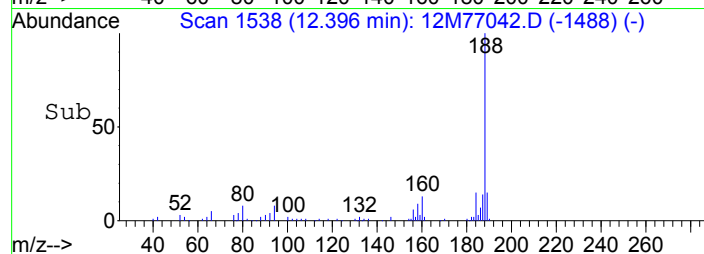


Abundance

Ion 88.00 (87.70 to 88.70): 12

Ion 96.90 (96.60 to 97.60): 12

Ion 89.00 (88.70 to 89.70): 12



Data File : I:\MSDCHEM\1\DATA\042220\12M77042.D Vial: 13
Acq On : 22 Apr 2020 4:18 pm Operator: SCB
Sample : MOD1189-04 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:28 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	191640	40.0000	ug/L	0.016
3) Perylene-d12	18.753	264	204539	40.0000	ug/L	0.016

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77042.D

Vial: 13

Acq On : 22 Apr 2020 4:18 pm

Operator: SCB

Sample : MOD1189-04

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

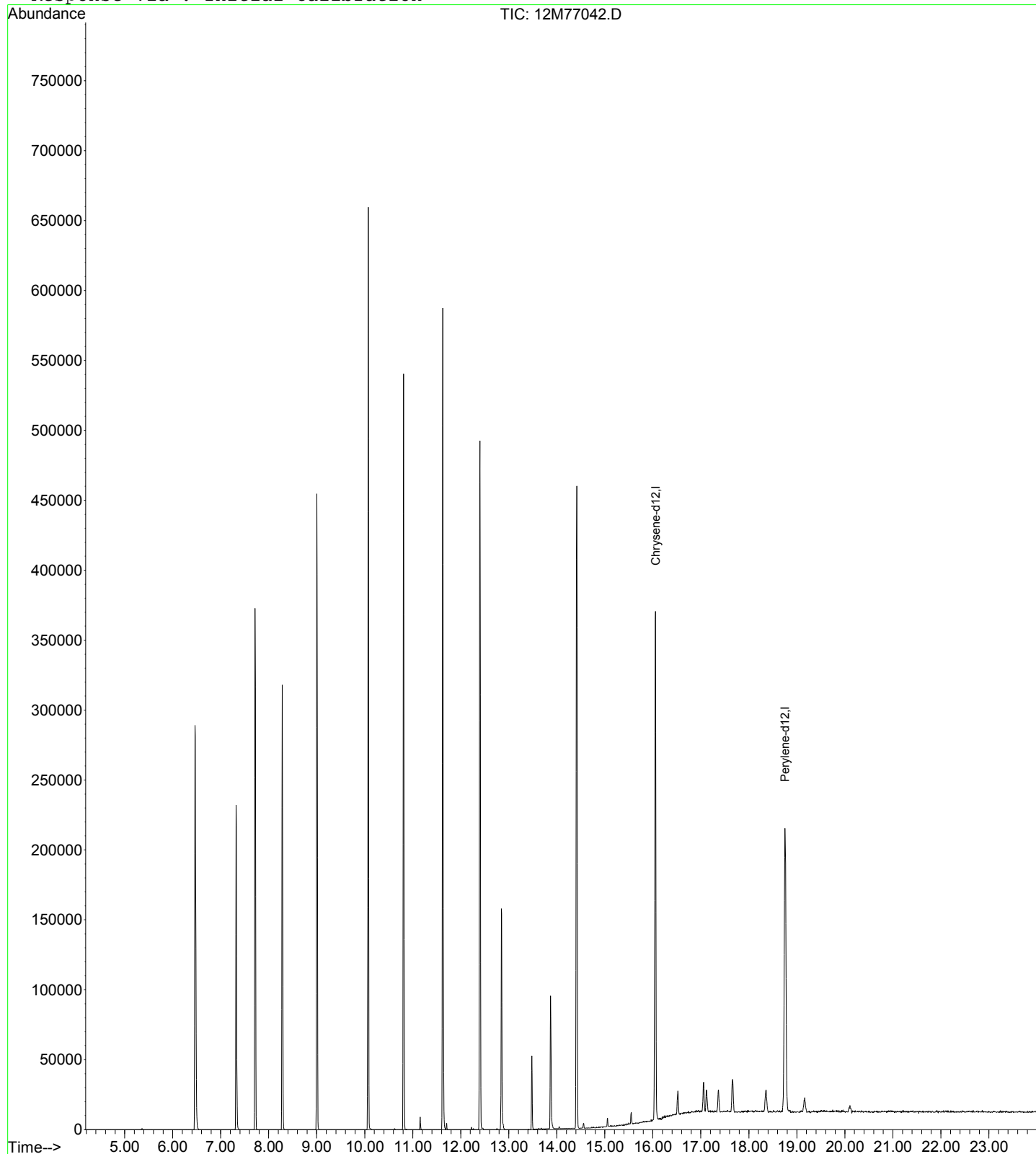
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77045.D Vial: 16
Acq On : 22 Apr 2020 5:58 pm Operator: SCB
Sample : MOD1189-05 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 24 14:23:36 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Apr 24 10:20:42 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	63902	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.004	136	233955	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.810	164	134582	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.396	188	235610	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	188216	40.0000	ug/ml	0.017
42) Perylene-d12	18.753	264	199803	40.0000	ug/ml	0.017

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
33) Disulfoton	12.40	88	3747	Below Cal	#	37

Data File : I:\MSDCHEM\1\DATA\042220\12M77045.D

Vial: 16

Acq On : 22 Apr 2020 5:58 pm

Operator: SCB

Sample : MOD1189-05

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:30 2020

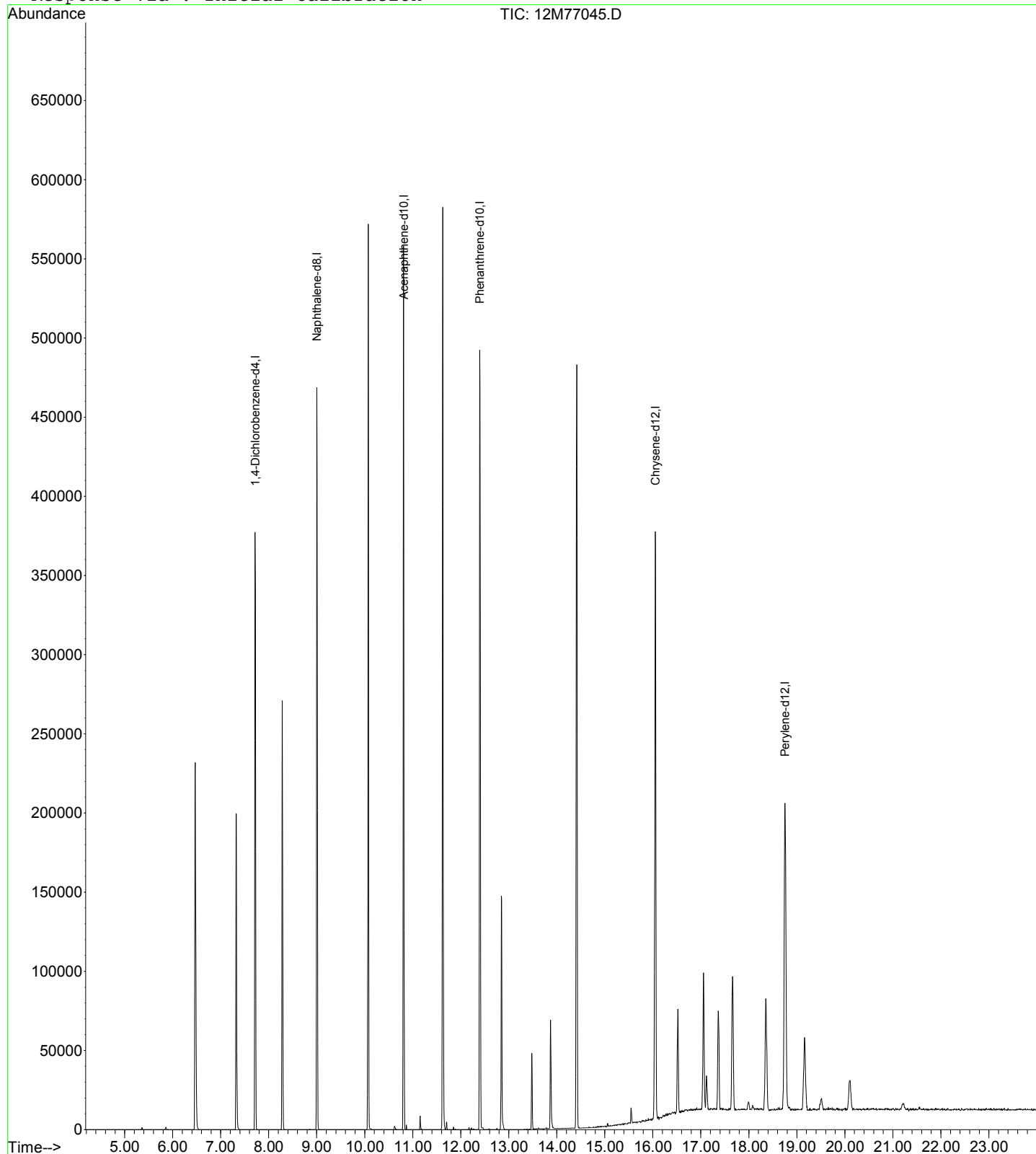
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77045.D Vial: 16
Acq On : 22 Apr 2020 5:58 pm Operator: SCB
Sample : MOD1189-05 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:33:00 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	188216	40.0000	ug/L	0.016
3) Perylene-d12	18.753	264	199812	40.0000	ug/L	0.016

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77045.D

Vial: 16

Acq On : 22 Apr 2020 5:58 pm

Operator: SCB

Sample : MOD1189-05

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:33 2020

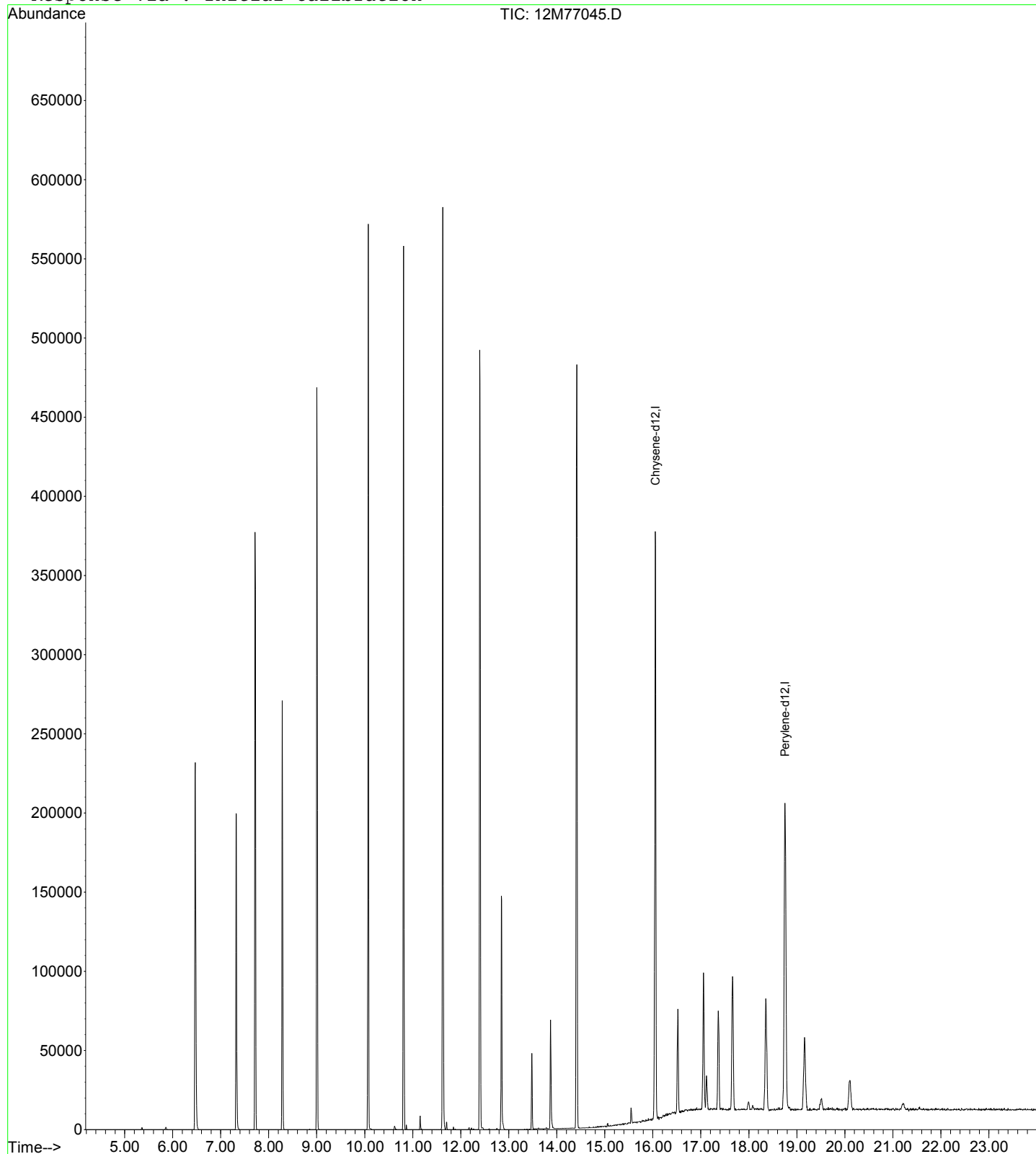
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77046.D Vial: 17
Acq On : 22 Apr 2020 6:29 pm Operator: SCB
Sample : MOD1189-06 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 24 14:23:37 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Apr 24 10:20:42 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	60826	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.004	136	227020	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.809	164	131241	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.401	188	229839	40.0000	ug/ml	0.000
38) Chrysene-d12	16.050	240	182703	40.0000	ug/ml	0.011
42) Perylene-d12	18.753	264	196068	40.0000	ug/ml	0.016

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
33) Disulfoton	12.40	88	3529	Below Cal	#	37

Data File : I:\MSDCHEM\1\DATA\042220\12M77046.D

Vial: 17

Acq On : 22 Apr 2020 6:29 pm

Operator: SCB

Sample : MOD1189-06

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:23 2020

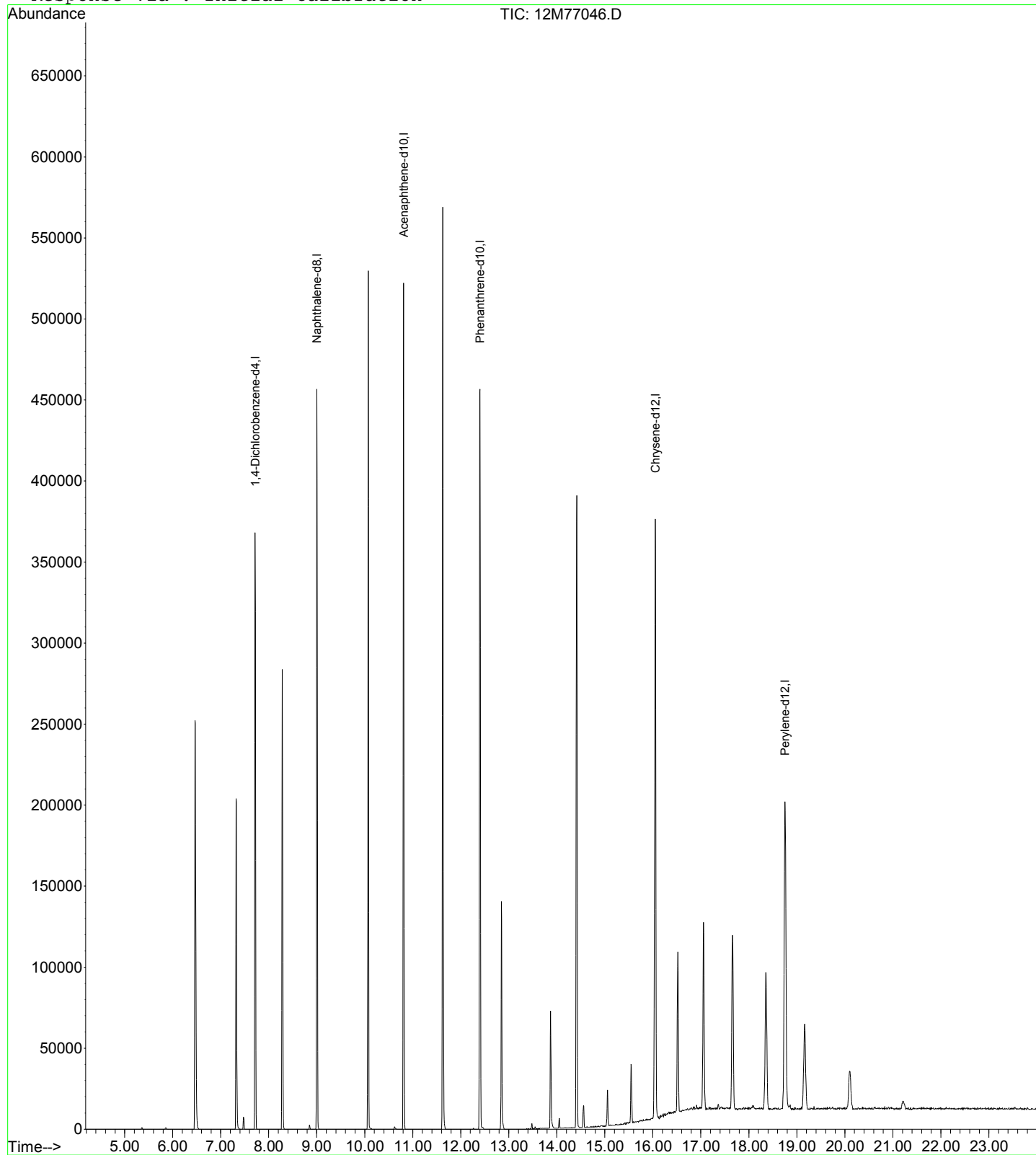
Quant Results File: TCL.RES

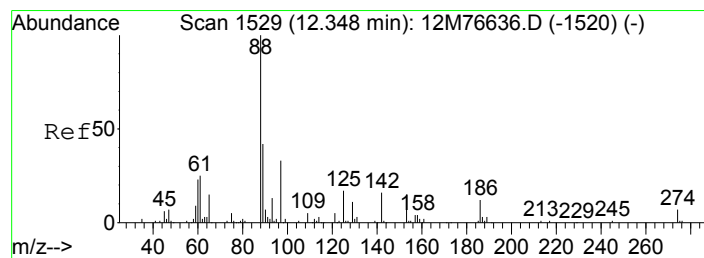
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

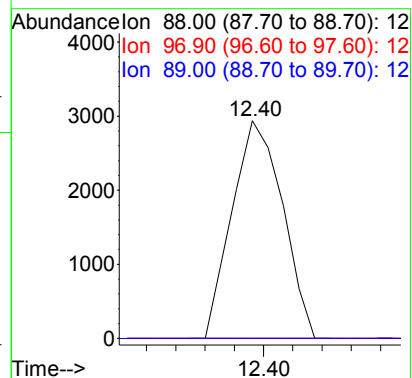
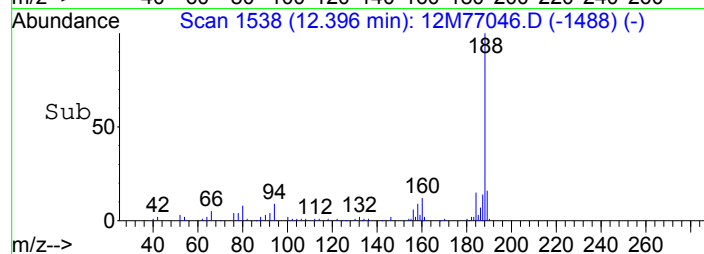
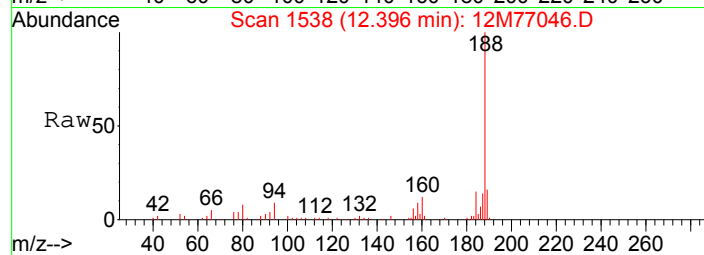
Response via : Initial Calibration





#33
Disulfoton
Concen: Below Cal
RT: 12.40 min Scan# 1538
Delta R.T. 0.06 min
Lab File: 12M77046.D
Acq: 22 Apr 2020 6:29 pm

Tgt Ion	Ratio	Lower	Upper
88	100		
97	0.0	26.6	40.0#
89	0.0	33.4	50.0#



Data File : I:\MSDCHEM\1\DATA\042220\12M77046.D Vial: 17
Acq On : 22 Apr 2020 6:29 pm Operator: SCB
Sample : MOD1189-06 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:33:00 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.050	240	182703	40.0000	ug/L	0.011
3) Perylene-d12	18.753	264	196057	40.0000	ug/L	0.016

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77046.D

Vial: 17

Acq On : 22 Apr 2020 6:29 pm

Operator: SCB

Sample : MOD1189-06

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:33 2020

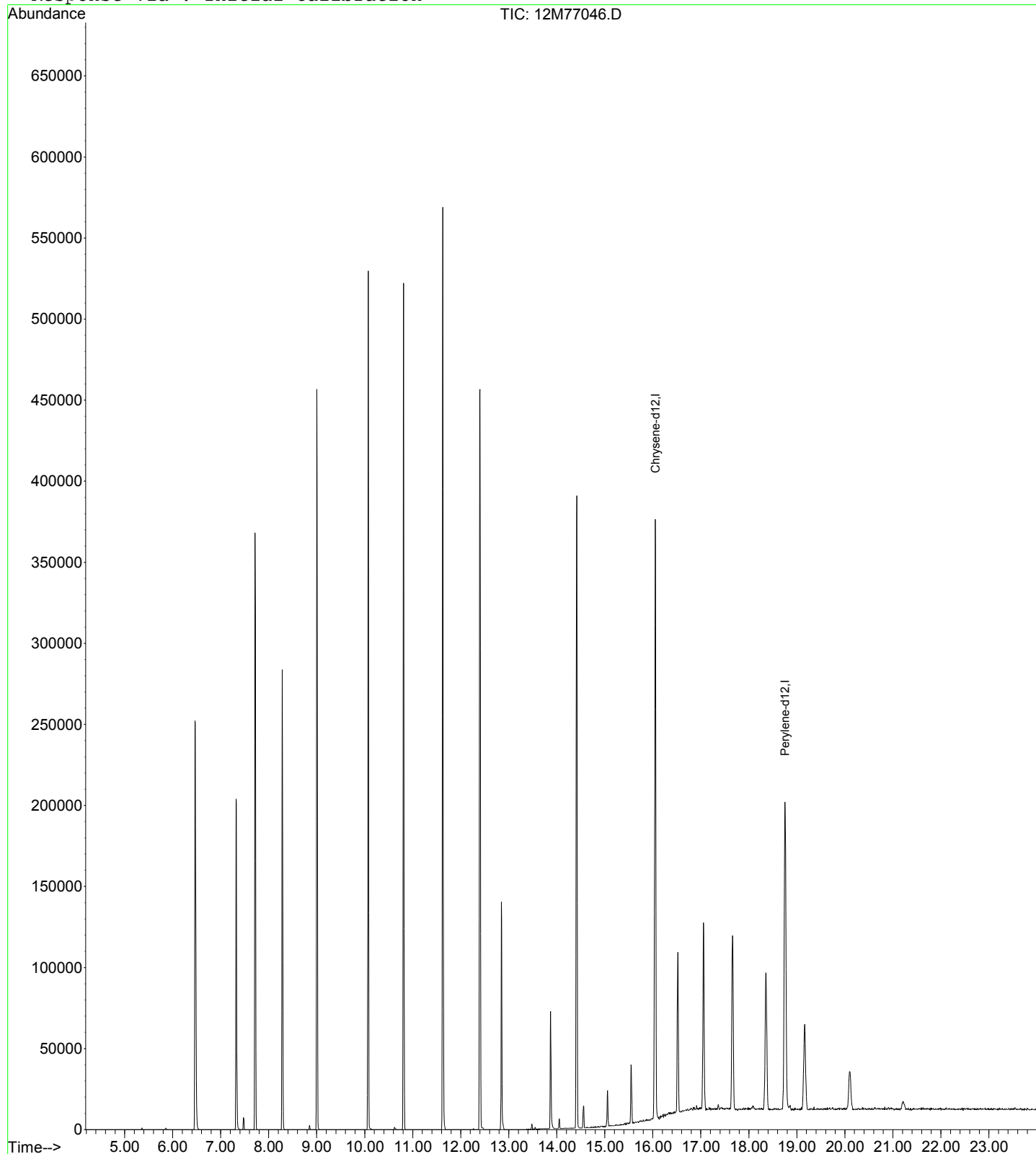
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration





Section C: GCMS Semivolatiles EPA 8270C QC Sample Raw Data

Data File : I:\MSDCHEM\1\DATA\042220\12M77034.D Vial: 5
Acq On : 22 Apr 2020 11:58 am Operator: SCB
Sample : B0D1025-BLK2 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 24 14:23:29 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Apr 24 10:20:42 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	64572	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.004	136	240010	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.809	164	139476	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.401	188	243415	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	196862	40.0000	ug/ml	0.016
42) Perylene-d12	18.759	264	208963	40.0000	ug/ml	0.022
Target Compounds						Qvalue
33) Disulfoton	12.40	88	3813	Below Cal	#	45

Data File : I:\MSDCHEM\1\DATA\042220\12M77034.D

Vial: 5

Acq On : 22 Apr 2020 11:58 am

Operator: SCB

Sample : B0D1025-BLK2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:29 2020

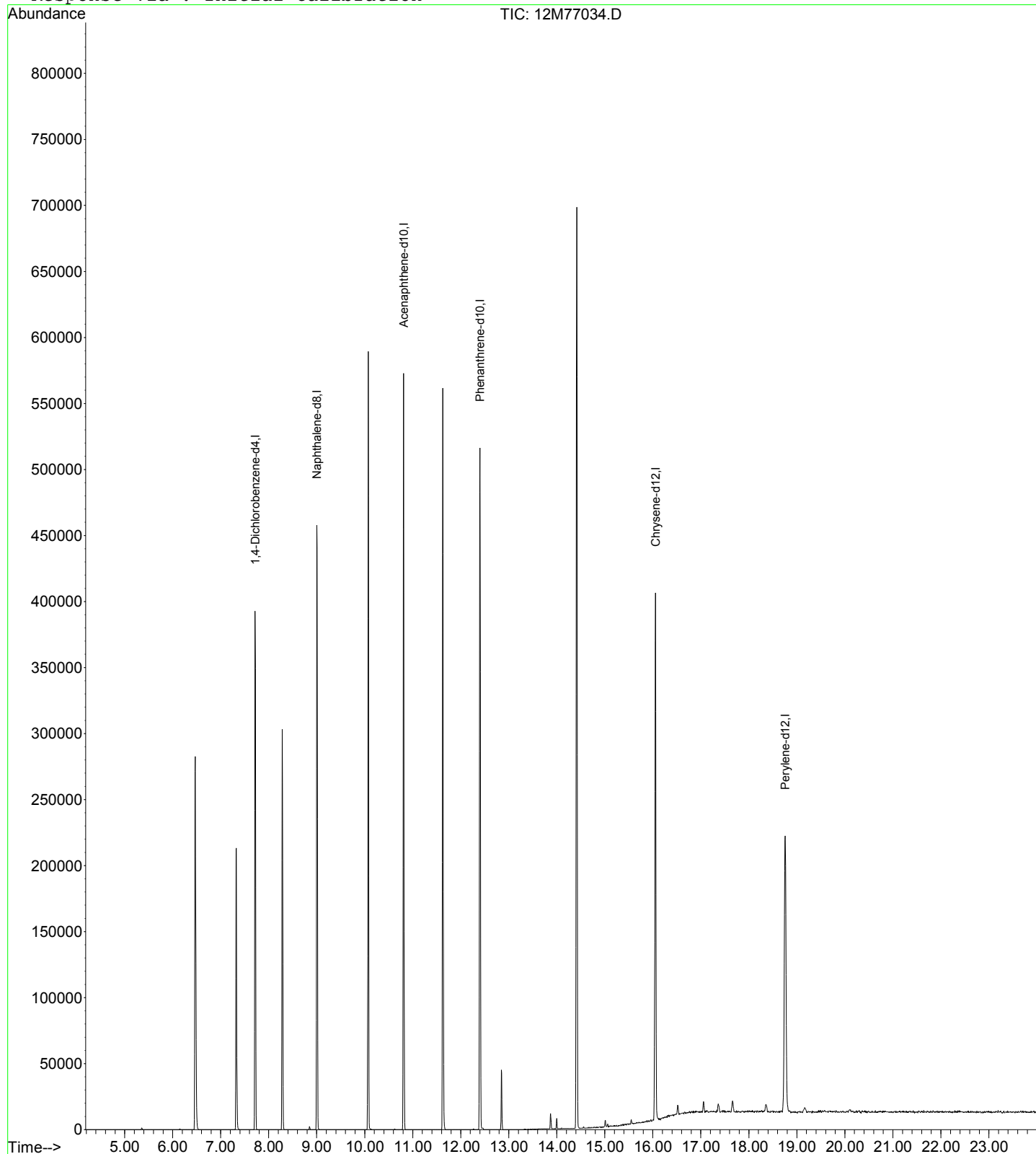
Quant Results File: TCL.RES

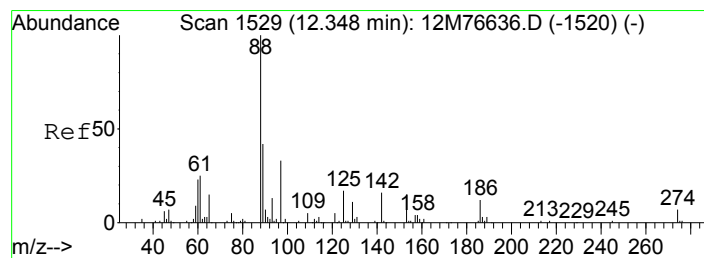
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

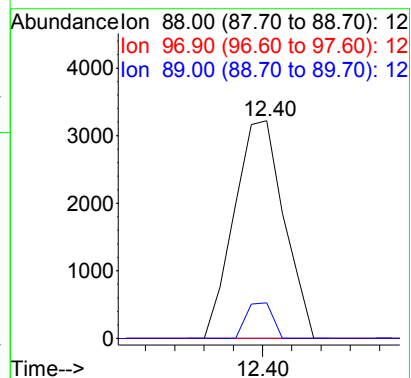
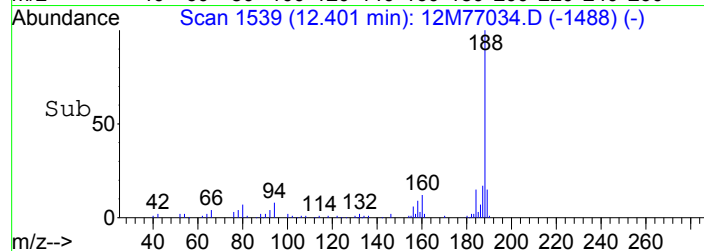
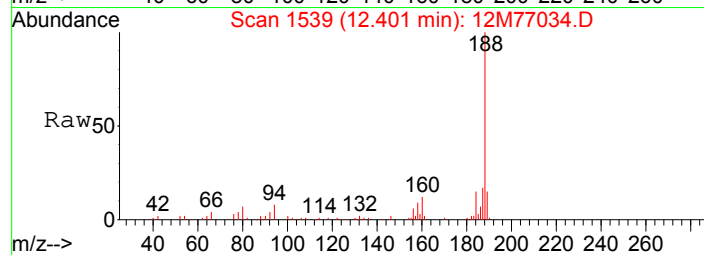
Response via : Initial Calibration





#33
Disulfoton
Concen: Below Cal
RT: 12.40 min Scan# 1539
Delta R.T. 0.07 min
Lab File: 12M77034.D
Acq: 22 Apr 2020 11:58 am

Tgt Ion	88	Resp	3813
Ion	Ratio	Lower	Upper
88	100		
97	0.0	26.6	40.0#
89	8.7	33.4	50.0#



Data File : I:\MSDCHEM\1\DATA\042220\12M77034.D Vial: 5
Acq On : 22 Apr 2020 11:58 am Operator: SCB
Sample : B0D1025-BLK2 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:31:57 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	196862	40.0000	ug/L	0.016
3) Perylene-d12	18.759	264	208962	40.0000	ug/L	0.021

Target Compounds Qvalue

Data File : I:\MSDCHEM\1\DATA\042220\12M77034.D

Vial: 5

Acq On : 22 Apr 2020 11:58 am

Operator: SCB

Sample : B0D1025-BLK2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:31 2020

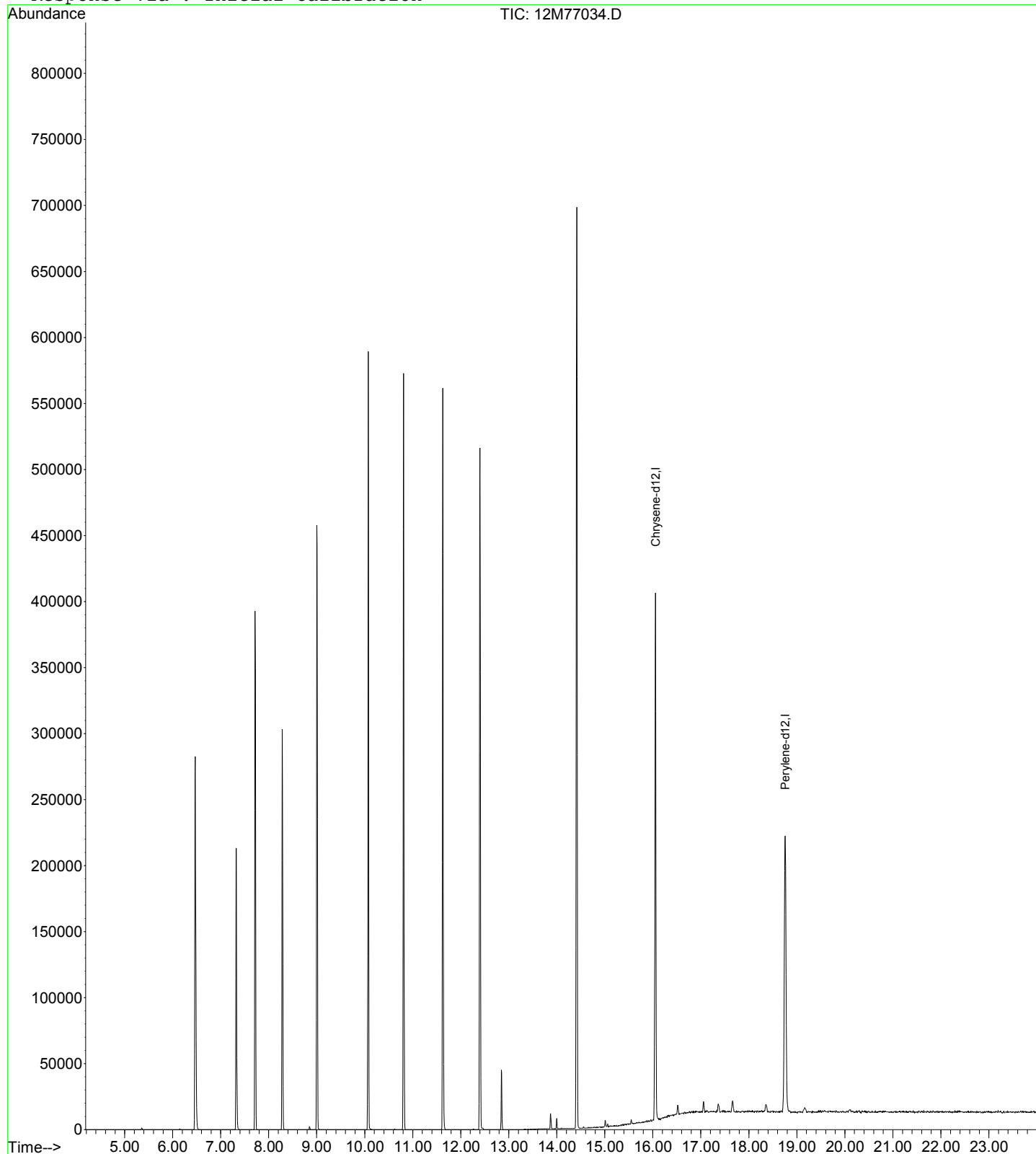
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77035.D

Vial: 6

Acq On : 22 Apr 2020 12:29 pm

Operator: SCB

Sample : B0D1025-BS2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 11:40:31 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	63296	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.009	136	233274	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.810	164	133542	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.402	188	221755	40.0000	ug/ml	0.000
86) Chrysene-d12	16.056	240	179194	40.0000	ug/ml	0.000
98) Perylene-d12	18.764	264	179312	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.472	112	100573	43.1049087	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery =	43.10%		
9) Phenol-d5	7.326	99	79245	30.5959551	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery =	30.60%		
26) Nitrobenzene-d5	8.283	82	87026	33.3285060	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	66.66%		
49) 2-Fluorobiphenyl	10.072	172	188088	35.1014766	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery =	70.20%		
72) 2,4,6-Tribromophenol	11.627	330	84802	148.3833041	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery =	148.38%#		
89) p-Terphenyl-d14	14.416	244	238769	43.9155189	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery =	87.83%		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	24348	15.4911	ug/ml#	44
3) Pyridine	5.05	79	18653	7.0542	ug/ml#	74
4) 2-Picoline	5.89	93	30123	10.5790	ug/ml	96
5) n-Nitrosomethylethylamine	6.01	88	30970	26.2176	ug/ml#	49
7) n-Nitrosodiethylamine	6.70	102	35134	29.6366	ug/ml#	61
8) Aniline	7.41	66	27173	19.9232	ug/ml	76
10) Phenol	7.34	94	40284	14.1079	ug/ml#	71
11) bis(2-Chloroethyl) ether	7.43	63	55145	30.1625	ug/ml#	39
12) 2-Chlorophenol	7.54	128	76447	30.2102	ug/ml	96
13) 1,3-Dichlorobenzene	7.69	146	43850	16.4706	ug/ml	96
14) 1,4-Dichlorobenzene	7.74	146	46740	17.8329	ug/ml	96
15) Benzyl Alcohol	7.83	108	45438	30.2023	ug/ml	81
16) 1,2-Dichlorobenzene	7.93	146	43743	18.6947	ug/ml	97
17) 2-Methylphenol	7.93	107	54720	31.3003	ug/ml	92
18) bis(2-Chloroisopropyl) ethe	7.97	45	107264	33.7018	ug/ml	92
19) 3-,4-Methylphenol	8.06	107	76244	31.2642	ug/ml	91
20) n-Nitrosopyrrolidine	8.10	100	34085	32.5280	ug/ml#	42
21) n-Nitrosodipropylamine	8.11	70	52355	35.4948	ug/ml	75
22) n-Nitrosomorpholine	8.11	56	50312	44.6532	ug/ml#	92
23) o-Toluidine	8.16	106	95005	26.3044	ug/ml	98
24) Hexachloroethane	8.25	117	14325	13.8879	ug/ml	97
27) Nitrobenzene	8.30	77	86099	36.1021	ug/ml	92
28) n-Nitrosopiperidine	8.45	114	39493	32.9444	ug/ml#	58
29) Isophorone	8.52	82	173859	40.1632	ug/ml	96
30) 2-Nitrophenol	8.62	139	40611	33.0698	ug/ml#	78
31) 2,4-Dimethylphenol	8.59	122	77727	37.3940	ug/ml	93
32) bis(2-Chloroethoxy)methane	8.69	93	108351	41.0557	ug/ml	87
33) Benzoic Acid	8.64	105	6797	21.8884	ug/ml	73
34) 2,4-Dichlorophenol	8.85	162	68041	38.0817	ug/ml	98
35) a,a-Dimethylphenethylamine	8.93	58	8686	1.5826	ug/ml#	88
36) 1,2,4-Trichlorobenzene	8.95	180	37101	18.5447	ug/ml	99
37) Naphthalene	9.03	128	186285	26.5688	ug/ml	98
38) 4-Chloroaniline	9.06	65	27031	34.3545	ug/ml	69

(#) = qualifier out of range (m) = manual integration

12M77035.D MEGAMIX.M Fri Apr 24 14:48:38 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77035.D

Vial: 6

Acq On : 22 Apr 2020 12:29 pm

Operator: SCB

Sample : B0D1025-BS2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 11:40:31 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.17	225	15960	16.2349	ug/ml	100
40) n-Nitrosodi-n-Butylamine	9.37	84	59901	42.3097	ug/ml#	77
41) p-Phenylenediamine	9.50	108	6965	3.0857	ug/ml#	1
42) 4-Chloro-3-Methylphenol	9.50	107	87439	45.4865	ug/ml	92
43) 2-Methylnaphthalene	9.71	142	116048	25.7617	ug/ml	98
44) 1-Methylnaphthalene	9.83	142	119776	28.2737	ug/ml#	93
46) Hexachlorocyclopentadiene	9.93	237	8551	10.6978	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	55101	43.5583	ug/ml	98
48) 2,4,5-Trichlorophenol	10.05	196	59871	45.1000	ug/ml	98
50) 2-Chloronaphthalene	10.22	162	142796	34.3373	ug/ml	95
51) 2-Nitroaniline	10.32	65	65268	50.4422	ug/ml	84
52) Dimethylphthalate	10.48	163	222318	46.9630	ug/ml	99
53) 1,3-Dinitrobenzene	10.54	168	38371	46.0995	ug/ml#	76
54) 2,6-Dinitrotoluene	10.57	165	49491	43.2861	ug/ml	73
55) Acenaphthylene	10.66	152	242284	38.1562	ug/ml	99
56) 3-Nitroaniline	10.73	138	53024	41.6439	ug/ml	91
57) 2,4-Dinitrophenol	10.84	184	25181	52.9444	ug/ml	56
58) Acenaphthene	10.84	154	164445	41.3334	ug/ml	96
59) 4-Nitrophenol	10.85	65	27099	38.2117	ug/ml	76
60) 2,4-Dinitrotoluene	10.99	165	67816	48.3476	ug/ml	75
61) Dibenzofuran	11.00	168	228016	39.6957	ug/ml#	90
62) 2,3,5,6-Tetrachlorophenol	11.15	232	42332	44.7472	ug/ml#	88
63) 2,3,4,6-Tetrachlorophenol	11.15	232	42337	43.4663	ug/ml#	87
64) 1-Naphthylamine	11.08	143	118201	27.3593	ug/ml#	89
65) 2-Naphthylamine	11.15	143	65792	16.4925	ug/ml	91
66) Diethylphthalate	11.18	149	227426	49.2779	ug/ml	98
67) Fluorene	11.35	166	201334	44.4486	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.30	204	84504	38.1175	ug/ml	86
69) 4-Nitroaniline	11.37	138	59247	48.3999	ug/ml#	70
70) 5-Nitro-o-Toluidine	11.36	152	67672	54.0057	ug/ml#	82
71) 1,2-Diphenylhydrazine	11.47	77	241020	50.4736	ug/ml	93
74) 4,6-Dinitro-2-Methylphenol	11.41	198	41311	58.5871	ug/ml#	44
75) Diphenylamine/n-Nitrosodip	11.42	169	357783	89.8757	ug/ml	99
76) 4-Bromophenyl Phenyl Ether	11.83	248	47059	39.3485	ug/ml	85
77) Hexachlorobenzene	12.04	284	57754	44.6216	ug/ml	83
78) 4-Aminobiphenyl	12.12	169	55699	11.2651	ug/ml	98
79) Pentachlorophenol	12.23	266	37676	51.9024	ug/ml	99
80) Phenanthrene	12.43	178	300205	44.4541	ug/ml	99
81) Anthracene	12.48	178	295020	43.0692	ug/ml	99
82) Carbazole	12.64	167	317852	50.1894	ug/ml	94
83) Di-n-Butyl Phthalate	13.00	149	407253	52.8052	ug/ml	98
85) Fluoranthene	13.96	202	334983	45.8257	ug/ml	96
87) Benzidine	14.07	184	5626	1.4683	ug/ml	100
88) Pyrene	14.29	202	346919	46.3133	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.63	225	62175	46.0030	ug/ml#	75
91) Butyl Benzyl Phthalate	15.09	149	186219	59.7775	ug/ml	91
92) 3,3'-Dimethylbenzidine	15.10	212	13237	3.1408	ug/ml#	65
93) 2-Acetylaminofluorene	15.52	181	166469	52.8193	ug/ml	93
94) bis(2-Ethylhexyl)phthalate	15.93	149	260442	58.5386	ug/ml	97
95) 3,3'-Dichlorobenzidine	15.94	252	90887	37.8882	ug/ml	99
96) Benzo[a]anthracene	16.03	228	299327	47.7270	ug/ml	99
97) Chrysene	16.10	228	277560	45.3208	ug/ml	99
99) Di-n-Octyl Phthalate	16.87	149	424704	60.0147	ug/ml	93
100) Benzo[b]fluoranthene	17.91	252	323229	56.7164	ug/ml	97

(#)=qualifier out of range (m)=manual integration

12M77035.D MEGAMIX.M

Fri Apr 24 14:48:38 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77035.D

Vial: 6

Acq On : 22 Apr 2020 12:29 pm

Operator: SCB

Sample : B0D1025-BS2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 11:40:31 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

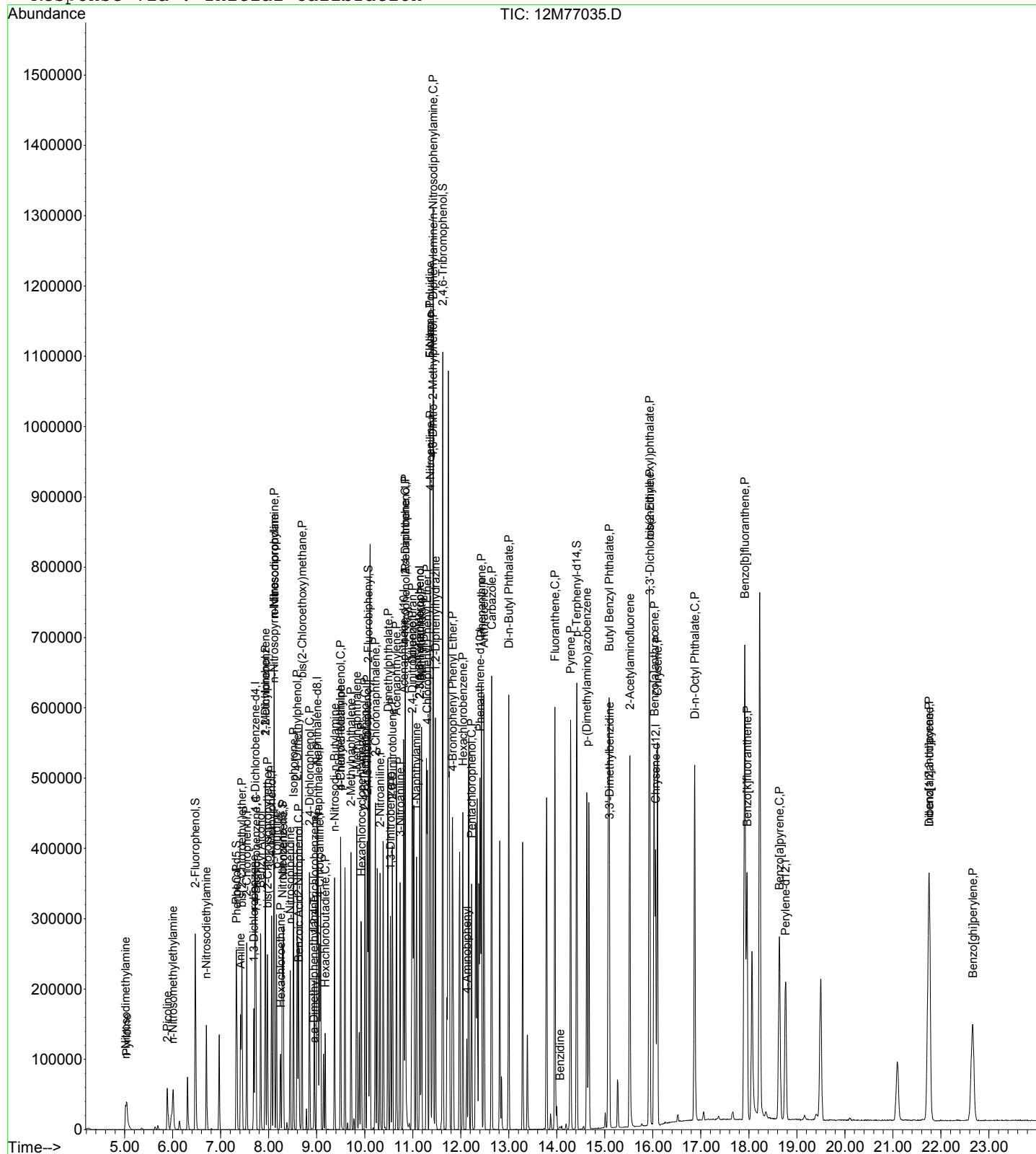
Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
101) Benzo[k]fluoranthene	17.96	252	251191	47.5782	ug/ml	97
102) Benzo[a]pyrene	18.64	252	247299	49.5300	ug/ml	97
103) Indeno[1,2,3-cd]pyrene	21.76	276	319297	51.9589	ug/ml	93
104) Dibenz[ah]anthracene	21.75	278	275651	53.2145	ug/ml	96
105) Benzo[ghi]perylene	22.66	276	244437	48.1458	ug/ml	93

Quant Results File: MEGAMIX.RES

```
Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Thu Apr 23 14:43:01 2020
Response via : Initial Calibration
```



Data File : I:\MSDCHEM\1\DATA\042220\12M77035.D

Vial: 6

Acq On : 22 Apr 2020 12:29 pm

Operator: SCB

Sample : B0D1025-BS2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:21:59 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	63296	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.009	136	233274	40.0000	ug/ml	0.011
15) Acenaphthene-d10	10.810	164	133542	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.402	188	221755	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	179194	40.0000	ug/ml	0.016
42) Perylene-d12	18.764	264	179312	40.0000	ug/ml	0.027

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Methyl Methanesulfonate	6.31	80	38928	27.2034	ug/ml	90
4) Ethyl Methanesulfonate	6.97	79	53403	31.4682	ug/ml	96
6) Pentachloroethane	7.45	167	17262	19.0553	ug/ml	99
7) Acetophenone	8.12	105	93590	30.9850	ug/ml	94
9) 0,0,0-Triethyl Phosphoroth	8.69	198	41838	38.3563	ug/ml	95
10) Alpha-Terpineol	9.14	59	420	Below Cal	#	1
11) 2,6-Dichlorophenol	9.08	162	64874	36.4089	ug/ml	98
12) Hexachloropropene	9.14	213	19499	15.7551	ug/ml	99
13) Caprolactam	9.37	55	8475	8.6262	ug/ml#	28
14) Safrole	9.59	162	51156	29.6494	ug/ml#	83
16) 1,2,4,5-Tetrachlorobenzene	9.92	216	50236	25.8218	ug/ml	99
17) Isosafrole	10.11	162	138515	74.4517	ug/ml#	84
18) 1,1'-Biphenyl	10.17	154	1850	Below Cal	#	60
19) 1-Chloronaphthalene	10.26	162	109684	32.8961	ug/ml	95
20) 1,4-Naphthoquinone	10.39	158	70802	41.9561	ug/ml#	78
21) Pentachlorobenzene	11.02	250	67181	40.7592	ug/ml#	91
22) Thionazin	11.28	107	40816	58.3266	ug/ml	93
24) Sulfotepp	11.62	322	49207	61.4668	ug/ml	90
25) Sym-Trinitrobenzene	11.71	75	65393	53.3004	ug/ml#	88
26) Diallate	11.74	86	138767	Below Cal		97
27) Phenacetin	11.73	108	129863	61.3114	ug/ml	91
28) Phorate	11.76	75	136213	55.1343	ug/ml#	98
29) Dimethoate	11.97	87	84064	56.5482	ug/ml	92
31) Pronamide	12.17	173	111178	54.0488	ug/ml	96
32) Pentachloronitrobenzene	12.31	237	35519	70.1688	ug/ml	93
33) Disulfoton	12.34	88	108128	52.1367	ug/ml#	89
34) Parathion Methyl	12.81	109	87376	56.7522	ug/ml	94
35) Parathion Ethyl	13.29	97	55828	61.5570	ug/ml	95
36) 4-Nitroquinoline 1-Oxide	13.39	190	16445	38.8431	ug/ml#	69
37) Isodrin	13.79	193	41655	53.8059	ug/ml#	94
39) Aramite	14.42	185	678	1.6865	ug/ml#	32
40) Chlorobenzilate	14.67	251	90594	51.0377	ug/ml#	81
41) Famphur	15.07	218	135097	60.3520	ug/ml	94
43) 7,12-Dimethylbenz[a]anthra	17.91	256	136736	67.6967	ug/ml	96
45) 3-Methylcholanthrene	19.50	268	128737	46.6075	ug/ml	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M77035.D TCL.M Fri Apr 24 14:49:45 2020

Vial: 6

Operator: SCB

Inst : MSD12

Multiplr: 1.00

MS Integration Params: RTEINT.P

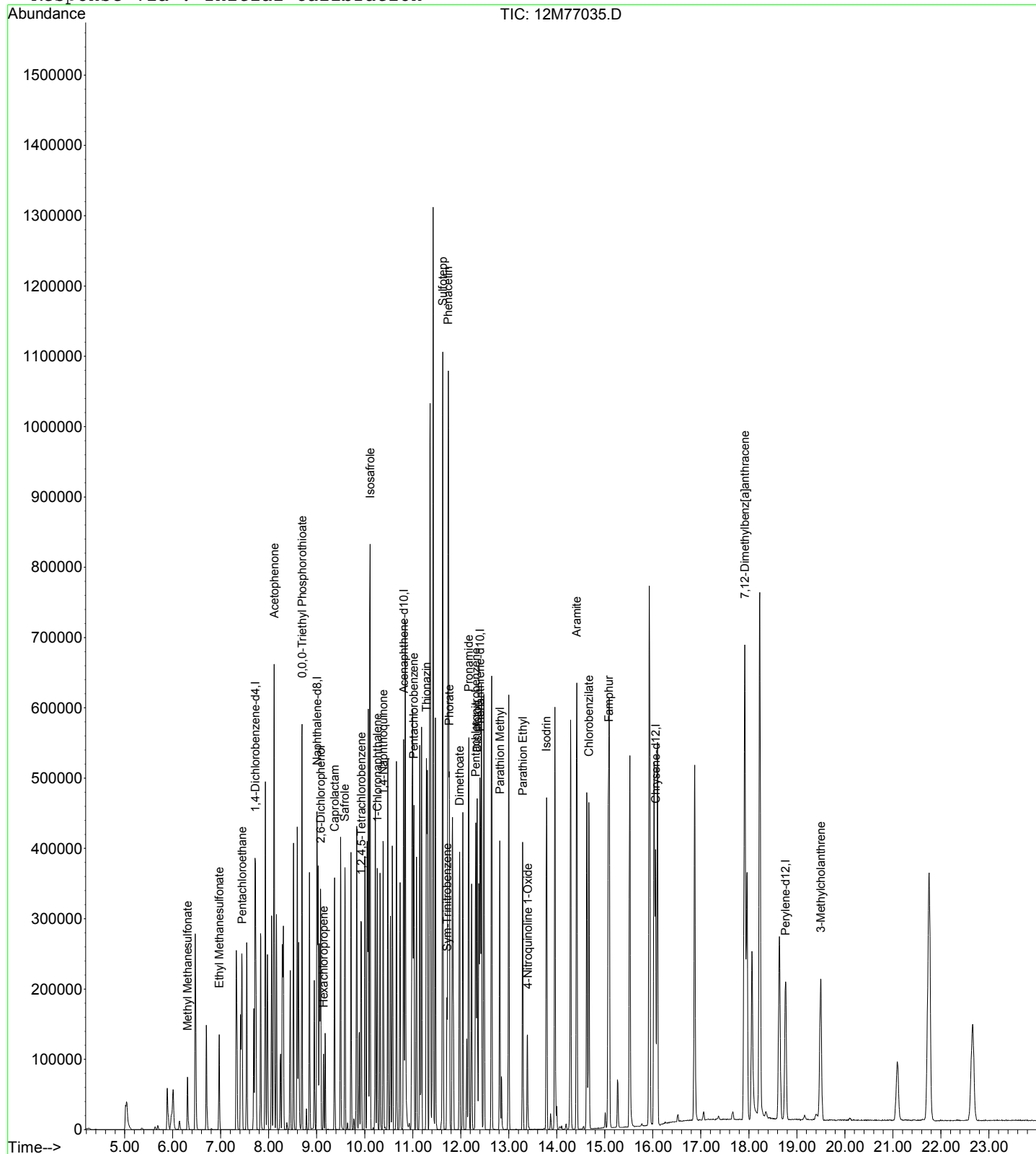
Quant Results File: TCL.RES

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Method      : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
```

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77035.D Vial: 6
Acq On : 22 Apr 2020 12:29 pm Operator: SCB
Sample : B0D1025-BS2 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:10 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	179194	40.0000	ug/L	0.016
3) Perylene-d12	18.764	264	179312	40.0000	ug/L	0.027

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Kepone	15.26	272	10755	17.0841	ug/L	94
4) Hexachlorophene	18.23	196	121880	82.2940	ug/L	100

Data File : I:\MSDCHEM\1\DATA\042220\12M77035.D

Vial: 6

Acq On : 22 Apr 2020 12:29 pm

Operator: SCB

Sample : B0D1025-BS2

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

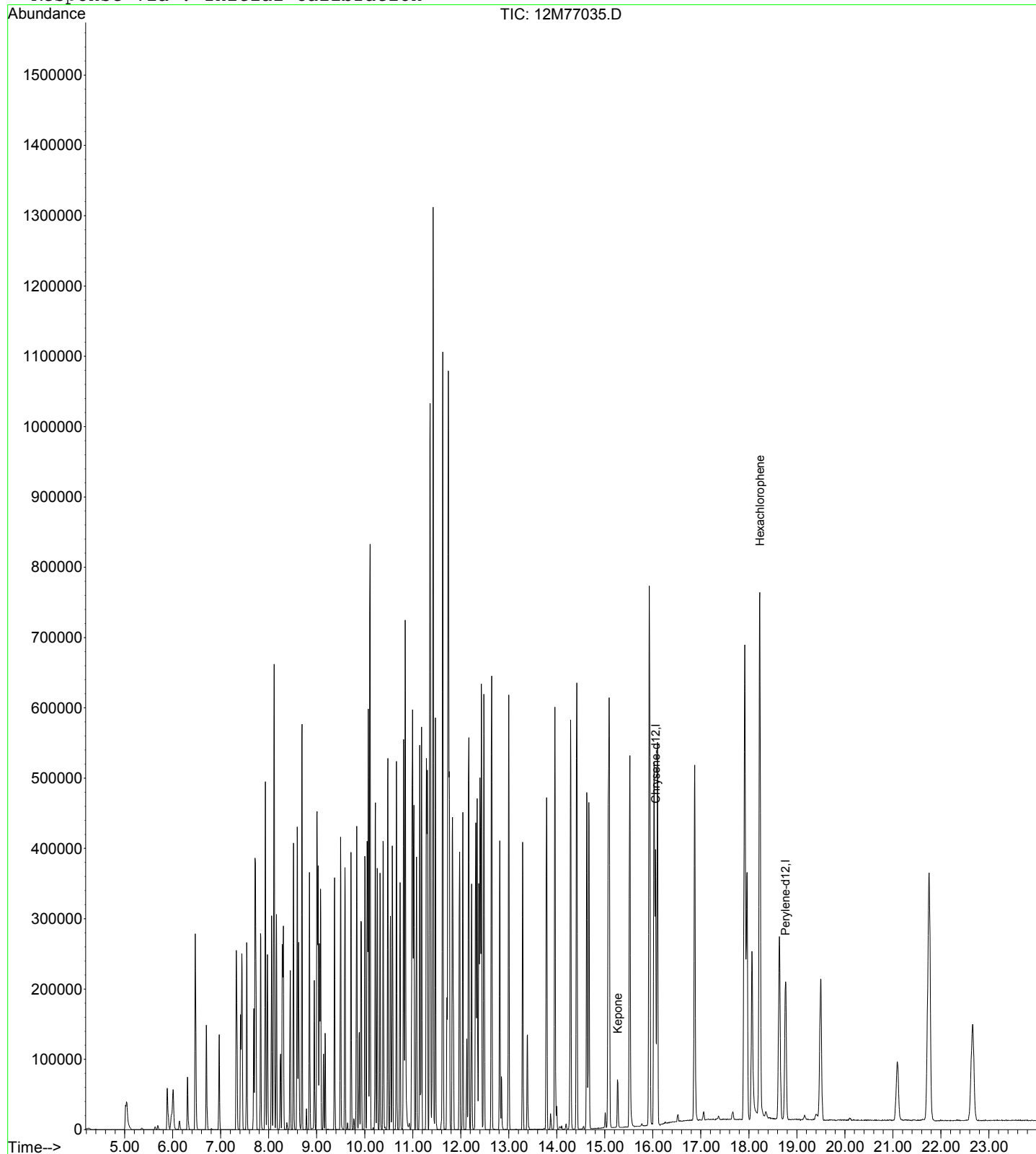
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D

Vial: 14

Acq On : 22 Apr 2020 4:53 pm

Operator: SCB

Sample : B0D1025-MS1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 11:40:42 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	62900	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.009	136	229831	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.809	164	132663	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.401	188	218900	40.0000	ug/ml	0.000
86) Chrysene-d12	16.056	240	177237	40.0000	ug/ml	0.000
98) Perylene-d12	18.764	264	180003	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.472	112	121530	52.4148615	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery =	52.41%		
9) Phenol-d5	7.326	99	93443	36.3048410	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery =	36.30%		
26) Nitrobenzene-d5	8.283	82	102050	39.6677496	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	79.34%		
49) 2-Fluorobiphenyl	10.072	172	208625	39.1921158	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery =	78.38%		
72) 2,4,6-Tribromophenol	11.627	330	82757	145.7644920	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery =	145.76%#		
89) p-Terphenyl-d14	14.416	244	187734	34.9101798	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery =	69.82%		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	31286	20.0306	ug/ml#	46
3) Pyridine	5.04	79	27320	10.3970	ug/ml#	74
4) 2-Picoline	5.88	93	39260	13.8747	ug/ml	95
5) n-Nitrosomethylethylamine	6.01	88	38497	32.7948	ug/ml#	52
7) n-Nitrosodiethylamine	6.70	102	43106	36.5902	ug/ml#	64
8) Aniline	7.42	66	38689	28.5452	ug/ml	95
10) Phenol	7.34	94	48044	16.9315	ug/ml#	71
11) bis(2-Chloroethyl) ether	7.44	63	66611	36.6634	ug/ml	72
12) 2-Chlorophenol	7.54	128	90876	36.1383	ug/ml	96
13) 1,3-Dichlorobenzene	7.69	146	36830	13.9209	ug/ml	96
14) 1,4-Dichlorobenzene	7.74	146	38686	14.8530	ug/ml	96
15) Benzyl Alcohol	7.83	108	54612	36.5287	ug/ml	83
16) 1,2-Dichlorobenzene	7.93	146	35327	15.1930	ug/ml	97
17) 2-Methylphenol	7.93	107	63678	36.6537	ug/ml	92
18) bis(2-Chloroisopropyl) ethe	7.97	45	109132	34.5046	ug/ml	93
19) 3-,4-Methylphenol	8.06	107	87248	36.0016	ug/ml	91
20) n-Nitrosopyrrolidine	8.11	100	38593	37.0620	ug/ml#	47
21) n-Nitrosodipropylamine	8.11	70	59357	41.1726	ug/ml	77
22) n-Nitrosomorpholine	8.11	56	56889	51.1562	ug/ml#	93
23) o-Toluidine	8.16	106	112205	31.2622	ug/ml	98
24) Hexachloroethane	8.25	117	14071	13.7275	ug/ml	96
27) Nitrobenzene	8.30	77	92240	39.2565	ug/ml	92
28) n-Nitrosopiperidine	8.45	114	44881	37.9998	ug/ml#	60
29) Isophorone	8.52	82	193897	45.4632	ug/ml	96
30) 2-Nitrophenol	8.62	139	46400	38.3498	ug/ml#	77
31) 2,4-Dimethylphenol	8.59	122	87449	42.7014	ug/ml	93
32) bis(2-Chloroethoxy) methane	8.69	93	123567	47.5227	ug/ml	87
33) Benzoic Acid	8.65	105	24667	45.2653	ug/ml	94
34) 2,4-Dichlorophenol	8.85	162	74593	42.3742	ug/ml	98
35) a,a-Dimethylphenethylamine	8.87	58	5761	1.0654	ug/ml#	40
36) 1,2,4-Trichlorobenzene	8.95	180	43664	22.1522	ug/ml	99
37) Naphthalene	9.03	128	176842	25.5999	ug/ml	98
38) 4-Chloroaniline	9.06	65	35989	46.4246	ug/ml	73

(#) = qualifier out of range (m) = manual integration

12M77043.D MEGAMIX.M Fri Apr 24 14:48:48 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D

Vial: 14

Acq On : 22 Apr 2020 4:53 pm

Operator: SCB

Sample : B0D1025-MS1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 11:40:42 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.17	225	21198	21.8862	ug/ml	98
40) n-Nitrosodi-n-Butylamine	9.37	84	63811	45.7466	ug/ml#	79
41) p-Phenylenediamine	9.50	108	6827	3.0699	ug/ml#	1
42) 4-Chloro-3-Methylphenol	9.50	107	90270	47.6627	ug/ml	92
43) 2-Methylnaphthalene	9.71	142	135464	30.5224	ug/ml	99
44) 1-Methylnaphthalene	9.83	142	138658	33.2212	ug/ml#	94
46) Hexachlorocyclopentadiene	9.93	237	16655	17.9856	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	57339	45.6278	ug/ml	100
48) 2,4,5-Trichlorophenol	10.05	196	59569	45.1699	ug/ml	99
50) 2-Chloronaphthalene	10.22	162	162683	39.3786	ug/ml	95
51) 2-Nitroaniline	10.32	65	66008	51.3521	ug/ml	84
52) Dimethylphthalate	10.48	163	223382	47.5004	ug/ml	99
53) 1,3-Dinitrobenzene	10.54	168	38530	46.5972	ug/ml#	77
54) 2,6-Dinitrotoluene	10.58	165	49230	43.3432	ug/ml#	71
55) Acenaphthylene	10.66	152	255678	40.5323	ug/ml	99
56) 3-Nitroaniline	10.73	138	53865	42.5847	ug/ml	91
57) 2,4-Dinitrophenol	10.84	184	25283	53.4529	ug/ml	63
58) Acenaphthene	10.84	154	174465	44.1425	ug/ml	97
59) 4-Nitrophenol	10.86	65	28441	40.3320	ug/ml	77
60) 2,4-Dinitrotoluene	10.99	165	67046	48.1154	ug/ml	74
61) Dibenzofuran	11.00	168	234566	41.1065	ug/ml#	90
62) 2,3,5,6-Tetrachlorophenol	11.15	232	43124	45.8864	ug/ml#	89
63) 2,3,4,6-Tetrachlorophenol	11.15	232	43129	44.5728	ug/ml#	88
64) 1-Naphthylamine	11.08	143	87550	20.3989	ug/ml#	87
65) 2-Naphthylamine	11.15	143	125997	31.7937	ug/ml	91
66) Diethylphthalate	11.18	149	224795	49.0305	ug/ml	97
67) Fluorene	11.35	166	200912	44.6493	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.30	204	85975	39.0380	ug/ml	86
69) 4-Nitroaniline	11.37	138	59115	48.6120	ug/ml#	70
70) 5-Nitro-o-Toluidine	11.36	152	67513	54.2358	ug/ml#	83
71) 1,2-Diphenylhydrazine	11.47	77	236748	49.9074	ug/ml	93
74) 4,6-Dinitro-2-Methylphenol	11.41	198	40083	57.5870	ug/ml#	40
75) Diphenylamine/n-Nitrosodip	11.42	169	348729	88.7439	ug/ml	99
76) 4-Bromophenyl Phenyl Ether	11.83	248	46334	39.2476	ug/ml	85
77) Hexachlorobenzene	12.04	284	55856	43.7180	ug/ml	83
78) 4-Aminobiphenyl	12.12	169	169713	34.7719	ug/ml	99
79) Pentachlorophenol	12.23	266	37169	51.8747	ug/ml	99
80) Phenanthrene	12.43	178	288529	43.2823	ug/ml	99
81) Anthracene	12.48	178	282384	41.7622	ug/ml	99
82) Carbazole	12.64	167	307617	49.2068	ug/ml	95
83) Di-n-Butyl Phthalate	13.00	149	390391	51.2791	ug/ml	98
85) Fluoranthene	13.96	202	316067	43.8019	ug/ml	97
87) Benzidine	14.07	184	10388	2.7410	ug/ml	100
88) Pyrene	14.29	202	329630	44.4911	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.63	225	62131	46.4781	ug/ml#	74
91) Butyl Benzyl Phthalate	15.09	149	177244	57.5247	ug/ml	91
92) 3,3'-Dimethylbenzidine	15.10	212	24504	5.8784	ug/ml#	81
93) 2-Acetylaminofluorene	15.52	181	164822	52.8725	ug/ml	94
94) bis(2-Ethylhexyl)phthalate	15.93	149	249296	56.6521	ug/ml	97
95) 3,3'-Dichlorobenzidine	15.94	252	102641	43.2605	ug/ml	99
96) Benzo[a]anthracene	16.03	228	288111	46.4459	ug/ml	99
97) Chrysene	16.10	228	265697	43.8628	ug/ml	99
99) Di-n-Octyl Phthalate	16.87	149	414942	58.4101	ug/ml	91
100) Benzo[b]fluoranthene	17.91	252	311732	54.4890	ug/ml	95

(#) = qualifier out of range (m) = manual integration

12M77043.D MEGAMIX.M

Fri Apr 24 14:48:49 2020

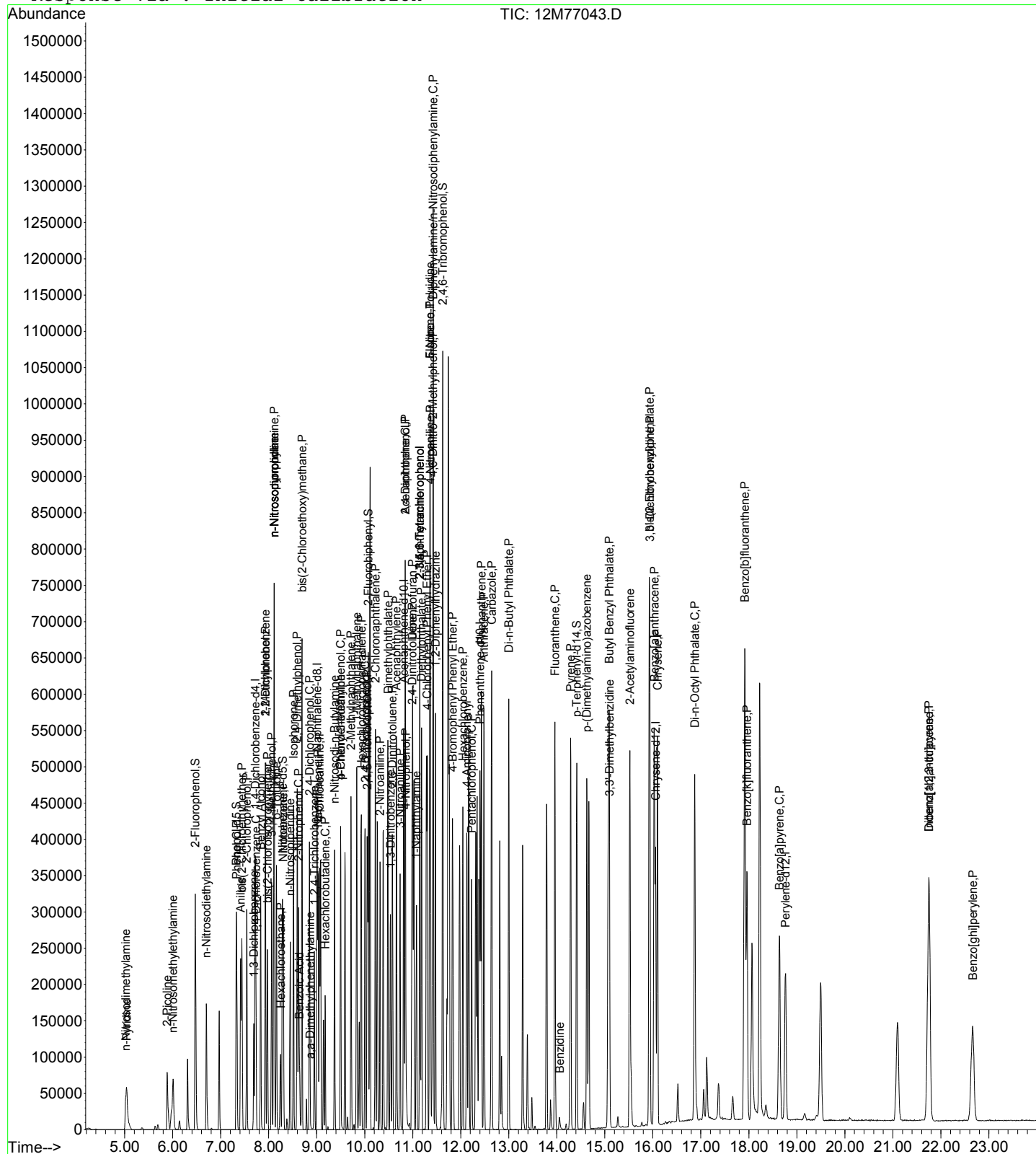
Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D Vial: 14
Acq On : 22 Apr 2020 4:53 pm Operator: SCB
Sample : B0D1025-MS1 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 23 11:40:42 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Tue Apr 21 08:35:29 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
101) Benzo[k]fluoranthene	17.96	252	241424	45.5527	ug/ml	97
102) Benzo[a]pyrene	18.64	252	239034	47.6909	ug/ml	97
103) Indeno[1,2,3-cd]pyrene	21.75	276	309466	50.1658	ug/ml	93
104) Dibenz[ah]anthracene	21.75	278	267556	51.4534	ug/ml	96
105) Benzo[ghi]perylene	22.66	276	237862	46.6709	ug/ml	93

Quant Results File: MEGAMIX.RES

```
Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Thu Apr 23 14:43:01 2020
Response via : Initial Calibration
```



Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D

Vial: 14

Acq On : 22 Apr 2020 4:53 pm

Operator: SCB

Sample : B0D1025-MS1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:22:04 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	62900	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.009	136	229831	40.0000	ug/ml	0.011
15) Acenaphthene-d10	10.809	164	132663	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.401	188	218900	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	177237	40.0000	ug/ml	0.016
42) Perylene-d12	18.764	264	180003	40.0000	ug/ml	0.027

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Methyl Methanesulfonate	6.31	80	49837	35.0460	ug/ml	90
4) Ethyl Methanesulfonate	6.97	79	64435	38.2080	ug/ml	96
6) Pentachloroethane	7.45	167	14490	16.0960	ug/ml	98
7) Acetophenone	8.12	105	105506	35.1500	ug/ml	95
9) 0,0,0-Triethyl Phosphoroth	8.69	198	49044	45.6362	ug/ml	95
10) Alpha-Terpineol	9.14	59	844	Below Cal	#	1
11) 2,6-Dichlorophenol	9.08	162	72461	41.2761	ug/ml	99
12) Hexachloropropene	9.14	213	26808	21.9852	ug/ml	98
13) Caprolactam	9.37	55	9032	9.3308	ug/ml#	29
14) Safrole	9.59	162	52854	31.0925	ug/ml#	82
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	65527	33.9047	ug/ml	98
17) Isosafrole	10.11	162	146119	79.0593	ug/ml#	85
18) 1,1'-Biphenyl	10.17	154	1704	Below Cal	#	65
19) 1-Chloronaphthalene	10.26	162	129514	39.6767	ug/ml	95
20) 1,4-Naphthoquinone	10.39	158	71261	42.5079	ug/ml#	77
21) Pentachlorobenzene	11.02	250	69626	42.5225	ug/ml#	91
22) Thionazin	11.28	107	40544	58.3216	ug/ml	93
24) Sulfotepp	11.62	322	47276	59.8249	ug/ml	88
25) Sym-Trinitrobenzene	11.71	75	62862	51.9563	ug/ml#	87
26) Diallate	11.74	86	133597	Below Cal		95
27) Phenacetin	11.74	108	127388	60.8364	ug/ml	91
28) Phorate	11.76	75	134914	55.3685	ug/ml#	97
29) Dimethoate	11.97	87	82426	56.0675	ug/ml	91
31) Pronamide	12.17	173	105726	52.0687	ug/ml	96
32) Pentachloronitrobenzene	12.31	237	33317	66.6771	ug/ml	94
33) Disulfoton	12.34	88	106891	52.2164	ug/ml#	89
34) Parathion Methyl	12.81	109	84898	55.8619	ug/ml	95
35) Parathion Ethyl	13.29	97	54502	60.8788	ug/ml	95
36) 4-Nitroquinoline 1-Oxide	13.39	190	15807	37.9844	ug/ml#	70
37) Isodrin	13.79	193	40097	52.4689	ug/ml	94
39) Aramite	14.42	185	376	0.9456	ug/ml#	32
40) Chlorobenzilate	14.67	251	86689	49.3770	ug/ml#	81
41) Famphur	15.07	218	126637	57.1973	ug/ml	94
43) 7,12-Dimethylbenz[a]anthra	17.91	256	133132	65.6593	ug/ml	95
45) 3-Methylcholanthrene	19.50	268	130234	46.9684	ug/ml	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M77043.D TCL.M Fri Apr 24 14:52:04 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D

Vial: 14

Acq On : 22 Apr 2020 4:53 pm

Operator: SCB

Sample : B0D1025-MS1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:22 2020

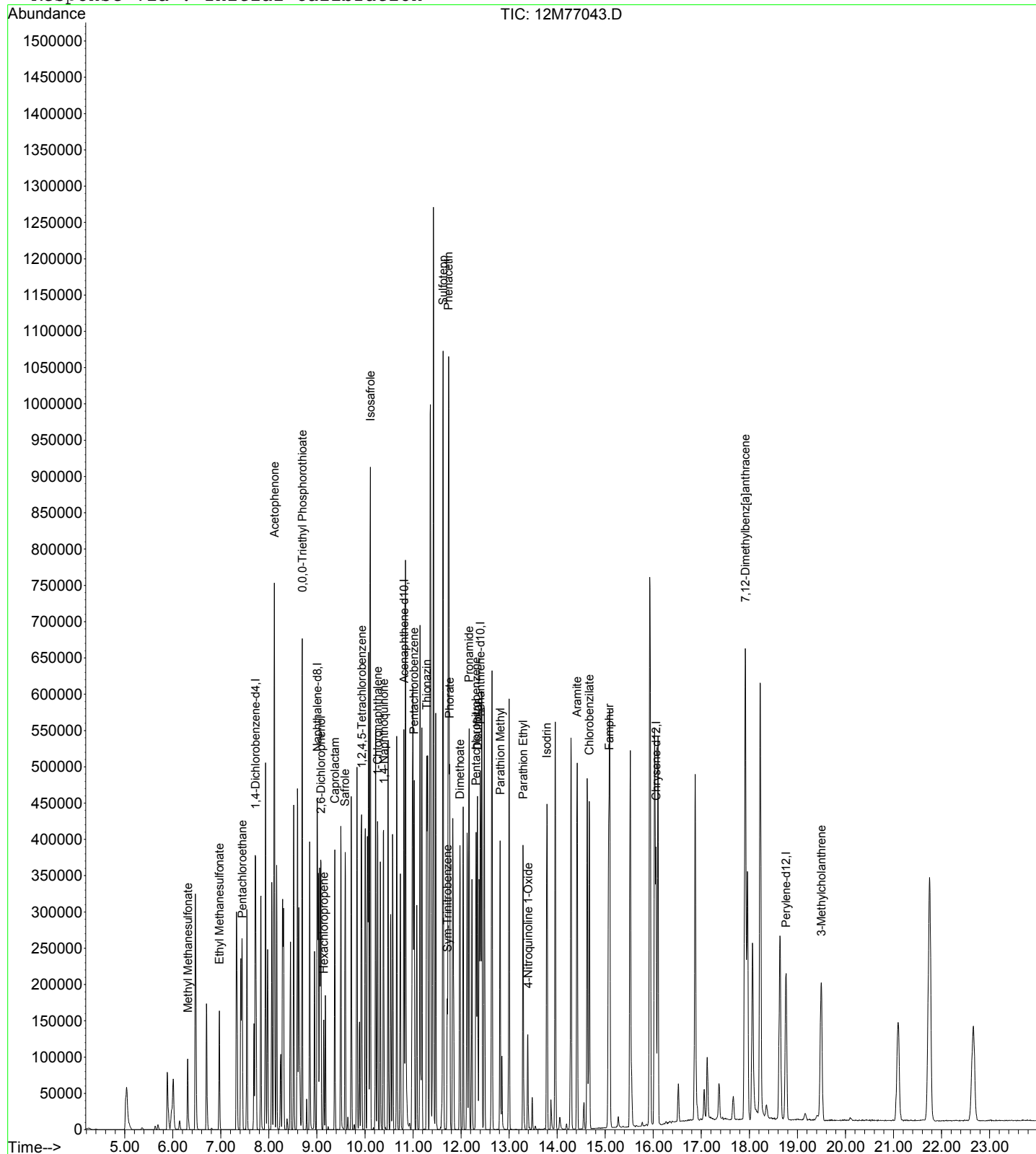
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D Vial: 14
Acq On : 22 Apr 2020 4:53 pm Operator: SCB
Sample : B0D1025-MS1 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:42 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	177237	40.0000	ug/L	0.016
3) Perylene-d12	18.764	264	180003	40.0000	ug/L	0.027

Target Compounds					Qvalue	
2) Kepone	15.27	272	4327	6.9492	ug/L #	92
4) Hexachlorophene	18.23	196	99395	66.8544	ug/L	99

Data File : I:\MSDCHEM\1\DATA\042220\12M77043.D

Vial: 14

Acq On : 22 Apr 2020 4:53 pm

Operator: SCB

Sample : B0D1025-MS1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

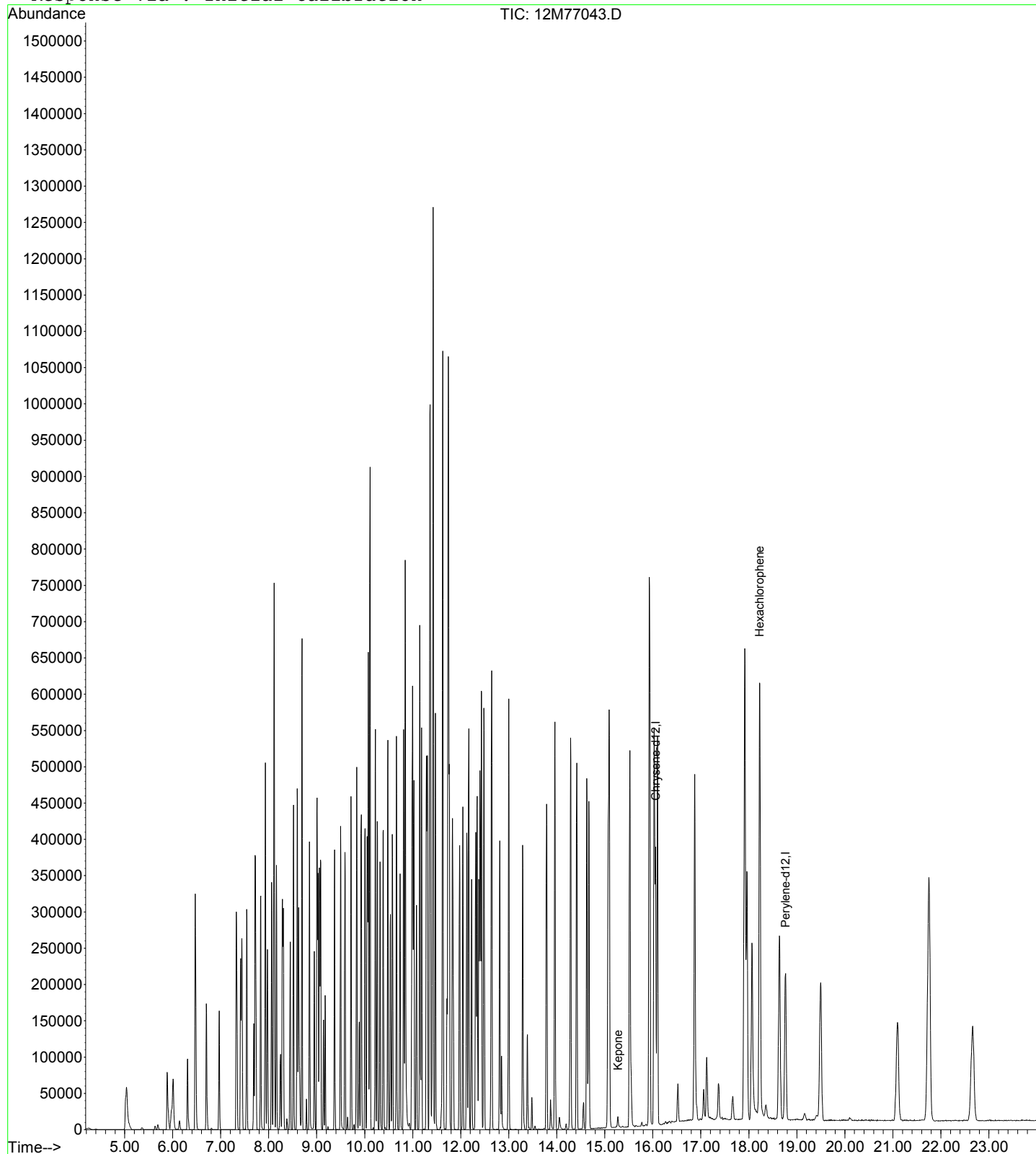
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77044.D

Vial: 15

Acq On : 22 Apr 2020 5:24 pm

Operator: SCB

Sample : B0D1025-MSD1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 12:06:31 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	59076	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.009	136	219537	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.809	164	124533	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.401	188	205950	40.0000	ug/ml	0.000
86) Chrysene-d12	16.056	240	165954	40.0000	ug/ml	0.000
98) Perylene-d12	18.764	264	169822	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.472	112	122806	56.3936356	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	= 56.39%		
9) Phenol-d5	7.326	99	93557	38.7020186	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	= 38.70%		
26) Nitrobenzene-d5	8.283	82	101219	41.1895908	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	= 82.38%		
49) 2-Fluorobiphenyl	10.072	172	201372	40.2992355	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	= 80.60%		
72) 2,4,6-Tribromophenol	11.627	330	75435	141.5419788	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	= 141.54%#		
89) p-Terphenyl-d14	14.415	244	159310	31.6387164	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	= 63.28%		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	31990	21.8071	ug/ml#	47
3) Pyridine	5.05	79	9767	3.9575	ug/ml#	78
4) 2-Picoline	5.88	93	40518	15.2461	ug/ml	94
5) n-Nitrosomethylethylamine	6.01	88	38640	35.0473	ug/ml#	51
7) n-Nitrosodiethylamine	6.70	102	42814	38.6948	ug/ml#	61
8) Aniline	7.42	66	42228	33.1731	ug/ml	93
10) Phenol	7.34	94	48438	18.1753	ug/ml#	72
11) bis(2-Chloroethyl)ether	7.44	63	69048	40.4648	ug/ml	75
12) 2-Chlorophenol	7.54	128	90023	38.1164	ug/ml	96
13) 1,3-Dichlorobenzene	7.69	146	41119	16.5481	ug/ml	96
14) 1,4-Dichlorobenzene	7.74	146	43858	17.9287	ug/ml	97
15) Benzyl Alcohol	7.83	108	52785	37.5920	ug/ml	81
16) 1,2-Dichlorobenzene	7.93	146	38910	17.8171	ug/ml	97
17) 2-Methylphenol	7.93	107	63243	38.7597	ug/ml	92
18) bis(2-Chloroisopropyl)ethe	7.97	45	119550	40.2452	ug/ml	93
19) 3-,4-Methylphenol	8.06	107	85709	37.6559	ug/ml	91
20) n-Nitrosopyrrolidine	8.11	100	37161	37.9968	ug/ml#	42
21) n-Nitrosodipropylamine	8.11	70	59921	44.7070	ug/ml	79
22) n-Nitrosomorpholine	8.11	56	56301	54.0402	ug/ml#	93
23) o-Toluidine	8.16	106	115610	34.2959	ug/ml	98
24) Hexachloroethane	8.25	117	15156	15.7432	ug/ml	94
27) Nitrobenzene	8.30	77	97036	43.2340	ug/ml	92
28) n-Nitrosopiperidine	8.45	114	43597	38.6435	ug/ml#	57
29) Isophorone	8.52	82	192973	47.3682	ug/ml	96
30) 2-Nitrophenol	8.62	139	46675	40.3860	ug/ml#	77
31) 2,4-Dimethylphenol	8.59	122	85244	43.5765	ug/ml	92
32) bis(2-Chloroethoxy)methane	8.69	93	124766	50.2337	ug/ml	87
33) Benzoic Acid	8.64	105	21791	43.1457	ug/ml	89
34) 2,4-Dichlorophenol	8.85	162	73241	43.5571	ug/ml	98
36) 1,2,4-Trichlorobenzene	8.95	180	35821	19.0253	ug/ml	98
37) Naphthalene	9.03	128	155347	23.5427	ug/ml	97
38) 4-Chloroaniline	9.06	65	34908	47.1416	ug/ml	74
39) Hexachlorobutadiene	9.17	225	16840	18.2019	ug/ml	99

(#) = qualifier out of range (m) = manual integration

12M77044.D MEGAMIX.M

Fri Apr 24 14:48:51 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77044.D

Vial: 15

Acq On : 22 Apr 2020 5:24 pm

Operator: SCB

Sample : B0D1025-MSD1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 12:06:31 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) n-Nitrosodi-n-Butylamine	9.37	84	60484	45.3947	ug/ml#	76
41) p-Phenylenediamine	9.50	108	6632	3.1221	ug/ml#	1
42) 4-Chloro-3-Methylphenol	9.50	107	86241	47.6705	ug/ml	93
43) 2-Methylnaphthalene	9.71	142	120970	28.5347	ug/ml	100
44) 1-Methylnaphthalene	9.83	142	122744	30.7873	ug/ml#	93
46) Hexachlorocyclopentadiene	9.93	237	14056	16.4840	ug/ml	98
47) 2,4,6-Trichlorophenol	10.01	196	54092	45.8541	ug/ml	100
48) 2,4,5-Trichlorophenol	10.05	196	56052	45.2778	ug/ml	99
50) 2-Chloronaphthalene	10.22	162	147406	38.0101	ug/ml	95
51) 2-Nitroaniline	10.32	65	64401	53.3727	ug/ml	83
52) Dimethylphthalate	10.48	163	212988	48.2470	ug/ml	99
53) 1,3-Dinitrobenzene	10.54	168	36451	46.9608	ug/ml#	76
54) 2,6-Dinitrotoluene	10.57	165	45840	42.9933	ug/ml#	71
55) Acenaphthylene	10.66	152	233640	39.4567	ug/ml	99
56) 3-Nitroaniline	10.73	138	50168	42.2512	ug/ml	90
57) 2,4-Dinitrophenol	10.84	184	24857	55.7280	ug/ml	52
58) Acenaphthene	10.84	154	157839	42.5430	ug/ml	96
59) 4-Nitrophenol	10.86	65	26601	40.1878	ug/ml	78
60) 2,4-Dinitrotoluene	10.99	165	61618	47.1068	ug/ml	74
61) Dibenzofuran	11.00	168	209568	39.1233	ug/ml#	89
62) 2,3,5,6-Tetrachlorophenol	11.15	232	39847	45.1675	ug/ml#	88
63) 2,3,4,6-Tetrachlorophenol	11.15	232	39853	43.8760	ug/ml#	87
64) 1-Naphthylamine	11.08	143	88940	22.0757	ug/ml#	87
65) 2-Naphthylamine	11.15	143	117733	31.6478	ug/ml	91
66) Diethylphthalate	11.18	149	208710	48.4941	ug/ml	98
67) Fluorene	11.35	166	178167	42.1795	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.30	204	76539	37.0223	ug/ml	87
69) 4-Nitroaniline	11.37	138	54804	48.0091	ug/ml#	67
70) 5-Nitro-o-Toluidine	11.36	152	61931	52.9995	ug/ml#	81
71) 1,2-Diphenylhydrazine	11.47	77	213783	48.0084	ug/ml	93
74) 4,6-Dinitro-2-Methylphenol	11.41	198	37913	57.8943	ug/ml#	41
75) Diphenylamine/n-Nitrosodip	11.42	169	311080	84.1408	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.83	248	40212	36.2037	ug/ml	83
77) Hexachlorobenzene	12.04	284	48483	40.3333	ug/ml	83
78) 4-Aminobiphenyl	12.12	169	148294	32.2940	ug/ml	99
79) Pentachlorophenol	12.23	266	34428	51.1474	ug/ml	99
80) Phenanthrene	12.43	178	251377	40.0803	ug/ml	99
81) Anthracene	12.48	178	244402	38.4177	ug/ml	99
82) Carbazole	12.64	167	274882	46.7353	ug/ml	95
83) Di-n-Butyl Phthalate	13.00	149	338625	47.2763	ug/ml	98
85) Fluoranthene	13.96	202	273190	40.2404	ug/ml	97
88) Pyrene	14.29	202	286680	41.3248	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.63	225	55345	44.2165	ug/ml#	74
91) Butyl Benzyl Phthalate	15.09	149	155716	53.9738	ug/ml	90
93) 2-Acetylaminofluorene	15.52	181	149498	51.2662	ug/ml	93
94) bis(2-Ethylhexyl)phthalate	15.93	149	218284	52.9772	ug/ml	97
95) 3,3'-Dichlorobenzidine	15.94	252	87391	39.3373	ug/ml	99
96) Benzo[a]anthracene	16.03	228	246904	42.5091	ug/ml	99
97) Chrysene	16.09	228	226502	39.9345	ug/ml	99
99) Di-n-Octyl Phthalate	16.87	149	358597	53.5049	ug/ml	92
100) Benzo[b]fluoranthene	17.91	252	273892	50.7449	ug/ml	97
101) Benzo[k]fluoranthene	17.96	252	220204	44.0397	ug/ml	97
102) Benzo[a]pyrene	18.64	252	206988	43.7730	ug/ml	96
103) Indeno[1,2,3-cd]pyrene	21.76	276	264438	45.4364	ug/ml	94

(#)=qualifier out of range (m)=manual integration

12M77044.D MEGAMIX.M Fri Apr 24 14:48:52 2020

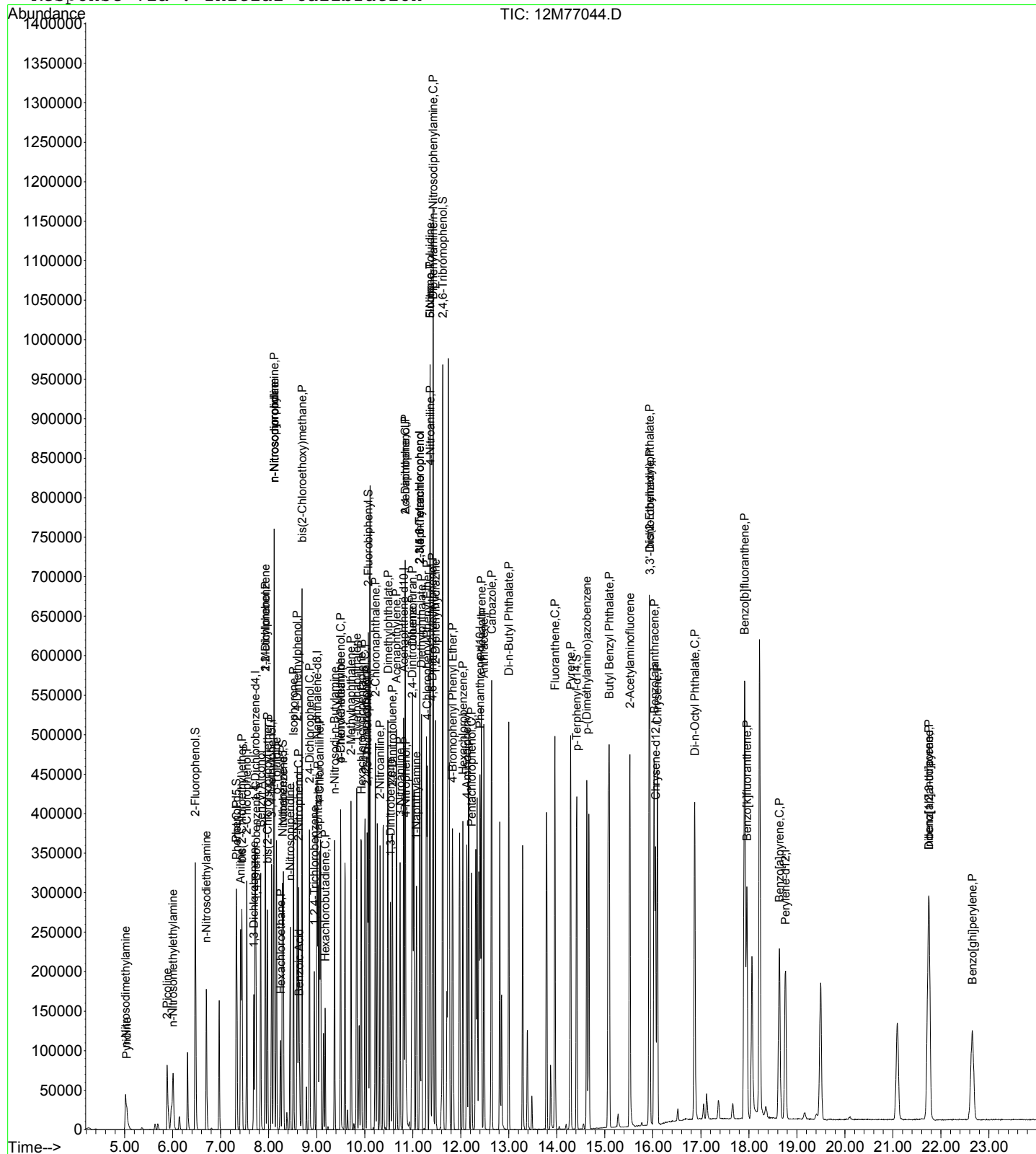
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Acq On : 22 Apr 2020 5:24 pm Operator: SCB
Sample : B0D1025-MSD1 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 23 12:06:31 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Tue Apr 21 08:35:29 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
104) Dibenz[ah]anthracene	21.75	278	228069	46.4892	ug/ml	96
105) Benzo[ghi]perylene	22.65	276	206530	42.9527	ug/ml	93

Quant Results File: MEGAMIX.RES

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Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update  : Thu Apr 23 14:43:01 2020
Response via : Initial Calibration
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Data File : I:\MSDCHEM\1\DATA\042220\12M77044.D

Vial: 15

Acq On : 22 Apr 2020 5:24 pm

Operator: SCB

Sample : B0D1025-MSD1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:22:05 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.716	152	59076	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.009	136	219537	40.0000	ug/ml	0.011
15) Acenaphthene-d10	10.809	164	124533	40.0000	ug/ml	0.011
23) Phenanthrene-d10	12.401	188	205950	40.0000	ug/ml	0.000
38) Chrysene-d12	16.056	240	165954	40.0000	ug/ml	0.016
42) Perylene-d12	18.764	264	169822	40.0000	ug/ml	0.027

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Methyl Methanesulfonate	6.31	80	49554	37.1027	ug/ml	89
4) Ethyl Methanesulfonate	6.97	79	63415	40.0372	ug/ml	97
6) Pentachloroethane	7.45	167	17296	20.4567	ug/ml	97
7) Acetophenone	8.12	105	107872	38.2645	ug/ml	95
9) 0,0,0-Triethyl Phosphoroth	8.69	198	48229	46.9821	ug/ml	95
10) Alpha-Terpineol	9.14	59	661	Below Cal	#	1
11) 2,6-Dichlorophenol	9.08	162	71663	42.7357	ug/ml	98
12) Hexachloropropene	9.14	213	22229	19.0848	ug/ml	99
13) Caprolactam	9.37	55	8524	9.2189	ug/ml#	27
14) Safrole	9.59	162	48304	29.7482	ug/ml#	82
16) 1,2,4,5-Tetrachlorobenzene	9.92	216	58817	32.4197	ug/ml	98
17) Isosafrole	10.11	162	134697	77.6371	ug/ml#	84
18) 1,1'-Biphenyl	10.17	154	1616	Below Cal	#	66
19) 1-Chloronaphthalene	10.26	162	116248	37.8037	ug/ml	95
20) 1,4-Naphthoquinone	10.39	158	66948	42.5422	ug/ml#	76
21) Pentachlorobenzene	11.02	250	60969	39.6663	ug/ml#	91
22) Thionazin	11.28	107	38440	58.9269	ug/ml	92
24) Sulfotepp	11.62	322	42374	56.9934	ug/ml#	85
25) Sym-Trinitrobenzene	11.71	75	58014	51.0012	ug/ml#	87
26) Diallate	11.74	86	117938	Below Cal		92
27) Phenacetin	11.73	108	120536	61.2664	ug/ml	91
28) Phorate	11.76	75	125154	54.3978	ug/ml#	96
29) Dimethoate	11.97	87	77798	56.2955	ug/ml	91
31) Pronamide	12.17	173	98063	51.3315	ug/ml	96
32) Pentachloronitrobenzene	12.31	237	29020	61.7295	ug/ml	93
33) Disulfoton	12.34	88	99496	51.6317	ug/ml#	90
34) Parathion Methyl	12.81	109	80948	56.6119	ug/ml	94
35) Parathion Ethyl	13.29	97	50281	59.6955	ug/ml	95
36) 4-Nitroquinoline 1-Oxide	13.39	190	15533	39.3980	ug/ml#	68
37) Isodrin	13.79	193	34852	48.4732	ug/ml	93
40) Chlorobenzilate	14.67	251	75965	46.2105	ug/ml#	80
41) Famphur	15.07	218	127268	61.3904	ug/ml	94
43) 7,12-Dimethylbenz[a]anthra	17.91	256	112396	58.7558	ug/ml	96
45) 3-Methylcholanthrene	19.50	268	111099	42.4696	ug/ml	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M77044.D TCL.M Fri Apr 24 14:52:06 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77044.D

Vial: 15

Acq On : 22 Apr 2020 5:24 pm

Operator: SCB

Sample : B0D1025-MSD1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 24 14:22 2020

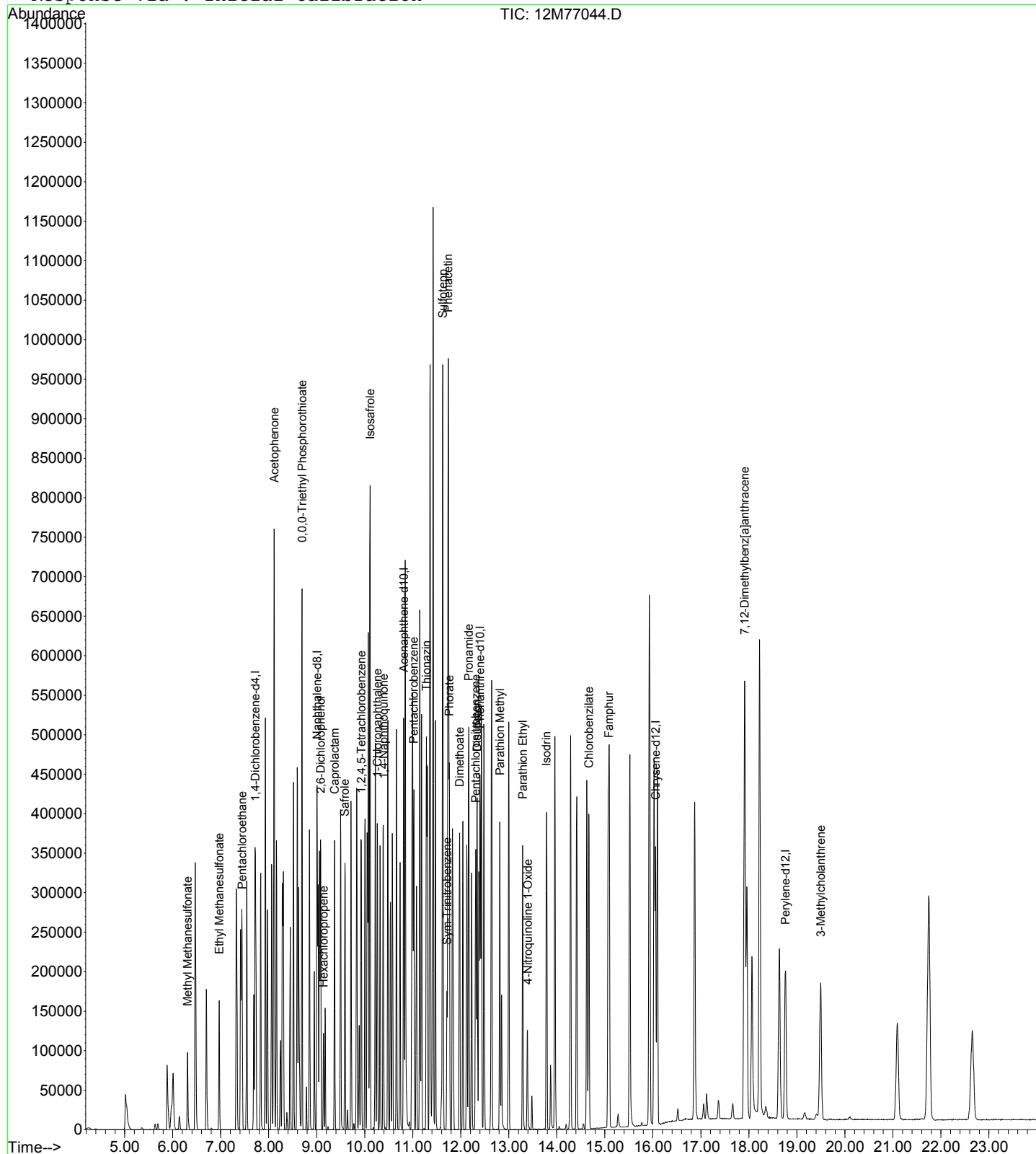
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77044.D Vial: 15
Acq On : 22 Apr 2020 5:24 pm Operator: SCB
Sample : B0D1025-MSD1 Inst : MSD12
Misc : 1,1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 24 14:32:43 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.056	240	165954	40.0000	ug/L	0.016
3) Perylene-d12	18.764	264	169822	40.0000	ug/L	0.027

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Kepone	15.28	272	5817	9.9774	ug/L #	89
4) Hexachlorophene	18.22	196	99227	70.7426	ug/L	99

Data File : I:\MSDCHEM\1\DATA\042220\12M77044.D

Vial: 15

Acq On : 22 Apr 2020 5:24 pm

Operator: SCB

Sample : B0D1025-MSD1

Inst : MSD12

Misc : 1,1

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 24 14:32 2020

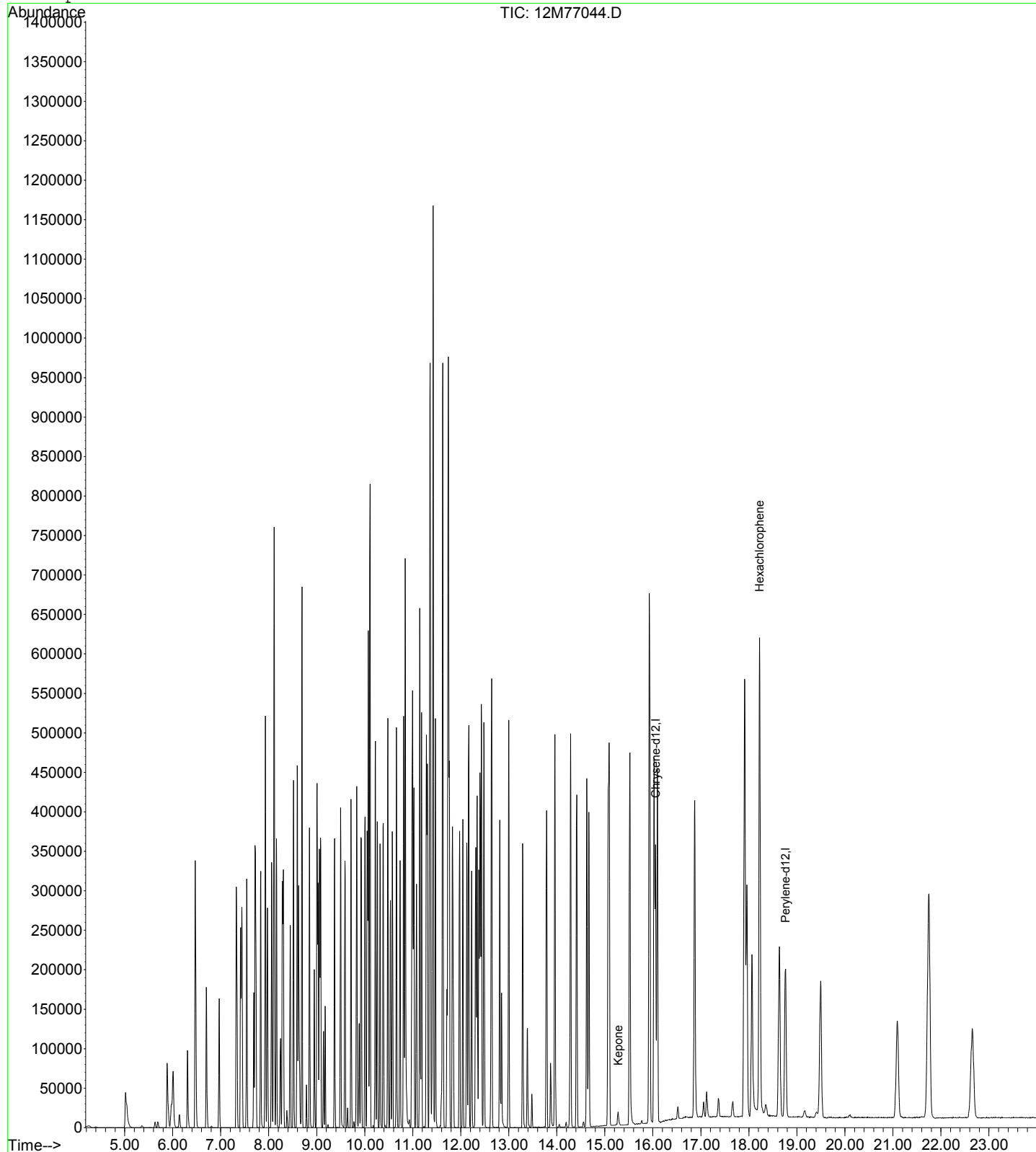
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration





Section D: GCMS Semivolatiles EPA 8270C Calibration Raw Data

Calibration Table Report

Method: MEGAMIX.M

MSD12

Title: OVD MSS01 8270/625 ICAL 03/27/20

Last Calibration: Fri Mar 27 15:47:08 2020

20C0029

Calibration Files

	3	10	15	25	50	80	100	120	1				
	12M76632.D	12M76631.D	12M76630.D	12M76629.D	12M76625.D	12M76628.D	12M76627.D	12M76626.D	12M76633.D				
Compound										Avg	%RSD	Linear	Quadratic
1,4-Dichlorobenzene-d4	ISTD												
n-Nitrosodimethylamine	0.836	1.026	0.981	0.969	0.993	1.071	1.059	1.012		0.993	7.344		
Pyridine	1.518	1.735	1.663	1.498	1.680	1.789	1.765	1.720		1.671	6.511		
2-Picoline	1.761	1.868	1.780	1.700	1.760	1.877	1.851	1.798		1.799	3.433		
n-Nitrosomethylethylamine	0.617	0.774	0.722	0.735	0.742	0.808	0.797	0.778		0.747	8.114		
2-Fluorophenol	1.402	1.543	1.468	1.382	1.463	1.554	1.521	1.464		1.474	4.236		
n-Nitrosodiethylamine	0.666	0.800	0.754	0.750	0.739	0.778	0.769	0.736		0.749	5.288		
Aniline	0.914	0.969	0.913	0.856	0.835	0.850	0.806	0.753		0.862	7.938		
Phenol-d5	1.673	1.816	1.732	1.639	1.602	1.634	1.547	1.452		1.637	6.769		
Phenol	1.913	2.051	1.917	1.795	1.747	1.777	1.676	1.558		1.804	8.551		
bis(2-Chloroethyl)ether	1.268	1.320	1.230	1.147	1.109	1.119	1.058	0.992		1.155	9.548		
2-Chlorophenol	1.653	1.732	1.635	1.555	1.550	1.622	1.560	1.487		1.599	4.784		
1,3-Dichlorobenzene	1.821	1.876	1.756	1.615	1.616	1.657	1.600	1.518		1.682	7.304		
1,4-Dichlorobenzene	1.872	1.827	1.709	1.562	1.583	1.624	1.581	1.493		1.656	8.113		
Benzyl Alcohol	0.816	0.998	0.959	0.967	0.956	1.006	0.970	0.933		0.951	6.222		
1,2-Dichlorobenzene	1.759	1.713	1.583	1.419	1.375	1.392	1.328	1.260		1.479	12.432		
2-Methylphenol	1.247	1.299	1.213	1.086	1.030	1.032	0.989	0.942		1.105	11.887		
bis(2-Chloroisopropyl)ether	2.358	2.348	2.173	2.023	1.920	1.888	1.755	1.626		2.011	13.257		
3-,4-Methylphenol	1.560	1.683	1.583	1.536	1.504	1.556	1.502	1.404		1.541	5.163		
n-Nitrosopyrrolidine	0.697	0.771	0.710	0.661	0.632	0.634	0.614	0.578		0.662	9.249		
n-Nitrosodipropylamine	1.104	1.113	1.034	0.919	0.868	0.837	0.781	0.715		0.921	16.141		0.999
n-Nitrosomorpholine	0.949	0.971	0.893	0.797	0.752	0.722	0.678	0.635		0.800	15.722	0.991	
o-Toluidine	2.551	2.555	2.391	2.230	2.172	2.220	2.129	2.011		2.282	8.681		
Hexachloroethane	0.666	0.705	0.664	0.633	0.638	0.663	0.637	0.609		0.652	4.440		
Naphthalene-d8	ISTD												
Nitrobenzene-d5	0.472	0.495	0.462	0.441	0.437	0.445	0.427	0.403		0.448	6.325		
Nitrobenzene	0.437	0.457	0.423	0.403	0.395	0.404	0.389	0.362		0.409	7.291		
n-Nitrosopiperidine	0.201	0.220	0.208	0.204	0.202	0.210	0.205	0.194		0.206	3.705		
Isophorone	0.805	0.841	0.783	0.733	0.716	0.724	0.692	0.644		0.742	8.628		
2-Nitrophenol	0.187	0.220	0.214	0.209	0.210	0.221	0.218	0.206		0.211	5.193		
2,4-Dimethylphenol	0.364	0.395	0.392	0.348	0.344	0.349	0.338	0.320		0.356	7.317		
bis(2-Chloroethoxy)methane	0.502	0.505	0.474	0.445	0.436	0.440	0.425	0.394		0.453	8.489		
Benzoic Acid		0.014	0.009	0.063	0.086	0.145	0.164	0.163		0.092	72.602		0.992
2,4-Dichlorophenol	0.302	0.332	0.312	0.296	0.296	0.310	0.308	0.294		0.306	4.098		
a,a-Dimethylphenethylamine	0.786	1.016	0.973	0.938	0.940	0.991	0.971	0.914		0.941	7.485		
1,2,4-Trichlorobenzene	0.373	0.380	0.356	0.331	0.328	0.336	0.329	0.311		0.343	7.044		
Naphthalene	1.394	1.368	1.279	1.166	1.143	1.149	1.106	1.013		1.202	11.035		
4-Chloroaniline	0.146	0.149	0.141	0.134	0.132	0.132	0.127	0.118		0.135	7.614		
Hexachlorobutadiene	0.176	0.188	0.172	0.165	0.165	0.174	0.173	0.166	0.138	0.169	8.007		
n-Nitrosodi-n-Butylamine	0.240	0.268	0.254	0.241	0.237	0.243	0.237	0.222		0.243	5.578		
p-Phenylenediamine		0.385	0.386	0.325	0.374	0.425	0.422	0.391		0.387	8.599		
4-Chloro-3-Methylphenol	0.305	0.357	0.335	0.335	0.326	0.339	0.331	0.308		0.3296	5.0864		
2-Methylnaphthalene	0.866	0.887	0.823	0.762	0.736	0.742	0.709	0.654		0.7724	10.387		
1-Methylnaphthalene	0.813	0.832	0.763	0.713	0.691	0.701	0.675	0.622		0.7264	9.8279		
Acenaphthene-d10	ISTD												
Hexachlorocyclopentadiene	0.108	0.21	0.222	0.227	0.304	0.331	0.343	0.335		0.26	31.763	0.993	
2,4,6-Trichlorophenol	0.338	0.393	0.382	0.371	0.375	0.394	0.397	0.38		0.3789	5.0124		
2,4,5-Trichlorophenol	0.376	0.413	0.393	0.386	0.393	0.413	0.411	0.396		0.3976	3.4806		
2-Fluorobiphenyl	1.861	1.837	1.691	1.538	1.519	1.538	1.496	1.36		1.605	10.916		
2-Chloronaphthalene	1.4	1.399	1.296	1.199	1.193	1.204	1.179	1.095		1.2456	8.768		
2-Nitroaniline		0.412	0.395	0.384	0.38	0.396	0.387	0.358		0.3876	4.3368		
Dimethylphthalate	1.547	1.579	1.471	1.359	1.353	1.391	1.365	1.279		1.418	7.3572		
1,3-Dinitrobenzene	0.207	0.258	0.251	0.246	0.249	0.265	0.266	0.253		0.2493	7.4456		
2,6-Dinitrotoluene	0.35	0.367	0.347	0.33	0.333	0.345	0.343	0.325		0.3425	3.9074		
Acenaphthylene	2.201	2.216	2.051	1.835	1.783	1.797	1.732	1.6		1.902	11.93		
3-Nitroaniline		0.395	0.381	0.373	0.373	0.39	0.387	0.369		0.3814	2.629		
2,4-Dinitrophenol		0.07	0.087	0.128	0.13	0.152	0.158	0.143		0.124	26.939	0.996	
Acenaphthene	1.422	1.397	1.276	1.157	1.122	1.117	1.074	0.968		1.1917	13.365		
4-Nitrophenol	0.106	0.217	0.226	0.232	0.228	0.226	0.22	0.191		0.2055	20.537	0.991	
2,4-Dinitrotoluene	0.388	0.456	0.44	0.42	0.418	0.435	0.419	0.386		0.4201	5.7593		
Dibenzofuran	2.026	1.993	1.841	1.659	1.628	1.638	1.567	1.413		1.7205	12.424		
2,3,5,6-Tetrachlorophenol	0.227	0.3	0.282	0.253	0.287	0.306	0.311	0.3		0.2834	10.264		
2,3,4,6-Tetrachlorophenol	0.281	0.306	0.293	0.273	0.279	0.305	0.308	0.289		0.2917	4.6211		
1-Naphthylamine	1.384	1.42	1.362	1.195	1.263	1.289	1.266	1.175		1.2941	6.8007		
2-Naphthylamine	1.477	1.329	1.223	1.158	1.115	1.149	1.104	1.004		1.1949	12.373		
Diethylphthalate	1.547	1.55	1.434	1.327	1.31	1.338	1.324	1.229		1.3824	8.4526		
Fluorene	1.64	1.572	1.445	1.291	1.253	1.272	1.249	1.131		1.3568	13.054		
4-Chlorophenyl Phenyl Ether	0.734	0.735	0.672	0.629	0.628	0.651	0.651	0.612		0.664	7.1244		
4-Nitroaniline		0.417	0.389	0.356	0.349	0.357	0.361	0.338		0.3667	7.4309		
5-Nitro-o-Toluidine	0.399	0.435	0.405	0.365	0.356	0.36	0.358	0.326		0.3753	9.2567		
1,2-Diphenylhydrazine	1.636	1.647	1.534	1.403	1.38	1.36	1.303	1.181		1.4303	11.419		
2,4,6-Tribromophenol	0.131	0.173	0.164	0.161	0.166	0.186	0.195	0.193		0.1712	12.122		
Phenanthrene-d10	ISTD												
4,6-Dinitro-2-Methylphenol		0.107	0.109	0.122	0.129	0.14	0.147	0.136		0.1272	11.928		
Diphenylamine/n-Nitrosodiphenylar	0.806	0.807	0.749	0.676	0.68	0.703	0.691	0.633		0.7181	8.7816		
4-Bromophenyl Phenyl Ether	0.224	0.233	0.216	0.198	0.203	0.217	0.222	0.212		0.2157	5.1657		
Hexachlorobenzene	0.239	0.246	0.229	0.211	0.22	0.238	0.246	0.239		0.2335	5.3684		
4-Aminobiphenyl	0.909	0.963	0.915	0.862	0.84	0.911	0.904	0.831		0.8919	4.9541		
Pentachlorophenol		0.087	0.095	0.109	0.12	0.135	0.143	0.14		0.1184	18.752	0.997	
Phenanthrene	1.363	1.35	1.259	1.142	1.155	1.191	1.184	1.099		1.2181	7.9684		

Anthracene	1.341	1.371	1.285	1.159	1.175	1.223	1.214	1.116	1.2356	7.2577	
Carbazole	1.21	1.247	1.171	1.087	1.1	1.137	1.132	1.055	1.1424	5.6315	
Di-n-Butyl Phthalate	1.386	1.524	1.456	1.345	1.351	1.406	1.383	1.278	1.3912	5.3605	
Methapyriline	0.545	0.724	0.709	0.652	0.666	0.659	0.642	0.576	0.6465	9.3864	
Fluoranthene	1.355	1.442	1.361	1.25	1.264	1.326	1.323	1.227	1.3186	5.3233	
Chrysene-d12	ISTD										
Benzidine	0.721	0.885	0.85	0.789	0.796	0.912	0.963	0.926	0.8553	9.5445	
Pyrene	1.717	1.792	1.655	1.522	1.621	1.716	1.736	1.618	1.6721	5.0886	
p-Terphenyl-d14	1.246	1.286	1.181	1.078	1.165	1.261	1.282	1.211	1.2137	5.8249	
p-(Dimethylamino)azobenzene	0.249	0.309	0.292	0.281	0.302	0.325	0.334	0.321	0.3017	9.1551	
Butyl Benzyl Phthalate	0.747	0.822	0.748	0.658	0.672	0.666	0.659	0.591	0.6954	10.393	
3,3'-Dimethylbenzidine	1.042	1.067	0.989	0.892	0.862	0.922	0.918	0.834	0.9408	8.926	
2-Acetylaminofluorene	0.435	0.619	0.615	0.614	0.666	0.727	0.748	0.706	0.6414	15.381	0.998
bis(2-Ethylhexyl)phthalate	1.013	1.133	1.061	0.978	1.011	1.045	1.042	0.949	0.9931	12.036	
3,3'-Dichlorobenzidine	0.503	0.556	0.515	0.475	0.502	0.564	0.596	0.572	0.5355	7.9036	
Benzo[a]anthracene	1.446	1.462	1.356	1.244	1.334	1.446	1.496	1.416	1.4	5.9253	
Chrysene	1.437	1.434	1.318	1.208	1.291	1.399	1.462	1.387	1.3671	6.4012	
Perylene-d12	ISTD										
Di-n-Octyl Phthalate	1.358	1.595	1.54	1.557	1.591	1.64	1.733	1.616	1.5786	6.7809	
Benzo[b]fluoranthene	1.212	1.249	1.174	1.169	1.275	1.349	1.384	1.359	1.2713	6.6659	
Benzo[k]fluoranthene	1.157	1.228	1.147	1.112	1.127	1.159	1.232	1.26	1.1777	4.646	
Benzo[a]pyrene	1.018	1.104	1.048	1.046	1.101	1.146	1.251	1.197	1.1138	7.2216	
Indeno[1,2,3-cd]pyrene	1.172	1.324	1.258	1.279	1.376	1.436	1.59	1.532	1.3708	10.351	
Dibenz[ah]anthracene	0.965	1.098	1.045	1.068	1.158	1.226	1.363	1.323	1.1555	12.045	
Benzo[ghi]perylene	0.991	1.103	1.045	1.054	1.152	1.179	1.298	1.238	1.1326	9.1893	

Sat Mar 28 10:19:27 2020

Calibration Table Report

Method: TCL.M

MSD12

Title: OVD MSS01 8270/625 ICAL 03/27/20

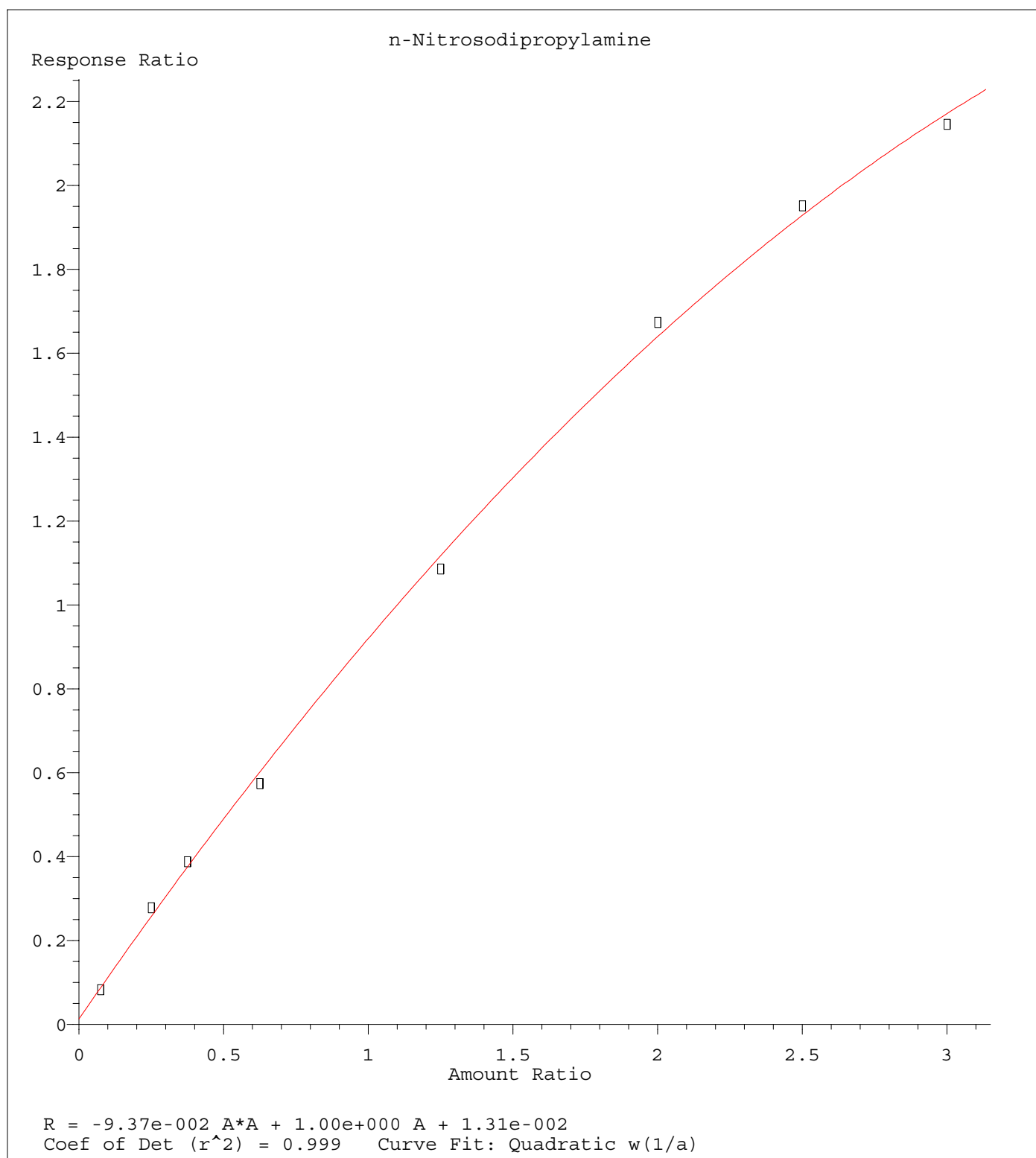
Last Calibration: Sat Mar 28 09:39:43 2020

20C0029-1

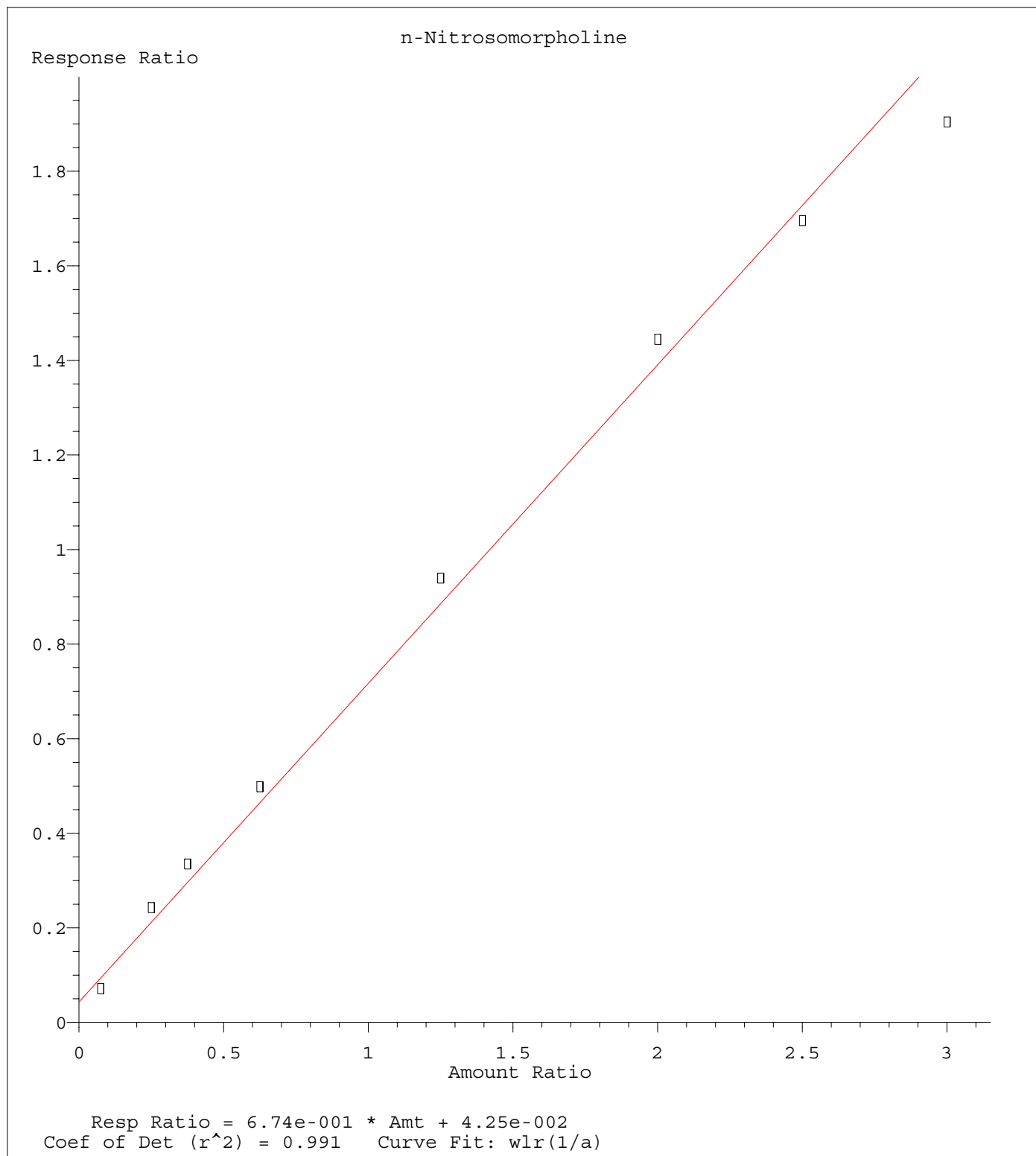
Calibration Files

	3	10	25	50	80	100	120				
	12M76637.D	12M76638.D	12M76639.D	12M76636.D	12M76640.D	12M76641.D	12M76642.D				
Compound								Avg	%RSD	Linear	Quadratic
1,4-Dichlorobenzene-d4	ISTD										
1,4-Dioxane	0.665	0.734	0.680	0.597	0.670	0.665	0.672	0.669	5.979		
Methyl Methanesulfonate	0.992	0.974	0.893	0.828	0.912	0.878	0.853	0.904	6.689		
Ethyl Methanesulfonate	1.255	1.220	1.092	0.976	1.039	0.984	0.941	1.072	11.475		
Benzaldehyde	1.419	1.437	1.281	1.119	1.158	1.096	1.032	1.220	13.194		
Pentachloroethane	0.684	0.644	0.578	0.515	0.553	0.529	0.505	0.572	11.851		
Acetophenone	2.328	2.228	1.980	1.739	1.804	1.679	1.604	1.909	14.633		
Naphthalene-d8	ISTD										
0,0,0-Triethyl Phosphorothioate	0.227	0.218	0.190	0.169	0.177	0.167	0.161	0.187	13.905		
Alpha-Terpineol	0.385	0.371	0.310	0.263	0.252	0.231	0.215	0.290	23.247		0.998
2,6-Dichlorophenol	0.348	0.347	0.315	0.284	0.296	0.280	0.269	0.306	10.524		
Hexachloropropene	0.212	0.226	0.215	0.204	0.220	0.210	0.199	0.212	4.322		
Caprolactam	0.163	0.190	0.175	0.162	0.171	0.162	0.156	0.168	6.745		
Safrole	0.358	0.349	0.307	0.270	0.278	0.259	0.250	0.296	14.590		
Acenaphthene-d10	ISTD										
1,2,4,5-Tetrachlorobenzene	0.707	0.674	0.587	0.549	0.543	0.522	0.498	0.583	13.524		
Isosafrole	0.676	0.644	0.561	0.533	0.519	0.495	0.472	0.557	13.687		
1,1'-Biphenyl	2.118	1.940	1.619	1.469	1.402	1.310	1.238	1.585	20.829		0.992
1-Chloronaphthalene	1.502	1.388	1.153	1.046	0.985	0.927	0.860	1.123	21.433		0.991
1,4-Naphthoquinone	0.451	0.551	0.526	0.515	0.519	0.500	0.477	0.505	6.559		
Pentachlorobenzene	0.594	0.550	0.482	0.463	0.471	0.455	0.440	0.494	11.489		
Thionazin	0.279	0.283	0.248	0.229	0.216	0.201	0.190	0.235	15.548		0.991
Phenanthrene-d10	ISTD										
Sulfotepp	0.142	0.150	0.136	0.134	0.151	0.150	0.149	0.144	4.992		
Sym-Trinitrobenzene	0.111	0.167	0.199	0.210	0.236	0.230	0.222	0.196	22.536		0.998
Diallate	0.377	0.349	0.291	0.238	0.221	0.195	0.180	0.264	28.828		0.998
Phenacetin	0.442	0.481	0.432	0.378	0.367	0.335	0.312	0.392	15.586		0.999
Phorate	0.645	0.598	0.508	0.432	0.414	0.375	0.345	0.474	24.006		0.999
Dimethoate	0.373	0.375	0.316	0.259	0.244	0.226	0.209	0.286	24.006		0.998
Atrazine	0.282	0.267	0.230	0.208	0.217	0.208	0.200	0.230	13.832		
Pronamide	0.420	0.420	0.378	0.347	0.363	0.342	0.326	0.371	10.087		
Pentachloronitrobenzene	0.089	0.099	0.090	0.086	0.095	0.092	0.090	0.091	4.665		
Disulfoton	0.540	0.524	0.450	0.394	0.388	0.358	0.334	0.427	18.848		0.991
Parathion Methyl	0.235	0.300	0.296	0.279	0.294	0.277	0.263	0.278	8.212		
Parathion Ethyl	0.144	0.181	0.177	0.166	0.170	0.158	0.149	0.164	8.386		
4-Nitroquinoline 1-Oxide	0.018	0.031	0.064	0.078	0.099	0.094	0.093	0.068	47.392		0.993
Isodrin	0.157	0.154	0.138	0.130	0.138	0.132	0.129	0.140	8.090		
Chrysene-d12	ISTD										
Aramite	0.076	0.092	0.089	0.094	0.094	0.092	0.091	0.090	7.090		
Chlorobenzilate	0.417	0.423	0.381	0.389	0.390	0.389	0.385	0.396	4.157		
Famphur	0.485	0.522	0.490	0.505	0.511	0.497	0.487	0.500	2.746		
Perylene-d12	ISTD										
7,12-Dimethylbenz[a]anthracene	0.384	0.405	0.413	0.479	0.476	0.499	0.498	0.4506	10.756		
Perylene	1.318	1.249	1.103	1.073	1.169	1.168	1.153	1.1762	7.1362		
3-Methylcholanthrene	0.645	0.643	0.59	0.6	0.622	0.611	0.603	0.6162	3.4786		

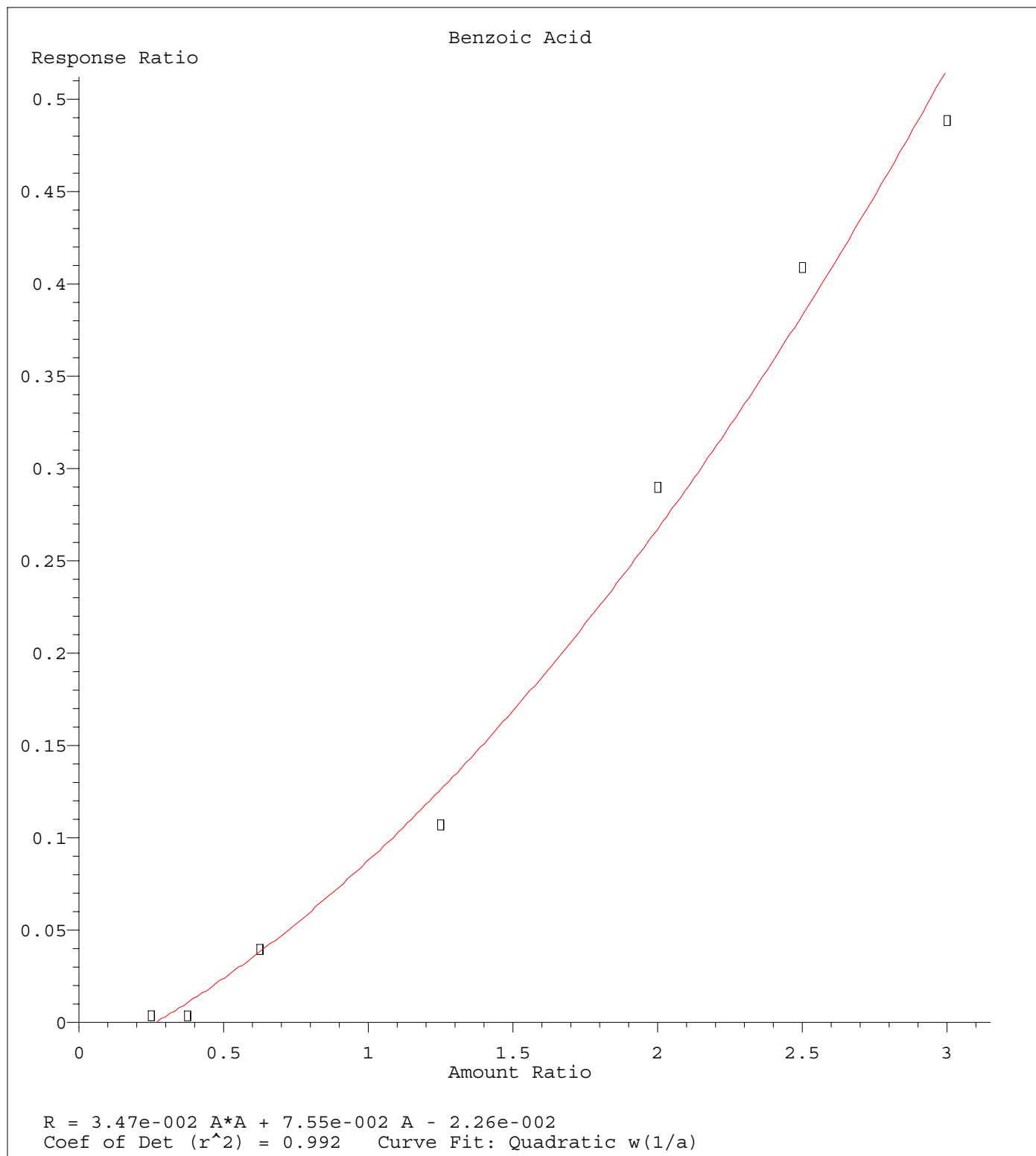
Sat Mar 28 10:22:48 2020



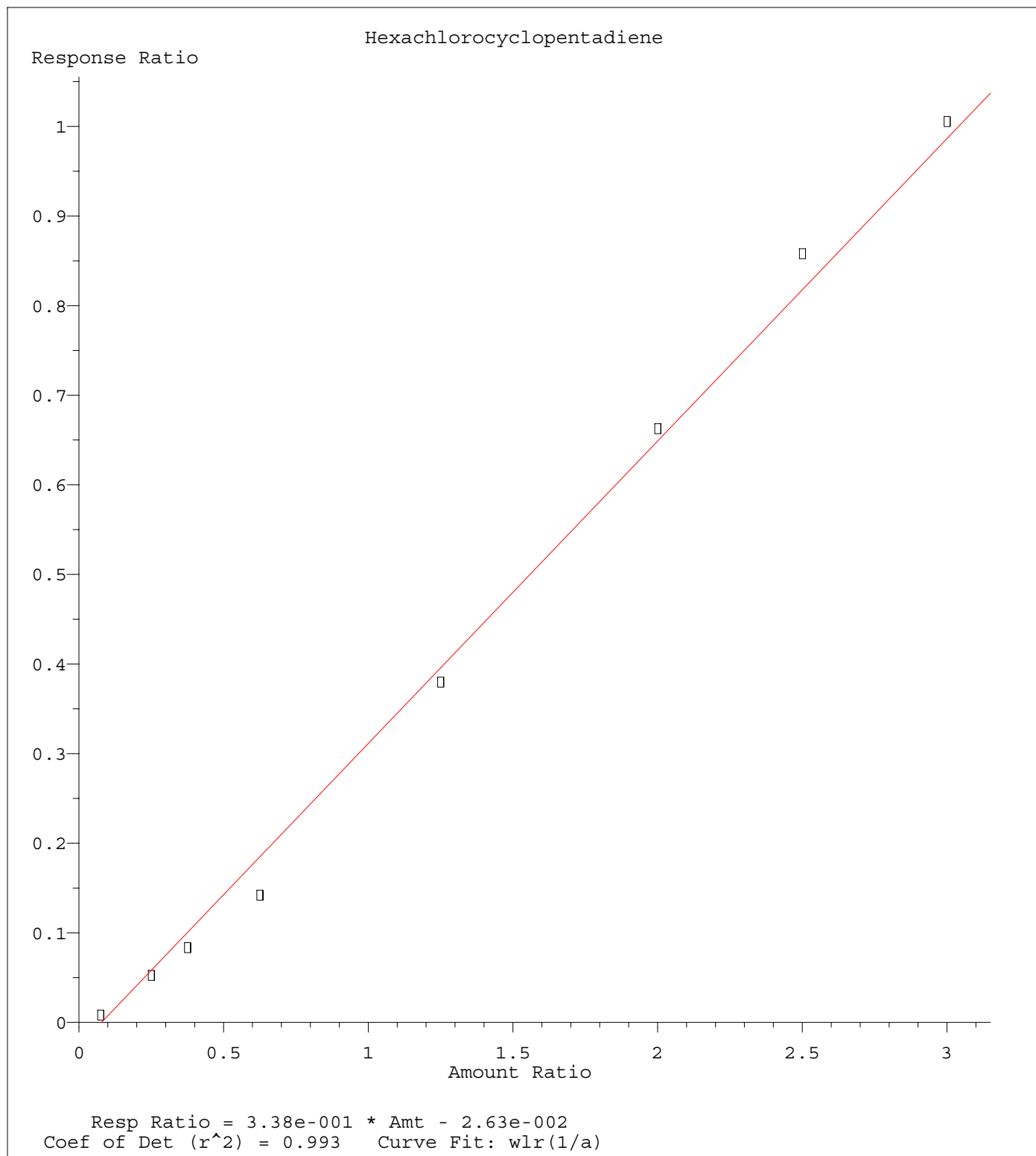
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



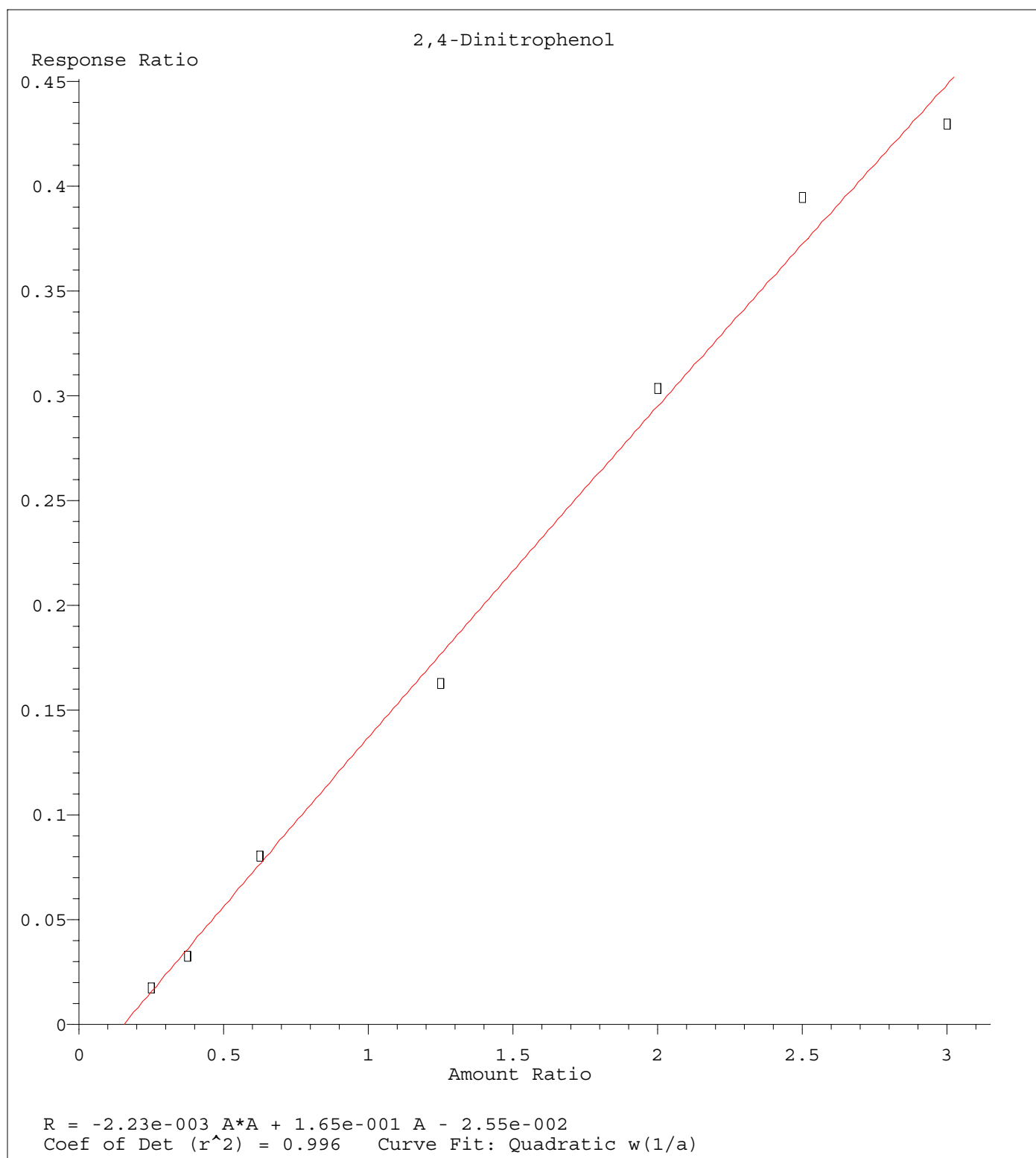
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



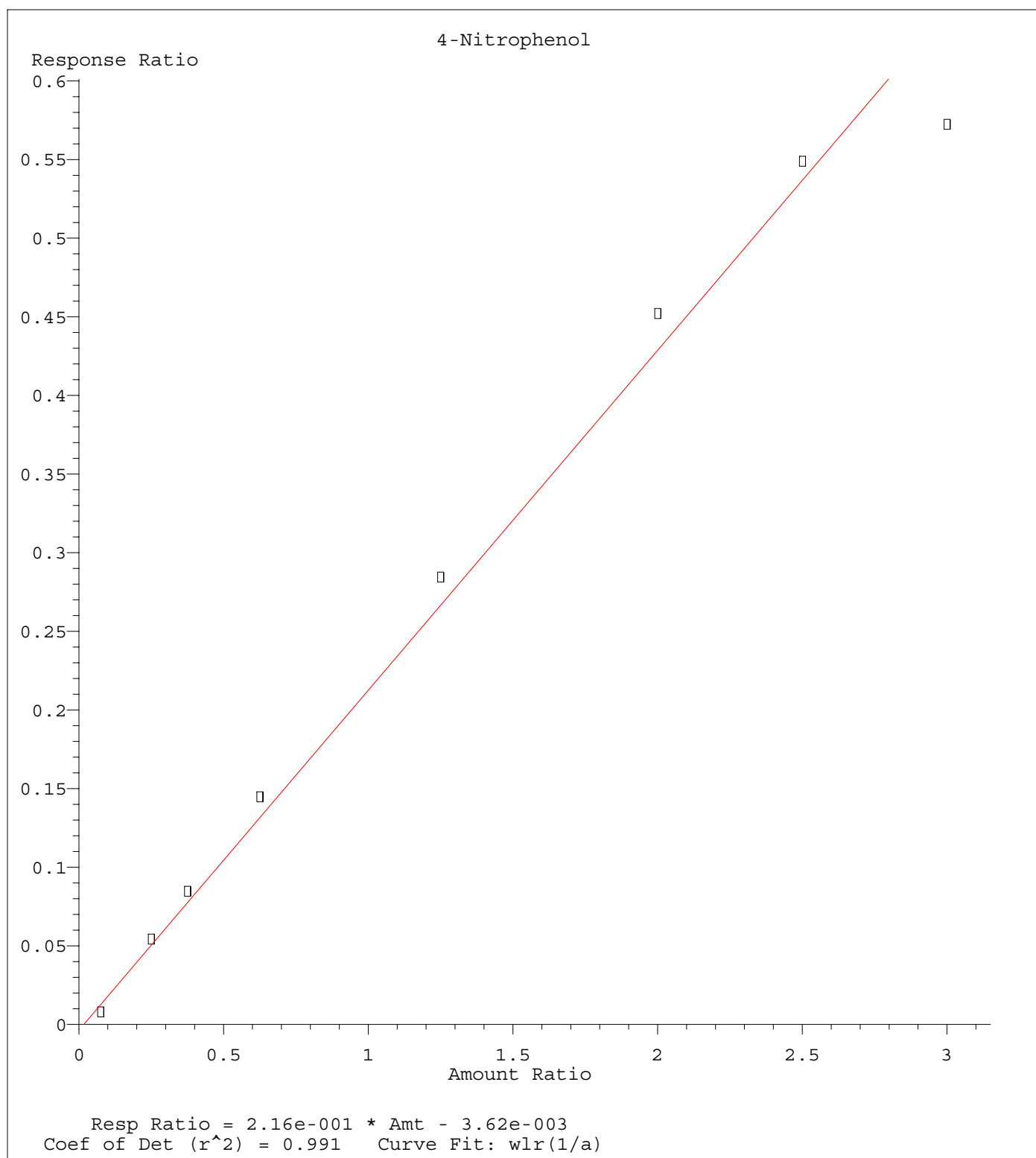
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



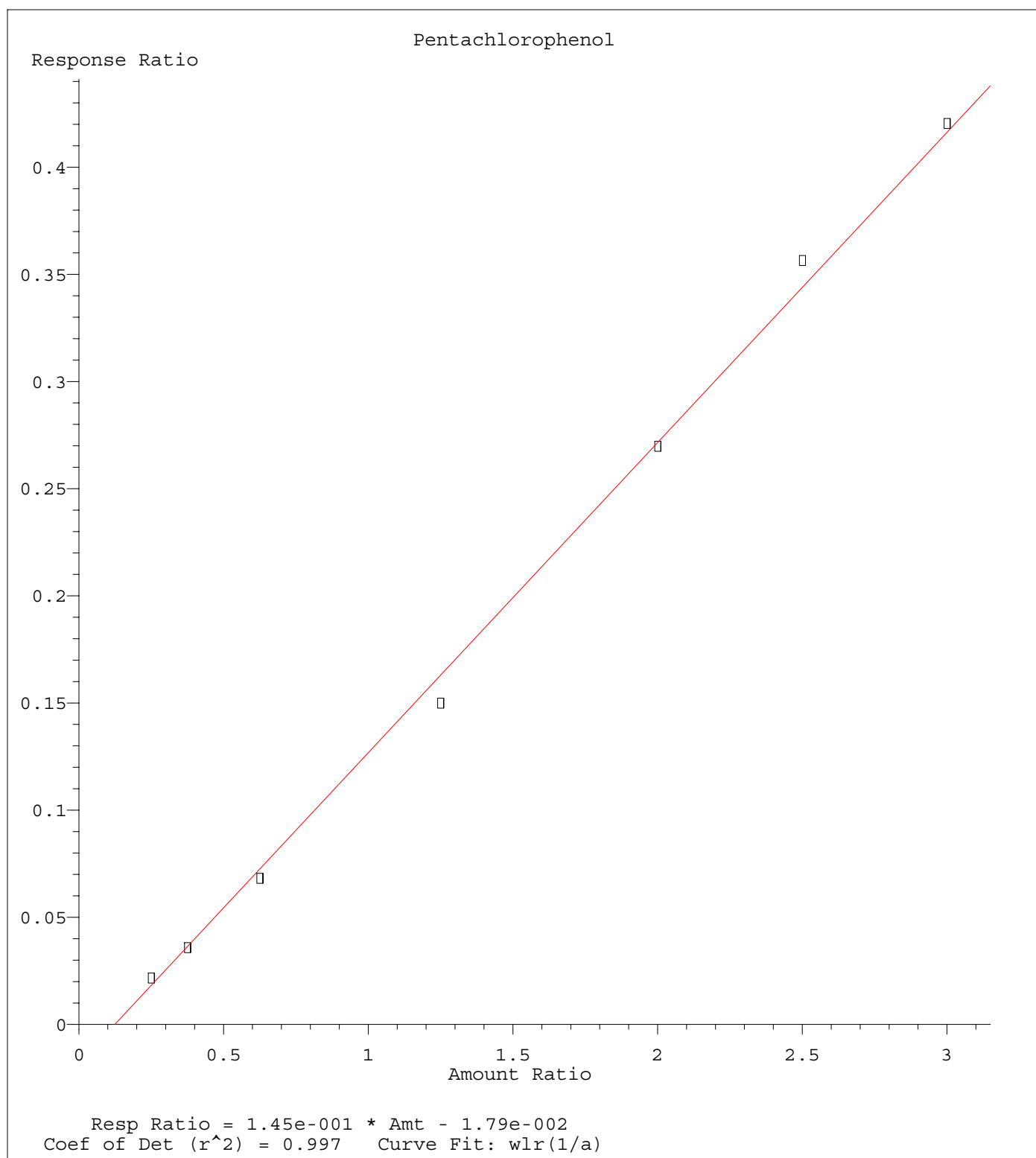
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



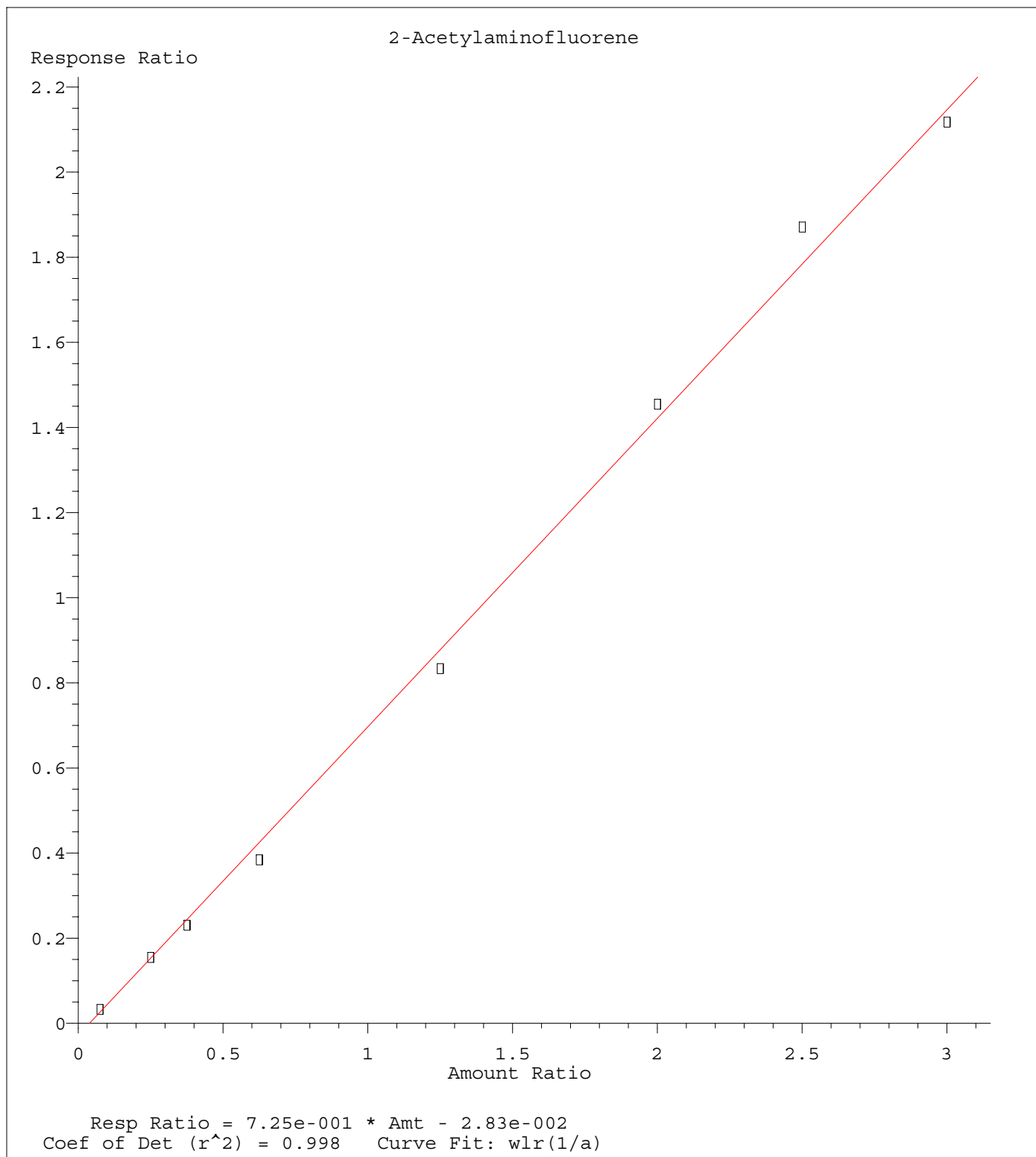
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



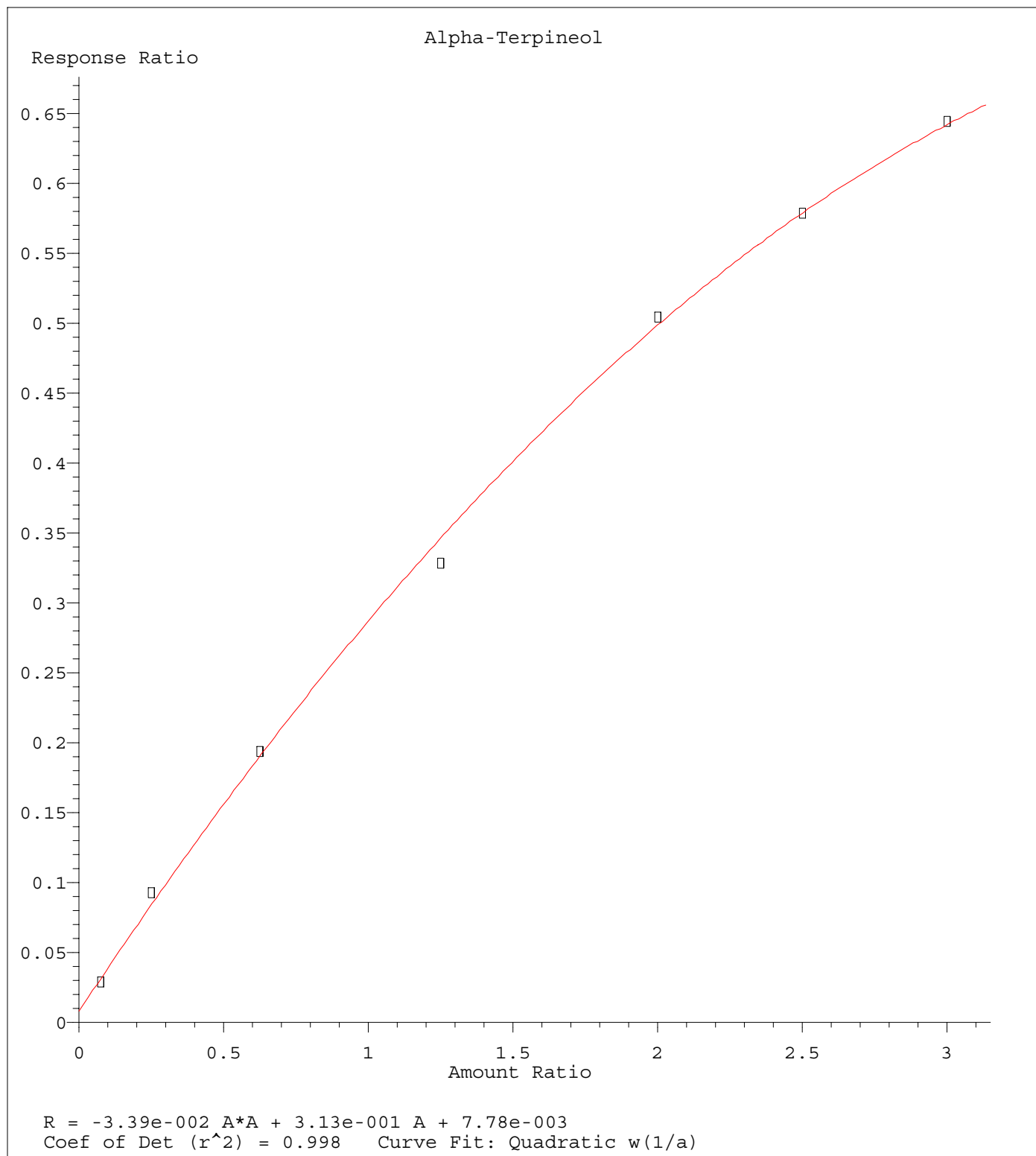
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



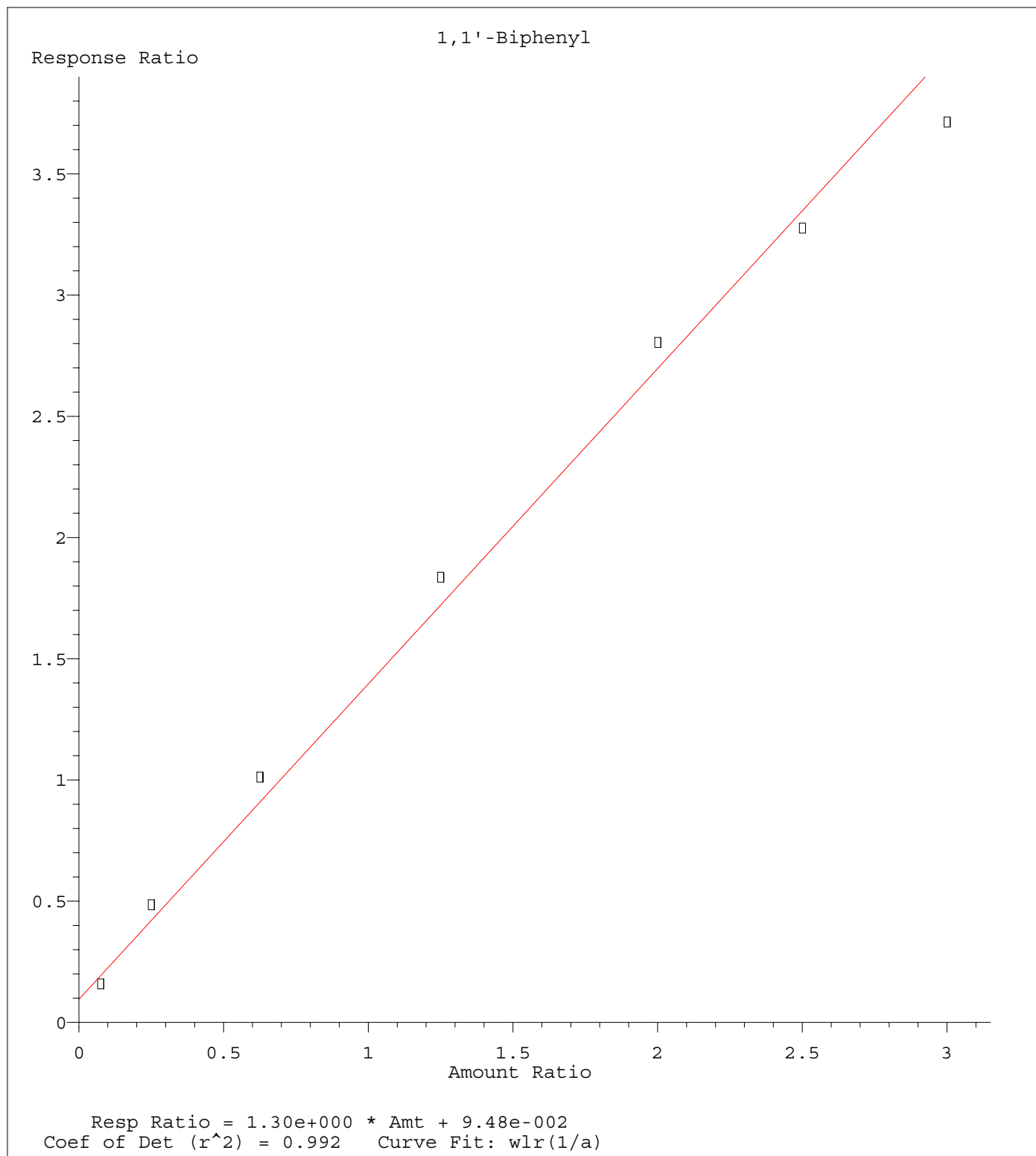
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



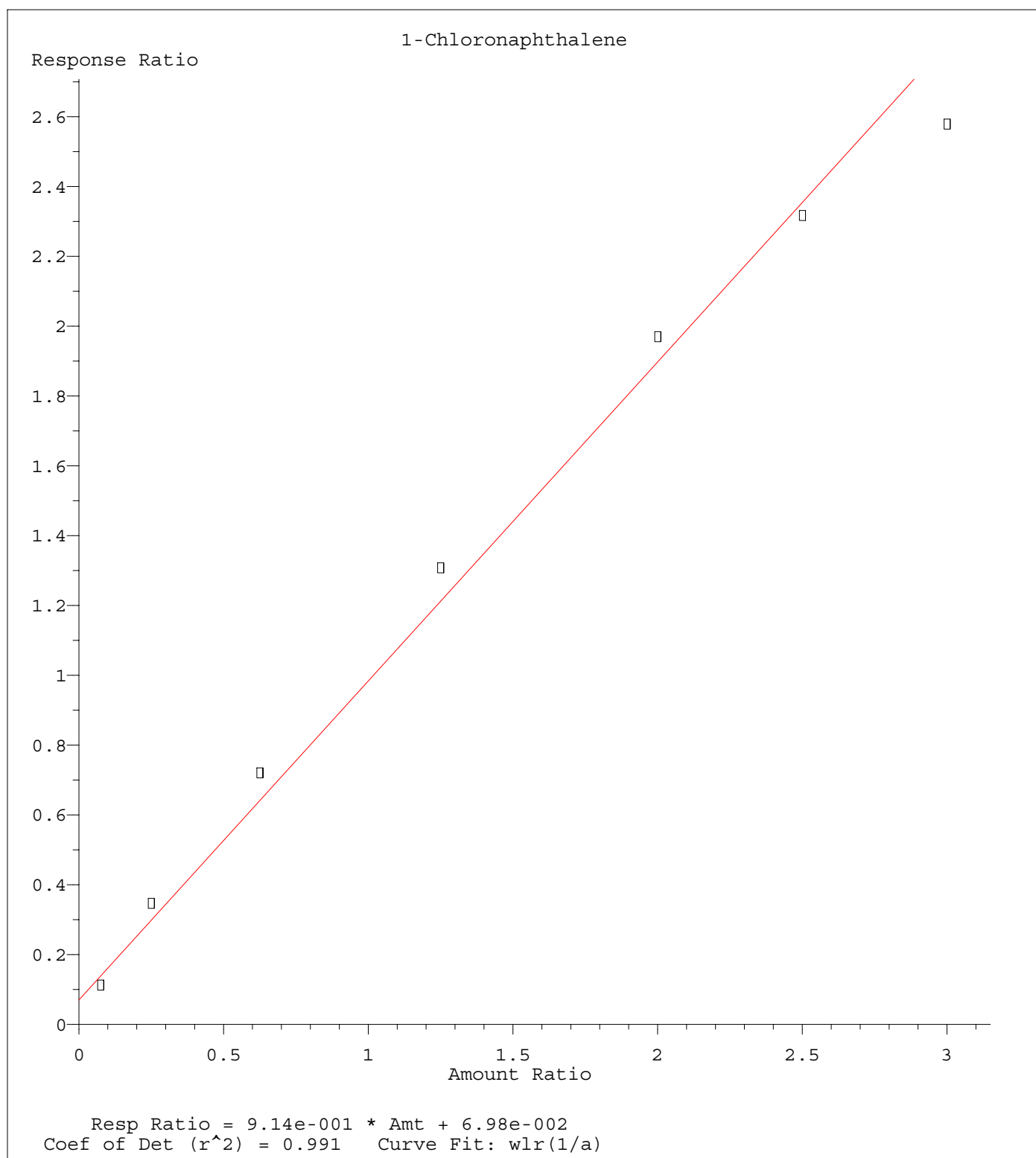
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Calibration Table Last Updated: Fri Mar 27 15:47:08 2020



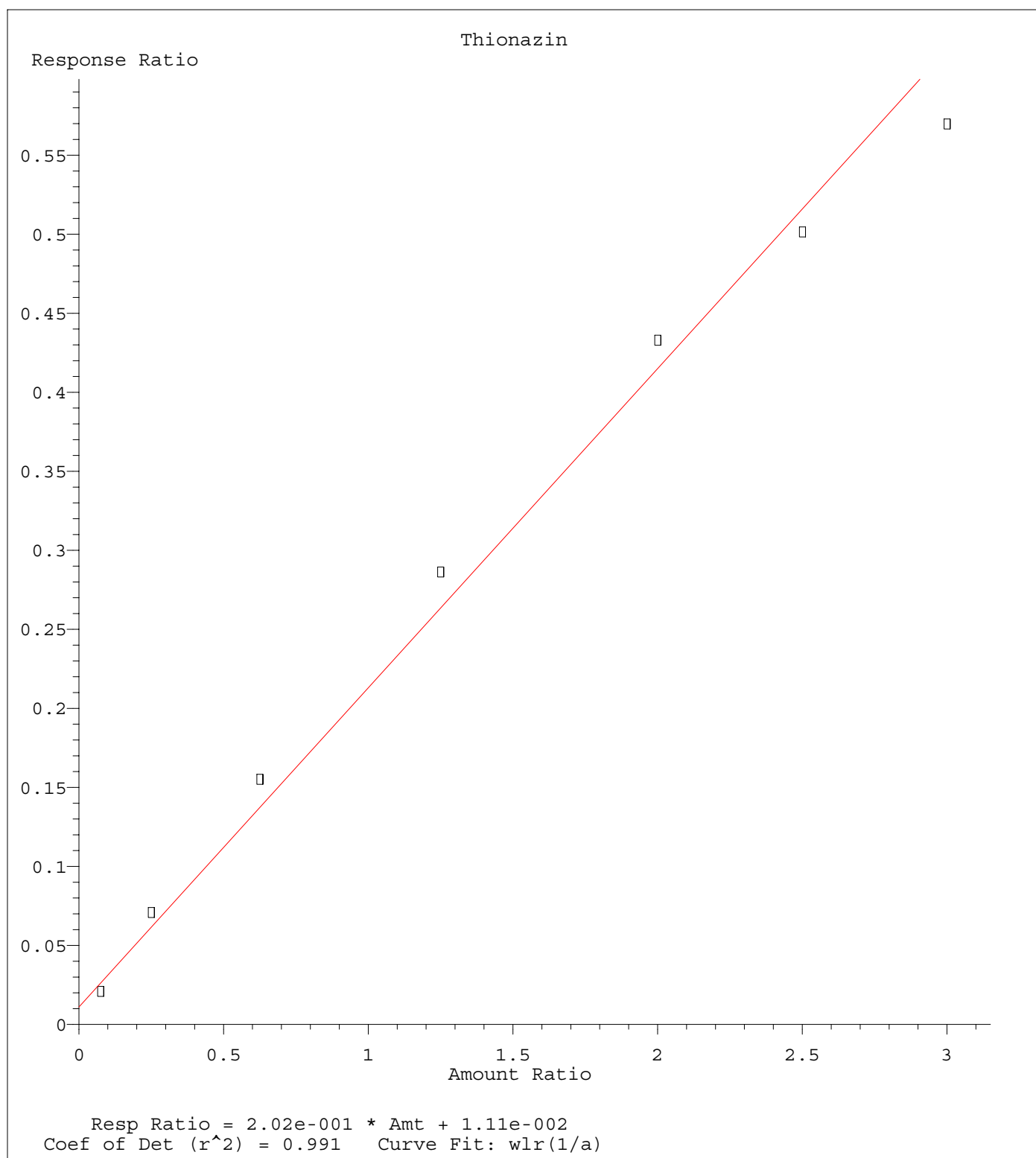
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Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



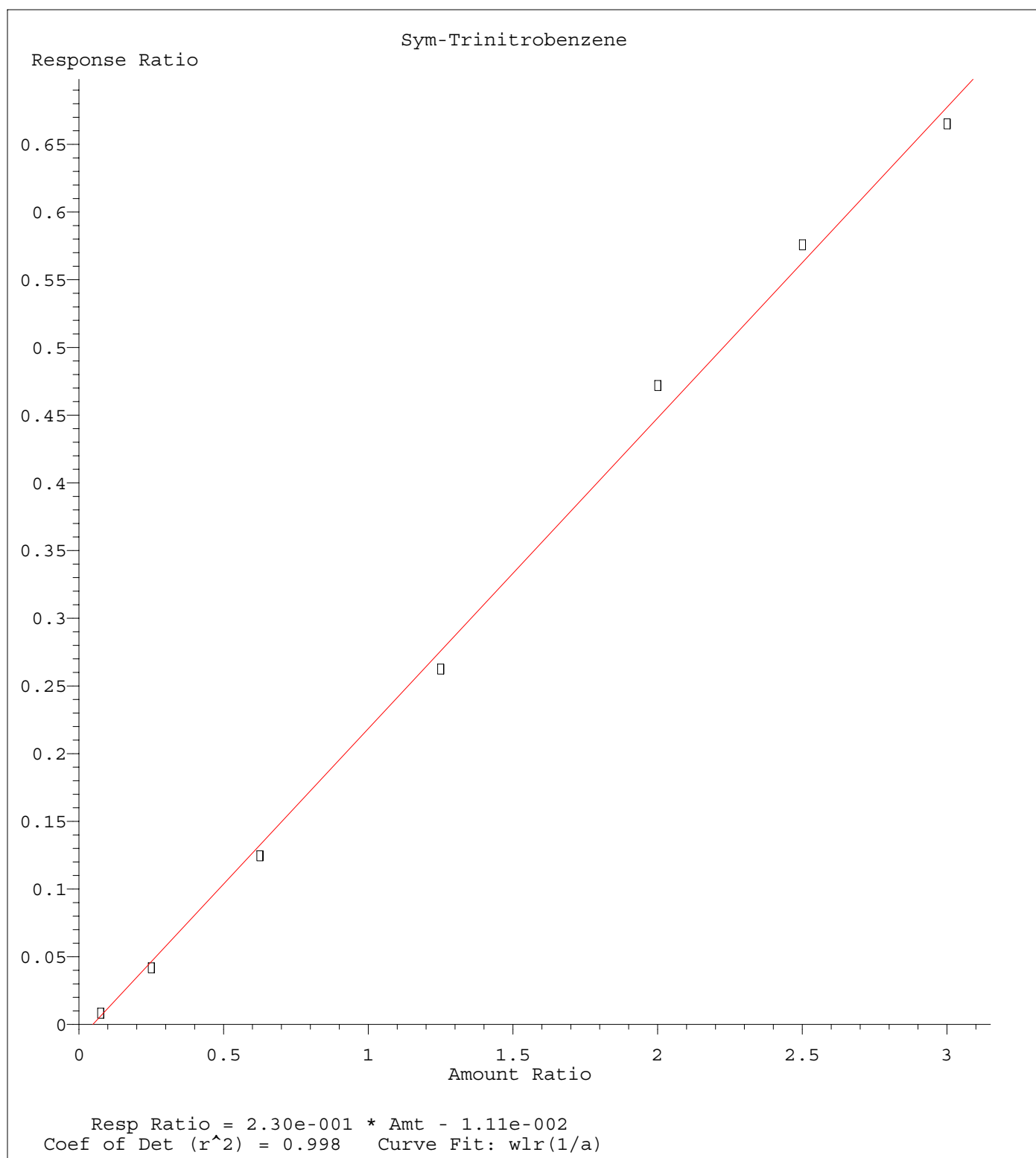
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Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



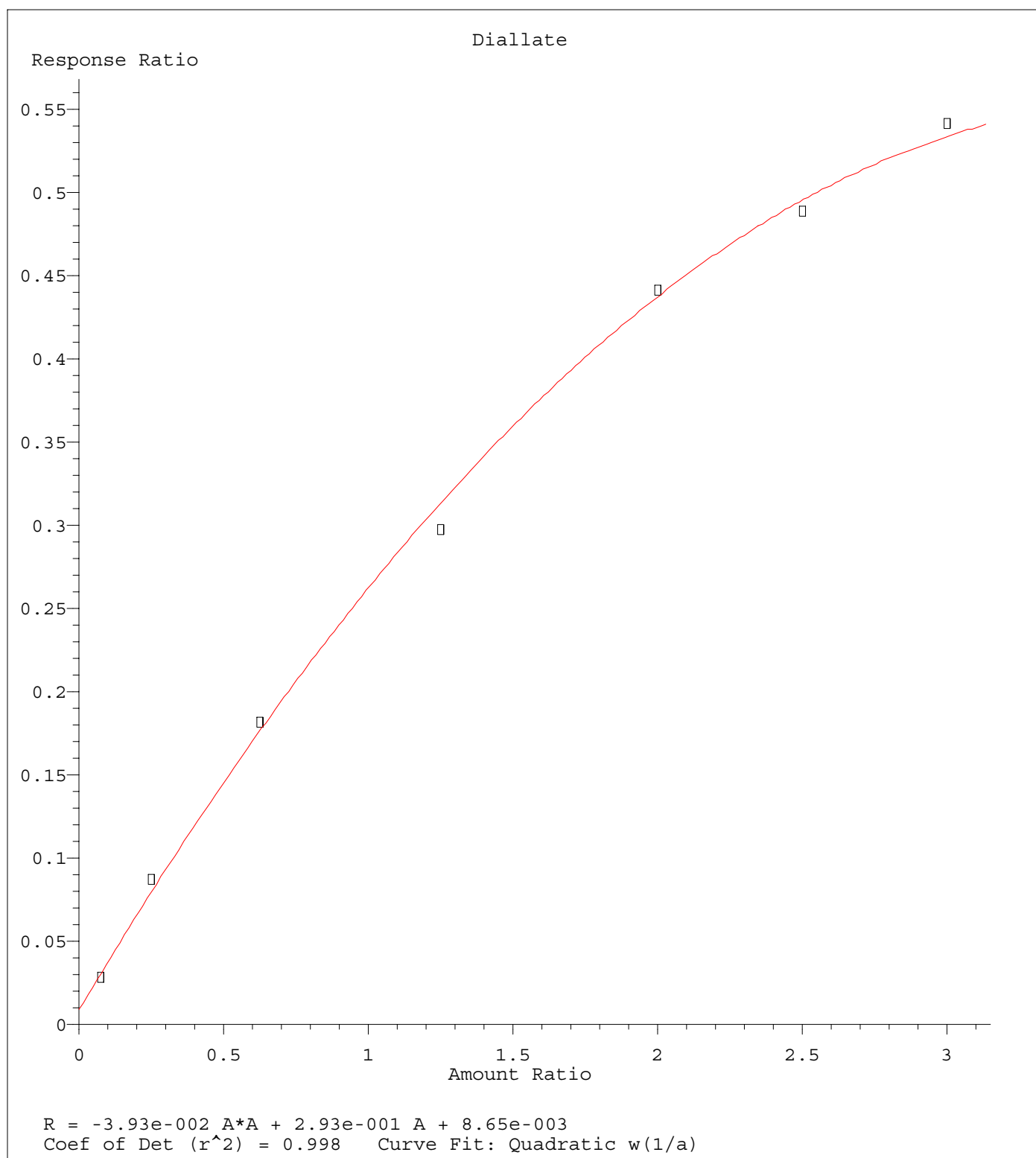
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Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



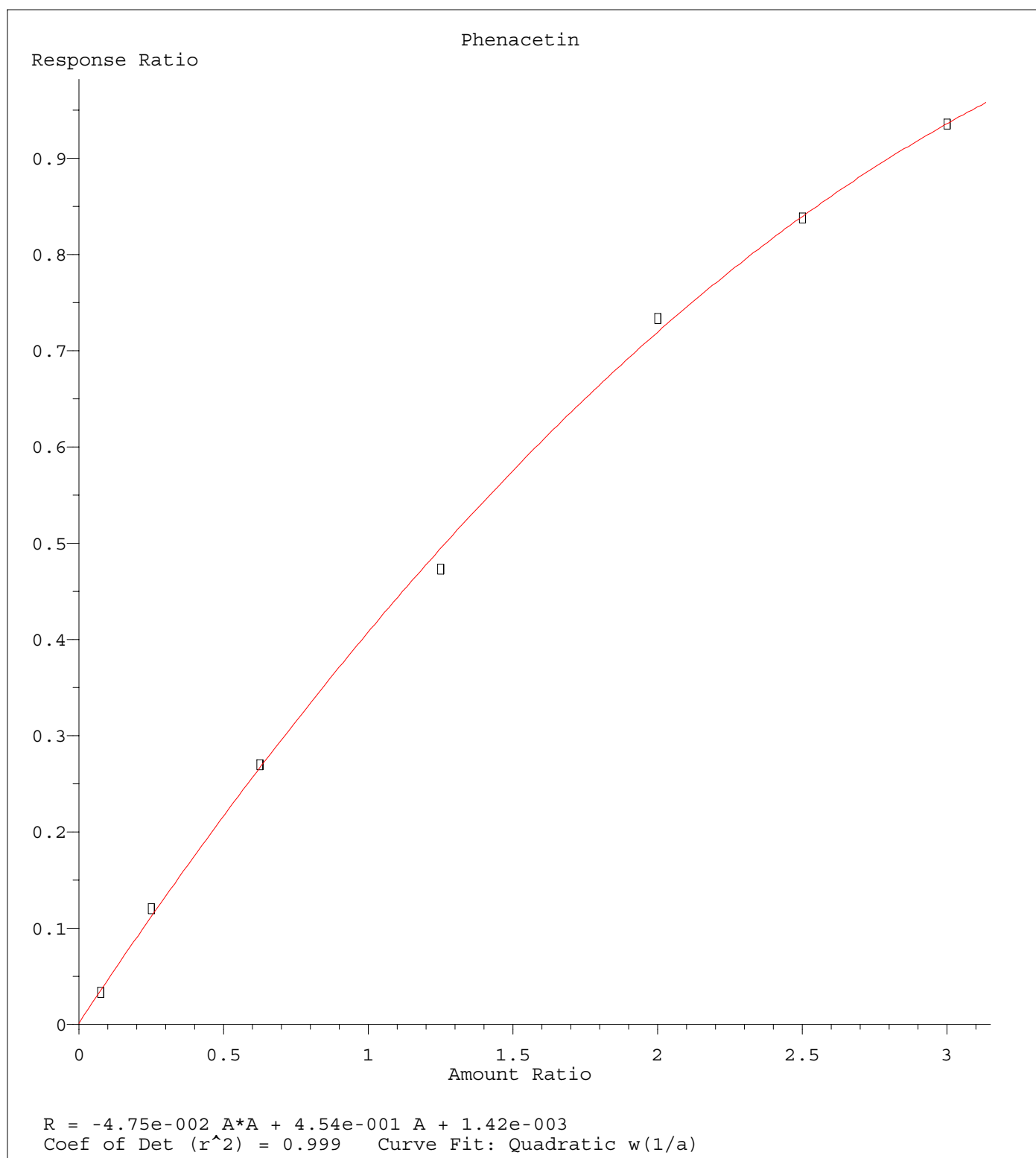
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Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



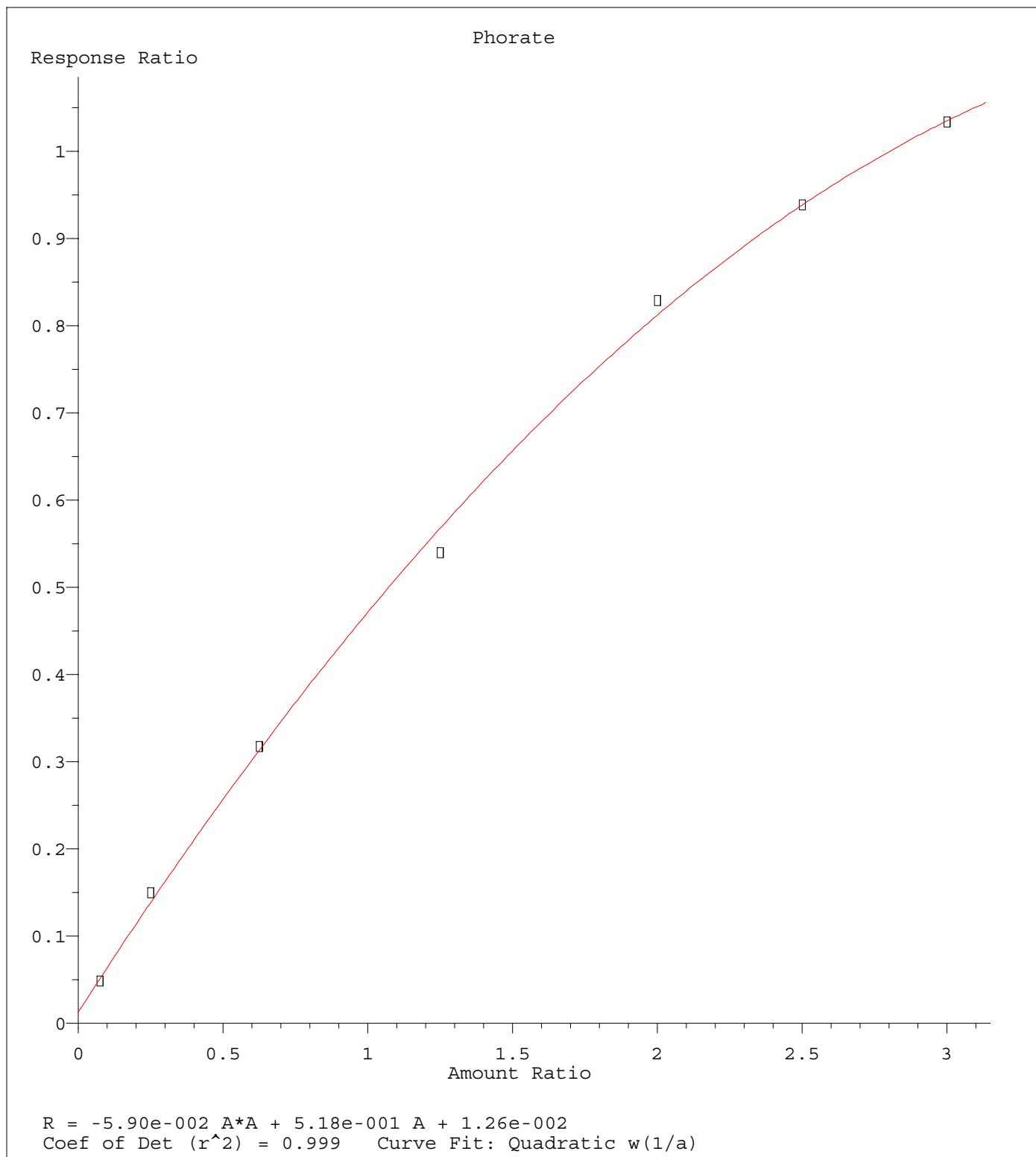
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Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



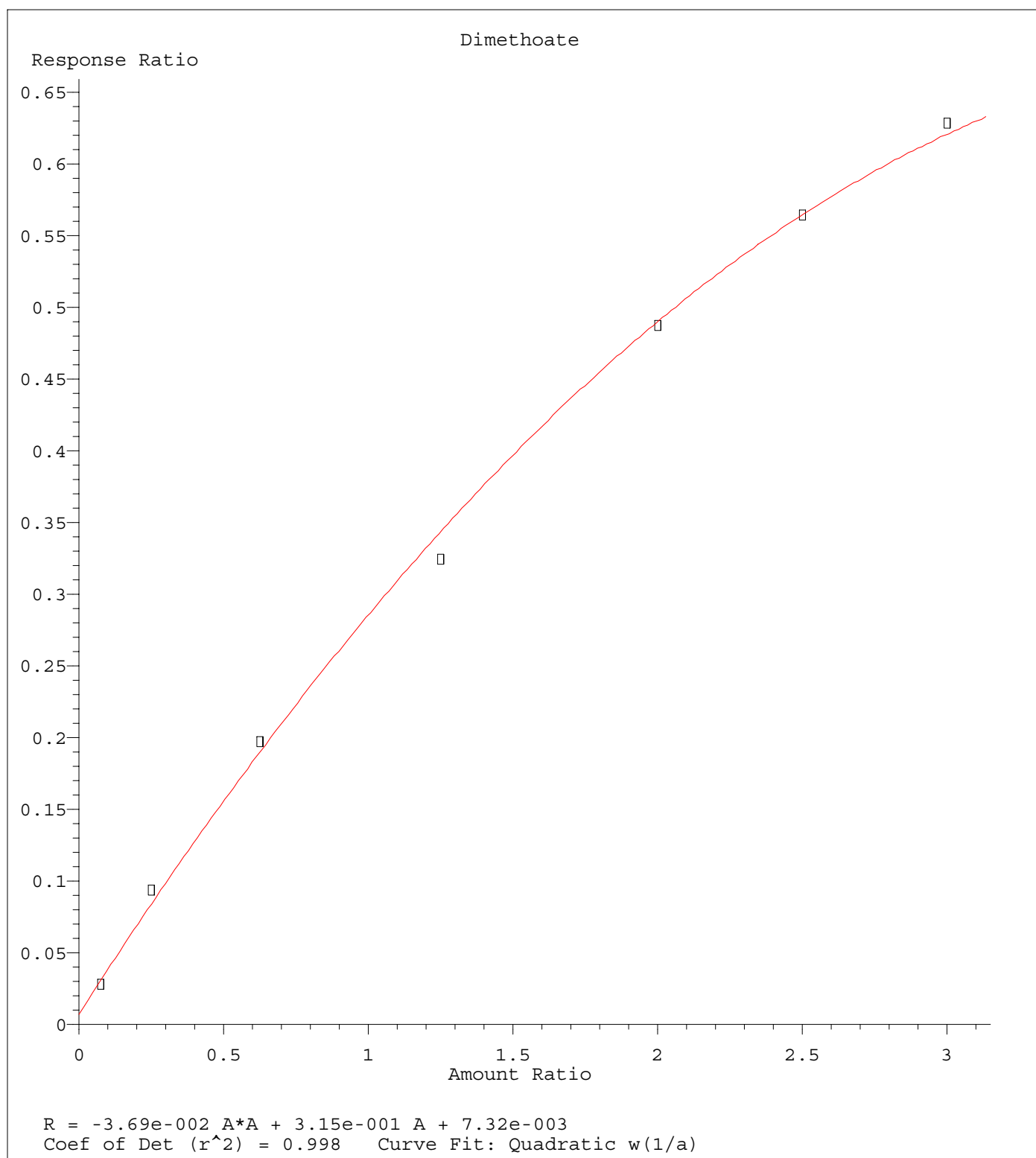
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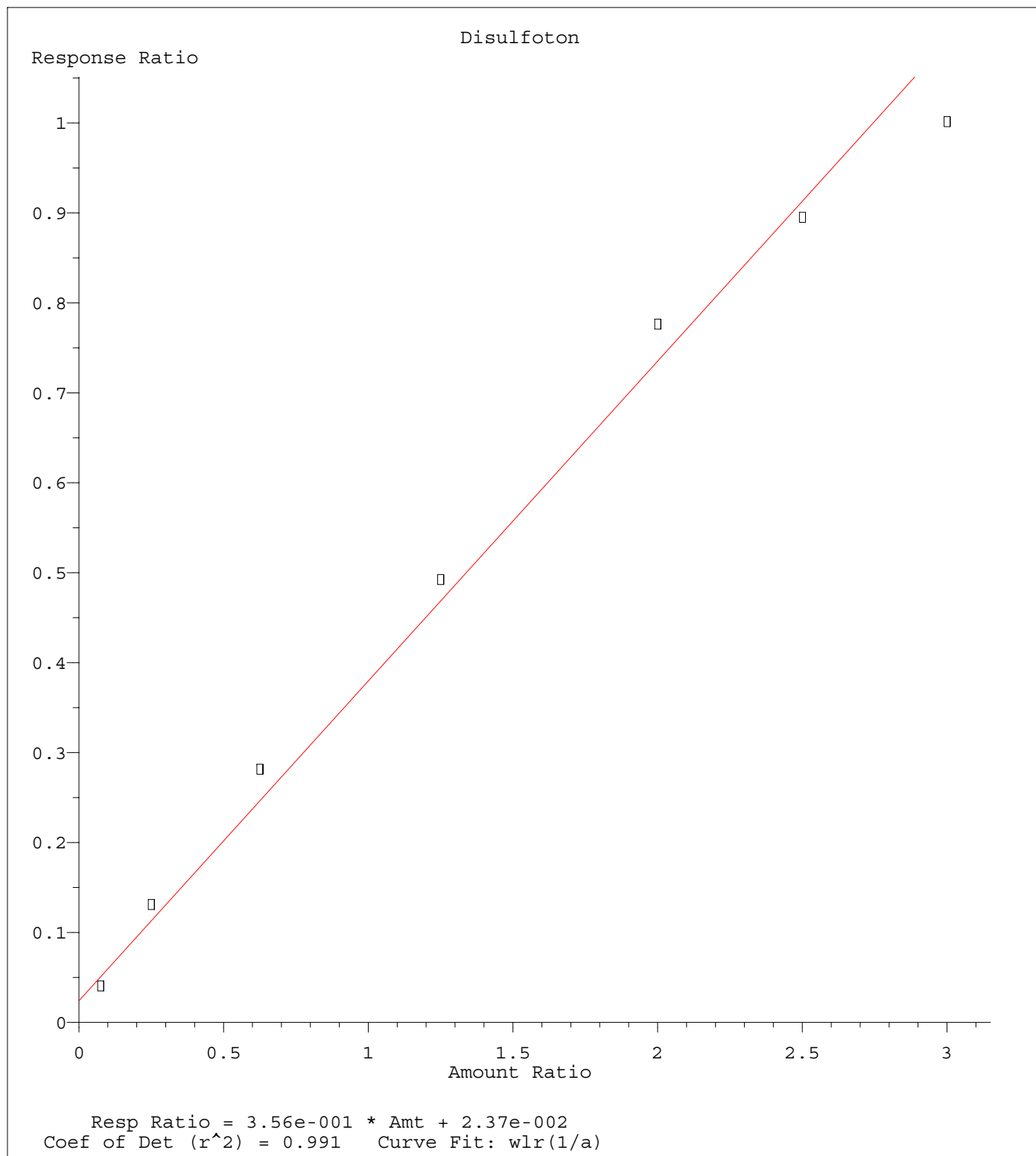
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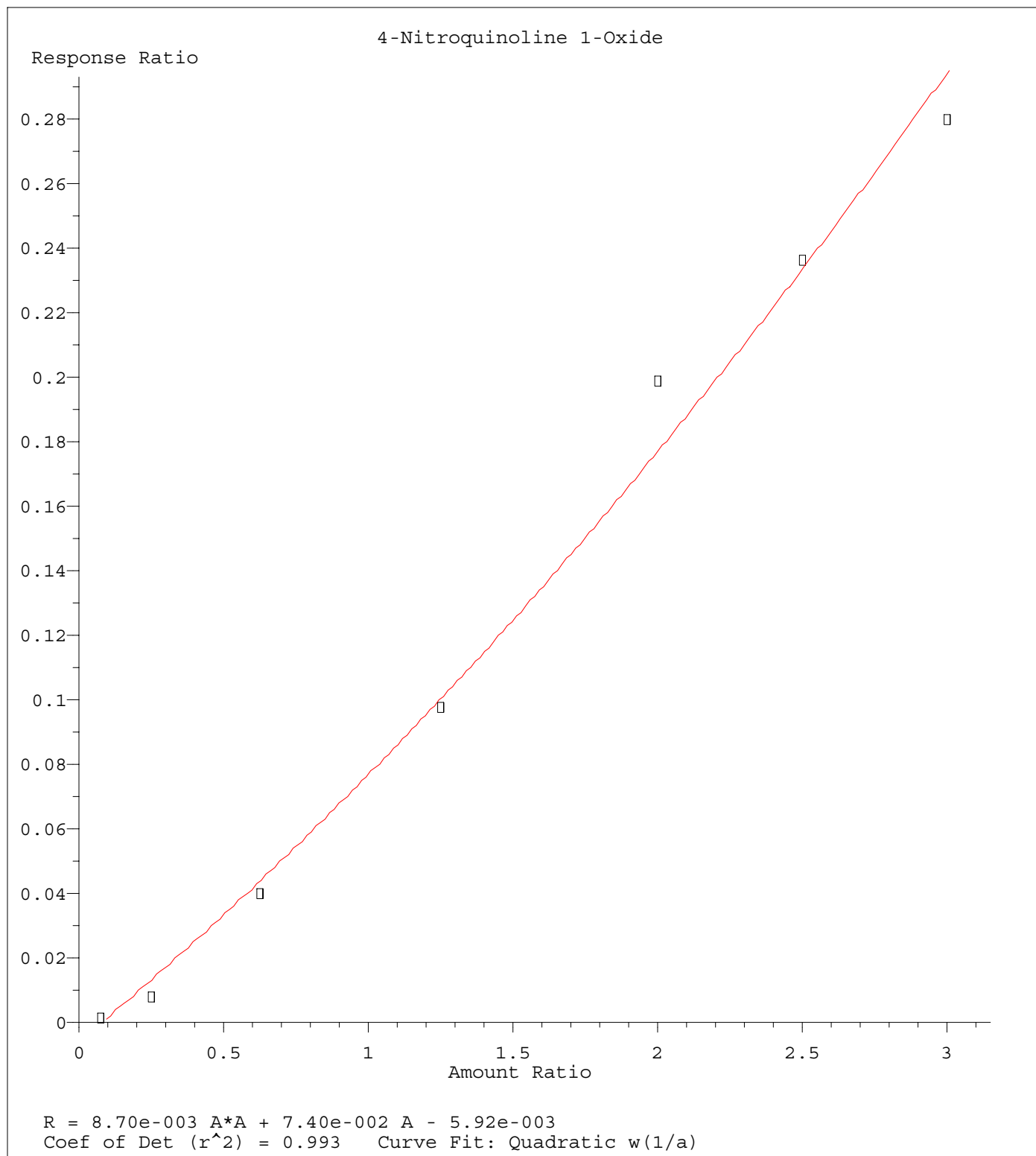
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Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



Method Name: I:\MSDCHEM\1\METHODS\TCL.M
Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



Method Name: I:\MSDCHEM\1\METHODS\TCL.M
Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



Method Name: I:\MSDCHEM\1\METHODS\TCL.M
Calibration Table Last Updated: Sat Mar 28 09:39:43 2020



Section E:

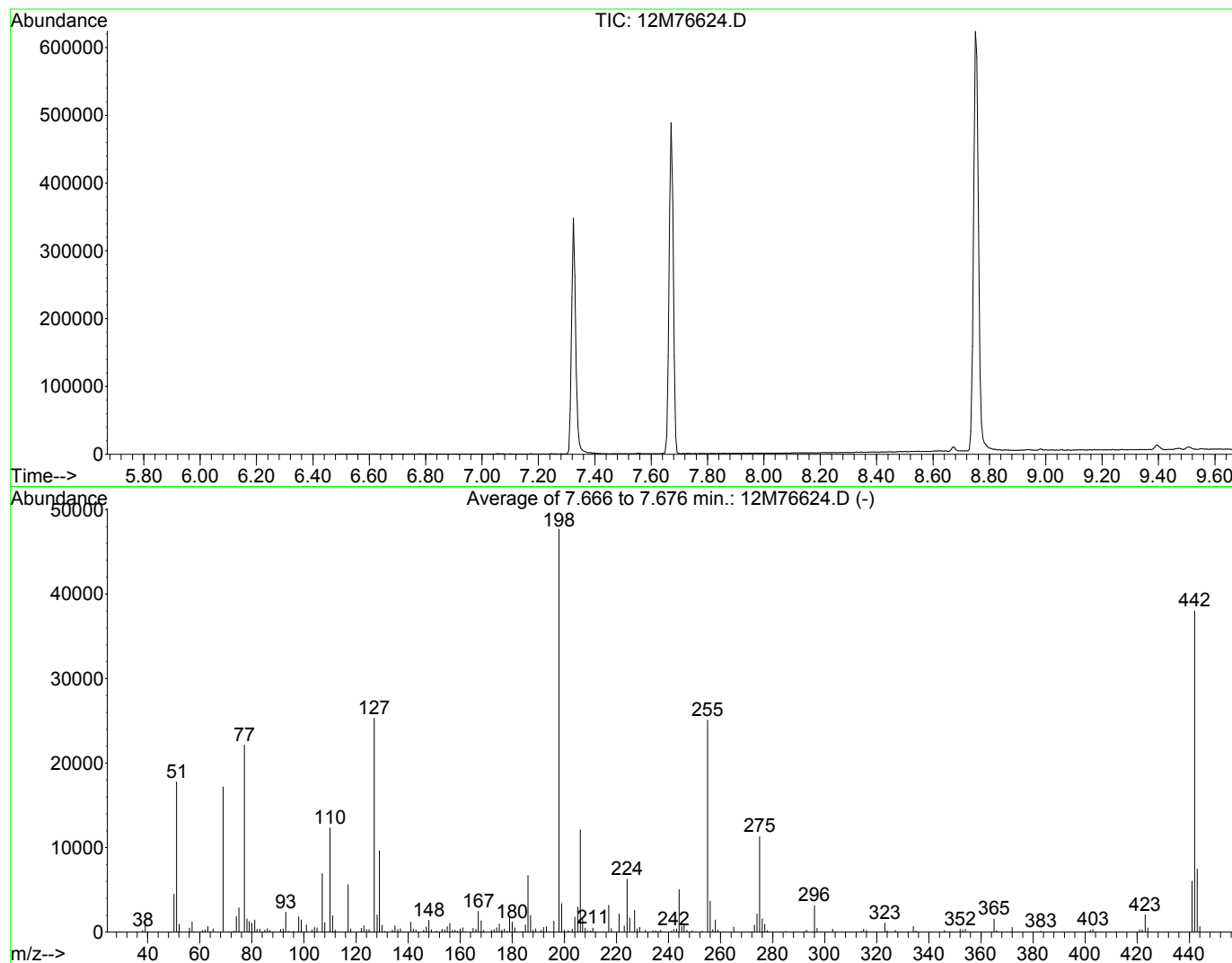
GCMS Semivolatiles

EPA 8270C

Sequence QC Sample Raw Data

DFTPP

Data File : I:\MSDCHEM\1\DATA\032720\12M76624.D Vial: 1
 Acq On : 27 Mar 2020 10:22 am Operator: SCB
 Sample : SEQ-TUN1 Inst : MSD12
 Misc : 1,1 0001469 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Method : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP

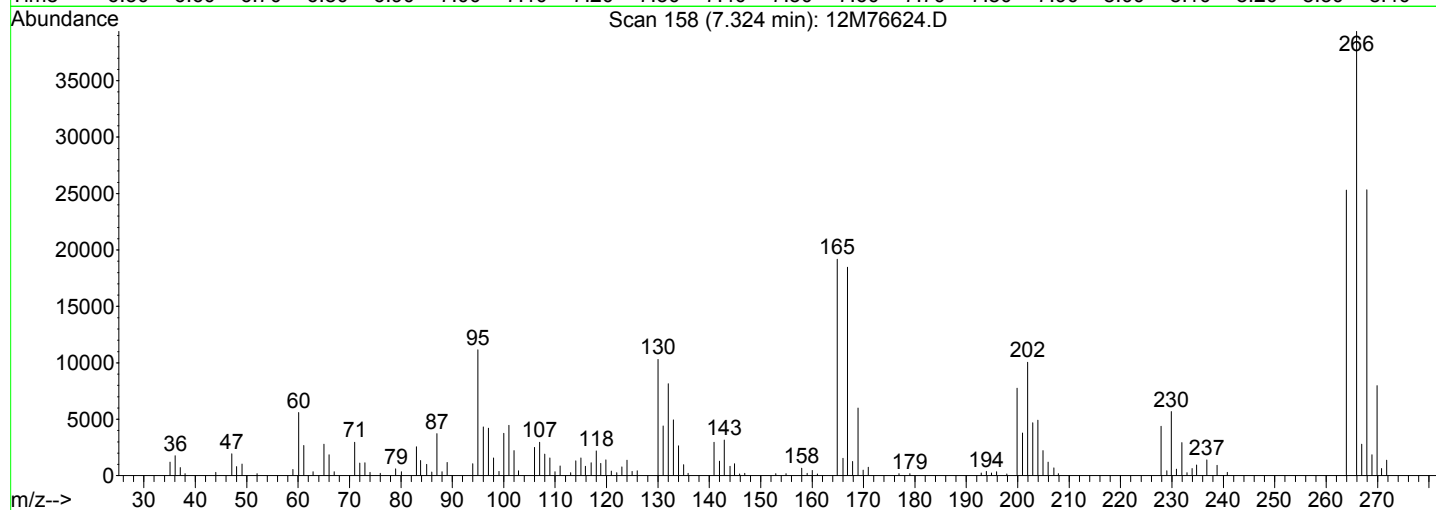
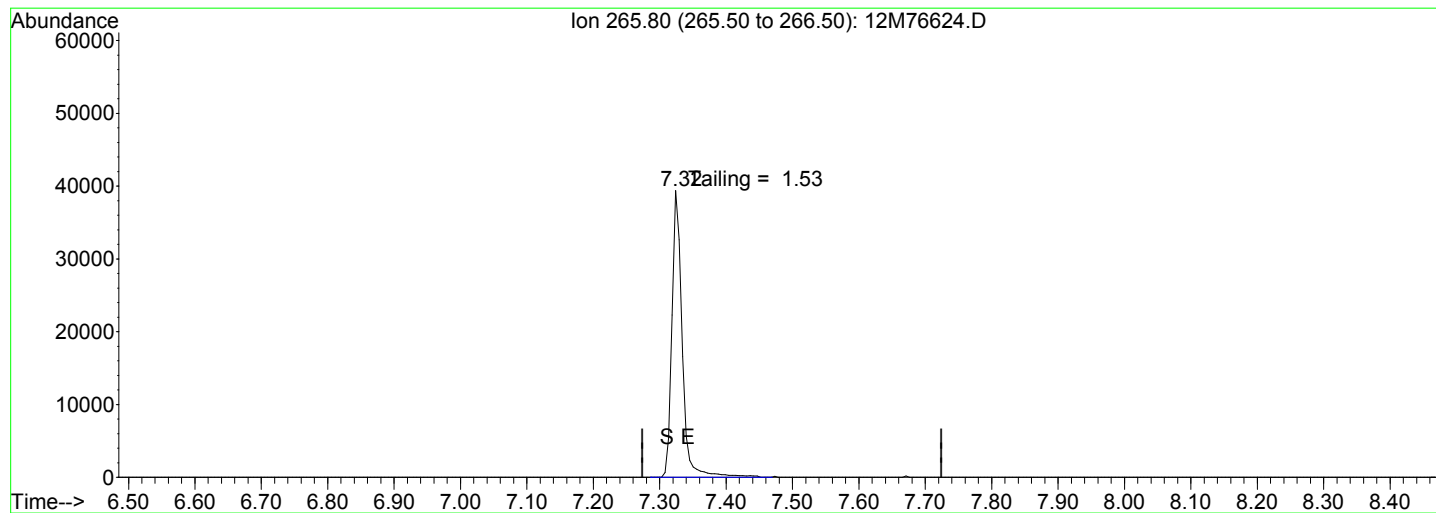


AutoFind: Scans 222, 223, 224; Background Corrected with Scan 216

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.3	17770	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	36.0	17178	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	53.1	25328	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	47672	PASS
199	198	5	9	7.1	3383	PASS
275	198	10	30	23.7	11307	PASS
365	198	1	100	3.3	1555	PASS
441	443	0.01	100	80.8	6021	PASS
442	198	40	100	79.7	37986	PASS
443	442	17	23	19.6	7454	PASS

Data File : I:\MSDCHEM\1\DATA\032720\12M76624.D Vial: 1
Acq On : 27 Mar 2020 10:22 am Operator: SCB
Sample : SEQ-TUN1 Inst : MSD12
Misc : 1,1 0001469 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 10:36 2020 Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Tue Dec 24 09:23:10 2019
Response via : Single Level Calibration



TIC: 12M76624.D

(1) Pentachlorophenol

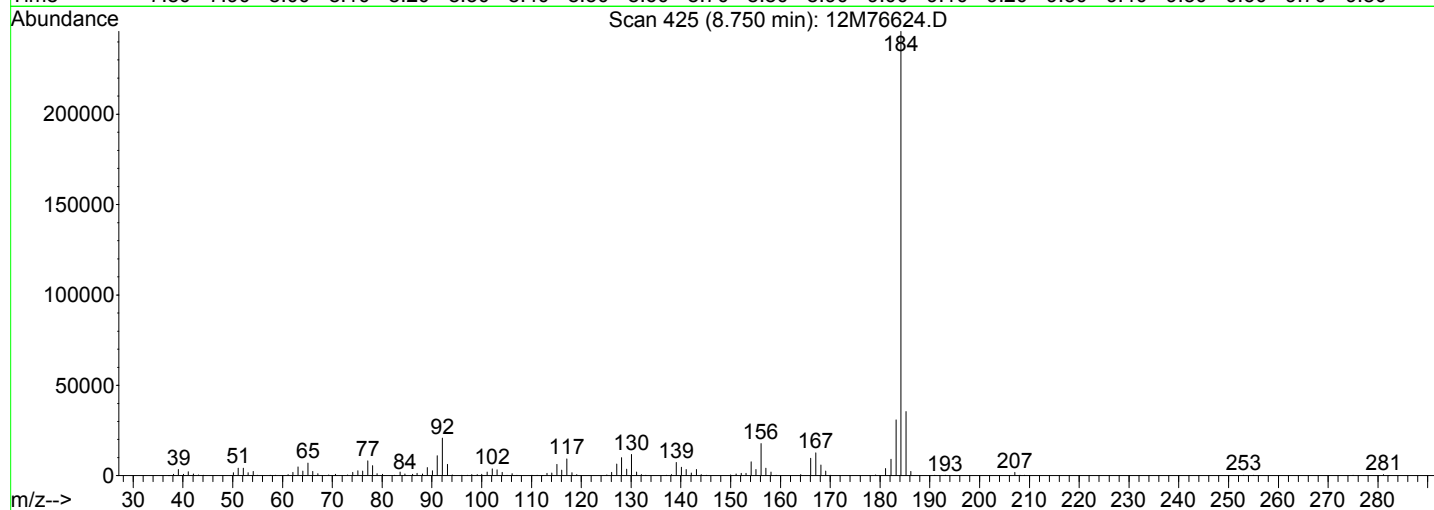
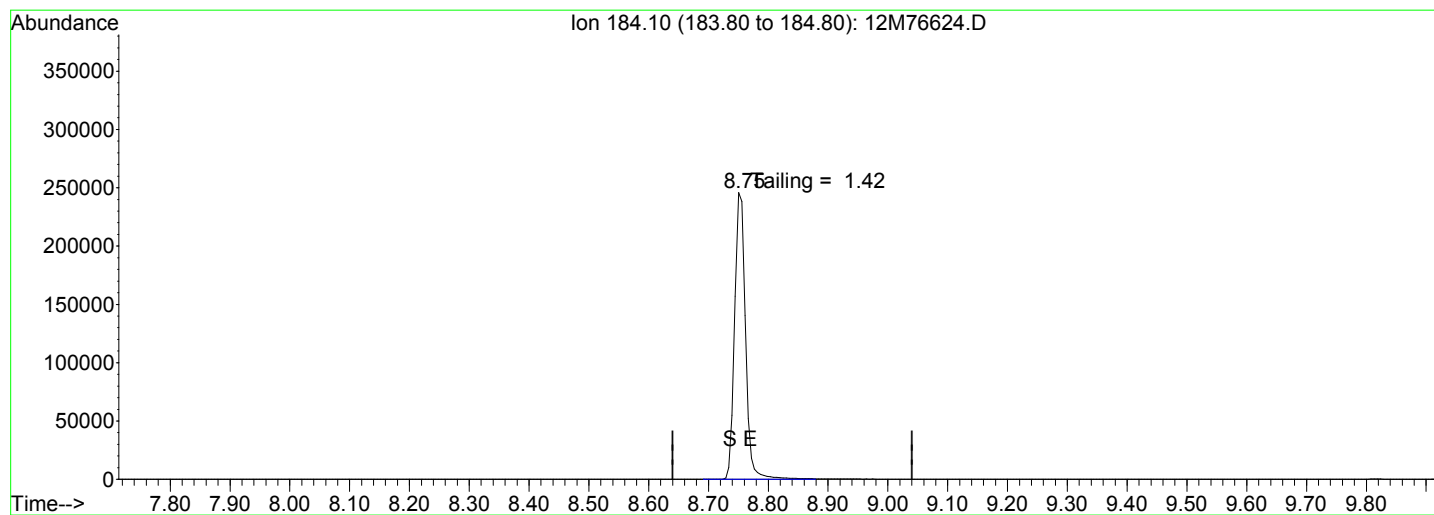
7.32min 0.00ug/ml

response 42967

Ion	Exp%	Act%
265.80	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76624.D Vial: 1
Acq On : 27 Mar 2020 10:22 am Operator: SCB
Sample : SEQ-TUN1 Inst : MSD12
Misc : 1,1 0001469 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 10:36 2020 Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Tue Dec 24 09:23:10 2019
Response via : Single Level Calibration



TIC: 12M76624.D

(2) Benzidine

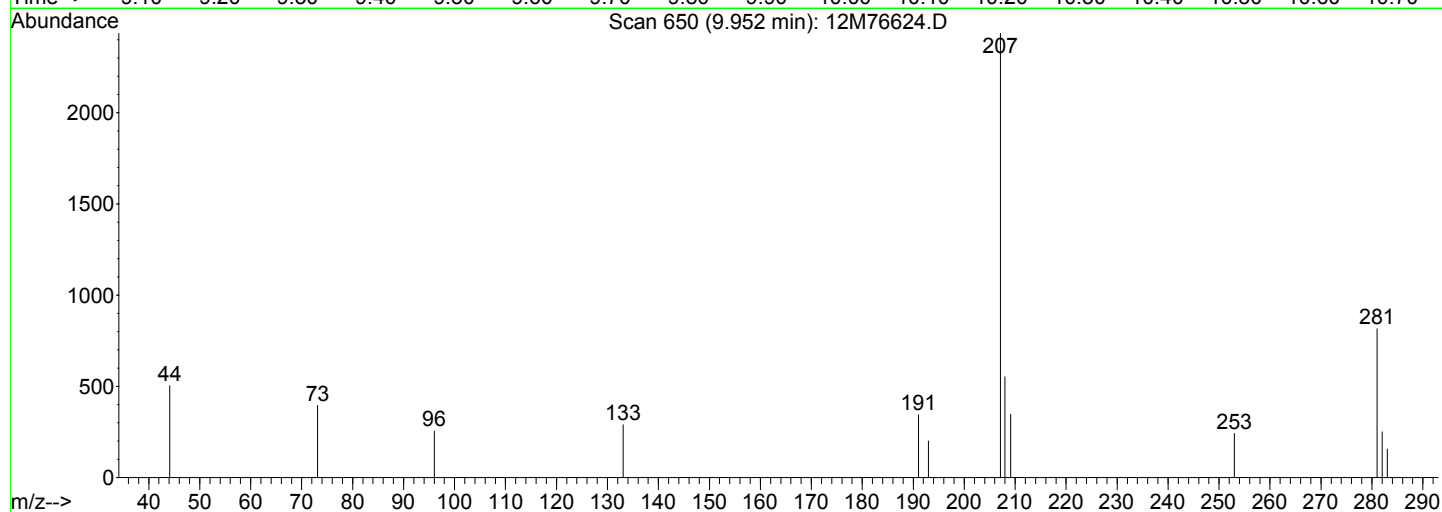
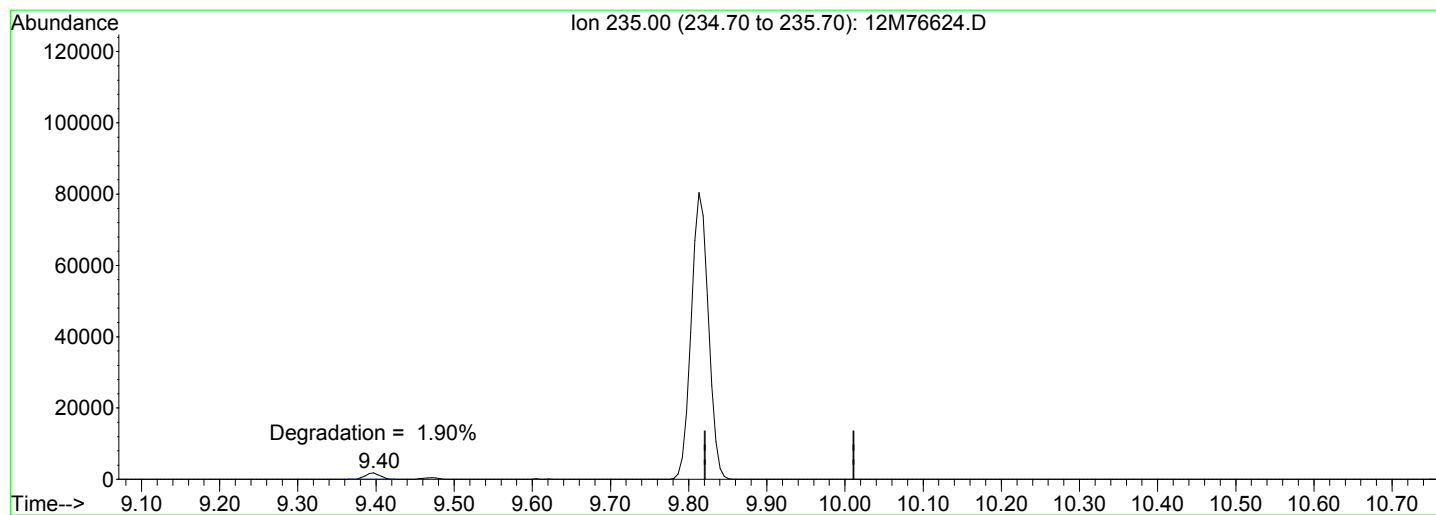
8.75min 0.00ug/ml

response 308142

Ion	Exp%	Act%
184.10	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76624.D Vial: 1
Acq On : 27 Mar 2020 10:22 am Operator: SCB
Sample : SEQ-TUN1 Inst : MSD12
Misc : 1,1 0001469 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 10:36 2020 Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : DFTPP
Last Update : Tue Dec 24 09:23:10 2019
Response via : Single Level Calibration



TIC: 12M76624.D

(3) DDT

9.95min 0.00ug/ml

response 0

Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D

Vial: 2

Acq On : 27 Mar 2020 10:42 am

Operator: SCB

Sample : SEQ-CAL4

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:27 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	92176	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.015	136	340254	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.820	164	188576	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.412	188	317208	40.0000	ug/ml	0.000
86) Chrysene-d12	16.072	240	250604	40.0000	ug/ml	0.000
98) Perylene-d12	18.775	264	290207	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	168514	49.5952084	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery =	49.60%		
9) Phenol-d5	7.332	99	184566	48.9330463	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery =	48.93%		
26) Nitrobenzene-d5	8.293	82	185748	48.7701473	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	97.54%		
49) 2-Fluorobiphenyl	10.083	172	358072	47.3223296	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery =	94.64%		
72) 2,4,6-Tribromophenol	11.638	330	39221	48.5991934	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery =	48.60%		
89) p-Terphenyl-d14	14.426	244	364939	47.9949807	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery =	95.99%		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	114440	49.9982	ug/ml	100
3) Pyridine	5.05	79	193575	50.2698	ug/ml	100
4) 2-Picoline	5.89	93	202754	48.8962	ug/ml	100
5) n-Nitrosomethylethylamine	6.01	88	85448	49.6721	ug/ml	100
7) n-Nitrosodiethylamine	6.71	102	85187	49.3439	ug/ml	100
8) Aniline	7.42	66	96256	48.4626	ug/ml	100
10) Phenol	7.34	94	201344	48.4202	ug/ml	100
11) bis(2-Chloroethyl) ether	7.44	63	127827	48.0112	ug/ml	100
12) 2-Chlorophenol	7.55	128	178562	48.4552	ug/ml	100
13) 1,3-Dichlorobenzene	7.69	146	186166	48.0174	ug/ml	100
14) 1,4-Dichlorobenzene	7.74	146	182343	47.7729	ug/ml	100
15) Benzyl Alcohol	7.84	108	110109	50.2576	ug/ml	100
16) 1,2-Dichlorobenzene	7.94	146	158390	46.4832	ug/ml	100
17) 2-Methylphenol	7.94	107	118672	46.6132	ug/ml	100
18) bis(2-Chloroisopropyl) ethe	7.98	45	221251	47.7356	ug/ml	100
19) 3-,4-Methylphenol	8.07	107	173310	48.8004	ug/ml	100
20) n-Nitrosopyrrolidine	8.11	100	72812	47.7151	ug/ml	100
21) n-Nitrosodipropylamine	8.12	70	100064	48.3501	ug/ml	100
22) n-Nitrosomorpholine	8.12	56	86598	53.2365	ug/ml	100
23) o-Toluidine	8.17	106	250303	47.5890	ug/ml	100
24) Hexachloroethane	8.25	117	73461	48.9055	ug/ml	100
27) Nitrobenzene	8.31	77	168148	48.3380	ug/ml	100
28) n-Nitrosopiperidine	8.45	114	85761	49.0472	ug/ml	100
29) Isophorone	8.52	82	304590	48.2403	ug/ml	100
30) 2-Nitrophenol	8.63	139	89247	49.8246	ug/ml	100
31) 2,4-Dimethylphenol	8.60	122	146160	48.2083	ug/ml	100
32) bis(2-Chloroethoxy) methane	8.70	93	185600	48.2149	ug/ml	100
33) Benzoic Acid	8.65	105	36392	45.1689	ug/ml	100
34) 2,4-Dichlorophenol	8.85	162	126092	48.3834	ug/ml	100
35) a,a-Dimethylphenethylamine	8.84	58	397664m	49.6746	ug/ml	
36) 1,2,4-Trichlorobenzene	8.96	180	139530	47.8151	ug/ml	100
37) Naphthalene	9.04	128	486017	47.5236	ug/ml	100
38) 4-Chloroaniline	9.06	65	55989	48.7850	ug/ml	100

(#) = qualifier out of range (m) = manual integration

12M76625.D MEGAMIX.M Fri Mar 27 16:48:33 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D

Vial: 2

Acq On : 27 Mar 2020 10:42 am

Operator: SCB

Sample : SEQ-CAL4

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:27 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	70362	49.0703	ug/ml	100
40) n-Nitrosodi-n-Butylamine	9.38	84	100912	48.8666	ug/ml	100
41) p-Phenylenediamine	9.41	108	159257	48.3727	ug/ml	100
42) 4-Chloro-3-Methylphenol	9.51	107	138840	49.5171	ug/ml	100
43) 2-Methylnaphthalene	9.73	142	312978	47.6337	ug/ml	100
44) 1-Methylnaphthalene	9.84	142	293981	47.5768	ug/ml	100
46) Hexachlorocyclopentadiene	9.94	237	71602	48.0978	ug/ml	100
47) 2,4,6-Trichlorophenol	10.01	196	88355	49.4623	ug/ml	100
48) 2,4,5-Trichlorophenol	10.06	196	92673	49.4362	ug/ml	100
50) 2-Chloronaphthalene	10.23	162	281217	47.8876	ug/ml	100
51) 2-Nitroaniline	10.32	65	89621	49.0495	ug/ml	100
52) Dimethylphthalate	10.49	163	318820	47.6934	ug/ml	100
53) 1,3-Dinitrobenzene	10.54	168	58699	49.9407	ug/ml	100
54) 2,6-Dinitrotoluene	10.59	165	78396	48.5566	ug/ml	100
55) Acenaphthylene	10.67	152	420346	46.8790	ug/ml	100
56) 3-Nitroaniline	10.74	138	88005	48.9460	ug/ml	100
57) 2,4-Dinitrophenol	10.85	184	30680	46.4426	ug/ml	100
58) Acenaphthene	10.85	154	264462	47.0733	ug/ml	100
59) 4-Nitrophenol	10.85	65	53645	53.2988	ug/ml	100
60) 2,4-Dinitrotoluene	10.99	165	98601	49.7801	ug/ml	100
61) Dibenzofuran	11.01	168	383663	47.2998	ug/ml	100
62) 2,3,5,6-Tetrachlorophenol	11.11	232	67626	50.6223	ug/ml	100
63) 2,3,4,6-Tetrachlorophenol	11.16	232	65777	47.8232	ug/ml	100
64) 1-Naphthylamine	11.09	143	297612	48.7826	ug/ml	100
65) 2-Naphthylamine	11.16	143	262747	46.6425	ug/ml	100
66) Diethylphthalate	11.19	149	308819	47.3857	ug/ml	100
67) Fluorene	11.36	166	295280	46.1643	ug/ml	100
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	147919	47.2501	ug/ml	100
69) 4-Nitroaniline	11.38	138	82171	47.5366	ug/ml	100
70) 5-Nitro-o-Toluidine	11.37	152	83808	47.3639	ug/ml	100
71) 1,2-Diphenylhydrazine	11.48	77	325258	48.2359	ug/ml	100
74) 4,6-Dinitro-2-Methylphenol	11.42	198	50953	50.5167	ug/ml	100
75) Diphenylamine/n-Nitrosodip	11.43	169	269466	47.3212	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.84	248	80628	47.1303	ug/ml	100
77) Hexachlorobenzene	12.05	284	87086	47.0371	ug/ml	100
78) 4-Aminobiphenyl	12.13	169	333221	47.1138	ug/ml	100
79) Pentachlorophenol	12.23	266	47548	46.3749	ug/ml	100
80) Phenanthrene	12.44	178	457942	47.4060	ug/ml	100
81) Anthracene	12.49	178	466047	47.5636	ug/ml	100
82) Carbazole	12.65	167	436001	48.1287	ug/ml	100
83) Di-n-Butyl Phthalate	13.01	149	535684	48.5568	ug/ml	100
84) Methapyrilene	13.45	58	264003	51.4928	ug/ml	100
85) Fluoranthene	13.97	202	501295	47.9412	ug/ml	100
87) Benzidine	14.07	184	249443	46.5499	ug/ml	100
88) Pyrene	14.30	202	507753	48.4692	ug/ml	100
90) p-(Dimethylamino)azobenzen	14.64	225	94701	50.1026	ug/ml	100
91) Butyl Benzyl Phthalate	15.10	149	210510	48.3195	ug/ml	100
92) 3,3'-Dimethylbenzidine	15.12	212	539931	91.6069	ug/ml	100
93) 2-Acetylaminofluorene	15.53	181	208781	47.5291	ug/ml	100
94) bis(2-Ethylhexyl)phthalate	15.94	149	316622	50.8871	ug/ml	100
95) 3,3'-Dichlorobenzidine	15.95	252	157340	46.9004	ug/ml	100
96) Benzo[a]anthracene	16.04	228	418003	47.6577	ug/ml	100
97) Chrysene	16.11	228	404355	47.2105	ug/ml	100
99) Di-n-Octyl Phthalate	16.88	149	577213	50.3975	ug/ml	100

(#) = qualifier out of range (m) = manual integration

12M76625.D MEGAMIX.M

Fri Mar 27 16:48:33 2020

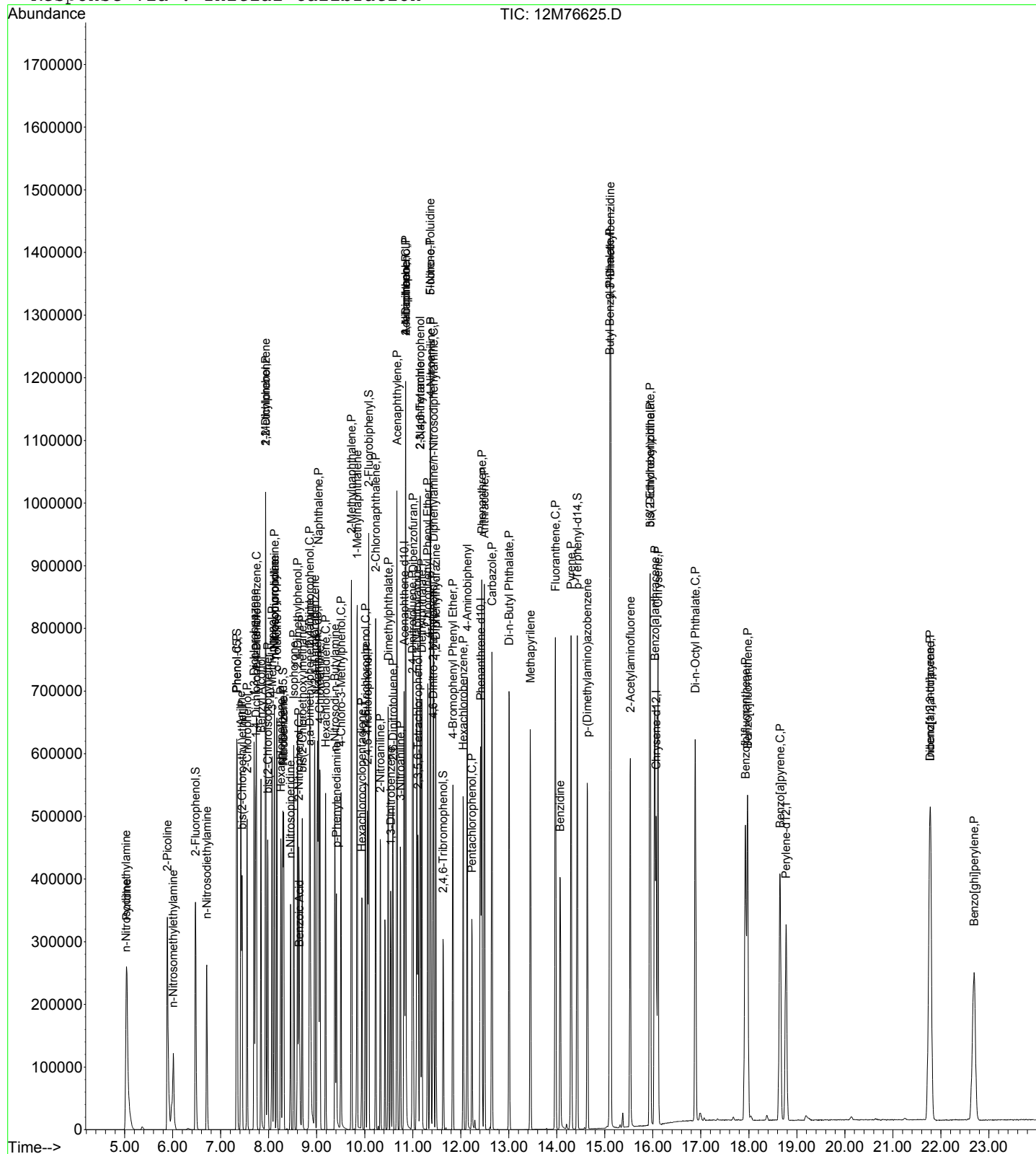
Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D Vial: 2
Acq On : 27 Mar 2020 10:42 am Operator: SCB
Sample : SEQ-CAL4 Inst : MSD12
Misc : 1,1 0002259 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:27 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.93	252	462686	50.1633	ug/ml	100
101) Benzo[k]fluoranthene	17.97	252	408674	47.8280	ug/ml	100
102) Benzo[a]pyrene	18.65	252	399347	49.4195	ug/ml	100
103) Indeno[1,2,3-cd]pyrene	21.78	276	499095	50.1822	ug/ml	100
104) Dibenz[ah]anthracene	21.78	278	419921	50.0886	ug/ml	100
105) Benzo[ghi]perylene	22.70	276	417847	50.8523	ug/ml	100

Quant Results File: MEGAMIX.RES

```
Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update  : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
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Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D

Vial: 2

Acq On : 27 Mar 2020 10:42 am

Operator: SCB

Sample : SEQ-CAL4

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31 2020

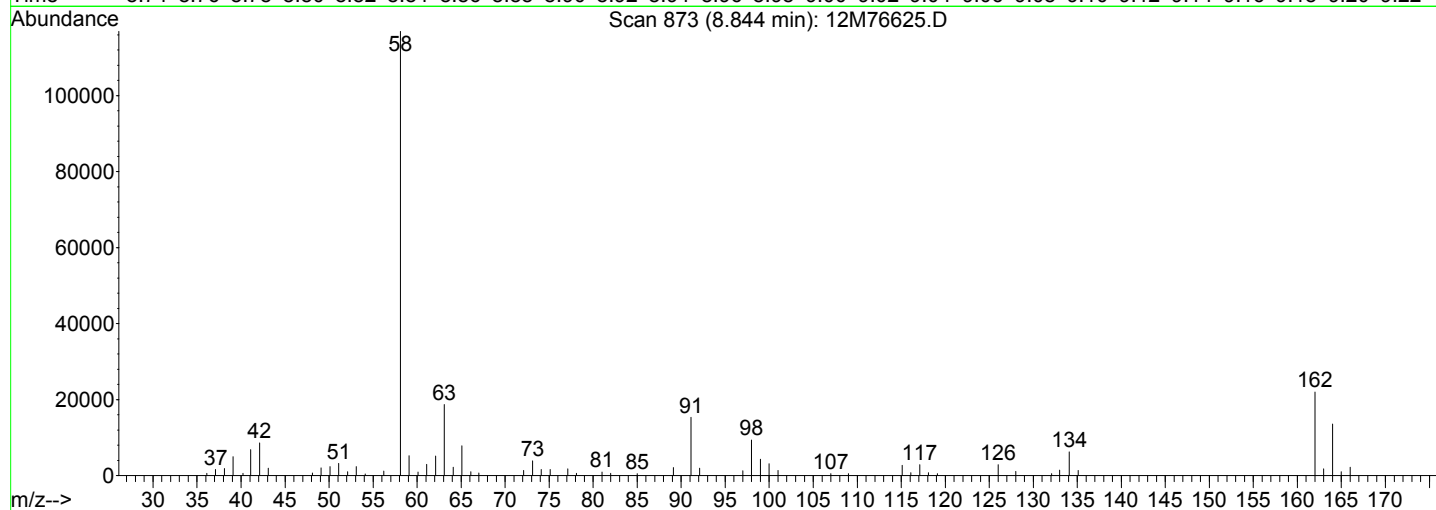
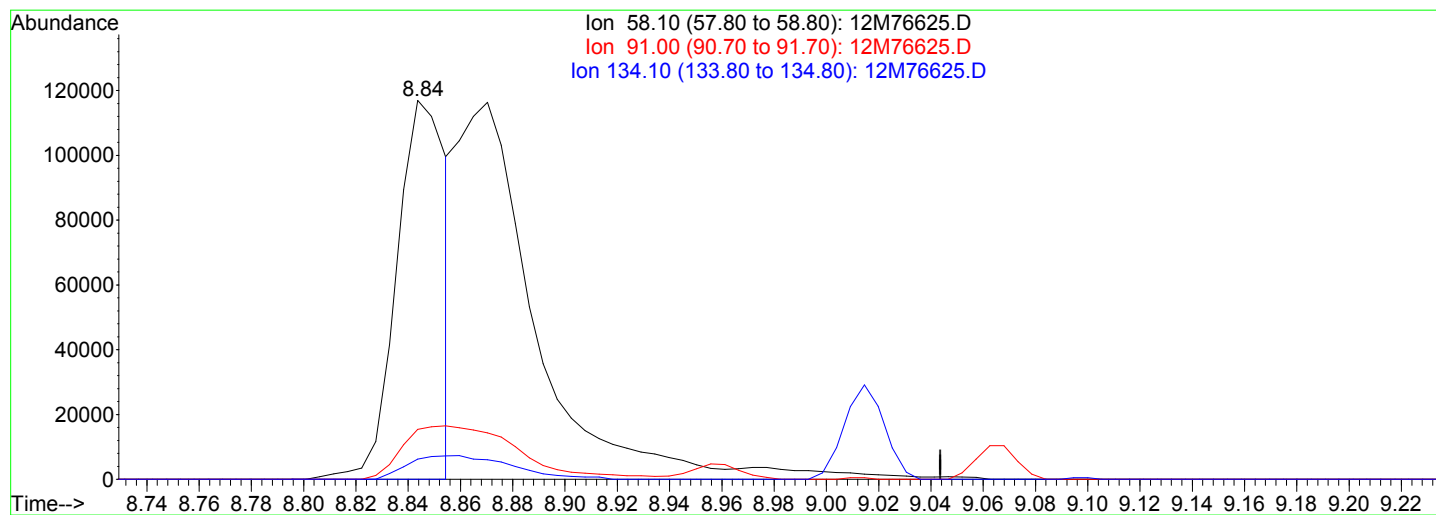
Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration



TIC: 12M76625.D

(35) a,a-Dimethylphenethylamine

8.84min 19.20ug/ml

response 153724

Ion	Exp%	Act%
58.10	100	100
91.00	12.60	32.82#
134.10	5.10	13.21#
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D

Vial: 2

Acq On : 27 Mar 2020 10:42 am

Operator: SCB

Sample : SEQ-CAL4

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:32 2020

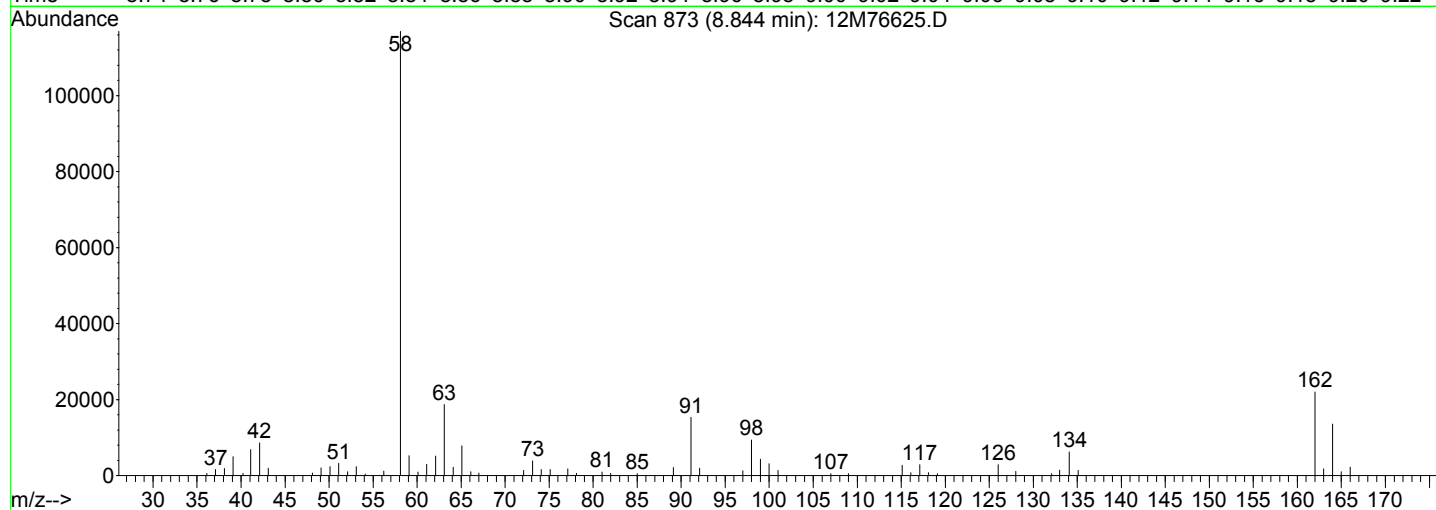
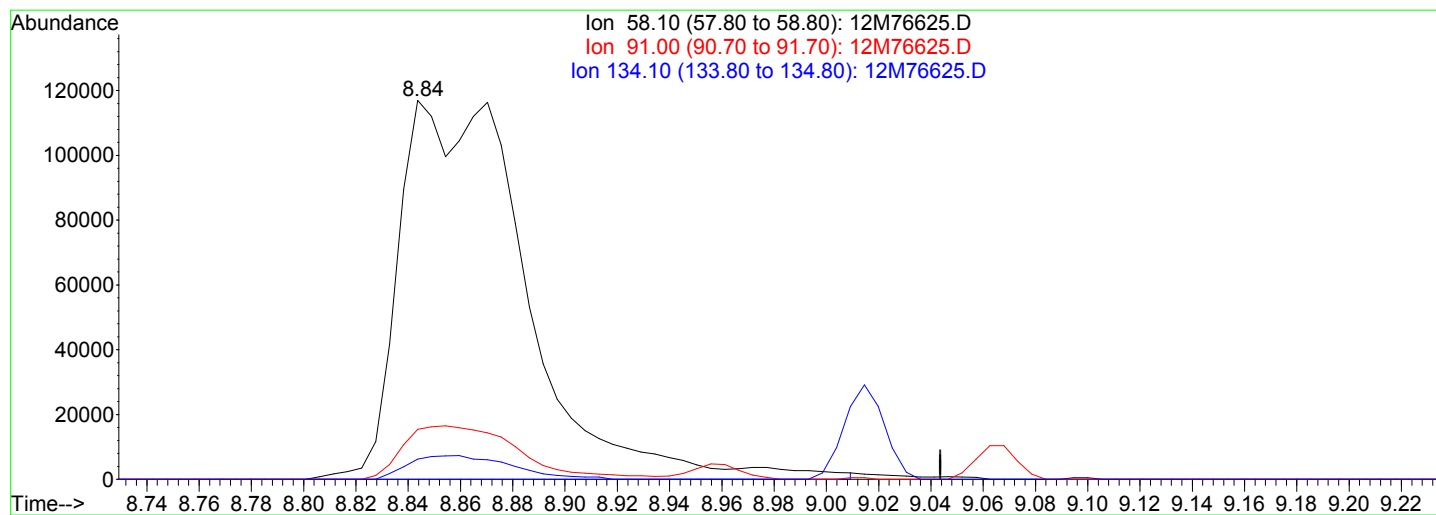
Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration



TIC: 12M76625.D

(35) a,a-Dimethylphenethylamine

8.84min 49.67ug/ml mint

response 397664

Ion	Exp%	Act%
58.10	100	100
91.00	12.60	12.69
134.10	5.10	5.11
0.00	0.00	0.00

Digitally signed by Sarah Bogolin
Reason: Data system splits the
peak incorrectly or integrates a
false peak as a rider peak
Date: 2020.03.28 10:18:58 -04'00'

Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D

Vial: 2

Acq On : 27 Mar 2020 10:42 am

Operator: SCB

Sample : SEQ-CAL4

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	50.000	49.998	0.0	100	0.00
3	Pyridine	50.000	50.270	-0.5	100	0.00
4	2-Picoline	50.000	48.896	2.2	100	0.00
5	n-Nitrosomethylethylamine	50.000	49.672	0.7	100	0.00
6 S	2-Fluorophenol	50.000	49.595	0.8	100	0.00
7	n-Nitrosodiethylamine	50.000	49.344	1.3	100	0.00
8	Aniline	50.000	48.463	3.1	100	0.00
9 S	Phenol-d5	50.000	48.933	2.1	100	0.00
10 C,P	Phenol	50.000	48.420	3.2	100	0.00
11 P	bis(2-Chloroethyl)ether	50.000	48.011	4.0	100	0.00
12 P	2-Chlorophenol	50.000	48.455	3.1	100	0.00
13	1,3-Dichlorobenzene	50.000	48.017	4.0	100	0.00
14 C	1,4-Dichlorobenzene	50.000	47.773	4.5	100	0.00
15	Benzyl Alcohol	50.000	50.258	-0.5	100	0.00
16	1,2-Dichlorobenzene	50.000	46.483	7.0	100	0.00
17 P	2-Methylphenol	50.000	46.613	6.8	100	0.00
18 P	bis(2-Chloroisopropyl)ether	50.000	47.736	4.5	100	0.00
19 P	3-,4-Methylphenol	50.000	48.800	2.4	100	0.00
20	n-Nitrosopyrrolidine	50.000	47.715	4.6	100	0.00
21 P	n-Nitrosodipropylamine	50.000	48.350	3.3	100	0.00
22	n-Nitrosomorpholine	50.000	53.237	-6.5	100	0.00
23	o-Toluidine	50.000	47.589	4.8	100	0.00
24 P	Hexachloroethane	50.000	48.905	2.2	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	50.000	48.770	2.5	100	0.00
27 P	Nitrobenzene	50.000	48.338	3.3	100	0.00
28	n-Nitrosopiperidine	50.000	49.047	1.9	100	0.00
29 P	Isophorone	50.000	48.240	3.5	100	0.00
30 C,P	2-Nitrophenol	50.000	49.825	0.3	100	0.00
31 P	2,4-Dimethylphenol	50.000	48.208	3.6	100	0.00
32 P	bis(2-Chloroethoxy)methane	50.000	48.215	3.6	100	0.00
33	Benzoic Acid	50.000	45.169	9.7	100	0.00
34 C,P	2,4-Dichlorophenol	50.000	48.383	3.2	100	0.00
35	a,a-Dimethylphenethylamine	50.000	49.675	0.7	99	0.00
36	1,2,4-Trichlorobenzene	50.000	47.815	4.4	100	0.00
37 P	Naphthalene	50.000	47.524	5.0	100	0.00
38 P	4-Chloroaniline	50.000	48.785	2.4	100	0.00
39 C,P	Hexachlorobutadiene	50.000	49.070	1.9	100	0.00
40	n-Nitrosodi-n-Butylamine	50.000	48.867	2.3	100	0.00
41	p-Phenylenediamine	50.000	48.373	3.3	100	0.00
42 C,P	4-Chloro-3-Methylphenol	50.000	49.517	1.0	100	0.00
43 P	2-Methylnaphthalene	50.000	47.634	4.7	100	0.00
44	1-Methylnaphthalene	50.000	47.577	4.8	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	50.000	48.098	3.8	100	0.00
47 C,P	2,4,6-Trichlorophenol	50.000	49.462	1.1	100	0.00
48 P	2,4,5-Trichlorophenol	50.000	49.436	1.1	100	0.00
49 S	2-Fluorobiphenyl	50.000	47.322	5.4	100	0.00
50 P	2-Chloronaphthalene	50.000	47.888	4.2	100	0.00
51 P	2-Nitroaniline	50.000	49.050	1.9	100	0.00
52 P	Dimethylphthalate	50.000	47.693	4.6	100	0.00

(#) = Out of Range

12M76625.D MEGAMIX.M

Fri Mar 27 16:51:45 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D

Vial: 2

Acq On : 27 Mar 2020 10:42 am

Operator: SCB

Sample : SEQ-CAL4

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	50.000	49.941	0.1	100	0.00
54 P	2,6-Dinitrotoluene	50.000	48.557	2.9	100	0.00
55 P	Acenaphthylene	50.000	46.879	6.2	100	0.00
56 P	3-Nitroaniline	50.000	48.946	2.1	100	0.00
57 P	2,4-Dinitrophenol	50.000	46.443	7.1	100	0.00
58 C,P	Acenaphthene	50.000	47.073	5.9	100	0.00
59 P	4-Nitrophenol	50.000	53.299	-6.6	100	0.00
60 P	2,4-Dinitrotoluene	50.000	49.780	0.4	100	0.00
61 P	Dibenzofuran	50.000	47.300	5.4	100	0.00
62	2,3,5,6-Tetrachlorophenol	50.000	50.622	-1.2	100	0.00
63	2,3,4,6-Tetrachlorophenol	50.000	47.823	4.4	100	0.00
64	1-Naphthylamine	50.000	48.783	2.4	100	0.00
65	2-Naphthylamine	50.000	46.642	6.7	100	0.00
66 P	Diethylphthalate	50.000	47.386	5.2	100	0.00
67 P	Fluorene	50.000	46.164	7.7	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	50.000	47.250	5.5	100	0.00
69 P	4-Nitroaniline	50.000	47.537	4.9	100	0.00
70	5-Nitro-o-Toluidine	50.000	47.364	5.3	100	0.00
71	1,2-Diphenylhydrazine	50.000	48.236	3.5	100	0.00
72 S	2,4,6-Tribromophenol	50.000	48.599	2.8	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	50.000	50.517	-1.0	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiph	50.000	47.321	5.4	100	0.00
76 P	4-Bromophenyl Phenyl Ether	50.000	47.130	5.7	100	0.00
77 P	Hexachlorobenzene	50.000	47.037	5.9	100	0.00
78	4-Aminobiphenyl	50.000	47.114	5.8	100	0.00
79 C,P	Pentachlorophenol	50.000	46.375	7.2	100	0.00
80 P	Phenanthrene	50.000	47.406	5.2	100	0.00
81 P	Anthracene	50.000	47.564	4.9	100	0.00
82 P	Carbazole	50.000	48.129	3.7	100	0.00
83 P	Di-n-Butyl Phthalate	50.000	48.557	2.9	100	0.00
84	Methapyrilene	50.000	51.493	-3.0	100	0.00
85 C,P	Fluoranthene	50.000	47.941	4.1	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	50.000	46.550	6.9	100	0.00
88 P	Pyrene	50.000	48.469	3.1	100	0.00
89 S	p-Terphenyl-d14	50.000	47.995	4.0	100	0.00
90	p-(Dimethylamino)azobenzene	50.000	50.103	-0.2	100	0.00
91 P	Butyl Benzyl Phthalate	50.000	48.319	3.4	100	0.00
92	3,3'-Dimethylbenzidine	100.000	91.607	8.4	100	0.00
93	2-Acetylaminofluorene	50.000	47.529	4.9	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	50.000	50.887	-1.8	100	0.00
95 P	3,3'-Dichlorobenzidine	50.000	46.900	6.2	100	0.00
96 P	Benzo[a]anthracene	50.000	47.658	4.7	100	0.00
97 P	Chrysene	50.000	47.211	5.6	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	50.000	50.397	-0.8	100	0.00
100 P	Benzo[b]fluoranthene	50.000	50.163	-0.3	100	0.00
101 P	Benzo[k]fluoranthene	50.000	47.828	4.3	100	0.00
102 C,P	Benzo[a]pyrene	50.000	49.419	1.2	100	0.00
103 P	Indeno[1,2,3-cd]pyrene	50.000	50.182	-0.4	100	0.00

(#) = Out of Range

12M76625.D MEGAMIX.M

Fri Mar 27 16:51:45 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76625.D Vial: 2
Acq On : 27 Mar 2020 10:42 am Operator: SCB
Sample : SEQ-CAL4 Inst : MSD12
Misc : 1,1 0002259 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	50.000	50.089	-0.2	100	0.00
105 P	Benzo[ghi]perylene	50.000	50.852	-1.7	100	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D

Vial: 3

Acq On : 27 Mar 2020 11:17 am

Operator: SCB

Sample : SEQ-CAL1

Inst : MSD12

Misc : 1,1 0002256

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:27 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	83372	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.015	136	314031	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.820	164	173602	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.412	188	286027	40.0000	ug/ml	0.000
86) Chrysene-d12	16.072	240	220412	40.0000	ug/ml	0.000
98) Perylene-d12	18.780	264	257254	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	366173	119.1482556	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery = 119.15%#			
9) Phenol-d5	7.332	99	363144	106.4454407	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery = 106.45%#			
26) Nitrobenzene-d5	8.299	82	379863	108.0656405	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 216.13%#			
49) 2-Fluorobiphenyl	10.083	172	708374	101.6927665	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 203.39%#			
72) 2,4,6-Tribromophenol	11.638	330	100362	135.0863296	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 135.09%#			
89) p-Terphenyl-d14	14.432	244	800942	119.7648499	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 239.53%#			
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.03	74	253047	122.2292	ug/ml	99
3) Pyridine	5.05	79	430128	123.4962	ug/ml	99
4) 2-Picoline	5.89	93	449678	119.8960	ug/ml	100
5) n-Nitrosomethylethylamine	6.02	88	194576	125.0540	ug/ml	99
7) n-Nitrosodiethylamine	6.71	102	184064	117.8762	ug/ml	96
8) Aniline	7.42	66	188324	104.8292	ug/ml	86
10) Phenol	7.35	94	389732	103.6219	ug/ml	99
11) bis(2-Chloroethyl) ether	7.44	63	248059	103.0083	ug/ml	87
12) 2-Chlorophenol	7.55	128	371813	111.5510	ug/ml	98
13) 1,3-Dichlorobenzene	7.70	146	379785	108.3014	ug/ml	100
14) 1,4-Dichlorobenzene	7.74	146	373437	108.1702	ug/ml	99
15) Benzyl Alcohol	7.84	108	233354	117.7583	ug/ml	100
16) 1,2-Dichlorobenzene	7.94	146	315212	102.2748	ug/ml	99
17) 2-Methylphenol	7.95	107	235591	102.3098	ug/ml	100
18) bis(2-Chloroisopropyl) ethe	7.98	45	406751	97.0250	ug/ml	93
19) 3-,4-Methylphenol	8.07	107	351160	109.3207	ug/ml	99
20) n-Nitrosopyrrolidine	8.12	100	144680	104.8235	ug/ml	87
21) n-Nitrosodipropylamine	8.13	70	178894	117.6838	ug/ml	98
22) n-Nitrosomorpholine	8.13	56	158736	110.4797	ug/ml	95
23) o-Toluidine	8.18	106	502866	105.7037	ug/ml	99
24) Hexachloroethane	8.25	117	152391	112.1651	ug/ml	96
27) Nitrobenzene	8.31	77	340582	106.0840	ug/ml	98
28) n-Nitrosopiperidine	8.46	114	183106	113.4638	ug/ml	94
29) Isophorone	8.53	82	606473	104.0727	ug/ml	98
30) 2-Nitrophenol	8.64	139	193870	117.2713	ug/ml	98
31) 2,4-Dimethylphenol	8.60	122	301516	107.7542	ug/ml	99
32) bis(2-Chloroethoxy) methane	8.70	93	370831	104.3783	ug/ml	97
33) Benzoic Acid	8.68	105	153380	115.9907	ug/ml	91
34) 2,4-Dichlorophenol	8.86	162	276574	114.9876	ug/ml	99
35) a,a-Dimethylphenethylamine	8.88	58	861491	116.6003	ug/ml	97
36) 1,2,4-Trichlorobenzene	8.96	180	293244	108.8824	ug/ml	99
37) Naphthalene	9.04	128	954275	101.1025	ug/ml	98
38) 4-Chloroaniline	9.07	65	111299	105.0766	ug/ml	97

(#) = qualifier out of range (m) = manual integration

12M76626.D MEGAMIX.M Fri Mar 27 16:48:36 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D

Vial: 3

Acq On : 27 Mar 2020 11:17 am

Operator: SCB

Sample : SEQ-CAL1

Inst : MSD12

Misc : 1,1 0002256

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:27 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	156053	117.9188	ug/ml	99
40) n-Nitrosodi-n-Butylamine	9.38	84	208845	109.5781	ug/ml	96
41) p-Phenylenediamine	9.42	108	368810	121.3766	ug/ml	99
42) 4-Chloro-3-Methylphenol	9.51	107	290503	112.2593	ug/ml	98
43) 2-Methylnaphthalene	9.73	142	615980	101.5775	ug/ml	100
44) 1-Methylnaphthalene	9.84	142	586268	102.8023	ug/ml	100
46) Hexachlorocyclopentadiene	9.94	237	174526	122.2215	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	197846	120.3100	ug/ml	100
48) 2,4,5-Trichlorophenol	10.06	196	206083	119.4169	ug/ml	99
50) 2-Chloronaphthalene	10.23	162	570114	105.4570	ug/ml	99
51) 2-Nitroaniline	10.33	65	186321	110.7690	ug/ml	96
52) Dimethylphthalate	10.49	163	665877	108.2028	ug/ml	99
53) 1,3-Dinitrobenzene	10.55	168	131524	121.5517	ug/ml	97
54) 2,6-Dinitrotoluene	10.59	165	169326	113.9225	ug/ml	97
55) Acenaphthylene	10.67	152	833426	100.9649	ug/ml	99
56) 3-Nitroaniline	10.75	138	192003	115.9978	ug/ml	98
57) 2,4-Dinitrophenol	10.85	184	74583	115.0215	ug/ml	57
58) Acenaphthene	10.86	154	504395	97.5246	ug/ml	98
59) 4-Nitrophenol	10.86	65	99369	106.5660	ug/ml	86
60) 2,4-Dinitrotoluene	11.00	165	201062	110.2646	ug/ml	89
61) Dibenzofuran	11.01	168	735652	98.5175	ug/ml	100
62) 2,3,5,6-Tetrachlorophenol	11.11	232	156332	127.1182	ug/ml	98
63) 2,3,4,6-Tetrachlorophenol	11.16	232	150368	118.7549	ug/ml	96
64) 1-Naphthylamine	11.09	143	611724	108.9186	ug/ml	99
65) 2-Naphthylamine	11.16	143	522953	100.8413	ug/ml	96
66) Diethylphthalate	11.20	149	639827	106.6443	ug/ml	99
67) Fluorene	11.37	166	588996	100.0268	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.32	204	318899	110.6531	ug/ml	98
69) 4-Nitroaniline	11.39	138	175946	110.5658	ug/ml	96
70) 5-Nitro-o-Toluidine	11.38	152	169651	104.1478	ug/ml	95
71) 1,2-Diphenylhydrazine	11.48	77	614829	99.0441	ug/ml	95
74) 4,6-Dinitro-2-Methylphenol	11.42	198	117113	128.7679	ug/ml	80
75) Diphenylamine/n-Nitrosodip	11.44	169	543585	105.8660	ug/ml	99
76) 4-Bromophenyl Phenyl Ether	11.84	248	182262	118.1539	ug/ml	96
77) Hexachlorobenzene	12.05	284	205388	123.0281	ug/ml	93
78) 4-Aminobiphenyl	12.14	169	712960	111.7938	ug/ml	98
79) Pentachlorophenol	12.24	266	120232	121.1074	ug/ml	100
80) Phenanthrene	12.44	178	943176	108.2811	ug/ml	99
81) Anthracene	12.50	178	957765	108.4028	ug/ml	99
82) Carbazole	12.65	167	905420	110.8418	ug/ml	97
83) Di-n-Butyl Phthalate	13.01	149	1096297	110.2065	ug/ml	99
84) Methapyrilene	13.45	58	494024	106.8619	ug/ml	94
85) Fluoranthene	13.98	202	1052913	111.6721	ug/ml	98
87) Benzidine	14.08	184	612616	129.9836	ug/ml	100
88) Pyrene	14.30	202	1069561	116.0837	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.64	225	212380	127.7534	ug/ml	92
91) Butyl Benzyl Phthalate	15.10	149	390535	101.9206	ug/ml	96
92) 3,3'-Dimethylbenzidine	15.13	212	1103488	212.8679	ug/ml	99
93) 2-Acetylaminofluorene	15.54	181	466660	118.3815	ug/ml	99
94) bis(2-Ethylhexyl)phthalate	15.94	149	627183	114.6077	ug/ml#	97
95) 3,3'-Dichlorobenzidine	15.96	252	377983	128.1039	ug/ml	99
96) Benzo[a]anthracene	16.04	228	936165	121.3553	ug/ml	99
97) Chrysene	16.11	228	917067	121.7390	ug/ml	99
99) Di-n-Octyl Phthalate	16.89	149	1246993	122.8238	ug/ml	97

(#) = qualifier out of range (m) = manual integration

12M76626.D MEGAMIX.M

Fri Mar 27 16:48:36 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D Vial: 3
Acq On : 27 Mar 2020 11:17 am Operator: SCB
Sample : SEQ-CAL1 Inst : MSD12
Misc : 1,1 0002256 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:27 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

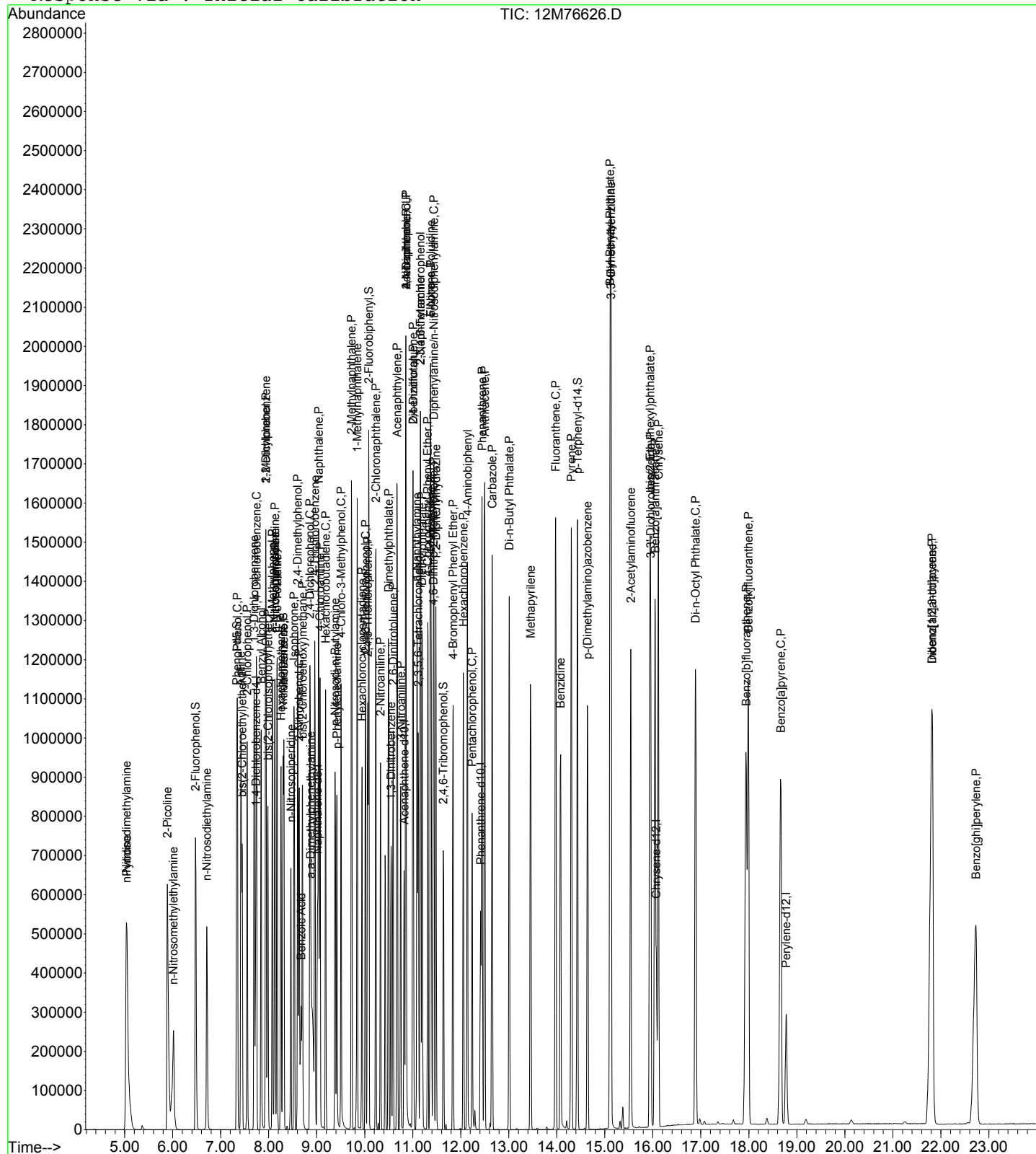
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.94	252	1048513	128.2387	ug/ml	99
101) Benzo[k]fluoranthene	17.99	252	972390	128.3783	ug/ml	97
102) Benzo[a]pyrene	18.66	252	923809	128.9661	ug/ml	98
103) Indeno[1,2,3-cd]pyrene	21.82	276	1182076	134.0780	ug/ml	96
104) Dibenz[ah]anthracene	21.81	278	1020937	137.3777	ug/ml	97
105) Benzo[ghi]perylene	22.73	276	955667	131.2036	ug/ml	98

Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D
Acq On : 27 Mar 2020 11:17 am
Sample : SEQ-CAL1
Misc : 1,1 0002256
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31 2020

Vial: 3
Operator: SCB
Inst : MSD12
Multiplr: 1.00

Quant Results File: MEGAMIX.RES

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Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
```



Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D
 Acq On : 27 Mar 2020 11:17 am
 Sample : SEQ-CAL1
 Misc : 1,1 0002256
 MS Integration Params: RTEINT.P

Vial: 3
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	120.000	122.229	-1.9	100	0.00
3	Pyridine	120.000	123.496	-2.9	100	0.00
4	2-Picoline	120.000	119.896	0.1	100	0.00
5	n-Nitrosomethylethylamine	120.000	125.054	-4.2	100	0.00
6 S	2-Fluorophenol	120.000	119.148	0.7	100	0.00
7	n-Nitrosodiethylamine	120.000	117.876	1.8	100	0.00
8	Aniline	120.000	104.829	12.6	100	0.00
9 S	Phenol-d5	120.000	106.445	11.3	100	0.00
10 C,P	Phenol	120.000	103.622	13.6	100	0.00
11 P	bis(2-Chloroethyl)ether	120.000	103.008	14.2	100	0.00
12 P	2-Chlorophenol	120.000	111.551	7.0	100	0.00
13	1,3-Dichlorobenzene	120.000	108.301	9.7	100	0.00
14 C	1,4-Dichlorobenzene	120.000	108.170	9.9	100	0.00
15	Benzyl Alcohol	120.000	117.758	1.9	100	0.00
16	1,2-Dichlorobenzene	120.000	102.275	14.8	100	0.00
17 P	2-Methylphenol	120.000	102.310	14.7	100	0.01
18 P	bis(2-Chloroisopropyl)ether	120.000	97.025	19.1	100	0.00
19 P	3-,4-Methylphenol	120.000	109.321	8.9	100	0.00
20	n-Nitrosopyrrolidine	120.000	104.824	12.6	100	0.01
21 P	n-Nitrosodipropylamine	120.000	117.684	1.9	100	0.01
22	n-Nitrosomorpholine	120.000	110.480	7.9	100	0.01
23	o-Toluidine	120.000	105.704	11.9	100	0.00
24 P	Hexachloroethane	120.000	112.165	6.5	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	120.000	108.066	9.9	100	0.00
27 P	Nitrobenzene	120.000	106.084	11.6	100	0.00
28	n-Nitrosopiperidine	120.000	113.464	5.4	100	0.01
29 P	Isophorone	120.000	104.073	13.3	100	0.00
30 C,P	2-Nitrophenol	120.000	117.271	2.3	100	0.00
31 P	2,4-Dimethylphenol	120.000	107.754	10.2	100	0.00
32 P	bis(2-Chloroethoxy)methane	120.000	104.378	13.0	100	0.00
33	Benzoic Acid	120.000	115.991	3.3	100	0.03
34 C,P	2,4-Dichlorophenol	120.000	114.988	4.2	100	0.00
35	a,a-Dimethylphenethylamine	120.000	116.600	2.8	100	0.04
36	1,2,4-Trichlorobenzene	120.000	108.882	9.3	100	0.00
37 P	Naphthalene	120.000	101.102	15.7	100	0.00
38 P	4-Chloroaniline	120.000	105.077	12.4	100	0.00
39 C,P	Hexachlorobutadiene	120.000	117.919	1.7	100	0.00
40	n-Nitrosodi-n-Butylamine	120.000	109.578	8.7	100	0.00
41	p-Phenylenediamine	120.000	121.377	-1.1	100	0.01
42 C,P	4-Chloro-3-Methylphenol	120.000	112.259	6.5	100	0.00
43 P	2-Methylnaphthalene	120.000	101.577	15.4	100	0.00
44	1-Methylnaphthalene	120.000	102.802	14.3	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	120.000	122.222	-1.9	100	0.00
47 C,P	2,4,6-Trichlorophenol	120.000	120.310	-0.3	100	0.00
48 P	2,4,5-Trichlorophenol	120.000	119.417	0.5	100	0.00
49 S	2-Fluorobiphenyl	120.000	101.693	15.3	100	0.00
50 P	2-Chloronaphthalene	120.000	105.457	12.1	100	0.00
51 P	2-Nitroaniline	120.000	110.769	7.7	100	0.00
52 P	Dimethylphthalate	120.000	108.203	9.8	100	0.00

(#) = Out of Range

12M76626.D MEGAMIX.M

Fri Mar 27 16:51:54 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D
 Acq On : 27 Mar 2020 11:17 am
 Sample : SEQ-CAL1
 Misc : 1,1 0002256
 MS Integration Params: RTEINT.P

Vial: 3
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	120.000	121.552	-1.3	100	0.00
54 P	2,6-Dinitrotoluene	120.000	113.922	5.1	100	0.00
55 P	Acenaphthylene	120.000	100.965	15.9	100	0.00
56 P	3-Nitroaniline	120.000	115.998	3.3	100	0.01
57 P	2,4-Dinitrophenol	120.000	115.022	4.1	100	0.00
58 C,P	Acenaphthene	120.000	97.525	18.7	100	0.00
59 P	4-Nitrophenol	120.000	106.566	11.2	100	0.01
60 P	2,4-Dinitrotoluene	120.000	110.265	8.1	100	0.01
61 P	Dibenzofuran	120.000	98.517	17.9	100	0.00
62	2,3,5,6-Tetrachlorophenol	120.000	127.118	-5.9	100	0.00
63	2,3,4,6-Tetrachlorophenol	120.000	118.755	1.0	100	0.00
64	1-Naphthylamine	120.000	108.919	9.2	100	0.00
65	2-Naphthylamine	120.000	100.841	16.0	100	0.00
66 P	Diethylphthalate	120.000	106.644	11.1	100	0.01
67 P	Fluorene	120.000	100.027	16.6	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	120.000	110.653	7.8	100	0.00
69 P	4-Nitroaniline	120.000	110.566	7.9	100	0.01
70	5-Nitro-o-Toluidine	120.000	104.148	13.2	100	0.01
71	1,2-Diphenylhydrazine	120.000	99.044	17.5	100	0.00
72 S	2,4,6-Tribromophenol	120.000	135.086	-12.6	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	120.000	128.768	-7.3	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiph	120.000	105.866	11.8	100	0.00
76 P	4-Bromophenyl Phenyl Ether	120.000	118.154	1.5	100	0.00
77 P	Hexachlorobenzene	120.000	123.028	-2.5	100	0.00
78	4-Aminobiphenyl	120.000	111.794	6.8	100	0.00
79 C,P	Pentachlorophenol	120.000	121.107	-0.9	100	0.00
80 P	Phenanthrene	120.000	108.281	9.8	100	0.00
81 P	Anthracene	120.000	108.403	9.7	100	0.00
82 P	Carbazole	120.000	110.842	7.6	100	0.00
83 P	Di-n-Butyl Phthalate	120.000	110.206	8.2	100	0.00
84	Methapyrilene	120.000	106.862	10.9	100	0.00
85 C,P	Fluoranthene	120.000	111.672	6.9	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	120.000	129.984	-8.3	100	0.00
88 P	Pyrene	120.000	116.084	3.3	100	0.00
89 S	p-Terphenyl-d14	120.000	119.765	0.2	100	0.00
90	p-(Dimethylamino)azobenzene	120.000	127.753	-6.5	100	0.00
91 P	Butyl Benzyl Phthalate	120.000	101.921	15.1	100	0.00
92	3,3'-Dimethylbenzidine	240.000	212.868	11.3	100	0.01
93	2-Acetylaminofluorene	120.000	118.381	1.3	100	0.01
94 P	bis(2-Ethylhexyl)phthalate	120.000	114.608	4.5	100	0.00
95 P	3,3'-Dichlorobenzidine	120.000	128.104	-6.8	100	0.01
96 P	Benzo[a]anthracene	120.000	121.355	-1.1	100	0.00
97 P	Chrysene	120.000	121.739	-1.4	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	120.000	122.824	-2.4	100	0.00
100 P	Benzo[b]fluoranthene	120.000	128.239	-6.9	100	0.01
101 P	Benzo[k]fluoranthene	120.000	128.378	-7.0	100	0.02
102 C,P	Benzo[a]pyrene	120.000	128.966	-7.5	100	0.02
103 P	Indeno[1,2,3-cd]pyrene	120.000	134.078	-11.7	100	0.04

(#) = Out of Range

12M76626.D MEGAMIX.M

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Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76626.D Vial: 3
Acq On : 27 Mar 2020 11:17 am Operator: SCB
Sample : SEQ-CAL1 Inst : MSD12
Misc : 1,1 0002256 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	120.000	137.378	-14.5	100	0.04
105 P	Benzo[ghi]perylene	120.000	131.204	-9.3	100	0.03

Data File : I:\MSDCHEM\1\DATA\032720\12M76627.D

Vial: 4

Acq On : 27 Mar 2020 11:52 am

Operator: SCB

Sample : SEQ-CAL2

Inst : MSD12

Misc : 1,1 0002257

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:28 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards			R.T.	QIon	Response	Conc	Units	Dev(Min)
1)	1,4-Dichlorobenzene-d4		7.727	152	80929	40.0000	ug/ml	0.000
25)	Naphthalene-d8		9.014	136	300322	40.0000	ug/ml	0.000
45)	Acenaphthene-d10		10.820	164	165280	40.0000	ug/ml	0.000
73)	Phenanthrene-d10		12.412	188	272649	40.0000	ug/ml	0.000
86)	Chrysene-d12		16.071	240	209977	40.0000	ug/ml	0.000
98)	Perylene-d12		18.775	264	243247	40.0000	ug/ml	0.000
System Monitoring Compounds								
6)	2-Fluorophenol		6.477	112	307639	103.1237760	ug/ml	0.00
	Spiked Amount	100.000	Range	21 - 100	Recovery	= 103.12%#		
9)	Phenol-d5		7.332	99	312918	94.4919438	ug/ml	0.00
	Spiked Amount	100.000	Range	10 - 94	Recovery	= 94.49%#		
26)	Nitrobenzene-d5		8.293	82	320530	95.3486825	ug/ml	0.00
	Spiked Amount	50.000	Range	35 - 114	Recovery	= 190.70%#		
49)	2-Fluorobiphenyl		10.083	172	618206	93.2169922	ug/ml	0.00
	Spiked Amount	50.000	Range	43 - 116	Recovery	= 186.43%#		
72)	2,4,6-Tribromophenol		11.637	330	80551	113.8799980	ug/ml	0.00
	Spiked Amount	100.000	Range	10 - 123	Recovery	= 113.88%		
89)	p-Terphenyl-d14		14.426	244	672754	105.5961548	ug/ml	0.00
	Spiked Amount	50.000	Range	33 - 141	Recovery	= 211.19%#		
Target Compounds								Qvalue
2)	n-Nitrosodimethylamine		5.02	74	214194	106.5853	ug/ml	99
3)	Pyridine		5.05	79	357198	105.6527	ug/ml	100
4)	2-Picoline		5.89	93	374530	102.8740	ug/ml	100
5)	n-Nitrosomethylethylamine		6.02	88	161200	106.7307	ug/ml	100
7)	n-Nitrosodiethylamine		6.71	102	155628	102.6742	ug/ml	97
8)	Aniline		7.42	66	162990	93.4660	ug/ml#	24
10)	Phenol		7.35	94	339063	92.8714	ug/ml	99
11)	bis(2-Chloroethyl)ether		7.44	63	213970	91.5348	ug/ml#	31
12)	2-Chlorophenol		7.55	128	315617	97.5496	ug/ml	98
13)	1,3-Dichlorobenzene		7.69	146	323691	95.0917	ug/ml	100
14)	1,4-Dichlorobenzene		7.74	146	319771	95.4213	ug/ml	99
15)	Benzyl Alcohol		7.84	108	196343	102.0723	ug/ml	99
16)	1,2-Dichlorobenzene		7.94	146	268726	89.8238	ug/ml	99
17)	2-Methylphenol		7.95	107	200079	89.5110	ug/ml	100
18)	bis(2-Chloroisopropyl)ethe		7.98	45	355046	87.2480	ug/ml	95
19)	3-,4-Methylphenol		8.07	107	303959	97.4829	ug/ml	99
20)	n-Nitrosopyrrolidine		8.12	100	124266	92.7510	ug/ml	89
21)	n-Nitrosodipropylamine		8.12	70	157926	101.7117	ug/ml	98
22)	n-Nitrosomorpholine		8.13	56	137213	98.1062	ug/ml	95
23)	o-Toluidine		8.17	106	430699	93.2670	ug/ml	100
24)	Hexachloroethane		8.25	117	128956	97.7813	ug/ml	97
27)	Nitrobenzene		8.31	77	292202	95.1693	ug/ml	99
28)	n-Nitrosopiperidine		8.46	114	154264	99.9550	ug/ml	96
29)	Isophorone		8.53	82	519592	93.2338	ug/ml	99
30)	2-Nitrophenol		8.63	139	163435	103.3741	ug/ml	99
31)	2,4-Dimethylphenol		8.60	122	254081	94.9470	ug/ml	100
32)	bis(2-Chloroethoxy)methane		8.70	93	319346	93.9899	ug/ml	99
33)	Benzoic Acid		8.67	105	122783	104.0500	ug/ml	92
34)	2,4-Dichlorophenol		8.86	162	231114	100.4734	ug/ml	99
35)	a,a-Dimethylphenethylamine		8.88	58	728993	103.1710	ug/ml	99
36)	1,2,4-Trichlorobenzene		8.96	180	246916	95.8657	ug/ml	100
37)	Naphthalene		9.04	128	830373	91.9913	ug/ml	98
38)	4-Chloroaniline		9.07	65	95318	94.0968	ug/ml	98

(#)=qualifier out of range (m)=manual integration

12M76627.D MEGAMIX.M Fri Mar 27 16:48:39 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76627.D

Vial: 4

Acq On : 27 Mar 2020 11:52 am

Operator: SCB

Sample : SEQ-CAL2

Inst : MSD12

Misc : 1,1 0002257

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:28 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	129885	102.6255	ug/ml	99
40) n-Nitrosodi-n-Butylamine	9.38	84	177956	97.6333	ug/ml	97
41) p-Phenylenediamine	9.42	108	316648	108.9669	ug/ml	99
42) 4-Chloro-3-Methylphenol	9.51	107	248611	100.4563	ug/ml	98
43) 2-Methylnaphthalene	9.72	142	532113	91.7530	ug/ml	99
44) 1-Methylnaphthalene	9.84	142	506993	92.9596	ug/ml	100
46) Hexachlorocyclopentadiene	9.94	237	141783	104.7473	ug/ml	100
47) 2,4,6-Trichlorophenol	10.01	196	164192	104.8723	ug/ml	100
48) 2,4,5-Trichlorophenol	10.06	196	169987	103.4603	ug/ml	100
50) 2-Chloronaphthalene	10.23	162	487355	94.6877	ug/ml	99
51) 2-Nitroaniline	10.33	65	159943	99.8749	ug/ml	98
52) Dimethylphthalate	10.49	163	564120	96.2832	ug/ml	100
53) 1,3-Dinitrobenzene	10.55	168	109961	106.7404	ug/ml	98
54) 2,6-Dinitrotoluene	10.59	165	141824	100.2236	ug/ml	98
55) Acenaphthylene	10.67	152	715545	91.0489	ug/ml	100
56) 3-Nitroaniline	10.75	138	160101	101.5945	ug/ml	100
57) 2,4-Dinitrophenol	10.85	184	65217	105.8246	ug/ml	58
58) Acenaphthene	10.85	154	443896	90.1486	ug/ml	98
59) 4-Nitrophenol	10.86	65	90718	102.2145	ug/ml	93
60) 2,4-Dinitrotoluene	11.00	165	173155	99.7414	ug/ml	92
61) Dibenzofuran	11.01	168	647596	91.0918	ug/ml	100
62) 2,3,5,6-Tetrachlorophenol	11.11	232	128671	109.8942	ug/ml	99
63) 2,3,4,6-Tetrachlorophenol	11.16	232	127161	105.4835	ug/ml	99
64) 1-Naphthylamine	11.09	143	522989	97.8078	ug/ml	100
65) 2-Naphthylamine	11.16	143	456281	92.4150	ug/ml	98
66) Diethylphthalate	11.19	149	547059	95.7731	ug/ml	99
67) Fluorene	11.36	166	516289	92.0940	ug/ml	100
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	268799	97.9653	ug/ml	98
69) 4-Nitroaniline	11.39	138	149200	98.4792	ug/ml	97
70) 5-Nitro-o-Toluidine	11.38	152	147818	95.3137	ug/ml	96
71) 1,2-Diphenylhydrazine	11.48	77	538298	91.0817	ug/ml	97
74) 4,6-Dinitro-2-Methylphenol	11.42	198	100027	115.3780	ug/ml	84
75) Diphenylamine/n-Nitrosodip	11.43	169	471211	96.2737	ug/ml	99
76) 4-Bromophenyl Phenyl Ether	11.84	248	151101	102.7596	ug/ml	98
77) Hexachlorobenzene	12.05	284	167545	105.2844	ug/ml	96
78) 4-Aminobiphenyl	12.13	169	616384	101.3928	ug/ml	99
79) Pentachlorophenol	12.24	266	97178	103.4422	ug/ml	100
80) Phenanthrene	12.44	178	807333	97.2335	ug/ml	100
81) Anthracene	12.50	178	827735	98.2825	ug/ml	99
82) Carbazole	12.65	167	771785	99.1181	ug/ml	98
83) Di-n-Butyl Phthalate	13.01	149	942724	99.4184	ug/ml	99
84) Methapyrilene	13.45	58	437646	99.3119	ug/ml	96
85) Fluoranthene	13.97	202	901746	100.3321	ug/ml	98
87) Benzidine	14.08	184	505611	112.6109	ug/ml	100
88) Pyrene	14.30	202	911377	103.8311	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.64	225	175424	110.7672	ug/ml	95
91) Butyl Benzyl Phthalate	15.10	149	345856	94.7460	ug/ml	96
92) 3,3'-Dimethylbenzidine	15.13	212	963395	195.0789	ug/ml	99
93) 2-Acetylaminofluorene	15.54	181	392827	104.7856	ug/ml	100
94) bis(2-Ethylhexyl)phthalate	15.94	149	547064	104.9352	ug/ml	98
95) 3,3'-Dichlorobenzidine	15.95	252	313064	111.3747	ug/ml	99
96) Benzo[a]anthracene	16.04	228	785385	106.8692	ug/ml	99
97) Chrysene	16.11	228	767593	106.9604	ug/ml	100
99) Di-n-Octyl Phthalate	16.89	149	1053988	109.7915	ug/ml	97

(#) = qualifier out of range (m) = manual integration

12M76627.D MEGAMIX.M

Fri Mar 27 16:48:39 2020

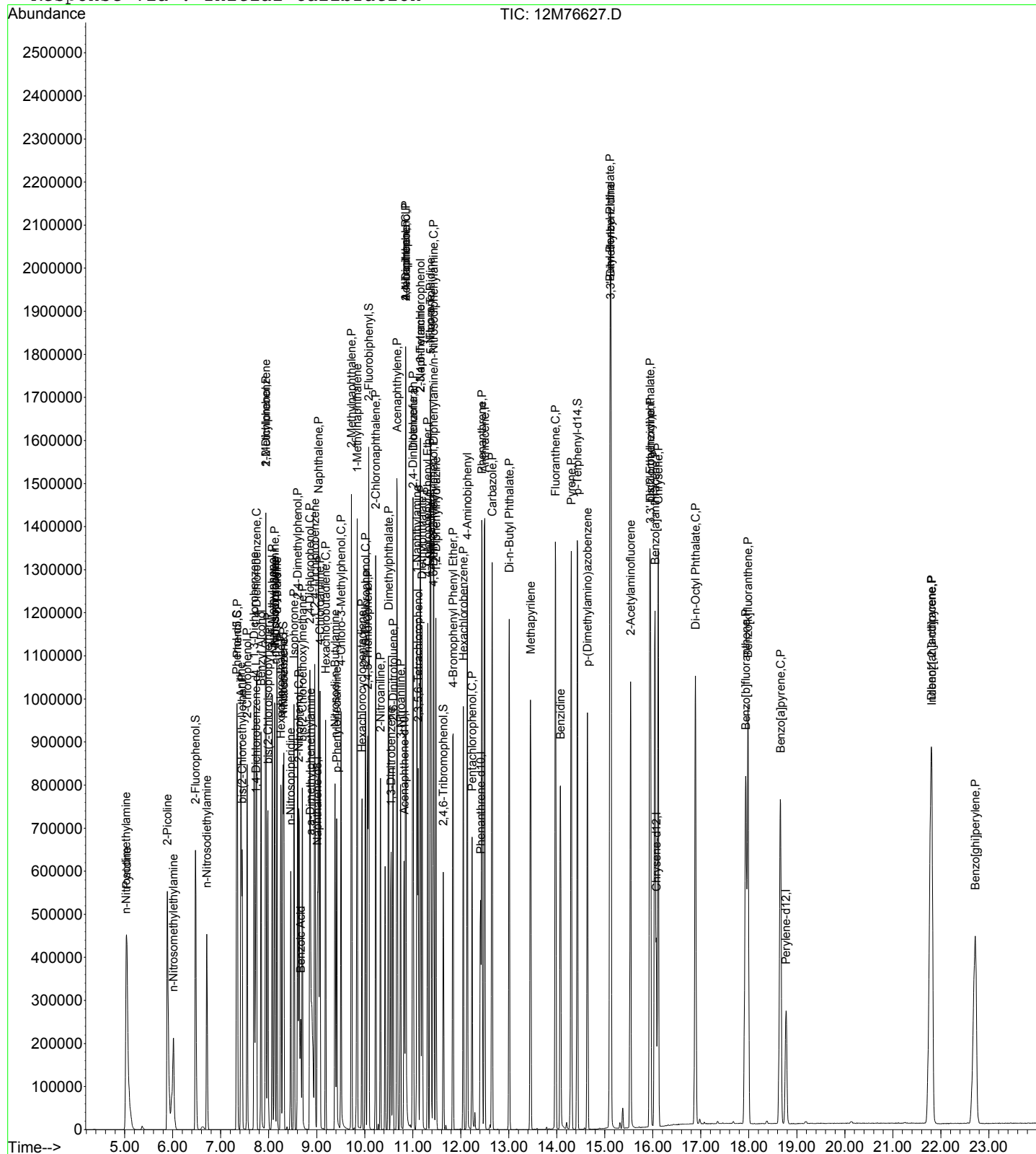
Data File : I:\MSDCHEM\1\DATA\032720\12M76627.D Vial: 4
Acq On : 27 Mar 2020 11:52 am Operator: SCB
Sample : SEQ-CAL2 Inst : MSD12
Misc : 1,1 0002257 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:28 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.94	252	841393	108.8325	ug/ml	100
101) Benzo[k]fluoranthene	17.98	252	749320	104.6244	ug/ml	98
102) Benzo[a]pyrene	18.66	252	760791	112.3242	ug/ml	99
103) Indeno[1,2,3-cd]pyrene	21.81	276	966890	115.9856	ug/ml	97
104) Dibenz[ah]anthracene	21.80	278	828726	117.9351	ug/ml	98
105) Benzo[ghi]perylene	22.72	276	789488	114.6303	ug/ml	99

Quant Results File: MEGAMIX.RES

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Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
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Data File : I:\MSDCHEM\1\DATA\032720\12M76627.D

Vial: 4

Acq On : 27 Mar 2020 11:52 am

Operator: SCB

Sample : SEQ-CAL2

Inst : MSD12

Misc : 1,1 0002257

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	100.000	106.585	-6.6	100	0.00
3	Pyridine	100.000	105.653	-5.7	100	0.00
4	2-Picoline	100.000	102.874	-2.9	100	0.00
5	n-Nitrosomethylethylamine	100.000	106.731	-6.7	100	0.00
6 S	2-Fluorophenol	100.000	103.124	-3.1	100	0.00
7	n-Nitrosodiethylamine	100.000	102.674	-2.7	100	0.00
8	Aniline	100.000	93.466	6.5	100	0.00
9 S	Phenol-d5	100.000	94.492	5.5	100	0.00
10 C,P	Phenol	100.000	92.871	7.1	100	0.00
11 P	bis(2-Chloroethyl)ether	100.000	91.535	8.5	100	0.00
12 P	2-Chlorophenol	100.000	97.550	2.5	100	0.00
13	1,3-Dichlorobenzene	100.000	95.092	4.9	100	0.00
14 C	1,4-Dichlorobenzene	100.000	95.421	4.6	100	0.00
15	Benzyl Alcohol	100.000	102.072	-2.1	100	0.00
16	1,2-Dichlorobenzene	100.000	89.824	10.2	100	0.00
17 P	2-Methylphenol	100.000	89.511	10.5	100	0.01
18 P	bis(2-Chloroisopropyl)ether	100.000	87.248	12.8	100	0.00
19 P	3-,4-Methylphenol	100.000	97.483	2.5	100	0.00
20	n-Nitrosopyrrolidine	100.000	92.751	7.2	100	0.01
21 P	n-Nitrosodipropylamine	100.000	101.712	-1.7	100	0.00
22	n-Nitrosomorpholine	100.000	98.106	1.9	100	0.01
23	o-Toluidine	100.000	93.267	6.7	100	0.00
24 P	Hexachloroethane	100.000	97.781	2.2	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	100.000	95.349	4.7	100	0.00
27 P	Nitrobenzene	100.000	95.169	4.8	100	0.00
28	n-Nitrosopiperidine	100.000	99.955	0.0	100	0.00
29 P	Isophorone	100.000	93.234	6.8	100	0.00
30 C,P	2-Nitrophenol	100.000	103.374	-3.4	100	0.00
31 P	2,4-Dimethylphenol	100.000	94.947	5.1	100	0.00
32 P	bis(2-Chloroethoxy)methane	100.000	93.990	6.0	100	0.00
33	Benzoic Acid	100.000	104.050	-4.0	100	0.02
34 C,P	2,4-Dichlorophenol	100.000	100.473	-0.5	100	0.00
35	a,a-Dimethylphenethylamine	100.000	103.171	-3.2	100	0.03
36	1,2,4-Trichlorobenzene	100.000	95.866	4.1	100	0.00
37 P	Naphthalene	100.000	91.991	8.0	100	0.00
38 P	4-Chloroaniline	100.000	94.097	5.9	100	0.00
39 C,P	Hexachlorobutadiene	100.000	102.625	-2.6	100	0.00
40	n-Nitrosodi-n-Butylamine	100.000	97.633	2.4	100	0.00
41	p-Phenylenediamine	100.000	108.967	-9.0	100	0.00
42 C,P	4-Chloro-3-Methylphenol	100.000	100.456	-0.5	100	0.00
43 P	2-Methylnaphthalene	100.000	91.753	8.2	100	0.00
44	1-Methylnaphthalene	100.000	92.960	7.0	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	100.000	104.747	-4.7	100	0.00
47 C,P	2,4,6-Trichlorophenol	100.000	104.872	-4.9	100	0.00
48 P	2,4,5-Trichlorophenol	100.000	103.460	-3.5	100	0.00
49 S	2-Fluorobiphenyl	100.000	93.217	6.8	100	0.00
50 P	2-Chloronaphthalene	100.000	94.688	5.3	100	0.00
51 P	2-Nitroaniline	100.000	99.875	0.1	100	0.00
52 P	Dimethylphthalate	100.000	96.283	3.7	100	0.00

(#) = Out of Range

12M76627.D MEGAMIX.M

Fri Mar 27 16:52:05 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76627.D
 Acq On : 27 Mar 2020 11:52 am
 Sample : SEQ-CAL2
 Misc : 1,1 0002257
 MS Integration Params: RTEINT.P

Vial: 4
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	100.000	106.740	-6.7	100	0.00
54 P	2,6-Dinitrotoluene	100.000	100.224	-0.2	100	0.00
55 P	Acenaphthylene	100.000	91.049	9.0	100	0.00
56 P	3-Nitroaniline	100.000	101.594	-1.6	100	0.00
57 P	2,4-Dinitrophenol	100.000	105.825	-5.8	100	0.00
58 C,P	Acenaphthene	100.000	90.149	9.9	100	0.00
59 P	4-Nitrophenol	100.000	102.214	-2.2	100	0.00
60 P	2,4-Dinitrotoluene	100.000	99.741	0.3	100	0.00
61 P	Dibenzofuran	100.000	91.092	8.9	100	0.00
62	2,3,5,6-Tetrachlorophenol	100.000	109.894	-9.9	100	0.00
63	2,3,4,6-Tetrachlorophenol	100.000	105.483	-5.5	100	0.00
64	1-Naphthylamine	100.000	97.808	2.2	100	0.00
65	2-Naphthylamine	100.000	92.415	7.6	100	0.00
66 P	Diethylphthalate	100.000	95.773	4.2	100	0.00
67 P	Fluorene	100.000	92.094	7.9	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	100.000	97.965	2.0	100	0.00
69 P	4-Nitroaniline	100.000	98.479	1.5	100	0.01
70	5-Nitro-o-Toluidine	100.000	95.314	4.7	100	0.01
71	1,2-Diphenylhydrazine	100.000	91.082	8.9	100	0.00
72 S	2,4,6-Tribromophenol	100.000	113.880	-13.9	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	100.000	115.378	-15.4	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	100.000	96.274	3.7	100	0.00
76 P	4-Bromophenyl Phenyl Ether	100.000	102.760	-2.8	100	0.00
77 P	Hexachlorobenzene	100.000	105.284	-5.3	100	0.00
78	4-Aminobiphenyl	100.000	101.393	-1.4	100	0.00
79 C,P	Pentachlorophenol	100.000	103.442	-3.4	100	0.00
80 P	Phenanthrene	100.000	97.233	2.8	100	0.00
81 P	Anthracene	100.000	98.282	1.7	100	0.00
82 P	Carbazole	100.000	99.118	0.9	100	0.00
83 P	Di-n-Butyl Phthalate	100.000	99.418	0.6	100	0.00
84	Methapyrilene	100.000	99.312	0.7	100	0.00
85 C,P	Fluoranthene	100.000	100.332	-0.3	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	100.000	112.611	-12.6	100	0.00
88 P	Pyrene	100.000	103.831	-3.8	100	0.00
89 S	p-Terphenyl-d14	100.000	105.596	-5.6	100	0.00
90	p-(Dimethylamino)azobenzene	100.000	110.767	-10.8	100	0.00
91 P	Butyl Benzyl Phthalate	100.000	94.746	5.3	100	0.00
92	3,3'-Dimethylbenzidine	200.000	195.079	2.5	100	0.00
93	2-Acetylaminofluorene	100.000	104.786	-4.8	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	100.000	104.935	-4.9	100	0.00
95 P	3,3'-Dichlorobenzidine	100.000	111.375	-11.4	100	0.00
96 P	Benzo[a]anthracene	100.000	106.869	-6.9	100	0.00
97 P	Chrysene	100.000	106.960	-7.0	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	100.000	109.792	-9.8	100	0.00
100 P	Benzo[b]fluoranthene	100.000	108.833	-8.8	100	0.00
101 P	Benzo[k]fluoranthene	100.000	104.624	-4.6	100	0.01
102 C,P	Benzo[a]pyrene	100.000	112.324	-12.3	100	0.01
103 P	Indeno[1,2,3-cd]pyrene	100.000	115.986	-16.0	100	0.04

(#) = Out of Range

12M76627.D MEGAMIX.M

Fri Mar 27 16:52:05 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76627.D Vial: 4
Acq On : 27 Mar 2020 11:52 am Operator: SCB
Sample : SEQ-CAL2 Inst : MSD12
Misc : 1,1 0002257 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	100.000	117.935	-17.9	100	0.03
105 P	Benzo[ghi]perylene	100.000	114.630	-14.6	100	0.02

Data File : I:\MSDCHEM\1\DATA\032720\12M76628.D

Vial: 5

Acq On : 27 Mar 2020 12:26 pm

Operator: SCB

Sample : SEQ-CAL3

Inst : MSD12

Misc : 1,1 0002258

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:28 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	81054	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.014	136	302089	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.820	164	167803	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.412	188	279919	40.0000	ug/ml	0.000
86) Chrysene-d12	16.072	240	219369	40.0000	ug/ml	0.000
98) Perylene-d12	18.775	264	264996	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	251979	84.3357062	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	= 84.34%		
9) Phenol-d5	7.332	99	264944	79.8818378	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	= 79.88%		
26) Nitrobenzene-d5	8.293	82	269142	79.5938888	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	= 159.19%#		
49) 2-Fluorobiphenyl	10.083	172	516025	76.6395940	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	= 153.28%#		
72) 2,4,6-Tribromophenol	11.637	330	62353	86.8269311	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	= 86.83%		
89) p-Terphenyl-d14	14.426	244	553040	83.0892484	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	= 166.18%#		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	173680	86.2918	ug/ml	100
3) Pyridine	5.05	79	289971	85.6359	ug/ml	100
4) 2-Picoline	5.89	93	304263	83.4445	ug/ml	100
5) n-Nitrosomethylethylamine	6.02	88	130978	86.5870	ug/ml	100
7) n-Nitrosodiethylamine	6.71	102	126183	83.1197	ug/ml	99
8) Aniline	7.42	66	137744	78.8670	ug/ml#	27
10) Phenol	7.35	94	288127	78.7980	ug/ml	99
11) bis(2-Chloroethyl) ether	7.44	63	181394	77.4793	ug/ml#	34
12) 2-Chlorophenol	7.55	128	262993	81.1594	ug/ml	99
13) 1,3-Dichlorobenzene	7.69	146	268680	78.8093	ug/ml	100
14) 1,4-Dichlorobenzene	7.74	146	263338	78.4602	ug/ml	100
15) Benzyl Alcohol	7.84	108	163102	84.6606	ug/ml	100
16) 1,2-Dichlorobenzene	7.94	146	225710	75.3290	ug/ml	99
17) 2-Methylphenol	7.94	107	167346	74.7515	ug/ml	99
18) bis(2-Chloroisopropyl) ethe	7.98	45	305983	75.0755	ug/ml	97
19) 3-,4-Methylphenol	8.07	107	252296	80.7892	ug/ml	99
20) n-Nitrosopyrrolidine	8.12	100	102855	76.6516	ug/ml	94
21) n-Nitrosodipropylamine	8.12	70	135635	82.1934	ug/ml	98
22) n-Nitrosomorpholine	8.13	56	117070	83.2012	ug/ml	97
23) o-Toluidine	8.17	106	359856	77.8059	ug/ml	100
24) Hexachloroethane	8.25	117	107507	81.3918	ug/ml	99
27) Nitrobenzene	8.31	77	244272	79.0933	ug/ml	100
28) n-Nitrosopiperidine	8.46	114	126893	81.7391	ug/ml	98
29) Isophorone	8.53	82	437595	78.0612	ug/ml	99
30) 2-Nitrophenol	8.63	139	133419	83.8951	ug/ml	99
31) 2,4-Dimethylphenol	8.60	122	211027	78.3970	ug/ml	100
32) bis(2-Chloroethoxy) methane	8.70	93	265586	77.7100	ug/ml	100
33) Benzoic Acid	8.66	105	87534	84.1136	ug/ml	93
34) 2,4-Dichlorophenol	8.86	162	187467	81.0218	ug/ml	99
35) a,a-Dimethylphenethylamine	8.88	58	598509	84.2087	ug/ml	99
36) 1,2,4-Trichlorobenzene	8.96	180	202724	78.2477	ug/ml	100
37) Naphthalene	9.04	128	693945	76.4277	ug/ml	100
38) 4-Chloroaniline	9.07	65	79522	78.0440	ug/ml	94

(#) = qualifier out of range (m) = manual integration

12M76628.D MEGAMIX.M

Fri Mar 27 16:48:42 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76628.D

Vial: 5

Acq On : 27 Mar 2020 12:26 pm

Operator: SCB

Sample : SEQ-CAL3

Inst : MSD12

Misc : 1,1 0002258

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:28 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	105231	82.6594	ug/ml	99
40) n-Nitrosodi-n-Butylamine	9.38	84	147049	80.2046	ug/ml	99
41) p-Phenylenediamine	9.42	108	256949	87.9057	ug/ml	99
42) 4-Chloro-3-Methylphenol	9.51	107	204616	82.1956	ug/ml	99
43) 2-Methylnaphthalene	9.72	142	448515	76.8857	ug/ml	99
44) 1-Methylnaphthalene	9.84	142	423322	77.1641	ug/ml	100
46) Hexachlorocyclopentadiene	9.94	237	111200	81.6255	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	132325	83.2475	ug/ml	99
48) 2,4,5-Trichlorophenol	10.06	196	138674	83.1330	ug/ml	100
50) 2-Chloronaphthalene	10.23	162	404222	77.3550	ug/ml	100
51) 2-Nitroaniline	10.33	65	133052	81.8338	ug/ml	99
52) Dimethylphthalate	10.49	163	466700	78.4580	ug/ml	100
53) 1,3-Dinitrobenzene	10.55	168	88885	84.9844	ug/ml	100
54) 2,6-Dinitrotoluene	10.59	165	115787	80.5936	ug/ml	99
55) Acenaphthylene	10.67	152	603083	75.5850	ug/ml	100
56) 3-Nitroaniline	10.75	138	131026	81.8944	ug/ml	100
57) 2,4-Dinitrophenol	10.85	184	50919	82.1842	ug/ml	71
58) Acenaphthene	10.85	154	374806	74.9730	ug/ml	99
59) 4-Nitrophenol	10.86	65	75851	84.2966	ug/ml	95
60) 2,4-Dinitrotoluene	11.00	165	145833	82.7403	ug/ml	95
61) Dibenzofuran	11.01	168	549750	76.1660	ug/ml	100
62) 2,3,5,6-Tetrachlorophenol	11.11	232	102662	86.3624	ug/ml	99
63) 2,3,4,6-Tetrachlorophenol	11.16	232	102442	83.7007	ug/ml	98
64) 1-Naphthylamine	11.09	143	432736	79.7121	ug/ml	100
65) 2-Naphthylamine	11.16	143	385481	76.9013	ug/ml	99
66) Diethylphthalate	11.19	149	448885	77.4043	ug/ml	99
67) Fluorene	11.37	166	426962	75.0151	ug/ml	100
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	218381	78.3935	ug/ml	99
69) 4-Nitroaniline	11.38	138	119680	77.8069	ug/ml	98
70) 5-Nitro-o-Toluidine	11.37	152	120833	76.7422	ug/ml	98
71) 1,2-Diphenylhydrazine	11.48	77	456509	76.0814	ug/ml	98
74) 4,6-Dinitro-2-Methylphenol	11.42	198	78334	88.0091	ug/ml	91
75) Diphenylamine/n-Nitrosodip	11.43	169	393591	78.3266	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.84	248	121430	80.4364	ug/ml	99
77) Hexachlorobenzene	12.05	284	133463	81.6892	ug/ml	97
78) 4-Aminobiphenyl	12.13	169	509762	81.6760	ug/ml	99
79) Pentachlorophenol	12.24	266	75517	79.5019	ug/ml	99
80) Phenanthrene	12.44	178	666835	78.2263	ug/ml	100
81) Anthracene	12.49	178	684892	79.2097	ug/ml	100
82) Carbazole	12.65	167	636341	79.6009	ug/ml	99
83) Di-n-Butyl Phthalate	13.01	149	786853	80.8253	ug/ml	100
84) Methapyrilene	13.45	58	368684	81.4899	ug/ml	98
85) Fluoranthene	13.97	202	742507	80.4688	ug/ml	99
87) Benzidine	14.07	184	400115	85.2992	ug/ml	100
88) Pyrene	14.30	202	752770	82.0896	ug/ml	100
90) p-(Dimethylamino)azobenzen	14.64	225	142599	86.1857	ug/ml	98
91) Butyl Benzyl Phthalate	15.10	149	292209	76.6224	ug/ml	98
92) 3,3'-Dimethylbenzidine	15.12	212	809025	156.8066	ug/ml	99
93) 2-Acetylaminofluorene	15.53	181	319083	81.8179	ug/ml	100
94) bis(2-Ethylhexyl)phthalate	15.94	149	458516	84.1849	ug/ml	99
95) 3,3'-Dichlorobenzidine	15.95	252	247556	84.2992	ug/ml	99
96) Benzo[a]anthracene	16.04	228	634310	82.6167	ug/ml	100
97) Chrysene	16.11	228	613959	81.8895	ug/ml	100
99) Di-n-Octyl Phthalate	16.89	149	869056	83.0977	ug/ml	98

(#) = qualifier out of range (m) = manual integration

12M76628.D MEGAMIX.M

Fri Mar 27 16:48:43 2020

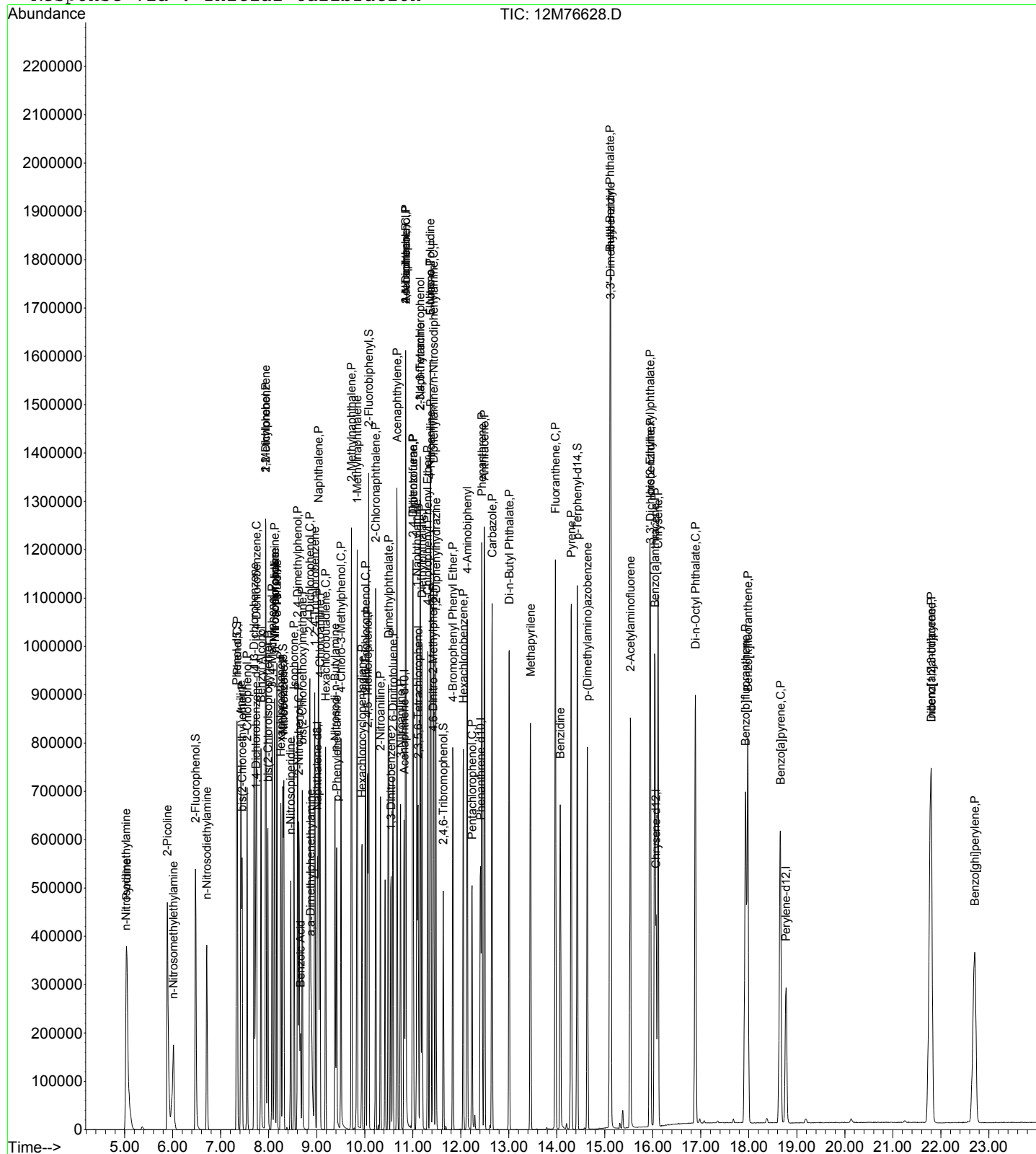
Data File : I:\MSDCHEM\1\DATA\032720\12M76628.D Vial: 5
Acq On : 27 Mar 2020 12:26 pm Operator: SCB
Sample : SEQ-CAL3 Inst : MSD12
Misc : 1,1 0002258 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:28 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.93	252	715065	84.9012	ug/ml	97
101) Benzo[k]fluoranthene	17.98	252	614258	78.7272	ug/ml	99
102) Benzo[a]pyrene	18.66	252	607420	82.3200	ug/ml	99
103) Indeno[1,2,3-cd]pyrene	21.80	276	760992	83.7944	ug/ml	99
104) Dibenz[ah]anthracene	21.79	278	649795	84.8822	ug/ml	99
105) Benzo[ghi]perylene	22.71	276	624649	83.2526	ug/ml	99

Quant Results File: MEGAMIX.RES

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Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
```



Data File : I:\MSDCHEM\1\DATA\032720\12M76628.D
 Acq On : 27 Mar 2020 12:26 pm
 Sample : SEQ-CAL3
 Misc : 1,1 0002258
 MS Integration Params: RTEINT.P

Vial: 5
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	80.000	86.292	-7.9	100	0.00
3	Pyridine	80.000	85.636	-7.0	100	0.00
4	2-Picoline	80.000	83.445	-4.3	100	0.00
5	n-Nitrosomethylethylamine	80.000	86.587	-8.2	100	0.00
6 S	2-Fluorophenol	80.000	84.336	-5.4	100	0.00
7	n-Nitrosodiethylamine	80.000	83.120	-3.9	100	0.00
8	Aniline	80.000	78.867	1.4	100	0.00
9 S	Phenol-d5	80.000	79.882	0.1	100	0.00
10 C,P	Phenol	80.000	78.798	1.5	100	0.00
11 P	bis(2-Chloroethyl)ether	80.000	77.479	3.2	100	0.00
12 P	2-Chlorophenol	80.000	81.159	-1.4	100	0.00
13	1,3-Dichlorobenzene	80.000	78.809	1.5	100	0.00
14 C	1,4-Dichlorobenzene	80.000	78.460	1.9	100	0.00
15	Benzyl Alcohol	80.000	84.661	-5.8	100	0.00
16	1,2-Dichlorobenzene	80.000	75.329	5.8	100	0.00
17 P	2-Methylphenol	80.000	74.751	6.6	100	0.00
18 P	bis(2-Chloroisopropyl)ether	80.000	75.075	6.2	100	0.00
19 P	3-,4-Methylphenol	80.000	80.789	-1.0	100	0.00
20	n-Nitrosopyrrolidine	80.000	76.652	4.2	100	0.00
21 P	n-Nitrosodipropylamine	80.000	82.193	-2.7	100	0.00
22	n-Nitrosomorpholine	80.000	83.201	-4.0	100	0.00
23	o-Toluidine	80.000	77.806	2.7	100	0.00
24 P	Hexachloroethane	80.000	81.392	-1.7	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	80.000	79.594	0.5	100	0.00
27 P	Nitrobenzene	80.000	79.093	1.1	100	0.00
28	n-Nitrosopiperidine	80.000	81.739	-2.2	100	0.00
29 P	Isophorone	80.000	78.061	2.4	100	0.00
30 C,P	2-Nitrophenol	80.000	83.895	-4.9	100	0.00
31 P	2,4-Dimethylphenol	80.000	78.397	2.0	100	0.00
32 P	bis(2-Chloroethoxy)methane	80.000	77.710	2.9	100	0.00
33	Benzoic Acid	80.000	84.114	-5.1	100	0.02
34 C,P	2,4-Dichlorophenol	80.000	81.022	-1.3	100	0.00
35	a,a-Dimethylphenethylamine	80.000	84.209	-5.3	100	0.04
36	1,2,4-Trichlorobenzene	80.000	78.248	2.2	100	0.00
37 P	Naphthalene	80.000	76.428	4.5	100	0.00
38 P	4-Chloroaniline	80.000	78.044	2.4	100	0.00
39 C,P	Hexachlorobutadiene	80.000	82.659	-3.3	100	0.00
40	n-Nitrosodi-n-Butylamine	80.000	80.205	-0.3	100	0.00
41	p-Phenylenediamine	80.000	87.906	-9.9	100	0.00
42 C,P	4-Chloro-3-Methylphenol	80.000	82.196	-2.7	100	0.00
43 P	2-Methylnaphthalene	80.000	76.886	3.9	100	0.00
44	1-Methylnaphthalene	80.000	77.164	3.5	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	80.000	81.626	-2.0	100	0.00
47 C,P	2,4,6-Trichlorophenol	80.000	83.248	-4.1	100	0.00
48 P	2,4,5-Trichlorophenol	80.000	83.133	-3.9	100	0.00
49 S	2-Fluorobiphenyl	80.000	76.640	4.2	100	0.00
50 P	2-Chloronaphthalene	80.000	77.355	3.3	100	0.00
51 P	2-Nitroaniline	80.000	81.834	-2.3	100	0.00
52 P	Dimethylphthalate	80.000	78.458	1.9	100	0.00

(#) = Out of Range

12M76628.D MEGAMIX.M

Fri Mar 27 16:52:17 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76628.D
 Acq On : 27 Mar 2020 12:26 pm
 Sample : SEQ-CAL3
 Misc : 1,1 0002258
 MS Integration Params: RTEINT.P

Vial: 5
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	80.000	84.984	-6.2	100	0.00
54 P	2,6-Dinitrotoluene	80.000	80.594	-0.7	100	0.00
55 P	Acenaphthylene	80.000	75.585	5.5	100	0.00
56 P	3-Nitroaniline	80.000	81.894	-2.4	100	0.00
57 P	2,4-Dinitrophenol	80.000	82.184	-2.7	100	0.00
58 C,P	Acenaphthene	80.000	74.973	6.3	100	0.00
59 P	4-Nitrophenol	80.000	84.297	-5.4	100	0.00
60 P	2,4-Dinitrotoluene	80.000	82.740	-3.4	100	0.00
61 P	Dibenzofuran	80.000	76.166	4.8	100	0.00
62	2,3,5,6-Tetrachlorophenol	80.000	86.362	-8.0	100	0.00
63	2,3,4,6-Tetrachlorophenol	80.000	83.701	-4.6	100	0.00
64	1-Naphthylamine	80.000	79.712	0.4	100	0.00
65	2-Naphthylamine	80.000	76.901	3.9	100	0.00
66 P	Diethylphthalate	80.000	77.404	3.2	100	0.00
67 P	Fluorene	80.000	75.015	6.2	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	80.000	78.394	2.0	100	0.00
69 P	4-Nitroaniline	80.000	77.807	2.7	100	0.00
70	5-Nitro-o-Toluidine	80.000	76.742	4.1	100	0.00
71	1,2-Diphenylhydrazine	80.000	76.081	4.9	100	0.00
72 S	2,4,6-Tribromophenol	80.000	86.827	-8.5	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	80.000	88.009	-10.0	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	80.000	78.327	2.1	100	0.00
76 P	4-Bromophenyl Phenyl Ether	80.000	80.436	-0.5	100	0.00
77 P	Hexachlorobenzene	80.000	81.689	-2.1	100	0.00
78	4-Aminobiphenyl	80.000	81.676	-2.1	100	0.00
79 C,P	Pentachlorophenol	80.000	79.502	0.6	100	0.00
80 P	Phenanthrene	80.000	78.226	2.2	100	0.00
81 P	Anthracene	80.000	79.210	1.0	100	0.00
82 P	Carbazole	80.000	79.601	0.5	100	0.00
83 P	Di-n-Butyl Phthalate	80.000	80.825	-1.0	100	0.00
84	Methapyrilene	80.000	81.490	-1.9	100	0.00
85 C,P	Fluoranthene	80.000	80.469	-0.6	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	80.000	85.299	-6.6	100	0.00
88 P	Pyrene	80.000	82.090	-2.6	100	0.00
89 S	p-Terphenyl-d14	80.000	83.089	-3.9	100	0.00
90	p-(Dimethylamino)azobenzene	80.000	86.186	-7.7	100	0.00
91 P	Butyl Benzyl Phthalate	80.000	76.622	4.2	100	0.00
92	3,3'-Dimethylbenzidine	160.000	156.807	2.0	100	0.00
93	2-Acetylaminofluorene	80.000	81.818	-2.3	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	80.000	84.185	-5.2	100	0.00
95 P	3,3'-Dichlorobenzidine	80.000	84.299	-5.4	100	0.00
96 P	Benzo[a]anthracene	80.000	82.617	-3.3	100	0.00
97 P	Chrysene	80.000	81.889	-2.4	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	80.000	83.098	-3.9	100	0.00
100 P	Benzo[b]fluoranthene	80.000	84.901	-6.1	100	0.00
101 P	Benzo[k]fluoranthene	80.000	78.727	1.6	100	0.00
102 C,P	Benzo[a]pyrene	80.000	82.320	-2.9	100	0.01
103 P	Indeno[1,2,3-cd]pyrene	80.000	83.794	-4.7	100	0.02

(#) = Out of Range

12M76628.D MEGAMIX.M

Fri Mar 27 16:52:18 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76628.D Vial: 5
Acq On : 27 Mar 2020 12:26 pm Operator: SCB
Sample : SEQ-CAL3 Inst : MSD12
Misc : 1,1 0002258 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	80.000	84.882	-6.1	100	0.02
105 P	Benzo[ghi]perylene	80.000	83.253	-4.1	100	0.01

Data File : I:\MSDCHEM\1\DATA\032720\12M76629.D

Vial: 6

Acq On : 27 Mar 2020 1:01 pm

Operator: SCB

Sample : SEQ-CAL5

Inst : MSD12

Misc : 1,1 0002260

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:29 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	132528	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.014	136	492423	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.820	164	277260	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.412	188	473886	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	391468	40.0000	ug/ml	0.000
98) Perylene-d12	18.775	264	438621	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	114493	23.4365068	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	=	23.44%	
9) Phenol-d5	7.326	99	135726	25.0278658	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	=	25.03%	
26) Nitrobenzene-d5	8.293	82	135696	24.6185164	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	49.24%	
49) 2-Fluorobiphenyl	10.083	172	266591	23.9629587	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	47.93%	
72) 2,4,6-Tribromophenol	11.637	330	27913	23.5242678	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	=	23.52%	
89) p-Terphenyl-d14	14.426	244	263723	22.2031852	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	44.41%	
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	80247	24.3846	ug/ml	99
3) Pyridine	5.05	79	124084	22.4122	ug/ml	98
4) 2-Picoline	5.89	93	140833	23.6222	ug/ml	100
5) n-Nitrosomethylethylamine	6.02	88	60877	24.6135	ug/ml	99
7) n-Nitrosodiethylamine	6.71	102	62107	25.0213	ug/ml	99
8) Aniline	7.42	66	70881	24.8210	ug/ml	98
10) Phenol	7.34	94	148721	24.8754	ug/ml	100
11) bis(2-Chloroethyl) ether	7.44	63	95035	24.8264	ug/ml	100
12) 2-Chlorophenol	7.55	128	128771	24.3041	ug/ml	100
13) 1,3-Dichlorobenzene	7.69	146	133731	23.9906	ug/ml	100
14) 1,4-Dichlorobenzene	7.74	146	129363	23.5729	ug/ml	99
15) Benzyl Alcohol	7.84	108	80135	25.4397	ug/ml	100
16) 1,2-Dichlorobenzene	7.94	146	117521	23.9880	ug/ml	100
17) 2-Methylphenol	7.94	107	89989	24.5845	ug/ml	100
18) bis(2-Chloroisopropyl) ethe	7.98	45	167531	25.1399	ug/ml	98
19) 3-,4-Methylphenol	8.07	107	127188	24.9090	ug/ml	99
20) n-Nitrosopyrrolidine	8.11	100	54735	24.9476	ug/ml	96
21) n-Nitrosodipropylamine	8.12	70	76092	23.7517	ug/ml	98
22) n-Nitrosomorpholine	8.12	56	66032	27.0481	ug/ml	99
23) o-Toluidine	8.16	106	184749	24.4305	ug/ml	99
24) Hexachloroethane	8.25	117	52390	24.2582	ug/ml	99
27) Nitrobenzene	8.31	77	124143	24.6595	ug/ml	99
28) n-Nitrosopiperidine	8.45	114	62732	24.7901	ug/ml	99
29) Isophorone	8.52	82	225516	24.6795	ug/ml	99
30) 2-Nitrophenol	8.63	139	64359	24.8270	ug/ml	99
31) 2,4-Dimethylphenol	8.60	122	107227	24.4378	ug/ml	99
32) bis(2-Chloroethoxy) methane	8.70	93	136887	24.5714	ug/ml	100
33) Benzoic Acid	8.64	105	19438	25.4356	ug/ml	92
34) 2,4-Dichlorophenol	8.85	162	91232	24.1892	ug/ml	100
35) a,a-Dimethylphenethylamine	8.84	58	288734	24.9219	ug/ml	99
36) 1,2,4-Trichlorobenzene	8.96	180	101953	24.1414	ug/ml	99
37) Naphthalene	9.04	128	358928	24.2510	ug/ml	100
38) 4-Chloroaniline	9.06	65	41319	24.8770	ug/ml	99

(#) = qualifier out of range (m) = manual integration

12M76629.D MEGAMIX.M Fri Mar 27 16:48:46 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76629.D

Vial: 6

Acq On : 27 Mar 2020 1:01 pm

Operator: SCB

Sample : SEQ-CAL5

Inst : MSD12

Misc : 1,1 0002260

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:29 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	50664	24.4143	ug/ml	99
40) n-Nitrosodi-n-Butylamine	9.38	84	74141	24.8080	ug/ml	96
41) p-Phenylenediamine	9.40	108	100158	21.0209	ug/ml	100
42) 4-Chloro-3-Methylphenol	9.50	107	103136	25.4165	ug/ml	98
43) 2-Methylphenol	9.72	142	234413	24.6517	ug/ml	100
44) 1-Methylphenol	9.84	142	219501	24.5458	ug/ml	99
46) Hexachlorocyclopentadiene	9.94	237	39342	19.9230	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	64339	24.4972	ug/ml	99
48) 2,4,5-Trichlorophenol	10.06	196	66814	24.2414	ug/ml	99
50) 2-Chloronaphthalene	10.23	162	207764	24.0631	ug/ml	100
51) 2-Nitroaniline	10.32	65	66557	24.7752	ug/ml	99
52) Dimethylphthalate	10.49	163	235555	23.9665	ug/ml	100
53) 1,3-Dinitrobenzene	10.54	168	42696	24.7065	ug/ml	99
54) 2,6-Dinitrotoluene	10.59	165	57155	24.0773	ug/ml	99
55) Acenaphthylene	10.67	152	317923	24.1153	ug/ml	100
56) 3-Nitroaniline	10.74	138	64693	24.4718	ug/ml	99
57) 2,4-Dinitrophenol	10.85	184	22262	25.9270	ug/ml	91
58) Acenaphthene	10.85	154	200491	24.2720	ug/ml	99
59) 4-Nitrophenol	10.85	65	40135	27.4501	ug/ml	97
60) 2,4-Dinitrotoluene	10.99	165	72796	24.9966	ug/ml	98
61) Dibenzofuran	11.01	168	287398	24.0986	ug/ml	100
62) 2,3,5,6-Tetrachlorophenol	11.11	232	43905	22.3533	ug/ml	100
63) 2,3,4,6-Tetrachlorophenol	11.16	232	47347	23.4129	ug/ml	96
64) 1-Naphthylamine	11.08	143	207130	23.0918	ug/ml	99
65) 2-Naphthylamine	11.15	143	200698	24.2318	ug/ml	99
66) Diethylphthalate	11.19	149	229909	23.9938	ug/ml	100
67) Fluorene	11.36	166	223667	23.7834	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	109033	23.6884	ug/ml	100
69) 4-Nitroaniline	11.37	138	61712	24.2817	ug/ml	98
70) 5-Nitro-o-Toluidine	11.36	152	63298	24.3305	ug/ml	96
71) 1,2-Diphenylhydrazine	11.48	77	243076	24.5179	ug/ml	100
74) 4,6-Dinitro-2-Methylphenol	11.41	198	36229	24.0432	ug/ml	94
75) Diphenylamine/n-Nitrosodip	11.43	169	200186	23.5318	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.84	248	58709	22.9715	ug/ml	99
77) Hexachlorobenzene	12.05	284	62558	22.6175	ug/ml	99
78) 4-Aminobiphenyl	12.13	169	255219	24.1545	ug/ml	100
79) Pentachlorophenol	12.24	266	32298	23.7886	ug/ml	99
80) Phenanthrene	12.44	178	338364	23.4465	ug/ml	100
81) Anthracene	12.49	178	343178	23.4441	ug/ml	100
82) Carbazole	12.65	167	322020	23.7941	ug/ml	100
83) Di-n-Butyl Phthalate	13.01	149	398363	24.1708	ug/ml	100
84) Methapyrilene	13.45	58	193077	25.2080	ug/ml	98
85) Fluoranthene	13.97	202	370144	23.6950	ug/ml	99
87) Benzidine	14.07	184	193030	23.0603	ug/ml	100
88) Pyrene	14.30	202	372495	22.7628	ug/ml	100
90) p-(Dimethylamino)azobenzen	14.63	225	68814	23.3064	ug/ml	98
91) Butyl Benzyl Phthalate	15.10	149	161109	23.6734	ug/ml	99
92) 3,3'-Dimethylbenzidine	15.12	212	436489	47.4083	ug/ml	99
93) 2-Acetylaminofluorene	15.53	181	150286	22.7435	ug/ml	99
94) bis(2-Ethylhexyl)phthalate	15.94	149	239354	24.6263	ug/ml	100
95) 3,3'-Dichlorobenzidine	15.95	252	116102	22.1548	ug/ml	100
96) Benzo[a]anthracene	16.04	228	304327	22.2119	ug/ml	100
97) Chrysene	16.11	228	295445	22.0823	ug/ml	100
99) Di-n-Octyl Phthalate	16.88	149	426717	24.6508	ug/ml	99

(#) = qualifier out of range (m) = manual integration

12M76629.D MEGAMIX.M

Fri Mar 27 16:48:46 2020

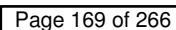
Data File : I:\MSDCHEM\1\DATA\032720\12M76629.D Vial: 6
Acq On : 27 Mar 2020 1:01 pm Operator: SCB
Sample : SEQ-CAL5 Inst : MSD12
Misc : 1,1 0002260 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:29 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.93	252	320560	22.9947	ug/ml	98
101) Benzo[k]fluoranthene	17.97	252	304857	23.6059	ug/ml	99
102) Benzo[a]pyrene	18.65	252	286756	23.4789	ug/ml	99
103) Indeno[1,2,3-cd]pyrene	21.77	276	350758	23.3342	ug/ml	99
104) Dibenz[ah]anthracene	21.77	278	292697	23.0998	ug/ml	99
105) Benzo[ghi]perylene	22.69	276	288968	23.2681	ug/ml	99

Quant Results File: MEGAMIX.RES

TIC: 12M76629.D



Data File : I:\MSDCHEM\1\DATA\032720\12M76629.D

Acq On : 27 Mar 2020 1:01 pm

Sample : SEQ-CAL5

Misc : 1,1 0002260

MS Integration Params: RTEINT.P

Vial: 6

Operator: SCB

Inst : MSD12

Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	25.000	24.385	2.5	100	0.00
3	Pyridine	25.000	22.412	10.4	100	0.00
4	2-Picoline	25.000	23.622	5.5	100	0.00
5	n-Nitrosomethylethylamine	25.000	24.614	1.5	100	0.00
6 S	2-Fluorophenol	25.000	23.437	6.3	100	0.00
7	n-Nitrosodiethylamine	25.000	25.021	-0.1	100	0.00
8	Aniline	25.000	24.821	0.7	100	0.00
9 S	Phenol-d5	25.000	25.028	-0.1	100	0.00
10 C,P	Phenol	25.000	24.875	0.5	100	0.00
11 P	bis(2-Chloroethyl)ether	25.000	24.826	0.7	100	0.00
12 P	2-Chlorophenol	25.000	24.304	2.8	100	0.00
13	1,3-Dichlorobenzene	25.000	23.991	4.0	100	0.00
14 C	1,4-Dichlorobenzene	25.000	23.573	5.7	100	0.00
15	Benzyl Alcohol	25.000	25.440	-1.8	100	0.00
16	1,2-Dichlorobenzene	25.000	23.988	4.0	100	0.00
17 P	2-Methylphenol	25.000	24.584	1.7	100	0.00
18 P	bis(2-Chloroisopropyl)ether	25.000	25.140	-0.6	100	0.00
19 P	3-,4-Methylphenol	25.000	24.909	0.4	100	0.00
20	n-Nitrosopyrrolidine	25.000	24.948	0.2	100	0.00
21 P	n-Nitrosodipropylamine	25.000	23.752	5.0	100	0.00
22	n-Nitrosomorpholine	25.000	27.048	-8.2	100	0.00
23	o-Toluidine	25.000	24.431	2.3	100	0.00
24 P	Hexachloroethane	25.000	24.258	3.0	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	25.000	24.619	1.5	100	0.00
27 P	Nitrobenzene	25.000	24.660	1.4	100	0.00
28	n-Nitrosopiperidine	25.000	24.790	0.8	100	0.00
29 P	Isophorone	25.000	24.680	1.3	100	0.00
30 C,P	2-Nitrophenol	25.000	24.827	0.7	100	0.00
31 P	2,4-Dimethylphenol	25.000	24.438	2.2	100	0.00
32 P	bis(2-Chloroethoxy)methane	25.000	24.571	1.7	100	0.00
33	Benzoic Acid	25.000	25.436	-1.7	100	0.00
34 C,P	2,4-Dichlorophenol	25.000	24.189	3.2	100	0.00
35	a,a-Dimethylphenethylamine	25.000	24.922	0.3	100	0.00
36	1,2,4-Trichlorobenzene	25.000	24.141	3.4	100	0.00
37 P	Naphthalene	25.000	24.251	3.0	100	0.00
38 P	4-Chloroaniline	25.000	24.877	0.5	100	0.00
39 C,P	Hexachlorobutadiene	25.000	24.414	2.3	100	0.00
40	n-Nitrosodi-n-Butylamine	25.000	24.808	0.8	100	0.00
41	p-Phenylenediamine	25.000	21.021	15.9	100	0.00
42 C,P	4-Chloro-3-Methylphenol	25.000	25.417	-1.7	100	0.00
43 P	2-Methylnaphthalene	25.000	24.652	1.4	100	0.00
44	1-Methylnaphthalene	25.000	24.546	1.8	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	25.000	19.923	20.3	100	0.00
47 C,P	2,4,6-Trichlorophenol	25.000	24.497	2.0	100	0.00
48 P	2,4,5-Trichlorophenol	25.000	24.241	3.0	100	0.00
49 S	2-Fluorobiphenyl	25.000	23.963	4.1	100	0.00
50 P	2-Chloronaphthalene	25.000	24.063	3.7	100	0.00
51 P	2-Nitroaniline	25.000	24.775	0.9	100	0.00
52 P	Dimethylphthalate	25.000	23.966	4.1	100	0.00

(#) = Out of Range

12M76629.D MEGAMIX.M

Fri Mar 27 16:52:30 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76629.D
 Acq On : 27 Mar 2020 1:01 pm
 Sample : SEQ-CAL5
 Misc : 1,1 0002260
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	25.000	24.706	1.2	100	0.00
54 P	2,6-Dinitrotoluene	25.000	24.077	3.7	100	0.00
55 P	Acenaphthylene	25.000	24.115	3.5	100	0.00
56 P	3-Nitroaniline	25.000	24.472	2.1	100	0.00
57 P	2,4-Dinitrophenol	25.000	25.927	-3.7	100	0.00
58 C,P	Acenaphthene	25.000	24.272	2.9	100	0.00
59 P	4-Nitrophenol	25.000	27.450	-9.8	100	0.00
60 P	2,4-Dinitrotoluene	25.000	24.997	0.0	100	0.00
61 P	Dibenzofuran	25.000	24.099	3.6	100	0.00
62	2,3,5,6-Tetrachlorophenol	25.000	22.353	10.6	100	0.00
63	2,3,4,6-Tetrachlorophenol	25.000	23.413	6.3	100	0.00
64	1-Naphthylamine	25.000	23.092	7.6	100	0.00
65	2-Naphthylamine	25.000	24.232	3.1	100	0.00
66 P	Diethylphthalate	25.000	23.994	4.0	100	0.00
67 P	Fluorene	25.000	23.783	4.9	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	25.000	23.688	5.2	100	0.00
69 P	4-Nitroaniline	25.000	24.282	2.9	100	0.00
70	5-Nitro-o-Toluidine	25.000	24.331	2.7	100	0.00
71	1,2-Diphenylhydrazine	25.000	24.518	1.9	100	0.00
72 S	2,4,6-Tribromophenol	25.000	23.524	5.9	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	25.000	24.043	3.8	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiph	25.000	23.532	5.9	100	0.00
76 P	4-Bromophenyl Phenyl Ether	25.000	22.972	8.1	100	0.00
77 P	Hexachlorobenzene	25.000	22.618	9.5	100	0.00
78	4-Aminobiphenyl	25.000	24.155	3.4	100	0.00
79 C,P	Pentachlorophenol	25.000	23.789	4.8	100	0.00
80 P	Phenanthrene	25.000	23.446	6.2	100	0.00
81 P	Anthracene	25.000	23.444	6.2	100	0.00
82 P	Carbazole	25.000	23.794	4.8	100	0.00
83 P	Di-n-Butyl Phthalate	25.000	24.171	3.3	100	0.00
84	Methapyrilene	25.000	25.208	-0.8	100	0.00
85 C,P	Fluoranthene	25.000	23.695	5.2	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	25.000	23.060	7.8	100	0.00
88 P	Pyrene	25.000	22.763	8.9	100	0.00
89 S	p-Terphenyl-d14	25.000	22.203	11.2	100	0.00
90	p-(Dimethylamino)azobenzene	25.000	23.306	6.8	100	0.00
91 P	Butyl Benzyl Phthalate	25.000	23.673	5.3	100	0.00
92	3,3'-Dimethylbenzidine	50.000	47.408	5.2	100	0.00
93	2-Acetylaminofluorene	25.000	22.743	9.0	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	25.000	24.626	1.5	100	0.00
95 P	3,3'-Dichlorobenzidine	25.000	22.155	11.4	100	0.00
96 P	Benzo[a]anthracene	25.000	22.212	11.2	100	0.00
97 P	Chrysene	25.000	22.082	11.7	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	25.000	24.651	1.4	100	0.00
100 P	Benzo[b]fluoranthene	25.000	22.995	8.0	100	0.00
101 P	Benzo[k]fluoranthene	25.000	23.606	5.6	100	0.00
102 C,P	Benzo[a]pyrene	25.000	23.479	6.1	100	0.00
103 P	Indeno[1,2,3-cd]pyrene	25.000	23.334	6.7	100	0.00

(#) = Out of Range

12M76629.D MEGAMIX.M

Fri Mar 27 16:52:31 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76629.D Vial: 6
Acq On : 27 Mar 2020 1:01 pm Operator: SCB
Sample : SEQ-CAL5 Inst : MSD12
Misc : 1,1 0002260 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	25.000	23.100	7.6	100	-0.01
105 P	Benzo[ghi]perylene	25.000	23.268	6.9	100	-0.01

Data File : I:\MSDCHEM\1\DATA\032720\12M76630.D

Vial: 7

Acq On : 27 Mar 2020 1:36 pm

Operator: SCB

Sample : SEQ-CAL6

Inst : MSD12

Misc : 1,1 0002261

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:30 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	92669	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.015	136	342694	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.820	164	189457	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.407	188	319642	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	265364	40.0000	ug/ml	0.000
98) Perylene-d12	18.769	264	310781	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	50997	14.9290352	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery =	14.93%#		
9) Phenol-d5	7.326	99	60187	15.8721819	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery =	15.87%		
26) Nitrobenzene-d5	8.288	82	59339	15.4691654	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	30.94%#		
49) 2-Fluorobiphenyl	10.078	172	120118	15.8008194	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery =	31.60%#		
72) 2,4,6-Tribromophenol	11.632	330	11673	14.3968887	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery =	14.40%		
89) p-Terphenyl-d14	14.426	244	117512	14.5949884	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery =	29.19%#		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	34084	14.8119	ug/ml	98
3) Pyridine	5.05	79	57795	14.9290	ug/ml	98
4) 2-Picoline	5.89	93	61868	14.8407	ug/ml	99
5) n-Nitrosomethylethylamine	6.02	88	25095	14.5105	ug/ml	97
7) n-Nitrosodiethylamine	6.71	102	26217	15.1052	ug/ml	96
8) Aniline	7.42	66	31711	15.8808	ug/ml	97
10) Phenol	7.34	94	66619	15.9356	ug/ml	99
11) bis(2-Chloroethyl) ether	7.44	63	42736	15.9660	ug/ml	98
12) 2-Chlorophenol	7.55	128	56835	15.3409	ug/ml	99
13) 1,3-Dichlorobenzene	7.70	146	61019	15.6548	ug/ml	99
14) 1,4-Dichlorobenzene	7.74	146	59380	15.4745	ug/ml	99
15) Benzyl Alcohol	7.84	108	33325	15.1298	ug/ml	100
16) 1,2-Dichlorobenzene	7.94	146	55016	16.0598	ug/ml	100
17) 2-Methylphenol	7.94	107	42162	16.4727	ug/ml	98
18) bis(2-Chloroisopropyl) ether	7.98	45	75512	16.2053	ug/ml	97
19) 3-,4-Methylphenol	8.06	107	55027	15.4120	ug/ml	99
20) n-Nitrosopyrrolidine	8.11	100	24680	16.0872	ug/ml	88
21) n-Nitrosodipropylamine	8.11	70	35923	15.5397	ug/ml	96
22) n-Nitrosomorpholine	8.12	56	31029	17.3492	ug/ml	97
23) o-Toluidine	8.17	106	83090	15.7135	ug/ml	98
24) Hexachloroethane	8.25	117	23079	15.2827	ug/ml	98
27) Nitrobenzene	8.31	77	54423	15.5338	ug/ml	99
28) n-Nitrosopiperidine	8.45	114	26775	15.2037	ug/ml	97
29) Isophorone	8.52	82	100623	15.8230	ug/ml	99
30) 2-Nitrophenol	8.63	139	27460	15.2212	ug/ml	98
31) 2,4-Dimethylphenol	8.60	122	50390	16.5019	ug/ml	92
32) bis(2-Chloroethoxy) methane	8.70	93	60881	15.7030	ug/ml	99
33) Benzoic Acid	8.65	105	1195	12.1161	ug/ml#	29
34) 2,4-Dichlorophenol	8.85	162	40096	15.2759	ug/ml	99
35) a,a-Dimethylphenethylamine	8.83	58	124995	15.5027	ug/ml	100
36) 1,2,4-Trichlorobenzene	8.96	180	45745	15.5646	ug/ml	98
37) Naphthalene	9.04	128	164363	15.9573	ug/ml	100
38) 4-Chloroaniline	9.06	65	18178	15.7263	ug/ml	97

(#) = qualifier out of range (m) = manual integration

12M76630.D MEGAMIX.M Fri Mar 27 16:48:49 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76630.D

Vial: 7

Acq On : 27 Mar 2020 1:36 pm

Operator: SCB

Sample : SEQ-CAL6

Inst : MSD12

Misc : 1,1 0002261

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:30 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	22085	15.2924	ug/ml	100
40) n-Nitrosodi-n-Butylamine	9.38	84	32655	15.7006	ug/ml	96
41) p-Phenylenediamine	9.40	108	49559	14.9459	ug/ml	98
42) 4-Chloro-3-Methylphenol	9.50	107	43109	15.2653	ug/ml	98
43) 2-Methyl-naphthalene	9.73	142	105827	15.9917	ug/ml	99
44) 1-Methyl-naphthalene	9.84	142	98011	15.7488	ug/ml	99
46) Hexachlorocyclopentadiene	9.94	237	15803	12.9939	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	27131	15.1177	ug/ml	98
48) 2,4,5-Trichlorophenol	10.06	196	27946	14.8384	ug/ml	98
50) 2-Chloronaphthalene	10.23	162	92095	15.6097	ug/ml	99
51) 2-Nitroaniline	10.32	65	28087	15.3005	ug/ml	98
52) Dimethylphthalate	10.49	163	104502	15.5601	ug/ml	99
53) 1,3-Dinitrobenzene	10.54	168	17809	15.0813	ug/ml	99
54) 2,6-Dinitrotoluene	10.58	165	24638	15.1892	ug/ml	99
55) Acenaphthylene	10.67	152	145721	16.1759	ug/ml	99
56) 3-Nitroaniline	10.74	138	27082	14.9922	ug/ml	99
57) 2,4-Dinitrophenol	10.84	184	6160	14.1630	ug/ml#	1
58) Acenaphthene	10.85	154	90661	16.0623	ug/ml	96
59) 4-Nitrophenol	10.85	65	16035	16.3277	ug/ml	93
60) 2,4-Dinitrotoluene	10.99	165	31235	15.6961	ug/ml	95
61) Dibenzofuran	11.01	168	130809	16.0518	ug/ml	99
62) 2,3,5,6-Tetrachlorophenol	11.11	232	20036	14.9285	ug/ml	99
63) 2,3,4,6-Tetrachlorophenol	11.16	232	20784	15.0407	ug/ml	97
64) 1-Naphthylamine	11.08	143	96752	15.7852	ug/ml	99
65) 2-Naphthylamine	11.15	143	86907	15.3559	ug/ml	99
66) Diethylphthalate	11.19	149	101914	15.5651	ug/ml	99
67) Fluorene	11.36	166	102697	15.9811	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	47776	15.1902	ug/ml	100
69) 4-Nitroaniline	11.37	138	27659	15.9266	ug/ml	95
70) 5-Nitro-o-Toluidine	11.37	152	28757	16.1764	ug/ml	94
71) 1,2-Diphenylhydrazine	11.48	77	108957	16.0832	ug/ml	99
74) 4,6-Dinitro-2-Methylphenol	11.41	198	13064	12.8535	ug/ml	77
75) Diphenylamine/n-Nitrosodip	11.43	169	89753	15.6416	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.84	248	25927	15.0400	ug/ml	98
77) Hexachlorobenzene	12.05	284	27429	14.7022	ug/ml	98
78) 4-Aminobiphenyl	12.13	169	109663	15.3871	ug/ml	99
79) Pentachlorophenol	12.23	266	11444	14.8488	ug/ml	97
80) Phenanthrene	12.43	178	150969	15.5093	ug/ml	99
81) Anthracene	12.49	178	153982	15.5953	ug/ml	99
82) Carbazole	12.65	167	140352	15.3750	ug/ml	99
83) Di-n-Butyl Phthalate	13.01	149	174547	15.7013	ug/ml	99
84) Methapyrilene	13.45	58	85010	16.4546	ug/ml	96
85) Fluoranthene	13.97	202	163143	15.4833	ug/ml	98
87) Benzidine	14.07	184	84541	14.8991	ug/ml	100
88) Pyrene	14.30	202	164700	14.8475	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.63	225	29027	14.5029	ug/ml	98
91) Butyl Benzyl Phthalate	15.10	149	74459	16.1403	ug/ml	95
92) 3,3'-Dimethylbenzidine	15.12	212	196854	31.5413	ug/ml	98
93) 2-Acetylaminofluorene	15.53	181	61161	14.2781	ug/ml	100
94) bis(2-Ethylhexyl)phthalate	15.93	149	105568	16.0230	ug/ml	99
95) 3,3'-Dichlorobenzidine	15.95	252	51246	14.4259	ug/ml	99
96) Benzo[a]anthracene	16.03	228	134935	14.5286	ug/ml	99
97) Chrysene	16.10	228	131175	14.4635	ug/ml	99
99) Di-n-Octyl Phthalate	16.88	149	179447	14.6306	ug/ml	98

(#) = qualifier out of range (m) = manual integration

12M76630.D MEGAMIX.M

Fri Mar 27 16:48:49 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76630.D Vial: 7
Acq On : 27 Mar 2020 1:36 pm Operator: SCB
Sample : SEQ-CAL6 Inst : MSD12
Misc : 1,1 0002261 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:30 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.92	252	136807	13.8504	ug/ml	98
101) Benzo[k]fluoranthene	17.96	252	133618	14.6024	ug/ml	98
102) Benzo[a]pyrene	18.65	252	122105	14.1102	ug/ml	100
103) Indeno[1,2,3-cd]pyrene	21.76	276	146645	13.7685	ug/ml	98
104) Dibenz[ah]anthracene	21.76	278	121758	13.5620	ug/ml	98
105) Benzo[ghi]perylene	22.67	276	121741	13.8351	ug/ml	100

Data File : I:\MSDCHEM\1\DATA\032720\12M76630.D

Vial: 7

Acq On : 27 Mar 2020 1:36 pm

Operator: SCB

Sample : SEQ-CAL6

Inst : MSD12

Misc : 1,1 0002261

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	15.000	14.812	1.3	100	0.00
3	Pyridine	15.000	14.929	0.5	100	0.00
4	2-Picoline	15.000	14.841	1.1	100	0.00
5	n-Nitrosomethylethylamine	15.000	14.510	3.3	100	0.00
6 S	2-Fluorophenol	15.000	14.929	0.5	100	0.00
7	n-Nitrosodiethylamine	15.000	15.105	-0.7	100	0.00
8	Aniline	15.000	15.881	-5.9	100	0.00
9 S	Phenol-d5	15.000	15.872	-5.8	100	0.00
10 C,P	Phenol	15.000	15.936	-6.2	100	0.00
11 P	bis(2-Chloroethyl)ether	15.000	15.966	-6.4	100	0.00
12 P	2-Chlorophenol	15.000	15.341	-2.3	100	0.00
13	1,3-Dichlorobenzene	15.000	15.655	-4.4	100	0.00
14 C	1,4-Dichlorobenzene	15.000	15.474	-3.2	100	0.00
15	Benzyl Alcohol	15.000	15.130	-0.9	100	0.00
16	1,2-Dichlorobenzene	15.000	16.060	-7.1	100	0.00
17 P	2-Methylphenol	15.000	16.473	-9.8	100	0.00
18 P	bis(2-Chloroisopropyl)ether	15.000	16.205	-8.0	100	0.00
19 P	3-,4-Methylphenol	15.000	15.412	-2.7	100	0.00
20	n-Nitrosopyrrolidine	15.000	16.087	-7.2	100	0.00
21 P	n-Nitrosodipropylamine	15.000	15.540	-3.6	100	0.00
22	n-Nitrosomorpholine	15.000	17.349	-15.7	100	0.00
23	o-Toluidine	15.000	15.713	-4.8	100	0.00
24 P	Hexachloroethane	15.000	15.283	-1.9	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	15.000	15.469	-3.1	100	0.00
27 P	Nitrobenzene	15.000	15.534	-3.6	100	0.00
28	n-Nitrosopiperidine	15.000	15.204	-1.4	100	0.00
29 P	Isophorone	15.000	15.823	-5.5	100	0.00
30 C,P	2-Nitrophenol	15.000	15.221	-1.5	100	0.00
31 P	2,4-Dimethylphenol	15.000	16.502	-10.0	100	0.00
32 P	bis(2-Chloroethoxy)methane	15.000	15.703	-4.7	100	0.00
33	Benzoic Acid	15.000	12.116	19.2	100	0.00
34 C,P	2,4-Dichlorophenol	15.000	15.276	-1.8	100	0.00
35	a,a-Dimethylphenethylamine	15.000	15.503	-3.4	100	-0.02
36	1,2,4-Trichlorobenzene	15.000	15.565	-3.8	100	0.00
37 P	Naphthalene	15.000	15.957	-6.4	100	0.00
38 P	4-Chloroaniline	15.000	15.726	-4.8	100	0.00
39 C,P	Hexachlorobutadiene	15.000	15.292	-1.9	100	0.00
40	n-Nitrosodi-n-Butylamine	15.000	15.701	-4.7	100	0.00
41	p-Phenylenediamine	15.000	14.946	0.4	100	0.00
42 C,P	4-Chloro-3-Methylphenol	15.000	15.265	-1.8	100	0.00
43 P	2-Methylnaphthalene	15.000	15.992	-6.6	100	0.00
44	1-Methylnaphthalene	15.000	15.749	-5.0	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	15.000	12.994	13.4	100	0.00
47 C,P	2,4,6-Trichlorophenol	15.000	15.118	-0.8	100	0.00
48 P	2,4,5-Trichlorophenol	15.000	14.838	1.1	100	0.00
49 S	2-Fluorobiphenyl	15.000	15.801	-5.3	100	0.00
50 P	2-Chloronaphthalene	15.000	15.610	-4.1	100	0.00
51 P	2-Nitroaniline	15.000	15.301	-2.0	100	0.00
52 P	Dimethylphthalate	15.000	15.560	-3.7	100	0.00

(#) = Out of Range

12M76630.D MEGAMIX.M

Fri Mar 27 16:52:43 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76630.D

Acq On : 27 Mar 2020 1:36 pm

Sample : SEQ-CAL6

Misc : 1,1 0002261

MS Integration Params: RTEINT.P

Vial: 7

Operator: SCB

Inst : MSD12

Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	15.000	15.081	-0.5	100	0.00
54 P	2,6-Dinitrotoluene	15.000	15.189	-1.3	100	0.00
55 P	Acenaphthylene	15.000	16.176	-7.8	100	0.00
56 P	3-Nitroaniline	15.000	14.992	0.1	100	0.00
57 P	2,4-Dinitrophenol	15.000	14.163	5.6	100	0.00
58 C,P	Acenaphthene	15.000	16.062	-7.1	100	0.00
59 P	4-Nitrophenol	15.000	16.328	-8.9	100	0.00
60 P	2,4-Dinitrotoluene	15.000	15.696	-4.6	100	0.00
61 P	Dibenzofuran	15.000	16.052	-7.0	100	0.00
62	2,3,5,6-Tetrachlorophenol	15.000	14.928	0.5	100	0.00
63	2,3,4,6-Tetrachlorophenol	15.000	15.041	-0.3	100	0.00
64	1-Naphthylamine	15.000	15.785	-5.2	100	0.00
65	2-Naphthylamine	15.000	15.356	-2.4	100	0.00
66 P	Diethylphthalate	15.000	15.565	-3.8	100	0.00
67 P	Fluorene	15.000	15.981	-6.5	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	15.000	15.190	-1.3	100	0.00
69 P	4-Nitroaniline	15.000	15.927	-6.2	100	0.00
70	5-Nitro-o-Toluidine	15.000	16.176	-7.8	100	0.00
71	1,2-Diphenylhydrazine	15.000	16.083	-7.2	100	0.00
72 S	2,4,6-Tribromophenol	15.000	14.397	4.0	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	15.000	12.854	14.3	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	15.000	15.642	-4.3	100	0.00
76 P	4-Bromophenyl Phenyl Ether	15.000	15.040	-0.3	100	0.00
77 P	Hexachlorobenzene	15.000	14.702	2.0	100	0.00
78	4-Aminobiphenyl	15.000	15.387	-2.6	100	0.00
79 C,P	Pentachlorophenol	15.000	14.849	1.0	100	0.00
80 P	Phenanthrene	15.000	15.509	-3.4	100	0.00
81 P	Anthracene	15.000	15.595	-4.0	100	0.00
82 P	Carbazole	15.000	15.375	-2.5	100	0.00
83 P	Di-n-Butyl Phthalate	15.000	15.701	-4.7	100	0.00
84	Methapyrilene	15.000	16.455	-9.7	100	0.00
85 C,P	Fluoranthene	15.000	15.483	-3.2	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	15.000	14.899	0.7	100	0.00
88 P	Pyrene	15.000	14.847	1.0	100	0.00
89 S	p-Terphenyl-d14	15.000	14.595	2.7	100	0.00
90	p-(Dimethylamino)azobenzene	15.000	14.503	3.3	100	0.00
91 P	Butyl Benzyl Phthalate	15.000	16.140	-7.6	100	0.00
92	3,3'-Dimethylbenzidine	30.000	31.541	-5.1	100	0.00
93	2-Acetylaminofluorene	15.000	14.278	4.8	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	15.000	16.023	-6.8	100	0.00
95 P	3,3'-Dichlorobenzidine	15.000	14.426	3.8	100	0.00
96 P	Benzo[a]anthracene	15.000	14.529	3.1	100	0.00
97 P	Chrysene	15.000	14.463	3.6	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	15.000	14.631	2.5	100	0.00
100 P	Benzo[b]fluoranthene	15.000	13.850	7.7	100	-0.01
101 P	Benzo[k]fluoranthene	15.000	14.602	2.7	100	-0.01
102 C,P	Benzo[a]pyrene	15.000	14.110	5.9	100	0.00
103 P	Indeno[1,2,3-cd]pyrene	15.000	13.769	8.2	100	-0.02

(#) = Out of Range

12M76630.D MEGAMIX.M

Fri Mar 27 16:52:43 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76630.D Vial: 7
Acq On : 27 Mar 2020 1:36 pm Operator: SCB
Sample : SEQ-CAL6 Inst : MSD12
Misc : 1,1 0002261 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	15.000	13.562	9.6	100	-0.02
105 P	Benzo[ghi]perylene	15.000	13.835	7.8	100	-0.02

Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D
 Acq On : 27 Mar 2020 2:11 pm
 Sample : SEQ-CAL7
 Misc : 1,1 0002262
 MS Integration Params: RTEINT.P
 Quant Time: Mar 27 16:31:30 2020

Vial: 8
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Initial Calibration
 DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	94080	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.014	136	345819	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.815	164	191375	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.407	188	324039	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	266042	40.0000	ug/ml	0.000
98) Perylene-d12	18.775	264	312572	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	36290	10.4643257	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	=	10.46%#	
9) Phenol-d5	7.326	99	42705	11.0930208	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	=	11.09%	
26) Nitrobenzene-d5	8.288	82	42811	11.0596067	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	22.12%#	
49) 2-Fluorobiphenyl	10.083	172	87900	11.4468461	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	22.89%#	
72) 2,4,6-Tribromophenol	11.632	330	8279	10.1085648	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	=	10.11%	
89) p-Terphenyl-d14	14.426	244	85536	10.5964959	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	21.19%#	
Target Compounds						
2) n-Nitrosodimethylamine	5.02	74	24120	10.3246	ug/ml#	99
3) Pyridine	5.05	79	40815	10.3848	ug/ml	99
4) 2-Picoline	5.89	93	43946	10.3835	ug/ml	99
5) n-Nitrosomethylethylamine	6.02	88	18206	10.3692	ug/ml	99
7) n-Nitrosodiethylamine	6.71	102	18814	10.6773	ug/ml	98
8) Aniline	7.42	66	22802	11.2479	ug/ml	98
10) Phenol	7.34	94	48246	11.3676	ug/ml	98
11) bis(2-Chloroethyl) ether	7.44	63	31045	11.4244	ug/ml	98
12) 2-Chlorophenol	7.55	128	40734	10.8300	ug/ml	99
13) 1,3-Dichlorobenzene	7.69	146	44133	11.1528	ug/ml	100
14) 1,4-Dichlorobenzene	7.74	146	42982	11.0332	ug/ml	98
15) Benzyl Alcohol	7.84	108	23476	10.4984	ug/ml	99
16) 1,2-Dichlorobenzene	7.94	146	40294	11.5859	ug/ml	99
17) 2-Methylphenol	7.94	107	30553	11.7581	ug/ml	98
18) bis(2-Chloroisopropyl) ethe	7.98	45	55221	11.6730	ug/ml	96
19) 3-,4-Methylphenol	8.06	107	39593	10.9229	ug/ml	99
20) n-Nitrosopyrrolidine	8.11	100	18124	11.6366	ug/ml	88
21) n-Nitrosodipropylamine	8.11	70	26170	10.8741	ug/ml	96
22) n-Nitrosomorpholine	8.12	56	22828	11.8774	ug/ml	96
23) o-Toluidine	8.16	106	60097	11.1947	ug/ml	98
24) Hexachloroethane	8.25	117	16572	10.8093	ug/ml	98
27) Nitrobenzene	8.31	77	39553	11.1875	ug/ml	99
28) n-Nitrosopiperidine	8.45	114	19027	10.7065	ug/ml	98
29) Isophorone	8.52	82	72737	11.3346	ug/ml	99
30) 2-Nitrophenol	8.63	139	19063	10.4712	ug/ml	98
31) 2,4-Dimethylphenol	8.60	122	34161	11.0861	ug/ml	97
32) bis(2-Chloroethoxy) methane	8.70	93	43646	11.1558	ug/ml	99
33) Benzoic Acid	8.65	105	1217	12.1294	ug/ml#	33
34) 2,4-Dichlorophenol	8.85	162	28733	10.8479	ug/ml	98
35) a,a-Dimethylphenethylamine	8.82	58	87835	10.7954	ug/ml	99
36) 1,2,4-Trichlorobenzene	8.96	180	32859	11.0792	ug/ml	100
37) Naphthalene	9.04	128	118295	11.3809	ug/ml	100
38) 4-Chloroaniline	9.06	65	12904	11.0627	ug/ml	99

(#) = qualifier out of range (m) = manual integration
 12M76631.D MEGAMIX.M Fri Mar 27 16:48:52 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D

Vial: 8

Acq On : 27 Mar 2020 2:11 pm

Operator: SCB

Sample : SEQ-CAL7

Inst : MSD12

Misc : 1,1 0002262

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:30 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.19	225	16278	11.1695	ug/ml	98
40) n-Nitrosodi-n-Butylamine	9.38	84	23166	11.0376	ug/ml	96
41) p-Phenylenediamine	9.40	108	33306	9.9536	ug/ml	97
42) 4-Chloro-3-Methylphenol	9.50	107	30858	10.8284	ug/ml	96
43) 2-Methylnaphthalene	9.72	142	76703	11.4859	ug/ml	99
44) 1-Methylnaphthalene	9.84	142	71973	11.4604	ug/ml	99
46) Hexachlorocyclopentadiene	9.94	237	10032	9.3220	ug/ml	98
47) 2,4,6-Trichlorophenol	10.01	196	18824	10.3838	ug/ml	99
48) 2,4,5-Trichlorophenol	10.06	196	19762	10.3878	ug/ml	100
50) 2-Chloronaphthalene	10.23	162	66913	11.2278	ug/ml	99
51) 2-Nitroaniline	10.32	65	19715	10.6322	ug/ml	98
52) Dimethylphthalate	10.49	163	75551	11.1366	ug/ml	99
53) 1,3-Dinitrobenzene	10.54	168	12342	10.3469	ug/ml	99
54) 2,6-Dinitrotoluene	10.58	165	17570	10.7233	ug/ml	99
55) Acenaphthylene	10.67	152	106039	11.6530	ug/ml	99
56) 3-Nitroaniline	10.74	138	18912	10.3645	ug/ml	99
57) 2,4-Dinitrophenol	10.85	184	3330	10.4615	ug/ml#	1
58) Acenaphthene	10.85	154	66841	11.7235	ug/ml	98
59) 4-Nitrophenol	10.85	65	10384	10.7078	ug/ml	95
60) 2,4-Dinitrotoluene	10.99	165	21814	10.8520	ug/ml	96
61) Dibenzofuran	11.01	168	95347	11.5829	ug/ml	99
62) 2,3,5,6-Tetrachlorophenol	11.11	232	14352	10.5862	ug/ml	96
63) 2,3,4,6-Tetrachlorophenol	11.15	232	14651	10.4962	ug/ml	97
64) 1-Naphthylamine	11.08	143	67916	10.9695	ug/ml	99
65) 2-Naphthylamine	11.15	143	63577	11.1210	ug/ml	99
66) Diethylphthalate	11.19	149	74180	11.2158	ug/ml	100
67) Fluorene	11.36	166	75211	11.5866	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	35187	11.0755	ug/ml	99
69) 4-Nitroaniline	11.37	138	19954	11.3747	ug/ml	95
70) 5-Nitro-o-Toluidine	11.36	152	20806	11.5865	ug/ml	94
71) 1,2-Diphenylhydrazine	11.48	77	78798	11.5149	ug/ml	99
74) 4,6-Dinitro-2-Methylphenol	11.41	198	8697	8.4408	ug/ml	71
75) Diphenylamine/n-Nitrosodip	11.43	169	65342	11.2329	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.84	248	18854	10.7886	ug/ml	99
77) Hexachlorobenzene	12.05	284	19918	10.5314	ug/ml	99
78) 4-Aminobiphenyl	12.13	169	78005	10.7965	ug/ml	99
79) Pentachlorophenol	12.23	266	7013	10.9361	ug/ml	98
80) Phenanthrene	12.43	178	109396	11.0859	ug/ml	99
81) Anthracene	12.49	178	111098	11.0994	ug/ml	99
82) Carbazole	12.65	167	101055	10.9200	ug/ml	99
83) Di-n-Butyl Phthalate	13.01	149	123496	10.9583	ug/ml	99
84) Methapyrilene	13.45	58	58635	11.1955	ug/ml	97
85) Fluoranthene	13.97	202	116801	10.9347	ug/ml	98
87) Benzidine	14.07	184	58846	10.3443	ug/ml	100
88) Pyrene	14.30	202	119190	10.7174	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.63	225	20553	10.2428	ug/ml	99
91) Butyl Benzyl Phthalate	15.10	149	54674	11.8214	ug/ml	95
92) 3,3'-Dimethylbenzidine	15.12	212	141901	22.6784	ug/ml	97
93) 2-Acetylaminofluorene	15.52	181	41187	10.1031	ug/ml	100
94) bis(2-Ethylhexyl)phthalate	15.93	149	75376	11.4114	ug/ml	100
95) 3,3'-Dichlorobenzidine	15.95	252	36997	10.3882	ug/ml	99
96) Benzo[a]anthracene	16.03	228	97246	10.4439	ug/ml	99
97) Chrysene	16.10	228	95396	10.4917	ug/ml	99
99) Di-n-Octyl Phthalate	16.88	149	124639	10.1038	ug/ml	97

(#) = qualifier out of range (m) = manual integration

12M76631.D MEGAMIX.M

Fri Mar 27 16:48:52 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D Vial: 8
Acq On : 27 Mar 2020 2:11 pm Operator: SCB
Sample : SEQ-CAL7 Inst : MSD12
Misc : 1,1 0002262 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:30 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

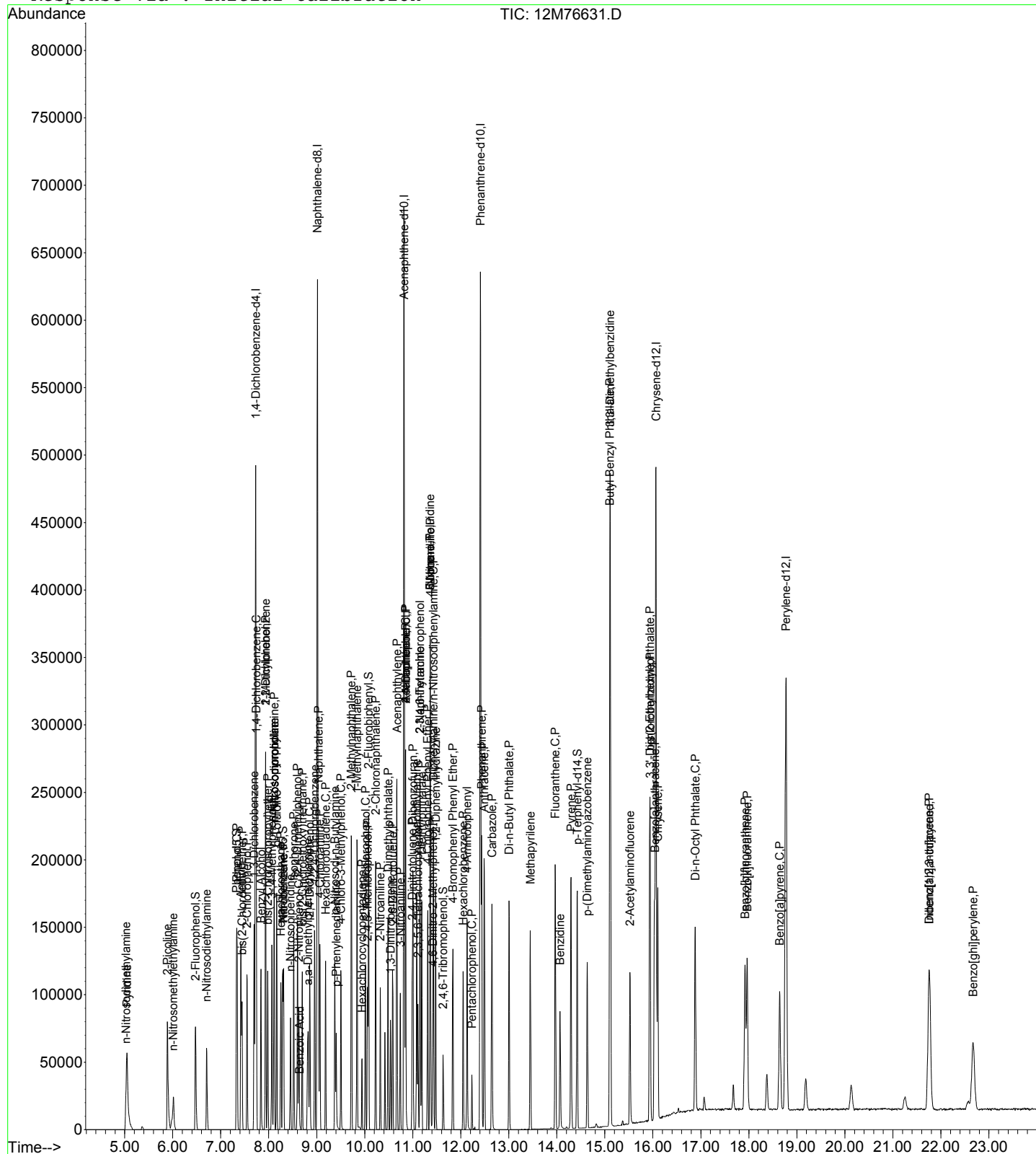
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.92	252	97583	9.8227	ug/ml	98
101) Benzo[k]fluoranthene	17.96	252	95982	10.4292	ug/ml	98
102) Benzo[a]pyrene	18.64	252	86268	9.9119	ug/ml	99
103) Indeno[1,2,3-cd]pyrene	21.76	276	103435	9.6559	ug/ml	97
104) Dibenz[ah]anthracene	21.76	278	85772	9.4989	ug/ml	98
105) Benzo[ghi]perylene	22.67	276	86225	9.7428	ug/ml	99

Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D
Acq On : 27 Mar 2020 2:11 pm
Sample : SEQ-CAL7
Misc : 1,1 0002262
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31 2020

Vial: 8
Operator: SCB
Inst : MSD12
Multiplr: 1.00

Quant Results File: MEGAMIX.RES

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D
 Acq On : 27 Mar 2020 2:11 pm
 Sample : SEQ-CAL7
 Misc : 1,1 0002262
 MS Integration Params: RTEINT.P

Vial: 8
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	10.000	10.325	-3.2	100	0.00
3	Pyridine	10.000	10.385	-3.8	100	0.00
4	2-Picoline	10.000	10.384	-3.8	100	0.00
5	n-Nitrosomethylethylamine	10.000	10.369	-3.7	100	0.00
6 S	2-Fluorophenol	10.000	10.464	-4.6	100	0.00
7	n-Nitrosodiethylamine	10.000	10.677	-6.8	100	0.00
8	Aniline	10.000	11.248	-12.5	100	0.00
9 S	Phenol-d5	10.000	11.093	-10.9	100	0.00
10 C,P	Phenol	10.000	11.368	-13.7	100	0.00
11 P	bis(2-Chloroethyl)ether	10.000	11.424	-14.2	100	0.00
12 P	2-Chlorophenol	10.000	10.830	-8.3	100	0.00
13	1,3-Dichlorobenzene	10.000	11.153	-11.5	100	0.00
14 C	1,4-Dichlorobenzene	10.000	11.033	-10.3	100	0.00
15	Benzyl Alcohol	10.000	10.498	-5.0	100	0.00
16	1,2-Dichlorobenzene	10.000	11.586	-15.9	100	0.00
17 P	2-Methylphenol	10.000	11.758	-17.6	100	0.00
18 P	bis(2-Chloroisopropyl)ether	10.000	11.673	-16.7	100	0.00
19 P	3-,4-Methylphenol	10.000	10.923	-9.2	100	0.00
20	n-Nitrosopyrrolidine	10.000	11.637	-16.4	100	0.00
21 P	n-Nitrosodipropylamine	10.000	10.874	-8.7	100	0.00
22	n-Nitrosomorpholine	10.000	11.877	-18.8	100	0.00
23	o-Toluidine	10.000	11.195	-12.0	100	0.00
24 P	Hexachloroethane	10.000	10.809	-8.1	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	10.000	11.060	-10.6	100	0.00
27 P	Nitrobenzene	10.000	11.187	-11.9	100	0.00
28	n-Nitrosopiperidine	10.000	10.707	-7.1	100	0.00
29 P	Isophorone	10.000	11.335	-13.4	100	0.00
30 C,P	2-Nitrophenol	10.000	10.471	-4.7	100	0.00
31 P	2,4-Dimethylphenol	10.000	11.086	-10.9	100	0.00
32 P	bis(2-Chloroethoxy)methane	10.000	11.156	-11.6	100	0.00
33	Benzoic Acid	10.000	12.129	-21.3	100	0.00
34 C,P	2,4-Dichlorophenol	10.000	10.848	-8.5	100	0.00
35	a,a-Dimethylphenethylamine	10.000	10.795	-7.9	100	-0.03
36	1,2,4-Trichlorobenzene	10.000	11.079	-10.8	100	0.00
37 P	Naphthalene	10.000	11.381	-13.8	100	0.00
38 P	4-Chloroaniline	10.000	11.063	-10.6	100	0.00
39 C,P	Hexachlorobutadiene	10.000	11.170	-11.7	100	0.00
40	n-Nitrosodi-n-Butylamine	10.000	11.038	-10.4	100	0.00
41	p-Phenylenediamine	10.000	9.954	0.5	100	0.00
42 C,P	4-Chloro-3-Methylphenol	10.000	10.828	-8.3	100	0.00
43 P	2-Methylnaphthalene	10.000	11.486	-14.9	100	0.00
44	1-Methylnaphthalene	10.000	11.460	-14.6	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	10.000	9.322	6.8	100	0.00
47 C,P	2,4,6-Trichlorophenol	10.000	10.384	-3.8	100	0.00
48 P	2,4,5-Trichlorophenol	10.000	10.388	-3.9	100	0.00
49 S	2-Fluorobiphenyl	10.000	11.447	-14.5	100	0.00
50 P	2-Chloronaphthalene	10.000	11.228	-12.3	100	0.00
51 P	2-Nitroaniline	10.000	10.632	-6.3	100	0.00
52 P	Dimethylphthalate	10.000	11.137	-11.4	100	0.00

(#) = Out of Range

12M76631.D MEGAMIX.M

Fri Mar 27 16:52:59 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D
 Acq On : 27 Mar 2020 2:11 pm
 Sample : SEQ-CAL7
 Misc : 1,1 0002262
 MS Integration Params: RTEINT.P

Vial: 8
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	10.000	10.347	-3.5	100	0.00
54 P	2,6-Dinitrotoluene	10.000	10.723	-7.2	100	0.00
55 P	Acenaphthylene	10.000	11.653	-16.5	100	0.00
56 P	3-Nitroaniline	10.000	10.365	-3.7	100	0.00
57 P	2,4-Dinitrophenol	10.000	10.461	-4.6	100	0.00
58 C,P	Acenaphthene	10.000	11.723	-17.2	100	0.00
59 P	4-Nitrophenol	10.000	10.708	-7.1	100	0.00
60 P	2,4-Dinitrotoluene	10.000	10.852	-8.5	100	0.00
61 P	Dibenzofuran	10.000	11.583	-15.8	100	0.00
62	2,3,5,6-Tetrachlorophenol	10.000	10.586	-5.9	100	0.00
63	2,3,4,6-Tetrachlorophenol	10.000	10.496	-5.0	100	0.00
64	1-Naphthylamine	10.000	10.970	-9.7	100	0.00
65	2-Naphthylamine	10.000	11.121	-11.2	100	0.00
66 P	Diethylphthalate	10.000	11.216	-12.2	100	0.00
67 P	Fluorene	10.000	11.587	-15.9	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	10.000	11.075	-10.7	100	0.00
69 P	4-Nitroaniline	10.000	11.375	-13.8	100	0.00
70	5-Nitro-o-Toluidine	10.000	11.586	-15.9	100	0.00
71	1,2-Diphenylhydrazine	10.000	11.515	-15.2	100	0.00
72 S	2,4,6-Tribromophenol	10.000	10.109	-1.1	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	10.000	8.441	15.6	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	10.000	11.233	-12.3	100	0.00
76 P	4-Bromophenyl Phenyl Ether	10.000	10.789	-7.9	100	0.00
77 P	Hexachlorobenzene	10.000	10.531	-5.3	100	0.00
78	4-Aminobiphenyl	10.000	10.797	-8.0	100	0.00
79 C,P	Pentachlorophenol	10.000	10.936	-9.4	100	0.00
80 P	Phenanthrene	10.000	11.086	-10.9	100	0.00
81 P	Anthracene	10.000	11.099	-11.0	100	0.00
82 P	Carbazole	10.000	10.920	-9.2	100	0.00
83 P	Di-n-Butyl Phthalate	10.000	10.958	-9.6	100	0.00
84	Methapyrilene	10.000	11.195	-12.0	100	0.00
85 C,P	Fluoranthene	10.000	10.935	-9.4	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	10.000	10.344	-3.4	100	0.00
88 P	Pyrene	10.000	10.717	-7.2	100	0.00
89 S	p-Terphenyl-d14	10.000	10.596	-6.0	100	0.00
90	p-(Dimethylamino)azobenzene	10.000	10.243	-2.4	100	0.00
91 P	Butyl Benzyl Phthalate	10.000	11.821	-18.2	100	0.00
92	3,3'-Dimethylbenzidine	20.000	22.678	-13.4	100	0.00
93	2-Acetylaminofluorene	10.000	10.103	-1.0	100	-0.01
94 P	bis(2-Ethylhexyl)phthalate	10.000	11.411	-14.1	100	0.00
95 P	3,3'-Dichlorobenzidine	10.000	10.388	-3.9	100	0.00
96 P	Benzo[a]anthracene	10.000	10.444	-4.4	100	0.00
97 P	Chrysene	10.000	10.492	-4.9	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	10.000	10.104	-1.0	100	0.00
100 P	Benzo[b]fluoranthene	10.000	9.823	1.8	100	-0.01
101 P	Benzo[k]fluoranthene	10.000	10.429	-4.3	100	-0.01
102 C,P	Benzo[a]pyrene	10.000	9.912	0.9	100	0.00
103 P	Indeno[1,2,3-cd]pyrene	10.000	9.656	3.4	100	-0.02

(#) = Out of Range

12M76631.D MEGAMIX.M

Fri Mar 27 16:53:00 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76631.D Vial: 8
Acq On : 27 Mar 2020 2:11 pm Operator: SCB
Sample : SEQ-CAL7 Inst : MSD12
Misc : 1,1 0002262 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	10.000	9.499	5.0	100	-0.02
105 P	Benzo[ghi]perylene	10.000	9.743	2.6	100	-0.03

Data File : I:\MSDCHEM\1\DATA\032720\12M76632.D
 Acq On : 27 Mar 2020 2:46 pm
 Sample : SEQ-CAL8
 Misc : 1,1 0002263
 MS Integration Params: RTEINT.P
 Quant Time: Mar 27 16:31:31 2020

Vial: 9
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Initial Calibration
 DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	92920	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.014	136	340931	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.815	164	187269	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.407	188	320173	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	264276	40.0000	ug/ml	0.000
98) Perylene-d12	18.769	264	311442	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.477	112	9768	2.8517933	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	=	2.85%#	
9) Phenol-d5	7.326	99	11661	3.0668674	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	=	3.07%#	
26) Nitrobenzene-d5	8.288	82	12063	3.1609818	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	6.32%#	
49) 2-Fluorobiphenyl	10.078	172	26135	3.4780738	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	6.96%#	
72) 2,4,6-Tribromophenol	11.632	330	1843	2.2996210	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	=	2.30%#	
89) p-Terphenyl-d14	14.426	244	24698	3.0801198	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	6.16%#	
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.03	74	5826	2.5250	ug/ml#	99
3) Pyridine	5.06	79	10577	2.7248	ug/ml	95
4) 2-Picoline	5.89	93	12271	2.9356	ug/ml	93
5) n-Nitrosomethylethylamine	6.02	88	4297	2.4779	ug/ml	96
7) n-Nitrosodiethylamine	6.71	102	4644	2.6685	ug/ml	88
8) Aniline	7.42	66	6369	3.1810	ug/ml	98
10) Phenol	7.34	94	13333	3.1807	ug/ml	96
11) bis(2-Chloroethyl) ether	7.44	63	8838	3.2929	ug/ml	96
12) 2-Chlorophenol	7.55	128	11517	3.1003	ug/ml	97
13) 1,3-Dichlorobenzene	7.69	146	12693	3.2477	ug/ml	99
14) 1,4-Dichlorobenzene	7.74	146	13047	3.3909	ug/ml	96
15) Benzyl Alcohol	7.84	108	5688	2.5754	ug/ml	95
16) 1,2-Dichlorobenzene	7.94	146	12257	3.5683	ug/ml	97
17) 2-Methylphenol	7.94	107	8687	3.3849	ug/ml	99
18) bis(2-Chloroisopropyl) ethe	7.98	45	16436	3.5177	ug/ml	96
19) 3-,4-Methylphenol	8.06	107	10871	3.0365	ug/ml	98
20) n-Nitrosopyrrolidine	8.11	100	4857	3.1574	ug/ml#	73
21) n-Nitrosodipropylamine	8.11	70	7692	2.8042	ug/ml	94
22) n-Nitrosomorpholine	8.12	56	6616	1.7018	ug/ml	94
23) o-Toluidine	8.16	106	17781	3.3536	ug/ml	98
24) Hexachloroethane	8.25	117	4642	3.0656	ug/ml	97
27) Nitrobenzene	8.31	77	11169	3.2044	ug/ml	96
28) n-Nitrosopiperidine	8.45	114	5132	2.9292	ug/ml	93
29) Isophorone	8.52	82	20580	3.2529	ug/ml	96
30) 2-Nitrophenol	8.63	139	4786	2.6666	ug/ml	94
31) 2,4-Dimethylphenol	8.60	122	9316	3.0666	ug/ml	99
32) bis(2-Chloroethoxy) methane	8.70	93	12836	3.3279	ug/ml	97
34) 2,4-Dichlorophenol	8.85	162	7723	2.9575	ug/ml	98
35) a,a-Dimethylphenethylamine	8.80	58	20097	2.5055	ug/ml#	93
36) 1,2,4-Trichlorobenzene	8.96	180	9547	3.2651	ug/ml	98
37) Naphthalene	9.04	128	35654	3.4794	ug/ml	99
38) 4-Chloroaniline	9.06	65	3734	3.2471	ug/ml	98
39) Hexachlorobutadiene	9.19	225	4497	3.1300	ug/ml	99

(#) = qualifier out of range (m) = manual integration
 12M76632.D MEGAMIX.M Fri Mar 27 16:48:55 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76632.D

Vial: 9

Acq On : 27 Mar 2020 2:46 pm

Operator: SCB

Sample : SEQ-CAL8

Inst : MSD12

Misc : 1,1 0002263

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:31:31 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
40) n-Nitrosodi-n-Butylamine	9.38	84	6132	2.9635	ug/ml	96
41) p-Phenylenediamine	9.40	108	7247	2.1968	ug/ml#	91
42) 4-Chloro-3-Methylphenol	9.51	107	7796	2.7749	ug/ml	98
43) 2-Methylnaphthalene	9.72	142	22150	3.3644	ug/ml	99
44) 1-Methylnaphthalene	9.84	142	20800	3.3595	ug/ml	98
46) Hexachlorocyclopentadiene	9.94	237	1514	4.0691	ug/ml#	85
47) 2,4,6-Trichlorophenol	10.01	196	4751	2.6782	ug/ml	97
48) 2,4,5-Trichlorophenol	10.06	196	5276	2.8341	ug/ml	92
50) 2-Chloronaphthalene	10.23	162	19659	3.3710	ug/ml	99
51) 2-Nitroaniline	10.32	65	4947	2.7264	ug/ml	95
52) Dimethylphthalate	10.48	163	21732	3.2737	ug/ml	98
53) 1,3-Dinitrobenzene	10.54	168	2907	2.4905	ug/ml	95
54) 2,6-Dinitrotoluene	10.58	165	4915	3.0655	ug/ml	98
55) Acenaphthylene	10.67	152	30919	3.4723	ug/ml	99
56) 3-Nitroaniline	10.74	138	5085	2.8479	ug/ml#	94
58) Acenaphthene	10.85	154	19970	3.5794	ug/ml	97
59) 4-Nitrophenol	10.86	65	1487	2.1385	ug/ml	85
60) 2,4-Dinitrotoluene	10.99	165	5443	2.7672	ug/ml	92
61) Dibenzofuran	11.01	168	28459	3.5330	ug/ml	97
62) 2,3,5,6-Tetrachlorophenol	11.11	232	3191	2.4053	ug/ml	97
63) 2,3,4,6-Tetrachlorophenol	11.16	232	3950	2.8919	ug/ml	93
64) 1-Naphthylamine	11.08	143	19434	3.2077	ug/ml	98
65) 2-Naphthylamine	11.15	143	20748	3.7089	ug/ml	97
66) Diethylphthalate	11.19	149	21732	3.3579	ug/ml	98
67) Fluorene	11.36	166	23041	3.6274	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	10311	3.3167	ug/ml	99
69) 4-Nitroaniline	11.37	138	5236	3.0502	ug/ml	92
70) 5-Nitro-o-Toluidine	11.37	152	5599	3.1863	ug/ml	93
71) 1,2-Diphenylhydrazine	11.48	77	22975	3.4310	ug/ml	98
74) 4,6-Dinitro-2-Methylphenol	11.41	198	1205	1.1836	ug/ml#	1
75) Diphenylamine/n-Nitrosodip	11.43	169	19350	3.3666	ug/ml	98
76) 4-Bromophenyl Phenyl Ether	11.84	248	5384	3.1180	ug/ml	98
77) Hexachlorobenzene	12.05	284	5730	3.0662	ug/ml	96
78) 4-Aminobiphenyl	12.13	169	21836	3.0588	ug/ml	99
79) Pentachlorophenol	12.24	266	915	5.7455	ug/ml#	69
80) Phenanthrene	12.43	178	32731	3.3569	ug/ml	99
81) Anthracene	12.49	178	32193	3.2551	ug/ml	99
82) Carbazole	12.65	167	29044	3.1764	ug/ml	99
83) Di-n-Butyl Phthalate	13.01	149	33291	2.9897	ug/ml	98
84) Methapyrilene	13.45	58	13088	2.5291	ug/ml	95
85) Fluoranthene	13.97	202	32546	3.0837	ug/ml	98
87) Benzidine	14.07	184	14297	2.5300	ug/ml	100
88) Pyrene	14.30	202	34028	3.0802	ug/ml	98
90) p-(Dimethylamino)azobenzen	14.63	225	4933	2.4748	ug/ml	95
91) Butyl Benzyl Phthalate	15.10	149	14802	3.2218	ug/ml	94
92) 3,3'-Dimethylbenzidine	15.12	212	41324	6.6485	ug/ml	96
93) 2-Acetylaminofluorene	15.53	181	8622	3.3612	ug/ml	97
94) bis(2-Ethylhexyl)phthalate	15.94	149	20070	3.0588	ug/ml	96
95) 3,3'-Dichlorobenzidine	15.94	252	9979	2.8207	ug/ml	98
96) Benzo[a]anthracene	16.03	228	28656	3.0981	ug/ml	98
97) Chrysene	16.10	228	28489	3.1542	ug/ml	99
99) Di-n-Octyl Phthalate	16.88	149	31715	2.5803	ug/ml#	96
100) Benzo[b]fluoranthene	17.92	252	28302	2.8592	ug/ml	100
101) Benzo[k]fluoranthene	17.96	252	27032	2.9479	ug/ml	98

(#) = qualifier out of range (m) = manual integration

12M76632.D MEGAMIX.M

Fri Mar 27 16:48:56 2020

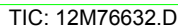
Data File : I:\MSDCHEM\1\DATA\032720\12M76632.D Vial: 9
Acq On : 27 Mar 2020 2:46 pm Operator: SCB
Sample : SEQ-CAL8 Inst : MSD12
Misc : 1,1 0002263 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:31:31 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) Benzo[a]pyrene	18.64	252	23769	2.7409	ug/ml	98
103) Indeno[1,2,3-cd]pyrene	21.76	276	27374	2.5647	ug/ml	97
104) Dibenz[ah]anthracene	21.76	278	22538	2.5051	ug/ml	95
105) Benzo[ghi]perylene	22.67	276	23155	2.6258	ug/ml	93

Quant Results File: MEGAMIX.RES

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76632.D
 Acq On : 27 Mar 2020 2:46 pm
 Sample : SEQ-CAL8
 Misc : 1,1 0002263
 MS Integration Params: RTEINT.P

Vial: 9
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	3.000	2.525	15.8	100	0.00
3	Pyridine	3.000	2.725	9.2	100	0.01
4	2-Picoline	3.000	2.936	2.1	100	0.00
5	n-Nitrosomethylethylamine	3.000	2.478	17.4	100	0.00
6 S	2-Fluorophenol	3.000	2.852	4.9	100	0.00
7	n-Nitrosodiethylamine	3.000	2.668	11.1	100	0.00
8	Aniline	3.000	3.181	-6.0	100	0.00
9 S	Phenol-d5	3.000	3.067	-2.2	100	0.00
10 C,P	Phenol	3.000	3.181	-6.0	100	0.00
11 P	bis(2-Chloroethyl)ether	3.000	3.293	-9.8	100	0.00
12 P	2-Chlorophenol	3.000	3.100	-3.3	100	0.00
13	1,3-Dichlorobenzene	3.000	3.248	-8.3	100	0.00
14 C	1,4-Dichlorobenzene	3.000	3.391	-13.0	100	0.00
15	Benzyl Alcohol	3.000	2.575	14.2	100	0.00
16	1,2-Dichlorobenzene	3.000	3.568	-18.9	100	0.00
17 P	2-Methylphenol	3.000	3.385	-12.8	100	0.00
18 P	bis(2-Chloroisopropyl)ether	3.000	3.518	-17.3	100	0.00
19 P	3-,4-Methylphenol	3.000	3.037	-1.2	100	0.00
20	n-Nitrosopyrrolidine	3.000	3.157	-5.2	100	0.00
21 P	n-Nitrosodipropylamine	3.000	2.804	6.5	100	0.00
22	n-Nitrosomorpholine	3.000	1.702	43.3#	100	0.00
23	o-Toluidine	3.000	3.354	-11.8	100	0.00
24 P	Hexachloroethane	3.000	3.066	-2.2	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	3.000	3.161	-5.4	100	0.00
27 P	Nitrobenzene	3.000	3.204	-6.8	100	0.00
28	n-Nitrosopiperidine	3.000	2.929	2.4	100	0.00
29 P	Isophorone	3.000	3.253	-8.4	100	0.00
30 C,P	2-Nitrophenol	3.000	2.667	11.1	100	0.00
31 P	2,4-Dimethylphenol	3.000	3.067	-2.2	100	0.00
32 P	bis(2-Chloroethoxy)methane	3.000	3.328	-10.9	100	0.00
33	Benzoic Acid	-1.000	0.000	0.0	0	-8.64#
34 C,P	2,4-Dichlorophenol	3.000	2.958	1.4	100	0.00
35	a,a-Dimethylphenethylamine	3.000	2.505	16.5	100	-0.04
36	1,2,4-Trichlorobenzene	3.000	3.265	-8.8	100	0.00
37 P	Naphthalene	3.000	3.479	-16.0	100	0.00
38 P	4-Chloroaniline	3.000	3.247	-8.2	100	0.00
39 C,P	Hexachlorobutadiene	3.000	3.130	-4.3	100	0.00
40	n-Nitrosodi-n-Butylamine	3.000	2.964	1.2	100	0.00
41	p-Phenylenediamine	-1.000	2.197	0.0	100	0.00
42 C,P	4-Chloro-3-Methylphenol	3.000	2.775	7.5	100	0.00
43 P	2-Methylnaphthalene	3.000	3.364	-12.1	100	0.00
44	1-Methylnaphthalene	3.000	3.360	-12.0	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	3.000	4.069	-35.6	100	0.00
47 C,P	2,4,6-Trichlorophenol	3.000	2.678	10.7	100	0.00
48 P	2,4,5-Trichlorophenol	3.000	2.834	5.5	100	0.00
49 S	2-Fluorobiphenyl	3.000	3.478	-15.9	100	0.00
50 P	2-Chloronaphthalene	3.000	3.371	-12.4	100	0.00
51 P	2-Nitroaniline	-1.000	2.726	0.0	100	0.00
52 P	Dimethylphthalate	3.000	3.274	-9.1	100	0.00

(#) = Out of Range

12M76632.D MEGAMIX.M

Fri Mar 27 16:53:45 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76632.D
 Acq On : 27 Mar 2020 2:46 pm
 Sample : SEQ-CAL8
 Misc : 1,1 0002263
 MS Integration Params: RTEINT.P

Vial: 9
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	3.000	2.491	17.0	100	0.00
54 P	2,6-Dinitrotoluene	3.000	3.065	-2.2	100	0.00
55 P	Acenaphthylene	3.000	3.472	-15.7	100	0.00
56 P	3-Nitroaniline	-1.000	2.848	0.0	100	0.00
57 P	2,4-Dinitrophenol	-1.000	0.000	0.0	0	-10.85#
58 C,P	Acenaphthene	3.000	3.579	-19.3	100	0.00
59 P	4-Nitrophenol	3.000	2.138	28.7	100	0.00
60 P	2,4-Dinitrotoluene	3.000	2.767	7.8	100	0.00
61 P	Dibenzofuran	3.000	3.533	-17.8	100	0.00
62	2,3,5,6-Tetrachlorophenol	3.000	2.405	19.8	100	0.00
63	2,3,4,6-Tetrachlorophenol	3.000	2.892	3.6	100	0.00
64	1-Naphthylamine	3.000	3.208	-6.9	100	0.00
65	2-Naphthylamine	3.000	3.709	-23.6	100	0.00
66 P	Diethylphthalate	3.000	3.358	-11.9	100	0.00
67 P	Fluorene	3.000	3.627	-20.9	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	3.000	3.317	-10.6	100	0.00
69 P	4-Nitroaniline	-1.000	3.050	0.0	100	0.00
70	5-Nitro-o-Toluidine	3.000	3.186	-6.2	100	0.00
71	1,2-Diphenylhydrazine	3.000	3.431	-14.4	100	0.00
72 S	2,4,6-Tribromophenol	3.000	2.300	23.3	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	-1.000	1.184	0.0	100	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	3.000	3.367	-12.2	100	0.00
76 P	4-Bromophenyl Phenyl Ether	3.000	3.118	-3.9	100	0.00
77 P	Hexachlorobenzene	3.000	3.066	-2.2	100	0.00
78	4-Aminobiphenyl	3.000	3.059	-2.0	100	0.00
79 C,P	Pentachlorophenol	-1.000	5.746	0.0	100	0.00
80 P	Phenanthrene	3.000	3.357	-11.9	100	0.00
81 P	Anthracene	3.000	3.255	-8.5	100	0.00
82 P	Carbazole	3.000	3.176	-5.9	100	0.00
83 P	Di-n-Butyl Phthalate	3.000	2.990	0.3	100	0.00
84	Methapyrilene	3.000	2.529	15.7	100	0.00
85 C,P	Fluoranthene	3.000	3.084	-2.8	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	3.000	2.530	15.7	100	0.00
88 P	Pyrene	3.000	3.080	-2.7	100	0.00
89 S	p-Terphenyl-d14	3.000	3.080	-2.7	100	0.00
90	p-(Dimethylamino)azobenzene	3.000	2.475	17.5	100	0.00
91 P	Butyl Benzyl Phthalate	3.000	3.222	-7.4	100	0.00
92	3,3'-Dimethylbenzidine	6.000	6.648	-10.8	100	0.00
93	2-Acetylaminofluorene	3.000	3.361	-12.0	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	3.000	3.059	-2.0	100	0.00
95 P	3,3'-Dichlorobenzidine	3.000	2.821	6.0	100	0.00
96 P	Benzo[a]anthracene	3.000	3.098	-3.3	100	0.00
97 P	Chrysene	3.000	3.154	-5.1	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	3.000	2.580	14.0	100	0.00
100 P	Benzo[b]fluoranthene	3.000	2.859	4.7	100	-0.01
101 P	Benzo[k]fluoranthene	3.000	2.948	1.7	100	-0.01
102 C,P	Benzo[a]pyrene	3.000	2.741	8.6	100	0.00
103 P	Indeno[1,2,3-cd]pyrene	3.000	2.565	14.5	100	-0.02

(#) = Out of Range

12M76632.D MEGAMIX.M

Fri Mar 27 16:53:45 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76632.D Vial: 9
Acq On : 27 Mar 2020 2:46 pm Operator: SCB
Sample : SEQ-CAL8 Inst : MSD12
Misc : 1,1 0002263 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	3.000	2.505	16.5	100	-0.02
105 P	Benzo[ghi]perylene	3.000	2.626	12.5	100	-0.02

Data File : I:\MSDCHEM\1\DATA\032720\12M76633.D
 Acq On : 27 Mar 2020 3:21 pm
 Sample : SEQ-CAL9
 Misc : 1,1 0002264
 MS Integration Params: RTEINT.P
 Quant Time: Mar 27 16:44:39 2020

Vial: 10
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Initial Calibration
 DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	116145	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.014	136	423890	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.815	164	235761	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.407	188	400245	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	333511	40.0000	ug/ml	0.000
98) Perylene-d12	18.769	264	385476	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.482	112	2775	0.6481627	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	=	0.65%#	
9) Phenol-d5	7.332	99	3602	0.7578995	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	=	0.76%#	
26) Nitrobenzene-d5	8.288	82	3703	0.7804295	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	1.56%#	
49) 2-Fluorobiphenyl	10.077	172	8853	0.9358380	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	1.87%#	
72) 2,4,6-Tribromophenol	11.637	330	339	0.3359886	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	=	0.34%#	
89) p-Terphenyl-d14	14.426	244	8261	0.8163681	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	1.63%#	
Target Compounds						
13) 1,3-Dichlorobenzene	7.69	146	4475	0.9160	ug/ml	95
14) 1,4-Dichlorobenzene	7.74	146	4422	0.9195	ug/ml#	75
16) 1,2-Dichlorobenzene	7.94	146	4212	0.9810	ug/ml	96
18) bis(2-Chloroisopropyl)ethe	7.98	45	5657	0.9686	ug/ml#	87
22) n-Nitrosomorpholine	8.12	56	2202	Below Cal	#	83
37) Naphthalene	9.04	128	12601	0.9890	ug/ml	96
43) 2-Methylnaphthalene	9.72	142	7640	0.9333	ug/ml	96
44) 1-Methylnaphthalene	9.84	142	7367	0.9570	ug/ml	97
55) Acenaphthylene	10.67	152	10178	0.9079	ug/ml	96
58) Acenaphthene	10.85	154	6651	0.9469	ug/ml	93
59) 4-Nitrophenol	10.74	65	1460	1.8151	ug/ml#	1
61) Dibenzofuran	11.01	168	9762	0.9626	ug/ml	96
66) Diethylphthalate	11.18	149	7466	0.9163	ug/ml	93
67) Fluorene	11.36	166	7590	0.9491	ug/ml	97
75) Diphenylamine/n-Nitrosodip	11.43	169	6526	0.9083	ug/ml	95
80) Phenanthrene	12.43	178	11756	0.9645	ug/ml	96
92) 3,3'-Dimethylbenzidine	15.12	212	11928	1.5207	ug/ml	96
93) 2-Acetylaminofluorene	15.53	181	1679	1.8388	ug/ml#	73

Data File : I:\MSDCHEM\1\DATA\032720\12M76633.D

Vial: 10

Acq On : 27 Mar 2020 3:21 pm

Operator: SCB

Sample : SEQ-CAL9

Inst : MSD

```
Misc      : 1,1 0002264
```

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:44 2020

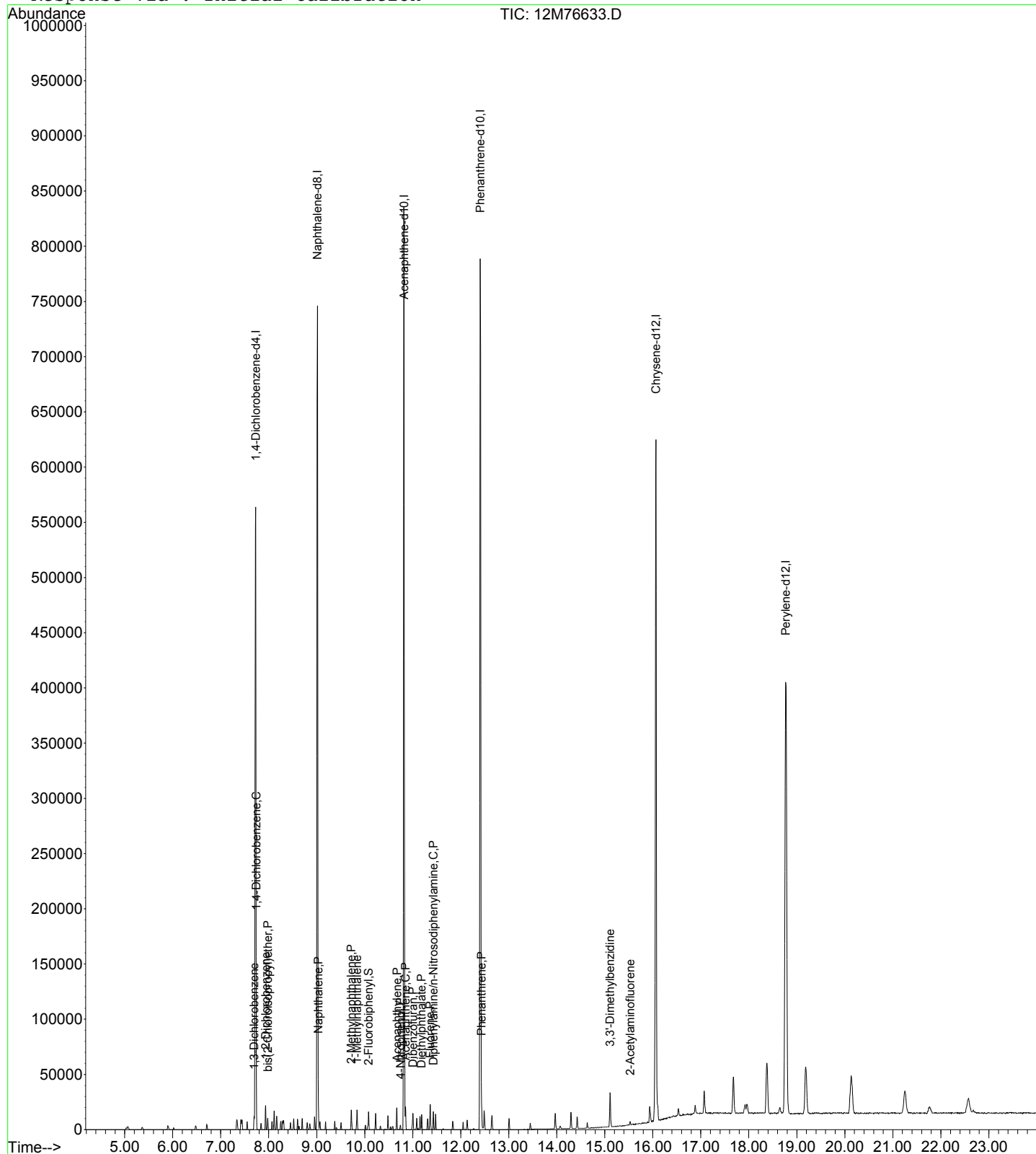
Quant Results File: MEGAMIX.RES

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76633.D
 Acq On : 27 Mar 2020 3:21 pm
 Sample : SEQ-CAL9
 Misc : 1,1 0002264
 MS Integration Params: RTEINT.P

Vial: 10
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	n-Nitrosodimethylamine	-1.000	0.490	0.0	100	0.01
3	Pyridine	-1.000	0.577	0.0	100	0.02
4	2-Picoline	-1.000	0.659	0.0	100	0.01
5	n-Nitrosomethylethylamine	-1.000	0.264	0.0	100	0.00
6 S	2-Fluorophenol	-1.000	0.648	0.0	100	0.00
7	n-Nitrosodiethylamine	-1.000	0.593	0.0	100	0.00
8	Aniline	-1.000	0.748	0.0	100	0.00
9 S	Phenol-d5	-1.000	0.758	0.0	100	0.00
10 C,P	Phenol	-1.000	0.812	0.0	100	0.00
11 P	bis(2-Chloroethyl)ether	-1.000	0.780	0.0	100	0.00
12 P	2-Chlorophenol	-1.000	0.745	0.0	100	0.00
13	1,3-Dichlorobenzene	-1.000	0.916	0.0	100	0.00
14 C	1,4-Dichlorobenzene	-1.000	0.919	0.0	100	0.00
15	Benzyl Alcohol	-1.000	0.519	0.0	100	0.00
16	1,2-Dichlorobenzene	-1.000	0.981	0.0	100	0.00
17 P	2-Methylphenol	-1.000	0.863	0.0	100	0.00
18 P	bis(2-Chloroisopropyl)ether	-1.000	0.969	0.0	100	0.00
19 P	3-,4-Methylphenol	-1.000	0.718	0.0	100	0.00
20	n-Nitrosopyrrolidine	-1.000	0.758	0.0	100	0.00
21 P	n-Nitrosodipropylamine	-1.000	0.357	0.0	100	0.00
22	n-Nitrosomorpholine	-1.000	-1.399	0.0	100	0.00
23	o-Toluidine	-1.000	0.896	0.0	100	0.00
24 P	Hexachloroethane	-1.000	0.733	0.0	100	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
26 S	Nitrobenzene-d5	-1.000	0.780	0.0	100	0.00
27 P	Nitrobenzene	-1.000	0.817	0.0	100	0.00
28	n-Nitrosopiperidine	-1.000	0.793	0.0	100	0.00
29 P	Isophorone	-1.000	0.836	0.0	100	0.00
30 C,P	2-Nitrophenol	-1.000	0.565	0.0	100	0.00
31 P	2,4-Dimethylphenol	-1.000	0.729	0.0	100	0.00
32 P	bis(2-Chloroethoxy)methane	-1.000	0.887	0.0	100	0.00
33	Benzoic Acid	-1.000	0.000	0.0	0	-8.64#
34 C,P	2,4-Dichlorophenol	-1.000	0.703	0.0	100	0.00
35	a,a-Dimethylphenethylamine	-1.000	0.625	0.0	100	-0.04
36	1,2,4-Trichlorobenzene	-1.000	0.869	0.0	100	0.00
37 P	Naphthalene	-1.000	0.989	0.0	100	0.00
38 P	4-Chloroaniline	-1.000	0.781	0.0	100	0.00
39 C,P	Hexachlorobutadiene	1.000	0.820	18.0	100	0.00
40	n-Nitrosodi-n-Butylamine	-1.000	0.709	0.0	100	0.00
41	p-Phenylenediamine	-1.000	0.415	0.0	100	0.00
42 C,P	4-Chloro-3-Methylphenol	-1.000	0.656	0.0	100	0.00
43 P	2-Methylnaphthalene	-1.000	0.933	0.0	100	0.00
44	1-Methylnaphthalene	-1.000	0.957	0.0	100	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
46 P	Hexachlorocyclopentadiene	-1.000	0.000	0.0	0	-9.94#
47 C,P	2,4,6-Trichlorophenol	-1.000	0.493	0.0	100	0.00
48 P	2,4,5-Trichlorophenol	-1.000	0.524	0.0	100	0.00
49 S	2-Fluorobiphenyl	-1.000	0.936	0.0	100	0.00
50 P	2-Chloronaphthalene	-1.000	0.899	0.0	100	0.00
51 P	2-Nitroaniline	-1.000	0.528	0.0	100	0.00
52 P	Dimethylphthalate	-1.000	0.882	0.0	100	0.00

(#) = Out of Range

12M76633.D MEGAMIX.M

Fri Mar 27 16:54:02 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76633.D
 Acq On : 27 Mar 2020 3:21 pm
 Sample : SEQ-CAL9
 Misc : 1,1 0002264
 MS Integration Params: RTEINT.P

Vial: 10
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	-1.000	0.298	0.0	100	0.00
54 P	2,6-Dinitrotoluene	-1.000	0.625	0.0	100	0.00
55 P	Acenaphthylene	-1.000	0.908	0.0	100	0.00
56 P	3-Nitroaniline	-1.000	0.528	0.0	100	0.00
57 P	2,4-Dinitrophenol	-1.000	0.000	0.0	0	-10.85#
58 C,P	Acenaphthene	-1.000	0.947	0.0	100	0.00
59 P	4-Nitrophenol	-1.000	1.815	0.0	100	-0.11
60 P	2,4-Dinitrotoluene	-1.000	0.543	0.0	100	0.00
61 P	Dibenzofuran	-1.000	0.963	0.0	100	0.00
62	2,3,5,6-Tetrachlorophenol	-1.000	0.283	0.0	100	0.00
63	2,3,4,6-Tetrachlorophenol	-1.000	0.434	0.0	100	0.00
64	1-Naphthylamine	-1.000	0.745	0.0	100	0.00
65	2-Naphthylamine	-1.000	0.806	0.0	100	-0.07
66 P	Diethylphthalate	-1.000	0.916	0.0	100	0.00
67 P	Fluorene	-1.000	0.949	0.0	100	0.00
68 P	4-Chlorophenyl Phenyl Ether	-1.000	0.880	0.0	100	0.00
69 P	4-Nitroaniline	-1.000	0.500	0.0	100	0.00
70	5-Nitro-o-Toluidine	-1.000	0.491	0.0	100	0.00
71	1,2-Diphenylhydrazine	-1.000	0.887	0.0	100	0.00
72 S	2,4,6-Tribromophenol	-1.000	0.336	0.0	100	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
74 P	4,6-Dinitro-2-Methylphenol	-1.000	0.000	0.0	0	-11.42#
75 C,P	Diphenylamine/n-Nitrosodiph	-1.000	0.908	0.0	100	0.00
76 P	4-Bromophenyl Phenyl Ether	-1.000	0.829	0.0	100	0.00
77 P	Hexachlorobenzene	-1.000	0.870	0.0	100	0.00
78	4-Aminobiphenyl	-1.000	0.725	0.0	100	0.00
79 C,P	Pentachlorophenol	-1.000	0.000	0.0	0	-12.23#
80 P	Phenanthrene	-1.000	0.964	0.0	100	0.00
81 P	Anthracene	-1.000	0.878	0.0	100	0.00
82 P	Carbazole	-1.000	0.834	0.0	100	0.00
83 P	Di-n-Butyl Phthalate	-1.000	0.725	0.0	100	0.00
84	Methapyrilene	-1.000	0.492	0.0	100	0.00
85 C,P	Fluoranthene	-1.000	0.820	0.0	100	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
87	Benzidine	-1.000	0.481	0.0	100	0.00
88 P	Pyrene	-1.000	0.819	0.0	100	0.00
89 S	p-Terphenyl-d14	-1.000	0.816	0.0	100	0.00
90	p-(Dimethylamino)azobenzene	-1.000	0.452	0.0	100	0.00
91 P	Butyl Benzyl Phthalate	-1.000	0.754	0.0	100	0.00
92	3,3'-Dimethylbenzidine	-1.000	1.521	0.0	100	0.00
93	2-Acetylaminofluorene	-1.000	1.839	0.0	100	0.00
94 P	bis(2-Ethylhexyl)phthalate	1.000	0.712	28.8	100	0.00
95 P	3,3'-Dichlorobenzidine	-1.000	0.675	0.0	100	0.00
96 P	Benzo[a]anthracene	-1.000	0.866	0.0	100	0.06
97 P	Chrysene	-1.000	0.886	0.0	100	0.00
98 I	Perylene-d12	40.000	40.000	0.0	100	0.00
99 C,P	Di-n-Octyl Phthalate	-1.000	0.575	0.0	100	0.00
100 P	Benzo[b]fluoranthene	-1.000	0.768	0.0	100	-0.01
101 P	Benzo[k]fluoranthene	-1.000	0.736	0.0	100	-0.01
102 C,P	Benzo[a]pyrene	-1.000	0.692	0.0	100	0.00
103 P	Indeno[1,2,3-cd]pyrene	-1.000	0.626	0.0	100	-0.01

(#) = Out of Range

12M76633.D MEGAMIX.M

Fri Mar 27 16:54:02 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76633.D Vial: 10
Acq On : 27 Mar 2020 3:21 pm Operator: SCB
Sample : SEQ-CAL9 Inst : MSD12
Misc : 1,1 0002264 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	-1.000	0.605	0.0	100	-0.02
105 P	Benzo[ghi]perylene	-1.000	0.654	0.0	100	-0.03

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D
 Acq On : 27 Mar 2020 3:55 pm
 Sample : SEQ-ICV1
 Misc : 1,1 0000107
 MS Integration Params: RTEINT.P
 Quant Time: Mar 27 16:21:57 2020

Vial: 11
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Initial Calibration
 DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	101631	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.015	136	374119	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.820	164	209862	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.407	188	357980	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	307996	40.0000	ug/ml	0.000
98) Perylene-d12	18.775	264	317859	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.472	112	192041	51.2612686	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery =	51.26%		
9) Phenol-d5	7.326	99	206589	49.6763188	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery =	49.68%		
26) Nitrobenzene-d5	8.293	82	176300	42.0993807	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	84.20%		
49) 2-Fluorobiphenyl	10.083	172	341937	40.6063977	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery =	81.21%		
72) 2,4,6-Tribromophenol	11.638	330	45835	51.0340749	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery =	51.03%		
89) p-Terphenyl-d14	14.426	244	347670	37.2036614	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery =	74.41%		
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	121825	48.2730	ug/ml	100
3) Pyridine	5.05	79	224992	52.9928	ug/ml	99
8) Aniline	7.42	66	105372	48.1167	ug/ml#	31
10) Phenol	7.34	94	217683	47.4793	ug/ml	99
11) bis(2-Chloroethyl)ether	7.44	63	133590	45.5077	ug/ml#	30
12) 2-Chlorophenol	7.55	128	195664	48.1564	ug/ml	99
13) 1,3-Dichlorobenzene	7.70	146	207918	48.6387	ug/ml	100
14) 1,4-Dichlorobenzene	7.74	146	200802	47.7147	ug/ml	100
15) Benzyl Alcohol	7.84	108	128237	53.0865	ug/ml	99
16) 1,2-Dichlorobenzene	7.94	146	176534	46.9881	ug/ml	100
17) 2-Methylphenol	7.93	107	127059	45.2645	ug/ml	99
18) bis(2-Chloroisopropyl)ethe	7.98	45	230599	45.1239	ug/ml	99
19) 3-,4-Methylphenol	8.06	107	185889	47.4728	ug/ml	100
21) n-Nitrosodipropylamine	8.12	70	124741	55.8491	ug/ml#	67
22) n-Nitrosomorpholine	8.12	56	8682	2.5461	ug/ml#	35
24) Hexachloroethane	8.25	117	78704	47.5214	ug/ml	99
27) Nitrobenzene	8.31	77	177129	46.3106	ug/ml	100
29) Isophorone	8.52	82	282771	40.7308	ug/ml	99
30) 2-Nitrophenol	8.63	139	97408	49.4582	ug/ml	97
31) 2,4-Dimethylphenol	8.60	122	166217	49.8611	ug/ml	99
32) bis(2-Chloroethoxy)methane	8.70	93	197195	46.5900	ug/ml	100
33) Benzoic Acid	8.66	105	120191	89.6787	ug/ml	91
34) 2,4-Dichlorophenol	8.85	162	143506	50.0809	ug/ml	100
36) 1,2,4-Trichlorobenzene	8.96	180	157766	49.1705	ug/ml	100
37) Naphthalene	9.04	128	528464	46.9966	ug/ml	100
38) 4-Chloroaniline	9.06	65	60363	47.8353	ug/ml	99
39) Hexachlorobutadiene	9.19	225	86139	54.6353	ug/ml	99
41) p-Phenylenediamine	9.50	108	11844	3.2719	ug/ml#	1
42) 4-Chloro-3-Methylphenol	9.50	107	154210	50.0204	ug/ml	99
43) 2-Methylnaphthalene	9.73	142	333564	46.1714	ug/ml	99
44) 1-Methylnaphthalene	9.84	142	327591	48.2171	ug/ml	100
46) Hexachlorocyclopentadiene	9.94	237	69338	42.2567	ug/ml	100
47) 2,4,6-Trichlorophenol	10.01	196	99426	50.0144	ug/ml	99

(#) = qualifier out of range (m) = manual integration
 12M76634.D MEGAMIX.M Fri Mar 27 16:49:02 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D

Vial: 11

Acq On : 27 Mar 2020 3:55 pm

Operator: SCB

Sample : SEQ-ICV1

Inst : MSD12

Misc : 1,1 0000107

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:21:57 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

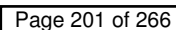
Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
48) 2,4,5-Trichlorophenol	10.06	196	102643	49.2010	ug/ml	99
50) 2-Chloronaphthalene	10.23	162	302918	46.3510	ug/ml	100
51) 2-Nitroaniline	10.32	65	100784	49.5643	ug/ml	100
52) Dimethylphthalate	10.49	163	346113	46.5247	ug/ml	100
53) 1,3-Dinitrobenzene	10.54	168	64619	49.4012	ug/ml	100
54) 2,6-Dinitrotoluene	10.59	165	85182	47.4083	ug/ml	100
55) Acenaphthylene	10.67	152	474452	47.5463	ug/ml	100
56) 3-Nitroaniline	10.74	138	98865	49.4089	ug/ml	99
57) 2,4-Dinitrophenol	10.84	184	33667	45.8738	ug/ml	97
58) Acenaphthene	10.85	154	294997	47.1826	ug/ml	100
59) 4-Nitrophenol	10.85	65	55909	49.9566	ug/ml	98
60) 2,4-Dinitrotoluene	10.99	165	109441	49.6486	ug/ml	100
61) Dibenzofuran	11.01	168	429352	47.5636	ug/ml	100
62) 2,3,5,6-Tetrachlorophenol	11.11	232	78490	52.7953	ug/ml	99
63) 2,3,4,6-Tetrachlorophenol	11.16	232	77243	50.4633	ug/ml	98
66) Diethylphthalate	11.19	149	331057	45.6456	ug/ml	100
67) Fluorene	11.36	166	339249	47.6589	ug/ml	99
68) 4-Chlorophenyl Phenyl EtHe	11.31	204	160080	45.9482	ug/ml	100
69) 4-Nitroaniline	11.38	138	92529	48.0994	ug/ml	96
70) 5-Nitro-o-Toluidine	11.41	152	3392	1.7225	ug/ml#	1
71) 1,2-Diphenylhydrazine	11.48	77	360880	48.0903	ug/ml	99
74) 4,6-Dinitro-2-Methylphenol	11.41	198	54349	47.7466	ug/ml	99
75) Diphenylamine/n-Nitrosodip	11.43	169	302645	47.0946	ug/ml	100
76) 4-Bromophenyl Phenyl Ether	11.84	248	90465	46.8577	ug/ml	99
77) Hexachlorobenzene	12.05	284	95828	45.8638	ug/ml	100
79) Pentachlorophenol	12.23	266	63882	54.2655	ug/ml	99
80) Phenanthrene	12.44	178	495388	45.4416	ug/ml	100
81) Anthracene	12.49	178	495661	44.8244	ug/ml	100
82) Carbazole	12.65	167	495652	48.4818	ug/ml	99
83) Di-n-Butyl Phthalate	13.01	149	598146	48.0435	ug/ml	100
85) Fluoranthene	13.97	202	539630	45.7295	ug/ml	100
88) Pyrene	14.30	202	565089	43.8907	ug/ml	100
91) Butyl Benzyl Phthalate	15.10	149	256168	47.8429	ug/ml	99
94) bis(2-Ethylhexyl)phthalate	15.94	149	369750	48.3524	ug/ml	100
96) Benzo[a]anthracene	16.04	228	448959	41.6489	ug/ml	100
97) Chrysene	16.11	228	447035	42.4679	ug/ml	100
99) Di-n-Octyl Phthalate	16.88	149	633548	50.5040	ug/ml	100
100) Benzo[b]fluoranthene	17.93	252	471326	46.6546	ug/ml	99
101) Benzo[k]fluoranthene	17.97	252	434392	46.4152	ug/ml	99
102) Benzo[a]pyrene	18.65	252	458002	51.7474	ug/ml	100
103) Indeno[1,2,3-cd]pyrene	21.78	276	517848	47.5381	ug/ml	100
104) Dibenz[ah]anthracene	21.78	278	446359	48.6104	ug/ml	100
105) Benzo[ghi]perylene	22.69	276	436438	48.4941	ug/ml	99

Quant Results File: MEGAMIX.RES

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D
 Acq On : 27 Mar 2020 3:55 pm
 Sample : SEQ-ICV1
 Misc : 1,1 0000107
 MS Integration Params: RTEINT.P

Vial: 11
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	110	0.00
2	n-Nitrosodimethylamine	0.993	0.959	3.4	106	0.00
3	Pyridine	1.671	1.771	-6.0	116	0.00
4	2-Picoline	1.799	0.000#	100.0#	0#	-5.89#
5	n-Nitrosomethylethylamine	0.747	0.000#	100.0#	0#	-6.01#
6 S	2-Fluorophenol	1.474	1.512	-2.6	114	0.00
7	n-Nitrosodiethylamine	0.749	0.000#	100.0#	0#	-6.71#
8	Aniline	0.862	0.829	3.8	109	0.00
9 S	Phenol-d5	1.637	1.626	0.7	112	0.00
10 C,P	Phenol	1.804	1.714	5.0	108	0.00
11 P	bis(2-Chloroethyl)ether	1.155	1.052	8.9	105	0.00
12 P	2-Chlorophenol	1.599	1.540	3.7	110	0.00
13	1,3-Dichlorobenzene	1.682	1.637	2.7	112	0.00
14 C	1,4-Dichlorobenzene	1.656	1.581	4.5	110	0.00
15	Benzyl Alcohol	0.951	1.009	-6.1	116	0.00
16	1,2-Dichlorobenzene	1.479	1.390	6.0	111	0.00
17 P	2-Methylphenol	1.105	1.000	9.5	107	0.00
18 P	bis(2-Chloroisopropyl)ether	2.011	1.815	9.7	104	0.00
19 P	3-,4-Methylphenol	1.541	1.463	5.1	107	0.00
20	n-Nitrosopyrrolidine	0.662	0.000#	100.0#	0#	-8.11#
21 P	n-Nitrosodipropylamine	0.921	0.982	-6.6	125	0.00
22	n-Nitrosomorpholine	0.800	0.068	91.5#	10	0.00
23	o-Toluidine	2.282	0.000#	100.0#	0#	-8.17#
24 P	Hexachloroethane	0.652	0.620	4.9	107	0.00
25 I	Naphthalene-d8	1.000	1.000	0.0	110	0.00
26 S	Nitrobenzene-d5	0.448	0.377	15.8	95	0.00
27 P	Nitrobenzene	0.409	0.379	7.3	105	0.00
28	n-Nitrosopiperidine	0.206	0.000#	100.0#	0#	-8.45#
29 P	Isophorone	0.742	0.605	18.5	93	0.00
30 C,P	2-Nitrophenol	0.211	0.208	1.4	109	0.00
31 P	2,4-Dimethylphenol	0.356	0.355	0.3	114	0.00
32 P	bis(2-Chloroethoxy)methane	0.453	0.422	6.8	106	0.00
33	Benzoic Acid	0.092	0.257	-179.3#	330	0.02
34 C,P	2,4-Dichlorophenol	0.306	0.307	-0.3	114	0.00
35	a,a-Dimethylphenethylamine	0.941	0.005#	99.5#	1#	0.05
36	1,2,4-Trichlorobenzene	0.343	0.337	1.7	113	0.00
37 P	Naphthalene	1.202	1.130	6.0	109	0.00
38 P	4-Chloroaniline	0.135	0.129	4.4	108	0.00
39 C,P	Hexachlorobutadiene	0.169	0.184	-8.9	122	0.00
40	n-Nitrosodi-n-Butylamine	0.243	0.001#	99.6#	1#	0.12
41	p-Phenylenediamine	0.387	0.025#	93.5#	7	0.09
42 C,P	4-Chloro-3-Methylphenol	0.330	0.330	0.0	111	0.00
43 P	2-Methylnaphthalene	0.772	0.713	7.6	107	0.00
44	1-Methylnaphthalene	0.726	0.701	3.4	111	0.00
45 I	Acenaphthene-d10	1.000	1.000	0.0	111	0.00
46 P	Hexachlorocyclopentadiene	0.260	0.264	-1.5	97	0.00
47 C,P	2,4,6-Trichlorophenol	0.379	0.379	0.0	113	0.00
48 P	2,4,5-Trichlorophenol	0.398	0.391	1.8	111	0.00
49 S	2-Fluorobiphenyl	1.605	1.303	18.8	95	0.00
50 P	2-Chloronaphthalene	1.246	1.155	7.3	108	0.00
51 P	2-Nitroaniline	0.388	0.384	1.0	112	0.00
52 P	Dimethylphthalate	1.418	1.319	7.0	109	0.00

(#) = Out of Range

12M76634.D MEGAMIX.M

Fri Mar 27 16:54:54 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D
 Acq On : 27 Mar 2020 3:55 pm
 Sample : SEQ-ICV1
 Misc : 1,1 0000107
 MS Integration Params: RTEINT.P

Vial: 11
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	0.249	0.246	1.2	110	0.00
54 P	2,6-Dinitrotoluene	0.342	0.325	5.0	109	0.00
55 P	Acenaphthylene	1.902	1.809	4.9	113	0.00
56 P	3-Nitroaniline	0.381	0.377	1.0	112	0.00
57 P	2,4-Dinitrophenol	0.124	0.128	-3.2	110	0.00
58 C,P	Acenaphthene	1.192	1.125	5.6	112	0.00
59 P	4-Nitrophenol	0.206	0.213	-3.4	104	0.00
60 P	2,4-Dinitrotoluene	0.420	0.417	0.7	111	0.00
61 P	Dibenzofuran	1.721	1.637	4.9	112	0.00
62	2,3,5,6-Tetrachlorophenol	0.283	0.299	-5.7	116	0.00
63	2,3,4,6-Tetrachlorophenol	0.292	0.294	-0.7	117	0.00
64	1-Naphthylamine	1.294	0.007#	99.5#	1#	0.02
65	2-Naphthylamine	1.195	0.010#	99.2#	1	0.00
66 P	Diethylphthalate	1.382	1.262	8.7	107	0.00
67 P	Fluorene	1.357	1.293	4.7	115	0.00
68 P	4-Chlorophenyl Phenyl Ether	0.664	0.610	8.1	108	0.00
69 P	4-Nitroaniline	0.367	0.353	3.8	113	0.00
70	5-Nitro-o-Toluidine	0.375	0.013#	96.5#	4	0.05
71	1,2-Diphenylhydrazine	1.430	1.376	3.8	111	0.00
72 S	2,4,6-Tribromophenol	0.171	0.175	-2.3	117	0.00
73 I	Phenanthrene-d10	1.000	1.000	0.0	113	0.00
74 P	4,6-Dinitro-2-Methylphenol	0.127	0.121	4.7	107	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	0.718	0.676	5.8	112	0.00
76 P	4-Bromophenyl Phenyl Ether	0.216	0.202	6.5	112	0.00
77 P	Hexachlorobenzene	0.233	0.214	8.2	110	0.00
78	4-Aminobiphenyl	0.892	0.001#	99.9#	0#	0.00
79 C,P	Pentachlorophenol	0.118	0.143	-21.2#	134	0.00
80 P	Phenanthrene	1.218	1.107	9.1	108	0.00
81 P	Anthracene	1.236	1.108	10.4	106	0.00
82 P	Carbazole	1.142	1.108	3.0	114	0.00
83 P	Di-n-Butyl Phthalate	1.391	1.337	3.9	112	0.00
84	Methapyrilene	0.647	0.000#	100.0#	0#	-13.45#
85 C,P	Fluoranthene	1.319	1.206	8.6	108	0.00
86 I	Chrysene-d12	1.000	1.000	0.0	123	0.00
87	Benzidine	0.855	0.000#	100.0#	0#	-14.07#
88 P	Pyrene	1.672	1.468	12.2	111	0.00
89 S	p-Terphenyl-d14	1.214	0.903	25.6	95	0.00
90	p-(Dimethylamino)azobenzene	0.302	0.000#	100.0#	0#	-14.64#
91 P	Butyl Benzyl Phthalate	0.695	0.665	4.3	122	0.00
92	3,3'-Dimethylbenzidine	0.941	0.004#	99.6#	1#	0.00
93	2-Acetylaminofluorene	0.641	0.000#	100.0#	0#	-15.53#
94 P	bis(2-Ethylhexyl)phthalate	0.993	0.960	3.3	117	0.00
95 P	3,3'-Dichlorobenzidine	0.535	0.000#	100.0#	0#	-15.95#
96 P	Benzo[a]anthracene	1.400	1.166	16.7	107	0.00
97 P	Chrysene	1.367	1.161	15.1	111	0.00
98 I	Perylene-d12	1.000	1.000	0.0	110	0.00
99 C,P	Di-n-Octyl Phthalate	1.579	1.595	-1.0	110	0.00
100 P	Benzo[b]fluoranthene	1.271	1.186	6.7	102	0.00
101 P	Benzo[k]fluoranthene	1.178	1.093	7.2	106	0.00
102 C,P	Benzo[a]pyrene	1.114	1.153	-3.5	115	0.00
103 P	Indeno[1,2,3-cd]pyrene	1.371	1.303	5.0	104	0.00

(#) = Out of Range

12M76634.D MEGAMIX.M

Fri Mar 27 16:54:54 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D Vial: 11
Acq On : 27 Mar 2020 3:55 pm Operator: SCB
Sample : SEQ-ICV1 Inst : MSD12
Misc : 1,1 0000107 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	1.156	1.123	2.9	106	0.00
105 P	Benzo[ghi]perylene	1.133	1.098	3.1	104	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D
 Acq On : 27 Mar 2020 3:55 pm
 Sample : SEQ-ICV1
 Misc : 1,1 0000107
 MS Integration Params: RTEINT.P

Vial: 11
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	110	0.00
2	n-Nitrosodimethylamine	50.000	48.273	3.5	106	0.00
3	Pyridine	50.000	52.993	-6.0	116	0.00
4	2-Picoline	50.000	0.000	100.0#	0	-5.89#
5	n-Nitrosomethylethylamine	50.000	0.000	100.0#	0	-6.01#
6 S	2-Fluorophenol	50.000	51.261	-2.5	114	0.00
7	n-Nitrosodiethylamine	50.000	0.000	100.0#	0	-6.71#
8	Aniline	50.000	48.117	3.8	109	0.00
9 S	Phenol-d5	50.000	49.676	0.6	112	0.00
10 C,P	Phenol	50.000	47.479	5.0	108	0.00
11 P	bis(2-Chloroethyl)ether	50.000	45.508	9.0	105	0.00
12 P	2-Chlorophenol	50.000	48.156	3.7	110	0.00
13	1,3-Dichlorobenzene	50.000	48.639	2.7	112	0.00
14 C	1,4-Dichlorobenzene	50.000	47.715	4.6	110	0.00
15	Benzyl Alcohol	50.000	53.086	-6.2	116	0.00
16	1,2-Dichlorobenzene	50.000	46.988	6.0	111	0.00
17 P	2-Methylphenol	50.000	45.265	9.5	107	0.00
18 P	bis(2-Chloroisopropyl)ether	50.000	45.124	9.8	104	0.00
19 P	3-,4-Methylphenol	50.000	47.473	5.1	107	0.00
20	n-Nitrosopyrrolidine	50.000	0.000	100.0#	0	-8.11#
21 P	n-Nitrosodipropylamine	50.000	55.849	-11.7	125	0.00
22	n-Nitrosomorpholine	50.000	2.546	94.9#	10	0.00
23	o-Toluidine	50.000	0.000	100.0#	0	-8.17#
24 P	Hexachloroethane	50.000	47.521	5.0	107	0.00
25 I	Naphthalene-d8	40.000	40.000	0.0	110	0.00
26 S	Nitrobenzene-d5	50.000	42.099	15.8	95	0.00
27 P	Nitrobenzene	50.000	46.311	7.4	105	0.00
28	n-Nitrosopiperidine	50.000	0.000	100.0#	0	-8.45#
29 P	Isophorone	50.000	40.731	18.5	93	0.00
30 C,P	2-Nitrophenol	50.000	49.458	1.1	109	0.00
31 P	2,4-Dimethylphenol	50.000	49.861	0.3	114	0.00
32 P	bis(2-Chloroethoxy)methane	50.000	46.590	6.8	106	0.00
33	Benzoic Acid	50.000	89.679	-79.4#	330	0.02
34 C,P	2,4-Dichlorophenol	50.000	50.081	-0.2	114	0.00
35	a,a-Dimethylphenethylamine	50.000	0.268	99.5#	1	0.05
36	1,2,4-Trichlorobenzene	50.000	49.171	1.7	113	0.00
37 P	Naphthalene	50.000	46.997	6.0	109	0.00
38 P	4-Chloroaniline	50.000	47.835	4.3	108	0.00
39 C,P	Hexachlorobutadiene	50.000	54.635	-9.3	122	0.00
40	n-Nitrosodi-n-Butylamine	50.000	0.305	99.4#	1	0.12
41	p-Phenylenediamine	50.000	3.272	93.5#	7	0.09
42 C,P	4-Chloro-3-Methylphenol	50.000	50.020	-0.0	111	0.00
43 P	2-Methylnaphthalene	50.000	46.171	7.7	107	0.00
44	1-Methylnaphthalene	50.000	48.217	3.6	111	0.00
45 I	Acenaphthene-d10	40.000	40.000	0.0	111	0.00
46 P	Hexachlorocyclopentadiene	50.000	42.257	15.5	97	0.00
47 C,P	2,4,6-Trichlorophenol	50.000	50.014	-0.0	113	0.00
48 P	2,4,5-Trichlorophenol	50.000	49.201	1.6	111	0.00
49 S	2-Fluorobiphenyl	50.000	40.606	18.8	95	0.00
50 P	2-Chloronaphthalene	50.000	46.351	7.3	108	0.00
51 P	2-Nitroaniline	50.000	49.564	0.9	112	0.00
52 P	Dimethylphthalate	50.000	46.525	7.0	109	0.00

(#) = Out of Range

12M76634.D MEGAMIX.M

Fri Mar 27 16:54:51 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D
 Acq On : 27 Mar 2020 3:55 pm
 Sample : SEQ-ICV1
 Misc : 1,1 0000107
 MS Integration Params: RTEINT.P

Vial: 11
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	50.000	49.401	1.2	110	0.00
54 P	2,6-Dinitrotoluene	50.000	47.408	5.2	109	0.00
55 P	Acenaphthylene	50.000	47.546	4.9	113	0.00
56 P	3-Nitroaniline	50.000	49.409	1.2	112	0.00
57 P	2,4-Dinitrophenol	50.000	45.874	8.3	110	0.00
58 C,P	Acenaphthene	50.000	47.183	5.6	112	0.00
59 P	4-Nitrophenol	50.000	49.957	0.1	104	0.00
60 P	2,4-Dinitrotoluene	50.000	49.649	0.7	111	0.00
61 P	Dibenzofuran	50.000	47.564	4.9	112	0.00
62	2,3,5,6-Tetrachlorophenol	50.000	52.795	-5.6	116	0.00
63	2,3,4,6-Tetrachlorophenol	50.000	50.463	-0.9	117	0.00
64	1-Naphthylamine	50.000	0.273	99.5#	1	0.02
65	2-Naphthylamine	50.000	0.426	99.1#	1	0.00
66 P	Diethylphthalate	50.000	45.646	8.7	107	0.00
67 P	Fluorene	50.000	47.659	4.7	115	0.00
68 P	4-Chlorophenyl Phenyl Ether	50.000	45.948	8.1	108	0.00
69 P	4-Nitroaniline	50.000	48.099	3.8	113	0.00
70	5-Nitro-o-Toluidine	50.000	1.723	96.6#	4	0.05
71	1,2-Diphenylhydrazine	50.000	48.090	3.8	111	0.00
72 S	2,4,6-Tribromophenol	50.000	51.034	-2.1	117	0.00
73 I	Phenanthrene-d10	40.000	40.000	0.0	113	0.00
74 P	4,6-Dinitro-2-Methylphenol	50.000	47.747	4.5	107	0.00
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	50.000	47.095	5.8	112	0.00
76 P	4-Bromophenyl Phenyl Ether	50.000	46.858	6.3	112	0.00
77 P	Hexachlorobenzene	50.000	45.864	8.3	110	0.00
78	4-Aminobiphenyl	50.000	0.049	99.9#	0	0.00
79 C,P	Pentachlorophenol	50.000	54.266	-8.5	134	0.00
80 P	Phenanthrene	50.000	45.442	9.1	108	0.00
81 P	Anthracene	50.000	44.824	10.4	106	0.00
82 P	Carbazole	50.000	48.482	3.0	114	0.00
83 P	Di-n-Butyl Phthalate	50.000	48.043	3.9	112	0.00
84	Methapyrilene	50.000	0.000	100.0#	0	-13.45#
85 C,P	Fluoranthene	50.000	45.730	8.5	108	0.00
86 I	Chrysene-d12	40.000	40.000	0.0	123	0.00
87	Benzidine	50.000	0.000	100.0#	0	-14.07#
88 P	Pyrene	50.000	43.891	12.2	111	0.00
89 S	p-Terphenyl-d14	50.000	37.204	25.6	95	0.00
90	p-(Dimethylamino)azobenzene	50.000	0.000	100.0#	0	-14.64#
91 P	Butyl Benzyl Phthalate	50.000	47.843	4.3	122	0.00
92	3,3'-Dimethylbenzidine	100.000	0.465	99.5#	1	0.00
93	2-Acetylaminofluorene	50.000	0.000	100.0#	0	-15.53#
94 P	bis(2-Ethylhexyl)phthalate	50.000	48.352	3.3	117	0.00
95 P	3,3'-Dichlorobenzidine	50.000	0.000	100.0#	0	-15.95#
96 P	Benzo[a]anthracene	50.000	41.649	16.7	107	0.00
97 P	Chrysene	50.000	42.468	15.1	111	0.00
98 I	Perylene-d12	40.000	40.000	0.0	110	0.00
99 C,P	Di-n-Octyl Phthalate	50.000	50.504	-1.0	110	0.00
100 P	Benzo[b]fluoranthene	50.000	46.655	6.7	102	0.00
101 P	Benzo[k]fluoranthene	50.000	46.415	7.2	106	0.00
102 C,P	Benzo[a]pyrene	50.000	51.747	-3.5	115	0.00
103 P	Indeno[1,2,3-cd]pyrene	50.000	47.538	4.9	104	0.00

(#) = Out of Range

12M76634.D MEGAMIX.M

Fri Mar 27 16:54:51 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76634.D Vial: 11
Acq On : 27 Mar 2020 3:55 pm Operator: SCB
Sample : SEQ-ICV1 Inst : MSD12
Misc : 1,1 0000107 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	50.000	48.610	2.8	106	0.00
105 P	Benzo[ghi]perylene	50.000	48.494	3.0	104	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76635.D

Vial: 12

Acq On : 27 Mar 2020 4:30 pm

Operator: SCB

Sample : SEQ-ICV2

Inst : MSD12

Misc : 1,1 9009893

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:57:15 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	122527	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.015	136	433180	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.815	164	244956	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.407	188	417012	40.0000	ug/ml	0.000
86) Chrysene-d12	16.066	240	370957	40.0000	ug/ml	0.000
98) Perylene-d12	18.775	264	391228	40.0000	ug/ml	0.000

System Monitoring Compounds

6) 2-Fluorophenol	0.000	112	0	0.0000000	ug/ml	
Spiked Amount	100.000	Range	21 - 100	Recovery	=	0.00%#
9) Phenol-d5	0.000	99	0	0.0000000	ug/ml	
Spiked Amount	100.000	Range	10 - 94	Recovery	=	0.00%#
26) Nitrobenzene-d5	0.000	82	0	0.0000000	ug/ml	
Spiked Amount	50.000	Range	35 - 114	Recovery	=	0.00%#
49) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ug/ml	
Spiked Amount	50.000	Range	43 - 116	Recovery	=	0.00%#
72) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ug/ml	
Spiked Amount	100.000	Range	10 - 123	Recovery	=	0.00%#
89) p-Terphenyl-d14	0.000	244	0	0.0000000	ug/ml	
Spiked Amount	50.000	Range	33 - 141	Recovery	=	0.00%#

Target Compounds

					Qvalue	
4) 2-Picoline	5.89	93	252426	45.7958	ug/ml	100
5) n-Nitrosomethylethylamine	6.01	88	106347	46.5074	ug/ml	99
7) n-Nitrosodiethylamine	6.71	102	107083	46.6623	ug/ml	99
19) 3-,4-Methylphenol	8.17	107	241098	51.0716	ug/ml#	37
20) n-Nitrosopyrrolidine	8.11	100	104795	51.6630	ug/ml#	46
21) n-Nitrosodipropylamine	8.11	70	1568	Below Cal	#	1
22) n-Nitrosomorpholine	8.12	56	113554	52.4817	ug/ml	95
23) o-Toluidine	8.17	106	313804	44.8833	ug/ml	98
24) Hexachloroethane	8.12	117	1919	0.9611	ug/ml#	15
28) n-Nitrosopiperidine	8.45	114	106261	47.7345	ug/ml	96
33) Benzoic Acid	8.82	105	545	11.1844	ug/ml#	1
35) a,a-Dimethylphenethylamine	8.82	58	544879	53.4630	ug/ml	100
40) n-Nitrosodi-n-Butylamine	9.38	84	125254	47.6426	ug/ml	98
41) p-Phenylenediamine	9.40	108	233603	55.7333	ug/ml	100
42) 4-Chloro-3-Methylphenol	9.40	107	63606	17.8186	ug/ml#	19
64) 1-Naphthylamine	11.08	143	356169	44.9437	ug/ml	99
65) 2-Naphthylamine	11.15	143	359161	49.0830	ug/ml	99
70) 5-Nitro-o-Toluidine	11.37	152	123034	53.5285	ug/ml	95
71) 1,2-Diphenylhydrazine	11.37	77	102851	11.7422	ug/ml#	60
78) 4-Aminobiphenyl	12.13	169	417872	44.9422	ug/ml	99
84) Methapyrilene	13.45	58	132711	19.6898	ug/ml	98
87) Benzidine	14.07	184	307648	38.7852	ug/ml	100
90) p-(Dimethylamino)azobenzen	14.64	225	133489	47.7107	ug/ml	93
92) 3,3'-Dimethylbenzidine	15.12	212	411366	47.1501	ug/ml	98
93) 2-Acetylaminofluorene	15.53	181	271224	41.9031	ug/ml	99
95) 3,3'-Dichlorobenzidine	15.95	252	223649	45.0369	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76635.D MEGAMIX.M Fri Mar 27 17:00:10 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76635.D

Vial: 12

Acq On : 27 Mar 2020 4:30 pm

Operator: SCB

Sample : SEQ-ICV2

Inst : MSD12

Misc : 1,1 9009893

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 27 16:57 2020

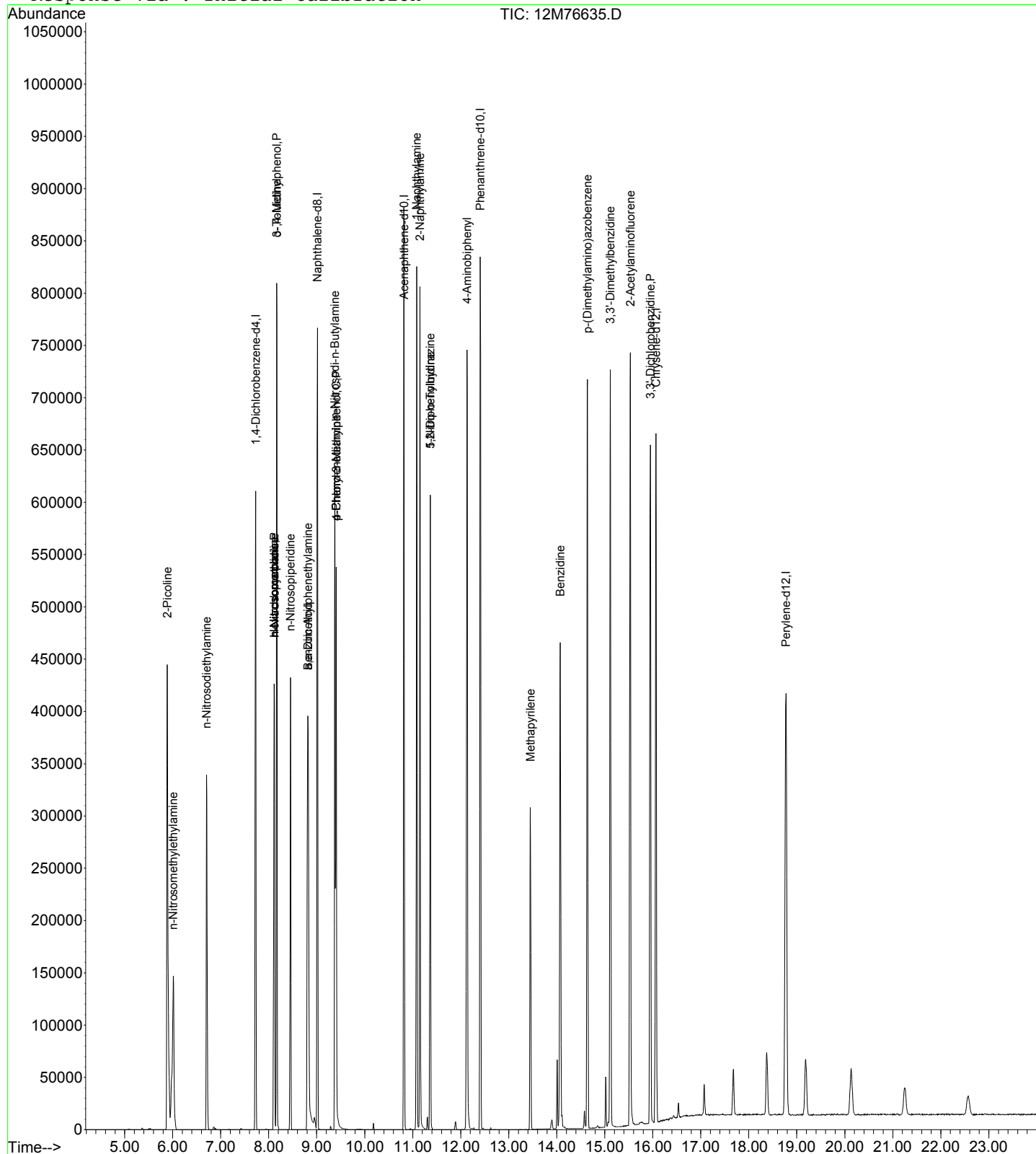
Quant Results File: MEGAMIX.RES

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Mar 27 15:47:08 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76635.D
 Acq On : 27 Mar 2020 4:30 pm
 Sample : SEQ-ICV2
 Misc : 1,1 9009893
 MS Integration Params: RTEINT.P

Vial: 12
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	133	0.00
2	n-Nitrosodimethylamine	50.000	0.000	100.0#	0	-5.02#
3	Pyridine	50.000	0.000	100.0#	0	-5.05#
4	2-Picoline	50.000	45.796	8.4	124	0.00
5	n-Nitrosomethylethylamine	50.000	46.507	7.0	124	0.00
6 S	2-Fluorophenol	50.000	0.000	100.0#	0	-6.48#
7	n-Nitrosodiethylamine	50.000	46.662	6.7	126	0.00
8	Aniline	50.000	0.000	100.0#	0	-7.42#
9 S	Phenol-d5	50.000	0.000	100.0#	0	-7.33#
10 C,P	Phenol	50.000	0.000	100.0#	0	-7.34#
11 P	bis(2-Chloroethyl)ether	50.000	0.000	100.0#	0	-7.44#
12 P	2-Chlorophenol	50.000	0.000	100.0#	0	-7.55#
13	1,3-Dichlorobenzene	50.000	0.000	100.0#	0	-7.69#
14 C	1,4-Dichlorobenzene	50.000	0.000	100.0#	0	-7.74#
15	Benzyl Alcohol	50.000	0.000	100.0#	0	-7.84#
16	1,2-Dichlorobenzene	50.000	0.000	100.0#	0	-7.94#
17 P	2-Methylphenol	50.000	0.000	100.0#	0	-7.94#
18 P	bis(2-Chloroisopropyl)ether	50.000	0.000	100.0#	0	-7.98#
19 P	3-,4-Methylphenol	50.000	51.072	-2.1	139	0.10
20	n-Nitrosopyrrolidine	50.000	51.663	-3.3	144	0.00
21 P	n-Nitrosodipropylamine	50.000	-1.000	102.0#	2	-0.01
22	n-Nitrosomorpholine	50.000	52.482	-5.0	131	0.00
23	o-Toluidine	50.000	44.883	10.2	125	0.00
24 P	Hexachloroethane	50.000	0.961	98.1#	3	-0.13
25 I	Naphthalene-d8	40.000	40.000	0.0	127	0.00
26 S	Nitrobenzene-d5	50.000	0.000	100.0#	0	-8.29#
27 P	Nitrobenzene	50.000	0.000	100.0#	0	-8.31#
28	n-Nitrosopiperidine	50.000	47.735	4.5	124	0.00
29 P	Isophorone	50.000	0.762	98.5#	2	-0.07
30 C,P	2-Nitrophenol	50.000	0.000	100.0#	0	-8.63#
31 P	2,4-Dimethylphenol	50.000	0.000	100.0#	0	-8.60#
32 P	bis(2-Chloroethoxy)methane	50.000	0.113	99.8#	0	0.12
33	Benzoic Acid	50.000	11.184	77.6#	1	0.17
34 C,P	2,4-Dichlorophenol	50.000	0.000	100.0#	0	-8.85#
35	a,a-Dimethylphenethylamine	50.000	53.463	-6.9	136	-0.03
36	1,2,4-Trichlorobenzene	50.000	0.000	100.0#	0	-8.96#
37 P	Naphthalene	50.000	0.000	100.0#	0	-9.04#
38 P	4-Chloroaniline	50.000	0.502	99.0#	1	-0.11
39 C,P	Hexachlorobutadiene	50.000	0.000	100.0#	0	-9.19#
40	n-Nitrosodi-n-Butylamine	50.000	47.643	4.7	124	0.00
41	p-Phenylenediamine	50.000	55.733	-11.5	147	0.00
42 C,P	4-Chloro-3-Methylphenol	50.000	17.819	64.4#	46	-0.10
43 P	2-Methylnaphthalene	50.000	0.000	100.0#	0	-9.73#
44	1-Methylnaphthalene	50.000	0.000	100.0#	0	-9.84#
45 I	Acenaphthene-d10	40.000	40.000	0.0	130	0.00
46 P	Hexachlorocyclopentadiene	50.000	0.000	100.0#	0	-9.94#
47 C,P	2,4,6-Trichlorophenol	50.000	0.000	100.0#	0	-10.01#
48 P	2,4,5-Trichlorophenol	50.000	0.000	100.0#	0	-10.06#
49 S	2-Fluorobiphenyl	50.000	0.000	100.0#	0	-10.08#
50 P	2-Chloronaphthalene	50.000	0.000	100.0#	0	-10.23#
51 P	2-Nitroaniline	50.000	0.000	100.0#	0	-10.32#
52 P	Dimethylphthalate	50.000	0.000	100.0#	0	-10.49#

(#) = Out of Range

12M76635.D MEGAMIX.M

Fri Mar 27 17:00:14 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76635.D
 Acq On : 27 Mar 2020 4:30 pm
 Sample : SEQ-ICV2
 Misc : 1,1 9009893
 MS Integration Params: RTEINT.P

Vial: 12
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Mar 27 15:47:08 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	50.000	0.000	100.0#	0	-10.54#
54 P	2,6-Dinitrotoluene	50.000	0.000	100.0#	0	-10.59#
55 P	Acenaphthylene	50.000	0.000	100.0#	0	-10.67#
56 P	3-Nitroaniline	50.000	0.000	100.0#	0	-10.74#
57 P	2,4-Dinitrophenol	50.000	0.000	100.0#	0	-10.85#
58 C,P	Acenaphthene	50.000	0.387	99.2#	1	-0.02
59 P	4-Nitrophenol	50.000	0.000	100.0#	0	-10.85#
60 P	2,4-Dinitrotoluene	50.000	0.000	100.0#	0	-10.99#
61 P	Dibenzofuran	50.000	0.000	100.0#	0	-11.01#
62	2,3,5,6-Tetrachlorophenol	50.000	0.000	100.0#	0	-11.11#
63	2,3,4,6-Tetrachlorophenol	50.000	0.000	100.0#	0	-11.16#
64	1-Naphthylamine	50.000	44.944	10.1	120	0.00
65	2-Naphthylamine	50.000	49.083	1.8	137	0.00
66 P	Diethylphthalate	50.000	0.000	100.0#	0	-11.19#
67 P	Fluorene	50.000	0.000	100.0#	0	-11.36#
68 P	4-Chlorophenyl Phenyl Ether	50.000	0.000	100.0#	0	-11.31#
69 P	4-Nitroaniline	50.000	0.000	100.0#	0	-11.38#
70	5-Nitro-o-Toluidine	50.000	53.529	-7.1	147	0.00
71	1,2-Diphenylhydrazine	50.000	11.742	76.5#	32	-0.11
72 S	2,4,6-Tribromophenol	50.000	0.000	100.0#	0	-11.64#
73 I	Phenanthrene-d10	40.000	40.000	0.0	131	0.00
74 P	4,6-Dinitro-2-Methylphenol	50.000	0.000	100.0#	0	-11.42#
75 C,P	Diphenylamine/n-Nitrosodiphenylamine	50.000	0.466	99.1#	1	-0.13
76 P	4-Bromophenyl Phenyl Ether	50.000	0.000	100.0#	0	-11.84#
77 P	Hexachlorobenzene	50.000	0.000	100.0#	0	-12.05#
78	4-Aminobiphenyl	50.000	44.942	10.1	125	0.00
79 C,P	Pentachlorophenol	50.000	0.000	100.0#	0	-12.23#
80 P	Phenanthrene	50.000	0.000	100.0#	0	-12.44#
81 P	Anthracene	50.000	0.000	100.0#	0	-12.49#
82 P	Carbazole	50.000	0.000	100.0#	0	-12.65#
83 P	Di-n-Butyl Phthalate	50.000	0.000	100.0#	0	-13.01#
84	Methapyrilene	50.000	19.690	60.6#	50	0.00
85 C,P	Fluoranthene	50.000	0.000	100.0#	0	-13.97#
86 I	Chrysene-d12	40.000	40.000	0.0	148	0.00
87	Benzidine	50.000	38.785	22.4	123	0.00
88 P	Pyrene	50.000	0.000	100.0#	0	-14.30#
89 S	p-Terphenyl-d14	50.000	0.000	100.0#	0	-14.43#
90	p-(Dimethylamino)azobenzene	50.000	47.711	4.6	141	0.00
91 P	Butyl Benzyl Phthalate	50.000	0.000	100.0#	0	-15.10#
92	3,3'-Dimethylbenzidine	100.000	47.150	52.8#	76	0.00
93	2-Acetylaminofluorene	50.000	41.903	16.2	130	0.00
94 P	bis(2-Ethylhexyl)phthalate	50.000	0.041	99.9#	0	0.00
95 P	3,3'-Dichlorobenzidine	50.000	45.037	9.9	142	0.00
96 P	Benzo[a]anthracene	50.000	0.042	99.9#	0	0.03
97 P	Chrysene	50.000	0.043	99.9#	0	-0.04
98 I	Perylene-d12	40.000	40.000	0.0	135	0.00
99 C,P	Di-n-Octyl Phthalate	50.000	0.000	100.0#	0	-16.88#
100 P	Benzo[b]fluoranthene	50.000	0.000	100.0#	0	-17.93#
101 P	Benzo[k]fluoranthene	50.000	0.000	100.0#	0	-17.97#
102 C,P	Benzo[a]pyrene	50.000	0.033	99.9#	0	0.12
103 P	Indeno[1,2,3-cd]pyrene	50.000	0.000	100.0#	0	-21.78#

(#) = Out of Range

12M76635.D MEGAMIX.M

Fri Mar 27 17:00:14 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\032720\12M76635.D Vial: 12
Acq On : 27 Mar 2020 4:30 pm Operator: SCB
Sample : SEQ-ICV2 Inst : MSD12
Misc : 1,1 9009893 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Fri Mar 27 15:47:08 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	50.000	0.000	100.0#	0	-21.78#
105 P	Benzo[ghi]perylene	50.000	0.000	100.0#	0	-22.70#

Data File : I:\MSDCHEM\1\DATA\032720\12M76636.D

Vial: 13

Acq On : 27 Mar 2020 5:04 pm

Operator: SCB

Sample : SEQ-CALD

Inst : MSD12

Misc : 1,1 0001926

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:35 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	126920	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.015	136	455195	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	241282	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.412	188	426235	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	356165	40.0000	ug/ml	0.000
42) Perylene-d12	18.780	264	398073	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.56	88	94747	44.6264	ug/ml	100
3) Methyl Methanesulfonate	6.32	80	131300	45.7585	ug/ml	100
4) Ethyl Methanesulfonate	6.97	79	154791	45.4882	ug/ml	100
5) Benzaldehyde	7.30	105	177470	45.8364	ug/ml	100
6) Pentachloroethane	7.45	167	81642	44.9453	ug/ml	100
7) Acetophenone	8.12	105	275866	45.5477	ug/ml	100
9) 0,0,0-Triethyl Phosphoroth	8.70	198	96136	45.1669	ug/ml	100
10) Alpha-Terpineol	8.97	59	149475	46.8943	ug/ml	100
11) 2,6-Dichlorophenol	9.09	162	161753	46.5220	ug/ml	100
12) Hexachloropropene	9.15	213	115946	48.0102	ug/ml	100
13) Caprolactam	9.37	55	92138	48.0602	ug/ml	100
14) Safrole	9.60	162	153765	45.6716	ug/ml	100
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	165448	47.0681	ug/ml	100
17) Isosafrole	10.12	162	160849	47.8508	ug/ml	100
18) 1,1'-Biphenyl	10.18	154	442938	53.5178	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	315566	54.1907	ug/ml	100
20) 1,4-Naphthoquinone	10.39	158	155429	50.9770	ug/ml	100
21) Pentachlorobenzene	11.03	250	139768	46.9332	ug/ml	100
22) Thionazin	11.28	107	69064	54.4846	ug/ml	100
24) Sulfotepp	11.63	322	71281	46.3246	ug/ml	100
25) Sym-Trinitrobenzene	11.71	75	111855	47.6455	ug/ml	100
26) Diallate	11.75	86	126764	46.7615	ug/ml	100
27) Phenacetin	11.74	108	201609	47.4437	ug/ml	100
28) Phorate	11.77	75	229989	46.9986	ug/ml#	100
29) Dimethoate	11.98	87	138256	46.5995	ug/ml	100
30) Atrazine	11.98	200	110710	45.1158	ug/ml	100
31) Pronamide	12.17	173	184924	46.7718	ug/ml	100
32) Pentachloronitrobenzene	12.32	237	45782	47.0546	ug/ml	100
33) Disulfoton	12.35	88	209875	52.6753	ug/ml	100
34) Parathion Methyl	12.82	109	148575	50.2065	ug/ml	100
35) Parathion Ethyl	13.30	97	88296	50.6514	ug/ml	100
36) 4-Nitroquinoline 1-Oxide	13.40	190	41615	48.9293	ug/ml	100
37) Isodrin	13.80	193	69432	46.6602	ug/ml	100
39) Aramite	14.34	185	41739	52.2376	ug/ml	100
40) Chlorobenzilate	14.68	251	173053	49.0504	ug/ml	100
41) Famphur	15.08	218	224991	50.5688	ug/ml	100
43) 7,12-Dimethylbenz[a]anthra	17.93	256	238470	53.1820	ug/ml	100
44) Perylene	18.84	252	534035	45.6232	ug/ml	100
45) 3-Methylcholanthrene	19.52	268	298402	48.6632	ug/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76636.D TCL.M Sat Mar 28 09:59:56 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76636.D

Vial: 13

Acq On : 27 Mar 2020 5:04 pm

Operator: SCB

Sample : SEQ-CALD

Inst : MSD12

Misc : 1,1 0001926

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:56 2020

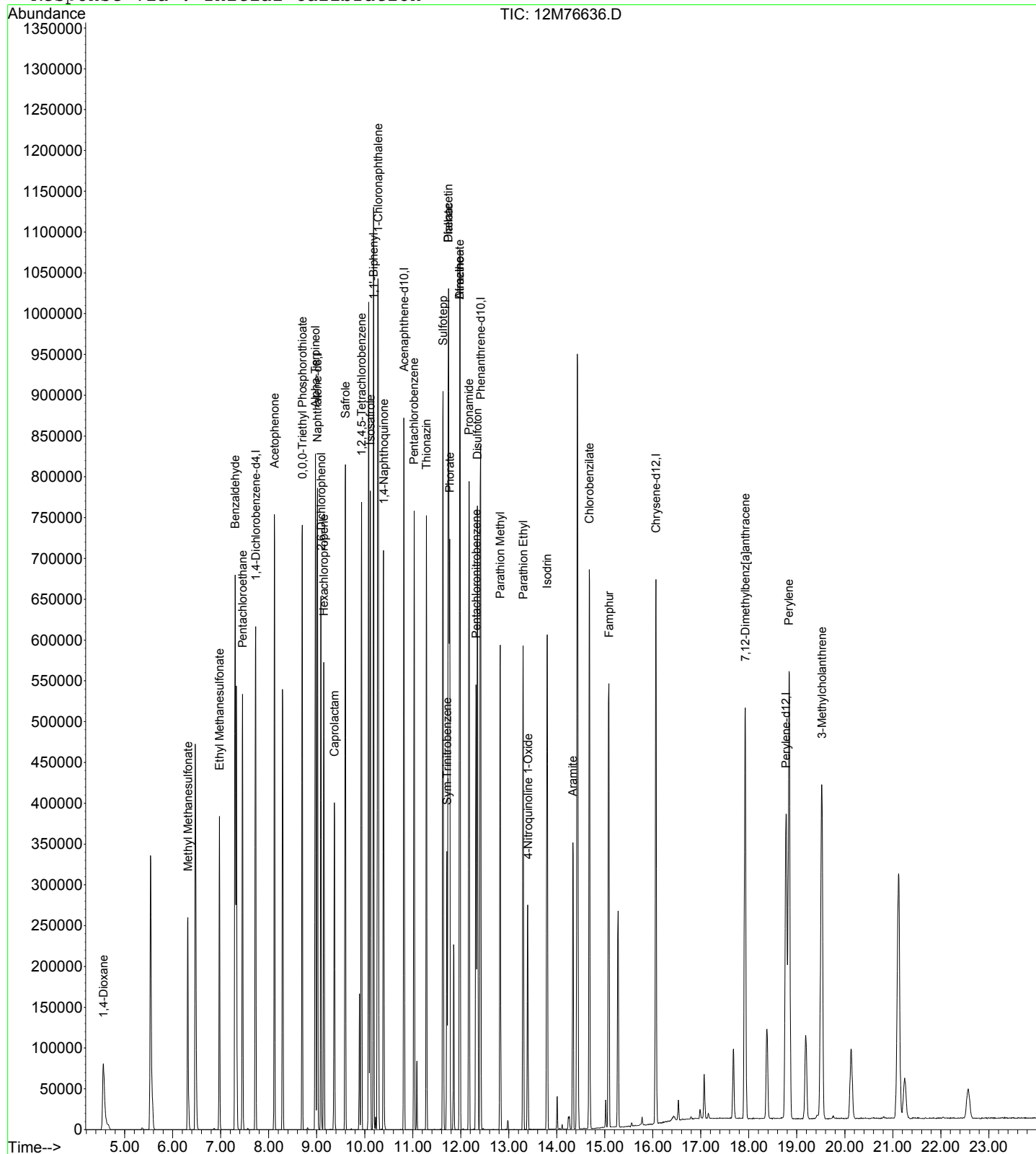
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76636.D

Vial: 13

Acq On : 27 Mar 2020 5:04 pm

Operator: SCB

Sample : SEQ-CALD

Inst : MSD12

Misc : 1,1 0001926

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	50.000	44.626	10.7	100	0.00
3	Methyl Methanesulfonate	50.000	45.759	8.5	100	0.00
4	Ethyl Methanesulfonate	50.000	45.488	9.0	100	0.00
5	Benzaldehyde	50.000	45.836	8.3	100	0.00
6	Pentachloroethane	50.000	44.945	10.1	100	0.00
7	Acetophenone	50.000	45.548	8.9	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	50.000	45.167	9.7	100	0.00
10	Alpha-Terpineol	50.000	46.894	6.2	100	0.00
11	2,6-Dichlorophenol	50.000	46.522	7.0	100	0.00
12	Hexachloropropene	50.000	48.010	4.0	100	0.00
13	Caprolactam	50.000	48.060	3.9	100	0.00
14	Safrrole	50.000	45.672	8.7	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	50.000	47.068	5.9	100	0.00
17	Isosafrole	50.000	47.851	4.3	100	0.00
18	1,1'-Biphenyl	50.000	53.518	-7.0	100	0.00
19	1-Chloronaphthalene	50.000	54.191	-8.4	100	0.00
20	1,4-Naphthoquinone	50.000	50.977	-2.0	100	0.00
21	Pentachlorobenzene	50.000	46.933	6.1	100	0.00
22	Thionazin	50.000	54.485	-9.0	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	50.000	46.325	7.3	100	0.00
25	Sym-Trinitrobenzene	50.000	47.646	4.7	100	0.00
26	Diallate	50.000	46.761	6.5	100	0.00
27	Phenacetin	50.000	47.444	5.1	100	0.00
28	Phorate	50.000	46.999	6.0	100	0.00
29	Dimethoate	50.000	46.600	6.8	100	0.00
30	Atrazine	50.000	45.116	9.8	100	0.00
31	Pronamide	50.000	46.772	6.5	100	0.00
32	Pentachloronitrobenzene	50.000	47.055	5.9	100	0.00
33	Disulfoton	50.000	52.675	-5.3	100	0.00
34	Parathion Methyl	50.000	50.207	-0.4	100	0.00
35	Parathion Ethyl	50.000	50.651	-1.3	100	0.00
36	4-Nitroquinoline 1-Oxide	50.000	48.929	2.1	100	0.00
37	Isodrin	50.000	46.660	6.7	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	50.000	52.238	-4.5	100	0.00
40	Chlorobenzilate	50.000	49.050	1.9	100	0.00
41	Famphur	50.000	50.569	-1.1	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	50.000	53.182	-6.4	100	0.00
44	Perylene	50.000	45.623	8.8	100	0.00
45	3-Methylcholanthrene	50.000	48.663	2.7	100	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

12M76636.D TCL.M

Sat Mar 28 10:01:05 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76637.D

Vial: 14

Acq On : 27 Mar 2020 5:37 pm

Operator: SCB

Sample : SEQ-CALG

Inst : MSD12

Misc : 1,1 9009875

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:35 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	109467	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.015	136	396973	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	220214	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.407	188	377579	40.0000	ug/ml	0.000
38) Chrysene-d12	16.061	240	337424	40.0000	ug/ml	0.000
42) Perylene-d12	18.775	264	351544	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.56	88	5458	2.9806	ug/ml	86
3) Methyl Methanesulfonate	6.31	80	8145	3.2911	ug/ml	98
4) Ethyl Methanesulfonate	6.97	79	10304	3.5108	ug/ml	97
5) Benzaldehyde	7.31	105	11652	3.4893	ug/ml	98
6) Pentachloroethane	7.45	167	5613	3.5827	ug/ml	97
7) Acetophenone	8.12	105	19110	3.6583	ug/ml	99
9) 0,0,0-Triethyl Phosphoroth	8.70	198	6749	3.6359	ug/ml	97
10) Alpha-Terpineol	8.97	59	11455	2.7109	ug/ml	89
11) 2,6-Dichlorophenol	9.09	162	10373	3.4210	ug/ml	98
12) Hexachloropropene	9.15	213	6310	2.9960	ug/ml	97
13) Caprolactam	9.36	55	4847	2.8991	ug/ml	96
14) Safrole	9.60	162	10655	3.6289	ug/ml	98
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	11673	3.6385	ug/ml	98
17) Isosafrole	10.12	162	11171	3.6412	ug/ml	98
18) 1,1'-Biphenyl	10.18	154	34982	1.9698	ug/ml	99
19) 1-Chloronaphthalene	10.27	162	24809	1.8779	ug/ml	99
20) 1,4-Naphthoquinone	10.39	158	7444	2.6750	ug/ml	97
21) Pentachlorobenzene	11.03	250	9817	3.6119	ug/ml	96
22) Thionazin	11.29	107	4607	1.9518	ug/ml	96
24) Sulfotepp	11.63	322	4033	2.9587	ug/ml#	71
25) Sym-Trinitrobenzene	11.71	75	3134	3.3781	ug/ml#	85
26) Diallate	11.75	86	10676	2.7045	ug/ml	87
27) Phenacetin	11.73	108	12514	2.8167	ug/ml	96
28) Phorate	11.77	75	18260	2.7826	ug/ml#	94
29) Dimethoate	11.97	87	10565	2.6432	ug/ml	94
30) Atrazine	11.97	200	7981	3.6715	ug/ml	99
31) Pronamide	12.17	173	11903	3.3985	ug/ml	99
32) Pentachloronitrobenzene	12.32	237	2507	2.9087	ug/ml	96
33) Disulfoton	12.35	88	15293	1.8861	ug/ml	96
34) Parathion Methyl	12.82	109	6653	2.5379	ug/ml	97
35) Parathion Ethyl	13.29	97	4092	2.6499	ug/ml	94
37) Isodrin	13.80	193	4439	3.3675	ug/ml	93
39) Aramite	14.34	185	1917	2.5324	ug/ml#	76
40) Chlorobenzilate	14.68	251	10549	3.1561	ug/ml	96
41) Famphur	15.08	218	12275	2.9122	ug/ml	97
43) 7,12-Dimethylbenz[a]anthra	17.92	256	10113	2.5538	ug/ml	97
44) Perylene	18.83	252	34763	3.3629	ug/ml	99
45) 3-Methylcholanthrene	19.51	268	17003	3.1398	ug/ml	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76637.D TCL.M Sat Mar 28 09:59:58 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76637.D

Vial: 14

Acq On : 27 Mar 2020 5:37 pm

Operator: SCB

Sample : SEQ-CALG

Inst : MSD12

Misc : 1,1 9009875

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:56 2020

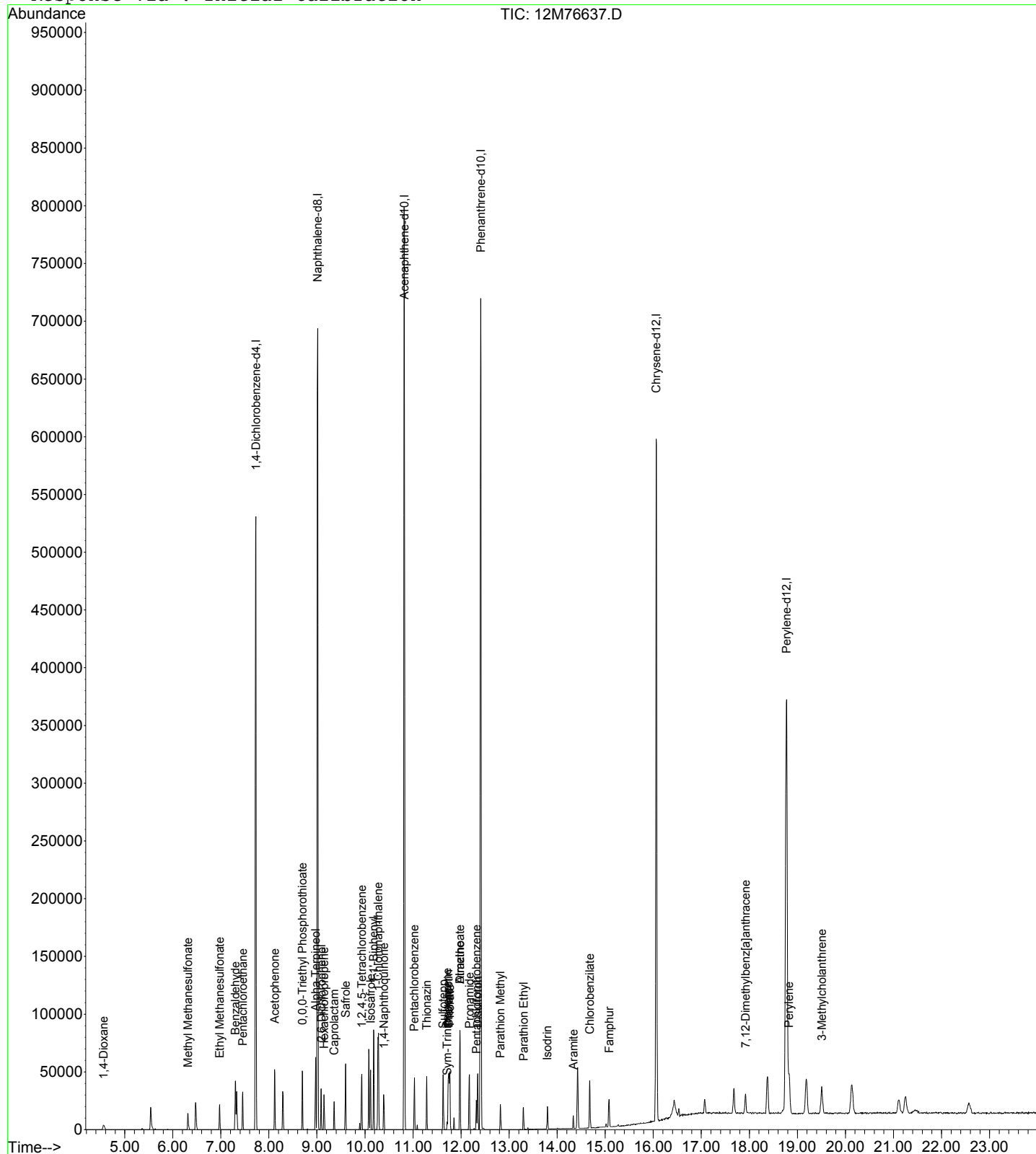
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76637.D

Vial: 14

Acq On : 27 Mar 2020 5:37 pm

Operator: SCB

Sample : SEQ-CALG

Inst : MSD12

Misc : 1,1 9009875

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	3.000	2.981	0.6	100	0.00
3	Methyl Methanesulfonate	3.000	3.291	-9.7	100	0.00
4	Ethyl Methanesulfonate	3.000	3.511	-17.0	100	0.00
5	Benzaldehyde	3.000	3.489	-16.3	100	0.00
6	Pentachloroethane	3.000	3.583	-19.4	100	0.00
7	Acetophenone	3.000	3.658	-21.9	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	3.000	3.636	-21.2	100	0.00
10	Alpha-Terpineol	3.000	2.711	9.6	100	0.00
11	2,6-Dichlorophenol	3.000	3.421	-14.0	100	0.00
12	Hexachloropropene	3.000	2.996	0.1	100	0.00
13	Caprolactam	3.000	2.899	3.4	100	-0.01
14	Safrole	3.000	3.629	-21.0	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	3.000	3.639	-21.3	100	0.00
17	Isosafrole	3.000	3.641	-21.4	100	0.00
18	1,1'-Biphenyl	3.000	1.970	34.3	100	0.00
19	1-Chloronaphthalene	3.000	1.878	37.4	100	0.00
20	1,4-Naphthoquinone	3.000	2.675	10.8	100	0.00
21	Pentachlorobenzene	3.000	3.612	-20.4	100	0.00
22	Thionazin	3.000	1.952	34.9	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	3.000	2.959	1.4	100	0.00
25	Sym-Trinitrobenzene	3.000	3.378	-12.6	100	0.00
26	Diallate	3.000	2.704	9.9	100	0.00
27	Phenacetin	3.000	2.817	6.1	100	0.00
28	Phorate	3.000	2.783	7.2	100	0.00
29	Dimethoate	3.000	2.643	11.9	100	0.00
30	Atrazine	3.000	3.671	-22.4	100	0.00
31	Pronamide	3.000	3.399	-13.3	100	0.00
32	Pentachloronitrobenzene	3.000	2.909	3.0	100	0.00
33	Disulfoton	3.000	1.886	37.1	100	0.00
34	Parathion Methyl	3.000	2.538	15.4	100	0.00
35	Parathion Ethyl	3.000	2.650	11.7	100	0.00
36	4-Nitroquinoline 1-Oxide	3.000	0.000	100.0#	0	-13.40#
37	Isodrin	3.000	3.368	-12.3	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	3.000	2.532	15.6	100	0.00
40	Chlorobenzilate	3.000	3.156	-5.2	100	0.00
41	Famphur	3.000	2.912	2.9	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	3.000	2.554	14.9	100	0.00
44	Perylene	3.000	3.363	-12.1	100	-0.02
45	3-Methylcholanthrene	3.000	3.140	-4.7	100	-0.02

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

12M76637.D TCL.M

Sat Mar 28 10:01:24 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76638.D

Vial: 15

Acq On : 27 Mar 2020 6:09 pm

Operator: SCB

Sample : SEQ-CALF

Inst : MSD12

Misc : 1,1 9009873

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:35 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	113851	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.015	136	411919	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	228077	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.407	188	396163	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	355154	40.0000	ug/ml	0.000
42) Perylene-d12	18.775	264	370468	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.56	88	20902	10.9751	ug/ml	91
3) Methyl Methanesulfonate	6.31	80	27728	10.7726	ug/ml	100
4) Ethyl Methanesulfonate	6.97	79	34721	11.3747	ug/ml	99
5) Benzaldehyde	7.30	105	40908	11.7784	ug/ml	99
6) Pentachloroethane	7.45	167	18323	11.2450	ug/ml	99
7) Acetophenone	8.12	105	63416	11.6724	ug/ml	100
9) 0,0,0-Triethyl Phosphoroth	8.70	198	22482	11.6723	ug/ml	98
10) Alpha-Terpineol	8.97	59	38196	11.1856	ug/ml	92
11) 2,6-Dichlorophenol	9.09	162	35749	11.3620	ug/ml	100
12) Hexachloropropene	9.15	213	23299	10.6611	ug/ml	99
13) Caprolactam	9.36	55	19587	11.2902	ug/ml	96
14) Safrole	9.60	162	35933	11.7942	ug/ml	99
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	38421	11.5632	ug/ml	99
17) Isosafrole	10.12	162	36724	11.5575	ug/ml	100
18) 1,1'-Biphenyl	10.18	154	110608	11.9941	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	79120	12.1304	ug/ml	99
20) 1,4-Naphthoquinone	10.39	158	31400	10.8947	ug/ml	99
21) Pentachlorobenzene	11.03	250	31374	11.1451	ug/ml	98
22) Thionazin	11.29	107	16146	11.8264	ug/ml	98
24) Sulfotepp	11.63	322	14807	10.3533	ug/ml#	78
25) Sym-Trinitrobenzene	11.71	75	16545	9.2072	ug/ml	99
26) Diallate	11.75	86	34523	11.1330	ug/ml	85
27) Phenacetin	11.73	108	47622	10.7719	ug/ml	98
28) Phorate	11.77	75	59274	10.9219	ug/ml#	96
29) Dimethoate	11.97	87	37093	11.3320	ug/ml	95
30) Atrazine	11.98	200	26449	11.5965	ug/ml	99
31) Pronamide	12.17	173	41624	11.3269	ug/ml	100
32) Pentachloronitrobenzene	12.32	237	9791	10.8270	ug/ml	98
33) Disulfoton	12.35	88	51939	12.0692	ug/ml	97
34) Parathion Methyl	12.82	109	29679	10.7904	ug/ml	99
35) Parathion Ethyl	13.30	97	17901	11.0485	ug/ml	97
36) 4-Nitroquinoline 1-Oxide	13.40	190	3113	7.2888	ug/ml#	88
37) Isodrin	13.80	193	15227	11.0097	ug/ml	99
39) Aramite	14.34	185	8204	10.2968	ug/ml	97
40) Chlorobenzilate	14.68	251	37528	10.6673	ug/ml	97
41) Famphur	15.08	218	46358	10.4491	ug/ml	97
43) 7,12-Dimethylbenz[a]anthra	17.91	256	37521	8.9912	ug/ml	99
44) Perylene	18.83	252	115715	10.6223	ug/ml	97
45) 3-Methylcholanthrene	19.51	268	59555	10.4359	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76638.D TCL.M Sat Mar 28 10:00:01 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76638.D

Vial: 15

Acq On : 27 Mar 2020 6:09 pm

Operator: SCB

Sample : SEQ-CALF

Inst : MSD12

Misc : 1,1 9009873

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:56 2020

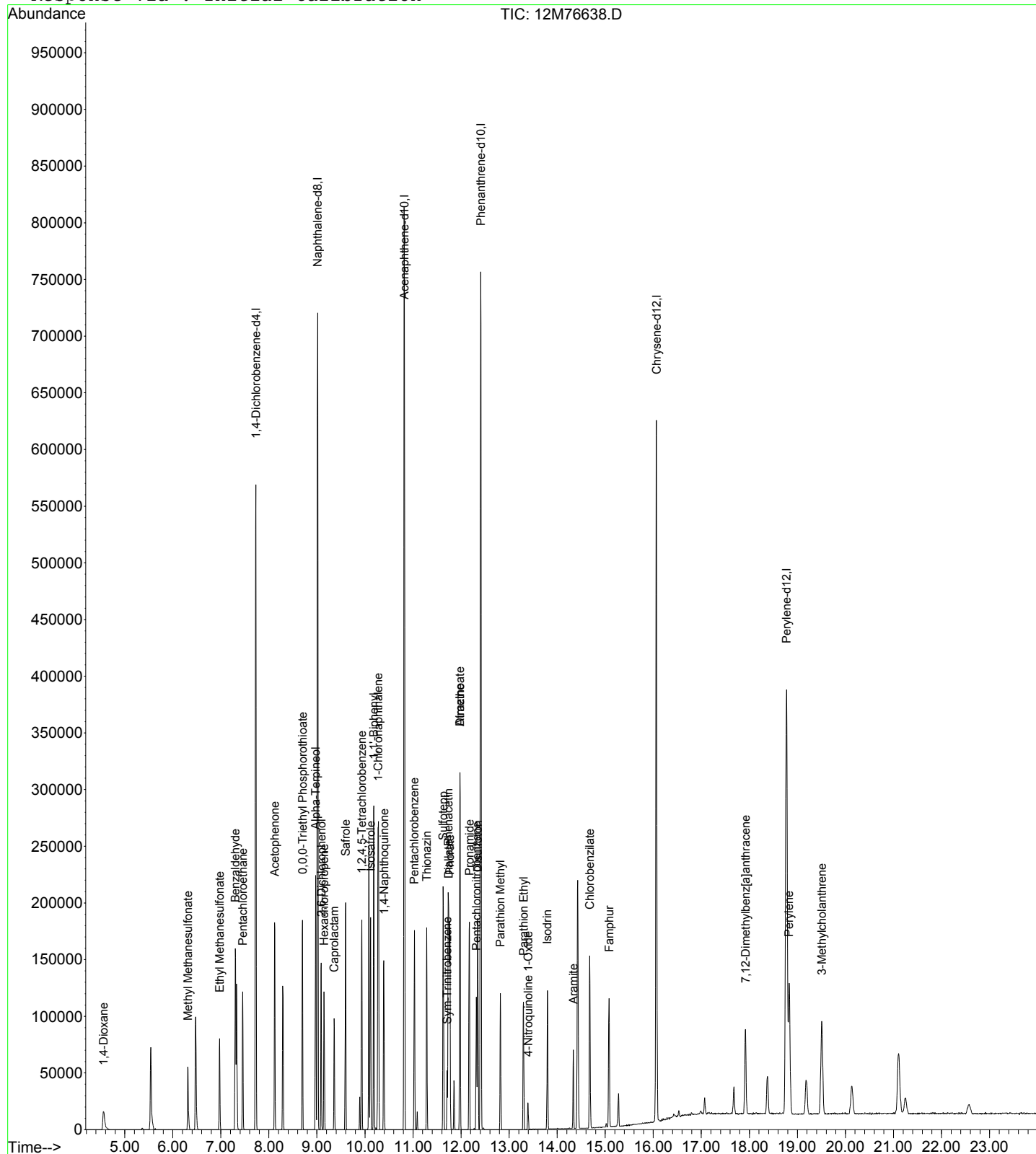
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76638.D

Acq On : 27 Mar 2020 6:09 pm

Sample : SEQ-CALF

Misc : 1,1 9009873

MS Integration Params: RTEINT.P

Vial: 15

Operator: SCB

Inst : MSD12

Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	10.000	10.975	-9.7	100	0.00
3	Methyl Methanesulfonate	10.000	10.773	-7.7	100	0.00
4	Ethyl Methanesulfonate	10.000	11.375	-13.8	100	0.00
5	Benzaldehyde	10.000	11.778	-17.8	100	0.00
6	Pentachloroethane	10.000	11.245	-12.4	100	0.00
7	Acetophenone	10.000	11.672	-16.7	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	10.000	11.672	-16.7	100	0.00
10	Alpha-Terpineol	10.000	11.186	-11.9	100	0.00
11	2,6-Dichlorophenol	10.000	11.362	-13.6	100	0.00
12	Hexachloropropene	10.000	10.661	-6.6	100	0.00
13	Caprolactam	10.000	11.290	-12.9	100	-0.01
14	Safrrole	10.000	11.794	-17.9	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	10.000	11.563	-15.6	100	0.00
17	Isosafrole	10.000	11.558	-15.6	100	0.00
18	1,1'-Biphenyl	10.000	11.994	-19.9	100	0.00
19	1-Chloronaphthalene	10.000	12.130	-21.3	100	0.00
20	1,4-Naphthoquinone	10.000	10.895	-8.9	100	0.00
21	Pentachlorobenzene	10.000	11.145	-11.4	100	0.00
22	Thionazin	10.000	11.826	-18.3	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	10.000	10.353	-3.5	100	0.00
25	Sym-Trinitrobenzene	10.000	9.207	7.9	100	0.00
26	Diallate	10.000	11.133	-11.3	100	0.00
27	Phenacetin	10.000	10.772	-7.7	100	0.00
28	Phorate	10.000	10.922	-9.2	100	0.00
29	Dimethoate	10.000	11.332	-13.3	100	0.00
30	Atrazine	10.000	11.596	-16.0	100	0.00
31	Pronamide	10.000	11.327	-13.3	100	0.00
32	Pentachloronitrobenzene	10.000	10.827	-8.3	100	0.00
33	Disulfoton	10.000	12.069	-20.7	100	0.00
34	Parathion Methyl	10.000	10.790	-7.9	100	0.00
35	Parathion Ethyl	10.000	11.048	-10.5	100	0.00
36	4-Nitroquinoline 1-Oxide	10.000	7.289	27.1	100	0.00
37	Isodrin	10.000	11.010	-10.1	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	10.000	10.297	-3.0	100	0.00
40	Chlorobenzilate	10.000	10.667	-6.7	100	0.00
41	Famphur	10.000	10.449	-4.5	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	10.000	8.991	10.1	100	-0.01
44	Perylene	10.000	10.622	-6.2	100	-0.02
45	3-Methylcholanthrene	10.000	10.436	-4.4	100	-0.02

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

12M76638.D TCL.M

Sat Mar 28 10:01:41 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76639.D

Vial: 16

Acq On : 27 Mar 2020 6:42 pm

Operator: SCB

Sample : SEQ-CALE

Inst : MSD12

Misc : 1,1 9009872

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:36 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	122988	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.014	136	447609	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	249054	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.407	188	426969	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	387009	40.0000	ug/ml	0.000
42) Perylene-d12	18.775	264	407083	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.56	88	52290	25.4163	ug/ml	89
3) Methyl Methanesulfonate	6.31	80	68624	24.6803	ug/ml	100
4) Ethyl Methanesulfonate	6.97	79	83909	25.4465	ug/ml	100
5) Benzaldehyde	7.30	105	98453	26.2411	ug/ml	99
6) Pentachloroethane	7.45	167	44423	25.2375	ug/ml	99
7) Acetophenone	8.12	105	152197	25.9324	ug/ml	100
9) 0,0,0-Triethyl Phosphoroth	8.70	198	53152	25.3953	ug/ml	98
10) Alpha-Terpineol	8.97	59	86697	25.5001	ug/ml	96
11) 2,6-Dichlorophenol	9.09	162	87999	25.7384	ug/ml	99
12) Hexachloropropene	9.15	213	60086	25.3017	ug/ml	100
13) Caprolactam	9.36	55	48852	25.9136	ug/ml	99
14) Safrole	9.60	162	85797	25.9155	ug/ml	100
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	91297	25.1625	ug/ml	100
17) Isosafrole	10.11	162	87334	25.1701	ug/ml	100
18) 1,1'-Biphenyl	10.18	154	251983	28.1879	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	179402	28.4750	ug/ml	100
20) 1,4-Naphthoquinone	10.39	158	81881	26.0170	ug/ml	100
21) Pentachlorobenzene	11.03	250	75075	24.4230	ug/ml	99
22) Thionazin	11.28	107	38615	28.5088	ug/ml	99
24) Sulfotepp	11.63	322	36182	23.4738	ug/ml#	86
25) Sym-Trinitrobenzene	11.71	75	53163	23.6217	ug/ml	99
26) Diallate	11.75	86	77534	25.8553	ug/ml	90
27) Phenacetin	11.74	108	115194	25.3282	ug/ml	98
28) Phorate	11.77	75	135479	25.3681	ug/ml#	97
29) Dimethoate	11.98	87	84193	26.0941	ug/ml	97
30) Atrazine	11.98	200	61422	24.9873	ug/ml	99
31) Pronamide	12.17	173	100984	25.4974	ug/ml	99
32) Pentachloronitrobenzene	12.32	237	23899	24.5211	ug/ml	99
33) Disulfoton	12.35	88	120151	28.9617	ug/ml	99
34) Parathion Methyl	12.82	109	78947	26.6320	ug/ml	99
35) Parathion Ethyl	13.30	97	47302	27.0883	ug/ml	99
36) 4-Nitroquinoline 1-Oxide	13.40	190	17037	23.1834	ug/ml	98
37) Isodrin	13.80	193	36852	24.7230	ug/ml	99
39) Aramite	14.34	185	21559	24.8313	ug/ml	100
40) Chlorobenzilate	14.68	251	92108	24.0265	ug/ml	98
41) Famphur	15.08	218	118503	24.5119	ug/ml	98
43) 7,12-Dimethylbenz[a]anthra	17.92	256	104991	22.8962	ug/ml	99
44) Perylene	18.83	252	280547	23.4370	ug/ml	99
45) 3-Methylcholanthrene	19.51	268	150059	23.9299	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76639.D TCL.M Sat Mar 28 10:00:03 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76639.D

Vial: 16

Acq On : 27 Mar 2020 6:42 pm

Operator: SCB

Sample : SEQ-CALE

Inst : MSD12

Misc : 1,1 9009872

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:56 2020

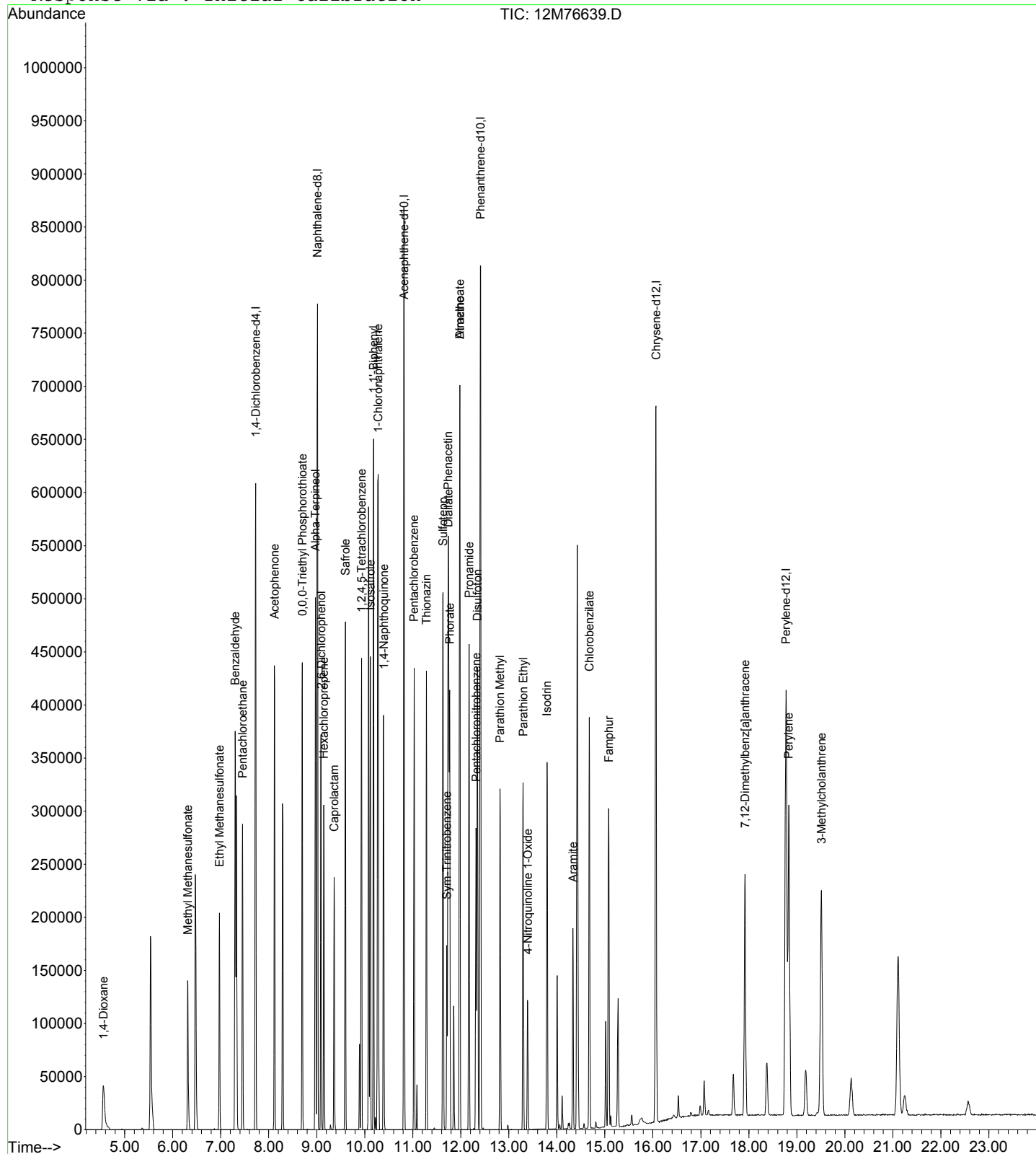
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76639.D

Vial: 16

Acq On : 27 Mar 2020 6:42 pm

Operator: SCB

Sample : SEQ-CALE

Inst : MSD12

Misc : 1,1 9009872

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	25.000	25.416	-1.7	100	0.00
3	Methyl Methanesulfonate	25.000	24.680	1.3	100	0.00
4	Ethyl Methanesulfonate	25.000	25.447	-1.8	100	0.00
5	Benzaldehyde	25.000	26.241	-5.0	100	0.00
6	Pentachloroethane	25.000	25.237	-0.9	100	0.00
7	Acetophenone	25.000	25.932	-3.7	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	25.000	25.395	-1.6	100	0.00
10	Alpha-Terpineol	25.000	25.500	-2.0	100	0.00
11	2,6-Dichlorophenol	25.000	25.738	-3.0	100	0.00
12	Hexachloropropene	25.000	25.302	-1.2	100	0.00
13	Caprolactam	25.000	25.914	-3.7	100	0.00
14	Safrole	25.000	25.915	-3.7	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	25.000	25.162	-0.6	100	0.00
17	Isosafrole	25.000	25.170	-0.7	100	0.00
18	1,1'-Biphenyl	25.000	28.188	-12.8	100	0.00
19	1-Chloronaphthalene	25.000	28.475	-13.9	100	0.00
20	1,4-Naphthoquinone	25.000	26.017	-4.1	100	0.00
21	Pentachlorobenzene	25.000	24.423	2.3	100	0.00
22	Thionazin	25.000	28.509	-14.0	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	25.000	23.474	6.1	100	0.00
25	Sym-Trinitrobenzene	25.000	23.622	5.5	100	0.00
26	Diallate	25.000	25.855	-3.4	100	0.00
27	Phenacetin	25.000	25.328	-1.3	100	0.00
28	Phorate	25.000	25.368	-1.5	100	0.00
29	Dimethoate	25.000	26.094	-4.4	100	0.00
30	Atrazine	25.000	24.987	0.1	100	0.00
31	Pronamide	25.000	25.497	-2.0	100	0.00
32	Pentachloronitrobenzene	25.000	24.521	1.9	100	0.00
33	Disulfoton	25.000	28.962	-15.8	100	0.00
34	Parathion Methyl	25.000	26.632	-6.5	100	0.00
35	Parathion Ethyl	25.000	27.088	-8.4	100	0.00
36	4-Nitroquinoline 1-Oxide	25.000	23.183	7.3	100	0.00
37	Isodrin	25.000	24.723	1.1	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	25.000	24.831	0.7	100	0.00
40	Chlorobenzilate	25.000	24.027	3.9	100	0.00
41	Famphur	25.000	24.512	2.0	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	25.000	22.896	8.4	100	0.00
44	Perylene	25.000	23.437	6.3	100	-0.01
45	3-Methylcholanthrene	25.000	23.930	4.3	100	-0.01

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

12M76639.D TCL.M

Sat Mar 28 10:01:53 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76640.D

Vial: 17

Acq On : 27 Mar 2020 7:15 pm

Operator: SCB

Sample : SEQ-CALC

Inst : MSD12

Misc : 1,1 9009870

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:36 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	109585	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.015	136	400042	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	223923	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.412	188	371368	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	337332	40.0000	ug/ml	0.000
42) Perylene-d12	18.780	264	351958	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.55	88	146890	80.1305	ug/ml	94
3) Methyl Methanesulfonate	6.32	80	199939	80.7019	ug/ml	99
4) Ethyl Methanesulfonate	6.97	79	227771	77.5229	ug/ml	99
5) Benzaldehyde	7.31	105	253826	75.9278	ug/ml	99
6) Pentachloroethane	7.45	167	121232	77.2978	ug/ml	99
7) Acetophenone	8.12	105	395482	75.6265	ug/ml	99
9) 0,0,0-Triethyl Phosphoroth	8.70	198	141804	75.8080	ug/ml	97
10) Alpha-Terpineol	8.97	59	201769	81.3296	ug/ml	95
11) 2,6-Dichlorophenol	9.09	162	236446	77.3802	ug/ml	100
12) Hexachloropropene	9.15	213	175878	82.8669	ug/ml	100
13) Caprolactam	9.37	55	136776	81.1800	ug/ml	98
14) Safrole	9.60	162	222102	75.0642	ug/ml	100
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	243304	74.5831	ug/ml	100
17) Isosafrole	10.12	162	232344	74.4781	ug/ml	100
18) 1,1'-Biphenyl	10.18	154	627953	83.2911	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	441113	83.1681	ug/ml	99
20) 1,4-Naphthoquinone	10.39	158	232354	82.1143	ug/ml	100
21) Pentachlorobenzene	11.03	250	210844	76.2886	ug/ml	99
22) Thionazin	11.29	107	96927	83.5156	ug/ml	99
24) Sulfotepp	11.63	322	111812	83.4009	ug/ml	89
25) Sym-Trinitrobenzene	11.71	75	175226	84.1243	ug/ml	99
26) Diallate	11.76	86	163877	81.1845	ug/ml	93
27) Phenacetin	11.74	108	272377	82.1596	ug/ml	98
28) Phorate	11.77	75	307792	82.3908	ug/ml#	97
29) Dimethoate	11.98	87	181002	79.3753	ug/ml	97
30) Atrazine	11.98	200	161016	75.3105	ug/ml	99
31) Pronamide	12.18	173	269503	78.2347	ug/ml	100
32) Pentachloronitrobenzene	12.32	237	70229	82.8455	ug/ml	99
33) Disulfoton	12.35	88	288304	84.5877	ug/ml	99
34) Parathion Methyl	12.82	109	218560	84.7676	ug/ml	98
35) Parathion Ethyl	13.30	97	125969	82.9389	ug/ml	97
36) 4-Nitroquinoline 1-Oxide	13.40	190	73816	87.9138	ug/ml	99
37) Isodrin	13.80	193	102606	79.1415	ug/ml	99
39) Aramite	14.34	185	63130	83.4201	ug/ml	99
40) Chlorobenzilate	14.68	251	263391	78.8240	ug/ml	97
41) Famphur	15.08	218	344637	81.7850	ug/ml	97
43) 7,12-Dimethylbenz[a]anthra	17.93	256	335141	84.5338	ug/ml	99
44) Perylene	18.85	252	822599	79.4833	ug/ml	99
45) 3-Methylcholanthrene	19.53	268	437888	80.7670	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76640.D TCL.M Sat Mar 28 10:00:06 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76640.D

Vial: 17

Acq On : 27 Mar 2020 7:15 pm

Operator: SCB

Sample : SEQ-CALC

Inst : MSD12

Misc : 1,1 9009870

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:56 2020

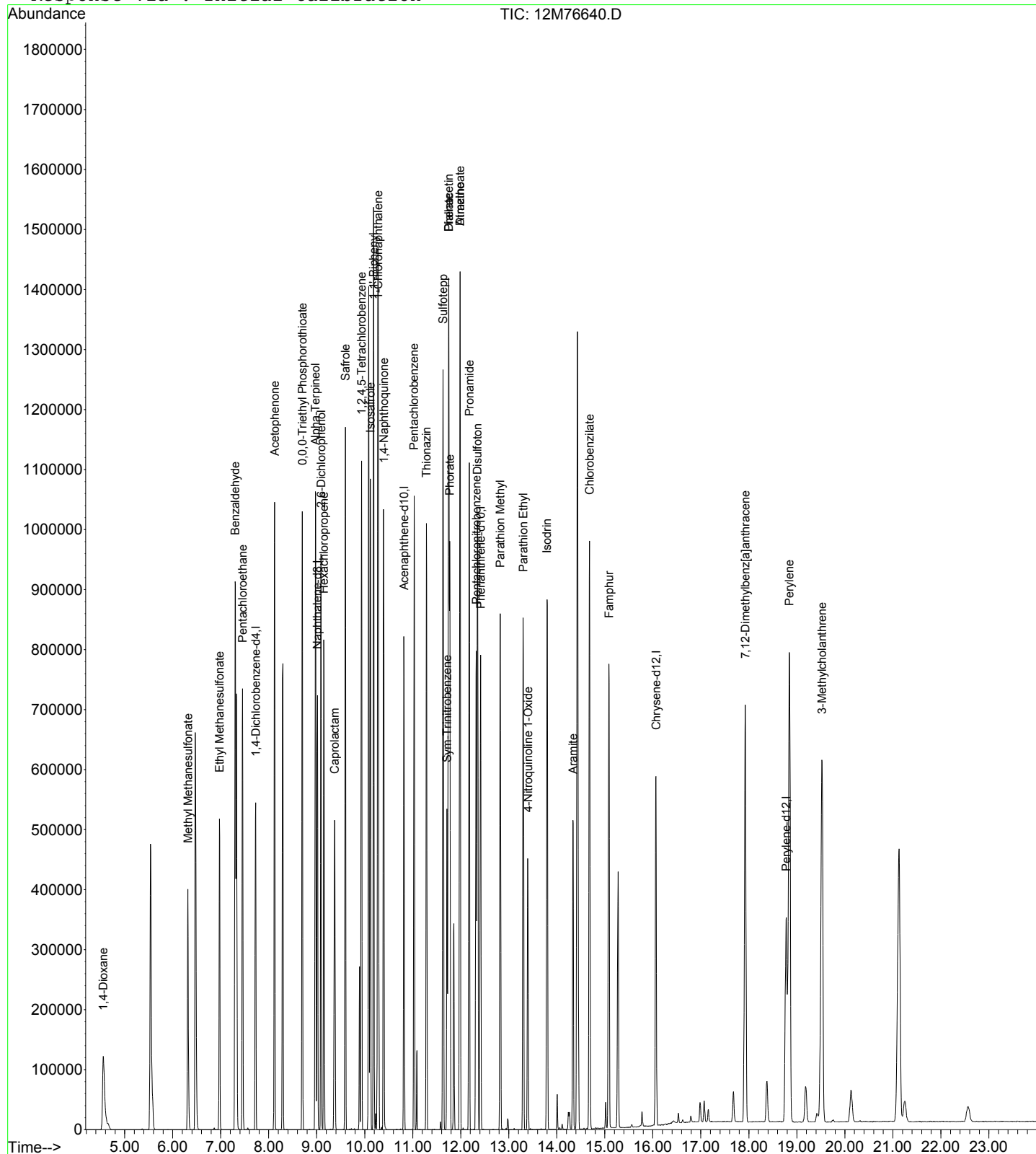
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76640.D

Acq On : 27 Mar 2020 7:15 pm

Sample : SEQ-CALC

Misc : 1,1 9009870

MS Integration Params: RTEINT.P

Vial: 17

Operator: SCB

Inst : MSD12

Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	80.000	80.130	-0.2	100	0.00
3	Methyl Methanesulfonate	80.000	80.702	-0.9	100	0.00
4	Ethyl Methanesulfonate	80.000	77.523	3.1	100	0.00
5	Benzaldehyde	80.000	75.928	5.1	100	0.00
6	Pentachloroethane	80.000	77.298	3.4	100	0.00
7	Acetophenone	80.000	75.627	5.5	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	80.000	75.808	5.2	100	0.00
10	Alpha-Terpineol	80.000	81.330	-1.7	100	0.00
11	2,6-Dichlorophenol	80.000	77.380	3.3	100	0.00
12	Hexachloropropene	80.000	82.867	-3.6	100	0.00
13	Caprolactam	80.000	81.180	-1.5	100	0.00
14	Safrole	80.000	75.064	6.2	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	80.000	74.583	6.8	100	0.00
17	Isosafrole	80.000	74.478	6.9	100	0.00
18	1,1'-Biphenyl	80.000	83.291	-4.1	100	0.00
19	1-Chloronaphthalene	80.000	83.168	-4.0	100	0.00
20	1,4-Naphthoquinone	80.000	82.114	-2.6	100	0.00
21	Pentachlorobenzene	80.000	76.289	4.6	100	0.00
22	Thionazin	80.000	83.516	-4.4	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	80.000	83.401	-4.3	100	0.00
25	Sym-Trinitrobenzene	80.000	84.124	-5.2	100	0.00
26	Diallate	80.000	81.185	-1.5	100	0.00
27	Phenacetin	80.000	82.160	-2.7	100	0.00
28	Phorate	80.000	82.391	-3.0	100	0.00
29	Dimethoate	80.000	79.375	0.8	100	0.00
30	Atrazine	80.000	75.311	5.9	100	0.00
31	Pronamide	80.000	78.235	2.2	100	0.00
32	Pentachloronitrobenzene	80.000	82.845	-3.6	100	0.00
33	Disulfoton	80.000	84.588	-5.7	100	0.00
34	Parathion Methyl	80.000	84.768	-6.0	100	0.00
35	Parathion Ethyl	80.000	82.939	-3.7	100	0.00
36	4-Nitroquinoline 1-Oxide	80.000	87.914	-9.9	100	0.00
37	Isodrin	80.000	79.142	1.1	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	80.000	83.420	-4.3	100	0.00
40	Chlorobenzilate	80.000	78.824	1.5	100	0.00
41	Famphur	80.000	81.785	-2.2	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	80.000	84.534	-5.7	100	0.00
44	Perylene	80.000	79.483	0.6	100	0.00
45	3-Methylcholanthrene	80.000	80.767	-1.0	100	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

12M76640.D TCL.M

Sat Mar 28 10:02:16 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76641.D

Vial: 18

Acq On : 27 Mar 2020 7:47 pm

Operator: SCB

Sample : SEQ-CALB

Inst : MSD12

Misc : 1,1 9009869

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:36 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	110149	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.014	136	405148	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	224026	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.412	188	370775	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	332787	40.0000	ug/ml	0.000
42) Perylene-d12	18.780	264	335081	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.56	88	183038	99.3384	ug/ml	93
3) Methyl Methanesulfonate	6.32	80	241777	97.0894	ug/ml	98
4) Ethyl Methanesulfonate	6.98	79	271098	91.7970	ug/ml	99
5) Benzaldehyde	7.30	105	301741	89.7986	ug/ml	99
6) Pentachloroethane	7.45	167	145735	92.4452	ug/ml	98
7) Acetophenone	8.12	105	462352	87.9611	ug/ml	99
9) 0,0,0-Triethyl Phosphoroth	8.70	198	169266	89.3486	ug/ml	94
10) Alpha-Terpineol	8.98	59	234440	99.9721	ug/ml	94
11) 2,6-Dichlorophenol	9.09	162	283622	91.6494	ug/ml	100
12) Hexachloropropene	9.15	213	212303	98.7683	ug/ml	99
13) Caprolactam	9.38	55	164484	96.3950	ug/ml	98
14) Safrole	9.60	162	262603	87.6338	ug/ml	99
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	292411	89.5953	ug/ml	100
17) Isosafrole	10.12	162	277390	88.8768	ug/ml	100
18) 1,1'-Biphenyl	10.18	154	733956	97.7967	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	519036	98.3525	ug/ml	99
20) 1,4-Naphthoquinone	10.39	158	279951	98.8896	ug/ml	99
21) Pentachlorobenzene	11.03	250	254602	92.0790	ug/ml	98
22) Thionazin	11.29	107	112335	97.0942	ug/ml	100
24) Sulfotepp	11.63	322	139481	104.2057	ug/ml#	83
25) Sym-Trinitrobenzene	11.72	75	213480	102.2280	ug/ml	99
26) Diallate	11.75	86	180708m	96.8153	ug/ml	
27) Phenacetin	11.75	108	310692	99.7214	ug/ml	97
28) Phorate	11.78	75	347970	100.0407	ug/ml#	95
29) Dimethoate	11.99	87	209245	99.9242	ug/ml	97
30) Atrazine	11.99	200	192782	90.3123	ug/ml	99
31) Pronamide	12.18	173	317356	92.2734	ug/ml	99
32) Pentachloronitrobenzene	12.32	237	84930	100.3477	ug/ml	99
33) Disulfoton	12.35	88	331871	97.9337	ug/ml	98
34) Parathion Methyl	12.82	109	256761	99.7430	ug/ml	97
35) Parathion Ethyl	13.30	97	146871	96.8556	ug/ml	95
36) 4-Nitroquinoline 1-Oxide	13.40	190	87582	100.9300	ug/ml	99
37) Isodrin	13.80	193	122205	94.4093	ug/ml	98
39) Aramite	14.34	185	76842	102.9259	ug/ml	99
40) Chlorobenzilate	14.68	251	323743	98.2085	ug/ml	94
41) Famphur	15.09	218	413673	99.5084	ug/ml	96
43) 7,12-Dimethylbenz[a]anthra	17.93	256	418130	110.7784	ug/ml	99
44) Perylene	18.85	252	978369	99.2960	ug/ml	98
45) 3-Methylcholanthrene	19.53	268	511848	99.1637	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76641.D TCL.M Sat Mar 28 10:00:08 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76641.D

Vial: 18

Acq On : 27 Mar 2020 7:47 pm

Operator: SCB

Sample : SEQ-CALB

Inst : MSD12

Misc : 1,1 9009869

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:58 2020

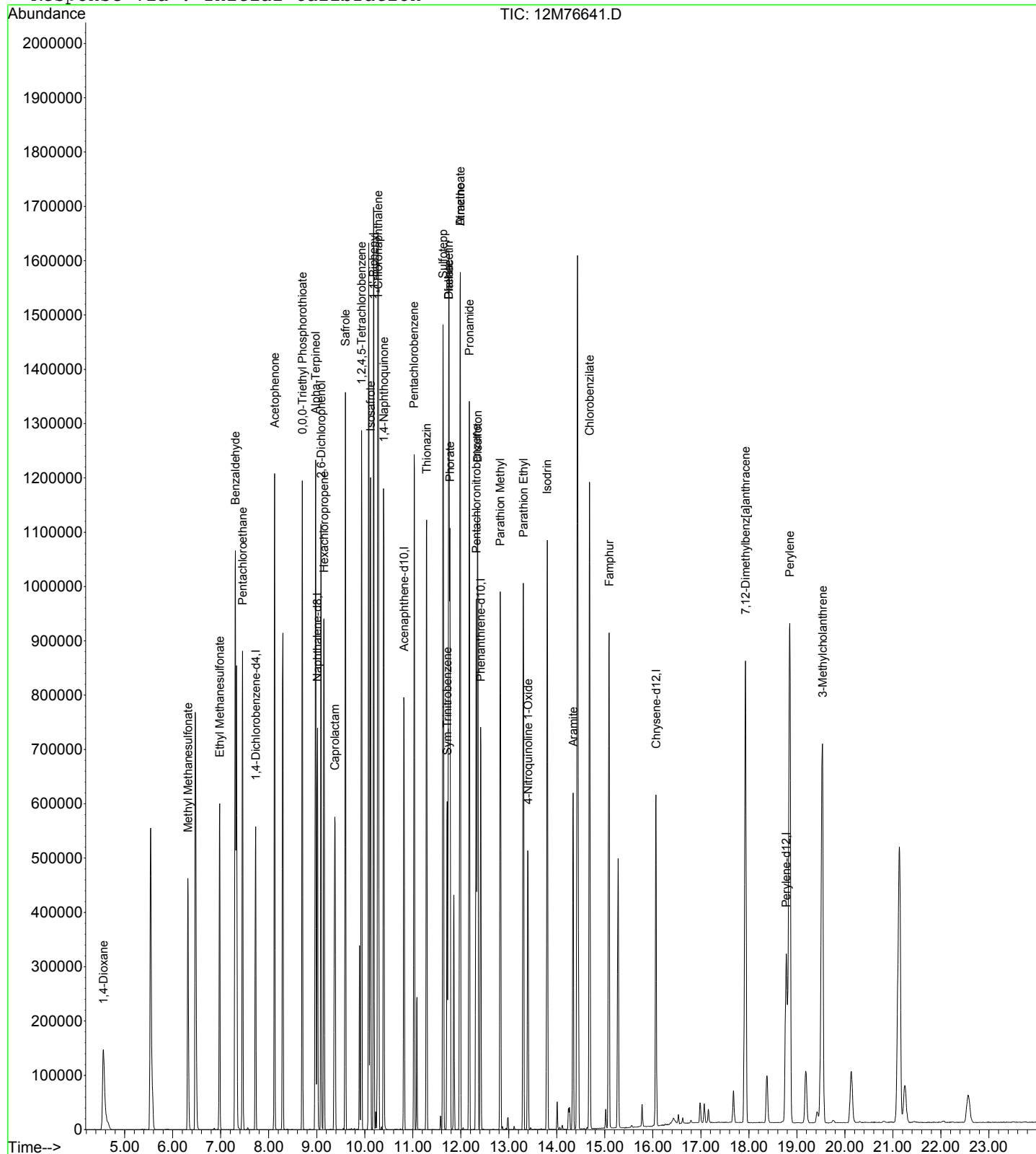
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

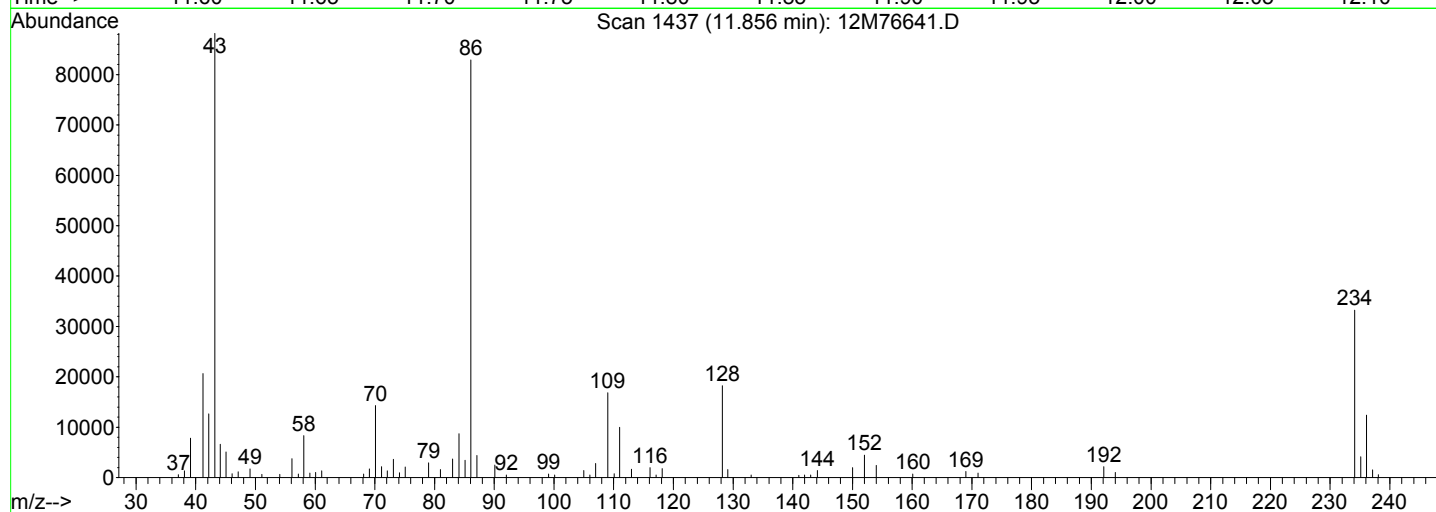
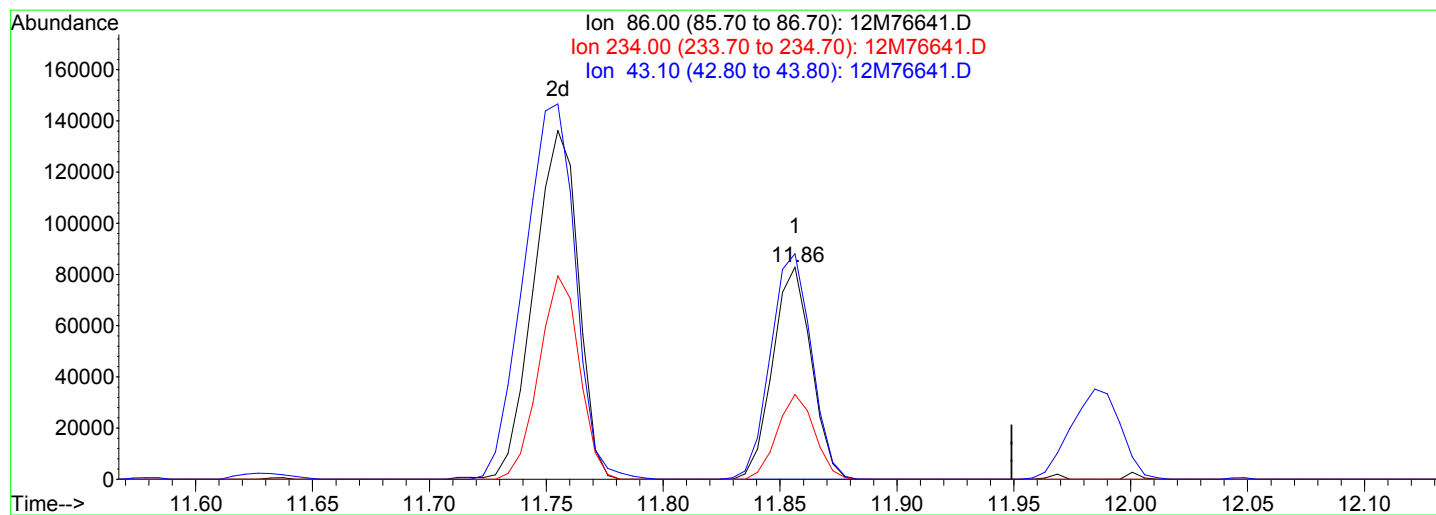
Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76641.D Vial: 18
Acq On : 27 Mar 2020 7:47 pm Operator: SCB
Sample : SEQ-CALB Inst : MSD12
Misc : 1,1 9009869 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 9:56 2020 Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Sat Mar 28 09:39:43 2020
Response via : Multiple Level Calibration



TIC: 12M76641.D

(26) Diallate

11.86min 39.12ug/ml

response 95491

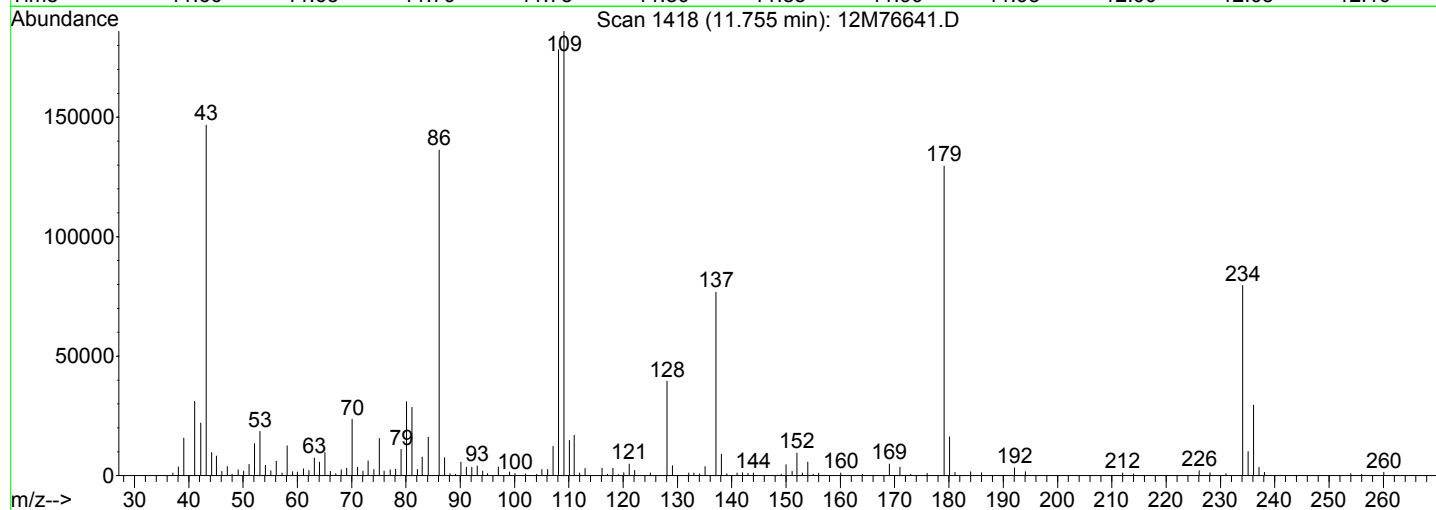
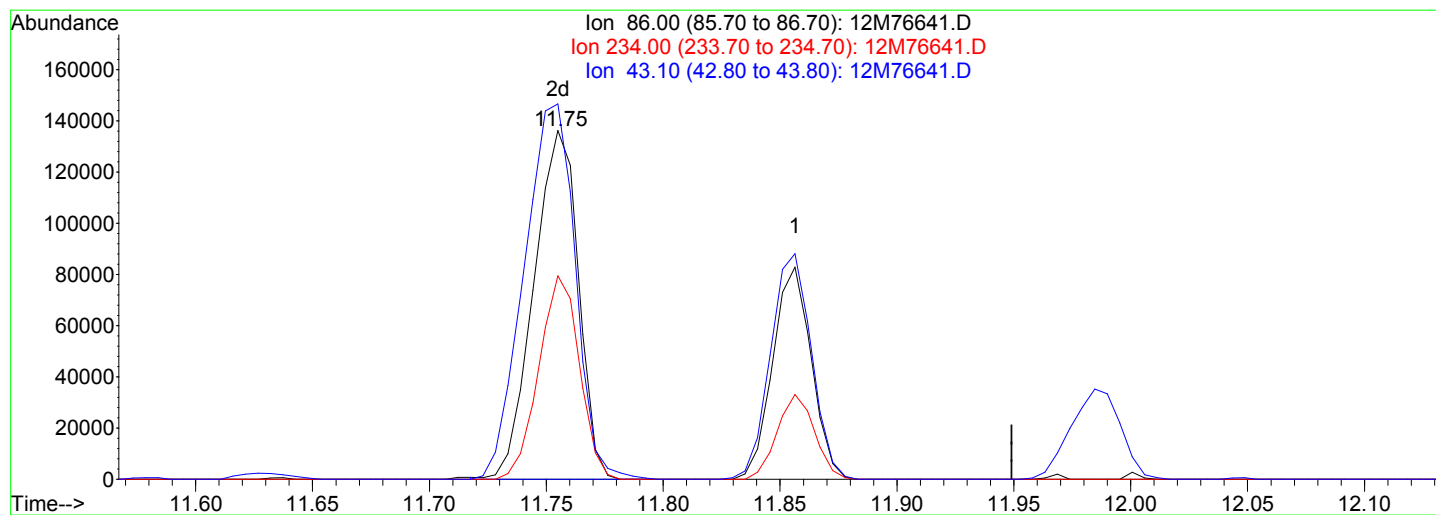
Ion	Exp%	Act%
86.00	100	100
234.00	41.10	38.58
43.10	128.90	112.39
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76641.D
Acq On : 27 Mar 2020 7:47 pm
Sample : SEQ-CALB
Misc : 1,1 9009869
MS Integration Params: RTEINT.P
Quant Time: Mar 28 9:58 2020

Vial: 18
Operator: SCB
Inst : MSD12
Multiplr: 1.00

Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Sat Mar 28 09:39:43 2020
Response via : Multiple Level Calibration



TIC: 12M76641.D

(26) Diallate

11.75min 96.82ug/ml mint

response 180708

Ion	Exp%	Act%
86.00	100	100
234.00	41.10	20.39#
43.10	128.90	59.39#
0.00	0.00	0.00

Sarah Bogolin

Digitally signed by Sarah Bogolin
Reason: Data system fails to
select correct peak
Date: 2020.03.28 10:17:27 -04'00'

Data File : I:\MSDCHEM\1\DATA\032720\12M76641.D
 Acq On : 27 Mar 2020 7:47 pm
 Sample : SEQ-CALB
 Misc : 1,1 9009869
 MS Integration Params: RTEINT.P

Vial: 18
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Sat Mar 28 09:39:43 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	100.000	99.338	0.7	100	0.00
3	Methyl Methanesulfonate	100.000	97.089	2.9	100	0.00
4	Ethyl Methanesulfonate	100.000	91.797	8.2	100	0.00
5	Benzaldehyde	100.000	89.799	10.2	100	0.00
6	Pentachloroethane	100.000	92.445	7.6	100	0.00
7	Acetophenone	100.000	87.961	12.0	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	100.000	89.349	10.7	100	0.00
10	Alpha-Terpineol	100.000	99.972	0.0	100	0.00
11	2,6-Dichlorophenol	100.000	91.649	8.4	100	0.00
12	Hexachloropropene	100.000	98.768	1.2	100	0.00
13	Caprolactam	100.000	96.395	3.6	100	0.01
14	Safrrole	100.000	87.634	12.4	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	100.000	89.595	10.4	100	0.00
17	Isosafrole	100.000	88.877	11.1	100	0.00
18	1,1'-Biphenyl	100.000	97.797	2.2	100	0.00
19	1-Chloronaphthalene	100.000	98.352	1.6	100	0.00
20	1,4-Naphthoquinone	100.000	98.890	1.1	100	0.00
21	Pentachlorobenzene	100.000	92.079	7.9	100	0.00
22	Thionazin	100.000	97.094	2.9	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	100.000	104.206	-4.2	100	0.00
25	Sym-Trinitrobenzene	100.000	102.228	-2.2	100	0.00
26	Diallate	100.000	96.815	3.2	100	0.00
27	Phenacetin	100.000	99.721	0.3	100	0.01
28	Phorate	100.000	100.041	-0.0	100	0.00
29	Dimethoate	100.000	99.924	0.1	100	0.01
30	Atrazine	100.000	90.312	9.7	100	0.01
31	Pronamide	100.000	92.273	7.7	100	0.00
32	Pentachloronitrobenzene	100.000	100.348	-0.3	100	0.00
33	Disulfoton	100.000	97.934	2.1	100	0.00
34	Parathion Methyl	100.000	99.743	0.3	100	0.00
35	Parathion Ethyl	100.000	96.856	3.1	100	0.00
36	4-Nitroquinoline 1-Oxide	100.000	100.930	-0.9	100	0.00
37	Isodrin	100.000	94.409	5.6	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	100.000	102.926	-2.9	100	0.00
40	Chlorobenzilate	100.000	98.208	1.8	100	0.00
41	Famphur	100.000	99.508	0.5	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	100.000	110.778	-10.8	100	0.00
44	Perylene	100.000	99.296	0.7	100	0.01
45	3-Methylcholanthrene	100.000	99.164	0.8	100	0.01

Data File : I:\MSDCHEM\1\DATA\032720\12M76642.D

Vial: 19

Acq On : 27 Mar 2020 8:19 pm

Operator: SCB

Sample : SEQ-CALA

Inst : MSD12

Misc : 1,1 9009868

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:56:36 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	107593	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.015	136	394709	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	221600	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.412	188	362585	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	320226	40.0000	ug/ml	0.000
42) Perylene-d12	18.780	264	314595	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.55	88	217005	120.5708	ug/ml	88
3) Methyl Methanesulfonate	6.32	80	275447	113.2378	ug/ml	97
4) Ethyl Methanesulfonate	6.98	79	303807	105.3165	ug/ml	99
5) Benzaldehyde	7.31	105	333061	101.4741	ug/ml	99
6) Pentachloroethane	7.45	167	163012	105.8611	ug/ml	97
7) Acetophenone	8.12	105	517630	100.8171	ug/ml	99
9) 0,0,0-Triethyl Phosphoroth	8.70	198	190597	103.2692	ug/ml	93
10) Alpha-Terpineol	8.98	59	254309	120.8348	ug/ml	92
11) 2,6-Dichlorophenol	9.09	162	318286	105.5708	ug/ml	99
12) Hexachloropropene	9.15	213	236075	112.7322	ug/ml	99
13) Caprolactam	9.38	55	185160	111.3819	ug/ml	97
14) Safrole	9.60	162	296463	101.5499	ug/ml	98
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	331124	102.5678	ug/ml	99
17) Isosafrole	10.12	162	313772	101.6343	ug/ml	99
18) 1,1'-Biphenyl	10.18	154	822937	111.2425	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	571402	109.8055	ug/ml	99
20) 1,4-Naphthoquinone	10.40	158	316985	113.1973	ug/ml	99
21) Pentachlorobenzene	11.03	250	292618	106.9863	ug/ml	98
22) Thionazin	11.29	107	126255	110.6186	ug/ml	98
24) Sulfotepp	11.63	322	161536	123.4089	ug/ml#	80
25) Sym-Trinitrobenzene	11.72	75	241167	117.7950	ug/ml	98
26) Diallate	11.76	86	196329m	126.1466	ug/ml	
27) Phenacetin	11.75	108	339164	119.8918	ug/ml	96
28) Phorate	11.78	75	374753	119.6892	ug/ml#	95
29) Dimethoate	11.99	87	227853	123.3897	ug/ml	96
30) Atrazine	11.99	200	217985	104.4258	ug/ml	98
31) Pronamide	12.18	173	354551	105.4167	ug/ml	99
32) Pentachloronitrobenzene	12.32	237	98002	118.4082	ug/ml	98
33) Disulfoton	12.35	88	363100	109.8863	ug/ml	97
34) Parathion Methyl	12.82	109	286544	113.8270	ug/ml	95
35) Parathion Ethyl	13.30	97	161933	109.2005	ug/ml#	92
36) 4-Nitroquinoline 1-Oxide	13.40	190	101453	115.3362	ug/ml	98
37) Isodrin	13.80	193	139903	110.5232	ug/ml	99
39) Aramite	14.34	185	87601	121.9396	ug/ml	99
40) Chlorobenzilate	14.68	251	369907	116.6141	ug/ml	92
41) Famphur	15.09	218	468090	117.0151	ug/ml	95
43) 7,12-Dimethylbenz[a]anthra	17.93	256	470175	132.6788	ug/ml	99
44) Perylene	18.85	252	1088272	117.6426	ug/ml	98
45) 3-Methylcholanthrene	19.53	268	568803	117.3739	ug/ml	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M76642.D TCL.M Sat Mar 28 10:00:11 2020

Data File : I:\MSDCHEM\1\DATA\032720\12M76642.D

Vial: 19

Acq On : 27 Mar 2020 8:19 pm

Operator: SCB

Sample : SEQ-CALA

Inst : MSD12

Misc : 1,1 9009868

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:58 2020

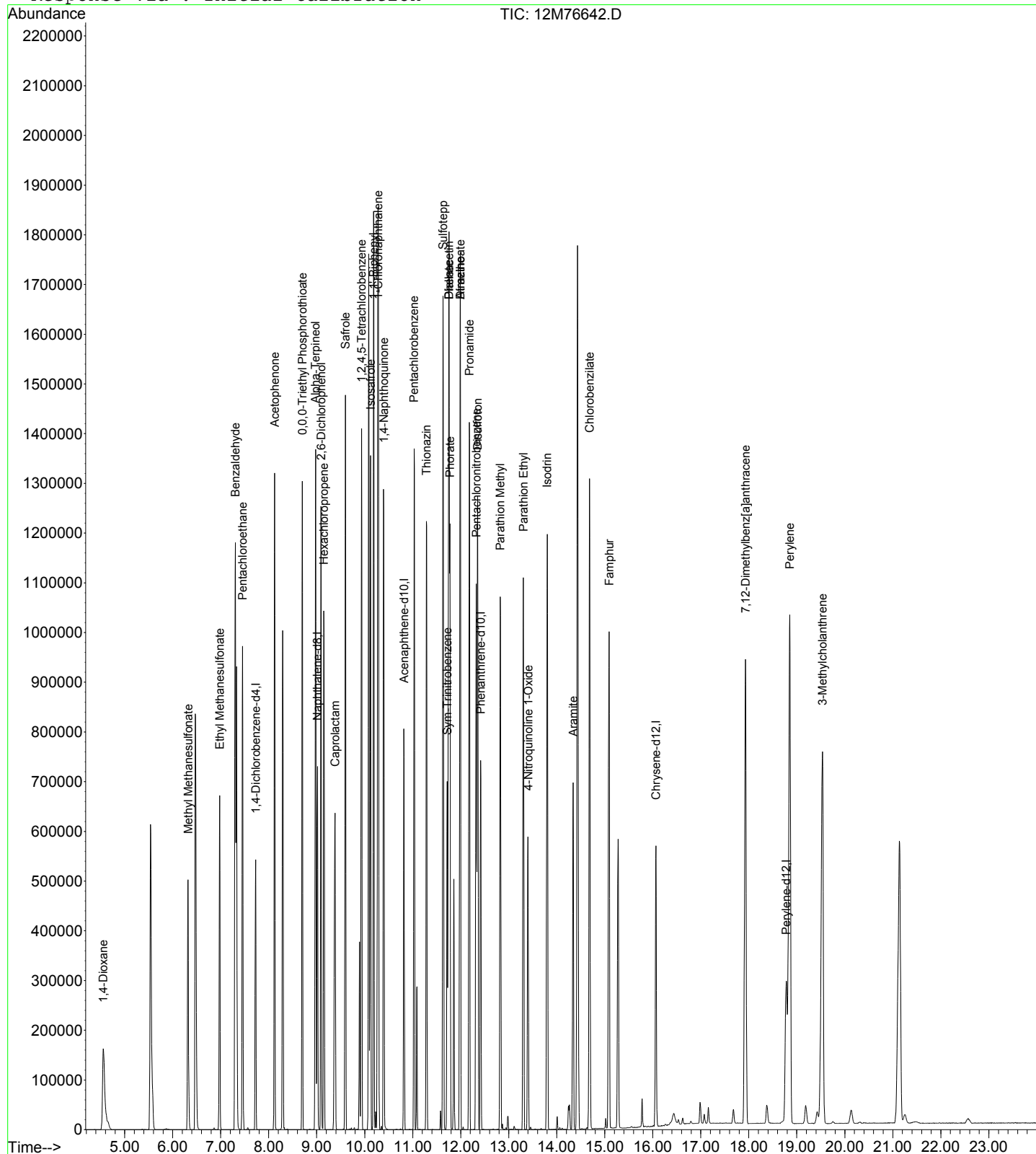
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76642.D

Vial: 19

Acq On : 27 Mar 2020 8:19 pm

Operator: SCB

Sample : SEQ-CALA

Inst : MSD12

Misc : 1,1 9009868

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:56 2020

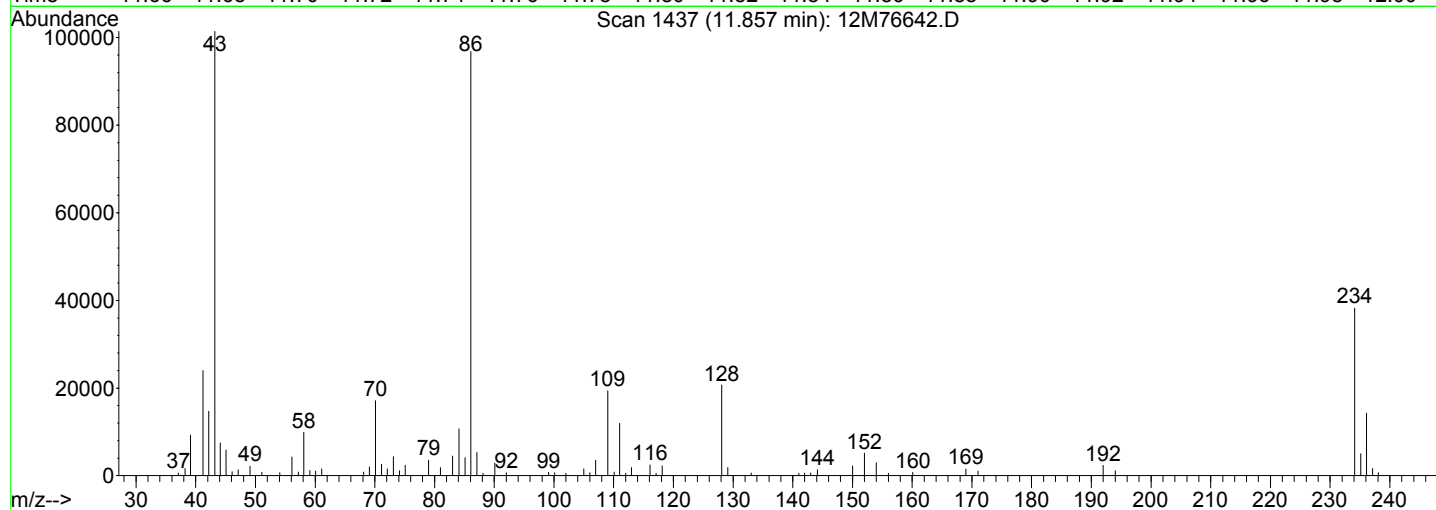
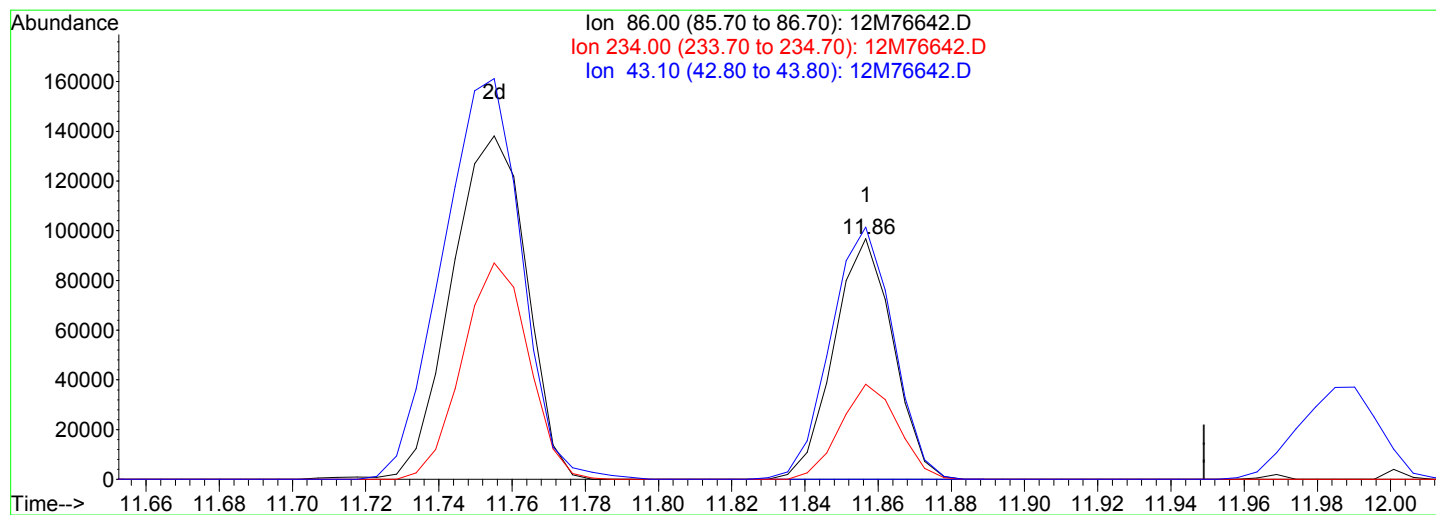
Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration



TIC: 12M76642.D

(26) Diallate

11.86min 47.32ug/ml

response 108847

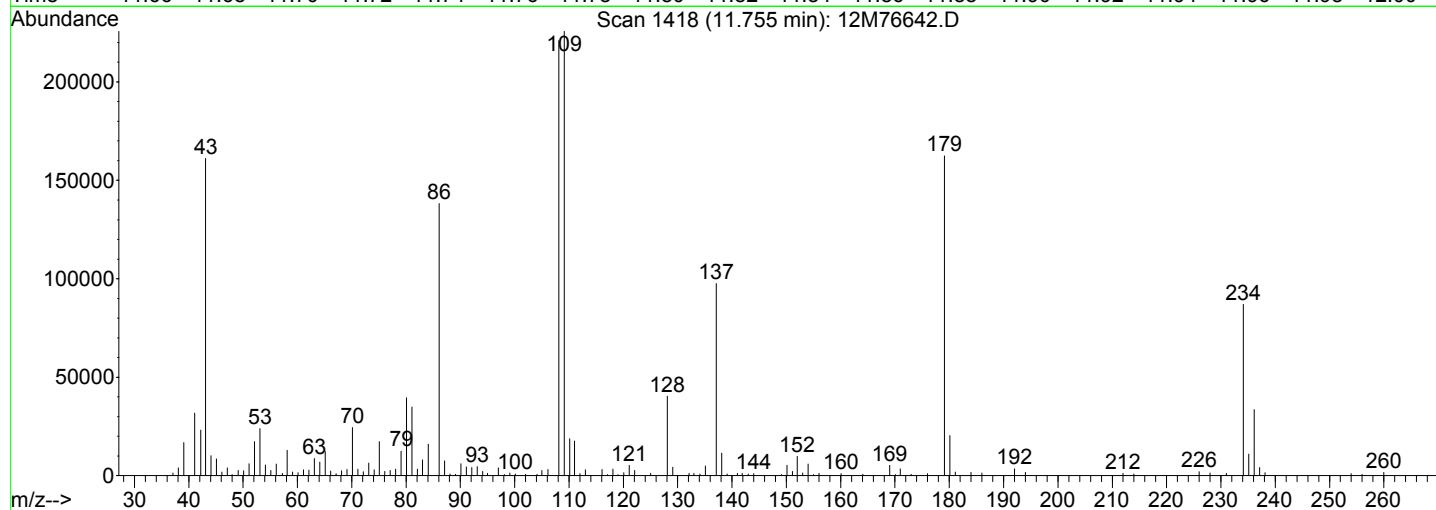
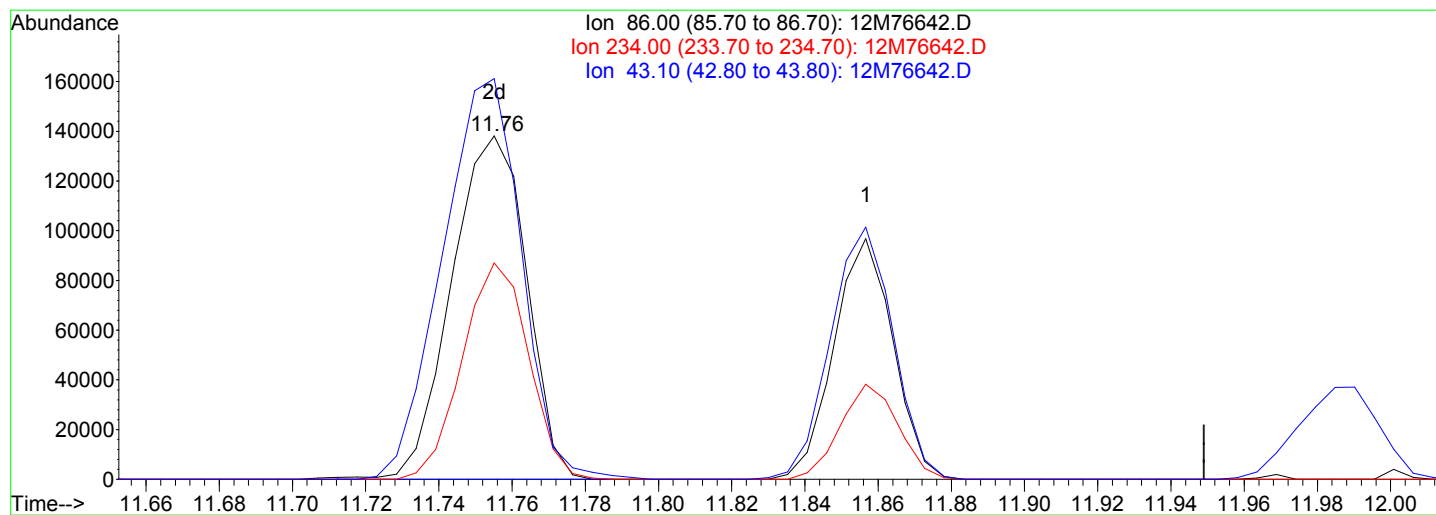
Ion	Exp%	Act%
86.00	100	100
234.00	41.10	38.69
43.10	128.90	110.67
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\032720\12M76642.D
Acq On : 27 Mar 2020 8:19 pm
Sample : SEQ-CALA
Misc : 1,1 9009868
MS Integration Params: RTEINT.P
Quant Time: Mar 28 9:58 2020

Vial: 19
Operator: SCB
Inst : MSD12
Multiplr: 1.00

Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Sat Mar 28 09:39:43 2020
Response via : Multiple Level Calibration



TIC: 12M76642.D

(26) Diallate

11.76min 126.15ug/ml mint

response 196329

Ion	Exp%	Act%
86.00	100	100
234.00	41.10	21.45#
43.10	128.90	61.36#
0.00	0.00	0.00

Sarah Bogolin

Digitally signed by Sarah Bogolin
Reason: Data system fails to select
correct peak
Date: 2020.03.28 10:18:04 -04'00'

Data File : I:\MSDCHEM\1\DATA\032720\12M76642.D
 Acq On : 27 Mar 2020 8:19 pm
 Sample : SEQ-CALA
 Misc : 1,1 9009868
 MS Integration Params: RTEINT.P

Vial: 19
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Sat Mar 28 09:39:43 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	100	0.00
2	1,4-Dioxane	120.000	120.571	-0.5	100	0.00
3	Methyl Methanesulfonate	120.000	113.238	5.6	100	0.00
4	Ethyl Methanesulfonate	120.000	105.317	12.2	100	0.00
5	Benzaldehyde	120.000	101.474	15.4	100	0.00
6	Pentachloroethane	120.000	105.861	11.8	100	0.00
7	Acetophenone	120.000	100.817	16.0	100	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
9	0,0,0-Triethyl Phosphorothi	120.000	103.269	13.9	100	0.00
10	Alpha-Terpineol	120.000	120.835	-0.7	100	0.00
11	2,6-Dichlorophenol	120.000	105.571	12.0	100	0.00
12	Hexachloropropene	120.000	112.732	6.1	100	0.00
13	Caprolactam	120.000	111.382	7.2	100	0.02
14	Safrrole	120.000	101.550	15.4	100	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	120.000	102.568	14.5	100	0.00
17	Isosafrole	120.000	101.634	15.3	100	0.00
18	1,1'-Biphenyl	120.000	111.243	7.3	100	0.00
19	1-Chloronaphthalene	120.000	109.805	8.5	100	0.00
20	1,4-Naphthoquinone	120.000	113.197	5.7	100	0.00
21	Pentachlorobenzene	120.000	106.986	10.8	100	0.00
22	Thionazin	120.000	110.619	7.8	100	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00
24	Sulfotepp	120.000	123.409	-2.8	100	0.00
25	Sym-Trinitrobenzene	120.000	117.795	1.8	100	0.00
26	Diallate	120.000	126.147	-5.1	100	0.00
27	Phenacetin	120.000	119.892	0.1	100	0.01
28	Phorate	120.000	119.689	0.3	100	0.00
29	Dimethoate	120.000	123.390	-2.8	100	0.01
30	Atrazine	120.000	104.426	13.0	100	0.01
31	Pronamide	120.000	105.417	12.2	100	0.00
32	Pentachloronitrobenzene	120.000	118.408	1.3	100	0.00
33	Disulfoton	120.000	109.886	8.4	100	0.00
34	Parathion Methyl	120.000	113.827	5.1	100	0.00
35	Parathion Ethyl	120.000	109.201	9.0	100	0.00
36	4-Nitroquinoline 1-Oxide	120.000	115.336	3.9	100	0.00
37	Isodrin	120.000	110.523	7.9	100	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	100	0.00
39	Aramite	120.000	121.940	-1.6	100	0.00
40	Chlorobenzilate	120.000	116.614	2.8	100	0.00
41	Famphur	120.000	117.015	2.5	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	100	0.00
43	7,12-Dimethylbenz[a]anthrac	120.000	132.679	-10.6	100	0.00
44	Perylene	120.000	117.643	2.0	100	0.01
45	3-Methylcholanthrene	120.000	117.374	2.2	100	0.01

Data File : I:\MSDCHEM\1\DATA\032720\12M76643.D

Vial: 20

Acq On : 27 Mar 2020 8:52 pm

Operator: SCB

Sample : SEQ-ICV3

Inst : MSD12

Misc : 1,1 9006891

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 09:59:02 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	118320	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.014	136	425848	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	241754	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.412	188	404664	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	359037	40.0000	ug/ml	0.000
42) Perylene-d12	18.775	264	346647	40.0000	ug/ml	0.000

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Methyl Methanesulfonate	6.32	80	123040	45.9966	ug/ml	99
4) Ethyl Methanesulfonate	6.97	79	144899	45.6762	ug/ml	100
5) Benzaldehyde	7.30	105	177100	49.0655	ug/ml	99
6) Pentachloroethane	7.45	167	77652	45.8559	ug/ml	100
7) Acetophenone	8.12	105	463684	82.1226	ug/ml	99
9) 0,0,0-Triethyl Phosphoroth	8.70	198	88353	44.3709	ug/ml	92
10) Alpha-Terpineol	8.97	59	107925	34.6133	ug/ml	97
11) 2,6-Dichlorophenol	9.09	162	156416	48.0873	ug/ml	100
12) Hexachloropropene	9.15	213	106937	47.3313	ug/ml	99
13) Caprolactam	9.37	55	92866	51.7782	ug/ml	100
14) Safrole	9.60	162	141531	44.9348	ug/ml	99
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	165024	46.8558	ug/ml	100
17) Isosafrole	10.11	162	170898	50.7410	ug/ml	100
18) 1,1'-Biphenyl	10.18	154	437990	52.7785	ug/ml	100
19) 1-Chloronaphthalene	10.27	162	311818	53.4004	ug/ml	99
20) 1,4-Naphthoquinone	10.39	158	157272	51.4807	ug/ml	100
21) Pentachlorobenzene	11.03	250	140207	46.9887	ug/ml	100
22) Thionazin	11.28	107	65287	51.2806	ug/ml	100
24) Sulfotepp	11.63	322	67513	46.2147	ug/ml	98
25) Sym-Trinitrobenzene	11.71	75	115103	51.4805	ug/ml	100
26) Diallate	11.75	86	127296	50.2366	ug/ml	100
27) Phenacetin	11.74	108	199855	49.9120	ug/ml	99
28) Phorate	11.77	75	210004	44.8408	ug/ml#	100
29) Dimethoate	11.98	87	136416	48.8440	ug/ml	100
30) Atrazine	11.98	200	109617	47.0516	ug/ml	99
31) Pronamide	12.17	173	178232	47.4823	ug/ml	100
32) Pentachloronitrobenzene	12.32	237	44027	47.6630	ug/ml	100
33) Disulfoton	12.35	88	188150	49.5913	ug/ml	99
34) Parathion Methyl	12.82	109	146784	52.2454	ug/ml	100
35) Parathion Ethyl	13.30	97	83046	50.1791	ug/ml	99
36) 4-Nitroquinoline 1-Oxide	13.40	190	40997	50.4674	ug/ml	100
37) Isodrin	13.80	193	67862	48.0362	ug/ml	100
39) Aramite	14.34	185	41494	51.5156	ug/ml	99
40) Chlorobenzilate	14.68	251	165084	46.4174	ug/ml	100
41) Famphur	15.08	218	225845	50.3547	ug/ml	99
43) 7,12-Dimethylbenz[a]anthra	17.92	256	196814	50.4037	ug/ml	99
44) Perylene	18.84	252	415925	40.8043	ug/ml	99
45) 3-Methylcholanthrene	19.51	268	184821	34.6119	ug/ml	99

Data File : I:\MSDCHEM\1\DATA\032720\12M76643.D

Vial: 20

Acq On : 27 Mar 2020 8:52 pm

Operator: SCB

Sample : SEQ-ICV3

Inst : MSD12

Misc : 1,1 9006891

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:59 2020

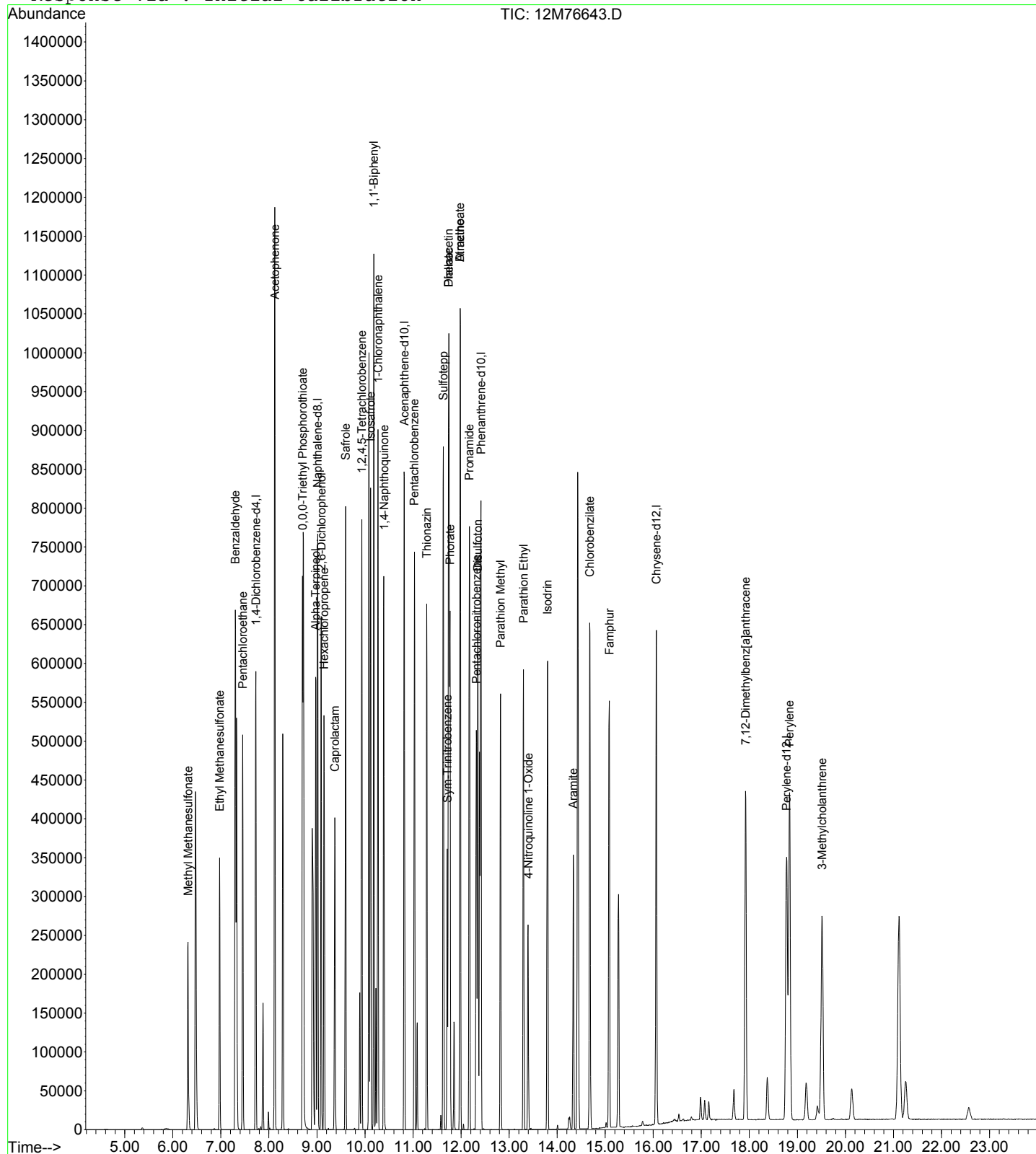
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76643.D

Vial: 20

Acq On : 27 Mar 2020 8:52 pm

Operator: SCB

Sample : SEQ-ICV3

Inst : MSD12

Misc : 1,1 9006891

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min

Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	93	0.00
2	1,4-Dioxane	50.000	0.000	100.0#	0	-4.56#
3	Methyl Methanesulfonate	50.000	45.997	8.0	94	0.00
4	Ethyl Methanesulfonate	50.000	45.676	8.6	94	0.00
5	Benzaldehyde	50.000	49.065	1.9	100	0.00
6	Pentachloroethane	50.000	45.856	8.3	95	0.00
7	Acetophenone	50.000	82.123	-64.2#	168	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	94	0.00
9	0,0,0-Triethyl Phosphorothi	50.000	44.371	11.3	92	0.00
10	Alpha-Terpineol	50.000	34.613	30.8	72	0.00
11	2,6-Dichlorophenol	50.000	48.087	3.8	97	0.00
12	Hexachloropropene	50.000	47.331	5.3	92	0.00
13	Caprolactam	50.000	51.778	-3.6	101	0.00
14	Safrole	50.000	44.935	10.1	92	0.00
15 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00
16	1,2,4,5-Tetrachlorobenzene	50.000	46.856	6.3	100	0.00
17	Isosafrole	50.000	50.741	-1.5	106	0.00
18	1,1'-Biphenyl	50.000	52.778	-5.6	99	0.00
19	1-Chloronaphthalene	50.000	53.400	-6.8	99	0.00
20	1,4-Naphthoquinone	50.000	51.481	-3.0	101	0.00
21	Pentachlorobenzene	50.000	46.989	6.0	100	0.00
22	Thionazin	50.000	51.281	-2.6	95	0.00
23 I	Phenanthrene-d10	40.000	40.000	0.0	95	0.00
24	Sulfotepp	50.000	46.215	7.6	95	0.00
25	Sym-Trinitrobenzene	50.000	51.480	-3.0	103	0.00
26	Diallate	50.000	50.237	-0.5	100	0.00
27	Phenacetin	50.000	49.912	0.2	99	0.00
28	Phorate	50.000	44.841	10.3	91	0.00
29	Dimethoate	50.000	48.844	2.3	99	0.00
30	Atrazine	50.000	47.052	5.9	99	0.00
31	Pronamide	50.000	47.482	5.0	96	0.00
32	Pentachloronitrobenzene	50.000	47.663	4.7	96	0.00
33	Disulfoton	50.000	49.591	0.8	90	0.00
34	Parathion Methyl	50.000	52.245	-4.5	99	0.00
35	Parathion Ethyl	50.000	50.179	-0.4	94	0.00
36	4-Nitroquinoline 1-Oxide	50.000	50.467	-0.9	99	0.00
37	Isodrin	50.000	48.036	3.9	98	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	101	0.00
39	Aramite	50.000	51.516	-3.0	99	0.00
40	Chlorobenzilate	50.000	46.417	7.2	95	0.00
41	Famphur	50.000	50.355	-0.7	100	0.00
42 I	Perylene-d12	40.000	40.000	0.0	87	0.00
43	7,12-Dimethylbenz[a]anthrac	50.000	50.404	-0.8	83	0.00
44	Perylene	50.000	40.804	18.4	78	0.00
45	3-Methylcholanthrene	50.000	34.612	30.8	62	-0.01

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

12M76643.D TCL.M

Sat Mar 28 10:02:59 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\032720\12M76644.D Vial: 21
Acq On : 27 Mar 2020 9:24 pm Operator: SCB
Sample : SEQ-ICV4 Inst : MSD12
Misc : 1,1 9008994 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 09:59:20 2020 Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Sat Mar 28 09:39:43 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.727	152	98287	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.014	136	361199	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.815	164	199196	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.407	188	338578	40.0000	ug/ml	0.000
38) Chrysene-d12	16.066	240	295029	40.0000	ug/ml	0.000
42) Perylene-d12	18.769	264	282968	40.0000	ug/ml	-0.011

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.55	88	80910	49.2110	ug/ml	94
33) Disulfoton	12.41	88	3369	Below Cal	#	37

Data File : I:\MSDCHEM\1\DATA\032720\12M76644.D

Vial: 21

Acq On : 27 Mar 2020 9:24 pm

Operator: SCB

Sample : SEQ-ICV4

Inst : MSD12

Misc : 1,1 9008994

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Mar 28 9:59 2020

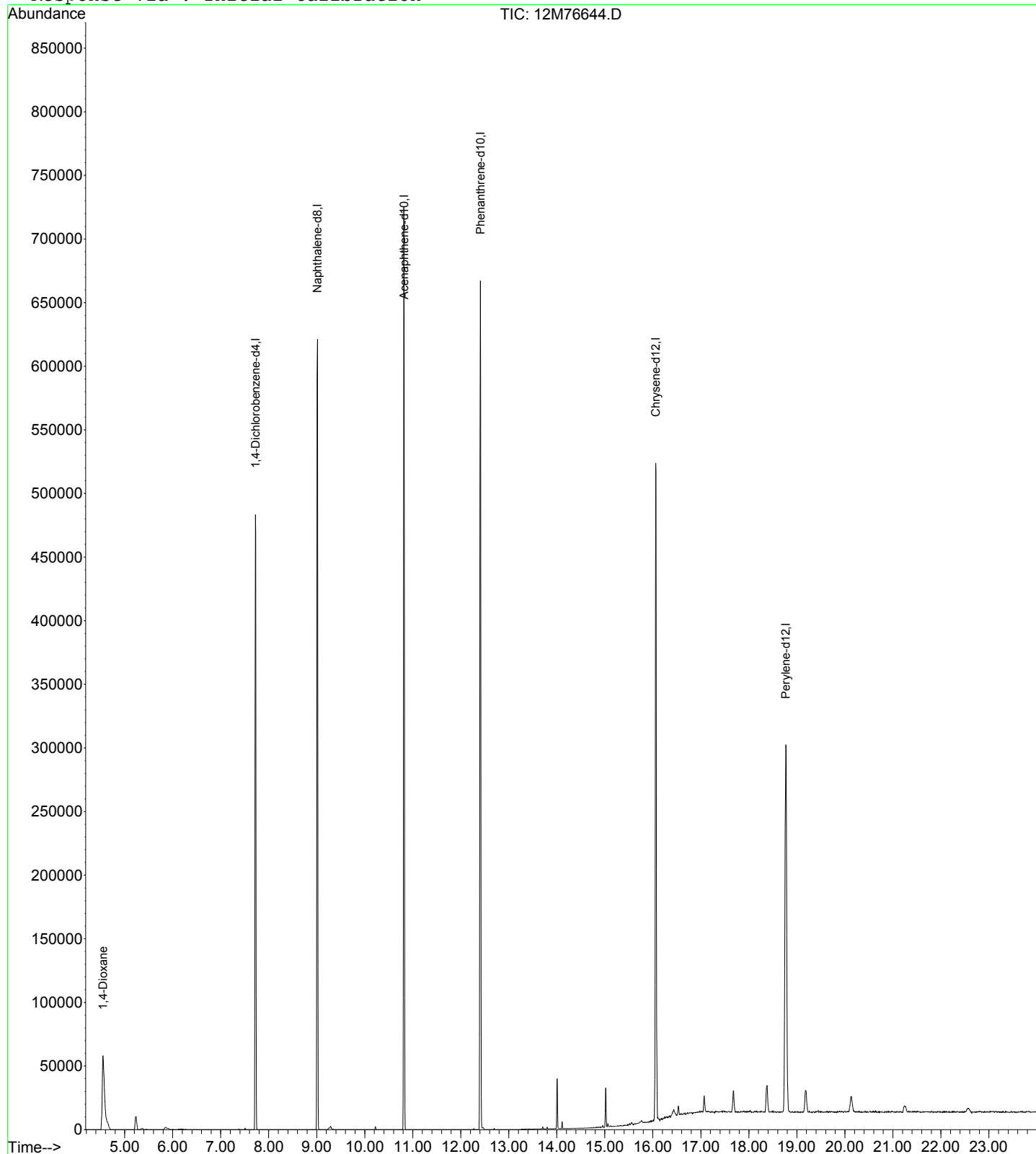
Quant Results File: TCL.RES

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Sat Mar 28 09:39:43 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\032720\12M76644.D
 Acq On : 27 Mar 2020 9:24 pm
 Sample : SEQ-ICV4
 Misc : 1,1 9008994
 MS Integration Params: RTEINT.P

Vial: 21
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

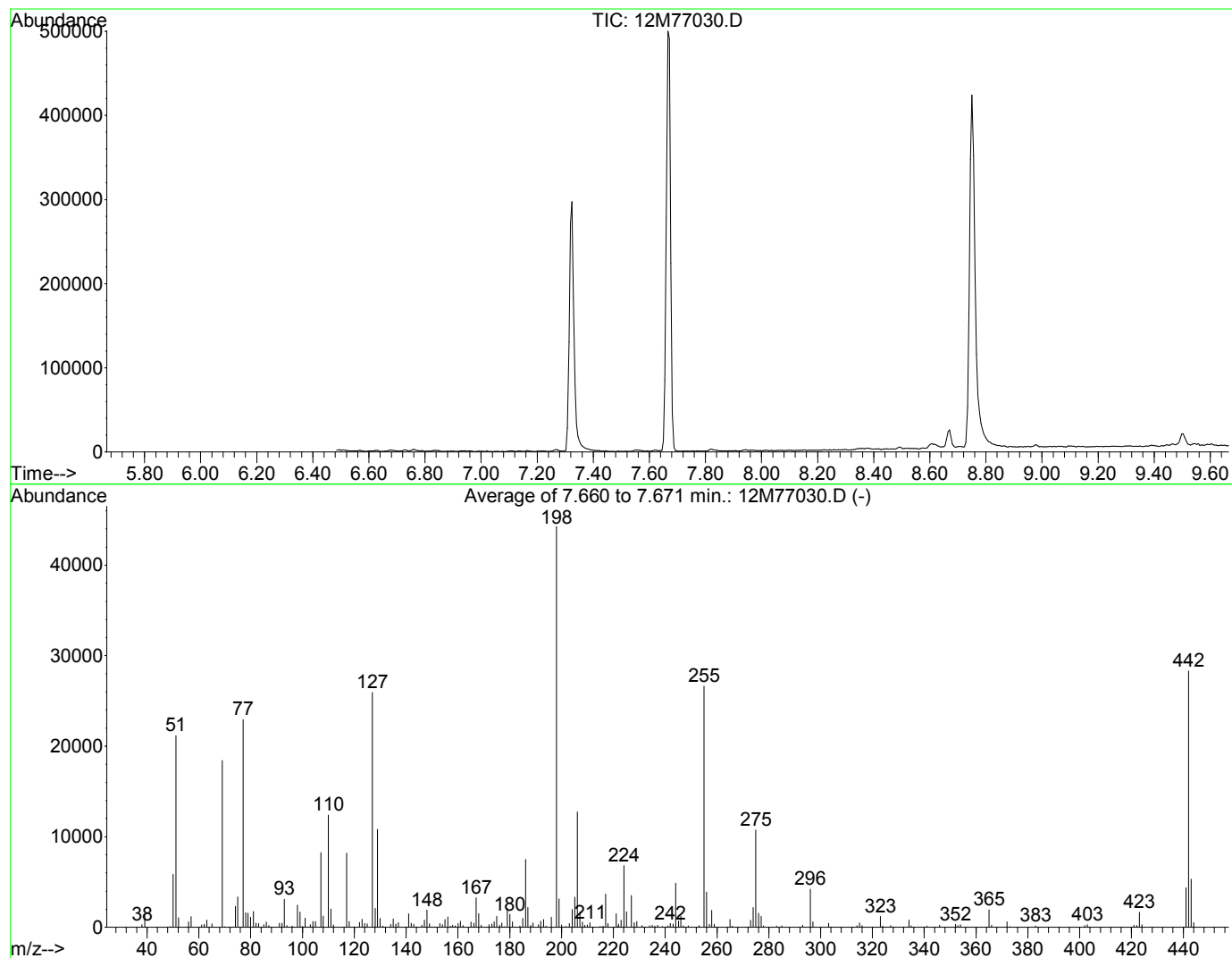
Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Sat Mar 28 09:39:43 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	77	0.00
2	1,4-Dioxane	50.000	49.211	1.6	85	-0.01
3	Methyl Methanesulfonate	50.000	0.000	100.0#	0	-6.32#
4	Ethyl Methanesulfonate	50.000	0.000	100.0#	0	-6.97#
5	Benzaldehyde	50.000	0.000	100.0#	0	-7.30#
6	Pentachloroethane	50.000	0.000	100.0#	0	-7.45#
7	Acetophenone	50.000	0.000	100.0#	0	-8.12#
8 I	Naphthalene-d8	40.000	40.000	0.0	79	0.00
9	0,0,0-Triethyl Phosphorothi	50.000	0.000	100.0#	0	-8.70#
10	Alpha-Terpineol	50.000	0.000	100.0#	0	-8.97#
11	2,6-Dichlorophenol	50.000	0.000	100.0#	0	-9.09#
12	Hexachloropropene	50.000	0.000	100.0#	0	-9.15#
13	Caprolactam	50.000	0.000	100.0#	0	-9.37#
14	Safrrole	50.000	0.000	100.0#	0	-9.60#
15 I	Acenaphthene-d10	40.000	40.000	0.0	83	0.00
16	1,2,4,5-Tetrachlorobenzene	50.000	0.000	100.0#	0	-9.93#
17	Isosafrole	50.000	0.000	100.0#	0	-10.12#
18	1,1'-Biphenyl	50.000	0.000	100.0#	0	-10.18#
19	1-Chloronaphthalene	50.000	0.000	100.0#	0	-10.27#
20	1,4-Naphthoquinone	50.000	0.000	100.0#	0	-10.39#
21	Pentachlorobenzene	50.000	0.000	100.0#	0	-11.03#
22	Thionazin	50.000	0.000	100.0#	0	-11.28#
23 I	Phenanthrene-d10	40.000	40.000	0.0	79	0.00
24	Sulfotepp	50.000	0.000	100.0#	0	-11.63#
25	Sym-Trinitrobenzene	50.000	0.000	100.0#	0	-11.71#
26	Diallate	50.000	0.000	100.0#	0	-11.75#
27	Phenacetin	50.000	0.000	100.0#	0	-11.74#
28	Phorate	50.000	0.000	100.0#	0	-11.77#
29	Dimethoate	50.000	0.000	100.0#	0	-11.98#
30	Atrazine	50.000	0.000	100.0#	0	-11.98#
31	Pronamide	50.000	0.000	100.0#	0	-12.17#
32	Pentachloronitrobenzene	50.000	0.000	100.0#	0	-12.32#
33	Disulfoton	50.000	-1.548	103.1#	2	0.06
34	Parathion Methyl	50.000	0.000	100.0#	0	-12.82#
35	Parathion Ethyl	50.000	0.000	100.0#	0	-13.30#
36	4-Nitroquinoline 1-Oxide	50.000	0.000	100.0#	0	-13.40#
37	Isodrin	50.000	0.000	100.0#	0	-13.80#
38 I	Chrysene-d12	40.000	40.000	0.0	83	0.00
39	Aramite	50.000	0.000	100.0#	0	-14.34#
40	Chlorobenzilate	50.000	0.000	100.0#	0	-14.68#
41	Famphur	50.000	0.000	100.0#	0	-15.08#
42 I	Perylene-d12	40.000	40.000	0.0	71	-0.01
43	7,12-Dimethylbenz[a]anthrac	50.000	0.000	100.0#	0	-17.93#
44	Perylene	50.000	0.000	100.0#	0	-18.84#
45	3-Methylcholanthrene	50.000	0.000	100.0#	0	-19.52#

DFTPP

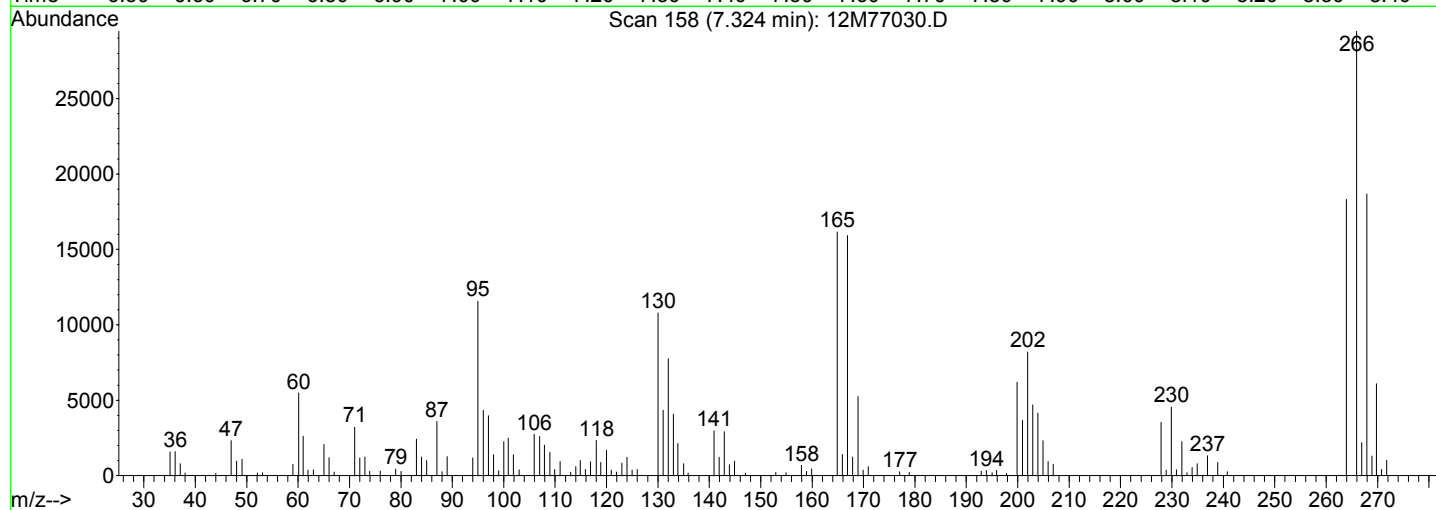
Data File : I:\MSDCHEM\1\DATA\042220\12M77030.D Vial: 1
 Acq On : 22 Apr 2020 9:58 am Operator: SCB
 Sample : SEQ-TUN1 Inst : MSD12
 Misc : 1,1 0001469 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Method : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP



AutoFind: Scans 221, 222, 223; Background Corrected with Scan 215

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.8	21168	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	41.6	18420	PASS
70	69	0.00	2	0.4	71	PASS
127	198	40	60	58.6	25946	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	44274	PASS
199	198	5	9	7.1	3131	PASS
275	198	10	30	24.3	10740	PASS
365	198	1	100	4.4	1957	PASS
441	443	0.01	100	82.1	4380	PASS
442	198	40	100	64.0	28327	PASS
443	442	17	23	18.8	5337	PASS

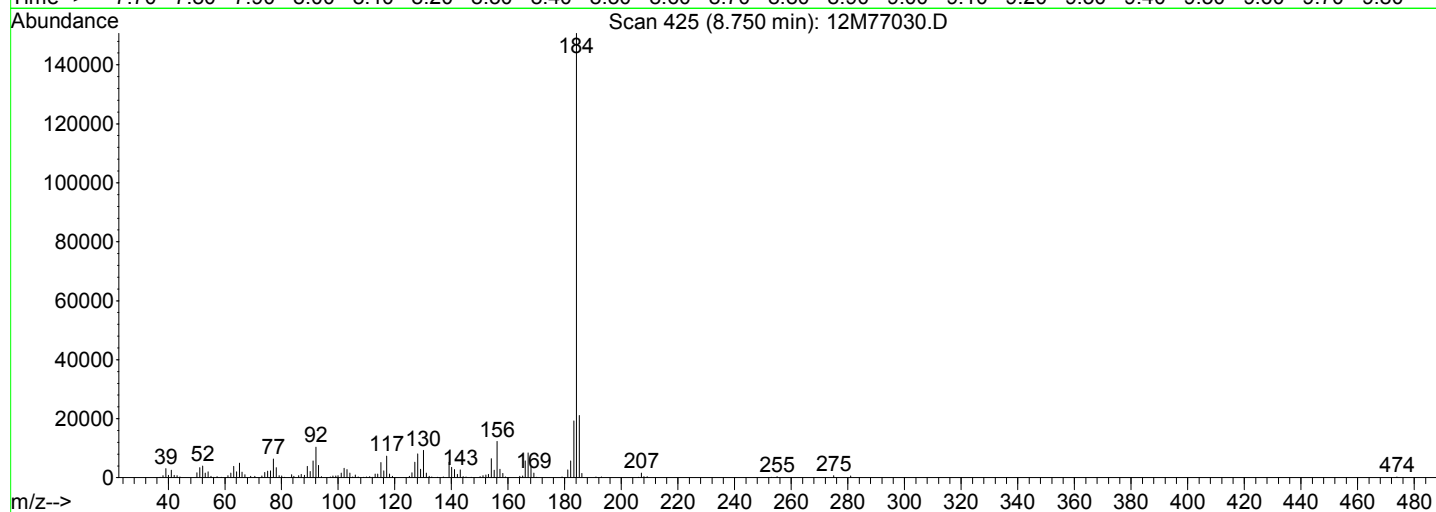
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Method      : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title       : DFTPP
Last Update  : Tue Dec 24 09:23:10 2019
Response via : Single Level Calibration
```



TIC: 12M77030.D

Ion	Exp%	Act%
265.80	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

```
Method      : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title       : DFTPP
Last Update  : Tue Dec 24 09:23:10 2019
Response via : Single Level Calibration
```



TIC: 12M77030.D

Ion	Exp%	Act%
184.10	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\042220\12M77030.D

Vial: 1

Acq On : 22 Apr 2020 9:58 am

Operator: SCB

Sample : SEQ-TUN1

Inst : MSD12

Misc : 1,1 0001469

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 22 10:17 2020

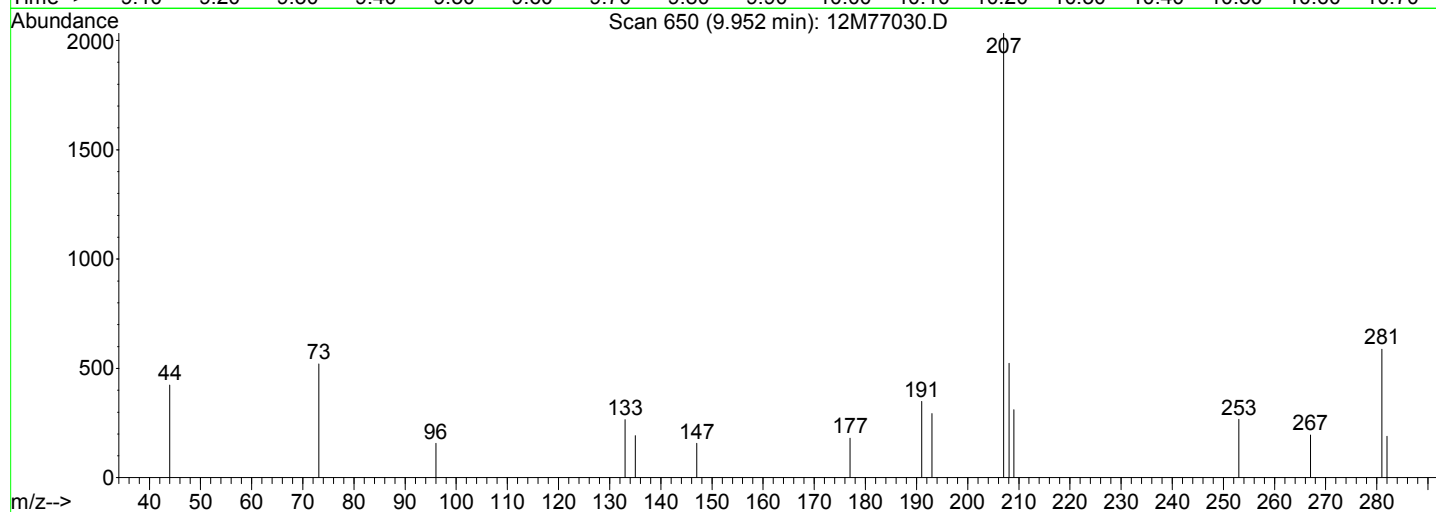
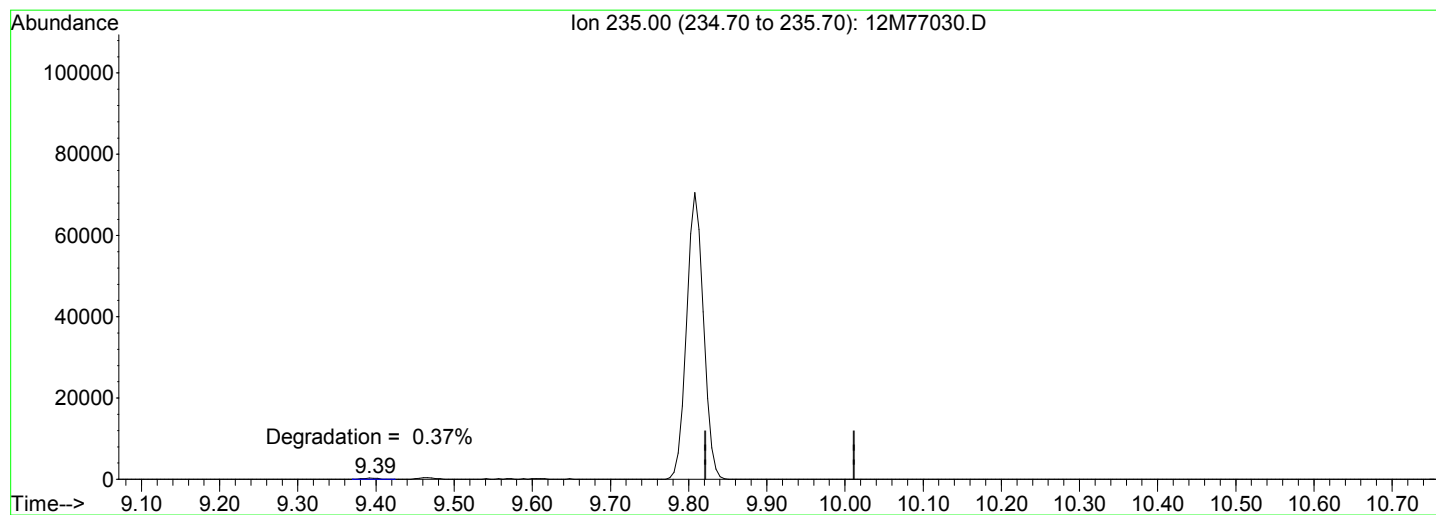
Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\DFTPP.M (RTE Integrator)

Title : DFTPP

Last Update : Tue Dec 24 09:23:10 2019

Response via : Single Level Calibration



TIC: 12M77030.D

(3) DDT

9.95min 0.00ug/ml

response 0

Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D

Vial: 2

Acq On : 22 Apr 2020 10:19 am

Operator: SCB

Sample : SEQ-CCV1

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 22 10:49:55 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.722	152	81539	40.0000	ug/ml	0.000
25) Naphthalene-d8	9.009	136	302444	40.0000	ug/ml	0.000
45) Acenaphthene-d10	10.815	164	176331	40.0000	ug/ml	0.000
73) Phenanthrene-d10	12.401	188	306550	40.0000	ug/ml	0.000
86) Chrysene-d12	16.061	240	243476	40.0000	ug/ml	0.000
98) Perylene-d12	18.764	264	258248	40.0000	ug/ml	0.000
System Monitoring Compounds						
6) 2-Fluorophenol	6.472	112	128235	42.6641193	ug/ml	0.00
Spiked Amount 100.000	Range 21 - 100		Recovery	=	42.66%	
9) Phenol-d5	7.326	99	144723	43.3751098	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery	=	43.38%	
26) Nitrobenzene-d5	8.288	82	164753	48.6655368	ug/ml	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	97.33%	
49) 2-Fluorobiphenyl	10.078	172	338534	47.8471194	ug/ml	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	95.69%	
72) 2,4,6-Tribromophenol	11.632	330	34293	45.4436941	ug/ml	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery	=	45.44%	
89) p-Terphenyl-d14	14.421	244	354091	47.9316382	ug/ml	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	95.86%	
Target Compounds						
					Qvalue	
2) n-Nitrosodimethylamine	5.02	74	82344	40.6687	ug/ml#	51
3) Pyridine	5.04	79	134151	39.3826	ug/ml#	76
4) 2-Picoline	5.88	93	148263	40.4195	ug/ml	94
5) n-Nitrosomethylethylamine	6.01	88	62391	41.0001	ug/ml#	55
7) n-Nitrosodiethylamine	6.71	102	64396	42.1668	ug/ml#	65
8) Aniline	7.42	66	82580	47.0009	ug/ml	85
10) Phenol	7.34	94	157859	42.9151	ug/ml#	79
11) bis(2-Chloroethyl) ether	7.44	63	109886	46.6567	ug/ml	86
12) 2-Chlorophenol	7.55	128	141880	43.5236	ug/ml	97
13) 1,3-Dichlorobenzene	7.69	146	153660	44.8035	ug/ml	98
14) 1,4-Dichlorobenzene	7.74	146	153828	45.5597	ug/ml	97
15) Benzyl Alcohol	7.83	108	87026	44.9035	ug/ml	81
16) 1,2-Dichlorobenzene	7.93	146	140380	46.5721	ug/ml	97
17) 2-Methylphenol	7.94	107	105783	46.9710	ug/ml	92
18) bis(2-Chloroisopropyl) ethe	7.97	45	200898	48.9988	ug/ml	95
19) 3-,4-Methylphenol	8.06	107	134995	42.9704	ug/ml	94
20) n-Nitrosopyrrolidine	8.11	100	57859	42.8624	ug/ml#	48
21) n-Nitrosodipropylamine	8.11	70	89049	48.6878	ug/ml	79
22) n-Nitrosomorpholine	8.12	56	89631	62.7184	ug/ml#	93
23) o-Toluidine	8.17	106	196731	42.2830	ug/ml	98
24) Hexachloroethane	8.25	117	66457	50.0143	ug/ml	98
27) Nitrobenzene	8.31	77	149828	48.4561	ug/ml	92
28) n-Nitrosopiperidine	8.45	114	65403	42.0804	ug/ml#	60
29) Isophorone	8.52	82	258212	46.0076	ug/ml	96
30) 2-Nitrophenol	8.62	139	70323	44.1678	ug/ml#	75
31) 2,4-Dimethylphenol	8.60	122	115958	43.0281	ug/ml	93
32) bis(2-Chloroethoxy) methane	8.69	93	145570	42.5436	ug/ml	99
33) Benzoic Acid	8.65	105	22358	36.1237	ug/ml	91
34) 2,4-Dichlorophenol	8.85	162	107313	46.3254	ug/ml	99
35) a,a-Dimethylphenethylamine	8.86	58	323699	45.4902	ug/ml#	92
36) 1,2,4-Trichlorobenzene	8.96	180	118924	45.8485	ug/ml	99
37) Naphthalene	9.03	128	413336	45.4694	ug/ml	99
38) 4-Chloroaniline	9.06	65	55533	54.4369	ug/ml	75

(#) = qualifier out of range (m) = manual integration

12M77031.D MEGAMIX.M

Fri Apr 24 14:46:16 2020

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D

Vial: 2

Acq On : 22 Apr 2020 10:19 am

Operator: SCB

Sample : SEQ-CCV1

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 22 10:49:55 2020

Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Tue Apr 21 08:35:29 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Hexachlorobutadiene	9.18	225	69794	54.7591	ug/ml	100
40) n-Nitrosodi-n-Butylamine	9.37	84	87902	47.8879	ug/ml#	80
41) p-Phenylenediamine	9.40	108	126023	43.0635	ug/ml#	91
42) 4-Chloro-3-Methylphenol	9.50	107	125349	50.2944	ug/ml	91
43) 2-Methylnaphthalene	9.72	142	272388	46.6387	ug/ml	99
44) 1-Methylnaphthalene	9.84	142	255276	46.4777	ug/ml#	94
46) Hexachlorocyclopentadiene	9.94	237	61483	44.4227	ug/ml	99
47) 2,4,6-Trichlorophenol	10.01	196	77301	46.2792	ug/ml	99
48) 2,4,5-Trichlorophenol	10.06	196	82042	46.8043	ug/ml	100
50) 2-Chloronaphthalene	10.22	162	246932	44.9694	ug/ml	95
51) 2-Nitroaniline	10.32	65	87822	51.4027	ug/ml	85
52) Dimethylphthalate	10.48	163	291075	46.5667	ug/ml	99
53) 1,3-Dinitrobenzene	10.54	168	48772	44.3764	ug/ml#	77
54) 2,6-Dinitrotoluene	10.58	165	65848	43.6169	ug/ml#	72
55) Acenaphthylene	10.67	152	383434	45.7320	ug/ml	99
56) 3-Nitroaniline	10.74	138	71150	42.3197	ug/ml	91
57) 2,4-Dinitrophenol	10.85	184	35264	55.8254	ug/ml	77
58) Acenaphthene	10.85	154	270875	51.5630	ug/ml	97
59) 4-Nitrophenol	10.85	65	62767	66.5244	ug/ml	80
60) 2,4-Dinitrotoluene	10.99	165	89681	48.4209	ug/ml	77
61) Dibenzofuran	11.00	168	354046	46.6795	ug/ml#	90
62) 2,3,5,6-Tetrachlorophenol	11.11	232	58521	46.8487	ug/ml#	91
63) 2,3,4,6-Tetrachlorophenol	11.15	232	68103	52.9527	ug/ml#	94
64) 1-Naphthylamine	11.08	143	250032	43.8297	ug/ml	91
65) 2-Naphthylamine	11.15	143	268008	50.8803	ug/ml	94
66) Diethylphthalate	11.19	149	301573	49.4873	ug/ml	98
67) Fluorene	11.36	166	299477	50.0719	ug/ml	99
68) 4-Chlorophenyl Phenyl Ethe	11.31	204	134718	46.0216	ug/ml	89
69) 4-Nitroaniline	11.37	138	77965	48.2355	ug/ml#	74
70) 5-Nitro-o-Toluidine	11.37	152	86060	52.0141	ug/ml#	87
71) 1,2-Diphenylhydrazine	11.47	77	311775	49.4472	ug/ml	94
74) 4,6-Dinitro-2-Methylphenol	11.41	198	47770	49.0076	ug/ml	69
75) Diphenylamine/n-Nitrosodip	11.43	169	249251	45.2931	ug/ml	99
76) 4-Bromophenyl Phenyl Ether	11.83	248	72397	43.7903	ug/ml	86
77) Hexachlorobenzene	12.05	284	81016	45.2799	ug/ml	87
78) 4-Aminobiphenyl	12.13	169	311922	45.6356	ug/ml	99
79) Pentachlorophenol	12.23	266	41311	42.1930	ug/ml	99
80) Phenanthrene	12.43	178	418227	44.8000	ug/ml	99
81) Anthracene	12.49	178	423722	44.7475	ug/ml	99
82) Carbazole	12.64	167	380746	43.4905	ug/ml	95
83) Di-n-Butyl Phthalate	13.00	149	515020	48.3068	ug/ml	98
84) Methapyrilene	13.44	58	261775	52.8334	ug/ml	97
85) Fluoranthene	13.97	202	463507	45.8685	ug/ml	97
87) Benzidine	14.07	184	266533	51.1953	ug/ml	100
88) Pyrene	14.29	202	463265	45.5171	ug/ml	99
90) p-(Dimethylamino)azobenzen	14.63	225	80251	43.7007	ug/ml#	77
91) Butyl Benzyl Phthalate	15.09	149	237237	56.0484	ug/ml	95
92) 3,3'-Dimethylbenzidine	15.11	212	714955	124.8534	ug/ml	100
93) 2-Acetylaminofluorene	15.52	181	193893	45.5010	ug/ml	94
94) bis(2-Ethylhexyl)phthalate	15.93	149	333718	55.2050	ug/ml	98
95) 3,3'-Dichlorobenzidine	15.94	252	161513	49.5538	ug/ml	100
96) Benzo[a]anthracene	16.03	228	381095	44.7217	ug/ml	99
97) Chrysene	16.10	228	372079	44.7139	ug/ml	99
99) Di-n-Octyl Phthalate	16.87	149	546127	53.5843	ug/ml	95

(#)=qualifier out of range (m)=manual integration

12M77031.D MEGAMIX.M

Fri Apr 24 14:46:17 2020

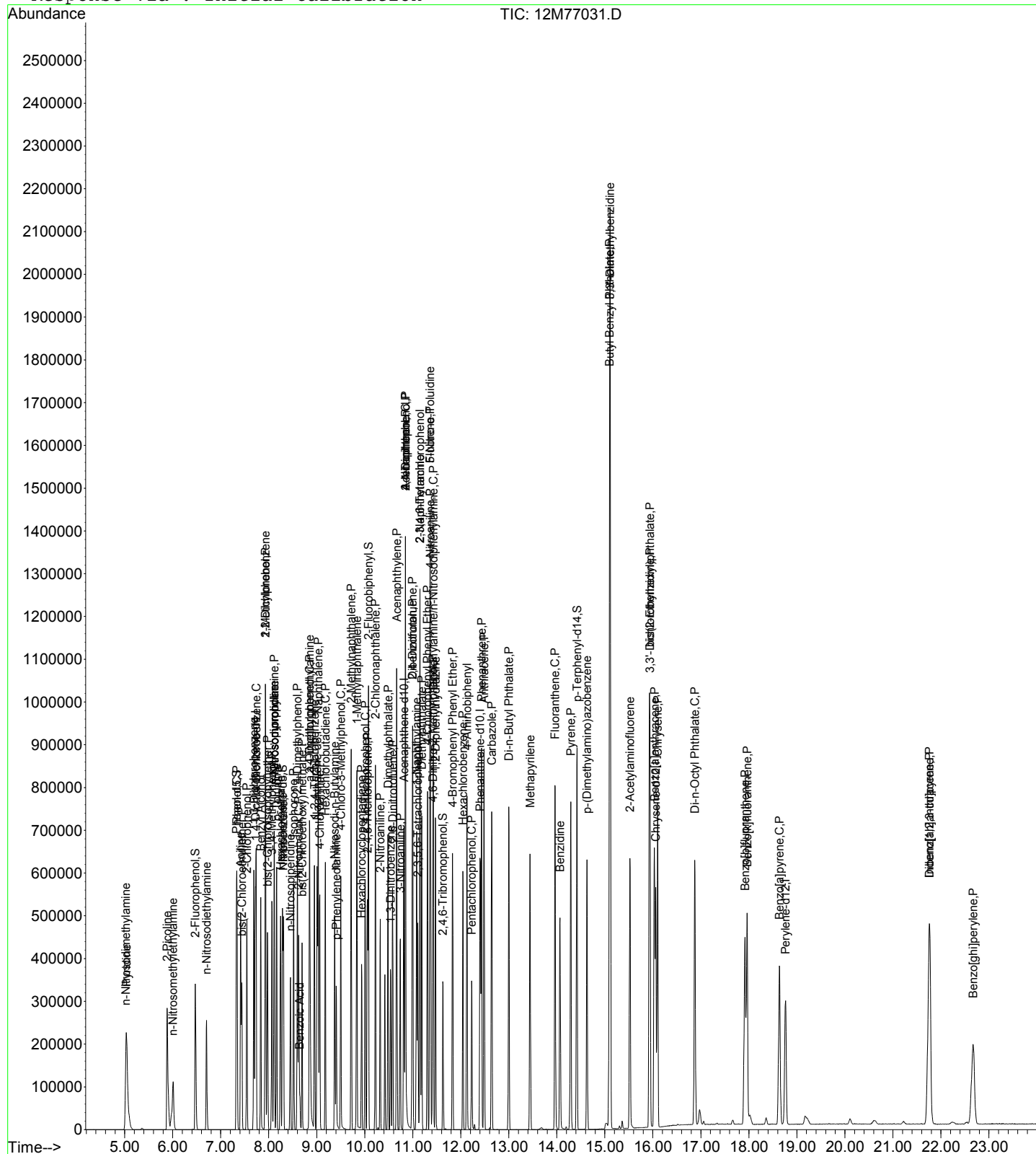
Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D Vial: 2
Acq On : 22 Apr 2020 10:19 am Operator: SCB
Sample : SEQ-CCV1 Inst : MSD12
Misc : 1,1 0002259 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 22 10:49:55 2020 Quant Results File: MEGAMIX.RES

Quant Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Tue Apr 21 08:35:29 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
100) Benzo[b]fluoranthene	17.92	252	400786	48.8296	ug/ml	97
101) Benzo[k]fluoranthene	17.96	252	361035	47.4816	ug/ml	98
102) Benzo[a]pyrene	18.64	252	340468	47.3473	ug/ml	96
103) Indeno[1,2,3-cd]pyrene	21.77	276	442731	50.0239	ug/ml	92
104) Dibenz[ah]anthracene	21.76	278	380620	51.0193	ug/ml	95
105) Benzo[ghi]perylene	22.67	276	341943	46.7647	ug/ml	93

Quant Results File: MEGAMIX.RES

```
Method      : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title       : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Thu Apr 23 14:43:01 2020
Response via : Initial Calibration
```



Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D

Vial: 2

Acq On : 22 Apr 2020 10:19 am

Operator: SCB

Sample : SEQ-CCV1

Inst : MSD12

Misc : 1,1 0002259

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 22 10:49 2020

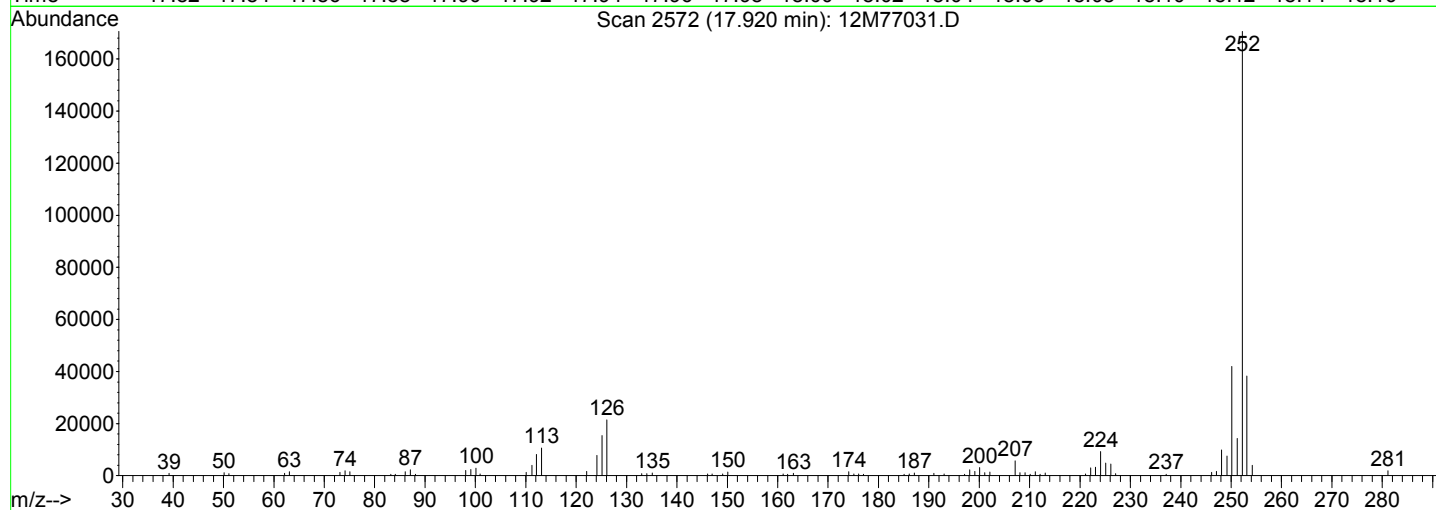
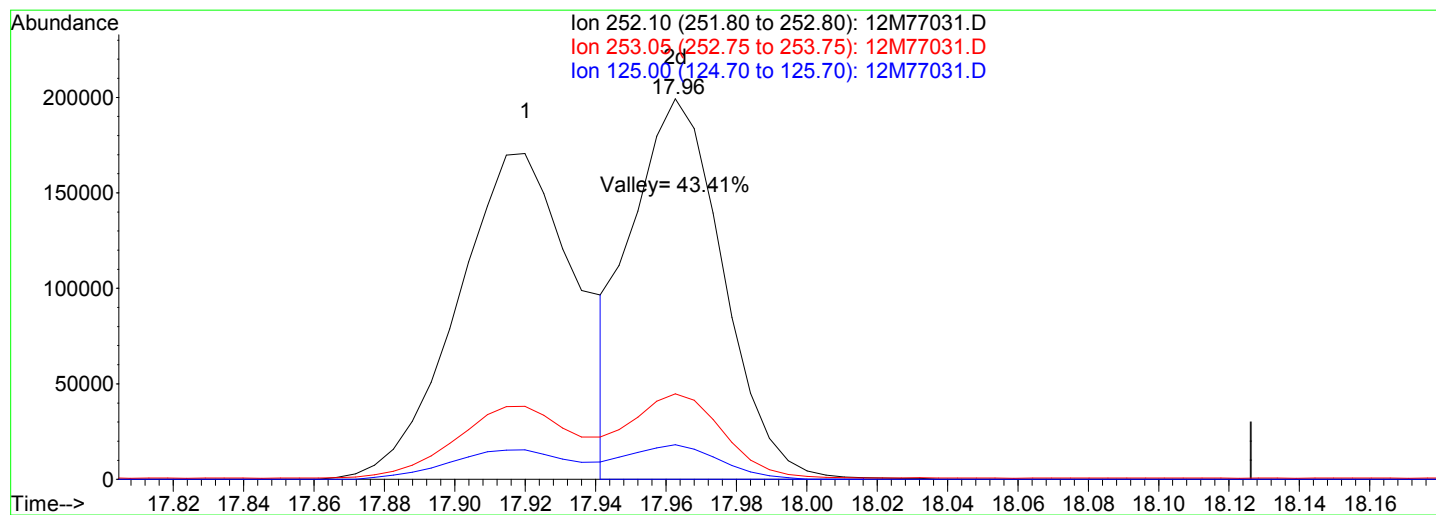
Quant Results File: temp.res

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Thu Apr 23 14:43:01 2020

Response via : Multiple Level Calibration



TIC: 12M77031.D

(100) Benzo[b]fluoranthene (P)

17.92min 48.83ug/ml

response 400786

Ion	Exp%	Act%
252.10	100	100
253.05	22.60	22.33
125.00	12.00	8.91
0.00	0.00	0.00

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D
 Acq On : 22 Apr 2020 10:19 am
 Sample : SEQ-CCV1
 Misc : 1,1 0002259
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Thu Apr 23 14:43:01 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	88	0.01
2	n-Nitrosodimethylamine	50.000	40.669	18.7	72	0.00
3	Pyridine	50.000	39.383	21.2	69	0.00
4	2-Picoline	50.000	40.419	19.2	73	0.00
5	n-Nitrosomethylethylamine	50.000	41.000	18.0	73	0.01
6 S	2-Fluorophenol	50.000	42.664	14.7	76	0.01
7	n-Nitrosodiethylamine	50.000	42.167	15.7	76	0.01
8	Aniline	50.000	47.001	6.0	86	0.01
9 S	Phenol-d5	50.000	43.375	13.3	78	0.01
10 C,P	Phenol	50.000	42.915	14.2	78	0.00
11 P	bis(2-Chloroethyl)ether	50.000	46.657	6.7	86	0.01
12 P	2-Chlorophenol	50.000	43.524	13.0	79	0.01
13	1,3-Dichlorobenzene	50.000	44.803	10.4	83	0.01
14 C	1,4-Dichlorobenzene	50.000	45.560	8.9	84	0.01
15	Benzyl Alcohol	50.000	44.904	10.2	79	0.01
16	1,2-Dichlorobenzene	50.000	46.572	6.9	89	0.01
17 P	2-Methylphenol	50.000	46.971	6.1	89	0.01
18 P	bis(2-Chloroisopropyl)ether	50.000	48.999	2.0	91	0.00
19 P	3-,4-Methylphenol	50.000	42.970	14.1	78	0.00
20	n-Nitrosopyrrolidine	50.000	42.862	14.3	79	0.00
21 P	n-Nitrosodipropylamine	50.000	48.688	2.6	89	0.00
22	n-Nitrosomorpholine	50.000	62.718	-25.4	104	0.00
23	o-Toluidine	50.000	42.283	15.4	79	0.01
24 P	Hexachloroethane	50.000	50.014	-0.0	90	0.01
25 I	Naphthalene-d8	40.000	40.000	0.0	89	0.01
26 S	Nitrobenzene-d5	50.000	48.666	2.7	89	0.01
27 P	Nitrobenzene	50.000	48.456	3.1	89	0.01
28	n-Nitrosopiperidine	50.000	42.080	15.8	76	0.01
29 P	Isophorone	50.000	46.008	8.0	85	0.00
30 C,P	2-Nitrophenol	50.000	44.168	11.7	79	0.01
31 P	2,4-Dimethylphenol	50.000	43.028	13.9	79	0.01
32 P	bis(2-Chloroethoxy)methane	50.000	42.544	14.9	78	0.01
33	Benzoic Acid	50.000	36.124	27.8	61	0.00
34 C,P	2,4-Dichlorophenol	50.000	46.325	7.3	85	0.01
35	a,a-Dimethylphenethylamine	50.000	45.490	9.0	81	-0.01
36	1,2,4-Trichlorobenzene	50.000	45.849	8.3	85	0.01
37 P	Naphthalene	50.000	45.469	9.1	85	0.01
38 P	4-Chloroaniline	50.000	54.437	-8.9	99	0.00
39 C,P	Hexachlorobutadiene	50.000	54.759	-9.5	99	0.01
40	n-Nitrosodi-n-Butylamine	50.000	47.888	4.2	87	0.00
41	p-Phenylenediamine	50.000	43.064	13.9	79	0.00
42 C,P	4-Chloro-3-Methylphenol	50.000	50.294	-0.6	90	0.01
43 P	2-Methylnaphthalene	50.000	46.639	6.7	87	0.01
44	1-Methylnaphthalene	50.000	46.478	7.0	87	0.01
45 I	Acenaphthene-d10	40.000	40.000	0.0	94	0.01
46 P	Hexachlorocyclopentadiene	50.000	44.423	11.2	86	0.02
47 C,P	2,4,6-Trichlorophenol	50.000	46.279	7.4	87	0.01
48 P	2,4,5-Trichlorophenol	50.000	46.804	6.4	89	0.01
49 S	2-Fluorobiphenyl	50.000	47.847	4.3	95	0.01
50 P	2-Chloronaphthalene	50.000	44.969	10.1	88	0.01
51 P	2-Nitroaniline	50.000	51.403	-2.8	98	0.01
52 P	Dimethylphthalate	50.000	46.567	6.9	91	0.00

(#) = Out of Range

12M77031.D MEGAMIX.M

Fri Apr 24 14:46:06 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D
 Acq On : 22 Apr 2020 10:19 am
 Sample : SEQ-CCV1
 Misc : 1,1 0002259
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Thu Apr 23 14:43:01 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	50.000	44.376	11.2	83	0.01
54 P	2,6-Dinitrotoluene	50.000	43.617	12.8	84	0.01
55 P	Acenaphthylene	50.000	45.732	8.5	91	0.01
56 P	3-Nitroaniline	50.000	42.320	15.4	81	0.01
57 P	2,4-Dinitrophenol	50.000	55.825	-11.7	115	0.01
58 C,P	Acenaphthene	50.000	51.563	-3.1	102	0.01
59 P	4-Nitrophenol	50.000	66.524	-33.0	117	0.01
60 P	2,4-Dinitrotoluene	50.000	48.421	3.2	91	0.01
61 P	Dibenzofuran	50.000	46.680	6.6	92	0.01
62	2,3,5,6-Tetrachlorophenol	50.000	46.849	6.3	87	0.01
63	2,3,4,6-Tetrachlorophenol	50.000	52.953	-5.9	104	0.01
64	1-Naphthylamine	50.000	43.830	12.3	84	0.01
65	2-Naphthylamine	50.000	50.880	-1.8	102	0.01
66 P	Diethylphthalate	50.000	49.487	1.0	98	0.01
67 P	Fluorene	50.000	50.072	-0.1	101	0.01
68 P	4-Chlorophenyl Phenyl Ether	50.000	46.022	8.0	91	0.01
69 P	4-Nitroaniline	50.000	48.236	3.5	95	0.00
70	5-Nitro-o-Toluidine	50.000	52.014	-4.0	103	0.01
71	1,2-Diphenylhydrazine	50.000	49.447	1.1	96	0.01
72 S	2,4,6-Tribromophenol	50.000	45.444	9.1	87	0.01
73 I	Phenanthrene-d10	40.000	40.000	0.0	97	0.01
74 P	4,6-Dinitro-2-Methylphenol	50.000	49.008	2.0	94	0.00
75 C,P	Diphenylamine/n-Nitrosodiph	50.000	45.293	9.4	92	0.01
76 P	4-Bromophenyl Phenyl Ether	50.000	43.790	12.4	90	0.01
77 P	Hexachlorobenzene	50.000	45.280	9.4	93	0.02
78	4-Aminobiphenyl	50.000	45.636	8.7	94	0.01
79 C,P	Pentachlorophenol	50.000	42.193	15.6	87	0.01
80 P	Phenanthrene	50.000	44.800	10.4	91	0.01
81 P	Anthracene	50.000	44.747	10.5	91	0.01
82 P	Carbazole	50.000	43.491	13.0	87	0.01
83 P	Di-n-Butyl Phthalate	50.000	48.307	3.4	96	0.01
84	Methapyrilene	50.000	52.833	-5.7	99	0.02
85 C,P	Fluoranthene	50.000	45.868	8.3	92	0.02
86 I	Chrysene-d12	40.000	40.000	0.0	97	0.01
87	Benzidine	50.000	51.195	-2.4	107	0.02
88 P	Pyrene	50.000	45.517	9.0	91	0.02
89 S	p-Terphenyl-d14	50.000	47.932	4.1	97	0.02
90	p-(Dimethylamino)azobenzene	50.000	43.701	12.6	85	0.01
91 P	Butyl Benzyl Phthalate	50.000	56.048	-12.1	113	0.01
92	3,3'-Dimethylbenzidine	100.000	124.853	-24.9	132	0.01
93	2-Acetylaminofluorene	50.000	45.501	9.0	93	0.00
94 P	bis(2-Ethylhexyl)phthalate	50.000	55.205	-10.4	105	0.01
95 P	3,3'-Dichlorobenzidine	50.000	49.554	0.9	103	0.02
96 P	Benzo[a]anthracene	50.000	44.722	10.6	91	0.02
97 P	Chrysene	50.000	44.714	10.6	92	0.01
98 I	Perylene-d12	40.000	40.000	0.0	89	0.02
99 C,P	Di-n-Octyl Phthalate	50.000	53.584	-7.2	95	0.01
100 P	Benzo[b]fluoranthene	50.000	48.830	2.3	87	0.02
101 P	Benzo[k]fluoranthene	50.000	47.482	5.0	88	0.02
102 C,P	Benzo[a]pyrene	50.000	47.347	5.3	85	0.02
103 P	Indeno[1,2,3-cd]pyrene	50.000	50.024	-0.0	89	0.03

(#) = Out of Range

12M77031.D MEGAMIX.M

Fri Apr 24 14:46:06 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D Vial: 2
Acq On : 22 Apr 2020 10:19 am Operator: SCB
Sample : SEQ-CCV1 Inst : MSD12
Misc : 1,1 0002259 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Thu Apr 23 14:43:01 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	50.000	51.019	-2.0	91	0.03
105 P	Benzo[ghi]perylene	50.000	46.765	6.5	82	0.03

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D
 Acq On : 22 Apr 2020 10:19 am
 Sample : SEQ-CCV1
 Misc : 1,1 0002259
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Thu Apr 23 14:43:01 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	88	0.01
2	n-Nitrosodimethylamine	0.993	0.808	18.6	72	0.00
3	Pyridine	1.671	1.316	21.2	69	0.00
4	2-Picoline	1.799	1.455	19.1	73	0.00
5	n-Nitrosomethylethylamine	0.747	0.612	18.1	73	0.01
6 S	2-Fluorophenol	1.474	1.258	14.7	76	0.01
7	n-Nitrosodiethylamine	0.749	0.632	15.6	76	0.01
8	Aniline	0.862	0.810	6.0	86	0.01
9 S	Phenol-d5	1.637	1.420	13.3	78	0.01
10 C,P	Phenol	1.804	1.549	14.1	78	0.00
11 P	bis(2-Chloroethyl)ether	1.155	1.078	6.7	86	0.01
12 P	2-Chlorophenol	1.599	1.392	12.9	79	0.01
13	1,3-Dichlorobenzene	1.682	1.508	10.3	83	0.01
14 C	1,4-Dichlorobenzene	1.656	1.509	8.9	84	0.01
15	Benzyl Alcohol	0.951	0.854	10.2	79	0.01
16	1,2-Dichlorobenzene	1.479	1.377	6.9	89	0.01
17 P	2-Methylphenol	1.105	1.038	6.1	89	0.01
18 P	bis(2-Chloroisopropyl)ether	2.011	1.971	2.0	91	0.00
19 P	3-,4-Methylphenol	1.541	1.324	14.1	78	0.00
20	n-Nitrosopyrrolidine	0.662	0.568	14.2	79	0.00
21 P	n-Nitrosodipropylamine	0.921	0.874	5.1	89	0.00
22	n-Nitrosomorpholine	0.800	0.879	-9.9	104	0.00
23	o-Toluidine	2.282	1.930	15.4	79	0.01
24 P	Hexachloroethane	0.652	0.652	0.0	90	0.01
25 I	Naphthalene-d8	1.000	1.000	0.0	89	0.01
26 S	Nitrobenzene-d5	0.448	0.436	2.7	89	0.01
27 P	Nitrobenzene	0.409	0.396	3.2	89	0.01
28	n-Nitrosopiperidine	0.206	0.173	16.0	76	0.01
29 P	Isophorone	0.742	0.683	8.0	85	0.00
30 C,P	2-Nitrophenol	0.211	0.186	11.8	79	0.01
31 P	2,4-Dimethylphenol	0.356	0.307	13.8	79	0.01
32 P	bis(2-Chloroethoxy)methane	0.453	0.385	15.0	78	0.01
33	Benzoic Acid	0.092	0.059	35.9	61	0.00
34 C,P	2,4-Dichlorophenol	0.306	0.284	7.2	85	0.01
35	a,a-Dimethylphenethylamine	0.941	0.856	9.0	81	-0.01
36	1,2,4-Trichlorobenzene	0.343	0.315	8.2	85	0.01
37 P	Naphthalene	1.202	1.093	9.1	85	0.01
38 P	4-Chloroaniline	0.135	0.147	-8.9	99	0.00
39 C,P	Hexachlorobutadiene	0.169	0.185	-9.5	99	0.01
40	n-Nitrosodi-n-Butylamine	0.243	0.233	4.1	87	0.00
41	p-Phenylenediamine	0.387	0.333	14.0	79	0.00
42 C,P	4-Chloro-3-Methylphenol	0.330	0.332	-0.6	90	0.01
43 P	2-Methylnaphthalene	0.772	0.720	6.7	87	0.01
44	1-Methylnaphthalene	0.726	0.675	7.0	87	0.01
45 I	Acenaphthene-d10	1.000	1.000	0.0	94	0.01
46 P	Hexachlorocyclopentadiene	0.260	0.279	-7.3	86	0.02
47 C,P	2,4,6-Trichlorophenol	0.379	0.351	7.4	87	0.01
48 P	2,4,5-Trichlorophenol	0.398	0.372	6.5	89	0.01
49 S	2-Fluorobiphenyl	1.605	1.536	4.3	95	0.01
50 P	2-Chloronaphthalene	1.246	1.120	10.1	88	0.01
51 P	2-Nitroaniline	0.388	0.398	-2.6	98	0.01
52 P	Dimethylphthalate	1.418	1.321	6.8	91	0.00

(#) = Out of Range

12M77031.D MEGAMIX.M

Fri Apr 24 14:46:09 2020

Page 1

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D
 Acq On : 22 Apr 2020 10:19 am
 Sample : SEQ-CCV1
 Misc : 1,1 0002259
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Thu Apr 23 14:43:01 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53	1,3-Dinitrobenzene	0.249	0.221	11.2	83	0.01
54 P	2,6-Dinitrotoluene	0.342	0.299	12.6	84	0.01
55 P	Acenaphthylene	1.902	1.740	8.5	91	0.01
56 P	3-Nitroaniline	0.381	0.323	15.2	81	0.01
57 P	2,4-Dinitrophenol	0.124	0.160	-29.0	115	0.01
58 C,P	Acenaphthene	1.192	1.229	-3.1	102	0.01
59 P	4-Nitrophenol	0.206	0.285	-38.3	117	0.01
60 P	2,4-Dinitrotoluene	0.420	0.407	3.1	91	0.01
61 P	Dibenzofuran	1.721	1.606	6.7	92	0.01
62	2,3,5,6-Tetrachlorophenol	0.283	0.266	6.0	87	0.01
63	2,3,4,6-Tetrachlorophenol	0.292	0.309	-5.8	104	0.01
64	1-Naphthylamine	1.294	1.134	12.4	84	0.01
65	2-Naphthylamine	1.195	1.216	-1.8	102	0.01
66 P	Diethylphthalate	1.382	1.368	1.0	98	0.01
67 P	Fluorene	1.357	1.359	-0.1	101	0.01
68 P	4-Chlorophenyl Phenyl Ether	0.664	0.611	8.0	91	0.01
69 P	4-Nitroaniline	0.367	0.354	3.5	95	0.00
70	5-Nitro-o-Toluidine	0.375	0.390	-4.0	103	0.01
71	1,2-Diphenylhydrazine	1.430	1.414	1.1	96	0.01
72 S	2,4,6-Tribromophenol	0.171	0.156	8.8	87	0.01
73 I	Phenanthrene-d10	1.000	1.000	0.0	97	0.01
74 P	4,6-Dinitro-2-Methylphenol	0.127	0.125	1.6	94	0.00
75 C,P	Diphenylamine/n-Nitrosodiph	0.718	0.650	9.5	92	0.01
76 P	4-Bromophenyl Phenyl Ether	0.216	0.189	12.5	90	0.01
77 P	Hexachlorobenzene	0.233	0.211	9.4	93	0.02
78	4-Aminobiphenyl	0.892	0.814	8.7	94	0.01
79 C,P	Pentachlorophenol	0.118	0.108	8.5	87	0.01
80 P	Phenanthrene	1.218	1.091	10.4	91	0.01
81 P	Anthracene	1.236	1.106	10.5	91	0.01
82 P	Carbazole	1.142	0.994	13.0	87	0.01
83 P	Di-n-Butyl Phthalate	1.391	1.344	3.4	96	0.01
84	Methapyrilene	0.647	0.683	-5.6	99	0.02
85 C,P	Fluoranthene	1.319	1.210	8.3	92	0.02
86 I	Chrysene-d12	1.000	1.000	0.0	97	0.01
87	Benzidine	0.855	0.876	-2.5	107	0.02
88 P	Pyrene	1.672	1.522	9.0	91	0.02
89 S	p-Terphenyl-d14	1.214	1.163	4.2	97	0.02
90	p-(Dimethylamino)azobenzene	0.302	0.264	12.6	85	0.01
91 P	Butyl Benzyl Phthalate	0.695	0.780	-12.2	113	0.01
92	3,3'-Dimethylbenzidine	0.941	1.175	-24.9	132	0.01
93	2-Acetylaminofluorene	0.641	0.637	0.6	93	0.00
94 P	bis(2-Ethylhexyl)phthalate	0.993	1.097	-10.5	105	0.01
95 P	3,3'-Dichlorobenzidine	0.535	0.531	0.7	103	0.02
96 P	Benzo[a]anthracene	1.400	1.252	10.6	91	0.02
97 P	Chrysene	1.367	1.223	10.5	92	0.01
98 I	Perylene-d12	1.000	1.000	0.0	89	0.02
99 C,P	Di-n-Octyl Phthalate	1.579	1.692	-7.2	95	0.01
100 P	Benzo[b]fluoranthene	1.271	1.242	2.3	87	0.02
101 P	Benzo[k]fluoranthene	1.178	1.118	5.1	88	0.02
102 C,P	Benzo[a]pyrene	1.114	1.055	5.3	85	0.02
103 P	Indeno[1,2,3-cd]pyrene	1.371	1.371	0.0	89	0.03

(#) = Out of Range

12M77031.D MEGAMIX.M

Fri Apr 24 14:46:09 2020

Page 2

Data File : I:\MSDCHEM\1\DATA\042220\12M77031.D Vial: 2
Acq On : 22 Apr 2020 10:19 am Operator: SCB
Sample : SEQ-CCV1 Inst : MSD12
Misc : 1,1 0002259 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : I:\MSDCHEM\1\METHODS\MEGAMIX.M (RTE Integrator)
Title : OVD MSS01 8270/625 ICAL 03/27/20
Last Update : Thu Apr 23 14:43:01 2020
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
104 P	Dibenz[ah]anthracene	1.156	1.179	-2.0	91	0.03
105 P	Benzo[ghi]perylene	1.133	1.059	6.5	82	0.03

Data File : I:\MSDCHEM\1\DATA\042220\12M77032.D

Vial: 3

Acq On : 22 Apr 2020 10:52 am

Operator: SCB

Sample : SEQ-CCV2

Inst : MSD12

Misc : 1,1 0003599

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 23 09:35:35 2020

Quant Results File: TCL.RES

Quant Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)

Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Thu Apr 16 08:52:57 2020

Response via : Initial Calibration

DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.722	152	69352	40.0000	ug/ml	0.000
8) Naphthalene-d8	9.009	136	253690	40.0000	ug/ml	0.000
15) Acenaphthene-d10	10.809	164	146616	40.0000	ug/ml	0.000
23) Phenanthrene-d10	12.401	188	257273	40.0000	ug/ml	-0.011
38) Chrysene-d12	16.055	240	209250	40.0000	ug/ml	-0.011
42) Perylene-d12	18.759	264	225122	40.0000	ug/ml	-0.021

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) 1,4-Dioxane	4.55	88	50580	43.5990	ug/ml	96
3) Methyl Methanesulfonate	6.31	80	82502	52.6190	ug/ml	89
4) Ethyl Methanesulfonate	6.97	79	85126	45.7811	ug/ml	99
5) Benzaldehyde	7.29	105	96125	45.4353	ug/ml	96
6) Pentachloroethane	7.45	167	49997	50.3716	ug/ml	98
7) Acetophenone	8.11	105	159702	48.2559	ug/ml	94
9) 0,0,0-Triethyl Phosphoroth	8.69	198	60580	51.0691	ug/ml	95
10) Alpha-Terpineol	8.97	59	98799	57.7795	ug/ml	94
11) 2,6-Dichlorophenol	9.08	162	89017	45.9381	ug/ml	99
12) Hexachloropropene	9.14	213	82218	61.0856	ug/ml	100
13) Caprolactam	9.36	55	54865	51.3495	ug/ml	90
14) Safrole	9.59	162	88133	46.9701	ug/ml#	82
16) 1,2,4,5-Tetrachlorobenzene	9.93	216	100256	46.9374	ug/ml	99
17) Isosafrole	10.11	162	91449	44.7707	ug/ml#	84
18) 1,1'-Biphenyl	10.18	154	264909	52.6280	ug/ml	99
19) 1-Chloronaphthalene	10.26	162	193781	54.7955	ug/ml	96
20) 1,4-Naphthoquinone	10.39	158	84134	45.4106	ug/ml#	78
21) Pentachlorobenzene	11.02	250	84430	46.6565	ug/ml#	93
22) Thionazin	11.28	107	42604	55.3448	ug/ml	93
24) Sulfotepp	11.62	322	44632	48.0551	ug/ml#	70
25) Sym-Trinitrobenzene	11.71	75	83974	58.7896	ug/ml#	92
26) Diallate	11.74	86	78020	47.9329	ug/ml#	74
27) Phenacetin	11.73	108	142694	57.3538	ug/ml	95
28) Phorate	11.76	75	153531	53.1804	ug/ml#	97
29) Dimethoate	11.97	87	95202	54.8453	ug/ml	88
30) Atrazine	11.97	200	78584	53.0556	ug/ml	96
31) Pronamide	12.17	173	122977	51.5312	ug/ml	96
32) Pentachloronitrobenzene	12.31	237	36427	62.0278	ug/ml	93
33) Disulfoton	12.34	88	128099	53.2955	ug/ml#	90
34) Parathion Methyl	12.81	109	94389	52.8434	ug/ml	96
35) Parathion Ethyl	13.29	97	60108	57.1264	ug/ml	97
36) 4-Nitroquinoline 1-Oxide	13.38	190	18823	38.4048	ug/ml#	73
37) Isodrin	13.79	193	44651	49.7134	ug/ml	94
39) Aramite	14.32	185	25271	53.8331	ug/ml	98
40) Chlorobenzilate	14.67	251	109788	52.9669	ug/ml#	84
41) Famphur	15.07	218	138402	52.9476	ug/ml	98
43) 7,12-Dimethylbenz[a]anthra	17.91	256	157089	61.9472	ug/ml	95
44) Perylene	18.82	252	320127	48.3597	ug/ml	96
45) 3-Methylcholanthrene	19.50	268	169209	48.7941	ug/ml	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 12M77032.D TCL.M Fri Apr 24 14:47:04 2020

Vial: 3

Operator: SCB

Inst : MSD12

Multiplr: 1.00

MS Integration Params: RTEINT.P

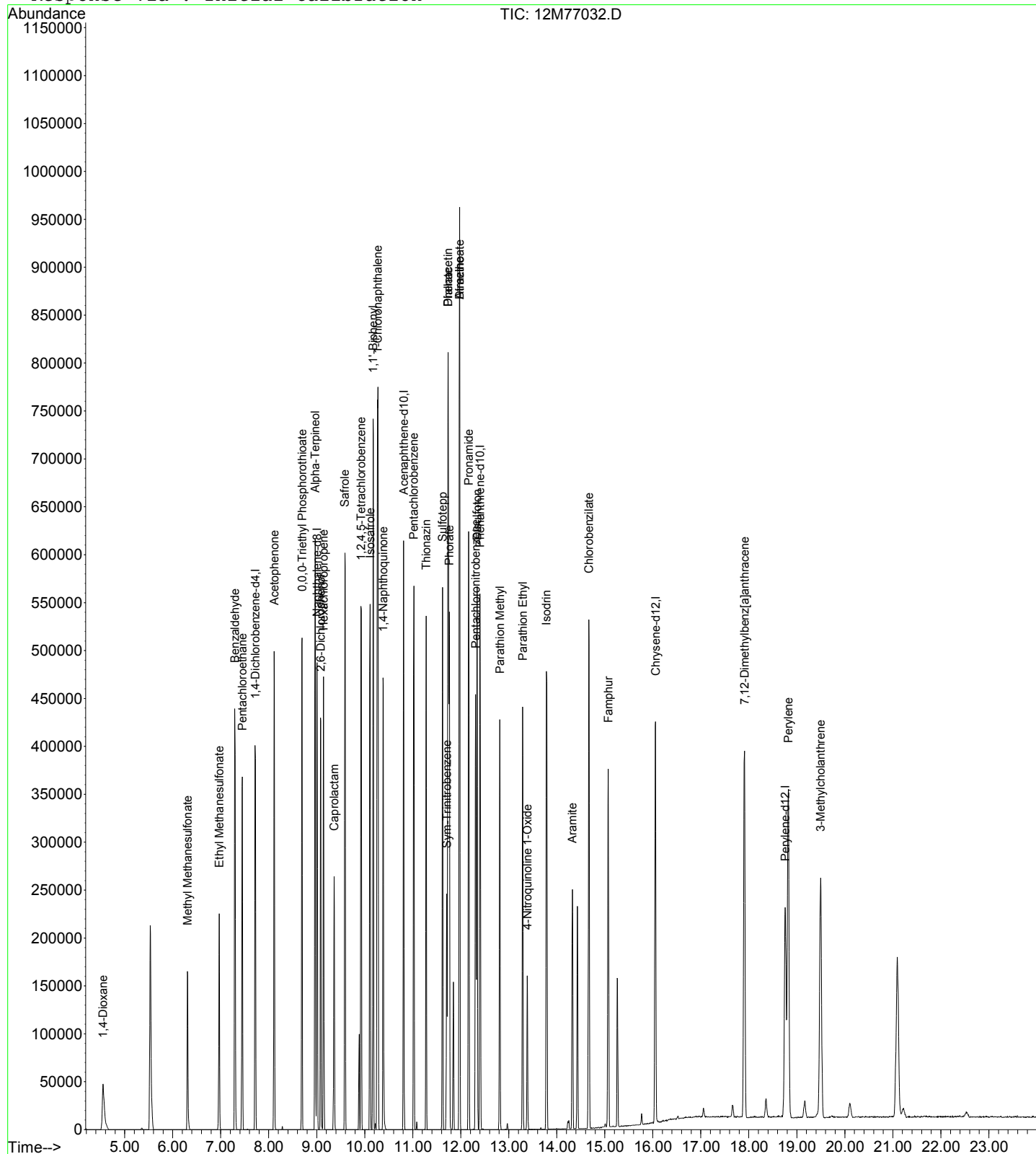
Quant Results File: TCL.RES

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Method      : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
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Title : OVD MSS01 8270/625 ICAL 03/27/20

Last Update : Fri Apr 24 10:20:42 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77032.D
 Acq On : 22 Apr 2020 10:52 am
 Sample : SEQ-CCV2
 Misc : 1,1 0003599
 MS Integration Params: RTEINT.P

Vial: 3
 Operator: SCB
 Inst : MSD12
 Multiplr: 1.00

Method : I:\MSDCHEM\1\METHODS\TCL.M (RTE Integrator)
 Title : OVD MSS01 8270/625 ICAL 03/27/20
 Last Update : Fri Apr 24 10:20:42 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	55	0.01
2	1,4-Dioxane	50.000	43.599	12.8	53	0.00
3	Methyl Methanesulfonate	50.000	52.619	-5.2	63	0.01
4	Ethyl Methanesulfonate	50.000	45.781	8.4	55	0.00
5	Benzaldehyde	50.000	45.435	9.1	54	0.00
6	Pentachloroethane	50.000	50.372	-0.7	61	0.01
7	Acetophenone	50.000	48.256	3.5	58	0.00
8 I	Naphthalene-d8	40.000	40.000	0.0	56	0.01
9	0,0,0-Triethyl Phosphorothi	50.000	51.069	-2.1	63	0.01
10	Alpha-Terpineol	50.000	57.780	-15.6	66	0.00
11	2,6-Dichlorophenol	50.000	45.938	8.1	55	0.01
12	Hexachloropropene	50.000	61.086	-22.2	71	0.01
13	Caprolactam	50.000	51.350	-2.7	60	0.00
14	Safrrole	50.000	46.970	6.1	57	0.01
15 I	Acenaphthene-d10	40.000	40.000	0.0	61	0.01
16	1,2,4,5-Tetrachlorobenzene	50.000	46.937	6.1	61	0.01
17	Isosafrole	50.000	44.771	10.5	57	0.01
18	1,1'-Biphenyl	50.000	52.628	-5.3	60	0.01
19	1-Chloronaphthalene	50.000	54.796	-9.6	61	0.01
20	1,4-Naphthoquinone	50.000	45.411	9.2	54	0.01
21	Pentachlorobenzene	50.000	46.657	6.7	60	0.01
22	Thionazin	50.000	55.345	-10.7	62	0.01
23 I	Phenanthrene-d10	40.000	40.000	0.0	60	0.00
24	Sulfotepp	50.000	48.055	3.9	63	0.00
25	Sym-Trinitrobenzene	50.000	58.790	-17.6	75	0.01
26	Diallate	50.000	47.933	4.1	62	0.01
27	Phenacetin	50.000	57.354	-14.7	71	0.00
28	Phorate	50.000	53.180	-6.4	67	0.00
29	Dimethoate	50.000	54.845	-9.7	69	0.01
30	Atrazine	50.000	53.056	-6.1	71	0.00
31	Pronamide	50.000	51.531	-3.1	67	0.01
32	Pentachloronitrobenzene	50.000	62.028	-24.1	80	0.01
33	Disulfoton	50.000	53.295	-6.6	61	0.01
34	Parathion Methyl	50.000	52.843	-5.7	64	0.01
35	Parathion Ethyl	50.000	57.126	-14.3	68	0.01
36	4-Nitroquinoline 1-Oxide	50.000	38.405	23.2	45	0.00
37	Isodrin	50.000	49.713	0.6	64	0.00
38 I	Chrysene-d12	40.000	40.000	0.0	59	0.02
39	Aramite	50.000	53.833	-7.7	61	0.00
40	Chlorobenzilate	50.000	52.967	-5.9	63	0.01
41	Famphur	50.000	52.948	-5.9	62	0.01
42 I	Perylene-d12	40.000	40.000	0.0	57	0.02
43	7,12-Dimethylbenz[a]anthrac	50.000	61.947	-23.9	66	0.02
44	Perylene	50.000	48.360	3.3	60	0.02
45	3-Methylcholanthrene	50.000	48.794	2.4	57	0.02

Data File : I:\MSDCHEM\1\DATA\042220\12M77033.D Vial: 4
Acq On : 22 Apr 2020 11:27 am Operator: SCB
Sample : SEQ-CVA1 Inst : MSD12
Misc : 1,1 9008789 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 23 11:11:54 2020 Quant Results File: A9B.RES

Quant Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Thu Apr 23 11:11:47 2020
Response via : Initial Calibration
DataAcq Meth : BNARUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chrysene-d12	16.055	240	190195	40.0000	ug/L	0.000
3) Perylene-d12	18.759	264	55609	40.0000	ug/L	0.000

Target Compounds					Qvalue	
2) Kepone	15.27	272	353661	500.0000	ug/L	100
4) Hexachlorophene	18.22	196	137558	500.0000	ug/L	100

Data File : I:\MSDCHEM\1\DATA\042220\12M77033.D

Vial: 4

Acq On : 22 Apr 2020 11:27 am

Operator: SCB

Sample : SEQ-CVA1

Inst : MSD12

Misc : 1,1 9008789

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 23 11:11 2020

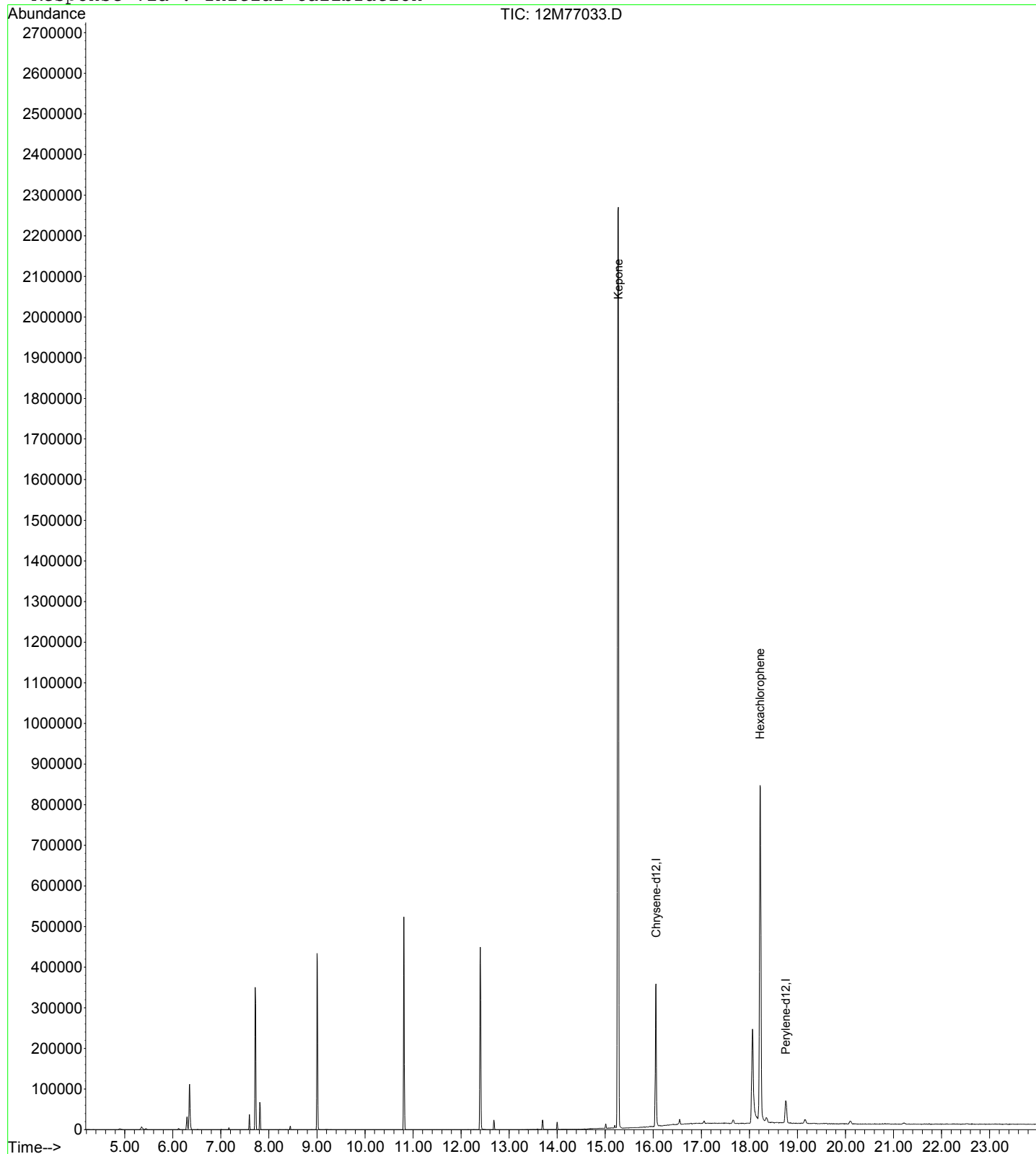
Quant Results File: A9B.RES

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)

Title : Appendix IX List/single point screen

Last Update : Fri Apr 24 10:22:00 2020

Response via : Initial Calibration



Data File : I:\MSDCHEM\1\DATA\042220\12M77033.D Vial: 4
Acq On : 22 Apr 2020 11:27 am Operator: SCB
Sample : SEQ-CVA1 Inst : MSD12
Misc : 1,1 9008789 Multiplr: 1.00
MS Integration Params: rteint.p

Method : I:\MSDCHEM\1\METHODS\A9B.M (RTE Integrator)
Title : Appendix IX List/single point screen
Last Update : Fri Apr 24 10:22:00 2020
Response via : Single Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Chrysene-d12	40.000	40.000	0.0	85	0.02
2	Kepone	500.000	500.000	0.0	90	0.02
3 I	Perylene-d12	40.000	40.000	0.0	87	0.02
4	Hexachlorophene	500.000	500.000	0.0	52	0.01

ok jcf 3-25-2020

7fc 4-14-2020

Book jcf 3-25-2020
PAGE 1 OF 1



Work Order #

40D1189

COOLER TEMP >6° C LOG

[illegible]

pH Lot #

MA

pH

Exceptions

[illegible]

PRESERVATIVE EXCEPTIONS

✓ NONE

AS NOTED

4-17-2020

Issued to: Document Master File



Report of Analysis

Draper Aden Associates

2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier

Project Name: RAAP HWMU16-verification event

Project Number: B03204-20A

Lot Number: **VF27003**

Date Completed: 07/10/2020

07/10/2020

Approved and released by:
Project Manager: **Cathy S. Dover**



The electronic signature above is the equivalent of a handwritten signature.

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PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative Draper Aden Associates Lot Number: VF27003

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Pace Analytical Services, LLC ("Pace") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Pace policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

PACE ANALYTICAL SERVICES, LLC

Sample Summary
Draper Aden Associates
Lot Number: VF27003
Project Name: RAAP HWMU16-verification event
Project Number: B03204-20A

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	16MW8	Aqueous	06/22/2020 0930	06/27/2020
002	DUP1	Aqueous	06/22/2020 0935	06/27/2020
003	16WC1A	Aqueous	06/22/2020 1015	06/27/2020
004	DUP2	Aqueous	06/22/2020 1020	06/27/2020
005	Trip Blank	Aqueous	06/22/2020	06/27/2020

(5 samples)

PACE ANALYTICAL SERVICES, LLC

Detection Summary
Draper Aden Associates
Lot Number: VF27003
Project Name: RAAP HWMU16-verification event
Project Number: B03204-20A

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	16WC1A	Aqueous	Vinyl chloride	8260D	0.20	J	ug/L	7
004	DUP2	Aqueous	Vinyl chloride	8260D	0.21	J	ug/L	8

(2 detections)

Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-001			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 06/22/2020 0930				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/29/2020 2348	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	10	U	10	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		94	70-130
1,2-Dichloroethane-d4		115	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-002			
Description: DUP1				Matrix: Aqueous			
Date Sampled: 06/22/2020 0935				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/30/2020 0013	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	10	U	10	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		93	70-130
1,2-Dichloroethane-d4		114	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-003			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 06/22/2020 1015				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/30/2020 0037	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Vinyl chloride	75-01-4	8260D	0.20	J	0.50	0.11	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		97	70-130
1,2-Dichloroethane-d4		119	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-004			
Description: DUP2				Matrix: Aqueous			
Date Sampled: 06/22/2020 1020				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/30/2020 0100	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Vinyl chloride	75-01-4	8260D	0.21	J	0.50	0.11	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		93	70-130
1,2-Dichloroethane-d4		114	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-005			
Description: Trip Blank				Matrix: Aqueous			
Date Sampled: 06/22/2020				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/29/2020 2324	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	10	U	10	2.0	ug/L	1
Vinyl chloride	75-01-4	8260D	0.50	U	0.50	0.11	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					
Bromofluorobenzene		98	70-130					
1,2-Dichloroethane-d4		120	70-130					
Toluene-d8		107	70-130					

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: VQ58472-001

Matrix: Aqueous

Batch: 58472

Prep Method: 5030B

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	10	U	1	10	2.0	ug/L	06/29/2020 2237
Vinyl chloride	0.50	U	1	0.50	0.11	ug/L	06/29/2020 2237
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		94	70-130				
1,2-Dichloroethane-d4		116	70-130				
Toluene-d8		104	70-130				

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and $\geq$ DL

U = Not detected at or above the detection limit

N = Recovery is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VF27003

Volatile Organic Compounds by GC/MS - LCS

Sample ID: VQ58472-002

Matrix: Aqueous

Batch: 58472

Prep Method: 5030B

Analytical Method: 8260D

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	89		1	89	60-140	06/29/2020 2133
Vinyl chloride	50	57		1	114	70-130	06/29/2020 2133
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		95	70-130				

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and $\geq$ DL

U = Not detected at or above the detection limit

N = Recovery is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VF27003

Chain of Custody and Miscellaneous Documents

7

100

Batch 66 - JCF 6-11-2020

Laboratory: European Laboratory for Nonlinear Spectroscopy, 24015, New Holland, PA, 15063-0225, U.S.A.

[illegible]

Reinforced Lithium concrete Slab & Cast

EDC x 6/27/00 0840

PACE ANALYTICAL SERVICES, LLC

Shealy Environmental Services, Inc.
Document Number: MB0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Eurafins Cooler Inspected by/date: BMG / 06/27/2020 Lot #: VF27003

Means of receipt: ☐ SEST ☐ Client ☐ UPS ☒ FedEx ☐ Other:	
☐ Yes ☒ No	1. Were custody seals present on the cooler?
☐ Yes ☐ No ☒ NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>NA</u>	
2.4 / 2.4 °C <u>NA</u> / <u>NA</u> °C <u>NA</u> / <u>NA</u> °C <u>NA</u> / <u>NA</u> °C	
Method: ☒ Temperature Blank ☐ Against Bottles IR Gun ID: <u>5</u> IR Gun Correction Factor: <u>0</u> °C	
Method of coolant: ☒ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None	
☐ Yes ☐ No ☒ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☒ Yes ☐ No ☐ NA	4. Is the commercial courier's packing slip attached to this form?
☒ Yes ☐ No	5. Were proper custody procedures (relinquished/received) followed?
☒ Yes ☐ No	6. Were sample IDs listed on the COC?
☒ Yes ☐ No	7. Were sample IDs listed on all sample containers?
☒ Yes ☐ No	8. Was collection date & time listed on the COC?
☒ Yes ☐ No	9. Was collection date & time listed on all sample containers?
☐ Yes ☒ No	10. Did all container label information (ID, date, time) agree with the COC?
☒ Yes ☐ No	11. Were tests to be performed listed on the COC?
☒ Yes ☐ No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☒ Yes ☐ No	13. Was adequate sample volume available?
☒ Yes ☐ No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☒ Yes ☐ No	15. Were any samples containers missing excess (circle one) samples Not listed on COC?
☐ Yes ☒ No ☐ NA	16. For VOA and RSK-175 samples, were bubbles present > "pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
☐ Yes ☐ No ☒ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes ☐ No ☒ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes ☐ No ☒ NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes ☐ No ☒ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes ☒ No	21. Was the quote number listed on the container label? If yes, Quote # <u>na</u>
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H ₂ SO ₄ , HNO ₃ , HCl, NaOH using SR # <u>NA</u>	
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles > 6 mm in diameter.	
Sample(s) <u>NA</u> were received with TRC > 0.5 mg/L. (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: <u>NA</u>	
SR barcode labels applied by: <u>BMG</u> Date: <u>06/27/2020</u>	

Comments: Received 2 containers for each sample. (COC says 3)

Sample VF27003-005/Trip Blank date on CoC: 06/22/2020, date on container: 06/17/20

VOLATILE

QC SUMMARY

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: VF27003
Project No.: B03204-20A
Analytical Method: 8260D Matrix: Water
Client Sample ID: 50ul/100ml 15843/49 Lab Sample ID: VQ58472-002
Instrument ID: _GC 7890B / MS 5977B_MSD17
Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Acetone	100	89	89	60-140
Vinyl chloride	50	57	114	70-130

* Values outside of QC Limits

CLIENT SAMPLE ID

VBLKIS

Lab Name : Shealy Environmental Services, Inc.

Lot No.: VF27003

Project No.: B03204-20A

Lab Sample ID: VQ58472-001

Analytical Method: 8260D

Matrix: Water

Instrument ID: GC 7890B / MS 5977B MSD17

Lab File ID: 170629B04

Extraction Type: _____

Date Extracted:_____

GC Column(1): DB-624 ID: 0.25 (mm)

Date Analyzed: 06/29/2020

GC Column(2): _____ ID: _____ (mm)

Time Analyzed: 22:37[illegible]

Shealy Environmental Services

Form 5 MS Tune Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C01.d
Injection Date: 05-Jun-2020 01:33:30 Inst. ID: msd17.i
Method: BFB-17.m Tune Type: BFB
Client ID: 15740 Lab ID: BFBUW
Sample Info: 17060420C, BFBUW
Injection Vol. Dil. Factor: 1.0
Operator: JTH
Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.9
75	30.00 - 60.00% of mass 95	49.4
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.0 (0.0) 1
174	50.00 - 150.00% of mass 95	73.3
175	5.00 - 9.00% of mass 174	5.7 (7.7) 1
176	95.00 - 101.00% of mass 174	71.1 (97.0) 1
177	5.00 - 9.00% of mass 176	4.7 (6.6) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	170604C01.d	BFBUW	15740	05-Jun-2020 01:33:30	00:00:00
Client	170604C02.d	VIBLK		05-Jun-2020 02:09:30	00:36:00
Client	170604C03.d	VIBLK		05-Jun-2020 02:32:30	00:59:00
Client	170604C04.d	VIBLK		05-Jun-2020 02:56:30	01:23:00
Ical	170604C05.d	VSTD0.5UW	1mL/100mL VSTD050	05-Jun-2020 03:20:30	01:47:00
Ical	170604C06.d	VSTD001UW	2mL/100mL VSTD050	05-Jun-2020 03:44:30	02:11:00
Ical	170604C07.d	VSTD005UW	5uL/100mL 15828/25	05-Jun-2020 04:08:30	02:35:00
Ical	170604C08.d	VSTD020UW	20uL/100mL 15828/25	05-Jun-2020 04:32:30	02:59:00
Ical	170604C09.d	VSTD050UW	50uL/100mL 15828/25	05-Jun-2020 04:55:30	03:22:00
Ical	170604C10.d	VSTD100UW	100uL/100mL 15828/25	05-Jun-2020 05:20:30	03:47:00
Ical	170604C11.d	VSTD200UW	200uL/100mL 15828/25	05-Jun-2020 05:43:30	04:10:00
Client	170604C12.d	VIBLK		05-Jun-2020 06:07:30	04:34:00
ICV	170604C13.d	VICV050UW	50uL/100mL 15819/26	05-Jun-2020 06:31:30	04:58:00
ICV	170604C13_dod.d	VICV050UW	50uL/100mL 15819/26	05-Jun-2020 06:31:30	04:58:00

Shealy Environmental Services

Form 5 MS Tune Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B01.d
Injection Date: 29-Jun-2020 21:09:30 Inst. ID: msd17.i
Method: BFB-17.m Tune Type: BFB
Client ID: 15740 Lab ID: BFBIS
Sample Info: 17062920B, BFBIS
Injection Vol. Dil. Factor: 1.0
Operator: JTH
Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	20.0
75	30.00 - 60.00% of mass 95	50.7
96	5.00 - 9.00% of mass 95	7.0
173	Less than 2.00% of mass 174	0.8 (1.1) 1
174	50.00 - 150.00% of mass 95	78.4
175	5.00 - 9.00% of mass 174	6.0 (7.6) 1
176	95.00 - 101.00% of mass 174	75.9 (96.9) 1
177	5.00 - 9.00% of mass 176	5.1 (6.7) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	170629B01.d	BFBIS	15740	29-Jun-2020 21:09:30	00:00:00
Ccv	170629B02.d	VSTD050IS	50ul/100ml 15843/49	29-Jun-2020 21:33:30	00:24:00
LCS	170629B02_lcs.d	VLCS050IS	50ul/100ml 15843/49	29-Jun-2020 21:33:30	00:24:00
Client	170629B03.d	VIBLK	VIBLK	29-Jun-2020 22:13:30	01:04:00
BLANK	170629B04.d	VBLKIS	VBLKIS	29-Jun-2020 22:37:30	01:28:00
Client	170629B05.d	VF27003-005	Trip Blank	29-Jun-2020 23:24:30	02:15:00
Client	170629B06.d	VF27003-001	16MW8	29-Jun-2020 23:48:30	02:39:00
Client	170629B07.d	VF27003-002	DUP1	30-Jun-2020 00:13:30	03:04:00
Client	170629B08.d	VF27003-003	16WC1A	30-Jun-2020 00:37:30	03:28:00
Client	170629B09.d	VF27003-004	DUP2	30-Jun-2020 01:00:30	03:51:00
Client	170629B10.d	VF20005-003	TMW-2	30-Jun-2020 01:24:30	04:15:00
Client	170629B11.d	VF26043-002	2020014783	30-Jun-2020 01:48:30	04:39:00
Client	170629B12.d	VF26043-003	2020014785	30-Jun-2020 02:13:30	05:04:00
Client	170629B13.d	VF26043-004		30-Jun-2020 02:37:30	05:28:00
Client	170629B14.d	VF26043-005		30-Jun-2020 03:01:30	05:52:00
Client	170629B15.d	VF26043-006	2020014759	30-Jun-2020 03:25:30	06:16:00
Client	170629B16.d	VF26043-007	2020014760	30-Jun-2020 03:49:30	06:40:00
Client	170629B17.d	VF26043-008	2020014761	30-Jun-2020 04:13:30	07:04:00
Client	170629B18.d	VF26043-009	2020014763	30-Jun-2020 04:37:30	07:28:00
Client	170629B19.d	VF26043-010	2020014765	30-Jun-2020 05:01:30	07:52:00
Client	170629B20.d	VF26043-011	2020014766	30-Jun-2020 05:25:30	08:16:00
Client	170629B21.d	VF26043-012	2020014767	30-Jun-2020 05:49:30	08:40:00
Client	170629B22.d	VF26043-013	2020014768	30-Jun-2020 06:13:30	09:04:00
Client	170629B23.d	VF26043-014	2020014769	30-Jun-2020 06:37:30	09:28:00

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
Client	170629B24.d	VF23009-001	DI Purge	30-Jun-2020 07:01:30	09:52:00
MS	170629B25.d	VF23009-001	DI PurgeMS	30-Jun-2020 07:26:30	10:17:00
MSD	170629B26.d	VF23009-001	DI PurgeMSD	30-Jun-2020 07:49:30	10:40:00

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd17.i\17060420C.b

Instrument: msd17.m

Method: 8260B-17.m

Column: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Initial Calibration Samples

Standard File: /chem/msd17.i/17060420C.b/170604C08.D.d

Injection Date: 05-Jun-2020 04:32:30

Lab ID: VSTD020UW

Sublist: std.sub

Sample Type: IcallS, Level: 4

IS-1: * 41 Pentafluorobenzene

IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	1344657	6.10	2236302	7.05	2002145	10.78	925681	13.16
Upper Limit	2689314	6.60	4472604	7.55	4004290	11.28	1851362	13.66
Lower Limit	672329	5.60	1118151	6.55	1001073	10.28	462841	12.66
VSTD0.5UW	1319463	6.10	2222524	7.05	1949941	10.78	797538	13.16
VSTD001UW	1325613	6.10	2238500	7.05	1977000	10.78	834648	13.16
VSTD005UW	1312747	6.10	2169016	7.05	1928710	10.78	853051	13.16
VSTD020UW	1344657	6.10	2236302	7.05	2002145	10.78	925681	13.16
VSTD050UW	1353473	6.10	2239912	7.05	2004707	10.78	943348	13.16
VSTD100UW	1412384	6.10	2347738	7.05	2122659	10.78	1005681	13.16
VSTD200UW	1402973	6.10	2309809	7.05	1989332	10.78	847856	13.16
VICV050UW	1451256	6.10	2408049	7.05	2170277	10.78	1049956	13.16
VICV050UW	1451256	6.10	2408049	7.05	2170277	10.78	1049956	13.16

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd17.i/17060420C.b/170604C09.D.d

Injection Date: 05-Jun-2020 04:55:30

Lab ID: VSTD050UW

Sublist: std.sub

Sample Type: CCV

IS-1: * 41 Pentafluorobenzene

IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	1353473	6.10	2239912	7.05	2004707	10.78	943348	13.16
Upper Limit	2706946	6.60	4479824	7.55	4009414	11.28	1886696	13.66
Lower Limit	676737	5.60	1119956	6.55	1002354	10.28	471674	12.66
VIBLK	1374583	6.09	2311246	7.04	2028926	10.78	819515	13.15
VIBLK	1329941	6.10	2235043	7.05	1953130	10.78	745927	13.16
VIBLK	1314738	6.10	2224072	7.05	1944051	10.78	774531	13.16
VIBLK	1461254	6.10	2407750	7.05	2099209	10.78	899762	13.15

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd17.i\17062920B.b

Instrument: msd17.m

Method: 8260B-17.m

Column: Rxi-624Sil (0.25 mm)

Detector: MS Scan

CCV Samples

Standard File: /chem/msd17.i/17060420C.b/170604C09.D.d

Injection Date: 05-Jun-2020 04:55:30

Lab ID: VSTD050UW

Sublist: std.sub

Sample Type: Ical, Level: 5

IS-1: * 41 Pentafluorobenzene

IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	1353473	6.10	2239912	7.05	2004707	10.78	943348	13.16
Upper Limit	2706946	6.60	4479824	7.55	4009414	11.28	1886696	13.66
Lower Limit	676737	5.60	1119956	6.55	1002354	10.28	471674	12.66
VSTD050IS	991305	6.10	1619781	7.05	1437738	10.78	739520	13.16

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd17.i/17062920B.b/170629B02.D.d

Injection Date: 29-Jun-2020 21:33:30

Lab ID: VSTD050IS

Sublist: std.sub

Sample Type: LCS

IS-1: * 41 Pentafluorobenzene

IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	991305	6.10	1619781	7.05	1437738	10.78	739520	13.16
Upper Limit	1982610	6.60	3239562	7.55	2875476	11.28	1479040	13.66
Lower Limit	495653	5.60	809891	6.55	718869	10.28	369760	12.66
VLCS050IS	991305	6.10	1619781	7.05	1437738	10.78	739520	13.16
VIBLK	907265	6.10	1563719	7.05	1420961	10.78	617499	13.16
VBLKIS	879823	6.10	1535730	7.05	1387428	10.78	607899	13.16
VF27003-005	863594	6.10	1504172	7.04	1361010	10.78	591874	13.16
VF27003-001	883270	6.10	1532279	7.05	1392620	10.78	606238	13.16
VF27003-002	876762	6.10	1520137	7.05	1380533	10.78	585069	13.16
VF27003-003	881936	6.10	1527367	7.05	1402959	10.78	609789	13.16
VF27003-004	862547	6.10	1505552	7.05	1373644	10.78	594249	13.16
VF20005-003	869480	6.10	1534559	7.05	1396740	10.78	605913	13.16
VF26043-002	876730	6.10	1519383	7.05	1383138	10.78	609842	13.16
VF26043-003	884382	6.10	1554542	7.05	1409451	10.78	614877	13.16
VF26043-004	861368	6.10	1540392	7.05	1415692	10.78	609164	13.16
VF26043-005	847262	6.10	1519912	7.05	1399271	10.78	605148	13.16
VF26043-006	823955	6.10	1484340	7.05	1357336	10.78	584036	13.16
VF26043-007	844290	6.10	1504051	7.05	1377771	10.78	599964	13.16
VF26043-008	847812	6.10	1524863	7.05	1396231	10.79	598815	13.16
VF26043-009	852327	6.10	1524691	7.05	1392029	10.78	600450	13.16
VF26043-010	816610	6.10	1463891	7.05	1344833	10.78	576439	13.16
VF26043-011	843233	6.10	1501769	7.05	1381009	10.78	597455	13.16
VF26043-012	843183	6.10	1499204	7.05	1362610	10.78	583663	13.16
VF26043-013	851684	6.10	1525542	7.05	1400068	10.78	599299	13.16

IS-1: * 41 Pentafluorobenzene

IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	
VF26043-014	843033	6.10	1496816	7.05	1363694	10.78	597247	13.16	
VF23009-001	852244	6.10	1564061	7.05	1349377	10.78	683404	13.16	
VF23009-001	973142	6.10	1651412	7.05	1468976	10.78	728156	13.16	
VF23009-001	1038645	6.10	1739716	7.05	1526609	10.78	744248	13.16	

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

RAW SAMPLE DATA

Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-001			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 06/22/2020 0930				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/29/2020 2348	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	10	U	10	2.0	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					
Bromofluorobenzene		94	70-130					
1,2-Dichloroethane-d4		115	70-130					
Toluene-d8		104	70-130					

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B06.D
 Lab Sample ID: VF27003-001 Client Sample ID: 16MW8
 Injection Date: 29-Jun-2020 23:48:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VF27003-001
 Misc. Info: EKDZ01
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Client ALS Bottle: 6
 Cpnd Sublist: sample.sb
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: pap

Review Date: 30-Jun-2020 14:32:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.106	6.100	0.006	883270	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1532279	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1392620	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	606238	50.000	50.000	
10 Acetone	43.0		3.082		ND			
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	800607	57.664	57.664	
\$ 64 Toluene-d8	98.0	8.953	8.947	0.006	2064221	51.800	51.800	
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	687004	47.048	47.048	

Compound Type Legend

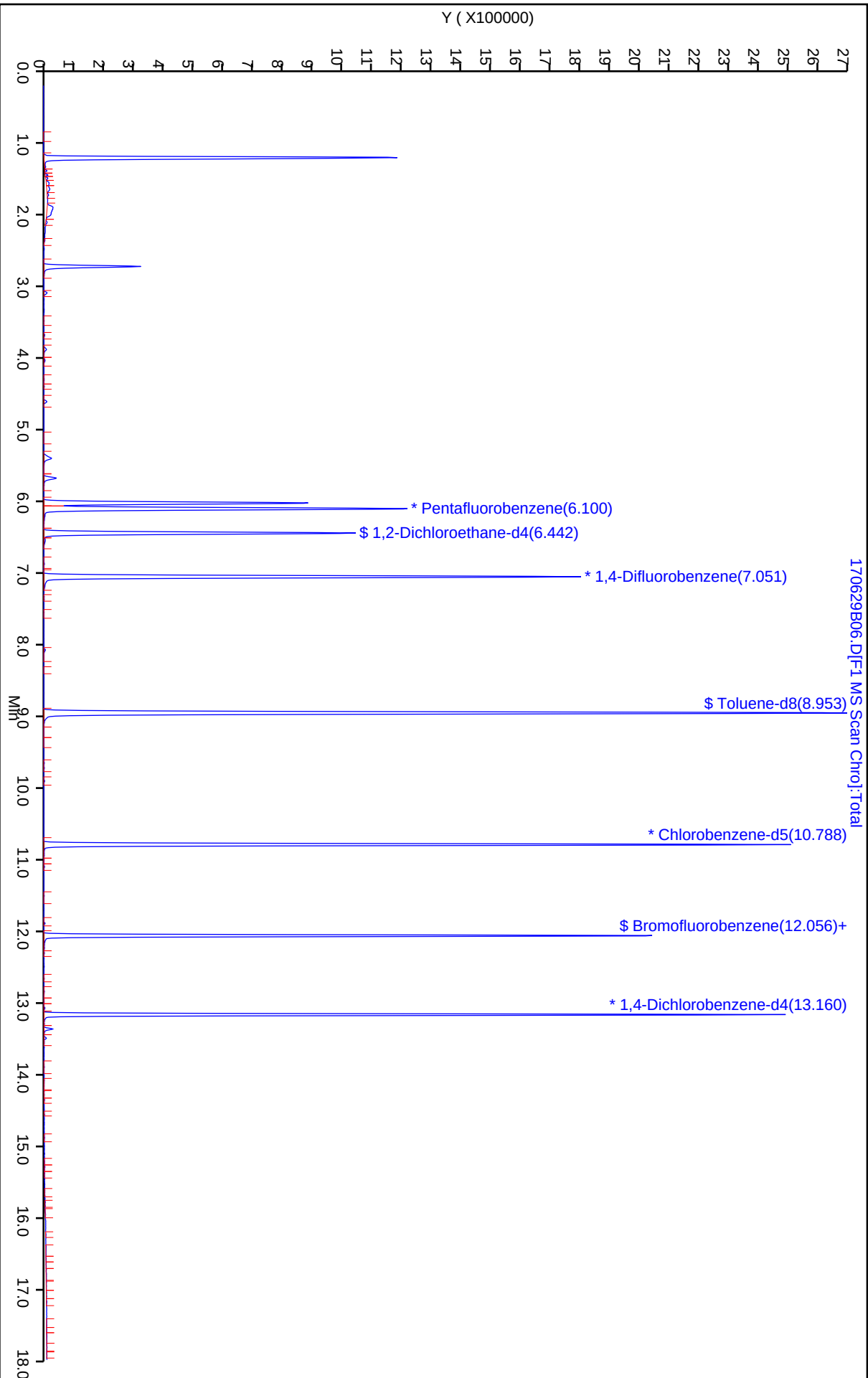
* - ISTD
 \$ - Surrogate

QC Flag Legend

Processing Flags
 Review Flags

Shealy Environmental Services

Data File:	\\Organics\ID\chem\msd17.i\17062920B.b\170629B06.D		
Injection Date:	29-Jun-2020 23:48:30	Inst. ID:	msd17.i
Client ID:	16MW8	Lab ID:	VF27003-001
Sample Info:	17062920B, VF27003-001		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
			Operator: JTH



Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-002			
Description: DUP1				Matrix: Aqueous			
Date Sampled: 06/22/2020 0935				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/30/2020 0013	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	10	U	10	2.0	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					
Bromofluorobenzene		93	70-130					
1,2-Dichloroethane-d4		114	70-130					
Toluene-d8		104	70-130					

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B07.D
 Lab Sample ID: VF27003-002 Client Sample ID: DUP1
 Injection Date: 30-Jun-2020 00:13:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VF27003-002
 Misc. Info: EKEA01
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Client ALS Bottle: 7
 Cpnd Sublist: sample.sb
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: pap

Review Date: 30-Jun-2020 14:32:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.106	6.100	0.006	876762	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1520137	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1380533	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	585069	50.000	50.000	
10 Acetone	43.0		3.082		ND			
\$ 46 1,2-Dichloroethane-d4	65.0	6.441	6.442	0.000	788120	57.218	57.218	
\$ 64 Toluene-d8	98.0	8.953	8.947	0.006	2047866	51.840	51.840	
\$ 86 Bromofluorobenzene	95.0	12.062	12.056	0.006	674383	46.588	46.588	

Compound Type Legend

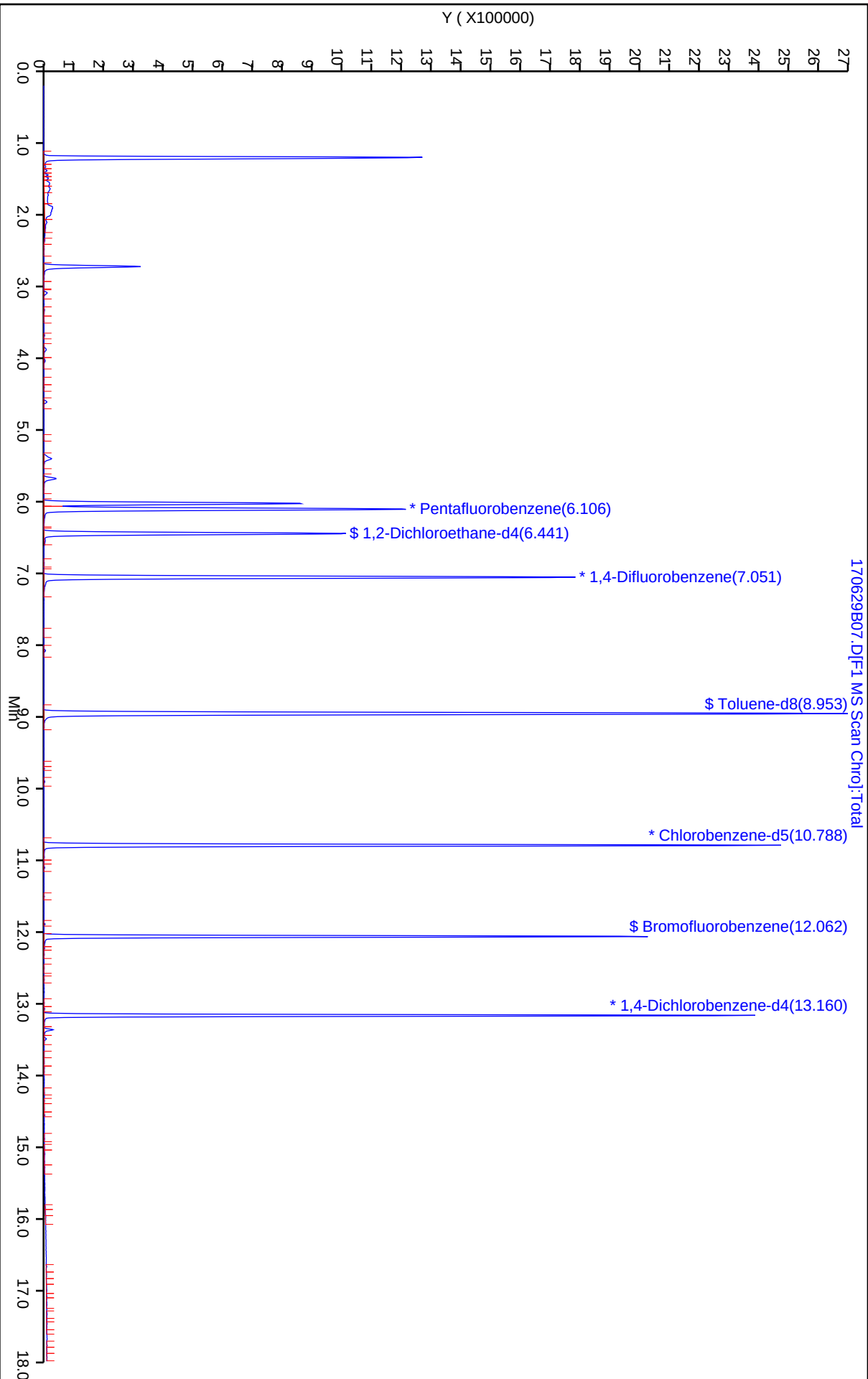
* - ISTD
 \$ - Surrogate

QC Flag Legend

Processing Flags
 Review Flags

Shealy Environmental Services

Data File:	\\Organics\ID\chem\msd17.i\17062920B.b\170629B07.D		
Injection Date:	30-Jun-2020 00:13:30	Inst. ID:	msd17.i
Client ID:	DUP1	Lab ID:	VF27003-002
Sample Info:	17062920B, VF27003-002		
Purge Vol:	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
			Operator: JTH



Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-003			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 06/22/2020 1015				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/30/2020 0037	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Vinyl chloride	75-01-4	8260D	0.20	J	0.50	0.11	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					
Bromofluorobenzene		97	70-130					
1,2-Dichloroethane-d4		119	70-130					
Toluene-d8		106	70-130					

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd17.i\17062920B.b\170629B08.D
 Lab Sample ID: VF27003-003 Client Sample ID: 16WC1A
 Injection Date: 30-Jun-2020 00:37:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VF27003-003
 Misc. Info: EKEB02
 Method: \\Organics\dd\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Client ALS Bottle: 8
 Cpnd Sublist: sample.sb
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: pap

Review Date: 30-Jun-2020 14:23:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.106	6.100	0.006	881936	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1527367	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1402959	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	609789	50.000	50.000	
3 Vinyl chloride	62.0	1.656	1.656	0.000	1765	0.19931	0.19931	QeM
\$ 46 1,2-Dichloroethane-d4	65.0	6.448	6.442	0.006	826074	59.689	59.689	
\$ 64 Toluene-d8	98.0	8.953	8.947	0.006	2125323	52.941	52.941	
\$ 86 Bromofluorobenzene	95.0	12.063	12.056	0.006	711904	48.394	48.394	

Compound Type Legend

* - ISTD

\$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

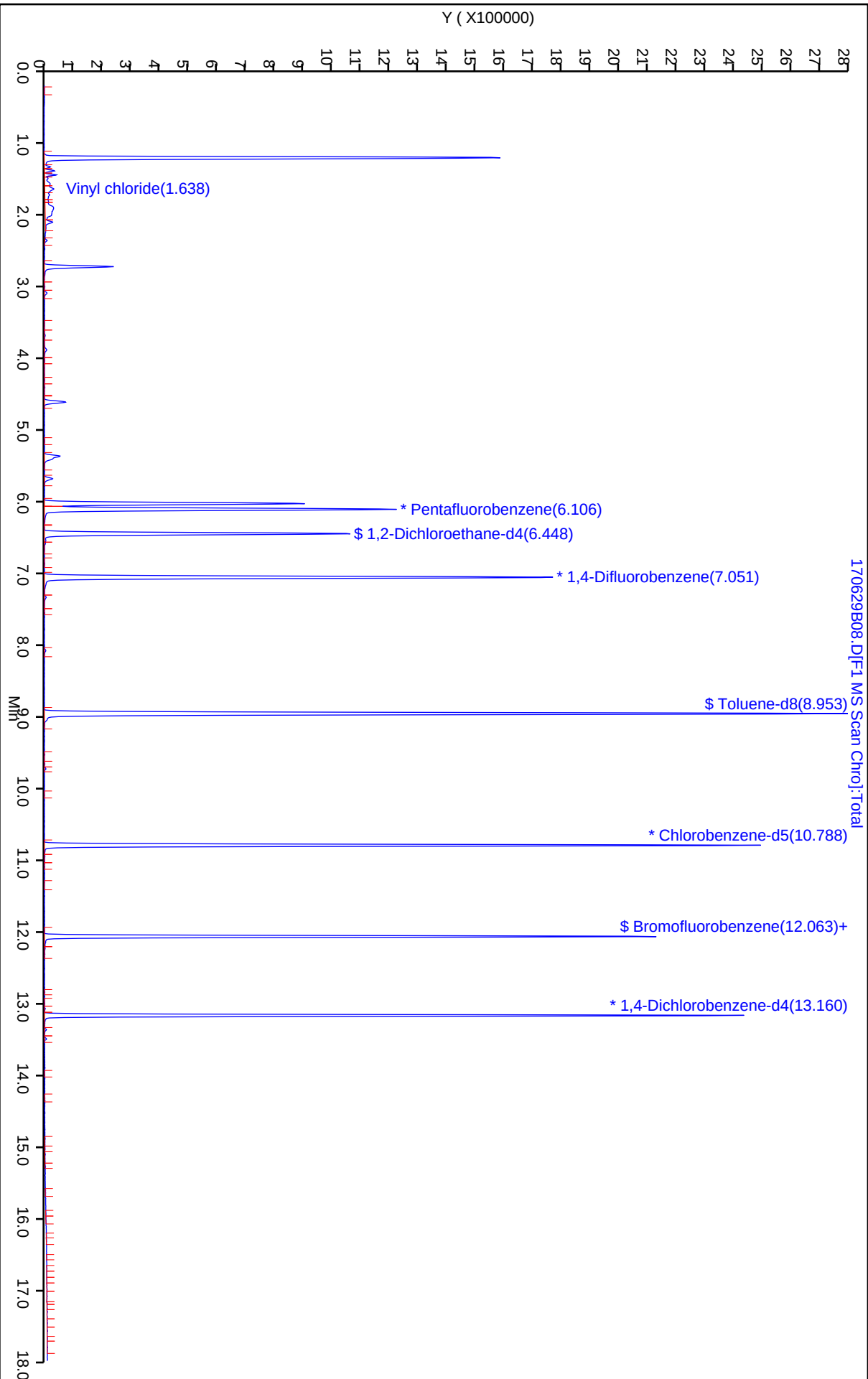
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd17.1\17062920B.b\170629B08.D		
Injection Date:	30-Jun-2020 00:37:30	Inst. ID:	msd17.i
Client ID:	16WC1A	Lab ID:	VF27003-003
Sample Info:	17062920B, VF27003-003		
Purge Vol:	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
			Operator: JTH



Shealy Environmental Services

Data File: \\Organics\dd\chem\msd17.i\17062920B.b\170629B08.D

Injection Date: 30-Jun-2020 00:37:30

Inst. ID: msd17.i

Client ID: 16WC1A

Lab ID: VF27003-003

Sample Info: 17062920B, VF27003-003

Purge Vol. 5.00 ml

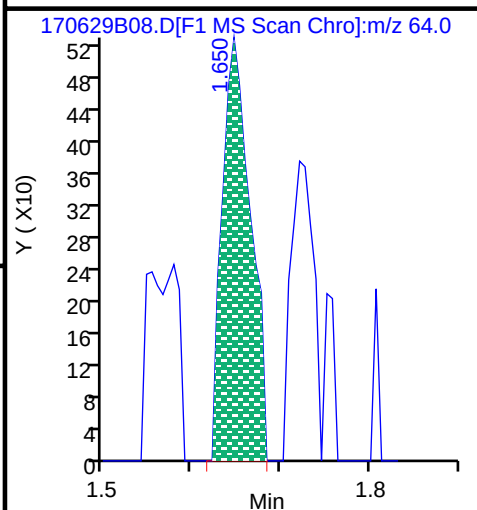
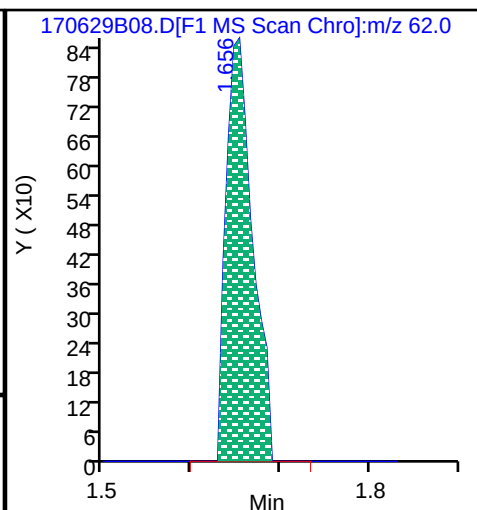
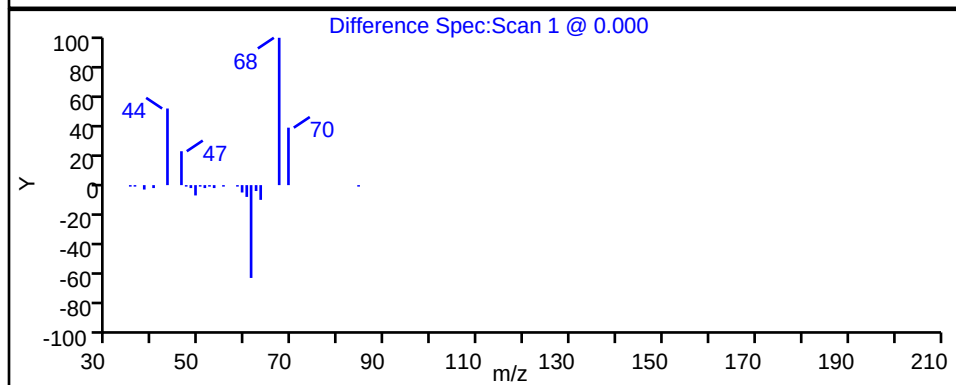
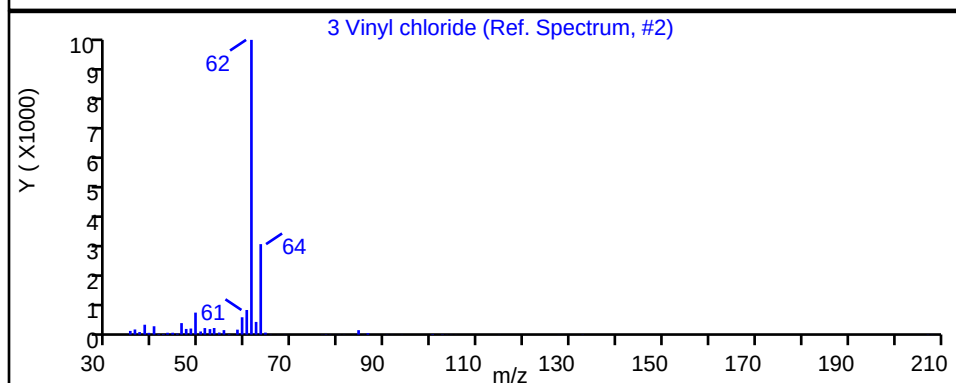
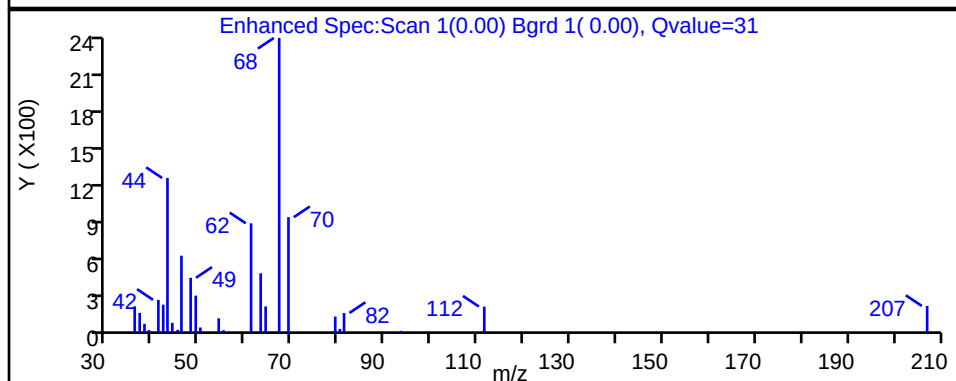
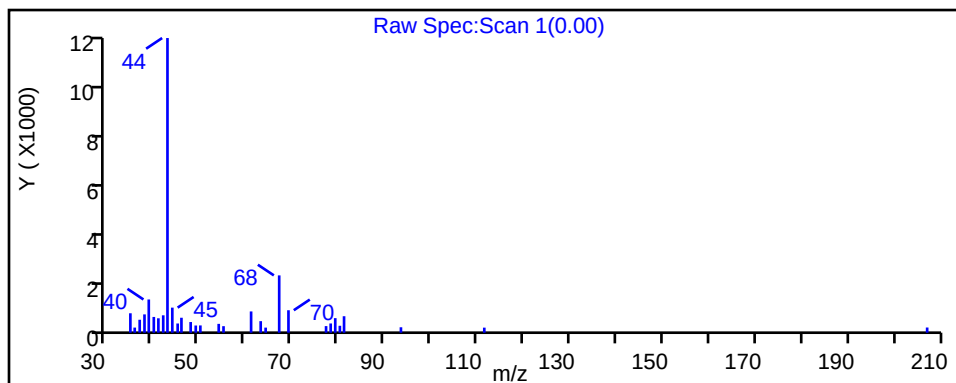
Dil. Factor: 1.0

Operator: JTH

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

3 Vinyl chloride



Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\dd\chem\msd17.i\17062920B.b\170629B08.D

Injection Date: 30-Jun-2020 00:37:30

Inst. ID: msd17.i

Client ID: 16WC1A

Lab ID: VF27003-003

Sample Info: 17062920B, VF27003-003

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

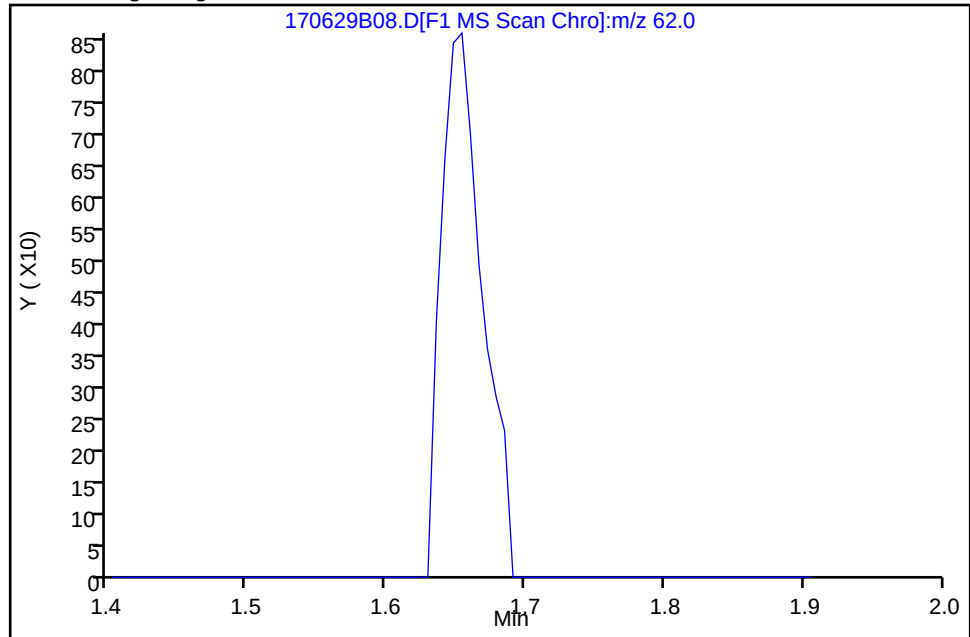
3 Vinyl chloride, CAS: 75-01-4

Not Detected

Expected RT: 1.656

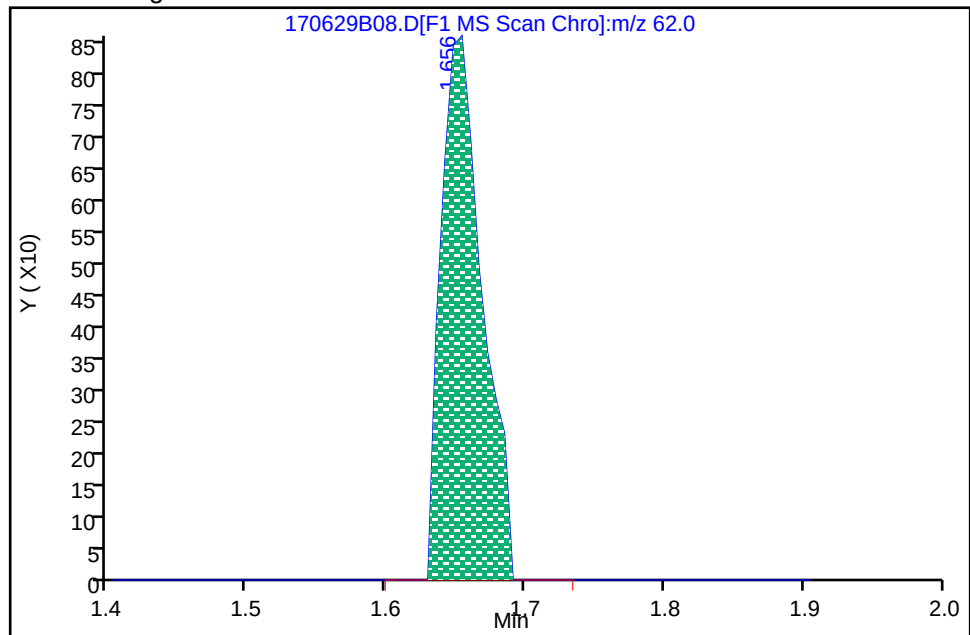
RT Window: 1.290-2.022

Processing Integration Results



Manual Integration Results

RT: 1.656
Area: 1765
Conc: 0.19931
Conc Units: ug/L



Data Editor: pap, 30-Jun-2020 14:23:30

Audit Action: Mint

Audit Reason:

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\\dd\\chem\\msd17.i\\17062920B.b\\170629B08.D

Injection Date: 30-Jun-2020 00:37:30

Inst. ID: msd17.i

Client ID: 16WC1A

Lab ID: VF27003-003

Sample Info: 17062920B, VF27003-003

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

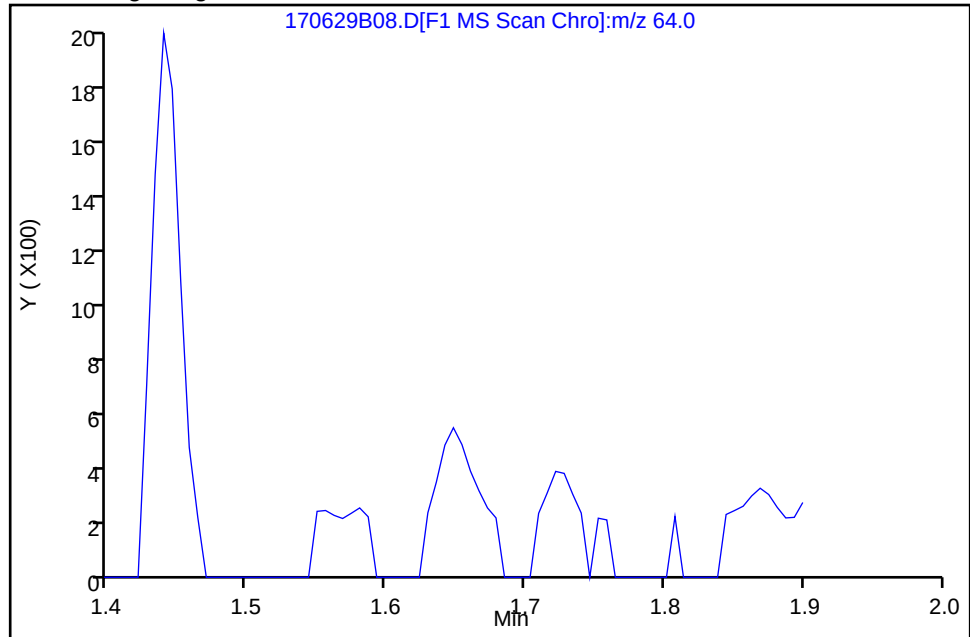
3 Vinyl chloride, CAS: 75-01-4

Not Detected

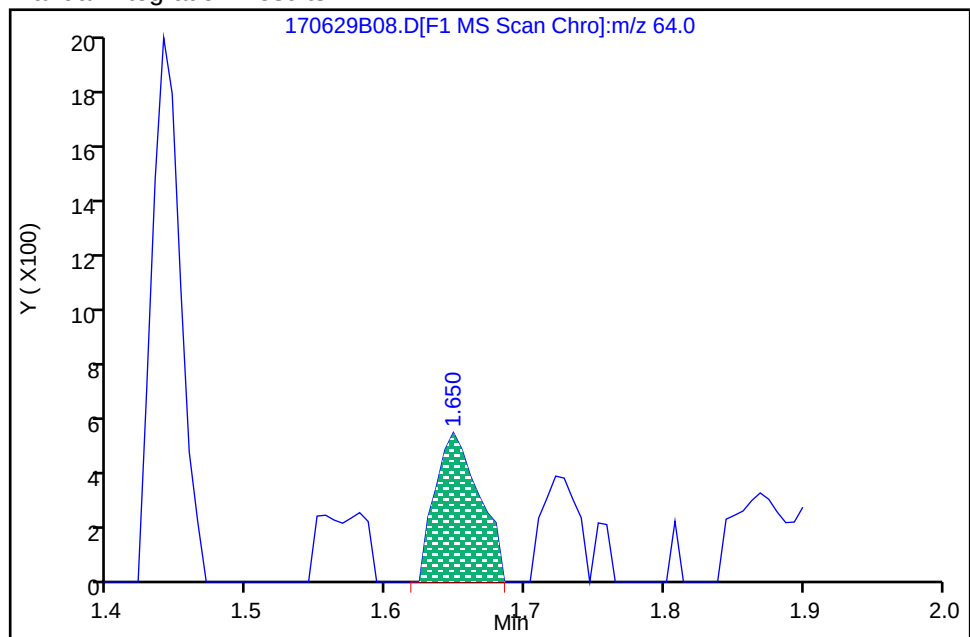
Expected RT: 1.656

RT Window: 1.290-2.022

Processing Integration Results



Manual Integration Results



RT: 1.650

Area: 1149

Conc: 0.19931

Conc Units: ug/L

Data Editor: pap, 30-Jun-2020 14:23:30

Audit Action: Mint

Audit Reason:

Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-004			
Description: DUP2				Matrix: Aqueous			
Date Sampled: 06/22/2020 1020				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/30/2020 0100	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Vinyl chloride	75-01-4	8260D	0.21	J	0.50	0.11	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					
Bromofluorobenzene		93	70-130					
1,2-Dichloroethane-d4		114	70-130					
Toluene-d8		103	70-130					

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd17.i\17062920B.b\170629B09.D
 Lab Sample ID: VF27003-004 Client Sample ID: DUP2
 Injection Date: 30-Jun-2020 01:00:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VF27003-004
 Misc. Info: EKEC01
 Method: \\Organics\dd\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Client ALS Bottle: 9
 Cpnd Sublist: sample.sb
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: pap

Review Date: 30-Jun-2020 14:23:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.106	6.100	0.006	862547	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1505552	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1373644	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	594249	50.000	50.000	
3 Vinyl chloride	62.0	1.656	1.656	0.000	1819	0.21003	0.21003	QeM
\$ 46 1,2-Dichloroethane-d4	65.0	6.448	6.442	0.006	779646	57.151	57.151	
\$ 64 Toluene-d8	98.0	8.953	8.947	0.006	2020049	51.392	51.392	
\$ 86 Bromofluorobenzene	95.0	12.063	12.056	0.006	672520	46.692	46.692	

Compound Type Legend

* - ISTD

\$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

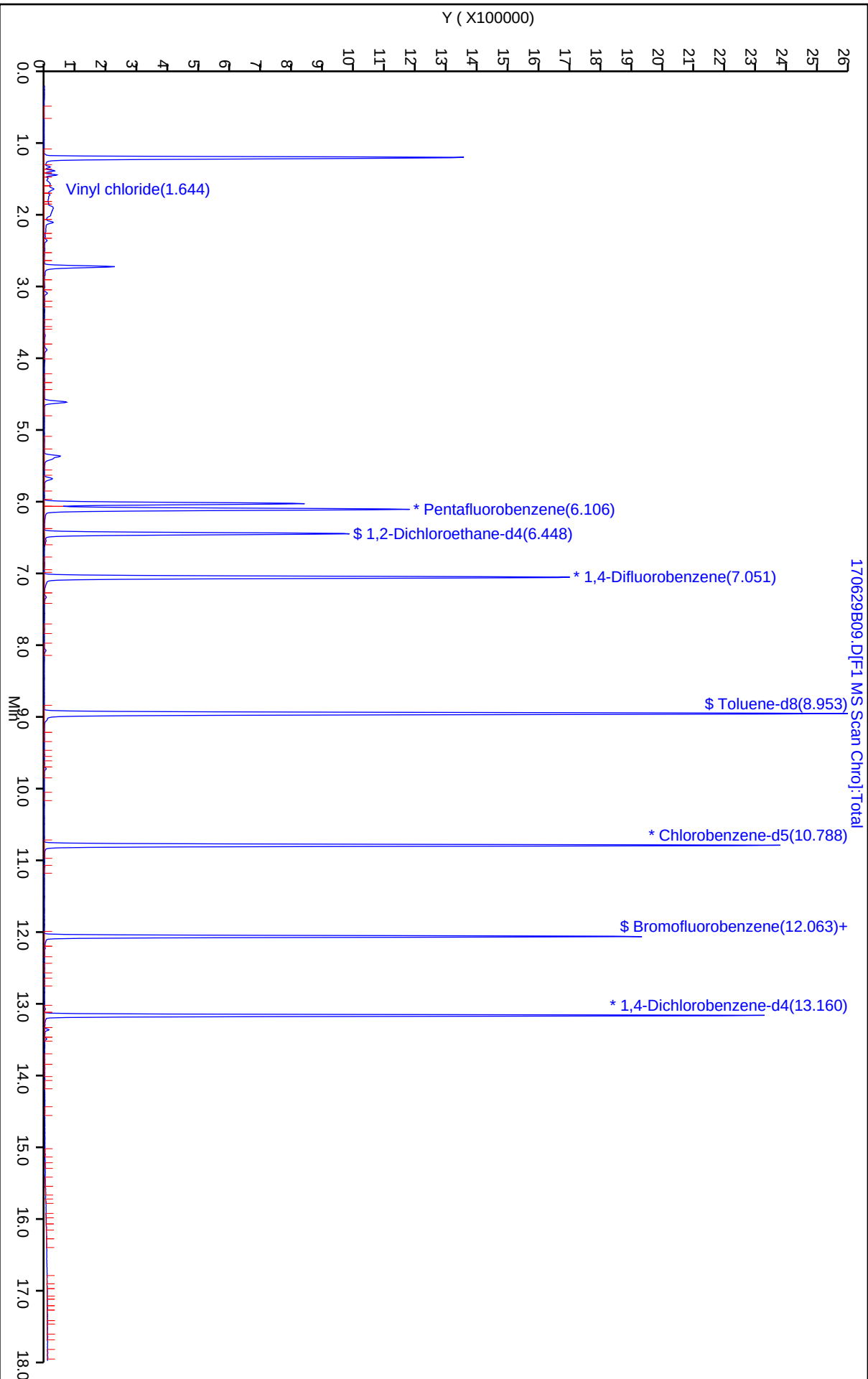
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd17.1\17062920B.b\170629B09.D		
Injection Date:	30-Jun-2020 01:00:30	Inst. ID:	msd17.i
Client ID:	DUP2	Lab ID:	VF27003-004
Sample Info:	17062920B, VF27003-004		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
			Operator: JTH



Shealy Environmental Services

Data File: \\Organics\dd\chem\msd17.i\17062920B.b\170629B09.D

Injection Date: 30-Jun-2020 01:00:30

Inst. ID: msd17.i

Client ID: DUP2

Lab ID: VF27003-004

Sample Info: 17062920B, VF27003-004

Purge Vol. 5.00 ml

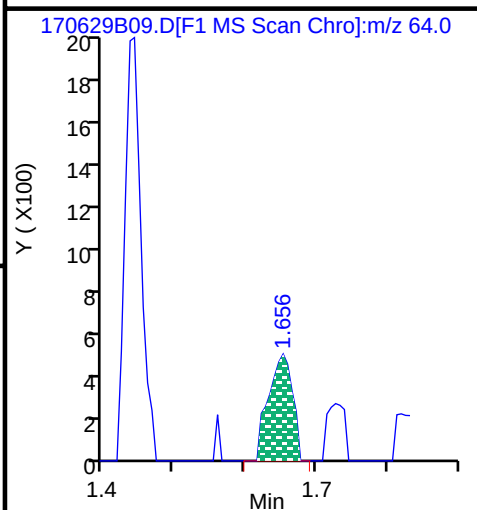
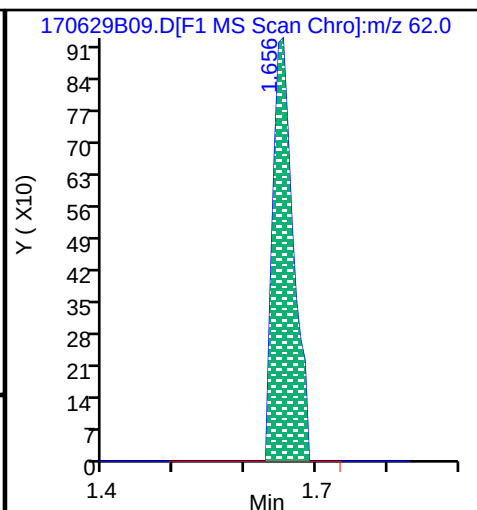
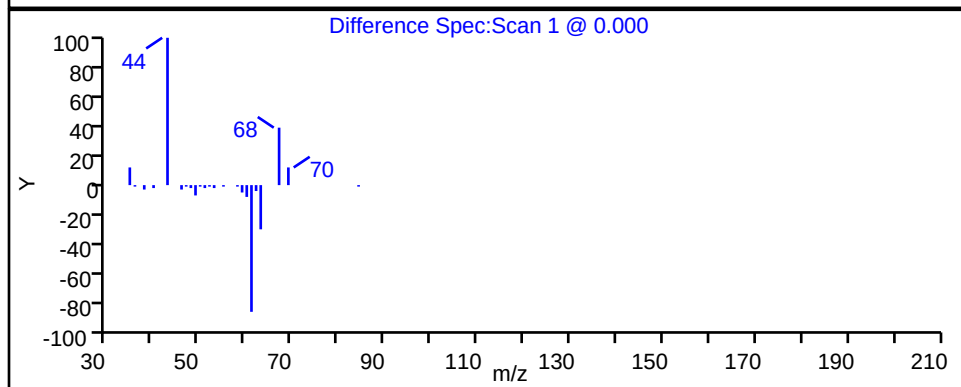
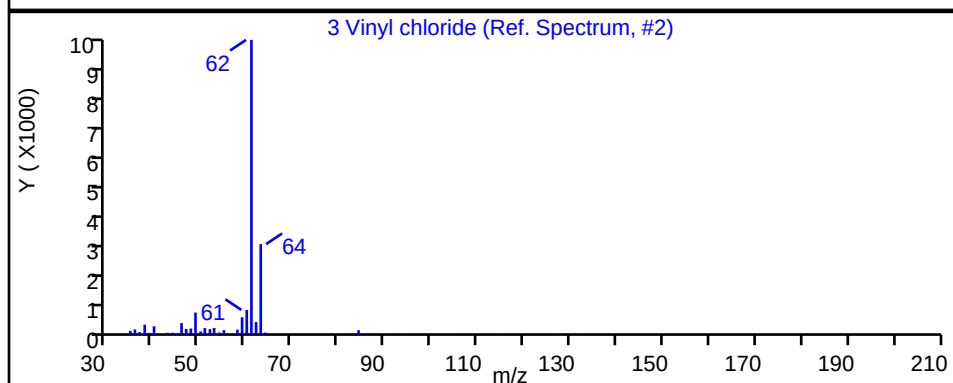
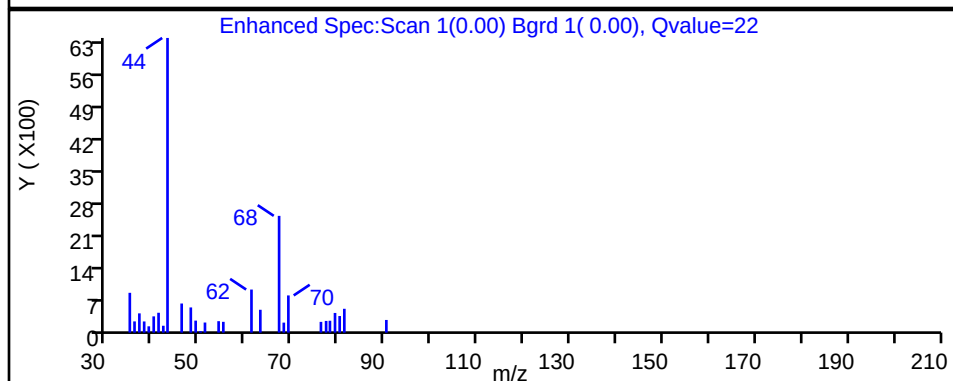
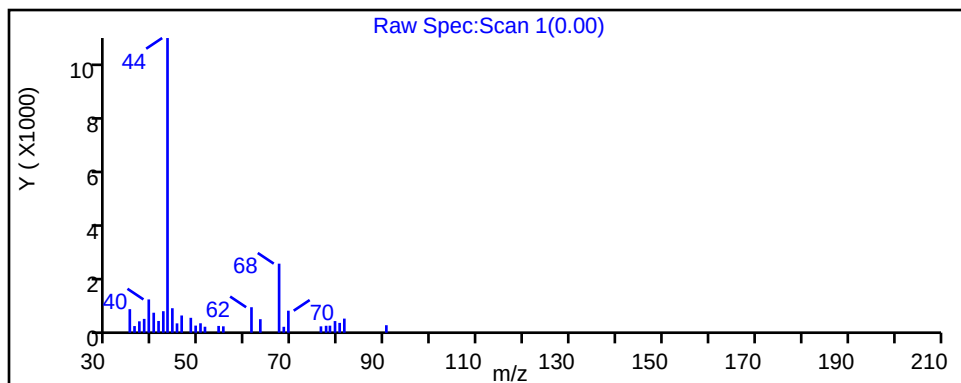
Dil. Factor: 1.0

Operator: JTH

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

3 Vinyl chloride



Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\\dd\\chem\\msd17.i\\17062920B.b\\170629B09.D

Injection Date: 30-Jun-2020 01:00:30

Inst. ID: msd17.i

Client ID: DUP2

Lab ID: VF27003-004

Sample Info: 17062920B, VF27003-004

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

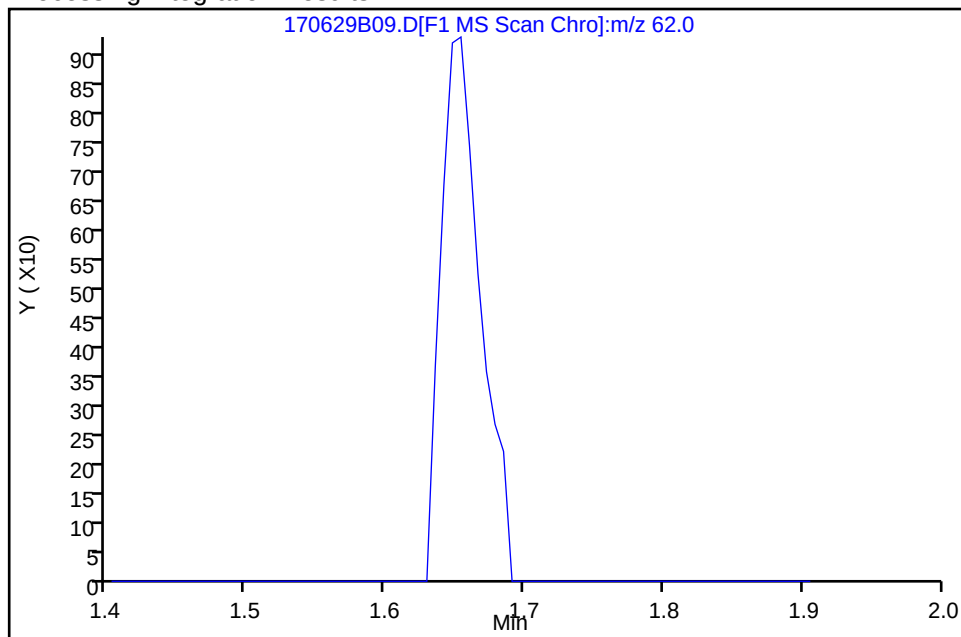
3 Vinyl chloride, CAS: 75-01-4

Not Detected

Expected RT: 1.656

RT Window: 1.290-2.022

Processing Integration Results



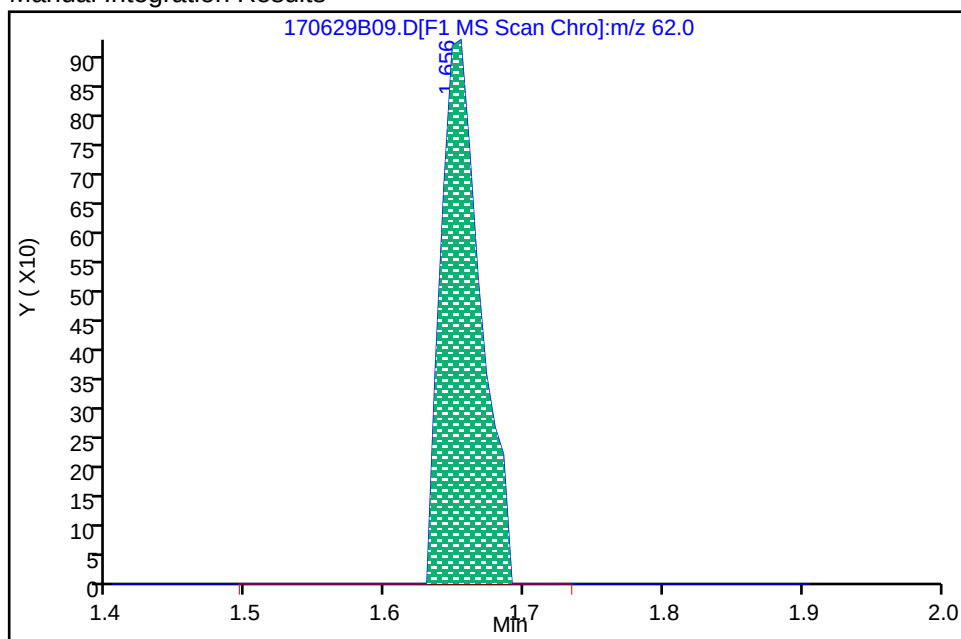
RT: 1.656

Area: 1819

Conc: 0.21003

Conc Units: ug/L

Manual Integration Results



Data Editor: pap, 30-Jun-2020 14:23:30

Audit Action: Mint

Audit Reason:

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\dd\chem\msd17.i\17062920B.b\170629B09.D

Injection Date: 30-Jun-2020 01:00:30

Inst. ID: msd17.i

Client ID: DUP2

Lab ID: VF27003-004

Sample Info: 17062920B, VF27003-004

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

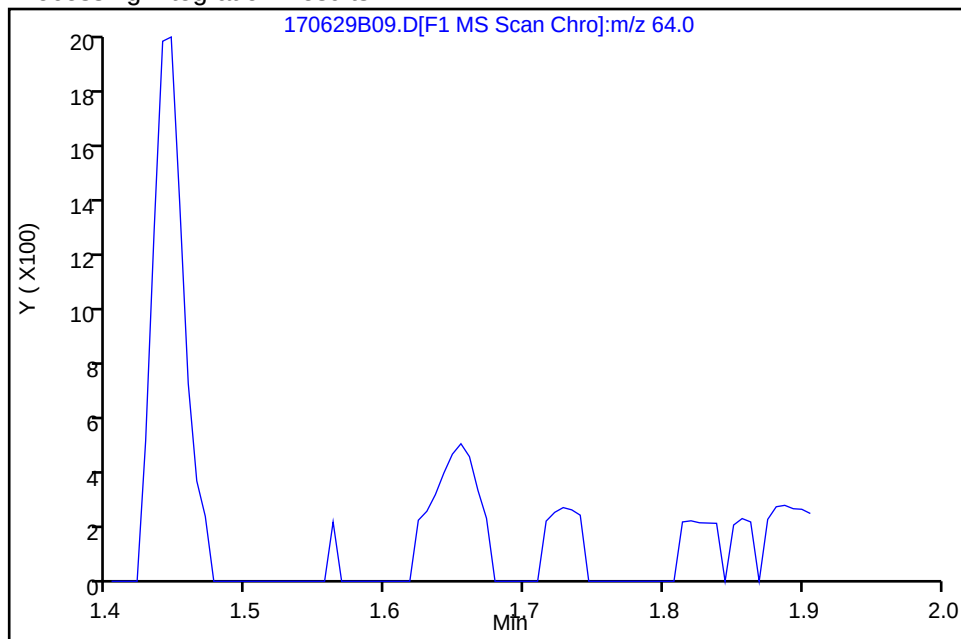
3 Vinyl chloride, CAS: 75-01-4

Not Detected

Expected RT: 1.656

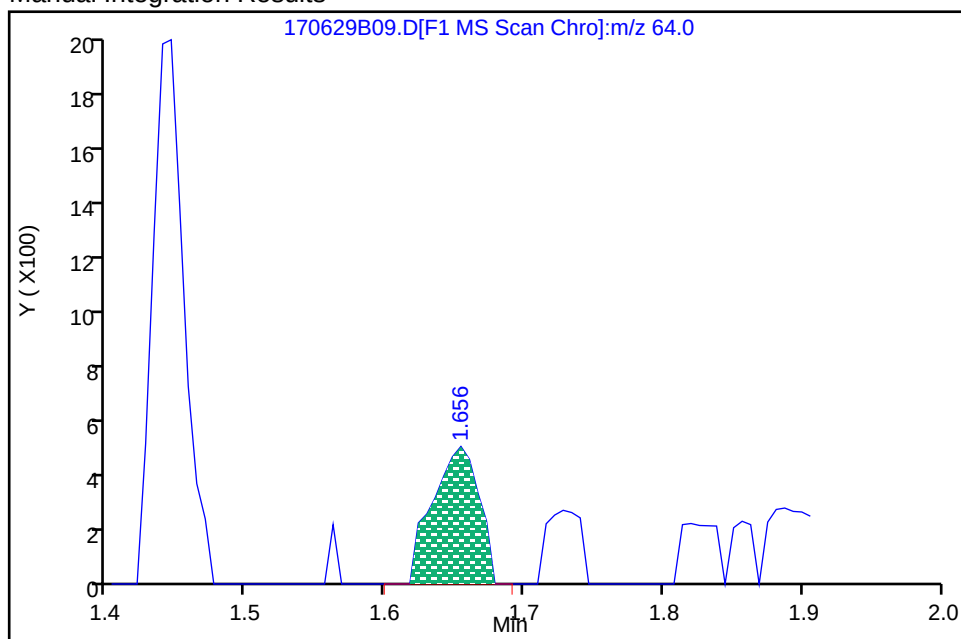
RT Window: 1.290-2.022

Processing Integration Results



Manual Integration Results

RT: 1.656
Area: 1131
Conc: 0.21003
Conc Units: ug/L



Data Editor: pap, 30-Jun-2020 14:23:30

Audit Action: Mint

Audit Reason:

Volatile Organic Compounds by GC/MS

Client: Draper Aden Associates				Laboratory ID: VF27003-005			
Description: Trip Blank				Matrix: Aqueous			
Date Sampled: 06/22/2020				Project Name: RAAP HWMU16-verification			
Date Received: 06/27/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	06/29/2020 2324	JTH		58472

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260D	10	U	10	2.0	ug/L	1
Vinyl chloride	75-01-4	8260D	0.50	U	0.50	0.11	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					
Bromofluorobenzene		98	70-130					
1,2-Dichloroethane-d4		120	70-130					
Toluene-d8		107	70-130					

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B05.D
 Lab Sample ID: VF27003-005 Client Sample ID: Trip Blank
 Injection Date: 29-Jun-2020 23:24:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VF27003-005
 Misc. Info: EKED01
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Client ALS Bottle: 5
 Cpnd Sublist: sample.sb
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: pap

Review Date: 30-Jun-2020 14:32:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	863594	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.045	7.051	-0.005	1504172	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1361010	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	591874	50.000	50.000	
3 Vinyl chloride	62.0		1.656		ND			
10 Acetone	43.0		3.082		ND			
\$ 46 1,2-Dichloroethane-d4	65.0	6.441	6.442	0.000	815183	59.811	59.811	
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	2089411	53.650	53.650	
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	695870	48.762	48.762	

Compound Type Legend

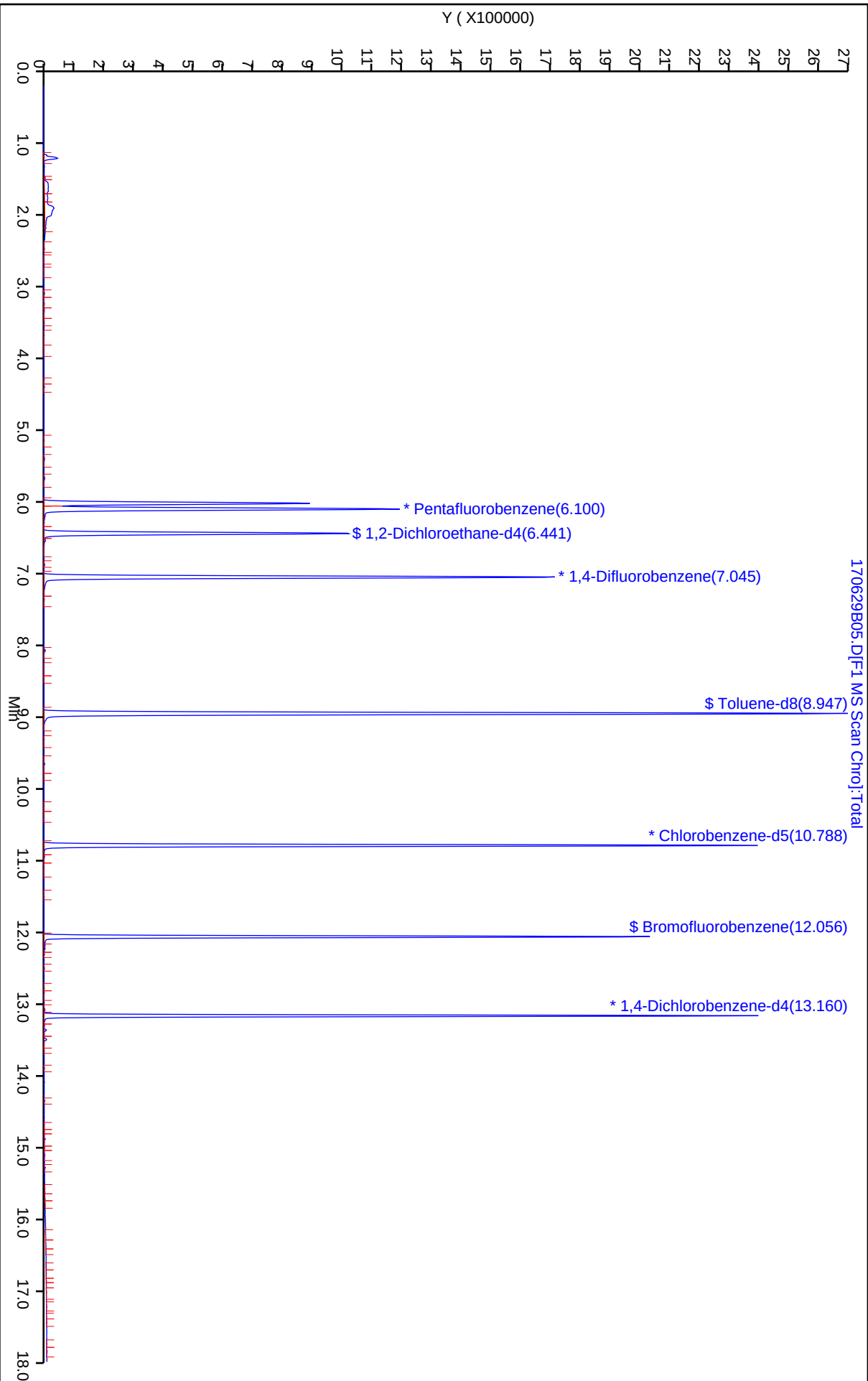
* - ISTD
 \$ - Surrogate

QC Flag Legend

Processing Flags
 Review Flags

Shealy Environmental Services

Data File:	\\Organics\ID\chem\msd17.i\17062920B.b\170629B05.D		
Injection Date:	29-Jun-2020 23:24:30	Inst. ID:	msd17.i
Client ID:	Trip Blank	Lab ID:	VF27003-005
Sample Info:	17062920B, VF27003-005		
Purge Vol:	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
			Operator: JTH



CALIBRATION DATA

Shealy Environmental Services
Form 6

Batch: \\Organics\DD\chem\msd17.i\17060420C.b
 Method: 8260B-17.M Instrument: msd17
 Cal Start Date: 05-Jun-2020 03:20:30 Cal End Date: 05-Jun-2020 05:43:30
 Last Modified: 05-Jun-2020 08:22:30
 No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
S 111 1,2-Dichloroethene (to	0.601040	0.585899	0.612205	0.584408	0.593650	0.562350	0.593952		0.590500	Avg	2.6		
	1.8	-0.8	3.7	-1	0.5	-4.8	0.6						
1 Dichlorodifluoromethan	0.315431	0.363040	0.363337	0.318650	0.372100	0.342781	0.325725		0.343009	Avg	6.9		
	-8	5.8	5.9	-7.1	8.5	-0.1	-5						
2 Chloromethane	0.548632	0.516591	0.524237	0.472325	0.491434	0.451000	0.432678		0.490985	Avg	8.5		
	11.7	5.2	6.8	-3.8	0.1	-8.1	-11.9						
3 Vinyl chloride	0.519681	0.508105	0.529744	0.476767	0.514073	0.494150	0.471764		0.502040	Avg	4.4		
	3.5	1.2	5.5	-5	2.4	-1.6	-6						
4 Bromomethane	0.444499	0.367528	0.375396	0.334517	0.338610	0.311262			0.361968	Avg	12.9		
	22.8	1.5	3.7	-7.6	-6.5	-14							
5 Chloroethane	0.331877	0.362134	0.341536	0.315144	0.317999	0.301923	0.296167		0.323826	Avg	7.1		
	2.5	11.8	5.5	-2.7	-1.8	-6.8	-8.5						
6 Trichlorofluoromethane	0.595773	0.610284	0.632468	0.580654	0.622391	0.601463	0.574972		0.602572	Avg	3.5		
	-1.1	1.3	5	-3.6	3.3	-0.2	-4.6						
8 Ethyl ether	0.478983	0.472951	0.484640	0.470724	0.481119	0.457179	0.484394		0.475713	Avg	2.1		
	0.7	-0.6	1.9	-1	1.1	-3.9	1.8						
9 Acrolein	0.179853	0.175330	0.207285	0.191915	0.183784	0.176690	0.150964		0.180832	Avg	9.5		
	-0.5	-3	14.6	6.1	1.6	-2.3	-16.5						
11 1,1-Dichloroethene	0.420853	0.378014	0.432124	0.378688	0.387948	0.367031	0.386505		0.393023	Avg	6.1		
	7.1	-3.8	9.9	-3.6	-1.3	-6.6	-1.7						
12 Freon 113	0.422672	0.386086	0.436786	0.408069	0.417543	0.402099	0.421536		0.413541	Avg	4.0		
	2.2	-6.6	5.6	-1.3	1	-2.8	1.9						
10 Acetone	0.529003	0.541240	0.501548	0.540635	0.471881	0.486734	0.507335		0.511196	Avg	5.3		
	3.5	5.9	-1.9	5.8	-7.7	-4.8	-0.8						
13 Methyl iodide	0.616993	0.602702	0.651108	0.574455	0.596268	0.553120	0.594150		0.598400	Avg	5.2		
	3.1	0.7	8.8	-4	-0.4	-7.6	-0.7						
14 Carbon disulfide	1.306895	1.137964	1.147624	1.043372	1.146550	1.072572	1.151425		1.143772	Avg	7.3		
	14.3	-0.5	0.3	-8.8	0.2	-6.2	0.7						
15 Acetonitrile	0.076675	0.079476	0.076336	0.072664	0.071286	0.069715	0.066474		0.073232	Avg	6.2		
	4.7	8.5	4.2	-0.8	-2.7	-4.8	-9.2						
17 Allyl chloride	0.256468	0.235966	0.272634	0.267159	0.285632	0.274478	0.289249		0.268798	Avg	6.8		
	-4.6	-12.2	1.4	-0.6	6.3	2.1	7.6						

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
16 Methyl Acetate	0.761219	0.768626	0.822801	0.803104	0.783482	0.765814	0.816766		0.788830	Avg	3.2		
	-3.5	-2.6	4.3	1.8	-0.7	-2.9	3.5						
18 Methylene chloride	0.537795	0.545483	0.540759	0.462969	0.461084	0.421967	0.441722		0.487397	Avg	10.7		
	10.3	11.9	10.9	-5	-5.4	-13.4	-9.4						
20 Acrylonitrile	0.472465	0.464332	0.478904	0.461587	0.460483	0.445530	0.453357		0.462380	Avg	2.4		
	2.2	0.4	3.6	-0.2	-0.4	-3.6	-2						
21 trans-1,2-Dichloroethe	0.534687	0.556309	0.570087	0.542319	0.549572	0.518945	0.545619		0.545362	Avg	3.0		
	-2	2	4.5	-0.6	0.8	-4.8	0						
22 tert-Butyl methyl ethe	1.234290	1.164292	1.159805	1.150431	1.067218	1.073908	1.011373		1.123045	Avg	6.7		
	9.9	3.7	3.3	2.4	-5	-4.4	-9.9						
23 Hexane	0.671410	0.563815	0.642622	0.636116	0.695168	0.696938	0.742330		0.664057	Avg	8.6		
	1.1	-15.1	-3.2	-4.2	4.7	5	11.8						
24 1,1-Dichloroethane	1.111740	1.045818	1.111471	1.041872	1.053448	0.994544	1.038802		1.056814	Avg	4.0		
	5.2	-1	5.2	-1.4	-0.3	-5.9	-1.7						
25 Vinyl acetate	0.120807	0.136767	0.121356	0.126307	0.141742	0.136780	0.144986		0.132678	Avg	7.4		
	-8.9	3.1	-8.5	-4.8	6.8	3.1	9.3						
26 Diisopropyl ether (IPE	0.410394	0.447529	0.457544	0.449732	0.457111	0.436565	0.450688		0.444223	Avg	3.7		
	-7.6	0.7	3	1.2	2.9	-1.7	1.5						
27 Chloroprene	0.774936	0.721289	0.822855	0.797484	0.839723	0.813777	0.842739		0.801829	Avg	5.3		
	-3.4	-10	2.6	-0.5	4.7	1.5	5.1						
31 2,2-Dichloropropane	0.516271	0.463710	0.464461	0.419179	0.412571	0.391716	0.385363		0.436182	Avg	10.8		
	18.4	6.3	6.5	-3.9	-5.4	-10.2	-11.7						
29 cis-1,2-Dichloroethene	0.667393	0.615489	0.654323	0.626498	0.637728	0.605755	0.642285		0.635638	Avg	3.4		
	5	-3.2	2.9	-1.4	0.3	-4.7	1						
30 2-Butanone (MEK)	0.164878	0.178408	0.196790	0.200452	0.197665	0.197363	0.214815		0.192910	Avg	8.4		
	-14.5	-7.5	2	3.9	2.5	2.3	11.4						
33 Ethyl Acetate	3.156966	2.026459	1.335977	1.200282	1.202871	1.160260	1.192947	-0.015280	1.176018	WLn	7.4	1.000	
	15.6	-4.1	-1.7	-1.8	0.8	-2.1	1.1						
32 Propionitrile	0.220749	0.217654	0.221284	0.215429	0.211548	0.202915	0.196672		0.212322	Avg	4.4		
	4	2.5	4.2	1.5	-0.4	-4.4	-7.4						
34 Methacrylonitrile	0.431524	0.431182	0.470450	0.459427	0.461156	0.439239	0.440693		0.447667	Avg	3.5		
	-3.6	-3.7	5.1	2.6	3	-1.9	-1.6						
35 Bromochloromethane	0.302547	0.309857	0.326895	0.300601	0.300847	0.285002	0.303379		0.304161	Avg	4.1		
	-0.5	1.9	7.5	-1.2	-1.1	-6.3	-0.3						
36 Tetrahydrofuran	0.650113	0.594404	0.561144	0.545697	0.555707	0.536659	0.552247		0.570853	Avg	6.9		
	13.9	4.1	-1.7	-4.4	-2.7	-6	-3.3						
37 Chloroform	1.173432	1.072749	1.099793	1.031410	1.022729	0.972919	1.022750		1.056540	Avg	6.2		
	11.1	1.5	4.1	-2.4	-3.2	-7.9	-3.2						
40 1,1,1-Trichloroethane	0.711577	0.698696	0.765540	0.732031	0.751755	0.722568	0.755308		0.733925	Avg	3.4		
	-3	-4.8	4.3	-0.3	2.4	-1.5	2.9						
\$ 39 dibromofluoromethane	0.668757	0.611151	0.617720	0.577138	0.571983	0.556752	0.552586		0.593727	Avg	7.0		
	12.6	2.9	4	-2.8	-3.7	-6.2	-6.9						

Report Date: 05-Jun-2020 08:23:54

AIM Revision: 1.0 30-Mar-2020 14:13:44

Method Path: \\Organics\DD\chem\msd17.1\17060420C.b\8260B-17.m

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
42 Cyclohexane	0.507403	0.527190	0.562774	0.491653	0.476848	0.467434	0.477329		0.501519	Avg	6.8		
	1.2	5.1	12.2	-2	-4.9	-6.8	-4.8						
44 Carbon tetrachloride	0.609111	0.579883	0.636155	0.620061	0.640867	0.630349	0.666242		0.626095	Avg	4.3		
	-2.7	-7.4	1.6	-1	2.4	0.7	6.4						
43 1,1-Dichloropropene	0.846708	0.823657	0.825978	0.781201	0.799582	0.782230	0.817711		0.811010	Avg	3.0		
	4.4	1.6	1.8	-3.7	-1.4	-3.5	0.8						
\$ 46 1,2-Dichloroethane-d4	0.501502	0.494885	0.482426	0.442501	0.430003	0.412720	0.407337		0.453053	Avg	8.7		
	10.7	9.2	6.5	-2.3	-5.1	-8.9	-10.1						
45 Isobutyl alcohol	0.044321	0.047476	0.046729	0.047976	0.051284	0.053078	0.052743		0.049087	Avg	6.8		
	-9.7	-3.3	-4.8	-2.3	4.5	8.1	7.4						
48 Benzene	1.387252	1.383516	1.504627	1.392357	1.409488	1.314951	1.345086		1.391039	Avg	4.3		
	-0.3	-0.5	8.2	0.1	1.3	-5.5	-3.3						
50 1,2-Dichloroethane	0.542041	0.524414	0.546409	0.495578	0.502366	0.466140	0.491482		0.509776	Avg	5.7		
	6.3	2.9	7.2	-2.8	-1.5	-8.6	-3.6						
49 Isopropyl Acetate	0.745729	0.766987	0.911086	0.901897	0.965580	0.922714	0.988316		0.886044	Avg	10.6		
	-15.8	-13.4	2.8	1.8	9	4.1	11.5						
53 Trichloroethene	0.346003	0.357092	0.369688	0.347367	0.353126	0.342711	0.371555		0.355363	Avg	3.2		
	-2.6	0.5	4	-2.3	-0.6	-3.6	4.6						
54 Methylcyclohexane	0.532053	0.495823	0.553394	0.529909	0.552717	0.552552	0.566542		0.540427	Avg	4.4		
	-1.5	-8.3	2.4	-1.9	2.3	2.2	4.8						
55 1,2-Dichloropropane	0.379074	0.383918	0.411943	0.375722	0.387437	0.363886	0.385614		0.383942	Avg	3.8		
	-1.3	0	7.3	-2.1	0.9	-5.2	0.4						
58 1,4-Dioxane	0.006160	0.005039	0.006747	0.006971	0.006746	0.006577	0.006863		0.006443	Avg	10.4		
	-4.4	-21.8	4.7	8.2	4.7	2.1	6.5						
56 Dibromomethane	0.241077	0.238195	0.252100	0.240107	0.244912	0.233826	0.250035		0.242893	Avg	2.7		
	-0.7	-1.9	3.8	-1.1	0.8	-3.7	2.9						
57 Methyl methacrylate	0.359816	0.369332	0.419900	0.430748	0.452699	0.445916	0.474504		0.421845	Avg	10.1		
	-14.7	-12.4	-0.5	2.1	7.3	5.7	12.5						
59 Bromodichloromethane	0.436036	0.406165	0.454372	0.445867	0.467083	0.455819	0.490852		0.450885	Avg	5.8		
	-3.3	-9.9	0.8	-1.1	3.6	1.1	8.9						
60 2-nitropropane	0.152754	0.152088	0.142244	0.151059	0.176487	0.185377	0.203915		0.166275	Avg	13.6		
	-8.1	-8.5	-14.5	-9.2	6.1	11.5	22.6						
61 2-Chloroethylvinyl eth	0.255610	0.233326	0.290519	0.285946	0.308691	0.305253	0.328205		0.286793	Avg	11.4		
	-10.9	-18.6	1.3	-0.3	7.6	6.4	14.4						
62 cis-1,3-Dichloropropen	0.473336	0.441881	0.518470	0.535797	0.579635	0.569898	0.613327		0.533192	Avg	11.4		
	-11.2	-17.1	-2.8	0.5	8.7	6.9	15						
63 4-Methyl-2-pentanone	0.579836	0.608745	0.681954	0.687418	0.720850	0.686829	0.671768		0.662486	Avg	7.5		
	-12.5	-8.1	2.9	3.8	8.8	3.7	1.4						
\$ 64 Toluene-d8	1.511174	1.446788	1.518471	1.426923	1.420656	1.348853	1.342294		1.430737	Avg	4.9		
	5.6	1.1	6.1	-0.3	-0.7	-5.7	-6.2						
65 Toluene	0.886899	0.870637	0.976814	0.926433	0.947036	0.888606	0.967422		0.923407	Avg	4.6		
	-4	-5.7	5.8	0.3	2.6	-3.8	4.8						

Report Date: 05-Jun-2020 08:23:54

AIM Revision: 1.0 30-Mar-2020 14:13:44

Method Path: \\Organics\DD\chem\msd17.1\17060420C.b\8260B-17.m

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
66 trans-1,3-Dichloroprop	0.469553	0.446156	0.507080	0.523203	0.580637	0.575059	0.655974		0.536809	Avg	13.5		
	-12.5	-16.9	-5.5	-2.5	8.2	7.1	22.2						
67 Ethyl methacrylate	0.477758	0.424001	0.547905	0.580600	0.640088	0.634224	0.702207	0.005995	0.670692	WLn	16.6	0.996	
	*31.2	-6.8	-12.3	-11.9	-4	-5.1	4.8						
68 1,1,2-Trichloroethane	0.394012	0.397370	0.437920	0.397231	0.396335	0.374265	0.407229		0.400623	Avg	4.8		
	-1.7	-0.8	9.3	-0.8	-1.1	-6.6	1.6						
69 Tetrachloroethene	0.319753	0.274709	0.310119	0.298846	0.300427	0.290637	0.320331		0.302118	Avg	5.4		
	5.8	-9.1	2.6	-1.1	-0.6	-3.8	6						
70 1,3-Dichloropropane	0.705047	0.676201	0.732583	0.677781	0.687856	0.645314	0.697364		0.688878	Avg	3.9		
	2.3	-1.8	6.3	-1.6	-0.1	-6.3	1.2						
71 2-Hexanone	0.545452	0.555956	0.635702	0.656224	0.678498	0.651321	0.668086		0.627320	Avg	8.6		
	-13.1	-11.4	1.3	4.6	8.2	3.8	6.5						
72 Dibromochloromethane	0.273906	0.302403	0.346511	0.348710	0.381831	0.375015	0.420574		0.349850	Avg	14.1		
	-21.7	-13.6	-1	-0.3	9.1	7.2	20.2						
73 n-Butyl acetate	0.573505	0.589251	0.882243	0.855806	0.930243	0.905965	0.965545	0.005515	0.941995	WLn	9.3	0.999	
	16	-9.9	-0.8	-7.8	-0.7	-3.5	2.6						
75 1,2-Dibromoethane (EDB	0.391755	0.372256	0.430713	0.401453	0.411943	0.392227	0.427872		0.404031	Avg	5.2		
	-3	-7.9	6.6	-0.6	2	-2.9	5.9						
77 Chlorobenzene	1.056596	1.051669	1.122636	1.029998	1.046567	0.977619	1.023780		1.044124	Avg	4.2		
	1.2	0.7	7.5	-1.4	0.2	-6.4	-1.9						
78 1,1,1,2-Tetrachloroeth	0.299035	0.317451	0.342680	0.339909	0.359903	0.343002	0.367208		0.338455	Avg	7.0		
	-11.6	-6.2	1.2	0.4	6.3	1.3	8.5						
79 Ethylbenzene	0.475963	0.468488	0.542575	0.536521	0.553171	0.526925	0.563299		0.523849	Avg	7.1		
	-9.1	-10.6	3.6	2.4	5.6	0.6	7.5						
80 m+p-Xylenes	0.569094	0.550835	0.635596	0.631073	0.671418	0.635987	0.673646		0.623950	Avg	7.6		
	-8.8	-11.7	1.9	1.1	7.6	1.9	8						
81 o-Xylene	0.507656	0.525114	0.602563	0.591483	0.627213	0.591702	0.614884		0.580088	Avg	7.9		
	-12.5	-9.5	3.9	2	8.1	2	6						
82 Styrene	0.831102	0.810015	1.008612	1.060454	1.124427	1.051721	1.068127		0.993494	Avg	12.4		
	-16.3	-18.5	1.5	6.7	13.2	5.9	7.5						
83 Bromoform	0.208776	0.212089	0.239336	0.248876	0.281672	0.280171	0.310582		0.254500	Avg	15.0		
	-18	-16.7	-6	-2.2	10.7	10.1	22						
84 Isopropylbenzene	1.352502	1.351593	1.619061	1.622882	1.715180	1.588430	1.494706		1.534908	Avg	9.2		
	-11.9	-11.9	5.5	5.7	11.7	3.5	-2.6						
85 Cyclohexanone	0.026519	0.025936	0.028619	0.031668	0.032487	0.032597	0.031173		0.029857	Avg	9.4		
	-11.2	-13.1	-4.1	6.1	8.8	9.2	4.4						
\$ 86 Bromofluorobenzene	0.578479	0.515984	0.536296	0.519897	0.531199	0.506241	0.481817		0.524274	Avg	5.7		
	10.3	-1.6	2.3	-0.8	1.3	-3.4	-8.1						
87 Bromobenzene	0.856887	0.842631	0.920285	0.852810	0.881642	0.813600	0.932164		0.871431	Avg	4.9		
	-1.7	-3.3	5.6	-2.1	1.2	-6.6	7						
88 1,1,2,2-Tetrachloroeth	1.531965	1.501172	1.523039	1.375757	1.408120	1.284685	1.404001		1.432677	Avg	6.3		
	6.9	4.8	6.3	-4	-1.7	-10.3	-2						

Report Date: 05-Jun-2020 08:23:54

AIM Revision: 1.0 30-Mar-2020 14:13:44

Method Path: \\Organics\DD\chem\msd17.1\17060420C.b\8260B-17.m

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
90 trans-1,4-Dichloro-2-b	0.359983	0.343977	0.365418	0.367721	0.407000	0.390414	0.451215		0.383675	Avg	9.4		
	-6.2	-10.3	-4.8	-4.2	6.1	1.8	17.6						
89 1,2,3-Trichloropropane	0.478723	0.495059	0.486829	0.453201	0.442829	0.412236	0.459275		0.461165	Avg	6.2		
	3.8	7.3	5.6	-1.7	-4	-10.6	-0.4						
91 n-Propylbenzene	3.683962	3.631411	4.312321	4.231252	4.336792	3.884067	3.948793		4.004086	Avg	7.3		
	-8	-9.3	7.7	5.7	8.3	-3	-1.4						
92 2-Chlorotoluene	2.507091	2.574259	2.723729	2.556059	2.561235	2.340387	2.514766		2.539647	Avg	4.5		
	-1.3	1.4	7.2	0.6	0.9	-7.8	-1						
93 1,3,5-Trimethylbenzene	2.288794	2.350871	2.899698	2.815986	2.926582	2.641079	2.762113		2.669303	Avg	9.6		
	-14.3	-11.9	8.6	5.5	9.6	-1.1	3.5						
94 4-Chlorotoluene	0.746046	0.710898	0.873793	0.856040	0.874760	0.808708	0.914334		0.826368	Avg	9.0		
	-9.7	-14	5.7	3.6	5.9	-2.1	10.6						
95 tert-Butylbenzene	2.079399	2.071532	2.461881	2.369817	2.475922	2.252611	2.339746		2.292987	Avg	7.3		
	-9.3	-9.7	7.4	3.4	8	-1.8	2						
96 1,2,4-Trimethylbenzene	2.390356	2.359977	2.856922	2.848279	2.946169	2.629160	2.757263		2.684018	Avg	8.7		
	-10.9	-12.1	6.4	6.1	9.8	-2	2.7						
97 sec-Butylbenzene	3.145681	2.989404	3.647543	3.570879	3.739943	3.368598	3.383830		3.406554	Avg	8.0		
	-7.7	-12.2	7.1	4.8	9.8	-1.1	-0.7						
98 1,3-Dichlorobenzene	1.506762	1.467924	1.660334	1.534700	1.605856	1.468626	1.626248		1.552921	Avg	5.0		
	-3	-5.5	6.9	-1.2	3.4	-5.4	4.7						
99 p-Isopropyltoluene	2.169426	2.226268	2.822000	2.831804	3.021736	2.708440	2.794198		2.653410	Avg	12.3		
	-18.2	-16.1	6.4	6.7	13.9	2.1	5.3						
101 1,4-Dichlorobenzene	1.736845	1.604868	1.702032	1.549767	1.609330	1.479757	1.630844		1.616206	Avg	5.4		
	7.5	-0.7	5.3	-4.1	-0.4	-8.4	0.9						
102 Benzyl chloride	1.248843	1.190442	1.402730	1.527267	1.887648	1.881513	2.162003	0.007877	2.027927	WLn	23.7	0.991	
	*40.4	-1.9	-23	-22.7	-6.1	-6.8	6.8						
103 n-Butylbenzene	2.176824	2.060809	2.521233	2.576174	2.868410	2.609527	2.741334		2.507759	Avg	11.6		
	-13.2	-17.8	0.5	2.7	14.4	4.1	9.3						
104 1,2-Dichlorobenzene	1.537732	1.442944	1.585732	1.485444	1.553128	1.399722	1.532347		1.505293	Avg	4.4		
	2.2	-4.1	5.3	-1.3	3.2	-7	1.8						
105 1,2-Dibromo-3-chloropr	0.233845	0.251783	0.296383	0.284466	0.316349	0.301135	0.357126		0.291584	Avg	14.0		
	-19.8	-13.6	1.6	-2.4	8.5	3.3	22.5						
106 1,2,4-Trichlorobenzene	0.670689	0.648477	0.747318	0.733244	0.870832	0.818508			0.748178	Avg	11.4		
	-10.4	-13.3	-0.1	-2	16.4	9.4							
107 Hexachlorobutadiene	0.308825	0.345475	0.377035	0.357831	0.417445	0.382480	0.457497		0.378084	Avg	12.8		
	-18.3	-8.6	-0.3	-5.4	10.4	1.2	21						
108 Naphthalene	2.247166	2.171814	2.459407	2.635306	3.152936	2.861918	3.202383	0.005304	3.086446	WLn	15.2	0.996	
	25.8	-3.1	-15	-13.3	2.7	-7	3.9						
109 1,2,3-Trichlorobenzene	0.590818	0.611995	0.671918	0.685374	0.818738	0.771521			0.691727	Avg	12.8		
	-14.6	-11.5	-2.9	-0.9	18.4	11.5							
S 110 Xylenes (total)	0.538375	0.537974	0.619080	0.611278	0.649315	0.613845	0.644265		0.602019	Avg	7.6		
	-10.6	-10.6	2.8	1.5	7.9	2	7						

Shealy Environmental Services
Initial Calibration RT Report

Batch: \\Organics\DD\chem\msd17.i\17060420C.b
 Method: 8260B-17.M Instrument: msd17
 Cal Start Date: 05-Jun-2020 03:20:30 Cal End Date: 05-Jun-2020 05:43:30
 Last Modified: 05-Jun-2020 08:22:30
 No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
S 111 1,2-Dichloroethene (to	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	
1 Dichlorodifluoromethan	1.369	1.363	1.369	1.369	1.369	1.369	1.363	1.371	0.675	
2 Chloromethane	1.540	1.540	1.540	1.540	1.546	1.540	1.540	1.545	0.816	
3 Vinyl chloride	1.656	1.656	1.656	1.656	1.662	1.656	1.656	1.661	0.749	
4 Bromomethane	1.985	1.979	1.985	1.985	1.979	1.979		1.988	0.770	
5 Chloroethane	2.101	2.101	2.101	2.101	2.101	2.101	2.095	2.105	0.630	
6 Trichlorofluoromethane	2.381	2.375	2.375	2.375	2.381	2.375	2.375	2.383	0.728	
8 Ethyl ether	2.723	2.723	2.723	2.723	2.723	2.723	2.717	2.730	0.850	
9 Acrolein	2.894	2.894	2.893	2.887	2.887	2.887	2.887	2.899	0.863	
11 1,1-Dichloroethene	3.003	2.997	3.003	3.003	3.003	3.003	2.997	3.009	0.753	
12 Freon 113	3.040	3.034	3.040	3.040	3.040	3.040	3.034	3.046	0.746	
10 Acetone	3.089	3.089	3.088	3.082	3.083	3.083	3.083	3.095	0.915	
13 Methyl iodide	3.174	3.174	3.180	3.180	3.180	3.180	3.174	3.185	0.681	
14 Carbon disulfide	3.247	3.247	3.247	3.247	3.247	3.247	3.247	3.255	0.644	
15 Acetonitrile	3.467	3.467	3.466	3.460	3.460	3.454	3.454	3.473	0.942	
17 Allyl chloride	3.491	3.491	3.491	3.491	3.491	3.491	3.491	3.500	0.730	
16 Methyl Acetate	3.515	3.509	3.509	3.509	3.509	3.509	3.503	3.519	0.811	
18 Methylene chloride	3.680	3.680	3.680	3.680	3.686	3.686	3.680	3.690	0.628	
20 Acrylonitrile	4.009	4.003	4.003	4.003	4.003	4.003	3.997	4.013	0.703	
21 trans-1,2-Dichloroethe	4.021	4.021	4.027	4.021	4.021	4.021	4.021	4.032	0.667	
22 tert-Butyl methyl ethe	4.034	4.034	4.033	4.033	4.034	4.034	4.034	4.043	0.656	
23 Hexane	4.399	4.399	4.405	4.405	4.405	4.406	4.399	4.413	0.628	
24 1,1-Dichloroethane	4.607	4.607	4.613	4.607	4.607	4.607	4.607	4.617	0.597	
25 Vinyl acetate	4.662	4.655	4.661	4.655	4.655	4.655	4.655	4.667	0.613	
26 Diisopropyl ether (IPE	4.698	4.692	4.698	4.692	4.692	4.692	4.692	4.703	0.570	
27 Chloroprene	4.698	4.698	4.698	4.698	4.698	4.698	4.698	4.708	0.573	
31 2,2-Dichloropropane	5.350	5.350	5.356	5.350	5.350	5.350	5.350	5.362	0.554	
29 cis-1,2-Dichloroethene	5.363	5.356	5.362	5.363	5.363	5.363	5.363	5.372	0.519	
30 2-Butanone (MEK)	5.381	5.381	5.381	5.375	5.375	5.375	5.375	5.388	0.553	
33 Ethyl Acetate	5.454	5.454	5.454	5.448	5.448	5.448	5.448	5.460	0.514	
32 Propionitrile	5.466	5.460	5.460	5.460	5.460	5.460	5.460	5.472	0.545	
34 Methacrylonitrile	5.649	5.649	5.649	5.649	5.649	5.649	5.649	5.659	0.497	
35 Bromochloromethane	5.661	5.661	5.661	5.661	5.661	5.661	5.661	5.672	0.518	
36 Tetrahydrofuran	5.680	5.673	5.673	5.667	5.667	5.667	5.667	5.681	0.496	
37 Chloroform	5.826	5.820	5.826	5.826	5.826	5.826	5.826	5.835	0.466	
40 1,1,1-Trichloroethane	5.991	5.990	5.996	5.990	5.991	5.991	5.991	6.002	0.523	
\$ 39 dibromofluoromethane	6.021	6.021	6.021	6.021	6.021	6.021	6.021	6.031	0.468	
42 Cyclohexane	6.064	6.064	6.064	6.064	6.064	6.064	6.064	6.081	0.796	
44 Carbon tetrachloride	6.180	6.179	6.179	6.179	6.179	6.180	6.180	6.189	0.449	
43 1,1-Dichloropropene	6.204	6.204	6.204	6.204	6.204	6.204	6.204	6.214	0.458	
\$ 46 1,2-Dichloroethane-d4	6.442	6.442	6.442	6.442	6.442	6.442	6.442	6.452	0.460	
48 Benzene	6.448	6.448	6.454	6.448	6.454	6.448	6.448	6.460	0.476	
45 Isobutyl alcohol	6.460	6.460	6.460	6.454	6.454	6.454	6.460	6.468	0.461	
50 1,2-Dichloroethane	6.545	6.545	6.545	6.545	6.545	6.539	6.539	6.554	0.471	
49 Isopropyl Acetate	6.606	6.606	6.606	6.606	6.606	6.606	6.606	6.616	0.437	
53 Trichloroethene	7.332	7.326	7.325	7.326	7.326	7.326	7.326	7.337	0.411	
54 Methylcyclohexane	7.606	7.606	7.606	7.606	7.606	7.606	7.606	7.617	0.387	
55 1,2-Dichloropropane	7.667	7.667	7.667	7.667	7.667	7.667	7.667	7.677	0.369	

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg- RRT	%Rsd RT	Flags
56 Dibromomethane	7.771	7.771	7.777	7.771	7.777	7.771	7.771	7.784	0.411	
58 1,4-Dioxane	7.783	7.777	7.783	7.777	7.777	7.777	7.777	7.790	0.407	
57 Methyl methacrylate	7.801	7.795	7.795	7.795	7.795	7.795	7.795	7.807	0.398	
59 Bromodichloromethane	8.033	8.033	8.033	8.033	8.033	8.033	8.033	8.043	0.358	
60 2-nitropropane	8.338	8.338	8.337	8.338	8.338	8.338	8.338	8.348	0.364	
61 2-Chloroethylvinyl eth	8.441	8.441	8.441	8.441	8.441	8.441	8.435	8.451	0.347	
62 cis-1,3-Dichloropropen	8.612	8.612	8.612	8.612	8.612	8.612	8.612	8.623	0.345	
63 4-Methyl-2-pentanone	8.838	8.838	8.837	8.837	8.838	8.838	8.838	8.848	0.336	
\$ 64 Toluene-d8	8.953	8.947	8.947	8.947	8.947	8.947	8.947	8.959	0.351	
65 Toluene	9.039	9.039	9.039	9.039	9.039	9.039	9.039	9.050	0.341	
66 trans-1,3-Dichloroprop	9.398	9.398	9.398	9.392	9.398	9.392	9.392	9.407	0.328	
67 Ethyl methacrylate	9.502	9.496	9.502	9.502	9.502	9.502	9.502	9.512	0.322	
68 1,1,2-Trichloroethane	9.648	9.648	9.648	9.648	9.648	9.648	9.648	9.658	0.295	
69 Tetrachloroethene	9.722	9.715	9.721	9.721	9.722	9.716	9.715	9.729	0.305	
70 1,3-Dichloropropane	9.850	9.850	9.849	9.849	9.850	9.850	9.850	9.860	0.301	
71 2-Hexanone	9.959	9.953	9.953	9.953	9.953	9.953	9.953	9.965	0.300	
72 Dibromochloromethane	10.112	10.112	10.112	10.112	10.112	10.112	10.112	10.121	0.257	
73 n-Butyl acetate	10.124	10.118	10.118	10.118	10.118	10.118	10.118	10.128	0.270	
75 1,2-Dibromoethane (EDB)	10.234	10.234	10.233	10.234	10.234	10.234	10.234	10.243	0.267	
77 Chlorobenzene	10.819	10.819	10.819	10.819	10.819	10.819	10.819	10.828	0.242	
78 1,1,1,2-Tetrachloroeth	10.929	10.935	10.935	10.935	10.935	10.935	10.935	10.943	0.242	
79 Ethylbenzene	10.941	10.941	10.941	10.941	10.941	10.941	10.941	10.950	0.235	
80 m+p-Xylenes	11.093	11.093	11.093	11.093	11.093	11.093	11.093	11.102	0.231	
81 o-Xylene	11.502	11.502	11.502	11.502	11.502	11.502	11.502	11.510	0.208	
82 Styrene	11.526	11.526	11.526	11.526	11.526	11.526	11.526	11.535	0.213	
83 Bromoform	11.703	11.703	11.703	11.703	11.703	11.703	11.703	11.712	0.214	
84 Isopropylbenzene	11.886	11.886	11.886	11.886	11.886	11.886	11.886	11.895	0.213	
85 Cyclohexanone	11.971	11.971	11.971	11.971	11.971	11.971	11.971	11.980	0.207	
\$ 86 Bromofluorobenzene	12.057	12.056	12.056	12.056	12.056	12.057	12.057	12.065	0.201	
87 Bromobenzene	12.185	12.184	12.184	12.184	12.184	12.185	12.185	12.193	0.208	
88 1,1,2,2-Tetrachloroeth	12.215	12.215	12.215	12.215	12.215	12.215	12.215	12.223	0.195	
90 trans-1,4-Dichloro-2-b	12.246	12.252	12.251	12.251	12.252	12.252	12.252	12.259	0.198	
89 1,2,3-Trichloropropane	12.258	12.258	12.258	12.258	12.258	12.258	12.258	12.267	0.207	
91 n-Propylbenzene	12.300	12.300	12.300	12.300	12.300	12.300	12.300	12.309	0.205	
92 2-Chlorotoluene	12.374	12.380	12.379	12.380	12.380	12.380	12.380	12.387	0.190	
93 1,3,5-Trimethylbenzene	12.483	12.483	12.483	12.483	12.483	12.483	12.483	12.492	0.189	
94 4-Chlorotoluene	12.502	12.501	12.501	12.501	12.502	12.502	12.502	12.510	0.181	
95 tert-Butylbenzene	12.776	12.776	12.776	12.776	12.776	12.776	12.776	12.784	0.187	
96 1,2,4-Trimethylbenzene	12.831	12.831	12.831	12.831	12.831	12.831	12.831	12.840	0.194	
97 sec-Butylbenzene	12.983	12.983	12.983	12.983	12.983	12.983	12.983	12.991	0.176	
98 1,3-Dichlorobenzene	13.087	13.087	13.087	13.087	13.087	13.087	13.087	13.095	0.178	
99 p-Isopropyltoluene	13.123	13.129	13.129	13.129	13.129	13.130	13.130	13.137	0.179	
101 1,4-Dichlorobenzene	13.178	13.178	13.178	13.178	13.178	13.178	13.178	13.187	0.185	
102 Benzyl chloride	13.288	13.288	13.288	13.288	13.288	13.288	13.288	13.297	0.184	
103 n-Butylbenzene	13.489	13.489	13.495	13.489	13.489	13.489	13.489	13.498	0.175	
104 1,2-Dichlorobenzene	13.501	13.501	13.501	13.501	13.501	13.501	13.501	13.510	0.172	
105 1,2-Dibromo-3-chloropr	14.190	14.190	14.190	14.190	14.184	14.190	14.190	14.197	0.161	
106 1,2,4-Trichlorobenzene	14.873	14.873	14.873	14.873	14.873	14.873		14.883	0.172	
107 Hexachlorobutadiene	14.989	14.989	14.989	14.989	14.989	14.989	14.989	14.998	0.171	
108 Naphthalene	15.093	15.092	15.092	15.092	15.092	15.093	15.093	15.101	0.160	
109 1,2,3-Trichlorobenzene	15.275	15.275	15.275	15.275	15.275	15.275		15.285	0.171	
S 110 Xylenes (total)	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	0.000	

Shealy Environmental Services
Form 6 Response

Batch: \\Organics\DD\chem\msd17.i\17060420C.b
 Method: 8260B-17.M Instrument: msd17
 Cal Start Date: 05-Jun-2020 03:20:30 Cal End Date: 05-Jun-2020 05:43:30
 Last Modified: 05-Jun-2020 08:22:30
 No.Compounds: 112 Integrator: falcon

Internal Standards

- * 41 Pentafluorobenzene
- * 52 1,4-Difluorobenzene
- * 76 Chlorobenzene-d5
- * 100 1,4-Dichlorobenzene-d4

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
S 111 1,2-Dichloroethene (to	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	15861	31067	160734	628663	1606978	3177015	6666390	
1 Dichlorodifluoromethan	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4162	9625	47697	171390	503627	968278	1827931	
2 Chloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7239	13696	68819	254046	665142	1273971	2428144	
3 Vinyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6857	13471	69542	256435	695784	1395859	2647486	
4 Bromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00		#41
	5865	9744	49280	179924	458299	879242		
5 Chloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4379	9601	44835	169504	430403	852863	1662059	
6 Trichlorofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7861	16180	83027	312312	842389	1698994	3226681	
8 Ethyl ether	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6320	12539	63621	253185	651181	1291426	2718365	
9 Acrolein	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	23731	46484	272113	1032241	2487472	4991071	8471927	
11 1,1-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5553	10022	56727	203682	525077	1036778	2169027	
12 Freon 113	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5577	10236	57339	219485	565133	1135836	2365614	
10 Acetone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	13960	28699	131681	581575	1277356	2749819	5694219	
13 Methyl iodide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8141	15979	85474	308978	807033	1562437	3334305	
14 Carbon disulfide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	17244	30170	150654	561191	1551824	3029766	6461672	
15 Acetonitrile	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	10117	21071	100210	390830	964830	1969296	3730452	
17 Allyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	3384	6256	35790	143695	386595	775338	1623236	
16 Methyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10044	20378	108013	431960	1060422	2163246	4583602	
18 Methylene chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7096	14462	70988	249014	624065	1191958	2478896	
20 Acrylonitrile	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	12468	24621	125736	496541	1246502	2517038	5088385	
21 trans-1,2-Dichloroethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7055	14749	74838	291693	743831	1465899	3061954	

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
22 tert-Butyl methyl ethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	16286	30868	152253	618774	1444451	3033541	5675714	
23 Hexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8859	14948	84360	342143	940891	1968687	4165878	
24 1,1-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	14669	27727	145908	560384	1425814	2809356	5829646	
25 Vinyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	1594	3626	15931	67936	191844	386373	813647	
26 Diisopropyl ether (IPE	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5415	11865	60064	241894	618688	1233194	2529214	
27 Chloroprene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10225	19123	108020	428937	1136542	2298732	4729361	
31 2,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6812	12294	60972	225461	558404	1106507	2162616	
29 cis-1,2-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8806	16318	85896	336970	863147	1711116	3604435	
30 2-Butanone (MEK)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	4351	9460	51667	215631	535068	1115009	2411032	
33 Ethyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	41655	53726	175380	645587	1628053	3277464	6694687	
32 Propionitrile	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	29127	57705	290490	1158711	2863243	5731868	11037048	
34 Methacrylonitrile	2.5000	5.0000	25.000	100.00	250.00	500.00	1000.00	#41
	28469	57158	308791	1235544	3120814	6203747	12365618	
35 Bromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	3992	8215	42913	161682	407188	805064	1702532	
36 Tetrahydrofuran	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8578	15759	73664	293510	752135	1515936	3099149	
37 Chloroform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15483	28441	144375	554757	1384236	2748270	5739562	
40 1,1,1-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	9389	18524	100496	393732	1017480	2041087	4238707	
\$ 39 dibromofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8824	16203	81091	310421	774163	1572695	3101052	
42 Cyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6695	13977	73878	264442	645401	1320392	2678717	
44 Carbon tetrachloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8037	15374	83511	333508	867396	1780590	3738879	
43 1,1-Dichloropropene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	11172	21837	108430	420179	1082212	2209619	4588906	
\$ 46 1,2-Dichloroethane-d4	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	11146	22156	104639	395826	963169	1937915	3763479	
48 Benzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	30832	61940	326356	1245492	3157129	6174321	12427571	
45 Isobutyl alcohol	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	5848	12587	61343	258046	694121	1499326	2959907	
50 1,2-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	12047	23478	118517	443305	1125255	2188748	4540918	
49 Isopropyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	16574	34338	197616	806766	2162815	4332583	9131286	
53 Trichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	7690	15987	80186	310727	790972	1609191	3432886	
54 Methylcyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	11825	22198	120032	474015	1238037	2594497	5234412	
55 1,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8425	17188	89351	336091	867825	1708616	3562782	

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
56 Dibromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	5358	10664	54681	214781	548582	1097923	2310134	
58 1,4-Dioxane	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#52
	1369	2256	14635	62361	151111	308834	634056	
57 Methyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	7997	16535	91077	385313	1014005	2093788	4384050	
59 Bromodichloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	9691	18184	98554	398837	1046224	2140286	4535095	
60 2-nitropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	3395	6809	30853	135125	395316	870434	1884018	
61 2-Chloroethylvinyl eth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	5681	10446	63014	255785	691441	1433306	3032366	
62 cis-1,3-Dichloropropen	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	10520	19783	112457	479282	1298332	2675943	5666671	
63 4-Methyl-2-pentanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#52
	25774	54507	295834	1229820	3229280	6449975	12413242	
\$ 64 Toluene-d8	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	29467	57206	292869	1142763	2847999	5726311	10681075	
65 Toluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	17294	34425	188399	741941	1898530	3772414	7698094	
66 trans-1,3-Dichloroprop	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9156	17641	97801	419011	1164007	2441307	5219800	
67 Ethyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9316	16765	105675	464978	1283189	2692484	5587690	
68 1,1,2-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	7683	15712	84462	318126	794536	1588875	3240457	
69 Tetrachloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	6235	10862	59813	239333	602269	1233847	2548977	
70 1,3-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	13748	26737	141294	542806	1378949	2739564	5549158	
71 2-Hexanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	21272	43965	245217	1051084	2720380	5530127	10632360	
72 Dibromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5341	11957	66832	279267	765459	1592060	3346647	
73 n-Butyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11183	23299	170159	685379	1864865	3846109	7683160	
75 1,2-Dibromoethane (EDB)	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	7639	14719	83072	321507	825826	1665129	3404720	
77 Chlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	20603	41583	216524	824882	2098061	4150303	8146553	
78 1,1,1,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5831	12552	66093	272219	721501	1456152	2921996	
79 Ethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9281	18524	104647	429677	1108946	2236963	4482353	
80 m+p-Xylenes	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11097	21780	122588	505400	1345996	2699968	5360426	
81 o-Xylene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9899	20763	116217	473694	1257378	2511963	4892833	
82 Styrene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	16206	32028	194532	849273	2254146	4464891	8499438	
83 Bromoform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	4071	8386	46161	199314	564669	1189416	2471404	
84 Isopropylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	26373	53442	312270	1299698	3438433	6743392	11893868	
85 Cyclohexanone	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#76
	5171	10255	55197	253619	651269	1383846	2480552	

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
\$ 86 Bromofluorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11280	20402	103436	416364	1064899	2149156	3833979	
87 Bromobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	6834	14066	78505	315772	831695	1636445	3161365	
88 1,1,2,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	12218	25059	129923	509405	1328347	2583967	4761562	
90 trans-1,4-Dichloro-2-b	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2871	5742	31172	136157	383943	785263	1530262	
89 1,2,3-Trichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	3818	8264	41529	167808	417742	829155	1557596	
91 n-Propylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	29381	60619	367863	1566716	4091104	7812264	13392032	
92 2-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	19995	42972	232348	946438	2416136	4707365	8528639	
93 1,3,5-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	18254	39243	247359	1042682	2760785	5312165	9367498	
94 4-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	5950	11867	74539	316968	825203	1626604	3100894	
95 tert-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	16584	34580	210011	877478	2335656	4530817	7935071	
96 1,2,4-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	19064	39395	243710	1054639	2779263	5288192	9351049	
97 sec-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	25088	49902	311154	1322198	3528068	6775471	11476001	
98 1,3-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	12017	24504	141635	568257	1514881	2953938	5515296	
99 p-Isopropyltoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	17302	37163	240731	1048539	2850549	5447653	9476311	
101 1,4-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	13852	26790	145192	573836	1518158	2976328	5530882	
102 Benzyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	9960	19872	119660	565505	1780709	3784403	7332269	
103 n-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	17361	34401	215074	953886	2705909	5248703	9297025	
104 1,2-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	12264	24087	135271	550019	1465140	2815347	5196839	
105 1,2-Dibromo-3-chloropr	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	1865	4203	25283	105330	298427	605691	1211165	
106 1,2,4-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00		#100
	5349	10825	63750	271500	821498	1646316		
107 Hexachlorobutadiene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2463	5767	32163	132495	393796	769305	1551568	
108 Naphthalene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	17922	36254	209800	975781	2974316	5756354	10860640	
109 1,2,3-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00		#100
	4712	10216	57318	253775	772355	1551808		
S 110 Xylenes (total)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	20996	42543	238805	979094	2603374	5211931	10253260	

Shealy Environmental Services
Calibration History Report

Batch: \\Organics\DD\chem\msd17.i\17060420C.b
 Method: 8260B-17.M Instrument: msd17
 Cal Start Date: 05-Jun-2020 03:20:30 Cal End Date: 05-Jun-2020 05:43:30
 Last Modified: 05-Jun-2020 08:22:30
 No.Compounds: 112 Integrator: falcon
 Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

No. Cal Levels: 7 No. Cal Levels: 7

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	VSTD0.5UW	05-Jun-2020 03:20:30	17060420C.b	170604C05.D	std.sub	75234790	48014850
2	2	VSTD001UW	05-Jun-2020 03:44:30	17060420C.b	170604C06.D	std.sub	75234790	48014851
3	3	VSTD005UW	05-Jun-2020 04:08:30	17060420C.b	170604C07.D	std.sub	75234790	48014852
4	4	VSTD020UW	05-Jun-2020 04:32:30	17060420C.b	170604C08.D	std.sub	75234790	48014853
5	5	VSTD050UW	05-Jun-2020 04:55:30	17060420C.b	170604C09.D	std.sub	75234790	48014854
6	6	VSTD100UW	05-Jun-2020 05:20:30	17060420C.b	170604C10.D	std.sub	75234790	48014855
7	7	VSTD200UW	05-Jun-2020 05:43:30	17060420C.b	170604C11.D	std.sub	75234790	48014856

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D
 Lab Sample ID: VSTD0.5UW Client Sample ID: 1mL/100mL VSTD050
 Injection Date: 05-Jun-2020 03:20:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD0.5UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 1 ALS Bottle: 5
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.369	1.369	0.000	4162	0.50000	0.46639	Q
2 Chloromethane	50.0	1.540	1.546	-0.005	7239	0.50000	0.55879	Q
3 Vinyl chloride	62.0	1.656	1.662	-0.006	6857	0.50000	0.51964	QM
4 Bromomethane	94.0	1.985	1.980	0.006	5865	0.50000	0.62718	Q
5 Chloroethane	64.0	2.101	2.101	0.000	4379	0.50000	0.51090	Q
6 Trichlorofluoromethane	101.0	2.381	2.375	0.006	7861	0.50000	0.49708	Q
8 Ethyl ether	59.0	2.723	2.723	0.000	6320	0.50000	0.50439	QM
9 Acrolein	56.0	2.894	2.888	0.006	23731	5.0000	4.9865	QM
10 Acetone	43.0	3.089	3.083	0.006	13960	1.0000	1.0217	QM
11 1,1-Dichloroethene	96.0	3.003	3.003	0.000	5553	0.50000	0.53425	Q
12 Freon 113	101.0	3.040	3.040	0.000	5577	0.50000	0.51186	Q
13 Methyl iodide	142.0	3.174	3.180	-0.005	8141	0.50000	0.51523	Q
14 Carbon disulfide	76.0	3.247	3.247	0.000	17244	0.50000	0.57154	Q
15 Acetonitrile	40.0	3.467	3.461	0.006	10117	5.0000	4.8030	QM
17 Allyl chloride	76.0	3.491	3.491	0.000	3384	0.50000	0.48210	Q
16 Methyl Acetate	43.0	3.515	3.509	0.006	10044	0.50000	0.47057	QM
18 Methylene chloride	84.0	3.680	3.680	0.000	7096	0.50000	0.54678	Q
20 Acrylonitrile	53.0	4.009	4.003	0.006	12468	1.0000	1.0211	Q
21 trans-1,2-Dichloroethene	96.0	4.021	4.028	-0.005	7055	0.50000	0.49084	Q
22 tert-Butyl methyl ether(MTBE)	73.0	4.034	4.034	0.000	16286	0.50000	0.54427	Q
23 Hexane	57.0	4.399	4.406	-0.005	8859	0.50000	0.50951	QM
24 1,1-Dichloroethane	63.0	4.607	4.613	-0.005	14669	0.50000	0.52522	Q
25 Vinyl acetate	86.0	4.662	4.655	0.006	1594	0.50000	0.46051	QM
26 Diisopropyl ether (IPE)	87.0	4.698	4.698	0.000	5415	0.50000	0.46417	Q
27 Chloroprene	53.0	4.698	4.698	0.000	10225	0.50000	0.48707	Q
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	8806	0.50000	0.52527	Q
30 2-Butanone (MEK)	72.0	5.381	5.375	0.006	4351	1.0000	0.85821	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.357	-0.005	6812	0.50000	0.58652	Q
32 Propionitrile	54.0	5.466	5.460	0.006	29127	5.0000	5.1953	Q
33 Ethyl Acetate	43.0	5.454	5.449	0.006	41655	0.50000	0.94024	Q
34 Methacrylonitrile	67.0	5.649	5.649	0.000	28469	2.5000	2.4220	QM
35 Bromochloromethane	128.0	5.661	5.661	0.000	3992	0.50000	0.49645	Q
36 Tetrahydrofuran	42.0	5.680	5.667	0.012	8578	0.50000	0.56692	QM
37 Chloroform	83.0	5.826	5.826	0.000	15483	0.50000	0.55237	Q
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	8824	0.50000	0.55977	Q
40 1,1,1-Trichloroethane	97.0	5.991	5.997	-0.005	9389	0.50000	0.48675	Q
* 41 Pentafluorobenzene	168.0	6.100	6.106	-0.005	1319463	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	6695	0.50000	0.50175	QM
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	11172	0.50000	0.52079	Q
44 Carbon tetrachloride	119.0	6.180	6.180	0.000	8037	0.50000	0.48836	Q
45 Isobutyl alcohol	42.0	6.460	6.454	0.006	5848	5.0000	4.5485	QM
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	11146	0.50000	0.54882	Q
48 Benzene	78.0	6.448	6.454	-0.005	30832	0.50000	0.49974	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	16574	0.50000	0.42721	Q
50 1,2-Dichloroethane	62.0	6.545	6.545	0.000	12047	0.50000	0.53036	Q
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2222524	50.000	50.000	
53 Trichloroethene	130.0	7.332	7.332	0.000	7690	0.50000	0.48632	Q
54 Methylcyclohexane	83.0	7.606	7.606	0.000	11825	0.50000	0.49412	QM
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	8425	0.50000	0.49441	Q
56 Dibromomethane	93.0	7.771	7.777	-0.005	5358	0.50000	0.49695	Q
57 Methyl methacrylate	41.0	7.801	7.795	0.006	7997	0.50000	0.42092	QM
58 1,4-Dioxane	88.0	7.783	7.777	0.006	1369	5.0000	4.8128	Q
59 Bromodichloromethane	83.0	8.033	8.033	0.000	9691	0.50000	0.48645	Q
60 2-nitropropane	43.0	8.338	8.338	0.000	3395	0.50000	0.46409	QM
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	5681	0.50000	0.45138	Q
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	10520	0.50000	0.45041	Q
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	25774	1.0000	0.88829	Q
\$ 64 Toluene-d8	98.0	8.953	8.947	0.006	29467	0.50000	0.52749	
65 Toluene	92.0	9.039	9.039	0.000	17294	0.50000	0.48229	Q
66 trans-1,3-Dichloropropene	75.0	9.398	9.399	0.000	9156	0.50000	0.44339	Q
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	9316	0.50000	0.42347	QM
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	7683	0.50000	0.49087	Q
69 Tetrachloroethene	164.0	9.722	9.722	0.000	6235	0.50000	0.52869	Q
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	13748	0.50000	0.51161	Q
71 2-Hexanone	43.0	9.959	9.953	0.006	21272	1.0000	0.88148	Q
72 Dibromochloromethane	129.0	10.112	10.112	0.000	5341	0.50000	0.39752	Q
73 n-Butyl acetate	43.0	10.124	10.118	0.006	11183	0.50000	0.35178	QM
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	7639	0.50000	0.48640	Q
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1949941	50.000	50.000	Q
77 Chlorobenzene	112.0	10.819	10.819	0.000	20603	0.50000	0.50617	Q
78 1,1,1,2-Tetrachloroethane	131.0	10.929	10.935	-0.005	5831	0.50000	0.44648	Q
79 Ethylbenzene	106.0	10.941	10.941	0.000	9281	0.50000	0.45857	Q
80 m+p-Xylenes	106.0	11.093	11.093	0.000	11097	0.50000	0.46190	Q
81 o-Xylene	106.0	11.502	11.502	0.000	9899	0.50000	0.44357	Q
82 Styrene	104.0	11.526	11.526	0.000	16206	0.50000	0.42767	Q
83 Bromoform	173.0	11.703	11.703	0.000	4071	0.50000	0.41760	Q
84 Isopropylbenzene	105.0	11.886	11.886	0.000	26373	0.50000	0.44938	Q
85 Cyclohexanone	55.0	11.971	11.971	0.000	5171	5.0000	4.4658	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.057	12.057	0.000	11280	0.50000	0.55291	Q
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.000	12218	0.50000	0.53313	Q
87 Bromobenzene	156.0	12.185	12.185	0.000	6834	0.50000	0.49262	Q
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	3818	0.50000	0.51562	Q
90 trans-1,4-Dichloro-2-butene	53.0	12.246	12.252	-0.005	2871	0.50000	0.47393	QM
91 n-Propylbenzene	91.0	12.300	12.300	0.000	29381	0.50000	0.46649	Q
92 2-Chlorotoluene	91.0	12.374	12.380	-0.005	19995	0.50000	0.49429	Q
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	18254	0.50000	0.43572	Q
94 4-Chlorotoluene	126.0	12.502	12.502	0.000	5950	0.50000	0.45585	Q
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	16584	0.50000	0.45954	Q
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	19064	0.50000	0.45266	Q
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	25088	0.50000	0.46937	Q
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	12017	0.50000	0.48791	Q
99 p-Isopropyltoluene	119.0	13.123	13.130	-0.005	17302	0.50000	0.41848	Q
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	797538	50.000	50.000	Q
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	13852	0.50000	0.53694	Q
102 Benzyl chloride	91.0	13.288	13.289	0.000	9960	0.50000	0.39760	Q
103 n-Butylbenzene	91.0	13.489	13.495	-0.005	17361	0.50000	0.44612	Q
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	12264	0.50000	0.51349	Q
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.190	0.000	1865	0.50000	0.40675	Q
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	5349	0.50000	0.43740	Q
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	2463	0.50000	0.41562	Q
108 Naphthalene	128.0	15.093	15.093	0.000	17922	0.50000	0.43276	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	4712	0.50000	0.41517	Q
S 110 Xylenes (total)	106.0	16.000		0.000		1.0000	0.90547	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		1.0000	1.0161	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File: \\Organics\ID\chem\msd17.i\17060420C.b\170604C05.D
Injection Date: 05-Jun-2020 03:20:30
Client ID: 1mL/100mL VSTD050
Sample Info: 17060420C, VSTD0.5UW
Purge Vol: 5.00 ml
Column1: Rxi-624Sil (0.25 mm)

Inst. ID: msd17.i
Lab ID: VSTD0.5UW
Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

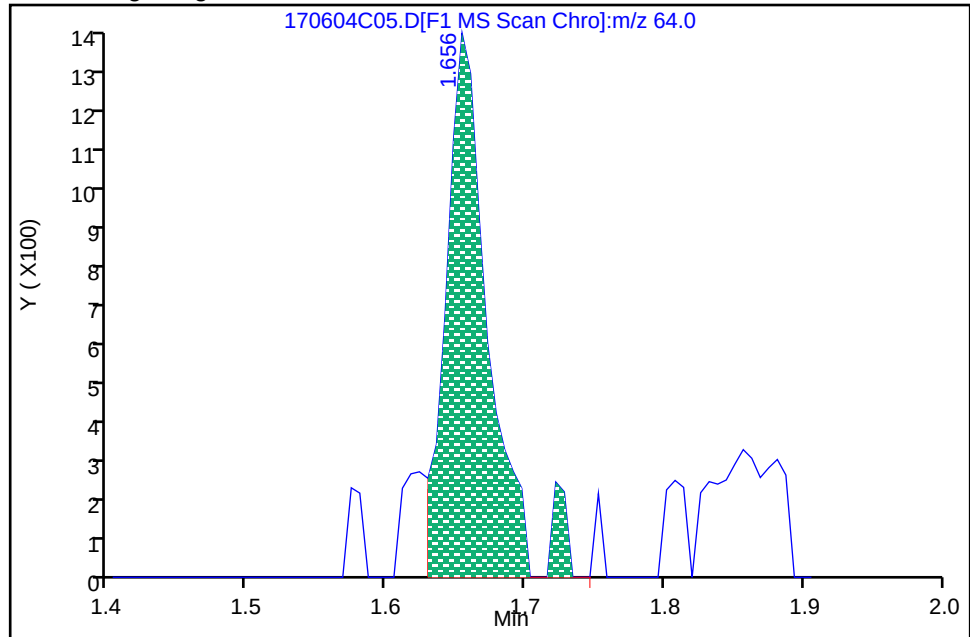
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

3 Vinyl chloride, CAS: 75-01-4

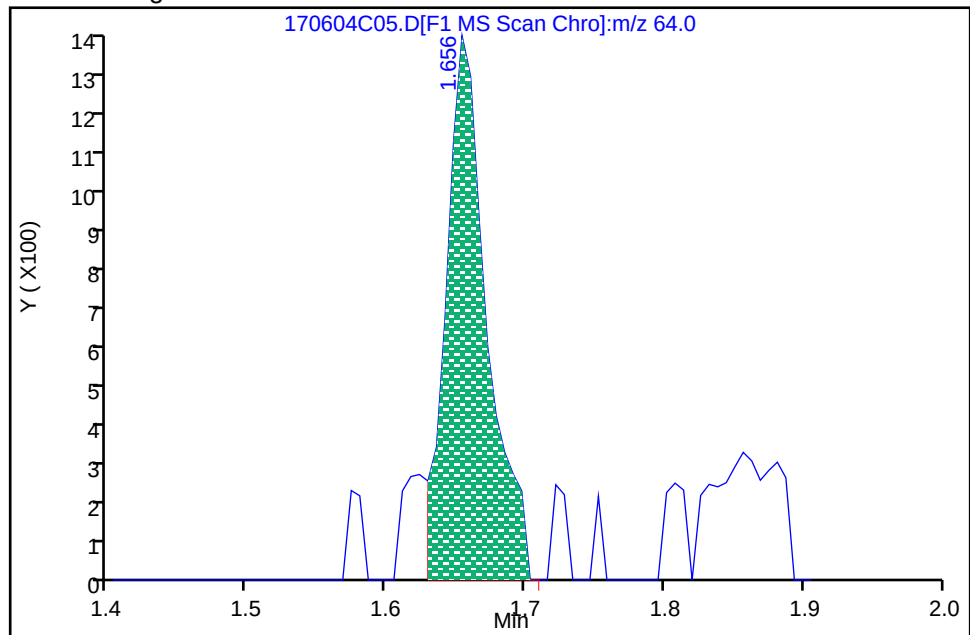
RT: 1.656
Area: 2846
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 1.656
Area: 2729
Amount: 0.51964
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

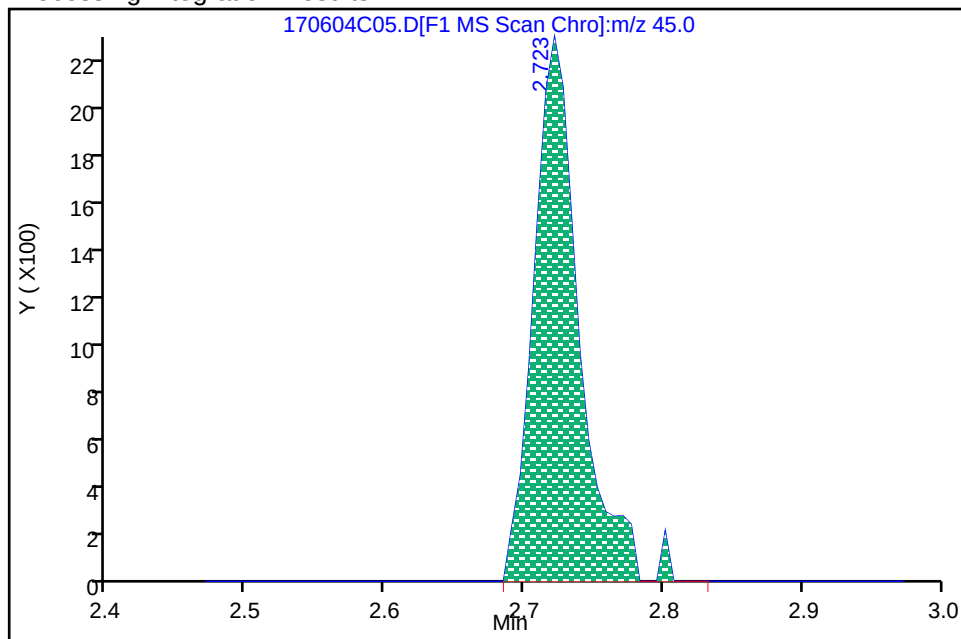
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

8 Ethyl ether, CAS: 60-29-7

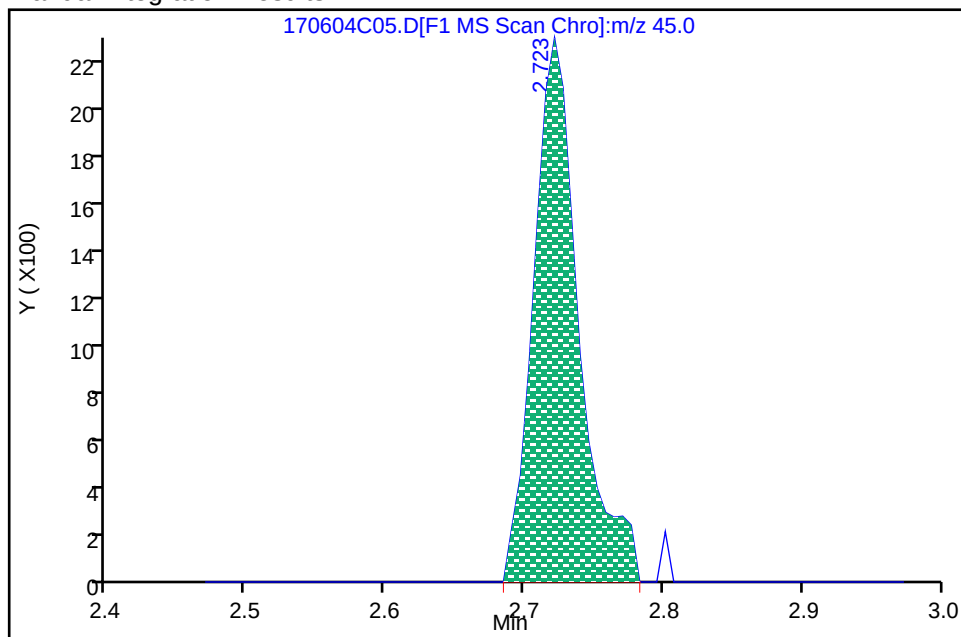
RT: 2.723
Area: 5070
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 2.723
Area: 4995
Amount: 0.50439
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

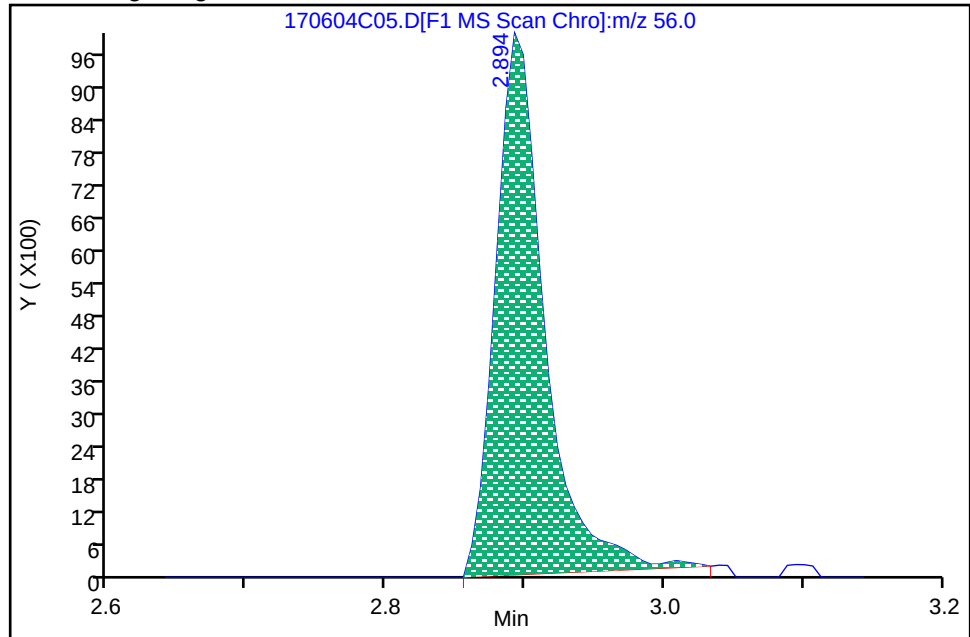
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

9 Acrolein, CAS: 107-02-8

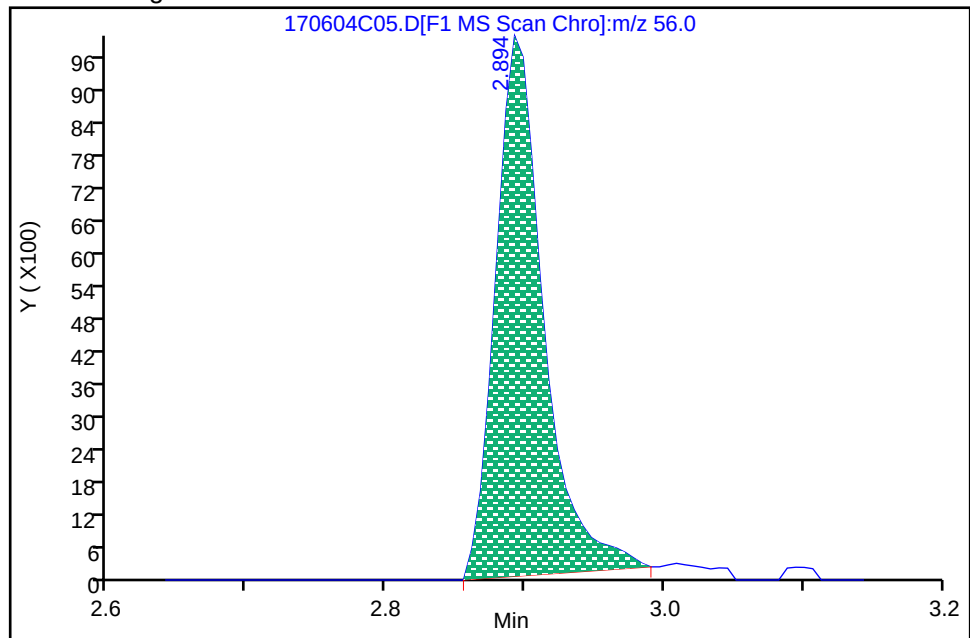
RT: 2.894
Area: 24285
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 2.894
Area: 23731
Amount: 4.9865
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

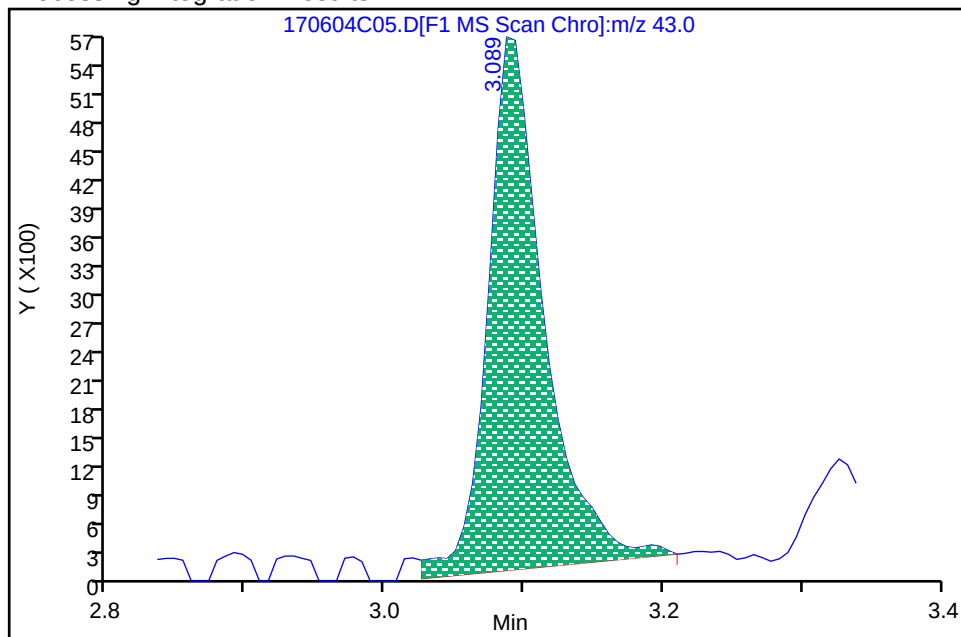
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

10 Acetone, CAS: 67-64-1

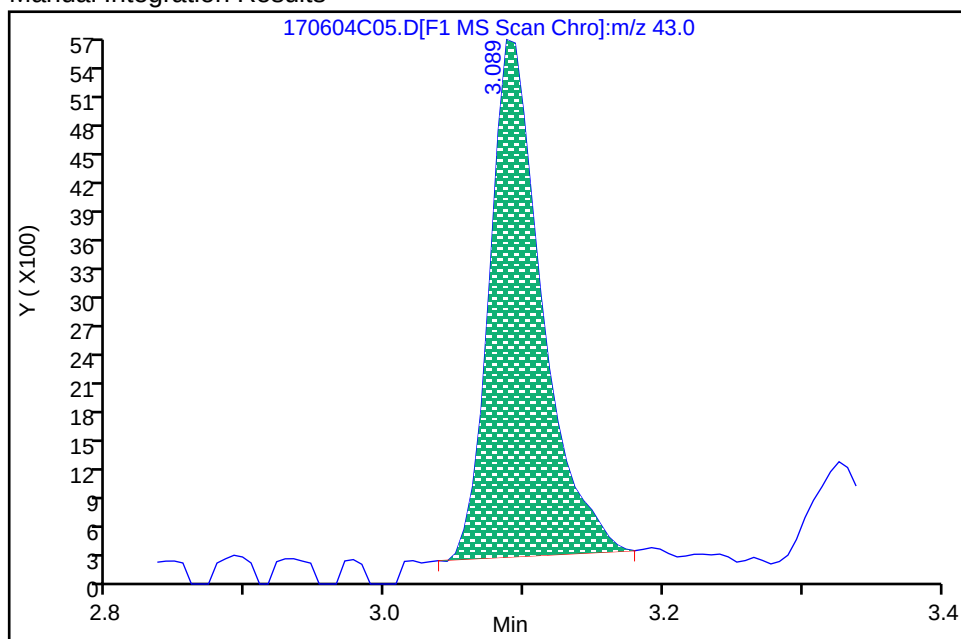
RT: 3.089
Area: 15547
Amount: 1.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.089
Area: 13960
Amount: 1.0217
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

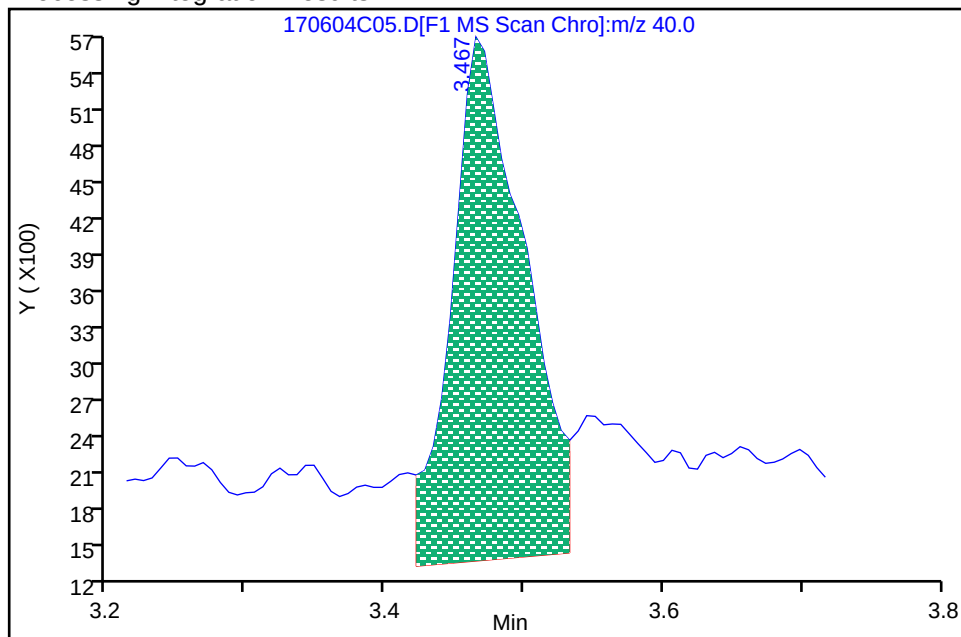
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

15 Acetonitrile, CAS: 75-05-8

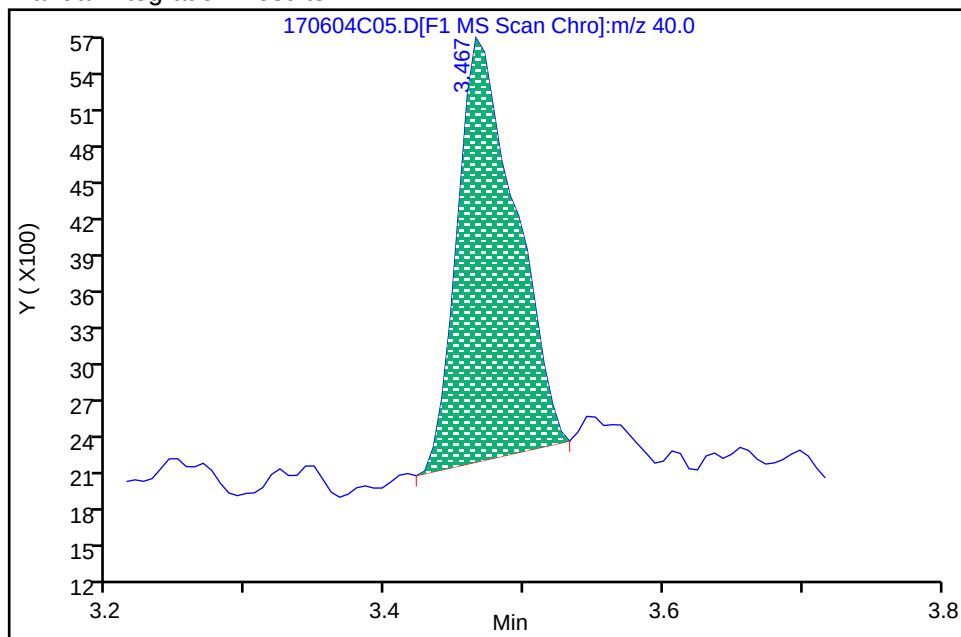
RT: 3.467
Area: 15677
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.467
Area: 10117
Amount: 4.8030
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

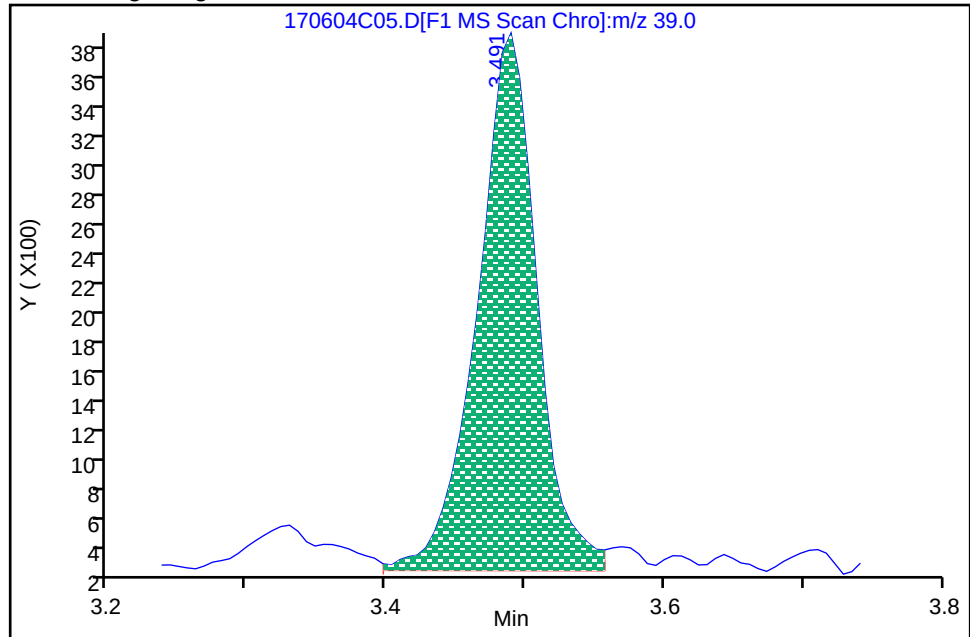
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

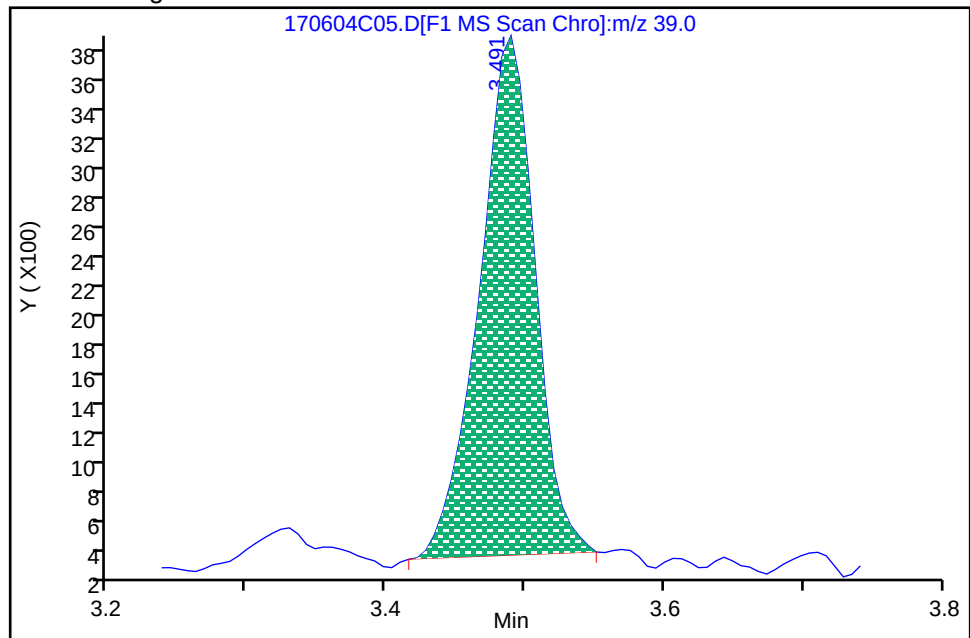
RT: 3.491
Area: 10735
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.491
Area: 9644
Amount: 4.8030
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

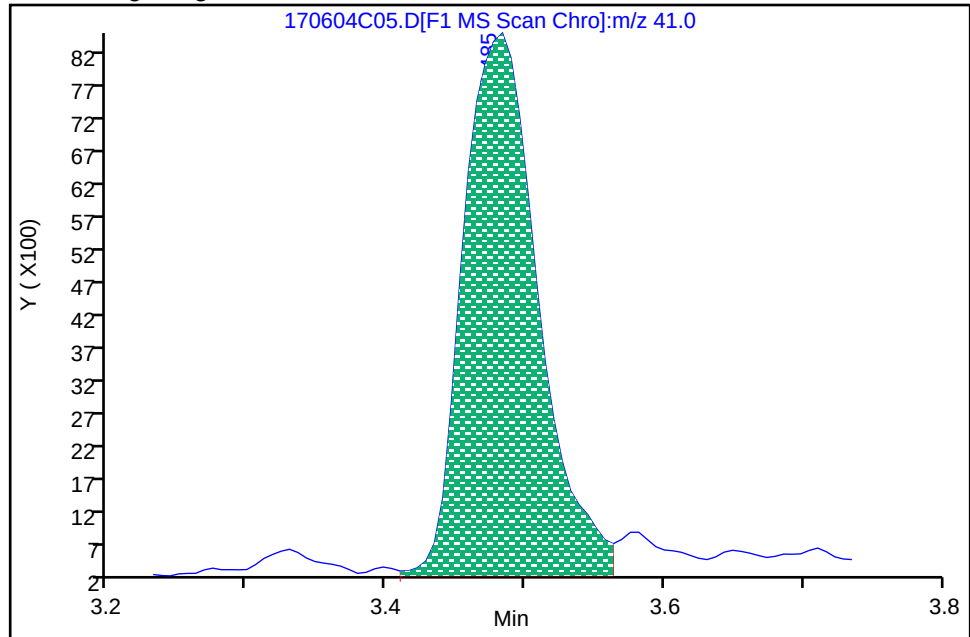
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

15 Acetonitrile, CAS: 75-05-8

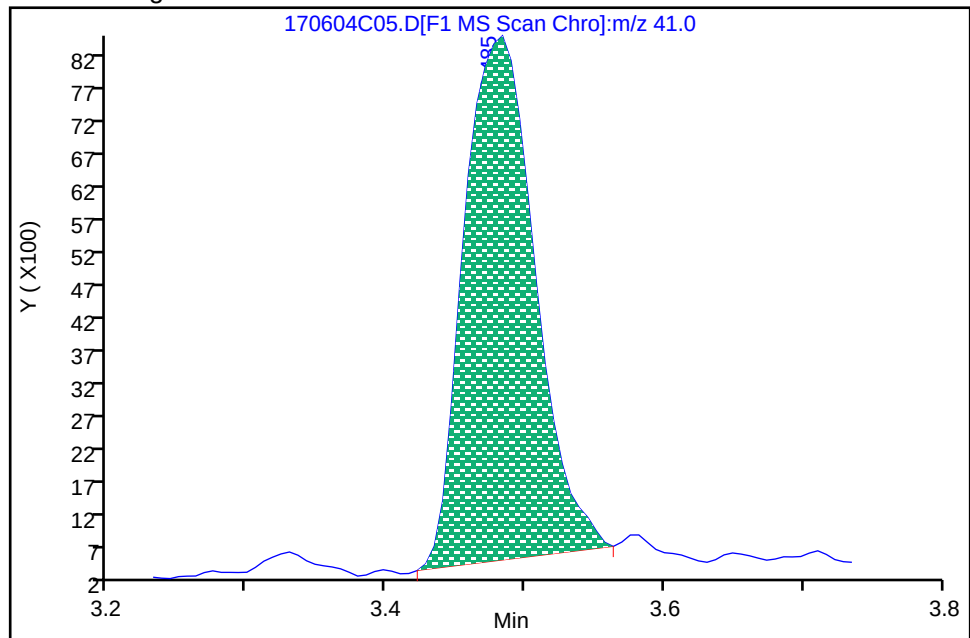
RT: 3.485
Area: 30686
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.485
Area: 28055
Amount: 4.8030
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:02:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

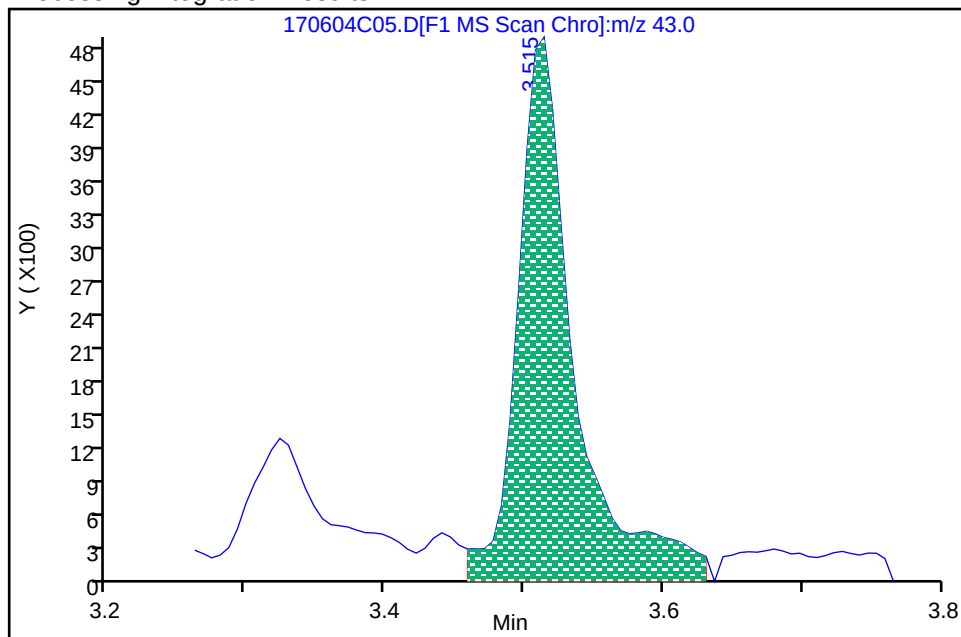
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

16 Methyl Acetate, CAS: 79-20-9

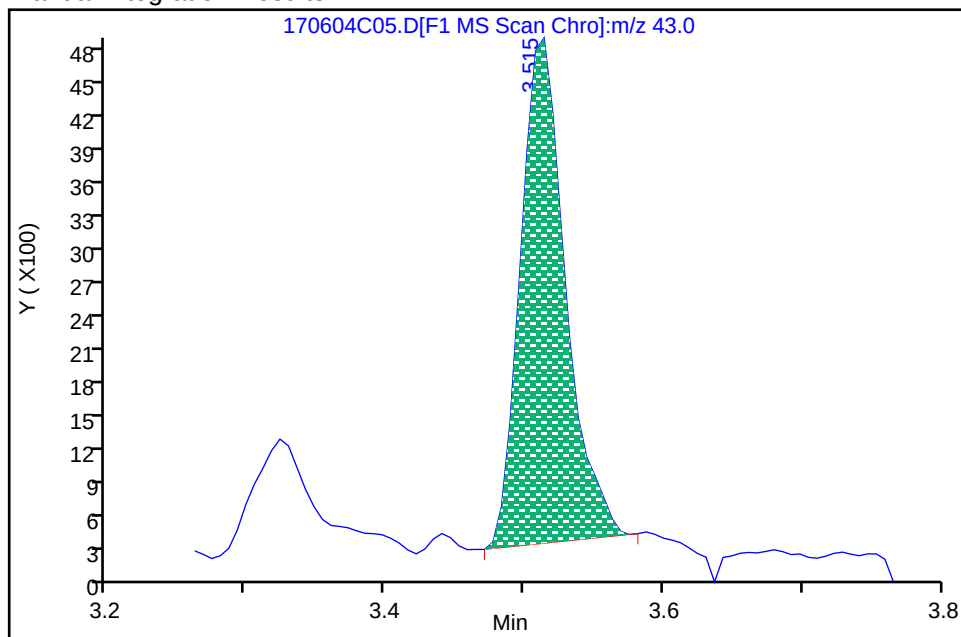
RT: 3.515
Area: 13666
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.515
Area: 10044
Amount: 0.47057
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:03:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

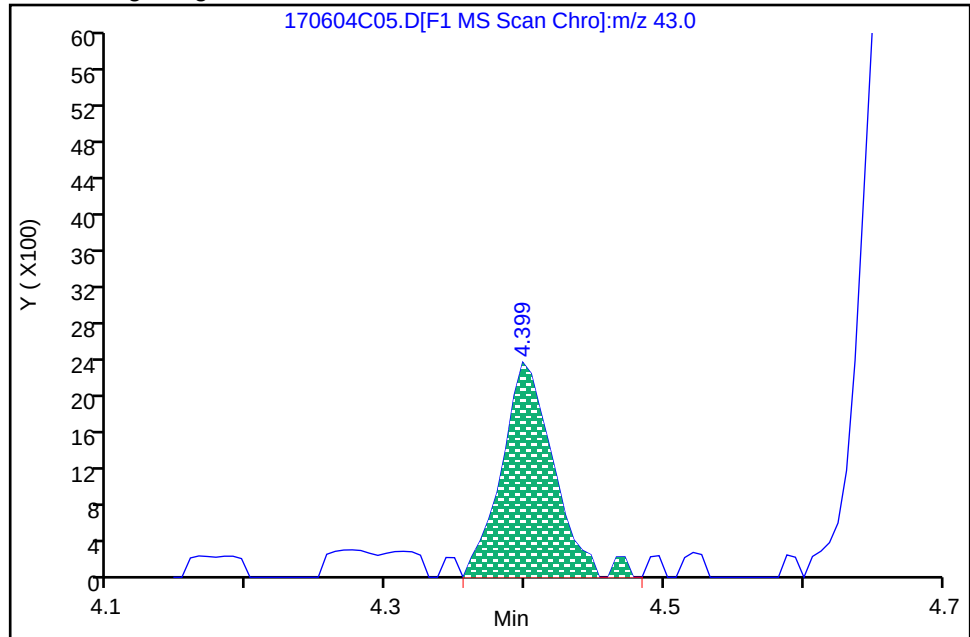
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

23 Hexane, CAS: 110-54-3

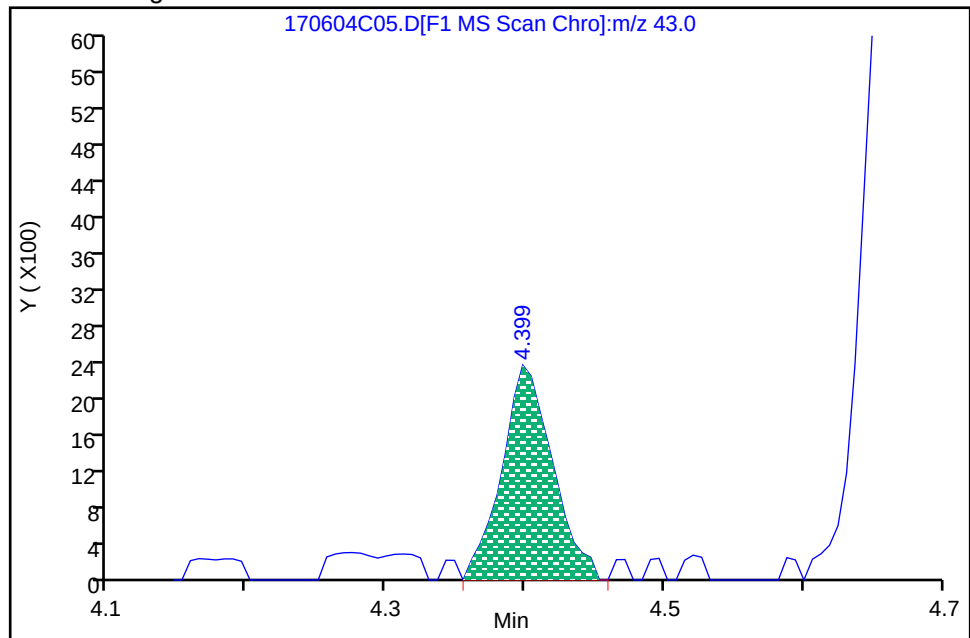
RT: 4.399
Area: 6066
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 4.399
Area: 5904
Amount: 0.50951
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:03:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

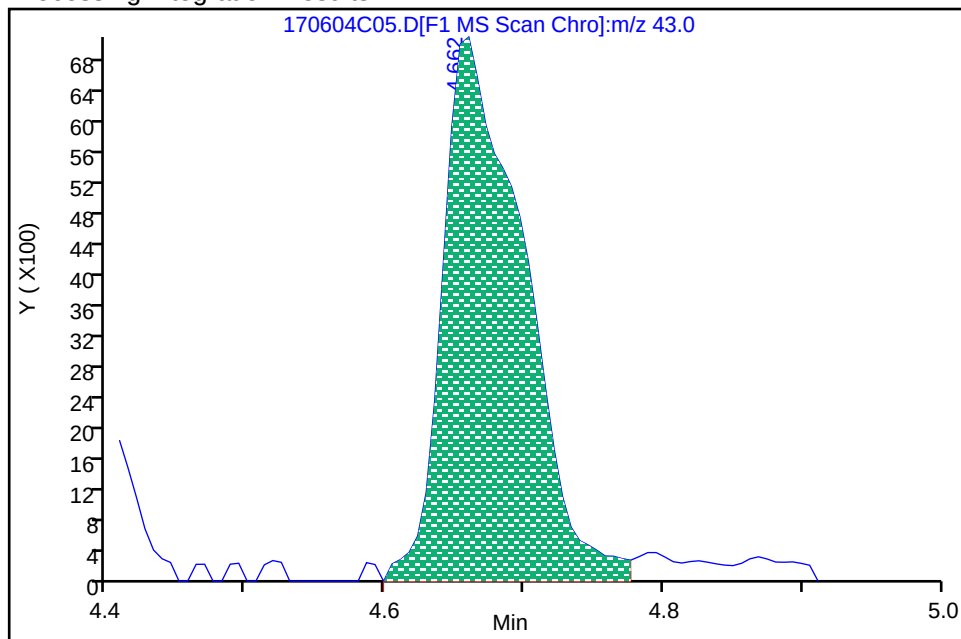
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

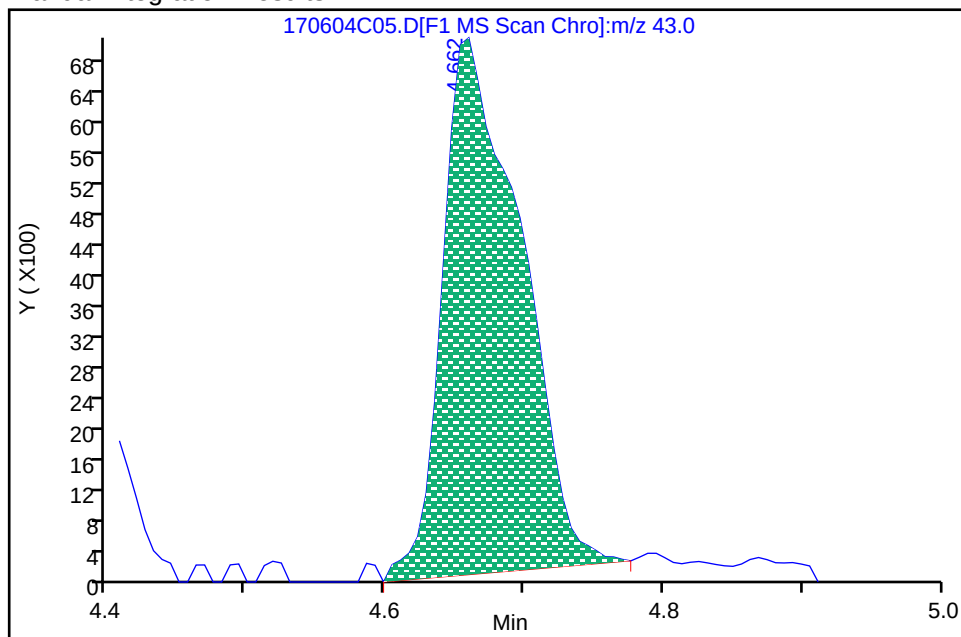
RT: 4.662
Area: 28742
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 4.662
Area: 27279
Amount: 0.46051
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:03:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

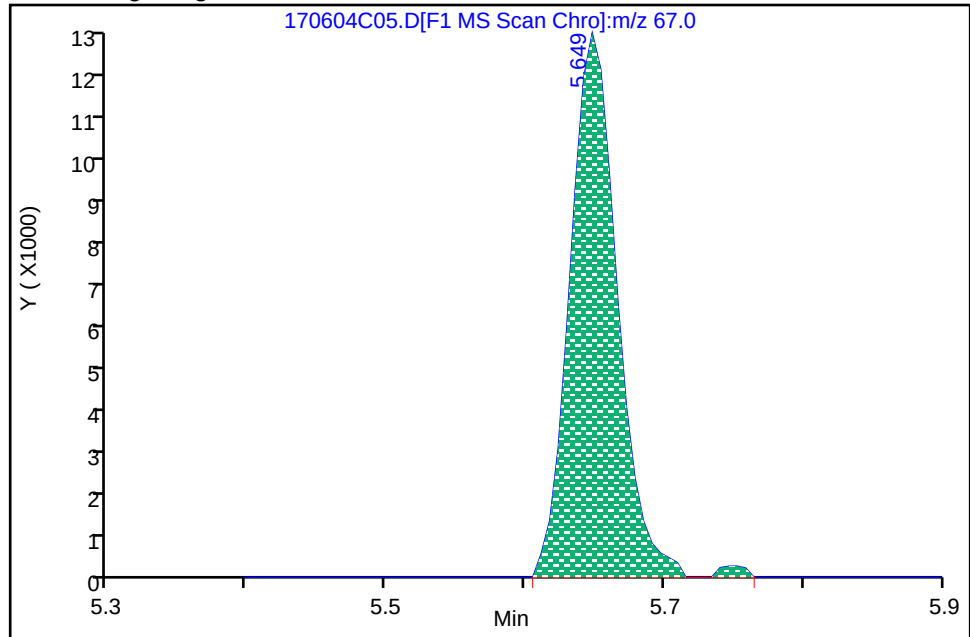
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

34 Methacrylonitrile, CAS: 126-98-7

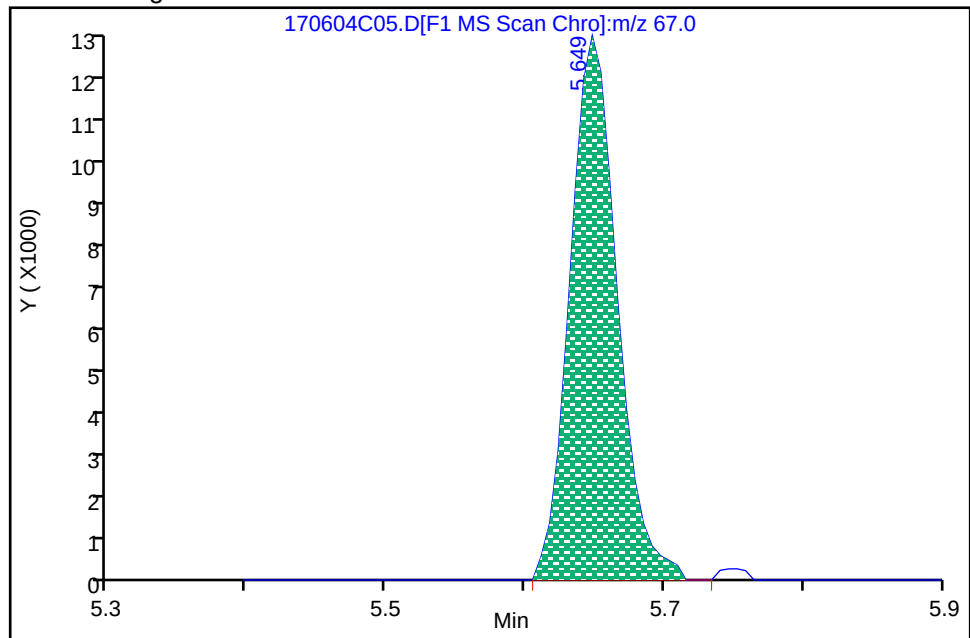
RT: 5.649
Area: 28807
Amount: 2.5000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 5.649
Area: 28469
Amount: 2.4220
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:03:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

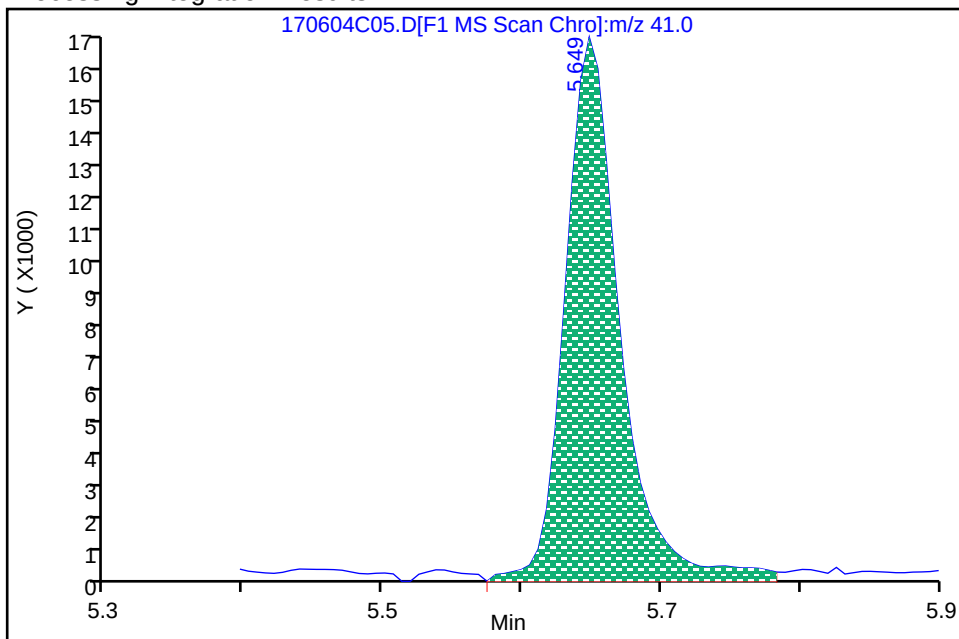
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

34 Methacrylonitrile, CAS: 126-98-7

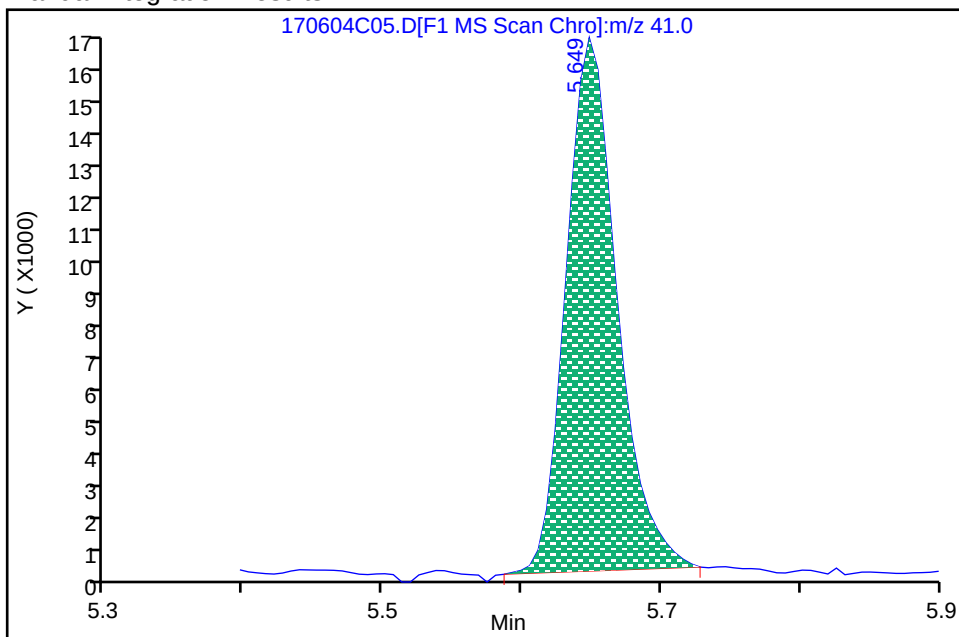
RT: 5.649
Area: 46500
Amount: 2.5000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 5.649
Area: 42034
Amount: 2.4220
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

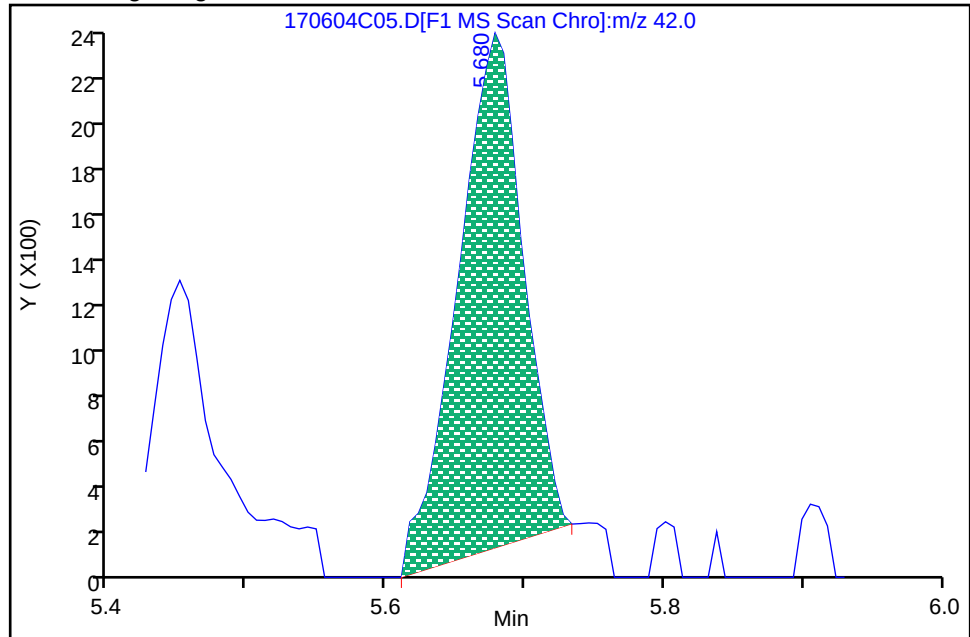
Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D
Injection Date: 05-Jun-2020 03:20:30 Inst. ID: msd17.i
Client ID: 1mL/100mL VSTD050 Lab ID: VSTD0.5UW
Sample Info: 17060420C, VSTD0.5UW
Purge Vol. 5.00 ml Dil. Factor: 1.0
Operator: JTH
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

36 Tetrahydrofuran, CAS: 109-99-9

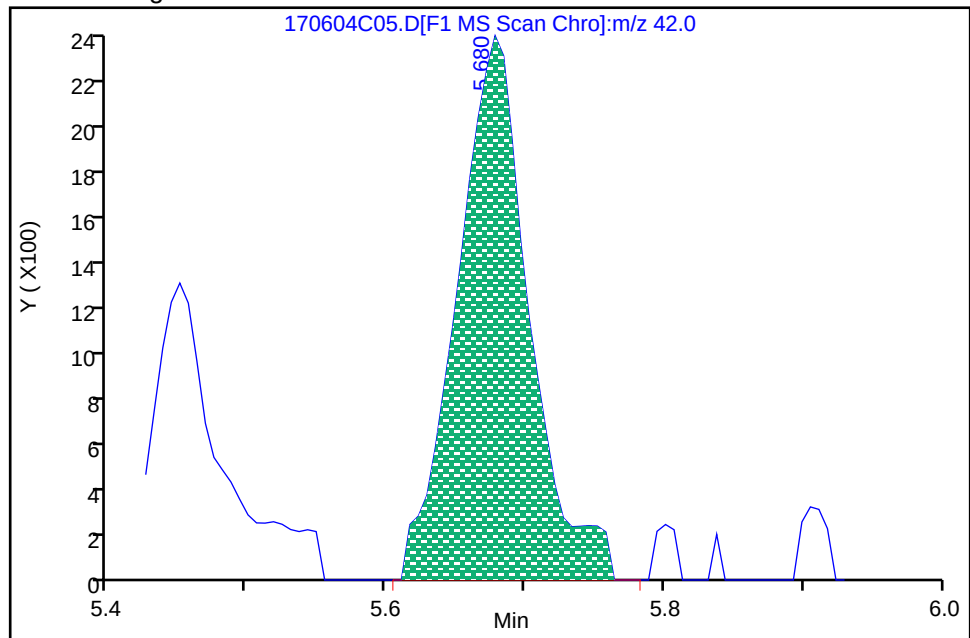
RT: 5.680
Area: 7342
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 5.680
Area: 8578
Amount: 0.56692
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

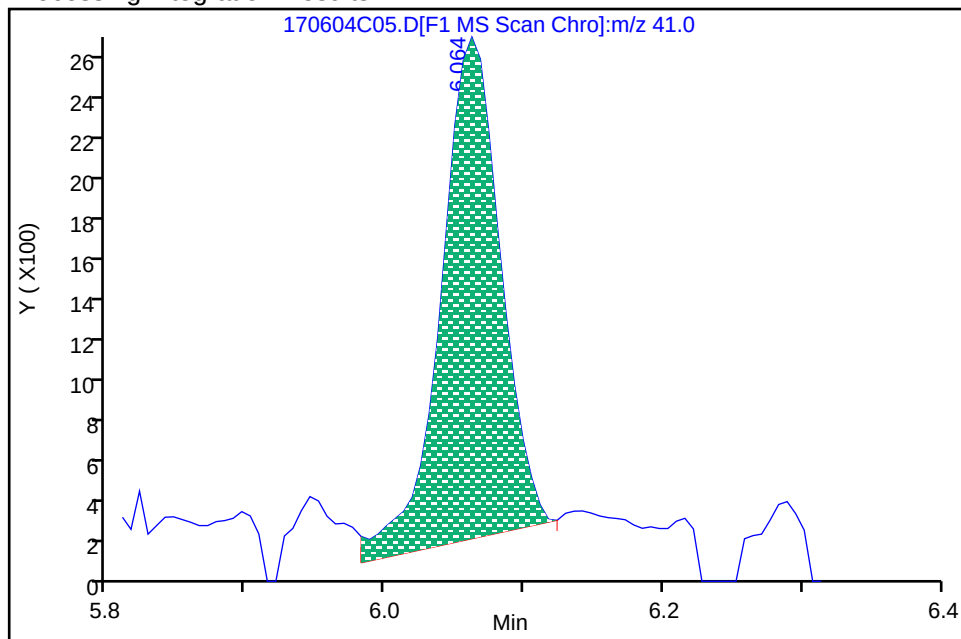
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

42 Cyclohexane, CAS: 110-82-7

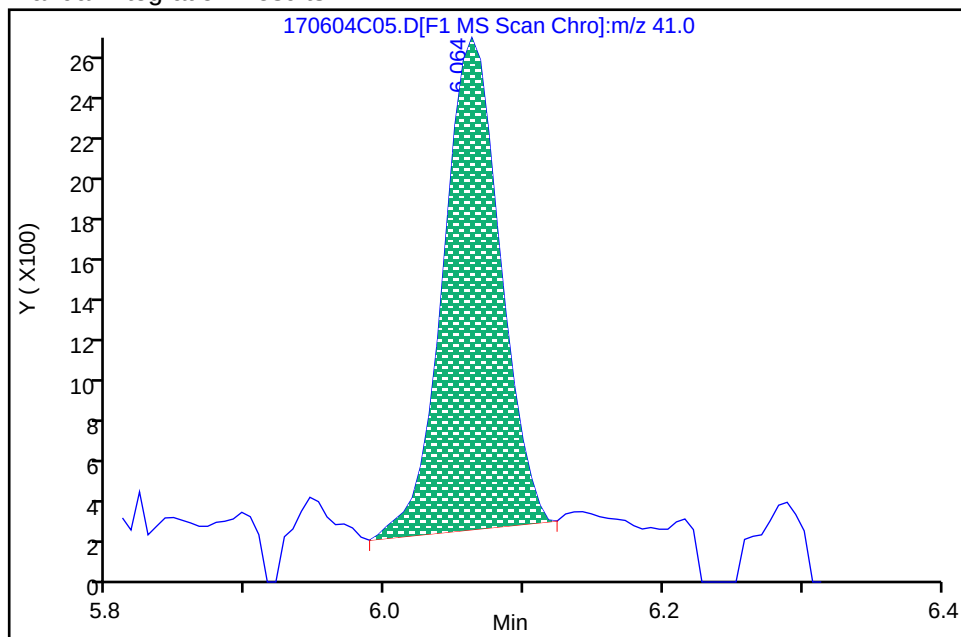
RT: 6.064
Area: 7151
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 6.064
Area: 6695
Amount: 0.50175
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

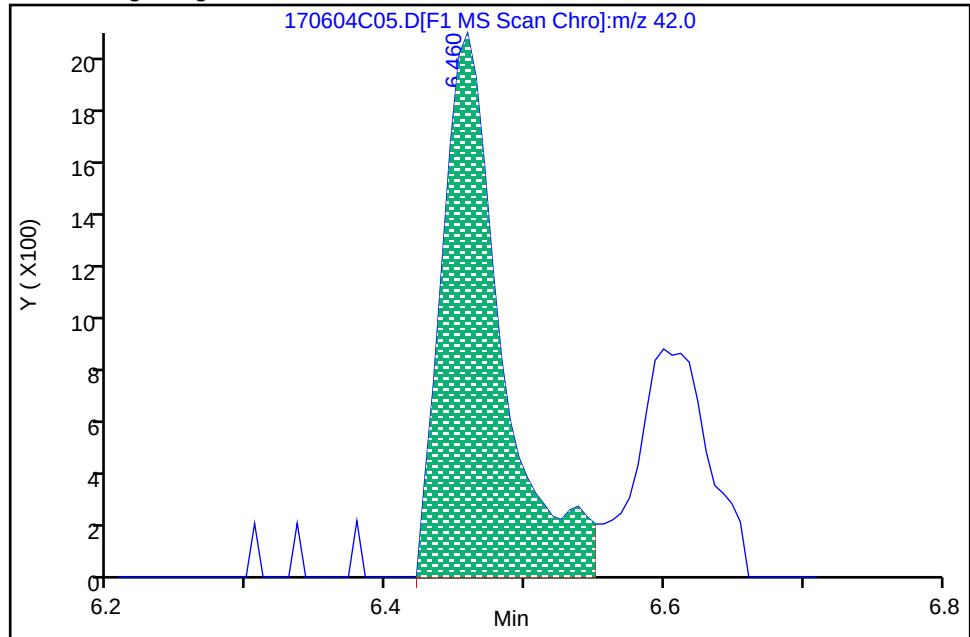
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

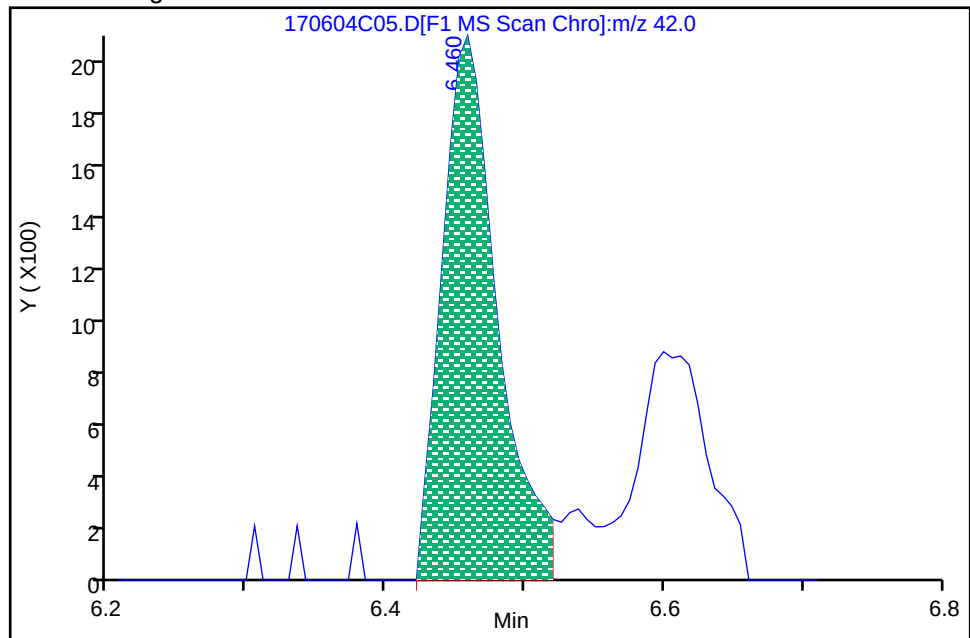
RT: 6.460
Area: 6249
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 6.460
Area: 5848
Amount: 4.5485
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

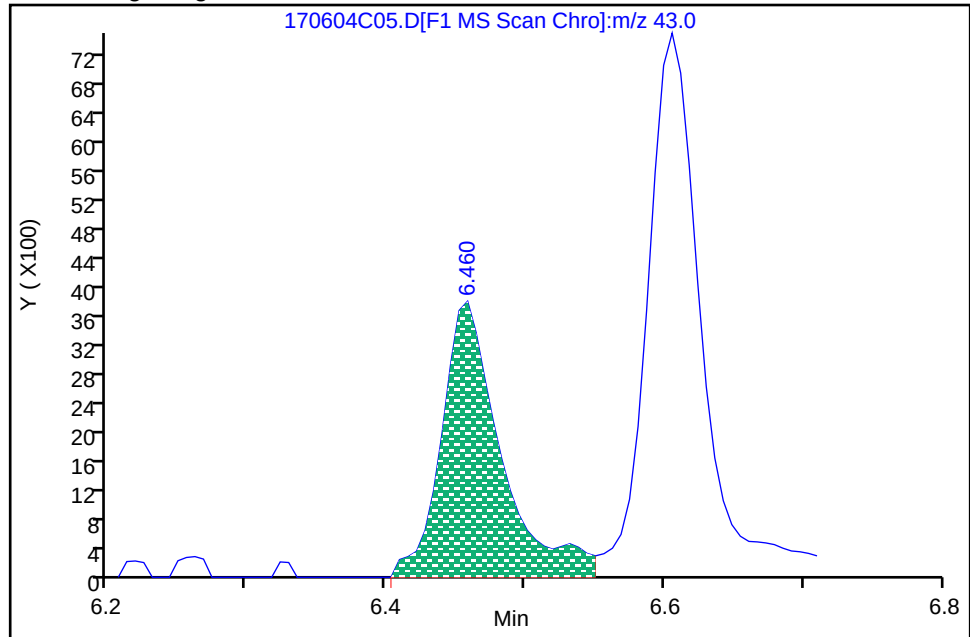
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

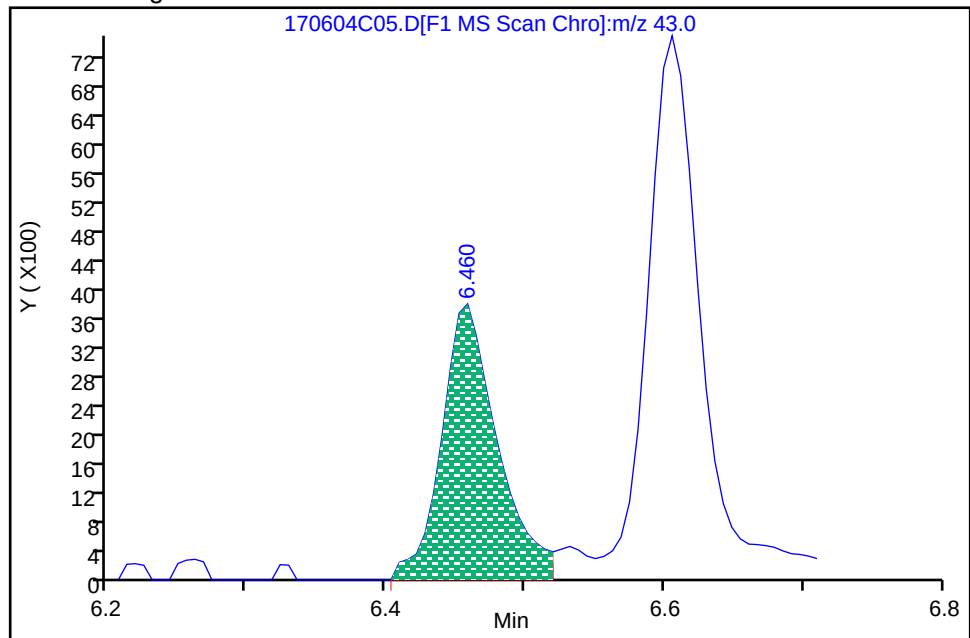
RT: 6.460
Area: 11208
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 6.460
Area: 10562
Amount: 4.5485
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

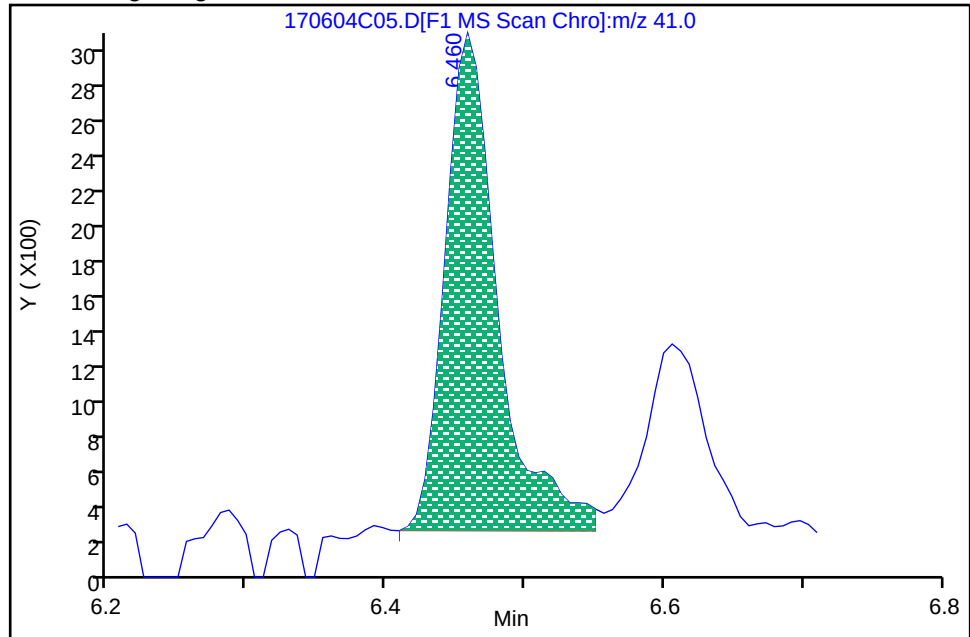
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

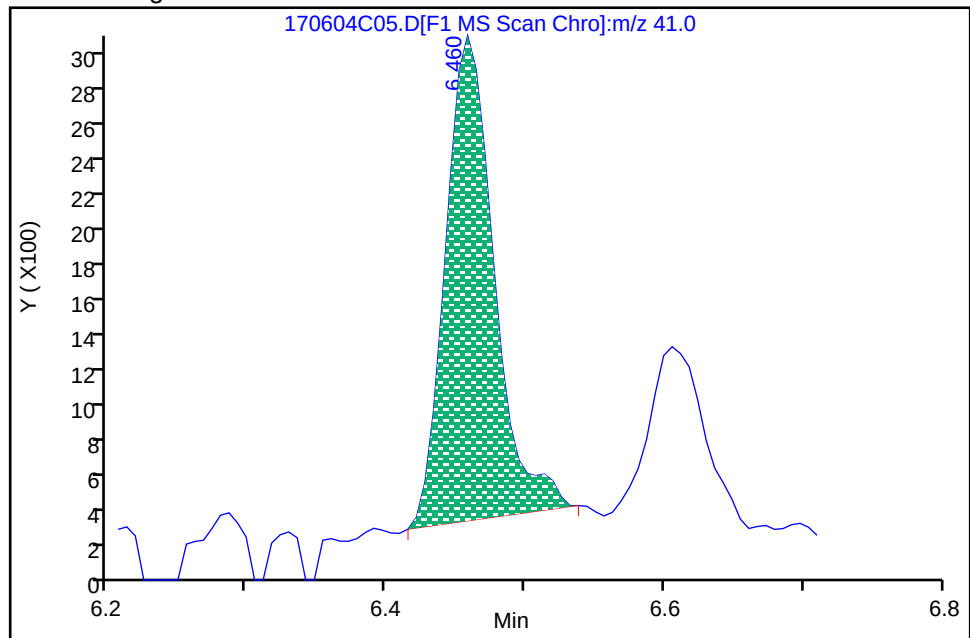
RT: 6.460
Area: 7465
Amount: 5.0000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 6.460
Area: 6669
Amount: 4.5485
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

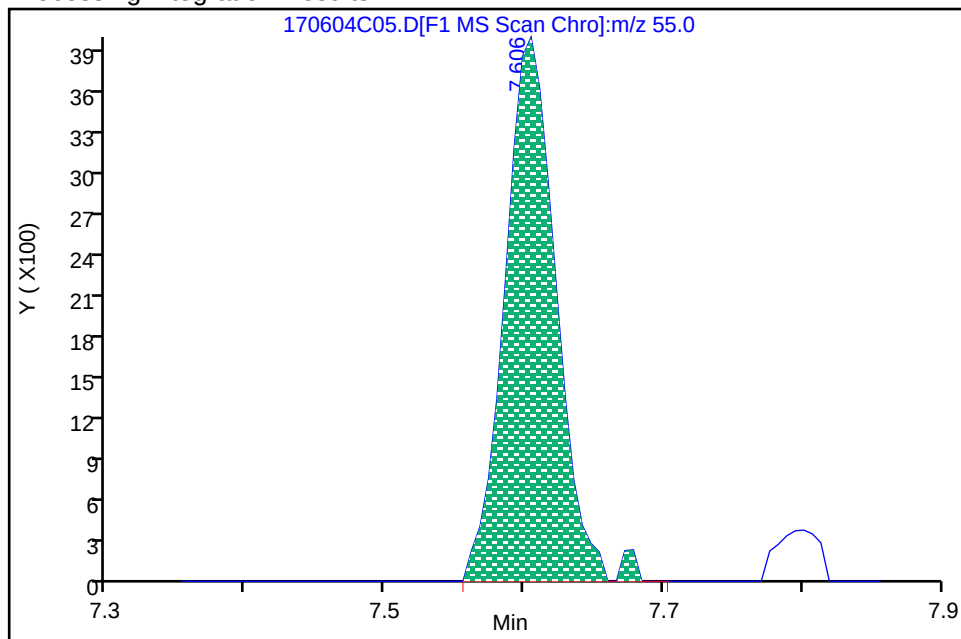
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

54 Methylcyclohexane, CAS: 108-87-2

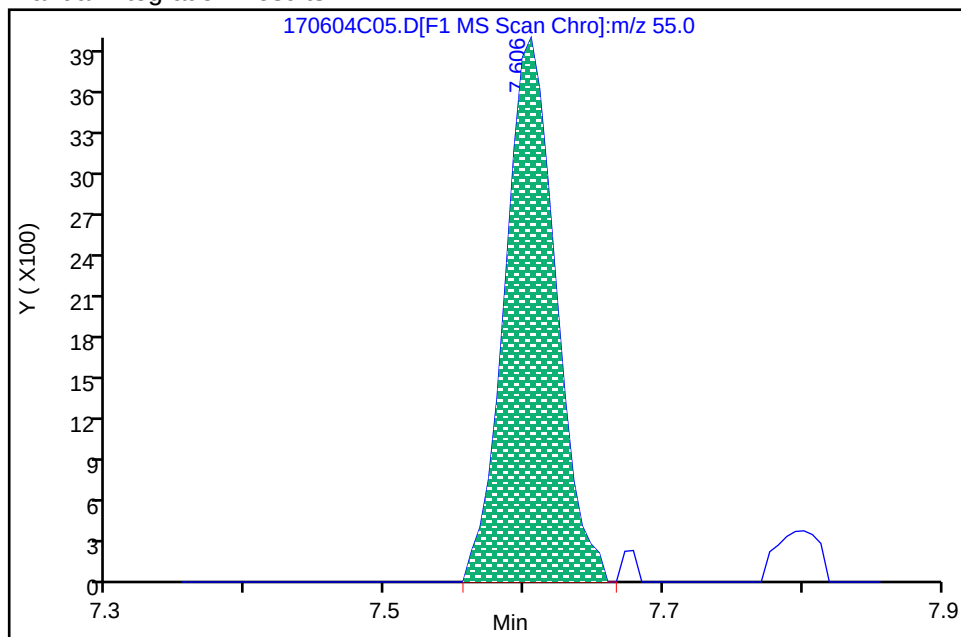
RT: 7.606
Area: 10104
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 7.606
Area: 9939
Amount: 0.49412
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

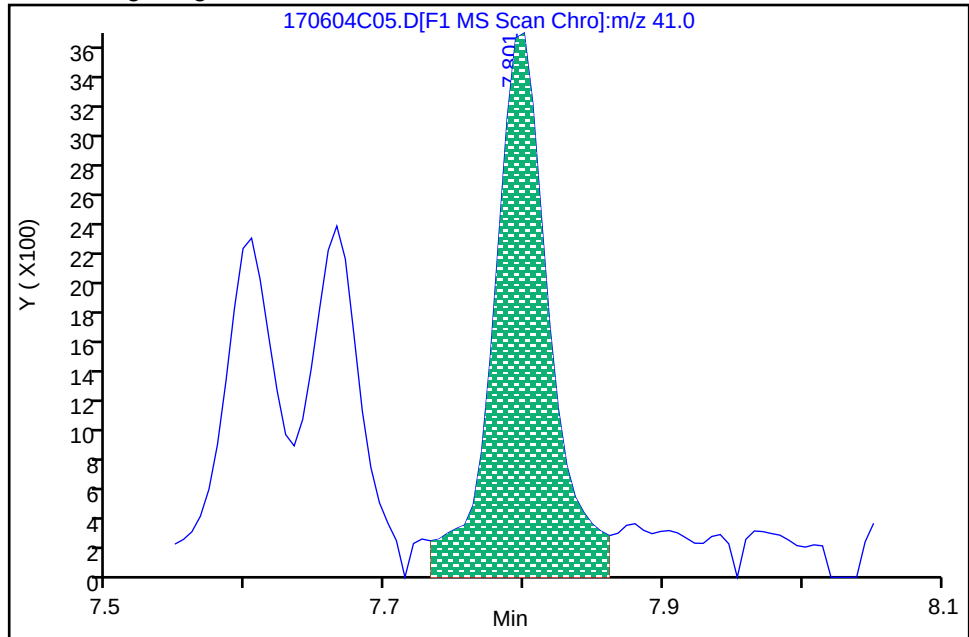
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

57 Methyl methacrylate, CAS: 80-62-6

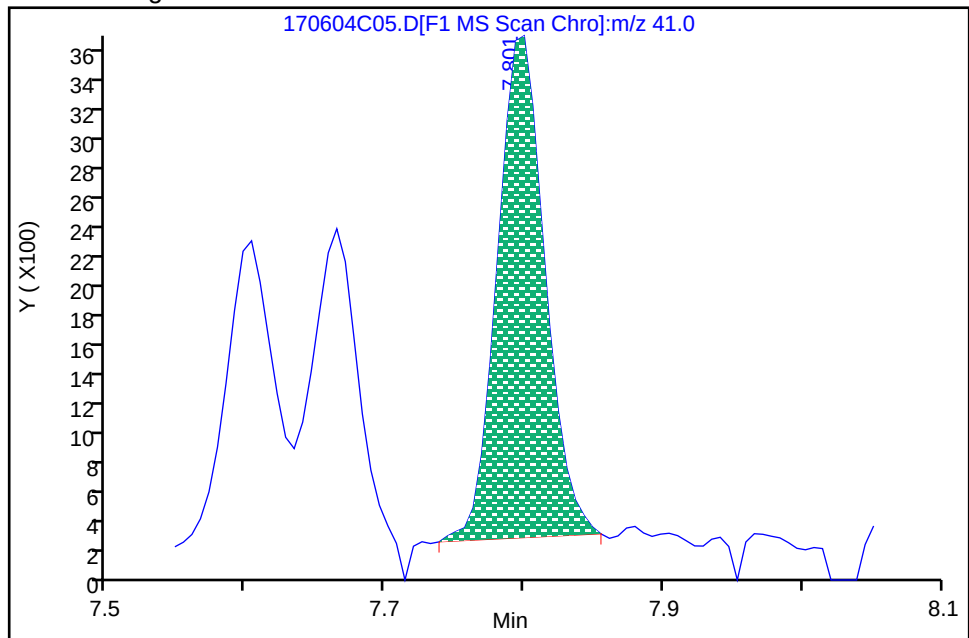
RT: 7.801
Area: 10163
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 7.801
Area: 7997
Amount: 0.42092
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

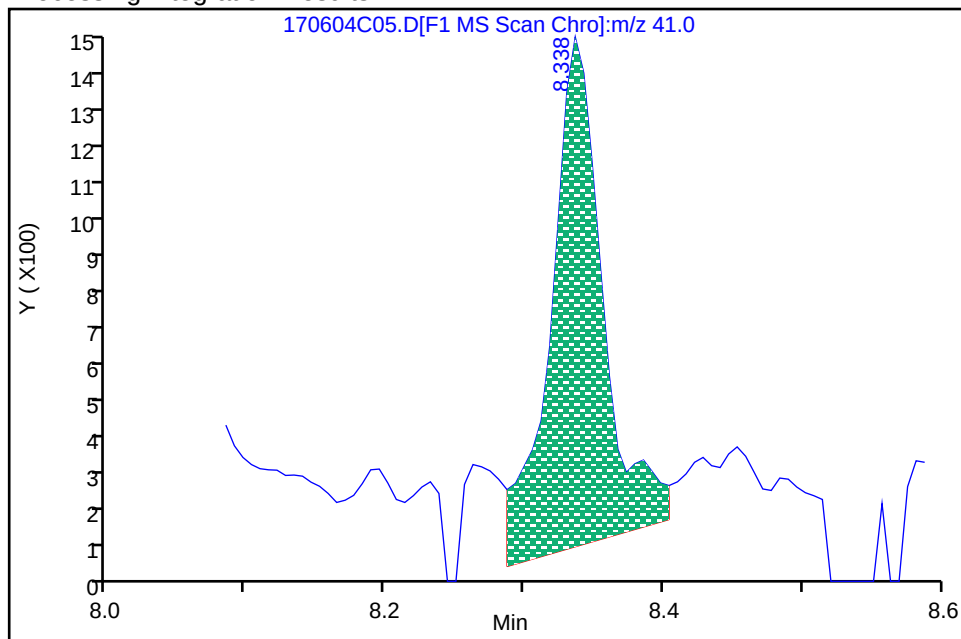
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

60 2-nitropropane, CAS: 79-46-9

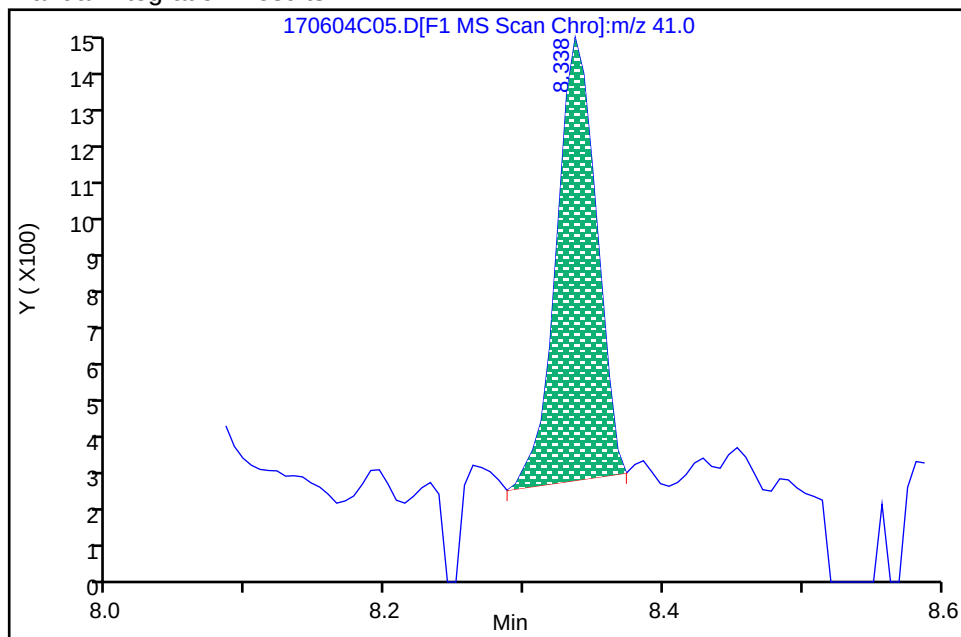
RT: 8.338
Area: 3541
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 8.338
Area: 2342
Amount: 0.46409
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:04:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

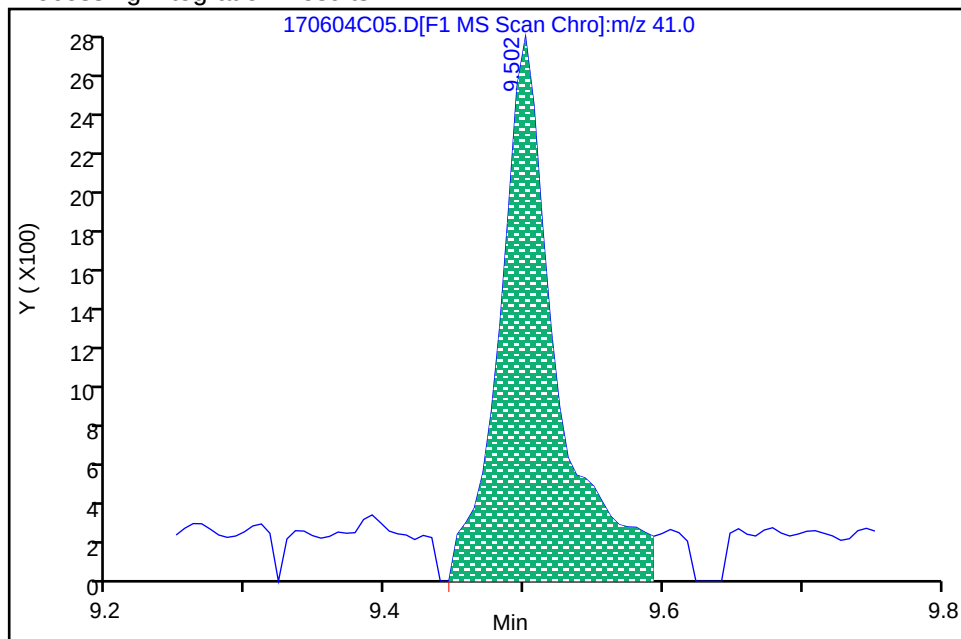
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D		
Injection Date:	05-Jun-2020 03:20:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5UW
Sample Info:	17060420C, VSTD0.5UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

67 Ethyl methacrylate, CAS: 97-63-2

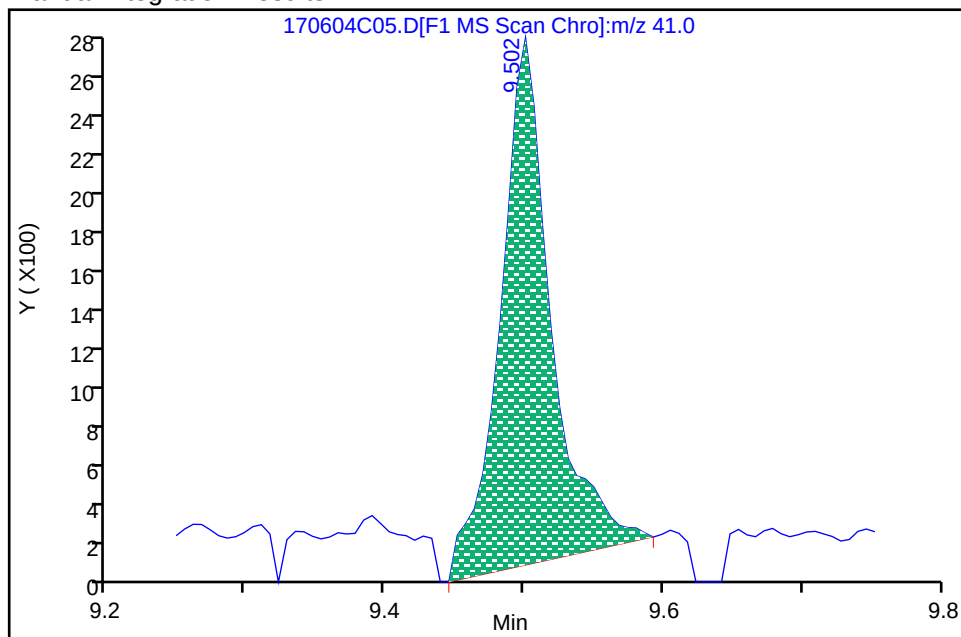
RT: 9.502
Area: 7787
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 9.502
Area: 6782
Amount: 0.42347
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:05:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D

Injection Date: 05-Jun-2020 03:20:30

Inst. ID: msd17.i

Client ID: 1mL/100mL VSTD050

Lab ID: VSTD0.5UW

Sample Info: 17060420C, VSTD0.5UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

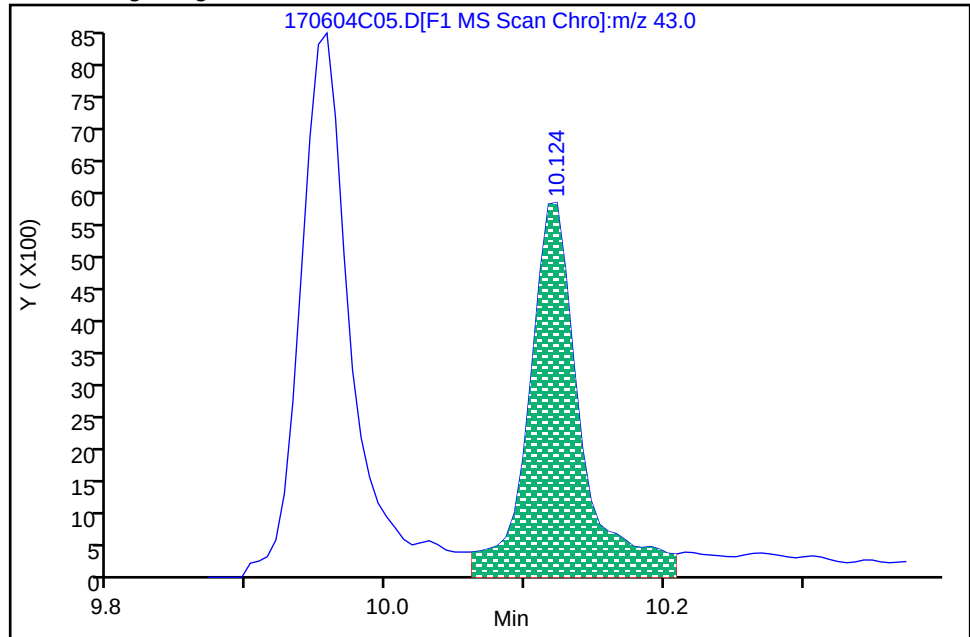
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

73 n-Butyl acetate, CAS: 123-86-4

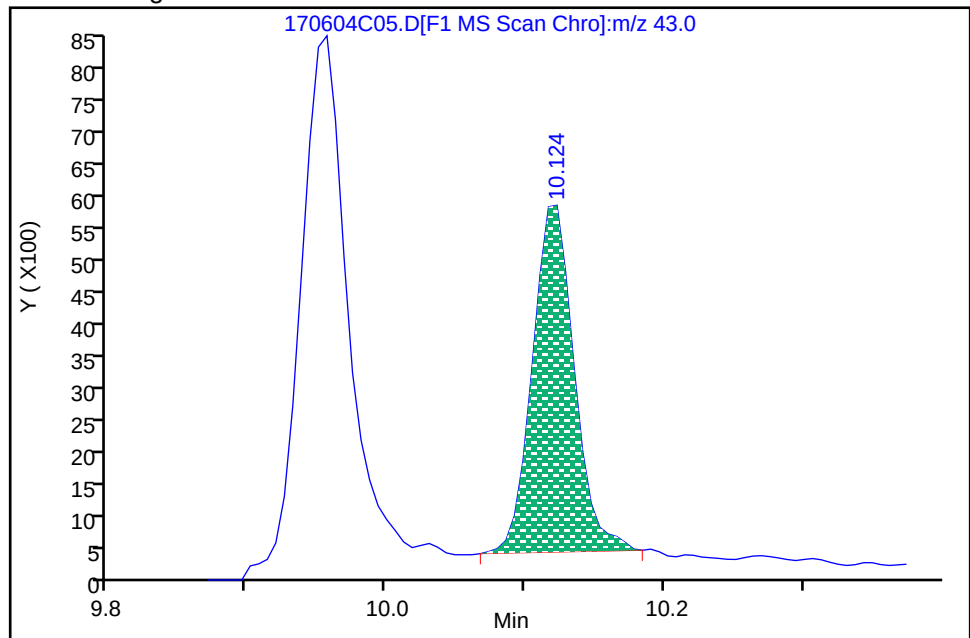
RT: 10.124
Area: 14962
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 10.124
Area: 11183
Amount: 0.35178
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:05:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

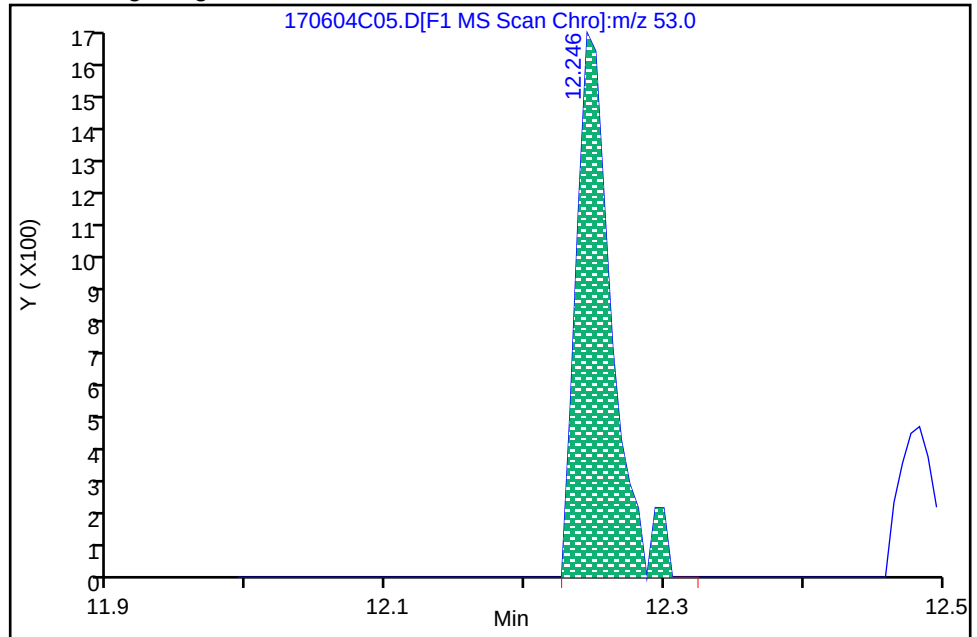
Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C05.D
Injection Date: 05-Jun-2020 03:20:30 Inst. ID: msd17.i
Client ID: 1mL/100mL VSTD050 Lab ID: VSTD0.5UW
Sample Info: 17060420C, VSTD0.5UW
Purge Vol. 5.00 ml Dil. Factor: 1.0
Operator: JTH
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

90 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

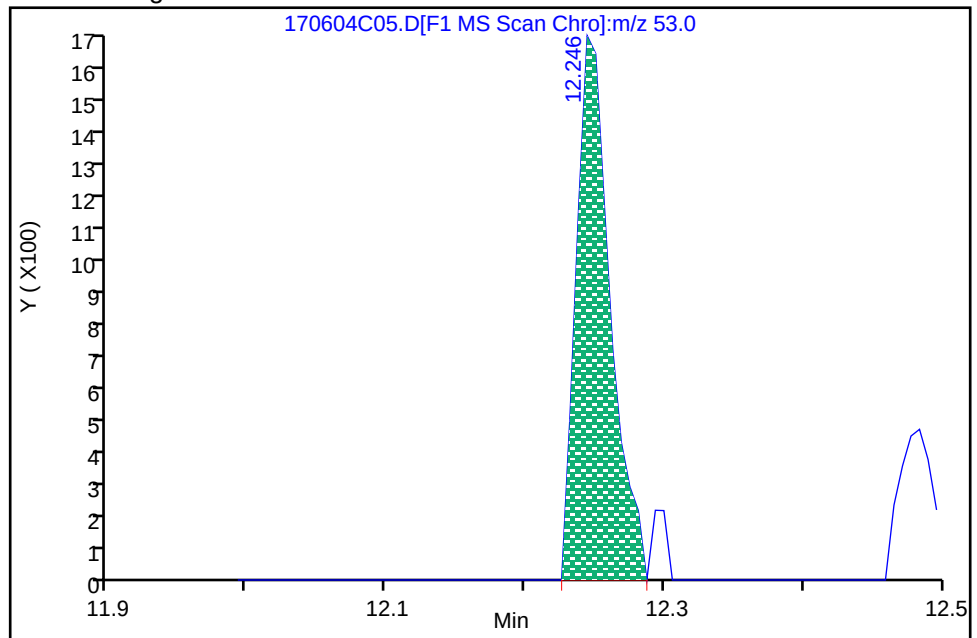
RT: 12.246
Area: 3030
Amount: 0.50000
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 12.246
Area: 2871
Amount: 0.47393
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:05:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D
 Lab Sample ID: VSTD001UW Client Sample ID: 2mL/100mL VSTD050
 Injection Date: 05-Jun-2020 03:44:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD001UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 2 ALS Bottle: 6
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:07:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.363	1.369	-0.005	9625	1.0000	1.0736	Q
2 Chloromethane	50.0	1.540	1.546	-0.005	13696	1.0000	1.0523	Q
3 Vinyl chloride	62.0	1.656	1.662	-0.006	13471	1.0000	1.0161	QM
4 Bromomethane	94.0	1.979	1.980	0.000	9744	1.0000	1.0626	QM
5 Chloroethane	64.0	2.101	2.101	0.000	9601	1.0000	1.1150	Q
6 Trichlorofluoromethane	101.0	2.375	2.375	0.000	16180	1.0000	1.0184	Q
8 Ethyl ether	59.0	2.723	2.723	0.000	12539	1.0000	0.9961	Q
9 Acrolein	56.0	2.894	2.888	0.006	46484	10.000	9.7222	Q
10 Acetone	43.0	3.089	3.083	0.006	28699	2.0000	2.0907	Q
11 1,1-Dichloroethene	96.0	2.997	3.003	-0.005	10022	1.0000	0.95974	Q
12 Freon 113	101.0	3.034	3.040	-0.005	10236	1.0000	0.93512	Q
13 Methyl iodide	142.0	3.174	3.180	-0.006	15979	1.0000	1.0066	Q
14 Carbon disulfide	76.0	3.247	3.247	0.000	30170	1.0000	0.9953	Q
15 Acetonitrile	40.0	3.467	3.461	0.006	21071	10.000	10.333	QM
17 Allyl chloride	76.0	3.491	3.491	0.000	6256	1.0000	0.88712	Q
16 Methyl Acetate	43.0	3.509	3.509	0.000	20378	1.0000	0.97329	QM
18 Methylene chloride	84.0	3.680	3.680	0.000	14462	1.0000	1.1092	Q
20 Acrylonitrile	53.0	4.003	4.003	0.000	24621	2.0000	2.0071	Q
21 trans-1,2-Dichloroethene	96.0	4.021	4.028	-0.005	14749	1.0000	1.0214	Q
22 tert-Butyl methyl ether(MTBE)	73.0	4.034	4.034	0.000	30868	1.0000	1.0282	QM
23 Hexane	57.0	4.399	4.406	-0.005	14948	1.0000	0.85573	Q
24 1,1-Dichloroethane	63.0	4.607	4.613	-0.005	27727	1.0000	0.98907	QM
25 Vinyl acetate	86.0	4.655	4.655	0.000	3626	1.0000	1.0427	Q
26 Diisopropyl ether (IPE)	87.0	4.692	4.698	-0.006	11865	1.0000	1.0123	Q
27 Chloroprene	53.0	4.698	4.698	0.000	19123	1.0000	0.90670	Q
29 cis-1,2-Dichloroethene	96.0	5.356	5.363	-0.005	16318	1.0000	0.96883	Q
30 2-Butanone (MEK)	72.0	5.381	5.375	0.006	9460	2.0000	1.8573	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.357	-0.005	12294	1.0000	1.0536	Q
32 Propionitrile	54.0	5.460	5.460	0.000	57705	10.000	10.245	Q
33 Ethyl Acetate	43.0	5.454	5.449	0.005	53726	1.0000	1.2071	Q
34 Methacrylonitrile	67.0	5.649	5.649	0.000	57158	5.0000	4.8402	Q
35 Bromochloromethane	128.0	5.661	5.661	0.000	8215	1.0000	1.0169	Q
36 Tetrahydrofuran	42.0	5.673	5.667	0.006	15759	1.0000	1.0367	Q
37 Chloroform	83.0	5.820	5.826	-0.005	28441	1.0000	1.0100	Q
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	16203	1.0000	1.0231	Q
40 1,1,1-Trichloroethane	97.0	5.990	5.997	-0.005	18524	1.0000	0.95587	Q
* 41 Pentafluorobenzene	168.0	6.100	6.106	-0.005	1325613	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	13977	1.0000	1.0426	QM
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	21837	1.0000	1.0132	Q
44 Carbon tetrachloride	119.0	6.179	6.180	0.000	15374	1.0000	0.92985	Q
45 Isobutyl alcohol	42.0	6.460	6.454	0.006	12587	10.000	9.7446	Q
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	22156	1.0000	1.0831	Q
48 Benzene	78.0	6.448	6.454	-0.005	61940	1.0000	0.9968	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	34338	1.0000	0.87878	Q
50 1,2-Dichloroethane	62.0	6.545	6.545	0.000	23478	1.0000	1.0262	Q
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2238500	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.332	-0.005	15987	1.0000	1.0038	Q
54 Methylcyclohexane	83.0	7.606	7.606	0.000	22198	1.0000	0.92096	Q
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	17188	1.0000	1.0015	Q
56 Dibromomethane	93.0	7.771	7.777	-0.005	10664	1.0000	0.98202	Q
57 Methyl methacrylate	41.0	7.795	7.795	0.000	16535	1.0000	0.88632	QM
58 1,4-Dioxane	88.0	7.777	7.777	0.000	2256	10.000	7.8744	Q
59 Bromodichloromethane	83.0	8.033	8.033	0.000	18184	1.0000	0.90624	Q
60 2-nitropropane	43.0	8.338	8.338	0.000	6809	1.0000	0.92414	Q
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	10446	1.0000	0.82406	Q
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	19783	1.0000	0.84095	Q
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	54507	2.0000	1.8651	Q
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	57206	1.0000	1.0100	
65 Toluene	92.0	9.039	9.039	0.000	34425	1.0000	0.94689	Q
66 trans-1,3-Dichloropropene	75.0	9.398	9.399	0.000	17641	1.0000	0.84259	Q
67 Ethyl methacrylate	69.0	9.496	9.502	-0.006	16765	1.0000	0.75564	QM
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	15712	1.0000	0.9901	Q
69 Tetrachloroethene	164.0	9.715	9.722	-0.005	10862	1.0000	0.90843	Q
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	26737	1.0000	0.98136	Q
71 2-Hexanone	43.0	9.953	9.953	0.000	43965	2.0000	1.7969	Q
72 Dibromochloromethane	129.0	10.112	10.112	0.000	11957	1.0000	0.87775	Q
73 n-Butyl acetate	43.0	10.118	10.118	0.000	23299	1.0000	0.74084	QM
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	14719	1.0000	0.92437	Q
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1977000	50.000	50.000	Q
77 Chlorobenzene	112.0	10.819	10.819	0.000	41583	1.0000	1.0076	Q
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	12552	1.0000	0.94795	Q
79 Ethylbenzene	106.0	10.941	10.941	0.000	18524	1.0000	0.90274	Q
80 m+p-Xylenes	106.0	11.093	11.093	0.000	21780	1.0000	0.89416	Q
81 o-Xylene	106.0	11.502	11.502	0.000	20763	1.0000	0.91766	Q
82 Styrene	104.0	11.526	11.526	0.000	32028	1.0000	0.83363	Q
83 Bromoform	173.0	11.703	11.703	0.000	8386	1.0000	0.84845	Q
84 Isopropylbenzene	105.0	11.886	11.886	0.000	53442	1.0000	0.89815	Q
85 Cyclohexanone	55.0	11.971	11.971	0.000	10255	10.000	8.7352	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.057	0.000	20402	1.0000	0.98636	Q
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.000	25059	1.0000	1.0448	Q
87 Bromobenzene	156.0	12.184	12.185	0.000	14066	1.0000	0.96884	Q
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	8264	1.0000	1.0664	Q
90 trans-1,4-Dichloro-2-butene	53.0	12.252	12.252	0.000	5742	1.0000	0.90571	Q
91 n-Propylbenzene	91.0	12.300	12.300	0.000	60619	1.0000	0.91966	Q
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	42972	1.0000	1.0151	Q
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	39243	1.0000	0.89508	Q
94 4-Chlorotoluene	126.0	12.501	12.502	0.000	11867	1.0000	0.86875	Q
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	34580	1.0000	0.91560	Q
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	39395	1.0000	0.89382	Q
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	49902	1.0000	0.89210	Q
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	24504	1.0000	0.95067	Q
99 p-Isopropyltoluene	119.0	13.129	13.130	0.000	37163	1.0000	0.85889	Q
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	834648	50.000	50.000	Q
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	26790	1.0000	0.9923	Q
102 Benzyl chloride	91.0	13.288	13.289	0.000	19872	1.0000	0.75882	QM
103 n-Butylbenzene	91.0	13.489	13.495	-0.005	34401	1.0000	0.84195	QM
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	24087	1.0000	0.96368	Q
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.190	0.000	4203	1.0000	0.87590	Q
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	10825	1.0000	0.84583	Q
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	5767	1.0000	0.92989	Q
108 Naphthalene	128.0	15.092	15.093	0.000	36254	1.0000	0.83649	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	10216	1.0000	0.86010	Q
S 110 Xylenes (total)	106.0	16.000		0.000		2.0000	1.8118	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		2.0000	1.9902	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File: \\Organics\ID\chem\msd17.i\17060420C.b\170604C06.D
Injection Date: 05-Jun-2020 03:44:30 Inst. ID: msd17.i
Client ID: 2mL/100mL VSTD050 Lab ID: VSTD001UW
Sample Info: 17060420C, VSTD001UW
Purge Vol: 5.00 ml
Column1: Rxi-624Sil (0.25 mm) Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services

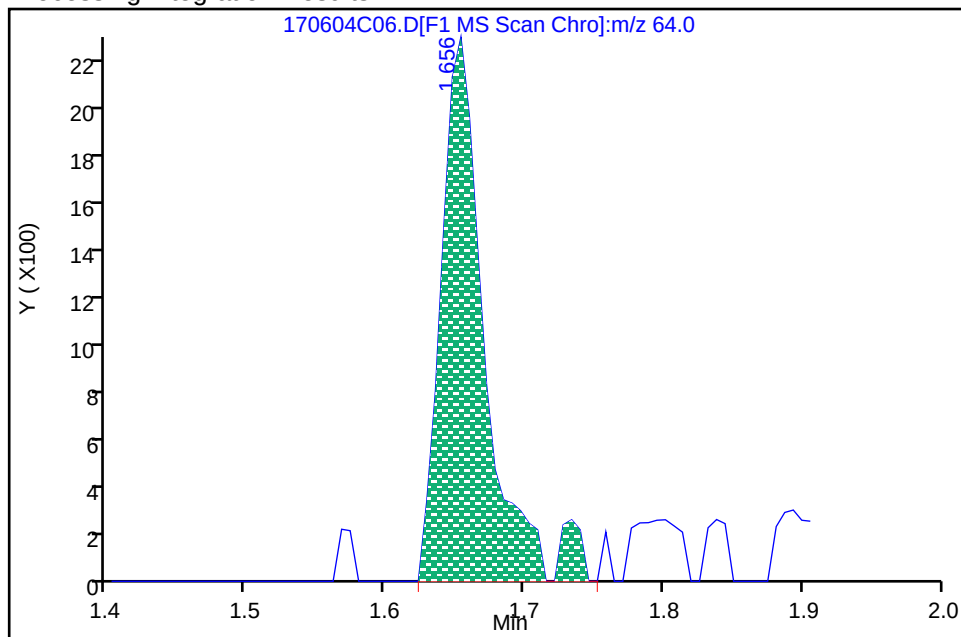
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

3 Vinyl chloride, CAS: 75-01-4

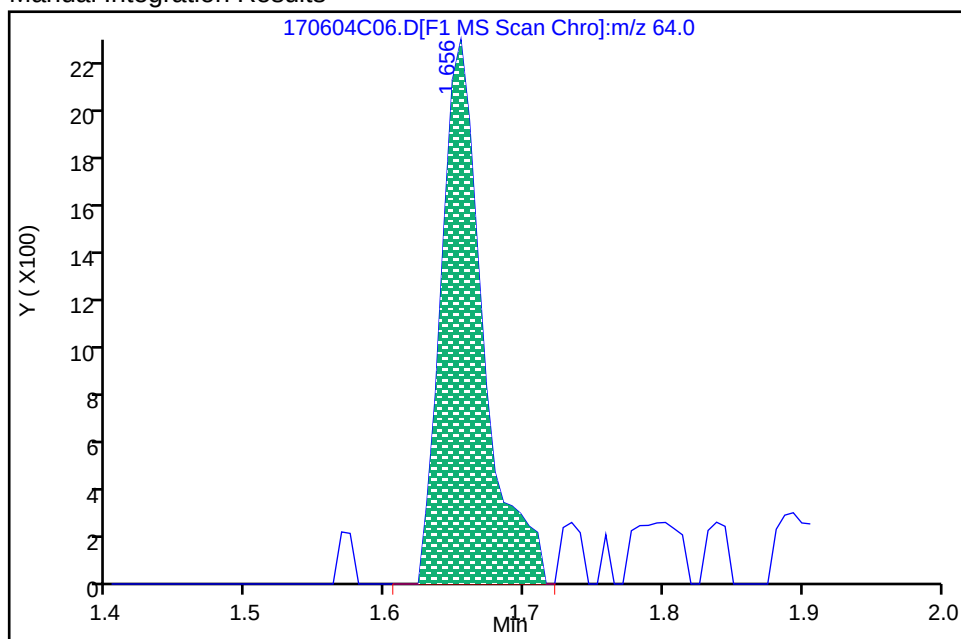
RT: 1.656
Area: 4941
Amount: 0.98874
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 1.656
Area: 4686
Amount: 1.0161
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

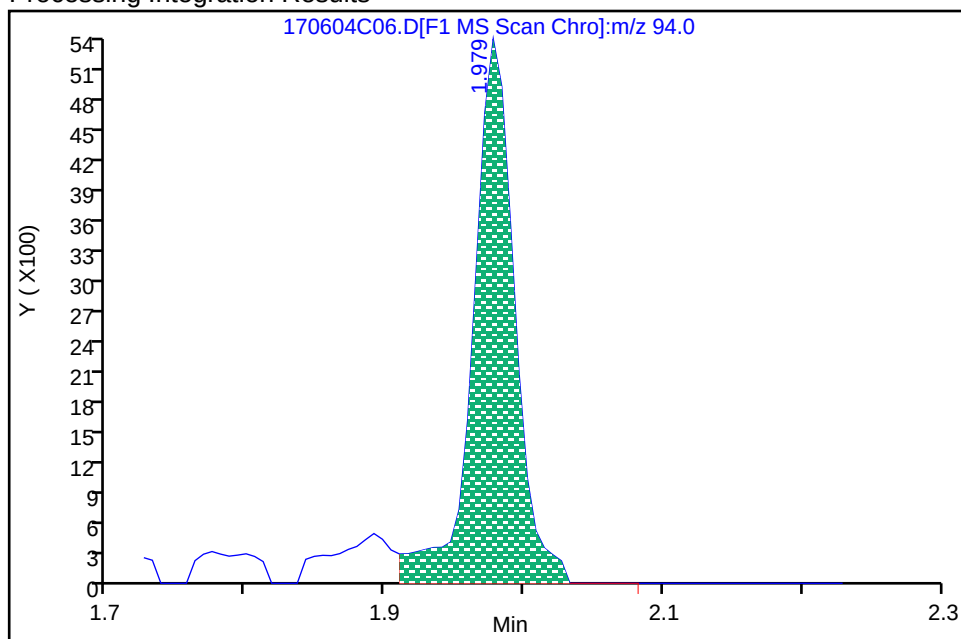
Manual Integration Report

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Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

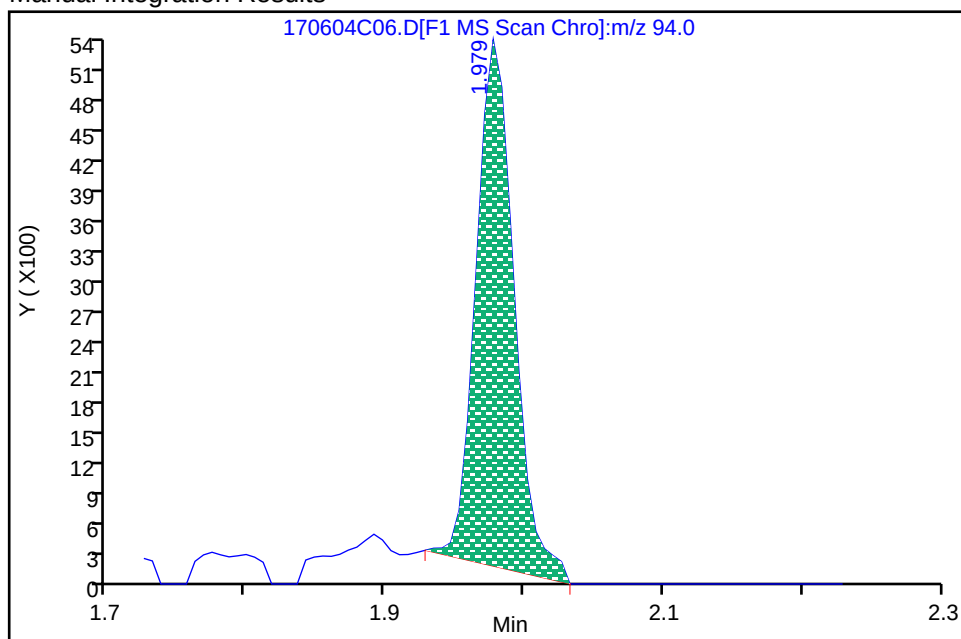
RT: 1.979
Area: 11096
Amount: 0.96990
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 1.979
Area: 9744
Amount: 1.0626
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

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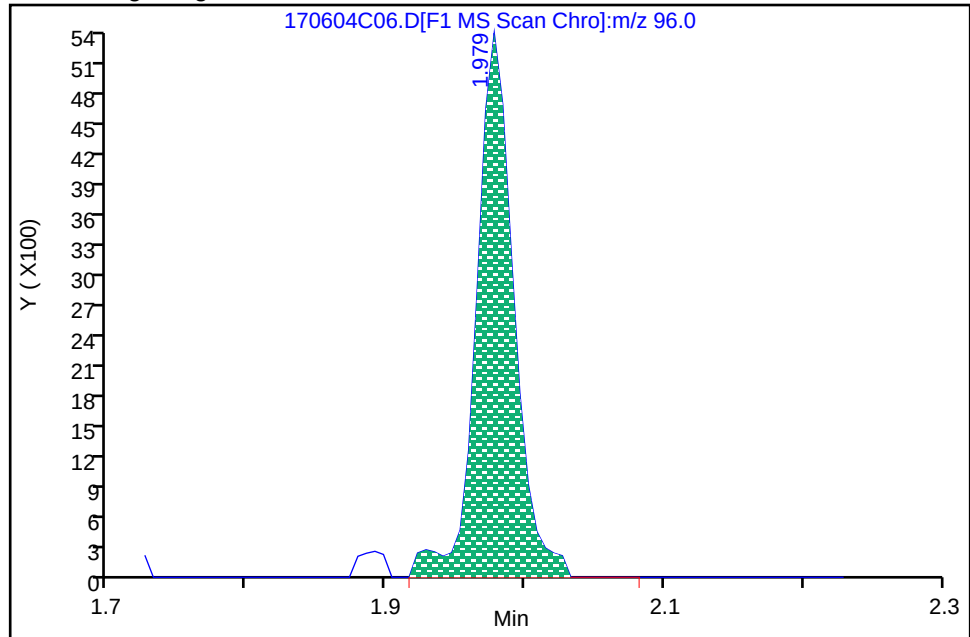
Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D
Injection Date: 05-Jun-2020 03:44:30 Inst. ID: msd17.i
Client ID: 2mL/100mL VSTD050 Lab ID: VSTD001UW
Sample Info: 17060420C, VSTD001UW
Purge Vol. 5.00 ml Dil. Factor: 1.0
Operator: JTH
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

4 Bromomethane, CAS: 74-83-9

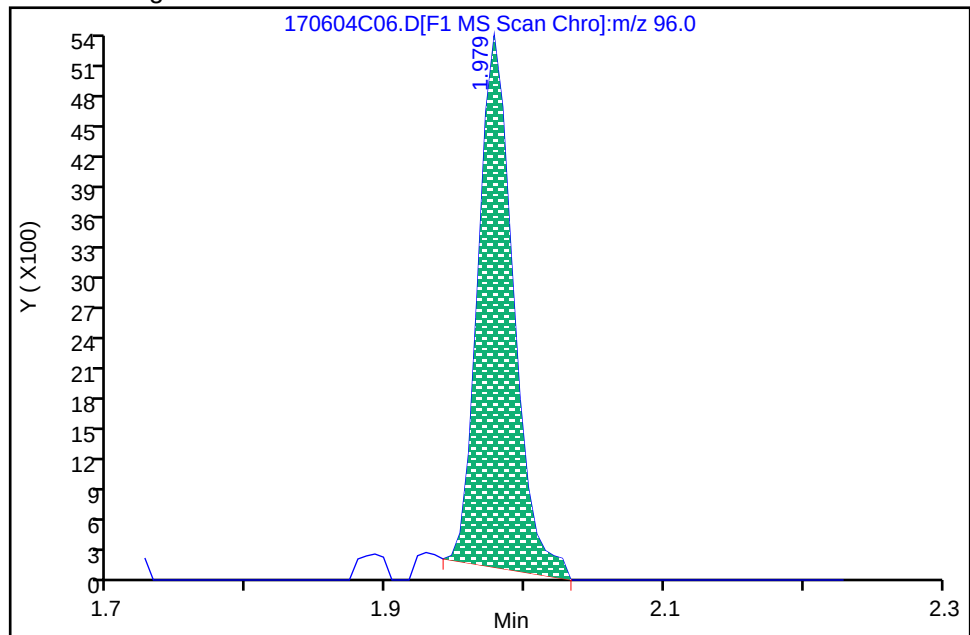
RT: 1.979
Area: 10067
Amount: 0.96990
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 1.979
Area: 9180
Amount: 1.0626
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

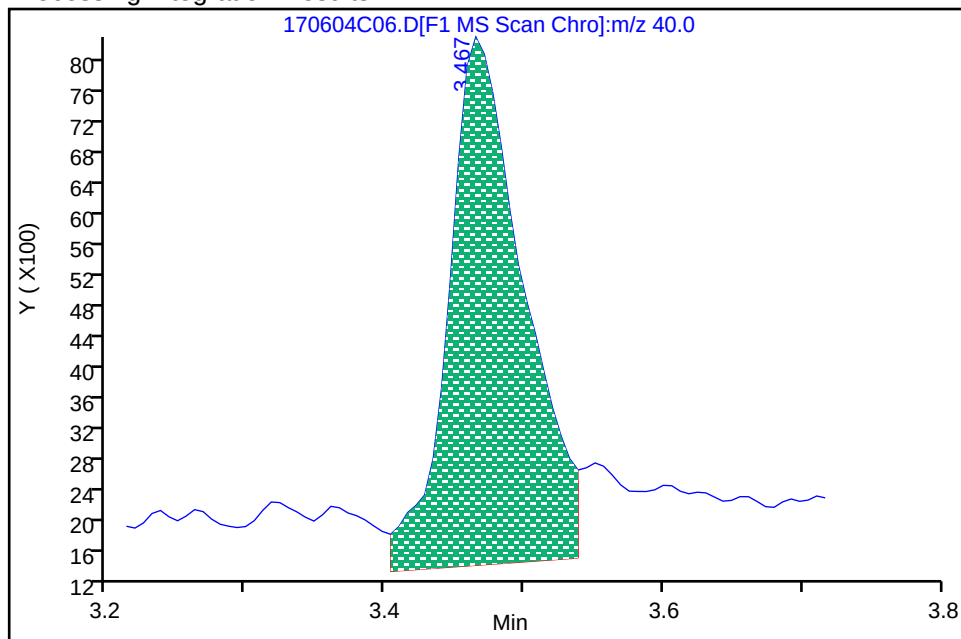
Manual Integration Report

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Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

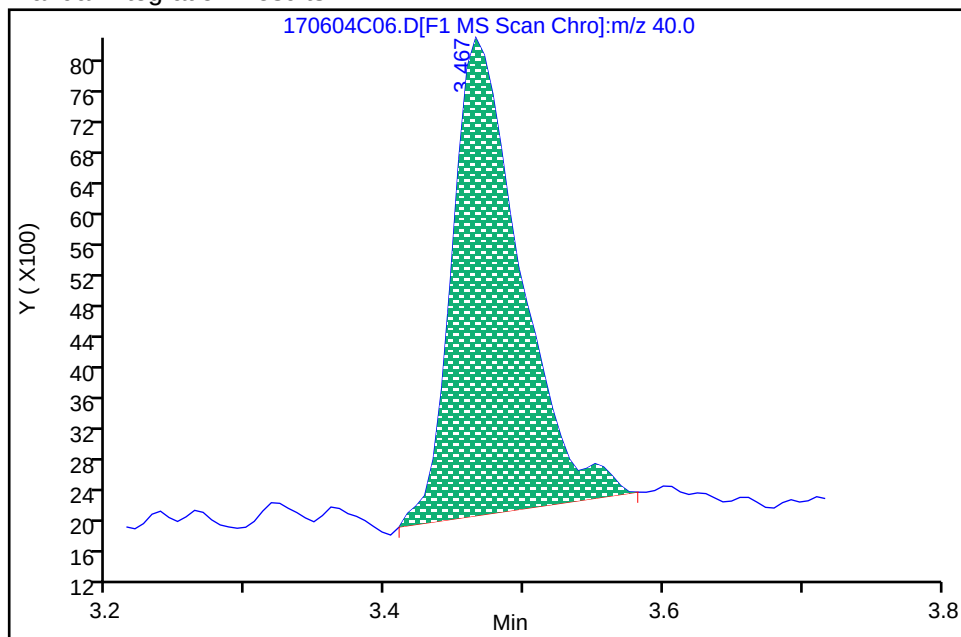
RT: 3.467
Area: 25696
Amount: 8.9852
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.467
Area: 21071
Amount: 10.333
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

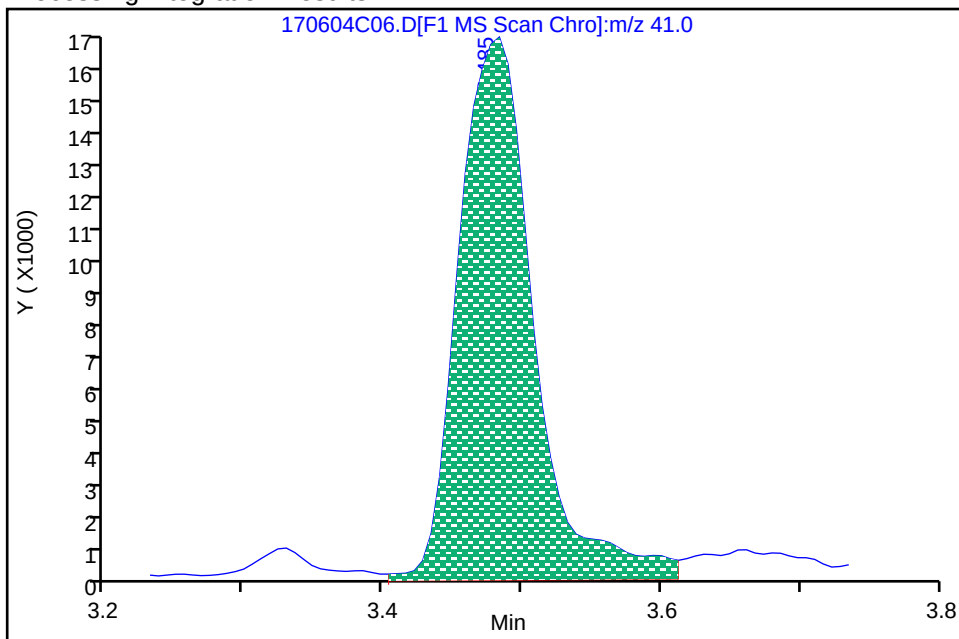
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

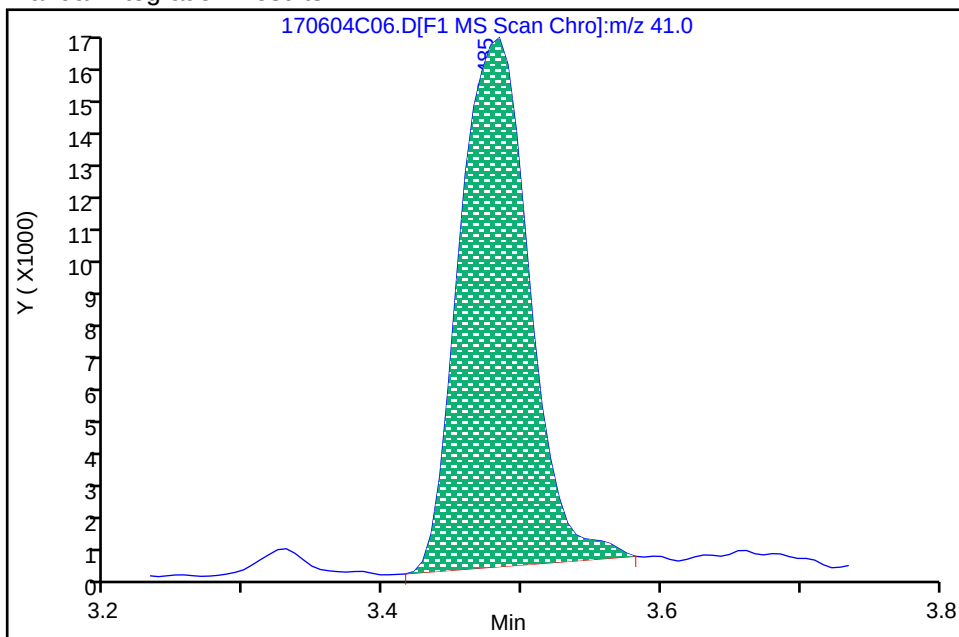
RT: 3.485
Area: 60533
Amount: 8.9852
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.485
Area: 54553
Amount: 10.333
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

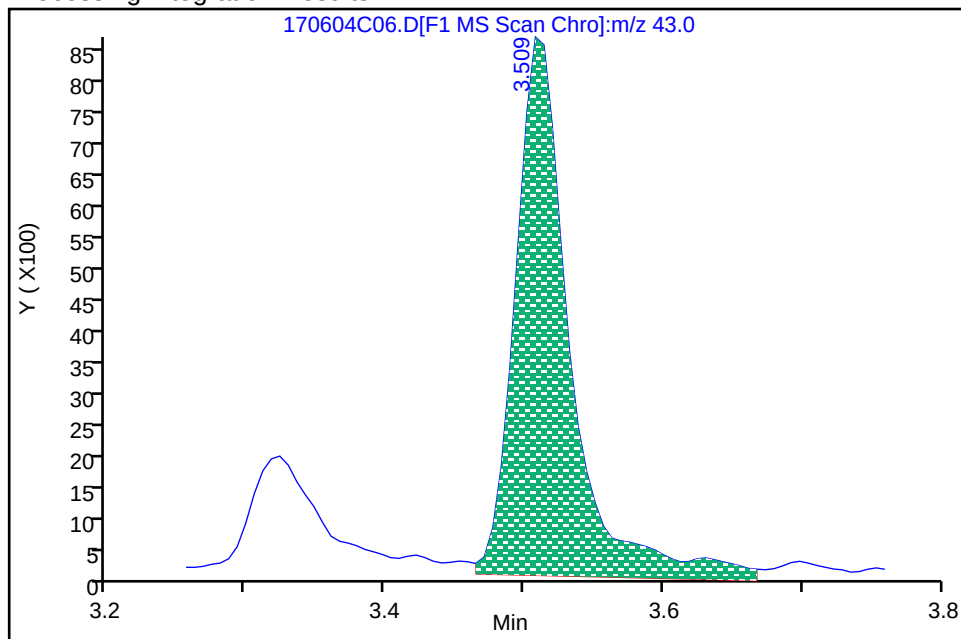
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

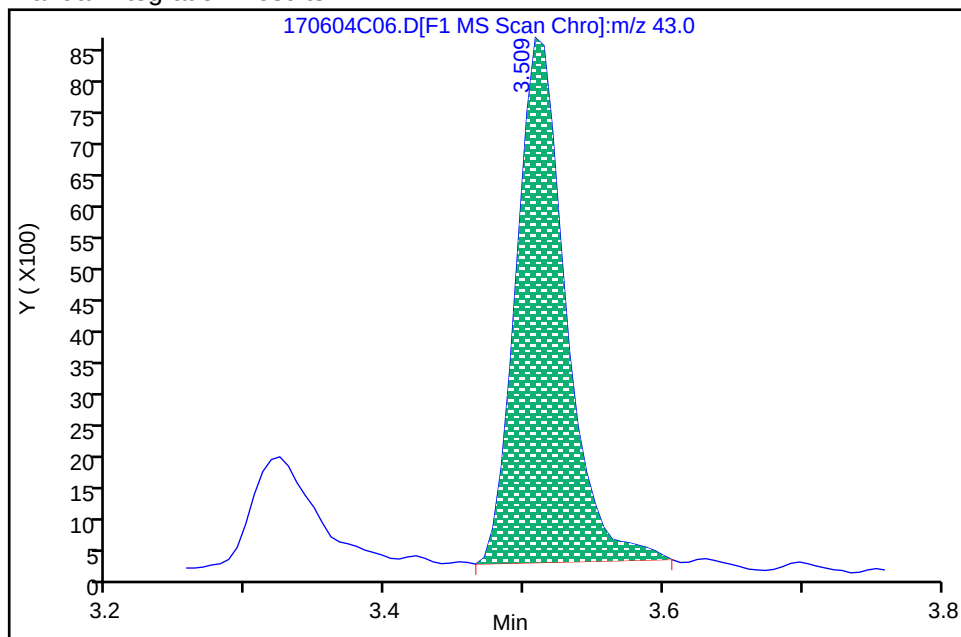
RT: 3.509
Area: 23418
Amount: 0.92057
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.509
Area: 20378
Amount: 0.97329
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

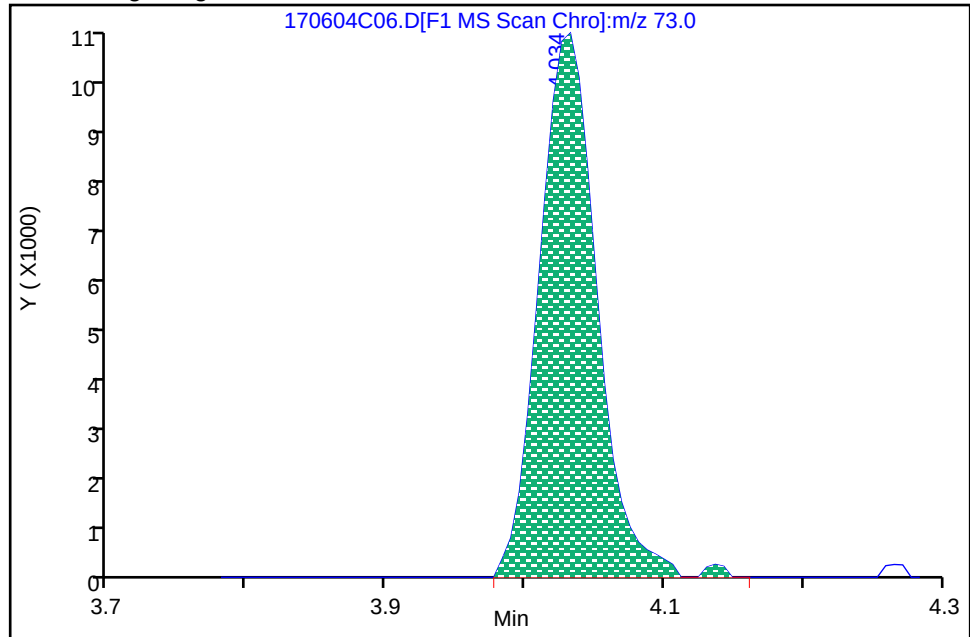
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

22 tert-Butyl methyl ether(MTBE), CAS: 1634-04-4

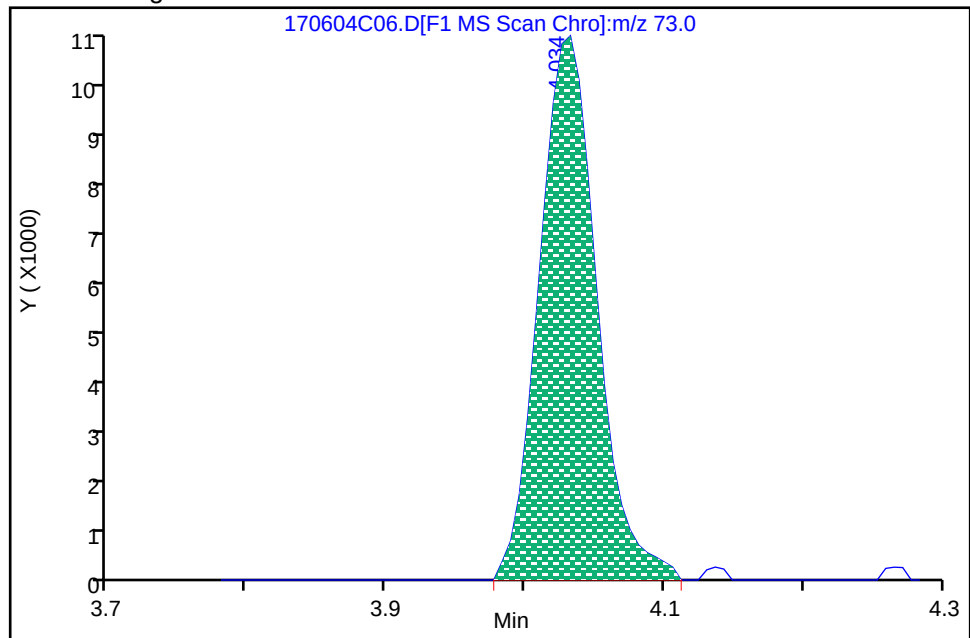
RT: 4.034
Area: 31115
Amount: 0.97480
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 4.034
Area: 30868
Amount: 1.0282
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

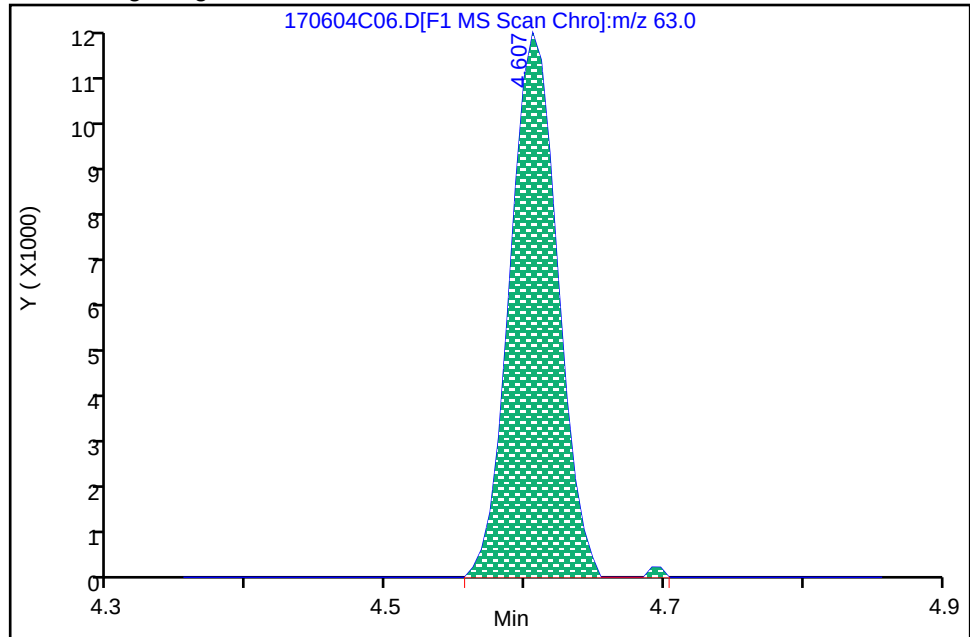
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

24 1,1-Dichloroethane, CAS: 75-34-3

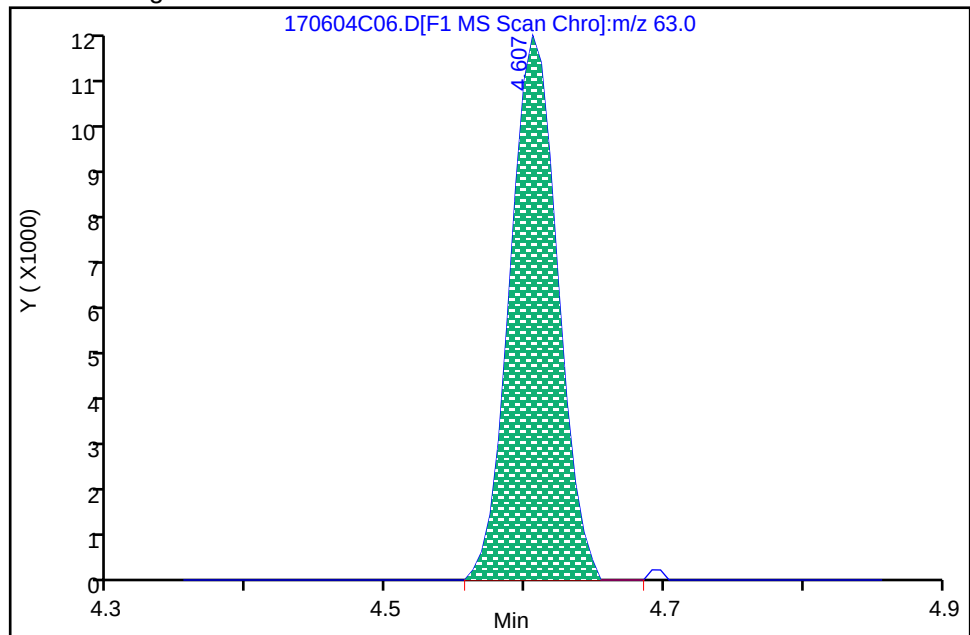
RT: 4.607
Area: 27884
Amount: 0.97227
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 4.607
Area: 27727
Amount: 0.98907
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:06:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

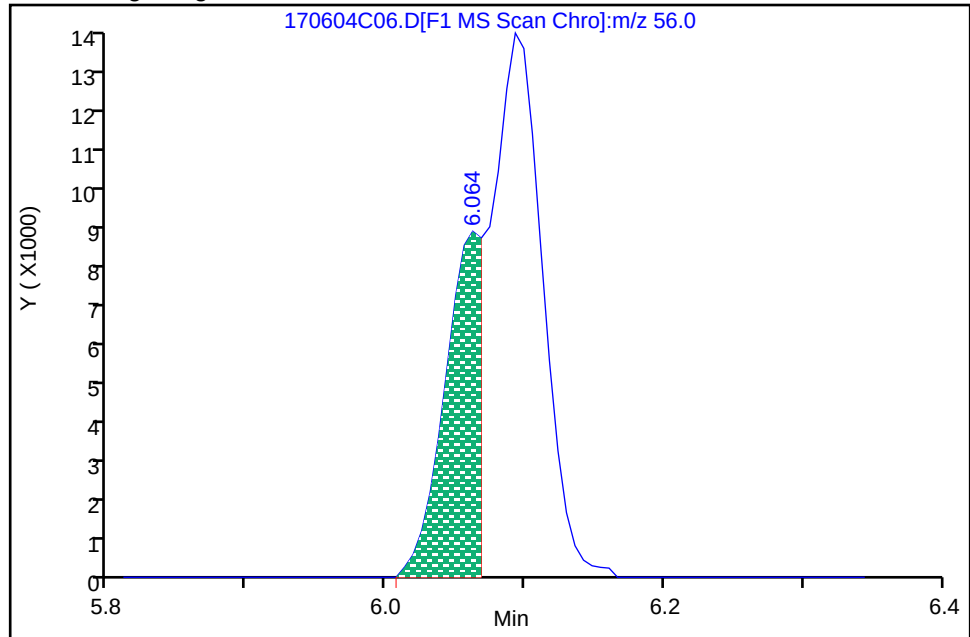
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

42 Cyclohexane, CAS: 110-82-7

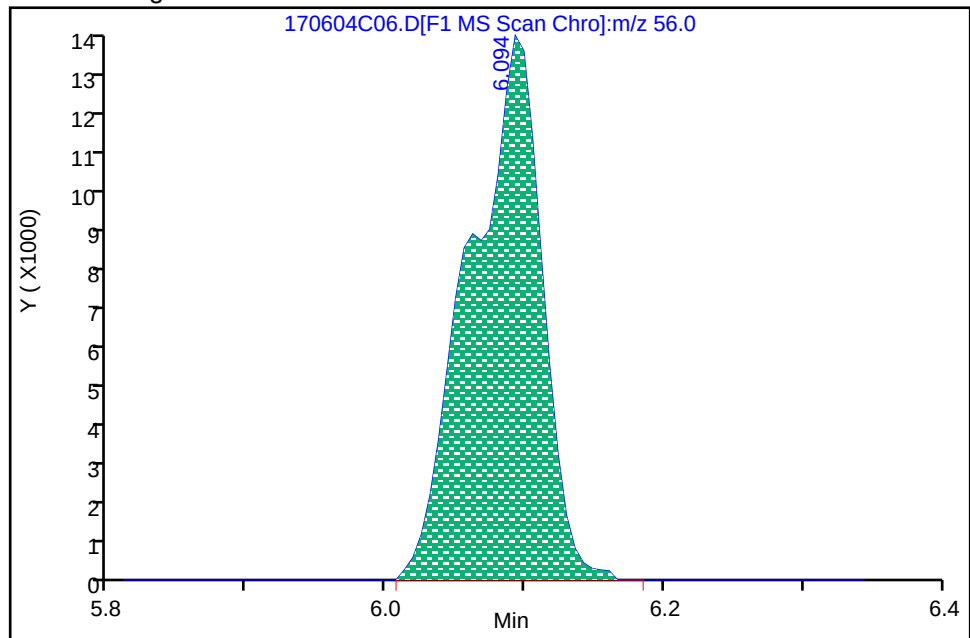
RT: 6.064
Area: 14763
Amount: 0.98618
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 6.094
Area: 48403
Amount: 1.0426
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:07:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D

Injection Date: 05-Jun-2020 03:44:30

Inst. ID: msd17.i

Client ID: 2mL/100mL VSTD050

Lab ID: VSTD001UW

Sample Info: 17060420C, VSTD001UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

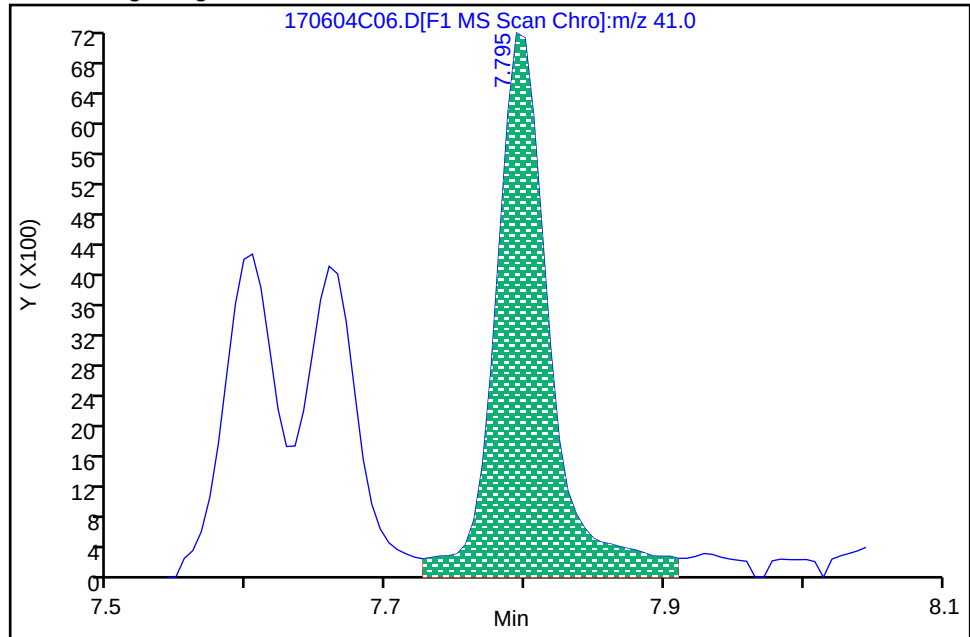
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

57 Methyl methacrylate, CAS: 80-62-6

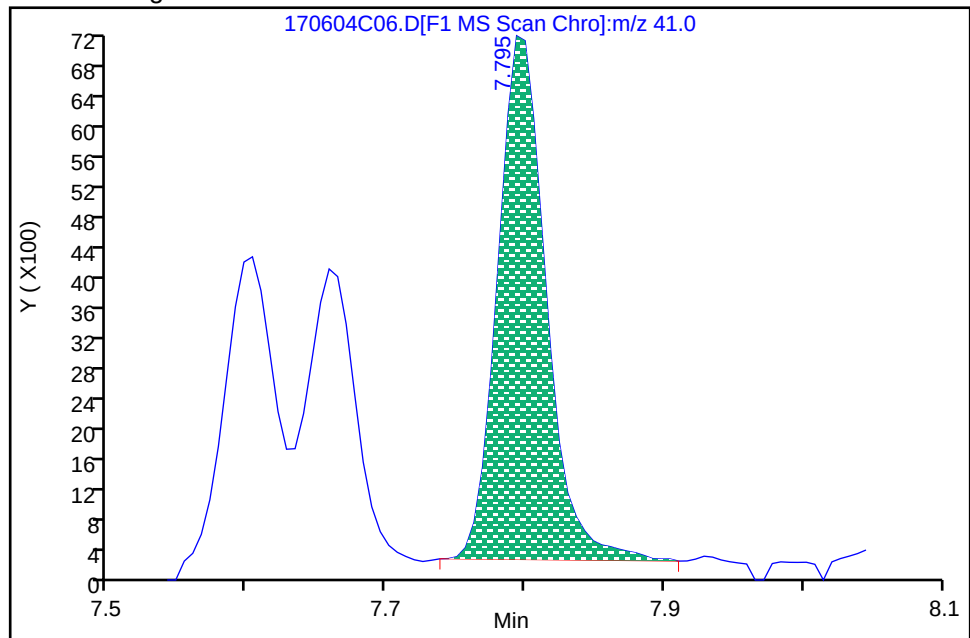
RT: 7.795
Area: 19413
Amount: 0.97345
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 7.795
Area: 16535
Amount: 0.88632
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:07:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

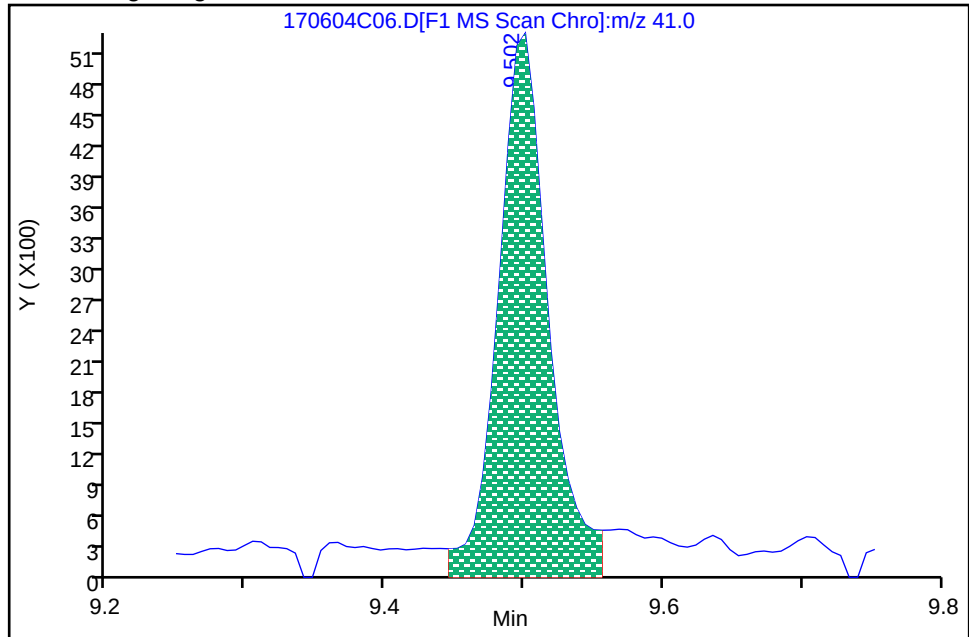
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

67 Ethyl methacrylate, CAS: 97-63-2

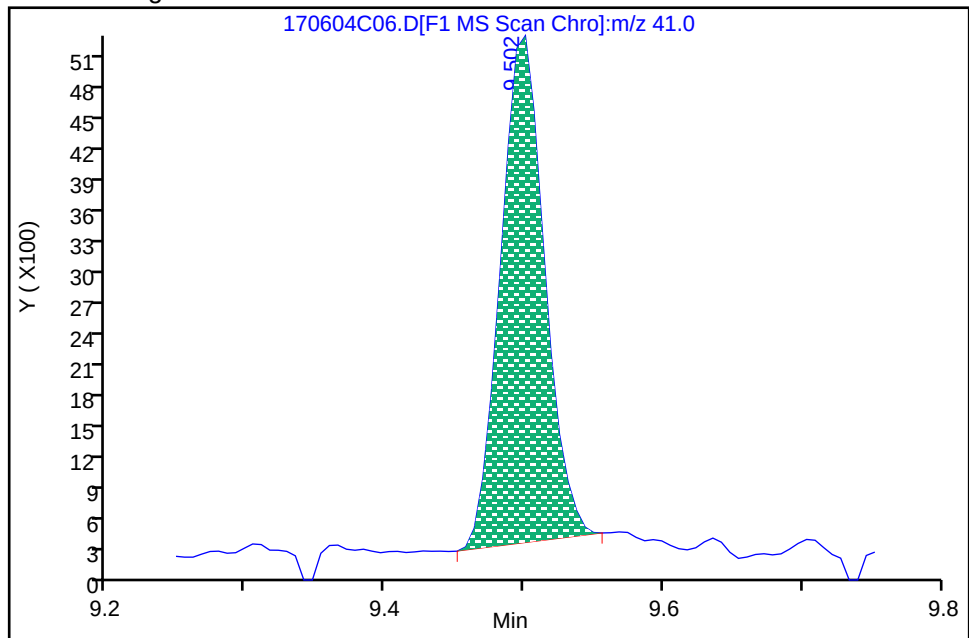
RT: 9.502
Area: 13197
Amount: 0.96105
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 9.502
Area: 10800
Amount: 0.75564
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:07:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

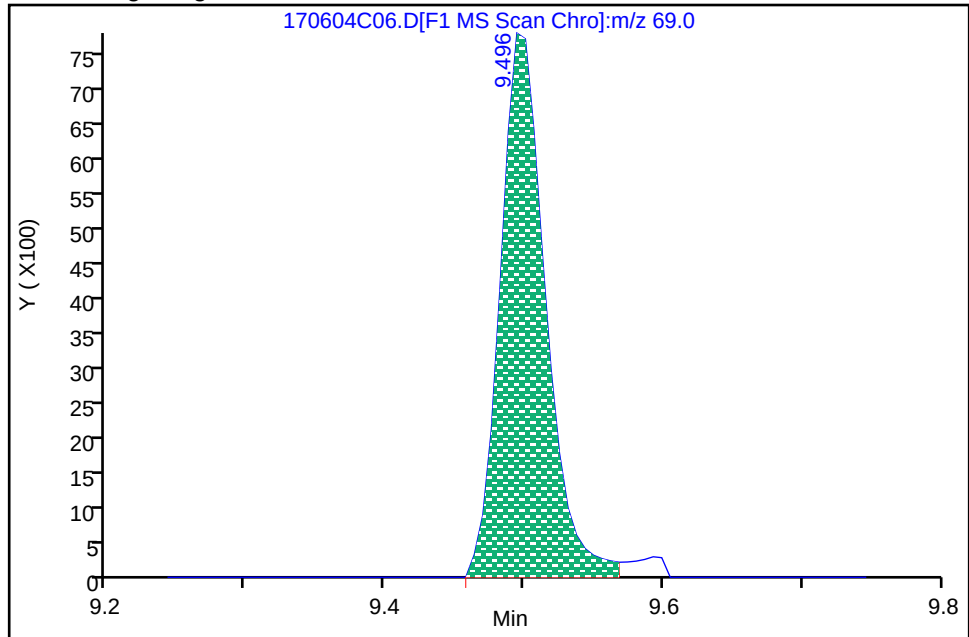
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

67 Ethyl methacrylate, CAS: 97-63-2

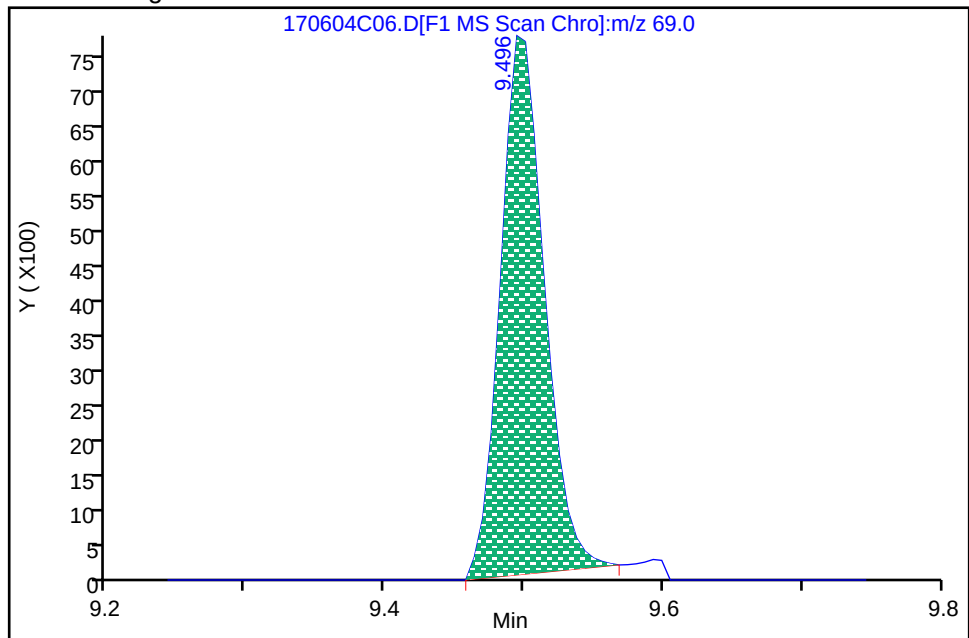
RT: 9.496
Area: 17474
Amount: 0.96105
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 9.496
Area: 16765
Amount: 0.75564
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:07:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D

Injection Date: 05-Jun-2020 03:44:30

Inst. ID: msd17.i

Client ID: 2mL/100mL VSTD050

Lab ID: VSTD001UW

Sample Info: 17060420C, VSTD001UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

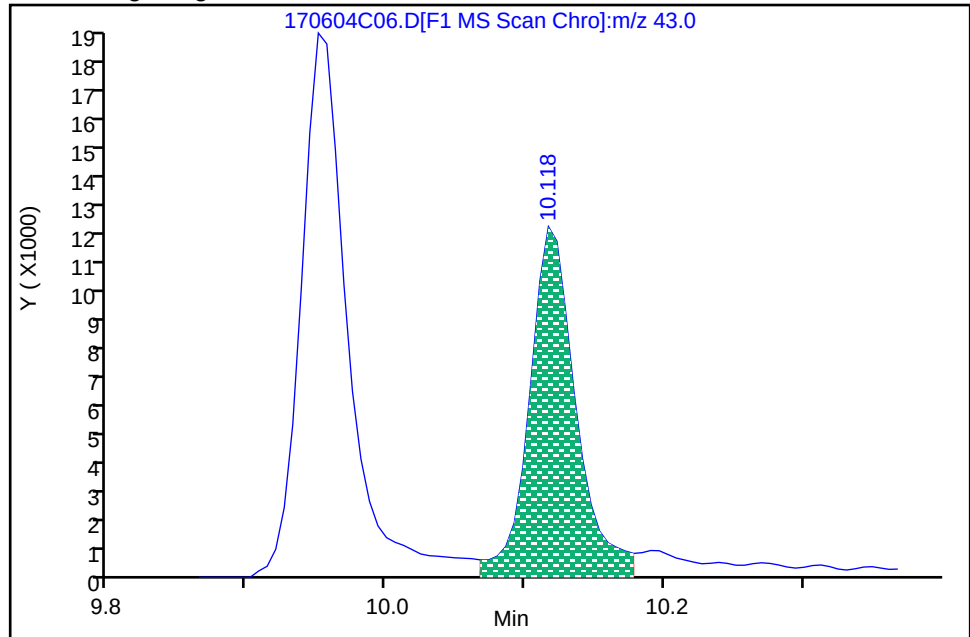
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

73 n-Butyl acetate, CAS: 123-86-4

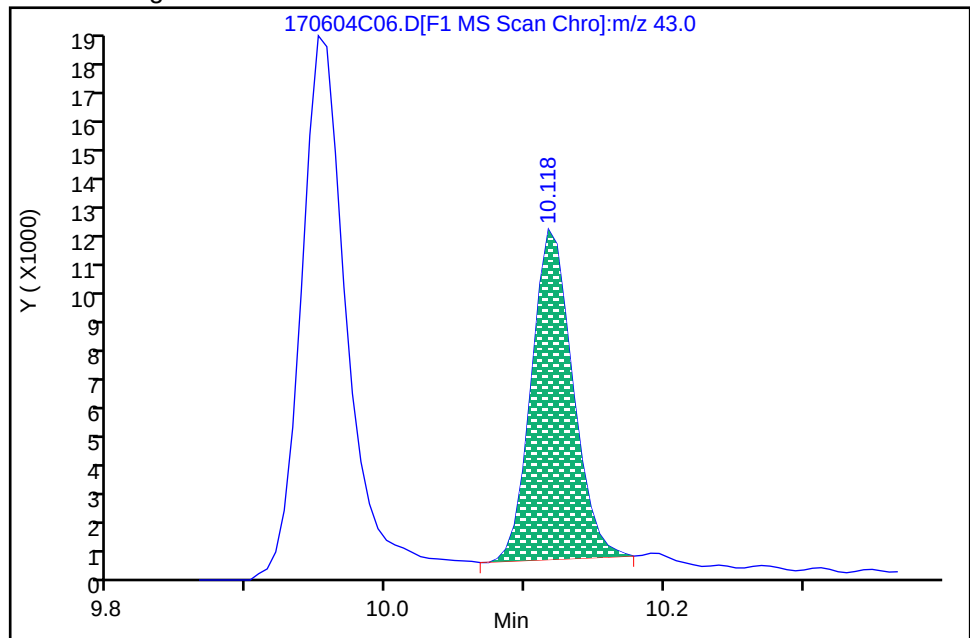
RT: 10.118
Area: 27987
Amount: 0.95967
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 10.118
Area: 23299
Amount: 0.74084
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:08:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D

Injection Date: 05-Jun-2020 03:44:30

Inst. ID: msd17.i

Client ID: 2mL/100mL VSTD050

Lab ID: VSTD001UW

Sample Info: 17060420C, VSTD001UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

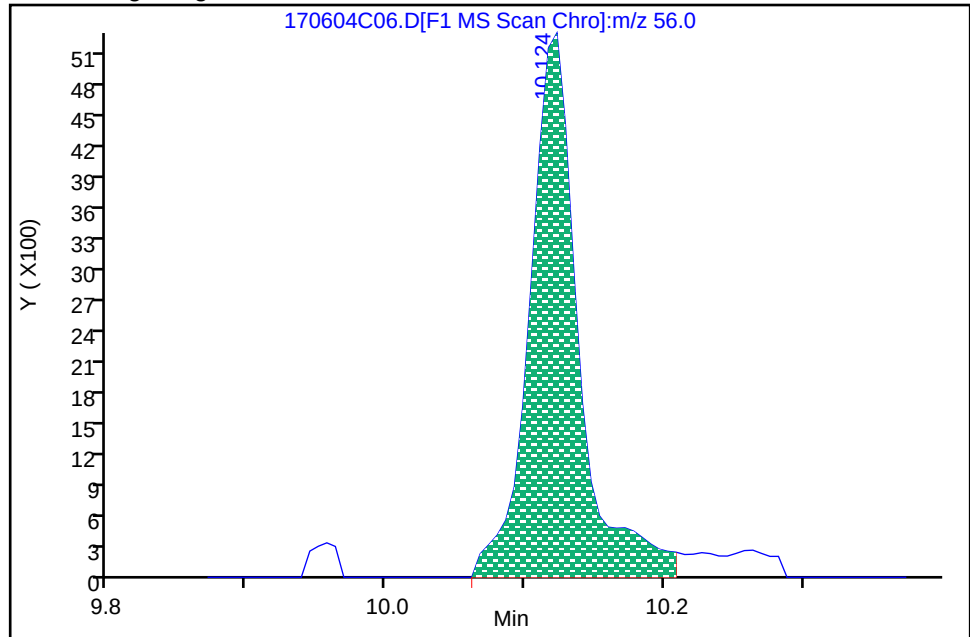
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

73 n-Butyl acetate, CAS: 123-86-4

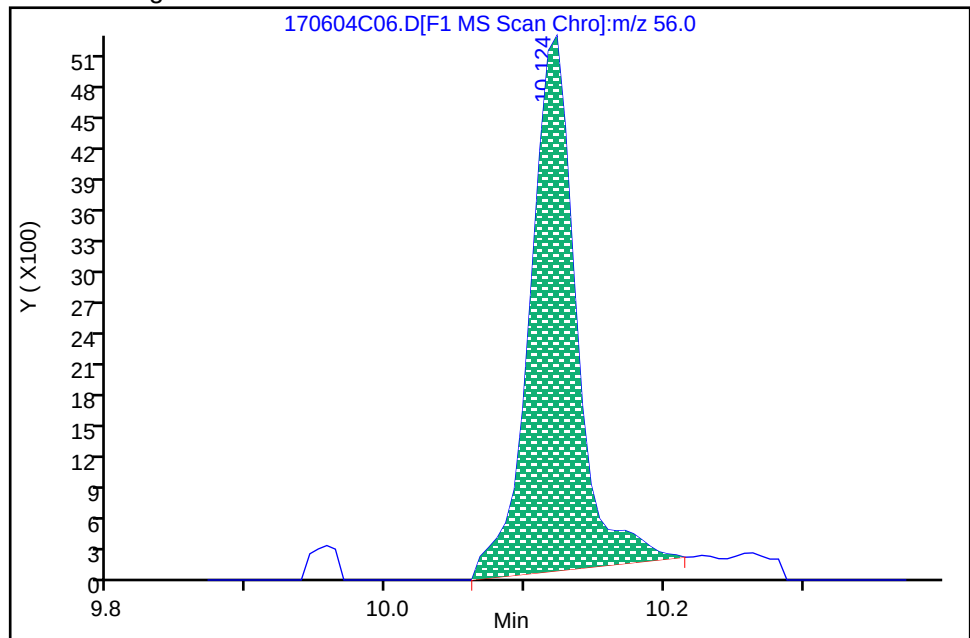
RT: 10.124
Area: 12867
Amount: 0.95967
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 10.124
Area: 11945
Amount: 0.74084
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:08:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

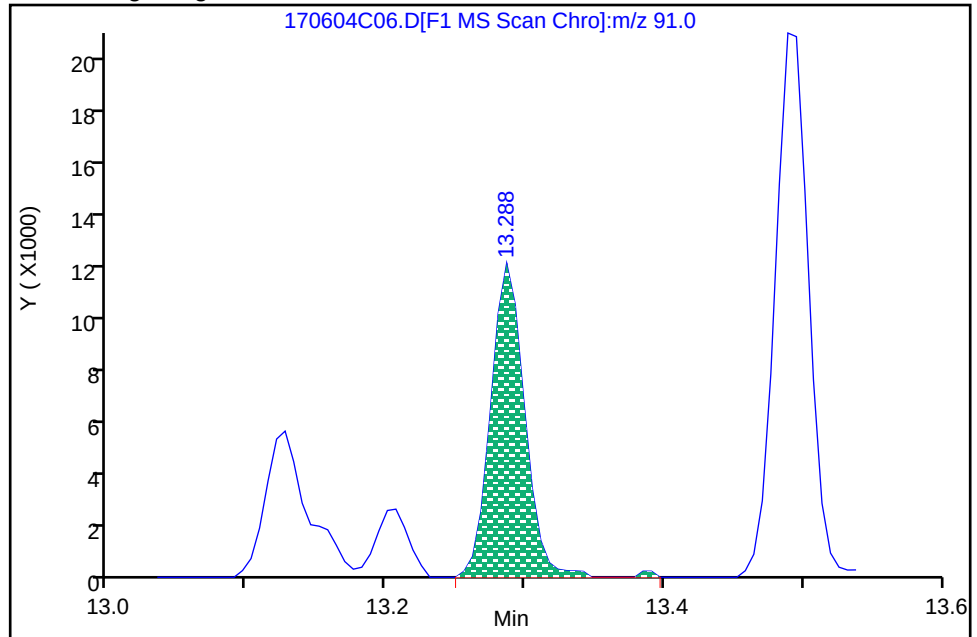
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

102 Benzyl chloride, CAS: 100-44-7

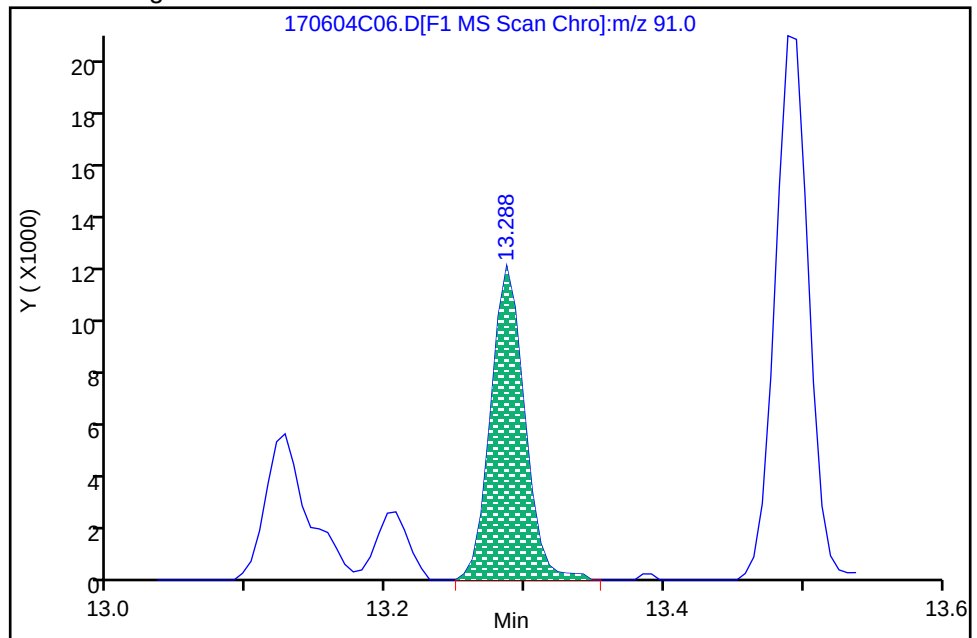
RT: 13.288
Area: 20040
Amount: 0.98027
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 13.288
Area: 19872
Amount: 0.75882
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:08:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

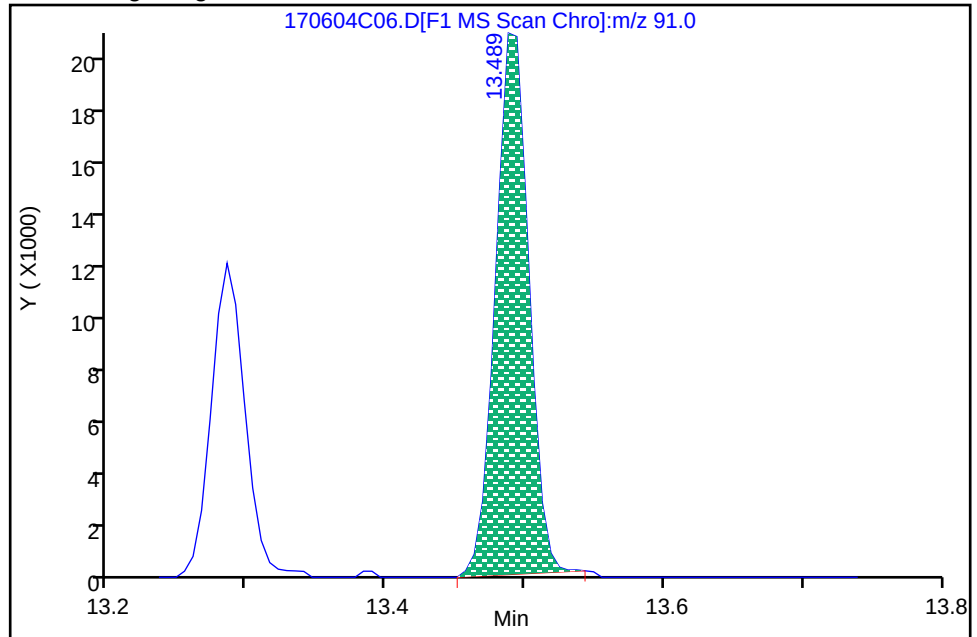
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C06.D		
Injection Date:	05-Jun-2020 03:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001UW
Sample Info:	17060420C, VSTD001UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

103 n-Butylbenzene, CAS: 104-51-8

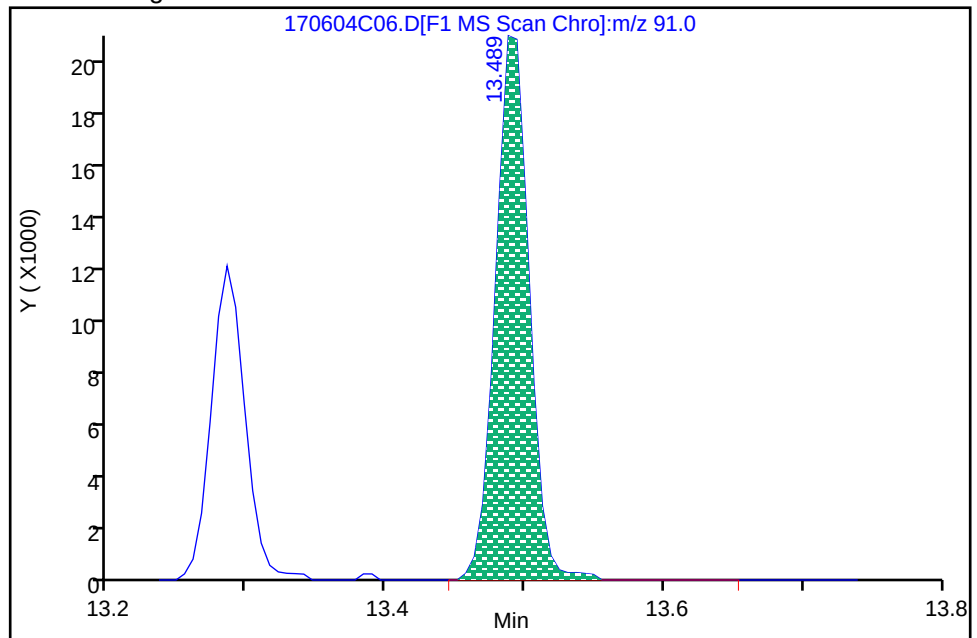
RT: 13.489
Area: 33610
Amount: 0.96100
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 13.489
Area: 34401
Amount: 0.84195
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:08:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D
 Lab Sample ID: VSTD005UW Client Sample ID: 5uL/100mL 15828/25
 Injection Date: 05-Jun-2020 04:08:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD005UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 3 ALS Bottle: 7
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:09:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.369	1.369	0.000	47697	5.0000	5.3723	Q
2 Chloromethane	50.0	1.540	1.546	-0.006	68819	5.0000	5.3394	Q
3 Vinyl chloride	62.0	1.656	1.662	-0.006	69542	5.0000	5.2971	Q
4 Bromomethane	94.0	1.985	1.980	0.006	49280	5.0000	5.4270	Q
5 Chloroethane	64.0	2.101	2.101	0.000	44835	5.0000	5.2577	Q
6 Trichlorofluoromethane	101.0	2.375	2.375	0.000	83027	5.0000	5.2770	Q
8 Ethyl ether	59.0	2.723	2.723	0.000	63621	5.0000	5.1035	Q
9 Acrolein	56.0	2.893	2.888	0.006	272113	50.000	57.471	Q
10 Acetone	43.0	3.088	3.083	0.006	131681	10.000	9.6871	Q
11 1,1-Dichloroethene	96.0	3.003	3.003	0.000	56727	5.0000	5.4856	Q
12 Freon 113	101.0	3.040	3.040	0.000	57339	5.0000	5.2896	Q
13 Methyl iodide	142.0	3.180	3.180	0.000	85474	5.0000	5.4372	Q
14 Carbon disulfide	76.0	3.247	3.247	0.000	150654	5.0000	5.0189	Q
15 Acetonitrile	40.0	3.466	3.461	0.006	100210	50.000	51.029	QM
17 Allyl chloride	76.0	3.491	3.491	0.000	35790	5.0000	5.1248	Q
16 Methyl Acetate	43.0	3.509	3.509	0.000	108013	5.0000	5.2094	Q
18 Methylene chloride	84.0	3.680	3.680	0.000	70988	5.0000	5.4980	Q
20 Acrylonitrile	53.0	4.003	4.003	0.000	125736	10.000	10.350	Q
21 trans-1,2-Dichloroethene	96.0	4.027	4.028	0.000	74838	5.0000	5.2334	Q
22 tert-Butyl methyl ether(MTBE)	73.0	4.033	4.034	0.000	152253	5.0000	5.1212	Q
23 Hexane	57.0	4.405	4.406	0.000	84360	5.0000	4.8767	Q
24 1,1-Dichloroethane	63.0	4.613	4.613	0.000	145908	5.0000	5.2558	Q
25 Vinyl acetate	86.0	4.661	4.655	0.006	15931	5.0000	4.6260	Q
26 Diisopropyl ether (IPE)	87.0	4.698	4.698	0.000	60064	5.0000	5.1750	QM
27 Chloroprene	53.0	4.698	4.698	0.000	108020	5.0000	5.1718	Q
29 cis-1,2-Dichloroethene	96.0	5.362	5.363	0.000	85896	5.0000	5.1498	Q
30 2-Butanone (MEK)	72.0	5.381	5.375	0.006	51667	10.000	10.243	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.356	5.357	0.000	60972	5.0000	5.2766	Q
32 Propionitrile	54.0	5.460	5.460	0.000	290490	50.000	52.079	Q
33 Ethyl Acetate	43.0	5.454	5.449	0.005	175380	5.0000	3.9789	Q
34 Methacrylonitrile	67.0	5.649	5.649	0.000	308791	25.000	26.405	Q
35 Bromochloromethane	128.0	5.661	5.661	0.000	42913	5.0000	5.3640	Q
36 Tetrahydrofuran	42.0	5.673	5.667	0.006	73664	5.0000	4.8933	Q
37 Chloroform	83.0	5.826	5.826	0.000	144375	5.0000	5.1771	Q
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	81091	5.0000	5.1705	Q
40 1,1,1-Trichloroethane	97.0	5.996	5.997	0.000	100496	5.0000	5.2366	Q
* 41 Pentafluorobenzene	168.0	6.106	6.106	0.000	1312747	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	73878	5.0000	5.5651	Q
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	108430	5.0000	5.0804	Q
44 Carbon tetrachloride	119.0	6.179	6.180	0.000	83511	5.0000	5.1004	Q
45 Isobutyl alcohol	42.0	6.460	6.454	0.006	61343	50.000	47.956	Q
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	104639	5.0000	5.2794	Q
48 Benzene	78.0	6.454	6.454	0.000	326356	5.0000	5.4203	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	197616	5.0000	5.2194	Q
50 1,2-Dichloroethane	62.0	6.545	6.545	0.000	118517	5.0000	5.3464	Q
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2169016	50.000	50.000	
53 Trichloroethene	130.0	7.325	7.332	-0.005	80186	5.0000	5.1961	Q
54 Methylcyclohexane	83.0	7.606	7.606	0.000	120032	5.0000	5.1394	Q
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	89351	5.0000	5.3728	Q
56 Dibromomethane	93.0	7.777	7.777	0.000	54681	5.0000	5.1967	Q
57 Methyl methacrylate	41.0	7.795	7.795	0.000	91077	5.0000	5.0384	Q
58 1,4-Dioxane	88.0	7.783	7.777	0.006	14635	50.000	52.719	Q
59 Bromodichloromethane	83.0	8.033	8.033	0.000	98554	5.0000	5.0690	Q
60 2-nitropropane	43.0	8.337	8.338	0.000	30853	5.0000	4.3216	Q
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	63014	5.0000	5.1302	Q
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	112457	5.0000	4.9336	Q
63 4-Methyl-2-pentanone	43.0	8.837	8.838	0.000	295834	10.000	10.447	Q
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	292869	5.0000	5.3004	
65 Toluene	92.0	9.039	9.039	0.000	188399	5.0000	5.3118	Q
66 trans-1,3-Dichloropropene	75.0	9.398	9.399	0.000	97801	5.0000	4.7883	Q
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	105675	5.0000	4.8823	Q
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	84462	5.0000	5.4557	Q
69 Tetrachloroethene	164.0	9.721	9.722	0.000	59813	5.0000	5.1276	Q
70 1,3-Dichloropropane	76.0	9.849	9.850	0.000	141294	5.0000	5.3159	Q
71 2-Hexanone	43.0	9.953	9.953	0.000	245217	10.000	10.273	Q
72 Dibromochloromethane	129.0	10.112	10.112	0.000	66832	5.0000	5.0289	Q
73 n-Butyl acetate	43.0	10.118	10.118	0.000	170159	5.0000	5.5460	Q
75 1,2-Dibromoethane (EDB)	107.0	10.233	10.234	0.000	83072	5.0000	5.3476	Q
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1928710	50.000	50.000	Q
77 Chlorobenzene	112.0	10.819	10.819	0.000	216524	5.0000	5.3781	Q
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	66093	5.0000	5.1164	Q
79 Ethylbenzene	106.0	10.941	10.941	0.000	104647	5.0000	5.2275	Q
80 m+p-Xylenes	106.0	11.093	11.093	0.000	122588	5.0000	5.1587	Q
81 o-Xylene	106.0	11.502	11.502	0.000	116217	5.0000	5.2650	Q
82 Styrene	104.0	11.526	11.526	0.000	194532	5.0000	5.1901	Q
83 Bromoform	173.0	11.703	11.703	0.000	46161	5.0000	4.7873	Q
84 Isopropylbenzene	105.0	11.886	11.886	0.000	312270	5.0000	5.3794	Q
85 Cyclohexanone	55.0	11.971	11.971	0.000	55197	50.000	48.640	QM

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.057	0.000	103436	5.0000	5.1259	Q
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.000	129923	5.0000	5.3002	Q
87 Bromobenzene	156.0	12.184	12.185	0.000	78505	5.0000	5.2906	Q
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	41529	5.0000	5.2435	Q
90 trans-1,4-Dichloro-2-butene	53.0	12.251	12.252	0.000	31172	5.0000	4.8108	QM
91 n-Propylbenzene	91.0	12.300	12.300	0.000	367863	5.0000	5.4605	Q
92 2-Chlorotoluene	91.0	12.379	12.380	0.000	232348	5.0000	5.3700	Q
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	247359	5.0000	5.5202	Q
94 4-Chlorotoluene	126.0	12.501	12.502	0.000	74539	5.0000	5.3391	Q
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	210011	5.0000	5.4406	Q
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	243710	5.0000	5.4102	Q
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	311154	5.0000	5.4425	Q
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	141635	5.0000	5.3764	Q
99 p-Isopropyltoluene	119.0	13.129	13.130	0.000	240731	5.0000	5.4436	Q
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	853051	50.000	50.000	Q
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	145192	5.0000	5.2618	Q
102 Benzyl chloride	91.0	13.288	13.289	0.000	119660	5.0000	4.4707	Q
103 n-Butylbenzene	91.0	13.495	13.495	0.000	215074	5.0000	5.1503	Q
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	135271	5.0000	5.2952	Q
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.190	0.000	25283	5.0000	5.1553	Q
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	63750	5.0000	4.8738	Q
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	32163	5.0000	5.0742	Q
108 Naphthalene	128.0	15.092	15.093	0.000	209800	5.0000	4.7363	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	57318	5.0000	4.7216	Q
S 110 Xylenes (total)	106.0	16.000		0.000		10.000	10.424	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		10.000	10.383	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

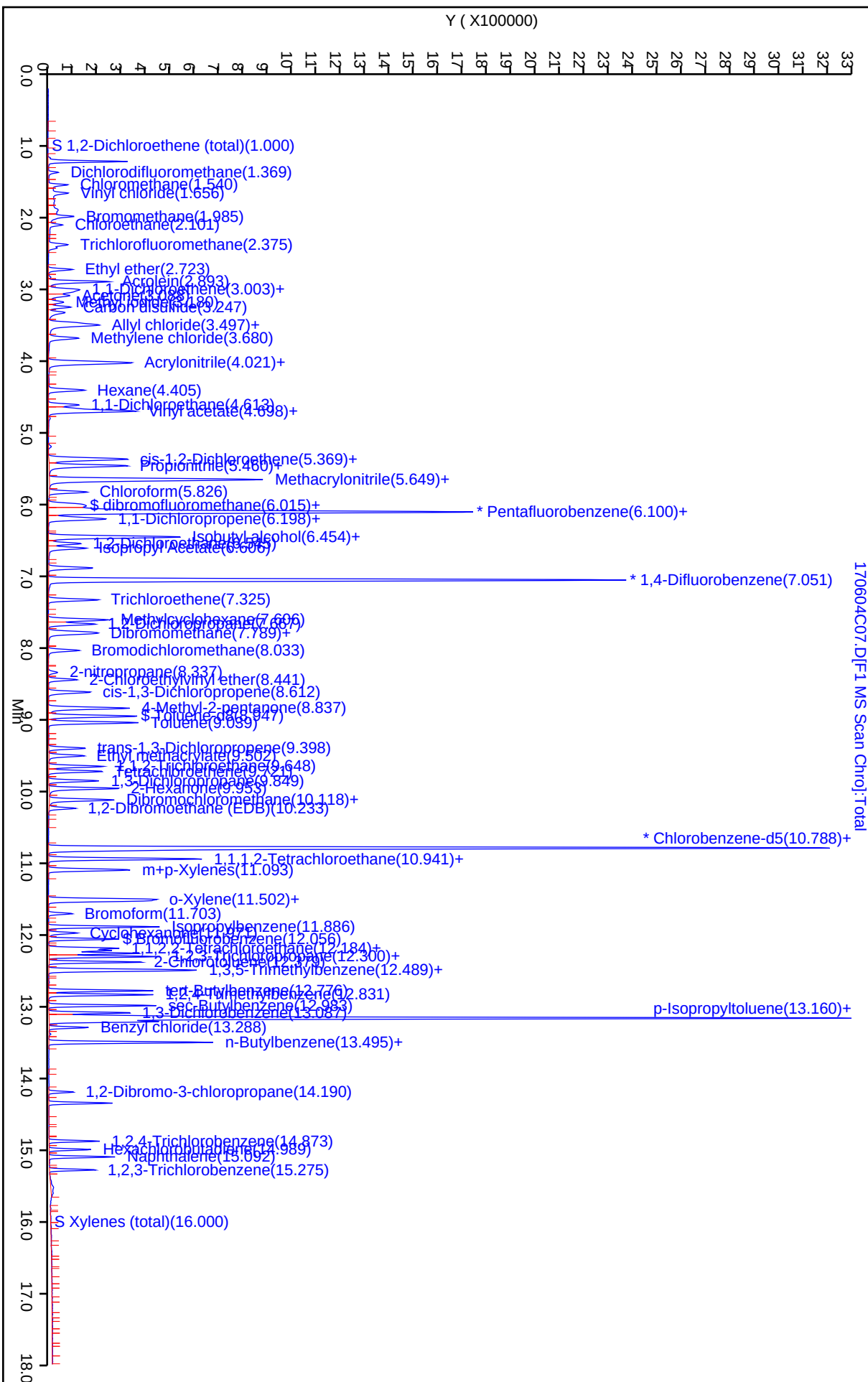
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File:	\\Organics\ID\chem\msd17.i\17060420C.b\170604C07.D	Inst. ID:	msd17.i	Operator:	JTH
Injection Date:	05-Jun-2020 04:08:30	Lab ID:	VSTD005UW		
Client ID:	5uL/100mL 15828/25				
Sample Info:	17060420C, VSTD005UW				
Purge Vol:	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services

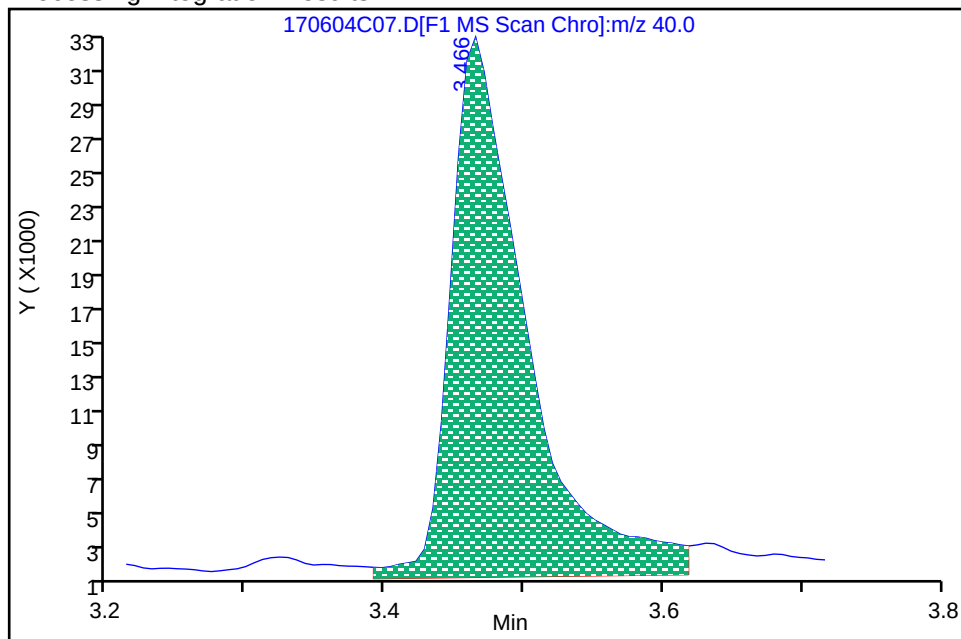
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D		
Injection Date:	05-Jun-2020 04:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15828/25	Lab ID:	VSTD005UW
Sample Info:	17060420C, VSTD005UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

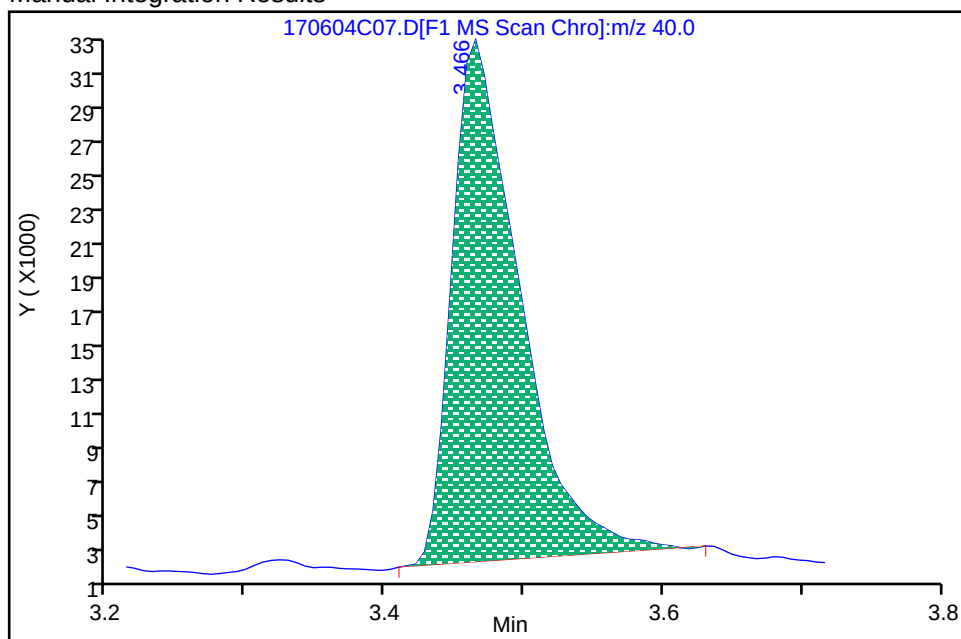
RT: 3.466
Area: 116868
Amount: 43.817
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.466
Area: 100210
Amount: 51.029
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:09:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D

Injection Date: 05-Jun-2020 04:08:30

Inst. ID: msd17.i

Client ID: 5uL/100mL 15828/25

Lab ID: VSTD005UW

Sample Info: 17060420C, VSTD005UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

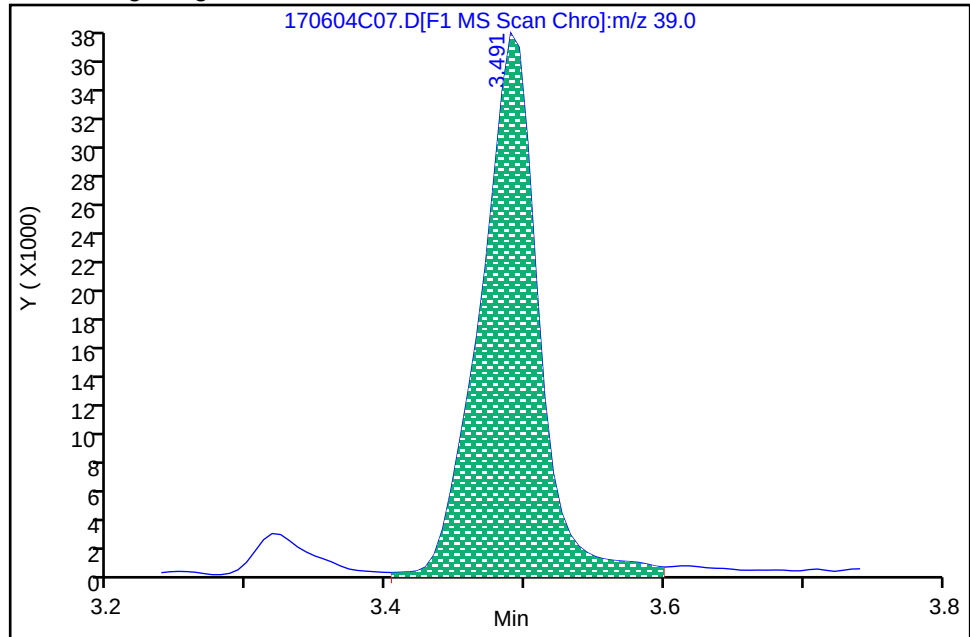
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

15 Acetonitrile, CAS: 75-05-8

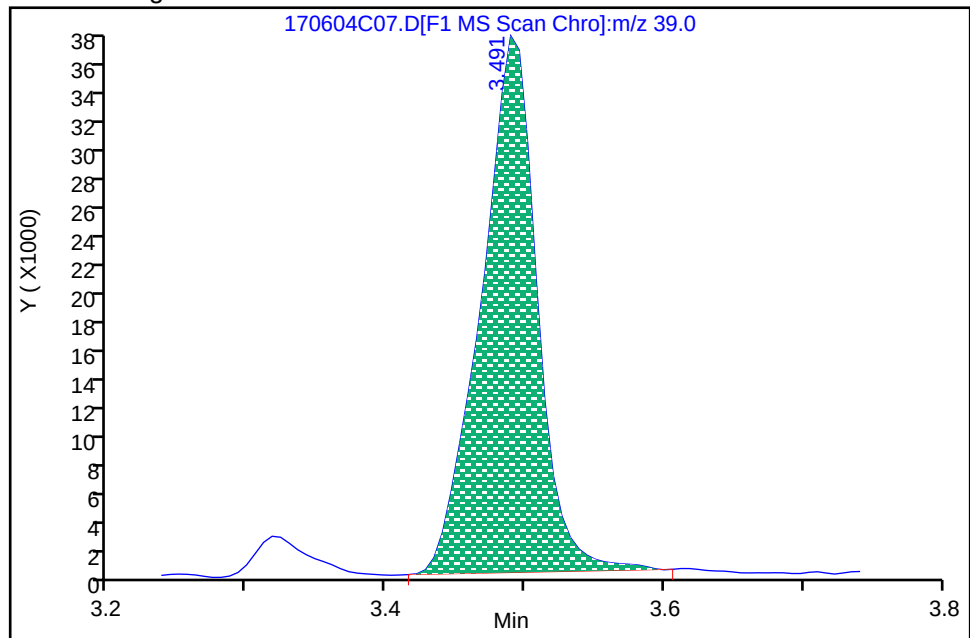
RT: 3.491
Area: 106881
Amount: 43.817
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.491
Area: 101011
Amount: 51.029
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:09:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D

Injection Date: 05-Jun-2020 04:08:30

Inst. ID: msd17.i

Client ID: 5uL/100mL 15828/25

Lab ID: VSTD005UW

Sample Info: 17060420C, VSTD005UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

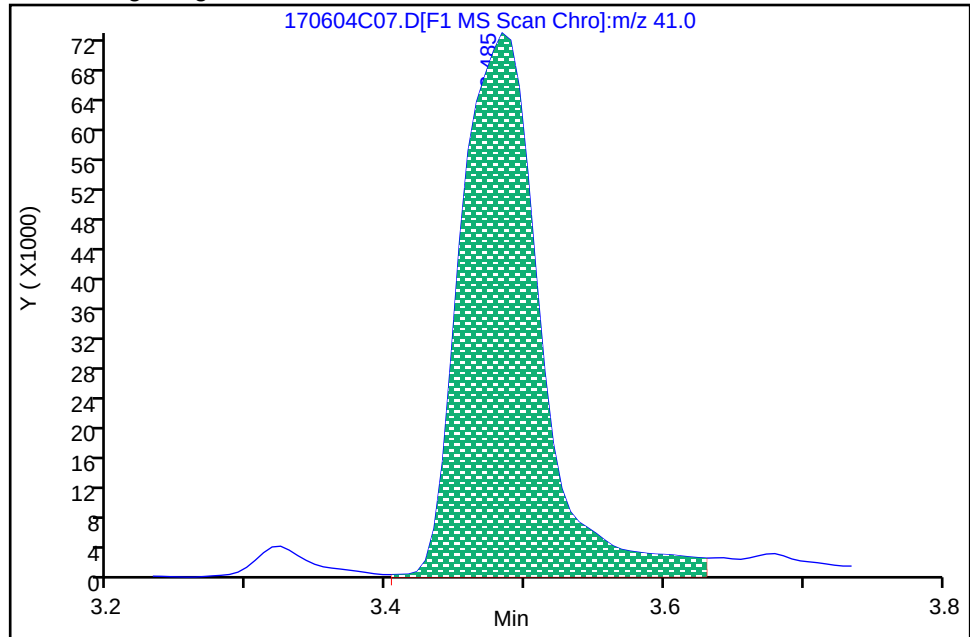
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

15 Acetonitrile, CAS: 75-05-8

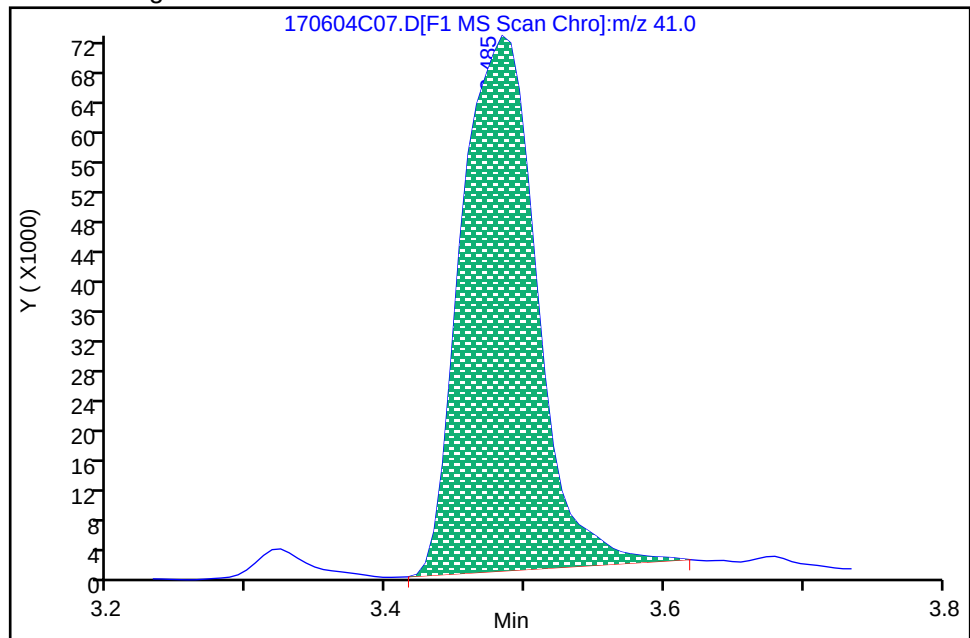
RT: 3.485
Area: 288769
Amount: 43.817
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.485
Area: 268272
Amount: 51.029
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:09:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

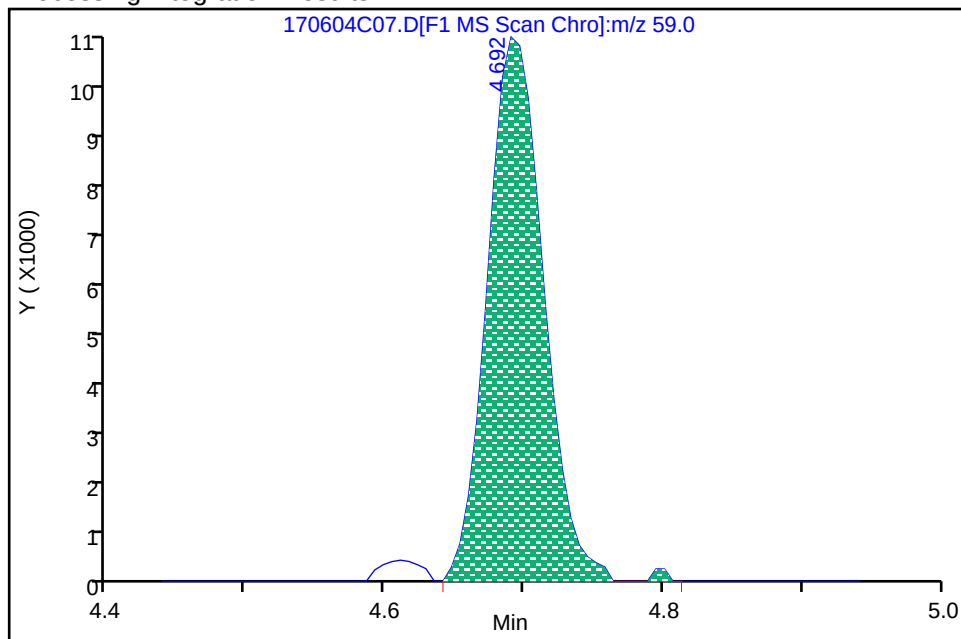
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D		
Injection Date:	05-Jun-2020 04:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15828/25	Lab ID:	VSTD005UW
Sample Info:	17060420C, VSTD005UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

26 Diisopropyl ether (IPE), CAS: 108-20-3

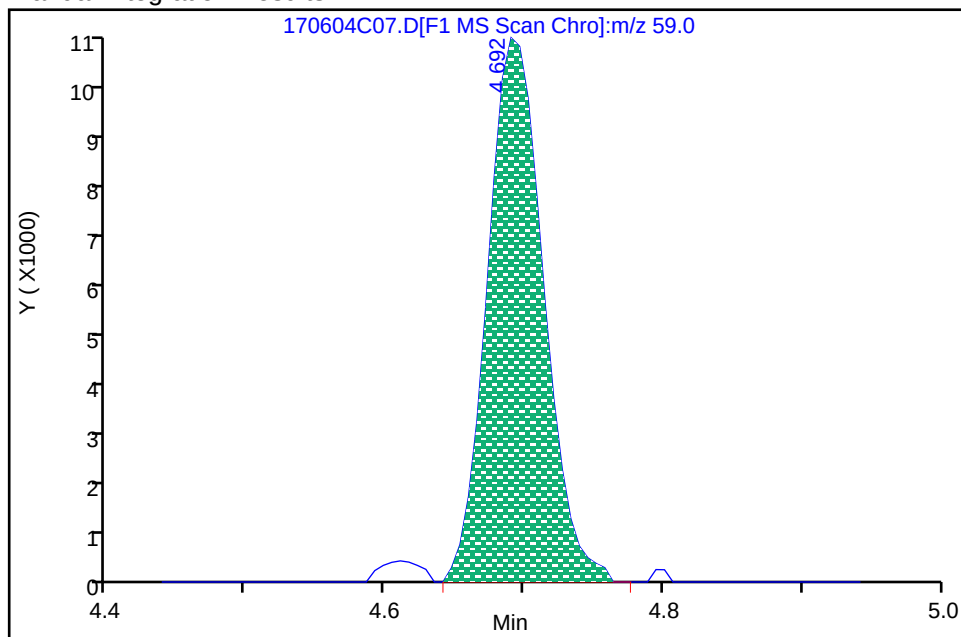
RT: 4.692
Area: 28494
Amount: 5.2173
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 4.692
Area: 28325
Amount: 5.1750
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:09:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services

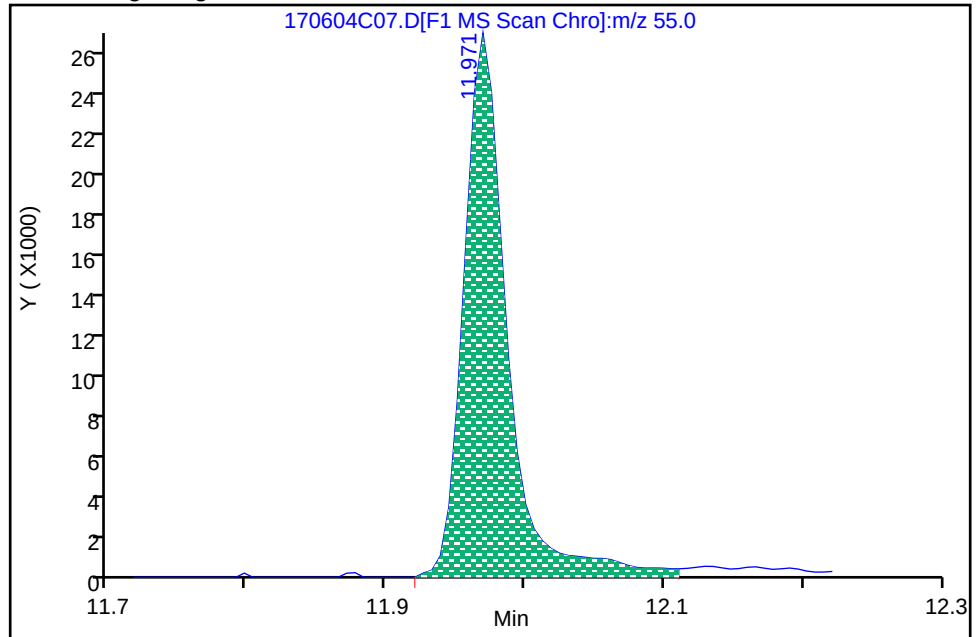
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D		
Injection Date:	05-Jun-2020 04:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15828/25	Lab ID:	VSTD005UW
Sample Info:	17060420C, VSTD005UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

85 Cyclohexanone, CAS: 108-94-1

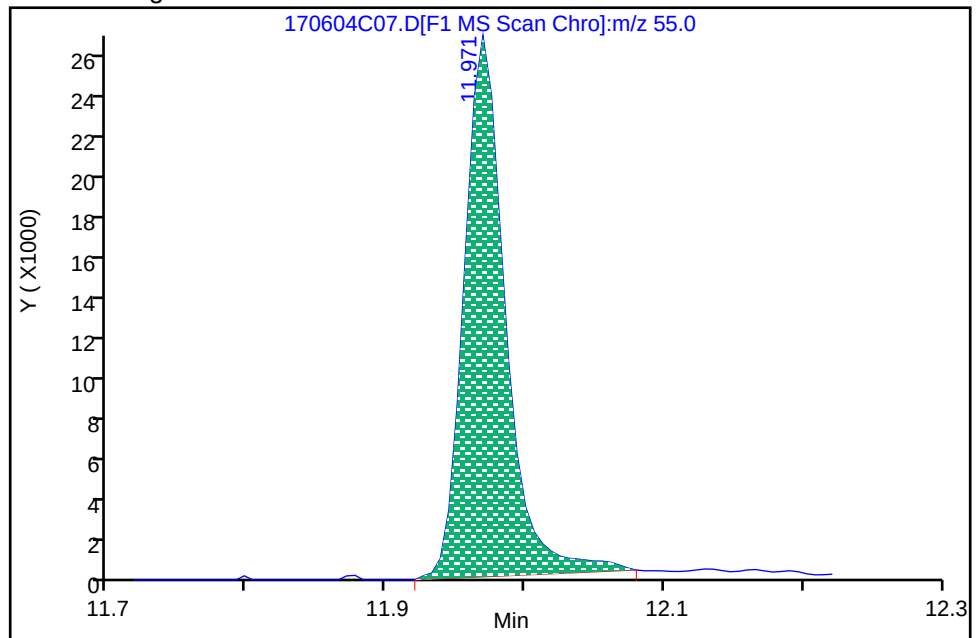
RT: 11.971
Area: 58350
Amount: 54.868
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 11.971
Area: 55197
Amount: 48.640
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:09:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C07.D

Injection Date: 05-Jun-2020 04:08:30

Inst. ID: msd17.i

Client ID: 5uL/100mL 15828/25

Lab ID: VSTD005UW

Sample Info: 17060420C, VSTD005UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

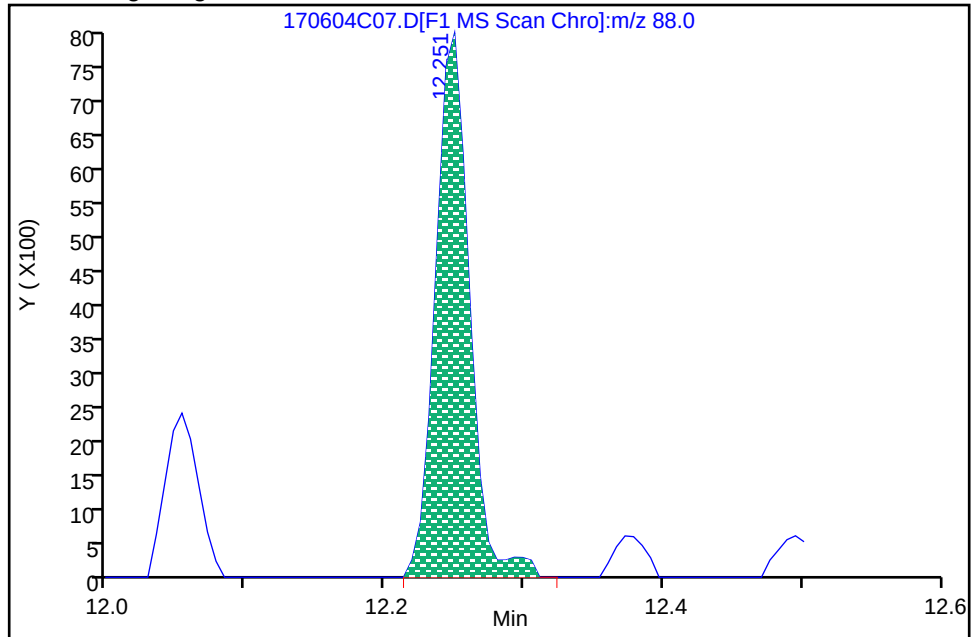
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

90 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

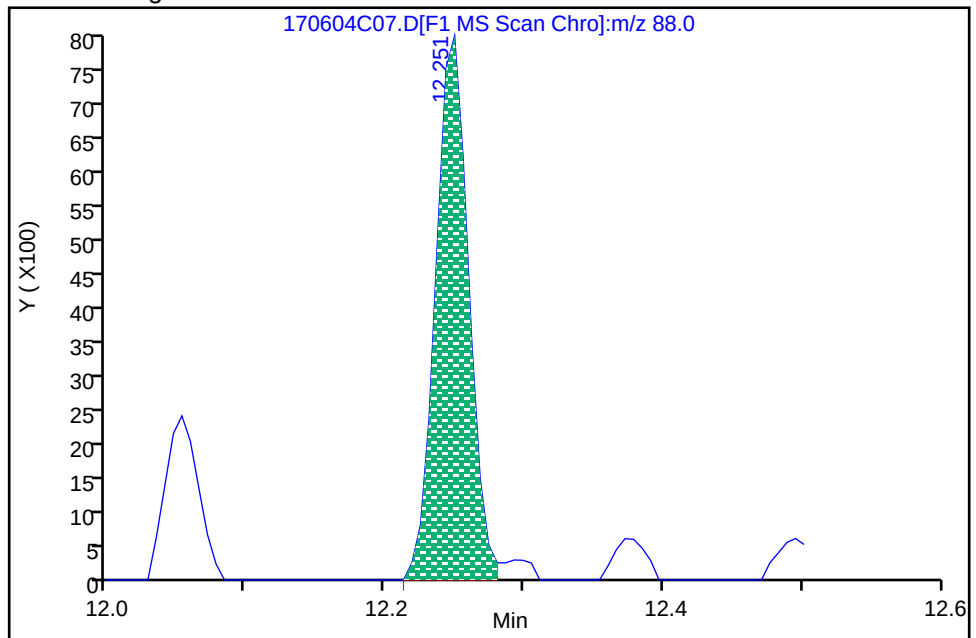
RT: 12.251
Area: 13431
Amount: 5.0319
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 12.251
Area: 13034
Amount: 4.8108
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:09:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C08.D
 Lab Sample ID: VSTD020UW Client Sample ID: 20uL/100mL 15828/25
 Injection Date: 05-Jun-2020 04:32:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD020UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 4 ALS Bottle: 8
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.369	1.369	0.000	171390	20.000	18.846	Q
2 Chloromethane	50.0	1.540	1.546	-0.005	254046	20.000	19.243	Q
3 Vinyl chloride	62.0	1.656	1.662	-0.006	256435	20.000	19.069	Q
4 Bromomethane	94.0	1.985	1.980	0.006	179924	20.000	19.344	Q
5 Chloroethane	64.0	2.101	2.101	0.000	169504	20.000	19.406	Q
6 Trichlorofluoromethane	101.0	2.375	2.375	0.000	312312	20.000	19.379	Q
8 Ethyl ether	59.0	2.723	2.723	0.000	253185	20.000	19.828	Q
9 Acrolein	56.0	2.887	2.888	0.000	1032241	200.00	212.84	Q
10 Acetone	43.0	3.082	3.083	0.000	581575	40.000	41.768	Q
11 1,1-Dichloroethene	96.0	3.003	3.003	0.000	203682	20.000	19.229	Q
12 Freon 113	101.0	3.040	3.040	0.000	219485	20.000	19.767	Q
13 Methyl iodide	142.0	3.180	3.180	0.000	308978	20.000	19.188	Q
14 Carbon disulfide	76.0	3.247	3.247	0.000	561191	20.000	18.252	Q
15 Acetonitrile	40.0	3.460	3.461	0.000	390830	200.00	197.57	QM
17 Allyl chloride	76.0	3.491	3.491	0.000	143695	20.000	20.088	Q
16 Methyl Acetate	43.0	3.509	3.509	0.000	431960	20.000	20.339	Q
18 Methylene chloride	84.0	3.680	3.680	0.000	249014	20.000	18.828	Q
20 Acrylonitrile	53.0	4.003	4.003	0.000	496541	40.000	39.904	Q
21 trans-1,2-Dichloroethene	96.0	4.021	4.028	-0.005	291693	20.000	19.914	Q
22 tert-Butyl methyl ether(MTBE)	73.0	4.033	4.034	0.000	618774	20.000	20.319	Q
23 Hexane	57.0	4.405	4.406	0.000	342143	20.000	19.309	Q
24 1,1-Dichloroethane	63.0	4.607	4.613	-0.005	560384	20.000	19.707	Q
25 Vinyl acetate	86.0	4.655	4.655	0.000	67936	20.000	19.259	Q
26 Diisopropyl ether (IPE)	87.0	4.692	4.698	-0.006	241894	20.000	20.346	Q
27 Chloroprene	53.0	4.698	4.698	0.000	428937	20.000	20.050	Q
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	336970	20.000	19.723	Q
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	215631	40.000	41.735	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.357	-0.005	225461	20.000	19.049	Q
32 Propionitrile	54.0	5.460	5.460	0.000	1158711	200.00	202.80	Q
33 Ethyl Acetate	43.0	5.448	5.449	0.000	645587	20.000	14.299	Q
34 Methacrylonitrile	67.0	5.649	5.649	0.000	1235544	100.00	103.14	Q
35 Bromochloromethane	128.0	5.661	5.661	0.000	161682	20.000	19.730	Q
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	293510	20.000	19.034	Q
37 Chloroform	83.0	5.826	5.826	0.000	554757	20.000	19.421	Q
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	310421	20.000	19.323	Q
40 1,1,1-Trichloroethane	97.0	5.990	5.997	-0.005	393732	20.000	20.029	Q
* 41 Pentafluorobenzene	168.0	6.100	6.106	-0.005	1344657	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	264442	20.000	19.447	Q
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	420179	20.000	19.220	Q
44 Carbon tetrachloride	119.0	6.179	6.180	0.000	333508	20.000	19.885	Q
45 Isobutyl alcohol	42.0	6.454	6.454	0.000	258046	200.00	196.94	Q
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	395826	20.000	19.370	Q
48 Benzene	78.0	6.448	6.454	-0.005	1245492	20.000	20.063	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	806766	20.000	20.667	Q
50 1,2-Dichloroethane	62.0	6.545	6.545	0.000	443305	20.000	19.396	Q
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2236302	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.332	-0.005	310727	20.000	19.529	Q
54 Methylcyclohexane	83.0	7.606	7.606	0.000	474015	20.000	19.685	Q
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	336091	20.000	19.602	Q
56 Dibromomethane	93.0	7.771	7.777	-0.005	214781	20.000	19.798	Q
57 Methyl methacrylate	41.0	7.795	7.795	0.000	385313	20.000	20.674	Q
58 1,4-Dioxane	88.0	7.777	7.777	0.000	62361	200.00	218.10	QM
59 Bromodichloromethane	83.0	8.033	8.033	0.000	398837	20.000	19.897	Q
60 2-nitropropane	43.0	8.338	8.338	0.000	135125	20.000	18.358	Q
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	255785	20.000	20.198	Q
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	479282	20.000	20.394	Q
63 4-Methyl-2-pentanone	43.0	8.837	8.838	0.000	1229820	40.000	42.124	Q
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	1142763	20.000	19.923	
65 Toluene	92.0	9.039	9.039	0.000	741941	20.000	20.151	Q
66 trans-1,3-Dichloropropene	75.0	9.392	9.399	-0.005	419011	20.000	19.762	Q
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	464978	20.000	20.694	Q
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	318126	20.000	19.795	Q
69 Tetrachloroethene	164.0	9.721	9.722	0.000	239333	20.000	19.765	Q
70 1,3-Dichloropropane	76.0	9.849	9.850	0.000	542806	20.000	19.673	Q
71 2-Hexanone	43.0	9.953	9.953	0.000	1051084	40.000	42.420	Q
72 Dibromochloromethane	129.0	10.112	10.112	0.000	279267	20.000	20.243	Q
73 n-Butyl acetate	43.0	10.118	10.118	0.000	685379	20.000	21.519	Q
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	321507	20.000	19.937	Q
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	2002145	50.000	50.000	Q
77 Chlorobenzene	112.0	10.819	10.819	0.000	824882	20.000	19.737	Q
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	272219	20.000	20.300	Q
79 Ethylbenzene	106.0	10.941	10.941	0.000	429677	20.000	20.677	Q
80 m+p-Xylenes	106.0	11.093	11.093	0.000	505400	20.000	20.488	Q
81 o-Xylene	106.0	11.502	11.502	0.000	473694	20.000	20.673	Q
82 Styrene	104.0	11.526	11.526	0.000	849273	20.000	21.827	Q
83 Bromoform	173.0	11.703	11.703	0.000	199314	20.000	19.912	Q
84 Isopropylbenzene	105.0	11.886	11.886	0.000	1299698	20.000	21.569	Q
85 Cyclohexanone	55.0	11.971	11.971	0.000	253619	200.00	215.30	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.057	0.000	416364	20.000	19.877	Q
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.000	509405	20.000	19.151	Q
87 Bromobenzene	156.0	12.184	12.185	0.000	315772	20.000	19.611	Q
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	167808	20.000	19.525	Q
90 trans-1,4-Dichloro-2-butene	53.0	12.251	12.252	0.000	136157	20.000	19.365	Q
91 n-Propylbenzene	91.0	12.300	12.300	0.000	1566716	20.000	21.431	Q
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	946438	20.000	20.158	Q
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	1042682	20.000	21.444	Q
94 4-Chlorotoluene	126.0	12.501	12.502	0.000	316968	20.000	20.922	Q
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	877478	20.000	20.949	Q
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	1054639	20.000	21.575	Q
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	1322198	20.000	21.312	Q
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	568257	20.000	19.878	Q
99 p-Isopropyltoluene	119.0	13.129	13.130	0.000	1048539	20.000	21.850	Q
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	925681	50.000	50.000	Q
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	573836	20.000	19.164	Q
102 Benzyl chloride	91.0	13.288	13.289	0.000	565505	20.000	19.471	Q
103 n-Butylbenzene	91.0	13.489	13.495	-0.005	953886	20.000	21.050	Q
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	550019	20.000	19.841	Q
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.190	0.000	105330	20.000	19.792	Q
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	271500	20.000	19.128	Q
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	132495	20.000	19.263	Q
108 Naphthalene	128.0	15.092	15.093	0.000	975781	20.000	20.300	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	253775	20.000	19.265	Q
S 110 Xylenes (total)	106.0	16.000		0.000		40.000	41.161	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		40.000	39.637	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

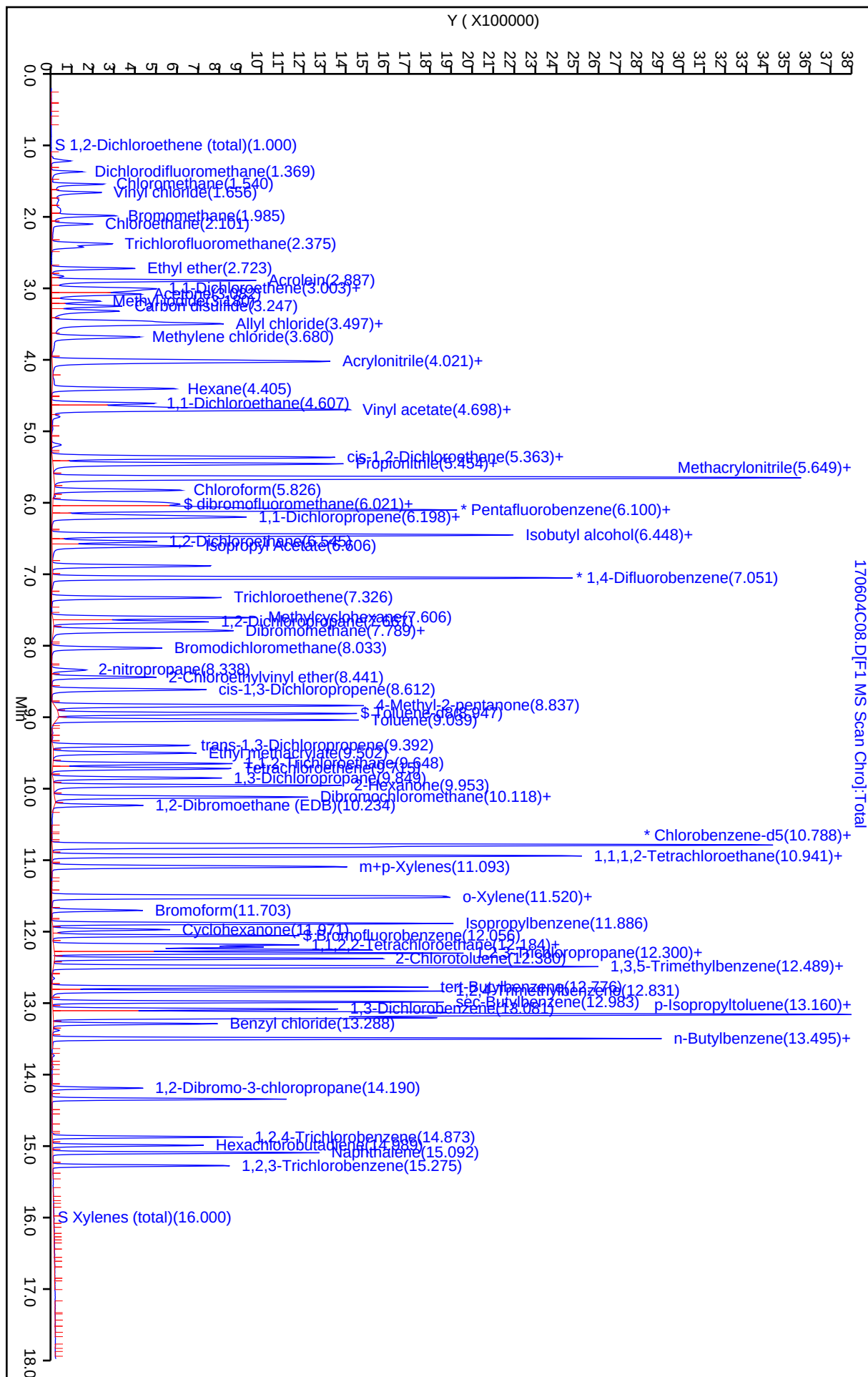
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File:	\\Organics\ID\Chem\msd17.i\17060420C.b\170604C08.D	
Injection Date:	05-Jun-2020 04:32:30	Inst. ID: msd17.i
Client ID:	20uL/100mL 15828/25	Lab ID: VSTD020UW
Sample Info:	17060420C, VSTD020UW	
Purge Vol:	5.00 ml	Dil. Factor: 1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector: MS Scan
		Operator: JTH



Shealy Environmental Services

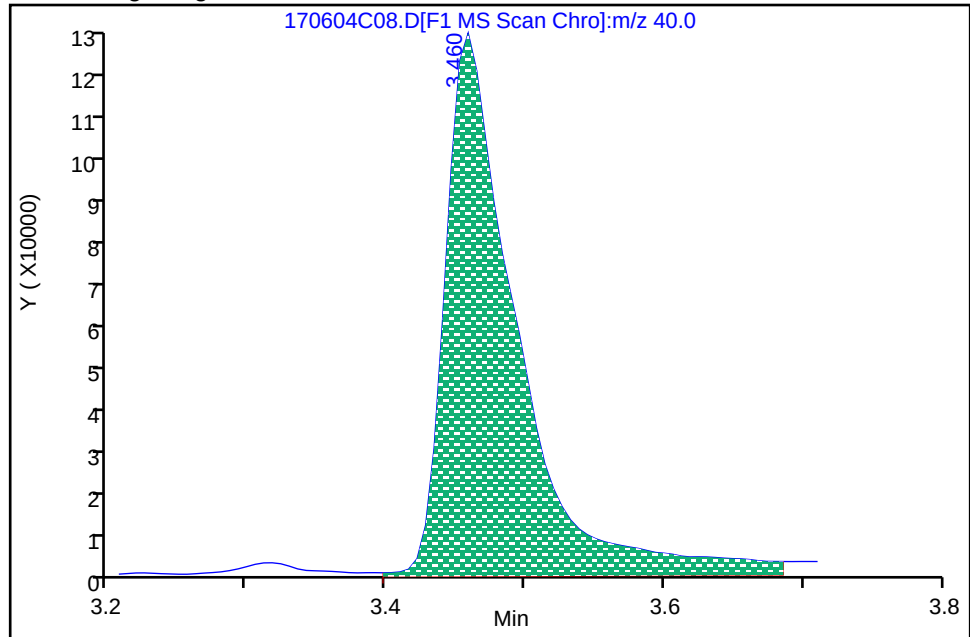
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C08.D		
Injection Date:	05-Jun-2020 04:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15828/25	Lab ID:	VSTD020UW
Sample Info:	17060420C, VSTD020UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

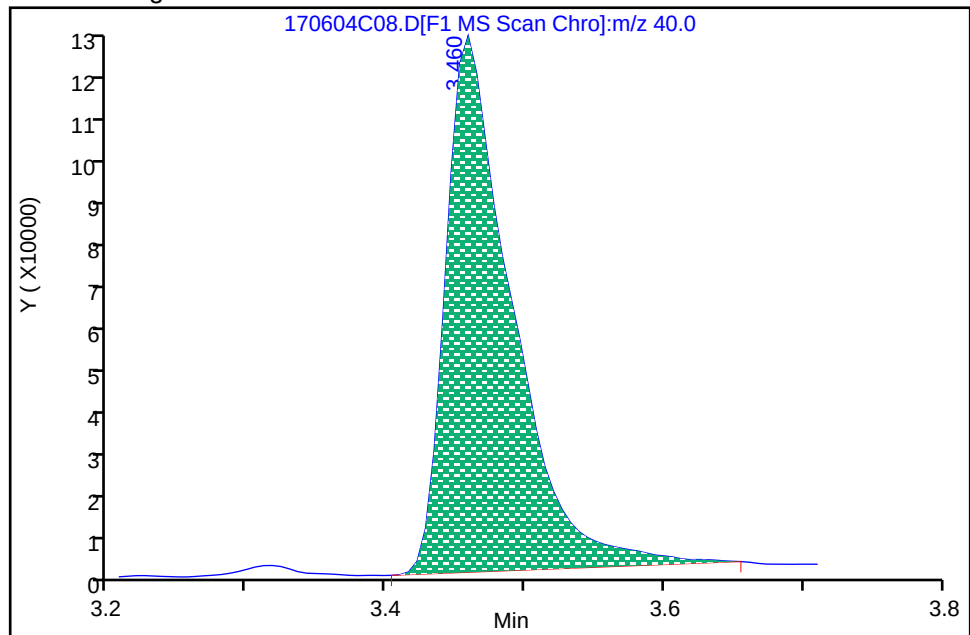
RT: 3.460
Area: 430850
Amount: 166.51
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.460
Area: 390830
Amount: 197.57
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:10:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

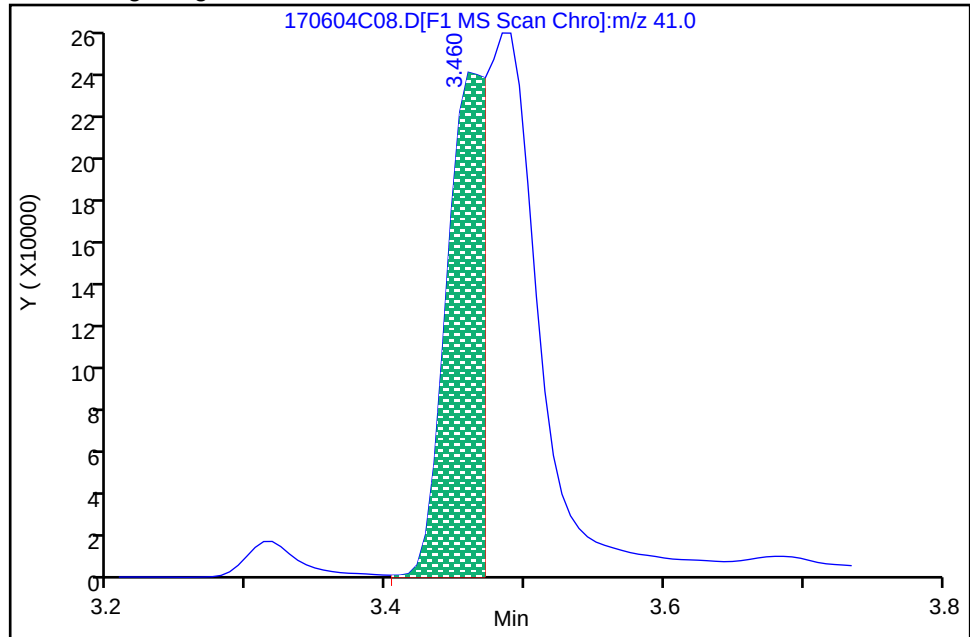
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C08.D		
Injection Date:	05-Jun-2020 04:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15828/25	Lab ID:	VSTD020UW
Sample Info:	17060420C, VSTD020UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

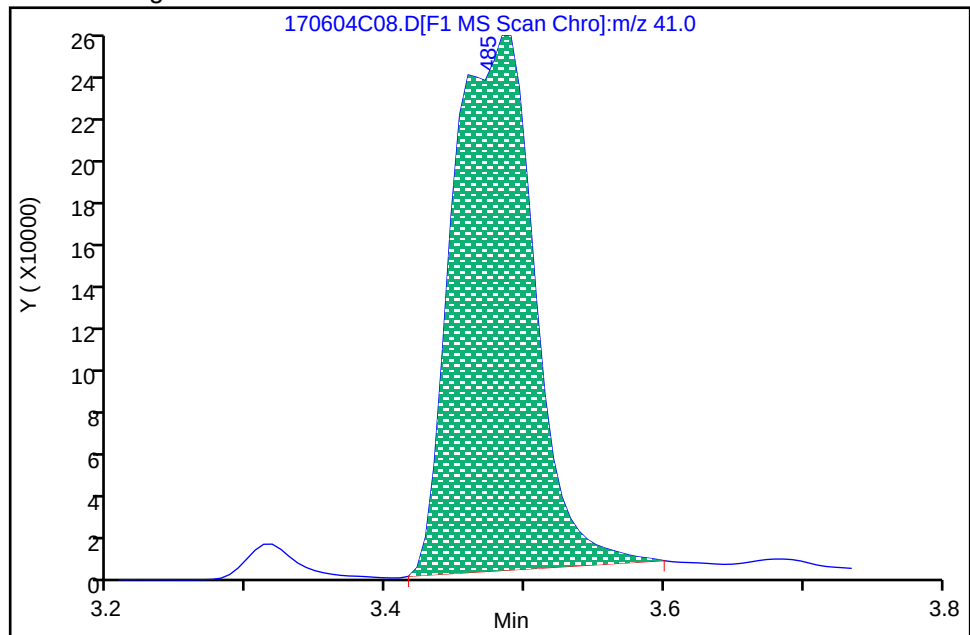
RT: 3.460
Area: 432138
Amount: 166.51
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.485
Area: 1028205
Amount: 197.57
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:10:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C08.D

Injection Date: 05-Jun-2020 04:32:30

Inst. ID: msd17.i

Client ID: 20uL/100mL 15828/25

Lab ID: VSTD020UW

Sample Info: 17060420C, VSTD020UW

Purge Vol. 5.00 ml

Dil. Factor: 1.0

Operator: JTH

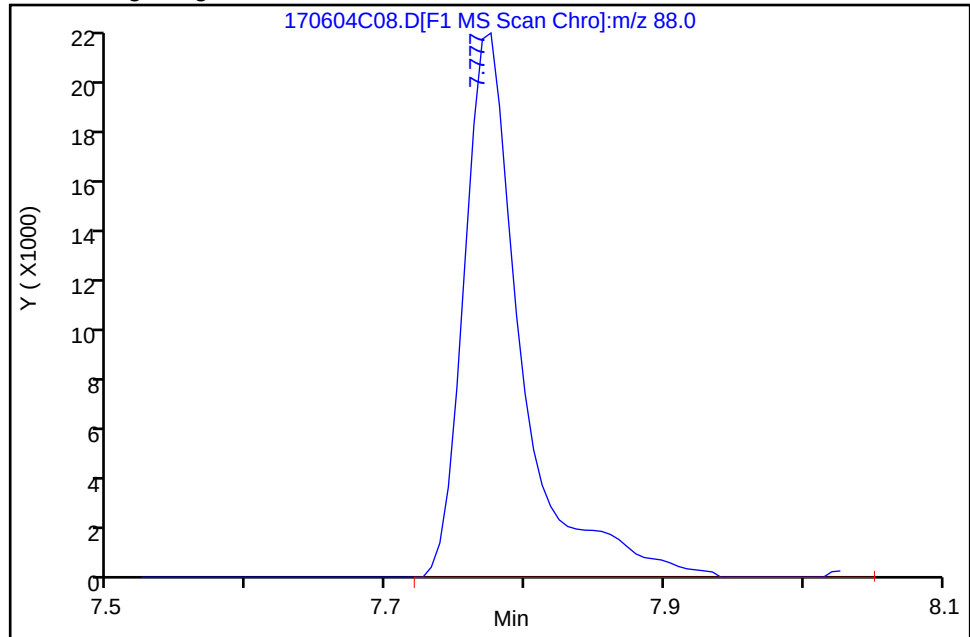
Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

58 1,4-Dioxane, CAS: 123-91-1

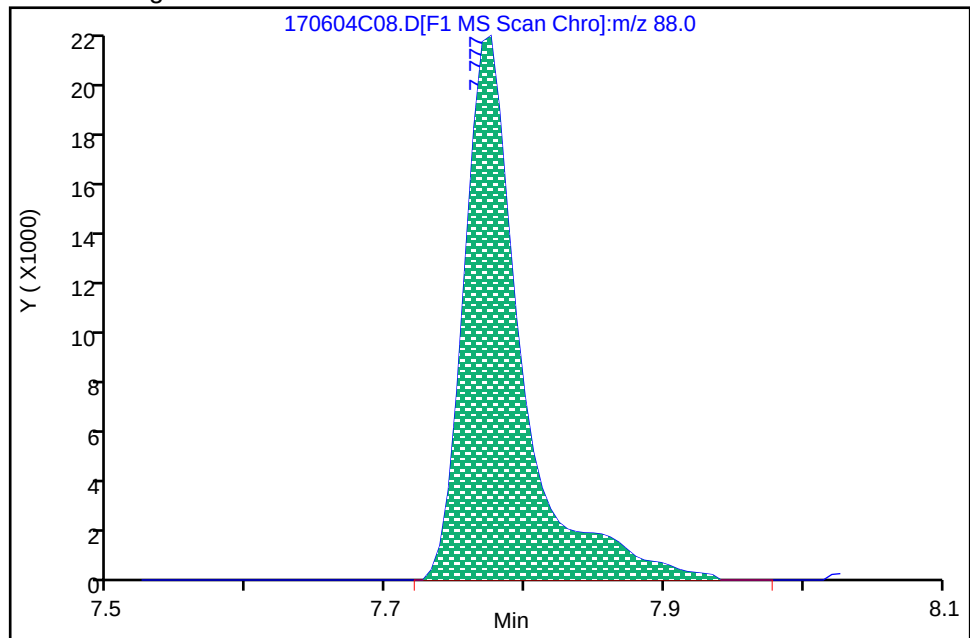
RT: 7.777
Area: 62705
Amount: 224.71
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 7.777
Area: 62361
Amount: 218.10
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:10:30

Audit Action: Mint

Audit Reason: Split Peak

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C09.D
 Lab Sample ID: VSTD050UW Client Sample ID: 50uL/100mL 15828/25
 Injection Date: 05-Jun-2020 04:55:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD050UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 5 ALS Bottle: 9
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.369	1.369	0.000	503627	50.000	54.241	
2 Chloromethane	50.0	1.546	1.546	0.000	665142	50.000	50.046	
3 Vinyl chloride	62.0	1.662	1.662	0.000	695784	50.000	51.198	
4 Bromomethane	94.0	1.979	1.979	0.000	458299	50.000	49.099	
5 Chloroethane	64.0	2.101	2.101	0.000	430403	50.000	49.100	
6 Trichlorofluoromethane	101.0	2.381	2.381	0.000	842389	50.000	51.645	
8 Ethyl ether	59.0	2.723	2.723	0.000	651181	50.000	50.568	
9 Acrolein	56.0	2.887	2.887	0.000	2487472	500.00	508.16	
10 Acetone	43.0	3.083	3.083	0.000	1277356	100.00	92.309	
11 1,1-Dichloroethene	96.0	3.003	3.003	0.000	525077	50.000	49.354	
12 Freon 113	101.0	3.040	3.040	0.000	565133	50.000	50.484	
13 Methyl iodide	142.0	3.180	3.180	0.000	807033	50.000	49.822	
14 Carbon disulfide	76.0	3.247	3.247	0.000	1551824	50.000	50.121	
15 Acetonitrile	40.0	3.460	3.460	0.000	964830	500.00	486.71	M
17 Allyl chloride	76.0	3.491	3.491	0.000	386595	50.000	53.131	
16 Methyl Acetate	43.0	3.509	3.509	0.000	1060422	50.000	49.661	
18 Methylene chloride	84.0	3.686	3.686	0.000	624065	50.000	47.301	
20 Acrylonitrile	53.0	4.003	4.003	0.000	1246502	100.00	99.590	
21 trans-1,2-Dichloroethene	96.0	4.021	4.021	0.000	743831	50.000	50.386	
22 tert-Butyl methyl ether(MTBE)	73.0	4.034	4.034	0.000	1444451	50.000	47.514	
23 Hexane	57.0	4.405	4.405	0.000	940891	50.000	52.343	
24 1,1-Dichloroethane	63.0	4.607	4.607	0.000	1425814	50.000	49.841	
25 Vinyl acetate	86.0	4.655	4.655	0.000	191844	50.000	53.416	
26 Diisopropyl ether (IPE)	87.0	4.692	4.692	0.000	618688	50.000	51.451	
27 Chloroprene	53.0	4.698	4.698	0.000	1136542	50.000	52.363	
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	863147	50.000	50.164	
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	535068	100.00	102.46	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.350	0.000	558404	50.000	47.294	
32 Propionitrile	54.0	5.460	5.460	0.000	2863243	500.00	498.18	
33 Ethyl Acetate	43.0	5.448	5.448	0.000	1628053	50.000	37.337	
34 Methacrylonitrile	67.0	5.649	5.649	0.000	3120814	250.00	257.53	
35 Bromochloromethane	128.0	5.661	5.661	0.000	407188	50.000	49.455	
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	752135	50.000	48.673	
37 Chloroform	83.0	5.826	5.826	0.000	1384236	50.000	48.400	
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	774163	50.000	48.169	
40 1,1,1-Trichloroethane	97.0	5.991	5.991	0.000	1017480	50.000	51.215	
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	1353473	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	645401	50.000	47.540	
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	1082212	50.000	49.295	
44 Carbon tetrachloride	119.0	6.179	6.179	0.000	867396	50.000	51.180	
45 Isobutyl alcohol	42.0	6.454	6.454	0.000	694121	500.00	522.38	
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	963169	50.000	47.456	
48 Benzene	78.0	6.454	6.454	0.000	3157129	50.000	50.663	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	2162815	50.000	54.488	
50 1,2-Dichloroethane	62.0	6.545	6.545	0.000	1125255	50.000	49.273	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2239912	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.326	0.000	790972	50.000	49.685	
54 Methylcyclohexane	83.0	7.606	7.606	0.000	1238037	50.000	51.137	
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	867825	50.000	50.455	
56 Dibromomethane	93.0	7.777	7.777	0.000	548582	50.000	50.416	
57 Methyl methacrylate	41.0	7.795	7.795	0.000	1014005	50.000	53.657	
58 1,4-Dioxane	88.0	7.777	7.777	0.000	151111	500.00	523.51	
59 Bromodichloromethane	83.0	8.033	8.033	0.000	1046224	50.000	51.796	
60 2-nitropropane	43.0	8.338	8.338	0.000	395316	50.000	53.071	
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	691441	50.000	53.818	
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	1298332	50.000	54.355	
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	3229280	100.00	108.81	
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	2847999	50.000	49.648	
65 Toluene	92.0	9.039	9.039	0.000	1898530	50.000	51.279	
66 trans-1,3-Dichloropropene	75.0	9.398	9.398	0.000	1164007	50.000	54.082	
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	1283189	50.000	55.913	
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	794536	50.000	49.465	
69 Tetrachloroethene	164.0	9.722	9.722	0.000	602269	50.000	49.720	
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	1378949	50.000	49.926	
71 2-Hexanone	43.0	9.953	9.953	0.000	2720380	100.00	108.16	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	765459	50.000	54.571	
73 n-Butyl acetate	43.0	10.118	10.118	0.000	1864865	50.000	57.095	
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	825826	50.000	50.979	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	2004707	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.819	0.000	2098061	50.000	50.117	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	721501	50.000	53.169	
79 Ethylbenzene	106.0	10.941	10.941	0.000	1108946	50.000	52.799	
80 m+p-Xylenes	106.0	11.093	11.093	0.000	1345996	50.000	53.804	
81 o-Xylene	106.0	11.502	11.502	0.000	1257378	50.000	54.062	
82 Styrene	104.0	11.526	11.526	0.000	2254146	50.000	56.590	
83 Bromoform	173.0	11.703	11.703	0.000	564669	50.000	55.338	
84 Isopropylbenzene	105.0	11.886	11.886	0.000	3438433	50.000	55.872	
85 Cyclohexanone	55.0	11.971	11.971	0.000	651269	500.00	544.04	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	1064899	50.000	50.661	
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.000	1328347	50.000	49.143	
87 Bromobenzene	156.0	12.184	12.184	0.000	831695	50.000	50.586	
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	417742	50.000	48.012	
90 trans-1,4-Dichloro-2-butene	53.0	12.252	12.252	0.000	383943	50.000	53.040	
91 n-Propylbenzene	91.0	12.300	12.300	0.000	4091104	50.000	54.155	
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	2416136	50.000	50.425	
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	2760785	50.000	54.819	
94 4-Chlorotoluene	126.0	12.502	12.502	0.000	825203	50.000	52.928	
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	2335656	50.000	53.989	
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	2779263	50.000	54.884	
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	3528068	50.000	54.893	
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	1514881	50.000	51.704	
99 p-Isopropyltoluene	119.0	13.129	13.129	0.000	2850549	50.000	56.941	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	943348	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	1518158	50.000	49.787	
102 Benzyl chloride	91.0	13.288	13.288	0.000	1780709	50.000	58.465	
103 n-Butylbenzene	91.0	13.489	13.489	0.000	2705909	50.000	57.191	
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	1465140	50.000	51.589	
105 1,2-Dibromo-3-chloropropane	75.0	14.184	14.184	0.000	298427	50.000	54.247	
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	821498	50.000	55.712	
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	393796	50.000	55.205	
108 Naphthalene	128.0	15.092	15.092	0.000	2974316	50.000	58.915	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	772355	50.000	56.321	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	107.87	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	100.55	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

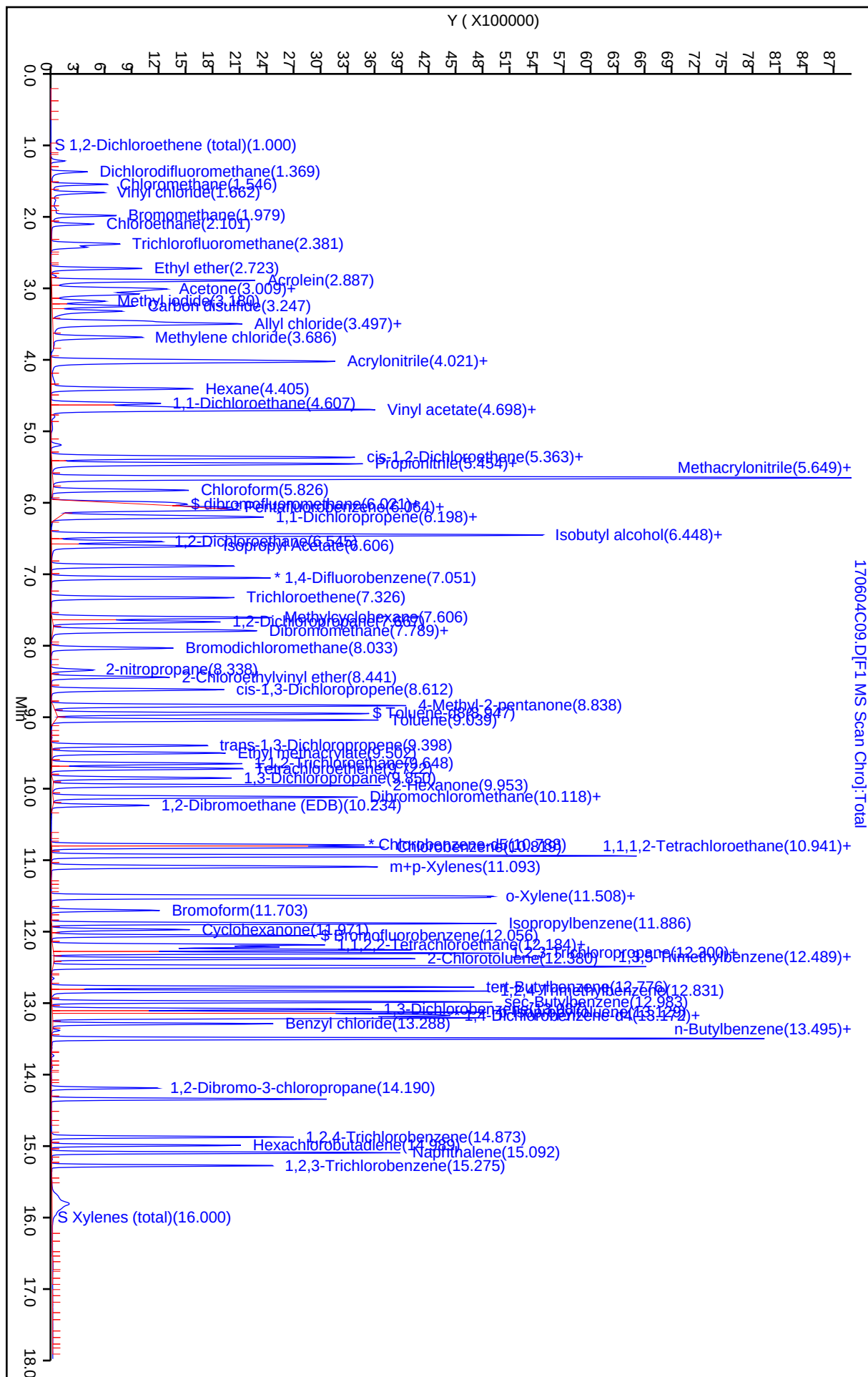
Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File: \\Organics\ID\chem\msd17.i\17060420C.b\170604C09.D
Injection Date: 05-Jun-2020 04:55:30 Inst. ID: msd17.i
Client ID: 50uL/100mL 15828/25 Lab ID: VSTD050UW
Sample Info: 17060420C, VSTD050UW
Purge Vol: 5.00 ml
Column1: Rxi-624Sil (0.25 mm) Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services

Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C09.D		
Injection Date:	05-Jun-2020 04:55:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15828/25	Lab ID:	VSTD050UW
Sample Info:	17060420C, VSTD050UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

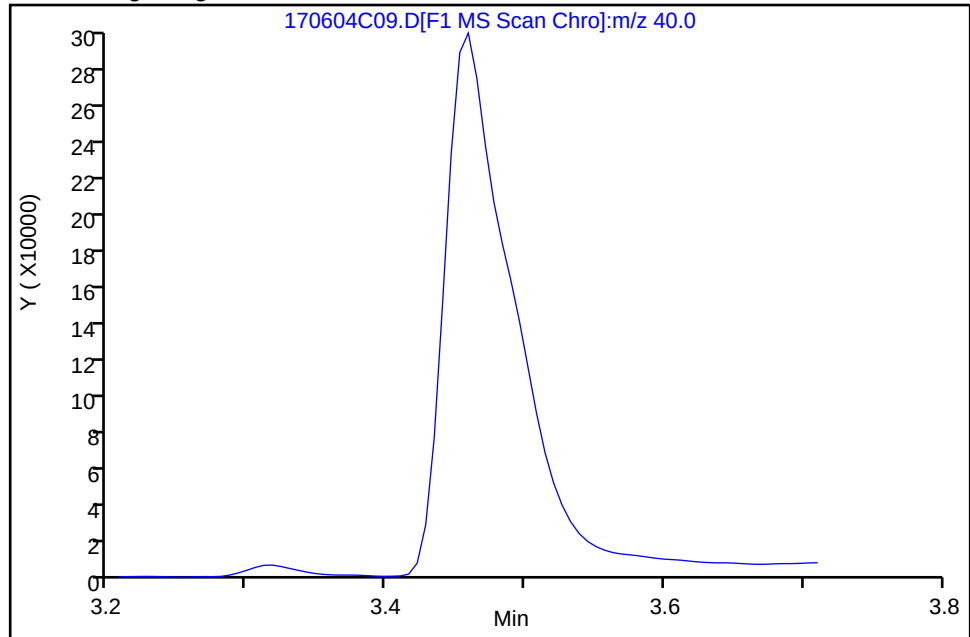
15 Acetonitrile, CAS: 75-05-8

Not Detected

Expected RT: 3.460

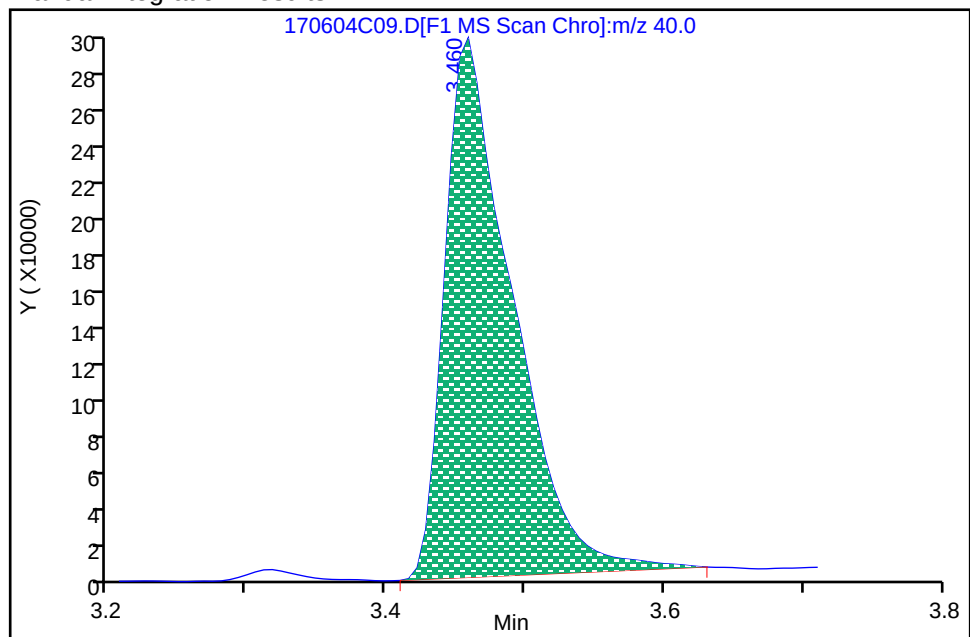
RT Window: 3.277-3.643

Processing Integration Results



Manual Integration Results

RT: 3.460
Area: 964830
Amount: 486.71
Amount Units: ug/L



Data Editor: tml, 05-Jun-2020 08:10:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C09.D		
Injection Date:	05-Jun-2020 04:55:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15828/25	Lab ID:	VSTD050UW
Sample Info:	17060420C, VSTD050UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

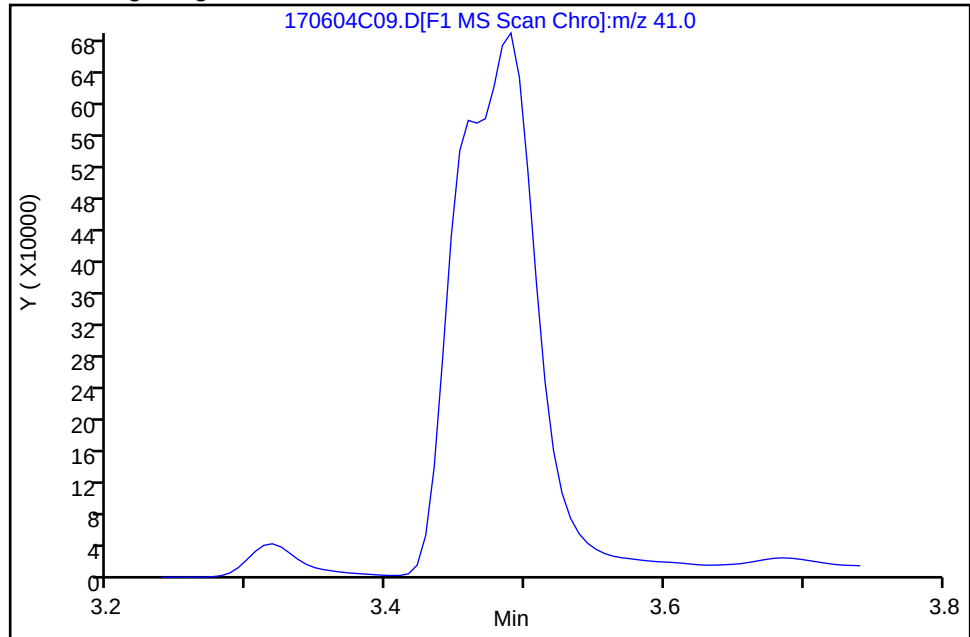
15 Acetonitrile, CAS: 75-05-8

Not Detected

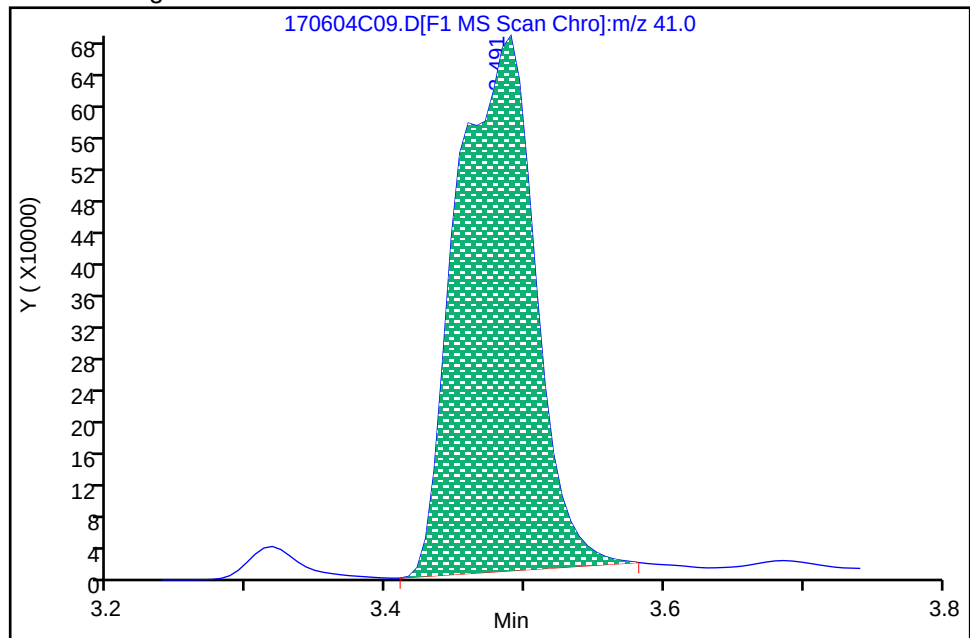
Expected RT: 3.491

RT Window: 3.308-3.674

Processing Integration Results



Manual Integration Results



RT: 3.491
Area: 2609844
Amount: 486.71
Amount Units: ug/L

Data Editor: tml, 05-Jun-2020 08:10:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C10.D
 Lab Sample ID: VSTD100UW Client Sample ID: 100uL/100mL15828/25
 Injection Date: 05-Jun-2020 05:20:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD100UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 6 ALS Bottle: 10
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:11:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.369	1.369	0.000	968278	100.00	99.934	
2 Chloromethane	50.0	1.540	1.546	-0.005	1273971	100.00	91.856	
3 Vinyl chloride	62.0	1.656	1.662	-0.006	1395859	100.00	98.428	
4 Bromomethane	94.0	1.979	1.979	0.000	879242	100.00	90.266	
5 Chloroethane	64.0	2.101	2.101	0.001	852863	100.00	93.236	
6 Trichlorofluoromethane	101.0	2.375	2.381	-0.005	1698994	100.00	99.816	
8 Ethyl ether	59.0	2.723	2.723	0.000	1291426	100.00	96.104	
9 Acrolein	56.0	2.887	2.887	0.000	4991071	1000.00	977.09	
10 Acetone	43.0	3.083	3.083	0.000	2749819	200.00	190.43	
11 1,1-Dichloroethene	96.0	3.003	3.003	0.000	1036778	100.00	93.387	
12 Freon 113	101.0	3.040	3.040	0.000	1135836	100.00	97.233	
13 Methyl iodide	142.0	3.180	3.180	0.000	1562437	100.00	92.433	
14 Carbon disulfide	76.0	3.247	3.247	0.000	3029766	100.00	93.775	
15 Acetonitrile	40.0	3.454	3.460	-0.005	1969296	1000.00	951.98	M
17 Allyl chloride	76.0	3.491	3.491	0.001	775338	100.00	102.11	
16 Methyl Acetate	43.0	3.509	3.509	0.000	2163246	100.00	97.082	
18 Methylene chloride	84.0	3.686	3.686	0.000	1191958	100.00	86.576	
20 Acrylonitrile	53.0	4.003	4.003	0.000	2517038	200.00	192.71	
21 trans-1,2-Dichloroethene	96.0	4.021	4.021	0.000	1465899	100.00	95.156	
22 tert-Butyl methyl ether(MTBE)	73.0	4.034	4.034	0.000	3033541	100.00	95.625	
23 Hexane	57.0	4.406	4.405	0.000	1968687	100.00	104.95	
24 1,1-Dichloroethane	63.0	4.607	4.607	0.000	2809356	100.00	94.108	
25 Vinyl acetate	86.0	4.655	4.655	0.000	386373	100.00	103.09	
26 Diisopropyl ether (IPE)	87.0	4.692	4.692	0.001	1233194	100.00	98.276	
27 Chloroprene	53.0	4.698	4.698	0.000	2298732	100.00	101.49	
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	1711116	100.00	95.299	
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	1115009	200.00	204.62	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.350	0.000	1106507	100.00	89.806	
32 Propionitrile	54.0	5.460	5.460	0.000	5731868	1000.00	955.70	
33 Ethyl Acetate	43.0	5.448	5.448	0.000	3277464	100.00	72.029	
34 Methacrylonitrile	67.0	5.649	5.649	0.000	6203747	500.00	490.59	
35 Bromochloromethane	128.0	5.661	5.661	0.000	805064	100.00	93.701	
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	1515936	100.00	94.010	
37 Chloroform	83.0	5.826	5.826	0.000	2748270	100.00	92.085	
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.001	1572695	100.00	93.772	
40 1,1,1-Trichloroethane	97.0	5.991	5.991	0.000	2041087	100.00	98.453	
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	1412384	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	1320392	100.00	93.204	
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	2209619	100.00	96.451	
44 Carbon tetrachloride	119.0	6.180	6.179	0.000	1780590	100.00	100.68	
45 Isobutyl alcohol	42.0	6.454	6.454	0.000	1499326	1000.00	1081.31	
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	1937915	100.00	91.097	
48 Benzene	78.0	6.448	6.454	-0.005	6174321	100.00	94.530	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	4332583	100.00	104.14	
50 1,2-Dichloroethane	62.0	6.539	6.545	-0.005	2188748	100.00	91.440	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2347738	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.326	0.000	1609191	100.00	96.440	
54 Methylcyclohexane	83.0	7.606	7.606	0.000	2594497	100.00	102.24	
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	1708616	100.00	94.776	
56 Dibromomethane	93.0	7.771	7.777	-0.005	1097923	100.00	96.267	
57 Methyl methacrylate	41.0	7.795	7.795	0.000	2093788	100.00	105.71	
58 1,4-Dioxane	88.0	7.777	7.777	0.000	308834	1000.00	1020.78	
59 Bromodichloromethane	83.0	8.033	8.033	0.000	2140286	100.00	101.09	
60 2-nitropropane	43.0	8.338	8.338	0.000	870434	100.00	111.49	
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	1433306	100.00	106.44	
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.001	2675943	100.00	106.88	
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	6449975	200.00	207.35	
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	5726311	100.00	94.277	
65 Toluene	92.0	9.039	9.039	0.000	3772414	100.00	96.231	
66 trans-1,3-Dichloropropene	75.0	9.392	9.398	-0.005	2441307	100.00	107.13	
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	2692484	100.00	110.80	
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	1588875	100.00	93.421	
69 Tetrachloroethene	164.0	9.716	9.722	-0.005	1233847	100.00	96.200	
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	2739564	100.00	93.676	
71 2-Hexanone	43.0	9.953	9.953	0.000	5530127	200.00	207.65	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	1592060	100.00	107.19	
73 n-Butyl acetate	43.0	10.118	10.118	0.000	3846109	100.00	111.21	
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	1665129	100.00	97.078	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	2122659	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.819	0.000	4150303	100.00	93.631	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	1456152	100.00	101.34	
79 Ethylbenzene	106.0	10.941	10.941	0.000	2236963	100.00	100.59	
80 m+p-Xylenes	106.0	11.093	11.093	0.000	2699968	100.00	101.93	
81 o-Xylene	106.0	11.502	11.502	0.000	2511963	100.00	102.00	
82 Styrene	104.0	11.526	11.526	0.000	4464891	100.00	105.86	
83 Bromoform	173.0	11.703	11.703	0.000	1189416	100.00	110.09	
84 Isopropylbenzene	105.0	11.886	11.886	0.000	6743392	100.00	103.49	
85 Cyclohexanone	55.0	11.971	11.971	0.000	1383846	1000.00	1091.77	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.057	12.056	0.000	2149156	100.00	96.561	
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.001	2583967	100.00	89.670	
87 Bromobenzene	156.0	12.185	12.184	0.000	1636445	100.00	93.364	
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	829155	100.00	89.390	
90 trans-1,4-Dichloro-2-butene	53.0	12.252	12.252	0.000	785263	100.00	101.76	
91 n-Propylbenzene	91.0	12.300	12.300	0.000	7812264	100.00	97.003	
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	4707365	100.00	92.154	
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	5312165	100.00	98.943	
94 4-Chlorotoluene	126.0	12.502	12.502	0.000	1626604	100.00	97.863	
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	4530817	100.00	98.239	
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	5288192	100.00	97.956	
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	6775471	100.00	98.886	
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	2953938	100.00	94.572	
99 p-Isopropyltoluene	119.0	13.130	13.129	0.000	5447653	100.00	102.07	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	1005681	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	2976328	100.00	91.557	
102 Benzyl chloride	91.0	13.288	13.288	0.001	3784403	100.00	116.55	
103 n-Butylbenzene	91.0	13.489	13.489	0.000	5248703	100.00	104.06	
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	2815347	100.00	92.987	
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.184	0.006	605691	100.00	103.28	
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	1646316	100.00	104.73	
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	769305	100.00	101.16	
108 Naphthalene	128.0	15.093	15.092	0.000	5756354	100.00	106.95	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	1551808	100.00	106.15	
S 110 Xylenes (total)	106.0	16.000		0.000		200.00	203.93	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		200.00	190.45	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

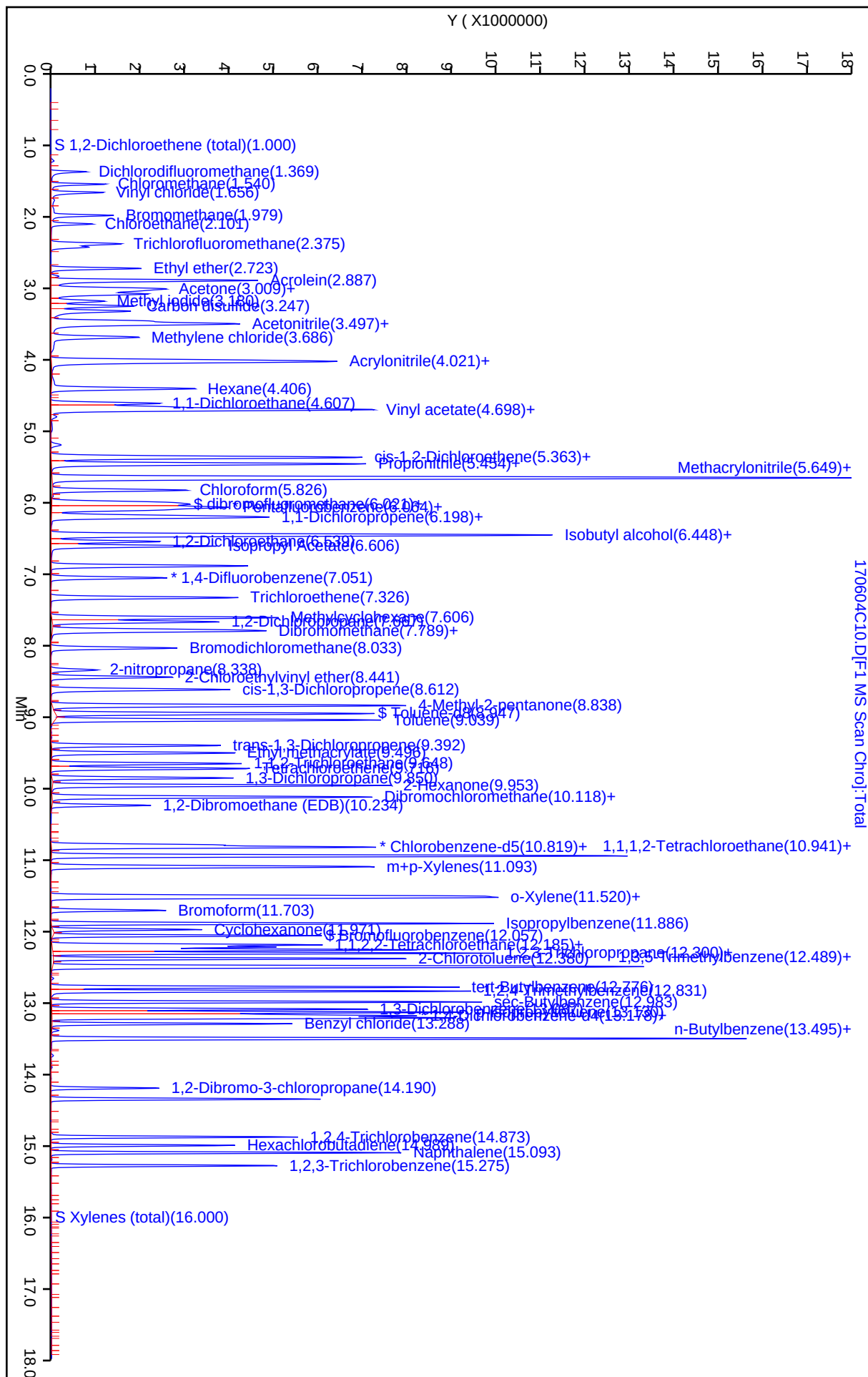
M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File: \\Organics\ID\Chem\msd17.i\17060420C.b\170604C10.D
Injection Date: 05-Jun-2020 05:20:30
Client ID: 100uL/100mL15828/25
Sample Info: 17060420C, VSTD100UW
Purge Vol: 5.00 ml
Column1: Rxi-624SiI (0.25 mm)

Inst. ID: msd17.i
Lab ID: VSTD100UW
Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services

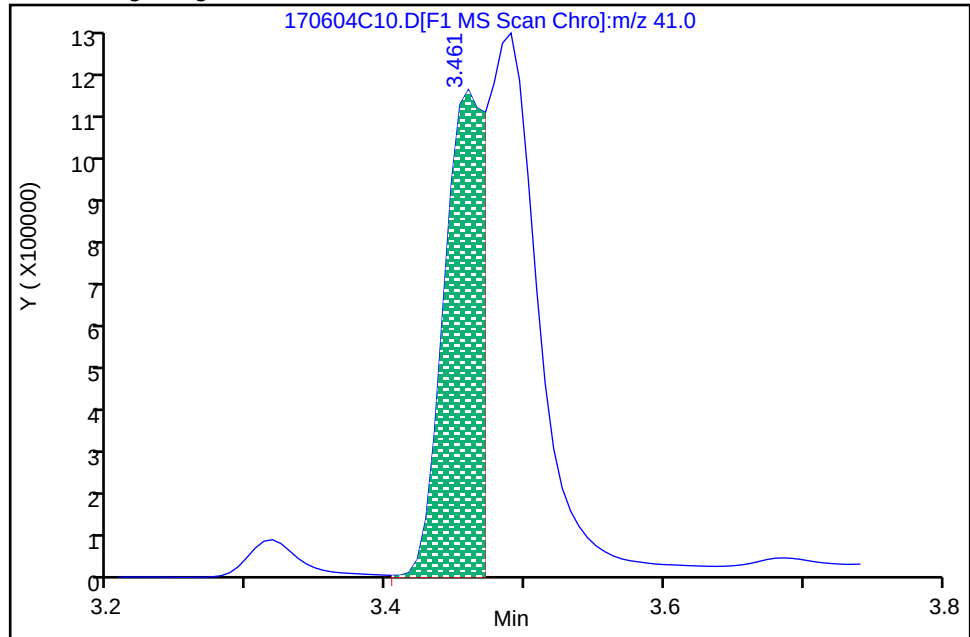
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17060420C.b\170604C10.D		
Injection Date:	05-Jun-2020 05:20:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15828/25	Lab ID:	VSTD100UW
Sample Info:	17060420C, VSTD100UW		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

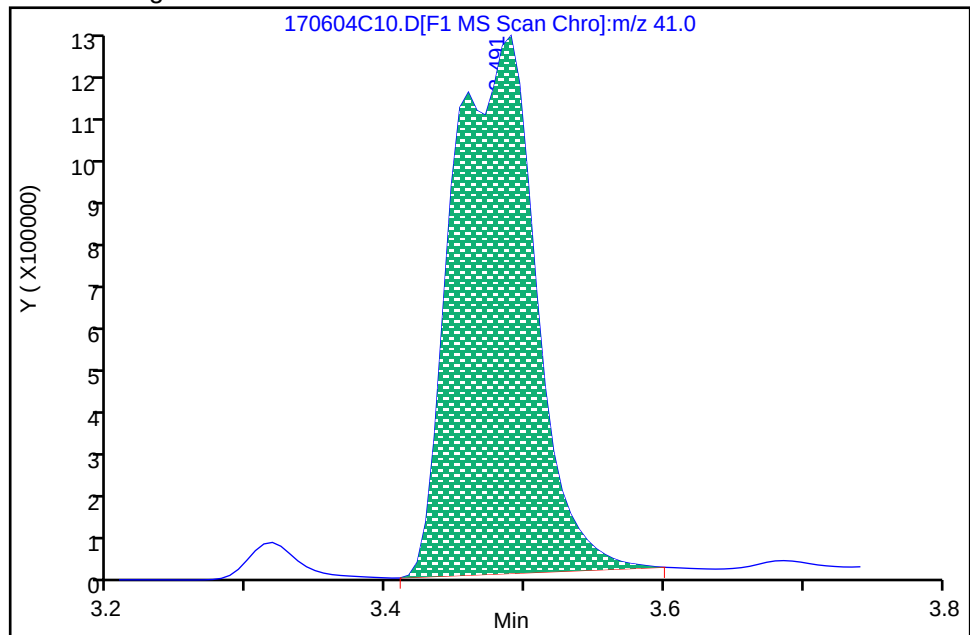
RT: 3.461
Area: 2219867
Amount: 766.81
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.491
Area: 5262292
Amount: 951.98
Amount Units: ug/L

Manual Integration Results



Data Editor: tml, 05-Jun-2020 08:11:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C11.D
 Lab Sample ID: VSTD200UW Client Sample ID: 200uL/100mL15828/25
 Injection Date: 05-Jun-2020 05:43:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VSTD200UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:16:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: Ical, Level: 7 ALS Bottle: 11
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:12:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.363	1.369	-0.005	1827931	200.00	192.64	Q
2 Chloromethane	50.0	1.540	1.546	-0.005	2428144	200.00	176.28	Q
3 Vinyl chloride	62.0	1.656	1.662	-0.006	2647486	200.00	188.69	Q
4 Bromomethane	94.0	1.973	1.979	-0.005	1357906	200.00	136.57	Q
5 Chloroethane	64.0	2.095	2.101	-0.005	1662059	200.00	182.37	Q
6 Trichlorofluoromethane	101.0	2.375	2.381	-0.005	3226681	200.00	191.89	Q
8 Ethyl ether	59.0	2.717	2.723	-0.005	2718365	200.00	204.04	Q
9 Acrolein	56.0	2.887	2.887	0.000	8471927	2000.00	1667.75	Q
10 Acetone	43.0	3.083	3.083	0.000	5694219	400.00	384.51	Q
11 1,1-Dichloroethene	96.0	2.997	3.003	-0.005	2169027	200.00	196.26	Q
12 Freon 113	101.0	3.034	3.040	-0.005	2365614	200.00	204.20	Q
13 Methyl iodide	142.0	3.174	3.180	-0.006	3334305	200.00	198.46	Q
14 Carbon disulfide	76.0	3.247	3.247	0.000	6461672	200.00	201.42	Q
15 Acetonitrile	40.0	3.454	3.460	-0.005	3730452	2000.00	1530.91	Q
17 Allyl chloride	76.0	3.491	3.491	0.001	1623236	200.00	217.49	Q
16 Methyl Acetate	43.0	3.503	3.509	-0.005	4583602	200.00	191.15	Q
18 Methylene chloride	84.0	3.680	3.686	-0.005	2478896	200.00	179.64	Q
20 Acrylonitrile	53.0	3.997	4.003	-0.005	5088385	400.00	391.93	Q
21 trans-1,2-Dichloroethene	96.0	4.021	4.021	0.000	3061954	200.00	200.35	Q
22 tert-Butyl methyl ether(MTBE)	73.0	4.034	4.034	0.000	5675714	200.00	178.39	Q
23 Hexane	57.0	4.399	4.405	-0.005	4165878	200.00	225.33	Q
24 1,1-Dichloroethane	63.0	4.607	4.607	0.000	5829646	200.00	196.30	Q
25 Vinyl acetate	86.0	4.655	4.655	0.000	813647	200.00	221.07	Q
26 Diisopropyl ether (IPE)	87.0	4.692	4.692	0.001	2529214	200.00	203.90	Q
27 Chloroprene	53.0	4.698	4.698	0.000	4729361	200.00	211.87	Q
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	3604435	200.00	202.20	Q
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	2411032	400.00	447.26	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.350	0.000	2162616	200.00	175.12	Q
32 Propionitrile	54.0	5.460	5.460	0.000	11037048	2000.00	1851.47	Q
33 Ethyl Acetate	43.0	5.448	5.448	0.000	6694687	200.00	142.12	Q
34 Methacrylonitrile	67.0	5.649	5.649	0.000	12365618	1000.00	987.50	Q
35 Bromochloromethane	128.0	5.661	5.661	0.000	1702532	200.00	199.12	Q
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	3099149	200.00	198.02	Q
37 Chloroform	83.0	5.826	5.826	0.000	5739562	200.00	192.58	Q
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.001	3101052	200.00	185.01	Q
40 1,1,1-Trichloroethane	97.0	5.991	5.991	0.000	4238707	200.00	206.66	Q
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	1402973	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	2678717	200.00	186.68	Q
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	4588906	200.00	201.18	Q
44 Carbon tetrachloride	119.0	6.180	6.179	0.000	3738879	200.00	213.66	Q
45 Isobutyl alcohol	42.0	6.460	6.454	0.006	2959907	2000.00	2142.86	Q
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	3763479	200.00	178.31	Q
48 Benzene	78.0	6.448	6.454	-0.005	12427571	200.00	193.82	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	9131286	200.00	226.47	Q
50 1,2-Dichloroethane	62.0	6.539	6.545	-0.005	4540918	200.00	192.36	Q
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2309809	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.326	0.000	3432886	200.00	208.89	Q
54 Methylcyclohexane	83.0	7.606	7.606	0.000	5234412	200.00	210.46	Q
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	3562782	200.00	201.18	Q
56 Dibromomethane	93.0	7.771	7.777	-0.005	2310134	200.00	206.17	Q
57 Methyl methacrylate	41.0	7.795	7.795	0.000	4384050	200.00	213.90	Q
58 1,4-Dioxane	88.0	7.777	7.777	0.000	634056	2000.00	2144.81	Q
59 Bromodichloromethane	83.0	8.033	8.033	0.000	4535095	200.00	219.04	Q
60 2-nitropropane	43.0	8.338	8.338	0.000	1884018	200.00	247.81	Q
61 2-Chloroethylvinyl ether	63.0	8.435	8.441	-0.005	3032366	200.00	231.83	Q
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.001	5666671	200.00	233.45	Q
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	12413242	400.00	411.65	Q
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	10681075	200.00	187.42	
65 Toluene	92.0	9.039	9.039	0.000	7698094	200.00	210.43	Q
66 trans-1,3-Dichloropropene	75.0	9.392	9.398	-0.005	5219800	200.00	247.77	Q
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	5587690	200.00	248.96	Q
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	3240457	200.00	202.94	Q
69 Tetrachloroethene	164.0	9.715	9.722	-0.005	2548977	200.00	211.86	Q
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	5549158	200.00	202.41	Q
71 2-Hexanone	43.0	9.953	9.953	0.000	10632360	400.00	431.87	Q
72 Dibromochloromethane	129.0	10.112	10.112	0.000	3346647	200.00	244.15	Q
73 n-Butyl acetate	43.0	10.118	10.118	0.000	7683160	200.00	227.87	Q
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	3404720	200.00	212.49	Q
* 76 Chlorobenzene-d5	117.0	10.782	10.788	-0.005	1989332	50.000	50.000	Q
77 Chlorobenzene	112.0	10.819	10.819	0.000	8146553	200.00	196.18	Q
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	2921996	200.00	219.31	Q
79 Ethylbenzene	106.0	10.941	10.941	0.000	4482353	200.00	217.09	Q
80 m+p-Xylenes	106.0	11.093	11.093	0.000	5360426	200.00	218.70	Q
81 o-Xylene	106.0	11.502	11.502	0.000	4892833	200.00	214.91	Q
82 Styrene	104.0	11.526	11.526	0.000	8499438	200.00	219.85	Q
83 Bromoform	173.0	11.703	11.703	0.000	2471404	200.00	248.49	Q
84 Isopropylbenzene	105.0	11.886	11.886	0.000	11893868	200.00	198.65	Q
85 Cyclohexanone	55.0	11.971	11.971	0.000	2480552	2000.00	2099.83	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.057	12.056	0.000	3833979	200.00	184.21	Q
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.001	4761562	200.00	195.44	Q
87 Bromobenzene	156.0	12.185	12.184	0.000	3161365	200.00	214.36	Q
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	1557596	200.00	197.87	Q
90 trans-1,4-Dichloro-2-butene	53.0	12.252	12.252	0.000	1530262	200.00	235.55	Q
91 n-Propylbenzene	91.0	12.300	12.300	0.000	13392032	200.00	200.01	Q
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	8528639	200.00	198.32	Q
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	9367498	200.00	210.33	Q
94 4-Chlorotoluene	126.0	12.502	12.502	0.000	3100894	200.00	223.47	Q
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	7935071	200.00	206.83	Q
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	9351049	200.00	208.86	Q
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	11476001	200.00	201.96	Q
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	5515296	200.00	210.64	Q
99 p-Isopropyltoluene	119.0	13.130	13.129	0.000	9476311	200.00	215.60	Q
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	847856	50.000	50.000	Q
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	5530882	200.00	201.67	Q
102 Benzyl chloride	91.0	13.288	13.288	0.000	7332269	200.00	275.33	Q
103 n-Butylbenzene	91.0	13.489	13.489	0.000	9297025	200.00	224.72	Q
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	5196839	200.00	204.68	Q
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.184	0.006	1211165	200.00	248.47	Q
106 1,2,4-Trichlorobenzene	180.0	14.873	14.873	0.000	3329701	200.00	256.12	Q
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	1551568	200.00	246.28	Q
108 Naphthalene	128.0	15.093	15.092	0.000	10860640	200.00	246.69	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	3179768	200.00	263.54	Q
S 110 Xylenes (total)	106.0	16.000		0.000		400.00	433.61	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		400.00	402.55	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

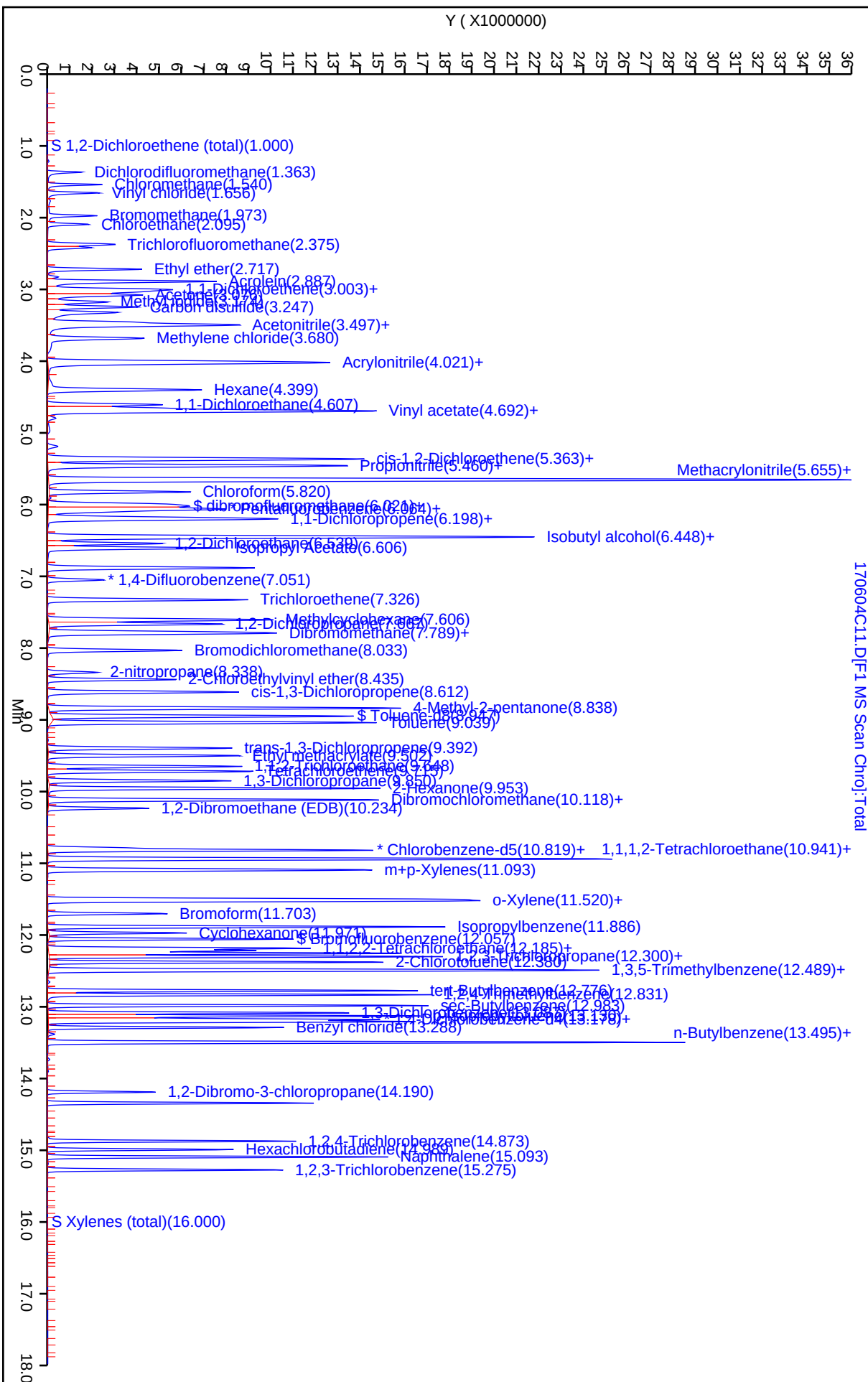
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

Shealy Environmental Services

Data File: \\Organics\ID\Chem\msd17.i\17060420C.b\170604C11.D
Injection Date: 05-Jun-2020 05:43:30
Client ID: 200uL/100mL15828/25
Sample Info: 17060420C, VSTD200UW
Purge Vol: 5.00 ml
Column1: Rxi-624Sil (0.25 mm)
Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services
ICV, Initial Calibration Verification Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C13.D
 Lab Sample ID: VICV050UW Client Sample ID: 50uL/100mL 15819/26
 Injection Date: 05-Jun-2020 06:31:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VICV050UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:22:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: ICV ALS Bottle: 13
 Cpnd Sublist: std.sub Spike List File: 8260ICV70-130.spk
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	59.593	19.2	119	70- 130
2 Chloromethane	50	49.815	-0.4	99.6	70- 130
3 Vinyl chloride	50	49.503	-1	99	70- 130
4 Bromomethane	50	46.8	-6.4	93.6	70- 130
5 Chloroethane	50	53.437	6.9	106	70- 130
6 Trichlorofluoromethane	50	53.539	7.1	107	70- 130
8 Ethyl ether	50	49.898	-0.2	99.8	70- 130
9 Acrolein	500	475.17	-5	95	70- 130
10 Acetone	100	91.515	-8.5	91.5	70- 130
11 1,1-Dichloroethene	50	48.318	-3.4	96.6	70- 130
12 Freon 113	50	48.391	-3.2	96.8	70- 130
13 Methyl iodide	50	49.401	-1.2	98.8	70- 130
14 Carbon disulfide	50	48.287	-3.4	96.6	70- 130
15 Acetonitrile	500	483.88	-3.2	96.8	70- 130
16 Methyl Acetate	50	53.435	6.9	106	70- 130
17 Allyl chloride	50	51.769	3.5	103	70- 130
18 Methylene chloride	50	45.542	-8.9	91.1	70- 130
20 Acrylonitrile	100	93.463	-6.5	93.5	70- 130
21 trans-1,2-Dichloroethene	50	48.152	-3.7	96.3	70- 130
22 tert-Butyl methyl ether(MTB	50	49.535	-0.9	99.1	70- 130
23 Hexane	50	41.292	-17.4	82.6	70- 130
24 1,1-Dichloroethane	50	47.118	-5.8	94.2	70- 130
25 Vinyl acetate	50	48.741	-2.5	97.5	70- 130
26 Diisopropyl ether (IPE)	50	48.101	-3.8	96.2	70- 130
27 Chloroprene	50	46.115	-7.8	92.2	70- 130
29 cis-1,2-Dichloroethene	50	46.549	-6.9	93.1	70- 130
30 2-Butanone (MEK)	100	94.495	-5.5	94.5	70- 130
31 2,2-Dichloropropane	50	45.634	-8.7	91.3	70- 130
32 Propionitrile	500	450.34	-9.9	90.1	70- 130
33 Ethyl Acetate	50	47.331	-5.3	94.7	70- 130
34 Methacrylonitrile	250	240.69	-3.7	96.3	70- 130
35 Bromochloromethane	50	46.599	-6.8	93.2	70- 130
36 Tetrahydrofuran	50	44.762	-10.5	89.5	70- 130
37 Chloroform	50	44.444	-11.1	88.9	70- 130
40 1,1,1-Trichloroethane	50	47.902	-4.2	95.8	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
42 Cyclohexane	50	49.803	-0.4	99.6	70- 130
43 1,1-Dichloropropene	50	46.033	-7.9	92.1	70- 130
44 Carbon tetrachloride	50	48.016	-4	96	70- 130
45 Isobutyl alcohol	500	464.02	-7.2	92.8	70- 130
48 Benzene	50	47.335	-5.3	94.7	70- 130
49 Isopropyl Acetate	50	51.043	2.1	102	70- 130
50 1,2-Dichloroethane	50	45.053	-9.9	90.1	70- 130
53 Trichloroethene	50	47.089	-5.8	94.2	70- 130
54 Methylcyclohexane	50	49.965	-0.1	99.9	70- 130
55 1,2-Dichloropropane	50	46.483	-7	93	70- 130
56 Dibromomethane	50	47.967	-4.1	95.9	70- 130
57 Methyl methacrylate	50	50.061	0.1	100	70- 130
58 1,4-Dioxane	500	406.51	-18.7	81.3	70- 130
59 Bromodichloromethane	50	43.543	-12.9	87.1	70- 130
60 2-nitropropane	50	48.687	-2.6	97.4	70- 130
61 2-Chloroethylvinyl ether	50	49.846	-0.3	99.7	70- 130
62 cis-1,3-Dichloropropene	50	50.34	0.7	100	70- 130
63 4-Methyl-2-pentanone	100	96.959	-3	97	70- 130
65 Toluene	50	48.752	-2.5	97.5	70- 130
66 trans-1,3-Dichloropropene	50	49.309	-1.4	98.6	70- 130
67 Ethyl methacrylate	50	45.132	-9.7	90.3	70- 130
68 1,1,2-Trichloroethane	50	45.762	-8.5	91.5	70- 130
69 Tetrachloroethene	50	46.534	-6.9	93.1	70- 130
70 1,3-Dichloropropane	50	46.526	-6.9	93.1	70- 130
71 2-Hexanone	100	97.474	-2.5	97.5	70- 130
72 Dibromochloromethane	50	49.763	-0.5	99.5	70- 130
73 n-Butyl acetate	50	46.237	-7.5	92.5	70- 130
75 1,2-Dibromoethane (EDB)	50	48.071	-3.9	96.1	70- 130
77 Chlorobenzene	50	45.849	-8.3	91.7	70- 130
78 1,1,1,2-Tetrachloroethane	50	48.202	-3.6	96.4	70- 130
79 Ethylbenzene	50	49.09	-1.8	98.2	70- 130
80 m+p-Xylenes	50	50.004	0	100	70- 130
81 o-Xylene	50	52.973	5.9	105	70- 130
82 Styrene	50	52.326	4.7	104	70- 130
83 Bromoform	50	47.472	-5.1	94.9	70- 130
84 Isopropylbenzene	50	51.169	2.3	102	70- 130
85 Cyclohexanone	500	475.3	-4.9	95.1	60- 140
87 Bromobenzene	50	45.191	-9.6	90.4	70- 130
88 1,1,2,2-Tetrachloroethane	50	43.344	-13.3	86.7	70- 130
89 1,2,3-Trichloropropane	50	44.026	-11.9	88.1	70- 130
90 trans-1,4-Dichloro-2-butene	50	47.538	-4.9	95.1	70- 130
91 n-Propylbenzene	50	48.344	-3.3	96.7	70- 130
92 2-Chlorotoluene	50	45.406	-9.2	90.8	70- 130
93 1,3,5-Trimethylbenzene	50	48.786	-2.4	97.6	70- 130
94 4-Chlorotoluene	50	46.651	-6.7	93.3	70- 130
95 tert-Butylbenzene	50	48.618	-2.8	97.2	70- 130
96 1,2,4-Trimethylbenzene	50	48.654	-2.7	97.3	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
97 sec-Butylbenzene	50	48.899	-2.2	97.8	70- 130
98 1,3-Dichlorobenzene	50	46.615	-6.8	93.2	70- 130
99 p-Isopropyltoluene	50	50.58	1.2	101	70- 130
101 1,4-Dichlorobenzene	50	45.302	-9.4	90.6	70- 130
102 Benzyl chloride	50	40.982	-18	82	70- 130
103 n-Butylbenzene	50	50.488	1	100	70- 130
104 1,2-Dichlorobenzene	50	46.388	-7.2	92.8	70- 130
105 1,2-Dibromo-3-chloropropane	50	51.016	2	102	70- 130
106 1,2,4-Trichlorobenzene	50	54.036	8.1	108	70- 130
107 Hexachlorobutadiene	50	50.339	0.7	100	70- 130
108 Naphthalene	50	47.262	-5.5	94.5	70- 130
109 1,2,3-Trichlorobenzene	50	54.862	9.7	109	70- 130
S 110 Xylenes (total)	100	102.98	3	102	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C13.D
 Lab Sample ID: VICV050UW Client Sample ID: 50uL/100mL 15819/26
 Injection Date: 05-Jun-2020 06:31:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17060420C, VICV050UW
 Method: \\Organics\DD\chem\msd17.i\17060420C.b\8260B-17.m
 Method Date: 05-Jun-2020 08:22:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: ICV ALS Bottle: 13
 Cpnd Sublist: std.sub Spike List File: 8260ICV70-130.spk
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: tml

Review Date: 05-Jun-2020 08:23:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.369	1.369	0.000	593303	59.593	59.593	
2 Chloromethane	50.0	1.540	1.546	-0.005	709911	49.815	49.815	
3 Vinyl chloride	62.0	1.656	1.662	-0.006	721351	49.503	49.503	
4 Bromomethane	94.0	1.979	1.980	0.000	491693	46.800	46.800	
5 Chloroethane	64.0	2.101	2.101	0.000	502255	53.437	53.437	
6 Trichlorofluoromethane	101.0	2.375	2.381	-0.005	936384	53.539	53.539	
8 Ethyl ether	59.0	2.723	2.723	0.000	688977	49.898	49.898	
9 Acrolein	56.0	2.887	2.887	0.000	2494024	475.17	475.17	
10 Acetone	43.0	3.082	3.083	0.000	1357856	91.515	91.515	
11 1,1-Dichloroethene	96.0	3.003	3.003	0.000	551190	48.318	48.318	
12 Freon 113	101.0	3.034	3.040	-0.005	580842	48.391	48.391	
13 Methyl iodide	142.0	3.180	3.180	0.000	858025	49.401	49.401	
14 Carbon disulfide	76.0	3.247	3.247	0.000	1603045	48.287	48.287	
15 Acetonitrile	40.0	3.460	3.460	0.000	1028518	483.88	483.88	
17 Allyl chloride	76.0	3.491	3.491	0.000	403898	51.769	51.769	
16 Methyl Acetate	43.0	3.503	3.509	-0.005	1223440	53.435	53.435	
18 Methylene chloride	84.0	3.680	3.686	-0.006	644265	45.542	45.542	
20 Acrylonitrile	53.0	3.997	4.003	-0.006	1254326	93.463	93.463	
21 trans-1,2-Dichloroethene	96.0	4.021	4.021	0.000	762205	48.152	48.152	
22 tert-Butyl methyl ether(MTBE)	73.0	4.033	4.034	0.000	1614659	49.535	49.535	
23 Hexane	57.0	4.399	4.405	-0.005	795875	41.292	41.292	
24 1,1-Dichloroethane	63.0	4.607	4.607	0.000	1445296	47.118	47.118	
25 Vinyl acetate	86.0	4.655	4.655	0.000	187701	48.741	48.741	
26 Diisopropyl ether (IPE)	87.0	4.692	4.692	0.000	620195	48.101	48.101	
27 Chloroprene	53.0	4.698	4.698	0.000	1073241	46.115	46.115	
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	858808	46.549	46.549	
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	529102	94.495	94.495	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.350	0.000	577742	45.634	45.634	
32 Propionitrile	54.0	5.454	5.460	-0.006	2775283	450.34	450.34	
33 Ethyl Acetate	43.0	5.448	5.448	0.000	1641690	47.331	47.331	
34 Methacrylonitrile	67.0	5.643	5.649	-0.006	3127457	240.69	240.69	
35 Bromochloromethane	128.0	5.661	5.661	0.000	411387	46.599	46.599	
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	741659	44.762	44.762	
37 Chloroform	83.0	5.820	5.826	-0.005	1362927	44.444	44.444	
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	848185	49.219	49.219	
40 1,1,1-Trichloroethane	97.0	5.990	5.991	0.000	1020423	47.902	47.902	
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	1451256	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	724971	49.803	49.803	
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	1083605	46.033	46.033	
44 Carbon tetrachloride	119.0	6.179	6.179	0.000	872579	48.016	48.016	
45 Isobutyl alcohol	42.0	6.454	6.454	0.000	661114	464.02	464.02	
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	1035059	47.437	47.437	
48 Benzene	78.0	6.448	6.454	-0.005	3171139	47.335	47.335	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	2178129	51.043	51.043	
50 1,2-Dichloroethane	62.0	6.539	6.545	-0.005	1106103	45.053	45.053	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	2408049	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.326	0.000	805918	47.089	47.089	
54 Methylcyclohexane	83.0	7.606	7.606	0.000	1300464	49.965	49.965	
55 1,2-Dichloropropane	63.0	7.661	7.667	-0.006	859526	46.483	46.483	
56 Dibromomethane	93.0	7.771	7.777	-0.005	561112	47.967	47.967	
57 Methyl methacrylate	41.0	7.795	7.795	0.000	1017053	50.061	50.061	
58 1,4-Dioxane	88.0	7.777	7.777	0.000	126148	406.51	406.51	
59 Bromodichloromethane	83.0	8.033	8.033	0.000	945547	43.543	43.543	
60 2-nitropropane	43.0	8.338	8.338	0.000	389887	48.687	48.687	
61 2-Chloroethylvinyl ether	63.0	8.435	8.441	-0.005	688489	49.846	49.846	
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	1292682	50.340	50.340	
63 4-Methyl-2-pentanone	43.0	8.837	8.838	0.000	3093582	96.959	96.959	
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	3301716	53.166	53.166	
65 Toluene	92.0	9.039	9.039	0.000	1954016	48.752	48.752	
66 trans-1,3-Dichloropropene	75.0	9.392	9.398	-0.005	1148915	49.309	49.309	
67 Ethyl methacrylate	69.0	9.496	9.503	-0.006	1305136	45.132	45.132	
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	795766	45.762	45.762	
69 Tetrachloroethene	164.0	9.715	9.722	-0.005	610225	46.534	46.534	
70 1,3-Dichloropropane	76.0	9.849	9.850	0.000	1391188	46.526	46.526	
71 2-Hexanone	43.0	9.953	9.953	0.000	2654146	97.474	97.474	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	755665	49.763	49.763	
73 n-Butyl acetate	43.0	10.118	10.118	0.000	1879235	46.237	46.237	
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	843027	48.071	48.071	
* 76 Chlorobenzene-d5	117.0	10.782	10.788	-0.005	2170277	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.819	0.000	2077890	45.849	45.849	
78 1,1,1,2-Tetrachloroethane	131.0	10.929	10.935	-0.005	708128	48.202	48.202	
79 Ethylbenzene	106.0	10.941	10.941	0.000	1116199	49.090	49.090	
80 m+p-Xylenes	106.0	11.093	11.093	0.000	1354257	50.004	50.004	
81 o-Xylene	106.0	11.502	11.502	0.000	1333810	52.973	52.973	
82 Styrene	104.0	11.526	11.526	0.000	2256462	52.326	52.326	
83 Bromoform	173.0	11.703	11.703	0.000	524405	47.472	47.472	
84 Isopropylbenzene	105.0	11.886	11.886	0.000	3409062	51.169	51.169	
85 Cyclohexanone	55.0	11.971	11.971	0.000	615967	475.30	475.30	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	1335910	58.705	58.705	
88 1,1,2,2-Tetrachloroethane	83.0	12.215	12.215	0.000	1304001	43.344	43.344	
87 Bromobenzene	156.0	12.184	12.184	0.000	826961	45.191	45.191	
89 1,2,3-Trichloropropane	110.0	12.258	12.258	0.000	426346	44.026	44.026	
90 trans-1,4-Dichloro-2-butene	53.0	12.251	12.252	0.000	383003	47.538	47.538	
91 n-Propylbenzene	91.0	12.300	12.300	0.000	4064864	48.344	48.344	
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	2421516	45.406	45.406	
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	2734605	48.786	48.786	
94 4-Chlorotoluene	126.0	12.501	12.502	0.000	809536	46.651	46.651	
95 tert-Butylbenzene	119.0	12.776	12.776	0.000	2341010	48.618	48.618	
96 1,2,4-Trimethylbenzene	105.0	12.831	12.831	0.000	2742248	48.654	48.654	
97 sec-Butylbenzene	105.0	12.983	12.983	0.000	3497985	48.899	48.899	
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	1520127	46.615	46.615	
99 p-Isopropyltoluene	119.0	13.129	13.129	0.000	2818271	50.580	50.580	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	1049956	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.178	13.178	0.000	1537491	45.302	45.302	
102 Benzyl chloride	91.0	13.288	13.288	0.000	1728449	40.982	40.982	
103 n-Butylbenzene	91.0	13.489	13.489	0.000	2658722	50.488	50.488	
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	1466310	46.388	46.388	
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.185	0.006	312373	51.016	51.016	
106 1,2,4-Trichlorobenzene	180.0	14.873	14.874	0.000	848965	54.036	54.036	
107 Hexachlorobutadiene	225.0	14.989	14.989	0.000	399665	50.339	50.339	
108 Naphthalene	128.0	15.092	15.093	0.000	3045982	47.262	47.262	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.276	0.000	796912	54.862	54.862	
S 110 Xylenes (total)	106.0	16.000		0.000		102.98	102.98	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		94.701	94.701	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

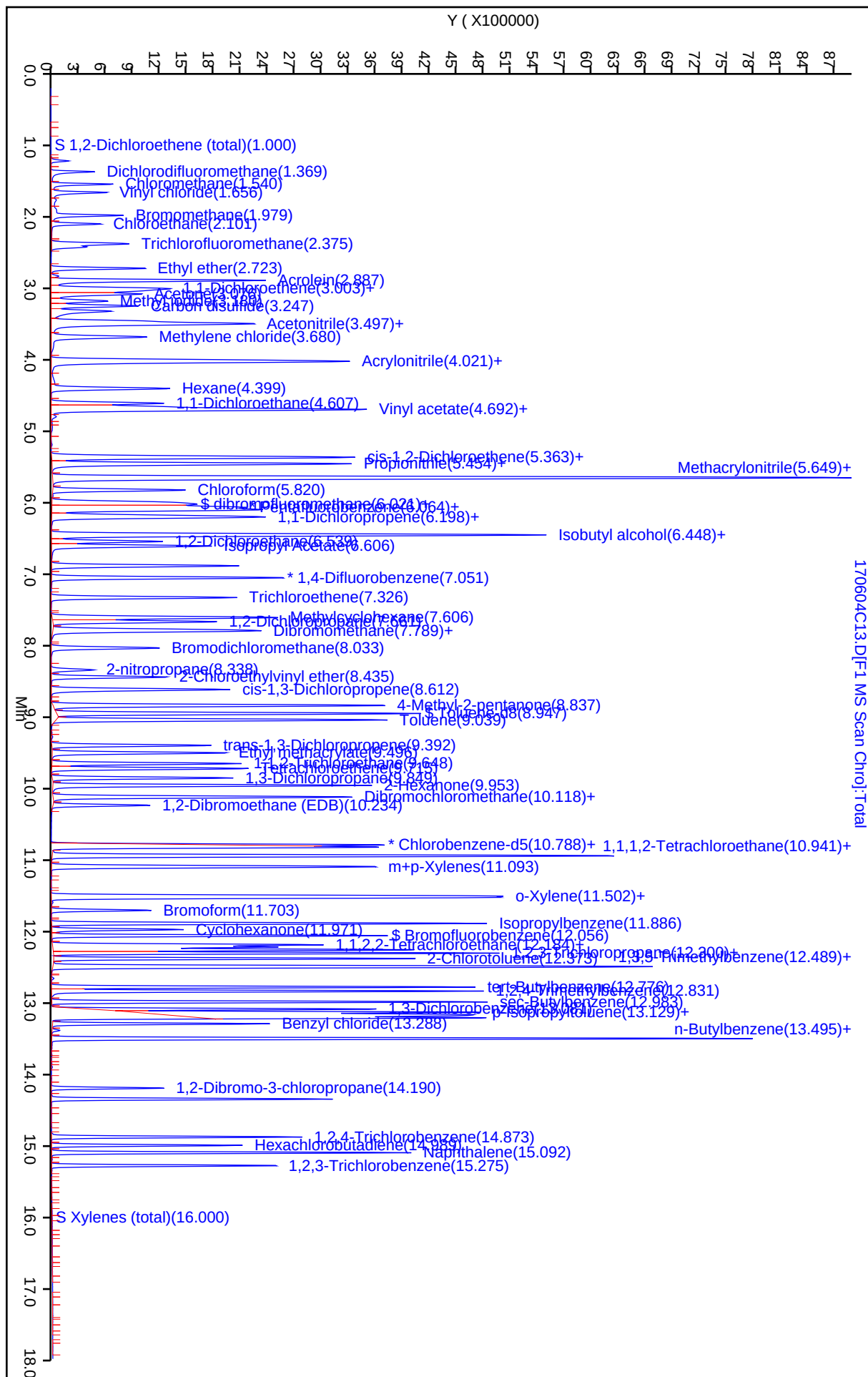
Review Flags

Shealy Environmental Services

Data File: \\Organics\ID\chem\msd17.i\17060420C.b\170604C13.D
Injection Date: 05-Jun-2020 06:31:30
Client ID: 50uL/100mL 15819/26
Sample Info: 17060420C, VICV050UW
Purge Vol: 5.00 ml
Column1: Rxi-624Sil (0.25 mm)

Inst. ID: msd17.i
Lab ID: VICV050UW
Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B02.D
 Lab Sample ID: VSTD050IS Client Sample ID: 50ul/100ml 15843/49
 Injection Date: 29-Jun-2020 21:33:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VSTD050IS
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: CCV ALS Bottle: 2
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.343009		0.409309	0.01	19.3	20	119
2 Chloromethane	0.490985		0.594612	0.1	* 21.1	20	121
3 Vinyl chloride	0.50204		0.56995	0.01	13.5	20	114
4 Bromomethane	0.361968		0.395766	0.01	9.3	20	109
5 Chloroethane	0.323826		0.351496	0.01	8.5	20	109
6 Trichlorofluoromethane	0.602572		0.623968	0.01	3.6	20	104
8 Ethyl ether	0.475713		0.47849	0.01	0.6	20	101
9 Acrolein	0.180832		0.163088	0.001	-9.8	20	90
10 Acetone	0.511196		0.452752	0.01	-11.4	20	89
11 1,1-Dichloroethene	0.393023		0.381585	0.01	-2.9	20	97
12 Freon 113	0.413541		0.419679	0.01	1.5	20	101
13 Methyl iodide	0.5984		0.607233	0.01	1.5	20	101
14 Carbon disulfide	1.143772		1.124041	0.01	-1.7	20	98
15 Acetonitrile	0.073232		0.084249	0.01	15	20	115
16 Methyl Acetate	0.78883		1.066677	0.01	* 35.2	20	135
17 Allyl chloride	0.268798		0.268284	0.01	-0.2	20	100
18 Methylene chloride	0.487397		0.497183	0.01	2	20	102
20 Acrylonitrile	0.46238		0.502154	0.01	8.6	20	109
21 trans-1,2-Dichloroethene	0.545362		0.538076	0.01	-1.3	20	99
22 tert-Butyl methyl ether(	1.123045		1.105789	0.01	-1.5	20	98
23 Hexane	0.664057		0.671311	0.01	1.1	20	101
24 1,1-Dichloroethane	1.056814		1.069478	0.1	1.2	20	101
25 Vinyl acetate	0.132678		0.134307	0.001	1.2	20	101
26 Diisopropyl ether (IPE)	0.444223		0.446433	0.01	0.5	20	100
27 Chloroprene	0.801829		0.823687	0.01	2.7	20	103
29 cis-1,2-Dichloroethene	0.635638		0.614472	0.01	-3.3	20	97
30 2-Butanone (MEK)	0.19291		0.200212	0.01	3.8	20	104
31 2,2-Dichloropropane	0.436182		0.370201	0.01	-15.1	20	85
32 Propionitrile	0.212322		0.242695	0.01	14.3	20	114
33 Ethyl Acetate	50	52.443	1.251444	0.01	4.9	20	105
34 Methacrylonitrile	0.447667		0.489955	0.01	9.4	20	109
35 Bromochloromethane	0.304161		0.319754	0.01	5.1	20	105
36 Tetrahydrofuran	0.570853		0.634246	0.01	11.1	20	111
37 Chloroform	1.05654		1.071217	0.01	1.4	20	101
\$ 39 dibromofluoromethane	0.593727		0.560565	0.01	-5.6	20	94

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 1,1,1-Trichloroethane	0.733925		0.714838	0.01	-2.6	20	97
42 Cyclohexane	0.501519		0.43138	0.01	-14	20	86
43 1,1-Dichloropropene	0.81101		0.769697	0.01	-5.1	20	95
44 Carbon tetrachloride	0.626095		0.618001	0.01	-1.3	20	99
45 Isobutyl alcohol	0.049087		0.06272	0.001	* 27.8	20	128
\$ 46 1,2-Dichloroethane-d4	0.453053		0.458045	0.01	1.1	20	101
48 Benzene	1.391039		1.446135	0.01	4	20	104
49 Isopropyl Acetate	0.886044		0.998167	0.01	12.7	20	113
50 1,2-Dichloroethane	0.509776		0.554846	0.01	8.8	20	109
53 Trichloroethene	0.355363		0.342535	0.01	-3.6	20	96
54 Methylcyclohexane	0.540427		0.481388	0.01	-10.9	20	89
55 1,2-Dichloropropane	0.383942		0.399797	0.01	4.1	20	104
56 Dibromomethane	0.242893		0.26983	0.01	11.1	20	111
57 Methyl methacrylate	0.421845		0.505063	0.01	19.7	20	120
58 1,4-Dioxane	0.006443		0.010549		* 63.7	20	164
59 Bromodichloromethane	0.450885		0.498967	0.01	10.7	20	111
60 2-nitropropane	0.166275		0.181741	0.01	9.3	20	109
61 2-Chloroethylvinyl ether	0.286793		0.281628	0.001	-1.8	20	98
62 cis-1,3-Dichloropropene	0.533192		0.583857	0.01	9.5	20	110
63 4-Methyl-2-pentanone	0.662486		0.786034	0.01	18.6	20	119
\$ 64 Toluene-d8	1.430737		1.363021	0.01	-4.7	20	95
65 Toluene	0.923407		0.948812	0.01	2.8	20	103
66 trans-1,3-Dichloropropen	0.536809		0.585086	0.01	9	20	109
67 Ethyl methacrylate	50	45.35	0.604291	0.01	-9.3	20	91
68 1,1,2-Trichloroethane	0.400623		0.432696	0.01	8	20	108
69 Tetrachloroethene	0.302118		0.297337	0.01	-1.6	20	98
70 1,3-Dichloropropane	0.688878		0.729507	0.01	5.9	20	106
71 2-Hexanone	0.62732		0.74531	0.01	18.8	20	119
72 Dibromochloromethane	0.34985		0.414378	0.01	18.4	20	118
73 n-Butyl acetate	50	49.493	0.927252	0.01	-1	20	99
75 1,2-Dibromoethane (EDB)	0.404031		0.449654	0.01	11.3	20	111
77 Chlorobenzene	1.044124		1.074292	0.3	2.9	20	103
78 1,1,1,2-Tetrachloroethan	0.338455		0.374079	0.01	10.5	20	111
79 Ethylbenzene	0.523849		0.542419	0.01	3.5	20	104
80 m+p-Xylenes	0.62395		0.655533	0.01	5.1	20	105
81 o-Xylene	0.580088		0.598113	0.01	3.1	20	103
82 Styrene	0.993494		1.172242	0.01	18	20	118
83 Bromoform	0.2545		0.298061	0.1	17.1	20	117
84 Isopropylbenzene	1.534908		1.620367	0.01	5.6	20	106
85 Cyclohexanone	0.029857		0.043273	0.001	* 44.9	20	145
\$ 86 Bromofluorobenzene	0.524274		0.515367	0.01	-1.7	20	98
87 Bromobenzene	0.871431		0.840449	0.01	-3.6	20	96
88 1,1,2,2-Tetrachloroethan	1.432677		1.439557	0.3	0.5	20	100
89 1,2,3-Trichloropropane	0.461165		0.453478	0.01	-1.7	20	98
90 trans-1,4-Dichloro-2-but	0.383675		0.427077	0.01	11.3	20	111
91 n-Propylbenzene	4.004086		4.089201	0.01	2.1	20	102
92 2-Chlorotoluene	2.539647		2.426974	0.01	-4.4	20	96

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
93 1,3,5-Trimethylbenzene	2.669303		2.672359	0.01	0.1	20	100
94 4-Chlorotoluene	0.826368		0.86931	0.01	5.2	20	105
95 tert-Butylbenzene	2.292987		2.103731	0.01	-8.3	20	92
96 1,2,4-Trimethylbenzene	2.684018		2.750472	0.01	2.5	20	102
97 sec-Butylbenzene	3.406554		3.33824	0.01	-2	20	98
98 1,3-Dichlorobenzene	1.552921		1.596418	0.01	2.8	20	103
99 p-Isopropyltoluene	2.65341		2.764996	0.01	4.2	20	104
101 1,4-Dichlorobenzene	1.616206		1.637227	0.01	1.3	20	101
102 Benzyl chloride	50	48.917	1.968033	0.01	-2.2	20	98
103 n-Butylbenzene	2.507759		2.741618	0.01	9.3	20	109
104 1,2-Dichlorobenzene	1.505293		1.574496	0.01	4.6	20	105
105 1,2-Dibromo-3-chloroprop	0.291584		0.32111	0.001	10.1	20	110
106 1,2,4-Trichlorobenzene	0.748178		0.766079	0.01	2.4	20	102
107 Hexachlorobutadiene	0.378084		0.351352	0.01	-7.1	20	93
108 Naphthalene	50	46.507	2.854454	0.01	-7	20	93
109 1,2,3-Trichlorobenzene	0.691727		0.77398	0.01	11.9	20	112
S 110 Xylenes (total)	0.602019		0.626823	0.01	4.1	20	104
S 111 1,2-Dichloroethene (tota	0.5905		0.576274	0.01	-2.4	20	98

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B02.D
 Lab Sample ID: VSTD050IS Client Sample ID: 50ul/100ml 15843/49
 Injection Date: 29-Jun-2020 21:33:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VSTD050IS
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: CCV ALS Bottle: 2
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: JTH

Review Date: 29-Jun-2020 21:56:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.363	1.363	0.000	405750	50.000	59.664	
2 Chloromethane	50.0	1.540	1.540	0.000	589442	50.000	60.553	
3 Vinyl chloride	62.0	1.656	1.656	0.000	564994	50.000	56.763	
4 Bromomethane	94.0	1.979	1.979	0.000	392325	50.000	54.669	
5 Chloroethane	64.0	2.095	2.095	0.000	348440	50.000	54.272	
6 Trichlorofluoromethane	101.0	2.375	2.375	0.000	618543	50.000	51.775	
8 Ethyl ether	59.0	2.717	2.717	0.000	474330	50.000	50.292	
9 Acrolein	56.0	2.887	2.887	0.000	1616695	500.00	450.94	
10 Acetone	43.0	3.082	3.082	0.000	897630	100.00	88.567	
11 1,1-Dichloroethene	96.0	2.997	2.997	0.000	378267	50.000	48.545	
12 Freon 113	101.0	3.034	3.034	0.000	416030	50.000	50.742	
13 Methyl iodide	142.0	3.174	3.174	0.000	601953	50.000	50.738	
14 Carbon disulfide	76.0	3.247	3.247	0.000	1114267	50.000	49.137	
15 Acetonitrile	40.0	3.454	3.454	0.000	835169	500.00	575.22	M
17 Allyl chloride	76.0	3.491	3.491	0.000	265951	50.000	49.904	
16 Methyl Acetate	43.0	3.503	3.503	0.000	1057402	50.000	67.611	
18 Methylene chloride	84.0	3.680	3.680	0.000	492860	50.000	51.004	
20 Acrylonitrile	53.0	3.997	3.997	0.000	995576	100.00	108.60	
21 trans-1,2-Dichloroethene	96.0	4.021	4.021	0.000	533397	50.000	49.332	
22 tert-Butyl methyl ether(MTBE)	73.0	4.033	4.033	0.000	1096174	50.000	49.232	
23 Hexane	57.0	4.399	4.399	0.000	665474	50.000	50.546	
24 1,1-Dichloroethane	63.0	4.607	4.607	0.000	1060179	50.000	50.599	
25 Vinyl acetate	86.0	4.655	4.655	0.000	133139	50.000	50.614	
26 Diisopropyl ether (IPE)	87.0	4.692	4.692	0.000	442551	50.000	50.249	
27 Chloroprene	53.0	4.698	4.698	0.000	816525	50.000	51.363	
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	609129	50.000	48.335	
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	396942	100.00	103.79	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.350	0.000	366982	50.000	42.437	
32 Propionitrile	54.0	5.454	5.454	0.000	2405849	500.00	571.53	
33 Ethyl Acetate	43.0	5.448	5.448	0.000	1240563	50.000	52.443	
34 Methacrylonitrile	67.0	5.643	5.643	0.000	2428475	250.00	273.62	
35 Bromochloromethane	128.0	5.661	5.661	0.000	316974	50.000	52.563	
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	628731	50.000	55.552	
37 Chloroform	83.0	5.820	5.820	0.000	1061903	50.000	50.695	
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	555691	50.000	47.207	
40 1,1,1-Trichloroethane	97.0	5.990	5.990	0.000	708622	50.000	48.700	
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	991305	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	427629	50.000	43.007	
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	763004	50.000	47.453	
44 Carbon tetrachloride	119.0	6.179	6.179	0.000	612627	50.000	49.354	
45 Isobutyl alcohol	42.0	6.454	6.454	0.000	621744	500.00	638.87	
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	741933	50.000	50.551	
48 Benzene	78.0	6.448	6.448	0.000	2342422	50.000	51.980	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	1616812	50.000	56.327	
50 1,2-Dichloroethane	62.0	6.539	6.539	0.000	898729	50.000	54.421	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1619781	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.326	0.000	554832	50.000	48.195	
54 Methylcyclohexane	83.0	7.606	7.606	0.000	779743	50.000	44.538	
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	647584	50.000	52.065	
56 Dibromomethane	93.0	7.771	7.771	0.000	437066	50.000	55.545	
57 Methyl methacrylate	41.0	7.795	7.795	0.000	818092	50.000	59.864	
58 1,4-Dioxane	88.0	7.777	7.777	0.000	170875	500.00	818.61	
59 Bromodichloromethane	83.0	8.033	8.033	0.000	808218	50.000	55.332	
60 2-nitropropane	43.0	8.338	8.338	0.000	294381	50.000	54.651	
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	456175	50.000	49.099	
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	945720	50.000	54.751	
63 4-Methyl-2-pentanone	43.0	8.837	8.837	0.000	2546406	100.00	118.65	
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	1959667	50.000	47.634	
65 Toluene	92.0	9.039	9.039	0.000	1364143	50.000	51.376	
66 trans-1,3-Dichloropropene	75.0	9.398	9.398	0.000	841200	50.000	54.497	
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	868812	50.000	45.350	
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	622103	50.000	54.003	
69 Tetrachloroethene	164.0	9.721	9.721	0.000	427492	50.000	49.209	
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	1048840	50.000	52.949	
71 2-Hexanone	43.0	9.953	9.953	0.000	2143120	100.00	118.81	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	595767	50.000	59.222	
73 n-Butyl acetate	43.0	10.124	10.124	0.000	1333146	50.000	49.493	
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	646484	50.000	55.646	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1437738	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.819	0.000	1544551	50.000	51.445	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	537828	50.000	55.263	
79 Ethylbenzene	106.0	10.947	10.947	0.000	779856	50.000	51.772	
80 m+p-Xylenes	106.0	11.093	11.093	0.000	942485	50.000	52.531	
81 o-Xylene	106.0	11.502	11.502	0.000	859930	50.000	51.554	
82 Styrene	104.0	11.526	11.526	0.000	1685377	50.000	58.996	
83 Bromoform	173.0	11.703	11.703	0.000	428534	50.000	58.558	
84 Isopropylbenzene	105.0	11.892	11.892	0.000	2329663	50.000	52.784	
85 Cyclohexanone	55.0	11.971	11.971	0.000	622151	500.00	724.67	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	740963	50.000	49.151	
88 1,1,2,2-Tetrachloroethane	83.0	12.221	12.221	0.000	1064581	50.000	50.240	
87 Bromobenzene	156.0	12.184	12.184	0.000	621529	50.000	48.222	
89 1,2,3-Trichloropropane	110.0	12.264	12.264	0.000	335356	50.000	49.167	
90 trans-1,4-Dichloro-2-butene	53.0	12.252	12.252	0.000	315832	50.000	55.656	
91 n-Propylbenzene	91.0	12.306	12.306	0.000	3024046	50.000	51.063	
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	1794796	50.000	47.782	
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	1976263	50.000	50.057	
94 4-Chlorotoluene	126.0	12.501	12.501	0.000	642872	50.000	52.598	
95 tert-Butylbenzene	119.0	12.782	12.782	0.000	1555751	50.000	45.873	
96 1,2,4-Trimethylbenzene	105.0	12.837	12.837	0.000	2034029	50.000	51.238	
97 sec-Butylbenzene	105.0	12.989	12.989	0.000	2468695	50.000	48.997	
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	1180583	50.000	51.400	
99 p-Isopropyltoluene	119.0	13.129	13.129	0.000	2044770	50.000	52.103	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	739520	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.184	13.184	0.000	1210762	50.000	50.650	
102 Benzyl chloride	91.0	13.294	13.294	0.000	1455400	50.000	48.917	
103 n-Butylbenzene	91.0	13.495	13.495	0.000	2027481	50.000	54.663	
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	1164371	50.000	52.299	
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.190	0.000	237467	50.000	55.063	
106 1,2,4-Trichlorobenzene	180.0	14.879	14.879	0.000	566531	50.000	51.196	
107 Hexachlorobutadiene	225.0	14.995	14.995	0.000	259832	50.000	46.465	
108 Naphthalene	128.0	15.099	15.099	0.000	2110926	50.000	46.507	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	572374	50.000	55.945	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	104.08	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	97.667	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

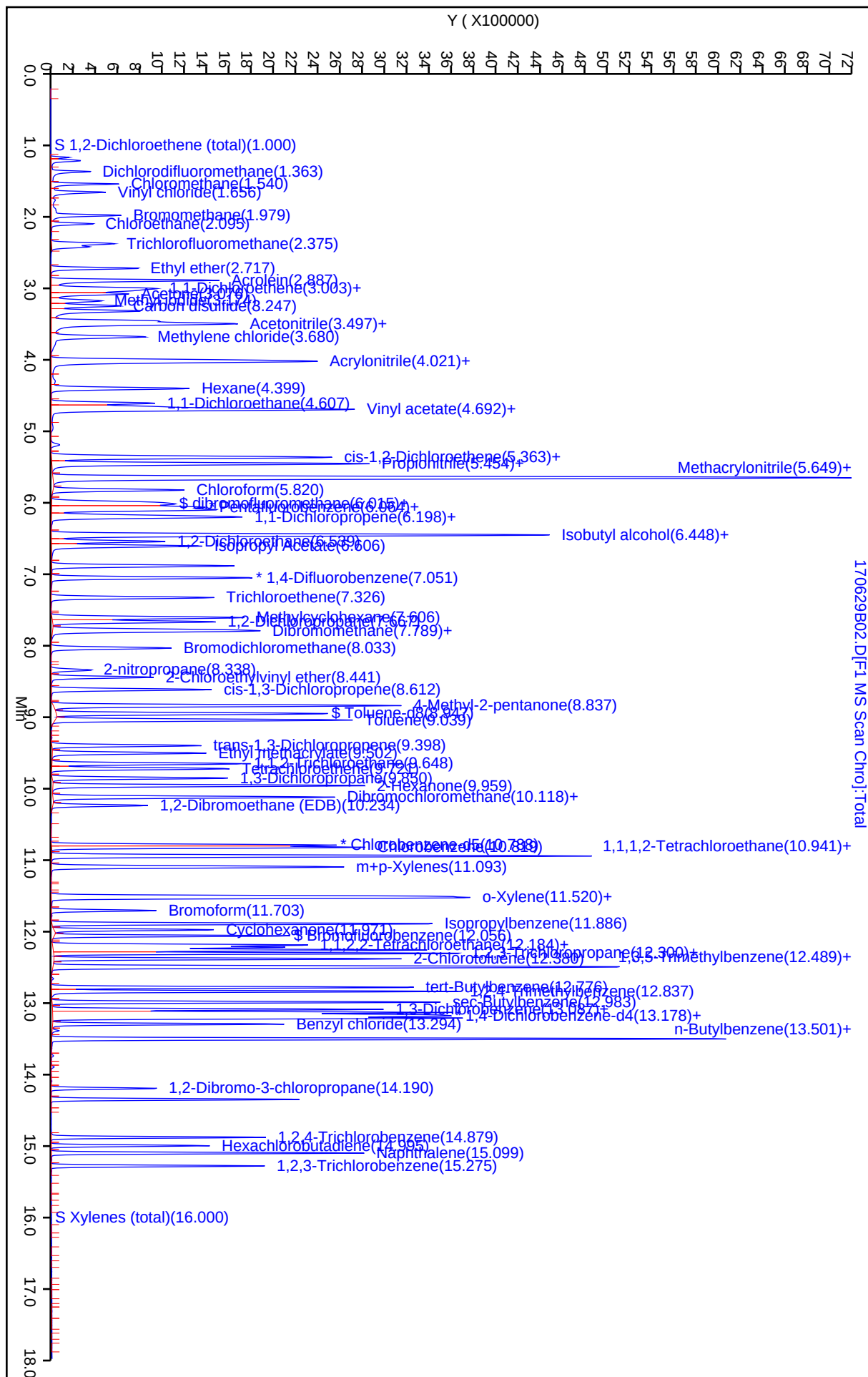
M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File: \\Organics\ID\Chem\msd17.i\17062920B.b\170629B02.D
Injection Date: 29-Jun-2020 21:33:30
Client ID: 50u/100ml 15843/49
Sample Info: 17062920B, VSTD050IS
Purge Vol: 5.00 ml
Column1: Rxi-624Sil (0.25 mm)

Inst. ID: msd17.i
Lab ID: VSTD050IS
Dil. Factor: 1.0
Detector: MS Scan

Operator: JTH



Shealy Environmental Services

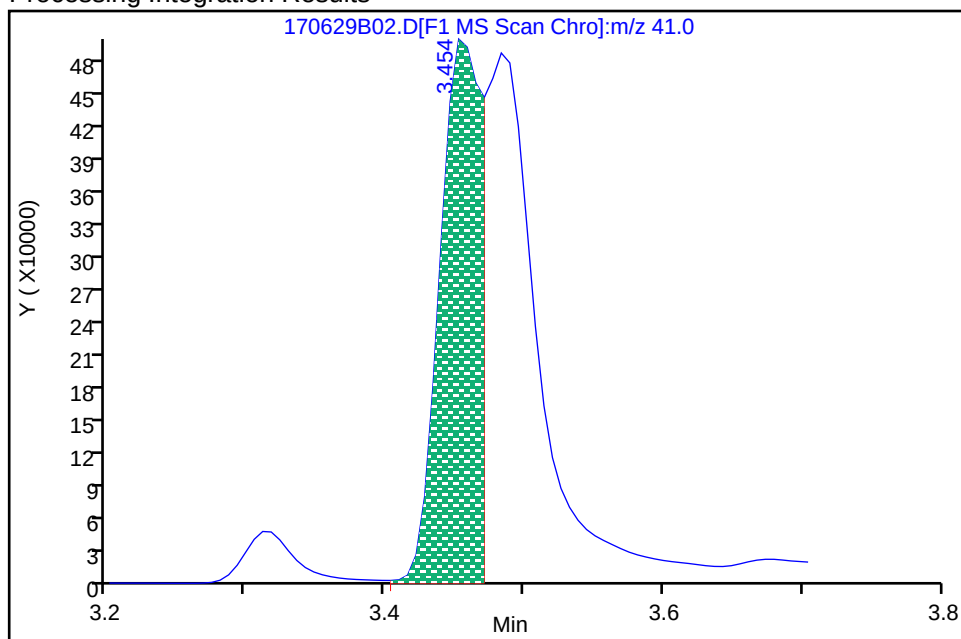
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17062920B.b\170629B02.D		
Injection Date:	29-Jun-2020 21:33:30	Inst. ID:	msd17.i
Client ID:	50ul/100ml 15843/49	Lab ID:	VSTD050IS
Sample Info:	17062920B, VSTD050IS		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

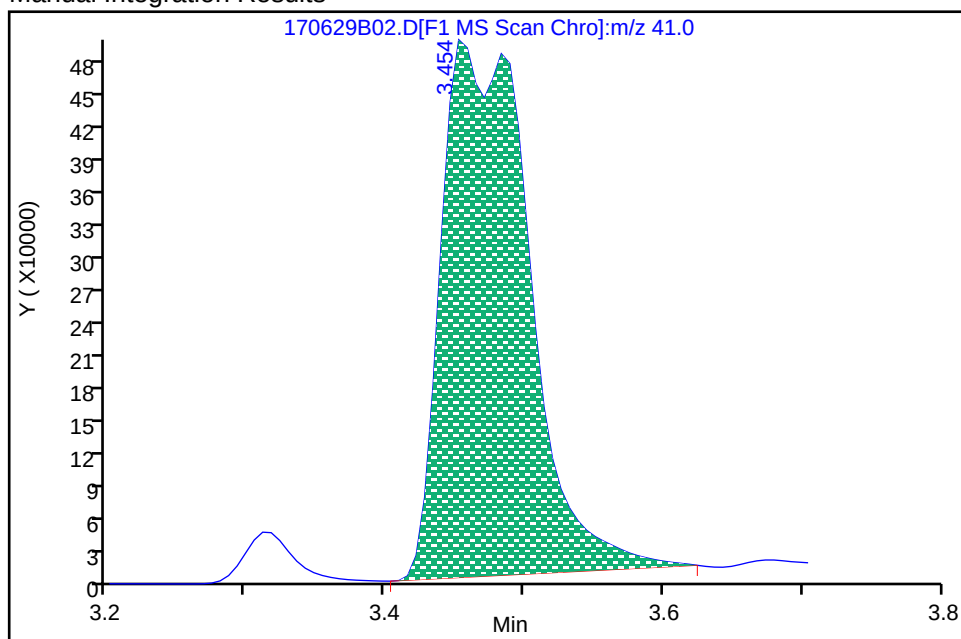
RT: 3.454
Area: 988867
Amount: 575.22
Amount Units: ug/L
Conc:

Processing Integration Results



RT: 3.454
Area: 2130461
Amount: 575.22
Amount Units: ug/L

Manual Integration Results



Data Editor: JTH, 29-Jun-2020 21:56:30

Audit Action: Mint

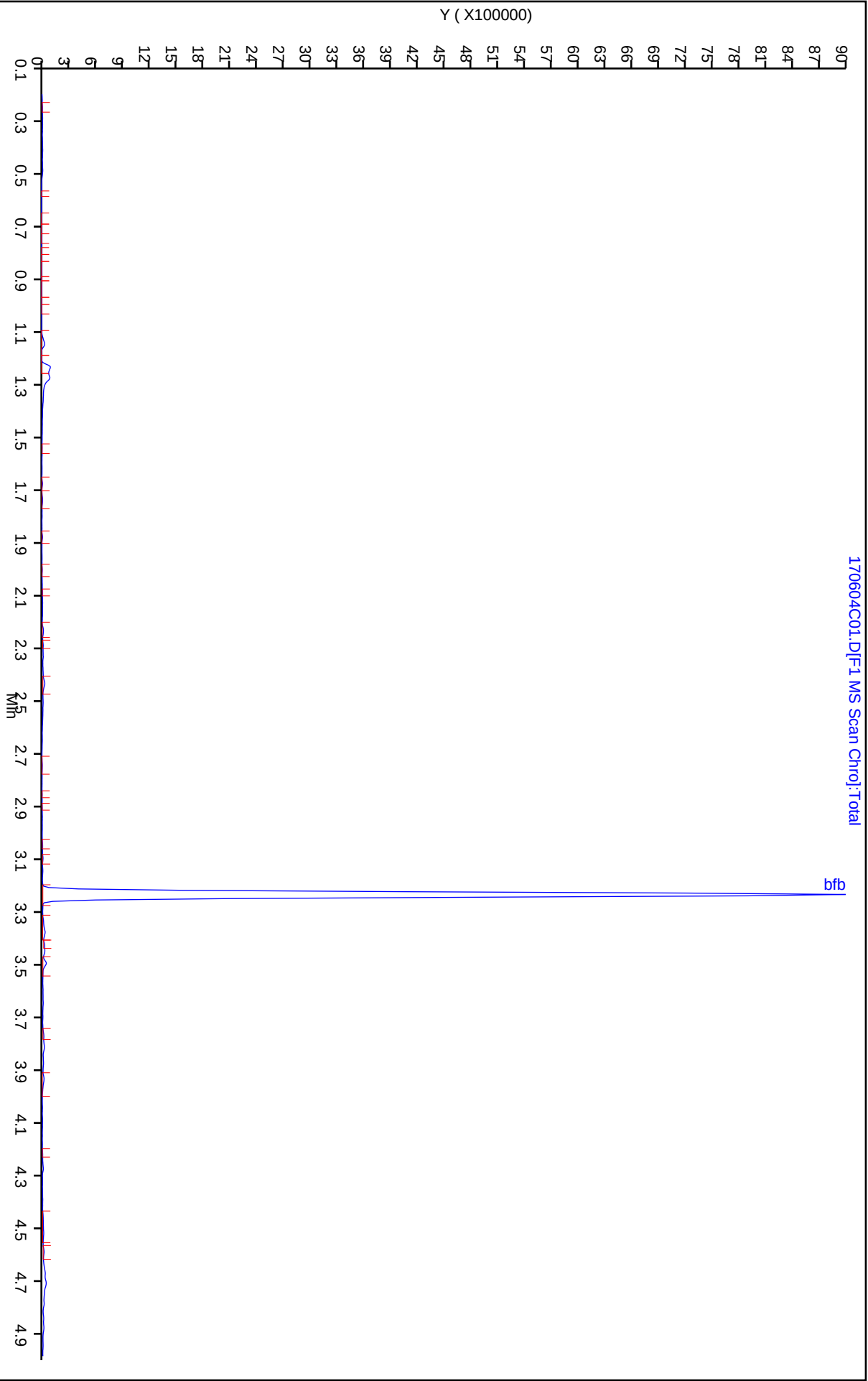
Audit Reason: Incorrect Auto Integration

RAW QC DATA

Shealy Environmental Services

Data File: \\Organics\ID\chem\msd17.i\17060420C.b\170604C01.D
Injection Date: 05-Jun-2020 01:33:30 Inst. ID: msd17.i
Client ID: 15740 Lab ID: BFBW
Sample Info: 17060420C, BFBW
Injection Vol. 1.00 Dil. Factor: 1.0
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Operator: JTH

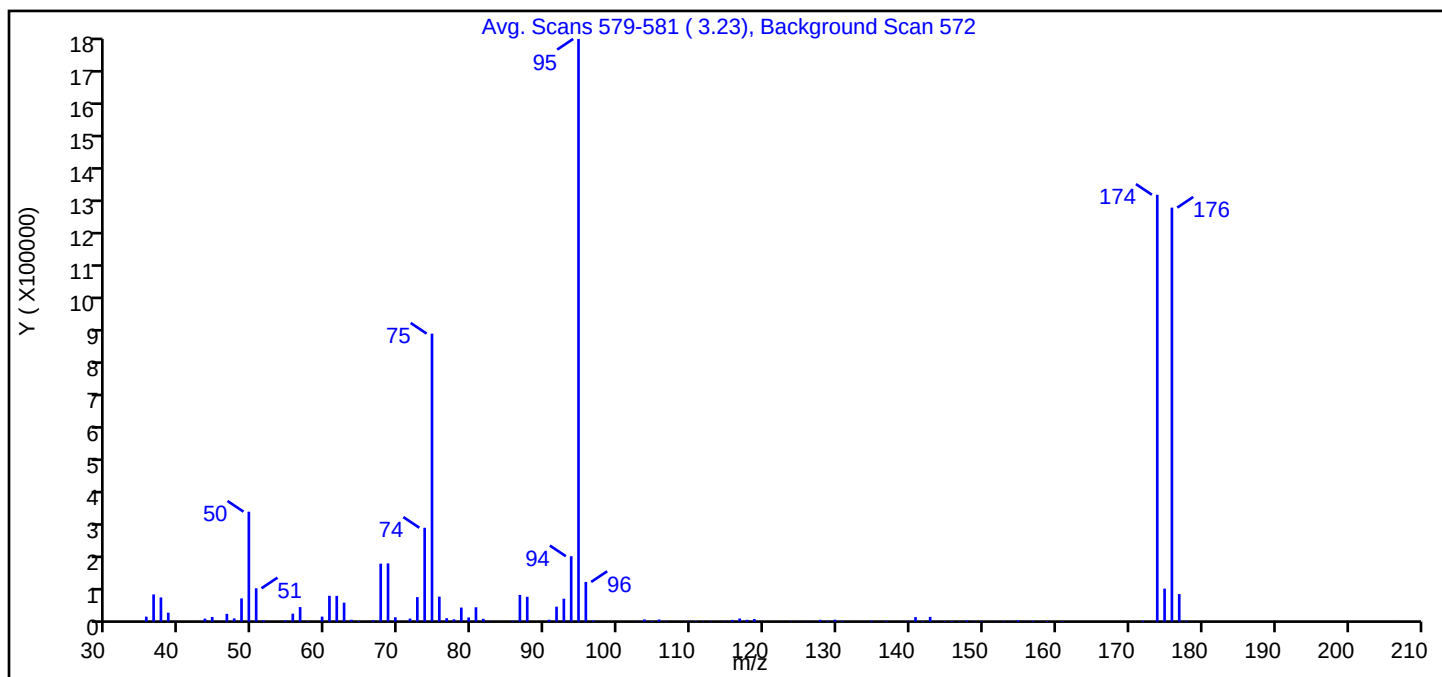


Shealy Environmental Services

MS Tune Report

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C01.D
Injection Date: 05-Jun-2020 01:33:30 Inst. ID: msd17.i
Client ID: 15740 Lab ID: BFB UW
Sample Info: 17060420C, BFB UW
Injection Vol. 1.00 Dil. Factor: 1.0
Operator: JTH
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.9
75	30.00 - 60.00% of mass 95	49.4
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.0 (0.0) 1
174	50.00 - 150.00% of mass 95	73.3
175	5.00 - 9.00% of mass 174	5.7 (7.7) 1
176	95.00 - 101.00% of mass 174	71.1 (97.0) 1
177	5.00 - 9.00% of mass 176	4.7 (6.6) 2

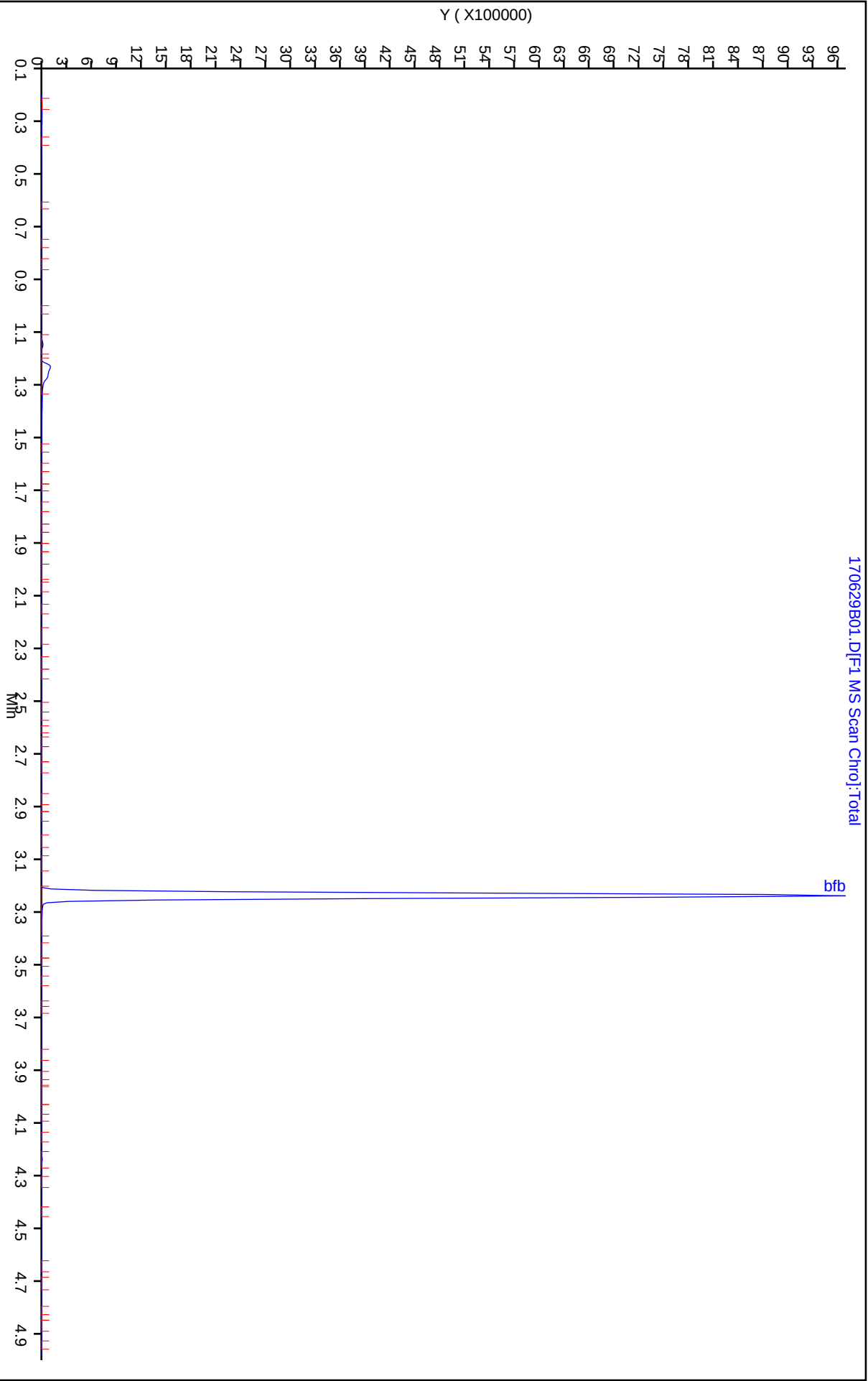
1-Value is % Mass 174 2-Value is % Mass 176

Data File: \\Organics\DD\chem\msd17.i\17060420C.b\170604C01.D
Injection Date: 05-Jun-2020 01:33:35
Spectrum: Avg. Scans 579-581 (3.23), Background Scan 572
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 119

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	14769	69.00	173824	106.00	6237	141.00	13520
37.00	81200	70.00	12864	107.00	1273	142.00	1697
38.00	72224	71.00	438	110.00	831	143.00	14092
39.00	26680	72.00	9102	111.00	1207	144.00	881
40.00	640	73.00	73184	112.00	918	145.00	1510
43.00	303	74.00	280320	113.00	1110	146.00	2159
44.00	8916	75.00	860096	115.00	1358	147.00	984
45.00	13850	76.00	74552	116.00	5040	148.00	3292
46.00	920	77.00	10129	117.00	9225	149.00	998
47.00	23168	78.00	6944	118.00	5454	150.00	1443
48.00	9575	79.00	41952	119.00	7713	151.00	67
49.00	69296	80.00	12228	120.00	336	152.00	812
50.00	328320	81.00	42808	121.00	214	153.00	1119
51.00	99488	82.00	8291	122.00	348	154.00	883
52.00	4323	83.00	995	123.00	436	155.00	3765
53.00	171	84.00	70	124.00	1030	156.00	522
55.00	3684	86.00	2115	125.00	620	157.00	2537
56.00	23776	87.00	79736	126.00	596	158.00	360
57.00	43384	88.00	74240	127.00	382	159.00	1749
58.00	1517	91.00	5659	128.00	5297	161.00	1661
59.00	161	92.00	44576	129.00	2471	170.00	67
60.00	14891	93.00	68352	130.00	5732	171.00	274
61.00	77160	94.00	195264	131.00	2176	172.00	2502
62.00	76832	95.00	1740288	132.00	305	174.00	1274880
63.00	56584	96.00	118424	134.00	457	175.00	98504
64.00	5542	97.00	3293	135.00	2760	176.00	1236480
65.00	1838	98.00	143	136.00	487	177.00	82160
66.00	265	103.00	566	137.00	2309	178.00	2363
67.00	4201	104.00	6507	139.00	460	207.00	105
68.00	173056	105.00	2003	140.00	1122		

Shealy Environmental Services

Data File:	\\Organics\ID\chem\msd17.i\17062920B.b\170629B01.D		Operator:	JTH
Injection Date:	29-Jun-2020 21:09:30	Inst. ID:	msd17.i	
Client ID:	15740	Lab ID:	BFBIS	
Sample Info:	17062920B, BFBIS			
Injection Vol.	1.00	Dil. Factor:	1.0	
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan	

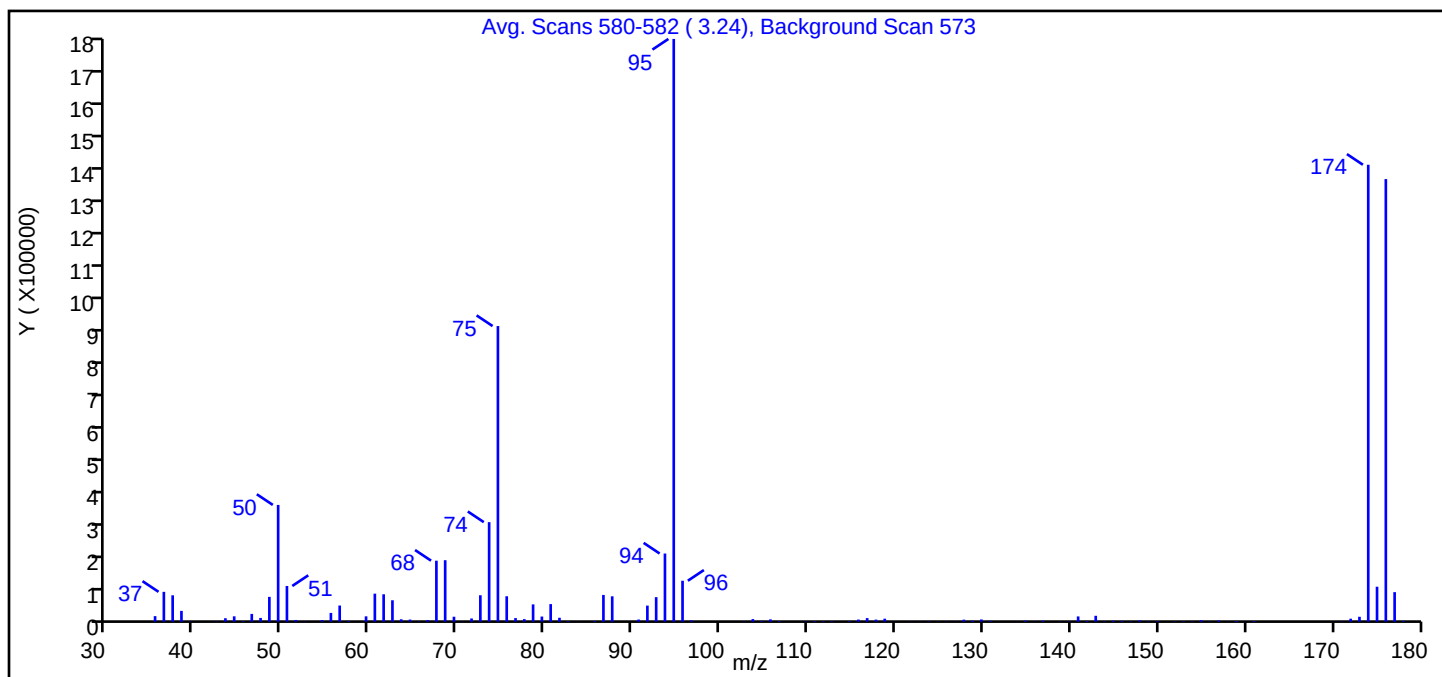


Shealy Environmental Services

MS Tune Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B01.D
 Injection Date: 29-Jun-2020 21:09:30 Inst. ID: msd17.i
 Client ID: 15740 Lab ID: BFBIS
 Sample Info: 17062920B, BFBIS
 Injection Vol. 1.00 Dil. Factor: 1.0
 Operator: JTH
 Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	20.0
75	30.00 - 60.00% of mass 95	50.7
96	5.00 - 9.00% of mass 95	7.0
173	Less than 2.00% of mass 174	0.8 (1.1) 1
174	50.00 - 150.00% of mass 95	78.4
175	5.00 - 9.00% of mass 174	6.0 (7.6) 1
176	95.00 - 101.00% of mass 174	75.9 (96.9) 1
177	5.00 - 9.00% of mass 176	5.1 (6.7) 2

1-Value is % Mass 174 2-Value is % Mass 176

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B01.D
Injection Date: 29-Jun-2020 21:09:02
Spectrum: Avg. Scans 580-582 (3.24), Background Scan 573
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 120

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	16600	66.00	833	104.00	7625	140.00	1145
37.00	90456	67.00	4752	105.00	2328	141.00	15694
38.00	79936	68.00	185152	106.00	6799	142.00	2148
39.00	32624	69.00	186624	107.00	1774	143.00	17656
40.00	896	70.00	14824	110.00	1010	144.00	1015
41.00	104	71.00	539	111.00	1662	145.00	2820
42.00	173	72.00	9511	112.00	1257	146.00	2423
43.00	907	73.00	80112	113.00	1394	147.00	1102
44.00	10240	74.00	302272	115.00	1774	148.00	3691
45.00	16035	75.00	898304	116.00	6222	149.00	1045
46.00	1558	76.00	77080	117.00	10695	150.00	1597
47.00	23360	77.00	10727	118.00	6084	152.00	744
48.00	11123	78.00	7516	119.00	8915	153.00	1160
49.00	75200	79.00	52312	120.00	380	154.00	1061
50.00	354624	80.00	15354	122.00	369	155.00	4148
51.00	108288	81.00	53248	123.00	491	156.00	690
52.00	4961	82.00	11663	124.00	1106	157.00	3097
53.00	828	83.00	1568	125.00	480	158.00	453
54.00	239	84.00	270	126.00	698	159.00	1994
55.00	4589	86.00	2318	127.00	536	161.00	1843
56.00	26368	87.00	81080	128.00	5887	169.00	71
57.00	48856	88.00	76880	129.00	2823	170.00	338
58.00	2117	91.00	6288	130.00	6541	171.00	993
59.00	264	92.00	48600	131.00	2507	172.00	8792
60.00	16004	93.00	74336	132.00	288	173.00	14723
61.00	84960	94.00	206912	134.00	396	174.00	1388544
62.00	83040	95.00	1771008	135.00	2925	175.00	106032
63.00	64840	96.00	124216	136.00	469	176.00	1345024
64.00	7067	97.00	3791	137.00	2835	177.00	89560
65.00	6211	103.00	715	139.00	652	178.00	2415

Volatile Organic Compounds by GC/MS - MB

Sample ID: VQ58472-001

Matrix: Aqueous

Batch: 58472

Prep Method: 5030B

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	10	U	1	10	2.0	ug/L	06/29/2020 2237
Vinyl chloride	0.50	U	1	0.50	0.11	ug/L	06/29/2020 2237
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		94	70-130				
1,2-Dichloroethane-d4		116	70-130				
Toluene-d8		104	70-130				

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and $\geq$ DL

U = Not detected at or above the detection limit

N = Recovery is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VF27003

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B04.D
 Lab Sample ID: VBLKIS Client Sample ID: VBLKIS
 Injection Date: 29-Jun-2020 22:37:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VBLKIS
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: BLANK ALS Bottle: 4
 Cpnd Sublist: std.sub
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: pap

Review Date: 30-Jun-2020 14:31:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.363		ND			
2 Chloromethane	50.0		1.540		ND			
3 Vinyl chloride	62.0		1.656		ND			
4 Bromomethane	94.0		1.979		ND			
5 Chloroethane	64.0		2.095		ND			
6 Trichlorofluoromethane	101.0		2.375		ND			
8 Ethyl ether	59.0		2.717		ND			
9 Acrolein	56.0		2.887		ND			
10 Acetone	43.0		3.082		ND			
11 1,1-Dichloroethene	96.0		2.997		ND			
12 Freon 113	101.0		3.034		ND			
13 Methyl iodide	142.0		3.174		ND			
14 Carbon disulfide	76.0		3.247		ND			
15 Acetonitrile	40.0		3.454		ND			
17 Allyl chloride	76.0		3.491		ND			
16 Methyl Acetate	43.0		3.503		ND			
18 Methylene chloride	84.0		3.680		ND			
20 Acrylonitrile	53.0		3.997		ND			
21 trans-1,2-Dichloroethene	96.0		4.021		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.033		ND			
23 Hexane	57.0		4.399		ND			
24 1,1-Dichloroethane	63.0		4.607		ND			
25 Vinyl acetate	86.0		4.655		ND			
26 Diisopropyl ether (IPE)	87.0		4.692		ND			
27 Chloroprene	53.0		4.698		ND			
29 cis-1,2-Dichloroethene	96.0		5.363		ND			
30 2-Butanone (MEK)	72.0		5.375		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0		5.350		ND			
32 Propionitrile	54.0		5.454		ND			
33 Ethyl Acetate	43.0		5.448		ND			
34 Methacrylonitrile	67.0		5.643		ND			
35 Bromochloromethane	128.0		5.661		ND			
36 Tetrahydrofuran	42.0		5.667		ND			
37 Chloroform	83.0		5.820		ND			
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	600837	57.510	57.510	
40 1,1,1-Trichloroethane	97.0		5.990		ND			
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	879823	50.000	50.000	
42 Cyclohexane	41.0		6.064		ND			
43 1,1-Dichloropropene	75.0		6.204		ND			
44 Carbon tetrachloride	119.0		6.179		ND			
45 Isobutyl alcohol	42.0		6.454		ND			
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	805943	57.918	57.918	
48 Benzene	78.0		6.448		ND			
49 Isopropyl Acetate	43.0		6.606		ND			
50 1,2-Dichloroethane	62.0		6.539		ND			
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1535730	50.000	50.000	
53 Trichloroethene	130.0		7.326		ND			
54 Methylcyclohexane	83.0		7.606		ND			
55 1,2-Dichloropropane	63.0		7.667		ND			
56 Dibromomethane	93.0		7.771		ND			
57 Methyl methacrylate	41.0		7.795		ND			
58 1,4-Dioxane	88.0		7.777		ND			
59 Bromodichloromethane	83.0		8.033		ND			
60 2-nitropropane	43.0		8.338		ND			
61 2-Chloroethylvinyl ether	63.0		8.441		ND			
62 cis-1,3-Dichloropropene	75.0		8.612		ND			
63 4-Methyl-2-pentanone	43.0		8.837		ND			
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	2068543	52.103	52.103	
65 Toluene	92.0		9.039		ND			
66 trans-1,3-Dichloropropene	75.0		9.398		ND			
67 Ethyl methacrylate	69.0		9.502		ND			
68 1,1,2-Trichloroethane	97.0		9.648		ND			
69 Tetrachloroethene	164.0		9.721		ND			
70 1,3-Dichloropropane	76.0		9.850		ND			
71 2-Hexanone	43.0		9.953		ND			
72 Dibromochloromethane	129.0		10.112		ND			
73 n-Butyl acetate	43.0		10.124		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.234		ND			
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1387428	50.000	50.000	
77 Chlorobenzene	112.0		10.819		ND			
78 1,1,1,2-Tetrachloroethane	131.0		10.935		ND			
79 Ethylbenzene	106.0		10.947		ND			
80 m+p-Xylenes	106.0		11.093		ND			
81 o-Xylene	106.0		11.502		ND			
82 Styrene	104.0		11.526		ND			
83 Bromoform	173.0		11.703		ND			
84 Isopropylbenzene	105.0		11.892		ND			
85 Cyclohexanone	55.0		11.971		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	684563	47.056	47.056	
88 1,1,2,2-Tetrachloroethane	83.0		12.221		ND			
87 Bromobenzene	156.0		12.184		ND			
89 1,2,3-Trichloropropane	110.0		12.264		ND			
90 trans-1,4-Dichloro-2-butene	53.0		12.252		ND			
91 n-Propylbenzene	91.0		12.306		ND			
92 2-Chlorotoluene	91.0		12.380		ND			
93 1,3,5-Trimethylbenzene	105.0		12.483		ND			
94 4-Chlorotoluene	126.0		12.501		ND			
95 tert-Butylbenzene	119.0		12.782		ND			
96 1,2,4-Trimethylbenzene	105.0		12.837		ND			
97 sec-Butylbenzene	105.0		12.989		ND			
98 1,3-Dichlorobenzene	146.0		13.087		ND			
99 p-Isopropyltoluene	119.0		13.129		ND			
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	607899	50.000	50.000	
101 1,4-Dichlorobenzene	146.0		13.184		ND			
102 Benzyl chloride	91.0		13.294		ND			
103 n-Butylbenzene	91.0		13.495		ND			
104 1,2-Dichlorobenzene	146.0		13.501		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.190		ND			
106 1,2,4-Trichlorobenzene	180.0		14.879		ND			
107 Hexachlorobutadiene	225.0		14.995		ND			
108 Naphthalene	128.0		15.099		ND			
109 1,2,3-Trichlorobenzene	180.0		15.275		ND			
S 110 Xylenes (total)	106.0				ND			
S 111 1,2-Dichloroethene (total)	96.0				ND			

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

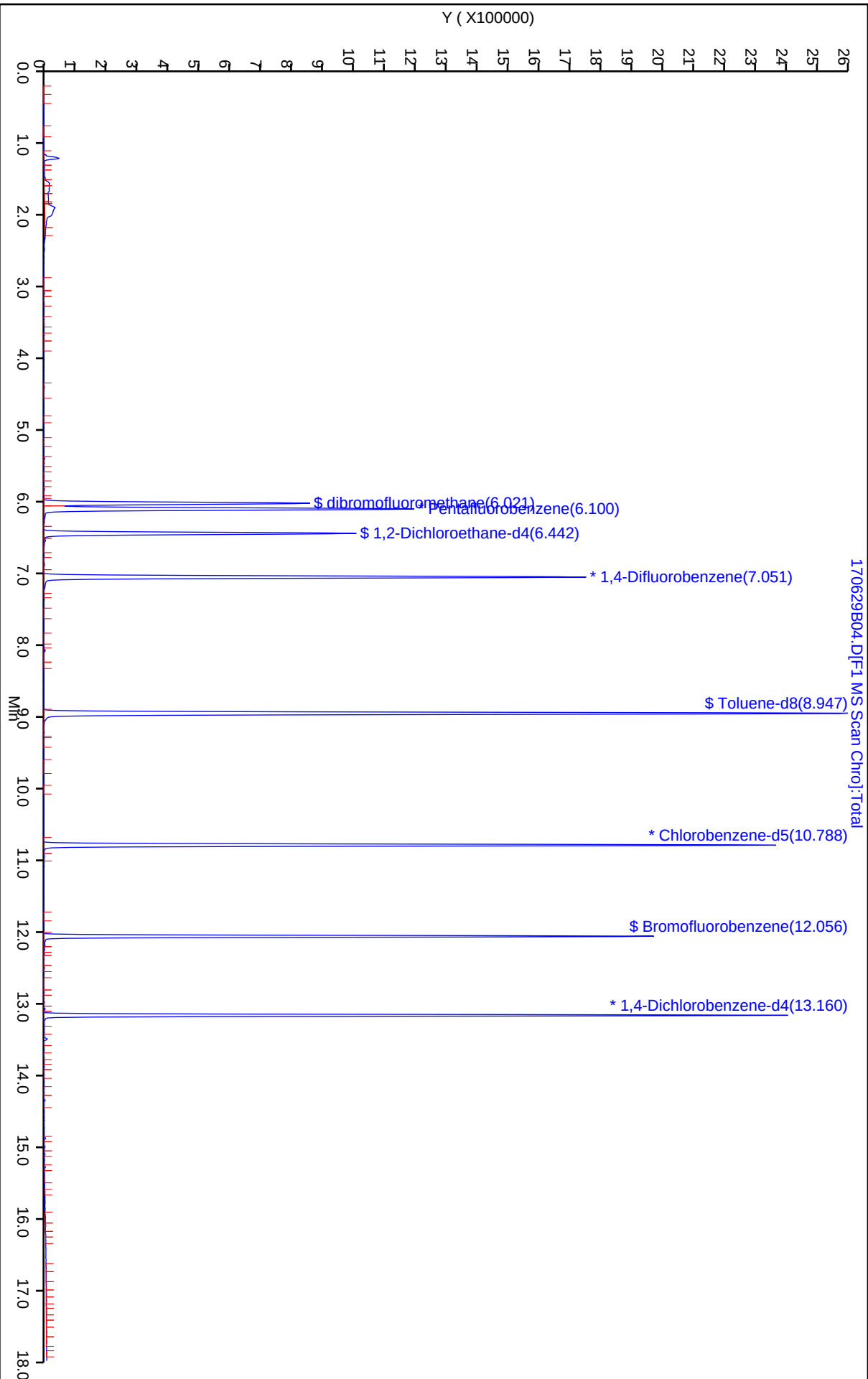
QC Flag Legend

Processing Flags

Review Flags

Shealy Environmental Services

Data File:	\\Organics\ID\chem\msd17.i\17062920B.b\170629B04.D	Operator:	JTH
Injection Date:	29-Jun-2020 22:37:30	Inst. ID:	msd17.i
Client ID:	VBLKIS	Lab ID:	VBLKIS
Sample Info:	17062920B, VBLKIS		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan



Volatile Organic Compounds by GC/MS - LCS

Sample ID: VQ58472-002

Matrix: Aqueous

Batch: 58472

Prep Method: 5030B

Analytical Method: 8260D

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	89		1	89	60-140	06/29/2020 2133
Vinyl chloride	50	57		1	114	70-130	06/29/2020 2133
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		95	70-130				

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and $\geq$ DL

U = Not detected at or above the detection limit

N = Recovery is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VF27003

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17062920B.b\170629B02_lcs.D
 Lab Sample ID: VLCS050IS Client Sample ID: 50ul/100ml 15843/49
 Injection Date: 29-Jun-2020 21:33:30 Dil. Factor: 1.0
 Operator: JTH Inst. ID: msd17.i
 Sample Info: 17062920B, VLCS050IS
 Method: \\Organics\DD\chem\msd17.i\17062920B.b\8260B-17.m
 Method Date: 30-Jun-2020 14:31:30 Quant Method: ISTD
 Calib Date: 05-Jun-2020 05:43:30 Calib File: 170604C11.D
 Sample Type: LCS ALS Bottle: 2
 Cpnd Sublist: std.sub Spike List File: Limswater.spk
 Matrix/Level: Water/Medium
 Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm)

Detector: MS Scan

Data Reviewer: JTH

Review Date: 29-Jun-2020 21:56:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.363	1.363	0.000	405750	59.664	59.664	
2 Chloromethane	50.0	1.540	1.540	0.000	589442	60.553	60.553	
3 Vinyl chloride	62.0	1.656	1.656	0.000	564994	56.763	56.763	
4 Bromomethane	94.0	1.979	1.979	0.000	392325	54.669	54.669	
5 Chloroethane	64.0	2.095	2.095	0.000	348440	54.272	54.272	
6 Trichlorofluoromethane	101.0	2.375	2.375	0.000	618543	51.775	51.775	
8 Ethyl ether	59.0	2.717	2.717	0.000	474330	50.292	50.292	
9 Acrolein	56.0	2.887	2.887	0.000	1616695	450.94	450.94	
10 Acetone	43.0	3.082	3.082	0.000	897630	88.567	88.567	
11 1,1-Dichloroethene	96.0	2.997	2.997	0.000	378267	48.545	48.545	
12 Freon 113	101.0	3.034	3.034	0.000	416030	50.742	50.742	
13 Methyl iodide	142.0	3.174	3.174	0.000	601953	50.738	50.738	
14 Carbon disulfide	76.0	3.247	3.247	0.000	1114267	49.137	49.137	
15 Acetonitrile	40.0	3.454	3.454	0.000	835169	575.22	575.22	M
17 Allyl chloride	76.0	3.491	3.491	0.000	265951	49.904	49.904	
16 Methyl Acetate	43.0	3.503	3.503	0.000	1057402	67.611	67.611	R
18 Methylene chloride	84.0	3.680	3.680	0.000	492860	51.004	51.004	
20 Acrylonitrile	53.0	3.997	3.997	0.000	995576	108.60	108.60	
21 trans-1,2-Dichloroethene	96.0	4.021	4.021	0.000	533397	49.332	49.332	
22 tert-Butyl methyl ether(MTBE)	73.0	4.033	4.033	0.000	1096174	49.232	49.232	
23 Hexane	57.0	4.399	4.399	0.000	665474	50.546	50.546	
24 1,1-Dichloroethane	63.0	4.607	4.607	0.000	1060179	50.599	50.599	
25 Vinyl acetate	86.0	4.655	4.655	0.000	133139	50.614	50.614	
26 Diisopropyl ether (IPE)	87.0	4.692	4.692	0.000	442551	50.249	50.249	
27 Chloroprene	53.0	4.698	4.698	0.000	816525	51.363	51.363	
29 cis-1,2-Dichloroethene	96.0	5.363	5.363	0.000	609129	48.335	48.335	
30 2-Butanone (MEK)	72.0	5.375	5.375	0.000	396942	103.79	103.79	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.350	5.350	0.000	366982	42.437	42.437	
32 Propionitrile	54.0	5.454	5.454	0.000	2405849	571.53	571.53	
33 Ethyl Acetate	43.0	5.448	5.448	0.000	1240563	52.443	52.443	
34 Methacrylonitrile	67.0	5.643	5.643	0.000	2428475	273.62	273.62	
35 Bromochloromethane	128.0	5.661	5.661	0.000	316974	52.563	52.563	
36 Tetrahydrofuran	42.0	5.667	5.667	0.000	628731	55.552	55.552	
37 Chloroform	83.0	5.820	5.820	0.000	1061903	50.695	50.695	
\$ 39 dibromofluoromethane	111.0	6.021	6.021	0.000	555691	47.207	47.207	
40 1,1,1-Trichloroethane	97.0	5.990	5.990	0.000	708622	48.700	48.700	
* 41 Pentafluorobenzene	168.0	6.100	6.100	0.000	991305	50.000	50.000	
42 Cyclohexane	41.0	6.064	6.064	0.000	427629	43.007	43.007	
43 1,1-Dichloropropene	75.0	6.204	6.204	0.000	763004	47.453	47.453	
44 Carbon tetrachloride	119.0	6.179	6.179	0.000	612627	49.354	49.354	
45 Isobutyl alcohol	42.0	6.454	6.454	0.000	621744	638.87	638.87	
\$ 46 1,2-Dichloroethane-d4	65.0	6.442	6.442	0.000	741933	50.551	50.551	
48 Benzene	78.0	6.448	6.448	0.000	2342422	51.980	51.980	
49 Isopropyl Acetate	43.0	6.606	6.606	0.000	1616812	56.327	56.327	
50 1,2-Dichloroethane	62.0	6.539	6.539	0.000	898729	54.421	54.421	
* 52 1,4-Difluorobenzene	114.0	7.051	7.051	0.000	1619781	50.000	50.000	
53 Trichloroethene	130.0	7.326	7.326	0.000	554832	48.195	48.195	
54 Methylcyclohexane	83.0	7.606	7.606	0.000	779743	44.538	44.538	
55 1,2-Dichloropropane	63.0	7.667	7.667	0.000	647584	52.065	52.065	
56 Dibromomethane	93.0	7.771	7.771	0.000	437066	55.545	55.545	
57 Methyl methacrylate	41.0	7.795	7.795	0.000	818092	59.864	59.864	
58 1,4-Dioxane	88.0	7.777	7.777	0.000	170875	818.61	818.61	R
59 Bromodichloromethane	83.0	8.033	8.033	0.000	808218	55.332	55.332	
60 2-nitropropane	43.0	8.338	8.338	0.000	294381	54.651	54.651	
61 2-Chloroethylvinyl ether	63.0	8.441	8.441	0.000	456175	49.099	49.099	
62 cis-1,3-Dichloropropene	75.0	8.612	8.612	0.000	945720	54.751	54.751	
63 4-Methyl-2-pentanone	43.0	8.837	8.837	0.000	2546406	118.65	118.65	
\$ 64 Toluene-d8	98.0	8.947	8.947	0.000	1959667	47.634	47.634	
65 Toluene	92.0	9.039	9.039	0.000	1364143	51.376	51.376	
66 trans-1,3-Dichloropropene	75.0	9.398	9.398	0.000	841200	54.497	54.497	
67 Ethyl methacrylate	69.0	9.502	9.502	0.000	868812	45.350	45.350	
68 1,1,2-Trichloroethane	97.0	9.648	9.648	0.000	622103	54.003	54.003	
69 Tetrachloroethene	164.0	9.721	9.721	0.000	427492	49.209	49.209	
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	1048840	52.949	52.949	
71 2-Hexanone	43.0	9.953	9.953	0.000	2143120	118.81	118.81	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	595767	59.222	59.222	
73 n-Butyl acetate	43.0	10.124	10.124	0.000	1333146	49.493	49.493	
75 1,2-Dibromoethane (EDB)	107.0	10.234	10.234	0.000	646484	55.646	55.646	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1437738	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.819	0.000	1544551	51.445	51.445	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	537828	55.263	55.263	
79 Ethylbenzene	106.0	10.947	10.947	0.000	779856	51.772	51.772	
80 m+p-Xylenes	106.0	11.093	11.093	0.000	942485	52.531	52.531	
81 o-Xylene	106.0	11.502	11.502	0.000	859930	51.554	51.554	
82 Styrene	104.0	11.526	11.526	0.000	1685377	58.996	58.996	
83 Bromoform	173.0	11.703	11.703	0.000	428534	58.558	58.558	
84 Isopropylbenzene	105.0	11.892	11.892	0.000	2329663	52.784	52.784	
85 Cyclohexanone	55.0	11.971	11.971	0.000	622151	724.67	724.67	R

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
\$ 86 Bromofluorobenzene	95.0	12.056	12.056	0.000	740963	49.151	49.151	
88 1,1,2,2-Tetrachloroethane	83.0	12.221	12.221	0.000	1064581	50.240	50.240	
87 Bromobenzene	156.0	12.184	12.184	0.000	621529	48.222	48.222	
89 1,2,3-Trichloropropane	110.0	12.264	12.264	0.000	335356	49.167	49.167	
90 trans-1,4-Dichloro-2-butene	53.0	12.252	12.252	0.000	315832	55.656	55.656	
91 n-Propylbenzene	91.0	12.306	12.306	0.000	3024046	51.063	51.063	
92 2-Chlorotoluene	91.0	12.380	12.380	0.000	1794796	47.782	47.782	
93 1,3,5-Trimethylbenzene	105.0	12.483	12.483	0.000	1976263	50.057	50.057	
94 4-Chlorotoluene	126.0	12.501	12.501	0.000	642872	52.598	52.598	
95 tert-Butylbenzene	119.0	12.782	12.782	0.000	1555751	45.873	45.873	
96 1,2,4-Trimethylbenzene	105.0	12.837	12.837	0.000	2034029	51.238	51.238	
97 sec-Butylbenzene	105.0	12.989	12.989	0.000	2468695	48.997	48.997	
98 1,3-Dichlorobenzene	146.0	13.087	13.087	0.000	1180583	51.400	51.400	
99 p-Isopropyltoluene	119.0	13.129	13.129	0.000	2044770	52.103	52.103	
* 100 1,4-Dichlorobenzene-d4	152.0	13.160	13.160	0.000	739520	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.184	13.184	0.000	1210762	50.650	50.650	
102 Benzyl chloride	91.0	13.294	13.294	0.000	1455400	48.917	48.917	
103 n-Butylbenzene	91.0	13.495	13.495	0.000	2027481	54.663	54.663	
104 1,2-Dichlorobenzene	146.0	13.501	13.501	0.000	1164371	52.299	52.299	
105 1,2-Dibromo-3-chloropropane	75.0	14.190	14.190	0.000	237467	55.063	55.063	
106 1,2,4-Trichlorobenzene	180.0	14.879	14.879	0.000	566531	51.196	51.196	
107 Hexachlorobutadiene	225.0	14.995	14.995	0.000	259832	46.465	46.465	
108 Naphthalene	128.0	15.099	15.099	0.000	2110926	46.507	46.507	
109 1,2,3-Trichlorobenzene	180.0	15.275	15.275	0.000	572374	55.945	55.945	
S 110 Xylenes (total)	106.0	16.000		0.000		104.08	104.08	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		97.667	97.667	Q

Compound Type Legend

\$ - Surrogate

* - ISTD

S - Summary

QC Flag Legend

Processing Flags

Q - Qualifier Signal(s) Fails Ratio Test

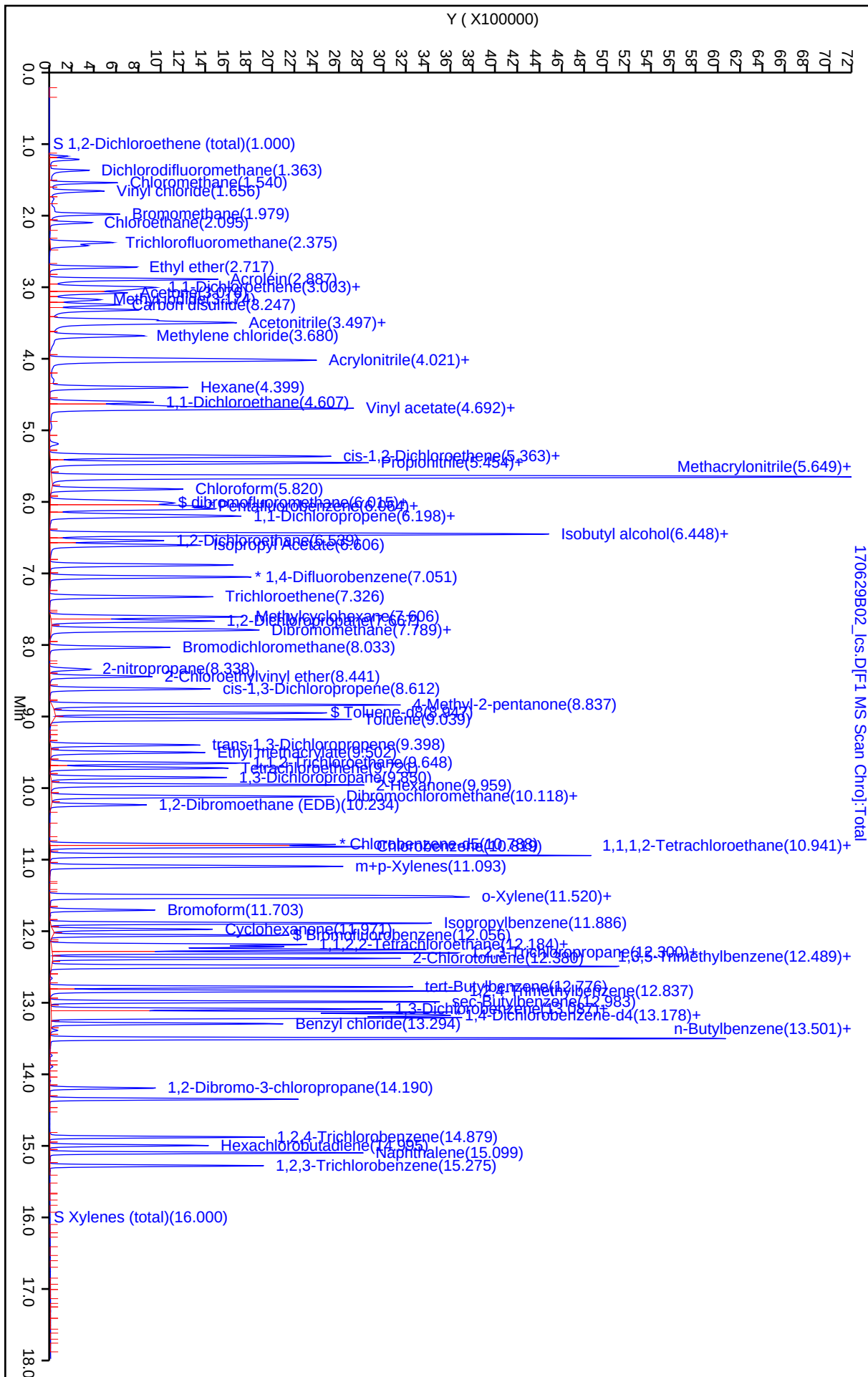
R - Spike/Surrogate Fails %Recovery Test

Review Flags

M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File:	\\Organics\ID\Chem\msd17.i\17062920B.b\170629B02_1cs.D	Operator:	JTH
Injection Date:	29-Jun-2020 21:33:30	Inst. ID:	msd17.i
Client ID:	50u/100ml 15843/49	Lab ID:	VLCSS050IS
Sample Info:	17062920B, VLCSS050IS		
Purge Vol:	5.00 ml	Dil. Factor:	1.0
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan



Shealy Environmental Services

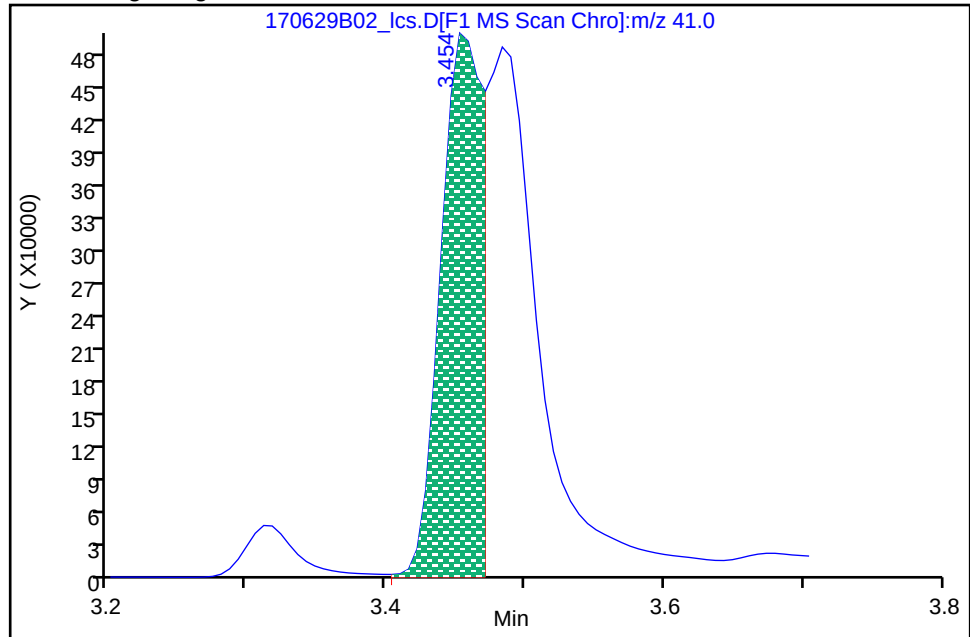
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17062920B.b\170629B02_ics.D		
Injection Date:	29-Jun-2020 21:33:30	Inst. ID:	msd17.i
Client ID:	50ul/100ml 15843/49	Lab ID:	VLCS050IS
Sample Info:	17062920B, VLCS050IS		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

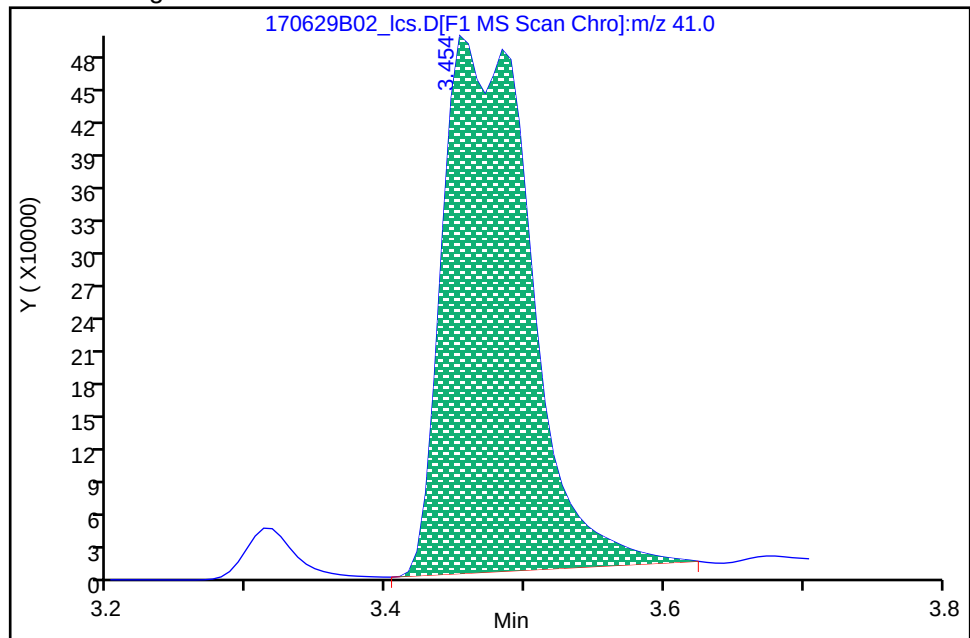
RT: 3.454
Area: 988867
Conc: 575.22
Conc Units: ug/L
Conc:

Processing Integration Results



RT: 3.454
Area: 2130461
Conc: 575.22
Conc Units: ug/L

Manual Integration Results



Data Editor: JTH, 29-Jun-2020 21:56:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

MISC. DATA

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd17.i\17060420C.b

Inst. ID: msd17.i

Method: 8260B-17

ESS vial lot: 0217701E

Matrix: Water

Operator: JTH

Srchr Tics: Yes

Quant Tics: Yes

Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBW	05-Jun-2020 01:33:30	170604C01.D	BFB		15740	Water	1	all				Yes					BFB-17
2	VIBLK	05-Jun-2020 02:09:30	170604C02.D	Client			Water	1	std									8260B-17
3	VIBLK	05-Jun-2020 02:32:30	170604C03.D	Client			Water	1	std									8260B-17
4	VIBLK	05-Jun-2020 02:56:30	170604C04.D	Client			Water	1	std									8260B-17
5	VSTD0.5UW	05-Jun-2020 03:20:30	170604C05.D	Ical	1	1mL/100mL VSTD050	Water	1	std									8260B-17
6	VSTD001UW	05-Jun-2020 03:44:30	170604C06.D	Ical	2	2mL/100mL VSTD050	Water	1	std									8260B-17
7	VSTD005UW	05-Jun-2020 04:08:30	170604C07.D	Ical	3	5uL/100mL 15828/25	Water	1	std									8260B-17
8	VSTD020UW	05-Jun-2020 04:32:30	170604C08.D	Ical	4	20uL/100mL 15828/25	Water	1	std									8260B-17
9	VSTD050UW	05-Jun-2020 04:55:30	170604C09.D	Ical	5	50uL/100mL 15828/25	Water	1	std									8260B-17
10	VSTD100UW	05-Jun-2020 05:20:30	170604C10.D	Ical	6	100uL/100mL 15828/25	Water	1	std									8260B-17
11	VSTD200UW	05-Jun-2020 05:43:30	170604C11.D	Ical	7	200uL/100mL 15828/25	Water	1	std									8260B-17
12	VIBLK	05-Jun-2020 06:07:30	170604C12.D	Client			Water	1	std									8260B-17
13	VICV050UW	05-Jun-2020 06:31:30	170604C13.D	ICV		50uL/100mL 15819/26	Water	1	std	8260ICV70-130								8260B-17
13	VICV050UW	05-Jun-2020 06:31:30	170604C13_dod.J	ICV		50uL/100mL 15819/26	Water	1	std_5.0	DoDICV80-120							NR	8260B-17

ICAL Summary:

DOD ICV from 170605A03

ethyl acetate wt. linear(41655)
ethyl methacrylate wt. linear(9316)
n-butyl acetate wt. linear(11183)
benzyl chloride wt. linear(9960)
naphthalene wt linear(17922)

bromomethane 0.5-100, lvl 7 off
1,2,3-trichlorobenzene 0.5-100, lvl 7 off
1,2,4-trichlorobenzene 0.5-100, lvl 7 off

ICV passes 8260 criteria
ICV from file 170605A03 passes DOD criteria

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\DD\chem\msd17.i\17062920B.b

Inst. ID: msd17.i

Method: 8260B-17

Matrix: Water

Operator: JTH

Srchr Tics: Yes

Quant Tics: Yes

Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBIS	29-Jun-2020 21:09:30	170629B01.D	BFB	15740	Water	1	all				Yes					BFB-17
2	VSTD050IS	29-Jun-2020 21:33:30	170629B02.D	Ccv	50ul/100ml 15843/49	Water	1	std									8260B-17
2	VLC050IS	29-Jun-2020 21:33:30	170629B02_ics.D	LCS	50ul/100ml 15843/49	Water	1	std	Limswater							NCM 35950	8260B-17
3	VIBLK	29-Jun-2020 22:13:30	170629B03.D	Client	VIBLK	Water	1	std									8260B-17
4	VBLKIS	29-Jun-2020 22:37:30	170629B04.D	BLANK	VBLKIS	Water	1	std									8260B-17
5	VF27003-005	29-Jun-2020 23:24:30	170629B05.D	Client	Trip Blank	Water	1	sample									8260B-17
6	VF27003-001	29-Jun-2020 23:48:30	170629B06.D	Client	16MW8	Water	1	sample									8260B-17
7	VF27003-002	30-Jun-2020 00:13:30	170629B07.D	Client	DUP1	Water	1	sample									8260B-17
8	VF27003-003	30-Jun-2020 00:37:30	170629B08.D	Client	16WC1A	Water	1	sample									8260B-17
9	VF27003-004	30-Jun-2020 01:00:30	170629B09.D	Client	DUP2	Water	1	sample									8260B-17
10	VF20005-003	30-Jun-2020 01:24:30	170629B10.D	Client	TMW-2	Water	1	sample									8260B-17
11	VF26043-002	30-Jun-2020 01:48:30	170629B11.D	Client	2020014783	Water	1	sample									8260B-17
12	VF26043-003	30-Jun-2020 02:13:30	170629B12.D	Client	2020014785	Water	1	sample									8260B-17
13	VF26043-004	30-Jun-2020 02:37:30	170629B13.D	Client		Water	1	std								NR	8260B-17
14	VF26043-005	30-Jun-2020 03:01:30	170629B14.D	Client		Water	1	std								NR	8260B-17
15	VF26043-006	30-Jun-2020 03:25:30	170629B15.D	Client	2020014759	Water	1	sample									8260B-17
16	VF26043-007	30-Jun-2020 03:49:30	170629B16.D	Client	2020014760	Water	1	sample									8260B-17
17	VF26043-008	30-Jun-2020 04:13:30	170629B17.D	Client	2020014761	Water	1	sample									8260B-17
18	VF26043-009	30-Jun-2020 04:37:30	170629B18.D	Client	2020014763	Water	1	sample									8260B-17
19	VF26043-010	30-Jun-2020 05:01:30	170629B19.D	Client	2020014765	Water	1	sample									8260B-17
20	VF26043-011	30-Jun-2020 05:25:30	170629B20.D	Client	2020014766	Water	1	sample									8260B-17
21	VF26043-012	30-Jun-2020 05:49:30	170629B21.D	Client	2020014767	Water	1	sample									8260B-17
22	VF26043-013	30-Jun-2020 06:13:30	170629B22.D	Client	2020014768	Water	1	sample									8260B-17
23	VF26043-014	30-Jun-2020 06:37:30	170629B23.D	Client	2020014769	Water	1	sample									8260B-17
24	VF23009-001	30-Jun-2020 07:01:30	170629B24.D	Client	DI Purge	Water	200	sample									8260B-17
25	VF23009-001	30-Jun-2020 07:26:30	170629B25.D	MS	DI PurgeMS	Water	200	std	Limswater						15843/47/49	21.5ul/43ml	8260B-17
26	VF23009-001	30-Jun-2020 07:49:30	170629B26.D	MSD	DI PurgeMSD	Water	200	std	Limswater						15843/47/49	21.5ul/43ml	8260B-17

ANALYTICAL REPORT

Job Number: 240-132346-1

Job Description: RFAAP Radford VA, HWMU16

For:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier



Approved for release.
Opal Johnson
Project Manager II
7/8/2020 2:39 PM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9279
opal.johnson@testamericainc.com
07/08/2020

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins TestAmerica, Canton

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Definitions/Glossary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RFAAP Radford VA, HWMU16

Report Number: 240-132346-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, Canton attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless sotherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The samples were received on 6/23/2020 10:10 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples 16WCIA (240-132346-1) and TRIP BLANK (240-132346-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 07/02/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Client Sample ID: 16WCIA

Lab Sample ID: 240-132346-1

☐ No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-132346-2

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Client Sample Results

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Client Sample ID: 16WCIA

Date Collected: 06/22/20 10:15

Date Received: 06/23/20 10:10

Lab Sample ID: 240-132346-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.20	ug/L			07/02/20 02:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		69 - 122		07/02/20 02:20	1
Dibromofluoromethane (Surr)	99		78 - 129		07/02/20 02:20	1
4-Bromofluorobenzene (Surr)	91		47 - 134		07/02/20 02:20	1
1,2-Dichloroethane-d4 (Surr)	95		75 - 130		07/02/20 02:20	1

Client Sample ID: TRIP BLANK

Date Collected: 06/22/20 00:00

Date Received: 06/23/20 10:10

Lab Sample ID: 240-132346-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.20	ug/L			07/02/20 02:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		69 - 122		07/02/20 02:42	1
Dibromofluoromethane (Surr)	103		78 - 129		07/02/20 02:42	1
4-Bromofluorobenzene (Surr)	96		47 - 134		07/02/20 02:42	1
1,2-Dichloroethane-d4 (Surr)	98		75 - 130		07/02/20 02:42	1

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
Vinyl chloride	1.0	0.20	ug/L

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TOL (69-122)	DBFM (78-129)	BFB (47-134)	DCA (75-130)
240-132112-N-9 MS	Matrix Spike	106	92	102	85
240-132112-Q-9 MSD	Matrix Spike Duplicate	108	95	104	88
240-132346-1	16WCIA	102	99	91	95
240-132346-2	TRIP BLANK	107	103	96	98
LCS 240-440963/5	Lab Control Sample	105	93	103	87
MB 240-440963/8	Method Blank	103	99	94	92

Surrogate Legend

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

QC Sample Results

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-440963/8

Matrix: Water

Analysis Batch: 440963

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.20	ug/L			07/01/20 18:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		69 - 122					07/01/20 18:26	1
Dibromofluoromethane (Surr)	99		78 - 129					07/01/20 18:26	1
4-Bromofluorobenzene (Surr)	94		47 - 134					07/01/20 18:26	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 130					07/01/20 18:26	1

Lab Sample ID: LCS 240-440963/5

Matrix: Water

Analysis Batch: 440963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride		20.0	21.2		ug/L		106	61 - 134
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Toluene-d8 (Surr)	105		69 - 122					
Dibromofluoromethane (Surr)	93		78 - 129					
4-Bromofluorobenzene (Surr)	103		47 - 134					
1,2-Dichloroethane-d4 (Surr)	87		75 - 130					

QC Association Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

GC/MS VOA

Analysis Batch: 440963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-132346-1	16WCIA	Total/NA	Water	8260C	
240-132346-2	TRIP BLANK	Total/NA	Water	8260C	
MB 240-440963/8	Method Blank	Total/NA	Water	8260C	
LCS 240-440963/5	Lab Control Sample	Total/NA	Water	8260C	

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Client Sample ID: 16WCIA

Date Collected: 06/22/20 10:15

Date Received: 06/23/20 10:10

Lab Sample ID: 240-132346-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440963	07/02/20 02:20	TJL1	TAL CAN

Client Sample ID: TRIP BLANK

Date Collected: 06/22/20 00:00

Date Received: 06/23/20 10:10

Lab Sample ID: 240-132346-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440963	07/02/20 02:42	TJL1	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	010101	09-14-20

Method Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP Radford VA, HWMU16

Job ID: 240-132346-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-132346-1	16WCIA	Water	06/22/20 10:15	06/23/20 10:10	
240-132346-2	TRIP BLANK	Water	06/22/20 00:00	06/23/20 10:10	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Instrument ID: A3UX19 Analysis Batch Number: 337766Lab Sample ID: STD8260 240-337766/13 I Client Sample ID: _____Date Analyzed: 07/24/18 20:04 Lab File ID: U1900794.d GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	laveyt	07/25/18 10:11
2-Methyl-2-propanol		Invalid Compound ID	laveyt	07/25/18 09:53
Acetone		Invalid Compound ID	laveyt	07/25/18 09:52
Bromoform		Invalid Compound ID	laveyt	07/25/18 09:54
Methylene Chloride		Invalid Compound ID	laveyt	07/25/18 09:52
n-Heptane		Invalid Compound ID	laveyt	07/25/18 09:54
1,3-Dichlorobenzene	10.81	Peak assignment corrected	laveyt	07/25/18 09:51

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Instrument ID: A3UX19 Analysis Batch Number: 342719Lab Sample ID: STD8260 240-342719/13 I Client Sample ID: _____Date Analyzed: 08/27/18 19:23 Lab File ID: U1901329.d GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	laveyt	08/27/18 19:49
Acetone		Invalid Compound ID	laveyt	08/27/18 19:48
Methylene Chloride		Invalid Compound ID	laveyt	08/27/18 19:48
Naphthalene		Invalid Compound ID	laveyt	08/27/18 20:00
n-Heptane		Invalid Compound ID	laveyt	08/27/18 19:48
Tetrahydrofuran		Invalid Compound ID	laveyt	08/27/18 19:48
trans-1,4-Dichloro-2-butene		Invalid Compound ID	laveyt	08/27/18 19:50
1,3-Dichlorobenzene	10.82	Peak assignment corrected	laveyt	08/27/18 19:47

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Instrument ID: A3UX19 Analysis Batch Number: 440963Lab Sample ID: 240-132346-1 Client Sample ID: 16WCIADate Analyzed: 07/02/20 02:20 Lab File ID: U1915353.d GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride		Invalid Compound ID	laveyt	07/02/20 15:12

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
vm50is_stk_A_00001	11/14/18	05/14/18	MEOH, Lot 191720	50 mL	vm30241_00007	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.vm30241_00007	01/31/23	restek, Lot A0134242			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
vm50is_stk_A_00006	08/06/20	02/06/20	MEOH, Lot 230446	50 mL	vm30241_00007	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.vm30241_00007	01/31/23	restek, Lot A0134242			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
vm50ss_00329	07/27/18	07/20/18	MEOH, Lot na	4 mL	vm50ss_stk_00078	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00078	12/20/18	06/20/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
..VM567650_00029	01/31/22	Restek, Lot A0124069			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_00333	08/29/18	08/22/18	MEOH, Lot na	4 mL	vm50ss_stk_00078	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00078	12/20/18	06/20/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
..VM567650_00029	01/31/22	Restek, Lot A0124069			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00077	09/27/18	03/27/18	MEOH, Lot 0000136118	200 mL	VM567650_00027	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00027	07/31/21	Restek, Lot A0120212			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00085	11/21/20	05/21/20	MEOH, Lot 0000230446	200 mL	VM567650_00032	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00032	07/30/23		Restek, Lot A0139582		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vmarolistdw_00256	07/26/18	07/19/18	MEOH, Lot na	4 mL	VMACROLSTD_00062	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00062	08/31/18	06/01/18	MEOH, Lot 178178	100 mL	VM568720_00028	1.25 mL	Acrolein	250 ug/mL
..VM568720_00028	08/31/18		restek, Lot A0135693		(Purchased Reagent)		Acrolein	20000 ug/mL
vmarolistdw_00260	08/27/18	08/20/18	MEOH, Lot na	4 mL	VMACROLSTD_00062	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00062	08/31/18	06/01/18	MEOH, Lot 178178	100 mL	VM568720_00028	1.25 mL	Acrolein	250 ug/mL
..VM568720_00028	08/31/18		restek, Lot A0135693		(Purchased Reagent)		Acrolein	20000 ug/mL
vmbfb_00020							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					vm30026_00002	1.25 mL	BFB	50 ug/mL
.vm30026_00002	07/31/21		restek, Lot A0120567		(Purchased Reagent)		BFB	2000 ug/mL
vmbfb_00025							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					vm30026_00003	1.25 mL	BFB	50 ug/mL
.vm30026_00003	08/31/23		restek, Lot A0141187		(Purchased Reagent)		BFB	2000 ug/mL
VMFASGW_00271	08/28/18	08/21/18	MEOH, Lot NA	4 mL	VMFASG_00074	4 mL	Vinyl chloride	50 ug/mL
.VMFASG_00074	09/13/18	08/13/18	MEOH, Lot 0000196626	100 mL	vm569722S_00004	2 mL	Vinyl chloride	50 ug/mL
..vm569722S_00004	11/30/18		Restek, Lot A0115484		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VMFASGW_00366	07/15/20	07/01/20	MEOH, Lot NA	5 mL	VMFASG_00096	5 mL	Vinyl chloride	50 ug/mL
.VMFASG_00096	08/01/20	07/01/20	MEOH, Lot 0000230446	100 mL	vm569722S_00007	2 mL	Vinyl chloride	50 ug/mL
..vm569722S_00007	10/31/21		Restek, Lot A0142117		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
vmrgas_00255	07/30/18	07/23/18	MEOH, Lot 0000196626	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
vmrgas_00259	08/31/18	08/24/18	MEOH, Lot 0000196628	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRGAS_00345	07/07/20	06/30/20	MEOH, Lot 0000230446	10 mL	vm569722_00015	0.2 mL	Vinyl chloride	50 ug/mL
.vm569722_00015	11/30/22		Restek, Lot A0154679		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
vmrprimw_00292	07/26/18	07/19/18	MEOH, Lot NA	4 mL	VMRPRIM_00028	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.VMRPRIM_00028	07/29/18	04/29/18	MEOH, Lot 0000177891	50 mL	VM569721_00002	0.4 mL	Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
					VM569723_00003	2 mL	Trichloroethene	50 ug/mL
							2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
					VM569724_00014	0.5 mL	4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM571992_00001	1 mL	2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00002	08/31/18		Restek, Lot A0113194		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00003	07/31/18		restek, Lot A0112895		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00014	07/31/18		Restek, Lot A0134268		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00001	12/31/18		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
vmrprimw_00297	08/29/18	08/22/18	MEOH, Lot NA	4 mL	VMRPRIM_00029	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.VMRPRIM_00029	10/31/18	07/28/18	MEOH, Lot 0000196626	50 mL	VM569721_00004	0.4 mL	Trichloroethene	50 ug/mL
							2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
					VM569723_00004	2 mL	Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00016	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00004	11/30/18		Restek, Lot A0115554		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00004	11/30/18		restek, Lot A0115628		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00016	10/31/18		Restek, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00001	12/31/18		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL

Reagent

vm30026_00002



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

Rec: 4/11/17 ⑤

VM30026-00002



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30026 Lot No.: A0120567
Description : 4-Bromofluorobenzene Mixture
4-Bromofluorobenzene 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : July 31, 2021 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1-Bromo-4-fluorobenzene (BFB)	2,019.3 µg/mL	+/-	11.8506	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KOV)		+/-	113.2335	µg/mL	Unstressed
	Purity 99%		+/-	115.8825	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

vm30026_00003



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REC: 11/28/18
VM 30026-00003

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30026 Lot No.: A0141187
Description: 4-Bromofluorobenzene Mixture
4-Bromofluorobenzene 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: August 31, 2023 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1-Bromo-4-fluorobenzene (BFB)	2,004.7 µg/mL	+/- 11.7645	µg/mL	Gravimetric	
	CAS # 460-00-4 (Lot 20401KO)		+/- 112.4110	µg/mL	Unstressed	
	Purity 99%		+/- 115.0408	µg/mL	Stressed	

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

vm30241_00007



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 Lot No.: A0134242
Description : 8260A Internal Standard Mix
8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : January 31, 2023 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Fluorobenzene CAS # 462-06-6 (Lot BCBK8171V) Purity 99%	2,503.6 µg/mL	+/- 14.5561 µg/mL Gravimetric +/- 140.3744 µg/mL Unstressed +/- 143.6590 µg/mL Stressed
2	Chlorobenzene-d5 CAS # 3114-55-4 (Lot PR-22736) Purity 99%	2,506.4 µg/mL	+/- 14.5724 µg/mL Gravimetric +/- 140.5314 µg/mL Unstressed +/- 143.8196 µg/mL Stressed
3	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 (Lot PR-18488) Purity 99%	2,513.4 µg/mL	+/- 14.6131 µg/mL Gravimetric +/- 140.9238 µg/mL Unstressed +/- 144.2213 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

VM30241-00007

REC'D
5-4-18

Reagent

VM567650_00027

VMS 67650-00027

Rec: 4/11/17

39



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 567650 Lot No.: A0120212
 Description: 8260 Surrogate Standard
8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul
 Container Size: 5 mL Pkg Amt: > 5 mL
 Expiration Date: July 31, 2021 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane CAS # 1868-53-7 (Lot 032015) Purity 99%	2,521.3 µg/mL	+/- 14.6591 µg/mL +/- 141.3668 µg/mL +/- 144.6746 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 CAS # 17060-07-0 (Lot 14C-191) Purity 99%	2,523.7 µg/mL	+/- 14.6730 µg/mL +/- 141.5014 µg/mL +/- 144.8123 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 CAS # 2037-26-5 (Lot PR-26623) Purity 99%	2,523.6 µg/mL	+/- 14.6724 µg/mL +/- 141.4957 µg/mL +/- 144.8066 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 (Lot 20401KOV) Purity 99%	2,510.9 µg/mL	+/- 14.5986 µg/mL +/- 140.7837 µg/mL +/- 144.0778 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
 CAS # 67-56-1
 Purity 99%

Reagent

VM567650_00029



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Rec: 8/22/17
UM 567650-00029

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 Lot No.: A0124069
Description : 8260 Surrogate Standard
8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : January 31, 2022 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane CAS # 1868-53-7 (Lot 0012016) Purity 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 CAS # 17060-07-0 (Lot PR-25433) Purity 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 CAS # 2037-26-5 (Lot PR-27311) Purity 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 (Lot 20401KOV) Purity 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed
Solvent:	P&T Methanol CAS # 67-56-1 Purity 99%			

Reagent

VM568720_00028



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 Lot No.: A0135693
Description : 8260 List 1/Std #5 Acrolein High
8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : August 31, 2018 Storage: 0°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acrolein	19,777.5 µg/mL	+/- 115.8016 µg/mL Gravimetric
	CAS # 107-02-8 (Lot 171116JLM)		+/- 634.1288 µg/mL Unstressed
	Purity 99%		+/- 737.1054 µg/mL Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM569721_00002

VM569721-00002

Rec: 9/16/15



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 Lot No.: A0113194

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : August 31, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acetone CAS # 67-64-1 (Lot 07196AK) Purity 99%	12,510.0 µg/mL	+/- 73.2488 µg/mL Gravimetric +/- 665.8110 µg/mL Unstressed +/- 666.5452 µg/mL Stressed
2	2-Butanone (MEK) CAS # 78-93-3 (Lot BCBK4358V) Purity 99%	12,527.5 µg/mL	+/- 73.3513 µg/mL Gravimetric +/- 666.7424 µg/mL Unstressed +/- 667.4776 µg/mL Stressed
3	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1 (Lot SHBF5332V) Purity 99%	12,503.0 µg/mL	+/- 73.2078 µg/mL Gravimetric +/- 665.4385 µg/mL Unstressed +/- 666.1722 µg/mL Stressed
4	2-Hexanone CAS # 591-78-6 (Lot MKBN7380V) Purity 99%	12,509.0 µg/mL	+/- 73.2429 µg/mL Gravimetric +/- 665.7578 µg/mL Unstressed +/- 666.4919 µg/mL Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VM569721_00004



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0115554

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,501.8 µg/mL	+/-	72.6865	µg/mL	Gravimetric
	CAS # 67-64-1 (Lot 07196AK)		+/-	754.2890	µg/mL	Unstressed
	Purity 99%		+/-	756.0798	µg/mL	Stressed
2	2-Butanone (MEK)	12,499.7 µg/mL	+/-	72.6744	µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBG0444V)		+/-	754.1625	µg/mL	Unstressed
	Purity 98%		+/-	755.9530	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,500.6 µg/mL	+/-	72.6796	µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBF9556V)		+/-	754.2166	µg/mL	Unstressed
	Purity 99%		+/-	756.0072	µg/mL	Stressed
4	2-Hexanone	12,502.4 µg/mL	+/-	72.6900	µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKBT3158V)		+/-	754.3252	µg/mL	Unstressed
	Purity 99%		+/-	756.1161	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)

CAS # 67-56-1/7732-18-5

Purity 99%

Reagent

vm569722_00011

Rec: 4/17/18
VM569722-00011



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Catalog No. : 569722 **Lot No.:** A0131502

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot Q167-08) Purity 99%	2,501.3 µg/mL	+/- 20.2137 µg/mL +/- 140.9452 µg/mL +/- 144.2108 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBG9707V) Purity 99%	2,504.9 µg/mL	+/- 24.8531 µg/mL +/- 141.8827 µg/mL +/- 145.1364 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 1026101231B1) Purity 99%	2,498.3 µg/mL	+/- 21.7258 µg/mL +/- 141.0069 µg/mL +/- 144.2635 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBH7966) Purity 99%	2,499.9 µg/mL	+/- 19.8572 µg/mL +/- 140.8167 µg/mL +/- 144.0816 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,500.4 µg/mL	+/- 24.9675 µg/mL +/- 141.6590 µg/mL +/- 144.9064 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot 23593) Purity 99%	2,500.1 µg/mL	+/- 25.2649 µg/mL +/- 141.6931 µg/mL +/- 144.9388 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot 4938100) Purity 99%	2,500.0 µg/mL	+/- 16.7114 µg/mL +/- 140.4149 µg/mL +/- 143.6892 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)	2,499.5 µg/mL	+/- 20.7085	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBH4155V)		+/- 140.9189	µg/mL	Unstressed
	Purity 99%		+/- 144.1805	µg/mL	Stressed
Solvent:	P&T Methanol				
	CAS # 67-56-1				
	Purity 99%				

Tech Tips:

Raw material may contain trace amounts of tert-Butanol.

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 mL/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

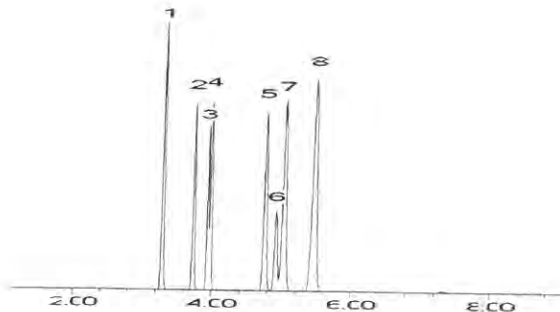
200°C

Det. Temp:

250°C

Det. Type:

MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon
F. Joseph Tallon - Mix Technician

Date Mixed: 10-Oct-2017

Balance: B251644995

Jennifer I. Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 12-Oct-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

vm569722_00015



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 Lot No.: A0154679

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : November 30, 2022 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot 00012554) Purity 99%	2,502.7 µg/mL	+/- 18.2705 µg/mL Gravimetric +/- 140.7566 µg/mL Unstressed +/- 144.0300 µg/mL Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBK6571) Purity 99%	2,500.3 µg/mL	+/- 18.7547 µg/mL Gravimetric +/- 140.6865 µg/mL Unstressed +/- 143.9553 µg/mL Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 00015559) Purity 99%	2,501.1 µg/mL	+/- 18.5858 µg/mL Gravimetric +/- 140.7083 µg/mL Unstressed +/- 143.9787 µg/mL Stressed
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBK2299) Purity 99%	2,497.1 µg/mL	+/- 17.5808 µg/mL Gravimetric +/- 140.3628 µg/mL Unstressed +/- 143.6309 µg/mL Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,500.8 µg/mL	+/- 23.3138 µg/mL Gravimetric +/- 141.3956 µg/mL Unstressed +/- 144.6498 µg/mL Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot 107-401039114-1) Purity 99%	2,499.0 µg/mL	+/- 21.4252 µg/mL Gravimetric +/- 140.9973 µg/mL Unstressed +/- 144.2558 µg/mL Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot 4938100) Purity 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL Gravimetric +/- 140.1725 µg/mL Unstressed +/- 143.4524 µg/mL Stressed

8	Trichlorofluoromethane (CFC-11)	2,499.6	µg/mL	+/-	21.2368	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot 25931)			+/-	141.0019	µg/mL	Unstressed
	Purity 99%			+/-	144.2618	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Raw material may contain trace amounts of tert-Butanol.

Column:

60m x 0.25mm x 1.4µm
 Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant pressure 30 psi

Temp. Program:

40°C (hold 2 min.) to 240°C
 @ 8°C/min. (hold 5 min.)

Inj. Temp:

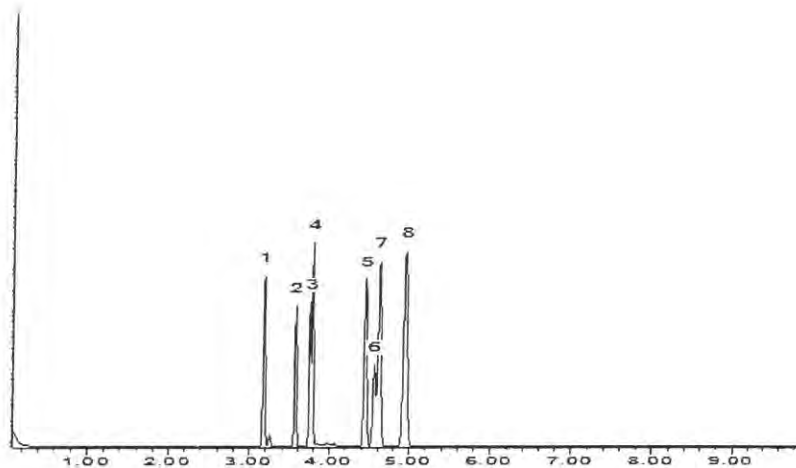
200°C

Det. Temp:

250°C

Det. Type:

MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


 Tom Suckal - Mix Technician

Date Mixed: 04-Nov-2019

Balance: B707717271


 Feng-Yun Lo - QC Analyst

Date Passed: 10-Nov-2019

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

Reagent

vm569722s_00004

VM 5697225 - 00004

Recd 7/12/16 (20)



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Catalog No. : 569722.sec Lot No.: A0115484
Description : 8260 List 1 / Std #3 Gases (2015)
8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : November 30, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8.SEC (Lot 22274) Purity 99%	2,505.6 µg/mL	+/- 16.6251 µg/mL +/- 140.7169 µg/mL +/- 143.9990 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3.SEC (Lot 18343) Purity 99%	2,517.3 µg/mL	+/- 17.3796 µg/mL +/- 141.4522 µg/mL +/- 144.7477 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride CAS # 75-01-4.SEC (Lot MKBK6872V) Purity 99%	2,510.2 µg/mL	+/- 16.6342 µg/mL +/- 140.9727 µg/mL +/- 144.2609 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene CAS # 106-99-0.SEC (Lot 22331) Purity 99%	2,516.5 µg/mL	+/- 17.4874 µg/mL +/- 141.4240 µg/mL +/- 144.7182 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9.SEC (Lot Q119-46) Purity 99%	2,511.5 µg/mL	+/- 16.8310 µg/mL +/- 141.0664 µg/mL +/- 144.3557 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3.SEC (Lot 00004202) Purity 99%	2,504.8 µg/mL	+/- 16.4341 µg/mL +/- 140.6469 µg/mL +/- 143.9283 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4.SEC (Lot SHBC0858V) Purity 99%	2,500.5 µg/mL	+/- 16.1659 µg/mL +/- 140.3776 µg/mL +/- 143.6540 µg/mL	Gravimetric Unstressed Stressed

Trichlorofluoromethane (CFC-11) 2,524.5 µg/mL +/- 16.8928 µg/mL Gravimetric
CAS # 75-69-4 SEC (Lot Q12B-59) +/- 141.7952 µg/mL Unstressed
Purity 99% +/- 145.1017 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

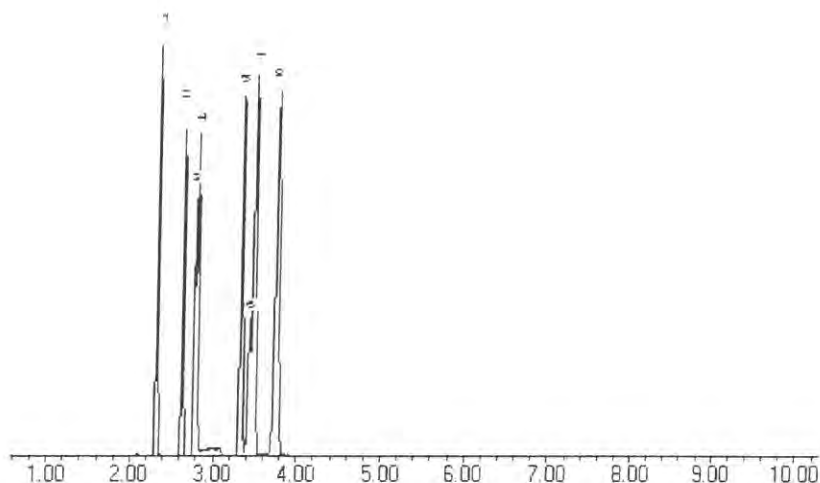
Carrier Gas:
helium-constant flow 2.0 mL/min

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 5°C/min

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe
Lane Kibe - Mix Technician

Date Mixed: 17-Nov-2015

Balance: 1127510105

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 10-Dec-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

vm569722s_00007

Ref: 1-23-19
VM5697225-00007



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Catalog No. : 569722.SEC **Lot No.:** A0142117

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8.SEC (Lot 24847) Purity 99%	2,503.0 µg/mL	+/- 23.3708 µg/mL Gravimetric +/- 141.5277 µg/mL Unstressed +/- 144.7846 µg/mL Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3.SEC (Lot 18343) Purity 99%	2,497.4 µg/mL	+/- 25.3963 µg/mL Gravimetric +/- 141.5662 µg/mL Unstressed +/- 144.8078 µg/mL Stressed
3	Vinyl chloride CAS # 75-01-4.SEC (Lot MKBK6872V) Purity 99%	2,501.8 µg/mL	+/- 19.5755 µg/mL Gravimetric +/- 140.8855 µg/mL Unstressed +/- 144.1539 µg/mL Stressed
4	1,3-Butadiene CAS # 106-99-0.SEC (Lot 22331) Purity 99%	2,505.3 µg/mL	+/- 20.9927 µg/mL Gravimetric +/- 141.2797 µg/mL Unstressed +/- 144.5480 µg/mL Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9.SEC (Lot Q119-46) Purity 99%	2,498.6 µg/mL	+/- 25.6449 µg/mL Gravimetric +/- 141.6796 µg/mL Unstressed +/- 144.9218 µg/mL Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3.SEC (Lot 00004202) Purity 99%	2,498.9 µg/mL	+/- 24.9623 µg/mL Gravimetric +/- 141.5741 µg/mL Unstressed +/- 144.8194 µg/mL Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 * (Lot 7766400) Purity 99%	2,500.0 µg/mL	+/- 14.6714 µg/mL Gravimetric +/- 140.1867 µg/mL Unstressed +/- 143.4662 µg/mL Stressed

8	Trichlorofluoromethane (CFC-11)	2,501.7 µg/mL	+/- 23.1926	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot 253600)		+/- 141.4285	µg/mL	Unstressed
	Purity 99%		+/- 144.6844	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

* Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.

Tech Tips:

Raw material may contain trace amounts of tert-Butanol.

Column:
 60m x 0.25mm x 1.4µm
 Rtx-502.2 (cat.#10916)

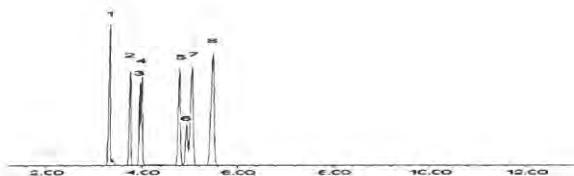
Carrier Gas:
 helium-constant flow 2.0 mL/min.

Temp. Program:
 40°C (hold 6 min.) to 100°C
 @ 5°C/min.

Inj. Temp:
 200°C

Det. Temp:
 250°C

Det. Type:
 MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Mage

Date Mixed: 04-Oct-2018

Balance: 1127510105

Jennifer Pollino
 Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 08-Oct-2018

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

Reagent

VM569723_00003



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Catalog No.: 569723 Lot No.: A0112895
Description: 8260 List 1 / Std #4 2-CEVE (2015)
8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: July 31, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Chloroethyl vinyl ether CAS # 110-75-8 Purity 99% (Lot MKBK2735V)	2,503.2 µg/mL	+/- 14.6902 µg/mL Gravimetric +/- 53.1239 µg/mL Unstressed +/- 53.3593 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569723_00004



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Catalog No. : 569723 **Lot No.:** A0115628
Description : 8260 List 1 / Std #4 2-CEVE (2015)
8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Chloroethyl vinyl ether CAS # 110-75-8 Purity 99% (Lot MKBK2735V)	2,509.2 µg/mL	+/- 14.5887 µg/mL +/- 53.7223 µg/mL +/- 55.2841 µg/mL Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569724_00014

R'd 4/17/18

VM569724-00014



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Catalog No.: 569724 Lot No.: A0134268
Description: 8260 List 1 / Std #6 Vinyl Acetate (2015)
8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: July 31, 2018 Storage: 0°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Vinyl acetate CAS # 108-05-4 Purity 99% (Lot STBD7333V)	5,014.0 µg/mL	+/- 29.3581 µg/mL Gravimetric +/- 302.5368 µg/mL Unstressed +/- 303.2550 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM569724_00016



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 569724 Lot No.: A0137562
Description: 8260 List 1 / Std #6 Vinyl Acetate (2015)
8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: October 31, 2018 Storage: 0°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Vinyl acetate	5,020.0 µg/mL	+/- 29.4602 µg/mL Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.9053 µg/mL Unstressed
	Purity 99%		+/- 303.6243 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM571992_00001

Rec: 1-25-17
VM571992-00001



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Catalog No. : 571992 Lot No.: A0123711
Description : 8260 List 1 / Std #1 MegaMix (2017)
8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : December 31, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Diethyl ether (ethyl ether) CAS # 60-29-7 (Lot SHBG1462V) Purity 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL Gravimetric +/- 150.9115 µg/mL Unstressed +/- 151.2698 µg/mL Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 (Lot 00009482) Purity 99%	2,505.1 µg/mL	+/- 14.5650 µg/mL Gravimetric +/- 151.1453 µg/mL Unstressed +/- 151.5041 µg/mL Stressed
3	1,1-dichloroethene CAS # 75-35-4 (Lot SHBG8609V) Purity 99%	2,511.5 µg/mL	+/- 14.6021 µg/mL Gravimetric +/- 151.5299 µg/mL Unstressed +/- 151.8897 µg/mL Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 (Lot SHBF0688V) Purity 99%	25,001.8 µg/mL	+/- 145.3547 µg/mL Gravimetric +/- 1,508.4656 µg/mL Unstressed +/- 1,512.0470 µg/mL Stressed
5	Methyl acetate CAS # 79-20-9 (Lot SHBG4345V) Purity 99%	5,000.5 µg/mL	+/- 29.0733 µg/mL Gravimetric +/- 301.7023 µg/mL Unstressed +/- 302.4186 µg/mL Stressed
6	Iodomethane (methyl iodide) CAS # 74-88-4 (Lot SHBF2149V) Purity 99%	2,502.9 µg/mL	+/- 14.5519 µg/mL Gravimetric +/- 151.0095 µg/mL Unstressed +/- 151.3681 µg/mL Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1 (Lot SHBF8133V) Purity 99%	2,517.1 µg/mL	+/- 14.6348 µg/mL Gravimetric +/- 151.8693 µg/mL Unstressed +/- 152.2299 µg/mL Stressed

10000-5PPI-21MV

8	Methylene chloride (dichloromethane)		2,502.1	µg/mL	+/-	14.5476	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBH2578V)			+/-	150.9643	µg/mL	Unstressed
	Purity 99%				+/-	151.3227	µg/mL	Stressed
9	Carbon disulfide		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot S20A856)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
10	Acrylonitrile		25,001.3	µg/mL	+/-	145.3518	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot T07B2030)			+/-	1,508.4355	µg/mL	Unstressed
	Purity 99%				+/-	1,512.0167	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBG2655V)			+/-	151.1528	µg/mL	Unstressed
	Purity 99%				+/-	151.5117	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,500.5	µg/mL	+/-	14.5379	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBV2831V)			+/-	150.8644	µg/mL	Unstressed
	Purity 98%				+/-	151.2226	µg/mL	Stressed
13	n-Hexane (C6)		2,503.8	µg/mL	+/-	14.5570	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBG2674V)			+/-	151.0623	µg/mL	Unstressed
	Purity 99%				+/-	151.4210	µg/mL	Stressed
14	1,1-Dichloroethane		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 00008621)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
15	2,2-Dichloropropane		2,501.0	µg/mL	+/-	14.5408	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBR0622V)			+/-	150.8940	µg/mL	Unstressed
	Purity 98%				+/-	151.2522	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,503.8	µg/mL	+/-	14.5570	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot 09431AEV)			+/-	151.0623	µg/mL	Unstressed
	Purity 99%				+/-	151.4210	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,512.5	µg/mL	+/-	363.4341	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBG8201V)			+/-	3,771.6543	µg/mL	Unstressed
	Purity 99%				+/-	3,780.6088	µg/mL	Stressed
18	chloroform		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot MKBV2089V)			+/-	150.9492	µg/mL	Unstressed
	Purity 99%				+/-	151.3076	µg/mL	Stressed
19	Bromochloromethane		2,503.3	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/-	151.0322	µg/mL	Unstressed
	Purity 99%				+/-	151.3907	µg/mL	Stressed
20	Tetrahydrofuran		5,001.3	µg/mL	+/-	29.0777	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBG2910V)			+/-	301.7476	µg/mL	Unstressed
	Purity 99%				+/-	302.4640	µg/mL	Stressed
21	1,1,1-trichloroethane		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B15W12061)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
22	Cyclohexane		2,502.0	µg/mL	+/-	14.5468	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot MKBX4768V)			+/-	150.9567	µg/mL	Unstressed
	Purity 99%				+/-	151.3151	µg/mL	Stressed
23	1,1-Dichloropropene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 160727JLM)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed

24	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG1763V)	2,503.3 µg/mL	+/- +/- +/-	14.5541 151.0322 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) CAS # 142-82-5 Purity 99%	(Lot SHBG6171V)	2,505.5 µg/mL	+/- +/- +/-	14.5672 151.1679 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot SHBF9313V)	2,504.8 µg/mL	+/- +/- +/-	14.5628 151.1227 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBH2056V)	2,506.9 µg/mL	+/- +/- +/-	14.5752 151.2509 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBH1955V)	2,502.4 µg/mL	+/- +/- +/-	14.5490 150.9794 151.3378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane CAS # 108-87-2 Purity 98%	(Lot SHBG0634V)	2,500.3 µg/mL	+/- +/- +/-	14.5372 150.8570 151.2152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot 01113D0V)	2,503.0 µg/mL	+/- +/- +/-	14.5527 151.0171 151.3756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1 Purity 99%	(Lot SHBH2584V)	50,011.4 µg/mL	+/- +/- +/-	290.7552 3,017.4064 3,024.5702	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3 Purity 98%	(Lot 10183283)	2,501.9 µg/mL	+/- +/- +/-	14.5465 150.9531 151.3115	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 22622)	2,501.0 µg/mL	+/- +/- +/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBH1932V)	2,504.3 µg/mL	+/- +/- +/-	14.5599 151.0925 151.4512	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2 Purity 99%	(Lot SHBD9190V)	2,506.9 µg/mL	+/- +/- +/-	14.5752 151.2509 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot C584177)	2,503.6 µg/mL	+/- +/- +/-	14.5563 151.0548 151.4134	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	2,501.0 µg/mL	+/- +/- +/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	(Lot BCBG2162V)	2,503.5 µg/mL	+/- +/- +/-	14.5556 151.0472 151.4059	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBD9374V)	2,500.9 µg/mL	+/- +/- +/-	14.5403 150.8889 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKBW3597V)	2,500.2 µg/mL	+/- +/- +/-	14.5365 150.8497 151.2078	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,501.3 µg/mL	+/- +/- +/-	14.5425 150.9115 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBF0505V)	2,500.1 µg/mL	+/- +/- +/-	14.5359 150.8436 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBG4347V)	1,250.3 µg/mL	+/- +/- +/-	7.2691 75.4331 75.6122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBG3928V)	1,251.3 µg/mL	+/- +/- +/-	7.2749 75.4935 75.6727	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBG5920V)	2,503.3 µg/mL	+/- +/- +/-	14.5541 151.0322 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	(Lot MKBS3769V)	2,500.3 µg/mL	+/- +/- +/-	14.5367 150.8512 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBH3432V)	2,504.9 µg/mL	+/- +/- +/-	14.5636 151.1302 151.4890	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 Purity 99%	(Lot MKBS7097V)	2,506.3 µg/mL	+/- +/- +/-	14.5716 151.2132 151.5722	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,501.6 µg/mL	+/- +/- +/-	14.5447 150.9341 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBD8459V)	2,502.9 µg/mL	+/- +/- +/-	14.5519 151.0095 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane CAS # 75-27-4 Purity 97%	(Lot MKBW5506V)	2,506.8 µg/mL	+/- +/- +/-	14.5750 151.2490 151.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,501.3 µg/mL	+/- +/- +/-	14.5425 150.9115 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	(Lot BCBH8722V)	2,508.5 µg/mL	+/- +/- +/-	14.5846 151.3489 151.7082	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 95%	(Lot MKBP6041V)	2,500.8 µg/mL	+/- +/- +/-	14.5396 150.8817 151.2399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	(Lot MKBJ0332V)	2,501.9 µg/mL	+/- +/- +/-	14.5461 150.9492 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1 Purity 99%	(Lot MKBD4032V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	(Lot BCBQ2165V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBW5554V)	2,500.6 µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBL7753V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot S52237V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	(Lot MKBJ6229V)	2,500.8 µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBR9260V)	2,505.4 µg/mL	+/- 14.5665 +/- 151.1604 +/- 151.5193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBS2604V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	2,503.9 µg/mL	+/- 14.5577 +/- 151.0699 +/- 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	2,509.9 µg/mL	+/- 14.5926 +/- 151.4319 +/- 151.7914	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09418JJV)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,505.0 µg/mL	+/- 14.5643 +/- 151.1378 +/- 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBC5541V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	2,506.5 µg/mL	+/- 14.5728 +/- 151.2266 +/- 151.5856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBW2603V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,511.1 µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	151.5073	µg/mL	Unstressed
	Purity 99%			+/-	151.8670	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

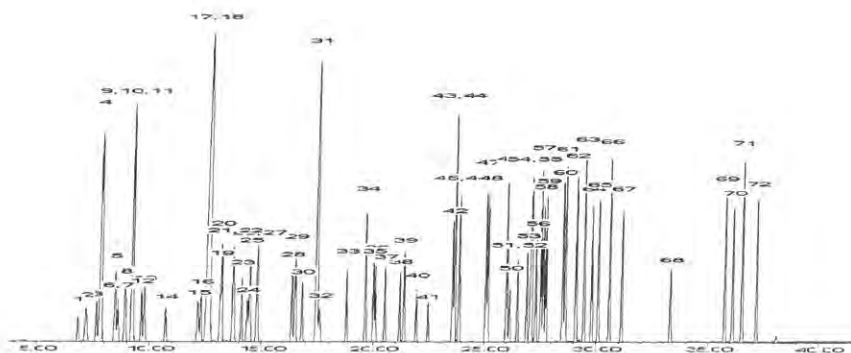
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon
F. Joseph Tallon - Mix Technician

Date Mixed: 22-Dec-2016 **Balance:** B251644995

Jennifer I. Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 04-Jan-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Method 8260C

Volatile Organic Compounds (GC/MS)
by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Matrix: Water Level: Low
 GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
16WCIA	240-132346-1	99	95	102	91
TRIP BLANK	240-132346-2	103	98	107	96
	MB 240-440963/8	99	92	103	94
	LCS 240-440963/5	93	87	105	103
	240-132112-N-9 MS	92	85	106	102
	240-132112-Q-9 MSD	95	88	108	104

	<u>QC LIMITS</u>
DBFM = Dibromofluoromethane (Surr)	78-129
DCA = 1,2-Dichloroethane-d4 (Surr)	75-130
TOL = Toluene-d8 (Surr)	69-122
BFB = 4-Bromofluorobenzene (Surr)	47-134

Column to be used to flag recovery values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: U1915329.d

Lab ID: LCS 240-440963/5 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Vinyl chloride	20.0	21.2	106	61-134	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: U1915335.d

Lab ID: 240-132112-N-9 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Vinyl chloride	20.0	1.0 U	20.0	100	49-136	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: U1915336.d
 Lab ID: 240-132112-Q-9 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Vinyl chloride	20.0	19.6	98	2	35	49-136	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
SDG No.: _____
Lab File ID: U1915332.d Lab Sample ID: MB 240-440963/8
Matrix: Water Heated Purge: (Y/N) N
Instrument ID: A3UX19 Date Analyzed: 07/01/2020 18:26
GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-440963/5	U1915329.d	07/01/2020 17:18
	240-132112-N-9 MS	U1915335.d	07/01/2020 19:34
	240-132112-Q-9 MSD	U1915336.d	07/01/2020 19:57
16WCIA	240-132346-1	U1915353.d	07/02/2020 02:20
TRIP BLANK	240-132346-2	U1915354.d	07/02/2020 02:42

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
SDG No.: _____
Lab File ID: bfb036.d BFB Injection Date: 07/24/2018
Instrument ID: A3UX19 BFB Injection Time: 17:22
Analysis Batch No.: 337766

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.1
75	30.0 - 60.0 % of mass 95	53.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	1.1 (1.2) 1
174	50.0 - 120.00 % of mass 95	84.3
175	5.0 - 9.0 % of mass 174	6.2 (7.4) 1
176	95.0 - 101.0 % of mass 174	80.7 (95.7) 1
177	5.0 - 9.0 % of mass 176	5.4 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-337766/2	U1900783.d	07/24/2018	17:50
	STD8260 240-337766/3	U1900784.d	07/24/2018	18:13
	STD8260 240-337766/9	U1900790.d	07/24/2018	18:35
	ICIS 240-337766/10	U1900791.d	07/24/2018	18:57
	STD8260 240-337766/11	U1900792.d	07/24/2018	19:20
	STD8260 240-337766/12	U1900793.d	07/24/2018	19:42
	STD8260 240-337766/13	U1900794.d	07/24/2018	20:04

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Lab File ID: bfb037.d BFB Injection Date: 07/25/2018
 Instrument ID: A3UX19 BFB Injection Time: 11:28
 Analysis Batch No.: 337917

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.4
75	30.0 - 60.0 % of mass 95	52.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	1.1 (1.3) 1
174	50.0 - 120.00 % of mass 95	82.7
175	5.0 - 9.0 % of mass 174	6.4 (7.8) 1
176	95.0 - 101.0 % of mass 174	80.3 (97.1) 1
177	5.0 - 9.0 % of mass 176	5.2 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 240-337917/14	U1900808.d	07/25/2018	15:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
SDG No.: _____
Lab File ID: bfb058.d BFB Injection Date: 08/27/2018
Instrument ID: A3UX19 BFB Injection Time: 16:23
Analysis Batch No.: 342719

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	17.5
75	30.0 - 60.0 % of mass 95	49.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.5
173	Less than 2.0 % of mass 174	0.6 (0.6) 1
174	50.0 - 120.00 % of mass 95	94.9
175	5.0 - 9.0 % of mass 174	7.3 (7.7) 1
176	95.0 - 101.0 % of mass 174	92.7 (97.7) 1
177	5.0 - 9.0 % of mass 176	5.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-342719/7	U1901323.d	08/27/2018	17:09
	STD8260 240-342719/8	U1901324.d	08/27/2018	17:31
	STD8260 240-342719/9	U1901325.d	08/27/2018	17:53
	ICIS 240-342719/10	U1901326.d	08/27/2018	18:16
	STD8260 240-342719/11	U1901327.d	08/27/2018	18:38
	STD8260 240-342719/12	U1901328.d	08/27/2018	19:01
	STD8260 240-342719/13	U1901329.d	08/27/2018	19:23
	ICV 240-342719/14	U1901330.d	08/27/2018	19:45

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Lab File ID: bfb559.d BFB Injection Date: 07/01/2020
 Instrument ID: A3UX19 BFB Injection Time: 16:10
 Analysis Batch No.: 440963

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	15.7
75	30.0 - 60.0 % of mass 95	45.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.6
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	84.9
175	5.0 - 9.0 % of mass 174	7.0 (8.3) 1
176	95.0 - 101.0 % of mass 174	82.1 (96.7) 1
177	5.0 - 9.0 % of mass 176	5.4 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-440963/3	U1915327.d	07/01/2020	16:33
	CCVIS 240-440963/4	U1915328.d	07/01/2020	16:55
	LCS 240-440963/5	U1915329.d	07/01/2020	17:18
	MB 240-440963/8	U1915332.d	07/01/2020	18:26
	240-132112-N-9 MS	U1915335.d	07/01/2020	19:34
	240-132112-Q-9 MSD	U1915336.d	07/01/2020	19:57
16WCIA	240-132346-1	U1915353.d	07/02/2020	2:20
TRIP BLANK	240-132346-2	U1915354.d	07/02/2020	2:42

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Sample No.: ICIS 240-342719/10 Date Analyzed: 08/27/2018 18:16
 Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): U1901326.d Heated Purge: (Y/N) N
 Calibration ID: 46687

	FB		CBNZd5		DCBd4		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
INITIAL CALIBRATION MID-POINT	972482	5.65	783101	8.50	430906	10.88	
UPPER LIMIT	1944964	6.15	1566202	9.00	861812	11.38	
LOWER LIMIT	486241	5.15	391551	8.00	215453	10.38	
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-342719/14		955207	5.65	765531	8.50	424750	10.88
CCVIS 240-440963/4		1097254	5.67	791587	8.50	421899	10.90

FB = Fluorobenzene

CBNZd5 = Chlorobenzene-d5

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Sample No.: CCVIS 240-440963/4 Date Analyzed: 07/01/2020 16:55
 Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): U1915328.d Heated Purge: (Y/N) N
 Calibration ID: 57283

	FB		CBNZd5		DCBd4	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	1097254	5.67	791587	8.50	421899	10.90
UPPER LIMIT	2194508	6.17	1583174	9.00	843798	11.40
LOWER LIMIT	548627	5.17	395794	8.00	210950	10.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 240-440963/5		1131345	5.67	815966	8.50	431035 10.90
MB 240-440963/8		1038938	5.67	737436	8.50	375744 10.90
240-132112-N-9 MS		1132584	5.67	802521	8.50	435506 10.90
240-132112-Q-9 MSD		1128446	5.67	798856	8.50	426824 10.90
240-132346-1	16WCIA	1038571	5.67	758576	8.50	379441 10.90
240-132346-2	TRIP BLANK	1025763	5.67	735355	8.50	373794 10.90

FB = Fluorobenzene

CBNZd5 = Chlorobenzene-d5

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Client Sample ID: 16WCIA Lab Sample ID: 240-132346-1
 Matrix: Water Lab File ID: U1915353.d
 Analysis Method: 8260C Date Collected: 06/22/2020 10:15
 Sample wt/vol: 5 (mL) Date Analyzed: 07/02/2020 02:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 440963 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	1.0	U	1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		69-122
1868-53-7	Dibromofluoromethane (Surr)	99		78-129
460-00-4	4-Bromofluorobenzene (Surr)	91		47-134
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		75-130

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915353.d
 Lims ID: 240-132346-B-1
 Client ID: 16WCIA
 Sample Type: Client
 Inject. Date: 02-Jul-2020 02:20:04 ALS Bottle#: 0 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-029
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 02-Jul-2020 15:12:05 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1039

First Level Reviewer: laveyt

Date: 02-Jul-2020 15:12:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.665	5.665	0.000	99	1038571	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	84	758576	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	94	379441	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.049	5.049	0.000	94	277864	19.9	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	96	304999	19.0	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	92	927681	20.4	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.686	9.685	0.001	91	311527	18.2	
12 Vinyl chloride	62		1.918				ND	U

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 02-Jul-2020 15:12:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915353.d

Injection Date: 02-Jul-2020 02:20:04

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: 240-132346-B-1

Lab Sample ID: 240-132346-1

Worklist Smp#: 29

Client ID: 16WCIA

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

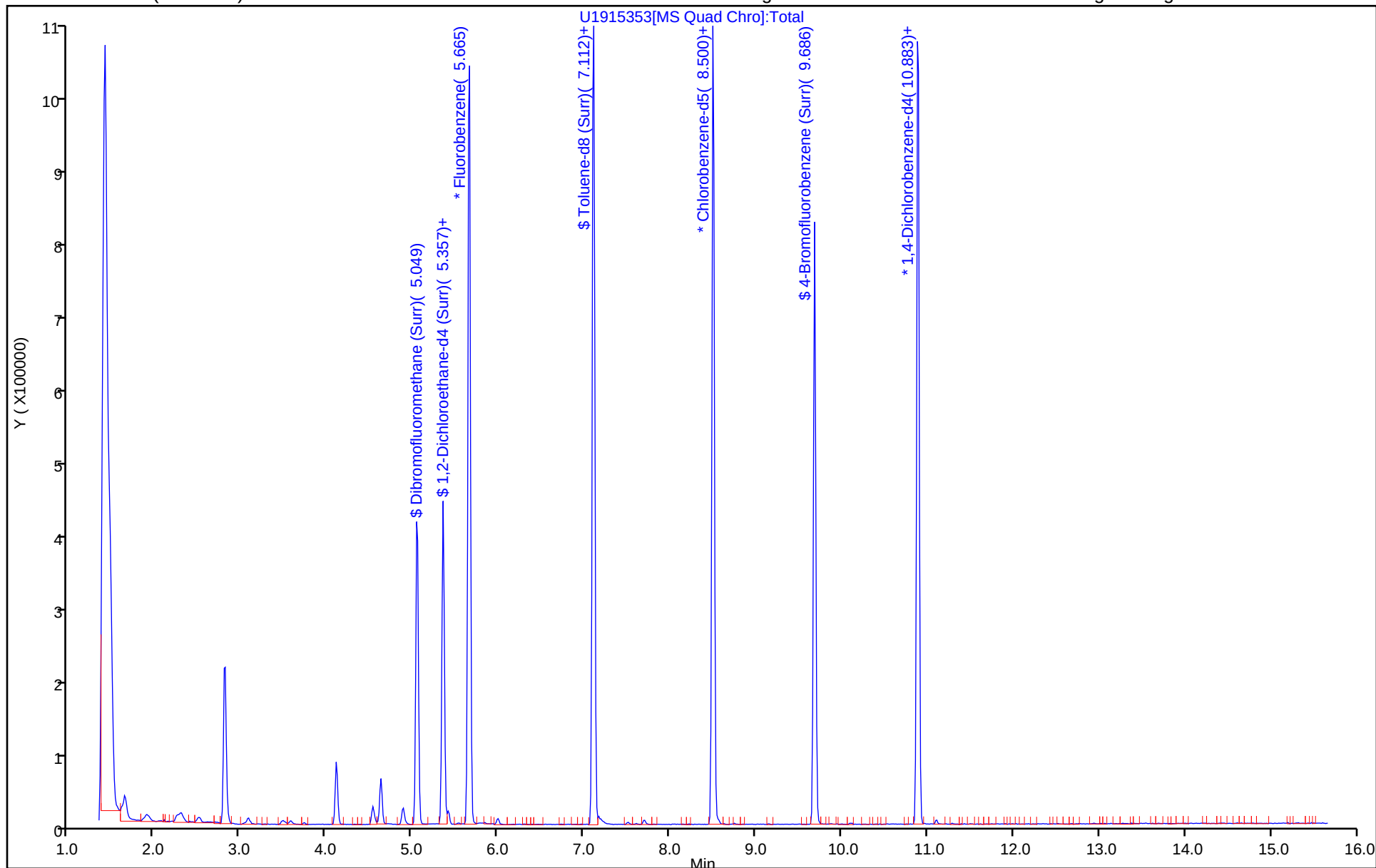
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915353.d
 Lims ID: 240-132346-B-1
 Client ID: 16WCIA
 Sample Type: Client
 Inject. Date: 02-Jul-2020 02:20:04 ALS Bottle#: 0 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-029
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 02-Jul-2020 15:12:05 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1039

First Level Reviewer: laveyt

Date: 02-Jul-2020 15:12:05

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Dibromofluoromethane (Surr)	20.0	19.9	99.38
\$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	19.0	94.98
\$ 6 Toluene-d8 (Surr)	20.0	20.4	101.97
\$ 7 4-Bromofluorobenzene (Surr)	20.0	18.2	91.00

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915353.d

Injection Date: 02-Jul-2020 02:20:04

Instrument ID: A3UX19

Lims ID: 240-132346-B-1

Lab Sample ID: 240-132346-1

Client ID: 16WCIA

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 29

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: 8260_19

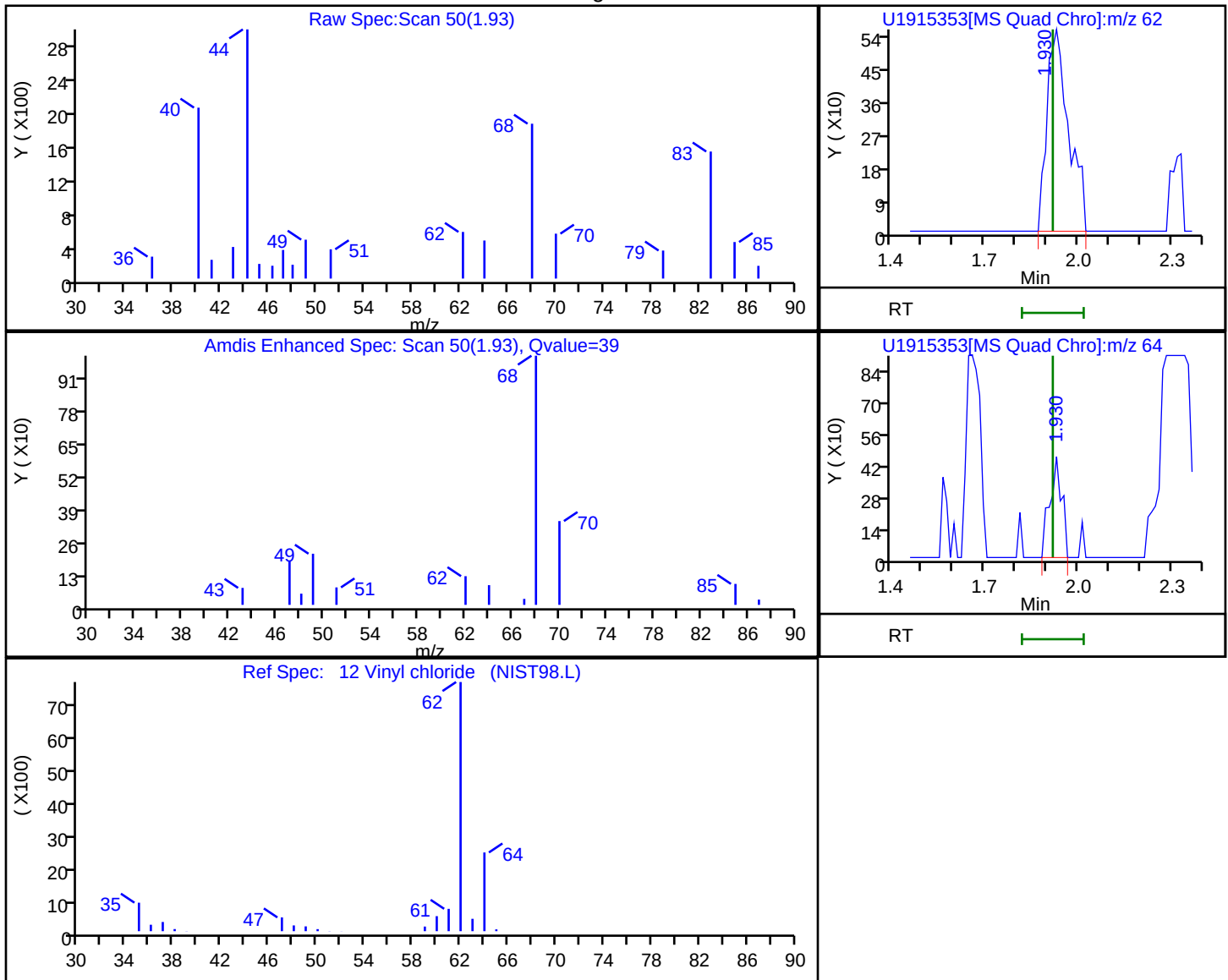
Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
1.93	62.00	2723	0.175982
1.93	64.00	1226	

Reviewer: laveyt, 02-Jul-2020 15:12:02

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Client Sample ID: TRIP BLANK Lab Sample ID: 240-132346-2
 Matrix: Water Lab File ID: U1915354.d
 Analysis Method: 8260C Date Collected: 06/22/2020 00:00
 Sample wt/vol: 5 (mL) Date Analyzed: 07/02/2020 02:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 440963 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	1.0	U	1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	107		69-122
1868-53-7	Dibromofluoromethane (Surr)	103		78-129
460-00-4	4-Bromofluorobenzene (Surr)	96		47-134
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		75-130

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915354.d
 Lims ID: 240-132346-B-2
 Client ID: TRIP BLANK
 Sample Type: Client
 Inject. Date: 02-Jul-2020 02:42:44 ALS Bottle#: 0 Worklist Smp#: 30
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-030
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 02-Jul-2020 15:12:05 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1039

First Level Reviewer: laveyt

Date: 02-Jul-2020 15:12:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.666	5.665	0.001	99	1025763	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	85	735355	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	95	373794	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.049	5.049	0.000	94	285795	20.7	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	96	311105	19.6	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	93	940269	21.3	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.686	9.685	0.001	91	319592	19.3	
12 Vinyl chloride	62		1.918				ND	

Reagents:

vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915354.d

Injection Date: 02-Jul-2020 02:42:44

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: 240-132346-B-2

Lab Sample ID: 240-132346-2

Worklist Smp#: 30

Client ID: TRIP BLANK

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

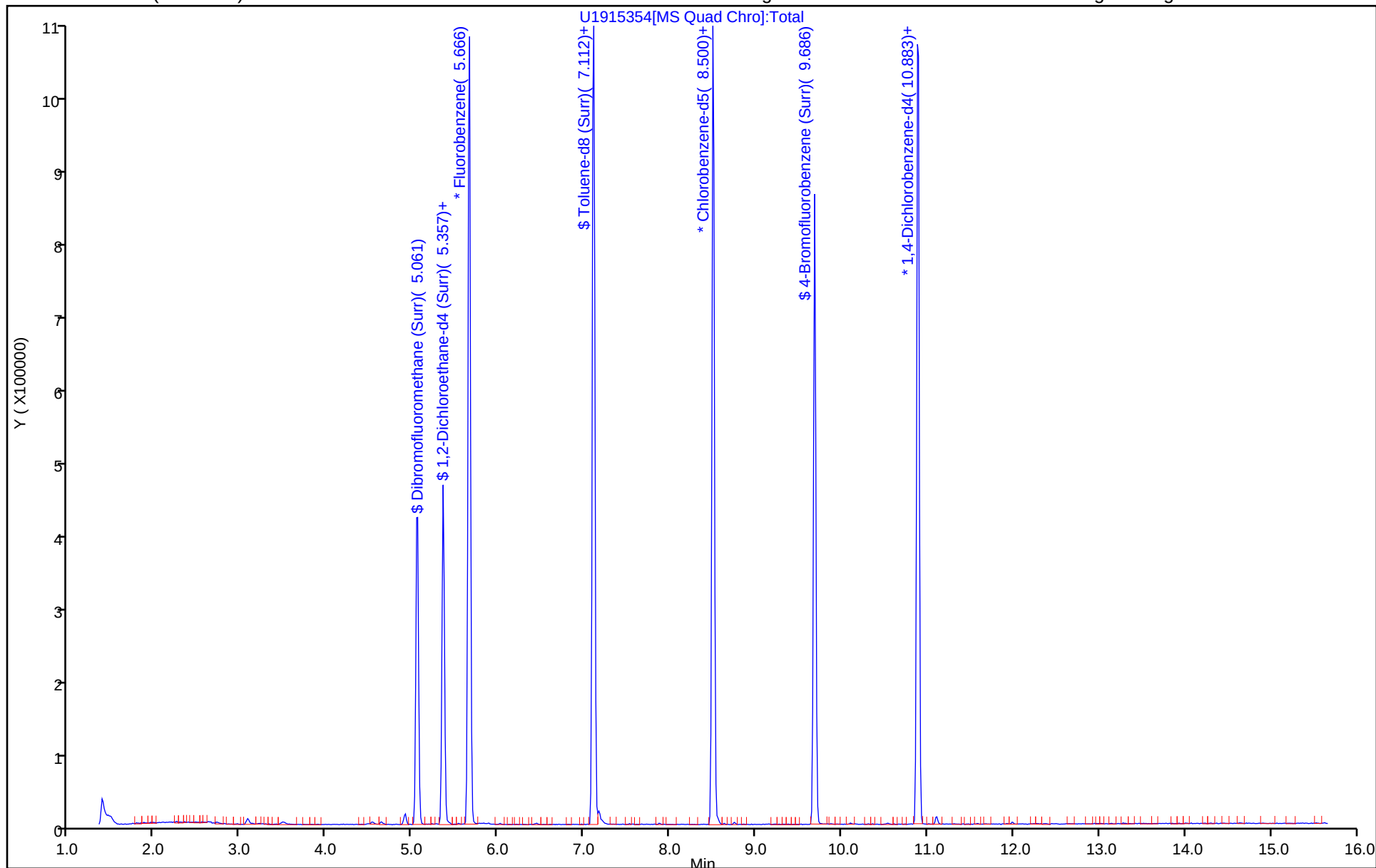
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915354.d
 Lims ID: 240-132346-B-2
 Client ID: TRIP BLANK
 Sample Type: Client
 Inject. Date: 02-Jul-2020 02:42:44 ALS Bottle#: 0 Worklist Smp#: 30
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-030
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 02-Jul-2020 15:12:05 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1039

First Level Reviewer: laveyt

Date: 02-Jul-2020 15:12:10

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Dibromofluoromethane (Surr)	20.0	20.7	103.50
\$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	19.6	98.09
\$ 6 Toluene-d8 (Surr)	20.0	21.3	106.62
\$ 7 4-Bromofluorobenzene (Surr)	20.0	19.3	96.30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-337766/13	U1900794.d
Level 2	STD8260 240-337766/12	U1900793.d
Level 3	STD8260 240-337766/11	U1900792.d
Level 4	ICIS 240-337766/10	U1900791.d
Level 5	STD8260 240-337766/9	U1900790.d
Level 6	STD8260 240-337766/3	U1900784.d
Level 7	STD8260 240-337766/2	U1900783.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2985 0.3869	0.3275 0.3899	0.3189	0.3531	0.3613	Ave		0.3480			0.1000	10.0		20.0			
Chloromethane	0.3558 0.3258	0.3705 0.3191	0.3263	0.3392	0.3223	Ave		0.3370			0.1000	5.8		20.0			
Butadiene	0.3408 0.3374	0.3424 0.3377	0.2895	0.3248	0.3219	Ave		0.3278				5.7		20.0			
Vinyl chloride	0.2746 0.3390	0.3544 0.3374	0.3113	0.3366	0.3288	Ave		0.3260			0.1000	8.0		20.0			
Bromomethane	0.2749 0.2254	0.2866 0.2173	0.2405	0.2466	0.2251	Ave		0.2452			0.0500	10.8		20.0			
Chloroethane	0.2109 0.1921	0.2097 0.1854	0.1960	0.2032	0.1901	Ave		0.1982			0.0500	5.0		20.0			
Dichlorofluoromethane	0.5221 0.4475	0.4917 0.4372	0.4526	0.4727	0.4486	Ave		0.4675				6.5		20.0			
Trichlorofluoromethane	0.4494 0.4561	0.4680 0.4427	0.3932	0.4472	0.4396	Ave		0.4423			0.1000	5.3		20.0			
Ethyl ether	0.2193 0.1979	0.2111 0.1891	0.1902	0.1939	0.1890	Ave		0.1987				6.0		20.0			
Acrolein	0.0586 0.0546	0.0507 0.0535	0.0446	0.0490	0.0542	Ave		0.0522				8.7		20.0			
1,1-Dichloroethene	0.3808 0.3850	0.3828 0.3735	0.3902	0.3740	0.3655	Ave		0.3788			0.1000	2.2		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2602 0.2706	0.2860 0.2683	0.2820	0.2661	0.2580	Ave		0.2702			0.0500	3.9		20.0			
Acetone	++++ 0.0784	0.0790 0.0643	0.0549	0.0580	0.0606	Ave		0.0659			0.0100	15.8		20.0			
Iodomethane	0.4645 0.4649	0.4824 0.4542	0.4796	0.4736	0.4610	Ave		0.4686				2.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766
SDG No.: _____
Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	1.0264 0.7904	0.9769 0.7703	0.8143	0.7839	0.7630	Ave		0.8465			0.1000	12.8		20.0			
3-Chloro-1-propene	0.4236 0.3955	0.4245 0.3845	0.3864	0.3828	0.3812	Ave		0.3969				4.8		20.0			
Methyl acetate	0.2893 0.2388	0.2199 0.2093	0.2069	0.2105	0.2113	Ave		0.2266			0.1000	13.1		20.0			
Methylene Chloride	++++ 0.2977	0.3380 0.2854	0.3031	0.3009	0.2892	Ave		0.3024			0.1000	6.2		20.0			
2-Methyl-2-propanol	++++ 0.0272	0.0286 ++++	0.0233	0.0231	0.0210	Ave		0.0246				12.8		20.0			
Acrylonitrile	0.1149 0.1149	0.0936 0.0991	0.0942	0.0985	0.1008	Ave		0.1023				8.8		20.0			
trans-1,2-Dichloroethene	0.4272 0.3621	0.3980 0.3508	0.3681	0.3544	0.3490	Ave		0.3728			0.1000	7.8		20.0			
Methyl tert-butyl ether	0.6889 0.7038	0.7226 0.6502	0.7037	0.7046	0.6888	Ave		0.6946			0.1000	3.3		20.0			
Hexane	0.4016 0.4127	0.4088 0.4136	0.4369	0.3839	0.3905	Ave		0.4069				4.3		20.0			
1,1-Dichloroethane	0.4297 0.4479	0.4309 0.4358	0.4483	0.4451	0.4391	Ave		0.4395			0.2000	1.8		20.0			
Vinyl acetate	0.4180 0.4211	0.3784 0.4083	0.3943	0.3850	0.3928	Ave		0.3997				4.1		20.0			
cis-1,2-Dichloroethene	0.3259 0.3058	0.3308 0.2928	0.3020	0.3030	0.2971	Ave		0.3082			0.1000	4.7		20.0			
2-Butanone (MEK)	++++ 0.0411	0.0357 0.0381	0.0358	0.0358	0.0391	Ave		0.0376			0.0100	6.0		20.0			
2,2-Dichloropropane	0.2667 0.2404	0.2856 0.2633	0.2822	0.2661	0.2457	Ave		0.2643				6.4		20.0			
Chlorobromomethane	0.2447 0.2004	0.2207 0.1830	0.1878	0.1937	0.1884	Ave		0.2027				11.0		20.0			
Tetrahydrofuran	0.0995 0.1054	0.1040 0.0940	0.0907	0.0913	0.0950	Ave		0.0971				6.1		20.0			
Chloroform	0.4629 0.4616	0.4798 0.4429	0.4485	0.4541	0.4433	Ave		0.4561			0.2000	2.9		20.0			
1,1,1-Trichloroethane	0.3956 0.4177	0.3988 0.4154	0.4324	0.4070	0.4089	Ave		0.4108			0.1000	3.0		20.0			
Cyclohexane	0.4246 0.4364	0.4382 0.4292	0.4507	0.4156	0.4161	Ave		0.4301			0.1000	3.0		20.0			
1,1-Dichloropropene	0.3755 0.3758	0.3903 0.3692	0.3840	0.3595	0.3614	Ave		0.3737				3.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.3639 0.3981	0.3846 0.3917	0.3944	0.3722	0.3729	Ave		0.3825			0.1000	3.4		20.0			
Isobutyl alcohol	0.0095 0.0104	0.0071 0.0087	0.0088	0.0079	0.0092	Ave		0.0088				12.2		20.0			
Benzene	0.9890 1.0452	1.0827 1.0051	1.0373	1.0007	1.0215	Ave		1.0259			0.5000	3.1		20.0			
1,2-Dichloroethane	0.3674 0.3257	0.3549 0.3127	0.3205	0.3110	0.3150	Ave		0.3296			0.1000	6.8		20.0			
n-Heptane	++++ 0.2252	0.7970 0.2266	0.2839	0.2324	0.2217	Lin1	0.5799	0.2147				4.3			0.9990		0.9900
Trichloroethene	0.3122 0.3167	0.3258 0.3140	0.3258	0.3068	0.3105	Ave		0.3160			0.1500	2.3		20.0			
Methylcyclohexane	0.4985 0.5342	0.5073 0.5200	0.5394	0.4970	0.4957	Ave		0.5132			0.1000	3.6		20.0			
1,2-Dichloropropane	0.2050 0.2404	0.2394 0.2326	0.2309	0.2270	0.2376	Ave		0.2304			0.1000	5.3		20.0			
Dibromomethane	0.2379 0.2151	0.2154 0.2010	0.2009	0.2115	0.2105	Ave		0.2132				5.8		20.0			
1,4-Dioxane	++++ 0.0024	0.0017 0.0024	0.0024	0.0024	0.0023	Ave		0.0023				13.5		20.0			
Dichlorobromomethane	0.3232 0.3408	0.3027 0.3295	0.3203	0.3127	0.3310	Ave		0.3229			0.1500	3.9		20.0			
2-Chloroethyl vinyl ether	0.1601 0.1755	0.1580 0.1783	0.1797	0.1698	0.1774	Ave		0.1713				5.2		20.0			
cis-1,3-Dichloropropene	0.3599 0.3873	0.3811 0.3872	0.3686	0.3735	0.3865	Ave		0.3777			0.1500	2.8		20.0			
4-Methyl-2-pentanone (MIBK)	0.2834 0.3221	0.2998 0.3046	0.3240	0.2983	0.3095	Ave		0.3059			0.0500	4.6		20.0			
Toluene	1.5618 1.4027	1.4672 1.4180	1.4098	1.3276	1.3894	Ave		1.4252			0.4000	5.1		20.0			
trans-1,3-Dichloropropene	0.4760 0.4702	0.4587 0.4631	0.4478	0.4252	0.4649	Ave		0.4580			0.1000	3.7		20.0			
Ethyl methacrylate	0.4185 0.4604	0.4061 0.4531	0.4309	0.4112	0.4583	Ave		0.4341				5.3		20.0			
1,1,2-Trichloroethane	0.2547 0.2895	0.2773 0.2862	0.2834	0.2725	0.2908	Ave		0.2792			0.1000	4.5		20.0			
Tetrachloroethene	0.4086 0.4320	0.4228 0.4317	0.4309	0.4048	0.4173	Ave		0.4212			0.1500	2.7		20.0			
1,3-Dichloropropane	0.4853 0.4890	0.5028 0.4855	0.4893	0.4635	0.4865	Ave		0.4860				2.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2860 0.3061	0.2740 0.2989	0.3048	0.2770	0.2999	Ave		0.2924			0.0500	4.5		20.0			
Chlorodibromomethane	0.3153 0.3531	0.3347 0.3456	0.3254	0.3197	0.3424	Ave		0.3337				4.2		20.0			
Ethylene Dibromide	0.3316 0.3186	0.3371 0.3125	0.3153	0.3013	0.3163	Ave		0.3190				3.8		20.0			
Chlorobenzene	0.9988 0.9439	1.0195 0.9268	0.9392	0.9052	0.9346	Ave		0.9526			0.3000	4.3		20.0			
1,1,1,2-Tetrachloroethane	0.2852 0.3466	0.3288 0.3341	0.3290	0.3310	0.3341	Ave		0.3270				5.9		20.0			
Ethylbenzene	0.4594 0.5246	0.5226 0.5211	0.5127	0.4996	0.5108	Ave		0.5073				4.5		20.0			
m-Xylene & p-Xylene	0.6169 0.6437	0.6148 0.6359	0.6355	0.6137	0.6232	Ave		0.6262				1.9		20.0			
o-Xylene	0.5941 0.6233	0.5896 0.6029	0.6245	0.6014	0.5968	Ave		0.6047				2.3		20.0			
Styrene	0.9580 1.0545	0.9583 1.0320	1.0135	0.9872	1.0201	Ave		1.0034			0.3000	3.7		20.0			
Bromoform	++++ 0.2846	0.2440 0.2826	0.2606	0.2566	0.2726	Ave		0.2668			0.1000	6.0		20.0			
Isopropylbenzene	1.5546 1.6483	1.5581 1.6164	1.6482	1.5866	1.5868	Ave		1.5999			0.1000	2.4		20.0			
1,1,2,2-Tetrachloroethane	0.7561 0.8073	0.8321 0.7913	0.8175	0.7659	0.8099	Ave		0.7972			0.3000	3.5		20.0			
Bromobenzene	0.8153 0.7490	0.7267 0.7427	0.7731	0.7237	0.7577	Ave		0.7555				4.2		20.0			
1,2,3-Trichloropropane	0.3160 0.2796	0.2566 0.2769	0.2966	0.2651	0.2852	Ave		0.2823				7.0		20.0			
trans-1,4-Dichloro-2-butene	0.2699 0.2473	0.2213 0.2516	0.2435	0.2261	0.2517	Ave		0.2445				6.7		20.0			
N-Propylbenzene	0.7798 0.8210	0.7523 0.8202	0.8514	0.7731	0.8029	Ave		0.8001				4.2		20.0			
2-Chlorotoluene	0.6509 0.6957	0.7125 0.6833	0.7132	0.6770	0.6858	Ave		0.6883				3.1		20.0			
1,3,5-Trimethylbenzene	2.0585 2.3418	2.1282 2.3386	2.4321	2.2627	2.2905	Ave		2.2646				5.7		20.0			
4-Chlorotoluene	0.7199 0.7173	0.7260 0.7141	0.7528	0.6936	0.7171	Ave		0.7201				2.4		20.0			
tert-Butylbenzene	2.0893 2.2086	2.2305 2.1805	2.3049	2.0958	2.1272	Ave		2.1767				3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766
SDG No.: _____
Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	2.3016 2.3641	2.3139 2.3974	2.4350	2.3225	2.3165	Ave		2.3501				2.1		20.0			
sec-Butylbenzene	2.8312 3.0965	2.8639 3.1341	3.2011	2.9684	2.9595	Ave		3.0078				4.6		20.0			
1,3-Dichlorobenzene	1.6206 1.4203	1.5501 1.4165	1.4543	1.3821	1.4074	Ave		1.4645			0.6000	6.0		20.0			
4-Isopropyltoluene	2.3868 2.6740	2.3755 2.7456	2.7383	2.5786	2.5586	Ave		2.5796				5.9		20.0			
1,4-Dichlorobenzene	1.7882 1.4335	1.6574 1.4328	1.4853	1.4002	1.4320	Ave		1.5185			0.5000	9.7		20.0			
n-Butylbenzene	2.0220 2.3242	2.1252 2.3914	2.3447	2.2111	2.1782	Ave		2.2281				5.9		20.0			
1,2-Dichlorobenzene	1.3936 1.3079	1.4283 1.3217	1.3446	1.2913	1.2861	Ave		1.3391			0.4000	4.0		20.0			
1,2-Dibromo-3-Chloropropane	0.2394 0.2501	0.2225 0.2556	0.2287	0.2293	0.2369	Ave		0.2375			0.0500	5.0		20.0			
1,2,4-Trichlorobenzene	1.0063 0.8577	1.0084 0.9508	0.8893	0.8765	0.8484	Ave		0.9196			0.2000	7.4		20.0			
Hexachlorobutadiene	0.4988 0.4431	0.5134 0.5128	0.4874	0.4604	0.4444	Ave		0.4800				6.4		20.0			
Naphthalene	2.5280 2.5374	2.6896 2.7560	2.5594	2.5256	2.5586	Ave		2.5935				3.5		20.0			
1,2,3-Trichlorobenzene	0.8270 0.7867	0.8451 0.9084	0.8355	0.8114	0.8072	Ave		0.8316				4.7		20.0			
Dibromofluoromethane (Surr)	0.2924 0.2586	0.2650 0.2453	0.2515	0.2531	0.2466	Ave		0.2589				6.3		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3213 0.2669	0.3001 0.2485	0.2625	0.2659	0.2555	Ave		0.2744				9.6		20.0			
Toluene-d8 (Surr)	1.2522 1.2151	1.2033 1.2031	1.2111	1.1433	1.2004	Ave		1.2041				2.7		20.0			
4-Bromofluorobenzene (Surr)	0.5696 0.4390	0.4918 0.4279	0.4472	0.4315	0.4318	Ave		0.4627				11.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-337766/13	U1900794.d
Level 2	STD8260 240-337766/12	U1900793.d
Level 3	STD8260 240-337766/11	U1900792.d
Level 4	ICIS 240-337766/10	U1900791.d
Level 5	STD8260 240-337766/9	U1900790.d
Level 6	STD8260 240-337766/3	U1900784.d
Level 7	STD8260 240-337766/2	U1900783.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	6894 1134505	14647 1522047	151920	328230	708511	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloromethane	FB	Ave	8217 955231	16570 1245553	155433	315290	632033	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Butadiene	FB	Ave	7871 989374	15313 1318121	137925	301883	631099	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl chloride	FB	Ave	6342 993940	15847 1317064	148293	312915	644632	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromomethane	FB	Ave	6350 660888	12818 848050	114577	229239	441425	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloroethane	FB	Ave	4872 563348	9377 723733	93395	188891	372825	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dichlorofluoromethane	FB	Ave	12059 1312016	21989 1706469	215631	439391	879608	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Trichlorofluoromethane	FB	Ave	10381 1337225	20928 1728039	187339	415720	861954	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl ether	FB	Ave	5066 580370	9442 738330	90620	180269	370565	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acrolein	FB	Ave	6772 800130	11339 1043418	106196	227879	531628	2.50 300	5.00 400	50.0	100	200
1,1-Dichloroethene	FB	Ave	8796 1128785	17119 1458107	185910	347690	716665	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	6009 793296	12789 1047375	134365	247358	505930	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acetone	FB	Ave	++++ 459712	7064 501797	52355	107763	237768	++++ 120	2.00 160	20.0	40.0	80.0
Iodomethane	FB	Ave	10728 1363038	21574 1772860	228493	440198	903919	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon disulfide	FB	Ave	23708 2317545	43688 3006958	387941	728690	1496184	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	9784 1159498	18985 1500878	184068	355801	747474	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl acetate	FB	Ave	13362 1400331	19667 1633788	197122	391356	828794	1.00 120	2.00 160	20.0	40.0	80.0
Methylene Chloride	FB	Ave	++++ 872855	15117 1113978	144386	279726	566982	++++ 60.0	1.00 80.0	10.0	20.0	40.0
2-Methyl-2-propanol	FB	Ave	++++ 798354	12788 ++++	110777	215092	411966	++++ 600	10.0 ++++	100	200	400
Acrylonitrile	FB	Ave	26540 3368428	41875 3868018	448754	915892	1977138	5.00 600	10.0 800	100	200	400
trans-1,2-Dichloroethene	FB	Ave	9868 1061569	17800 1369327	175373	329454	684359	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl tert-butyl ether	FB	Ave	15911 2063462	32315 2537900	335243	654948	1350698	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexane	FB	Ave	9277 1210166	18280 1614587	208123	356826	765779	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloroethane	FB	Ave	9924 1313347	19272 1701003	213583	413734	860929	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl acetate	FB	Ave	9654 1234805	16923 1593713	187841	357825	770166	0.500 60.0	1.00 80.0	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	7528 896669	14795 1142993	143871	281663	582599	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Butanone (MEK)	FB	Ave	++++ 241145	3193 297238	34072	66486	153177	++++ 120	2.00 160	20.0	40.0	80.0
2,2-Dichloropropane	FB	Ave	6159 704769	12773 1027916	134434	247316	481767	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chlorobromomethane	FB	Ave	5651 587580	9868 714392	89489	180080	369472	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrahydrofuran	FB	Ave	4596 618274	9301 734202	86462	169823	372381	1.00 120	2.00 160	20.0	40.0	80.0
Chloroform	FB	Ave	10692 1353439	21458 1728769	213657	422069	869181	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1-Trichloroethane	FB	Ave	9137 1224716	17835 1621508	206006	378348	801860	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Cyclohexane	FB	Ave	9806 1279473	19597 1675220	214696	386296	815868	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloropropene	FB	Ave	8674 1102013	17455 1441115	182947	334178	708682	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon tetrachloride	FB	Ave	8406 1167256	17198 1528972	187898	345961	731238	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Isobutyl alcohol	FB	Ave	5482 758926	7910 849021	105355	183028	449380	12.5 1500	25.0 2000	250	500	1000

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	22844 3064496	48419 3923346	494183	930203	2003056	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane	FB	Ave	8485 954899	15873 1220640	152677	289097	617748	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Heptane	FB	Lin1	++++ 660181	35642 884598	135257	216048	434651	++++ 60.0	1.00 80.0	10.0	20.0	40.0
Trichloroethene	FB	Ave	7211 928718	14571 1225880	155201	285190	608912	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methylcyclohexane	FB	Ave	11515 1566351	22689 2029926	256970	461990	972024	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloropropane	FB	Ave	4734 704987	10704 908144	110015	210992	465852	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromomethane	FB	Ave	5496 630606	9635 784539	95707	196594	412829	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,4-Dioxane	FB	Ave	++++ 142512	1478 187742	23290	43840	91591	++++ 1200	20.0 1600	200	400	800
Dichlorobromomethane	FB	Ave	7466 999127	13539 1286301	152581	290639	649042	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chloroethyl vinyl ether	FB	Ave	7395 1029389	14128 1392220	171233	315645	695808	1.00 120	2.00 160	20.0	40.0	80.0
cis-1,3-Dichloropropene	FB	Ave	8313 1135535	17042 1511629	175580	347181	757793	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	13091 1889071	26811 2377711	308673	554613	1213622	1.00 120	2.00 160	20.0	40.0	80.0
Toluene	CBNZ d5	Ave	28549 3229981	51989 4260144	544060	985962	2123092	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	8702 1082760	16254 1391341	172822	315763	710372	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl methacrylate	CBNZ d5	Ave	7650 1060082	14391 1361372	166277	305349	700245	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloroethane	CBNZ d5	Ave	4656 666583	9825 859718	109350	202390	444369	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrachloroethene	CBNZ d5	Ave	7470 994717	14983 1297004	166266	300622	637692	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	8871 1126088	17817 1458618	188817	344194	743433	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Hexanone	CBNZ d5	Ave	10457 1409861	19416 1795814	235229	411400	916606	1.00 120	2.00 160	20.0	40.0	80.0
Chlorodibromomethane	CBNZ d5	Ave	5763 813124	11860 1038431	125585	237418	523153	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylene Dibromide	CBNZ d5	Ave	6061 733594	11944 938884	121691	223763	483377	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	18258 2173534	36126 2784427	362449	672294	1428038	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	5213 798193	11650 1003714	126948	245845	510579	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylbenzene	CBNZ d5	Ave	8398 1207976	18517 1565528	197845	371072	780525	0.500 60.0	1.00 80.0	10.0	20.0	40.0
m-Xylene & p-Xylene	CBNZ d5	Ave	11276 1482266	21784 1910562	245222	455770	952249	0.500 60.0	1.00 80.0	10.0	20.0	40.0
o-Xylene	CBNZ d5	Ave	10860 1435324	20892 1811249	240986	446659	911893	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Styrene	CBNZ d5	Ave	17512 2428268	33956 3100442	391122	733164	1558780	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromoform	CBNZ d5	Ave	++++ 655265	8645 849153	100560	190577	416502	++++ 60.0	1.00 80.0	10.0	20.0	40.0
Isopropylbenzene	CBNZ d5	Ave	28418 3795594	55210 4856288	636049	1178300	2424662	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	8105 1065677	17817 1352703	173948	331847	686661	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromobenzene	DCBd 4	Ave	8740 988831	15559 1269533	164497	313555	642419	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichloropropane	DCBd 4	Ave	3387 369092	5494 473318	63108	114884	241838	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	2893 326498	4738 430124	51819	97955	213375	0.500 60.0	1.00 80.0	10.0	20.0	40.0
N-Propylbenzene	DCBd 4	Ave	8359 1083875	16107 1402046	181166	334963	680756	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chlorotoluene	DCBd 4	Ave	6977 918378	15255 1168008	151745	293354	581507	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	22067 3091430	45567 3997648	517511	980405	1942019	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Chlorotoluene	DCBd 4	Ave	7717 946982	15545 1220622	160173	300515	607997	0.500 60.0	1.00 80.0	10.0	20.0	40.0
tert-Butylbenzene	DCBd 4	Ave	22397 2915643	47758 3727392	490442	908078	1803602	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	24672 3120829	49545 4098181	518127	1006317	1964040	0.500 60.0	1.00 80.0	10.0	20.0	40.0
sec-Butylbenzene	DCBd 4	Ave	30350 4087764	61320 5357379	681132	1286147	2509293	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichlorobenzene	DCBd 4	Ave	17372 1874897	33191 2421314	309437	598840	1193296	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Isopropyltoluene	DCBd 4	Ave	25586 3530033	50862 4693383	582655	1117286	2169356	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	19169 1892443	35488 2449293	316046	606688	1214157	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Butylbenzene	DCBd 4	Ave	21675 3068191	45503 4087812	498908	958018	1846843	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichlorobenzene	DCBd 4	Ave	14939 1726550	30581 2259323	286113	559506	1090448	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	2566 330105	4764 436864	48670	99335	200822	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	10787 1132196	21592 1625332	189226	379757	719342	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexachlorobutadiene	DCBd 4	Ave	5347 584967	10992 876579	103707	199490	376786	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Naphthalene	DCBd 4	Ave	27099 3349616	57589 4711177	544587	1094286	2169342	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	8865 1038523	18094 1552764	177768	351575	684438	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromofluoromethane (Surr)	FB	Ave	6754 758227	11849 957680	119809	235239	483501	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	7422 782592	13421 970142	125069	247201	501017	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Toluene-d8 (Surr)	CBNZ d5	Ave	22890 2798059	42636 3614422	467380	849081	1834190	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	10413 1010844	17427 1285631	172585	320453	659738	0.500 60.0	1.00 80.0	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 337766

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-337766/13	U1900794.d
Level 2	STD8260 240-337766/12	U1900793.d
Level 3	STD8260 240-337766/11	U1900792.d
Level 4	ICIS 240-337766/10	U1900791.d
Level 5	STD8260 240-337766/9	U1900790.d
Level 6	STD8260 240-337766/3	U1900784.d
Level 7	STD8260 240-337766/2	U1900783.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
n-Heptane	+++++	1.1						50				

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900783.d
 Lims ID: std8260 L7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 24-Jul-2018 17:50:49 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-002
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:13:29 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:42:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	94	975875	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	80	751089	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	65	427349	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.037	5.049	-0.012	62	957680	80.0	75.8	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	90	970142	80.0	72.5	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	92	3614422	80.0	79.9	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	92	1285631	80.0	74.0	
9 Dichlorodifluoromethane	85	1.610	1.622	-0.012	88	1522047	80.0	89.6	
10 Chloromethane	50	1.811	1.823	-0.012	81	1245553	80.0	75.7	
12 Butadiene	54	1.894	1.906	-0.012	88	1318121	80.0	82.4	
11 Vinyl chloride	62	1.918	1.930	-0.012	82	1317064	80.0	82.8	
13 Bromomethane	94	2.203	2.227	-0.024	90	848050	80.0	70.9	
14 Chloroethane	64	2.286	2.310	-0.024	86	723733	80.0	74.8	
15 Dichlorofluoromethane	67	2.487	2.511	-0.024	83	1706469	80.0	74.8	
16 Trichlorofluoromethane	101	2.559	2.582	-0.023	88	1728039	80.0	80.1	
17 Ethyl ether	59	2.796	2.820	-0.024	91	738330	80.0	76.2	
18 Acrolein	56	2.914	2.938	-0.024	93	1043418	400.0	409.9	
21 1,1-Dichloroethene	61	3.021	3.033	-0.012	90	1458107	80.0	78.9	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	83	1047375	80.0	79.5	
22 Acetone	43	3.068	3.080	-0.012	74	501797	160.0	156.1	
23 Iodomethane	142	3.175	3.199	-0.024	98	1772860	80.0	77.5	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900783.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	98	3006958	80.0	72.8	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	83	1500878	80.0	77.5	
27 Methyl acetate	43	3.377	3.389	-0.012	97	1633788	160.0	147.8	
28 Methylene Chloride	49	3.472	3.484	-0.012	54	1113978	80.0	75.5	
29 2-Methyl-2-propanol	59	3.578	3.579	0.000	76	741744	800.0	616.8	
30 Acrylonitrile	53	3.685	3.697	-0.012	97	3868018	800.0	774.9	
32 trans-1,2-Dichloroethene	61	3.721	3.733	-0.012	80	1369327	80.0	75.3	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	69	2537900	80.0	74.9	
33 Hexane	57	3.970	3.982	-0.012	91	1614587	80.0	81.3	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	1701003	80.0	79.3	
35 Vinyl acetate	43	4.136	4.148	-0.012	97	1593713	80.0	81.7	
41 2-Butanone (MEK)	72	4.622	4.634	-0.012	64	297238	160.0	162.1	
39 2,2-Dichloropropane	77	4.622	4.634	-0.012	58	1027916	80.0	79.7	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	68	1142993	80.0	76.0	
45 Chlorobromomethane	49	4.835	4.836	-0.001	71	714392	80.0	72.2	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	734202	160.0	154.9	
47 Chloroform	83	4.895	4.907	-0.012	68	1728769	80.0	77.7	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	89	1621508	80.0	80.9	
49 Cyclohexane	84	5.132	5.144	-0.012	87	1675220	80.0	79.8	
50 1,1-Dichloropropene	75	5.215	5.227	-0.012	92	1441115	80.0	79.0	
51 Carbon tetrachloride	117	5.227	5.239	-0.012	69	1528972	80.0	81.9	
52 Isobutyl alcohol	41	5.298	5.298	0.000	84	849021	2000.0	1980.1	
53 Benzene	78	5.405	5.417	-0.012	94	3923346	80.0	78.4	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	43	1220640	80.0	75.9	
56 n-Heptane	57	5.630	5.642	-0.012	91	884598	80.0	81.7	
58 Trichloroethene	130	5.986	5.986	0.000	90	1225880	80.0	79.5	
60 Methylcyclohexane	83	6.164	6.176	-0.012	90	2029926	80.0	81.1	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	88	908144	80.0	80.8	
63 Dibromomethane	174	6.294	6.294	0.000	85	784539	80.0	75.4	
64 1,4-Dioxane	88	6.294	6.306	-0.012	33	187742	1600.0	1694.3	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	94	1286301	80.0	81.6	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	91	1392220	160.0	166.6	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	93	1511629	80.0	82.0	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	89	2377711	160.0	159.3	
70 Toluene	91	7.160	7.172	-0.012	94	4260144	80.0	79.6	
71 trans-1,3-Dichloropropene	75	7.349	7.361	-0.012	82	1391341	80.0	80.9	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	88	1361372	80.0	83.5	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	67	859718	80.0	82.0	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	1297004	80.0	82.0	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	1458618	80.0	79.9	
77 2-Hexanone	43	7.764	7.765	-0.001	79	1795814	160.0	163.5	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	88	1038431	80.0	82.9	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900783.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.037	8.049	-0.012	97	938884	80.0	78.4	
82 Chlorobenzene	112	8.523	8.524	-0.001	96	2784427	80.0	77.8	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	79	1003714	80.0	81.7	
84 Ethylbenzene	106	8.630	8.630	0.000	97	1565528	80.0	82.2	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1910562	80.0	81.2	
87 Styrene	104	9.152	9.152	0.000	90	3100442	80.0	82.3	
86 o-Xylene	106	9.140	9.152	-0.012	93	1811249	80.0	79.8	
88 Bromoform	173	9.354	9.354	0.000	99	849153	80.0	84.7	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	4856288	80.0	80.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	83	1352703	80.0	79.4	
92 Bromobenzene	156	9.840	9.840	0.000	80	1269533	80.0	78.6	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	68	473318	80.0	78.5	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	52	430124	80.0	82.3	
95 N-Propylbenzene	120	9.946	9.947	-0.001	91	1402046	80.0	82.0	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	1168008	80.0	79.4	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	3997648	80.0	82.6	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	1220622	80.0	79.3	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	3727392	80.0	80.1	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	4098181	80.0	81.6	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	5357379	80.0	83.4	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	96	2421314	80.0	77.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	4693383	80.0	85.1	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	95	2449293	80.0	75.5	
108 n-Butylbenzene	91	11.275	11.275	0.000	97	4087812	80.0	85.9	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	98	2259323	80.0	79.0	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	94	436864	80.0	86.1	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	1625332	80.0	82.7	
113 Hexachlorobutadiene	225	13.208	13.196	0.012	86	876579	80.0	85.5	
114 Naphthalene	128	13.279	13.279	0.000	96	4711177	80.0	85.0	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	1552764	80.0	87.4	
S 164 Total BTEX	1				0		400.0	401.2	
S 127 Trihalomethanes, Total	1				0		320.0	326.9	
S 124 1,2-Dichloroethene, Total	96				0			151.3	
S 125 1,3-Dichloropropene, Total	75				0			162.9	
S 126 Xylenes, Total	106				0		160.0	161.0	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00255	Amount Added: 64.00	Units: uL
vmarolistdw_00256	Amount Added: 64.00	Units: uL
vmrprimw_00292	Amount Added: 64.00	Units: uL
vm50ss_00329	Amount Added: 64.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900783.d

Injection Date: 24-Jul-2018 17:50:49

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L7

Worklist Smp#: 2

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

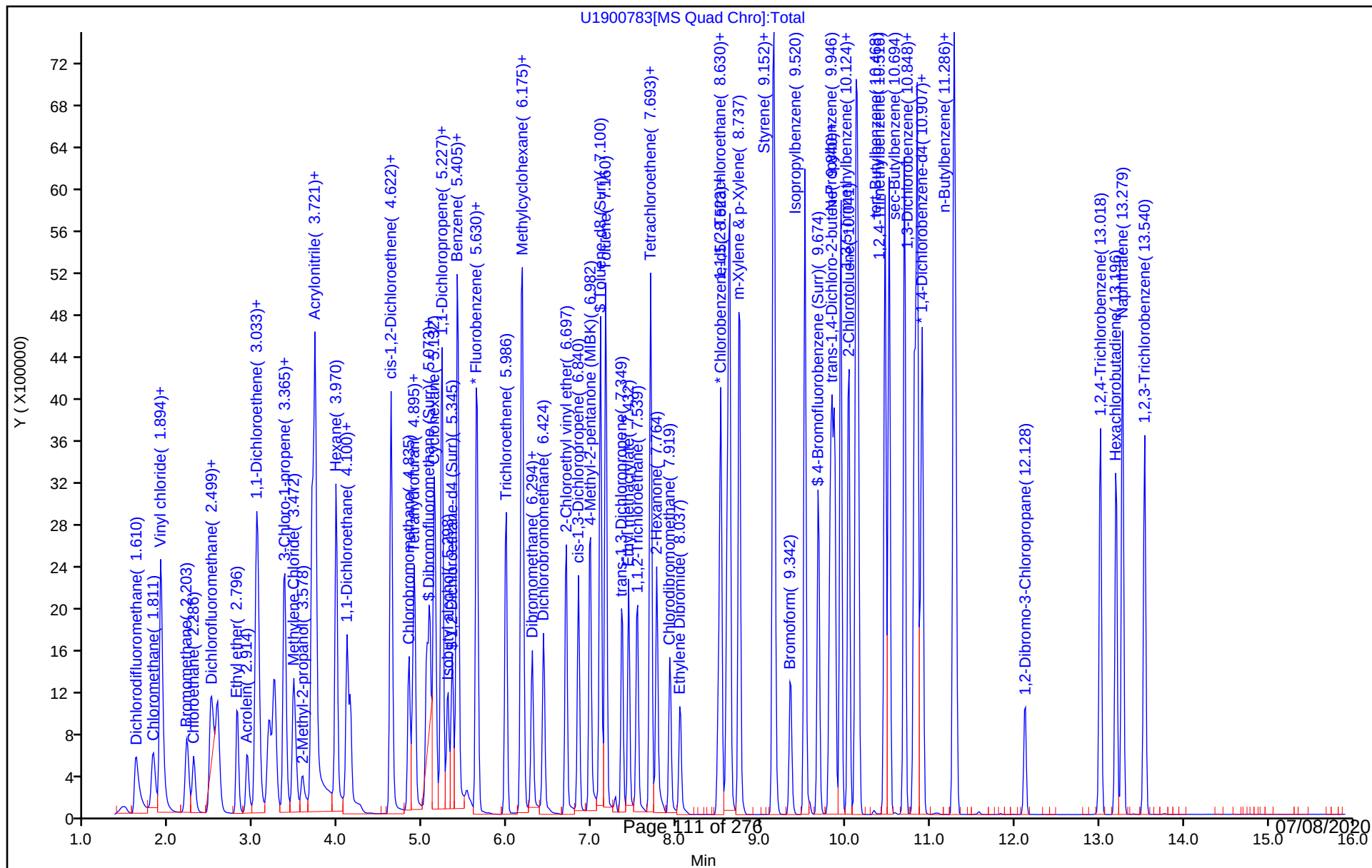
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900784.d
 Lims ID: std8260 L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 24-Jul-2018 18:13:04 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-003
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:13:35 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:44:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	92	977352	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	767566	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.884	10.883	0.001	73	440038	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	63	758227	60.0	59.9	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	98	782592	60.0	58.4	
\$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	89	2798059	60.0	60.6	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	92	1010844	60.0	56.9	
9 Dichlorodifluoromethane	85	1.622	1.622	0.000	87	1134505	60.0	66.7	
10 Chloromethane	50	1.824	1.823	0.001	78	955231	60.0	58.0	
12 Butadiene	54	1.907	1.906	0.000	88	989374	60.0	61.8	
11 Vinyl chloride	62	1.930	1.930	0.000	82	993940	60.0	62.4	
13 Bromomethane	94	2.227	2.227	0.000	91	660888	60.0	55.2	
14 Chloroethane	64	2.310	2.310	0.000	87	563348	60.0	58.2	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	83	1312016	60.0	57.4	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	87	1337225	60.0	61.9	
17 Ethyl ether	59	2.808	2.820	-0.012	90	580370	60.0	59.8	
18 Acrolein	56	2.926	2.938	-0.012	96	800130	300.0	313.8	
21 1,1-Dichloroethene	61	3.045	3.033	0.012	89	1128785	60.0	61.0	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	74	793296	60.0	60.1	
22 Acetone	43	3.081	3.080	0.001	88	459712	120.0	142.8	
23 Iodomethane	142	3.199	3.199	0.000	97	1363038	60.0	59.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	98	2317545	60.0	56.0	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	79	1159498	60.0	59.8	
27 Methyl acetate	43	3.389	3.389	0.000	96	1400331	120.0	126.5	
28 Methylene Chloride	49	3.484	3.484	0.000	51	872855	60.0	59.1	
29 2-Methyl-2-propanol	59	3.579	3.579	0.001	88	798354	600.0	662.9	
30 Acrylonitrile	53	3.697	3.697	0.000	99	3368428	600.0	673.8	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	47	2063462	60.0	60.8	
32 trans-1,2-Dichloroethene	61	3.733	3.733	0.000	71	1061569	60.0	58.3	
33 Hexane	57	3.982	3.982	0.000	89	1210166	60.0	60.9	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	84	1313347	60.0	61.1	
35 Vinyl acetate	43	4.148	4.148	0.000	97	1234805	60.0	63.2	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	67	896669	60.0	59.5	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	59	704769	60.0	54.6	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	79	241145	120.0	131.3	
45 Chlorobromomethane	49	4.836	4.836	0.000	75	587580	60.0	59.3	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	618274	120.0	130.2	
47 Chloroform	83	4.907	4.907	0.000	70	1353439	60.0	60.7	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	81	1224716	60.0	61.0	
49 Cyclohexane	84	5.144	5.144	0.000	85	1279473	60.0	60.9	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	91	1102013	60.0	60.3	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	1167256	60.0	62.4	
52 Isobutyl alcohol	41	5.298	5.298	0.000	83	758926	1500.0	1767.3	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	46	954899	60.0	59.3	
53 Benzene	78	5.417	5.417	0.000	94	3064496	60.0	61.1	
56 n-Heptane	57	5.642	5.642	0.000	89	660181	60.0	60.2	
58 Trichloroethene	130	5.986	5.986	0.000	92	928718	60.0	60.1	
60 Methylcyclohexane	83	6.176	6.176	0.000	89	1566351	60.0	62.5	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	86	704987	60.0	62.6	
63 Dibromomethane	174	6.294	6.294	0.000	88	630606	60.0	60.5	
64 1,4-Dioxane	88	6.306	6.306	0.000	34	142512	1200.0	1284.2	
65 Dichlorobromomethane	83	6.437	6.436	0.000	93	999127	60.0	63.3	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	86	1029389	120.0	123.0	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	95	1135535	60.0	61.5	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	93	1889071	120.0	126.4	
70 Toluene	91	7.172	7.172	0.000	94	3229981	60.0	59.1	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	80	1082760	60.0	61.6	
72 Ethyl methacrylate	69	7.433	7.433	0.000	87	1060082	60.0	63.6	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	73	666583	60.0	62.2	
75 Tetrachloroethene	166	7.694	7.693	0.001	92	994717	60.0	61.5	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	1126088	60.0	60.4	
77 2-Hexanone	43	7.765	7.765	0.000	79	1409861	120.0	125.6	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	88	813124	60.0	63.5	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900784.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	733594	60.0	59.9	
82 Chlorobenzene	112	8.524	8.524	0.000	96	2173534	60.0	59.5	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	85	798193	60.0	63.6	
84 Ethylbenzene	106	8.630	8.630	0.000	97	1207976	60.0	62.1	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1482266	60.0	61.7	
86 o-Xylene	106	9.140	9.152	-0.012	93	1435324	60.0	61.9	
87 Styrene	104	9.152	9.152	0.000	90	2428268	60.0	63.1	
88 Bromoform	173	9.354	9.354	0.000	99	655265	60.0	64.0	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	3795594	60.0	61.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	83	1065677	60.0	60.8	
92 Bromobenzene	156	9.840	9.840	0.000	80	988831	60.0	59.5	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	67	369092	60.0	59.4	
94 trans-1,4-Dichloro-2-buten	53	9.876	9.875	0.001	52	326498	60.0	60.7	
95 N-Propylbenzene	120	9.947	9.947	0.000	95	1083875	60.0	61.6	
96 2-Chlorotoluene	126	10.042	10.041	0.001	96	918378	60.0	60.6	
97 1,3,5-Trimethylbenzene	105	10.125	10.124	0.001	93	3091430	60.0	62.0	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	946982	60.0	59.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	76	2915643	60.0	60.9	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	3120829	60.0	60.4	
102 sec-Butylbenzene	105	10.694	10.694	0.000	93	4087764	60.0	61.8	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	90	1874897	60.0	58.2	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	3530033	60.0	62.2	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1892443	60.0	56.6	
108 n-Butylbenzene	91	11.275	11.275	0.000	97	3068191	60.0	62.6	
109 1,2-Dichlorobenzene	146	11.299	11.298	0.001	98	1726550	60.0	58.6	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	94	330105	60.0	63.2	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	1132196	60.0	56.0	
113 Hexachlorobutadiene	225	13.196	13.196	0.000	92	584967	60.0	55.4	
114 Naphthalene	128	13.279	13.279	0.000	96	3349616	60.0	58.7	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	1038523	60.0	56.8	
S 127 Trihalomethanes, Total	1				0		240.0	251.5	
S 164 Total BTEX	1				0		300.0	305.8	
S 124 1,2-Dichloroethene, Total	96				0			117.8	
S 125 1,3-Dichloropropene, Total	75				0			123.1	
S 126 Xylenes, Total	106				0		120.0	123.5	

Reagents:

vmarolistdw_00256	Amount Added: 48.00	Units: uL
vmrgas_00255	Amount Added: 48.00	Units: uL
vmrprimw_00292	Amount Added: 48.00	Units: uL
vm50ss_00329	Amount Added: 48.00	Units: uL
vm50is_stk_A_00001	Amount Added: 2.00	Units: uL

Operator ID: 001904

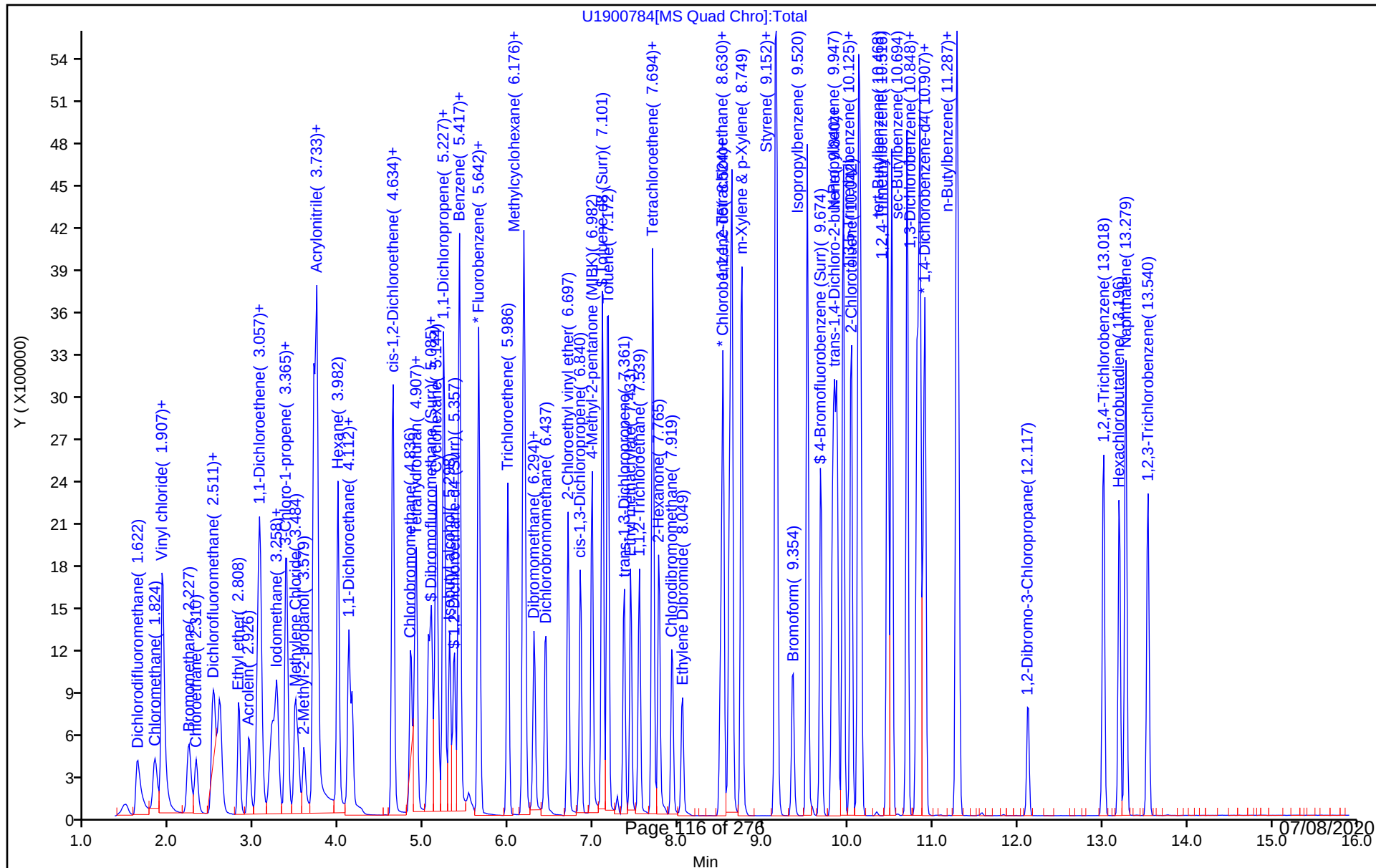
Worklist Smp#: 3

Client ID:

ALS Bottle#: 0

Limit Group: MSV 8260C ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900790.d
 Lims ID: std8260 L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 24-Jul-2018 18:35:32 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-009
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:13:42 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:45:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	95	980424	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	764018	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	76	423933	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	483501	40.0	38.1	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	99	501017	40.0	37.2	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	92	1834190	40.0	39.9	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	91	659738	40.0	37.3	
9 Dichlorodifluoromethane	85	1.610	1.622	-0.012	88	708511	40.0	41.5	
10 Chloromethane	50	1.811	1.823	-0.012	78	632033	40.0	38.3	
12 Butadiene	54	1.894	1.906	-0.012	87	631099	40.0	39.3	
11 Vinyl chloride	62	1.918	1.930	-0.012	83	644632	40.0	40.3	
13 Bromomethane	94	2.215	2.227	-0.012	90	441425	40.0	36.7	
14 Chloroethane	64	2.298	2.310	-0.012	86	372825	40.0	38.4	
15 Dichlorofluoromethane	67	2.499	2.511	-0.012	83	879608	40.0	38.4	
16 Trichlorofluoromethane	101	2.570	2.582	-0.012	87	861954	40.0	39.8	
17 Ethyl ether	59	2.808	2.820	-0.012	88	370565	40.0	38.0	
18 Acrolein	56	2.926	2.938	-0.012	92	531628	200.0	207.9	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	89	716665	40.0	38.6	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	76	505930	40.0	38.2	
22 Acetone	43	3.068	3.080	-0.012	63	237768	80.0	73.6	
23 Iodomethane	142	3.187	3.199	-0.012	96	903919	40.0	39.4	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900790.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	98	1496184	40.0	36.1	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	81	747474	40.0	38.4	
27 Methyl acetate	43	3.377	3.389	-0.012	96	828794	80.0	74.6	
28 Methylene Chloride	49	3.472	3.484	-0.012	53	566982	40.0	38.3	
29 2-Methyl-2-propanol	59	3.578	3.579	0.000	9	411966	400.0	341.0	
30 Acrylonitrile	53	3.697	3.697	0.000	99	1977138	400.0	394.3	
32 trans-1,2-Dichloroethene	61	3.721	3.733	-0.012	78	684359	40.0	37.4	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	88	1350698	40.0	39.7	
33 Hexane	57	3.982	3.982	0.000	90	765779	40.0	38.4	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	860929	40.0	40.0	
35 Vinyl acetate	43	4.148	4.148	0.000	96	770166	40.0	39.3	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	74	153177	80.0	83.1	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	64	481767	40.0	37.2	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	62	582599	40.0	38.6	
45 Chlorobromomethane	49	4.835	4.836	-0.001	89	369472	40.0	37.2	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	372381	80.0	78.2	
47 Chloroform	83	4.907	4.907	0.000	70	869181	40.0	38.9	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	89	801860	40.0	39.8	
49 Cyclohexane	84	5.144	5.144	0.000	75	815868	40.0	38.7	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	90	708682	40.0	38.7	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	731238	40.0	39.0	
52 Isobutyl alcohol	41	5.298	5.298	0.000	70	449380	1000.0	1043.2	
53 Benzene	78	5.405	5.417	-0.012	93	2003056	40.0	39.8	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	47	617748	40.0	38.2	
56 n-Heptane	57	5.642	5.642	0.000	86	434651	40.0	38.6	
58 Trichloroethene	130	5.986	5.986	0.000	92	608912	40.0	39.3	
60 Methylcyclohexane	83	6.175	6.176	-0.001	90	972024	40.0	38.6	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	86	465852	40.0	41.2	
63 Dibromomethane	174	6.294	6.294	0.000	90	412829	40.0	39.5	
64 1,4-Dioxane	88	6.306	6.306	0.000	32	91591	800.0	822.7	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	94	649042	40.0	41.0	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	86	695808	80.0	82.9	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	93	757793	40.0	40.9	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	92	1213622	80.0	80.9	
70 Toluene	91	7.160	7.172	-0.012	94	2123092	40.0	39.0	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	80	710372	40.0	40.6	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	87	700245	40.0	42.2	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	73	444369	40.0	41.7	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	637692	40.0	39.6	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	743433	40.0	40.0	
77 2-Hexanone	43	7.764	7.765	-0.001	79	916606	80.0	82.1	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	88	523153	40.0	41.0	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900790.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	483377	40.0	39.7	
82 Chlorobenzene	112	8.523	8.524	-0.001	96	1428038	40.0	39.2	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	85	510579	40.0	40.9	
84 Ethylbenzene	106	8.630	8.630	0.000	98	780525	40.0	40.3	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	952249	40.0	39.8	
87 Styrene	104	9.152	9.152	0.000	89	1558780	40.0	40.7	
86 o-Xylene	106	9.152	9.152	0.000	86	911893	40.0	39.5	
88 Bromoform	173	9.354	9.354	0.000	99	416502	40.0	40.9	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	2424662	40.0	39.7	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	87	686661	40.0	40.6	
92 Bromobenzene	156	9.840	9.840	0.000	87	642419	40.0	40.1	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	68	241838	40.0	40.4	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	59	213375	40.0	41.2	
95 N-Propylbenzene	120	9.946	9.947	-0.001	95	680756	40.0	40.1	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	581507	40.0	39.9	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	1942019	40.0	40.5	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	607997	40.0	39.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	1803602	40.0	39.1	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	1964040	40.0	39.4	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	2509293	40.0	39.4	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	89	1193296	40.0	38.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	2169356	40.0	39.7	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1214157	40.0	37.7	
108 n-Butylbenzene	91	11.275	11.275	0.000	97	1846843	40.0	39.1	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	98	1090448	40.0	38.4	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	93	200822	40.0	39.9	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	719342	40.0	36.9	
113 Hexachlorobutadiene	225	13.208	13.196	0.012	86	376786	40.0	37.0	
114 Naphthalene	128	13.279	13.279	0.000	96	2169342	40.0	39.5	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	684438	40.0	38.8	
S 164 Total BTEX	1				0		200.0	198.4	
S 127 Trihalomethanes, Total	1				0		160.0	161.8	
S 124 1,2-Dichloroethene, Total	96				0			76.0	
S 125 1,3-Dichloropropene, Total	75				0			81.5	
S 126 Xylenes, Total	106				0		80.0	79.3	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00255	Amount Added: 32.00	Units: uL
vmarolistdw_00256	Amount Added: 32.00	Units: uL
vmrprimw_00292	Amount Added: 32.00	Units: uL
vm50ss_00329	Amount Added: 32.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900790.d

Injection Date: 24-Jul-2018 18:35:32

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L5

Worklist Smp#: 9

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

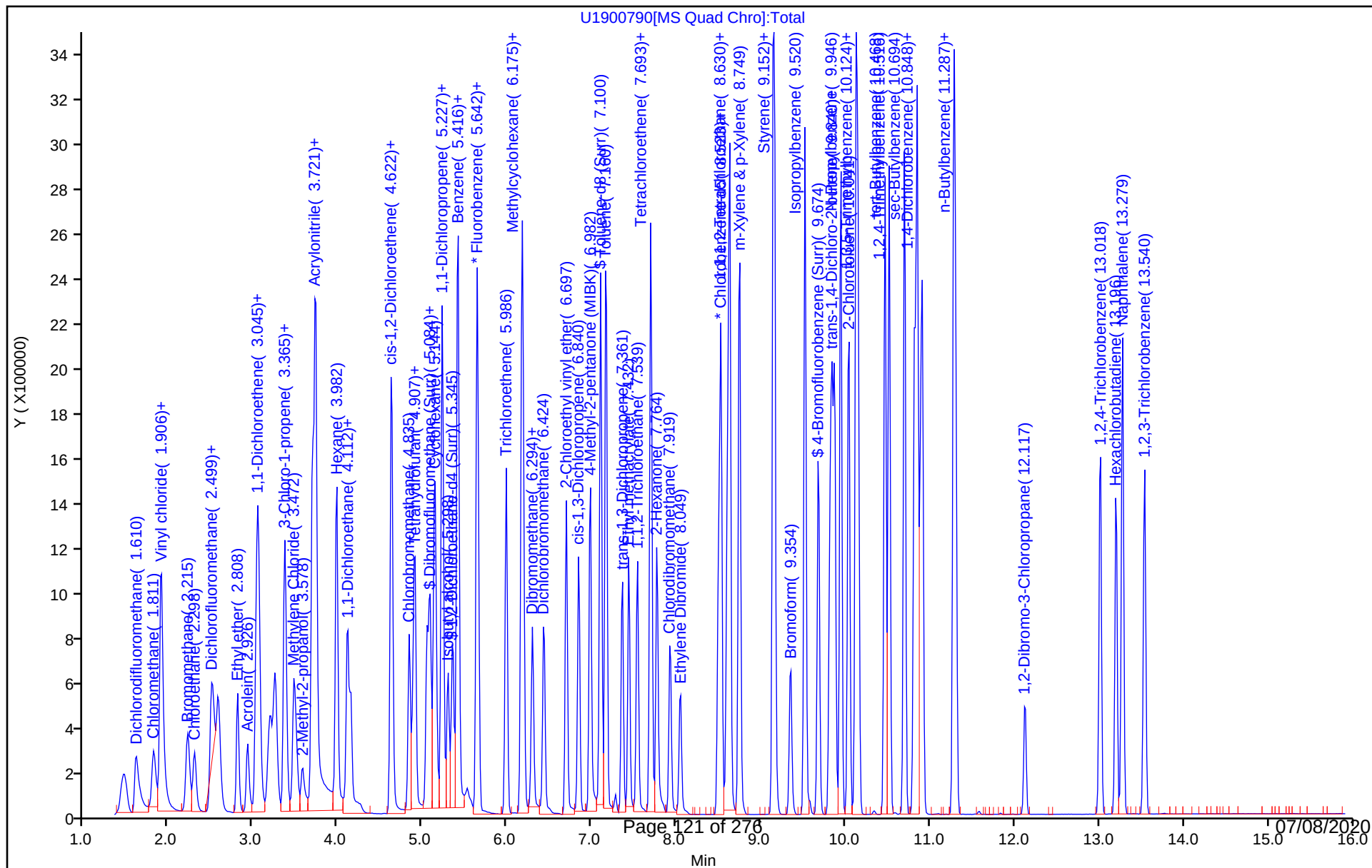
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900791.d
 Lims ID: ICIS L4
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 24-Jul-2018 18:57:47 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-010
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:13:48 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:47:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	96	929533	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	84	742668	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	89	433286	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	235239	20.0	19.5	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	98	247201	20.0	19.4	
\$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	84	849081	20.0	19.0	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	91	320453	20.0	18.7	
9 Dichlorodifluoromethane	85	1.622	1.622	0.000	87	328230	20.0	20.3	
10 Chloromethane	50	1.823	1.823	0.000	89	315290	20.0	20.1	
12 Butadiene	54	1.906	1.906	0.000	86	301883	20.0	19.8	
11 Vinyl chloride	62	1.930	1.930	0.000	74	312915	20.0	20.7	
13 Bromomethane	94	2.227	2.227	0.000	90	229239	20.0	20.1	
14 Chloroethane	64	2.310	2.310	0.000	94	188891	20.0	20.5	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	83	439391	20.0	20.2	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	86	415720	20.0	20.2	
17 Ethyl ether	59	2.820	2.820	0.000	89	180269	20.0	19.5	
18 Acrolein	56	2.938	2.938	0.000	95	227879	100.0	94.0	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	90	347690	20.0	19.7	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	83	247358	20.0	19.7	
22 Acetone	43	3.080	3.080	0.000	74	107763	40.0	35.2	
23 Iodomethane	142	3.199	3.199	0.000	98	440198	20.0	20.2	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900791.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	98	728690	20.0	18.5	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	82	355801	20.0	19.3	
27 Methyl acetate	43	3.389	3.389	0.000	96	391356	40.0	37.2	
28 Methylene Chloride	49	3.484	3.484	0.000	51	279726	20.0	19.9	
29 2-Methyl-2-propanol	59	3.579	3.579	0.000	7	215092	200.0	187.8	
30 Acrylonitrile	53	3.697	3.697	0.000	99	915892	200.0	192.6	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	88	654948	20.0	20.3	
32 trans-1,2-Dichloroethene	61	3.733	3.733	0.000	72	329454	20.0	19.0	
33 Hexane	57	3.982	3.982	0.000	91	356826	20.0	18.9	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	413734	20.0	20.3	
35 Vinyl acetate	43	4.148	4.148	0.000	97	357825	20.0	19.3	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	67	281663	20.0	19.7	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	61	247316	20.0	20.1	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	69	66486	40.0	38.1	
45 Chlorobromomethane	49	4.836	4.836	0.000	72	180080	20.0	19.1	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	169823	40.0	37.6	
47 Chloroform	83	4.907	4.907	0.000	70	422069	20.0	19.9	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	56	378348	20.0	19.8	
49 Cyclohexane	84	5.144	5.144	0.000	85	386296	20.0	19.3	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	92	334178	20.0	19.2	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	345961	20.0	19.5	
52 Isobutyl alcohol	41	5.298	5.298	0.000	69	183028	500.0	448.2	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	45	289097	20.0	18.9	
53 Benzene	78	5.417	5.417	0.000	94	930203	20.0	19.5	
56 n-Heptane	57	5.642	5.642	0.000	84	216048	20.0	18.9	
58 Trichloroethene	130	5.986	5.986	0.000	92	285190	20.0	19.4	
60 Methylcyclohexane	83	6.176	6.176	0.000	89	461990	20.0	19.4	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	84	210992	20.0	19.7	
63 Dibromomethane	174	6.294	6.294	0.000	93	196594	20.0	19.8	
64 1,4-Dioxane	88	6.306	6.306	0.000	33	43840	400.0	415.4	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	290639	20.0	19.4	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	91	315645	40.0	39.7	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	91	347181	20.0	19.8	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	93	554613	40.0	39.0	
70 Toluene	91	7.172	7.172	0.000	94	985962	20.0	18.6	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	82	315763	20.0	18.6	
72 Ethyl methacrylate	69	7.433	7.433	0.000	87	305349	20.0	18.9	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	74	202390	20.0	19.5	
75 Tetrachloroethene	166	7.693	7.693	0.000	97	300622	20.0	19.2	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	344194	20.0	19.1	
77 2-Hexanone	43	7.765	7.765	0.000	79	411400	40.0	37.9	
79 Chlorodibromomethane	129	7.931	7.931	0.000	87	237418	20.0	19.2	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900791.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	223763	20.0	18.9	
82 Chlorobenzene	112	8.524	8.524	0.000	96	672294	20.0	19.0	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	86	245845	20.0	20.2	
84 Ethylbenzene	106	8.630	8.630	0.000	97	371072	20.0	19.7	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	455770	20.0	19.6	
86 o-Xylene	106	9.152	9.152	0.000	87	446659	20.0	19.9	
87 Styrene	104	9.152	9.152	0.000	88	733164	20.0	19.7	
88 Bromoform	173	9.354	9.354	0.000	98	190577	20.0	19.2	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	1178300	20.0	19.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	87	331847	20.0	19.2	
92 Bromobenzene	156	9.840	9.840	0.000	80	313555	20.0	19.2	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	68	114884	20.0	18.8	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	52	97955	20.0	18.5	
95 N-Propylbenzene	120	9.947	9.947	0.000	91	334963	20.0	19.3	
96 2-Chlorotoluene	126	10.041	10.041	0.000	94	293354	20.0	19.7	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	980405	20.0	20.0	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	300515	20.0	19.3	
99 tert-Butylbenzene	119	10.468	10.468	0.000	76	908078	20.0	19.3	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	1006317	20.0	19.8	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	1286147	20.0	19.7	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	84	598840	20.0	18.9	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	1117286	20.0	20.0	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	93	606688	20.0	18.4	
108 n-Butylbenzene	91	11.275	11.275	0.000	98	958018	20.0	19.8	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	559506	20.0	19.3	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	92	99335	20.0	19.3	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	90	379757	20.0	19.1	
113 Hexachlorobutadiene	225	13.196	13.196	0.000	92	199490	20.0	19.2	
114 Naphthalene	128	13.279	13.279	0.000	96	1094286	20.0	19.5	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	351575	20.0	19.5	
S 127 Trihalomethanes, Total	1				0		80.0	77.7	
S 164 Total BTEX	1				0		100.0	97.3	
S 126 Xylenes, Total	106				0		40.0	39.5	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00255	Amount Added: 16.00	Units: uL
vmarolistdw_00256	Amount Added: 16.00	Units: uL
vmrprimw_00292	Amount Added: 16.00	Units: uL
vm50ss_00329	Amount Added: 16.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900791.d

Injection Date: 24-Jul-2018 18:57:47

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: ICIS L4

Worklist Smp#: 10

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

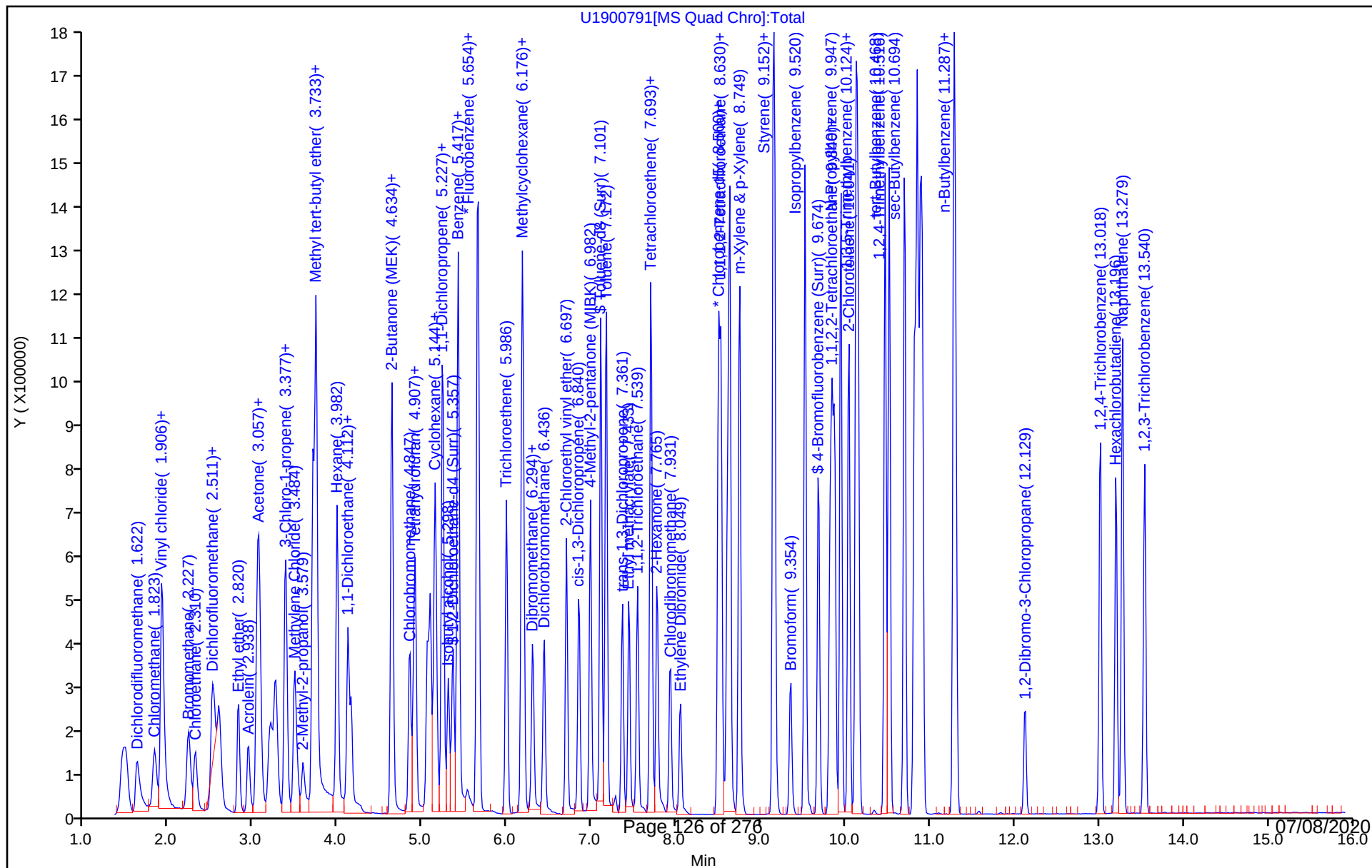
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900792.d
 Lims ID: std8260 L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 24-Jul-2018 19:20:02 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-011
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:13:54 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:49:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.653	5.654	-0.001	98	952790	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	771801	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	92	425561	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	119809	10.0	9.71	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	90	125069	10.0	9.57	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	89	467380	10.0	10.1	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	91	172585	10.0	9.67	
9 Dichlorodifluoromethane	85	1.598	1.622	-0.024	86	151920	10.0	9.16	
10 Chloromethane	50	1.811	1.823	-0.012	78	155433	10.0	9.68	
12 Butadiene	54	1.894	1.906	-0.012	88	137925	10.0	8.83	
11 Vinyl chloride	62	1.918	1.930	-0.012	73	148293	10.0	9.55	
13 Bromomethane	94	2.214	2.227	-0.013	91	114577	10.0	9.81	
14 Chloroethane	64	2.297	2.310	-0.013	94	93395	10.0	9.89	
15 Dichlorofluoromethane	67	2.499	2.511	-0.012	82	215631	10.0	9.68	
16 Trichlorofluoromethane	101	2.570	2.582	-0.012	98	187339	10.0	8.89	
17 Ethyl ether	59	2.807	2.820	-0.013	87	90620	10.0	9.57	
18 Acrolein	56	2.926	2.938	-0.012	95	106196	50.0	42.7	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	90	185910	10.0	10.3	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	76	134365	10.0	10.4	
22 Acetone	43	3.068	3.080	-0.012	55	52355	20.0	16.7	
23 Iodomethane	142	3.187	3.199	-0.012	97	228493	10.0	10.2	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900792.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	98	387941	10.0	9.62	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	82	184068	10.0	9.73	
27 Methyl acetate	43	3.377	3.389	-0.012	84	197122	20.0	18.3	
28 Methylene Chloride	49	3.471	3.484	-0.013	57	144386	10.0	10.0	
29 2-Methyl-2-propanol	59	3.578	3.579	0.000	32	110777	100.0	94.4	
30 Acrylonitrile	53	3.697	3.697	0.000	99	448754	100.0	92.1	
32 trans-1,2-Dichloroethene	61	3.732	3.733	-0.001	71	175373	10.0	9.87	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	88	335243	10.0	10.1	
33 Hexane	57	3.981	3.982	-0.001	90	208123	10.0	10.7	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	97	213583	10.0	10.2	
35 Vinyl acetate	43	4.147	4.148	-0.001	96	187841	10.0	9.87	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	71	34072	20.0	19.0	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	65	134434	10.0	10.7	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	69	143871	10.0	9.80	
45 Chlorobromomethane	49	4.835	4.836	-0.001	84	89489	10.0	9.27	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	86462	20.0	18.7	
47 Chloroform	83	4.906	4.907	-0.001	70	213657	10.0	9.83	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	90	206006	10.0	10.5	
49 Cyclohexane	84	5.144	5.144	0.000	85	214696	10.0	10.5	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	93	182947	10.0	10.3	
51 Carbon tetrachloride	117	5.238	5.239	-0.001	69	187898	10.0	10.3	
52 Isobutyl alcohol	41	5.298	5.298	0.000	69	105355	250.0	251.7	
53 Benzene	78	5.416	5.417	-0.001	94	494183	10.0	10.1	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	46	152677	10.0	9.72	
56 n-Heptane	57	5.642	5.642	0.000	60	135257	10.0	10.5	
58 Trichloroethene	130	5.985	5.986	-0.001	91	155201	10.0	10.3	
60 Methylcyclohexane	83	6.175	6.176	-0.001	89	256970	10.0	10.5	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	84	110015	10.0	10.0	
63 Dibromomethane	174	6.294	6.294	0.000	91	95707	10.0	9.42	
64 1,4-Dioxane	88	6.306	6.306	0.000	33	23290	200.0	215.3	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	152581	10.0	9.92	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	86	171233	20.0	21.0	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	93	175580	10.0	9.76	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	93	308673	20.0	21.2	
70 Toluene	91	7.171	7.172	-0.001	94	544060	10.0	9.89	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	85	172822	10.0	9.78	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	88	166277	10.0	9.93	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	80	109350	10.0	10.1	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	166266	10.0	10.2	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	188817	10.0	10.1	
77 2-Hexanone	43	7.764	7.765	-0.001	80	235229	20.0	20.8	
79 Chlorodibromomethane	129	7.930	7.931	-0.001	86	125585	10.0	9.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	121691	10.0	9.89	
82 Chlorobenzene	112	8.523	8.524	-0.001	97	362449	10.0	9.86	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	80	126948	10.0	10.1	
84 Ethylbenzene	106	8.630	8.630	0.000	98	197845	10.0	10.1	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	245222	10.0	10.1	
87 Styrene	104	9.152	9.152	0.000	88	391122	10.0	10.1	
86 o-Xylene	106	9.152	9.152	0.000	87	240986	10.0	10.3	
88 Bromoform	173	9.353	9.354	-0.001	98	100560	10.0	9.77	
89 Isopropylbenzene	105	9.519	9.520	-0.001	95	636049	10.0	10.3	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	173948	10.0	10.3	
92 Bromobenzene	156	9.840	9.840	0.000	87	164497	10.0	10.2	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	69	63108	10.0	10.5	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	64	51819	10.0	9.96	
95 N-Propylbenzene	120	9.946	9.947	-0.001	96	181166	10.0	10.6	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	151745	10.0	10.4	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	517511	10.0	10.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	160173	10.0	10.5	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	490442	10.0	10.6	
101 1,2,4-Trimethylbenzene	105	10.515	10.516	-0.001	70	518127	10.0	10.4	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	94	681132	10.0	10.6	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	82	309437	10.0	9.93	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	582655	10.0	10.6	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	91	316046	10.0	9.78	
108 n-Butylbenzene	91	11.274	11.275	-0.001	97	498908	10.0	10.5	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	286113	10.0	10.0	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	88	48670	10.0	9.63	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	189226	10.0	9.67	
113 Hexachlorobutadiene	225	13.207	13.196	0.011	85	103707	10.0	10.2	
114 Naphthalene	128	13.279	13.279	0.000	96	544587	10.0	9.87	
115 1,2,3-Trichlorobenzene	180	13.539	13.540	-0.001	96	177768	10.0	10.0	
S 164 Total BTEX	1				0		50.0	50.6	
S 127 Trihalomethanes, Total	1				0		40.0	39.3	
S 124 1,2-Dichloroethene, Total	96				0			19.7	
S 125 1,3-Dichloropropene, Total	75				0			19.5	
S 126 Xylenes, Total	106				0		20.0	20.5	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00255	Amount Added: 8.00	Units: uL
vmarolistdw_00256	Amount Added: 8.00	Units: uL
vmrprimw_00292	Amount Added: 8.00	Units: uL
vm50ss_00329	Amount Added: 8.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900792.d

Injection Date: 24-Jul-2018 19:20:02

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L3

Worklist Smp#: 11

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

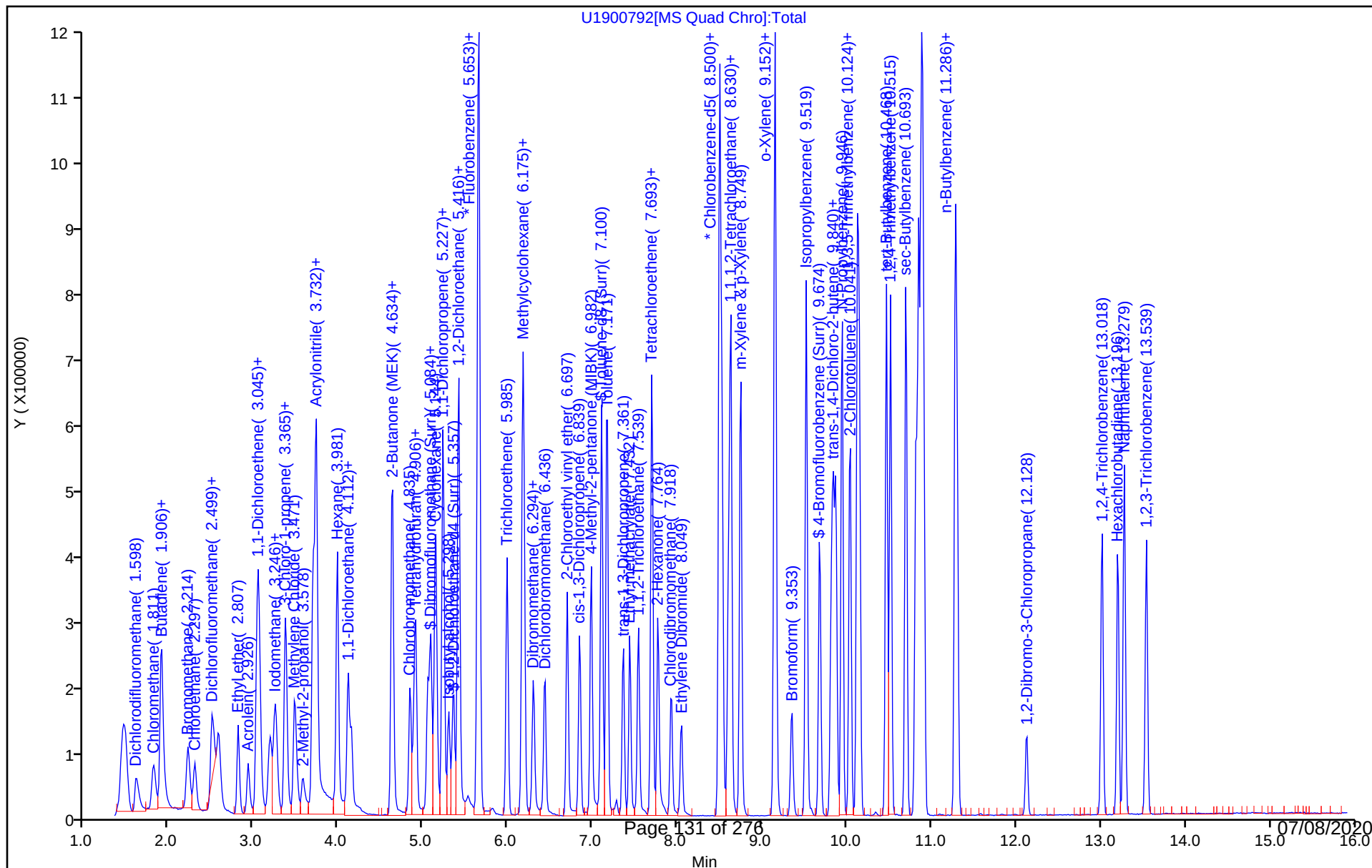
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900793.d
 Lims ID: std8260 L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 24-Jul-2018 19:42:05 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-012
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:14:00 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:51:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	894422	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	708670	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.884	10.883	0.001	93	428230	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	11849	1.00	1.02	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	88	13421	1.00	1.09	
\$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	87	42636	1.00	1.00	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	86	17427	1.00	1.06	
9 Dichlorodifluoromethane	85	1.610	1.622	-0.012	74	14647	1.00	0.9411	
10 Chloromethane	50	1.812	1.823	-0.011	89	16570	1.00	1.10	
12 Butadiene	54	1.895	1.906	-0.011	88	15313	1.00	1.04	
11 Vinyl chloride	62	1.930	1.930	0.000	70	15847	1.00	1.09	
13 Bromomethane	94	2.215	2.227	-0.012	77	12818	1.00	1.17	
14 Chloroethane	64	2.298	2.310	-0.012	70	9377	1.00	1.06	
15 Dichlorofluoromethane	67	2.499	2.511	-0.012	82	21989	1.00	1.05	
16 Trichlorofluoromethane	101	2.559	2.582	-0.023	73	20928	1.00	1.06	
17 Ethyl ether	59	2.808	2.820	-0.012	80	9442	1.00	1.06	
18 Acrolein	56	2.926	2.938	-0.012	86	11339	5.00	4.86	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	92	17119	1.00	1.01	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	63	12789	1.00	1.06	
22 Acetone	43	3.069	3.080	-0.011	66	7064	2.00	2.40	
23 Iodomethane	142	3.187	3.199	-0.012	96	21574	1.00	1.03	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900793.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.247	3.258	-0.011	96	43688	1.00	1.15	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	84	18985	1.00	1.07	
27 Methyl acetate	43	3.389	3.389	0.000	92	19667	2.00	1.94	
28 Methylene Chloride	49	3.472	3.484	-0.012	75	15117	1.00	1.12	
29 2-Methyl-2-propanol	59	3.579	3.579	0.001	70	12788	10.0	11.6	
30 Acrylonitrile	53	3.697	3.697	0.000	100	41875	10.0	9.15	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	87	32315	1.00	1.04	
32 trans-1,2-Dichloroethene	61	3.733	3.733	0.000	73	17800	1.00	1.07	
33 Hexane	57	3.982	3.982	0.000	92	18280	1.00	1.00	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	83	19272	1.00	0.9804	
35 Vinyl acetate	43	4.148	4.148	0.000	95	16923	1.00	0.9468	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	78	14795	1.00	1.07	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	56	12773	1.00	1.08	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	60	3193	2.00	1.90	
45 Chlorobromomethane	49	4.836	4.836	0.000	67	9868	1.00	1.09	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	9301	2.00	2.14	
47 Chloroform	83	4.907	4.907	0.000	66	21458	1.00	1.05	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	80	17835	1.00	0.9707	
49 Cyclohexane	84	5.144	5.144	0.000	82	19597	1.00	1.02	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	87	17455	1.00	1.04	
51 Carbon tetrachloride	117	5.239	5.239	0.000	75	17198	1.00	1.01	
52 Isobutyl alcohol	41	5.298	5.298	0.000	89	7910	25.0	20.1	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	50	15873	1.00	1.08	
53 Benzene	78	5.417	5.417	0.000	94	48419	1.00	1.06	
56 n-Heptane	57	5.654	5.642	0.012	38	35642	1.00	1.01	
58 Trichloroethene	130	5.986	5.986	0.000	84	14571	1.00	1.03	
60 Methylcyclohexane	83	6.176	6.176	0.000	88	22689	1.00	0.9886	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	79	10704	1.00	1.04	
63 Dibromomethane	174	6.294	6.294	0.000	82	9635	1.00	1.01	
64 1,4-Dioxane	88	6.318	6.306	0.012	1	1478	20.0	14.6	
65 Dichlorobromomethane	83	6.425	6.436	-0.011	87	13539	1.00	0.9376	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	82	14128	2.00	1.84	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	76	17042	1.00	1.01	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	91	26811	2.00	1.96	
70 Toluene	91	7.172	7.172	0.000	93	51989	1.00	1.03	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	75	16254	1.00	1.00	
72 Ethyl methacrylate	69	7.433	7.433	0.000	77	14391	1.00	0.9357	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	74	9825	1.00	0.99	
75 Tetrachloroethene	166	7.694	7.693	0.001	89	14983	1.00	1.00	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	77	17817	1.00	1.03	
77 2-Hexanone	43	7.777	7.765	0.012	67	19416	2.00	1.87	
79 Chlorodibromomethane	129	7.931	7.931	0.000	74	11860	1.00	1.00	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900793.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	85	11944	1.00	1.06	
82 Chlorobenzene	112	8.524	8.524	0.000	65	36126	1.00	1.07	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	59	11650	1.00	1.01	
84 Ethylbenzene	106	8.630	8.630	0.000	96	18517	1.00	1.03	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	21784	1.00	0.9817	
86 o-Xylene	106	9.140	9.152	-0.012	91	20892	1.00	0.9751	
87 Styrene	104	9.152	9.152	0.000	88	33956	1.00	0.9551	
88 Bromoform	173	9.354	9.354	0.000	82	8645	1.00	0.9144	
89 Isopropylbenzene	105	9.520	9.520	0.000	91	55210	1.00	0.9739	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	77	17817	1.00	1.04	
92 Bromobenzene	156	9.840	9.840	0.000	89	15559	1.00	0.9619	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	70	5494	1.00	0.9090	
94 trans-1,4-Dichloro-2-buten	53	9.864	9.875	-0.011	44	4738	1.00	0.9051	
95 N-Propylbenzene	120	9.947	9.947	0.000	94	16107	1.00	0.9402	
96 2-Chlorotoluene	126	10.042	10.041	0.001	93	15255	1.00	1.04	
97 1,3,5-Trimethylbenzene	105	10.125	10.124	0.001	93	45567	1.00	0.9397	
98 4-Chlorotoluene	126	10.148	10.148	0.000	94	15545	1.00	1.01	
99 tert-Butylbenzene	119	10.468	10.468	0.000	88	47758	1.00	1.02	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	68	49545	1.00	0.9846	
102 sec-Butylbenzene	105	10.694	10.694	0.000	90	61320	1.00	0.9521	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	11	33191	1.00	1.06	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	82	50862	1.00	0.9208	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	52	35488	1.00	1.09	
108 n-Butylbenzene	91	11.275	11.275	0.000	94	45503	1.00	0.9538	
109 1,2-Dichlorobenzene	146	11.299	11.298	0.001	94	30581	1.00	1.07	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	47	4764	1.00	0.9369	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	82	21592	1.00	1.10	
113 Hexachlorobutadiene	225	13.208	13.196	0.012	66	10992	1.00	1.07	
114 Naphthalene	128	13.279	13.279	0.000	93	57589	1.00	1.04	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	86	18094	1.00	1.02	
S 127 Trihalomethanes, Total	1				0		4.00	3.91	
S 164 Total BTEX	1				0		5.00	5.07	
S 124 1,2-Dichloroethene, Total	96				0			2.14	
S 125 1,3-Dichloropropene, Total	75				0			2.01	
S 126 Xylenes, Total	106				0		2.00	1.96	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00255	Amount Added: 0.80	Units: uL
vmarolistdw_00256	Amount Added: 0.80	Units: uL
vmrprimw_00292	Amount Added: 0.80	Units: uL
vm50ss_00329	Amount Added: 0.80	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900793.d

Injection Date: 24-Jul-2018 19:42:05

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L2

Worklist Smp#: 12

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

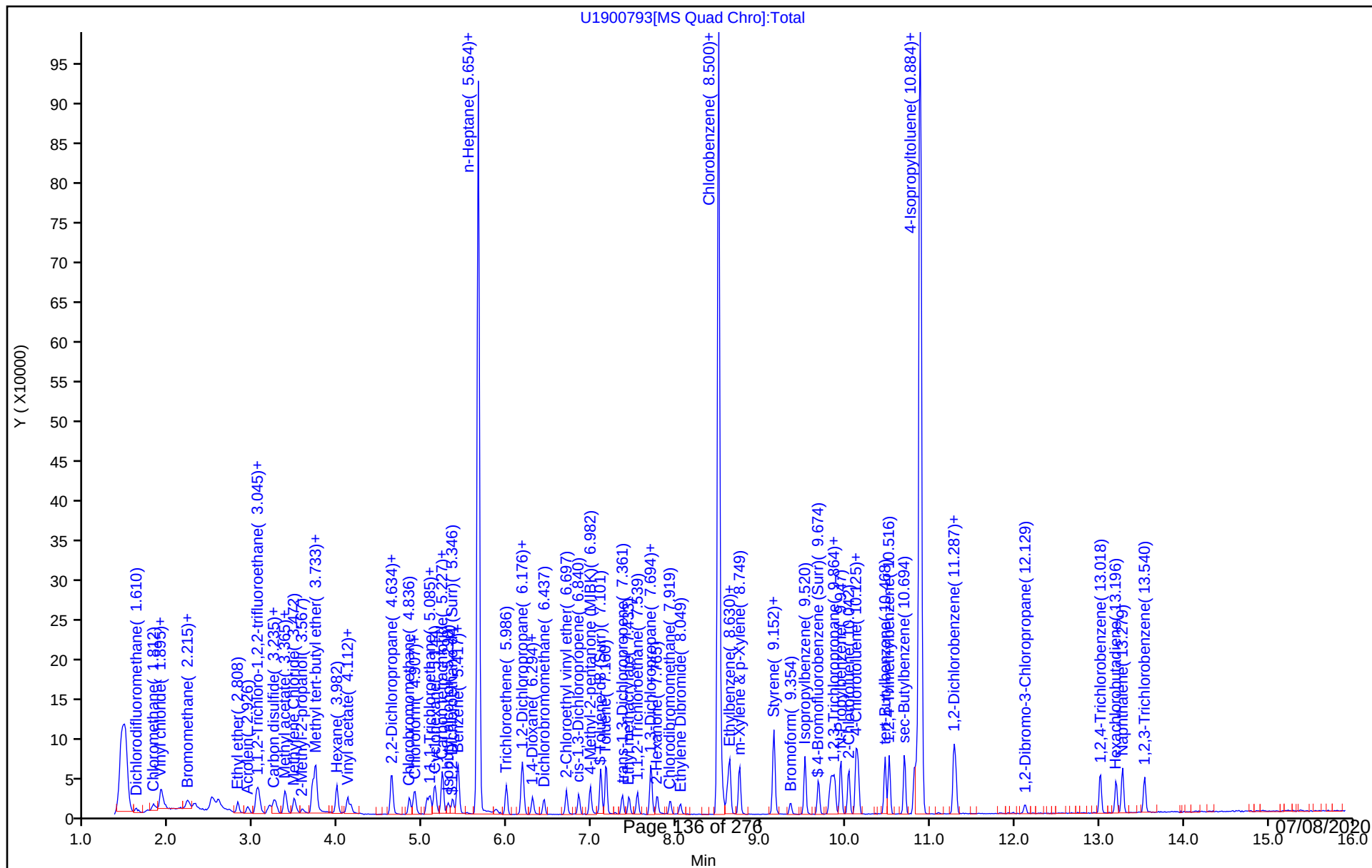
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Lims ID: std8260 L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 24-Jul-2018 20:04:28 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-013
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 10:14:09 Calib Date: 24-Jul-2018 20:04:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

First Level Reviewer: laveyt

Date: 25-Jul-2018 09:56:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	923893	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	84	731189	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	428789	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	56	6754	0.5000	0.5647	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	75	7422	0.5000	0.5855	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	74	22890	0.5000	0.5200	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	79	10413	0.5000	0.6156	
9 Dichlorodifluoromethane	85	1.633	1.622	0.011	62	6894	0.5000	0.4288	
10 Chloromethane	50	1.823	1.823	0.000	71	8217	0.5000	0.5278	
12 Butadiene	54	1.906	1.906	0.000	82	7871	0.5000	0.5198	
11 Vinyl chloride	62	1.930	1.930	0.000	64	6342	0.5000	0.4211	
13 Bromomethane	94	2.238	2.227	0.011	71	6350	0.5000	0.5606	
14 Chloroethane	64	2.309	2.310	-0.001	60	4872	0.5000	0.5321	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	53	12059	0.5000	0.5584	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	75	10381	0.5000	0.5081	
17 Ethyl ether	59	2.819	2.820	-0.001	67	5066	0.5000	0.5520	
18 Acrolein	56	2.938	2.938	0.000	82	6772	2.50	2.81	
21 1,1-Dichloroethene	61	3.045	3.033	0.012	68	8796	0.5000	0.5026	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	-0.001	56	6009	0.5000	0.4815	
22 Acetone	43		3.080				ND	ND	U
23 Iodomethane	142	3.187	3.199	-0.012	82	10728	0.5000	0.4956	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	95	23708	0.5000	0.6063	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	77	9784	0.5000	0.5336	
27 Methyl acetate	43	3.389	3.389	0.000	86	13362	1.00	1.28	
28 Methylene Chloride	49		3.484				ND	ND	U
29 2-Methyl-2-propanol	59		3.579				ND	ND	U
30 Acrylonitrile	53	3.697	3.697	0.000	99	26540	5.00	5.62	
32 trans-1,2-Dichloroethene	61	3.732	3.733	-0.001	74	9868	0.5000	0.5730	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	83	15911	0.5000	0.4958	
33 Hexane	57	3.981	3.982	-0.001	90	9277	0.5000	0.4936	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	54	9924	0.5000	0.4888	
35 Vinyl acetate	43	4.148	4.148	0.000	95	9654	0.5000	0.5229	
41 2-Butanone (MEK)	72		4.634				ND	ND	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	46	6159	0.5000	0.5045	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	56	7528	0.5000	0.5287	
45 Chlorobromomethane	49	4.835	4.836	-0.001	65	5651	0.5000	0.6036	
46 Tetrahydrofuran	42	4.895	4.883	0.012	78	4596	1.00	1.02	
47 Chloroform	83	4.906	4.907	-0.001	60	10692	0.5000	0.5074	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	72	9137	0.5000	0.4814	
49 Cyclohexane	84	5.144	5.144	0.000	79	9806	0.5000	0.4936	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	85	8674	0.5000	0.5025	
51 Carbon tetrachloride	117	5.239	5.239	-0.001	69	8406	0.5000	0.4757	
52 Isobutyl alcohol	41	5.298	5.298	0.000	73	5482	12.5	13.5	
53 Benzene	78	5.416	5.417	-0.001	94	22844	0.5000	0.4820	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	40	8485	0.5000	0.5573	
56 n-Heptane	57		5.642				ND	ND	U
58 Trichloroethene	130	5.986	5.986	0.000	83	7211	0.5000	0.4940	
60 Methylcyclohexane	83	6.175	6.176	-0.001	83	11515	0.5000	0.4857	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	62	4734	0.5000	0.4448	
63 Dibromomethane	174	6.306	6.294	0.012	67	5496	0.5000	0.5580	
64 1,4-Dioxane	88		6.306				ND	ND	U
65 Dichlorobromomethane	83	6.436	6.436	0.000	71	7466	0.5000	0.5005	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	76	7395	1.00	0.9347	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	66	8313	0.5000	0.4764	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	86	13091	1.00	0.9263	
70 Toluene	91	7.171	7.172	-0.001	90	28549	0.5000	0.5479	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	72	8702	0.5000	0.5197	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	67	7650	0.5000	0.4821	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	65	4656	0.5000	0.4562	
75 Tetrachloroethene	166	7.693	7.693	0.000	89	7470	0.5000	0.4851	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	73	8871	0.5000	0.4993	
77 2-Hexanone	43	7.764	7.765	-0.001	87	10457	1.00	0.9783	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	51	5763	0.5000	0.4723	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	69	6061	0.5000	0.5198	
82 Chlorobenzene	112	8.523	8.524	-0.001	47	18258	0.5000	0.5243	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	47	5213	0.5000	0.4361	
84 Ethylbenzene	106	8.630	8.630	0.000	92	8398	0.5000	0.4528	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	96	11276	0.5000	0.4925	
87 Styrene	104	9.152	9.152	0.000	84	17512	0.5000	0.4774	
86 o-Xylene	106	9.152	9.152	0.000	82	10860	0.5000	0.4913	
88 Bromoform	173		9.354				ND	ND	U
89 Isopropylbenzene	105	9.519	9.520	-0.001	87	28418	0.5000	0.4859	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	49	8105	0.5000	0.4742	
92 Bromobenzene	156	9.840	9.840	0.000	80	8740	0.5000	0.5396	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	57	3387	0.5000	0.5596	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	36	2893	0.5000	0.5519	
95 N-Propylbenzene	120	9.946	9.947	-0.001	90	8359	0.5000	0.4873	
96 2-Chlorotoluene	126	10.041	10.041	0.000	86	6977	0.5000	0.4728	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	88	22067	0.5000	0.4545	
98 4-Chlorotoluene	126	10.148	10.148	0.000	89	7717	0.5000	0.4998	
99 tert-Butylbenzene	119	10.468	10.468	0.000	82	22397	0.5000	0.4799	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	62	24672	0.5000	0.4897	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	78	30350	0.5000	0.4706	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	1	17372	0.5000	0.5533	a
104 4-Isopropyltoluene	119	10.848	10.848	0.000	80	25586	0.5000	0.4626	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	42	19169	0.5000	0.5888	
108 n-Butylbenzene	91	11.275	11.275	0.000	91	21675	0.5000	0.4537	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	87	14939	0.5000	0.5204	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	24	2566	0.5000	0.5040	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	65	10787	0.5000	0.5471	
113 Hexachlorobutadiene	225	13.196	13.196	0.000	52	5347	0.5000	0.5195	
114 Naphthalene	128	13.279	13.279	0.000	81	27099	0.5000	0.4874	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	60	8865	0.5000	0.4972	
S 164 Total BTEX	1				0		2.50	2.47	
S 127 Trihalomethanes, Total	1				0		2.00	1.48	
S 124 1,2-Dichloroethene, Total	96				0			1.10	
S 125 1,3-Dichloropropene, Total	75				0			1.00	
S 126 Xylenes, Total	106				0		1.00	0.9838	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00255	Amount Added: 0.40	Units: uL
vmarolistdw_00256	Amount Added: 0.40	Units: uL
vmrprimw_00292	Amount Added: 0.40	Units: uL
vm50ss_00329	Amount Added: 0.40	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L1

Worklist Smp#: 13

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

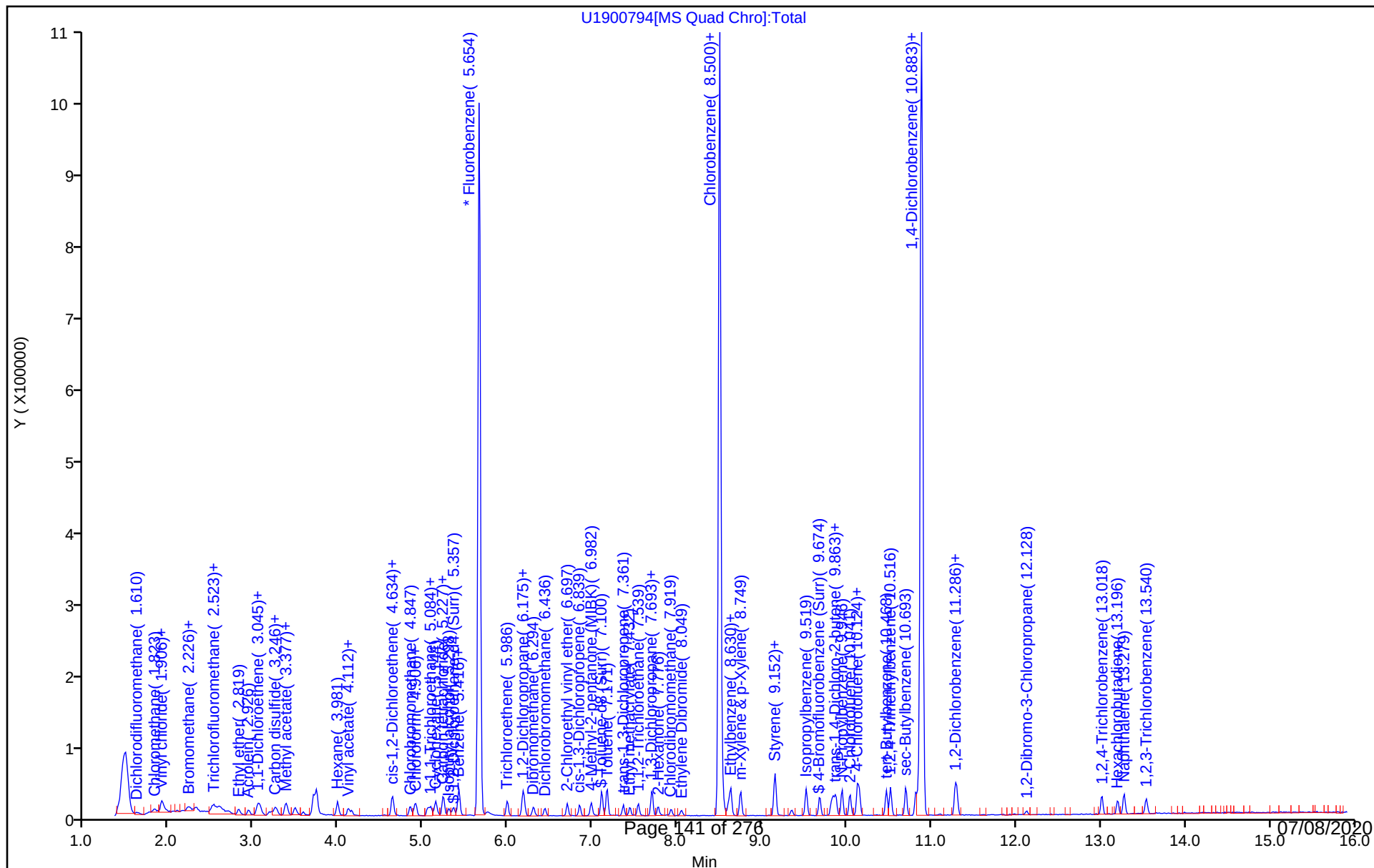
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

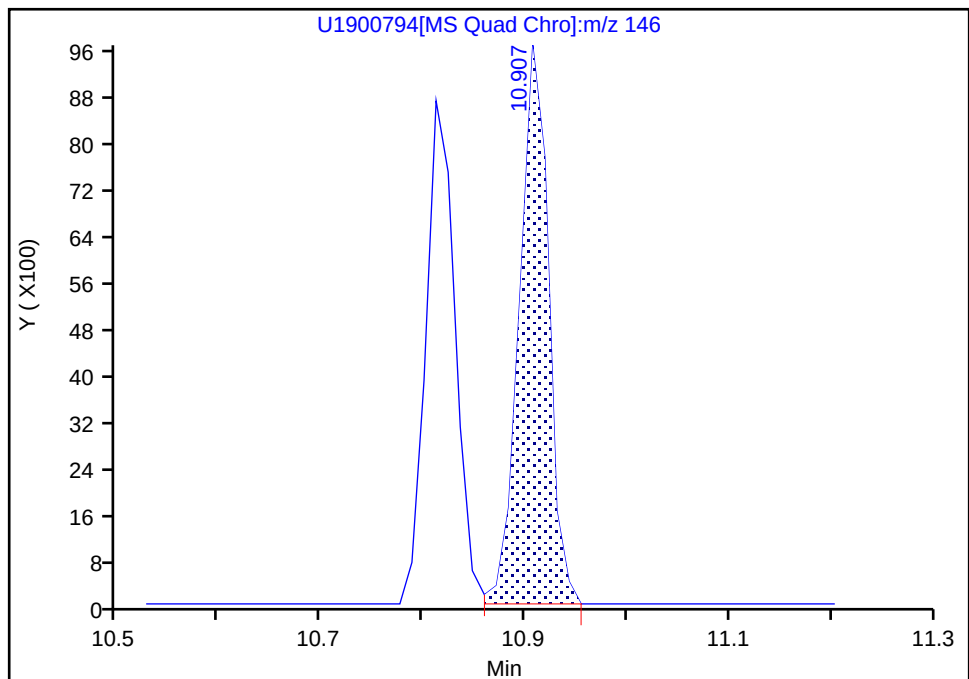
Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
Injection Date: 24-Jul-2018 20:04:28 Instrument ID: A3UX19
Lims ID: std8260 L1
Client ID:
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_19 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

103 1,3-Dichlorobenzene, CAS: 541-73-1

Signal: 1

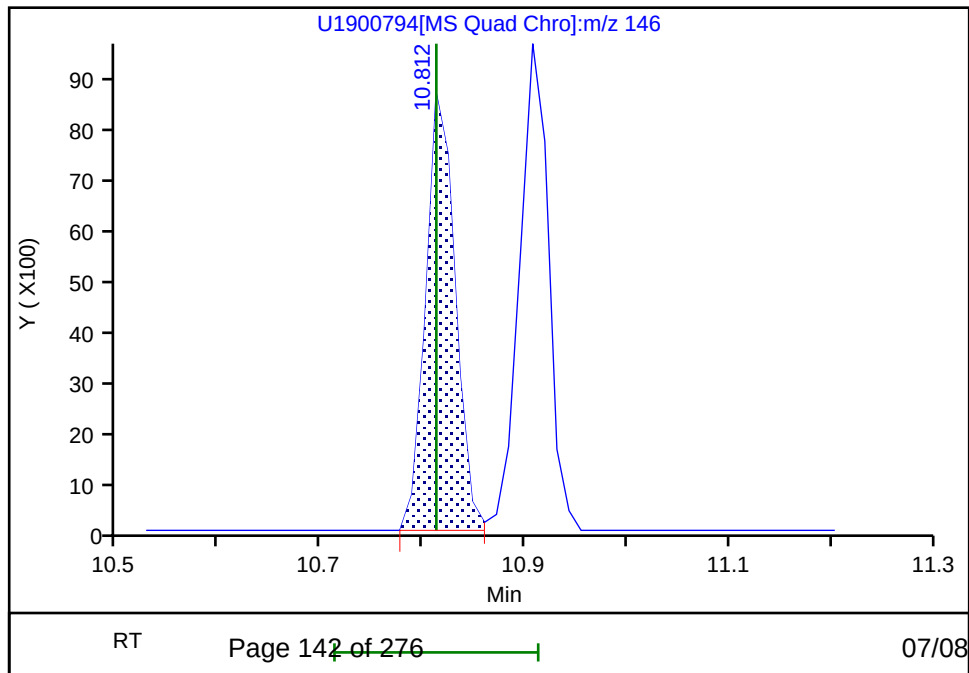
Processing Integration Results

RT: 10.91
Area: 19169
Amount: 0.600710
Amount Units: ug/l



Manual Integration Results

RT: 10.81
Area: 17372
Amount: 0.553299
Amount Units: ug/l



User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

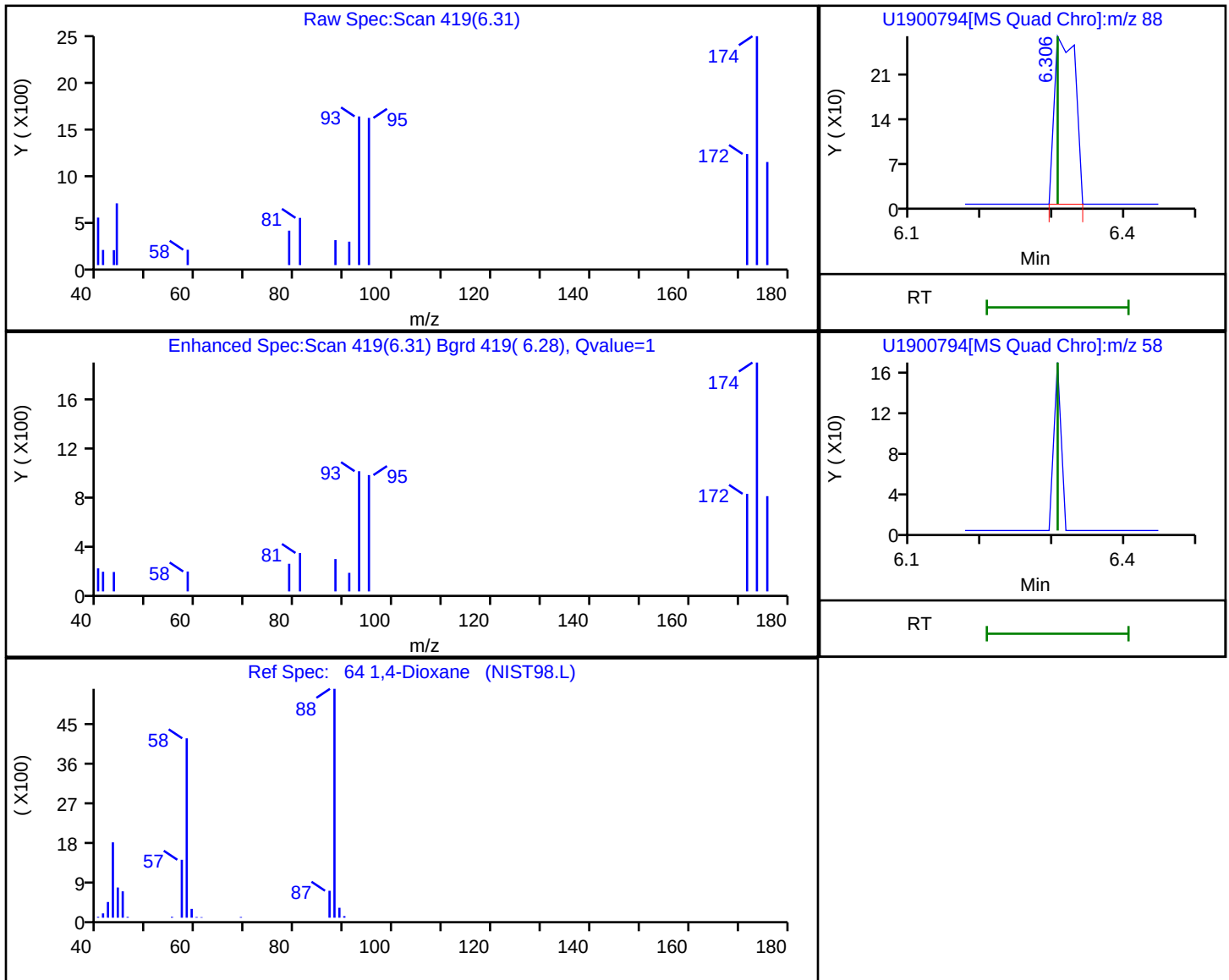
Column: DB-624 (0.18 mm)

Detector

MS SCAN

64 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
6.31	88.00	541	10.248924
6.31	58.00	0	

Reviewer: laveyt, 25-Jul-2018 10:11:40

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

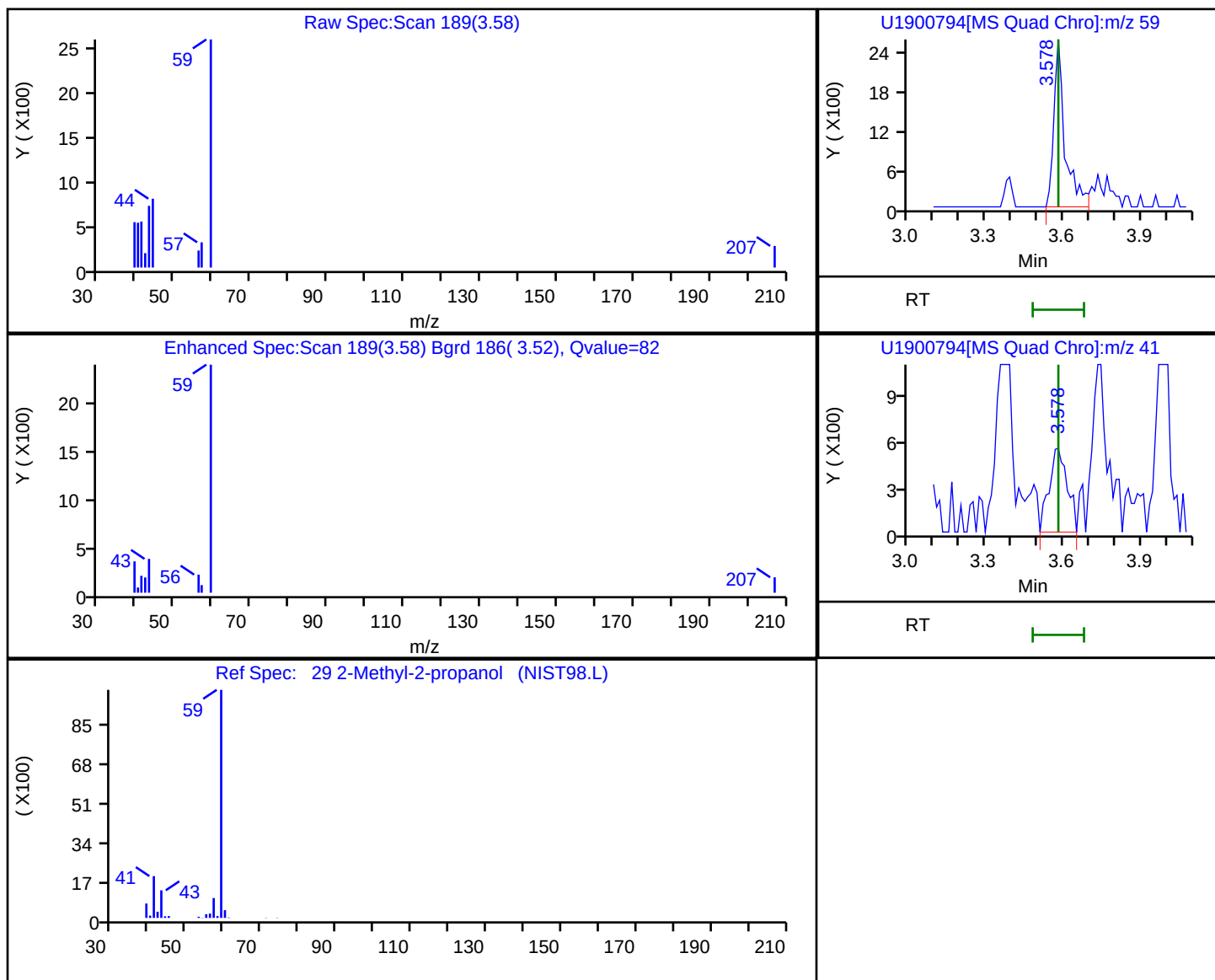
Column: DB-624 (0.18 mm)

Detector

MS SCAN

29 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
3.58	59.00	7655	6.614472
3.58	41.00	2500	

Reviewer: laveyt, 25-Jul-2018 09:53:00

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

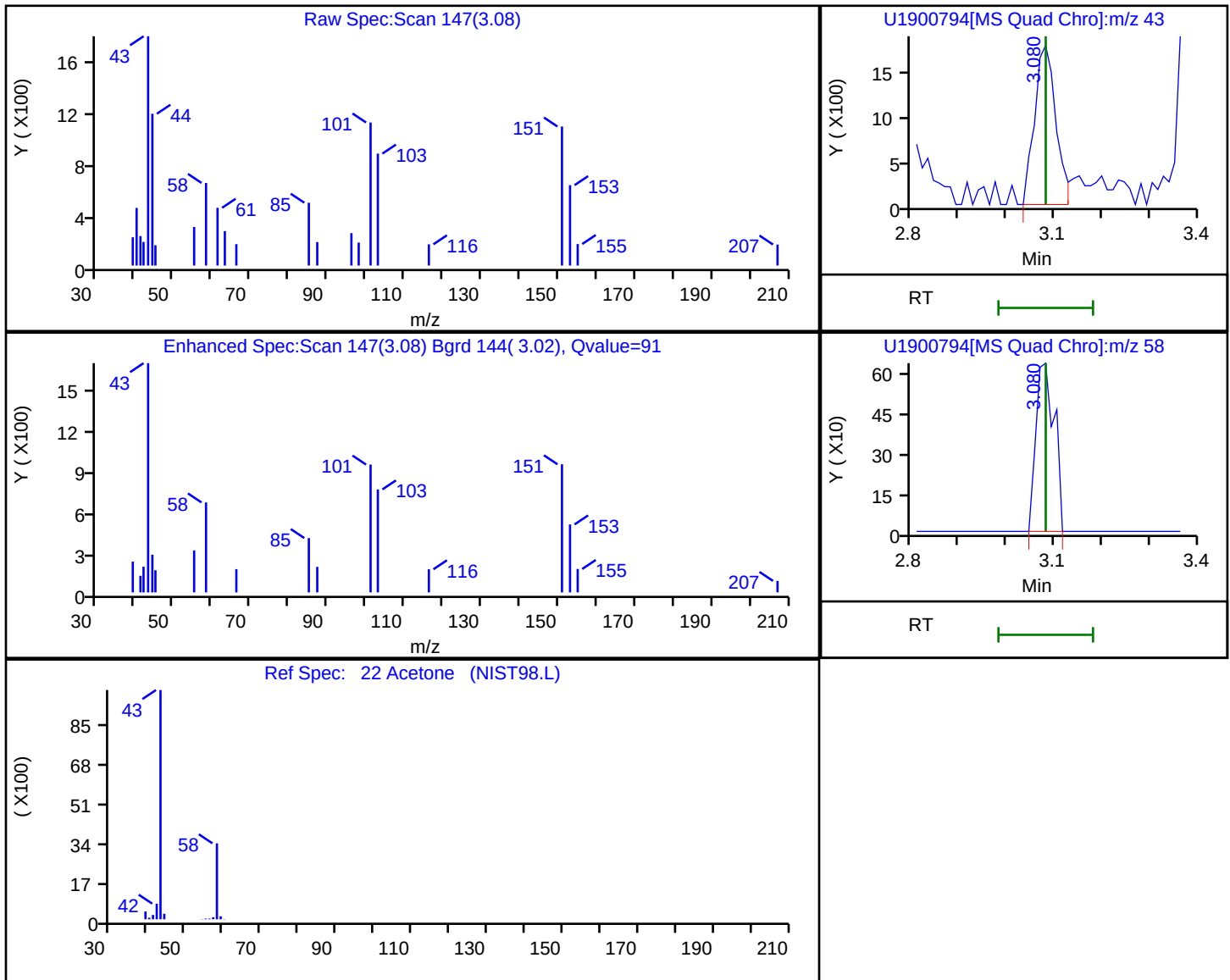
Column: DB-624 (0.18 mm)

Detector

MS SCAN

22 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.08	43.00	5518	1.624733
3.08	58.00	1707	

Reviewer: laveyt, 25-Jul-2018 09:52:16

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

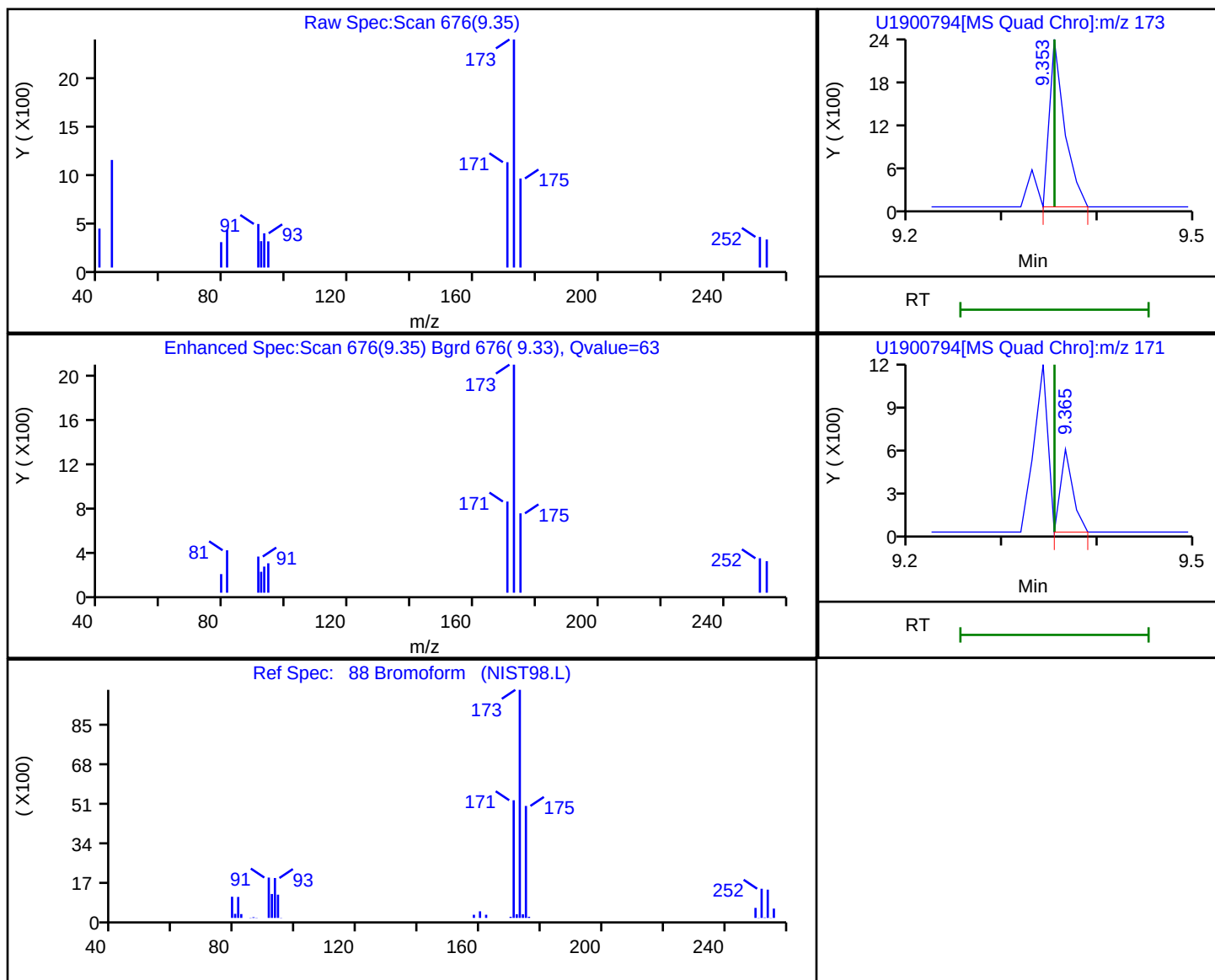
Column: DB-624 (0.18 mm)

Detector

MS SCAN

88 Bromoform, CAS: 75-25-2

Processing Results



RT	Mass	Response	Amount
9.35	173.00	2603	0.492517
9.37	171.00	513	

Reviewer: laveyt, 25-Jul-2018 09:54:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

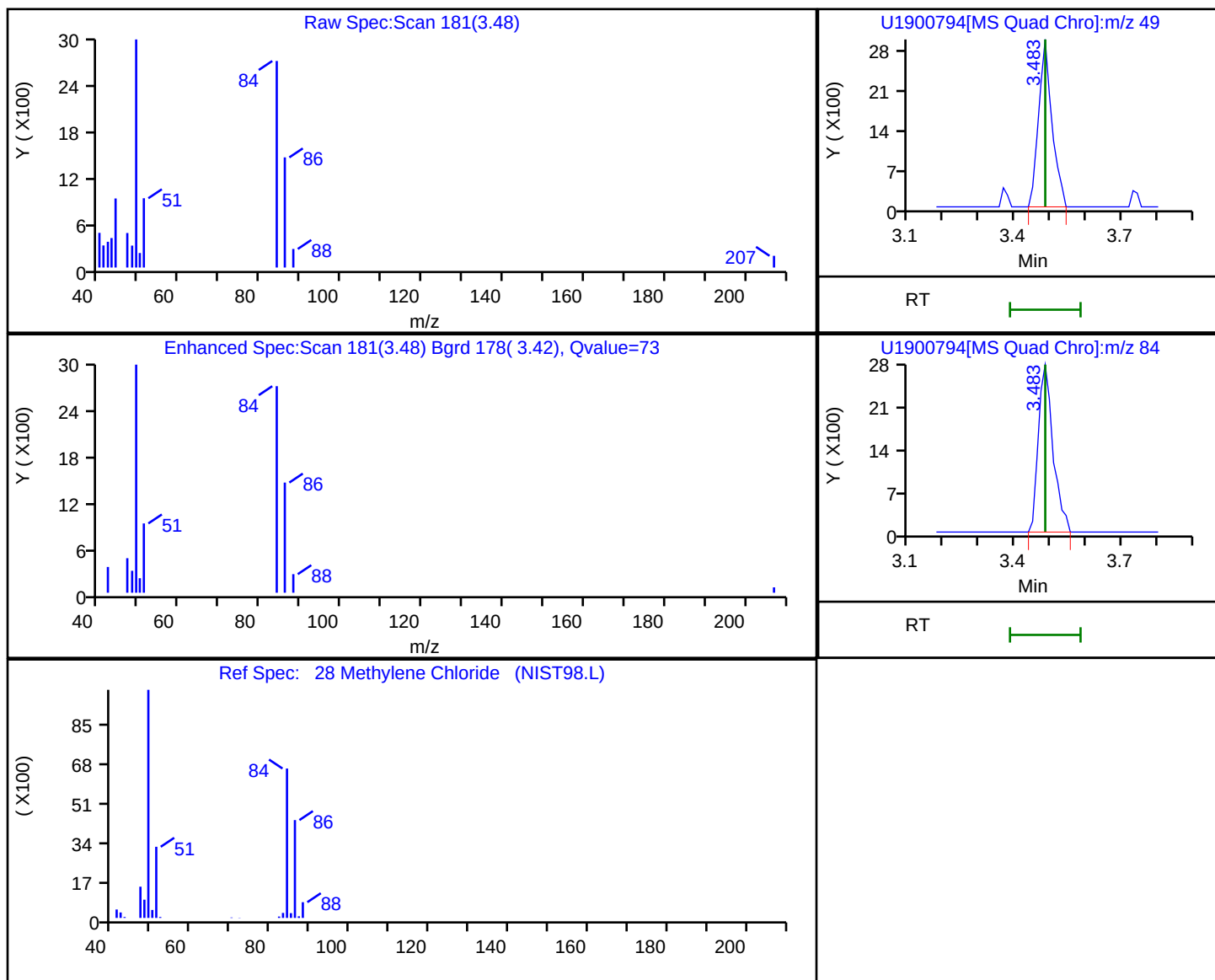
Column: DB-624 (0.18 mm)

Detector

MS SCAN

28 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.48	49.00	7846	0.551972
3.48	84.00	7835	

Reviewer: laveyt, 25-Jul-2018 09:52:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date: 24-Jul-2018 20:04:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

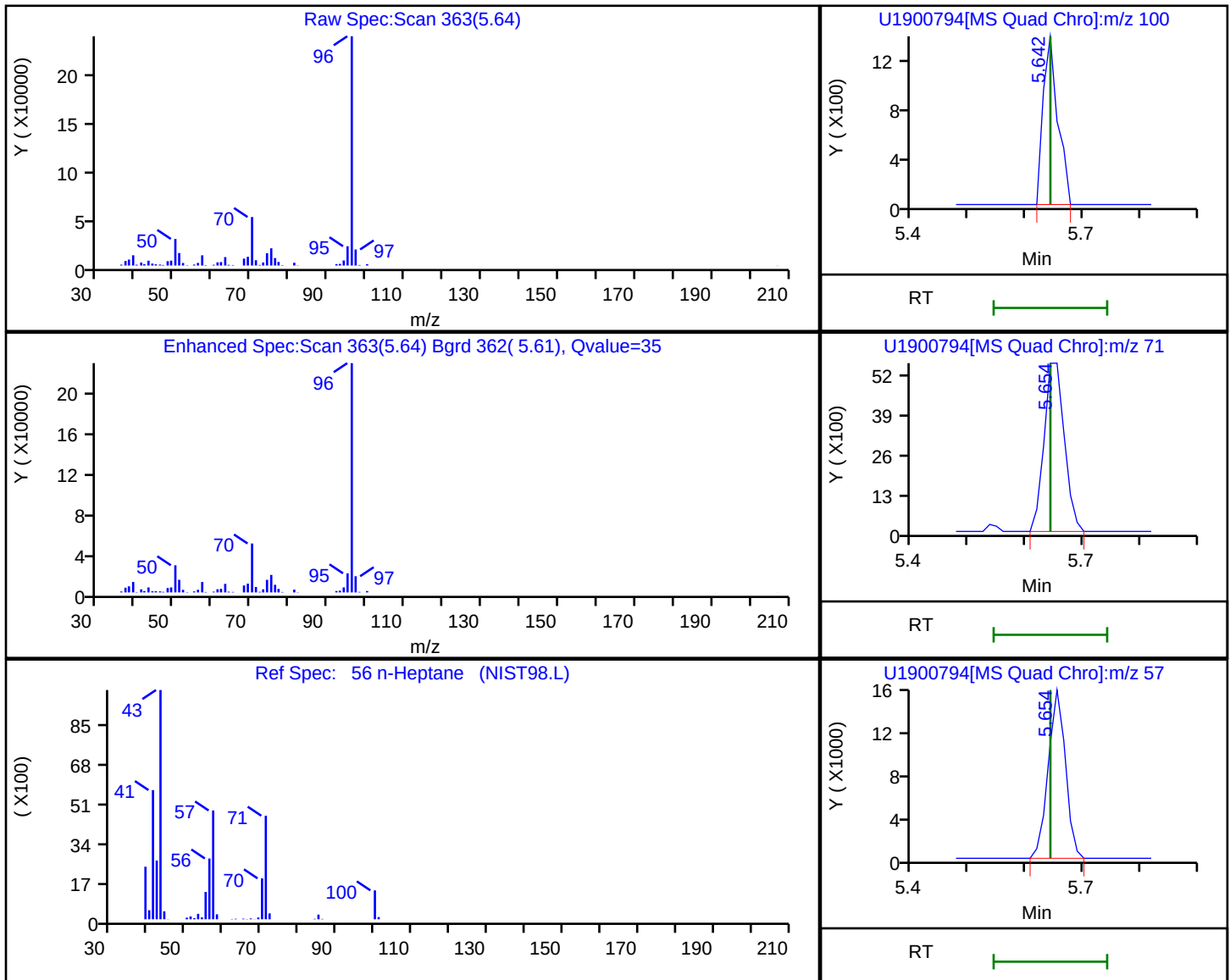
Column: DB-624 (0.18 mm)

Detector

MS SCAN

56 n-Heptane, CAS: 142-82-5

Processing Results



RT	Mass	Response	Amount
5.64	100.00	2448	
5.65	71.00	13746	
5.65	57.00	32874	0.539419

Reviewer: laveyt, 25-Jul-2018 09:54:04

Audit Action: Marked Compound Undetected

Page 148 of 236
Audit Reason: Invalid Compound ID

07/08/2020

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-342719/13	U1901329.d
Level 2	STD8260 240-342719/12	U1901328.d
Level 3	STD8260 240-342719/11	U1901327.d
Level 4	ICIS 240-342719/10	U1901326.d
Level 5	STD8260 240-342719/9	U1901325.d
Level 6	STD8260 240-342719/8	U1901324.d
Level 7	STD8260 240-342719/7	U1901323.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3252 0.4073	0.3858 0.4041	0.3902	0.3772	0.4052	Ave		0.3850			0.1000	7.5		20.0			
Chloromethane	0.3476 0.2860	0.2731 0.2757	0.2817	0.2748	0.2796	Ave		0.2883			0.1000	9.2		20.0			
Butadiene	0.2863 0.2923	0.2971 0.2827	0.2967	0.2831	0.2826	Ave		0.2887				2.3		20.0			
Vinyl chloride	0.2799 0.3039	0.3000 0.2955	0.3102	0.2950	0.3013	Ave		0.2980			0.1000	3.2		20.0			
Bromomethane	0.2530 0.2308	0.2391 0.2251	0.2340	0.2259	0.2264	Ave		0.2335			0.0500	4.3		20.0			
Chloroethane	0.2052 0.1842	0.1766 0.1812	0.1882	0.1779	0.1807	Ave		0.1848			0.0500	5.3		20.0			
Dichlorofluoromethane	0.4944 0.4514	0.4567 0.4411	0.4677	0.4468	0.4490	Ave		0.4581				3.9		20.0			
Trichlorofluoromethane	0.4941 0.5030	0.4893 0.4931	0.5122	0.4967	0.5003	Ave		0.4984			0.1000	1.5		20.0			
Ethyl ether	0.1731 0.1798	0.1898 0.1760	0.1849	0.1771	0.1791	Ave		0.1800				3.1		20.0			
Acrolein	0.0495 0.0430	0.0446 0.0441	0.0420	0.0454	0.0427	Ave		0.0445				5.6		20.0			
1,1-Dichloroethene	0.3476 0.3661	0.3473 0.3597	0.3727	0.3582	0.3610	Ave		0.3589			0.1000	2.6		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2493 0.2658	0.2366 0.2616	0.2651	0.2563	0.2622	Ave		0.2567			0.0500	4.1		20.0			
Acetone	++++ 0.0747	0.0941 0.0735	0.0766	0.0752	0.0764	Ave		0.0784			0.0100	9.9		20.0			
Iodomethane	0.4872 0.4597	0.4730 0.4538	0.4730	0.4575	0.4539	Ave		0.4655				2.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.8746 0.7168	0.8257 0.7023	0.7362	0.7031	0.7015	Ave		0.7515			0.1000	9.3		20.0			
3-Chloro-1-propene	0.3735 0.3489	0.3837 0.3396	0.3586	0.3361	0.3385	Ave		0.3541				5.3		20.0			
Methyl acetate	0.2638 0.2201	0.2366 0.2157	0.2398	0.2267	0.2267	Ave		0.2328			0.1000	6.9		20.0			
Methylene Chloride	++++ 0.2751	0.3184 0.2694	0.2925	0.2792	0.2733	Ave		0.2846			0.1000	6.5		20.0			
2-Methyl-2-propanol	0.0302 0.0245	0.0277 0.0251	0.0284	0.0260	0.0277	Ave		0.0271				7.4		20.0			
Acrylonitrile	0.1006 0.0983	0.1046 0.0951	0.1079	0.0977	0.0997	Ave		0.1006				4.3		20.0			
trans-1,2-Dichloroethene	0.3568 0.3338	0.3540 0.3216	0.3508	0.3269	0.3267	Ave		0.3387			0.1000	4.4		20.0			
Methyl tert-butyl ether	0.6459 0.7174	0.6970 0.7172	0.7178	0.6715	0.6899	Ave		0.6938			0.1000	3.9		20.0			
Hexane	0.3287 0.3643	0.3216 0.3693	0.3652	0.3577	0.3600	Ave		0.3524				5.4		20.0			
1,1-Dichloroethane	0.3877 0.4112	0.4141 0.3990	0.4182	0.3989	0.4043	Ave		0.4048			0.2000	2.6		20.0			
Vinyl acetate	0.4652 0.4557	0.4582 0.4625	0.4853	0.4584	0.4619	Ave		0.4639				2.1		20.0			
cis-1,2-Dichloroethene	0.3057 0.2869	0.2992 0.2782	0.2948	0.2801	0.2786	Ave		0.2891			0.1000	3.8		20.0			
2,2-Dichloropropane	0.2469 0.2502	0.2497 0.2458	0.2443	0.2181	0.2515	Ave		0.2438				4.8		20.0			
2-Butanone (MEK)	0.0487 0.0444	0.0481 0.0466	0.0506	0.0457	0.0465	Ave		0.0472			0.0100	4.3		20.0			
Chlorobromomethane	0.2347 0.1831	0.2161 0.1713	0.1973	0.1804	0.1790	Ave		0.1945				11.9		20.0			
Tetrahydrofuran	++++ 0.0978	0.2111 0.0981	0.1202	0.1027	0.1037	Lin1	0.2460	0.0976				7.4			0.9990		0.9900
Chloroform	0.4336 0.4423	0.4430 0.4326	0.4702	0.4398	0.4415	Ave		0.4433			0.2000	2.8		20.0			
1,1,1-Trichloroethane	0.3739 0.4296	0.4106 0.4262	0.4442	0.4096	0.4275	Ave		0.4174			0.1000	5.4		20.0			
Cyclohexane	0.3499 0.3999	0.3515 0.3986	0.3944	0.3825	0.3967	Ave		0.3819			0.1000	5.8		20.0			
1,1-Dichloropropene	0.3411 0.3565	0.3509 0.3499	0.3664	0.3469	0.3516	Ave		0.3519				2.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719
SDG No.: _____
Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.3818 0.4136	0.3781 0.4121	0.4219	0.3956	0.4130	Ave		0.4023			0.1000	4.3		20.0			
Isobutyl alcohol	0.0122 0.0101	0.0118 0.0103	0.0107	0.0108	0.0111	Ave		0.0110				7.0		20.0			
Benzene	0.9270 0.9480	0.9546 0.9366	1.0106	0.9431	0.9423	Ave		0.9518			0.5000	2.9		20.0			
1,2-Dichloroethane	0.3794 0.3459	0.3845 0.3369	0.3743	0.3513	0.3479	Ave		0.3600			0.1000	5.2		20.0			
n-Heptane	++++ 0.1978	0.8214 0.1912	0.2589	0.2169	0.2053	Lin1	0.6437	0.1861				3.4			1.0000		0.9900
Trichloroethene	0.3334 0.3137	0.3081 0.3106	0.3277	0.3076	0.3109	Ave		0.3160			0.1500	3.3		20.0			
Methylcyclohexane	0.4282 0.4825	0.4267 0.4698	0.4724	0.4580	0.4751	Ave		0.4590			0.1000	5.0		20.0			
1,2-Dichloropropane	0.2171 0.2187	0.2141 0.2164	0.2362	0.2209	0.2218	Ave		0.2208			0.1000	3.3		20.0			
Dibromomethane	0.2410 0.2204	0.2408 0.2155	0.2336	0.2191	0.2191	Ave		0.2271				4.9		20.0			
1,4-Dioxane	++++ 0.0025	0.0016 0.0027	0.0021	0.0026	0.0028	Ave		0.0024				17.9		20.0			
Dichlorobromomethane	0.3399 0.3440	0.3630 0.3379	0.3620	0.3462	0.3426	Ave		0.3479			0.1500	3.0		20.0			
2-Chloroethyl vinyl ether	0.1593 0.1741	0.1654 0.1828	0.1943	0.1818	0.1815	Ave		0.1770				6.6		20.0			
cis-1,3-Dichloropropene	0.3743 0.3841	0.3867 0.3870	0.4032	0.3827	0.3872	Ave		0.3865			0.1500	2.2		20.0			
4-Methyl-2-pentanone (MIBK)	0.3150 0.3064	0.3110 0.3144	0.3487	0.3229	0.3240	Ave		0.3203			0.0500	4.4		20.0			
Toluene	1.3762 1.3312	1.3706 1.3223	1.4018	1.3282	1.3309	Ave		1.3516			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4999 0.4712	0.5033 0.4805	0.4835	0.4641	0.4704	Ave		0.4818			0.1000	3.1		20.0			
Ethyl methacrylate	0.3824 0.4408	0.4001 0.4600	0.4577	0.4462	0.4540	Ave		0.4344				7.1		20.0			
1,1,2-Trichloroethane	0.2808 0.2823	0.2821 0.2821	0.2973	0.2798	0.2847	Ave		0.2842			0.1000	2.1		20.0			
Tetrachloroethene	0.4234 0.4375	0.4194 0.4317	0.4508	0.4248	0.4314	Ave		0.4313			0.1500	2.4		20.0			
1,3-Dichloropropane	0.4988 0.4724	0.4733 0.4772	0.5009	0.4686	0.4705	Ave		0.4802				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2781 0.3092	0.3020 0.3219	0.3438	0.3247	0.3245	Ave		0.3149			0.0500	6.6		20.0			
Chlorodibromomethane	0.3308 0.3663	0.3497 0.3646	0.3736	0.3604	0.3630	Ave		0.3583				3.9		20.0			
Ethylene Dibromide	0.3770 0.3214	0.3321 0.3219	0.3422	0.3286	0.3194	Ave		0.3346				6.1		20.0			
Chlorobenzene	0.9370 0.9055	0.9832 0.8914	0.9544	0.9002	0.9056	Ave		0.9253			0.3000	3.7		20.0			
1,1,1,2-Tetrachloroethane	0.3225 0.3380	0.3313 0.3315	0.3490	0.3282	0.3347	Ave		0.3336				2.5		20.0			
Ethylbenzene	0.4566 0.4899	0.4640 0.4838	0.5159	0.4863	0.4886	Ave		0.4836				4.0		20.0			
m-Xylene & p-Xylene	0.5709 0.5980	0.5535 0.5943	0.6142	0.5959	0.5965	Ave		0.5890				3.4		20.0			
o-Xylene	0.5188 0.5706	0.5578 0.5579	0.5806	0.5638	0.5683	Ave		0.5597				3.5		20.0			
Styrene	0.8915 0.9829	0.9056 0.9730	1.0088	0.9699	0.9794	Ave		0.9588			0.3000	4.5		20.0			
Bromoform	0.2892 0.2933	0.2907 0.2979	0.3020	0.2847	0.2951	Ave		0.2933			0.1000	2.0		20.0			
Isopropylbenzene	1.3694 1.5447	1.4922 1.4942	1.5808	1.5060	1.5314	Ave		1.5027			0.1000	4.4		20.0			
1,1,2,2-Tetrachloroethane	0.7123 0.7674	0.7872 0.7661	0.8261	0.7624	0.7730	Ave		0.7706			0.3000	4.4		20.0			
Bromobenzene	0.7562 0.7639	0.7920 0.7473	0.8125	0.7532	0.7575	Ave		0.7690				3.1		20.0			
1,2,3-Trichloropropane	0.2805 0.2866	0.2903 0.2882	0.3178	0.2884	0.2929	Ave		0.2921				4.1		20.0			
trans-1,4-Dichloro-2-butene	++++ 0.2667	0.2763 0.2751	0.2902	0.2665	0.2675	Ave		0.2737				3.3		20.0			
N-Propylbenzene	0.7009 0.7973	0.7492 0.7772	0.8251	0.7710	0.7894	Ave		0.7729				5.1		20.0			
2-Chlorotoluene	0.6131 0.6732	0.6212 0.6509	0.7079	0.6539	0.6587	Ave		0.6541				4.9		20.0			
1,3,5-Trimethylbenzene	2.1099 2.2883	2.1099 2.2183	2.3988	2.1936	2.2594	Ave		2.2255				4.6		20.0			
4-Chlorotoluene	0.7307 0.7048	0.6944 0.6840	0.7470	0.7010	0.6888	Ave		0.7072				3.3		20.0			
tert-Butylbenzene	1.9093 2.2037	2.0260 2.1009	2.2785	2.0983	2.1715	Ave		2.1126				5.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	2.0996 2.3002	2.2590 2.2368	2.3762	2.2406	2.2826	Ave		2.2564				3.7		20.0			
sec-Butylbenzene	2.5921 3.0046	2.6994 2.8685	2.9965	2.8235	2.9285	Ave		2.8447				5.4		20.0			
1,3-Dichlorobenzene	1.4791 1.3933	1.5035 1.3394	1.4385	1.3676	1.3647	Ave		1.4123			0.6000	4.4		20.0			
4-Isopropyltoluene	2.2955 2.5970	2.3910 2.5362	2.6099	2.4625	2.5496	Ave		2.4917				4.6		20.0			
1,4-Dichlorobenzene	1.6054 1.4113	1.5675 1.3669	1.4816	1.3825	1.3984	Ave		1.4591			0.5000	6.5		20.0			
n-Butylbenzene	1.8944 2.1259	2.0232 2.0712	2.1091	2.0276	2.0953	Ave		2.0495				3.8		20.0			
1,2-Dichlorobenzene	1.3437 1.2534	1.3687 1.2318	1.3105	1.2348	1.2330	Ave		1.2823			0.4000	4.5		20.0			
1,2-Dibromo-3-Chloropropane	0.2630 0.2491	0.2219 0.2547	0.2430	0.2371	0.2465	Ave		0.2450			0.0500	5.4		20.0			
1,2,4-Trichlorobenzene	0.9409 0.8412	0.9494 0.8737	0.8099	0.7792	0.7909	Ave		0.8550			0.2000	8.1		20.0			
Hexachlorobutadiene	0.4751 0.4459	0.4859 0.4196	0.4201	0.4076	0.4202	Ave		0.4392				7.0		20.0			
Naphthalene	++++ 2.4081	2.5248 2.5673	2.2519	2.1428	2.2829	Ave		2.3630				7.0		20.0			
1,2,3-Trichlorobenzene	0.7893 0.7724	0.8277 0.8517	0.7383	0.6846	0.7103	Ave		0.7677				7.9		20.0			
Dibromofluoromethane (Surr)	0.2950 0.2630	0.2820 0.2531	0.2707	0.2587	0.2619	Ave		0.2692				5.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3515 0.2903	0.3408 0.2779	0.3137	0.2940	0.2963	Ave		0.3092				8.9		20.0			
Toluene-d8 (Surr)	1.2799 1.1805	1.2018 1.1653	1.2236	1.1594	1.1844	Ave		1.1993				3.5		20.0			
4-Bromofluorobenzene (Surr)	0.5295 0.4325	0.4716 0.4172	0.4467	0.4309	0.4307	Ave		0.4513				8.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-342719/13	U1901329.d
Level 2	STD8260 240-342719/12	U1901328.d
Level 3	STD8260 240-342719/11	U1901327.d
Level 4	ICIS 240-342719/10	U1901326.d
Level 5	STD8260 240-342719/9	U1901325.d
Level 6	STD8260 240-342719/8	U1901324.d
Level 7	STD8260 240-342719/7	U1901323.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	7625 1180992	18328 1552738	186223	366772	792590	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloromethane	FB	Ave	8152 829233	12972 1059365	134420	267203	546909	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Butadiene	FB	Ave	6713 847603	14115 1086231	141609	275330	552757	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl chloride	FB	Ave	6564 881108	14250 1135494	148037	286894	589426	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromomethane	FB	Ave	5934 669257	11360 864872	111689	219651	442826	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloroethane	FB	Ave	4812 533953	8387 696179	89838	172968	353502	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dichlorofluoromethane	FB	Ave	11593 1308784	21694 1694878	223205	434465	878380	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Trichlorofluoromethane	FB	Ave	11587 1458414	23241 1894654	244417	483006	978643	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl ether	FB	Ave	4060 521372	9015 676475	88252	172224	350377	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acrolein	FB	Ave	5804 622965	10600 846753	100203	220720	417769	2.50 300	5.00 400	50.0	100	200
1,1-Dichloroethene	FB	Ave	8152 1061526	16498 1382045	177882	348307	706289	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	5847 770733	11240 1005400	126531	249289	512861	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acetone	FB	Ave	++++ 433055	8941 564923	73077	146204	298968	++++ 120	2.00 160	20.0	40.0	80.0
Iodomethane	FB	Ave	11424 1332936	22471 1743886	225726	444884	888035	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon disulfide	FB	Ave	20511 2078244	39223 2698750	351356	683722	1372316	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	8759 1011692	18227 1304832	171118	326833	662138	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl acetate	FB	Ave	12374 1276471	22480 1658043	228841	440913	886871	1.00 120	2.00 160	20.0	40.0	80.0
Methylene Chloride	FB	Ave	++++ 797526	15126 1035294	139613	271471	534613	++++ 60.0	1.00 80.0	10.0	20.0	40.0
2-Methyl-2-propanol	FB	Ave	7089 709594	13140 963916	135517	252801	542388	5.00 600	10.0 800	100	200	400
Acrylonitrile	FB	Ave	23600 2849701	49680 3654042	514757	950386	1951040	5.00 600	10.0 800	100	200	400
trans-1,2-Dichloroethene	FB	Ave	8368 967924	16818 1235776	167419	317885	639131	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl tert-butyl ether	FB	Ave	15146 2079947	33109 2755910	342568	653045	1349603	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexane	FB	Ave	7709 1056328	15276 1419117	174299	347875	704185	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloroethane	FB	Ave	9092 1192355	19673 1533220	199597	387941	790957	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl acetate	FB	Ave	10910 1321142	21765 1777280	231586	445770	903595	0.500 60.0	1.00 80.0	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	7168 831715	14212 1069027	140685	272438	545012	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2,2-Dichloropropane	FB	Ave	5791 725393	11860 944363	116583	212094	491954	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Butanone (MEK)	FB	Ave	2283 257675	4567 358198	48290	88909	181887	1.00 120	2.00 160	20.0	40.0	80.0
Chlorobromomethane	FB	Ave	5503 530825	10266 658069	94139	175479	350082	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrahydrofuran	FB	Lin1	++++ 566965	20056 753652	114720	199816	405539	++++ 120	2.00 160	20.0	40.0	80.0
Chloroform	FB	Ave	10169 1282514	21044 1662428	224371	427697	863672	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1-Trichloroethane	FB	Ave	8767 1245609	19503 1637723	211997	398309	836381	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Cyclohexane	FB	Ave	8206 1159393	16696 1531667	188221	372006	776128	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloropropene	FB	Ave	7998 1033663	16667 1344377	174842	337392	687882	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon tetrachloride	FB	Ave	8954 1199313	17959 1583649	201366	384700	807965	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Isobutyl alcohol	FB	Ave	7140 731439	14010 985172	127213	263438	540692	12.5 1500	25.0 2000	250	500	1000

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	21738 2748682	45349 3599104	482300	917150	1843426	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane	FB	Ave	8896 1002994	18266 1294416	178638	341638	680627	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Heptane	FB	Lin1	++++ 573367	39021 734621	123554	210893	401639	++++ 60.0	1.00 80.0	10.0	20.0	40.0
Trichloroethene	FB	Ave	7819 909646	14636 1193487	156409	299123	608172	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methylcyclohexane	FB	Ave	10042 1399000	20268 1805108	225444	445411	929492	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloropropane	FB	Ave	5092 634222	10172 831616	112735	214790	433884	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromomethane	FB	Ave	5652 638964	11437 828119	111478	213090	428543	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,4-Dioxane	FB	Ave	++++ 147508	1560 204613	20257	50489	108387	++++ 1200	20.0 1600	200	400	800
Dichlorobromomethane	FB	Ave	7972 997303	17242 1298324	172767	336655	670319	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chloroethyl vinyl ether	FB	Ave	7473 1009556	15714 1404589	185460	353595	710198	1.00 120	2.00 160	20.0	40.0	80.0
cis-1,3-Dichloropropene	FB	Ave	8778 1113655	18371 1486992	192411	372198	757475	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	14774 1776570	29549 2416341	332777	627983	1267570	1.00 120	2.00 160	20.0	40.0	80.0
Toluene	CBNZ d5	Ave	25413 3039879	50838 4036837	544474	1040131	2085055	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	9232 1076004	18668 1466824	187797	363416	737016	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl methacrylate	CBNZ d5	Ave	7062 1006534	14839 1404401	177753	349427	711262	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloroethane	CBNZ d5	Ave	5186 644677	10462 861140	115489	219105	445968	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrachloroethene	CBNZ d5	Ave	7818 999011	15556 1317893	175104	332664	675866	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	9211 1078694	17554 1456758	194537	366944	737142	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Hexanone	CBNZ d5	Ave	10272 1411899	22402 1965782	267096	508487	1016835	1.00 120	2.00 160	20.0	40.0	80.0
Chlorodibromomethane	CBNZ d5	Ave	6108 836499	12969 1113195	145120	282195	568645	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylene Dibromide	CBNZ d5	Ave	6962 733806	12317 982631	132926	257341	500324	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	17303 2067581	36469 2721351	370702	704913	1418747	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	5956 771705	12290 1012040	135561	257026	524311	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylbenzene	CBNZ d5	Ave	8431 1118678	17209 1476959	200390	380861	765441	0.500 60.0	1.00 80.0	10.0	20.0	40.0
m-Xylene & p-Xylene	CBNZ d5	Ave	10542 1365436	20530 1814431	238543	466651	934583	0.500 60.0	1.00 80.0	10.0	20.0	40.0
o-Xylene	CBNZ d5	Ave	9580 1302937	20689 1703380	225509	441487	890297	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Styrene	CBNZ d5	Ave	16463 2244503	33591 2970527	391834	759556	1534422	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromoform	CBNZ d5	Ave	5340 669771	10783 909465	117306	222929	462320	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Isopropylbenzene	CBNZ d5	Ave	25288 3527221	55346 4561888	613985	1179370	2399226	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	7218 951258	16261 1271933	172140	328526	660294	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromobenzene	DCBd 4	Ave	7663 946835	16361 1240722	169316	324573	647055	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichloropropane	DCBd 4	Ave	2842 355186	5997 478494	66218	124262	250203	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	++++ 330637	5707 456736	60466	114842	228469	++++ 60.0	1.00 80.0	10.0	20.0	40.0
N-Propylbenzene	DCBd 4	Ave	7103 988262	15476 1290307	171938	332244	674293	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chlorotoluene	DCBd 4	Ave	6213 834423	12831 1080636	147510	281753	562614	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	21381 2836427	43584 3682951	499875	945225	1929863	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Chlorotoluene	DCBd 4	Ave	7405 873575	14345 1135643	155656	302046	588358	0.500 60.0	1.00 80.0	10.0	20.0	40.0
tert-Butylbenzene	DCBd 4	Ave	19348 2731529	41850 3487952	474813	904165	1854784	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	21277 2851175	46663 3713592	495166	965487	1949684	0.500 60.0	1.00 80.0	10.0	20.0	40.0
sec-Butylbenzene	DCBd 4	Ave	26267 3724288	55760 4762339	624437	1216655	2501406	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichlorobenzene	DCBd 4	Ave	14989 1726981	31057 2223773	299776	589299	1165661	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Isopropyltoluene	DCBd 4	Ave	23262 3219084	49391 4210777	543873	1061108	2177763	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	16269 1749380	32379 2269476	308743	595729	1194426	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Butylbenzene	DCBd 4	Ave	19197 2635155	41792 3438646	439518	873706	1789693	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichlorobenzene	DCBd 4	Ave	13617 1553579	28272 2045057	273092	532075	1053180	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	2665 308798	4583 422865	50642	102189	210526	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	9535 1042664	19612 1450610	168774	335760	675526	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexachlorobutadiene	DCBd 4	Ave	4814 552719	10037 696652	87534	175651	358938	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Naphthalene	DCBd 4	Ave	++++ 2984863	52154 4262332	469280	923339	1949946	++++ 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	7998 957428	17097 1414051	153843	295011	606712	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromofluoromethane (Surr)	FB	Ave	6919 762443	13395 972724	129168	251584	512374	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	8242 841615	16187 1067780	149716	285917	579615	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Toluene-d8 (Surr)	CBNZ d5	Ave	23636 2695636	44577 3557725	475254	907923	1855495	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	9778 987516	17494 1273707	173480	337411	674745	0.500 60.0	1.00 80.0	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1 Analy Batch No.: 342719

SDG No.: _____

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-342719/13	U1901329.d
Level 2	STD8260 240-342719/12	U1901328.d
Level 3	STD8260 240-342719/11	U1901327.d
Level 4	ICIS 240-342719/10	U1901326.d
Level 5	STD8260 240-342719/9	U1901325.d
Level 6	STD8260 240-342719/8	U1901324.d
Level 7	STD8260 240-342719/7	U1901323.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Tetrahydrofuran	+++++	-9.7						50				
n-Heptane	+++++	-4.5						50				

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901323.d
 Lims ID: std8260 L7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 27-Aug-2018 17:09:10 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0079307-003
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:27:48 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 17:37:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	92	960659	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	763247	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	68	415062	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	63	972724	80.0	75.2	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	100	1067780	80.0	71.9	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	93	3557725	80.0	77.7	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	1273707	80.0	74.0	
9 Dichlorodifluoromethane	85	1.598	1.610	-0.012	88	1552738	80.0	84.0	
10 Chloromethane	50	1.811	1.812	-0.001	78	1059365	80.0	76.5	
12 Butadiene	54	1.894	1.906	-0.012	89	1086231	80.0	78.3	
11 Vinyl chloride	62	1.918	1.918	0.000	82	1135494	80.0	79.3	
13 Bromomethane	94	2.215	2.227	-0.013	84	864872	80.0	77.1	
14 Chloroethane	64	2.286	2.298	-0.012	86	696179	80.0	78.4	
15 Dichlorofluoromethane	67	2.499	2.499	0.000	83	1694878	80.0	77.0	
16 Trichlorofluoromethane	101	2.570	2.582	-0.012	87	1894654	80.0	79.1	
17 Ethyl ether	59	2.807	2.808	-0.001	88	676475	80.0	78.2	
18 Acrolein	56	2.926	2.926	0.000	91	846753	400.0	396.4	
21 1,1-Dichloroethene	61	3.033	3.045	-0.012	90	1382045	80.0	80.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	78	1005400	80.0	81.5	
22 Acetone	43	3.068	3.069	-0.001	79	564923	160.0	150.0	
23 Iodomethane	142	3.187	3.199	-0.012	99	1743886	80.0	78.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	89	2698750	80.0	74.8	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	81	1304832	80.0	76.7	
27 Methyl acetate	43	3.377	3.377	0.000	96	1658043	160.0	148.3	
28 Methylene Chloride	49	3.483	3.495	-0.012	52	1035294	80.0	75.7	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	69	963916	800.0	741.0	
30 Acrylonitrile	53	3.685	3.685	0.000	98	3654042	800.0	756.5	
32 trans-1,2-Dichloroethene	61	3.721	3.721	0.000	79	1235776	80.0	76.0	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	89	2755910	80.0	82.7	
33 Hexane	57	3.970	3.982	-0.012	93	1419117	80.0	83.8	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	1533220	80.0	78.9	
35 Vinyl acetate	43	4.147	4.148	-0.001	97	1777280	80.0	79.8	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	63	1069027	80.0	77.0	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	66	944363	80.0	80.7	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	96	358198	160.0	157.9	
45 Chlorobromomethane	49	4.835	4.836	-0.001	81	658069	80.0	70.4	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	753652	160.0	158.3	
47 Chloroform	83	4.906	4.907	-0.001	70	1662428	80.0	78.1	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	91	1637723	80.0	81.7	
49 Cyclohexane	84	5.144	5.144	0.000	75	1531667	80.0	83.5	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	89	1344377	80.0	79.5	
51 Carbon tetrachloride	117	5.238	5.239	-0.001	71	1583649	80.0	82.0	
52 Isobutyl alcohol	41	5.298	5.298	0.000	88	985172	2000.0	1867.6	
53 Benzene	78	5.404	5.417	-0.013	95	3599104	80.0	78.7	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	51	1294416	80.0	74.9	
56 n-Heptane	57	5.642	5.642	0.000	86	734621	80.0	78.7	
58 Trichloroethene	130	5.986	5.986	0.000	88	1193487	80.0	78.6	
60 Methylcyclohexane	83	6.175	6.176	-0.001	89	1805108	80.0	81.9	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	81	831616	80.0	78.4	
63 Dibromomethane	174	6.294	6.294	0.000	85	828119	80.0	75.9	
64 1,4-Dioxane	88	6.306	6.306	0.000	33	204613	1600.0	1782.8	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	93	1298324	80.0	77.7	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	1404589	160.0	165.2	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	91	1486992	80.0	80.1	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	83	2416341	160.0	157.0	
70 Toluene	91	7.171	7.172	-0.001	94	4036837	80.0	78.3	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	83	1466824	80.0	79.8	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	87	1404401	80.0	84.7	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	84	861140	80.0	79.4	
75 Tetrachloroethene	166	7.693	7.693	0.000	93	1317893	80.0	80.1	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	1456758	80.0	79.5	
77 2-Hexanone	43	7.764	7.765	-0.001	79	1965782	160.0	163.6	
79 Chlorodibromomethane	129	7.930	7.919	0.011	87	1113195	80.0	81.4	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901323.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	982631	80.0	76.9	
82 Chlorobenzene	112	8.523	8.524	-0.001	92	2721351	80.0	77.1	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	88	1012040	80.0	79.5	
84 Ethylbenzene	106	8.630	8.630	0.000	98	1476959	80.0	80.0	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1814431	80.0	80.7	
86 o-Xylene	106	9.152	9.152	0.000	87	1703380	80.0	79.8	
87 Styrene	104	9.164	9.164	0.000	93	2970527	80.0	81.2	
88 Bromoform	173	9.353	9.354	-0.001	98	909465	80.0	81.3	
89 Isopropylbenzene	105	9.519	9.520	-0.001	95	4561888	80.0	79.6	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	84	1271933	80.0	79.5	
92 Bromobenzene	156	9.840	9.840	0.000	81	1240722	80.0	77.7	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	65	478494	80.0	78.9	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	62	456736	80.0	80.4	
95 N-Propylbenzene	120	9.946	9.947	-0.001	92	1290307	80.0	80.4	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	1080636	80.0	79.6	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	3682951	80.0	79.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	1135643	80.0	77.4	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	3487952	80.0	79.6	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	71	3713592	80.0	79.3	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	94	4762339	80.0	80.7	
103 1,3-Dichlorobenzene	146	10.824	10.812	0.012	95	2223773	80.0	75.9	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	4210777	80.0	81.4	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	2269476	80.0	74.9	
108 n-Butylbenzene	91	11.286	11.287	-0.001	96	3438646	80.0	80.8	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	98	2045057	80.0	76.9	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	92	422865	80.0	83.2	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	93	1450610	80.0	81.7	
113 Hexachlorobutadiene	225	13.207	13.208	-0.001	88	696652	80.0	76.4	
114 Naphthalene	128	13.279	13.279	0.000	97	4262332	80.0	86.9	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	1414051	80.0	88.7	
S 127 Trihalomethanes, Total	1				0		320.0	318.4	
S 164 Total BTEX	1				0		400.0	397.5	
S 124 1,2-Dichloroethene, Total	96				0			153.0	
S 125 1,3-Dichloropropene, Total	75				0			159.9	
S 126 Xylenes, Total	106				0		160.0	160.5	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 64.00	Units: uL
vmarolistdw_00260	Amount Added: 64.00	Units: uL
vmrprimw_00297	Amount Added: 64.00	Units: uL
vm50ss_00333	Amount Added: 64.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901323.d

Injection Date: 27-Aug-2018 17:09:10

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L7

Worklist Smp#: 7

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

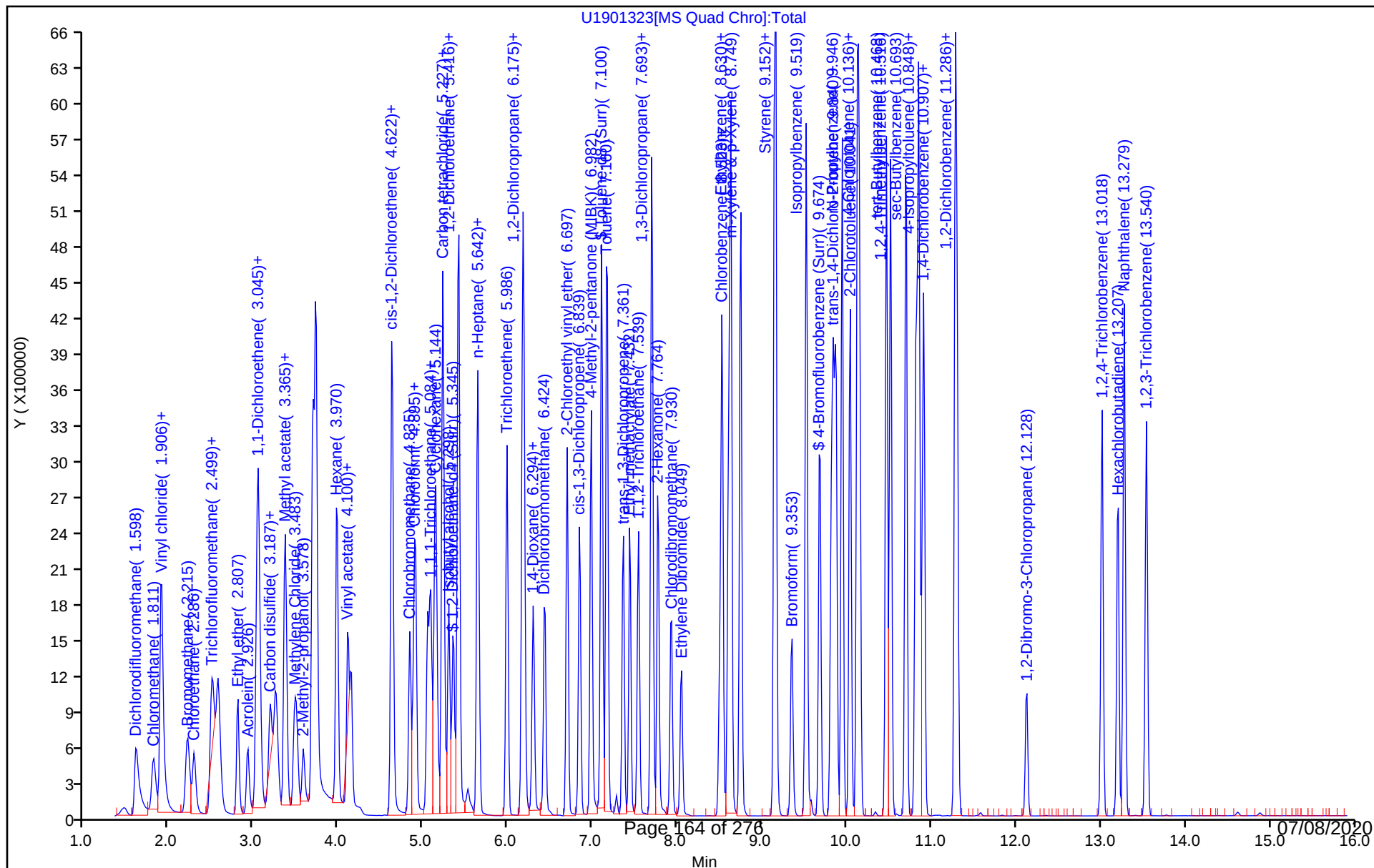
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901324.d
 Lims ID: std8260 L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 27-Aug-2018 17:31:36 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0079307-004
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:27:54 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 18:08:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	92	966455	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	761160	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	74	413175	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	762443	60.0	58.6	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	99	841615	60.0	56.3	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	86	2695636	60.0	59.1	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	987516	60.0	57.5	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	80	1180992	60.0	63.5	
10 Chloromethane	50	1.823	1.812	0.011	77	829233	60.0	59.5	
12 Butadiene	54	1.906	1.906	0.000	88	847603	60.0	60.8	
11 Vinyl chloride	62	1.930	1.918	0.012	81	881108	60.0	61.2	
13 Bromomethane	94	2.226	2.227	-0.001	89	669257	60.0	59.3	
14 Chloroethane	64	2.298	2.298	0.000	94	533953	60.0	59.8	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	82	1308784	60.0	59.1	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	88	1458414	60.0	60.6	
17 Ethyl ether	59	2.807	2.808	-0.001	90	521372	60.0	59.9	
18 Acrolein	56	2.926	2.926	0.000	95	622965	300.0	289.9	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	89	1061526	60.0	61.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	79	770733	60.0	62.1	
22 Acetone	43	3.068	3.069	-0.001	64	433055	120.0	114.3	
23 Iodomethane	142	3.199	3.199	0.000	99	1332936	60.0	59.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	99	2078244	60.0	57.2	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	74	1011692	60.0	59.1	
27 Methyl acetate	43	3.377	3.377	0.000	96	1276471	120.0	113.5	
28 Methylene Chloride	49	3.483	3.495	-0.012	53	797526	60.0	58.0	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	86	709594	600.0	542.2	
30 Acrylonitrile	53	3.697	3.685	0.012	98	2849701	600.0	586.4	
32 trans-1,2-Dichloroethene	61	3.732	3.721	0.011	69	967924	60.0	59.1	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	89	2079947	60.0	62.0	
33 Hexane	57	3.982	3.982	0.000	89	1056328	60.0	62.0	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	1192355	60.0	61.0	
35 Vinyl acetate	43	4.148	4.148	0.000	97	1321142	60.0	58.9	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	63	831715	60.0	59.5	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	90	257675	120.0	112.9	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	62	725393	60.0	61.6	
45 Chlorobromomethane	49	4.835	4.836	-0.001	68	530825	60.0	56.5	
46 Tetrahydrofuran	42	4.883	4.883	0.000	85	566965	120.0	117.7	
47 Chloroform	83	4.906	4.907	-0.001	70	1282514	60.0	59.9	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	89	1245609	60.0	61.8	
49 Cyclohexane	84	5.144	5.144	0.000	85	1159393	60.0	62.8	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	91	1033663	60.0	60.8	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	1199313	60.0	61.7	
52 Isobutyl alcohol	41	5.298	5.298	0.000	82	731439	1500.0	1378.3	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	49	1002994	60.0	57.7	
53 Benzene	78	5.416	5.417	-0.001	94	2748682	60.0	59.8	
56 n-Heptane	57	5.642	5.642	0.000	87	573367	60.0	60.3	
58 Trichloroethene	130	5.986	5.986	0.000	93	909646	60.0	59.6	
60 Methylcyclohexane	83	6.175	6.176	-0.001	89	1399000	60.0	63.1	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	79	634222	60.0	59.5	
63 Dibromomethane	174	6.294	6.294	0.000	86	638964	60.0	58.2	
64 1,4-Dioxane	88	6.306	6.306	0.000	32	147508	1200.0	1277.5	
65 Dichlorobromomethane	83	6.436	6.436	0.000	94	997303	60.0	59.3	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	1009556	120.0	118.0	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	93	1113655	60.0	59.6	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	82	1776570	120.0	114.8	
70 Toluene	91	7.171	7.172	-0.001	94	3039879	60.0	59.1	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	87	1076004	60.0	58.7	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	88	1006534	60.0	60.9	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	84	644677	60.0	59.6	
75 Tetrachloroethene	166	7.693	7.693	0.000	93	999011	60.0	60.9	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	1078694	60.0	59.0	
77 2-Hexanone	43	7.764	7.765	-0.001	79	1411899	120.0	117.8	
79 Chlorodibromomethane	129	7.930	7.919	0.011	87	836499	60.0	61.3	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901324.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	733806	60.0	57.6	
82 Chlorobenzene	112	8.523	8.524	-0.001	95	2067581	60.0	58.7	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	88	771705	60.0	60.8	
84 Ethylbenzene	106	8.630	8.630	0.000	98	1118678	60.0	60.8	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1365436	60.0	60.9	
86 o-Xylene	106	9.152	9.152	0.000	87	1302937	60.0	61.2	
87 Styrene	104	9.152	9.164	-0.012	88	2244503	60.0	61.5	
88 Bromoform	173	9.353	9.354	-0.001	98	669771	60.0	60.0	
89 Isopropylbenzene	105	9.519	9.520	-0.001	95	3527221	60.0	61.7	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	84	951258	60.0	59.8	
92 Bromobenzene	156	9.840	9.840	0.000	87	946835	60.0	59.6	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	63	355186	60.0	58.9	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	61	330637	60.0	58.5	
95 N-Propylbenzene	120	9.946	9.947	-0.001	91	988262	60.0	61.9	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	834423	60.0	61.7	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	2836427	60.0	61.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	873575	60.0	59.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	2731529	60.0	62.6	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	2851175	60.0	61.2	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	94	3724288	60.0	63.4	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	90	1726981	60.0	59.2	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	3219084	60.0	62.5	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1749380	60.0	58.0	
108 n-Butylbenzene	91	11.275	11.287	-0.012	98	2635155	60.0	62.2	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	1553579	60.0	58.6	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	91	308798	60.0	61.0	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	1042664	60.0	59.0	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	552719	60.0	60.9	
114 Naphthalene	128	13.279	13.279	0.000	96	2984863	60.0	61.1	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	957428	60.0	60.4	
S 164 Total BTEX	1				0		300.0	301.7	
S 127 Trihalomethanes, Total	1				0		240.0	240.5	
S 124 1,2-Dichloroethene, Total	96				0			118.7	
S 125 1,3-Dichloropropene, Total	75				0			118.3	
S 126 Xylenes, Total	106				0		120.0	122.1	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 48.00	Units: uL
vmarolistdw_00260	Amount Added: 48.00	Units: uL
vmrprimw_00297	Amount Added: 48.00	Units: uL
vm50ss_00333	Amount Added: 48.00	Units: uL

Chrom Revision: 2.3 19-Jul-2018 15:14:50

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901324.d

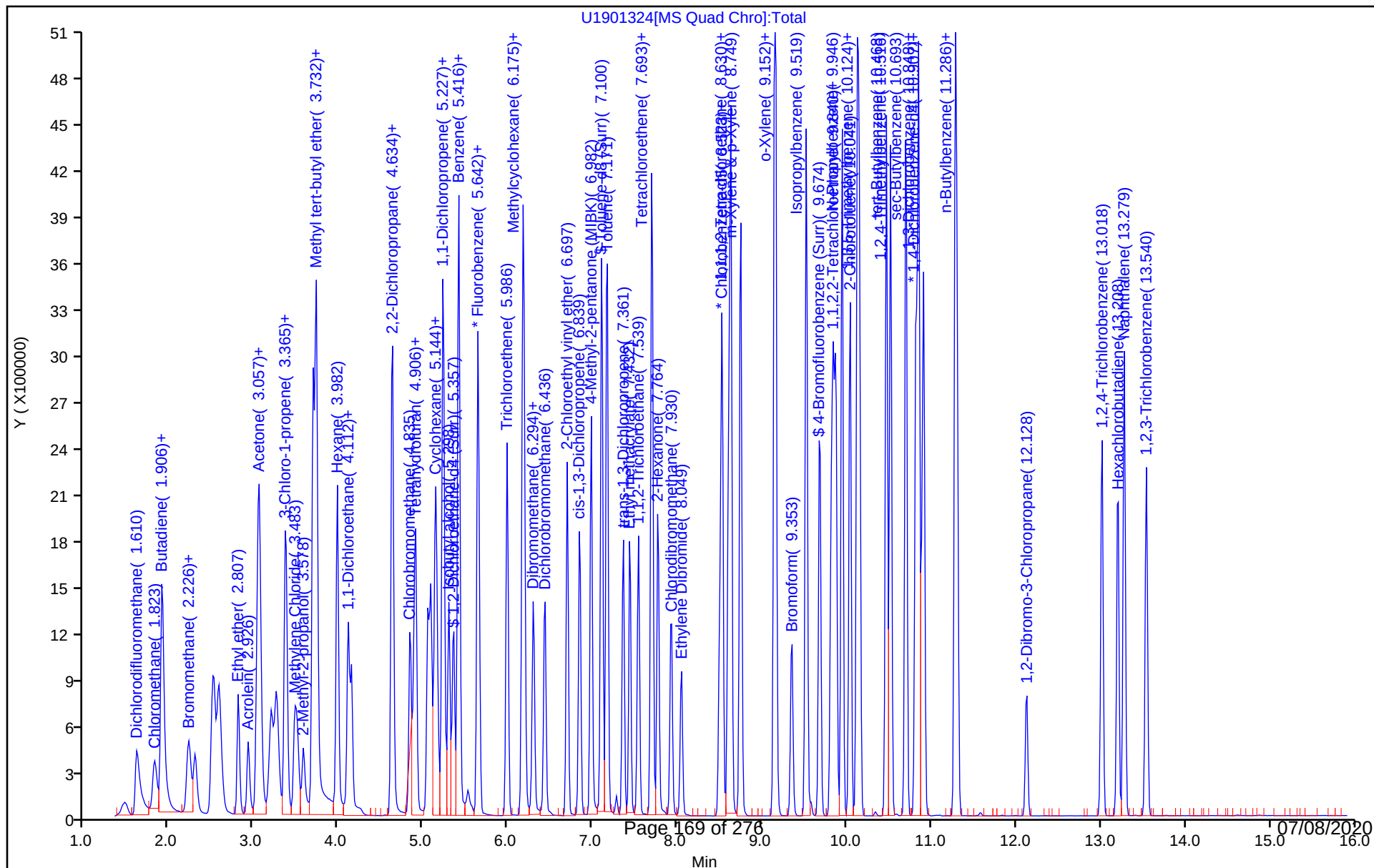
Operator ID: 001904

Worklist Smp#: 8

ALS Bottle#: 0

Limit Group: MSV 8260C ICAL

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901325.d
 Lims ID: std8260 L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 27-Aug-2018 17:53:51 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0079307-009
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:28:08 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 18:49:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	95	978140	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	783329	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	75	427081	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	512374	40.0	38.9	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	100	579615	40.0	38.3	
\$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	86	1855495	40.0	39.5	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	89	674745	40.0	38.2	
9 Dichlorodifluoromethane	85	1.598	1.610	-0.012	88	792590	40.0	42.1	
10 Chloromethane	50	1.812	1.812	0.000	78	546909	40.0	38.8	
12 Butadiene	54	1.895	1.906	-0.011	89	552757	40.0	39.2	
11 Vinyl chloride	62	1.918	1.918	0.000	83	589426	40.0	40.4	
13 Bromomethane	94	2.215	2.227	-0.012	85	442826	40.0	38.8	
14 Chloroethane	64	2.298	2.298	0.000	82	353502	40.0	39.1	
15 Dichlorofluoromethane	67	2.499	2.499	0.000	83	878380	40.0	39.2	
16 Trichlorofluoromethane	101	2.571	2.582	-0.012	87	978643	40.0	40.2	
17 Ethyl ether	59	2.808	2.808	0.000	88	350377	40.0	39.8	
18 Acrolein	56	2.926	2.926	0.000	95	417769	200.0	192.1	
21 1,1-Dichloroethene	61	3.033	3.045	-0.012	90	706289	40.0	40.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	72	512861	40.0	40.8	
22 Acetone	43	3.069	3.069	0.000	82	298968	80.0	78.0	
23 Iodomethane	142	3.187	3.199	-0.012	99	888035	40.0	39.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	89	1372316	40.0	37.3	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	73	662138	40.0	38.2	
27 Methyl acetate	43	3.377	3.377	0.000	96	886871	80.0	77.9	
28 Methylene Chloride	49	3.484	3.495	-0.011	51	534613	40.0	38.4	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	69	542388	400.0	409.5	
30 Acrylonitrile	53	3.685	3.685	0.000	97	1951040	400.0	396.7	
32 trans-1,2-Dichloroethene	61	3.721	3.721	0.000	74	639131	40.0	38.6	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	87	1349603	40.0	39.8	
33 Hexane	57	3.982	3.982	0.000	92	704185	40.0	40.9	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	790957	40.0	40.0	
35 Vinyl acetate	43	4.148	4.148	0.000	97	903595	40.0	39.8	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	69	545012	40.0	38.6	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	66	491954	40.0	41.3	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	96	181887	80.0	78.7	
45 Chlorobromomethane	49	4.836	4.836	0.000	80	350082	40.0	36.8	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	405539	80.0	82.5	
47 Chloroform	83	4.907	4.907	0.000	68	863672	40.0	39.8	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	90	836381	40.0	41.0	
49 Cyclohexane	84	5.144	5.144	0.000	75	776128	40.0	41.6	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	89	687882	40.0	40.0	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	807965	40.0	41.1	
52 Isobutyl alcohol	41	5.298	5.298	0.000	88	540692	1000.0	1006.7	
53 Benzene	78	5.405	5.417	-0.012	95	1843426	40.0	39.6	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	51	680627	40.0	38.7	
56 n-Heptane	57	5.642	5.642	0.000	84	401639	40.0	40.7	
58 Trichloroethene	130	5.986	5.986	0.000	92	608172	40.0	39.4	
60 Methylcyclohexane	83	6.176	6.176	0.000	88	929492	40.0	41.4	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	80	433884	40.0	40.2	
63 Dibromomethane	174	6.294	6.294	0.000	86	428543	40.0	38.6	
64 1,4-Dioxane	88	6.306	6.306	0.000	35	108387	800.0	927.5	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	670319	40.0	39.4	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	710198	80.0	82.0	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	92	757475	40.0	40.1	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	82	1267570	80.0	80.9	
70 Toluene	91	7.172	7.172	0.000	95	2085055	40.0	39.4	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	83	737016	40.0	39.1	
72 Ethyl methacrylate	69	7.433	7.433	0.000	88	711262	40.0	41.8	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	84	445968	40.0	40.1	
75 Tetrachloroethene	166	7.693	7.693	0.000	92	675866	40.0	40.0	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	737142	40.0	39.2	
77 2-Hexanone	43	7.765	7.765	0.000	79	1016835	80.0	82.4	
79 Chlorodibromomethane	129	7.931	7.919	0.012	87	568645	40.0	40.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	500324	40.0	38.2	
82 Chlorobenzene	112	8.524	8.524	0.000	97	1418747	40.0	39.1	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	87	524311	40.0	40.1	
84 Ethylbenzene	106	8.630	8.630	0.000	98	765441	40.0	40.4	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	934583	40.0	40.5	
86 o-Xylene	106	9.152	9.152	0.000	87	890297	40.0	40.6	
87 Styrene	104	9.164	9.164	0.000	93	1534422	40.0	40.9	
88 Bromoform	173	9.354	9.354	0.000	98	462320	40.0	40.2	
89 Isopropylbenzene	105	9.520	9.520	0.000	96	2399226	40.0	40.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	660294	40.0	40.1	
92 Bromobenzene	156	9.840	9.840	0.000	81	647055	40.0	39.4	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	70	250203	40.0	40.1	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	61	228469	40.0	39.1	
95 N-Propylbenzene	120	9.947	9.947	0.000	91	674293	40.0	40.9	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	562614	40.0	40.3	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	1929863	40.0	40.6	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	588358	40.0	39.0	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	1854784	40.0	41.1	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	1949684	40.0	40.5	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	2501406	40.0	41.2	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	90	1165661	40.0	38.7	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	2177763	40.0	40.9	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1194426	40.0	38.3	
108 n-Butylbenzene	91	11.287	11.287	0.000	97	1789693	40.0	40.9	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	96	1053180	40.0	38.5	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	92	210526	40.0	40.2	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	91	675526	40.0	37.0	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	358938	40.0	38.3	
114 Naphthalene	128	13.279	13.279	0.000	96	1949946	40.0	38.6	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	93	606712	40.0	37.0	
S 127 Trihalomethanes, Total	1				0		160.0	160.0	
S 164 Total BTEX	1				0		200.0	200.5	
S 124 1,2-Dichloroethene, Total	96				0			77.1	
S 125 1,3-Dichloropropene, Total	75				0			79.1	
S 126 Xylenes, Total	106				0		80.0	81.1	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 32.00	Units: uL
vmarolistdw_00260	Amount Added: 32.00	Units: uL
vmrprimw_00297	Amount Added: 32.00	Units: uL
vm50ss_00333	Amount Added: 32.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901325.d

Injection Date: 27-Aug-2018 17:53:51

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L5

Worklist Smp#: 9

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

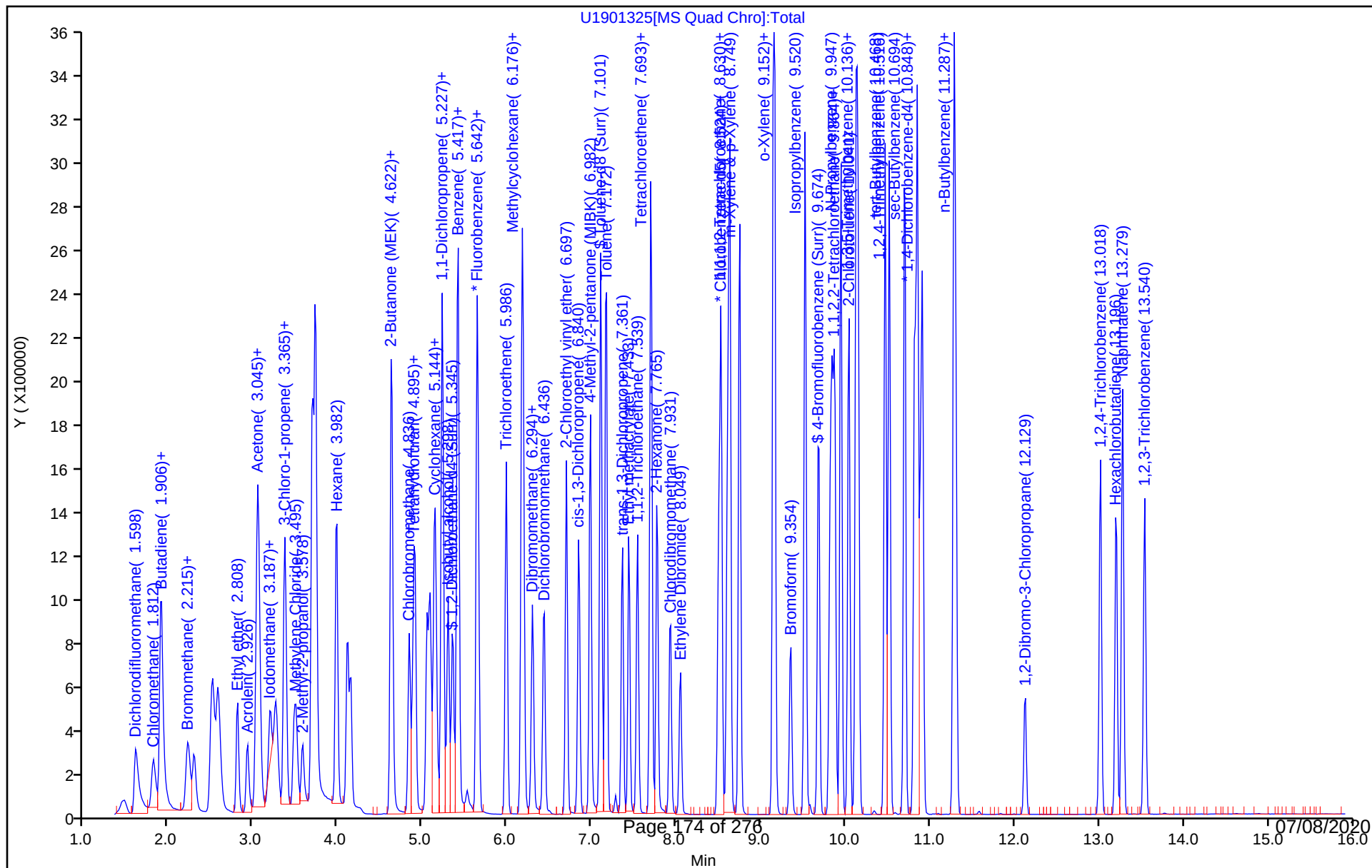
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901326.d
 Lims ID: ICIS L4
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 27-Aug-2018 18:16:31 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0079307-010
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:28:20 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 18:47:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	97	972482	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	783101	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	86	430906	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	251584	20.0	19.2	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	99	285917	20.0	19.0	
\$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	86	907923	20.0	19.3	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	337411	20.0	19.1	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	66	366772	20.0	19.6	
10 Chloromethane	50	1.812	1.812	0.000	77	267203	20.0	19.1	
12 Butadiene	54	1.906	1.906	0.000	88	275330	20.0	19.6	
11 Vinyl chloride	62	1.918	1.918	0.000	70	286894	20.0	19.8	
13 Bromomethane	94	2.227	2.227	0.000	90	219651	20.0	19.3	
14 Chloroethane	64	2.298	2.298	0.000	95	172968	20.0	19.2	
15 Dichlorofluoromethane	67	2.499	2.499	0.000	83	434465	20.0	19.5	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	86	483006	20.0	19.9	
17 Ethyl ether	59	2.808	2.808	0.000	88	172224	20.0	19.7	
18 Acrolein	56	2.926	2.926	0.000	95	220720	100.0	102.1	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	89	348307	20.0	20.0	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	80	249289	20.0	20.0	
22 Acetone	43	3.069	3.069	0.000	68	146204	40.0	38.3	
23 Iodomethane	142	3.199	3.199	0.000	99	444884	20.0	19.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	99	683722	20.0	18.7	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	80	326833	20.0	19.0	
27 Methyl acetate	43	3.377	3.377	0.000	96	440913	40.0	39.0	
28 Methylene Chloride	49	3.495	3.495	0.000	55	271471	20.0	19.6	
29 2-Methyl-2-propanol	59	3.567	3.567	0.000	51	252801	200.0	192.0	
30 Acrylonitrile	53	3.685	3.685	0.000	98	950386	200.0	194.4	
32 trans-1,2-Dichloroethene	61	3.721	3.721	0.000	72	317885	20.0	19.3	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	78	653045	20.0	19.4	
33 Hexane	57	3.982	3.982	0.000	91	347875	20.0	20.3	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	387941	20.0	19.7	
35 Vinyl acetate	43	4.148	4.148	0.000	97	445770	20.0	19.8	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	69	272438	20.0	19.4	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	95	88909	40.0	38.7	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	63	212094	20.0	17.9	
45 Chlorobromomethane	49	4.836	4.836	0.000	81	175479	20.0	18.6	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	199816	40.0	39.6	
47 Chloroform	83	4.907	4.907	0.000	70	427697	20.0	19.8	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	89	398309	20.0	19.6	
49 Cyclohexane	84	5.144	5.144	0.000	75	372006	20.0	20.0	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	90	337392	20.0	19.7	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	384700	20.0	19.7	
52 Isobutyl alcohol	41	5.298	5.298	0.000	88	263438	500.0	493.3	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	51	341638	20.0	19.5	
53 Benzene	78	5.417	5.417	0.000	94	917150	20.0	19.8	
56 n-Heptane	57	5.642	5.642	0.000	76	210893	20.0	19.9	
58 Trichloroethene	130	5.986	5.986	0.000	92	299123	20.0	19.5	
60 Methylcyclohexane	83	6.176	6.176	0.000	88	445411	20.0	20.0	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	81	214790	20.0	20.0	
63 Dibromomethane	174	6.294	6.294	0.000	87	213090	20.0	19.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	35	50489	400.0	434.6	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	336655	20.0	19.9	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	353595	40.0	41.1	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	92	372198	20.0	19.8	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	83	627983	40.0	40.3	
70 Toluene	91	7.172	7.172	0.000	94	1040131	20.0	19.7	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	85	363416	20.0	19.3	
72 Ethyl methacrylate	69	7.433	7.433	0.000	88	349427	20.0	20.5	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	86	219105	20.0	19.7	
75 Tetrachloroethene	166	7.693	7.693	0.000	92	332664	20.0	19.7	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	82	366944	20.0	19.5	
77 2-Hexanone	43	7.765	7.765	0.000	80	508487	40.0	41.2	
79 Chlorodibromomethane	129	7.919	7.919	0.000	89	282195	20.0	20.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	257341	20.0	19.6	
82 Chlorobenzene	112	8.524	8.524	0.000	97	704913	20.0	19.5	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	87	257026	20.0	19.7	
84 Ethylbenzene	106	8.630	8.630	0.000	98	380861	20.0	20.1	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	466651	20.0	20.2	
86 o-Xylene	106	9.152	9.152	0.000	87	441487	20.0	20.1	
87 Styrene	104	9.164	9.164	0.000	93	759556	20.0	20.2	
88 Bromoform	173	9.354	9.354	0.000	98	222929	20.0	19.4	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	1179370	20.0	20.0	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	328526	20.0	19.8	
92 Bromobenzene	156	9.840	9.840	0.000	88	324573	20.0	19.6	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	71	124262	20.0	19.7	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	65	114842	20.0	19.5	
95 N-Propylbenzene	120	9.947	9.947	0.000	96	332244	20.0	20.0	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	281753	20.0	20.0	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	945225	20.0	19.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	302046	20.0	19.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	78	904165	20.0	19.9	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	72	965487	20.0	19.9	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	1216655	20.0	19.9	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	84	589299	20.0	19.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	1061108	20.0	19.8	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	92	595729	20.0	19.0	
108 n-Butylbenzene	91	11.287	11.287	0.000	96	873706	20.0	19.8	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	532075	20.0	19.3	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	91	102189	20.0	19.4	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	335760	20.0	18.2	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	175651	20.0	18.6	
114 Naphthalene	128	13.279	13.279	0.000	96	923339	20.0	18.1	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	92	295011	20.0	17.8	
S 164 Total BTEX	1				0		100.0	100.0	
S 127 Trihalomethanes, Total	1				0		80.0	79.3	
S 126 Xylenes, Total	106				0		40.0	40.4	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 16.00	Units: uL
vmarolistdw_00260	Amount Added: 16.00	Units: uL
vmrprimw_00297	Amount Added: 16.00	Units: uL
vm50ss_00333	Amount Added: 16.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901326.d

Injection Date: 27-Aug-2018 18:16:31

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: ICIS L4

Worklist Smp#: 10

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

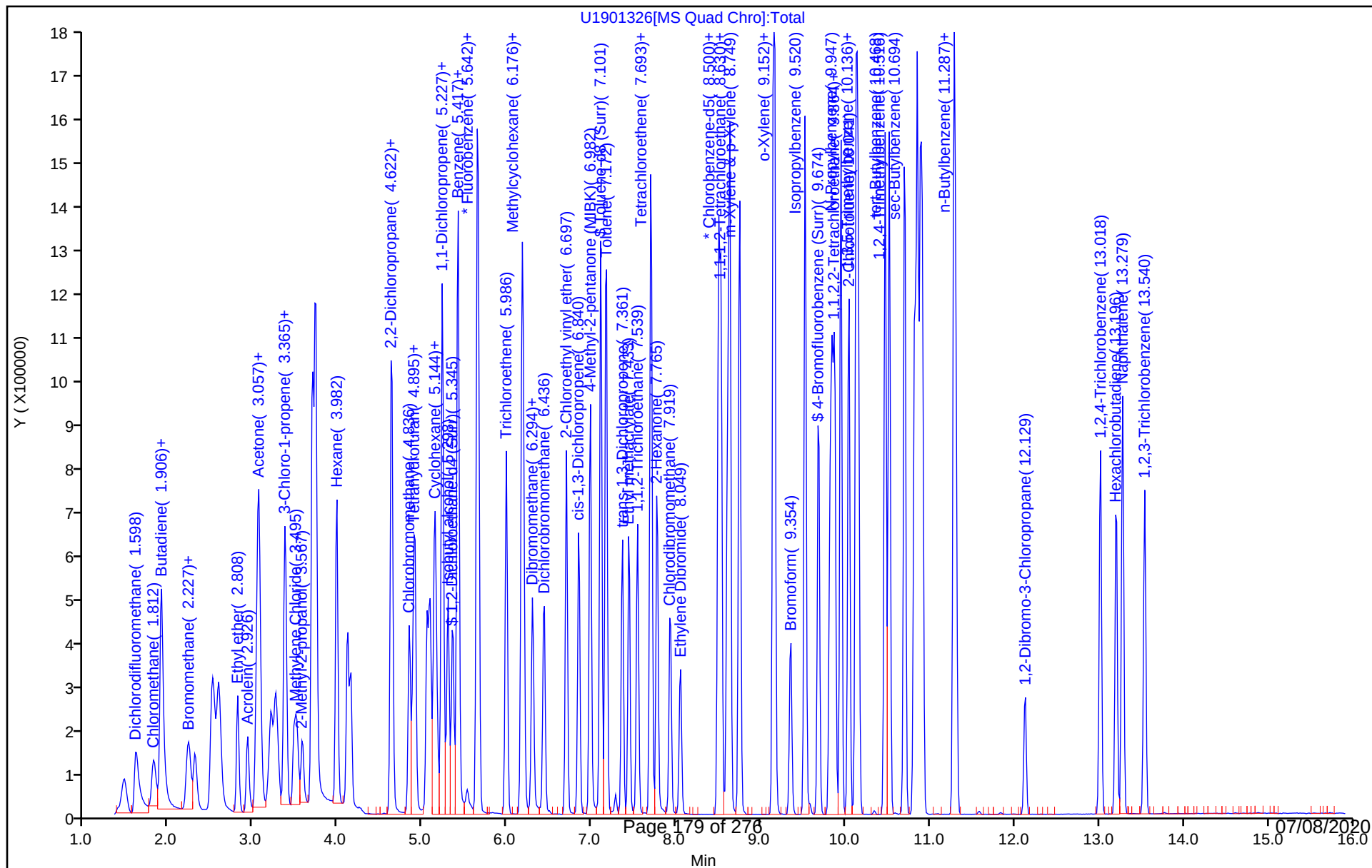
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901327.d
 Lims ID: std8260 L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 27-Aug-2018 18:38:57 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info:
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:28:30 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 19:29:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	97	954461	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	776799	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	92	416777	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	129168	10.0	10.1	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	99	149716	10.0	10.1	
\$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.001	86	475254	10.0	10.2	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	89	173480	10.0	9.90	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	66	186223	10.0	10.1	
10 Chloromethane	50	1.823	1.812	0.011	81	134420	10.0	9.77	
12 Butadiene	54	1.906	1.906	0.000	90	141609	10.0	10.3	
11 Vinyl chloride	62	1.930	1.918	0.012	82	148037	10.0	10.4	
13 Bromomethane	94	2.227	2.227	0.000	90	111689	10.0	10.0	
14 Chloroethane	64	2.310	2.298	0.012	94	89838	10.0	10.2	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	83	223205	10.0	10.2	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	86	244417	10.0	10.3	
17 Ethyl ether	59	2.808	2.808	0.000	90	88252	10.0	10.3	
18 Acrolein	56	2.926	2.926	0.000	96	100203	50.0	47.2	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	90	177882	10.0	10.4	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	78	126531	10.0	10.3	
22 Acetone	43	3.069	3.069	0.000	71	73077	20.0	19.5	
23 Iodomethane	142	3.199	3.199	0.000	99	225726	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.270	3.258	0.012	98	351356	10.0	9.80	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	76	171118	10.0	10.1	
27 Methyl acetate	43	3.377	3.377	0.000	95	228841	20.0	20.6	
28 Methylene Chloride	49	3.484	3.495	-0.011	73	139613	10.0	10.3	
29 2-Methyl-2-propanol	59	3.579	3.567	0.012	89	135517	100.0	104.9	
30 Acrylonitrile	53	3.697	3.685	0.012	98	514757	100.0	107.3	
32 trans-1,2-Dichloroethene	61	3.733	3.721	0.012	68	167419	10.0	10.4	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	89	342568	10.0	10.3	
33 Hexane	57	3.982	3.982	0.000	93	174299	10.0	10.4	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	199597	10.0	10.3	
35 Vinyl acetate	43	4.148	4.148	0.000	97	231586	10.0	10.5	
40 cis-1,2-Dichloroethene	96	4.634	4.622	0.012	68	140685	10.0	10.2	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	61	116583	10.0	10.0	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	92	48290	20.0	21.4	
45 Chlorobromomethane	49	4.836	4.836	0.000	68	94139	10.0	10.1	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	114720	20.0	22.1	
47 Chloroform	83	4.907	4.907	0.000	71	224371	10.0	10.6	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	90	211997	10.0	10.6	
49 Cyclohexane	84	5.144	5.144	0.000	86	188221	10.0	10.3	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	92	174842	10.0	10.4	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	201366	10.0	10.5	
52 Isobutyl alcohol	41	5.298	5.298	0.000	68	127213	250.0	242.7	
53 Benzene	78	5.417	5.417	0.000	94	482300	10.0	10.6	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	48	178638	10.0	10.4	
56 n-Heptane	57	5.642	5.642	0.000	64	123554	10.0	10.5	
58 Trichloroethene	130	5.986	5.986	0.000	92	156409	10.0	10.4	
60 Methylcyclohexane	83	6.176	6.176	0.000	87	225444	10.0	10.3	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	78	112735	10.0	10.7	
63 Dibromomethane	174	6.306	6.294	0.012	81	111478	10.0	10.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	24	20257	200.0	177.6	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	172767	10.0	10.4	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	185460	20.0	22.0	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	93	192411	10.0	10.4	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	83	332777	20.0	21.8	
70 Toluene	91	7.172	7.172	0.000	95	544474	10.0	10.4	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	80	187797	10.0	10.0	
72 Ethyl methacrylate	69	7.433	7.433	0.000	88	177753	10.0	10.5	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	87	115489	10.0	10.5	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	175104	10.0	10.5	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	194537	10.0	10.4	
77 2-Hexanone	43	7.765	7.765	0.000	79	267096	20.0	21.8	
79 Chlorodibromomethane	129	7.931	7.919	0.012	88	145120	10.0	10.4	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901327.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	97	132926	10.0	10.2	
82 Chlorobenzene	112	8.524	8.524	0.000	96	370702	10.0	10.3	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	88	135561	10.0	10.5	
84 Ethylbenzene	106	8.630	8.630	0.000	98	200390	10.0	10.7	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	238543	10.0	10.4	
86 o-Xylene	106	9.152	9.152	0.000	88	225509	10.0	10.4	
87 Styrene	104	9.164	9.164	0.000	93	391834	10.0	10.5	
88 Bromoform	173	9.354	9.354	0.000	98	117306	10.0	10.3	
89 Isopropylbenzene	105	9.520	9.520	0.000	96	613985	10.0	10.5	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	90	172140	10.0	10.7	
92 Bromobenzene	156	9.840	9.840	0.000	88	169316	10.0	10.6	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	71	66218	10.0	10.9	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	63	60466	10.0	10.6	
95 N-Propylbenzene	120	9.947	9.947	0.000	90	171938	10.0	10.7	
96 2-Chlorotoluene	126	10.042	10.041	0.001	97	147510	10.0	10.8	
97 1,3,5-Trimethylbenzene	105	10.125	10.124	0.000	93	499875	10.0	10.8	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	155656	10.0	10.6	
99 tert-Butylbenzene	119	10.468	10.468	0.000	78	474813	10.0	10.8	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	72	495166	10.0	10.5	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	624437	10.0	10.5	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	83	299776	10.0	10.2	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	543873	10.0	10.5	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	90	308743	10.0	10.2	
108 n-Butylbenzene	91	11.287	11.287	0.000	96	439518	10.0	10.3	
109 1,2-Dichlorobenzene	146	11.299	11.298	0.001	97	273092	10.0	10.2	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	89	50642	10.0	9.92	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	93	168774	10.0	9.47	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	90	87534	10.0	9.56	
114 Naphthalene	128	13.279	13.279	0.000	97	469280	10.0	9.53	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	95	153843	10.0	9.62	
S 127 Trihalomethanes, Total	1				0		40.0	41.7	
S 164 Total BTEX	1				0		50.0	52.5	
S 124 1,2-Dichloroethene, Total	96				0			20.6	
S 125 1,3-Dichloropropene, Total	75				0			20.5	
S 126 Xylenes, Total	106				0		20.0	20.8	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 8.00	Units: uL
vmarolistdw_00260	Amount Added: 8.00	Units: uL
vmrprimw_00297	Amount Added: 8.00	Units: uL
vm50ss_00333	Amount Added: 8.00	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901327.d

Injection Date: 27-Aug-2018 18:38:57

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L3

Worklist Smp#: 11

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

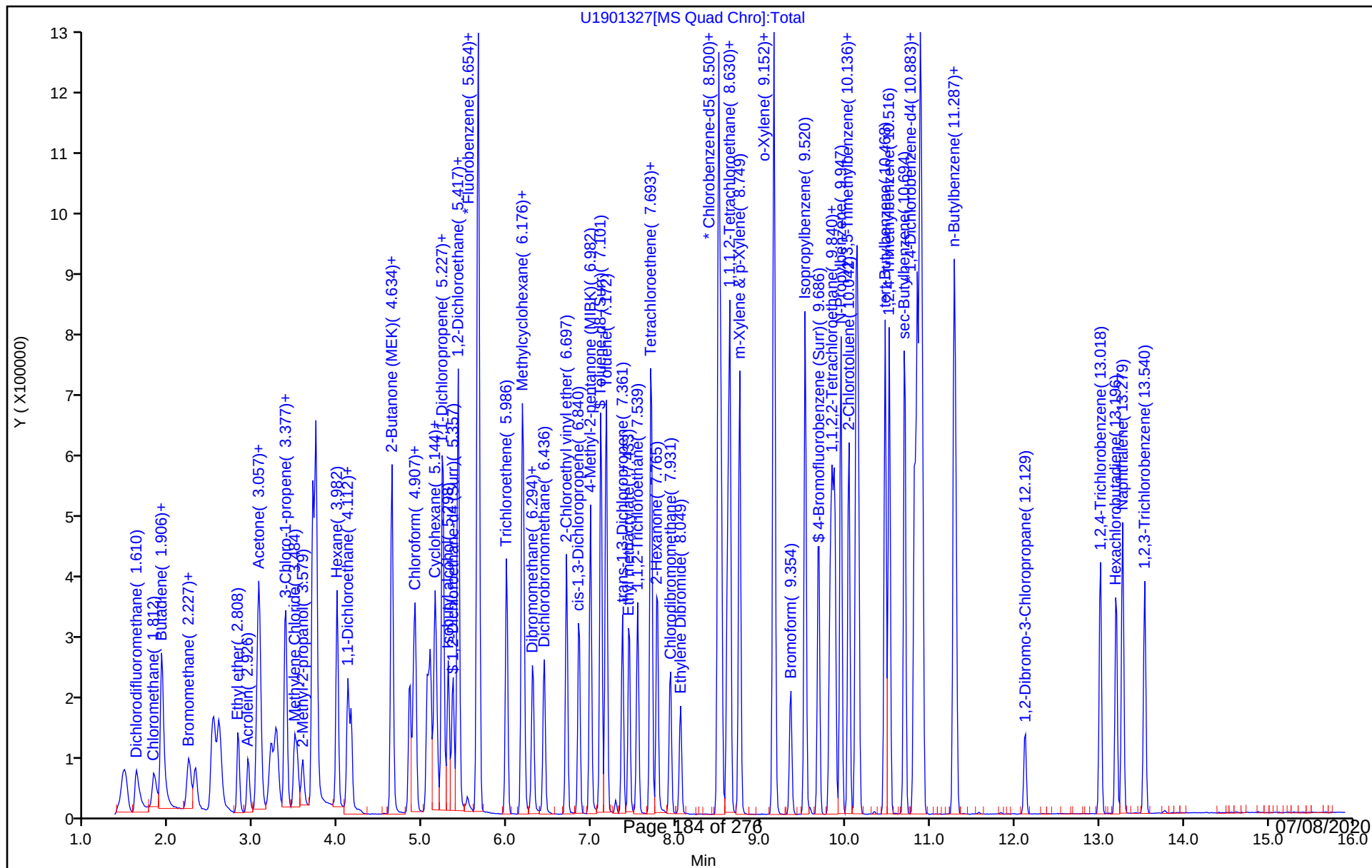
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901328.d
 Lims ID: std8260 L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 27-Aug-2018 19:01:13 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info:
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:28:42 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 19:32:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.653	5.654	-0.001	99	950066	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	741822	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	413134	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	13395	1.00	1.05	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	98	16187	1.00	1.10	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	84	44577	1.00	1.00	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	85	17494	1.00	1.05	
9 Dichlorodifluoromethane	85	1.598	1.610	-0.012	61	18328	1.00	1.00	
10 Chloromethane	50	1.811	1.812	-0.001	83	12972	1.00	0.9471	
12 Butadiene	54	1.894	1.906	-0.012	89	14115	1.00	1.03	
11 Vinyl chloride	62	1.918	1.918	0.000	47	14250	1.00	1.01	
13 Bromomethane	94	2.238	2.227	0.011	86	11360	1.00	1.02	
14 Chloroethane	64	2.297	2.298	-0.001	81	8387	1.00	0.9552	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	76	21694	1.00	1.00	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	84	23241	1.00	0.9817	
17 Ethyl ether	59	2.807	2.808	-0.001	83	9015	1.00	1.05	
18 Acrolein	56	2.926	2.926	0.000	86	10600	5.00	5.02	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	86	16498	1.00	0.9676	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	67	11240	1.00	0.9217	
22 Acetone	43	3.068	3.069	-0.001	90	8941	2.00	2.40	
23 Iodomethane	142	3.187	3.199	-0.012	96	22471	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	97	39223	1.00	1.10	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	76	18227	1.00	1.08	
27 Methyl acetate	43	3.377	3.377	0.000	96	22480	2.00	2.03	
28 Methylene Chloride	49	3.483	3.495	-0.012	78	15126	1.00	1.12	
29 2-Methyl-2-propanol	59	3.566	3.567	-0.001	88	13140	10.0	10.2	
30 Acrylonitrile	53	3.697	3.685	0.012	99	49680	10.0	10.4	
32 trans-1,2-Dichloroethene	61	3.732	3.721	0.011	72	16818	1.00	1.05	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	89	33109	1.00	1.00	
33 Hexane	57	3.981	3.982	-0.001	93	15276	1.00	0.9125	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	76	19673	1.00	1.02	
35 Vinyl acetate	43	4.147	4.148	-0.001	96	21765	1.00	0.9877	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	70	14212	1.00	1.03	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	91	4567	2.00	2.04	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	58	11860	1.00	1.02	
45 Chlorobromomethane	49	4.835	4.836	-0.001	64	10266	1.00	1.11	
46 Tetrahydrofuran	42	4.883	4.883	0.000	85	20056	2.00	1.81	
47 Chloroform	83	4.906	4.907	-0.001	67	21044	1.00	1.00	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	84	19503	1.00	0.9837	
49 Cyclohexane	84	5.144	5.144	0.000	85	16696	1.00	0.9202	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	88	16667	1.00	1.00	
51 Carbon tetrachloride	117	5.238	5.239	-0.001	77	17959	1.00	0.9397	
52 Isobutyl alcohol	41	5.298	5.298	0.000	78	14010	25.0	26.9	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	52	18266	1.00	1.07	
53 Benzene	78	5.416	5.417	-0.001	95	45349	1.00	1.00	
56 n-Heptane	57	5.653	5.642	0.011	38	39021	1.00	0.9553	
58 Trichloroethene	130	5.985	5.986	-0.001	90	14636	1.00	0.9750	
60 Methylcyclohexane	83	6.175	6.176	-0.001	87	20268	1.00	0.9296	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	78	10172	1.00	0.9700	
63 Dibromomethane	174	6.294	6.294	0.000	83	11437	1.00	1.06	
64 1,4-Dioxane	88	6.306	6.306	0.000	1	1560	20.0	13.7	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	86	17242	1.00	1.04	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	90	15714	2.00	1.87	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	72	18371	1.00	1.00	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	81	29549	2.00	1.94	
70 Toluene	91	7.171	7.172	-0.001	86	50838	1.00	1.01	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	79	18668	1.00	1.04	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	70	14839	1.00	0.9209	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	87	10462	1.00	0.99	
75 Tetrachloroethene	166	7.693	7.693	0.000	95	15556	1.00	0.9725	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	79	17554	1.00	0.9855	
77 2-Hexanone	43	7.764	7.765	-0.001	94	22402	2.00	1.92	
79 Chlorodibromomethane	129	7.930	7.919	0.011	80	12969	1.00	0.9758	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	85	12317	1.00	0.99	
82 Chlorobenzene	112	8.523	8.524	-0.001	60	36469	1.00	1.06	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	75	12290	1.00	0.99	
84 Ethylbenzene	106	8.630	8.630	0.000	97	17209	1.00	0.9594	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	20530	1.00	0.9397	
86 o-Xylene	106	9.152	9.152	0.000	87	20689	1.00	1.00	
87 Styrene	104	9.164	9.164	0.000	92	33591	1.00	0.9446	
88 Bromoform	173	9.353	9.354	-0.001	89	10783	1.00	0.99	
89 Isopropylbenzene	105	9.519	9.520	-0.001	93	55346	1.00	0.99	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	75	16261	1.00	1.02	
92 Bromobenzene	156	9.840	9.840	0.000	89	16361	1.00	1.03	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	66	5997	1.00	0.99	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	38	5707	1.00	1.01	
95 N-Propylbenzene	120	9.946	9.947	-0.001	95	15476	1.00	0.9694	
96 2-Chlorotoluene	126	10.041	10.041	0.000	92	12831	1.00	0.9496	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	91	43584	1.00	0.9481	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	14345	1.00	0.9819	
99 tert-Butylbenzene	119	10.468	10.468	0.000	73	41850	1.00	0.9590	
101 1,2,4-Trimethylbenzene	105	10.515	10.516	-0.001	67	46663	1.00	1.00	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	92	55760	1.00	0.9489	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	11	31057	1.00	1.06	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	77	49391	1.00	0.9596	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	49	32379	1.00	1.07	
108 n-Butylbenzene	91	11.286	11.287	-0.001	95	41792	1.00	0.9871	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	93	28272	1.00	1.07	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	57	4583	1.00	0.9054	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	83	19612	1.00	1.11	
113 Hexachlorobutadiene	225	13.207	13.208	-0.001	72	10037	1.00	1.11	
114 Naphthalene	128	13.279	13.279	0.000	94	52154	1.00	1.07	
115 1,2,3-Trichlorobenzene	180	13.539	13.540	-0.001	86	17097	1.00	1.08	
S 164 Total BTEX	1				0		5.00	4.91	
S 127 Trihalomethanes, Total	1				0		4.00	4.01	
S 124 1,2-Dichloroethene, Total	96				0			2.08	
S 125 1,3-Dichloropropene, Total	75				0			2.05	
S 126 Xylenes, Total	106				0		2.00	1.94	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 0.80	Units: uL
vmarolistdw_00260	Amount Added: 0.80	Units: uL
vmrprimw_00297	Amount Added: 0.80	Units: uL
vm50ss_00333	Amount Added: 0.80	Units: uL

Report Date: 27-Aug-2018 21:28:46

Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901328.d

Injection Date: 27-Aug-2018 19:01:13

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L2

Worklist Smp#: 12

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

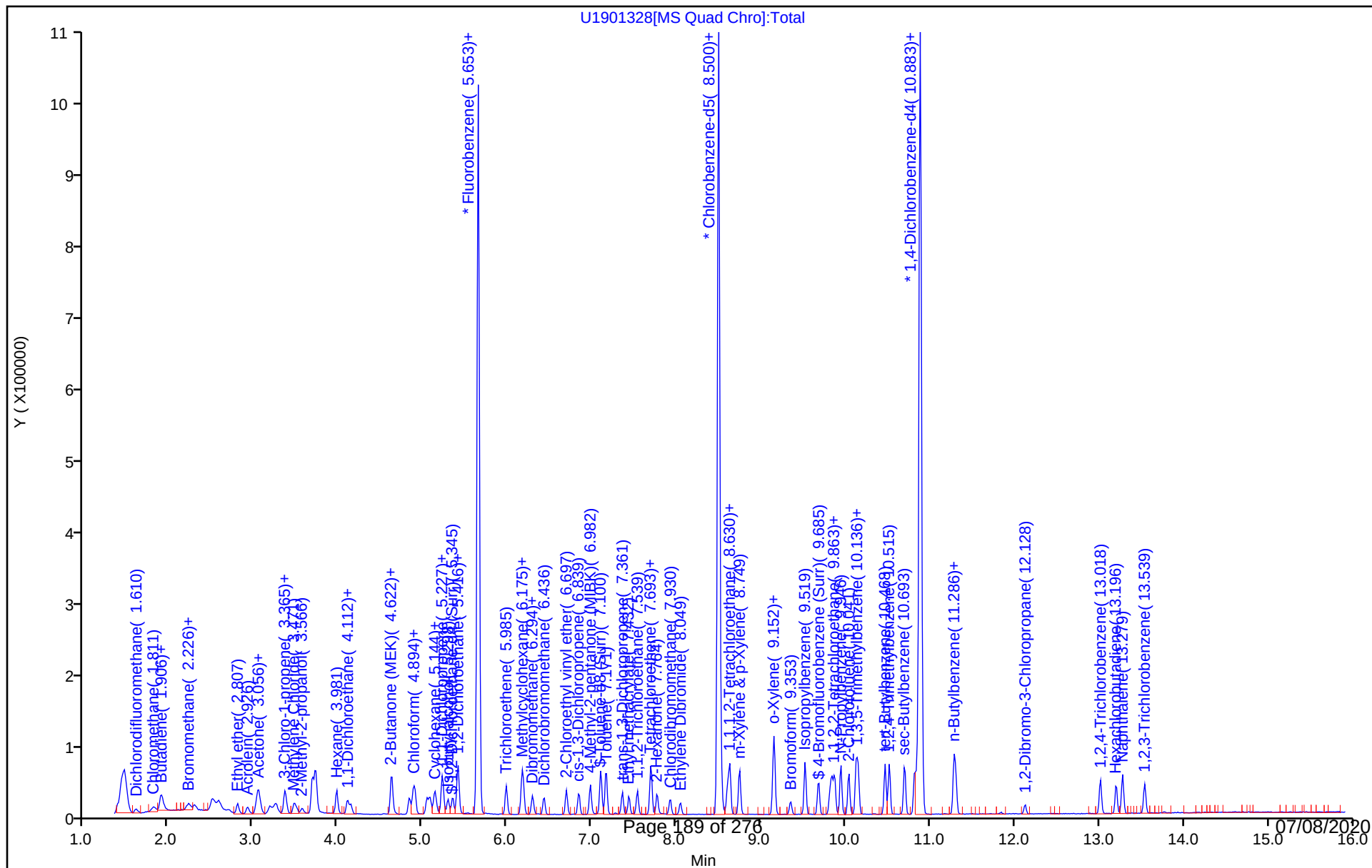
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Lims ID: std8260 L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 27-Aug-2018 19:23:28 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info:
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:28:54 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 19:52:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	938021	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	738667	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	405345	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	56	6919	0.5000	0.5480	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	94	8242	0.5000	0.5683	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	74	23636	0.5000	0.5336	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	82	9778	0.5000	0.5866	
9 Dichlorodifluoromethane	85	1.622	1.610	0.012	56	7625	0.5000	0.4223	
10 Chloromethane	50	1.812	1.812	0.000	70	8152	0.5000	0.6028	
12 Butadiene	54	1.906	1.906	0.000	92	6713	0.5000	0.4958	
11 Vinyl chloride	62	1.942	1.918	0.024	39	6564	0.5000	0.4697	
13 Bromomethane	94	2.227	2.227	0.000	83	5934	0.5000	0.5419	
14 Chloroethane	64	2.310	2.298	0.012	73	4812	0.5000	0.5551	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	55	11593	0.5000	0.5395	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	76	11587	0.5000	0.4957	
17 Ethyl ether	59	2.808	2.808	0.000	84	4060	0.5000	0.4810	
18 Acrolein	56	2.938	2.926	0.012	73	5804	2.50	2.78	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	72	8152	0.5000	0.4842	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	55	5847	0.5000	0.4856	
22 Acetone	43		3.069				ND	ND	U
23 Iodomethane	142	3.199	3.199	0.000	93	11424	0.5000	0.5233	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	95	20511	0.5000	0.5820	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	70	8759	0.5000	0.5274	
27 Methyl acetate	43	3.389	3.377	0.012	94	12374	1.00	1.13	
28 Methylene Chloride	49		3.495				ND	ND	U
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	76	7089	5.00	5.58	
30 Acrylonitrile	53	3.697	3.685	0.012	98	23600	5.00	5.00	
32 trans-1,2-Dichloroethene	61	3.733	3.721	0.012	68	8368	0.5000	0.5268	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	83	15146	0.5000	0.4655	
33 Hexane	57	3.982	3.982	0.000	81	7709	0.5000	0.4664	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	57	9092	0.5000	0.4789	
35 Vinyl acetate	43	4.148	4.148	0.000	96	10910	0.5000	0.5015	
40 cis-1,2-Dichloroethene	96	4.634	4.622	0.012	63	7168	0.5000	0.5287	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	48	5791	0.5000	0.5065	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	82	2283	1.00	1.03	
45 Chlorobromomethane	49	4.847	4.836	0.011	57	5503	0.5000	0.6031	
46 Tetrahydrofuran	42		4.883				ND	ND	U
47 Chloroform	83	4.907	4.907	0.000	71	10169	0.5000	0.4891	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	78	8767	0.5000	0.4479	
49 Cyclohexane	84	5.144	5.144	0.000	85	8206	0.5000	0.4581	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	80	7998	0.5000	0.4846	
51 Carbon tetrachloride	117	5.239	5.239	0.000	77	8954	0.5000	0.4745	
52 Isobutyl alcohol	41	5.298	5.298	0.000	52	7140	12.5	13.9	
53 Benzene	78	5.417	5.417	0.000	95	21738	0.5000	0.4870	
54 1,2-Dichloroethane	62	5.428	5.417	0.011	58	8896	0.5000	0.5268	
56 n-Heptane	57		5.642				ND	ND	U
58 Trichloroethene	130	5.986	5.986	0.000	77	7819	0.5000	0.5276	
60 Methylcyclohexane	83	6.176	6.176	0.000	85	10042	0.5000	0.4665	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	64	5092	0.5000	0.4918	
63 Dibromomethane	174	6.306	6.294	0.012	66	5652	0.5000	0.5307	
64 1,4-Dioxane	88		6.306				ND	ND	U
65 Dichlorobromomethane	83	6.436	6.436	0.000	75	7972	0.5000	0.4885	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	83	7473	1.00	0.9000	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	60	8778	0.5000	0.4843	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	90	14774	1.00	0.9834	
70 Toluene	91	7.172	7.172	0.000	94	25413	0.5000	0.5091	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	76	9232	0.5000	0.5188	
72 Ethyl methacrylate	69	7.433	7.433	0.000	70	7062	0.5000	0.4401	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	79	5186	0.5000	0.4942	
75 Tetrachloroethene	166	7.693	7.693	0.000	86	7818	0.5000	0.4908	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	72	9211	0.5000	0.5193	
77 2-Hexanone	43	7.765	7.765	0.000	88	10272	1.00	0.8832	
79 Chlorodibromomethane	129	7.931	7.919	0.012	54	6108	0.5000	0.4615	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	74	6962	0.5000	0.5633	
82 Chlorobenzene	112	8.524	8.524	0.000	45	17303	0.5000	0.5063	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	55	5956	0.5000	0.4834	
84 Ethylbenzene	106	8.630	8.630	0.000	94	8431	0.5000	0.4721	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	96	10542	0.5000	0.4846	
86 o-Xylene	106	9.140	9.152	-0.012	88	9580	0.5000	0.4635	
87 Styrene	104	9.164	9.164	0.000	83	16463	0.5000	0.4649	
88 Bromoform	173	9.354	9.354	0.000	77	5340	0.5000	0.4930	
89 Isopropylbenzene	105	9.520	9.520	0.000	90	25288	0.5000	0.4556	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	62	7218	0.5000	0.4621	
92 Bromobenzene	156	9.840	9.840	0.000	88	7663	0.5000	0.4917	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	66	2842	0.5000	0.4801	
94 trans-1,4-Dichloro-2-buten	53		9.875				ND	ND	U
95 N-Propylbenzene	120	9.947	9.947	0.000	91	7103	0.5000	0.4535	
96 2-Chlorotoluene	126	10.041	10.041	0.000	82	6213	0.5000	0.4687	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	91	21381	0.5000	0.4740	
98 4-Chlorotoluene	126	10.148	10.148	0.000	91	7405	0.5000	0.5166	
99 tert-Butylbenzene	119	10.468	10.468	0.000	70	19348	0.5000	0.4519	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	63	21277	0.5000	0.4653	
102 sec-Butylbenzene	105	10.694	10.694	0.000	88	26267	0.5000	0.4556	
103 1,3-Dichlorobenzene	146	10.824	10.812	0.012	1	14989	0.5000	0.5237	a
104 4-Isopropyltoluene	119	10.848	10.848	0.000	68	23262	0.5000	0.4606	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	39	16269	0.5000	0.5502	
108 n-Butylbenzene	91	11.287	11.287	0.000	91	19197	0.5000	0.4622	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	87	13617	0.5000	0.5240	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	31	2665	0.5000	0.5366	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	63	9535	0.5000	0.5502	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	55	4814	0.5000	0.5408	
114 Naphthalene	128		13.279				ND	ND	U
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	72	7998	0.5000	0.5140	
S 127 Trihalomethanes, Total	1				0		2.00	1.93	
S 164 Total BTEX	1				0		2.50	2.42	
S 124 1,2-Dichloroethene, Total	96				0			1.06	
S 125 1,3-Dichloropropene, Total	75				0			1.00	
S 126 Xylenes, Total	106				0		1.00	0.9480	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmrgas_00259	Amount Added: 0.40	Units: uL
vmarolistdw_00260	Amount Added: 0.40	Units: uL
vmrprimw_00297	Amount Added: 0.40	Units: uL
vm50ss_00333	Amount Added: 0.40	Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: std8260 L1

Worklist Smp#: 13

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

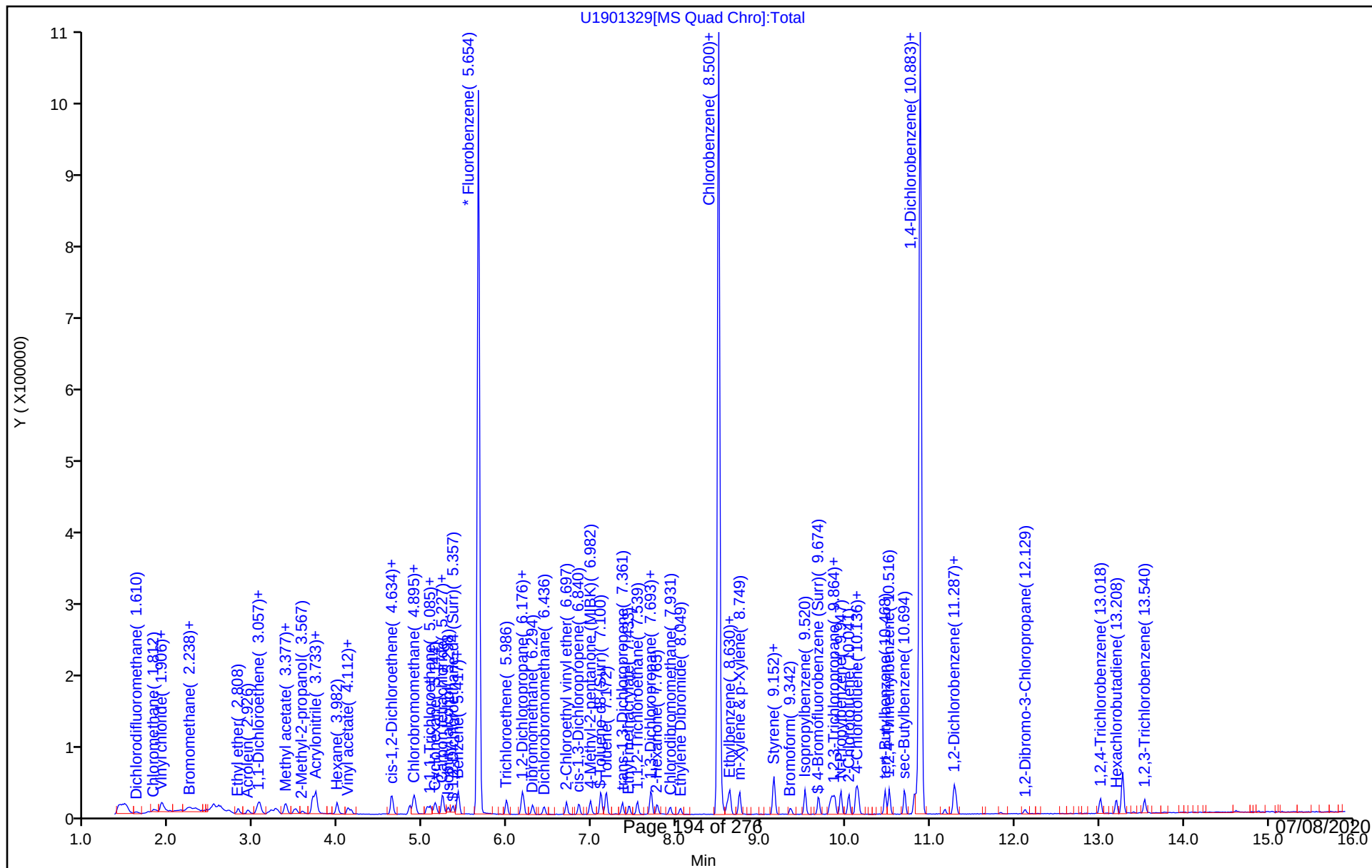
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

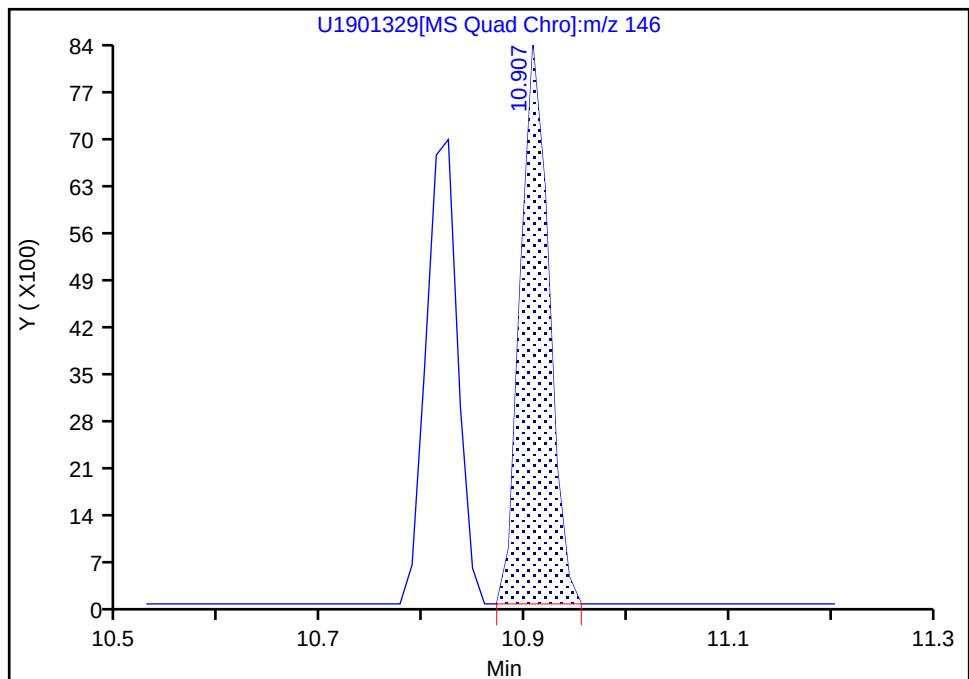
Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
Injection Date: 27-Aug-2018 19:23:28 Instrument ID: A3UX19
Lims ID: std8260 L1
Client ID:
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_19 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

103 1,3-Dichlorobenzene, CAS: 541-73-1

Signal: 1

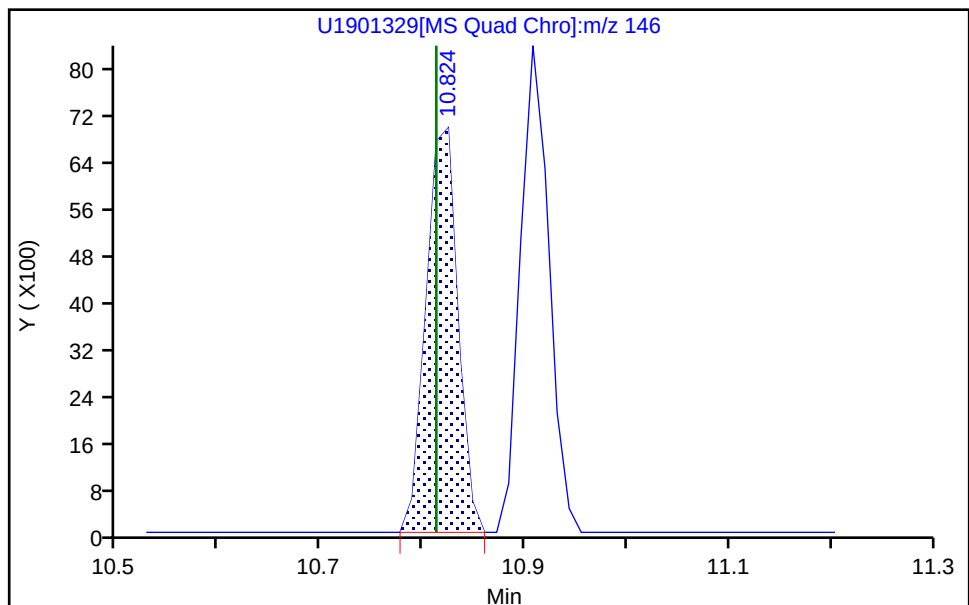
Processing Integration Results

RT: 10.91
Area: 16269
Amount: 0.561209
Amount Units: ug/l



Manual Integration Results

RT: 10.82
Area: 14989
Amount: 0.523661
Amount Units: ug/l



User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

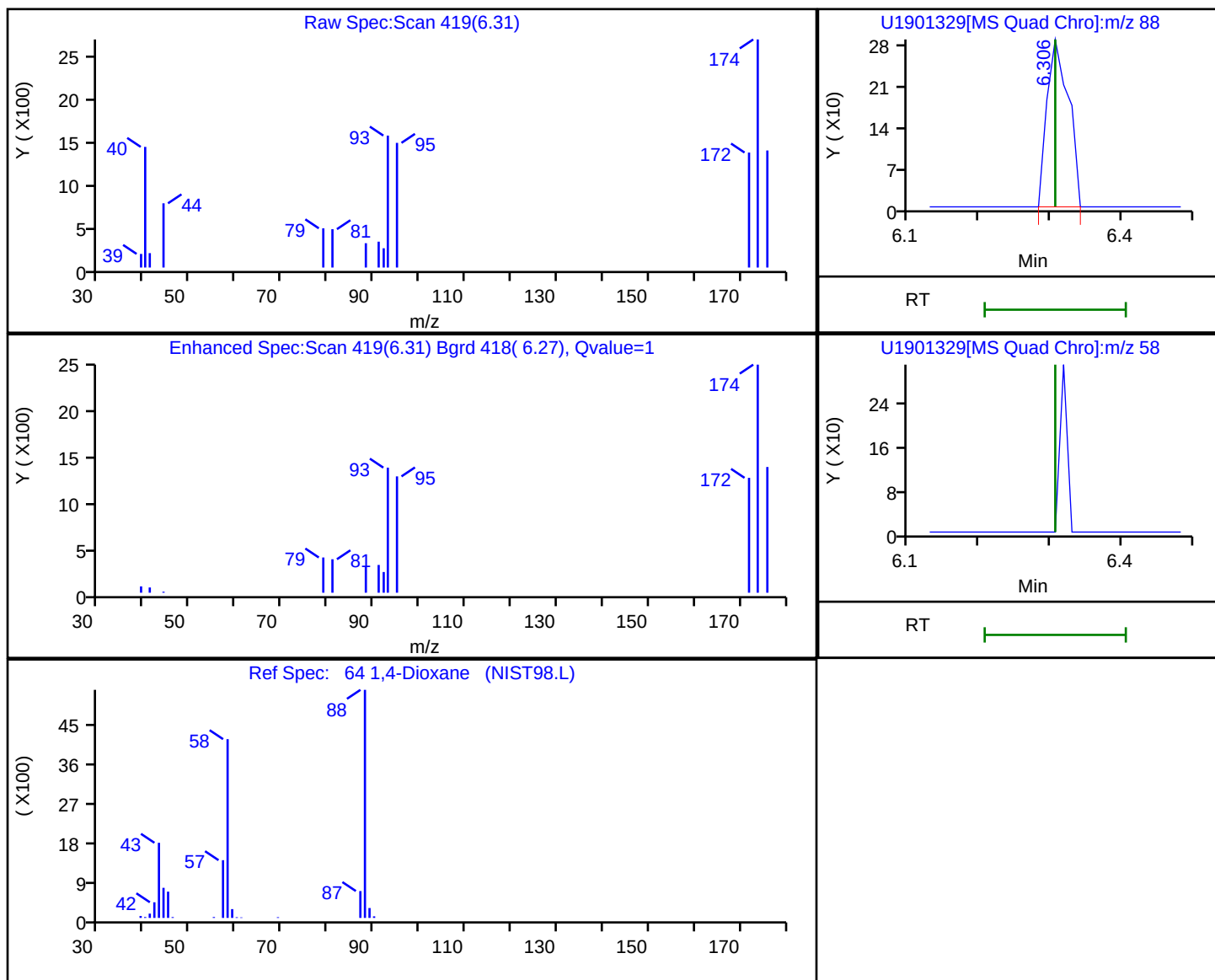
Column: DB-624 (0.18 mm)

Detector

MS SCAN

64 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
6.31	88.00	601	11.604682
6.31	58.00	0	

Reviewer: laveyt, 27-Aug-2018 19:49:09

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

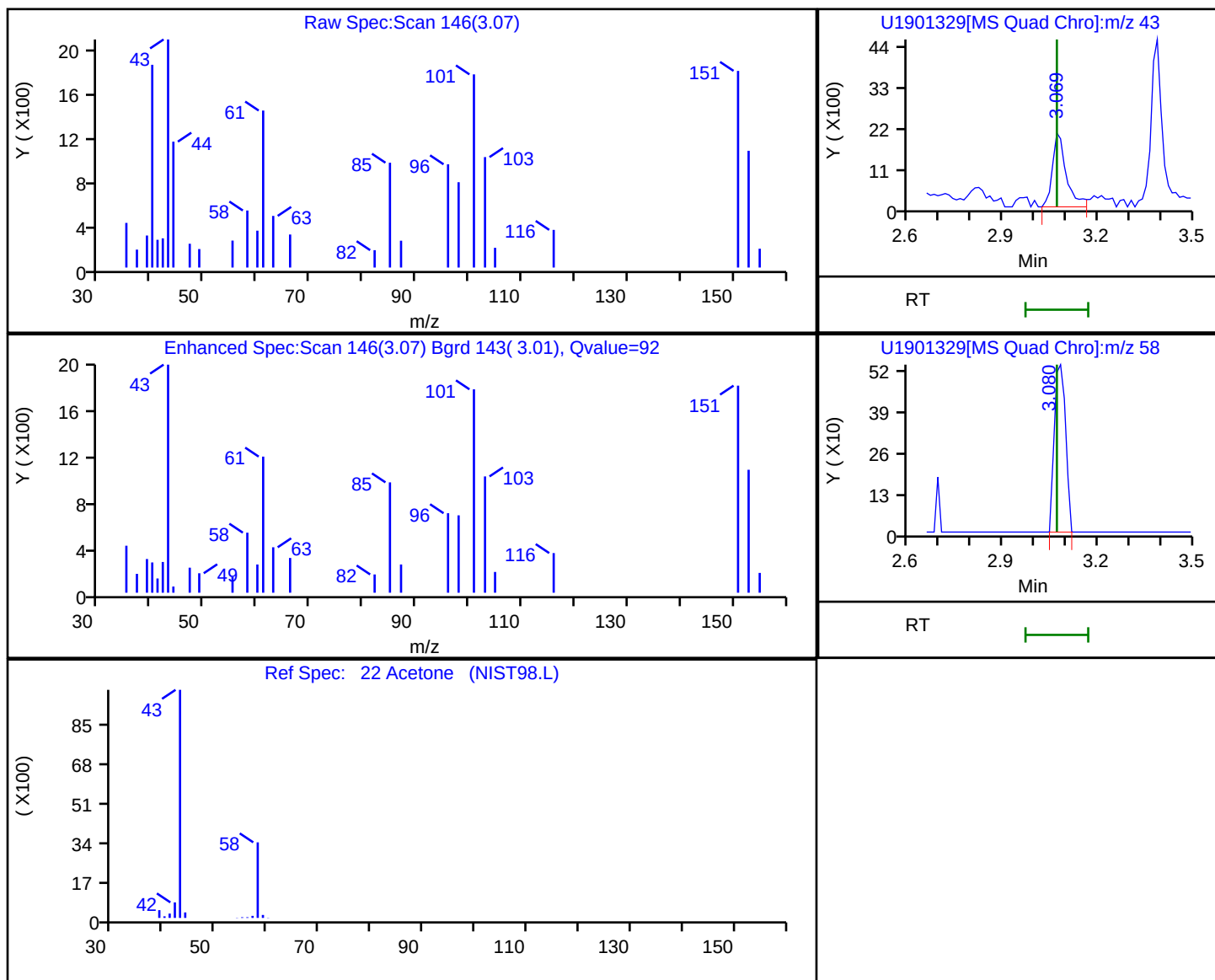
Column: DB-624 (0.18 mm)

Detector

MS SCAN

22 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.07	43.00	6224	1.077444
3.08	58.00	1333	

Reviewer: laveyt, 27-Aug-2018 19:48:05

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

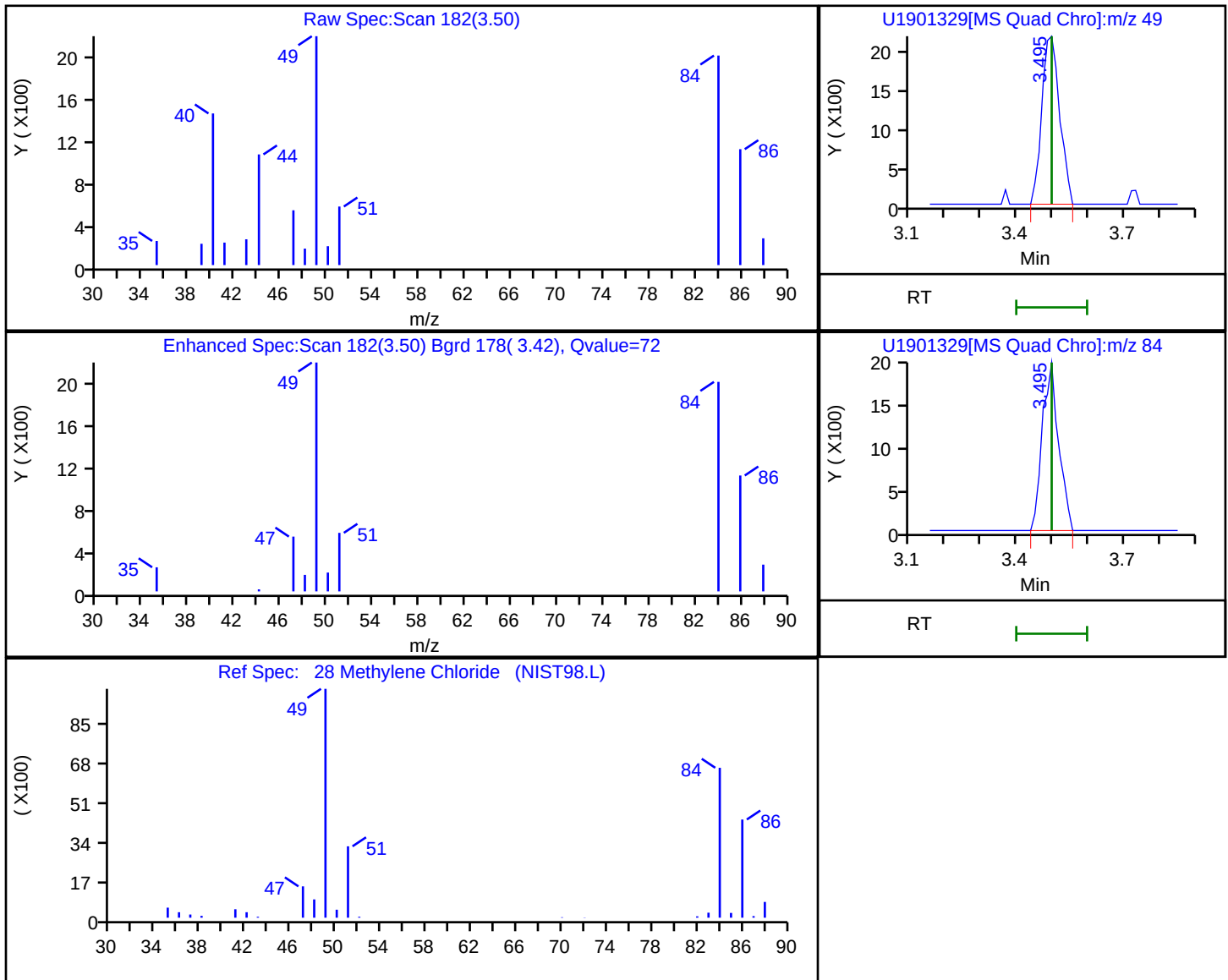
Column: DB-624 (0.18 mm)

Detector

MS SCAN

28 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
3.50	49.00	7484	0.551047
3.50	84.00	6258	

Reviewer: laveyt, 27-Aug-2018 19:48:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

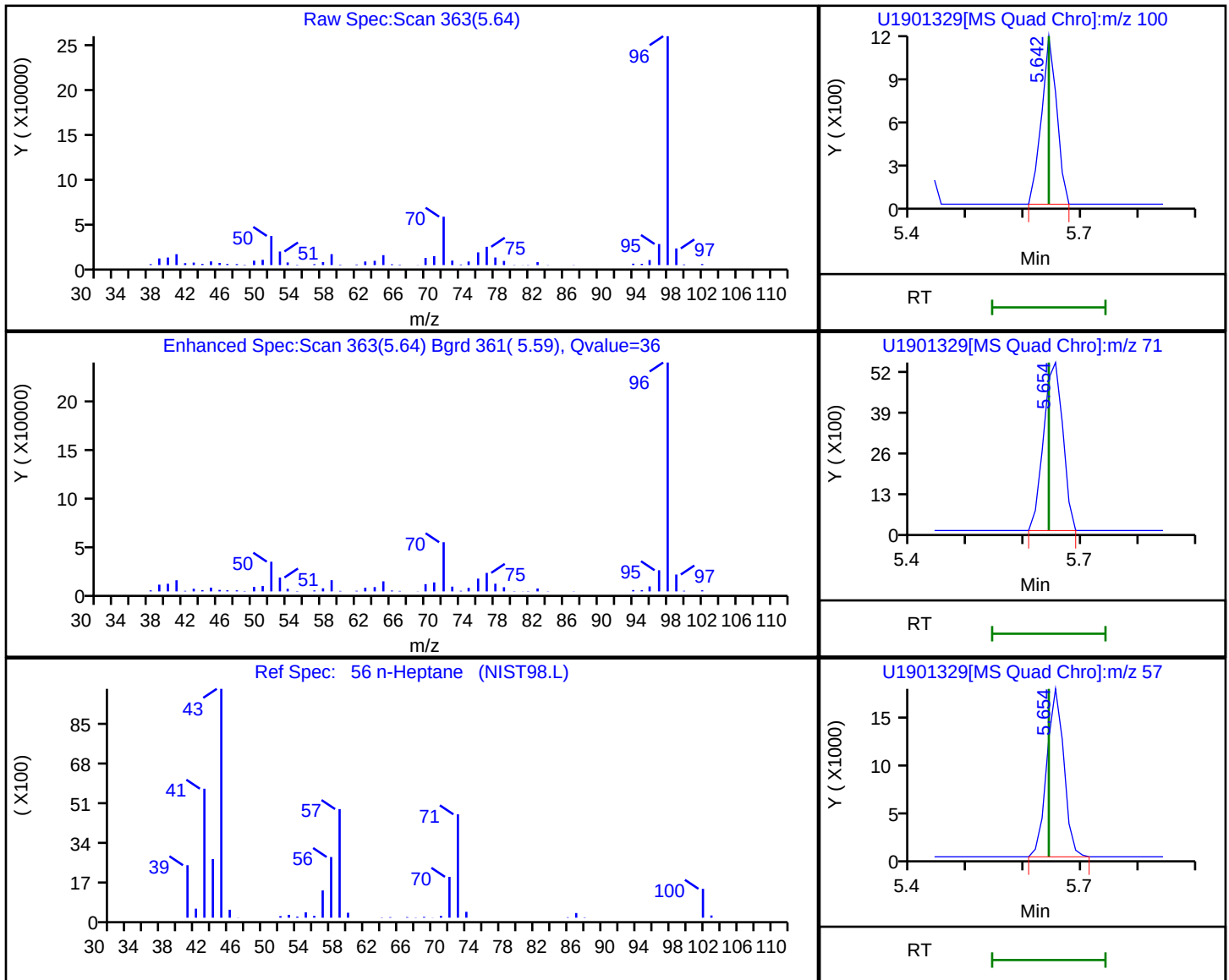
Column: DB-624 (0.18 mm)

Detector

MS SCAN

56 n-Heptane, CAS: 142-82-5

Processing Results



RT	Mass	Response	Amount
5.64	100.00	2131	
5.65	71.00	12900	
5.65	57.00	35542	0.539390

Reviewer: laveyt, 27-Aug-2018 19:48:44

Audit Action: Marked Compound Undetected

Page 199 of 276
Audit Reason: Invalid Compound ID

07/08/2020

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

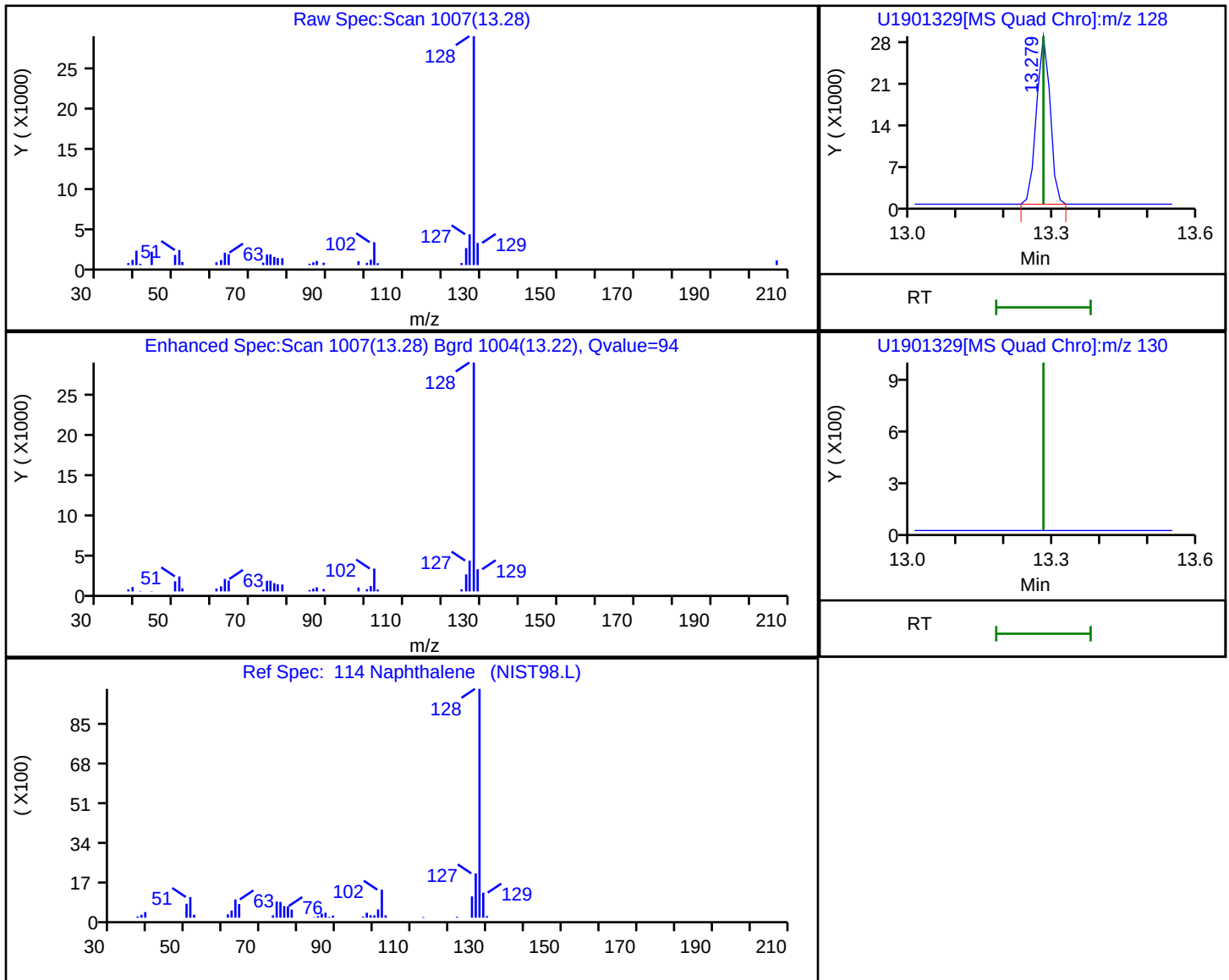
Column: DB-624 (0.18 mm)

Detector

MS SCAN

114 Naphthalene, CAS: 91-20-3

Processing Results



RT	Mass	Response	Amount
13.28	128.00	56279	0.769368
13.28	130.00	0	

Reviewer: laveyt, 27-Aug-2018 20:00:12

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

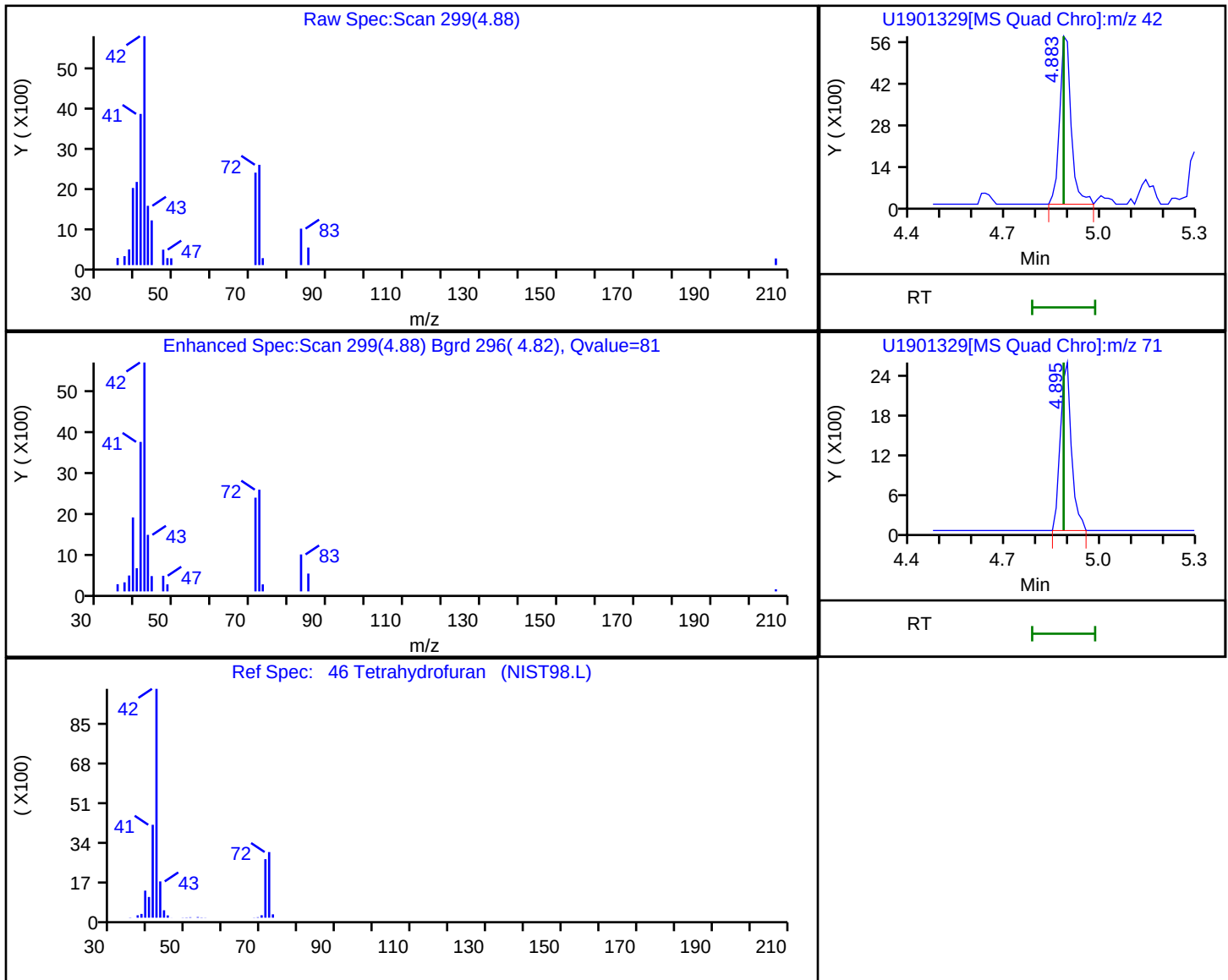
Column: DB-624 (0.18 mm)

Detector

MS SCAN

46 Tetrahydrofuran, CAS: 109-99-9

Processing Results



RT	Mass	Response	Amount
4.88	42.00	14557	0.882444
4.89	71.00	6288	

Reviewer: laveyt, 27-Aug-2018 19:48:29

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28

Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904

ALS Bottle#:

0

Worklist Smp#: 13

Injection Vol: 5.0 mL

Dil. Factor:

1.0000

Method: 8260_19

Limit Group:

MSV 8260C ICAL

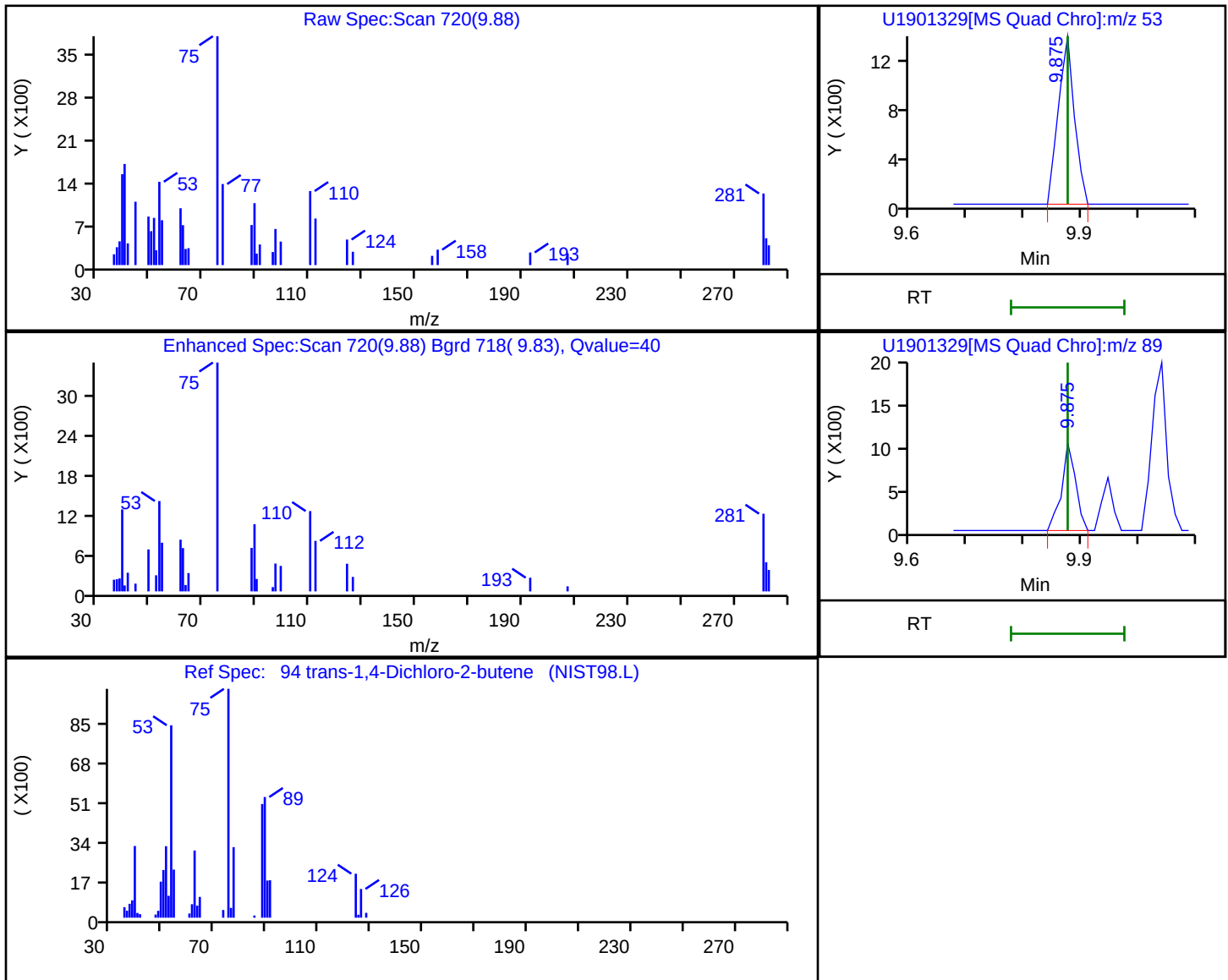
Column: DB-624 (0.18 mm)

Detector

MS SCAN

94 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Processing Results



RT	Mass	Response	Amount
9.88	53.00	2712	0.490436
9.88	89.00	1752	

Reviewer: laveyt, 27-Aug-2018 19:50:09

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Lab Sample ID: ICV 240-337917/14 Calibration Date: 07/25/2018 15:37
 Instrument ID: A3UX19 Calib Start Date: 07/24/2018 17:50
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/24/2018 20:04
 Lab File ID: U1900808.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2589	0.2758		0.0213	0.0200	6.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2744	0.2888		0.0211	0.0200	5.3	30.0
Toluene-d8 (Surr)	Ave	1.204	1.258		0.0209	0.0200	4.5	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4627	0.4749		0.0205	0.0200	2.6	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 25-Jul-2018 15:37:29 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078311-014
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist:
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 16:30:24 Calib Date: 25-Jul-2018 15:15:13
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	882991	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	707956	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	83	413254	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	84	243481	20.0	21.3	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	96	255028	20.0	21.1	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	93	890649	20.0	20.9	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	336222	20.0	20.5	
25 Acetonitrile	41	3.329	3.329	0.000	100	288916	200.0	164.3	
36 Isopropyl ether	87	4.171	4.171	0.000	94	210236	20.0	20.6	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	86	354575	20.0	20.2	
38 Tert-butyl ethyl ether	59	4.492	4.491	0.001	97	657887	20.0	20.5	
42 Ethyl acetate	43	4.681	4.681	0.000	96	486199	40.0	36.6	
43 Propionitrile	54	4.681	4.681	0.000	59	348995	200.0	193.9	
44 Methacrylonitrile	41	4.824	4.823	0.001	91	1700375	200.0	210.7	
55 Tert-amyl methyl ether	73	5.500	5.499	0.001	91	691178	20.0	20.3	
57 n-Butanol	56	5.891	5.891	0.000	85	188747	500.0	456.8	
59 Ethyl acrylate	55	6.057	6.057	0.000	99	329918	20.0	20.2	
62 Methyl methacrylate	41	6.270	6.270	0.000	91	440657	40.0	40.6	
66 2-Nitropropane	41	6.638	6.638	0.000	98	128315	40.0	40.0	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	386791	20.0	20.4	
81 1-Chlorohexane	91	8.488	8.488	0.000	74	315130	20.0	19.3	
90 Cyclohexanone	55	9.615	9.614	0.000	91	97723	200.0	202.0	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
100 Pentachloroethane	167	10.492	10.492	0.000	86	279031	40.0	39.0	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	86	994788	20.0	21.2	
107 Benzyl chloride	91	11.049	11.049	0.000	97	499238	20.0	18.8	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	414514	20.0	19.6	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	1147583	40.0	38.8	

Reagents:

VMFASA9W_00194	Amount Added: 16.00	Units: uL	
vm50ss_stk_00077	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00121	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00001	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d

Injection Date: 25-Jul-2018 15:37:29

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: ICV

Worklist Smp#: 14

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

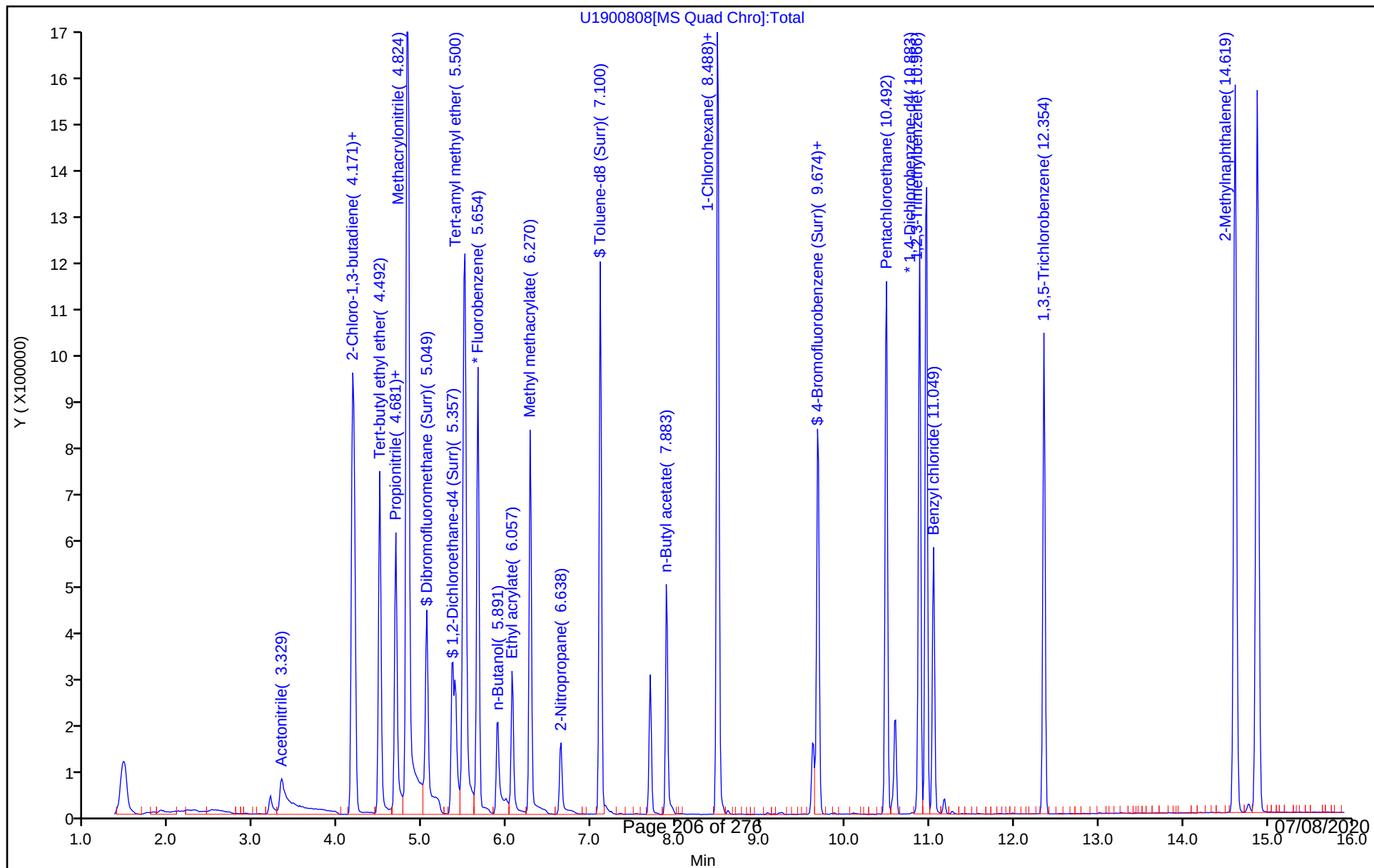
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Lab Sample ID: ICV 240-337917/14 Calibration Date: 07/25/2018 15:37
 Instrument ID: A3UX19 Calib Start Date: 07/25/2018 13:24
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/25/2018 15:15
 Lab File ID: U1900808.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Lin1		0.0327		0.164	0.200	-17.8	30.0
Isopropyl ether	Ave	0.2313	0.2381		0.0206	0.0200	3.0	30.0
2-Chloro-1,3-butadiene	Ave	0.3979	0.4016		0.0202	0.0200	0.9	30.0
Tert-butyl ethyl ether	Ave	0.7258	0.7451		0.0205	0.0200	2.7	30.0
Ethyl acetate	Ave	0.3007	0.2753		0.0366	0.0400	-8.5	30.0
Propionitrile	Ave	0.0408	0.0395		0.194	0.200	-3.0	30.0
Methacrylonitrile	Ave	0.1828	0.1926		0.211	0.200	5.3	30.0
Tert-amyl methyl ether	Ave	0.7700	0.7828		0.0203	0.0200	1.7	30.0
n-Butanol	Ave	0.0094	0.0086		0.457	0.500	-8.6	30.0
Ethyl acrylate	Ave	0.3703	0.3736		0.0202	0.0200	0.9	30.0
Methyl methacrylate	Ave	0.2459	0.2495		0.0406	0.0400	1.5	30.0
2-Nitropropane	Ave	0.0726	0.0727		0.0400	0.0400	0.1	30.0
n-Butyl acetate	Ave	0.5364	0.5464		0.0204	0.0200	1.9	30.0
1-Chlorohexane	Ave	0.4610	0.4451		0.0193	0.0200	-3.4	30.0
Cyclohexanone	Ave	0.0137	0.0138		0.202	0.200	1.0	30.0
Pentachloroethane	Ave	0.3462	0.3376		0.0390	0.0400	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.276	2.407		0.0212	0.0200	5.8	30.0
Benzyl chloride	Ave	1.286	1.208		0.0188	0.0200	-6.1	30.0
1,3,5-Trichlorobenzene	Ave	1.021	1.003		0.0196	0.0200	-1.8	30.0
2-Methylnaphthalene	Ave	1.433	1.388		0.0388	0.0400	-3.1	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 25-Jul-2018 15:37:29 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078311-014
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist:
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 16:30:24 Calib Date: 25-Jul-2018 15:15:13
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	882991	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	707956	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	83	413254	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	84	243481	20.0	21.3	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	96	255028	20.0	21.1	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	93	890649	20.0	20.9	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	336222	20.0	20.5	
25 Acetonitrile	41	3.329	3.329	0.000	100	288916	200.0	164.3	
36 Isopropyl ether	87	4.171	4.171	0.000	94	210236	20.0	20.6	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	86	354575	20.0	20.2	
38 Tert-butyl ethyl ether	59	4.492	4.491	0.001	97	657887	20.0	20.5	
42 Ethyl acetate	43	4.681	4.681	0.000	96	486199	40.0	36.6	
43 Propionitrile	54	4.681	4.681	0.000	59	348995	200.0	193.9	
44 Methacrylonitrile	41	4.824	4.823	0.001	91	1700375	200.0	210.7	
55 Tert-amyl methyl ether	73	5.500	5.499	0.001	91	691178	20.0	20.3	
57 n-Butanol	56	5.891	5.891	0.000	85	188747	500.0	456.8	
59 Ethyl acrylate	55	6.057	6.057	0.000	99	329918	20.0	20.2	
62 Methyl methacrylate	41	6.270	6.270	0.000	91	440657	40.0	40.6	
66 2-Nitropropane	41	6.638	6.638	0.000	98	128315	40.0	40.0	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	386791	20.0	20.4	
81 1-Chlorohexane	91	8.488	8.488	0.000	74	315130	20.0	19.3	
90 Cyclohexanone	55	9.615	9.614	0.000	91	97723	200.0	202.0	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
100 Pentachloroethane	167	10.492	10.492	0.000	86	279031	40.0	39.0	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	86	994788	20.0	21.2	
107 Benzyl chloride	91	11.049	11.049	0.000	97	499238	20.0	18.8	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	414514	20.0	19.6	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	1147583	40.0	38.8	

Reagents:

VMFASA9W_00194	Amount Added: 16.00	Units: uL	
vm50ss_stk_00077	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00121	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00001	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d

Injection Date: 25-Jul-2018 15:37:29

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: ICV

Worklist Smp#: 14

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

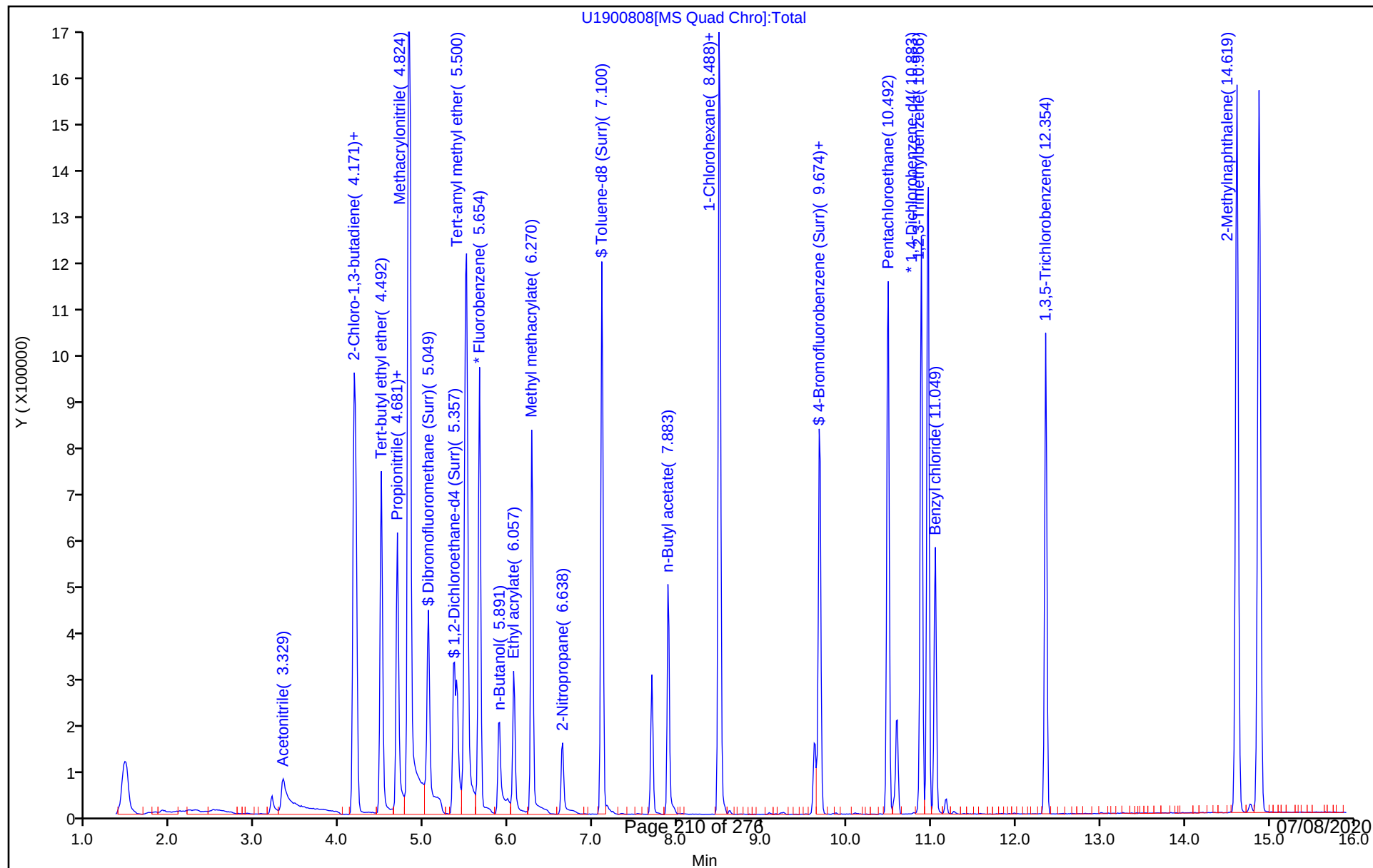
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Lab Sample ID: ICV 240-342719/14 Calibration Date: 08/27/2018 19:45

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1901330.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3850	0.2913	0.1000	0.0151	0.0200	-24.3	30.0
Chloromethane	Ave	0.2883	0.2492	0.1000	0.0173	0.0200	-13.6	30.0
Butadiene	Ave	0.2887	0.2477		0.0172	0.0200	-14.2	30.0
Vinyl chloride	Ave	0.2980	0.2874	0.1000	0.0193	0.0200	-3.5	30.0
Bromomethane	Ave	0.2335	0.2187	0.0500	0.0187	0.0200	-6.3	30.0
Chloroethane	Ave	0.1848	0.1799	0.0500	0.0195	0.0200	-2.7	30.0
Dichlorofluoromethane	Ave	0.4581	0.4762		0.0208	0.0200	3.9	30.0
Trichlorofluoromethane	Ave	0.4984	0.5062	0.1000	0.0203	0.0200	1.6	30.0
Ethyl ether	Ave	0.1800	0.1933		0.0215	0.0200	7.4	30.0
Acrolein	Ave	0.0445	0.0361		0.0812	0.100	-18.8	30.0
1,1-Dichloroethene	Ave	0.3589	0.3889	0.1000	0.0217	0.0200	8.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2567	0.2852	0.0500	0.0222	0.0200	11.1	30.0
Acetone	Ave	0.0784	0.0730	0.0100	0.0372	0.0400	-6.9	50.0
Iodomethane	Ave	0.4655	0.4827		0.0207	0.0200	3.7	30.0
Carbon disulfide	Ave	0.7515	0.7522	0.1000	0.0200	0.0200	0.0	30.0
3-Chloro-1-propene	Ave	0.3541	0.3611		0.0204	0.0200	2.0	30.0
Methyl acetate	Ave	0.2328	0.2202	0.1000	0.0378	0.0400	-5.4	50.0
Methylene Chloride	Ave	0.2846	0.2847	0.1000	0.0200	0.0200	0.0	50.0
2-Methyl-2-propanol	Ave	0.0271	0.0283		0.209	0.200	4.3	30.0
Acrylonitrile	Ave	0.1006	0.1020		0.203	0.200	1.4	30.0
Methyl tert-butyl ether	Ave	0.6938	0.7063	0.1000	0.0204	0.0200	1.8	30.0
trans-1,2-Dichloroethene	Ave	0.3387	0.3554	0.1000	0.0210	0.0200	4.9	30.0
Hexane	Ave	0.3524	0.3872		0.0220	0.0200	9.9	30.0
1,1-Dichloroethane	Ave	0.4048	0.4171	0.2000	0.0206	0.0200	3.0	30.0
Vinyl acetate	Ave	0.4639	0.5080		0.0219	0.0200	9.5	30.0
2,2-Dichloropropane	Ave	0.2438	0.2691		0.0221	0.0200	10.4	30.0
2-Butanone (MEK)	Ave	0.0472	0.0464	0.0100	0.0393	0.0400	-1.8	50.0
cis-1,2-Dichloroethene	Ave	0.2891	0.2867	0.1000	0.0198	0.0200	-0.8	30.0
Chlorobromomethane	Ave	0.1945	0.1891		0.0194	0.0200	-2.8	30.0
Tetrahydrofuran	Lin1		0.1082		0.0418	0.0400	4.6	30.0
Chloroform	Ave	0.4433	0.4563	0.2000	0.0206	0.0200	2.9	30.0
1,1,1-Trichloroethane	Ave	0.4174	0.4498	0.1000	0.0216	0.0200	7.8	30.0
Cyclohexane	Ave	0.3819	0.4119	0.1000	0.0216	0.0200	7.8	30.0
1,1-Dichloropropene	Ave	0.3519	0.3667		0.0208	0.0200	4.2	30.0
Carbon tetrachloride	Ave	0.4023	0.4240	0.1000	0.0211	0.0200	5.4	30.0
Isobutyl alcohol	Ave	0.0110	0.0112		0.508	0.500	1.6	30.0
1,2-Dichloroethane	Ave	0.3600	0.3604	0.1000	0.0200	0.0200	0.1	30.0
Benzene	Ave	0.9518	0.9713	0.5000	0.0204	0.0200	2.1	30.0
n-Heptane	Lin1		0.2300		0.0213	0.0200	6.3	30.0
Trichloroethene	Ave	0.3160	0.3196	0.1500	0.0202	0.0200	1.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Lab Sample ID: ICV 240-342719/14 Calibration Date: 08/27/2018 19:45

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1901330.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4590	0.4761	0.1000	0.0207	0.0200	3.7	30.0
1,2-Dichloropropane	Ave	0.2208	0.2306	0.1000	0.0209	0.0200	4.5	30.0
Dibromomethane	Ave	0.2271	0.2193		0.0193	0.0200	-3.4	30.0
1,4-Dioxane	Ave	0.0024	0.0028		0.474	0.400	18.4	50.0
Dichlorobromomethane	Ave	0.3479	0.3495	0.1500	0.0201	0.0200	0.4	30.0
2-Chloroethyl vinyl ether	Ave	0.1770	0.1822		0.0206	0.0200	2.9	30.0
cis-1,3-Dichloropropene	Ave	0.3865	0.4060	0.1500	0.0210	0.0200	5.1	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3203	0.3230	0.0500	0.0403	0.0400	0.8	50.0
Toluene	Ave	1.352	1.362	0.4000	0.0201	0.0200	0.7	30.0
trans-1,3-Dichloropropene	Ave	0.4818	0.4613	0.1000	0.0191	0.0200	-4.3	30.0
Ethyl methacrylate	Ave	0.4344	0.4432		0.0204	0.0200	2.0	30.0
1,1,2-Trichloroethane	Ave	0.2842	0.2905	0.1000	0.0204	0.0200	2.2	30.0
Tetrachloroethene	Ave	0.4313	0.4447	0.1500	0.0206	0.0200	3.1	30.0
1,3-Dichloropropane	Ave	0.4802	0.4738		0.0197	0.0200	-1.3	30.0
2-Hexanone	Ave	0.3149	0.3202	0.0500	0.0407	0.0400	1.7	50.0
Chlorodibromomethane	Ave	0.3583	0.3632		0.0203	0.0200	1.3	30.0
Ethylene Dibromide	Ave	0.3346	0.3230		0.0193	0.0200	-3.5	30.0
Chlorobenzene	Ave	0.9253	0.9231	0.3000	0.0200	0.0200	-0.2	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3336	0.3465		0.0208	0.0200	3.9	30.0
Ethylbenzene	Ave	0.4836	0.4959		0.0205	0.0200	2.5	30.0
m-Xylene & p-Xylene	Ave	0.5890	0.6110		0.0207	0.0200	3.7	30.0
o-Xylene	Ave	0.5597	0.5768		0.0206	0.0200	3.1	30.0
Styrene	Ave	0.9588	0.9701	0.3000	0.0202	0.0200	1.2	30.0
Bromoform	Ave	0.2933	0.2923	0.1000	0.0199	0.0200	-0.3	30.0
Isopropylbenzene	Ave	1.503	1.583	0.1000	0.0211	0.0200	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7706	0.7768	0.3000	0.0202	0.0200	0.8	30.0
Bromobenzene	Ave	0.7690	0.7545		0.0196	0.0200	-1.9	30.0
1,2,3-Trichloropropane	Ave	0.2921	0.3010		0.0206	0.0200	3.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.2737	0.2785		0.0203	0.0200	1.7	30.0
N-Propylbenzene	Ave	0.7729	0.7998		0.0207	0.0200	3.5	30.0
2-Chlorotoluene	Ave	0.6541	0.6592		0.0202	0.0200	0.8	30.0
1,3,5-Trimethylbenzene	Ave	2.225	2.303		0.0207	0.0200	3.5	30.0
4-Chlorotoluene	Ave	0.7072	0.7078		0.0200	0.0200	0.0	30.0
tert-Butylbenzene	Ave	2.113	2.203		0.0209	0.0200	4.3	30.0
1,2,4-Trimethylbenzene	Ave	2.256	2.278		0.0202	0.0200	1.0	30.0
sec-Butylbenzene	Ave	2.845	3.009		0.0212	0.0200	5.8	30.0
1,3-Dichlorobenzene	Ave	1.412	1.370	0.6000	0.0194	0.0200	-3.0	30.0
4-Isopropyltoluene	Ave	2.492	2.628		0.0211	0.0200	5.5	30.0
1,4-Dichlorobenzene	Ave	1.459	1.395	0.5000	0.0191	0.0200	-4.4	30.0
n-Butylbenzene	Ave	2.050	2.114		0.0206	0.0200	3.1	30.0
1,2-Dichlorobenzene	Ave	1.282	1.257	0.4000	0.0196	0.0200	-2.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Lab Sample ID: ICV 240-342719/14 Calibration Date: 08/27/2018 19:45
 Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/27/2018 19:23
 Lab File ID: U1901330.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2450	0.2412	0.0500	0.0197	0.0200	-1.6	50.0
1,2,4-Trichlorobenzene	Ave	0.8550	0.8004	0.2000	0.0187	0.0200	-6.4	50.0
Hexachlorobutadiene	Ave	0.4392	0.4373		0.0199	0.0200	-0.4	50.0
Naphthalene	Ave	2.363	2.262		0.0191	0.0200	-4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7677	0.7284		0.0190	0.0200	-5.1	30.0
Dibromofluoromethane (Surr)	Ave	0.2692	0.2770		0.0206	0.0200	2.9	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3092	0.3266		0.0211	0.0200	5.6	30.0
Toluene-d8 (Surr)	Ave	1.199	1.238		0.0206	0.0200	3.2	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4513	0.4759		0.0211	0.0200	5.5	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901330.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 27-Aug-2018 19:45:31 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info:
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist:
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 21:12:05 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	96	955207	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	765531	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	87	424750	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	264542	20.0	20.6	
\$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	100	311954	20.0	21.1	
\$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	86	947747	20.0	20.6	
\$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	89	364329	20.0	21.1	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	88	278240	20.0	15.1	
10 Chloromethane	50	1.823	1.812	0.011	78	238040	20.0	17.3	
12 Butadiene	54	1.906	1.906	0.000	87	236605	20.0	17.2	
11 Vinyl chloride	62	1.930	1.918	0.012	82	274549	20.0	19.3	
13 Bromomethane	94	2.227	2.227	0.000	92	208903	20.0	18.7	
14 Chloroethane	64	2.298	2.298	0.000	95	171871	20.0	19.5	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	83	454821	20.0	20.8	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	88	483563	20.0	20.3	
17 Ethyl ether	59	2.808	2.808	0.000	90	184629	20.0	21.5	
18 Acrolein	56	2.926	2.926	0.000	94	172494	100.0	81.2	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	89	371471	20.0	21.7	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	81	272453	20.0	22.2	
22 Acetone	43	3.068	3.069	-0.001	72	139402	40.0	37.2	
23 Iodomethane	142	3.199	3.199	0.000	99	461057	20.0	20.7	
24 Carbon disulfide	76	3.258	3.258	0.000	99	718482	20.0	20.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
26 3-Chloro-1-propene	41	3.365	3.365	0.000	74	344875	20.0	20.4	
27 Methyl acetate	43	3.377	3.377	0.000	96	420737	40.0	37.8	
28 Methylene Chloride	49	3.484	3.495	-0.011	55	271908	20.0	20.0	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	87	269854	200.0	208.6	
30 Acrylonitrile	53	3.697	3.685	0.012	98	973795	200.0	202.8	
32 trans-1,2-Dichloroethene	61	3.733	3.721	0.012	68	339431	20.0	21.0	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	89	674668	20.0	20.4	
33 Hexane	57	3.982	3.982	0.000	92	369879	20.0	22.0	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	398379	20.0	20.6	
35 Vinyl acetate	43	4.148	4.148	0.000	97	485201	20.0	21.9	
40 cis-1,2-Dichloroethene	96	4.634	4.622	0.012	68	273831	20.0	19.8	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	92	88581	40.0	39.3	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	65	257071	20.0	22.1	
45 Chlorobromomethane	49	4.835	4.836	-0.001	70	180641	20.0	19.4	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	206721	40.0	41.8	
47 Chloroform	83	4.907	4.907	0.000	71	435869	20.0	20.6	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	90	429620	20.0	21.6	
49 Cyclohexane	84	5.144	5.144	0.000	86	393450	20.0	21.6	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	90	350261	20.0	20.8	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	405050	20.0	21.1	
52 Isobutyl alcohol	41	5.298	5.298	0.000	83	266481	500.0	508.1	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	50	344294	20.0	20.0	
53 Benzene	78	5.416	5.417	-0.001	94	927804	20.0	20.4	
56 n-Heptane	57	5.642	5.642	0.000	82	219666	20.0	21.3	
58 Trichloroethene	130	5.986	5.986	0.000	92	305241	20.0	20.2	
60 Methylcyclohexane	83	6.175	6.176	-0.001	87	454812	20.0	20.7	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	80	220275	20.0	20.9	
63 Dibromomethane	174	6.294	6.294	0.000	89	209471	20.0	19.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	35	54068	400.0	473.8	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	333796	20.0	20.1	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	174029	20.0	20.6	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	89	387819	20.0	21.0	
69 4-Methyl-2-pentanone (MIBK)	43	6.982	6.982	0.000	83	617114	40.0	40.3	
70 Toluene	91	7.172	7.172	0.000	94	1042380	20.0	20.1	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	85	353136	20.0	19.1	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	89	339271	20.0	20.4	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	86	222400	20.0	20.4	
75 Tetrachloroethene	166	7.693	7.693	0.000	92	340390	20.0	20.6	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	90	362713	20.0	19.7	
77 2-Hexanone	43	7.765	7.765	-0.001	79	490171	40.0	40.7	
79 Chlorodibromomethane	129	7.931	7.919	0.012	88	278002	20.0	20.3	
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	247260	20.0	19.3	

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901330.d

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
82 Chlorobenzene	112	8.523	8.524	-0.001	92	706649	20.0	20.0	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	87	265224	20.0	20.8	
84 Ethylbenzene	106	8.630	8.630	0.000	98	379588	20.0	20.5	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	100	467728	20.0	20.7	
86 o-Xylene	106	9.152	9.152	0.000	88	441586	20.0	20.6	
87 Styrene	104	9.164	9.164	0.000	93	742653	20.0	20.2	
88 Bromoform	173	9.354	9.354	0.000	98	223782	20.0	19.9	
89 Isopropylbenzene	105	9.520	9.520	0.000	96	1211475	20.0	21.1	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	329964	20.0	20.2	
92 Bromobenzene	156	9.840	9.840	0.000	89	320488	20.0	19.6	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	69	127830	20.0	20.6	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	61	118291	20.0	20.3	
95 N-Propylbenzene	120	9.946	9.947	-0.001	96	339730	20.0	20.7	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	279994	20.0	20.2	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	95	978383	20.0	20.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	300639	20.0	20.0	
99 tert-Butylbenzene	119	10.468	10.468	0.000	78	935547	20.0	20.9	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	71	967584	20.0	20.2	
102 sec-Butylbenzene	105	10.694	10.694	0.000	93	1277861	20.0	21.2	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	84	581709	20.0	19.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	1116328	20.0	21.1	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	92	592339	20.0	19.1	
108 n-Butylbenzene	91	11.287	11.287	0.000	97	897771	20.0	20.6	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	98	533790	20.0	19.6	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	89	102428	20.0	19.7	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	339973	20.0	18.7	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	185743	20.0	19.9	
114 Naphthalene	128	13.279	13.279	0.000	96	960764	20.0	19.1	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	93	309386	20.0	19.0	
S 164 Total BTEX	1				0		100.0	102.4	
S 127 Trihalomethanes, Total	1				0		80.0	80.9	
S 126 Xylenes, Total	106				0		40.0	41.4	

Reagents:

vmfasgw_00271	Amount Added: 16.00	Units: uL	
vmfasaw_00246	Amount Added: 16.00	Units: uL	
vmfaspw_00264	Amount Added: 16.00	Units: uL	
vm50ss_stk_00077	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00123	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00001	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901330.d

Injection Date: 27-Aug-2018 19:45:31

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: ICV

Worklist Smp#: 14

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

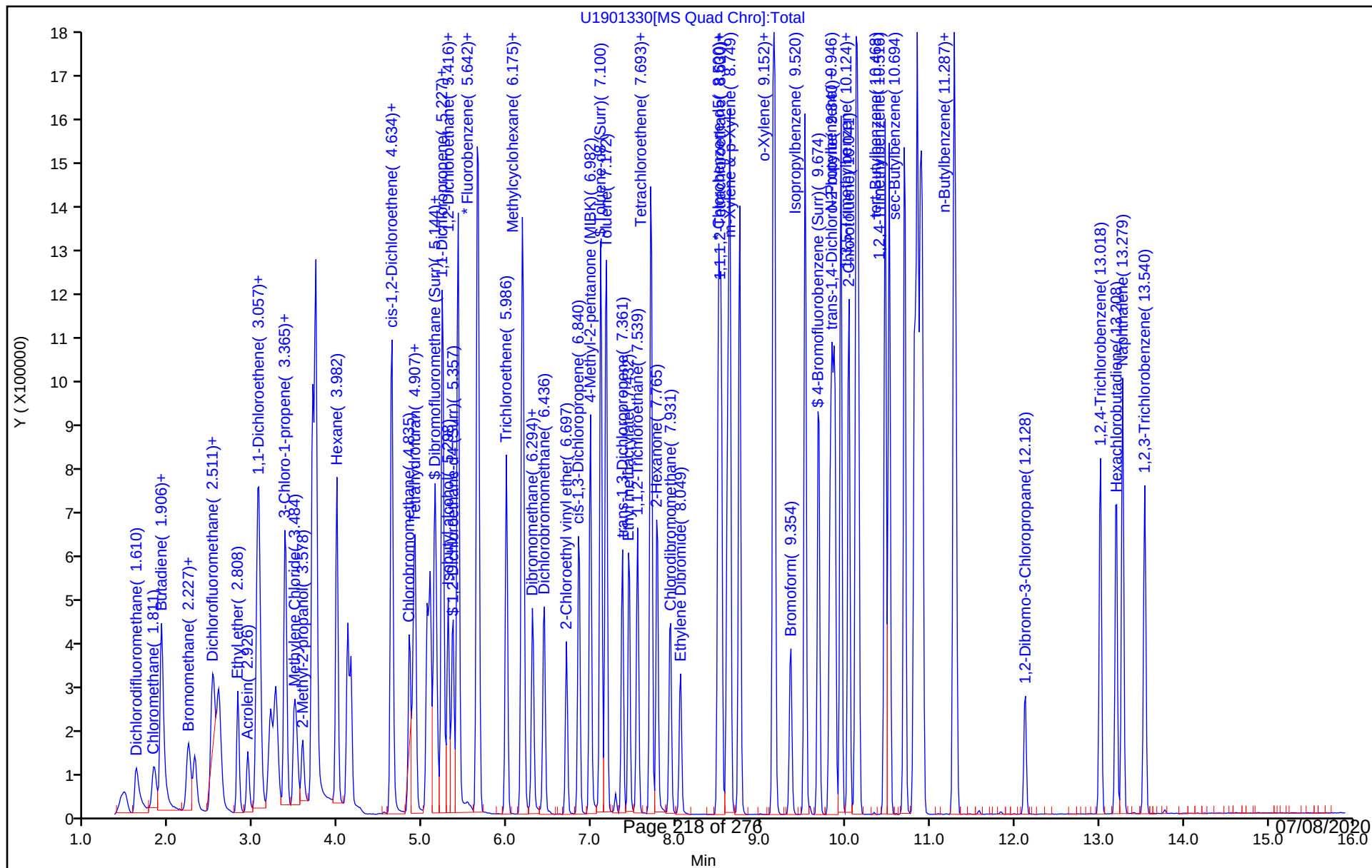
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Lab Sample ID: CCVIS 240-440963/4 Calibration Date: 07/01/2020 16:55

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1915328.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3850	0.2746	0.1000	0.0143	0.0200	-28.7*	20.0
Chloromethane	Ave	0.2883	0.2699	0.1000	0.0187	0.0200	-6.4	20.0
Butadiene	Ave	0.2887	0.2874		0.0199	0.0200	-0.5	20.0
Vinyl chloride	Ave	0.2980	0.2960	0.1000	0.0199	0.0200	-0.7	20.0
Bromomethane	Ave	0.2335	0.2172	0.0500	0.0186	0.0200	-7.0	20.0
Chloroethane	Ave	0.1848	0.1970	0.0500	0.0213	0.0200	6.6	20.0
Dichlorofluoromethane	Ave	0.4581	0.4290		0.0187	0.0200	-6.4	20.0
Trichlorofluoromethane	Ave	0.4984	0.3915	0.1000	0.0157	0.0200	-21.4*	20.0
Ethyl ether	Ave	0.1800	0.2078		0.0231	0.0200	15.5	20.0
Acrolein	Ave	0.0445	0.0204		0.0459	0.100	-54.1*	20.0
1,1-Dichloroethene	Ave	0.3589	0.3500	0.1000	0.0195	0.0200	-2.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2567	0.2604	0.0500	0.0203	0.0200	1.4	20.0
Acetone	Ave	0.0784	0.1077	0.0100	0.0549	0.0400	37.3	50.0
Iodomethane	Ave	0.4655	0.4198		0.0180	0.0200	-9.8	20.0
Carbon disulfide	Ave	0.7515	0.8019	0.1000	0.0213	0.0200	6.7	20.0
3-Chloro-1-propene	Ave	0.3541	0.3207		0.0181	0.0200	-9.4	20.0
Methyl acetate	Ave	0.2328	0.2490	0.1000	0.0428	0.0400	7.0	50.0
Methylene Chloride	Ave	0.2846	0.2803	0.1000	0.0197	0.0200	-1.5	50.0
2-Methyl-2-propanol	Ave	0.0271	0.0347		0.256	0.200	28.2*	20.0
Acrylonitrile	Ave	0.1006	0.1302		0.259	0.200	29.5*	20.0
Methyl tert-butyl ether	Ave	0.6938	0.6426	0.1000	0.0185	0.0200	-7.4	20.0
trans-1,2-Dichloroethene	Ave	0.3387	0.3412	0.1000	0.0202	0.0200	0.8	20.0
Hexane	Ave	0.3524	0.3652		0.0207	0.0200	3.6	20.0
1,1-Dichloroethane	Ave	0.4048	0.4262	0.2000	0.0211	0.0200	5.3	20.0
Vinyl acetate	Ave	0.4639	0.5065		0.0218	0.0200	9.2	20.0
2,2-Dichloropropane	Ave	0.2438	0.2346		0.0192	0.0200	-3.8	20.0
2-Butanone (MEK)	Ave	0.0472	0.0541	0.0100	0.0459	0.0400	14.6	50.0
cis-1,2-Dichloroethene	Ave	0.2891	0.2865	0.1000	0.0198	0.0200	-0.9	20.0
Chlorobromomethane	Ave	0.1945	0.1933		0.0199	0.0200	-0.6	20.0
Tetrahydrofuran	Lin1		0.1072		0.0414	0.0400	3.6	20.0
Chloroform	Ave	0.4433	0.4425	0.2000	0.0200	0.0200	-0.2	20.0
1,1,1-Trichloroethane	Ave	0.4174	0.3638	0.1000	0.0174	0.0200	-12.8	20.0
Cyclohexane	Ave	0.3819	0.3985	0.1000	0.0209	0.0200	4.3	20.0
1,1-Dichloropropene	Ave	0.3519	0.3575		0.0203	0.0200	1.6	20.0
Carbon tetrachloride	Ave	0.4023	0.3363	0.1000	0.0167	0.0200	-16.4	20.0
Isobutyl alcohol	Ave	0.0110	0.0139		0.631	0.500	26.1*	20.0
Benzene	Ave	0.9518	1.038	0.5000	0.0218	0.0200	9.1	20.0
1,2-Dichloroethane	Ave	0.3600	0.3101	0.1000	0.0172	0.0200	-13.9	20.0
n-Heptane	Lin1		0.1741		0.0152	0.0200	-23.8*	20.0
Trichloroethene	Ave	0.3160	0.2853	0.1500	0.0181	0.0200	-9.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Lab Sample ID: CCVIS 240-440963/4 Calibration Date: 07/01/2020 16:55

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1915328.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4590	0.4385	0.1000	0.0191	0.0200	-4.5	20.0
1,2-Dichloropropane	Ave	0.2208	0.2347	0.1000	0.0213	0.0200	6.3	20.0
1,4-Dioxane	Ave	0.0024	0.0044		0.734	0.400	83.6*	50.0
Dibromomethane	Ave	0.2271	0.1813		0.0160	0.0200	-20.1*	20.0
Dichlorobromomethane	Ave	0.3479	0.3129	0.1500	0.0180	0.0200	-10.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1770	0.1698		0.0384	0.0400	-4.1	20.0
cis-1,3-Dichloropropene	Ave	0.3865	0.3742	0.1500	0.0194	0.0200	-3.2	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3203	0.3271	0.0500	0.0408	0.0400	2.1	50.0
Toluene	Ave	1.352	1.486	0.4000	0.0220	0.0200	10.0	20.0
trans-1,3-Dichloropropene	Ave	0.4818	0.4630	0.1000	0.0192	0.0200	-3.9	20.0
Ethyl methacrylate	Ave	0.4344	0.4636		0.0213	0.0200	6.7	20.0
1,1,2-Trichloroethane	Ave	0.2842	0.3072	0.1000	0.0216	0.0200	8.1	20.0
1,3-Dichloropropane	Ave	0.4802	0.5219		0.0217	0.0200	8.7	20.0
Tetrachloroethene	Ave	0.4313	0.3827	0.1500	0.0177	0.0200	-11.3	20.0
2-Hexanone	Ave	0.3149	0.3394	0.0500	0.0431	0.0400	7.8	50.0
Chlorodibromomethane	Ave	0.3583	0.3404		0.0190	0.0200	-5.0	20.0
Ethylene Dibromide	Ave	0.3346	0.3315		0.0198	0.0200	-0.9	20.0
Chlorobenzene	Ave	0.9253	0.9265	0.3000	0.0200	0.0200	0.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3336	0.3358		0.0201	0.0200	0.7	20.0
Ethylbenzene	Ave	0.4836	0.5050		0.0209	0.0200	4.4	20.0
m-Xylene & p-Xylene	Ave	0.5890	0.6304		0.0214	0.0200	7.0	20.0
o-Xylene	Ave	0.5597	0.6122		0.0219	0.0200	9.4	20.0
Styrene	Ave	0.9588	1.014	0.3000	0.0212	0.0200	5.8	20.0
Bromoform	Ave	0.2933	0.2511	0.1000	0.0171	0.0200	-14.4	20.0
Isopropylbenzene	Ave	1.503	1.578	0.1000	0.0210	0.0200	5.0	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7706	0.9746	0.3000	0.0253	0.0200	26.5*	20.0
Bromobenzene	Ave	0.7690	0.7321		0.0190	0.0200	-4.8	20.0
1,2,3-Trichloropropane	Ave	0.2921	0.3119		0.0214	0.0200	6.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2737	0.2146		0.0157	0.0200	-21.6*	20.0
N-Propylbenzene	Ave	0.7729	0.8205		0.0212	0.0200	6.2	20.0
2-Chlorotoluene	Ave	0.6541	0.7032		0.0215	0.0200	7.5	20.0
1,3,5-Trimethylbenzene	Ave	2.225	2.424		0.0218	0.0200	8.9	20.0
4-Chlorotoluene	Ave	0.7072	0.7193		0.0203	0.0200	1.7	20.0
tert-Butylbenzene	Ave	2.113	2.077		0.0197	0.0200	-1.7	20.0
1,2,4-Trimethylbenzene	Ave	2.256	2.463		0.0218	0.0200	9.1	20.0
sec-Butylbenzene	Ave	2.845	2.991		0.0210	0.0200	5.1	20.0
1,3-Dichlorobenzene	Ave	1.412	1.393	0.6000	0.0197	0.0200	-1.3	20.0
4-Isopropyltoluene	Ave	2.492	2.546		0.0204	0.0200	2.2	20.0
1,4-Dichlorobenzene	Ave	1.459	1.423	0.5000	0.0195	0.0200	-2.5	20.0
n-Butylbenzene	Ave	2.050	2.140		0.0209	0.0200	4.4	20.0
1,2-Dichlorobenzene	Ave	1.282	1.374	0.4000	0.0214	0.0200	7.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Lab Sample ID: CCVIS 240-440963/4 Calibration Date: 07/01/2020 16:55
 Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/27/2018 19:23
 Lab File ID: U1915328.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2450	0.2553	0.0500	0.0208	0.0200	4.2	50.0
1,2,4-Trichlorobenzene	Ave	0.8550	0.7204	0.2000	0.0169	0.0200	-15.7	50.0
Hexachlorobutadiene	Ave	0.4392	0.2955		0.0135	0.0200	-32.7	50.0
Naphthalene	Ave	2.363	2.509		0.0212	0.0200	6.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7677	0.7054		0.0184	0.0200	-8.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2692	0.2399		0.0178	0.0200	-10.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3092	0.2557		0.0165	0.0200	-17.3	20.0
Toluene-d8 (Surr)	Ave	1.199	1.205		0.0201	0.0200	0.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4513	0.4314		0.0191	0.0200	-4.4	20.0

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915328.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 01-Jul-2020 16:55:48 ALS Bottle#: 0 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-004
 Operator ID: 001904 Instrument ID: A3UX19
 Sublist: chrom-8260_19*sub1
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 17:21:19 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 17:21:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.665	5.665	0.000	99	1097254	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.499	8.499	0.000	85	791587	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	92	421899	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.049	5.049	0.000	94	263175	20.0	17.8	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	96	280592	20.0	16.5	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	92	954242	20.0	20.1	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.685	9.685	0.000	91	341520	20.0	19.1	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	100	301346	20.0	14.3	
10 Chloromethane	50	1.811	1.811	0.000	98	296141	20.0	18.7	
11 Butadiene	54	1.906	1.906	0.000	86	315312	20.0	19.9	
12 Vinyl chloride	62	1.918	1.918	0.000	98	324736	20.0	19.9	
13 Bromomethane	94	2.226	2.226	0.000	90	238287	20.0	18.6	
15 Chloroethane	64	2.309	2.309	0.000	99	216133	20.0	21.3	
16 Dichlorofluoromethane	67	2.511	2.511	0.000	96	470693	20.0	18.7	
17 Trichlorofluoromethane	101	2.582	2.582	0.000	97	429616	20.0	15.7	
18 Ethyl ether	59	2.807	2.807	0.000	89	228056	20.0	23.1	
19 Acrolein	56	2.938	2.938	0.000	98	111953	100.0	45.9	
20 1,1-Dichloroethene	61	3.044	3.044	0.000	98	383999	20.0	19.5	
21 1,1,2-Trichloro-1,2,2-trifluoro	101	3.056	3.056	0.000	92	285680	20.0	20.3	
22 Acetone	43	3.080	3.080	0.000	100	236309	40.0	54.9	
24 Iodomethane	142	3.199	3.199	0.000	98	460594	20.0	18.0	
25 Carbon disulfide	76	3.270	3.270	0.000	98	879904	20.0	21.3	
27 3-Chloro-1-propene	41	3.365	3.365	0.000	91	351863	20.0	18.1	
28 Methyl acetate	43	3.388	3.388	0.000	96	546344	40.0	42.8	
29 Methylene Chloride	49	3.483	3.483	0.000	85	307518	20.0	19.7	
30 2-Methyl-2-propanol	59	3.578	3.578	0.000	98	381057	200.0	256.5	
31 Acrylonitrile	53	3.697	3.697	0.000	99	1428671	200.0	259.0	
32 trans-1,2-Dichloroethene	61	3.732	3.732	0.000	98	374422	20.0	20.2	
33 Methyl tert-butyl ether	73	3.732	3.732	0.000	95	705112	20.0	18.5	
34 Hexane	57	3.981	3.981	0.000	88	400733	20.0	20.7	
35 1,1-Dichloroethane	63	4.112	4.112	0.000	96	467672	20.0	21.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 Vinyl acetate	43	4.147	4.147	0.000	97	555797	20.0	21.8	
41 cis-1,2-Dichloroethene	96	4.633	4.633	0.000	80	314338	20.0	19.8	
42 2,2-Dichloropropane	77	4.633	4.633	0.000	87	257398	20.0	19.2	
40 2-Butanone (MEK)	72	4.633	4.633	0.000	95	118816	40.0	45.9	
46 Chlorobromomethane	49	4.847	4.847	0.000	90	212138	20.0	19.9	
47 Tetrahydrofuran	42	4.883	4.883	0.000	84	235291	40.0	41.4	
48 Chloroform	83	4.906	4.906	0.000	93	485543	20.0	20.0	
49 1,1,1-Trichloroethane	97	5.084	5.084	0.000	98	399193	20.0	17.4	
50 Cyclohexane	84	5.143	5.143	0.000	87	437291	20.0	20.9	
51 1,1-Dichloropropene	75	5.226	5.226	0.000	98	392309	20.0	20.3	
52 Carbon tetrachloride	117	5.238	5.238	0.000	97	368960	20.0	16.7	
53 Isobutyl alcohol	41	5.298	5.298	0.000	94	379987	500.0	630.7	
54 Benzene	78	5.416	5.416	0.000	94	1139217	20.0	21.8	
55 1,2-Dichloroethane	62	5.428	5.428	0.000	97	340212	20.0	17.2	
57 n-Heptane	57	5.641	5.653	-0.012	81	190972	20.0	15.2	
59 Trichloroethene	130	5.997	5.997	0.000	98	312997	20.0	18.1	
61 Methylcyclohexane	83	6.175	6.175	0.000	90	481165	20.0	19.1	
62 1,2-Dichloropropane	63	6.199	6.199	0.000	96	257563	20.0	21.3	
65 1,4-Dioxane	88	6.306	6.306	0.000	89	96274	400.0	734.4	
64 Dibromomethane	174	6.306	6.306	0.000	94	198967	20.0	16.0	
66 Dichlorobromomethane	83	6.436	6.436	0.000	99	343349	20.0	18.0	
68 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	372570	40.0	38.4	
69 cis-1,3-Dichloropropene	75	6.851	6.851	0.000	98	410616	20.0	19.4	
70 4-Methyl-2-pentanone (MIBK)	43	6.981	6.981	0.000	94	717816	40.0	40.8	
71 Toluene	91	7.171	7.171	0.000	98	1176648	20.0	22.0	
72 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	90	366538	20.0	19.2	
73 Ethyl methacrylate	69	7.444	7.444	0.000	87	366958	20.0	21.3	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	90	243167	20.0	21.6	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	413149	20.0	21.7	
75 Tetrachloroethene	166	7.705	7.705	0.000	97	302937	20.0	17.7	
77 2-Hexanone	43	7.776	7.776	0.000	93	537376	40.0	43.1	
79 Chlorodibromomethane	129	7.930	7.930	0.000	90	269432	20.0	19.0	
81 Ethylene Dibromide	107	8.049	8.049	0.000	98	262386	20.0	19.8	
83 Chlorobenzene	112	8.535	8.535	0.000	97	733381	20.0	20.0	
84 1,1,1,2-Tetrachloroethane	131	8.606	8.606	0.000	96	265827	20.0	20.1	
85 Ethylbenzene	106	8.642	8.642	0.000	98	399785	20.0	20.9	
86 m-Xylene & p-Xylene	106	8.748	8.748	0.000	100	498977	20.0	21.4	
87 o-Xylene	106	9.152	9.152	0.000	95	484577	20.0	21.9	
88 Styrene	104	9.163	9.163	0.000	93	802748	20.0	21.2	
89 Bromoform	173	9.353	9.353	0.000	97	198744	20.0	17.1	
90 Isopropylbenzene	105	9.531	9.531	0.000	95	1248915	20.0	21.0	
93 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	93	411176	20.0	25.3	
95 Bromobenzene	156	9.851	9.851	0.000	89	308891	20.0	19.0	
97 trans-1,4-Dichloro-2-butene	53	9.875	9.875	0.000	77	90530	20.0	15.7	
96 1,2,3-Trichloropropane	110	9.875	9.875	0.000	83	131605	20.0	21.4	
98 N-Propylbenzene	120	9.946	9.946	0.000	99	346158	20.0	21.2	
100 2-Chlorotoluene	126	10.041	10.041	0.000	97	296687	20.0	21.5	
101 1,3,5-Trimethylbenzene	105	10.136	10.136	0.000	94	1022524	20.0	21.8	
102 4-Chlorotoluene	126	10.160	10.160	0.000	97	303473	20.0	20.3	
103 tert-Butylbenzene	119	10.480	10.480	0.000	91	876440	20.0	19.7	
105 1,2,4-Trimethylbenzene	105	10.527	10.527	0.000	95	1038997	20.0	21.8	
106 sec-Butylbenzene	105	10.705	10.705	0.000	94	1261978	20.0	21.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 1,3-Dichlorobenzene	146	10.824	10.824	0.000	98	587886	20.0	19.7	
108 4-Isopropyltoluene	119	10.859	10.859	0.000	97	1073946	20.0	20.4	
109 1,4-Dichlorobenzene	146	10.919	10.919	0.000	96	600429	20.0	19.5	
112 n-Butylbenzene	91	11.286	11.286	0.000	98	902874	20.0	20.9	
113 1,2-Dichlorobenzene	146	11.310	11.310	0.000	98	579654	20.0	21.4	
114 1,2-Dibromo-3-Chloropropane	157	12.128	12.128	0.000	89	107690	20.0	20.8	
116 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	94	303935	20.0	16.9	
117 Hexachlorobutadiene	225	13.207	13.207	0.000	96	124666	20.0	13.5	
118 Naphthalene	128	13.290	13.290	0.000	97	1058388	20.0	21.2	
119 1,2,3-Trichlorobenzene	180	13.551	13.551	0.000	96	297624	20.0	18.4	
S 124 Total BTEX	1				0		100.0	108.0	
S 125 Trihalomethanes, Total	1				0		80.0	74.1	
S 128 Xylenes, Total	106				0		40.0	43.3	

Reagents:

vmarolistdw_00351	Amount Added: 16.00	Units: uL	
vmrprimw_00392	Amount Added: 16.00	Units: uL	
vmrgas_00345	Amount Added: 16.00	Units: uL	
vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915328.d

Injection Date: 01-Jul-2020 16:55:48

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: CCVIS

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

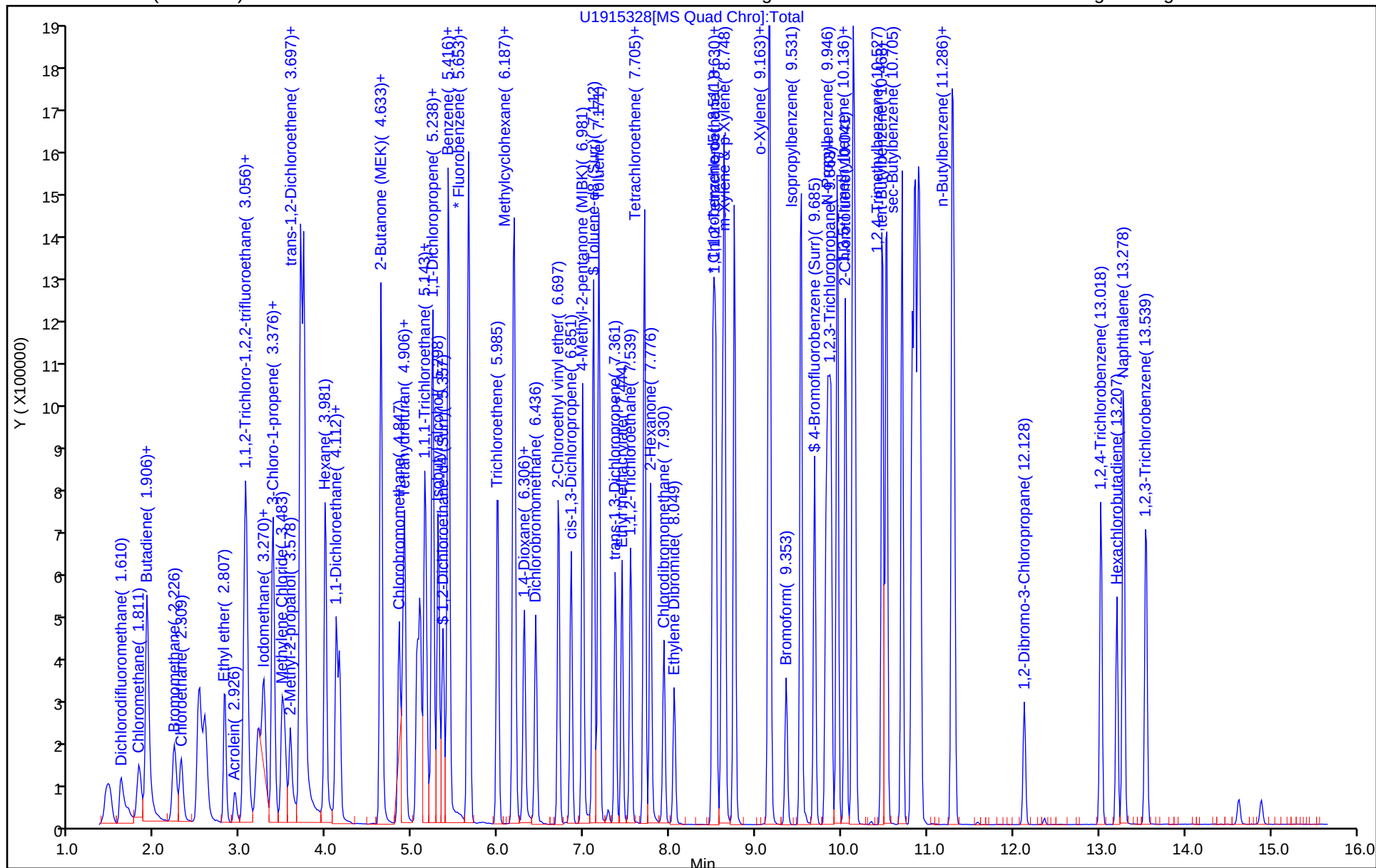
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 24-Jul-2018 17:22:19 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078277-001
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 24-Jul-2018 18:26:01 Calib Date: 01-Jan-0001 00:00:00
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK002

First Level Reviewer: laveyt

Date: 24-Jul-2018 18:26:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 8 BFB	95	4.698	4.698	0.000	0	1090680	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00020

Amount Added: 1.00

Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d

Injection Date: 24-Jul-2018 17:22:19

Instrument ID: A3UX19

Lims ID: BFB

Client ID:

Operator ID: 001904

ALS Bottle#: 0

Worklist Smp#: 1

Injection Vol: 5.0 mL

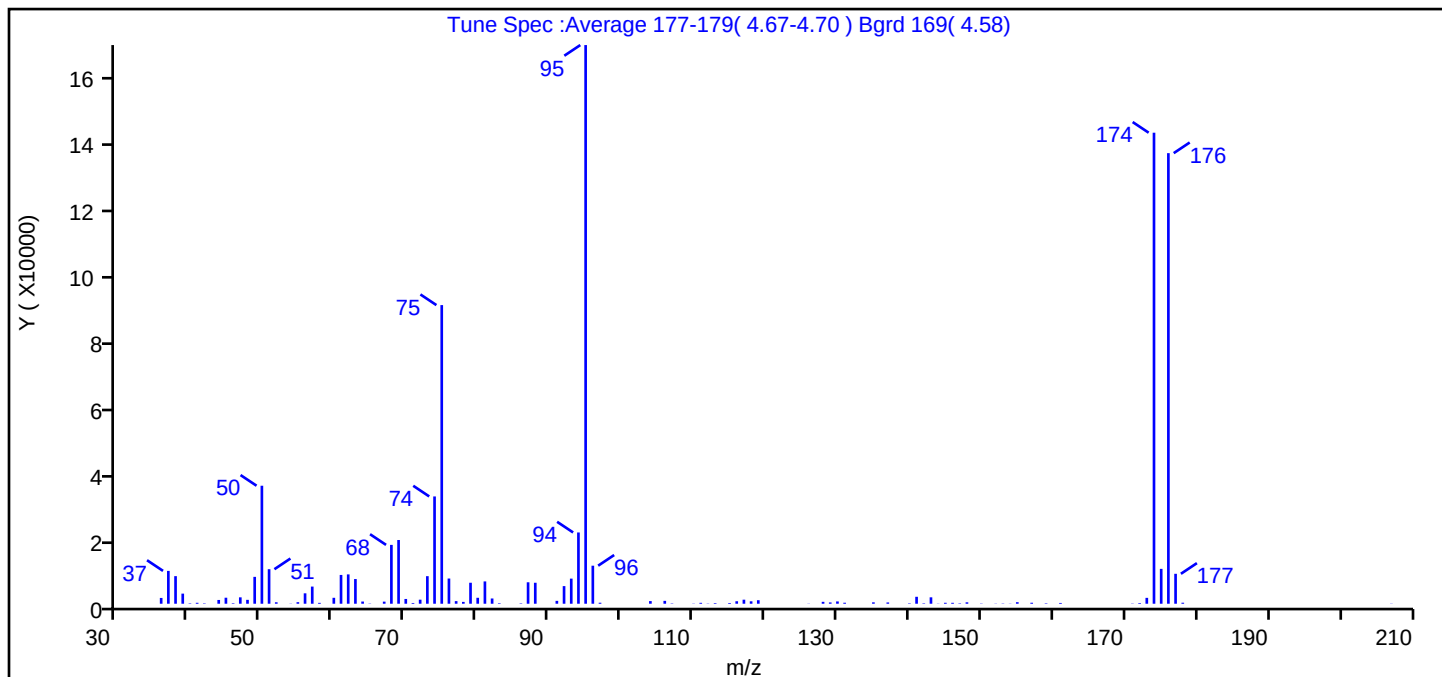
Dil. Factor: 1.0000

Method: 8260_19

Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

\$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.1
75	30 to 60% of m/z 95	53.5
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.1 (1.2)
174	50 to 120% of m/z 95	84.3
175	5 to 9% of m/z 174	6.2 (7.4)
176	Greater than 95% but less than 101% of m/z 174	80.7 (95.7)
177	5 to 9% of m/z 176	5.4 (6.6)

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d\8260_19.rslt\spectra.d

Injection Date: 24-Jul-2018 17:22:19

Spectrum: Tune Spec :Average 177-179(4.67-4.70) Bgrd 169(4.58)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1706	64.00	645	94.00	20976	142.00	135
37.00	9667	65.00	75	95.00	164416	143.00	1887
38.00	8121	67.00	620	96.00	11195	144.00	54
39.00	2976	68.00	17320	97.00	297	145.00	282
40.00	128	69.00	18752	104.00	777	146.00	275
41.00	280	70.00	1405	106.00	846	147.00	123
42.00	120	71.00	220	107.00	102	148.00	420
44.00	1112	72.00	1196	110.00	66	150.00	76
45.00	1770	73.00	8112	111.00	269	152.00	57
46.00	157	74.00	31576	112.00	68	153.00	83
47.00	1883	75.00	87888	113.00	186	154.00	50
48.00	1146	76.00	7419	115.00	214	155.00	454
49.00	7909	77.00	768	116.00	734	157.00	295
50.00	34728	78.00	542	117.00	1191	159.00	132
51.00	10164	79.00	6178	118.00	715	161.00	228
52.00	428	80.00	1749	119.00	1035	171.00	76
54.00	52	81.00	6569	126.00	50	172.00	196
55.00	455	82.00	1544	128.00	562	173.00	1730
56.00	3065	83.00	158	129.00	380	174.00	138624
57.00	5049	86.00	123	130.00	675	175.00	10263
58.00	260	87.00	6315	131.00	295	176.00	132608
60.00	1747	88.00	6174	135.00	411	177.00	8811
61.00	8473	91.00	844	137.00	377	178.00	300
62.00	8634	92.00	5187	140.00	129	207.00	54
63.00	7267	93.00	7390	141.00	2044		

Report Date: 24-Jul-2018 18:26:02

Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d

Injection Date: 24-Jul-2018 17:22:19

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

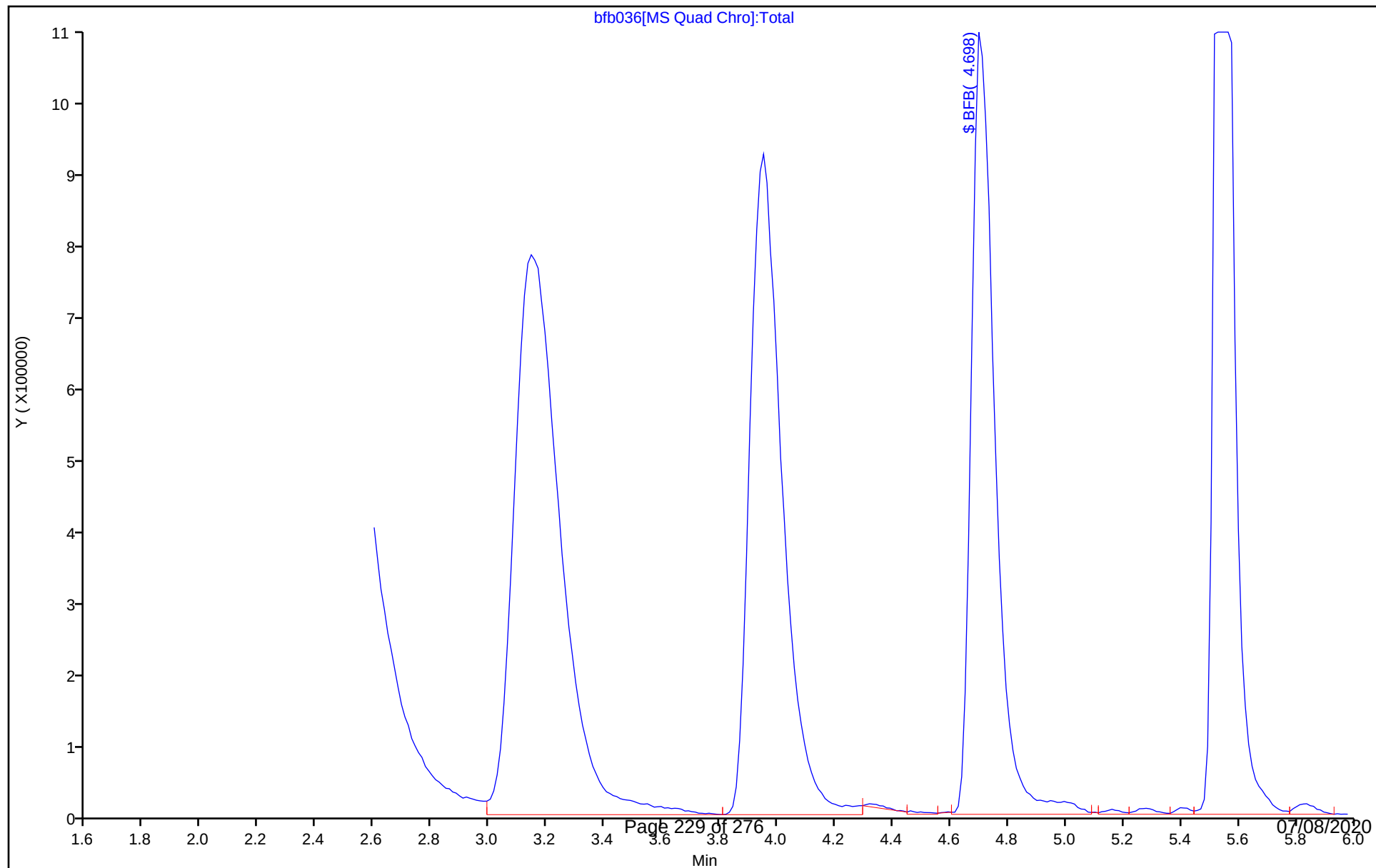
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 25-Jul-2018 11:28:13 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0078311-001
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 25-Jul-2018 16:32:06 Calib Date: 25-Jul-2018 15:15:13
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK026

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 8 BFB	95	4.686	4.686	0.000	0	1106546	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00020 Amount Added: 1.00 Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d

Injection Date: 25-Jul-2018 11:28:13

Instrument ID: A3UX19

Lims ID: BFB

Client ID:

Operator ID: 001904

ALS Bottle#: 0

Worklist Smp#: 1

Injection Vol: 5.0 mL

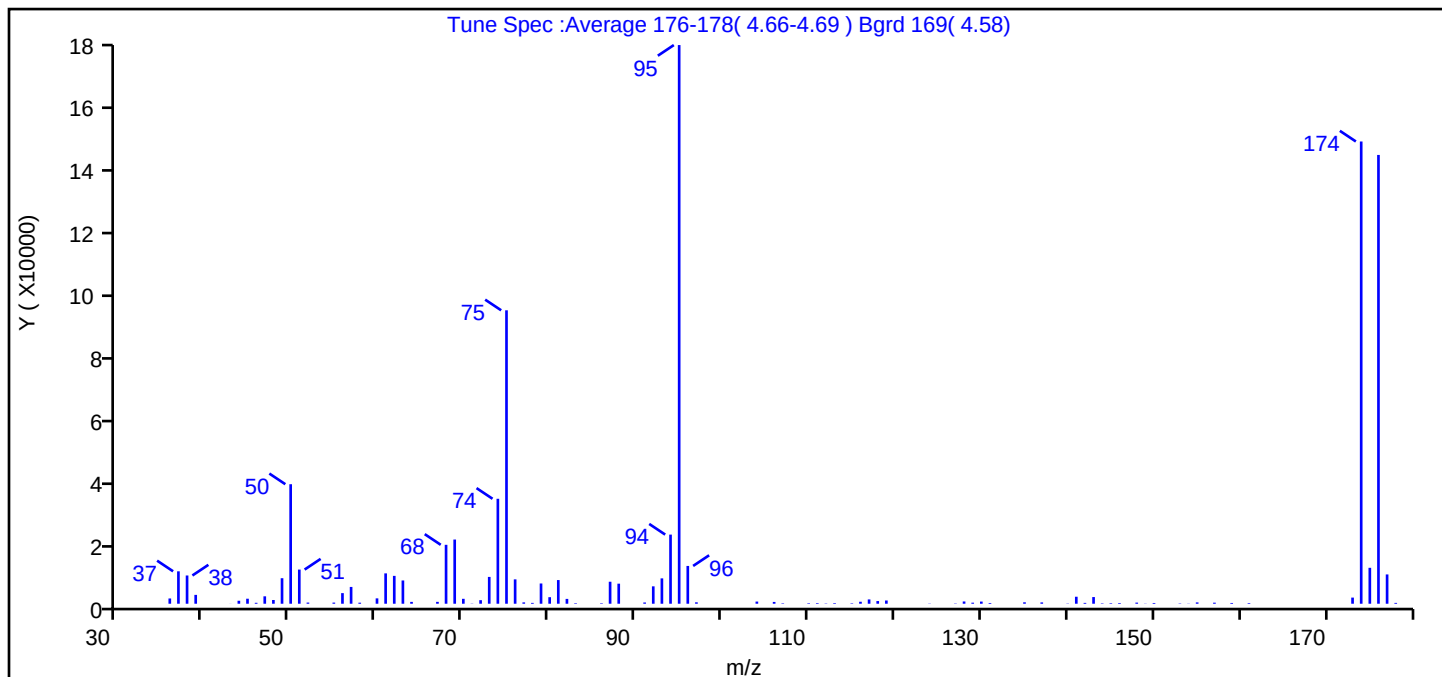
Dil. Factor: 1.0000

Method: 8260_19

Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

\$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.4
75	30 to 60% of m/z 95	52.5
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.1 (1.3)
174	50 to 120% of m/z 95	82.7
175	5 to 9% of m/z 174	6.4 (7.8)
176	Greater than 95% but less than 101% of m/z 174	80.3 (97.1)
177	5 to 9% of m/z 176	5.2 (6.5)

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d\8260_19.rslt\spectra.d

Injection Date: 25-Jul-2018 11:28:13

Spectrum: Tune Spec :Average 176-178(4.66-4.69) Bgrd 169(4.58)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1628	67.00	581	94.00	21384	137.00	409
37.00	10027	68.00	18224	95.00	172800	140.00	80
38.00	8737	69.00	19856	96.00	11689	141.00	2163
39.00	2738	70.00	1521	97.00	441	142.00	263
43.00	20	71.00	65	104.00	670	143.00	2064
44.00	922	72.00	1099	106.00	557	144.00	132
45.00	1551	73.00	8295	107.00	144	145.00	176
46.00	292	74.00	32464	110.00	165	146.00	215
47.00	2293	75.00	90760	111.00	202	148.00	348
48.00	1156	76.00	7539	112.00	94	149.00	57
49.00	7894	77.00	416	113.00	196	150.00	232
50.00	36968	78.00	262	115.00	145	153.00	106
51.00	10570	79.00	6264	116.00	614	154.00	54
52.00	361	80.00	2025	117.00	1332	155.00	412
55.00	352	81.00	7320	118.00	827	157.00	327
56.00	3282	82.00	1495	119.00	1001	159.00	239
57.00	5195	83.00	170	124.00	70	161.00	201
58.00	322	86.00	159	127.00	96	173.00	1900
60.00	1660	87.00	6806	128.00	700	174.00	142976
61.00	9391	88.00	6205	129.00	329	175.00	11113
62.00	8617	91.00	385	130.00	667	176.00	138816
63.00	7197	92.00	5382	131.00	228	177.00	9062
64.00	572	93.00	7843	135.00	442	178.00	262

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d

Injection Date: 25-Jul-2018 11:28:13

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

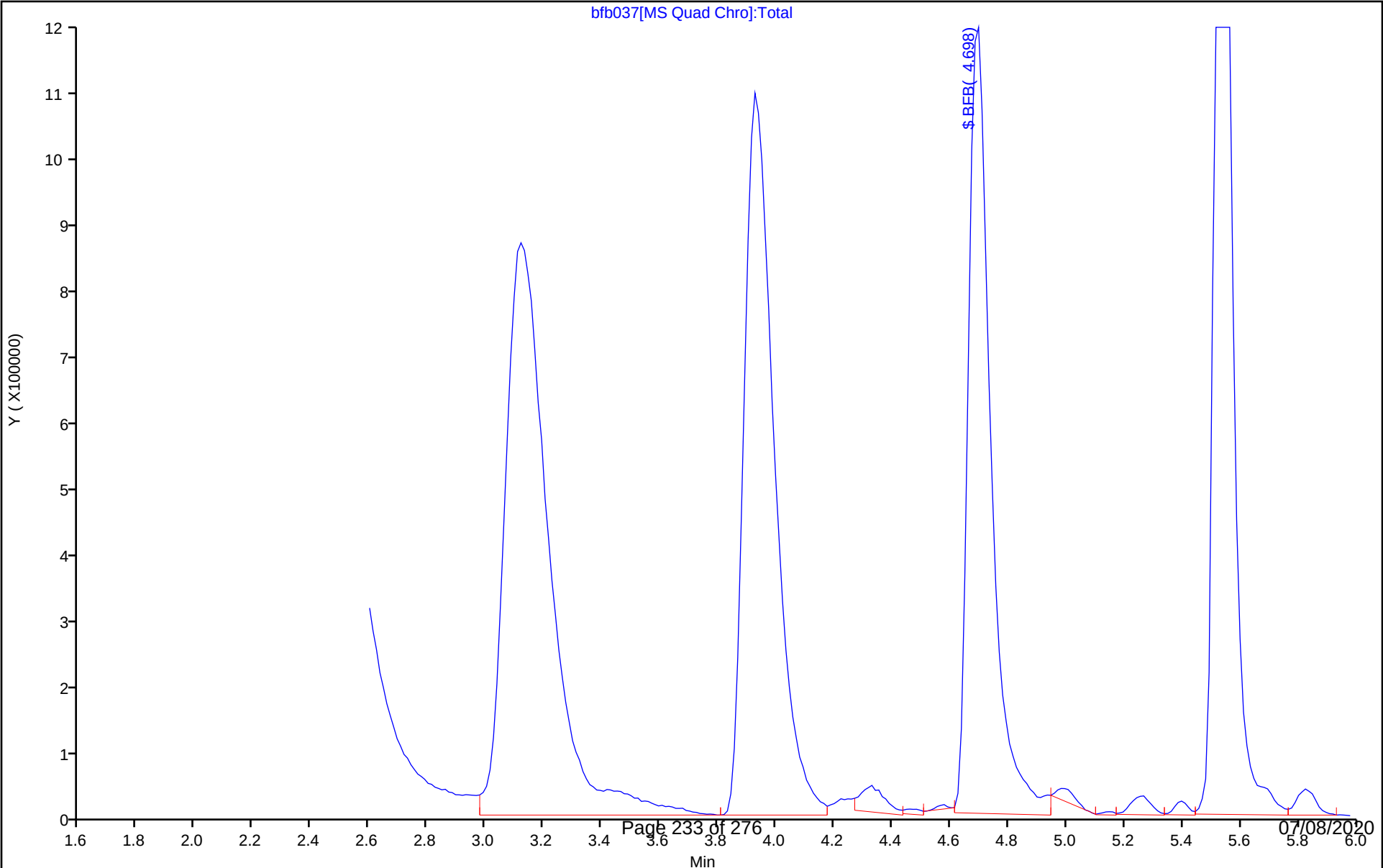
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



bfb037[MS Quad Chro]:Total

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 27-Aug-2018 16:23:35 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 240-0079307-001
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 27-Aug-2018 20:00:43 Calib Date: 27-Aug-2018 19:23:28
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: laveyt

Date: 27-Aug-2018 19:59:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 8 BFB	95	4.698	4.698	0.000	0	1569511	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00020

Amount Added: 1.00

Units: uL

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d

Injection Date: 27-Aug-2018 16:23:35

Instrument ID: A3UX19

Lims ID: BFB

Client ID:

Operator ID: 001904

ALS Bottle#: 0

Worklist Smp#: 1

Injection Vol: 5.0 mL

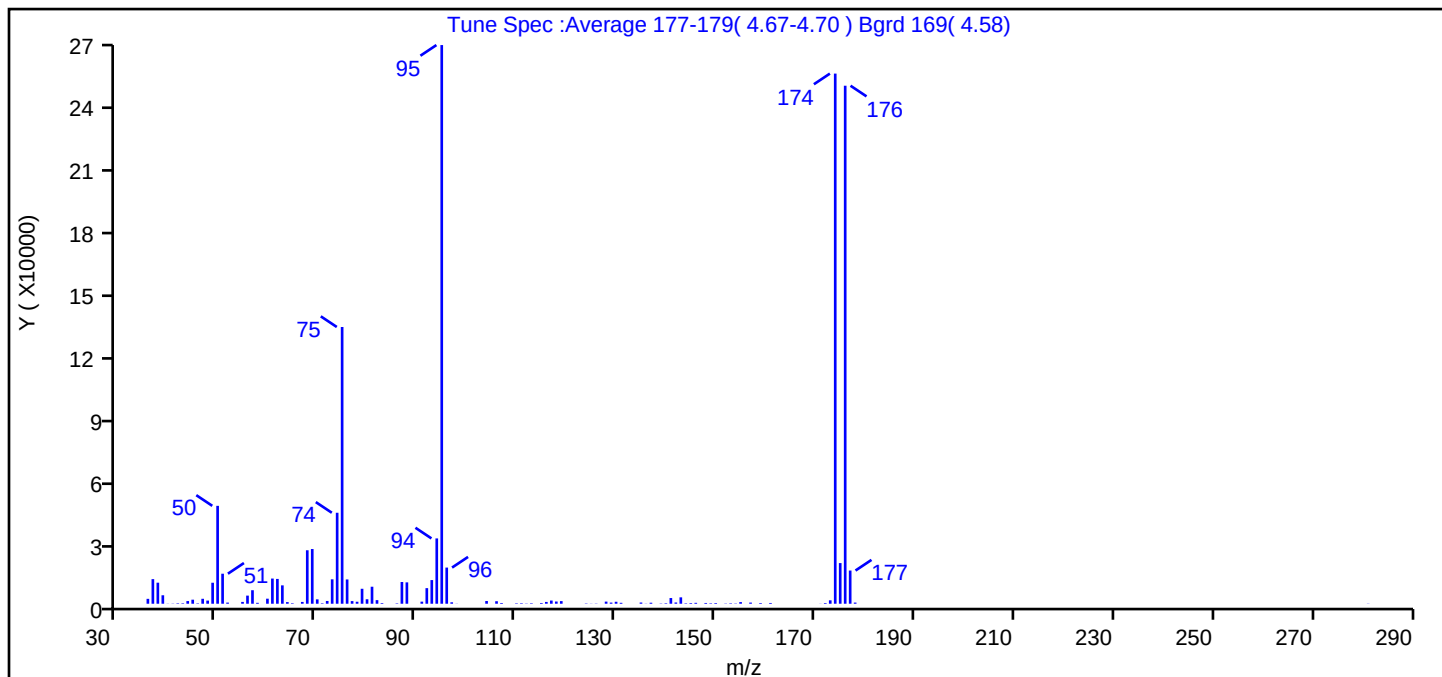
Dil. Factor: 1.0000

Method: 8260_19

Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

\$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.5
75	30 to 60% of m/z 95	49.5
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.6 (0.6)
174	50 to 120% of m/z 95	94.9
175	5 to 9% of m/z 174	7.3 (7.7)
176	Greater than 95% but less than 101% of m/z 174	92.7 (97.7)
177	5 to 9% of m/z 176	5.9 (6.4)

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d\8260_19.rslt\spectra.d

Injection Date: 27-Aug-2018 16:23:35

Spectrum: Tune Spec :Average 177-179(4.67-4.70) Bgrd 169(4.58)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 104

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2349	65.00	256	96.00	17360	140.00	251
37.00	11809	67.00	862	97.00	688	141.00	2734
38.00	10107	68.00	25672	98.00	58	142.00	600
39.00	4064	69.00	26264	104.00	1300	143.00	3067
40.00	66	70.00	2099	106.00	1203	144.00	221
41.00	100	71.00	235	107.00	359	145.00	322
42.00	232	72.00	1321	110.00	224	146.00	434
43.00	243	73.00	11723	111.00	256	148.00	370
44.00	1279	74.00	43680	112.00	119	149.00	227
45.00	1945	75.00	132864	113.00	246	150.00	326
46.00	198	76.00	11659	115.00	360	152.00	127
47.00	2373	77.00	1269	116.00	866	153.00	224
48.00	1513	78.00	954	117.00	1530	154.00	142
49.00	10079	79.00	7185	118.00	1063	155.00	786
50.00	47000	80.00	2148	119.00	1259	157.00	556
51.00	14416	81.00	8168	124.00	158	159.00	325
52.00	549	82.00	1723	125.00	69	161.00	362
55.00	872	83.00	325	126.00	112	171.00	51
56.00	3900	86.00	204	128.00	1021	172.00	331
57.00	6486	87.00	10430	129.00	555	173.00	1639
58.00	440	88.00	10260	130.00	946	174.00	254528
60.00	2424	91.00	1000	131.00	447	175.00	19520
61.00	12091	92.00	7487	135.00	583	176.00	248704
62.00	11912	93.00	11359	136.00	73	177.00	15935
63.00	8822	94.00	31360	137.00	488	178.00	556
64.00	782	95.00	268224	139.00	133	281.00	85

Report Date: 27-Aug-2018 20:00:44

Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d

Injection Date: 27-Aug-2018 16:23:35

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

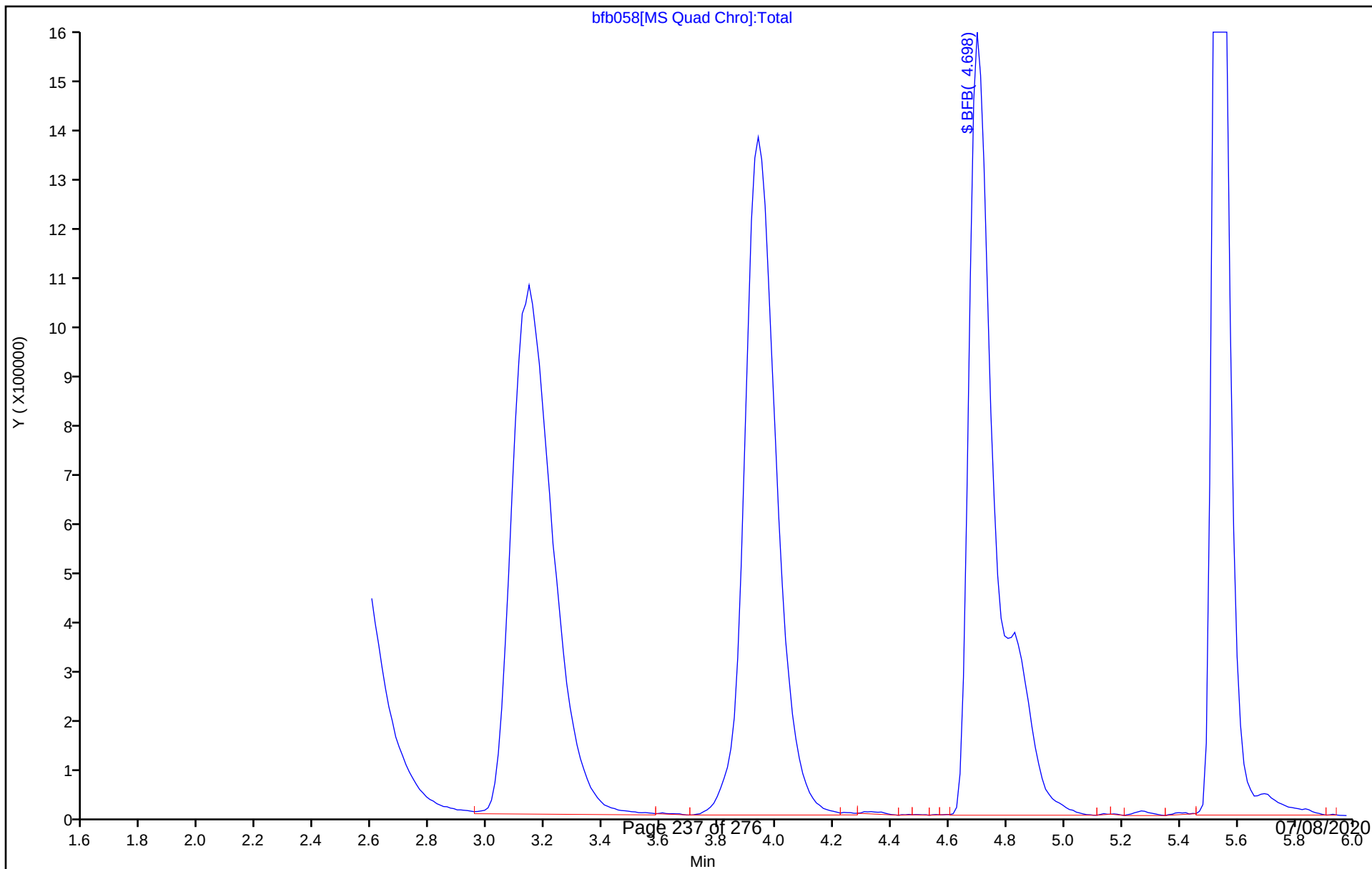
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\bfb559.d
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 01-Jul-2020 16:10:54 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0099705-001
Operator ID: 001904 Instrument ID: A3UX19
Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 01-Jul-2020 16:27:13 Calib Date: 09-Jun-2020 21:22:13
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 16:27:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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\$ 8 BFB	95	4.703	4.703	0.000	0	1524949	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00025

Amount Added: 1.00

Units: uL

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\bfb559.d

Injection Date: 01-Jul-2020 16:10:54

Instrument ID: A3UX19

Lims ID: BFB

Client ID:

Operator ID: 001904

ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 mL

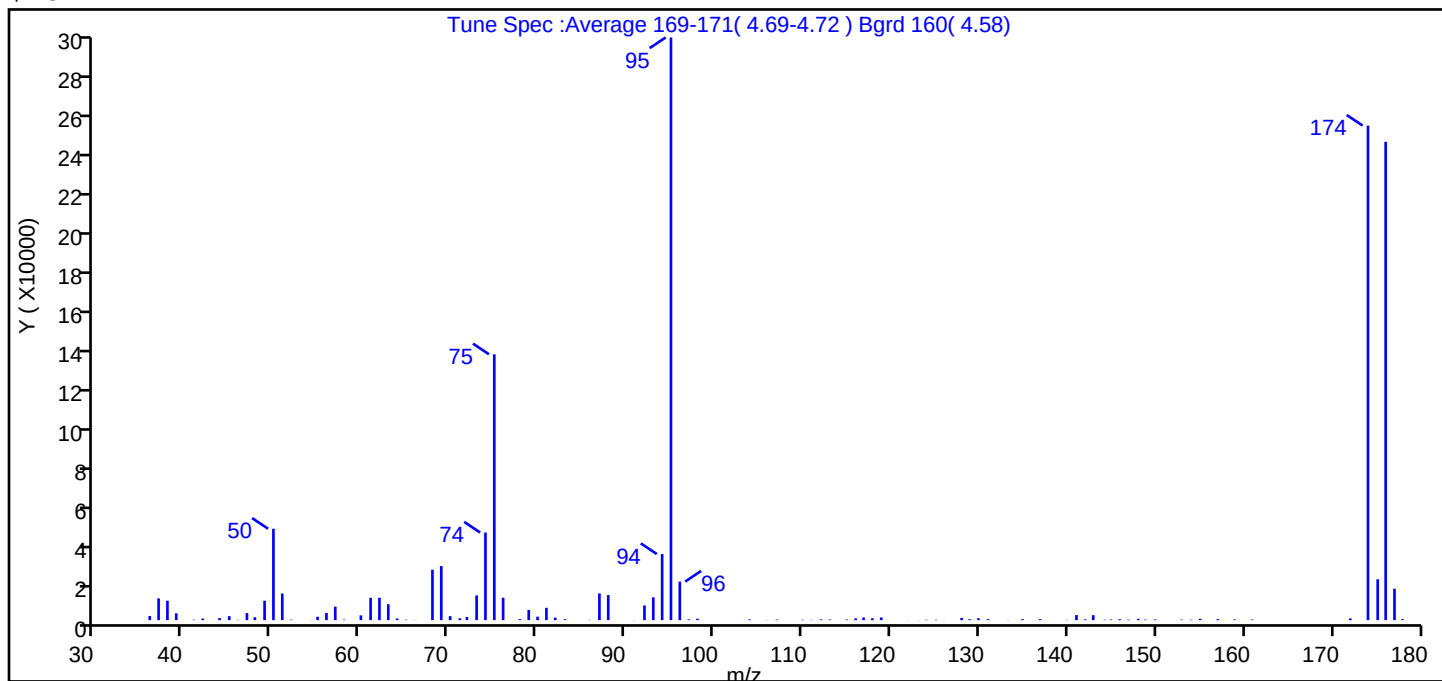
Dil. Factor: 1.0000

Method: 8260_19

Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

\$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.7
75	30 to 60% of m/z 95	45.6
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	84.9
175	5 to 9% of m/z 174	7.0 (8.3)
176	Greater than 95% but less than 101% of m/z 174	82.1 (96.7)
177	5 to 9% of m/z 176	5.4 (6.6)

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\bfb559.d\8260_19.rslt\spectra.d
Injection Date: 01-Jul-2020 16:10:54
Spectrum: Tune Spec :Average 169-171(4.69-4.72) Bgrd 160(4.58)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 101

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2126	65.00	231	97.00	366	140.00	145
37.00	11006	66.00	55	98.00	734	141.00	2576
38.00	9813	68.00	25512	104.00	379	142.00	399
39.00	3451	69.00	27368	106.00	106	143.00	2527
41.00	235	70.00	2030	107.00	299	144.00	204
42.00	810	71.00	912	110.00	222	145.00	303
43.00	27	72.00	1573	111.00	134	146.00	483
44.00	1024	73.00	12497	112.00	372	147.00	253
45.00	2007	74.00	44336	113.00	331	148.00	656
46.00	161	75.00	134528	115.00	313	149.00	281
47.00	3574	76.00	11368	116.00	921	150.00	345
48.00	1476	78.00	517	117.00	1353	153.00	272
49.00	9824	79.00	5194	118.00	957	154.00	221
50.00	46248	80.00	1755	119.00	1363	155.00	695
51.00	13468	81.00	6242	122.00	55	157.00	516
52.00	256	82.00	1282	123.00	54	159.00	359
54.00	61	83.00	450	124.00	204	161.00	289
55.00	1708	86.00	151	125.00	219	172.00	875
56.00	3621	87.00	13512	126.00	50	174.00	250240
57.00	6838	88.00	12700	128.00	1102	175.00	20672
58.00	264	91.00	67	129.00	471	176.00	242048
60.00	2408	92.00	7452	130.00	968	177.00	15891
61.00	11312	93.00	11536	131.00	507	178.00	538
62.00	11309	94.00	33456	133.00	68		
63.00	8053	95.00	294848	135.00	488		
64.00	836	96.00	19504	137.00	486		

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\bfb559.d

Injection Date: 01-Jul-2020 16:10:54

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

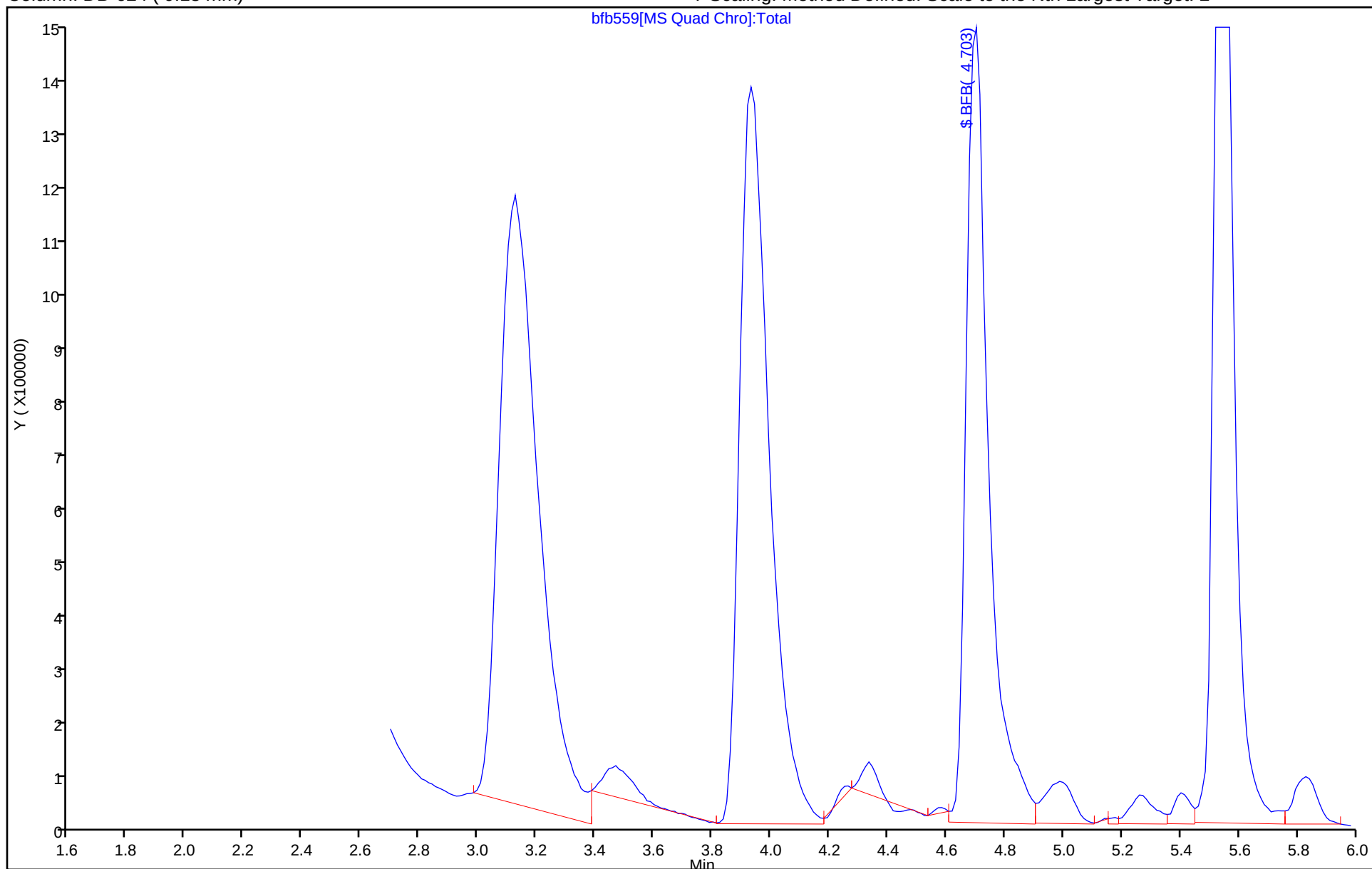
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 240-440963/8
 Matrix: Water Lab File ID: U1915332.d
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 07/01/2020 18:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 440963 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	1.0	U	1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	103		69-122
1868-53-7	Dibromofluoromethane (Surr)	99		78-129
460-00-4	4-Bromofluorobenzene (Surr)	94		47-134
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		75-130

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915332.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 01-Jul-2020 18:26:19 ALS Bottle#: 0 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-008
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 19:23:58 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 19:23:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.666	5.665	0.001	99	1038938	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	84	737436	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	94	375744	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.061	5.049	0.012	94	276777	20.0	19.8	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	95	296627	20.0	18.5	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	92	912945	20.0	20.6	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.686	9.685	0.001	92	312271	20.0	18.8	
9 Dichlorodifluoromethane	85		1.610					ND	
10 Chloromethane	50		1.811					ND	
11 Butadiene	54		1.906					ND	
12 Vinyl chloride	62		1.918					ND	
14 1-Chloro-1-fluoroethane TIC	47		2.215					ND	
13 Bromomethane	94		2.226					ND	
15 Chloroethane	64		2.309					ND	
16 Dichlorofluoromethane	67		2.511					ND	
17 Trichlorofluoromethane	101		2.582					ND	
18 Ethyl ether	59		2.807					ND	
19 Acrolein	56	2.950	2.938	0.012	41	450		0.1948	
20 1,1-Dichloroethene	61		3.044					ND	
21 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.056					ND	
22 Acetone	43	3.092	3.080	0.012	100	11817		2.90	
23 Methylal	45		3.092					ND	
24 Iodomethane	142		3.199					ND	
25 Carbon disulfide	76		3.270					ND	
26 Acetonitrile	41		3.341					ND	U
27 3-Chloro-1-propene	41		3.365					ND	
28 Methyl acetate	43		3.388					ND	
29 Methylene Chloride	49	3.495	3.483	0.012	81	6291		0.4255	
30 2-Methyl-2-propanol	59		3.578					ND	
31 Acrylonitrile	53	3.709	3.697	0.012	90	1138		0.2178	
32 trans-1,2-Dichloroethene	61		3.732					ND	
33 Methyl tert-butyl ether	73		3.732					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
34 Hexane	57		3.981					ND	
35 1,1-Dichloroethane	63		4.112					ND	
36 Vinyl acetate	43		4.147					ND	
37 Isopropyl ether	87		4.183					ND	
38 2-Chloro-1,3-butadiene	53		4.207					ND	
39 Tert-butyl ethyl ether	59		4.503					ND	
42 2,2-Dichloropropane	77		4.633					ND	
41 cis-1,2-Dichloroethene	96		4.633					ND	
40 2-Butanone (MEK)	72		4.633					ND	
43 Propionitrile	54		4.681					ND	
44 Ethyl acetate	43		4.693					ND	
45 Methacrylonitrile	41		4.824					ND	
46 Chlorobromomethane	49		4.847					ND	
47 Tetrahydrofuran	42		4.883					ND	
48 Chloroform	83		4.906					ND	
49 1,1,1-Trichloroethane	97		5.084					ND	
50 Cyclohexane	84		5.143					ND	
51 1,1-Dichloropropene	75		5.226					ND	
52 Carbon tetrachloride	117		5.238					ND	
53 Isobutyl alcohol	41		5.298					ND	
54 Benzene	78		5.416					ND	
55 1,2-Dichloroethane	62		5.428					ND	
56 Tert-amyl methyl ether	73		5.511					ND	
57 n-Heptane	57		5.653					ND	
58 n-Butanol	56		5.891					ND	
59 Trichloroethene	130		5.997					ND	
60 Ethyl acrylate	55		6.069					ND	
61 Methylcyclohexane	83		6.175					ND	
62 1,2-Dichloropropane	63		6.199					ND	
63 Methyl methacrylate	41		6.282					ND	
64 Dibromomethane	174		6.306					ND	
65 1,4-Dioxane	88		6.306					ND	
66 Dichlorobromomethane	83		6.436					ND	
67 2-Nitropropane	41		6.638					ND	
68 2-Chloroethyl vinyl ether	63		6.697					ND	
69 cis-1,3-Dichloropropene	75		6.851					ND	
70 4-Methyl-2-pentanone (MIBK)	43		6.981					ND	
71 Toluene	91		7.171					ND	
72 trans-1,3-Dichloropropene	75		7.361					ND	
73 Ethyl methacrylate	69		7.444					ND	
74 1,1,2-Trichloroethane	97		7.539					ND	
76 1,3-Dichloropropane	76		7.705					ND	
75 Tetrachloroethene	166		7.705					ND	
77 2-Hexanone	43		7.776					ND	
78 n-Butyl acetate	43		7.895					ND	
79 Chlorodibromomethane	129		7.930					ND	
80 Tetrahydrothiophene	60		7.931					ND	
81 Ethylene Dibromide	107		8.049					ND	
82 1-Chlorohexane	91		8.500					ND	
83 Chlorobenzene	112		8.535					ND	
84 1,1,1,2-Tetrachloroethane	131		8.606					ND	
85 Ethylbenzene	106		8.642					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 m-Xylene & p-Xylene	106		8.748					ND	
87 o-Xylene	106		9.152					ND	
88 Styrene	104		9.163					ND	
89 Bromoform	173		9.353					ND	
90 Isopropylbenzene	105		9.531					ND	
91 Cyclohexanone	55		9.626					ND	
92 1,4-Dichlorobutane	55		9.626					ND	
93 1,1,2,2-Tetrachloroethane	83		9.816					ND	
95 Bromobenzene	156		9.851					ND	
96 1,2,3-Trichloropropane	110		9.875					ND	
97 trans-1,4-Dichloro-2-butene	53		9.875					ND	
98 N-Propylbenzene	120		9.946					ND	
100 2-Chlorotoluene	126		10.041					ND	
94 3-Ethyltoluene	105		10.041					ND	
101 1,3,5-Trimethylbenzene	105		10.136					ND	
102 4-Chlorotoluene	126		10.160					ND	
99 2-Ethyltoluene	105		10.350					ND	
103 tert-Butylbenzene	119		10.480					ND	
104 Pentachloroethane	167		10.492					ND	
105 1,2,4-Trimethylbenzene	105		10.527					ND	
106 sec-Butylbenzene	105		10.705					ND	
107 1,3-Dichlorobenzene	146		10.824					ND	
108 4-Isopropyltoluene	119		10.859					ND	
109 1,4-Dichlorobenzene	146		10.919					ND	
110 1,2,3-Trimethylbenzene	105		10.966					ND	
111 Benzyl chloride	91		11.049					ND	
112 n-Butylbenzene	91		11.286					ND	
113 1,2-Dichlorobenzene	146		11.310					ND	
114 1,2-Dibromo-3-Chloropropane	157		12.128					ND	
115 1,3,5-Trichlorobenzene	180		12.366					ND	
116 1,2,4-Trichlorobenzene	180		13.018					ND	
117 Hexachlorobutadiene	225		13.207					ND	
118 Naphthalene	128		13.290					ND	
119 1,2,3-Trichlorobenzene	180		13.551					ND	
120 2-Methylnaphthalene	142	14.619	14.631	-0.012	94	3241		0.1204	
122 Ethylene oxide	1		-0.010					ND	
123 Propene oxide	1		-0.010					ND	
121 Epichlorohydrin	1		-0.010					ND	
S 124 Total BTEX	1		-0.010					ND	
S 125 Trihalomethanes, Total	1		-0.010					ND	
S 126 1,2-Dichloroethene, Total	96		1.130					ND	
S 127 1,3-Dichloropropene, Total	75		6.750					ND	
S 128 Xylenes, Total	106		16.520					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915332.d

Injection Date: 01-Jul-2020 18:26:19

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: MB

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

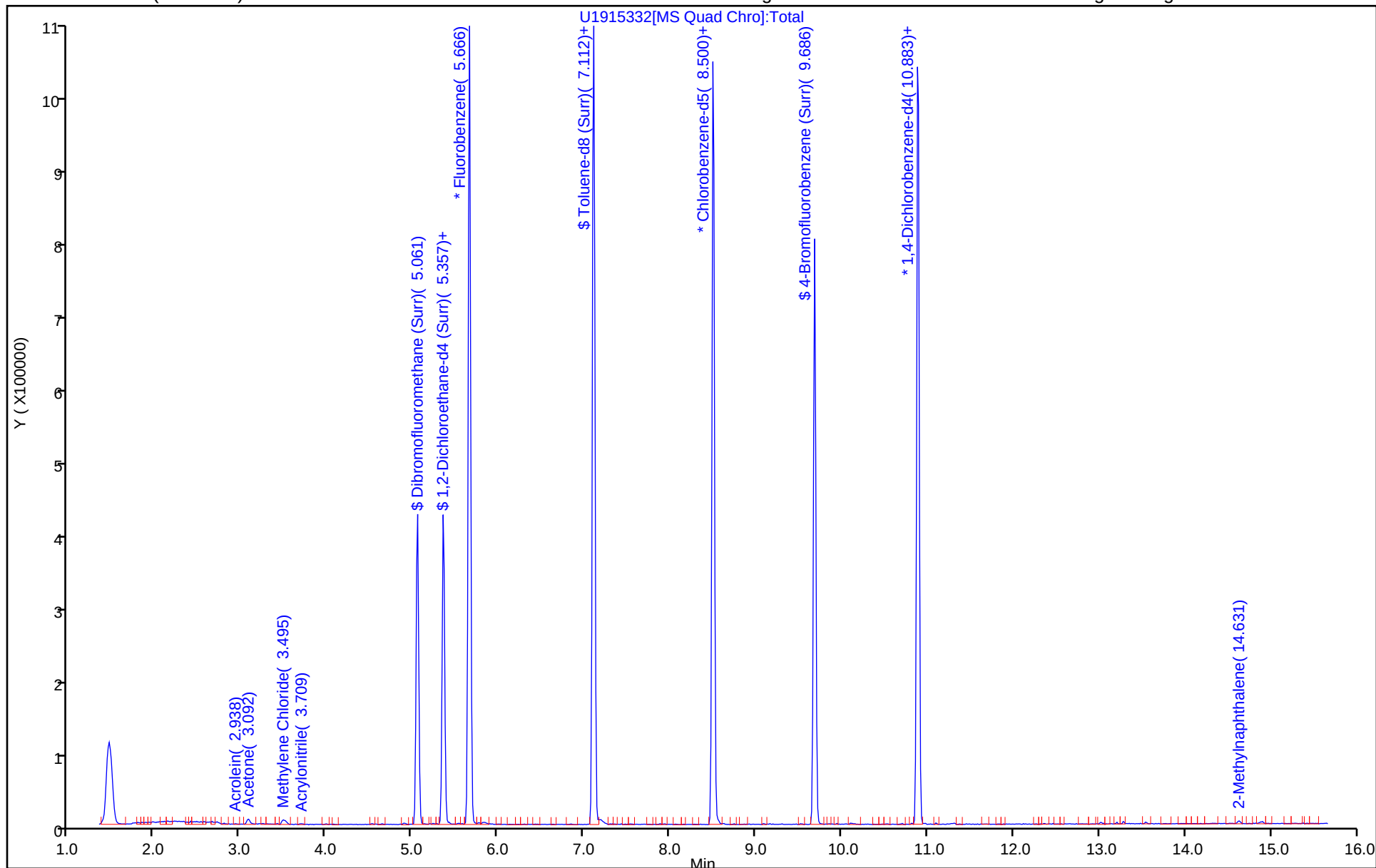
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915332.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 01-Jul-2020 18:26:19 ALS Bottle#: 0 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-008
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 19:23:58 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 19:23:58

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Dibromofluoromethane (Surr)	20.0	19.8	98.96
\$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	18.5	92.34
\$ 6 Toluene-d8 (Surr)	20.0	20.6	103.23
\$ 7 4-Bromofluorobenzene (Surr)	20.0	18.8	93.83

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 240-440963/5
 Matrix: Water Lab File ID: U1915329.d
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 07/01/2020 17:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 440963 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	21.2		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	105		69-122
1868-53-7	Dibromofluoromethane (Surr)	93		78-129
460-00-4	4-Bromofluorobenzene (Surr)	103		47-134
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		75-130

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915329.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 01-Jul-2020 17:18:15 ALS Bottle#: 0 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-005
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 15:36:14 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 17:45:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.666	5.665	0.001	99	1131345	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	88	815966	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	94	431035	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.061	5.049	0.012	94	282701	20.0	18.6	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	96	303858	20.0	17.4	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	92	1027701	20.0	21.0	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.686	9.685	0.001	91	377789	20.0	20.5	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	100	382994	20.0	17.6	
10 Chloromethane	50	1.823	1.811	0.012	99	338759	20.0	20.8	
11 Butadiene	54	1.918	1.906	0.012	86	362774	20.0	22.2	
12 Vinyl chloride	62	1.930	1.918	0.012	98	356698	20.0	21.2	
13 Bromomethane	94	2.239	2.226	0.013	91	254534	20.0	19.3	
15 Chloroethane	64	2.310	2.309	0.001	99	226282	20.0	21.6	
16 Dichlorofluoromethane	67	2.511	2.511	0.000	97	505716	20.0	19.5	
17 Trichlorofluoromethane	101	2.582	2.582	0.000	98	467821	20.0	16.6	
18 Ethyl ether	59	2.820	2.807	0.013	88	238264	20.0	23.4	
19 Acrolein	56	2.938	2.938	0.000	100	135751	100.0	54.0	
20 1,1-Dichloroethene	61	3.057	3.044	0.013	97	401957	20.0	19.8	
21 1,1,2-Trichloro-1,2,2-trifluoro	101	3.069	3.056	0.013	92	294546	20.0	20.3	
22 Acetone	43	3.081	3.080	0.000	100	238984	40.0	53.9	
24 Iodomethane	142	3.211	3.199	0.012	98	467567	20.0	17.8	
25 Carbon disulfide	76	3.270	3.270	0.000	98	892186	20.0	21.0	
27 3-Chloro-1-propene	41	3.377	3.365	0.012	92	363573	20.0	18.2	
28 Methyl acetate	43	3.389	3.388	0.001	96	562464	40.0	42.7	
29 Methylene Chloride	49	3.496	3.483	0.013	86	327174	20.0	20.3	
30 2-Methyl-2-propanol	59	3.579	3.578	0.001	97	357233	200.0	233.2	
31 Acrylonitrile	53	3.697	3.697	0.000	99	1478869	200.0	260.0	
32 trans-1,2-Dichloroethene	61	3.733	3.732	0.001	96	387490	20.0	20.2	
33 Methyl tert-butyl ether	73	3.745	3.732	0.013	95	724735	20.0	18.5	
34 Hexane	57	3.994	3.981	0.013	89	413536	20.0	20.7	
35 1,1-Dichloroethane	63	4.112	4.112	0.000	96	476465	20.0	20.8	
36 Vinyl acetate	43	4.160	4.147	0.013	97	485964	20.0	18.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 2,2-Dichloropropane	77	4.634	4.633	0.001	88	274545	20.0	19.9	
41 cis-1,2-Dichloroethene	96	4.634	4.633	0.001	81	332075	20.0	20.3	
40 2-Butanone (MEK)	72	4.634	4.633	0.001	88	114595	40.0	42.9	
46 Chlorobromomethane	49	4.847	4.847	0.000	88	212282	20.0	19.3	
47 Tetrahydrofuran	42	4.895	4.883	0.013	84	238459	40.0	40.7	
48 Chloroform	83	4.919	4.906	0.013	94	488416	20.0	19.5	
49 1,1,1-Trichloroethane	97	5.096	5.084	0.012	98	418700	20.0	17.7	
50 Cyclohexane	84	5.156	5.143	0.013	93	444395	20.0	20.6	
51 1,1-Dichloropropene	75	5.239	5.226	0.013	99	392115	20.0	19.7	
52 Carbon tetrachloride	117	5.239	5.238	0.001	98	375678	20.0	16.5	
53 Isobutyl alcohol	41	5.298	5.298	0.000	94	396616	500.0	638.4	
54 Benzene	78	5.417	5.416	0.001	95	1147324	20.0	21.3	
55 1,2-Dichloroethane	62	5.429	5.428	0.001	96	343175	20.0	16.9	
57 n-Heptane	57	5.654	5.653	0.001	92	202620	20.0	15.8	
59 Trichloroethene	130	5.998	5.997	0.001	97	319936	20.0	17.9	
61 Methylcyclohexane	83	6.176	6.175	0.001	89	488249	20.0	18.8	
62 1,2-Dichloropropane	63	6.199	6.199	0.000	97	267781	20.0	21.4	
64 Dibromomethane	174	6.306	6.306	0.000	93	208770	20.0	16.3	
65 1,4-Dioxane	88	6.306	6.306	0.000	92	101323	400.0	749.6	
66 Dichlorobromomethane	83	6.437	6.436	0.000	99	363852	20.0	18.5	
68 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	182862	20.0	18.3	
69 cis-1,3-Dichloropropene	75	6.852	6.851	0.001	97	422115	20.0	19.3	
70 4-Methyl-2-pentanone (MIBK)	43	6.982	6.981	0.001	94	689622	40.0	38.1	
71 Toluene	91	7.172	7.171	0.001	98	1203882	20.0	21.8	
72 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	90	348317	20.0	17.7	
73 Ethyl methacrylate	69	7.444	7.444	0.000	87	376882	20.0	21.3	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	90	249016	20.0	21.5	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	88	414564	20.0	21.2	
75 Tetrachloroethene	166	7.705	7.705	0.000	96	316895	20.0	18.0	
77 2-Hexanone	43	7.777	7.776	0.001	94	515310	40.0	40.1	
79 Chlorodibromomethane	129	7.931	7.930	0.001	89	279268	20.0	19.1	
81 Ethylene Dibromide	107	8.049	8.049	0.000	99	267692	20.0	19.6	
83 Chlorobenzene	112	8.535	8.535	0.000	97	754720	20.0	20.0	
84 1,1,1,2-Tetrachloroethane	131	8.607	8.606	0.001	95	271233	20.0	19.9	
85 Ethylbenzene	106	8.642	8.642	0.000	99	414494	20.0	21.0	
86 m-Xylene & p-Xylene	106	8.749	8.748	0.001	100	506498	20.0	21.1	
87 o-Xylene	106	9.152	9.152	0.000	96	492894	20.0	21.6	
88 Styrene	104	9.164	9.163	0.001	93	842297	20.0	21.5	
89 Bromoform	173	9.354	9.353	0.001	97	203865	20.0	17.0	
90 Isopropylbenzene	105	9.532	9.531	0.001	95	1304247	20.0	21.3	
93 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	93	410393	20.0	24.7	
95 Bromobenzene	156	9.852	9.851	0.001	89	310771	20.0	18.8	
96 1,2,3-Trichloropropane	110	9.876	9.875	0.001	83	135702	20.0	21.6	
97 trans-1,4-Dichloro-2-butene	53	9.876	9.875	0.001	75	100415	20.0	17.0	
98 N-Propylbenzene	120	9.947	9.946	0.001	99	351550	20.0	21.1	
100 2-Chlorotoluene	126	10.042	10.041	0.001	96	301914	20.0	21.4	
101 1,3,5-Trimethylbenzene	105	10.136	10.136	0.000	95	1052038	20.0	21.9	
102 4-Chlorotoluene	126	10.160	10.160	0.000	98	317126	20.0	20.8	
103 tert-Butylbenzene	119	10.480	10.480	0.000	91	904047	20.0	19.9	
105 1,2,4-Trimethylbenzene	105	10.528	10.527	0.001	96	1070348	20.0	22.0	
106 sec-Butylbenzene	105	10.706	10.705	0.001	94	1323792	20.0	21.6	
107 1,3-Dichlorobenzene	146	10.824	10.824	0.000	98	600700	20.0	19.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 4-Isopropyltoluene	119	10.860	10.859	0.001	97	1119518	20.0	20.8	
109 1,4-Dichlorobenzene	146	10.919	10.919	0.000	96	616355	20.0	19.6	
112 n-Butylbenzene	91	11.287	11.286	0.001	98	939616	20.0	21.3	
113 1,2-Dichlorobenzene	146	11.310	11.310	0.000	99	579164	20.0	21.0	
114 1,2-Dibromo-3-Chloropropane	157	12.129	12.128	0.001	89	108933	20.0	20.6	
116 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	94	323398	20.0	17.5	
117 Hexachlorobutadiene	225	13.208	13.207	0.001	97	140484	20.0	14.8	
118 Naphthalene	128	13.279	13.290	-0.011	97	1101499	20.0	21.6	
119 1,2,3-Trichlorobenzene	180	13.552	13.551	0.001	96	321192	20.0	19.4	
S 124 Total BTEX	1				0		100.0	106.8	
S 125 Trihalomethanes, Total	1				0		80.0	74.1	
S 128 Xylenes, Total	106				0		40.0	42.7	

Reagents:

vmfasgw_00366	Amount Added: 16.00	Units: uL	
vmfasaw_00334	Amount Added: 16.00	Units: uL	
vmfaspw_00356	Amount Added: 16.00	Units: uL	
vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915329.d

Injection Date: 01-Jul-2020 17:18:15

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: LCS

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

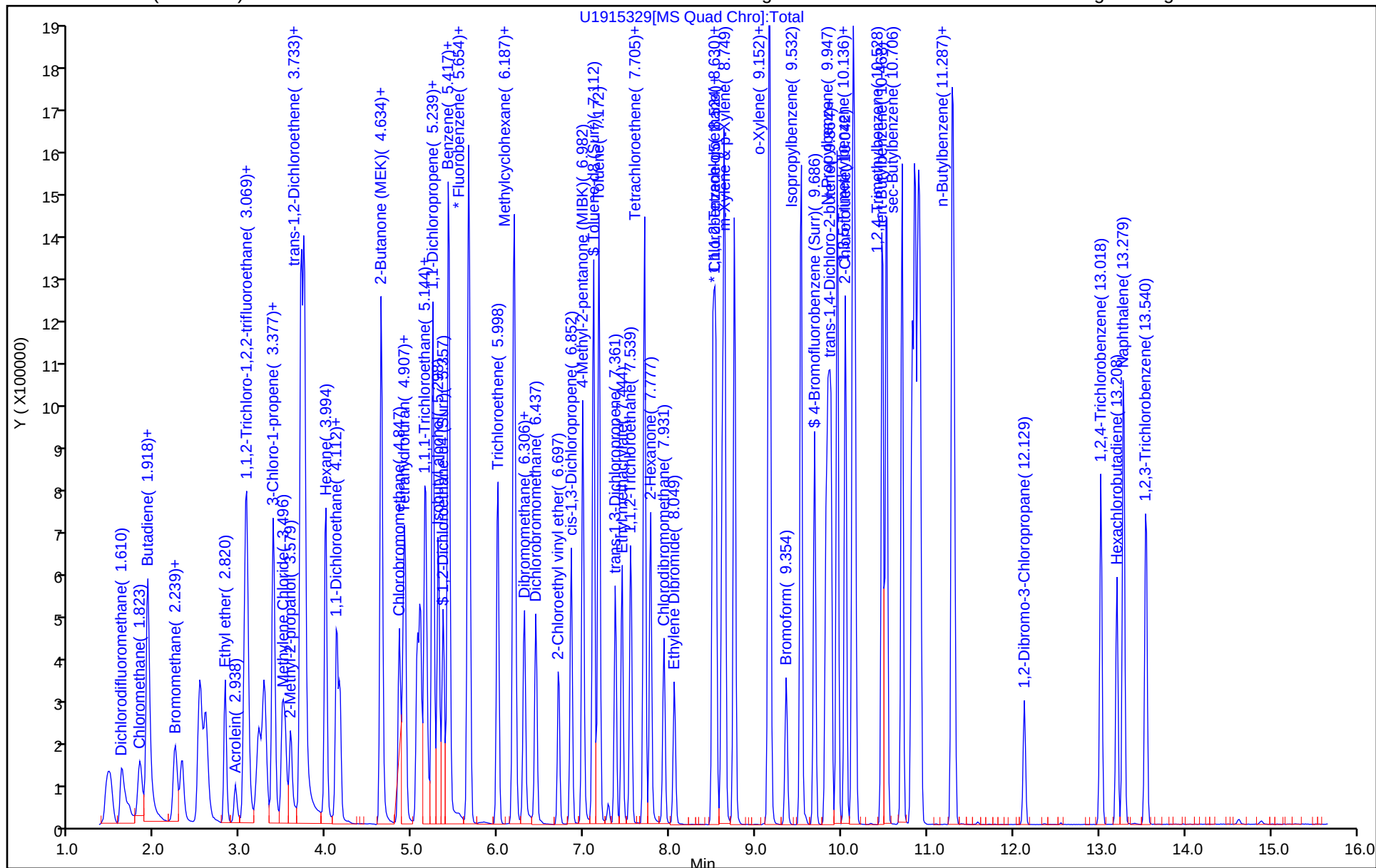
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915329.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 01-Jul-2020 17:18:15 ALS Bottle#: 0 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-005
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 15:36:14 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 17:45:19

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Dibromofluoromethane (Surr)	20.0	18.6	92.82
\$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	17.4	86.86
\$ 6 Toluene-d8 (Surr)	20.0	21.0	105.02
\$ 7 4-Bromofluorobenzene (Surr)	20.0	20.5	102.59

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: 240-132112-N-9 MS
 Matrix: Water Lab File ID: U1915335.d
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 07/01/2020 19:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 440963 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	20.0		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	106		69-122
1868-53-7	Dibromofluoromethane (Surr)	92		78-129
460-00-4	4-Bromofluorobenzene (Surr)	102		47-134
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		75-130

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915335.d
 Lims ID: 240-132112-N-9 MS
 Client ID: MW-03-062020
 Sample Type: MS
 Inject. Date: 01-Jul-2020 19:34:18 ALS Bottle#: 0 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-011
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 17:52:09 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 19:57:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.666	5.665	0.001	99	1132584	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	84	802521	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	93	435506	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.049	5.049	0.000	94	279701	20.0	18.3	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	97	297702	20.0	17.0	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	92	1017277	20.0	21.1	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.686	9.685	0.001	92	368783	20.0	20.4	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	99	363720	20.0	16.7	
10 Chloromethane	50	1.812	1.811	0.001	99	313576	20.0	19.2	
12 Vinyl chloride	62	1.918	1.918	0.000	98	337721	20.0	20.0	
13 Bromomethane	94	2.227	2.226	0.001	90	234874	20.0	17.8	
15 Chloroethane	64	2.310	2.309	0.001	99	212243	20.0	20.3	
17 Trichlorofluoromethane	101	2.571	2.582	-0.011	97	431604	20.0	15.3	
20 1,1-Dichloroethene	61	3.045	3.044	0.001	97	359670	20.0	17.7	
21 1,1,2-Trichloro-1,2,2-trifluoroethane	101	3.057	3.056	0.001	94	249096	20.0	17.1	
22 Acetone	43	3.080	3.080	0.000	100	214403	40.0	48.3	
25 Carbon disulfide	76	3.270	3.270	0.000	98	809009	20.0	19.0	
28 Methyl acetate	43	3.389	3.388	0.001	96	513681	40.0	39.0	
29 Methylene Chloride	49	3.484	3.483	0.001	87	297356	20.0	18.4	
32 trans-1,2-Dichloroethene	61	3.733	3.732	0.001	96	353805	20.0	18.4	
33 Methyl tert-butyl ether	73	3.745	3.732	0.013	95	657470	20.0	16.7	
35 1,1-Dichloroethane	63	4.112	4.112	0.000	96	430334	20.0	18.8	
41 cis-1,2-Dichloroethene	96	4.634	4.633	0.001	89	301672	20.0	18.4	
40 2-Butanone (MEK)	72	4.634	4.633	0.001	94	105986	40.0	39.6	
48 Chloroform	83	4.907	4.906	0.001	93	444076	20.0	17.7	
49 1,1,1-Trichloroethane	97	5.096	5.084	0.012	98	373346	20.0	15.8	
52 Carbon tetrachloride	117	5.239	5.238	0.001	98	337091	20.0	14.8	
54 Benzene	78	5.417	5.416	0.001	94	1056004	20.0	19.6	
55 1,2-Dichloroethane	62	5.428	5.428	0.000	97	315825	20.0	15.5	
59 Trichloroethene	130	5.998	5.997	0.001	97	289566	20.0	16.2	
61 Methylcyclohexane	83	6.176	6.175	0.001	91	410244	20.0	15.8	
62 1,2-Dichloropropane	63	6.199	6.199	0.000	97	240072	20.0	19.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
66 Dichlorobromomethane	83	6.436	6.436	0.000	99	323136	20.0	16.4	
69 cis-1,3-Dichloropropene	75	6.852	6.851	0.001	97	361892	20.0	16.5	
70 4-Methyl-2-pentanone (MIBK)	43	6.982	6.981	0.001	94	614201	40.0	33.9	
71 Toluene	91	7.172	7.171	0.001	98	1090184	20.0	20.1	
72 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	91	315989	20.0	16.3	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	90	226998	20.0	19.9	
75 Tetrachloroethene	166	7.705	7.705	0.000	98	288042	20.0	16.6	
77 2-Hexanone	43	7.776	7.776	0.000	94	468812	40.0	37.1	
79 Chlorodibromomethane	129	7.931	7.930	0.001	90	249473	20.0	17.4	
81 Ethylene Dibromide	107	8.049	8.049	0.000	99	236973	20.0	17.6	
83 Chlorobenzene	112	8.535	8.535	0.000	99	682412	20.0	18.4	
85 Ethylbenzene	106	8.630	8.642	-0.012	98	370371	20.0	19.1	
86 m-Xylene & p-Xylene	106	8.749	8.748	0.001	100	459477	20.0	19.4	
87 o-Xylene	106	9.152	9.152	0.000	96	442381	20.0	19.7	
88 Styrene	104	9.164	9.163	0.001	92	742480	20.0	19.3	
89 Bromoform	173	9.354	9.353	0.001	97	184760	20.0	15.7	
90 Isopropylbenzene	105	9.532	9.531	0.001	95	1170493	20.0	19.4	
93 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	92	376856	20.0	22.5	
107 1,3-Dichlorobenzene	146	10.824	10.824	0.000	98	539877	20.0	17.6	
109 1,4-Dichlorobenzene	146	10.919	10.919	0.000	95	553855	20.0	17.4	
113 1,2-Dichlorobenzene	146	11.310	11.310	0.000	98	520187	20.0	18.6	
114 1,2-Dibromo-3-Chloropropane	157	12.129	12.128	0.001	89	98264	20.0	18.4	
116 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	93	281193	20.0	15.1	
S 128 Xylenes, Total	106				0		40.0	39.1	

Reagents:

vmfasgw_00366	Amount Added: 16.00	Units: uL	
vmfasaw_00334	Amount Added: 16.00	Units: uL	
vmfaspw_00356	Amount Added: 16.00	Units: uL	
vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915335.d

Injection Date: 01-Jul-2020 19:34:18

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: 240-132112-N-9 MS

Worklist Smp#: 11

Client ID: MW-03-062020

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

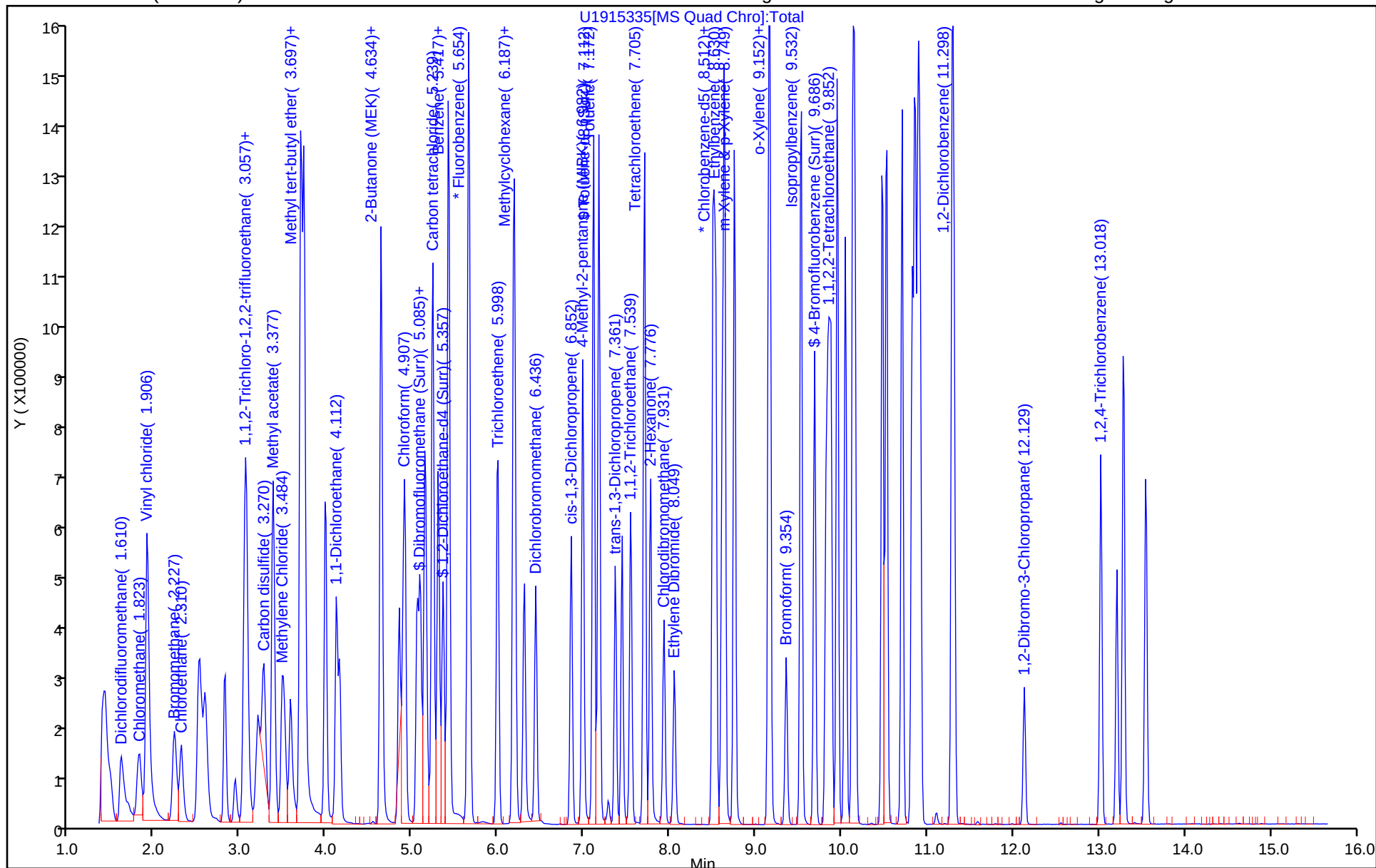
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915335.d
 Lims ID: 240-132112-N-9 MS
 Client ID: MW-03-062020
 Sample Type: MS
 Inject. Date: 01-Jul-2020 19:34:18 ALS Bottle#: 0 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-011
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 17:52:09 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 19:57:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Dibromofluoromethane (Surr)	20.0	18.3	91.74
\$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	17.0	85.01
\$ 6 Toluene-d8 (Surr)	20.0	21.1	105.70
\$ 7 4-Bromofluorobenzene (Surr)	20.0	20.4	101.83

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: 240-132112-Q-9 MSD
 Matrix: Water Lab File ID: U1915336.d
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 07/01/2020 19:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 440963 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	19.6		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	108		69-122
1868-53-7	Dibromofluoromethane (Surr)	95		78-129
460-00-4	4-Bromofluorobenzene (Surr)	104		47-134
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		75-130

Eurofins TestAmerica, Canton
Target Compound Quantitation Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915336.d
 Lims ID: 240-132112-Q-9 MSD
 Client ID: MW-03-062020
 Sample Type: MSD
 Inject. Date: 01-Jul-2020 19:57:06 ALS Bottle#: 0 Worklist Smp#: 12
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 240-0099705-012
 Operator ID: 001904 Instrument ID: A3UX19
 Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
 Limit Group: MSV 8260C ICAL
 Last Update: 01-Jul-2020 18:16:13 Calib Date: 09-Jun-2020 21:22:13
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 20:28:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.666	5.665	0.001	99	1128446	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	86	798856	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.895	10.895	0.000	93	426824	20.0	20.0	
\$ 4 Dibromofluoromethane (Surr)	111	5.049	5.049	0.000	93	287825	20.0	18.9	
\$ 5 1,2-Dichloroethane-d4 (Surr)	65	5.357	5.357	0.000	97	307694	20.0	17.6	
\$ 6 Toluene-d8 (Surr)	98	7.112	7.112	0.000	92	1032738	20.0	21.6	
\$ 7 4-Bromofluorobenzene (Surr)	95	9.686	9.685	0.001	91	376108	20.0	20.9	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	100	327961	20.0	15.1	
10 Chloromethane	50	1.812	1.811	0.001	98	305873	20.0	18.8	
12 Vinyl chloride	62	1.918	1.918	0.000	97	328997	20.0	19.6	
13 Bromomethane	94	2.227	2.226	0.001	90	231765	20.0	17.6	
15 Chloroethane	64	2.310	2.309	0.001	99	206802	20.0	19.8	
17 Trichlorofluoromethane	101	2.570	2.582	-0.012	98	409834	20.0	14.6	
20 1,1-Dichloroethene	61	3.045	3.044	0.001	96	353996	20.0	17.5	
21 1,1,2-Trichloro-1,2,2-trifluoroethane	101	3.057	3.056	0.001	92	236075	20.0	16.3	
22 Acetone	43	3.080	3.080	0.000	100	199430	40.0	45.1	
25 Carbon disulfide	76	3.270	3.270	0.000	98	786906	20.0	18.6	
28 Methyl acetate	43	3.389	3.388	0.001	96	500986	40.0	38.1	
29 Methylene Chloride	49	3.484	3.483	0.001	87	290748	20.0	18.1	
32 trans-1,2-Dichloroethene	61	3.733	3.732	0.001	82	349532	20.0	18.3	
33 Methyl tert-butyl ether	73	3.744	3.732	0.012	95	642167	20.0	16.4	
35 1,1-Dichloroethane	63	4.112	4.112	0.000	96	427513	20.0	18.7	
41 cis-1,2-Dichloroethene	96	4.634	4.633	0.001	80	298248	20.0	18.3	
40 2-Butanone (MEK)	72	4.634	4.633	0.001	97	102969	40.0	38.6	
48 Chloroform	83	4.907	4.906	0.001	95	442085	20.0	17.7	
49 1,1,1-Trichloroethane	97	5.085	5.084	0.000	98	373162	20.0	15.8	
52 Carbon tetrachloride	117	5.239	5.238	0.001	97	330803	20.0	14.6	
54 Benzene	78	5.417	5.416	0.001	94	1039541	20.0	19.4	
55 1,2-Dichloroethane	62	5.428	5.428	0.000	98	312264	20.0	15.4	
59 Trichloroethene	130	5.998	5.997	0.001	97	285997	20.0	16.0	
61 Methylcyclohexane	83	6.176	6.175	0.001	90	389416	20.0	15.0	
62 1,2-Dichloropropane	63	6.199	6.199	0.000	97	236314	20.0	19.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
66 Dichlorobromomethane	83	6.436	6.436	0.000	99	320250	20.0	16.3	
69 cis-1,3-Dichloropropene	75	6.851	6.851	0.000	97	358069	20.0	16.4	
70 4-Methyl-2-pentanone (MIBK)	43	6.982	6.981	0.001	95	595827	40.0	33.0	
71 Toluene	91	7.172	7.171	0.001	98	1078191	20.0	20.0	
72 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	91	307579	20.0	16.0	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	89	223878	20.0	19.7	
75 Tetrachloroethene	166	7.705	7.705	0.000	97	281314	20.0	16.3	
77 2-Hexanone	43	7.776	7.776	0.000	94	461103	40.0	36.7	
79 Chlorodibromomethane	129	7.931	7.930	0.001	89	250642	20.0	17.5	
81 Ethylene Dibromide	107	8.049	8.049	0.000	99	237326	20.0	17.8	
83 Chlorobenzene	112	8.535	8.535	0.000	98	668131	20.0	18.1	
85 Ethylbenzene	106	8.642	8.642	0.000	98	359616	20.0	18.6	
86 m-Xylene & p-Xylene	106	8.749	8.748	0.001	99	453500	20.0	19.3	
87 o-Xylene	106	9.152	9.152	0.000	95	439146	20.0	19.6	
88 Styrene	104	9.164	9.163	0.001	93	739747	20.0	19.3	
89 Bromoform	173	9.354	9.353	0.001	97	179544	20.0	15.3	
90 Isopropylbenzene	105	9.532	9.531	0.001	95	1145509	20.0	19.1	
93 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	94	366774	20.0	22.3	
107 1,3-Dichlorobenzene	146	10.824	10.824	0.000	98	532109	20.0	17.7	
109 1,4-Dichlorobenzene	146	10.919	10.919	0.000	95	555036	20.0	17.8	
113 1,2-Dichlorobenzene	146	11.310	11.310	0.000	99	511284	20.0	18.7	
114 1,2-Dibromo-3-Chloropropane	157	12.129	12.128	0.001	89	95787	20.0	18.3	
116 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	94	277111	20.0	15.2	
S 128 Xylenes, Total	106				0		40.0	38.9	

Reagents:

vmfasgw_00366	Amount Added: 16.00	Units: uL	
vmfasaw_00334	Amount Added: 16.00	Units: uL	
vmfaspw_00356	Amount Added: 16.00	Units: uL	
vm50ss_stk_00085	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00174	Amount Added: 0.00	Units:	Run Reagent
vm40ml_vials_00015	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00006	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Canton

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915336.d

Injection Date: 01-Jul-2020 19:57:06

Instrument ID: A3UX19

Operator ID: 001904

Lims ID: 240-132112-Q-9 MSD

Worklist Smp#: 12

Client ID: MW-03-062020

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

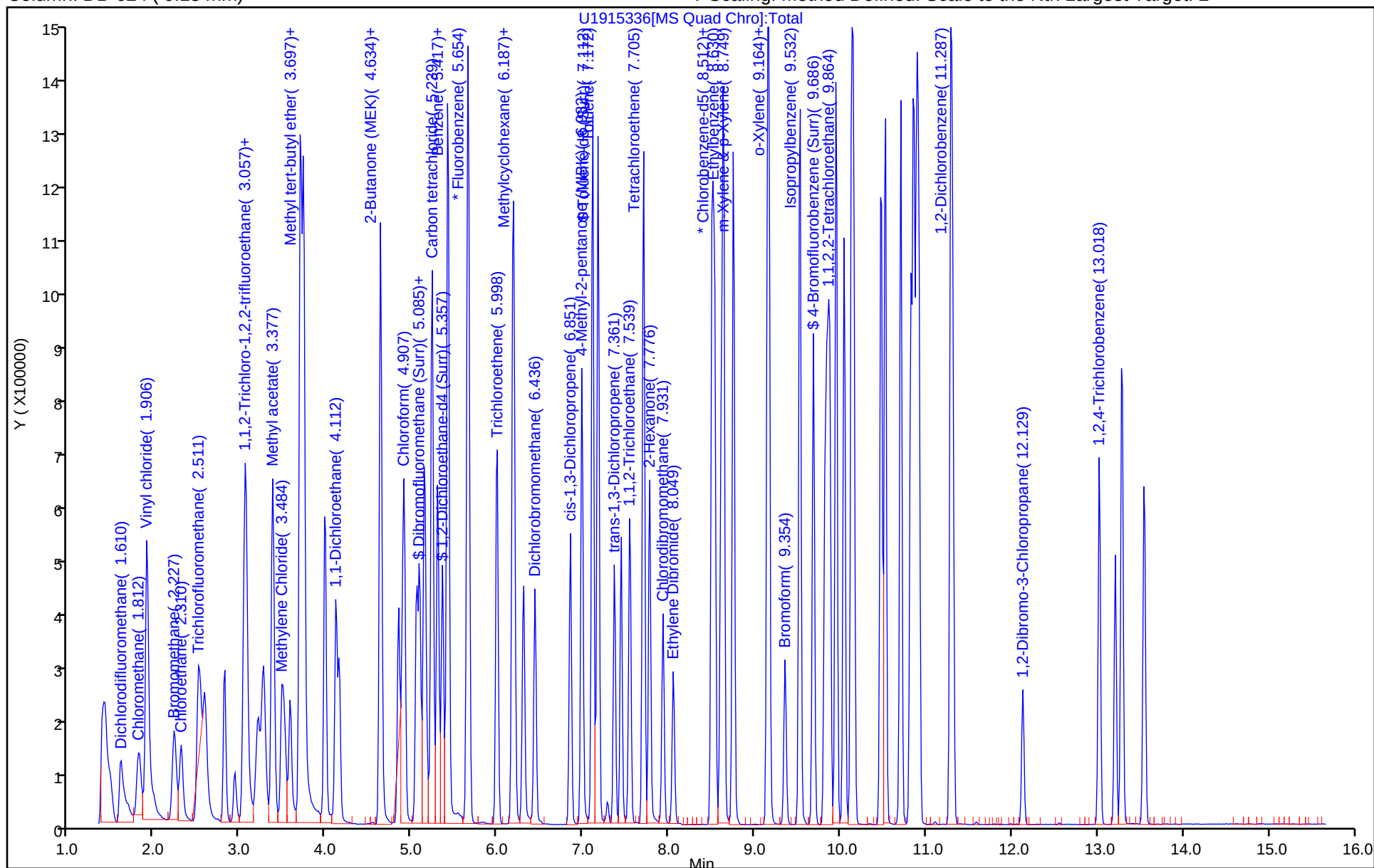
ALS Bottle#: 0

Method: 8260_19

Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins TestAmerica, Canton
Recovery Report

Data File: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\U1915336.d
Lims ID: 240-132112-Q-9 MSD
Client ID: MW-03-062020
Sample Type: MSD
Inject. Date: 01-Jul-2020 19:57:06 ALS Bottle#: 0 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0099705-012
Operator ID: 001904 Instrument ID: A3UX19
Method: \\chromfs\Canton\ChromData\A3UX19\20200701-99705.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 01-Jul-2020 18:16:13 Calib Date: 09-Jun-2020 21:22:13
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Canton\ChromData\A3UX19\20200609-98977.b\U1914735.d
Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX1057

First Level Reviewer: laveyt

Date: 01-Jul-2020 20:28:19

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Dibromofluoromethane (Surr)	20.0	18.9	94.75
\$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	17.6	88.19
\$ 6 Toluene-d8 (Surr)	20.0	21.6	107.80
\$ 7 4-Bromofluorobenzene (Surr)	20.0	20.9	104.33

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Instrument ID: A3UX19 Start Date: 07/24/2018 17:22Analysis Batch Number: 337766 End Date: 07/24/2018 21:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-337766/1		07/24/2018 17:22	1	bfb036.d	DB-624 0.18 (mm)
STD8260 240-337766/2 IC		07/24/2018 17:50	1	U1900783.d	DB-624 0.18 (mm)
STD8260 240-337766/3 IC		07/24/2018 18:13	1	U1900784.d	DB-624 0.18 (mm)
STD8260 240-337766/9 IC		07/24/2018 18:35	1	U1900790.d	DB-624 0.18 (mm)
ICIS 240-337766/10		07/24/2018 18:57	1	U1900791.d	DB-624 0.18 (mm)
STD8260 240-337766/11 IC		07/24/2018 19:20	1	U1900792.d	DB-624 0.18 (mm)
STD8260 240-337766/12 IC		07/24/2018 19:42	1	U1900793.d	DB-624 0.18 (mm)
STD8260 240-337766/13 IC		07/24/2018 20:04	1	U1900794.d	DB-624 0.18 (mm)
ICV 240-337766/14		07/24/2018 20:26	1		DB-624 0.18 (mm)
MRL 240-337766/15 MDLV		07/24/2018 20:48	1		DB-624 0.18 (mm)
MDLV 240-337766/16		07/24/2018 21:10	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Canton

Job No.: 240-132346-1

SDG No.:

Instrument ID: A3UX19

Start Date: 07/25/2018 11:28

Analysis Batch Number: 337917

End Date: 07/25/2018 19:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-337917/1		07/25/2018 11:28	1	bfb037.d	DB-624 0.18 (mm)
CCVIS 240-337917/3		07/25/2018 12:17	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 12:39	1		DB-624 0.18 (mm)
STDA9 240-337917/8 IC		07/25/2018 13:24	1		DB-624 0.18 (mm)
STDA9 240-337917/9 IC		07/25/2018 13:46	1		DB-624 0.18 (mm)
STDA9 240-337917/10 IC		07/25/2018 14:08	1		DB-624 0.18 (mm)
STDA9 240-337917/11 IC		07/25/2018 14:30	1		DB-624 0.18 (mm)
STDA9 240-337917/12 IC		07/25/2018 14:52	1		DB-624 0.18 (mm)
STDA9 240-337917/13 IC		07/25/2018 15:15	1		DB-624 0.18 (mm)
ICV 240-337917/14		07/25/2018 15:37	1	U1900808.d	DB-624 0.18 (mm)
MRL 240-337917/15 MDLV		07/25/2018 15:59	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 16:21	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 16:44	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 17:06	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 17:29	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 17:51	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 18:13	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 18:35	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 18:57	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 19:20	1		DB-624 0.18 (mm)
ZZZZZ		07/25/2018 19:42	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Canton

Job No.: 240-132346-1

SDG No.:

Instrument ID: A3UX19

Start Date: 08/27/2018 16:23

Analysis Batch Number: 342719

End Date: 08/27/2018 20:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-342719/1		08/27/2018 16:23	1	bfb058.d	DB-624 0.18 (mm)
CCV 240-342719/2		08/27/2018 16:46	1		DB-624 0.18 (mm)
STD8260 240-342719/7 IC		08/27/2018 17:09	1	U1901323.d	DB-624 0.18 (mm)
STD8260 240-342719/8 IC		08/27/2018 17:31	1	U1901324.d	DB-624 0.18 (mm)
STD8260 240-342719/9 IC		08/27/2018 17:53	1	U1901325.d	DB-624 0.18 (mm)
ICIS 240-342719/10		08/27/2018 18:16	1	U1901326.d	DB-624 0.18 (mm)
STD8260 240-342719/11 IC		08/27/2018 18:38	1	U1901327.d	DB-624 0.18 (mm)
STD8260 240-342719/12 IC		08/27/2018 19:01	1	U1901328.d	DB-624 0.18 (mm)
STD8260 240-342719/13 IC		08/27/2018 19:23	1	U1901329.d	DB-624 0.18 (mm)
ICV 240-342719/14		08/27/2018 19:45	1	U1901330.d	DB-624 0.18 (mm)
MRL 240-342719/15 MDLV		08/27/2018 20:07	1		DB-624 0.18 (mm)
MDLV 240-342719/16		08/27/2018 20:30	1		DB-624 0.18 (mm)
ZZZZZ		08/27/2018 20:52	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Canton

Job No.: 240-132346-1

SDG No.:

Instrument ID: A3UX19

Start Date: 07/01/2020 16:10

Analysis Batch Number: 440963

End Date: 07/02/2020 03:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-440963/1		07/01/2020 16:10	1	bfb559.d	DB-624 0.18 (mm)
CCV 240-440963/3		07/01/2020 16:33	1	U1915327.d	DB-624 0.18 (mm)
CCVIS 240-440963/4		07/01/2020 16:55	1	U1915328.d	DB-624 0.18 (mm)
LCS 240-440963/5		07/01/2020 17:18	1	U1915329.d	DB-624 0.18 (mm)
MRL 240-440963/6 MDLV		07/01/2020 17:40	1		DB-624 0.18 (mm)
MRL 240-440963/7 MDLV		07/01/2020 18:03	1		DB-624 0.18 (mm)
MB 240-440963/8		07/01/2020 18:26	1	U1915332.d	DB-624 0.18 (mm)
MRL 240-440963/9 MDLV		07/01/2020 18:48	1		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 19:11	1		DB-624 0.18 (mm)
240-132112-N-9 MS		07/01/2020 19:34	1	U1915335.d	DB-624 0.18 (mm)
240-132112-Q-9 MSD		07/01/2020 19:57	1	U1915336.d	DB-624 0.18 (mm)
ZZZZZ		07/01/2020 20:42	20		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 21:04	200		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 21:26	100		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 21:49	200		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 22:11	200		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 22:34	1		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 22:57	1		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 23:19	1		DB-624 0.18 (mm)
ZZZZZ		07/01/2020 23:42	1		DB-624 0.18 (mm)
ZZZZZ		07/02/2020 00:04	1		DB-624 0.18 (mm)
ZZZZZ		07/02/2020 00:26	1		DB-624 0.18 (mm)
ZZZZZ		07/02/2020 00:49	1		DB-624 0.18 (mm)
ZZZZZ		07/02/2020 01:11	1		DB-624 0.18 (mm)
ZZZZZ		07/02/2020 01:34	1		DB-624 0.18 (mm)
ZZZZZ		07/02/2020 01:57	1		DB-624 0.18 (mm)
240-132346-1		07/02/2020 02:20	1	U1915353.d	DB-624 0.18 (mm)
240-132346-2		07/02/2020 02:42	1	U1915354.d	DB-624 0.18 (mm)
ZZZZZ		07/02/2020 03:27	1		DB-624 0.18 (mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Batch Number: 337917 Batch Start Date: 07/25/18 11:28 Batch Analyst: Lavey, TimBatch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	vm50is_stk_A 00001	vm50ss_stk 00077	vmbfb 00020	VMFASA9W 00194
BFB 240-337917/1		8260C		5 mL	5 mL			1 uL	
ICV 240-337917/14		8260C		5 mL	5 mL	2 uL	2 uL		16 uL

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Batch Number: 342719 Batch Start Date: 08/27/18 16:23 Batch Analyst: Lavey, TimBatch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	vm50is_stk_A 00001	vm50ss 00333	vm50ss_stk 00077	vmarolistdw 00260
BFB 240-342719/1		8260C		5 mL	5 mL				
STD8260 240-342719/7 IC		8260C		5 mL	5 mL	2 uL	64 uL		64 uL
STD8260 240-342719/8 IC		8260C		5 mL	5 mL	2 uL	48 uL		48 uL
STD8260 240-342719/9 IC		8260C		5 mL	5 mL	2 uL	32 uL		32 uL
ICIS 240-342719/10		8260C		5 mL	5 mL	2 uL	16 uL		16 uL
STD8260 240-342719/11 IC		8260C		5 mL	5 mL	2 uL	8 uL		8 uL
STD8260 240-342719/12 IC		8260C		5 mL	5 mL	2 uL	0.8 uL		0.8 uL
STD8260 240-342719/13 IC		8260C		5 mL	5 mL	2 uL	0.4 uL		0.4 uL
ICV 240-342719/14		8260C		5 mL	5 mL	2 uL		2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	vmfasaw 00246	vmfasgw 00271	vmfaspw 00264	vmrgas 00259	vmrprimw 00297
BFB 240-342719/1		8260C		1 uL					
STD8260 240-342719/7 IC		8260C						64 uL	64 uL
STD8260 240-342719/8 IC		8260C						48 uL	48 uL
STD8260 240-342719/9 IC		8260C						32 uL	32 uL
ICIS 240-342719/10		8260C						16 uL	16 uL
STD8260 240-342719/11 IC		8260C						8 uL	8 uL
STD8260 240-342719/12 IC		8260C						0.8 uL	0.8 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C

Page 1 of 2

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Batch Number: 342719 Batch Start Date: 08/27/18 16:23 Batch Analyst: Lavey, TimBatch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	vmfasaw 00246	vmfasgw 00271	vmfaspw 00264	vmrgas 00259	vmrprimw 00297
STD8260 240-342719/13 IC		8260C						0.4 uL	0.4 uL
ICV 240-342719/14		8260C			16 uL	16 uL	16 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Batch Number: 440963 Batch Start Date: 07/01/20 16:10 Batch Analyst: Lavey, TimBatch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	vm50is_stk_A 00006	vm50ss_stk 00085	vmarolistdw 00351
BFB 240-440963/1		8260C		5 mL	5 mL				
CCV 240-440963/3		8260C		5 mL	5 mL		2 uL		
CCVIS 240-440963/4		8260C		5 mL	5 mL		2 uL	2 uL	16 uL
LCS 240-440963/5		8260C		5 mL	5 mL		2 uL	2 uL	
MB 240-440963/8		8260C		5 mL	5 mL		2 uL	2 uL	
240-132112-N-9 MS	MW-03-062020	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-132112-Q-9 MSD	MW-03-062020	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-132346-B-1	16WCIA	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-132346-B-2	TRIP BLANK	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00025	vmfasaw 00334	vmfasgw 00366	vmfaspw 00356	vmra9w 00350	vmrgas 00345
BFB 240-440963/1		8260C		1 uL					
CCV 240-440963/3		8260C						16 uL	
CCVIS 240-440963/4		8260C							16 uL
LCS 240-440963/5		8260C			16 uL	16 uL	16 uL		
MB 240-440963/8		8260C							
240-132112-N-9 MS	MW-03-062020	8260C	T		16 uL	16 uL	16 uL		
240-132112-Q-9 MSD	MW-03-062020	8260C	T		16 uL	16 uL	16 uL		
240-132346-B-1	16WCIA	8260C	T						
240-132346-B-2	TRIP BLANK	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmrprimw 00392					
BFB 240-440963/1		8260C							
CCV 240-440963/3		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C

Page 1 of 2

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-132346-1

SDG No.: _____

Batch Number: 440963 Batch Start Date: 07/01/20 16:10 Batch Analyst: Lavey, TimBatch Method: 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmrprimw 00392					
CCVIS 240-440963/4		8260C		16 uL					
LCS 240-440963/5		8260C							
MB 240-440963/8		8260C							
240-132112-N-9 MS	MW-03-062020	8260C	T						
240-132112-Q-9 MSD	MW-03-062020	8260C	T						
240-132346-B-1	16WCIA	8260C	T						
240-132346-B-2	TRIP BLANK	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C

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Shipping and Receiving Documents

page 1 of 1 JCF 6-11-2020

07/08/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 132314

Client ELLE Test America Site Name _____
 Cooler Received on 6-23-20 Opened on 6-23-20
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:

Adam Pancey

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box _____ Client Cooler _____ Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Water Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. 0.2 °C Corrected Cooler Temp. 1-1 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ☒ Yes ☐ No
 -Were the seals on the outside of the cooler(s) signed & dated? ☒ Yes ☐ No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? ☒ Yes ☐ No
 -Were tamper/custody seals intact and uncompromised? ☒ Yes ☐ No NA
3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☐ No
4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No
5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No
6. Was/were the person(s) who collected the samples clearly identified on the COC? ☒ Yes ☐ No
7. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No
8. Could all bottle labels be reconciled with the COC? ☒ Yes ☐ No
9. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No
10. Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No
11. Are these work share samples? ☒ Yes ☐ No
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? ☒ Yes ☐ No NA pH Strip Lot# HC902937
13. Were VOAs on the COC? ☒ Yes ☐ No
14. Were air bubbles >6 mm in any VOA vials? ☒ Yes ☐ No NA
 (Larger than this.)
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 0417701E ☒ Yes ☐ No
16. Was a LL Hg or Me Hg trip blank present? ☒ Yes ☐ No

Tests that are not
checked for pH by
Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

RL

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____



Report of Analysis

Draper Aden Associates

2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier

Project Name: RAAP HWMU16

Project Number: B03204-20A

Lot Number: **VD17087**

Date Completed: 06/8/2020

Revision Date: 07/24/2020

07/24/2020

Approved and released by:
Project Manager: **Cathy S. Dover**



The electronic signature above is the equivalent of a handwritten signature.
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PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative Draper Aden Associates Lot Number: VD17087

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Pace Analytical Services, LLC ("Pace") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Pace policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

This PDF report has been revised to re-digest and reanalyze sample VD17087-005 (16WDUP) for only Thallium and Antimony, per client request. The re-digested analysis results have also been reported per client request. All other results are as reported in the original report.

Cyanide 9012B

The MS/MSD for batch 52043 and parent sample VD17087-004 (16WC1A) recovered biased low outside criteria (83%, 87%, resp. with range of 90-110%). The associated LCS passed all acceptance criteria.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

PACE ANALYTICAL SERVICES, LLC

Sample Summary
Draper Aden Associates
Lot Number: VD17087
Project Name: RAAP HWMU16
Project Number: B03204-20A

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	16C1	Aqueous	04/16/2020 1205	04/17/2020
002	16MW8	Aqueous	04/16/2020 1105	04/17/2020
003	16MW9	Aqueous	04/16/2020 1105	04/17/2020
004	16WC1A	Aqueous	04/16/2020 0925	04/17/2020
005	16WDUP	Aqueous	04/16/2020 0950	04/17/2020
006	16WC1B	Aqueous	04/16/2020 0835	04/17/2020

(6 samples)

Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-001			
Description: 16C1				Matrix: Aqueous			
Date Sampled: 04/16/2020 1205				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1512	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-001			
Description: 16C1				Matrix: Aqueous			
Date Sampled: 04/16/2020 1205				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1319	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
H = Out of holding time W = Reported on wet weight basis

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106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-001			
Description: 16C1				Matrix: Aqueous			
Date Sampled: 04/16/2020 1205				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1538	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	170		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	4.2	J	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-002			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1513	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit
U = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL
H = Out of holding time	W = Reported on wet weight basis		

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-002			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1322	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-002			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1544	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	150		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	0.25	J	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	0.20	J	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	1.4	J	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	2.7	J	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	6.6		5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	4.7	J	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30		30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-003			
Description: 16MW9				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1514	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-003			
Description: 16MW9				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1324	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit
U = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL
H = Out of holding time	W = Reported on wet weight basis		

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-003			
Description: 16MW9				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1549	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	2.1	J	10	2.0	ug/L	1
Barium	7440-39-3	6020B	610		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	7.1		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	17		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-004			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 04/16/2020 0925				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1515	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-004			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 04/16/2020 0925				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1327	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-004			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 04/16/2020 0925				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1555	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	360		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	18		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	1.4	J	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	15		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	19	J	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-005			
Description: 16WDUP				Matrix: Aqueous			
Date Sampled: 04/16/2020 0950				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1521	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-005			
Description: 16WDUP				Matrix: Aqueous			
Date Sampled: 04/16/2020 0950				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1339	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-005			
Description: 16WDUP				Matrix: Aqueous			
Date Sampled: 04/16/2020 0950				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1642	BPK	04/21/2020 1542	51454
2	3005A	6020B	1	05/11/2020 1422	BNW	05/09/2020 1523	53374

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	2
Arsenic	7440-38-2	6020B	2.0	J	10	2.0	ug/L	1
Barium	7440-39-3	6020B	350		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	18		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	15		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	2
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	18	J	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-006			
Description: 16WC1B				Matrix: Aqueous			
Date Sampled: 04/16/2020 0835				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1522	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-006			
Description: 16WC1B				Matrix: Aqueous			
Date Sampled: 04/16/2020 0835				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1342	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-006			
Description: 16WC1B				Matrix: Aqueous			
Date Sampled: 04/16/2020 0835				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	3005A	6020B	1	04/22/2020 1648	BPK	04/21/2020 1542	51454		
Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run	
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1	
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1	
Barium	7440-39-3	6020B	130		10	1.3	ug/L	1	
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1	
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1	
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1	
Cobalt	7440-48-4	6020B	4.7	J	5.0	1.3	ug/L	1	
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1	
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1	
Nickel	7440-02-0	6020B	3.3	J	10	2.0	ug/L	1	
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1	
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1	
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1	
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1	
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1	

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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QC Summary

Inorganic non-metals - MB

Sample ID: VQ52043-001

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Cyanide - Total	20	U	1	20	5.0	ug/L	04/24/2020 1507

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Inorganic non-metals - LCS

Sample ID: VQ52043-002

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Cyanide - Total	100	93		1	93	90-110	04/24/2020 1508

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Inorganic non-metals - MS

Sample ID: VD17087-004MS

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Cyanide - Total	0.0	100	83	N	1	83	90-110	04/24/2020 1516

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

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QC Data for Lot Number: VD17087

Inorganic non-metals - MSD

Sample ID: VD17087-004MD

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Cyanide - Total	0.0	100	87	N	1	87	3.9	90-110	20	04/24/2020 1520

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

QC Data for Lot Number: VD17087

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ICP-MS - MB

Sample ID: VQ51454-001

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Antimony	2.0	U	1	2.0	0.50	ug/L	04/22/2020 1526
Arsenic	10	U	1	10	2.0	ug/L	04/22/2020 1526
Barium	10	U	1	10	1.3	ug/L	04/22/2020 1526
Beryllium	1.0	U	1	1.0	0.20	ug/L	04/22/2020 1526
Cadmium	1.0	U	1	1.0	0.20	ug/L	04/22/2020 1526
Chromium	5.0	U	1	5.0	1.3	ug/L	04/22/2020 1526
Cobalt	5.0	U	1	5.0	1.3	ug/L	04/22/2020 1526
Copper	5.0	U	1	5.0	1.3	ug/L	04/22/2020 1526
Lead	3.0	U	1	3.0	1.0	ug/L	04/22/2020 1526
Nickel	10	U	1	10	2.0	ug/L	04/22/2020 1526
Selenium	10	U	1	10	3.0	ug/L	04/22/2020 1526
Silver	2.0	U	1	2.0	0.30	ug/L	04/22/2020 1526
Thallium	1.0	U	1	1.0	0.20	ug/L	04/22/2020 1526
Vanadium	10	U	1	10	2.5	ug/L	04/22/2020 1526
Zinc	30	U	1	30	7.3	ug/L	04/22/2020 1526

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ51454-002

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	100	100		1	101	80-120	04/22/2020 1532
Arsenic	100	100		1	103	80-120	04/22/2020 1532
Barium	100	100		1	103	80-120	04/22/2020 1532
Beryllium	100	100		1	100	80-120	04/22/2020 1532
Cadmium	100	100		1	100	80-120	04/22/2020 1532
Chromium	100	100		1	100	80-120	04/22/2020 1532
Cobalt	100	100		1	100	80-120	04/22/2020 1532
Copper	100	100		1	100	80-120	04/22/2020 1532
Lead	100	100		1	100	80-120	04/22/2020 1532
Nickel	100	100		1	101	80-120	04/22/2020 1532
Selenium	100	100		1	102	80-120	04/22/2020 1532
Silver	100	100		1	103	80-120	04/22/2020 1532
Thallium	100	110		1	107	80-120	04/22/2020 1532
Vanadium	100	99		1	99	80-120	04/22/2020 1532
Zinc	100	100		1	103	80-120	04/22/2020 1532

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: VD17087-004MS

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	0.0	100	100		1	101	70-130	04/22/2020 1601
Arsenic	0.0	100	100		1	105	70-130	04/22/2020 1601
Barium	360	100	470		1	112	70-130	04/22/2020 1601
Beryllium	0.0	100	99		1	99	70-130	04/22/2020 1601
Cadmium	0.0	100	100		1	101	70-130	04/22/2020 1601
Chromium	0.0	100	100		1	101	70-130	04/22/2020 1601
Cobalt	18	100	120		1	98	70-130	04/22/2020 1601
Copper	1.4	100	97		1	96	70-130	04/22/2020 1601
Lead	0.0	100	100		1	102	70-130	04/22/2020 1601
Nickel	15	100	110		1	95	70-130	04/22/2020 1601
Selenium	0.0	100	97		1	97	70-130	04/22/2020 1601
Silver	0.0	100	100		1	102	70-130	04/22/2020 1601
Thallium	0.0	100	110		1	109	70-130	04/22/2020 1601
Vanadium	0.0	100	99		1	99	70-130	04/22/2020 1601
Zinc	19	100	120		1	96	70-130	04/22/2020 1601

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MSD

Sample ID: VD17087-004MD

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Antimony	0.0	100	98		1	98	3.0	70-130	20	04/22/2020 1607
Arsenic	0.0	100	100		1	103	1.9	70-130	20	04/22/2020 1607
Barium	360	100	460		1	106	1.3	70-130	20	04/22/2020 1607
Beryllium	0.0	100	96		1	96	2.7	70-130	20	04/22/2020 1607
Cadmium	0.0	100	99		1	99	2.6	70-130	20	04/22/2020 1607
Chromium	0.0	100	99		1	99	1.9	70-130	20	04/22/2020 1607
Cobalt	18	100	110		1	96	1.7	70-130	20	04/22/2020 1607
Copper	1.4	100	95		1	94	1.9	70-130	20	04/22/2020 1607
Lead	0.0	100	99		1	99	3.2	70-130	20	04/22/2020 1607
Nickel	15	100	110		1	95	0.18	70-130	20	04/22/2020 1607
Selenium	0.0	100	97		1	97	0.14	70-130	20	04/22/2020 1607
Silver	0.0	100	99		1	99	2.4	70-130	20	04/22/2020 1607
Thallium	0.0	100	110		1	106	2.8	70-130	20	04/22/2020 1607
Vanadium	0.0	100	99		1	99	0.070	70-130	20	04/22/2020 1607
Zinc	19	100	110		1	95	0.87	70-130	20	04/22/2020 1607

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MB

Sample ID: VQ53374-001

Matrix: Aqueous

Batch: 53374

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 05/09/2020 1523

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Antimony	2.0	U	1	2.0	0.50	ug/L	05/11/2020 1410
Thallium	1.0	U	1	1.0	0.20	ug/L	05/11/2020 1410

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ53374-002

Matrix: Aqueous

Batch: 53374

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 05/09/2020 1523

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	100	96		1	96	80-120	05/11/2020 1416
Thallium	100	100		1	100	80-120	05/11/2020 1416

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - Duplicate

Sample ID: VD17087-005DU

Matrix: Aqueous

Batch: 53374

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 05/09/2020 1523

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Antimony	ND		U	1	0.00	20	05/11/2020 1439
Thallium	ND		U	1	0.00	20	05/11/2020 1439

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Mercury - MB

Sample ID: VQ51713-001

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	2.0	U	1	2.0	0.20	ug/L	04/22/2020 1314

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - LCS

Sample ID: VQ51713-002

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.0		1	99	80-120	04/22/2020 1317

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Mercury - MS

Sample ID: VD17087-004MS

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	1.8		1	88	85-115	04/22/2020 1329

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Mercury - MSD

Sample ID: VD17087-004MD

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0	2.0	1.7		1	87	0.51	85-115	20	04/22/2020 1337

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Chain of Custody and Miscellaneous Documents

5/5

HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B & QC

Report to QL, DL listed below and provide estimated results ("J").

Analyzed by Method 6020B
 not 6020A as noted. JCF
 3-25 -2020

HWMU 16					
Analyte	Method Ref	LOQ	L0D	CAS#	Units
ANTIMONY	6020A	2	0.5 C-4	7440-35-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.2	7440-11-7	UG/L
CADMIUM	6020A	1	0.2	7440-13-8	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1	7440-50-8	UG/L
LEAD	6020A	3.2	1.0-2	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.3 0-2	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	2.5-1	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report estimated results.

Rev 12/2016 per class 1 permit mod
 Rev 2019 - red reflects DEQ pre approval in 2019. Class 1 permit mod remains pending as of 3-25-2020
 I:\environmental\bbg\databases\rap\sample event set up\semi-annual events\hwmu-16\hwmu-16-target analyte list-annual rev 10 - 2014.doc

OK JCF 3-25-2020
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HWMU16
Radford Army Ammunition Plant (RFAAP)
Semiannual Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

No.	ANALYTE	CAS RN	Required LOQ (ug/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-82-1	2-3 (per DEQ 2019- class 1 permit mod pending)
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-8	30

Method SW 7470A/CVAA

12.	Mercury	7439-97-6 2/7470A	3
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Notes.

- Antimony, selenium and silver deleted 4-6,2012.
- 11 Zinc QL increased 11 2016, lead increased to 2 ppb.
- 10/2016 JCF- rev 102017
- 10/2018 – Changed to 6020 "B" for Shealy. 6020 "A" can still be used. No other changes. Still current.

Above applies to wells 16-2, 16-3, 16-5, 16WC2B and 16Spring

Report to at or above QL only. JCF 3-25-2020

c:\environmental\hbg\databases\rap\sample event set up\semi-annual events\hwmu-16\hwmu16-target analyte list-q as of 10-2018.doc
JCF 11/04/2004

OK JCF 3-25-2020

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 7470A

THIS APPLIES TO ALL WELLS AND QC

Method SW 7470A/CVAA	CAS#	Required LOQ
1 Mercury	7439-97-6	2 / 0.2 ug/l

Report to permit DL (0.2 ug/l) for 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B, QC. (Appendix IX wells)-jcf 3-25-2020

Report to at or above QL for remaining wells. jcf 3-25-2020

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OK JCF 3-25-2020 Page 4 of 5

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

**THIS APPLIES TO 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B
AND QC**

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

**These are Appendix IX wells.
Report estimated results.**

LOD revised 4Q2016 class 1 permit mod

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OK JCF 3-25-2020

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PACE ANALYTICAL SERVICES, LLC

Shealy Environmental Services, Inc.
Document Number: M30018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Draper

Cooler Inspected by/date: LKH / 04/17/2020 Lot #: VD17087

Means of receipt: ☐ SESI ☐ Client ☒ UPS ☒ FedEx ☐ Other:	
☒ Yes ☐ No	1. Were custody seals present on the cooler?
☒ Yes ☐ No ☐ NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: 20-0209 Chlorine Strip ID: 20-0278 Tested by: BMG	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA	
2.4 / 2.4 °C NA / NA °C NA / NA °C NA / NA °C	
Method: ☒ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C	
Method of coolant: ☒ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None	
☐ Yes ☐ No ☒ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☒ Yes ☐ No ☐ NA	4. Is the commercial courier's packing slip attached to this form?
☒ Yes ☐ No	5. Were proper custody procedures (relinquished/received) followed?
☒ Yes ☐ No	6. Were sample IDs listed on the COC?
☒ Yes ☐ No	7. Were sample IDs listed on all sample containers?
☒ Yes ☐ No	8. Was collection date & time listed on the COC?
☒ Yes ☐ No	9. Was collection date & time listed on all sample containers?
☒ Yes ☐ No	10. Did all container label information (ID, date, time) agree with the COC?
☒ Yes ☐ No	11. Were tests to be performed listed on the COC?
☒ Yes ☐ No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☒ Yes ☐ No	13. Was adequate sample volume available?
☒ Yes ☐ No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes ☒ No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes ☐ No ☒ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
☒ Yes ☐ No ☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☒ Yes ☐ No ☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☒ Yes ☐ No ☐ NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes ☐ No ☒ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes ☒ No	21. Was the quote number listed on the container label? If yes, Quote # NA
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H ₂ SO ₄ , HNO ₃ , HCl, NaOH using SR # NA.	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: NA.	
SR barcode labels applied by: BMG Date: 04/17/2020	

Comments:

PACE ANALYTICAL SERVICES, LLC

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Draper

Cooler Inspected by/date: LKH / 04/17/2020

Lot #: VD17091

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☒ FedEx ☐ Other: _____	
☒ Yes ☐ No	1. Were custody seals present on the cooler?
☒ Yes ☐ No ☐ NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: 20-0209 Chlorine Strip ID: 20-0278 Tested by: BMG	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA	
2.4 / 2.4 °C NA / NA °C NA / NA °C NA / NA °C	
Method: ☒ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C	
Method of coolant: ☒ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None	
☐ Yes ☐ No ☒ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☒ Yes ☐ No ☐ NA	4. Is the commercial courier's packing slip attached to this form?
☒ Yes ☐ No	5. Were proper custody procedures (relinquished/received) followed?
☒ Yes ☐ No	6. Were sample IDs listed on the COC?
☒ Yes ☐ No	7. Were sample IDs listed on all sample containers?
☒ Yes ☐ No	8. Was collection date & time listed on the COC?
☒ Yes ☐ No	9. Was collection date & time listed on all sample containers?
☒ Yes ☐ No	10. Did all container label information (ID, date, time) agree with the COC?
☒ Yes ☐ No	11. Were tests to be performed listed on the COC?
☒ Yes ☐ No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☒ Yes ☐ No	13. Was adequate sample volume available?
☐ Yes ☒ No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
☐ Yes ☒ No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes ☐ No ☒ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any of the VOA vials?
☒ Yes ☐ No ☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes ☐ No ☒ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☒ Yes ☐ No ☐ NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes ☐ No ☒ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes ☒ No	21. Was the quote number listed on the container label? If yes, Quote # NA
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H ₂ SO ₄ , HNO ₃ , HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: NA	
SR barcode labels applied by: BMG Date: 04/17/2020	

Comments:

Metals



Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-001			
Description: 16C1				Matrix: Aqueous			
Date Sampled: 04/16/2020 1205				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1319	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-001			
Description: 16C1				Matrix: Aqueous			
Date Sampled: 04/16/2020 1205				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1538	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	170		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	4.2	J	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-002			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1322	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-002			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1544	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	150		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	0.25	J	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	0.20	J	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	1.4	J	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	2.7	J	5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	6.6		5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	4.7	J	10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30		30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-003			
Description: 16MW9				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1324	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-003			
Description: 16MW9				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1549	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	2.1	J	10	2.0	ug/L	1
Barium	7440-39-3	6020B	610		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	7.1		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	17		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-004			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 04/16/2020 0925				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1327	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-004			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 04/16/2020 0925				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1555	BPK	04/21/2020 1542	51454

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1
Barium	7440-39-3	6020B	360		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	18		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	1.4	J	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	15		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	19	J	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-005			
Description: 16WDUP				Matrix: Aqueous			
Date Sampled: 04/16/2020 0950				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1339	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-005			
Description: 16WDUP				Matrix: Aqueous			
Date Sampled: 04/16/2020 0950				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1642	BPK	04/21/2020 1542	51454
2	3005A	6020B	1	05/11/2020 1422	BNW	05/09/2020 1523	53374

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	2
Arsenic	7440-38-2	6020B	2.0	J	10	2.0	ug/L	1
Barium	7440-39-3	6020B	350		10	1.3	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1
Cobalt	7440-48-4	6020B	18		5.0	1.3	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1
Nickel	7440-02-0	6020B	15		10	2.0	ug/L	1
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	2
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1
Zinc	7440-66-6	6020B	18	J	30	7.3	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17087-006			
Description: 16WC1B				Matrix: Aqueous			
Date Sampled: 04/16/2020 0835				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1		7470A	1	04/22/2020 1342	KSH2	04/22/2020 0029	51713		

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	0.20	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17087-006			
Description: 16WC1B				Matrix: Aqueous			
Date Sampled: 04/16/2020 0835				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	3005A	6020B	1	04/22/2020 1648	BPK	04/21/2020 1542	51454		
Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run	
Antimony	7440-36-0	6020B	2.0	U	2.0	0.50	ug/L	1	
Arsenic	7440-38-2	6020B	10	U	10	2.0	ug/L	1	
Barium	7440-39-3	6020B	130		10	1.3	ug/L	1	
Beryllium	7440-41-7	6020B	1.0	U	1.0	0.20	ug/L	1	
Cadmium	7440-43-9	6020B	1.0	U	1.0	0.20	ug/L	1	
Chromium	7440-47-3	6020B	5.0	U	5.0	1.3	ug/L	1	
Cobalt	7440-48-4	6020B	4.7	J	5.0	1.3	ug/L	1	
Copper	7440-50-8	6020B	5.0	U	5.0	1.3	ug/L	1	
Lead	7439-92-1	6020B	3.0	U	3.0	1.0	ug/L	1	
Nickel	7440-02-0	6020B	3.3	J	10	2.0	ug/L	1	
Selenium	7782-49-2	6020B	10	U	10	3.0	ug/L	1	
Silver	7440-22-4	6020B	2.0	U	2.0	0.30	ug/L	1	
Thallium	7440-28-0	6020B	1.0	U	1.0	0.20	ug/L	1	
Vanadium	7440-62-2	6020B	10	U	10	2.5	ug/L	1	
Zinc	7440-66-6	6020B	30	U	30	7.3	ug/L	1	

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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QC Summary

ICP-MS - MB

Sample ID: VQ51454-001

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Antimony	2.0	U	1	2.0	0.50	ug/L	04/22/2020 1526
Arsenic	10	U	1	10	2.0	ug/L	04/22/2020 1526
Barium	10	U	1	10	1.3	ug/L	04/22/2020 1526
Beryllium	1.0	U	1	1.0	0.20	ug/L	04/22/2020 1526
Cadmium	1.0	U	1	1.0	0.20	ug/L	04/22/2020 1526
Chromium	5.0	U	1	5.0	1.3	ug/L	04/22/2020 1526
Cobalt	5.0	U	1	5.0	1.3	ug/L	04/22/2020 1526
Copper	5.0	U	1	5.0	1.3	ug/L	04/22/2020 1526
Lead	3.0	U	1	3.0	1.0	ug/L	04/22/2020 1526
Nickel	10	U	1	10	2.0	ug/L	04/22/2020 1526
Selenium	10	U	1	10	3.0	ug/L	04/22/2020 1526
Silver	2.0	U	1	2.0	0.30	ug/L	04/22/2020 1526
Thallium	1.0	U	1	1.0	0.20	ug/L	04/22/2020 1526
Vanadium	10	U	1	10	2.5	ug/L	04/22/2020 1526
Zinc	30	U	1	30	7.3	ug/L	04/22/2020 1526

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ51454-002

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	100	100		1	101	80-120	04/22/2020 1532
Arsenic	100	100		1	103	80-120	04/22/2020 1532
Barium	100	100		1	103	80-120	04/22/2020 1532
Beryllium	100	100		1	100	80-120	04/22/2020 1532
Cadmium	100	100		1	100	80-120	04/22/2020 1532
Chromium	100	100		1	100	80-120	04/22/2020 1532
Cobalt	100	100		1	100	80-120	04/22/2020 1532
Copper	100	100		1	100	80-120	04/22/2020 1532
Lead	100	100		1	100	80-120	04/22/2020 1532
Nickel	100	100		1	101	80-120	04/22/2020 1532
Selenium	100	100		1	102	80-120	04/22/2020 1532
Silver	100	100		1	103	80-120	04/22/2020 1532
Thallium	100	110		1	107	80-120	04/22/2020 1532
Vanadium	100	99		1	99	80-120	04/22/2020 1532
Zinc	100	100		1	103	80-120	04/22/2020 1532

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: VD17087-004MS

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	0.0	100	100		1	101	70-130	04/22/2020 1601
Arsenic	0.0	100	100		1	105	70-130	04/22/2020 1601
Barium	360	100	470		1	112	70-130	04/22/2020 1601
Beryllium	0.0	100	99		1	99	70-130	04/22/2020 1601
Cadmium	0.0	100	100		1	101	70-130	04/22/2020 1601
Chromium	0.0	100	100		1	101	70-130	04/22/2020 1601
Cobalt	18	100	120		1	98	70-130	04/22/2020 1601
Copper	1.4	100	97		1	96	70-130	04/22/2020 1601
Lead	0.0	100	100		1	102	70-130	04/22/2020 1601
Nickel	15	100	110		1	95	70-130	04/22/2020 1601
Selenium	0.0	100	97		1	97	70-130	04/22/2020 1601
Silver	0.0	100	100		1	102	70-130	04/22/2020 1601
Thallium	0.0	100	110		1	109	70-130	04/22/2020 1601
Vanadium	0.0	100	99		1	99	70-130	04/22/2020 1601
Zinc	19	100	120		1	96	70-130	04/22/2020 1601

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MSD

Sample ID: VD17087-004MD

Matrix: Aqueous

Batch: 51454

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Antimony	0.0	100	98		1	98	3.0	70-130	20	04/22/2020 1607
Arsenic	0.0	100	100		1	103	1.9	70-130	20	04/22/2020 1607
Barium	360	100	460		1	106	1.3	70-130	20	04/22/2020 1607
Beryllium	0.0	100	96		1	96	2.7	70-130	20	04/22/2020 1607
Cadmium	0.0	100	99		1	99	2.6	70-130	20	04/22/2020 1607
Chromium	0.0	100	99		1	99	1.9	70-130	20	04/22/2020 1607
Cobalt	18	100	110		1	96	1.7	70-130	20	04/22/2020 1607
Copper	1.4	100	95		1	94	1.9	70-130	20	04/22/2020 1607
Lead	0.0	100	99		1	99	3.2	70-130	20	04/22/2020 1607
Nickel	15	100	110		1	95	0.18	70-130	20	04/22/2020 1607
Selenium	0.0	100	97		1	97	0.14	70-130	20	04/22/2020 1607
Silver	0.0	100	99		1	99	2.4	70-130	20	04/22/2020 1607
Thallium	0.0	100	110		1	106	2.8	70-130	20	04/22/2020 1607
Vanadium	0.0	100	99		1	99	0.070	70-130	20	04/22/2020 1607
Zinc	19	100	110		1	95	0.87	70-130	20	04/22/2020 1607

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MB

Sample ID: VQ53374-001

Matrix: Aqueous

Batch: 53374

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 05/09/2020 1523

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Antimony	2.0	U	1	2.0	0.50	ug/L	05/11/2020 1410
Thallium	1.0	U	1	1.0	0.20	ug/L	05/11/2020 1410

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ53374-002

Matrix: Aqueous

Batch: 53374

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 05/09/2020 1523

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Antimony	100	96		1	96	80-120	05/11/2020 1416
Thallium	100	100		1	100	80-120	05/11/2020 1416

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - Duplicate

Sample ID: VD17087-005DU

Matrix: Aqueous

Batch: 53374

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 05/09/2020 1523

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Antimony	ND		U	1	0.00	20	05/11/2020 1439
Thallium	ND		U	1	0.00	20	05/11/2020 1439

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Mercury - MB

Sample ID: VQ51713-001

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	2.0	U	1	2.0	0.20	ug/L	04/22/2020 1314

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - LCS

Sample ID: VQ51713-002

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.0		1	99	80-120	04/22/2020 1317

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Mercury - MS

Sample ID: VD17087-004MS

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	1.8		1	88	85-115	04/22/2020 1329

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Mercury - MSD

Sample ID: VD17087-004MD

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0	2.0	1.7		1	87	0.51	85-115	20	04/22/2020 1337

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and $\geq$ DL

U = Not detected at or above the detection limit

N = Recovery is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

ICP-MS Metals



- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: VD17087

Method Type: ICP-MS

SOW No.: _____

Contract: RAAP HWMU16

Lab Code: _____

Case No.: _____

SAS No.: _____

Lab Sample ID	Client Sample ID	QC Description
VD17087-001	16C1	
VD17087-002	16MW8	
VD17087-003	16MW9	
VD17087-004	16WC1A	
VD17087-004S	16WC1AS	Matrix Spike
VD17087-004SD	16WC1ASD	Matrix Spike Duplicate
VD17087-005	16WDUP	
VD17087-005D	16WDUPD	Sample Duplicate
VD17087-006	16WC1B	

Were ICP interelement corrections applied? Yes/No Yes _____

Were ICP background corrections applied? Yes/No Yes _____

If yes - were raw data generated before applications of background corrections? Yes/No No _____

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: _____

Date: _____

Title: _____

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates SDG No.: VD17087

Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Antimony	199.13	200.0	100	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Arsenic	207.23	200.0	104	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Barium	198.90	200.0	99	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Beryllium	200.83	200.0	100	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Cadmium	191.13	200.0	96	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Chromium	189.33	200.0	95	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Cobalt	186.13	200.0	93	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Copper	192.73	200.0	96	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Lead	186.03	200.0	93	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Nickel	185.53	200.0	93	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Selenium	197.40	200.0	99	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Silver	198.73	200.0	99	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Thallium	200.73	200.0	100	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Vanadium	195.60	200.0	98	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Zinc	191.47	200.0	96	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
CCV1									
	Antimony	296.60	300.0	99	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Arsenic	299.23	300.0	100	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Barium	303.70	300.0	101	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Beryllium	302.77	300.0	101	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Cadmium	292.00	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Chromium	295.03	300.0	98	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Cobalt	290.47	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Copper	283.87	300.0	95	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Lead	286.73	300.0	96	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Nickel	285.87	300.0	95	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Selenium	291.97	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Silver	297.60	300.0	99	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Thallium	309.93	300.0	103	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Vanadium	299.80	300.0	100	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Zinc	290.63	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates SDG No.: VD17087

Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV2									
	Antimony	297.03	300.0	99	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Arsenic	310.37	300.0	103	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Barium	307.47	300.0	102	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Beryllium	313.27	300.0	104	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Cadmium	296.43	300.0	99	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Chromium	298.90	300.0	100	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Cobalt	295.87	300.0	99	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Copper	300.53	300.0	100	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Lead	293.67	300.0	98	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Nickel	290.00	300.0	97	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Selenium	304.53	300.0	102	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Silver	301.97	300.0	101	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Thallium	316.20	300.0	105	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Vanadium	306.77	300.0	102	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Zinc	298.97	300.0	100	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
CCV3									
	Antimony	298.97	300.0	100	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Arsenic	312.10	300.0	104	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Barium	307.43	300.0	102	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Beryllium	312.07	300.0	104	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Cadmium	297.63	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Chromium	299.17	300.0	100	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Cobalt	296.97	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Copper	297.57	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Lead	295.93	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Nickel	293.23	300.0	98	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Selenium	303.63	300.0	101	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Silver	303.03	300.0	101	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Thallium	315.70	300.0	105	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Vanadium	304.93	300.0	102	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Zinc	300.07	300.0	100	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates SDG No.: VD17087

Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Antimony	210.47	200.0	105	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Arsenic	218.07	200.0	109	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Barium	207.13	200.0	104	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Beryllium	211.73	200.0	106	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Cadmium	200.53	200.0	100	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Chromium	201.63	200.0	101	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Cobalt	197.07	200.0	99	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Copper	194.13	200.0	97	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Lead	196.97	200.0	98	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Nickel	198.03	200.0	99	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Selenium	200.47	200.0	100	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Silver	188.30	200.0	94	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Thallium	195.03	200.0	98	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Vanadium	208.53	200.0	104	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
	Zinc	190.17	200.0	95	90.0 - 110.0	MS	5/11/2020	11:44	MS2051120C 6020B 200.8, g
CCV1									
	Antimony	302.90	300.0	101	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Arsenic	293.80	300.0	98	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Barium	307.70	300.0	103	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Beryllium	300.27	300.0	100	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Cadmium	296.37	300.0	99	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Chromium	297.27	300.0	99	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Cobalt	290.13	300.0	97	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Copper	284.00	300.0	95	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Lead	293.27	300.0	98	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Nickel	282.17	300.0	94	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Selenium	298.60	300.0	100	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Silver	284.47	300.0	95	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Thallium	289.67	300.0	97	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Vanadium	304.30	300.0	101	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g
	Zinc	290.40	300.0	97	90.0 - 110.0	MS	5/11/2020	12:02	MS2051120C 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates SDG No.: VD17087

Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV2									
	Antimony	304.40	300.0	101	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Arsenic	311.37	300.0	104	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Barium	300.37	300.0	100	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Beryllium	303.63	300.0	101	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Cadmium	294.93	300.0	98	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Chromium	299.37	300.0	100	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Cobalt	295.83	300.0	99	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Copper	293.23	300.0	98	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Lead	290.73	300.0	97	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Nickel	295.83	300.0	99	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Selenium	297.37	300.0	99	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Silver	292.83	300.0	98	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Thallium	287.80	300.0	96	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Vanadium	305.27	300.0	102	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
	Zinc	289.50	300.0	97	90.0 - 110.0	MS	5/11/2020	13:12	MS2051120C 6020B 200.8, g
CCV3									
	Antimony	299.10	300.0	100	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Arsenic	300.17	300.0	100	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Barium	302.27	300.0	101	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Beryllium	305.03	300.0	102	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Cadmium	292.43	300.0	97	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Chromium	295.10	300.0	98	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Cobalt	290.57	300.0	97	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Copper	281.83	300.0	94	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Lead	297.33	300.0	99	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Nickel	282.43	300.0	94	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Selenium	296.37	300.0	99	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Silver	285.13	300.0	95	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Thallium	294.37	300.0	98	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Vanadium	300.90	300.0	100	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g
	Zinc	287.17	300.0	96	90.0 - 110.0	MS	5/11/2020	14:28	MS2051120C 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV4									
	Antimony	296.73	300.0	99	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Arsenic	297.70	300.0	99	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Barium	308.00	300.0	103	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Beryllium	303.43	300.0	101	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Cadmium	297.00	300.0	99	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Chromium	299.50	300.0	100	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Cobalt	298.27	300.0	99	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Copper	285.43	300.0	95	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Lead	304.93	300.0	102	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Nickel	293.87	300.0	98	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Selenium	292.20	300.0	97	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Silver	288.63	300.0	96	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Thallium	300.77	300.0	100	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Vanadium	304.63	300.0	102	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g
	Zinc	293.40	300.0	98	90.0 - 110.0	MS	5/11/2020	15:32	MS2051120C 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½ LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Antimony	0.207	+/-1.000	U	0.500	1.000	MS	4/22/2020	15:02	MS2042220C 6
	Arsenic	-0.058	+/-1.000	U	1.250	1.000	MS	4/22/2020	15:02	MS2042220C 6
	Barium	-0.038	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Beryllium	0.006	+/-0.200	U	0.150	0.200	MS	4/22/2020	15:02	MS2042220C 6
	Cadmium	0.006	+/-0.250	U	0.125	0.250	MS	4/22/2020	15:02	MS2042220C 6
	Chromium	-0.015	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Cobalt	0.008	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Copper	0.035	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Lead	0.014	+/-0.500	U	0.250	0.500	MS	4/22/2020	15:02	MS2042220C 6
	Nickel	-0.001	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Selenium	-0.029	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Silver	0.005	+/-0.500	U	0.250	0.500	MS	4/22/2020	15:02	MS2042220C 6
	Thallium	0.007	+/-0.250	U	0.150	0.250	MS	4/22/2020	15:02	MS2042220C 6
	Vanadium	-0.003	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Zinc	-0.091	+/-5.000	U	2.500	5.000	MS	4/22/2020	15:02	MS2042220C 6
CCB1										
	Antimony	0.339	+/-1.000	U	0.500	1.000	MS	4/22/2020	15:20	MS2042220C 6
	Arsenic	-0.067	+/-1.000	U	1.250	1.000	MS	4/22/2020	15:20	MS2042220C 6
	Barium	-0.038	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Beryllium	-0.017	+/-0.200	U	0.150	0.200	MS	4/22/2020	15:20	MS2042220C 6
	Cadmium	0.018	+/-0.250	U	0.125	0.250	MS	4/22/2020	15:20	MS2042220C 6
	Chromium	0.019	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Cobalt	0.017	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Copper	0.021	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Lead	0.015	+/-0.500	U	0.250	0.500	MS	4/22/2020	15:20	MS2042220C 6
	Nickel	0.002	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Selenium	-0.276	+/-2.500	U	1.250	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Silver	0.006	+/-0.500	U	0.250	0.500	MS	4/22/2020	15:20	MS2042220C 6
	Thallium	0.009	+/-0.250	U	0.150	0.250	MS	4/22/2020	15:20	MS2042220C 6
	Vanadium	0.029	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Zinc	0.008	+/-5.000	U	2.500	5.000	MS	4/22/2020	15:20	MS2042220C 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½ LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Antimony	0.335	+/-1.000	U	0.500	1.000	MS	4/22/2020	16:31	MS2042220C 6
	Arsenic	-0.111	+/-1.000	U	1.250	1.000	MS	4/22/2020	16:31	MS2042220C 6
	Barium	-0.041	+/-2.500	U	1.250	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Beryllium	-0.008	+/-0.200	U	0.150	0.200	MS	4/22/2020	16:31	MS2042220C 6
	Cadmium	0.018	+/-0.250	U	0.125	0.250	MS	4/22/2020	16:31	MS2042220C 6
	Chromium	0.011	+/-2.500	U	1.250	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Cobalt	0.008	+/-2.500	U	1.250	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Copper	0.007	+/-2.500	U	1.250	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Lead	0.021	+/-0.500	U	0.250	0.500	MS	4/22/2020	16:31	MS2042220C 6
	Nickel	-0.008	+/-2.500	U	1.250	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Selenium	-0.299	+/-2.500	U	1.250	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Silver	0.007	+/-0.500	U	0.250	0.500	MS	4/22/2020	16:31	MS2042220C 6
	Thallium	0.007	+/-0.250	U	0.150	0.250	MS	4/22/2020	16:31	MS2042220C 6
	Vanadium	0.018	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Zinc	0.038	+/-5.000	U	2.500	5.000	MS	4/22/2020	16:31	MS2042220C 6
CCB3										
	Antimony	0.314	+/-1.000	U	0.500	1.000	MS	4/22/2020	17:47	MS2042220C 6
	Arsenic	-0.001	+/-1.000	U	1.250	1.000	MS	4/22/2020	17:47	MS2042220C 6
	Barium	-0.033	+/-2.500	U	1.250	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Beryllium	-0.011	+/-0.200	U	0.150	0.200	MS	4/22/2020	17:47	MS2042220C 6
	Cadmium	0.015	+/-0.250	U	0.125	0.250	MS	4/22/2020	17:47	MS2042220C 6
	Chromium	0.005	+/-2.500	U	1.250	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Cobalt	0.009	+/-2.500	U	1.250	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Copper	0.014	+/-2.500	U	1.250	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Lead	0.021	+/-0.500	U	0.250	0.500	MS	4/22/2020	17:47	MS2042220C 6
	Nickel	-0.021	+/-2.500	U	1.250	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Selenium	-0.043	+/-2.500	U	1.250	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Silver	0.009	+/-0.500	U	0.250	0.500	MS	4/22/2020	17:47	MS2042220C 6
	Thallium	0.010	+/-0.250	U	0.150	0.250	MS	4/22/2020	17:47	MS2042220C 6
	Vanadium	0.005	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Zinc	-0.089	+/-5.000	U	2.500	5.000	MS	4/22/2020	17:47	MS2042220C 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Antimony	0.267	+/-1.000	U	0.500	1.000	MS	5/11/2020	11:50	MS2051120C 6
	Arsenic	-0.210	+/-1.000	U	1.250	1.000	MS	5/11/2020	11:50	MS2051120C 6
	Barium	0.008	+/-2.500	U	1.250	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Beryllium	0.016	+/-0.200	U	0.150	0.200	MS	5/11/2020	11:50	MS2051120C 6
	Cadmium	0.014	+/-0.250	U	0.125	0.250	MS	5/11/2020	11:50	MS2051120C 6
	Chromium	-0.005	+/-2.500	U	1.250	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Cobalt	-0.004	+/-2.500	U	1.250	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Copper	-0.009	+/-2.500	U	1.250	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Lead	0.003	+/-0.500	U	0.250	0.500	MS	5/11/2020	11:50	MS2051120C 6
	Nickel	-0.002	+/-2.500	U	1.250	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Selenium	-0.586	+/-2.500	U	1.250	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Silver	0.017	+/-0.500	U	0.250	0.500	MS	5/11/2020	11:50	MS2051120C 6
	Thallium	0.011	+/-0.250	U	0.150	0.250	MS	5/11/2020	11:50	MS2051120C 6
	Vanadium	0.018	+/-2.500	U	2.500	2.500	MS	5/11/2020	11:50	MS2051120C 6
	Zinc	0.007	+/-5.000	U	2.500	5.000	MS	5/11/2020	11:50	MS2051120C 6
CCB1										
	Antimony	0.449	+/-1.000	U	0.500	1.000	MS	5/11/2020	12:07	MS2051120C 6
	Arsenic	-0.118	+/-1.000	U	1.250	1.000	MS	5/11/2020	12:07	MS2051120C 6
	Barium	0.007	+/-2.500	U	1.250	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Beryllium	-0.002	+/-0.200	U	0.150	0.200	MS	5/11/2020	12:07	MS2051120C 6
	Cadmium	0.011	+/-0.250	U	0.125	0.250	MS	5/11/2020	12:07	MS2051120C 6
	Chromium	0.006	+/-2.500	U	1.250	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Cobalt	-0.001	+/-2.500	U	1.250	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Copper	-0.026	+/-2.500	U	1.250	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Lead	0.017	+/-0.500	U	0.250	0.500	MS	5/11/2020	12:07	MS2051120C 6
	Nickel	0.000	+/-2.500	U	1.250	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Selenium	-0.222	+/-2.500	U	1.250	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Silver	0.008	+/-0.500	U	0.250	0.500	MS	5/11/2020	12:07	MS2051120C 6
	Thallium	0.010	+/-0.250	U	0.150	0.250	MS	5/11/2020	12:07	MS2051120C 6
	Vanadium	0.025	+/-2.500	U	2.500	2.500	MS	5/11/2020	12:07	MS2051120C 6
	Zinc	-0.009	+/-5.000	U	2.500	5.000	MS	5/11/2020	12:07	MS2051120C 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Antimony	0.410	+/-1.000	U	0.500	1.000	MS	5/11/2020	13:18	MS2051120C 6
	Arsenic	0.074	+/-1.000	U	1.250	1.000	MS	5/11/2020	13:18	MS2051120C 6
	Barium	0.012	+/-2.500	U	1.250	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Beryllium	0.003	+/-0.200	U	0.150	0.200	MS	5/11/2020	13:18	MS2051120C 6
	Cadmium	0.017	+/-0.250	U	0.125	0.250	MS	5/11/2020	13:18	MS2051120C 6
	Chromium	0.034	+/-2.500	U	1.250	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Cobalt	-0.007	+/-2.500	U	1.250	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Copper	-0.031	+/-2.500	U	1.250	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Lead	0.039	+/-0.500	U	0.250	0.500	MS	5/11/2020	13:18	MS2051120C 6
	Nickel	0.017	+/-2.500	U	1.250	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Selenium	0.450	+/-2.500	U	1.250	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Silver	0.021	+/-0.500	U	0.250	0.500	MS	5/11/2020	13:18	MS2051120C 6
	Thallium	0.030	+/-0.250	U	0.150	0.250	MS	5/11/2020	13:18	MS2051120C 6
	Vanadium	0.019	+/-2.500	U	2.500	2.500	MS	5/11/2020	13:18	MS2051120C 6
	Zinc	0.020	+/-5.000	U	2.500	5.000	MS	5/11/2020	13:18	MS2051120C 6
CCB3										
	Antimony	0.393	+/-1.000	U	0.500	1.000	MS	5/11/2020	14:34	MS2051120C 6
	Arsenic	-0.206	+/-1.000	U	1.250	1.000	MS	5/11/2020	14:34	MS2051120C 6
	Barium	-0.005	+/-2.500	U	1.250	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Beryllium	0.004	+/-0.200	U	0.150	0.200	MS	5/11/2020	14:34	MS2051120C 6
	Cadmium	0.002	+/-0.250	U	0.125	0.250	MS	5/11/2020	14:34	MS2051120C 6
	Chromium	0.016	+/-2.500	U	1.250	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Cobalt	-0.011	+/-2.500	U	1.250	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Copper	-0.044	+/-2.500	U	1.250	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Lead	0.027	+/-0.500	U	0.250	0.500	MS	5/11/2020	14:34	MS2051120C 6
	Nickel	0.008	+/-2.500	U	1.250	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Selenium	-0.530	+/-2.500	U	1.250	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Silver	0.006	+/-0.500	U	0.250	0.500	MS	5/11/2020	14:34	MS2051120C 6
	Thallium	0.009	+/-0.250	U	0.150	0.250	MS	5/11/2020	14:34	MS2051120C 6
	Vanadium	0.015	+/-2.500	U	2.500	2.500	MS	5/11/2020	14:34	MS2051120C 6
	Zinc	-0.008	+/-5.000	U	2.500	5.000	MS	5/11/2020	14:34	MS2051120C 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	½LOQ	M	Analysis Date	Analysis Time	Run
CCB4										
	Antimony	0.428	+/-1.000	U	0.500	1.000	MS	5/11/2020	15:38	MS2051120C 6
	Arsenic	-0.120	+/-1.000	U	1.250	1.000	MS	5/11/2020	15:38	MS2051120C 6
	Barium	0.006	+/-2.500	U	1.250	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Beryllium	0.031	+/-0.200	U	0.150	0.200	MS	5/11/2020	15:38	MS2051120C 6
	Cadmium	0.006	+/-0.250	U	0.125	0.250	MS	5/11/2020	15:38	MS2051120C 6
	Chromium	-0.001	+/-2.500	U	1.250	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Cobalt	-0.004	+/-2.500	U	1.250	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Copper	-0.001	+/-2.500	U	1.250	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Lead	0.030	+/-0.500	U	0.250	0.500	MS	5/11/2020	15:38	MS2051120C 6
	Nickel	-0.006	+/-2.500	U	1.250	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Selenium	-0.241	+/-2.500	U	1.250	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Silver	0.014	+/-0.500	U	0.250	0.500	MS	5/11/2020	15:38	MS2051120C 6
	Thallium	0.006	+/-0.250	U	0.150	0.250	MS	5/11/2020	15:38	MS2051120C 6
	Vanadium	0.026	+/-2.500	U	2.500	2.500	MS	5/11/2020	15:38	MS2051120C 6
	Zinc	0.026	+/-5.000	U	2.500	5.000	MS	5/11/2020	15:38	MS2051120C 6

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INTERFERENCE CHECK SAMPLE

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

ICS Source: Inorganic Ventures

Instrument ID: ICPMS2

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Antimony	0.12			-4.00 to 4.00	4/22/2020	15:08	MS2042220C 6
	Arsenic	-0.43			-4.00 to 4.00	4/22/2020	15:08	MS2042220C 6
	Barium	0.0040			-10.0000 to 10.000	4/22/2020	15:08	MS2042220C 6
	Beryllium	-0.017			-0.800 to 0.800	4/22/2020	15:08	MS2042220C 6
	Cadmium	0.046			-1.000 to 1.000	4/22/2020	15:08	MS2042220C 6
	Chromium	-1.1			-10.0 to 10.0	4/22/2020	15:08	MS2042220C 6
	Cobalt	0.24			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Copper	-0.14			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Lead	0.055			-2.000 to 2.000	4/22/2020	15:08	MS2042220C 6
	Nickel	0.56			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Selenium	-2.2			-10.0 to 10.0	4/22/2020	15:08	MS2042220C 6
	Silver	0.015			-2.000 to 2.000	4/22/2020	15:08	MS2042220C 6
	Thallium	0.013			-1.000 to 1.000	4/22/2020	15:08	MS2042220C 6
	Vanadium	-0.95			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Zinc	1.4			-20.0 to 20.0	4/22/2020	15:08	MS2042220C 6

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INTERFERENCE CHECK SAMPLE

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

ICS Source: Inorganic Ventures

Instrument ID: ICPMS2

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Antimony	0.31			-4.00 to 4.00	5/11/2020	11:56	MS2051120C 6
	Arsenic	-0.23			-4.00 to 4.00	5/11/2020	11:56	MS2051120C 6
	Barium	0.053			-10.000 to 10.000	5/11/2020	11:56	MS2051120C 6
	Beryllium	-0.0017			-0.8000 to 0.8000	5/11/2020	11:56	MS2051120C 6
	Cadmium	0.15			-1.00 to 1.00	5/11/2020	11:56	MS2051120C 6
	Chromium	-1.2			-10.0 to 10.0	5/11/2020	11:56	MS2051120C 6
	Cobalt	0.22			-10.00 to 10.00	5/11/2020	11:56	MS2051120C 6
	Copper	-0.25			-10.00 to 10.00	5/11/2020	11:56	MS2051120C 6
	Lead	0.070			-2.000 to 2.000	5/11/2020	11:56	MS2051120C 6
	Nickel	0.61			-10.00 to 10.00	5/11/2020	11:56	MS2051120C 6
	Selenium	-0.93			-10.00 to 10.00	5/11/2020	11:56	MS2051120C 6
	Silver	0.032			-2.000 to 2.000	5/11/2020	11:56	MS2051120C 6
	Thallium	0.025			-1.000 to 1.000	5/11/2020	11:56	MS2051120C 6
	Vanadium	-0.61			-10.00 to 10.00	5/11/2020	11:56	MS2051120C 6
	Zinc	1.8			-20.0 to 20.0	5/11/2020	11:56	MS2051120C 6

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SERIAL DILUTION SAMPLE SUMMARY

Client: Draper Aden Associates **SDG No.:** VD17087
Contract: RAAP HWMU16 **Lab Code:** **Case No.:** **SAS No.:**
Matrix: WATER **Level:** **Client ID:** 16WC1AL
Sample ID: VD17087-004 **Serial Dilution ID:** VD17087-004L
Batch Number: 51454

Analyte	Initial Result ug/L	C	Serial Result ug/L	C	% Difference	Qual	Acceptance Limits	M
Antimony	0.50	U	2.50	U			10.00 %	MS
Arsenic	2.00	U	10.00	U			10.00 %	MS
Barium	357.80		346.55		3.1		10.00 %	MS
Beryllium	0.20	U	1.00	U			10.00 %	MS
Cadmium	0.20	U	1.00	U			10.00 %	MS
Chromium	1.30	U	6.50	U			10.00 %	MS
Cobalt	17.75		17.71	J	0.3		10.00 %	MS
Copper	1.39	J	6.50	U	100.0		10.00 %	MS
Lead	1.00	U	5.00	U			10.00 %	MS
Nickel	15.01		15.04	J	0.2		10.00 %	MS
Selenium	3.00	U	15.00	U			10.00 %	MS
Silver	0.30	U	1.50	U			10.00 %	MS
Thallium	0.20	U	1.00	U			10.00 %	MS
Vanadium	2.50	U	12.50	U			10.00 %	MS
Zinc	19.08	J	36.50	U	100.0		10.00 %	MS

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Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ Mod. Ref. No.: _____ SDG No.: **VD17087**

Instrument Type: MS Instrument ID: ICPMS2

Preparation Method: 3005A

Concentration Units (ug/L, mg/kg, or ug): UG/L

Analyte	Wavelength/Mass	MDL
Antimony	123.00	0.500
Arsenic	75.00	1.25
Barium	135.00	1.3
Beryllium	9.00	0.150
Cadmium	114.00	0.13
Chromium	52.00	1.25
Cobalt	59.00	1.250
Copper	65.00	1.25
Lead	208.00	0.25
Nickel	60.00	1.250
Selenium	82.00	1.25
Silver	107.00	0.250
Thallium	205.00	0.150
Vanadium	51.00	2.500
Zinc	66.00	2.50

Comments: _____

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LINEAR RANGES

Client: Draper Aden Associates SDG No.: VD17087
Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:
Instrument ID: ICPMS2 Date: Analyzed Daily

Analyte	Integration Time (sec)	LDR ug/L
Antimony	0.10	1000
Arsenic	0.10	2000
Barium	0.10	10000
Beryllium	0.10	1000
Cadmium	0.10	2000
Chromium	0.10	2000
Cobalt	0.10	2000
Copper	0.10	2000
Lead	0.10	2000
Nickel	0.10	2000
Selenium	0.10	2000
Silver	0.10	500
Thallium	0.10	1000
Vanadium	0.10	2000
Zinc	0.10	2000

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Case No.: SAS No.: SDG No.: VD17087

Instrument ID Number: ICPMS2 Run Number: MS2042220C 6020B ONLY, generated

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1.00	1403																													
BLANK	1.00	1409			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL1	1.00	1415			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
MW12644	1.00	1421			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL2	1.00	1427			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL3	1.00	1433			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL4	1.00	1439			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL5	1.00	1445																													
CAL6	1.00	1451																													
ICV1	1.00	1457			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ICB1	1.00	1502			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ICSA	1.00	1508			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CCV1	1.00	1514			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CCB1	1.00	1520			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VO51454-001	1.00	1526			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VO51454-002	1.00	1532			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-001	1.00	1538			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-002	1.00	1544			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-003	1.00	1549			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-004	1.00	1555			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-004S	1.00	1601			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-004SD	1.00	1607			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
VD17087-004L	5.00	1613			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ZZZZZZ	1.00	1619																													
CCV2	1.00	1625			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CCB2	1.00	1631			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ZZZZZZ	1.00	1637																													
VD17087-005	1.00	1642				X	X	X	X		X	X	X		X			X		X	X			X	X						
VD17087-006	1.00	1648			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ZZZZZZ	1.00	1654																													
ZZZZZZ	1.00	1700																													
ZZZZZZ	1.00	1706																													
ZZZZZZ	1.00	1712																													
ZZZZZZ	1.00	1718																													
ZZZZZZ	1.00	1723																													
ZZZZZZ	1.00	1729																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17087

Instrument ID Number: ICPMS2 Run Number: MS2042220C 6020B ONLY, generated

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1.00	1735																													
CCV3	1.00	1741			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X					
CCB3	1.00	1747			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X					
ZZZZZZ	1.00	1753																													
ZZZZZZ	5.00	1759																													
ZZZZZZ	1.00	1804																													
ZZZZZZ	1.00	1810																													
ZZZZZZ	1.00	1816																													
ZZZZZZ	1.00	1822																													
ZZZZZZ	1.00	1828																													
ZZZZZZ	1.00	1834																													
ZZZZZZ	5.00	1840																													
ZZZZZZ	1.00	1845																													
ZZZZZZ	1.00	1851																													
ZZZZZZ	1.00	1857																													
ZZZZZZ	1.00	1903																													
ZZZZZZ	1.00	1909																													
ZZZZZZ	1.00	1915																													
ZZZZZZ	1.00	1921																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17087

Instrument ID Number: ICPMS2 Run Number: MS2051120C 6020B 200.8, generate

Start Date: 5/11/2020 End Date: 5/12/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1.00	1039																													
BLANK	1.00	1045			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
MW12519B	1.00	1051																													
MW12617	1.00	1057																													
CAL1	1.00	1103			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
MW12644	1.00	1108			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL2	1.00	1114			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL3	1.00	1120			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL4	1.00	1126			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CAL5	1.00	1132																													
CAL6	1.00	1138																													
ICV1	1.00	1144			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ICB1	1.00	1150			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ICSA	1.00	1156			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CCV1	1.00	1202			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CCB1	1.00	1207			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ZZZZZZ	1.00	1213																													
ZZZZZZ	1.00	1219																													
ZZZZZZ	1.00	1225																													
ZZZZZZ	1.00	1231																													
ZZZZZZ	1.00	1237																													
ZZZZZZ	1.00	1242																													
ZZZZZZ	1.00	1248																													
ZZZZZZ	1.00	1254																													
ZZZZZZ	1.00	1300																													
ZZZZZZ	1.00	1306																													
CCV2	1.00	1312			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
CCB2	1.00	1318			X	X	X	X	X		X	X	X		X			X		X	X		X	X	X						
ZZZZZZ	1.00	1324																													
ZZZZZZ	1.00	1329																													
ZZZZZZ	5.00	1335																													
ZZZZZZ	1.00	1341																													
ZZZZZZ	1.00	1347																													
ZZZZZZ	1.00	1353																													
ZZZZZZ	5.00	1358																													
ZZZZZZ	5.00	1404																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Case No.: SAS No.: SDG No.: VD17087

Instrument ID Number: ICPMS2 Run Number: MS2051120C 6020B 200.8, generate

Start Date: 5/11/2020 End Date: 5/12/2020

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
VO53374-001	1.00	1410			X	X	X	X	X		X	X	X	X					X		X	X		X	X
VO53374-002	1.00	1416			X	X	X	X	X		X	X	X	X					X		X	X		X	X
VD17087-005	1.00	1422			X																		X		
CCV3	1.00	1428			X	X	X	X	X		X	X	X	X					X		X	X		X	X
CCB3	1.00	1434			X	X	X	X	X		X	X	X	X					X		X	X		X	X
VD17087-005D	1.00	1439			X																		X		
ZZZZZZ	1.00	1445																							
ZZZZZZ	1.00	1451																							
ZZZZZZ	1.00	1457																							
ZZZZZZ	1.00	1503																							
ZZZZZZ	1.00	1509																							
ZZZZZZ	5.00	1514																							
ZZZZZZ	1.00	1520																							
ZZZZZZ	1.00	1526																							
CCV4	1.00	1532			X	X	X	X	X		X	X	X	X					X		X	X		X	X
CCB4	1.00	1538			X	X	X	X	X		X	X	X	X					X		X	X		X	X
ZZZZZZ	5.00	1544																							
ZZZZZZ	5.00	1549																							
ZZZZZZ	1.00	1555																							
ZZZZZZ	1.00	1601																							
ZZZZZZ	1.00	1607																							
ZZZZZZ	1.00	1613																							
ZZZZZZ	1.00	1619																							
ZZZZZZ	1.00	1624																							
ZZZZZZ	1.00	1630																							
ZZZZZZ	1.00	1636																							
ZZZZZZ	1.00	1642																							
ZZZZZZ	1.00	1648																							
ZZZZZZ	1.00	1654																							
ZZZZZZ	5.00	1700																							
ZZZZZZ	1.00	1705																							
ZZZZZZ	1.00	1711																							
ZZZZZZ	1.00	1717																							
ZZZZZZ	1.00	1723																							
ZZZZZZ	1.00	1729																							
ZZZZZZ	1.00	1735																							

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17087

Instrument ID Number: ICPMS2 Run Number: MS2051120C 6020B 200.8, generate

Start Date: 5/11/2020 End Date: 5/12/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1.00	2111																													
ZZZZZZ	1.00	2117																													
ZZZZZZ	1.00	2123																													
ZZZZZZ	1.00	2129																													
ZZZZZZ	1.00	2134																													
ZZZZZZ	1.00	2140																													
ZZZZZZ	1.00	2146																													
ZZZZZZ	1.00	2152																													
ZZZZZZ	1.00	2158																													
ZZZZZZ	5.00	2204																													
ZZZZZZ	5.00	2210																													
ZZZZZZ	1.00	2215																													
ZZZZZZ	1.00	2221																													
ZZZZZZ	1.00	2227																													
ZZZZZZ	1.00	2233																													
ZZZZZZ	1.00	2239																													
ZZZZZZ	1.00	2245																													
ZZZZZZ	1.00	2251																													
ZZZZZZ	5.00	2256																													
ZZZZZZ	1.00	2302																													
ZZZZZZ	20.00	2308																													
ZZZZZZ	200.00	2314																													
ZZZZZZ	5.00	2320																													
ZZZZZZ	5.00	2326																													
ZZZZZZ	5.00	2332																													
ZZZZZZ	1.00	2337																													
ZZZZZZ	1.00	2343																													
ZZZZZZ	1.00	2349																													
ZZZZZZ	20.00	2355																													
ZZZZZZ	1.00	0001																													
ZZZZZZ	1.00	0007																													
ZZZZZZ	1.00	0013																													
ZZZZZZ	1.00	0018																													
ZZZZZZ	1.00	0024																													
ZZZZZZ	1.00	0030																													
ZZZZZZ	1.00	0036																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Case No.: SAS No.: SDG No.: VD17087

Instrument ID Number: ICPMS2 Run Number: MS2051120C 6020B 200.8, generate

Start Date: 5/11/2020 End Date: 5/12/2020

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N
ZZZZZZ	1.00	0042																									
ZZZZZZ	1.00	0048																									

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17087ICP-MS Instrument ID: ICPMS2 Start Date: 04/22/2020 End Date: 04/22/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
TUNE	ZZZZZZ	1403												
BLANK	BLANK IM9936-01	1409	100		100		100		100		100		100	
CAL1	CAL1 MW-12643	1415	99		99		100		99		100		100	
MW12644	MW12644	1421	99		98		98		97		99		97	
CAL2	CAL2 MW-12645	1427	96		96		96		95		98		94	
CAL3	CAL3 MW-12520	1433	96		91		91		88		95		89	
CAL4	CAL4 MW-12521	1439	93		86		86		82		92		84	
CAL5	CAL5 MW-12618	1445	88		83		82		82		90		83	
CAL6	CAL6 MW-12619	1451	86		83		79		82		88		83	
ICV1	ICV1	1457	90		86		83		87		93		86	
ICB1	ICB1	1502	96		91		90		88		94		89	
ICSA	ICSA	1508	89		84		80		78		92		83	
CCV1	CCV1	1514	92		88		85		85		96		88	
CCB1	CCB1	1520	99		94		92		89		98		92	
VQ51454-001	VQ51454-001MB	1526	98		92		93		86		97		90	
VQ51454-002	LCS	1532	95		87		90		82		93		85	
VD17087-001	16C1	1538	92		87		93		84		93		88	
VD17087-002	16MW8	1544	90		81		85		76		89		86	
VD17087-003	16MW9	1549	89		84		90		80		89		83	
VD17087-004	16WC1A	1555	85		77		82		72		84		77	
VD17087-004	16WC1AS	1601	84		75		80		71		82		75	
VD17087-004	16WC1ASD	1607	85		75		81		71		84		75	
VD17087-004	16WC1AL	1613	88		80		84		78		85		79	
VD17087-004	ZZZZZZ	1619												
CCV2	CCV2	1625	81		75		75		75		82		75	
CCB2	CCB2	1631	86		81		82		81		84		79	
LR	ZZZZZZ	1637												
VD17087-005	16WDUP	1642	86		78		82		74		85		77	
VD17087-006	16WC1B	1648	85		76		82		73		84		76	
VQ51455-001	ZZZZZZ	1654												
VQ51455-002	ZZZZZZ	1700												
VD17091-001	ZZZZZZ	1706												
VD17091-002	ZZZZZZ	1712												
VD17091-003	ZZZZZZ	1718												
VD17091-004	ZZZZZZ	1723												
VD17091-005	ZZZZZZ	1729												
VD17091-005	ZZZZZZ	1735												
CCV3	CCV3	1741	76		71		73		71		78		71	
CCB3	CCB3	1747	81		75		78		75		79		73	
VD17091-005	ZZZZZZ	1753												
VD17091-005	ZZZZZZ	1759												
VD17091-005	ZZZZZZ	1804												
VD15011-023	ZZZZZZ	1810												
VD15011-024	ZZZZZZ	1816												
VD15011-029	ZZZZZZ	1822												

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17087

ICP-MS Instrument ID: ICPMS2 Start Date: 04/22/2020 End Date: 04/22/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
VD15011-029	ZZZZZZ	1828												
VD15011-029	ZZZZZZ	1834												
VD15011-029	ZZZZZZ	1840												
VD15011-029	ZZZZZZ	1845												
CCV4	ZZZZZZ	1851												
CCB4	ZZZZZZ	1857												
VD15011-030	ZZZZZZ	1903												
VD15011-031	ZZZZZZ	1909												
CCV	ZZZZZZ	1915												
CCB	ZZZZZZ	1921												

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17087ICP-MS Instrument ID: ICPMS2 Start Date: 05/11/2020 End Date: 05/11/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
TUNE	ZZZZZZ	1039												
BLANK	BLANK IM9968-01	1045	100		100		100		100		100		100	
MW12519B	MW12519B	1051	102		101		100		101		101		101	
MW12617	MW12617	1057	104		102		100		101		103		101	
CAL1	CAL1 MW-12643	1103	104		102		100		101		102		102	
MW12644	MW12644	1108	103		101		101		102		102		102	
CAL2	CAL2 MW-12645	1114	104		102		101		102		102		102	
CAL3	CAL3 MW-12813	1120	103		101		100		102		102		102	
CAL4	CAL4 MW-12814	1126	104		99		96		97		101		98	
CAL5	CAL5 MW-12618	1132	95		96		90		98		99		97	
CAL6	CAL6 MW-12619	1138	95		99		93		103		101		102	
ICV1	ICV1	1144	104		106		101		110		107		108	
ICB1	ICB1	1150	115		118		115		121		114		118	
ICSA	ICSA	1156	103		101		90		95		105		100	
CCV1	CCV1	1202	107		104		93		101		109		105	
CCB1	CCB1	1207	122		120		112		116		119		120	
VQ53133-001	ZZZZZZ	1213												
VQ53133-002	ZZZZZZ	1219												
VE04005-009	ZZZZZZ	1225												
VQ52974-001	ZZZZZZ	1231												
VQ52974-002	ZZZZZZ	1237												
VE02018-005	ZZZZZZ	1242												
VE02018-006	ZZZZZZ	1248												
VE02018-007	ZZZZZZ	1254												
VE02018-008	ZZZZZZ	1300												
VE02018-008	ZZZZZZ	1306												
CCV2	CCV2	1312	98		98		92		97		100		101	
CCB2	CCB2	1318	108		114		113		119		109		117	
LR	ZZZZZZ	1324												
VE02018-008	ZZZZZZ	1329												
VE02018-008	ZZZZZZ	1335												
VE02018-008	ZZZZZZ	1341												
VQ53372-001	ZZZZZZ	1347												
VQ53372-002	ZZZZZZ	1353												
XVE08113-00	ZZZZZZ	1358												
XVE08113-00	ZZZZZZ	1404												
VQ53374-001	VQ53374-001MB	1410	114		104		97		96		108		103	
VQ53374-002	LCS	1416	111		98		89		88		104		96	
VD17087-005	16WDUP	1422	104		96		91		91		102		98	
CCV3	CCV3	1428	101		97		89		95		101		99	
CCB3	CCB3	1434	115		114		110		114		113		115	
VD17087-005	16WDUPD	1439	107		104		103		105		107		106	
VE08021-001	ZZZZZZ	1445												
VE08021-002	ZZZZZZ	1451												
VE08021-003	ZZZZZZ	1457												

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17087ICP-MS Instrument ID: ICPMS2 Start Date: 05/11/2020 End Date: 05/11/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
VE08021-003	ZZZZZZ	1503												
VE08021-003	ZZZZZZ	1509												
VE08021-003	ZZZZZZ	1514												
VE08021-003	ZZZZZZ	1520												
VE08021-004	ZZZZZZ	1526												
CCV4	CCV4	1532	90		83		79		80		88		85	
CCB4	CCB4	1538	100		92		90		89		94		92	
VE08113-001	ZZZZZZ	1544												
VE08113-002	ZZZZZZ	1549												
VQ53370-001	ZZZZZZ	1555												
VQ53370-002	ZZZZZZ	1601												
VD23013-004	ZZZZZZ	1607												
VD23013-005	ZZZZZZ	1613												
VD23013-006	ZZZZZZ	1619												
VE06015-001	ZZZZZZ	1624												
VE06015-002	ZZZZZZ	1630												
VE06015-002	ZZZZZZ	1636												
CCV	ZZZZZZ	1642												
CCB	ZZZZZZ	1648												
VE06015-002	ZZZZZZ	1654												
VE06015-002	ZZZZZZ	1700												
VE06015-002	ZZZZZZ	1705												
VE06015-003	ZZZZZZ	1711												
VE06015-004	ZZZZZZ	1717												
VQ53070-001	ZZZZZZ	1723												
VQ53070-002	ZZZZZZ	1729												
VE05042-001	ZZZZZZ	1735												
VE05043-001	ZZZZZZ	1740												
VE05044-001	ZZZZZZ	1746												
CCV	ZZZZZZ	1752												
CCB	ZZZZZZ	1758												
VE05062-001	ZZZZZZ	1804												
VE05066-002	ZZZZZZ	1810												
VE05031-001	ZZZZZZ	1815												
VE05031-001	ZZZZZZ	1821												
VE05031-001	ZZZZZZ	1827												
VE05031-001	ZZZZZZ	1833												
VE05058-001	ZZZZZZ	1839												
VE05058-001	ZZZZZZ	1845												
VE05080-001	ZZZZZZ	1850												
VE06006-002	ZZZZZZ	1856												
CCV	ZZZZZZ	1902												
CCB	ZZZZZZ	1908												
VE05075-001	ZZZZZZ	1914												
VE05075-003	ZZZZZZ	1920												

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17087ICP-MS Instrument ID: ICPMS2 Start Date: 05/11/2020 End Date: 05/11/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
VE05075-004	ZZZZZZ	1926												
VE05075-005	ZZZZZZ	1931												
VE05075-006	ZZZZZZ	1937												
VQ53251-001	ZZZZZZ	1943												
VQ53251-002	ZZZZZZ	1949												
VE07023-001	ZZZZZZ	1955												
VE07023-002	ZZZZZZ	2001												
VE07043-001	ZZZZZZ	2007												
CCV	ZZZZZZ	2012												
CCB	ZZZZZZ	2018												
VE07043-001	ZZZZZZ	2024												
VE07043-001	ZZZZZZ	2030												
VE07043-001	ZZZZZZ	2036												
VE07039-001	ZZZZZZ	2042												
VE05016-004	ZZZZZZ	2048												
VE05016-011	ZZZZZZ	2053												
VE05016-026	ZZZZZZ	2059												
VE06079-001	ZZZZZZ	2105												
VE06093-001	ZZZZZZ	2111												
VE06096-001	ZZZZZZ	2117												
CCV	ZZZZZZ	2123												
CCB	ZZZZZZ	2129												
VE06113-001	ZZZZZZ	2134												
VE07038-001	ZZZZZZ	2140												
VE07038-001	ZZZZZZ	2146												
VE07040-001	ZZZZZZ	2152												
VE07082-001	ZZZZZZ	2158												
VE07041-001	ZZZZZZ	2204												
VE07042-001	ZZZZZZ	2210												
VE07045-001	ZZZZZZ	2215												
VE07049-001	ZZZZZZ	2221												
VE07049-003	ZZZZZZ	2227												
CCV	ZZZZZZ	2233												
CCB	ZZZZZZ	2239												
VE07049-003	ZZZZZZ	2245												
VE07049-003	ZZZZZZ	2251												
VE07049-003	ZZZZZZ	2256												
VE07072-001	ZZZZZZ	2302												
VE07083-001	ZZZZZZ	2308												
VE07083-001	ZZZZZZ	2314												
VE07084-001	ZZZZZZ	2320												
VE07100-001	ZZZZZZ	2326												
VE07101-001	ZZZZZZ	2332												
VE06115-001	ZZZZZZ	2337												
CCV	ZZZZZZ	2343												

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17087

ICP-MS Instrument ID: ICPMS2 Start Date: 05/11/2020 End Date: 05/11/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
CCB	ZZZZZZ	2349												
VE07102-001	ZZZZZZ	2355												
VE06115-002	ZZZZZZ	0001												
VE07048-001	ZZZZZZ	0007												
VE07009-001	ZZZZZZ	0013												
VE06116-001	ZZZZZZ	0018												
VE06116-001	ZZZZZZ	0024												
CCV	ZZZZZZ	0030												
CCB	ZZZZZZ	0036												
IS	ZZZZZZ	0042												
RINSE	ZZZZZZ	0048												

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ MA No.: _____ SDG No.: VD17087

Instrument ID: ICPMS2 Start Date: 4/22/2020

Analytical Method: ICP-MS Run Batch: MS2042220C 6020B ONLY, generated 1

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony	0.00	0	0	2.00	2.1	6	10.0	11	8
Arsenic	0.00	0	0	2.00	1.7	-17	10.0	11	7
Barium	0.00	0	0	5.00	4.9	-2	25.0	25	1
Beryllium	0.00	0	0	0.400	0.32	-20	2.00	2.1	4
Cadmium	0.00	0	0	0.100	0.10	0	0.500	0.50	0
Chromium	0.00	0	0	5.00	4.9	-1	25.0	25	-2
Cobalt	0.00	0	0	1.00	1.0	2	5.00	4.9	-1
Copper	0.00	0	0	5.00	5.3	5	25.0	26	3
Lead	0.00	0	0	1.00	0.92	-8	5.00	4.7	-5
Nickel	0.00	0	0	5.00	5.1	1	25.0	25	0
Selenium	0.00	0	0	5.00	4.7	-6	25.0	25	0
Silver	0.00	0	0	1.00	1.0	1	5.00	4.9	-1
Thallium	0.00	0	0	0.500	0.52	5	2.50	2.6	3
Vanadium	0.00	0	0	5.00	5.0	-1	25.0	25	-1
Zinc	0.00	0	0	10.0	10	4	50.0	50	-1

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ MA No.: _____ SDG No.: VD17087

Instrument ID: ICPMS2 Start Date: 5/11/2020

Analytical Method: ICP-MS Run Batch: MS2051120C 6020B 200.8, generated 0

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony	0.00	0	0	2.00	2.1	6	10.0	11	6
Arsenic	0.00	0	0	2.00	1.9	-5	10.0	10	1
Barium	0.00	0	0	5.00	5.0	1	25.0	25	-1
Beryllium	0.00	0	0	0.400	0.44	11	2.00	1.9	-5
Cadmium	0.00	0	0	0.100	0.088	-12	0.500	0.60	20
Chromium	0.00	0	0	5.00	5.0	0	25.0	25	-1
Cobalt	0.00	0	0	1.00	1.0	3	5.00	5.0	0
Copper	0.00	0	0	5.00	5.3	5	25.0	25	0
Lead	0.00	0	0	1.00	0.96	-4	5.00	4.9	-2
Nickel	0.00	0	0	5.00	5.2	4	25.0	25	-1
Selenium	0.00	0	0	5.00	4.6	-8	25.0	24	-3
Silver	0.00	0	0	1.00	1.0	2	5.00	4.9	-1
Thallium	0.00	0	0	0.500	0.49	-2	2.50	2.4	-4
Vanadium	0.00	0	0	5.00	5.0	0	25.0	24	-2
Zinc	0.00	0	0	10.0	10	5	50.0	49	-2

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: Case No.: MA No.: SDG No.: VD17087

Instrument ID: ICPMS2 Start Date: 4/22/2020

Analytical Method: ICP-MS Run Batch: MS2042220C 6020B ONLY, generate

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony	250	247	-1	500	501	0			
Arsenic	250	249	0	500	502	0			
Barium	250	249	-1	500	504	1			
Beryllium	250	249	0	500	500	0			
Cadmium	250	244	-2	500	503	1			
Chromium	250	246	-2	500	504	1			
Cobalt	250	248	-1	500	504	1			
Copper	250	253	1	500	499	0			
Lead	250	246	-2	500	503	1			
Nickel	250	250	0	500	500	0			
Selenium	250	248	-1	500	501	0			
Silver	250	255	2	500	518	4			
Thallium	250	262	5	500	494	-1			
Vanadium	250	245	-2	500	503	1			
Zinc	250	247	-1	500	500	0			

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: Case No.: MA No.: SDG No.: VD17087

Instrument ID: ICPMS2 Start Date: 5/11/2020

Analytical Method: ICP-MS Run Batch: MS2051120C 6020B 200.8, generat

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony	250	247	-1	500	501	0			
Arsenic	250	252	1	500	494	-1			
Barium	250	252	1	500	499	0			
Beryllium	250	251	0	500	499	0			
Cadmium	250	249	0	500	500	0			
Chromium	250	251	0	500	502	0			
Cobalt	250	247	-1	500	500	0			
Copper	250	252	1	500	499	0			
Lead	250	250	0	500	510	2			
Nickel	250	250	0	500	500	0			
Selenium	250	257	3	500	497	-1			
Silver	250	251	1	500	499	0			
Thallium	250	244	-2	500	503	1			
Vanadium	250	249	0	500	500	0			
Zinc	250	248	-1	500	500	0			

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: Case No.: MA No.: SDG No.: VD17087

Instrument ID: ICPMS2 Start Date: 4/22/2020

Analytical Method: ICP-MS Run Batch: MS2042220C 6020B ONLY, generate

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony				4.00	4.2	6			
Arsenic				4.00	4.2	5			
Barium				10.0	9.5	-5			
Beryllium				0.800	0.77	-3			
Cadmium				0.200	0.23	16			
Chromium				10.0	9.9	-1			
Cobalt				2.00	1.9	-4			
Copper				10.0	10	3			
Lead				2.00	1.9	-7			
Nickel				10.0	10	1			
Selenium				10.0	10	4			
Silver				2.00	2.0	-1			
Thallium				1.00	1.0	0			
Vanadium				10.0	9.9	-1			
Zinc				20.0	20	1			

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: Case No.: MA No.: SDG No.: VD17087

Instrument ID: ICPMS2 Start Date: 5/11/2020

Analytical Method: ICP-MS Run Batch: MS2051120C 6020B 200.8, generat

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Antimony				4.00	4.3	9			
Arsenic				4.00	3.9	-3			
Barium				10.0	10	5			
Beryllium				0.800	0.81	2			
Cadmium				0.200	0.20	2			
Chromium				10.0	9.9	-1			
Cobalt				2.00	2.0	-2			
Copper				10.0	10	2			
Lead				2.00	1.9	-3			
Nickel				10.0	9.9	-1			
Selenium				10.0	10	3			
Silver				2.00	2.0	-1			
Thallium				1.00	0.95	-5			
Vanadium				10.0	9.8	-2			
Zinc				20.0	20	2			

Raw Sample Data



Performance Report

Sample details

Acquired at : 4/22/2020 07:25:01

Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Mass Calibration verification

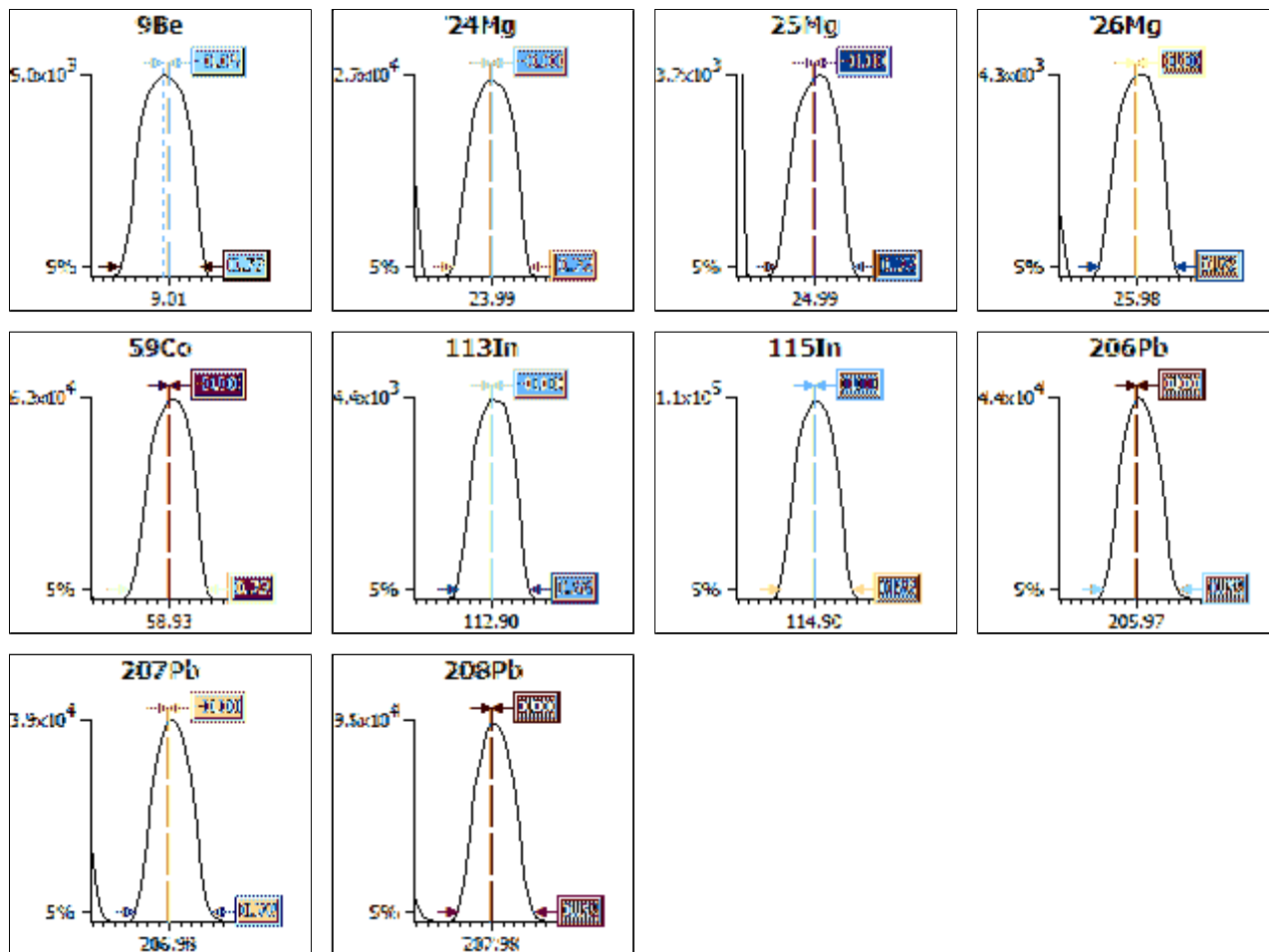
Acquisition parameters

Sweeps : 25

Dwell : 10.0 mSecs

Point spacing : 0.05 amu

Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.77	-0.05
24Mg	0.85	0.65	0.10	0.72	-0.00
25Mg	0.85	0.65	0.10	0.72	-0.00
26Mg	0.85	0.65	0.10	0.72	0.00
59Co	0.85	0.65	0.10	0.72	-0.00
113In	0.85	0.65	0.10	0.66	-0.00
115In	0.85	0.65	0.10	0.66	0.00
206Pb	0.85	0.65	0.10	0.72	0.00
207Pb	0.85	0.65	0.10	0.72	-0.00
208Pb	0.85	0.65	0.10	0.72	0.00

Sample details

Acquired at : 4/22/2020 07:25:01

Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Tune conditions

Major		Minor		Global		Add. Gases
Extraction	-109.8	Lens 3	-196.1	Standard resolution	100	
Lens 1	-1208	Forward power	1404	High resolution	90	
Lens 2	-87.1	Horizontal	95	Analogue Detector	2304	
Focus	15.5	Vertical	811	PC Detector	3627	
D1	-43.1	DA	-49.4			
D2	-147	Cool	13.0			
Pole Bias	1.0	Auxiliary	1.00			
Hexapole Bias	-2.0	Sampling Depth	100			
Nebuliser	0.81					

Sensitivity and stability results**Acquisition parameters**

Sweeps : 130

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	56Ar O	59Co	136Ba++	101Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	-	5.0%	-	-
	CountRate	-	>5000	>1000	>1000	>1000	-	>10000	-	-
1	07:26:23	0.000	5409.301	27450.613	3686.132	4399.526	130848.01	64315.939	1123.916	0.000
2	07:26:55	0.000	5364.659	27489.191	3713.835	4522.663	132205.13	63958.817	1063.908	0.000
3	07:27:27	0.000	5300.006	27213.748	3888.524	4448.011	131150.79	64154.806	1128.532	0.000
4	07:27:58	0.000	5262.292	26832.618	3719.222	4516.506	131850.03	63903.817	1124.685	0.000
5	07:28:30	0.000	5276.146	26531.737	3779.247	4524.972	132913.03	64505.738	1253.933	0.000
x		0.000	5322.481	27103.581	3757.392	4482.336	131793.40	64167.823	1138.995	0.000
s		0.00	62.43	412.82	80.79	56.23	826.59	249.84	69.62	0.00
%RSD		0.000	1.173	1.523	2.150	1.254	0.627	0.389	6.113	0.000

Run	Time	113In	115In	138Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	5.0%	5.0%	-	-	-	5.0%	5.0%	5.0%	-
	CountRate	>1000	>10000	-	-	-	>10000	>10000	>10000	<2
1	07:26:23	4835.901	110392.36	89481.300	121160.51	1859.421	45683.728	39864.908	97292.465	0.000
2	07:26:55	4615.787	110301.27	89214.077	121656.30	1754.015	45698.417	39846.365	97577.029	0.000
3	07:27:27	4847.446	110829.17	88668.781	120214.22	1836.339	45903.292	39793.828	97115.200	0.000
4	07:27:58	4799.728	110221.85	88567.027	121261.07	1799.409	45277.859	39306.329	96434.939	0.000
5	07:28:30	4865.148	110297.38	88538.288	121036.57	1815.566	45171.950	39562.823	96152.742	0.000
x		4792.802	110408.41	88893.895	121065.73	1812.950	45547.049	39674.851	96914.475	0.000
s		101.81	242.85	427.65	529.58	39.91	308.90	238.77	598.40	0.00
%RSD		2.124	0.220	0.481	0.437	2.201	0.678	0.602	0.617	0.000

Ratio results

Run	Time	56Ar O / 59Co	136Ba++ / 138Ba	115In / 101Bkg	156Ce O / 140Ce
Ratio limits		-	-	-	-
1	07:26:23	2.034	0.013	INF	0.015
2	07:26:55	2.067	0.012	INF	0.014
3	07:27:27	2.044	0.013	INF	0.015
4	07:27:58	2.063	0.013	INF	0.015
5	07:28:30	2.060	0.014	INF	0.015
x		2.0539	0.0128	0.0000	0.0150
s		0.01	0.00	0.00	0.00
%RSD		0.6772	6.4035	0.0000	2.4942

Result : The performance report passed.

FORM 11-IN

ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Shealy Environmental Services, I Contract: _____

Lab Code: _____ Case No.: _____ MA No.: _____ SDG No.: _____

Instrument ID: ICPMS2Run Batch: MS2042220C 6020B ONLY, gene Date: 4/22/2020

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	45Sc	
Antimony	159Tb	
Arsenic	115In	
Barium	115In	
Beryllium	6Li	
Boron	6Li	45Sc
Cadmium	115In	
Calcium	45Sc	
Chromium	45Sc	
Cobalt	45Sc	
Copper	115In	
Iron	45Sc	
Lead	159Tb	
Magnesium	45Sc	
Manganese	45Sc	
Molybdenum	115In	
Nickel	45Sc	
Potassium	6Li	45Sc
Selenium	115In	
Silicon	6Li	
Silver	115In	
Sodium	45Sc	
Strontium	45Sc	
Thallium	159Tb	
Tin	115In	159Tb
Titanium	45Sc	
Vanadium	45Sc	
Zinc	115In	

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2041020A 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	DELL
Last Edit Timestamp	4/22/2020 14:01:42
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.

Underlining indicates that a data warning flag is set.

Column headings	Result cells	Data warning flags
No flag	Internal Standard	I - Invalid calibration
Semi Quant	Excluded	T - Tripped
Standard Addition	QC Warning	F - Interference correction failed
Multi Element	QC Failure	M - Result over max
	Transient TRA only:	V - Valley integration failed
	Peak Not Found	D - Different method used
	Manually Edited	
	Merged Peak	

Fully Quantitative Concentrations

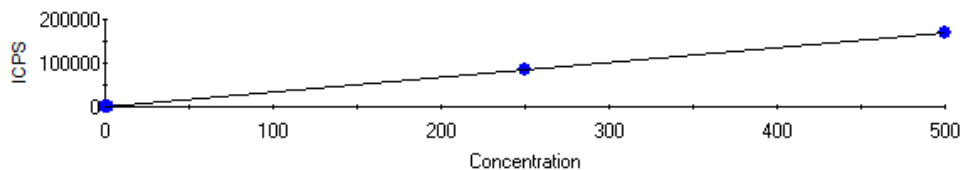
Id	Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si	39K
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000	400.000
4	MW12644	0.800		100.000	800.000	800.000	800.000	800.000	80.000		800.000
5	cal2 MW-12645	2.000			2000.000	2000.000	2000.000	2000.000	200.000		2000.000
6	cal3 MW-12520	250.000	250.000	250.000					250.000	250.000	
7	cal4 MW-12521	500.000	500.000	500.000					500.000	500.000	
8	cal5 MW-12618				50000.000	50000.000	50000.000	50000.000		5000.000	50000.000
9	cal6 MW-12619				100000.000	100000.000	100000.000	100000.000		10000.000	100000.000
Id	Label	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe	57Fe	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000	50.000	1.000
4	MW12644	800.000	800.000	10.000	10.000	10.000	10.000			100.000	2.000
5	cal2 MW-12645	2000.000	2000.000	25.000	25.000	25.000	25.000				5.000
6	cal3 MW-12520			250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521			500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618	50000.000	50000.000					50000.000	50000.000	50000.000	
9	cal6 MW-12619	100000.000	100000.000					100000.000	100000.000	100000.000	
Id	Label	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	82Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	5.000	5.000	5.000	5.000	10.000	10.000	10.000	2.000	5.000	5.000
4	MW12644	10.000			10.000	20.000			4.000		10.000
5	cal2 MW-12645	25.000	25.000	25.000	25.000	50.000	50.000	50.000	10.000	25.000	25.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag	106Cd	111Cd	114Cd	116Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	10.000	10.000	10.000	10.000	1.000	1.000	0.100	0.100	0.100	20.000
4	MW12644	20.000		20.000	20.000	2.000				0.200	
5	cal2 MW-12645	50.000	50.000	50.000	50.000	5.000	5.000	0.500	0.500	0.500	100.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	118Sn	121Sb	123Sb	135Ba	137Ba	203Tl	205Tl	206Pb	207Pb	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	20.000	2.000	2.000	5.000	5.000	0.500	0.500	1.000	1.000	1.000
4	MW12644	40.000		4.000	10.000	10.000	1.000	1.000	2.000	2.000	2.000
5	cal2 MW-12645	100.000	10.000	10.000	25.000	25.000	2.500	2.500	5.000	5.000	5.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	232Th	238U								
		ppb	ppb								

3	cal1 MW-12643	50.000
4	MW12644	
5	cal2 MW-12645	250.000
6	cal3 MW-12520	
7	cal4 MW-12521	500.000
8	cal5 MW-12618	
9	cal6 MW-12619	

Sample List

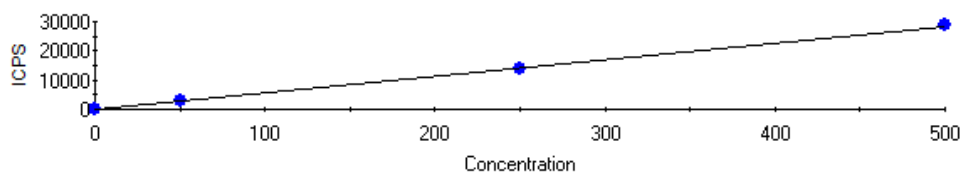
No	Label	Type	Weight	Rack	Row	Col	Height
1	TUNE MW12522	Unknown	1.000	0	1	5	144
2	BLANK IM9936-01	Blank	1.000	0	1	1	144
3	cal1 MW-12643	Fully Quant Standard	1.000	4	5	3	144
4	MW12644	Fully Quant Standard	1.000	4	5	4	144
5	cal2 MW-12645	Fully Quant Standard	1.000	4	5	5	144
6	cal3 MW-12520	Fully Quant Standard	1.000	4	5	6	144
7	cal4 MW-12521	Fully Quant Standard	1.000	4	5	7	144
8	cal5 MW-12618	Fully Quant Standard	1.000	4	5	8	144
9	cal6 MW-12619	Fully Quant Standard	1.000	4	5	9	144
10	ICV MW12789 PREP 4/22/20	QC Sample	1.000	4	5	11	144
11	ICB IM9936-01	QC Sample	1.000	0	1	1	144
12	ICSA MW12579	QC Sample	1.000	4	5	12	144
13	CCV MW12620	QC Sample	1.000	0	1	8	144
14	CCB IM9936-01	QC Sample	1.000	0	1	1	144
15	VQ51454-001	QC Sample	1.000	1	1	1	144
16	VQ51454-002	QC Sample	1.000	1	1	2	144
17	VD17087-001	Unknown	1.000	1	1	3	144
18	VD17087-002	Unknown	1.000	1	1	4	144
19	VD17087-003	Unknown	1.000	1	1	5	144
20	VD17087-004	Unknown	1.000	1	1	6	144
21	VD17087-004S	Unknown	1.000	1	1	7	144
22	VD17087-004SD	Unknown	1.000	1	1	8	144
23	VD17087-004L(5)	Unknown	1.000	1	1	9	144
24	VD17087-004A	Unknown	1.000	1	1	10	144
25	CCV MW12620	QC Sample	1.000	0	1	8	144
26	CCB IM9936-01	QC Sample	1.000	0	1	1	144
27	LR MW12519	QC Sample	1.000	4	5	10	144
28	VD17087-005	Unknown	1.000	1	2	1	144
29	VD17087-006	Unknown	1.000	1	2	2	144
30	VQ51455-001	QC Sample	1.000	1	2	3	144
31	VQ51455-002	QC Sample	1.000	1	2	4	144
32	VD17091-001	Unknown	1.000	1	2	5	144
33	VD17091-002	Unknown	1.000	1	2	6	144
34	VD17091-003	Unknown	1.000	1	2	7	144
35	VD17091-004	Unknown	1.000	1	2	8	144
36	VD17091-005	Unknown	1.000	1	2	9	144
37	VD17091-005S	Unknown	1.000	1	2	10	144
38	CCV MW12620	QC Sample	1.000	0	1	8	144
39	CCB IM9936-01	QC Sample	1.000	0	1	1	144
40	VD17091-005SD	Unknown	1.000	1	3	1	144
41	VD17091-005L(5)	Unknown	1.000	1	3	2	144
42	VD17091-005A	Unknown	1.000	1	3	3	144
43	VD15011-023	Unknown	1.000	1	3	4	144
44	VD15011-024	Unknown	1.000	1	3	5	144
45	VD15011-029	Unknown	1.000	1	3	6	144
46	VD15011-029S	Unknown	1.000	1	3	7	144
47	VD15011-029SD	Unknown	1.000	1	3	8	144
48	VD15011-029L(5)	Unknown	1.000	1	3	9	144
49	VD15011-029A	Unknown	1.000	1	3	10	144
50	CCV MW12620	QC Sample	1.000	0	1	8	144
51	CCB IM9936-01	QC Sample	1.000	0	1	1	144
52	VD15011-030	Unknown	1.000	1	4	1	144
53	VD15011-031	Unknown	1.000	1	4	2	144
54	CCV MW12620	QC Sample	1.000	0	1	8	144
55	CCB IM9936-01	QC Sample	1.000	0	1	1	144
56	IS MW12650	Unknown	1.000	0	3	5	144
57	RINSE	Unknown	1.000	0	1	5	144

Fully Quant Calibration

9Be FQ Block 1

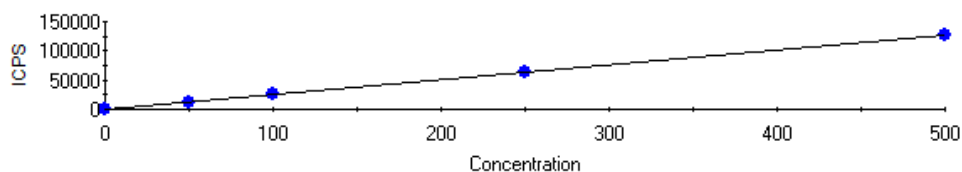
Intercept CPS=17.413757 Intercept Conc=0.052031
Sensitivity=334.677669 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	17.41	0.00
cal1 MW-12643	0.400	0.319	0.081	124.13	20.28
MW12644	0.800	0.773	0.027	276.22	3.34
cal2 MW-12645	2.000	2.093	0.093	717.75	4.63
cal3 MW-12520	250.000	249.004	0.996	83353.54	0.40
cal4 MW-12521	500.000	500.284	0.284	167451.19	0.06

10B FQ Block 1

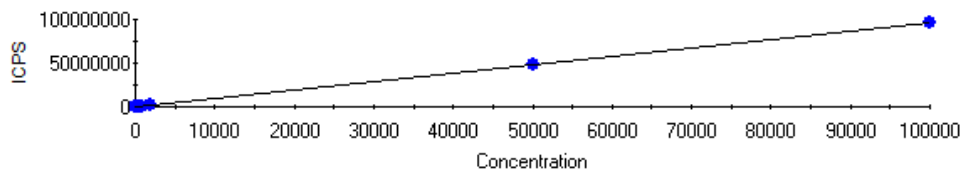
Intercept CPS=45.385382 Intercept Conc=0.799220
Sensitivity=56.787092 Correlation Coeff=0.999735

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	45.39	0.00
cal1 MW-12643	50.000	48.739	1.261	2813.14	2.52
cal3 MW-12520	250.000	241.226	8.774	13743.93	3.51
cal4 MW-12521	500.000	504.513	4.513	28695.20	0.90

11B FQ Block 1

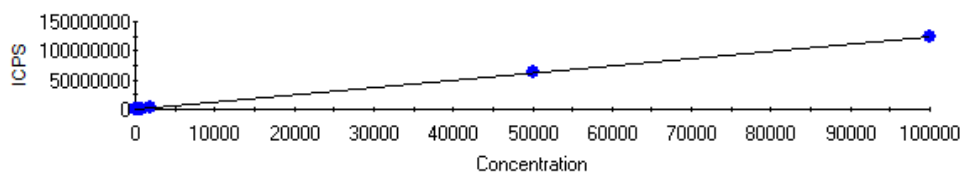
Intercept CPS=259.776766 Intercept Conc=1.035881
Sensitivity=250.778608 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	259.78	0.00
cal1 MW-12643	50.000	48.754	1.246	12486.19	2.49
MW12644	100.000	101.493	1.493	25711.93	1.49
cal3 MW-12520	250.000	253.028	3.028	63713.69	1.21
cal4 MW-12521	500.000	506.041	6.041	127164.11	1.21

23Na FQ Block 1

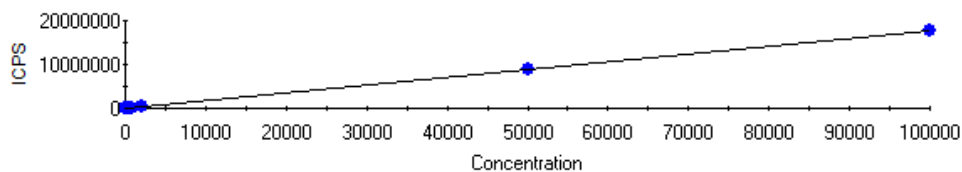
Intercept CPS=9081.467041 Intercept Conc=9.511486
Sensitivity=954.789514 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	9081.47	0.00
cal1 MW-12643	400.000	435.301	35.301	424702.76	8.83
MW12644	800.000	861.839	61.839	831956.13	7.73
cal2 MW-12645	2000.000	2033.523	33.523	1950668.08	1.68
cal5 MW-12618	50000.000	50210.227	210.227	47949279.90	0.42
cal6 MW-12619	100000.000	99893.580	106.420	95386424.16	0.11

24Mg FQ Block 1

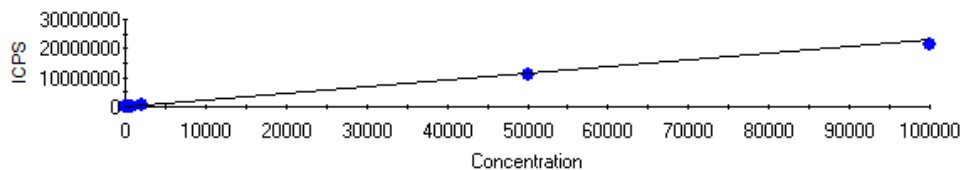
Intercept CPS=1922.859718 Intercept Conc=1.554999
Sensitivity=1236.566718 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1922.86	0.00
cal1 MW-12643	400.000	460.593	60.593	571477.24	15.15
MW12644	800.000	929.015	129.015	1150711.33	16.13
cal2 MW-12645	2000.000	2105.382	105.382	2605368.73	5.27
cal5 MW-12618	50000.000	50224.435	224.435	62107787.51	0.45
cal6 MW-12619	100000.000	99884.400	115.600	123515648.10	0.12

25Mg FQ Block 1

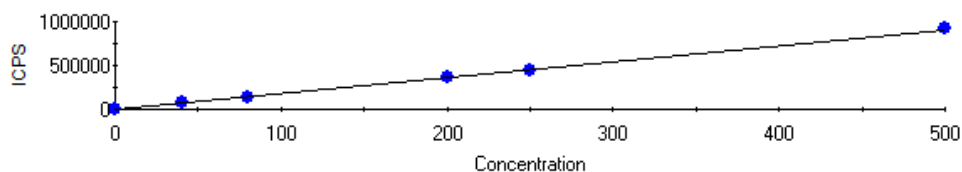
Intercept CPS=292.166635 Intercept Conc=1.634104
Sensitivity=178.793162 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	292.17	0.00
cal1 MW-12643	400.000	440.972	40.972	79134.87	10.24
MW12644	800.000	875.407	75.407	156808.95	9.43
cal2 MW-12645	2000.000	2202.546	202.546	394092.30	10.13
cal5 MW-12618	50000.000	50027.630	27.630	8944890.33	0.06
cal6 MW-12619	100000.000	99981.367	18.633	17876276.92	0.02

26Mg FQ Block 1

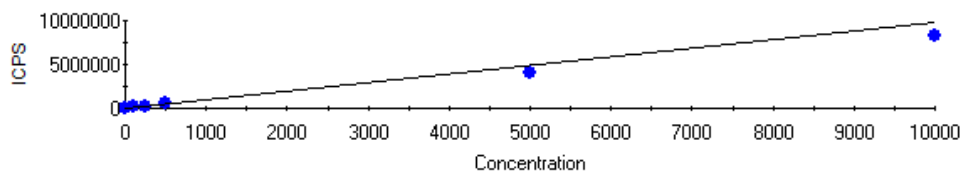
Intercept CPS=316.242242 Intercept Conc=1.382628
Sensitivity=228.725442 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	316.24	0.00
cal1 MW-12643	400.000	408.932	8.932	93849.28	2.23
MW12644	800.000	820.013	20.013	187874.17	2.50
cal2 MW-12645	2000.000	2075.598	75.598	475058.32	3.78
cal5 MW-12618	50000.000	47406.908	2593.092	10843482.19	5.19
cal6 MW-12619	100000.000	93631.014	6368.986	21416111.34	6.37

27Al FQ Block 1

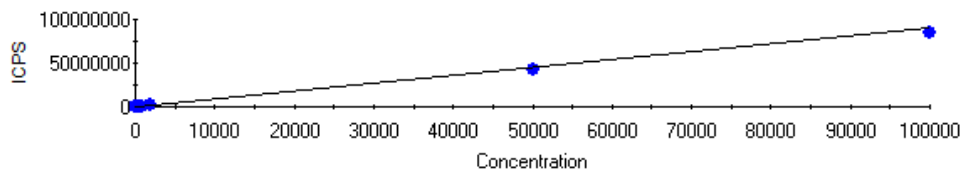
Intercept CPS=290.538306 Intercept Conc=0.160557
Sensitivity=1809.560040 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	290.54	0.00
cal1 MW-12643	40.000	40.088	0.088	72832.60	0.22
MW12644	80.000	79.498	0.502	144146.59	0.63
cal2 MW-12645	200.000	198.000	2.000	358583.54	1.00
cal3 MW-12520	250.000	249.320	0.680	451450.89	0.27
cal4 MW-12521	500.000	507.479	7.479	918604.46	1.50

28Si FQ Block 1

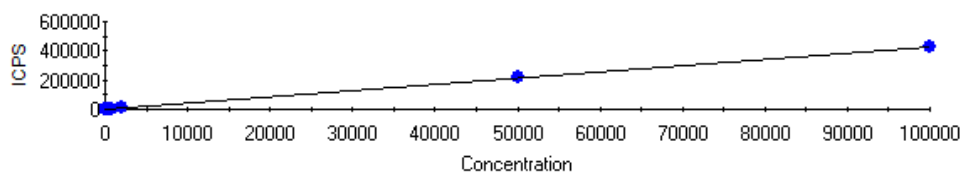
Intercept CPS=12337.884504 Intercept Conc=12.657863
Sensitivity=974.720983 Correlation Coeff=0.999794

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	12337.88	0.00
cal1 MW-12643	100.000	91.948	8.052	101961.52	8.05
cal3 MW-12520	250.000	250.326	0.326	256336.26	0.13
cal4 MW-12521	500.000	519.016	19.016	518233.96	3.80
cal5 MW-12618	5000.000	4085.008	914.992	3994081.26	18.30
cal6 MW-12619	10000.000	8437.520	1562.480	8236565.20	15.62

39K FQ Block 1

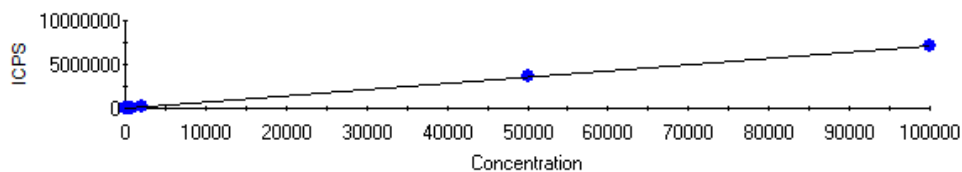
Intercept CPS=55155.248519 Intercept Conc=61.185574
Sensitivity=901.442034 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	55155.25	0.00
cal1 MW-12643	400.000	408.983	8.983	423829.34	2.25
MW12644	800.000	829.017	29.017	802465.62	3.63
cal2 MW-12645	2000.000	1975.043	24.957	1835541.64	1.25
cal5 MW-12618	50000.000	46544.282	3455.718	42012127.88	6.91
cal6 MW-12619	100000.000	93683.232	6316.768	84505158.38	6.32

43Ca FQ Block 1

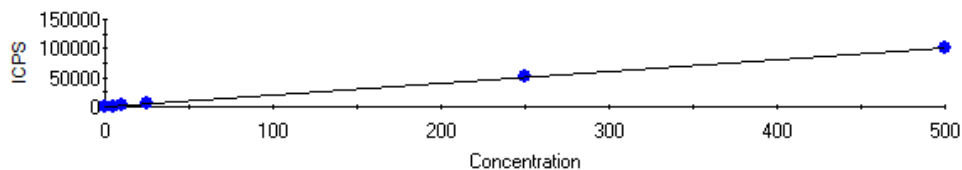
Intercept CPS=13.309839 Intercept Conc=3.106645
Sensitivity=4.284313 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.31	0.00
cal1 MW-12643	400.000	407.549	7.549	1759.38	1.89
MW12644	800.000	816.911	16.911	3513.21	2.11
cal2 MW-12645	2000.000	2109.470	109.470	9050.94	5.47
cal5 MW-12618	50000.000	50327.382	327.382	215631.56	0.65
cal6 MW-12619	100000.000	99833.954	166.046	427733.20	0.17

44Ca FQ Block 1

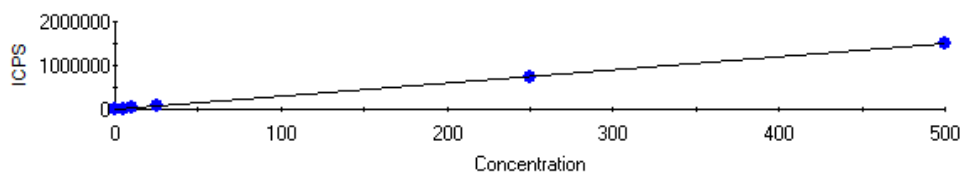
Intercept CPS=473.527476 Intercept Conc=6.620990
Sensitivity=71.519134 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	473.53	0.00
cal1 MW-12643	400.000	398.436	1.564	28969.30	0.39
MW12644	800.000	803.052	3.052	57907.14	0.38
cal2 MW-12645	2000.000	2021.146	21.146	145024.17	1.06
cal5 MW-12618	50000.000	49748.849	251.151	3558468.18	0.50
cal6 MW-12619	100000.000	100075.317	75.317	7157773.55	0.08

47Ti FQ Block 1

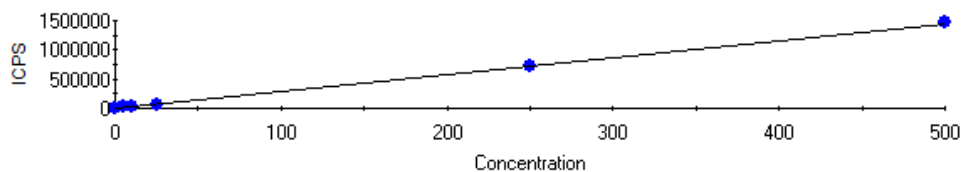
Intercept CPS=9.331027 Intercept Conc=0.045710
Sensitivity=204.134446 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	9.33	0.00
cal1 MW-12643	5.000	5.035	0.035	1037.25	0.71
MW12644	10.000	9.708	0.292	1990.97	2.92
cal2 MW-12645	25.000	25.820	0.820	5280.14	3.28
cal3 MW-12520	250.000	247.584	2.416	50549.71	0.97
cal4 MW-12521	500.000	499.900	0.100	102056.05	0.02

51V FQ Block 1

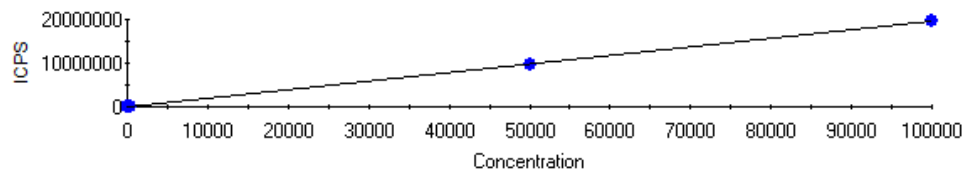
Intercept CPS=148.899046 Intercept Conc=0.049658
Sensitivity=2998.500176 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	148.90	0.00
cal1 MW-12643	5.000	4.965	0.035	15035.60	0.71
MW12644	10.000	9.873	0.127	29754.56	1.27
cal2 MW-12645	25.000	24.653	0.347	74071.73	1.39
cal3 MW-12520	250.000	244.919	5.081	734537.48	2.03
cal4 MW-12521	500.000	502.561	2.561	1507077.85	0.51

52Cr FQ Block 1

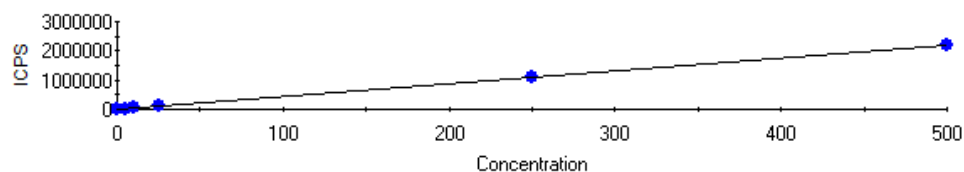
Intercept CPS=477.143826 Intercept Conc=0.164490
Sensitivity=2900.739688 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	477.14	0.00
cal1 MW-12643	5.000	4.933	0.067	14787.25	1.33
MW12644	10.000	9.883	0.117	29145.57	1.17
cal2 MW-12645	25.000	24.535	0.465	71647.62	1.86
cal3 MW-12520	250.000	245.643	4.357	713023.03	1.74
cal4 MW-12521	500.000	504.022	4.022	1462513.77	0.80

54Fe FQ Block 1

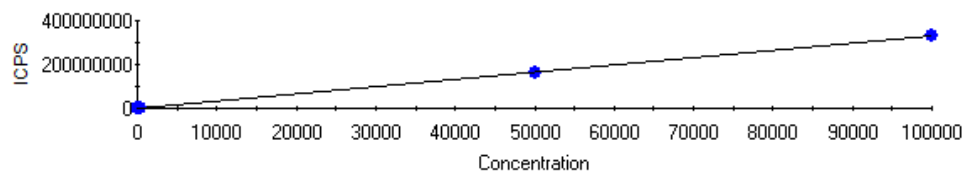
Intercept CPS=3028.697078 Intercept Conc=15.473761
Sensitivity=195.731154 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	3028.70	0.00
cal1 MW-12643	50.000	55.059	5.059	13805.52	10.12
cal3 MW-12520	250.000	383.256	133.256	78043.80	53.30
cal4 MW-12521	500.000	778.116	278.116	155330.22	55.62
cal5 MW-12618	50000.000	49978.998	21.002	9785475.74	0.04
cal6 MW-12619	100000.000	100008.775	8.775	19577861.60	0.01

55Mn FQ Block 1

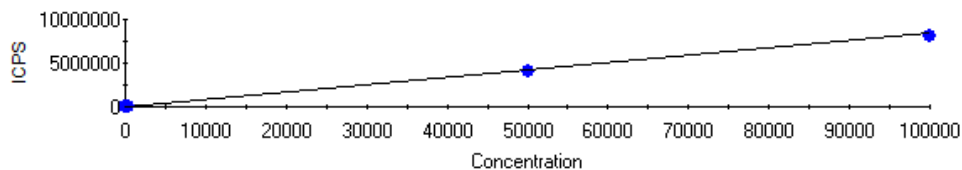
Intercept CPS=326.878583 Intercept Conc=0.074158
Sensitivity=4407.859604 Correlation Coeff=0.999889

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	326.88	0.00
cal1 MW-12643	5.000	4.751	0.249	21270.74	4.97
MW12644	10.000	9.375	0.625	41650.66	6.25
cal2 MW-12645	25.000	24.287	0.713	107378.49	2.85
cal3 MW-12520	250.000	243.609	6.391	1074120.96	2.56
cal4 MW-12521	500.000	503.246	3.246	2218565.38	0.65

56Fe FQ Block 1

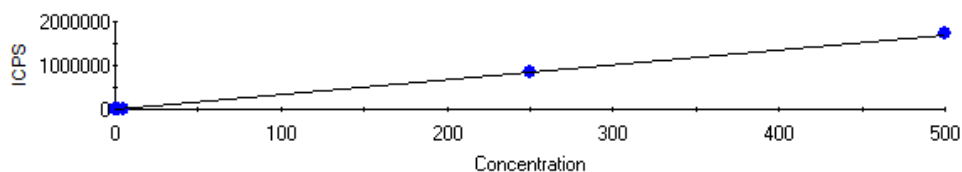
Intercept CPS=113497.874209 Intercept Conc=34.481929
Sensitivity=3291.517569 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	113497.87	0.00
cal1 MW-12643	50.000	55.879	5.879	297425.73	11.76
cal3 MW-12520	250.000	281.000	31.000	1038414.52	12.40
cal4 MW-12521	500.000	568.023	68.023	1983154.35	13.60
cal5 MW-12618	50000.000	50084.999	84.999	164969150.70	0.17
cal6 MW-12619	100000.000	99957.080	42.920	329123983.36	0.04

57Fe FQ Block 1

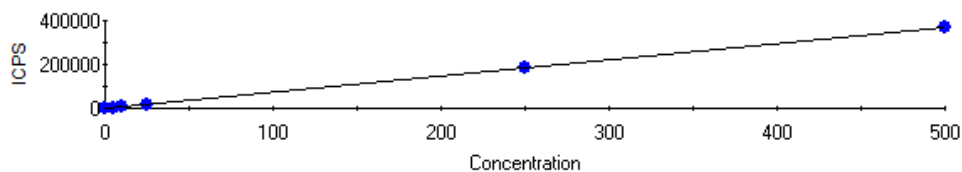
Intercept CPS=1411.920479 Intercept Conc=16.795136
Sensitivity=84.067226 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1411.92	0.00
cal1 MW-12643	50.000	49.040	0.960	5534.59	1.92
MW12644	100.000	100.074	0.074	9824.90	0.07
cal3 MW-12520	250.000	261.310	11.310	23379.55	4.52
cal4 MW-12521	500.000	525.472	25.472	45586.93	5.09
cal5 MW-12618	50000.000	47976.564	2023.436	4034668.57	4.05
cal6 MW-12619	100000.000	96052.550	3947.450	8076283.34	3.95

59Co FQ Block 1

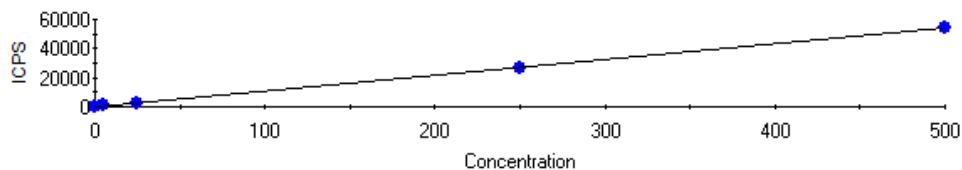
Intercept CPS=43.976845 Intercept Conc=0.012884
Sensitivity=3413.173268 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	43.98	0.00
cal1 MW-12643	1.000	1.022	0.022	3533.39	2.23
MW12644	2.000	1.921	0.079	6599.96	3.96
cal2 MW-12645	5.000	4.937	0.063	16895.65	1.26
cal3 MW-12520	250.000	248.386	1.614	847828.70	0.65
cal4 MW-12521	500.000	503.631	3.631	1719022.97	0.73

60Ni FQ Block 1

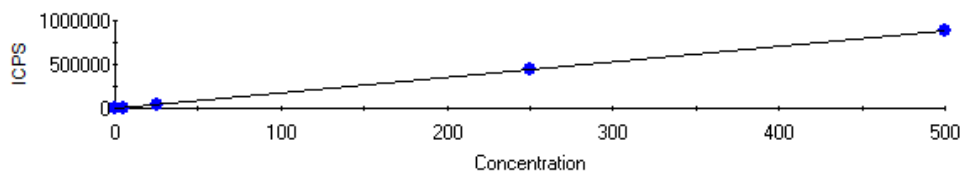
Intercept CPS=38.671749 Intercept Conc=0.052844
Sensitivity=731.814899 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	38.67	0.00
cal1 MW-12643	5.000	5.074	0.074	3751.79	1.48
MW12644	10.000	10.067	0.067	7406.21	0.67
cal2 MW-12645	25.000	25.048	0.048	18369.50	0.19
cal3 MW-12520	250.000	250.076	0.076	183048.06	0.03
cal4 MW-12521	500.000	499.957	0.043	365914.99	0.01

62Ni FQ Block 1

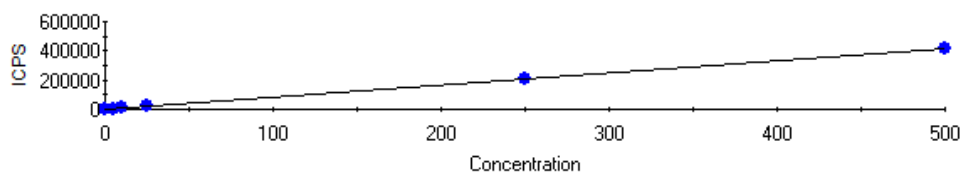
Intercept CPS=82.722291 Intercept Conc=0.766077
Sensitivity=107.981717 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	82.72	0.00
cal1 MW-12643	5.000	5.393	0.393	665.12	7.87
cal2 MW-12645	25.000	24.952	0.048	2777.13	0.19
cal3 MW-12520	250.000	249.699	0.301	27045.64	0.12
cal4 MW-12521	500.000	500.149	0.149	54089.67	0.03

63Cu FQ Block 1

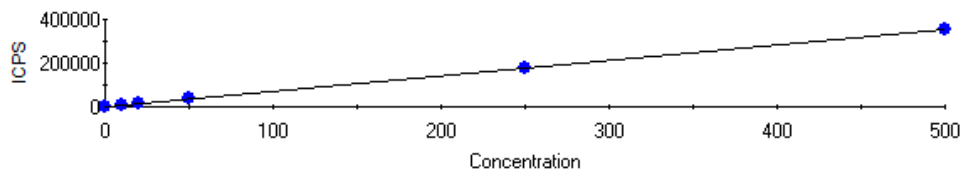
Intercept CPS=185.273004 Intercept Conc=0.103753
Sensitivity=1785.718369 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	185.27	0.00
cal1 MW-12643	5.000	5.075	0.075	9247.10	1.49
cal2 MW-12645	25.000	25.134	0.134	45066.88	0.53
cal3 MW-12520	250.000	250.364	0.364	447265.48	0.15
cal4 MW-12521	500.000	499.810	0.190	892705.89	0.04

65Cu FQ Block 1

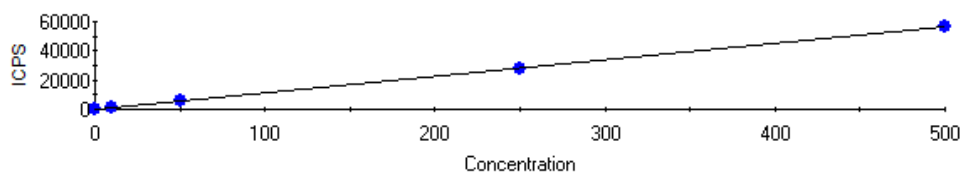
Intercept CPS=58.638104 Intercept Conc=0.070746
Sensitivity=828.852530 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	58.64	0.00
cal1 MW-12643	5.000	5.273	0.273	4429.24	5.46
MW12644	10.000	10.339	0.339	8628.25	3.39
cal2 MW-12645	25.000	25.723	0.723	21378.88	2.89
cal3 MW-12520	250.000	252.483	2.483	209329.75	0.99
cal4 MW-12521	500.000	498.713	1.287	413418.08	0.26

66Zn FQ Block 1

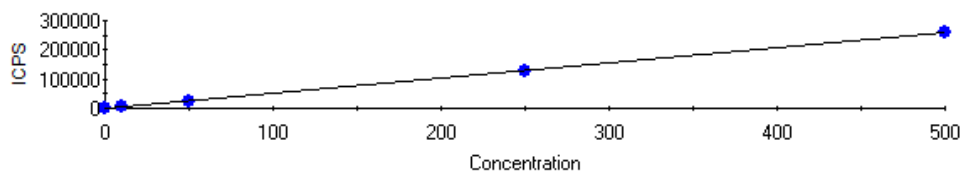
Intercept CPS=689.329668 Intercept Conc=0.981101
Sensitivity=702.608335 Correlation Coeff=0.999986

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	689.33	0.00
cal1 MW-12643	10.000	10.381	0.381	7983.42	3.81
MW12644	20.000	20.235	0.235	14906.55	1.17
cal2 MW-12645	50.000	49.720	0.280	35623.28	0.56
cal3 MW-12520	250.000	247.300	2.700	174444.06	1.08
cal4 MW-12521	500.000	499.890	0.110	351915.99	0.02

67Zn FQ Block 1

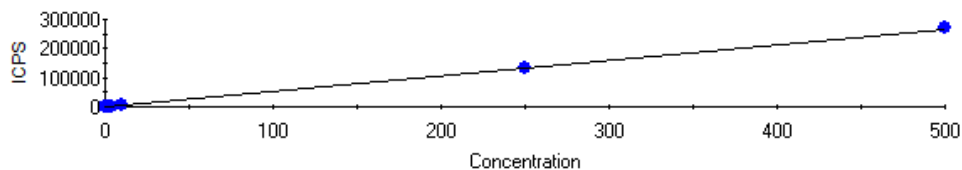
Intercept CPS=108.019241 Intercept Conc=0.958163
Sensitivity=112.735723 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	108.02	0.00
cal1 MW-12643	10.000	9.769	0.231	1209.36	2.31
cal2 MW-12645	50.000	49.210	0.790	5655.76	1.58
cal3 MW-12520	250.000	249.397	0.603	28223.92	0.24
cal4 MW-12521	500.000	500.385	0.385	56519.32	0.08

68Zn FQ Block 1

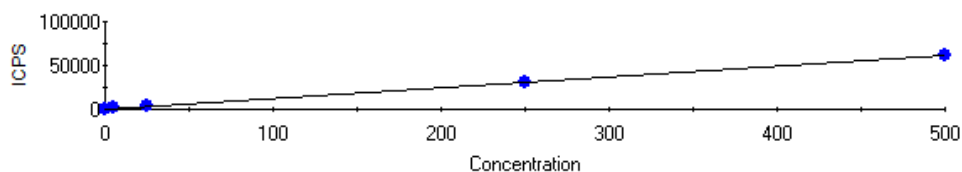
Intercept CPS=452.050933 Intercept Conc=0.877083
Sensitivity=515.402875 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	452.05	0.00
cal1 MW-12643	10.000	10.013	0.013	5612.57	0.13
cal2 MW-12645	50.000	49.278	0.722	25849.85	1.44
cal3 MW-12520	250.000	249.423	0.577	129005.60	0.23
cal4 MW-12521	500.000	504.697	4.697	260574.17	0.94

75As FQ Block 1

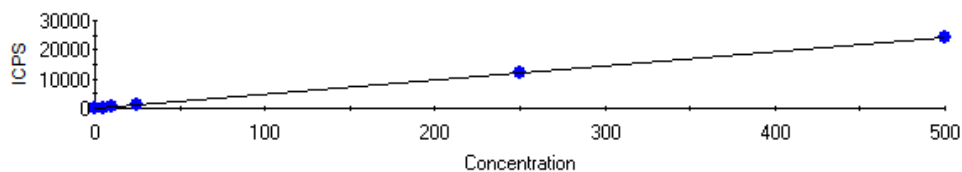
Intercept CPS=97.527066 Intercept Conc=0.182258
Sensitivity=535.105443 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	97.53	0.00
cal1 MW-12643	2.000	1.662	0.338	986.81	16.91
MW12644	4.000	4.205	0.205	2347.53	5.12
cal2 MW-12645	10.000	10.727	0.727	5837.34	7.27
cal3 MW-12520	250.000	248.783	1.217	133222.89	0.49
cal4 MW-12521	500.000	502.183	2.183	268818.28	0.44

78Se FQ Block 1

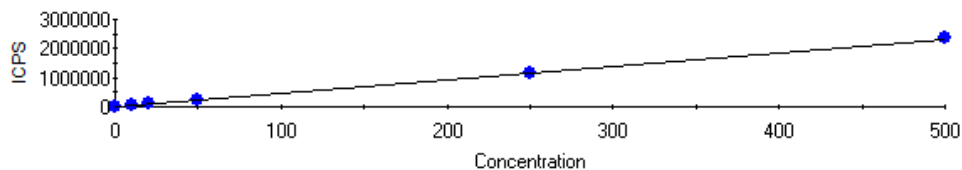
Intercept CPS=438.681361 Intercept Conc=3.607565
Sensitivity=121.600396 Correlation Coeff=0.999976

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	438.68	0.00
cal1 MW-12643	5.000	5.470	0.470	1103.87	9.41
cal2 MW-12645	25.000	23.890	1.110	3343.68	4.44
cal3 MW-12520	250.000	247.347	2.653	30516.21	1.06
cal4 MW-12521	500.000	501.377	1.377	61406.35	0.28

82Se FQ Block 1

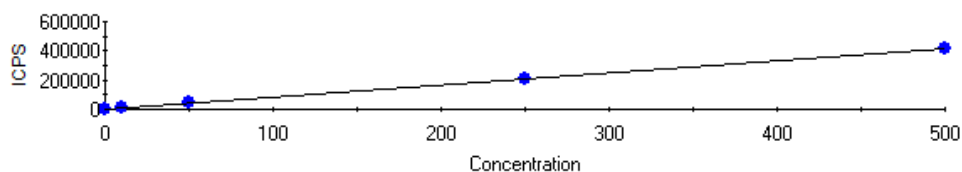
Intercept CPS=38.175900 Intercept Conc=0.792060
Sensitivity=48.198218 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	38.18	0.00
cal1 MW-12643	5.000	4.690	0.310	264.22	6.20
MW12644	10.000	10.428	0.428	540.79	4.28
cal2 MW-12645	25.000	25.117	0.117	1248.78	0.47
cal3 MW-12520	250.000	248.194	1.806	12000.68	0.72
cal4 MW-12521	500.000	500.892	0.892	24180.26	0.18

88Sr FQ Block 1

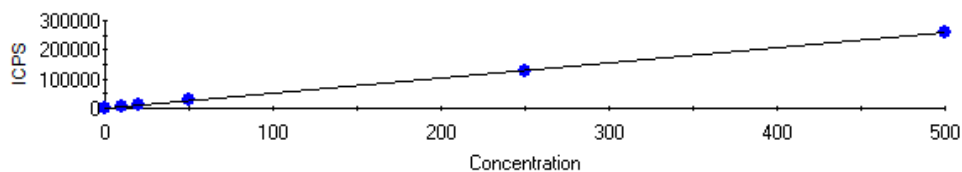
Intercept CPS=26.669572 Intercept Conc=0.005712
Sensitivity=4669.312453 Correlation Coeff=0.999966

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	26.67	0.00
cal1 MW-12643	10.000	9.526	0.474	44507.08	4.74
MW12644	20.000	18.996	1.004	88723.39	5.02
cal2 MW-12645	50.000	48.782	1.218	227806.74	2.44
cal3 MW-12520	250.000	246.543	3.457	1151213.18	1.38
cal4 MW-12521	500.000	501.900	1.900	2343554.09	0.38

95Mo FQ Block 1

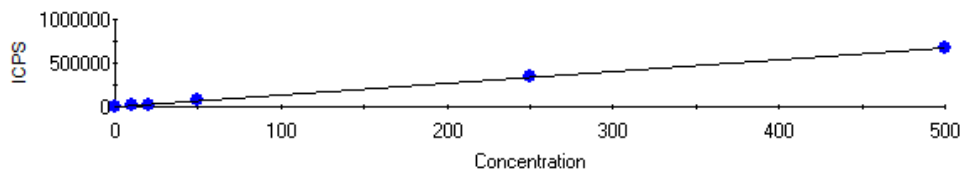
Intercept CPS=122.755766 Intercept Conc=0.148531
Sensitivity=826.463547 Correlation Coeff=0.999930

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	122.76	0.00
cal1 MW-12643	10.000	10.073	0.073	8447.57	0.73
cal2 MW-12645	50.000	51.366	1.366	42575.20	2.73
cal3 MW-12520	250.000	245.528	4.472	203042.87	1.79
cal4 MW-12521	500.000	502.081	2.081	415074.68	0.42

97Mo FQ Block 1

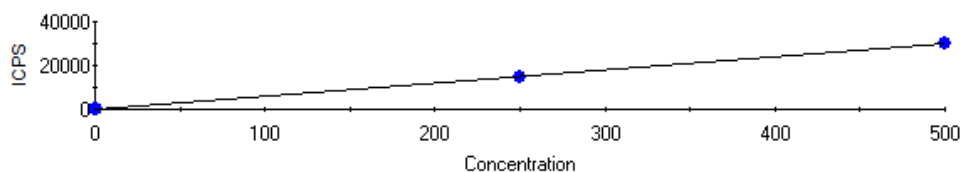
Intercept CPS=81.403631 Intercept Conc=0.157165
Sensitivity=517.948534 Correlation Coeff=0.999971

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	81.40	0.00
cal1 MW-12643	10.000	10.419	0.419	5477.82	4.19
MW12644	20.000	20.406	0.406	10650.83	2.03
cal2 MW-12645	50.000	51.462	1.462	26735.99	2.92
cal3 MW-12520	250.000	247.237	2.763	128137.21	1.11
cal4 MW-12521	500.000	501.211	1.211	259682.86	0.24

98Mo FQ Block 1

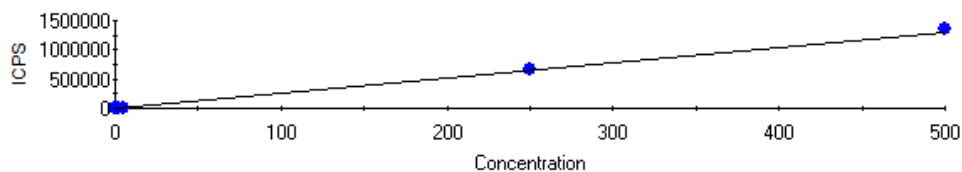
Intercept CPS=230.422493 Intercept Conc=0.169552
Sensitivity=1359.011305 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	230.42	0.00
cal1 MW-12643	10.000	9.902	0.098	13687.58	0.98
MW12644	20.000	19.964	0.036	27361.49	0.18
cal2 MW-12645	50.000	50.635	0.635	69044.24	1.27
cal3 MW-12520	250.000	247.746	2.254	336920.69	0.90
cal4 MW-12521	500.000	501.067	1.067	681185.65	0.21

106Cd FQ Block 1

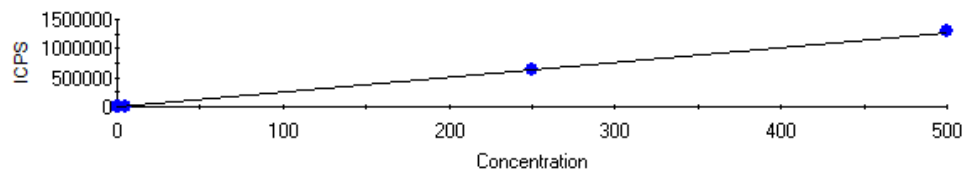
Intercept CPS=95.736912 Intercept Conc=1.595103
Sensitivity=60.019270 Correlation Coeff=0.999938

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	95.74	0.00
cal1 MW-12643	0.100	0.025	0.075	97.22	75.30
cal2 MW-12645	0.500	1.056	0.556	159.13	111.24
cal3 MW-12520	250.000	245.500	4.500	14830.47	1.80
cal4 MW-12521	500.000	502.249	2.249	30240.38	0.45

107Ag FQ Block 1

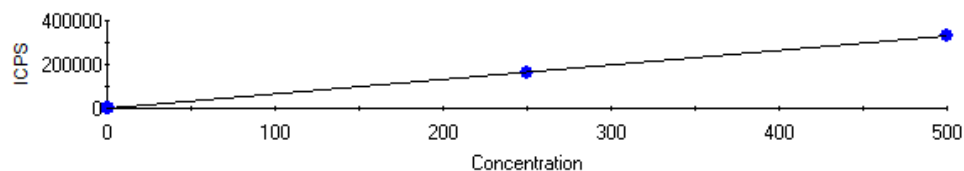
Intercept CPS=18.695937 Intercept Conc=0.007198
Sensitivity=2597.375088 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.70	0.00
cal1 MW-12643	1.000	1.012	0.012	2647.60	1.21
MW12644	2.000	1.985	0.015	5175.68	0.73
cal2 MW-12645	5.000	4.938	0.062	12843.31	1.25
cal3 MW-12520	250.000	254.854	4.854	661971.09	1.94
cal4 MW-12521	500.000	518.092	18.092	1345698.85	3.62

109Ag FQ Block 1

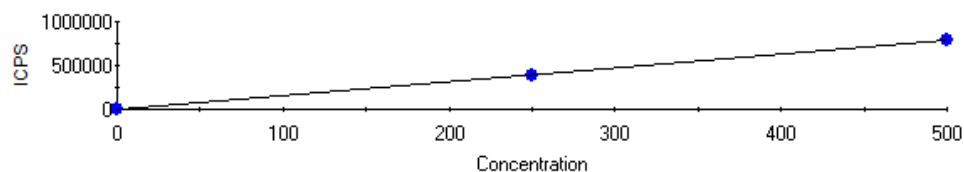
Intercept CPS=10.674132 Intercept Conc=0.004163
Sensitivity=2563.831690 Correlation Coeff=0.999912

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	10.67	0.00
cal1 MW-12643	1.000	1.018	0.018	2620.36	1.79
cal2 MW-12645	5.000	4.977	0.023	12771.85	0.45
cal3 MW-12520	250.000	248.640	1.360	637480.67	0.54
cal4 MW-12521	500.000	511.244	11.244	1310754.39	2.25

111Cd FQ Block 1

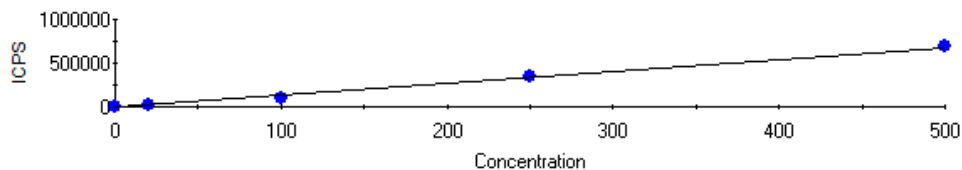
Intercept CPS=7.568163 Intercept Conc=0.011472
Sensitivity=659.706996 Correlation Coeff=0.999937

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	7.57	0.00
cal1 MW-12643	0.100	0.065	0.035	50.40	35.07
cal2 MW-12645	0.500	0.407	0.093	275.93	18.64
cal3 MW-12520	250.000	245.349	4.651	161866.13	1.86
cal4 MW-12521	500.000	502.326	2.326	331395.23	0.47

114Cd FQ Block 1

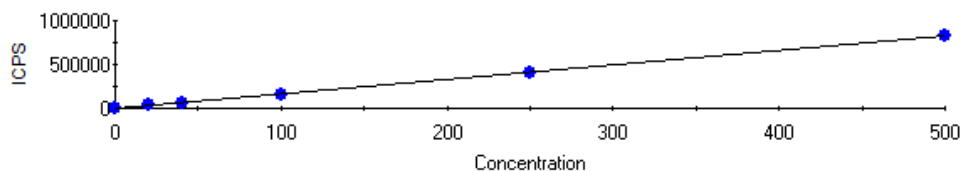
Intercept CPS=5.172680 Intercept Conc=0.003271
Sensitivity=1581.251230 Correlation Coeff=0.999913

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	5.17	0.00
cal1 MW-12643	0.100	0.100	0.000	163.71	0.26
MW12644	0.200	0.232	0.032	371.40	15.80
cal2 MW-12645	0.500	0.498	0.002	792.73	0.39
cal3 MW-12520	250.000	244.342	5.658	386370.80	2.26
cal4 MW-12521	500.000	502.829	2.829	795104.36	0.57

116Sn FQ Block 1

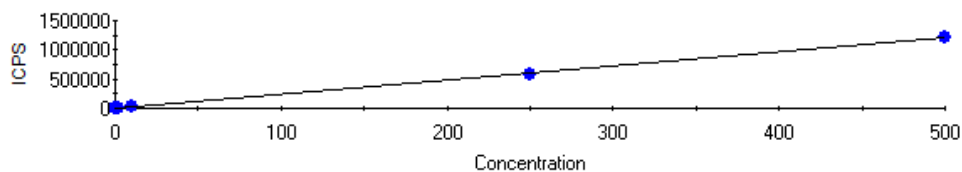
Intercept CPS=41.373472 Intercept Conc=0.030335
Sensitivity=1363.887110 Correlation Coeff=0.998229

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	41.37	0.00
cal1 MW-12643	20.000	13.167	6.833	18000.29	34.16
cal2 MW-12645	100.000	69.533	30.467	94876.81	30.47
cal3 MW-12520	250.000	247.003	2.997	336925.10	1.20
cal4 MW-12521	500.000	507.865	7.865	692712.36	1.57

118Sn FQ Block 1

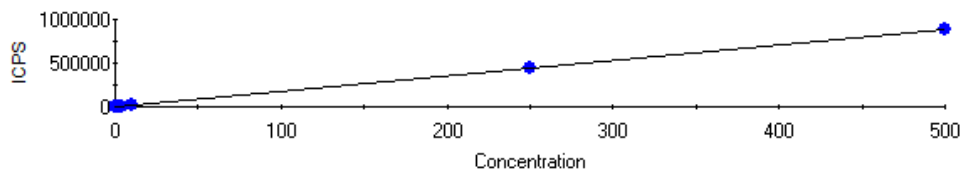
Intercept CPS=53.371023 Intercept Conc=0.032507
Sensitivity=1641.818798 Correlation Coeff=0.999946

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	53.37	0.00
cal1 MW-12643	20.000	19.004	0.996	31253.81	4.98
MW12644	40.000	38.372	1.628	63053.18	4.07
cal2 MW-12645	100.000	98.768	1.232	162212.54	1.23
cal3 MW-12520	250.000	245.806	4.194	403622.43	1.68
cal4 MW-12521	500.000	502.513	2.513	825089.40	0.50

121Sb FQ Block 1

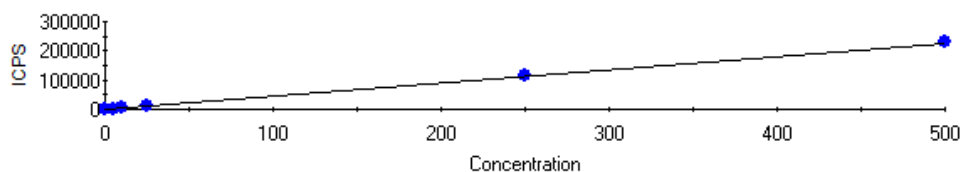
Intercept CPS=215.958008 Intercept Conc=0.089744
Sensitivity=2406.388624 Correlation Coeff=0.999837

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	215.96	0.00
cal1 MW-12643	2.000	1.994	0.006	5014.57	0.29
cal2 MW-12645	10.000	10.104	0.104	24530.41	1.04
cal3 MW-12520	250.000	242.600	7.400	584004.82	2.96
cal4 MW-12521	500.000	503.698	3.698	1212309.46	0.74

123Sb FQ Block 1

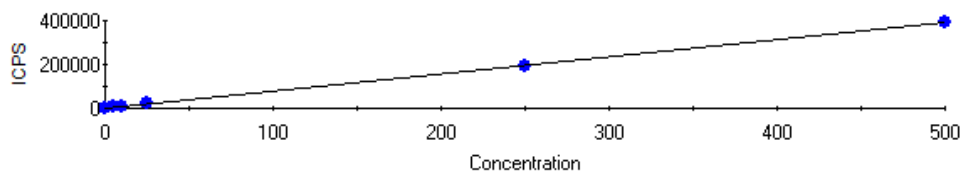
Intercept CPS=173.260345 Intercept Conc=0.098539
Sensitivity=1758.289147 Correlation Coeff=0.999977

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	173.26	0.00
cal1 MW-12643	2.000	2.126	0.126	3911.60	6.31
MW12644	4.000	4.224	0.224	7599.66	5.59
cal2 MW-12645	10.000	10.751	0.751	19077.10	7.51
cal3 MW-12520	250.000	247.273	2.727	434950.06	1.09
cal4 MW-12521	500.000	501.346	1.346	881685.13	0.27

135Ba FQ Block 1

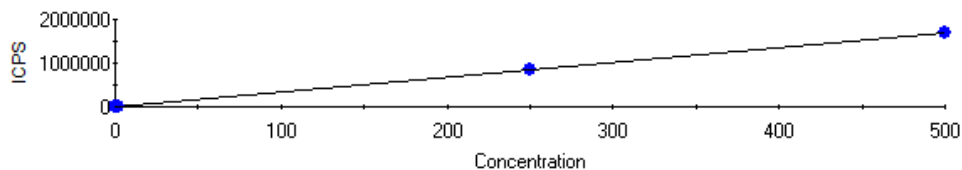
Intercept CPS=18.663998 Intercept Conc=0.041245
Sensitivity=452.520037 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.66	0.00
cal1 MW-12643	5.000	4.892	0.108	2232.17	2.17
MW12644	10.000	9.546	0.454	4338.21	4.54
cal2 MW-12645	25.000	25.292	0.292	11463.82	1.17
cal3 MW-12520	250.000	248.654	1.346	112539.36	0.54
cal4 MW-12521	500.000	504.277	4.277	228213.94	0.86

137Ba FQ Block 1

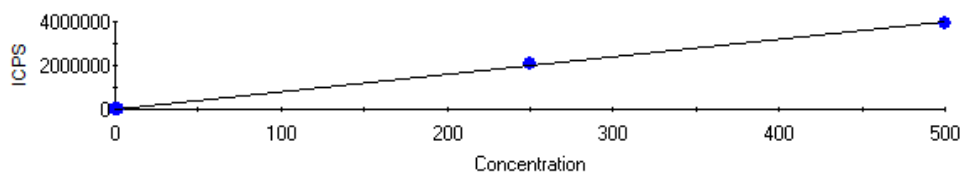
Intercept CPS=13.327659 Intercept Conc=0.017035
Sensitivity=782.388041 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.33	0.00
cal1 MW-12643	5.000	5.004	0.004	3928.38	0.08
MW12644	10.000	10.123	0.123	7933.72	1.23
cal2 MW-12645	25.000	25.102	0.102	19653.14	0.41
cal3 MW-12520	250.000	249.942	0.058	195565.14	0.02
cal4 MW-12521	500.000	499.993	0.007	391202.11	0.00

203Tl FQ Block 1

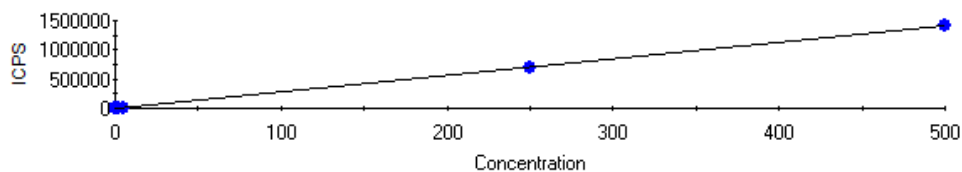
Intercept CPS=39.986560 Intercept Conc=0.011906
Sensitivity=3358.420779 Correlation Coeff=0.999958

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	39.99	0.00
cal1 MW-12643	0.500	0.516	0.016	1773.38	3.23
MW12644	1.000	1.015	0.015	3450.36	1.55
cal2 MW-12645	2.500	2.512	0.012	8477.22	0.49
cal3 MW-12520	250.000	249.577	0.423	838225.33	0.17
cal4 MW-12521	500.000	509.135	9.135	1709928.25	1.83

205Tl FQ Block 1

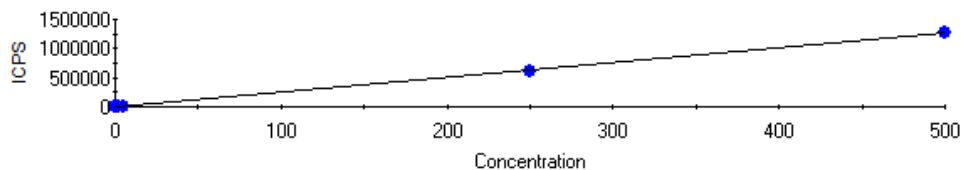
Intercept CPS=113.404042 Intercept Conc=0.014226
Sensitivity=7971.680418 Correlation Coeff=0.999600

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	113.40	0.00
cal1 MW-12643	0.500	0.525	0.025	4295.96	4.94
MW12644	1.000	1.001	0.001	8095.16	0.13
cal2 MW-12645	2.500	2.569	0.069	20595.83	2.78
cal3 MW-12520	250.000	262.067	12.067	2089230.11	4.83
cal4 MW-12521	500.000	493.966	6.034	3937852.33	1.21

206Pb FQ Block 1

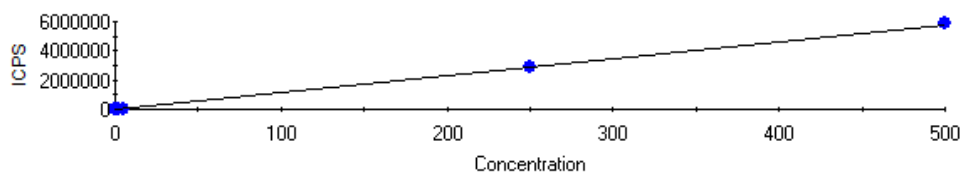
Intercept CPS=80.034582 Intercept Conc=0.028266
Sensitivity=2831.455827 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	80.03	0.00
cal1 MW-12643	1.000	0.938	0.062	2735.43	6.22
MW12644	2.000	1.931	0.069	5546.58	3.47
cal2 MW-12645	5.000	4.764	0.236	13567.74	4.73
cal3 MW-12520	250.000	247.587	2.413	701112.81	0.97
cal4 MW-12521	500.000	501.209	1.209	1419231.37	0.24

207Pb FQ Block 1

Intercept CPS=78.726709 Intercept Conc=0.031313
Sensitivity=2514.215145 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	78.73	0.00
cal1 MW-12643	1.000	0.942	0.058	2446.97	5.81
MW12644	2.000	1.845	0.155	4717.45	7.75
cal2 MW-12645	5.000	4.864	0.136	12308.66	2.71
cal3 MW-12520	250.000	246.130	3.870	618902.98	1.55
cal4 MW-12521	500.000	501.937	1.937	1262056.33	0.39

208Pb FQ Block 1

Intercept CPS=365.445135 Intercept Conc=0.031423
Sensitivity=11629.851619 Correlation Coeff=0.999942

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	365.45	0.00
cal1 MW-12643	1.000	0.916	0.084	11017.69	8.41
MW12644	2.000	1.870	0.130	22116.02	6.49
cal2 MW-12645	5.000	4.743	0.257	55524.01	5.14
cal3 MW-12520	250.000	245.646	4.354	2857193.14	1.74
cal4 MW-12521	500.000	502.980	2.980	5849947.53	0.60

Dilution Corrected Concentrations

TUNE MW12522 4/22/2020 14:03:49

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	100.4%	-0.040	0.388	0.720	121.900	1.040	0.048	-0.016	0.245	1.190
2	14:04:43	100.5%	-0.004	0.583	0.750	122.500	1.315	0.126	-0.010	0.105	1.205
3	14:05:10	99.1%	-0.004	0.723	0.571	127.200	1.097	0.187	0.092	0.135	1.133
X		100.0%	-0.016	0.565	0.680	123.900	1.151	0.121	0.022	0.162	1.176
S		0.8%	0.021	0.168	0.096	2.877	0.145	0.070	0.061	0.074	0.038
%RSD		0.8	128.900	29.750	14.060	2.322	12.580	57.860	271.500	45.680	3.220
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	0.944	377.600	0.631	2.441	2.629	101.0%	-0.026	0.024	0.053	56.000
2	14:04:43	0.966	372.100	0.603	5.404	3.123	98.7%	0.073	0.034	0.055	55.050
3	14:05:10	1.589	377.700	0.758	0.617	3.362	100.3%	0.052	-0.012	0.035	94.330
X		1.166	375.800	0.664	2.821	3.038	100.0%	0.033	0.015	0.047	68.460
S		0.366	3.229	0.083	2.416	0.374	1.2%	0.052	0.024	0.011	22.410
%RSD		31.410	0.859	12.490	85.650	12.310	1.2	158.900	160.500	23.080	32.730
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	2.116	0.020	0.954	-0.868	0.014	-0.020	-0.069	-0.002	0.039	-0.006
2	14:04:43	1.647	0.032	1.180	2.049	0.013	0.041	0.172	0.025	0.041	0.070
3	14:05:10	1.606	0.026	1.081	0.002	0.008	-0.009	-0.175	0.026	0.016	0.033
X		1.790	0.026	1.071	0.395	0.012	0.004	-0.024	0.017	0.032	0.033
S		0.283	0.006	0.113	1.498	0.003	0.033	0.178	0.016	0.014	0.038
%RSD		15.830	21.820	10.570	379.700	26.540	845.100	738.100	97.590	43.260	116.400
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.154	0.248	-0.088	-0.500	1.745	3.152	6.136	-0.184	5.713	0.004
2	14:04:43	-0.095	0.129	0.062	0.192	1.936	2.752	7.069	0.397	2.945	0.001
3	14:05:10	0.001	0.234	0.020	-0.737	1.323	3.128	5.160	0.022	2.553	0.005
X		-0.083	0.204	-0.002	-0.348	1.668	3.011	6.122	0.078	3.737	0.003
S		0.078	0.065	0.077	0.483	0.313	0.225	0.954	0.294	1.723	0.002
%RSD		94.410	31.780	3600.000	138.700	18.780	7.454	15.590	377.500	46.090	55.240
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	101.8%	0.086	0.034	0.097	-0.213	0.002	0.005	0.024	0.013	101.0%
2	14:04:43	98.7%	0.091	0.116	0.122	0.493	0.004	0.004	0.006	0.013	99.1%
3	14:05:10	99.5%	0.094	0.106	0.073	-0.125	-0.001	0.004	0.012	0.011	99.9%
X		100.0%	0.090	0.085	0.097	0.051	0.002	0.004	0.014	0.013	100.0%
S		1.7%	0.004	0.044	0.025	0.385	0.002	0.001	0.009	0.001	0.9%
%RSD		1.7	4.104	52.280	25.480	749.100	155.500	19.910	65.870	11.870	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.001	-0.006	0.060	0.063	0.055	0.100	99.9%	0.008	-0.002	0.025
2	14:04:43	0.011	0.007	0.061	0.022	0.039	0.075	99.8%	0.008	0.007	0.018
3	14:05:10	0.008	0.004	0.033	0.024	0.056	0.039	100.3%	0.007	0.003	0.029
X		0.006	0.002	0.052	0.036	0.050	0.072	100.0%	0.008	0.003	0.024
S		0.006	0.007	0.016	0.023	0.010	0.031	0.2%	0.001	0.005	0.006
%RSD		109.100	409.400	30.630	63.310	19.120	42.790	0.2	8.799	171.100	22.860
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:04:16	0.023	0.022	100.8%							
2	14:04:43	0.018	0.014	99.3%							
3	14:05:10	0.013	0.021	100.0%							
X		0.018	0.019	100.0%							
S		0.005	0.004	0.7%							
%RSD		26.910	21.190	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	98.9%	0.045	0.166	0.011	-2.391	-0.067	-0.043	-0.015	0.291	-0.023
2	14:10:35	100.5%	-0.016	-0.243	0.050	-1.602	-0.124	-0.026	-0.037	-0.161	0.018
3	14:11:02	100.6%	-0.028	0.077	-0.061	3.993	0.191	0.069	0.053	-0.130	0.004
X		100.0%	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S		0.9%	0.039	0.216	0.056	3.480	0.168	0.060	0.047	0.252	0.021
%RSD		0.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.032	6.536	0.627	-1.226	0.647	99.3%	-0.006	-0.003	-0.003	8.527
2	14:10:35	0.170	-4.374	-0.379	-0.311	-0.145	100.2%	0.013	0.024	-0.006	-15.590
3	14:11:02	-0.202	-2.162	-0.248	1.537	-0.501	100.5%	-0.007	-0.021	0.010	7.063
X		0.000	0.000	-0.000	0.000	0.000	100.0%	-0.000	0.000	-0.000	0.000
S		0.188	5.768	0.547	1.407	0.588	0.6%	0.011	0.023	0.008	13.520
%RSD		0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000	0.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.071	0.014	0.267	-0.594	-0.002	-0.003	0.129	0.015	-0.003	-0.030
2	14:10:35	0.602	-0.009	-0.142	0.208	0.002	0.018	-0.027	-0.025	-0.004	-0.024
3	14:11:02	-0.673	-0.005	-0.125	0.387	-0.000	-0.015	-0.103	0.010	0.006	0.054
X		-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
S		0.640	0.012	0.231	0.522	0.002	0.017	0.118	0.022	0.006	0.047
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.074	0.042	0.143	0.444	0.154	-0.339	1.718	0.344	0.366	-0.001
2	14:10:35	-0.000	-0.016	-0.075	-0.580	-0.211	0.240	-1.220	-0.231	-0.359	0.001
3	14:11:02	-0.074	-0.026	-0.067	0.135	0.058	0.099	-0.499	-0.113	-0.007	0.000
X		0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	0.000
S		0.074	0.036	0.124	0.525	0.189	0.302	1.531	0.304	0.362	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	100.1%	0.037	0.029	-0.014	-0.401	0.002	0.001	0.000	0.001	99.3%
2	14:10:35	99.9%	-0.009	-0.042	0.025	0.398	-0.004	-0.001	-0.006	0.001	100.5%
3	14:11:02	100.1%	-0.028	0.013	-0.011	0.003	0.002	0.001	0.006	-0.001	100.1%
X		100.0%	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	100.0%
S		0.1%	0.033	0.037	0.021	0.400	0.004	0.001	0.006	0.001	0.6%
%RSD		0.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.008	0.012	-0.008	-0.010	-0.006	0.014	100.7%	0.000	-0.002	-0.002
2	14:10:35	-0.007	0.001	0.005	-0.010	-0.006	-0.002	99.8%	-0.001	0.000	-0.006
3	14:11:02	-0.001	-0.013	0.003	0.020	0.012	-0.012	99.5%	0.001	0.002	0.007
X		-0.000	0.000	-0.000	-0.000	-0.000	0.000	100.0%	-0.000	-0.000	-0.000
S		0.008	0.012	0.007	0.018	0.010	0.013	0.6%	0.001	0.002	0.007
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:10:08	-0.006	-0.002	99.4%							
2	14:10:35	0.001	-0.001	99.6%							
3	14:11:02	0.005	0.003	101.0%							
X		0.000	-0.000	100.0%							
S		0.006	0.003	0.8%							
%RSD		0.000	0.000	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.2%	0.282	48.210	49.120	-2.992	431.100	455.100	431.600	406.100	40.000
2	14:16:28	99.5%	0.272	48.150	48.960	-4.847	439.000	467.600	450.100	409.600	39.740
3	14:16:55	100.0%	0.402	49.870	48.180	-15.710	435.800	459.100	441.200	411.100	40.520
X		99.9%	0.319	48.740	48.750	-7.850	435.300	460.600	441.000	408.900	40.090
S		0.4%	0.072	0.976	0.506	6.871	3.957	6.419	9.223	2.600	0.399
%RSD		0.4	22.720	2.002	1.037	87.530	0.909	1.394	2.092	0.636	0.995
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	90.630	5.325	411.600	402.800	387.300	99.8%	5.215	4.948	4.975	44.460
2	14:16:28	92.890	-8.681	410.700	398.900	420.200	98.5%	4.909	5.003	4.920	174.200
3	14:16:55	92.320	-25.720	404.600	420.900	387.800	98.2%	4.982	4.943	4.904	44.960
X		91.950	-9.690	409.000	407.500	398.400	98.8%	5.035	4.965	4.933	87.890
S		1.175	15.540	3.804	11.740	18.870	0.9%	0.160	0.033	0.037	74.790
%RSD		1.277	160.400	0.930	2.880	4.735	0.9	3.168	0.664	0.754	85.090
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	55.900	4.699	55.500	47.180	0.963	5.155	5.319	5.005	5.174	10.160
2	14:16:28	54.680	4.786	56.280	50.240	1.030	5.316	5.366	5.302	5.292	10.400
3	14:16:55	54.600	4.769	55.860	49.690	1.074	4.751	5.495	4.917	5.353	10.580
X		55.060	4.751	55.880	49.040	1.022	5.074	5.393	5.075	5.273	10.380
S		0.729	0.046	0.390	1.631	0.056	0.291	0.091	0.201	0.091	0.214
%RSD		1.324	0.973	0.698	3.325	5.495	5.734	1.690	3.970	1.725	2.064
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	9.583	9.434	1.914	4.777	-0.213	0.191	23.720	5.141	1.448	9.395
2	14:16:28	10.220	10.540	2.133	6.035	-0.203	-0.548	22.450	5.376	-2.164	9.537
3	14:16:55	9.502	10.060	0.938	5.599	0.766	-0.271	15.870	3.553	0.410	9.646
X		9.769	10.010	1.662	5.470	0.117	-0.209	20.680	4.690	-0.102	9.526
S		0.395	0.556	0.636	0.639	0.562	0.373	4.213	0.991	1.860	0.126
%RSD		4.046	5.558	38.270	11.670	482.100	178.300	20.370	21.140	1822.000	1.319
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.1%	9.870	10.170	9.831	0.066	0.939	1.049	0.058	0.117	100.4%
2	14:16:28	99.6%	10.250	10.380	9.908	0.338	0.979	0.992	0.077	0.103	99.3%
3	14:16:55	99.2%	10.100	10.700	9.967	-0.330	1.118	1.012	0.059	0.081	98.5%
X		99.6%	10.070	10.420	9.902	0.025	1.012	1.018	0.065	0.100	99.4%
S		0.4%	0.190	0.265	0.068	0.336	0.094	0.029	0.011	0.018	0.9%
%RSD		0.5	1.890	2.544	0.688	1359.000	9.283	2.846	16.450	18.310	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	13.140	18.480	2.003	2.189	4.659	5.066	100.4%	0.516	0.530	0.885
2	14:16:28	13.000	19.010	2.027	1.993	5.069	4.818	99.1%	0.522	0.511	0.931
3	14:16:55	13.370	19.520	1.952	2.197	4.946	5.128	99.6%	0.510	0.533	0.997
X		13.170	19.000	1.994	2.126	4.892	5.004	99.7%	0.516	0.525	0.938
S		0.187	0.520	0.038	0.115	0.210	0.164	0.6%	0.006	0.012	0.056
%RSD		1.420	2.738	1.926	5.414	4.299	3.273	0.7	1.156	2.285	5.991
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:16:01	0.997	0.899	98.2%							
2	14:16:28	0.903	0.899	100.0%							
3	14:16:55	0.925	0.950	99.4%							
X		0.942	0.916	99.2%							
S		0.049	0.029	0.9%							
%RSD		5.230	3.206	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	98.9%	0.830	95.090	98.440	-7.755	870.000	920.200	871.400	832.800	79.790
2	14:22:23	98.2%	0.703	98.940	104.100	-7.550	860.800	931.100	871.600	805.400	78.710
3	14:22:50	96.9%	0.787	97.300	102.000	-8.019	854.700	935.700	883.200	821.800	79.990
X		98.0%	0.773	97.110	101.500	-7.775	861.800	929.000	875.400	820.000	79.500
S		1.0%	0.065	1.933	2.849	0.235	7.728	7.943	6.738	13.800	0.685
%RSD		1.1	8.405	1.990	2.807	3.024	0.897	0.855	0.770	1.683	0.862
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	188.700	-26.180	833.000	841.900	816.600	96.7%	10.630	9.848	10.020	158.000
2	14:22:23	186.600	-39.240	824.500	763.500	795.700	97.7%	9.944	10.190	9.768	47.370
3	14:22:50	195.400	-44.840	829.500	845.400	796.800	97.0%	8.544	9.582	9.865	250.500
X		190.200	-36.750	829.000	816.900	803.100	97.1%	9.708	9.873	9.883	152.000
S		4.629	9.576	4.312	46.300	11.770	0.5%	1.065	0.305	0.125	101.700
%RSD		2.433	26.060	0.520	5.668	1.465	0.5	10.970	3.090	1.269	66.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	112.000	9.373	114.000	104.400	1.965	9.984	11.490	10.220	10.620	19.850
2	14:22:23	111.000	9.330	113.600	98.060	1.839	9.714	10.420	9.869	9.914	20.000
3	14:22:50	110.900	9.422	111.100	97.800	1.959	10.500	9.893	10.160	10.490	20.850
X		111.300	9.375	112.900	100.100	1.921	10.070	10.600	10.080	10.340	20.230
S		0.623	0.046	1.587	3.719	0.071	0.402	0.815	0.187	0.374	0.539
%RSD		0.560	0.489	1.406	3.716	3.703	3.989	7.691	1.852	3.614	2.664
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	19.680	19.340	4.078	10.020	-0.071	0.214	51.050	11.520	-1.336	18.910
2	14:22:23	17.900	19.060	4.570	9.333	0.524	0.463	50.220	10.730	3.490	18.910
3	14:22:50	18.780	19.790	3.967	9.238	0.411	0.373	42.240	9.040	2.475	19.170
X		18.790	19.400	4.205	9.530	0.288	0.350	47.840	10.430	1.543	19.000
S		0.892	0.369	0.321	0.426	0.316	0.126	4.864	1.266	2.544	0.152
%RSD		4.749	1.901	7.633	4.471	109.800	36.070	10.170	12.140	164.900	0.801
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	96.5%	20.110	20.480	19.770	0.630	1.992	1.912	0.072	0.149	98.2%
2	14:22:23	97.3%	20.360	20.420	20.250	-0.123	1.984	1.883	0.125	0.227	98.6%
3	14:22:50	95.7%	19.980	20.320	19.880	0.393	1.980	1.961	0.085	0.319	97.6%
X		96.5%	20.150	20.410	19.960	0.300	1.985	1.919	0.094	0.232	98.1%
S		0.8%	0.197	0.079	0.253	0.385	0.006	0.040	0.027	0.085	0.5%
%RSD		0.8	0.979	0.387	1.265	128.300	0.310	2.068	29.200	36.590	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	27.030	37.710	3.964	4.178	9.768	10.150	98.6%	1.006	1.007	1.913
2	14:22:23	26.600	38.080	3.891	4.267	9.305	10.240	99.1%	1.042	0.990	1.918
3	14:22:50	26.700	39.330	4.244	4.226	9.563	9.976	98.2%	0.999	1.007	1.961
X		26.780	38.370	4.033	4.224	9.546	10.120	98.6%	1.015	1.001	1.931
S		0.225	0.848	0.186	0.045	0.232	0.136	0.4%	0.023	0.010	0.026
%RSD		0.839	2.210	4.621	1.057	2.433	1.345	0.4	2.288	1.002	1.365
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:21:56	1.867	1.893	98.8%							
2	14:22:23	1.825	1.837	100.0%							
3	14:22:50	1.843	1.881	98.0%							
X		1.845	1.870	99.0%							
S		0.021	0.029	1.0%							
%RSD		1.157	1.574	1.0							

cal2 MW-12645 4/22/2020 14:27:24

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	97.0%	2.068	244.200	247.700	-6.594	1973.000	2066.000	2175.000	2038.000	193.700
2	14:28:18	94.4%	2.087	252.000	257.600	-7.551	2063.000	2132.000	2243.000	2090.000	199.900
3	14:28:45	95.6%	2.123	255.100	259.300	-6.314	2065.000	2118.000	2190.000	2099.000	200.400
X		95.7%	2.093	250.400	254.900	-6.820	2034.000	2105.000	2203.000	2076.000	198.000
S		1.3%	0.028	5.627	6.290	0.648	52.800	34.510	35.540	33.050	3.725
%RSD		1.3	1.348	2.247	2.468	9.508	2.596	1.639	1.613	1.592	1.881
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	488.800	-43.640	1858.000	2059.000	1997.000	97.3%	25.180	24.020	23.840	636.100
2	14:28:18	506.300	-49.900	1942.000	2150.000	2045.000	93.0%	26.010	25.450	25.010	178.800
3	14:28:45	493.300	-55.240	2124.000	2120.000	2021.000	93.2%	26.270	24.500	24.750	414.800
X		496.100	-49.590	1975.000	2109.000	2021.000	94.5%	25.820	24.650	24.540	409.900
S		9.091	5.808	136.000	45.890	24.140	2.4%	0.571	0.728	0.619	228.700
%RSD		1.832	11.710	6.885	2.175	1.194	2.6	2.209	2.953	2.521	55.790
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	277.700	23.810	278.400	251.100	4.924	24.040	25.360	25.140	26.410	49.940
2	14:28:18	294.400	24.620	297.500	276.600	4.867	25.760	24.610	25.220	25.130	49.160
3	14:28:45	289.000	24.420	290.500	262.400	5.021	25.340	24.880	25.040	25.620	50.060
X		287.000	24.290	288.800	263.400	4.937	25.050	24.950	25.130	25.720	49.720
S		8.516	0.421	9.664	12.770	0.078	0.898	0.378	0.090	0.644	0.487
%RSD		2.967	1.734	3.346	4.849	1.575	3.586	1.516	0.359	2.505	0.980
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	48.680	48.310	10.760	23.220	-0.150	0.300	114.200	25.670	-0.527	48.360
2	14:28:18	50.430	50.330	11.570	24.660	0.170	0.313	119.100	26.130	-0.844	49.400
3	14:28:45	48.520	49.190	9.847	23.780	0.934	-0.272	107.500	23.550	3.763	48.590
X		49.210	49.280	10.730	23.890	0.318	0.114	113.600	25.120	0.797	48.780
S		1.059	1.013	0.864	0.724	0.557	0.334	5.825	1.375	2.573	0.548
%RSD		2.152	2.056	8.056	3.032	175.100	293.800	5.128	5.474	322.800	1.124
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	94.9%	51.770	51.020	50.950	0.882	4.901	5.122	0.352	0.455	96.1%
2	14:28:18	93.8%	50.230	51.040	50.140	1.305	5.015	4.893	0.435	0.504	96.8%
3	14:28:45	94.3%	52.100	52.330	50.810	0.982	4.897	4.917	0.434	0.535	95.1%
X		94.4%	51.370	51.460	50.640	1.056	4.938	4.977	0.407	0.498	96.0%
S		0.6%	1.001	0.752	0.436	0.221	0.067	0.126	0.048	0.041	0.9%
%RSD		0.6	1.949	1.460	0.860	20.910	1.360	2.531	11.750	8.149	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	69.280	99.910	9.850	10.990	25.580	25.190	97.9%	2.589	2.559	4.816
2	14:28:18	69.460	96.770	10.260	10.680	24.840	25.050	98.6%	2.467	2.601	4.642
3	14:28:45	69.860	99.620	10.210	10.580	25.460	25.070	97.2%	2.481	2.548	4.832
X		69.530	98.770	10.100	10.750	25.290	25.100	97.9%	2.512	2.569	4.764
S		0.294	1.739	0.222	0.213	0.399	0.074	0.7%	0.067	0.028	0.105
%RSD		0.423	1.761	2.195	1.980	1.578	0.295	0.7	2.653	1.087	2.209
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:27:51	4.764	4.726	95.9%							
2	14:28:18	4.828	4.685	95.6%							
3	14:28:45	5.001	4.818	97.2%							
X		4.864	4.743	96.3%							
S		0.123	0.068	0.9%							
%RSD		2.523	1.433	0.9							

cal3 MW-12520 4/22/2020 14:33:19

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	93.2%	244.700	237.900	252.800	4.196	269.300	281.500	268.300	248.000	246.800
2	14:34:14	91.1%	249.500	238.300	250.800	-0.992	271.600	283.300	265.400	261.400	252.800
3	14:34:41	88.2%	252.800	247.500	255.600	4.568	274.400	282.600	265.800	256.500	248.400
X		90.9%	249.000	241.200	253.000	2.591	271.800	282.500	266.500	255.300	249.300
S		2.5%	4.080	5.424	2.416	3.108	2.545	0.893	1.592	6.749	3.106
%RSD		2.7	1.639	2.248	0.955	120.000	0.936	0.316	0.598	2.644	1.246
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	245.100	-72.390	250.200	375.100	310.300	89.6%	243.900	243.200	242.900	2911.000
2	14:34:14	248.500	-83.970	254.900	387.500	310.000	87.0%	251.400	248.900	248.900	2648.000
3	14:34:41	257.300	-91.300	257.200	342.900	309.500	87.2%	247.500	242.700	245.100	2978.000
X		250.300	-82.550	254.100	368.500	309.900	87.9%	247.600	244.900	245.600	2846.000
S		6.308	9.533	3.568	22.990	0.381	1.5%	3.779	3.451	3.071	174.800
%RSD		2.520	11.550	1.404	6.238	0.123	1.7	1.526	1.409	1.250	6.144
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	377.000	243.100	280.000	258.300	244.500	249.100	244.700	244.300	250.100	242.500
2	14:34:14	394.500	246.900	283.400	269.800	253.900	252.500	256.800	255.200	255.800	251.400
3	14:34:41	378.300	240.800	279.600	255.800	246.800	248.700	247.600	251.500	251.500	248.000
X		383.300	243.600	281.000	261.300	248.400	250.100	249.700	250.400	252.500	247.300
S		9.776	3.076	2.054	7.491	4.903	2.098	6.340	5.527	2.970	4.479
%RSD		2.551	1.263	0.731	2.867	1.974	0.839	2.539	2.208	1.176	1.811
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	247.000	248.600	246.100	249.000	0.843	0.295	1102.000	243.700	0.923	244.600
2	14:34:14	252.200	252.600	252.400	251.100	-0.038	-0.601	1128.000	247.200	-0.616	247.400
3	14:34:41	249.000	247.000	247.900	242.000	0.240	-0.470	1167.000	253.700	-1.811	247.600
X		249.400	249.400	248.800	247.300	0.348	-0.259	1132.000	248.200	-0.502	246.500
S		2.672	2.874	3.256	4.756	0.450	0.484	32.940	5.113	1.371	1.650
%RSD		1.072	1.152	1.309	1.923	129.300	186.900	2.910	2.060	273.200	0.669
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	90.2%	243.100	242.400	242.100	239.300	255.700	246.900	245.700	242.900	92.0%
2	14:34:14	88.7%	249.300	251.700	248.700	250.300	257.200	250.800	247.000	246.800	91.2%
3	14:34:41	87.4%	244.200	247.600	252.400	246.900	251.600	248.300	243.400	243.300	90.9%
X		88.7%	245.500	247.200	247.700	245.500	254.900	248.600	245.300	244.300	91.4%
S		1.4%	3.309	4.706	5.227	5.607	2.900	1.980	1.819	2.170	0.6%
%RSD		1.6	1.348	1.903	2.110	2.284	1.138	0.796	0.741	0.888	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	246.000	248.100	240.100	242.500	247.100	248.400	96.3%	249.500	258.800	242.600
2	14:34:14	249.000	245.000	243.900	251.400	251.100	252.100	94.1%	250.100	267.900	253.600
3	14:34:41	246.000	244.300	243.900	247.900	247.800	249.400	94.2%	249.100	259.500	246.600
X		247.000	245.800	242.600	247.300	248.700	249.900	94.9%	249.600	262.100	247.600
S		1.731	2.029	2.206	4.485	2.158	1.912	1.2%	0.465	5.030	5.614
%RSD		0.701	0.825	0.909	1.814	0.868	0.765	1.3	0.186	1.919	2.268
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:33:47	241.100	241.100	95.7%							
2	14:34:14	250.500	250.600	95.9%							
3	14:34:41	246.900	245.200	95.0%							
X		246.100	245.600	95.5%							
S		4.744	4.745	0.5%							
%RSD		1.927	1.932	0.5							

cal4 MW-12521 4/22/2020 14:39:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.6%	<u>m 507.300</u>	<u>m 511.100</u>	<u>m 512.100</u>	8.931	547.400	576.000	546.800	502.900	<u>m 500.800</u>
2	14:40:09	87.0%	498.100	<u>m 505.600</u>	<u>m 500.900</u>	-0.852	564.200	564.300	545.200	518.300	<u>m 510.000</u>
3	14:40:36	85.9%	495.500	496.800	<u>m 505.100</u>	3.933	560.500	571.100	552.500	527.600	<u>m 511.700</u>
X		85.8%	<u>m 500.300</u>	<u>m 504.500</u>	<u>m 506.000</u>	4.004	557.400	570.400	548.200	516.300	<u>m 507.500</u>
S		1.2%	<u>m 6.191</u>	<u>m 7.234</u>	<u>m 5.622</u>	4.892	8.875	5.880	3.826	12.450	<u>m 5.836</u>
%RSD		1.4	<u>m 1.238</u>	<u>m 1.434</u>	<u>m 1.111</u>	122.200	1.592	1.031	0.698	2.412	<u>m 1.150</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	519.600	-83.370	512.000	731.900	607.800	83.1%	498.600	<u>m 501.200</u>	<u>m 506.000</u>	1378.000
2	14:40:09	517.200	-98.600	512.400	675.500	602.000	82.4%	499.700	<u>m 503.300</u>	<u>m 501.800</u>	3295.000
3	14:40:36	520.200	-105.700	506.000	791.000	617.000	80.9%	<u>m 501.400</u>	<u>m 503.200</u>	<u>m 504.300</u>	5078.000
X		519.000	-95.900	510.100	732.800	609.000	82.1%	<u>m 499.900</u>	<u>m 502.600</u>	<u>m 504.000</u>	3250.000
S		1.583	11.430	3.560	57.780	7.572	1.1%	<u>m 1.415</u>	<u>m 1.139</u>	<u>m 2.088</u>	1851.000
%RSD		0.305	11.920	0.698	7.884	1.243	1.4	<u>m 0.283</u>	<u>m 0.227</u>	<u>m 0.414</u>	56.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	773.300	499.300	561.400	527.400	498.500	497.400	497.800	<u>m 503.800</u>	<u>m 501.900</u>	497.700
2	14:40:09	772.600	498.200	566.200	521.300	<u>m 505.800</u>	496.300	498.800	<u>m 501.600</u>	<u>m 501.500</u>	<u>m 503.100</u>
3	14:40:36	788.400	<u>m 512.200</u>	576.500	527.700	<u>m 506.600</u>	<u>m 506.200</u>	<u>m 503.900</u>	494.100	492.800	498.900
X		778.100	<u>m 503.200</u>	568.000	525.500	<u>m 503.600</u>	<u>m 500.000</u>	<u>m 500.100</u>	<u>m 499.800</u>	<u>m 498.700</u>	<u>m 499.900</u>
S		8.941	<u>m 7.789</u>	7.693	3.598	<u>m 4.420</u>	<u>m 5.426</u>	<u>m 3.241</u>	<u>m 5.096</u>	<u>m 5.102</u>	<u>m 2.867</u>
%RSD		1.149	<u>m 1.548</u>	1.354	0.685	<u>m 0.878</u>	<u>m 1.085</u>	<u>m 0.648</u>	<u>m 1.020</u>	<u>m 1.023</u>	<u>m 0.574</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	491.600	497.200	491.500	498.200	-0.023	-0.281	2239.000	494.100	-1.286	<u>m 503.300</u>
2	14:40:09	<u>m 505.400</u>	<u>m 510.100</u>	<u>m 508.000</u>	<u>m 510.800</u>	0.152	-0.685	2250.000	497.200	3.502	<u>m 501.300</u>
3	14:40:36	<u>m 504.100</u>	<u>m 506.800</u>	<u>m 507.000</u>	495.200	-0.103	-0.606	2317.000	<u>m 511.400</u>	0.964	<u>m 501.100</u>
X		<u>m 500.400</u>	<u>m 504.700</u>	<u>m 502.200</u>	<u>m 501.400</u>	0.009	-0.524	2269.000	<u>m 500.900</u>	1.060	<u>m 501.900</u>
S		<u>m 7.616</u>	<u>m 6.704</u>	<u>m 9.280</u>	<u>m 8.261</u>	0.131	0.214	42.340	<u>m 9.230</u>	2.396	<u>m 1.213</u>
%RSD		<u>m 1.522</u>	<u>m 1.328</u>	<u>m 1.848</u>	<u>m 1.648</u>	1499.000	40.850	1.866	<u>m 1.843</u>	226.000	<u>m 0.242</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.8%	493.000	488.300	490.700	<u>m 509.700</u>	<u>m 514.500</u>	<u>m 506.100</u>	496.900	498.200	86.6%
2	14:40:09	84.2%	<u>m 503.000</u>	<u>m 503.900</u>	<u>m 505.300</u>	494.100	<u>m 518.000</u>	<u>m 506.200</u>	<u>m 501.400</u>	<u>m 502.800</u>	85.7%
3	14:40:36	83.4%	<u>m 510.200</u>	<u>m 511.500</u>	<u>m 507.200</u>	<u>m 503.000</u>	<u>m 521.700</u>	<u>m 521.400</u>	<u>m 508.600</u>	<u>m 507.400</u>	85.0%
X		84.1%	<u>m 502.100</u>	<u>m 501.200</u>	<u>m 501.100</u>	<u>m 502.200</u>	<u>m 518.100</u>	<u>m 511.200</u>	<u>m 502.300</u>	<u>m 502.800</u>	85.8%
S		0.7%	<u>m 8.662</u>	<u>m 11.840</u>	<u>m 9.061</u>	<u>m 7.797</u>	<u>m 3.612</u>	<u>m 8.801</u>	<u>m 5.893</u>	<u>m 4.626</u>	0.8%
%RSD		0.8	<u>m 1.725</u>	<u>m 2.363</u>	<u>m 1.808</u>	<u>m 1.553</u>	<u>m 0.697</u>	<u>m 1.721</u>	<u>m 1.173</u>	<u>m 0.920</u>	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	496.400	488.100	497.000	<u>m 502.400</u>	500.000	497.200	92.4%	<u>m 512.500</u>	<u>m 489.300</u>	499.900
2	14:40:09	<u>m 515.800</u>	<u>m 510.200</u>	<u>m 508.300</u>	<u>m 501.000</u>	<u>m 508.300</u>	<u>m 504.400</u>	92.3%	<u>m 510.800</u>	<u>m 496.100</u>	497.900
3	14:40:36	<u>m 511.400</u>	<u>m 509.200</u>	<u>m 505.800</u>	<u>m 500.700</u>	<u>m 504.600</u>	498.400	91.9%	<u>m 504.000</u>	<u>m 496.500</u>	<u>m 505.800</u>
X		<u>m 507.900</u>	<u>m 502.500</u>	<u>m 503.700</u>	<u>m 501.300</u>	<u>m 504.300</u>	<u>m 500.000</u>	92.2%	<u>m 509.100</u>	<u>m 494.000</u>	<u>m 501.200</u>
S		<u>m 10.160</u>	<u>m 12.460</u>	<u>m 5.938</u>	<u>m 0.894</u>	<u>m 4.170</u>	<u>m 3.902</u>	0.3%	<u>m 4.492</u>	<u>m 4.023</u>	<u>m 4.109</u>
%RSD		<u>m 2.000</u>	<u>m 2.480</u>	<u>m 1.179</u>	<u>m 0.178</u>	<u>m 0.827</u>	<u>m 0.780</u>	0.3	<u>m 0.882</u>	<u>m 0.814</u>	<u>m 0.820</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:39:42	<u>m 502.900</u>	<u>m 503.900</u>	92.8%							
2	14:40:09	497.000	<u>m 501.300</u>	92.4%							
3	14:40:36	<u>m 505.900</u>	<u>m 503.700</u>	92.8%							
X		<u>m 501.900</u>	<u>m 503.000</u>	92.7%							
S		<u>m 4.532</u>	<u>m 1.435</u>	0.2%							
%RSD		<u>m 0.903</u>	<u>m 0.285</u>	0.3							

cal5 MW-12618 4/22/2020 14:45:12

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	81.7%	-0.023	4.861	5.207	-13.390	±50410.000	±49520.000	±49620.000	±47840.000	1.047
2	14:46:06	81.3%	0.021	5.894	4.543	-6.239	±49480.000	±50720.000	±50970.000	±46750.000	1.182
3	14:46:33	82.9%	0.020	4.464	4.333	-12.190	±50740.000	±50430.000	±49490.000	±47630.000	1.124
X		82.0%	0.006	5.073	4.694	-10.610	±50210.000	±50220.000	±50030.000	±47410.000	1.118
S		0.8%	0.025	0.738	0.456	3.830	±655.600	±626.400	±822.900	±582.600	0.068
%RSD		1.0	401.900	14.550	9.721	36.110	±1.306	±1.247	±1.645	±1.229	6.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±3995.000	-112.100	±46110.000	50710.000	±49440.000	80.8%	0.391	0.031	0.219	-62.520
2	14:46:06	±4151.000	-114.600	±46790.000	50070.000	±49660.000	82.8%	0.499	0.022	0.138	-66.410
3	14:46:33	±4109.000	-129.200	±46740.000	50200.000	±50140.000	83.0%	0.450	0.010	0.172	-64.220
X		±4085.000	-118.700	±46540.000	50330.000	±49750.000	82.2%	0.447	0.021	0.177	-64.390
S		±80.730	9.209	±379.700	338.600	±355.200	1.2%	0.054	0.010	0.041	1.949
%RSD		±1.976	7.761	±0.816	0.673	±0.714	1.5	12.070	49.180	23.080	3.027
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±49610.000	0.648	±50060.000	±48140.000	2.240	2.154	6.527	0.380	0.250	1.061
2	14:46:06	±50420.000	0.599	±49870.000	±47470.000	2.264	2.033	4.737	0.303	0.265	1.124
3	14:46:33	±49910.000	0.698	±50330.000	±48310.000	2.254	1.845	4.368	0.404	0.164	0.901
X		±49980.000	0.648	±50080.000	±47980.000	2.252	2.010	5.211	0.362	0.226	1.029
S		±407.400	0.050	±234.500	±443.600	0.012	0.156	1.154	0.053	0.054	0.115
%RSD		±0.815	7.654	±0.468	±0.924	0.535	7.746	22.160	14.600	23.970	11.160
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.958	1.246	0.190	1.416	1.357	-0.686	-0.094	-0.111	0.593	0.396
2	14:46:06	1.089	0.970	0.193	0.220	1.305	-0.193	-0.644	-0.095	-0.370	0.398
3	14:46:33	1.211	0.937	0.490	0.757	2.382	-0.097	2.842	0.629	0.048	0.388
X		1.086	1.051	0.291	0.798	1.681	-0.325	0.701	0.141	0.090	0.394
S		0.127	0.170	0.173	0.599	0.607	0.316	1.874	0.423	0.483	0.006
%RSD		11.650	16.170	59.410	75.130	36.120	97.270	267.300	299.600	534.600	1.426
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	82.2%	1.114	0.925	0.898	0.099	0.037	0.043	0.036	0.006	82.8%
2	14:46:06	83.6%	0.932	0.965	0.959	0.083	0.026	0.058	-0.001	0.032	83.3%
3	14:46:33	83.9%	0.991	0.991	0.977	0.223	0.033	0.029	-0.009	0.014	84.1%
X		83.2%	1.012	0.960	0.945	0.135	0.032	0.043	0.009	0.017	83.4%
S		0.9%	0.093	0.033	0.041	0.076	0.006	0.014	0.024	0.013	0.6%
%RSD		1.1	9.148	3.483	4.362	56.460	17.780	32.840	279.200	78.090	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.394	0.656	0.975	0.980	0.055	0.043	88.6%	0.034	0.056	0.043
2	14:46:06	0.370	0.576	0.962	0.978	-0.009	0.048	90.7%	0.049	0.050	0.047
3	14:46:33	0.356	0.550	0.955	0.899	0.032	0.036	89.6%	0.057	0.030	0.033
X		0.374	0.594	0.964	0.952	0.026	0.042	89.6%	0.047	0.045	0.041
S		0.019	0.055	0.010	0.046	0.033	0.006	1.0%	0.011	0.014	0.007
%RSD		5.100	9.271	1.017	4.807	125.700	13.960	1.1	24.220	29.990	16.950
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:45:39	0.041	0.042	87.2%							
2	14:46:06	0.055	0.047	87.3%							
3	14:46:33	0.040	0.041	88.3%							
X		0.045	0.043	87.6%							
S		0.008	0.003	0.6%							
%RSD		18.710	7.218	0.7							

cal6 MW-12619 4/22/2020 14:51:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	79.0%	0.008	2.040	2.002	-12.050	97620.000	99400.000	99970.000	92370.000	1.284
2	14:52:01	78.5%	-0.022	3.057	2.109	-12.490	99940.000	100300.000	100100.000	93540.000	1.110
3	14:52:28	79.9%	0.008	2.168	2.017	-7.497	102100.000	100000.000	99910.000	94990.000	1.242
X		79.2%	-0.002	2.422	2.043	-10.680	99890.000	99880.000	99980.000	93630.000	1.212
S		0.7%	0.017	0.554	0.058	2.765	2253.000	438.200	82.360	1314.000	0.091
%RSD		0.9	966.100	22.890	2.818	25.890	2.256	0.439	0.082	1.403	7.469
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	8443.000	-120.800	92050.000	97570.000	99170.000	82.5%	1.047	-0.047	0.322	-50.120
2	14:52:01	8514.000	-120.200	94110.000	100700.000	100800.000	81.6%	0.675	-0.003	0.325	-85.880
3	14:52:28	8356.000	-136.700	94880.000	101200.000	100300.000	82.0%	1.006	-0.059	0.329	-32.570
X		8438.000	-125.900	93680.000	99830.000	100100.000	82.0%	0.909	-0.037	0.325	-56.190
S		78.890	9.348	1463.000	1976.000	823.700	0.5%	0.204	0.030	0.003	27.170
%RSD		0.935	7.427	1.562	1.979	0.823	0.6	22.440	80.560	1.033	48.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	98930.000	1.260	98730.000	95040.000	4.634	3.816	9.785	0.496	0.353	1.858
2	14:52:01	100200.000	1.295	101400.000	96680.000	4.516	3.478	7.679	0.658	0.387	2.121
3	14:52:28	100900.000	1.346	99770.000	96440.000	4.559	3.749	8.544	0.660	0.440	2.066
X		100000.000	1.300	99960.000	96050.000	4.569	3.681	8.669	0.605	0.394	2.015
S		983.900	0.043	1324.000	886.400	0.059	0.179	1.058	0.094	0.044	0.139
%RSD		0.984	3.298	1.325	0.923	1.300	4.863	12.210	15.530	11.210	6.880
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	1.643	1.930	0.408	1.353	4.998	1.237	-0.222	-0.533	3.522	0.769
2	14:52:01	1.788	1.758	0.508	1.607	5.128	0.020	0.673	0.086	0.496	0.774
3	14:52:28	1.463	1.932	0.619	1.961	5.225	0.013	1.682	0.468	-0.742	0.813
X		1.631	1.873	0.512	1.640	5.117	0.423	0.711	0.007	1.092	0.785
S		0.163	0.099	0.105	0.305	0.114	0.704	0.952	0.505	2.194	0.024
%RSD		9.971	5.309	20.580	18.600	2.226	166.300	134.000	7155.000	200.900	3.062
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	83.9%	0.347	0.234	0.182	-0.328	0.013	0.011	0.009	-0.001	83.0%
2	14:52:01	83.8%	0.381	0.317	0.232	0.563	0.021	0.024	-0.013	0.003	83.1%
3	14:52:28	82.2%	0.330	0.280	0.155	0.178	0.010	0.022	-0.013	-0.006	83.0%
X		83.3%	0.353	0.277	0.190	0.138	0.014	0.019	-0.006	-0.001	83.0%
S		1.0%	0.026	0.042	0.039	0.447	0.006	0.007	0.013	0.005	0.1%
%RSD		1.2	7.419	15.040	20.470	324.600	39.080	37.380	227.100	358.100	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	0.058	0.090	0.601	0.632	0.012	0.001	88.4%	0.012	0.018	0.037
2	14:52:01	0.072	0.183	0.635	0.608	-0.009	0.072	89.2%	0.011	0.016	0.029
3	14:52:28	0.065	0.082	0.543	0.567	0.023	0.061	87.2%	0.009	0.018	0.048
X		0.065	0.118	0.593	0.602	0.008	0.045	88.3%	0.011	0.017	0.038
S		0.007	0.056	0.047	0.033	0.016	0.038	1.0%	0.002	0.001	0.010
%RSD		10.750	47.630	7.850	5.499	193.300	85.780	1.1	14.500	6.342	25.250
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:51:33	0.019	0.029	85.0%							
2	14:52:01	0.022	0.026	86.2%							
3	14:52:28	0.049	0.032	85.4%							
X		0.030	0.029	85.5%							
S		0.016	0.003	0.6%							
%RSD		54.620	10.390	0.7							

ICV MW12789 PREP 4/22/20 4/22/2020 14:57:03 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	84.0%	199.200	207.800	207.100	-4.914	±39660.000	±40640.000	±40090.000	±36740.000	191.300
2	14:57:57	81.8%	199.400	191.400	207.500	-0.411	±40030.000	±41330.000	±41130.000	±37400.000	192.500
3	14:58:24	83.8%	203.900	199.100	198.500	-5.660	±40640.000	±39960.000	±40280.000	±37800.000	195.100
X		83.2%	100.417%	199.400	102.179%	-3.661	±100.280%	±40640.000	±40500.000	±93.286%	96.496%
S		1.2%	n/a	8.206	n/a	2.840	±n/a	±686.400	±552.300	±n/a	n/a
%RSD		1.5	1.331	4.115	2.506	77.560	±1.242	±1.689	±1.364	±1.426	1.012
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	2479.000	-134.900	±37820.000	39320.000	±38960.000	87.1%	194.500	193.800	188.600	1698.000
2	14:57:57	±2397.000	-147.300	±37470.000	39360.000	±38850.000	87.0%	194.900	194.100	189.600	1903.000
3	14:58:24	2579.000	-151.300	±38030.000	39720.000	±39110.000	86.1%	197.600	198.900	189.800	2048.000
X		±2485.000	-144.500	±94.437%	39470.000	±97.429%	86.7%	97.840%	97.815%	94.669%	1883.000
S		±91.380	8.585	±n/a	220.700	±n/a	0.6%	n/a	n/a	n/a	175.900
%RSD		±3.677	5.942	±0.751	0.559	±0.337	0.6	0.864	1.467	0.352	9.338
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	±39520.000	184.700	±39030.000	±37470.000	183.700	182.800	190.300	186.900	195.700	191.400
2	14:57:57	±38980.000	185.400	±38830.000	±37650.000	185.400	183.900	195.600	190.200	190.500	192.600
3	14:58:24	±39910.000	183.700	±39860.000	±37940.000	189.300	189.900	191.800	189.100	192.000	190.400
X		±39470.000	92.295%	±98.093%	±94.212%	93.053%	92.754%	192.600	188.700	96.365%	95.720%
S		±466.200	n/a	±n/a	±n/a	n/a	n/a	2.737	1.674	n/a	n/a
%RSD		±1.181	0.452	±1.390	±0.632	1.544	2.052	1.422	0.887	1.369	0.580
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	186.000	186.000	210.600	190.800	1.578	-0.749	895.400	203.500	3.284	192.800
2	14:57:57	190.200	185.600	208.000	190.200	1.691	-0.174	870.600	195.500	0.346	192.800
3	14:58:24	191.100	188.800	203.100	185.500	3.551	0.518	857.800	193.200	1.966	191.700
X		189.100	186.800	103.630%	188.800	2.273	-0.135	874.600	98.706%	1.866	96.221%
S		2.738	1.744	n/a	2.888	1.108	0.634	19.120	n/a	1.472	n/a
%RSD		1.448	0.934	1.825	1.529	48.730	469.600	2.186	2.745	78.880	0.346
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	86.1%	204.700	201.600	197.200	186.200	200.200	196.800	194.200	192.100	85.6%
2	14:57:57	85.8%	201.700	204.000	201.500	191.600	197.600	194.400	192.500	191.000	86.6%
3	14:58:24	87.0%	205.600	200.300	199.300	187.400	198.400	192.300	195.300	190.300	87.1%
X		86.3%	102.007%	100.983%	99.664%	188.400	99.366%	194.500	97.004%	95.574%	86.4%
S		0.6%	n/a	n/a	n/a	2.849	n/a	2.279	n/a	n/a	0.8%
%RSD		0.7	1.014	0.913	1.096	1.512	0.651	1.172	0.729	0.471	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	198.700	199.000	201.800	198.900	203.700	197.100	92.6%	198.300	198.500	189.900
2	14:57:57	197.300	197.100	200.000	199.800	197.900	196.400	91.9%	198.200	202.400	190.200
3	14:58:24	198.600	195.800	198.600	198.700	195.100	195.800	93.2%	200.200	201.300	188.100
X		99.086%	98.650%	200.200	99.577%	99.434%	98.228%	92.6%	198.900	100.363%	189.400
S		n/a	n/a	1.611	n/a	n/a	n/a	0.7%	1.137	n/a	1.115
%RSD		0.387	0.833	0.805	0.297	2.208	0.332	0.7	0.572	0.996	0.589
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:57:30	185.600	186.100	89.2%							
2	14:57:57	187.000	185.300	89.0%							
3	14:58:24	187.400	186.700	90.5%							
X		186.700	93.015%	89.6%							
S		0.952	n/a	0.8%							
%RSD		0.510	0.391	0.9							

ICB IM9936-01 4/22/2020 15:02:57 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	90.0%	0.014	1.168	0.996	-7.239	10.510	1.429	0.625	1.756	-0.003
2	15:03:50	89.2%	0.015	0.930	1.126	-0.044	10.430	1.855	1.373	1.261	0.019
3	15:04:17	89.8%	-0.012	1.684	1.413	-1.978	9.389	1.321	0.964	1.230	0.013
X		89.7%	0.006	1.261	1.178	-3.087	10.110	1.535	0.988	1.416	0.010
S		0.5%	0.015	0.385	0.213	3.723	0.626	0.282	0.374	0.295	0.012
%RSD		0.5	269.500	30.560	18.090	120.600	6.194	18.380	37.910	20.870	120.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.398	-164.600	18.060	1.109	1.965	88.6%	-0.046	-0.029	-0.018	-52.490
2	15:03:50	2.865	-167.200	17.660	-0.969	1.640	87.3%	0.022	0.014	-0.027	-77.080
3	15:04:17	2.612	-170.900	16.110	2.217	2.053	87.7%	-0.001	0.005	-0.001	-80.190
X		2.625	-167.600	17.270	0.786	1.886	87.9%	-0.008	-0.003	-0.015	-69.920
S		0.234	3.130	1.029	1.617	0.217	0.6%	0.034	0.023	0.013	15.180
%RSD		8.908	1.868	5.956	205.800	11.530	0.7	408.800	733.000	86.110	21.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.569	0.019	-2.481	5.389	0.008	0.021	1.199	0.048	0.077	-0.054
2	15:03:50	2.547	0.010	-1.282	3.909	0.003	-0.028	0.846	0.044	0.019	-0.187
3	15:04:17	0.515	0.024	-2.410	1.817	0.014	0.003	0.755	0.041	0.008	-0.031
X		1.877	0.018	-2.058	3.705	0.008	-0.001	0.933	0.044	0.035	-0.091
S		1.180	0.007	0.672	1.795	0.005	0.025	0.235	0.004	0.037	0.084
%RSD		62.840	40.380	32.670	48.450	62.910	2212.000	25.170	8.382	106.000	93.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.165	0.185	-0.017	0.078	0.219	-0.448	0.286	0.496	-3.489	0.003
2	15:03:50	-0.068	0.114	-0.008	-0.091	0.020	-0.590	-1.358	0.028	-2.659	0.003
3	15:04:17	-0.517	0.061	-0.148	0.907	0.105	-0.067	-3.065	-0.611	-0.644	0.006
X		-0.140	0.120	-0.058	0.298	0.115	-0.368	-1.379	-0.029	-2.264	0.004
S		0.347	0.062	0.078	0.534	0.100	0.271	1.676	0.556	1.463	0.002
%RSD		247.500	51.920	135.900	179.300	86.900	73.460	121.500	1913.000	64.610	40.530
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	88.3%	0.116	0.113	0.071	0.464	0.005	0.009	0.007	-0.000	91.5%
2	15:03:50	88.1%	0.160	0.055	0.161	-0.781	0.011	0.006	-0.006	0.010	91.0%
3	15:04:17	89.3%	0.163	0.096	0.131	0.092	-0.000	0.011	-0.013	0.008	91.7%
X		88.6%	0.146	0.088	0.121	-0.075	0.005	0.009	-0.004	0.006	91.4%
S		0.6%	0.026	0.030	0.046	0.639	0.006	0.003	0.010	0.005	0.3%
%RSD		0.7	17.920	33.960	37.860	854.800	115.300	28.760	274.700	90.480	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.015	0.055	0.166	0.188	-0.032	0.005	93.7%	0.009	0.008	0.026
2	15:03:50	0.047	0.085	0.207	0.206	-0.041	0.005	93.4%	0.017	0.009	0.020
3	15:04:17	0.018	0.052	0.210	0.228	-0.041	-0.012	94.7%	0.013	0.004	0.012
X		0.026	0.064	0.194	0.207	-0.038	-0.000	93.9%	0.013	0.007	0.019
S		0.018	0.018	0.025	0.020	0.006	0.010	0.7%	0.004	0.003	0.007
%RSD		67.840	28.170	12.720	9.699	14.670	2142.000	0.7	29.250	36.430	36.290
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:03:23	0.009	0.016	95.8%							
2	15:03:50	0.010	0.015	95.6%							
3	15:04:17	0.019	0.010	97.5%							
X		0.013	0.014	96.3%							
S		0.006	0.003	1.0%							
%RSD		43.580	24.960	1.1							

ICSA MW12579 4/22/2020 15:08:50 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	78.7%	-0.006	1.571	1.135	576.300	TM 102400.000	TM 98940.000	TM 98500.000	TM 97450.000	TM 93260.000
2	15:09:44	81.3%	-0.023	1.557	0.818	568.800	TM 105000.000	TM 100400.000	TM 101100.000	TM 99790.000	TM 93460.000
3	15:10:11	80.7%	-0.022	0.872	0.879	573.700	TM 102900.000	TM 99460.000	TM 98780.000	TM 96230.000	TM 91470.000
X		80.2%	-1.#IO%	1.333	1.#IO%	573.000	TM 103.442%	TM 99610.000	TM 99450.000	TM 97.821%	TM 92.731%
S		1.4%	n/a	0.400	n/a	3.796	TM n/a	TM 759.000	TM 1419.000	TM n/a	TM n/a
%RSD		1.7	54.060	29.960	17.820	0.662	TM 1.315	TM 0.762	TM 1.426	TM 1.848	TM 1.181
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	16.400	TM 30650.000	TM 91370.000	TM 101100.000	TM 101300.000	76.9%	TM 2145.000	-0.908	-1.011	3401.000
2	15:09:44	14.890	TM 30500.000	TM 93550.000	TM 101500.000	TM 103400.000	76.6%	TM 2164.000	-0.992	-1.203	3523.000
3	15:10:11	15.070	TM 30120.000	TM 92500.000	TM 100100.000	TM 100700.000	79.0%	TM 2064.000	-0.938	-1.036	3554.000
X		15.450	TM 30420.000	TM 92.476%	TM 100900.000	TM 101.821%	77.5%	TM 106.210%	-1.#IO%	-1.#IO%	3493.000
S		0.821	TM 272.000	TM n/a	TM 719.600	TM n/a	1.3%	TM n/a	n/a	n/a	81.130
%RSD		5.309	TM 0.894	TM 1.178	TM 0.713	TM 1.361	1.7	TM 2.482	4.475	9.618	2.323
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	TM 102500.000	0.117	TM 102500.000	TM 98890.000	0.230	0.395	13.250	-1.352	-0.083	1.351
2	15:09:44	TM 105000.000	0.133	TM 104500.000	TM 100200.000	0.239	0.775	15.190	-1.202	-0.044	1.397
3	15:10:11	TM 100300.000	0.142	TM 101700.000	TM 98630.000	0.250	0.508	16.070	-1.103	-0.278	1.424
X		TM 102600.000	1.#IO%	TM 102900.000	TM 99.240%	1.#IO%	1.#IO%	14.840	-1.219	-1.#IO%	1.#IO%
S		TM 2322.000	n/a	TM 1466.000	TM n/a	n/a	n/a	1.441	0.126	n/a	n/a
%RSD		TM 2.263	9.627	TM 1.425	TM 0.850	4.233	34.870	9.712	10.300	93.090	2.680
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	1.381	0.499	-0.865	1.869	5.292	0.697	-2.705	-2.378	13.360	0.876
2	15:09:44	0.645	0.688	0.048	1.895	7.401	0.735	-2.779	-1.971	9.884	0.819
3	15:10:11	1.532	0.507	-0.471	1.583	7.786	1.446	-1.931	-2.399	14.550	0.868
X		1.186	0.565	-1.#IO%	1.782	6.826	0.959	-2.472	-1.#IO%	12.600	0.854
S		0.475	0.107	n/a	0.173	1.343	0.422	0.470	n/a	2.425	0.031
%RSD		40.030	18.960	106.700	9.698	19.670	43.990	19.000	10.710	19.250	3.637
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	80.9%	TM 2098.000	TM 2066.000	TM 2146.000	-0.809	0.009	0.022	-6.316	0.031	83.8%
2	15:09:44	83.0%	TM 2129.000	TM 2115.000	TM 2116.000	-0.793	0.022	0.043	-6.189	0.119	83.1%
3	15:10:11	83.6%	TM 2127.000	TM 2092.000	TM 2147.000	0.058	0.013	0.033	-6.516	-0.012	84.7%
X		82.5%	TM 2118.000	TM 104.549%	TM 2137.000	-0.515	1.#IO%	0.032	-6.340	1.#IO%	83.9%
S		1.4%	TM 17.440	TM n/a	TM 17.560	0.496	n/a	0.010	0.165	n/a	0.8%
%RSD		1.7	TM 0.823	TM 1.163	TM 0.822	96.300	45.730	32.160	2.603	145.700	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	0.781	0.048	0.140	0.096	0.033	0.036	91.2%	0.030	0.025	0.051
2	15:09:44	0.695	0.075	0.153	0.155	-0.009	0.042	91.7%	0.020	0.007	0.058
3	15:10:11	0.733	0.093	0.121	0.116	-0.010	0.012	93.3%	0.017	0.007	0.050
X		1.#IO%	1.#IO%	0.138	1.#IO%	0.004	1.#IO%	92.1%	0.022	1.#IO%	0.053
S		n/a	n/a	0.016	n/a	0.024	n/a	1.1%	0.007	n/a	0.004
%RSD		5.795	31.120	11.570	24.350	548.100	53.260	1.2	29.620	80.160	8.065
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:09:17	0.082	0.065	88.5%							
2	15:09:44	0.055	0.049	88.8%							
3	15:10:11	0.044	0.051	90.3%							
X		0.060	1.#IO%	89.2%							
S		0.020	n/a	1.0%							
%RSD		32.480	16.140	1.1							

CCV MW12620 4/22/2020 15:14:45 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	86.4%	298.300	289.000	302.400	-8.235	60660.000	62060.000	61560.000	57320.000	297.700
2	15:15:39	83.8%	305.700	288.600	296.300	0.794	61350.000	61760.000	60940.000	58670.000	297.700
3	15:16:06	83.4%	304.300	297.000	304.800	-5.554	61760.000	63630.000	62910.000	58300.000	298.500
X		84.5%	100.920%	97.180%	100.388%	-4.332	102.099%	62480.000	61800.000	96.835%	99.315%
S		1.6%	n/a	n/a	n/a	4.637	n/a	1008.000	1004.000	n/a	n/a
%RSD		1.9	1.307	1.620	1.442	107.000	0.908	1.613	1.625	1.201	0.161
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	2694.000	-73.840	56500.000	61700.000	61050.000	86.0%	297.200	300.800	293.100	1466.000
2	15:15:39	2787.000	-83.180	58070.000	62120.000	62760.000	84.4%	300.700	297.700	300.300	3433.000
3	15:16:06	2765.000	-92.850	57790.000	61870.000	62500.000	84.6%	301.200	300.900	291.700	1796.000
X		2748.000	-83.290	95.756%	61900.000	103.506%	85.0%	99.908%	99.931%	98.347%	2232.000
S		48.620	9.507	n/a	208.600	n/a	0.9%	n/a	n/a	n/a	1054.000
%RSD		1.769	11.410	1.451	0.337	1.487	1.0	0.723	0.613	1.572	47.210
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	61710.000	286.200	60920.000	58780.000	287.300	281.700	293.900	276.200	284.400	293.700
2	15:15:39	63150.000	293.500	62570.000	60130.000	293.800	289.500	304.100	280.900	285.600	294.800
3	15:16:06	61610.000	286.300	61960.000	59540.000	290.300	286.400	303.500	280.500	281.600	283.400
X		62160.000	96.217%	61820.000	99.141%	96.833%	95.295%	300.500	279.200	94.614%	96.877%
S		861.100	n/a	837.800	n/a	n/a	n/a	5.733	2.591	n/a	n/a
%RSD		1.385	1.451	1.355	1.133	1.120	1.374	1.908	0.928	0.728	2.171
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	282.400	289.000	299.000	286.300	3.895	-0.139	1300.000	293.100	4.335	294.800
2	15:15:39	288.500	289.200	301.900	292.200	4.802	0.050	1315.000	297.200	-0.973	299.800
3	15:16:06	284.800	282.900	296.800	286.400	3.387	0.662	1288.000	285.600	0.276	296.500
X		285.200	287.000	99.741%	288.300	4.028	0.191	1301.000	97.319%	1.213	99.018%
S		3.055	3.572	n/a	3.361	0.717	0.419	13.270	n/a	2.775	n/a
%RSD		1.071	1.244	0.860	1.166	17.800	219.100	1.020	2.003	228.800	0.859
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	88.6%	310.100	310.000	305.800	293.600	297.200	291.500	294.500	292.600	88.3%
2	15:15:39	87.6%	321.400	314.600	311.400	288.300	302.000	297.200	294.200	292.800	87.2%
3	15:16:06	87.6%	310.600	311.100	308.500	299.000	293.600	288.200	291.000	290.600	88.8%
X		88.0%	104.676%	103.962%	308.600	293.600	99.205%	292.300	293.200	97.341%	88.1%
S		0.6%	n/a	n/a	2.802	5.334	n/a	4.542	1.922	n/a	0.8%
%RSD		0.6	2.033	0.775	0.908	1.816	1.422	1.554	0.656	0.412	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	295.700	299.800	297.500	292.400	301.200	295.000	96.6%	306.300	307.600	286.900
2	15:15:39	302.700	303.200	303.100	297.100	305.900	300.700	94.8%	304.800	313.100	296.700
3	15:16:06	298.900	296.700	299.100	300.300	304.000	301.400	95.0%	305.100	309.100	289.200
X		99.707%	99.973%	299.900	98.868%	101.237%	99.682%	95.5%	305.400	103.314%	96.976%
S		n/a	n/a	2.893	n/a	n/a	n/a	1.0%	0.814	n/a	n/a
%RSD		1.173	1.093	0.965	1.350	0.774	1.178	1.1	0.267	0.919	1.775
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:15:12	282.200	282.000	91.4%							
2	15:15:39	291.900	290.900	92.5%							
3	15:16:06	286.900	287.300	92.1%							
X		95.670%	95.576%	92.0%							
S		n/a	n/a	0.6%							
%RSD		1.679	1.564	0.6							

CBC IM9936-01 4/22/2020 15:20:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	93.3%	-0.039	1.844	1.807	-6.426	17.540	2.288	2.421	1.961	0.111
2	15:21:33	92.9%	-0.001	1.709	1.980	-10.380	16.100	1.855	1.982	2.518	0.123
3	15:22:00	90.3%	-0.012	1.736	1.798	-1.885	15.260	2.061	1.651	2.070	0.091
X		92.2%	-0.017	1.763	1.862	-6.229	16.300	2.068	2.018	2.183	0.109
S		1.7%	0.020	0.071	0.102	4.249	1.153	0.216	0.386	0.295	0.016
%RSD		1.8	114.100	4.055	5.507	68.220	7.073	10.450	19.150	13.530	15.090
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	0.794	-147.300	19.050	1.069	4.135	89.4%	0.064	0.059	0.031	-91.900
2	15:21:33	0.676	-146.600	18.610	-1.003	4.091	88.8%	0.065	0.003	0.025	-69.970
3	15:22:00	0.936	-159.200	16.910	0.018	2.363	89.7%	0.064	0.025	0.002	-81.240
X		0.802	-151.000	18.190	0.028	3.529	89.3%	0.064	0.029	0.019	-81.040
S		0.130	7.084	1.131	1.036	1.011	0.5%	0.001	0.028	0.016	10.970
%RSD		16.230	4.691	6.215	3732.000	28.640	0.5	0.890	98.070	81.440	13.530
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	1.803	0.054	-0.167	2.251	0.011	0.002	3.044	0.113	0.021	0.122
2	15:21:33	1.750	0.053	-0.716	4.594	0.014	-0.016	2.406	0.093	0.036	-0.001
3	15:22:00	1.215	0.059	-0.999	4.276	0.026	0.020	1.506	0.062	0.006	-0.096
X		1.589	0.055	-0.627	3.707	0.017	0.002	2.319	0.089	0.021	0.008
S		0.325	0.004	0.423	1.271	0.008	0.018	0.773	0.025	0.015	0.109
%RSD		20.470	6.663	67.460	34.280	49.440	826.100	33.320	28.550	70.520	1317.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	-0.211	0.129	-0.006	0.134	0.125	-0.022	-1.102	-0.125	-1.119	0.009
2	15:21:33	-0.329	-0.061	-0.138	0.549	0.217	0.205	-2.342	-0.389	-1.144	0.007
3	15:22:00	-0.410	0.013	-0.058	-0.106	-0.085	0.105	-1.539	-0.315	-0.349	0.005
X		-0.317	0.027	-0.067	0.192	0.086	0.096	-1.661	-0.276	-0.871	0.007
S		0.100	0.096	0.066	0.332	0.154	0.114	0.629	0.136	0.452	0.002
%RSD		31.670	351.900	98.700	172.600	180.100	118.400	37.850	49.330	51.940	33.860
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	91.0%	0.364	0.382	0.329	0.335	0.016	0.004	-0.007	0.008	94.5%
2	15:21:33	91.8%	0.291	0.348	0.437	0.539	-0.006	0.009	-0.014	0.021	94.7%
3	15:22:00	91.6%	0.377	0.295	0.410	0.338	0.008	0.012	-0.001	0.024	93.9%
X		91.5%	0.344	0.342	0.392	0.404	0.006	0.009	-0.007	0.018	94.4%
S		0.4%	0.046	0.044	0.056	0.117	0.011	0.004	0.007	0.008	0.4%
%RSD		0.5	13.490	12.810	14.340	29.010	182.200	49.340	90.630	48.010	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	0.088	0.140	0.318	0.342	-0.032	0.004	97.6%	0.004	0.016	0.027
2	15:21:33	0.118	0.150	0.292	0.308	-0.041	-0.006	96.9%	0.004	0.008	0.018
3	15:22:00	0.129	0.151	0.315	0.366	-0.041	-0.001	99.0%	0.017	0.003	0.023
X		0.112	0.147	0.308	0.339	-0.038	-0.001	97.8%	0.008	0.009	0.023
S		0.021	0.006	0.014	0.029	0.005	0.005	1.1%	0.008	0.006	0.004
%RSD		19.240	4.201	4.677	8.636	14.170	495.900	1.1	92.590	73.160	18.390
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:21:06	0.019	0.012	98.7%							
2	15:21:33	0.026	0.016	99.1%							
3	15:22:00	0.020	0.017	99.6%							
X		0.022	0.015	99.1%							
S		0.004	0.003	0.4%							
%RSD		17.270	19.380	0.4							

VQ51454-001 4/22/2020 15:26:29 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	93.8%	-0.001	1.123	1.406	-22.450	21.590	-0.272	-0.711	-0.139	0.854
2	15:27:23	91.3%	0.000	1.147	0.799	-16.940	18.610	-0.330	-0.527	-0.356	0.820
3	15:27:51	92.5%	-0.000	0.835	0.871	-14.560	17.490	-0.376	-0.543	-0.399	0.817
X		92.5%	-0.000	1.035	1.025	-17.980	19.230	-0.326	-0.594	-0.298	0.830
S		1.2%	0.001	0.174	0.332	4.047	2.117	0.052	0.102	0.139	0.021
%RSD		1.3	188.800	16.780	32.330	22.510	11.010	15.980	17.130	46.800	2.505
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	2.413	71750.000	37.090	-2.036	3.646	87.2%	0.089	-0.076	0.726	4709.000
2	15:27:23	2.815	71340.000	33.120	-0.956	3.426	86.8%	0.045	-0.349	0.707	5036.000
3	15:27:51	2.136	73120.000	30.290	4.555	2.493	85.3%	0.092	-0.173	0.805	5106.000
X		2.455	72070.000	33.500	0.521	3.188	86.4%	0.075	-0.199	0.746	4951.000
S		0.342	934.800	3.415	3.535	0.612	1.0%	0.027	0.138	0.052	211.900
%RSD		13.910	1.297	10.200	678.500	19.200	1.2	35.410	69.410	6.980	4.281
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	6.804	-0.002	2.964	3.349	-0.010	0.154	2.549	0.243	0.143	1.002
2	15:27:23	6.157	-0.003	2.546	4.356	-0.010	0.105	1.836	0.162	0.075	1.161
3	15:27:51	9.112	0.004	3.522	4.013	-0.007	0.101	1.145	0.117	0.089	0.798
X		7.358	-0.001	3.010	3.906	-0.009	0.120	1.843	0.174	0.102	0.987
S		1.554	0.004	0.490	0.512	0.002	0.030	0.702	0.064	0.036	0.182
%RSD		21.120	564.400	16.260	13.110	17.470	24.790	38.090	36.660	35.020	18.430
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.998	0.859	-0.331	-0.163	7.074	6.034	-0.252	-0.147	0.514	-0.005
2	15:27:23	0.817	1.027	-0.657	-0.078	5.758	5.816	-0.987	-0.757	3.867	0.008
3	15:27:51	1.228	0.998	-0.454	0.094	6.646	5.765	-1.432	-0.243	-0.661	-0.003
X		1.014	0.961	-0.480	-0.049	6.492	5.872	-0.890	-0.382	1.240	0.000
S		0.206	0.090	0.165	0.131	0.671	0.143	0.596	0.328	2.350	0.007
%RSD		20.330	9.353	34.270	265.700	10.340	2.435	66.980	85.790	189.500	15640.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	90.7%	0.045	0.160	0.068	0.056	-0.001	0.003	-0.006	-0.001	92.5%
2	15:27:23	89.1%	0.165	0.194	0.087	-0.366	0.004	0.011	-0.006	-0.004	92.5%
3	15:27:51	90.1%	0.140	0.107	0.062	0.395	0.012	0.003	-0.006	0.004	90.6%
X		90.0%	0.117	0.154	0.073	0.029	0.005	0.005	-0.006	-0.001	91.9%
S		0.8%	0.063	0.044	0.013	0.381	0.006	0.005	0.000	0.004	1.1%
%RSD		0.9	54.250	28.330	18.270	1333.000	117.700	88.680	1.937	697.200	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.062	0.096	0.139	0.085	-0.032	-0.012	96.5%	0.012	0.010	0.035
2	15:27:23	0.058	0.112	0.114	0.147	-0.032	0.015	97.2%	0.005	0.002	0.034
3	15:27:51	0.106	0.115	0.105	0.121	-0.012	-0.012	96.1%	0.014	0.008	0.008
X		0.075	0.108	0.119	0.118	-0.025	-0.003	96.6%	0.010	0.007	0.026
S		0.026	0.010	0.018	0.031	0.011	0.016	0.6%	0.005	0.004	0.015
%RSD		35.070	9.294	14.790	26.250	45.340	593.800	0.6	43.540	65.440	58.110
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:26:56	0.025	0.021	98.5%							
2	15:27:23	0.021	0.015	97.5%							
3	15:27:51	0.010	0.010	98.6%							
X		0.019	0.015	98.2%							
S		0.008	0.005	0.6%							
%RSD		40.930	32.860	0.6							

VQ51454-002 4/22/2020 15:32:21 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	91.1%	98.150	103.800	104.500	-11.310	1146.000	1166.000	1088.000	1049.000	100.900
2	15:33:15	88.2%	101.000	96.250	99.160	-18.110	1153.000	1128.000	1061.000	1060.000	103.600
3	15:33:42	90.2%	100.400	102.700	105.700	-14.670	1183.000	1175.000	1108.000	1088.000	104.100
X		89.8%	99.854%	100.900	103.100	-14.700	116.058%	1156.000	1086.000	106.560%	102.863%
S		1.5%	n/a	4.067	3.488	3.402	n/a	24.910	23.670	n/a	n/a
%RSD		1.7	1.506	4.031	3.383	23.150	1.712	2.154	2.180	1.862	1.648
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	848.700	71730.000	1027.000	1059.000	1029.000	84.3%	100.100	96.270	98.510	11490.000
2	15:33:15	894.300	71850.000	1033.000	1032.000	1055.000	81.8%	103.400	99.910	101.000	12620.000
3	15:33:42	855.500	73320.000	1058.000	1207.000	1075.000	80.1%	101.400	99.500	101.800	14580.000
X		866.100	72300.000	103.922%	1099.000	105.318%	82.1%	101.650%	98.560%	100.454%	12900.000
S		24.600	884.800	n/a	94.150	n/a	2.1%	n/a	n/a	n/a	1565.000
%RSD		2.840	1.224	1.604	8.566	2.211	2.6	1.633	2.019	1.715	12.140
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	1146.000	98.530	1021.000	1057.000	97.800	99.250	97.810	100.600	97.800	100.700
2	15:33:15	1177.000	99.780	1042.000	1061.000	100.500	101.400	104.700	101.600	101.600	105.500
3	15:33:42	1183.000	101.400	1066.000	1123.000	100.800	102.700	104.200	100.500	101.000	101.600
X		1168.000	99.919%	1043.000	108.037%	99.706%	101.142%	102.200	100.912%	100.103%	102.619%
S		19.440	n/a	22.220	n/a	n/a	n/a	3.847	n/a	n/a	n/a
%RSD		1.664	1.463	2.131	3.410	1.665	1.741	3.763	0.584	2.017	2.506
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	101.900	101.100	102.200	101.600	6.255	5.171	448.300	97.120	0.383	98.340
2	15:33:15	104.600	104.800	103.200	102.900	4.416	5.835	471.200	103.000	0.060	101.100
3	15:33:42	103.700	104.100	104.200	98.660	5.611	5.311	466.900	104.900	0.817	98.480
X		103.400	103.400	103.187%	101.100	5.427	5.439	462.200	101.697%	0.420	99.320
S		1.382	1.958	n/a	2.173	0.933	0.350	12.160	n/a	0.380	1.582
%RSD		1.337	1.894	0.973	2.150	17.200	6.430	2.631	4.008	90.440	1.593
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	85.6%	97.890	98.470	100.600	98.420	102.100	100.100	97.400	98.850	89.0%
2	15:33:15	83.8%	100.700	101.600	103.000	104.900	102.000	101.800	101.300	99.840	86.3%
3	15:33:42	86.1%	102.800	100.300	99.810	100.900	104.800	102.400	102.800	101.300	85.5%
X		85.2%	100.500	100.100	101.100	101.400	102.975%	101.400	100.500	100.002%	86.9%
S		1.2%	2.486	1.562	1.666	3.276	n/a	1.167	2.774	n/a	1.8%
%RSD		1.4	2.474	1.560	1.647	3.230	1.517	1.150	2.760	1.239	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	99.620	98.770	97.610	99.070	99.520	97.740	94.7%	101.900	104.700	100.900
2	15:33:15	102.600	101.900	100.100	100.600	103.400	99.960	93.5%	101.600	106.300	101.500
3	15:33:42	102.700	101.800	101.900	102.200	104.600	102.300	90.8%	102.200	109.000	104.300
X		101.600	100.837%	99.880	100.620%	102.500	100.012%	93.0%	101.900	106.672%	102.200
S		1.744	n/a	2.176	n/a	2.672	n/a	2.0%	0.268	n/a	1.851
%RSD		1.716	1.776	2.179	1.541	2.606	2.301	2.2	0.263	2.030	1.811
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:32:48	100.800	99.530	95.1%							
2	15:33:15	100.600	99.580	94.9%							
3	15:33:42	103.700	102.000	95.0%							
X		101.700	100.385%	95.0%							
S		1.728	n/a	0.1%							
%RSD		1.698	1.435	0.1							

VD17087-001

4/22/2020 15:38:12

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	94.7%	0.024	1.545	1.482	-62.820	14576.000	118690.000	119140.000	126910.000	2.039
2	15:39:06	93.3%	-0.014	1.168	1.512	-62.080	14463.000	118180.000	118410.000	126290.000	1.881
3	15:39:33	91.2%	-0.026	1.241	1.230	-63.790	14576.000	118450.000	118960.000	127000.000	2.000
X		93.1%	-0.005	1.318	1.408	-62.900	14538.000	118440.000	118830.000	126730.000	1.973
S		1.7%	0.026	0.200	0.155	0.855	165.020	1252.000	1380.400	1385.700	0.083
%RSD		1.9	492.500	15.180	10.980	1.359	1.433	1.367	2.020	1.443	4.185
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	15740.000	162410.000	12997.000	85070.000	183830.000	84.6%	0.672	-1.017	0.941	12400.000
2	15:39:06	15733.000	161180.000	12912.000	83500.000	182910.000	85.7%	0.526	-0.174	0.939	13290.000
3	15:39:33	15907.000	162750.000	13024.000	86450.000	186030.000	82.8%	0.546	-1.134	0.888	15150.000
X		15793.000	162110.000	12977.000	85010.000	184260.000	84.4%	0.581	-0.775	0.923	13610.000
S		198.500	1827.600	158.590	1477.000	1606.000	1.5%	0.079	0.523	0.030	1405.000
%RSD		1.700	1.332	1.968	1.738	1.906	1.7	13.610	67.540	3.280	10.320
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	13.320	79.890	26.200	134.200	0.511	4.333	3.305	0.194	0.167	1.398
2	15:39:06	12.560	77.510	25.070	132.100	0.579	3.948	3.904	0.144	0.225	1.454
3	15:39:33	12.410	79.440	24.890	131.900	0.531	4.233	3.127	0.119	0.230	1.391
X		12.760	78.950	25.390	132.700	0.540	4.171	3.445	0.152	0.207	1.414
S		0.488	1.265	0.711	1.268	0.035	0.200	0.407	0.038	0.035	0.035
%RSD		3.826	1.602	2.799	0.955	6.551	4.794	11.810	24.950	16.810	2.444
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	5.788	4.162	-0.843	-0.277	14.850	15.860	-1.791	-0.889	3.495	42.250
2	15:39:06	4.435	4.259	0.234	0.343	14.480	16.200	-0.919	-0.305	0.662	42.420
3	15:39:33	5.298	4.069	-1.034	-0.603	14.640	13.250	1.345	0.126	1.205	43.450
X		5.174	4.163	-0.547	-0.179	14.660	15.100	-0.455	-0.356	1.787	42.700
S		0.685	0.095	0.684	0.480	0.186	1.611	1.619	0.509	1.503	0.648
%RSD		13.240	2.285	124.900	268.600	1.268	10.660	355.900	143.100	84.120	1.517
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	89.0%	0.135	0.064	0.040	1.568	0.055	0.055	0.050	0.040	87.1%
2	15:39:06	88.0%	0.164	0.097	0.115	0.503	0.050	0.042	0.036	0.043	88.1%
3	15:39:33	86.3%	0.069	0.066	0.048	2.190	0.039	0.070	0.072	0.034	86.6%
X		87.8%	0.123	0.076	0.068	1.420	0.048	0.055	0.053	0.039	87.3%
S		1.4%	0.049	0.018	0.041	0.853	0.008	0.014	0.018	0.005	0.8%
%RSD		1.6	39.620	24.320	60.100	60.050	16.870	25.070	34.540	11.920	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	0.054	0.104	0.094	0.070	168.500	168.000	93.0%	0.035	0.039	0.023
2	15:39:06	0.123	0.058	0.103	0.097	167.300	164.900	92.9%	0.031	0.041	-0.005
3	15:39:33	0.081	0.107	0.123	0.068	170.800	168.800	92.9%	0.042	0.025	-0.001
X		0.086	0.090	0.107	0.079	168.900	167.200	92.9%	0.036	0.035	0.006
S		0.035	0.027	0.015	0.016	1.739	2.104	0.1%	0.006	0.009	0.016
%RSD		40.380	30.430	14.080	20.800	1.030	1.258	0.1	16.140	24.900	273.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:38:39	0.011	0.011	91.3%							
2	15:39:06	0.005	0.002	92.1%							
3	15:39:33	0.001	0.004	92.4%							
X		0.006	0.006	91.9%							
S		0.005	0.005	0.6%							
%RSD		90.120	79.090	0.6							

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4/22/2020 15:44:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	86.5%	0.280	1.234	1.672	-39.460	<u>7197.000</u>	<u>4819.000</u>	5061.000	6051.000	22.810
2	15:44:57	84.7%	0.230	2.056	1.688	-41.020	<u>7112.000</u>	<u>4735.000</u>	5016.000	6112.000	23.050
3	15:45:24	83.6%	0.234	1.910	1.255	-35.900	<u>7238.000</u>	<u>4896.000</u>	5258.000	6205.000	25.000
X		84.9%	0.248	1.733	1.538	-38.790	<u>7182.000</u>	<u>4816.000</u>	5111.000	6123.000	23.620
S		1.5%	0.028	0.438	0.246	2.626	<u>64.300</u>	<u>80.350</u>	128.900	77.480	1.204
%RSD		1.7	11.110	25.290	15.960	6.770	<u>0.895</u>	<u>1.668</u>	2.522	1.265	5.098
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	<u>4940.000</u>	<u>62130.000</u>	<u>3657.000</u>	10760.000	10320.000	76.8%	0.516	-1.537	1.471	27260.000
2	15:44:57	<u>5018.000</u>	<u>62980.000</u>	<u>3692.000</u>	10570.000	10490.000	76.3%	0.519	-1.682	1.299	26400.000
3	15:45:24	<u>5090.000</u>	<u>63960.000</u>	<u>3765.000</u>	10820.000	10600.000	76.0%	0.625	-1.397	1.308	25980.000
X		<u>5016.000</u>	<u>63020.000</u>	<u>3705.000</u>	10720.000	10470.000	76.4%	0.553	-1.539	1.359	26550.000
S		<u>74.740</u>	<u>917.300</u>	<u>54.820</u>	127.900	138.200	0.4%	0.062	0.143	0.097	648.500
%RSD		<u>1.490</u>	<u>1.456</u>	<u>1.480</u>	1.194	1.320	0.5	11.190	9.275	7.126	2.443
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	1940.000	<u>TM 838.200</u>	<u>1791.000</u>	1849.000	2.606	4.445	4.395	6.510	6.547	30.060
2	15:44:57	1938.000	<u>TM 847.200</u>	<u>1804.000</u>	1824.000	2.654	4.560	4.039	6.430	6.735	29.730
3	15:45:24	1929.000	<u>TM 845.700</u>	<u>1831.000</u>	1865.000	2.789	5.003	4.887	6.470	6.642	29.350
X		1936.000	<u>TM 843.700</u>	<u>1809.000</u>	1846.000	2.683	4.669	4.440	6.470	6.641	29.710
S		6.150	<u>TM 4.800</u>	<u>20.340</u>	20.620	0.095	0.294	0.426	0.040	0.094	0.354
%RSD		0.318	<u>TM 0.569</u>	<u>1.124</u>	1.117	3.541	6.305	9.591	0.615	1.417	1.191
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	31.950	29.980	-1.390	-0.216	22.670	23.780	-3.751	-0.918	0.436	39.770
2	15:44:57	31.550	31.700	-1.103	-0.648	23.440	24.890	2.345	0.387	1.292	39.850
3	15:45:24	33.740	31.290	0.150	-0.908	25.540	21.790	-0.760	-0.148	-0.046	39.400
X		32.420	30.990	-0.781	-0.591	23.880	23.490	-0.722	-0.227	0.561	39.670
S		1.165	0.899	0.819	0.349	1.485	1.570	3.048	0.656	0.678	0.237
%RSD		3.595	2.900	104.900	59.170	6.219	6.687	422.100	289.800	120.900	0.597
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	85.9%	-0.023	0.034	0.019	1.266	0.016	0.011	0.250	0.167	80.8%
2	15:44:57	86.0%	0.071	-0.024	0.043	0.627	0.006	0.015	0.248	0.187	81.4%
3	15:45:24	87.2%	0.064	0.050	-0.021	1.082	0.010	0.013	0.209	0.231	82.1%
X		86.3%	0.037	0.020	0.014	0.992	0.010	0.013	0.236	0.195	81.4%
S		0.7%	0.052	0.039	0.033	0.329	0.005	0.002	0.023	0.033	0.7%
%RSD		0.8	139.600	197.400	238.600	33.180	46.450	14.250	9.768	16.950	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	0.133	0.054	0.061	0.037	155.700	151.600	89.1%	0.067	0.080	0.229
2	15:44:57	0.124	0.054	0.047	0.049	150.000	146.200	89.1%	0.071	0.083	0.276
3	15:45:24	0.066	0.071	0.091	0.026	150.400	147.100	87.7%	0.064	0.080	0.281
X		0.108	0.060	0.066	0.037	152.000	148.300	88.6%	0.067	0.081	0.262
S		0.036	0.010	0.022	0.012	3.190	2.904	0.8%	0.004	0.002	0.029
%RSD		33.750	16.280	33.580	30.970	2.098	1.958	0.9	5.850	2.372	11.040
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:44:30	0.258	0.250	90.3%							
2	15:44:57	0.253	0.274	90.1%							
3	15:45:24	0.248	0.259	90.2%							
X		0.253	0.261	90.2%							
S		0.005	0.012	0.1%							
%RSD		1.994	4.557	0.1							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	89.7%	0.015	0.954	1.334	-68.750	5700.000	27480.000	28330.000	43740.000	1.777
2	15:50:49	91.4%	-0.052	1.456	1.359	-68.100	5751.000	27420.000	28420.000	44670.000	1.876
3	15:51:17	89.8%	0.001	1.383	1.468	-68.050	5789.000	27920.000	28470.000	44930.000	1.874
X		90.3%	-0.012	1.264	1.387	-68.300	5747.000	27610.000	28400.000	44440.000	1.842
S		1.0%	0.035	0.272	0.071	0.393	44.470	274.500	71.600	623.100	0.056
%RSD		1.1	291.500	21.480	5.145	0.575	0.774	0.995	0.252	1.402	3.056
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	7638.000	59840.000	3130.000	138600.000	136800.000	80.2%	0.687	-0.523	0.787	13210.000
2	15:50:49	7518.000	61660.000	3192.000	141900.000	140300.000	80.7%	0.829	-1.300	0.850	14590.000
3	15:51:17	7668.000	62680.000	3217.000	144000.000	141400.000	79.4%	0.966	-0.875	0.883	15160.000
X		7608.000	61390.000	3180.000	141500.000	139500.000	80.1%	0.827	-0.899	0.840	14320.000
S		79.270	1442.000	45.040	2705.000	2420.000	0.6%	0.139	0.389	0.049	1000.000
%RSD		1.042	2.348	1.416	1.912	1.734	0.8	16.830	43.250	5.784	6.983
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	2617.000	511.000	2468.000	2705.000	6.997	17.380	17.060	0.216	0.200	1.514
2	15:50:49	2666.000	515.000	2507.000	2756.000	7.039	16.850	19.300	0.144	0.323	1.807
3	15:51:17	2670.000	522.300	2546.000	2780.000	7.182	17.340	17.000	0.195	0.284	1.576
X		2651.000	516.100	2507.000	2747.000	7.073	17.190	17.790	0.185	0.269	1.632
S		29.860	5.690	39.260	38.540	0.097	0.294	1.312	0.037	0.062	0.154
%RSD		1.126	1.102	1.566	1.403	1.374	1.710	7.372	20.010	23.220	9.455
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	13.550	10.660	1.695	-0.508	37.570	40.490	0.807	0.078	0.596	83.160
2	15:50:49	13.500	10.820	2.189	-0.399	40.220	38.110	-3.280	-0.876	0.939	81.450
3	15:51:17	12.970	10.340	2.332	-0.431	44.300	37.040	3.920	0.998	-1.186	85.040
X		13.340	10.610	2.072	-0.446	40.700	38.550	0.482	0.066	0.116	83.220
S		0.319	0.247	0.335	0.056	3.388	1.767	3.611	0.937	1.141	1.796
%RSD		2.391	2.328	16.140	12.620	8.325	4.585	748.700	1411.000	980.800	2.159
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	82.3%	-0.033	-0.055	-0.059	0.697	0.019	0.018	0.003	0.010	83.5%
2	15:50:49	83.9%	0.078	-0.018	-0.036	1.669	0.013	0.026	0.017	0.001	83.3%
3	15:51:17	82.6%	0.018	0.026	-0.028	2.393	0.006	0.016	0.010	0.000	84.2%
X		82.9%	0.021	-0.016	-0.041	1.586	0.012	0.020	0.010	0.003	83.7%
S		0.8%	0.055	0.041	0.016	0.851	0.007	0.005	0.007	0.005	0.4%
%RSD		1.0	261.300	259.800	39.160	53.670	52.440	25.100	74.150	150.500	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	0.012	0.055	0.029	0.014	612.300	613.500	89.2%	0.051	0.037	0.014
2	15:50:49	0.026	0.043	0.035	0.027	617.500	614.600	90.3%	0.048	0.043	-0.009
3	15:51:17	0.015	0.063	0.030	0.019	610.300	617.100	88.8%	0.047	0.043	0.010
X		0.018	0.053	0.031	0.020	613.400	615.100	89.4%	0.049	0.041	0.005
S		0.007	0.010	0.003	0.007	3.692	1.847	0.8%	0.002	0.003	0.013
%RSD		42.380	18.380	10.180	34.510	0.602	0.300	0.8	4.393	8.449	256.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:50:23	-0.005	0.008	88.9%							
2	15:50:49	-0.003	-0.001	89.3%							
3	15:51:17	0.001	0.006	89.1%							
X		-0.002	0.004	89.1%							
S		0.003	0.005	0.2%							
%RSD		126.900	115.600	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	83.3%	0.020	2.025	2.184	-56.960	±6585.000	±21420.000	±21910.000	±31900.000	4.457
2	15:56:42	82.0%	0.050	1.787	2.108	-56.230	±6600.000	±21850.000	±21980.000	±31960.000	4.544
3	15:57:09	81.0%	-0.037	2.737	2.263	-59.200	±6624.000	±21740.000	±22250.000	±32110.000	4.710
X		82.1%	0.011	2.183	2.185	-57.460	±6603.000	±21670.000	±22050.000	±31990.000	4.570
S		1.1%	0.044	0.494	0.077	1.548	±19.580	±224.500	±182.200	±108.700	0.129
%RSD		1.4	410.000	22.650	3.542	2.695	±0.296	±1.036	±0.826	±0.340	2.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	±5353.000	±63990.000	2444.000	94030.000	±91280.000	73.0%	0.625	-0.188	0.419	5858.000
2	15:56:42	±5417.000	±64510.000	2482.000	93510.000	±92760.000	72.1%	0.878	-0.365	0.418	5671.000
3	15:57:09	±5412.000	±64860.000	2503.000	94610.000	±93580.000	71.1%	0.781	-0.259	0.395	5416.000
X		±5394.000	±64450.000	2476.000	94050.000	±92540.000	72.1%	0.762	-0.271	0.411	5648.000
S		±35.320	±441.600	29.890	551.200	±1166.000	0.9%	0.128	0.089	0.013	222.200
%RSD		±0.655	±0.685	1.207	0.586	±1.260	1.3	16.750	32.980	3.241	3.934
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	4426.000	TM 6808.000	±4083.000	4326.000	17.610	14.510	12.890	1.230	1.284	19.600
2	15:56:42	4463.000	TM 7015.000	±4245.000	4416.000	17.810	15.150	14.190	1.105	1.570	18.030
3	15:57:09	4549.000	TM 7055.000	±4272.000	4524.000	17.820	15.360	13.880	1.319	1.304	19.600
X		4480.000	TM 6959.000	±4200.000	4422.000	17.750	15.010	13.650	1.218	1.386	19.080
S		63.220	TM 132.300	±102.300	98.970	0.118	0.443	0.679	0.108	0.159	0.908
%RSD		1.411	TM 1.901	±2.437	2.238	0.666	2.954	4.973	8.861	11.490	4.759
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	23.430	22.720	1.472	0.150	26.440	23.990	-0.610	-0.471	2.384	98.630
2	15:56:42	21.840	23.270	1.557	-0.587	25.610	24.070	-2.961	-1.009	2.483	98.450
3	15:57:09	25.480	23.490	1.003	-0.567	24.630	23.810	-1.476	-0.685	2.521	98.550
X		23.580	23.160	1.344	-0.335	25.560	23.960	-1.683	-0.722	2.463	98.540
S		1.824	0.395	0.298	0.420	0.907	0.133	1.189	0.271	0.070	0.091
%RSD		7.737	1.705	22.190	125.400	3.549	0.555	70.660	37.490	2.863	0.092
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	77.3%	0.191	0.134	0.214	1.880	-0.001	0.002	0.011	0.019	76.9%
2	15:56:42	76.2%	0.238	0.231	0.264	1.974	0.003	0.010	0.026	0.030	77.6%
3	15:57:09	75.9%	0.236	0.160	0.091	2.649	0.003	0.006	0.004	0.014	75.4%
X		76.5%	0.222	0.175	0.190	2.168	0.002	0.006	0.013	0.021	76.7%
S		0.7%	0.027	0.050	0.089	0.419	0.002	0.004	0.011	0.008	1.1%
%RSD		0.9	11.950	28.580	47.030	19.340	155.100	66.540	85.200	39.230	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	0.061	0.106	0.015	0.034	355.300	348.200	85.6%	0.059	0.064	0.034
2	15:56:42	0.060	0.055	0.042	0.040	349.800	345.400	83.9%	0.070	0.069	0.036
3	15:57:09	0.059	0.077	0.058	0.035	368.200	355.400	83.2%	0.077	0.063	0.052
X		0.060	0.079	0.038	0.037	357.800	349.700	84.2%	0.069	0.065	0.041
S		0.001	0.026	0.022	0.003	9.455	5.180	1.2%	0.009	0.003	0.010
%RSD		1.745	32.350	57.500	7.846	2.643	1.481	1.4	13.120	4.776	23.420
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:56:15	0.039	0.031	83.8%							
2	15:56:42	0.043	0.038	85.5%							
3	15:57:09	0.047	0.042	84.8%							
X		0.043	0.037	84.7%							
S		0.004	0.006	0.9%							
%RSD		9.023	14.800	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	79.9%	100.400	41.680	43.820	-55.160	7796.000	22550.000	22840.000	33340.000	108.900
2	16:02:34	80.1%	100.300	43.660	45.680	-58.290	7833.000	22810.000	23340.000	34130.000	109.100
3	16:03:01	80.3%	96.300	41.790	46.780	-57.710	7970.000	22940.000	23170.000	33820.000	108.200
X		80.1%	98.980	42.380	45.430	-57.050	7866.000	22770.000	23120.000	33760.000	108.700
S		0.2%	2.324	1.113	1.496	1.665	91.480	197.600	253.100	396.300	0.494
%RSD		0.2	2.348	2.627	3.293	2.918	1.163	0.868	1.095	1.174	0.454
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	6328.000	62520.000	3250.000	97430.000	95250.000	71.1%	102.200	99.420	101.200	5434.000
2	16:02:34	6229.000	63280.000	3247.000	97860.000	96130.000	70.8%	101.900	100.800	100.600	4915.000
3	16:03:01	6225.000	63270.000	3216.000	97650.000	96590.000	70.9%	102.200	98.200	99.650	6372.000
X		6260.000	63020.000	3238.000	97650.000	95990.000	70.9%	102.100	99.460	100.500	5574.000
S		58.270	438.100	18.730	212.800	680.900	0.1%	0.172	1.279	0.806	738.400
%RSD		0.931	0.695	0.579	0.218	0.709	0.2	0.168	1.286	0.802	13.250
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	5736.000	7040.000	5291.000	5594.000	114.300	110.600	114.300	97.120	98.750	113.700
2	16:02:34	5756.000	7133.000	5378.000	5646.000	115.200	109.600	115.900	96.030	95.040	116.200
3	16:03:01	5813.000	7347.000	5371.000	5600.000	116.300	109.600	113.700	98.560	97.490	116.600
X		5769.000	7173.000	5347.000	5613.000	115.300	109.900	114.600	97.240	97.090	115.500
S		40.080	157.500	48.080	28.770	0.997	0.563	1.145	1.269	1.887	1.528
%RSD		0.695	2.196	0.899	0.512	0.865	0.512	0.999	1.305	1.944	1.323
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	122.000	122.400	103.000	97.670	26.910	24.340	412.700	90.980	1.672	201.800
2	16:02:34	121.600	123.200	107.400	98.140	26.210	27.090	452.300	102.000	-0.842	199.700
3	16:03:01	123.000	120.400	104.300	97.000	24.660	24.430	437.500	97.510	-0.302	202.900
X		122.200	122.000	104.900	97.600	25.930	25.290	434.200	96.810	0.176	201.400
S		0.718	1.457	2.249	0.576	1.152	1.563	19.990	5.519	1.323	1.626
%RSD		0.588	1.194	2.144	0.590	4.443	6.180	4.605	5.700	751.900	0.807
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	74.3%	102.700	102.900	102.100	103.200	100.800	98.600	99.600	100.000	75.4%
2	16:02:34	75.6%	103.100	106.500	101.100	111.900	102.800	99.700	99.660	100.600	75.1%
3	16:03:01	74.5%	105.400	105.000	103.400	101.600	101.100	99.940	101.900	102.700	74.9%
X		74.8%	103.700	104.800	102.200	105.600	101.600	99.410	100.400	101.100	75.2%
S		0.7%	1.499	1.839	1.150	5.560	1.075	0.716	1.285	1.374	0.3%
%RSD		0.9	1.446	1.755	1.125	5.265	1.058	0.720	1.280	1.359	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	101.300	102.000	102.100	100.600	460.100	458.200	81.5%	102.300	108.200	102.800
2	16:02:34	103.600	103.600	105.000	101.200	474.000	456.100	83.0%	103.900	108.600	103.500
3	16:03:01	103.600	104.200	104.100	101.500	474.600	464.200	82.4%	105.500	110.900	105.500
X		102.800	103.300	103.700	101.100	469.600	459.500	82.3%	103.900	109.200	103.900
S		1.333	1.170	1.499	0.431	8.172	4.191	0.8%	1.573	1.431	1.399
%RSD		1.296	1.133	1.445	0.426	1.740	0.912	0.9	1.514	1.311	1.347
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:02:07	102.700	102.200	84.1%							
2	16:02:34	102.700	101.600	84.4%							
3	16:03:01	103.400	102.700	83.9%							
X		102.900	102.200	84.2%							
S		0.431	0.522	0.3%							
%RSD		0.418	0.511	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	81.5%	96.790	43.840	45.320	-55.750	7740.000	22520.000	22940.000	33110.000	106.400
2	16:08:27	79.9%	95.900	41.470	45.390	-59.790	7683.000	22160.000	22990.000	33500.000	108.000
3	16:08:53	82.3%	96.230	46.170	45.290	-59.080	7795.000	22370.000	23000.000	33560.000	107.800
X		81.2%	96.310	43.830	45.330	-58.210	7739.000	22350.000	22980.000	33390.000	107.400
S		1.2%	0.448	2.350	0.053	2.158	55.980	182.000	28.470	246.600	0.858
%RSD		1.5	0.465	5.362	0.117	3.708	0.723	0.814	0.124	0.739	0.799
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5956.000	60520.000	3186.000	95050.000	93880.000	71.3%	98.700	97.390	98.240	4658.000
2	16:08:27	6192.000	61000.000	3192.000	97520.000	94770.000	70.9%	103.900	99.610	97.660	5858.000
3	16:08:53	6064.000	61880.000	3213.000	98310.000	96920.000	70.5%	104.700	101.200	99.980	5015.000
X		6070.000	61130.000	3197.000	96960.000	95190.000	70.9%	102.400	99.390	98.630	5177.000
S		118.200	691.000	14.140	1698.000	1563.000	0.4%	3.266	1.901	1.207	616.000
%RSD		1.948	1.130	0.442	1.752	1.642	0.6	3.188	1.913	1.224	11.900
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5680.000	TM 7145.000	5300.000	5498.000	110.800	110.100	110.600	95.810	95.250	114.600
2	16:08:27	5739.000	TM 7097.000	5336.000	5566.000	113.800	109.100	110.400	96.640	93.960	114.600
3	16:08:53	5776.000	TM 7177.000	5291.000	5544.000	115.600	110.000	111.800	94.980	96.660	114.400
X		5732.000	TM 7140.000	5309.000	5536.000	113.400	109.700	111.000	95.810	95.290	114.500
S		48.230	TM 40.100	23.690	34.870	2.460	0.599	0.769	0.831	1.352	0.109
%RSD		0.841	TM 0.562	0.446	0.630	2.169	0.546	0.693	0.867	1.419	0.095
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	120.700	118.400	99.850	94.400	23.320	23.450	433.800	96.700	0.142	193.700
2	16:08:27	124.600	122.100	103.600	92.240	23.510	22.460	454.100	100.100	-0.778	201.500
3	16:08:53	119.200	120.600	105.300	96.070	22.930	23.430	423.000	94.100	1.638	197.100
X		121.500	120.300	102.900	94.240	23.250	23.120	437.000	96.950	0.334	197.400
S		2.763	1.848	2.789	1.923	0.297	0.566	15.760	2.985	1.220	3.907
%RSD		2.274	1.535	2.710	2.040	1.277	2.447	3.606	3.079	365.300	1.979
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	75.2%	101.700	102.100	99.810	94.470	98.190	96.440	98.540	98.470	75.6%
2	16:08:27	74.1%	101.200	99.750	101.200	103.600	100.500	98.800	100.600	98.440	75.6%
3	16:08:53	74.9%	101.300	101.800	100.700	99.580	98.870	99.950	100.300	98.730	75.2%
X		74.8%	101.400	101.200	100.600	99.220	99.190	98.400	99.810	98.550	75.4%
S		0.6%	0.275	1.299	0.685	4.583	1.197	1.789	1.121	0.159	0.3%
%RSD		0.7	0.271	1.283	0.681	4.619	1.207	1.818	1.123	0.161	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	100.800	98.180	101.200	97.460	460.500	455.900	83.4%	98.340	107.000	100.700
2	16:08:27	101.600	101.700	102.400	97.060	465.100	442.500	84.5%	103.200	104.900	100.300
3	16:08:53	102.700	102.300	103.000	99.730	465.200	452.100	83.4%	101.200	106.800	101.500
X		101.700	100.700	102.200	98.080	463.600	450.200	83.8%	100.900	106.200	100.800
S		0.982	2.225	0.901	1.438	2.673	6.926	0.6%	2.453	1.113	0.627
%RSD		0.966	2.209	0.882	1.466	0.577	1.539	0.8	2.431	1.048	0.622
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:07:59	98.570	98.090	86.6%							
2	16:08:27	98.450	98.220	84.4%							
3	16:08:53	101.200	100.700	84.7%							
X		99.410	99.000	85.2%							
S		1.557	1.462	1.2%							
%RSD		1.566	1.477	1.4							

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User Pre-dilution: 1.000

User Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	84.5%	-0.010	1.608	1.659	-28.190	1344.000	5506.000	5872.000	6544.000	1.221
2	16:14:18	83.5%	-0.009	0.785	1.499	-28.600	1409.000	5820.000	6094.000	6635.000	1.203
3	16:14:45	83.1%	0.034	1.092	1.325	-28.430	1389.000	5666.000	6014.000	6818.000	1.135
X		83.7%	0.005	1.162	1.494	-28.400	1381.000	5664.000	5993.000	6665.000	1.186
S		0.7%	0.025	0.416	0.167	0.206	33.640	157.200	112.100	139.500	0.045
%RSD		0.8	483.400	35.770	11.180	0.726	2.437	2.775	1.871	2.094	3.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	1219.000	14160.000	534.100	18440.000	18210.000	79.0%	0.029	-0.092	0.108	1213.000
2	16:14:18	1215.000	14540.000	544.500	18910.000	18530.000	77.0%	0.132	-0.203	0.115	1289.000
3	16:14:45	1235.000	14570.000	540.200	19150.000	18670.000	76.6%	0.185	0.044	0.111	1099.000
X		1223.000	14420.000	539.600	18830.000	18470.000	77.6%	0.115	-0.084	0.111	1200.000
S		10.640	227.500	5.216	360.200	233.900	1.3%	0.079	0.124	0.004	95.420
%RSD		0.870	1.577	0.967	1.912	1.266	1.7	68.870	148.000	3.160	7.949
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	865.000	TM 1331.000	805.400	858.600	3.430	2.873	2.608	0.234	0.245	4.214
2	16:14:18	877.400	TM 1337.000	938.400	869.900	3.522	3.055	3.129	0.246	0.305	3.881
3	16:14:45	880.200	TM 1393.000	841.700	894.900	3.671	3.094	2.715	0.245	0.341	4.095
X		874.200	TM 1353.000	861.800	874.500	3.541	3.007	2.818	0.242	0.297	4.063
S		8.094	TM 34.060	68.760	18.570	0.122	0.118	0.275	0.007	0.048	0.169
%RSD		0.926	TM 2.517	7.978	2.124	3.432	3.929	9.764	2.916	16.300	4.150
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	4.840	4.678	0.210	0.103	5.098	4.313	-0.314	-0.375	2.186	19.280
2	16:14:18	5.030	5.291	0.247	-0.603	5.676	6.051	-1.719	0.048	-3.345	19.920
3	16:14:45	5.862	5.553	0.437	-0.241	5.832	3.718	0.289	0.213	-1.432	20.340
X		5.244	5.174	0.298	-0.247	5.535	4.694	-0.581	-0.038	-0.864	19.850
S		0.544	0.449	0.122	0.353	0.387	1.212	1.030	0.303	2.809	0.532
%RSD		10.370	8.679	40.850	143.000	6.987	25.820	177.300	795.000	325.200	2.682
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	78.9%	0.065	0.047	0.050	0.661	-0.003	0.004	-0.005	0.007	79.5%
2	16:14:18	79.4%	0.109	0.024	0.073	0.131	-0.005	0.004	0.003	0.010	80.9%
3	16:14:45	77.4%	0.085	0.072	0.003	1.458	-0.001	-0.000	-0.012	0.006	80.9%
X		78.6%	0.086	0.048	0.042	0.750	-0.003	0.002	-0.005	0.008	80.4%
S		1.1%	0.022	0.024	0.036	0.668	0.002	0.002	0.007	0.002	0.8%
%RSD		1.3	25.600	50.170	85.480	89.040	56.570	98.100	154.700	22.810	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	0.040	0.065	0.014	-0.057	69.730	68.810	86.9%	0.040	0.038	0.024
2	16:14:18	-0.005	0.067	-0.022	-0.034	68.700	68.200	84.4%	0.030	0.042	0.009
3	16:14:45	0.031	0.070	-0.043	-0.034	69.500	69.430	84.4%	0.026	0.026	-0.003
X		0.022	0.067	-0.017	-0.041	69.310	68.810	85.2%	0.032	0.035	0.010
S		0.024	0.002	0.029	0.013	0.544	0.615	1.4%	0.007	0.008	0.014
%RSD		108.000	3.481	166.400	31.760	0.784	0.893	1.7	21.100	22.840	138.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:13:51	0.007	0.007	88.0%							
2	16:14:18	-0.001	-0.000	87.8%							
3	16:14:45	0.001	-0.002	87.4%							
X		0.002	0.002	87.7%							
S		0.004	0.005	0.3%							
%RSD		194.200	285.000	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	79.6%	98.230	45.370	49.990	-52.900	7326.000	21860.000	22540.000	31600.000	105.100
2	16:20:11	80.3%	100.900	45.780	49.720	-57.560	7613.000	22110.000	22300.000	32590.000	107.900
3	16:20:38	79.6%	98.520	49.060	51.840	-52.260	7593.000	22360.000	22750.000	32330.000	106.500
X		79.9%	99.210	46.740	50.520	-54.240	7511.000	22110.000	22530.000	32170.000	106.500
S		0.4%	1.451	2.023	1.154	2.891	160.200	249.600	224.500	509.100	1.441
%RSD		0.5	1.463	4.329	2.285	5.330	2.132	1.129	0.997	1.582	1.353
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	6221.000	63370.000	3173.000	93590.000	91390.000	72.3%	96.440	98.900	98.990	5844.000
2	16:20:11	6039.000	64790.000	3243.000	94590.000	94430.000	69.9%	105.500	102.600	102.700	5453.000
3	16:20:38	6177.000	64620.000	3241.000	95480.000	92580.000	71.1%	105.700	99.940	100.700	5858.000
X		6146.000	64260.000	3219.000	94550.000	92800.000	71.1%	102.600	100.500	100.800	5718.000
S		94.720	773.200	40.180	944.700	1533.000	1.2%	5.301	1.911	1.842	229.700
%RSD		1.541	1.203	1.248	0.999	1.652	1.7	5.169	1.901	1.828	4.018
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	5584.000	TM 6775.000	5114.000	5258.000	112.800	109.600	112.100	96.010	95.880	115.500
2	16:20:11	5682.000	TM 7059.000	5291.000	5475.000	117.000	111.400	114.000	98.900	95.670	117.500
3	16:20:38	5514.000	TM 6905.000	5160.000	5417.000	115.600	112.900	110.700	96.250	99.650	118.300
X		5593.000	TM 6913.000	5188.000	5383.000	115.200	111.300	112.300	97.060	97.070	117.100
S		84.440	TM 142.000	92.160	112.300	2.129	1.685	1.695	1.602	2.237	1.426
%RSD		1.510	TM 2.054	1.776	2.086	1.849	1.514	1.510	1.650	2.305	1.218
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	120.200	120.500	104.500	98.200	23.680	23.100	442.300	100.200	0.621	192.800
2	16:20:11	125.700	125.500	105.100	101.200	23.390	23.280	440.800	96.900	1.269	197.300
3	16:20:38	121.600	121.000	106.500	98.960	25.760	22.790	432.700	98.060	0.639	196.600
X		122.500	122.300	105.400	99.440	24.280	23.060	438.600	98.400	0.843	195.600
S		2.857	2.771	1.005	1.542	1.295	0.250	5.170	1.691	0.369	2.397
%RSD		2.332	2.265	0.954	1.551	5.334	1.082	1.179	1.719	43.780	1.226
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	75.2%	104.000	104.600	101.400	100.800	101.200	100.700	102.100	100.900	74.5%
2	16:20:11	73.2%	102.900	104.000	102.300	104.400	102.100	99.180	102.600	100.700	74.6%
3	16:20:38	75.1%	106.000	107.200	104.100	100.500	103.700	100.700	102.900	103.100	74.2%
X		74.5%	104.300	105.300	102.600	101.900	102.300	100.200	102.500	101.500	74.4%
S		1.1%	1.604	1.723	1.358	2.190	1.262	0.877	0.393	1.329	0.2%
%RSD		1.5	1.538	1.637	1.324	2.149	1.233	0.875	0.383	1.309	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	104.400	105.000	94.170	90.830	455.000	440.200	81.7%	104.800	108.800	102.400
2	16:20:11	103.000	101.000	94.800	90.330	454.400	439.800	82.8%	103.700	107.800	102.700
3	16:20:38	104.100	105.000	97.160	93.610	459.900	449.600	82.8%	104.600	109.700	102.400
X		103.800	103.700	95.380	91.590	456.400	443.200	82.4%	104.300	108.800	102.500
S		0.713	2.286	1.575	1.768	3.055	5.560	0.7%	0.593	0.959	0.162
%RSD		0.687	2.205	1.651	1.930	0.669	1.255	0.8	0.568	0.881	0.158
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:19:44	102.800	102.300	83.6%							
2	16:20:11	101.900	100.600	83.9%							
3	16:20:38	103.600	102.000	83.7%							
X		102.800	101.600	83.7%							
S		0.867	0.903	0.2%							
%RSD		0.844	0.888	0.2							

CCV MW12620 4/22/2020 16:25:12 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	73.9%	322.900	290.400	295.400	3.415	63910.000	61750.000	61450.000	59570.000	306.200
2	16:26:06	76.0%	308.600	274.200	291.200	3.310	63060.000	61710.000	60760.000	58670.000	298.700
3	16:26:33	75.9%	308.300	297.300	300.100	4.705	62920.000	62540.000	61760.000	58160.000	293.900
X		75.3%	104.417%	95.763%	98.529%	3.810	105.493%	62000.000	61320.000	58.003%	99.877%
S		1.2%	n/a	n/a	n/a	0.777	n/a	469.800	509.700	n/a	n/a
%RSD		1.6	2.671	4.114	1.506	20.380	0.852	0.758	0.831	1.220	2.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	2842.000	526.500	59420.000	62530.000	62530.000	74.3%	308.300	310.100	303.200	3162.000
2	16:26:06	2774.000	463.300	58790.000	62410.000	62340.000	75.5%	308.800	303.900	296.700	3186.000
3	16:26:33	2755.000	449.600	59340.000	62090.000	62290.000	76.2%	310.600	306.300	296.800	2286.000
X		2790.000	479.800	98.638%	62340.000	103.973%	75.3%	103.085%	102.252%	99.636%	2878.000
S		45.710	41.020	n/a	230.700	n/a	1.0%	n/a	n/a	n/a	513.000
%RSD		1.638	8.549	0.579	0.370	0.207	1.3	0.398	1.013	1.251	17.820
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	62900.000	294.600	62500.000	59920.000	299.800	292.900	302.500	292.500	297.200	295.200
2	16:26:06	62160.000	290.900	61250.000	59580.000	293.600	289.900	285.600	289.800	301.500	298.000
3	16:26:33	62270.000	290.300	61340.000	58700.000	294.200	287.200	290.500	286.100	302.900	303.700
X		62440.000	97.309%	61690.000	99.001%	98.610%	96.669%	292.900	289.500	100.176%	99.652%
S		403.500	n/a	698.200	n/a	n/a	n/a	8.706	3.221	n/a	n/a
%RSD		0.646	0.802	1.132	1.054	1.154	0.972	2.973	1.113	0.981	1.443
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	290.800	289.500	311.000	289.600	0.219	-0.134	1344.000	304.700	-2.316	288.900
2	16:26:06	284.900	290.200	307.000	289.600	0.829	0.588	1322.000	298.100	0.114	298.900
3	16:26:33	299.900	288.600	313.100	286.900	0.999	-0.431	1362.000	310.800	1.058	295.900
X		291.900	289.400	103.461%	288.700	0.683	0.008	1343.000	101.512%	-0.381	98.188%
S		7.520	0.778	n/a	1.569	0.410	0.524	19.740	n/a	1.741	n/a
%RSD		2.577	0.269	0.994	0.543	60.070	6885.000	1.470	2.090	456.600	1.754
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	75.7%	316.800	310.600	308.500	282.300	296.900	299.400	296.200	295.100	75.3%
2	16:26:06	75.1%	317.600	317.200	315.400	302.000	305.500	299.100	300.000	295.300	75.3%
3	16:26:33	75.3%	323.300	324.600	319.100	291.400	303.500	297.200	298.200	298.900	74.7%
X		75.3%	106.410%	105.836%	314.300	291.900	100.657%	298.600	298.100	98.810%	75.1%
S		0.3%	n/a	n/a	5.379	9.867	n/a	1.189	1.889	n/a	0.4%
%RSD		0.4	1.112	2.205	1.711	3.380	1.477	0.398	0.633	0.709	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	302.300	300.100	302.100	298.100	304.000	296.700	81.6%	306.400	319.400	299.800
2	16:26:06	305.600	303.700	302.700	295.900	306.700	304.600	82.4%	301.800	309.500	294.600
3	16:26:33	307.200	303.400	307.400	297.100	311.700	305.500	81.3%	307.300	319.700	302.400
X		101.678%	100.804%	304.100	99.001%	102.500%	100.752%	81.8%	305.200	105.395%	99.647%
S		n/a	n/a	2.863	n/a	n/a	n/a	0.6%	2.928	n/a	n/a
%RSD		0.813	0.657	0.942	0.378	1.274	1.612	0.7	0.960	1.820	1.332
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:25:39	291.400	293.500	80.2%							
2	16:26:06	292.700	290.800	81.2%							
3	16:26:33	297.000	296.700	81.1%							
X		97.898%	97.887%	80.8%							
S		n/a	n/a	0.6%							
%RSD		0.999	1.005	0.7							

CCB IM9936-01 4/22/2020 16:31:06 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	81.2%	-0.023	2.003	1.848	5.986	0.811	2.175	2.307	1.537	0.021
2	16:32:01	82.6%	0.006	2.348	1.953	-0.964	0.490	2.116	2.015	2.591	0.010
3	16:32:28	81.5%	-0.008	1.869	1.597	-7.647	0.573	2.364	2.568	2.345	0.045
X		81.8%	-0.008	2.073	1.799	-0.875	0.625	2.218	2.296	2.158	0.025
S		0.7%	0.014	0.247	0.183	6.817	0.167	0.129	0.277	0.552	0.017
%RSD		0.9	172.200	11.930	10.160	779.000	26.660	5.831	12.040	25.560	68.600
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.676	285.100	10.940	2.709	2.297	80.3%	0.028	0.026	0.023	-76.780
2	16:32:01	0.983	237.000	9.201	0.333	2.103	81.4%	-0.022	0.028	0.012	-67.110
3	16:32:28	1.437	241.700	9.808	3.917	2.005	79.8%	-0.021	-0.000	-0.000	-59.580
X		1.365	254.600	9.982	2.320	2.135	80.5%	-0.005	0.018	0.011	-67.820
S		0.352	26.500	0.881	1.823	0.149	0.9%	0.028	0.016	0.011	8.622
%RSD		25.810	10.410	8.822	78.610	6.969	1.1	554.900	88.570	101.100	12.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.891	0.075	-2.464	2.588	0.010	-0.019	-0.120	-0.011	0.006	0.030
2	16:32:01	0.641	0.054	-2.279	3.892	0.003	0.021	-0.357	0.005	0.008	0.029
3	16:32:28	2.517	0.082	-1.388	4.207	0.009	-0.025	-0.116	0.000	0.007	0.054
X		1.683	0.070	-2.044	3.563	0.008	-0.008	-0.198	-0.002	0.007	0.038
S		0.955	0.014	0.575	0.858	0.004	0.025	0.138	0.009	0.001	0.014
%RSD		56.740	20.590	28.140	24.090	53.410	324.200	69.790	443.500	11.590	37.330
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.107	-0.032	-0.029	-0.184	0.066	-0.511	0.085	-0.284	2.116	0.007
2	16:32:01	-0.070	0.192	-0.187	0.588	0.078	0.470	-0.781	-0.170	-0.116	0.006
3	16:32:28	-0.244	0.198	-0.115	-0.123	-0.154	-0.159	-0.341	-0.443	2.614	0.004
X		-0.069	0.119	-0.111	0.094	-0.003	-0.066	-0.346	-0.299	1.538	0.006
S		0.175	0.131	0.079	0.429	0.131	0.497	0.433	0.137	1.454	0.002
%RSD		254.700	110.000	71.580	458.100	3872.000	748.200	125.400	45.880	94.500	27.970
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	79.6%	0.267	0.335	0.234	0.382	0.006	0.005	0.017	0.015	81.6%
2	16:32:01	78.5%	0.305	0.258	0.222	-0.002	0.008	0.015	0.002	0.020	80.0%
3	16:32:28	79.1%	0.163	0.263	0.152	0.481	0.006	0.023	0.002	0.020	80.8%
X		79.1%	0.245	0.285	0.202	0.287	0.007	0.015	0.007	0.018	80.8%
S		0.6%	0.074	0.043	0.044	0.255	0.001	0.009	0.008	0.003	0.8%
%RSD		0.7	30.060	15.050	21.900	88.810	18.130	60.300	118.400	18.120	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.085	0.107	0.314	0.345	-0.041	-0.011	84.6%	0.008	0.009	0.008
2	16:32:01	0.138	0.141	0.361	0.321	-0.041	0.008	82.9%	-0.002	0.009	0.016
3	16:32:28	0.100	0.142	0.351	0.338	-0.041	0.002	82.9%	0.006	0.004	0.019
X		0.108	0.130	0.342	0.335	-0.041	-0.000	83.5%	0.004	0.007	0.015
S		0.028	0.020	0.025	0.012	0.000	0.010	1.0%	0.005	0.003	0.006
%RSD		25.610	15.060	7.312	3.661	0.000	2630.000	1.2	135.700	39.320	38.350
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:31:33	0.012	0.017	85.8%							
2	16:32:01	0.034	0.026	85.9%							
3	16:32:28	0.026	0.021	85.5%							
X		0.024	0.021	85.7%							
S		0.011	0.005	0.2%							
%RSD		46.410	22.870	0.3							

LR MW12519 4/22/2020 16:37:01 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	69.0%	M 1044.000	M 1970.000	M 2056.000	6.651	TM 122700.000	TM 123000.000	TM 125000.000	TM 115200.000	TM 112800.000
2	16:37:56	69.9%	M 1032.000	M 1811.000	M 1870.000	4.291	TM 126400.000	TM 120300.000	TM 119100.000	TM 118300.000	TM 115100.000
3	16:38:22	68.0%	M 1070.000	M 1956.000	M 1999.000	2.916	TM 125200.000	TM 124500.000	TM 123800.000	TM 117700.000	TM 115400.000
X		69.0%	M 104.881%	M 95.610%	M 98.748%	4.620	TM 103.978%	TM 122600.000	TM 122600.000	TM 97.559%	TM 95.332%
S		0.9%	M n/a	M n/a	M n/a	1.889	TM n/a	TM 2149.000	TM 3075.000	TM n/a	TM n/a
%RSD		1.4	M 1.864	M 4.608	M 4.836	40.890	TM 1.505	TM 1.753	TM 2.507	TM 1.382	TM 1.243
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	7.434	208.400	TM 118300.000	M 125500.000	TM 124700.000	70.3%	M 2009.000	TM 1889.000	TM 1875.000	40380.000
2	16:37:56	7.139	167.600	TM 117800.000	M 125700.000	TM 126400.000	69.3%	M 2043.000	TM 1956.000	TM 1933.000	32590.000
3	16:38:22	8.377	174.100	TM 117900.000	M 125600.000	TM 126700.000	68.8%	M 2047.000	TM 1939.000	TM 1915.000	37640.000
X		7.650	183.400	TM 98.343%	M 125600.000	TM 104.933%	69.5%	M 101.650%	TM 96.400%	TM 95.382%	36870.000
S		0.646	21.940	TM n/a	M 122.900	TM n/a	0.8%	M n/a	TM n/a	TM n/a	3949.000
%RSD		8.450	11.970	TM 0.234	M 0.098	TM 0.866	1.1	M 1.014	TM 1.811	TM 1.569	10.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	TM 122800.000	TM 1816.000	TM 120900.000	TM 116900.000	TM 1838.000	M 1862.000	M 1880.000	M 1900.000	M 1942.000	M 1947.000
2	16:37:56	TM 126200.000	TM 1880.000	TM 124300.000	TM 119500.000	TM 1887.000	M 1890.000	M 1895.000	M 1873.000	M 1948.000	M 1939.000
3	16:38:22	TM 127000.000	TM 1904.000	TM 124600.000	TM 120900.000	TM 1891.000	M 1951.000	M 1972.000	M 1951.000	M 1948.000	M 1956.000
X		TM 125300.000	TM 93.325%	TM 123300.000	TM 99.254%	TM 93.591%	M 95.037%	M 1915.000	M 1908.000	M 97.301%	M 97.373%
S		TM 2238.000	TM n/a	TM 2066.000	TM n/a	TM n/a	M n/a	M 49.320	M 39.620	M n/a	M n/a
%RSD		TM 1.786	TM 2.435	TM 1.676	TM 1.717	TM 1.578	M 2.383	M 2.575	M 2.077	M 0.186	M 0.422
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2040.000	M 1998.000	M 2070.000	M 1822.000	1.829	0.827	8499.000	M 1945.000	17.980	TM 1995.000
2	16:37:56	M 2041.000	M 1985.000	M 2062.000	M 1840.000	1.553	-0.393	8526.000	M 1962.000	17.290	TM 1975.000
3	16:38:22	M 2030.000	M 2007.000	M 2056.000	M 1826.000	3.133	-0.434	8468.000	M 1934.000	15.930	TM 2005.000
X		M 2037.000	M 1997.000	M 103.154%	M 1829.000	2.171	-0.000	8498.000	M 97.357%	17.070	TM 99.580%
S		M 5.721	M 10.830	M n/a	M 9.593	0.844	0.716	29.400	M n/a	1.046	TM n/a
%RSD		M 0.281	M 0.543	M 0.338	M 0.524	38.870	3799000.000	0.346	M 0.725	6.129	TM 0.787
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	70.4%	M 2236.000	M 2182.000	M 2198.000	M 1940.000	297.600	293.500	M 1999.000	M 2021.000	69.4%
2	16:37:56	71.2%	M 2224.000	M 2203.000	M 2176.000	M 1969.000	295.500	290.400	M 1974.000	M 2026.000	69.6%
3	16:38:22	70.6%	M 2232.000	M 2226.000	M 2235.000	M 1978.000	299.700	292.900	M 1985.000	M 2031.000	69.5%
X		70.7%	M 2230.000	M 110.186%	M 2203.000	M 1962.000	297.600	292.300	M 1986.000	M 101.292%	69.5%
S		0.4%	M 6.150	M n/a	M 29.920	M 19.860	2.084	1.658	M 12.550	M n/a	0.1%
%RSD		0.6	M 0.276	M 0.983	M 1.358	M 1.012	0.700	0.567	M 0.632	M 0.248	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2059.000	M 2072.000	M 1063.000	M 1019.000	TM 10440.000	TM 10090.000	77.5%	M 788.800	TM 757.700	TM 1796.000
2	16:37:56	M 2077.000	M 2100.000	M 1069.000	M 1017.000	TM 10630.000	TM 10280.000	78.4%	M 785.500	TM 744.000	TM 1780.000
3	16:38:22	M 2084.000	M 2094.000	M 1061.000	M 1020.000	TM 10610.000	TM 10260.000	78.1%	M 790.800	TM 741.200	TM 1819.000
X		M 2073.000	M 104.440%	M 1064.000	M 101.856%	TM 105.608%	TM 10210.000	78.0%	M 788.400	TM 74.766%	TM 1798.000
S		M 12.600	M n/a	M 4.306	M n/a	TM n/a	TM 105.500	0.5%	M 2.663	TM n/a	TM 19.520
%RSD		M 0.608	M 0.689	M 0.405	M 0.133	TM 0.998	TM 1.034	0.6	M 0.338	TM 1.177	TM 1.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:37:29	TM 1761.000	TM 1804.000	74.5%							
2	16:37:56	TM 1757.000	TM 1796.000	75.8%							
3	16:38:22	TM 1792.000	TM 1818.000	75.3%							
X		TM 1770.000	TM 90.300%	75.2%							
S		TM 19.100	TM n/a	0.7%							
%RSD		TM 1.079	TM 0.611	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	83.1%	0.135	7.134	6.909	-59.360	±6406.000	±21060.000	±21610.000	±30690.000	3.359
2	16:43:48	82.8%	0.063	5.741	6.392	-58.650	±6702.000	±21530.000	±22160.000	±31250.000	3.709
3	16:44:15	80.8%	0.037	6.079	6.198	-55.830	±6552.000	±21470.000	±21770.000	±31100.000	3.743
X		82.2%	0.078	6.318	6.500	-57.950	±6553.000	±21350.000	±21850.000	±31010.000	3.603
S		1.2%	0.051	0.726	0.368	1.866	±147.900	±251.300	±282.900	±292.000	0.212
%RSD		1.5	64.830	11.500	5.655	3.220	±2.257	±1.177	±1.295	±0.941	5.898
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	±5404.000	±60120.000	±2249.000	91780.000	±89780.000	75.5%	0.733	0.028	0.401	3938.000
2	16:43:48	±5372.000	±61440.000	±2320.000	94650.000	±91420.000	73.4%	0.381	0.034	0.425	4047.000
3	16:44:15	±5514.000	±61040.000	2445.000	91580.000	±91330.000	73.8%	0.485	0.132	0.397	3964.000
X		±5430.000	±60870.000	±2338.000	92670.000	±90840.000	74.2%	0.533	0.065	0.408	3983.000
S		±74.550	±673.800	±99.180	1718.000	±925.200	1.1%	0.181	0.058	0.015	57.090
%RSD		±1.373	±1.107	±4.242	1.854	±1.018	1.4	33.920	90.110	3.645	1.433
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4478.000	TM 6730.000	±4153.000	4353.000	17.410	14.730	12.980	1.004	0.978	17.740
2	16:43:48	4509.000	TM 6876.000	±4280.000	4384.000	17.660	15.160	14.670	0.957	0.950	17.620
3	16:44:15	4529.000	TM 6879.000	±4188.000	4362.000	17.710	14.300	14.590	1.003	1.217	17.470
X		4506.000	TM 6828.000	±4207.000	4366.000	17.590	14.730	14.080	0.988	1.048	17.610
S		25.660	TM 85.120	±65.730	15.830	0.160	0.429	0.954	0.027	0.147	0.138
%RSD		0.570	TM 1.247	±1.562	0.363	0.910	2.913	6.774	2.690	14.030	0.785
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	21.780	22.080	2.439	-0.541	19.300	16.530	1.694	0.240	0.901	95.340
2	16:43:48	22.740	23.590	1.794	0.493	19.680	18.060	0.430	0.196	-0.884	98.190
3	16:44:15	24.380	22.070	1.785	0.172	16.660	17.450	4.271	0.798	1.013	97.840
X		22.960	22.580	2.006	0.042	18.550	17.350	2.132	0.411	0.344	97.120
S		1.316	0.878	0.375	0.529	1.648	0.769	1.957	0.335	1.064	1.554
%RSD		5.729	3.889	18.690	1272.000	8.887	4.435	91.820	81.510	309.900	1.600
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	77.8%	1.532	1.120	1.175	0.992	0.020	0.028	0.060	0.136	78.6%
2	16:43:48	76.1%	1.396	1.156	1.448	0.460	0.025	0.026	0.100	0.105	77.1%
3	16:44:15	76.4%	1.163	1.144	1.056	3.170	0.029	0.012	0.031	0.100	77.2%
X		76.8%	1.364	1.140	1.226	1.540	0.025	0.022	0.064	0.114	77.6%
S		0.9%	0.187	0.018	0.201	1.436	0.004	0.009	0.035	0.020	0.9%
%RSD		1.2	13.700	1.614	16.410	93.220	17.330	39.290	54.500	17.290	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4.263	6.298	0.450	0.543	346.600	345.900	85.1%	0.759	0.759	0.130
2	16:43:48	4.239	6.349	0.492	0.534	353.400	348.900	84.6%	0.615	0.658	0.130
3	16:44:15	3.981	5.647	0.549	0.478	354.400	351.100	83.9%	0.528	0.563	0.081
X		4.161	6.098	0.497	0.518	351.500	348.600	84.5%	0.634	0.660	0.114
S		0.157	0.391	0.050	0.035	4.224	2.585	0.6%	0.117	0.098	0.028
%RSD		3.764	6.416	10.040	6.761	1.202	0.742	0.7	18.390	14.890	24.810
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:43:21	0.124	0.128	85.7%							
2	16:43:48	0.091	0.109	85.8%							
3	16:44:15	0.090	0.092	85.0%							
X		0.102	0.110	85.5%							
S		0.019	0.018	0.4%							
%RSD		19.000	16.400	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	81.3%	-0.023	7.315	6.997	-32.990	2821.000	16610.000	16670.000	19450.000	8.122
2	16:49:40	83.1%	-0.009	6.521	7.584	-27.570	2810.000	17440.000	17320.000	19290.000	7.591
3	16:50:06	82.6%	0.006	7.440	6.401	-28.090	2713.000	16910.000	17150.000	19040.000	7.143
X		82.3%	-0.009	7.092	6.994	-29.550	2781.000	16990.000	17050.000	19260.000	7.619
S		0.9%	0.014	0.498	0.592	2.989	59.230	422.700	333.200	207.900	0.490
%RSD		1.1	166.400	7.027	8.458	10.110	2.130	2.489	1.954	1.079	6.429
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	2500.000	72250.000	3835.000	46540.000	45360.000	72.7%	0.843	-0.656	0.782	6637.000
2	16:49:40	2469.000	73060.000	3790.000	46190.000	45820.000	73.2%	0.329	-0.030	0.811	6153.000
3	16:50:06	2421.000	72110.000	3754.000	45740.000	45070.000	73.6%	0.487	-0.544	0.783	6336.000
X		2463.000	72470.000	3793.000	46160.000	45410.000	73.2%	0.553	-0.410	0.792	6376.000
S		39.980	514.700	40.660	403.600	377.900	0.4%	0.263	0.334	0.016	244.200
%RSD		1.623	0.710	1.072	0.875	0.832	0.6	47.640	81.510	2.051	3.830
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	162.300	4554.000	171.300	220.700	4.839	3.449	3.053	0.585	0.623	3.910
2	16:49:40	163.100	4503.000	166.900	219.900	4.696	3.329	2.826	0.672	0.612	4.032
3	16:50:06	158.300	4432.000	163.000	215.600	4.628	3.266	2.907	0.648	0.687	4.188
X		161.300	4496.000	167.100	218.700	4.721	3.348	2.929	0.635	0.641	4.043
S		2.566	61.020	4.169	2.772	0.108	0.093	0.115	0.045	0.041	0.139
%RSD		1.591	1.357	2.495	1.267	2.290	2.767	3.926	7.081	6.357	3.438
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	5.876	5.697	0.440	0.168	10.870	10.960	1.345	0.630	-2.342	179.100
2	16:49:40	6.779	5.928	-0.402	-0.081	10.440	11.190	-1.039	-0.120	-0.894	181.700
3	16:50:06	5.842	5.704	0.316	-0.017	12.930	10.640	-0.514	-0.018	-0.866	176.600
X		6.166	5.776	0.118	0.023	11.410	10.930	-0.069	0.164	-1.367	179.100
S		0.531	0.131	0.455	0.129	1.331	0.279	1.253	0.406	0.844	2.540
%RSD		8.616	2.275	385.200	551.700	11.660	2.556	1808.000	247.400	61.730	1.418
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	76.9%	0.184	0.271	0.225	2.808	0.060	0.053	0.107	0.158	75.8%
2	16:49:40	76.4%	0.264	0.136	0.262	3.713	0.043	0.053	0.154	0.156	76.3%
3	16:50:06	75.6%	0.248	0.164	0.151	4.512	0.043	0.075	0.098	0.150	77.0%
X		76.3%	0.232	0.190	0.213	3.677	0.049	0.060	0.119	0.154	76.4%
S		0.6%	0.042	0.071	0.057	0.853	0.010	0.012	0.030	0.004	0.6%
%RSD		0.8	18.280	37.370	26.690	23.190	20.000	20.600	25.170	2.685	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	1.353	1.965	0.194	0.200	135.300	131.400	83.1%	0.096	0.113	0.043
2	16:49:40	1.611	2.128	0.194	0.212	131.500	130.400	84.2%	0.105	0.108	0.027
3	16:50:06	1.434	2.023	0.244	0.166	134.700	129.700	83.2%	0.123	0.113	0.023
X		1.466	2.039	0.211	0.193	133.900	130.500	83.5%	0.108	0.111	0.031
S		0.132	0.082	0.029	0.024	2.027	0.845	0.6%	0.014	0.003	0.011
%RSD		9.017	4.042	13.570	12.270	1.514	0.648	0.8	12.560	2.710	34.790
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:49:13	0.030	0.032	85.0%							
2	16:49:40	0.006	0.015	83.8%							
3	16:50:06	0.015	0.016	86.1%							
X		0.017	0.021	85.0%							
S		0.012	0.009	1.2%							
%RSD		70.160	44.690	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	85.9%	-0.038	2.938	2.320	-15.940	11.130	-0.040	0.023	0.142	0.873
2	16:55:30	85.6%	-0.010	2.177	2.767	-7.961	11.430	-0.054	0.133	0.067	0.747
3	16:55:57	86.5%	-0.052	2.934	2.589	-9.317	12.150	0.008	0.105	0.270	0.825
X		86.0%	-0.033	2.683	2.559	-11.070	11.570	-0.029	0.087	0.160	0.815
S		0.4%	0.021	0.438	0.225	4.270	0.525	0.033	0.057	0.102	0.064
%RSD		0.5	63.820	16.340	8.793	38.560	4.538	114.500	65.790	64.110	7.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.995	74510.000	13.170	5.528	5.646	75.7%	0.110	-0.458	0.706	9213.000
2	16:55:30	1.149	75030.000	11.790	4.265	6.700	76.0%	0.006	-0.802	0.632	9028.000
3	16:55:57	0.404	76180.000	12.330	4.348	6.032	75.1%	0.033	-0.920	0.768	9472.000
X		0.849	75240.000	12.430	4.714	6.126	75.6%	0.049	-0.727	0.702	9238.000
S		0.394	857.300	0.699	0.707	0.533	0.4%	0.054	0.240	0.068	223.300
%RSD		46.360	1.139	5.623	14.990	8.708	0.6	109.200	33.040	9.675	2.417
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	9.209	0.123	18.480	3.134	-0.005	0.034	-0.423	0.008	0.135	0.827
2	16:55:30	8.948	0.158	16.720	1.613	-0.005	0.033	-0.035	0.041	0.038	0.808
3	16:55:57	6.450	0.138	17.310	2.202	-0.007	0.042	-0.076	0.062	0.075	0.674
X		8.202	0.140	17.500	2.316	-0.006	0.036	-0.178	0.037	0.083	0.770
S		1.523	0.018	0.897	0.767	0.001	0.005	0.214	0.027	0.049	0.083
%RSD		18.570	12.580	5.122	33.100	15.190	12.840	119.900	73.620	58.920	10.790
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	1.137	1.139	-1.451	-0.037	7.982	8.609	-2.528	-0.522	-0.453	0.001
2	16:55:30	1.334	0.893	-1.253	-0.570	7.709	8.077	-2.488	-0.334	-1.846	0.002
3	16:55:57	1.238	1.023	-0.819	-0.247	7.339	9.259	-1.565	-0.940	4.294	0.008
X		1.236	1.018	-1.174	-0.285	7.677	8.648	-2.194	-0.599	0.665	0.004
S		0.098	0.123	0.323	0.268	0.323	0.592	0.544	0.310	3.219	0.004
%RSD		7.946	12.090	27.530	94.290	4.207	6.842	24.820	51.740	484.100	98.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	76.7%	0.070	0.056	0.024	0.439	-0.003	-0.002	-0.012	-0.006	79.7%
2	16:55:30	75.7%	0.125	0.076	0.086	0.528	0.004	-0.002	-0.012	0.017	79.6%
3	16:55:57	76.8%	0.071	0.115	0.016	0.945	-0.003	-0.000	-0.005	0.013	79.4%
X		76.4%	0.089	0.082	0.042	0.637	-0.001	-0.002	-0.010	0.008	79.6%
S		0.6%	0.032	0.030	0.039	0.270	0.004	0.001	0.004	0.013	0.1%
%RSD		0.8	35.660	36.470	91.920	42.340	599.300	73.400	46.130	155.000	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.653	1.052	0.103	0.076	-0.030	-0.011	84.7%	0.026	0.031	-0.005
2	16:55:30	0.890	0.995	0.074	0.086	0.014	0.014	84.9%	0.023	0.031	0.002
3	16:55:57	0.751	1.039	0.101	0.108	-0.041	0.008	84.7%	0.019	0.037	0.005
X		0.765	1.029	0.093	0.090	-0.019	0.004	84.8%	0.023	0.033	0.001
S		0.119	0.030	0.016	0.016	0.029	0.013	0.1%	0.003	0.004	0.005
%RSD		15.550	2.886	17.480	18.220	154.500	347.900	0.1	14.890	11.490	830.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:55:03	0.004	-0.001	87.8%							
2	16:55:30	-0.011	-0.008	89.0%							
3	16:55:57	0.001	-0.003	87.9%							
X		-0.002	-0.004	88.2%							
S		0.008	0.003	0.7%							
%RSD		410.600	76.180	0.8							

VQ51455-002 4/22/2020 17:00:27 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	82.1%	95.910	98.680	100.600	-16.300	1128.000	1120.000	1069.000	1044.000	101.300
2	17:01:20	80.0%	99.280	100.100	106.900	-5.824	1181.000	1151.000	1076.000	1068.000	105.500
3	17:01:47	79.9%	97.850	102.100	103.500	-7.680	1157.000	1141.000	1064.000	1066.000	103.000
X		80.7%	97.680%	100.300	103.700	-9.935	115.524%	1138.000	1070.000	105.970%	103.286%
S		1.2%	n/a	1.701	3.124	5.590	n/a	16.000	5.645	n/a	n/a
%RSD		1.5	1.732	1.697	3.013	56.270	2.314	1.407	0.528	1.262	2.039
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	832.900	71980.000	1007.000	1063.000	1064.000	74.0%	96.800	100.000	97.320	8804.000
2	17:01:20	859.900	74610.000	1029.000	1106.000	1075.000	71.5%	97.320	98.960	100.700	9702.000
3	17:01:47	850.200	73630.000	1017.000	1122.000	1049.000	72.4%	97.490	97.180	100.100	10100.000
X		847.700	73410.000	101.769%	1097.000	106.283%	72.6%	97.203%	98.710%	99.375%	9536.000
S		13.640	1330.000	n/a	30.590	n/a	1.3%	n/a	n/a	n/a	664.400
%RSD		1.609	1.811	1.090	2.789	1.235	1.8	0.368	1.444	1.815	6.967
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	1147.000	98.130	1032.000	1041.000	99.180	98.630	95.300	100.800	98.770	100.700
2	17:01:20	1183.000	99.480	1072.000	1069.000	99.820	99.300	99.810	101.100	98.060	101.500
3	17:01:47	1157.000	98.150	1050.000	1049.000	99.950	100.700	98.660	101.300	99.050	100.900
X		1162.000	98.586%	1052.000	105.292%	99.650%	99.552%	97.920	101.051%	98.626%	101.021%
S		18.680	n/a	19.920	n/a	n/a	n/a	2.345	n/a	n/a	n/a
%RSD		1.608	0.787	1.895	1.392	0.416	1.074	2.395	0.231	0.520	0.402
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	103.200	100.900	103.400	97.970	6.678	5.667	488.200	105.800	-2.277	96.550
2	17:01:20	106.800	103.000	103.100	100.400	5.704	5.875	459.600	98.580	3.727	97.340
3	17:01:47	99.040	102.300	98.960	100.700	6.508	6.788	450.200	97.170	-0.247	99.970
X		103.000	102.000	101.816%	99.670	6.297	6.110	466.000	100.533%	0.401	97.960
S		3.862	1.050	n/a	1.480	0.520	0.596	19.780	n/a	3.054	1.791
%RSD		3.749	1.030	2.429	1.485	8.262	9.760	4.246	4.627	761.300	1.828
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	74.3%	97.230	98.720	99.650	99.180	101.700	98.950	99.220	98.010	77.6%
2	17:01:20	73.3%	101.200	97.300	100.200	102.900	100.500	97.920	99.190	100.700	76.6%
3	17:01:47	73.2%	99.670	100.600	101.700	99.330	102.500	101.300	99.950	100.000	76.5%
X		73.6%	99.360	98.870	100.500	100.500	101.547%	99.400	99.450	99.568%	76.9%
S		0.6%	1.996	1.651	1.070	2.102	n/a	1.751	0.430	n/a	0.6%
%RSD		0.8	2.009	1.669	1.065	2.092	1.030	1.761	0.432	1.404	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	101.200	98.820	97.180	98.470	97.780	98.930	82.8%	102.400	106.500	103.300
2	17:01:20	100.200	99.390	99.680	98.200	99.070	101.000	81.7%	103.100	108.100	103.000
3	17:01:47	101.000	100.100	99.650	99.820	104.800	101.200	81.6%	100.700	108.700	103.600
X		100.800	99.449%	98.840	98.832%	100.500	100.387%	82.0%	102.100	107.767%	103.300
S		0.527	n/a	1.436	n/a	3.717	n/a	0.7%	1.247	n/a	0.306
%RSD		0.523	0.668	1.453	0.882	3.697	1.254	0.8	1.221	1.058	0.296
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:00:53	102.500	101.100	84.9%							
2	17:01:20	102.400	102.400	85.4%							
3	17:01:47	103.700	103.700	85.9%							
X		102.900	102.399%	85.4%							
S		0.731	n/a	0.5%							
%RSD		0.711	1.269	0.6							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	85.4%	0.004	4.764	5.073	-54.570	14116.000	14030.000	14290.000	19880.000	4.950
2	17:07:10	86.2%	-0.038	4.402	4.655	-58.370	14140.000	14090.000	14330.000	19980.000	4.958
3	17:07:37	86.3%	0.017	4.856	4.960	-55.480	14234.000	13970.000	14430.000	20170.000	4.682
X		86.0%	-0.006	4.674	4.896	-56.140	14163.000	14030.000	14350.000	20010.000	4.863
S		0.5%	0.029	0.240	0.217	1.983	62.560	62.410	68.820	146.100	0.157
%RSD		0.6	509.100	5.138	4.422	3.533	1.503	0.445	0.480	0.730	3.230
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5084.000	62060.000	2848.000	76070.000	74580.000	77.1%	0.412	-0.884	1.236	11130.000
2	17:07:10	5055.000	62840.000	2842.000	75990.000	75470.000	77.1%	0.691	-0.471	1.247	12230.000
3	17:07:37	5058.000	63390.000	2853.000	76740.000	75820.000	76.7%	0.389	-1.827	1.305	14120.000
X		5066.000	62760.000	2848.000	76270.000	75290.000	77.0%	0.497	-1.061	1.263	12500.000
S		15.630	666.100	5.691	410.100	639.000	0.2%	0.168	0.695	0.037	1513.000
%RSD		0.309	1.061	0.200	0.538	0.849	0.3	33.840	65.510	2.903	12.100
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	23.950	1.082	30.880	132.600	0.063	0.543	-0.093	0.195	0.169	1.065
2	17:07:10	26.380	1.034	30.670	126.500	0.048	0.741	-0.430	0.180	0.259	1.139
3	17:07:37	25.850	1.009	30.610	127.600	0.056	0.646	-0.428	0.151	0.304	1.319
X		25.390	1.042	30.720	128.900	0.056	0.643	-0.317	0.175	0.244	1.175
S		1.281	0.037	0.142	3.235	0.008	0.099	0.194	0.022	0.069	0.131
%RSD		5.044	3.579	0.463	2.510	13.710	15.390	61.160	12.680	28.240	11.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5.425	4.235	-0.993	-0.334	7.872	6.580	-1.147	-0.455	1.377	38.600
2	17:07:10	6.169	3.750	-0.220	0.185	5.834	6.722	-0.657	-0.288	0.924	38.420
3	17:07:37	6.514	3.673	-0.682	-0.351	7.061	6.923	-0.238	0.011	-0.528	38.690
X		6.036	3.886	-0.632	-0.167	6.922	6.742	-0.681	-0.244	0.591	38.570
S		0.557	0.305	0.389	0.305	1.026	0.172	0.455	0.236	0.995	0.135
%RSD		9.224	7.840	61.580	183.100	14.820	2.552	66.850	96.610	168.400	0.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	77.5%	0.370	0.453	0.273	0.352	0.001	0.002	0.002	0.012	78.5%
2	17:07:10	77.2%	0.281	0.273	0.330	0.418	-0.001	0.006	-0.006	0.016	78.9%
3	17:07:37	78.2%	0.320	0.404	0.353	2.181	-0.001	-0.000	-0.014	0.033	78.5%
X		77.6%	0.324	0.377	0.319	0.984	-0.001	0.002	-0.006	0.020	78.6%
S		0.5%	0.045	0.093	0.041	1.038	0.001	0.003	0.008	0.011	0.3%
%RSD		0.6	13.780	24.660	12.950	105.500	171.500	122.900	139.500	54.730	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	0.388	0.471	0.158	0.107	198.400	193.800	84.3%	0.056	0.047	0.027
2	17:07:10	0.318	0.588	0.196	0.158	197.300	196.100	85.3%	0.036	0.058	0.031
3	17:07:37	0.384	0.545	0.149	0.120	203.100	195.900	85.5%	0.040	0.035	0.023
X		0.363	0.535	0.168	0.128	199.600	195.200	85.0%	0.044	0.047	0.027
S		0.039	0.059	0.025	0.026	3.087	1.289	0.7%	0.011	0.012	0.004
%RSD		10.730	11.020	14.820	20.680	1.547	0.660	0.8	24.560	24.770	15.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:06:43	0.016	0.022	85.8%							
2	17:07:10	0.036	0.028	84.3%							
3	17:07:37	0.026	0.023	85.7%							
X		0.026	0.024	85.3%							
S		0.010	0.003	0.9%							
%RSD		38.360	13.850	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	89.1%	-0.012	1.575	1.884	-42.400	558.000	13140.000	13380.000	17660.000	16.490
2	17:13:02	88.7%	-0.039	1.996	1.725	-52.100	551.100	13190.000	13490.000	17970.000	15.120
3	17:13:29	88.0%	0.016	2.087	1.850	-43.830	566.200	13400.000	13410.000	17980.000	14.440
X		88.6%	-0.012	1.886	1.820	-46.110	558.400	13240.000	13430.000	17870.000	15.350
S		0.5%	0.027	0.273	0.084	5.237	7.534	137.400	59.210	184.600	1.041
%RSD		0.6	236.500	14.490	4.610	11.360	1.349	1.038	0.441	1.033	6.783
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	3296.000	63360.000	944.700	19640.000	19760.000	79.3%	0.597	-1.412	2.309	24750.000
2	17:13:02	3238.000	62290.000	942.800	19990.000	20170.000	78.8%	0.452	-1.666	2.486	26210.000
3	17:13:29	3320.000	63000.000	958.900	20200.000	20440.000	78.6%	0.403	-1.485	2.444	26430.000
X		3285.000	62880.000	948.800	19940.000	20120.000	78.9%	0.484	-1.521	2.413	25800.000
S		42.450	544.200	8.806	281.400	337.800	0.4%	0.101	0.131	0.093	913.900
%RSD		1.292	0.866	0.928	1.411	1.679	0.5	20.830	8.590	3.839	3.543
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	24.000	1.009	35.580	45.930	0.024	0.161	-0.112	0.143	0.321	1.266
2	17:13:02	26.050	0.971	35.940	45.200	0.026	0.204	-0.108	0.212	0.289	1.343
3	17:13:29	24.460	0.994	36.810	45.040	0.023	0.198	-0.295	0.183	0.355	1.249
X		24.840	0.991	36.110	45.390	0.024	0.187	-0.171	0.179	0.321	1.286
S		1.076	0.019	0.633	0.477	0.001	0.023	0.107	0.035	0.033	0.050
%RSD		4.331	1.927	1.752	1.052	5.996	12.390	62.260	19.500	10.330	3.883
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	20.110	12.500	-0.916	-0.404	5.906	4.863	-2.701	-0.399	-1.552	25.020
2	17:13:02	18.870	12.630	-0.480	-0.754	4.928	5.813	-4.059	-0.712	-1.530	25.060
3	17:13:29	17.920	12.620	-0.835	-0.103	7.004	5.555	-1.245	-0.401	0.803	24.840
X		18.970	12.580	-0.744	-0.420	5.946	5.411	-2.668	-0.504	-0.760	24.980
S		1.101	0.071	0.232	0.326	1.038	0.491	1.407	0.180	1.353	0.117
%RSD		5.805	0.563	31.190	77.460	17.460	9.076	52.750	35.740	178.100	0.468
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	80.4%	0.142	0.045	0.142	0.628	0.000	0.002	0.040	0.008	80.1%
2	17:13:02	79.8%	0.224	0.135	0.101	0.506	-0.003	0.002	-0.005	0.013	81.8%
3	17:13:29	78.9%	0.195	0.217	0.155	0.200	-0.005	0.002	0.040	-0.003	80.4%
X		79.7%	0.187	0.133	0.133	0.444	-0.003	0.002	0.025	0.006	80.8%
S		0.7%	0.042	0.086	0.028	0.221	0.003	0.000	0.026	0.008	0.9%
%RSD		0.9	22.370	64.820	21.280	49.650	107.700	4.082	104.200	129.100	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	0.226	0.379	0.120	0.116	774.900	764.000	86.0%	0.018	0.016	0.023
2	17:13:02	0.349	0.404	0.106	0.095	754.200	759.600	85.7%	0.024	0.022	0.044
3	17:13:29	0.301	0.414	0.090	0.094	767.800	763.000	86.2%	0.018	0.016	0.031
X		0.292	0.399	0.106	0.102	765.600	762.200	86.0%	0.020	0.018	0.033
S		0.062	0.018	0.015	0.012	10.540	2.322	0.3%	0.003	0.003	0.011
%RSD		21.320	4.442	14.000	11.950	1.376	0.305	0.3	15.620	18.740	33.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:12:35	0.024	0.027	87.4%							
2	17:13:02	0.043	0.025	87.7%							
3	17:13:29	0.017	0.025	87.4%							
X		0.028	0.026	87.5%							
S		0.014	0.001	0.2%							
%RSD		48.510	5.330	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	86.7%	-0.052	14.880	17.060	-38.650	13355.000	120540.000	120660.000	125620.000	3.923
2	17:18:55	87.1%	0.017	15.380	15.860	-42.290	13368.000	120210.000	120340.000	125270.000	3.901
3	17:19:22	84.8%	-0.024	13.430	15.040	-42.020	13496.000	120500.000	120710.000	126780.000	4.086
X		86.2%	-0.020	14.560	15.990	-40.980	13406.000	120410.000	120570.000	125890.000	3.970
S		1.2%	0.035	1.016	1.016	2.028	178.340	1181.400	1201.100	1792.900	0.101
%RSD		1.4	174.700	6.979	6.357	4.949	12.300	10.889	10.978	13.063	2.546
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	14035.000	157450.000	1725.000	66970.000	166460.000	77.3%	0.486	-1.306	1.369	18000.000
2	17:18:55	13977.000	156920.000	1691.000	67270.000	166930.000	77.8%	0.534	-0.819	1.398	18010.000
3	17:19:22	14008.000	158400.000	1739.000	70360.000	168380.000	73.7%	0.327	-0.288	1.529	18840.000
X		14007.000	157590.000	1718.000	68200.000	167260.000	76.3%	0.449	-0.804	1.432	18280.000
S		129.110	1750.800	24.790	1876.000	1997.900	2.2%	0.109	0.509	0.085	479.200
%RSD		10.727	11.304	1.443	2.751	11.484	2.9	24.190	63.300	5.966	2.621
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	14.370	0.338	25.520	105.800	0.025	1.085	0.384	0.406	0.544	1.526
2	17:18:55	12.530	0.355	25.090	105.400	0.041	1.128	0.711	0.423	0.562	1.571
3	17:19:22	15.710	0.358	28.650	112.000	0.038	1.052	0.491	0.532	0.509	1.780
X		14.200	0.350	26.420	107.700	0.035	1.089	0.528	0.454	0.538	1.625
S		1.598	0.011	1.940	3.719	0.009	0.038	0.167	0.069	0.027	0.136
%RSD		11.250	3.153	7.342	3.452	24.850	3.491	31.580	15.130	4.949	8.334
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	5.199	4.150	0.086	0.734	14.430	14.870	-1.195	-0.271	-0.074	63.430
2	17:18:55	6.614	4.282	0.383	0.409	15.300	14.430	1.185	0.390	-0.988	63.430
3	17:19:22	5.453	4.078	-0.497	0.283	13.640	13.600	-1.558	-0.433	0.503	63.700
X		5.755	4.170	-0.009	0.475	14.460	14.300	-0.523	-0.105	-0.186	63.520
S		0.755	0.103	0.447	0.233	0.834	0.646	1.490	0.436	0.752	0.156
%RSD		13.110	2.478	4718.000	48.930	5.771	4.520	285.100	416.500	403.500	0.245
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	78.3%	1.341	0.895	1.313	0.740	0.003	-0.000	-0.010	-0.007	79.3%
2	17:18:55	77.8%	1.288	1.043	1.248	3.014	-0.005	0.002	0.014	-0.001	78.5%
3	17:19:22	76.9%	1.146	1.325	1.185	1.190	-0.003	-0.000	-0.001	0.003	78.2%
X		77.7%	1.258	1.088	1.249	1.648	-0.002	0.000	0.001	-0.002	78.7%
S		0.7%	0.101	0.218	0.064	1.204	0.004	0.001	0.012	0.005	0.6%
%RSD		0.9	8.035	20.080	5.122	73.060	202.100	247.200	1147.000	271.300	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	0.232	0.329	0.037	0.025	162.800	163.400	84.9%	0.037	0.033	0.033
2	17:18:55	0.231	0.344	0.051	0.036	168.600	164.100	84.7%	0.028	0.027	0.025
3	17:19:22	0.239	0.328	0.054	0.053	166.200	166.600	82.8%	0.035	0.029	0.038
X		0.234	0.334	0.047	0.038	165.900	164.700	84.1%	0.033	0.030	0.032
S		0.005	0.009	0.009	0.014	2.913	1.697	1.1%	0.004	0.003	0.007
%RSD		2.034	2.773	18.890	37.150	1.756	1.030	1.4	13.520	10.160	20.630
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:18:27	0.040	0.025	86.0%							
2	17:18:55	0.038	0.026	86.5%							
3	17:19:22	0.021	0.024	84.4%							
X		0.033	0.025	85.6%							
S		0.011	0.001	1.1%							
%RSD		32.560	3.233	1.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	87.7%	-0.038	4.016	4.544	-35.020	665.300	19520.000	19590.000	23580.000	9.747
2	17:24:47	86.7%	-0.024	4.884	4.163	-36.460	681.600	19610.000	19450.000	23950.000	10.140
3	17:25:14	85.3%	-0.024	5.407	4.547	-33.630	680.900	19430.000	19590.000	23940.000	10.220
X		86.6%	-0.029	4.769	4.418	-35.040	675.900	19520.000	19550.000	23820.000	10.040
S		1.2%	0.008	0.703	0.221	1.415	9.236	90.340	82.790	210.800	0.254
%RSD		1.4	28.250	14.730	5.002	4.039	1.366	0.463	0.424	0.885	2.530
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	2914.000	66700.000	1157.000	26570.000	26740.000	76.7%	0.363	-1.009	0.955	29020.000
2	17:24:47	2911.000	67440.000	1158.000	26600.000	26570.000	76.4%	0.134	-2.030	0.991	30090.000
3	17:25:14	3055.000	67890.000	1171.000	26920.000	26880.000	76.2%	0.289	-1.769	1.008	31050.000
X		2960.000	67340.000	1162.000	26700.000	26730.000	76.4%	0.262	-1.603	0.985	30060.000
S		82.360	600.900	8.162	196.400	156.000	0.3%	0.117	0.531	0.027	1014.000
%RSD		2.782	0.892	0.702	0.736	0.584	0.3	44.650	33.100	2.740	3.373
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	23.680	0.515	40.190	56.490	0.031	0.268	-0.042	0.162	0.248	1.121
2	17:24:47	21.780	0.521	40.070	57.610	0.022	0.255	-0.524	0.131	0.215	1.327
3	17:25:14	21.960	0.495	40.010	53.300	0.055	0.284	-0.134	0.116	0.126	1.322
X		22.480	0.510	40.090	55.800	0.036	0.269	-0.233	0.136	0.196	1.256
S		1.048	0.014	0.091	2.236	0.017	0.015	0.256	0.024	0.064	0.117
%RSD		4.664	2.652	0.227	4.007	46.170	5.493	109.800	17.430	32.380	9.349
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	5.359	3.036	-0.360	0.149	9.260	9.468	-1.192	-0.265	-0.073	43.590
2	17:24:47	4.674	3.277	0.654	-0.067	8.717	9.386	-2.142	-0.417	-0.548	43.690
3	17:25:14	4.606	3.433	-1.873	-0.262	9.674	9.622	-0.624	-0.287	0.956	45.380
X		4.880	3.249	-0.526	-0.060	9.217	9.492	-1.319	-0.323	0.112	44.220
S		0.416	0.200	1.272	0.206	0.480	0.120	0.767	0.082	0.768	1.004
%RSD		8.531	6.153	241.700	341.900	5.208	1.263	58.110	25.490	687.800	2.271
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	78.4%	2.205	2.094	2.315	2.005	0.001	-0.002	0.002	0.009	78.6%
2	17:24:47	78.6%	2.295	1.933	2.274	0.495	-0.005	0.002	0.010	0.010	79.4%
3	17:25:14	76.9%	2.019	2.486	2.231	1.665	-0.005	-0.002	-0.005	0.009	78.6%
X		78.0%	2.173	2.171	2.274	1.389	-0.003	-0.001	0.002	0.010	78.9%
S		0.9%	0.141	0.284	0.042	0.792	0.003	0.002	0.007	0.001	0.5%
%RSD		1.2	6.478	13.090	1.846	57.050	103.600	257.500	358.200	7.452	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	0.201	0.174	0.038	0.076	115.000	111.900	84.5%	0.010	0.014	-0.010
2	17:24:47	0.206	0.239	0.081	0.056	115.400	114.400	84.1%	0.009	0.003	-0.006
3	17:25:14	0.249	0.294	0.059	0.074	114.800	113.900	84.3%	0.010	0.004	-0.010
X		0.219	0.236	0.059	0.069	115.100	113.400	84.3%	0.010	0.007	-0.009
S		0.027	0.060	0.021	0.011	0.269	1.349	0.2%	0.001	0.006	0.002
%RSD		12.160	25.490	35.820	16.460	0.234	1.189	0.2	7.118	90.270	22.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:24:20	-0.011	-0.010	85.8%							
2	17:24:47	-0.014	-0.015	85.0%							
3	17:25:14	-0.020	-0.014	85.7%							
X		-0.015	-0.013	85.5%							
S		0.005	0.002	0.4%							
%RSD		31.590	18.670	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	85.0%	-0.024	15.580	15.230	-48.140	5644.000	18240.000	18390.000	24150.000	25.240
2	17:30:37	86.0%	0.004	14.640	15.690	-43.610	5647.000	18140.000	18220.000	24360.000	25.510
3	17:31:04	84.9%	-0.052	15.490	15.190	-45.050	5730.000	18060.000	18190.000	24550.000	20.320
X		85.3%	-0.024	15.240	15.370	-45.600	5674.000	18140.000	18270.000	24350.000	23.690
S		0.6%	0.028	0.518	0.281	2.315	48.950	91.810	108.100	199.400	2.917
%RSD		0.7	115.200	3.398	1.830	5.077	0.863	0.506	0.592	0.819	12.310
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	4202.000	65400.000	2323.000	75930.000	74100.000	74.6%	0.978	-0.907	1.372	23980.000
2	17:30:37	4043.000	64300.000	2112.000	73830.000	73190.000	75.4%	0.812	-1.531	1.309	23670.000
3	17:31:04	4156.000	64510.000	2274.000	73660.000	74450.000	75.1%	0.894	-1.719	1.429	23910.000
X		4134.000	64740.000	2236.000	74470.000	73910.000	75.0%	0.895	-1.386	1.370	23850.000
S		81.850	584.800	110.400	1266.000	653.500	0.4%	0.083	0.425	0.060	159.900
%RSD		1.980	0.903	4.935	1.699	0.884	0.5	9.297	30.690	4.395	0.670
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	91.650	12.030	104.000	191.800	0.077	0.548	-0.319	0.109	0.206	1.187
2	17:30:37	90.260	12.130	102.800	190.900	0.057	0.621	-0.226	0.208	0.284	1.026
3	17:31:04	91.060	12.140	102.700	186.500	0.065	0.668	0.320	0.117	0.220	1.185
X		90.990	12.100	103.200	189.700	0.066	0.612	-0.075	0.145	0.237	1.133
S		0.698	0.062	0.751	2.829	0.010	0.061	0.345	0.055	0.041	0.092
%RSD		0.767	0.516	0.728	1.491	14.830	9.904	458.800	37.900	17.460	8.140
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	6.045	3.480	-0.207	0.421	15.170	15.180	0.391	0.401	-2.337	69.310
2	17:30:37	5.612	3.270	-0.878	0.347	16.830	15.800	1.299	0.278	0.014	69.040
3	17:31:04	5.205	3.706	-0.636	-0.381	16.420	15.400	-1.094	-0.133	-0.932	69.660
X		5.621	3.485	-0.574	0.129	16.140	15.460	0.199	0.182	-1.085	69.340
S		0.420	0.218	0.340	0.443	0.863	0.314	1.208	0.279	1.183	0.314
%RSD		7.470	6.267	59.290	342.900	5.345	2.030	608.500	153.600	109.000	0.453
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	76.4%	0.384	0.348	0.343	3.143	-0.007	-0.002	0.002	0.009	76.4%
2	17:30:37	76.9%	0.308	0.342	0.277	1.898	0.003	-0.004	-0.005	-0.000	77.4%
3	17:31:04	76.9%	0.306	0.399	0.280	2.702	-0.003	-0.002	-0.013	0.002	77.8%
X		76.7%	0.332	0.363	0.300	2.581	-0.003	-0.003	-0.005	0.004	77.2%
S		0.3%	0.044	0.031	0.037	0.631	0.005	0.001	0.008	0.005	0.7%
%RSD		0.4	13.370	8.603	12.380	24.460	195.300	41.520	144.500	129.800	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	0.138	0.227	0.039	0.004	171.100	165.500	84.7%	0.014	0.014	0.023
2	17:30:37	0.117	0.215	0.034	0.039	172.600	170.400	82.9%	0.011	0.010	0.026
3	17:31:04	0.117	0.242	0.027	0.017	169.000	169.600	82.8%	0.005	0.005	0.025
X		0.124	0.228	0.033	0.020	170.900	168.500	83.5%	0.010	0.009	0.025
S		0.012	0.014	0.006	0.018	1.805	2.632	1.0%	0.004	0.005	0.001
%RSD		9.960	5.918	18.530	89.780	1.056	1.562	1.2	43.370	48.570	5.625
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:30:10	0.012	0.017	84.3%							
2	17:30:37	0.026	0.031	84.4%							
3	17:31:04	0.019	0.025	83.8%							
X		0.019	0.024	84.2%							
S		0.007	0.007	0.3%							
%RSD		37.840	29.450	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	84.1%	95.740	65.590	68.430	-49.900	16534.000	118410.000	118990.000	1125380.000	179.600
2	17:36:29	84.4%	94.860	61.380	67.480	-42.000	16714.000	118810.000	119000.000	1125320.000	173.600
3	17:36:56	82.4%	95.900	66.000	69.270	-45.740	16817.000	118680.000	119130.000	1125240.000	176.000
X		83.6%	95.500	64.320	68.390	-45.880	16688.000	118630.000	119040.000	1125310.000	176.400
S		1.1%	0.564	2.559	0.893	3.955	1143.300	11200.700	1177.820	1171.090	3.009
%RSD		1.3	0.591	3.978	1.305	8.620	112.143	111.077	110.409	110.281	1.706
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	114847.000	1164450.000	112985.000	74220.000	1173680.000	73.9%	98.730	96.680	96.990	26640.000
2	17:36:29	114755.000	1165290.000	113047.000	75490.000	1175050.000	73.6%	99.480	95.800	98.150	26470.000
3	17:36:56	114931.000	1166000.000	112988.000	75860.000	1175680.000	72.5%	104.500	96.980	97.460	25360.000
X		114844.000	1165250.000	113006.000	75190.000	1174800.000	73.4%	100.900	96.490	97.530	26160.000
S		1187.960	11775.500	1134.760	857.600	111025.000	0.7%	3.153	0.614	0.583	693.500
%RSD		111.816	111.189	111.156	1.141	111.370	1.0	3.124	0.636	0.598	2.651
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	1209.000	108.400	11137.000	1228.000	93.740	93.360	91.630	94.560	93.170	94.830
2	17:36:29	1233.000	106.000	11122.000	1225.000	93.320	93.410	95.960	93.840	95.100	97.120
3	17:36:56	1220.000	107.500	11115.000	1221.000	93.220	93.120	93.390	93.290	93.120	97.020
X		1221.000	107.300	11124.000	1225.000	93.430	93.300	93.660	93.900	93.800	96.320
S		11.850	1.223	111.230	3.355	0.275	0.155	2.177	0.635	1.126	1.294
%RSD		0.971	1.140	110.999	0.274	0.295	0.166	2.325	0.676	1.201	1.343
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	103.800	99.190	97.920	94.840	16.400	16.840	449.600	99.270	1.096	166.200
2	17:36:29	102.500	96.830	103.000	97.340	16.110	15.370	430.500	95.800	-2.767	164.800
3	17:36:56	101.600	98.660	99.610	92.630	18.020	16.790	443.800	99.370	2.064	163.100
X		102.600	98.230	100.200	94.940	16.840	16.330	441.300	98.150	0.131	164.700
S		1.092	1.238	2.575	2.354	1.028	0.833	9.826	2.037	2.556	1.544
%RSD		1.064	1.260	2.570	2.480	6.102	5.102	2.227	2.075	1955.000	0.938
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	75.1%	100.500	98.660	99.620	95.980	97.860	94.430	95.060	94.980	76.5%
2	17:36:29	74.4%	100.400	99.490	99.930	102.400	98.670	95.910	97.180	97.650	75.8%
3	17:36:56	75.3%	100.700	99.600	98.980	94.300	99.080	95.420	96.700	97.700	75.4%
X		75.0%	100.600	99.250	99.510	97.550	98.540	95.250	96.310	96.780	75.9%
S		0.5%	0.125	0.513	0.482	4.265	0.618	0.757	1.113	1.556	0.6%
%RSD		0.6	0.124	0.517	0.484	4.372	0.627	0.795	1.155	1.608	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	96.360	96.290	96.950	95.970	267.500	261.200	84.0%	97.850	99.660	95.270
2	17:36:29	98.570	99.320	98.200	96.190	269.100	265.400	83.1%	99.380	102.900	96.800
3	17:36:56	100.400	98.650	99.070	95.920	271.500	269.800	83.5%	99.220	101.000	96.460
X		98.450	98.090	98.070	96.030	269.400	265.500	83.5%	98.810	101.200	96.170
S		2.027	1.592	1.068	0.145	2.022	4.306	0.5%	0.839	1.637	0.802
%RSD		2.059	1.623	1.089	0.151	0.750	1.622	0.5	0.849	1.618	0.834
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:36:02	94.550	94.010	83.9%							
2	17:36:29	96.760	95.910	83.9%							
3	17:36:56	96.180	95.070	84.2%							
X		95.830	95.000	84.0%							
S		1.143	0.956	0.2%							
%RSD		1.193	1.006	0.2							

CCV MW12620 4/22/2020 17:41:29 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	73.6%	315.600	280.800	299.300	8.345	±62440.000	±61300.000	±60970.000	±58900.000	302.800
2	17:42:24	73.8%	307.800	285.100	306.600	5.804	±63430.000	±62260.000	±62620.000	±60310.000	310.800
3	17:42:51	72.4%	312.800	297.300	305.800	10.090	±62660.000	±62440.000	±62500.000	±58670.000	304.200
X		73.3%	104.030%	95.910%	101.301%	8.080	±104.739%	±62000.000	±62030.000	±98.823%	101.983%
S		0.7%	n/a	n/a	n/a	2.156	±n/a	±609.000	±925.400	±n/a	n/a
%RSD		1.0	1.271	2.964	1.308	26.680	±0.825	±0.982	±1.492	±1.493	1.387
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	3037.000	669.200	±58050.000	61940.000	±61810.000	71.2%	301.800	305.400	300.500	2918.000
2	17:42:24	±2799.000	624.400	±58220.000	62600.000	±63670.000	71.0%	308.700	309.000	303.200	2786.000
3	17:42:51	±2825.000	594.900	±57930.000	61490.000	±61920.000	72.2%	307.400	300.400	293.800	4008.000
X		±2887.000	629.500	±96.774%	62010.000	±104.113%	71.4%	101.993%	101.640%	99.719%	3237.000
S		±130.700	37.430	±n/a	561.600	±n/a	0.6%	n/a	n/a	n/a	670.700
%RSD		±4.529	5.946	±0.250	0.906	±1.668	0.9	1.194	1.407	1.616	20.720
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	±62390.000	294.600	±62170.000	±59180.000	299.300	295.100	306.200	286.600	298.700	298.200
2	17:42:24	±63190.000	294.000	±63620.000	±60990.000	299.200	294.900	296.900	286.400	297.900	300.900
3	17:42:51	±62210.000	290.000	±62510.000	±59590.000	292.400	289.700	298.000	289.000	296.100	301.100
X		±62600.000	97.623%	±62770.000	±99.870%	98.997%	97.750%	300.300	287.300	99.186%	100.020%
S		±517.900	n/a	±759.100	±n/a	n/a	n/a	5.081	1.422	n/a	n/a
%RSD		±0.827	0.843	±1.209	±1.584	1.335	1.051	1.692	0.495	0.453	0.539
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	286.000	290.800	314.000	286.000	0.393	-0.581	1354.000	305.400	-1.647	295.900
2	17:42:24	291.800	289.100	311.900	293.600	1.122	-0.558	1345.000	305.400	0.315	296.000
3	17:42:51	300.500	288.700	310.400	288.600	0.208	-0.063	1344.000	300.100	1.984	298.500
X		292.800	289.600	104.037%	289.400	0.575	-0.401	1348.000	101.216%	0.218	98.939%
S		7.292	1.133	n/a	3.873	0.483	0.293	5.707	n/a	1.818	n/a
%RSD		2.491	0.391	0.577	1.338	84.080	73.020	0.423	1.000	835.500	0.491
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	70.8%	320.800	315.200	312.300	295.100	303.700	297.300	300.800	296.800	71.1%
2	17:42:24	72.3%	318.700	320.300	308.400	283.500	300.800	292.600	294.800	295.600	71.7%
3	17:42:51	70.1%	321.100	318.800	319.300	295.600	304.600	296.300	296.800	300.500	71.3%
X		71.1%	106.742%	106.034%	313.300	291.400	101.012%	295.400	297.400	99.201%	71.4%
S		1.1%	n/a	n/a	5.512	6.876	n/a	2.495	3.046	n/a	0.3%
%RSD		1.5	0.407	0.815	1.759	2.360	0.662	0.845	1.024	0.858	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	308.800	305.700	301.700	292.900	307.600	296.900	78.6%	310.400	314.700	296.800
2	17:42:24	306.000	306.200	304.800	296.500	306.800	300.900	77.9%	310.000	313.800	298.200
3	17:42:51	307.100	305.500	311.400	307.500	307.900	303.700	77.4%	308.900	318.600	299.800
X		102.438%	101.947%	306.000	99.651%	102.489%	100.178%	77.9%	309.800	105.241%	99.422%
S		n/a	n/a	4.932	n/a	n/a	n/a	0.6%	0.801	n/a	n/a
%RSD		0.457	0.116	1.612	2.539	0.185	1.140	0.8	0.259	0.807	0.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:41:56	292.900	292.700	76.2%							
2	17:42:24	297.800	296.900	76.5%							
3	17:42:51	297.100	298.200	75.9%							
X		98.643%	98.653%	76.2%							
S		n/a	n/a	0.3%							
%RSD		0.894	0.974	0.4							

CCB IM9936-01 4/22/2020 17:47:24 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	79.1%	-0.037	2.022	2.883	9.522	0.016	1.935	1.217	1.412	0.041
2	17:48:18	77.8%	-0.006	2.557	2.618	14.000	0.510	2.270	1.784	1.699	0.064
3	17:48:45	77.7%	0.010	2.843	1.926	16.460	0.386	1.887	2.274	1.438	0.036
X		78.2%	-0.011	2.474	2.476	13.330	0.304	2.030	1.758	1.516	0.047
S		0.8%	0.024	0.417	0.494	3.519	0.257	0.209	0.529	0.159	0.015
%RSD		1.0	212.700	16.850	19.970	26.400	84.450	10.280	30.100	10.480	31.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.534	386.400	10.590	0.654	3.969	74.5%	-0.046	-0.014	-0.022	-35.100
2	17:48:18	0.822	364.100	9.863	3.126	3.236	74.9%	-0.046	0.017	0.027	-47.580
3	17:48:45	0.501	356.200	9.429	4.423	3.828	74.4%	-0.019	0.013	0.010	-42.880
X		0.619	368.900	9.960	2.734	3.678	74.6%	-0.037	0.005	0.005	-41.860
S		0.177	15.670	0.585	1.914	0.389	0.3%	0.015	0.017	0.025	6.303
%RSD		28.550	4.248	5.871	70.010	10.580	0.4	41.170	308.500	503.300	15.060
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	2.202	0.005	-3.338	5.697	0.006	-0.009	0.030	0.011	-0.001	-0.108
2	17:48:18	2.318	0.026	-3.499	6.711	0.017	-0.031	-0.272	0.005	0.015	-0.098
3	17:48:45	2.410	0.038	-3.171	4.118	0.004	-0.023	-0.169	-0.025	0.028	-0.061
X		2.310	0.023	-3.336	5.509	0.009	-0.021	-0.137	-0.003	0.014	-0.089
S		0.104	0.017	0.164	1.306	0.007	0.011	0.153	0.019	0.014	0.025
%RSD		4.521	72.240	4.905	23.710	74.270	53.460	112.000	644.800	105.100	28.090
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	83Kr	88Sr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.048	0.098	-0.078	0.180	0.133	-0.313	-1.386	-0.553	1.682	0.001
2	17:48:18	-0.336	0.024	-0.065	0.630	-0.667	-0.913	-1.376	-0.341	0.215	0.009
3	17:48:45	0.198	0.251	0.138	0.388	-0.351	-0.839	2.670	0.764	-1.244	0.007
X		-0.030	0.124	-0.001	0.399	-0.295	-0.688	-0.031	-0.043	0.218	0.006
S		0.275	0.116	0.121	0.225	0.403	0.327	2.339	0.707	1.463	0.004
%RSD		921.100	93.260	8590.000	56.460	136.400	47.560	7634.000	1635.000	672.500	70.780
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	73.6%	0.162	0.187	0.277	0.086	0.005	0.010	0.003	0.020	76.3%
2	17:48:18	73.4%	0.207	0.158	0.167	-0.053	0.014	0.015	-0.005	0.025	73.5%
3	17:48:45	72.9%	0.167	0.284	0.193	0.222	0.010	0.036	0.020	0.000	73.6%
X		73.3%	0.179	0.210	0.212	0.085	0.009	0.020	0.006	0.015	74.5%
S		0.4%	0.025	0.066	0.057	0.137	0.004	0.014	0.013	0.013	1.6%
%RSD		0.5	13.700	31.360	27.040	161.600	46.990	67.710	207.800	86.350	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.131	0.200	0.361	0.342	-0.041	-0.017	79.6%	0.020	0.004	0.013
2	17:48:18	0.141	0.195	0.397	0.349	-0.029	-0.004	78.3%	0.009	0.017	0.042
3	17:48:45	0.157	0.218	0.291	0.250	-0.029	0.003	78.3%	0.010	0.010	0.024
X		0.143	0.204	0.350	0.314	-0.033	-0.006	78.7%	0.013	0.010	0.026
S		0.013	0.012	0.054	0.055	0.007	0.010	0.7%	0.006	0.006	0.015
%RSD		9.061	5.886	15.390	17.550	20.880	177.500	0.9	47.460	60.880	56.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:47:51	0.011	0.014	82.1%							
2	17:48:18	0.026	0.031	81.0%							
3	17:48:45	0.028	0.018	81.1%							
X		0.021	0.021	81.4%							
S		0.009	0.009	0.6%							
%RSD		43.440	42.430	0.7							

VD17091-005SD 4/22/2020 17:53:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	81.0%	98.030	63.600	67.350	-45.940	18540.000	18540.000	19110.000	25590.000	171.500
2	17:54:09	80.0%	99.760	69.510	68.870	-44.090	18980.000	18980.000	19410.000	25550.000	173.100
3	17:54:36	81.5%	97.220	66.430	69.840	-43.320	19460.000	19460.000	19620.000	26160.000	177.800
X		80.8%	98.340	66.510	68.690	-44.450	18990.000	18990.000	19380.000	25760.000	174.100
S		0.8%	1.298	2.952	1.254	1.350	189.800	462.200	253.000	342.200	3.281
%RSD		1.0	1.320	4.438	1.826	3.038	2.793	2.434	1.305	1.328	1.884
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	5061.000	62800.000	2998.000	75570.000	75440.000	74.1%	98.930	94.480	95.830	14610.000
2	17:54:09	5143.000	64470.000	3097.000	75650.000	76360.000	73.0%	97.880	95.480	98.310	16470.000
3	17:54:36	4981.000	65930.000	3116.000	77650.000	77640.000	71.6%	102.600	99.060	98.250	17810.000
X		5062.000	64400.000	3070.000	76290.000	76480.000	72.9%	99.810	96.340	97.460	16300.000
S		81.140	1566.000	63.540	1178.000	1103.000	1.3%	2.489	2.406	1.420	1603.000
%RSD		1.603	2.431	2.070	1.544	1.442	1.7	2.494	2.498	1.457	9.839
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	1204.000	106.300	1094.000	1218.000	92.340	92.480	94.430	94.760	96.560	99.410
2	17:54:09	1218.000	107.000	1133.000	1229.000	94.190	93.450	94.380	94.260	97.290	99.250
3	17:54:36	1273.000	112.200	1154.000	1275.000	96.010	95.200	98.700	94.400	96.480	97.570
X		1231.000	108.500	1127.000	1241.000	94.180	93.710	95.830	94.470	96.780	98.740
S		36.540	3.240	30.290	30.210	1.832	1.377	2.481	0.254	0.446	1.022
%RSD		2.967	2.986	2.689	2.434	1.946	1.469	2.589	0.269	0.461	1.035
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	98.690	99.430	102.100	98.210	12.570	10.780	427.200	96.470	2.198	165.400
2	17:54:09	102.900	101.000	101.700	97.190	15.580	13.660	453.100	102.100	-2.247	167.600
3	17:54:36	101.500	100.800	105.000	97.030	14.040	13.650	455.800	101.600	-1.745	167.100
X		101.000	100.400	103.000	97.480	14.060	12.700	445.400	100.000	-0.598	166.700
S		2.134	0.858	1.798	0.639	1.509	1.663	15.790	3.112	2.434	1.120
%RSD		2.112	0.855	1.746	0.655	10.730	13.090	3.544	3.110	406.900	0.672
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	73.4%	102.400	100.800	98.340	104.100	97.980	97.030	96.180	97.590	73.4%
2	17:54:09	73.4%	102.500	102.400	100.400	93.490	98.760	96.860	99.240	96.310	73.8%
3	17:54:36	73.5%	102.900	100.400	101.000	102.100	99.890	98.440	96.840	96.820	74.4%
X		73.4%	102.600	101.200	99.910	99.900	98.880	97.440	97.420	96.910	73.9%
S		0.0%	0.239	1.009	1.383	5.652	0.959	0.867	1.612	0.645	0.5%
%RSD		0.1	0.233	0.997	1.384	5.657	0.970	0.890	1.655	0.665	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	99.790	99.480	100.300	99.920	275.200	269.400	79.2%	99.300	105.200	103.000
2	17:54:09	99.120	100.400	100.500	98.060	278.300	274.300	81.2%	99.660	103.500	98.000
3	17:54:36	99.560	101.400	100.200	100.500	275.900	272.500	80.6%	100.900	105.000	100.300
X		99.490	100.400	100.300	99.500	276.400	272.100	80.4%	99.940	104.600	100.400
S		0.344	0.955	0.146	1.284	1.616	2.485	1.0%	0.823	0.958	2.511
%RSD		0.346	0.950	0.145	1.291	0.584	0.914	1.3	0.823	0.916	2.500
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:53:42	100.600	100.300	82.5%							
2	17:54:09	98.350	96.910	82.1%							
3	17:54:36	98.980	98.450	82.1%							
X		99.310	98.540	82.2%							
S		1.160	1.677	0.2%							
%RSD		1.168	1.702	0.2							

VD17091-005L(5)

4/22/2020 17:59:06

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	82.7%	0.006	6.386	5.822	-19.410	1182.000	4478.000	4753.000	5091.000	7.650
2	17:59:59	82.7%	-0.038	6.263	5.797	-20.090	1184.000	4575.000	4845.000	5037.000	6.579
3	18:00:26	81.9%	-0.008	6.438	6.219	-15.610	1232.000	4645.000	4870.000	5177.000	6.651
X		82.5%	-0.013	6.362	5.946	-18.370	1199.000	4566.000	4822.000	5102.000	6.960
S		0.5%	0.022	0.090	0.237	2.414	28.240	83.700	61.740	70.330	0.599
%RSD		0.6	165.500	1.416	3.984	13.140	2.355	1.833	1.280	1.379	8.602
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	922.500	13900.000	483.900	14950.000	14640.000	76.1%	0.212	-0.220	0.310	5719.000
2	17:59:59	907.800	14200.000	489.100	14720.000	14590.000	76.9%	0.184	-0.756	0.257	5859.000
3	18:00:26	940.200	14600.000	508.600	15400.000	14860.000	75.1%	0.189	-0.184	0.300	5865.000
X		923.500	14230.000	493.900	15020.000	14700.000	76.0%	0.195	-0.387	0.289	5814.000
S		16.200	351.600	13.050	342.700	143.700	0.9%	0.015	0.320	0.028	82.970
%RSD		1.755	2.470	2.642	2.281	0.978	1.2	7.659	82.860	9.793	1.427
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	16.270	2.417	33.430	41.210	-0.001	0.177	0.257	0.044	0.034	0.346
2	17:59:59	17.190	2.419	31.210	40.910	0.015	0.118	-0.188	0.051	0.065	0.341
3	18:00:26	18.050	2.469	32.500	41.210	0.023	0.137	-0.125	0.024	0.067	0.404
X		17.170	2.435	32.380	41.110	0.012	0.144	-0.019	0.040	0.055	0.364
S		0.892	0.030	1.113	0.170	0.012	0.030	0.240	0.014	0.019	0.035
%RSD		5.194	1.213	3.436	0.414	96.790	21.080	1297.000	34.410	34.130	9.578
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	1.858	0.756	0.128	-0.291	3.116	2.943	1.437	0.455	-1.344	13.680
2	17:59:59	2.004	0.854	-0.030	0.044	2.390	2.035	0.352	-0.068	0.975	13.550
3	18:00:26	0.982	0.811	-0.042	0.169	2.779	2.382	-1.462	-0.685	2.553	14.340
X		1.615	0.807	0.018	-0.026	2.762	2.453	0.109	-0.099	0.728	13.850
S		0.552	0.049	0.095	0.238	0.363	0.459	1.465	0.570	1.960	0.423
%RSD		34.220	6.133	514.500	916.200	13.160	18.690	1341.000	573.700	269.400	3.055
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	75.2%	0.086	0.118	0.020	-0.302	0.003	-0.000	-0.004	0.012	78.5%
2	17:59:59	76.5%	0.187	0.190	0.159	0.205	0.005	-0.002	-0.013	0.002	77.9%
3	18:00:26	74.9%	0.103	0.124	0.037	0.403	0.003	-0.004	0.004	-0.002	76.9%
X		75.5%	0.125	0.144	0.072	0.102	0.003	-0.002	-0.005	0.004	77.8%
S		0.9%	0.054	0.040	0.076	0.363	0.001	0.002	0.008	0.007	0.8%
%RSD		1.1	43.120	27.540	105.900	356.400	33.540	91.540	178.000	189.800	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	0.059	0.132	0.009	-0.014	31.310	32.870	80.5%	0.031	0.033	0.002
2	17:59:59	0.067	0.145	0.021	0.005	32.710	33.940	81.3%	0.035	0.041	0.001
3	18:00:26	0.095	0.170	0.015	0.010	35.550	33.910	81.4%	0.036	0.028	-0.007
X		0.074	0.149	0.015	0.001	33.190	33.570	81.1%	0.034	0.034	-0.002
S		0.019	0.019	0.006	0.013	2.160	0.610	0.5%	0.003	0.006	0.005
%RSD		25.600	12.900	36.810	2229.000	6.507	1.817	0.6	8.281	18.660	333.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:59:32	-0.010	-0.004	84.7%							
2	17:59:59	0.008	-0.002	84.3%							
3	18:00:26	-0.006	-0.010	85.6%							
X		-0.003	-0.005	84.9%							
S		0.009	0.004	0.6%							
%RSD		360.500	85.050	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	83.3%	94.560	67.350	69.490	-45.490	18320.000	18320.000	18210.000	23860.000	121.900
2	18:05:49	83.6%	97.930	74.210	75.520	-44.280	16675.000	19020.000	19020.000	25260.000	125.400
3	18:06:16	82.8%	100.600	70.980	74.650	-45.150	16643.000	18770.000	19150.000	25440.000	127.100
X		83.2%	97.690	70.850	73.220	-44.970	16601.000	18700.000	18790.000	24850.000	124.800
S		0.4%	3.026	3.436	3.257	0.621	101.300	356.000	509.300	864.600	2.640
%RSD		0.5	3.098	4.849	4.449	1.381	1.535	1.904	2.710	3.479	2.116
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	4731.000	62730.000	2928.000	71750.000	71670.000	74.7%	98.640	96.080	97.020	19730.000
2	18:05:49	4720.000	64540.000	3061.000	73410.000	72790.000	72.9%	103.600	96.810	97.740	22040.000
3	18:06:16	4793.000	65390.000	3073.000	74940.000	74010.000	72.5%	100.400	99.020	100.900	20280.000
X		4748.000	64220.000	3021.000	73370.000	72820.000	73.4%	100.900	97.310	98.540	20680.000
S		39.350	1360.000	80.720	1597.000	1167.000	1.2%	2.502	1.529	2.044	1206.000
%RSD		0.829	2.118	2.672	2.177	1.603	1.6	2.481	1.571	2.074	5.833
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	1203.000	107.500	1109.000	1216.000	93.890	94.200	97.310	94.980	97.860	99.190
2	18:05:49	1220.000	108.300	1120.000	1220.000	97.110	95.720	96.170	97.200	98.880	99.120
3	18:06:16	1255.000	109.600	1122.000	1230.000	96.540	94.550	98.100	95.580	95.570	98.370
X		1226.000	108.500	1117.000	1222.000	95.850	94.820	97.190	95.920	97.440	98.890
S		26.770	1.049	7.339	7.008	1.719	0.795	0.969	1.145	1.693	0.454
%RSD		2.184	0.967	0.657	0.574	1.794	0.839	0.997	1.194	1.738	0.459
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	103.000	99.570	104.600	93.700	14.910	16.190	449.400	100.300	0.651	164.000
2	18:05:49	102.700	99.700	106.300	94.760	14.680	14.010	436.700	99.330	-0.855	162.300
3	18:06:16	103.900	99.310	102.900	92.280	15.660	13.590	425.600	95.280	0.615	161.900
X		103.200	99.520	104.600	93.580	15.080	14.600	437.200	98.300	0.137	162.800
S		0.645	0.196	1.696	1.240	0.511	1.394	11.890	2.651	0.859	1.090
%RSD		0.625	0.197	1.622	1.325	3.390	9.553	2.719	2.697	627.300	0.670
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	74.3%	102.700	101.800	100.500	103.500	100.500	98.260	97.470	98.280	75.3%
2	18:05:49	75.5%	102.800	102.200	100.800	103.200	100.200	98.580	100.700	98.420	74.7%
3	18:06:16	75.3%	104.000	102.600	101.900	98.410	99.130	97.720	98.500	96.730	75.5%
X		75.0%	103.200	102.200	101.100	101.700	99.960	98.190	98.890	97.810	75.1%
S		0.6%	0.733	0.413	0.740	2.868	0.729	0.433	1.651	0.937	0.4%
%RSD		0.8	0.710	0.405	0.732	2.820	0.730	0.441	1.670	0.958	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	101.500	100.300	89.670	89.200	269.000	259.900	82.1%	97.820	105.300	100.700
2	18:05:49	99.670	100.600	90.880	90.060	269.600	265.700	81.9%	101.700	105.200	100.000
3	18:06:16	99.870	98.980	92.280	89.680	265.400	262.400	83.1%	102.200	103.400	97.180
X		100.300	99.940	90.940	89.650	268.000	262.700	82.4%	100.600	104.600	99.290
S		0.991	0.851	1.308	0.429	2.316	2.896	0.6%	2.407	1.091	1.856
%RSD		0.988	0.852	1.438	0.478	0.864	1.102	0.8	2.393	1.042	1.869
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:05:22	98.820	98.850	84.5%							
2	18:05:49	99.090	98.580	83.0%							
3	18:06:16	98.410	96.760	82.3%							
X		98.770	98.060	83.3%							
S		0.342	1.139	1.1%							
%RSD		0.346	1.162	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	81.9%	-0.008	5.226	5.304	-27.570	72570.000	33380.000	34850.000	56570.000	190.800
2	18:11:38	81.0%	0.051	4.937	5.510	-30.930	73630.000	33520.000	34830.000	55840.000	188.700
3	18:12:05	80.8%	-0.008	4.062	4.914	-35.070	74500.000	33490.000	34760.000	56430.000	195.200
X		81.3%	0.012	4.742	5.243	-31.190	73570.000	33470.000	34810.000	56280.000	191.600
S		0.6%	0.034	0.606	0.303	3.758	971.300	71.640	48.010	391.900	3.299
%RSD		0.7	290.500	12.780	5.772	12.050	1.320	0.214	0.138	0.696	1.722
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	TM 10150.000	57200.000	2020.000	69290.000	69540.000	71.6%	5.397	0.607	0.977	15490.000
2	18:11:38	TM 10430.000	58450.000	2034.000	69040.000	68420.000	71.2%	5.240	-0.178	0.987	15990.000
3	18:12:05	TM 10400.000	58170.000	2045.000	70270.000	69780.000	71.1%	4.917	0.939	1.029	15120.000
X		TM 10330.000	57940.000	2033.000	69530.000	69240.000	71.3%	5.185	0.456	0.998	15530.000
S		TM 154.700	657.800	12.310	649.500	727.800	0.3%	0.245	0.573	0.028	435.100
%RSD		TM 1.498	1.135	0.606	0.934	1.051	0.4	4.719	125.700	2.801	2.801
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	4178.000	TM 2823.000	3895.000	4039.000	6.968	3.472	2.750	0.592	0.592	4.117
2	18:11:38	4173.000	TM 2912.000	3980.000	4072.000	6.885	3.426	3.501	0.736	0.671	4.077
3	18:12:05	4197.000	TM 2894.000	3949.000	4115.000	7.281	3.347	3.768	0.693	0.794	3.859
X		4182.000	TM 2876.000	3941.000	4075.000	7.045	3.415	3.340	0.673	0.686	4.018
S		12.370	TM 46.920	42.820	38.370	0.209	0.063	0.528	0.074	0.102	0.139
%RSD		0.296	TM 1.631	1.087	0.942	2.962	1.856	15.810	11.000	14.800	3.457
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	11.830	10.090	13.840	-0.015	1763.000	1781.000	8.131	1.595	0.220	M 643.800
2	18:11:38	11.310	8.866	15.180	-0.288	1777.000	1768.000	5.609	0.574	3.662	M 656.400
3	18:12:05	11.900	9.772	14.100	1.171	1825.000	1810.000	4.669	0.340	3.706	M 657.900
X		11.680	9.576	14.370	0.289	1788.000	1786.000	6.137	0.837	2.529	M 652.700
S		0.320	0.635	0.709	0.775	32.640	21.490	1.790	0.667	2.000	M 7.729
%RSD		2.742	6.637	4.934	267.900	1.825	1.203	29.180	79.790	79.080	M 1.184
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	73.8%	0.645	0.701	0.704	15.390	0.009	0.004	-0.007	0.015	73.8%
2	18:11:38	74.1%	0.844	0.423	0.601	17.570	0.001	0.004	0.043	0.054	73.2%
3	18:12:05	73.6%	0.735	0.748	0.626	10.230	0.007	0.009	0.035	0.022	73.4%
X		73.8%	0.741	0.624	0.644	14.400	0.006	0.006	0.024	0.030	73.5%
S		0.2%	0.100	0.175	0.054	3.766	0.004	0.002	0.027	0.021	0.3%
%RSD		0.3	13.440	28.090	8.346	26.160	71.110	42.800	112.200	69.110	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	0.279	0.443	0.496	0.452	421.000	419.600	80.5%	0.023	0.008	0.144
2	18:11:38	0.278	0.397	0.383	0.459	434.700	423.200	81.5%	0.015	0.012	0.147
3	18:12:05	0.265	0.422	0.433	0.362	431.200	420.000	81.9%	0.013	0.010	0.136
X		0.274	0.421	0.437	0.424	428.900	420.900	81.3%	0.017	0.010	0.142
S		0.008	0.023	0.057	0.054	7.133	1.986	0.7%	0.005	0.002	0.006
%RSD		2.890	5.468	12.940	12.780	1.663	0.472	0.9	30.130	17.180	4.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:11:11	0.129	0.130	79.0%							
2	18:11:38	0.139	0.126	80.3%							
3	18:12:05	0.147	0.123	80.4%							
X		0.138	0.126	79.9%							
S		0.009	0.004	0.8%							
%RSD		6.742	2.794	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	82.9%	-0.009	0.937	1.105	-66.960	TM 144200.000	TM 48430.000	TM 50720.000	TM 86250.000	7.965
2	18:17:29	82.9%	-0.038	0.916	1.239	-66.840	TM 147300.000	TM 48640.000	TM 51070.000	TM 87110.000	8.537
3	18:17:56	84.7%	-0.010	0.736	1.345	-66.080	TM 148100.000	TM 49300.000	TM 51390.000	TM 88760.000	9.126
X		83.5%	-0.019	0.863	1.230	-66.630	TM 146500.000	TM 48790.000	TM 51060.000	TM 87370.000	8.543
S		1.0%	0.016	0.111	0.121	0.474	TM 2021.000	TM 452.400	TM 335.400	TM 1279.000	0.581
%RSD		1.2	87.680	12.820	9.795	0.712	TM 1.379	TM 0.927	TM 0.657	TM 1.464	6.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	TM 14000.000	TM 58950.000	1491.000	TM 105000.000	TM 103300.000	76.8%	1.384	4.547	0.824	17180.000
2	18:17:29	TM 14230.000	TM 60190.000	1522.000	TM 105600.000	TM 107100.000	75.9%	1.272	5.536	0.830	17760.000
3	18:17:56	TM 13700.000	TM 60490.000	1511.000	TM 105800.000	TM 107000.000	75.1%	1.702	4.821	0.882	18920.000
X		TM 13980.000	TM 59880.000	1508.000	TM 105500.000	TM 105800.000	75.9%	1.453	4.968	0.846	17950.000
S		TM 261.700	TM 818.500	15.700	TM 447.900	TM 2137.000	0.8%	0.224	0.511	0.032	885.600
%RSD		TM 1.873	TM 1.367	1.041	TM 0.425	TM 2.020	1.1	15.390	10.280	3.784	4.933
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	271.400	TM 556.400	284.700	406.800	1.528	2.397	1.888	1.067	1.141	1.850
2	18:17:29	269.100	TM 544.800	288.500	390.500	1.537	2.260	0.943	1.074	0.894	1.900
3	18:17:56	267.200	TM 560.300	287.400	400.100	1.564	2.218	1.207	1.109	1.042	1.634
X		269.200	TM 553.800	286.900	399.100	1.543	2.292	1.346	1.083	1.026	1.795
S		2.124	TM 8.064	1.930	8.213	0.019	0.093	0.488	0.022	0.125	0.142
%RSD		0.789	TM 1.456	0.673	2.058	1.204	4.075	36.230	2.051	12.140	7.894
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	8.085	6.621	0.519	0.428	2233.000	2211.000	10.610	2.062	0.560	TM 963.000
2	18:17:29	9.185	5.961	-0.321	-0.080	2195.000	2204.000	7.547	1.157	2.395	TM 969.700
3	18:17:56	8.559	5.862	0.484	0.623	2228.000	2259.000	12.610	2.420	1.054	TM 976.300
X		8.610	6.148	0.228	0.324	2219.000	2225.000	10.260	1.880	1.336	TM 969.700
S		0.551	0.412	0.475	0.363	20.750	30.140	2.551	0.651	0.950	TM 6.640
%RSD		6.406	6.710	208.700	112.100	0.935	1.355	24.870	34.650	71.100	TM 0.685
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	75.5%	1.068	1.082	1.016	19.580	0.003	-0.000	0.088	0.141	76.0%
2	18:17:29	76.7%	0.935	1.203	1.008	23.540	0.001	0.012	0.137	0.169	75.5%
3	18:17:56	75.5%	1.064	0.897	1.081	18.760	-0.003	0.002	0.183	0.135	76.2%
X		75.9%	1.022	1.061	1.035	20.630	0.000	0.005	0.136	0.148	75.9%
S		0.7%	0.076	0.155	0.040	2.552	0.003	0.007	0.047	0.018	0.4%
%RSD		0.9	7.400	14.570	3.909	12.370	1265.000	140.000	35.030	12.420	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	0.358	0.423	0.288	0.241	330.000	320.900	84.2%	0.027	0.033	0.051
2	18:17:29	0.237	0.388	0.300	0.343	331.200	326.300	82.9%	0.033	0.026	0.052
3	18:17:56	0.254	0.361	0.291	0.272	328.800	326.100	84.7%	0.033	0.028	0.048
X		0.283	0.391	0.293	0.285	330.000	324.400	83.9%	0.031	0.029	0.050
S		0.066	0.031	0.006	0.052	1.170	3.036	0.9%	0.004	0.004	0.002
%RSD		23.230	7.915	2.068	18.300	0.354	0.936	1.1	11.760	12.470	3.377
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:17:02	0.039	0.031	79.5%							
2	18:17:29	0.057	0.040	81.4%							
3	18:17:56	0.034	0.034	82.3%							
X		0.043	0.035	81.1%							
S		0.012	0.005	1.4%							
%RSD		27.620	13.600	1.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	84.3%	-0.024	2.946	3.686	-44.420	TM 150200.000	TM 45710.000	TM 46770.000	TM 74450.000	43.420
2	18:23:20	86.0%	0.017	3.928	3.515	-46.430	TM 147500.000	TM 44850.000	TM 45670.000	TM 72600.000	41.350
3	18:23:47	84.6%	-0.038	3.226	3.335	-48.890	TM 149400.000	TM 45520.000	TM 46790.000	TM 74540.000	41.790
X		85.0%	-0.015	3.367	3.512	-46.580	TM 149000.000	TM 45360.000	TM 46410.000	TM 73860.000	42.190
S		0.9%	0.029	0.506	0.175	2.243	TM 1413.000	TM 449.000	TM 640.100	TM 1094.000	1.094
%RSD		1.1	195.300	15.040	4.998	4.815	TM 0.948	TM 0.990	TM 1.379	TM 1.480	2.593
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	TM 9461.000	TM 67060.000	1472.000	TM 199000.000	TM 194600.000	74.3%	2.117	1.603	0.815	15450.000
2	18:23:20	TM 9406.000	TM 66940.000	1435.000	TM 195000.000	TM 194600.000	76.8%	1.689	0.588	0.794	15930.000
3	18:23:47	TM 9395.000	TM 67440.000	TM 1399.000	TM 196200.000	TM 195600.000	75.6%	1.742	1.225	0.809	15890.000
X		TM 9421.000	TM 67150.000	TM 1435.000	TM 196800.000	TM 195000.000	75.6%	1.849	1.139	0.806	15760.000
S		TM 35.640	TM 262.800	TM 36.430	TM 2076.000	TM 578.800	1.3%	0.234	0.513	0.011	266.700
%RSD		TM 0.378	TM 0.391	TM 2.539	TM 1.055	TM 0.297	1.7	12.630	45.050	1.361	1.692
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	39.270	TM 1036.000	53.200	327.700	0.465	11.610	10.550	0.716	0.787	2.860
2	18:23:20	40.890	TM 1015.000	52.420	319.800	0.521	11.010	10.950	0.796	0.827	2.598
3	18:23:47	39.520	TM 1042.000	54.210	316.500	0.508	11.780	8.688	0.819	0.826	2.851
X		39.890	TM 1031.000	53.280	321.400	0.498	11.470	10.060	0.777	0.813	2.770
S		0.874	TM 14.230	0.897	5.759	0.029	0.401	1.208	0.054	0.023	0.149
%RSD		2.190	TM 1.380	1.684	1.792	5.863	3.500	12.010	6.965	2.822	5.368
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	19.520	15.180	-0.342	-0.038	2746.000	2730.000	7.026	1.071	1.896	TM 946.900
2	18:23:20	19.210	14.080	1.973	-0.156	2712.000	2757.000	1.717	-0.299	2.802	TM 971.700
3	18:23:47	20.100	15.140	1.708	0.161	2801.000	2850.000	6.198	1.105	0.058	TM 987.900
X		19.610	14.800	1.113	-0.011	2753.000	2779.000	4.980	0.626	1.585	TM 968.800
S		0.452	0.625	1.267	0.160	44.520	62.790	2.857	0.801	1.398	TM 20.630
%RSD		2.304	4.222	113.800	1447.000	1.617	2.260	57.360	128.000	88.200	TM 2.129
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	77.3%	0.629	0.649	0.621	21.250	0.011	0.008	0.440	0.458	74.7%
2	18:23:20	77.3%	0.595	0.664	0.600	27.290	0.003	0.004	0.487	0.457	76.2%
3	18:23:47	76.1%	0.732	0.566	0.636	26.900	0.003	0.008	0.383	0.403	74.7%
X		76.9%	0.652	0.626	0.619	25.150	0.006	0.007	0.437	0.439	75.2%
S		0.7%	0.072	0.053	0.019	3.376	0.005	0.003	0.052	0.031	0.9%
%RSD		0.9	11.000	8.394	2.995	13.420	83.260	36.200	11.920	7.119	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	0.455	0.447	0.154	0.184	TM 918.400	TM 906.500	83.7%	0.009	0.004	0.071
2	18:23:20	0.434	0.374	0.218	0.117	TM 916.500	TM 889.400	84.4%	0.001	0.004	0.044
3	18:23:47	0.420	0.456	0.179	0.140	TM 948.000	TM 910.400	85.9%	0.004	0.001	0.059
X		0.436	0.425	0.184	0.147	TM 927.600	TM 902.100	84.7%	0.005	0.003	0.058
S		0.018	0.045	0.032	0.034	TM 17.670	TM 11.170	1.1%	0.004	0.002	0.014
%RSD		4.093	10.500	17.690	23.180	TM 1.905	TM 1.238	1.3	80.670	58.890	23.910
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:22:53	0.028	0.053	81.3%							
2	18:23:20	0.040	0.045	81.1%							
3	18:23:47	0.035	0.052	82.2%							
X		0.034	0.050	81.6%							
S		0.006	0.004	0.6%							
%RSD		18.530	8.570	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	83.1%	99.540	33.600	36.370	-48.140	TM 150000.000	T 45650.000	T 47030.000	T 74950.000	176.800
2	18:29:14	81.8%	98.180	32.200	37.370	-45.530	TM 149200.000	T 46080.000	T 47480.000	T 73420.000	171.700
3	18:29:41	80.9%	98.930	33.610	37.170	-49.800	TM 151100.000	T 47100.000	T 48470.000	T 76130.000	176.500
X		82.0%	98.880	33.140	36.970	-47.820	TM 150100.000	T 46280.000	T 47660.000	T 74830.000	175.000
S		1.1%	0.678	0.816	0.529	2.153	TM 975.400	T 743.800	T 736.300	T 1363.000	2.866
%RSD		1.3	0.686	2.462	1.430	4.501	TM 0.650	T 1.607	T 1.545	T 1.821	1.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	TM 10070.000	T 67120.000	T 2202.000	M 199700.000	TM 195900.000	73.5%	101.500	100.500	96.420	18320.000
2	18:29:14	TM 10260.000	T 66530.000	T 2197.000	M 195300.000	TM 194700.000	74.2%	100.800	99.980	95.780	18070.000
3	18:29:41	TM 10300.000	T 68500.000	T 2231.000	M 197900.000	TM 197600.000	72.7%	100.900	101.500	96.990	18800.000
X		TM 10210.000	T 67380.000	T 2210.000	M 197600.000	TM 196100.000	73.5%	101.100	100.700	96.400	18400.000
S		TM 125.200	T 1012.000	T 18.530	M 2237.000	TM 1492.000	0.7%	0.375	0.778	0.606	369.500
%RSD		TM 1.226	T 1.502	T 0.839	M 1.132	TM 0.761	1.0	0.371	0.772	0.629	2.008
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	1144.000	TM 1126.000	T 1083.000	1364.000	94.250	103.700	103.600	92.500	94.130	95.400
2	18:29:14	1145.000	TM 1127.000	T 1070.000	1326.000	92.870	103.400	104.000	90.570	97.170	96.810
3	18:29:41	1143.000	TM 1129.000	T 1078.000	1367.000	93.610	103.100	103.700	92.720	95.130	96.400
X		1144.000	TM 1127.000	T 1077.000	1352.000	93.580	103.400	103.800	91.930	95.480	96.200
S		1.145	TM 1.422	T 6.568	23.120	0.690	0.310	0.214	1.184	1.546	0.727
%RSD		0.100	TM 0.126	T 0.610	1.710	0.737	0.299	0.207	1.288	1.620	0.756
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	112.700	103.700	103.200	90.480	2721.000	2735.000	439.800	99.670	0.071	TM 1053.000
2	18:29:14	118.500	107.100	104.100	91.750	2797.000	2799.000	444.000	100.600	-0.335	TM 1085.000
3	18:29:41	114.700	106.300	103.300	92.220	2816.000	2833.000	427.200	95.400	1.136	TM 1062.000
X		115.300	105.700	103.500	91.480	2778.000	2789.000	437.000	98.540	0.290	TM 1067.000
S		2.915	1.795	0.492	0.897	50.360	50.150	8.783	2.757	0.760	TM 16.550
%RSD		2.529	1.699	0.476	0.981	1.813	1.798	2.010	2.798	261.600	TM 1.552
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	76.2%	102.100	102.900	99.490	112.800	95.870	95.040	96.510	96.130	75.3%
2	18:29:14	74.6%	103.800	105.200	103.500	123.800	98.450	95.930	98.270	95.620	74.2%
3	18:29:41	74.7%	106.100	104.200	103.200	122.800	97.510	94.620	98.920	97.490	74.9%
X		75.1%	104.000	104.100	102.000	119.800	97.280	95.200	97.900	96.410	74.8%
S		0.9%	1.997	1.173	2.213	6.062	1.307	0.666	1.248	0.967	0.6%
%RSD		1.2	1.921	1.127	2.169	5.060	1.343	0.699	1.275	1.003	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	99.110	97.830	99.370	97.480	M 1015.000	M 990.400	82.8%	101.100	99.900	95.190
2	18:29:14	101.600	102.300	102.200	97.460	M 1034.000	M 995.500	82.5%	101.300	101.600	96.840
3	18:29:41	99.590	101.500	102.500	98.590	M 1011.000	M 994.900	82.2%	103.100	103.600	98.050
X		100.100	100.600	101.400	97.840	M 1020.000	M 993.600	82.5%	101.800	101.700	96.690
S		1.335	2.394	1.728	0.644	M 12.490	M 2.775	0.3%	1.117	1.869	1.436
%RSD		1.334	2.380	1.705	0.658	M 1.225	M 0.279	0.4	1.097	1.838	1.485
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:28:47	97.190	95.260	79.5%							
2	18:29:14	96.760	95.780	80.8%							
3	18:29:41	96.370	96.370	79.7%							
X		96.770	95.810	80.0%							
S		0.407	0.555	0.7%							
%RSD		0.421	0.579	0.9							

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User Pre-dilution: 1.000

User Predefinition: 1.000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	83.6%	97.400	30.460	35.660	-46.350	<u>TM 146200.000</u>	<u>T 45160.000</u>	<u>T 47060.000</u>	<u>T 73310.000</u>	168.900
2	18:35:04	84.0%	97.310	32.840	35.220	-50.780	<u>TM 149900.000</u>	<u>T 45220.000</u>	<u>T 47240.000</u>	<u>T 74550.000</u>	172.400
3	18:35:31	82.9%	97.810	33.470	37.560	-50.220	<u>TM 150500.000</u>	<u>T 45760.000</u>	<u>T 46870.000</u>	<u>T 74000.000</u>	172.400
X		83.5%	97.500	32.260	36.150	-49.110	<u>TM 148900.000</u>	<u>T 45380.000</u>	<u>T 47060.000</u>	<u>T 73950.000</u>	171.300
S		0.6%	0.267	1.588	1.247	2.412	<u>TM 2303.000</u>	<u>T 333.500</u>	<u>T 184.700</u>	<u>T 619.200</u>	2.056
%RSD		0.7	0.273	4.924	3.449	4.911	<u>TM 1.547</u>	<u>T 0.735</u>	<u>T 0.393</u>	<u>T 0.837</u>	1.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	<u>T 9834.000</u>	<u>T 67130.000</u>	2304.000	<u>M 192800.000</u>	<u>TM 188600.000</u>	74.5%	97.590	97.610	93.350	17970.000
2	18:35:04	<u>T 9565.000</u>	<u>T 67920.000</u>	2374.000	<u>M 198100.000</u>	<u>TM 193700.000</u>	72.9%	100.200	98.730	95.660	18410.000
3	18:35:31	<u>T 9844.000</u>	<u>T 66980.000</u>	<u>T 2158.000</u>	<u>M 193700.000</u>	<u>TM 192200.000</u>	73.8%	101.400	99.250	96.400	17980.000
X		<u>T 9747.000</u>	<u>T 67340.000</u>	<u>T 2279.000</u>	<u>M 194900.000</u>	<u>TM 191500.000</u>	73.7%	99.720	98.530	95.140	18120.000
S		<u>T 158.000</u>	<u>T 505.100</u>	<u>T 110.300</u>	<u>M 2858.000</u>	<u>TM 2590.000</u>	0.8%	1.926	0.840	1.594	252.900
%RSD		<u>T 1.621</u>	<u>T 0.750</u>	<u>T 4.838</u>	<u>M 1.467</u>	<u>TM 1.352</u>	1.1	1.931	0.852	1.676	1.395
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	1148.000	<u>TM 1096.000</u>	<u>T 1062.000</u>	1323.000	91.680	99.230	107.700	90.250	92.840	95.360
2	18:35:04	1148.000	<u>TM 1112.000</u>	<u>T 1059.000</u>	1322.000	93.730	103.800	102.900	91.020	95.200	98.640
3	18:35:31	1122.000	<u>TM 1113.000</u>	<u>T 1066.000</u>	1333.000	92.570	100.500	98.400	90.510	95.160	96.080
X		1139.000	<u>TM 1107.000</u>	<u>T 1062.000</u>	1326.000	92.660	101.200	103.000	90.590	94.400	96.690
S		14.560	<u>TM 9.616</u>	<u>T 3.431</u>	6.264	1.028	2.366	4.649	0.392	1.351	1.724
%RSD		1.278	<u>TM 0.869</u>	<u>T 0.323</u>	0.472	1.110	2.339	4.513	0.433	1.431	1.783
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	110.200	105.600	102.100	93.620	2637.000	2671.000	462.100	105.100	0.063	<u>TM 1022.000</u>
2	18:35:04	112.400	104.700	104.400	90.260	2695.000	2732.000	458.700	104.200	1.135	<u>TM 1062.000</u>
3	18:35:31	110.400	103.300	105.400	91.350	2686.000	2746.000	418.200	95.310	2.533	<u>TM 1055.000</u>
X		111.000	104.500	104.000	91.750	2672.000	2716.000	446.300	101.500	1.244	<u>TM 1046.000</u>
S		1.211	1.197	1.711	1.714	30.960	40.330	24.400	5.400	1.239	<u>TM 21.350</u>
%RSD		1.091	1.145	1.646	1.868	1.159	1.485	5.468	5.319	99.610	<u>TM 2.041</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	76.2%	102.100	102.100	101.800	116.200	95.920	93.940	94.800	93.670	75.2%
2	18:35:04	74.7%	105.100	103.700	101.600	120.500	96.440	94.590	98.500	96.570	73.7%
3	18:35:31	75.3%	104.100	103.600	101.700	127.500	97.420	96.600	97.430	97.830	74.0%
X		75.4%	103.800	103.100	101.700	121.400	96.590	95.040	96.910	96.020	74.3%
S		0.7%	1.540	0.893	0.100	5.731	0.758	1.387	1.903	2.132	0.8%
%RSD		1.0	1.484	0.866	0.098	4.721	0.785	1.459	1.963	2.220	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	97.430	98.550	98.920	96.350	<u>M 988.700</u>	<u>M 972.700</u>	82.5%	98.850	99.390	95.670
2	18:35:04	100.900	99.570	100.500	98.020	<u>M 1007.000</u>	<u>M 978.700</u>	81.7%	100.800	101.000	98.520
3	18:35:31	99.640	99.400	102.200	97.280	<u>M 1002.000</u>	<u>M 976.500</u>	82.5%	100.600	100.300	97.070
X		99.330	99.170	100.500	97.220	<u>M 999.500</u>	<u>M 976.000</u>	82.2%	100.100	100.300	97.090
S		1.756	0.547	1.617	0.836	<u>M 9.690</u>	<u>M 3.018</u>	0.5%	1.080	0.813	1.427
%RSD		1.768	0.552	1.609	0.859	<u>M 0.970</u>	<u>M 0.309</u>	0.6	1.079	0.811	1.470
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:34:37	95.170	93.540	80.1%							
2	18:35:04	97.510	96.500	79.9%							
3	18:35:31	95.860	95.360	80.2%							
X		96.180	95.130	80.1%							
S		1.200	1.495	0.1%							
%RSD		1.248	1.571	0.2							

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User Pre-dilution: 1.000

user file duration: 12.00s

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	84.8%	0.018	1.685	2.029	-28.460	±29020.000	±12050.000	±12060.000	±14420.000	9.291
2	18:40:55	85.0%	-0.024	2.215	2.250	-27.240	±29400.000	±12260.000	±12260.000	±14670.000	11.650
3	18:41:22	86.0%	-0.038	1.805	1.889	-23.720	±30610.000	±12480.000	±12650.000	±15190.000	9.323
X		85.3%	-0.015	1.902	2.056	-26.470	±29680.000	±12270.000	±12320.000	±14760.000	10.090
S		0.6%	0.029	0.278	0.182	2.459	±828.300	±213.400	±302.600	±388.700	1.354
%RSD		0.8	202.600	14.600	8.849	9.290	±2.791	±1.740	±2.456	±2.633	13.420
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	±1959.000	14710.000	314.700	37990.000	±37660.000	79.6%	0.299	0.037	0.291	5673.000
2	18:40:55	2110.000	14800.000	313.200	39100.000	±38630.000	78.1%	0.280	-0.123	0.238	5890.000
3	18:41:22	2156.000	15190.000	±336.100	40660.000	±39850.000	78.1%	0.305	-0.298	0.262	5999.000
X		±2075.000	14900.000	±321.300	39250.000	±38710.000	78.6%	0.295	-0.128	0.264	5854.000
S		±103.400	257.000	±12.780	1342.000	±1096.000	0.9%	0.013	0.167	0.027	165.700
%RSD		±4.982	1.725	±3.978	3.418	±2.830	1.1	4.386	130.500	10.080	2.831
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	8.741	210.200	25.010	70.020	0.103	2.461	2.026	0.165	0.138	0.712
2	18:40:55	8.838	211.600	25.320	75.650	0.092	2.516	2.222	0.174	0.237	0.699
3	18:41:22	10.370	216.000	24.960	73.170	0.107	2.109	2.031	0.137	0.226	0.743
X		9.316	212.600	25.100	72.950	0.101	2.362	2.093	0.159	0.201	0.718
S		0.914	3.022	0.191	2.818	0.008	0.221	0.112	0.019	0.054	0.022
%RSD		9.806	1.421	0.762	3.863	7.721	9.350	5.336	12.210	27.000	3.124
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	4.083	3.348	0.418	-0.421	552.000	537.600	6.292	1.181	1.310	189.700
2	18:40:55	4.667	3.648	0.276	-0.119	530.100	542.100	1.139	0.207	-0.083	189.100
3	18:41:22	4.944	3.524	-0.147	-0.851	558.100	576.000	1.832	0.209	1.006	202.700
X		4.565	3.507	0.182	-0.464	546.800	551.900	3.088	0.532	0.744	193.800
S		0.440	0.150	0.294	0.367	14.710	20.980	2.797	0.562	0.732	7.711
%RSD		9.633	4.286	161.300	79.250	2.690	3.801	90.590	105.500	98.400	3.978
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	78.1%	0.086	0.178	0.090	5.490	-0.007	0.002	0.080	0.074	78.3%
2	18:40:55	78.3%	0.049	0.159	0.071	4.309	0.001	0.002	0.057	0.081	78.3%
3	18:41:22	75.8%	0.137	0.146	0.067	6.191	-0.001	0.002	0.131	0.074	76.3%
X		77.4%	0.091	0.161	0.076	5.330	-0.003	0.002	0.089	0.076	77.6%
S		1.4%	0.044	0.016	0.013	0.951	0.004	0.000	0.038	0.004	1.2%
%RSD		1.8	48.440	9.868	16.450	17.850	161.200	4.893	41.940	5.563	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	0.127	0.110	-0.033	-0.047	178.000	172.100	83.8%	0.133	0.134	-0.015
2	18:40:55	0.089	0.073	-0.043	-0.042	180.100	175.700	84.2%	0.095	0.134	0.010
3	18:41:22	0.089	0.180	-0.010	-0.004	185.800	183.200	82.1%	0.134	0.125	-0.009
X		0.102	0.121	-0.029	-0.031	181.300	177.000	83.4%	0.121	0.131	-0.005
S		0.022	0.055	0.017	0.023	4.024	5.636	1.1%	0.022	0.006	0.013
%RSD		21.410	45.160	59.650	74.970	2.219	3.184	1.4	18.330	4.256	286.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:40:28	0.001	-0.004	82.9%							
2	18:40:55	-0.011	-0.002	83.4%							
3	18:41:22	0.004	-0.006	83.7%							
X		-0.002	-0.004	83.3%							
S		0.008	0.002	0.4%							
%RSD		374.000	54.820	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	80.8%	101.500	36.370	38.300	-46.050	<u>TM 149200.000</u>	<u>45610.000</u>	<u>47410.000</u>	<u>74910.000</u>	<u>165.500</u>
2	18:46:47	81.1%	98.770	34.450	38.890	-45.120	<u>TM 148100.000</u>	<u>45820.000</u>	<u>47310.000</u>	<u>74180.000</u>	153.000
3	18:47:14	80.8%	100.700	33.860	37.310	-46.280	<u>TM 152600.000</u>	<u>46280.000</u>	<u>47500.000</u>	<u>76410.000</u>	<u>150.200</u>
X		80.9%	100.300	34.890	38.170	-45.820	<u>TM 150000.000</u>	<u>45900.000</u>	<u>47410.000</u>	<u>75170.000</u>	<u>156.200</u>
S		0.2%	1.410	1.312	0.800	0.617	<u>TM 2378.000</u>	<u>340.100</u>	<u>98.400</u>	<u>1135.000</u>	<u>8.145</u>
%RSD		0.2	1.405	3.759	2.096	1.346	<u>TM 1.586</u>	<u>0.741</u>	<u>0.208</u>	<u>1.510</u>	<u>5.214</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	<u>TM 10760.000</u>	<u>66770.000</u>	<u>2177.000</u>	<u>M 195500.000</u>	<u>TM 197700.000</u>	74.4%	104.600	99.360	96.330	17740.000
2	18:46:47	<u>TM 10730.000</u>	<u>67330.000</u>	<u>2220.000</u>	<u>M 197500.000</u>	<u>TM 196000.000</u>	74.7%	102.500	98.980	96.940	18100.000
3	18:47:14	<u>TM 10810.000</u>	<u>67280.000</u>	<u>2199.000</u>	<u>M 196800.000</u>	<u>TM 195500.000</u>	73.3%	105.600	101.400	97.450	17820.000
X		<u>TM 10760.000</u>	<u>67130.000</u>	<u>2198.000</u>	<u>M 196600.000</u>	<u>TM 196400.000</u>	74.1%	104.200	99.910	96.910	17890.000
S		<u>TM 39.550</u>	<u>313.300</u>	<u>21.560</u>	<u>M 1017.000</u>	<u>TM 1152.000</u>	0.8%	1.582	1.301	0.561	188.700
%RSD		<u>TM 0.367</u>	<u>0.467</u>	<u>0.981</u>	<u>M 0.517</u>	<u>TM 0.587</u>	1.0	1.518	1.303	0.579	1.055
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	1158.000	<u>TM 1108.000</u>	<u>1076.000</u>	1337.000	94.300	102.800	101.400	93.690	97.630	98.930
2	18:46:47	1147.000	<u>TM 1123.000</u>	<u>1069.000</u>	1337.000	93.450	101.800	105.900	91.770	94.610	100.300
3	18:47:14	1163.000	<u>TM 1129.000</u>	<u>1074.000</u>	1348.000	96.800	106.800	105.500	93.710	96.830	99.620
X		1156.000	<u>TM 1120.000</u>	<u>1073.000</u>	1341.000	94.850	103.800	104.300	93.060	96.360	99.630
S		8.000	<u>TM 11.030</u>	<u>3.516</u>	6.310	1.740	2.639	2.468	1.112	1.564	0.701
%RSD		0.692	<u>TM 0.985</u>	<u>0.328</u>	0.471	1.835	2.542	2.367	1.195	1.624	0.703
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	106.700	107.900	106.700	94.180	2774.000	2765.000	430.200	98.660	-0.823	<u>TM 1068.000</u>
2	18:46:47	111.800	105.400	106.900	95.210	2764.000	2803.000	471.800	105.000	1.665	<u>TM 1070.000</u>
3	18:47:14	109.300	108.100	109.700	91.670	2787.000	2814.000	450.200	102.400	-0.787	<u>TM 1099.000</u>
X		109.300	107.100	107.800	93.690	2775.000	2794.000	450.700	102.000	0.018	<u>TM 1079.000</u>
S		2.550	1.535	1.670	1.818	11.580	25.470	20.790	3.183	1.426	<u>TM 17.360</u>
%RSD		2.334	1.433	1.550	1.941	0.417	0.911	4.613	3.120	7918.000	<u>TM 1.609</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	74.5%	104.900	104.300	102.700	126.200	97.380	97.250	100.300	98.470	73.3%
2	18:46:47	73.8%	104.600	103.300	104.400	126.000	97.120	95.270	96.730	97.410	74.7%
3	18:47:14	73.9%	107.100	108.300	105.900	124.500	98.370	97.630	100.300	98.300	73.3%
X		74.1%	105.500	105.300	104.300	125.600	97.630	96.720	99.120	98.060	73.8%
S		0.4%	1.343	2.661	1.604	0.941	0.660	1.267	2.068	0.569	0.8%
%RSD		0.5	1.272	2.527	1.538	0.749	0.677	1.310	2.086	0.581	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	102.300	102.500	91.370	89.520	<u>M 1009.000</u>	<u>M 992.900</u>	81.3%	103.600	104.400	99.670
2	18:46:47	99.850	100.800	90.190	89.010	<u>M 1015.000</u>	<u>M 988.900</u>	82.7%	104.300	102.200	96.240
3	18:47:14	103.400	103.700	93.970	90.370	<u>M 1034.000</u>	<u>M 1004.000</u>	81.9%	104.300	104.400	98.010
X		101.800	102.400	91.840	89.630	<u>M 1020.000</u>	<u>M 995.400</u>	82.0%	104.100	103.700	97.970
S		1.807	1.436	1.936	0.688	<u>M 13.000</u>	<u>M 8.010</u>	0.7%	0.417	1.246	1.718
%RSD		1.774	1.403	2.108	0.767	<u>M 1.275</u>	<u>M 0.805</u>	0.8	0.401	1.202	1.753
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:46:20	98.450	97.610	79.6%							
2	18:46:47	95.440	95.250	78.9%							
3	18:47:14	98.680	97.490	79.0%							
X		97.520	96.780	79.1%							
S		1.808	1.332	0.4%							
%RSD		1.854	1.377	0.5							

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User Pre-dilution: 1.000

User Predefinition: 1.000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	75.9%	306.000	301.000	301.200	10.440	<u>61830.000</u>	<u>61630.000</u>	<u>61810.000</u>	<u>57580.000</u>	297.300
2	18:52:42	74.1%	311.200	311.200	311.500	8.046	<u>63150.000</u>	<u>63730.000</u>	<u>63450.000</u>	<u>59360.000</u>	306.900
3	18:53:09	74.1%	314.000	287.400	297.900	3.578	<u>63230.000</u>	<u>61200.000</u>	<u>61030.000</u>	<u>58890.000</u>	304.500
X		74.7%	103.459%	99.950%	101.166%	7.355	<u>104.562%</u>	<u>62190.000</u>	<u>62090.000</u>	<u>97.687%</u>	100.961%
S		1.0%	n/a	n/a	n/a	3.483	<u>1n/a</u>	<u>1351.000</u>	<u>1232.000</u>	<u>1n/a</u>	n/a
%RSD		1.4	1.300	3.982	2.345	47.350	<u>1.254</u>	<u>2.172</u>	<u>1.985</u>	<u>1.572</u>	1.658
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	<u>2700.000</u>	603.200	<u>58190.000</u>	63190.000	<u>62360.000</u>	73.2%	308.600	300.400	294.700	3470.000
2	18:52:42	<u>2756.000</u>	599.700	<u>58600.000</u>	63970.000	<u>62970.000</u>	71.3%	309.800	308.300	298.400	2260.000
3	18:53:09	<u>2776.000</u>	546.100	<u>57510.000</u>	62180.000	<u>61900.000</u>	72.7%	301.800	305.000	295.000	4612.000
X		<u>2744.000</u>	583.000	<u>96.835%</u>	63120.000	<u>104.020%</u>	72.4%	102.247%	101.528%	98.681%	3447.000
S		<u>39.590</u>	31.990	<u>1n/a</u>	893.300	<u>1n/a</u>	1.0%	n/a	n/a	n/a	1176.000
%RSD		<u>1.443</u>	5.486	<u>0.944</u>	1.415	<u>0.860</u>	1.4	1.402	1.300	0.695	34.120
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	<u>61650.000</u>	287.000	<u>62560.000</u>	<u>59310.000</u>	286.300	281.200	288.000	285.800	299.700	300.200
2	18:52:42	<u>62890.000</u>	295.400	<u>62520.000</u>	<u>59940.000</u>	297.900	292.800	294.800	291.200	298.200	296.300
3	18:53:09	<u>61940.000</u>	290.700	<u>62240.000</u>	<u>59770.000</u>	292.500	285.100	289.400	289.100	299.600	299.100
X		<u>62160.000</u>	97.008%	<u>62440.000</u>	<u>99.455%</u>	97.413%	95.451%	290.700	288.700	99.718%	99.522%
S		<u>649.700</u>	n/a	<u>171.900</u>	<u>1n/a</u>	n/a	n/a	3.592	2.753	n/a	n/a
%RSD		<u>1.045</u>	1.449	<u>0.275</u>	<u>0.541</u>	1.970	2.079	1.236	0.954	0.279	0.677
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	286.300	284.200	306.500	291.100	23.010	24.830	1314.000	298.400	-0.193	292.200
2	18:52:42	292.700	291.400	313.700	287.400	24.150	21.920	1384.000	312.500	-1.151	300.000
3	18:53:09	298.100	288.700	316.100	293.700	25.500	23.910	1391.000	313.500	1.433	300.200
X		292.400	288.100	104.028%	290.700	24.220	23.550	1363.000	102.714%	0.030	99.155%
S		5.912	3.632	n/a	3.170	1.246	1.488	42.620	n/a	1.306	n/a
%RSD		2.022	1.260	1.598	1.090	5.147	6.317	3.127	2.741	4406.000	1.520
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	72.0%	315.600	308.500	303.800	289.200	299.000	292.000	292.400	294.600	71.9%
2	18:52:42	71.2%	317.000	314.200	313.600	293.200	303.900	294.700	293.900	291.600	71.3%
3	18:53:09	70.5%	324.100	325.000	322.200	283.500	304.800	297.700	296.800	301.200	71.0%
X		71.3%	106.304%	105.297%	313.200	288.600	100.850%	294.800	294.400	98.594%	71.4%
S		0.7%	n/a	n/a	9.217	4.866	n/a	2.884	2.240	n/a	0.4%
%RSD		1.0	1.436	2.659	2.943	1.686	1.035	0.978	0.761	1.654	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	304.200	298.000	298.200	296.100	306.600	304.600	77.7%	300.800	317.000	293.400
2	18:52:42	305.000	305.900	308.100	301.700	305.600	301.900	77.2%	304.300	316.600	295.900
3	18:53:09	305.900	302.700	305.500	302.700	313.000	305.400	76.8%	309.400	320.100	301.600
X		101.683%	100.729%	303.900	100.065%	102.801%	101.318%	77.2%	304.800	105.954%	98.994%
S		n/a	n/a	5.150	n/a	n/a	n/a	0.5%	4.340	n/a	n/a
%RSD		0.275	1.321	1.694	1.180	1.301	0.592	0.6	1.424	0.599	1.397
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:52:15	292.600	292.000	77.3%							
2	18:52:42	294.500	296.300	77.0%							
3	18:53:09	298.600	299.300	76.5%							
X		98.406%	98.624%	76.9%							
S		n/a	n/a	0.4%							
%RSD		1.040	1.248	0.5							

CCB IM9936-01 4/22/2020 18:57:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	77.8%	-0.006	2.477	2.513	10.660	0.378	1.736	1.860	0.936	0.082
2	18:58:36	78.4%	-0.006	3.043	2.572	16.440	0.596	1.907	2.217	1.932	-0.013
3	18:59:03	78.0%	0.009	2.264	1.677	15.170	0.214	1.914	2.341	1.960	0.034
X		78.1%	-0.001	2.595	2.254	14.090	0.396	1.853	2.139	1.609	0.035
S		0.3%	0.009	0.403	0.500	3.036	0.192	0.101	0.250	0.583	0.048
%RSD		0.4	884.200	15.520	22.210	21.540	48.450	5.437	11.680	36.240	137.900
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.874	337.000	8.667	8.147	5.214	74.7%	0.059	0.007	0.003	-49.580
2	18:58:36	3.213	324.500	9.047	6.862	3.531	74.9%	-0.046	-0.008	-0.052	-40.000
3	18:59:03	2.906	322.900	8.554	3.133	3.472	74.8%	0.085	0.019	0.022	-58.230
X		2.998	328.100	8.756	6.047	4.072	74.8%	0.033	0.006	-0.009	-49.270
S		0.187	7.706	0.258	2.604	0.989	0.1%	0.069	0.013	0.038	9.118
%RSD		6.245	2.349	2.951	43.060	24.290	0.2	210.500	211.800	423.600	18.510
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.373	0.006	-4.309	5.446	0.001	-0.002	-0.072	0.012	0.045	-0.030
2	18:58:36	2.039	0.026	-4.019	5.750	0.004	0.020	-0.123	-0.002	0.025	0.152
3	18:59:03	2.148	0.016	-3.876	5.912	0.001	0.013	-0.320	-0.019	0.007	-0.050
X		2.187	0.016	-4.068	5.702	0.002	0.010	-0.172	-0.003	0.026	0.024
S		0.171	0.010	0.221	0.237	0.002	0.011	0.131	0.015	0.019	0.111
%RSD		7.802	63.480	5.424	4.149	79.070	105.600	76.450	511.400	75.280	465.300
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	-0.523	0.075	0.033	-0.218	11.540	11.930	2.236	0.227	1.790	0.007
2	18:58:36	-0.056	0.223	-0.225	-0.172	10.890	11.700	-2.921	-0.487	-1.316	0.013
3	18:59:03	-0.378	0.160	-0.149	-0.578	12.980	10.530	-0.288	-0.193	0.793	0.006
X		-0.319	0.153	-0.114	-0.323	11.800	11.390	-0.325	-0.151	0.422	0.009
S		0.239	0.074	0.132	0.222	1.071	0.751	2.579	0.359	1.586	0.003
%RSD		74.810	48.680	116.300	68.880	9.072	6.596	794.700	237.300	375.500	39.730
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	72.2%	0.278	0.359	0.245	0.569	0.003	-0.002	-0.013	0.033	74.8%
2	18:58:36	74.6%	0.253	0.362	0.250	0.702	0.013	0.010	-0.013	0.011	75.9%
3	18:59:03	72.1%	0.137	0.340	0.165	0.115	0.009	0.015	0.004	0.011	74.6%
X		73.0%	0.223	0.353	0.220	0.462	0.009	0.008	-0.008	0.018	75.1%
S		1.4%	0.075	0.012	0.048	0.308	0.005	0.009	0.010	0.013	0.7%
%RSD		1.9	33.860	3.400	21.610	66.630	59.440	114.100	126.800	69.590	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	0.126	0.117	0.344	0.346	-0.029	0.016	79.8%	0.007	0.010	0.050
2	18:58:36	0.132	0.166	0.374	0.426	-0.006	0.009	79.3%	0.017	0.010	0.029
3	18:59:03	0.139	0.205	0.375	0.338	-0.029	-0.004	78.3%	0.010	0.011	0.022
X		0.132	0.163	0.364	0.370	-0.022	0.007	79.1%	0.012	0.011	0.034
S		0.006	0.044	0.018	0.049	0.013	0.010	0.8%	0.005	0.001	0.014
%RSD		4.670	27.290	4.846	13.240	61.490	138.200	1.0	44.870	7.880	42.570
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:58:09	0.022	0.022	80.7%							
2	18:58:36	0.013	0.020	81.9%							
3	18:59:03	0.009	0.013	82.1%							
X		0.015	0.018	81.5%							
S		0.007	0.005	0.8%							
%RSD		45.760	25.970	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	78.9%	0.069	23.960	25.710	5.622	14470.000	10090.000	10830.000	11410.000	M 1431.000
2	19:04:26	77.6%	0.148	25.950	25.750	12.550	14220.000	10020.000	10710.000	11310.000	TM 1284.000
3	19:04:53	76.0%	0.058	24.950	26.520	8.954	14650.000	10100.000	10850.000	11590.000	M 1440.000
X		77.5%	0.092	24.950	25.990	9.041	14450.000	10070.000	10800.000	11440.000	TM 1385.000
S		1.4%	0.049	0.996	0.459	3.463	216.800	43.200	73.250	145.100	TM 87.470
%RSD		1.8	53.500	3.991	1.767	38.300	1.500	0.429	0.678	1.269	TM 6.314
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	6880.000	67200.000	1477.000	17680.000	17240.000	68.2%	11.110	1.337	2.604	18340.000
2	19:04:26	7129.000	66600.000	1466.000	17450.000	17010.000	69.7%	11.230	0.571	2.533	20550.000
3	19:04:53	7087.000	67800.000	1497.000	17280.000	17360.000	68.2%	11.140	1.576	2.670	21390.000
X		7032.000	67200.000	1480.000	17470.000	17200.000	68.7%	11.160	1.161	2.603	20090.000
S		133.100	599.100	15.900	200.700	175.300	0.9%	0.062	0.525	0.069	1580.000
%RSD		1.892	0.892	1.074	1.149	1.019	1.3	0.555	45.220	2.647	7.861
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	942.200	286.300	995.700	917.700	1.767	9.356	8.909	3.391	3.341	7.860
2	19:04:26	923.900	287.600	993.400	920.800	1.855	10.090	8.428	3.190	3.404	8.227
3	19:04:53	960.000	291.300	997.000	912.600	1.758	9.610	9.558	3.200	3.020	8.016
X		942.000	288.400	995.400	917.000	1.794	9.685	8.965	3.261	3.255	8.034
S		18.050	2.593	1.818	4.137	0.054	0.372	0.567	0.113	0.206	0.184
%RSD		1.917	0.899	0.183	0.451	3.000	3.840	6.325	3.476	6.330	2.290
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	10.350	8.783	1.602	-0.337	107.700	106.100	-1.253	-0.470	1.337	74.600
2	19:04:26	9.349	9.006	0.781	-1.106	107.400	105.400	2.921	0.767	-0.642	74.800
3	19:04:53	10.280	8.434	0.024	-0.759	112.000	111.600	-0.758	-0.159	-0.191	74.920
X		9.992	8.741	0.803	-0.734	109.000	107.700	0.303	0.046	0.168	74.770
S		0.558	0.288	0.789	0.385	2.597	3.408	2.280	0.644	1.037	0.160
%RSD		5.583	3.298	98.300	52.460	2.382	3.166	751.900	1396.000	616.700	0.214
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	72.6%	0.012	0.043	-0.034	4.163	0.019	0.027	0.538	0.413	69.4%
2	19:04:26	71.5%	0.025	0.120	0.013	1.596	0.010	0.027	0.414	0.468	69.7%
3	19:04:53	72.8%	0.033	0.047	0.025	2.937	0.014	0.028	0.460	0.433	72.0%
X		72.3%	0.023	0.070	0.001	2.899	0.015	0.028	0.471	0.438	70.4%
S		0.7%	0.011	0.043	0.032	1.284	0.004	0.001	0.063	0.028	1.4%
%RSD		1.0	46.080	61.990	2254.000	44.300	30.550	2.355	13.340	6.325	2.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	0.357	0.327	0.404	0.324	90.820	88.800	76.5%	0.028	0.022	0.834
2	19:04:26	0.436	0.394	0.455	0.407	90.590	87.300	78.8%	0.012	0.017	0.865
3	19:04:53	0.454	0.362	0.345	0.386	86.870	88.340	77.0%	0.028	0.019	0.932
X		0.416	0.361	0.402	0.372	89.430	88.150	77.4%	0.023	0.020	0.877
S		0.051	0.034	0.055	0.043	2.215	0.772	1.2%	0.009	0.003	0.050
%RSD		12.320	9.349	13.670	11.670	2.477	0.876	1.5	40.700	14.240	5.721
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:03:59	0.894	0.888	78.5%							
2	19:04:26	0.845	0.807	79.8%							
3	19:04:53	0.891	0.895	80.3%							
X		0.877	0.863	79.5%							
S		0.027	0.049	0.9%							
%RSD		3.090	5.698	1.1							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	79.9%	-0.022	11.170	11.470	-1.305	29810.000	15910.000	15880.000	18360.000	21.820
2	19:10:16	78.1%	0.009	12.140	11.180	0.710	30180.000	16630.000	16660.000	18380.000	21.900
3	19:10:43	78.8%	-0.007	10.050	11.310	-4.206	30100.000	16080.000	16490.000	18540.000	21.460
X		78.9%	-0.006	11.120	11.320	-1.600	30030.000	16210.000	16350.000	18430.000	21.730
S		0.9%	0.016	1.045	0.146	2.471	196.500	373.800	409.500	97.630	0.232
%RSD		1.2	241.600	9.396	1.287	154.400	0.654	2.306	2.505	0.530	1.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	TM 19260.000	269300.000	2224.000	71910.000	71870.000	70.9%	1.889	0.390	1.936	25120.000
2	19:10:16	TM 19870.000	71080.000	2443.000	71940.000	71030.000	71.1%	1.910	0.116	1.920	26970.000
3	19:10:43	TM 19660.000	69870.000	2383.000	72930.000	72210.000	71.4%	2.396	1.118	2.036	27790.000
X		TM 19600.000	70080.000	2350.000	72260.000	71700.000	71.2%	2.065	0.541	1.964	26630.000
S		TM 309.100	908.900	113.400	582.500	606.100	0.3%	0.287	0.518	0.063	1368.000
%RSD		TM 1.577	1.297	4.827	0.806	0.845	0.4	13.880	95.620	3.196	5.138
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	139.900	160.000	136.800	222.900	0.665	15.180	13.970	1.934	1.686	14.250
2	19:10:16	143.300	160.400	139.800	230.700	0.679	14.800	14.760	2.046	2.306	13.520
3	19:10:43	141.000	160.800	140.200	224.500	0.709	15.370	13.440	2.128	2.148	14.290
X		141.400	160.400	138.900	226.100	0.684	15.120	14.060	2.036	2.047	14.020
S		1.710	0.399	1.882	4.137	0.023	0.290	0.661	0.098	0.322	0.434
%RSD		1.209	0.249	1.354	1.830	3.293	1.921	4.700	4.789	15.740	3.092
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	17.980	16.730	-0.181	0.064	796.800	813.000	0.899	-0.445	4.005	159.400
2	19:10:16	20.690	16.770	0.445	-0.173	826.500	815.700	8.144	1.249	3.482	158.500
3	19:10:43	18.850	17.360	-2.214	0.286	812.600	807.500	0.885	0.246	-1.135	159.800
X		19.170	16.950	-0.650	0.059	812.000	812.100	3.310	0.350	2.117	159.300
S		1.385	0.351	1.390	0.230	14.870	4.207	4.187	0.852	2.829	0.632
%RSD		7.224	2.069	213.800	389.700	1.831	0.518	126.500	243.300	133.600	0.397
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	70.7%	0.663	0.677	0.649	2.424	-0.007	0.004	0.229	0.311	72.2%
2	19:10:16	70.8%	0.615	0.630	0.547	3.625	-0.003	0.000	0.248	0.289	71.6%
3	19:10:43	70.8%	0.730	0.892	0.516	2.872	0.001	0.000	0.238	0.240	72.2%
X		70.8%	0.669	0.733	0.571	2.974	-0.003	0.002	0.238	0.280	72.0%
S		0.0%	0.058	0.139	0.069	0.607	0.004	0.002	0.010	0.036	0.3%
%RSD		0.1	8.635	19.020	12.170	20.410	146.200	154.200	4.032	12.990	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	0.310	0.404	1.891	1.749	176.000	171.900	79.4%	0.020	0.016	0.183
2	19:10:16	0.358	0.370	1.983	1.966	176.800	174.200	78.0%	0.027	0.019	0.222
3	19:10:43	0.424	0.441	1.845	1.734	176.900	172.700	79.1%	0.014	0.017	0.215
X		0.364	0.405	1.906	1.816	176.600	172.900	78.8%	0.020	0.017	0.206
S		0.057	0.035	0.070	0.130	0.521	1.132	0.7%	0.007	0.002	0.020
%RSD		15.680	8.735	3.677	7.165	0.295	0.655	0.9	32.760	9.372	9.867
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:09:49	0.211	0.194	79.0%							
2	19:10:16	0.160	0.192	80.3%							
3	19:10:43	0.198	0.179	79.2%							
X		0.190	0.188	79.5%							
S		0.026	0.008	0.7%							
%RSD		13.850	4.141	0.9							

CCV MW12620 4/22/2020 19:15:14 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	74.0%	311.600	289.600	305.000	9.785	±61640.000	±61790.000	±62140.000	±57450.000	298.100
2	19:16:08	73.5%	310.600	297.700	306.400	5.068	±63300.000	±62550.000	±62330.000	±59270.000	301.800
3	19:16:35	74.8%	303.200	291.300	302.100	6.933	±62270.000	±62160.000	±62300.000	±59000.000	300.700
X		74.1%	102.826%	97.617%	101.501%	7.262	±104.004%	±62170.000	±62260.000	±97.621%	100.059%
S		0.7%	n/a	n/a	n/a	2.376	±n/a	±379.800	±101.000	±n/a	n/a
%RSD		0.9	1.482	1.452	0.721	32.710	±1.338	±0.611	±0.162	±1.671	0.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±2746.000	488.700	±57510.000	60740.000	±61820.000	73.0%	306.300	300.500	292.800	3458.000
2	19:16:08	±2779.000	471.400	±57320.000	62440.000	±62220.000	72.2%	306.900	305.900	300.500	2818.000
3	19:16:35	±2780.000	418.400	±56760.000	61760.000	±61650.000	73.4%	309.200	304.300	296.000	2046.000
X		±2768.000	459.500	±95.329%	61650.000	±103.158%	72.9%	102.477%	101.194%	98.805%	2774.000
S		±19.380	36.610	±n/a	854.700	±n/a	0.6%	n/a	n/a	n/a	707.100
%RSD		±0.700	7.967	±0.682	1.386	±0.480	0.9	0.494	0.914	1.304	25.490
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±62250.000	286.000	±61190.000	±58800.000	291.600	287.300	279.400	287.600	305.900	301.300
2	19:16:08	±61670.000	292.500	±61560.000	±59900.000	294.300	287.300	292.300	290.000	300.200	298.300
3	19:16:35	±60990.000	286.700	±61830.000	±59210.000	292.600	289.000	291.200	288.100	307.700	309.000
X		±61640.000	96.129%	±61530.000	±98.838%	97.607%	95.949%	287.700	288.600	101.532%	100.945%
S		±630.600	n/a	±325.100	±n/a	n/a	n/a	7.176	1.266	n/a	n/a
%RSD		±1.023	1.237	±0.528	±0.942	0.466	0.337	2.495	0.439	1.285	1.818
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	295.600	289.000	317.000	293.500	13.790	13.680	1393.000	318.700	4.991	296.900
2	19:16:08	292.000	287.200	314.900	294.600	15.010	15.440	1413.000	318.900	3.486	296.200
3	19:16:35	294.200	287.600	324.500	291.600	12.460	13.690	1368.000	319.400	1.903	293.900
X		293.900	287.900	106.272%	293.200	13.750	14.270	1391.000	106.342%	3.460	98.548%
S		1.806	0.955	n/a	1.512	1.272	1.015	22.410	n/a	1.544	n/a
%RSD		0.615	0.332	1.586	0.516	9.250	7.111	1.611	0.117	44.630	0.536
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	70.8%	317.200	313.800	310.200	300.300	305.900	296.600	295.500	295.400	70.1%
2	19:16:08	70.6%	322.900	322.000	313.300	293.800	303.000	291.400	297.700	291.300	70.8%
3	19:16:35	71.0%	326.900	326.900	317.100	316.600	312.400	307.400	302.600	299.000	69.0%
X		70.8%	107.444%	106.960%	313.500	303.600	102.365%	298.500	298.600	98.405%	70.0%
S		0.2%	n/a	n/a	3.445	11.780	n/a	8.144	3.646	n/a	0.9%
%RSD		0.3	1.517	2.062	1.099	3.882	1.573	2.729	1.221	1.295	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	304.500	305.300	305.300	296.900	311.600	301.000	76.9%	307.400	309.300	290.100
2	19:16:08	303.000	302.900	302.300	303.600	302.800	298.600	75.8%	304.200	314.100	293.600
3	19:16:35	311.100	312.400	311.600	299.400	319.000	304.600	76.5%	312.200	312.400	296.500
X		102.070%	102.282%	306.400	99.983%	103.709%	100.463%	76.4%	307.900	103.990%	97.806%
S		n/a	n/a	4.742	n/a	n/a	n/a	0.5%	4.008	n/a	n/a
%RSD		1.414	1.600	1.548	1.133	2.610	1.013	0.7	1.301	0.779	1.101
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:15:41	293.600	290.600	74.9%							
2	19:16:08	294.200	294.300	75.6%							
3	19:16:35	291.500	290.300	74.0%							
X		97.704%	97.242%	74.8%							
S		n/a	n/a	0.8%							
%RSD		0.483	0.758	1.1							

CCB IM9936-01 4/22/2020 19:21:07 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	78.2%	0.009	2.114	2.581	21.380	-0.122	2.030	2.090	2.522	0.036
2	19:22:00	77.5%	-0.021	1.754	2.091	22.110	0.002	1.963	2.000	2.350	0.006
3	19:22:27	77.3%	-0.021	3.897	1.912	6.236	-0.202	1.984	1.275	1.907	0.044
X		77.7%	-0.011	2.588	2.195	16.570	-0.107	1.993	1.789	2.260	0.029
S		0.4%	0.017	1.148	0.346	8.960	0.103	0.034	0.447	0.317	0.020
%RSD		0.6	158.000	44.340	15.790	54.060	96.120	1.722	24.990	14.040	71.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.940	267.400	8.835	4.337	4.379	75.3%	-0.020	0.018	0.010	-55.530
2	19:22:00	2.200	257.700	9.470	-0.600	3.666	74.5%	-0.046	0.033	-0.011	-58.050
3	19:22:27	1.879	254.500	7.164	0.603	4.270	75.5%	0.006	-0.002	-0.026	-54.870
X		2.006	259.900	8.490	1.447	4.105	75.1%	-0.020	0.017	-0.009	-56.150
S		0.171	6.747	1.191	2.574	0.384	0.5%	0.026	0.018	0.018	1.679
%RSD		8.495	2.596	14.030	177.900	9.360	0.7	131.600	107.400	196.900	2.991
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.855	0.017	-3.507	5.653	0.017	0.034	0.071	0.011	0.025	-0.190
2	19:22:00	2.553	0.012	-2.995	8.757	0.004	-0.023	-0.617	-0.016	0.033	-0.134
3	19:22:27	1.312	0.015	-3.618	3.311	-0.002	0.020	0.264	-0.014	0.001	-0.031
X		1.907	0.015	-3.373	5.907	0.006	0.010	-0.094	-0.006	0.019	-0.118
S		0.623	0.003	0.333	2.732	0.010	0.030	0.463	0.015	0.017	0.081
%RSD		32.650	17.330	9.862	46.250	149.300	296.600	493.000	241.200	85.990	68.080
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.001	-0.048	-0.037	-0.292	8.759	7.486	0.657	0.020	0.740	0.012
2	19:22:00	-0.235	0.062	-0.215	0.752	8.479	7.634	-0.834	-0.637	3.240	0.012
3	19:22:27	0.142	0.170	0.028	-0.253	6.576	6.376	1.147	0.145	0.732	0.011
X		-0.031	0.061	-0.074	0.069	7.938	7.165	0.323	-0.158	1.571	0.012
S		0.191	0.109	0.126	0.592	1.188	0.687	1.032	0.420	1.446	0.001
%RSD		615.600	178.300	169.400	858.300	14.970	9.592	319.200	266.700	92.050	6.045
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	72.8%	0.185	0.211	0.210	0.013	0.007	0.010	0.043	0.018	75.5%
2	19:22:00	72.8%	0.247	0.247	0.292	0.477	0.005	0.015	-0.013	0.016	74.6%
3	19:22:27	72.9%	0.255	0.352	0.207	-0.060	0.016	0.015	-0.013	0.017	74.3%
X		72.8%	0.229	0.270	0.236	0.143	0.009	0.013	0.006	0.017	74.8%
S		0.1%	0.039	0.073	0.048	0.292	0.006	0.003	0.033	0.001	0.6%
%RSD		0.1	16.890	27.220	20.330	203.300	59.750	19.220	571.400	4.905	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.117	0.190	0.342	0.316	-0.030	-0.010	77.9%	0.000	0.013	0.019
2	19:22:00	0.131	0.127	0.350	0.403	-0.029	-0.010	78.9%	0.003	0.003	0.033
3	19:22:27	0.104	0.209	0.339	0.405	-0.017	0.023	78.2%	0.013	0.006	0.024
X		0.117	0.175	0.344	0.375	-0.025	0.001	78.3%	0.005	0.007	0.025
S		0.013	0.043	0.006	0.051	0.007	0.019	0.5%	0.007	0.005	0.007
%RSD		11.490	24.550	1.702	13.590	27.250	2331.000	0.7	128.200	71.380	27.440
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:21:33	0.016	0.012	80.3%							
2	19:22:00	0.021	0.026	80.5%							
3	19:22:27	0.011	0.013	81.8%							
X		0.016	0.017	80.9%							
S		0.005	0.008	0.9%							
%RSD		30.210	44.480	1.1							

Performance Report

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2041020A 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	DELL
Last Edit Timestamp	4/22/2020 14:01:42
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.

Underlining indicates that a data warning flag is set.

Column headings	Result cells	Data warning flags
No flag	Internal Standard	I - Invalid calibration
Semi Quant	Excluded	T - Tripped
Standard Addition	QC Warning	F - Interference correction failed
Multi Element	QC Failure	M - Result over max
	Transient TRA only:	V - Valley integration failed
	Peak Not Found	D - Different method used
	Manually Edited	
	Merged Peak	

Fully Quantitative Concentrations

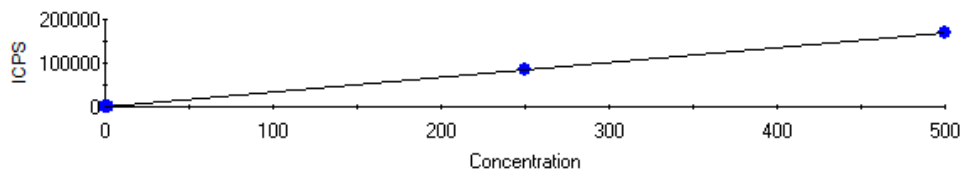
Id		Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si	39K
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1	MW-12643	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000	400.000
4		MW12644	0.800		100.000	800.000	800.000	800.000	800.000	80.000		800.000
5	cal2	MW-12645	2.000			2000.000	2000.000	2000.000	2000.000	200.000		2000.000
6	cal3	MW-12520	250.000	250.000	250.000					250.000	250.000	
7	cal4	MW-12521	500.000	500.000	500.000					500.000	500.000	
8	cal5	MW-12618				50000.000	50000.000	50000.000	50000.000		5000.000	50000.000
9	cal6	MW-12619				100000.000	100000.000	100000.000	100000.000		10000.000	100000.000
Id		Label	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe	57Fe	59Co
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1	MW-12643	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000	50.000	1.000
4		MW12644	800.000	800.000	10.000	10.000	10.000	10.000			100.000	2.000
5	cal2	MW-12645	2000.000	2000.000	25.000	25.000	25.000	25.000				5.000
6	cal3	MW-12520			250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4	MW-12521			500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5	MW-12618	50000.000	50000.000					50000.000	50000.000	50000.000	
9	cal6	MW-12619	100000.000	100000.000					100000.000	100000.000	100000.000	
Id		Label	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	82Se
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1	MW-12643	5.000	5.000	5.000	5.000	10.000	10.000	10.000	2.000	5.000	5.000
4		MW12644	10.000			10.000	20.000			4.000		10.000
5	cal2	MW-12645	25.000	25.000	25.000	25.000	50.000	50.000	50.000	10.000	25.000	25.000
6	cal3	MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4	MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5	MW-12618										
9	cal6	MW-12619										
Id		Label	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag	106Cd	111Cd	114Cd	116Sn
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1	MW-12643	10.000	10.000	10.000	10.000	1.000	1.000	0.100	0.100	0.100	20.000
4		MW12644	20.000		20.000	20.000	2.000				0.200	
5	cal2	MW-12645	50.000	50.000	50.000	50.000	5.000	5.000	0.500	0.500	0.500	100.000
6	cal3	MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4	MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5	MW-12618										
9	cal6	MW-12619										
Id		Label	118Sn	121Sb	123Sb	135Ba	137Ba	203Tl	205Tl	206Pb	207Pb	208Pb
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1	MW-12643	20.000	2.000	2.000	5.000	5.000	0.500	0.500	1.000	1.000	1.000
4		MW12644	40.000		4.000	10.000	10.000	1.000	1.000	2.000	2.000	2.000
5	cal2	MW-12645	100.000	10.000	10.000	25.000	25.000	2.500	2.500	5.000	5.000	5.000
6	cal3	MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4	MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5	MW-12618										
9	cal6	MW-12619										
Id		Label	232Th	238U								
			ppb	ppb								

3	cal1 MW-12643	50.000
4	MW12644	
5	cal2 MW-12645	250.000
6	cal3 MW-12520	
7	cal4 MW-12521	500.000
8	cal5 MW-12618	
9	cal6 MW-12619	

Sample List

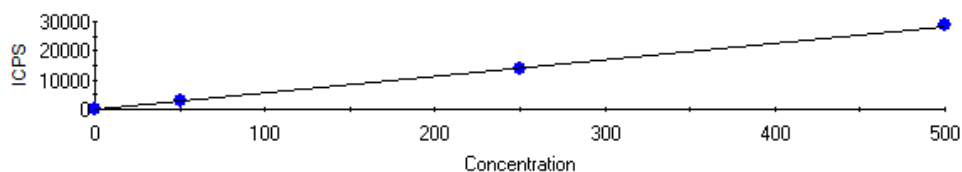
No	Label	Type	Weight	Rack	Row	Col	Height
1	TUNE MW12522	Unknown	1.000	0	1	5	144
2	BLANK IM9936-01	Blank	1.000	0	1	1	144
3	cal1 MW-12643	Fully Quant Standard	1.000	4	5	3	144
4	MW12644	Fully Quant Standard	1.000	4	5	4	144
5	cal2 MW-12645	Fully Quant Standard	1.000	4	5	5	144
6	cal3 MW-12520	Fully Quant Standard	1.000	4	5	6	144
7	cal4 MW-12521	Fully Quant Standard	1.000	4	5	7	144
8	cal5 MW-12618	Fully Quant Standard	1.000	4	5	8	144
9	cal6 MW-12619	Fully Quant Standard	1.000	4	5	9	144
10	ICV MW12789 PREP 4/22/20	QC Sample	1.000	4	5	11	144
11	ICB IM9936-01	QC Sample	1.000	0	1	1	144
12	ICSA MW12579	QC Sample	1.000	4	5	12	144
13	CCV MW12620	QC Sample	1.000	0	1	8	144
14	CCB IM9936-01	QC Sample	1.000	0	1	1	144
15	VQ51454-001	QC Sample	1.000	1	1	1	144
16	VQ51454-002	QC Sample	1.000	1	1	2	144
17	VD17087-001	Unknown	1.000	1	1	3	144
18	VD17087-002	Unknown	1.000	1	1	4	144
19	VD17087-003	Unknown	1.000	1	1	5	144
20	VD17087-004	Unknown	1.000	1	1	6	144
21	VD17087-004S	Unknown	1.000	1	1	7	144
22	VD17087-004SD	Unknown	1.000	1	1	8	144
23	VD17087-004L(5)	Unknown	1.000	1	1	9	144
24	VD17087-004A	Unknown	1.000	1	1	10	144
25	CCV MW12620	QC Sample	1.000	0	1	8	144
26	CCB IM9936-01	QC Sample	1.000	0	1	1	144
27	LR MW12519	QC Sample	1.000	4	5	10	144
28	VD17087-005	Unknown	1.000	1	2	1	144
29	VD17087-006	Unknown	1.000	1	2	2	144
30	VQ51455-001	QC Sample	1.000	1	2	3	144
31	VQ51455-002	QC Sample	1.000	1	2	4	144
32	VD17091-001	Unknown	1.000	1	2	5	144
33	VD17091-002	Unknown	1.000	1	2	6	144
34	VD17091-003	Unknown	1.000	1	2	7	144
35	VD17091-004	Unknown	1.000	1	2	8	144
36	VD17091-005	Unknown	1.000	1	2	9	144
37	VD17091-005S	Unknown	1.000	1	2	10	144
38	CCV MW12620	QC Sample	1.000	0	1	8	144
39	CCB IM9936-01	QC Sample	1.000	0	1	1	144
40	VD17091-005SD	Unknown	1.000	1	3	1	144
41	VD17091-005L(5)	Unknown	1.000	1	3	2	144
42	VD17091-005A	Unknown	1.000	1	3	3	144
43	VD15011-023	Unknown	1.000	1	3	4	144
44	VD15011-024	Unknown	1.000	1	3	5	144
45	VD15011-029	Unknown	1.000	1	3	6	144
46	VD15011-029S	Unknown	1.000	1	3	7	144
47	VD15011-029SD	Unknown	1.000	1	3	8	144
48	VD15011-029L(5)	Unknown	1.000	1	3	9	144
49	VD15011-029A	Unknown	1.000	1	3	10	144
50	CCV MW12620	QC Sample	1.000	0	1	8	144
51	CCB IM9936-01	QC Sample	1.000	0	1	1	144
52	VD15011-030	Unknown	1.000	1	4	1	144
53	VD15011-031	Unknown	1.000	1	4	2	144
54	CCV MW12620	QC Sample	1.000	0	1	8	144
55	CCB IM9936-01	QC Sample	1.000	0	1	1	144
56	IS MW12650	Unknown	1.000	0	3	5	144
57	RINSE	Unknown	1.000	0	1	5	144

Fully Quant Calibration

9Be FQ Block 1

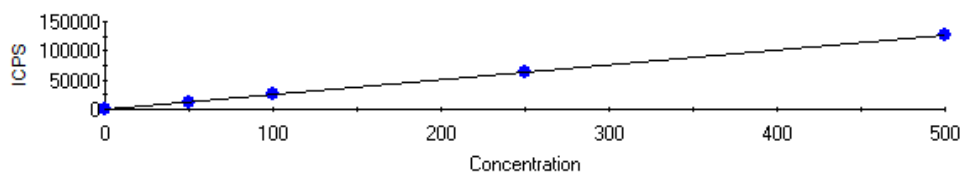
Intercept CPS=17.413757 Intercept Conc=0.052031
Sensitivity=334.677669 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	17.41	0.00
cal1 MW-12643	0.400	0.319	0.081	124.13	20.28
MW12644	0.800	0.773	0.027	276.22	3.34
cal2 MW-12645	2.000	2.093	0.093	717.75	4.63
cal3 MW-12520	250.000	249.004	0.996	83353.54	0.40
cal4 MW-12521	500.000	500.284	0.284	167451.19	0.06

10B FQ Block 1

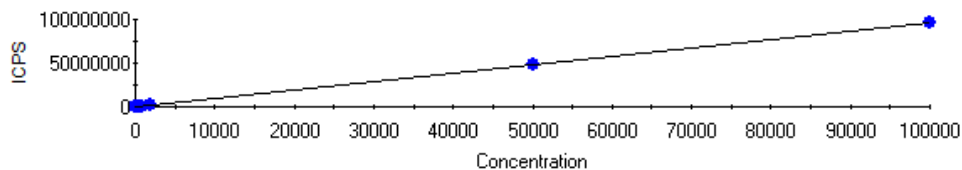
Intercept CPS=45.385382 Intercept Conc=0.799220
Sensitivity=56.787092 Correlation Coeff=0.999735

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	45.39	0.00
cal1 MW-12643	50.000	48.739	1.261	2813.14	2.52
cal3 MW-12520	250.000	241.226	8.774	13743.93	3.51
cal4 MW-12521	500.000	504.513	4.513	28695.20	0.90

11B FQ Block 1

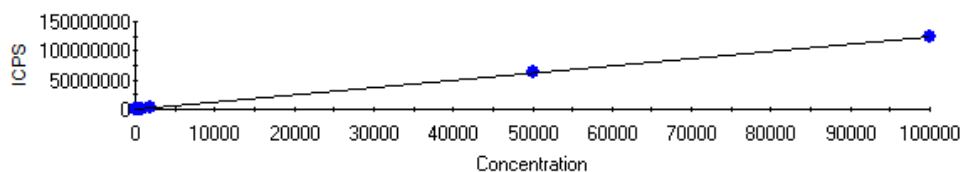
Intercept CPS=259.776766 Intercept Conc=1.035881
Sensitivity=250.778608 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	259.78	0.00
cal1 MW-12643	50.000	48.754	1.246	12486.19	2.49
MW12644	100.000	101.493	1.493	25711.93	1.49
cal3 MW-12520	250.000	253.028	3.028	63713.69	1.21
cal4 MW-12521	500.000	506.041	6.041	127164.11	1.21

23Na FQ Block 1

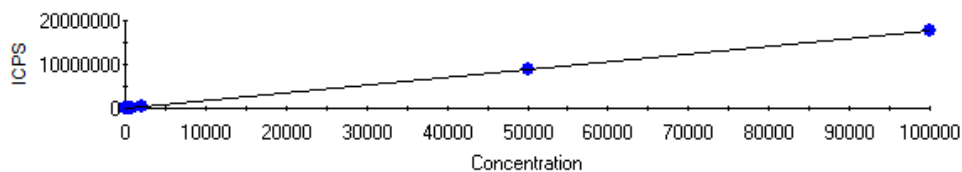
Intercept CPS=9081.467041 Intercept Conc=9.511486
Sensitivity=954.789514 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	9081.47	0.00
cal1 MW-12643	400.000	435.301	35.301	424702.76	8.83
MW12644	800.000	861.839	61.839	831956.13	7.73
cal2 MW-12645	2000.000	2033.523	33.523	1950668.08	1.68
cal5 MW-12618	50000.000	50210.227	210.227	47949279.90	0.42
cal6 MW-12619	100000.000	99893.580	106.420	95386424.16	0.11

24Mg FQ Block 1

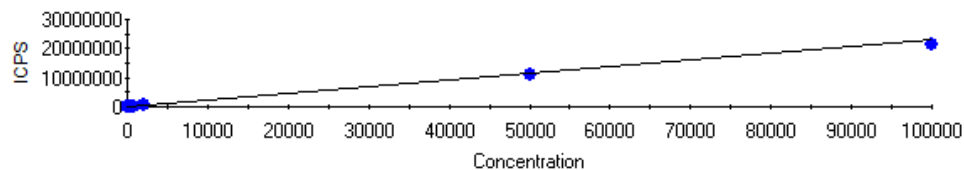
Intercept CPS=1922.859718 Intercept Conc=1.554999
Sensitivity=1236.566718 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1922.86	0.00
cal1 MW-12643	400.000	460.593	60.593	571477.24	15.15
MW12644	800.000	929.015	129.015	1150711.33	16.13
cal2 MW-12645	2000.000	2105.382	105.382	2605368.73	5.27
cal5 MW-12618	50000.000	50224.435	224.435	62107787.51	0.45
cal6 MW-12619	100000.000	99884.400	115.600	123515648.10	0.12

25Mg FQ Block 1

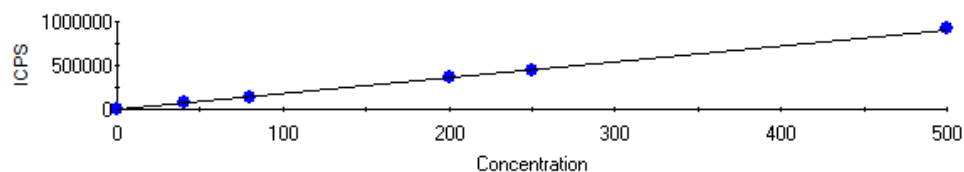
Intercept CPS=292.166635 Intercept Conc=1.634104
Sensitivity=178.793162 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	292.17	0.00
cal1 MW-12643	400.000	440.972	40.972	79134.87	10.24
MW12644	800.000	875.407	75.407	156808.95	9.43
cal2 MW-12645	2000.000	2202.546	202.546	394092.30	10.13
cal5 MW-12618	50000.000	50027.630	27.630	8944890.33	0.06
cal6 MW-12619	100000.000	99981.367	18.633	17876276.92	0.02

26Mg FQ Block 1

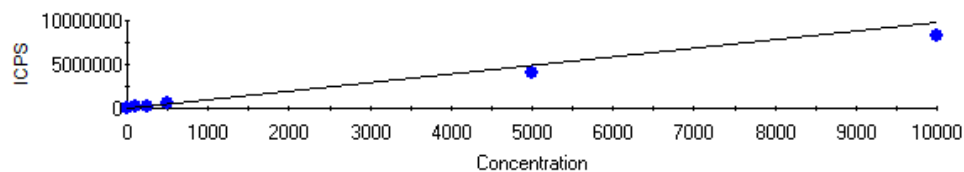
Intercept CPS=316.242242 Intercept Conc=1.382628
Sensitivity=228.725442 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	316.24	0.00
cal1 MW-12643	400.000	408.932	8.932	93849.28	2.23
MW12644	800.000	820.013	20.013	187874.17	2.50
cal2 MW-12645	2000.000	2075.598	75.598	475058.32	3.78
cal5 MW-12618	50000.000	47406.908	2593.092	10843482.19	5.19
cal6 MW-12619	100000.000	93631.014	6368.986	21416111.34	6.37

27Al FQ Block 1

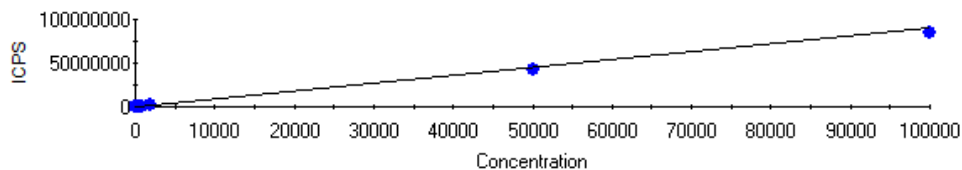
Intercept CPS=290.538306 Intercept Conc=0.160557
Sensitivity=1809.560040 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	290.54	0.00
cal1 MW-12643	40.000	40.088	0.088	72832.60	0.22
MW12644	80.000	79.498	0.502	144146.59	0.63
cal2 MW-12645	200.000	198.000	2.000	358583.54	1.00
cal3 MW-12520	250.000	249.320	0.680	451450.89	0.27
cal4 MW-12521	500.000	507.479	7.479	918604.46	1.50

28Si FQ Block 1

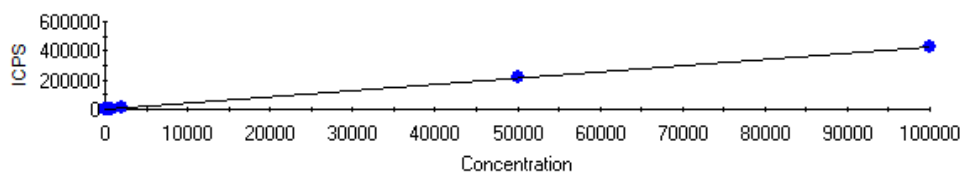
Intercept CPS=12337.884504 Intercept Conc=12.657863
Sensitivity=974.720983 Correlation Coeff=0.999794

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	12337.88	0.00
cal1 MW-12643	100.000	91.948	8.052	101961.52	8.05
cal3 MW-12520	250.000	250.326	0.326	256336.26	0.13
cal4 MW-12521	500.000	519.016	19.016	518233.96	3.80
cal5 MW-12618	5000.000	4085.008	914.992	3994081.26	18.30
cal6 MW-12619	10000.000	8437.520	1562.480	8236565.20	15.62

39K FQ Block 1

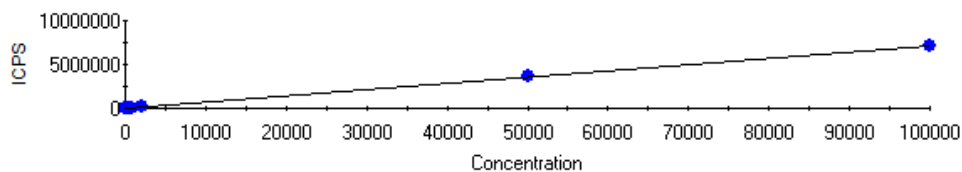
Intercept CPS=55155.248519 Intercept Conc=61.185574
Sensitivity=901.442034 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	55155.25	0.00
cal1 MW-12643	400.000	408.983	8.983	423829.34	2.25
MW12644	800.000	829.017	29.017	802465.62	3.63
cal2 MW-12645	2000.000	1975.043	24.957	1835541.64	1.25
cal5 MW-12618	50000.000	46544.282	3455.718	42012127.88	6.91
cal6 MW-12619	100000.000	93683.232	6316.768	84505158.38	6.32

43Ca FQ Block 1

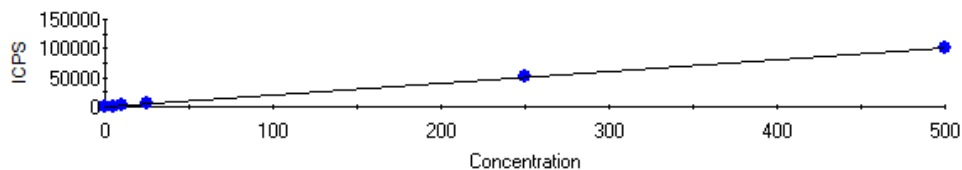
Intercept CPS=13.309839 Intercept Conc=3.106645
Sensitivity=4.284313 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.31	0.00
cal1 MW-12643	400.000	407.549	7.549	1759.38	1.89
MW12644	800.000	816.911	16.911	3513.21	2.11
cal2 MW-12645	2000.000	2109.470	109.470	9050.94	5.47
cal5 MW-12618	50000.000	50327.382	327.382	215631.56	0.65
cal6 MW-12619	100000.000	99833.954	166.046	427733.20	0.17

44Ca FQ Block 1

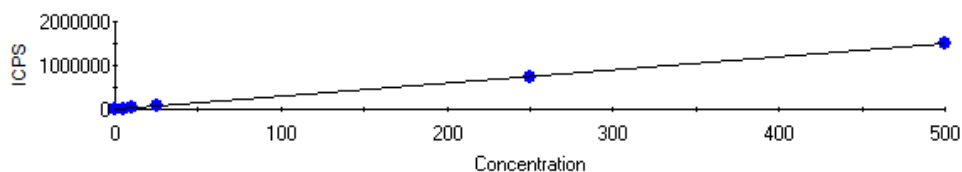
Intercept CPS=473.527476 Intercept Conc=6.620990
Sensitivity=71.519134 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	473.53	0.00
cal1 MW-12643	400.000	398.436	1.564	28969.30	0.39
MW12644	800.000	803.052	3.052	57907.14	0.38
cal2 MW-12645	2000.000	2021.146	21.146	145024.17	1.06
cal5 MW-12618	50000.000	49748.849	251.151	3558468.18	0.50
cal6 MW-12619	100000.000	100075.317	75.317	7157773.55	0.08

47Ti FQ Block 1

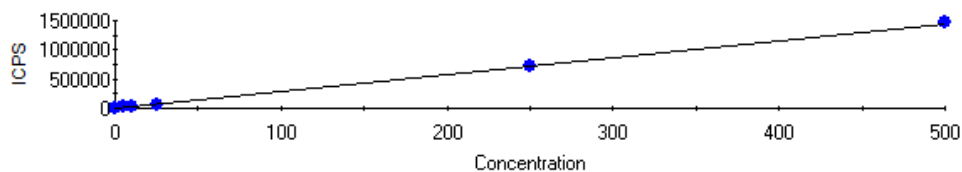
Intercept CPS=9.331027 Intercept Conc=0.045710
Sensitivity=204.134446 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	9.33	0.00
cal1 MW-12643	5.000	5.035	0.035	1037.25	0.71
MW12644	10.000	9.708	0.292	1990.97	2.92
cal2 MW-12645	25.000	25.820	0.820	5280.14	3.28
cal3 MW-12520	250.000	247.584	2.416	50549.71	0.97
cal4 MW-12521	500.000	499.900	0.100	102056.05	0.02

51V FQ Block 1

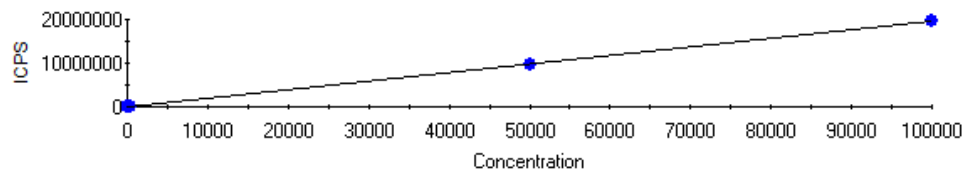
Intercept CPS=148.899046 Intercept Conc=0.049658
Sensitivity=2998.500176 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	148.90	0.00
cal1 MW-12643	5.000	4.965	0.035	15035.60	0.71
MW12644	10.000	9.873	0.127	29754.56	1.27
cal2 MW-12645	25.000	24.653	0.347	74071.73	1.39
cal3 MW-12520	250.000	244.919	5.081	734537.48	2.03
cal4 MW-12521	500.000	502.561	2.561	1507077.85	0.51

52Cr FQ Block 1

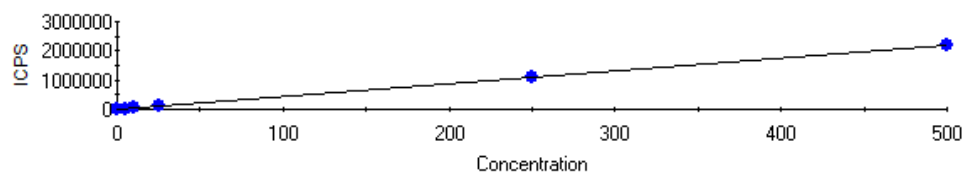
Intercept CPS=477.143826 Intercept Conc=0.164490
Sensitivity=2900.739688 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	477.14	0.00
cal1 MW-12643	5.000	4.933	0.067	14787.25	1.33
MW12644	10.000	9.883	0.117	29145.57	1.17
cal2 MW-12645	25.000	24.535	0.465	71647.62	1.86
cal3 MW-12520	250.000	245.643	4.357	713023.03	1.74
cal4 MW-12521	500.000	504.022	4.022	1462513.77	0.80

54Fe FQ Block 1

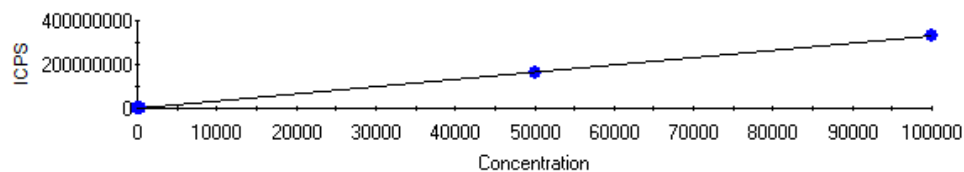
Intercept CPS=3028.697078 Intercept Conc=15.473761
Sensitivity=195.731154 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	3028.70	0.00
cal1 MW-12643	50.000	55.059	5.059	13805.52	10.12
cal3 MW-12520	250.000	383.256	133.256	78043.80	53.30
cal4 MW-12521	500.000	778.116	278.116	155330.22	55.62
cal5 MW-12618	50000.000	49978.998	21.002	9785475.74	0.04
cal6 MW-12619	100000.000	100008.775	8.775	19577861.60	0.01

55Mn FQ Block 1

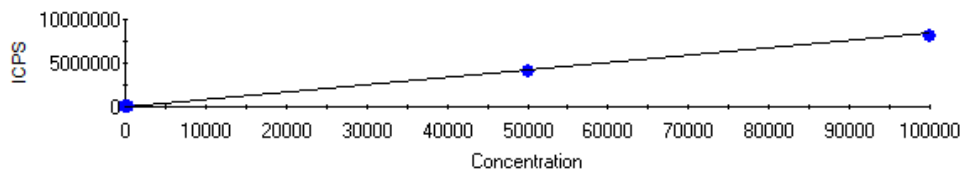
Intercept CPS=326.878583 Intercept Conc=0.074158
Sensitivity=4407.859604 Correlation Coeff=0.999889

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	326.88	0.00
cal1 MW-12643	5.000	4.751	0.249	21270.74	4.97
MW12644	10.000	9.375	0.625	41650.66	6.25
cal2 MW-12645	25.000	24.287	0.713	107378.49	2.85
cal3 MW-12520	250.000	243.609	6.391	1074120.96	2.56
cal4 MW-12521	500.000	503.246	3.246	2218565.38	0.65

56Fe FQ Block 1

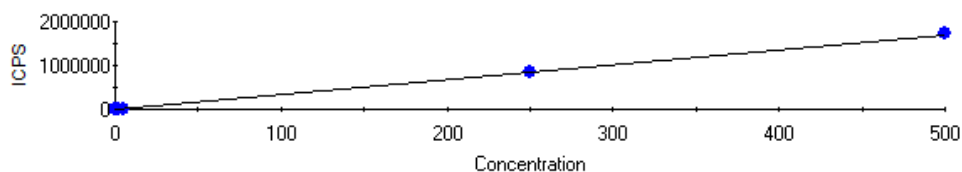
Intercept CPS=113497.874209 Intercept Conc=34.481929
Sensitivity=3291.517569 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	113497.87	0.00
cal1 MW-12643	50.000	55.879	5.879	297425.73	11.76
cal3 MW-12520	250.000	281.000	31.000	1038414.52	12.40
cal4 MW-12521	500.000	568.023	68.023	1983154.35	13.60
cal5 MW-12618	50000.000	50084.999	84.999	164969150.70	0.17
cal6 MW-12619	100000.000	99957.080	42.920	329123983.36	0.04

57Fe FQ Block 1

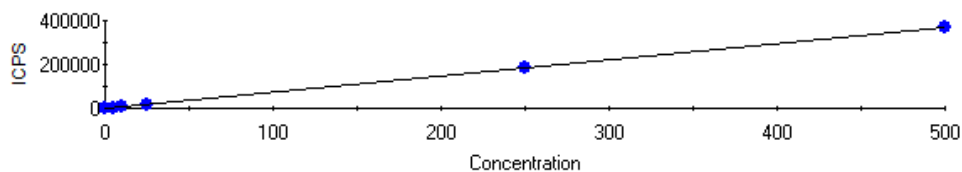
Intercept CPS=1411.920479 Intercept Conc=16.795136
Sensitivity=84.067226 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1411.92	0.00
cal1 MW-12643	50.000	49.040	0.960	5534.59	1.92
MW12644	100.000	100.074	0.074	9824.90	0.07
cal3 MW-12520	250.000	261.310	11.310	23379.55	4.52
cal4 MW-12521	500.000	525.472	25.472	45586.93	5.09
cal5 MW-12618	50000.000	47976.564	2023.436	4034668.57	4.05
cal6 MW-12619	100000.000	96052.550	3947.450	8076283.34	3.95

59Co FQ Block 1

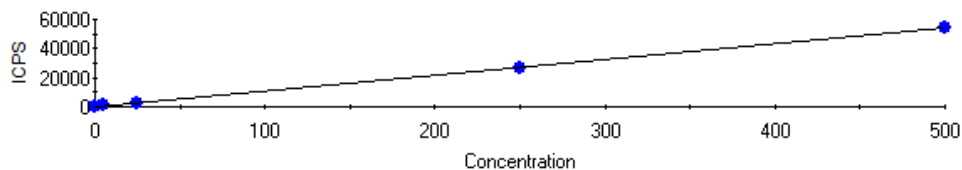
Intercept CPS=43.976845 Intercept Conc=0.012884
Sensitivity=3413.173268 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	43.98	0.00
cal1 MW-12643	1.000	1.022	0.022	3533.39	2.23
MW12644	2.000	1.921	0.079	6599.96	3.96
cal2 MW-12645	5.000	4.937	0.063	16895.65	1.26
cal3 MW-12520	250.000	248.386	1.614	847828.70	0.65
cal4 MW-12521	500.000	503.631	3.631	1719022.97	0.73

60Ni FQ Block 1

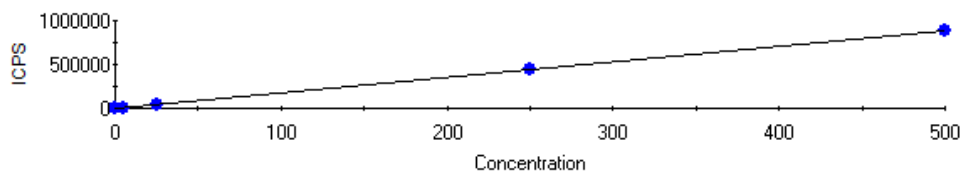
Intercept CPS=38.671749 Intercept Conc=0.052844
Sensitivity=731.814899 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	38.67	0.00
cal1 MW-12643	5.000	5.074	0.074	3751.79	1.48
MW12644	10.000	10.067	0.067	7406.21	0.67
cal2 MW-12645	25.000	25.048	0.048	18369.50	0.19
cal3 MW-12520	250.000	250.076	0.076	183048.06	0.03
cal4 MW-12521	500.000	499.957	0.043	365914.99	0.01

62Ni FQ Block 1

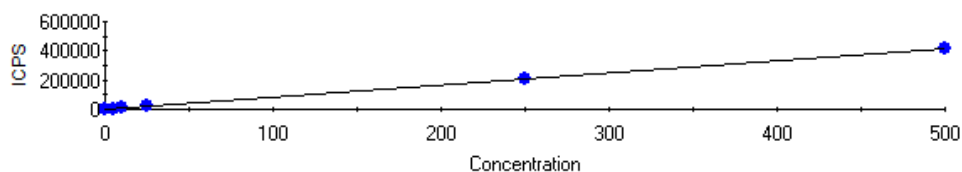
Intercept CPS=82.722291 Intercept Conc=0.766077
Sensitivity=107.981717 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	82.72	0.00
cal1 MW-12643	5.000	5.393	0.393	665.12	7.87
cal2 MW-12645	25.000	24.952	0.048	2777.13	0.19
cal3 MW-12520	250.000	249.699	0.301	27045.64	0.12
cal4 MW-12521	500.000	500.149	0.149	54089.67	0.03

63Cu FQ Block 1

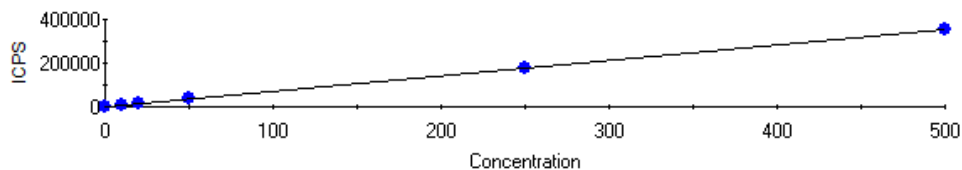
Intercept CPS=185.273004 Intercept Conc=0.103753
Sensitivity=1785.718369 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	185.27	0.00
cal1 MW-12643	5.000	5.075	0.075	9247.10	1.49
cal2 MW-12645	25.000	25.134	0.134	45066.88	0.53
cal3 MW-12520	250.000	250.364	0.364	447265.48	0.15
cal4 MW-12521	500.000	499.810	0.190	892705.89	0.04

65Cu FQ Block 1

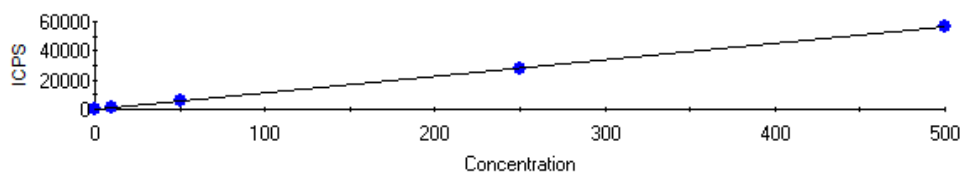
Intercept CPS=58.638104 Intercept Conc=0.070746
Sensitivity=828.852530 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	58.64	0.00
cal1 MW-12643	5.000	5.273	0.273	4429.24	5.46
MW12644	10.000	10.339	0.339	8628.25	3.39
cal2 MW-12645	25.000	25.723	0.723	21378.88	2.89
cal3 MW-12520	250.000	252.483	2.483	209329.75	0.99
cal4 MW-12521	500.000	498.713	1.287	413418.08	0.26

66Zn FQ Block 1

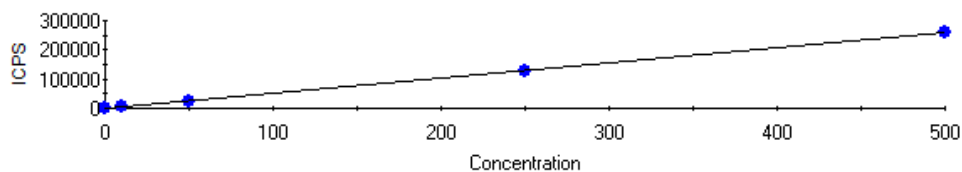
Intercept CPS=689.329668 Intercept Conc=0.981101
Sensitivity=702.608335 Correlation Coeff=0.999986

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	689.33	0.00
cal1 MW-12643	10.000	10.381	0.381	7983.42	3.81
MW12644	20.000	20.235	0.235	14906.55	1.17
cal2 MW-12645	50.000	49.720	0.280	35623.28	0.56
cal3 MW-12520	250.000	247.300	2.700	174444.06	1.08
cal4 MW-12521	500.000	499.890	0.110	351915.99	0.02

67Zn FQ Block 1

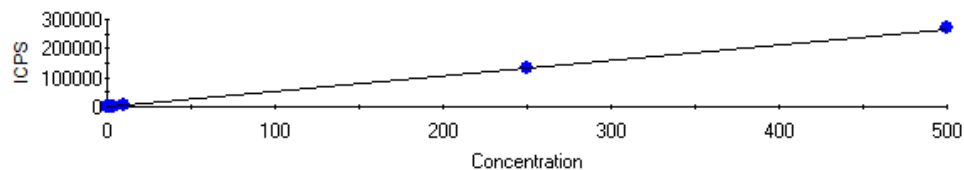
Intercept CPS=108.019241 Intercept Conc=0.958163
Sensitivity=112.735723 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	108.02	0.00
cal1 MW-12643	10.000	9.769	0.231	1209.36	2.31
cal2 MW-12645	50.000	49.210	0.790	5655.76	1.58
cal3 MW-12520	250.000	249.397	0.603	28223.92	0.24
cal4 MW-12521	500.000	500.385	0.385	56519.32	0.08

68Zn FQ Block 1

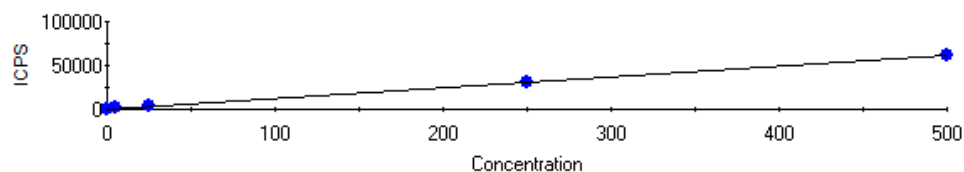
Intercept CPS=452.050933 Intercept Conc=0.877083
Sensitivity=515.402875 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	452.05	0.00
cal1 MW-12643	10.000	10.013	0.013	5612.57	0.13
cal2 MW-12645	50.000	49.278	0.722	25849.85	1.44
cal3 MW-12520	250.000	249.423	0.577	129005.60	0.23
cal4 MW-12521	500.000	504.697	4.697	260574.17	0.94

75As FQ Block 1

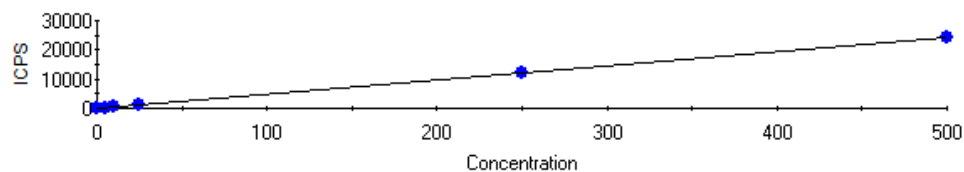
Intercept CPS=97.527066 Intercept Conc=0.182258
Sensitivity=535.105443 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	97.53	0.00
cal1 MW-12643	2.000	1.662	0.338	986.81	16.91
MW12644	4.000	4.205	0.205	2347.53	5.12
cal2 MW-12645	10.000	10.727	0.727	5837.34	7.27
cal3 MW-12520	250.000	248.783	1.217	133222.89	0.49
cal4 MW-12521	500.000	502.183	2.183	268818.28	0.44

78Se FQ Block 1

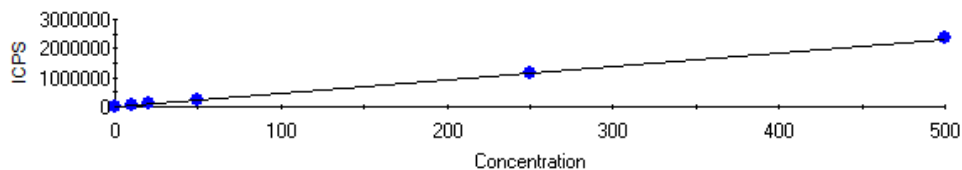
Intercept CPS=438.681361 Intercept Conc=3.607565
Sensitivity=121.600396 Correlation Coeff=0.999976

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	438.68	0.00
cal1 MW-12643	5.000	5.470	0.470	1103.87	9.41
cal2 MW-12645	25.000	23.890	1.110	3343.68	4.44
cal3 MW-12520	250.000	247.347	2.653	30516.21	1.06
cal4 MW-12521	500.000	501.377	1.377	61406.35	0.28

82Se FQ Block 1

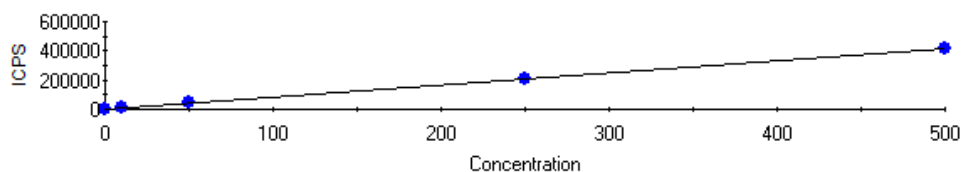
Intercept CPS=38.175900 Intercept Conc=0.792060
Sensitivity=48.198218 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	38.18	0.00
cal1 MW-12643	5.000	4.690	0.310	264.22	6.20
MW12644	10.000	10.428	0.428	540.79	4.28
cal2 MW-12645	25.000	25.117	0.117	1248.78	0.47
cal3 MW-12520	250.000	248.194	1.806	12000.68	0.72
cal4 MW-12521	500.000	500.892	0.892	24180.26	0.18

88Sr FQ Block 1

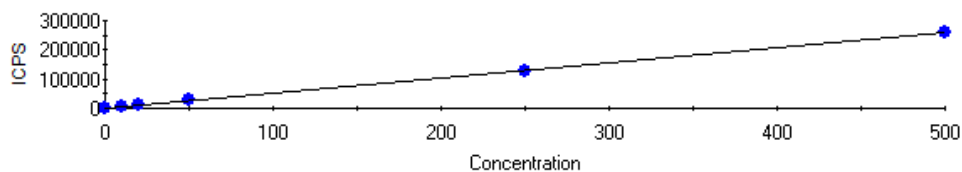
Intercept CPS=26.669572 Intercept Conc=0.005712
Sensitivity=4669.312453 Correlation Coeff=0.999966

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	26.67	0.00
cal1 MW-12643	10.000	9.526	0.474	44507.08	4.74
MW12644	20.000	18.996	1.004	88723.39	5.02
cal2 MW-12645	50.000	48.782	1.218	227806.74	2.44
cal3 MW-12520	250.000	246.543	3.457	1151213.18	1.38
cal4 MW-12521	500.000	501.900	1.900	2343554.09	0.38

95Mo FQ Block 1

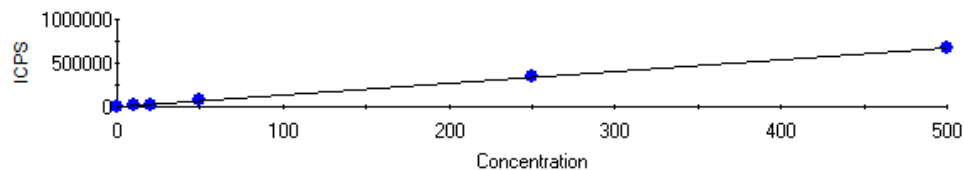
Intercept CPS=122.755766 Intercept Conc=0.148531
Sensitivity=826.463547 Correlation Coeff=0.999930

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	122.76	0.00
cal1 MW-12643	10.000	10.073	0.073	8447.57	0.73
cal2 MW-12645	50.000	51.366	1.366	42575.20	2.73
cal3 MW-12520	250.000	245.528	4.472	203042.87	1.79
cal4 MW-12521	500.000	502.081	2.081	415074.68	0.42

97Mo FQ Block 1

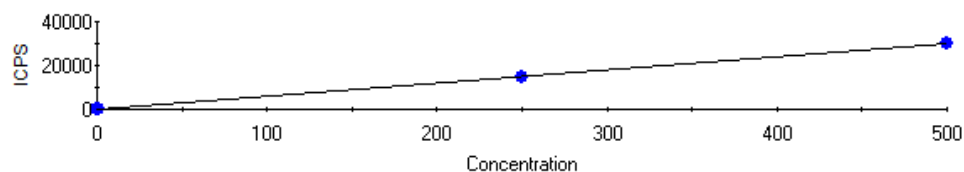
Intercept CPS=81.403631 Intercept Conc=0.157165
Sensitivity=517.948534 Correlation Coeff=0.999971

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	81.40	0.00
cal1 MW-12643	10.000	10.419	0.419	5477.82	4.19
MW12644	20.000	20.406	0.406	10650.83	2.03
cal2 MW-12645	50.000	51.462	1.462	26735.99	2.92
cal3 MW-12520	250.000	247.237	2.763	128137.21	1.11
cal4 MW-12521	500.000	501.211	1.211	259682.86	0.24

98Mo FQ Block 1

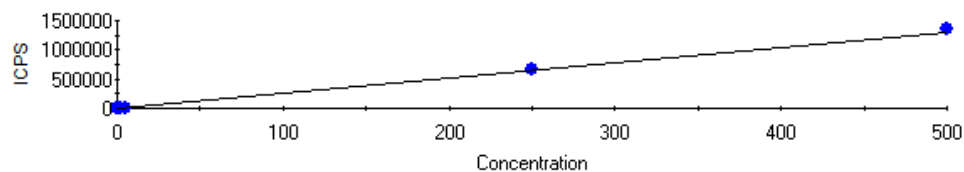
Intercept CPS=230.422493 Intercept Conc=0.169552
Sensitivity=1359.011305 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	230.42	0.00
cal1 MW-12643	10.000	9.902	0.098	13687.58	0.98
MW12644	20.000	19.964	0.036	27361.49	0.18
cal2 MW-12645	50.000	50.635	0.635	69044.24	1.27
cal3 MW-12520	250.000	247.746	2.254	336920.69	0.90
cal4 MW-12521	500.000	501.067	1.067	681185.65	0.21

106Cd FQ Block 1

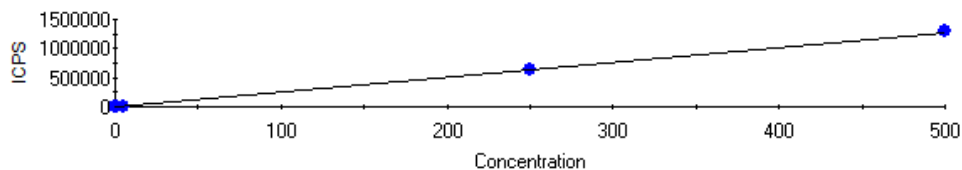
Intercept CPS=95.736912 Intercept Conc=1.595103
Sensitivity=60.019270 Correlation Coeff=0.999938

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	95.74	0.00
cal1 MW-12643	0.100	0.025	0.075	97.22	75.30
cal2 MW-12645	0.500	1.056	0.556	159.13	111.24
cal3 MW-12520	250.000	245.500	4.500	14830.47	1.80
cal4 MW-12521	500.000	502.249	2.249	30240.38	0.45

107Ag FQ Block 1

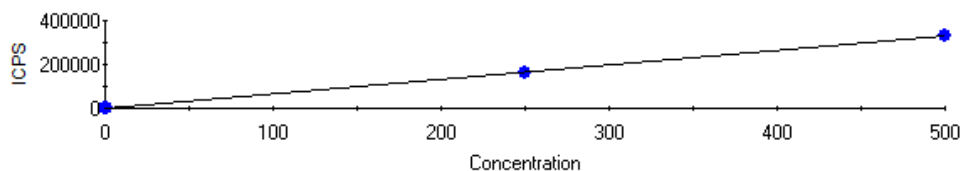
Intercept CPS=18.695937 Intercept Conc=0.007198
Sensitivity=2597.375088 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.70	0.00
cal1 MW-12643	1.000	1.012	0.012	2647.60	1.21
MW12644	2.000	1.985	0.015	5175.68	0.73
cal2 MW-12645	5.000	4.938	0.062	12843.31	1.25
cal3 MW-12520	250.000	254.854	4.854	661971.09	1.94
cal4 MW-12521	500.000	518.092	18.092	1345698.85	3.62

109Ag FQ Block 1

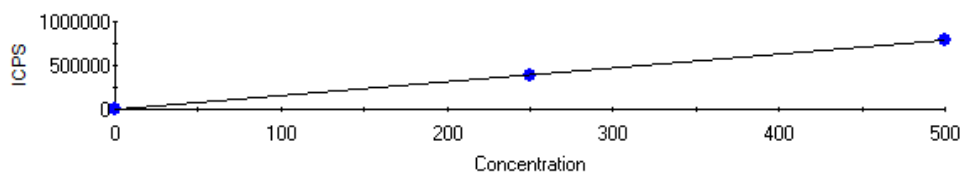
Intercept CPS=10.674132 Intercept Conc=0.004163
Sensitivity=2563.831690 Correlation Coeff=0.999912

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	10.67	0.00
cal1 MW-12643	1.000	1.018	0.018	2620.36	1.79
cal2 MW-12645	5.000	4.977	0.023	12771.85	0.45
cal3 MW-12520	250.000	248.640	1.360	637480.67	0.54
cal4 MW-12521	500.000	511.244	11.244	1310754.39	2.25

111Cd FQ Block 1

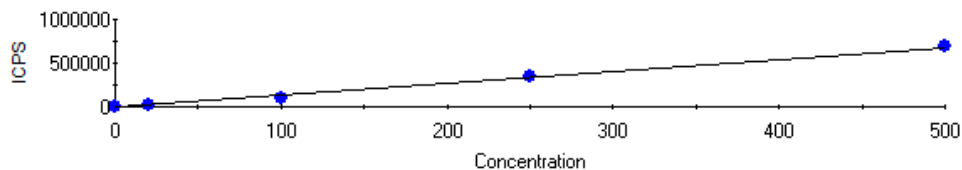
Intercept CPS=7.568163 Intercept Conc=0.011472
Sensitivity=659.706996 Correlation Coeff=0.999937

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	7.57	0.00
cal1 MW-12643	0.100	0.065	0.035	50.40	35.07
cal2 MW-12645	0.500	0.407	0.093	275.93	18.64
cal3 MW-12520	250.000	245.349	4.651	161866.13	1.86
cal4 MW-12521	500.000	502.326	2.326	331395.23	0.47

114Cd FQ Block 1

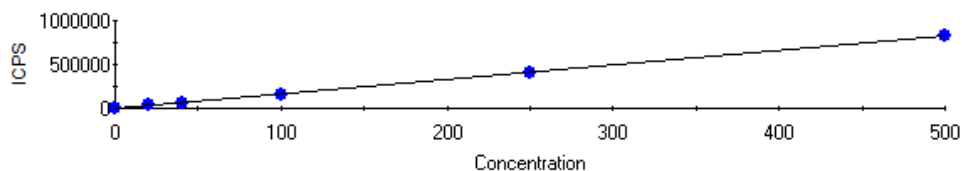
Intercept CPS=5.172680 Intercept Conc=0.003271
Sensitivity=1581.251230 Correlation Coeff=0.999913

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	5.17	0.00
cal1 MW-12643	0.100	0.100	0.000	163.71	0.26
MW12644	0.200	0.232	0.032	371.40	15.80
cal2 MW-12645	0.500	0.498	0.002	792.73	0.39
cal3 MW-12520	250.000	244.342	5.658	386370.80	2.26
cal4 MW-12521	500.000	502.829	2.829	795104.36	0.57

116Sn FQ Block 1

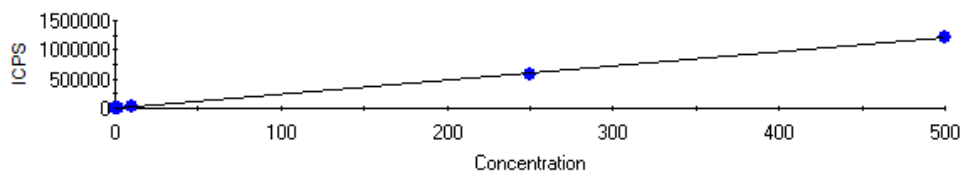
Intercept CPS=41.373472 Intercept Conc=0.030335
Sensitivity=1363.887110 Correlation Coeff=0.998229

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	41.37	0.00
cal1 MW-12643	20.000	13.167	6.833	18000.29	34.16
cal2 MW-12645	100.000	69.533	30.467	94876.81	30.47
cal3 MW-12520	250.000	247.003	2.997	336925.10	1.20
cal4 MW-12521	500.000	507.865	7.865	692712.36	1.57

118Sn FQ Block 1

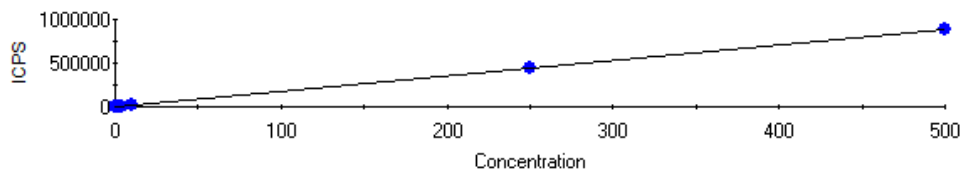
Intercept CPS=53.371023 Intercept Conc=0.032507
Sensitivity=1641.818798 Correlation Coeff=0.999946

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	53.37	0.00
cal1 MW-12643	20.000	19.004	0.996	31253.81	4.98
MW12644	40.000	38.372	1.628	63053.18	4.07
cal2 MW-12645	100.000	98.768	1.232	162212.54	1.23
cal3 MW-12520	250.000	245.806	4.194	403622.43	1.68
cal4 MW-12521	500.000	502.513	2.513	825089.40	0.50

121Sb FQ Block 1

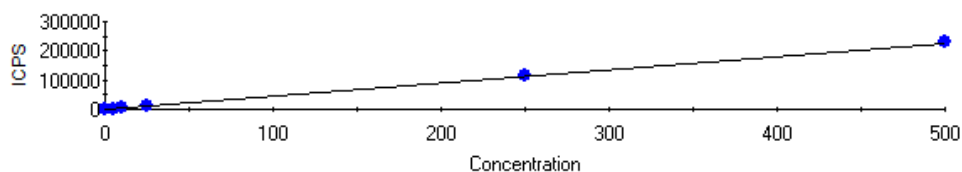
Intercept CPS=215.958008 Intercept Conc=0.089744
Sensitivity=2406.388624 Correlation Coeff=0.999837

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	215.96	0.00
cal1 MW-12643	2.000	1.994	0.006	5014.57	0.29
cal2 MW-12645	10.000	10.104	0.104	24530.41	1.04
cal3 MW-12520	250.000	242.600	7.400	584004.82	2.96
cal4 MW-12521	500.000	503.698	3.698	1212309.46	0.74

123Sb FQ Block 1

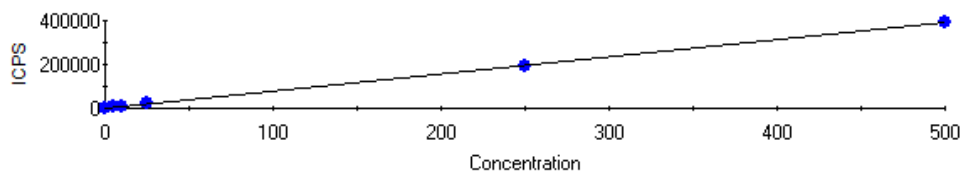
Intercept CPS=173.260345 Intercept Conc=0.098539
Sensitivity=1758.289147 Correlation Coeff=0.999977

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	173.26	0.00
cal1 MW-12643	2.000	2.126	0.126	3911.60	6.31
MW12644	4.000	4.224	0.224	7599.66	5.59
cal2 MW-12645	10.000	10.751	0.751	19077.10	7.51
cal3 MW-12520	250.000	247.273	2.727	434950.06	1.09
cal4 MW-12521	500.000	501.346	1.346	881685.13	0.27

135Ba FQ Block 1

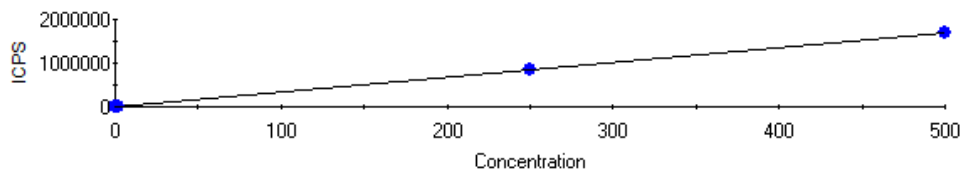
Intercept CPS=18.663998 Intercept Conc=0.041245
Sensitivity=452.520037 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.66	0.00
cal1 MW-12643	5.000	4.892	0.108	2232.17	2.17
MW12644	10.000	9.546	0.454	4338.21	4.54
cal2 MW-12645	25.000	25.292	0.292	11463.82	1.17
cal3 MW-12520	250.000	248.654	1.346	112539.36	0.54
cal4 MW-12521	500.000	504.277	4.277	228213.94	0.86

137Ba FQ Block 1

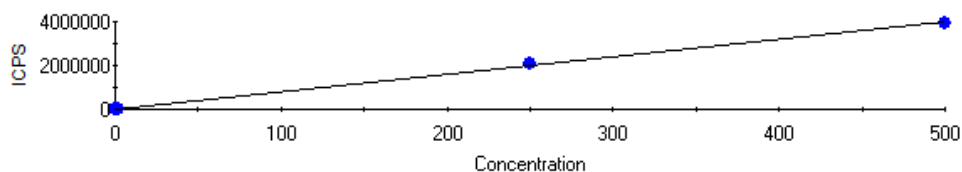
Intercept CPS=13.327659 Intercept Conc=0.017035
Sensitivity=782.388041 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.33	0.00
cal1 MW-12643	5.000	5.004	0.004	3928.38	0.08
MW12644	10.000	10.123	0.123	7933.72	1.23
cal2 MW-12645	25.000	25.102	0.102	19653.14	0.41
cal3 MW-12520	250.000	249.942	0.058	195565.14	0.02
cal4 MW-12521	500.000	499.993	0.007	391202.11	0.00

203Tl FQ Block 1

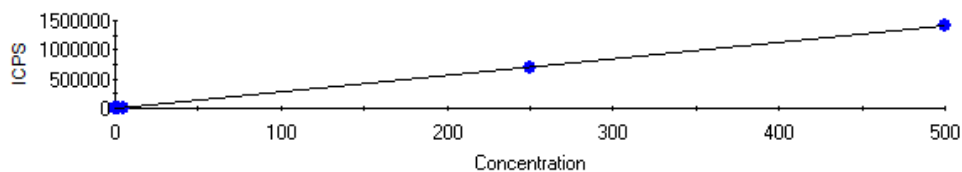
Intercept CPS=39.986560 Intercept Conc=0.011906
Sensitivity=3358.420779 Correlation Coeff=0.999958

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	39.99	0.00
cal1 MW-12643	0.500	0.516	0.016	1773.38	3.23
MW12644	1.000	1.015	0.015	3450.36	1.55
cal2 MW-12645	2.500	2.512	0.012	8477.22	0.49
cal3 MW-12520	250.000	249.577	0.423	838225.33	0.17
cal4 MW-12521	500.000	509.135	9.135	1709928.25	1.83

205Tl FQ Block 1

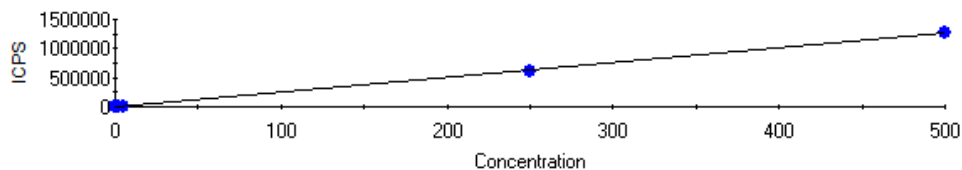
Intercept CPS=113.404042 Intercept Conc=0.014226
Sensitivity=7971.680418 Correlation Coeff=0.999600

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	113.40	0.00
cal1 MW-12643	0.500	0.525	0.025	4295.96	4.94
MW12644	1.000	1.001	0.001	8095.16	0.13
cal2 MW-12645	2.500	2.569	0.069	20595.83	2.78
cal3 MW-12520	250.000	262.067	12.067	2089230.11	4.83
cal4 MW-12521	500.000	493.966	6.034	3937852.33	1.21

206Pb FQ Block 1

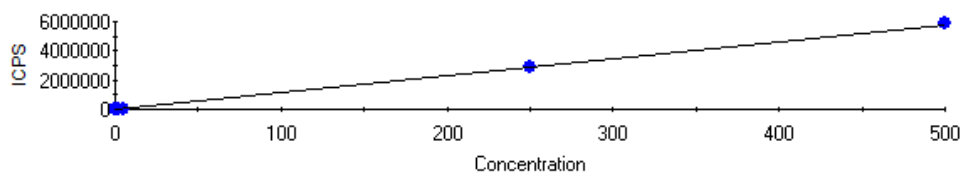
Intercept CPS=80.034582 Intercept Conc=0.028266
Sensitivity=2831.455827 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	80.03	0.00
cal1 MW-12643	1.000	0.938	0.062	2735.43	6.22
MW12644	2.000	1.931	0.069	5546.58	3.47
cal2 MW-12645	5.000	4.764	0.236	13567.74	4.73
cal3 MW-12520	250.000	247.587	2.413	701112.81	0.97
cal4 MW-12521	500.000	501.209	1.209	1419231.37	0.24

207Pb FQ Block 1

Intercept CPS=78.726709 Intercept Conc=0.031313
Sensitivity=2514.215145 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	78.73	0.00
cal1 MW-12643	1.000	0.942	0.058	2446.97	5.81
MW12644	2.000	1.845	0.155	4717.45	7.75
cal2 MW-12645	5.000	4.864	0.136	12308.66	2.71
cal3 MW-12520	250.000	246.130	3.870	618902.98	1.55
cal4 MW-12521	500.000	501.937	1.937	1262056.33	0.39

208Pb FQ Block 1

Intercept CPS=365.445135 Intercept Conc=0.031423
Sensitivity=11629.851619 Correlation Coeff=0.999942

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	365.45	0.00
cal1 MW-12643	1.000	0.916	0.084	11017.69	8.41
MW12644	2.000	1.870	0.130	22116.02	6.49
cal2 MW-12645	5.000	4.743	0.257	55524.01	5.14
cal3 MW-12520	250.000	245.646	4.354	2857193.14	1.74
cal4 MW-12521	500.000	502.980	2.980	5849947.53	0.60

Dilution Corrected Concentrations

TUNE MW12522 4/22/2020 14:03:49

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	100.4%	-0.040	0.388	0.720	121.900	1.040	0.048	-0.016	0.245	1.190
2	14:04:43	100.5%	-0.004	0.583	0.750	122.500	1.315	0.126	-0.010	0.105	1.205
3	14:05:10	99.1%	-0.004	0.723	0.571	127.200	1.097	0.187	0.092	0.135	1.133
X		100.0%	-0.016	0.565	0.680	123.900	1.151	0.121	0.022	0.162	1.176
S		0.8%	0.021	0.168	0.096	2.877	0.145	0.070	0.061	0.074	0.038
%RSD		0.8	128.900	29.750	14.060	2.322	12.580	57.860	271.500	45.680	3.220
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	0.944	377.600	0.631	2.441	2.629	101.0%	-0.026	0.024	0.053	56.000
2	14:04:43	0.966	372.100	0.603	5.404	3.123	98.7%	0.073	0.034	0.055	55.050
3	14:05:10	1.589	377.700	0.758	0.617	3.362	100.3%	0.052	-0.012	0.035	94.330
X		1.166	375.800	0.664	2.821	3.038	100.0%	0.033	0.015	0.047	68.460
S		0.366	3.229	0.083	2.416	0.374	1.2%	0.052	0.024	0.011	22.410
%RSD		31.410	0.859	12.490	85.650	12.310	1.2	158.900	160.500	23.080	32.730
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	2.116	0.020	0.954	-0.868	0.014	-0.020	-0.069	-0.002	0.039	-0.006
2	14:04:43	1.647	0.032	1.180	2.049	0.013	0.041	0.172	0.025	0.041	0.070
3	14:05:10	1.606	0.026	1.081	0.002	0.008	-0.009	-0.175	0.026	0.016	0.033
X		1.790	0.026	1.071	0.395	0.012	0.004	-0.024	0.017	0.032	0.033
S		0.283	0.006	0.113	1.498	0.003	0.033	0.178	0.016	0.014	0.038
%RSD		15.830	21.820	10.570	379.700	26.540	845.100	738.100	97.590	43.260	116.400
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.154	0.248	-0.088	-0.500	1.745	3.152	6.136	-0.184	5.713	0.004
2	14:04:43	-0.095	0.129	0.062	0.192	1.936	2.752	7.069	0.397	2.945	0.001
3	14:05:10	0.001	0.234	0.020	-0.737	1.323	3.128	5.160	0.022	2.553	0.005
X		-0.083	0.204	-0.002	-0.348	1.668	3.011	6.122	0.078	3.737	0.003
S		0.078	0.065	0.077	0.483	0.313	0.225	0.954	0.294	1.723	0.002
%RSD		94.410	31.780	3600.000	138.700	18.780	7.454	15.590	377.500	46.090	55.240
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	101.8%	0.086	0.034	0.097	-0.213	0.002	0.005	0.024	0.013	101.0%
2	14:04:43	98.7%	0.091	0.116	0.122	0.493	0.004	0.004	0.006	0.013	99.1%
3	14:05:10	99.5%	0.094	0.106	0.073	-0.125	-0.001	0.004	0.012	0.011	99.9%
X		100.0%	0.090	0.085	0.097	0.051	0.002	0.004	0.014	0.013	100.0%
S		1.7%	0.004	0.044	0.025	0.385	0.002	0.001	0.009	0.001	0.9%
%RSD		1.7	4.104	52.280	25.480	749.100	155.500	19.910	65.870	11.870	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.001	-0.006	0.060	0.063	0.055	0.100	99.9%	0.008	-0.002	0.025
2	14:04:43	0.011	0.007	0.061	0.022	0.039	0.075	99.8%	0.008	0.007	0.018
3	14:05:10	0.008	0.004	0.033	0.024	0.056	0.039	100.3%	0.007	0.003	0.029
X		0.006	0.002	0.052	0.036	0.050	0.072	100.0%	0.008	0.003	0.024
S		0.006	0.007	0.016	0.023	0.010	0.031	0.2%	0.001	0.005	0.006
%RSD		109.100	409.400	30.630	63.310	19.120	42.790	0.2	8.799	171.100	22.860
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:04:16	0.023	0.022	100.8%							
2	14:04:43	0.018	0.014	99.3%							
3	14:05:10	0.013	0.021	100.0%							
X		0.018	0.019	100.0%							
S		0.005	0.004	0.7%							
%RSD		26.910	21.190	0.7							

BLANK IM9936-01 4/22/2020 14:09:41

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	98.9%	0.045	0.166	0.011	-2.391	-0.067	-0.043	-0.015	0.291	-0.023
2	14:10:35	100.5%	-0.016	-0.243	0.050	-1.602	-0.124	-0.026	-0.037	-0.161	0.018
3	14:11:02	100.6%	-0.028	0.077	-0.061	3.993	0.191	0.069	0.053	-0.130	0.004
X		100.0%	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S		0.9%	0.039	0.216	0.056	3.480	0.168	0.060	0.047	0.252	0.021
%RSD		0.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.032	6.536	0.627	-1.226	0.647	99.3%	-0.006	-0.003	-0.003	8.527
2	14:10:35	0.170	-4.374	-0.379	-0.311	-0.145	100.2%	0.013	0.024	-0.006	-15.590
3	14:11:02	-0.202	-2.162	-0.248	1.537	-0.501	100.5%	-0.007	-0.021	0.010	7.063
X		0.000	0.000	-0.000	0.000	0.000	100.0%	-0.000	0.000	-0.000	0.000
S		0.188	5.768	0.547	1.407	0.588	0.6%	0.011	0.023	0.008	13.520
%RSD		0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000	0.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.071	0.014	0.267	-0.594	-0.002	-0.003	0.129	0.015	-0.003	-0.030
2	14:10:35	0.602	-0.009	-0.142	0.208	0.002	0.018	-0.027	-0.025	-0.004	-0.024
3	14:11:02	-0.673	-0.005	-0.125	0.387	-0.000	-0.015	-0.103	0.010	0.006	0.054
X		-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
S		0.640	0.012	0.231	0.522	0.002	0.017	0.118	0.022	0.006	0.047
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.074	0.042	0.143	0.444	0.154	-0.339	1.718	0.344	0.366	-0.001
2	14:10:35	-0.000	-0.016	-0.075	-0.580	-0.211	0.240	-1.220	-0.231	-0.359	0.001
3	14:11:02	-0.074	-0.026	-0.067	0.135	0.058	0.099	-0.499	-0.113	-0.007	0.000
X		0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	0.000
S		0.074	0.036	0.124	0.525	0.189	0.302	1.531	0.304	0.362	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	100.1%	0.037	0.029	-0.014	-0.401	0.002	0.001	0.000	0.001	99.3%
2	14:10:35	99.9%	-0.009	-0.042	0.025	0.398	-0.004	-0.001	-0.006	0.001	100.5%
3	14:11:02	100.1%	-0.028	0.013	-0.011	0.003	0.002	0.001	0.006	-0.001	100.1%
X		100.0%	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	100.0%
S		0.1%	0.033	0.037	0.021	0.400	0.004	0.001	0.006	0.001	0.6%
%RSD		0.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.008	0.012	-0.008	-0.010	-0.006	0.014	100.7%	0.000	-0.002	-0.002
2	14:10:35	-0.007	0.001	0.005	-0.010	-0.006	-0.002	99.8%	-0.001	0.000	-0.006
3	14:11:02	-0.001	-0.013	0.003	0.020	0.012	-0.012	99.5%	0.001	0.002	0.007
X		-0.000	0.000	-0.000	-0.000	-0.000	0.000	100.0%	-0.000	-0.000	-0.000
S		0.008	0.012	0.007	0.018	0.010	0.013	0.6%	0.001	0.002	0.007
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:10:08	-0.006	-0.002	99.4%							
2	14:10:35	0.001	-0.001	99.6%							
3	14:11:02	0.005	0.003	101.0%							
X		0.000	-0.000	100.0%							
S		0.006	0.003	0.8%							
%RSD		0.000	0.000	0.8							

cal1 MW-12643 4/22/2020 14:15:34

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.2%	0.282	48.210	49.120	-2.992	431.100	455.100	431.600	406.100	40.000
2	14:16:28	99.5%	0.272	48.150	48.960	-4.847	439.000	467.600	450.100	409.600	39.740
3	14:16:55	100.0%	0.402	49.870	48.180	-15.710	435.800	459.100	441.200	411.100	40.520
X		99.9%	0.319	48.740	48.750	-7.850	435.300	460.600	441.000	408.900	40.090
S		0.4%	0.072	0.976	0.506	6.871	3.957	6.419	9.223	2.600	0.399
%RSD		0.4	22.720	2.002	1.037	87.530	0.909	1.394	2.092	0.636	0.995
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	90.630	5.325	411.600	402.800	387.300	99.8%	5.215	4.948	4.975	44.460
2	14:16:28	92.890	-8.681	410.700	398.900	420.200	98.5%	4.909	5.003	4.920	174.200
3	14:16:55	92.320	-25.720	404.600	420.900	387.800	98.2%	4.982	4.943	4.904	44.960
X		91.950	-9.690	409.000	407.500	398.400	98.8%	5.035	4.965	4.933	87.890
S		1.175	15.540	3.804	11.740	18.870	0.9%	0.160	0.033	0.037	74.790
%RSD		1.277	160.400	0.930	2.880	4.735	0.9	3.168	0.664	0.754	85.090
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	55.900	4.699	55.500	47.180	0.963	5.155	5.319	5.005	5.174	10.160
2	14:16:28	54.680	4.786	56.280	50.240	1.030	5.316	5.366	5.302	5.292	10.400
3	14:16:55	54.600	4.769	55.860	49.690	1.074	4.751	5.495	4.917	5.353	10.580
X		55.060	4.751	55.880	49.040	1.022	5.074	5.393	5.075	5.273	10.380
S		0.729	0.046	0.390	1.631	0.056	0.291	0.091	0.201	0.091	0.214
%RSD		1.324	0.973	0.698	3.325	5.495	5.734	1.690	3.970	1.725	2.064
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	9.583	9.434	1.914	4.777	-0.213	0.191	23.720	5.141	1.448	9.395
2	14:16:28	10.220	10.540	2.133	6.035	-0.203	-0.548	22.450	5.376	-2.164	9.537
3	14:16:55	9.502	10.060	0.938	5.599	0.766	-0.271	15.870	3.553	0.410	9.646
X		9.769	10.010	1.662	5.470	0.117	-0.209	20.680	4.690	-0.102	9.526
S		0.395	0.556	0.636	0.639	0.562	0.373	4.213	0.991	1.860	0.126
%RSD		4.046	5.558	38.270	11.670	482.100	178.300	20.370	21.140	1822.000	1.319
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.1%	9.870	10.170	9.831	0.066	0.939	1.049	0.058	0.117	100.4%
2	14:16:28	99.6%	10.250	10.380	9.908	0.338	0.979	0.992	0.077	0.103	99.3%
3	14:16:55	99.2%	10.100	10.700	9.967	-0.330	1.118	1.012	0.059	0.081	98.5%
X		99.6%	10.070	10.420	9.902	0.025	1.012	1.018	0.065	0.100	99.4%
S		0.4%	0.190	0.265	0.068	0.336	0.094	0.029	0.011	0.018	0.9%
%RSD		0.5	1.890	2.544	0.688	1359.000	9.283	2.846	16.450	18.310	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	13.140	18.480	2.003	2.189	4.659	5.066	100.4%	0.516	0.530	0.885
2	14:16:28	13.000	19.010	2.027	1.993	5.069	4.818	99.1%	0.522	0.511	0.931
3	14:16:55	13.370	19.520	1.952	2.197	4.946	5.128	99.6%	0.510	0.533	0.997
X		13.170	19.000	1.994	2.126	4.892	5.004	99.7%	0.516	0.525	0.938
S		0.187	0.520	0.038	0.115	0.210	0.164	0.6%	0.006	0.012	0.056
%RSD		1.420	2.738	1.926	5.414	4.299	3.273	0.7	1.156	2.285	5.991
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:16:01	0.997	0.899	98.2%							
2	14:16:28	0.903	0.899	100.0%							
3	14:16:55	0.925	0.950	99.4%							
X		0.942	0.916	99.2%							
S		0.049	0.029	0.9%							
%RSD		5.230	3.206	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	98.9%	0.830	95.090	98.440	-7.755	870.000	920.200	871.400	832.800	79.790
2	14:22:23	98.2%	0.703	98.940	104.100	-7.550	860.800	931.100	871.600	805.400	78.710
3	14:22:50	96.9%	0.787	97.300	102.000	-8.019	854.700	935.700	883.200	821.800	79.990
X		98.0%	0.773	97.110	101.500	-7.775	861.800	929.000	875.400	820.000	79.500
S		1.0%	0.065	1.933	2.849	0.235	7.728	7.943	6.738	13.800	0.685
%RSD		1.1	8.405	1.990	2.807	3.024	0.897	0.855	0.770	1.683	0.862
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	188.700	-26.180	833.000	841.900	816.600	96.7%	10.630	9.848	10.020	158.000
2	14:22:23	186.600	-39.240	824.500	763.500	795.700	97.7%	9.944	10.190	9.768	47.370
3	14:22:50	195.400	-44.840	829.500	845.400	796.800	97.0%	8.544	9.582	9.865	250.500
X		190.200	-36.750	829.000	816.900	803.100	97.1%	9.708	9.873	9.883	152.000
S		4.629	9.576	4.312	46.300	11.770	0.5%	1.065	0.305	0.125	101.700
%RSD		2.433	26.060	0.520	5.668	1.465	0.5	10.970	3.090	1.269	66.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	112.000	9.373	114.000	104.400	1.965	9.984	11.490	10.220	10.620	19.850
2	14:22:23	111.000	9.330	113.600	98.060	1.839	9.714	10.420	9.869	9.914	20.000
3	14:22:50	110.900	9.422	111.100	97.800	1.959	10.500	9.893	10.160	10.490	20.850
X		111.300	9.375	112.900	100.100	1.921	10.070	10.600	10.080	10.340	20.230
S		0.623	0.046	1.587	3.719	0.071	0.402	0.815	0.187	0.374	0.539
%RSD		0.560	0.489	1.406	3.716	3.703	3.989	7.691	1.852	3.614	2.664
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	19.680	19.340	4.078	10.020	-0.071	0.214	51.050	11.520	-1.336	18.910
2	14:22:23	17.900	19.060	4.570	9.333	0.524	0.463	50.220	10.730	3.490	18.910
3	14:22:50	18.780	19.790	3.967	9.238	0.411	0.373	42.240	9.040	2.475	19.170
X		18.790	19.400	4.205	9.530	0.288	0.350	47.840	10.430	1.543	19.000
S		0.892	0.369	0.321	0.426	0.316	0.126	4.864	1.266	2.544	0.152
%RSD		4.749	1.901	7.633	4.471	109.800	36.070	10.170	12.140	164.900	0.801
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	96.5%	20.110	20.480	19.770	0.630	1.992	1.912	0.072	0.149	98.2%
2	14:22:23	97.3%	20.360	20.420	20.250	-0.123	1.984	1.883	0.125	0.227	98.6%
3	14:22:50	95.7%	19.980	20.320	19.880	0.393	1.980	1.961	0.085	0.319	97.6%
X		96.5%	20.150	20.410	19.960	0.300	1.985	1.919	0.094	0.232	98.1%
S		0.8%	0.197	0.079	0.253	0.385	0.006	0.040	0.027	0.085	0.5%
%RSD		0.8	0.979	0.387	1.265	128.300	0.310	2.068	29.200	36.590	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	27.030	37.710	3.964	4.178	9.768	10.150	98.6%	1.006	1.007	1.913
2	14:22:23	26.600	38.080	3.891	4.267	9.305	10.240	99.1%	1.042	0.990	1.918
3	14:22:50	26.700	39.330	4.244	4.226	9.563	9.976	98.2%	0.999	1.007	1.961
X		26.780	38.370	4.033	4.224	9.546	10.120	98.6%	1.015	1.001	1.931
S		0.225	0.848	0.186	0.045	0.232	0.136	0.4%	0.023	0.010	0.026
%RSD		0.839	2.210	4.621	1.057	2.433	1.345	0.4	2.288	1.002	1.365
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:21:56	1.867	1.893	98.8%							
2	14:22:23	1.825	1.837	100.0%							
3	14:22:50	1.843	1.881	98.0%							
X		1.845	1.870	99.0%							
S		0.021	0.029	1.0%							
%RSD		1.157	1.574	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	97.0%	2.068	244.200	247.700	-6.594	1973.000	2066.000	2175.000	2038.000	193.700
2	14:28:18	94.4%	2.087	252.000	257.600	-7.551	2063.000	2132.000	2243.000	2090.000	199.900
3	14:28:45	95.6%	2.123	255.100	259.300	-6.314	2065.000	2118.000	2190.000	2099.000	200.400
X		95.7%	2.093	250.400	254.900	-6.820	2034.000	2105.000	2203.000	2076.000	198.000
S		1.3%	0.028	5.627	6.290	0.648	52.800	34.510	35.540	33.050	3.725
%RSD		1.3	1.348	2.247	2.468	9.508	2.596	1.639	1.613	1.592	1.881
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	488.800	-43.640	1858.000	2059.000	1997.000	97.3%	25.180	24.020	23.840	636.100
2	14:28:18	506.300	-49.900	1942.000	2150.000	2045.000	93.0%	26.010	25.450	25.010	178.800
3	14:28:45	493.300	-55.240	2124.000	2120.000	2021.000	93.2%	26.270	24.500	24.750	414.800
X		496.100	-49.590	1975.000	2109.000	2021.000	94.5%	25.820	24.650	24.540	409.900
S		9.091	5.808	136.000	45.890	24.140	2.4%	0.571	0.728	0.619	228.700
%RSD		1.832	11.710	6.885	2.175	1.194	2.6	2.209	2.953	2.521	55.790
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	277.700	23.810	278.400	251.100	4.924	24.040	25.360	25.140	26.410	49.940
2	14:28:18	294.400	24.620	297.500	276.600	4.867	25.760	24.610	25.220	25.130	49.160
3	14:28:45	289.000	24.420	290.500	262.400	5.021	25.340	24.880	25.040	25.620	50.060
X		287.000	24.290	288.800	263.400	4.937	25.050	24.950	25.130	25.720	49.720
S		8.516	0.421	9.664	12.770	0.078	0.898	0.378	0.090	0.644	0.487
%RSD		2.967	1.734	3.346	4.849	1.575	3.586	1.516	0.359	2.505	0.980
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	48.680	48.310	10.760	23.220	-0.150	0.300	114.200	25.670	-0.527	48.360
2	14:28:18	50.430	50.330	11.570	24.660	0.170	0.313	119.100	26.130	-0.844	49.400
3	14:28:45	48.520	49.190	9.847	23.780	0.934	-0.272	107.500	23.550	3.763	48.590
X		49.210	49.280	10.730	23.890	0.318	0.114	113.600	25.120	0.797	48.780
S		1.059	1.013	0.864	0.724	0.557	0.334	5.825	1.375	2.573	0.548
%RSD		2.152	2.056	8.056	3.032	175.100	293.800	5.128	5.474	322.800	1.124
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	94.9%	51.770	51.020	50.950	0.882	4.901	5.122	0.352	0.455	96.1%
2	14:28:18	93.8%	50.230	51.040	50.140	1.305	5.015	4.893	0.435	0.504	96.8%
3	14:28:45	94.3%	52.100	52.330	50.810	0.982	4.897	4.917	0.434	0.535	95.1%
X		94.4%	51.370	51.460	50.640	1.056	4.938	4.977	0.407	0.498	96.0%
S		0.6%	1.001	0.752	0.436	0.221	0.067	0.126	0.048	0.041	0.9%
%RSD		0.6	1.949	1.460	0.860	20.910	1.360	2.531	11.750	8.149	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	69.280	99.910	9.850	10.990	25.580	25.190	97.9%	2.589	2.559	4.816
2	14:28:18	69.460	96.770	10.260	10.680	24.840	25.050	98.6%	2.467	2.601	4.642
3	14:28:45	69.860	99.620	10.210	10.580	25.460	25.070	97.2%	2.481	2.548	4.832
X		69.530	98.770	10.100	10.750	25.290	25.100	97.9%	2.512	2.569	4.764
S		0.294	1.739	0.222	0.213	0.399	0.074	0.7%	0.067	0.028	0.105
%RSD		0.423	1.761	2.195	1.980	1.578	0.295	0.7	2.653	1.087	2.209
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:27:51	4.764	4.726	95.9%							
2	14:28:18	4.828	4.685	95.6%							
3	14:28:45	5.001	4.818	97.2%							
X		4.864	4.743	96.3%							
S		0.123	0.068	0.9%							
%RSD		2.523	1.433	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	93.2%	244.700	237.900	252.800	4.196	269.300	281.500	268.300	248.000	246.800
2	14:34:14	91.1%	249.500	238.300	250.800	-0.992	271.600	283.300	265.400	261.400	252.800
3	14:34:41	88.2%	252.800	247.500	255.600	4.568	274.400	282.600	265.800	256.500	248.400
X		90.9%	249.000	241.200	253.000	2.591	271.800	282.500	266.500	255.300	249.300
S		2.5%	4.080	5.424	2.416	3.108	2.545	0.893	1.592	6.749	3.106
%RSD		2.7	1.639	2.248	0.955	120.000	0.936	0.316	0.598	2.644	1.246
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	245.100	-72.390	250.200	375.100	310.300	89.6%	243.900	243.200	242.900	2911.000
2	14:34:14	248.500	-83.970	254.900	387.500	310.000	87.0%	251.400	248.900	248.900	2648.000
3	14:34:41	257.300	-91.300	257.200	342.900	309.500	87.2%	247.500	242.700	245.100	2978.000
X		250.300	-82.550	254.100	368.500	309.900	87.9%	247.600	244.900	245.600	2846.000
S		6.308	9.533	3.568	22.990	0.381	1.5%	3.779	3.451	3.071	174.800
%RSD		2.520	11.550	1.404	6.238	0.123	1.7	1.526	1.409	1.250	6.144
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	377.000	243.100	280.000	258.300	244.500	249.100	244.700	244.300	250.100	242.500
2	14:34:14	394.500	246.900	283.400	269.800	253.900	252.500	256.800	255.200	255.800	251.400
3	14:34:41	378.300	240.800	279.600	255.800	246.800	248.700	247.600	251.500	251.500	248.000
X		383.300	243.600	281.000	261.300	248.400	250.100	249.700	250.400	252.500	247.300
S		9.776	3.076	2.054	7.491	4.903	2.098	6.340	5.527	2.970	4.479
%RSD		2.551	1.263	0.731	2.867	1.974	0.839	2.539	2.208	1.176	1.811
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	247.000	248.600	246.100	249.000	0.843	0.295	1102.000	243.700	0.923	244.600
2	14:34:14	252.200	252.600	252.400	251.100	-0.038	-0.601	1128.000	247.200	-0.616	247.400
3	14:34:41	249.000	247.000	247.900	242.000	0.240	-0.470	1167.000	253.700	-1.811	247.600
X		249.400	249.400	248.800	247.300	0.348	-0.259	1132.000	248.200	-0.502	246.500
S		2.672	2.874	3.256	4.756	0.450	0.484	32.940	5.113	1.371	1.650
%RSD		1.072	1.152	1.309	1.923	129.300	186.900	2.910	2.060	273.200	0.669
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	90.2%	243.100	242.400	242.100	239.300	255.700	246.900	245.700	242.900	92.0%
2	14:34:14	88.7%	249.300	251.700	248.700	250.300	257.200	250.800	247.000	246.800	91.2%
3	14:34:41	87.4%	244.200	247.600	252.400	246.900	251.600	248.300	243.400	243.300	90.9%
X		88.7%	245.500	247.200	247.700	245.500	254.900	248.600	245.300	244.300	91.4%
S		1.4%	3.309	4.706	5.227	5.607	2.900	1.980	1.819	2.170	0.6%
%RSD		1.6	1.348	1.903	2.110	2.284	1.138	0.796	0.741	0.888	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	246.000	248.100	240.100	242.500	247.100	248.400	96.3%	249.500	258.800	242.600
2	14:34:14	249.000	245.000	243.900	251.400	251.100	252.100	94.1%	250.100	267.900	253.600
3	14:34:41	246.000	244.300	243.900	247.900	247.800	249.400	94.2%	249.100	259.500	246.600
X		247.000	245.800	242.600	247.300	248.700	249.900	94.9%	249.600	262.100	247.600
S		1.731	2.029	2.206	4.485	2.158	1.912	1.2%	0.465	5.030	5.614
%RSD		0.701	0.825	0.909	1.814	0.868	0.765	1.3	0.186	1.919	2.268
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:33:47	241.100	241.100	95.7%							
2	14:34:14	250.500	250.600	95.9%							
3	14:34:41	246.900	245.200	95.0%							
X		246.100	245.600	95.5%							
S		4.744	4.745	0.5%							
%RSD		1.927	1.932	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.6%	<u>m 507.300</u>	<u>m 511.100</u>	<u>m 512.100</u>	8.931	547.400	576.000	546.800	502.900	<u>m 500.800</u>
2	14:40:09	87.0%	498.100	<u>m 505.600</u>	<u>m 500.900</u>	-0.852	564.200	564.300	545.200	518.300	<u>m 510.000</u>
3	14:40:36	85.9%	495.500	496.800	<u>m 505.100</u>	3.933	560.500	571.100	552.500	527.600	<u>m 511.700</u>
X		85.8%	<u>m 500.300</u>	<u>m 504.500</u>	<u>m 506.000</u>	4.004	557.400	570.400	548.200	516.300	<u>m 507.500</u>
S		1.2%	<u>m 6.191</u>	<u>m 7.234</u>	<u>m 5.622</u>	4.892	8.875	5.880	3.826	12.450	<u>m 5.836</u>
%RSD		1.4	<u>m 1.238</u>	<u>m 1.434</u>	<u>m 1.111</u>	122.200	1.592	1.031	0.698	2.412	<u>m 1.150</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	519.600	-83.370	512.000	731.900	607.800	83.1%	498.600	<u>m 501.200</u>	<u>m 506.000</u>	1378.000
2	14:40:09	517.200	-98.600	512.400	675.500	602.000	82.4%	499.700	<u>m 503.300</u>	<u>m 501.800</u>	3295.000
3	14:40:36	520.200	-105.700	506.000	791.000	617.000	80.9%	<u>m 501.400</u>	<u>m 503.200</u>	<u>m 504.300</u>	5078.000
X		519.000	-95.900	510.100	732.800	609.000	82.1%	<u>m 499.900</u>	<u>m 502.600</u>	<u>m 504.000</u>	3250.000
S		1.583	11.430	3.560	57.780	7.572	1.1%	<u>m 1.415</u>	<u>m 1.139</u>	<u>m 2.088</u>	1851.000
%RSD		0.305	11.920	0.698	7.884	1.243	1.4	<u>m 0.283</u>	<u>m 0.227</u>	<u>m 0.414</u>	56.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	773.300	499.300	561.400	527.400	498.500	497.400	497.800	<u>m 503.800</u>	<u>m 501.900</u>	497.700
2	14:40:09	772.600	498.200	566.200	521.300	<u>m 505.800</u>	496.300	498.800	<u>m 501.600</u>	<u>m 501.500</u>	<u>m 503.100</u>
3	14:40:36	788.400	<u>m 512.200</u>	576.500	527.700	<u>m 506.600</u>	<u>m 506.200</u>	<u>m 503.900</u>	494.100	492.800	498.900
X		778.100	<u>m 503.200</u>	568.000	525.500	<u>m 503.600</u>	<u>m 500.000</u>	<u>m 500.100</u>	<u>m 499.800</u>	<u>m 498.700</u>	<u>m 499.900</u>
S		8.941	<u>m 7.789</u>	7.693	3.598	<u>m 4.420</u>	<u>m 5.426</u>	<u>m 3.241</u>	<u>m 5.096</u>	<u>m 5.102</u>	<u>m 2.867</u>
%RSD		1.149	<u>m 1.548</u>	1.354	0.685	<u>m 0.878</u>	<u>m 1.085</u>	<u>m 0.648</u>	<u>m 1.020</u>	<u>m 1.023</u>	<u>m 0.574</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	491.600	497.200	491.500	498.200	-0.023	-0.281	2239.000	494.100	-1.286	<u>m 503.300</u>
2	14:40:09	<u>m 505.400</u>	<u>m 510.100</u>	<u>m 508.000</u>	<u>m 510.800</u>	0.152	-0.685	2250.000	497.200	3.502	<u>m 501.300</u>
3	14:40:36	<u>m 504.100</u>	<u>m 506.800</u>	<u>m 507.000</u>	495.200	-0.103	-0.606	2317.000	<u>m 511.400</u>	0.964	<u>m 501.100</u>
X		<u>m 500.400</u>	<u>m 504.700</u>	<u>m 502.200</u>	<u>m 501.400</u>	0.009	-0.524	2269.000	<u>m 500.900</u>	1.060	<u>m 501.900</u>
S		<u>m 7.616</u>	<u>m 6.704</u>	<u>m 9.280</u>	<u>m 8.261</u>	0.131	0.214	42.340	<u>m 9.230</u>	2.396	<u>m 1.213</u>
%RSD		<u>m 1.522</u>	<u>m 1.328</u>	<u>m 1.848</u>	<u>m 1.648</u>	1499.000	40.850	1.866	<u>m 1.843</u>	226.000	<u>m 0.242</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.8%	493.000	488.300	490.700	<u>m 509.700</u>	<u>m 514.500</u>	<u>m 506.100</u>	496.900	498.200	86.6%
2	14:40:09	84.2%	<u>m 503.000</u>	<u>m 503.900</u>	<u>m 505.300</u>	494.100	<u>m 518.000</u>	<u>m 506.200</u>	<u>m 501.400</u>	<u>m 502.800</u>	85.7%
3	14:40:36	83.4%	<u>m 510.200</u>	<u>m 511.500</u>	<u>m 507.200</u>	<u>m 503.000</u>	<u>m 521.700</u>	<u>m 521.400</u>	<u>m 508.600</u>	<u>m 507.400</u>	85.0%
X		84.1%	<u>m 502.100</u>	<u>m 501.200</u>	<u>m 501.100</u>	<u>m 502.200</u>	<u>m 518.100</u>	<u>m 511.200</u>	<u>m 502.300</u>	<u>m 502.800</u>	85.8%
S		0.7%	<u>m 8.662</u>	<u>m 11.840</u>	<u>m 9.061</u>	<u>m 7.797</u>	<u>m 3.612</u>	<u>m 8.801</u>	<u>m 5.893</u>	<u>m 4.626</u>	0.8%
%RSD		0.8	<u>m 1.725</u>	<u>m 2.363</u>	<u>m 1.808</u>	<u>m 1.553</u>	<u>m 0.697</u>	<u>m 1.721</u>	<u>m 1.173</u>	<u>m 0.920</u>	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	496.400	488.100	497.000	<u>m 502.400</u>	500.000	497.200	92.4%	<u>m 512.500</u>	<u>m 489.300</u>	499.900
2	14:40:09	<u>m 515.800</u>	<u>m 510.200</u>	<u>m 508.300</u>	<u>m 501.000</u>	<u>m 508.300</u>	<u>m 504.400</u>	92.3%	<u>m 510.800</u>	<u>m 496.100</u>	497.900
3	14:40:36	<u>m 511.400</u>	<u>m 509.200</u>	<u>m 505.800</u>	<u>m 500.700</u>	<u>m 504.600</u>	498.400	91.9%	<u>m 504.000</u>	<u>m 496.500</u>	<u>m 505.800</u>
X		<u>m 507.900</u>	<u>m 502.500</u>	<u>m 503.700</u>	<u>m 501.300</u>	<u>m 504.300</u>	<u>m 500.000</u>	92.2%	<u>m 509.100</u>	<u>m 494.000</u>	<u>m 501.200</u>
S		<u>m 10.160</u>	<u>m 12.460</u>	<u>m 5.938</u>	<u>m 0.894</u>	<u>m 4.170</u>	<u>m 3.902</u>	0.3%	<u>m 4.492</u>	<u>m 4.023</u>	<u>m 4.109</u>
%RSD		<u>m 2.000</u>	<u>m 2.480</u>	<u>m 1.179</u>	<u>m 0.178</u>	<u>m 0.827</u>	<u>m 0.780</u>	0.3	<u>m 0.882</u>	<u>m 0.814</u>	<u>m 0.820</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:39:42	<u>m 502.900</u>	<u>m 503.900</u>	92.8%							
2	14:40:09	497.000	<u>m 501.300</u>	92.4%							
3	14:40:36	<u>m 505.900</u>	<u>m 503.700</u>	92.8%							
X		<u>m 501.900</u>	<u>m 503.000</u>	92.7%							
S		<u>m 4.532</u>	<u>m 1.435</u>	0.2%							
%RSD		<u>m 0.903</u>	<u>m 0.285</u>	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	81.7%	-0.023	4.861	5.207	-13.390	±50410.000	±49520.000	±49620.000	±47840.000	1.047
2	14:46:06	81.3%	0.021	5.894	4.543	-6.239	±49480.000	±50720.000	±50970.000	±46750.000	1.182
3	14:46:33	82.9%	0.020	4.464	4.333	-12.190	±50740.000	±50430.000	±49490.000	±47630.000	1.124
X		82.0%	0.006	5.073	4.694	-10.610	±50210.000	±50220.000	±50030.000	±47410.000	1.118
S		0.8%	0.025	0.738	0.456	3.830	±655.600	±626.400	±822.900	±582.600	0.068
%RSD		1.0	401.900	14.550	9.721	36.110	±1.306	±1.247	±1.645	±1.229	6.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±3995.000	-112.100	±46110.000	50710.000	±49440.000	80.8%	0.391	0.031	0.219	-62.520
2	14:46:06	±4151.000	-114.600	±46790.000	50070.000	±49660.000	82.8%	0.499	0.022	0.138	-66.410
3	14:46:33	±4109.000	-129.200	±46740.000	50200.000	±50140.000	83.0%	0.450	0.010	0.172	-64.220
X		±4085.000	-118.700	±46540.000	50330.000	±49750.000	82.2%	0.447	0.021	0.177	-64.390
S		±80.730	9.209	±379.700	338.600	±355.200	1.2%	0.054	0.010	0.041	1.949
%RSD		±1.976	7.761	±0.816	0.673	±0.714	1.5	12.070	49.180	23.080	3.027
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±49610.000	0.648	±50060.000	±48140.000	2.240	2.154	6.527	0.380	0.250	1.061
2	14:46:06	±50420.000	0.599	±49870.000	±47470.000	2.264	2.033	4.737	0.303	0.265	1.124
3	14:46:33	±49910.000	0.698	±50330.000	±48310.000	2.254	1.845	4.368	0.404	0.164	0.901
X		±49980.000	0.648	±50080.000	±47980.000	2.252	2.010	5.211	0.362	0.226	1.029
S		±407.400	0.050	±234.500	±443.600	0.012	0.156	1.154	0.053	0.054	0.115
%RSD		±0.815	7.654	±0.468	±0.924	0.535	7.746	22.160	14.600	23.970	11.160
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.958	1.246	0.190	1.416	1.357	-0.686	-0.094	-0.111	0.593	0.396
2	14:46:06	1.089	0.970	0.193	0.220	1.305	-0.193	-0.644	-0.095	-0.370	0.398
3	14:46:33	1.211	0.937	0.490	0.757	2.382	-0.097	2.842	0.629	0.048	0.388
X		1.086	1.051	0.291	0.798	1.681	-0.325	0.701	0.141	0.090	0.394
S		0.127	0.170	0.173	0.599	0.607	0.316	1.874	0.423	0.483	0.006
%RSD		11.650	16.170	59.410	75.130	36.120	97.270	267.300	299.600	534.600	1.426
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	82.2%	1.114	0.925	0.898	0.099	0.037	0.043	0.036	0.006	82.8%
2	14:46:06	83.6%	0.932	0.965	0.959	0.083	0.026	0.058	-0.001	0.032	83.3%
3	14:46:33	83.9%	0.991	0.991	0.977	0.223	0.033	0.029	-0.009	0.014	84.1%
X		83.2%	1.012	0.960	0.945	0.135	0.032	0.043	0.009	0.017	83.4%
S		0.9%	0.093	0.033	0.041	0.076	0.006	0.014	0.024	0.013	0.6%
%RSD		1.1	9.148	3.483	4.362	56.460	17.780	32.840	279.200	78.090	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.394	0.656	0.975	0.980	0.055	0.043	88.6%	0.034	0.056	0.043
2	14:46:06	0.370	0.576	0.962	0.978	-0.009	0.048	90.7%	0.049	0.050	0.047
3	14:46:33	0.356	0.550	0.955	0.899	0.032	0.036	89.6%	0.057	0.030	0.033
X		0.374	0.594	0.964	0.952	0.026	0.042	89.6%	0.047	0.045	0.041
S		0.019	0.055	0.010	0.046	0.033	0.006	1.0%	0.011	0.014	0.007
%RSD		5.100	9.271	1.017	4.807	125.700	13.960	1.1	24.220	29.990	16.950
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:45:39	0.041	0.042	87.2%							
2	14:46:06	0.055	0.047	87.3%							
3	14:46:33	0.040	0.041	88.3%							
X		0.045	0.043	87.6%							
S		0.008	0.003	0.6%							
%RSD		18.710	7.218	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	79.0%	0.008	2.040	2.002	-12.050	97620.000	99400.000	99970.000	92370.000	1.284
2	14:52:01	78.5%	-0.022	3.057	2.109	-12.490	99940.000	100300.000	100100.000	93540.000	1.110
3	14:52:28	79.9%	0.008	2.168	2.017	-7.497	102100.000	100000.000	99910.000	94990.000	1.242
X		79.2%	-0.002	2.422	2.043	-10.680	99890.000	99880.000	99980.000	93630.000	1.212
S		0.7%	0.017	0.554	0.058	2.765	2253.000	438.200	82.360	1314.000	0.091
%RSD		0.9	966.100	22.890	2.818	25.890	2.256	0.439	0.082	1.403	7.469
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	8443.000	-120.800	92050.000	97570.000	99170.000	82.5%	1.047	-0.047	0.322	-50.120
2	14:52:01	8514.000	-120.200	94110.000	100700.000	100800.000	81.6%	0.675	-0.003	0.325	-85.880
3	14:52:28	8356.000	-136.700	94880.000	101200.000	100300.000	82.0%	1.006	-0.059	0.329	-32.570
X		8438.000	-125.900	93680.000	99830.000	100100.000	82.0%	0.909	-0.037	0.325	-56.190
S		78.890	9.348	1463.000	1976.000	823.700	0.5%	0.204	0.030	0.003	27.170
%RSD		0.935	7.427	1.562	1.979	0.823	0.6	22.440	80.560	1.033	48.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	98930.000	1.260	98730.000	95040.000	4.634	3.816	9.785	0.496	0.353	1.858
2	14:52:01	100200.000	1.295	101400.000	96680.000	4.516	3.478	7.679	0.658	0.387	2.121
3	14:52:28	100900.000	1.346	99770.000	96440.000	4.559	3.749	8.544	0.660	0.440	2.066
X		100000.000	1.300	99960.000	96050.000	4.569	3.681	8.669	0.605	0.394	2.015
S		983.900	0.043	1324.000	886.400	0.059	0.179	1.058	0.094	0.044	0.139
%RSD		0.984	3.298	1.325	0.923	1.300	4.863	12.210	15.530	11.210	6.880
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	1.643	1.930	0.408	1.353	4.998	1.237	-0.222	-0.533	3.522	0.769
2	14:52:01	1.788	1.758	0.508	1.607	5.128	0.020	0.673	0.086	0.496	0.774
3	14:52:28	1.463	1.932	0.619	1.961	5.225	0.013	1.682	0.468	-0.742	0.813
X		1.631	1.873	0.512	1.640	5.117	0.423	0.711	0.007	1.092	0.785
S		0.163	0.099	0.105	0.305	0.114	0.704	0.952	0.505	2.194	0.024
%RSD		9.971	5.309	20.580	18.600	2.226	166.300	134.000	7155.000	200.900	3.062
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	83.9%	0.347	0.234	0.182	-0.328	0.013	0.011	0.009	-0.001	83.0%
2	14:52:01	83.8%	0.381	0.317	0.232	0.563	0.021	0.024	-0.013	0.003	83.1%
3	14:52:28	82.2%	0.330	0.280	0.155	0.178	0.010	0.022	-0.013	-0.006	83.0%
X		83.3%	0.353	0.277	0.190	0.138	0.014	0.019	-0.006	-0.001	83.0%
S		1.0%	0.026	0.042	0.039	0.447	0.006	0.007	0.013	0.005	0.1%
%RSD		1.2	7.419	15.040	20.470	324.600	39.080	37.380	227.100	358.100	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	0.058	0.090	0.601	0.632	0.012	0.001	88.4%	0.012	0.018	0.037
2	14:52:01	0.072	0.183	0.635	0.608	-0.009	0.072	89.2%	0.011	0.016	0.029
3	14:52:28	0.065	0.082	0.543	0.567	0.023	0.061	87.2%	0.009	0.018	0.048
X		0.065	0.118	0.593	0.602	0.008	0.045	88.3%	0.011	0.017	0.038
S		0.007	0.056	0.047	0.033	0.016	0.038	1.0%	0.002	0.001	0.010
%RSD		10.750	47.630	7.850	5.499	193.300	85.780	1.1	14.500	6.342	25.250
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:51:33	0.019	0.029	85.0%							
2	14:52:01	0.022	0.026	86.2%							
3	14:52:28	0.049	0.032	85.4%							
X		0.030	0.029	85.5%							
S		0.016	0.003	0.6%							
%RSD		54.620	10.390	0.7							

ICV MW12789 PREP 4/22/20 4/22/2020 14:57:03 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	84.0%	199.200	207.800	207.100	-4.914	±39660.000	±40640.000	±40090.000	±36740.000	191.300
2	14:57:57	81.8%	199.400	191.400	207.500	-0.411	±40030.000	±41330.000	±41130.000	±37400.000	192.500
3	14:58:24	83.8%	203.900	199.100	198.500	-5.660	±40640.000	±39960.000	±40280.000	±37800.000	195.100
X		83.2%	100.417%	199.400	102.179%	-3.661	±100.280%	±40640.000	±40500.000	±93.286%	96.496%
S		1.2%	n/a	8.206	n/a	2.840	±n/a	±686.400	±552.300	±n/a	n/a
%RSD		1.5	1.331	4.115	2.506	77.560	±1.242	±1.689	±1.364	±1.426	1.012
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	2479.000	-134.900	±37820.000	39320.000	±38960.000	87.1%	194.500	193.800	188.600	1698.000
2	14:57:57	±2397.000	-147.300	±37470.000	39360.000	±38850.000	87.0%	194.900	194.100	189.600	1903.000
3	14:58:24	2579.000	-151.300	±38030.000	39720.000	±39110.000	86.1%	197.600	198.900	189.800	2048.000
X		±2485.000	-144.500	±94.437%	39470.000	±97.429%	86.7%	97.840%	97.815%	94.669%	1883.000
S		±91.380	8.585	±n/a	220.700	±n/a	0.6%	n/a	n/a	n/a	175.900
%RSD		±3.677	5.942	±0.751	0.559	±0.337	0.6	0.864	1.467	0.352	9.338
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	±39520.000	184.700	±39030.000	±37470.000	183.700	182.800	190.300	186.900	195.700	191.400
2	14:57:57	±38980.000	185.400	±38830.000	±37650.000	185.400	183.900	195.600	190.200	190.500	192.600
3	14:58:24	±39910.000	183.700	±39860.000	±37940.000	189.300	189.900	191.800	189.100	192.000	190.400
X		±39470.000	92.295%	±98.093%	±94.212%	93.053%	92.754%	192.600	188.700	96.365%	95.720%
S		±466.200	n/a	±n/a	±n/a	n/a	n/a	2.737	1.674	n/a	n/a
%RSD		±1.181	0.452	±1.390	±0.632	1.544	2.052	1.422	0.887	1.369	0.580
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	186.000	186.000	210.600	190.800	1.578	-0.749	895.400	203.500	3.284	192.800
2	14:57:57	190.200	185.600	208.000	190.200	1.691	-0.174	870.600	195.500	0.346	192.800
3	14:58:24	191.100	188.800	203.100	185.500	3.551	0.518	857.800	193.200	1.966	191.700
X		189.100	186.800	103.630%	188.800	2.273	-0.135	874.600	98.706%	1.866	96.221%
S		2.738	1.744	n/a	2.888	1.108	0.634	19.120	n/a	1.472	n/a
%RSD		1.448	0.934	1.825	1.529	48.730	469.600	2.186	2.745	78.880	0.346
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	86.1%	204.700	201.600	197.200	186.200	200.200	196.800	194.200	192.100	85.6%
2	14:57:57	85.8%	201.700	204.000	201.500	191.600	197.600	194.400	192.500	191.000	86.6%
3	14:58:24	87.0%	205.600	200.300	199.300	187.400	198.400	192.300	195.300	190.300	87.1%
X		86.3%	102.007%	100.983%	99.664%	188.400	99.366%	194.500	97.004%	95.574%	86.4%
S		0.6%	n/a	n/a	n/a	2.849	n/a	2.279	n/a	n/a	0.8%
%RSD		0.7	1.014	0.913	1.096	1.512	0.651	1.172	0.729	0.471	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	198.700	199.000	201.800	198.900	203.700	197.100	92.6%	198.300	198.500	189.900
2	14:57:57	197.300	197.100	200.000	199.800	197.900	196.400	91.9%	198.200	202.400	190.200
3	14:58:24	198.600	195.800	198.600	198.700	195.100	195.800	93.2%	200.200	201.300	188.100
X		99.086%	98.650%	200.200	99.577%	99.434%	98.228%	92.6%	198.900	100.363%	189.400
S		n/a	n/a	1.611	n/a	n/a	n/a	0.7%	1.137	n/a	1.115
%RSD		0.387	0.833	0.805	0.297	2.208	0.332	0.7	0.572	0.996	0.589
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:57:30	185.600	186.100	89.2%							
2	14:57:57	187.000	185.300	89.0%							
3	14:58:24	187.400	186.700	90.5%							
X		186.700	93.015%	89.6%							
S		0.952	n/a	0.8%							
%RSD		0.510	0.391	0.9							

ICB IM9936-01 4/22/2020 15:02:57 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	90.0%	0.014	1.168	0.996	-7.239	10.510	1.429	0.625	1.756	-0.003
2	15:03:50	89.2%	0.015	0.930	1.126	-0.044	10.430	1.855	1.373	1.261	0.019
3	15:04:17	89.8%	-0.012	1.684	1.413	-1.978	9.389	1.321	0.964	1.230	0.013
X		89.7%	0.006	1.261	1.178	-3.087	10.110	1.535	0.988	1.416	0.010
S		0.5%	0.015	0.385	0.213	3.723	0.626	0.282	0.374	0.295	0.012
%RSD		0.5	269.500	30.560	18.090	120.600	6.194	18.380	37.910	20.870	120.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.398	-164.600	18.060	1.109	1.965	88.6%	-0.046	-0.029	-0.018	-52.490
2	15:03:50	2.865	-167.200	17.660	-0.969	1.640	87.3%	0.022	0.014	-0.027	-77.080
3	15:04:17	2.612	-170.900	16.110	2.217	2.053	87.7%	-0.001	0.005	-0.001	-80.190
X		2.625	-167.600	17.270	0.786	1.886	87.9%	-0.008	-0.003	-0.015	-69.920
S		0.234	3.130	1.029	1.617	0.217	0.6%	0.034	0.023	0.013	15.180
%RSD		8.908	1.868	5.956	205.800	11.530	0.7	408.800	733.000	86.110	21.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.569	0.019	-2.481	5.389	0.008	0.021	1.199	0.048	0.077	-0.054
2	15:03:50	2.547	0.010	-1.282	3.909	0.003	-0.028	0.846	0.044	0.019	-0.187
3	15:04:17	0.515	0.024	-2.410	1.817	0.014	0.003	0.755	0.041	0.008	-0.031
X		1.877	0.018	-2.058	3.705	0.008	-0.001	0.933	0.044	0.035	-0.091
S		1.180	0.007	0.672	1.795	0.005	0.025	0.235	0.004	0.037	0.084
%RSD		62.840	40.380	32.670	48.450	62.910	2212.000	25.170	8.382	106.000	93.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.165	0.185	-0.017	0.078	0.219	-0.448	0.286	0.496	-3.489	0.003
2	15:03:50	-0.068	0.114	-0.008	-0.091	0.020	-0.590	-1.358	0.028	-2.659	0.003
3	15:04:17	-0.517	0.061	-0.148	0.907	0.105	-0.067	-3.065	-0.611	-0.644	0.006
X		-0.140	0.120	-0.058	0.298	0.115	-0.368	-1.379	-0.029	-2.264	0.004
S		0.347	0.062	0.078	0.534	0.100	0.271	1.676	0.556	1.463	0.002
%RSD		247.500	51.920	135.900	179.300	86.900	73.460	121.500	1913.000	64.610	40.530
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	88.3%	0.116	0.113	0.071	0.464	0.005	0.009	0.007	-0.000	91.5%
2	15:03:50	88.1%	0.160	0.055	0.161	-0.781	0.011	0.006	-0.006	0.010	91.0%
3	15:04:17	89.3%	0.163	0.096	0.131	0.092	-0.000	0.011	-0.013	0.008	91.7%
X		88.6%	0.146	0.088	0.121	-0.075	0.005	0.009	-0.004	0.006	91.4%
S		0.6%	0.026	0.030	0.046	0.639	0.006	0.003	0.010	0.005	0.3%
%RSD		0.7	17.920	33.960	37.860	854.800	115.300	28.760	274.700	90.480	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.015	0.055	0.166	0.188	-0.032	0.005	93.7%	0.009	0.008	0.026
2	15:03:50	0.047	0.085	0.207	0.206	-0.041	0.005	93.4%	0.017	0.009	0.020
3	15:04:17	0.018	0.052	0.210	0.228	-0.041	-0.012	94.7%	0.013	0.004	0.012
X		0.026	0.064	0.194	0.207	-0.038	-0.000	93.9%	0.013	0.007	0.019
S		0.018	0.018	0.025	0.020	0.006	0.010	0.7%	0.004	0.003	0.007
%RSD		67.840	28.170	12.720	9.699	14.670	2142.000	0.7	29.250	36.430	36.290
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:03:23	0.009	0.016	95.8%							
2	15:03:50	0.010	0.015	95.6%							
3	15:04:17	0.019	0.010	97.5%							
X		0.013	0.014	96.3%							
S		0.006	0.003	1.0%							
%RSD		43.580	24.960	1.1							

ICSA MW12579 4/22/2020 15:08:50 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	78.7%	-0.006	1.571	1.135	576.300	TM 102400.000	TM 98940.000	TM 98500.000	TM 97450.000	TM 93260.000
2	15:09:44	81.3%	-0.023	1.557	0.818	568.800	TM 105000.000	TM 100400.000	TM 101100.000	TM 99790.000	TM 93460.000
3	15:10:11	80.7%	-0.022	0.872	0.879	573.700	TM 102900.000	TM 99460.000	TM 98780.000	TM 96230.000	TM 91470.000
X		80.2%	-1.#IO%	1.333	1.#IO%	573.000	TM 103.442%	TM 99610.000	TM 99450.000	TM 97.821%	TM 92.731%
S		1.4%	n/a	0.400	n/a	3.796	TM n/a	TM 759.000	TM 1419.000	TM n/a	TM n/a
%RSD		1.7	54.060	29.960	17.820	0.662	TM 1.315	TM 0.762	TM 1.426	TM 1.848	TM 1.181
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	16.400	TM 30650.000	TM 91370.000	TM 101100.000	TM 101300.000	76.9%	TM 2145.000	-0.908	-1.011	3401.000
2	15:09:44	14.890	TM 30500.000	TM 93550.000	TM 101500.000	TM 103400.000	76.6%	TM 2164.000	-0.992	-1.203	3523.000
3	15:10:11	15.070	TM 30120.000	TM 92500.000	TM 100100.000	TM 100700.000	79.0%	TM 2064.000	-0.938	-1.036	3554.000
X		15.450	TM 30420.000	TM 92.476%	TM 100900.000	TM 101.821%	77.5%	TM 106.210%	-1.#IO%	-1.#IO%	3493.000
S		0.821	TM 272.000	TM n/a	TM 719.600	TM n/a	1.3%	TM n/a	n/a	n/a	81.130
%RSD		5.309	TM 0.894	TM 1.178	TM 0.713	TM 1.361	1.7	TM 2.482	4.475	9.618	2.323
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	TM 102500.000	0.117	TM 102500.000	TM 98890.000	0.230	0.395	13.250	-1.352	-0.083	1.351
2	15:09:44	TM 105000.000	0.133	TM 104500.000	TM 100200.000	0.239	0.775	15.190	-1.202	-0.044	1.397
3	15:10:11	TM 100300.000	0.142	TM 101700.000	TM 98630.000	0.250	0.508	16.070	-1.103	-0.278	1.424
X		TM 102600.000	1.#IO%	TM 102900.000	TM 99.240%	1.#IO%	1.#IO%	14.840	-1.219	-1.#IO%	1.#IO%
S		TM 2322.000	n/a	TM 1466.000	TM n/a	n/a	n/a	1.441	0.126	n/a	n/a
%RSD		TM 2.263	9.627	TM 1.425	TM 0.850	4.233	34.870	9.712	10.300	93.090	2.680
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	1.381	0.499	-0.865	1.869	5.292	0.697	-2.705	-2.378	13.360	0.876
2	15:09:44	0.645	0.688	0.048	1.895	7.401	0.735	-2.779	-1.971	9.884	0.819
3	15:10:11	1.532	0.507	-0.471	1.583	7.786	1.446	-1.931	-2.399	14.550	0.868
X		1.186	0.565	-1.#IO%	1.782	6.826	0.959	-2.472	-1.#IO%	12.600	0.854
S		0.475	0.107	n/a	0.173	1.343	0.422	0.470	n/a	2.425	0.031
%RSD		40.030	18.960	106.700	9.698	19.670	43.990	19.000	10.710	19.250	3.637
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	80.9%	TM 2098.000	TM 2066.000	TM 2146.000	-0.809	0.009	0.022	-6.316	0.031	83.8%
2	15:09:44	83.0%	TM 2129.000	TM 2115.000	TM 2116.000	-0.793	0.022	0.043	-6.189	0.119	83.1%
3	15:10:11	83.6%	TM 2127.000	TM 2092.000	TM 2147.000	0.058	0.013	0.033	-6.516	-0.012	84.7%
X		82.5%	TM 2118.000	TM 104.549%	TM 2137.000	-0.515	1.#IO%	0.032	-6.340	1.#IO%	83.9%
S		1.4%	TM 17.440	TM n/a	TM 17.560	0.496	n/a	0.010	0.165	n/a	0.8%
%RSD		1.7	TM 0.823	TM 1.163	TM 0.822	96.300	45.730	32.160	2.603	145.700	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	0.781	0.048	0.140	0.096	0.033	0.036	91.2%	0.030	0.025	0.051
2	15:09:44	0.695	0.075	0.153	0.155	-0.009	0.042	91.7%	0.020	0.007	0.058
3	15:10:11	0.733	0.093	0.121	0.116	-0.010	0.012	93.3%	0.017	0.007	0.050
X		1.#IO%	1.#IO%	0.138	1.#IO%	0.004	1.#IO%	92.1%	0.022	1.#IO%	0.053
S		n/a	n/a	0.016	n/a	0.024	n/a	1.1%	0.007	n/a	0.004
%RSD		5.795	31.120	11.570	24.350	548.100	53.260	1.2	29.620	80.160	8.065
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:09:17	0.082	0.065	88.5%							
2	15:09:44	0.055	0.049	88.8%							
3	15:10:11	0.044	0.051	90.3%							
X		0.060	1.#IO%	89.2%							
S		0.020	n/a	1.0%							
%RSD		32.480	16.140	1.1							

CCV MW12620 4/22/2020 15:14:45 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	86.4%	298.300	289.000	302.400	-8.235	60660.000	62060.000	61560.000	57320.000	297.700
2	15:15:39	83.8%	305.700	288.600	296.300	0.794	61350.000	61760.000	60940.000	58670.000	297.700
3	15:16:06	83.4%	304.300	297.000	304.800	-5.554	61760.000	63630.000	62910.000	58300.000	298.500
X		84.5%	100.920%	97.180%	100.388%	-4.332	102.099%	62480.000	61800.000	96.835%	99.315%
S		1.6%	n/a	n/a	n/a	4.637	n/a	1008.000	1004.000	n/a	n/a
%RSD		1.9	1.307	1.620	1.442	107.000	0.908	1.613	1.625	1.201	0.161
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	2694.000	-73.840	56500.000	61700.000	61050.000	86.0%	297.200	300.800	293.100	1466.000
2	15:15:39	2787.000	-83.180	58070.000	62120.000	62760.000	84.4%	300.700	297.700	300.300	3433.000
3	15:16:06	2765.000	-92.850	57790.000	61870.000	62500.000	84.6%	301.200	300.900	291.700	1796.000
X		2748.000	-83.290	95.756%	61900.000	103.506%	85.0%	99.908%	99.931%	98.347%	2232.000
S		48.620	9.507	n/a	208.600	n/a	0.9%	n/a	n/a	n/a	1054.000
%RSD		1.769	11.410	1.451	0.337	1.487	1.0	0.723	0.613	1.572	47.210
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	61710.000	286.200	60920.000	58780.000	287.300	281.700	293.900	276.200	284.400	293.700
2	15:15:39	63150.000	293.500	62570.000	60130.000	293.800	289.500	304.100	280.900	285.600	294.800
3	15:16:06	61610.000	286.300	61960.000	59540.000	290.300	286.400	303.500	280.500	281.600	283.400
X		62160.000	96.217%	61820.000	99.141%	96.833%	95.295%	300.500	279.200	94.614%	96.877%
S		861.100	n/a	837.800	n/a	n/a	n/a	5.733	2.591	n/a	n/a
%RSD		1.385	1.451	1.355	1.133	1.120	1.374	1.908	0.928	0.728	2.171
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	282.400	289.000	299.000	286.300	3.895	-0.139	1300.000	293.100	4.335	294.800
2	15:15:39	288.500	289.200	301.900	292.200	4.802	0.050	1315.000	297.200	-0.973	299.800
3	15:16:06	284.800	282.900	296.800	286.400	3.387	0.662	1288.000	285.600	0.276	296.500
X		285.200	287.000	99.741%	288.300	4.028	0.191	1301.000	97.319%	1.213	99.018%
S		3.055	3.572	n/a	3.361	0.717	0.419	13.270	n/a	2.775	n/a
%RSD		1.071	1.244	0.860	1.166	17.800	219.100	1.020	2.003	228.800	0.859
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	88.6%	310.100	310.000	305.800	293.600	297.200	291.500	294.500	292.600	88.3%
2	15:15:39	87.6%	321.400	314.600	311.400	288.300	302.000	297.200	294.200	292.800	87.2%
3	15:16:06	87.6%	310.600	311.100	308.500	299.000	293.600	288.200	291.000	290.600	88.8%
X		88.0%	104.676%	103.962%	308.600	293.600	99.205%	292.300	293.200	97.341%	88.1%
S		0.6%	n/a	n/a	2.802	5.334	n/a	4.542	1.922	n/a	0.8%
%RSD		0.6	2.033	0.775	0.908	1.816	1.422	1.554	0.656	0.412	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	295.700	299.800	297.500	292.400	301.200	295.000	96.6%	306.300	307.600	286.900
2	15:15:39	302.700	303.200	303.100	297.100	305.900	300.700	94.8%	304.800	313.100	296.700
3	15:16:06	298.900	296.700	299.100	300.300	304.000	301.400	95.0%	305.100	309.100	289.200
X		99.707%	99.973%	299.900	98.868%	101.237%	99.682%	95.5%	305.400	103.314%	96.976%
S		n/a	n/a	2.893	n/a	n/a	n/a	1.0%	0.814	n/a	n/a
%RSD		1.173	1.093	0.965	1.350	0.774	1.178	1.1	0.267	0.919	1.775
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:15:12	282.200	282.000	91.4%							
2	15:15:39	291.900	290.900	92.5%							
3	15:16:06	286.900	287.300	92.1%							
X		95.670%	95.576%	92.0%							
S		n/a	n/a	0.6%							
%RSD		1.679	1.564	0.6							

CCB IM9936-01 4/22/2020 15:20:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

User File Location: 15000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	93.3%	-0.039	1.844	1.807	-6.426	17.540	2.288	2.421	1.961	0.111
2	15:21:33	92.9%	-0.001	1.709	1.980	-10.380	16.100	1.855	1.982	2.518	0.123
3	15:22:00	90.3%	-0.012	1.736	1.798	-1.885	15.260	2.061	1.651	2.070	0.091
X		92.2%	-0.017	1.763	1.862	-6.229	16.300	2.068	2.018	2.183	0.109
S		1.7%	0.020	0.071	0.102	4.249	1.153	0.216	0.386	0.295	0.016
%RSD		1.8	114.100	4.055	5.507	68.220	7.073	10.450	19.150	13.530	15.090
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	0.794	-147.300	19.050	1.069	4.135	89.4%	0.064	0.059	0.031	-91.900
2	15:21:33	0.676	-146.600	18.610	-1.003	4.091	88.8%	0.065	0.003	0.025	-69.970
3	15:22:00	0.936	-159.200	16.910	0.018	2.363	89.7%	0.064	0.025	0.002	-81.240
X		0.802	-151.000	18.190	0.028	3.529	89.3%	0.064	0.029	0.019	-81.040
S		0.130	7.084	1.131	1.036	1.011	0.5%	0.001	0.028	0.016	10.970
%RSD		16.230	4.691	6.215	3732.000	28.640	0.5	0.890	98.070	81.440	13.530
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	1.803	0.054	-0.167	2.251	0.011	0.002	3.044	0.113	0.021	0.122
2	15:21:33	1.750	0.053	-0.716	4.594	0.014	-0.016	2.406	0.093	0.036	-0.001
3	15:22:00	1.215	0.059	-0.999	4.276	0.026	0.020	1.506	0.062	0.006	-0.096
X		1.589	0.055	-0.627	3.707	0.017	0.002	2.319	0.089	0.021	0.008
S		0.325	0.004	0.423	1.271	0.008	0.018	0.773	0.025	0.015	0.109
%RSD		20.470	6.663	67.460	34.280	49.440	826.100	33.320	28.550	70.520	1317.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	-0.211	0.129	-0.006	0.134	0.125	-0.022	-1.102	-0.125	-1.119	0.009
2	15:21:33	-0.329	-0.061	-0.138	0.549	0.217	0.205	-2.342	-0.389	-1.144	0.007
3	15:22:00	-0.410	0.013	-0.058	-0.106	-0.085	0.105	-1.539	-0.315	-0.349	0.005
X		-0.317	0.027	-0.067	0.192	0.086	0.096	-1.661	-0.276	-0.871	0.007
S		0.100	0.096	0.066	0.332	0.154	0.114	0.629	0.136	0.452	0.002
%RSD		31.670	351.900	98.700	172.600	180.100	118.400	37.850	49.330	51.940	33.860
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	91.0%	0.364	0.382	0.329	0.335	0.016	0.004	-0.007	0.008	94.5%
2	15:21:33	91.8%	0.291	0.348	0.437	0.539	-0.006	0.009	-0.014	0.021	94.7%
3	15:22:00	91.6%	0.377	0.295	0.410	0.338	0.008	0.012	-0.001	0.024	93.9%
X		91.5%	0.344	0.342	0.392	0.404	0.006	0.009	-0.007	0.018	94.4%
S		0.4%	0.046	0.044	0.056	0.117	0.011	0.004	0.007	0.008	0.4%
%RSD		0.5	13.490	12.810	14.340	29.010	182.200	49.340	90.630	48.010	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	0.088	0.140	0.318	0.342	-0.032	0.004	97.6%	0.004	0.016	0.027
2	15:21:33	0.118	0.150	0.292	0.308	-0.041	-0.006	96.9%	0.004	0.008	0.018
3	15:22:00	0.129	0.151	0.315	0.366	-0.041	-0.001	99.0%	0.017	0.003	0.023
X		0.112	0.147	0.308	0.339	-0.038	-0.001	97.8%	0.008	0.009	0.023
S		0.021	0.006	0.014	0.029	0.005	0.005	1.1%	0.008	0.006	0.004
%RSD		19.240	4.201	4.677	8.636	14.170	495.900	1.1	92.590	73.160	18.390
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:21:06	0.019	0.012	98.7%							
2	15:21:33	0.026	0.016	99.1%							
3	15:22:00	0.020	0.017	99.6%							
X		0.022	0.015	99.1%							
S		0.004	0.003	0.4%							
%RSD		17.270	19.380	0.4							

VQ51454-001 4/22/2020 15:26:29 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	93.8%	-0.001	1.123	1.406	-22.450	21.590	-0.272	-0.711	-0.139	0.854
2	15:27:23	91.3%	0.000	1.147	0.799	-16.940	18.610	-0.330	-0.527	-0.356	0.820
3	15:27:51	92.5%	-0.000	0.835	0.871	-14.560	17.490	-0.376	-0.543	-0.399	0.817
X		92.5%	-0.000	1.035	1.025	-17.980	19.230	-0.326	-0.594	-0.298	0.830
S		1.2%	0.001	0.174	0.332	4.047	2.117	0.052	0.102	0.139	0.021
%RSD		1.3	188.800	16.780	32.330	22.510	11.010	15.980	17.130	46.800	2.505
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	2.413	71750.000	37.090	-2.036	3.646	87.2%	0.089	-0.076	0.726	4709.000
2	15:27:23	2.815	71340.000	33.120	-0.956	3.426	86.8%	0.045	-0.349	0.707	5036.000
3	15:27:51	2.136	73120.000	30.290	4.555	2.493	85.3%	0.092	-0.173	0.805	5106.000
X		2.455	72070.000	33.500	0.521	3.188	86.4%	0.075	-0.199	0.746	4951.000
S		0.342	934.800	3.415	3.535	0.612	1.0%	0.027	0.138	0.052	211.900
%RSD		13.910	1.297	10.200	678.500	19.200	1.2	35.410	69.410	6.980	4.281
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	6.804	-0.002	2.964	3.349	-0.010	0.154	2.549	0.243	0.143	1.002
2	15:27:23	6.157	-0.003	2.546	4.356	-0.010	0.105	1.836	0.162	0.075	1.161
3	15:27:51	9.112	0.004	3.522	4.013	-0.007	0.101	1.145	0.117	0.089	0.798
X		7.358	-0.001	3.010	3.906	-0.009	0.120	1.843	0.174	0.102	0.987
S		1.554	0.004	0.490	0.512	0.002	0.030	0.702	0.064	0.036	0.182
%RSD		21.120	564.400	16.260	13.110	17.470	24.790	38.090	36.660	35.020	18.430
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.998	0.859	-0.331	-0.163	7.074	6.034	-0.252	-0.147	0.514	-0.005
2	15:27:23	0.817	1.027	-0.657	-0.078	5.758	5.816	-0.987	-0.757	3.867	0.008
3	15:27:51	1.228	0.998	-0.454	0.094	6.646	5.765	-1.432	-0.243	-0.661	-0.003
X		1.014	0.961	-0.480	-0.049	6.492	5.872	-0.890	-0.382	1.240	0.000
S		0.206	0.090	0.165	0.131	0.671	0.143	0.596	0.328	2.350	0.007
%RSD		20.330	9.353	34.270	265.700	10.340	2.435	66.980	85.790	189.500	15640.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	90.7%	0.045	0.160	0.068	0.056	-0.001	0.003	-0.006	-0.001	92.5%
2	15:27:23	89.1%	0.165	0.194	0.087	-0.366	0.004	0.011	-0.006	-0.004	92.5%
3	15:27:51	90.1%	0.140	0.107	0.062	0.395	0.012	0.003	-0.006	0.004	90.6%
X		90.0%	0.117	0.154	0.073	0.029	0.005	0.005	-0.006	-0.001	91.9%
S		0.8%	0.063	0.044	0.013	0.381	0.006	0.005	0.000	0.004	1.1%
%RSD		0.9	54.250	28.330	18.270	1333.000	117.700	88.680	1.937	697.200	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.062	0.096	0.139	0.085	-0.032	-0.012	96.5%	0.012	0.010	0.035
2	15:27:23	0.058	0.112	0.114	0.147	-0.032	0.015	97.2%	0.005	0.002	0.034
3	15:27:51	0.106	0.115	0.105	0.121	-0.012	-0.012	96.1%	0.014	0.008	0.008
X		0.075	0.108	0.119	0.118	-0.025	-0.003	96.6%	0.010	0.007	0.026
S		0.026	0.010	0.018	0.031	0.011	0.016	0.6%	0.005	0.004	0.015
%RSD		35.070	9.294	14.790	26.250	45.340	593.800	0.6	43.540	65.440	58.110
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:26:56	0.025	0.021	98.5%							
2	15:27:23	0.021	0.015	97.5%							
3	15:27:51	0.010	0.010	98.6%							
X		0.019	0.015	98.2%							
S		0.008	0.005	0.6%							
%RSD		40.930	32.860	0.6							


VQ51454-002 4/22/2020 15:32:21 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	91.1%	98.150	103.800	104.500	-11.310	1146.000	1166.000	1088.000	1049.000	100.900
2	15:33:15	88.2%	101.000	96.250	99.160	-18.110	1153.000	1128.000	1061.000	1060.000	103.600
3	15:33:42	90.2%	100.400	102.700	105.700	-14.670	1183.000	1175.000	1108.000	1088.000	104.100
X		89.8%	99.854%	100.900	103.100	-14.700	116.058%	1156.000	1086.000	106.560%	102.863%
S		1.5%	n/a	4.067	3.488	3.402	n/a	24.910	23.670	n/a	n/a
%RSD		1.7	1.506	4.031	3.383	23.150	1.712	2.154	2.180	1.862	1.648
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	848.700	71730.000	1027.000	1059.000	1029.000	84.3%	100.100	96.270	98.510	11490.000
2	15:33:15	894.300	71850.000	1033.000	1032.000	1055.000	81.8%	103.400	99.910	101.000	12620.000
3	15:33:42	855.500	73320.000	1058.000	1207.000	1075.000	80.1%	101.400	99.500	101.800	14580.000
X		866.100	72300.000	103.922%	1099.000	105.318%	82.1%	101.650%	98.560%	100.454%	12900.000
S		24.600	884.800	n/a	94.150	n/a	2.1%	n/a	n/a	n/a	1565.000
%RSD		2.840	1.224	1.604	8.566	2.211	2.6	1.633	2.019	1.715	12.140
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	1146.000	98.530	1021.000	1057.000	97.800	99.250	97.810	100.600	97.800	100.700
2	15:33:15	1177.000	99.780	1042.000	1061.000	100.500	101.400	104.700	101.600	101.600	105.500
3	15:33:42	1183.000	101.400	1066.000	1123.000	100.800	102.700	104.200	100.500	101.000	101.600
X		1168.000	99.919%	1043.000	108.037%	99.706%	101.142%	102.200	100.912%	100.103%	102.619%
S		19.440	n/a	22.220	n/a	n/a	n/a	3.847	n/a	n/a	n/a
%RSD		1.664	1.463	2.131	3.410	1.665	1.741	3.763	0.584	2.017	2.506
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	101.900	101.100	102.200	101.600	6.255	5.171	448.300	97.120	0.383	98.340
2	15:33:15	104.600	104.800	103.200	102.900	4.416	5.835	471.200	103.000	0.060	101.100
3	15:33:42	103.700	104.100	104.200	98.660	5.611	5.311	466.900	104.900	0.817	98.480
X		103.400	103.400	103.187%	101.100	5.427	5.439	462.200	101.697%	0.420	99.320
S		1.382	1.958	n/a	2.173	0.933	0.350	12.160	n/a	0.380	1.582
%RSD		1.337	1.894	0.973	2.150	17.200	6.430	2.631	4.008	90.440	1.593
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	85.6%	97.890	98.470	100.600	98.420	102.100	100.100	97.400	98.850	89.0%
2	15:33:15	83.8%	100.700	101.600	103.000	104.900	102.000	101.800	101.300	99.840	86.3%
3	15:33:42	86.1%	102.800	100.300	99.810	100.900	104.800	102.400	102.800	101.300	85.5%
X		85.2%	100.500	100.100	101.100	101.400	102.975%	101.400	100.500	100.002%	86.9%
S		1.2%	2.486	1.562	1.666	3.276	n/a	1.167	2.774	n/a	1.8%
%RSD		1.4	2.474	1.560	1.647	3.230	1.517	1.150	2.760	1.239	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	99.620	98.770	97.610	99.070	99.520	97.740	94.7%	101.900	104.700	100.900
2	15:33:15	102.600	101.900	100.100	100.600	103.400	99.960	93.5%	101.600	106.300	101.500
3	15:33:42	102.700	101.800	101.900	102.200	104.600	102.300	90.8%	102.200	109.000	104.300
X		101.600	100.837%	99.880	100.620%	102.500	100.012%	93.0%	101.900	106.672%	102.200
S		1.744	n/a	2.176	n/a	2.672	n/a	2.0%	0.268	n/a	1.851
%RSD		1.716	1.776	2.179	1.541	2.606	2.301	2.2	0.263	2.030	1.811
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:32:48	100.800	99.530	95.1%							
2	15:33:15	100.600	99.580	94.9%							
3	15:33:42	103.700	102.000	95.0%							
X		101.700	100.385%	95.0%							
S		1.728	n/a	0.1%							
%RSD		1.698	1.435	0.1							

VD17087-001

4/22/2020 15:38:12

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	94.7%	0.024	1.545	1.482	-62.820	14576.000	118690.000	119140.000	126910.000	2.039
2	15:39:06	93.3%	-0.014	1.168	1.512	-62.080	14463.000	118180.000	118410.000	126290.000	1.881
3	15:39:33	91.2%	-0.026	1.241	1.230	-63.790	14576.000	118450.000	118960.000	127000.000	2.000
X		93.1%	-0.005	1.318	1.408	-62.900	14538.000	118440.000	118830.000	126730.000	1.973
S		1.7%	0.026	0.200	0.155	0.855	165.020	1252.000	1380.400	1385.700	0.083
%RSD		1.9	492.500	15.180	10.980	1.359	1.433	1.367	2.020	1.443	4.185
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	15740.000	162410.000	12997.000	85070.000	183830.000	84.6%	0.672	-1.017	0.941	12400.000
2	15:39:06	15733.000	161180.000	12912.000	83500.000	182910.000	85.7%	0.526	-0.174	0.939	13290.000
3	15:39:33	15907.000	162750.000	13024.000	86450.000	186030.000	82.8%	0.546	-1.134	0.888	15150.000
X		15793.000	162110.000	12977.000	85010.000	184260.000	84.4%	0.581	-0.775	0.923	13610.000
S		198.500	1827.600	158.590	1477.000	11606.000	1.5%	0.079	0.523	0.030	1405.000
%RSD		1.700	1.332	1.968	1.738	1.906	1.7	13.610	67.540	3.280	10.320
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	13.320	79.890	26.200	134.200	0.511	4.333	3.305	0.194	0.167	1.398
2	15:39:06	12.560	77.510	25.070	132.100	0.579	3.948	3.904	0.144	0.225	1.454
3	15:39:33	12.410	79.440	24.890	131.900	0.531	4.233	3.127	0.119	0.230	1.391
X		12.760	78.950	25.390	132.700	0.540	4.171	3.445	0.152	0.207	1.414
S		0.488	1.265	0.711	1.268	0.035	0.200	0.407	0.038	0.035	0.035
%RSD		3.826	1.602	2.799	0.955	6.551	4.794	11.810	24.950	16.810	2.444
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	5.788	4.162	-0.843	-0.277	14.850	15.860	-1.791	-0.889	3.495	42.250
2	15:39:06	4.435	4.259	0.234	0.343	14.480	16.200	-0.919	-0.305	0.662	42.420
3	15:39:33	5.298	4.069	-1.034	-0.603	14.640	13.250	1.345	0.126	1.205	43.450
X		5.174	4.163	-0.547	-0.179	14.660	15.100	-0.455	-0.356	1.787	42.700
S		0.685	0.095	0.684	0.480	0.186	1.611	1.619	0.509	1.503	0.648
%RSD		13.240	2.285	124.900	268.600	1.268	10.660	355.900	143.100	84.120	1.517
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	89.0%	0.135	0.064	0.040	1.568	0.055	0.055	0.050	0.040	87.1%
2	15:39:06	88.0%	0.164	0.097	0.115	0.503	0.050	0.042	0.036	0.043	88.1%
3	15:39:33	86.3%	0.069	0.066	0.048	2.190	0.039	0.070	0.072	0.034	86.6%
X		87.8%	0.123	0.076	0.068	1.420	0.048	0.055	0.053	0.039	87.3%
S		1.4%	0.049	0.018	0.041	0.853	0.008	0.014	0.018	0.005	0.8%
%RSD		1.6	39.620	24.320	60.100	60.050	16.870	25.070	34.540	11.920	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	0.054	0.104	0.094	0.070	168.500	168.000	93.0%	0.035	0.039	0.023
2	15:39:06	0.123	0.058	0.103	0.097	167.300	164.900	92.9%	0.031	0.041	-0.005
3	15:39:33	0.081	0.107	0.123	0.068	170.800	168.800	92.9%	0.042	0.025	-0.001
X		0.086	0.090	0.107	0.079	168.900	167.200	92.9%	0.036	0.035	0.006
S		0.035	0.027	0.015	0.016	1.739	2.104	0.1%	0.006	0.009	0.016
%RSD		40.380	30.430	14.080	20.800	1.030	1.258	0.1	16.140	24.900	273.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:38:39	0.011	0.011	91.3%							
2	15:39:06	0.005	0.002	92.1%							
3	15:39:33	0.001	0.004	92.4%							
X		0.006	0.006	91.9%							
S		0.005	0.005	0.6%							
%RSD		90.120	79.090	0.6							

VD17087-002

4/22/2020 15:44:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	86.5%	0.280	1.234	1.672	-39.460	7197.000	4819.000	5061.000	6051.000	22.810
2	15:44:57	84.7%	0.230	2.056	1.688	-41.020	7112.000	4735.000	5016.000	6112.000	23.050
3	15:45:24	83.6%	0.234	1.910	1.255	-35.900	7238.000	4896.000	5258.000	6205.000	25.000
X		84.9%	0.248	1.733	1.538	-38.790	7182.000	4816.000	5111.000	6123.000	23.620
S		1.5%	0.028	0.438	0.246	2.626	64.300	80.350	128.900	77.480	1.204
%RSD		1.7	11.110	25.290	15.960	6.770	0.895	1.668	2.522	1.265	5.098
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	4940.000	62130.000	3657.000	10760.000	10320.000	76.8%	0.516	-1.537	1.471	27260.000
2	15:44:57	5018.000	62980.000	3692.000	10570.000	10490.000	76.3%	0.519	-1.682	1.299	26400.000
3	15:45:24	5090.000	63960.000	3765.000	10820.000	10600.000	76.0%	0.625	-1.397	1.308	25980.000
X		5016.000	63020.000	3705.000	10720.000	10470.000	76.4%	0.553	-1.539	1.359	26550.000
S		74.740	917.300	54.820	127.900	138.200	0.4%	0.062	0.143	0.097	648.500
%RSD		1.490	1.456	1.480	1.194	1.320	0.5	11.190	9.275	7.126	2.443
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	1940.000	TM 838.200	1791.000	1849.000	2.606	4.445	4.395	6.510	6.547	30.060
2	15:44:57	1938.000	TM 847.200	1804.000	1824.000	2.654	4.560	4.039	6.430	6.735	29.730
3	15:45:24	1929.000	TM 845.700	1831.000	1865.000	2.789	5.003	4.887	6.470	6.642	29.350
X		1936.000	TM 843.700	1809.000	1846.000	2.683	4.669	4.440	6.470	6.641	29.710
S		6.150	TM 4.800	20.340	20.620	0.095	0.294	0.426	0.040	0.094	0.354
%RSD		0.318	TM 0.569	1.124	1.117	3.541	6.305	9.591	0.615	1.417	1.191
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	31.950	29.980	-1.390	-0.216	22.670	23.780	-3.751	-0.918	0.436	39.770
2	15:44:57	31.550	31.700	-1.103	-0.648	23.440	24.890	2.345	0.387	1.292	39.850
3	15:45:24	33.740	31.290	0.150	-0.908	25.540	21.790	-0.760	-0.148	-0.046	39.400
X		32.420	30.990	-0.781	-0.591	23.880	23.490	-0.722	-0.227	0.561	39.670
S		1.165	0.899	0.819	0.349	1.485	1.570	3.048	0.656	0.678	0.237
%RSD		3.595	2.900	104.900	59.170	6.219	6.687	422.100	289.800	120.900	0.597
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	85.9%	-0.023	0.034	0.019	1.266	0.016	0.011	0.250	0.167	80.8%
2	15:44:57	86.0%	0.071	-0.024	0.043	0.627	0.006	0.015	0.248	0.187	81.4%
3	15:45:24	87.2%	0.064	0.050	-0.021	1.082	0.010	0.013	0.209	0.231	82.1%
X		86.3%	0.037	0.020	0.014	0.992	0.010	0.013	0.236	0.195	81.4%
S		0.7%	0.052	0.039	0.033	0.329	0.005	0.002	0.023	0.033	0.7%
%RSD		0.8	139.600	197.400	238.600	33.180	46.450	14.250	9.768	16.950	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	0.133	0.054	0.061	0.037	155.700	151.600	89.1%	0.067	0.080	0.229
2	15:44:57	0.124	0.054	0.047	0.049	150.000	146.200	89.1%	0.071	0.083	0.276
3	15:45:24	0.066	0.071	0.091	0.026	150.400	147.100	87.7%	0.064	0.080	0.281
X		0.108	0.060	0.066	0.037	152.000	148.300	88.6%	0.067	0.081	0.262
S		0.036	0.010	0.022	0.012	3.190	2.904	0.8%	0.004	0.002	0.029
%RSD		33.750	16.280	33.580	30.970	2.098	1.958	0.9	5.850	2.372	11.040
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:44:30	0.258	0.250	90.3%							
2	15:44:57	0.253	0.274	90.1%							
3	15:45:24	0.248	0.259	90.2%							
X		0.253	0.261	90.2%							
S		0.005	0.012	0.1%							
%RSD		1.994	4.557	0.1							

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4/22/2020 15:49:55

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	89.7%	0.015	0.954	1.334	-68.750	5700.000	27480.000	28330.000	43740.000	1.777
2	15:50:49	91.4%	-0.052	1.456	1.359	-68.100	5751.000	27420.000	28420.000	44670.000	1.876
3	15:51:17	89.8%	0.001	1.383	1.468	-68.050	5789.000	27920.000	28470.000	44930.000	1.874
X		90.3%	-0.012	1.264	1.387	-68.300	5747.000	27610.000	28400.000	44440.000	1.842
S		1.0%	0.035	0.272	0.071	0.393	44.470	274.500	71.600	623.100	0.056
%RSD		1.1	291.500	21.480	5.145	0.575	0.774	0.995	0.252	1.402	3.056
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	7638.000	59840.000	3130.000	138600.000	136800.000	80.2%	0.687	-0.523	0.787	13210.000
2	15:50:49	7518.000	61660.000	3192.000	141900.000	140300.000	80.7%	0.829	-1.300	0.850	14590.000
3	15:51:17	7668.000	62680.000	3217.000	144000.000	141400.000	79.4%	0.966	-0.875	0.883	15160.000
X		7608.000	61390.000	3180.000	141500.000	139500.000	80.1%	0.827	-0.899	0.840	14320.000
S		79.270	1442.000	45.040	2705.000	2420.000	0.6%	0.139	0.389	0.049	1000.000
%RSD		1.042	2.348	1.416	1.912	1.734	0.8	16.830	43.250	5.784	6.983
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	2617.000	511.000	2468.000	2705.000	6.997	17.380	17.060	0.216	0.200	1.514
2	15:50:49	2666.000	515.000	2507.000	2756.000	7.039	16.850	19.300	0.144	0.323	1.807
3	15:51:17	2670.000	522.300	2546.000	2780.000	7.182	17.340	17.000	0.195	0.284	1.576
X		2651.000	516.100	2507.000	2747.000	7.073	17.190	17.790	0.185	0.269	1.632
S		29.860	5.690	39.260	38.540	0.097	0.294	1.312	0.037	0.062	0.154
%RSD		1.126	1.102	1.566	1.403	1.374	1.710	7.372	20.010	23.220	9.455
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	13.550	10.660	1.695	-0.508	37.570	40.490	0.807	0.078	0.596	83.160
2	15:50:49	13.500	10.820	2.189	-0.399	40.220	38.110	-3.280	-0.876	0.939	81.450
3	15:51:17	12.970	10.340	2.332	-0.431	44.300	37.040	3.920	0.998	-1.186	85.040
X		13.340	10.610	2.072	-0.446	40.700	38.550	0.482	0.066	0.116	83.220
S		0.319	0.247	0.335	0.056	3.388	1.767	3.611	0.937	1.141	1.796
%RSD		2.391	2.328	16.140	12.620	8.325	4.585	748.700	1411.000	980.800	2.159
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	82.3%	-0.033	-0.055	-0.059	0.697	0.019	0.018	0.003	0.010	83.5%
2	15:50:49	83.9%	0.078	-0.018	-0.036	1.669	0.013	0.026	0.017	0.001	83.3%
3	15:51:17	82.6%	0.018	0.026	-0.028	2.393	0.006	0.016	0.010	0.000	84.2%
X		82.9%	0.021	-0.016	-0.041	1.586	0.012	0.020	0.010	0.003	83.7%
S		0.8%	0.055	0.041	0.016	0.851	0.007	0.005	0.007	0.005	0.4%
%RSD		1.0	261.300	259.800	39.160	53.670	52.440	25.100	74.150	150.500	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	0.012	0.055	0.029	0.014	612.300	613.500	89.2%	0.051	0.037	0.014
2	15:50:49	0.026	0.043	0.035	0.027	617.500	614.600	90.3%	0.048	0.043	-0.009
3	15:51:17	0.015	0.063	0.030	0.019	610.300	617.100	88.8%	0.047	0.043	0.010
X		0.018	0.053	0.031	0.020	613.400	615.100	89.4%	0.049	0.041	0.005
S		0.007	0.010	0.003	0.007	3.692	1.847	0.8%	0.002	0.003	0.013
%RSD		42.380	18.380	10.180	34.510	0.602	0.300	0.8	4.393	8.449	256.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:50:23	-0.005	0.008	88.9%							
2	15:50:49	-0.003	-0.001	89.3%							
3	15:51:17	0.001	0.006	89.1%							
X		-0.002	0.004	89.1%							
S		0.003	0.005	0.2%							
%RSD		126.900	115.600	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	83.3%	0.020	2.025	2.184	-56.960	6585.000	21420.000	21910.000	31900.000	4.457
2	15:56:42	82.0%	0.050	1.787	2.108	-56.230	6600.000	21850.000	21980.000	31960.000	4.544
3	15:57:09	81.0%	-0.037	2.737	2.263	-59.200	6624.000	21740.000	22250.000	32110.000	4.710
X		82.1%	0.011	2.183	2.185	-57.460	6603.000	21670.000	22050.000	31990.000	4.570
S		1.1%	0.044	0.494	0.077	1.548	19.580	224.500	182.200	108.700	0.129
%RSD		1.4	410.000	22.650	3.542	2.695	0.296	1.036	0.826	0.340	2.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	5353.000	63990.000	2444.000	94030.000	91280.000	73.0%	0.625	-0.188	0.419	5858.000
2	15:56:42	5417.000	64510.000	2482.000	93510.000	92760.000	72.1%	0.878	-0.365	0.418	5671.000
3	15:57:09	5412.000	64860.000	2503.000	94610.000	93580.000	71.1%	0.781	-0.259	0.395	5416.000
X		5394.000	64450.000	2476.000	94050.000	92540.000	72.1%	0.762	-0.271	0.411	5648.000
S		35.320	441.600	29.890	551.200	1166.000	0.9%	0.128	0.089	0.013	222.200
%RSD		0.655	0.685	1.207	0.586	1.260	1.3	16.750	32.980	3.241	3.934
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	4426.000	6808.000	4083.000	4326.000	17.610	14.510	12.890	1.230	1.284	19.600
2	15:56:42	4463.000	7015.000	4245.000	4416.000	17.810	15.150	14.190	1.105	1.570	18.030
3	15:57:09	4549.000	7055.000	4272.000	4524.000	17.820	15.360	13.880	1.319	1.304	19.600
X		4480.000	6959.000	4200.000	4422.000	17.750	15.010	13.650	1.218	1.386	19.080
S		63.220	132.300	102.300	98.970	0.118	0.443	0.679	0.108	0.159	0.908
%RSD		1.411	1.901	2.437	2.238	0.666	2.954	4.973	8.861	11.490	4.759
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	23.430	22.720	1.472	0.150	26.440	23.990	-0.610	-0.471	2.384	98.630
2	15:56:42	21.840	23.270	1.557	-0.587	25.610	24.070	-2.961	-1.009	2.483	98.450
3	15:57:09	25.480	23.490	1.003	-0.567	24.630	23.810	-1.476	-0.685	2.521	98.550
X		23.580	23.160	1.344	-0.335	25.560	23.960	-1.683	-0.722	2.463	98.540
S		1.824	0.395	0.298	0.420	0.907	0.133	1.189	0.271	0.070	0.091
%RSD		7.737	1.705	22.190	125.400	3.549	0.555	70.660	37.490	2.863	0.092
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	77.3%	0.191	0.134	0.214	1.880	-0.001	0.002	0.011	0.019	76.9%
2	15:56:42	76.2%	0.238	0.231	0.264	1.974	0.003	0.010	0.026	0.030	77.6%
3	15:57:09	75.9%	0.236	0.160	0.091	2.649	0.003	0.006	0.004	0.014	75.4%
X		76.5%	0.222	0.175	0.190	2.168	0.002	0.006	0.013	0.021	76.7%
S		0.7%	0.027	0.050	0.089	0.419	0.002	0.004	0.011	0.008	1.1%
%RSD		0.9	11.950	28.580	47.030	19.340	155.100	66.540	85.200	39.230	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	0.061	0.106	0.015	0.034	355.300	348.200	85.6%	0.059	0.064	0.034
2	15:56:42	0.060	0.055	0.042	0.040	349.800	345.400	83.9%	0.070	0.069	0.036
3	15:57:09	0.059	0.077	0.058	0.035	368.200	355.400	83.2%	0.077	0.063	0.052
X		0.060	0.079	0.038	0.037	357.800	349.700	84.2%	0.069	0.065	0.041
S		0.001	0.026	0.022	0.003	9.455	5.180	1.2%	0.009	0.003	0.010
%RSD		1.745	32.350	57.500	7.846	2.643	1.481	1.4	13.120	4.776	23.420
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:56:15	0.039	0.031	83.8%							
2	15:56:42	0.043	0.038	85.5%							
3	15:57:09	0.047	0.042	84.8%							
X		0.043	0.037	84.7%							
S		0.004	0.006	0.9%							
%RSD		9.023	14.800	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	79.9%	100.400	41.680	43.820	-55.160	7796.000	22550.000	22840.000	33340.000	108.900
2	16:02:34	80.1%	100.300	43.660	45.680	-58.290	7833.000	22810.000	23340.000	34130.000	109.100
3	16:03:01	80.3%	96.300	41.790	46.780	-57.710	7970.000	22940.000	23170.000	33820.000	108.200
X		80.1%	98.980	42.380	45.430	-57.050	7866.000	22770.000	23120.000	33760.000	108.700
S		0.2%	2.324	1.113	1.496	1.665	91.480	197.600	253.100	396.300	0.494
%RSD		0.2	2.348	2.627	3.293	2.918	1.163	0.868	1.095	1.174	0.454
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	6328.000	62520.000	3250.000	97430.000	95250.000	71.1%	102.200	99.420	101.200	5434.000
2	16:02:34	6229.000	63280.000	3247.000	97860.000	96130.000	70.8%	101.900	100.800	100.600	4915.000
3	16:03:01	6225.000	63270.000	3216.000	97650.000	96590.000	70.9%	102.200	98.200	99.650	6372.000
X		6260.000	63020.000	3238.000	97650.000	95990.000	70.9%	102.100	99.460	100.500	5574.000
S		58.270	438.100	18.730	212.800	680.900	0.1%	0.172	1.279	0.806	738.400
%RSD		0.931	0.695	0.579	0.218	0.709	0.2	0.168	1.286	0.802	13.250
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	5736.000	7040.000	5291.000	5594.000	114.300	110.600	114.300	97.120	98.750	113.700
2	16:02:34	5756.000	7133.000	5378.000	5646.000	115.200	109.600	115.900	96.030	95.040	116.200
3	16:03:01	5813.000	7347.000	5371.000	5600.000	116.300	109.600	113.700	98.560	97.490	116.600
X		5769.000	7173.000	5347.000	5613.000	115.300	109.900	114.600	97.240	97.090	115.500
S		40.080	157.500	48.080	28.770	0.997	0.563	1.145	1.269	1.887	1.528
%RSD		0.695	2.196	0.899	0.512	0.865	0.512	0.999	1.305	1.944	1.323
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	122.000	122.400	103.000	97.670	26.910	24.340	412.700	90.980	1.672	201.800
2	16:02:34	121.600	123.200	107.400	98.140	26.210	27.090	452.300	102.000	-0.842	199.700
3	16:03:01	123.000	120.400	104.300	97.000	24.660	24.430	437.500	97.510	-0.302	202.900
X		122.200	122.000	104.900	97.600	25.930	25.290	434.200	96.810	0.176	201.400
S		0.718	1.457	2.249	0.576	1.152	1.563	19.990	5.519	1.323	1.626
%RSD		0.588	1.194	2.144	0.590	4.443	6.180	4.605	5.700	751.900	0.807
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	74.3%	102.700	102.900	102.100	103.200	100.800	98.600	99.600	100.000	75.4%
2	16:02:34	75.6%	103.100	106.500	101.100	111.900	102.800	99.700	99.660	100.600	75.1%
3	16:03:01	74.5%	105.400	105.000	103.400	101.600	101.100	99.940	101.900	102.700	74.9%
X		74.8%	103.700	104.800	102.200	105.600	101.600	99.410	100.400	101.100	75.2%
S		0.7%	1.499	1.839	1.150	5.560	1.075	0.716	1.285	1.374	0.3%
%RSD		0.9	1.446	1.755	1.125	5.265	1.058	0.720	1.280	1.359	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	101.300	102.000	102.100	100.600	460.100	458.200	81.5%	102.300	108.200	102.800
2	16:02:34	103.600	103.600	105.000	101.200	474.000	456.100	83.0%	103.900	108.600	103.500
3	16:03:01	103.600	104.200	104.100	101.500	474.600	464.200	82.4%	105.500	110.900	105.500
X		102.800	103.300	103.700	101.100	469.600	459.500	82.3%	103.900	109.200	103.900
S		1.333	1.170	1.499	0.431	8.172	4.191	0.8%	1.573	1.431	1.399
%RSD		1.296	1.133	1.445	0.426	1.740	0.912	0.9	1.514	1.311	1.347
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:02:07	102.700	102.200	84.1%							
2	16:02:34	102.700	101.600	84.4%							
3	16:03:01	103.400	102.700	83.9%							
X		102.900	102.200	84.2%							
S		0.431	0.522	0.3%							
%RSD		0.418	0.511	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	81.5%	96.790	43.840	45.320	-55.750	7740.000	22520.000	22940.000	33110.000	106.400
2	16:08:27	79.9%	95.900	41.470	45.390	-59.790	7683.000	22160.000	22990.000	33500.000	108.000
3	16:08:53	82.3%	96.230	46.170	45.290	-59.080	7795.000	22370.000	23000.000	33560.000	107.800
X		81.2%	96.310	43.830	45.330	-58.210	7739.000	22350.000	22980.000	33390.000	107.400
S		1.2%	0.448	2.350	0.053	2.158	55.980	182.000	28.470	246.600	0.858
%RSD		1.5	0.465	5.362	0.117	3.708	0.723	0.814	0.124	0.739	0.799
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5956.000	60520.000	3186.000	95050.000	93880.000	71.3%	98.700	97.390	98.240	4658.000
2	16:08:27	6192.000	61000.000	3192.000	97520.000	94770.000	70.9%	103.900	99.610	97.660	5858.000
3	16:08:53	6064.000	61880.000	3213.000	98310.000	96920.000	70.5%	104.700	101.200	99.980	5015.000
X		6070.000	61130.000	3197.000	96960.000	95190.000	70.9%	102.400	99.390	98.630	5177.000
S		118.200	691.000	14.140	1698.000	1563.000	0.4%	3.266	1.901	1.207	616.000
%RSD		1.948	1.130	0.442	1.752	1.642	0.6	3.188	1.913	1.224	11.900
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5680.000	TM 7145.000	5300.000	5498.000	110.800	110.100	110.600	95.810	95.250	114.600
2	16:08:27	5739.000	TM 7097.000	5336.000	5566.000	113.800	109.100	110.400	96.640	93.960	114.600
3	16:08:53	5776.000	TM 7177.000	5291.000	5544.000	115.600	110.000	111.800	94.980	96.660	114.400
X		5732.000	TM 7140.000	5309.000	5536.000	113.400	109.700	111.000	95.810	95.290	114.500
S		48.230	TM 40.100	23.690	34.870	2.460	0.599	0.769	0.831	1.352	0.109
%RSD		0.841	TM 0.562	0.446	0.630	2.169	0.546	0.693	0.867	1.419	0.095
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	120.700	118.400	99.850	94.400	23.320	23.450	433.800	96.700	0.142	193.700
2	16:08:27	124.600	122.100	103.600	92.240	23.510	22.460	454.100	100.100	-0.778	201.500
3	16:08:53	119.200	120.600	105.300	96.070	22.930	23.430	423.000	94.100	1.638	197.100
X		121.500	120.300	102.900	94.240	23.250	23.120	437.000	96.950	0.334	197.400
S		2.763	1.848	2.789	1.923	0.297	0.566	15.760	2.985	1.220	3.907
%RSD		2.274	1.535	2.710	2.040	1.277	2.447	3.606	3.079	365.300	1.979
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	75.2%	101.700	102.100	99.810	94.470	98.190	96.440	98.540	98.470	75.6%
2	16:08:27	74.1%	101.200	99.750	101.200	103.600	100.500	98.800	100.600	98.440	75.6%
3	16:08:53	74.9%	101.300	101.800	100.700	99.580	98.870	99.950	100.300	98.730	75.2%
X		74.8%	101.400	101.200	100.600	99.220	99.190	98.400	99.810	98.550	75.4%
S		0.6%	0.275	1.299	0.685	4.583	1.197	1.789	1.121	0.159	0.3%
%RSD		0.7	0.271	1.283	0.681	4.619	1.207	1.818	1.123	0.161	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	100.800	98.180	101.200	97.460	460.500	455.900	83.4%	98.340	107.000	100.700
2	16:08:27	101.600	101.700	102.400	97.060	465.100	442.500	84.5%	103.200	104.900	100.300
3	16:08:53	102.700	102.300	103.000	99.730	465.200	452.100	83.4%	101.200	106.800	101.500
X		101.700	100.700	102.200	98.080	463.600	450.200	83.8%	100.900	106.200	100.800
S		0.982	2.225	0.901	1.438	2.673	6.926	0.6%	2.453	1.113	0.627
%RSD		0.966	2.209	0.882	1.466	0.577	1.539	0.8	2.431	1.048	0.622
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:07:59	98.570	98.090	86.6%							
2	16:08:27	98.450	98.220	84.4%							
3	16:08:53	101.200	100.700	84.7%							
X		99.410	99.000	85.2%							
S		1.557	1.462	1.2%							
%RSD		1.566	1.477	1.4							

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User Pre-dilution: 1.000

User Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	84.5%	-0.010	1.608	1.659	-28.190	1344.000	<u>5506.000</u>	5872.000	6544.000	1.221
2	16:14:18	83.5%	-0.009	0.785	1.499	-28.600	1409.000	<u>5820.000</u>	6094.000	6635.000	1.203
3	16:14:45	83.1%	0.034	1.092	1.325	-28.430	1389.000	<u>5666.000</u>	6014.000	6818.000	1.135
X		83.7%	0.005	1.162	1.494	-28.400	1381.000	<u>5664.000</u>	5993.000	6665.000	1.186
S		0.7%	0.025	0.416	0.167	0.206	33.640	<u>157.200</u>	112.100	139.500	0.045
%RSD		0.8	483.400	35.770	11.180	0.726	2.437	<u>2.775</u>	1.871	2.094	3.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	1219.000	14160.000	534.100	18440.000	18210.000	79.0%	0.029	-0.092	0.108	1213.000
2	16:14:18	1215.000	14540.000	544.500	18910.000	18530.000	77.0%	0.132	-0.203	0.115	1289.000
3	16:14:45	1235.000	14570.000	540.200	19150.000	18670.000	76.6%	0.185	0.044	0.111	1099.000
X		1223.000	14420.000	539.600	18830.000	18470.000	77.6%	0.115	-0.084	0.111	1200.000
S		10.640	227.500	5.216	360.200	233.900	1.3%	0.079	0.124	0.004	95.420
%RSD		0.870	1.577	0.967	1.912	1.266	1.7	68.870	148.000	3.160	7.949
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	865.000	<u>TM 1331.000</u>	<u>805.400</u>	858.600	3.430	2.873	2.608	0.234	0.245	4.214
2	16:14:18	877.400	<u>TM 1337.000</u>	938.400	869.900	3.522	3.055	3.129	0.246	0.305	3.881
3	16:14:45	880.200	<u>TM 1393.000</u>	<u>841.700</u>	894.900	3.671	3.094	2.715	0.245	0.341	4.095
X		874.200	<u>TM 1353.000</u>	<u>861.800</u>	874.500	3.541	3.007	2.818	0.242	0.297	4.063
S		8.094	<u>TM 34.060</u>	<u>68.760</u>	18.570	0.122	0.118	0.275	0.007	0.048	0.169
%RSD		0.926	<u>TM 2.517</u>	<u>7.978</u>	2.124	3.432	3.929	9.764	2.916	16.300	4.150
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	4.840	4.678	0.210	0.103	5.098	4.313	-0.314	-0.375	2.186	19.280
2	16:14:18	5.030	5.291	0.247	-0.603	5.676	6.051	-1.719	0.048	-3.345	19.920
3	16:14:45	5.862	5.553	0.437	-0.241	5.832	3.718	0.289	0.213	-1.432	20.340
X		5.244	5.174	0.298	-0.247	5.535	4.694	-0.581	-0.038	-0.864	19.850
S		0.544	0.449	0.122	0.353	0.387	1.212	1.030	0.303	2.809	0.532
%RSD		10.370	8.679	40.850	143.000	6.987	25.820	177.300	795.000	325.200	2.682
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	78.9%	0.065	0.047	0.050	0.661	-0.003	0.004	-0.005	0.007	79.5%
2	16:14:18	79.4%	0.109	0.024	0.073	0.131	-0.005	0.004	0.003	0.010	80.9%
3	16:14:45	77.4%	0.085	0.072	0.003	1.458	-0.001	-0.000	-0.012	0.006	80.9%
X		78.6%	0.086	0.048	0.042	0.750	-0.003	0.002	-0.005	0.008	80.4%
S		1.1%	0.022	0.024	0.036	0.668	0.002	0.002	0.007	0.002	0.8%
%RSD		1.3	25.600	50.170	85.480	89.040	56.570	98.100	154.700	22.810	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	0.040	0.065	0.014	-0.057	69.730	68.810	86.9%	0.040	0.038	0.024
2	16:14:18	-0.005	0.067	-0.022	-0.034	68.700	68.200	84.4%	0.030	0.042	0.009
3	16:14:45	0.031	0.070	-0.043	-0.034	69.500	69.430	84.4%	0.026	0.026	-0.003
X		0.022	0.067	-0.017	-0.041	69.310	68.810	85.2%	0.032	0.035	0.010
S		0.024	0.002	0.029	0.013	0.544	0.615	1.4%	0.007	0.008	0.014
%RSD		108.000	3.481	166.400	31.760	0.784	0.893	1.7	21.100	22.840	138.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:13:51	0.007	0.007	88.0%							
2	16:14:18	-0.001	-0.000	87.8%							
3	16:14:45	0.001	-0.002	87.4%							
X		0.002	0.002	87.7%							
S		0.004	0.005	0.3%							
%RSD		194.200	285.000	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	79.6%	98.230	45.370	49.990	-52.900	7326.000	21860.000	22540.000	31600.000	105.100
2	16:20:11	80.3%	100.900	45.780	49.720	-57.560	7613.000	22110.000	22300.000	32590.000	107.900
3	16:20:38	79.6%	98.520	49.060	51.840	-52.260	7593.000	22360.000	22750.000	32330.000	106.500
X		79.9%	99.210	46.740	50.520	-54.240	7511.000	22110.000	22530.000	32170.000	106.500
S		0.4%	1.451	2.023	1.154	2.891	160.200	249.600	224.500	509.100	1.441
%RSD		0.5	1.463	4.329	2.285	5.330	2.132	1.129	0.997	1.582	1.353
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	6221.000	63370.000	3173.000	93590.000	91390.000	72.3%	96.440	98.900	98.990	5844.000
2	16:20:11	6039.000	64790.000	3243.000	94590.000	94430.000	69.9%	105.500	102.600	102.700	5453.000
3	16:20:38	6177.000	64620.000	3241.000	95480.000	92580.000	71.1%	105.700	99.940	100.700	5858.000
X		6146.000	64260.000	3219.000	94550.000	92800.000	71.1%	102.600	100.500	100.800	5718.000
S		94.720	773.200	40.180	944.700	1533.000	1.2%	5.301	1.911	1.842	229.700
%RSD		1.541	1.203	1.248	0.999	1.652	1.7	5.169	1.901	1.828	4.018
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	5584.000	TM 6775.000	5114.000	5258.000	112.800	109.600	112.100	96.010	95.880	115.500
2	16:20:11	5682.000	TM 7059.000	5291.000	5475.000	117.000	111.400	114.000	98.900	95.670	117.500
3	16:20:38	5514.000	TM 6905.000	5160.000	5417.000	115.600	112.900	110.700	96.250	99.650	118.300
X		5593.000	TM 6913.000	5188.000	5383.000	115.200	111.300	112.300	97.060	97.070	117.100
S		84.440	TM 142.000	92.160	112.300	2.129	1.685	1.695	1.602	2.237	1.426
%RSD		1.510	TM 2.054	1.776	2.086	1.849	1.514	1.510	1.650	2.305	1.218
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	120.200	120.500	104.500	98.200	23.680	23.100	442.300	100.200	0.621	192.800
2	16:20:11	125.700	125.500	105.100	101.200	23.390	23.280	440.800	96.900	1.269	197.300
3	16:20:38	121.600	121.000	106.500	98.960	25.760	22.790	432.700	98.060	0.639	196.600
X		122.500	122.300	105.400	99.440	24.280	23.060	438.600	98.400	0.843	195.600
S		2.857	2.771	1.005	1.542	1.295	0.250	5.170	1.691	0.369	2.397
%RSD		2.332	2.265	0.954	1.551	5.334	1.082	1.179	1.719	43.780	1.226
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	75.2%	104.000	104.600	101.400	100.800	101.200	100.700	102.100	100.900	74.5%
2	16:20:11	73.2%	102.900	104.000	102.300	104.400	102.100	99.180	102.600	100.700	74.6%
3	16:20:38	75.1%	106.000	107.200	104.100	100.500	103.700	100.700	102.900	103.100	74.2%
X		74.5%	104.300	105.300	102.600	101.900	102.300	100.200	102.500	101.500	74.4%
S		1.1%	1.604	1.723	1.358	2.190	1.262	0.877	0.393	1.329	0.2%
%RSD		1.5	1.538	1.637	1.324	2.149	1.233	0.875	0.383	1.309	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	104.400	105.000	94.170	90.830	455.000	440.200	81.7%	104.800	108.800	102.400
2	16:20:11	103.000	101.000	94.800	90.330	454.400	439.800	82.8%	103.700	107.800	102.700
3	16:20:38	104.100	105.000	97.160	93.610	459.900	449.600	82.8%	104.600	109.700	102.400
X		103.800	103.700	95.380	91.590	456.400	443.200	82.4%	104.300	108.800	102.500
S		0.713	2.286	1.575	1.768	3.055	5.560	0.7%	0.593	0.959	0.162
%RSD		0.687	2.205	1.651	1.930	0.669	1.255	0.8	0.568	0.881	0.158
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:19:44	102.800	102.300	83.6%							
2	16:20:11	101.900	100.600	83.9%							
3	16:20:38	103.600	102.000	83.7%							
X		102.800	101.600	83.7%							
S		0.867	0.903	0.2%							
%RSD		0.844	0.888	0.2							

CCV MW12620 4/22/2020 16:25:12 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	73.9%	322.900	290.400	295.400	3.415	63910.000	61750.000	61450.000	59570.000	306.200
2	16:26:06	76.0%	308.600	274.200	291.200	3.310	63060.000	61710.000	60760.000	58670.000	298.700
3	16:26:33	75.9%	308.300	297.300	300.100	4.705	62920.000	62540.000	61760.000	58160.000	293.900
X		75.3%	104.417%	95.763%	98.529%	3.810	105.493%	62000.000	61320.000	98.003%	99.877%
S		1.2%	n/a	n/a	n/a	0.777	n/a	469.800	509.700	n/a	n/a
%RSD		1.6	2.671	4.114	1.506	20.380	0.852	0.758	0.831	1.220	2.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	2842.000	526.500	59420.000	62530.000	62530.000	74.3%	308.300	310.100	303.200	3162.000
2	16:26:06	2774.000	463.300	58790.000	62410.000	62340.000	75.5%	308.800	303.900	296.700	3186.000
3	16:26:33	2755.000	449.600	59340.000	62090.000	62290.000	76.2%	310.600	306.300	296.800	2286.000
X		2790.000	479.800	98.638%	62340.000	103.973%	75.3%	103.085%	102.252%	99.636%	2878.000
S		45.710	41.020	n/a	230.700	n/a	1.0%	n/a	n/a	n/a	513.000
%RSD		1.638	8.549	0.579	0.370	0.207	1.3	0.398	1.013	1.251	17.820
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	62900.000	294.600	62500.000	59920.000	299.800	292.900	302.500	292.500	297.200	295.200
2	16:26:06	62160.000	290.900	61250.000	59580.000	293.600	289.900	285.600	289.800	301.500	298.000
3	16:26:33	62270.000	290.300	61340.000	58700.000	294.200	287.200	290.500	286.100	302.900	303.700
X		62440.000	97.309%	61690.000	99.001%	98.610%	96.669%	292.900	289.500	100.176%	99.652%
S		403.500	n/a	698.200	n/a	n/a	n/a	8.706	3.221	n/a	n/a
%RSD		0.646	0.802	1.132	1.054	1.154	0.972	2.973	1.113	0.981	1.443
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	290.800	289.500	311.000	289.600	0.219	-0.134	1344.000	304.700	-2.316	288.900
2	16:26:06	284.900	290.200	307.000	289.600	0.829	0.588	1322.000	298.100	0.114	298.900
3	16:26:33	299.900	288.600	313.100	286.900	0.999	-0.431	1362.000	310.800	1.058	295.900
X		291.900	289.400	103.461%	288.700	0.683	0.008	1343.000	101.512%	-0.381	98.188%
S		7.520	0.778	n/a	1.569	0.410	0.524	19.740	n/a	1.741	n/a
%RSD		2.577	0.269	0.994	0.543	60.070	6885.000	1.470	2.090	456.600	1.754
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	75.7%	316.800	310.600	308.500	282.300	296.900	299.400	296.200	295.100	75.3%
2	16:26:06	75.1%	317.600	317.200	315.400	302.000	305.500	299.100	300.000	295.300	75.3%
3	16:26:33	75.3%	323.300	324.600	319.100	291.400	303.500	297.200	298.200	298.900	74.7%
X		75.3%	106.410%	105.836%	314.300	291.900	100.657%	298.600	298.100	98.810%	75.1%
S		0.3%	n/a	n/a	5.379	9.867	n/a	1.189	1.889	n/a	0.4%
%RSD		0.4	1.112	2.205	1.711	3.380	1.477	0.398	0.633	0.709	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	302.300	300.100	302.100	298.100	304.000	296.700	81.6%	306.400	319.400	299.800
2	16:26:06	305.600	303.700	302.700	295.900	306.700	304.600	82.4%	301.800	309.500	294.600
3	16:26:33	307.200	303.400	307.400	297.100	311.700	305.500	81.3%	307.300	319.700	302.400
X		101.678%	100.804%	304.100	99.001%	102.500%	100.752%	81.8%	305.200	105.395%	99.647%
S		n/a	n/a	2.863	n/a	n/a	n/a	0.6%	2.928	n/a	n/a
%RSD		0.813	0.657	0.942	0.378	1.274	1.612	0.7	0.960	1.820	1.332
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:25:39	291.400	293.500	80.2%							
2	16:26:06	292.700	290.800	81.2%							
3	16:26:33	297.000	296.700	81.1%							
X		97.898%	97.887%	80.8%							
S		n/a	n/a	0.6%							
%RSD		0.999	1.005	0.7							

CCB IM9936-01 4/22/2020 16:31:06 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	81.2%	-0.023	2.003	1.848	5.986	0.811	2.175	2.307	1.537	0.021
2	16:32:01	82.6%	0.006	2.348	1.953	-0.964	0.490	2.116	2.015	2.591	0.010
3	16:32:28	81.5%	-0.008	1.869	1.597	-7.647	0.573	2.364	2.568	2.345	0.045
X		81.8%	-0.008	2.073	1.799	-0.875	0.625	2.218	2.296	2.158	0.025
S		0.7%	0.014	0.247	0.183	6.817	0.167	0.129	0.277	0.552	0.017
%RSD		0.9	172.200	11.930	10.160	779.000	26.660	5.831	12.040	25.560	68.600
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.676	285.100	10.940	2.709	2.297	80.3%	0.028	0.026	0.023	-76.780
2	16:32:01	0.983	237.000	9.201	0.333	2.103	81.4%	-0.022	0.028	0.012	-67.110
3	16:32:28	1.437	241.700	9.808	3.917	2.005	79.8%	-0.021	-0.000	-0.000	-59.580
X		1.365	254.600	9.982	2.320	2.135	80.5%	-0.005	0.018	0.011	-67.820
S		0.352	26.500	0.881	1.823	0.149	0.9%	0.028	0.016	0.011	8.622
%RSD		25.810	10.410	8.822	78.610	6.969	1.1	554.900	88.570	101.100	12.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.891	0.075	-2.464	2.588	0.010	-0.019	-0.120	-0.011	0.006	0.030
2	16:32:01	0.641	0.054	-2.279	3.892	0.003	0.021	-0.357	0.005	0.008	0.029
3	16:32:28	2.517	0.082	-1.388	4.207	0.009	-0.025	-0.116	0.000	0.007	0.054
X		1.683	0.070	-2.044	3.563	0.008	-0.008	-0.198	-0.002	0.007	0.038
S		0.955	0.014	0.575	0.858	0.004	0.025	0.138	0.009	0.001	0.014
%RSD		56.740	20.590	28.140	24.090	53.410	324.200	69.790	443.500	11.590	37.330
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.107	-0.032	-0.029	-0.184	0.066	-0.511	0.085	-0.284	2.116	0.007
2	16:32:01	-0.070	0.192	-0.187	0.588	0.078	0.470	-0.781	-0.170	-0.116	0.006
3	16:32:28	-0.244	0.198	-0.115	-0.123	-0.154	-0.159	-0.341	-0.443	2.614	0.004
X		-0.069	0.119	-0.111	0.094	-0.003	-0.066	-0.346	-0.299	1.538	0.006
S		0.175	0.131	0.079	0.429	0.131	0.497	0.433	0.137	1.454	0.002
%RSD		254.700	110.000	71.580	458.100	3872.000	748.200	125.400	45.880	94.500	27.970
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	79.6%	0.267	0.335	0.234	0.382	0.006	0.005	0.017	0.015	81.6%
2	16:32:01	78.5%	0.305	0.258	0.222	-0.002	0.008	0.015	0.002	0.020	80.0%
3	16:32:28	79.1%	0.163	0.263	0.152	0.481	0.006	0.023	0.002	0.020	80.8%
X		79.1%	0.245	0.285	0.202	0.287	0.007	0.015	0.007	0.018	80.8%
S		0.6%	0.074	0.043	0.044	0.255	0.001	0.009	0.008	0.003	0.8%
%RSD		0.7	30.060	15.050	21.900	88.810	18.130	60.300	118.400	18.120	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.085	0.107	0.314	0.345	-0.041	-0.011	84.6%	0.008	0.009	0.008
2	16:32:01	0.138	0.141	0.361	0.321	-0.041	0.008	82.9%	-0.002	0.009	0.016
3	16:32:28	0.100	0.142	0.351	0.338	-0.041	0.002	82.9%	0.006	0.004	0.019
X		0.108	0.130	0.342	0.335	-0.041	-0.000	83.5%	0.004	0.007	0.015
S		0.028	0.020	0.025	0.012	0.000	0.010	1.0%	0.005	0.003	0.006
%RSD		25.610	15.060	7.312	3.661	0.000	2630.000	1.2	135.700	39.320	38.350
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:31:33	0.012	0.017	85.8%							
2	16:32:01	0.034	0.026	85.9%							
3	16:32:28	0.026	0.021	85.5%							
X		0.024	0.021	85.7%							
S		0.011	0.005	0.2%							
%RSD		46.410	22.870	0.3							

LR MW12519 4/22/2020 16:37:01 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	69.0%	M 1044.000	M 1970.000	M 2056.000	6.651	TM 122700.000	TM 123000.000	TM 125000.000	TM 115200.000	TM 112800.000
2	16:37:56	69.9%	M 1032.000	M 1811.000	M 1870.000	4.291	TM 126400.000	TM 120300.000	TM 119100.000	TM 118300.000	TM 115100.000
3	16:38:22	68.0%	M 1070.000	M 1956.000	M 1999.000	2.916	TM 125200.000	TM 124500.000	TM 123800.000	TM 117700.000	TM 115400.000
X		69.0%	M 104.881%	M 95.610%	M 98.748%	4.620	TM 103.978%	TM 122600.000	TM 122600.000	TM 97.559%	TM 95.332%
S		0.9%	M n/a	M n/a	M n/a	1.889	TM n/a	TM 2149.000	TM 3075.000	TM n/a	TM n/a
%RSD		1.4	M 1.864	M 4.608	M 4.836	40.890	TM 1.505	TM 1.753	TM 2.507	TM 1.382	TM 1.243
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	7.434	208.400	TM 118300.000	M 125500.000	TM 124700.000	70.3%	M 2009.000	TM 1889.000	TM 1875.000	40380.000
2	16:37:56	7.139	167.600	TM 117800.000	M 125700.000	TM 126400.000	69.3%	M 2043.000	TM 1956.000	TM 1933.000	32590.000
3	16:38:22	8.377	174.100	TM 117900.000	M 125600.000	TM 126700.000	68.8%	M 2047.000	TM 1939.000	TM 1915.000	37640.000
X		7.650	183.400	TM 98.343%	M 125600.000	TM 104.933%	69.5%	M 101.650%	TM 96.400%	TM 95.382%	36870.000
S		0.646	21.940	TM n/a	M 122.900	TM n/a	0.8%	M n/a	TM n/a	TM n/a	3949.000
%RSD		8.450	11.970	TM 0.234	M 0.098	TM 0.866	1.1	M 1.014	TM 1.811	TM 1.569	10.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	TM 122800.000	TM 1816.000	TM 120900.000	TM 116900.000	TM 1838.000	M 1862.000	M 1880.000	M 1900.000	M 1942.000	M 1947.000
2	16:37:56	TM 126200.000	TM 1880.000	TM 124300.000	TM 119500.000	TM 1887.000	M 1890.000	M 1895.000	M 1873.000	M 1948.000	M 1939.000
3	16:38:22	TM 127000.000	TM 1904.000	TM 124600.000	TM 120900.000	TM 1891.000	M 1951.000	M 1972.000	M 1951.000	M 1948.000	M 1956.000
X		TM 125300.000	TM 93.325%	TM 123300.000	TM 99.254%	TM 93.591%	M 95.037%	M 1915.000	M 1908.000	M 97.301%	M 97.373%
S		TM 2238.000	TM n/a	TM 2066.000	TM n/a	TM n/a	M n/a	M 49.320	M 39.620	M n/a	M n/a
%RSD		TM 1.786	TM 2.435	TM 1.676	TM 1.717	TM 1.578	M 2.383	M 2.575	M 2.077	M 0.186	M 0.422
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2040.000	M 1998.000	M 2070.000	M 1822.000	1.829	0.827	8499.000	M 1945.000	17.980	TM 1995.000
2	16:37:56	M 2041.000	M 1985.000	M 2062.000	M 1840.000	1.553	-0.393	8526.000	M 1962.000	17.290	TM 1975.000
3	16:38:22	M 2030.000	M 2007.000	M 2056.000	M 1826.000	3.133	-0.434	8468.000	M 1934.000	15.930	TM 2005.000
X		M 2037.000	M 1997.000	M 103.154%	M 1829.000	2.171	-0.000	8498.000	M 97.357%	17.070	TM 99.580%
S		M 5.721	M 10.830	M n/a	M 9.593	0.844	0.716	29.400	M n/a	1.046	TM n/a
%RSD		M 0.281	M 0.543	M 0.338	M 0.524	38.870	3799000.000	0.346	M 0.725	6.129	TM 0.787
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	70.4%	M 2236.000	M 2182.000	M 2198.000	M 1940.000	297.600	293.500	M 1999.000	M 2021.000	69.4%
2	16:37:56	71.2%	M 2224.000	M 2203.000	M 2176.000	M 1969.000	295.500	290.400	M 1974.000	M 2026.000	69.6%
3	16:38:22	70.6%	M 2232.000	M 2226.000	M 2235.000	M 1978.000	299.700	292.900	M 1985.000	M 2031.000	69.5%
X		70.7%	M 2230.000	M 110.186%	M 2203.000	M 1962.000	297.600	292.300	M 1986.000	M 101.292%	69.5%
S		0.4%	M 6.150	M n/a	M 29.920	M 19.860	2.084	1.658	M 12.550	M n/a	0.1%
%RSD		0.6	M 0.276	M 0.983	M 1.358	M 1.012	0.700	0.567	M 0.632	M 0.248	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2059.000	M 2072.000	M 1063.000	M 1019.000	TM 10440.000	TM 10090.000	77.5%	M 788.800	TM 757.700	TM 1796.000
2	16:37:56	M 2077.000	M 2100.000	M 1069.000	M 1017.000	TM 10630.000	TM 10280.000	78.4%	M 785.500	TM 744.000	TM 1780.000
3	16:38:22	M 2084.000	M 2094.000	M 1061.000	M 1020.000	TM 10610.000	TM 10260.000	78.1%	M 790.800	TM 741.200	TM 1819.000
X		M 2073.000	M 104.440%	M 1064.000	M 101.856%	TM 105.608%	TM 10210.000	78.0%	M 788.400	TM 74.766%	TM 1798.000
S		M 12.600	M n/a	M 4.306	M n/a	TM n/a	TM 105.500	0.5%	M 2.663	TM n/a	TM 19.520
%RSD		M 0.608	M 0.689	M 0.405	M 0.133	TM 0.998	TM 1.034	0.6	M 0.338	TM 1.177	TM 1.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:37:29	TM 1761.000	TM 1804.000	74.5%							
2	16:37:56	TM 1757.000	TM 1796.000	75.8%							
3	16:38:22	TM 1792.000	TM 1818.000	75.3%							
X		TM 1770.000	TM 90.300%	75.2%							
S		TM 19.100	TM n/a	0.7%							
%RSD		TM 1.079	TM 0.611	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	83.1%	0.135	7.134	6.909	-59.360	±6406.000	±21060.000	±21610.000	±30690.000	3.359
2	16:43:48	82.8%	0.063	5.741	6.392	-58.650	±6702.000	±21530.000	±22160.000	±31250.000	3.709
3	16:44:15	80.8%	0.037	6.079	6.198	-55.830	±6552.000	±21470.000	±21770.000	±31100.000	3.743
X		82.2%	0.078	6.318	6.500	-57.950	±6553.000	±21350.000	±21850.000	±31010.000	3.603
S		1.2%	0.051	0.726	0.368	1.866	±147.900	±251.300	±282.900	±292.000	0.212
%RSD		1.5	64.830	11.500	5.655	3.220	±2.257	±1.177	±1.295	±0.941	5.898
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	±5404.000	±60120.000	±2249.000	91780.000	±89780.000	75.5%	0.733	0.028	0.401	3938.000
2	16:43:48	±5372.000	±61440.000	±2320.000	94650.000	±91420.000	73.4%	0.381	0.034	0.425	4047.000
3	16:44:15	±5514.000	±61040.000	2445.000	91580.000	±91330.000	73.8%	0.485	0.132	0.397	3964.000
X		±5430.000	±60870.000	±2338.000	92670.000	±90840.000	74.2%	0.533	0.065	0.408	3983.000
S		±74.550	±673.800	±99.180	1718.000	±925.200	1.1%	0.181	0.058	0.015	57.090
%RSD		±1.373	±1.107	±4.242	1.854	±1.018	1.4	33.920	90.110	3.645	1.433
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4478.000	TM 6730.000	±4153.000	4353.000	17.410	14.730	12.980	1.004	0.978	17.740
2	16:43:48	4509.000	TM 6876.000	±4280.000	4384.000	17.660	15.160	14.670	0.957	0.950	17.620
3	16:44:15	4529.000	TM 6879.000	±4188.000	4362.000	17.710	14.300	14.590	1.003	1.217	17.470
X		4506.000	TM 6828.000	±4207.000	4366.000	17.590	14.730	14.080	0.988	1.048	17.610
S		25.660	TM 85.120	±65.730	15.830	0.160	0.429	0.954	0.027	0.147	0.138
%RSD		0.570	TM 1.247	±1.562	0.363	0.910	2.913	6.774	2.690	14.030	0.785
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	21.780	22.080	2.439	-0.541	19.300	16.530	1.694	0.240	0.901	95.340
2	16:43:48	22.740	23.590	1.794	0.493	19.680	18.060	0.430	0.196	-0.884	98.190
3	16:44:15	24.380	22.070	1.785	0.172	16.660	17.450	4.271	0.798	1.013	97.840
X		22.960	22.580	2.006	0.042	18.550	17.350	2.132	0.411	0.344	97.120
S		1.316	0.878	0.375	0.529	1.648	0.769	1.957	0.335	1.064	1.554
%RSD		5.729	3.889	18.690	1272.000	8.887	4.435	91.820	81.510	309.900	1.600
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	77.8%	1.532	1.120	1.175	0.992	0.020	0.028	0.060	0.136	78.6%
2	16:43:48	76.1%	1.396	1.156	1.448	0.460	0.025	0.026	0.100	0.105	77.1%
3	16:44:15	76.4%	1.163	1.144	1.056	3.170	0.029	0.012	0.031	0.100	77.2%
X		76.8%	1.364	1.140	1.226	1.540	0.025	0.022	0.064	0.114	77.6%
S		0.9%	0.187	0.018	0.201	1.436	0.004	0.009	0.035	0.020	0.9%
%RSD		1.2	13.700	1.614	16.410	93.220	17.330	39.290	54.500	17.290	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4.263	6.298	0.450	0.543	346.600	345.900	85.1%	0.759	0.759	0.130
2	16:43:48	4.239	6.349	0.492	0.534	353.400	348.900	84.6%	0.615	0.658	0.130
3	16:44:15	3.981	5.647	0.549	0.478	354.400	351.100	83.9%	0.528	0.563	0.081
X		4.161	6.098	0.497	0.518	351.500	348.600	84.5%	0.634	0.660	0.114
S		0.157	0.391	0.050	0.035	4.224	2.585	0.6%	0.117	0.098	0.028
%RSD		3.764	6.416	10.040	6.761	1.202	0.742	0.7	18.390	14.890	24.810
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:43:21	0.124	0.128	85.7%							
2	16:43:48	0.091	0.109	85.8%							
3	16:44:15	0.090	0.092	85.0%							
X		0.102	0.110	85.5%							
S		0.019	0.018	0.4%							
%RSD		19.000	16.400	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	81.3%	-0.023	7.315	6.997	-32.990	±2821.000	±16610.000	±16670.000	±19450.000	8.122
2	16:49:40	83.1%	-0.009	6.521	7.584	-27.570	±2810.000	±17440.000	±17320.000	±19290.000	7.591
3	16:50:06	82.6%	0.006	7.440	6.401	-28.090	±2713.000	±16910.000	±17150.000	±19040.000	7.143
X		82.3%	-0.009	7.092	6.994	-29.550	±2781.000	±16990.000	±17050.000	±19260.000	7.619
S		0.9%	0.014	0.498	0.592	2.989	±59.230	±422.700	±333.200	±207.900	0.490
%RSD		1.1	166.400	7.027	8.458	10.110	±2.130	±2.489	±1.954	±1.079	6.429
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	±2500.000	±72250.000	±3835.000	46540.000	±45360.000	72.7%	0.843	-0.656	0.782	6637.000
2	16:49:40	±2469.000	±73060.000	±3790.000	46190.000	±45820.000	73.2%	0.329	-0.030	0.811	6153.000
3	16:50:06	±2421.000	±72110.000	±3754.000	45740.000	±45070.000	73.6%	0.487	-0.544	0.783	6336.000
X		±2463.000	±72470.000	±3793.000	46160.000	±45410.000	73.2%	0.553	-0.410	0.792	6376.000
S		±39.980	±514.700	±40.660	403.600	±377.900	0.4%	0.263	0.334	0.016	244.200
%RSD		±1.623	±0.710	±1.072	0.875	±0.832	0.6	47.640	81.510	2.051	3.830
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	162.300	TM 4554.000	171.300	220.700	4.839	3.449	3.053	0.585	0.623	3.910
2	16:49:40	163.100	TM 4503.000	166.900	219.900	4.696	3.329	2.826	0.672	0.612	4.032
3	16:50:06	158.300	TM 4432.000	163.000	215.600	4.628	3.266	2.907	0.648	0.687	4.188
X		161.300	TM 4496.000	167.100	218.700	4.721	3.348	2.929	0.635	0.641	4.043
S		2.566	TM 61.020	4.169	2.772	0.108	0.093	0.115	0.045	0.041	0.139
%RSD		1.591	TM 1.357	2.495	1.267	2.290	2.767	3.926	7.081	6.357	3.438
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	5.876	5.697	0.440	0.168	10.870	10.960	1.345	0.630	-2.342	179.100
2	16:49:40	6.779	5.928	-0.402	-0.081	10.440	11.190	-1.039	-0.120	-0.894	181.700
3	16:50:06	5.842	5.704	0.316	-0.017	12.930	10.640	-0.514	-0.018	-0.866	176.600
X		6.166	5.776	0.118	0.023	11.410	10.930	-0.069	0.164	-1.367	179.100
S		0.531	0.131	0.455	0.129	1.331	0.279	1.253	0.406	0.844	2.540
%RSD		8.616	2.275	385.200	551.700	11.660	2.556	1808.000	247.400	61.730	1.418
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	76.9%	0.184	0.271	0.225	2.808	0.060	0.053	0.107	0.158	75.8%
2	16:49:40	76.4%	0.264	0.136	0.262	3.713	0.043	0.053	0.154	0.156	76.3%
3	16:50:06	75.6%	0.248	0.164	0.151	4.512	0.043	0.075	0.098	0.150	77.0%
X		76.3%	0.232	0.190	0.213	3.677	0.049	0.060	0.119	0.154	76.4%
S		0.6%	0.042	0.071	0.057	0.853	0.010	0.012	0.030	0.004	0.6%
%RSD		0.8	18.280	37.370	26.690	23.190	20.000	20.600	25.170	2.685	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	1.353	1.965	0.194	0.200	135.300	131.400	83.1%	0.096	0.113	0.043
2	16:49:40	1.611	2.128	0.194	0.212	131.500	130.400	84.2%	0.105	0.108	0.027
3	16:50:06	1.434	2.023	0.244	0.166	134.700	129.700	83.2%	0.123	0.113	0.023
X		1.466	2.039	0.211	0.193	133.900	130.500	83.5%	0.108	0.111	0.031
S		0.132	0.082	0.029	0.024	2.027	0.845	0.6%	0.014	0.003	0.011
%RSD		9.017	4.042	13.570	12.270	1.514	0.648	0.8	12.560	2.710	34.790
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:49:13	0.030	0.032	85.0%							
2	16:49:40	0.006	0.015	83.8%							
3	16:50:06	0.015	0.016	86.1%							
X		0.017	0.021	85.0%							
S		0.012	0.009	1.2%							
%RSD		70.160	44.690	1.4							

VQ51455-001 4/22/2020 16:54:36 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	85.9%	-0.038	2.938	2.320	-15.940	11.130	-0.040	0.023	0.142	0.873
2	16:55:30	85.6%	-0.010	2.177	2.767	-7.961	11.430	-0.054	0.133	0.067	0.747
3	16:55:57	86.5%	-0.052	2.934	2.589	-9.317	12.150	0.008	0.105	0.270	0.825
X		86.0%	-0.033	2.683	2.559	-11.070	11.570	-0.029	0.087	0.160	0.815
S		0.4%	0.021	0.438	0.225	4.270	0.525	0.033	0.057	0.102	0.064
%RSD		0.5	63.820	16.340	8.793	38.560	4.538	114.500	65.790	64.110	7.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.995	74510.000	13.170	5.528	5.646	75.7%	0.110	-0.458	0.706	9213.000
2	16:55:30	1.149	75030.000	11.790	4.265	6.700	76.0%	0.006	-0.802	0.632	9028.000
3	16:55:57	0.404	76180.000	12.330	4.348	6.032	75.1%	0.033	-0.920	0.768	9472.000
X		0.849	75240.000	12.430	4.714	6.126	75.6%	0.049	-0.727	0.702	9238.000
S		0.394	857.300	0.699	0.707	0.533	0.4%	0.054	0.240	0.068	223.300
%RSD		46.360	1.139	5.623	14.990	8.708	0.6	109.200	33.040	9.675	2.417
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	9.209	0.123	18.480	3.134	-0.005	0.034	-0.423	0.008	0.135	0.827
2	16:55:30	8.948	0.158	16.720	1.613	-0.005	0.033	-0.035	0.041	0.038	0.808
3	16:55:57	6.450	0.138	17.310	2.202	-0.007	0.042	-0.076	0.062	0.075	0.674
X		8.202	0.140	17.500	2.316	-0.006	0.036	-0.178	0.037	0.083	0.770
S		1.523	0.018	0.897	0.767	0.001	0.005	0.214	0.027	0.049	0.083
%RSD		18.570	12.580	5.122	33.100	15.190	12.840	119.900	73.620	58.920	10.790
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	1.137	1.139	-1.451	-0.037	7.982	8.609	-2.528	-0.522	-0.453	0.001
2	16:55:30	1.334	0.893	-1.253	-0.570	7.709	8.077	-2.488	-0.334	-1.846	0.002
3	16:55:57	1.238	1.023	-0.819	-0.247	7.339	9.259	-1.565	-0.940	4.294	0.008
X		1.236	1.018	-1.174	-0.285	7.677	8.648	-2.194	-0.599	0.665	0.004
S		0.098	0.123	0.323	0.268	0.323	0.592	0.544	0.310	3.219	0.004
%RSD		7.946	12.090	27.530	94.290	4.207	6.842	24.820	51.740	484.100	98.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	76.7%	0.070	0.056	0.024	0.439	-0.003	-0.002	-0.012	-0.006	79.7%
2	16:55:30	75.7%	0.125	0.076	0.086	0.528	0.004	-0.002	-0.012	0.017	79.6%
3	16:55:57	76.8%	0.071	0.115	0.016	0.945	-0.003	-0.000	-0.005	0.013	79.4%
X		76.4%	0.089	0.082	0.042	0.637	-0.001	-0.002	-0.010	0.008	79.6%
S		0.6%	0.032	0.030	0.039	0.270	0.004	0.001	0.004	0.013	0.1%
%RSD		0.8	35.660	36.470	91.920	42.340	599.300	73.400	46.130	155.000	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.653	1.052	0.103	0.076	-0.030	-0.011	84.7%	0.026	0.031	-0.005
2	16:55:30	0.890	0.995	0.074	0.086	0.014	0.014	84.9%	0.023	0.031	0.002
3	16:55:57	0.751	1.039	0.101	0.108	-0.041	0.008	84.7%	0.019	0.037	0.005
X		0.765	1.029	0.093	0.090	-0.019	0.004	84.8%	0.023	0.033	0.001
S		0.119	0.030	0.016	0.016	0.029	0.013	0.1%	0.003	0.004	0.005
%RSD		15.550	2.886	17.480	18.220	154.500	347.900	0.1	14.890	11.490	830.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:55:03	0.004	-0.001	87.8%							
2	16:55:30	-0.011	-0.008	89.0%							
3	16:55:57	0.001	-0.003	87.9%							
X		-0.002	-0.004	88.2%							
S		0.008	0.003	0.7%							
%RSD		410.600	76.180	0.8							

VQ51455-002 4/22/2020 17:00:27 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	82.1%	95.910	98.680	100.600	-16.300	1128.000	1120.000	1069.000	1044.000	101.300
2	17:01:20	80.0%	99.280	100.100	106.900	-5.824	1181.000	1151.000	1076.000	1068.000	105.500
3	17:01:47	79.9%	97.850	102.100	103.500	-7.680	1157.000	1141.000	1064.000	1066.000	103.000
X		80.7%	97.680%	100.300	103.700	-9.935	115.524%	1138.000	1070.000	105.970%	103.286%
S		1.2%	n/a	1.701	3.124	5.590	n/a	16.000	5.645	n/a	n/a
%RSD		1.5	1.732	1.697	3.013	56.270	2.314	1.407	0.528	1.262	2.039
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	832.900	71980.000	1007.000	1063.000	1064.000	74.0%	96.800	100.000	97.320	8804.000
2	17:01:20	859.900	74610.000	1029.000	1106.000	1075.000	71.5%	97.320	98.960	100.700	9702.000
3	17:01:47	850.200	73630.000	1017.000	1122.000	1049.000	72.4%	97.490	97.180	100.100	10100.000
X		847.700	73410.000	101.769%	1097.000	106.283%	72.6%	97.203%	98.710%	99.375%	9536.000
S		13.640	1330.000	n/a	30.590	n/a	1.3%	n/a	n/a	n/a	664.400
%RSD		1.609	1.811	1.090	2.789	1.235	1.8	0.368	1.444	1.815	6.967
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	1147.000	98.130	1032.000	1041.000	99.180	98.630	95.300	100.800	98.770	100.700
2	17:01:20	1183.000	99.480	1072.000	1069.000	99.820	99.300	99.810	101.100	98.060	101.500
3	17:01:47	1157.000	98.150	1050.000	1049.000	99.950	100.700	98.660	101.300	99.050	100.900
X		1162.000	98.586%	1052.000	105.292%	99.650%	99.552%	97.920	101.051%	98.626%	101.021%
S		18.680	n/a	19.920	n/a	n/a	n/a	2.345	n/a	n/a	n/a
%RSD		1.608	0.787	1.895	1.392	0.416	1.074	2.395	0.231	0.520	0.402
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	103.200	100.900	103.400	97.970	6.678	5.667	488.200	105.800	-2.277	96.550
2	17:01:20	106.800	103.000	103.100	100.400	5.704	5.875	459.600	98.580	3.727	97.340
3	17:01:47	99.040	102.300	98.960	100.700	6.508	6.788	450.200	97.170	-0.247	99.970
X		103.000	102.000	101.816%	99.670	6.297	6.110	466.000	100.533%	0.401	97.960
S		3.862	1.050	n/a	1.480	0.520	0.596	19.780	n/a	3.054	1.791
%RSD		3.749	1.030	2.429	1.485	8.262	9.760	4.246	4.627	761.300	1.828
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	74.3%	97.230	98.720	99.650	99.180	101.700	98.950	99.220	98.010	77.6%
2	17:01:20	73.3%	101.200	97.300	100.200	102.900	100.500	97.920	99.190	100.700	76.6%
3	17:01:47	73.2%	99.670	100.600	101.700	99.330	102.500	101.300	99.950	100.000	76.5%
X		73.6%	99.360	98.870	100.500	100.500	101.547%	99.400	99.450	99.568%	76.9%
S		0.6%	1.996	1.651	1.070	2.102	n/a	1.751	0.430	n/a	0.6%
%RSD		0.8	2.009	1.669	1.065	2.092	1.030	1.761	0.432	1.404	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	101.200	98.820	97.180	98.470	97.780	98.930	82.8%	102.400	106.500	103.300
2	17:01:20	100.200	99.390	99.680	98.200	99.070	101.000	81.7%	103.100	108.100	103.000
3	17:01:47	101.000	100.100	99.650	99.820	104.800	101.200	81.6%	100.700	108.700	103.600
X		100.800	99.449%	98.840	98.832%	100.500	100.387%	82.0%	102.100	107.767%	103.300
S		0.527	n/a	1.436	n/a	3.717	n/a	0.7%	1.247	n/a	0.306
%RSD		0.523	0.668	1.453	0.882	3.697	1.254	0.8	1.221	1.058	0.296
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:00:53	102.500	101.100	84.9%							
2	17:01:20	102.400	102.400	85.4%							
3	17:01:47	103.700	103.700	85.9%							
X		102.900	102.399%	85.4%							
S		0.731	n/a	0.5%							
%RSD		0.711	1.269	0.6							

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4/22/2020 17:06:16

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	85.4%	0.004	4.764	5.073	-54.570	4116.000	14030.000	14290.000	19880.000	4.950
2	17:07:10	86.2%	-0.038	4.402	4.655	-58.370	4140.000	14090.000	14330.000	19980.000	4.958
3	17:07:37	86.3%	0.017	4.856	4.960	-55.480	4234.000	13970.000	14430.000	20170.000	4.682
X		86.0%	-0.006	4.674	4.896	-56.140	4163.000	14030.000	14350.000	20010.000	4.863
S		0.5%	0.029	0.240	0.217	1.983	62.560	62.410	68.820	146.100	0.157
%RSD		0.6	509.100	5.138	4.422	3.533	1.503	0.445	0.480	0.730	3.230
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5084.000	62060.000	2848.000	76070.000	74580.000	77.1%	0.412	-0.884	1.236	11130.000
2	17:07:10	5055.000	62840.000	2842.000	75990.000	75470.000	77.1%	0.691	-0.471	1.247	12230.000
3	17:07:37	5058.000	63390.000	2853.000	76740.000	75820.000	76.7%	0.389	-1.827	1.305	14120.000
X		5066.000	62760.000	2848.000	76270.000	75290.000	77.0%	0.497	-1.061	1.263	12500.000
S		15.630	666.100	5.691	410.100	639.000	0.2%	0.168	0.695	0.037	1513.000
%RSD		0.309	1.061	0.200	0.538	0.849	0.3	33.840	65.510	2.903	12.100
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	23.950	1.082	30.880	132.600	0.063	0.543	-0.093	0.195	0.169	1.065
2	17:07:10	26.380	1.034	30.670	126.500	0.048	0.741	-0.430	0.180	0.259	1.139
3	17:07:37	25.850	1.009	30.610	127.600	0.056	0.646	-0.428	0.151	0.304	1.319
X		25.390	1.042	30.720	128.900	0.056	0.643	-0.317	0.175	0.244	1.175
S		1.281	0.037	0.142	3.235	0.008	0.099	0.194	0.022	0.069	0.131
%RSD		5.044	3.579	0.463	2.510	13.710	15.390	61.160	12.680	28.240	11.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5.425	4.235	-0.993	-0.334	7.872	6.580	-1.147	-0.455	1.377	38.600
2	17:07:10	6.169	3.750	-0.220	0.185	5.834	6.722	-0.657	-0.288	0.924	38.420
3	17:07:37	6.514	3.673	-0.682	-0.351	7.061	6.923	-0.238	0.011	-0.528	38.690
X		6.036	3.886	-0.632	-0.167	6.922	6.742	-0.681	-0.244	0.591	38.570
S		0.557	0.305	0.389	0.305	1.026	0.172	0.455	0.236	0.995	0.135
%RSD		9.224	7.840	61.580	183.100	14.820	2.552	66.850	96.610	168.400	0.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	77.5%	0.370	0.453	0.273	0.352	0.001	0.002	0.002	0.012	78.5%
2	17:07:10	77.2%	0.281	0.273	0.330	0.418	-0.001	0.006	-0.006	0.016	78.9%
3	17:07:37	78.2%	0.320	0.404	0.353	2.181	-0.001	-0.000	-0.014	0.033	78.5%
X		77.6%	0.324	0.377	0.319	0.984	-0.001	0.002	-0.006	0.020	78.6%
S		0.5%	0.045	0.093	0.041	1.038	0.001	0.003	0.008	0.011	0.3%
%RSD		0.6	13.780	24.660	12.950	105.500	171.500	122.900	139.500	54.730	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	0.388	0.471	0.158	0.107	198.400	193.800	84.3%	0.056	0.047	0.027
2	17:07:10	0.318	0.588	0.196	0.158	197.300	196.100	85.3%	0.036	0.058	0.031
3	17:07:37	0.384	0.545	0.149	0.120	203.100	195.900	85.5%	0.040	0.035	0.023
X		0.363	0.535	0.168	0.128	199.600	195.200	85.0%	0.044	0.047	0.027
S		0.039	0.059	0.025	0.026	3.087	1.289	0.7%	0.011	0.012	0.004
%RSD		10.730	11.020	14.820	20.680	1.547	0.660	0.8	24.560	24.770	15.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:06:43	0.016	0.022	85.8%							
2	17:07:10	0.036	0.028	84.3%							
3	17:07:37	0.026	0.023	85.7%							
X		0.026	0.024	85.3%							
S		0.010	0.003	0.9%							
%RSD		38.360	13.850	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	89.1%	-0.012	1.575	1.884	-42.400	558.000	13140.000	13380.000	17660.000	16.490
2	17:13:02	88.7%	-0.039	1.996	1.725	-52.100	551.100	13190.000	13490.000	17970.000	15.120
3	17:13:29	88.0%	0.016	2.087	1.850	-43.830	566.200	13400.000	13410.000	17980.000	14.440
X		88.6%	-0.012	1.886	1.820	-46.110	558.400	13240.000	13430.000	17870.000	15.350
S		0.5%	0.027	0.273	0.084	5.237	7.534	137.400	59.210	184.600	1.041
%RSD		0.6	236.500	14.490	4.610	11.360	1.349	1.038	0.441	1.033	6.783
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	3296.000	63360.000	944.700	19640.000	19760.000	79.3%	0.597	-1.412	2.309	24750.000
2	17:13:02	3238.000	62290.000	942.800	19990.000	20170.000	78.8%	0.452	-1.666	2.486	26210.000
3	17:13:29	3320.000	63000.000	958.900	20200.000	20440.000	78.6%	0.403	-1.485	2.444	26430.000
X		3285.000	62880.000	948.800	19940.000	20120.000	78.9%	0.484	-1.521	2.413	25800.000
S		42.450	544.200	8.806	281.400	337.800	0.4%	0.101	0.131	0.093	913.900
%RSD		1.292	0.866	0.928	1.411	1.679	0.5	20.830	8.590	3.839	3.543
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	24.000	1.009	35.580	45.930	0.024	0.161	-0.112	0.143	0.321	1.266
2	17:13:02	26.050	0.971	35.940	45.200	0.026	0.204	-0.108	0.212	0.289	1.343
3	17:13:29	24.460	0.994	36.810	45.040	0.023	0.198	-0.295	0.183	0.355	1.249
X		24.840	0.991	36.110	45.390	0.024	0.187	-0.171	0.179	0.321	1.286
S		1.076	0.019	0.633	0.477	0.001	0.023	0.107	0.035	0.033	0.050
%RSD		4.331	1.927	1.752	1.052	5.996	12.390	62.260	19.500	10.330	3.883
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	20.110	12.500	-0.916	-0.404	5.906	4.863	-2.701	-0.399	-1.552	25.020
2	17:13:02	18.870	12.630	-0.480	-0.754	4.928	5.813	-4.059	-0.712	-1.530	25.060
3	17:13:29	17.920	12.620	-0.835	-0.103	7.004	5.555	-1.245	-0.401	0.803	24.840
X		18.970	12.580	-0.744	-0.420	5.946	5.411	-2.668	-0.504	-0.760	24.980
S		1.101	0.071	0.232	0.326	1.038	0.491	1.407	0.180	1.353	0.117
%RSD		5.805	0.563	31.190	77.460	17.460	9.076	52.750	35.740	178.100	0.468
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	80.4%	0.142	0.045	0.142	0.628	0.000	0.002	0.040	0.008	80.1%
2	17:13:02	79.8%	0.224	0.135	0.101	0.506	-0.003	0.002	-0.005	0.013	81.8%
3	17:13:29	78.9%	0.195	0.217	0.155	0.200	-0.005	0.002	0.040	-0.003	80.4%
X		79.7%	0.187	0.133	0.133	0.444	-0.003	0.002	0.025	0.006	80.8%
S		0.7%	0.042	0.086	0.028	0.221	0.003	0.000	0.026	0.008	0.9%
%RSD		0.9	22.370	64.820	21.280	49.650	107.700	4.082	104.200	129.100	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	0.226	0.379	0.120	0.116	774.900	764.000	86.0%	0.018	0.016	0.023
2	17:13:02	0.349	0.404	0.106	0.095	754.200	759.600	85.7%	0.024	0.022	0.044
3	17:13:29	0.301	0.414	0.090	0.094	767.800	763.000	86.2%	0.018	0.016	0.031
X		0.292	0.399	0.106	0.102	765.600	762.200	86.0%	0.020	0.018	0.033
S		0.062	0.018	0.015	0.012	10.540	2.322	0.3%	0.003	0.003	0.011
%RSD		21.320	4.442	14.000	11.950	1.376	0.305	0.3	15.620	18.740	33.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:12:35	0.024	0.027	87.4%							
2	17:13:02	0.043	0.025	87.7%							
3	17:13:29	0.017	0.025	87.4%							
X		0.028	0.026	87.5%							
S		0.014	0.001	0.2%							
%RSD		48.510	5.330	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	86.7%	-0.052	14.880	17.060	-38.650	3355.000	20540.000	20660.000	25620.000	3.923
2	17:18:55	87.1%	0.017	15.380	15.860	-42.290	3368.000	20210.000	20340.000	25270.000	3.901
3	17:19:22	84.8%	-0.024	13.430	15.040	-42.020	3496.000	20500.000	20710.000	26780.000	4.086
X		86.2%	-0.020	14.560	15.990	-40.980	3406.000	20410.000	20570.000	25890.000	3.970
S		1.2%	0.035	1.016	1.016	2.028	78.340	181.400	201.100	792.900	0.101
%RSD		1.4	174.700	6.979	6.357	4.949	2.300	0.889	0.978	3.063	2.546
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	4035.000	57450.000	1725.000	66970.000	66460.000	77.3%	0.486	-1.306	1.369	18000.000
2	17:18:55	3977.000	56920.000	1691.000	67270.000	66930.000	77.8%	0.534	-0.819	1.398	18010.000
3	17:19:22	4008.000	58400.000	1739.000	70360.000	68380.000	73.7%	0.327	-0.288	1.529	18840.000
X		4007.000	57590.000	1718.000	68200.000	67260.000	76.3%	0.449	-0.804	1.432	18280.000
S		29.110	750.800	24.790	1876.000	997.900	2.2%	0.109	0.509	0.085	479.200
%RSD		0.727	1.304	1.443	2.751	1.484	2.9	24.190	63.300	5.966	2.621
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	14.370	0.338	25.520	105.800	0.025	1.085	0.384	0.406	0.544	1.526
2	17:18:55	12.530	0.355	25.090	105.400	0.041	1.128	0.711	0.423	0.562	1.571
3	17:19:22	15.710	0.358	28.650	112.000	0.038	1.052	0.491	0.532	0.509	1.780
X		14.200	0.350	26.420	107.700	0.035	1.089	0.528	0.454	0.538	1.625
S		1.598	0.011	1.940	3.719	0.009	0.038	0.167	0.069	0.027	0.136
%RSD		11.250	3.153	7.342	3.452	24.850	3.491	31.580	15.130	4.949	8.334
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	5.199	4.150	0.086	0.734	14.430	14.870	-1.195	-0.271	-0.074	63.430
2	17:18:55	6.614	4.282	0.383	0.409	15.300	14.430	1.185	0.390	-0.988	63.430
3	17:19:22	5.453	4.078	-0.497	0.283	13.640	13.600	-1.558	-0.433	0.503	63.700
X		5.755	4.170	-0.009	0.475	14.460	14.300	-0.523	-0.105	-0.186	63.520
S		0.755	0.103	0.447	0.233	0.834	0.646	1.490	0.436	0.752	0.156
%RSD		13.110	2.478	4718.000	48.930	5.771	4.520	285.100	416.500	403.500	0.245
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	78.3%	1.341	0.895	1.313	0.740	0.003	-0.000	-0.010	-0.007	79.3%
2	17:18:55	77.8%	1.288	1.043	1.248	3.014	-0.005	0.002	0.014	-0.001	78.5%
3	17:19:22	76.9%	1.146	1.325	1.185	1.190	-0.003	-0.000	-0.001	0.003	78.2%
X		77.7%	1.258	1.088	1.249	1.648	-0.002	0.000	0.001	-0.002	78.7%
S		0.7%	0.101	0.218	0.064	1.204	0.004	0.001	0.012	0.005	0.6%
%RSD		0.9	8.035	20.080	5.122	73.060	202.100	247.200	1147.000	271.300	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	0.232	0.329	0.037	0.025	162.800	163.400	84.9%	0.037	0.033	0.033
2	17:18:55	0.231	0.344	0.051	0.036	168.600	164.100	84.7%	0.028	0.027	0.025
3	17:19:22	0.239	0.328	0.054	0.053	166.200	166.600	82.8%	0.035	0.029	0.038
X		0.234	0.334	0.047	0.038	165.900	164.700	84.1%	0.033	0.030	0.032
S		0.005	0.009	0.009	0.014	2.913	1.697	1.1%	0.004	0.003	0.007
%RSD		2.034	2.773	18.890	37.150	1.756	1.030	1.4	13.520	10.160	20.630
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:18:27	0.040	0.025	86.0%							
2	17:18:55	0.038	0.026	86.5%							
3	17:19:22	0.021	0.024	84.4%							
X		0.033	0.025	85.6%							
S		0.011	0.001	1.1%							
%RSD		32.560	3.233	1.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	87.7%	-0.038	4.016	4.544	-35.020	665.300	19520.000	19590.000	23580.000	9.747
2	17:24:47	86.7%	-0.024	4.884	4.163	-36.460	681.600	19610.000	19450.000	23950.000	10.140
3	17:25:14	85.3%	-0.024	5.407	4.547	-33.630	680.900	19430.000	19590.000	23940.000	10.220
X		86.6%	-0.029	4.769	4.418	-35.040	675.900	19520.000	19550.000	23820.000	10.040
S		1.2%	0.008	0.703	0.221	1.415	9.236	90.340	82.790	210.800	0.254
%RSD		1.4	28.250	14.730	5.002	4.039	1.366	0.463	0.424	0.885	2.530
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	2914.000	66700.000	1157.000	26570.000	26740.000	76.7%	0.363	-1.009	0.955	29020.000
2	17:24:47	2911.000	67440.000	1158.000	26600.000	26570.000	76.4%	0.134	-2.030	0.991	30090.000
3	17:25:14	3055.000	67890.000	1171.000	26920.000	26880.000	76.2%	0.289	-1.769	1.008	31050.000
X		2960.000	67340.000	1162.000	26700.000	26730.000	76.4%	0.262	-1.603	0.985	30060.000
S		82.360	600.900	8.162	196.400	156.000	0.3%	0.117	0.531	0.027	1014.000
%RSD		2.782	0.892	0.702	0.736	0.584	0.3	44.650	33.100	2.740	3.373
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	23.680	0.515	40.190	56.490	0.031	0.268	-0.042	0.162	0.248	1.121
2	17:24:47	21.780	0.521	40.070	57.610	0.022	0.255	-0.524	0.131	0.215	1.327
3	17:25:14	21.960	0.495	40.010	53.300	0.055	0.284	-0.134	0.116	0.126	1.322
X		22.480	0.510	40.090	55.800	0.036	0.269	-0.233	0.136	0.196	1.256
S		1.048	0.014	0.091	2.236	0.017	0.015	0.256	0.024	0.064	0.117
%RSD		4.664	2.652	0.227	4.007	46.170	5.493	109.800	17.430	32.380	9.349
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	5.359	3.036	-0.360	0.149	9.260	9.468	-1.192	-0.265	-0.073	43.590
2	17:24:47	4.674	3.277	0.654	-0.067	8.717	9.386	-2.142	-0.417	-0.548	43.690
3	17:25:14	4.606	3.433	-1.873	-0.262	9.674	9.622	-0.624	-0.287	0.956	45.380
X		4.880	3.249	-0.526	-0.060	9.217	9.492	-1.319	-0.323	0.112	44.220
S		0.416	0.200	1.272	0.206	0.480	0.120	0.767	0.082	0.768	1.004
%RSD		8.531	6.153	241.700	341.900	5.208	1.263	58.110	25.490	687.800	2.271
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	78.4%	2.205	2.094	2.315	2.005	0.001	-0.002	0.002	0.009	78.6%
2	17:24:47	78.6%	2.295	1.933	2.274	0.495	-0.005	0.002	0.010	0.010	79.4%
3	17:25:14	76.9%	2.019	2.486	2.231	1.665	-0.005	-0.002	-0.005	0.009	78.6%
X		78.0%	2.173	2.171	2.274	1.389	-0.003	-0.001	0.002	0.010	78.9%
S		0.9%	0.141	0.284	0.042	0.792	0.003	0.002	0.007	0.001	0.5%
%RSD		1.2	6.478	13.090	1.846	57.050	103.600	257.500	358.200	7.452	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	0.201	0.174	0.038	0.076	115.000	111.900	84.5%	0.010	0.014	-0.010
2	17:24:47	0.206	0.239	0.081	0.056	115.400	114.400	84.1%	0.009	0.003	-0.006
3	17:25:14	0.249	0.294	0.059	0.074	114.800	113.900	84.3%	0.010	0.004	-0.010
X		0.219	0.236	0.059	0.069	115.100	113.400	84.3%	0.010	0.007	-0.009
S		0.027	0.060	0.021	0.011	0.269	1.349	0.2%	0.001	0.006	0.002
%RSD		12.160	25.490	35.820	16.460	0.234	1.189	0.2	7.118	90.270	22.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:24:20	-0.011	-0.010	85.8%							
2	17:24:47	-0.014	-0.015	85.0%							
3	17:25:14	-0.020	-0.014	85.7%							
X		-0.015	-0.013	85.5%							
S		0.005	0.002	0.4%							
%RSD		31.590	18.670	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	85.0%	-0.024	15.580	15.230	-48.140	5644.000	18240.000	18390.000	24150.000	25.240
2	17:30:37	86.0%	0.004	14.640	15.690	-43.610	5647.000	18140.000	18220.000	24360.000	25.510
3	17:31:04	84.9%	-0.052	15.490	15.190	-45.050	5730.000	18060.000	18190.000	24550.000	20.320
X		85.3%	-0.024	15.240	15.370	-45.600	5674.000	18140.000	18270.000	24350.000	23.690
S		0.6%	0.028	0.518	0.281	2.315	48.950	91.810	108.100	199.400	2.917
%RSD		0.7	115.200	3.398	1.830	5.077	0.863	0.506	0.592	0.819	12.310
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	4202.000	65400.000	2323.000	75930.000	74100.000	74.6%	0.978	-0.907	1.372	23980.000
2	17:30:37	4043.000	64300.000	2112.000	73830.000	73190.000	75.4%	0.812	-1.531	1.309	23670.000
3	17:31:04	4156.000	64510.000	2274.000	73660.000	74450.000	75.1%	0.894	-1.719	1.429	23910.000
X		4134.000	64740.000	2236.000	74470.000	73910.000	75.0%	0.895	-1.386	1.370	23850.000
S		81.850	584.800	110.400	1266.000	653.500	0.4%	0.083	0.425	0.060	159.900
%RSD		1.980	0.903	4.935	1.699	0.884	0.5	9.297	30.690	4.395	0.670
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	91.650	12.030	104.000	191.800	0.077	0.548	-0.319	0.109	0.206	1.187
2	17:30:37	90.260	12.130	102.800	190.900	0.057	0.621	-0.226	0.208	0.284	1.026
3	17:31:04	91.060	12.140	102.700	186.500	0.065	0.668	0.320	0.117	0.220	1.185
X		90.990	12.100	103.200	189.700	0.066	0.612	-0.075	0.145	0.237	1.133
S		0.698	0.062	0.751	2.829	0.010	0.061	0.345	0.055	0.041	0.092
%RSD		0.767	0.516	0.728	1.491	14.830	9.904	458.800	37.900	17.460	8.140
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	6.045	3.480	-0.207	0.421	15.170	15.180	0.391	0.401	-2.337	69.310
2	17:30:37	5.612	3.270	-0.878	0.347	16.830	15.800	1.299	0.278	0.014	69.040
3	17:31:04	5.205	3.706	-0.636	-0.381	16.420	15.400	-1.094	-0.133	-0.932	69.660
X		5.621	3.485	-0.574	0.129	16.140	15.460	0.199	0.182	-1.085	69.340
S		0.420	0.218	0.340	0.443	0.863	0.314	1.208	0.279	1.183	0.314
%RSD		7.470	6.267	59.290	342.900	5.345	2.030	608.500	153.600	109.000	0.453
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	76.4%	0.384	0.348	0.343	3.143	-0.007	-0.002	0.002	0.009	76.4%
2	17:30:37	76.9%	0.308	0.342	0.277	1.898	0.003	-0.004	-0.005	-0.000	77.4%
3	17:31:04	76.9%	0.306	0.399	0.280	2.702	-0.003	-0.002	-0.013	0.002	77.8%
X		76.7%	0.332	0.363	0.300	2.581	-0.003	-0.003	-0.005	0.004	77.2%
S		0.3%	0.044	0.031	0.037	0.631	0.005	0.001	0.008	0.005	0.7%
%RSD		0.4	13.370	8.603	12.380	24.460	195.300	41.520	144.500	129.800	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	0.138	0.227	0.039	0.004	171.100	165.500	84.7%	0.014	0.014	0.023
2	17:30:37	0.117	0.215	0.034	0.039	172.600	170.400	82.9%	0.011	0.010	0.026
3	17:31:04	0.117	0.242	0.027	0.017	169.000	169.600	82.8%	0.005	0.005	0.025
X		0.124	0.228	0.033	0.020	170.900	168.500	83.5%	0.010	0.009	0.025
S		0.012	0.014	0.006	0.018	1.805	2.632	1.0%	0.004	0.005	0.001
%RSD		9.960	5.918	18.530	89.780	1.056	1.562	1.2	43.370	48.570	5.625
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:30:10	0.012	0.017	84.3%							
2	17:30:37	0.026	0.031	84.4%							
3	17:31:04	0.019	0.025	83.8%							
X		0.019	0.024	84.2%							
S		0.007	0.007	0.3%							
%RSD		37.840	29.450	0.4							

VD17091-005S 4/22/2020 17:35:36

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	84.1%	95.740	65.590	68.430	-49.900	16534.000	118410.000	118990.000	125380.000	179.600
2	17:36:29	84.4%	94.860	61.380	67.480	-42.000	16714.000	118810.000	119000.000	125320.000	173.600
3	17:36:56	82.4%	95.900	66.000	69.270	-45.740	16817.000	118680.000	119130.000	125240.000	176.000
X		83.6%	95.500	64.320	68.390	-45.880	16688.000	118630.000	119040.000	125310.000	176.400
S		1.1%	0.564	2.559	0.893	3.955	1143.300	1200.700	1177.820	1171.090	3.009
%RSD		1.3	0.591	3.978	1.305	8.620	12.143	11.077	110.409	110.281	1.706
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	14847.000	164450.000	12985.000	74220.000	173680.000	73.9%	98.730	96.680	96.990	26640.000
2	17:36:29	14755.000	165290.000	13047.000	75490.000	175050.000	73.6%	99.480	95.800	98.150	26470.000
3	17:36:56	14931.000	166000.000	12988.000	75860.000	175680.000	72.5%	104.500	96.980	97.460	25360.000
X		14844.000	165250.000	13006.000	75190.000	174800.000	73.4%	100.900	96.490	97.530	26160.000
S		187.960	1775.500	134.760	857.600	11025.000	0.7%	3.153	0.614	0.583	693.500
%RSD		1.816	1.189	1.156	1.141	11.370	1.0	3.124	0.636	0.598	2.651
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	1209.000	108.400	11137.000	1228.000	93.740	93.360	91.630	94.560	93.170	94.830
2	17:36:29	1233.000	106.000	11122.000	1225.000	93.320	93.410	95.960	93.840	95.100	97.120
3	17:36:56	1220.000	107.500	11115.000	1221.000	93.220	93.120	93.390	93.290	93.120	97.020
X		1221.000	107.300	11124.000	1225.000	93.430	93.300	93.660	93.900	93.800	96.320
S		11.850	1.223	11.230	3.355	0.275	0.155	2.177	0.635	1.126	1.294
%RSD		0.971	1.140	10.999	0.274	0.295	0.166	2.325	0.676	1.201	1.343
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	103.800	99.190	97.920	94.840	16.400	16.840	449.600	99.270	1.096	166.200
2	17:36:29	102.500	96.830	103.000	97.340	16.110	15.370	430.500	95.800	-2.767	164.800
3	17:36:56	101.600	98.660	99.610	92.630	18.020	16.790	443.800	99.370	2.064	163.100
X		102.600	98.230	100.200	94.940	16.840	16.330	441.300	98.150	0.131	164.700
S		1.092	1.238	2.575	2.354	1.028	0.833	9.826	2.037	2.556	1.544
%RSD		1.064	1.260	2.570	2.480	6.102	5.102	2.227	2.075	1955.000	0.938
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	75.1%	100.500	98.660	99.620	95.980	97.860	94.430	95.060	94.980	76.5%
2	17:36:29	74.4%	100.400	99.490	99.930	102.400	98.670	95.910	97.180	97.650	75.8%
3	17:36:56	75.3%	100.700	99.600	98.980	94.300	99.080	95.420	96.700	97.700	75.4%
X		75.0%	100.600	99.250	99.510	97.550	98.540	95.250	96.310	96.780	75.9%
S		0.5%	0.125	0.513	0.482	4.265	0.618	0.757	1.113	1.556	0.6%
%RSD		0.6	0.124	0.517	0.484	4.372	0.627	0.795	1.155	1.608	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	96.360	96.290	96.950	95.970	267.500	261.200	84.0%	97.850	99.660	95.270
2	17:36:29	98.570	99.320	98.200	96.190	269.100	265.400	83.1%	99.380	102.900	96.800
3	17:36:56	100.400	98.650	99.070	95.920	271.500	269.800	83.5%	99.220	101.000	96.460
X		98.450	98.090	98.070	96.030	269.400	265.500	83.5%	98.810	101.200	96.170
S		2.027	1.592	1.068	0.145	2.022	4.306	0.5%	0.839	1.637	0.802
%RSD		2.059	1.623	1.089	0.151	0.750	1.622	0.5	0.849	1.618	0.834
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:36:02	94.550	94.010	83.9%							
2	17:36:29	96.760	95.910	83.9%							
3	17:36:56	96.180	95.070	84.2%							
X		95.830	95.000	84.0%							
S		1.143	0.956	0.2%							
%RSD		1.193	1.006	0.2							

CCV MW12620 4/22/2020 17:41:29 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	73.6%	315.600	280.800	299.300	8.345	±62440.000	±61300.000	±60970.000	±58900.000	302.800
2	17:42:24	73.8%	307.800	285.100	306.600	5.804	±63430.000	±62260.000	±62620.000	±60310.000	310.800
3	17:42:51	72.4%	312.800	297.300	305.800	10.090	±62660.000	±62440.000	±62500.000	±58670.000	304.200
X		73.3%	104.030%	95.910%	101.301%	8.080	±104.739%	±62000.000	±62030.000	±98.823%	101.983%
S		0.7%	n/a	n/a	n/a	2.156	±n/a	±609.000	±925.400	±n/a	n/a
%RSD		1.0	1.271	2.964	1.308	26.680	±0.825	±0.982	±1.492	±1.493	1.387
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	3037.000	669.200	±58050.000	61940.000	±61810.000	71.2%	301.800	305.400	300.500	2918.000
2	17:42:24	±2799.000	624.400	±58220.000	62600.000	±63670.000	71.0%	308.700	309.000	303.200	2786.000
3	17:42:51	±2825.000	594.900	±57930.000	61490.000	±61920.000	72.2%	307.400	300.400	293.800	4008.000
X		±2887.000	629.500	±96.774%	62010.000	±104.113%	71.4%	101.993%	101.640%	99.719%	3237.000
S		±130.700	37.430	±n/a	561.600	±n/a	0.6%	n/a	n/a	n/a	670.700
%RSD		±4.529	5.946	±0.250	0.906	±1.668	0.9	1.194	1.407	1.616	20.720
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	±62390.000	294.600	±62170.000	±59180.000	299.300	295.100	306.200	286.600	298.700	298.200
2	17:42:24	±63190.000	294.000	±63620.000	±60990.000	299.200	294.900	296.900	286.400	297.900	300.900
3	17:42:51	±62210.000	290.000	±62510.000	±59590.000	292.400	289.700	298.000	289.000	296.100	301.100
X		±62600.000	97.623%	±62770.000	±99.870%	98.997%	97.750%	300.300	287.300	99.186%	100.020%
S		±517.900	n/a	±759.100	±n/a	n/a	n/a	5.081	1.422	n/a	n/a
%RSD		±0.827	0.843	±1.209	±1.584	1.335	1.051	1.692	0.495	0.453	0.539
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	286.000	290.800	314.000	286.000	0.393	-0.581	1354.000	305.400	-1.647	295.900
2	17:42:24	291.800	289.100	311.900	293.600	1.122	-0.558	1345.000	305.400	0.315	296.000
3	17:42:51	300.500	288.700	310.400	288.600	0.208	-0.063	1344.000	300.100	1.984	298.500
X		292.800	289.600	104.037%	289.400	0.575	-0.401	1348.000	101.216%	0.218	98.939%
S		7.292	1.133	n/a	3.873	0.483	0.293	5.707	n/a	1.818	n/a
%RSD		2.491	0.391	0.577	1.338	84.080	73.020	0.423	1.000	835.500	0.491
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	70.8%	320.800	315.200	312.300	295.100	303.700	297.300	300.800	296.800	71.1%
2	17:42:24	72.3%	318.700	320.300	308.400	283.500	300.800	292.600	294.800	295.600	71.7%
3	17:42:51	70.1%	321.100	318.800	319.300	295.600	304.600	296.300	296.800	300.500	71.3%
X		71.1%	106.742%	106.034%	313.300	291.400	101.012%	295.400	297.400	99.201%	71.4%
S		1.1%	n/a	n/a	5.512	6.876	n/a	2.495	3.046	n/a	0.3%
%RSD		1.5	0.407	0.815	1.759	2.360	0.662	0.845	1.024	0.858	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	308.800	305.700	301.700	292.900	307.600	296.900	78.6%	310.400	314.700	296.800
2	17:42:24	306.000	306.200	304.800	296.500	306.800	300.900	77.9%	310.000	313.800	298.200
3	17:42:51	307.100	305.500	311.400	307.500	307.900	303.700	77.4%	308.900	318.600	299.800
X		102.438%	101.947%	306.000	99.651%	102.489%	100.178%	77.9%	309.800	105.241%	99.422%
S		n/a	n/a	4.932	n/a	n/a	n/a	0.6%	0.801	n/a	n/a
%RSD		0.457	0.116	1.612	2.539	0.185	1.140	0.8	0.259	0.807	0.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:41:56	292.900	292.700	76.2%							
2	17:42:24	297.800	296.900	76.5%							
3	17:42:51	297.100	298.200	75.9%							
X		98.643%	98.653%	76.2%							
S		n/a	n/a	0.3%							
%RSD		0.894	0.974	0.4							

CCB IM9936-01 4/22/2020 17:47:24 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	79.1%	-0.037	2.022	2.883	9.522	0.016	1.935	1.217	1.412	0.041
2	17:48:18	77.8%	-0.006	2.557	2.618	14.000	0.510	2.270	1.784	1.699	0.064
3	17:48:45	77.7%	0.010	2.843	1.926	16.460	0.386	1.887	2.274	1.438	0.036
X		78.2%	-0.011	2.474	2.476	13.330	0.304	2.030	1.758	1.516	0.047
S		0.8%	0.024	0.417	0.494	3.519	0.257	0.209	0.529	0.159	0.015
%RSD		1.0	212.700	16.850	19.970	26.400	84.450	10.280	30.100	10.480	31.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.534	386.400	10.590	0.654	3.969	74.5%	-0.046	-0.014	-0.022	-35.100
2	17:48:18	0.822	364.100	9.863	3.126	3.236	74.9%	-0.046	0.017	0.027	-47.580
3	17:48:45	0.501	356.200	9.429	4.423	3.828	74.4%	-0.019	0.013	0.010	-42.880
X		0.619	368.900	9.960	2.734	3.678	74.6%	-0.037	0.005	0.005	-41.860
S		0.177	15.670	0.585	1.914	0.389	0.3%	0.015	0.017	0.025	6.303
%RSD		28.550	4.248	5.871	70.010	10.580	0.4	41.170	308.500	503.300	15.060
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	2.202	0.005	-3.338	5.697	0.006	-0.009	0.030	0.011	-0.001	-0.108
2	17:48:18	2.318	0.026	-3.499	6.711	0.017	-0.031	-0.272	0.005	0.015	-0.098
3	17:48:45	2.410	0.038	-3.171	4.118	0.004	-0.023	-0.169	-0.025	0.028	-0.061
X		2.310	0.023	-3.336	5.509	0.009	-0.021	-0.137	-0.003	0.014	-0.089
S		0.104	0.017	0.164	1.306	0.007	0.011	0.153	0.019	0.014	0.025
%RSD		4.521	72.240	4.905	23.710	74.270	53.460	112.000	644.800	105.100	28.090
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	83Kr	88Sr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.048	0.098	-0.078	0.180	0.133	-0.313	-1.386	-0.553	1.682	0.001
2	17:48:18	-0.336	0.024	-0.065	0.630	-0.667	-0.913	-1.376	-0.341	0.215	0.009
3	17:48:45	0.198	0.251	0.138	0.388	-0.351	-0.839	2.670	0.764	-1.244	0.007
X		-0.030	0.124	-0.001	0.399	-0.295	-0.688	-0.031	-0.043	0.218	0.006
S		0.275	0.116	0.121	0.225	0.403	0.327	2.339	0.707	1.463	0.004
%RSD		921.100	93.260	8590.000	56.460	136.400	47.560	7634.000	1635.000	672.500	70.780
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	73.6%	0.162	0.187	0.277	0.086	0.005	0.010	0.003	0.020	76.3%
2	17:48:18	73.4%	0.207	0.158	0.167	-0.053	0.014	0.015	-0.005	0.025	73.5%
3	17:48:45	72.9%	0.167	0.284	0.193	0.222	0.010	0.036	0.020	0.000	73.6%
X		73.3%	0.179	0.210	0.212	0.085	0.009	0.020	0.006	0.015	74.5%
S		0.4%	0.025	0.066	0.057	0.137	0.004	0.014	0.013	0.013	1.6%
%RSD		0.5	13.700	31.360	27.040	161.600	46.990	67.710	207.800	86.350	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.131	0.200	0.361	0.342	-0.041	-0.017	79.6%	0.020	0.004	0.013
2	17:48:18	0.141	0.195	0.397	0.349	-0.029	-0.004	78.3%	0.009	0.017	0.042
3	17:48:45	0.157	0.218	0.291	0.250	-0.029	0.003	78.3%	0.010	0.010	0.024
X		0.143	0.204	0.350	0.314	-0.033	-0.006	78.7%	0.013	0.010	0.026
S		0.013	0.012	0.054	0.055	0.007	0.010	0.7%	0.006	0.006	0.015
%RSD		9.061	5.886	15.390	17.550	20.880	177.500	0.9	47.460	60.880	56.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:47:51	0.011	0.014	82.1%							
2	17:48:18	0.026	0.031	81.0%							
3	17:48:45	0.028	0.018	81.1%							
X		0.021	0.021	81.4%							
S		0.009	0.009	0.6%							
%RSD		43.440	42.430	0.7							

VD17091-005SD 4/22/2020 17:53:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	81.0%	98.030	63.600	67.350	-45.940	18540.000	18540.000	19110.000	25590.000	171.500
2	17:54:09	80.0%	99.760	69.510	68.870	-44.090	18980.000	18980.000	19410.000	25550.000	173.100
3	17:54:36	81.5%	97.220	66.430	69.840	-43.320	19460.000	19460.000	19620.000	26160.000	177.800
X		80.8%	98.340	66.510	68.690	-44.450	18990.000	18990.000	19380.000	25760.000	174.100
S		0.8%	1.298	2.952	1.254	1.350	189.800	462.200	253.000	342.200	3.281
%RSD		1.0	1.320	4.438	1.826	3.038	2.793	2.434	1.305	1.328	1.884
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	5061.000	62800.000	2998.000	75570.000	75440.000	74.1%	98.930	94.480	95.830	14610.000
2	17:54:09	5143.000	64470.000	3097.000	75650.000	76360.000	73.0%	97.880	95.480	98.310	16470.000
3	17:54:36	4981.000	65930.000	3116.000	77650.000	77640.000	71.6%	102.600	99.060	98.250	17810.000
X		5062.000	64400.000	3070.000	76290.000	76480.000	72.9%	99.810	96.340	97.460	16300.000
S		81.140	1566.000	63.540	1178.000	1103.000	1.3%	2.489	2.406	1.420	1603.000
%RSD		1.603	2.431	2.070	1.544	1.442	1.7	2.494	2.498	1.457	9.839
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	1204.000	106.300	1094.000	1218.000	92.340	92.480	94.430	94.760	96.560	99.410
2	17:54:09	1218.000	107.000	1133.000	1229.000	94.190	93.450	94.380	94.260	97.290	99.250
3	17:54:36	1273.000	112.200	1154.000	1275.000	96.010	95.200	98.700	94.400	96.480	97.570
X		1231.000	108.500	1127.000	1241.000	94.180	93.710	95.830	94.470	96.780	98.740
S		36.540	3.240	30.290	30.210	1.832	1.377	2.481	0.254	0.446	1.022
%RSD		2.967	2.986	2.689	2.434	1.946	1.469	2.589	0.269	0.461	1.035
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	98.690	99.430	102.100	98.210	12.570	10.780	427.200	96.470	2.198	165.400
2	17:54:09	102.900	101.000	101.700	97.190	15.580	13.660	453.100	102.100	-2.247	167.600
3	17:54:36	101.500	100.800	105.000	97.030	14.040	13.650	455.800	101.600	-1.745	167.100
X		101.000	100.400	103.000	97.480	14.060	12.700	445.400	100.000	-0.598	166.700
S		2.134	0.858	1.798	0.639	1.509	1.663	15.790	3.112	2.434	1.120
%RSD		2.112	0.855	1.746	0.655	10.730	13.090	3.544	3.110	406.900	0.672
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	73.4%	102.400	100.800	98.340	104.100	97.980	97.030	96.180	97.590	73.4%
2	17:54:09	73.4%	102.500	102.400	100.400	93.490	98.760	96.860	99.240	96.310	73.8%
3	17:54:36	73.5%	102.900	100.400	101.000	102.100	99.890	98.440	96.840	96.820	74.4%
X		73.4%	102.600	101.200	99.910	99.900	98.880	97.440	97.420	96.910	73.9%
S		0.0%	0.239	1.009	1.383	5.652	0.959	0.867	1.612	0.645	0.5%
%RSD		0.1	0.233	0.997	1.384	5.657	0.970	0.890	1.655	0.665	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	99.790	99.480	100.300	99.920	275.200	269.400	79.2%	99.300	105.200	103.000
2	17:54:09	99.120	100.400	100.500	98.060	278.300	274.300	81.2%	99.660	103.500	98.000
3	17:54:36	99.560	101.400	100.200	100.500	275.900	272.500	80.6%	100.900	105.000	100.300
X		99.490	100.400	100.300	99.500	276.400	272.100	80.4%	99.940	104.600	100.400
S		0.344	0.955	0.146	1.284	1.616	2.485	1.0%	0.823	0.958	2.511
%RSD		0.346	0.950	0.145	1.291	0.584	0.914	1.3	0.823	0.916	2.500
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:53:42	100.600	100.300	82.5%							
2	17:54:09	98.350	96.910	82.1%							
3	17:54:36	98.980	98.450	82.1%							
X		99.310	98.540	82.2%							
S		1.160	1.677	0.2%							
%RSD		1.168	1.702	0.2							

VD17091-005L(5)

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User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	82.7%	0.006	6.386	5.822	-19.410	1182.000	4478.000	4753.000	5091.000	7.650
2	17:59:59	82.7%	-0.038	6.263	5.797	-20.090	1184.000	4575.000	4845.000	5037.000	6.579
3	18:00:26	81.9%	-0.008	6.438	6.219	-15.610	1232.000	4645.000	4870.000	5177.000	6.651
X		82.5%	-0.013	6.362	5.946	-18.370	1199.000	4566.000	4822.000	5102.000	6.960
S		0.5%	0.022	0.090	0.237	2.414	28.240	83.700	61.740	70.330	0.599
%RSD		0.6	165.500	1.416	3.984	13.140	2.355	1.833	1.280	1.379	8.602
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	922.500	13900.000	483.900	14950.000	14640.000	76.1%	0.212	-0.220	0.310	5719.000
2	17:59:59	907.800	14200.000	489.100	14720.000	14590.000	76.9%	0.184	-0.756	0.257	5859.000
3	18:00:26	940.200	14600.000	508.600	15400.000	14860.000	75.1%	0.189	-0.184	0.300	5865.000
X		923.500	14230.000	493.900	15020.000	14700.000	76.0%	0.195	-0.387	0.289	5814.000
S		16.200	351.600	13.050	342.700	143.700	0.9%	0.015	0.320	0.028	82.970
%RSD		1.755	2.470	2.642	2.281	0.978	1.2	7.659	82.860	9.793	1.427
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	16.270	2.417	33.430	41.210	-0.001	0.177	0.257	0.044	0.034	0.346
2	17:59:59	17.190	2.419	31.210	40.910	0.015	0.118	-0.188	0.051	0.065	0.341
3	18:00:26	18.050	2.469	32.500	41.210	0.023	0.137	-0.125	0.024	0.067	0.404
X		17.170	2.435	32.380	41.110	0.012	0.144	-0.019	0.040	0.055	0.364
S		0.892	0.030	1.113	0.170	0.012	0.030	0.240	0.014	0.019	0.035
%RSD		5.194	1.213	3.436	0.414	96.790	21.080	1297.000	34.410	34.130	9.578
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	1.858	0.756	0.128	-0.291	3.116	2.943	1.437	0.455	-1.344	13.680
2	17:59:59	2.004	0.854	-0.030	0.044	2.390	2.035	0.352	-0.068	0.975	13.550
3	18:00:26	0.982	0.811	-0.042	0.169	2.779	2.382	-1.462	-0.685	2.553	14.340
X		1.615	0.807	0.018	-0.026	2.762	2.453	0.109	-0.099	0.728	13.850
S		0.552	0.049	0.095	0.238	0.363	0.459	1.465	0.570	1.960	0.423
%RSD		34.220	6.133	514.500	916.200	13.160	18.690	1341.000	573.700	269.400	3.055
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	75.2%	0.086	0.118	0.020	-0.302	0.003	-0.000	-0.004	0.012	78.5%
2	17:59:59	76.5%	0.187	0.190	0.159	0.205	0.005	-0.002	-0.013	0.002	77.9%
3	18:00:26	74.9%	0.103	0.124	0.037	0.403	0.003	-0.004	0.004	-0.002	76.9%
X		75.5%	0.125	0.144	0.072	0.102	0.003	-0.002	-0.005	0.004	77.8%
S		0.9%	0.054	0.040	0.076	0.363	0.001	0.002	0.008	0.007	0.8%
%RSD		1.1	43.120	27.540	105.900	356.400	33.540	91.540	178.000	189.800	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	0.059	0.132	0.009	-0.014	31.310	32.870	80.5%	0.031	0.033	0.002
2	17:59:59	0.067	0.145	0.021	0.005	32.710	33.940	81.3%	0.035	0.041	0.001
3	18:00:26	0.095	0.170	0.015	0.010	35.550	33.910	81.4%	0.036	0.028	-0.007
X		0.074	0.149	0.015	0.001	33.190	33.570	81.1%	0.034	0.034	-0.002
S		0.019	0.019	0.006	0.013	2.160	0.610	0.5%	0.003	0.006	0.005
%RSD		25.600	12.900	36.810	2229.000	6.507	1.817	0.6	8.281	18.660	333.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:59:32	-0.010	-0.004	84.7%							
2	17:59:59	0.008	-0.002	84.3%							
3	18:00:26	-0.006	-0.010	85.6%							
X		-0.003	-0.005	84.9%							
S		0.009	0.004	0.6%							
%RSD		360.500	85.050	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	83.3%	94.560	67.350	69.490	-45.490	18320.000	18210.000	18210.000	23860.000	121.900
2	18:05:49	83.6%	97.930	74.210	75.520	-44.280	19020.000	19020.000	19020.000	25260.000	125.400
3	18:06:16	82.8%	100.600	70.980	74.650	-45.150	18770.000	18770.000	19150.000	25440.000	127.100
X		83.2%	97.690	70.850	73.220	-44.970	18700.000	18700.000	18790.000	24850.000	124.800
S		0.4%	3.026	3.436	3.257	0.621	101.300	356.000	509.300	864.600	2.640
%RSD		0.5	3.098	4.849	4.449	1.381	1.535	1.904	2.710	3.479	2.116
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	4731.000	62730.000	2928.000	71750.000	71670.000	74.7%	98.640	96.080	97.020	19730.000
2	18:05:49	4720.000	64540.000	3061.000	73410.000	72790.000	72.9%	103.600	96.810	97.740	22040.000
3	18:06:16	4793.000	65390.000	3073.000	74940.000	74010.000	72.5%	100.400	99.020	100.900	20280.000
X		4748.000	64220.000	3021.000	73370.000	72820.000	73.4%	100.900	97.310	98.540	20680.000
S		39.350	1360.000	80.720	1597.000	1167.000	1.2%	2.502	1.529	2.044	1206.000
%RSD		0.829	2.118	2.672	2.177	1.603	1.6	2.481	1.571	2.074	5.833
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	1203.000	107.500	1109.000	1216.000	93.890	94.200	97.310	94.980	97.860	99.190
2	18:05:49	1220.000	108.300	1120.000	1220.000	97.110	95.720	96.170	97.200	98.880	99.120
3	18:06:16	1255.000	109.600	1122.000	1230.000	96.540	94.550	98.100	95.580	95.570	98.370
X		1226.000	108.500	1117.000	1222.000	95.850	94.820	97.190	95.920	97.440	98.890
S		26.770	1.049	7.339	7.008	1.719	0.795	0.969	1.145	1.693	0.454
%RSD		2.184	0.967	0.657	0.574	1.794	0.839	0.997	1.194	1.738	0.459
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	103.000	99.570	104.600	93.700	14.910	16.190	449.400	100.300	0.651	164.000
2	18:05:49	102.700	99.700	106.300	94.760	14.680	14.010	436.700	99.330	-0.855	162.300
3	18:06:16	103.900	99.310	102.900	92.280	15.660	13.590	425.600	95.280	0.615	161.900
X		103.200	99.520	104.600	93.580	15.080	14.600	437.200	98.300	0.137	162.800
S		0.645	0.196	1.696	1.240	0.511	1.394	11.890	2.651	0.859	1.090
%RSD		0.625	0.197	1.622	1.325	3.390	9.553	2.719	2.697	627.300	0.670
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	74.3%	102.700	101.800	100.500	103.500	100.500	98.260	97.470	98.280	75.3%
2	18:05:49	75.5%	102.800	102.200	100.800	103.200	100.200	98.580	100.700	98.420	74.7%
3	18:06:16	75.3%	104.000	102.600	101.900	98.410	99.130	97.720	98.500	96.730	75.5%
X		75.0%	103.200	102.200	101.100	101.700	99.960	98.190	98.890	97.810	75.1%
S		0.6%	0.733	0.413	0.740	2.868	0.729	0.433	1.651	0.937	0.4%
%RSD		0.8	0.710	0.405	0.732	2.820	0.730	0.441	1.670	0.958	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	101.500	100.300	89.670	89.200	269.000	259.900	82.1%	97.820	105.300	100.700
2	18:05:49	99.670	100.600	90.880	90.060	269.600	265.700	81.9%	101.700	105.200	100.000
3	18:06:16	99.870	98.980	92.280	89.680	265.400	262.400	83.1%	102.200	103.400	97.180
X		100.300	99.940	90.940	89.650	268.000	262.700	82.4%	100.600	104.600	99.290
S		0.991	0.851	1.308	0.429	2.316	2.896	0.6%	2.407	1.091	1.856
%RSD		0.988	0.852	1.438	0.478	0.864	1.102	0.8	2.393	1.042	1.869
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:05:22	98.820	98.850	84.5%							
2	18:05:49	99.090	98.580	83.0%							
3	18:06:16	98.410	96.760	82.3%							
X		98.770	98.060	83.3%							
S		0.342	1.139	1.1%							
%RSD		0.346	1.162	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	81.9%	-0.008	5.226	5.304	-27.570	72570.000	33380.000	34850.000	56570.000	190.800
2	18:11:38	81.0%	0.051	4.937	5.510	-30.930	73630.000	33520.000	34830.000	55840.000	188.700
3	18:12:05	80.8%	-0.008	4.062	4.914	-35.070	74500.000	33490.000	34760.000	56430.000	195.200
X		81.3%	0.012	4.742	5.243	-31.190	73570.000	33470.000	34810.000	56280.000	191.600
S		0.6%	0.034	0.606	0.303	3.758	971.300	71.640	48.010	391.900	3.299
%RSD		0.7	290.500	12.780	5.772	12.050	1.320	0.214	0.138	0.696	1.722
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	TM 10150.000	57200.000	2020.000	69290.000	69540.000	71.6%	5.397	0.607	0.977	15490.000
2	18:11:38	TM 10430.000	58450.000	2034.000	69040.000	68420.000	71.2%	5.240	-0.178	0.987	15990.000
3	18:12:05	TM 10400.000	58170.000	2045.000	70270.000	69780.000	71.1%	4.917	0.939	1.029	15120.000
X		TM 10330.000	57940.000	2033.000	69530.000	69240.000	71.3%	5.185	0.456	0.998	15530.000
S		TM 154.700	657.800	12.310	649.500	727.800	0.3%	0.245	0.573	0.028	435.100
%RSD		TM 1.498	1.135	0.606	0.934	1.051	0.4	4.719	125.700	2.801	2.801
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	4178.000	TM 2823.000	3895.000	4039.000	6.968	3.472	2.750	0.592	0.592	4.117
2	18:11:38	4173.000	TM 2912.000	3980.000	4072.000	6.885	3.426	3.501	0.736	0.671	4.077
3	18:12:05	4197.000	TM 2894.000	3949.000	4115.000	7.281	3.347	3.768	0.693	0.794	3.859
X		4182.000	TM 2876.000	3941.000	4075.000	7.045	3.415	3.340	0.673	0.686	4.018
S		12.370	TM 46.920	42.820	38.370	0.209	0.063	0.528	0.074	0.102	0.139
%RSD		0.296	TM 1.631	1.087	0.942	2.962	1.856	15.810	11.000	14.800	3.457
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	11.830	10.090	13.840	-0.015	1763.000	1781.000	8.131	1.595	0.220	M 643.800
2	18:11:38	11.310	8.866	15.180	-0.288	1777.000	1768.000	5.609	0.574	3.662	M 656.400
3	18:12:05	11.900	9.772	14.100	1.171	1825.000	1810.000	4.669	0.340	3.706	M 657.900
X		11.680	9.576	14.370	0.289	1788.000	1786.000	6.137	0.837	2.529	M 652.700
S		0.320	0.635	0.709	0.775	32.640	21.490	1.790	0.667	2.000	M 7.729
%RSD		2.742	6.637	4.934	267.900	1.825	1.203	29.180	79.790	79.080	M 1.184
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	73.8%	0.645	0.701	0.704	15.390	0.009	0.004	-0.007	0.015	73.8%
2	18:11:38	74.1%	0.844	0.423	0.601	17.570	0.001	0.004	0.043	0.054	73.2%
3	18:12:05	73.6%	0.735	0.748	0.626	10.230	0.007	0.009	0.035	0.022	73.4%
X		73.8%	0.741	0.624	0.644	14.400	0.006	0.006	0.024	0.030	73.5%
S		0.2%	0.100	0.175	0.054	3.766	0.004	0.002	0.027	0.021	0.3%
%RSD		0.3	13.440	28.090	8.346	26.160	71.110	42.800	112.200	69.110	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	0.279	0.443	0.496	0.452	421.000	419.600	80.5%	0.023	0.008	0.144
2	18:11:38	0.278	0.397	0.383	0.459	434.700	423.200	81.5%	0.015	0.012	0.147
3	18:12:05	0.265	0.422	0.433	0.362	431.200	420.000	81.9%	0.013	0.010	0.136
X		0.274	0.421	0.437	0.424	428.900	420.900	81.3%	0.017	0.010	0.142
S		0.008	0.023	0.057	0.054	7.133	1.986	0.7%	0.005	0.002	0.006
%RSD		2.890	5.468	12.940	12.780	1.663	0.472	0.9	30.130	17.180	4.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:11:11	0.129	0.130	79.0%							
2	18:11:38	0.139	0.126	80.3%							
3	18:12:05	0.147	0.123	80.4%							
X		0.138	0.126	79.9%							
S		0.009	0.004	0.8%							
%RSD		6.742	2.794	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	82.9%	-0.009	0.937	1.105	-66.960	TM 144200.000	TM 48430.000	TM 50720.000	TM 86250.000	7.965
2	18:17:29	82.9%	-0.038	0.916	1.239	-66.840	TM 147300.000	TM 48640.000	TM 51070.000	TM 87110.000	8.537
3	18:17:56	84.7%	-0.010	0.736	1.345	-66.080	TM 148100.000	TM 49300.000	TM 51390.000	TM 88760.000	9.126
X		83.5%	-0.019	0.863	1.230	-66.630	TM 146500.000	TM 48790.000	TM 51060.000	TM 87370.000	8.543
S		1.0%	0.016	0.111	0.121	0.474	TM 2021.000	TM 452.400	TM 335.400	TM 1279.000	0.581
%RSD		1.2	87.680	12.820	9.795	0.712	TM 1.379	TM 0.927	TM 0.657	TM 1.464	6.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	TM 14000.000	TM 58950.000	1491.000	TM 105000.000	TM 103300.000	76.8%	1.384	4.547	0.824	17180.000
2	18:17:29	TM 14230.000	TM 60190.000	1522.000	TM 105600.000	TM 107100.000	75.9%	1.272	5.536	0.830	17760.000
3	18:17:56	TM 13700.000	TM 60490.000	1511.000	TM 105800.000	TM 107000.000	75.1%	1.702	4.821	0.882	18920.000
X		TM 13980.000	TM 59880.000	1508.000	TM 105500.000	TM 105800.000	75.9%	1.453	4.968	0.846	17950.000
S		TM 261.700	TM 818.500	15.700	TM 447.900	TM 2137.000	0.8%	0.224	0.511	0.032	885.600
%RSD		TM 1.873	TM 1.367	1.041	TM 0.425	TM 2.020	1.1	15.390	10.280	3.784	4.933
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	271.400	TM 556.400	284.700	406.800	1.528	2.397	1.888	1.067	1.141	1.850
2	18:17:29	269.100	TM 544.800	288.500	390.500	1.537	2.260	0.943	1.074	0.894	1.900
3	18:17:56	267.200	TM 560.300	287.400	400.100	1.564	2.218	1.207	1.109	1.042	1.634
X		269.200	TM 553.800	286.900	399.100	1.543	2.292	1.346	1.083	1.026	1.795
S		2.124	TM 8.064	1.930	8.213	0.019	0.093	0.488	0.022	0.125	0.142
%RSD		0.789	TM 1.456	0.673	2.058	1.204	4.075	36.230	2.051	12.140	7.894
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	8.085	6.621	0.519	0.428	2233.000	2211.000	10.610	2.062	0.560	TM 963.000
2	18:17:29	9.185	5.961	-0.321	-0.080	2195.000	2204.000	7.547	1.157	2.395	TM 969.700
3	18:17:56	8.559	5.862	0.484	0.623	2228.000	2259.000	12.610	2.420	1.054	TM 976.300
X		8.610	6.148	0.228	0.324	2219.000	2225.000	10.260	1.880	1.336	TM 969.700
S		0.551	0.412	0.475	0.363	20.750	30.140	2.551	0.651	0.950	TM 6.640
%RSD		6.406	6.710	208.700	112.100	0.935	1.355	24.870	34.650	71.100	TM 0.685
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	75.5%	1.068	1.082	1.016	19.580	0.003	-0.000	0.088	0.141	76.0%
2	18:17:29	76.7%	0.935	1.203	1.008	23.540	0.001	0.012	0.137	0.169	75.5%
3	18:17:56	75.5%	1.064	0.897	1.081	18.760	-0.003	0.002	0.183	0.135	76.2%
X		75.9%	1.022	1.061	1.035	20.630	0.000	0.005	0.136	0.148	75.9%
S		0.7%	0.076	0.155	0.040	2.552	0.003	0.007	0.047	0.018	0.4%
%RSD		0.9	7.400	14.570	3.909	12.370	1265.000	140.000	35.030	12.420	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	0.358	0.423	0.288	0.241	330.000	320.900	84.2%	0.027	0.033	0.051
2	18:17:29	0.237	0.388	0.300	0.343	331.200	326.300	82.9%	0.033	0.026	0.052
3	18:17:56	0.254	0.361	0.291	0.272	328.800	326.100	84.7%	0.033	0.028	0.048
X		0.283	0.391	0.293	0.285	330.000	324.400	83.9%	0.031	0.029	0.050
S		0.066	0.031	0.006	0.052	1.170	3.036	0.9%	0.004	0.004	0.002
%RSD		23.230	7.915	2.068	18.300	0.354	0.936	1.1	11.760	12.470	3.377
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:17:02	0.039	0.031	79.5%							
2	18:17:29	0.057	0.040	81.4%							
3	18:17:56	0.034	0.034	82.3%							
X		0.043	0.035	81.1%							
S		0.012	0.005	1.4%							
%RSD		27.620	13.600	1.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	84.3%	-0.024	2.946	3.686	-44.420	TM 150200.000	TM 45710.000	TM 46770.000	TM 74450.000	43.420
2	18:23:20	86.0%	0.017	3.928	3.515	-46.430	TM 147500.000	TM 44850.000	TM 45670.000	TM 72600.000	41.350
3	18:23:47	84.6%	-0.038	3.226	3.335	-48.890	TM 149400.000	TM 45520.000	TM 46790.000	TM 74540.000	41.790
X		85.0%	-0.015	3.367	3.512	-46.580	TM 149000.000	TM 45360.000	TM 46410.000	TM 73860.000	42.190
S		0.9%	0.029	0.506	0.175	2.243	TM 1413.000	TM 449.000	TM 640.100	TM 1094.000	1.094
%RSD		1.1	195.300	15.040	4.998	4.815	TM 0.948	TM 0.990	TM 1.379	TM 1.480	2.593
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	TM 9461.000	TM 67060.000	1472.000	TM 199000.000	TM 194600.000	74.3%	2.117	1.603	0.815	15450.000
2	18:23:20	TM 9406.000	TM 66940.000	1435.000	TM 195000.000	TM 194600.000	76.8%	1.689	0.588	0.794	15930.000
3	18:23:47	TM 9395.000	TM 67440.000	TM 1399.000	TM 196200.000	TM 195600.000	75.6%	1.742	1.225	0.809	15890.000
X		TM 9421.000	TM 67150.000	TM 1435.000	TM 196800.000	TM 195000.000	75.6%	1.849	1.139	0.806	15760.000
S		TM 35.640	TM 262.800	TM 36.430	TM 2076.000	TM 578.800	1.3%	0.234	0.513	0.011	266.700
%RSD		TM 0.378	TM 0.391	TM 2.539	TM 1.055	TM 0.297	1.7	12.630	45.050	1.361	1.692
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	39.270	TM 1036.000	53.200	327.700	0.465	11.610	10.550	0.716	0.787	2.860
2	18:23:20	40.890	TM 1015.000	52.420	319.800	0.521	11.010	10.950	0.796	0.827	2.598
3	18:23:47	39.520	TM 1042.000	54.210	316.500	0.508	11.780	8.688	0.819	0.826	2.851
X		39.890	TM 1031.000	53.280	321.400	0.498	11.470	10.060	0.777	0.813	2.770
S		0.874	TM 14.230	0.897	5.759	0.029	0.401	1.208	0.054	0.023	0.149
%RSD		2.190	TM 1.380	1.684	1.792	5.863	3.500	12.010	6.965	2.822	5.368
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	19.520	15.180	-0.342	-0.038	2746.000	2730.000	7.026	1.071	1.896	TM 946.900
2	18:23:20	19.210	14.080	1.973	-0.156	2712.000	2757.000	1.717	-0.299	2.802	TM 971.700
3	18:23:47	20.100	15.140	1.708	0.161	2801.000	2850.000	6.198	1.105	0.058	TM 987.900
X		19.610	14.800	1.113	-0.011	2753.000	2779.000	4.980	0.626	1.585	TM 968.800
S		0.452	0.625	1.267	0.160	44.520	62.790	2.857	0.801	1.398	TM 20.630
%RSD		2.304	4.222	113.800	1447.000	1.617	2.260	57.360	128.000	88.200	TM 2.129
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	77.3%	0.629	0.649	0.621	21.250	0.011	0.008	0.440	0.458	74.7%
2	18:23:20	77.3%	0.595	0.664	0.600	27.290	0.003	0.004	0.487	0.457	76.2%
3	18:23:47	76.1%	0.732	0.566	0.636	26.900	0.003	0.008	0.383	0.403	74.7%
X		76.9%	0.652	0.626	0.619	25.150	0.006	0.007	0.437	0.439	75.2%
S		0.7%	0.072	0.053	0.019	3.376	0.005	0.003	0.052	0.031	0.9%
%RSD		0.9	11.000	8.394	2.995	13.420	83.260	36.200	11.920	7.119	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	0.455	0.447	0.154	0.184	TM 918.400	TM 906.500	83.7%	0.009	0.004	0.071
2	18:23:20	0.434	0.374	0.218	0.117	TM 916.500	TM 889.400	84.4%	0.001	0.004	0.044
3	18:23:47	0.420	0.456	0.179	0.140	TM 948.000	TM 910.400	85.9%	0.004	0.001	0.059
X		0.436	0.425	0.184	0.147	TM 927.600	TM 902.100	84.7%	0.005	0.003	0.058
S		0.018	0.045	0.032	0.034	TM 17.670	TM 11.170	1.1%	0.004	0.002	0.014
%RSD		4.093	10.500	17.690	23.180	TM 1.905	TM 1.238	1.3	80.670	58.890	23.910
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:22:53	0.028	0.053	81.3%							
2	18:23:20	0.040	0.045	81.1%							
3	18:23:47	0.035	0.052	82.2%							
X		0.034	0.050	81.6%							
S		0.006	0.004	0.6%							
%RSD		18.530	8.570	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	83.1%	99.540	33.600	36.370	-48.140	TM 150000.000	T 45650.000	T 47030.000	T 74950.000	176.800
2	18:29:14	81.8%	98.180	32.200	37.370	-45.530	TM 149200.000	T 46080.000	T 47480.000	T 73420.000	171.700
3	18:29:41	80.9%	98.930	33.610	37.170	-49.800	TM 151100.000	T 47100.000	T 48470.000	T 76130.000	176.500
X		82.0%	98.880	33.140	36.970	-47.820	TM 150100.000	T 46280.000	T 47660.000	T 74830.000	175.000
S		1.1%	0.678	0.816	0.529	2.153	TM 975.400	T 743.800	T 736.300	T 1363.000	2.866
%RSD		1.3	0.686	2.462	1.430	4.501	TM 0.650	T 1.607	T 1.545	T 1.821	1.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	TM 10070.000	T 67120.000	T 2202.000	M 199700.000	TM 195900.000	73.5%	101.500	100.500	96.420	18320.000
2	18:29:14	TM 10260.000	T 66530.000	T 2197.000	M 195300.000	TM 194700.000	74.2%	100.800	99.980	95.780	18070.000
3	18:29:41	TM 10300.000	T 68500.000	T 2231.000	M 197900.000	TM 197600.000	72.7%	100.900	101.500	96.990	18800.000
X		TM 10210.000	T 67380.000	T 2210.000	M 197600.000	TM 196100.000	73.5%	101.100	100.700	96.400	18400.000
S		TM 125.200	T 1012.000	T 18.530	M 2237.000	TM 1492.000	0.7%	0.375	0.778	0.606	369.500
%RSD		TM 1.226	T 1.502	T 0.839	M 1.132	TM 0.761	1.0	0.371	0.772	0.629	2.008
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	1144.000	TM 1126.000	T 1083.000	1364.000	94.250	103.700	103.600	92.500	94.130	95.400
2	18:29:14	1145.000	TM 1127.000	T 1070.000	1326.000	92.870	103.400	104.000	90.570	97.170	96.810
3	18:29:41	1143.000	TM 1129.000	T 1078.000	1367.000	93.610	103.100	103.700	92.720	95.130	96.400
X		1144.000	TM 1127.000	T 1077.000	1352.000	93.580	103.400	103.800	91.930	95.480	96.200
S		1.145	TM 1.422	T 6.568	23.120	0.690	0.310	0.214	1.184	1.546	0.727
%RSD		0.100	TM 0.126	T 0.610	1.710	0.737	0.299	0.207	1.288	1.620	0.756
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	112.700	103.700	103.200	90.480	2721.000	2735.000	439.800	99.670	0.071	TM 1053.000
2	18:29:14	118.500	107.100	104.100	91.750	2797.000	2799.000	444.000	100.600	-0.335	TM 1085.000
3	18:29:41	114.700	106.300	103.300	92.220	2816.000	2833.000	427.200	95.400	1.136	TM 1062.000
X		115.300	105.700	103.500	91.480	2778.000	2789.000	437.000	98.540	0.290	TM 1067.000
S		2.915	1.795	0.492	0.897	50.360	50.150	8.783	2.757	0.760	TM 16.550
%RSD		2.529	1.699	0.476	0.981	1.813	1.798	2.010	2.798	261.600	TM 1.552
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	76.2%	102.100	102.900	99.490	112.800	95.870	95.040	96.510	96.130	75.3%
2	18:29:14	74.6%	103.800	105.200	103.500	123.800	98.450	95.930	98.270	95.620	74.2%
3	18:29:41	74.7%	106.100	104.200	103.200	122.800	97.510	94.620	98.920	97.490	74.9%
X		75.1%	104.000	104.100	102.000	119.800	97.280	95.200	97.900	96.410	74.8%
S		0.9%	1.997	1.173	2.213	6.062	1.307	0.666	1.248	0.967	0.6%
%RSD		1.2	1.921	1.127	2.169	5.060	1.343	0.699	1.275	1.003	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	99.110	97.830	99.370	97.480	M 1015.000	M 990.400	82.8%	101.100	99.900	95.190
2	18:29:14	101.600	102.300	102.200	97.460	M 1034.000	M 995.500	82.5%	101.300	101.600	96.840
3	18:29:41	99.590	101.500	102.500	98.590	M 1011.000	M 994.900	82.2%	103.100	103.600	98.050
X		100.100	100.600	101.400	97.840	M 1020.000	M 993.600	82.5%	101.800	101.700	96.690
S		1.335	2.394	1.728	0.644	M 12.490	M 2.775	0.3%	1.117	1.869	1.436
%RSD		1.334	2.380	1.705	0.658	M 1.225	M 0.279	0.4	1.097	1.838	1.485
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:28:47	97.190	95.260	79.5%							
2	18:29:14	96.760	95.780	80.8%							
3	18:29:41	96.370	96.370	79.7%							
X		96.770	95.810	80.0%							
S		0.407	0.555	0.7%							
%RSD		0.421	0.579	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	83.6%	97.400	30.460	35.660	-46.350	<u>TM 146200.000</u>	<u>T 45160.000</u>	<u>T 47060.000</u>	<u>T 73310.000</u>	168.900
2	18:35:04	84.0%	97.310	32.840	35.220	-50.780	<u>TM 149900.000</u>	<u>T 45220.000</u>	<u>T 47240.000</u>	<u>T 74550.000</u>	172.400
3	18:35:31	82.9%	97.810	33.470	37.560	-50.220	<u>TM 150500.000</u>	<u>T 45760.000</u>	<u>T 46870.000</u>	<u>T 74000.000</u>	172.400
X		83.5%	97.500	32.260	36.150	-49.110	<u>TM 148900.000</u>	<u>T 45380.000</u>	<u>T 47060.000</u>	<u>T 73950.000</u>	171.300
S		0.6%	0.267	1.588	1.247	2.412	<u>TM 2303.000</u>	<u>T 333.500</u>	<u>T 184.700</u>	<u>T 619.200</u>	2.056
%RSD		0.7	0.273	4.924	3.449	4.911	<u>TM 1.547</u>	<u>T 0.735</u>	<u>T 0.393</u>	<u>T 0.837</u>	1.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	<u>T 9834.000</u>	<u>T 67130.000</u>	2304.000	<u>M 192800.000</u>	<u>TM 188600.000</u>	74.5%	97.590	97.610	93.350	17970.000
2	18:35:04	<u>T 9565.000</u>	<u>T 67920.000</u>	2374.000	<u>M 198100.000</u>	<u>TM 193700.000</u>	72.9%	100.200	98.730	95.660	18410.000
3	18:35:31	<u>T 9844.000</u>	<u>T 66980.000</u>	<u>T 2158.000</u>	<u>M 193700.000</u>	<u>TM 192200.000</u>	73.8%	101.400	99.250	96.400	17980.000
X		<u>T 9747.000</u>	<u>T 67340.000</u>	<u>T 2279.000</u>	<u>M 194900.000</u>	<u>TM 191500.000</u>	73.7%	99.720	98.530	95.140	18120.000
S		<u>T 158.000</u>	<u>T 505.100</u>	<u>T 110.300</u>	<u>M 2858.000</u>	<u>TM 2590.000</u>	0.8%	1.926	0.840	1.594	252.900
%RSD		<u>T 1.621</u>	<u>T 0.750</u>	<u>T 4.838</u>	<u>M 1.467</u>	<u>TM 1.352</u>	1.1	1.931	0.852	1.676	1.395
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	1148.000	<u>TM 1096.000</u>	<u>T 1062.000</u>	1323.000	91.680	99.230	107.700	90.250	92.840	95.360
2	18:35:04	1148.000	<u>TM 1112.000</u>	<u>T 1059.000</u>	1322.000	93.730	103.800	102.900	91.020	95.200	98.640
3	18:35:31	1122.000	<u>TM 1113.000</u>	<u>T 1066.000</u>	1333.000	92.570	100.500	98.400	90.510	95.160	96.080
X		1139.000	<u>TM 1107.000</u>	<u>T 1062.000</u>	1326.000	92.660	101.200	103.000	90.590	94.400	96.690
S		14.560	<u>TM 9.616</u>	<u>T 3.431</u>	6.264	1.028	2.366	4.649	0.392	1.351	1.724
%RSD		1.278	<u>TM 0.869</u>	<u>T 0.323</u>	0.472	1.110	2.339	4.513	0.433	1.431	1.783
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	110.200	105.600	102.100	93.620	2637.000	2671.000	462.100	105.100	0.063	<u>TM 1022.000</u>
2	18:35:04	112.400	104.700	104.400	90.260	2695.000	2732.000	458.700	104.200	1.135	<u>TM 1062.000</u>
3	18:35:31	110.400	103.300	105.400	91.350	2686.000	2746.000	418.200	95.310	2.533	<u>TM 1055.000</u>
X		111.000	104.500	104.000	91.750	2672.000	2716.000	446.300	101.500	1.244	<u>TM 1046.000</u>
S		1.211	1.197	1.711	1.714	30.960	40.330	24.400	5.400	1.239	<u>TM 21.350</u>
%RSD		1.091	1.145	1.646	1.868	1.159	1.485	5.468	5.319	99.610	<u>TM 2.041</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	76.2%	102.100	102.100	101.800	116.200	95.920	93.940	94.800	93.670	75.2%
2	18:35:04	74.7%	105.100	103.700	101.600	120.500	96.440	94.590	98.500	96.570	73.7%
3	18:35:31	75.3%	104.100	103.600	101.700	127.500	97.420	96.600	97.430	97.830	74.0%
X		75.4%	103.800	103.100	101.700	121.400	96.590	95.040	96.910	96.020	74.3%
S		0.7%	1.540	0.893	0.100	5.731	0.758	1.387	1.903	2.132	0.8%
%RSD		1.0	1.484	0.866	0.098	4.721	0.785	1.459	1.963	2.220	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	97.430	98.550	98.920	96.350	<u>M 988.700</u>	<u>M 972.700</u>	82.5%	98.850	99.390	95.670
2	18:35:04	100.900	99.570	100.500	98.020	<u>M 1007.000</u>	<u>M 978.700</u>	81.7%	100.800	101.000	98.520
3	18:35:31	99.640	99.400	102.200	97.280	<u>M 1002.000</u>	<u>M 976.500</u>	82.5%	100.600	100.300	97.070
X		99.330	99.170	100.500	97.220	<u>M 999.500</u>	<u>M 976.000</u>	82.2%	100.100	100.300	97.090
S		1.756	0.547	1.617	0.836	<u>M 9.690</u>	<u>M 3.018</u>	0.5%	1.080	0.813	1.427
%RSD		1.768	0.552	1.609	0.859	<u>M 0.970</u>	<u>M 0.309</u>	0.6	1.079	0.811	1.470
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:34:37	95.170	93.540	80.1%							
2	18:35:04	97.510	96.500	79.9%							
3	18:35:31	95.860	95.360	80.2%							
X		96.180	95.130	80.1%							
S		1.200	1.495	0.1%							
%RSD		1.248	1.571	0.2							

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User Pre-dilution: 1.000

user file duration: 1:00:00

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	84.8%	0.018	1.685	2.029	-28.460	±29020.000	±12050.000	±12060.000	±14420.000	9.291
2	18:40:55	85.0%	-0.024	2.215	2.250	-27.240	±29400.000	±12260.000	±12260.000	±14670.000	11.650
3	18:41:22	86.0%	-0.038	1.805	1.889	-23.720	±30610.000	±12480.000	±12650.000	±15190.000	9.323
X		85.3%	-0.015	1.902	2.056	-26.470	±29680.000	±12270.000	±12320.000	±14760.000	10.090
S		0.6%	0.029	0.278	0.182	2.459	±828.300	±213.400	±302.600	±388.700	1.354
%RSD		0.8	202.600	14.600	8.849	9.290	±2.791	±1.740	±2.456	±2.633	13.420
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	±1959.000	14710.000	314.700	37990.000	±37660.000	79.6%	0.299	0.037	0.291	5673.000
2	18:40:55	2110.000	14800.000	313.200	39100.000	±38630.000	78.1%	0.280	-0.123	0.238	5890.000
3	18:41:22	2156.000	15190.000	±336.100	40660.000	±39850.000	78.1%	0.305	-0.298	0.262	5999.000
X		±2075.000	14900.000	±321.300	39250.000	±38710.000	78.6%	0.295	-0.128	0.264	5854.000
S		±103.400	257.000	±12.780	1342.000	±1096.000	0.9%	0.013	0.167	0.027	165.700
%RSD		±4.982	1.725	±3.978	3.418	±2.830	1.1	4.386	130.500	10.080	2.831
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	8.741	210.200	25.010	70.020	0.103	2.461	2.026	0.165	0.138	0.712
2	18:40:55	8.838	211.600	25.320	75.650	0.092	2.516	2.222	0.174	0.237	0.699
3	18:41:22	10.370	216.000	24.960	73.170	0.107	2.109	2.031	0.137	0.226	0.743
X		9.316	212.600	25.100	72.950	0.101	2.362	2.093	0.159	0.201	0.718
S		0.914	3.022	0.191	2.818	0.008	0.221	0.112	0.019	0.054	0.022
%RSD		9.806	1.421	0.762	3.863	7.721	9.350	5.336	12.210	27.000	3.124
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	4.083	3.348	0.418	-0.421	552.000	537.600	6.292	1.181	1.310	189.700
2	18:40:55	4.667	3.648	0.276	-0.119	530.100	542.100	1.139	0.207	-0.083	189.100
3	18:41:22	4.944	3.524	-0.147	-0.851	558.100	576.000	1.832	0.209	1.006	202.700
X		4.565	3.507	0.182	-0.464	546.800	551.900	3.088	0.532	0.744	193.800
S		0.440	0.150	0.294	0.367	14.710	20.980	2.797	0.562	0.732	7.711
%RSD		9.633	4.286	161.300	79.250	2.690	3.801	90.590	105.500	98.400	3.978
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	78.1%	0.086	0.178	0.090	5.490	-0.007	0.002	0.080	0.074	78.3%
2	18:40:55	78.3%	0.049	0.159	0.071	4.309	0.001	0.002	0.057	0.081	78.3%
3	18:41:22	75.8%	0.137	0.146	0.067	6.191	-0.001	0.002	0.131	0.074	76.3%
X		77.4%	0.091	0.161	0.076	5.330	-0.003	0.002	0.089	0.076	77.6%
S		1.4%	0.044	0.016	0.013	0.951	0.004	0.000	0.038	0.004	1.2%
%RSD		1.8	48.440	9.868	16.450	17.850	161.200	4.893	41.940	5.563	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	0.127	0.110	-0.033	-0.047	178.000	172.100	83.8%	0.133	0.134	-0.015
2	18:40:55	0.089	0.073	-0.043	-0.042	180.100	175.700	84.2%	0.095	0.134	0.010
3	18:41:22	0.089	0.180	-0.010	-0.004	185.800	183.200	82.1%	0.134	0.125	-0.009
X		0.102	0.121	-0.029	-0.031	181.300	177.000	83.4%	0.121	0.131	-0.005
S		0.022	0.055	0.017	0.023	4.024	5.636	1.1%	0.022	0.006	0.013
%RSD		21.410	45.160	59.650	74.970	2.219	3.184	1.4	18.330	4.256	286.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:40:28	0.001	-0.004	82.9%							
2	18:40:55	-0.011	-0.002	83.4%							
3	18:41:22	0.004	-0.006	83.7%							
X		-0.002	-0.004	83.3%							
S		0.008	0.002	0.4%							
%RSD		374.000	54.820	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	80.8%	101.500	36.370	38.300	-46.050	<u>TM 149200.000</u>	<u>TM 45610.000</u>	<u>TM 47410.000</u>	<u>TM 74910.000</u>	<u>TM 165.500</u>
2	18:46:47	81.1%	98.770	34.450	38.890	-45.120	<u>TM 148100.000</u>	<u>TM 45820.000</u>	<u>TM 47310.000</u>	<u>TM 74180.000</u>	153.000
3	18:47:14	80.8%	100.700	33.860	37.310	-46.280	<u>TM 152600.000</u>	<u>TM 46280.000</u>	<u>TM 47500.000</u>	<u>TM 76410.000</u>	<u>TM 150.200</u>
X		80.9%	100.300	34.890	38.170	-45.820	<u>TM 150000.000</u>	<u>TM 45900.000</u>	<u>TM 47410.000</u>	<u>TM 75170.000</u>	<u>TM 156.200</u>
S		0.2%	1.410	1.312	0.800	0.617	<u>TM 2378.000</u>	<u>TM 340.100</u>	<u>TM 98.400</u>	<u>TM 1135.000</u>	<u>TM 8.145</u>
%RSD		0.2	1.405	3.759	2.096	1.346	<u>TM 1.586</u>	<u>TM 0.741</u>	<u>TM 0.208</u>	<u>TM 1.510</u>	<u>TM 5.214</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	<u>TM 10760.000</u>	<u>TM 66770.000</u>	<u>TM 2177.000</u>	<u>M 195500.000</u>	<u>TM 197700.000</u>	74.4%	104.600	99.360	96.330	17740.000
2	18:46:47	<u>TM 10730.000</u>	<u>TM 67330.000</u>	<u>TM 2220.000</u>	<u>M 197500.000</u>	<u>TM 196000.000</u>	74.7%	102.500	98.980	96.940	18100.000
3	18:47:14	<u>TM 10810.000</u>	<u>TM 67280.000</u>	<u>TM 2199.000</u>	<u>M 196800.000</u>	<u>TM 195500.000</u>	73.3%	105.600	101.400	97.450	17820.000
X		<u>TM 10760.000</u>	<u>TM 67130.000</u>	<u>TM 2198.000</u>	<u>M 196600.000</u>	<u>TM 196400.000</u>	74.1%	104.200	99.910	96.910	17890.000
S		<u>TM 39.550</u>	<u>TM 313.300</u>	<u>TM 21.560</u>	<u>M 1017.000</u>	<u>TM 1152.000</u>	0.8%	1.582	1.301	0.561	188.700
%RSD		<u>TM 0.367</u>	<u>TM 0.467</u>	<u>TM 0.981</u>	<u>M 0.517</u>	<u>TM 0.587</u>	1.0	1.518	1.303	0.579	1.055
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	1158.000	<u>TM 1108.000</u>	<u>TM 1076.000</u>	1337.000	94.300	102.800	101.400	93.690	97.630	98.930
2	18:46:47	1147.000	<u>TM 1123.000</u>	<u>TM 1069.000</u>	1337.000	93.450	101.800	105.900	91.770	94.610	100.300
3	18:47:14	1163.000	<u>TM 1129.000</u>	<u>TM 1074.000</u>	1348.000	96.800	106.800	105.500	93.710	96.830	99.620
X		1156.000	<u>TM 1120.000</u>	<u>TM 1073.000</u>	1341.000	94.850	103.800	104.300	93.060	96.360	99.630
S		8.000	<u>TM 11.030</u>	<u>TM 3.516</u>	6.310	1.740	2.639	2.468	1.112	1.564	0.701
%RSD		0.692	<u>TM 0.985</u>	<u>TM 0.328</u>	0.471	1.835	2.542	2.367	1.195	1.624	0.703
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	106.700	107.900	106.700	94.180	2774.000	2765.000	430.200	98.660	-0.823	<u>TM 1068.000</u>
2	18:46:47	111.800	105.400	106.900	95.210	2764.000	2803.000	471.800	105.000	1.665	<u>TM 1070.000</u>
3	18:47:14	109.300	108.100	109.700	91.670	2787.000	2814.000	450.200	102.400	-0.787	<u>TM 1099.000</u>
X		109.300	107.100	107.800	93.690	2775.000	2794.000	450.700	102.000	0.018	<u>TM 1079.000</u>
S		2.550	1.535	1.670	1.818	11.580	25.470	20.790	3.183	1.426	<u>TM 17.360</u>
%RSD		2.334	1.433	1.550	1.941	0.417	0.911	4.613	3.120	7918.000	<u>TM 1.609</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	74.5%	104.900	104.300	102.700	126.200	97.380	97.250	100.300	98.470	73.3%
2	18:46:47	73.8%	104.600	103.300	104.400	126.000	97.120	95.270	96.730	97.410	74.7%
3	18:47:14	73.9%	107.100	108.300	105.900	124.500	98.370	97.630	100.300	98.300	73.3%
X		74.1%	105.500	105.300	104.300	125.600	97.630	96.720	99.120	98.060	73.8%
S		0.4%	1.343	2.661	1.604	0.941	0.660	1.267	2.068	0.569	0.8%
%RSD		0.5	1.272	2.527	1.538	0.749	0.677	1.310	2.086	0.581	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	102.300	102.500	91.370	89.520	<u>M 1009.000</u>	<u>M 992.900</u>	81.3%	103.600	104.400	99.670
2	18:46:47	99.850	100.800	90.190	89.010	<u>M 1015.000</u>	<u>M 988.900</u>	82.7%	104.300	102.200	96.240
3	18:47:14	103.400	103.700	93.970	90.370	<u>M 1034.000</u>	<u>M 1004.000</u>	81.9%	104.300	104.400	98.010
X		101.800	102.400	91.840	89.630	<u>M 1020.000</u>	<u>M 995.400</u>	82.0%	104.100	103.700	97.970
S		1.807	1.436	1.936	0.688	<u>M 13.000</u>	<u>M 8.010</u>	0.7%	0.417	1.246	1.718
%RSD		1.774	1.403	2.108	0.767	<u>M 1.275</u>	<u>M 0.805</u>	0.8	0.401	1.202	1.753
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:46:20	98.450	97.610	79.6%							
2	18:46:47	95.440	95.250	78.9%							
3	18:47:14	98.680	97.490	79.0%							
X		97.520	96.780	79.1%							
S		1.808	1.332	0.4%							
%RSD		1.854	1.377	0.5							

CCV MW12620 4/22/2020 18:51:48 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	75.9%	306.000	301.000	301.200	10.440	61830.000	61630.000	61810.000	57580.000	297.300
2	18:52:42	74.1%	311.200	311.200	311.500	8.046	63150.000	63730.000	63450.000	59360.000	306.900
3	18:53:09	74.1%	314.000	287.400	297.900	3.578	63230.000	61200.000	61030.000	58890.000	304.500
X		74.7%	103.459%	99.950%	101.166%	7.355	104.562%	62190.000	62090.000	97.687%	100.961%
S		1.0%	n/a	n/a	n/a	3.483	n/a	1351.000	1232.000	n/a	n/a
%RSD		1.4	1.300	3.982	2.345	47.350	1.254	2.172	1.985	1.572	1.658
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	2700.000	603.200	58190.000	63190.000	62360.000	73.2%	308.600	300.400	294.700	3470.000
2	18:52:42	2756.000	599.700	58600.000	63970.000	62970.000	71.3%	309.800	308.300	298.400	2260.000
3	18:53:09	2776.000	546.100	57510.000	62180.000	61900.000	72.7%	301.800	305.000	295.000	4612.000
X		2744.000	583.000	96.835%	63120.000	104.020%	72.4%	102.247%	101.528%	98.681%	3447.000
S		39.590	31.990	n/a	893.300	n/a	1.0%	n/a	n/a	n/a	1176.000
%RSD		1.443	5.486	0.944	1.415	0.860	1.4	1.402	1.300	0.695	34.120
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	61650.000	287.000	62560.000	59310.000	286.300	281.200	288.000	285.800	299.700	300.200
2	18:52:42	62890.000	295.400	62520.000	59940.000	297.900	292.800	294.800	291.200	298.200	296.300
3	18:53:09	61940.000	290.700	62240.000	59770.000	292.500	285.100	289.400	289.100	299.600	299.100
X		62160.000	97.008%	62440.000	99.455%	97.413%	95.451%	290.700	288.700	99.718%	99.522%
S		649.700	n/a	171.900	n/a	n/a	n/a	3.592	2.753	n/a	n/a
%RSD		1.045	1.449	0.275	0.541	1.970	2.079	1.236	0.954	0.279	0.677
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	286.300	284.200	306.500	291.100	23.010	24.830	1314.000	298.400	-0.193	292.200
2	18:52:42	292.700	291.400	313.700	287.400	24.150	21.920	1384.000	312.500	-1.151	300.000
3	18:53:09	298.100	288.700	316.100	293.700	25.500	23.910	1391.000	313.500	1.433	300.200
X		292.400	288.100	104.028%	290.700	24.220	23.550	1363.000	102.714%	0.030	99.155%
S		5.912	3.632	n/a	3.170	1.246	1.488	42.620	n/a	1.306	n/a
%RSD		2.022	1.260	1.598	1.090	5.147	6.317	3.127	2.741	4406.000	1.520
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	72.0%	315.600	308.500	303.800	289.200	299.000	292.000	292.400	294.600	71.9%
2	18:52:42	71.2%	317.000	314.200	313.600	293.200	303.900	294.700	293.900	291.600	71.3%
3	18:53:09	70.5%	324.100	325.000	322.200	283.500	304.800	297.700	296.800	301.200	71.0%
X		71.3%	106.304%	105.297%	313.200	288.600	100.850%	294.800	294.400	98.594%	71.4%
S		0.7%	n/a	n/a	9.217	4.866	n/a	2.884	2.240	n/a	0.4%
%RSD		1.0	1.436	2.659	2.943	1.686	1.035	0.978	0.761	1.654	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	304.200	298.000	298.200	296.100	306.600	304.600	77.7%	300.800	317.000	293.400
2	18:52:42	305.000	305.900	308.100	301.700	305.600	301.900	77.2%	304.300	316.600	295.900
3	18:53:09	305.900	302.700	305.500	302.700	313.000	305.400	76.8%	309.400	320.100	301.600
X		101.683%	100.729%	303.900	100.065%	102.801%	101.318%	77.2%	304.800	105.954%	98.994%
S		n/a	n/a	5.150	n/a	n/a	n/a	0.5%	4.340	n/a	n/a
%RSD		0.275	1.321	1.694	1.180	1.301	0.592	0.6	1.424	0.599	1.397
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:52:15	292.600	292.000	77.3%							
2	18:52:42	294.500	296.300	77.0%							
3	18:53:09	298.600	299.300	76.5%							
X		98.406%	98.624%	76.9%							
S		n/a	n/a	0.4%							
%RSD		1.040	1.248	0.5							

CCB IM9936-01 4/22/2020 18:57:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	77.8%	-0.006	2.477	2.513	10.660	0.378	1.736	1.860	0.936	0.082
2	18:58:36	78.4%	-0.006	3.043	2.572	16.440	0.596	1.907	2.217	1.932	-0.013
3	18:59:03	78.0%	0.009	2.264	1.677	15.170	0.214	1.914	2.341	1.960	0.034
X		78.1%	-0.001	2.595	2.254	14.090	0.396	1.853	2.139	1.609	0.035
S		0.3%	0.009	0.403	0.500	3.036	0.192	0.101	0.250	0.583	0.048
%RSD		0.4	884.200	15.520	22.210	21.540	48.450	5.437	11.680	36.240	137.900
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.874	337.000	8.667	8.147	5.214	74.7%	0.059	0.007	0.003	-49.580
2	18:58:36	3.213	324.500	9.047	6.862	3.531	74.9%	-0.046	-0.008	-0.052	-40.000
3	18:59:03	2.906	322.900	8.554	3.133	3.472	74.8%	0.085	0.019	0.022	-58.230
X		2.998	328.100	8.756	6.047	4.072	74.8%	0.033	0.006	-0.009	-49.270
S		0.187	7.706	0.258	2.604	0.989	0.1%	0.069	0.013	0.038	9.118
%RSD		6.245	2.349	2.951	43.060	24.290	0.2	210.500	211.800	423.600	18.510
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.373	0.006	-4.309	5.446	0.001	-0.002	-0.072	0.012	0.045	-0.030
2	18:58:36	2.039	0.026	-4.019	5.750	0.004	0.020	-0.123	-0.002	0.025	0.152
3	18:59:03	2.148	0.016	-3.876	5.912	0.001	0.013	-0.320	-0.019	0.007	-0.050
X		2.187	0.016	-4.068	5.702	0.002	0.010	-0.172	-0.003	0.026	0.024
S		0.171	0.010	0.221	0.237	0.002	0.011	0.131	0.015	0.019	0.111
%RSD		7.802	63.480	5.424	4.149	79.070	105.600	76.450	511.400	75.280	465.300
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	-0.523	0.075	0.033	-0.218	11.540	11.930	2.236	0.227	1.790	0.007
2	18:58:36	-0.056	0.223	-0.225	-0.172	10.890	11.700	-2.921	-0.487	-1.316	0.013
3	18:59:03	-0.378	0.160	-0.149	-0.578	12.980	10.530	-0.288	-0.193	0.793	0.006
X		-0.319	0.153	-0.114	-0.323	11.800	11.390	-0.325	-0.151	0.422	0.009
S		0.239	0.074	0.132	0.222	1.071	0.751	2.579	0.359	1.586	0.003
%RSD		74.810	48.680	116.300	68.880	9.072	6.596	794.700	237.300	375.500	39.730
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	72.2%	0.278	0.359	0.245	0.569	0.003	-0.002	-0.013	0.033	74.8%
2	18:58:36	74.6%	0.253	0.362	0.250	0.702	0.013	0.010	-0.013	0.011	75.9%
3	18:59:03	72.1%	0.137	0.340	0.165	0.115	0.009	0.015	0.004	0.011	74.6%
X		73.0%	0.223	0.353	0.220	0.462	0.009	0.008	-0.008	0.018	75.1%
S		1.4%	0.075	0.012	0.048	0.308	0.005	0.009	0.010	0.013	0.7%
%RSD		1.9	33.860	3.400	21.610	66.630	59.440	114.100	126.800	69.590	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	0.126	0.117	0.344	0.346	-0.029	0.016	79.8%	0.007	0.010	0.050
2	18:58:36	0.132	0.166	0.374	0.426	-0.006	0.009	79.3%	0.017	0.010	0.029
3	18:59:03	0.139	0.205	0.375	0.338	-0.029	-0.004	78.3%	0.010	0.011	0.022
X		0.132	0.163	0.364	0.370	-0.022	0.007	79.1%	0.012	0.011	0.034
S		0.006	0.044	0.018	0.049	0.013	0.010	0.8%	0.005	0.001	0.014
%RSD		4.670	27.290	4.846	13.240	61.490	138.200	1.0	44.870	7.880	42.570
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:58:09	0.022	0.022	80.7%							
2	18:58:36	0.013	0.020	81.9%							
3	18:59:03	0.009	0.013	82.1%							
X		0.015	0.018	81.5%							
S		0.007	0.005	0.8%							
%RSD		45.760	25.970	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	78.9%	0.069	23.960	25.710	5.622	14470.000	10090.000	10830.000	11410.000	M 1431.000
2	19:04:26	77.6%	0.148	25.950	25.750	12.550	14220.000	10020.000	10710.000	11310.000	TM 1284.000
3	19:04:53	76.0%	0.058	24.950	26.520	8.954	14650.000	10100.000	10850.000	11590.000	M 1440.000
X		77.5%	0.092	24.950	25.990	9.041	14450.000	10070.000	10800.000	11440.000	TM 1385.000
S		1.4%	0.049	0.996	0.459	3.463	216.800	43.200	73.250	145.100	TM 87.470
%RSD		1.8	53.500	3.991	1.767	38.300	1.500	0.429	0.678	1.269	TM 6.314
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	6880.000	67200.000	1477.000	17680.000	17240.000	68.2%	11.110	1.337	2.604	18340.000
2	19:04:26	7129.000	66600.000	1466.000	17450.000	17010.000	69.7%	11.230	0.571	2.533	20550.000
3	19:04:53	7087.000	67800.000	1497.000	17280.000	17360.000	68.2%	11.140	1.576	2.670	21390.000
X		7032.000	67200.000	1480.000	17470.000	17200.000	68.7%	11.160	1.161	2.603	20090.000
S		133.100	599.100	15.900	200.700	175.300	0.9%	0.062	0.525	0.069	1580.000
%RSD		1.892	0.892	1.074	1.149	1.019	1.3	0.555	45.220	2.647	7.861
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	942.200	286.300	995.700	917.700	1.767	9.356	8.909	3.391	3.341	7.860
2	19:04:26	923.900	287.600	993.400	920.800	1.855	10.090	8.428	3.190	3.404	8.227
3	19:04:53	960.000	291.300	997.000	912.600	1.758	9.610	9.558	3.200	3.020	8.016
X		942.000	288.400	995.400	917.000	1.794	9.685	8.965	3.261	3.255	8.034
S		18.050	2.593	1.818	4.137	0.054	0.372	0.567	0.113	0.206	0.184
%RSD		1.917	0.899	0.183	0.451	3.000	3.840	6.325	3.476	6.330	2.290
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	10.350	8.783	1.602	-0.337	107.700	106.100	-1.253	-0.470	1.337	74.600
2	19:04:26	9.349	9.006	0.781	-1.106	107.400	105.400	2.921	0.767	-0.642	74.800
3	19:04:53	10.280	8.434	0.024	-0.759	112.000	111.600	-0.758	-0.159	-0.191	74.920
X		9.992	8.741	0.803	-0.734	109.000	107.700	0.303	0.046	0.168	74.770
S		0.558	0.288	0.789	0.385	2.597	3.408	2.280	0.644	1.037	0.160
%RSD		5.583	3.298	98.300	52.460	2.382	3.166	751.900	1396.000	616.700	0.214
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	72.6%	0.012	0.043	-0.034	4.163	0.019	0.027	0.538	0.413	69.4%
2	19:04:26	71.5%	0.025	0.120	0.013	1.596	0.010	0.027	0.414	0.468	69.7%
3	19:04:53	72.8%	0.033	0.047	0.025	2.937	0.014	0.028	0.460	0.433	72.0%
X		72.3%	0.023	0.070	0.001	2.899	0.015	0.028	0.471	0.438	70.4%
S		0.7%	0.011	0.043	0.032	1.284	0.004	0.001	0.063	0.028	1.4%
%RSD		1.0	46.080	61.990	2254.000	44.300	30.550	2.355	13.340	6.325	2.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	0.357	0.327	0.404	0.324	90.820	88.800	76.5%	0.028	0.022	0.834
2	19:04:26	0.436	0.394	0.455	0.407	90.590	87.300	78.8%	0.012	0.017	0.865
3	19:04:53	0.454	0.362	0.345	0.386	86.870	88.340	77.0%	0.028	0.019	0.932
X		0.416	0.361	0.402	0.372	89.430	88.150	77.4%	0.023	0.020	0.877
S		0.051	0.034	0.055	0.043	2.215	0.772	1.2%	0.009	0.003	0.050
%RSD		12.320	9.349	13.670	11.670	2.477	0.876	1.5	40.700	14.240	5.721
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:03:59	0.894	0.888	78.5%							
2	19:04:26	0.845	0.807	79.8%							
3	19:04:53	0.891	0.895	80.3%							
X		0.877	0.863	79.5%							
S		0.027	0.049	0.9%							
%RSD		3.090	5.698	1.1							

VD15011-031 4/22/2020 19:09:22

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	79.9%	-0.022	11.170	11.470	-1.305	29810.000	15910.000	15880.000	18360.000	21.820
2	19:10:16	78.1%	0.009	12.140	11.180	0.710	30180.000	16630.000	16660.000	18380.000	21.900
3	19:10:43	78.8%	-0.007	10.050	11.310	-4.206	30100.000	16080.000	16490.000	18540.000	21.460
X		78.9%	-0.006	11.120	11.320	-1.600	30030.000	16210.000	16350.000	18430.000	21.730
S		0.9%	0.016	1.045	0.146	2.471	196.500	373.800	409.500	97.630	0.232
%RSD		1.2	241.600	9.396	1.287	154.400	0.654	2.306	2.505	0.530	1.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	TM 19260.000	269300.000	2224.000	71910.000	71870.000	70.9%	1.889	0.390	1.936	25120.000
2	19:10:16	TM 19870.000	71080.000	2443.000	71940.000	71030.000	71.1%	1.910	0.116	1.920	26970.000
3	19:10:43	TM 19660.000	69870.000	2383.000	72930.000	72210.000	71.4%	2.396	1.118	2.036	27790.000
X		TM 19600.000	70080.000	2350.000	72260.000	71700.000	71.2%	2.065	0.541	1.964	26630.000
S		TM 309.100	908.900	113.400	582.500	606.100	0.3%	0.287	0.518	0.063	1368.000
%RSD		TM 1.577	1.297	4.827	0.806	0.845	0.4	13.880	95.620	3.196	5.138
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	139.900	160.000	136.800	222.900	0.665	15.180	13.970	1.934	1.686	14.250
2	19:10:16	143.300	160.400	139.800	230.700	0.679	14.800	14.760	2.046	2.306	13.520
3	19:10:43	141.000	160.800	140.200	224.500	0.709	15.370	13.440	2.128	2.148	14.290
X		141.400	160.400	138.900	226.100	0.684	15.120	14.060	2.036	2.047	14.020
S		1.710	0.399	1.882	4.137	0.023	0.290	0.661	0.098	0.322	0.434
%RSD		1.209	0.249	1.354	1.830	3.293	1.921	4.700	4.789	15.740	3.092
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	17.980	16.730	-0.181	0.064	796.800	813.000	0.899	-0.445	4.005	159.400
2	19:10:16	20.690	16.770	0.445	-0.173	826.500	815.700	8.144	1.249	3.482	158.500
3	19:10:43	18.850	17.360	-2.214	0.286	812.600	807.500	0.885	0.246	-1.135	159.800
X		19.170	16.950	-0.650	0.059	812.000	812.100	3.310	0.350	2.117	159.300
S		1.385	0.351	1.390	0.230	14.870	4.207	4.187	0.852	2.829	0.632
%RSD		7.224	2.069	213.800	389.700	1.831	0.518	126.500	243.300	133.600	0.397
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	70.7%	0.663	0.677	0.649	2.424	-0.007	0.004	0.229	0.311	72.2%
2	19:10:16	70.8%	0.615	0.630	0.547	3.625	-0.003	0.000	0.248	0.289	71.6%
3	19:10:43	70.8%	0.730	0.892	0.516	2.872	0.001	0.000	0.238	0.240	72.2%
X		70.8%	0.669	0.733	0.571	2.974	-0.003	0.002	0.238	0.280	72.0%
S		0.0%	0.058	0.139	0.069	0.607	0.004	0.002	0.010	0.036	0.3%
%RSD		0.1	8.635	19.020	12.170	20.410	146.200	154.200	4.032	12.990	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	0.310	0.404	1.891	1.749	176.000	171.900	79.4%	0.020	0.016	0.183
2	19:10:16	0.358	0.370	1.983	1.966	176.800	174.200	78.0%	0.027	0.019	0.222
3	19:10:43	0.424	0.441	1.845	1.734	176.900	172.700	79.1%	0.014	0.017	0.215
X		0.364	0.405	1.906	1.816	176.600	172.900	78.8%	0.020	0.017	0.206
S		0.057	0.035	0.070	0.130	0.521	1.132	0.7%	0.007	0.002	0.020
%RSD		15.680	8.735	3.677	7.165	0.295	0.655	0.9	32.760	9.372	9.867
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:09:49	0.211	0.194	79.0%							
2	19:10:16	0.160	0.192	80.3%							
3	19:10:43	0.198	0.179	79.2%							
X		0.190	0.188	79.5%							
S		0.026	0.008	0.7%							
%RSD		13.850	4.141	0.9							

CCV MW12620 4/22/2020 19:15:14 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	74.0%	311.600	289.600	305.000	9.785	±61640.000	±61790.000	±62140.000	±57450.000	298.100
2	19:16:08	73.5%	310.600	297.700	306.400	5.068	±63300.000	±62550.000	±62330.000	±59270.000	301.800
3	19:16:35	74.8%	303.200	291.300	302.100	6.933	±62270.000	±62160.000	±62300.000	±59000.000	300.700
X		74.1%	102.826%	97.617%	101.501%	7.262	±104.004%	±62170.000	±62260.000	±97.621%	100.059%
S		0.7%	n/a	n/a	n/a	2.376	±n/a	±379.800	±101.000	±n/a	n/a
%RSD		0.9	1.482	1.452	0.721	32.710	±1.338	±0.611	±0.162	±1.671	0.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±2746.000	488.700	±57510.000	60740.000	±61820.000	73.0%	306.300	300.500	292.800	3458.000
2	19:16:08	±2779.000	471.400	±57320.000	62440.000	±62220.000	72.2%	306.900	305.900	300.500	2818.000
3	19:16:35	±2780.000	418.400	±56760.000	61760.000	±61650.000	73.4%	309.200	304.300	296.000	2046.000
X		±2768.000	459.500	±95.329%	61650.000	±103.158%	72.9%	102.477%	101.194%	98.805%	2774.000
S		±19.380	36.610	±n/a	854.700	±n/a	0.6%	n/a	n/a	n/a	707.100
%RSD		±0.700	7.967	±0.682	1.386	±0.480	0.9	0.494	0.914	1.304	25.490
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±62250.000	286.000	±61190.000	±58800.000	291.600	287.300	279.400	287.600	305.900	301.300
2	19:16:08	±61670.000	292.500	±61560.000	±59900.000	294.300	287.300	292.300	290.000	300.200	298.300
3	19:16:35	±60990.000	286.700	±61830.000	±59210.000	292.600	289.000	291.200	288.100	307.700	309.000
X		±61640.000	96.129%	±61530.000	±98.838%	97.607%	95.949%	287.700	288.600	101.532%	100.945%
S		±630.600	n/a	±325.100	±n/a	n/a	n/a	7.176	1.266	n/a	n/a
%RSD		±1.023	1.237	±0.528	±0.942	0.466	0.337	2.495	0.439	1.285	1.818
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	295.600	289.000	317.000	293.500	13.790	13.680	1393.000	318.700	4.991	296.900
2	19:16:08	292.000	287.200	314.900	294.600	15.010	15.440	1413.000	318.900	3.486	296.200
3	19:16:35	294.200	287.600	324.500	291.600	12.460	13.690	1368.000	319.400	1.903	293.900
X		293.900	287.900	106.272%	293.200	13.750	14.270	1391.000	106.342%	3.460	98.548%
S		1.806	0.955	n/a	1.512	1.272	1.015	22.410	n/a	1.544	n/a
%RSD		0.615	0.332	1.586	0.516	9.250	7.111	1.611	0.117	44.630	0.536
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	70.8%	317.200	313.800	310.200	300.300	305.900	296.600	295.500	295.400	70.1%
2	19:16:08	70.6%	322.900	322.000	313.300	293.800	303.000	291.400	297.700	291.300	70.8%
3	19:16:35	71.0%	326.900	326.900	317.100	316.600	312.400	307.400	302.600	299.000	69.0%
X		70.8%	107.444%	106.960%	313.500	303.600	102.365%	298.500	298.600	98.405%	70.0%
S		0.2%	n/a	n/a	3.445	11.780	n/a	8.144	3.646	n/a	0.9%
%RSD		0.3	1.517	2.062	1.099	3.882	1.573	2.729	1.221	1.295	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	304.500	305.300	305.300	296.900	311.600	301.000	76.9%	307.400	309.300	290.100
2	19:16:08	303.000	302.900	302.300	303.600	302.800	298.600	75.8%	304.200	314.100	293.600
3	19:16:35	311.100	312.400	311.600	299.400	319.000	304.600	76.5%	312.200	312.400	296.500
X		102.070%	102.282%	306.400	99.983%	103.709%	100.463%	76.4%	307.900	103.990%	97.806%
S		n/a	n/a	4.742	n/a	n/a	n/a	0.5%	4.008	n/a	n/a
%RSD		1.414	1.600	1.548	1.133	2.610	1.013	0.7	1.301	0.779	1.101
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:15:41	293.600	290.600	74.9%							
2	19:16:08	294.200	294.300	75.6%							
3	19:16:35	291.500	290.300	74.0%							
X		97.704%	97.242%	74.8%							
S		n/a	n/a	0.8%							
%RSD		0.483	0.758	1.1							

CCB IM9936-01 4/22/2020 19:21:07 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	78.2%	0.009	2.114	2.581	21.380	-0.122	2.030	2.090	2.522	0.036
2	19:22:00	77.5%	-0.021	1.754	2.091	22.110	0.002	1.963	2.000	2.350	0.006
3	19:22:27	77.3%	-0.021	3.897	1.912	6.236	-0.202	1.984	1.275	1.907	0.044
X		77.7%	-0.011	2.588	2.195	16.570	-0.107	1.993	1.789	2.260	0.029
S		0.4%	0.017	1.148	0.346	8.960	0.103	0.034	0.447	0.317	0.020
%RSD		0.6	158.000	44.340	15.790	54.060	96.120	1.722	24.990	14.040	71.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.940	267.400	8.835	4.337	4.379	75.3%	-0.020	0.018	0.010	-55.530
2	19:22:00	2.200	257.700	9.470	-0.600	3.666	74.5%	-0.046	0.033	-0.011	-58.050
3	19:22:27	1.879	254.500	7.164	0.603	4.270	75.5%	0.006	-0.002	-0.026	-54.870
X		2.006	259.900	8.490	1.447	4.105	75.1%	-0.020	0.017	-0.009	-56.150
S		0.171	6.747	1.191	2.574	0.384	0.5%	0.026	0.018	0.018	1.679
%RSD		8.495	2.596	14.030	177.900	9.360	0.7	131.600	107.400	196.900	2.991
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.855	0.017	-3.507	5.653	0.017	0.034	0.071	0.011	0.025	-0.190
2	19:22:00	2.553	0.012	-2.995	8.757	0.004	-0.023	-0.617	-0.016	0.033	-0.134
3	19:22:27	1.312	0.015	-3.618	3.311	-0.002	0.020	0.264	-0.014	0.001	-0.031
X		1.907	0.015	-3.373	5.907	0.006	0.010	-0.094	-0.006	0.019	-0.118
S		0.623	0.003	0.333	2.732	0.010	0.030	0.463	0.015	0.017	0.081
%RSD		32.650	17.330	9.862	46.250	149.300	296.600	493.000	241.200	85.990	68.080
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.001	-0.048	-0.037	-0.292	8.759	7.486	0.657	0.020	0.740	0.012
2	19:22:00	-0.235	0.062	-0.215	0.752	8.479	7.634	-0.834	-0.637	3.240	0.012
3	19:22:27	0.142	0.170	0.028	-0.253	6.576	6.376	1.147	0.145	0.732	0.011
X		-0.031	0.061	-0.074	0.069	7.938	7.165	0.323	-0.158	1.571	0.012
S		0.191	0.109	0.126	0.592	1.188	0.687	1.032	0.420	1.446	0.001
%RSD		615.600	178.300	169.400	858.300	14.970	9.592	319.200	266.700	92.050	6.045
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	72.8%	0.185	0.211	0.210	0.013	0.007	0.010	0.043	0.018	75.5%
2	19:22:00	72.8%	0.247	0.247	0.292	0.477	0.005	0.015	-0.013	0.016	74.6%
3	19:22:27	72.9%	0.255	0.352	0.207	-0.060	0.016	0.015	-0.013	0.017	74.3%
X		72.8%	0.229	0.270	0.236	0.143	0.009	0.013	0.006	0.017	74.8%
S		0.1%	0.039	0.073	0.048	0.292	0.006	0.003	0.033	0.001	0.6%
%RSD		0.1	16.890	27.220	20.330	203.300	59.750	19.220	571.400	4.905	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.117	0.190	0.342	0.316	-0.030	-0.010	77.9%	0.000	0.013	0.019
2	19:22:00	0.131	0.127	0.350	0.403	-0.029	-0.010	78.9%	0.003	0.003	0.033
3	19:22:27	0.104	0.209	0.339	0.405	-0.017	0.023	78.2%	0.013	0.006	0.024
X		0.117	0.175	0.344	0.375	-0.025	0.001	78.3%	0.005	0.007	0.025
S		0.013	0.043	0.006	0.051	0.007	0.019	0.5%	0.007	0.005	0.007
%RSD		11.490	24.550	1.702	13.590	27.250	2331.000	0.7	128.200	71.380	27.440
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:21:33	0.016	0.012	80.3%							
2	19:22:00	0.021	0.026	80.5%							
3	19:22:27	0.011	0.013	81.8%							
X		0.016	0.017	80.9%							
S		0.005	0.008	0.9%							
%RSD		30.210	44.480	1.1							

Performance Report

Performance Report

Sample details

Acquired at : 5/11/2020 10:28:38

Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Mass Calibration verification

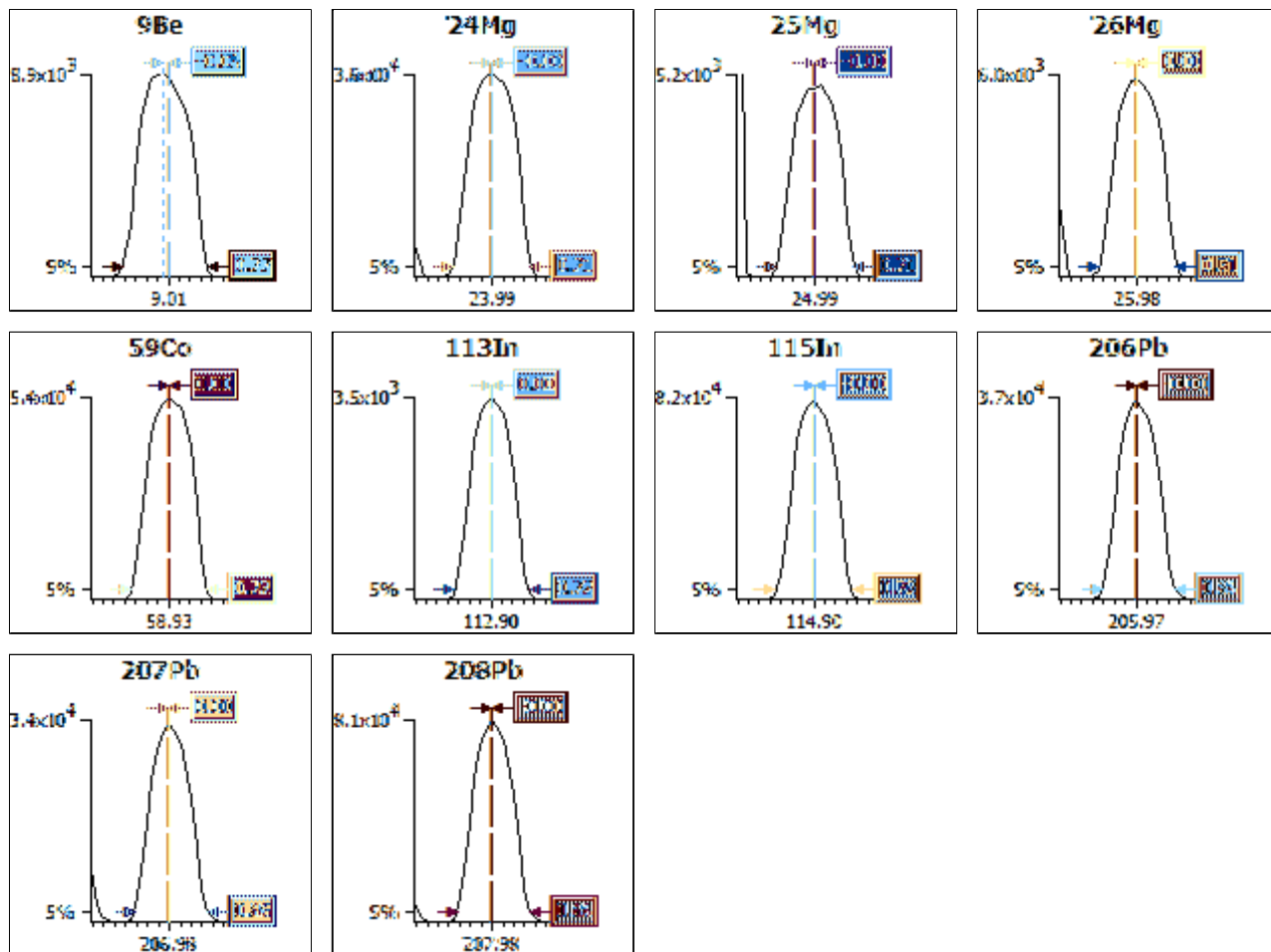
Acquisition parameters

Sweeps : 25

Dwell : 10.0 mSecs

Point spacing : 0.05 amu

Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.77	-0.05
24Mg	0.85	0.65	0.10	0.71	-0.00
25Mg	0.85	0.65	0.10	0.71	-0.00
26Mg	0.85	0.65	0.10	0.71	0.00
59Co	0.85	0.65	0.10	0.72	0.00
113In	0.85	0.65	0.10	0.72	0.00
115In	0.85	0.65	0.10	0.72	-0.00
206Pb	0.85	0.65	0.10	0.66	-0.00
207Pb	0.85	0.65	0.10	0.66	0.00
208Pb	0.85	0.65	0.10	0.66	-0.00

Sample details

Acquired at : 5/11/2020 10:28:38

Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Tune conditions

Major		Minor		Global		Add. Gases
Extraction	-90.2	Lens 3	-196.1	Standard resolution	100	
Lens 1	-1200	Forward power	1404	High resolution	90	
Lens 2	-87.1	Horizontal	65	Analogue Detector	2350	
Focus	15.5	Vertical	809	PC Detector	3675	
D1	-43.1	DA	-49.4			
D2	-147	Cool	13.0			
Pole Bias	1.0	Auxiliary	1.00			
Hexapole Bias	-2.0	Sampling Depth	110			
Nebuliser	0.86					

Sensitivity and stability results**Acquisition parameters**

Sweeps : 130

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	56Ar O	59Co	136Ba++	101Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	-	5.0%	-	-
	CountRate	-	>5000	>1000	>1000	>1000	-	>10000	-	-
1	10:30:02	0.000	9322.470	36893.171	5079.880	5954.257	89070.371	54449.497	930.048	0.000
2	10:30:34	0.000	9272.419	36506.229	4999.066	5945.790	88247.792	54648.378	898.506	0.000
3	10:31:06	0.000	9514.977	36785.814	5145.302	6062.790	88344.105	54479.677	875.427	0.000
4	10:31:38	0.000	9248.548	36650.654	5131.448	6082.034	89078.139	54833.333	886.197	0.000
5	10:32:10	0.000	9369.441	36764.961	5012.920	6032.001	89019.880	55036.865	857.733	0.769
x		0.000	9345.571	36720.166	5073.723	6015.374	88752.057	54689.550	889.582	0.154
s		0.00	105.55	147.35	66.64	62.34	418.36	247.32	27.13	0.34
%RSD		0.000	1.129	0.401	1.313	1.036	0.471	0.452	3.049	223.607

Run	Time	113In	115In	138Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	5.0%	5.0%	-	-	-	5.0%	5.0%	5.0%	-
	CountRate	>1000	>10000	-	-	-	>10000	>10000	>10000	<2
1	10:30:02	3687.671	83220.716	66180.015	89381.091	1360.102	38550.797	33416.689	81220.439	0.000
2	10:30:34	3636.881	82511.992	65814.298	88487.800	1320.096	38068.772	33076.217	81883.268	0.000
3	10:31:06	3635.342	82767.374	65342.451	88673.442	1347.792	38061.820	33465.329	81831.265	0.000
4	10:31:38	3613.795	83021.212	66075.412	88798.500	1270.858	38146.790	33453.748	81592.984	0.000
5	10:32:10	3650.733	83067.012	66111.054	89206.309	1342.407	38092.718	33507.021	81663.613	0.000
x		3644.884	82917.661	65904.646	88909.428	1328.251	38184.179	33383.801	81638.314	0.000
s		27.32	279.30	343.45	372.95	35.20	207.64	174.94	261.99	0.00
%RSD		0.750	0.337	0.521	0.419	2.650	0.544	0.524	0.321	0.000

Ratio results

Run	Time	56Ar O / 59Co	136Ba++ / 138Ba	115In / 101Bkg	156Ce O / 140Ce
Ratio limits		-	-	-	-
1	10:30:02	1.636	0.014	INF	0.015
2	10:30:34	1.615	0.014	INF	0.015
3	10:31:06	1.622	0.013	INF	0.015
4	10:31:38	1.625	0.013	INF	0.014
5	10:32:10	1.617	0.013	107987.11	0.015
x		1.6228	0.0135	107987.11	0.0149
s		0.01	0.00	0.00	0.00
%RSD		0.5028	2.9263	0.0000	2.4843

Result : The performance report passed.

FORM 11-IN

ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Pace Analytical Services, LLC Contract: _____

Lab Code: _____ Case No.: _____ MA No.: _____ SDG No.: _____

Instrument ID: ICPMS2Run Batch: MS2051120C 6020B 200.8, gen Date: 5/11/2020

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	45Sc	
Antimony	159Tb	
Arsenic	115In	
Barium	115In	
Beryllium	6Li	
Boron	6Li	45Sc
Cadmium	115In	
Calcium	45Sc	
Chromium	45Sc	
Cobalt	45Sc	
Copper	45Sc	
Iron	45Sc	
Lead	159Tb	
Magnesium	6Li	45Sc
Manganese	45Sc	
Molybdenum	115In	
Nickel	45Sc	
Potassium	45Sc	
Selenium	115In	
Silicon	45Sc	
Silver	115In	
Sodium	45Sc	45Sc
Strontium	89Y	
Thallium	159Tb	
Tin	115In	159Tb
Titanium	45Sc	
Vanadium	45Sc	
Zinc	45Sc	

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2042320A 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	DELL
Last Edit Timestamp	5/12/2020 07:03:45
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.

Underlining indicates that a data warning flag is set.

Column headings	Result cells	Data warning flags
No flag	Internal Standard	I - Invalid calibration
Semi Quant	Excluded	T - Tripped
Standard Addition	QC Warning	F - Interference correction failed
Multi Element	QC Failure	M - Result over max
	Transient TRA only:	V - Valley integration failed
	Peak Not Found	D - Different method used
	Manually Edited	
	Merged Peak	

Fully Quantitative Concentrations

Id	Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si	39K
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										
4	MW12617			25.000				50.000			200.000
5	cal1 MW-12643	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000	400.000
6	MW12644	0.800		100.000	800.000	800.000	800.000	800.000	80.000		800.000
7	cal2 MW-12645	2.000			2000.000	2000.000	2000.000	2000.000	200.000		2000.000
8	cal3 MW-12813	250.000	250.000	250.000					250.000	250.000	
9	cal4 MW-12814	500.000	500.000	500.000					500.000	500.000	
10	cal5 MW-12618				50000.000	50000.000	50000.000	50000.000		5000.000	50000.000
11	cal6 MW-12619				100000.000	100000.000	100000.000	100000.000		10000.000	100000.000
Id	Label	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe	57Fe	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										
4	MW12617									20.000	
5	cal1 MW-12643	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000	50.000	1.000
6	MW12644	800.000	800.000	10.000	10.000	10.000	10.000			100.000	2.000
7	cal2 MW-12645	2000.000	2000.000	25.000	25.000	25.000	25.000				5.000
8	cal3 MW-12813			250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12814			500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618	50000.000	50000.000					50000.000	50000.000	50000.000	
11	cal6 MW-12619	100000.000	100000.000					100000.000	100000.000	100000.000	
Id	Label	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	82Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B	2.000									
4	MW12617				1.000						
5	cal1 MW-12643	5.000	5.000	5.000	5.000	10.000	10.000	10.000	2.000	5.000	5.000
6	MW12644	10.000			10.000	20.000			4.000		10.000
7	cal2 MW-12645	25.000	25.000	25.000	25.000	50.000	50.000	50.000	10.000	25.000	25.000
8	cal3 MW-12813	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12814	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618										
11	cal6 MW-12619										
Id	Label	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag	106Cd	111Cd	114Cd	116Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										
4	MW12617										
5	cal1 MW-12643	10.000	10.000	10.000	10.000	1.000	1.000	0.100	0.100	0.100	20.000
6	MW12644	20.000		20.000	20.000	2.000				0.200	
7	cal2 MW-12645	50.000	50.000	50.000	50.000	5.000	5.000	0.500	0.500	0.500	100.000
8	cal3 MW-12813	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12814	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618										
11	cal6 MW-12619										
Id	Label	118Sn	121Sb	123Sb	135Ba	137Ba	203Tl	205Tl	206Pb	207Pb	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	MW12519B										

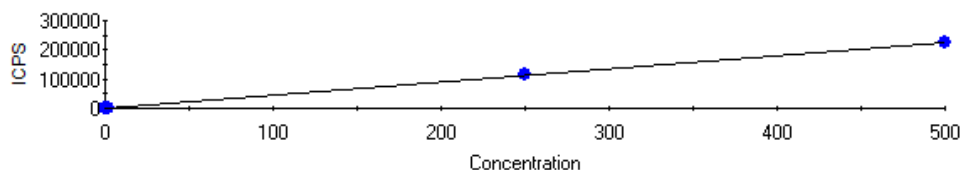
4	MW12617	5.000									
5	cal1 MW-12643	20.000	2.000	2.000	5.000	5.000	0.500	0.500	1.000	1.000	1.000
6	MW12644	40.000		4.000	10.000	10.000	1.000	1.000	2.000	2.000	2.000
7	cal2 MW-12645	100.000	10.000	10.000	25.000	25.000	2.500	2.500	5.000	5.000	5.000
8	cal3 MW-12813	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
9	cal4 MW-12814	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
10	cal5 MW-12618										
11	cal6 MW-12619										
Id	Label	232Th	238U								
		ppb	ppb								
3	MW12519B										
4	MW12617										
5	cal1 MW-12643		50.000								
6	MW12644										
7	cal2 MW-12645		250.000								
8	cal3 MW-12813										
9	cal4 MW-12814		500.000								
10	cal5 MW-12618										
11	cal6 MW-12619										

Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	TUNE MW12793	Unknown	1.000	0	1	5	144
2	BLANK IM9968-01	Blank	1.000	0	1	1	144
3	MW12519B	Fully Quant Standard	1.000	4	5	1	144
4	MW12617	Fully Quant Standard	1.000	4	5	2	144
5	cal1 MW-12643	Fully Quant Standard	1.000	4	5	3	144
6	MW12644	Fully Quant Standard	1.000	4	5	4	144
7	cal2 MW-12645	Fully Quant Standard	1.000	4	5	5	144
8	cal3 MW-12813	Fully Quant Standard	1.000	4	5	6	144
9	cal4 MW-12814	Fully Quant Standard	1.000	4	5	7	144
10	cal5 MW-12618	Fully Quant Standard	1.000	4	5	8	144
11	cal6 MW-12619	Fully Quant Standard	1.000	4	5	9	144
12	ICV MW128568 PREP 5/11/20	QC Sample	1.000	4	5	11	144
13	ICB IM9968-01	QC Sample	1.000	0	1	1	144
14	ICSA MW12853	QC Sample	1.000	4	5	12	144
15	CCV MW126865	QC Sample	1.000	0	1	8	144
16	CCB IM9968-01	QC Sample	1.000	0	1	1	144
17	VQ53133-001	Unknown	1.000	1	1	1	144
18	VQ53133-002	Unknown	1.000	1	1	2	144
19	VE04005-009	Unknown	1.000	1	1	3	144
20	VQ52974-001	QC Sample	1.000	1	1	4	144
21	VQ52974-002	QC Sample	1.000	1	1	5	144
22	VE02018-005	Unknown	1.000	1	1	6	144
23	VE02018-006	Unknown	1.000	1	1	7	144
24	VE02018-007	Unknown	1.000	1	1	8	144
25	VE02018-008	Unknown	1.000	1	1	9	144
26	VE02018-008S	Unknown	1.000	1	1	10	144
27	CCV MW126865	QC Sample	1.000	0	1	8	144
28	CCB IM9968-01	QC Sample	1.000	0	1	1	144
29	LR MW12844	QC Sample	1.000	4	5	10	144
30	VE02018-008SD	Unknown	1.000	1	2	1	144
31	VE02018-008L(5)	Unknown	1.000	1	2	2	144
32	VE02018-008A	Unknown	1.000	1	2	3	144
33	VQ53372-001	QC Sample	1.000	1	2	4	144
34	VQ53372-002	QC Sample	1.000	1	2	5	144
35	xVE08113-001(5)	Unknown	1.000	1	2	6	144
36	xVE08113-002(5)	Unknown	1.000	1	2	7	144
37	VQ53374-001	Unknown	1.000	1	2	8	144
38	VQ53374-002	Unknown	1.000	1	2	9	144
39	VD17087-005	Unknown	1.000	1	2	10	144
40	CCV MW126865	QC Sample	1.000	0	1	8	144
41	CCB IM9968-01	QC Sample	1.000	0	1	1	144
42	VD17087-005DU	Unknown	1.000	1	3	1	144
43	VE08021-001	Unknown	1.000	1	3	2	144
44	VE08021-002	Unknown	1.000	1	3	3	144
45	VE08021-003	Unknown	1.000	1	3	4	144
46	VE08021-003MS	Unknown	1.000	1	3	5	144
47	VE08021-003MD	Unknown	1.000	1	3	6	144
48	VE08021-003L(5)	Unknown	1.000	1	3	7	144
49	VE08021-003A	Unknown	1.000	1	3	8	144
50	VE08021-004	Unknown	1.000	1	3	9	144
51	CCV MW126865	QC Sample	1.000	0	1	8	144
52	CCB IM9968-01	QC Sample	1.000	0	1	1	144
53	VE08113-001(5)	Unknown	1.000	1	4	1	144
54	VE08113-002(5)	Unknown	1.000	1	4	2	144
55	VQ53370-001	QC Sample	1.000	1	4	3	144
56	VQ53370-002	QC Sample	1.000	1	4	4	144
57	VD23013-004dis	Unknown	1.000	1	4	5	144
58	VD23013-005dis	Unknown	1.000	1	4	6	144
59	VD23013-006dis	Unknown	1.000	1	4	7	144

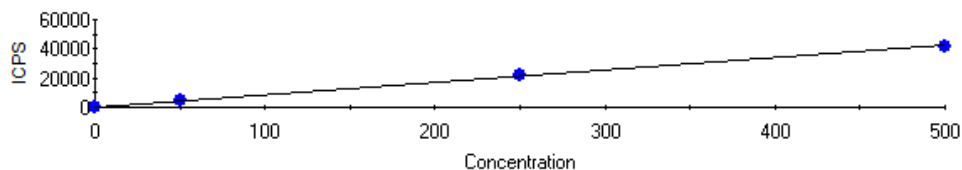
60	VE06015-001dis	Unknown	1.000	1	4	8	144
61	VE06015-002dis	Unknown	1.000	1	4	9	144
62	VE06015-002Sdis	Unknown	1.000	1	4	10	144
63	CCV MW126865	QC Sample	1.000	0	1	8	144
64	CCB IM9968-01	QC Sample	1.000	0	1	1	144
65	VE06015-002SDdis	Unknown	1.000	1	5	1	144
66	VE06015-002L(5)dis	Unknown	1.000	1	5	2	144
67	VE06015-002Adis	Unknown	1.000	1	5	3	144
68	VE06015-003dis	Unknown	1.000	1	5	4	144
69	VE06015-004dis	Unknown	1.000	1	5	5	144
70	VQ53070-001	Unknown	1.000	1	5	6	144
71	VQ53070-002	Unknown	1.000	1	5	7	144
72	VE05042-001	Unknown	1.000	1	5	8	144
73	VE05043-001(5)	Unknown	1.000	1	5	9	144
74	VE05044-001(5)	Unknown	1.000	1	5	10	144
75	CCV MW126865	QC Sample	1.000	0	1	8	144
76	CCB IM9968-01	QC Sample	1.000	0	1	1	144
77	VE05062-001	Unknown	1.000	2	1	1	144
78	VE05066-002	Unknown	1.000	2	1	2	144
79	VE05031-001	Unknown	1.000	2	1	3	144
80	VE05031-001S	Unknown	1.000	2	1	4	144
81	VE05031-001SD	Unknown	1.000	2	1	5	144
82	VE05031-001L(5)	Unknown	1.000	2	1	6	144
83	VE05058-001	Unknown	1.000	2	1	7	144
84	VE05058-001S	Unknown	1.000	2	1	8	144
85	VE05080-001(5)	Unknown	1.000	2	1	9	144
86	VE06006-002	Unknown	1.000	2	1	10	144
87	CCV MW126865	QC Sample	1.000	0	1	8	144
88	CCB IM9968-01	QC Sample	1.000	0	1	1	144
89	VE05075-001	Unknown	1.000	2	2	1	144
90	VE05075-003	Unknown	1.000	2	2	2	144
91	VE05075-004	Unknown	1.000	2	2	3	144
92	VE05075-005(5)	Unknown	1.000	2	2	4	144
93	VE05075-006	Unknown	1.000	2	2	5	144
94	VQ53251-001	Unknown	1.000	2	2	6	144
95	VQ53251-002	Unknown	1.000	2	2	7	144
96	VE07023-001	Unknown	1.000	2	2	8	144
97	VE07023-002	Unknown	1.000	2	2	9	144
98	VE07043-001	Unknown	1.000	2	2	10	144
99	CCV MW126865	QC Sample	1.000	0	1	8	144
100	CCB IM9968-01	QC Sample	1.000	0	1	1	144
101	VE07043-001S	Unknown	1.000	2	3	1	144
102	VE07043-001SD	Unknown	1.000	2	3	2	144
103	VE07043-001L(5)	Unknown	1.000	2	3	3	144
104	VE07039-001(20)	Unknown	1.000	2	3	4	144
105	VE05016-004	Unknown	1.000	2	3	5	144
106	VE05016-011	Unknown	1.000	2	3	6	144
107	VE05016-026	Unknown	1.000	2	3	7	144
108	VE06079-001	Unknown	1.000	2	3	8	144
109	VE06093-001	Unknown	1.000	2	3	9	144
110	VE06096-001	Unknown	1.000	2	3	10	144
111	CCV MW126865	QC Sample	1.000	0	1	8	144
112	CCB IM9968-01	QC Sample	1.000	0	1	1	144
113	VE06113-001	Unknown	1.000	2	4	1	144
114	VE07038-001	Unknown	1.000	2	4	2	144
115	VE07038-001S	Unknown	1.000	2	4	3	144
116	VE07040-001	Unknown	1.000	2	4	4	144
117	VE07082-001	Unknown	1.000	2	4	5	144
118	VE07041-001(5)	Unknown	1.000	2	4	6	144
119	VE07042-001(5)	Unknown	1.000	2	4	7	144
120	VE07045-001	Unknown	1.000	2	4	8	144
121	VE07049-001	Unknown	1.000	2	4	9	144
122	VE07049-003	Unknown	1.000	2	4	10	144
123	CCV MW126865	QC Sample	1.000	0	1	8	144
124	CCB IM9968-01	QC Sample	1.000	0	1	1	144
125	VE07049-003S	Unknown	1.000	2	5	1	144
126	VE07049-003SD	Unknown	1.000	2	5	2	144
127	VE07049-003L(5)	Unknown	1.000	2	5	3	144
128	VE07072-001	Unknown	1.000	2	5	4	144
129	VE07083-001(20)	Unknown	1.000	2	5	5	144
130	VE07083-001(200)	Unknown	1.000	2	5	6	144
131	VE07084-001(5)	Unknown	1.000	2	5	7	144
132	VE07100-001(5)	Unknown	1.000	2	5	8	144
133	VE07101-001(5)	Unknown	1.000	2	5	9	144
134	VE06115-001	Unknown	1.000	2	5	10	144
135	CCV MW126865	QC Sample	1.000	0	1	8	144
136	CCB IM9968-01	QC Sample	1.000	0	1	1	144
137	VE07102-001(20)	Unknown	1.000	3	1	1	144
138	VE06115-002	Unknown	1.000	3	1	2	144
139	VE07048-001	Unknown	1.000	3	1	3	144
140	VE07009-001	Unknown	1.000	3	1	4	144
141	VE06116-001S	Unknown	1.000	3	1	5	144
142	VE06116-001	Unknown	1.000	3	1	6	144
143	CCV MW126865	QC Sample	1.000	0	1	8	144

	CCB IM9968-01	QC Sample	1.000	0	1	1	144
145	IS MW12864	Unknown	1.000	0	1	5	144
146	RINSE	Unknown	1.000	0	1	5	144

Fully Quant Calibration**9Be FQ Block 1**

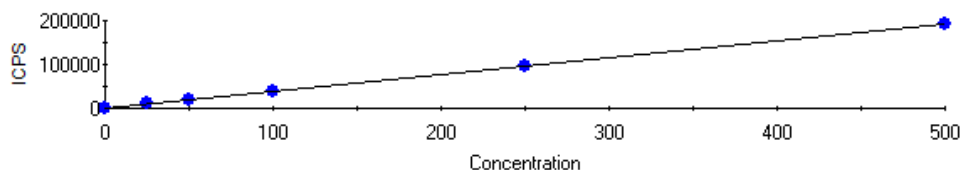
Intercept CPS=8.019676 Intercept Conc=0.017729
Sensitivity=452.355509 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	8.02	0.00
cal1 MW-12643	0.400	0.445	0.045	209.42	11.31
MW12644	0.800	0.813	0.013	375.81	1.63
cal2 MW-12645	2.000	1.902	0.098	868.45	4.89
cal3 MW-12813	250.000	250.791	0.791	113454.64	0.32
cal4 MW-12814	500.000	498.832	1.168	225657.46	0.23

10B FQ Block 1

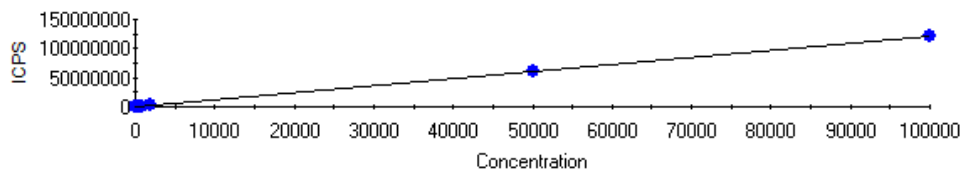
Intercept CPS=301.161822 Intercept Conc=3.585663
Sensitivity=83.990560 Correlation Coeff=0.999691

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	301.16	0.00
cal1 MW-12643	50.000	49.447	0.553	4454.24	1.11
cal3 MW-12813	250.000	259.100	9.100	22063.10	3.64
cal4 MW-12814	500.000	495.505	4.495	41918.94	0.90

11B FQ Block 1

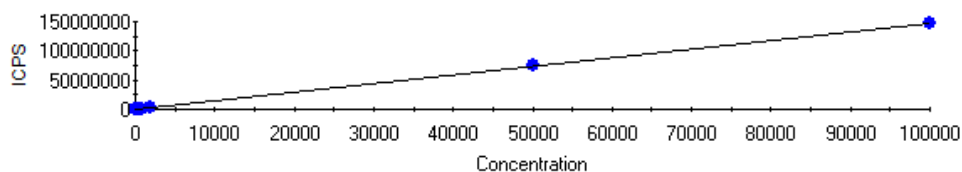
Intercept CPS=1740.623972 Intercept Conc=4.582500
Sensitivity=379.841570 Correlation Coeff=0.999982

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	1740.62	0.00
MW12617	25.000	22.983	2.017	10470.56	8.07
cal1 MW-12643	50.000	49.466	0.534	20529.69	1.07
MW12644	100.000	99.862	0.138	39672.26	0.14
cal3 MW-12813	250.000	251.620	1.620	97316.36	0.65
cal4 MW-12814	500.000	499.372	0.628	191422.85	0.13

23Na FQ Block 1

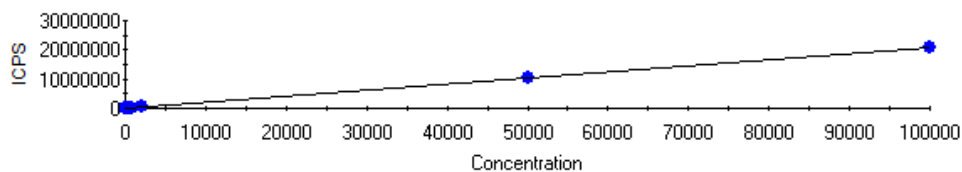
Intercept CPS=1862.975536 Intercept Conc=1.546973
Sensitivity=1204.271742 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	1862.98	0.00
cal1 MW-12643	400.000	428.580	28.580	517989.42	7.14
MW12644	800.000	848.840	48.840	1024097.11	6.11
cal2 MW-12645	2000.000	2061.102	61.102	2483990.24	3.06
cal5 MW-12618	50000.000	49937.844	62.156	60140596.81	0.12
cal6 MW-12619	100000.000	100029.351	29.351	120464383.87	0.03

24Mg FQ Block 1

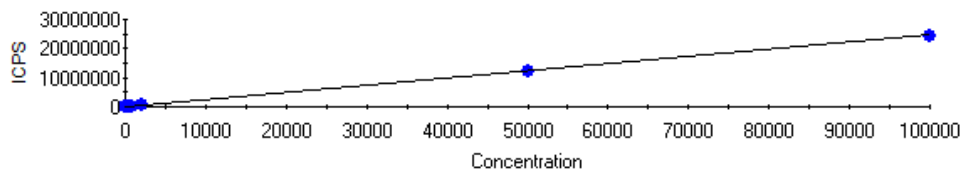
Intercept CPS=234.750700 Intercept Conc=0.158721
Sensitivity=1479.010139 Correlation Coeff=0.999975

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	234.75	0.00
cal1 MW-12643	400.000	433.614	33.614	641554.44	8.40
MW12644	800.000	870.429	70.429	1287608.09	8.80
cal2 MW-12645	2000.000	2063.909	63.909	3052777.05	3.20
cal5 MW-12618	50000.000	50608.408	608.408	74850582.71	1.22
cal6 MW-12619	100000.000	99693.820	306.180	147448405.48	0.31

25Mg FQ Block 1

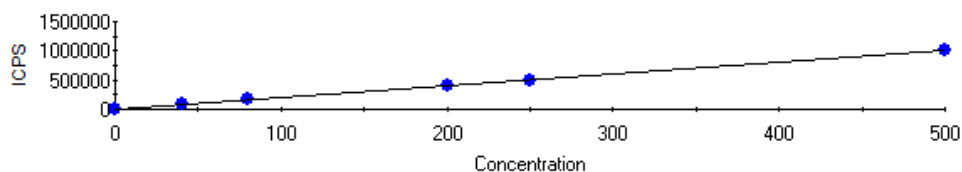
Intercept CPS=39.985693 Intercept Conc=0.192762
Sensitivity=207.435661 Correlation Coeff=0.999961

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	39.99	0.00
cal1 MW-12643	400.000	418.373	18.373	86825.45	4.59
MW12644	800.000	829.429	29.429	172093.06	3.68
cal2 MW-12645	2000.000	2073.705	73.705	430200.34	3.69
cal5 MW-12618	50000.000	50760.693	760.693	10529617.87	1.52
cal6 MW-12619	100000.000	99617.871	382.129	20664338.79	0.38

26Mg FQ Block 1

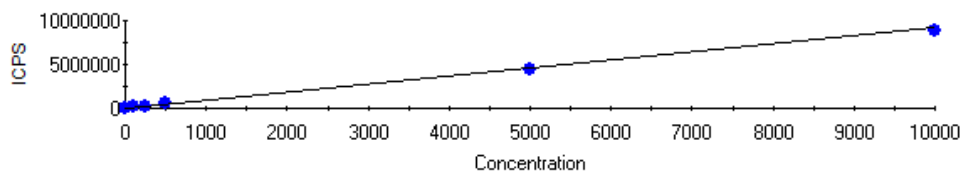
Intercept CPS=57.331855 Intercept Conc=0.230906
Sensitivity=248.291077 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	57.33	0.00
MW12617	50.000	50.253	0.253	12534.79	0.51
cal1 MW-12643	400.000	414.536	14.536	102982.91	3.63
MW12644	800.000	825.892	25.892	205119.05	3.24
cal2 MW-12645	2000.000	2080.374	80.374	516595.70	4.02
cal5 MW-12618	50000.000	48950.649	1049.351	12154066.76	2.10
cal6 MW-12619	100000.000	97224.042	2775.958	24139919.43	2.78

27Al FQ Block 1

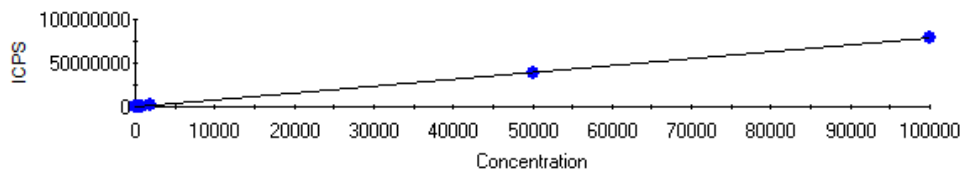
Intercept CPS=329.309179 Intercept Conc=0.163912
Sensitivity=2009.057551 Correlation Coeff=0.999963

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	329.31	0.00
cal1 MW-12643	40.000	40.030	0.030	80751.91	0.08
MW12644	80.000	79.823	0.177	160697.58	0.22
cal2 MW-12645	200.000	199.424	0.576	400983.13	0.29
cal3 MW-12813	250.000	246.787	3.213	496139.21	1.29
cal4 MW-12814	500.000	501.875	1.875	1008625.86	0.38

28Si FQ Block 1

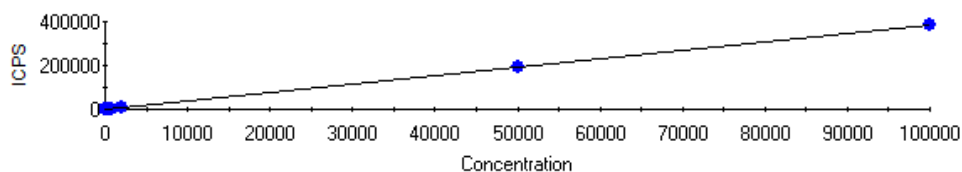
Intercept CPS=14175.764806 Intercept Conc=15.540822
Sensitivity=912.163157 Correlation Coeff=0.999959

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	14175.76	0.00
cal1 MW-12643	100.000	102.348	2.348	107533.40	2.35
cal3 MW-12813	250.000	267.335	17.335	258028.53	6.93
cal4 MW-12814	500.000	539.042	39.042	505870.30	7.81
cal5 MW-12618	5000.000	4820.659	179.341	4411402.98	3.59
cal6 MW-12619	10000.000	9780.906	219.094	8935957.63	2.19

39K FQ Block 1

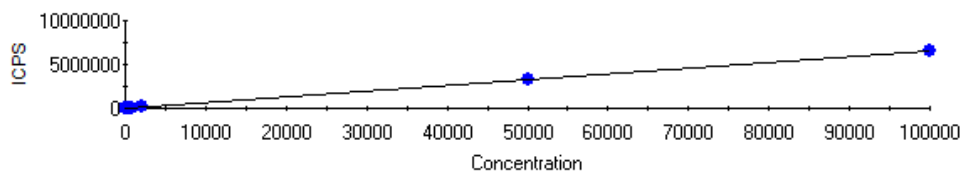
Intercept CPS=22164.297871 Intercept Conc=28.267117
Sensitivity=784.101825 Correlation Coeff=0.999952

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	22164.30	0.00
MW12617	200.000	208.446	8.446	185607.03	4.22
cal1 MW-12643	400.000	410.968	10.968	344405.32	2.74
MW12644	800.000	800.043	0.043	649479.39	0.01
cal2 MW-12645	2000.000	1983.451	16.549	1577392.14	0.83
cal5 MW-12618	50000.000	48691.376	1308.624	38201160.81	2.62
cal6 MW-12619	100000.000	99483.906	516.094	78027676.51	0.52

43Ca FQ Block 1

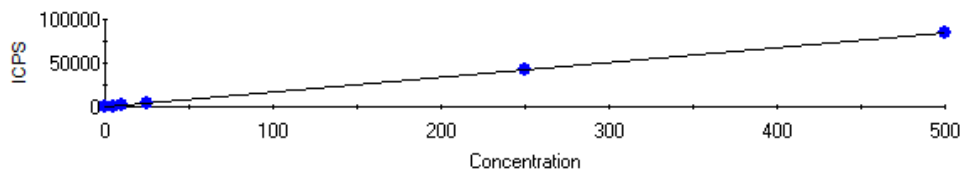
Intercept CPS=5.320883 Intercept Conc=1.375340
Sensitivity=3.868776 Correlation Coeff=0.999985

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	5.32	0.00
cal1 MW-12643	400.000	429.727	29.727	1667.84	7.43
MW12644	800.000	818.568	18.568	3172.18	2.32
cal2 MW-12645	2000.000	2026.446	26.446	7845.19	1.32
cal5 MW-12618	50000.000	49535.917	464.083	191648.71	0.93
cal6 MW-12619	100000.000	100231.245	231.245	387777.60	0.23

44Ca FQ Block 1

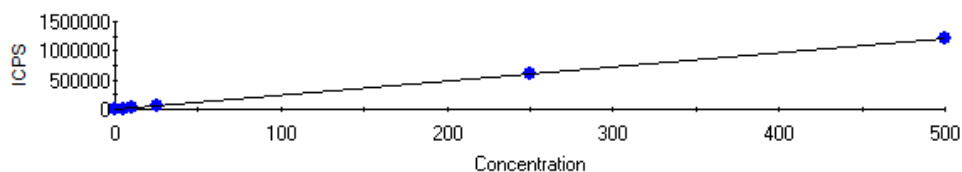
Intercept CPS=93.364764 Intercept Conc=1.428339
Sensitivity=65.365989 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	93.36	0.00
cal1 MW-12643	400.000	388.957	11.043	25517.93	2.76
MW12644	800.000	784.669	15.331	51384.05	1.92
cal2 MW-12645	2000.000	1944.249	55.751	127181.09	2.79
cal5 MW-12618	50000.000	50145.398	145.398	3277896.92	0.29
cal6 MW-12619	100000.000	100618.436	618.436	6577117.00	0.62

47Ti FQ Block 1

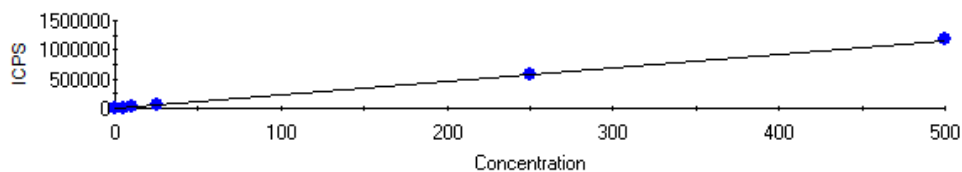
Intercept CPS=11.986315 Intercept Conc=0.070105
Sensitivity=170.976276 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	11.99	0.00
cal1 MW-12643	5.000	5.052	0.052	875.79	1.04
MW12644	10.000	10.599	0.599	1824.18	5.99
cal2 MW-12645	25.000	25.037	0.037	4292.75	0.15
cal3 MW-12813	250.000	249.001	0.999	42585.27	0.40
cal4 MW-12814	500.000	497.761	2.239	85117.30	0.45

51V FQ Block 1

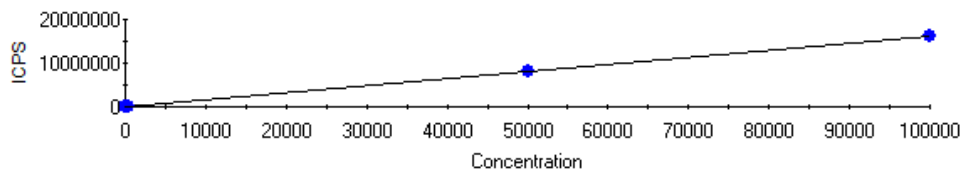
Intercept CPS=93.619720 Intercept Conc=0.038306
Sensitivity=2443.992279 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	93.62	0.00
cal1 MW-12643	5.000	4.987	0.013	12282.78	0.25
MW12644	10.000	9.787	0.213	24012.10	2.13
cal2 MW-12645	25.000	24.417	0.583	59768.16	2.33
cal3 MW-12813	250.000	249.360	0.640	609528.50	0.26
cal4 MW-12814	500.000	500.353	0.353	1222953.35	0.07

52Cr FQ Block 1

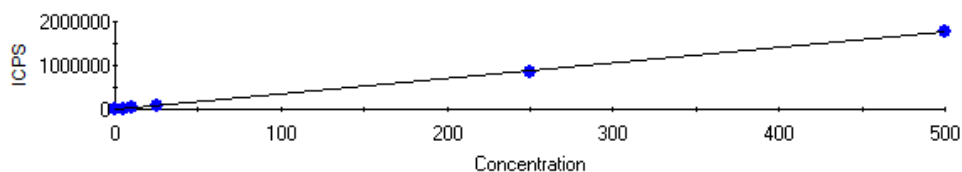
Intercept CPS=355.925575 Intercept Conc=0.152568
Sensitivity=2332.893424 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	355.93	0.00
cal1 MW-12643	5.000	5.015	0.015	12054.67	0.29
MW12644	10.000	9.891	0.109	23431.10	1.09
cal2 MW-12645	25.000	24.738	0.262	58068.19	1.05
cal3 MW-12813	250.000	250.486	0.486	584713.33	0.19
cal4 MW-12814	500.000	501.951	1.951	1171353.90	0.39

54Fe FQ Block 1

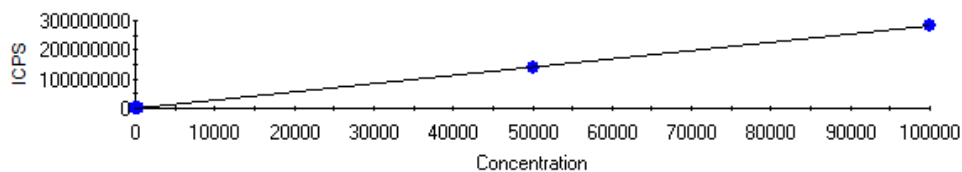
Intercept CPS=2868.202667 Intercept Conc=17.610674
Sensitivity=162.867282 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	2868.20	0.00
cal1 MW-12643	50.000	53.887	3.887	11644.64	7.77
cal3 MW-12813	250.000	368.426	118.426	62872.73	47.37
cal4 MW-12814	500.000	750.382	250.382	125080.95	50.08
cal5 MW-12618	50000.000	49650.692	349.308	8089341.51	0.70
cal6 MW-12619	100000.000	100173.104	173.104	16317789.36	0.17

55Mn FQ Block 1

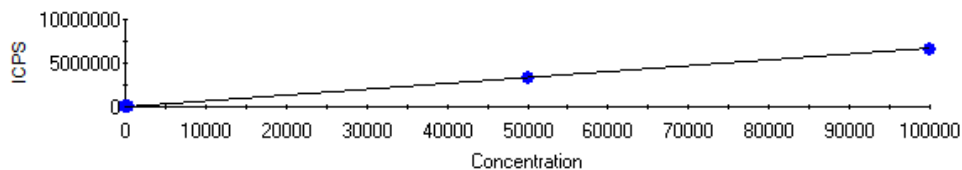
Intercept CPS=96.089935 Intercept Conc=0.027206
Sensitivity=3531.904641 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	96.09	0.00
cal1 MW-12643	5.000	4.858	0.142	17255.75	2.83
MW12644	10.000	9.451	0.549	33477.80	5.49
cal2 MW-12645	25.000	23.974	1.026	84771.23	4.10
cal3 MW-12813	250.000	244.886	5.114	865011.33	2.05
cal4 MW-12814	500.000	502.620	2.620	1775303.74	0.52

56Fe FQ Block 1

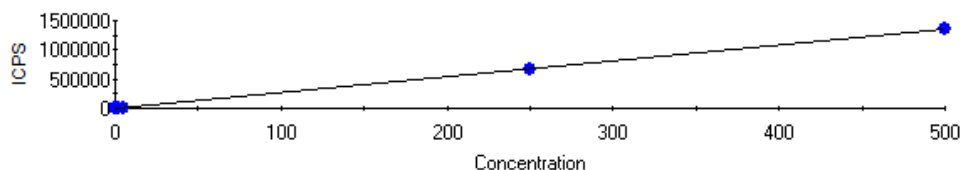
Intercept CPS=81888.263341 Intercept Conc=29.170356
Sensitivity=2807.242498 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	81888.26	0.00
cal1 MW-12643	50.000	52.857	2.857	230270.36	5.71
cal3 MW-12813	250.000	261.375	11.375	815632.31	4.55
cal4 MW-12814	500.000	532.346	32.346	1576313.41	6.47
cal5 MW-12618	50000.000	50248.638	248.638	141141999.42	0.50
cal6 MW-12619	100000.000	99875.490	124.510	280456607.07	0.12

57Fe FQ Block 1

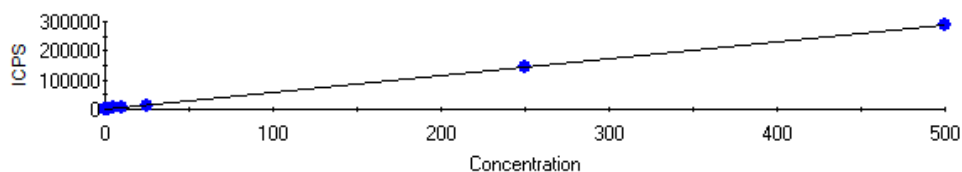
Intercept CPS=782.860290 Intercept Conc=11.740351
Sensitivity=66.681168 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	782.86	0.00
MW12617	20.000	21.033	1.033	2185.35	5.16
cal1 MW-12643	50.000	52.695	2.695	4296.66	5.39
MW12644	100.000	104.344	4.344	7740.61	4.34
cal3 MW-12813	250.000	262.342	12.342	18276.15	4.94
cal4 MW-12814	500.000	527.387	27.387	35949.67	5.48
cal5 MW-12618	50000.000	49271.392	728.608	3286256.86	1.46
cal6 MW-12619	100000.000	99162.073	837.927	6613025.76	0.84

59Co FQ Block 1

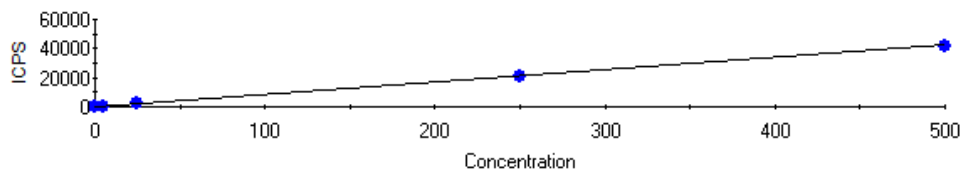
Intercept CPS=52.019141 Intercept Conc=0.019246
Sensitivity=2702.833260 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	52.02	0.00
cal1 MW-12643	1.000	1.029	0.029	2832.21	2.86
MW12644	2.000	1.951	0.049	5324.77	2.46
cal2 MW-12645	5.000	5.012	0.012	13599.53	0.25
cal3 MW-12813	250.000	247.431	2.569	668817.70	1.03
cal4 MW-12814	500.000	500.303	0.303	1352286.30	0.06

60Ni FQ Block 1

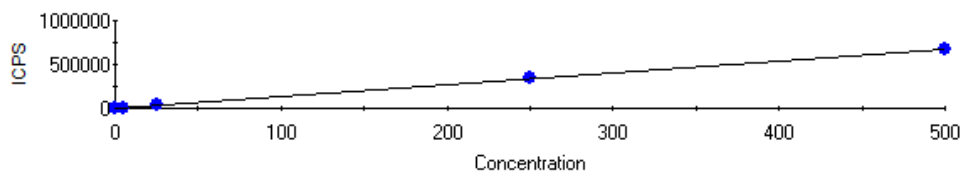
Intercept CPS=7.999346 Intercept Conc=0.013969
Sensitivity=572.649863 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	8.00	0.00
MW125198	2.000	2.034	0.034	1172.80	1.70
cal1 MW-12643	5.000	5.175	0.175	2971.70	3.51
MW12644	10.000	9.904	0.096	5679.29	0.96
cal2 MW-12645	25.000	24.708	0.292	14157.06	1.17
cal3 MW-12813	250.000	249.658	0.342	142974.36	0.14
cal4 MW-12814	500.000	500.186	0.186	286439.36	0.04

62Ni FQ Block 1

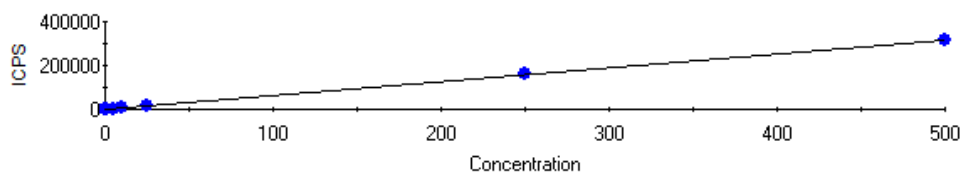
Intercept CPS=74.689932 Intercept Conc=0.887533
Sensitivity=84.154518 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	74.69	0.00
cal1 MW-12643	5.000	5.528	0.528	539.87	10.55
cal2 MW-12645	25.000	25.028	0.028	2180.94	0.11
cal3 MW-12813	250.000	251.313	1.313	21223.79	0.53
cal4 MW-12814	500.000	499.337	0.663	42096.15	0.13

63Cu FQ Block 1

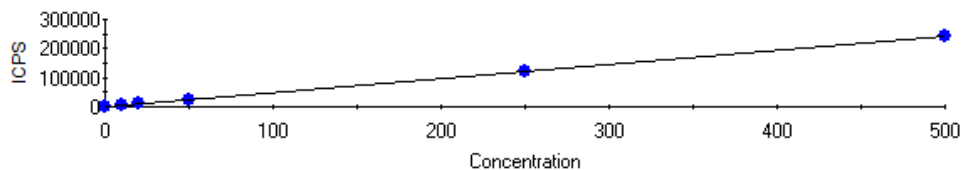
Intercept CPS=158.555621 Intercept Conc=0.116995
Sensitivity=1355.234620 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	158.56	0.00
cal1 MW-12643	5.000	4.923	0.077	6830.40	1.54
cal2 MW-12645	25.000	24.598	0.402	33494.55	1.61
cal3 MW-12813	250.000	251.053	1.053	340394.25	0.42
cal4 MW-12814	500.000	499.494	0.506	677090.63	0.10

65Cu FQ Block 1

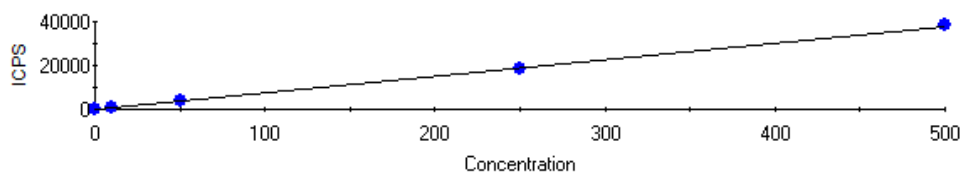
Intercept CPS=68.007718 Intercept Conc=0.106845
Sensitivity=636.505520 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	68.01	0.00
MW12617	1.000	1.062	0.062	744.04	6.21
cal1 MW-12643	5.000	5.264	0.264	3418.60	5.28
MW12644	10.000	10.191	0.191	6554.92	1.91
cal2 MW-12645	25.000	25.119	0.119	16056.40	0.48
cal3 MW-12813	250.000	251.498	1.498	160147.80	0.60
cal4 MW-12814	500.000	499.239	0.761	317836.08	0.15

66Zn FQ Block 1

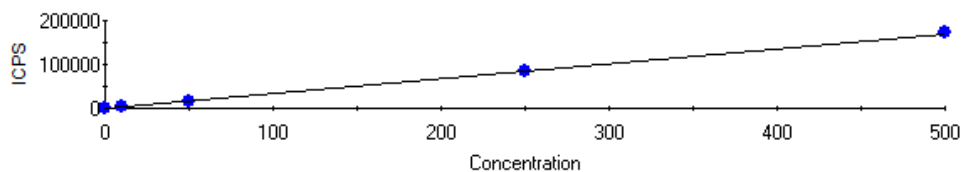
Intercept CPS=30.661831 Intercept Conc=0.063225
Sensitivity=484.966491 Correlation Coeff=0.999986

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	30.66	0.00
cal1 MW-12643	10.000	10.466	0.466	5106.19	4.66
MW12644	20.000	20.430	0.430	9938.62	2.15
cal2 MW-12645	50.000	48.896	1.104	23743.43	2.21
cal3 MW-12813	250.000	247.685	2.315	120149.73	0.93
cal4 MW-12814	500.000	500.116	0.116	242570.09	0.02

67Zn FQ Block 1

Intercept CPS=8.001769 Intercept Conc=0.105169
Sensitivity=76.085159 Correlation Coeff=0.999921

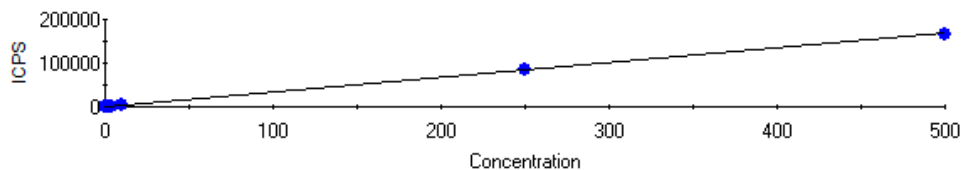
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	8.00	0.00
cal1 MW-12643	10.000	9.254	0.746	712.10	7.46
cal2 MW-12645	50.000	48.706	1.294	3713.77	2.59
cal3 MW-12813	250.000	244.849	5.151	18637.38	2.06
cal4 MW-12814	500.000	502.720	2.720	38257.52	0.54

68Zn FQ Block 1

Intercept CPS=24.001970 Intercept Conc=0.070221
Sensitivity=341.808400 Correlation Coeff=0.999985

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	24.00	0.00
cal1 MW-12643	10.000	10.222	0.222	3517.98	2.22
cal2 MW-12645	50.000	49.926	0.074	17089.13	0.15
cal3 MW-12813	250.000	248.304	1.696	84896.32	0.68
cal4 MW-12814	500.000	502.030	2.030	171621.97	0.41

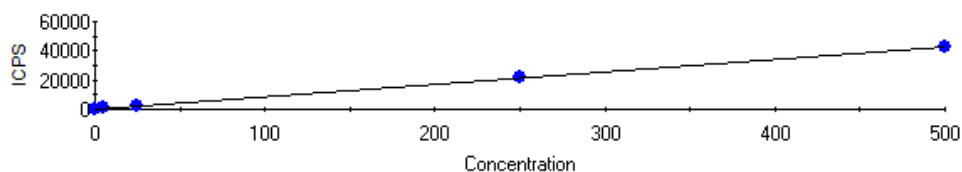
75As FQ Block 1



Intercept CPS=110.949445 Intercept Conc=0.328018
Sensitivity=338.241847 Correlation Coeff=0.999949

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	110.95	0.00
cal1 MW-12643	2.000	1.904	0.096	755.13	4.78
MW12644	4.000	3.897	0.103	1429.18	2.57
cal2 MW-12645	10.000	10.135	0.135	3539.01	1.35
cal3 MW-12813	250.000	252.436	2.436	85495.50	0.97
cal4 MW-12814	500.000	494.240	5.760	167283.48	1.15

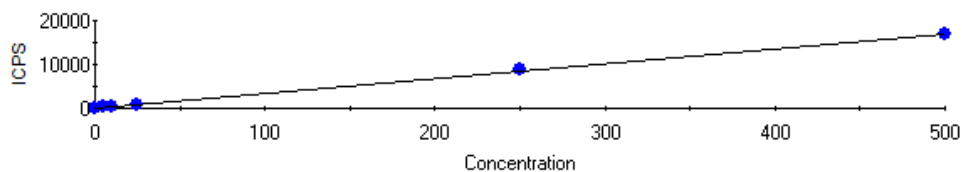
78Se FQ Block 1



Intercept CPS=206.655759 Intercept Conc=2.413620
Sensitivity=85.620675 Correlation Coeff=0.999997

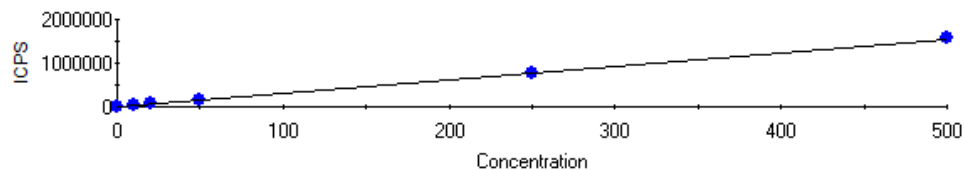
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	206.66	0.00
cal1 MW-12643	5.000	4.884	0.116	624.80	2.33
cal2 MW-12645	25.000	25.976	0.976	2430.77	3.91
cal3 MW-12813	250.000	249.568	0.432	21574.81	0.17
cal4 MW-12814	500.000	500.168	0.168	43031.42	0.03

82Se FQ Block 1



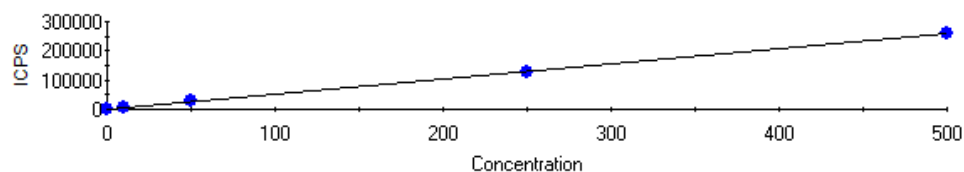
Intercept CPS=41.763228 Intercept Conc=1.235092
Sensitivity=33.813858 Correlation Coeff=0.999876

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	41.76	0.00
cal1 MW-12643	5.000	4.605	0.395	197.47	7.90
MW12644	10.000	10.334	0.334	391.21	3.34
cal2 MW-12645	25.000	24.228	0.772	861.02	3.09
cal3 MW-12813	250.000	256.486	6.486	8714.56	2.59
cal4 MW-12814	500.000	496.793	3.207	16840.24	0.64

88Sr FQ Block 1

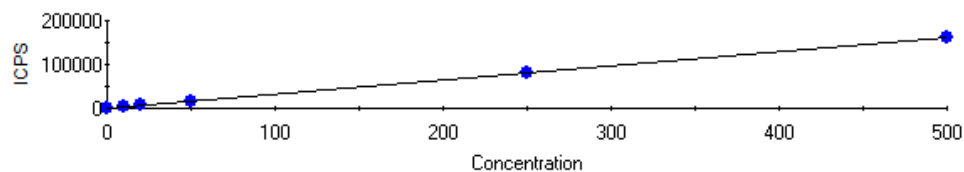
Intercept CPS=2.682063 Intercept Conc=0.000861
Sensitivity=3114.277786 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	2.68	0.00
cal1 MW-12643	10.000	9.737	0.263	30327.43	2.63
MW12644	20.000	19.485	0.515	60684.09	2.58
cal2 MW-12645	50.000	48.465	1.535	150934.66	3.07
cal3 MW-12813	250.000	246.958	3.042	769098.87	1.22
cal4 MW-12814	500.000	501.700	1.700	1562436.92	0.34

95Mo FQ Block 1

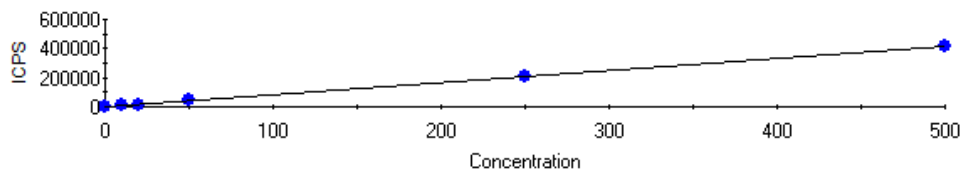
Intercept CPS=170.681142 Intercept Conc=0.325649
Sensitivity=524.125708 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	170.68	0.00
cal1 MW-12643	10.000	10.001	0.001	5412.25	0.01
cal2 MW-12645	50.000	50.774	0.774	26782.43	1.55
cal3 MW-12813	250.000	246.189	3.811	129204.90	1.52
cal4 MW-12814	500.000	498.283	1.717	261333.61	0.34

97Mo FQ Block 1

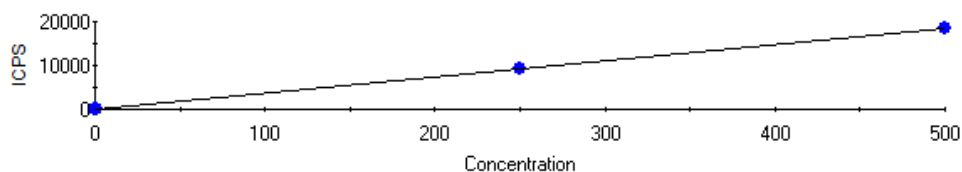
Intercept CPS=100.075565 Intercept Conc=0.309526
Sensitivity=323.318473 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	100.08	0.00
cal1 MW-12643	10.000	10.090	0.090	3362.49	0.90
MW12644	20.000	20.490	0.490	6724.81	2.45
cal2 MW-12645	50.000	51.119	1.119	16627.73	2.24
cal3 MW-12813	250.000	249.501	0.499	80768.51	0.20
cal4 MW-12814	500.000	500.116	0.116	161796.81	0.02

98Mo FQ Block 1

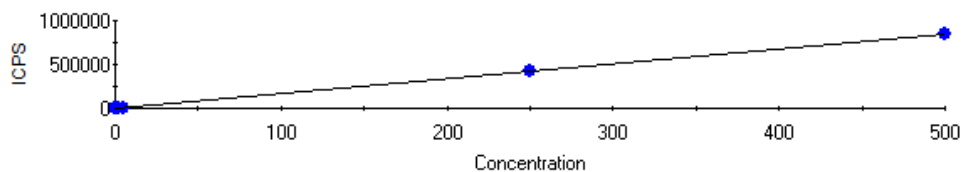
Intercept CPS=319.103335 Intercept Conc=0.381325
Sensitivity=836.828689 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	319.10	0.00
cal1 MW-12643	10.000	10.076	0.076	8751.02	0.76
MW12644	20.000	20.026	0.026	17077.24	0.13
cal2 MW-12645	50.000	50.556	0.556	42626.16	1.11
cal3 MW-12813	250.000	248.518	1.482	208286.19	0.59
cal4 MW-12814	500.000	500.683	0.683	419304.79	0.14

106Cd FQ Block 1

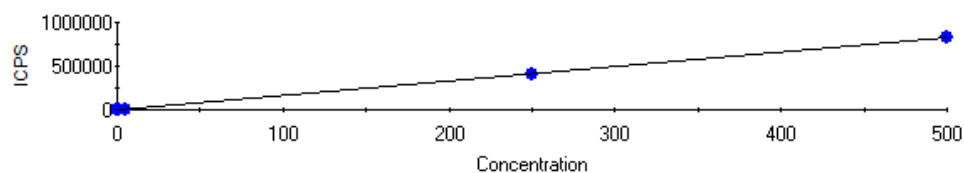
Intercept CPS=81.472864 Intercept Conc=2.219748
Sensitivity=36.703659 Correlation Coeff=0.999969

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	81.47	0.00
cal1 MW-12643	0.100	0.103	0.003	85.25	3.01
cal2 MW-12645	0.500	1.273	0.773	128.21	154.68
cal3 MW-12813	250.000	246.915	3.085	9144.15	1.23
cal4 MW-12814	500.000	501.542	1.542	18489.89	0.31

107Ag FQ Block 1

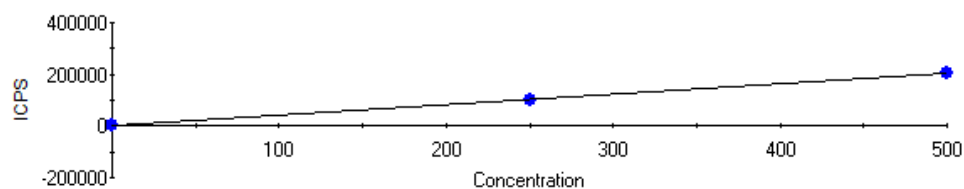
Intercept CPS=0.000000 Intercept Conc=0.000000
Sensitivity=1710.388138 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	0.00	0.00
cal1 MW-12643	1.000	1.024	0.024	1750.74	2.36
MW12644	2.000	1.988	0.012	3399.87	0.61
cal2 MW-12645	5.000	4.938	0.062	8446.45	1.23
cal3 MW-12813	250.000	251.399	1.399	429990.43	0.56
cal4 MW-12814	500.000	499.058	0.942	853583.28	0.19

109Ag FQ Block 1

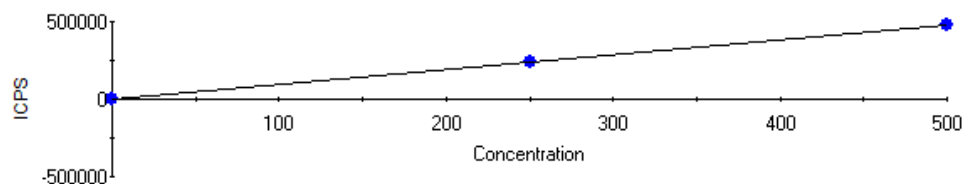
Intercept CPS=2.654803 Intercept Conc=0.001607
Sensitivity=1652.419463 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	2.65	0.00
cal1 MW-12643	1.000	1.010	0.010	1671.46	0.99
cal2 MW-12645	5.000	4.924	0.076	8139.17	1.52
cal3 MW-12813	250.000	250.092	0.092	413259.22	0.04
cal4 MW-12814	500.000	499.775	0.225	825840.80	0.04

111Cd FQ Block 1

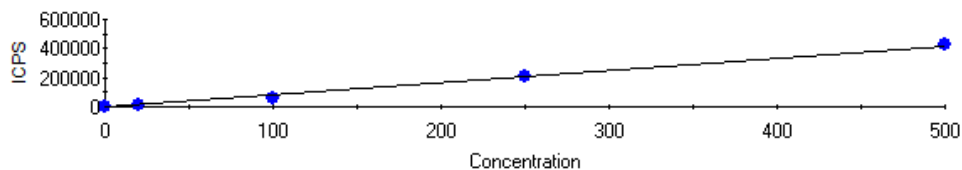
Intercept CPS=-0.606296 Intercept Conc=-0.001507
Sensitivity=402.296894 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	-0.61	0.00
cal1 MW-12643	0.100	0.130	0.030	51.50	29.52
cal2 MW-12645	0.500	0.326	0.174	130.47	34.84
cal3 MW-12813	250.000	250.134	0.134	100627.63	0.05
cal4 MW-12814	500.000	499.933	0.067	201120.90	0.01

114Cd FQ Block 1

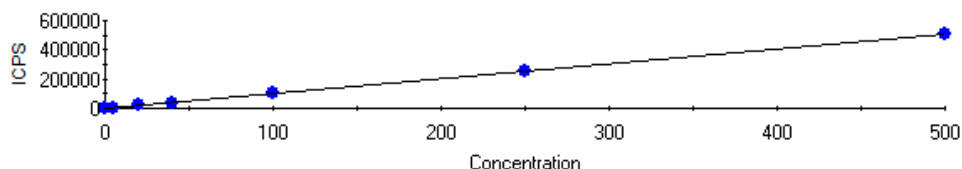
Intercept CPS=1.749904 Intercept Conc=0.001831
Sensitivity=955.597730 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	1.75	0.00
cal1 MW-12643	0.100	0.088	0.012	85.39	12.47
MW12644	0.200	0.205	0.005	197.99	2.68
cal2 MW-12645	0.500	0.599	0.099	574.54	19.88
cal3 MW-12813	250.000	249.390	0.610	238318.17	0.24
cal4 MW-12814	500.000	500.305	0.305	478092.02	0.06

116Sn FQ Block 1

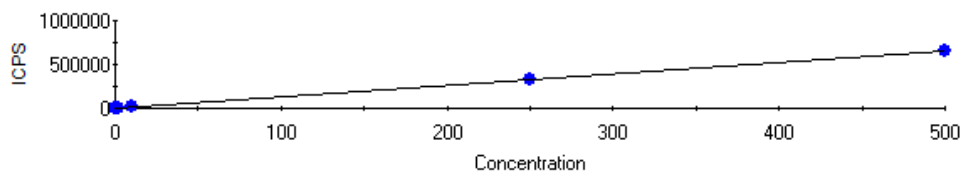
Intercept CPS=18.629985 Intercept Conc=0.022238
Sensitivity=837.747822 Correlation Coeff=0.998264

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	18.63	0.00
cal1 MW-12643	20.000	13.577	6.423	11392.54	32.12
cal2 MW-12645	100.000	70.242	29.758	58864.06	29.76
cal3 MW-12813	250.000	250.977	0.977	210274.35	0.39
cal4 MW-12814	500.000	505.720	5.720	423684.27	1.14

118Sn FQ Block 1

Intercept CPS=26.617148 Intercept Conc=0.026272
Sensitivity=1013.124733 Correlation Coeff=0.999995

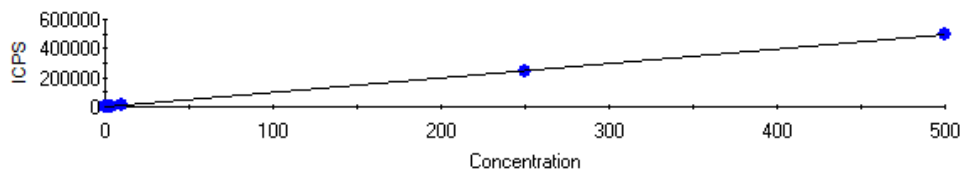
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	26.62	0.00
MW12617	5.000	4.827	0.173	4916.73	3.46
cal1 MW-12643	20.000	19.647	0.353	19931.57	1.76
MW12644	40.000	39.436	0.564	39980.48	1.41
cal2 MW-12645	100.000	99.205	0.795	100533.50	0.80
cal3 MW-12813	250.000	248.780	1.220	252072.19	0.49
cal4 MW-12814	500.000	500.830	0.830	507429.66	0.17

121Sb FQ Block 1

Intercept CPS=87.921782 Intercept Conc=0.067443
Sensitivity=1303.636961 Correlation Coeff=0.999982

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	87.92	0.00
cal1 MW-12643	2.000	1.964	0.036	2648.06	1.81
cal2 MW-12645	10.000	10.126	0.126	13288.80	1.26
cal3 MW-12813	250.000	247.556	2.444	322810.81	0.98
cal4 MW-12814	500.000	501.220	1.220	653496.48	0.24

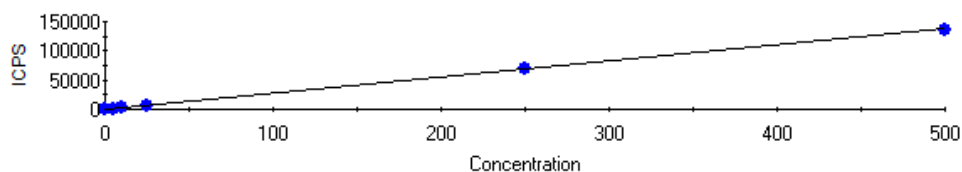
123Sb FQ Block 1



Intercept CPS=76.074856 Intercept Conc=0.077150
Sensitivity=986.069520 Correlation Coeff=0.999975

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	76.07	0.00
cal1 MW-12643	2.000	2.115	0.115	2161.65	5.75
MW12644	4.000	4.343	0.343	4358.49	8.57
cal2 MW-12645	10.000	10.551	0.551	10480.20	5.51
cal3 MW-12813	250.000	247.144	2.856	243777.08	1.14
cal4 MW-12814	500.000	501.414	1.414	494504.99	0.28

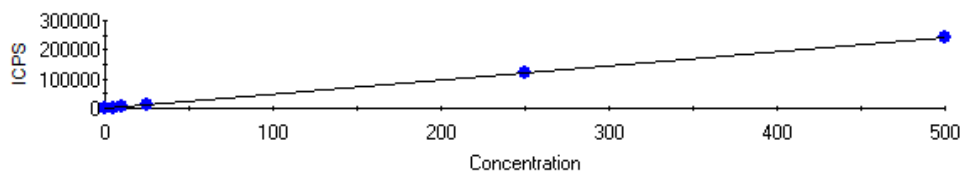
135Ba FQ Block 1



Intercept CPS=1.335489 Intercept Conc=0.004871
Sensitivity=274.165889 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	1.34	0.00
cal1 MW-12643	5.000	5.044	0.044	1384.34	0.89
MW12644	10.000	10.492	0.492	2877.98	4.92
cal2 MW-12645	25.000	24.660	0.340	6762.32	1.36
cal3 MW-12813	250.000	251.663	1.663	68998.76	0.67
cal4 MW-12814	500.000	499.063	0.937	136827.27	0.19

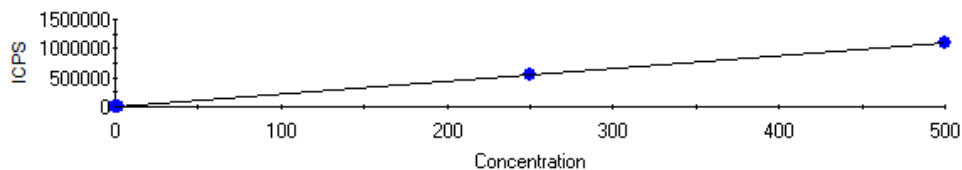
137Ba FQ Block 1



Intercept CPS=1.326658 Intercept Conc=0.002748
Sensitivity=482.701747 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	1.33	0.00
cal1 MW-12643	5.000	4.869	0.131	2351.49	2.62
MW12644	10.000	10.275	0.275	4961.18	2.75
cal2 MW-12645	25.000	25.099	0.099	12116.43	0.39
cal3 MW-12813	250.000	250.003	0.003	120678.22	0.00
cal4 MW-12814	500.000	497.626	2.374	240206.09	0.47

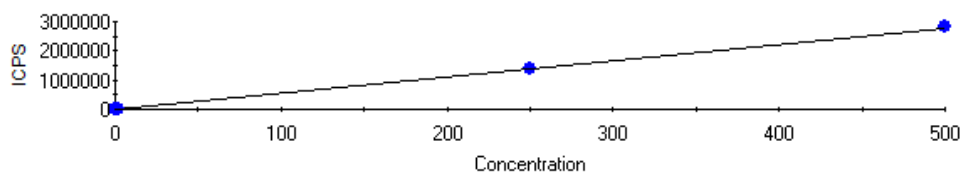
203Tl FQ Block 1



Intercept CPS=29.372250 Intercept Conc=0.013412
Sensitivity=2189.958506 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	29.37	0.00
cal1 MW-12643	0.500	0.515	0.015	1157.57	3.03
MW12644	1.000	0.984	0.016	2183.32	1.64
cal2 MW-12645	2.500	2.504	0.004	5514.00	0.18
cal3 MW-12813	250.000	249.994	0.006	547505.58	0.00
cal4 MW-12814	500.000	498.449	1.551	1091610.92	0.31

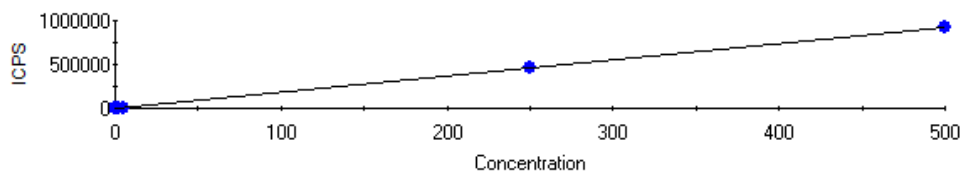
205Tl FQ Block 1



Intercept CPS=53.335167 Intercept Conc=0.009565
Sensitivity=5575.839767 Correlation Coeff=0.999906

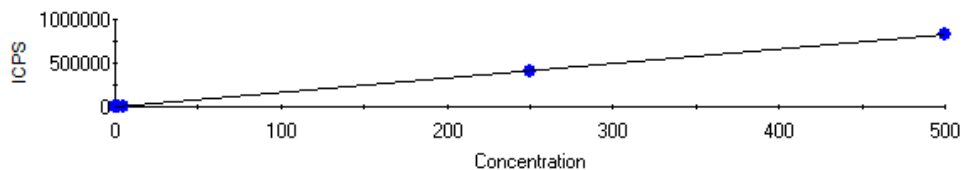
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	53.34	0.00
cal1 MW-12643	0.500	0.489	0.011	2778.74	2.24
MW12644	1.000	0.950	0.050	5351.81	4.97
cal2 MW-12645	2.500	2.407	0.093	13473.16	3.73
cal3 MW-12813	250.000	244.112	5.888	1361181.12	2.36
cal4 MW-12814	500.000	502.945	2.945	2804392.51	0.59

206Pb FQ Block 1



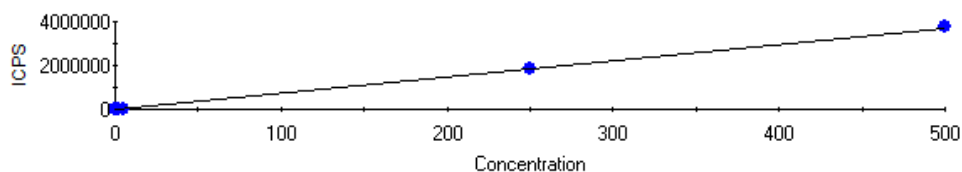
Intercept CPS=33.341832 Intercept Conc=0.018083
Sensitivity=1843.832977 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	33.34	0.00
cal1 MW-12643	1.000	0.928	0.072	1743.59	7.24
MW12644	2.000	1.892	0.108	3522.48	5.38
cal2 MW-12645	5.000	4.805	0.195	8893.32	3.90
cal3 MW-12813	250.000	247.984	2.016	457274.58	0.81
cal4 MW-12814	500.000	501.010	1.010	923812.99	0.20

207Pb FQ Block 1

Intercept CPS=17.395907 Intercept Conc=0.010632
Sensitivity=1636.219437 Correlation Coeff=0.999975

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	0.000	0.000	17.40	0.00
cal1 MW-12643	1.000	0.988	0.012	1633.76	1.21
MW12644	2.000	1.998	0.002	3285.99	0.12
cal2 MW-12645	5.000	5.054	0.054	8287.16	1.08
cal3 MW-12813	250.000	246.961	3.039	404099.57	1.22
cal4 MW-12814	500.000	501.519	1.519	820612.63	0.30

208Pb FQ Block 1

Intercept CPS=113.310376 Intercept Conc=0.015239
Sensitivity=7435.414359 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9968-01	0.000	-0.000	0.000	113.31	0.00
cal1 MW-12643	1.000	0.961	0.039	7258.54	3.90
MW12644	2.000	1.949	0.051	14605.94	2.54
cal2 MW-12645	5.000	4.885	0.115	36435.98	2.30
cal3 MW-12813	250.000	250.158	0.158	1860139.75	0.06
cal4 MW-12814	500.000	510.103	10.103	3792938.15	2.02

Dilution Corrected Concentrations

TUNE MW12793 5/11/2020 10:39:29

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:56	99.7%	-0.009	-0.260	-0.261	105.300	2.038	1.234	1.240	1.414	0.300
2	10:40:23	100.4%	0.017	0.140	0.058	112.600	2.056	1.213	1.361	1.069	0.413
3	10:40:50	99.9%	-0.000	0.325	0.068	102.900	1.775	1.167	1.372	0.997	0.319
X		100.0%	0.003	0.068	-0.045	106.900	1.957	1.204	1.325	1.160	0.344
S		0.4%	0.013	0.299	0.187	5.044	0.157	0.035	0.073	0.223	0.060
%RSD		0.4	467.300	439.500	416.300	4.717	8.037	2.876	5.522	19.210	17.530
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:56	0.771	57.220	3.431	7.939	6.719	99.9%	0.000	-0.021	0.105	-0.366
2	10:40:23	0.785	58.080	2.956	10.980	8.567	100.4%	-0.047	0.030	0.126	-36.610
3	10:40:50	0.721	53.410	2.593	8.995	8.086	99.7%	0.024	0.008	0.148	-22.890
X		0.759	56.240	2.994	9.305	7.791	100.0%	-0.008	0.006	0.126	-19.950
S		0.034	2.488	0.421	1.545	0.959	0.4%	0.036	0.026	0.022	18.300
%RSD		4.494	4.425	14.050	16.600	12.310	0.4	470.700	463.600	17.220	91.700
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:56	2.798	0.263	2.467	2.612	0.006	0.077	0.016	0.042	0.025	2.108
2	10:40:23	2.206	0.289	1.909	2.002	0.007	0.132	-0.177	0.042	0.043	2.073
3	10:40:50	1.854	0.300	2.213	2.641	0.005	0.091	-0.077	0.073	0.051	2.038
X		2.286	0.284	2.196	2.418	0.006	0.100	-0.079	0.052	0.040	2.073
S		0.477	0.019	0.279	0.361	0.001	0.029	0.097	0.018	0.013	0.035
%RSD		20.870	6.667	12.710	14.920	23.530	28.650	122.200	33.800	32.990	1.690
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:56	1.735	2.259	0.110	0.809	3.494	4.970	8.774	0.585	4.356	0.011
2	10:40:23	1.675	1.922	0.036	0.935	4.282	4.950	8.740	0.465	7.593	0.012
3	10:40:50	1.479	2.093	0.010	0.028	3.107	4.799	6.619	0.118	3.286	0.003
X		1.629	2.091	0.052	0.591	3.628	4.906	8.044	0.389	5.079	0.009
S		0.134	0.168	0.052	0.491	0.599	0.094	1.235	0.243	2.243	0.005
%RSD		8.218	8.045	100.400	83.220	16.510	1.914	15.350	62.350	44.160	56.510
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:56	100.1%	0.331	0.392	0.214	0.636	0.002	0.001	0.019	0.005	98.8%
2	10:40:23	100.5%	0.133	0.312	0.334	0.581	0.007	0.003	-0.001	0.004	101.6%
3	10:40:50	99.4%	0.134	0.212	0.252	0.516	0.002	0.008	0.009	0.005	99.7%
X		100.0%	0.199	0.305	0.267	0.578	0.004	0.004	0.009	0.005	100.0%
S		0.5%	0.114	0.090	0.061	0.060	0.003	0.004	0.010	0.001	1.4%
%RSD		0.5	57.300	29.540	23.060	10.350	67.830	91.910	114.700	10.740	1.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:56	0.021	0.014	0.020	0.030	0.025	0.081	98.6%	0.007	0.008	0.006
2	10:40:23	0.020	0.040	0.054	0.036	0.024	0.047	100.1%	0.007	0.019	0.008
3	10:40:50	0.045	0.033	0.071	0.047	0.024	0.022	101.3%	-0.004	0.005	0.025
X		0.029	0.029	0.048	0.038	0.024	0.050	100.0%	0.003	0.011	0.013
S		0.014	0.014	0.026	0.009	0.000	0.030	1.4%	0.006	0.007	0.010
%RSD		48.560	47.030	54.350	22.900	1.691	59.600	1.4	209.800	68.130	79.380
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	10:39:56	0.022	0.017	98.9%							
2	10:40:23	0.038	0.024	100.5%							
3	10:40:50	0.013	0.016	100.6%							
X		0.024	0.019	100.0%							
S		0.013	0.005	0.9%							
%RSD		51.580	24.040	0.9							

BLANK IM9968-01 5/11/2020 10:45:18

User Pre-dilution: 1.000

user file location: 1000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:45:45	99.5%	0.018	0.156	-0.287	-0.808	0.072	-0.022	-0.002	0.012	-0.008
2	10:46:12	99.4%	-0.009	0.027	0.347	0.623	-0.005	0.022	0.019	0.009	0.002
3	10:46:39	101.1%	-0.009	-0.183	-0.060	0.185	-0.067	0.000	-0.017	-0.021	0.006
X		100.0%	-0.000	0.000	-0.000	0.000	-0.000	-0.000	0.000	-0.000	-0.000
S		1.0%	0.015	0.172	0.321	0.733	0.070	0.022	0.018	0.018	0.007
%RSD		1.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:45:45	0.126	0.032	0.707	-1.375	0.109	99.5%	-0.023	0.010	0.008	-4.396
2	10:46:12	-0.282	-0.846	-0.356	0.681	-0.151	100.6%	0.023	-0.008	-0.015	4.868
3	10:46:39	0.156	0.813	-0.351	0.695	0.042	99.9%	0.000	-0.002	0.007	-0.471
X		-0.000	0.000	-0.000	-0.000	0.000	100.0%	-0.000	-0.000	0.000	-0.000
S		0.244	0.830	0.613	1.191	0.135	0.5%	0.023	0.009	0.013	4.650
%RSD		0.000	0.000	0.000	0.000	0.000	0.5	0.000	0.000	0.000	0.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:45:45	-0.582	0.006	0.536	0.435	0.000	-0.014	0.068	-0.005	0.007	0.011
2	10:46:12	0.365	-0.008	-0.304	-0.825	-0.003	-0.007	-0.084	-0.008	-0.026	0.011
3	10:46:39	0.217	0.002	-0.232	0.390	0.003	0.021	0.017	0.013	0.019	-0.022
X		0.000	-0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000	-0.000
S		0.509	0.007	0.466	0.715	0.003	0.019	0.077	0.011	0.023	0.019
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:45:45	-0.053	0.000	-0.006	0.198	0.753	-0.765	-0.742	-0.122	-1.464	-0.001
2	10:46:12	0.158	0.012	-0.078	-0.117	-0.433	0.799	-1.258	-0.293	1.295	0.002
3	10:46:39	-0.105	-0.012	0.084	-0.081	-0.320	-0.034	2.000	0.415	0.170	-0.001
X		0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000
S		0.139	0.012	0.081	0.173	0.654	0.782	1.751	0.369	1.387	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:45:45	100.4%	-0.028	0.013	-0.013	0.177	0.000	0.001	0.000	-0.003	99.8%
2	10:46:12	99.4%	0.021	0.028	0.087	0.636	0.000	-0.002	-0.000	-0.003	99.1%
3	10:46:39	100.2%	0.007	-0.040	-0.074	-0.814	0.000	0.001	0.000	0.005	101.1%
X		100.0%	0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000	0.000	100.0%
S		0.5%	0.025	0.036	0.081	0.741	0.000	0.001	0.000	0.005	1.0%
%RSD		0.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:45:45	0.002	-0.003	-0.003	-0.017	0.010	0.005	101.2%	0.003	0.000	-0.003
2	10:46:12	-0.008	-0.006	-0.009	0.001	-0.005	-0.003	98.9%	-0.001	0.001	-0.003
3	10:46:39	0.006	0.009	0.012	0.016	-0.005	-0.003	99.9%	-0.002	-0.001	0.006
X		-0.000	0.000	0.000	-0.000	0.000	0.000	100.0%	-0.000	-0.000	-0.000
S		0.007	0.008	0.010	0.017	0.008	0.005	1.1%	0.003	0.001	0.005
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	1.1	0.000	0.000	0.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	10:45:45	-0.006	-0.001	98.4%							
2	10:46:12	0.004	-0.002	101.6%							
3	10:46:39	0.002	0.003	100.0%							
X		0.000	-0.000	100.0%							
S		0.005	0.003	1.6%							
%RSD		0.000	0.000	1.6							

MW12519B 5/11/2020 10:51:11

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:37	100.1%	0.176	8.531	8.769	19.110	85.300	22.280	20.600	21.400	16.510
2	10:52:05	99.8%	0.142	8.184	8.415	17.300	83.090	21.600	20.720	21.090	16.450
3	10:52:33	99.4%	0.142	8.841	8.275	18.750	85.160	21.870	20.200	21.780	16.700
X		99.8%	0.154	8.519	8.486	18.390	84.510	21.920	20.510	21.430	16.550
S		0.4%	0.020	0.329	0.255	0.961	1.236	0.341	0.276	0.345	0.133
%RSD		0.4	12.960	3.859	3.001	5.227	1.462	1.557	1.348	1.612	0.805
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:37	40.990	1.607	82.150	87.470	82.610	101.2%	1.732	2.053	0.376	-11.330
2	10:52:05	39.110	0.704	81.500	76.670	80.480	102.0%	1.902	2.007	0.360	-19.420
3	10:52:33	41.050	-1.250	84.890	102.500	82.680	100.6%	2.326	2.012	0.358	-9.997
X		40.380	0.354	82.850	88.860	81.920	101.3%	1.987	2.024	0.364	-13.580
S		1.101	1.460	1.797	12.950	1.253	0.7%	0.306	0.025	0.010	5.099
%RSD		2.726	412.800	2.169	14.570	1.530	0.7	15.390	1.225	2.667	37.540
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:37	9.419	1.945	8.365	8.584	1.921	2.021	2.258	0.332	0.543	4.165
2	10:52:05	8.132	1.934	8.377	9.077	1.909	2.143	1.815	0.338	0.403	4.255
3	10:52:33	7.937	1.980	9.578	9.792	2.025	1.938	1.948	0.449	0.372	4.136
X		8.496	1.953	8.773	9.151	1.952	2.034	2.007	0.373	0.440	4.185
S		0.805	0.024	0.697	0.608	0.064	0.103	0.227	0.066	0.091	0.062
%RSD		9.479	1.237	7.940	6.641	3.269	5.076	11.330	17.630	20.760	1.478
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:37	4.149	3.845	0.023	1.089	-1.764	-0.892	-1.887	-0.394	0.111	0.007
2	10:52:05	3.114	3.941	0.532	0.457	-1.349	-0.663	0.318	0.027	1.225	0.007
3	10:52:33	3.444	4.380	0.445	0.414	-1.681	-2.375	-1.319	-0.249	-1.483	0.008
X		3.569	4.055	0.334	0.653	-1.598	-1.310	-0.963	-0.205	-0.049	0.007
S		0.529	0.285	0.272	0.378	0.219	0.929	1.145	0.214	1.361	0.001
%RSD		14.820	7.029	81.650	57.840	13.730	70.930	119.000	104.000	2764.000	10.300
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:37	101.4%	4.117	3.818	3.882	0.386	0.354	0.370	0.005	0.070	99.8%
2	10:52:05	100.5%	4.456	3.917	3.732	-0.091	0.337	0.347	0.014	0.044	102.2%
3	10:52:33	100.9%	3.450	4.385	4.154	-0.814	0.404	0.381	0.033	0.036	100.7%
X		100.9%	4.008	4.040	3.922	-0.173	0.365	0.366	0.017	0.050	100.9%
S		0.5%	0.512	0.303	0.214	0.604	0.035	0.017	0.014	0.018	1.2%
%RSD		0.4	12.780	7.490	5.455	349.900	9.634	4.732	83.130	35.490	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:37	1.417	1.903	0.375	0.341	2.086	1.962	101.0%	0.208	0.197	0.364
2	10:52:05	1.217	1.854	0.281	0.373	1.823	1.727	101.0%	0.197	0.182	0.319
3	10:52:33	1.263	2.044	0.319	0.339	1.879	2.146	101.4%	0.215	0.194	0.363
X		1.299	1.933	0.325	0.351	1.929	1.945	101.1%	0.207	0.191	0.349
S		0.105	0.099	0.047	0.019	0.138	0.210	0.2%	0.009	0.008	0.026
%RSD		8.090	5.096	14.390	5.434	7.160	10.800	0.2	4.412	4.131	7.344
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	10:51:37	0.372	0.367	100.5%							
2	10:52:05	0.411	0.398	102.7%							
3	10:52:33	0.365	0.375	102.5%							
X		0.383	0.380	101.9%							
S		0.024	0.016	1.2%							
%RSD		6.379	4.142	1.2							

MW12617 5/11/2020 10:57:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:34	100.7%	0.369	23.160	22.960	18.980	205.900	52.250	52.790	50.460	39.740
2	10:58:01	98.9%	0.393	23.290	23.560	18.140	206.000	52.840	51.870	50.720	40.820
3	10:58:28	100.0%	0.495	24.300	22.430	21.470	209.500	54.130	52.030	49.580	39.930
X		99.9%	0.419	23.590	22.980	19.530	207.200	53.070	52.230	50.250	40.160
S		0.9%	0.067	0.622	0.565	1.731	2.036	0.960	0.492	0.593	0.575
%RSD		0.9	16.000	2.636	2.460	8.862	0.983	1.809	0.941	1.180	1.431
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:34	103.300	4.711	208.000	214.400	194.600	101.6%	4.882	4.781	0.948	-2.851
2	10:58:01	104.300	7.586	207.500	196.500	193.100	100.3%	5.154	5.035	1.057	10.820
3	10:58:28	103.000	4.943	209.800	183.100	190.900	100.9%	5.056	5.018	0.981	-9.403
X		103.500	5.747	208.400	198.000	192.900	100.9%	5.031	4.945	0.995	-0.477
S		0.672	1.597	1.215	15.690	1.874	0.6%	0.138	0.142	0.056	10.320
%RSD		0.649	27.790	0.583	7.926	0.972	0.6	2.744	2.872	5.641	2162.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:34	19.900	4.964	20.690	21.920	4.814	5.247	4.868	0.968	1.003	9.797
2	10:58:01	20.840	4.868	21.690	21.150	4.881	5.077	5.462	0.980	1.054	10.020
3	10:58:28	21.970	4.909	20.240	20.020	4.874	5.291	5.427	0.961	1.129	9.735
X		20.900	4.914	20.870	21.030	4.856	5.205	5.252	0.970	1.062	9.851
S		1.035	0.048	0.741	0.958	0.037	0.113	0.333	0.009	0.063	0.150
%RSD		4.951	0.972	3.549	4.555	0.762	2.173	6.346	0.973	5.969	1.523
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:34	9.915	10.360	0.857	2.010	-1.666	-1.558	4.739	0.982	0.172	0.007
2	10:58:01	9.229	10.280	0.852	0.703	-1.583	-0.991	-0.307	-0.088	1.140	0.010
3	10:58:28	9.257	9.876	0.396	1.326	-2.223	-0.882	-0.253	-0.053	0.119	0.005
X		9.467	10.170	0.702	1.347	-1.824	-1.144	1.393	0.280	0.477	0.008
S		0.388	0.258	0.264	0.654	0.348	0.363	2.898	0.608	0.575	0.003
%RSD		4.101	2.537	37.680	48.560	19.100	31.730	208.000	216.900	120.500	33.660
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:34	99.9%	9.863	9.600	9.643	1.226	0.980	0.927	0.108	0.127	101.9%
2	10:58:01	102.5%	10.150	9.826	9.458	1.299	1.004	1.033	0.041	0.102	102.1%
3	10:58:28	101.3%	10.100	10.030	9.692	0.259	0.942	0.998	0.080	0.061	101.0%
X		101.2%	10.040	9.818	9.598	0.928	0.975	0.986	0.076	0.097	101.7%
S		1.3%	0.154	0.215	0.123	0.580	0.031	0.054	0.034	0.033	0.6%
%RSD		1.3	1.530	2.186	1.285	62.540	3.178	5.438	44.610	34.210	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:34	3.272	4.655	0.694	0.928	4.921	4.888	102.1%	0.514	0.508	1.021
2	10:58:01	3.393	4.655	0.753	0.767	4.770	5.229	102.3%	0.494	0.482	1.023
3	10:58:28	3.465	5.170	0.817	0.698	5.209	5.101	102.9%	0.500	0.548	1.046
X		3.377	4.827	0.755	0.798	4.967	5.073	102.5%	0.503	0.513	1.030
S		0.097	0.298	0.062	0.118	0.223	0.172	0.4%	0.010	0.033	0.014
%RSD		2.885	6.167	8.153	14.760	4.492	3.396	0.4	1.988	6.473	1.364
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	10:57:34	1.016	1.003	102.3%							
2	10:58:01	1.010	1.021	103.4%							
3	10:58:28	1.015	1.018	105.2%							
X		1.014	1.014	103.6%							
S		0.003	0.010	1.5%							
%RSD		0.342	0.992	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:28	100.5%	0.545	49.620	49.290	26.500	432.100	433.900	418.000	414.400	39.660
2	11:03:54	100.4%	0.388	47.240	48.300	21.170	424.900	432.800	413.400	406.900	39.860
3	11:04:21	98.8%	0.403	51.480	50.810	16.980	428.800	434.100	423.700	422.300	40.570
X		99.9%	0.445	49.450	49.470	21.550	428.600	433.600	418.400	414.500	40.030
S		0.9%	0.087	2.128	1.262	4.771	3.597	0.689	5.189	7.682	0.481
%RSD		1.0	19.520	4.304	2.551	22.140	0.839	0.159	1.240	1.853	1.202
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:28	102.900	5.352	412.700	455.000	400.200	100.4%	4.918	5.054	4.986	120.800
2	11:03:54	101.700	2.053	407.400	420.700	375.200	101.9%	4.728	4.779	4.853	43.270
3	11:04:21	102.400	1.576	412.900	413.400	391.400	100.2%	5.510	5.130	5.206	-5.597
X		102.300	2.994	411.000	429.700	389.000	100.8%	5.052	4.987	5.015	52.830
S		0.585	2.056	3.108	22.210	12.660	0.9%	0.407	0.185	0.178	63.740
%RSD		0.572	68.690	0.756	5.169	3.256	0.9	8.066	3.707	3.552	120.700
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:28	54.500	4.896	53.130	53.120	1.072	5.506	5.648	4.788	5.338	10.950
2	11:03:54	52.300	4.761	52.140	51.320	0.990	4.799	4.850	4.829	5.410	10.310
3	11:04:21	54.860	4.919	53.290	53.640	1.024	5.222	6.085	5.153	5.045	10.140
X		53.890	4.858	52.860	52.700	1.029	5.175	5.528	4.923	5.264	10.470
S		1.383	0.085	0.622	1.219	0.041	0.356	0.626	0.200	0.194	0.430
%RSD		2.567	1.758	1.177	2.313	4.001	6.876	11.330	4.062	3.676	4.106
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:28	10.060	9.722	1.821	5.118	-1.225	-1.602	19.270	4.138	-1.496	10.000
2	11:03:54	8.691	10.580	1.959	4.981	-1.660	-1.978	20.570	4.427	0.594	9.521
3	11:04:21	9.012	10.370	1.934	4.553	-1.563	-1.544	24.090	5.250	1.184	9.687
X		9.254	10.220	1.904	4.884	-1.483	-1.708	21.310	4.605	0.094	9.737
S		0.715	0.446	0.074	0.295	0.228	0.236	2.494	0.577	1.408	0.245
%RSD		7.731	4.365	3.875	6.036	15.390	13.810	11.700	12.530	1496.000	2.516
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:28	101.4%	10.010	9.805	9.955	-0.615	1.037	1.041	0.136	0.036	102.2%
2	11:03:54	102.5%	9.996	10.040	9.981	0.112	0.978	0.987	0.174	0.076	102.4%
3	11:04:21	101.6%	9.997	10.430	10.290	0.812	1.056	1.002	0.078	0.150	100.1%
X		101.8%	10.000	10.090	10.080	0.103	1.024	1.010	0.130	0.088	101.6%
S		0.6%	0.008	0.315	0.188	0.714	0.041	0.028	0.048	0.058	1.2%
%RSD		0.6	0.077	3.126	1.865	692.800	3.972	2.774	37.210	66.600	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:28	13.650	19.360	1.923	2.115	4.894	4.655	101.4%	0.506	0.501	0.977
2	11:03:54	13.400	19.760	1.866	2.147	4.984	5.021	102.5%	0.509	0.500	0.951
3	11:04:21	13.680	19.820	2.103	2.083	5.255	4.930	102.2%	0.530	0.466	0.855
X		13.580	19.650	1.964	2.115	5.044	4.869	102.0%	0.515	0.489	0.928
S		0.150	0.250	0.124	0.032	0.188	0.191	0.6%	0.013	0.020	0.064
%RSD		1.103	1.272	6.290	1.502	3.727	3.915	0.6	2.516	4.058	6.939
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:03:28	0.976	0.986	102.8%							
2	11:03:54	0.895	0.921	105.2%							
3	11:04:21	1.093	0.976	102.6%							
X		0.988	0.961	103.5%							
S		0.099	0.035	1.5%							
%RSD		10.030	3.592	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:22	102.0%	0.824	99.490	101.200	19.440	855.300	873.000	846.900	833.200	80.630
2	11:09:49	100.5%	0.853	102.800	102.700	21.100	857.000	893.500	842.100	822.700	79.490
3	11:10:16	100.9%	0.762	98.000	95.700	13.720	834.200	844.800	799.200	821.800	79.340
X		101.1%	0.813	100.100	99.860	18.090	848.800	870.400	829.400	825.900	79.820
S		0.7%	0.046	2.437	3.687	3.874	12.700	24.440	26.280	6.336	0.707
%RSD		0.7	5.698	2.435	3.692	21.420	1.496	2.808	3.169	0.767	0.886
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:22	201.700	-1.732	787.300	833.700	779.100	102.4%	10.440	9.688	9.765	148.100
2	11:09:49	207.300	-1.915	819.400	815.500	795.100	101.7%	10.310	9.698	9.985	186.800
3	11:10:16	205.000	-5.800	793.400	806.600	779.900	102.9%	11.050	9.973	9.924	109.600
X		204.700	-3.149	800.000	818.600	784.700	102.3%	10.600	9.787	9.891	148.100
S		2.815	2.298	17.020	13.810	9.005	0.6%	0.394	0.162	0.114	38.580
%RSD		1.375	72.970	2.127	1.687	1.148	0.6	3.720	1.653	1.147	26.040
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:22	107.300	9.436	102.500	108.900	2.004	10.210	10.250	9.758	9.903	20.230
2	11:09:49	109.500	9.550	105.500	102.100	1.958	9.863	9.306	10.240	10.170	20.560
3	11:10:16	109.700	9.368	103.400	102.100	1.890	9.635	9.598	9.936	10.500	20.510
X		108.800	9.451	103.800	104.300	1.951	9.904	9.719	9.977	10.190	20.430
S		1.347	0.092	1.513	3.907	0.058	0.291	0.484	0.242	0.300	0.178
%RSD		1.238	0.969	1.458	3.745	2.958	2.942	4.982	2.426	2.948	0.872
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:22	20.030	19.510	4.268	9.595	-1.756	-1.201	46.480	10.090	2.290	19.780
2	11:09:49	19.630	19.630	3.636	9.784	-1.263	-1.975	41.500	9.127	-1.531	19.150
3	11:10:16	19.650	18.900	3.788	11.250	-0.523	-1.628	54.720	11.780	1.166	19.520
X		19.770	19.350	3.897	10.210	-1.181	-1.602	47.570	10.330	0.642	19.480
S		0.229	0.392	0.330	0.906	0.621	0.388	6.672	1.345	1.964	0.314
%RSD		1.158	2.026	8.464	8.877	52.550	24.200	14.030	13.010	306.100	1.612
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:22	100.7%	19.050	20.500	19.830	-0.154	1.971	1.794	0.190	0.222	99.9%
2	11:09:49	102.5%	20.360	20.890	20.310	0.573	2.005	2.050	0.117	0.196	100.9%
3	11:10:16	101.6%	20.340	20.080	19.940	1.515	1.988	2.051	0.117	0.199	101.7%
X		101.6%	19.920	20.490	20.030	0.645	1.988	1.965	0.141	0.205	100.8%
S		0.9%	0.749	0.408	0.251	0.837	0.017	0.148	0.042	0.014	0.9%
%RSD		0.9	3.762	1.990	1.251	129.700	0.859	7.546	30.020	6.894	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:22	27.380	39.410	4.272	4.461	9.997	10.690	101.0%	0.953	0.935	1.818
2	11:09:49	28.360	39.440	4.053	4.295	10.360	10.390	102.2%	0.940	0.998	1.942
3	11:10:16	27.380	39.460	4.151	4.272	11.120	9.747	101.5%	1.057	0.918	1.916
X		27.710	39.440	4.158	4.343	10.490	10.280	101.6%	0.984	0.950	1.892
S		0.564	0.029	0.110	0.103	0.572	0.481	0.6%	0.064	0.042	0.065
%RSD		2.036	0.072	2.641	2.380	5.448	4.681	0.6	6.536	4.413	3.454
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:09:22	1.947	1.920	102.0%							
2	11:09:49	2.107	1.982	101.9%							
3	11:10:16	1.938	1.946	104.6%							
X		1.998	1.949	102.8%							
S		0.095	0.031	1.5%							
%RSD		4.763	1.596	1.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:15	102.0%	2.055	254.500	248.000	19.820	±2058.000	±2078.000	2045.000	2068.000	201.900
2	11:15:42	99.2%	1.827	240.300	235.900	18.230	±2033.000	±2033.000	2079.000	2071.000	195.300
3	11:16:09	101.3%	1.824	244.700	247.000	24.090	±2093.000	±2081.000	2097.000	2102.000	201.100
X		100.8%	1.902	246.500	243.700	20.710	±2061.000	±2064.000	2074.000	2080.000	199.400
S		1.4%	0.133	7.245	6.701	3.028	±30.330	±26.790	26.490	19.070	3.583
%RSD		1.4	6.969	2.939	2.750	14.620	±1.471	±1.298	1.277	0.917	1.797
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:15	536.100	-1.966	±1980.000	1972.000	1936.000	102.3%	25.500	24.080	24.580	446.400
2	11:15:42	511.500	-4.678	±1966.000	2024.000	1927.000	103.5%	23.930	23.890	24.260	119.800
3	11:16:09	526.900	0.452	±2004.000	2083.000	1970.000	101.1%	25.690	25.280	25.380	150.200
X		524.800	-2.064	±1983.000	2026.000	1944.000	102.3%	25.040	24.420	24.740	238.800
S		12.440	2.566	±19.350	55.640	22.830	1.2%	0.967	0.756	0.577	180.400
%RSD		2.371	124.300	±0.976	2.746	1.174	1.1	3.862	3.097	2.333	75.550
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:15	272.400	24.060	262.700	265.900	5.007	24.580	22.720	24.370	25.190	48.280
2	11:15:42	271.200	23.670	261.200	257.400	5.049	24.900	25.900	24.810	24.570	48.440
3	11:16:09	276.800	24.180	265.500	266.900	4.981	24.640	26.470	24.620	25.600	49.970
X		273.500	23.970	263.100	263.400	5.012	24.710	25.030	24.600	25.120	48.900
S		2.958	0.267	2.196	5.222	0.035	0.173	2.024	0.221	0.519	0.933
%RSD		1.082	1.112	0.835	1.983	0.692	0.700	8.086	0.899	2.068	1.909
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:15	47.900	49.890	10.010	25.990	-0.820	-1.457	111.300	24.180	1.220	48.950
2	11:15:42	48.630	49.670	10.190	25.030	-2.650	-1.598	116.300	24.930	1.651	48.550
3	11:16:09	49.590	50.210	10.200	26.910	-0.693	-0.968	107.800	23.590	1.621	47.890
X		48.710	49.930	10.130	25.980	-1.388	-1.341	111.800	24.230	1.497	48.460
S		0.849	0.272	0.105	0.941	1.095	0.331	4.260	0.671	0.241	0.538
%RSD		1.744	0.545	1.034	3.622	78.930	24.650	3.810	2.771	16.080	1.110
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:15	100.6%	51.400	51.950	49.400	1.893	4.885	4.767	0.341	0.544	100.0%
2	11:15:42	102.4%	49.070	49.890	50.310	0.749	4.817	4.968	0.361	0.578	103.0%
3	11:16:09	103.3%	51.850	51.520	51.960	1.178	5.112	5.037	0.275	0.677	101.4%
X		102.1%	50.770	51.120	50.560	1.273	4.938	4.924	0.326	0.599	101.5%
S		1.4%	1.497	1.086	1.299	0.578	0.154	0.140	0.045	0.069	1.5%
%RSD		1.4	2.948	2.124	2.569	45.410	3.126	2.848	13.830	11.540	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:15	71.050	100.400	10.150	10.580	24.930	25.440	100.5%	2.490	2.417	4.715
2	11:15:42	69.030	98.460	9.975	10.490	24.320	24.650	101.7%	2.511	2.375	4.792
3	11:16:09	70.650	98.740	10.250	10.580	24.730	25.210	102.9%	2.512	2.428	4.908
X		70.240	99.200	10.130	10.550	24.660	25.100	101.7%	2.504	2.407	4.805
S		1.068	1.052	0.141	0.055	0.309	0.407	1.2%	0.012	0.028	0.097
%RSD		1.520	1.061	1.391	0.519	1.251	1.623	1.2	0.498	1.178	2.025
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:15:15	5.184	4.864	102.2%							
2	11:15:42	5.006	4.887	102.5%							
3	11:16:09	4.973	4.905	105.8%							
X		5.054	4.885	103.5%							
S		0.114	0.020	2.0%							
%RSD		2.252	0.416	1.9							

cal3 MW-12813

5/11/2020 11:20:42

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:21:10	101.6%	251.500	252.700	247.200	19.910	265.200	260.900	253.000	259.200	249.200
2	11:21:38	98.5%	254.000	262.900	250.400	18.360	259.000	264.900	253.000	255.700	247.500
3	11:22:06	99.7%	246.800	261.700	257.200	27.910	261.500	266.600	259.400	255.200	243.600
X		99.9%	250.800	259.100	251.600	22.060	261.900	264.100	255.100	256.700	246.800
S		1.5%	3.641	5.569	5.115	5.122	3.112	2.942	3.693	2.194	2.839
%RSD		1.5	1.452	2.149	2.033	23.220	1.188	1.114	1.448	0.855	1.151
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:21:10	273.900	-3.163	259.800	369.900	307.900	102.2%	253.700	253.200	254.400	507.400
2	11:21:38	264.400	-1.996	253.300	344.500	302.900	101.3%	252.100	247.200	247.900	1984.000
3	11:22:06	263.700	-3.684	251.500	384.300	302.400	101.3%	241.300	247.700	249.200	1054.000
X		267.300	-2.948	254.900	366.200	304.400	101.6%	249.000	249.400	250.500	1182.000
S		5.676	0.865	4.364	20.140	3.032	0.5%	6.758	3.337	3.476	746.500
%RSD		2.123	29.330	1.712	5.500	0.996	0.5	2.714	1.338	1.388	63.160
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:21:10	372.500	245.900	263.600	264.500	251.100	253.500	253.800	249.000	252.000	248.100
2	11:21:38	365.300	242.900	257.900	266.200	244.800	248.000	254.300	250.800	249.700	245.900
3	11:22:06	367.600	245.900	262.600	256.300	246.400	247.500	245.900	253.300	252.700	249.000
X		368.400	244.900	261.400	262.300	247.400	249.700	251.300	251.100	251.500	247.700
S		3.672	1.751	3.070	5.301	3.266	3.362	4.734	2.185	1.557	1.573
%RSD		0.997	0.715	1.175	2.021	1.320	1.347	1.884	0.870	0.619	0.635
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:21:10	245.000	251.200	255.200	251.600	-2.300	-0.119	1190.000	259.000	2.785	248.300
2	11:21:38	243.800	246.800	255.200	244.200	-1.986	-1.069	1171.000	257.400	2.723	245.000
3	11:22:06	245.700	246.900	246.900	253.000	-1.109	-1.687	1178.000	253.100	1.170	247.600
X		244.800	248.300	252.400	249.600	-1.799	-0.958	1180.000	256.500	2.226	247.000
S		0.960	2.509	4.775	4.740	0.617	0.790	9.393	3.071	0.915	1.717
%RSD		0.392	1.010	1.892	1.899	34.310	82.440	0.796	1.197	41.110	0.695
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:21:10	101.5%	242.800	247.500	245.600	243.100	252.400	250.000	251.200	250.300	100.6%
2	11:21:38	102.6%	248.100	250.100	251.900	242.200	252.500	251.400	250.800	250.900	100.4%
3	11:22:06	101.7%	247.800	250.900	248.100	255.400	249.300	248.900	248.400	246.900	102.0%
X		101.9%	246.200	249.500	248.500	246.900	251.400	250.100	250.100	249.400	101.0%
S		0.6%	2.977	1.810	3.143	7.387	1.858	1.250	1.513	2.155	0.9%
%RSD		0.6	1.209	0.725	1.265	2.992	0.739	0.500	0.605	0.864	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:21:10	250.600	249.700	245.500	245.400	249.200	249.900	101.7%	249.700	243.500	246.900
2	11:21:38	251.700	248.500	247.900	246.300	252.300	250.100	102.1%	249.900	244.600	249.900
3	11:22:06	250.600	248.100	249.300	249.800	253.400	250.000	102.6%	250.400	244.300	247.200
X		251.000	248.800	247.600	247.100	251.700	250.000	102.1%	250.000	244.100	248.000
S		0.656	0.847	1.905	2.342	2.171	0.086	0.4%	0.340	0.572	1.682
%RSD		0.262	0.340	0.769	0.948	0.863	0.035	0.4	0.136	0.234	0.678
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:21:10	247.100	249.800	102.1%							
2	11:21:38	248.500	250.600	103.9%							
3	11:22:06	245.300	250.100	104.2%							
X		247.000	250.200	103.4%							
S		1.600	0.372	1.1%							
%RSD		0.648	0.149	1.1							

cal4 MW-12814

5/11/2020 11:26:39

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:05	96.9%	497.500	493.100	<u>m 503.400</u>	23.770	523.000	533.100	511.400	520.500	499.500
2	11:27:33	96.6%	492.300	484.700	487.700	19.630	528.700	533.200	509.100	521.700	<u>m 504.800</u>
3	11:27:59	95.1%	<u>m 506.700</u>	<u>m 508.700</u>	<u>m 507.100</u>	23.750	519.000	531.400	506.700	511.200	<u>m 501.400</u>
X		96.2%	<u>m 498.800</u>	<u>m 495.500</u>	<u>m 499.400</u>	22.380	523.600	532.600	509.100	517.800	<u>m 501.900</u>
S		0.9%	<u>m 7.277</u>	<u>m 12.140</u>	<u>m 10.300</u>	2.387	4.843	1.023	2.333	5.726	<u>m 2.667</u>
%RSD		1.0	<u>m 1.459</u>	<u>m 2.450</u>	<u>m 2.064</u>	10.670	0.925	0.192	0.458	1.106	<u>m 0.531</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:05	537.800	-0.620	518.000	765.900	621.300	97.6%	<u>m 503.900</u>	<u>m 502.200</u>	<u>m 502.000</u>	4640.000
2	11:27:33	542.700	-4.177	524.400	709.700	611.200	95.8%	493.000	500.000	<u>m 505.200</u>	5127.000
3	11:27:59	536.600	-2.375	505.200	707.100	604.800	96.0%	496.300	498.900	498.700	2264.000
X		539.000	-2.391	515.900	727.600	612.400	96.5%	<u>m 497.800</u>	<u>m 500.400</u>	<u>m 502.000</u>	4010.000
S		3.266	1.779	9.782	33.240	8.293	1.0%	<u>m 5.606</u>	<u>m 1.688</u>	<u>m 3.261</u>	1532.000
%RSD		0.606	74.390	1.896	4.568	1.354	1.0	<u>m 1.126</u>	<u>m 0.337</u>	<u>m 0.650</u>	38.200
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:05	756.700	<u>m 504.400</u>	533.200	520.300	497.300	496.600	497.000	<u>m 510.400</u>	<u>m 502.000</u>	490.500
2	11:27:33	750.900	<u>m 506.900</u>	531.900	542.900	<u>m 502.300</u>	<u>m 507.300</u>	498.500	498.000	498.100	<u>m 509.700</u>
3	11:27:59	743.600	496.600	531.900	519.000	<u>m 501.300</u>	496.600	<u>m 502.500</u>	490.100	497.600	<u>m 500.100</u>
X		750.400	<u>m 502.600</u>	532.300	527.400	<u>m 500.300</u>	<u>m 500.200</u>	<u>m 499.300</u>	<u>m 499.500</u>	<u>m 499.200</u>	<u>m 500.100</u>
S		6.572	<u>m 5.384</u>	0.716	13.490	<u>m 2.648</u>	<u>m 6.190</u>	<u>m 2.856</u>	<u>m 10.210</u>	<u>m 2.419</u>	<u>m 9.596</u>
%RSD		0.876	<u>m 1.071</u>	0.135	2.558	<u>m 0.529</u>	<u>m 1.237</u>	<u>m 0.572</u>	<u>m 2.045</u>	<u>m 0.484</u>	<u>m 1.919</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:05	<u>m 504.700</u>	<u>m 503.800</u>	498.600	491.800	-1.302	-1.564	2380.000	<u>m 509.100</u>	2.550	<u>m 501.100</u>
2	11:27:33	<u>m 505.000</u>	498.500	488.600	<u>m 503.100</u>	-1.915	-1.145	2332.000	491.100	4.799	<u>m 502.000</u>
3	11:27:59	498.400	<u>m 503.900</u>	495.400	<u>m 505.600</u>	-1.594	-1.592	2268.000	490.200	-0.283	<u>m 502.100</u>
X		<u>m 502.700</u>	<u>m 502.000</u>	494.200	<u>m 500.200</u>	-1.603	-1.434	2327.000	<u>m 496.800</u>	2.356	<u>m 501.700</u>
S		<u>m 3.746</u>	<u>m 3.091</u>	5.102	<u>m 7.382</u>	0.307	0.251	56.240	<u>m 10.700</u>	2.547	<u>m 0.536</u>
%RSD		<u>m 0.745</u>	<u>m 0.616</u>	1.032	<u>m 1.476</u>	19.130	17.470	2.417	<u>m 2.154</u>	108.100	<u>m 0.107</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:05	97.3%	495.200	493.100	496.500	497.600	<u>m 502.200</u>	<u>m 501.600</u>	<u>m 500.100</u>	499.000	98.1%
2	11:27:33	97.5%	490.900	492.000	493.800	497.300	493.300	495.500	495.000	498.000	99.5%
3	11:27:59	98.4%	<u>m 508.700</u>	<u>m 515.300</u>	<u>m 511.700</u>	<u>m 509.700</u>	<u>m 501.700</u>	<u>m 502.300</u>	<u>m 504.700</u>	<u>m 503.900</u>	97.8%
X		97.8%	<u>m 498.300</u>	<u>m 500.100</u>	<u>m 500.700</u>	<u>m 501.500</u>	<u>m 499.100</u>	<u>m 499.800</u>	<u>m 499.900</u>	<u>m 500.300</u>	98.5%
S		0.6%	<u>m 9.290</u>	<u>m 13.150</u>	<u>m 9.641</u>	<u>m 7.029</u>	<u>m 4.995</u>	<u>m 3.745</u>	<u>m 4.869</u>	<u>m 3.112</u>	0.9%
%RSD		0.6	<u>m 1.864</u>	<u>m 2.629</u>	<u>m 1.926</u>	<u>m 1.401</u>	<u>m 1.001</u>	<u>m 0.749</u>	<u>m 0.974</u>	<u>m 0.622</u>	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:27:05	<u>m 507.100</u>	<u>m 503.900</u>	<u>m 500.900</u>	498.200	<u>m 504.300</u>	498.700	100.1%	<u>m 501.500</u>	<u>m 500.600</u>	<u>m 501.800</u>
2	11:27:33	<u>m 502.300</u>	494.600	496.200	<u>m 502.900</u>	494.800	490.300	101.3%	495.900	<u>m 501.600</u>	498.200
3	11:27:59	<u>m 507.800</u>	<u>m 504.000</u>	<u>m 506.600</u>	<u>m 503.100</u>	498.100	<u>m 503.800</u>	101.4%	497.900	<u>m 506.700</u>	<u>m 503.100</u>
X		<u>m 505.700</u>	<u>m 500.800</u>	<u>m 501.200</u>	<u>m 501.400</u>	<u>m 499.100</u>	<u>m 497.600</u>	100.9%	<u>m 498.400</u>	<u>m 502.900</u>	<u>m 501.000</u>
S		<u>m 3.021</u>	<u>m 5.435</u>	<u>m 5.208</u>	<u>m 2.779</u>	<u>m 4.801</u>	<u>m 6.828</u>	0.7%	<u>m 2.795</u>	<u>m 3.271</u>	<u>m 2.520</u>
%RSD		<u>m 0.597</u>	<u>m 1.085</u>	<u>m 1.039</u>	<u>m 0.554</u>	<u>m 0.962</u>	<u>m 1.372</u>	0.7	<u>m 0.561</u>	<u>m 0.650</u>	<u>m 0.503</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:27:05	<u>m 504.300</u>	<u>m 511.200</u>	103.0%							
2	11:27:33	496.500	<u>m 507.800</u>	104.8%							
3	11:27:59	<u>m 503.700</u>	<u>m 511.300</u>	105.3%							
X		<u>m 501.500</u>	<u>m 510.100</u>	104.4%							
S		<u>m 4.367</u>	<u>m 2.013</u>	1.2%							
%RSD		<u>m 0.871</u>	<u>m 0.395</u>	1.1							

cal5 MW-12618

5/11/2020 11:32:32

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:58	89.2%	0.002	4.567	3.433	13.980	50110.000	50080.000	50350.000	48340.000	1.294
2	11:33:25	89.6%	0.061	3.149	2.492	25.040	49980.000	50340.000	50590.000	49110.000	1.210
3	11:33:52	92.2%	-0.008	3.052	2.311	17.140	49720.000	51410.000	51340.000	49410.000	1.516
X		90.3%	0.018	3.589	2.745	18.720	49940.000	50610.000	50760.000	48950.000	1.340
S		1.6%	0.037	0.848	0.603	5.693	197.900	707.300	520.100	553.100	0.158
%RSD		1.8	203.500	23.620	21.950	30.420	0.396	1.398	1.025	1.130	11.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:58	4769.000	-6.168	48340.000	49910.000	50090.000	96.6%	0.584	0.062	0.200	-13.660
2	11:33:25	4869.000	-4.492	48650.000	49580.000	50010.000	97.6%	0.649	0.052	0.230	2.039
3	11:33:52	4824.000	-5.796	49080.000	49120.000	50340.000	100.1%	0.631	0.042	0.174	14.400
X		4821.000	-5.485	48690.000	49540.000	50150.000	98.1%	0.622	0.052	0.201	0.926
S		49.850	0.880	374.000	398.800	172.100	1.8%	0.034	0.010	0.028	14.060
%RSD		1.034	16.040	0.768	0.805	0.343	1.8	5.413	19.200	13.870	1519.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:58	49710.000	0.759	49820.000	48810.000	2.247	1.896	2.165	0.423	0.179	1.073
2	11:33:25	49610.000	0.811	50280.000	49440.000	2.446	1.848	2.718	0.348	0.144	1.205
3	11:33:52	49630.000	0.754	50650.000	49570.000	2.309	2.129	1.820	0.338	0.181	0.959
X		49650.000	0.775	50250.000	49270.000	2.334	1.958	2.234	0.370	0.168	1.079
S		56.030	0.032	419.300	403.600	0.102	0.151	0.453	0.047	0.021	0.123
%RSD		0.113	4.089	0.835	0.819	4.373	7.692	20.270	12.700	12.550	11.410
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:58	1.331	0.939	0.291	0.552	0.153	-2.192	0.768	0.199	-1.255	0.400
2	11:33:25	0.972	0.853	0.163	1.032	-1.447	-1.982	1.090	0.274	-0.818	0.399
3	11:33:52	0.791	0.927	0.316	1.057	0.446	-2.196	0.948	0.294	-1.989	0.450
X		1.031	0.906	0.256	0.880	-0.283	-2.123	0.936	0.256	-1.354	0.416
S		0.275	0.046	0.082	0.284	1.019	0.122	0.161	0.050	0.591	0.029
%RSD		26.660	5.122	32.010	32.300	360.700	5.746	17.250	19.600	43.680	6.968
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:58	93.8%	1.923	2.059	1.739	2.420	0.030	0.045	0.025	0.033	94.0%
2	11:33:25	97.6%	1.812	2.052	1.930	0.482	0.024	0.034	0.034	0.003	96.4%
3	11:33:52	99.5%	1.782	2.006	1.804	0.682	0.051	0.023	0.013	0.025	96.7%
X		97.0%	1.839	2.039	1.824	1.195	0.035	0.034	0.024	0.020	95.7%
S		2.9%	0.074	0.029	0.097	1.066	0.014	0.011	0.010	0.016	1.5%
%RSD		3.0	4.037	1.405	5.323	89.210	40.000	31.440	42.240	76.660	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:58	0.384	0.460	1.527	1.442	0.135	0.049	97.7%	0.049	0.044	0.042
2	11:33:25	0.413	0.558	1.333	1.346	0.086	0.056	99.8%	0.040	0.033	0.034
3	11:33:52	0.397	0.548	1.307	1.368	0.055	0.048	99.9%	0.028	0.026	0.036
X		0.398	0.522	1.389	1.385	0.092	0.051	99.1%	0.039	0.034	0.037
S		0.015	0.054	0.120	0.050	0.040	0.005	1.2%	0.011	0.009	0.004
%RSD		3.732	10.390	8.643	3.630	43.450	9.041	1.2	27.050	27.140	10.720
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:32:58	0.067	0.048	93.1%							
2	11:33:25	0.043	0.041	95.3%							
3	11:33:52	0.060	0.039	96.6%							
X		0.057	0.042	95.0%							
S		0.012	0.005	1.8%							
%RSD		21.460	10.960	1.9							

cal6 MW-12619

5/11/2020 11:38:27

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:38:54	92.1%	0.040	1.243	-0.123	25.110	99440.000	97480.000	99050.000	96600.000	1.368
2	11:39:21	92.5%	-0.008	0.385	-0.307	26.290	100700.000	101100.000	100800.000	97610.000	1.272
3	11:39:48	93.6%	0.011	0.735	-0.307	24.130	99960.000	100500.000	98960.000	97470.000	1.332
X		92.7%	0.014	0.788	-0.246	25.180	100000.000	99690.000	99620.000	97220.000	1.324
S		0.8%	0.024	0.432	0.106	1.082	624.200	1935.000	1066.000	549.000	0.049
%RSD		0.8	171.600	54.840	43.170	4.299	0.624	1.941	1.070	0.565	3.673
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:38:54	9759.000	-2.763	99740.000	100900.000	99960.000	101.2%	0.924	0.025	0.412	-5.534
2	11:39:21	9816.000	-0.606	99320.000	99820.000	100600.000	102.1%	1.076	-0.009	0.359	18.510
3	11:39:48	9767.000	-2.801	99400.000	99940.000	101300.000	104.2%	1.030	0.061	0.388	-35.570
X		9781.000	-2.057	99480.000	100200.000	100600.000	102.5%	1.010	0.026	0.386	-7.533
S		30.940	1.256	222.600	617.200	648.400	1.5%	0.078	0.035	0.027	27.090
%RSD		0.316	61.090	0.224	0.616	0.644	1.5	7.741	136.500	6.932	359.700
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:38:54	98840.000	1.470	99010.000	98820.000	4.474	3.864	4.465	0.622	0.370	1.941
2	11:39:21	100900.000	1.425	100200.000	98480.000	4.498	3.997	3.863	0.601	0.292	2.038
3	11:39:48	100800.000	1.416	100400.000	100200.000	4.471	4.035	4.221	0.685	0.320	1.995
X		100200.000	1.437	99880.000	99160.000	4.481	3.965	4.183	0.636	0.328	1.991
S		1157.000	0.029	752.500	901.700	0.014	0.090	0.303	0.044	0.039	0.049
%RSD		1.155	2.010	0.753	0.909	0.322	2.262	7.240	6.869	12.040	2.439
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:38:54	2.294	1.764	0.425	1.302	1.333	-0.518	0.334	0.083	1.239	0.821
2	11:39:21	1.858	1.965	0.519	0.942	2.066	-2.011	0.266	0.052	1.713	0.896
3	11:39:48	2.261	2.126	0.462	0.356	2.005	-0.986	-0.971	-0.217	2.045	0.819
X		2.137	1.952	0.469	0.867	1.802	-1.172	-0.124	-0.028	1.666	0.845
S		0.243	0.181	0.047	0.477	0.407	0.764	0.735	0.165	0.405	0.044
%RSD		11.350	9.274	10.070	55.050	22.580	65.180	594.600	598.200	24.340	5.246
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:38:54	100.4%	0.267	0.411	0.282	0.745	0.019	0.013	0.009	-0.001	97.8%
2	11:39:21	101.5%	0.251	0.401	0.370	1.594	0.028	0.023	-0.001	-0.002	99.3%
3	11:39:48	104.7%	0.369	0.474	0.328	0.871	0.019	0.022	-0.001	0.007	101.0%
X		102.2%	0.296	0.429	0.327	1.070	0.022	0.019	0.002	0.001	99.4%
S		2.2%	0.064	0.040	0.044	0.458	0.005	0.005	0.006	0.005	1.6%
%RSD		2.2	21.670	9.241	13.370	42.820	24.860	27.690	287.300	347.200	1.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:38:54	0.070	0.087	0.809	0.681	0.055	0.022	99.5%	0.014	0.016	0.028
2	11:39:21	0.088	0.109	0.857	0.861	0.025	0.055	102.0%	0.006	0.011	0.029
3	11:39:48	0.086	0.111	0.795	0.865	0.038	0.071	101.2%	0.022	0.014	0.018
X		0.082	0.102	0.820	0.803	0.039	0.049	100.9%	0.014	0.013	0.025
S		0.010	0.013	0.032	0.105	0.015	0.025	1.3%	0.008	0.002	0.006
%RSD		12.000	13.040	3.936	13.070	38.590	50.000	1.3	59.200	18.200	22.910
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:38:54	0.014	0.022	93.8%							
2	11:39:21	0.040	0.025	94.7%							
3	11:39:48	0.026	0.022	97.4%							
X		0.026	0.023	95.3%							
S		0.013	0.002	1.9%							
%RSD		48.810	8.611	2.0							

ICV MW128568 PREP 5/11/20 5/11/2020 11:44:21 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:48	101.6%	212.800	218.100	222.700	2.129	42580.000	42440.000	42810.000	41190.000	202.800
2	11:45:15	100.0%	213.600	214.600	214.600	1.575	42230.000	43220.000	42270.000	40770.000	196.500
3	11:45:43	100.2%	208.800	221.300	215.400	1.260	41830.000	42670.000	42190.000	40000.000	193.100
X		100.6%	105.862%	218.000	108.769%	1.654	105.535%	42780.000	42420.000	101.631%	98.730%
S		0.9%	n/a	3.356	n/a	0.440	n/a	402.900	337.500	n/a	n/a
%RSD		0.9	1.216	1.539	2.049	26.590	0.898	0.942	0.796	1.493	2.482
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:48	42288.000	0.052	42570.000	41250.000	42120.000	109.5%	212.800	213.700	205.100	1146.000
2	11:45:15	42250.000	-3.052	41820.000	41040.000	41180.000	109.6%	209.100	208.600	202.300	578.100
3	11:45:43	42250.000	-4.681	42110.000	40770.000	40950.000	109.8%	203.600	203.300	197.500	1531.000
X		42263.000	-2.561	4105.423%	41020.000	4103.542%	109.6%	104.254%	104.271%	100.830%	1085.000
S		22.220	2.405	n/a	238.600	n/a	0.2%	n/a	n/a	n/a	479.600
%RSD		0.982	93.900	0.890	0.582	1.504	0.2	2.235	2.510	1.904	44.190
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:48	41750.000	199.400	41790.000	40970.000	202.300	201.500	197.600	201.900	198.400	193.000
2	11:45:15	40730.000	195.700	41330.000	40670.000	195.200	197.800	196.500	193.300	193.900	188.200
3	11:45:43	40810.000	194.800	40650.000	40200.000	193.700	194.800	191.400	190.800	190.100	189.300
X		41100.000	98.329%	4103.147%	4101.536%	98.545%	99.016%	195.200	195.300	97.074%	95.071%
S		569.100	n/a	n/a	n/a	n/a	n/a	3.308	5.813	n/a	n/a
%RSD		1.385	1.233	1.387	0.957	2.331	1.691	1.695	2.976	2.127	1.314
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:48	196.300	197.300	224.800	199.400	0.881	0.665	938.400	206.700	1.363	208.800
2	11:45:15	194.200	193.500	221.900	199.000	1.178	0.266	910.000	201.800	-0.227	202.600
3	11:45:43	192.700	192.500	207.500	197.900	1.965	-0.475	884.100	192.900	1.759	201.600
X		194.400	194.500	109.042%	198.800	1.341	0.152	910.800	100.232%	0.965	102.151%
S		1.819	2.524	n/a	0.749	0.560	0.578	27.130	n/a	1.051	n/a
%RSD		0.936	1.298	4.247	0.377	41.760	380.700	2.979	3.480	109.000	1.913
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:48	107.1%	216.500	220.800	219.100	207.800	192.600	191.600	204.500	204.000	105.2%
2	11:45:15	108.9%	218.300	216.000	217.000	202.900	188.800	185.800	203.500	202.000	106.0%
3	11:45:43	109.1%	214.700	217.300	216.200	203.900	183.500	183.400	196.300	195.600	107.9%
X		108.4%	108.247%	108.999%	108.724%	204.900	94.162%	186.900	100.716%	100.258%	106.4%
S		1.1%	n/a	n/a	n/a	2.575	n/a	4.182	n/a	n/a	1.4%
%RSD		1.1	0.830	1.138	0.693	1.257	2.434	2.237	2.208	2.177	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:48	209.800	208.500	213.400	212.000	211.100	208.800	106.3%	215.100	195.700	198.400
2	11:45:15	207.800	205.500	206.400	208.200	206.600	202.900	107.5%	208.300	195.700	196.400
3	11:45:43	202.500	202.300	207.000	211.200	203.700	203.000	108.0%	205.400	193.700	194.000
X		103.354%	102.722%	208.900	105.223%	103.561%	102.436%	107.2%	209.600	97.518%	196.300
S		n/a	n/a	3.848	n/a	n/a	n/a	0.9%	4.934	n/a	2.196
%RSD		1.822	1.499	1.841	0.937	1.790	1.648	0.8	2.354	0.595	1.119
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:44:48	195.400	198.800	101.8%							
2	11:45:15	197.300	196.400	104.2%							
3	11:45:43	193.200	195.700	104.9%							
X		195.300	98.482%	103.6%							
S		2.038	n/a	1.7%							
%RSD		1.044	0.817	1.6							

ICB IM9968-01 5/11/2020 11:50:14 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:41	113.8%	0.021	1.048	0.436	-0.048	4.845	1.276	0.948	1.096	0.048
2	11:51:08	113.1%	0.021	0.954	0.439	1.225	3.975	1.206	0.798	0.987	0.075
3	11:51:36	116.6%	0.005	1.262	0.598	-1.939	3.633	0.953	1.112	0.928	0.037
X		114.5%	0.016	1.088	0.491	-0.254	4.151	1.145	0.953	1.004	0.053
S		1.8%	0.009	0.158	0.093	1.592	0.625	0.170	0.157	0.085	0.020
%RSD		1.6	59.100	14.540	18.930	626.500	15.050	14.840	16.440	8.494	36.760
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:41	1.686	-4.501	5.667	-0.524	0.991	121.4%	-0.070	0.014	-0.001	-1.208
2	11:51:08	1.747	-1.941	5.069	1.173	1.789	121.7%	-0.012	0.014	-0.009	3.843
3	11:51:36	1.791	-2.652	5.231	0.335	1.203	120.9%	0.046	0.026	-0.004	-13.250
X		1.741	-3.031	5.322	0.328	1.328	121.3%	-0.012	0.018	-0.005	-3.538
S		0.053	1.322	0.309	0.848	0.413	0.4%	0.058	0.007	0.004	8.781
%RSD		3.020	43.600	5.814	258.600	31.110	0.3	476.200	36.850	81.280	248.200
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:41	2.119	-0.001	6.070	4.172	-0.003	-0.002	0.013	-0.023	0.002	-0.016
2	11:51:08	2.024	-0.001	6.687	5.213	-0.003	-0.002	-0.146	-0.026	-0.009	0.025
3	11:51:36	1.405	0.001	6.167	5.029	-0.005	-0.002	0.135	-0.028	-0.019	0.012
X		1.849	-0.000	6.308	4.805	-0.004	-0.002	0.001	-0.026	-0.009	0.007
S		0.388	0.001	0.332	0.555	0.001	0.000	0.141	0.003	0.010	0.021
%RSD		20.980	258.800	5.261	11.560	17.320	1.583	22340.000	9.740	120.200	295.500
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:41	-0.061	-0.041	-0.174	0.226	-0.021	-0.175	-2.969	-0.660	1.268	0.004
2	11:51:08	0.290	-0.041	-0.219	0.344	-1.382	-1.294	-2.039	-0.439	0.348	0.006
3	11:51:36	0.027	-0.011	-0.236	0.414	-0.093	-1.146	-2.982	-0.659	0.784	0.003
X		0.085	-0.031	-0.210	0.328	-0.499	-0.872	-2.663	-0.586	0.800	0.004
S		0.183	0.017	0.032	0.095	0.766	0.608	0.540	0.127	0.460	0.001
%RSD		214.500	54.560	15.080	29.010	153.600	69.720	20.300	21.720	57.490	30.060
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:41	117.7%	0.254	0.271	0.255	0.752	0.014	0.013	0.024	0.017	117.2%
2	11:51:08	117.6%	0.305	0.397	0.303	0.286	0.022	0.007	0.016	0.010	117.3%
3	11:51:36	118.3%	0.290	0.356	0.301	-0.385	0.014	0.017	0.007	0.014	119.0%
X		117.9%	0.283	0.341	0.286	0.218	0.017	0.012	0.016	0.014	117.8%
S		0.4%	0.026	0.064	0.027	0.571	0.005	0.005	0.009	0.004	1.0%
%RSD		0.3	9.295	18.790	9.525	262.400	28.130	42.050	54.740	25.180	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:41	0.035	0.041	0.299	0.266	-0.005	0.004	112.3%	0.004	0.012	-0.005
2	11:51:08	0.023	0.034	0.271	0.325	0.032	0.012	114.0%	0.004	0.012	-0.001
3	11:51:36	0.022	0.027	0.332	0.210	-0.005	-0.003	114.4%	-0.004	0.009	-0.001
X		0.026	0.034	0.301	0.267	0.008	0.004	113.6%	0.001	0.011	-0.002
S		0.007	0.007	0.030	0.057	0.022	0.007	1.1%	0.005	0.002	0.002
%RSD		27.570	20.980	10.090	21.530	284.800	161.500	1.0	308.300	15.720	94.620
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:50:41	0.002	0.002	114.7%							
2	11:51:08	0.004	0.005	114.7%							
3	11:51:36	0.000	0.001	114.1%							
X		0.002	0.003	114.5%							
S		0.002	0.002	0.3%							
%RSD		94.880	73.810	0.3							

ICSA MW12853 5/11/2020 11:56:06 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:34	89.1%	0.002	0.051	-0.548	633.900	96580.000	96310.000	95410.000	95570.000	92080.000
2	11:57:01	91.0%	0.011	0.810	-0.392	659.200	100300.000	101400.000	100800.000	97710.000	92030.000
3	11:57:28	89.8%	-0.018	-0.219	-0.302	636.800	98610.000	96180.000	96440.000	97630.000	93620.000
X		90.0%	-1.#IO%	0.214	-1.#IO%	643.300	98.512%	97960.000	97560.000	96.969%	92.576%
S		1.0%	n/a	0.534	n/a	13.840	n/a	2958.000	2882.000	n/a	n/a
%RSD		1.1	1072.000	249.300	30.070	2.151	1.909	3.019	2.954	1.252	0.978
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:34	16.990	22500.000	97650.000	99100.000	98720.000	96.1%	2125.000	-0.633	-1.275	902.100
2	11:57:01	17.820	23230.000	99290.000	101800.000	102800.000	95.3%	2174.000	-0.548	-1.275	851.500
3	11:57:28	17.710	23040.000	98640.000	100500.000	101600.000	95.0%	2154.000	-0.639	-1.195	895.100
X		17.510	22920.000	98.527%	100500.000	101.047%	95.4%	107.538%	-1.#IO%	-1.#IO%	882.900
S		0.448	377.600	n/a	1358.000	n/a	0.6%	n/a	n/a	n/a	27.410
%RSD		2.557	1.647	0.837	1.351	0.6	0.6	1.141	8.362	3.690	3.105
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:34	100800.000	0.236	101000.000	99480.000	0.204	0.582	6.287	-1.755	-0.382	1.800
2	11:57:01	101800.000	0.245	101800.000	101100.000	0.226	0.528	6.643	-1.778	-0.099	1.858
3	11:57:28	101600.000	0.270	104200.000	102000.000	0.232	0.707	5.718	-1.658	-0.270	1.769
X		101400.000	1.#IO%	102300.000	100.871%	1.#IO%	1.#IO%	6.216	-1.730	-1.#IO%	1.#IO%
S		485.900	n/a	1665.000	n/a	n/a	n/a	0.467	0.064	n/a	n/a
%RSD		0.479	7.031	1.627	1.267	6.588	15.100	7.505	3.677	56.970	2.495
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:34	1.407	0.555	-0.238	1.734	2.515	0.157	1.605	-0.667	46.280	0.902
2	11:57:01	1.671	0.528	-0.467	2.451	1.766	1.158	-0.142	-1.224	54.980	0.888
3	11:57:28	1.612	0.431	0.024	2.231	3.743	0.771	-0.190	-0.888	38.730	0.880
X		1.563	0.504	-1.#IO%	2.139	2.675	0.695	0.424	-1.#IO%	46.660	0.890
S		0.138	0.065	n/a	0.367	0.998	0.505	1.023	n/a	8.131	0.011
%RSD		8.852	12.940	108.100	17.170	37.320	72.620	241.200	30.260	17.420	1.263
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:34	98.6%	2194.000	2190.000	2204.000	-0.829	0.037	0.030	-6.741	0.182	99.9%
2	11:57:01	100.2%	2181.000	2194.000	2210.000	-0.318	0.042	0.032	-6.368	0.125	101.2%
3	11:57:28	101.2%	2203.000	2214.000	2223.000	-0.721	0.016	0.032	-6.508	0.133	102.1%
X		100.0%	2193.000	109.968%	2213.000	-0.623	1.#IO%	0.031	-6.539	1.#IO%	101.1%
S		1.3%	10.730	n/a	9.750	0.270	n/a	0.001	0.188	n/a	1.1%
%RSD		1.3	0.490	0.586	0.441	43.290	43.270	3.435	2.881	20.880	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:34	0.833	0.076	0.321	0.324	0.024	0.063	103.2%	0.019	0.029	0.087
2	11:57:01	0.760	0.055	0.340	0.321	0.053	0.029	105.0%	0.024	0.018	0.065
3	11:57:28	0.861	0.082	0.309	0.282	0.081	0.061	106.1%	0.018	0.027	0.045
X		1.#IO%	1.#IO%	0.323	1.#IO%	0.053	1.#IO%	104.7%	0.020	1.#IO%	0.066
S		n/a	n/a	0.015	n/a	0.028	n/a	1.5%	0.003	n/a	0.021
%RSD		6.368	19.520	4.744	7.513	53.680	36.670	1.4	13.840	23.970	31.830
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	11:56:34	0.075	0.082	99.9%							
2	11:57:01	0.073	0.071	103.7%							
3	11:57:28	0.095	0.058	103.9%							
X		0.081	1.#IO%	102.5%							
S		0.012	n/a	2.2%							
%RSD		15.280	16.690	2.2							

CCV MW126865 5/11/2020 12:02:00 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:27	92.1%	301.600	298.500	300.700	-2.720	60640.000	61880.000	60340.000	58600.000	282.300
2	12:02:53	93.1%	298.900	306.500	303.000	-1.444	60790.000	60340.000	60500.000	58370.000	283.500
3	12:03:20	92.4%	300.300	308.700	297.500	-3.891	59370.000	60480.000	60430.000	58380.000	281.000
X		92.5%	100.078%	101.524%	100.135%	-2.685	100.443%	60900.000	60420.000	97.414%	94.086%
S		0.5%	n/a	n/a	n/a	1.224	n/a	853.400	79.150	n/a	n/a
%RSD		0.5	0.447	1.758	0.923	45.570	1.289	1.401	0.131	0.223	0.447
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:27	3080.000	78.580	60740.000	60460.000	61050.000	100.7%	293.600	302.000	296.000	3052.000
2	12:02:53	3195.000	76.300	60420.000	60690.000	60880.000	100.2%	302.100	305.900	300.100	1060.000
3	12:03:20	3113.000	72.160	61260.000	60710.000	61720.000	100.7%	300.500	305.000	295.700	2973.000
X		3129.000	75.680	101.341%	60620.000	102.027%	100.5%	99.582%	101.429%	99.080%	2362.000
S		59.260	3.257	n/a	138.100	n/a	0.3%	n/a	n/a	n/a	1128.000
%RSD		1.894	4.303	0.697	0.228	0.724	0.3	1.519	0.671	0.825	47.760
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:27	61610.000	297.800	62370.000	61110.000	287.500	279.800	287.600	276.400	281.700	289.300
2	12:02:53	61670.000	295.300	62240.000	61480.000	291.800	284.400	284.600	274.900	286.900	289.900
3	12:03:20	62550.000	300.700	62050.000	60590.000	291.100	282.300	288.200	273.100	283.400	292.000
X		61950.000	99.310%	62220.000	101.773%	96.707%	94.070%	286.800	274.800	94.661%	96.805%
S		523.300	n/a	164.000	n/a	n/a	n/a	1.918	1.619	n/a	n/a
%RSD		0.845	0.907	0.264	0.733	0.805	0.814	0.669	0.589	0.925	0.496
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:27	281.900	287.500	294.400	290.600	1.936	0.266	1401.000	302.100	1.038	297.100
2	12:02:53	290.500	286.000	294.000	293.500	2.836	-0.586	1405.000	300.900	0.028	303.800
3	12:03:20	282.200	285.800	293.000	287.400	2.155	2.363	1359.000	292.800	-1.635	299.400
X		284.900	286.400	97.925%	290.500	2.309	0.681	1388.000	99.531%	-0.190	100.028%
S		4.920	0.914	n/a	3.026	0.469	1.517	25.470	n/a	1.350	n/a
%RSD		1.727	0.319	0.248	1.042	20.330	222.900	1.835	1.682	711.600	1.128
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:27	104.5%	311.200	311.900	311.400	297.800	282.100	284.000	291.300	296.500	103.9%
2	12:02:53	103.6%	317.100	316.500	319.800	302.900	286.500	285.700	299.500	296.300	103.8%
3	12:03:20	106.7%	320.800	322.500	318.200	283.300	284.800	280.100	295.000	296.300	105.7%
X		104.9%	105.457%	105.651%	316.500	294.700	94.825%	283.300	295.300	98.800%	104.4%
S		1.5%	n/a	n/a	4.461	10.200	n/a	2.863	4.069	n/a	1.1%
%RSD		1.5	1.529	1.665	1.409	3.461	0.776	1.011	1.378	0.040	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:27	300.700	302.600	303.800	301.500	308.200	293.500	108.6%	305.200	287.500	287.000
2	12:02:53	302.500	306.500	307.800	302.600	314.000	296.800	109.7%	305.600	289.700	288.500
3	12:03:20	302.400	302.400	304.700	304.600	300.900	300.200	109.5%	304.700	291.800	291.700
X		100.627%	101.276%	305.400	100.975%	102.567%	98.942%	109.3%	305.200	96.549%	96.357%
S		n/a	n/a	2.086	n/a	n/a	n/a	0.6%	0.464	n/a	n/a
%RSD		0.335	0.761	0.683	0.512	2.131	1.116	0.5	0.152	0.750	0.834
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:02:27	288.900	291.600	105.4%							
2	12:02:53	290.700	292.200	106.8%							
3	12:03:20	292.800	296.000	107.3%							
X		96.935%	97.764%	106.5%							
S		n/a	n/a	1.0%							
%RSD		0.671	0.810	0.9							

■ CCB IM9968-01 5/11/2020 12:07:52 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:19	113.4%	-0.002	1.324	0.471	-0.383	12.180	1.501	1.453	1.428	0.140
2	12:08:45	111.1%	0.006	0.510	0.714	-3.739	11.540	2.030	1.805	1.949	0.161
3	12:09:12	111.4%	-0.010	0.898	0.410	-2.032	9.670	1.245	0.998	1.402	0.146
X		112.0%	-0.002	0.910	0.531	-2.051	11.130	1.592	1.419	1.593	0.149
S		1.2%	0.008	0.407	0.161	1.678	1.305	0.401	0.405	0.308	0.011
%RSD		1.1	413.400	44.730	30.280	81.800	11.720	25.160	28.520	19.360	7.367
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:19	0.207	35.790	6.901	0.399	1.407	116.6%	-0.030	0.038	0.006	-8.975
2	12:08:45	-0.360	36.590	6.950	2.144	2.581	117.5%	0.029	0.012	0.012	-4.035
3	12:09:12	1.157	31.950	6.919	0.432	0.764	114.4%	0.093	0.025	-0.001	-10.030
X		0.335	34.770	6.923	0.991	1.584	116.2%	0.031	0.025	0.006	-7.680
S		0.766	2.480	0.025	0.998	0.921	1.6%	0.062	0.013	0.007	3.200
%RSD		228.900	7.132	0.363	100.700	58.160	1.4	199.300	52.750	120.000	41.670
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:19	2.516	0.037	4.617	5.656	-0.005	-0.008	-0.317	-0.032	-0.037	-0.007
2	12:08:45	2.037	0.036	4.432	6.125	0.005	0.010	0.002	-0.022	-0.016	-0.028
3	12:09:12	1.409	0.042	4.959	1.890	-0.002	-0.002	-0.015	0.002	-0.025	0.009
X		1.987	0.038	4.669	4.557	-0.001	0.000	-0.110	-0.017	-0.026	-0.009
S		0.555	0.003	0.267	2.322	0.005	0.009	0.179	0.017	0.010	0.019
%RSD		27.940	8.158	5.719	50.940	507.300	39840.000	163.100	97.780	40.440	215.200
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:19	-0.016	-0.001	0.028	0.355	-0.121	-1.123	1.669	0.378	-1.963	0.007
2	12:08:45	0.028	0.019	-0.179	0.650	-0.321	-0.210	-2.992	-0.633	-1.067	0.012
3	12:09:12	0.029	-0.001	-0.202	0.492	-0.496	0.106	-2.086	-0.410	-1.539	0.006
X		0.014	0.006	-0.118	0.499	-0.313	-0.409	-1.136	-0.222	-1.523	0.008
S		0.026	0.011	0.127	0.148	0.188	0.638	2.471	0.532	0.448	0.003
%RSD		185.500	189.900	107.600	29.580	60.120	156.000	217.500	239.800	29.430	42.820
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:19	118.6%	0.608	0.699	0.685	1.606	0.006	0.006	-0.003	0.008	120.2%
2	12:08:45	119.4%	0.539	0.909	0.694	-0.238	0.006	0.004	0.014	0.014	121.8%
3	12:09:12	120.6%	0.714	0.700	0.604	-0.122	0.012	0.005	0.006	0.011	118.9%
X		119.5%	0.620	0.769	0.661	0.415	0.008	0.005	0.006	0.011	120.3%
S		1.0%	0.088	0.121	0.050	1.032	0.003	0.001	0.008	0.003	1.5%
%RSD		0.8	14.240	15.740	7.494	248.400	44.450	22.900	145.100	28.510	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:08:19	0.061	0.105	0.423	0.459	0.019	-0.003	118.7%	0.008	0.007	0.017
2	12:08:45	0.084	0.117	0.503	0.442	-0.005	-0.003	119.5%	0.006	0.014	0.022
3	12:09:12	0.042	0.120	0.490	0.445	0.007	0.039	119.0%	-0.005	0.008	0.015
X		0.062	0.114	0.472	0.449	0.007	0.011	119.0%	0.003	0.010	0.018
S		0.021	0.008	0.043	0.009	0.012	0.024	0.4%	0.007	0.004	0.004
%RSD		33.450	6.737	9.060	2.066	166.000	215.800	0.3	213.600	42.760	20.800
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:08:19	0.016	0.018	121.3%							
2	12:08:45	0.016	0.015	121.6%							
3	12:09:12	0.030	0.019	123.8%							
X		0.021	0.017	122.3%							
S		0.008	0.002	1.4%							
%RSD		39.880	9.892	1.1							

VQ53133-001 5/11/2020 12:13:41

User Pre-dilution: 1.000

User Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:09	109.5%	0.015	0.662	0.356	31.550	7.704	1.038	1.024	1.104	0.912
2	12:14:36	106.0%	-0.018	1.526	0.028	37.740	7.708	1.066	0.928	0.668	0.922
3	12:15:03	106.3%	-0.018	0.334	-0.126	36.230	8.445	1.035	0.766	0.988	0.919
X		107.3%	-0.007	0.841	0.086	35.170	7.952	1.047	0.906	0.920	0.918
S		1.9%	0.019	0.616	0.246	3.227	0.426	0.017	0.131	0.226	0.005
%RSD		1.8	267.800	73.230	285.300	9.173	5.364	1.616	14.400	24.550	0.570
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:09	9.388	235500.000	21.460	3.384	4.713	108.6%	0.275	-0.598	0.616	7775.000
2	12:14:36	9.067	236100.000	20.410	1.558	4.242	105.8%	0.018	-0.199	0.650	7336.000
3	12:15:03	9.193	236100.000	17.740	3.638	4.506	103.1%	0.111	-0.171	0.664	7443.000
X		9.216	235900.000	19.870	2.860	4.487	105.8%	0.135	-0.323	0.643	7518.000
S		0.162	356.500	1.917	1.135	0.236	2.7%	0.130	0.239	0.025	229.100
%RSD		1.754	0.151	9.647	39.690	5.258	2.6	96.220	73.960	3.823	3.047
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:09	13.540	0.059	3.633	0.135	-0.007	0.160	-0.100	0.559	0.633	0.552
2	12:14:36	13.470	0.067	4.448	1.136	-0.016	0.131	0.056	0.525	0.499	0.569
3	12:15:03	17.550	0.068	4.302	1.756	-0.015	0.122	0.311	0.430	0.454	0.385
X		14.850	0.065	4.127	1.009	-0.013	0.138	0.089	0.505	0.529	0.502
S		2.339	0.005	0.434	0.818	0.005	0.020	0.207	0.067	0.094	0.102
%RSD		15.750	7.493	10.520	81.100	39.760	14.410	232.600	13.190	17.680	20.270
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:09	0.464	0.405	0.366	0.384	30.500	32.480	-0.353	-0.116	1.576	0.012
2	12:14:36	0.718	0.543	-0.083	0.430	28.990	29.290	0.727	0.141	0.194	0.007
3	12:15:03	0.873	0.625	0.067	0.478	28.290	29.700	-2.749	-0.595	0.184	0.008
X		0.685	0.524	0.117	0.430	29.260	30.490	-0.792	-0.190	0.651	0.009
S		0.206	0.111	0.228	0.047	1.126	1.734	1.779	0.373	0.801	0.002
%RSD		30.100	21.230	196.100	10.900	3.849	5.686	224.700	196.600	123.000	25.570
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:09	113.0%	0.623	0.767	0.624	-0.592	0.010	0.007	-0.002	0.046	112.7%
2	12:14:36	111.6%	0.818	0.634	0.776	1.005	0.021	0.011	-0.003	0.027	111.5%
3	12:15:03	112.3%	0.582	0.578	0.634	0.925	0.017	0.003	-0.003	0.001	110.1%
X		112.3%	0.674	0.659	0.678	0.446	0.016	0.007	-0.003	0.025	111.4%
S		0.7%	0.126	0.097	0.085	0.900	0.005	0.004	0.000	0.022	1.3%
%RSD		0.6	18.680	14.710	12.590	201.700	33.220	61.090	12.590	89.870	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:09	3.655	5.416	0.983	1.154	0.021	0.026	115.6%	0.022	0.030	0.038
2	12:14:36	3.869	5.353	0.957	0.980	0.021	0.019	115.5%	0.005	0.015	0.038
3	12:15:03	3.712	5.401	1.040	1.000	0.008	-0.003	115.3%	0.033	0.020	0.023
X		3.745	5.390	0.994	1.045	0.017	0.014	115.5%	0.020	0.021	0.033
S		0.111	0.033	0.043	0.096	0.007	0.015	0.2%	0.014	0.008	0.009
%RSD		2.956	0.607	4.281	9.157	43.700	106.300	0.2	69.870	36.780	25.890
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:14:09	0.044	0.039	119.5%							
2	12:14:36	0.053	0.042	118.2%							
3	12:15:03	0.036	0.027	118.6%							
X		0.044	0.036	118.8%							
S		0.008	0.008	0.7%							
%RSD		18.950	22.830	0.6							

VQ53133-002

5/11/2020 12:19:31

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:57	100.3%	223.800	246.800	234.000	49.650	2462.000	2474.000	2411.000	2460.000	233.800
2	12:20:23	98.7%	224.400	238.400	225.200	51.170	2415.000	2387.000	2384.000	2384.000	226.000
3	12:20:50	95.7%	217.700	237.800	236.400	54.680	2375.000	2444.000	2429.000	2428.000	233.800
X		98.2%	222.000	241.000	231.900	51.830	2417.000	2435.000	2408.000	2424.000	231.200
S		2.3%	3.736	5.040	5.942	2.581	43.370	43.930	22.590	38.440	4.469
%RSD		2.4	1.683	2.091	2.562	4.980	1.794	1.804	0.938	1.586	1.933
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:57	378.200	313100.000	2392.000	2434.000	2372.000	96.4%	244.300	237.500	240.000	11970.000
2	12:20:23	373.100	308100.000	2318.000	2446.000	2313.000	96.2%	237.200	227.400	235.300	11500.000
3	12:20:50	380.900	305000.000	2333.000	2353.000	2286.000	94.6%	237.300	232.800	235.000	12230.000
X		377.400	308800.000	2347.000	2411.000	2324.000	95.7%	239.600	232.500	236.800	11900.000
S		3.953	4050.000	39.190	50.540	44.010	1.0%	4.053	5.053	2.840	370.700
%RSD		1.047	1.312	1.669	2.096	1.894	1.0	1.692	2.173	1.199	3.114
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:57	2691.000	236.300	2444.000	2535.000	239.900	239.100	238.100	232.900	243.800	226.700
2	12:20:23	2665.000	232.800	2439.000	2519.000	232.500	234.100	234.700	232.900	242.600	223.500
3	12:20:50	2650.000	235.500	2432.000	2497.000	236.400	236.200	229.000	228.100	240.800	225.800
X		2669.000	234.900	2438.000	2517.000	236.300	236.400	233.900	231.300	242.400	225.400
S		20.370	1.828	5.921	19.040	3.675	2.510	4.595	2.789	1.551	1.645
%RSD		0.763	0.778	0.243	0.757	1.556	1.061	1.964	1.206	0.640	0.730
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:57	225.000	220.500	228.900	203.400	46.420	50.940	972.400	212.000	1.038	231.700
2	12:20:23	219.700	218.600	227.000	205.700	50.190	49.590	996.500	211.500	1.145	233.900
3	12:20:50	215.200	213.700	226.100	209.500	44.740	47.500	1028.000	219.500	1.086	229.800
X		220.000	217.600	227.300	206.200	47.120	49.340	998.900	214.300	1.090	231.800
S		4.899	3.505	1.419	3.060	2.792	1.730	27.780	4.443	0.053	2.050
%RSD		2.227	1.611	0.624	1.484	5.925	3.506	2.781	2.073	4.903	0.884
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:57	105.3%	250.100	253.800	254.400	221.600	238.100	236.900	229.900	232.300	102.6%
2	12:20:23	103.1%	249.100	251.300	250.500	226.700	234.600	233.400	228.500	228.000	103.5%
3	12:20:50	104.6%	248.000	248.300	246.600	228.700	229.800	228.400	225.600	226.000	103.9%
X		104.4%	249.100	251.100	250.500	225.700	234.100	232.900	228.000	228.800	103.3%
S		1.1%	1.061	2.746	3.919	3.683	4.148	4.289	2.163	3.251	0.7%
%RSD		1.1	0.426	1.093	1.565	1.632	1.772	1.841	0.949	1.421	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:57	243.300	244.400	238.800	231.700	244.900	234.600	109.2%	233.800	229.400	235.700
2	12:20:23	240.700	243.900	234.300	231.400	239.400	233.200	108.9%	235.800	226.700	232.300
3	12:20:50	239.600	239.700	231.500	226.200	235.700	232.600	108.9%	229.600	228.800	232.200
X		241.200	242.600	234.900	229.800	240.000	233.500	109.0%	233.100	228.300	233.400
S		1.926	2.539	3.709	3.067	4.643	1.002	0.2%	3.157	1.400	1.971
%RSD		0.799	1.046	1.579	1.335	1.935	0.429	0.2	1.354	0.613	0.844
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:19:57	233.800	235.000	110.5%							
2	12:20:23	231.900	233.900	109.2%							
3	12:20:50	232.400	234.000	110.8%							
X		232.700	234.300	110.2%							
S		0.965	0.626	0.8%							
%RSD		0.415	0.267	0.7							

VE04005-009

5/11/2020 12:25:20

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:47	99.0%	0.456	55.630	54.360	37.880	463.900	470.200	449.800	449.800	43.500
2	12:26:14	95.8%	0.462	53.120	54.680	46.310	466.400	472.600	446.700	455.500	43.660
3	12:26:41	94.8%	0.533	56.240	54.290	44.620	470.600	478.200	466.500	466.500	44.580
X		96.6%	0.483	55.000	54.440	42.940	467.000	473.700	454.300	457.300	43.910
S		2.2%	0.043	1.653	0.209	4.458	3.376	4.076	10.660	8.494	0.586
%RSD		2.3	8.838	3.006	0.384	10.380	0.723	0.861	2.346	1.857	1.335
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:47	109.000	275800.000	464.400	489.100	439.000	95.1%	5.318	4.406	6.006	9792.000
2	12:26:14	106.800	276200.000	457.100	466.600	434.600	94.8%	5.631	4.843	6.064	9500.000
3	12:26:41	108.300	279700.000	458.600	418.200	431.900	93.6%	5.701	4.855	6.119	9663.000
X		108.000	277200.000	460.000	458.000	435.200	94.5%	5.550	4.701	6.063	9651.000
S		1.114	2157.000	3.822	36.200	3.585	0.8%	0.204	0.256	0.057	146.200
%RSD		1.031	0.778	0.831	7.904	0.824	0.8	3.673	5.444	0.932	1.515
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:47	77.030	5.577	60.150	56.850	1.192	5.732	5.561	2.640	2.837	11.000
2	12:26:14	80.150	5.420	60.070	56.940	1.188	5.543	6.183	2.570	2.687	10.890
3	12:26:41	77.040	5.449	59.090	61.050	1.144	5.552	4.798	2.437	2.687	11.130
X		78.070	5.482	59.770	58.280	1.175	5.609	5.514	2.549	2.737	11.000
S		1.797	0.083	0.591	2.400	0.026	0.107	0.694	0.103	0.087	0.120
%RSD		2.301	1.520	0.989	4.118	2.252	1.900	12.580	4.033	3.162	1.094
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:47	11.170	10.060	0.644	2.048	46.050	44.300	4.500	0.929	0.584	10.780
2	12:26:14	10.080	10.000	1.411	1.500	42.790	46.350	5.580	1.142	1.119	10.720
3	12:26:41	11.880	10.370	0.448	0.553	42.770	46.480	9.428	1.964	-1.519	10.730
X		11.040	10.150	0.834	1.367	43.870	45.710	6.503	1.345	0.061	10.740
S		0.907	0.201	0.509	0.756	1.888	1.224	2.590	0.547	1.394	0.035
%RSD		8.216	1.977	60.950	55.320	4.304	2.678	39.830	40.630	2267.000	0.323
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:47	103.9%	11.910	12.460	11.650	0.172	1.043	1.083	0.520	0.454	103.6%
2	12:26:14	103.9%	12.000	12.140	11.980	0.195	1.145	1.100	0.489	0.639	103.8%
3	12:26:41	103.4%	12.170	12.260	12.220	1.427	1.149	1.142	0.559	0.786	104.8%
X		103.7%	12.030	12.290	11.950	0.598	1.112	1.108	0.523	0.626	104.1%
S		0.3%	0.131	0.160	0.285	0.718	0.060	0.030	0.035	0.166	0.7%
%RSD		0.3	1.087	1.305	2.381	120.100	5.404	2.733	6.654	26.550	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:47	19.530	27.290	2.444	2.714	5.389	5.205	105.5%	0.685	0.741	1.156
2	12:26:14	19.260	26.900	2.613	2.715	5.887	5.226	107.1%	0.689	0.697	1.208
3	12:26:41	19.240	27.180	2.644	2.556	5.562	5.242	107.3%	0.626	0.734	1.080
X		19.340	27.120	2.567	2.662	5.613	5.225	106.6%	0.667	0.724	1.148
S		0.161	0.199	0.107	0.092	0.253	0.018	1.0%	0.036	0.023	0.064
%RSD		0.832	0.733	4.183	3.449	4.506	0.353	0.9	5.337	3.240	5.578
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:25:47	1.122	1.133	110.2%							
2	12:26:14	1.129	1.131	108.6%							
3	12:26:41	1.152	1.117	110.1%							
X		1.134	1.127	109.6%							
S		0.016	0.009	0.9%							
%RSD		1.374	0.781	0.8							

VQ52974-001 5/11/2020 12:31:11 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:39	97.0%	-0.009	0.827	1.043	32.970	10.580	1.339	0.974	1.285	0.948
2	12:32:05	96.9%	-0.018	0.812	0.589	29.970	10.980	1.316	1.443	1.051	1.042
3	12:32:33	96.0%	-0.009	0.789	0.370	32.680	11.160	1.357	1.201	1.347	1.091
X		96.7%	-0.012	0.809	0.667	31.870	10.910	1.338	1.206	1.227	1.027
S		0.5%	0.005	0.019	0.343	1.655	0.299	0.020	0.235	0.156	0.073
%RSD		0.6	45.520	2.387	51.430	5.194	2.744	1.528	19.470	12.720	7.074
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:39	10.100	248000.000	11.930	6.191	6.825	95.7%	0.272	-0.698	0.675	8724.000
2	12:32:05	9.618	243500.000	11.990	11.790	6.881	94.3%	0.128	-0.567	0.557	8449.000
3	12:32:33	10.240	247100.000	11.860	8.749	7.894	91.9%	0.261	-0.553	0.666	8379.000
X		9.988	246200.000	11.920	8.909	7.200	93.9%	0.221	-0.606	0.633	8518.000
S		0.327	2349.000	0.067	2.801	0.602	1.9%	0.080	0.080	0.066	182.600
%RSD		3.278	0.954	0.565	31.440	8.355	2.0	36.260	13.210	10.440	2.144
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:39	13.290	0.038	3.319	-2.270	-0.018	0.103	-0.092	0.296	0.287	0.264
2	12:32:05	16.550	0.015	3.568	-0.922	-0.011	0.060	0.373	0.302	0.273	0.252
3	12:32:33	15.210	0.032	3.563	-0.448	-0.013	0.077	0.561	0.277	0.187	0.170
X		15.020	0.028	3.484	-1.214	-0.014	0.080	0.280	0.292	0.249	0.229
S		1.643	0.012	0.142	0.945	0.003	0.022	0.336	0.014	0.054	0.051
%RSD		10.940	42.420	4.090	77.890	23.680	26.870	119.900	4.632	21.780	22.380
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:39	0.478	0.271	-0.048	0.036	30.830	30.420	-0.287	-0.021	-2.054	0.008
2	12:32:05	0.582	0.223	-0.438	-0.449	29.820	30.630	-3.560	-0.769	0.010	0.004
3	12:32:33	0.217	0.228	-0.895	-0.009	32.270	32.320	1.833	0.319	2.712	0.014
X		0.426	0.241	-0.460	-0.141	30.970	31.120	-0.672	-0.157	0.223	0.009
S		0.188	0.026	0.424	0.268	1.232	1.042	2.717	0.557	2.390	0.005
%RSD		44.120	10.970	92.080	190.300	3.979	3.347	404.500	353.600	1073.000	57.930
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:39	103.1%	-0.004	0.066	-0.091	0.548	0.011	0.020	0.000	-0.005	102.0%
2	12:32:05	105.2%	0.029	0.026	-0.071	-0.123	0.005	0.005	0.010	-0.022	103.3%
3	12:32:33	104.5%	0.014	-0.082	-0.073	-0.886	0.016	0.001	0.000	-0.000	103.3%
X		104.2%	0.013	0.003	-0.078	-0.154	0.011	0.009	0.004	-0.009	102.9%
S		1.1%	0.016	0.077	0.011	0.718	0.006	0.010	0.006	0.011	0.7%
%RSD		1.0	125.800	2225.000	13.820	467.400	53.790	114.700	157.300	123.900	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:39	3.355	4.883	0.241	0.172	0.024	0.013	105.7%	0.059	0.070	0.021
2	12:32:05	3.257	4.848	0.175	0.207	0.009	0.037	107.2%	0.074	0.047	0.016
3	12:32:33	3.614	4.945	0.252	0.234	0.023	0.005	106.9%	0.057	0.060	0.027
X		3.409	4.892	0.223	0.204	0.019	0.018	106.6%	0.063	0.059	0.021
S		0.184	0.049	0.042	0.031	0.008	0.016	0.8%	0.009	0.011	0.005
%RSD		5.403	1.003	18.710	15.130	43.970	89.250	0.7	14.440	19.130	24.110
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:31:39	0.019	0.022	108.5%							
2	12:32:05	0.035	0.019	109.2%							
3	12:32:33	0.010	0.015	109.5%							
X		0.021	0.019	109.1%							
S		0.013	0.003	0.5%							
%RSD		58.900	18.290	0.5							

VQ52974-002 5/11/2020 12:37:02 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:30	94.2%	193.700	208.000	205.000	31.920	2114.000	2169.000	2152.000	2128.000	201.100
2	12:37:57	94.7%	189.200	205.200	201.300	33.660	2115.000	2124.000	2052.000	2128.000	202.800
3	12:38:24	93.5%	191.000	212.200	211.100	37.720	2141.000	2149.000	2140.000	2127.000	201.600
X		94.1%	95.658%	208.400	102.917%	34.430	106.166%	2147.000	2115.000	106.387%	100.916%
S		0.6%	n/a	3.488	n/a	2.980	n/a	22.490	54.660	n/a	n/a
%RSD		0.6	1.192	1.673	2.393	8.654	0.720	1.047	2.585	0.018	0.425
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:30	298.100	278500.000	2137.000	2159.000	2055.000	92.6%	203.900	203.900	206.300	11610.000
2	12:37:57	303.200	284500.000	2066.000	2171.000	1972.000	92.3%	209.100	203.600	205.700	9549.000
3	12:38:24	308.900	278300.000	2059.000	2152.000	1990.000	90.2%	203.700	204.000	204.500	10490.000
X		303.400	280400.000	104.352%	2161.000	100.279%	91.7%	205.600	101.919%	102.758%	10550.000
S		5.369	3547.000	n/a	9.288	n/a	1.3%	3.028	n/a	n/a	1030.000
%RSD		1.770	1.265	1.078	0.430	2.183	1.4	1.473	0.107	0.458	9.764
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:30	2318.000	207.800	2127.000	2190.000	206.100	207.900	207.000	203.400	215.100	197.300
2	12:37:57	2314.000	203.300	2119.000	2206.000	205.700	201.200	211.100	201.500	210.800	197.300
3	12:38:24	2343.000	203.400	2152.000	2215.000	207.900	207.100	210.500	199.600	218.400	202.700
X		2325.000	102.428%	2133.000	110.182%	103.289%	102.691%	209.500	201.500	107.381%	99.550%
S		15.970	n/a	17.000	n/a	n/a	n/a	2.228	1.902	n/a	n/a
%RSD		0.687	1.242	0.797	0.591	0.576	1.791	1.063	0.944	1.772	1.562
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:30	193.200	195.800	204.200	187.800	40.800	44.090	917.500	194.900	-0.323	199.300
2	12:37:57	186.900	187.400	198.300	184.500	44.850	42.630	835.800	180.900	5.508	196.800
3	12:38:24	197.300	193.200	194.300	183.300	41.950	41.140	864.000	181.600	1.248	198.000
X		192.500	192.100	99.467%	185.200	42.530	42.620	872.400	92.893%	2.144	198.000
S		5.247	4.301	n/a	2.343	2.088	1.475	41.500	n/a	3.017	1.233
%RSD		2.726	2.239	2.517	1.265	4.910	3.460	4.756	4.241	140.700	0.623
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:30	100.1%	213.500	216.000	217.700	199.500	204.300	204.300	198.500	201.000	100.3%
2	12:37:57	102.7%	216.100	216.200	214.100	196.900	203.300	203.500	200.100	198.700	100.4%
3	12:38:24	102.1%	209.000	210.800	211.700	191.100	197.300	197.000	194.900	195.700	102.6%
X		101.6%	212.800	107.158%	214.500	195.800	100.811%	201.600	197.800	99.231%	101.1%
S		1.4%	3.606	n/a	3.067	4.323	n/a	4.010	2.651	n/a	1.3%
%RSD		1.4	1.694	1.414	1.430	2.208	1.870	1.989	1.340	1.336	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:30	209.100	206.500	208.600	202.300	204.000	202.400	105.5%	205.000	198.500	202.700
2	12:37:57	206.800	210.700	204.300	201.800	204.000	200.700	105.0%	203.000	199.300	204.700
3	12:38:24	203.800	206.200	199.800	202.000	202.900	203.100	105.1%	202.900	200.100	202.900
X		206.600	103.890%	204.200	101.013%	101.819%	202.100	105.2%	203.600	99.660%	203.500
S		2.675	n/a	4.447	n/a	n/a	1.224	0.3%	1.212	n/a	1.098
%RSD		1.295	1.213	2.178	0.132	0.323	0.606	0.2	0.595	0.411	0.540
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:37:30	204.500	204.900	106.5%							
2	12:37:57	205.400	205.900	107.3%							
3	12:38:24	202.600	205.000	107.8%							
X		204.200	102.633%	107.2%							
S		1.462	n/a	0.6%							
%RSD		0.716	0.270	0.6							

VE02018-005

5/11/2020 12:42:54

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:22	102.5%	2.440	2.175	1.457	-24.070	552.300	1802.000	1847.000	2615.000	TM 29970.000
2	12:43:49	102.7%	2.213	2.126	1.671	-22.960	546.800	1803.000	1793.000	2582.000	TM 30450.000
3	12:44:16	102.9%	2.381	2.155	1.351	-25.370	522.500	1768.000	1802.000	2569.000	TM 29530.000
X		102.7%	2.345	2.152	1.493	-24.130	540.600	1791.000	1814.000	2589.000	TM 29980.000
S		0.2%	0.118	0.025	0.163	1.205	15.880	20.170	28.600	23.790	TM 460.100
%RSD		0.2	5.022	1.139	10.930	4.995	2.938	1.126	1.576	0.919	TM 1.535
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:22	13037.000	182300.000	1014.000	6582.000	6540.000	104.3%	272.700	53.790	46.560	7590.000
2	12:43:49	12989.000	184000.000	1004.000	6938.000	6529.000	104.4%	272.400	53.920	47.340	7948.000
3	12:44:16	12927.000	180100.000	983.600	6599.000	6399.000	106.9%	273.000	54.440	46.590	6928.000
X		12985.000	182100.000	1001.000	6706.000	6489.000	105.2%	272.700	54.050	46.830	7489.000
S		155.190	1932.000	15.610	200.700	78.230	1.4%	0.289	0.345	0.444	517.800
%RSD		1.849	1.061	1.560	2.992	1.205	1.4	0.106	0.638	0.949	6.914
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:22	12440.000	32.690	121300.000	22330.000	5.650	12.440	13.110	4.017	5.245	34.160
2	12:43:49	121560.000	33.640	121500.000	22370.000	5.754	12.250	12.490	4.182	4.851	34.330
3	12:44:16	120970.000	33.260	121320.000	22220.000	5.460	12.010	13.620	3.974	4.616	33.760
X		121320.000	33.200	121370.000	22310.000	5.621	12.230	13.070	4.057	4.904	34.080
S		1316.000	0.480	109.500	80.140	0.149	0.220	0.561	0.110	0.318	0.294
%RSD		1.482	1.445	0.513	0.359	2.646	1.795	4.290	2.712	6.479	0.864
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:22	30.300	30.590	7.147	0.260	9.662	10.770	0.181	0.318	5.625	56.570
2	12:43:49	30.640	30.930	7.500	0.211	12.270	11.340	1.261	0.749	1.884	57.070
3	12:44:16	31.780	30.700	7.340	-0.139	12.480	10.330	1.222	0.768	0.757	56.120
X		30.910	30.740	7.329	0.111	11.470	10.810	0.888	0.612	2.755	56.590
S		0.773	0.174	0.177	0.218	1.571	0.507	0.613	0.254	2.548	0.477
%RSD		2.501	0.566	2.414	196.300	13.700	4.693	68.990	41.560	92.490	0.843
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:22	157.7%	1.364	1.673	1.372	2.949	0.063	0.045	0.041	0.045	108.0%
2	12:43:49	159.0%	1.399	1.323	1.409	3.565	0.065	0.054	0.059	0.005	108.4%
3	12:44:16	159.0%	1.346	1.391	1.173	2.787	0.056	0.083	0.032	-0.008	109.1%
X		158.6%	1.370	1.462	1.318	3.101	0.061	0.061	0.044	0.014	108.5%
S		0.7%	0.027	0.186	0.127	0.411	0.005	0.019	0.014	0.028	0.6%
%RSD		0.5	1.996	12.700	9.642	13.240	7.774	32.000	31.310	203.600	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:43:22	4.044	5.316	0.283	0.184	107.500	106.200	111.9%	0.348	0.326	17.260
2	12:43:49	4.058	5.358	0.234	0.199	106.500	104.800	113.3%	0.388	0.342	17.030
3	12:44:16	3.917	5.239	0.148	0.154	108.700	105.200	113.9%	0.278	0.319	17.410
X		4.006	5.304	0.222	0.179	107.600	105.400	113.0%	0.338	0.329	17.230
S		0.078	0.061	0.069	0.023	1.080	0.716	1.0%	0.056	0.012	0.190
%RSD		1.943	1.141	30.930	12.590	1.004	0.680	0.9	16.430	3.611	1.102
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:43:22	15.610	16.610	109.2%							
2	12:43:49	15.780	16.440	111.8%							
3	12:44:16	16.000	16.620	111.9%							
X		15.790	16.560	111.0%							
S		0.196	0.102	1.5%							
%RSD		1.240	0.617	1.4							

VE02018-006

5/11/2020 12:48:46

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:14	111.2%	5.167	1.055	1.140	-30.870	631.900	2395.000	2482.000	3839.000	TM 53180.000
2	12:49:41	110.4%	5.198	1.546	0.735	-35.580	631.700	2330.000	2377.000	3748.000	TM 51540.000
3	12:50:08	109.2%	4.653	0.912	0.720	-33.390	621.800	2323.000	2381.000	3681.000	TM 51150.000
X		110.3%	5.006	1.171	0.865	-33.280	628.500	2349.000	2413.000	3756.000	TM 51960.000
S		1.0%	0.306	0.333	0.238	2.356	5.748	39.590	59.640	79.480	TM 1079.000
%RSD		0.9	6.112	28.390	27.490	7.080	0.914	1.685	2.471	2.116	TM 2.076
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:14	2872.000	174800.000	2022.000	9848.000	9390.000	117.7%	409.500	100.800	83.340	7555.000
2	12:49:41	2767.000	170300.000	1957.000	9621.000	9259.000	118.8%	403.900	99.270	80.470	7371.000
3	12:50:08	2745.000	172500.000	1985.000	9482.000	9222.000	118.2%	400.700	97.620	81.180	6469.000
X		2795.000	172500.000	1988.000	9650.000	9291.000	118.2%	404.700	99.220	81.660	7132.000
S		67.740	2255.000	32.680	184.300	88.260	0.6%	4.454	1.575	1.496	581.400
%RSD		2.424	1.307	1.644	1.910	0.950	0.5	1.101	1.587	1.832	8.152
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:14	53500.000	48.690	53640.000	52620.000	9.456	18.920	21.130	9.849	13.000	50.190
2	12:49:41	52870.000	48.290	52860.000	51840.000	9.301	18.810	19.720	10.010	13.410	49.770
3	12:50:08	52320.000	47.980	53100.000	52690.000	9.294	18.730	18.810	10.090	13.000	49.270
X		52890.000	48.320	53200.000	52390.000	9.350	18.820	19.890	9.983	13.140	49.750
S		592.200	0.359	395.700	470.300	0.092	0.095	1.167	0.122	0.235	0.461
%RSD		1.120	0.744	0.744	0.898	0.983	0.505	5.866	1.224	1.789	0.927
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:14	40.710	37.620	7.915	0.381	7.088	7.009	2.216	1.616	5.605	58.280
2	12:49:41	40.910	38.240	7.276	0.141	8.672	7.176	1.362	1.364	3.184	57.660
3	12:50:08	41.010	38.820	7.175	-0.081	5.555	6.541	6.501	3.185	5.814	58.020
X		40.870	38.230	7.455	0.147	7.105	6.909	3.360	2.055	4.868	57.990
S		0.152	0.597	0.401	0.231	1.558	0.329	2.754	0.987	1.462	0.310
%RSD		0.373	1.563	5.384	156.800	21.940	4.765	81.960	48.020	30.030	0.535
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:14	233.2%	1.121	1.155	1.091	5.221	0.069	0.067	0.093	0.139	112.4%
2	12:49:41	234.0%	1.239	1.258	1.179	5.995	0.056	0.050	0.109	0.107	113.7%
3	12:50:08	234.5%	1.134	1.283	0.878	6.213	0.069	0.059	0.135	0.069	115.0%
X		233.9%	1.165	1.232	1.049	5.810	0.064	0.059	0.112	0.105	113.7%
S		0.6%	0.065	0.068	0.155	0.521	0.008	0.009	0.021	0.035	1.3%
%RSD		0.3	5.539	5.496	14.740	8.974	11.970	15.200	18.790	33.180	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:14	4.868	6.260	0.209	0.178	143.700	139.800	118.8%	0.472	0.401	34.430
2	12:49:41	4.991	6.241	0.156	0.208	141.400	139.600	117.9%	0.424	0.414	34.470
3	12:50:08	4.745	6.162	0.155	0.197	142.300	138.600	119.9%	0.440	0.393	34.220
X		4.868	6.221	0.173	0.194	142.500	139.300	118.8%	0.446	0.403	34.370
S		0.123	0.052	0.031	0.016	1.170	0.680	1.0%	0.024	0.010	0.135
%RSD		2.527	0.835	17.850	7.975	0.821	0.488	0.8	5.480	2.583	0.392
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:49:14	32.370	33.400	111.3%							
2	12:49:41	32.510	33.700	111.6%							
3	12:50:08	31.700	33.350	112.7%							
X		32.190	33.480	111.9%							
S		0.431	0.188	0.8%							
%RSD		1.338	0.562	0.7							

VE02018-007

5/11/2020 12:54:39

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:05	115.9%	1.210	-0.626	-1.320	-24.310	618.700	1618.000	1707.000	2996.000	TM 82890.000
2	12:55:32	114.6%	1.387	-0.729	-1.135	-23.620	606.200	1638.000	1679.000	2949.000	TM 82060.000
3	12:55:59	113.9%	1.116	-0.947	-1.208	-25.950	602.500	1646.000	1705.000	2908.000	TM 80610.000
X		114.8%	1.238	-0.767	-1.221	-24.630	609.100	1634.000	1697.000	2951.000	TM 81860.000
S		1.0%	0.137	0.164	0.094	1.201	8.474	14.090	15.460	44.100	TM 1154.000
%RSD		0.9	11.100	21.360	7.661	4.877	1.391	0.862	0.911	1.494	TM 1.410
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:05	3190.000	175000.000	1777.000	11040.000	10600.000	120.6%	494.400	150.800	117.400	6375.000
2	12:55:32	3101.000	174200.000	1778.000	10810.000	10460.000	119.8%	485.900	147.900	114.200	7447.000
3	12:55:59	3039.000	171200.000	1735.000	10840.000	10250.000	118.9%	478.300	144.600	114.800	7596.000
X		3110.000	173500.000	1764.000	10900.000	10440.000	119.7%	486.200	147.800	115.500	7139.000
S		76.200	2036.000	24.630	124.400	174.700	0.8%	8.091	3.108	1.693	665.800
%RSD		2.450	1.174	1.397	1.141	1.673	0.7	1.664	2.103	1.466	9.325
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:05	76870.000	176.600	76240.000	75980.000	6.648	25.300	25.570	63.090	68.790	54.080
2	12:55:32	76470.000	175.800	75910.000	75310.000	6.626	25.160	27.970	63.260	67.180	54.640
3	12:55:59	75140.000	174.400	75310.000	76460.000	6.477	25.430	25.630	62.090	68.410	53.650
X		76160.000	175.600	75820.000	75920.000	6.584	25.300	26.390	62.810	68.130	54.120
S		908.300	1.131	468.900	580.400	0.093	0.137	1.372	0.631	0.846	0.500
%RSD		1.193	0.644	0.618	0.764	1.419	0.540	5.201	1.004	1.241	0.924
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:05	55.790	51.190	6.734	1.164	14.770	13.890	5.463	1.178	20.290	51.070
2	12:55:32	56.440	52.420	6.716	1.696	15.760	14.540	5.700	1.281	18.820	49.660
3	12:55:59	52.610	51.710	7.700	1.619	15.180	15.130	4.713	1.000	19.190	50.200
X		54.950	51.770	7.050	1.493	15.240	14.520	5.292	1.153	19.430	50.310
S		2.052	0.619	0.563	0.287	0.496	0.622	0.515	0.142	0.764	0.708
%RSD		3.734	1.196	7.990	19.250	3.254	4.287	9.742	12.340	3.935	1.408
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:05	145.6%	3.813	3.733	3.597	7.552	0.185	0.163	0.038	-0.012	115.1%
2	12:55:32	148.1%	3.659	3.908	3.637	6.670	0.159	0.150	0.062	0.034	116.5%
3	12:55:59	145.6%	3.264	3.770	3.538	7.548	0.142	0.183	0.038	0.117	115.2%
X		146.4%	3.579	3.804	3.591	7.257	0.162	0.165	0.046	0.046	115.6%
S		1.5%	0.283	0.092	0.050	0.508	0.022	0.017	0.014	0.066	0.8%
%RSD		1.0	7.914	2.422	1.379	7.008	13.360	10.130	31.100	141.600	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:55:05	6.794	8.368	0.341	0.267	179.100	179.900	114.2%	0.780	0.705	48.730
2	12:55:32	6.612	8.450	0.302	0.330	177.900	179.900	114.4%	0.754	0.728	48.870
3	12:55:59	6.821	8.003	0.351	0.247	180.500	176.100	114.9%	0.715	0.721	48.730
X		6.742	8.274	0.331	0.281	179.100	178.600	114.5%	0.750	0.718	48.770
S		0.114	0.238	0.026	0.043	1.302	2.224	0.4%	0.033	0.012	0.080
%RSD		1.688	2.877	7.730	15.440	0.727	1.245	0.3	4.368	1.603	0.163
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	12:55:05	46.100	47.710	110.3%							
2	12:55:32	46.510	47.670	110.5%							
3	12:55:59	46.170	47.800	111.2%							
X		46.260	47.730	110.6%							
S		0.217	0.065	0.5%							
%RSD		0.469	0.137	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:56	86.9%	0.552	5.261	4.392	9.307	1144.000	2320.000	2338.000	3411.000	13110.000
2	13:01:23	84.0%	0.519	5.336	4.476	10.010	1174.000	2412.000	2451.000	3502.000	13620.000
3	13:01:50	84.4%	0.496	4.848	4.205	4.173	1130.000	2386.000	2374.000	3500.000	13480.000
X		85.1%	0.522	5.148	4.358	7.830	1149.000	2373.000	2388.000	3471.000	13400.000
S		1.6%	0.028	0.263	0.139	3.187	22.300	47.330	57.850	52.360	260.800
%RSD		1.8	5.416	5.108	3.184	40.700	1.940	1.994	2.423	1.509	1.945
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:56	2115.000	183600.000	1766.000	349900.000	344400.000	88.2%	529.300	-14.670	2892.000	43160.000
2	13:01:23	2196.000	188400.000	1766.000	353600.000	350000.000	86.7%	526.200	-12.000	2936.000	41340.000
3	13:01:50	2143.000	186800.000	1749.000	346500.000	348800.000	87.3%	524.900	-20.200	2933.000	47430.000
X		2151.000	186300.000	1761.000	350000.000	347700.000	87.4%	526.800	-15.620	2921.000	43980.000
S		41.300	2408.000	9.919	3546.000	2958.000	0.8%	2.228	4.180	24.720	3126.000
%RSD		1.920	1.293	0.563	1.013	0.851	0.9	0.423	26.750	0.847	7.109
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:56	153900.000	1518.000	150500.000	151700.000	40.710	86.930	90.440	185.300	207.300	10340.000
2	13:01:23	156700.000	1535.000	154900.000	153700.000	41.490	88.200	89.210	185.500	212.900	10600.000
3	13:01:50	156200.000	1551.000	157000.000	157400.000	41.720	89.220	91.670	187.300	209.800	10730.000
X		155600.000	1535.000	154200.000	154200.000	41.310	88.110	90.440	186.000	210.000	10560.000
S		1448.000	16.270	3302.000	2911.000	0.530	1.145	1.229	1.107	2.789	200.400
%RSD		0.931	1.060	2.142	1.888	1.283	1.300	1.358	0.595	1.328	1.899
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:56	9754.000	9084.000	15.840	0.139	16.460	16.130	2.856	0.724	7.708	737.100
2	13:01:23	9909.000	9235.000	17.190	0.391	19.490	17.510	-0.212	-0.058	8.100	735.400
3	13:01:50	9915.000	9236.000	14.630	0.751	15.760	14.300	-0.773	-0.274	10.880	735.500
X		9859.000	9185.000	15.890	0.427	17.240	15.980	0.624	0.131	8.897	736.000
S		91.300	87.890	1.277	0.308	1.981	1.610	1.954	0.525	1.731	0.943
%RSD		0.926	0.957	8.038	72.160	11.490	10.080	313.400	402.200	19.460	0.128
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:56	113.9%	12.720	14.880	13.720	12.890	0.178	0.206	3.744	3.832	93.5%
2	13:01:23	115.4%	13.360	13.600	13.530	20.620	0.256	0.183	3.659	3.922	94.3%
3	13:01:50	116.9%	13.300	12.090	13.310	11.490	0.198	0.196	3.531	3.740	95.7%
X		115.4%	13.120	13.520	13.520	15.000	0.210	0.195	3.645	3.831	94.5%
S		1.5%	0.354	1.396	0.202	4.921	0.040	0.011	0.107	0.091	1.1%
%RSD		1.3	2.698	10.330	1.495	32.800	19.210	5.732	2.938	2.365	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:56	12.500	15.830	1.052	1.029	116.600	115.500	97.6%	0.157	0.200	996.200
2	13:01:23	12.230	15.620	1.085	1.190	116.200	114.900	98.4%	0.161	0.179	1001.000
3	13:01:50	12.010	15.830	1.093	1.136	120.500	116.100	99.9%	0.207	0.174	990.400
X		12.250	15.760	1.076	1.118	117.800	115.500	98.6%	0.175	0.185	996.000
S		0.248	0.121	0.022	0.082	2.357	0.626	1.2%	0.028	0.014	5.547
%RSD		2.021	0.768	2.002	7.314	2.002	0.542	1.2	15.910	7.356	0.557
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:00:56	932.900	953.900	98.6%							
2	13:01:23	935.700	956.200	99.5%							
3	13:01:50	931.700	955.800	100.1%							
X		933.400	955.300	99.4%							
S		2.095	1.209	0.8%							
%RSD		0.225	0.127	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	88.9%	212.100	93.590	93.710	-17.350	<u>4564.000</u>	<u>3795.000</u>	3896.000	5830.000	<u>TM 21290.000</u>
2	13:07:16	86.7%	217.200	98.890	98.090	-16.330	<u>4510.000</u>	<u>3792.000</u>	3917.000	5753.000	<u>TM 20920.000</u>
3	13:07:43	85.3%	220.900	92.150	95.130	-18.430	<u>4475.000</u>	<u>3859.000</u>	3855.000	5732.000	<u>TM 20950.000</u>
X		87.0%	216.700	94.880	95.640	-17.370	<u>4516.000</u>	<u>3815.000</u>	3889.000	5772.000	<u>TM 21050.000</u>
S		1.8%	4.400	3.549	2.233	1.052	<u>44.650</u>	<u>37.680</u>	31.290	51.300	<u>TM 208.100</u>
%RSD		2.1	2.030	3.741	2.335	6.054	<u>0.989</u>	<u>0.988</u>	0.804	0.889	<u>TM 0.989</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	<u>TM 7429.000</u>	<u>TM 240600.000</u>	<u>TM 5000.000</u>	<u>TM 371000.000</u>	<u>TM 364400.000</u>	89.8%	<u>TM 2380.000</u>	296.600	<u>TM 584.600</u>	8954.000
2	13:07:16	<u>TM 7374.000</u>	<u>TM 242200.000</u>	<u>TM 4966.000</u>	<u>TM 375000.000</u>	<u>TM 367300.000</u>	89.6%	<u>TM 2332.000</u>	292.600	<u>TM 586.800</u>	9814.000
3	13:07:43	<u>TM 7348.000</u>	<u>TM 239200.000</u>	<u>TM 4960.000</u>	<u>TM 366600.000</u>	<u>TM 365400.000</u>	90.1%	<u>TM 2373.000</u>	282.100	<u>TM 570.000</u>	14080.000
X		<u>TM 7384.000</u>	<u>TM 240700.000</u>	<u>TM 4975.000</u>	<u>TM 370900.000</u>	<u>TM 365700.000</u>	89.8%	<u>TM 2362.000</u>	290.400	<u>TM 580.500</u>	10950.000
S		<u>TM 41.270</u>	<u>TM 1525.000</u>	<u>TM 21.640</u>	<u>TM 4200.000</u>	<u>TM 1465.000</u>	0.2%	<u>TM 26.240</u>	7.504	<u>TM 9.117</u>	2743.000
%RSD		<u>TM 0.559</u>	<u>TM 0.634</u>	<u>TM 0.435</u>	<u>TM 1.132</u>	<u>TM 0.401</u>	0.3	<u>TM 1.111</u>	2.584	<u>TM 1.570</u>	25.060
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	<u>TM 216900.000</u>	<u>TM 2921.000</u>	<u>TM 222200.000</u>	<u>TM 220700.000</u>	253.800	351.500	351.000	<u>TM 520.200</u>	<u>TM 584.300</u>	<u>TM 1260.000</u>
2	13:07:16	<u>TM 221000.000</u>	<u>TM 2947.000</u>	<u>TM 220200.000</u>	<u>TM 219500.000</u>	252.800	347.400	349.500	<u>TM 517.200</u>	<u>TM 589.100</u>	<u>TM 1276.000</u>
3	13:07:43	<u>TM 217900.000</u>	<u>TM 2918.000</u>	<u>TM 217000.000</u>	<u>TM 217500.000</u>	242.900	342.700	353.600	<u>TM 509.700</u>	<u>TM 584.400</u>	<u>TM 1260.000</u>
X		<u>TM 218600.000</u>	<u>TM 2929.000</u>	<u>TM 219800.000</u>	<u>TM 219200.000</u>	249.800	347.200	351.300	<u>TM 515.700</u>	<u>TM 585.900</u>	<u>TM 1265.000</u>
S		<u>TM 2132.000</u>	<u>TM 15.900</u>	<u>TM 2647.000</u>	<u>TM 1617.000</u>	6.051	4.382	2.066	<u>TM 5.397</u>	<u>TM 2.708</u>	<u>TM 9.090</u>
%RSD		<u>TM 0.975</u>	<u>TM 0.543</u>	<u>TM 1.204</u>	<u>TM 0.738</u>	2.422	1.262	0.588	<u>TM 1.047</u>	<u>TM 0.462</u>	<u>TM 0.719</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	<u>TM 1080.000</u>	<u>TM 1088.000</u>	253.500	175.900	26.730	28.030	798.000	204.100	13.200	<u>TM 1230.000</u>
2	13:07:16	<u>TM 1067.000</u>	<u>TM 1099.000</u>	258.700	165.700	28.740	29.500	820.800	209.200	15.520	<u>TM 1236.000</u>
3	13:07:43	<u>TM 1073.000</u>	<u>TM 1093.000</u>	253.500	171.300	30.150	24.770	797.500	201.800	13.100	<u>TM 1225.000</u>
X		<u>TM 1073.000</u>	<u>TM 1093.000</u>	255.200	171.000	28.540	27.430	805.500	205.000	13.940	<u>TM 1230.000</u>
S		<u>TM 6.574</u>	<u>TM 5.583</u>	3.010	5.127	1.717	2.418	13.330	3.813	1.373	<u>TM 5.607</u>
%RSD		<u>TM 0.613</u>	<u>TM 0.511</u>	1.179	2.999	6.016	8.813	1.655	1.859	9.852	<u>TM 0.456</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	121.0%	272.900	277.700	273.900	244.400	218.800	217.600	219.900	221.300	96.6%
2	13:07:16	121.3%	273.100	274.600	274.900	253.700	218.100	215.800	218.600	219.600	97.0%
3	13:07:43	121.7%	271.100	274.600	274.400	245.800	213.100	214.400	216.500	220.200	98.2%
X		121.3%	272.300	275.600	274.400	248.000	216.700	215.900	218.400	220.400	97.3%
S		0.4%	1.090	1.794	0.481	5.003	3.137	1.641	1.710	0.862	0.8%
%RSD		0.3	0.400	0.651	0.175	2.018	1.448	0.760	0.783	0.391	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:06:48	249.700	259.500	219.400	216.700	389.700	381.200	100.9%	228.200	220.600	<u>TM 1136.000</u>
2	13:07:16	248.300	255.500	217.900	217.100	392.100	381.700	102.5%	229.200	218.500	<u>TM 1138.000</u>
3	13:07:43	243.200	255.000	217.400	216.600	391.600	380.300	102.8%	228.900	219.000	<u>TM 1129.000</u>
X		247.000	256.700	218.200	216.800	391.200	381.100	102.1%	228.800	219.400	<u>TM 1135.000</u>
S		3.408	2.477	1.031	0.278	1.283	0.682	1.0%	0.527	1.094	<u>TM 4.849</u>
%RSD		1.380	0.965	0.472	0.128	0.328	0.179	1.0	0.230	0.499	<u>TM 0.427</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:06:48	<u>TM 1099.000</u>	<u>TM 1107.000</u>	100.7%							
2	13:07:16	<u>TM 1085.000</u>	<u>TM 1097.000</u>	101.5%							
3	13:07:43	<u>TM 1084.000</u>	<u>TM 1099.000</u>	102.2%							
X		<u>TM 1089.000</u>	<u>TM 1101.000</u>	101.5%							
S		<u>TM 8.211</u>	<u>TM 5.397</u>	0.7%							
%RSD		<u>TM 0.754</u>	<u>TM 0.490</u>	0.7							

CCV MW126865 5/11/2020 13:12:15 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:42	91.8%	302.100	309.900	296.400	6.673	62030.000	61650.000	61060.000	59850.000	296.800
2	13:13:10	92.0%	305.500	302.900	301.200	0.819	62010.000	61440.000	61430.000	59800.000	292.300
3	13:13:37	91.4%	303.300	298.500	291.900	5.315	62950.000	61960.000	61240.000	61340.000	291.800
X		91.7%	101.209%	101.259%	98.834%	4.269	103.886%	61680.000	61240.000	100.555%	97.880%
S		0.3%	n/a	n/a	n/a	3.064	n/a	259.400	183.000	n/a	n/a
%RSD		0.4	0.577	1.886	1.564	71.780	0.856	0.421	0.299	1.448	0.949
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:42	3361.000	2341.000	62580.000	60730.000	60440.000	96.6%	307.400	308.400	298.700	2673.000
2	13:13:10	3346.000	2208.000	63370.000	60780.000	60890.000	97.5%	294.800	299.900	300.400	2702.000
3	13:13:37	3269.000	2152.000	62620.000	60990.000	61610.000	98.0%	304.200	307.500	299.000	241.200
X		3326.000	2234.000	104.759%	60830.000	101.632%	97.4%	100.714%	101.753%	99.784%	1872.000
S		49.340	97.300	n/a	136.000	n/a	0.7%	n/a	n/a	n/a	1412.000
%RSD		1.484	4.356	0.704	0.224	0.970	0.7	2.169	1.538	0.306	75.450
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:42	62120.000	290.800	61690.000	60800.000	294.200	298.200	299.200	286.100	292.900	287.500
2	13:13:10	61500.000	297.100	61260.000	60600.000	296.200	296.300	291.500	288.700	295.900	287.900
3	13:13:37	61690.000	292.600	61610.000	61430.000	297.100	293.000	289.900	286.200	290.900	293.100
X		61770.000	97.826%	61520.000	101.573%	98.618%	98.619%	293.500	287.000	97.752%	96.505%
S		315.200	n/a	228.400	n/a	n/a	n/a	4.961	1.492	n/a	n/a
%RSD		0.510	1.103	0.371	0.710	0.507	0.888	1.690	0.520	0.866	1.078
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:42	294.800	286.600	315.500	286.100	2.144	1.330	1333.000	299.100	0.734	295.800
2	13:13:10	290.700	281.900	307.000	283.600	2.149	0.998	1361.000	299.600	-2.021	293.900
3	13:13:37	289.600	291.100	311.600	272.300	3.331	-0.061	1325.000	293.400	1.154	296.000
X		291.700	286.600	103.782%	280.700	2.541	0.756	1340.000	99.113%	-0.044	98.410%
S		2.762	4.608	n/a	7.356	0.684	0.726	18.880	n/a	1.725	n/a
%RSD		0.947	1.608	1.366	2.621	26.930	96.090	1.409	1.156	3925.000	0.396
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:42	100.3%	320.800	324.200	318.000	298.400	295.500	291.000	301.200	297.700	95.8%
2	13:13:10	101.3%	318.200	320.700	321.600	297.100	292.000	290.500	293.800	294.000	98.6%
3	13:13:37	102.6%	325.500	328.800	326.700	292.600	291.000	289.000	295.700	293.100	99.1%
X		101.4%	107.169%	108.195%	322.100	296.000	97.609%	290.100	296.900	98.309%	97.8%
S		1.1%	n/a	n/a	4.383	3.086	n/a	1.041	3.818	n/a	1.8%
%RSD		1.1	1.155	1.255	1.361	1.042	0.804	0.359	1.286	0.818	1.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:42	303.000	306.800	307.300	300.800	305.000	302.900	99.6%	306.800	286.000	283.600
2	13:13:10	302.500	300.200	300.900	302.200	304.100	299.300	100.5%	302.900	288.300	286.900
3	13:13:37	301.800	303.300	304.100	310.200	292.000	299.800	100.9%	302.500	289.100	291.600
X		100.809%	101.140%	304.100	101.473%	100.116%	100.227%	100.3%	304.100	95.925%	95.781%
S		n/a	n/a	3.245	n/a	n/a	n/a	0.7%	2.343	n/a	n/a
%RSD		0.202	1.092	1.067	1.658	2.420	0.654	0.7	0.770	0.560	1.396
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:12:42	285.100	288.200	95.3%							
2	13:13:10	285.900	290.200	98.4%							
3	13:13:37	289.000	293.800	98.9%							
X		95.557%	96.918%	97.5%							
S		n/a	n/a	2.0%							
%RSD		0.721	0.969	2.0							

CB CB IM9968-01 5/11/2020 13:18:09 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:36	114.0%	-0.002	1.224	0.788	2.213	3.513	1.762	1.668	1.708	0.210
2	13:19:02	112.5%	0.022	1.623	1.049	7.770	3.042	1.617	1.742	1.384	0.170
3	13:19:29	113.6%	-0.010	1.420	1.122	8.507	2.822	1.747	1.729	1.579	0.147
X		113.3%	0.003	1.422	0.986	6.164	3.126	1.709	1.713	1.557	0.176
S		0.8%	0.016	0.200	0.175	3.441	0.353	0.080	0.039	0.163	0.032
%RSD		0.7	523.400	14.020	17.790	55.830	11.290	4.666	2.305	10.490	18.260
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:36	1.288	1524.000	7.165	0.353	2.459	119.6%	-0.051	0.033	0.031	48.700
2	13:19:02	1.535	1555.000	6.323	0.366	1.612	118.7%	-0.070	0.008	0.039	63.210
3	13:19:29	1.148	1561.000	6.670	-1.375	1.621	118.4%	-0.011	0.016	0.033	68.410
X		1.324	1547.000	6.719	-0.219	1.897	118.9%	-0.044	0.019	0.034	60.110
S		0.196	19.750	0.423	1.002	0.486	0.6%	0.030	0.013	0.005	10.220
%RSD		14.790	1.277	6.295	457.900	25.630	0.5	68.910	66.640	13.240	17.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:36	2.818	0.015	13.440	5.508	-0.006	0.015	-0.133	-0.025	-0.044	0.013
2	13:19:02	2.726	0.016	14.120	3.972	-0.006	0.010	-0.167	-0.034	-0.027	0.020
3	13:19:29	1.786	0.006	14.010	2.243	-0.011	0.027	-0.165	-0.037	-0.022	0.027
X		2.443	0.012	13.850	3.908	-0.007	0.017	-0.155	-0.032	-0.031	0.020
S		0.571	0.005	0.366	1.634	0.003	0.009	0.019	0.006	0.011	0.007
%RSD		23.360	43.040	2.643	41.800	39.240	52.240	12.410	19.590	36.580	36.770
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:36	-0.016	0.029	0.087	0.876	0.919	0.815	0.313	0.160	-1.019	0.008
2	13:19:02	-0.105	0.069	-0.002	0.888	-0.034	1.233	1.270	0.293	1.316	0.006
3	13:19:29	-0.105	0.059	0.138	0.175	0.543	0.786	4.084	0.897	0.855	0.007
X		-0.076	0.052	0.074	0.646	0.476	0.945	1.889	0.450	0.384	0.007
S		0.051	0.021	0.071	0.409	0.480	0.250	1.960	0.393	1.237	0.001
%RSD		67.810	40.200	95.580	63.220	100.900	26.490	103.800	87.380	321.800	15.940
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:36	117.3%	0.493	0.453	0.447	0.943	0.025	0.009	0.007	0.029	111.9%
2	13:19:02	117.0%	0.473	0.604	0.455	1.196	0.018	0.022	0.007	0.027	113.8%
3	13:19:29	117.0%	0.574	0.570	0.385	-0.434	0.018	0.015	0.016	-0.006	115.4%
X		117.1%	0.513	0.542	0.429	0.568	0.021	0.015	0.010	0.017	113.7%
S		0.2%	0.054	0.079	0.038	0.877	0.004	0.006	0.005	0.019	1.7%
%RSD		0.1	10.450	14.570	8.923	154.300	18.800	40.910	50.520	117.200	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:36	0.067	0.073	0.423	0.405	0.034	0.005	107.7%	0.009	0.033	0.036
2	13:19:02	0.037	0.120	0.487	0.421	-0.005	0.020	108.3%	0.044	0.030	0.028
3	13:19:29	0.052	0.108	0.452	0.404	0.008	0.005	109.7%	0.022	0.026	0.031
X		0.052	0.100	0.454	0.410	0.012	0.010	108.6%	0.025	0.030	0.032
S		0.015	0.024	0.032	0.010	0.020	0.009	1.0%	0.018	0.003	0.004
%RSD		29.590	24.460	6.993	2.325	161.200	89.050	0.9	71.200	11.230	13.090
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:18:36	0.039	0.039	106.8%							
2	13:19:02	0.044	0.047	108.7%							
3	13:19:29	0.038	0.030	108.6%							
X		0.040	0.039	108.0%							
S		0.003	0.009	1.1%							
%RSD		6.823	21.810	1.0							

LR MW12844 5/11/2020 13:24:01 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:28	79.0%	M 1003.000	M 1855.000	M 1815.000	7.270	TM 120900.000	TM 121600.000	TM 120900.000	TM 119000.000	TM 114800.000
2	13:24:55	77.5%	M 1012.000	M 1800.000	M 1794.000	0.264	TM 119100.000	TM 119400.000	TM 119200.000	TM 119500.000	TM 116300.000
3	13:25:21	76.0%	M 1005.000	M 1884.000	M 1867.000	2.991	TM 121900.000	TM 124000.000	TM 122400.000	TM 119000.000	TM 114500.000
X		77.5%	M 100.635%	M 92.312%	M 91.264%	3.508	TM 100.539%	TM 121700.000	TM 120800.000	TM 99.335%	TM 95.975%
S		1.5%	M n/a	M n/a	M n/a	3.532	TM n/a	TM 2272.000	TM 1566.000	TM n/a	TM n/a
%RSD		1.9	M 0.466	M 2.306	M 2.069	100.700	TM 1.166	TM 1.867	TM 1.296	TM 0.245	TM 0.822
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:28	8.392	1546.000	TM 123600.000	M 122700.000	TM 122800.000	84.2%	M 2017.000	TM 2019.000	TM 1988.000	21870.000
2	13:24:55	7.601	1560.000	TM 123000.000	M 121400.000	TM 121900.000	84.5%	M 2038.000	TM 2046.000	TM 1956.000	15800.000
3	13:25:21	7.509	1595.000	TM 125600.000	M 123400.000	TM 124900.000	83.1%	M 2055.000	TM 2052.000	TM 2003.000	12960.000
X		7.834	1567.000	TM 103.387%	M 122500.000	TM 102.651%	83.9%	M 101.845%	TM 101.930%	TM 99.122%	16880.000
S		0.485	25.120	TM n/a	M 1014.000	TM n/a	0.7%	M n/a	TM n/a	TM n/a	4552.000
%RSD		6.197	1.603	TM 1.116	M 0.828	TM 1.242	0.8	M 0.930	TM 0.865	TM 1.205	26.980
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:28	TM 124100.000	TM 1982.000	TM 123200.000	TM 122200.000	TM 1922.000	M 1880.000	M 1876.000	M 1857.000	M 1897.000	M 1866.000
2	13:24:55	TM 121900.000	TM 1956.000	TM 123500.000	TM 121800.000	TM 1943.000	M 1906.000	M 1878.000	M 1855.000	M 1879.000	M 1868.000
3	13:25:21	TM 125100.000	TM 1998.000	TM 122300.000	TM 121600.000	TM 1924.000	M 1882.000	M 1891.000	M 1846.000	M 1875.000	M 1904.000
X		TM 123700.000	TM 98.942%	TM 123000.000	TM 101.559%	TM 96.476%	M 94.461%	M 1881.000	M 1852.000	M 94.185%	M 93.972%
S		TM 1609.000	TM n/a	TM 596.100	TM n/a	TM n/a	M n/a	M 8.185	M 5.953	M n/a	M n/a
%RSD		TM 1.301	TM 1.069	TM 0.485	TM 0.243	TM 0.604	M 0.791	M 0.435	M 0.321	M 0.640	M 1.141
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:28	M 2096.000	M 2051.000	M 2012.000	M 1802.000	3.689	1.661	8753.000	M 1916.000	46.150	TM 2044.000
2	13:24:55	M 2062.000	M 2011.000	M 1925.000	M 1823.000	5.787	1.545	8495.000	M 1802.000	54.520	TM 2084.000
3	13:25:21	M 2078.000	M 2037.000	M 1907.000	M 1837.000	4.849	-0.104	8775.000	M 1832.000	62.850	TM 2078.000
X		M 2079.000	M 2033.000	M 97.392%	M 1821.000	4.775	1.034	8675.000	M 92.509%	54.500	TM 103.425%
S		M 16.940	M 20.330	M n/a	M 17.500	1.051	0.987	155.700	M n/a	8.349	TM n/a
%RSD		M 0.815	M 1.000	M 2.872	M 0.961	22.020	95.480	1.794	M 3.181	15.320	TM 1.050
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:28	88.4%	M 2285.000	M 2299.000	M 2322.000	M 1934.000	284.400	282.400	M 1989.000	M 2006.000	86.4%
2	13:24:55	88.9%	M 2208.000	M 2226.000	M 2246.000	M 1905.000	275.900	273.700	M 1920.000	M 1961.000	89.6%
3	13:25:21	87.7%	M 2209.000	M 2228.000	M 2240.000	M 1900.000	277.300	274.200	M 1929.000	M 1960.000	89.7%
X		88.4%	M 2234.000	M 112.542%	M 2269.000	M 1913.000	279.200	276.800	M 1946.000	M 98.773%	88.6%
S		0.6%	M 44.520	M n/a	M 45.760	M 18.050	4.560	4.855	M 37.280	M n/a	1.9%
%RSD		0.7	M 1.993	M 1.837	M 2.017	M 0.943	1.633	1.754	M 1.916	M 1.320	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:28	M 2055.000	M 2088.000	M 1061.000	M 1031.000	M 10890.000	TM 10570.000	91.6%	M 721.300	TM 661.300	TM 1901.000
2	13:24:55	M 2017.000	M 2023.000	M 1040.000	M 1030.000	M 10440.000	TM 10380.000	92.1%	M 710.300	TM 666.500	TM 1892.000
3	13:25:21	M 2021.000	M 2052.000	M 1040.000	M 1033.000	M 10540.000	TM 10420.000	92.6%	M 705.600	TM 666.700	TM 1898.000
X		M 2031.000	M 102.697%	M 1047.000	M 103.144%	M 106.234%	TM 10460.000	92.1%	M 712.400	TM 66.482%	TM 1897.000
S		M 20.650	M n/a	M 11.930	M n/a	M n/a	TM 99.760	0.5%	M 8.062	TM n/a	TM 4.464
%RSD		M 1.017	M 1.583	M 1.139	M 0.113	M 2.248	TM 0.954	0.6	M 1.132	TM 0.456	TM 0.235
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:24:28	TM 1864.000	TM 1919.000	88.8%							
2	13:24:55	M 2017.000	TM 1958.000	90.6%							
3	13:25:21	TM 1915.000	TM 1941.000	91.0%							
X		TM 1932.000	TM 96.966%	90.1%							
S		TM 77.830	TM n/a	1.2%							
%RSD		TM 4.029	TM 1.000	1.3							

VE02018-008SD

5/11/2020 13:29:51

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:19	94.7%	189.100	84.500	83.550	-25.870	<u>3117.000</u>	<u>3138.000</u>	3213.000	4931.000	<u>TM 22890.000</u>
2	13:30:45	92.1%	187.400	84.730	84.990	-23.420	<u>3127.000</u>	<u>3188.000</u>	3219.000	4820.000	<u>TM 23140.000</u>
3	13:31:12	90.7%	191.300	82.970	85.870	-24.000	<u>3074.000</u>	<u>3149.000</u>	3260.000	4865.000	<u>TM 23030.000</u>
X		92.5%	189.300	84.070	84.810	-24.430	<u>3106.000</u>	<u>3158.000</u>	3231.000	4872.000	<u>TM 23020.000</u>
S		2.0%	1.978	0.955	1.173	1.279	<u>28.070</u>	<u>26.360</u>	25.760	55.940	<u>TM 125.600</u>
%RSD		2.2	1.045	1.136	1.383	5.236	<u>0.904</u>	<u>0.835</u>	0.797	1.148	<u>TM 0.546</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:19	<u>6092.000</u>	<u>207700.000</u>	<u>4687.000</u>	<u>M 447000.000</u>	<u>TM 442500.000</u>	96.2%	<u>M 1371.000</u>	254.600	378.500	10640.000
2	13:30:45	<u>6151.000</u>	<u>210200.000</u>	<u>4678.000</u>	<u>M 450000.000</u>	<u>TM 434900.000</u>	96.2%	<u>M 1362.000</u>	255.400	381.500	10780.000
3	13:31:12	<u>6062.000</u>	<u>210100.000</u>	<u>4618.000</u>	<u>M 443500.000</u>	<u>TM 433000.000</u>	95.7%	<u>M 1349.000</u>	252.000	379.200	11310.000
X		<u>6102.000</u>	<u>209300.000</u>	<u>4661.000</u>	<u>M 446800.000</u>	<u>TM 436800.000</u>	96.0%	<u>M 1360.000</u>	254.000	379.700	10910.000
S		<u>45.680</u>	<u>1441.000</u>	<u>37.710</u>	<u>M 3220.000</u>	<u>TM 5033.000</u>	0.3%	<u>M 11.330</u>	1.762	1.558	353.800
%RSD		<u>0.749</u>	<u>0.688</u>	<u>0.809</u>	<u>M 0.721</u>	<u>TM 1.152</u>	0.3	<u>M 0.833</u>	0.694	0.410	3.244
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:19	<u>TM 105000.000</u>	<u>TM 1390.000</u>	<u>TM 105300.000</u>	<u>TM 104600.000</u>	206.500	248.700	252.100	310.000	347.800	<u>M 823.500</u>
2	13:30:45	<u>TM 106500.000</u>	<u>TM 1376.000</u>	<u>TM 105700.000</u>	<u>TM 105000.000</u>	205.200	246.500	260.800	310.100	348.600	<u>M 826.500</u>
3	13:31:12	<u>TM 104500.000</u>	<u>TM 1382.000</u>	<u>TM 105500.000</u>	<u>TM 105600.000</u>	206.100	247.600	249.700	307.000	347.200	<u>M 823.500</u>
X		<u>TM 105300.000</u>	<u>TM 1383.000</u>	<u>TM 105500.000</u>	<u>TM 105100.000</u>	205.900	247.600	254.200	309.000	347.900	<u>M 824.500</u>
S		<u>TM 1063.000</u>	<u>TM 6.742</u>	<u>TM 203.600</u>	<u>TM 457.500</u>	0.649	1.090	5.830	1.774	0.693	<u>M 1.734</u>
%RSD		<u>TM 1.010</u>	<u>TM 0.488</u>	<u>TM 0.193</u>	<u>TM 0.435</u>	0.315	0.440	2.293	0.574	0.199	<u>M 0.210</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:19	<u>M 710.800</u>	<u>M 713.400</u>	214.400	147.400	23.150	20.800	649.400	169.800	15.920	<u>TM 836.900</u>
2	13:30:45	<u>M 700.500</u>	<u>M 716.600</u>	207.800	155.800	25.200	20.970	696.700	180.700	15.880	<u>TM 843.000</u>
3	13:31:12	<u>M 691.900</u>	<u>M 710.100</u>	207.100	148.400	23.620	23.140	664.000	170.100	15.230	<u>TM 835.500</u>
X		<u>M 701.100</u>	<u>M 713.400</u>	209.800	150.500	23.990	21.640	670.000	173.500	15.680	<u>TM 838.500</u>
S		<u>M 9.433</u>	<u>M 3.278</u>	4.005	4.557	1.075	1.305	24.230	6.197	0.387	<u>TM 3.971</u>
%RSD		<u>M 1.346</u>	<u>M 0.460</u>	1.909	3.027	4.482	6.031	3.616	3.572	2.466	<u>TM 0.474</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:19	126.6%	226.800	229.400	228.800	205.600	188.800	187.200	188.600	192.300	99.3%
2	13:30:45	126.9%	229.500	225.700	226.800	207.600	188.300	188.000	191.700	189.900	100.3%
3	13:31:12	128.6%	222.300	226.800	224.700	203.500	183.500	183.200	187.200	187.700	102.6%
X		127.4%	226.200	227.300	226.800	205.600	186.900	186.200	189.200	190.000	100.7%
S		1.1%	3.616	1.891	2.009	2.054	2.928	2.580	2.272	2.286	1.7%
%RSD		0.8	1.599	0.832	0.886	0.999	1.567	1.386	1.201	1.204	1.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:19	214.200	216.500	189.700	187.800	340.400	334.100	102.6%	200.600	193.100	<u>M 675.500</u>
2	13:30:45	210.900	217.500	188.700	185.500	340.000	335.300	103.5%	197.700	194.500	<u>M 672.900</u>
3	13:31:12	205.600	212.800	185.500	187.600	326.500	332.300	103.3%	203.700	192.900	<u>M 676.800</u>
X		210.200	215.600	188.000	187.000	335.600	333.900	103.2%	200.700	193.500	<u>M 675.100</u>
S		4.311	2.484	2.214	1.230	7.887	1.489	0.4%	3.023	0.858	<u>M 2.001</u>
%RSD		2.051	1.152	1.178	0.658	2.350	0.446	0.4	1.506	0.443	<u>M 0.296</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:30:19	<u>M 647.200</u>	<u>M 666.700</u>	103.1%							
2	13:30:45	<u>M 648.500</u>	<u>M 668.600</u>	105.2%							
3	13:31:12	<u>M 651.600</u>	<u>M 673.200</u>	103.4%							
X		<u>M 649.100</u>	<u>M 669.500</u>	103.9%							
S		<u>M 2.248</u>	<u>M 3.328</u>	1.1%							
%RSD		<u>M 0.346</u>	<u>M 0.497</u>	1.1							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:06	100.5%	0.202	6.401	4.963	1.709	251.900	680.000	642.500	728.600	<u>TM 2831.000</u>
2	13:36:33	98.3%	0.081	5.496	4.779	1.855	253.400	672.200	651.900	738.300	<u>TM 2854.000</u>
3	13:37:00	97.2%	0.101	5.125	4.258	-0.379	248.500	658.700	631.000	722.000	<u>TM 2833.000</u>
X		98.7%	0.128	5.674	4.666	1.062	251.300	670.300	641.800	729.600	<u>TM 2839.000</u>
S		1.7%	0.065	0.656	0.366	1.250	2.522	10.760	10.470	8.200	<u>TM 12.750</u>
%RSD		1.7	50.750	11.570	7.834	117.700	1.004	1.605	1.631	1.124	<u>TM 0.449</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:06	477.300	<u>T 44710.000</u>	377.800	70260.000	<u>T 70500.000</u>	104.0%	110.800	4.398	<u>M 612.300</u>	3796.000
2	13:36:33	468.700	<u>T 44700.000</u>	378.600	69400.000	<u>T 69320.000</u>	99.3%	105.700	4.543	<u>M 615.100</u>	3628.000
3	13:37:00	<u>T 456.400</u>	<u>T 43120.000</u>	369.200	69350.000	<u>T 70200.000</u>	99.7%	105.000	1.996	<u>M 596.100</u>	5260.000
X		<u>T 467.500</u>	<u>T 44180.000</u>	375.200	69670.000	<u>T 70010.000</u>	101.0%	107.200	3.646	<u>M 607.800</u>	4228.000
S		<u>T 10.490</u>	<u>T 914.900</u>	5.212	510.300	<u>T 615.000</u>	2.6%	3.151	1.431	<u>M 10.280</u>	897.500
%RSD		<u>T 2.244</u>	<u>T 2.071</u>	1.389	0.733	<u>T 0.878</u>	2.6	2.940	39.240	<u>M 1.691</u>	21.230
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:06	<u>T 31500.000</u>	308.500	<u>T 31180.000</u>	32680.000	8.516	17.800	19.680	42.530	45.340	<u>M 2549.000</u>
2	13:36:33	<u>T 31840.000</u>	312.300	<u>T 31730.000</u>	34250.000	8.619	18.630	19.890	42.270	45.150	<u>M 2562.000</u>
3	13:37:00	<u>T 30990.000</u>	306.200	<u>T 31070.000</u>	32960.000	8.410	18.520	16.760	41.710	44.940	<u>M 2558.000</u>
X		<u>T 31450.000</u>	309.000	<u>T 31330.000</u>	33300.000	8.515	18.320	18.780	42.170	45.140	<u>M 2556.000</u>
S		<u>T 428.600</u>	3.071	<u>T 355.700</u>	834.700	0.104	0.448	1.750	0.417	0.201	<u>M 6.818</u>
%RSD		<u>T 1.363</u>	0.994	<u>T 1.135</u>	2.507	1.222	2.446	9.321	0.990	0.445	<u>M 0.267</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:06	<u>M 2304.000</u>	<u>M 2421.000</u>	3.480	0.223	2.591	2.868	-1.163	-0.244	1.289	169.200
2	13:36:33	<u>M 2284.000</u>	<u>M 2422.000</u>	3.484	0.702	3.575	3.470	-2.130	-0.403	-1.182	167.500
3	13:37:00	<u>M 2310.000</u>	<u>M 2378.000</u>	2.650	0.988	4.393	2.546	-0.552	-0.094	0.889	168.100
X		<u>M 2299.000</u>	<u>M 2407.000</u>	3.205	0.638	3.520	2.961	-1.282	-0.247	0.332	168.200
S		<u>M 13.360</u>	<u>M 24.950</u>	0.480	0.386	0.902	0.469	0.795	0.154	1.326	0.860
%RSD		<u>M 0.581</u>	<u>M 1.036</u>	14.980	60.570	25.630	15.850	62.060	62.480	399.600	0.511
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:06	109.5%	2.716	3.123	3.019	4.685	0.038	0.068	0.813	0.720	104.9%
2	13:36:33	109.1%	2.923	3.154	3.101	5.393	0.052	0.029	0.775	0.773	103.6%
3	13:37:00	108.0%	2.755	2.706	3.132	5.109	0.046	0.048	0.734	0.740	102.6%
X		108.9%	2.798	2.994	3.084	5.062	0.045	0.048	0.774	0.744	103.7%
S		0.8%	0.110	0.250	0.059	0.356	0.007	0.019	0.039	0.027	1.2%
%RSD		0.7	3.934	8.349	1.900	7.043	15.550	40.380	5.087	3.574	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:36:06	2.699	3.818	0.347	0.343	23.260	23.500	106.2%	0.332	0.328	201.800
2	13:36:33	2.718	3.736	0.295	0.337	23.440	23.640	106.7%	0.291	0.300	200.300
3	13:37:00	2.942	3.310	0.323	0.409	22.990	23.640	105.1%	0.255	0.253	202.300
X		2.787	3.621	0.322	0.363	23.230	23.590	106.0%	0.293	0.293	201.400
S		0.135	0.273	0.026	0.040	0.225	0.080	0.8%	0.038	0.038	1.053
%RSD		4.838	7.532	8.060	11.000	0.968	0.338	0.8	13.090	12.940	0.523
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:36:06	186.000	194.600	105.7%							
2	13:36:33	189.000	193.600	107.4%							
3	13:37:00	189.300	195.600	108.5%							
X		188.100	194.600	107.2%							
S		1.840	0.995	1.4%							
%RSD		0.978	0.511	1.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:56	87.8%	189.200	98.910	100.100	13.360	3093.000	3659.000	3709.000	5422.000	13600.000
2	13:42:23	87.1%	187.800	88.860	94.300	14.070	3021.000	3605.000	3679.000	5341.000	13240.000
3	13:42:49	87.9%	188.400	95.220	95.660	11.510	3083.000	3648.000	3762.000	5360.000	13250.000
X		87.6%	188.500	94.330	96.700	12.980	3066.000	3637.000	3717.000	5374.000	13370.000
S		0.5%	0.691	5.084	3.052	1.326	39.060	28.120	41.870	42.530	205.900
%RSD		0.5	0.367	5.389	3.157	10.220	1.274	0.773	1.127	0.791	1.540
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:56	4014.000	188000.000	3770.000	349000.000	341300.000	89.3%	726.400	184.900	3068.000	43900.000
2	13:42:23	3871.000	180800.000	3682.000	336200.000	338300.000	91.8%	706.400	195.100	3035.000	35560.000
3	13:42:49	3928.000	186100.000	3747.000	345900.000	341500.000	89.3%	715.100	198.900	3099.000	33990.000
X		3938.000	185000.000	3733.000	343700.000	340400.000	90.1%	716.000	193.000	3067.000	37820.000
S		71.850	3702.000	45.690	6708.000	1753.000	1.4%	10.050	7.218	31.880	5329.000
%RSD		1.825	2.002	1.224	1.952	0.515	1.6	1.404	3.740	1.039	14.090
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:56	154300.000	1679.000	152800.000	154400.000	232.500	274.400	281.100	357.500	394.000	10470.000
2	13:42:23	153600.000	1686.000	152300.000	152500.000	231.500	266.200	270.500	350.000	389.900	10470.000
3	13:42:49	155400.000	1691.000	154900.000	156300.000	236.400	278.800	284.100	356.000	402.300	10690.000
X		154400.000	1685.000	153300.000	154400.000	233.500	273.100	278.600	354.500	395.400	10540.000
S		899.100	5.946	1371.000	1876.000	2.585	6.376	7.113	3.949	6.306	126.800
%RSD		0.582	0.353	0.894	1.215	1.107	2.334	2.553	1.114	1.595	1.202
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:56	9971.000	9215.000	213.700	150.800	14.240	13.900	722.600	180.400	11.210	892.200
2	13:42:23	9923.000	9120.000	214.100	157.400	15.580	11.670	687.000	172.900	6.304	890.400
3	13:42:49	9946.000	9328.000	215.400	153.800	17.390	16.180	727.800	180.600	9.647	895.100
X		9947.000	9221.000	214.400	154.000	15.740	13.920	712.500	178.000	9.054	892.600
S		24.290	104.200	0.855	3.269	1.583	2.255	22.210	4.406	2.506	2.351
%RSD		0.244	1.130	0.399	2.122	10.060	16.200	3.117	2.476	27.680	0.263
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:56	117.7%	224.300	225.400	224.400	201.200	183.400	181.300	191.900	189.900	96.7%
2	13:42:23	118.1%	226.200	225.400	226.800	197.900	186.000	184.200	193.800	194.400	96.8%
3	13:42:49	118.9%	226.400	225.900	224.300	184.500	182.200	183.700	189.700	192.500	98.1%
X		118.2%	225.600	225.600	225.200	194.500	183.900	183.100	191.800	192.300	97.2%
S		0.6%	1.152	0.314	1.380	8.810	1.974	1.547	2.046	2.234	0.8%
%RSD		0.5	0.510	0.139	0.613	4.529	1.073	0.845	1.067	1.162	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:41:56	208.500	211.100	184.600	181.600	314.000	312.000	100.7%	196.600	189.500	1180.000
2	13:42:23	206.900	214.100	187.500	183.500	321.900	311.500	101.3%	197.300	193.500	1181.000
3	13:42:49	205.600	212.700	185.200	184.200	315.400	309.100	103.2%	196.800	190.100	1174.000
X		207.000	212.600	185.700	183.100	317.100	310.900	101.7%	196.900	191.000	1178.000
S		1.480	1.525	1.529	1.350	4.178	1.566	1.3%	0.341	2.162	3.880
%RSD		0.715	0.717	0.823	0.738	1.318	0.504	1.2	0.173	1.132	0.329
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:41:56	1114.000	1132.000	101.6%							
2	13:42:23	1126.000	1144.000	103.6%							
3	13:42:49	1117.000	1132.000	103.3%							
X		1119.000	1136.000	102.8%							
S		6.077	7.202	1.1%							
%RSD		0.543	0.634	1.0							

VQ53372-001 5/11/2020 13:47:18 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:46	109.0%	0.023	2.326	2.144	12.100	5.394	0.644	0.513	0.479	1.853
2	13:48:14	109.2%	0.007	3.226	2.111	18.390	5.635	0.765	0.699	0.705	2.099
3	13:48:41	107.4%	0.073	2.035	1.890	13.110	5.323	0.732	0.608	0.629	2.188
X		108.5%	0.034	2.529	2.048	14.530	5.450	0.714	0.606	0.605	2.047
S		1.0%	0.035	0.621	0.138	3.377	0.164	0.062	0.093	0.115	0.174
%RSD		0.9	101.300	24.540	6.752	23.240	3.001	8.743	15.330	19.010	8.481
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:46	4.820	66420.000	7.688	14.440	15.360	111.2%	0.056	-0.046	0.390	2125.000
2	13:48:14	4.138	67490.000	6.949	19.270	21.790	110.2%	0.057	0.024	0.414	2144.000
3	13:48:41	4.230	66350.000	7.072	18.280	24.550	110.5%	0.036	0.058	0.485	2129.000
X		4.396	66750.000	7.236	17.330	20.570	110.6%	0.050	0.012	0.430	2133.000
S		0.370	639.900	0.396	2.553	4.715	0.5%	0.012	0.053	0.049	9.862
%RSD		8.417	0.959	5.475	14.740	22.920	0.5	24.360	440.500	11.500	0.463
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:46	10.810	0.110	17.610	8.982	-0.007	0.024	0.096	0.068	0.046	1.406
2	13:48:14	13.700	0.145	20.160	12.440	0.002	0.011	-0.068	0.013	0.076	1.606
3	13:48:41	14.300	0.147	21.830	11.390	0.005	0.011	0.145	0.073	0.103	1.549
X		12.930	0.134	19.870	10.940	-0.000	0.015	0.058	0.051	0.075	1.520
S		1.866	0.021	2.129	1.771	0.006	0.007	0.111	0.033	0.029	0.103
%RSD		14.420	15.470	10.710	16.200	12280.000	46.160	193.300	64.710	38.600	6.793
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:46	1.727	1.341	-0.456	1.330	5.137	7.154	-3.777	-0.852	2.056	0.047
2	13:48:14	1.312	1.486	-0.207	0.469	6.620	7.621	-0.339	-0.029	-0.836	0.061
3	13:48:41	1.582	1.671	0.100	-0.057	6.442	7.236	-0.890	-0.146	-0.881	0.066
X		1.540	1.499	-0.188	0.581	6.066	7.337	-1.668	-0.342	0.113	0.058
S		0.210	0.166	0.278	0.700	0.810	0.250	1.847	0.445	1.683	0.010
%RSD		13.650	11.050	148.200	120.600	13.350	3.402	110.700	130.000	1491.000	16.790
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:46	112.7%	0.040	0.160	0.015	-0.097	0.021	0.009	-0.000	0.005	110.6%
2	13:48:14	112.4%	0.161	0.029	0.062	-0.289	0.017	0.009	0.009	0.002	109.7%
3	13:48:41	113.9%	0.095	0.093	0.133	-1.921	0.013	0.007	0.017	0.029	110.7%
X		113.0%	0.099	0.094	0.070	-0.769	0.017	0.009	0.009	0.012	110.3%
S		0.8%	0.061	0.066	0.059	1.002	0.004	0.001	0.009	0.015	0.5%
%RSD		0.7	61.520	69.950	85.260	130.400	24.950	14.970	100.200	121.800	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:46	0.120	0.263	0.335	0.352	-0.005	0.005	109.7%	0.054	0.090	0.065
2	13:48:14	0.187	0.258	0.411	0.409	0.035	0.058	109.2%	0.067	0.085	0.105
3	13:48:41	0.185	0.241	0.271	0.386	0.021	0.012	109.4%	0.064	0.064	0.125
X		0.164	0.254	0.339	0.382	0.017	0.025	109.5%	0.062	0.080	0.098
S		0.038	0.011	0.070	0.029	0.020	0.029	0.2%	0.007	0.014	0.030
%RSD		23.100	4.426	20.620	7.577	117.900	114.900	0.2	11.150	17.330	31.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:47:46	0.090	0.079	111.1%							
2	13:48:14	0.070	0.090	110.9%							
3	13:48:41	0.101	0.101	111.8%							
X		0.087	0.090	111.2%							
S		0.016	0.011	0.5%							
%RSD		18.160	11.900	0.4							

VQ53372-002 5/11/2020 13:53:09 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	106.2%	98.460	107.200	104.400	11.400	1041.000	1093.000	1040.000	1036.000	100.700
2	13:54:03	103.7%	100.700	106.700	103.600	17.370	1060.000	1046.000	1044.000	1043.000	100.000
3	13:54:30	104.4%	102.000	105.400	100.500	12.610	1036.000	1107.000	1076.000	1063.000	99.840
X		104.7%	100.396%	106.400	102.800	13.790	104.552%	1082.000	1053.000	104.735%	100.205%
S		1.3%	n/a	0.960	2.055	3.152	n/a	31.840	19.810	n/a	n/a
%RSD		1.2	1.801	0.902	1.999	22.860	1.198	2.942	1.880	1.297	0.462
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	1038.000	66680.000	1085.000	1034.000	1016.000	106.4%	98.540	98.830	99.560	2902.000
2	13:54:03	1025.000	68000.000	1081.000	1073.000	1000.000	104.5%	101.000	97.440	101.400	3699.000
3	13:54:30	1012.000	66930.000	1073.000	1059.000	1011.000	103.2%	103.400	98.280	100.600	3649.000
X		1025.000	67200.000	107.950%	1055.000	100.885%	104.7%	100.973%	98.184%	100.537%	3417.000
S		12.900	702.300	n/a	19.920	n/a	1.6%	n/a	n/a	n/a	446.700
%RSD		1.258	1.045	0.576	1.888	0.792	1.5	2.421	0.712	0.942	13.070
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	1084.000	97.420	1025.000	1036.000	98.740	104.400	106.300	102.800	104.300	101.400
2	13:54:03	1117.000	97.950	1033.000	1061.000	100.400	102.100	104.100	102.700	103.800	102.400
3	13:54:30	1122.000	99.840	1056.000	1071.000	99.730	105.000	105.200	101.500	104.300	105.700
X		1108.000	98.405%	1038.000	105.611%	99.630%	103.853%	105.200	102.328%	104.130%	103.182%
S		20.780	n/a	15.890	n/a	n/a	n/a	1.086	n/a	n/a	n/a
%RSD		1.876	1.291	1.531	1.708	0.850	1.470	1.032	0.712	0.315	2.194
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	104.300	102.700	108.800	99.890	6.160	5.801	504.400	108.900	-0.160	97.770
2	13:54:03	101.500	100.600	108.500	101.100	5.860	5.546	473.100	103.900	2.325	96.820
3	13:54:30	101.100	101.200	104.000	102.100	6.036	4.988	480.700	105.200	1.890	98.090
X		102.300	101.500	107.068%	101.000	6.019	5.445	486.100	105.980%	1.352	97.560
S		1.740	1.064	n/a	1.118	0.150	0.416	16.330	n/a	1.327	0.662
%RSD		1.701	1.048	2.520	1.107	2.500	7.644	3.360	2.443	98.150	0.678
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	107.6%	102.300	104.100	103.100	98.550	99.760	99.600	99.700	99.720	107.3%
2	13:54:03	108.8%	104.500	104.500	103.300	98.510	100.500	99.990	100.800	99.480	106.1%
3	13:54:30	107.7%	104.400	106.900	105.800	103.200	102.600	101.900	98.610	102.200	105.3%
X		108.0%	103.700	105.100	104.100	100.100	100.937%	100.500	99.690	100.467%	106.2%
S		0.7%	1.249	1.535	1.550	2.688	n/a	1.234	1.080	n/a	1.0%
%RSD		0.6	1.204	1.460	1.490	2.686	1.464	1.228	1.083	1.502	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	101.200	98.070	99.490	103.200	99.540	99.340	106.4%	100.500	97.960	100.600
2	13:54:03	101.000	99.660	101.300	101.100	101.800	101.900	107.0%	100.400	99.100	101.400
3	13:54:30	102.100	99.790	100.900	100.200	102.100	102.300	107.8%	100.100	98.940	101.400
X		101.400	99.175%	100.600	101.521%	101.100	101.155%	107.1%	100.300	98.666%	101.100
S		0.598	n/a	0.935	n/a	1.385	n/a	0.7%	0.209	n/a	0.485
%RSD		0.590	0.964	0.929	1.525	1.369	1.572	0.6	0.208	0.621	0.479
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:53:36	100.400	100.800	109.5%							
2	13:54:03	100.300	101.400	111.0%							
3	13:54:30	101.100	101.700	111.0%							
X		100.600	101.297%	110.5%							
S		0.435	n/a	0.9%							
%RSD		0.432	0.463	0.8							

xVE08113-001(5)

5/11/2020 13:58:59

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:25	84.4%	0.003	<u>M 6024.000</u>	<u>TM 6017.000</u>	392.600	<u>TM 468400.000</u>	181.300	175.900	193.300	68.710
2	13:59:52	84.1%	-0.007	<u>M 5755.000</u>	<u>TM 6144.000</u>	392.900	<u>TM 475200.000</u>	182.500	177.700	189.400	68.250
3	14:00:19	81.7%	0.026	<u>M 5926.000</u>	<u>TM 6235.000</u>	404.800	<u>TM 478600.000</u>	184.700	178.300	188.900	67.980
X		83.4%	0.007	<u>M 5902.000</u>	<u>TM 6132.000</u>	396.800	<u>TM 474100.000</u>	182.900	177.300	190.500	68.320
S		1.5%	0.017	<u>M 136.200</u>	<u>TM 109.600</u>	6.961	<u>TM 5176.000</u>	1.730	1.238	2.429	0.368
%RSD		1.8	232.800	<u>M 2.308</u>	<u>TM 1.788</u>	1.754	<u>TM 1.092</u>	0.946	0.698	1.275	0.539
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:25	145.600	<u>T 18470.000</u>	<u>T 34230.000</u>	446.900	412.500	88.6%	3.787	0.665	9.039	320.700
2	13:59:52	141.400	<u>T 18330.000</u>	<u>T 34140.000</u>	438.200	423.600	87.0%	3.505	0.643	8.728	304.800
3	14:00:19	141.700	<u>T 18450.000</u>	<u>T 34390.000</u>	460.000	410.300	84.7%	3.686	0.462	9.154	368.100
X		142.900	<u>T 18420.000</u>	<u>T 34260.000</u>	448.400	415.500	86.8%	3.659	0.590	8.974	331.200
S		2.356	<u>T 79.360</u>	<u>T 126.800</u>	10.940	7.151	1.9%	0.142	0.111	0.220	32.910
%RSD		1.649	<u>T 0.431</u>	<u>T 0.370</u>	2.440	1.721	2.2	3.893	18.870	2.457	9.936
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:25	14380.000	243.000	<u>T 13660.000</u>	14070.000	3.287	28.050	43.560	45.890	45.290	287.800
2	13:59:52	14530.000	246.600	<u>T 13790.000</u>	14170.000	3.213	29.350	45.110	46.500	45.520	286.800
3	14:00:19	14830.000	249.700	<u>T 13960.000</u>	14430.000	3.231	29.490	49.560	46.730	47.930	294.500
X		14580.000	246.400	<u>T 13800.000</u>	14230.000	3.244	28.960	46.080	46.370	46.250	289.700
S		225.400	3.375	<u>T 148.100</u>	184.500	0.039	0.796	3.116	0.436	1.461	4.192
%RSD		1.546	1.370	<u>T 1.073</u>	1.297	1.192	2.749	6.764	0.941	3.159	1.447
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:25	263.200	273.000	1.255	1.768	19.280	17.900	3.924	0.944	-1.175	0.599
2	13:59:52	258.100	276.300	0.610	1.835	19.140	16.800	-1.435	-0.278	-0.577	0.593
3	14:00:19	270.300	278.100	0.517	1.643	17.650	19.490	-1.971	-0.348	-2.922	0.641
X		263.900	275.800	0.794	1.749	18.690	18.060	0.173	0.106	-1.558	0.611
S		6.163	2.607	0.402	0.097	0.906	1.354	3.260	0.727	1.218	0.026
%RSD		2.336	0.945	50.670	5.561	4.850	7.498	1889.000	686.700	78.200	4.297
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:25	92.7%	28.030	28.090	27.110	1.979	0.008	0.020	0.452	0.481	88.9%
2	13:59:52	92.8%	27.310	27.240	27.540	0.895	0.005	0.017	0.466	0.522	90.0%
3	14:00:19	91.7%	27.730	26.570	27.710	1.051	0.026	0.012	0.538	0.500	89.1%
X		92.4%	27.690	27.300	27.450	1.308	0.013	0.016	0.485	0.501	89.3%
S		0.6%	0.359	0.758	0.308	0.586	0.011	0.004	0.046	0.020	0.6%
%RSD		0.7	1.295	2.778	1.120	44.770	87.380	25.210	9.516	4.052	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:25	0.991	1.181	3.029	2.747	2.949	2.515	95.0%	0.054	0.048	0.674
2	13:59:52	0.963	1.323	3.121	2.907	2.929	2.700	96.7%	0.065	0.036	0.635
3	14:00:19	0.914	1.124	2.953	2.991	2.435	2.333	97.2%	0.035	0.056	0.634
X		0.956	1.209	3.034	2.881	2.771	2.516	96.3%	0.052	0.047	0.648
S		0.039	0.102	0.084	0.124	0.291	0.184	1.2%	0.015	0.010	0.023
%RSD		4.089	8.466	2.759	4.309	10.490	7.292	1.2	29.120	22.060	3.542
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	13:59:25	0.607	0.636	91.0%							
2	13:59:52	0.617	0.598	92.9%							
3	14:00:19	0.525	0.599	93.3%							
X		0.583	0.611	92.4%							
S		0.050	0.022	1.2%							
%RSD		8.632	3.550	1.3							

xVE08113-002(5)

5/11/2020 14:04:49

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:18	73.2%	-0.018	M 5809.000	TM 6041.000	451.700	TM 441200.000	231.300	221.900	230.300	75.430
2	14:05:44	71.7%	0.007	M 5767.000	TM 5918.000	439.600	TM 437400.000	229.400	222.500	234.000	75.780
3	14:06:11	68.5%	0.008	M 6077.000	TM 6382.000	458.200	TM 447500.000	238.400	227.800	238.200	77.710
X		71.1%	-0.001	M 5885.000	TM 6114.000	449.900	TM 442000.000	233.100	224.100	234.200	76.300
S		2.4%	0.015	M 168.100	TM 240.400	9.456	TM 5108.000	4.747	3.264	3.977	1.227
%RSD		3.4	1615.000	M 2.857	TM 3.932	2.102	TM 1.156	2.037	1.457	1.698	1.608
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:18	176.000	T 17620.000	T 34580.000	429.700	436.000	76.0%	4.792	0.901	10.550	194.000
2	14:05:44	172.600	15990.000	T 33560.000	455.700	437.600	73.7%	4.847	0.721	10.620	265.100
3	14:06:11	179.700	T 17860.000	T 34810.000	513.900	446.400	71.2%	4.396	0.600	10.960	350.800
X		176.100	T 17160.000	T 34310.000	466.400	440.000	73.7%	4.678	0.741	10.710	270.000
S		3.555	T 1018.000	T 666.100	43.100	5.559	2.4%	0.246	0.151	0.220	78.550
%RSD		2.018	T 5.932	T 1.941	9.240	1.263	3.3	5.256	20.440	2.050	29.100
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:18	17230.000	246.300	T 16470.000	16830.000	3.234	27.860	54.450	47.040	46.960	317.500
2	14:05:44	17280.000	245.400	T 16340.000	16940.000	3.277	28.880	59.710	47.560	48.070	324.400
3	14:06:11	17630.000	252.000	T 16620.000	16860.000	3.063	28.920	68.520	46.420	50.000	327.300
X		17380.000	247.900	T 16480.000	16870.000	3.191	28.550	60.890	47.000	48.340	323.100
S		216.700	3.607	T 139.000	57.550	0.114	0.600	7.109	0.570	1.536	5.046
%RSD		1.246	1.455	T 0.844	0.341	3.559	2.101	11.670	1.213	3.177	1.562
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:18	291.800	301.600	0.375	2.909	19.790	11.130	-2.219	-0.453	-1.425	0.791
2	14:05:44	287.400	301.300	1.040	3.178	15.750	14.180	-0.053	-0.077	2.738	0.816
3	14:06:11	299.100	307.200	0.713	3.716	22.290	17.030	-3.425	-0.834	3.568	0.773
X		292.700	303.400	0.710	3.267	19.270	14.110	-1.899	-0.455	1.627	0.794
S		5.923	3.311	0.332	0.411	3.300	2.953	1.709	0.378	2.676	0.022
%RSD		2.023	1.091	46.830	12.570	17.120	20.920	89.980	83.200	164.500	2.717
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:18	83.7%	29.170	28.970	28.150	1.437	0.056	0.054	0.488	0.576	82.9%
2	14:05:44	81.5%	27.410	29.970	28.500	0.868	0.067	0.055	0.430	0.625	80.6%
3	14:06:11	80.2%	29.270	28.000	28.600	1.261	0.048	0.031	0.541	0.533	82.1%
X		81.8%	28.610	28.980	28.420	1.189	0.057	0.047	0.486	0.578	81.9%
S		1.8%	1.047	0.984	0.234	0.291	0.009	0.014	0.055	0.046	1.2%
%RSD		2.2	3.659	3.396	0.823	24.510	16.050	29.490	11.400	7.926	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:18	1.402	1.670	3.327	2.828	4.024	4.118	93.0%	0.021	0.028	0.696
2	14:05:44	1.426	1.718	3.337	2.993	4.015	3.840	91.8%	0.019	0.033	0.809
3	14:06:11	1.498	1.812	3.285	3.095	3.551	3.769	92.1%	0.018	0.025	0.872
X		1.442	1.734	3.316	2.972	3.863	3.909	92.3%	0.019	0.029	0.792
S		0.050	0.072	0.027	0.135	0.271	0.185	0.6%	0.001	0.004	0.089
%RSD		3.485	4.171	0.828	4.528	7.002	4.720	0.7	7.596	13.840	11.290
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:05:18	0.796	0.764	90.2%							
2	14:05:44	0.807	0.782	91.4%							
3	14:06:11	0.746	0.810	92.5%							
X		0.783	0.785	91.4%							
S		0.033	0.023	1.1%							
%RSD		4.155	2.938	1.3							

VQ53374-001

5/11/2020 14:10:40

User Pre-dilution: 1.000

user Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:08	98.5%	0.000	56.030	52.840	18.520	38.760	0.412	0.366	0.132	0.875
2	14:11:34	97.6%	-0.018	48.810	46.890	12.080	38.370	0.411	0.126	0.355	0.961
3	14:12:02	95.7%	-0.018	44.330	40.780	16.970	35.310	0.428	0.188	0.367	0.975
X		97.3%	-0.012	49.720	46.830	15.860	37.480	0.417	0.227	0.284	0.937
S		1.5%	0.010	5.902	6.033	3.361	1.890	0.010	0.125	0.133	0.054
%RSD		1.5	88.230	11.870	12.880	21.200	5.043	2.358	54.930	46.570	5.766
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:08	2.398	62960.000	12.620	8.144	3.330	97.7%	0.026	-0.092	0.084	1644.000
2	14:11:34	2.527	62530.000	14.310	1.846	4.355	96.3%	0.027	-0.186	0.116	1710.000
3	14:12:02	3.857	63990.000	12.470	-0.279	3.505	94.3%	-0.020	-0.208	0.188	1825.000
X		2.927	63160.000	13.130	3.237	3.730	96.1%	0.011	-0.162	0.129	1726.000
S		0.808	749.300	1.019	4.380	0.548	1.7%	0.027	0.062	0.053	91.760
%RSD		27.600	1.186	7.763	135.300	14.700	1.8	251.600	38.170	40.930	5.315
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:08	3.122	0.004	2.922	4.155	-0.019	0.158	0.863	0.332	0.305	0.764
2	14:11:34	1.700	0.020	3.318	6.077	-0.018	0.102	0.346	0.250	0.226	0.596
3	14:12:02	3.888	0.022	4.180	3.661	-0.018	0.045	0.474	0.178	0.080	0.680
X		2.903	0.015	3.473	4.631	-0.018	0.102	0.561	0.253	0.203	0.680
S		1.110	0.010	0.644	1.277	0.001	0.056	0.269	0.077	0.114	0.084
%RSD		38.240	63.970	18.530	27.570	4.926	55.210	47.960	30.230	56.070	12.310
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:08	0.732	0.674	-0.966	1.434	8.220	6.699	-0.865	-0.277	3.766	0.002
2	14:11:34	0.582	0.576	0.171	0.683	6.671	7.458	0.797	0.173	-0.981	-0.001
3	14:12:02	0.427	0.509	-0.224	0.958	6.988	7.682	0.235	0.054	-1.529	0.003
X		0.580	0.586	-0.340	1.025	7.293	7.280	0.056	-0.017	0.419	0.001
S		0.152	0.083	0.577	0.380	0.818	0.515	0.845	0.233	2.912	0.002
%RSD		26.220	14.110	169.900	37.100	11.220	7.073	1516.000	1406.000	695.600	156.900
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:08	103.5%	-0.082	-0.082	-0.143	-0.042	0.002	0.001	0.001	-0.002	103.5%
2	14:11:34	102.8%	-0.096	-0.058	-0.138	-0.667	0.002	-0.002	0.001	-0.002	103.2%
3	14:12:02	103.7%	-0.092	0.046	-0.131	-0.370	0.002	0.001	0.001	-0.007	104.5%
X		103.3%	-0.090	-0.032	-0.137	-0.359	0.002	-0.000	0.001	-0.004	103.8%
S		0.5%	0.007	0.068	0.006	0.313	0.000	0.001	0.000	0.003	0.7%
%RSD		0.4	7.962	215.300	4.189	87.000	0.644	2437.000	4.189	80.900	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:08	0.125	0.130	0.024	0.073	0.023	0.005	107.8%	0.029	0.030	0.026
2	14:11:34	0.116	0.115	0.042	0.092	0.052	0.005	107.7%	0.022	0.016	-0.004
3	14:12:02	0.106	0.155	0.035	0.020	0.023	0.005	108.3%	0.011	0.016	0.008
X		0.116	0.133	0.034	0.062	0.033	0.005	107.9%	0.020	0.020	0.010
S		0.010	0.020	0.009	0.037	0.016	0.000	0.4%	0.009	0.008	0.015
%RSD		8.495	15.110	26.990	60.350	50.330	0.756	0.3	45.240	39.800	151.100
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:11:08	0.035	0.027	113.3%							
2	14:11:34	0.033	0.013	114.2%							
3	14:12:02	0.019	0.009	115.5%							
X		0.029	0.016	114.3%							
S		0.009	0.009	1.1%							
%RSD		30.310	57.410	1.0							

VQ53374-002

5/11/2020 14:16:31

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	90.8%	96.930	124.300	120.400	20.230	1063.000	1103.000	1035.000	1019.000	98.910
2	14:17:25	90.6%	94.820	117.100	117.300	16.110	1076.000	1073.000	1014.000	1037.000	100.300
3	14:17:52	86.7%	97.210	121.500	120.400	17.420	1077.000	1087.000	1020.000	1019.000	99.420
X		89.4%	96.320	121.000	119.400	17.920	1072.000	1088.000	1023.000	1025.000	99.550
S		2.3%	1.303	3.651	1.764	2.109	7.870	14.830	10.880	10.050	0.718
%RSD		2.6	1.353	3.018	1.478	11.770	0.734	1.363	1.063	0.980	0.721
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	982.500	61940.000	1084.000	1102.000	1000.000	89.2%	98.420	98.780	100.500	2902.000
2	14:17:25	1017.000	63650.000	1114.000	1105.000	1020.000	87.2%	100.200	98.840	99.190	3029.000
3	14:17:52	955.500	60270.000	1063.000	1051.000	997.300	87.8%	100.100	97.860	98.820	3194.000
X		984.900	61950.000	1087.000	1086.000	1006.000	88.1%	99.570	98.490	99.500	3042.000
S		30.610	1689.000	25.530	30.190	12.140	1.0%	0.991	0.549	0.877	146.400
%RSD		3.108	2.727	2.348	2.780	1.207	1.2	0.995	0.558	0.881	4.813
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	1126.000	100.600	1029.000	1064.000	97.910	99.210	100.400	97.280	103.200	106.600
2	14:17:25	1133.000	101.000	1065.000	1086.000	99.350	101.300	104.400	98.880	102.900	104.800
3	14:17:52	1115.000	100.400	1035.000	1068.000	99.050	97.830	100.600	96.830	101.500	105.600
X		1125.000	100.700	1043.000	1073.000	98.770	99.450	101.800	97.660	102.500	105.700
S		9.174	0.325	19.010	11.620	0.761	1.760	2.281	1.078	0.924	0.869
%RSD		0.816	0.323	1.823	1.084	0.771	1.770	2.241	1.104	0.901	0.823
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	104.500	103.000	98.650	99.430	4.707	6.155	485.000	100.900	1.522	96.960
2	14:17:25	100.900	103.700	100.900	98.740	4.765	5.405	491.500	102.500	1.027	98.180
3	14:17:52	100.700	101.600	100.300	101.900	6.064	5.715	484.800	100.600	-1.241	98.030
X		102.100	102.800	99.940	100.000	5.179	5.758	487.100	101.300	0.436	97.730
S		2.136	1.054	1.158	1.682	0.767	0.377	3.784	1.009	1.474	0.663
%RSD		2.093	1.025	1.159	1.682	14.820	6.549	0.777	0.996	337.900	0.679
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	97.1%	96.730	96.180	97.710	97.750	95.900	96.280	98.210	98.430	99.1%
2	14:17:25	96.0%	98.530	100.500	97.770	106.700	97.660	96.370	99.310	100.500	97.7%
3	14:17:52	94.9%	98.200	101.300	99.000	104.100	97.610	98.020	98.060	100.300	97.3%
X		96.0%	97.820	99.320	98.160	102.800	97.060	96.890	98.530	99.720	98.0%
S		1.1%	0.957	2.742	0.728	4.589	1.001	0.983	0.684	1.124	1.0%
%RSD		1.2	0.979	2.761	0.742	4.462	1.031	1.014	0.694	1.127	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	99.740	98.310	97.720	95.010	99.470	98.470	103.7%	99.600	100.200	102.200
2	14:17:25	99.650	100.700	100.300	96.390	100.500	98.410	104.4%	98.120	101.100	102.500
3	14:17:52	101.100	99.290	99.590	96.090	102.300	98.250	105.0%	99.240	99.230	102.400
X		100.200	99.430	99.200	95.830	100.800	98.380	104.4%	98.980	100.200	102.400
S		0.833	1.191	1.327	0.727	1.420	0.115	0.6%	0.772	0.943	0.162
%RSD		0.831	1.198	1.338	0.759	1.409	0.117	0.6	0.780	0.941	0.158
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:16:58	103.800	104.400	110.2%							
2	14:17:25	103.500	103.000	111.0%							
3	14:17:52	101.700	103.300	110.9%							
X		103.000	103.500	110.7%							
S		1.144	0.717	0.4%							
%RSD		1.111	0.692	0.4							

VD17087-005

5/11/2020 14:22:22

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:49	89.5%	-0.008	7.165	6.912	-25.100	±6722.000	±23680.000	±24110.000	±33270.000	2.240
2	14:23:16	90.8%	0.050	7.987	6.983	-27.010	±6647.000	±23970.000	±24280.000	±33520.000	2.332
3	14:23:43	93.2%	0.030	7.792	6.803	-24.160	±6823.000	±24570.000	±24310.000	±34450.000	2.267
X		91.2%	0.024	7.648	6.899	-25.420	±6731.000	±24070.000	±24230.000	±33750.000	2.280
S		1.9%	0.030	0.429	0.091	1.453	±88.460	±453.300	±108.600	±622.900	0.047
%RSD		2.1	122.600	5.614	1.315	5.717	±1.314	±1.883	±0.448	±1.846	2.065
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:49	±7350.000	±53920.000	±2882.000	94880.000	±94060.000	90.5%	0.887	-0.094	0.279	2000.000
2	14:23:16	±7332.000	±54970.000	±2882.000	94380.000	±93980.000	91.7%	0.695	-0.089	0.281	1894.000
3	14:23:43	±7517.000	±56710.000	±2935.000	95110.000	±95990.000	91.2%	0.571	0.028	0.273	1916.000
X		±7400.000	±55200.000	±2900.000	94790.000	±94680.000	91.1%	0.718	-0.052	0.278	1937.000
S		±102.200	±1412.000	±30.690	369.400	±1139.000	0.6%	0.159	0.069	0.004	56.240
%RSD		±1.382	±2.557	±1.058	0.390	±1.203	0.7	22.180	133.300	1.345	2.904
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:49	4439.000	TM 7452.000	±4309.000	4651.000	17.760	15.640	14.400	0.953	1.233	17.730
2	14:23:16	4584.000	TM 7509.000	±4416.000	4728.000	18.140	15.260	14.100	0.993	1.387	17.410
3	14:23:43	4641.000	TM 7550.000	±4508.000	4793.000	18.730	15.110	14.740	1.150	1.284	18.440
X		4555.000	TM 7504.000	±4411.000	4724.000	18.210	15.340	14.410	1.032	1.301	17.860
S		104.200	TM 49.440	±99.950	70.970	0.485	0.272	0.322	0.104	0.078	0.529
%RSD		2.289	TM 0.659	±2.266	1.502	2.666	1.771	2.235	10.080	6.014	2.961
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:49	25.110	24.470	1.805	1.128	20.400	21.950	-1.048	-0.248	0.968	101.200
2	14:23:16	27.520	25.020	2.471	-0.227	21.570	24.430	-1.677	-0.339	-0.787	101.800
3	14:23:43	27.230	25.100	1.933	0.042	22.210	22.070	-1.727	-0.377	0.281	102.100
X		26.620	24.860	2.070	0.314	21.390	22.820	-1.484	-0.321	0.154	101.700
S		1.315	0.344	0.353	0.717	0.919	1.398	0.378	0.066	0.884	0.450
%RSD		4.941	1.384	17.070	228.100	4.295	6.126	25.480	20.680	575.200	0.442
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:49	96.6%	0.529	0.325	0.274	4.501	0.015	0.006	0.072	0.085	95.5%
2	14:23:16	97.7%	0.358	0.606	0.311	1.249	0.007	0.003	0.102	0.076	96.0%
3	14:23:43	99.1%	0.457	0.439	0.245	1.494	0.005	0.003	0.030	0.053	97.5%
X		97.8%	0.448	0.457	0.277	2.415	0.009	0.004	0.068	0.071	96.3%
S		1.3%	0.086	0.141	0.033	1.811	0.005	0.001	0.037	0.016	1.0%
%RSD		1.3	19.150	30.920	11.880	74.990	57.550	35.170	53.780	22.950	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:49	0.098	0.138	0.181	0.096	370.700	363.800	100.9%	0.111	0.104	0.021
2	14:23:16	0.157	0.162	0.104	0.090	376.000	364.200	101.7%	0.096	0.095	0.016
3	14:23:43	0.159	0.143	0.164	0.160	366.400	360.800	102.4%	0.111	0.106	0.054
X		0.138	0.148	0.150	0.116	371.000	362.900	101.7%	0.106	0.102	0.030
S		0.035	0.013	0.041	0.039	4.803	1.859	0.8%	0.008	0.006	0.021
%RSD		25.230	8.505	27.130	33.790	1.295	0.512	0.7	7.923	5.901	68.500
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:22:49	0.033	0.023	103.2%							
2	14:23:16	0.021	0.026	103.5%							
3	14:23:43	0.042	0.035	106.5%							
X		0.032	0.028	104.4%							
S		0.011	0.006	1.8%							
%RSD		33.560	22.360	1.7							

CCV MW126865 5/11/2020 14:28:14 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:41	90.4%	300.000	324.100	315.100	5.277	61750.000	61860.000	61470.000	60560.000	294.800
2	14:29:08	89.3%	303.400	312.300	301.800	6.186	61330.000	61280.000	61610.000	60440.000	289.800
3	14:29:35	88.1%	311.700	310.200	308.200	7.601	61900.000	62000.000	61510.000	60610.000	292.400
X		89.3%	101.683%	105.177%	102.791%	6.355	102.771%	61710.000	61530.000	100.889%	97.443%
S		1.2%	n/a	n/a	n/a	1.171	n/a	382.700	69.880	n/a	n/a
%RSD		1.3	1.974	2.376	2.158	18.430	0.483	0.620	0.114	0.144	0.844
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:41	3289.000	1077.000	63330.000	61070.000	61600.000	94.6%	307.800	299.300	297.800	2635.000
2	14:29:08	3247.000	1047.000	62860.000	60630.000	61050.000	95.1%	302.300	303.700	294.300	2720.000
3	14:29:35	3244.000	1027.000	63340.000	60450.000	61040.000	95.0%	302.800	299.700	293.200	3473.000
X		3260.000	1050.000	105.297%	60710.000	102.054%	94.9%	101.436%	100.294%	98.370%	2943.000
S		25.330	25.500	n/a	319.700	n/a	0.3%	n/a	n/a	n/a	461.400
%RSD		0.777	2.428	0.433	0.526	0.518	0.3	1.008	0.816	0.805	15.680
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:41	61220.000	292.100	60390.000	60700.000	292.200	285.100	291.700	276.100	281.300	287.500
2	14:29:08	61250.000	297.000	61590.000	60770.000	290.400	278.500	297.000	278.600	280.800	285.300
3	14:29:35	61030.000	294.000	60840.000	60620.000	289.100	283.700	280.800	276.600	283.400	288.700
X		61170.000	98.115%	60940.000	101.167%	96.857%	94.149%	289.800	277.100	93.952%	95.726%
S		122.600	n/a	606.200	n/a	n/a	n/a	8.245	1.337	n/a	n/a
%RSD		0.201	0.855	0.995	0.122	0.533	1.220	2.845	0.482	0.498	0.613
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:41	290.200	284.800	294.100	286.200	1.011	0.032	1381.000	296.900	-0.795	296.200
2	14:29:08	288.900	282.800	302.100	280.700	1.295	0.913	1308.000	285.900	1.381	295.700
3	14:29:35	286.200	284.000	304.300	285.600	1.601	-0.678	1388.000	306.300	2.994	295.400
X		288.400	283.900	100.055%	284.200	1.302	0.089	1359.000	98.788%	1.194	98.586%
S		2.033	1.018	n/a	3.005	0.295	0.797	43.980	n/a	1.902	n/a
%RSD		0.705	0.358	1.786	1.057	22.660	898.400	3.236	3.450	159.300	0.140
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:41	97.4%	301.600	307.700	308.400	298.500	284.100	280.200	288.900	289.700	97.2%
2	14:29:08	98.7%	315.300	319.600	316.900	289.300	282.500	284.000	290.800	294.300	96.7%
3	14:29:35	99.4%	321.500	325.900	327.500	294.900	288.800	285.100	295.100	293.300	96.4%
X		98.5%	104.261%	105.921%	317.600	294.300	95.050%	283.100	291.600	97.476%	96.8%
S		1.0%	n/a	n/a	9.568	4.630	n/a	2.545	3.214	n/a	0.4%
%RSD		1.0	3.255	2.905	3.013	1.573	1.147	0.899	1.102	0.829	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:41	296.600	297.300	297.200	300.000	296.100	293.100	100.1%	306.200	294.900	294.000
2	14:29:08	300.300	301.000	302.400	303.000	307.900	297.200	100.7%	302.000	296.100	300.600
3	14:29:35	305.200	301.900	307.000	294.300	302.800	298.300	102.1%	303.300	292.100	291.200
X		100.231%	100.029%	302.200	99.691%	100.749%	98.737%	101.0%	303.900	98.126%	98.417%
S		n/a	n/a	4.935	n/a	n/a	n/a	1.0%	2.131	n/a	n/a
%RSD		1.445	0.809	1.633	1.479	1.959	0.930	1.0	0.702	0.713	1.633
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:28:41	294.800	297.100	99.2%							
2	14:29:08	298.000	300.300	101.0%							
3	14:29:35	291.900	294.600	102.1%							
X		98.298%	99.124%	100.8%							
S		n/a	n/a	1.5%							
%RSD		1.039	0.962	1.5							

CB CB IM9968-01 5/11/2020 14:34:06 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:34	109.9%	-0.002	7.252	7.383	1.697	7.400	1.251	1.200	1.125	0.128
2	14:35:01	111.2%	-0.002	6.402	7.097	7.752	6.500	1.233	1.091	1.393	0.082
3	14:35:28	108.9%	0.015	6.655	6.640	-0.211	6.023	1.054	1.096	0.888	0.132
X		110.0%	0.004	6.770	7.040	3.079	6.641	1.179	1.129	1.136	0.114
S		1.2%	0.010	0.436	0.375	4.157	0.699	0.109	0.062	0.253	0.028
%RSD		1.0	252.800	6.446	5.322	135.000	10.530	9.215	5.455	22.240	24.220
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:34	0.651	804.300	9.099	0.438	1.416	114.0%	-0.070	-0.004	0.002	49.260
2	14:35:01	0.720	773.000	7.971	-1.375	1.951	114.1%	0.032	0.012	0.002	29.110
3	14:35:28	0.758	800.000	9.000	3.171	0.725	113.7%	-0.008	0.036	0.045	11.620
X		0.709	792.500	8.690	0.745	1.364	113.9%	-0.015	0.015	0.016	30.000
S		0.054	16.970	0.625	2.289	0.615	0.2%	0.052	0.020	0.025	18.830
%RSD		7.633	2.141	7.187	307.400	45.100	0.2	336.400	137.200	149.900	62.790
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:34	1.495	0.024	8.093	3.672	-0.013	0.017	-0.012	-0.019	-0.052	0.009
2	14:35:01	0.671	0.029	7.969	2.143	-0.013	0.011	0.113	-0.042	-0.057	0.009
3	14:35:28	1.250	0.034	7.854	2.927	-0.006	-0.002	0.325	-0.052	-0.024	-0.041
X		1.139	0.029	7.972	2.914	-0.011	0.008	0.142	-0.038	-0.044	-0.008
S		0.423	0.005	0.120	0.765	0.004	0.009	0.170	0.017	0.018	0.029
%RSD		37.140	15.680	1.501	26.240	35.620	109.800	120.300	45.660	40.270	376.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:34	-0.059	-0.009	-0.124	0.324	-1.147	-0.550	-0.459	-0.030	-2.343	0.003
2	14:35:01	0.125	0.022	-0.179	0.367	-0.026	-0.836	-3.336	-0.684	-1.388	0.001
3	14:35:28	-0.105	-0.009	-0.315	0.357	-1.099	0.240	-4.305	-0.877	-2.353	0.005
X		-0.013	0.001	-0.206	0.349	-0.757	-0.382	-2.700	-0.530	-2.028	0.003
S		0.122	0.018	0.098	0.022	0.633	0.557	2.000	0.444	0.554	0.002
%RSD		929.800	1210.000	47.670	6.401	83.640	146.000	74.070	83.780	27.330	59.160
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:34	114.4%	0.507	0.305	0.437	1.434	0.002	0.013	-0.002	-0.006	112.8%
2	14:35:01	114.3%	0.413	0.562	0.448	0.078	0.006	0.005	0.007	0.002	113.6%
3	14:35:28	115.0%	0.343	0.420	0.373	1.280	0.010	0.005	-0.001	0.009	115.3%
X		114.6%	0.421	0.429	0.419	0.930	0.006	0.008	0.001	0.002	113.9%
S		0.4%	0.082	0.129	0.040	0.743	0.004	0.005	0.005	0.007	1.3%
%RSD		0.3	19.540	30.020	9.612	79.800	65.800	65.670	393.100	458.900	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:34	0.105	0.107	0.441	0.340	-0.005	0.019	112.7%	0.009	0.007	0.043
2	14:35:01	0.125	0.102	0.441	0.443	-0.005	0.019	113.0%	0.015	0.013	0.030
3	14:35:28	0.069	0.090	0.402	0.394	-0.005	0.005	112.8%	0.010	0.008	0.020
X		0.100	0.100	0.428	0.393	-0.005	0.014	112.8%	0.012	0.009	0.031
S		0.028	0.009	0.022	0.051	0.000	0.009	0.2%	0.003	0.003	0.012
%RSD		28.500	8.535	5.227	13.120	0.000	59.310	0.2	29.620	32.010	37.150
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:34:34	0.024	0.031	115.2%							
2	14:35:01	0.037	0.032	114.4%							
3	14:35:28	0.015	0.017	115.6%							
X		0.025	0.027	115.1%							
S		0.011	0.009	0.6%							
%RSD		42.610	32.470	0.5							

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5/11/2020 14:39:56

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:23	101.8%	0.034	4.203	3.583	-22.480	6563.000	23610.000	24020.000	32700.000	2.377
2	14:40:49	103.3%	0.025	3.839	3.427	-26.620	6581.000	23970.000	23710.000	32870.000	2.246
3	14:41:16	102.8%	-0.001	3.493	4.055	-25.180	6752.000	24300.000	24630.000	33520.000	2.259
X		102.6%	0.020	3.845	3.688	-24.760	6632.000	23960.000	24120.000	33030.000	2.294
S		0.8%	0.018	0.355	0.327	2.102	104.400	342.400	466.600	433.800	0.072
%RSD		0.8	92.010	9.237	8.861	8.489	1.574	1.429	1.934	1.313	3.155
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:23	7310.000	52950.000	2882.000	92520.000	91520.000	105.9%	0.615	0.016	0.261	1728.000
2	14:40:49	7268.000	52910.000	2848.000	92420.000	93640.000	105.1%	0.553	-0.063	0.289	1805.000
3	14:41:16	7385.000	54550.000	2976.000	93460.000	94180.000	103.4%	0.790	-0.006	0.306	1756.000
X		7321.000	53470.000	2902.000	92800.000	93110.000	104.8%	0.653	-0.018	0.285	1763.000
S		59.120	938.200	66.460	572.300	1401.000	1.3%	0.123	0.041	0.023	39.090
%RSD		0.808	1.755	2.290	0.617	1.505	1.2	18.780	230.200	7.894	2.217
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:23	4463.000	7239.000	4263.000	4560.000	18.150	15.170	14.470	1.151	1.376	17.610
2	14:40:49	4480.000	7341.000	4278.000	4583.000	18.620	15.480	15.850	1.170	1.310	17.120
3	14:41:16	4601.000	7434.000	4314.000	4516.000	18.380	14.900	12.860	1.183	1.357	16.620
X		4515.000	7338.000	4285.000	4553.000	18.380	15.180	14.390	1.168	1.348	17.120
S		75.410	97.920	26.210	34.010	0.233	0.292	1.500	0.016	0.034	0.494
%RSD		1.670	1.334	0.612	0.747	1.267	1.924	10.420	1.361	2.517	2.887
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:23	26.280	24.550	1.743	0.679	21.830	20.220	-1.546	-0.274	-1.634	101.700
2	14:40:49	22.550	24.900	3.135	0.436	20.980	19.730	-3.133	-0.676	0.886	101.400
3	14:41:16	26.540	25.200	2.373	0.207	22.080	22.710	-1.531	-0.301	-1.109	102.700
X		25.120	24.880	2.417	0.440	21.630	20.880	-2.070	-0.417	-0.619	101.900
S		2.234	0.322	0.697	0.236	0.578	1.598	0.920	0.224	1.329	0.665
%RSD		8.893	1.293	28.840	53.560	2.672	7.654	44.460	53.770	214.800	0.652
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:23	105.7%	0.296	0.410	0.217	1.953	0.007	0.010	0.086	0.070	103.1%
2	14:40:49	107.1%	0.244	0.302	0.323	2.803	0.009	0.005	0.076	0.061	103.1%
3	14:41:16	105.8%	0.388	0.269	0.257	3.383	0.004	0.003	0.094	0.089	104.8%
X		106.2%	0.309	0.327	0.266	2.713	0.007	0.006	0.085	0.073	103.7%
S		0.8%	0.073	0.074	0.054	0.719	0.002	0.004	0.009	0.014	1.0%
%RSD		0.7	23.520	22.580	20.280	26.500	34.000	58.430	10.570	19.200	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:23	0.117	0.150	0.238	0.213	368.800	356.000	105.0%	0.080	0.079	0.015
2	14:40:49	0.121	0.180	0.232	0.164	372.500	360.800	107.5%	0.073	0.079	0.028
3	14:41:16	0.146	0.150	0.274	0.232	360.700	360.900	107.6%	0.103	0.088	0.038
X		0.128	0.160	0.248	0.203	367.300	359.200	106.7%	0.085	0.082	0.027
S		0.016	0.017	0.023	0.035	6.025	2.779	1.5%	0.015	0.005	0.012
%RSD		12.450	10.790	9.187	17.140	1.640	0.774	1.4	17.940	6.506	43.070
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:40:23	0.048	0.039	105.5%							
2	14:40:49	0.030	0.035	107.2%							
3	14:41:16	0.033	0.031	106.8%							
X		0.037	0.035	106.5%							
S		0.009	0.004	0.9%							
%RSD		25.540	10.490	0.9							

VE08021-001 5/11/2020 14:45:44

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:46:11	107.5%	-0.010	4.680	3.008	-14.980	536.300	14450.000	14450.000	18350.000	10.260
2	14:46:38	107.0%	0.024	3.588	2.839	-9.321	538.500	14990.000	14860.000	18550.000	10.270
3	14:47:05	106.1%	0.007	3.156	3.340	-18.320	532.600	14650.000	14630.000	18700.000	10.330
X		106.9%	0.007	3.808	3.063	-14.210	535.800	14700.000	14650.000	18530.000	10.290
S		0.7%	0.017	0.785	0.255	4.551	2.990	272.300	204.300	175.300	0.042
%RSD		0.6	232.500	20.620	8.316	32.030	0.558	1.853	1.395	0.946	0.405
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:46:11	4463.000	55720.000	1139.000	20000.000	19430.000	106.6%	0.347	-0.144	1.851	4099.000
2	14:46:38	4451.000	56440.000	1133.000	20220.000	19660.000	106.3%	0.370	0.092	1.864	4812.000
3	14:47:05	4341.000	56050.000	1138.000	20050.000	19750.000	106.7%	0.259	-0.144	2.017	5921.000
X		4419.000	56070.000	1137.000	20090.000	19610.000	106.5%	0.325	-0.065	1.911	4944.000
S		67.470	362.500	3.023	115.200	164.600	0.2%	0.059	0.136	0.093	918.300
%RSD		1.527	0.646	0.266	0.573	0.839	0.2	18.060	208.800	4.847	18.570
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:46:11	20.080	0.521	26.640	46.140	0.006	0.202	-0.085	0.169	0.359	1.129
2	14:46:38	17.160	0.586	25.900	42.740	0.009	0.216	0.007	0.207	0.295	1.124
3	14:47:05	18.380	0.553	26.080	45.120	0.028	0.196	0.182	0.128	0.276	1.143
X		18.540	0.553	26.210	44.670	0.014	0.205	0.035	0.168	0.310	1.132
S		1.468	0.032	0.384	1.742	0.012	0.010	0.135	0.039	0.043	0.010
%RSD		7.919	5.821	1.466	3.901	85.580	5.112	390.300	23.330	14.010	0.859
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:46:11	23.810	18.180	-0.115	0.363	5.307	8.585	-2.145	-0.415	-2.199	25.650
2	14:46:38	25.350	18.990	-0.639	0.908	5.867	6.532	-4.195	-0.840	-2.719	25.770
3	14:47:05	27.700	18.550	-0.594	0.623	7.437	8.540	2.799	0.602	0.742	25.840
X		25.620	18.570	-0.449	0.631	6.204	7.885	-1.180	-0.218	-1.392	25.750
S		1.959	0.406	0.291	0.272	1.104	1.173	3.595	0.741	1.866	0.091
%RSD		7.646	2.187	64.700	43.140	17.800	14.870	304.600	340.100	134.000	0.355
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:46:11	108.1%	-0.022	0.023	0.017	0.589	0.004	0.007	0.009	0.010	108.0%
2	14:46:38	109.0%	-0.056	0.231	0.014	1.084	0.007	-0.002	-0.000	0.006	107.5%
3	14:47:05	110.1%	0.159	0.202	0.004	0.626	0.009	-0.002	-0.000	-0.003	108.8%
X		109.1%	0.027	0.152	0.012	0.766	0.006	0.001	0.003	0.004	108.1%
S		1.0%	0.115	0.113	0.007	0.276	0.002	0.005	0.005	0.007	0.6%
%RSD		0.9	426.500	74.220	59.030	35.990	32.910	374.400	175.300	145.900	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:46:11	0.035	0.105	0.100	0.084	762.600	766.000	108.5%	0.003	0.012	0.046
2	14:46:38	0.058	0.102	0.106	0.154	770.000	770.300	109.0%	-0.000	0.013	0.032
3	14:47:05	0.057	0.144	0.152	0.159	762.100	767.900	109.9%	0.017	0.007	0.029
X		0.050	0.117	0.120	0.132	764.900	768.100	109.1%	0.007	0.011	0.036
S		0.013	0.023	0.029	0.042	4.428	2.134	0.7%	0.009	0.003	0.009
%RSD		25.440	19.980	23.830	31.860	0.579	0.278	0.6	137.900	31.540	25.190
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:46:11	0.041	0.033	109.4%							
2	14:46:38	0.043	0.034	112.2%							
3	14:47:05	0.038	0.039	113.5%							
X		0.041	0.035	111.7%							
S		0.002	0.003	2.1%							
%RSD		5.996	8.428	1.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:00	101.5%	0.017	5.402	4.362	-5.244	1728.000	15480.000	15650.000	18980.000	372.400
2	14:52:27	100.3%	0.009	4.039	4.092	-7.388	1796.000	15950.000	15570.000	19460.000	381.400
3	14:52:54	97.7%	0.073	5.070	4.361	-6.711	1815.000	15770.000	15810.000	19440.000	383.400
X		99.8%	0.033	4.837	4.272	-6.448	1779.000	15730.000	15670.000	19290.000	379.100
S		1.9%	0.035	0.711	0.156	1.096	45.990	237.300	121.400	267.100	5.847
%RSD		1.9	105.900	14.690	3.642	17.010	2.585	1.508	0.775	1.385	1.542
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:00	7737.000	59410.000	1058.000	63160.000	61350.000	102.3%	12.720	0.976	1.162	6316.000
2	14:52:27	8053.000	62620.000	1088.000	62830.000	62930.000	98.3%	17.030	1.338	1.328	6397.000
3	14:52:54	7860.000	62100.000	1076.000	63830.000	63610.000	97.2%	13.250	1.017	1.282	6903.000
X		7883.000	61380.000	1074.000	63270.000	62630.000	99.2%	14.330	1.110	1.257	6538.000
S		159.100	1726.000	15.220	506.200	1158.000	2.7%	2.349	0.198	0.086	318.000
%RSD		2.018	2.812	1.417	0.800	1.849	2.7	16.390	17.810	6.830	4.864
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:00	611.200	8.564	605.000	700.600	0.257	0.833	0.089	1.012	1.223	3.051
2	14:52:27	636.200	8.498	634.700	700.600	0.259	0.988	0.612	1.133	1.383	3.068
3	14:52:54	635.500	8.797	642.200	721.000	0.282	0.763	0.434	1.058	1.293	3.078
X		627.700	8.620	627.300	707.400	0.266	0.861	0.378	1.068	1.300	3.066
S		14.210	0.157	19.700	11.810	0.014	0.116	0.266	0.061	0.080	0.014
%RSD		2.264	1.819	3.140	1.669	5.238	13.410	70.390	5.689	6.166	0.458
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:00	4.996	3.687	-0.010	0.521	8.504	9.820	-1.980	-0.348	-2.097	54.420
2	14:52:27	3.813	4.065	-0.032	0.017	7.445	8.407	-3.536	-0.760	0.593	54.070
3	14:52:54	4.534	4.193	0.568	-0.278	8.828	8.440	-2.507	-0.510	-0.523	53.350
X		4.448	3.982	0.175	0.087	8.259	8.889	-2.674	-0.539	-0.676	53.950
S		0.597	0.263	0.341	0.404	0.723	0.806	0.791	0.207	1.351	0.545
%RSD		13.410	6.598	194.300	466.400	8.757	9.070	29.590	38.480	200.000	1.011
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:00	103.9%	-0.165	-0.037	-0.118	0.239	0.005	0.006	0.000	0.019	99.8%
2	14:52:27	103.1%	-0.003	-0.035	-0.078	1.211	0.002	0.006	0.010	0.010	99.2%
3	14:52:54	104.9%	-0.031	0.046	-0.144	0.825	0.007	-0.002	0.010	0.008	100.9%
X		104.0%	-0.066	-0.009	-0.114	0.758	0.005	0.003	0.007	0.012	100.0%
S		0.9%	0.087	0.047	0.034	0.489	0.002	0.004	0.006	0.006	0.9%
%RSD		0.8	131.200	542.400	29.560	64.530	49.250	129.300	80.900	48.630	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:00	0.126	0.124	0.085	0.075	60.240	56.750	103.7%	0.016	0.011	0.528
2	14:52:27	0.112	0.172	0.144	0.039	58.270	57.390	104.4%	0.023	0.010	0.501
3	14:52:54	0.082	0.216	0.054	0.116	56.880	57.530	103.2%	0.014	0.012	0.508
X		0.107	0.171	0.095	0.077	58.470	57.220	103.7%	0.018	0.011	0.512
S		0.023	0.046	0.046	0.038	1.689	0.417	0.6%	0.005	0.001	0.014
%RSD		21.190	27.060	48.640	49.580	2.889	0.729	0.6	26.040	8.243	2.732
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:52:00	0.419	0.482	105.7%							
2	14:52:27	0.455	0.464	105.9%							
3	14:52:54	0.508	0.482	106.6%							
X		0.461	0.476	106.1%							
S		0.045	0.010	0.5%							
%RSD		9.792	2.199	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:49	95.4%	95.850	90.130	95.050	-24.430	15270.000	32680.000	33370.000	46660.000	130.600
2	14:58:17	88.2%	99.430	91.450	90.230	-24.200	14790.000	33410.000	33040.000	45890.000	128.700
3	14:58:43	90.8%	95.270	92.520	93.460	-26.510	15330.000	33160.000	33730.000	47160.000	131.600
X		91.5%	96.850	91.370	92.920	-25.050	15130.000	33090.000	33380.000	46570.000	130.300
S		3.6%	2.252	1.198	2.459	1.270	293.700	371.700	343.700	638.800	1.501
%RSD		4.0	2.325	1.311	2.647	5.069	1.941	1.124	1.029	1.372	1.151
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:49	TM 11220.000	57200.000	3360.000	M 160500.000	TM 157300.000	90.4%	102.200	99.620	99.510	7949.000
2	14:58:17	TM 11060.000	57390.000	3397.000	M 159600.000	TM 158200.000	88.7%	102.500	100.800	100.100	6484.000
3	14:58:43	TM 10930.000	58070.000	3431.000	M 158800.000	TM 161000.000	87.3%	103.500	100.500	100.900	7114.000
X		TM 11070.000	57560.000	3396.000	M 159600.000	TM 158800.000	88.8%	102.700	100.300	100.200	7182.000
S		TM 144.700	456.500	35.430	M 823.400	TM 1962.000	1.6%	0.692	0.607	0.710	735.200
%RSD		TM 1.308	1.0793	1.1043	M 0.516	TM 1.235	1.8	0.674	0.605	0.709	10.240
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:49	1138.000	97.640	1085.000	1386.000	95.800	98.420	95.190	93.610	97.820	95.150
2	14:58:17	1139.000	97.740	1072.000	1316.000	94.980	93.990	95.760	93.580	95.680	96.600
3	14:58:43	1160.000	98.700	1088.000	1338.000	97.060	96.650	92.670	93.130	96.830	96.360
X		1146.000	98.030	1082.000	1347.000	95.950	96.350	94.540	93.440	96.780	96.040
S		12.650	0.587	8.470	36.030	1.051	2.233	1.643	0.272	1.070	0.777
%RSD		1.104	0.599	0.783	2.675	1.095	2.318	1.738	0.291	1.105	0.809
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:49	101.300	101.300	106.400	94.250	62.530	52.880	479.600	103.400	1.823	230.700
2	14:58:17	101.500	99.240	99.660	95.340	56.400	57.930	475.000	103.200	-1.163	224.500
3	14:58:43	103.300	101.300	101.800	98.040	63.330	57.760	452.900	95.550	1.964	229.200
X		102.000	100.600	102.600	95.880	60.750	56.190	469.200	100.700	0.874	228.100
S		1.111	1.184	3.416	1.951	3.791	2.865	14.290	4.494	1.766	3.223
%RSD		1.089	1.176	3.329	2.034	6.240	5.099	3.046	4.461	202.000	1.413
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:49	91.7%	104.300	106.300	105.300	99.000	94.770	94.870	97.860	98.830	91.4%
2	14:58:17	92.3%	105.100	106.900	105.100	104.700	94.440	94.420	97.640	96.830	91.0%
3	14:58:43	90.0%	104.700	106.000	106.700	100.000	93.850	92.460	94.870	98.000	91.4%
X		91.3%	104.700	106.400	105.700	101.300	94.350	93.920	96.790	97.890	91.3%
S		1.2%	0.385	0.437	0.879	3.061	0.462	1.280	1.667	1.003	0.2%
%RSD		1.3	0.368	0.410	0.832	3.024	0.489	1.363	1.722	1.024	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:49	100.500	98.810	101.000	97.530	316.500	317.300	96.5%	102.200	98.040	99.790
2	14:58:17	98.360	99.640	101.900	100.200	317.400	311.700	95.3%	103.200	98.880	99.660
3	14:58:43	99.220	97.720	99.870	99.730	317.500	311.700	94.5%	99.930	99.330	101.200
X		99.370	98.720	100.900	99.140	317.100	313.600	95.5%	101.800	98.750	100.200
S		1.102	0.963	1.014	1.415	0.582	3.246	1.0%	1.686	0.659	0.867
%RSD		1.109	0.976	1.005	1.427	0.184	1.035	1.1	1.656	0.667	0.865
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:57:49	98.990	99.310	96.5%							
2	14:58:17	99.950	100.000	96.2%							
3	14:58:43	100.900	101.600	97.5%							
X		99.940	100.300	96.7%							
S		0.949	1.163	0.7%							
%RSD		0.950	1.159	0.7							

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5/11/2020 15:03:12

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:39	85.6%	95.700	94.750	95.800	-22.770	15720.000	34290.000	34470.000	48510.000	138.600
2	15:04:06	86.8%	99.300	94.330	92.370	-24.310	15480.000	33870.000	34100.000	47230.000	134.100
3	15:04:33	85.5%	99.400	90.880	89.710	-26.350	15260.000	32940.000	33250.000	46810.000	139.700
X		86.0%	98.130	93.320	92.630	-24.480	15490.000	33700.000	33940.000	47520.000	137.500
S		0.7%	2.110	2.120	3.055	1.793	229.900	693.800	624.700	884.400	2.963
%RSD		0.8	2.150	2.271	3.299	7.327	1.484	2.059	1.840	1.861	2.156
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:39	TM 11540.000	57120.000	3514.000	M 168200.000	TM 164200.000		81.8%	107.500	101.800	103.100
2	15:04:06	TM 11210.000	55910.000	3448.000	M 163800.000	TM 162700.000		83.3%	103.600	96.640	100.600
3	15:04:33	TM 11290.000	55990.000	3440.000	M 162000.000	TM 161900.000		83.6%	101.700	98.800	99.660
X		TM 11350.000	56340.000	3467.000	M 164700.000	TM 162900.000		82.9%	104.200	99.090	101.100
S		TM 173.600	678.300	40.200	M 3158.000	TM 1157.000		1.0%	2.967	2.612	1.755
%RSD		TM 1.530	1.204	1.159	M 1.918	TM 0.710		1.2	2.846	2.636	1.736
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:39	1180.000	99.720	1094.000	1375.000	96.070	96.460	102.600	96.030	98.440	100.700
2	15:04:06	1146.000	98.030	1076.000	1354.000	95.550	95.660	95.390	94.170	93.520	96.740
3	15:04:33	1138.000	96.820	1087.000	1372.000	97.430	96.230	93.720	92.680	96.590	96.950
X		1154.000	98.190	1086.000	1367.000	96.350	96.120	97.230	94.290	96.180	98.120
S		22.170	1.458	9.134	11.200	0.973	0.412	4.696	1.683	2.486	2.212
%RSD		1.921	1.485	0.841	0.819	1.010	0.428	4.830	1.784	2.584	2.254
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:39	102.900	104.300	104.700	96.590	67.160	74.600	481.500	104.400	0.338	229.200
2	15:04:06	104.500	99.750	102.300	92.440	71.300	67.000	458.100	99.510	-1.562	229.600
3	15:04:33	99.380	101.200	106.100	93.090	67.950	68.410	441.100	97.280	2.772	228.300
X		102.300	101.800	104.400	94.040	68.800	70.000	460.300	100.400	0.516	229.000
S		2.611	2.329	1.920	2.232	2.200	4.041	20.300	3.624	2.172	0.653
%RSD		2.554	2.289	1.840	2.374	3.197	5.772	4.411	3.610	420.800	0.285
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:39	86.8%	106.900	104.700	107.800	99.940	96.190	95.560	101.400	99.420	85.5%
2	15:04:06	86.6%	108.700	107.800	106.900	98.850	94.500	97.280	100.900	98.770	85.4%
3	15:04:33	87.8%	106.000	106.200	106.400	105.100	94.840	96.620	97.990	98.720	85.1%
X		87.1%	107.200	106.200	107.000	101.300	95.180	96.490	100.100	98.970	85.3%
S		0.7%	1.417	1.581	0.696	3.316	0.893	0.867	1.857	0.389	0.2%
%RSD		0.7	1.322	1.489	0.651	3.274	0.939	0.898	1.855	0.393	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:39	99.250	100.800	101.500	99.680	327.300	322.700	90.3%	104.000	101.900	101.000
2	15:04:06	101.200	100.800	101.500	97.600	323.800	314.400	91.3%	104.400	100.700	101.700
3	15:04:33	103.200	99.730	102.300	98.530	328.400	318.200	92.5%	102.200	100.200	101.600
X		101.200	100.400	101.800	98.600	326.500	318.400	91.3%	103.500	100.900	101.400
S		1.955	0.624	0.473	1.041	2.382	4.154	1.1%	1.188	0.855	0.358
%RSD		1.932	0.621	0.465	1.056	0.730	1.305	1.2	1.148	0.847	0.353
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:03:39	101.800	102.400	92.2%							
2	15:04:06	100.500	102.400	93.3%							
3	15:04:33	100.300	101.400	93.2%							
X		100.900	102.100	92.9%							
S		0.825	0.556	0.6%							
%RSD		0.818	0.545	0.6							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:29	83.0%	-0.007	45.230	42.280	-28.140	13900.000	31760.000	31770.000	45050.000	28.090
2	15:09:56	83.0%	0.025	43.680	41.560	-21.860	13940.000	32200.000	32830.000	45140.000	26.690
3	15:10:23	82.0%	0.015	41.960	42.140	-27.110	13850.000	32570.000	32190.000	44590.000	27.220
X		82.7%	0.011	43.620	41.990	-25.710	13900.000	32180.000	32260.000	44930.000	27.330
S		0.6%	0.016	1.637	0.380	3.367	49.160	405.400	531.400	298.600	0.710
%RSD		0.7	150.900	3.753	0.904	13.100	0.354	1.260	1.647	0.665	2.598
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:29	TM 10090.000	55940.000	2300.000	M 153300.000	TM 151900.000	81.2%	3.040	-0.512	1.670	7937.000
2	15:09:56	TM 10130.000	56930.000	2289.000	M 157600.000	TM 153900.000	79.9%	1.745	-0.475	1.854	7772.000
3	15:10:23	TM 9995.000	57140.000	2300.000	M 153400.000	TM 154100.000	79.9%	2.126	1.080	1.801	7410.000
X		TM 10070.000	56670.000	2296.000	M 154800.000	TM 153300.000	80.4%	2.304	0.031	1.775	7706.000
S		TM 67.630	640.700	6.535	M 2467.000	TM 1232.000	0.8%	0.666	0.909	0.095	269.600
%RSD		TM 0.672	1.131	0.285	M 1.594	TM 0.804	1.0	28.900	2914.000	5.328	3.499
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:29	53.950	1.377	67.350	318.500	0.108	1.241	0.107	0.360	0.533	2.851
2	15:09:56	55.370	1.384	67.880	307.900	0.099	1.218	0.123	0.442	0.497	2.661
3	15:10:23	52.640	1.473	68.650	310.500	0.081	1.245	0.183	0.327	0.395	2.890
X		53.980	1.411	67.960	312.300	0.096	1.235	0.138	0.376	0.475	2.800
S		1.366	0.053	0.656	5.539	0.014	0.015	0.040	0.059	0.072	0.122
%RSD		2.530	3.789	0.966	1.774	14.580	1.179	29.150	15.760	15.070	4.367
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:29	7.724	6.570	0.173	1.299	51.840	47.080	-2.330	-0.533	1.700	123.400
2	15:09:56	9.125	6.905	-1.184	0.089	56.280	49.820	0.926	0.212	-0.863	123.700
3	15:10:23	7.219	6.583	0.580	0.425	50.160	49.380	0.280	0.064	-0.217	123.000
X		8.023	6.686	-0.144	0.604	52.760	48.760	-0.375	-0.085	0.207	123.400
S		0.987	0.190	0.924	0.624	3.164	1.472	1.724	0.395	1.333	0.369
%RSD		12.310	2.838	643.400	103.300	5.996	3.018	460.000	461.900	644.700	0.299
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:29	85.4%	0.213	0.209	0.231	3.257	0.003	0.010	0.011	0.014	83.6%
2	15:09:56	85.4%	0.242	0.348	0.161	3.244	0.006	0.018	-0.001	0.004	84.6%
3	15:10:23	85.4%	0.127	0.160	0.135	4.459	0.008	0.013	0.035	0.029	84.3%
X		85.4%	0.194	0.239	0.175	3.653	0.006	0.014	0.015	0.016	84.2%
S		0.0%	0.060	0.098	0.050	0.698	0.003	0.004	0.018	0.012	0.5%
%RSD		0.0	30.850	40.830	28.280	19.100	49.790	31.330	120.100	78.330	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:29	0.075	0.115	0.122	0.082	217.800	206.200	89.2%	0.033	0.036	0.121
2	15:09:56	0.085	0.104	0.087	0.091	215.500	205.300	89.5%	0.007	0.021	0.171
3	15:10:23	0.074	0.123	0.059	0.048	211.900	204.500	90.9%	0.024	0.031	0.144
X		0.078	0.114	0.089	0.073	215.100	205.300	89.9%	0.021	0.029	0.145
S		0.006	0.010	0.032	0.023	2.992	0.881	0.9%	0.013	0.008	0.025
%RSD		7.785	8.398	35.410	30.800	1.391	0.429	1.0	62.950	26.590	17.380
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:09:29	0.132	0.128	91.7%							
2	15:09:56	0.156	0.152	91.9%							
3	15:10:23	0.151	0.133	92.2%							
X		0.146	0.138	91.9%							
S		0.013	0.013	0.2%							
%RSD		8.671	9.192	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:19	87.8%	21.310	34.520	35.980	-8.022	3401.000	9296.000	9375.000	10340.000	29.800
2	15:15:46	84.2%	21.790	33.150	36.090	-3.608	3287.000	9164.000	9051.000	9981.000	28.880
3	15:16:13	84.3%	21.040	32.280	34.550	-0.438	3155.000	8864.000	9216.000	9845.000	27.630
X		85.4%	21.380	33.320	35.540	-4.023	3281.000	9108.000	9214.000	10060.000	28.770
S		2.0%	0.376	1.130	0.858	3.809	122.800	221.600	161.900	255.200	1.091
%RSD		2.4	1.760	3.392	2.413	94.680	3.742	2.433	1.757	2.538	3.794
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:19	2468.000	13280.000	755.200	34780.000	34760.000	84.3%	22.530	21.340	21.970	3014.000
2	15:15:46	2365.000	12980.000	729.200	33650.000	33110.000	83.6%	21.640	21.250	21.320	2315.000
3	15:16:13	2380.000	12850.000	717.100	32770.000	33100.000	82.8%	19.540	20.520	21.120	2371.000
X		2404.000	13040.000	733.800	33730.000	33660.000	83.6%	21.240	21.040	21.470	2567.000
S		55.630	217.200	19.490	1004.000	953.400	0.7%	1.538	0.451	0.444	388.600
%RSD		2.314	1.666	2.656	2.976	2.833	0.9	7.242	2.142	2.066	15.140
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:19	252.100	21.820	250.100	308.500	21.030	21.540	21.730	22.110	21.930	23.090
2	15:15:46	240.100	20.420	237.900	289.400	20.010	20.370	20.140	20.650	21.060	21.540
3	15:16:13	237.900	20.170	233.200	282.600	20.140	20.580	20.860	20.220	20.860	21.450
X		243.400	20.800	240.400	293.500	20.390	20.830	20.910	20.990	21.290	22.030
S		7.614	0.887	8.729	13.450	0.551	0.624	0.795	0.992	0.568	0.927
%RSD		3.128	4.262	3.631	4.581	2.700	2.993	3.801	4.725	2.670	4.207
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:19	23.750	23.130	22.630	22.430	15.040	12.000	106.200	22.960	0.949	48.720
2	15:15:46	22.610	22.460	20.940	20.410	12.870	16.270	94.910	19.920	-0.221	47.140
3	15:16:13	22.930	21.850	21.930	19.330	9.004	12.620	83.510	17.810	-1.546	46.290
X		23.100	22.480	21.830	20.720	12.300	13.630	94.890	20.230	-0.273	47.380
S		0.588	0.643	0.852	1.574	3.057	2.310	11.370	2.591	1.248	1.234
%RSD		2.546	2.858	3.904	7.594	24.840	16.950	11.980	12.810	457.500	2.605
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:19	86.8%	22.100	22.550	22.320	22.860	21.530	20.820	20.870	21.500	86.1%
2	15:15:46	84.8%	21.560	21.910	21.670	26.580	20.100	20.340	20.270	20.490	86.9%
3	15:16:13	86.2%	21.030	21.440	21.420	24.820	20.180	20.270	20.090	20.570	86.6%
X		85.9%	21.560	21.970	21.800	24.750	20.600	20.470	20.410	20.850	86.5%
S		1.0%	0.535	0.555	0.460	1.861	0.802	0.301	0.412	0.564	0.4%
%RSD		1.1	2.483	2.526	2.111	7.518	3.891	1.471	2.018	2.702	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:19	21.420	22.090	22.280	21.820	70.990	67.580	89.7%	22.320	21.820	22.310
2	15:15:46	20.850	20.820	21.170	21.230	67.450	65.480	90.2%	21.020	21.150	21.500
3	15:16:13	20.590	20.470	20.880	20.720	67.340	64.110	90.9%	20.680	20.210	21.000
X		20.950	21.130	21.440	21.260	68.590	65.720	90.3%	21.340	21.060	21.600
S		0.426	0.851	0.742	0.553	2.074	1.748	0.6%	0.867	0.805	0.662
%RSD		2.032	4.028	3.459	2.604	3.024	2.660	0.7	4.062	3.824	3.065
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:15:19	22.220	22.410	93.3%							
2	15:15:46	21.100	21.430	95.0%							
3	15:16:13	21.720	21.300	95.5%							
X		21.680	21.710	94.6%							
S		0.563	0.608	1.1%							
%RSD		2.597	2.798	1.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:09	80.0%	201.200	147.900	153.000	-22.370	16390.000	33920.000	34440.000	47250.000	227.300
2	15:21:35	80.8%	193.900	150.100	152.400	-20.650	16170.000	33520.000	34010.000	47570.000	229.000
3	15:22:02	79.4%	201.300	144.500	147.200	-20.250	16120.000	33410.000	33420.000	46960.000	225.000
X		80.0%	198.800	147.500	150.900	-21.090	16230.000	33620.000	33960.000	47260.000	227.100
S		0.7%	4.224	2.815	3.201	1.129	141.400	266.700	513.500	306.000	2.010
%RSD		0.9	2.125	1.909	2.122	5.353	0.872	0.793	1.512	0.647	0.885
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:09	TM 12050.000	156330.000	14375.000	M 161000.000	TM 157800.000	77.6%	208.000	197.400	197.800	8731.000
2	15:21:35	TM 12150.000	156800.000	14433.000	M 160900.000	TM 159400.000	77.0%	203.100	200.100	198.600	8080.000
3	15:22:02	TM 11640.000	154460.000	14302.000	M 155400.000	TM 154000.000	78.4%	199.800	198.900	193.100	7385.000
X		TM 11950.000	155860.000	14370.000	M 159100.000	TM 157100.000	77.7%	203.600	198.800	196.500	8065.000
S		TM 268.400	1242.000	165.540	M 3193.000	TM 2767.000	0.7%	4.110	1.366	2.956	673.400
%RSD		TM 2.247	1.224	1.500	M 2.007	TM 1.762	0.9	2.018	0.687	1.504	8.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:09	2277.000	195.000	12071.000	2412.000	191.600	191.300	190.700	186.500	191.800	193.000
2	15:21:35	2248.000	191.600	12098.000	2412.000	194.100	191.800	193.400	187.700	192.900	194.100
3	15:22:02	2159.000	193.400	12065.000	2368.000	190.200	186.500	195.400	184.300	188.200	192.300
X		2228.000	193.400	12078.000	2397.000	192.000	189.900	193.200	186.200	191.000	193.100
S		61.520	1.702	17.640	25.270	1.994	2.901	2.326	1.702	2.488	0.868
%RSD		2.761	0.880	0.849	1.054	1.039	1.528	1.204	0.914	1.303	0.450
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:09	199.900	193.000	203.200	199.300	57.780	57.120	889.400	193.700	-1.330	324.400
2	15:21:35	200.400	194.500	204.200	190.800	59.580	60.150	895.900	192.100	-2.703	320.700
3	15:22:02	195.100	193.500	201.400	196.100	53.370	57.470	957.700	203.300	-1.322	326.800
X		198.500	193.600	203.000	195.400	56.910	58.250	914.300	196.400	-1.785	323.900
S		2.915	0.773	1.434	4.321	3.195	1.659	37.700	6.081	0.795	3.077
%RSD		1.469	0.399	0.707	2.211	5.614	2.848	4.123	3.097	44.550	0.950
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:09	80.7%	210.100	210.400	210.100	200.800	184.100	189.100	193.700	198.600	79.4%
2	15:21:35	81.5%	205.800	211.100	208.200	194.300	178.900	181.200	193.500	192.600	81.2%
3	15:22:02	80.3%	209.200	211.200	209.300	204.700	185.600	185.300	189.800	192.800	81.2%
X		80.8%	208.400	210.900	209.200	199.900	182.900	185.200	192.300	194.600	80.6%
S		0.6%	2.294	0.400	0.959	5.232	3.504	3.935	2.221	3.389	1.1%
%RSD		0.7	1.101	0.190	0.459	2.617	1.916	2.125	1.155	1.741	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:09	200.100	203.700	198.100	188.400	419.800	408.500	86.3%	204.800	199.300	202.300
2	15:21:35	196.800	200.400	192.800	185.400	417.200	404.700	87.4%	204.600	199.700	199.400
3	15:22:02	200.900	199.000	195.900	187.400	423.500	407.200	87.0%	206.100	200.900	202.800
X		199.300	201.000	195.600	187.100	420.200	406.800	86.9%	205.200	200.000	201.500
S		2.153	2.381	2.694	1.538	3.146	1.926	0.6%	0.767	0.854	1.871
%RSD		1.080	1.184	1.377	0.822	0.749	0.473	0.6	0.374	0.427	0.928
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:21:09	202.500	203.400	88.0%							
2	15:21:35	200.100	200.900	88.1%							
3	15:22:02	202.900	204.500	88.5%							
X		201.800	203.000	88.2%							
S		1.542	1.844	0.2%							
%RSD		0.764	0.909	0.3							

VE08021-004 5/11/2020 15:26:33

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:59	81.9%	-0.007	82.200	82.520	-0.392	12420.000	17330.000	17270.000	20070.000	4.448
2	15:27:26	80.7%	0.004	79.750	84.420	-0.312	12820.000	17770.000	18050.000	21060.000	4.784
3	15:27:53	81.3%	0.026	80.620	84.120	-4.317	12650.000	17470.000	17500.000	20020.000	4.318
X		81.3%	0.008	80.860	83.690	-1.674	12630.000	17520.000	17600.000	20380.000	4.517
S		0.6%	0.017	1.243	1.023	2.290	201.700	225.000	399.600	584.100	0.240
%RSD		0.8	216.500	1.538	1.223	136.800	1.597	1.284	2.270	2.866	5.324
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:59	8856.000	62970.000	1898.000	42340.000	41230.000	77.4%	0.474	-0.261	1.732	8460.000
2	15:27:26	9283.000	64660.000	1915.000	42810.000	42350.000	75.1%	0.740	-0.571	1.771	8691.000
3	15:27:53	8604.000	62790.000	1861.000	42710.000	42080.000	78.0%	0.770	-0.339	1.625	8576.000
X		8914.000	63470.000	1891.000	42620.000	41890.000	76.8%	0.661	-0.391	1.709	8576.000
S		342.900	1032.000	27.680	248.100	583.200	1.5%	0.163	0.161	0.075	115.800
%RSD		3.847	1.626	1.463	0.582	1.392	2.0	24.650	41.260	4.409	1.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:59	15.860	3.230	21.700	85.360	0.059	2.034	1.138	0.346	0.420	1.599
2	15:27:26	17.380	3.251	22.460	83.640	0.067	2.125	1.960	0.346	0.738	1.606
3	15:27:53	16.760	3.191	19.440	77.820	0.085	2.190	1.611	0.270	0.602	1.492
X		16.670	3.224	21.200	82.270	0.071	2.116	1.570	0.321	0.587	1.565
S		0.766	0.030	1.573	3.952	0.013	0.078	0.412	0.044	0.159	0.064
%RSD		4.596	0.942	7.418	4.804	18.20	3.695	26.280	13.670	27.140	4.090
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:59	2.522	1.579	0.707	1.603	118.600	127.500	5.837	1.278	-0.742	52.550
2	15:27:26	2.314	2.035	0.606	0.919	122.900	122.100	4.684	1.026	-2.700	53.480
3	15:27:53	2.055	1.618	0.364	1.769	125.500	125.100	3.823	0.802	-0.079	53.090
X		2.297	1.744	0.559	1.430	122.400	124.900	4.782	1.035	-1.174	53.040
S		0.234	0.253	0.176	0.451	3.473	2.699	1.010	0.238	1.362	0.470
%RSD		10.180	14.480	31.580	31.520	2.838	2.161	21.130	23.000	116.100	0.886
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:59	82.9%	0.330	0.192	0.247	0.673	0.011	0.013	0.011	0.015	81.4%
2	15:27:26	81.7%	0.142	0.221	0.233	1.360	0.017	0.019	0.036	0.024	81.7%
3	15:27:53	82.8%	0.276	-0.084	0.123	3.738	0.006	0.016	0.024	0.059	82.5%
X		82.4%	0.249	0.109	0.201	1.924	0.011	0.016	0.023	0.032	81.9%
S		0.7%	0.097	0.169	0.068	1.608	0.006	0.003	0.012	0.023	0.5%
%RSD		0.8	38.980	154.100	33.790	83.600	50.270	18.250	51.870	71.960	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:59	0.083	0.109	0.448	0.459	26.770	26.010	87.7%	0.037	0.016	0.041
2	15:27:26	0.089	0.157	0.517	0.321	26.180	25.630	87.7%	0.021	0.023	0.073
3	15:27:53	0.140	0.160	0.379	0.371	27.200	26.740	88.7%	0.012	0.015	0.046
X		0.104	0.142	0.448	0.384	26.720	26.130	88.0%	0.023	0.018	0.053
S		0.031	0.028	0.069	0.070	0.513	0.567	0.6%	0.013	0.005	0.017
%RSD		29.990	20.100	15.460	18.290	1.921	2.170	0.6	54.210	25.710	32.710
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:26:59	0.056	0.052	91.1%							
2	15:27:26	0.051	0.061	92.0%							
3	15:27:53	0.069	0.059	93.3%							
X		0.059	0.057	92.1%							
S		0.010	0.005	1.1%							
%RSD		16.270	8.654	1.2							

CCV MW126865 5/11/2020 15:32:25 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:52	78.2%	307.500	304.100	303.600	5.577	63620.000	61290.000	61360.000	61860.000	297.500
2	15:33:19	79.2%	305.400	322.800	311.100	11.440	62570.000	62350.000	61710.000	61630.000	298.600
3	15:33:46	80.1%	297.400	324.200	313.600	5.565	63220.000	62820.000	62820.000	61950.000	299.500
X		79.2%	101.138%	105.670%	103.139%	7.528	105.233%	62150.000	61960.000	103.025%	99.506%
S		0.9%	n/a	n/a	n/a	3.389	n/a	785.100	764.100	n/a	n/a
%RSD		1.2	1.752	3.545	1.684	45.020	0.843	1.263	1.233	0.266	0.334
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:52	3300.000	874.900	63970.000	61490.000	61410.000	79.7%	305.200	305.300	297.600	2249.000
2	15:33:19	3310.000	883.800	65110.000	61740.000	62450.000	79.5%	309.800	306.600	302.300	3080.000
3	15:33:46	3257.000	843.400	63610.000	61860.000	61470.000	81.2%	305.700	302.000	298.600	873.800
X		3289.000	867.300	107.050%	61700.000	102.957%	80.1%	102.297%	101.541%	99.839%	2068.000
S		28.300	21.220	n/a	190.100	n/a	0.9%	n/a	n/a	n/a	1114.000
%RSD		0.861	2.447	1.222	0.308	0.950	1.1	0.825	0.786	0.826	53.890
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:52	61500.000	295.900	62030.000	61850.000	298.900	297.100	282.500	279.600	287.200	289.400
2	15:33:19	62980.000	299.100	62130.000	62310.000	300.100	296.400	290.700	279.200	285.300	297.100
3	15:33:46	61880.000	294.500	63040.000	61680.000	295.800	288.100	287.600	277.100	283.800	293.700
X		62120.000	98.827%	62400.000	103.244%	99.417%	97.960%	286.900	278.600	95.146%	97.803%
S		767.000	n/a	560.200	n/a	n/a	n/a	4.118	1.338	n/a	n/a
%RSD		1.235	0.807	0.898	0.528	0.748	1.711	1.435	0.480	0.596	1.313
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:52	287.400	284.300	294.300	292.300	3.425	2.588	1298.000	281.600	2.566	296.300
2	15:33:19	292.800	285.700	305.700	295.300	2.086	2.725	1384.000	307.400	3.622	298.100
3	15:33:46	293.500	291.400	293.100	287.000	2.556	1.078	1328.000	287.600	-2.154	300.300
X		291.300	287.100	99.234%	291.500	2.689	2.130	1337.000	97.406%	1.345	99.408%
S		3.344	3.768	n/a	4.210	0.679	0.914	43.490	n/a	3.076	n/a
%RSD		1.148	1.312	2.323	1.444	25.260	42.890	3.253	4.623	228.700	0.674
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:52	82.6%	308.400	313.900	312.500	285.700	288.600	287.000	295.400	298.000	81.6%
2	15:33:19	85.8%	320.800	324.400	322.600	296.200	288.300	289.300	297.600	300.000	82.2%
3	15:33:46	85.4%	317.100	317.700	318.600	290.200	289.000	283.700	292.400	293.000	84.3%
X		84.6%	105.143%	106.225%	317.900	290.700	96.213%	286.700	295.100	99.000%	82.7%
S		1.7%	n/a	n/a	5.123	5.300	n/a	2.827	2.612	n/a	1.4%
%RSD		2.0	2.009	1.664	1.612	1.823	0.111	0.986	0.885	1.225	1.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:52	298.700	305.500	306.100	295.400	308.200	300.400	87.0%	305.600	301.500	299.700
2	15:33:19	305.000	304.700	309.200	297.200	313.400	300.700	88.5%	299.100	299.200	302.700
3	15:33:46	303.300	300.400	307.600	297.600	302.400	297.900	89.4%	309.100	301.600	302.100
X		100.775%	101.180%	307.600	98.913%	102.670%	99.886%	88.3%	304.600	100.251%	100.499%
S		n/a	n/a	1.516	n/a	n/a	n/a	1.2%	5.079	n/a	n/a
%RSD		1.069	0.891	0.493	0.399	1.773	0.521	1.4	1.667	0.451	0.517
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:32:52	301.300	304.700	89.7%							
2	15:33:19	302.900	305.800	91.1%							
3	15:33:46	300.700	304.300	90.3%							
X		100.538%	101.642%	90.4%							
S		n/a	n/a	0.7%							
%RSD		0.374	0.253	0.8							

■ CCB IM9968-01 5/11/2020 15:38:17 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:44	90.7%	0.050	4.228	3.633	12.400	2.470	1.713	1.538	1.385	0.184
2	15:39:11	89.9%	0.022	4.408	3.779	6.075	2.405	1.742	1.761	1.818	0.163
3	15:39:37	88.6%	0.022	4.209	3.733	7.049	2.430	1.645	1.724	1.379	0.116
X		89.8%	0.031	4.282	3.715	8.510	2.435	1.700	1.674	1.527	0.154
S		1.1%	0.017	0.110	0.075	3.408	0.033	0.050	0.120	0.252	0.035
%RSD		1.2	52.520	2.573	2.009	40.050	1.349	2.934	7.152	16.470	22.840
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:44	1.457	637.900	14.080	3.233	3.004	89.7%	-0.044	0.038	0.002	2.563
2	15:39:11	1.101	636.100	13.380	-1.375	2.015	88.9%	0.035	0.007	-0.002	29.640
3	15:39:37	1.829	635.800	13.550	0.947	2.145	89.1%	0.035	0.033	-0.004	4.451
X		1.462	636.600	13.670	0.935	2.388	89.2%	0.009	0.026	-0.001	12.220
S		0.364	1.111	0.362	2.304	0.537	0.5%	0.046	0.017	0.003	15.120
%RSD		24.920	0.175	2.647	246.500	22.510	0.5	524.400	64.110	225.200	123.700
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:44	1.357	0.059	4.334	2.230	0.001	-0.014	0.595	-0.055	-0.009	0.010
2	15:39:11	3.120	0.037	5.171	5.743	-0.008	0.002	0.129	-0.016	-0.022	0.020
3	15:39:37	1.944	0.026	4.626	2.270	-0.004	-0.006	0.447	-0.062	0.027	0.048
X		2.140	0.040	4.710	3.415	-0.004	-0.006	0.390	-0.044	-0.001	0.026
S		0.898	0.017	0.425	2.017	0.004	0.008	0.238	0.025	0.025	0.019
%RSD		41.930	40.940	9.018	59.060	108.200	128.500	61.090	56.530	2033.000	74.430
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:44	-0.105	0.020	-0.114	0.150	-0.190	0.047	-0.806	-0.235	3.031	0.010
2	15:39:11	-0.047	0.020	-0.207	-0.723	0.394	-0.907	-2.017	-0.425	-0.559	0.006
3	15:39:37	-0.047	0.033	-0.040	0.484	0.646	0.633	-0.269	-0.065	-0.005	0.013
X		-0.067	0.024	-0.120	-0.029	0.283	-0.076	-1.031	-0.241	0.823	0.010
S		0.033	0.007	0.084	0.623	0.429	0.777	0.895	0.180	1.933	0.003
%RSD		50.340	29.440	69.790	2113.000	151.400	1029.000	86.880	74.590	235.000	35.200
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:44	91.6%	0.563	0.533	0.564	1.126	0.023	0.012	-0.002	0.003	91.0%
2	15:39:11	92.0%	0.555	0.404	0.544	0.744	0.010	0.025	0.009	0.012	91.9%
3	15:39:37	92.9%	0.594	0.396	0.231	0.126	0.010	0.019	-0.001	0.002	92.9%
X		92.1%	0.571	0.444	0.446	0.665	0.014	0.019	0.002	0.006	91.9%
S		0.7%	0.021	0.077	0.187	0.504	0.008	0.007	0.006	0.005	1.0%
%RSD		0.7	3.648	17.330	41.890	75.820	51.930	35.290	322.900	92.370	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:44	0.083	0.112	0.373	0.397	0.011	0.006	93.2%	0.001	0.004	0.026
2	15:39:11	0.040	0.111	0.442	0.426	-0.005	0.024	94.3%	0.012	0.006	0.003
3	15:39:37	0.106	0.139	0.414	0.462	0.011	0.015	94.0%	0.003	0.008	0.033
X		0.076	0.121	0.409	0.428	0.006	0.015	93.9%	0.006	0.006	0.020
S		0.034	0.016	0.035	0.033	0.009	0.009	0.6%	0.006	0.002	0.016
%RSD		43.920	13.220	8.464	7.590	160.600	58.790	0.6	105.300	37.940	77.180
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:38:44	0.042	0.034	99.7%							
2	15:39:11	0.059	0.024	100.1%							
3	15:39:37	0.021	0.031	100.4%							
X		0.041	0.030	100.0%							
S		0.019	0.005	0.4%							
%RSD		47.880	17.460	0.4							

VE08113-001(5)

5/11/2020 15:44:06

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:34	77.7%	0.016	M 5913.000	TM 6063.000	412.900	TM 465100.000	180.500	174.100	181.600	67.950
2	15:45:01	78.2%	0.016	M 5797.000	TM 5877.000	387.500	TM 472300.000	179.300	177.700	188.000	69.410
3	15:45:28	75.2%	-0.006	M 5872.000	TM 6249.000	401.200	TM 474900.000	180.400	172.700	191.000	69.340
X		77.0%	0.009	M 5861.000	TM 6063.000	400.600	TM 470800.000	180.100	174.800	186.900	68.900
S		1.6%	0.013	M 58.700	TM 186.300	12.700	TM 5053.000	0.664	2.561	4.784	0.822
%RSD		2.1	144.900	M 1.002	TM 3.072	3.170	TM 1.073	0.369	1.465	2.560	1.193
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:34	146.000	T 17980.000	T 34940.000	512.200	412.200	80.1%	4.426	0.582	8.488	385.400
2	15:45:01	143.000	T 18170.000	T 35300.000	414.600	416.800	78.3%	3.814	0.691	8.934	277.500
3	15:45:28	144.100	17350.000	T 35670.000	479.400	427.700	76.8%	3.617	0.510	8.420	368.200
X		144.400	T 17830.000	T 35300.000	468.700	418.900	78.4%	3.952	0.594	8.614	343.700
S		1.564	T 429.600	T 361.100	49.680	7.948	1.7%	0.422	0.091	0.279	58.010
%RSD		1.083	T 2.409	T 1.023	10.600	1.897	2.1	10.670	15.260	3.241	16.880
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:34	14430.000	246.300	T 13770.000	13900.000	3.175	27.910	36.720	43.710	43.530	284.000
2	15:45:01	14490.000	249.000	T 13680.000	14350.000	3.357	29.770	41.490	44.550	44.030	285.600
3	15:45:28	14680.000	248.000	T 13740.000	14220.000	3.103	29.450	48.650	45.380	45.200	293.200
X		14540.000	247.800	T 13730.000	14160.000	3.212	29.040	42.290	44.540	44.260	287.600
S		130.400	1.378	T 43.940	231.200	0.131	0.994	6.005	0.836	0.859	4.877
%RSD		0.897	0.556	T 0.320	1.633	4.086	3.424	14.200	1.876	1.942	1.696
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:34	271.200	273.100	0.748	1.637	17.370	17.220	-4.212	-0.948	1.907	0.596
2	15:45:01	263.300	278.800	0.853	2.140	20.900	19.060	-2.172	-0.447	-0.713	0.549
3	15:45:28	269.100	276.400	0.723	1.070	19.830	17.000	-2.827	-0.618	0.652	0.583
X		267.900	276.100	0.775	1.616	19.370	17.760	-3.070	-0.671	0.615	0.576
S		4.061	2.845	0.069	0.535	1.811	1.134	1.042	0.255	1.310	0.024
%RSD		1.516	1.030	8.923	33.140	9.349	6.384	33.930	37.970	212.900	4.152
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:34	82.5%	27.700	27.220	26.790	1.369	0.017	-0.002	0.466	0.556	81.7%
2	15:45:01	82.0%	27.450	28.110	26.570	1.001	0.012	0.010	0.597	0.613	80.8%
3	15:45:28	81.8%	28.270	27.430	27.430	1.562	0.020	0.004	0.450	0.597	80.1%
X		82.1%	27.810	27.580	26.930	1.311	0.016	0.004	0.504	0.588	80.9%
S		0.4%	0.416	0.465	0.445	0.285	0.004	0.006	0.080	0.029	0.8%
%RSD		0.4	1.497	1.685	1.654	21.740	27.310	136.100	15.950	4.957	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:34	0.881	1.088	3.011	2.893	2.547	2.527	88.9%	0.003	0.002	0.638
2	15:45:01	1.034	1.179	2.887	2.781	2.830	2.588	88.4%	0.005	0.003	0.671
3	15:45:28	1.113	1.187	3.167	2.974	2.927	2.748	89.7%	0.005	-0.001	0.637
X		1.009	1.151	3.021	2.883	2.768	2.621	89.0%	0.005	0.001	0.649
S		0.118	0.055	0.140	0.097	0.197	0.114	0.7%	0.001	0.002	0.019
%RSD		11.660	4.755	4.648	3.368	7.120	4.353	0.7	23.370	144.500	2.995
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:44:34	0.592	0.601	87.1%							
2	15:45:01	0.631	0.635	88.0%							
3	15:45:28	0.575	0.586	88.9%							
X		0.599	0.607	88.0%							
S		0.029	0.025	0.9%							
%RSD		4.775	4.177	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	74.5%	0.030	M 6395.000	TM 6695.000	499.800	TM 497500.000	248.100	243.700	260.600	86.420
2	15:50:50	74.0%	0.042	M 6199.000	TM 6311.000	464.100	TM 459400.000	237.500	228.300	249.000	80.410
3	15:51:17	72.3%	-0.005	M 6323.000	TM 6556.000	490.100	TM 474600.000	245.400	240.700	247.700	81.960
X		73.6%	0.022	M 6306.000	TM 6521.000	484.700	TM 477200.000	243.700	237.600	252.500	82.930
S		1.2%	0.025	M 99.500	TM 194.700	18.480	TM 19170.000	5.491	8.178	7.119	3.120
%RSD		1.6	111.700	M 1.578	TM 2.986	3.813	TM 4.017	2.253	3.442	2.820	3.763
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	201.700	T 19310.000	T 38980.000	534.500	486.100	74.9%	5.430	0.699	12.310	393.300
2	15:50:50	194.000	17840.000	T 37800.000	499.300	469.700	73.9%	5.372	0.704	11.340	378.600
3	15:51:17	184.400	17740.000	T 37130.000	493.200	467.800	73.2%	5.014	0.737	11.010	417.200
X		193.300	T 18300.000	T 37970.000	509.000	474.500	74.0%	5.272	0.713	11.550	396.400
S		8.659	T 877.100	T 937.300	22.320	10.050	0.8%	0.226	0.021	0.677	19.460
%RSD		4.479	T 4.793	T 2.469	4.384	2.117	1.1	4.277	2.946	5.865	4.911
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	19240.000	274.600	T 18000.000	18690.000	3.511	32.140	51.190	52.890	52.740	344.600
2	15:50:50	18360.000	261.500	T 17660.000	17890.000	3.298	28.800	55.890	49.760	49.920	333.200
3	15:51:17	18410.000	262.600	T 17630.000	17820.000	3.346	30.020	53.560	50.660	50.540	332.000
X		18670.000	266.200	T 17770.000	18130.000	3.385	30.320	53.540	51.100	51.070	336.600
S		492.600	7.283	T 206.500	482.800	0.112	1.688	2.350	1.610	1.481	6.979
%RSD		2.639	2.736	T 1.162	2.663	3.296	5.568	4.389	3.150	2.900	2.073
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	315.100	329.200	0.715	2.781	21.670	18.780	1.357	0.217	3.465	0.781
2	15:50:50	306.900	321.500	0.891	1.374	19.860	17.650	-0.011	-0.017	0.057	0.766
3	15:51:17	303.300	307.800	1.398	1.943	22.000	15.580	1.996	0.453	0.020	0.736
X		308.400	319.500	1.001	2.033	21.180	17.340	1.114	0.218	1.181	0.761
S		6.023	10.840	0.355	0.708	1.151	1.621	1.026	0.235	1.978	0.023
%RSD		1.953	3.394	35.430	34.810	5.436	9.349	92.050	108.100	167.600	3.010
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	80.7%	31.650	33.340	32.560	3.080	0.056	0.038	0.520	0.620	79.7%
2	15:50:50	80.7%	30.590	31.350	30.760	1.568	0.064	0.053	0.571	0.591	80.5%
3	15:51:17	81.7%	31.020	31.460	31.740	1.324	0.035	0.060	0.440	0.581	79.1%
X		81.0%	31.090	32.050	31.690	1.991	0.052	0.050	0.510	0.597	79.7%
S		0.5%	0.533	1.117	0.902	0.951	0.015	0.011	0.066	0.020	0.7%
%RSD		0.7	1.715	3.485	2.847	47.780	28.320	22.160	12.860	3.358	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	1.491	1.712	3.691	3.420	4.060	3.960	87.6%	-0.001	0.005	0.782
2	15:50:50	1.452	1.801	3.710	3.344	4.311	3.803	89.4%	0.009	0.006	0.877
3	15:51:17	1.567	1.780	3.537	3.214	4.847	3.945	90.5%	0.005	-0.000	0.759
X		1.503	1.765	3.646	3.326	4.406	3.902	89.2%	0.004	0.004	0.806
S		0.059	0.047	0.095	0.104	0.402	0.086	1.5%	0.005	0.003	0.063
%RSD		3.895	2.643	2.605	3.132	9.125	2.214	1.6	118.300	88.120	7.783
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:50:23	0.813	0.807	88.4%							
2	15:50:50	0.768	0.789	89.5%							
3	15:51:17	0.822	0.754	90.5%							
X		0.801	0.783	89.5%							
S		0.028	0.027	1.0%							
%RSD		3.549	3.444	1.2							

VQ53370-001 5/11/2020 15:55:47 QC Status: FAIL (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:13	86.0%	0.003	57.450	53.850	18.230	45.230	0.542	0.505	0.244	1.234
2	15:56:40	84.6%	0.003	49.380	48.210	16.700	45.530	0.500	0.444	0.321	1.737
3	15:57:07	85.9%	-0.018	43.860	45.620	13.340	46.320	0.341	0.503	0.349	1.217
X		85.5%	-0.004	50.230	49.230	16.090	45.690	0.461	0.484	0.305	1.396
S		0.8%	0.012	6.837	4.211	2.500	0.566	0.106	0.035	0.054	0.296
%RSD		0.9	307.000	13.610	8.555	15.540	1.239	22.970	7.163	17.760	21.190
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:13	5.546	65640.000	18.010	1.166	3.385	81.4%	-0.013	0.025	0.157	2177.000
2	15:56:40	4.853	66020.000	16.500	3.687	3.815	81.7%	-0.041	-0.052	0.150	2098.000
3	15:57:07	3.947	64340.000	16.850	10.170	3.659	80.6%	0.017	0.008	0.194	2211.000
X		4.782	65330.000	17.120	5.008	3.620	81.2%	-0.012	-0.007	0.167	2162.000
S		0.802	879.000	0.793	4.645	0.218	0.6%	0.029	0.040	0.024	57.770
%RSD		16.770	1.345	4.632	92.750	6.011	0.7	236.400	608.200	14.250	2.672
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:13	-1.278	0.031	2.018	2.269	-0.017	0.209	1.332	0.278	0.225	0.667
2	15:56:40	-0.682	0.041	1.380	4.048	-0.019	0.337	0.684	0.323	0.362	0.835
3	15:57:07	2.321	0.026	2.072	2.178	-0.012	0.185	0.882	0.352	0.314	0.837
X		0.120	0.033	1.824	2.832	-0.016	0.244	0.966	0.317	0.301	0.780
S		1.929	0.007	0.385	1.054	0.004	0.081	0.333	0.037	0.070	0.098
%RSD		1604.000	22.550	21.100	37.240	23.620	33.360	34.440	11.740	23.140	12.560
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:13	0.269	0.692	-0.276	0.199	5.470	8.778	-1.771	-0.364	-2.207	0.017
2	15:56:40	0.767	0.581	-0.080	0.473	5.087	4.715	-1.766	-0.435	0.948	0.005
3	15:57:07	0.272	0.669	-0.234	0.159	6.864	6.771	-3.025	-0.724	2.235	0.007
X		0.436	0.647	-0.197	0.277	5.807	6.755	-2.187	-0.508	0.325	0.009
S		0.287	0.059	0.103	0.171	0.935	2.031	0.725	0.191	2.286	0.006
%RSD		65.790	9.097	52.600	61.640	16.100	30.070	33.150	37.510	702.400	67.710
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:13	87.4%	-0.027	-0.033	-0.168	0.849	0.003	0.004	0.001	0.004	89.5%
2	15:56:40	87.2%	-0.114	-0.158	-0.191	-0.159	0.008	0.004	0.001	-0.007	90.1%
3	15:57:07	87.0%	-0.139	-0.103	-0.100	-0.383	0.008	-0.002	0.000	-0.001	90.0%
X		87.2%	-0.093	-0.098	-0.153	0.102	0.006	0.002	0.001	-0.001	89.9%
S		0.2%	0.059	0.063	0.047	0.656	0.003	0.003	0.000	0.005	0.3%
%RSD		0.2	62.790	63.860	30.970	639.900	49.300	156.600	30.970	453.700	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:13	0.084	0.110	0.438	0.386	0.028	0.060	96.3%	0.003	-0.001	-0.000
2	15:56:40	0.062	0.148	0.498	0.402	0.044	0.033	94.8%	-0.003	0.006	0.014
3	15:57:07	0.116	0.096	0.464	0.382	0.076	0.015	95.4%	-0.005	0.001	-0.002
X		0.087	0.118	0.467	0.390	0.049	0.036	95.5%	-0.002	0.002	0.004
S		0.027	0.027	0.030	0.011	0.025	0.022	0.8%	0.004	0.004	0.009
%RSD		30.470	23.020	6.378	2.695	50.150	62.330	0.8	248.200	164.000	224.100
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:56:13	0.007	0.009	102.7%							
2	15:56:40	0.025	0.013	104.2%							
3	15:57:07	0.030	0.011	103.7%							
X		0.021	0.011	103.5%							
S		0.012	0.002	0.8%							
%RSD		58.360	14.700	0.7							

VQ53370-002 5/11/2020 16:01:36 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:04	83.6%	94.280	117.800	119.600	18.420	1110.000	1064.000	1005.000	1046.000	99.860
2	16:02:30	80.9%	98.510	127.200	118.300	16.900	1095.000	1059.000	1017.000	1046.000	98.230
3	16:02:57	79.6%	96.430	119.600	119.400	17.640	1096.000	1055.000	1010.000	1032.000	98.400
X		81.4%	96.404%	121.500	119.100	17.660	110.041%	1059.000	1011.000	104.116%	98.829%
S		2.1%	n/a	4.988	0.732	0.759	n/a	4.880	6.128	n/a	n/a
%RSD		2.5	2.191	4.105	0.615	4.298	0.782	0.461	0.606	0.768	0.906
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:04	991.300	63570.000	1117.000	1040.000	1020.000	77.0%	101.800	98.200	102.100	3900.000
2	16:02:30	973.200	62760.000	1075.000	1055.000	988.200	76.7%	93.900	95.090	98.970	3859.000
3	16:02:57	976.000	63610.000	1087.000	1024.000	974.300	75.9%	98.870	97.960	99.320	3616.000
X		980.200	63310.000	109.324%	1040.000	99.415%	76.5%	98.206%	97.085%	100.126%	3792.000
S		9.778	477.700	n/a	15.400	n/a	0.6%	n/a	n/a	n/a	153.400
%RSD		0.998	0.754	1.980	1.481	2.357	0.7	4.086	1.785	1.705	4.045
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:04	1142.000	102.500	1048.000	1087.000	98.860	99.760	110.400	100.100	103.100	105.700
2	16:02:30	1120.000	99.960	1038.000	1056.000	97.960	98.970	99.130	98.850	103.600	105.800
3	16:02:57	1115.000	100.200	1037.000	1057.000	99.840	98.470	101.600	96.380	102.200	105.400
X		1125.000	100.866%	1041.000	106.648%	98.885%	99.063%	103.700	98.435%	102.965%	105.625%
S		14.100	n/a	6.055	n/a	n/a	n/a	5.903	n/a	n/a	n/a
%RSD		1.253	1.381	0.582	1.638	0.953	0.657	5.693	1.917	0.693	0.221
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:04	97.180	103.100	95.820	97.960	6.191	6.008	488.100	102.400	-2.092	96.450
2	16:02:30	104.400	102.600	97.700	98.830	6.210	7.802	454.400	95.080	0.550	97.230
3	16:02:57	99.000	101.600	97.780	100.500	5.522	6.434	474.700	98.730	-1.384	97.100
X		100.200	102.400	97.100%	99.100	5.974	6.748	472.400	98.727%	-0.975	96.930
S		3.741	0.806	n/a	1.292	0.392	0.937	17.010	n/a	1.368	0.418
%RSD		3.734	0.787	1.143	1.303	6.564	13.890	3.600	3.694	140.300	0.431
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:04	83.8%	95.660	99.040	99.250	102.200	97.780	98.510	102.100	97.800	84.9%
2	16:02:30	83.6%	96.320	98.070	96.570	101.600	97.790	97.490	96.600	98.850	84.9%
3	16:02:57	82.5%	98.420	101.600	97.560	103.800	97.850	98.990	101.000	102.400	84.3%
X		83.3%	96.800	99.580	97.790	102.500	97.808%	98.330	99.920	99.686%	84.7%
S		0.7%	1.440	1.836	1.355	1.111	n/a	0.769	2.929	n/a	0.3%
%RSD		0.8	1.487	1.844	1.386	1.083	0.039	0.782	2.932	2.422	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:04	101.700	100.500	99.210	95.450	101.600	97.460	91.5%	98.240	103.200	105.700
2	16:02:30	101.000	98.630	98.340	95.370	99.250	97.990	92.8%	98.850	103.100	105.500
3	16:02:57	100.500	99.810	97.820	94.570	105.100	99.400	91.6%	98.000	103.600	105.900
X		101.100	99.642%	98.460	95.131%	102.000	98.285%	92.0%	98.360	103.297%	105.700
S		0.608	n/a	0.707	n/a	2.929	n/a	0.7%	0.437	n/a	0.202
%RSD		0.601	0.938	0.718	0.510	2.873	1.019	0.7	0.444	0.260	0.191
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:02:04	106.500	106.300	100.3%							
2	16:02:30	104.200	105.700	100.1%							
3	16:02:57	106.000	106.700	101.2%							
X		105.600	106.222%	100.6%							
S		1.250	n/a	0.6%							
%RSD		1.184	0.472	0.6							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:54	77.5%	0.039	457.900	475.700	43.910	TM 138500.000	T 41640.000	T 41480.000	T 49790.000	2.102
2	16:08:21	81.0%	0.037	454.700	457.100	38.580	TM 138300.000	T 41230.000	T 41900.000	T 50030.000	2.047
3	16:08:48	83.4%	0.025	449.600	457.400	36.040	TM 136900.000	T 41100.000	T 41650.000	T 49030.000	2.001
X		80.6%	0.034	454.100	463.400	39.510	TM 137900.000	T 41320.000	T 41680.000	T 49620.000	2.050
S		3.0%	0.008	4.227	10.680	4.017	TM 886.600	T 281.200	T 214.300	T 522.700	0.051
%RSD		3.7	23.310	0.931	2.305	10.170	TM 0.643	T 0.680	T 0.514	T 1.053	2.475
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:54	TM 11170.000	T 67740.000	T 31200.000	M 161500.000	TM 161700.000	78.9%	1.086	0.928	0.563	2003.000
2	16:08:21	TM 11170.000	T 66210.000	T 30960.000	M 159800.000	TM 158900.000	80.6%	0.917	1.192	0.527	1820.000
3	16:08:48	TM 11180.000	T 66630.000	T 31280.000	M 158900.000	TM 160400.000	83.1%	0.944	1.051	0.606	1813.000
X		TM 11180.000	T 66860.000	T 31140.000	M 160100.000	TM 160400.000	80.9%	0.982	1.057	0.565	1879.000
S		TM 5.354	T 790.100	T 167.300	M 1351.000	TM 1379.000	2.1%	0.091	0.132	0.039	107.700
%RSD		TM 0.048	T 1.182	T 0.537	M 0.844	TM 0.860	2.6	9.263	12.500	6.981	5.730
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:54	26.340	TM 7221.000	31.700	334.100	33.140	19.390	16.040	28.350	30.330	6.218
2	16:08:21	25.700	TM 7128.000	33.010	338.600	33.800	18.510	16.740	29.120	30.880	6.189
3	16:08:48	25.090	TM 7211.000	32.700	314.600	33.060	18.680	18.340	29.290	30.790	6.301
X		25.710	TM 7187.000	32.470	329.100	33.330	18.860	17.040	28.920	30.670	6.236
S		0.626	TM 51.140	0.686	12.750	0.402	0.465	1.178	0.499	0.298	0.058
%RSD		2.436	TM 0.712	2.113	3.875	1.205	2.465	6.916	1.725	0.972	0.934
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:54	28.110	22.380	1.363	0.213	1932.000	1908.000	10.970	2.246	3.469	TM 2372.000
2	16:08:21	27.110	21.670	1.403	0.677	1887.000	1911.000	11.120	2.348	0.794	TM 2382.000
3	16:08:48	27.550	20.380	0.162	0.040	1910.000	1911.000	7.751	1.683	-1.116	TM 2381.000
X		27.590	21.480	0.976	0.310	1910.000	1910.000	9.946	2.092	1.049	TM 2378.000
S		0.499	1.015	0.705	0.330	22.250	1.888	1.903	0.358	2.303	TM 5.454
%RSD		1.809	4.723	72.240	106.400	1.165	0.099	19.130	17.120	219.500	TM 0.229
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:54	87.8%	0.305	0.502	0.414	49.320	0.040	0.016	0.373	0.320	82.3%
2	16:08:21	90.3%	0.470	0.687	0.474	48.850	0.022	0.036	0.328	0.325	84.4%
3	16:08:48	91.9%	0.460	0.364	0.394	41.370	0.022	0.024	0.375	0.340	84.5%
X		90.0%	0.412	0.518	0.427	46.510	0.028	0.025	0.359	0.328	83.7%
S		2.1%	0.093	0.162	0.042	4.461	0.010	0.010	0.027	0.010	1.3%
%RSD		2.3	22.470	31.280	9.731	9.590	36.320	38.970	7.431	3.160	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:54	0.424	0.284	0.433	0.418	M 892.600	M 850.600	90.8%	0.097	0.122	0.032
2	16:08:21	0.322	0.346	0.486	0.506	M 882.500	M 840.900	91.6%	0.110	0.145	0.034
3	16:08:48	0.333	0.331	0.413	0.495	M 889.200	M 857.000	93.2%	0.142	0.132	0.028
X		0.360	0.320	0.444	0.473	M 888.100	M 849.500	91.9%	0.116	0.133	0.032
S		0.056	0.033	0.038	0.048	M 5.150	M 8.111	1.2%	0.023	0.012	0.003
%RSD		15.490	10.160	8.516	10.130	M 0.580	M 0.955	1.3	19.940	8.716	8.944
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:07:54	0.054	0.045	89.5%							
2	16:08:21	0.069	0.048	91.4%							
3	16:08:48	0.042	0.034	92.9%							
X		0.055	0.043	91.3%							
S		0.014	0.007	1.7%							
%RSD		25.120	17.030	1.9							

VD23013-005dis

5/11/2020 16:13:16

User Pre-dilution: 1.000

User Population: 1,000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:43	87.2%	0.013	M 526.700	M 502.400	50.570	TM 115000.000	T 52900.000	T 53690.000	T 59030.000	1.455
2	16:14:10	85.9%	0.013	M 508.200	M 538.400	58.240	TM 119000.000	T 54490.000	T 53830.000	T 58660.000	1.495
3	16:14:38	87.2%	0.023	M 517.300	M 519.900	51.830	TM 115900.000	T 54360.000	T 54150.000	T 58860.000	1.489
X		86.8%	0.016	M 517.400	M 520.200	53.550	TM 116600.000	T 53910.000	T 53890.000	T 58850.000	1.480
S		0.7%	0.006	M 9.250	M 17.970	4.111	TM 2127.000	T 884.100	T 232.200	T 186.400	0.022
%RSD		0.8	35.350	M 1.788	M 3.455	7.677	TM 1.824	T 1.640	T 0.431	T 0.317	1.461
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:43	TM 10910.000	T 69480.000	T 16130.000	M 199600.000	TM 197100.000	88.2%	1.071	1.544	0.313	2328.000
2	16:14:10	TM 10960.000	T 71800.000	T 16270.000	M 197100.000	TM 195500.000	88.2%	0.964	1.412	0.225	2430.000
3	16:14:38	TM 10860.000	T 70110.000	T 15810.000	M 194600.000	TM 197800.000	88.7%	0.669	0.994	0.299	2537.000
X		TM 10910.000	T 70460.000	T 16070.000	M 197100.000	TM 196800.000	88.4%	0.901	1.317	0.279	2432.000
S		TM 52.550	T 1202.000	T 235.200	M 2509.000	TM 1167.000	0.3%	0.208	0.287	0.047	104.900
%RSD		TM 0.482	T 1.705	T 1.463	M 1.273	TM 0.593	0.3	23.100	21.810	16.880	4.313
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:43	23.110	TM 6874.000	32.510	393.900	25.650	20.440	20.190	18.950	19.620	3.294
2	16:14:10	22.090	TM 6839.000	32.060	371.800	25.630	21.790	21.310	19.010	19.330	3.274
3	16:14:38	24.010	TM 6890.000	33.240	379.200	25.310	20.180	18.950	19.260	19.210	3.035
X		23.070	TM 6868.000	32.600	381.700	25.530	20.800	20.150	19.070	19.390	3.201
S		0.960	TM 25.730	0.591	11.230	0.190	0.868	1.179	0.165	0.212	0.144
%RSD		4.162	TM 0.375	1.813	2.941	0.744	4.172	5.851	0.864	1.093	4.505
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:43	22.790	18.130	0.342	-0.009	1799.000	1819.000	9.935	2.054	4.175	TM 2916.000
2	16:14:10	22.930	18.200	0.288	0.905	1863.000	1855.000	8.709	1.802	0.012	TM 2915.000
3	16:14:38	23.990	17.710	0.282	0.528	1870.000	1883.000	5.272	0.990	0.675	TM 3000.000
X		23.240	18.010	0.304	0.475	1844.000	1852.000	7.972	1.615	1.621	TM 2944.000
S		0.659	0.266	0.033	0.460	39.320	32.120	2.418	0.556	2.237	TM 48.570
%RSD		2.835	1.477	10.720	96.850	2.132	1.734	30.330	34.440	138.000	TM 1.650
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:43	92.4%	0.382	0.493	0.239	56.260	0.033	0.046	0.137	0.158	86.3%
2	16:14:10	92.6%	0.358	0.448	0.128	60.910	0.066	0.051	0.135	0.124	88.2%
3	16:14:38	91.2%	0.403	0.436	0.336	71.930	0.040	0.031	0.066	0.106	88.0%
X		92.1%	0.381	0.459	0.234	63.030	0.046	0.043	0.113	0.129	87.5%
S		0.8%	0.023	0.031	0.104	8.048	0.018	0.010	0.040	0.026	1.1%
%RSD		0.9	5.938	6.659	44.380	12.770	38.390	23.450	35.610	20.390	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:43	0.193	0.334	0.331	0.472	M 771.900	M 752.000	92.9%	0.011	0.005	0.008
2	16:14:10	0.280	0.237	0.364	0.344	M 762.300	M 738.500	93.0%	-0.009	0.007	0.015
3	16:14:38	0.211	0.367	0.409	0.366	M 772.800	M 741.100	95.0%	0.019	0.005	0.016
X		0.228	0.312	0.368	0.394	M 769.000	M 743.900	93.6%	0.007	0.006	0.013
S		0.046	0.067	0.039	0.069	M 5.830	M 7.163	1.2%	0.014	0.001	0.005
%RSD		20.230	21.590	10.690	17.390	M 0.758	M 0.963	1.3	218.400	24.750	35.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:13:43	0.026	0.014	90.8%							
2	16:14:10	0.016	0.017	91.6%							
3	16:14:38	0.002	0.009	90.7%							
X		0.015	0.013	91.0%							
S		0.012	0.004	0.5%							
%RSD		81.750	31.480	0.6							

VD23013-006dis

5/11/2020 16:19:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:33	92.4%	0.633	20.860	17.930	27.400	<u>2124.000</u>	394.900	382.400	390.400	9.445
2	16:19:59	91.9%	0.589	16.670	17.250	22.420	<u>2119.000</u>	393.600	374.600	396.500	9.480
3	16:20:26	92.7%	0.555	13.130	16.070	11.500	<u>2140.000</u>	383.300	373.000	389.300	10.070
X		92.3%	0.592	16.890	17.080	20.440	<u>2128.000</u>	390.600	376.700	392.100	9.665
S		0.4%	0.039	3.873	0.942	8.132	<u>10.740</u>	6.399	5.041	3.906	0.351
%RSD		0.4	6.655	22.940	5.516	39.790	<u>0.505</u>	1.638	1.338	0.996	3.634
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:33	<u>6397.000</u>	<u>69020.000</u>	2344.000	1264.000	1272.000	88.6%	0.590	-0.518	0.319	7370.000
2	16:19:59	<u>6454.000</u>	<u>68160.000</u>	<u>2278.000</u>	1321.000	1277.000	88.6%	0.484	-0.640	0.427	8389.000
3	16:20:26	<u>6358.000</u>	<u>67470.000</u>	<u>2300.000</u>	1415.000	1293.000	88.5%	0.538	0.088	0.407	8688.000
X		<u>6403.000</u>	<u>68220.000</u>	<u>2307.000</u>	1333.000	1280.000	88.6%	0.537	-0.357	0.384	8149.000
S		<u>48.500</u>	<u>773.000</u>	<u>33.560</u>	76.330	11.080	0.1%	0.053	0.389	0.058	690.900
%RSD		<u>0.757</u>	<u>1.133</u>	<u>1.455</u>	5.726	0.866	0.1	9.819	109.200	15.000	8.478
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:33	12.080	15.580	11.850	4.574	1.135	0.230	0.132	0.298	0.283	19.550
2	16:19:59	9.281	15.460	11.480	4.034	1.175	0.223	0.293	0.270	0.226	19.190
3	16:20:26	9.062	15.250	11.580	5.543	1.128	0.215	0.187	0.307	0.241	19.160
X		10.140	15.430	11.640	4.717	1.146	0.223	0.204	0.292	0.250	19.300
S		1.682	0.164	0.189	0.765	0.025	0.008	0.082	0.020	0.029	0.216
%RSD		16.580	1.060	1.624	16.210	2.222	3.476	40.220	6.696	11.770	1.118
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:33	18.860	19.410	-0.886	0.596	24.720	24.250	0.475	0.089	-0.499	39.150
2	16:19:59	20.650	20.570	0.155	0.411	22.410	21.510	-1.406	-0.341	1.837	38.460
3	16:20:26	19.970	20.720	-0.545	1.303	19.360	19.310	-3.798	-0.837	0.675	39.050
X		19.830	20.230	-0.425	0.770	22.160	21.690	-1.576	-0.363	0.671	38.890
S		0.906	0.715	0.531	0.471	2.687	2.471	2.142	0.464	1.168	0.375
%RSD		4.571	3.533	124.900	61.110	12.130	11.390	135.900	127.700	174.000	0.964
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:33	90.5%	-0.176	-0.121	-0.157	1.339	0.005	0.001	0.369	0.419	91.8%
2	16:19:59	91.8%	-0.183	-0.024	-0.187	2.069	0.003	0.001	0.460	0.533	91.0%
3	16:20:26	91.2%	-0.151	-0.188	-0.240	0.750	0.005	0.001	0.381	0.389	91.6%
X		91.2%	-0.170	-0.111	-0.195	1.386	0.004	0.001	0.403	0.447	91.4%
S		0.6%	0.017	0.082	0.042	0.661	0.001	0.000	0.049	0.076	0.4%
%RSD		0.7	10.040	74.330	21.570	47.700	34.320	1.181	12.240	17.000	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:33	0.201	0.094	0.348	0.328	41.370	40.930	95.0%	0.051	0.042	0.000
2	16:19:59	0.214	0.099	0.428	0.372	40.830	41.880	95.8%	0.040	0.041	0.011
3	16:20:26	0.176	0.055	0.385	0.442	40.790	41.450	96.1%	0.028	0.043	-0.002
X		0.197	0.083	0.387	0.381	41.000	41.420	95.6%	0.040	0.042	0.003
S		0.019	0.024	0.040	0.057	0.324	0.475	0.5%	0.012	0.001	0.007
%RSD		9.832	28.850	10.320	15.070	0.791	1.148	0.6	29.750	2.485	235.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:19:33	0.025	0.017	103.0%							
2	16:19:59	0.017	0.015	103.4%							
3	16:20:26	0.020	0.009	103.5%							
X		0.021	0.014	103.3%							
S		0.004	0.004	0.3%							
%RSD		19.440	28.690	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:24	93.0%	0.458	12.560	12.100	11.150	<u>9663.000</u>	<u>3369.000</u>	3360.000	3518.000	<u>TM 1075.000</u>
2	16:25:51	87.5%	0.629	12.950	11.500	18.100	<u>9713.000</u>	<u>3343.000</u>	3257.000	3530.000	<u>TM 1078.000</u>
3	16:26:18	89.3%	0.487	11.920	11.070	19.840	<u>9613.000</u>	<u>3279.000</u>	3383.000	3549.000	<u>TM 1086.000</u>
X		89.9%	0.525	12.480	11.560	16.360	<u>9663.000</u>	<u>3330.000</u>	3333.000	3532.000	<u>TM 1080.000</u>
S		2.8%	0.091	0.518	0.514	4.596	<u>50.050</u>	<u>46.200</u>	67.460	15.910	<u>TM 5.851</u>
%RSD		3.1	17.420	4.153	4.445	28.080	<u>0.518</u>	<u>1.387</u>	2.024	0.451	<u>TM 0.542</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:24	<u>3731.000</u>	<u>66520.000</u>	1758.000	1240.000	1241.000	87.1%	0.387	-0.496	0.422	6833.000
2	16:25:51	<u>3769.000</u>	<u>67690.000</u>	1808.000	1225.000	1252.000	86.3%	0.391	-0.527	0.497	7185.000
3	16:26:18	<u>3838.000</u>	<u>67810.000</u>	1774.000	1256.000	1253.000	85.5%	0.477	-0.146	0.536	6852.000
X		<u>3780.000</u>	<u>67340.000</u>	1780.000	1240.000	1249.000	86.3%	0.418	-0.390	0.485	6957.000
S		<u>54.280</u>	<u>711.700</u>	25.170	15.520	6.574	0.8%	0.051	0.211	0.058	197.900
%RSD		<u>1.436</u>	<u>1.057</u>	1.414	1.252	0.526	0.9	12.180	54.230	11.980	2.845
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:24	10.090	8.487	13.120	8.723	2.710	2.417	2.443	0.633	0.795	5.555
2	16:25:51	10.100	8.450	12.190	6.687	2.725	2.577	3.190	0.629	0.891	5.731
3	16:26:18	9.614	8.372	11.980	7.266	2.684	2.738	2.836	0.672	0.782	5.945
X		9.935	8.436	12.430	7.559	2.706	2.577	2.823	0.645	0.823	5.744
S		0.278	0.058	0.610	1.049	0.021	0.161	0.374	0.024	0.060	0.195
%RSD		2.795	0.692	4.906	13.880	0.759	6.231	13.240	3.665	7.236	3.400
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:24	10.430	8.400	-0.485	-0.259	94.290	93.490	-1.640	0.248	-2.493	10.520
2	16:25:51	9.046	8.759	0.214	-0.219	96.160	96.440	-3.163	-0.258	-2.864	10.440
3	16:26:18	9.179	8.283	-0.519	-0.252	96.410	94.070	-3.165	-0.286	-2.123	10.530
X		9.552	8.481	-0.263	-0.243	95.620	94.670	-2.656	-0.099	-2.493	10.500
S		0.764	0.248	0.413	0.021	1.162	1.562	0.880	0.301	0.371	0.048
%RSD		7.994	2.929	157.000	8.756	1.215	1.650	33.120	305.100	14.870	0.457
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:24	164.2%	-0.266	-0.255	-0.296	0.848	0.000	-0.002	0.045	0.047	89.9%
2	16:25:51	164.5%	-0.180	-0.129	-0.274	1.268	0.008	-0.002	0.057	0.061	89.2%
3	16:26:18	165.1%	-0.223	-0.199	-0.258	2.088	0.005	0.001	0.046	0.019	89.4%
X		164.6%	-0.223	-0.194	-0.276	1.401	0.004	-0.001	0.049	0.042	89.5%
S		0.5%	0.043	0.063	0.019	0.631	0.004	0.002	0.007	0.022	0.4%
%RSD		0.3	19.270	32.330	6.895	45.020	91.700	222.100	13.320	50.800	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:24	0.052	0.079	0.254	0.205	233.800	227.200	96.5%	0.049	0.055	1.952
2	16:25:51	0.042	0.062	0.218	0.266	233.800	229.800	97.0%	0.052	0.045	1.989
3	16:26:18	0.026	0.066	0.312	0.154	239.600	226.900	98.3%	0.027	0.034	1.892
X		0.040	0.069	0.262	0.208	235.800	227.900	97.2%	0.042	0.045	1.944
S		0.013	0.009	0.047	0.056	3.352	1.591	0.9%	0.014	0.010	0.049
%RSD		33.220	12.780	18.140	26.910	1.422	0.698	1.0	32.520	23.310	2.524
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:25:24	1.933	1.881	100.5%							
2	16:25:51	1.787	1.908	101.4%							
3	16:26:18	1.718	1.858	100.9%							
X		1.813	1.882	101.0%							
S		0.110	0.025	0.5%							
%RSD		6.060	1.330	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:15	89.1%	0.290	12.970	11.850	16.630	5297.000	6664.000	6741.000	7129.000	TM 1386.000
2	16:31:42	87.6%	0.336	13.290	11.950	14.660	5419.000	6839.000	6794.000	7213.000	TM 1395.000
3	16:32:08	86.9%	0.460	13.290	12.230	22.870	5427.000	6910.000	6870.000	7191.000	TM 1381.000
X		87.9%	0.362	13.180	12.010	18.050	5381.000	6805.000	6802.000	7178.000	TM 1387.000
S		1.1%	0.088	0.184	0.200	4.290	73.030	126.400	64.830	43.430	TM 7.020
%RSD		1.3	24.390	1.393	1.661	23.760	1.357	1.858	0.953	0.605	TM 0.506
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:15	3684.000	67180.000	2116.000	17190.000	16600.000	86.4%	0.228	-0.289	0.673	7197.000
2	16:31:42	3684.000	67330.000	2133.000	17440.000	16930.000	83.1%	0.211	-0.217	0.825	7559.000
3	16:32:08	3611.000	68380.000	2162.000	17660.000	17140.000	83.4%	0.379	-0.327	0.701	7764.000
X		3660.000	67630.000	2137.000	17430.000	16890.000	84.3%	0.273	-0.278	0.733	7507.000
S		42.230	657.100	23.090	238.600	272.600	1.8%	0.092	0.056	0.081	287.300
%RSD		1.154	0.972	1.081	1.369	1.614	2.2	33.870	20.210	11.060	3.827
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:15	3.059	15.900	7.523	27.700	2.152	2.169	2.193	0.388	0.526	1.980
2	16:31:42	6.325	16.550	8.878	31.920	2.269	2.373	2.543	0.394	0.422	2.239
3	16:32:08	7.020	16.250	8.285	27.840	2.072	2.231	2.533	0.369	0.496	2.301
X		5.468	16.230	8.228	29.150	2.164	2.258	2.423	0.384	0.481	2.173
S		2.115	0.325	0.679	2.400	0.099	0.104	0.199	0.013	0.053	0.170
%RSD		38.680	2.000	8.257	8.232	4.576	4.619	8.218	3.400	11.080	7.842
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:15	6.474	5.638	-0.722	2.467	56.940	56.210	8.606	2.436	-0.020	69.390
2	16:31:42	7.787	5.045	0.800	2.283	59.680	57.020	7.093	2.004	0.527	70.140
3	16:32:08	8.693	4.674	-0.274	1.976	52.720	52.860	10.170	2.832	-0.032	68.620
X		7.651	5.119	-0.065	2.242	56.450	55.360	8.624	2.424	0.158	69.380
S		1.116	0.486	0.782	0.248	3.506	2.205	1.540	0.414	0.319	0.762
%RSD		14.580	9.501	1197.000	11.070	6.211	3.983	17.860	17.090	201.500	1.098
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:15	107.7%	-0.177	-0.068	-0.222	2.656	0.005	0.001	0.035	0.077	87.1%
2	16:31:42	108.0%	-0.195	-0.196	-0.250	3.193	0.005	-0.002	0.046	0.054	87.4%
3	16:32:08	108.8%	-0.186	-0.097	-0.228	3.985	0.000	0.004	0.046	0.081	87.4%
X		108.2%	-0.186	-0.121	-0.234	3.278	0.004	0.001	0.043	0.071	87.3%
S		0.6%	0.009	0.067	0.015	0.669	0.003	0.003	0.007	0.015	0.2%
%RSD		0.5	4.839	55.760	6.292	20.410	86.600	237.500	15.330	20.890	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:15	0.032	0.064	0.288	0.271	184.700	177.800	94.2%	0.028	0.029	5.191
2	16:31:42	0.054	0.037	0.207	0.234	183.400	179.600	93.6%	0.031	0.026	5.297
3	16:32:08	0.049	0.091	0.291	0.246	178.700	177.200	93.0%	0.028	0.028	5.182
X		0.045	0.064	0.262	0.250	182.200	178.200	93.6%	0.029	0.028	5.223
S		0.011	0.027	0.048	0.019	3.185	1.262	0.6%	0.002	0.002	0.064
%RSD		24.970	42.390	18.140	7.486	1.748	0.708	0.7	7.453	6.605	1.225
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:31:15	5.059	5.128	98.3%							
2	16:31:42	5.134	5.254	98.5%							
3	16:32:08	5.068	5.169	98.6%							
X		5.087	5.184	98.4%							
S		0.041	0.064	0.2%							
%RSD		0.805	1.240	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:05	85.6%	100.200	114.100	110.900	22.120	┐6489.000	┐7857.000	7848.000	┐7944.000	┐1473.000
2	16:37:32	83.2%	98.390	109.600	109.500	19.990	┐6350.000	┐7739.000	7788.000	8126.000	┐1493.000
3	16:37:59	81.6%	106.800	107.300	111.300	17.980	┐6322.000	┐7713.000	7806.000	8056.000	┐1480.000
X		83.5%	101.800	110.300	110.600	20.030	┐6387.000	┐7770.000	7814.000	┐8042.000	┐1482.000
S		2.0%	4.402	3.444	0.957	2.070	┐89.290	┐76.390	30.690	┐91.570	┐10.470
%RSD		2.4	4.325	3.122	0.866	10.340	┐1.398	┐0.983	0.393	┐1.139	┐0.706
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:05	┐4579.000	┐65690.000	┐3223.000	18020.000	17570.000	81.6%	100.300	97.970	104.400	7827.000
2	16:37:32	┐4563.000	┐65920.000	┐3133.000	18380.000	17340.000	80.4%	94.000	97.900	104.800	7159.000
3	16:37:59	┐4543.000	┐66650.000	┐3181.000	18330.000	17760.000	80.5%	100.100	99.620	102.400	6625.000
X		┐4561.000	┐66080.000	┐3179.000	18240.000	17560.000	80.8%	98.120	98.500	103.900	7203.000
S		┐18.050	┐501.200	┐45.080	194.300	209.600	0.7%	3.570	0.973	1.273	602.100
%RSD		┐0.396	┐0.758	┐1.418	1.065	1.194	0.8	3.638	0.988	1.225	8.359
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:05	1131.000	114.000	┐1061.000	1088.000	98.010	99.540	103.700	91.200	99.640	99.610
2	16:37:32	1125.000	116.200	┐1053.000	1090.000	97.380	100.300	103.900	91.130	99.270	102.800
3	16:37:59	1120.000	113.100	┐1070.000	1097.000	100.700	100.800	102.900	88.930	98.250	102.100
X		1125.000	114.400	┐1061.000	1092.000	98.700	100.200	103.500	90.420	99.050	101.500
S		5.744	1.616	┐8.547	5.012	1.767	0.631	0.503	1.293	0.722	1.677
%RSD		0.510	1.412	┐0.805	0.459	1.791	0.629	0.486	1.430	0.729	1.652
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:05	94.610	93.750	100.600	84.860	55.690	49.180	402.100	102.300	-1.476	148.100
2	16:37:32	94.120	92.340	100.100	82.720	51.830	48.900	399.600	101.200	-1.971	148.700
3	16:37:59	91.820	94.170	102.500	87.350	52.830	51.640	413.100	105.300	-0.920	148.400
X		93.520	93.420	101.100	84.980	53.450	49.910	404.900	102.900	-1.456	148.400
S		1.487	0.961	1.299	2.321	2.001	1.509	7.233	2.139	0.526	0.316
%RSD		1.590	1.029	1.285	2.731	3.743	3.024	1.786	2.078	36.120	0.213
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:05	104.5%	100.200	105.100	102.200	99.420	96.950	98.130	100.300	99.760	84.9%
2	16:37:32	102.6%	103.300	104.100	104.200	96.380	97.340	98.470	101.000	100.000	83.9%
3	16:37:59	104.3%	104.600	101.400	102.100	94.570	97.830	96.640	97.680	100.600	84.4%
X		103.8%	102.700	103.600	102.800	96.790	97.370	97.750	99.650	100.100	84.4%
S		1.0%	2.240	1.905	1.187	2.450	0.444	0.975	1.743	0.435	0.5%
%RSD		1.0	2.181	1.839	1.154	2.531	0.456	0.998	1.749	0.435	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:05	100.500	98.920	99.690	97.620	281.400	275.800	90.8%	101.500	101.400	108.300
2	16:37:32	101.100	100.600	101.700	97.740	281.800	274.400	90.7%	100.500	101.100	110.000
3	16:37:59	101.200	100.200	102.400	95.880	287.900	276.600	92.3%	99.490	100.500	107.200
X		100.900	99.890	101.300	97.080	283.700	275.600	91.3%	100.500	101.000	108.500
S		0.413	0.861	1.395	1.044	3.654	1.100	0.9%	0.981	0.479	1.422
%RSD		0.410	0.862	1.377	1.076	1.288	0.399	1.0	0.976	0.474	1.311
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:37:05	107.600	109.000	94.9%							
2	16:37:32	108.800	109.400	96.1%							
3	16:37:59	105.800	107.700	97.2%							
X		107.400	108.700	96.1%							
S		1.491	0.890	1.2%							
%RSD		1.389	0.819	1.2							

CCV MW126865 5/11/2020 16:42:30 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:42:57	82.2%	301.300	307.500	296.300	1.086	65710.000	61870.000	61730.000	62840.000	302.800
2	16:43:24	81.3%	296.700	308.000	308.700	8.858	63110.000	61360.000	61780.000	60790.000	295.300
3	16:43:51	79.7%	309.800	332.600	311.400	1.659	64680.000	64140.000	63700.000	63560.000	307.400
X		81.1%	100.867%	105.333%	101.820%	3.868	107.504%	62460.000	62400.000	103.994%	100.608%
S		1.2%	n/a	n/a	n/a	4.331	n/a	1480.000	1120.000	n/a	n/a
%RSD		1.5	2.203	4.538	2.638	112.000	2.030	2.370	1.794	2.307	2.019
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:42:57	3437.000	868.700	67420.000	61620.000	62340.000	79.6%	313.300	306.400	302.600	2217.000
2	16:43:24	3269.000	815.300	65960.000	60710.000	61460.000	81.6%	306.900	298.000	292.300	3706.000
3	16:43:51	3425.000	830.700	67550.000	62340.000	63410.000	79.4%	307.900	311.600	306.800	1257.000
X		3377.000	838.200	111.625%	61550.000	104.002%	80.2%	103.121%	101.767%	100.185%	2393.000
S		93.470	27.490	n/a	820.000	n/a	1.2%	n/a	n/a	n/a	1234.000
%RSD		2.768	3.279	1.320	1.332	1.566	1.5	1.103	2.241	2.477	51.560
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:42:57	62960.000	299.500	63390.000	63370.000	302.100	296.000	294.100	283.100	290.000	294.300
2	16:43:24	61740.000	297.100	62680.000	61690.000	293.400	286.000	288.200	280.000	282.300	286.600
3	16:43:51	63010.000	298.800	63630.000	63070.000	299.600	293.900	300.000	278.900	295.300	295.700
X		62570.000	99.484%	63230.000	104.517%	99.464%	97.329%	294.100	280.700	96.403%	97.391%
S		718.600	n/a	497.300	n/a	n/a	n/a	5.937	2.177	n/a	n/a
%RSD		1.148	0.423	0.786	1.429	1.500	1.815	2.019	0.776	2.262	1.681
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:42:57	288.800	283.800	293.500	286.200	3.250	2.081	1349.000	291.700	-2.109	295.700
2	16:43:24	281.900	284.000	298.900	284.900	3.542	3.173	1361.000	296.000	3.765	300.000
3	16:43:51	296.600	290.700	295.300	291.400	3.345	1.138	1359.000	291.200	1.105	296.900
X		289.100	286.200	98.622%	287.500	3.379	2.131	1356.000	97.661%	0.920	99.179%
S		7.364	3.953	n/a	3.451	0.149	1.018	6.383	n/a	2.941	n/a
%RSD		2.547	1.381	0.930	1.200	4.405	47.800	0.471	0.898	319.600	0.742
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:42:57	83.9%	309.900	311.600	307.100	304.500	287.500	286.100	294.900	296.000	83.0%
2	16:43:24	83.7%	317.700	321.100	314.600	307.300	287.900	290.800	294.600	298.000	82.6%
3	16:43:51	84.9%	316.500	318.900	317.200	293.200	284.500	284.200	291.800	294.500	84.5%
X		84.2%	104.890%	105.728%	313.000	301.600	95.545%	287.000	293.800	98.720%	83.4%
S		0.6%	n/a	n/a	5.257	7.477	n/a	3.392	1.756	n/a	1.0%
%RSD		0.8	1.328	1.555	1.680	2.479	0.642	1.182	0.598	0.593	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:42:57	303.800	298.900	300.200	299.200	302.000	297.000	87.1%	308.400	302.900	307.400
2	16:43:24	307.000	306.200	305.400	299.600	309.700	300.800	88.3%	305.000	303.300	304.300
3	16:43:51	304.400	298.300	302.400	296.600	309.300	296.500	89.5%	306.100	303.100	306.800
X		101.696%	100.370%	302.600	99.486%	102.326%	99.364%	88.3%	306.500	101.034%	102.055%
S		n/a	n/a	2.632	n/a	n/a	n/a	1.2%	1.736	n/a	n/a
%RSD		0.550	1.460	0.870	0.539	1.411	0.788	1.4	0.566	0.066	0.528
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:42:57	309.200	310.500	89.7%							
2	16:43:24	302.800	307.100	91.4%							
3	16:43:51	305.700	309.500	92.3%							
X		101.963%	103.017%	91.1%							
S		n/a	n/a	1.3%							
%RSD		1.062	0.566	1.4							

CCB IM9968-01 5/11/2020 16:48:23 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:48:50	92.8%	-0.008	7.229	6.451	0.732	3.797	2.406	2.445	1.781	0.188
2	16:49:17	91.6%	0.031	6.047	6.081	-3.674	3.913	2.148	1.672	1.454	0.234
3	16:49:44	89.8%	0.012	6.343	6.202	4.761	4.035	2.169	1.934	2.053	0.172
X		91.4%	0.011	6.540	6.245	0.606	3.915	2.241	2.017	1.763	0.198
S		1.5%	0.019	0.615	0.188	4.218	0.119	0.143	0.393	0.300	0.032
%RSD		1.6	170.200	9.399	3.015	696.000	3.041	6.393	19.480	17.040	16.340
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:48:50	2.117	616.500	18.150	5.602	3.046	88.9%	0.061	0.015	-0.008	5.353
2	16:49:17	1.696	604.800	16.700	-0.200	2.188	88.0%	-0.044	0.021	0.007	19.010
3	16:49:44	1.833	618.500	16.440	0.952	2.635	88.9%	0.035	0.046	-0.020	4.010
X		1.882	613.300	17.100	2.118	2.623	88.6%	0.018	0.027	-0.007	9.456
S		0.215	7.404	0.921	3.072	0.429	0.5%	0.055	0.016	0.013	8.297
%RSD		11.400	1.207	5.389	145.100	16.350	0.6	308.300	60.120	197.100	87.740
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:48:50	1.288	0.039	5.808	5.939	-0.003	0.065	0.235	-0.022	0.013	-0.026
2	16:49:17	2.908	0.029	5.235	5.509	-0.006	-0.006	0.085	-0.051	0.007	0.002
3	16:49:44	3.619	0.014	4.845	3.787	-0.003	-0.006	0.022	-0.016	-0.029	0.020
X		2.605	0.027	5.296	5.078	-0.004	0.017	0.114	-0.029	-0.003	-0.001
S		1.195	0.013	0.484	1.139	0.002	0.041	0.110	0.019	0.023	0.023
%RSD		45.860	47.010	9.148	22.430	50.390	233.300	96.240	63.170	809.700	2059.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:48:50	-0.047	0.008	-0.151	0.467	1.523	2.466	-3.204	-0.652	-1.736	0.005
2	16:49:17	-0.105	-0.004	-0.228	-0.116	1.542	2.229	-1.933	-0.397	-1.688	0.006
3	16:49:44	0.069	0.046	-0.123	0.450	1.928	1.182	-1.428	-0.271	-1.756	0.016
X		-0.028	0.016	-0.167	0.267	1.664	1.959	-2.188	-0.440	-1.727	0.009
S		0.089	0.026	0.055	0.332	0.229	0.683	0.915	0.195	0.035	0.006
%RSD		320.800	161.100	32.570	124.400	13.730	34.890	41.830	44.220	2.005	67.160
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:48:50	91.5%	0.377	0.532	0.442	1.003	0.015	0.009	0.009	0.013	91.2%
2	16:49:17	90.0%	0.399	0.352	0.401	-0.424	0.010	0.014	0.020	0.023	91.6%
3	16:49:44	92.2%	0.413	0.552	0.456	0.386	0.008	0.006	-0.002	0.026	91.9%
X		91.2%	0.397	0.479	0.433	0.322	0.011	0.010	0.009	0.021	91.6%
S		1.1%	0.018	0.110	0.028	0.716	0.004	0.004	0.011	0.007	0.4%
%RSD		1.2	4.576	22.960	6.533	222.600	35.650	41.040	119.700	32.540	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:48:50	0.088	0.086	0.390	0.383	0.027	0.015	91.8%	-0.002	0.004	0.022
2	16:49:17	0.066	0.068	0.441	0.388	0.011	0.006	92.4%	0.003	0.009	0.017
3	16:49:44	0.066	0.111	0.386	0.353	0.043	0.006	93.4%	0.003	0.010	0.024
X		0.073	0.089	0.406	0.375	0.027	0.009	92.5%	0.001	0.008	0.021
S		0.012	0.021	0.031	0.019	0.016	0.005	0.8%	0.003	0.004	0.003
%RSD		16.920	24.120	7.623	5.039	58.740	56.890	0.9	224.200	45.770	16.390
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:48:50	0.029	0.026	98.2%							
2	16:49:17	0.032	0.024	99.8%							
3	16:49:44	0.042	0.021	101.0%							
X		0.034	0.024	99.7%							
S		0.007	0.003	1.4%							
%RSD		19.250	11.180	1.4							

VE06015-002SDdis 5/11/2020 16:54:12

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:39	87.4%	103.900	104.700	106.800	24.660	76419.000	77698.000	7789.000	7979.000	TM 1496.000
2	16:55:06	86.1%	103.300	110.900	106.300	21.200	76419.000	77647.000	7794.000	7864.000	TM 1446.000
3	16:55:33	86.0%	99.470	105.300	107.300	19.560	76558.000	77827.000	7888.000	8275.000	TM 1493.000
X		86.5%	102.200	107.000	106.800	21.810	76465.000	77724.000	7824.000	8040.000	TM 1478.000
S		0.8%	2.408	3.443	0.483	2.604	80.110	93.080	55.750	212.000	TM 28.200
%RSD		0.9	2.356	3.219	0.452	11.940	1.239	1.205	0.713	2.637	TM 1.908
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:39	74690.000	766290.000	73174.000	18110.000	17570.000	82.8%	99.760	98.890	101.200	6291.000
2	16:55:06	74574.000	766680.000	73158.000	18460.000	17730.000	83.0%	103.300	96.940	99.370	6164.000
3	16:55:33	74615.000	767900.000	73154.000	18650.000	17870.000	81.6%	97.970	100.100	101.800	5379.000
X		74626.000	766960.000	73162.000	18410.000	17730.000	82.4%	100.300	98.660	100.800	5945.000
S		758.560	7840.600	710.940	274.200	151.500	0.8%	2.708	1.610	1.267	493.900
%RSD		71.266	71.255	70.346	1.490	0.855	0.9	2.699	1.632	1.257	8.309
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:39	1106.000	114.300	71046.000	1099.000	101.800	101.900	102.000	91.790	101.000	100.400
2	16:55:06	1135.000	113.200	71032.000	1108.000	101.600	100.200	98.880	89.250	99.620	101.200
3	16:55:33	1155.000	116.300	71049.000	1094.000	101.900	101.900	99.950	92.190	102.300	102.700
X		1132.000	114.600	71043.000	1100.000	101.800	101.400	100.300	91.070	101.000	101.400
S		24.550	1.576	78.975	7.192	0.132	0.975	1.574	1.594	1.357	1.187
%RSD		2.169	1.375	70.861	0.654	0.130	0.962	1.570	1.751	1.344	1.171
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:39	91.620	94.370	104.700	88.210	42.430	41.230	385.100	99.310	4.999	148.500
2	16:55:06	95.600	93.550	107.000	86.370	43.200	42.780	398.500	101.800	-0.400	150.400
3	16:55:33	97.710	94.210	102.900	85.030	43.220	44.720	415.200	106.600	-2.036	147.500
X		94.980	94.040	104.900	86.540	42.950	42.910	399.600	102.600	0.854	148.800
S		3.090	0.432	2.060	1.598	0.448	1.749	15.080	3.688	3.682	1.474
%RSD		3.254	0.460	1.965	1.846	1.044	4.077	3.775	3.595	431.000	0.991
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:39	104.5%	105.700	104.700	104.200	88.730	99.790	99.690	99.760	99.300	83.9%
2	16:55:06	104.3%	101.700	104.500	102.800	89.040	97.970	99.430	100.000	100.900	84.7%
3	16:55:33	105.3%	103.900	104.900	104.000	104.600	97.570	97.580	97.500	100.600	84.8%
X		104.7%	103.800	104.700	103.600	94.110	98.440	98.900	99.100	100.300	84.5%
S		0.6%	2.017	0.242	0.757	9.052	1.184	1.149	1.386	0.863	0.5%
%RSD		0.5	1.944	0.231	0.730	9.619	1.203	1.162	1.398	0.860	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:39	101.800	101.000	102.300	99.550	281.800	279.900	89.4%	101.400	100.400	106.800
2	16:55:06	100.700	99.950	102.800	98.980	281.300	269.600	91.5%	101.300	99.120	107.200
3	16:55:33	99.590	99.770	102.200	99.860	282.800	273.600	91.0%	99.210	100.200	106.300
X		100.700	100.200	102.400	99.460	282.000	274.300	90.6%	100.700	99.900	106.800
S		1.119	0.659	0.291	0.451	0.797	5.166	1.1%	1.250	0.682	0.485
%RSD		1.111	0.657	0.284	0.453	0.283	1.883	1.3	1.242	0.683	0.454
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:54:39	107.000	108.600	93.0%							
2	16:55:06	105.300	106.700	93.9%							
3	16:55:33	107.000	108.200	95.4%							
X		106.400	107.800	94.1%							
S		0.964	0.994	1.2%							
%RSD		0.906	0.921	1.3							

VE06015-002L(5)dis

5/11/2020 17:00:03

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:29	92.2%	0.040	8.847	6.856	7.432	1109.000	1424.000	1408.000	1426.000	286.200
2	17:00:57	89.2%	0.032	6.978	7.558	12.780	1068.000	1427.000	1430.000	1436.000	287.100
3	17:01:23	89.4%	0.061	7.479	6.799	8.485	1091.000	1418.000	1409.000	1477.000	296.700
X		90.3%	0.044	7.768	7.071	9.566	1090.000	1423.000	1416.000	1446.000	290.000
S		1.7%	0.015	0.967	0.422	2.834	20.640	4.595	12.240	27.030	5.811
%RSD		1.8	34.470	12.450	5.974	29.620	1.895	0.323	0.865	1.869	2.004
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:29	778.000	13830.000	447.200	3563.000	3411.000	90.1%	0.086	0.122	0.175	1220.000
2	17:00:57	778.800	13610.000	444.300	3589.000	3359.000	89.0%	0.088	-0.174	0.096	1519.000
3	17:01:23	792.000	13980.000	465.500	3660.000	3381.000	86.4%	0.065	0.003	0.151	1514.000
X		782.900	13810.000	452.400	3604.000	3384.000	88.5%	0.080	-0.017	0.140	1418.000
S		7.848	182.000	11.500	50.060	25.870	1.9%	0.012	0.149	0.040	171.700
%RSD		1.002	1.318	2.542	1.389	0.765	2.1	15.600	900.000	28.820	12.110
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:29	0.249	3.237	4.777	7.904	0.474	0.537	0.590	0.125	0.130	0.504
2	17:00:57	2.313	3.334	5.704	8.141	0.400	0.378	0.127	0.124	0.105	0.465
3	17:01:23	1.259	3.394	6.515	9.775	0.395	0.463	0.267	0.081	0.089	0.547
X		1.274	3.322	5.665	8.607	0.423	0.459	0.328	0.110	0.108	0.506
S		1.032	0.079	0.870	1.018	0.044	0.079	0.237	0.025	0.021	0.041
%RSD		81.060	2.391	15.350	11.830	10.420	17.230	72.340	22.890	19.080	8.164
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:29	1.842	1.586	0.128	0.460	12.130	13.500	5.584	1.332	-1.213	16.290
2	17:00:57	2.093	1.165	-0.492	0.079	11.910	12.740	-0.859	-0.099	-1.773	16.550
3	17:01:23	1.878	1.355	0.118	1.239	15.420	13.990	0.878	0.214	1.134	16.020
X		1.938	1.369	-0.082	0.593	13.150	13.410	1.868	0.482	-0.617	16.280
S		0.136	0.211	0.355	0.591	1.966	0.630	3.334	0.752	1.542	0.265
%RSD		7.010	15.390	431.500	99.730	14.950	4.699	178.500	155.900	249.800	1.627
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:29	93.6%	-0.010	0.009	-0.087	0.662	0.005	0.009	0.000	0.010	89.3%
2	17:00:57	92.8%	0.020	0.125	-0.035	1.499	0.000	0.004	0.023	0.000	88.3%
3	17:01:23	94.1%	-0.002	-0.020	-0.093	1.466	0.005	0.009	0.023	-0.004	89.7%
X		93.5%	0.003	0.038	-0.072	1.209	0.003	0.007	0.015	0.002	89.1%
S		0.7%	0.015	0.076	0.032	0.474	0.003	0.003	0.013	0.007	0.7%
%RSD		0.7	558.200	201.200	44.620	39.180	86.600	41.470	84.640	322.500	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:29	0.026	0.036	0.070	0.061	38.450	36.640	91.0%	0.006	0.019	1.043
2	17:00:57	0.070	0.058	0.064	0.042	36.150	37.130	92.3%	0.019	0.029	1.098
3	17:01:23	0.020	0.048	0.062	0.100	36.640	36.060	91.5%	0.005	0.023	0.990
X		0.039	0.047	0.065	0.068	37.080	36.610	91.6%	0.010	0.023	1.044
S		0.027	0.011	0.004	0.030	1.210	0.539	0.6%	0.008	0.005	0.054
%RSD		69.890	24.160	5.961	44.220	3.263	1.472	0.7	76.330	21.020	5.218
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:00:29	0.975	1.034	96.9%							
2	17:00:57	1.030	1.077	97.7%							
3	17:01:23	0.999	0.988	97.4%							
X		1.002	1.033	97.3%							
S		0.028	0.044	0.4%							
%RSD		2.767	4.295	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:21	87.4%	102.400	108.500	114.800	28.170	6514.000	7795.000	7784.000	8151.000	TM 1482.000
2	17:06:47	87.6%	101.600	112.900	107.500	20.640	6423.000	7636.000	7673.000	8310.000	TM 1487.000
3	17:07:14	85.2%	100.900	115.100	113.300	23.980	6475.000	7693.000	7828.000	8361.000	TM 1491.000
X		86.7%	101.600	112.200	111.900	24.260	6471.000	7708.000	7762.000	8274.000	TM 1487.000
S		1.3%	0.784	3.382	3.819	3.772	45.670	80.650	79.870	109.700	TM 4.617
%RSD		1.5	0.772	3.016	3.414	15.550	0.706	1.046	1.029	1.326	TM 0.311
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:21	4624.000	66660.000	3178.000	17980.000	17720.000	83.0%	106.200	101.300	102.300	5669.000
2	17:06:47	4561.000	65870.000	3140.000	18320.000	17890.000	83.1%	104.400	99.730	100.500	6022.000
3	17:07:14	4672.000	66670.000	3174.000	18160.000	17430.000	81.9%	103.400	102.000	102.500	4925.000
X		4619.000	66400.000	3164.000	18160.000	17680.000	82.7%	104.700	101.000	101.800	5539.000
S		55.750	461.700	20.970	171.100	233.500	0.7%	1.407	1.141	1.103	559.900
%RSD		1.207	0.695	0.663	0.942	1.321	0.8	1.345	1.130	1.084	10.110
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:21	1131.000	115.900	1059.000	1096.000	101.500	101.700	101.700	91.880	102.500	102.900
2	17:06:47	1143.000	115.300	1045.000	1114.000	100.800	102.300	96.690	90.150	100.500	103.700
3	17:07:14	1135.000	117.400	1077.000	1116.000	102.500	104.500	97.080	93.300	103.300	103.300
X		1137.000	116.200	1061.000	1109.000	101.600	102.800	98.480	91.780	102.100	103.300
S		6.183	1.064	16.360	10.670	0.854	1.493	2.767	1.577	1.418	0.433
%RSD		0.544	0.916	1.543	0.962	0.841	1.452	2.810	1.718	1.389	0.419
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:21	99.910	95.500	103.800	87.610	57.630	51.340	397.800	100.300	-2.567	150.700
2	17:06:47	95.140	94.330	107.900	92.820	55.390	53.180	405.100	103.800	1.174	152.200
3	17:07:14	100.400	98.630	105.000	90.100	53.480	50.300	400.000	101.500	1.739	151.900
X		98.470	96.150	105.500	90.180	55.500	51.610	401.000	101.900	0.116	151.600
S		2.896	2.223	2.095	2.603	2.074	1.461	3.768	1.773	2.340	0.776
%RSD		2.941	2.312	1.985	2.887	3.737	2.831	0.940	1.741	2024.000	0.511
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:21	104.5%	104.500	101.800	104.000	98.170	98.580	98.010	98.620	100.100	86.1%
2	17:06:47	105.3%	105.300	105.100	105.000	103.000	100.900	99.080	101.600	100.600	85.2%
3	17:07:14	105.0%	105.500	105.500	106.500	93.900	99.420	100.600	101.000	102.900	85.5%
X		105.0%	105.100	104.100	105.100	98.370	99.630	99.240	100.400	101.200	85.6%
S		0.4%	0.524	2.008	1.244	4.576	1.169	1.313	1.596	1.467	0.5%
%RSD		0.4	0.498	1.928	1.183	4.651	1.173	1.323	1.590	1.450	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:21	102.600	102.500	95.220	93.170	286.200	281.000	90.5%	103.200	104.500	111.500
2	17:06:47	102.000	102.800	96.640	92.630	290.000	277.200	91.7%	103.800	102.700	110.600
3	17:07:14	102.400	103.900	96.040	92.680	288.000	275.500	91.4%	104.100	103.200	112.100
X		102.300	103.100	95.970	92.830	288.000	277.900	91.2%	103.700	103.500	111.400
S		0.335	0.727	0.712	0.301	1.907	2.846	0.6%	0.466	0.909	0.766
%RSD		0.327	0.706	0.742	0.325	0.662	1.024	0.7	0.450	0.878	0.688
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:06:21	110.600	111.400	94.2%							
2	17:06:47	109.000	110.900	95.3%							
3	17:07:14	109.200	111.600	95.5%							
X		109.600	111.300	95.0%							
S		0.834	0.351	0.7%							
%RSD		0.761	0.316	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:10	89.8%	0.681	10.550	11.110	15.500	4944.000	5264.000	5289.000	5844.000	2186.000
2	17:12:37	87.3%	0.883	11.240	10.730	20.170	4786.000	5337.000	5370.000	5813.000	2081.000
3	17:13:03	87.7%	0.688	13.650	10.890	15.970	4738.000	5264.000	5312.000	5832.000	2107.000
X		88.3%	0.751	11.810	10.910	17.210	4822.000	5288.000	5324.000	5830.000	2125.000
S		1.3%	0.115	1.626	0.190	2.568	107.700	42.370	41.930	15.680	54.760
%RSD		1.5	15.280	13.770	1.743	14.920	2.234	0.801	0.788	0.269	2.577
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:10	4017.000	66190.000	2251.000	11210.000	11100.000	82.9%	0.325	-0.145	0.835	4901.000
2	17:12:37	3981.000	66560.000	2254.000	11580.000	11020.000	81.9%	0.558	-0.581	0.825	5410.000
3	17:13:03	3937.000	65810.000	2192.000	11410.000	10970.000	82.8%	0.269	-0.479	0.744	5327.000
X		3978.000	66190.000	2233.000	11400.000	11030.000	82.5%	0.384	-0.402	0.801	5213.000
S		40.480	373.400	34.890	185.700	62.320	0.6%	0.154	0.228	0.050	273.100
%RSD		1.018	0.564	1.563	1.628	0.565	0.7	39.970	56.860	6.244	5.240
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:10	10.060	69.530	8.590	27.690	11.300	9.650	10.000	0.998	1.431	6.602
2	17:12:37	8.723	68.600	8.108	23.860	11.440	9.327	9.269	0.876	1.642	7.189
3	17:13:03	7.518	68.580	8.262	20.500	11.270	10.070	9.503	0.902	1.403	7.021
X		8.766	68.900	8.320	24.020	11.340	9.682	9.592	0.925	1.492	6.937
S		1.270	0.543	0.246	3.595	0.092	0.373	0.375	0.064	0.131	0.302
%RSD		14.480	0.788	2.960	14.970	0.811	3.848	3.909	6.925	8.751	4.359
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:10	5.782	6.013	-0.652	-0.830	121.200	115.900	0.213	1.545	0.039	26.190
2	17:12:37	5.605	5.666	-0.686	-0.519	127.100	119.800	-0.875	0.969	0.399	27.040
3	17:13:03	6.336	5.342	-0.153	-0.435	122.600	113.200	-0.087	1.515	-2.766	26.820
X		5.908	5.674	-0.497	-0.595	123.600	116.300	-0.249	1.343	-0.776	26.680
S		0.381	0.336	0.298	0.208	3.057	3.300	0.562	0.324	1.733	0.438
%RSD		6.452	5.913	60.000	34.960	2.472	2.837	225.200	24.140	223.300	1.641
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:10	246.8%	-0.058	-0.078	-0.007	4.657	0.014	0.010	0.221	0.245	85.5%
2	17:12:37	242.6%	-0.006	0.094	-0.058	5.219	0.016	0.004	0.290	0.342	85.9%
3	17:13:03	247.5%	0.045	0.091	-0.094	4.281	0.016	0.015	0.184	0.300	86.5%
X		245.6%	-0.006	0.036	-0.053	4.719	0.015	0.010	0.232	0.295	86.0%
S		2.6%	0.052	0.099	0.044	0.472	0.002	0.006	0.054	0.049	0.5%
%RSD		1.1	831.500	276.400	82.420	10.010	9.801	57.840	23.110	16.490	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:10	0.145	0.084	0.712	0.623	91.370	87.030	97.3%	0.102	0.083	0.812
2	17:12:37	0.144	0.065	0.615	0.552	93.490	86.410	97.3%	0.099	0.108	0.816
3	17:13:03	0.203	0.096	0.606	0.496	92.410	86.280	98.3%	0.099	0.089	0.820
X		0.164	0.082	0.644	0.557	92.430	86.570	97.6%	0.100	0.093	0.816
S		0.034	0.016	0.059	0.064	1.057	0.399	0.6%	0.002	0.013	0.004
%RSD		20.780	19.160	9.149	11.430	1.143	0.461	0.6	1.933	14.410	0.540
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:12:10	0.884	0.816	95.9%							
2	17:12:37	0.869	0.857	97.3%							
3	17:13:03	0.862	0.865	97.3%							
X		0.872	0.846	96.8%							
S		0.011	0.027	0.8%							
%RSD		1.291	3.137	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:17:59	87.5%	0.225	12.220	10.770	21.620	<u>7675.000</u>	<u>2079.000</u>	2091.000	2210.000	<u>509.500</u>
2	17:18:26	87.3%	0.185	9.870	10.620	17.320	<u>7503.000</u>	<u>2029.000</u>	2015.000	2158.000	<u>502.700</u>
3	17:18:53	86.5%	0.187	11.080	11.860	21.970	<u>7598.000</u>	<u>2132.000</u>	2096.000	2187.000	<u>506.500</u>
X		87.1%	0.199	11.060	11.080	20.310	<u>7592.000</u>	<u>2080.000</u>	2067.000	2185.000	<u>506.200</u>
S		0.5%	0.023	1.173	0.680	2.589	<u>86.210</u>	<u>51.690</u>	45.410	26.030	<u>3.438</u>
%RSD		0.6	11.340	10.610	6.134	12.750	<u>1.135</u>	<u>2.485</u>	2.197	1.191	<u>0.679</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:17:59	<u>2941.000</u>	<u>66510.000</u>	<u>3528.000</u>	9788.000	9371.000	82.9%	0.269	-0.484	0.499	6232.000
2	17:18:26	<u>2855.000</u>	<u>65170.000</u>	<u>3411.000</u>	9440.000	9348.000	84.3%	0.180	0.257	0.388	5838.000
3	17:18:53	<u>2913.000</u>	<u>65750.000</u>	<u>3542.000</u>	9654.000	9360.000	83.5%	0.322	-0.261	0.514	6136.000
X		<u>2903.000</u>	<u>65810.000</u>	<u>3494.000</u>	9627.000	9359.000	83.6%	0.257	-0.163	0.467	6068.000
S		<u>43.970</u>	<u>672.200</u>	<u>72.100</u>	175.700	11.520	0.7%	0.072	0.380	0.069	205.300
%RSD		<u>1.515</u>	<u>1.021</u>	<u>2.064</u>	1.825	0.123	0.8	28.000	233.400	14.690	3.383
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:17:59	4.318	14.620	6.729	22.200	0.816	1.132	0.947	0.071	0.189	2.574
2	17:18:26	5.067	14.120	5.540	18.230	0.833	0.873	1.087	0.144	0.154	2.384
3	17:18:53	4.098	14.330	6.002	18.000	0.814	0.914	0.592	0.094	0.141	2.219
X		4.495	14.360	6.091	19.480	0.821	0.973	0.875	0.103	0.161	2.392
S		0.508	0.251	0.600	2.362	0.010	0.139	0.255	0.038	0.025	0.178
%RSD		11.310	1.751	9.842	12.130	1.241	14.300	29.110	36.470	15.200	7.431
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:17:59	4.667	3.740	0.408	0.883	36.550	36.360	-3.781	-0.843	1.910	36.030
2	17:18:26	4.281	3.628	-0.717	0.100	39.390	41.340	-1.941	-0.417	1.329	36.110
3	17:18:53	4.833	3.889	0.728	0.096	43.140	37.160	1.700	0.450	-1.105	35.940
X		4.594	3.753	0.139	0.360	39.690	38.290	-1.341	-0.270	0.712	36.030
S		0.283	0.131	0.759	0.453	3.303	2.676	2.790	0.659	1.600	0.087
%RSD		6.159	3.489	544.700	125.900	8.320	6.989	208.100	244.300	224.800	0.241
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:17:59	91.6%	-0.149	-0.123	-0.166	2.065	0.000	0.004	0.035	0.028	86.4%
2	17:18:26	91.0%	-0.210	-0.109	-0.243	0.636	0.014	0.004	0.036	0.048	86.2%
3	17:18:53	91.5%	-0.115	-0.167	-0.227	0.966	0.003	0.001	0.035	0.004	86.8%
X		91.4%	-0.158	-0.133	-0.212	1.223	0.005	0.003	0.035	0.027	86.4%
S		0.3%	0.049	0.030	0.041	0.748	0.007	0.002	0.000	0.022	0.3%
%RSD		0.4	30.740	22.860	19.250	61.220	132.500	53.180	0.594	82.790	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:17:59	0.116	0.120	0.300	0.246	75.650	73.810	90.5%	0.046	0.055	2.423
2	17:18:26	0.077	0.097	0.282	0.348	78.310	74.640	91.6%	0.036	0.041	2.433
3	17:18:53	0.104	0.114	0.337	0.340	74.540	72.580	90.4%	0.042	0.048	2.608
X		0.099	0.110	0.306	0.311	76.170	73.670	90.8%	0.041	0.048	2.488
S		0.020	0.012	0.028	0.057	1.934	1.037	0.7%	0.005	0.007	0.104
%RSD		19.870	10.720	9.124	18.310	2.540	1.408	0.8	12.590	14.810	4.198
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:17:59	2.413	2.426	96.0%							
2	17:18:26	2.335	2.415	97.5%							
3	17:18:53	2.308	2.470	97.3%							
X		2.352	2.437	96.9%							
S		0.054	0.029	0.8%							
%RSD		2.316	1.202	0.8							

VQ53070-001

5/11/2020 17:23:22

User Pre-dilution: 1.000

user Prevalence: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:23:48	95.9%	-0.018	3.057	3.803	19.720	6.801	0.381	0.323	0.461	1.121
2	17:24:15	93.0%	-0.018	4.586	3.602	28.910	7.267	0.413	0.375	0.149	1.182
3	17:24:42	93.7%	0.001	5.190	3.978	25.000	7.742	0.384	0.760	0.288	1.211
X		94.2%	-0.011	4.278	3.794	24.540	7.270	0.393	0.486	0.299	1.172
S		1.5%	0.011	1.099	0.188	4.613	0.471	0.018	0.239	0.156	0.046
%RSD		1.6	95.300	25.690	4.963	18.800	6.473	4.472	49.070	52.140	3.913
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:23:48	5.623	61830.000	13.420	0.962	3.138	88.5%	-0.044	0.019	0.340	4296.000
2	17:24:15	6.071	62270.000	13.250	7.925	4.076	88.9%	0.009	-0.295	0.308	4356.000
3	17:24:42	5.521	62360.000	12.220	0.921	5.095	90.1%	-0.044	-0.253	0.306	4379.000
X		5.738	62160.000	12.960	3.269	4.103	89.1%	-0.026	-0.176	0.318	4344.000
S		0.292	283.700	0.646	4.032	0.979	0.8%	0.030	0.170	0.019	42.660
%RSD		5.096	0.456	4.983	123.300	23.860	0.9	115.600	96.530	5.920	0.982
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:23:48	2.050	-0.002	11.310	0.874	-0.018	0.073	0.402	-0.034	0.007	0.664
2	17:24:15	2.053	0.007	10.120	2.154	-0.016	0.041	-0.086	0.015	-0.008	0.502
3	17:24:42	0.474	0.011	10.260	1.250	-0.016	0.033	0.432	-0.022	-0.037	0.422
X		1.526	0.005	10.560	1.426	-0.016	0.049	0.249	-0.014	-0.013	0.530
S		0.911	0.006	0.648	0.658	0.001	0.021	0.291	0.025	0.022	0.123
%RSD		59.700	116.700	6.139	46.140	5.726	43.560	116.600	184.000	175.100	23.260
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:23:48	0.603	0.560	-0.705	0.513	5.307	5.057	-3.765	-0.813	0.143	0.005
2	17:24:15	0.833	0.634	-0.100	0.024	4.858	6.000	-0.135	-0.075	1.915	0.002
3	17:24:42	0.594	0.721	-0.840	-0.138	5.949	5.828	2.283	0.476	-0.506	0.009
X		0.676	0.638	-0.549	0.133	5.371	5.629	-0.539	-0.138	0.517	0.005
S		0.135	0.080	0.394	0.339	0.548	0.502	3.044	0.647	1.253	0.004
%RSD		19.990	12.590	71.850	255.300	10.210	8.918	565.000	469.900	242.200	67.260
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:23:48	89.7%	-0.232	-0.227	-0.242	2.282	0.003	-0.002	0.012	0.006	89.5%
2	17:24:15	90.5%	-0.199	-0.173	-0.244	1.740	0.000	-0.002	0.001	-0.004	90.7%
3	17:24:42	90.4%	-0.201	-0.215	-0.293	0.761	0.003	-0.002	0.001	-0.004	91.9%
X		90.2%	-0.211	-0.205	-0.260	1.594	0.002	-0.002	0.005	-0.001	90.7%
S		0.4%	0.018	0.028	0.029	0.771	0.001	0.000	0.006	0.006	1.2%
%RSD		0.5	8.669	13.760	11.010	48.340	86.630	0.000	134.400	611.300	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:23:48	0.031	0.040	0.086	0.133	0.044	0.006	92.6%	-0.006	-0.002	-0.009
2	17:24:15	0.057	0.056	0.081	0.063	0.011	-0.003	92.9%	-0.006	0.000	0.005
3	17:24:42	0.082	0.068	0.092	0.136	0.043	0.006	93.4%	0.001	0.000	-0.006
X		0.056	0.055	0.087	0.110	0.033	0.003	93.0%	-0.003	-0.000	-0.003
S		0.025	0.014	0.006	0.041	0.019	0.005	0.4%	0.004	0.001	0.008
%RSD		44.770	26.060	6.644	37.500	56.890	159.500	0.4	121.600	424.300	227.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:23:48	-0.000	-0.001	97.4%							
2	17:24:15	-0.003	-0.005	99.8%							
3	17:24:42	-0.000	-0.007	99.3%							
X		-0.001	-0.005	98.8%							
S		0.002	0.003	1.2%							
%RSD		152.200	65.130	1.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:38	89.3%	104.200	112.300	102.100	31.940	1127.000	1122.000	1073.000	1079.000	102.900
2	17:30:05	86.0%	100.800	104.600	103.600	26.250	1080.000	1083.000	1035.000	1083.000	104.500
3	17:30:33	85.0%	102.900	111.800	106.900	40.630	1151.000	1105.000	1049.000	1088.000	104.500
X		86.7%	102.600	109.600	104.200	32.940	1119.000	1103.000	1052.000	1084.000	104.000
S		2.2%	1.692	4.319	2.494	7.241	35.860	19.410	19.400	4.482	0.925
%RSD		2.6	1.649	3.941	2.393	21.980	3.204	1.760	1.844	0.414	0.890
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:38	1049.000	65110.000	1133.000	1092.000	1036.000	81.9%	104.300	100.400	100.500	4588.000
2	17:30:05	1057.000	64970.000	1124.000	1075.000	1023.000	81.4%	100.600	101.200	101.800	4146.000
3	17:30:33	1064.000	65950.000	1134.000	1035.000	1046.000	80.3%	102.700	101.500	102.600	4563.000
X		1057.000	65340.000	1130.000	1067.000	1035.000	81.2%	102.500	101.000	101.600	4432.000
S		7.532	530.000	5.555	29.210	11.490	0.8%	1.849	0.558	1.037	248.600
%RSD		0.713	0.811	0.491	2.737	1.110	1.0	1.804	0.552	1.020	5.609
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:38	1135.000	100.600	1068.000	1079.000	103.000	103.300	108.500	102.100	106.300	106.100
2	17:30:05	1134.000	100.400	1055.000	1092.000	102.200	104.800	97.420	100.800	106.400	101.800
3	17:30:33	1140.000	101.500	1051.000	1069.000	102.600	99.640	99.520	101.500	103.500	105.900
X		1137.000	100.800	1058.000	1080.000	102.600	102.600	101.800	101.500	105.400	104.600
S		3.384	0.604	8.673	11.770	0.399	2.635	5.906	0.637	1.619	2.406
%RSD		0.298	0.599	0.820	1.089	0.388	2.569	5.800	0.628	1.536	2.299
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:38	103.700	106.700	106.100	105.000	4.745	7.063	453.600	96.190	-0.808	99.860
2	17:30:05	104.000	104.300	109.100	103.500	5.493	5.870	478.500	103.100	2.402	98.520
3	17:30:33	101.100	103.200	106.200	101.800	4.492	6.273	444.700	94.590	-2.098	100.100
X		102.900	104.700	107.100	103.400	4.910	6.402	458.900	97.960	-0.168	99.490
S		1.620	1.752	1.687	1.612	0.520	0.607	17.510	4.525	2.318	0.845
%RSD		1.574	1.673	1.575	1.559	10.600	9.480	3.815	4.619	1379.000	0.849
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:38	83.7%	101.000	102.200	101.200	103.100	100.700	100.000	103.900	101.900	84.8%
2	17:30:05	84.5%	100.800	101.500	102.600	105.200	102.300	101.100	101.200	102.300	84.0%
3	17:30:33	83.4%	101.200	103.900	102.100	112.800	100.100	102.100	102.200	101.200	84.0%
X		83.9%	101.000	102.500	102.000	107.000	101.000	101.100	102.500	101.800	84.3%
S		0.6%	0.196	1.222	0.712	5.120	1.143	1.030	1.360	0.573	0.5%
%RSD		0.7	0.194	1.192	0.698	4.785	1.131	1.019	1.327	0.563	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:38	101.800	102.500	103.700	101.500	102.700	101.600	86.9%	101.200	105.500	107.600
2	17:30:05	103.700	102.200	104.600	101.400	104.400	103.500	88.6%	100.900	103.200	107.000
3	17:30:33	102.300	102.600	104.300	100.700	102.000	101.500	88.2%	102.000	104.600	108.400
X		102.600	102.400	104.200	101.200	103.100	102.200	87.9%	101.400	104.500	107.700
S		0.988	0.192	0.454	0.449	1.224	1.104	0.9%	0.541	1.158	0.697
%RSD		0.963	0.187	0.436	0.444	1.188	1.080	1.0	0.534	1.108	0.647
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:29:38	107.800	108.400	94.9%							
2	17:30:05	105.900	107.200	94.7%							
3	17:30:33	107.500	108.700	95.8%							
X		107.000	108.100	95.1%							
S		1.026	0.775	0.6%							
%RSD		0.959	0.717	0.6							

VE05042-001

5/11/2020 17:35:02

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:29	81.4%	0.037	26.500	26.000	5224.000	62210.000	2713.000	2726.000	2866.000	535.400
2	17:35:56	83.5%	0.014	23.870	24.700	5056.000	61630.000	2636.000	2638.000	2820.000	517.400
3	17:36:23	83.3%	0.057	24.670	25.030	5034.000	63380.000	2615.000	2676.000	2871.000	538.400
X		82.7%	0.036	25.010	25.240	5105.000	62410.000	2655.000	2680.000	2853.000	530.400
S		1.2%	0.021	1.345	0.675	103.700	891.600	51.260	43.880	28.190	11.360
%RSD		1.4	59.550	5.377	2.675	2.031	1.429	1.931	1.637	0.988	2.142
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:29	4552.000	63510.000	14890.000	15030.000	14620.000	79.8%	22.570	1.051	5.039	4589.000
2	17:35:56	4487.000	63220.000	14550.000	15080.000	14730.000	79.9%	23.720	0.200	5.260	5354.000
3	17:36:23	4541.000	63850.000	15090.000	15320.000	15010.000	78.8%	23.670	0.451	5.138	5546.000
X		4527.000	63520.000	14840.000	15140.000	14790.000	79.5%	23.320	0.567	5.146	5163.000
S		34.550	314.500	269.900	157.000	203.900	0.6%	0.648	0.437	0.111	506.400
%RSD		0.763	0.495	1.818	1.037	1.379	0.8	2.780	77.050	2.149	9.809
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:29	433.100	38.450	426.200	440.900	0.168	3.882	4.474	14.630	14.840	393.800
2	17:35:56	435.000	37.950	417.700	438.600	0.225	4.403	3.159	14.390	15.100	396.600
3	17:36:23	428.900	38.290	427.200	442.000	0.227	4.643	4.243	14.660	15.190	409.300
X		432.300	38.230	423.700	440.500	0.207	4.309	3.959	14.560	15.040	399.900
S		3.143	0.257	5.233	1.732	0.034	0.389	0.702	0.149	0.180	8.253
%RSD		0.727	0.672	1.235	0.393	16.210	9.021	17.730	1.021	1.195	2.064
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:29	369.500	389.400	-0.089	1.748	57.650	51.550	-0.117	-0.070	2.002	46.350
2	17:35:56	362.200	388.800	0.215	1.021	50.780	51.270	5.853	1.174	2.594	46.790
3	17:36:23	375.200	390.600	-0.461	1.487	53.930	52.870	5.861	1.267	-0.066	46.640
X		369.000	389.600	-0.112	1.419	54.120	51.900	3.866	0.790	1.510	46.590
S		6.505	0.912	0.338	0.368	3.439	0.856	3.449	0.746	1.397	0.226
%RSD		1.763	0.234	303.500	25.960	6.355	1.649	89.220	94.440	92.510	0.485
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:29	81.2%	2.074	1.942	2.181	2.582	0.017	0.001	0.053	0.080	80.8%
2	17:35:56	82.2%	1.979	2.187	2.085	1.573	0.003	0.019	0.076	0.109	82.8%
3	17:36:23	82.4%	1.957	2.101	2.109	1.363	0.023	0.013	0.126	0.115	81.6%
X		81.9%	2.003	2.077	2.125	1.840	0.014	0.011	0.085	0.101	81.7%
S		0.6%	0.062	0.124	0.050	0.652	0.010	0.009	0.037	0.019	1.0%
%RSD		0.8	3.105	5.984	2.359	35.420	72.220	79.910	43.880	18.390	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:35:29	0.143	0.144	0.666	0.663	22.360	21.160	86.6%	0.035	0.033	2.152
2	17:35:56	0.139	0.112	0.754	0.794	22.090	21.370	86.6%	0.031	0.022	2.224
3	17:36:23	0.235	0.157	0.852	0.735	22.030	21.720	87.9%	0.020	0.027	2.100
X		0.172	0.137	0.758	0.731	22.160	21.420	87.0%	0.029	0.027	2.159
S		0.054	0.023	0.093	0.066	0.176	0.280	0.8%	0.008	0.005	0.063
%RSD		31.440	16.910	12.280	8.991	0.794	1.307	0.9	26.460	19.760	2.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:35:29	2.033	2.107	91.7%							
2	17:35:56	2.050	2.108	91.5%							
3	17:36:23	1.861	2.000	93.2%							
X		1.982	2.072	92.1%							
S		0.105	0.062	0.9%							
%RSD		5.280	3.001	1.0							

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5/11/2020 17:40:51

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:18	88.2%	-0.008	124.200	140.000	30.620	<u>TM 116100.000</u>	<u>1584.000</u>	1634.000	2764.000	29.330
2	17:41:45	90.7%	0.002	125.100	137.100	28.150	<u>TM 113500.000</u>	<u>1574.000</u>	1615.000	2761.000	29.740
3	17:42:12	89.2%	-0.008	125.800	134.100	29.120	<u>TM 113000.000</u>	<u>1565.000</u>	1609.000	2797.000	29.950
X		89.4%	-0.005	125.000	137.100	29.300	<u>TM 114200.000</u>	<u>1574.000</u>	1619.000	2774.000	29.670
S		1.2%	0.006	0.802	2.984	1.242	<u>TM 1686.000</u>	<u>9.542</u>	13.020	19.720	0.316
%RSD		1.4	120.000	0.642	2.177	4.240	<u>TM 1.476</u>	<u>0.606</u>	0.804	0.711	1.066
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:18	905.700	<u>12780.000</u>	<u>30880.000</u>	2997.000	2989.000	85.5%	12.490	7.110	8.046	1179.000
2	17:41:45	887.400	11790.000	<u>30820.000</u>	3145.000	2972.000	84.8%	11.270	7.035	8.060	1130.000
3	17:42:12	902.200	12180.000	<u>30970.000</u>	3121.000	2974.000	84.9%	12.900	7.306	8.211	1143.000
X		898.400	<u>12250.000</u>	<u>30890.000</u>	3088.000	2978.000	85.1%	12.220	7.150	8.106	1151.000
S		9.747	<u>499.900</u>	<u>76.660</u>	79.620	9.366	0.3%	0.852	0.140	0.092	25.670
%RSD		1.085	<u>4.081</u>	<u>0.248</u>	2.579	0.314	0.4	6.975	1.958	1.130	2.231
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:18	518.200	15.540	512.900	512.100	1.737	8.872	8.789	0.446	0.288	4.733
2	17:41:45	517.300	15.210	515.400	517.400	1.801	9.490	9.254	0.439	0.203	4.526
3	17:42:12	516.500	15.430	519.600	524.900	1.607	8.943	9.464	0.431	0.275	4.423
X		517.400	15.390	516.000	518.100	1.715	9.102	9.169	0.439	0.255	4.561
S		0.869	0.171	3.386	6.393	0.099	0.339	0.345	0.007	0.046	0.158
%RSD		0.168	1.111	0.656	1.234	5.772	3.720	3.768	1.702	17.950	3.465
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:18	4.031	4.518	8.933	0.381	8997.000	9015.000	44.820	8.895	-0.348	10.700
2	17:41:45	4.278	4.033	8.763	0.106	9190.000	9082.000	28.930	5.555	-2.857	10.530
3	17:42:12	4.171	4.157	8.364	0.013	9281.000	9209.000	22.850	4.037	0.292	10.810
X		4.160	4.236	8.686	0.167	9156.000	9102.000	32.200	6.162	-0.971	10.680
S		0.124	0.252	0.292	0.191	145.400	98.600	11.340	2.485	1.664	0.140
%RSD		2.976	5.951	3.363	114.600	1.588	1.083	35.220	40.330	171.400	1.312
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:18	87.4%	0.308	0.515	0.328	7.239	0.047	0.010	0.034	0.008	85.5%
2	17:41:45	87.9%	0.388	0.159	0.218	8.592	0.044	0.004	0.023	-0.013	84.5%
3	17:42:12	87.2%	0.167	0.300	0.214	11.550	0.069	0.001	0.022	-0.019	85.2%
X		87.5%	0.288	0.325	0.253	9.127	0.053	0.005	0.026	-0.008	85.1%
S		0.4%	0.112	0.180	0.065	2.205	0.013	0.004	0.006	0.014	0.5%
%RSD		0.4	38.820	55.260	25.580	24.150	25.350	85.850	24.230	176.400	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:18	0.793	1.250	1.404	1.423	4.211	3.985	88.7%	-0.001	0.007	0.063
2	17:41:45	0.880	1.309	1.492	1.380	4.000	3.773	89.9%	-0.006	-0.002	0.076
3	17:42:12	1.165	1.336	1.462	1.398	4.158	3.911	90.7%	-0.007	0.005	0.104
X		0.946	1.298	1.453	1.400	4.123	3.890	89.8%	-0.005	0.004	0.081
S		0.194	0.044	0.044	0.021	0.110	0.108	1.0%	0.003	0.005	0.021
%RSD		20.550	3.368	3.059	1.508	2.666	2.764	1.1	66.840	125.800	26.020
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:41:18	0.083	0.076	90.4%							
2	17:41:45	0.101	0.070	93.0%							
3	17:42:12	0.078	0.080	92.4%							
X		0.087	0.075	91.9%							
S		0.012	0.005	1.4%							
%RSD		13.630	6.552	1.5							

VE05044-001(5)

5/11/2020 17:46:42

User Pre-dilution: 1.000

user Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:09	85.7%	-0.007	129.500	142.700	36.010	<u>TM 114100.000</u>	<u>T 1586.000</u>	1629.000	2804.000	30.520
2	17:47:36	87.3%	-0.018	125.200	141.500	34.650	<u>TM 114900.000</u>	<u>T 1625.000</u>	1634.000	2828.000	29.310
3	17:48:03	90.1%	0.002	126.500	136.400	32.000	<u>TM 113100.000</u>	<u>T 1566.000</u>	1576.000	2757.000	30.570
X		87.7%	-0.008	127.000	140.200	34.220	<u>TM 114000.000</u>	<u>T 1592.000</u>	1613.000	2796.000	30.140
S		2.2%	0.010	2.225	3.368	2.036	<u>TM 891.800</u>	<u>T 29.930</u>	31.800	36.360	0.713
%RSD		2.5	126.800	1.752	2.403	5.950	<u>TM 0.782</u>	<u>T 1.879</u>	1.972	1.300	2.365
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:09	938.100	11780.000	<u>T 31980.000</u>	3084.000	2930.000	86.4%	12.500	7.611	7.986	918.500
2	17:47:36	938.100	11850.000	<u>T 31480.000</u>	3118.000	3058.000	86.0%	11.620	6.838	8.004	1405.000
3	17:48:03	902.600	11860.000	<u>T 31380.000</u>	2983.000	3002.000	86.9%	12.420	6.785	7.809	1286.000
X		926.300	11830.000	<u>T 31610.000</u>	3062.000	2997.000	86.5%	12.180	7.078	7.933	1203.000
S		20.510	43.030	<u>T 322.400</u>	70.330	63.910	0.5%	0.482	0.462	0.108	253.500
%RSD		2.214	0.364	<u>T 1.020</u>	2.297	2.133	0.5	3.956	6.530	1.360	21.070
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:09	523.800	15.630	515.100	516.900	1.782	8.963	10.170	0.518	0.240	4.558
2	17:47:36	509.300	16.000	510.000	511.800	1.700	8.904	9.556	0.420	0.322	4.568
3	17:48:03	511.400	15.380	498.800	492.700	1.733	9.228	8.899	0.403	0.281	4.586
X		514.800	15.670	507.900	507.100	1.738	9.032	9.542	0.447	0.281	4.571
S		7.813	0.314	8.340	12.760	0.041	0.173	0.636	0.062	0.041	0.014
%RSD		1.518	2.001	1.642	2.515	2.368	1.914	6.667	13.870	14.690	0.310
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:09	4.495	4.820	8.998	0.805	9607.000	9631.000	35.320	6.904	-2.226	10.860
2	17:47:36	4.611	4.208	9.051	-0.169	9404.000	9515.000	32.630	6.201	-1.616	10.550
3	17:48:03	3.897	4.249	7.471	0.752	9321.000	9238.000	22.230	3.904	2.025	10.390
X		4.335	4.426	8.507	0.463	9444.000	9462.000	30.060	5.670	-0.606	10.600
S		0.383	0.342	0.897	0.548	147.500	201.900	6.917	1.569	2.298	0.240
%RSD		8.835	7.721	10.550	118.400	1.561	2.134	23.010	27.680	379.300	2.263
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:09	87.3%	0.308	0.175	0.231	10.550	0.058	0.004	0.011	0.037	84.3%
2	17:47:36	87.9%	0.297	0.526	0.120	9.974	0.044	0.015	0.034	0.004	85.8%
3	17:48:03	89.1%	0.276	0.278	0.140	6.775	0.054	0.018	0.046	-0.006	86.3%
X		88.1%	0.294	0.327	0.164	9.101	0.052	0.012	0.030	0.012	85.5%
S		0.9%	0.016	0.181	0.059	2.035	0.008	0.007	0.018	0.023	1.0%
%RSD		1.0	5.571	55.330	36.330	22.360	14.560	58.940	58.480	192.200	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:09	0.764	1.284	1.560	1.531	4.166	3.890	90.1%	-0.001	-0.001	0.081
2	17:47:36	0.856	1.211	1.468	1.441	4.023	3.813	91.1%	-0.005	0.005	0.068
3	17:48:03	0.774	1.209	1.581	1.377	4.088	3.876	91.2%	-0.004	-0.005	0.063
X		0.798	1.235	1.537	1.450	4.092	3.859	90.8%	-0.003	-0.000	0.070
S		0.050	0.043	0.060	0.078	0.072	0.041	0.6%	0.002	0.005	0.009
%RSD		6.299	3.468	3.911	5.353	1.751	1.062	0.7	59.800	1365.000	13.160
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:47:09	0.074	0.083	90.9%							
2	17:47:36	0.062	0.060	91.8%							
3	17:48:03	0.062	0.063	92.5%							
X		0.066	0.069	91.7%							
S		0.007	0.013	0.8%							
%RSD		10.330	18.430	0.9							

CCV MW126865 5/11/2020 17:52:34 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:01	80.0%	321.000	315.100	312.900	16.760	64190.000	61840.000	61640.000	60880.000	301.400
2	17:53:29	79.6%	308.600	318.900	304.200	11.870	64460.000	62570.000	60220.000	62020.000	300.600
3	17:53:56	78.5%	315.200	300.200	302.900	7.207	64270.000	61710.000	62210.000	62950.000	300.300
X		79.4%	104.979%	103.804%	102.221%	11.950	107.179%	62040.000	61350.000	103.253%	100.246%
S		0.8%	n/a	n/a	n/a	4.779	n/a	464.600	1027.000	n/a	n/a
%RSD		0.9	1.958	3.173	1.771	40.000	0.221	0.749	1.673	1.674	0.183
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:01	3378.000	641.900	66690.000	61280.000	62060.000	82.3%	307.200	303.100	296.500	2728.000
2	17:53:29	3398.000	659.600	65760.000	61020.000	61820.000	81.8%	308.500	311.700	299.100	2878.000
3	17:53:56	3366.000	648.600	66760.000	61490.000	62270.000	81.0%	307.000	308.700	298.200	2050.000
X		3381.000	650.000	110.671%	61260.000	103.419%	81.7%	102.519%	102.608%	99.317%	2552.000
S		16.470	8.912	n/a	237.300	n/a	0.6%	n/a	n/a	n/a	440.800
%RSD		0.487	1.371	0.845	0.387	0.367	0.8	0.270	1.410	0.440	17.270
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:01	61620.000	294.300	61560.000	61380.000	293.400	292.600	287.900	280.900	283.800	284.200
2	17:53:29	62500.000	295.300	62630.000	61550.000	295.500	288.400	291.500	276.000	283.200	288.900
3	17:53:56	62570.000	294.900	62700.000	63010.000	298.000	289.900	296.500	282.100	287.000	291.800
X		62230.000	98.277%	62300.000	103.295%	98.543%	96.773%	292.000	279.700	94.894%	96.099%
S		525.400	n/a	640.300	n/a	n/a	n/a	4.325	3.225	n/a	n/a
%RSD		0.844	0.161	1.028	1.447	0.794	0.724	1.481	1.153	0.706	1.336
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:01	291.900	283.100	299.100	293.200	29.430	27.740	1388.000	304.000	0.499	298.300
2	17:53:29	296.800	285.100	305.000	283.200	26.930	26.190	1334.000	298.900	-0.209	298.300
3	17:53:56	290.400	296.400	301.200	291.800	27.650	23.810	1394.000	296.800	-2.748	305.400
X		293.000	288.200	100.580%	289.400	28.000	25.910	1372.000	99.971%	-0.819	100.215%
S		3.353	7.174	n/a	5.371	1.285	1.979	33.200	n/a	1.707	n/a
%RSD		1.144	2.489	0.982	1.856	4.588	7.638	2.420	1.224	208.400	1.369
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:01	83.6%	313.700	311.400	312.800	294.600	287.300	286.300	295.200	296.700	82.1%
2	17:53:29	84.9%	326.000	326.300	324.100	307.500	296.600	289.700	301.200	301.400	81.2%
3	17:53:56	82.9%	322.200	321.200	321.000	302.600	287.300	282.900	293.100	300.400	83.7%
X		83.8%	106.870%	106.553%	319.300	301.600	96.798%	286.300	296.500	99.833%	82.3%
S		1.0%	n/a	n/a	5.848	6.546	n/a	3.400	4.214	n/a	1.3%
%RSD		1.2	1.968	2.364	1.831	2.171	1.838	1.187	1.421	0.835	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:01	302.200	306.100	306.200	301.900	306.900	302.600	85.2%	310.000	308.400	310.100
2	17:53:29	310.600	306.600	313.300	301.400	307.800	300.200	86.3%	309.000	305.300	307.500
3	17:53:56	303.900	304.800	307.700	303.900	307.300	301.500	87.1%	310.400	306.900	310.100
X		101.862%	101.943%	309.000	100.788%	102.446%	100.475%	86.2%	309.800	102.291%	103.088%
S		n/a	n/a	3.721	n/a	n/a	n/a	1.0%	0.694	n/a	n/a
%RSD		1.444	0.306	1.204	0.437	0.158	0.405	1.2	0.224	0.499	0.486
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:53:01	308.800	311.200	87.3%							
2	17:53:29	309.000	311.900	88.6%							
3	17:53:56	304.800	309.900	89.1%							
X		102.512%	103.674%	88.3%							
S		n/a	n/a	0.9%							
%RSD		0.768	0.329	1.0							

CCB IM9968-01 5/11/2020 17:58:28 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:54	89.4%	-0.008	6.129	5.466	29.910	4.127	2.063	1.937	1.749	0.196
2	17:59:22	88.2%	0.022	5.563	6.401	37.450	3.803	2.333	2.095	2.245	0.158
3	17:59:49	87.7%	0.002	6.715	6.121	35.050	3.571	1.898	1.927	1.819	0.140
X		88.4%	0.006	6.136	5.996	34.140	3.834	2.098	1.986	1.938	0.165
S		0.9%	0.015	0.576	0.480	3.852	0.279	0.220	0.094	0.268	0.029
%RSD		1.0	271.400	9.387	8.007	11.290	7.282	10.460	4.732	13.850	17.530
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:54	6.932	556.600	19.490	-1.375	3.254	86.3%	-0.070	0.008	-0.017	12.640
2	17:59:22	6.124	539.700	18.030	5.739	3.063	87.2%	-0.016	0.021	-0.001	8.286
3	17:59:49	4.713	546.500	17.700	0.995	2.430	87.2%	-0.043	0.014	0.024	1.772
X		5.923	547.600	18.410	1.786	2.916	86.9%	-0.043	0.014	0.002	7.565
S		1.123	8.493	0.950	3.623	0.432	0.6%	0.027	0.006	0.021	5.468
%RSD		18.960	1.551	5.162	202.800	14.810	0.6	61.990	44.810	1111.000	72.290
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:54	2.438	0.020	3.890	6.691	-0.004	0.043	0.490	-0.045	-0.063	-0.044
2	17:59:22	1.573	0.030	4.467	7.110	-0.001	0.034	0.094	-0.013	-0.049	-0.025
3	17:59:49	2.746	0.031	3.350	7.307	0.001	-0.006	0.039	-0.046	-0.064	0.031
X		2.252	0.027	3.902	7.036	-0.001	0.024	0.207	-0.035	-0.059	-0.013
S		0.608	0.006	0.558	0.315	0.002	0.026	0.246	0.019	0.008	0.039
%RSD		27.000	22.540	14.310	4.474	229.000	110.000	118.700	54.970	13.940	308.600
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:54	0.016	0.051	0.070	-0.159	10.900	11.370	0.711	0.118	0.901	0.008
2	17:59:22	-0.105	-0.004	-0.114	-0.081	10.180	10.860	0.002	-0.043	1.448	0.009
3	17:59:49	-0.105	-0.017	-0.131	0.773	11.350	9.686	-1.231	-0.252	-1.013	0.005
X		-0.065	0.010	-0.059	0.178	10.810	10.640	-0.173	-0.059	0.445	0.007
S		0.070	0.036	0.111	0.517	0.593	0.865	0.983	0.186	1.292	0.002
%RSD		108.000	352.900	190.300	291.100	5.485	8.130	569.200	314.600	290.200	30.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:54	87.3%	0.367	0.518	0.248	0.757	0.016	0.012	0.010	0.004	88.2%
2	17:59:22	88.4%	0.350	0.481	0.401	-0.014	0.013	0.009	0.010	-0.001	89.2%
3	17:59:49	88.2%	0.532	0.275	0.350	0.596	0.008	0.004	0.043	-0.000	88.9%
X		88.0%	0.417	0.425	0.333	0.447	0.012	0.008	0.021	0.001	88.8%
S		0.6%	0.101	0.131	0.078	0.407	0.004	0.004	0.019	0.003	0.5%
%RSD		0.7	24.180	30.900	23.470	91.090	33.110	50.060	91.570	274.300	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:54	0.064	0.103	0.474	0.317	0.012	-0.003	89.6%	0.010	0.001	0.021
2	17:59:22	0.069	0.093	0.345	0.355	-0.005	0.034	89.1%	-0.004	0.010	0.018
3	17:59:49	0.096	0.076	0.393	0.364	-0.005	0.016	91.0%	-0.000	0.001	0.025
X		0.076	0.091	0.404	0.345	0.001	0.016	89.9%	0.002	0.004	0.021
S		0.017	0.014	0.065	0.025	0.010	0.019	1.0%	0.007	0.005	0.003
%RSD		22.300	15.480	16.110	7.282	1480.000	117.800	1.1	396.700	138.200	15.170
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:58:54	0.030	0.023	96.4%							
2	17:59:22	0.031	0.026	97.6%							
3	17:59:49	0.019	0.018	98.5%							
X		0.027	0.023	97.5%							
S		0.007	0.004	1.0%							
%RSD		25.000	17.700	1.1							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:45	148.1%	-0.012	39.170	51.170	442.400	TM 272000.000	TM 1000.000	1036.000	2209.000	TM 8235.000
2	18:05:11	150.7%	-0.012	40.440	52.550	435.200	TM 272000.000	TM 1003.000	1026.000	2168.000	TM 8414.000
3	18:05:38	147.6%	0.006	39.830	51.570	441.200	TM 277000.000	TM 1006.000	1040.000	2163.000	TM 8117.000
X		148.8%	-0.006	39.810	51.760	439.600	TM 273700.000	TM 1003.000	1034.000	2180.000	TM 8255.000
S		1.7%	0.010	0.633	0.711	3.846	TM 2896.000	TM 2.742	7.280	25.570	TM 149.400
%RSD		1.1	179.700	1.590	1.374	0.875	TM 1.058	TM 0.273	0.704	1.173	TM 1.810
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:45	TM 7962.000	TM 52690.000	TM 28160.000	9196.000	9076.000	77.9%	85.180	0.545	83.580	2740.000
2	18:05:11	TM 7977.000	TM 53200.000	TM 28080.000	9123.000	8990.000	78.2%	83.900	1.017	84.090	2602.000
3	18:05:38	TM 7924.000	TM 54780.000	TM 28760.000	9248.000	9112.000	76.9%	81.830	1.446	86.280	2503.000
X		TM 7954.000	TM 53560.000	TM 28330.000	9189.000	9059.000	77.7%	83.640	1.003	84.650	2615.000
S		TM 27.180	TM 1090.000	TM 370.200	62.750	62.760	0.7%	1.692	0.451	1.437	119.100
%RSD		TM 0.342	TM 2.036	TM 1.307	0.683	0.693	0.8	2.023	44.950	1.698	4.553
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:45	7905.000	171.200	TM 7498.000	7670.000	26.820	322.300	328.100	103.800	109.400	408.900
2	18:05:11	7859.000	172.500	TM 7659.000	7975.000	26.690	328.000	332.600	106.100	112.500	412.200
3	18:05:38	7945.000	174.900	TM 7690.000	7783.000	27.360	331.800	335.900	106.600	114.000	423.600
X		7903.000	172.900	TM 7616.000	7810.000	26.960	327.400	332.200	105.500	112.000	414.900
S		43.050	1.869	TM 102.700	154.100	0.359	4.777	3.927	1.499	2.332	7.672
%RSD		0.545	1.081	TM 1.348	1.973	1.332	1.459	1.182	1.421	2.083	1.849
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:45	372.900	391.700	3.289	0.494	10620.000	10650.000	45.010	8.870	-0.108	31.800
2	18:05:11	391.200	395.200	3.626	0.562	10590.000	10670.000	38.270	7.477	-2.132	32.210
3	18:05:38	377.300	393.800	2.024	0.643	10710.000	10770.000	40.570	7.716	1.151	32.510
X		380.500	393.600	2.980	0.566	10640.000	10700.000	41.290	8.021	-0.363	32.170
S		9.598	1.756	0.844	0.075	63.700	65.590	3.427	0.745	1.656	0.361
%RSD		2.523	0.446	28.330	13.200	0.599	0.613	8.300	9.285	456.200	1.122
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:45	83.4%	94.050	97.230	94.610	14.690	8.620	8.261	-0.150	0.182	80.0%
2	18:05:11	85.0%	96.200	96.040	97.360	11.120	8.297	7.926	-0.065	0.121	80.8%
3	18:05:38	84.6%	94.630	97.250	95.880	14.450	8.206	8.474	-0.003	-0.073	81.9%
X		84.3%	94.960	96.840	95.950	13.420	8.374	8.220	-0.073	0.077	80.9%
S		0.8%	1.112	0.691	1.376	1.991	0.218	0.276	0.074	0.133	1.0%
%RSD		1.0	1.171	0.714	1.434	14.840	2.599	3.361	102.000	173.200	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:45	45.960	63.490	31.880	29.540	21.680	20.620	87.2%	-0.002	0.010	5.010
2	18:05:11	45.070	63.810	31.940	30.290	21.120	19.740	89.5%	-0.000	0.004	5.089
3	18:05:38	45.450	63.240	31.630	30.730	20.870	19.940	90.5%	-0.000	0.005	4.974
X		45.490	63.510	31.820	30.190	21.220	20.100	89.1%	-0.001	0.006	5.024
S		0.443	0.286	0.167	0.602	0.412	0.460	1.7%	0.001	0.003	0.059
%RSD		0.974	0.450	0.525	1.995	1.940	2.286	1.9	139.600	53.290	1.169
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:04:45	5.013	4.939	94.2%							
2	18:05:11	4.866	5.001	96.6%							
3	18:05:38	4.877	4.967	97.7%							
X		4.919	4.969	96.2%							
S		0.082	0.031	1.8%							
%RSD		1.658	0.628	1.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:35	86.6%	0.003	209.100	195.000	48.940	54570.000	2956.000	2907.000	3215.000	69.940
2	18:11:02	87.1%	0.023	193.500	186.200	48.960	54080.000	2886.000	2882.000	3168.000	67.780
3	18:11:29	84.9%	-0.007	193.100	202.700	43.830	53800.000	2968.000	2915.000	3087.000	67.870
X		86.2%	0.006	198.600	194.600	47.240	54150.000	2936.000	2901.000	3157.000	68.530
S		1.2%	0.015	9.121	8.287	2.960	389.800	44.230	17.400	64.820	1.224
%RSD		1.3	252.600	4.593	4.257	6.265	0.720	1.506	0.600	2.054	1.786
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:35	2439.000	62480.000	11860.000	35070.000	34270.000	82.8%	0.693	0.131	0.426	3629.000
2	18:11:02	2405.000	61180.000	11540.000	34490.000	33780.000	83.0%	1.058	0.536	0.468	3596.000
3	18:11:29	2439.000	62450.000	11590.000	34520.000	34270.000	83.1%	0.718	0.268	0.453	4168.000
X		2428.000	62040.000	11660.000	34690.000	34100.000	83.0%	0.823	0.312	0.449	3798.000
S		19.640	740.000	168.400	326.100	285.500	0.1%	0.204	0.206	0.021	321.600
%RSD		0.809	1.193	1.443	0.940	0.837	0.1	24.780	66.190	4.756	8.470
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:35	39.760	20.780	41.510	101.300	0.252	1.150	1.580	1.442	1.539	41.270
2	18:11:02	38.310	20.240	41.240	106.700	0.252	1.257	0.717	1.436	1.400	41.740
3	18:11:29	40.270	20.560	41.600	96.610	0.300	1.281	1.401	1.420	1.527	40.610
X		39.440	20.530	41.450	101.600	0.268	1.229	1.233	1.433	1.488	41.210
S		1.018	0.273	0.188	5.072	0.027	0.070	0.456	0.011	0.077	0.569
%RSD		2.581	1.330	0.453	4.994	10.240	5.691	36.960	0.792	5.173	1.380
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:35	40.050	42.350	-0.587	0.912	116.200	111.500	-1.020	-0.285	1.077	56.760
2	18:11:02	40.260	40.180	-0.078	0.823	101.300	100.500	-1.079	-0.207	-1.539	57.190
3	18:11:29	38.840	39.900	-0.054	0.655	103.400	100.900	1.483	0.312	-0.906	56.980
X		39.720	40.810	-0.239	0.797	107.000	104.300	-0.205	-0.060	-0.456	56.980
S		0.765	1.338	0.301	0.130	8.076	6.280	1.462	0.325	1.365	0.217
%RSD		1.927	3.280	125.700	16.360	7.548	6.021	712.100	538.700	299.300	0.380
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:35	84.8%	7.281	7.684	7.029	0.544	0.003	0.015	-0.005	0.024	87.3%
2	18:11:02	85.9%	7.766	7.893	7.878	0.784	0.008	0.001	0.027	0.033	85.4%
3	18:11:29	86.0%	7.630	7.868	7.486	1.901	0.005	-0.002	-0.018	0.013	86.5%
X		85.6%	7.559	7.815	7.464	1.077	0.005	0.005	0.001	0.024	86.4%
S		0.7%	0.250	0.114	0.425	0.724	0.003	0.009	0.023	0.010	1.0%
%RSD		0.8	3.307	1.463	5.697	67.280	50.970	182.200	1747.000	42.610	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:35	0.262	0.267	0.460	0.479	7.182	6.844	91.2%	-0.010	0.001	0.113
2	18:11:02	0.218	0.310	0.459	0.475	6.865	6.632	92.5%	0.009	0.007	0.113
3	18:11:29	0.209	0.319	0.463	0.490	7.042	7.374	92.3%	0.005	0.002	0.125
X		0.230	0.298	0.461	0.481	7.030	6.950	92.0%	0.002	0.003	0.117
S		0.028	0.028	0.002	0.008	0.159	0.382	0.7%	0.010	0.003	0.007
%RSD		12.320	9.310	0.505	1.602	2.256	5.500	0.8	568.800	84.020	6.101
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:10:35	0.129	0.113	94.9%							
2	18:11:02	0.108	0.126	96.5%							
3	18:11:29	0.127	0.119	97.8%							
X		0.121	0.119	96.4%							
S		0.011	0.007	1.4%							
%RSD		9.390	5.560	1.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:25	85.3%	-0.007	50.860	59.130	-33.750	56400.000	4359.000	4553.000	8004.000	147.100
2	18:16:52	84.3%	-0.007	50.130	55.840	-36.010	58310.000	4455.000	4649.000	8262.000	151.800
3	18:17:19	83.5%	-0.018	53.000	57.320	-35.050	59720.000	4585.000	4676.000	8247.000	150.300
X		84.4%	-0.011	51.330	57.430	-34.940	58140.000	4466.000	4626.000	8171.000	149.700
S		0.9%	0.006	1.490	1.646	1.134	1669.000	113.600	64.380	145.100	2.414
%RSD		1.1	55.830	2.903	2.866	3.247	2.870	2.543	1.392	1.775	1.612
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:25	4661.000	50330.000	16050.000	51560.000	51140.000	80.8%	12.320	1.004	1.705	5766.000
2	18:16:52	4662.000	51280.000	15980.000	51550.000	51920.000	78.4%	10.940	1.296	1.760	5925.000
3	18:17:19	4744.000	51470.000	16470.000	52680.000	53310.000	77.6%	10.640	1.692	1.730	6175.000
X		4689.000	51020.000	16170.000	51930.000	52120.000	78.9%	11.300	1.330	1.732	5956.000
S		47.740	610.200	265.800	649.800	1101.000	1.7%	0.896	0.345	0.028	206.200
%RSD		1.018	1.196	1.644	1.251	2.112	2.1	7.931	25.970	1.591	3.463
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:25	158.200	12.690	160.400	243.000	1.014	18.340	20.170	8.792	8.811	25.350
2	18:16:52	156.100	12.850	162.300	247.300	1.125	19.180	18.090	8.511	8.575	25.860
3	18:17:19	158.700	12.860	163.200	245.300	0.960	18.640	19.640	8.564	8.799	26.830
X		157.600	12.800	161.900	245.200	1.033	18.720	19.300	8.622	8.728	26.010
S		1.383	0.094	1.445	2.140	0.084	0.423	1.080	0.149	0.133	0.753
%RSD		0.877	0.733	0.892	0.873	8.158	2.259	5.596	1.730	1.520	2.894
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:25	22.260	24.820	1.479	0.436	169.600	165.500	-2.207	-0.573	3.234	75.820
2	18:16:52	24.750	25.410	2.150	-0.470	161.200	163.400	-2.208	-0.553	2.562	76.310
3	18:17:19	25.740	25.140	2.001	-0.187	166.200	157.700	5.775	1.224	-0.102	75.370
X		24.250	25.120	1.876	-0.073	165.700	162.200	0.453	0.033	1.898	75.830
S		1.796	0.297	0.352	0.464	4.228	4.051	4.609	1.032	1.765	0.467
%RSD		7.406	1.183	18.790	631.000	2.552	2.497	1017.000	3138.000	92.970	0.616
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:25	82.4%	4.038	4.836	4.309	3.280	0.031	0.036	-0.005	0.009	83.4%
2	18:16:52	82.9%	4.479	4.953	4.818	2.834	0.040	0.033	0.041	0.020	82.8%
3	18:17:19	83.3%	4.505	4.886	4.021	3.607	0.017	0.036	0.056	0.043	82.6%
X		82.9%	4.341	4.891	4.383	3.240	0.029	0.035	0.031	0.024	82.9%
S		0.5%	0.263	0.059	0.403	0.388	0.011	0.002	0.032	0.017	0.4%
%RSD		0.6	6.055	1.202	9.204	11.970	39.100	4.597	104.000	72.000	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:16:25	0.635	0.784	2.162	2.187	10.260	8.807	88.5%	-0.002	-0.004	0.163
2	18:16:52	0.646	0.739	2.276	1.945	8.546	8.604	87.8%	0.002	0.008	0.133
3	18:17:19	0.480	0.868	2.209	2.044	9.495	8.761	88.0%	-0.011	0.003	0.150
X		0.587	0.797	2.216	2.059	9.434	8.724	88.1%	-0.004	0.002	0.148
S		0.093	0.066	0.057	0.121	0.859	0.106	0.4%	0.007	0.006	0.015
%RSD		15.850	8.237	2.585	5.893	9.101	1.215	0.4	198.800	257.100	10.360
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:16:25	0.172	0.164	93.5%							
2	18:16:52	0.165	0.165	93.5%							
3	18:17:19	0.151	0.143	93.7%							
X		0.162	0.157	93.6%							
S		0.011	0.012	0.1%							
%RSD		6.627	7.957	0.2							

VE05031-001S

5/11/2020 18:21:48

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:15	82.3%	101.800	78.520	84.570	-35.060	56310.000	4862.000	5032.000	8836.000	290.600
2	18:22:42	80.6%	99.880	77.440	86.030	-32.010	58940.000	5032.000	5156.000	9140.000	295.500
3	18:23:09	81.6%	101.000	77.530	82.440	-33.440	57650.000	4903.000	5048.000	9235.000	287.500
X		81.5%	100.900	77.830	84.340	-33.500	57630.000	4932.000	5078.000	9070.000	291.200
S		0.9%	0.971	0.602	1.805	1.528	1315.000	88.580	67.730	208.900	4.034
%RSD		1.1	0.962	0.773	2.140	4.561	2.282	1.796	1.334	2.303	1.385
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:15	5496.000	52750.000	17130.000	51380.000	51460.000	77.5%	110.400	100.800	102.200	6353.000
2	18:22:42	5605.000	53810.000	17290.000	52790.000	52210.000	75.2%	109.800	103.100	101.900	4989.000
3	18:23:09	5497.000	53580.000	17220.000	52330.000	51630.000	75.5%	118.000	102.900	104.300	4571.000
X		5533.000	53380.000	17210.000	52170.000	51770.000	76.1%	112.700	102.300	102.800	5304.000
S		62.580	559.200	78.820	715.900	393.400	1.3%	4.566	1.305	1.316	932.200
%RSD		1.131	1.048	0.458	1.372	0.760	1.6	4.051	1.276	1.281	17.570
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:15	1261.000	110.200	1205.000	1300.000	100.600	118.000	117.000	104.600	109.600	125.600
2	18:22:42	1272.000	113.600	1215.000	1362.000	101.400	119.400	119.700	106.700	110.400	126.900
3	18:23:09	1293.000	112.400	1205.000	1328.000	100.700	119.100	117.300	105.100	107.300	128.600
X		1275.000	112.100	1208.000	1330.000	100.900	118.800	118.000	105.500	109.100	127.000
S		16.490	1.720	5.877	30.850	0.402	0.734	1.441	1.116	1.607	1.527
%RSD		1.293	1.534	0.486	2.320	0.398	0.618	1.221	1.057	1.473	1.202
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:15	120.000	121.600	106.900	99.010	136.500	142.000	448.100	97.150	0.705	172.500
2	18:22:42	123.900	126.100	101.200	99.930	137.400	139.400	437.000	92.800	-0.580	173.800
3	18:23:09	122.300	123.300	105.900	94.640	140.200	135.600	465.900	100.700	0.101	175.300
X		122.100	123.700	104.700	97.860	138.000	139.000	450.300	96.890	0.075	173.900
S		1.991	2.283	3.027	2.827	1.968	3.221	14.610	3.958	0.642	1.390
%RSD		1.631	1.846	2.892	2.889	1.426	2.318	3.244	4.085	851.700	0.799
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:15	80.7%	109.000	110.900	110.500	103.400	98.940	97.090	97.580	99.210	79.7%
2	18:22:42	79.5%	109.400	109.700	110.100	106.900	96.780	96.680	100.200	99.130	79.9%
3	18:23:09	79.6%	111.400	113.300	110.300	104.500	97.020	97.640	99.120	101.700	78.7%
X		79.9%	109.900	111.300	110.300	104.900	97.580	97.130	98.960	100.000	79.5%
S		0.7%	1.298	1.818	0.216	1.829	1.184	0.480	1.302	1.473	0.7%
%RSD		0.9	1.180	1.633	0.196	1.743	1.214	0.494	1.316	1.472	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:15	101.500	101.200	104.600	102.500	108.400	109.300	85.2%	100.200	101.200	106.300
2	18:22:42	101.100	100.600	105.200	103.100	111.200	109.400	84.0%	102.100	103.600	107.700
3	18:23:09	102.500	102.800	108.400	102.900	113.100	109.900	85.4%	100.800	102.900	107.600
X		101.700	101.500	106.100	102.800	110.900	109.500	84.9%	101.000	102.600	107.200
S		0.726	1.165	2.067	0.291	2.374	0.292	0.8%	0.941	1.245	0.750
%RSD		0.713	1.148	1.949	0.283	2.140	0.266	0.9	0.931	1.213	0.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:22:15	106.800	107.000	90.2%							
2	18:22:42	107.700	108.600	90.7%							
3	18:23:09	108.500	108.400	91.6%							
X		107.700	108.000	90.8%							
S		0.875	0.870	0.7%							
%RSD		0.812	0.805	0.8							

VE05031-001SD

5/11/2020 18:27:38

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:05	82.6%	99.290	74.830	82.300	-35.800	59440.000	5058.000	5388.000	9071.000	292.900
2	18:28:32	77.9%	103.500	77.270	83.310	-36.250	59470.000	5060.000	5352.000	9188.000	295.700
3	18:28:59	80.5%	98.610	76.610	84.090	-35.590	59620.000	5102.000	5247.000	9748.000	298.800
X		80.3%	100.500	76.230	83.230	-35.880	59510.000	5073.000	5329.000	9336.000	295.800
S		2.4%	2.654	1.260	0.897	0.338	98.490	24.780	72.960	361.400	2.938
%RSD		2.9	2.642	1.653	1.077	0.941	0.166	0.488	1.369	3.872	0.993
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:05	5670.000	53460.000	17470.000	52950.000	53350.000	75.7%	112.500	101.400	102.100	4781.000
2	18:28:32	5792.000	55140.000	17730.000	54090.000	53390.000	73.7%	116.400	104.100	103.600	5886.000
3	18:28:59	5626.000	54610.000	17640.000	54110.000	54680.000	73.0%	115.600	105.300	103.200	5750.000
X		5696.000	54400.000	17610.000	53720.000	53810.000	74.1%	114.800	103.600	103.000	5472.000
S		85.890	856.500	135.000	664.800	754.800	1.4%	2.085	2.002	0.745	602.900
%RSD		1.508	1.574	0.766	1.238	1.403	1.9	1.816	1.932	0.724	11.020
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:05	1263.000	111.800	1195.000	1336.000	101.000	119.000	114.900	106.500	107.300	126.200
2	18:28:32	1313.000	114.200	1219.000	1331.000	102.400	117.800	121.700	108.000	112.400	130.500
3	18:28:59	1320.000	117.100	1253.000	1373.000	100.900	120.100	121.100	108.800	110.800	132.000
X		1299.000	114.300	1222.000	1347.000	101.400	119.000	119.200	107.800	110.200	129.600
S		31.080	2.664	29.260	22.720	0.868	1.185	3.723	1.148	2.606	2.983
%RSD		2.393	2.330	2.394	1.687	0.856	0.996	3.123	1.066	2.365	2.302
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:05	124.800	123.700	106.400	96.370	143.500	136.000	480.000	103.900	1.502	175.600
2	18:28:32	124.300	127.100	107.100	104.600	144.000	145.400	500.200	107.600	0.162	178.600
3	18:28:59	129.200	127.900	108.900	95.100	142.200	134.200	493.100	104.900	0.203	179.100
X		126.100	126.200	107.500	98.700	143.200	138.500	491.100	105.500	0.622	177.800
S		2.719	2.191	1.292	5.180	0.952	6.048	10.220	1.913	0.762	1.875
%RSD		2.156	1.736	1.203	5.248	0.665	4.365	2.082	1.813	122.500	1.055
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:05	79.2%	111.600	113.700	111.600	104.500	96.510	99.380	100.100	100.900	78.3%
2	18:28:32	78.8%	111.900	113.900	113.600	105.800	99.170	100.200	101.700	101.900	78.1%
3	18:28:59	78.1%	114.200	112.200	112.000	108.700	97.760	98.610	101.800	102.800	78.3%
X		78.7%	112.600	113.300	112.400	106.300	97.810	99.400	101.200	101.900	78.2%
S		0.6%	1.384	0.924	1.046	2.156	1.331	0.808	0.942	0.964	0.1%
%RSD		0.7	1.229	0.816	0.930	2.028	1.361	0.813	0.930	0.947	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:05	101.900	102.000	106.900	103.200	113.500	110.200	83.2%	105.000	105.200	108.500
2	18:28:32	105.500	104.200	108.700	103.400	116.900	111.900	84.3%	102.900	104.300	107.600
3	18:28:59	104.500	104.100	107.600	103.400	114.000	111.100	85.3%	103.400	103.900	108.800
X		104.000	103.400	107.700	103.300	114.800	111.000	84.3%	103.800	104.400	108.300
S		1.840	1.250	0.910	0.124	1.835	0.843	1.0%	1.094	0.650	0.598
%RSD		1.770	1.209	0.845	0.120	1.598	0.759	1.2	1.055	0.622	0.552
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:28:05	107.700	108.700	88.5%							
2	18:28:32	107.300	108.000	90.2%							
3	18:28:59	106.700	107.800	89.8%							
X		107.200	108.100	89.5%							
S		0.521	0.444	0.9%							
%RSD		0.486	0.411	1.0							

VE05031-001L(5)

5/11/2020 18:33:27

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:33:54	86.2%	-0.007	24.710	27.210	-22.040	12060.000	1189.000	1220.000	1709.000	32.530
2	18:34:21	83.2%	0.004	26.400	27.080	-23.310	11640.000	1184.000	1221.000	1678.000	31.080
3	18:34:48	84.3%	-0.007	26.440	26.830	-21.400	12290.000	1205.000	1226.000	1718.000	31.970
X		84.6%	-0.004	25.850	27.040	-22.250	12000.000	1193.000	1222.000	1701.000	31.860
S		1.5%	0.006	0.988	0.190	0.973	329.300	10.940	3.487	21.040	0.730
%RSD		1.8	168.700	3.822	0.703	4.375	2.745	0.917	0.285	1.237	2.290
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:33:54	1036.000	11420.000	3397.000	10860.000	10350.000	79.4%	2.877	0.138	0.393	1516.000
2	18:34:21	994.900	11350.000	3349.000	10650.000	10170.000	80.3%	2.378	0.170	0.364	1541.000
3	18:34:48	1014.000	11470.000	3418.000	11080.000	10390.000	77.8%	2.454	0.165	0.382	1560.000
X		1015.000	11420.000	3388.000	10860.000	10300.000	79.2%	2.570	0.158	0.380	1539.000
S		20.390	61.700	35.620	213.300	114.400	1.2%	0.269	0.018	0.015	22.030
%RSD		2.009	0.540	1.051	1.964	1.110	1.5	10.470	11.120	3.875	1.432
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:33:54	32.410	2.711	39.120	52.360	0.191	4.571	4.562	1.825	1.910	5.466
2	18:34:21	32.680	2.574	37.410	53.880	0.161	4.024	4.027	1.977	2.076	5.712
3	18:34:48	33.860	2.735	38.200	57.620	0.194	4.293	3.692	1.806	1.796	5.394
X		32.980	2.673	38.240	54.620	0.182	4.296	4.094	1.869	1.927	5.524
S		0.774	0.087	0.856	2.709	0.018	0.274	0.439	0.094	0.140	0.167
%RSD		2.348	3.248	2.237	4.960	9.885	6.372	10.720	5.019	7.284	3.021
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:33:54	4.894	5.610	0.172	1.081	36.860	37.640	-2.800	-0.564	-2.690	16.640
2	18:34:21	4.952	5.152	-0.102	0.108	32.970	34.400	-2.857	-0.608	-0.724	15.520
3	18:34:48	6.136	6.000	0.291	0.394	39.290	34.530	-1.422	-0.339	0.032	16.130
X		5.327	5.587	0.120	0.528	36.370	35.520	-2.360	-0.504	-1.127	16.100
S		0.701	0.425	0.202	0.500	3.187	1.834	0.813	0.144	1.405	0.565
%RSD		13.160	7.602	167.600	94.730	8.761	5.161	34.440	28.600	124.600	3.507
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:33:54	80.5%	0.843	0.938	0.920	0.182	0.009	0.010	0.008	0.012	82.3%
2	18:34:21	81.9%	0.961	0.846	0.912	-0.763	0.006	0.007	0.021	0.001	82.4%
3	18:34:48	80.6%	0.946	1.184	0.888	0.836	0.003	0.013	-0.004	0.032	82.8%
X		81.0%	0.917	0.990	0.907	0.085	0.006	0.010	0.008	0.015	82.5%
S		0.8%	0.064	0.175	0.016	0.804	0.003	0.003	0.012	0.016	0.3%
%RSD		1.0	7.027	17.680	1.784	941.400	50.240	28.680	141.600	106.500	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:33:54	0.117	0.184	0.403	0.402	1.697	1.688	86.4%	0.143	0.175	0.060
2	18:34:21	0.163	0.236	0.340	0.319	2.278	1.779	86.0%	0.148	0.168	0.063
3	18:34:48	0.099	0.202	0.469	0.353	2.092	1.933	87.7%	0.134	0.140	0.056
X		0.126	0.207	0.404	0.358	2.022	1.800	86.7%	0.142	0.161	0.060
S		0.033	0.027	0.065	0.041	0.297	0.124	0.9%	0.007	0.018	0.003
%RSD		26.250	12.820	16.060	11.590	14.670	6.872	1.1	4.904	11.440	5.535
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:33:54	0.046	0.048	92.8%							
2	18:34:21	0.043	0.049	94.1%							
3	18:34:48	0.034	0.047	95.1%							
X		0.041	0.048	94.0%							
S		0.006	0.001	1.1%							
%RSD		15.380	2.666	1.2							

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User Pre-dilution: 1.000

Run		Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:43		80.3%	-0.007	32.620	32.040	138.000	27140.000	2312.000	2304.000	2565.000	155.000
2	18:40:10		81.0%	-0.007	30.090	31.470	131.700	27340.000	2304.000	2263.000	2541.000	154.600
3	18:40:37		77.7%	0.005	30.890	31.310	129.000	26340.000	2279.000	2263.000	2481.000	153.100
X			79.7%	-0.003	31.200	31.600	132.900	26940.000	2298.000	2277.000	2529.000	154.200
S			1.8%	0.007	1.296	0.384	4.615	531.300	17.250	23.520	43.270	1.021
%RSD			2.2	240.800	4.153	1.216	3.474	1.972	0.751	1.033	1.711	0.662
Run	Time		28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:43		4575.000	62190.000	3719.000	24250.000	23820.000	74.7%	2.279	-0.464	1.261	5724.000
2	18:40:10		4515.000	62880.000	3720.000	25040.000	24170.000	73.7%	2.341	-0.111	1.177	5638.000
3	18:40:37		4389.000	61320.000	3682.000	24560.000	24030.000	75.1%	2.921	0.056	1.162	5546.000
X			4493.000	62130.000	3707.000	24620.000	24010.000	74.5%	2.514	-0.173	1.200	5636.000
S			95.100	782.800	21.990	395.000	173.300	0.7%	0.354	0.266	0.054	89.130
%RSD			2.117	1.260	0.593	1.605	0.722	0.9	14.090	153.500	4.462	1.581
Run	Time		54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:43		85.190	3.213	88.640	134.000	0.088	1.735	1.658	2.740	3.055	20.120
2	18:40:10		88.520	3.295	89.000	136.000	0.097	1.938	1.433	3.001	2.857	19.130
3	18:40:37		86.680	3.294	84.980	133.600	0.093	1.726	2.278	2.650	3.005	20.620
X			86.800	3.268	87.540	134.500	0.093	1.799	1.790	2.797	2.972	19.960
S			1.669	0.047	2.221	1.255	0.005	0.120	0.437	0.182	0.103	0.759
%RSD			1.923	1.440	2.537	0.933	5.094	6.654	24.440	6.511	3.457	3.804
Run	Time		67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:43		19.480	18.560	-0.150	-0.424	288.400	287.700	-3.396	-0.715	-2.627	51.990
2	18:40:10		18.890	20.100	0.489	0.213	304.700	297.900	-0.503	-0.123	-2.600	52.390
3	18:40:37		18.100	18.700	0.817	0.815	297.200	305.400	0.072	-0.002	-0.567	51.620
X			18.820	19.120	0.385	0.201	296.800	297.000	-1.276	-0.280	-1.932	52.000
S			0.689	0.850	0.491	0.619	8.130	8.894	1.859	0.381	1.182	0.384
%RSD			3.661	4.444	127.600	307.600	2.740	2.995	145.700	136.200	61.170	0.739
Run	Time		89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:43		78.4%	3.413	3.555	3.278	0.342	0.006	-0.002	-0.000	-0.004	79.4%
2	18:40:10		77.5%	3.258	3.511	3.298	2.869	0.006	0.008	-0.013	0.013	79.7%
3	18:40:37		79.2%	3.662	3.380	3.262	3.360	0.000	0.001	0.012	0.008	78.5%
X			78.4%	3.444	3.482	3.279	2.190	0.004	0.002	-0.000	0.006	79.2%
S			0.9%	0.204	0.091	0.018	1.620	0.003	0.005	0.013	0.009	0.6%
%RSD			1.1	5.918	2.615	0.550	73.940	86.600	188.500	3757.000	150.600	0.8
Run	Time		116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:43		0.092	0.167	0.201	0.183	16.700	16.290	84.2%	0.076	0.065	0.067
2	18:40:10		0.062	0.112	0.230	0.159	16.280	17.050	85.8%	0.042	0.064	0.035
3	18:40:37		0.099	0.109	0.235	0.111	18.290	17.540	84.2%	0.056	0.053	0.039
X			0.084	0.129	0.222	0.151	17.090	16.960	84.7%	0.058	0.061	0.047
S			0.020	0.033	0.018	0.037	1.062	0.630	0.9%	0.017	0.007	0.018
%RSD			23.730	25.270	8.249	24.410	6.212	3.718	1.1	29.050	11.570	37.340
Run	Time		207Pb	208Pb	209Bi							
			ppb	ppb	ppb							
1	18:39:43		0.068	0.056	92.9%							
2	18:40:10		0.069	0.052	92.4%							
3	18:40:37		0.047	0.040	92.8%							
X			0.061	0.049	92.7%							
S			0.012	0.008	0.3%							
%RSD			19.800	17.160	0.3							

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:45:33	78.5%	100.700	128.200	126.400	155.600	<u>28040.000</u>	<u>3297.000</u>	3307.000	3529.000	249.700
2	18:46:00	75.4%	102.500	119.500	123.100	136.000	<u>26940.000</u>	<u>3284.000</u>	3234.000	3531.000	250.600
3	18:46:27	77.6%	96.560	128.300	126.600	148.000	<u>27450.000</u>	<u>3345.000</u>	3275.000	3530.000	252.000
X		77.2%	99.940	125.300	125.400	146.500	<u>27480.000</u>	<u>3308.000</u>	3272.000	3530.000	250.800
S		1.6%	3.054	5.051	1.981	9.878	<u>552.800</u>	<u>32.060</u>	36.610	0.900	1.167
%RSD		2.1	3.056	4.030	1.580	6.742	<u>2.012</u>	<u>0.969</u>	1.119	0.025	0.466
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:45:33	<u>5468.000</u>	<u>64990.000</u>	<u>4809.000</u>	25200.000	24920.000	73.5%	101.600	98.670	101.800	4983.000
2	18:46:00	<u>5312.000</u>	<u>63380.000</u>	<u>4785.000</u>	24730.000	24360.000	73.3%	97.760	97.040	98.400	5360.000
3	18:46:27	<u>5348.000</u>	<u>64790.000</u>	<u>4771.000</u>	25310.000	25160.000	73.3%	100.200	98.110	99.130	5050.000
X		<u>5376.000</u>	<u>64390.000</u>	<u>4788.000</u>	25080.000	24810.000	73.4%	99.840	97.940	99.760	5131.000
S		<u>81.930</u>	<u>878.600</u>	<u>19.370</u>	309.900	412.600	0.1%	1.928	0.832	1.769	201.300
%RSD		<u>1.524</u>	<u>1.365</u>	<u>0.405</u>	1.236	1.663	0.1	1.932	0.850	1.773	3.923
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:45:33	1170.000	101.500	1165.000	1158.000	96.360	99.840	101.000	99.900	100.200	116.700
2	18:46:00	1176.000	100.800	<u>1110.000</u>	1151.000	98.490	97.880	98.260	99.000	101.300	118.500
3	18:46:27	1165.000	102.500	<u>1098.000</u>	1163.000	96.500	97.780	94.940	98.990	102.000	119.000
X		1171.000	101.600	<u>1124.000</u>	1157.000	97.120	98.500	98.060	99.300	101.200	118.100
S		5.663	0.838	<u>35.720</u>	6.115	1.189	1.163	3.018	0.522	0.886	1.214
%RSD		4.928	0.825	<u>3.177</u>	0.528	1.224	1.180	3.078	0.526	0.876	1.028
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:45:33	118.300	117.400	99.280	55.820	292.100	285.700	266.600	56.120	-3.312	148.600
2	18:46:00	120.600	117.700	104.400	56.860	302.000	303.800	259.900	55.070	-1.856	151.300
3	18:46:27	109.800	116.800	100.900	54.970	288.000	297.300	278.900	58.590	-0.429	150.700
X		116.200	117.300	101.500	55.880	294.100	295.600	268.500	56.590	-1.866	150.200
S		5.728	0.422	2.611	0.944	7.202	9.174	9.637	1.803	1.441	1.419
%RSD		4.928	0.360	2.572	1.690	2.449	3.104	3.590	3.186	77.250	0.945
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:45:33	77.7%	103.600	105.600	106.400	102.500	93.810	94.770	98.240	98.140	78.9%
2	18:46:00	76.4%	106.600	106.900	106.700	102.500	96.290	96.080	99.470	99.840	77.2%
3	18:46:27	76.6%	104.800	107.300	105.200	102.100	95.680	96.120	99.170	99.080	78.0%
X		76.9%	105.000	106.600	106.100	102.400	95.260	95.660	98.960	99.020	78.0%
S		0.7%	1.502	0.870	0.778	0.235	1.293	0.771	0.643	0.853	0.9%
%RSD		1.0	1.430	0.816	0.733	0.229	1.358	0.806	0.649	0.862	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:45:33	93.550	91.100	99.770	99.580	115.000	112.700	83.6%	100.000	102.900	105.900
2	18:46:00	97.720	94.180	102.600	99.150	120.700	114.400	83.2%	98.760	103.900	106.700
3	18:46:27	94.630	93.810	101.700	95.390	119.500	113.800	85.3%	98.860	102.300	103.800
X		95.300	93.030	101.300	98.040	118.400	113.600	84.1%	99.220	103.100	105.400
S		2.161	1.684	1.426	2.304	2.976	0.862	1.1%	0.715	0.803	1.477
%RSD		2.268	1.810	1.407	2.350	2.514	0.759	1.3	0.721	0.779	1.401
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:45:33	104.600	106.200	91.2%							
2	18:46:00	106.800	107.800	91.7%							
3	18:46:27	105.000	104.900	92.1%							
X		105.500	106.300	91.7%							
S		1.159	1.465	0.5%							
%RSD		1.099	1.379	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:51:25	75.1%	0.147	45.300	44.620	225.300	70180.000	1930.000	1939.000	2273.000	TM 3416.000
2	18:51:52	77.1%	0.223	40.970	42.470	224.200	71420.000	1985.000	1932.000	2321.000	TM 3459.000
3	18:52:19	77.6%	0.119	42.350	40.850	213.800	72220.000	1973.000	1953.000	2345.000	TM 3442.000
X		76.6%	0.163	42.870	42.650	221.100	71270.000	1963.000	1941.000	2313.000	TM 3439.000
S		1.3%	0.054	2.210	1.890	6.377	1027.000	28.890	10.850	36.620	TM 21.730
%RSD		1.7	33.020	5.156	4.431	2.884	1.442	1.472	0.559	1.583	TM 0.632
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:51:25	6602.000	12380.000	2613.000	21080.000	20670.000	76.9%	147.400	8.229	36.280	663.900
2	18:51:52	6849.000	12420.000	2698.000	21550.000	20710.000	75.6%	143.700	8.730	36.550	87.600
3	18:52:19	6756.000	12180.000	2695.000	21550.000	21140.000	76.0%	145.400	7.722	36.940	755.800
X		6736.000	12330.000	2669.000	21390.000	20840.000	76.2%	145.500	8.227	36.590	502.400
S		124.700	124.900	48.660	269.000	262.500	0.7%	1.872	0.504	0.332	362.200
%RSD		1.852	1.013	1.823	1.257	1.259	0.9	1.287	6.126	0.907	72.090
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:51:25	27940.000	302.400	27800.000	28480.000	10.700	25.240	26.060	115.700	120.500	M 1713.000
2	18:51:52	28040.000	304.100	28040.000	29110.000	11.020	24.430	24.820	119.500	122.100	M 1770.000
3	18:52:19	27940.000	304.700	28120.000	29110.000	11.090	24.070	26.270	118.000	122.900	M 1754.000
X		27970.000	303.700	27990.000	28900.000	10.940	24.580	25.720	117.700	121.800	M 1745.000
S		55.980	1.231	165.300	361.700	0.205	0.603	0.785	1.943	1.227	M 29.460
%RSD		0.200	0.405	0.591	1.251	1.879	2.452	3.051	1.650	1.007	M 1.688
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:51:25	M 1576.000	M 1666.000	1.581	0.281	36.480	36.460	-2.106	-0.449	0.710	44.830
2	18:51:52	M 1610.000	M 1679.000	1.909	-0.015	37.820	34.420	-1.440	-0.278	-0.667	45.350
3	18:52:19	M 1602.000	M 1686.000	1.632	0.540	32.230	36.120	2.559	0.625	-0.042	45.170
X		M 1596.000	M 1677.000	1.707	0.269	35.510	35.670	-0.329	-0.034	0.001	45.120
S		M 17.590	M 9.962	0.177	0.278	2.918	1.092	2.523	0.577	0.689	0.268
%RSD		M 1.102	M 0.594	10.350	103.400	8.219	3.061	767.000	1688.000	113200.000	0.595
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:51:25	80.7%	2.245	2.219	2.009	6.032	0.676	0.708	0.312	0.172	77.8%
2	18:51:52	81.4%	1.961	2.487	2.259	3.116	0.769	0.724	0.130	0.205	78.8%
3	18:52:19	82.4%	2.452	2.338	2.216	4.064	0.665	0.656	0.195	0.141	78.0%
X		81.5%	2.219	2.348	2.161	4.404	0.704	0.696	0.212	0.173	78.2%
S		0.8%	0.246	0.134	0.134	1.487	0.057	0.035	0.092	0.032	0.5%
%RSD		1.0	11.100	5.708	6.186	33.770	8.096	5.085	43.360	18.380	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:51:25	4.170	6.305	4.310	4.355	71.280	68.490	83.4%	0.099	0.088	15.310
2	18:51:52	4.028	5.715	4.495	4.173	70.590	68.990	84.0%	0.096	0.095	15.290
3	18:52:19	4.223	6.007	4.276	3.916	72.340	69.240	85.2%	0.076	0.076	15.150
X		4.140	6.009	4.360	4.148	71.400	68.910	84.2%	0.090	0.086	15.250
S		0.101	0.295	0.118	0.221	0.880	0.385	0.9%	0.013	0.010	0.087
%RSD		2.432	4.908	2.708	5.319	1.232	0.558	1.1	13.910	11.110	0.571
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:51:25	14.010	14.710	88.7%							
2	18:51:52	14.490	14.730	89.3%							
3	18:52:19	14.550	14.860	90.9%							
X		14.350	14.770	89.6%							
S		0.293	0.078	1.2%							
%RSD		2.040	0.527	1.3							

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User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:16	79.2%	0.016	324.600	357.400	-18.090	<u>62310.000</u>	168.800	163.600	271.500	<u>TM 5661.000</u>
2	18:57:43	80.5%	-0.018	338.400	355.600	-21.400	<u>64220.000</u>	167.000	167.500	271.500	<u>TM 5775.000</u>
3	18:58:10	80.8%	-0.007	329.000	342.200	-19.040	<u>65110.000</u>	172.300	169.800	277.400	<u>TM 5645.000</u>
X		80.2%	-0.003	330.700	351.700	-19.510	<u>63880.000</u>	169.400	167.000	273.500	<u>TM 5693.000</u>
S		0.9%	0.017	7.047	8.271	1.702	<u>1432.000</u>	2.665	3.125	3.421	<u>TM 70.660</u>
%RSD		1.1	586.600	2.131	2.352	8.722	<u>2.242</u>	1.574	1.872	1.251	<u>TM 1.241</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:16	309.100	<u>55200.000</u>	<u>10380.000</u>	55950.000	<u>55920.000</u>	75.2%	1.796	0.028	0.315	2802.000
2	18:57:43	303.500	<u>56170.000</u>	<u>10410.000</u>	56670.000	<u>56070.000</u>	75.1%	2.359	-0.075	0.477	3164.000
3	18:58:10	292.600	<u>56020.000</u>	<u>10500.000</u>	56470.000	<u>56640.000</u>	75.3%	1.918	0.278	0.405	3197.000
X		301.800	<u>55800.000</u>	<u>10430.000</u>	56360.000	<u>56210.000</u>	75.2%	2.024	0.077	0.399	3054.000
S		8.399	<u>520.500</u>	<u>58.620</u>	370.000	<u>380.300</u>	0.1%	0.296	0.181	0.081	219.100
%RSD		2.783	<u>0.933</u>	<u>0.562</u>	0.656	<u>0.677</u>	0.1	14.640	235.300	20.360	7.173
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:16	15.470	1.086	18.660	127.000	0.038	90.890	89.810	61.090	61.830	5.891
2	18:57:43	17.250	1.084	19.570	116.300	0.073	97.800	96.910	60.580	62.240	6.559
3	18:58:10	18.200	1.060	20.910	127.200	0.067	94.590	95.260	62.120	64.390	6.574
X		16.970	1.077	19.710	123.500	0.059	94.430	93.990	61.260	62.820	6.341
S		1.387	0.014	1.135	6.225	0.019	3.456	3.715	0.784	1.376	0.390
%RSD		8.174	1.327	5.756	5.040	31.960	3.660	3.952	1.280	2.191	6.150
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:16	8.720	7.643	0.039	-0.549	887.100	890.600	0.818	0.085	0.160	<u>M 922.400</u>
2	18:57:43	9.199	7.248	-0.815	0.651	892.200	857.900	0.812	0.038	2.246	<u>M 921.300</u>
3	18:58:10	7.762	7.659	0.004	-0.849	911.700	917.600	6.457	1.193	1.561	<u>M 940.500</u>
X		8.560	7.517	-0.257	-0.249	897.000	888.700	2.696	0.439	1.322	<u>M 928.100</u>
S		0.732	0.233	0.483	0.794	12.970	29.890	3.257	0.654	1.064	<u>M 10.750</u>
%RSD		8.549	3.101	188.000	318.700	1.446	3.363	120.800	149.100	80.430	<u>M 1.158</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:16	78.5%	-0.119	-0.087	-0.095	18.430	7.735	7.786	0.000	-0.002	77.7%
2	18:57:43	78.7%	0.066	-0.024	-0.050	25.090	7.534	7.660	0.000	-0.013	78.0%
3	18:58:10	78.4%	-0.030	0.138	-0.071	16.060	7.789	7.480	0.000	-0.006	80.1%
X		78.6%	-0.028	0.009	-0.072	19.860	7.686	7.642	0.000	-0.007	78.6%
S		0.1%	0.093	0.116	0.023	4.681	0.134	0.154	0.000	0.005	1.3%
%RSD		0.1	331.800	1252.000	31.260	23.570	1.747	2.017	31.260	75.080	1.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:16	0.647	0.788	0.206	0.136	83.440	83.340	83.6%	0.012	0.016	1.152
2	18:57:43	0.815	0.976	0.267	0.234	86.020	83.750	84.8%	0.003	0.028	1.192
3	18:58:10	0.585	0.921	0.259	0.264	84.420	83.540	85.6%	0.031	0.023	1.207
X		0.682	0.895	0.244	0.211	84.630	83.540	84.7%	0.016	0.022	1.184
S		0.119	0.097	0.033	0.067	1.303	0.208	1.0%	0.014	0.006	0.029
%RSD		17.500	10.800	13.540	31.550	1.539	0.249	1.1	92.680	25.950	2.411
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:57:16	1.112	1.132	87.2%							
2	18:57:43	1.151	1.166	87.7%							
3	18:58:10	1.032	1.175	90.4%							
X		1.099	1.158	88.4%							
S		0.061	0.022	1.7%							
%RSD		5.517	1.928	1.9							

CCV MW126865 5/11/2020 19:02:41 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:08	77.1%	307.100	316.200	318.700	30.980	63650.000	62700.000	62310.000	61380.000	291.600
2	19:03:35	76.4%	306.600	315.600	308.700	25.620	64860.000	62750.000	60650.000	63260.000	304.300
3	19:04:02	74.4%	313.700	318.200	314.300	21.720	64990.000	62850.000	62310.000	62760.000	302.800
X		76.0%	103.051%	105.556%	104.629%	26.110	107.502%	62770.000	61760.000	104.112%	99.862%
S		1.4%	n/a	n/a	n/a	4.652	n/a	76.060	957.100	n/a	n/a
%RSD		1.9	1.276	0.419	1.601	17.820	1.142	0.121	1.550	1.564	2.309
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:08	3251.000	769.400	66900.000	62310.000	62540.000	77.3%	298.200	304.000	298.600	1686.000
2	19:03:35	3374.000	758.100	68140.000	62210.000	63240.000	76.4%	306.500	303.700	302.800	2208.000
3	19:04:02	3375.000	745.800	67930.000	61660.000	63560.000	76.2%	310.400	311.900	302.900	2066.000
X		3333.000	757.800	112.756%	62060.000	105.192%	76.6%	101.674%	102.187%	100.470%	1986.000
S		71.070	11.800	n/a	351.200	n/a	0.6%	n/a	n/a	n/a	269.900
%RSD		2.132	1.558	0.980	0.566	0.828	0.8	2.050	1.523	0.812	13.590
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:08	62490.000	294.400	62070.000	61090.000	288.500	285.900	285.100	278.300	287.800	294.100
2	19:03:35	63660.000	299.200	63040.000	62660.000	297.900	288.000	297.600	278.000	285.900	295.000
3	19:04:02	63060.000	302.000	63450.000	63710.000	298.300	291.500	287.300	286.200	293.000	296.100
X		63070.000	99.498%	62850.000	104.140%	98.305%	96.153%	290.000	280.800	96.304%	98.360%
S		585.600	n/a	710.900	n/a	n/a	n/a	6.723	4.633	n/a	n/a
%RSD		0.928	1.288	1.131	2.112	1.876	0.971	2.318	1.650	1.258	0.331
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:08	294.400	289.500	305.400	301.300	9.752	9.463	1446.000	313.300	6.419	303.500
2	19:03:35	291.300	292.300	303.200	298.800	10.950	9.534	1406.000	299.400	0.142	305.800
3	19:04:02	286.100	291.600	301.000	294.000	10.150	9.979	1371.000	298.100	2.807	301.800
X		290.600	291.100	101.072%	298.000	10.290	9.659	1408.000	101.194%	3.123	101.223%
S		4.186	1.480	n/a	3.755	0.612	0.280	37.580	n/a	3.150	n/a
%RSD		1.440	0.508	0.716	1.260	5.953	2.895	2.669	2.768	100.900	0.655
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:08	78.4%	315.900	316.500	315.900	311.400	290.700	292.100	304.200	304.900	77.8%
2	19:03:35	78.7%	312.400	321.300	323.800	293.800	288.400	289.400	297.800	300.600	79.3%
3	19:04:02	80.1%	325.000	321.100	325.500	299.700	289.500	296.800	305.700	308.600	78.8%
X		79.1%	105.919%	106.536%	321.700	301.700	96.512%	292.700	302.500	101.578%	78.6%
S		0.9%	n/a	n/a	5.118	8.962	n/a	3.761	4.200	n/a	0.8%
%RSD		1.2	2.059	0.855	1.591	2.971	0.404	1.285	1.388	1.311	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:08	310.000	306.200	312.800	301.700	318.100	299.300	83.4%	316.000	312.400	314.800
2	19:03:35	304.900	305.200	308.900	305.400	310.800	303.200	83.5%	308.000	313.800	317.600
3	19:04:02	306.200	309.500	313.600	300.100	310.300	310.100	84.7%	308.800	312.600	311.900
X		102.340%	102.317%	311.800	100.793%	104.359%	101.395%	83.9%	310.900	104.310%	104.924%
S		n/a	n/a	2.548	n/a	n/a	n/a	0.7%	4.408	n/a	n/a
%RSD		0.853	0.745	0.817	0.894	1.396	1.792	0.9	1.418	0.243	0.905
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:03:08	314.400	319.200	85.3%							
2	19:03:35	316.500	321.200	87.3%							
3	19:04:02	315.000	319.500	89.6%							
X		105.103%	106.652%	87.4%							
S		n/a	n/a	2.2%							
%RSD		0.347	0.335	2.5							

CCB IM9968-01 5/11/2020 19:08:35 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:02	83.5%	0.003	6.727	6.524	28.030	4.373	3.042	2.977	2.916	0.122
2	19:09:29	83.6%	0.003	5.199	5.685	30.510	3.883	3.108	2.554	3.075	0.128
3	19:09:56	82.2%	0.004	5.764	5.826	30.390	3.469	2.713	2.940	2.367	0.199
X		83.1%	0.004	5.897	6.012	29.640	3.908	2.955	2.824	2.786	0.150
S		0.8%	0.000	0.772	0.449	1.399	0.452	0.211	0.234	0.372	0.043
%RSD		0.9	5.707	13.100	7.475	4.718	11.580	7.160	8.300	13.340	28.650
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:02	3.277	555.000	20.020	2.533	4.432	79.4%	-0.011	0.027	0.029	12.520
2	19:09:29	2.651	551.300	18.980	3.768	3.747	80.4%	-0.070	0.047	0.001	-4.641
3	19:09:56	2.778	548.300	16.730	1.209	3.543	80.0%	0.076	0.047	0.012	-2.576
X		2.902	551.500	18.580	2.504	3.907	79.9%	-0.002	0.040	0.014	1.768
S		0.331	3.354	1.679	1.280	0.466	0.5%	0.074	0.011	0.014	9.370
%RSD		11.400	0.608	9.037	51.120	11.920	0.7	4279.000	27.920	99.890	529.800
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:02	2.013	0.037	3.394	7.384	-0.002	0.030	0.730	-0.051	0.020	-0.032
2	19:09:29	0.903	0.036	3.795	6.465	0.007	0.003	0.058	-0.023	0.018	-0.002
3	19:09:56	1.577	0.034	3.165	6.329	-0.003	0.003	0.241	-0.030	-0.036	-0.012
X		1.497	0.036	3.452	6.726	0.000	0.012	0.343	-0.035	0.001	-0.015
S		0.559	0.002	0.319	0.574	0.005	0.015	0.347	0.015	0.032	0.015
%RSD		37.350	4.902	9.244	8.535	1074.000	124.700	101.200	43.010	5477.000	102.300
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:02	-0.105	-0.027	-0.228	0.368	4.766	3.899	-3.562	-0.828	2.516	0.016
2	19:09:29	-0.041	-0.013	-0.151	0.666	4.324	5.417	-0.202	-0.075	-0.082	0.008
3	19:09:56	-0.105	0.015	-0.093	0.740	4.611	4.616	-0.949	-0.200	-0.154	0.016
X		-0.084	-0.008	-0.157	0.591	4.567	4.644	-1.571	-0.368	0.760	0.014
S		0.037	0.022	0.068	0.197	0.224	0.760	1.764	0.404	1.521	0.004
%RSD		44.580	264.600	43.050	33.320	4.911	16.360	112.300	109.700	200.200	32.230
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:02	83.3%	0.409	0.485	0.363	1.420	0.017	0.007	0.034	0.014	84.1%
2	19:09:29	82.4%	0.424	0.393	0.472	2.072	0.017	0.010	0.010	0.029	84.5%
3	19:09:56	84.0%	0.306	0.269	0.244	1.040	0.011	0.001	-0.001	0.010	83.4%
X		83.3%	0.380	0.382	0.360	1.511	0.015	0.006	0.014	0.017	84.0%
S		0.8%	0.064	0.108	0.114	0.522	0.003	0.004	0.018	0.010	0.6%
%RSD		0.9	16.890	28.290	31.780	34.530	21.090	71.920	125.100	56.440	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:02	0.063	0.128	0.376	0.426	0.030	0.007	87.1%	0.012	0.008	0.034
2	19:09:29	0.074	0.109	0.374	0.399	0.064	0.007	86.9%	0.006	0.009	0.027
3	19:09:56	0.046	0.073	0.437	0.424	0.048	-0.003	87.4%	0.002	0.008	0.019
X		0.061	0.103	0.396	0.416	0.047	0.004	87.1%	0.006	0.008	0.027
S		0.014	0.028	0.036	0.015	0.017	0.006	0.3%	0.005	0.001	0.008
%RSD		22.520	27.200	9.153	3.561	36.370	150.900	0.3	77.380	6.565	28.180
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:09:02	0.031	0.026	96.1%							
2	19:09:29	0.023	0.021	96.7%							
3	19:09:56	0.051	0.030	97.4%							
X		0.035	0.025	96.7%							
S		0.014	0.005	0.6%							
%RSD		40.490	17.770	0.7							

VE05075-001 5/11/2020 19:14:26

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:52	79.9%	-0.018	90.530	89.240	41.940	48810.000	2942.000	2959.000	3246.000	41.530
2	19:15:19	79.7%	-0.018	91.230	90.260	47.650	50030.000	3074.000	3005.000	3236.000	42.300
3	19:15:47	77.7%	0.051	94.420	94.540	42.650	48140.000	3007.000	2979.000	3180.000	40.570
X		79.1%	0.005	92.060	91.350	44.080	48990.000	3008.000	2981.000	3221.000	41.470
S		1.2%	0.039	2.073	2.815	3.113	957.500	66.080	23.090	35.120	0.869
%RSD		1.5	782.300	2.252	3.082	7.061	1.954	2.197	0.775	1.090	2.096
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:52	4330.000	63730.000	9625.000	18020.000	17640.000	75.9%	4.587	0.111	0.543	3263.000
2	19:15:19	4484.000	65180.000	9677.000	18740.000	18200.000	73.9%	4.616	-0.032	0.490	3991.000
3	19:15:47	4350.000	64130.000	9550.000	18330.000	17810.000	75.8%	4.346	-0.017	0.626	4259.000
X		4388.000	64350.000	9617.000	18360.000	17880.000	75.2%	4.516	0.021	0.553	3837.000
S		83.670	749.400	63.790	358.000	287.400	1.1%	0.148	0.079	0.069	515.500
%RSD		1.907	1.165	0.663	1.950	1.607	1.5	3.283	378.900	12.390	13.430
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:52	96.570	43.700	91.570	124.900	0.744	1.515	1.807	2.223	2.093	27.880
2	19:15:19	94.590	44.400	94.090	133.500	0.776	1.782	2.329	2.178	2.203	27.570
3	19:15:47	93.830	43.200	91.530	123.500	0.811	1.729	0.995	2.081	2.113	25.680
X		94.990	43.770	92.400	127.300	0.777	1.675	1.710	2.160	2.136	27.040
S		1.414	0.603	1.466	5.390	0.034	0.142	0.672	0.073	0.059	1.194
%RSD		1.489	1.378	1.587	4.234	4.341	8.455	39.320	3.357	2.741	4.416
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:52	23.240	27.240	0.079	1.465	33.560	31.610	2.860	0.555	2.201	49.940
2	19:15:19	25.670	26.040	1.109	0.538	31.120	30.370	0.112	0.039	-1.937	50.690
3	19:15:47	27.710	26.470	0.133	0.744	35.370	31.790	-2.733	-0.557	-1.961	50.200
X		25.540	26.580	0.440	0.916	33.350	31.260	0.080	0.012	-0.565	50.280
S		2.234	0.612	0.580	0.487	2.134	0.775	2.797	0.556	2.396	0.383
%RSD		8.746	2.303	131.700	53.200	6.397	2.480	3504.000	4555.000	423.700	0.762
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:52	79.1%	0.301	0.191	0.173	2.143	0.021	0.001	0.037	0.037	79.1%
2	19:15:19	78.9%	0.230	0.358	0.183	1.452	0.023	0.014	0.037	0.129	79.6%
3	19:15:47	79.3%	0.181	0.295	0.122	0.916	0.012	0.014	0.012	0.035	79.8%
X		79.1%	0.238	0.282	0.159	1.504	0.019	0.010	0.029	0.067	79.5%
S		0.2%	0.060	0.085	0.033	0.615	0.006	0.007	0.014	0.054	0.3%
%RSD		0.3	25.380	30.070	20.540	40.880	32.980	73.410	50.290	80.490	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:52	7.863	12.030	0.417	0.419	15.580	15.940	84.2%	0.019	0.025	0.232
2	19:15:19	8.223	11.630	0.536	0.426	14.910	15.460	85.4%	0.033	0.012	0.233
3	19:15:47	8.148	11.980	0.515	0.285	16.170	15.010	86.3%	0.017	0.012	0.264
X		8.078	11.880	0.489	0.377	15.550	15.470	85.3%	0.023	0.016	0.243
S		0.190	0.219	0.063	0.080	0.628	0.462	1.1%	0.009	0.007	0.018
%RSD		2.356	1.844	12.940	21.150	4.040	2.988	1.2	38.430	43.830	7.350
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:14:52	0.207	0.226	90.0%							
2	19:15:19	0.195	0.211	91.2%							
3	19:15:47	0.233	0.227	92.3%							
X		0.212	0.222	91.2%							
S		0.019	0.009	1.1%							
%RSD		9.077	3.987	1.3							

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5/11/2020 19:20:17

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:20:44	79.8%	0.060	95.550	92.200	206.600	55110.000	3095.000	3051.000	3371.000	1739.000
2	19:21:10	81.3%	0.004	91.000	88.050	203.300	53900.000	3002.000	3037.000	3356.000	1760.000
3	19:21:38	79.3%	0.083	89.440	89.290	200.900	53810.000	3021.000	3051.000	3303.000	1729.000
X		80.2%	0.049	92.000	89.850	203.600	54270.000	3039.000	3046.000	3343.000	1742.000
S		1.0%	0.040	3.176	2.129	2.899	730.500	49.140	8.205	35.950	15.950
%RSD		1.3	82.820	3.452	2.369	1.424	1.346	1.617	0.269	1.075	0.915
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:20:44	4849.000	61420.000	10400.000	13510.000	12840.000	75.5%	20.020	1.617	3.725	4423.000
2	19:21:10	4786.000	61040.000	10390.000	13030.000	12940.000	75.5%	19.650	2.130	3.769	3985.000
3	19:21:38	4885.000	62580.000	10390.000	13320.000	12840.000	74.9%	19.890	1.702	4.020	4277.000
X		4840.000	61680.000	10400.000	13290.000	12880.000	75.3%	19.850	1.816	3.838	4228.000
S		50.180	803.000	6.211	244.800	54.370	0.3%	0.188	0.275	0.159	223.100
%RSD		1.037	1.302	0.060	1.843	0.422	0.4	0.945	15.140	4.145	5.277
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:20:44	1639.000	69.200	1582.000	1618.000	1.093	2.948	2.135	35.180	36.170	123.800
2	19:21:10	1610.000	70.760	1589.000	1579.000	1.081	2.679	2.828	35.010	36.130	125.700
3	19:21:38	1619.000	70.190	1587.000	1661.000	1.016	3.128	2.856	34.540	35.990	126.100
X		1623.000	70.050	1586.000	1619.000	1.063	2.918	2.606	34.910	36.100	125.200
S		14.840	0.792	3.829	41.080	0.041	0.226	0.408	0.334	0.097	1.257
%RSD		0.914	1.131	0.241	2.537	3.886	7.736	15.670	0.957	0.268	1.004
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:20:44	114.100	121.000	0.040	-0.154	56.310	53.890	0.732	0.149	0.787	51.250
2	19:21:10	116.100	121.200	0.726	0.663	53.700	53.230	-1.380	-0.341	2.126	49.600
3	19:21:38	120.800	123.500	0.212	1.457	52.530	61.860	-0.654	-0.104	-1.967	51.340
X		117.000	121.900	0.326	0.655	54.180	56.330	-0.434	-0.099	0.315	50.730
S		3.461	1.381	0.357	0.805	1.931	4.802	1.073	0.245	2.087	0.981
%RSD		2.958	1.133	109.600	123.000	3.564	8.526	247.100	248.500	662.100	1.933
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:20:44	79.7%	1.264	1.192	1.090	1.068	0.140	0.150	0.224	0.348	78.3%
2	19:21:10	80.2%	1.021	1.088	1.214	1.343	0.175	0.189	0.147	0.183	78.8%
3	19:21:38	79.7%	1.143	1.163	1.041	2.135	0.181	0.185	0.298	0.306	79.0%
X		79.9%	1.143	1.148	1.115	1.515	0.165	0.175	0.223	0.279	78.7%
S		0.3%	0.122	0.054	0.089	0.554	0.022	0.022	0.076	0.086	0.4%
%RSD		0.4	10.640	4.689	8.008	36.540	13.170	12.320	33.950	30.820	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:20:44	13.240	17.930	0.651	0.601	43.300	42.470	84.3%	0.040	0.032	2.911
2	19:21:10	12.840	18.530	0.618	0.503	43.810	41.190	86.0%	0.025	0.032	2.905
3	19:21:38	13.140	18.820	0.793	0.547	44.360	42.610	86.5%	0.025	0.041	2.955
X		13.070	18.430	0.687	0.550	43.820	42.090	85.6%	0.030	0.035	2.924
S		0.208	0.449	0.093	0.049	0.528	0.783	1.1%	0.008	0.005	0.027
%RSD		1.592	2.439	13.510	8.909	1.204	1.860	1.3	26.980	14.610	0.931
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:20:44	2.744	2.794	98.5%							
2	19:21:10	2.686	2.823	100.6%							
3	19:21:38	2.718	2.841	100.7%							
X		2.716	2.819	99.9%							
S		0.029	0.024	1.2%							
%RSD		1.070	0.843	1.2							

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5/11/2020 19:26:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:35	79.0%	0.016	84.540	83.980	145.800	51150.000	2901.000	2928.000	3222.000	544.500
2	19:27:02	80.1%	0.015	90.000	86.470	152.600	51420.000	2918.000	2915.000	3274.000	542.400
3	19:27:29	79.7%	0.016	89.820	88.460	152.800	52950.000	3026.000	2988.000	3300.000	538.200
X		79.6%	0.016	88.120	86.300	150.400	51840.000	2948.000	2944.000	3265.000	541.700
S		0.6%	0.000	3.097	2.248	3.992	970.500	67.450	39.050	39.820	3.199
%RSD		0.7	1.601	3.515	2.604	2.654	1.872	2.288	1.327	1.219	0.591
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:35	4589.000	63060.000	10270.000	13050.000	12600.000	75.4%	11.440	0.665	1.169	4664.000
2	19:27:02	4607.000	64710.000	10230.000	12970.000	12840.000	74.2%	13.140	1.251	1.266	4364.000
3	19:27:29	4692.000	64910.000	10310.000	12860.000	12720.000	73.4%	11.500	0.745	1.362	4607.000
X		4629.000	64230.000	10270.000	12960.000	12720.000	74.4%	12.030	0.887	1.266	4545.000
S		55.200	1015.000	38.890	93.550	120.400	1.0%	0.966	0.318	0.096	159.500
%RSD		1.192	1.581	0.379	0.722	0.947	1.4	8.030	35.830	7.623	3.510
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:35	1207.000	69.540	1170.000	1221.000	0.966	2.162	3.083	17.410	17.930	51.950
2	19:27:02	1211.000	71.170	1178.000	1230.000	0.896	2.367	1.867	17.760	18.130	52.930
3	19:27:29	1236.000	71.030	1191.000	1265.000	0.872	1.775	2.285	17.900	18.640	53.430
X		1218.000	70.580	1180.000	1239.000	0.911	2.102	2.411	17.690	18.230	52.770
S		15.500	0.901	10.510	23.360	0.049	0.301	0.618	0.253	0.365	0.752
%RSD		1.272	1.277	0.891	1.886	5.354	14.320	25.620	1.428	2.001	1.425
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:35	49.670	51.160	0.162	0.238	55.320	57.130	-4.841	-1.064	0.730	49.370
2	19:27:02	47.450	52.740	1.342	0.370	59.470	55.640	-0.559	-0.133	-0.517	51.370
3	19:27:29	50.100	51.400	0.465	1.200	57.410	58.330	-0.596	-0.067	-3.333	50.150
X		49.070	51.770	0.656	0.603	57.400	57.030	-1.999	-0.421	-1.040	50.300
S		1.426	0.855	0.613	0.521	2.073	1.347	2.461	0.558	2.081	1.012
%RSD		2.907	1.651	93.380	86.560	3.612	2.361	123.100	132.400	200.100	2.011
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:35	80.7%	0.402	0.545	0.351	1.855	0.094	0.068	0.098	0.095	79.7%
2	19:27:02	78.3%	0.496	0.443	0.357	2.151	0.068	0.063	0.112	0.139	79.0%
3	19:27:29	79.1%	0.296	0.731	0.325	1.899	0.057	0.091	0.239	0.120	78.5%
X		79.3%	0.398	0.573	0.344	1.968	0.073	0.074	0.150	0.118	79.0%
S		1.2%	0.100	0.146	0.017	0.159	0.019	0.015	0.078	0.022	0.6%
%RSD		1.5	25.040	25.510	4.942	8.100	26.230	20.150	51.870	18.840	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:26:35	17.030	24.340	0.375	0.335	27.990	27.130	85.6%	0.016	0.010	0.999
2	19:27:02	16.870	24.510	0.444	0.341	27.830	25.130	85.3%	0.008	0.015	0.915
3	19:27:29	17.520	24.390	0.438	0.409	28.630	26.210	86.8%	0.012	0.019	0.947
X		17.140	24.410	0.419	0.362	28.150	26.160	85.9%	0.012	0.015	0.954
S		0.343	0.086	0.038	0.041	0.422	0.999	0.8%	0.004	0.005	0.042
%RSD		1.999	0.353	9.108	11.320	1.498	3.820	0.9	33.150	33.000	4.394
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:26:35	0.815	0.888	94.0%							
2	19:27:02	0.881	0.915	94.3%							
3	19:27:29	0.942	0.906	95.9%							
X		0.879	0.903	94.7%							
S		0.063	0.014	1.0%							
%RSD		7.209	1.495	1.1							

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5/11/2020 19:31:58

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:25	82.6%	0.186	30.000	28.520	414.600	10000.000	1577.000	1527.000	1718.000	TM 5413.000
2	19:32:52	83.7%	0.120	29.450	29.420	401.000	10060.000	1577.000	1586.000	1767.000	TM 5452.000
3	19:33:19	80.8%	0.245	29.310	28.830	420.400	10040.000	1566.000	1541.000	1740.000	TM 5501.000
X		82.4%	0.183	29.590	28.920	412.000	10030.000	1573.000	1551.000	1741.000	TM 5455.000
S		1.5%	0.063	0.365	0.455	9.963	26.880	6.378	30.530	24.550	TM 44.150
%RSD		1.8	34.210	1.235	1.571	2.418	0.268	0.405	1.968	1.410	TM 0.809
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:25	2670.000	12380.000	4455.000	7348.000	7262.000	78.7%	31.150	6.551	6.792	916.900
2	19:32:52	2748.000	12390.000	4414.000	7450.000	7417.000	76.6%	32.610	6.813	6.706	943.000
3	19:33:19	2712.000	12390.000	4484.000	7871.000	7396.000	77.6%	32.270	6.932	6.766	848.900
X		2710.000	12380.000	4451.000	7556.000	7358.000	77.7%	32.010	6.765	6.755	903.000
S		39.160	6.327	34.840	277.000	84.390	1.0%	0.761	0.195	0.044	48.570
%RSD		1.445	0.051	0.783	3.665	1.147	1.3	2.378	2.879	0.655	5.379
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:25	6927.000	151.800	6625.000	6929.000	1.585	6.200	6.300	127.000	136.200	258.700
2	19:32:52	7123.000	156.300	6857.000	6977.000	1.505	6.058	5.750	127.700	134.400	264.600
3	19:33:19	7005.000	151.000	6757.000	6908.000	1.487	5.825	5.479	125.100	132.600	257.400
X		7019.000	153.000	6746.000	6938.000	1.526	6.028	5.843	126.600	134.400	260.200
S		98.430	2.861	116.200	35.260	0.052	0.189	0.418	1.340	1.805	3.803
%RSD		1.402	1.870	1.722	0.508	3.433	3.139	7.159	1.058	1.343	1.461
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:25	242.100	243.800	1.944	0.821	23.340	20.780	2.882	0.611	3.004	28.840
2	19:32:52	239.900	250.500	2.075	0.640	19.820	24.220	3.651	0.875	-0.815	29.900
3	19:33:19	242.600	241.900	1.833	0.812	20.760	20.340	3.483	0.801	0.398	29.640
X		241.500	245.400	1.951	0.757	21.300	21.780	3.339	0.762	0.862	29.460
S		1.430	4.538	0.121	0.102	1.821	2.127	0.404	0.136	1.951	0.552
%RSD		0.592	1.849	6.207	13.470	8.549	9.764	12.100	17.830	226.300	1.874
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:25	85.6%	1.361	1.292	1.183	1.428	0.868	0.803	0.603	0.516	81.9%
2	19:32:52	84.8%	1.511	1.348	1.089	0.946	0.873	0.836	0.588	0.562	80.6%
3	19:33:19	86.4%	1.453	1.328	1.041	1.544	0.684	0.965	0.587	0.639	82.4%
X		85.6%	1.442	1.323	1.104	1.306	0.809	0.868	0.593	0.573	81.6%
S		0.8%	0.075	0.028	0.073	0.317	0.108	0.086	0.009	0.062	0.9%
%RSD		0.9	5.229	2.134	6.572	24.300	13.320	9.900	1.457	10.820	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:25	9.102	13.700	0.580	0.679	115.600	114.600	86.3%	0.060	0.086	9.187
2	19:32:52	9.691	13.290	0.589	0.632	120.100	115.900	86.4%	0.077	0.080	8.907
3	19:33:19	9.866	12.920	0.484	0.571	113.000	115.500	86.3%	0.050	0.080	9.110
X		9.553	13.300	0.551	0.627	116.200	115.400	86.3%	0.063	0.082	9.068
S		0.400	0.393	0.058	0.054	3.625	0.671	0.1%	0.014	0.003	0.145
%RSD		4.190	2.952	10.540	8.634	3.118	0.582	0.1	21.860	4.165	1.595
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:32:25	8.484	8.664	113.0%							
2	19:32:52	8.404	8.640	117.8%							
3	19:33:19	8.480	8.714	120.4%							
X		8.456	8.673	117.1%							
S		0.045	0.037	3.7%							
%RSD		0.537	0.431	3.2							

VE05075-006

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:14	79.4%	0.038	166.800	163.500	252.200	28790.000	3636.000	3558.000	4037.000	724.400
2	19:38:41	79.7%	0.038	182.400	177.100	269.900	28760.000	3733.000	3659.000	3977.000	707.000
3	19:39:08	82.2%	0.058	180.300	175.300	260.300	29420.000	3655.000	3660.000	3924.000	695.800
X		80.5%	0.044	176.500	172.000	260.800	28990.000	3674.000	3626.000	3979.000	709.000
S		1.5%	0.011	8.424	7.370	8.828	372.100	51.730	58.150	56.440	14.430
%RSD		1.9	25.660	4.773	4.285	3.385	1.284	1.408	1.604	1.418	2.035
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:14	4000.000	63290.000	9965.000	17730.000	17620.000	75.3%	24.750	0.730	1.974	3772.000
2	19:38:41	4099.000	65810.000	9964.000	18950.000	18170.000	73.6%	22.230	0.953	2.049	3685.000
3	19:39:08	4052.000	65390.000	9827.000	17760.000	17610.000	74.2%	25.680	1.629	1.912	3409.000
X		4051.000	64830.000	9919.000	18150.000	17800.000	74.3%	24.220	1.104	1.979	3622.000
S		49.380	1349.000	79.510	693.200	320.200	0.9%	1.787	0.468	0.069	189.400
%RSD		1.219	2.081	0.802	3.820	1.798	1.2	7.380	42.420	3.469	5.230
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:14	1746.000	110.200	1699.000	1759.000	1.748	2.156	1.953	31.340	31.530	115.800
2	19:38:41	1780.000	111.300	1739.000	1804.000	1.947	2.445	2.989	30.700	33.960	120.600
3	19:39:08	1818.000	111.300	1733.000	1782.000	1.841	2.577	1.933	30.890	32.260	117.100
X		1781.000	110.900	1724.000	1782.000	1.845	2.393	2.291	30.980	32.580	117.800
S		35.600	0.614	21.380	22.550	0.100	0.215	0.604	0.331	1.248	2.521
%RSD		1.999	0.554	1.240	1.266	5.394	8.984	26.370	1.070	3.831	2.140
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:14	107.500	113.900	0.602	0.765	40.040	42.170	2.027	0.332	5.490	60.090
2	19:38:41	117.000	113.800	0.871	0.487	45.710	43.530	-0.013	-0.018	0.738	59.050
3	19:39:08	106.700	110.300	0.370	0.851	46.280	45.720	5.546	1.131	2.133	60.580
X		110.400	112.700	0.614	0.701	44.010	43.810	2.520	0.481	2.787	59.910
S		5.742	2.014	0.251	0.190	3.450	1.789	2.812	0.589	2.442	0.782
%RSD		5.200	1.787	40.790	27.090	7.840	4.084	111.600	122.300	87.640	1.306
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:14	80.8%	0.302	0.614	0.332	1.807	0.536	0.446	0.225	0.299	79.0%
2	19:38:41	80.9%	0.261	0.501	0.280	1.248	0.584	0.560	0.275	0.144	79.4%
3	19:39:08	80.4%	0.535	0.512	0.373	3.318	0.615	0.511	0.136	0.221	79.8%
X		80.7%	0.366	0.542	0.328	2.124	0.578	0.505	0.212	0.221	79.4%
S		0.3%	0.148	0.063	0.047	1.071	0.040	0.057	0.070	0.078	0.4%
%RSD		0.3	40.330	11.520	14.180	50.420	6.916	11.310	33.280	35.160	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:14	7.921	11.140	0.456	0.578	49.650	49.500	84.8%	0.066	0.080	4.941
2	19:38:41	8.258	11.130	0.511	0.572	51.010	48.390	85.7%	0.083	0.088	5.021
3	19:39:08	7.826	11.290	0.435	0.446	50.120	49.380	86.7%	0.090	0.059	5.119
X		8.002	11.190	0.467	0.532	50.260	49.090	85.7%	0.080	0.076	5.027
S		0.227	0.088	0.039	0.074	0.692	0.613	0.9%	0.013	0.015	0.089
%RSD		2.838	0.785	8.406	13.960	1.377	1.249	1.1	15.650	19.900	1.772
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:38:14	4.793	4.878	95.6%							
2	19:38:41	4.819	4.897	95.6%							
3	19:39:08	4.954	4.983	96.3%							
X		4.855	4.920	95.8%							
S		0.086	0.056	0.4%							
%RSD		1.779	1.138	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:05	87.7%	-0.018	4.252	4.058	21.680	7.363	0.439	0.285	0.148	1.066
2	19:44:32	86.0%	-0.018	3.536	4.011	28.580	7.389	0.474	0.652	0.349	1.027
3	19:44:59	84.8%	-0.007	3.911	3.042	21.950	7.516	0.350	0.356	0.451	1.062
X		86.2%	-0.014	3.900	3.704	24.070	7.423	0.421	0.431	0.316	1.052
S		1.5%	0.006	0.358	0.573	3.907	0.082	0.064	0.195	0.154	0.021
%RSD		1.7	42.230	9.180	15.480	16.240	1.108	15.230	45.240	48.760	2.044
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:05	51.060	66810.000	15.410	-0.096	3.722	80.8%	-0.070	-0.045	0.338	4200.000
2	19:44:32	4.976	67790.000	15.840	3.757	3.356	80.6%	0.046	0.021	0.286	4195.000
3	19:44:59	5.019	66920.000	14.850	3.770	3.064	80.4%	0.046	-0.220	0.323	4534.000
X		20.350	67170.000	15.360	2.477	3.381	80.6%	0.007	-0.082	0.316	4309.000
S		26.590	538.800	0.497	2.228	0.330	0.2%	0.067	0.125	0.027	194.200
%RSD		130.700	0.802	3.236	89.940	9.759	0.3	905.200	152.400	8.513	4.506
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:05	1.848	0.011	6.621	0.437	-0.014	0.038	0.524	-0.005	0.111	0.539
2	19:44:32	0.861	0.022	5.908	-1.244	-0.012	0.038	-0.357	0.038	-0.052	0.612
3	19:44:59	1.827	0.005	6.927	1.247	-0.014	0.073	0.177	0.020	-0.044	0.563
X		1.512	0.013	6.486	0.147	-0.013	0.050	0.115	0.018	0.005	0.571
S		0.564	0.009	0.523	1.271	0.001	0.020	0.444	0.021	0.092	0.037
%RSD		37.280	67.890	8.064	864.500	8.079	40.680	386.100	119.800	1941.000	6.536
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:05	0.540	0.604	-0.051	0.497	8.847	8.830	-2.870	-0.648	0.589	0.007
2	19:44:32	0.535	0.670	-0.146	0.348	9.805	9.419	-1.600	-0.299	-2.762	0.002
3	19:44:59	0.535	0.556	-0.535	0.344	9.862	10.190	-1.609	-0.387	1.152	0.004
X		0.537	0.610	-0.244	0.396	9.505	9.478	-2.026	-0.445	-0.340	0.004
S		0.003	0.057	0.256	0.088	0.570	0.680	0.731	0.182	2.116	0.002
%RSD		0.526	9.381	105.000	22.100	5.998	7.172	36.070	40.830	621.700	56.330
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:05	82.2%	-0.199	-0.251	-0.349	-0.697	0.003	0.007	0.001	-0.004	84.5%
2	19:44:32	83.7%	-0.262	-0.251	-0.292	0.736	0.000	0.001	0.001	0.001	84.5%
3	19:44:59	83.9%	-0.227	-0.237	-0.298	0.079	0.000	-0.002	0.001	-0.007	85.0%
X		83.3%	-0.230	-0.246	-0.313	0.039	0.001	0.002	0.001	-0.003	84.7%
S		0.9%	0.032	0.008	0.032	0.717	0.002	0.004	0.000	0.004	0.3%
%RSD		1.1	13.820	3.341	10.090	1836.000	173.200	197.800	10.090	128.900	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:05	0.096	0.249	-0.002	-0.022	0.030	0.007	87.9%	-0.002	-0.001	-0.003
2	19:44:32	0.125	0.225	-0.003	0.000	-0.005	0.007	88.9%	-0.004	0.007	-0.008
3	19:44:59	0.062	0.159	-0.010	0.018	-0.005	0.016	89.2%	-0.006	0.007	-0.011
X		0.094	0.211	-0.005	-0.001	0.007	0.010	88.7%	-0.004	0.004	-0.007
S		0.031	0.047	0.004	0.020	0.020	0.005	0.7%	0.002	0.005	0.004
%RSD		33.210	22.050	87.410	2001.000	300.200	54.600	0.8	50.290	116.200	51.330
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:44:05	0.000	-0.005	96.6%							
2	19:44:32	0.003	-0.001	95.7%							
3	19:44:59	-0.005	-0.007	96.7%							
X		-0.001	-0.005	96.3%							
S		0.004	0.003	0.6%							
%RSD		824.400	63.160	0.6							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:49:56	81.5%	100.300	106.900	101.200	33.300	1089.000	1076.000	1002.000	1038.000	100.900
2	19:50:23	81.1%	101.300	105.700	106.500	44.080	1128.000	1100.000	1041.000	1043.000	100.100
3	19:50:49	81.7%	102.900	111.300	103.200	22.950	1086.000	1051.000	1007.000	1069.000	100.800
X		81.4%	101.500	108.000	103.600	33.450	1101.000	1076.000	1017.000	1050.000	100.600
S		0.3%	1.318	2.969	2.661	10.560	23.400	24.360	21.740	16.360	0.446
%RSD		0.3	1.298	2.750	2.568	31.580	2.126	2.265	2.139	1.559	0.443
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:49:56	999.800	64860.000	1100.000	1038.000	1014.000	78.3%	100.300	98.340	98.650	4593.000
2	19:50:23	1009.000	64920.000	1082.000	1077.000	1004.000	76.9%	98.560	98.130	99.380	3885.000
3	19:50:49	1027.000	66010.000	1110.000	1011.000	1000.000	76.8%	101.900	98.240	97.630	4155.000
X		1012.000	65270.000	1097.000	1042.000	1006.000	77.3%	100.200	98.240	98.550	4211.000
S		13.620	647.300	14.290	33.190	7.315	0.8%	1.647	0.107	0.880	357.200
%RSD		1.346	0.992	1.302	3.184	0.727	1.1	1.644	0.109	0.893	8.483
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:49:56	1110.000	99.860	1027.000	1044.000	98.160	98.180	102.000	99.140	100.000	103.100
2	19:50:23	1109.000	98.960	1091.000	1074.000	98.240	98.930	102.300	100.600	103.600	103.700
3	19:50:49	1128.000	100.400	1094.000	1062.000	100.600	100.500	96.140	99.270	103.400	103.200
X		1115.000	99.750	1071.000	1060.000	99.000	99.210	100.100	99.660	102.300	103.300
S		10.850	0.744	37.640	14.780	1.381	1.191	3.473	0.793	1.988	0.330
%RSD		0.973	0.746	3.515	1.395	1.395	1.201	3.467	0.796	1.943	0.319
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:49:56	102.200	102.400	104.800	99.090	7.185	7.048	488.000	104.400	-3.373	96.850
2	19:50:23	104.600	104.200	106.000	100.800	9.208	6.718	504.100	107.300	1.439	97.330
3	19:50:49	101.400	102.500	107.000	104.200	7.034	9.064	504.200	108.600	2.768	97.090
X		102.700	103.000	106.000	101.400	7.809	7.610	498.800	106.700	0.278	97.090
S		1.670	1.018	1.102	2.617	1.214	1.270	9.293	2.121	3.231	0.242
%RSD		1.626	0.988	1.040	2.581	15.550	16.690	1.863	1.987	1161.000	0.249
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:49:56	80.9%	96.890	99.160	99.600	105.400	98.020	100.300	101.200	101.600	81.2%
2	19:50:23	80.0%	101.000	99.260	100.500	107.000	99.530	101.000	102.500	100.800	80.5%
3	19:50:49	80.5%	99.340	100.600	102.200	107.900	100.400	100.800	102.900	101.700	79.9%
X		80.5%	99.080	99.680	100.800	106.800	99.320	100.700	102.200	101.400	80.5%
S		0.5%	2.068	0.814	1.306	1.286	1.207	0.330	0.921	0.445	0.6%
%RSD		0.6	2.088	0.817	1.296	1.204	1.215	0.327	0.901	0.439	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:49:56	101.100	101.000	100.500	99.450	102.800	97.860	85.8%	100.300	103.900	107.000
2	19:50:23	102.900	100.600	100.900	100.000	101.000	99.500	84.9%	100.600	104.500	108.500
3	19:50:49	102.300	100.300	102.400	99.530	102.200	101.900	85.5%	100.500	104.800	107.500
X		102.100	100.600	101.300	99.680	102.000	99.740	85.4%	100.500	104.400	107.700
S		0.913	0.349	0.989	0.321	0.905	2.010	0.4%	0.159	0.465	0.760
%RSD		0.895	0.347	0.977	0.322	0.887	2.015	0.5	0.158	0.446	0.706
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:49:56	106.000	107.200	92.5%							
2	19:50:23	107.300	108.400	93.1%							
3	19:50:49	107.000	107.500	94.0%							
X		106.700	107.700	93.2%							
S		0.692	0.639	0.7%							
%RSD		0.648	0.594	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:46	78.8%	-0.007	156.600	153.500	38.820	37770.000	2787.000	2767.000	3041.000	41.350
2	19:56:13	77.5%	0.017	160.500	155.700	36.790	39220.000	2900.000	2860.000	3125.000	41.360
3	19:56:40	76.5%	-0.018	159.600	165.100	43.980	37760.000	2908.000	2885.000	3052.000	40.850
X		77.6%	-0.003	158.900	158.100	39.860	38250.000	2865.000	2837.000	3073.000	41.180
S		1.2%	0.017	2.024	6.212	3.705	842.600	67.670	62.150	45.820	0.293
%RSD		1.5	677.500	1.274	3.930	9.295	2.203	2.362	2.190	1.491	0.712
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:46	5099.000	65190.000	9700.000	28560.000	28460.000	75.3%	8.784	0.661	0.573	4483.000
2	19:56:13	5120.000	66660.000	10000.000	29720.000	28710.000	72.9%	8.725	0.488	0.736	5167.000
3	19:56:40	5154.000	66860.000	10040.000	29520.000	28320.000	72.9%	8.531	0.668	0.661	5169.000
X		5124.000	66240.000	9913.000	29260.000	28490.000	73.7%	8.680	0.606	0.657	4940.000
S		27.590	911.300	184.900	620.700	200.200	1.4%	0.133	0.102	0.082	395.800
%RSD		0.538	1.376	1.865	2.121	0.703	1.9	1.527	16.840	12.440	8.013
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:46	87.570	20.010	87.350	141.800	0.374	1.183	1.132	4.471	4.685	28.010
2	19:56:13	92.950	21.390	92.090	155.100	0.320	1.471	1.264	4.613	4.473	28.600
3	19:56:40	94.250	21.230	90.510	148.900	0.366	1.184	1.329	4.438	4.930	28.080
X		91.590	20.880	89.980	148.600	0.353	1.279	1.242	4.507	4.696	28.230
S		3.540	0.752	2.412	6.672	0.029	0.166	0.100	0.093	0.228	0.324
%RSD		3.865	3.604	2.681	4.488	8.283	13.010	8.087	2.060	4.863	1.149
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:46	27.530	27.480	0.812	0.920	31.810	32.230	4.430	0.879	3.022	53.000
2	19:56:13	26.730	28.300	1.195	0.763	28.740	26.920	0.203	0.038	-0.482	52.810
3	19:56:40	27.820	25.080	0.152	0.078	30.650	29.900	-1.253	-0.263	-1.211	52.360
X		27.360	26.950	0.720	0.587	30.400	29.680	1.127	0.218	0.443	52.730
S		0.565	1.671	0.528	0.448	1.552	2.661	2.952	0.592	2.263	0.332
%RSD		2.064	6.199	73.320	76.270	5.104	8.965	262.000	271.500	510.800	0.630
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:46	77.7%	0.992	0.599	0.671	0.727	0.006	0.002	0.010	0.007	77.6%
2	19:56:13	77.7%	0.586	0.819	0.636	0.106	0.009	0.020	0.036	0.044	77.8%
3	19:56:40	78.3%	0.682	0.680	0.745	-0.623	0.018	0.005	0.035	0.025	78.8%
X		77.9%	0.753	0.699	0.684	0.070	0.011	0.009	0.027	0.025	78.1%
S		0.3%	0.212	0.112	0.056	0.676	0.006	0.010	0.015	0.018	0.6%
%RSD		0.4	28.130	15.940	8.120	966.300	55.950	114.600	54.020	73.100	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:46	0.187	0.227	0.395	0.343	14.750	14.470	83.0%	0.036	0.041	0.154
2	19:56:13	0.210	0.266	0.377	0.373	16.270	14.810	84.5%	0.044	0.048	0.156
3	19:56:40	0.184	0.353	0.408	0.370	14.680	14.000	83.5%	0.038	0.038	0.174
X		0.194	0.282	0.393	0.362	15.230	14.420	83.7%	0.039	0.042	0.162
S		0.015	0.065	0.015	0.017	0.898	0.408	0.8%	0.004	0.005	0.011
%RSD		7.627	22.890	3.923	4.599	5.896	2.832	0.9	10.380	12.820	6.758
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:55:46	0.169	0.164	88.7%							
2	19:56:13	0.229	0.171	89.7%							
3	19:56:40	0.156	0.157	90.5%							
X		0.185	0.164	89.6%							
S		0.039	0.007	0.9%							
%RSD		21.140	4.208	1.0							

VE07023-002

5/11/2020 20:01:09

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:36	80.2%	0.004	160.300	154.000	39.780	24090.000	2184.000	2207.000	2365.000	152.600
2	20:02:03	78.9%	-0.007	149.400	157.300	39.550	22860.000	2150.000	2157.000	2302.000	149.100
3	20:02:30	77.6%	0.016	167.100	162.800	58.070	23990.000	2231.000	2223.000	2344.000	150.400
X		78.9%	0.005	159.000	158.000	45.800	23640.000	2189.000	2195.000	2337.000	150.700
S		1.3%	0.012	8.954	4.456	10.630	684.300	40.840	34.390	32.250	1.755
%RSD		1.6	241.500	5.633	2.820	23.210	2.894	1.866	1.567	1.380	1.164
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:36	4382.000	65420.000	6022.000	59730.000	59980.000	74.0%	4.008	1.394	0.751	5181.000
2	20:02:03	4297.000	64820.000	5982.000	58310.000	58950.000	74.5%	2.849	1.521	0.769	4836.000
3	20:02:30	4356.000	66940.000	5987.000	59680.000	60000.000	72.5%	3.059	1.867	0.766	4767.000
X		4345.000	65730.000	5997.000	59240.000	59640.000	73.7%	3.306	1.594	0.762	4928.000
S		43.440	1094.000	21.710	807.200	603.700	1.0%	0.618	0.245	0.010	221.900
%RSD		1.000	1.664	0.362	1.362	1.012	1.4	18.680	15.380	1.254	4.503
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:36	202.800	20.380	202.400	312.000	0.803	1.780	1.939	6.610	7.382	16.690
2	20:02:03	197.200	19.780	202.600	297.600	0.724	1.842	1.664	6.995	7.709	16.130
3	20:02:30	201.500	20.250	204.300	314.500	0.716	1.797	2.586	6.981	7.674	16.780
X		200.500	20.140	203.100	308.000	0.747	1.806	2.063	6.862	7.588	16.530
S		2.941	0.318	1.030	9.107	0.048	0.032	0.474	0.218	0.180	0.350
%RSD		1.467	1.579	0.507	2.957	6.459	1.779	22.970	3.182	2.369	2.117
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:36	16.370	15.760	1.730	0.562	233.200	242.800	-3.377	-0.807	2.315	63.420
2	20:02:03	15.140	16.150	0.310	0.837	234.400	244.400	-1.293	-0.343	1.552	61.920
3	20:02:30	16.980	15.850	1.415	0.138	245.700	232.600	0.159	0.069	-2.619	61.670
X		16.170	15.920	1.152	0.512	237.800	239.900	-1.504	-0.360	0.416	62.330
S		0.940	0.203	0.746	0.352	6.883	6.406	1.777	0.438	2.656	0.945
%RSD		5.812	1.273	64.780	68.690	2.895	2.670	118.200	121.600	638.400	1.515
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:36	78.0%	22.780	22.200	22.300	4.110	0.021	0.023	-0.075	0.032	78.1%
2	20:02:03	78.7%	22.640	23.380	22.070	1.814	0.042	0.023	-0.049	0.007	78.5%
3	20:02:30	78.5%	22.460	23.640	22.340	3.721	0.030	0.023	-0.050	0.040	77.4%
X		78.4%	22.630	23.070	22.240	3.215	0.031	0.023	-0.058	0.026	78.0%
S		0.4%	0.164	0.767	0.144	1.229	0.010	0.000	0.015	0.017	0.6%
%RSD		0.5	0.723	3.326	0.648	38.230	33.550	0.763	25.720	65.820	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:36	0.393	0.397	0.588	0.514	14.460	14.090	83.0%	0.007	0.030	1.289
2	20:02:03	0.306	0.530	0.514	0.462	15.460	14.480	83.5%	0.005	0.014	1.260
3	20:02:30	0.255	0.303	0.571	0.532	15.640	14.670	84.6%	0.005	0.009	1.234
X		0.318	0.410	0.558	0.503	15.180	14.410	83.7%	0.006	0.018	1.261
S		0.070	0.114	0.039	0.036	0.634	0.295	0.8%	0.001	0.011	0.028
%RSD		22.010	27.740	6.928	7.251	4.179	2.047	1.0	20.880	61.170	2.197
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:01:36	1.233	1.258	89.9%							
2	20:02:03	1.160	1.191	90.2%							
3	20:02:30	1.134	1.170	89.5%							
X		1.176	1.206	89.9%							
S		0.051	0.046	0.4%							
%RSD		4.344	3.786	0.4							

VE07043-001

5/11/2020 20:07:02

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:29	77.1%	-0.006	36.330	37.760	128.500	<u>28510.000</u>	1257.000	1190.000	1291.000	193.000
2	20:07:56	75.1%	-0.006	41.110	39.730	144.900	<u>29340.000</u>	1269.000	1225.000	1280.000	195.500
3	20:08:24	76.8%	-0.018	40.690	37.000	132.400	<u>29180.000</u>	1223.000	1167.000	1273.000	199.200
X		76.4%	-0.010	39.380	38.160	135.300	<u>29010.000</u>	1250.000	1194.000	1281.000	195.900
S		1.1%	0.007	2.647	1.411	8.580	<u>441.500</u>	23.620	29.250	9.086	3.091
%RSD		1.4	67.240	6.723	3.696	6.343	<u>1.522</u>	1.890	2.449	0.709	1.578
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:29	<u>7205.000</u>	<u>61620.000</u>	2270.000	13670.000	13200.000	71.8%	117.000	-0.335	1.792	6632.000
2	20:07:56	<u>7302.000</u>	<u>62960.000</u>	2314.000	13530.000	12960.000	70.9%	117.800	0.678	2.056	5740.000
3	20:08:24	<u>7280.000</u>	<u>62190.000</u>	2278.000	13380.000	13130.000	70.7%	114.100	0.182	1.817	6288.000
X		<u>7262.000</u>	<u>62260.000</u>	2287.000	13520.000	13100.000	71.2%	116.300	0.175	1.888	6220.000
S		<u>50.620</u>	<u>672.900</u>	23.570	142.500	124.800	0.6%	1.964	0.506	0.145	450.200
%RSD		<u>0.697</u>	<u>1.081</u>	1.031	1.053	0.953	0.8	1.689	289.600	7.704	7.237
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:29	1760.000	20.540	<u>1715.000</u>	1758.000	0.156	7.353	7.190	3.685	3.846	153.600
2	20:07:56	1769.000	20.740	<u>1740.000</u>	1763.000	0.169	8.042	10.030	3.924	4.373	157.900
3	20:08:24	1772.000	20.220	<u>1720.000</u>	1763.000	0.180	8.037	8.052	3.793	4.603	157.400
X		1767.000	20.500	<u>1725.000</u>	1761.000	0.168	7.811	8.425	3.801	4.274	156.300
S		6.317	0.264	<u>13.410</u>	2.607	0.012	0.397	1.459	0.120	0.388	2.346
%RSD		0.357	1.288	<u>0.777</u>	0.148	7.022	5.079	17.310	3.146	9.076	1.501
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:29	152.300	154.000	2.565	-0.096	51.120	51.540	0.375	0.133	-3.273	36.620
2	20:07:56	147.100	151.900	0.871	0.567	51.620	47.410	-3.992	-0.802	-3.255	37.140
3	20:08:24	146.900	154.900	1.921	0.168	52.740	52.400	-2.541	-0.532	-1.810	37.130
X		148.800	153.600	1.786	0.213	51.830	50.450	-2.053	-0.400	-2.779	36.960
S		3.053	1.561	0.855	0.334	0.829	2.670	2.224	0.481	0.839	0.300
%RSD		2.052	1.016	47.880	156.500	1.600	5.292	108.300	120.200	30.210	0.810
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:29	75.5%	0.692	0.605	0.716	1.906	0.003	0.021	0.010	0.047	75.8%
2	20:07:56	74.6%	0.948	0.739	0.816	1.536	0.012	0.018	0.010	0.027	75.5%
3	20:08:24	75.4%	0.859	0.852	0.797	1.590	0.015	0.020	-0.003	0.009	76.7%
X		75.2%	0.833	0.732	0.776	1.678	0.010	0.020	0.006	0.028	76.0%
S		0.5%	0.130	0.124	0.053	0.200	0.006	0.002	0.008	0.019	0.6%
%RSD		0.7	15.630	16.900	6.776	11.910	62.090	8.820	134.500	67.940	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:07:29	1.626	1.861	1.279	1.323	163.500	158.100	82.0%	0.022	0.025	0.559
2	20:07:56	1.474	1.777	1.309	1.354	164.000	156.800	83.3%	0.032	0.025	0.547
3	20:08:24	1.370	1.786	1.569	1.411	162.400	154.100	84.0%	0.017	0.031	0.571
X		1.490	1.808	1.386	1.363	163.300	156.300	83.1%	0.024	0.027	0.559
S		0.129	0.046	0.160	0.045	0.812	2.037	1.0%	0.007	0.003	0.012
%RSD		8.658	2.552	11.520	3.268	0.497	1.303	1.2	31.530	11.690	2.166
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:07:29	0.556	0.529	89.3%							
2	20:07:56	0.482	0.514	89.2%							
3	20:08:24	0.502	0.542	89.4%							
X		0.513	0.528	89.3%							
S		0.038	0.014	0.1%							
%RSD		7.440	2.659	0.1							

CCV MW126865 5/11/2020 20:12:55 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:23	75.9%	315.400	319.700	314.400	22.260	63800.000	63690.000	62910.000	62160.000	298.900
2	20:13:50	77.2%	296.900	316.400	316.200	27.570	65270.000	62100.000	63210.000	63940.000	307.000
3	20:14:17	77.1%	303.300	305.400	330.300	28.580	67220.000	65290.000	65470.000	64390.000	307.200
X		76.7%	101.739%	104.610%	106.758%	26.130	109.047%	63690.000	63860.000	105.826%	101.463%
S		0.8%	n/a	n/a	n/a	3.396	n/a	1595.000	1399.000	n/a	n/a
%RSD		1.0	3.079	2.394	2.712	12.990	2.620	2.505	2.190	1.856	1.550
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:23	3333.000	740.200	66620.000	63220.000	63300.000	75.5%	314.300	310.100	307.100	3222.000
2	20:13:50	3485.000	732.900	66660.000	63700.000	63610.000	74.8%	308.400	310.600	309.000	2671.000
3	20:14:17	3395.000	720.300	68050.000	64840.000	63810.000	74.3%	315.500	316.000	311.400	1553.000
X		3404.000	731.100	111.853%	63920.000	105.952%	74.9%	104.245%	104.074%	103.055%	2482.000
S		76.450	10.040	n/a	831.700	n/a	0.6%	n/a	n/a	n/a	850.100
%RSD		2.246	1.373	1.213	1.301	0.401	0.8	1.215	1.039	0.710	34.250
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:23	63110.000	297.400	63610.000	63100.000	302.100	298.800	299.500	287.900	294.700	295.500
2	20:13:50	64230.000	303.800	64190.000	64240.000	306.100	301.000	303.400	282.300	292.000	297.100
3	20:14:17	65310.000	308.400	65360.000	64630.000	307.900	295.400	295.000	286.700	300.300	300.700
X		64220.000	101.066%	64390.000	106.647%	101.787%	99.465%	299.300	285.600	98.554%	99.267%
S		1100.000	n/a	890.200	n/a	n/a	n/a	4.181	2.941	n/a	n/a
%RSD		1.712	1.816	1.382	1.240	0.970	0.944	1.397	1.030	1.423	0.893
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:23	299.200	288.300	302.600	298.500	3.153	2.456	1413.000	304.800	-1.196	306.200
2	20:13:50	301.000	296.200	303.100	304.800	2.240	2.398	1387.000	302.400	-0.523	302.300
3	20:14:17	295.100	297.700	298.100	294.600	1.517	2.523	1402.000	301.100	0.148	302.000
X		298.400	294.000	100.425%	299.300	2.303	2.459	1401.000	100.912%	-0.524	101.165%
S		3.046	5.037	n/a	5.147	0.820	0.062	13.290	n/a	0.672	n/a
%RSD		1.021	1.713	0.923	1.720	35.600	2.532	0.949	0.617	128.300	0.768
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:23	77.5%	316.300	316.500	316.400	284.900	289.300	287.400	297.500	300.700	77.1%
2	20:13:50	78.3%	324.000	329.600	325.700	314.400	296.100	293.100	302.700	301.300	76.8%
3	20:14:17	78.9%	325.400	326.300	323.200	297.800	288.100	287.000	301.200	301.600	78.5%
X		78.2%	107.297%	108.048%	321.800	299.100	97.063%	289.200	300.500	100.404%	77.5%
S		0.7%	n/a	n/a	4.824	14.770	n/a	3.399	2.707	n/a	0.9%
%RSD		0.9	1.530	2.091	1.499	4.940	1.475	1.175	0.901	0.140	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:23	308.800	307.800	307.000	297.700	308.500	300.200	82.7%	317.000	305.900	308.700
2	20:13:50	317.600	314.900	315.900	299.700	314.500	304.100	83.4%	313.200	309.600	311.300
3	20:14:17	310.400	306.600	313.900	302.700	308.600	305.200	83.1%	308.400	308.500	312.500
X		104.096%	103.259%	312.300	100.007%	103.517%	101.065%	83.1%	312.900	102.668%	103.617%
S		n/a	n/a	4.644	n/a	n/a	n/a	0.3%	4.297	n/a	n/a
%RSD		1.501	1.453	1.487	0.853	1.111	0.866	0.4	1.374	0.621	0.616
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:13:23	308.900	311.300	82.7%							
2	20:13:50	310.500	313.100	84.8%							
3	20:14:17	310.900	316.200	86.5%							
X		103.364%	104.512%	84.7%							
S		n/a	n/a	1.9%							
%RSD		0.348	0.785	2.2							

CCB IM9968-01 5/11/2020 20:18:49 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

User Predefined: 1.000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:16	85.6%	0.034	4.215	4.217	27.430	3.268	2.990	3.049	3.187	0.109
2	20:19:43	85.4%	0.034	3.562	3.084	22.330	3.269	2.639	3.054	2.694	0.089
3	20:20:10	83.6%	0.003	4.156	3.376	26.560	3.091	3.438	2.679	3.454	0.116
X		84.9%	0.024	3.978	3.559	25.440	3.209	3.022	2.927	3.111	0.105
S		1.1%	0.018	0.361	0.589	2.728	0.103	0.401	0.215	0.386	0.014
%RSD		1.3	74.100	9.076	16.530	10.720	3.209	13.250	7.352	12.400	13.080
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:16	3.091	525.600	17.630	1.175	3.478	81.1%	0.045	0.022	-0.000	9.732
2	20:19:43	2.184	529.400	17.750	-0.099	4.012	81.0%	-0.041	0.027	0.036	19.450
3	20:20:10	2.809	531.400	17.260	2.480	3.668	80.5%	0.046	0.027	-0.029	12.500
X		2.695	528.800	17.550	1.186	3.719	80.8%	0.017	0.025	0.002	13.890
S		0.464	2.950	0.253	1.289	0.271	0.3%	0.050	0.003	0.033	5.007
%RSD		17.220	0.558	1.444	108.800	7.283	0.4	299.400	12.080	1540.000	36.040
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:16	1.659	0.026	3.421	5.723	0.010	0.029	0.109	-0.037	-0.053	-0.002
2	20:19:43	0.861	0.015	3.897	8.039	-0.010	-0.014	0.228	-0.048	-0.014	0.018
3	20:20:10	2.968	0.039	4.259	8.616	0.012	0.047	0.708	0.010	-0.013	0.009
X		1.829	0.027	3.859	7.459	0.004	0.021	0.348	-0.025	-0.027	0.008
S		1.063	0.012	0.420	1.531	0.012	0.031	0.317	0.031	0.023	0.010
%RSD		58.130	45.670	10.890	20.530	308.800	151.400	91.020	121.600	85.280	124.600
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:16	-0.105	0.016	0.004	0.786	2.043	2.695	1.159	0.246	-0.066	0.016
2	20:19:43	-0.105	0.016	-0.314	-0.026	1.352	1.917	-4.218	-0.890	-0.757	0.015
3	20:20:10	0.024	0.030	-0.059	0.311	2.158	0.936	-0.898	-0.243	1.871	0.010
X		-0.062	0.020	-0.123	0.357	1.851	1.850	-1.319	-0.296	0.349	0.014
S		0.074	0.008	0.168	0.408	0.436	0.881	2.713	0.570	1.363	0.003
%RSD		119.400	40.190	137.200	114.400	23.560	47.650	205.700	192.700	389.900	24.210
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:16	82.0%	0.473	0.443	0.340	0.036	0.017	0.013	-0.001	0.004	82.2%
2	20:19:43	82.6%	0.529	0.534	0.503	0.429	0.026	0.010	0.022	0.000	82.1%
3	20:20:10	82.9%	0.351	0.432	0.369	0.660	0.039	0.004	0.034	0.014	83.4%
X		82.5%	0.451	0.470	0.404	0.375	0.027	0.009	0.018	0.006	82.6%
S		0.5%	0.091	0.056	0.087	0.316	0.011	0.005	0.018	0.007	0.7%
%RSD		0.6	20.140	11.920	21.570	84.150	40.960	49.590	98.550	118.100	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:16	0.042	0.117	0.426	0.382	0.013	0.007	85.7%	0.013	0.002	0.017
2	20:19:43	0.076	0.074	0.308	0.461	0.031	0.007	85.9%	0.008	0.020	0.012
3	20:20:10	0.064	0.125	0.434	0.327	0.013	0.036	86.3%	0.000	0.010	0.022
X		0.061	0.106	0.389	0.390	0.019	0.017	86.0%	0.007	0.010	0.017
S		0.018	0.027	0.071	0.068	0.010	0.017	0.3%	0.006	0.009	0.005
%RSD		29.140	25.810	18.200	17.320	55.250	100.000	0.4	86.610	84.100	28.710
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:19:16	0.049	0.043	91.0%							
2	20:19:43	0.041	0.021	93.2%							
3	20:20:10	0.018	0.023	92.9%							
X		0.036	0.029	92.3%							
S		0.016	0.012	1.2%							
%RSD		45.500	41.460	1.3							

VE07043-001S

5/11/2020 20:24:40

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:07	79.6%	100.100	138.300	141.000	156.300	32030.000	2277.000	2282.000	2476.000	326.000
2	20:25:34	79.1%	104.300	143.600	143.100	158.400	31710.000	2291.000	2280.000	2433.000	321.700
3	20:26:01	79.1%	98.680	139.200	134.900	144.800	32090.000	2255.000	2256.000	2475.000	329.400
X		79.3%	101.000	140.300	139.700	153.200	31940.000	2274.000	2273.000	2461.000	325.700
S		0.2%	2.915	2.829	4.262	7.325	207.200	17.740	14.260	24.360	3.853
%RSD		0.3	2.886	2.016	3.051	4.783	0.649	0.780	0.627	0.990	1.183
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:07	8804.000	65600.000	3474.000	15280.000	14850.000	73.6%	224.800	102.300	103.000	3685.000
2	20:25:34	8675.000	65250.000	3514.000	15120.000	14770.000	73.6%	232.100	101.500	102.300	3990.000
3	20:26:01	8938.000	65990.000	3510.000	15650.000	14790.000	71.2%	226.800	107.000	104.000	3212.000
X		8806.000	65610.000	3499.000	15350.000	14800.000	72.8%	227.900	103.600	103.100	3629.000
S		131.400	368.700	22.260	272.200	43.800	1.4%	3.781	3.026	0.842	392.200
%RSD		1.492	0.562	0.636	1.773	0.296	1.9	1.659	2.922	0.817	10.810
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:07	3030.000	120.600	2865.000	2981.000	100.600	108.500	111.700	102.200	108.300	266.100
2	20:25:34	3006.000	122.000	2848.000	2952.000	100.300	107.300	109.100	103.700	108.100	264.900
3	20:26:01	3081.000	125.400	2945.000	3005.000	102.400	110.200	115.400	103.600	112.300	273.300
X		3039.000	122.700	2886.000	2979.000	101.100	108.700	112.100	103.100	109.600	268.100
S		38.110	2.461	51.520	26.350	1.107	1.448	3.164	0.823	2.343	4.554
%RSD		1.254	2.006	1.785	0.884	1.095	1.333	2.823	0.798	2.139	1.699
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:07	261.800	258.900	105.200	102.500	34.110	35.590	474.500	102.100	1.650	139.600
2	20:25:34	258.300	262.800	104.700	102.100	35.360	33.920	470.100	98.710	1.718	139.800
3	20:26:01	251.700	262.400	101.900	102.900	35.230	32.480	473.000	98.850	0.944	137.800
X		257.300	261.400	104.000	102.500	34.900	34.000	472.500	99.880	1.437	139.100
S		5.165	2.150	1.783	0.395	0.688	1.558	2.241	1.907	0.428	1.070
%RSD		2.008	0.823	1.715	0.385	1.972	4.583	0.474	1.910	29.820	0.769
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:07	77.5%	102.800	106.900	107.300	101.800	100.200	99.650	102.000	101.900	77.0%
2	20:25:34	76.5%	106.000	105.000	104.100	99.660	99.090	98.600	101.400	101.700	78.0%
3	20:26:01	77.9%	104.100	105.300	103.500	92.910	96.710	98.270	101.000	101.200	79.1%
X		77.3%	104.300	105.800	105.000	98.130	98.680	98.840	101.500	101.600	78.0%
S		0.7%	1.629	1.045	2.054	4.650	1.800	0.719	0.505	0.361	1.1%
%RSD		0.9	1.562	0.988	1.956	4.738	1.825	0.727	0.497	0.355	1.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:07	104.000	104.200	105.700	102.100	276.100	266.400	82.8%	101.300	103.900	109.300
2	20:25:34	104.000	102.900	104.600	102.700	275.300	263.900	82.9%	103.100	103.700	108.100
3	20:26:01	101.800	102.400	103.400	98.930	267.000	262.500	84.3%	103.400	103.300	108.600
X		103.300	103.200	104.600	101.200	272.800	264.200	83.3%	102.600	103.700	108.600
S		1.279	0.921	1.160	2.013	5.020	1.983	0.8%	1.157	0.302	0.610
%RSD		1.239	0.892	1.109	1.988	1.840	0.750	1.0	1.128	0.291	0.562
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:25:07	107.800	108.900	88.6%							
2	20:25:34	108.600	108.700	89.5%							
3	20:26:01	106.600	108.100	89.0%							
X		107.700	108.600	89.0%							
S		0.981	0.419	0.5%							
%RSD		0.911	0.386	0.5							

VE07043-001SD

5/11/2020 20:30:30

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:57	78.6%	101.400	138.700	139.000	136.400	30930.000	2278.000	2226.000	2416.000	322.100
2	20:31:24	77.3%	101.900	132.500	132.000	140.500	30320.000	2203.000	2193.000	2347.000	313.900
3	20:31:51	77.9%	99.730	126.100	129.600	138.900	31320.000	2248.000	2220.000	2323.000	312.900
X		77.9%	101.000	132.400	133.500	138.600	30860.000	2243.000	2213.000	2362.000	316.300
S		0.6%	1.150	6.324	4.893	2.087	502.200	37.780	17.400	47.980	5.040
%RSD		0.8	1.139	4.775	3.665	1.506	1.628	1.685	0.786	2.031	1.594
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:57	8814.000	56240.000	3408.000	14880.000	14720.000	74.5%	218.800	98.990	100.200	3941.000
2	20:31:24	8428.000	55000.000	3361.000	14990.000	14280.000	74.5%	214.500	97.390	100.200	3759.000
3	20:31:51	8382.000	54410.000	3392.000	14920.000	14490.000	73.8%	215.600	96.540	99.520	4743.000
X		8542.000	55220.000	3387.000	14930.000	14500.000	74.3%	216.300	97.640	99.970	4148.000
S		236.900	932.000	23.980	52.390	220.200	0.4%	2.220	1.245	0.387	523.600
%RSD		2.774	1.688	0.708	0.351	1.519	0.6	1.027	1.275	0.387	12.620
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:57	2883.000	119.100	2754.000	2853.000	95.670	102.000	105.600	102.000	102.700	258.700
2	20:31:24	2938.000	119.000	2780.000	2887.000	95.570	105.100	105.400	101.800	106.900	256.200
3	20:31:51	2949.000	121.200	2801.000	2888.000	99.170	106.800	109.700	101.900	106.100	255.700
X		2923.000	119.800	2779.000	2876.000	96.800	104.600	106.900	101.900	105.200	256.800
S		35.360	1.244	23.630	19.730	2.049	2.406	2.466	0.080	2.260	1.639
%RSD		1.210	1.039	0.850	0.686	2.117	2.299	2.307	0.079	2.148	0.638
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:57	258.900	257.900	103.400	100.900	31.470	30.270	456.200	97.420	-4.014	136.200
2	20:31:24	240.200	253.400	102.100	96.070	30.880	31.240	464.600	98.550	0.953	136.200
3	20:31:51	254.500	257.400	104.400	98.210	31.020	35.300	471.000	100.500	-1.900	135.100
X		251.200	256.200	103.300	98.390	31.120	32.270	463.900	98.840	-1.654	135.900
S		9.794	2.461	1.182	2.411	0.307	2.671	7.411	1.581	2.493	0.621
%RSD		3.899	0.961	1.144	2.451	0.987	8.279	1.597	1.600	150.800	0.457
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:57	76.9%	101.300	102.800	105.100	94.250	97.980	97.620	99.960	99.750	77.3%
2	20:31:24	77.1%	102.800	107.300	102.900	98.020	96.740	98.910	100.800	98.790	77.9%
3	20:31:51	77.7%	105.100	104.200	104.000	100.900	97.630	97.710	98.950	99.360	77.8%
X		77.3%	103.100	104.800	104.000	97.710	97.450	98.080	99.920	99.300	77.7%
S		0.4%	1.896	2.310	1.066	3.326	0.638	0.719	0.941	0.484	0.3%
%RSD		0.5	1.839	2.204	1.025	3.403	0.654	0.733	0.941	0.487	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:57	102.500	101.400	103.500	101.900	268.700	264.700	82.3%	100.300	102.700	106.300
2	20:31:24	103.100	100.700	104.200	97.730	264.700	260.200	83.4%	100.900	103.900	106.400
3	20:31:51	101.800	102.200	105.000	98.450	270.400	259.900	85.4%	101.800	101.200	103.600
X		102.500	101.400	104.200	99.380	268.000	261.600	83.7%	101.000	102.600	105.400
S		0.612	0.757	0.763	2.253	2.952	2.693	1.6%	0.759	1.356	1.604
%RSD		0.597	0.746	0.732	2.268	1.102	1.029	1.9	0.751	1.322	1.521
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:30:57	106.200	107.200	88.5%							
2	20:31:24	106.100	107.000	88.9%							
3	20:31:51	103.500	104.400	89.1%							
X		105.200	106.200	88.8%							
S		1.504	1.572	0.3%							
%RSD		1.429	1.480	0.4							

VE07043-001L(5)

5/11/2020 20:36:20

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:36:46	82.2%	0.004	10.840	10.000	40.540	5932.000	267.200	258.300	265.400	40.870
2	20:37:13	83.8%	-0.018	12.570	10.870	41.980	6013.000	268.200	259.000	256.400	39.820
3	20:37:40	83.0%	-0.007	10.710	10.120	48.830	5895.000	265.400	251.000	263.700	40.170
X		83.0%	-0.007	11.370	10.330	43.780	5947.000	266.900	256.100	261.800	40.280
S		0.8%	0.011	1.041	0.472	4.427	60.160	1.384	4.439	4.792	0.535
%RSD		1.0	153.700	9.158	4.571	10.110	1.012	0.519	1.733	1.830	1.327
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:36:46	1583.000	12360.000	490.300	2804.000	2685.000	77.8%	23.680	0.223	0.385	819.000
2	20:37:13	1541.000	12360.000	479.800	2665.000	2656.000	77.8%	23.800	0.315	0.357	695.500
3	20:37:40	1566.000	12290.000	485.000	2944.000	2694.000	76.8%	23.730	-0.030	0.371	1016.000
X		1564.000	12340.000	485.000	2804.000	2678.000	77.5%	23.740	0.169	0.371	843.600
S		20.980	37.530	5.213	139.700	19.710	0.6%	0.063	0.178	0.014	161.700
%RSD		1.342	0.304	1.075	4.983	0.736	0.8	0.264	105.400	3.870	19.170
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:36:46	365.700	4.081	358.100	363.900	0.036	1.628	2.593	0.935	0.722	33.180
2	20:37:13	363.600	4.206	351.800	355.700	0.026	1.700	2.777	0.883	1.167	31.640
3	20:37:40	356.300	4.438	359.700	352.900	0.015	1.278	1.712	0.777	0.857	32.710
X		361.900	4.242	356.500	357.500	0.026	1.535	2.361	0.865	0.915	32.510
S		4.922	0.181	4.151	5.739	0.010	0.226	0.569	0.080	0.228	0.792
%RSD		1.360	4.268	1.164	1.606	39.500	14.730	24.120	9.293	24.890	2.437
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:36:46	33.980	33.290	0.203	0.563	11.910	10.800	-2.801	-0.552	-2.692	7.285
2	20:37:13	32.650	32.580	0.008	0.119	9.274	11.470	-0.696	-0.158	-0.616	7.544
3	20:37:40	32.310	33.500	0.339	-0.016	11.440	11.640	-0.748	-0.200	1.376	7.456
X		32.980	33.120	0.183	0.222	10.880	11.300	-1.415	-0.303	-0.644	7.428
S		0.881	0.485	0.166	0.303	1.407	0.444	1.200	0.216	2.034	0.132
%RSD		2.673	1.463	90.790	136.400	12.940	3.931	84.850	71.340	315.900	1.771
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:36:46	80.8%	0.032	0.194	0.114	0.593	0.000	0.004	-0.000	0.008	81.1%
2	20:37:13	79.8%	0.248	0.011	0.095	-0.620	0.014	0.001	-0.000	0.024	81.1%
3	20:37:40	81.0%	0.240	0.195	0.020	1.011	0.014	0.007	0.024	-0.008	81.0%
X		80.5%	0.173	0.133	0.076	0.328	0.010	0.004	0.008	0.008	81.1%
S		0.6%	0.123	0.106	0.049	0.847	0.008	0.003	0.014	0.016	0.1%
%RSD		0.8	70.770	79.680	64.840	258.300	86.600	68.560	182.200	195.600	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:36:46	0.236	0.352	0.271	0.227	31.670	32.050	85.5%	0.100	0.151	0.111
2	20:37:13	0.301	0.361	0.308	0.230	33.140	32.630	85.8%	0.150	0.128	0.131
3	20:37:40	0.331	0.387	0.196	0.249	32.770	32.840	86.0%	0.108	0.134	0.123
X		0.289	0.367	0.258	0.235	32.530	32.510	85.7%	0.119	0.137	0.122
S		0.048	0.018	0.057	0.012	0.767	0.406	0.3%	0.027	0.012	0.010
%RSD		16.730	4.883	22.120	4.984	2.357	1.248	0.3	22.850	8.734	8.127
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:36:46	0.084	0.105	91.3%							
2	20:37:13	0.083	0.116	92.2%							
3	20:37:40	0.095	0.107	92.6%							
X		0.087	0.109	92.0%							
S		0.006	0.006	0.6%							
%RSD		7.293	5.169	0.7							

VE07039-001(20)

5/11/2020 20:42:11

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:38	452.5%	-0.014	106.900	142.400	-64.090	7875.000	22.580	23.240	48.290	31.330
2	20:43:05	460.0%	-0.016	114.500	145.400	-64.330	7937.000	22.880	24.050	50.080	31.640
3	20:43:32	467.2%	-0.014	110.500	143.800	-64.930	7708.000	22.490	21.900	48.170	30.540
X		459.9%	-0.015	110.600	143.800	-64.450	7840.000	22.650	23.070	48.850	31.170
S		7.3%	0.001	3.796	1.507	0.434	118.300	0.205	1.085	1.072	0.571
%RSD		1.6	7.662	3.432	1.047	0.673	1.509	0.907	4.702	2.195	1.832
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:38	99.450	3783.000	21000.000	249.600	231.500	76.2%	11.570	0.064	0.084	269.400
2	20:43:05	100.300	3855.000	20750.000	248.100	232.900	75.4%	10.570	0.212	0.174	199.200
3	20:43:32	95.220	3692.000	20430.000	245.500	231.000	77.1%	10.770	0.219	0.125	167.300
X		98.340	3777.000	20730.000	247.700	231.800	76.2%	10.970	0.165	0.128	212.000
S		2.735	81.730	288.600	2.079	0.981	0.8%	0.528	0.088	0.045	52.240
%RSD		2.782	2.164	1.392	0.839	0.423	1.1	4.815	52.980	35.260	24.640
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:38	-1.528	0.163	1.756	4.160	-0.008	0.444	1.233	0.435	0.651	0.348
2	20:43:05	0.133	0.185	1.839	2.095	-0.009	0.569	0.436	0.438	0.451	0.276
3	20:43:32	-0.749	0.142	1.673	3.206	-0.013	0.557	0.531	0.463	0.496	0.344
X		-0.715	0.163	1.756	3.154	-0.010	0.524	0.733	0.445	0.533	0.322
S		0.831	0.021	0.083	1.034	0.003	0.069	0.436	0.015	0.105	0.041
%RSD		116.300	13.080	4.738	32.780	29.620	13.160	59.400	3.474	19.660	12.570
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:38	0.299	0.259	7.018	1.075	45110.000	44840.000	165.300	31.120	1.447	0.607
2	20:43:05	0.370	0.322	6.919	0.088	45700.000	45630.000	167.200	31.220	2.181	0.598
3	20:43:32	0.364	0.437	6.994	-0.464	45740.000	45270.000	170.100	31.660	-1.294	0.581
X		0.344	0.340	6.977	0.233	45520.000	45250.000	167.500	31.330	0.778	0.595
S		0.040	0.090	0.051	0.780	352.800	395.200	2.456	0.287	1.832	0.013
%RSD		11.470	26.520	0.737	334.700	0.775	0.873	1.466	0.916	235.500	2.230
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:38	80.0%	536.200	544.200	548.300	1.766	0.003	0.011	-1.370	0.086	78.6%
2	20:43:05	79.5%	555.500	564.400	564.400	0.406	0.003	-0.002	-1.307	0.136	78.6%
3	20:43:32	79.8%	572.000	571.600	572.600	0.875	0.006	-0.002	-1.466	0.348	79.8%
X		79.7%	554.600	560.100	561.700	1.016	0.004	0.003	-1.381	0.190	79.0%
S		0.3%	17.900	14.190	12.350	0.691	0.002	0.007	0.080	0.139	0.7%
%RSD		0.3	3.229	2.534	2.199	68.020	42.250	284.500	5.814	73.200	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:38	0.263	0.054	0.130	0.145	4.507	4.138	84.1%	0.025	0.019	0.003
2	20:43:05	0.269	-0.006	0.223	0.132	4.768	4.103	84.8%	0.021	0.022	-0.005
3	20:43:32	0.294	0.023	0.165	0.140	4.362	4.372	85.9%	0.012	0.016	-0.000
X		0.275	0.023	0.172	0.139	4.546	4.205	84.9%	0.019	0.019	-0.001
S		0.017	0.030	0.047	0.006	0.206	0.146	0.9%	0.007	0.003	0.004
%RSD		6.020	127.900	27.160	4.524	4.529	3.479	1.1	34.700	14.460	377.300
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:42:38	0.004	-0.001	85.3%							
2	20:43:05	0.007	-0.004	85.2%							
3	20:43:32	-0.002	-0.000	86.2%							
X		0.003	-0.002	85.6%							
S		0.004	0.002	0.6%							
%RSD		158.700	107.700	0.7							

VE05016-004

5/11/2020 20:48:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:29	81.7%	0.026	23.830	24.260	18.210	9078.000	1616.000	1634.000	1994.000	18.270
2	20:48:57	81.3%	-0.007	24.210	23.110	18.540	9200.000	1691.000	1650.000	2030.000	17.840
3	20:49:23	81.0%	0.004	22.380	21.660	19.090	9348.000	1668.000	1651.000	1996.000	17.860
X		81.3%	0.008	23.470	23.010	18.610	9209.000	1658.000	1645.000	2007.000	17.990
S		0.4%	0.016	0.965	1.303	0.447	135.300	38.700	9.818	20.320	0.240
%RSD		0.4	216.700	4.111	5.660	2.399	1.469	2.334	0.597	1.013	1.333
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:29	2122.000	47950.000	1741.000	22060.000	21390.000	77.2%	1.051	0.225	0.199	3116.000
2	20:48:57	2077.000	48380.000	1743.000	22230.000	21620.000	75.6%	0.859	0.036	0.166	3255.000
3	20:49:23	2072.000	48020.000	1762.000	22060.000	21450.000	75.5%	0.798	-0.018	0.155	3375.000
X		2090.000	48120.000	1749.000	22110.000	21490.000	76.1%	0.902	0.081	0.174	3249.000
S		28.000	230.600	11.700	101.100	117.700	1.0%	0.132	0.127	0.023	130.000
%RSD		1.340	0.479	0.669	0.457	0.548	1.3	14.650	157.400	13.160	4.003
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:29	51.170	15.190	50.670	98.160	0.149	32.520	34.460	211.400	216.900	3710.000
2	20:48:57	51.040	15.500	54.390	96.580	0.196	34.760	31.770	210.000	214.700	3737.000
3	20:49:23	51.070	15.530	52.800	89.220	0.181	33.950	34.440	210.300	215.300	3742.000
X		51.090	15.410	52.620	94.650	0.175	33.740	33.550	210.500	215.600	3729.000
S		0.066	0.190	1.864	4.774	0.024	1.133	1.550	0.764	1.107	17.360
%RSD		0.129	1.233	3.543	5.044	13.580	3.357	4.618	0.363	0.513	0.466
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:29	3420.000	3600.000	0.377	-0.103	595.500	609.000	0.031	-0.059	-0.592	46.740
2	20:48:57	3468.000	3633.000	-0.042	0.041	474.800	486.100	3.590	0.724	-1.251	46.660
3	20:49:23	3427.000	3628.000	0.829	1.376	398.200	392.900	0.824	0.136	-1.931	47.120
X		3438.000	3620.000	0.388	0.438	489.500	496.000	1.482	0.267	-1.258	46.840
S		25.960	17.920	0.435	0.816	99.500	108.400	1.868	0.408	0.670	0.245
%RSD		0.755	0.495	112.300	186.000	20.330	21.860	126.100	152.900	53.230	0.523
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:29	79.4%	2.704	2.872	2.665	0.820	0.009	0.004	0.039	0.022	80.1%
2	20:48:57	78.9%	2.981	2.915	2.755	2.547	0.003	0.008	0.027	0.039	79.4%
3	20:49:23	78.4%	2.455	2.368	2.427	0.427	0.015	0.004	0.028	0.002	80.4%
X		78.9%	2.713	2.718	2.616	1.265	0.009	0.005	0.031	0.021	80.0%
S		0.5%	0.263	0.305	0.169	1.128	0.006	0.002	0.007	0.018	0.5%
%RSD		0.6	9.683	11.210	6.470	89.150	66.280	32.890	22.380	87.020	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:29	0.692	0.967	0.165	0.170	17.210	16.810	83.6%	0.059	0.061	0.784
2	20:48:57	0.704	0.934	0.166	0.120	16.960	16.210	84.5%	0.056	0.063	0.721
3	20:49:23	0.577	0.927	0.160	0.189	16.350	16.700	85.3%	0.054	0.059	0.697
X		0.658	0.943	0.164	0.160	16.840	16.570	84.4%	0.056	0.061	0.734
S		0.070	0.021	0.003	0.036	0.445	0.323	0.8%	0.002	0.002	0.045
%RSD		10.720	2.217	2.120	22.540	2.642	1.947	1.0	4.351	3.324	6.128
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:48:29	0.741	0.726	89.3%							
2	20:48:57	0.733	0.730	89.9%							
3	20:49:23	0.732	0.711	90.2%							
X		0.735	0.722	89.8%							
S		0.005	0.010	0.5%							
%RSD		0.691	1.406	0.5							

VE05016-011 5/11/2020 20:53:54

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:21	78.4%	-0.006	85.030	83.880	2.037	10000.000	1705.000	1695.000	2125.000	M 614.300
2	20:54:47	76.3%	-0.006	82.720	85.730	4.426	9901.000	1688.000	1699.000	2142.000	M 615.700
3	20:55:14	77.2%	-0.006	88.310	86.850	4.627	9891.000	1712.000	1661.000	2167.000	M 614.300
X		77.3%	-0.006	85.350	85.490	3.696	9932.000	1702.000	1685.000	2145.000	M 614.800
S		1.1%	0.000	2.812	1.500	1.441	61.950	11.920	21.060	21.280	M 0.803
%RSD		1.4	2.470	3.294	1.755	38.980	0.624	0.700	1.250	0.992	M 0.131
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:21	4568.000	56610.000	1896.000	18870.000	18250.000	74.1%	4.289	0.672	0.639	4497.000
2	20:54:47	4610.000	56900.000	1937.000	19130.000	18410.000	71.4%	3.896	-0.110	0.561	5000.000
3	20:55:14	4607.000	58320.000	1914.000	18900.000	18550.000	71.7%	3.876	0.483	0.570	4772.000
X		4595.000	57280.000	1916.000	18970.000	18400.000	72.4%	4.020	0.348	0.590	4756.000
S		23.580	915.200	20.650	141.000	151.600	1.5%	0.233	0.408	0.043	252.000
%RSD		0.513	1.598	1.078	0.744	0.824	2.0	5.790	117.200	7.223	5.298
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:21	113.900	21.400	112.500	148.600	0.193	2.202	2.514	148.400	152.400	61.570
2	20:54:47	113.200	21.920	115.200	152.500	0.157	2.658	2.376	151.500	155.100	64.990
3	20:55:14	118.600	21.670	113.500	148.500	0.195	2.274	2.757	149.500	155.400	64.700
X		115.300	21.660	113.700	149.900	0.182	2.378	2.549	149.800	154.300	63.750
S		2.929	0.263	1.371	2.257	0.021	0.245	0.193	1.574	1.654	1.895
%RSD		2.541	1.213	1.205	1.506	11.760	10.300	7.561	1.051	1.072	2.973
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:21	57.440	61.860	0.533	0.958	168.700	178.300	-0.476	-0.116	-0.454	42.530
2	20:54:47	58.920	60.700	0.316	1.061	162.500	168.000	-1.149	-0.305	1.015	42.380
3	20:55:14	58.830	62.420	1.046	0.628	147.300	150.000	1.030	0.220	-1.851	42.940
X		58.400	61.660	0.632	0.882	159.500	165.400	-0.199	-0.067	-0.430	42.620
S		0.830	0.876	0.375	0.226	11.030	14.300	1.116	0.266	1.434	0.291
%RSD		1.421	1.420	59.300	25.660	6.915	8.646	562.000	397.300	333.400	0.684
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:21	76.9%	0.727	0.882	0.832	0.591	0.030	0.055	0.010	-0.026	76.8%
2	20:54:47	76.7%	0.917	1.082	0.984	1.313	0.033	0.033	-0.004	-0.003	77.4%
3	20:55:14	76.5%	0.861	1.053	1.004	-1.143	0.039	0.052	0.035	-0.003	77.2%
X		76.7%	0.835	1.006	0.940	0.254	0.034	0.047	0.013	-0.011	77.1%
S		0.2%	0.098	0.108	0.094	1.262	0.005	0.012	0.020	0.013	0.3%
%RSD		0.3	11.710	10.750	10.030	497.800	13.330	25.800	145.200	124.000	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:21	1.144	1.482	0.356	0.419	12.810	13.070	82.6%	0.013	0.027	0.747
2	20:54:47	1.037	1.603	0.384	0.207	13.460	12.520	84.3%	0.035	0.039	0.626
3	20:55:14	0.947	1.423	0.290	0.336	13.170	12.460	84.4%	0.021	0.025	0.650
X		1.043	1.503	0.343	0.321	13.150	12.680	83.7%	0.023	0.030	0.674
S		0.099	0.092	0.048	0.107	0.326	0.333	1.0%	0.011	0.007	0.064
%RSD		9.450	6.096	13.990	33.350	2.481	2.628	1.2	48.290	24.570	9.479
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	20:54:21	0.756	0.694	90.2%							
2	20:54:47	0.715	0.646	91.1%							
3	20:55:14	0.661	0.670	91.5%							
X		0.711	0.670	90.9%							
S		0.048	0.024	0.7%							
%RSD		6.684	3.592	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:00:12	80.6%	0.004	27.700	27.670	29.780	<u>9633.000</u>	<u>2157.000</u>	2121.000	2374.000	67.430
2	21:00:39	76.7%	-0.006	29.440	29.090	36.500	<u>9731.000</u>	<u>2281.000</u>	2197.000	2353.000	66.800
3	21:01:07	75.6%	-0.006	29.890	28.490	31.680	<u>9849.000</u>	<u>2234.000</u>	2187.000	2345.000	65.010
X		77.6%	-0.003	29.010	28.410	32.650	<u>9738.000</u>	<u>2224.000</u>	2168.000	2357.000	66.410
S		2.6%	0.006	1.157	0.713	3.464	<u>108.200</u>	<u>62.680</u>	41.220	14.850	1.254
%RSD		3.4	222.900	3.990	2.508	10.610	<u>1.111</u>	<u>2.818</u>	1.901	0.630	1.889
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:00:12	<u>3319.000</u>	<u>60240.000</u>	1651.000	20520.000	20240.000	73.4%	3.721	1.000	0.441	4162.000
2	21:00:39	<u>3360.000</u>	<u>63970.000</u>	1685.000	20470.000	20860.000	71.4%	4.256	0.420	0.489	4609.000
3	21:01:07	<u>3283.000</u>	<u>63290.000</u>	1688.000	21020.000	20710.000	71.3%	5.378	0.335	0.402	4712.000
X		<u>3320.000</u>	<u>62500.000</u>	1674.000	20670.000	20610.000	72.0%	4.452	0.585	0.444	4494.000
S		<u>38.710</u>	<u>1986.000</u>	20.560	303.800	322.600	1.2%	0.845	0.362	0.044	292.700
%RSD		<u>1.166</u>	<u>3.178</u>	1.228	1.470	1.565	1.7	18.990	61.850	9.814	6.512
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:00:12	251.200	44.970	251.700	293.200	0.327	131.800	128.200	<u>TM 4399.000</u>	<u>M 5312.000</u>	<u>M 943.200</u>
2	21:00:39	255.900	46.630	256.700	298.200	0.306	133.500	134.000	<u>TM 4440.000</u>	<u>M 5483.000</u>	<u>M 959.700</u>
3	21:01:07	250.900	46.510	258.100	288.100	0.350	131.300	135.900	<u>TM 4417.000</u>	<u>TM 4508.000</u>	<u>M 952.800</u>
X		252.700	46.030	255.500	293.200	0.328	132.200	132.700	<u>TM 4419.000</u>	<u>TM 5101.000</u>	<u>M 951.900</u>
S		2.798	0.920	3.340	5.024	0.022	1.192	3.972	<u>TM 20.740</u>	<u>TM 520.700</u>	<u>M 8.296</u>
%RSD		1.107	1.999	1.307	1.714	6.712	0.901	2.993	<u>TM 0.469</u>	<u>TM 10.210</u>	<u>M 0.872</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:00:12	<u>M 870.900</u>	<u>M 905.700</u>	0.184	0.677	128.600	135.000	-0.429	-0.088	-1.854	48.270
2	21:00:39	<u>M 881.400</u>	<u>M 907.400</u>	0.426	0.982	125.500	125.200	-3.337	-0.756	0.983	47.830
3	21:01:07	<u>M 872.900</u>	<u>M 922.200</u>	0.243	0.599	107.600	115.800	-0.350	-0.074	-1.816	49.720
X		<u>M 875.100</u>	<u>M 911.800</u>	0.285	0.753	120.600	125.400	-1.372	-0.306	-0.896	48.610
S		<u>M 5.554</u>	<u>M 9.076</u>	0.126	0.202	11.340	9.619	1.702	0.390	1.627	0.989
%RSD		<u>M 0.635</u>	<u>M 0.995</u>	44.290	26.850	9.403	7.673	124.100	127.500	181.600	2.035
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:00:12	76.3%	0.404	0.394	0.459	2.002	0.036	0.036	0.101	0.099	77.4%
2	21:00:39	77.2%	0.548	0.608	0.493	1.639	0.046	0.042	0.037	0.087	76.9%
3	21:01:07	75.5%	0.631	0.531	0.599	2.569	0.015	0.036	0.102	0.100	76.6%
X		76.4%	0.528	0.511	0.517	2.070	0.032	0.038	0.080	0.096	76.9%
S		0.8%	0.115	0.108	0.073	0.468	0.016	0.004	0.037	0.007	0.4%
%RSD		1.1	21.760	21.210	14.100	22.630	48.010	9.607	46.590	7.505	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:00:12	2.265	3.264	0.177	0.255	18.120	18.000	81.7%	0.005	0.021	53.380
2	21:00:39	2.161	3.350	0.193	0.221	18.530	18.080	84.2%	0.009	0.013	52.790
3	21:01:07	2.349	3.101	0.289	0.208	18.710	18.170	84.0%	0.005	0.025	53.290
X		2.258	3.238	0.220	0.228	18.450	18.080	83.3%	0.006	0.020	53.150
S		0.094	0.127	0.061	0.025	0.303	0.087	1.4%	0.002	0.006	0.318
%RSD		4.184	3.907	27.640	10.760	1.641	0.482	1.6	37.390	30.410	0.599
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:00:12	52.490	53.260	90.0%							
2	21:00:39	50.300	51.390	90.2%							
3	21:01:07	51.120	52.490	90.9%							
X		51.300	52.380	90.3%							
S		1.104	0.942	0.5%							
%RSD		2.152	1.798	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:04	78.7%	0.050	6.540	7.829	27.200	2263.000	490.900	479.200	503.400	43.000
2	21:06:31	80.6%	0.015	8.438	6.994	21.410	2294.000	489.400	480.000	525.600	43.120
3	21:06:58	76.5%	0.052	6.206	7.373	23.980	2259.000	491.100	482.000	513.700	44.560
X		78.6%	0.039	7.061	7.399	24.190	2272.000	490.500	480.400	514.200	43.560
S		2.1%	0.021	1.204	0.418	2.902	19.360	0.909	1.413	11.110	0.867
%RSD		2.6	52.800	17.050	5.647	11.990	0.852	0.185	0.294	2.160	1.990
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:04	3560.000	61870.000	336.800	13690.000	13300.000	72.8%	0.734	0.024	0.671	4766.000
2	21:06:31	3595.000	63640.000	342.600	14260.000	13600.000	71.1%	0.885	0.256	0.723	4830.000
3	21:06:58	3539.000	61940.000	329.800	13530.000	13180.000	71.2%	0.817	0.004	0.733	5324.000
X		3564.000	62480.000	336.400	13830.000	13360.000	71.7%	0.812	0.095	0.709	4973.000
S		28.010	1000.000	6.424	383.700	215.400	1.0%	0.076	0.140	0.033	305.600
%RSD		0.786	1.601	1.910	2.775	1.613	1.3	9.336	147.800	4.652	6.145
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:04	29.950	1.180	26.070	53.130	0.023	0.303	0.810	2.568	2.613	15.690
2	21:06:31	31.040	1.355	27.630	55.220	0.006	0.291	0.116	2.501	2.785	16.210
3	21:06:58	29.760	1.193	27.440	53.480	0.004	0.261	0.247	2.293	2.523	16.370
X		30.250	1.243	27.050	53.940	0.011	0.285	0.391	2.454	2.640	16.090
S		0.691	0.097	0.854	1.120	0.011	0.022	0.369	0.143	0.133	0.352
%RSD		2.283	7.836	3.156	2.077	99.550	7.607	94.310	5.837	5.048	2.185
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:04	15.590	14.970	-0.194	-0.146	76.650	74.400	-1.208	-0.281	0.241	11.300
2	21:06:31	15.500	15.210	0.831	0.195	68.010	68.570	-2.595	-0.591	0.300	11.440
3	21:06:58	15.920	15.360	-0.364	0.444	65.880	68.860	-1.144	-0.307	1.739	11.470
X		15.670	15.180	0.091	0.164	70.180	70.610	-1.649	-0.393	0.760	11.400
S		0.220	0.196	0.646	0.296	5.705	3.283	0.820	0.172	0.848	0.087
%RSD		1.406	1.293	710.400	180.600	8.129	4.649	49.710	43.680	111.600	0.760
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:04	77.5%	-0.079	0.042	-0.080	0.713	0.012	-0.002	0.090	0.020	77.5%
2	21:06:31	76.7%	-0.081	-0.040	-0.032	0.731	0.003	0.001	0.013	0.021	78.0%
3	21:06:58	76.6%	-0.068	-0.117	-0.078	1.038	0.003	0.005	0.000	0.009	77.1%
X		76.9%	-0.076	-0.038	-0.063	0.827	0.006	0.002	0.034	0.017	77.5%
S		0.5%	0.007	0.079	0.027	0.183	0.005	0.003	0.049	0.007	0.5%
%RSD		0.6	9.082	207.100	42.660	22.070	86.680	206.500	141.300	40.580	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:04	0.082	0.151	-0.020	0.036	4.083	4.510	82.5%	0.009	0.012	0.600
2	21:06:31	0.094	0.105	0.026	0.001	4.016	4.398	82.6%	0.003	0.013	0.466
3	21:06:58	0.126	0.172	-0.001	0.014	4.707	4.126	84.6%	0.003	0.011	0.495
X		0.101	0.143	0.002	0.017	4.268	4.345	83.2%	0.005	0.012	0.520
S		0.023	0.035	0.023	0.017	0.381	0.198	1.2%	0.004	0.001	0.071
%RSD		22.450	24.170	1317.000	102.000	8.926	4.545	1.5	72.110	9.458	13.620
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:06:04	0.446	0.526	90.8%							
2	21:06:31	0.573	0.487	90.9%							
3	21:06:58	0.455	0.496	90.5%							
X		0.491	0.503	90.7%							
S		0.071	0.020	0.2%							
%RSD		14.440	3.996	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:55	78.9%	0.016	7.060	6.965	20.170	76724.000	1121.000	1134.000	1656.000	159.500
2	21:12:22	77.7%	-0.006	7.878	7.066	17.800	6651.000	1114.000	1160.000	1683.000	156.500
3	21:12:49	78.4%	-0.006	7.604	7.217	21.550	6718.000	1146.000	1142.000	1638.000	156.300
X		78.3%	0.001	7.514	7.083	19.840	6698.000	1127.000	1145.000	1659.000	157.400
S		0.6%	0.013	0.416	0.127	1.896	40.660	16.450	13.420	22.790	1.818
%RSD		0.7	1249.000	5.539	1.792	9.559	0.607	1.460	1.172	1.373	1.155
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:55	8769.000	52390.000	5786.000	15700.000	15110.000	70.6%	6.926	-0.566	0.783	6807.000
2	21:12:22	8860.000	52340.000	5752.000	15530.000	15240.000	70.2%	5.362	0.078	0.887	6619.000
3	21:12:49	8673.000	52790.000	5702.000	15630.000	15300.000	70.8%	6.011	0.525	0.916	6152.000
X		8768.000	52510.000	5747.000	15620.000	15220.000	70.5%	6.100	0.012	0.862	6526.000
S		93.500	245.500	42.260	87.460	94.720	0.3%	0.786	0.548	0.070	337.500
%RSD		1.066	0.468	0.735	0.560	0.623	0.4	12.880	4465.000	8.141	5.171
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:55	322.900	41.910	327.500	368.200	0.157	1.095	0.864	17.770	17.680	187.400
2	21:12:22	342.400	41.220	320.600	357.100	0.177	1.250	1.415	17.140	17.760	185.900
3	21:12:49	321.800	41.550	325.100	348.000	0.136	1.012	0.590	17.380	17.370	186.200
X		329.000	41.560	324.400	357.800	0.156	1.119	0.956	17.430	17.600	186.500
S		11.600	0.348	3.502	10.120	0.021	0.121	0.420	0.314	0.207	0.799
%RSD		3.527	0.838	1.079	2.828	13.230	10.780	43.940	1.803	1.177	0.428
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:55	181.200	182.000	0.555	0.347	60.720	63.370	-0.959	-0.308	3.472	55.360
2	21:12:22	181.900	188.000	0.984	0.678	56.690	55.480	2.073	0.434	-1.735	56.150
3	21:12:49	173.500	176.900	-0.767	0.453	57.470	55.420	-2.491	-0.662	4.882	55.100
X		178.900	182.300	0.257	0.493	58.290	58.090	-0.459	-0.179	2.206	55.540
S		4.660	5.560	0.913	0.169	2.141	4.571	2.323	0.559	3.485	0.544
%RSD		2.605	3.050	354.800	34.350	3.673	7.870	506.100	312.400	158.000	0.979
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:55	73.5%	7.858	7.143	8.002	1.983	0.006	0.011	0.035	0.041	74.7%
2	21:12:22	73.3%	8.239	7.987	8.017	1.421	0.006	0.024	0.061	0.105	74.9%
3	21:12:49	74.2%	7.846	8.058	8.136	3.258	0.012	0.027	0.152	0.082	75.6%
X		73.7%	7.981	7.729	8.052	2.221	0.008	0.021	0.083	0.076	75.0%
S		0.5%	0.224	0.509	0.073	0.941	0.004	0.008	0.061	0.032	0.5%
%RSD		0.6	2.800	6.586	0.906	42.390	42.630	40.290	74.260	42.380	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:55	0.431	0.689	0.103	0.055	75.460	73.430	79.8%	0.006	0.013	0.401
2	21:12:22	0.583	0.609	0.103	0.124	78.510	72.730	80.6%	-0.008	0.009	0.410
3	21:12:49	0.432	0.598	0.105	0.087	75.360	71.880	81.7%	-0.002	0.013	0.388
X		0.482	0.632	0.104	0.089	76.440	72.680	80.7%	-0.001	0.012	0.399
S		0.087	0.050	0.001	0.035	1.789	0.778	1.0%	0.007	0.002	0.011
%RSD		18.130	7.925	1.187	39.020	2.341	1.070	1.2	544.500	19.540	2.705
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:11:55	0.332	0.400	132.3%							
2	21:12:22	0.377	0.398	136.9%							
3	21:12:49	0.327	0.396	140.0%							
X		0.346	0.398	136.4%							
S		0.028	0.002	3.8%							
%RSD		7.955	0.562	2.8							

VE06096-001 5/11/2020 21:17:19

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:17:46	77.2%	0.074	<u>M 591.700</u>	<u>M 614.700</u>	182.200	<u>T 72130.000</u>	<u>T 2856.000</u>	2883.000	3460.000	136.900
2	21:18:13	76.5%	0.052	<u>M 614.200</u>	<u>M 603.300</u>	177.700	<u>T 70830.000</u>	<u>T 2885.000</u>	2886.000	3515.000	136.400
3	21:18:40	75.7%	0.041	<u>M 592.500</u>	<u>M 579.500</u>	166.400	<u>T 72130.000</u>	<u>T 2923.000</u>	2883.000	3533.000	132.000
X		76.5%	0.055	<u>M 599.500</u>	<u>M 599.200</u>	175.500	<u>T 71700.000</u>	<u>T 2888.000</u>	2884.000	3503.000	135.100
S		0.8%	0.017	<u>M 12.760</u>	<u>M 17.990</u>	8.145	<u>T 749.600</u>	<u>T 33.470</u>	1.521	37.670	2.679
%RSD		1.0	30.520	<u>M 2.128</u>	<u>M 3.002</u>	4.642	<u>T 1.046</u>	<u>T 1.159</u>	0.053	1.075	1.983
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:17:46	<u>T 8664.000</u>	<u>T 57000.000</u>	1620.000	60350.000	<u>T 60370.000</u>	71.1%	3.318	1.041	1.220	6081.000
2	21:18:13	<u>T 8489.000</u>	<u>T 58060.000</u>	1605.000	60090.000	<u>T 60700.000</u>	70.6%	3.575	1.404	1.313	5962.000
3	21:18:40	<u>T 8520.000</u>	<u>T 57940.000</u>	1604.000	61160.000	<u>T 60590.000</u>	70.3%	3.991	1.473	1.209	6093.000
X		<u>T 8558.000</u>	<u>T 57670.000</u>	1610.000	60530.000	<u>T 60550.000</u>	70.7%	3.628	1.306	1.247	6045.000
S		<u>T 93.710</u>	<u>T 579.600</u>	9.212	559.400	<u>T 169.200</u>	0.4%	0.340	0.232	0.057	72.150
%RSD		<u>T 1.095</u>	<u>T 1.005</u>	0.572	0.924	<u>T 0.279</u>	0.6	9.359	17.740	4.563	1.193
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:17:46	207.000	12.780	209.600	335.000	0.566	1.243	0.850	10.440	11.290	28.570
2	21:18:13	207.600	12.800	206.100	331.100	0.561	1.272	0.728	10.930	10.990	29.050
3	21:18:40	209.500	12.710	205.900	326.100	0.553	1.447	1.344	10.460	10.150	28.680
X		208.100	12.760	207.200	330.700	0.560	1.321	0.974	10.610	10.810	28.770
S		1.303	0.045	2.064	4.482	0.006	0.110	0.326	0.275	0.593	0.253
%RSD		0.626	0.349	0.996	1.355	1.088	8.346	33.480	2.590	5.488	0.880
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:17:46	29.630	28.570	1.868	-0.052	9398.000	9342.000	28.890	5.268	-1.761	120.800
2	21:18:13	30.020	28.030	1.836	0.431	9350.000	9473.000	32.910	6.188	-1.797	121.700
3	21:18:40	27.990	27.900	2.227	0.865	9412.000	9372.000	34.240	6.566	-3.267	121.700
X		29.220	28.170	1.977	0.414	9387.000	9396.000	32.020	6.007	-2.275	121.400
S		1.077	0.354	0.217	0.459	32.460	68.850	2.785	0.668	0.859	0.525
%RSD		3.686	1.258	10.970	110.600	0.346	0.733	8.698	11.110	37.770	0.433
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:17:46	73.9%	21.070	21.400	20.640	2.578	0.264	0.229	-0.041	0.021	73.5%
2	21:18:13	75.1%	20.660	20.700	20.310	3.558	0.248	0.258	-0.053	0.027	73.7%
3	21:18:40	75.5%	20.570	20.970	21.110	4.865	0.220	0.321	-0.029	0.032	73.5%
X		74.8%	20.770	21.020	20.690	3.667	0.244	0.269	-0.041	0.027	73.6%
S		0.8%	0.266	0.352	0.402	1.147	0.023	0.047	0.012	0.005	0.1%
%RSD		1.1	1.283	1.673	1.943	31.290	9.266	17.480	29.070	19.700	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:17:46	0.075	0.118	0.271	0.227	46.660	44.210	79.9%	-0.007	0.007	0.134
2	21:18:13	0.114	0.123	0.221	0.170	46.830	44.780	80.5%	0.008	0.006	0.200
3	21:18:40	0.107	0.139	0.233	0.158	45.680	45.120	81.0%	0.006	0.006	0.209
X		0.099	0.127	0.242	0.185	46.390	44.710	80.5%	0.003	0.006	0.181
S		0.021	0.011	0.026	0.037	0.621	0.460	0.5%	0.008	0.001	0.041
%RSD		20.970	8.738	10.860	19.990	1.338	1.029	0.7	316.500	14.690	22.760
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:17:46	0.197	0.172	82.9%							
2	21:18:13	0.226	0.204	84.6%							
3	21:18:40	0.195	0.206	84.2%							
X		0.206	0.194	83.9%							
S		0.018	0.019	0.8%							
%RSD		8.545	9.869	1.0							

CCV MW126865 5/11/2020 21:23:12 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:39	75.2%	311.100	317.900	305.200	23.570	±65250.000	±62650.000	±63290.000	±63900.000	309.000
2	21:24:06	76.2%	307.800	315.300	309.800	22.440	±65480.000	±63880.000	±63140.000	±64470.000	303.600
3	21:24:33	75.6%	315.800	327.600	311.700	23.790	±65450.000	±62850.000	±62770.000	±62940.000	298.600
X		75.6%	103.862%	106.754%	102.973%	23.270	±108.992%	±63120.000	±63070.000	±106.281%	101.233%
S		0.5%	n/a	n/a	n/a	0.726	±n/a	±659.100	±269.900	±n/a	n/a
%RSD		0.7	1.300	2.023	1.073	3.121	±0.189	±1.044	±0.428	±1.211	1.711
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:39	±3404.000	761.800	±65440.000	63060.000	±63010.000	73.2%	314.800	306.900	305.600	2407.000
2	21:24:06	±3367.000	768.500	±64350.000	62280.000	±63760.000	74.0%	309.900	310.300	301.600	2612.000
3	21:24:33	±3365.000	752.800	±63570.000	62060.000	±63610.000	73.9%	305.800	310.400	304.000	1825.000
X		±3378.000	761.000	±107.419%	62470.000	±105.766%	73.7%	103.385%	103.057%	101.250%	2281.000
S		±21.860	7.875	±n/a	523.500	±n/a	0.4%	n/a	n/a	n/a	408.100
%RSD		±0.647	1.035	±1.455	0.838	±0.622	0.6	1.457	0.648	0.659	17.890
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:39	±62800.000	301.300	±64180.000	±62800.000	303.000	298.500	294.100	280.500	291.200	294.800
2	21:24:06	±62570.000	296.600	±63000.000	±62440.000	298.500	290.200	276.500	279.500	282.800	293.500
3	21:24:33	±63520.000	296.900	±63500.000	±62960.000	297.100	290.900	301.000	282.200	292.400	301.000
X		±62960.000	99.418%	±63560.000	±104.558%	99.843%	97.732%	290.600	280.800	96.274%	98.807%
S		±499.800	n/a	±593.400	±n/a	n/a	n/a	12.650	1.381	n/a	n/a
%RSD		±0.794	0.884	±0.934	±0.431	1.018	1.575	4.355	0.492	1.811	1.346
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:39	297.500	292.400	307.800	298.600	38.640	37.040	1424.000	311.800	0.985	299.200
2	21:24:06	299.200	294.200	300.800	288.900	33.890	35.740	1355.000	294.300	-0.401	302.700
3	21:24:33	296.900	297.400	309.700	293.400	29.970	26.180	1394.000	308.700	-0.450	302.400
X		297.900	294.700	102.039%	293.600	34.170	32.990	1391.000	101.653%	0.045	100.477%
S		1.162	2.535	n/a	4.850	4.340	5.934	34.940	n/a	0.815	n/a
%RSD		0.390	0.860	1.537	1.652	12.700	17.990	2.512	3.057	1809.000	0.643
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:39	76.8%	315.700	316.900	313.000	294.800	288.300	288.400	298.700	299.100	75.1%
2	21:24:06	75.8%	319.200	322.200	326.400	302.300	291.200	289.700	306.400	302.400	75.0%
3	21:24:33	76.9%	329.400	332.900	334.700	310.200	297.100	296.000	308.300	309.300	74.4%
X		76.5%	107.151%	107.996%	324.700	302.400	97.391%	291.300	304.500	101.198%	74.8%
S		0.6%	n/a	n/a	10.950	7.741	n/a	4.080	5.075	n/a	0.4%
%RSD		0.8	2.210	2.515	3.372	2.560	1.545	1.400	1.667	1.721	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:39	305.400	304.400	309.200	300.600	312.100	302.000	80.6%	314.500	307.200	309.600
2	21:24:06	310.100	307.600	313.200	298.600	316.100	301.900	81.3%	314.000	309.100	310.800
3	21:24:33	317.600	318.200	322.800	304.000	321.100	308.400	81.5%	312.300	309.600	312.700
X		103.674%	103.359%	315.100	100.346%	105.480%	101.369%	81.1%	313.600	102.876%	103.676%
S		n/a	n/a	6.982	n/a	n/a	n/a	0.5%	1.132	n/a	n/a
%RSD		1.970	2.317	2.216	0.912	1.418	1.230	0.6	0.361	0.414	0.517
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:23:39	312.900	313.500	81.1%							
2	21:24:06	311.300	313.600	82.7%							
3	21:24:33	315.100	317.400	84.2%							
X		104.367%	104.944%	82.7%							
S		n/a	n/a	1.5%							
%RSD		0.603	0.720	1.9							

■ CCB IM9968-01 5/11/2020 21:29:05 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:32	84.3%	0.003	5.503	5.757	34.170	3.810	3.490	3.610	3.569	0.144
2	21:30:00	83.5%	0.014	5.590	4.908	27.270	3.607	3.445	2.991	3.597	0.159
3	21:30:27	81.1%	0.026	3.718	5.019	25.020	2.973	3.073	2.822	3.131	0.133
X		83.0%	0.014	4.937	5.228	28.820	3.463	3.336	3.141	3.432	0.145
S		1.7%	0.011	1.056	0.461	4.770	0.437	0.229	0.415	0.261	0.013
%RSD		2.0	78.720	21.390	8.819	16.550	12.610	6.853	13.210	7.607	9.120
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:32	3.102	549.800	15.660	2.496	4.299	80.1%	-0.041	0.031	-0.003	20.180
2	21:30:00	4.033	527.700	15.370	9.023	4.341	79.5%	0.106	0.002	0.002	23.900
3	21:30:27	2.827	537.400	15.170	1.256	2.777	78.6%	-0.040	0.002	-0.015	23.980
X		3.321	538.300	15.400	4.258	3.806	79.4%	0.008	0.012	-0.005	22.690
S		0.632	11.110	0.249	4.172	0.891	0.8%	0.085	0.017	0.009	2.173
%RSD		19.040	2.064	1.620	97.990	23.420	1.0	1014.000	140.800	174.400	9.581
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:32	2.254	0.025	3.162	10.420	-0.003	0.012	0.299	-0.018	-0.052	0.040
2	21:30:00	2.553	0.047	2.765	6.359	-0.004	0.021	0.427	-0.047	-0.028	0.009
3	21:30:27	1.957	0.020	3.196	7.956	-0.002	-0.014	0.383	-0.025	-0.003	0.021
X		2.255	0.031	3.041	8.245	-0.003	0.006	0.370	-0.030	-0.028	0.023
S		0.298	0.014	0.240	2.046	0.001	0.018	0.065	0.015	0.025	0.015
%RSD		13.220	45.900	7.892	24.820	35.900	282.700	17.610	50.450	88.830	65.900
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:32	-0.105	0.046	-0.152	0.480	13.790	12.500	-0.783	-0.209	1.343	0.018
2	21:30:00	0.092	0.032	-0.262	0.854	16.120	12.070	-4.162	-0.916	0.713	0.012
3	21:30:27	-0.105	0.017	-0.263	0.336	14.900	11.040	-4.208	-0.862	-2.068	0.010
X		-0.039	0.032	-0.226	0.557	14.930	11.870	-3.051	-0.662	-0.004	0.013
S		0.114	0.015	0.064	0.267	1.166	0.750	1.964	0.394	1.815	0.004
%RSD		289.500	45.990	28.200	48.000	7.806	6.316	64.380	59.460	45150.000	31.860
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:32	80.9%	0.478	0.599	0.403	1.261	0.020	0.013	0.035	0.014	81.7%
2	21:30:00	80.2%	0.493	0.514	0.385	-0.062	0.029	0.022	0.011	0.020	81.1%
3	21:30:27	82.6%	0.390	0.504	0.370	2.020	0.006	0.010	-0.001	0.009	82.1%
X		81.3%	0.454	0.539	0.386	1.073	0.018	0.015	0.015	0.014	81.6%
S		1.2%	0.055	0.052	0.017	1.053	0.012	0.006	0.019	0.005	0.5%
%RSD		1.5	12.230	9.684	4.287	98.180	64.200	41.290	125.700	35.670	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:32	0.101	0.114	0.416	0.296	-0.005	0.017	83.7%	0.017	0.011	0.039
2	21:30:00	0.037	0.119	0.444	0.484	-0.005	-0.003	85.3%	0.001	0.019	0.007
3	21:30:27	0.048	0.113	0.405	0.351	0.031	0.027	85.3%	-0.003	0.011	0.033
X		0.062	0.115	0.421	0.377	0.007	0.014	84.8%	0.005	0.014	0.026
S		0.034	0.003	0.020	0.097	0.021	0.015	0.9%	0.011	0.005	0.017
%RSD		55.550	3.029	4.748	25.630	294.100	109.500	1.1	224.400	35.000	63.540
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:29:32	0.021	0.030	91.4%							
2	21:30:00	0.041	0.025	90.5%							
3	21:30:27	0.027	0.028	92.0%							
X		0.030	0.028	91.3%							
S		0.010	0.003	0.8%							
%RSD		33.950	9.506	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:35:25	79.9%	-0.007	12.110	11.820	107.000	9332.000	995.100	1001.000	1460.000	79.460
2	21:35:52	79.9%	0.004	10.660	10.830	106.000	9377.000	981.200	985.900	1468.000	80.880
3	21:36:19	77.8%	0.028	11.880	11.920	113.500	9437.000	1001.000	985.200	1443.000	80.280
X		79.2%	0.008	11.550	11.520	108.800	9382.000	992.400	990.800	1457.000	80.210
S		1.2%	0.018	0.780	0.605	4.085	52.800	10.040	9.034	12.610	0.717
%RSD		1.5	206.800	6.754	5.252	3.753	0.563	1.011	0.912	0.865	0.894
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:35:25	7779.000	49570.000	5642.000	13340.000	13360.000	74.0%	8.282	-0.180	0.859	1992.000
2	21:35:52	7959.000	50090.000	5813.000	14340.000	13530.000	72.0%	8.578	-0.231	0.810	1878.000
3	21:36:19	7756.000	50350.000	5703.000	13770.000	13520.000	72.0%	7.667	-0.123	0.887	1964.000
X		7831.000	50000.000	5719.000	13820.000	13470.000	72.6%	8.176	-0.178	0.852	1945.000
S		111.000	395.000	87.010	497.300	99.090	1.1%	0.464	0.054	0.039	59.270
%RSD		1.418	0.790	1.521	3.599	0.736	1.6	5.680	30.230	4.583	3.048
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:35:25	6540.000	340.200	6237.000	6409.000	1.306	35.730	33.950	8.236	8.675	43.750
2	21:35:52	6663.000	348.000	6418.000	6678.000	1.297	36.700	35.110	8.248	8.778	44.210
3	21:36:19	6680.000	346.000	6345.000	6555.000	1.375	36.420	36.700	8.282	8.560	43.470
X		6628.000	344.700	6333.000	6548.000	1.326	36.280	35.250	8.256	8.671	43.810
S		76.660	4.059	91.140	134.500	0.043	0.499	1.378	0.024	0.109	0.377
%RSD		1.157	1.178	1.439	2.054	3.232	1.375	3.910	0.286	1.256	0.860
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:35:25	42.310	42.740	3.283	0.017	61.900	63.480	1.822	0.416	-1.824	53.620
2	21:35:52	41.980	43.810	3.746	0.362	57.790	61.830	-1.048	-0.305	2.601	54.980
3	21:36:19	42.310	43.170	4.037	-0.081	57.830	57.120	-3.266	-0.724	0.398	54.530
X		42.200	43.240	3.689	0.099	59.170	60.810	-0.830	-0.204	0.392	54.380
S		0.194	0.543	0.381	0.233	2.363	3.298	2.551	0.577	2.212	0.692
%RSD		0.459	1.255	10.320	234.400	3.994	5.424	307.200	282.500	564.900	1.273
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:35:25	75.3%	1158.000	1168.000	1175.000	1608.000	8.930	0.546	-1.067	0.478	75.6%
2	21:35:52	74.8%	1157.000	1170.000	1176.000	1594.000	9.102	0.497	-0.930	0.649	75.7%
3	21:36:19	74.9%	1168.000	1193.000	1171.000	1593.000	9.042	0.548	-0.971	0.535	75.3%
X		75.0%	1161.000	1177.000	1174.000	1598.000	9.025	0.530	-0.989	0.554	75.6%
S		0.3%	6.028	13.940	2.723	8.329	0.087	0.029	0.070	0.087	0.2%
%RSD		0.4	0.519	1.185	0.232	0.521	0.968	5.418	7.089	15.730	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:35:25	0.690	0.223	2.247	2.386	44.960	42.160	80.6%	-0.003	0.004	0.125
2	21:35:52	0.714	0.150	2.359	2.268	44.610	41.830	82.0%	0.003	0.002	0.112
3	21:36:19	0.705	0.224	2.354	2.374	45.550	42.480	81.7%	-0.001	0.008	0.131
X		0.703	0.199	2.320	2.343	45.040	42.160	81.5%	-0.000	0.005	0.122
S		0.012	0.042	0.064	0.065	0.475	0.326	0.7%	0.003	0.003	0.010
%RSD		1.714	21.320	2.740	2.776	1.054	0.773	0.9	1250.000	69.880	7.978
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:35:25	0.098	0.112	88.4%							
2	21:35:52	0.121	0.106	89.2%							
3	21:36:19	0.112	0.123	88.6%							
X		0.110	0.114	88.7%							
S		0.011	0.009	0.5%							
%RSD		10.050	7.535	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:41:17	81.2%	0.004	7.740	7.883	92.300	34380.000	1941.000	2004.000	3368.000	188.600
2	21:41:44	81.3%	0.015	9.054	8.492	87.840	35380.000	1922.000	1956.000	3297.000	183.000
3	21:42:11	78.3%	-0.018	7.823	8.776	93.400	34470.000	1905.000	1975.000	3356.000	191.300
X		80.3%	0.000	8.206	8.384	91.180	34740.000	1923.000	1978.000	3340.000	187.600
S		1.7%	0.017	0.736	0.456	2.942	552.100	18.070	24.600	37.940	4.259
%RSD		2.1	4066.000	8.970	5.441	3.226	1.589	0.940	1.243	1.136	2.270
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:41:17	5896.000	49280.000	23340.000	16680.000	15660.000	73.7%	32.070	0.012	0.967	2524.000
2	21:41:44	5715.000	48880.000	23080.000	16040.000	15980.000	73.6%	30.500	-0.007	1.007	2573.000
3	21:42:11	5868.000	49980.000	23760.000	16400.000	15630.000	74.3%	29.200	-0.169	1.055	2647.000
X		5826.000	49380.000	23390.000	16380.000	15750.000	73.8%	30.590	-0.055	1.010	2581.000
S		97.360	560.300	340.100	321.700	196.700	0.4%	1.438	0.099	0.044	61.950
%RSD		1.671	1.135	1.454	1.964	1.249	0.5	4.700	181.100	4.395	2.400
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:41:17	1593.000	36.900	1607.000	1655.000	0.232	3.295	2.726	56.520	56.040	99.830
2	21:41:44	1632.000	37.100	1575.000	1672.000	0.254	3.120	2.925	54.550	55.540	100.900
3	21:42:11	1598.000	36.280	1592.000	1702.000	0.246	2.855	2.633	55.340	57.080	101.600
X		1607.000	36.760	1591.000	1676.000	0.244	3.090	2.761	55.470	56.220	100.800
S		21.060	0.423	15.860	23.560	0.011	0.222	0.149	0.992	0.784	0.875
%RSD		1.310	1.152	0.997	1.406	4.657	7.172	5.405	1.788	1.395	0.869
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:41:17	100.300	99.650	0.283	0.939	82.700	83.050	1.056	0.294	-3.282	69.470
2	21:41:44	95.290	98.940	-0.775	0.846	79.380	87.520	-1.899	-0.402	-0.443	69.160
3	21:42:11	95.010	99.350	-0.259	-0.203	83.150	81.170	1.693	0.390	-1.158	70.190
X		96.850	99.310	-0.250	0.527	81.740	83.910	0.283	0.094	-1.628	69.610
S		2.956	0.354	0.529	0.634	2.057	3.264	1.917	0.432	1.477	0.531
%RSD		3.052	0.356	211.600	120.300	2.516	3.890	676.700	459.100	90.730	0.764
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:41:17	75.8%	3.048	3.369	2.948	7.816	0.124	0.079	0.147	0.199	75.3%
2	21:41:44	76.8%	3.191	3.055	3.311	10.210	0.099	0.101	0.249	0.183	75.7%
3	21:42:11	76.7%	3.240	3.468	3.305	9.931	0.151	0.103	0.170	0.233	76.0%
X		76.4%	3.160	3.297	3.188	9.320	0.125	0.094	0.189	0.205	75.7%
S		0.6%	0.100	0.216	0.208	1.310	0.026	0.014	0.054	0.026	0.3%
%RSD		0.7	3.157	6.538	6.522	14.060	20.880	14.390	28.520	12.600	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:41:17	0.250	0.506	6.167	6.400	10.840	10.570	80.6%	0.005	0.006	2.797
2	21:41:44	0.387	0.436	6.474	6.105	11.400	10.910	81.1%	0.004	0.009	3.039
3	21:42:11	0.423	0.377	6.165	6.035	10.840	10.380	82.6%	-0.001	0.004	2.894
X		0.353	0.439	6.269	6.180	11.030	10.620	81.4%	0.003	0.007	2.910
S		0.091	0.065	0.178	0.194	0.321	0.267	1.1%	0.003	0.002	0.122
%RSD		25.860	14.710	2.842	3.135	2.909	2.511	1.3	136.900	35.650	4.187
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:41:17	2.816	2.847	92.3%							
2	21:41:44	2.858	2.925	94.1%							
3	21:42:11	2.839	2.886	93.2%							
X		2.838	2.886	93.2%							
S		0.021	0.039	0.9%							
%RSD		0.745	1.346	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:47:08	80.1%	101.600	41.580	41.930	99.290	36040.000	2527.000	2599.000	4401.000	315.200
2	21:47:35	78.7%	100.600	38.140	42.340	93.020	35760.000	2532.000	2632.000	4544.000	326.100
3	21:48:02	78.3%	98.980	41.200	42.730	104.500	37650.000	2593.000	2672.000	4653.000	327.100
X		79.0%	100.400	40.310	42.330	98.950	36480.000	2551.000	2634.000	4533.000	322.800
S		0.9%	1.309	1.885	0.402	5.768	1021.000	36.660	36.590	126.300	6.603
%RSD		1.2	1.304	4.676	0.950	5.830	2.799	1.437	1.389	2.786	2.046
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:47:08	6833.000	50180.000	24700.000	17290.000	16860.000	73.7%	113.100	101.000	102.100	3477.000
2	21:47:35	6945.000	50980.000	24510.000	16990.000	16850.000	72.6%	113.500	103.000	102.400	4105.000
3	21:48:02	7137.000	52320.000	25730.000	18260.000	17350.000	71.0%	112.600	105.500	106.100	4021.000
X		6972.000	51160.000	24980.000	17510.000	17020.000	72.4%	113.100	103.100	103.600	3868.000
S		154.000	1079.000	658.500	661.300	287.000	1.4%	0.441	2.265	2.238	340.900
%RSD		2.208	2.110	2.636	3.776	1.686	1.9	0.390	2.196	2.161	8.815
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:47:08	2636.000	137.500	2452.000	2607.000	103.400	103.500	105.300	153.600	158.300	206.900
2	21:47:35	2632.000	142.400	2508.000	2584.000	103.600	104.000	103.600	154.000	158.400	209.400
3	21:48:02	2656.000	142.700	2545.000	2656.000	105.100	109.100	114.900	155.800	164.000	211.800
X		2641.000	140.900	2501.000	2616.000	104.000	105.500	107.900	154.400	160.200	209.400
S		13.100	2.893	46.660	36.630	0.916	3.070	6.074	1.180	3.241	2.432
%RSD		0.496	2.054	1.865	1.400	0.881	2.909	5.628	0.764	2.022	1.161
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:47:08	191.000	202.500	112.200	103.800	92.260	87.050	515.700	114.500	-3.305	171.200
2	21:47:35	192.600	201.800	107.100	97.910	83.510	82.710	464.600	100.300	2.390	172.900
3	21:48:02	204.900	207.300	102.700	101.200	80.900	89.660	450.900	97.340	3.793	172.200
X		196.200	203.900	107.300	100.900	85.560	86.470	477.100	104.100	0.959	172.100
S		7.595	2.973	4.752	2.934	5.953	3.511	34.160	9.175	3.759	0.890
%RSD		3.872	1.459	4.427	2.906	6.958	4.060	7.160	8.816	391.900	0.517
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:47:08	77.2%	109.900	113.100	110.600	112.400	98.610	98.040	105.600	104.800	74.5%
2	21:47:35	77.3%	109.700	108.600	107.400	117.300	98.520	98.390	103.600	104.800	76.3%
3	21:48:02	77.8%	108.000	108.800	107.300	107.500	98.650	98.240	105.000	104.400	76.4%
X		77.4%	109.200	110.200	108.400	112.400	98.600	98.220	104.700	104.700	75.7%
S		0.3%	1.059	2.514	1.893	4.914	0.065	0.173	0.990	0.278	1.1%
%RSD		0.4	0.970	2.282	1.745	4.372	0.066	0.176	0.945	0.266	1.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:47:08	53.000	29.090	115.700	107.300	120.900	115.500	81.0%	100.500	106.600	111.900
2	21:47:35	51.970	29.170	111.500	108.600	117.200	112.400	82.5%	98.170	104.400	109.100
3	21:48:02	52.470	28.650	112.300	107.000	114.700	110.300	83.2%	97.260	104.400	111.800
X		52.480	28.970	113.200	107.600	117.600	112.700	82.2%	98.640	105.100	111.000
S		0.515	0.280	2.257	0.816	3.111	2.592	1.1%	1.670	1.293	1.576
%RSD		0.982	0.965	1.994	0.758	2.645	2.300	1.4	1.693	1.230	1.420
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:47:08	112.700	112.800	91.3%							
2	21:47:35	110.200	110.300	92.8%							
3	21:48:02	110.200	110.600	93.5%							
X		111.000	111.200	92.5%							
S		1.439	1.373	1.1%							
%RSD		1.296	1.234	1.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:52:58	85.8%	0.024	5.112	4.990	101.600	<u>19990.000</u>	7.600	7.956	7.878	26.330
2	21:53:25	84.0%	-0.007	6.792	4.481	104.700	<u>19990.000</u>	7.902	7.773	8.637	27.300
3	21:53:52	80.7%	-0.018	6.305	5.127	98.880	<u>20000.000</u>	8.123	7.766	8.155	27.450
X		83.5%	-0.000	6.070	4.866	101.700	<u>19990.000</u>	7.875	7.832	8.223	27.030
S		2.6%	0.021	0.864	0.340	2.892	<u>14.439</u>	0.262	0.108	0.384	0.609
%RSD		3.1	4510.000	14.240	6.995	2.844	<u>10.022</u>	3.332	1.375	4.668	2.255
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:52:58	70.030	<u>62280.000</u>	1169.000	95.290	98.600	78.1%	6.132	0.910	3.107	2566.000
2	21:53:25	73.470	<u>62560.000</u>	1161.000	90.980	96.500	76.1%	5.769	2.135	<u>6.443</u>	1451.000
3	21:53:52	70.780	<u>63570.000</u>	1170.000	94.860	94.630	76.3%	5.236	0.726	3.185	2318.000
X		71.420	<u>62800.000</u>	1166.000	93.710	96.580	76.8%	5.712	1.257	<u>4.245</u>	2112.000
S		1.809	<u>678.100</u>	5.241	2.375	1.988	1.1%	0.451	0.766	<u>1.904</u>	585.600
%RSD		2.532	<u>1.080</u>	0.449	2.534	2.058	1.4	7.890	60.940	<u>44.840</u>	27.730
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:52:58	628.000	7.199	638.400	617.600	26.400	2.992	3.191	9.996	10.210	17.940
2	21:53:25	644.500	7.458	658.700	653.400	26.850	3.400	2.734	10.060	10.950	19.250
3	21:53:52	648.900	7.338	636.300	640.800	26.820	3.045	2.727	10.270	10.500	19.010
X		640.500	7.332	644.500	637.300	26.690	3.145	2.884	10.110	10.550	18.730
S		10.990	0.129	12.370	18.150	0.249	0.222	0.266	0.144	0.371	0.696
%RSD		1.715	1.765	1.920	2.849	0.932	7.046	9.225	1.429	3.517	3.714
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:52:58	16.850	18.820	-0.618	0.302	24.430	21.820	1.400	0.289	-0.602	0.437
2	21:53:25	17.220	17.580	-0.099	-0.134	23.270	22.110	-1.439	-0.304	0.011	0.358
3	21:53:52	16.150	17.750	-0.184	0.806	26.250	21.660	0.620	0.210	-2.692	0.393
X		16.740	18.050	-0.300	0.325	24.650	21.860	0.193	0.065	-1.094	0.396
S		0.542	0.676	0.278	0.470	1.503	0.229	1.467	0.322	1.417	0.040
%RSD		3.239	3.745	92.700	144.700	6.099	1.048	758.700	495.000	129.500	9.977
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:52:58	79.5%	6.706	6.342	6.425	2.336	0.006	0.019	0.036	0.137	80.5%
2	21:53:25	81.3%	7.203	7.071	6.557	1.038	0.021	0.029	0.086	0.080	79.8%
3	21:53:52	81.1%	6.899	6.811	7.210	1.328	0.030	0.020	0.110	0.018	79.2%
X		80.6%	6.936	6.741	6.731	1.567	0.019	0.023	0.077	0.078	79.9%
S		1.0%	0.251	0.370	0.420	0.682	0.012	0.005	0.037	0.060	0.7%
%RSD		1.2	3.611	5.485	6.242	43.480	64.300	23.280	48.340	76.290	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:52:58	5.066	7.106	0.190	0.197	0.901	1.335	84.4%	0.005	0.003	2.824
2	21:53:25	5.285	7.196	0.200	0.205	1.330	1.197	84.7%	-0.005	0.004	2.769
3	21:53:52	4.960	7.392	0.151	0.183	1.100	1.416	85.8%	0.001	0.001	2.787
X		5.103	7.231	0.180	0.195	1.110	1.316	85.0%	-0.000	0.003	2.793
S		0.166	0.146	0.026	0.011	0.215	0.110	0.7%	0.005	0.001	0.028
%RSD		3.257	2.023	14.290	5.808	19.340	8.391	0.9	7874.000	48.670	1.003
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:52:58	2.702	2.806	92.0%							
2	21:53:25	2.852	2.859	91.5%							
3	21:53:52	2.811	2.751	92.8%							
X		2.788	2.805	92.1%							
S		0.078	0.054	0.6%							
%RSD		2.792	1.914	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:58:49	79.6%	-0.007	36.880	38.970	66.110	37380.000	3724.000	3706.000	4162.000	13.740
2	21:59:16	77.3%	-0.018	40.070	39.970	68.720	38190.000	3744.000	3680.000	4103.000	13.380
3	21:59:44	77.4%	0.017	44.640	40.760	64.970	38310.000	3794.000	3810.000	4212.000	14.210
X		78.1%	-0.003	40.530	39.900	66.600	37960.000	3754.000	3732.000	4159.000	13.780
S		1.3%	0.017	3.900	0.897	1.927	503.800	36.130	68.900	54.360	0.414
%RSD		1.6	671.600	9.623	2.248	2.893	1.327	0.962	1.846	1.307	3.004
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:58:49	6743.000	59630.000	7589.000	45280.000	45600.000	73.9%	3.603	-0.185	1.299	3438.000
2	21:59:16	6692.000	59220.000	7526.000	46520.000	46650.000	72.1%	4.019	-0.615	1.099	4106.000
3	21:59:44	6789.000	60550.000	7663.000	47300.000	47480.000	71.2%	4.499	-0.212	1.401	4217.000
X		6741.000	59800.000	7593.000	46360.000	46580.000	72.4%	4.040	-0.337	1.266	3920.000
S		48.570	680.700	68.660	1019.000	939.100	1.4%	0.448	0.241	0.154	421.600
%RSD		0.721	1.138	0.904	2.199	2.016	1.9	11.100	71.400	12.150	10.760
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:58:49	203.100	3.506	201.100	291.900	0.177	2.009	1.879	7.381	7.564	18.070
2	21:59:16	207.100	3.405	203.900	292.400	0.178	2.467	2.541	7.614	7.676	17.760
3	21:59:44	213.000	3.536	208.300	290.100	0.205	2.312	2.118	7.261	7.723	18.290
X		207.700	3.482	204.400	291.400	0.187	2.263	2.179	7.418	7.654	18.040
S		5.011	0.068	3.595	1.230	0.016	0.233	0.335	0.179	0.082	0.267
%RSD		2.412	1.962	1.759	0.422	8.623	10.280	15.390	2.416	1.067	1.482
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:58:49	15.870	18.250	0.544	-0.375	60.590	59.400	6.084	1.263	3.172	102.900
2	21:59:16	19.060	18.060	0.240	0.498	61.090	58.840	1.937	0.434	-1.783	104.600
3	21:59:44	18.330	18.670	-0.397	0.955	62.730	59.430	-3.242	-0.804	4.127	105.000
X		17.760	18.320	0.129	0.359	61.470	59.220	1.593	0.297	1.838	104.200
S		1.673	0.312	0.480	0.676	1.119	0.331	4.672	1.040	3.173	1.118
%RSD		9.422	1.702	372.700	188.100	1.820	0.559	293.400	349.700	172.600	1.073
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:58:49	76.2%	1.189	0.877	0.905	3.362	0.006	0.002	0.010	0.004	75.1%
2	21:59:16	74.4%	1.051	1.030	1.100	3.507	0.003	0.008	0.022	0.010	74.8%
3	21:59:44	74.3%	1.046	1.194	0.969	1.765	0.012	-0.002	0.049	0.010	75.7%
X		75.0%	1.095	1.034	0.991	2.878	0.007	0.003	0.027	0.008	75.2%
S		1.1%	0.081	0.159	0.099	0.966	0.005	0.005	0.020	0.004	0.4%
%RSD		1.4	7.396	15.360	10.040	33.580	64.920	182.900	74.180	47.740	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:58:49	0.130	0.162	0.386	0.577	30.380	28.730	81.3%	-0.003	0.001	0.222
2	21:59:16	0.112	0.136	0.476	0.384	29.200	29.470	81.5%	-0.003	0.002	0.269
3	21:59:44	0.104	0.114	0.522	0.390	29.980	28.150	82.5%	-0.005	0.004	0.276
X		0.115	0.137	0.461	0.450	29.850	28.780	81.8%	-0.003	0.002	0.256
S		0.014	0.024	0.069	0.110	0.600	0.664	0.7%	0.001	0.002	0.029
%RSD		11.790	17.580	15.040	24.390	2.009	2.309	0.8	35.860	71.350	11.500
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	21:58:49	0.221	0.228	86.6%							
2	21:59:16	0.193	0.241	85.9%							
3	21:59:44	0.265	0.257	86.2%							
X		0.226	0.242	86.2%							
S		0.036	0.014	0.3%							
%RSD		15.940	5.824	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:41	80.8%	0.004	<u>M 1596.000</u>	<u>M 1612.000</u>	-25.560	<u>TM 129600.000</u>	155.000	156.500	221.300	9.175
2	22:05:08	81.7%	-0.007	<u>M 1447.000</u>	<u>M 1472.000</u>	-25.300	<u>TM 130600.000</u>	153.300	154.000	213.000	9.350
3	22:05:35	81.6%	-0.007	<u>M 1497.000</u>	<u>M 1563.000</u>	-28.310	<u>TM 129600.000</u>	152.000	154.800	219.100	9.491
X		81.4%	-0.003	<u>M 1513.000</u>	<u>M 1549.000</u>	-26.390	<u>TM 129900.000</u>	153.400	155.100	217.800	9.339
S		0.5%	0.006	<u>M 75.390</u>	<u>M 70.770</u>	1.666	<u>TM 572.100</u>	1.515	1.285	4.278	0.158
%RSD		0.6	198.800	<u>M 4.981</u>	<u>M 4.568</u>	6.313	<u>TM 0.440</u>	0.988	0.829	1.964	1.696
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:41	195.700	13400.000	1829.000	18700.000	18200.000	77.4%	0.081	-0.090	0.148	755.000
2	22:05:08	194.600	13440.000	1831.000	18970.000	18240.000	77.1%	0.112	0.012	0.176	663.800
3	22:05:35	190.800	13340.000	1821.000	18720.000	17920.000	77.7%	0.020	-0.141	0.121	765.700
X		193.700	13390.000	1827.000	18800.000	18120.000	77.4%	0.071	-0.073	0.149	728.200
S		2.575	46.900	5.327	148.800	172.200	0.3%	0.047	0.078	0.028	55.990
%RSD		1.330	0.350	0.292	0.792	0.950	0.4	65.740	106.700	18.710	7.689
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:41	54.970	0.924	59.220	95.520	-0.000	0.329	-0.089	7.436	7.321	9.633
2	22:05:08	54.140	0.860	58.790	96.370	-0.010	0.312	0.099	7.532	7.842	9.375
3	22:05:35	51.640	0.892	60.570	98.020	-0.010	0.247	0.458	7.438	7.477	9.434
X		53.580	0.892	59.530	96.640	-0.007	0.296	0.156	7.469	7.547	9.480
S		1.733	0.032	0.930	1.270	0.006	0.043	0.278	0.055	0.268	0.135
%RSD		3.234	3.558	1.562	1.314	84.840	14.700	178.500	0.738	3.547	1.424
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:41	9.504	9.224	0.271	1.188	411.900	414.000	0.830	0.109	2.271	274.500
2	22:05:08	8.683	8.287	-0.236	0.424	418.600	416.500	-3.447	-0.781	0.083	271.500
3	22:05:35	9.230	8.697	0.238	0.293	427.200	418.600	-2.081	-0.497	0.746	273.900
X		9.139	8.736	0.091	0.635	419.200	416.400	-1.566	-0.390	1.033	273.300
S		0.418	0.469	0.284	0.484	7.671	2.313	2.185	0.455	1.122	1.593
%RSD		4.573	5.373	312.300	76.140	1.830	0.555	139.500	116.700	108.500	0.583
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:41	78.0%	0.292	0.498	0.436	7.097	0.000	0.002	0.011	0.005	76.6%
2	22:05:08	79.7%	0.661	0.561	0.542	9.065	0.000	-0.002	0.023	0.010	78.1%
3	22:05:35	80.0%	0.716	0.700	0.551	5.230	0.003	-0.002	-0.002	0.009	78.4%
X		79.2%	0.556	0.587	0.510	7.131	0.001	-0.001	0.011	0.008	77.7%
S		1.1%	0.230	0.103	0.064	1.918	0.002	0.002	0.013	0.003	1.0%
%RSD		1.4	41.430	17.630	12.570	26.890	173.200	329.800	118.100	34.380	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:04:41	0.283	0.318	0.171	0.154	0.719	0.492	80.9%	0.007	0.005	3.556
2	22:05:08	0.252	0.306	0.116	0.137	0.705	0.480	83.3%	0.011	0.002	3.496
3	22:05:35	0.264	0.355	0.196	0.146	0.684	0.469	83.5%	-0.009	0.007	3.525
X		0.266	0.326	0.161	0.146	0.702	0.480	82.6%	0.003	0.005	3.525
S		0.015	0.026	0.041	0.008	0.018	0.012	1.5%	0.010	0.002	0.030
%RSD		5.785	7.828	25.690	5.656	2.532	2.461	1.8	384.000	46.140	0.844
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:04:41	3.330	3.510	82.4%							
2	22:05:08	3.342	3.487	83.4%							
3	22:05:35	3.501	3.512	84.9%							
X		3.391	3.503	83.6%							
S		0.096	0.014	1.3%							
%RSD		2.818	0.405	1.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:32	73.9%	-0.018	<u>M 631.000</u>	<u>M 661.500</u>	-50.500	<u>TM 545900.000</u>	112.500	112.200	199.700	4.874
2	22:10:59	73.9%	-0.018	<u>M 614.700</u>	<u>M 654.600</u>	-49.460	<u>TM 531900.000</u>	115.700	116.000	202.000	5.070
3	22:11:25	71.5%	0.007	<u>M 618.700</u>	<u>M 656.100</u>	-51.040	<u>TM 539900.000</u>	114.800	116.700	203.800	4.802
X		73.1%	-0.009	<u>M 621.500</u>	<u>M 657.400</u>	-50.330	<u>TM 539200.000</u>	114.300	115.000	201.800	4.915
S		1.4%	0.014	<u>M 8.492</u>	<u>M 3.613</u>	0.805	<u>TM 6979.000</u>	1.620	2.416	2.068	0.139
%RSD		1.9	150.400	<u>M 1.366</u>	<u>M 0.550</u>	1.600	<u>TM 1.294</u>	1.417	2.101	1.025	2.820
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:32	144.200	<u>T 22700.000</u>	<u>T 12480.000</u>	70760.000	<u>T 74080.000</u>	71.8%	0.060	-0.065	0.155	719.800
2	22:10:59	138.400	<u>T 22590.000</u>	<u>T 12500.000</u>	71820.000	<u>T 72090.000</u>	72.4%	0.027	0.153	0.150	621.400
3	22:11:25	139.700	<u>T 23280.000</u>	<u>T 12850.000</u>	72490.000	<u>T 73030.000</u>	71.8%	-0.005	0.075	0.098	642.400
X		140.700	<u>T 22860.000</u>	<u>T 12610.000</u>	71690.000	<u>T 73070.000</u>	72.0%	0.027	0.054	0.135	661.200
S		3.028	<u>T 374.200</u>	<u>T 208.200</u>	870.900	<u>T 995.400</u>	0.3%	0.033	0.111	0.032	51.820
%RSD		2.151	<u>T 1.637</u>	<u>T 1.651</u>	1.215	<u>T 1.362</u>	0.4	119.100	204.800	23.600	7.837
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:32	16.790	12.530	24.890	185.700	0.022	0.813	7.118	2.697	2.894	86.570
2	22:10:59	14.560	12.660	24.490	177.300	0.052	0.816	7.518	3.069	2.897	83.560
3	22:11:25	17.620	12.870	25.070	180.400	0.010	0.842	9.237	2.873	3.157	85.550
X		16.320	12.680	24.820	181.100	0.028	0.823	7.958	2.879	2.983	85.230
S		1.579	0.171	0.296	4.233	0.022	0.016	1.126	0.186	0.151	1.528
%RSD		9.672	1.345	1.193	2.337	78.630	1.944	14.150	6.459	5.056	1.793
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:32	75.700	81.530	0.968	0.153	1891.000	1893.000	6.957	1.274	3.259	<u>TM 1148.000</u>
2	22:10:59	78.880	80.190	1.604	0.460	1911.000	1910.000	7.669	1.490	-0.376	<u>TM 1146.000</u>
3	22:11:25	80.070	82.900	2.090	0.490	1911.000	1896.000	9.646	1.901	1.708	<u>TM 1145.000</u>
X		78.220	81.540	1.554	0.368	1904.000	1899.000	8.091	1.555	1.531	<u>TM 1146.000</u>
S		2.261	1.358	0.563	0.187	11.570	9.040	1.393	0.318	1.824	<u>TM 1.260</u>
%RSD		2.891	1.665	36.210	50.690	0.608	0.476	17.220	20.470	119.200	<u>TM 0.110</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:32	75.6%	1.893	1.640	1.678	30.510	0.006	0.005	0.061	0.019	73.6%
2	22:10:59	75.6%	1.699	1.524	1.486	26.480	0.000	-0.002	0.008	0.018	74.2%
3	22:11:25	77.0%	1.760	1.745	1.443	21.860	0.000	-0.002	0.021	0.023	74.7%
X		76.1%	1.784	1.636	1.536	26.280	0.002	0.001	0.030	0.020	74.2%
S		0.8%	0.099	0.111	0.125	4.327	0.004	0.004	0.028	0.003	0.5%
%RSD		1.0	5.564	6.777	8.124	16.460	173.200	648.100	93.250	13.660	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:10:32	0.030	0.006	0.246	0.288	4.951	3.999	79.9%	-0.004	0.007	0.050
2	22:10:59	0.042	0.016	0.267	0.203	4.161	4.476	82.3%	0.004	0.009	0.071
3	22:11:25	0.042	0.037	0.298	0.304	4.236	4.390	81.9%	-0.000	0.012	0.069
X		0.038	0.020	0.270	0.265	4.449	4.288	81.4%	0.000	0.009	0.064
S		0.007	0.016	0.026	0.054	0.436	0.254	1.3%	0.004	0.003	0.012
%RSD		18.680	81.130	9.677	20.520	9.801	5.927	1.6	5499.000	31.460	18.810
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:10:32	0.069	0.066	79.2%							
2	22:10:59	0.049	0.069	81.5%							
3	22:11:25	0.046	0.062	82.1%							
X		0.055	0.066	80.9%							
S		0.012	0.003	1.5%							
%RSD		22.870	5.163	1.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:16:23	78.5%	-0.006	54.310	55.180	166.700	<u>144450.000</u>	<u>1717.000</u>	1688.000	2102.000	<u>M 615.200</u>
2	22:16:51	75.6%	0.041	53.480	56.290	171.000	<u>145410.000</u>	<u>1726.000</u>	1725.000	2143.000	<u>M 629.200</u>
3	22:17:17	75.8%	0.017	56.640	51.900	167.200	<u>143830.000</u>	<u>1715.000</u>	1711.000	2069.000	<u>M 606.700</u>
X		76.6%	0.017	54.810	54.460	168.300	<u>144560.000</u>	<u>1719.000</u>	1708.000	2105.000	<u>M 617.000</u>
S		1.6%	0.024	1.640	2.282	2.351	<u>1796.600</u>	<u>15.882</u>	18.640	37.210	<u>M 11.330</u>
%RSD		2.1	137.400	2.993	4.190	1.397	<u>1.787</u>	<u>0.342</u>	1.092	1.768	<u>M 1.836</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:16:23	<u>14165.000</u>	<u>160790.000</u>	<u>124930.000</u>	9083.000	9068.000	71.8%	66.460	1.617	1.539	3724.000
2	22:16:51	<u>14193.000</u>	<u>161190.000</u>	<u>125620.000</u>	9423.000	9244.000	68.8%	54.850	1.955	1.565	3766.000
3	22:17:17	<u>14054.000</u>	<u>159800.000</u>	<u>125020.000</u>	9141.000	8791.000	70.2%	65.030	1.112	1.576	4389.000
X		<u>14138.000</u>	<u>160590.000</u>	<u>125190.000</u>	9215.000	9034.000	70.3%	62.120	1.561	1.560	3960.000
S		<u>173.540</u>	<u>1716.900</u>	<u>1378.300</u>	181.600	228.200	1.5%	6.331	0.425	0.019	372.300
%RSD		<u>1.777</u>	<u>1.183</u>	<u>1.502</u>	1.970	2.526	2.2	10.190	27.200	1.231	9.403
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:16:23	719.500	34.040	713.600	722.300	0.646	2.563	1.693	55.460	57.810	50.530
2	22:16:51	739.600	35.180	741.000	760.300	0.532	2.566	2.775	56.600	60.760	52.440
3	22:17:17	724.400	34.780	724.600	736.200	0.527	2.234	2.971	54.300	56.040	51.740
X		727.800	34.660	726.400	739.600	0.568	2.454	2.480	55.460	58.200	51.570
S		10.490	0.580	13.820	19.220	0.068	0.191	0.688	1.150	2.385	0.968
%RSD		1.441	1.672	1.903	2.599	11.900	7.764	27.760	2.073	4.098	1.878
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:16:23	45.900	49.220	0.701	1.330	66.850	65.670	2.532	0.578	-1.833	41.040
2	22:16:51	46.370	51.630	0.602	0.441	64.240	61.300	1.169	0.182	1.861	40.160
3	22:17:17	49.970	48.350	0.511	0.050	63.190	63.200	0.419	0.075	0.391	40.380
X		47.410	49.730	0.605	0.607	64.760	63.390	1.373	0.278	0.140	40.530
S		2.229	1.697	0.095	0.656	1.884	2.190	1.071	0.265	1.860	0.457
%RSD		4.701	3.411	15.660	108.000	2.910	3.454	77.990	95.150	1332.000	1.128
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:16:23	76.0%	3.907	4.073	3.862	2.790	0.037	0.043	0.117	0.180	75.4%
2	22:16:51	75.4%	3.876	4.046	3.585	2.216	0.074	0.027	0.144	0.128	75.6%
3	22:17:17	75.3%	4.221	3.409	3.737	0.549	0.047	0.067	0.212	0.148	74.5%
X		75.6%	4.001	3.843	3.728	1.852	0.053	0.046	0.158	0.152	75.2%
S		0.4%	0.191	0.376	0.139	1.164	0.019	0.020	0.049	0.026	0.5%
%RSD		0.5	4.771	9.782	3.715	62.870	36.300	43.290	31.210	17.230	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:16:23	0.433	0.563	1.346	1.261	28.940	27.790	81.9%	0.005	0.017	1.379
2	22:16:51	0.445	0.624	1.331	1.595	30.030	28.520	81.8%	0.003	0.009	1.322
3	22:17:17	0.444	0.589	1.637	1.263	29.820	28.500	83.3%	-0.007	0.005	1.308
X		0.441	0.592	1.438	1.373	29.600	28.270	82.3%	0.001	0.010	1.336
S		0.007	0.031	0.172	0.192	0.576	0.416	0.8%	0.007	0.006	0.037
%RSD		1.491	5.170	11.990	14.010	1.945	1.471	1.0	1154.000	58.100	2.791
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:16:23		1.312	87.9%							
2	22:16:51		1.342	87.3%							
3	22:17:17		1.315	88.3%							
X			1.261	87.8%							
S			0.046	0.026							
%RSD			3.609	1.902							

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User Pre-dilution: 1.000

Run		Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:22:14		76.0%	0.029	143.300	140.700	206.700	76790.000	73377.000	3395.000	4115.000	TM 4295.000
2	22:22:41		74.6%	0.065	136.400	138.200	202.200	75700.000	73337.000	3335.000	4030.000	TM 4254.000
3	22:23:08		73.1%	0.043	129.500	135.900	198.000	74730.000	73344.000	3321.000	4081.000	TM 4361.000
X			74.6%	0.046	136.400	138.300	202.300	75740.000	73353.000	3350.000	4076.000	TM 4303.000
S			1.5%	0.018	6.931	2.387	4.349	71028.000	7121.280	39.240	42.800	TM 54.040
%RSD			2.0	40.320	5.081	1.726	2.150	71.357	70.635	1.171	1.050	TM 1.256
Run	Time		28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:22:14		7885.000	754560.000	710660.000	11980.000	11200.000	69.9%	57.030	6.637	14.350	3763.000
2	22:22:41		7617.000	754400.000	710380.000	11560.000	11110.000	69.3%	58.560	6.551	13.620	3936.000
3	22:23:08		7793.000	753750.000	710650.000	11300.000	11430.000	68.4%	57.210	6.932	14.050	3667.000
X			7765.000	754240.000	710560.000	11610.000	11250.000	69.2%	57.600	6.707	14.010	3789.000
S			7136.400	7430.500	7154.800	343.200	164.800	0.7%	0.837	0.200	0.366	136.300
%RSD			71.757	70.794	71.466	2.956	1.466	1.1	1.453	2.979	2.616	3.597
Run	Time		54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:22:14		2161.000	69.030	72074.000	2135.000	4.222	4.424	4.282	57.670	61.150	293.300
2	22:22:41		2134.000	67.510	72066.000	2160.000	4.234	4.288	3.843	56.640	58.110	298.100
3	22:23:08		2177.000	69.730	72100.000	2182.000	4.074	4.202	5.225	57.770	58.740	299.300
X			2157.000	68.760	72080.000	2159.000	4.177	4.305	4.450	57.360	59.330	296.900
S			21.560	1.136	717.780	23.490	0.089	0.112	0.706	0.623	1.607	3.173
%RSD			0.999	1.652	70.855	1.088	2.139	2.606	15.870	1.086	2.708	1.069
Run	Time		67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:22:14		264.900	280.700	0.818	1.390	147.000	143.400	4.138	0.852	2.607	62.340
2	22:22:41		272.400	282.000	0.451	0.035	156.000	150.500	3.569	0.767	-0.247	64.460
3	22:23:08		268.300	284.800	0.192	1.542	145.900	144.000	7.902	1.768	-2.516	63.440
X			268.500	282.500	0.487	0.989	149.700	146.000	5.203	1.129	-0.052	63.410
S			3.796	2.133	0.315	0.830	5.509	3.922	2.355	0.555	2.567	1.060
%RSD			1.413	0.755	64.570	83.880	3.681	2.687	45.260	49.180	4921.000	1.672
Run	Time		89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:22:14		75.1%	1.563	1.348	1.135	4.376	8.534	8.245	0.159	0.262	73.1%
2	22:22:41		73.6%	1.281	1.461	1.525	0.730	8.253	8.207	0.240	0.178	72.7%
3	22:23:08		75.0%	1.601	1.683	1.489	1.951	8.204	8.057	0.211	0.165	73.3%
X			74.5%	1.482	1.497	1.383	2.352	8.330	8.170	0.203	0.201	73.0%
S			0.8%	0.175	0.170	0.216	1.856	0.178	0.099	0.041	0.052	0.3%
%RSD			1.1	11.800	11.370	15.580	78.890	2.135	1.217	20.340	26.070	0.4
Run	Time		116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:22:14		1.190	1.654	20.750	20.060	43.270	40.720	80.1%	0.015	0.024	3.965
2	22:22:41		1.269	1.840	21.590	19.600	42.680	39.590	81.1%	0.018	0.028	4.213
3	22:23:08		1.284	1.600	21.410	19.860	41.730	39.640	81.9%	0.020	0.019	3.948
X			1.248	1.698	21.250	19.840	42.560	39.980	81.0%	0.018	0.023	4.042
S			0.051	0.126	0.443	0.227	0.776	0.640	0.9%	0.003	0.004	0.148
%RSD			4.074	7.431	2.086	1.146	1.824	1.602	1.1	15.630	17.560	3.665
Run	Time		207Pb	208Pb	209Bi							
			ppb	ppb	ppb							
1	22:22:14		4.060	3.934	92.4%							
2	22:22:41		3.858	3.960	93.4%							
3	22:23:08		3.942	3.907	93.9%							
X			3.953	3.934	93.2%							
S			0.101	0.026	0.8%							
%RSD			2.565	0.671	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:28:04	75.7%	0.029	116.900	115.000	102.300	TM 103100.000	TM 3276.000	3381.000	4172.000	TM 3787.000
2	22:28:31	74.8%	0.018	109.100	111.200	99.160	TM 104400.000	TM 3408.000	3448.000	4193.000	TM 3713.000
3	22:28:58	75.5%	0.006	111.900	112.600	94.210	TM 105400.000	TM 3442.000	3328.000	4168.000	TM 3706.000
X		75.3%	0.017	112.600	112.900	98.540	TM 104300.000	TM 3375.000	3386.000	4178.000	TM 3735.000
S		0.5%	0.012	3.924	1.922	4.060	TM 1158.000	TM 87.760	59.930	13.640	TM 44.730
%RSD		0.6	66.620	3.484	1.702	4.120	TM 1.110	TM 2.600	1.770	0.327	TM 1.197
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:28:04	TM 7226.000	TM 55830.000	TM 11760.000	11620.000	11090.000	70.5%	26.600	2.257	9.469	4005.000
2	22:28:31	TM 6987.000	TM 55450.000	TM 11750.000	11670.000	11110.000	69.8%	25.440	2.162	9.920	4209.000
3	22:28:58	TM 6943.000	TM 55720.000	TM 11620.000	11390.000	10980.000	69.5%	24.920	2.191	9.732	4270.000
X		TM 7052.000	TM 55670.000	TM 11710.000	11560.000	11060.000	69.9%	25.650	2.203	9.707	4161.000
S		TM 152.100	TM 193.900	TM 77.490	151.600	68.760	0.5%	0.861	0.048	0.227	138.700
%RSD		TM 2.157	TM 0.348	TM 0.662	1.311	0.622	0.8	3.358	2.199	2.333	3.334
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:28:04	1248.000	74.920	TM 1214.000	1268.000	3.059	2.947	2.751	33.940	35.740	93.620
2	22:28:31	1239.000	75.100	TM 1203.000	1247.000	3.083	2.818	3.061	34.720	35.070	94.620
3	22:28:58	1234.000	75.690	TM 1204.000	1275.000	3.254	2.660	2.396	35.070	35.540	97.100
X		1241.000	75.240	TM 1207.000	1263.000	3.132	2.808	2.736	34.570	35.450	95.110
S		6.844	0.400	TM 5.794	14.940	0.106	0.143	0.333	0.577	0.345	1.791
%RSD		0.552	0.531	TM 0.480	1.182	3.381	5.111	12.160	1.668	0.973	1.883
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:28:04	87.080	88.190	1.337	1.249	166.100	166.500	-4.005	-0.867	-0.339	59.980
2	22:28:31	84.320	92.060	0.934	-0.178	165.600	162.500	-0.250	0.026	-3.246	59.060
3	22:28:58	88.640	92.230	0.388	0.436	163.300	165.500	0.426	0.068	1.127	59.310
X		86.680	90.830	0.886	0.502	165.000	164.800	-1.276	-0.257	-0.820	59.450
S		2.188	2.285	0.477	0.716	1.484	2.070	2.387	0.528	2.226	0.479
%RSD		2.524	2.515	53.760	142.600	0.900	1.256	187.000	205.200	271.500	0.805
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:28:04	75.2%	0.705	0.888	0.785	5.057	0.255	0.259	0.078	0.103	73.3%
2	22:28:31	74.3%	0.881	0.737	0.713	1.058	0.282	0.250	0.052	0.040	72.1%
3	22:28:58	75.3%	0.766	0.752	0.692	2.147	0.220	0.233	0.051	0.070	73.4%
X		75.0%	0.784	0.793	0.730	2.754	0.252	0.247	0.061	0.071	72.9%
S		0.5%	0.090	0.083	0.049	2.067	0.031	0.014	0.015	0.032	0.7%
%RSD		0.7	11.440	10.470	6.691	75.060	12.380	5.460	25.060	44.730	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:28:04	0.757	1.140	8.263	7.757	17.300	16.860	80.5%	0.008	0.006	0.679
2	22:28:31	0.804	1.219	8.180	7.388	18.270	18.060	80.5%	0.003	0.009	0.804
3	22:28:58	0.783	1.096	8.252	7.371	18.750	17.270	81.1%	0.016	0.003	0.774
X		0.781	1.152	8.232	7.505	18.110	17.400	80.7%	0.009	0.006	0.752
S		0.023	0.062	0.045	0.218	0.735	0.606	0.3%	0.006	0.003	0.065
%RSD		2.970	5.401	0.544	2.905	4.061	3.486	0.4	70.000	51.740	8.620
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:28:04	0.788	0.753	86.4%							
2	22:28:31	0.688	0.759	88.5%							
3	22:28:58	0.734	0.761	88.8%							
X		0.736	0.758	87.9%							
S		0.050	0.004	1.3%							
%RSD		6.782	0.574	1.5							

CCV MW126865 5/11/2020 22:33:30 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:33:56	75.5%	317.100	312.000	311.400	26.070	66490.000	63220.000	62630.000	62550.000	305.400
2	22:34:23	75.3%	311.600	317.100	318.400	27.590	66890.000	63070.000	62040.000	64210.000	311.600
3	22:34:50	75.1%	308.900	317.200	319.900	35.270	66160.000	64350.000	62820.000	64170.000	303.200
X		75.3%	104.179%	105.137%	105.521%	29.640	110.859%	63540.000	62490.000	106.072%	102.242%
S		0.2%	n/a	n/a	n/a	4.930	n/a	702.300	407.800	n/a	n/a
%RSD		0.3	1.329	0.945	1.421	16.630	0.546	1.105	0.653	1.494	1.422
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:33:56	6365.000	699.800	63110.000	62600.000	63710.000	74.3%	312.700	311.800	309.800	2084.000
2	22:34:23	6439.000	699.500	62730.000	62940.000	64390.000	73.3%	316.300	318.000	311.900	1897.000
3	22:34:50	6328.000	706.500	63130.000	62700.000	64180.000	74.1%	314.700	311.100	307.000	2373.000
X		6377.000	701.900	104.983%	62750.000	106.823%	73.9%	104.849%	104.550%	103.189%	2118.000
S		56.500	3.967	n/a	177.200	n/a	0.5%	n/a	n/a	n/a	239.600
%RSD		1.673	0.565	0.360	0.282	0.547	0.7	0.575	1.220	0.788	11.320
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:33:56	63280.000	299.200	63360.000	62640.000	300.500	291.600	301.200	282.600	286.800	297.400
2	22:34:23	64380.000	309.400	64650.000	64470.000	298.000	292.300	300.900	278.200	290.800	305.900
3	22:34:50	63840.000	306.400	63740.000	63050.000	294.900	292.700	293.300	283.500	287.900	301.300
X		63830.000	101.664%	63920.000	105.642%	99.273%	97.408%	298.500	281.500	96.168%	100.512%
S		547.100	n/a	663.600	n/a	n/a	n/a	4.516	2.836	n/a	n/a
%RSD		0.857	1.710	1.038	1.517	0.947	0.188	1.513	1.008	0.711	1.416
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:33:56	303.800	293.100	307.800	303.600	6.152	6.132	1356.000	296.100	1.754	304.700
2	22:34:23	299.800	306.000	307.200	292.700	6.137	6.258	1403.000	307.200	-0.459	305.200
3	22:34:50	301.200	302.000	310.200	295.300	6.702	4.915	1407.000	304.300	2.420	308.100
X		301.600	300.400	102.799%	297.200	6.331	5.768	1388.000	100.843%	1.238	102.002%
S		2.022	6.590	n/a	5.691	0.322	0.742	28.360	n/a	1.507	n/a
%RSD		0.670	2.194	0.519	1.915	5.085	12.850	2.042	1.902	121.800	0.600
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:33:56	75.9%	321.900	324.600	322.300	300.100	291.700	293.000	305.000	304.000	74.7%
2	22:34:23	77.2%	324.000	322.400	321.600	294.800	290.100	287.200	305.200	302.400	75.4%
3	22:34:50	76.6%	329.000	329.800	332.500	293.100	294.300	290.700	303.900	305.500	75.9%
X		76.6%	108.326%	108.543%	325.500	296.000	97.351%	290.300	304.700	101.322%	75.3%
S		0.6%	n/a	n/a	6.083	3.658	n/a	2.896	0.707	n/a	0.6%
%RSD		0.8	1.122	1.169	1.869	1.236	0.727	0.997	0.232	0.518	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:33:56	309.100	307.600	315.700	301.700	313.000	302.800	80.1%	317.300	305.100	309.300
2	22:34:23	315.600	308.300	316.700	304.700	314.600	304.900	81.0%	312.000	309.700	313.100
3	22:34:50	313.300	312.500	317.200	304.000	314.500	305.600	81.5%	315.700	312.500	311.700
X		104.218%	103.155%	316.500	101.161%	104.678%	101.475%	80.9%	315.000	103.032%	103.782%
S		n/a	n/a	0.778	n/a	n/a	n/a	0.7%	2.766	n/a	n/a
%RSD		1.058	0.855	0.246	0.521	0.277	0.473	0.8	0.878	1.201	0.621
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:33:56	309.800	314.400	80.4%							
2	22:34:23	308.800	315.300	82.9%							
3	22:34:50	312.200	316.600	84.3%							
X		103.419%	105.140%	82.5%							
S		n/a	n/a	1.9%							
%RSD		0.571	0.350	2.4							

CB IM9968-01 5/11/2020 22:39:22 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:39:48	82.9%	0.014	6.636	6.908	33.230	6.216	4.904	4.701	4.716	0.109
2	22:40:15	82.6%	0.014	6.925	6.745	30.960	5.492	4.180	4.401	4.309	0.104
3	22:40:42	81.8%	0.058	6.108	6.233	35.750	4.959	4.002	4.154	3.493	0.092
X		82.4%	0.029	6.556	6.629	33.310	5.556	4.362	4.419	4.173	0.102
S		0.6%	0.025	0.414	0.352	2.393	0.631	0.478	0.274	0.623	0.009
%RSD		0.7	87.280	6.318	5.315	7.183	11.350	10.960	6.196	14.930	8.614
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:39:48	3.268	558.100	16.590	6.562	6.401	78.2%	-0.070	0.013	0.030	22.590
2	22:40:15	3.260	561.800	15.700	2.562	4.242	78.8%	0.049	0.023	-0.029	17.590
3	22:40:42	3.076	558.500	15.390	6.590	4.072	77.9%	-0.040	0.021	0.004	14.600
X		3.201	559.500	15.890	5.238	4.905	78.3%	-0.021	0.019	0.002	18.260
S		0.109	2.054	0.619	2.317	1.298	0.5%	0.062	0.005	0.029	4.038
%RSD		3.391	0.367	3.897	44.240	26.470	0.6	301.300	28.810	1907.000	22.110
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:39:48	2.911	0.047	4.225	9.674	0.007	-0.005	0.572	-0.004	-0.002	0.106
2	22:40:15	3.498	0.045	3.674	9.734	0.011	0.013	0.017	-0.009	0.045	0.052
3	22:40:42	3.268	0.014	3.481	9.057	-0.002	0.022	-0.216	-0.031	0.022	0.074
X		3.226	0.035	3.793	9.488	0.005	0.010	0.124	-0.015	0.022	0.077
S		0.296	0.019	0.386	0.375	0.007	0.014	0.405	0.014	0.023	0.027
%RSD		9.169	53.210	10.170	3.948	126.100	139.100	325.400	97.190	109.100	34.850
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:39:48	-0.038	-0.011	-0.069	-0.523	4.987	4.329	0.020	-0.024	0.090	0.020
2	22:40:15	0.028	0.004	0.056	0.013	5.178	6.037	2.124	0.419	0.796	0.019
3	22:40:42	0.094	0.019	-0.092	-0.300	4.503	4.505	-1.402	-0.271	-1.995	0.010
X		0.028	0.004	-0.035	-0.270	4.889	4.957	0.247	0.041	-0.370	0.016
S		0.066	0.015	0.080	0.269	0.348	0.939	1.774	0.349	1.451	0.005
%RSD		236.800	375.700	228.800	99.780	7.114	18.950	717.000	843.600	392.200	32.210
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:39:48	79.4%	0.334	0.332	0.380	1.304	0.026	0.016	0.011	0.041	81.0%
2	22:40:15	79.0%	0.418	0.540	0.586	1.063	0.018	0.023	0.010	0.004	80.0%
3	22:40:42	80.1%	0.410	0.257	0.281	1.025	0.014	0.022	0.011	0.016	80.9%
X		79.5%	0.388	0.376	0.416	1.130	0.019	0.020	0.011	0.020	80.6%
S		0.6%	0.046	0.147	0.156	0.151	0.006	0.004	0.001	0.019	0.5%
%RSD		0.7	11.990	39.080	37.470	13.370	30.900	17.360	5.106	94.420	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:39:48	0.078	0.110	0.411	0.367	0.031	0.027	84.1%	0.003	0.021	0.031
2	22:40:15	0.055	0.141	0.458	0.345	0.013	0.007	84.5%	0.017	0.007	0.015
3	22:40:42	0.078	0.076	0.415	0.334	0.013	-0.003	84.8%	0.007	0.014	0.031
X		0.070	0.109	0.428	0.349	0.019	0.011	84.5%	0.009	0.014	0.026
S		0.013	0.032	0.026	0.017	0.010	0.015	0.4%	0.007	0.007	0.009
%RSD		18.670	29.810	6.014	4.753	53.740	144.000	0.4	81.610	52.340	34.880
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:39:48	0.053	0.047	90.7%							
2	22:40:15	0.041	0.032	92.2%							
3	22:40:42	0.030	0.030	91.9%							
X		0.042	0.036	91.6%							
S		0.012	0.010	0.8%							
%RSD		28.460	26.570	0.9							

VE07049-003S 5/11/2020 22:45:12

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:39	77.2%	102.700	182.400	180.400	80.990	TM 104600.000	T 4164.000	4135.000	5249.000	TM 4300.000
2	22:46:06	76.5%	103.600	181.400	182.700	89.560	TM 100700.000	T 4131.000	4144.000	5052.000	TM 4107.000
3	22:46:34	76.7%	102.100	184.700	186.100	83.710	T 98140.000	T 4142.000	4056.000	5037.000	TM 4109.000
X		76.8%	102.800	182.800	183.100	84.750	TM 101100.000	T 4146.000	4112.000	5113.000	TM 4172.000
S		0.4%	0.758	1.704	2.864	4.377	TM 3232.000	T 16.860	48.480	118.000	TM 110.600
%RSD		0.5	0.738	0.932	1.564	5.165	TM 3.196	T 0.407	1.179	2.309	TM 2.652
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:39	T 8462.000	T 54790.000	T 13020.000	12470.000	11870.000	70.9%	122.400	106.300	111.800	3287.000
2	22:46:06	T 8273.000	T 53420.000	T 12530.000	12120.000	11550.000	73.2%	114.500	100.700	106.600	4092.000
3	22:46:34	T 7944.000	T 52920.000	T 12170.000	11950.000	11490.000	74.0%	114.200	101.900	103.200	3235.000
X		T 8226.000	T 53710.000	T 12570.000	12180.000	11640.000	72.7%	117.100	103.000	107.200	3538.000
S		T 262.100	T 969.400	T 425.900	266.200	206.300	1.6%	4.651	2.955	4.347	480.300
%RSD		T 3.187	T 1.805	T 3.387	2.185	1.773	2.2	3.973	2.870	4.055	13.580
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:39	2259.000	178.500	T 2162.000	2214.000	104.400	104.200	103.300	128.300	134.900	195.700
2	22:46:06	2162.000	169.900	T 2096.000	2134.000	99.300	99.930	103.100	125.700	131.900	186.800
3	22:46:34	2141.000	172.700	T 2072.000	2108.000	98.840	97.430	97.830	125.700	124.400	184.200
X		2187.000	173.700	T 2110.000	2152.000	100.800	100.500	101.400	126.500	130.400	188.900
S		63.220	4.413	T 46.330	55.350	3.071	3.450	3.091	1.511	5.395	6.053
%RSD		2.890	2.540	T 2.196	2.572	3.046	3.432	3.048	1.194	4.136	3.204
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:39	188.700	192.500	108.200	99.080	148.800	153.500	476.200	103.100	1.035	158.700
2	22:46:06	186.400	187.600	106.800	98.700	145.300	150.100	469.400	104.000	-1.880	157.200
3	22:46:34	170.100	182.500	108.300	100.100	150.800	143.500	458.500	101.400	-1.862	159.100
X		181.700	187.500	107.800	99.310	148.300	149.100	468.000	102.800	-0.902	158.300
S		10.120	5.025	0.813	0.751	2.801	5.070	8.932	1.319	1.678	1.023
%RSD		5.567	2.680	0.754	0.757	1.889	3.401	1.908	1.283	185.900	0.646
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:39	76.5%	104.400	107.500	105.800	104.300	97.090	94.940	101.800	101.900	75.2%
2	22:46:06	77.2%	108.500	107.900	108.700	105.400	98.110	97.990	101.000	100.100	74.5%
3	22:46:34	76.5%	108.700	110.400	107.800	99.070	98.820	99.810	103.000	101.700	74.2%
X		76.7%	107.200	108.600	107.400	102.900	98.010	97.580	101.900	101.300	74.6%
S		0.4%	2.394	1.543	1.468	3.390	0.867	2.458	0.996	0.961	0.5%
%RSD		0.5	2.233	1.421	1.366	3.294	0.884	2.519	0.977	0.949	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:45:39	78.310	66.860	113.000	107.700	123.600	119.100	82.3%	100.300	102.300	105.700
2	22:46:06	77.540	69.770	112.900	104.400	121.300	118.300	82.6%	101.500	103.500	106.200
3	22:46:34	79.690	68.420	113.600	106.700	125.000	121.200	83.1%	100.500	104.000	106.000
X		78.510	68.350	113.200	106.200	123.300	119.500	82.7%	100.800	103.300	105.900
S		1.089	1.455	0.377	1.678	1.880	1.457	0.4%	0.654	0.860	0.260
%RSD		1.387	2.128	0.333	1.580	1.525	1.219	0.5	0.649	0.832	0.245
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:45:39	106.000	106.600	87.0%							
2	22:46:06	105.200	106.600	88.5%							
3	22:46:34	106.800	107.100	90.1%							
X		106.000	106.800	88.5%							
S		0.838	0.273	1.6%							
%RSD		0.791	0.255	1.8							

VE07049-003SD

5/11/2020 22:51:05

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:51:31	77.4%	102.100	182.900	183.900	90.380	TM 102400.000	T 4204.000	4128.000	5127.000	TM 4221.000
2	22:51:58	74.9%	98.660	187.100	188.300	82.140	TM 102100.000	T 4186.000	4197.000	5198.000	TM 4285.000
3	22:52:25	76.1%	98.640	186.000	179.900	82.520	TM 102700.000	T 4187.000	4217.000	5112.000	TM 4223.000
X		76.1%	99.790	185.300	184.000	85.010	TM 102400.000	T 4193.000	4181.000	5146.000	TM 4243.000
S		1.2%	1.981	2.205	4.200	4.648	TM 261.500	T 10.170	46.750	45.970	TM 36.340
%RSD		1.6	1.985	1.190	2.282	5.467	TM 0.255	T 0.243	1.118	0.893	TM 0.856
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:51:31	T 8372.000	T 54420.000	T 12480.000	12080.000	11790.000	71.8%	121.300	102.900	105.800	3999.000
2	22:51:58	T 8379.000	T 55500.000	T 12870.000	12370.000	12100.000	69.5%	120.000	104.900	110.300	4077.000
3	22:52:25	T 8468.000	T 55650.000	T 12570.000	12220.000	11990.000	71.1%	119.300	103.300	108.700	2995.000
X		T 8406.000	T 55190.000	T 12640.000	12220.000	11960.000	70.8%	120.200	103.700	108.200	3690.000
S		T 53.380	T 672.600	T 202.900	144.000	156.900	1.2%	1.050	1.088	2.253	603.200
%RSD		T 0.635	T 1.219	T 1.606	1.178	1.312	1.7	0.874	1.050	2.082	16.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:51:31	2206.000	172.000	T 2095.000	2112.000	101.300	99.850	100.100	125.100	130.000	191.900
2	22:51:58	2242.000	178.600	T 2125.000	2216.000	103.500	103.200	102.000	127.200	135.000	194.200
3	22:52:25	2211.000	171.200	T 2111.000	2155.000	100.800	100.800	99.570	125.600	130.700	193.900
X		2220.000	173.900	T 2110.000	2161.000	101.900	101.300	100.600	126.000	131.900	193.300
S		19.640	4.028	T 14.620	51.990	1.437	1.743	1.261	1.084	2.693	1.300
%RSD		0.885	2.316	T 0.693	2.406	1.411	1.721	1.254	0.861	2.042	0.672
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:51:31	179.700	184.400	108.800	98.770	147.000	139.500	482.900	107.200	-2.570	156.400
2	22:51:58	184.700	190.900	106.500	97.530	157.500	148.800	454.500	99.070	-3.274	157.600
3	22:52:25	179.300	190.500	104.700	102.000	139.400	144.200	461.600	99.340	-0.370	159.800
X		181.200	188.600	106.700	99.430	147.900	144.200	466.300	101.900	-2.071	157.900
S		3.022	3.628	2.031	2.309	9.106	4.692	14.790	4.612	1.515	1.684
%RSD		1.667	1.924	1.904	2.322	6.155	3.254	3.171	4.527	73.120	1.066
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:51:31	76.5%	104.600	106.200	105.400	99.400	97.960	98.020	102.000	101.400	73.6%
2	22:51:58	76.0%	105.000	106.700	105.800	100.900	95.290	97.070	99.940	101.700	74.2%
3	22:52:25	75.7%	105.900	106.300	104.600	97.970	96.800	95.270	99.660	102.100	75.1%
X		76.1%	105.200	106.400	105.300	99.410	96.680	96.790	100.500	101.700	74.3%
S		0.4%	0.662	0.287	0.638	1.443	1.339	1.397	1.261	0.355	0.7%
%RSD		0.5	0.629	0.270	0.606	1.452	1.385	1.444	1.255	0.349	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:51:31	78.100	67.310	112.300	105.300	123.900	117.200	80.4%	101.800	103.700	105.900
2	22:51:58	77.050	64.930	112.000	107.000	124.400	118.900	81.0%	100.600	103.800	106.300
3	22:52:25	77.660	65.750	110.000	104.100	120.100	117.000	83.0%	100.500	100.000	104.700
X		77.600	65.990	111.400	105.500	122.800	117.700	81.5%	100.900	102.500	105.600
S		0.527	1.208	1.247	1.465	2.332	1.063	1.3%	0.742	2.170	0.795
%RSD		0.679	1.830	1.119	1.389	1.899	0.903	1.6	0.736	2.117	0.753
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:51:31	108.000	107.300	87.2%							
2	22:51:58	107.100	107.800	87.9%							
3	22:52:25	104.500	104.700	88.5%							
X		106.500	106.600	87.9%							
S		1.832	1.642	0.6%							
%RSD		1.720	1.540	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:57:22	82.0%	0.004	32.620	32.580	34.280	20950.000	819.600	790.800	851.900	788.100
2	22:57:49	80.2%	0.004	32.740	32.060	43.150	20440.000	794.700	777.800	818.300	734.700
3	22:58:16	79.5%	0.005	30.940	31.340	29.870	20460.000	798.300	776.700	832.500	767.900
X		80.6%	0.004	32.100	31.990	35.770	20620.000	804.200	781.800	834.200	763.600
S		1.3%	0.000	1.005	0.624	6.767	289.200	13.480	7.833	16.840	26.990
%RSD		1.6	8.264	3.129	1.951	18.920	1.403	1.676	1.002	2.018	3.535
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:57:22	1505.000	11400.000	2490.000	2408.000	2225.000	75.3%	6.956	0.523	2.187	831.800
2	22:57:49	1432.000	10910.000	2360.000	2300.000	2144.000	77.0%	5.730	0.436	1.847	804.100
3	22:58:16	1460.000	10840.000	2410.000	2287.000	2205.000	75.5%	5.786	0.397	1.980	749.400
X		1466.000	11050.000	2420.000	2332.000	2191.000	75.9%	6.157	0.452	2.005	795.100
S		36.360	304.300	65.920	66.340	42.270	1.0%	0.692	0.064	0.172	41.960
%RSD		2.481	2.754	2.724	2.845	1.929	1.3	11.240	14.260	8.554	5.278
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:57:22	245.800	15.550	249.400	251.300	0.594	0.515	0.944	7.376	7.822	19.610
2	22:57:49	246.000	14.550	239.600	247.400	0.645	0.430	0.531	7.113	7.810	20.400
3	22:58:16	250.800	15.260	242.100	256.100	0.647	0.726	0.309	7.405	7.738	19.380
X		247.500	15.120	243.700	251.600	0.629	0.557	0.595	7.298	7.790	19.800
S		2.818	0.517	5.125	4.354	0.030	0.152	0.323	0.161	0.045	0.539
%RSD		1.138	3.417	2.103	1.731	4.770	27.340	54.230	2.204	0.584	2.722
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:57:22	17.600	19.680	-0.007	0.615	33.530	35.660	-3.442	-0.775	2.153	11.730
2	22:57:49	18.480	19.770	0.285	0.064	32.420	34.150	-2.670	-0.613	1.613	12.310
3	22:58:16	18.500	19.770	-0.186	0.404	38.030	34.770	-3.342	-0.724	-0.446	12.320
X		18.190	19.740	0.031	0.361	34.660	34.860	-3.151	-0.704	1.107	12.120
S		0.513	0.055	0.238	0.278	2.972	0.760	0.420	0.083	1.371	0.338
%RSD		2.819	0.279	773.500	77.100	8.574	2.181	13.330	11.780	123.900	2.787
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:57:22	79.9%	0.154	0.241	0.113	2.125	0.049	0.055	0.052	0.039	76.4%
2	22:57:49	77.4%	0.305	0.138	0.229	-0.001	0.054	0.052	0.038	0.001	77.4%
3	22:58:16	76.5%	0.095	0.372	0.182	1.716	0.069	0.064	-0.001	0.040	78.1%
X		77.9%	0.185	0.250	0.175	1.280	0.057	0.057	0.030	0.026	77.3%
S		1.7%	0.109	0.117	0.058	1.128	0.010	0.006	0.027	0.022	0.9%
%RSD		2.2	58.780	46.830	33.320	88.140	17.930	10.730	91.830	84.090	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:57:22	0.302	0.293	1.616	1.474	3.587	3.620	82.1%	0.022	0.035	0.164
2	22:57:49	0.150	0.268	1.687	1.582	3.878	3.397	82.2%	0.030	0.032	0.132
3	22:58:16	0.259	0.221	1.714	1.690	3.397	3.822	82.0%	0.014	0.028	0.228
X		0.237	0.261	1.672	1.582	3.621	3.613	82.1%	0.022	0.032	0.175
S		0.078	0.037	0.050	0.108	0.242	0.213	0.1%	0.008	0.003	0.049
%RSD		33.040	14.050	3.009	6.832	6.690	5.885	0.1	37.360	10.960	27.870
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	22:57:22	0.111	0.150	87.4%							
2	22:57:49	0.171	0.142	88.8%							
3	22:58:16	0.195	0.186	88.4%							
X		0.159	0.160	88.2%							
S		0.043	0.023	0.7%							
%RSD		27.080	14.370	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:03:13	76.0%	0.017	45.970	42.670	1391.000	<u>62520.000</u>	<u>2413.000</u>	2385.000	2707.000	139.000
2	23:03:39	76.8%	-0.006	43.330	43.980	1401.000	<u>63420.000</u>	<u>2400.000</u>	2384.000	2687.000	141.900
3	23:04:06	74.6%	-0.006	42.990	43.520	1391.000	<u>61420.000</u>	<u>2421.000</u>	2379.000	2614.000	139.000
X		75.8%	0.002	44.100	43.390	1394.000	<u>62450.000</u>	<u>2411.000</u>	2383.000	2669.000	140.000
S		1.1%	0.013	1.631	0.667	5.637	<u>1002.000</u>	<u>10.330</u>	3.240	49.220	1.648
%RSD		1.4	789.500	3.698	1.538	0.404	<u>1.604</u>	<u>0.428</u>	0.136	1.844	1.178
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:03:13	<u>TM 11600.000</u>	<u>T 59170.000</u>	<u>T 3181.000</u>	29590.000	29050.000	71.4%	4.387	-0.138	25.410	3794.000
2	23:03:39	<u>TM 11240.000</u>	<u>T 60440.000</u>	<u>T 3297.000</u>	30300.000	29540.000	70.3%	4.225	-0.677	25.530	4144.000
3	23:04:06	<u>TM 11360.000</u>	<u>T 60600.000</u>	<u>T 3202.000</u>	30140.000	29140.000	71.4%	3.798	-0.408	25.260	3981.000
X		<u>TM 11400.000</u>	<u>T 60070.000</u>	<u>T 3227.000</u>	30010.000	29240.000	71.0%	4.137	-0.408	25.400	3973.000
S		<u>TM 183.400</u>	<u>T 787.700</u>	<u>T 61.900</u>	373.300	263.200	0.6%	0.304	0.269	0.134	175.500
%RSD		<u>TM 1.608</u>	<u>T 1.311</u>	<u>T 1.918</u>	1.244	0.900	0.9	7.360	66.090	0.527	4.417
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:03:13	851.600	29.800	854.900	925.500	3.058	9.156	7.702	15.250	16.630	137.600
2	23:03:39	880.000	29.830	878.500	900.300	2.979	9.602	8.922	16.330	15.530	140.200
3	23:04:06	872.600	28.910	862.700	919.200	2.889	9.334	9.635	15.930	16.310	137.400
X		868.100	29.510	865.300	915.000	2.975	9.364	8.753	15.840	16.160	138.400
S		14.720	0.523	12.010	13.140	0.085	0.224	0.978	0.546	0.566	1.580
%RSD		1.695	1.771	1.388	1.436	2.852	2.393	11.170	3.450	3.504	1.142
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:03:13	138.500	136.000	1.869	1.549	3910.000	3922.000	17.420	3.328	-1.698	61.000
2	23:03:39	132.100	134.600	1.748	0.257	3971.000	4023.000	11.340	2.035	-0.938	61.300
3	23:04:06	136.200	137.600	1.430	-0.394	4022.000	4100.000	12.140	2.203	-1.689	61.880
X		135.600	136.100	1.682	0.471	3968.000	4015.000	13.630	2.522	-1.442	61.390
S		3.234	1.539	0.227	0.989	55.800	89.560	3.303	0.703	0.436	0.446
%RSD		2.384	1.131	13.490	210.100	1.406	2.231	24.240	27.880	30.230	0.727
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:03:13	72.1%	3.045	2.975	2.853	1.052	13.200	13.320	0.112	0.201	72.7%
2	23:03:39	72.2%	3.548	4.095	3.865	2.560	13.750	13.350	0.275	0.241	71.9%
3	23:04:06	71.8%	4.008	3.899	3.787	3.950	13.500	13.150	0.082	0.211	72.0%
X		72.0%	3.534	3.656	3.502	2.521	13.480	13.270	0.156	0.218	72.2%
S		0.2%	0.482	0.598	0.563	1.450	0.275	0.107	0.104	0.021	0.4%
%RSD		0.3	13.640	16.350	16.080	57.510	2.042	0.809	66.620	9.533	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:03:13	0.817	0.936	<u>M 515.700</u>	498.300	58.220	55.730	78.5%	0.031	0.031	0.866
2	23:03:39	0.733	0.819	<u>M 520.100</u>	487.800	59.190	55.740	79.4%	0.038	0.046	0.832
3	23:04:06	0.587	0.835	<u>M 519.500</u>	<u>M 501.900</u>	59.970	55.250	78.2%	0.040	0.037	0.867
X		0.712	0.863	<u>M 518.400</u>	<u>M 496.000</u>	59.130	55.570	78.7%	0.036	0.038	0.855
S		0.117	0.063	<u>M 2.385</u>	<u>M 7.344</u>	0.877	0.280	0.6%	0.004	0.007	0.020
%RSD		16.390	7.312	<u>M 0.460</u>	<u>M 1.481</u>	1.483	0.504	0.8	12.380	19.800	2.329
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:03:13	0.861	0.861	82.7%							
2	23:03:39	0.926	0.900	82.6%							
3	23:04:06	0.909	0.892	83.5%							
X		0.899	0.884	83.0%							
S		0.033	0.021	0.5%							
%RSD		3.724	2.353	0.6							

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5/11/2020 23:14:29

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:14:56	82.5%	0.004	7.002	6.346	-4.791	18330.000	180.500	176.200	206.700	2.728
2	23:15:23	84.3%	-0.018	7.082	6.470	-4.760	18210.000	183.300	177.100	207.600	2.466
3	23:15:50	81.4%	-0.018	6.374	6.161	-4.376	18880.000	183.300	172.700	207.900	2.507
X		82.7%	-0.011	6.819	6.326	-4.642	18470.000	182.400	175.300	207.400	2.567
S		1.5%	0.012	0.388	0.155	0.231	355.600	1.586	2.337	0.652	0.141
%RSD		1.8	116.900	5.686	2.454	4.979	1.925	0.870	1.333	0.315	5.491
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:14:56	23.750	1261.000	352.300	6589.000	6216.000	77.0%	-0.040	2.125	0.252	50.900
2	23:15:23	23.150	1239.000	350.200	6425.000	6219.000	76.9%	-0.040	2.198	0.273	65.650
3	23:15:50	24.730	1283.000	356.100	6714.000	6235.000	76.4%	0.144	2.252	0.269	32.720
X		23.880	1261.000	352.800	6576.000	6223.000	76.8%	0.022	2.192	0.265	49.760
S		0.795	21.650	2.985	145.200	10.150	0.3%	0.106	0.064	0.011	16.500
%RSD		3.331	1.716	0.846	2.208	0.163	0.4	491.900	2.921	4.141	33.160
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:14:56	17.590	0.323	21.930	37.470	-0.015	0.149	0.161	0.194	0.244	0.194
2	23:15:23	17.900	0.320	21.980	34.590	-0.006	0.122	0.225	0.171	0.236	0.205
3	23:15:50	17.110	0.343	21.690	34.030	-0.010	0.114	0.294	0.114	0.164	0.358
X		17.530	0.329	21.870	35.360	-0.010	0.129	0.227	0.160	0.215	0.252
S		0.400	0.013	0.153	1.847	0.005	0.018	0.067	0.041	0.044	0.092
%RSD		2.279	3.857	0.699	5.223	47.310	14.340	29.360	25.760	20.420	36.360
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:14:56	0.367	0.095	3.268	-0.092	14.380	16.210	-2.729	-0.590	-0.572	8.361
2	23:15:23	0.231	0.169	3.431	0.492	12.520	14.600	-2.745	-0.530	-3.347	8.313
3	23:15:50	0.029	0.229	3.302	0.186	15.850	15.260	-2.071	-0.445	-0.613	8.166
X		0.209	0.164	3.334	0.195	14.250	15.350	-2.515	-0.522	-1.511	8.280
S		0.170	0.067	0.086	0.292	1.669	0.808	0.385	0.073	1.591	0.102
%RSD		81.190	40.930	2.575	149.800	11.710	5.260	15.300	13.990	105.300	1.229
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:14:56	79.0%	16.910	16.350	16.870	1.600	0.000	-0.002	-0.054	0.003	80.4%
2	23:15:23	79.4%	16.640	17.490	16.330	-0.040	0.006	0.001	-0.003	-0.002	80.3%
3	23:15:50	80.0%	17.540	16.640	17.380	0.740	0.003	-0.002	-0.056	0.017	80.6%
X		79.5%	17.030	16.830	16.860	0.766	0.003	-0.001	-0.038	0.006	80.4%
S		0.5%	0.464	0.589	0.525	0.821	0.003	0.002	0.030	0.010	0.1%
%RSD		0.6	2.723	3.499	3.116	107.100	100.100	289.000	80.550	162.800	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:14:56	0.013	-0.012	0.012	0.014	0.213	0.300	84.2%	0.039	0.043	0.003
2	23:15:23	-0.004	-0.021	0.031	0.014	0.104	0.249	84.4%	0.050	0.040	-0.005
3	23:15:50	0.019	0.023	-0.007	0.004	0.122	0.177	85.2%	0.039	0.040	0.015
X		0.009	-0.003	0.012	0.011	0.146	0.242	84.6%	0.043	0.041	0.004
S		0.012	0.023	0.019	0.006	0.058	0.061	0.5%	0.006	0.002	0.010
%RSD		131.200	664.500	157.000	56.200	39.920	25.390	0.6	14.970	4.733	248.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:14:56	0.007	0.005	88.4%							
2	23:15:23	0.021	0.009	90.1%							
3	23:15:50	0.007	0.006	90.8%							
X		0.012	0.007	89.8%							
S		0.008	0.002	1.3%							
%RSD		72.790	31.460	1.4							

VE07084-001(5)

5/11/2020 23:20:20

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:20:47	81.8%	-0.007	7.912	8.700	21.450	2163.000	328.500	325.900	337.300	3.392
2	23:21:14	81.1%	-0.007	8.706	8.347	17.390	2143.000	323.700	311.100	333.900	3.229
3	23:21:40	79.3%	-0.007	8.591	7.825	13.100	2113.000	330.900	324.300	325.000	3.214
X		80.7%	-0.007	8.403	8.291	17.310	2140.000	327.700	320.400	332.100	3.278
S		1.3%	0.000	0.429	0.440	4.175	25.440	3.634	8.139	6.330	0.099
%RSD		1.6	2.628	5.107	5.305	24.120	1.189	1.109	2.540	1.906	3.012
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:20:47	573.100	11110.000	604.600	972.000	921.400	74.0%	0.088	0.080	0.074	589.800
2	23:21:14	550.600	11030.000	597.100	956.900	889.000	74.1%	0.088	-0.033	0.095	735.400
3	23:21:40	548.200	10810.000	592.100	951.800	892.600	75.2%	0.085	0.160	0.110	586.700
X		557.300	10980.000	597.900	960.300	901.000	74.5%	0.087	0.069	0.093	637.300
S		13.710	155.900	6.317	10.500	17.770	0.6%	0.001	0.097	0.018	84.960
%RSD		2.461	1.420	1.056	1.094	1.973	0.8	1.525	141.100	19.120	13.330
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:20:47	41.290	1.861	41.710	48.060	-0.009	0.118	0.332	1.874	1.989	1.886
2	23:21:14	37.410	1.877	40.330	46.290	-0.011	0.109	0.010	1.852	1.894	1.906
3	23:21:40	36.540	1.890	39.410	43.400	-0.003	0.153	0.440	1.729	2.142	1.879
X		38.410	1.876	40.490	45.920	-0.008	0.127	0.261	1.818	2.008	1.890
S		2.528	0.014	1.156	2.349	0.004	0.024	0.224	0.078	0.125	0.014
%RSD		6.582	0.769	2.855	5.116	50.340	18.610	85.780	4.310	6.227	0.751
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:20:47	1.981	1.585	-0.159	0.827	11.730	9.519	-2.639	-0.616	1.662	4.349
2	23:21:14	1.438	1.834	-0.019	0.997	12.770	12.480	-1.129	-0.249	-1.119	4.429
3	23:21:40	1.539	1.393	-0.091	0.178	10.020	8.612	-1.986	-0.373	-2.627	4.395
X		1.653	1.604	-0.090	0.667	11.510	10.200	-1.918	-0.412	-0.694	4.391
S		0.289	0.221	0.070	0.432	1.387	2.024	0.757	0.187	2.176	0.040
%RSD		17.470	13.800	77.940	64.790	12.050	19.840	39.490	45.280	313.300	0.914
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:20:47	77.2%	0.153	0.102	0.072	0.582	0.003	-0.002	-0.000	-0.003	78.1%
2	23:21:14	75.8%	0.008	0.152	0.024	2.293	0.000	0.002	-0.000	-0.004	77.8%
3	23:21:40	78.3%	0.085	0.118	0.066	1.254	0.006	-0.002	-0.000	-0.003	78.1%
X		77.1%	0.082	0.124	0.054	1.376	0.003	-0.001	-0.000	-0.003	78.0%
S		1.3%	0.073	0.025	0.026	0.862	0.003	0.002	0.000	0.000	0.2%
%RSD		1.7	88.610	20.290	47.890	62.620	100.000	315.700	47.890	3.561	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:20:47	0.014	0.019	-0.021	-0.002	4.461	4.339	81.2%	-0.007	-0.002	0.019
2	23:21:14	-0.010	0.029	-0.009	-0.038	4.591	4.277	82.7%	-0.003	0.003	0.003
3	23:21:40	0.021	0.024	-0.005	-0.008	4.648	4.512	82.1%	-0.003	0.003	-0.010
X		0.008	0.024	-0.011	-0.016	4.567	4.376	82.0%	-0.004	0.001	0.004
S		0.016	0.005	0.008	0.019	0.096	0.122	0.8%	0.002	0.003	0.015
%RSD		194.000	21.130	71.020	119.700	2.106	2.784	0.9	52.400	322.200	367.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:20:47	0.007	0.007	87.7%							
2	23:21:14	0.010	0.004	88.8%							
3	23:21:40	0.022	0.003	89.9%							
X		0.013	0.005	88.8%							
S		0.008	0.002	1.1%							
%RSD		59.310	44.160	1.3							

VE07100-001(5)

5/11/2020 23:26:11

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:38	78.6%	0.016	12.430	12.500	-37.600	±45430.000	±941.400	956.500	1727.000	232.500
2	23:27:05	77.7%	0.016	12.710	13.440	-39.010	±45810.000	±944.200	978.600	1710.000	233.800
3	23:27:32	80.2%	-0.007	12.490	13.230	-37.400	±46150.000	±953.600	969.200	1747.000	238.900
X		78.8%	0.009	12.540	13.060	-38.000	±45800.000	±946.400	968.100	1728.000	235.100
S		1.2%	0.013	0.149	0.496	0.879	±356.900	±6.388	11.110	18.780	3.377
%RSD		1.6	154.300	1.192	3.796	2.313	±0.779	±0.675	1.147	1.087	1.436
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:38	1491.000	9746.000	±3695.000	13420.000	12890.000	73.1%	2.874	3.160	0.778	765.900
2	23:27:05	1496.000	9826.000	±3722.000	13440.000	13160.000	73.0%	3.071	3.066	0.812	804.200
3	23:27:32	1493.000	9793.000	±3704.000	13430.000	12920.000	72.3%	2.938	3.306	0.797	690.500
X		1493.000	9788.000	±3707.000	13430.000	12990.000	72.8%	2.961	3.177	0.796	753.600
S		2.194	40.170	±14.030	8.950	148.800	0.4%	0.101	0.121	0.017	57.870
%RSD		0.147	0.410	±0.379	0.067	1.145	0.6	3.400	3.814	2.164	7.679
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:38	270.400	12.120	272.200	303.900	0.096	1.601	1.453	3.877	4.275	22.420
2	23:27:05	265.600	12.110	269.600	296.100	0.104	1.546	2.108	3.723	4.300	22.190
3	23:27:32	274.500	12.510	265.700	293.200	0.124	1.435	1.150	4.132	3.940	22.460
X		270.200	12.240	269.200	297.700	0.108	1.527	1.570	3.910	4.172	22.350
S		4.493	0.228	3.227	5.549	0.014	0.085	0.490	0.207	0.201	0.147
%RSD		1.663	1.862	1.199	1.864	13.220	5.534	31.190	5.283	4.809	0.658
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:38	22.650	22.620	3.912	1.671	62.530	58.860	0.412	0.079	-0.340	29.750
2	23:27:05	23.040	21.880	3.693	0.578	59.190	63.490	4.729	1.031	-0.382	30.060
3	23:27:32	22.150	21.570	4.220	0.348	62.530	61.040	-1.074	-0.183	-1.810	30.280
X		22.610	22.020	3.942	0.866	61.420	61.130	1.356	0.309	-0.844	30.030
S		0.446	0.540	0.265	0.707	1.928	2.315	3.014	0.639	0.837	0.263
%RSD		1.971	2.453	6.720	81.610	3.139	3.786	222.400	206.800	99.210	0.877
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:38	74.8%	106.600	106.500	106.000	1.253	0.258	0.224	-0.340	0.011	75.2%
2	23:27:05	75.6%	106.100	109.000	105.100	2.215	0.262	0.276	-0.270	0.027	74.9%
3	23:27:32	75.2%	112.700	110.600	109.800	0.423	0.311	0.232	-0.272	0.101	73.7%
X		75.2%	108.500	108.700	107.000	1.297	0.277	0.244	-0.294	0.046	74.6%
S		0.4%	3.674	2.081	2.499	0.897	0.029	0.028	0.040	0.048	0.8%
%RSD		0.6	3.387	1.915	2.336	69.140	10.590	11.640	13.530	104.600	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:26:38	0.358	0.397	0.163	0.136	8.823	9.553	80.0%	0.210	0.172	0.283
2	23:27:05	0.398	0.467	0.152	0.185	10.320	9.764	80.6%	0.221	0.168	0.262
3	23:27:32	0.372	0.400	0.183	0.149	10.170	10.140	80.9%	0.224	0.171	0.272
X		0.376	0.421	0.166	0.156	9.770	9.819	80.5%	0.218	0.170	0.272
S		0.020	0.040	0.016	0.025	0.824	0.298	0.4%	0.007	0.002	0.011
%RSD		5.347	9.382	9.673	16.190	8.430	3.031	0.5	3.258	0.919	3.858
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:26:38	0.310	0.296	84.7%							
2	23:27:05	0.241	0.266	84.7%							
3	23:27:32	0.252	0.266	85.3%							
X		0.268	0.276	84.9%							
S		0.037	0.018	0.4%							
%RSD		13.820	6.364	0.4							

VE07101-001(5)

5/11/2020 23:32:02

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:32:28	87.3%	0.013	2.626	3.016	-61.720	±39000.000	694.200	703.200	1405.000	58.800
2	23:32:55	85.8%	0.003	2.256	3.100	-61.530	±39040.000	±657.800	678.900	1412.000	57.020
3	23:33:22	85.7%	0.003	2.270	3.096	-60.800	±38890.000	682.100	680.800	1362.000	56.860
X		86.2%	0.006	2.384	3.071	-61.350	±38980.000	±678.000	687.600	1393.000	57.560
S		0.9%	0.006	0.210	0.047	0.487	±78.350	±18.540	13.550	26.950	1.075
%RSD		1.0	91.570	8.802	1.538	0.795	±0.201	±2.734	1.970	1.935	1.868
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:32:28	1360.000	8898.000	±3144.000	10150.000	9971.000	72.0%	1.783	10.430	0.310	639.900
2	23:32:55	1344.000	8969.000	±3107.000	9851.000	9898.000	72.7%	1.829	9.900	0.352	820.900
3	23:33:22	1346.000	9044.000	±3165.000	10250.000	9861.000	71.1%	1.706	10.280	0.320	717.200
X		1350.000	8970.000	±3139.000	10080.000	9910.000	71.9%	1.773	10.200	0.328	726.000
S		9.000	73.340	±29.290	207.700	56.170	0.8%	0.062	0.274	0.022	90.810
%RSD		0.667	0.818	±0.933	2.060	0.567	1.1	3.492	2.687	6.737	12.510
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:32:28	60.260	10.500	58.100	89.750	0.100	3.394	4.067	0.940	1.027	10.340
2	23:32:55	59.990	10.780	58.650	83.170	0.066	3.676	3.035	1.069	0.825	9.957
3	23:33:22	55.590	10.620	58.910	85.530	0.066	3.915	3.122	0.907	0.943	9.981
X		58.610	10.630	58.550	86.150	0.077	3.661	3.408	0.972	0.932	10.090
S		2.619	0.142	0.415	3.333	0.020	0.261	0.572	0.085	0.101	0.212
%RSD		4.468	1.337	0.709	3.869	25.270	7.121	16.790	8.786	10.890	2.105
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:32:28	8.840	9.721	7.550	-0.376	31.290	33.920	-3.978	-0.877	0.459	24.780
2	23:32:55	9.664	9.321	7.040	0.292	33.380	30.040	-0.320	-0.092	0.395	24.130
3	23:33:22	10.390	10.200	7.153	0.168	32.660	30.350	-3.274	-0.703	-0.349	23.770
X		9.631	9.749	7.248	0.028	32.440	31.440	-2.524	-0.557	0.168	24.230
S		0.774	0.442	0.268	0.355	1.063	2.158	1.941	0.412	0.449	0.512
%RSD		8.040	4.536	3.697	1270.000	3.277	6.865	76.890	73.960	266.800	2.112
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:32:28	73.8%	108.100	111.100	109.800	1.404	0.069	0.079	-0.222	0.071	75.1%
2	23:32:55	74.8%	109.200	108.800	108.000	0.089	0.081	0.063	-0.269	0.021	75.3%
3	23:33:22	75.3%	111.600	109.400	109.800	0.960	0.103	0.044	-0.262	0.017	75.0%
X		74.6%	109.600	109.700	109.200	0.818	0.084	0.062	-0.251	0.037	75.1%
S		0.7%	1.827	1.171	1.031	0.669	0.017	0.018	0.025	0.030	0.2%
%RSD		1.0	1.667	1.067	0.944	81.820	20.750	28.680	9.984	82.290	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:32:28	0.200	0.136	0.252	0.199	2.287	2.030	80.9%	0.586	0.537	0.079
2	23:32:55	0.174	0.151	0.276	0.235	2.398	2.010	80.5%	0.514	0.522	0.074
3	23:33:22	0.213	0.293	0.272	0.220	2.330	2.325	81.9%	0.516	0.498	0.069
X		0.196	0.193	0.267	0.218	2.338	2.122	81.1%	0.538	0.519	0.074
S		0.020	0.087	0.013	0.018	0.056	0.177	0.8%	0.041	0.020	0.005
%RSD		10.110	44.800	4.792	8.418	2.382	8.323	0.9	7.601	3.758	6.250
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:32:28	0.068	0.070	84.3%							
2	23:32:55	0.056	0.053	86.4%							
3	23:33:22	0.061	0.070	85.3%							
X		0.062	0.064	85.3%							
S		0.006	0.010	1.0%							
%RSD		9.605	15.330	1.2							

VE06115-001 5/11/2020 23:37:54

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:38:21	77.1%	0.028	78.970	79.000	118.000	23700.000	3402.000	3433.000	3816.000	1815.000
2	23:38:48	74.3%	0.042	75.200	79.350	112.000	23570.000	3321.000	3333.000	3813.000	1762.000
3	23:39:15	73.5%	-0.006	83.880	79.570	120.300	23730.000	3482.000	3390.000	3771.000	1799.000
X		75.0%	0.021	79.350	79.310	116.800	23660.000	3402.000	3385.000	3800.000	1792.000
S		1.9%	0.024	4.354	0.285	4.282	85.780	80.190	50.280	25.340	27.330
%RSD		2.5	114.200	5.487	0.360	3.666	0.362	2.358	1.485	0.667	1.525
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:38:21	5850.000	56500.000	7308.000	15930.000	15360.000	68.9%	23.360	6.707	2.462	3466.000
2	23:38:48	5576.000	56330.000	7034.000	15480.000	15100.000	69.4%	21.920	6.106	2.355	3700.000
3	23:39:15	5649.000	58220.000	7124.000	15760.000	15040.000	69.0%	20.070	6.956	2.519	3198.000
X		5692.000	57020.000	7155.000	15720.000	15170.000	69.1%	21.780	6.590	2.445	3455.000
S		141.900	1047.000	139.500	226.900	170.400	0.2%	1.648	0.437	0.084	251.500
%RSD		2.493	1.836	1.950	1.443	1.124	0.4	7.564	6.628	3.417	7.280
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:38:21	1949.000	226.500	1895.000	1949.000	1.345	5.612	5.734	37.630	39.160	207.600
2	23:38:48	1900.000	227.000	1839.000	1889.000	1.319	5.595	5.348	37.250	39.550	206.300
3	23:39:15	1914.000	223.700	1855.000	1901.000	1.384	5.463	6.414	37.940	38.550	209.300
X		1921.000	225.700	1863.000	1913.000	1.349	5.557	5.832	37.610	39.090	207.700
S		25.100	1.784	29.110	31.840	0.033	0.082	0.540	0.348	0.500	1.473
%RSD		1.307	0.790	1.563	1.665	2.426	1.470	9.258	0.925	1.280	0.709
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:38:21	193.600	201.900	0.383	0.919	48.780	47.790	-3.226	-0.701	0.462	70.820
2	23:38:48	200.800	202.800	0.555	0.661	43.430	53.590	-3.973	-0.966	4.912	70.980
3	23:39:15	190.700	200.100	2.178	1.063	46.990	50.150	3.552	0.751	1.234	70.890
X		195.100	201.600	1.039	0.881	46.400	50.510	-1.216	-0.305	2.203	70.900
S		5.211	1.363	0.990	0.203	2.726	2.916	4.146	0.924	2.378	0.081
%RSD		2.672	0.676	95.360	23.080	5.874	5.774	341.000	302.900	108.000	0.115
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:38:21	74.3%	2.926	2.668	2.607	2.384	0.113	0.075	0.169	0.158	72.3%
2	23:38:48	74.2%	2.878	2.881	2.858	2.361	0.141	0.164	0.207	0.132	72.9%
3	23:39:15	73.8%	3.278	2.799	2.859	4.591	0.116	0.129	0.112	0.162	72.4%
X		74.1%	3.027	2.783	2.775	3.112	0.124	0.123	0.163	0.151	72.5%
S		0.2%	0.218	0.108	0.145	1.281	0.015	0.045	0.048	0.017	0.3%
%RSD		0.3	7.208	3.864	5.228	41.160	12.420	36.470	29.300	11.070	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:38:21	0.788	1.069	0.514	0.398	67.730	62.490	80.3%	0.016	0.010	3.664
2	23:38:48	0.730	0.926	0.568	0.366	67.680	60.730	80.5%	0.001	0.012	3.867
3	23:39:15	0.813	0.894	0.526	0.400	66.610	64.770	80.8%	0.015	0.016	3.716
X		0.777	0.963	0.536	0.388	67.340	62.660	80.5%	0.011	0.013	3.749
S		0.043	0.093	0.028	0.019	0.632	2.027	0.3%	0.008	0.003	0.106
%RSD		5.521	9.704	5.297	4.866	0.939	3.235	0.3	79.010	24.680	2.818
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:38:21	3.453	3.585	89.0%							
2	23:38:48	3.533	3.680	90.4%							
3	23:39:15	3.574	3.700	91.1%							
X		3.520	3.655	90.2%							
S		0.062	0.062	1.0%							
%RSD		1.752	1.693	1.2							

CCV MW126865 5/11/2020 23:43:47 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:44:15	72.3%	319.900	319.400	307.600	32.510	66290.000	64180.000	63960.000	64730.000	312.900
2	23:44:42	74.1%	308.600	323.700	321.100	28.430	67300.000	65580.000	63900.000	66000.000	318.900
3	23:45:09	74.4%	310.500	311.100	311.400	35.730	66580.000	65580.000	64210.000	64490.000	308.200
X		73.6%	104.331%	106.007%	104.453%	32.230	111.200%	65110.000	64020.000	108.456%	104.448%
S		1.1%	n/a	n/a	n/a	3.659	n/a	810.900	163.600	n/a	n/a
%RSD		1.5	1.934	2.014	2.210	11.350	0.781	1.245	0.256	1.249	1.715
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:44:15	3358.000	504.500	64140.000	63260.000	64000.000	71.9%	313.300	318.100	302.900	3059.000
2	23:44:42	3461.000	495.000	65400.000	63990.000	64580.000	71.3%	305.000	317.600	316.700	4661.000
3	23:45:09	3382.000	469.600	63780.000	63700.000	63950.000	73.8%	313.400	308.400	306.100	1619.000
X		3400.000	489.700	107.398%	63650.000	106.959%	72.3%	103.532%	104.908%	102.851%	3113.000
S		53.920	18.030	n/a	368.500	n/a	1.3%	n/a	n/a	n/a	1522.000
%RSD		1.586	3.682	1.316	0.579	0.552	1.8	1.556	1.733	2.349	48.890
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:44:15	65620.000	311.000	64590.000	63930.000	304.800	298.300	291.600	289.000	294.100	303.800
2	23:44:42	66080.000	315.200	65530.000	64650.000	306.500	295.100	302.800	287.900	295.900	311.300
3	23:45:09	64250.000	304.600	64300.000	63120.000	297.700	296.600	295.100	291.700	292.500	300.100
X		65320.000	103.415%	64800.000	106.501%	100.997%	98.902%	296.500	289.500	98.060%	101.685%
S		954.400	n/a	644.500	n/a	n/a	n/a	5.708	1.941	n/a	n/a
%RSD		1.461	1.712	0.995	1.202	1.548	0.537	1.925	0.670	0.580	1.867
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:44:15	300.300	307.500	312.700	308.000	3.555	2.535	1430.000	315.800	2.699	312.300
2	23:44:42	307.500	308.400	317.900	304.500	4.693	6.108	1474.000	318.800	0.490	315.000
3	23:45:09	306.700	301.900	309.300	304.900	3.399	5.037	1435.000	312.100	1.106	315.300
X		304.800	305.900	104.423%	305.800	3.882	4.560	1446.000	105.194%	1.432	104.736%
S		3.933	3.529	n/a	1.903	0.707	1.834	23.830	n/a	1.140	n/a
%RSD		1.290	1.154	1.384	0.622	18.200	40.210	1.648	1.064	79.630	0.530
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:44:15	73.6%	326.600	329.800	327.100	310.900	301.800	300.400	311.800	316.400	71.6%
2	23:44:42	73.4%	338.200	336.100	333.100	337.600	298.400	297.200	312.800	316.300	72.8%
3	23:45:09	74.9%	333.700	339.300	337.000	307.800	298.300	297.500	308.600	314.100	74.1%
X		74.0%	110.950%	111.686%	332.400	318.800	99.826%	298.400	311.100	105.199%	72.8%
S		0.8%	n/a	n/a	4.963	16.380	n/a	1.770	2.182	n/a	1.2%
%RSD		1.1	1.751	1.440	1.493	5.140	0.663	0.593	0.702	0.419	1.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:44:15	321.400	320.700	329.800	309.100	322.900	317.000	78.1%	321.400	321.300	323.700
2	23:44:42	323.000	321.900	321.500	306.500	328.300	310.400	79.6%	319.200	313.700	322.200
3	23:45:09	319.900	316.400	323.800	308.600	322.400	311.500	79.8%	319.200	318.900	320.400
X		107.154%	106.559%	325.000	102.690%	108.179%	104.323%	79.2%	319.900	105.990%	107.369%
S		n/a	n/a	4.314	n/a	n/a	n/a	1.0%	1.243	n/a	n/a
%RSD		0.491	0.896	1.327	0.452	1.011	1.138	1.2	0.389	1.215	0.505
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:44:15	318.500	324.600	80.9%							
2	23:44:42	319.600	323.500	82.4%							
3	23:45:09	323.700	323.500	83.2%							
X		106.864%	107.959%	82.1%							
S		n/a	n/a	1.1%							
%RSD		0.848	0.187	1.4							

CCB IM9968-01 5/11/2020 23:49:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:50:07	82.1%	0.015	4.615	3.505	35.020	5.132	4.821	4.317	4.336	0.111
2	23:50:34	81.4%	0.004	3.277	4.490	34.590	4.756	4.328	4.510	4.352	0.062
3	23:51:01	80.9%	0.037	3.742	3.541	29.110	4.761	4.042	3.835	3.839	0.090
X		81.5%	0.018	3.878	3.845	32.910	4.883	4.397	4.221	4.176	0.088
S		0.6%	0.017	0.679	0.559	3.295	0.216	0.394	0.347	0.292	0.024
%RSD		0.7	90.820	17.520	14.530	10.010	4.416	8.958	8.230	6.984	27.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:50:07	3.579	319.900	15.560	1.289	4.013	77.6%	-0.010	0.019	-0.002	16.220
2	23:50:34	3.601	330.800	15.580	5.370	5.838	76.6%	-0.070	0.065	-0.007	-12.100
3	23:51:01	2.802	322.000	15.590	7.953	3.856	77.6%	0.081	0.002	-0.036	19.770
X		3.327	324.200	15.580	4.871	4.569	77.3%	0.000	0.029	-0.015	7.964
S		0.455	5.750	0.018	3.360	1.102	0.6%	0.076	0.033	0.018	17.460
%RSD		13.670	1.773	0.119	68.980	24.110	0.7	30370.000	113.100	119.400	219.300
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:50:07	5.116	0.047	3.199	10.910	-0.004	0.049	-0.091	0.008	0.015	0.054
2	23:50:34	4.792	0.035	3.865	8.846	0.029	0.032	-0.019	-0.022	-0.025	0.001
3	23:51:01	4.330	0.038	3.856	10.920	0.019	0.049	0.460	-0.046	0.063	0.022
X		4.746	0.040	3.640	10.220	0.015	0.043	0.117	-0.020	0.018	0.026
S		0.395	0.006	0.382	1.193	0.017	0.010	0.300	0.027	0.044	0.026
%RSD		8.326	15.820	10.500	11.670	115.500	23.300	257.200	136.400	250.100	103.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:50:07	-0.105	0.065	0.051	0.460	2.446	2.604	1.512	0.181	7.133	0.032
2	23:50:34	-0.105	0.020	-0.002	-0.435	0.731	2.695	-1.297	-0.213	-2.633	0.029
3	23:51:01	-0.105	-0.041	-0.026	-0.356	3.328	2.932	2.043	0.460	-0.628	0.007
X		-0.105	0.015	0.008	-0.111	2.169	2.743	0.753	0.143	1.291	0.023
S		0.000	0.053	0.039	0.495	1.321	0.169	1.795	0.338	5.158	0.013
%RSD		0.000	355.000	503.000	448.100	60.900	6.168	238.400	236.400	399.500	59.640
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:50:07	78.2%	0.549	0.519	0.555	3.091	0.018	0.020	0.023	0.014	77.6%
2	23:50:34	78.3%	0.482	0.601	0.322	1.424	0.027	0.017	0.012	0.027	77.4%
3	23:51:01	80.1%	0.461	0.453	0.382	0.924	0.015	0.020	-0.002	0.004	79.5%
X		78.9%	0.498	0.524	0.420	1.813	0.020	0.019	0.011	0.015	78.2%
S		1.1%	0.046	0.074	0.121	1.134	0.006	0.002	0.012	0.011	1.1%
%RSD		1.4	9.250	14.150	28.770	62.570	32.270	8.662	111.800	74.690	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:50:07	0.064	0.156	0.443	0.391	0.070	0.028	82.4%	0.014	0.005	0.021
2	23:50:34	0.119	0.111	0.487	0.519	-0.005	0.018	81.7%	0.005	0.024	0.030
3	23:51:01	0.110	0.127	0.466	0.502	0.032	0.038	82.6%	0.005	0.007	0.021
X		0.098	0.131	0.465	0.471	0.032	0.028	82.2%	0.008	0.012	0.024
S		0.030	0.023	0.022	0.070	0.038	0.010	0.5%	0.005	0.010	0.005
%RSD		30.440	17.440	4.815	14.810	116.000	35.560	0.6	63.320	85.620	20.010
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:50:07	0.022	0.030	87.7%							
2	23:50:34	0.019	0.023	89.4%							
3	23:51:01	0.040	0.030	90.3%							
X		0.027	0.028	89.1%							
S		0.011	0.004	1.3%							
%RSD		40.960	14.890	1.5							

VE07102-001(20)

5/11/2020 23:55:32

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:59	79.7%	0.004	22.410	22.510	-43.070	<u>TM 206300.000</u>	<u>TM 2509.000</u>	2557.000	4404.000	13.380
2	23:56:26	79.5%	0.016	21.070	21.570	-41.920	<u>TM 205200.000</u>	<u>TM 2532.000</u>	2541.000	4422.000	13.430
3	23:56:53	79.6%	0.027	20.460	22.610	-41.170	<u>TM 203600.000</u>	<u>TM 2463.000</u>	2538.000	4386.000	13.420
X		79.6%	0.016	21.310	22.230	-42.060	<u>TM 205000.000</u>	<u>TM 2502.000</u>	2545.000	4404.000	13.410
S		0.1%	0.011	0.999	0.573	0.957	<u>TM 1359.000</u>	<u>TM 35.000</u>	10.450	17.970	0.027
%RSD		0.2	71.370	4.686	2.579	2.276	<u>TM 0.663</u>	<u>TM 1.399</u>	0.411	0.408	0.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:59	167.300	7222.000	<u>TM 3822.000</u>	49720.000	<u>TM 50500.000</u>	76.5%	0.052	16.710	0.590	166.600
2	23:56:26	167.800	7267.000	<u>TM 3928.000</u>	50660.000	<u>TM 50440.000</u>	75.6%	0.239	16.400	0.557	279.100
3	23:56:53	<u>TM 168.100</u>	7261.000	<u>TM 3801.000</u>	50100.000	<u>TM 50950.000</u>	76.7%	0.113	16.460	0.585	255.900
X		<u>TM 167.700</u>	7250.000	<u>TM 3851.000</u>	50160.000	<u>TM 50630.000</u>	76.2%	0.135	16.520	0.577	233.900
S		<u>TM 0.392</u>	24.270	<u>TM 67.790</u>	469.000	<u>TM 279.900</u>	0.6%	0.095	0.162	0.018	59.410
%RSD		<u>TM 0.233</u>	0.335	<u>TM 1.760</u>	0.935	<u>TM 0.553</u>	0.8	70.800	0.979	3.034	25.400
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:59	23.910	2.820	26.640	145.200	0.039	0.690	1.724	1.315	1.504	0.714
2	23:56:26	22.530	2.866	27.000	136.200	0.022	0.679	1.502	1.469	1.481	0.744
3	23:56:53	21.780	2.820	27.410	143.500	0.017	0.824	1.033	1.518	1.384	0.700
X		22.740	2.835	27.020	141.600	0.026	0.731	1.420	1.434	1.456	0.719
S		1.079	0.027	0.383	4.789	0.011	0.081	0.353	0.106	0.064	0.023
%RSD		4.744	0.939	1.419	3.381	43.400	11.030	24.830	7.375	4.381	3.151
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:59	0.923	0.311	6.125	0.445	13.410	13.270	-2.647	-0.551	-0.473	69.060
2	23:56:26	1.129	0.433	5.682	1.459	12.530	11.770	-1.963	-0.344	-2.615	69.530
3	23:56:53	1.588	0.427	5.092	0.699	12.600	14.040	0.798	0.231	-1.244	69.080
X		1.214	0.391	5.633	0.868	12.840	13.030	-1.271	-0.221	-1.444	69.230
S		0.341	0.069	0.518	0.528	0.489	1.154	1.824	0.405	1.085	0.266
%RSD		28.070	17.610	9.193	60.860	3.811	8.859	143.500	183.000	75.140	0.384
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:59	76.9%	497.400	<u>TM 504.900</u>	494.800	2.745	0.000	-0.002	-1.196	0.222	75.9%
2	23:56:26	77.8%	<u>TM 518.500</u>	<u>TM 515.200</u>	<u>TM 523.500</u>	2.603	0.003	0.002	-1.094	0.258	75.5%
3	23:56:53	78.5%	<u>TM 530.300</u>	<u>TM 532.900</u>	<u>TM 537.900</u>	1.990	0.006	0.002	-1.502	0.186	76.5%
X		77.7%	<u>TM 515.400</u>	<u>TM 517.700</u>	<u>TM 518.700</u>	2.446	0.003	0.001	-1.264	0.222	76.0%
S		0.8%	<u>TM 16.670</u>	<u>TM 14.160</u>	<u>TM 21.950</u>	0.401	0.003	0.002	0.212	0.036	0.5%
%RSD		1.0	<u>TM 3.235</u>	<u>TM 2.735</u>	<u>TM 4.232</u>	16.410	99.530	356.000	16.810	16.080	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:59	0.279	0.036	0.161	0.160	1.379	1.261	80.3%	1.061	0.880	-0.010
2	23:56:26	0.300	0.031	0.235	0.107	1.522	1.057	81.1%	0.900	0.888	0.033
3	23:56:53	0.295	0.025	0.186	0.118	1.310	0.840	83.0%	0.888	0.858	-0.002
X		0.291	0.031	0.194	0.129	1.404	1.053	81.5%	0.950	0.875	0.007
S		0.011	0.005	0.037	0.028	0.108	0.211	1.4%	0.096	0.016	0.023
%RSD		3.697	17.790	19.190	21.770	7.701	20.010	1.7	10.150	1.790	335.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	23:55:59	0.014	0.016	81.2%							
2	23:56:26	0.023	0.027	83.2%							
3	23:56:53	0.022	0.013	83.0%							
X		0.019	0.019	82.5%							
S		0.005	0.007	1.1%							
%RSD		25.190	38.830	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:50	76.7%	-0.018	116.000	110.700	40.580	45380.000	3301.000	3274.000	3711.000	207.600
2	00:02:17	76.2%	-0.006	117.700	116.500	50.700	46960.000	3326.000	3366.000	3706.000	218.100
3	00:02:44	78.0%	0.005	115.300	111.400	43.150	46570.000	3283.000	3207.000	3590.000	215.700
X		77.0%	-0.006	116.300	112.900	44.810	46310.000	3303.000	3282.000	3669.000	213.800
S		0.9%	0.011	1.230	3.159	5.261	822.600	21.620	79.640	68.490	5.527
%RSD		1.1	180.100	1.057	2.799	11.740	1.776	0.654	2.426	1.866	2.585
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:50	4949.000	58400.000	7948.000	14170.000	13840.000	71.9%	2.567	2.548	0.470	2419.000
2	00:02:17	5069.000	59750.000	8167.000	14440.000	14190.000	70.1%	1.532	1.863	0.472	2889.000
3	00:02:44	5045.000	57790.000	7796.000	14150.000	13850.000	70.3%	2.392	1.819	0.479	3018.000
X		5021.000	58640.000	7970.000	14260.000	13960.000	70.8%	2.164	2.077	0.473	2775.000
S		63.370	1003.000	186.200	163.500	199.600	1.0%	0.554	0.409	0.005	314.800
%RSD		1.262	1.711	2.336	1.147	1.430	1.4	25.590	19.670	0.999	11.340
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:50	228.700	10.190	229.500	269.000	0.236	3.893	3.477	8.587	8.742	87.580
2	00:02:17	235.900	10.570	229.900	267.400	0.209	3.993	4.606	8.421	9.246	89.350
3	00:02:44	233.100	10.260	230.200	256.300	0.204	3.463	3.777	8.507	9.063	92.040
X		232.600	10.340	229.900	264.200	0.216	3.783	3.953	8.505	9.017	89.660
S		3.664	0.205	0.399	6.908	0.017	0.282	0.585	0.083	0.255	2.249
%RSD		1.575	1.981	0.174	2.614	8.028	7.445	14.790	0.975	2.832	2.508
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:50	79.520	87.500	0.145	0.285	55.730	51.210	-3.281	-0.690	-1.086	59.840
2	00:02:17	79.160	85.100	0.224	0.728	45.240	48.900	2.777	0.586	-1.752	61.140
3	00:02:44	84.610	86.180	0.296	-0.022	49.270	44.870	-1.811	-0.362	-1.814	59.230
X		81.100	86.260	0.222	0.330	50.080	48.330	-0.772	-0.156	-1.550	60.070
S		3.045	1.199	0.075	0.377	5.293	3.207	3.160	0.662	0.404	0.972
%RSD		3.754	1.390	34.020	114.200	10.570	6.636	409.500	425.800	26.040	1.619
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:50	75.3%	5.515	6.210	5.528	2.080	0.000	0.018	0.005	0.015	75.1%
2	00:02:17	73.8%	5.841	6.426	5.554	1.381	0.006	0.018	0.005	0.026	75.1%
3	00:02:44	75.6%	5.879	5.220	5.154	4.046	0.016	0.011	-0.007	0.004	75.4%
X		74.9%	5.745	5.952	5.412	2.502	0.007	0.016	0.001	0.015	75.2%
S		1.0%	0.200	0.643	0.224	1.382	0.008	0.004	0.007	0.011	0.2%
%RSD		1.3	3.488	10.800	4.139	55.230	107.700	24.070	1045.000	75.290	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:50	0.206	0.235	0.413	0.425	8.597	7.907	82.3%	-0.007	0.003	0.203
2	00:02:17	0.314	0.251	0.506	0.465	8.443	8.876	81.6%	-0.005	-0.002	0.165
3	00:02:44	0.161	0.271	0.508	0.629	8.974	9.685	82.1%	-0.009	0.005	0.159
X		0.227	0.252	0.476	0.506	8.671	8.823	82.0%	-0.007	0.002	0.176
S		0.079	0.018	0.055	0.108	0.273	0.890	0.4%	0.002	0.004	0.024
%RSD		34.620	7.089	11.460	21.350	3.152	10.090	0.5	30.370	167.700	13.610
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:01:50	0.147	0.151	86.7%							
2	00:02:17	0.163	0.154	86.9%							
3	00:02:44	0.126	0.146	88.3%							
X		0.145	0.150	87.3%							
S		0.018	0.004	0.9%							
%RSD		12.700	2.779	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:42	78.9%	-0.007	29.840	29.190	8.948	45990.000	2606.000	2653.000	4529.000	332.100
2	00:08:09	77.2%	0.051	28.370	29.500	9.748	47060.000	2672.000	2742.000	4587.000	323.500
3	00:08:36	77.5%	0.005	29.560	30.390	7.423	45410.000	2587.000	2673.000	4427.000	321.100
X		77.8%	0.017	29.260	29.690	8.707	46150.000	2622.000	2690.000	4514.000	325.600
S		0.9%	0.030	0.782	0.624	1.181	836.300	44.120	46.760	81.270	5.752
%RSD		1.2	184.000	2.674	2.102	13.560	1.812	1.683	1.739	1.800	1.767
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:42	2008.000	45920.000	17010.000	35410.000	34880.000	71.7%	1.203	3.173	38.100	2842.000
2	00:08:09	2011.000	46900.000	17780.000	36990.000	36010.000	70.0%	0.999	4.298	39.320	2228.000
3	00:08:36	1946.000	45660.000	17000.000	35670.000	35100.000	70.6%	1.089	3.950	39.960	2282.000
X		1989.000	46160.000	17260.000	36020.000	35330.000	70.8%	1.097	3.807	39.130	2451.000
S		36.550	655.700	451.800	847.800	598.400	0.9%	0.102	0.576	0.948	339.900
%RSD		1.838	1.421	2.617	2.354	1.694	1.2	9.281	15.130	2.424	13.870
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:42	1794.000	149.800	1719.000	1826.000	12.730	2.841	2.626	1.900	2.338	6.127
2	00:08:09	1839.000	150.600	1762.000	1870.000	12.670	3.229	3.458	1.946	2.792	6.712
3	00:08:36	1809.000	148.500	1757.000	1857.000	12.190	2.884	2.545	2.078	2.517	6.115
X		1814.000	149.600	1746.000	1851.000	12.530	2.985	2.876	1.975	2.549	6.318
S		22.740	1.087	23.810	22.650	0.294	0.213	0.505	0.093	0.229	0.341
%RSD		1.254	0.727	1.364	1.224	2.347	7.130	17.570	4.685	8.976	5.403
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:42	6.267	5.581	1.630	0.477	4177.000	4120.000	18.040	3.470	0.377	128.400
2	00:08:09	6.819	6.003	1.364	0.285	4197.000	4174.000	16.460	3.080	1.800	127.400
3	00:08:36	5.656	4.908	0.926	0.543	4230.000	4193.000	7.737	1.234	-1.085	127.200
X		6.247	5.498	1.307	0.435	4202.000	4162.000	14.080	2.595	0.364	127.700
S		0.582	0.552	0.355	0.134	26.610	37.970	5.548	1.194	1.442	0.673
%RSD		9.309	10.050	27.190	30.800	0.633	0.912	39.410	46.040	396.200	0.528
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:42	75.3%	7.966	8.278	8.362	3.090	0.041	0.038	0.007	0.023	74.2%
2	00:08:09	76.0%	8.445	8.148	8.809	2.368	0.009	0.021	-0.022	0.022	74.8%
3	00:08:36	75.5%	8.187	8.164	8.397	2.606	0.037	0.040	-0.007	0.007	75.1%
X		75.6%	8.199	8.197	8.523	2.688	0.029	0.033	-0.007	0.017	74.7%
S		0.4%	0.240	0.071	0.249	0.368	0.017	0.010	0.014	0.009	0.4%
%RSD		0.5	2.926	0.866	2.918	13.690	59.130	31.580	204.300	53.080	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:42	0.151	0.122	16.200	15.060	10.650	11.010	81.5%	-0.013	0.000	0.336
2	00:08:09	0.041	0.142	16.020	15.050	10.830	10.890	82.6%	-0.011	-0.003	0.292
3	00:08:36	0.130	0.084	16.010	15.540	10.320	10.540	82.4%	-0.003	-0.001	0.374
X		0.108	0.116	16.080	15.220	10.600	10.810	82.2%	-0.009	-0.001	0.334
S		0.058	0.030	0.106	0.276	0.259	0.242	0.5%	0.006	0.001	0.041
%RSD		54.090	25.540	0.659	1.816	2.440	2.240	0.7	59.650	123.500	12.350
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:07:42	0.385	0.354	86.7%							
2	00:08:09	0.404	0.357	87.6%							
3	00:08:36	0.348	0.351	88.4%							
X		0.379	0.354	87.6%							
S		0.028	0.003	0.9%							
%RSD		7.424	0.790	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:34	78.4%	-0.006	10.440	9.039	26.990	31590.000	755.800	723.900	766.000	28.390
2	00:14:01	79.1%	-0.018	11.170	9.705	29.490	31740.000	774.100	724.700	770.900	28.920
3	00:14:28	76.9%	-0.006	9.554	9.207	31.310	30400.000	742.500	729.000	763.200	28.820
X		78.1%	-0.010	10.390	9.317	29.260	31240.000	757.400	725.900	766.700	28.710
S		1.1%	0.007	0.808	0.346	2.169	730.300	15.850	2.725	3.856	0.284
%RSD		1.5	64.890	7.777	3.718	7.410	2.337	2.092	0.376	0.503	0.989
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:34	3496.000	58030.000	558.300	1809.000	1875.000	71.0%	0.457	-0.107	0.391	2580.000
2	00:14:01	3571.000	60330.000	560.900	1905.000	1886.000	70.6%	0.592	-0.226	0.410	2655.000
3	00:14:28	3595.000	59480.000	557.600	1875.000	1887.000	70.3%	0.362	-0.017	0.442	2533.000
X		3554.000	59280.000	558.900	1863.000	1883.000	70.6%	0.471	-0.116	0.414	2589.000
S		51.620	1165.000	1.705	49.240	6.455	0.3%	0.116	0.105	0.026	61.230
%RSD		1.452	1.965	0.305	2.643	0.343	0.5	24.540	90.130	6.268	2.365
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:34	5.929	0.608	0.848	7.620	-0.005	0.508	0.385	60.160	61.180	26.110
2	00:14:01	3.184	0.606	1.306	6.774	0.018	0.570	0.391	59.860	60.460	26.480
3	00:14:28	4.746	0.535	1.387	6.772	-0.002	0.602	0.600	60.650	61.730	25.670
X		4.620	0.583	1.180	7.055	0.004	0.560	0.459	60.220	61.130	26.090
S		1.376	0.042	0.290	0.489	0.013	0.048	0.122	0.400	0.636	0.405
%RSD		29.800	7.151	24.620	6.927	335.200	8.546	26.630	0.663	1.041	1.551
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:34	25.170	26.010	0.601	0.512	49.420	50.190	-1.009	-0.236	-0.298	15.180
2	00:14:01	23.390	25.410	-0.928	0.731	49.270	49.540	-0.959	-0.191	-1.745	15.330
3	00:14:28	24.850	25.350	0.171	0.775	49.450	46.510	-1.746	-0.365	-1.031	15.360
X		24.470	25.590	-0.052	0.673	49.380	48.750	-1.238	-0.264	-1.025	15.290
S		0.950	0.364	0.788	0.141	0.098	1.966	0.440	0.090	0.724	0.098
%RSD		3.882	1.422	1516.000	20.900	0.198	4.034	35.570	34.150	70.630	0.639
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:34	74.3%	0.100	0.183	0.043	1.234	0.009	0.011	-0.000	0.011	75.3%
2	00:14:01	73.5%	0.167	0.173	0.101	-0.160	0.009	0.015	-0.000	-0.005	74.4%
3	00:14:28	74.3%	0.178	0.223	-0.027	-0.032	0.025	0.031	0.000	0.006	74.3%
X		74.1%	0.148	0.193	0.039	0.347	0.015	0.019	-0.000	0.004	74.7%
S		0.4%	0.042	0.027	0.064	0.770	0.009	0.011	0.000	0.008	0.6%
%RSD		0.6	28.470	13.820	166.000	222.000	62.340	55.600	166.000	212.100	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:34	0.047	0.099	0.086	-0.013	10.180	9.489	81.0%	-0.007	-0.002	1.155
2	00:14:01	0.106	0.085	0.026	0.069	10.260	9.232	80.6%	-0.001	0.001	1.204
3	00:14:28	0.068	0.111	0.096	0.052	10.600	9.226	81.8%	-0.003	0.000	1.181
X		0.074	0.098	0.069	0.036	10.350	9.316	81.1%	-0.003	-0.000	1.180
S		0.030	0.013	0.037	0.043	0.223	0.150	0.6%	0.003	0.001	0.025
%RSD		40.400	13.470	54.040	119.500	2.159	1.610	0.8	92.330	1029.000	2.081
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:13:34	1.157	1.155	86.0%							
2	00:14:01	1.106	1.190	86.8%							
3	00:14:28	1.322	1.234	86.7%							
X		1.195	1.193	86.5%							
S		0.113	0.040	0.4%							
%RSD		9.470	3.335	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:26	77.8%	106.600	130.800	133.500	304.900	<u>79130.000</u>	<u>2032.000</u>	2018.000	2088.000	<u>TM 1616.000</u>
2	00:19:53	75.2%	106.200	126.100	126.100	305.900	<u>79470.000</u>	<u>2018.000</u>	1995.000	2042.000	<u>TM 1576.000</u>
3	00:20:20	76.7%	104.400	130.900	128.100	297.700	<u>79810.000</u>	<u>1973.000</u>	1939.000	2054.000	<u>TM 1563.000</u>
X		76.6%	105.700	129.300	129.200	302.800	<u>79470.000</u>	<u>2008.000</u>	1984.000	2061.000	<u>TM 1585.000</u>
S		1.3%	1.145	2.740	3.821	4.458	<u>340.100</u>	<u>31.010</u>	40.180	24.350	<u>TM 27.450</u>
%RSD		1.7	1.082	2.120	2.956	1.472	<u>0.428</u>	<u>1.545</u>	2.025	1.181	<u>TM 1.732</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:26	2540.000	<u>64640.000</u>	<u>6389.000</u>	3770.000	3568.000	69.8%	142.800	107.600	112.600	4081.000
2	00:19:53	<u>2356.000</u>	<u>63850.000</u>	<u>6439.000</u>	3743.000	3649.000	69.4%	142.600	108.600	114.000	3388.000
3	00:20:20	<u>2392.000</u>	<u>64430.000</u>	<u>6262.000</u>	3737.000	3586.000	69.6%	147.700	105.900	111.300	3619.000
X		<u>2430.000</u>	<u>64310.000</u>	<u>6364.000</u>	3750.000	3601.000	69.6%	144.400	107.400	112.600	3696.000
S		<u>97.570</u>	<u>413.900</u>	<u>91.290</u>	17.360	42.560	0.2%	2.851	1.366	1.371	352.900
%RSD		<u>4.016</u>	<u>0.644</u>	<u>1.435</u>	0.463	1.182	0.3	1.975	1.273	1.217	9.548
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:26	1621.000	117.800	<u>1497.000</u>	1550.000	108.600	112.200	113.700	<u>848.900</u>	<u>870.200</u>	403.900
2	00:19:53	1615.000	118.600	<u>1500.000</u>	1559.000	108.100	112.400	114.000	<u>855.800</u>	<u>872.100</u>	408.300
3	00:20:20	1602.000	118.400	<u>1528.000</u>	1544.000	106.400	114.800	113.600	<u>847.300</u>	<u>872.200</u>	403.700
X		1612.000	118.300	<u>1508.000</u>	1551.000	107.700	113.200	113.800	<u>850.700</u>	<u>871.500</u>	405.300
S		9.875	0.417	<u>16.960</u>	7.680	1.161	1.446	0.211	<u>4.497</u>	<u>1.115</u>	2.604
%RSD		0.612	0.353	<u>1.124</u>	0.495	1.078	1.278	0.185	<u>0.529</u>	<u>0.128</u>	0.642
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:26	390.200	398.100	114.500	106.100	40.860	40.620	504.700	108.500	2.000	126.700
2	00:19:53	384.600	385.900	109.100	101.100	40.030	38.690	488.200	105.800	-0.235	127.700
3	00:20:20	385.600	391.000	110.400	106.300	39.280	43.500	508.400	109.100	-0.201	130.600
X		386.800	391.700	111.400	104.500	40.060	40.940	500.400	107.800	0.521	128.300
S		3.010	6.132	2.815	2.939	0.793	2.423	10.790	1.769	1.281	2.061
%RSD		0.778	1.566	2.527	2.813	1.980	5.918	2.157	1.641	245.700	1.606
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:26	73.4%	112.800	111.400	111.900	105.900	104.700	104.000	107.700	107.500	73.0%
2	00:19:53	73.4%	111.900	113.300	113.500	116.600	104.800	105.500	107.000	110.400	72.3%
3	00:20:20	72.7%	114.800	112.400	112.300	109.400	103.900	102.600	109.400	109.900	72.5%
X		73.2%	113.200	112.400	112.600	110.700	104.400	104.000	108.000	109.200	72.6%
S		0.4%	1.460	0.960	0.818	5.468	0.487	1.456	1.235	1.539	0.3%
%RSD		0.6	1.290	0.854	0.726	4.942	0.467	1.399	1.143	1.409	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:26	110.900	110.300	110.500	105.700	118.900	117.100	77.8%	109.400	110.000	117.700
2	00:19:53	115.100	114.100	112.400	107.600	122.500	115.800	78.8%	110.900	110.900	120.100
3	00:20:20	112.300	112.800	112.200	105.200	120.200	116.500	79.9%	109.600	109.400	118.200
X		112.800	112.400	111.700	106.100	120.600	116.400	78.9%	110.000	110.100	118.700
S		2.096	1.935	1.024	1.250	1.823	0.656	1.1%	0.791	0.775	1.256
%RSD		1.858	1.721	0.917	1.177	1.512	0.563	1.4	0.720	0.704	1.058
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:19:26	118.500	119.400	81.6%							
2	00:19:53	117.000	119.300	82.8%							
3	00:20:20	118.400	119.200	83.7%							
X		118.000	119.300	82.7%							
S		0.869	0.104	1.0%							
%RSD		0.737	0.087	1.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:18	78.1%	0.005	23.350	22.740	316.600	<u>75940.000</u>	897.200	872.000	909.700	<u>TM 1418.000</u>
2	00:25:45	75.3%	-0.006	24.090	25.480	325.700	<u>75690.000</u>	914.100	865.700	907.700	<u>TM 1422.000</u>
3	00:26:12	75.5%	-0.018	22.390	23.390	323.200	<u>75420.000</u>	906.000	864.400	889.700	<u>TM 1414.000</u>
X		76.3%	-0.006	23.280	23.870	321.800	<u>75680.000</u>	905.800	867.300	902.400	<u>TM 1418.000</u>
S		1.6%	0.011	0.852	1.434	4.724	<u>7263.800</u>	8.427	4.060	11.010	<u>TM 4.072</u>
%RSD		2.0	180.900	3.658	6.007	1.468	<u>70.349</u>	0.930	0.468	1.220	<u>TM 0.287</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:18	1434.000	<u>762830.000</u>	<u>75195.000</u>	2416.000	2421.000	71.4%	30.530	0.266	3.994	2344.000
2	00:25:45	1380.000	<u>763360.000</u>	<u>75166.000</u>	2583.000	2431.000	70.0%	35.020	0.051	3.833	2641.000
3	00:26:12	1408.000	<u>763760.000</u>	<u>75072.000</u>	2438.000	2422.000	70.1%	31.700	-0.156	4.034	2765.000
X		1407.000	<u>763320.000</u>	<u>75144.000</u>	2479.000	2425.000	70.5%	32.410	0.053	3.954	2583.000
S		27.240	<u>7466.700</u>	<u>764.200</u>	90.680	5.373	0.8%	2.332	0.211	0.107	215.900
%RSD		1.936	<u>71.737</u>	<u>71.248</u>	3.658	0.222	1.1	7.193	394.400	2.699	8.357
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:18	369.400	9.233	363.600	370.400	0.427	8.573	9.238	<u>735.600</u>	<u>753.800</u>	285.200
2	00:25:45	372.400	9.442	359.700	369.500	0.478	8.885	7.946	<u>725.600</u>	<u>746.700</u>	288.000
3	00:26:12	358.100	9.275	360.200	378.500	0.494	8.175	9.279	<u>733.300</u>	<u>748.500</u>	291.200
X		366.600	9.317	361.200	372.800	0.466	8.544	8.821	<u>731.500</u>	<u>749.700</u>	288.100
S		7.574	0.110	2.126	4.986	0.035	0.356	0.758	<u>75.241</u>	<u>73.716</u>	3.014
%RSD		2.066	1.181	0.589	1.337	7.506	4.165	8.596	<u>70.717</u>	<u>70.496</u>	1.046
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:18	266.700	280.200	0.482	1.632	33.990	32.340	1.308	0.236	1.249	21.510
2	00:25:45	263.700	273.700	0.067	0.275	31.070	35.120	2.758	0.629	-1.017	21.770
3	00:26:12	271.000	280.100	0.380	0.586	35.000	36.800	-0.252	-0.023	-1.028	21.380
X		267.100	278.000	0.310	0.831	33.350	34.750	1.272	0.281	-0.266	21.550
S		3.696	3.753	0.216	0.711	2.039	2.252	1.505	0.328	1.312	0.202
%RSD		1.384	1.350	69.750	85.570	6.112	6.479	118.400	117.000	493.900	0.938
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:18	73.2%	0.761	0.646	0.617	1.445	0.177	0.153	0.105	0.150	73.8%
2	00:25:45	74.1%	0.586	0.829	0.597	1.611	0.144	0.175	0.162	0.055	72.8%
3	00:26:12	74.3%	0.647	0.742	0.785	2.939	0.132	0.115	0.174	0.165	72.9%
X		73.9%	0.665	0.739	0.666	1.998	0.151	0.147	0.147	0.124	73.2%
S		0.6%	0.088	0.091	0.103	0.819	0.024	0.030	0.037	0.059	0.5%
%RSD		0.8	13.310	12.350	15.540	40.970	15.710	20.630	24.890	48.070	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:18	4.088	5.743	1.222	1.045	8.283	7.793	79.5%	0.004	0.015	5.499
2	00:25:45	4.030	5.566	1.149	0.970	8.151	7.679	79.4%	-0.000	0.015	5.469
3	00:26:12	4.245	5.540	1.060	1.187	7.077	7.304	79.6%	-0.007	0.012	5.046
X		4.121	5.617	1.144	1.067	7.837	7.592	79.5%	-0.001	0.014	5.338
S		0.111	0.110	0.081	0.110	0.661	0.256	0.1%	0.006	0.002	0.253
%RSD		2.701	1.961	7.095	10.310	8.441	3.375	0.1	668.500	11.390	4.748
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:25:18	5.253	5.371	82.0%							
2	00:25:45	4.998	5.274	83.4%							
3	00:26:12	5.453	5.215	83.8%							
X		5.235	5.287	83.1%							
S		0.228	0.079	0.9%							
%RSD		4.353	1.497	1.1							

CCV MW126865 5/12/2020 00:30:43 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:31:11	74.7%	315.800	311.100	300.600	35.360	65450.000	63940.000	63220.000	64490.000	314.800
2	00:31:38	75.0%	307.800	313.000	308.800	32.840	67280.000	64930.000	65020.000	65350.000	306.900
3	00:32:05	76.2%	310.900	305.700	311.100	35.270	67840.000	65010.000	65530.000	66840.000	313.500
X		75.3%	103.841%	103.302%	102.277%	34.490	111.425%	64620.000	64590.000	109.267%	103.902%
S		0.8%	n/a	n/a	n/a	1.433	n/a	594.000	1213.000	n/a	n/a
%RSD		1.0	1.297	1.219	1.808	4.155	1.871	0.919	1.878	1.818	1.361
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:31:11	3413.000	720.000	64110.000	63580.000	65570.000	73.2%	309.600	319.600	310.300	485.600
2	00:31:38	3359.000	691.000	63750.000	63660.000	65060.000	73.4%	313.800	320.200	313.500	1600.000
3	00:32:05	3541.000	708.700	66350.000	64270.000	65580.000	72.7%	317.500	313.600	311.800	4350.000
X		3438.000	706.600	107.895%	63840.000	109.001%	73.1%	104.540%	105.921%	103.955%	2145.000
S		93.170	14.620	n/a	376.600	n/a	0.4%	n/a	n/a	n/a	1989.000
%RSD		2.710	2.069	1.216	0.590	0.454	0.5	1.262	1.152	0.516	92.720
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:31:11	63950.000	308.000	64850.000	64740.000	301.000	299.700	301.800	291.800	297.900	306.100
2	00:31:38	64050.000	299.700	64450.000	64940.000	308.600	293.600	306.700	290.600	292.400	307.400
3	00:32:05	65770.000	311.400	66480.000	65430.000	310.300	305.800	307.100	292.200	299.200	306.700
X		64590.000	102.119%	65260.000	108.389%	102.205%	99.905%	305.200	291.500	98.830%	102.246%
S		1023.000	n/a	1077.000	n/a	n/a	n/a	2.970	0.817	n/a	n/a
%RSD		1.584	1.968	1.651	0.544	1.619	2.036	0.973	0.280	1.221	0.211
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:31:11	306.200	308.000	316.900	291.400	6.364	7.806	1408.000	307.900	0.416	312.300
2	00:31:38	302.100	303.200	310.500	303.000	7.499	6.762	1414.000	305.400	0.354	310.500
3	00:32:05	312.200	301.500	320.700	290.300	6.875	5.252	1457.000	323.700	1.025	312.900
X		306.800	304.200	105.345%	294.900	6.912	6.606	1426.000	104.112%	0.598	103.969%
S		5.064	3.348	n/a	7.040	0.569	1.284	26.610	n/a	0.371	n/a
%RSD		1.650	1.101	1.625	2.387	8.224	19.440	1.866	3.183	61.980	0.401
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:31:11	74.3%	323.300	331.700	324.500	305.300	295.900	297.100	309.700	313.300	73.1%
2	00:31:38	75.4%	330.000	333.300	325.900	304.400	295.800	292.900	306.800	310.000	74.9%
3	00:32:05	76.3%	338.300	345.400	338.500	307.300	304.600	299.900	317.900	319.000	73.5%
X		75.3%	110.177%	112.270%	329.700	305.700	99.576%	296.600	311.500	104.699%	73.8%
S		1.0%	n/a	n/a	7.720	1.459	n/a	3.504	5.774	n/a	0.9%
%RSD		1.3	2.275	2.227	2.342	0.477	1.690	1.181	1.854	1.464	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:31:11	315.800	313.700	315.600	309.200	323.000	308.500	78.3%	321.400	315.800	315.800
2	00:31:38	316.300	314.600	320.800	305.300	316.900	309.600	80.3%	320.200	314.000	317.300
3	00:32:05	323.600	320.900	324.600	310.600	329.400	311.300	80.4%	319.200	318.700	321.200
X		106.197%	105.462%	320.300	102.787%	107.697%	103.268%	79.6%	320.300	105.397%	106.023%
S		n/a	n/a	4.492	n/a	n/a	n/a	1.2%	1.117	n/a	n/a
%RSD		1.362	1.252	1.402	0.897	1.937	0.461	1.5	0.349	0.751	0.875
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:31:11	319.200	322.300	79.4%							
2	00:31:38	314.600	319.100	81.7%							
3	00:32:05	318.900	324.300	83.0%							
X		105.850%	107.294%	81.3%							
S		n/a	n/a	1.8%							
%RSD		0.809	0.812	2.3							

CCB IM9968-01 5/12/2020 00:36:35 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:37:03	82.0%	0.015	4.268	4.049	38.560	5.730	5.172	5.396	4.816	0.048
2	00:37:30	82.0%	0.004	3.047	3.595	24.730	5.373	4.673	4.915	5.554	0.067
3	00:37:57	81.0%	0.037	2.890	3.660	29.340	4.639	3.908	4.059	4.282	0.104
X		81.7%	0.018	3.402	3.768	30.880	5.247	4.584	4.790	4.884	0.073
S		0.6%	0.017	0.755	0.245	7.041	0.557	0.637	0.677	0.639	0.029
%RSD		0.7	91.320	22.190	6.509	22.810	10.610	13.890	14.140	13.080	39.150
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:37:03	3.636	473.600	16.620	1.312	5.412	76.9%	-0.070	0.044	0.021	10.470
2	00:37:30	3.532	452.700	16.750	4.005	5.657	76.9%	-0.040	0.054	0.010	3.375
3	00:37:57	4.446	457.500	15.440	1.357	5.040	75.7%	-0.070	0.009	-0.001	16.620
X		3.872	461.300	16.270	2.225	5.370	76.5%	-0.060	0.036	0.010	10.160
S		0.500	10.930	0.723	1.542	0.311	0.7%	0.018	0.023	0.011	6.629
%RSD		12.930	2.368	4.444	69.300	5.783	0.9	29.300	65.490	107.700	65.270
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:37:03	4.483	0.032	5.473	10.560	0.012	0.004	0.348	-0.010	0.057	0.044
2	00:37:30	5.525	0.039	5.623	8.550	-0.012	-0.014	0.473	0.035	-0.017	-0.031
3	00:37:57	3.420	0.033	3.818	8.947	0.014	0.004	0.683	0.009	0.034	0.024
X		4.476	0.034	4.971	9.353	0.005	-0.002	0.501	0.011	0.025	0.012
S		1.052	0.004	1.001	1.064	0.014	0.011	0.169	0.023	0.038	0.039
%RSD		23.510	11.690	20.140	11.380	302.300	599.400	33.730	200.500	153.000	315.800
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:37:03	-0.105	-0.025	-0.187	-0.012	5.574	3.986	-1.992	-0.499	2.963	0.017
2	00:37:30	-0.038	-0.025	-0.225	1.232	3.979	4.190	-4.816	-1.029	-0.554	0.024
3	00:37:57	-0.105	0.005	-0.089	0.324	5.133	4.294	0.045	0.024	-0.585	0.022
X		-0.083	-0.015	-0.167	0.514	4.895	4.157	-2.254	-0.501	0.608	0.021
S		0.039	0.017	0.070	0.644	0.824	0.157	2.441	0.527	2.040	0.003
%RSD		47.260	116.400	42.060	125.100	16.820	3.770	108.300	105.100	335.500	15.820
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:37:03	78.1%	0.451	0.399	0.391	0.281	0.027	0.020	0.024	0.031	78.6%
2	00:37:30	78.6%	0.457	0.603	0.348	1.344	0.015	0.020	0.036	0.031	80.0%
3	00:37:57	79.5%	0.410	0.460	0.346	1.089	0.021	0.017	0.024	0.010	78.8%
X		78.7%	0.439	0.487	0.362	0.904	0.021	0.019	0.028	0.024	79.2%
S		0.7%	0.025	0.105	0.025	0.555	0.006	0.002	0.007	0.012	0.7%
%RSD		0.9	5.754	21.550	6.968	61.380	29.320	9.085	25.120	51.500	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:37:03	0.038	0.124	0.455	0.472	0.014	-0.003	83.5%	0.011	0.021	0.024
2	00:37:30	0.079	0.102	0.584	0.396	0.013	0.007	83.9%	0.015	0.015	0.052
3	00:37:57	0.056	0.123	0.443	0.536	-0.005	0.018	83.3%	0.001	0.011	0.021
X		0.058	0.116	0.494	0.468	0.007	0.007	83.6%	0.009	0.016	0.032
S		0.020	0.013	0.078	0.070	0.011	0.010	0.3%	0.007	0.005	0.017
%RSD		35.190	10.910	15.870	14.960	143.700	137.400	0.4	82.070	30.240	53.190
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:37:03	0.045	0.041	90.6%							
2	00:37:30	0.033	0.046	90.5%							
3	00:37:57	0.028	0.026	90.9%							
X		0.035	0.038	90.7%							
S		0.009	0.010	0.2%							
%RSD		25.420	27.690	0.3							

IS MW12864 5/12/2020 00:42:28

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:55	83.9%	0.003	3.511	1.983	44.100	3.471	1.529	1.143	1.609	0.413
2	00:43:22	83.3%	-0.007	2.653	2.694	41.730	3.396	1.429	1.134	1.725	0.391
3	00:43:49	82.4%	-0.018	1.752	2.404	38.520	3.425	1.606	0.999	1.438	0.398
X		83.2%	-0.007	2.638	2.360	41.450	3.431	1.521	1.092	1.591	0.401
S		0.7%	0.011	0.879	0.357	2.798	0.038	0.088	0.080	0.145	0.012
%RSD		0.9	147.200	33.330	15.140	6.751	1.104	5.815	7.372	9.102	2.890
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:55	4.125	353.100	14.150	15.870	9.801	77.9%	-0.040	0.013	0.100	9.605
2	00:43:22	5.046	349.300	14.800	7.875	11.090	78.2%	-0.010	-0.041	0.141	43.090
3	00:43:49	3.513	354.800	14.390	20.040	8.553	77.2%	-0.040	0.020	0.129	-2.173
X		4.228	352.400	14.440	14.600	9.814	77.8%	-0.030	-0.003	0.124	16.840
S		0.772	2.784	0.328	6.182	1.267	0.5%	0.017	0.034	0.021	23.490
%RSD		18.260	0.790	2.273	42.350	12.910	0.6	56.940	1308.000	16.910	139.400
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:55	1.838	0.290	2.119	5.427	-0.000	0.147	0.088	-0.012	-0.018	2.329
2	00:43:22	0.504	0.301	2.044	6.202	-0.006	0.066	0.145	-0.016	0.006	2.414
3	00:43:49	0.323	0.342	1.931	6.898	-0.012	0.058	0.466	0.015	-0.017	2.702
X		0.888	0.311	2.031	6.175	-0.006	0.091	0.233	-0.004	-0.010	2.482
S		0.827	0.028	0.095	0.736	0.006	0.049	0.204	0.017	0.013	0.196
%RSD		93.110	8.879	4.659	11.920	95.230	54.280	87.310	388.400	134.900	7.883
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:55	2.499	2.663	-0.098	0.124	3.363	3.645	-1.374	-0.303	0.768	0.012
2	00:43:22	2.234	2.279	-0.242	0.251	2.966	4.440	-0.658	-0.123	-1.276	0.014
3	00:43:49	2.234	2.219	-0.128	0.117	2.916	3.775	-0.016	-0.017	0.743	0.014
X		2.322	2.387	-0.156	0.164	3.082	3.953	-0.682	-0.148	0.078	0.013
S		0.153	0.241	0.076	0.075	0.245	0.427	0.679	0.145	1.173	0.001
%RSD		6.580	10.080	48.620	45.920	7.956	10.790	99.550	97.950	1497.000	7.111
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:55	79.6%	0.004	-0.026	-0.023	0.818	0.015	0.017	0.000	0.012	78.6%
2	00:43:22	79.1%	-0.048	0.001	-0.004	0.248	0.006	0.004	0.000	0.007	79.7%
3	00:43:49	80.1%	-0.095	0.017	-0.099	1.880	0.003	-0.002	0.000	0.006	79.6%
X		79.6%	-0.046	-0.003	-0.042	0.982	0.008	0.007	0.000	0.009	79.3%
S		0.5%	0.050	0.022	0.051	0.828	0.006	0.009	0.000	0.003	0.6%
%RSD		0.6	107.900	791.600	121.200	84.380	78.800	143.200	121.200	37.430	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:55	0.008	0.034	0.162	0.140	-0.005	0.028	81.8%	0.003	0.004	0.003
2	00:43:22	0.014	0.023	0.166	0.138	-0.005	0.069	82.8%	0.003	0.005	0.024
3	00:43:49	0.056	0.053	0.204	0.106	0.013	0.038	84.0%	-0.001	0.008	0.005
X		0.026	0.037	0.177	0.128	0.001	0.045	82.9%	0.002	0.006	0.011
S		0.026	0.015	0.023	0.019	0.011	0.021	1.1%	0.003	0.002	0.011
%RSD		100.700	41.100	13.240	14.890	852.700	47.020	1.3	146.000	42.730	106.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:42:55	0.016	0.016	87.8%							
2	00:43:22	0.025	0.017	89.3%							
3	00:43:49	0.016	0.017	90.6%							
X		0.019	0.017	89.2%							
S		0.005	0.001	1.4%							
%RSD		27.250	5.301	1.6							

RINSE 5/12/2020 00:48:20

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:47	83.2%	-0.018	2.571	1.702	45.240	3.340	1.471	1.298	1.153	0.354
2	00:49:14	83.6%	-0.007	2.242	1.339	46.040	3.288	1.428	1.451	1.716	0.405
3	00:49:41	83.7%	-0.007	2.605	2.975	40.510	3.253	1.440	1.145	1.510	0.469
X		83.5%	-0.011	2.473	2.005	43.930	3.294	1.446	1.298	1.460	0.409
S		0.3%	0.006	0.201	0.859	2.986	0.044	0.022	0.153	0.284	0.057
%RSD		0.3	57.160	8.117	42.850	6.798	1.342	1.526	11.790	19.490	13.980
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:47	3.765	320.700	16.430	13.210	10.580	78.0%	-0.040	0.047	0.125	-16.180
2	00:49:14	4.314	312.500	16.370	14.750	9.067	77.0%	-0.009	0.021	0.150	-7.406
3	00:49:41	4.043	322.600	15.210	9.265	9.908	77.7%	-0.010	0.013	0.176	5.286
X		4.041	318.600	16.010	12.410	9.852	77.6%	-0.020	0.027	0.150	-6.100
S		0.274	5.387	0.686	2.827	0.758	0.5%	0.018	0.018	0.026	10.790
%RSD		6.792	1.691	4.285	22.790	7.695	0.7	89.030	66.800	17.150	176.900
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:47	0.472	0.274	2.337	9.187	-0.002	0.120	0.454	0.018	0.038	2.613
2	00:49:14	0.772	0.333	2.575	7.434	-0.000	0.122	-0.208	-0.007	-0.017	2.284
3	00:49:41	1.633	0.339	1.548	5.855	-0.004	0.094	-0.093	0.003	0.031	2.229
X		0.959	0.315	2.154	7.492	-0.002	0.112	0.051	0.005	0.017	2.375
S		0.603	0.036	0.538	1.667	0.002	0.016	0.353	0.013	0.030	0.208
%RSD		62.830	11.470	24.970	22.250	96.870	14.140	694.100	264.600	173.900	8.754
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:47	1.433	2.088	-0.028	0.487	2.026	2.503	0.727	0.162	-0.590	0.010
2	00:49:14	1.311	2.435	-0.146	0.444	3.261	2.799	-2.031	-0.522	3.582	0.006
3	00:49:41	1.964	2.335	-0.194	0.827	2.248	2.958	-1.384	-0.245	-1.299	0.015
X		1.569	2.286	-0.123	0.586	2.512	2.754	-0.896	-0.202	0.564	0.010
S		0.347	0.179	0.085	0.210	0.658	0.231	1.442	0.344	2.638	0.005
%RSD		22.120	7.819	69.430	35.810	26.200	8.387	160.900	170.700	467.500	45.860
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:47	79.2%	-0.201	-0.030	-0.177	0.662	0.006	0.011	0.013	0.007	79.5%
2	00:49:14	79.0%	-0.210	-0.170	-0.189	2.177	0.009	-0.002	0.013	0.007	79.5%
3	00:49:41	79.8%	-0.099	-0.118	-0.172	1.814	0.009	0.008	0.001	0.002	77.6%
X		79.3%	-0.170	-0.106	-0.179	1.551	0.008	0.006	0.009	0.005	78.9%
S		0.4%	0.062	0.071	0.009	0.791	0.002	0.006	0.007	0.003	1.1%
%RSD		0.5	36.130	66.960	4.871	51.020	22.310	114.400	80.100	49.480	1.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:47	0.032	0.028	0.063	0.047	-0.005	0.008	81.4%	0.012	0.009	0.009
2	00:49:14	0.026	0.033	0.082	0.066	0.032	0.028	82.2%	0.009	0.002	0.000
3	00:49:41	0.015	0.014	0.066	0.011	-0.005	0.049	82.9%	-0.009	-0.000	0.011
X		0.024	0.025	0.071	0.041	0.007	0.028	82.2%	0.004	0.004	0.007
S		0.009	0.010	0.010	0.028	0.021	0.021	0.7%	0.012	0.005	0.005
%RSD		36.150	38.930	14.720	67.620	287.800	73.470	0.9	288.500	133.600	83.090
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	00:48:47	-0.005	0.009	87.1%							
2	00:49:14	0.019	0.012	88.9%							
3	00:49:41	0.037	0.026	89.8%							
X		0.017	0.016	88.6%							
S		0.021	0.009	1.4%							
%RSD		121.500	55.700	1.6							

Performance Report

Raw Supportive Data



Analyst: WCM

Level 2 Analyst: KSH2

Printed: 06/01/20 1114

Status: Level 2 review released

Prep Batch: 51454

Matrix: Aqueous

3005A Draper 2 - Total Recoverable Acid Digestion (ICP-MS) and 3005A

Start Date: 04/21/2020 1542

End Date: 04/21/2020 2042

Digestion Cup ID: 20-608

Ext Solvent: 1:1 HNO3/1:1 HCl

Reagents Vol. (mL): 1, 0.5

Chem ID: IM 9923-01, IM 9922-01

Hot Block ID: Hot Block # 10

Thermometer ID: 1172

Start Temperature (°C): 93

End Temperature (°C): 93

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51454-001	MB	PBW	1	6020B	50		0.0	50			PIPET ID 388
VQ51454-002	LCS	LCS	1	6020B	50	20-664	0.5	50			
VD17087-001	Sample	16C1	1	6020B	50		0.0	50	10/13/2020 2359	04/27/2020	
VD17087-002	Sample	16MW8	1	6020B	50		0.0	50	10/13/2020 2359	04/27/2020	
VD17087-003	Sample	16MW9	1	6020B	50		0.0	50	10/13/2020 2359	04/27/2020	
VD17087-004	Sample	16WC1A	1	6020B	50		0.0	50	10/13/2020 2359	04/27/2020	
VD17087-004MSMS		16WC1AS	1	6020B	50	20-664	0.5	50			
VD17087-004MDMSD		16WC1ASD	1	6020B	50	20-664	0.5	50			
VD17087-005	Sample	16WDUP	1	6020B	50		0.0	50	10/13/2020 2359	04/27/2020	
VD17087-006	Sample	16WC1B	1	6020B	50		0.0	50	10/13/2020 2359	04/27/2020	

(end of report)

Total Samples: 6

Analyst: WCM

Level 2 Analyst: KSH2

Printed: 05/21/20 1256

Status: Level 2 review released

Prep Batch: 53374

Matrix: Aqueous

3005A - Total Recoverable Acid Digestion (ICP-MS) Linked: 6020A,6020B and

Start Date: 05/09/2020 1523

End Date: 05/09/2020 2023

Digestion Cup ID: 20-984

Ext Solvent: 1:1 HNO3/1:1 HCl

Reagents Vol. (mL): 1, 0.5

Chem ID: IM 9923-01, IM 9922-01

Hot Block ID: Hot Block # 11

Thermometer ID: 1134

Start Temperature (°C): 93

End Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ53374-001	MB	PBW	1	6020B	50		0.0	50			PIPET ID 388
VQ53374-002	LCS	LCS	1	6020B	50	20-664 (3/17/21)	0.5	50			
VD17087-005	Sample	16WDUP	2	6020B	50		0.0	50	10/13/2020 2359	05/13/2020	
VD17087-005DUDuplicate		16WDUP	2	6020B	50		0.0	50			
VE08021-001	Sample	16-3	1	6020B	50		0.0	50	11/03/2020 2359	05/22/2020	
VE08021-002	Sample	FAL2	1	6020B	50		0.0	50	11/03/2020 2359	05/22/2020	
VE08021-003	Sample	FAL3	1	6020B	50		0.0	50	11/03/2020 2359	05/22/2020	
VE08021-003MSMS		FAL3S	1	6020B	50	20-664 (3/17/21)	0.5	50			
VE08021-003MDMSD		FAL3SD	1	6020B	50	20-664 (3/17/21)	0.5	50			
VE08021-004	Sample	WELL7	1	6020B	50		0.0	50	11/03/2020 2359	05/22/2020	

(end of report)

Total Samples: 5

Mercury



- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: VD17087

Method Type: CVAA

SOW No.: _____

Contract: RAAP HWMU16

Lab Code: _____

Case No.: _____

SAS No.: _____

Lab Sample ID	Client Sample ID	QC Description
VD17087-001	16C1	
VD17087-002	16MW8	
VD17087-003	16MW9	
VD17087-004	16WC1A	
VD17087-004S	16WC1AS	Matrix Spike
VD17087-004SD	16WC1ASD	Matrix Spike Duplicate
VD17087-005	16WDUP	
VD17087-006	16WC1B	

Were ICP interelement corrections applied? Yes/No Yes _____

Were ICP background corrections applied? Yes/No Yes _____

If yes - were raw data generated before applications of background corrections? Yes/No No _____

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: _____

Date: _____

Title: _____

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic VenturesInorganic Ventu

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Mercury	1.927300	2.000000	96	90.0 - 110.0	CV	4/22/2020	11:53	HG6042220A
CCV1	Mercury	1.938700	2.000000	97	80.0 - 120.0	CV	4/22/2020	12:01	HG6042220A
CCV2	Mercury	1.925500	2.000000	96	80.0 - 120.0	CV	4/22/2020	13:01	HG6042220A
CCV3	Mercury	1.921400	2.000000	96	80.0 - 120.0	CV	4/22/2020	13:32	HG6042220A
CCV4	Mercury	1.933900	2.000000	97	80.0 - 120.0	CV	4/22/2020	14:02	HG6042220A

CRDL STANDARD FOR AA & ICP

SDG No.: VD17087

AA CRDL Standard Source: _____

ICP CRDL Standard Source:

LLCCV									
Mercury	0.202200	0.200000	101	50 - 150	CV	4/22/2020	11:58	HG6042220A	

- 3a -
INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17087

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	0.008600	+/-2.000000	U	0.120000	2.000000	CV	4/22/2020	11:56	HG6042220A
CCB1	Mercury	0.006700	+/-2.000000	U	0.120000	2.000000	CV	4/22/2020	12:03	HG6042220A
CCB2	Mercury	0.009600	+/-2.000000	U	0.120000	2.000000	CV	4/22/2020	13:04	HG6042220A
CCB3	Mercury	0.010300	+/-2.000000	U	0.120000	2.000000	CV	4/22/2020	13:34	HG6042220A
CCB4	Mercury	0.008000	+/-2.000000	U	0.120000	2.000000	CV	4/22/2020	14:05	HG6042220A

METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ Mod. Ref. No.: _____ SDG No.: VD17087Instrument Type: CV Instrument ID: Hg6 _____Preparation Method: 7470AConcentration Units (ug/L, mg/kg, or ug): UG/L

Analyte	Wavelength/Mass	MDL
Mercury	253.70	0.120000

Comments: _____

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17087

Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
S0 20HG0642	1.00	1138															X														
S01 20HG0643	1.00	1141															X														
S02 20HG0644	1.00	1143															X														
S03 20HG0645	1.00	1146															X														
S04 20HG0646	1.00	1148															X														
S05 20HG0647	1.00	1151															X														
ICV1	1.00	1153															X														
ICB1	1.00	1156															X														
LLCCV 20HG0644	1.00	1158															X														
CCV1	1.00	1201															X														
CCB1	1.00	1203															X														
ZZZZZZ	1.00	1206																													
ZZZZZZ	1.00	1208																													
ZZZZZZ	1.00	1211																													
ZZZZZZ	1.00	1213																													
ZZZZZZ	1.00	1216																													
ZZZZZZ	1.00	1218																													
ZZZZZZ	1.00	1221																													
ZZZZZZ	1.00	1224																													
ZZZZZZ	1.00	1226																													
ZZZZZZ	1.00	1229																													
ZZZZZZ	1.00	1231																													
ZZZZZZ	1.00	1234																													
ZZZZZZ	1.00	1236																													
ZZZZZZ	1.00	1239																													
ZZZZZZ	1.00	1241																													
ZZZZZZ	1.00	1244																													
ZZZZZZ	1.00	1246																													
ZZZZZZ	1.00	1249																													
ZZZZZZ	1.00	1251																													
ZZZZZZ	1.00	1254																													
ZZZZZZ	1.00	1256																													
ZZZZZZ	1.00	1259																													
CCV2	1.00	1301															X														
CCB2	1.00	1304															X														
ZZZZZZ	1.00	1306																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Case No.: SAS No.: SDG No.: VD17087

Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
ZZZZZZ	1.00	1309																											
ZZZZZZ	1.00	1312																											
V051713-001	1.00	1314																X											
V051713-002	1.00	1317																X											
VD17087-001	1.00	1319																X											
VD17087-002	1.00	1322																X											
VD17087-003	1.00	1324																X											
VD17087-004	1.00	1327																X											
VD17087-004S	1.00	1329																X											
CCV3	1.00	1332																X											
CCB3	1.00	1334																X											
VD17087-004SD	1.00	1337																X											
VD17087-005	1.00	1339																X											
VD17087-006	1.00	1342																X											
ZZZZZZ	1.00	1344																											
ZZZZZZ	1.00	1347																											
ZZZZZZ	1.00	1349																											
ZZZZZZ	1.00	1352																											
ZZZZZZ	1.00	1355																											
ZZZZZZ	1.00	1357																											
ZZZZZZ	1.00	1400																											
CCV4	1.00	1402																X											
CCB4	1.00	1405																X											
ZZZZZZ	1.00	1407																											
ZZZZZZ	1.00	1410																											
ZZZZZZ	1.00	1412																											
ZZZZZZ	1.00	1415																											
ZZZZZZ	1.00	1417																											
ZZZZZZ	1.00	1420																											
ZZZZZZ	1.00	1422																											
ZZZZZZ	1.00	1425																											
ZZZZZZ	1.00	1427																											
ZZZZZZ	1.00	1430																											
ZZZZZZ	1.00	1432																											
ZZZZZZ	1.00	1435																											
ZZZZZZ	1.00	1437																											

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17087

Instrument ID Number: Hg6 Run Number: HG6042220A

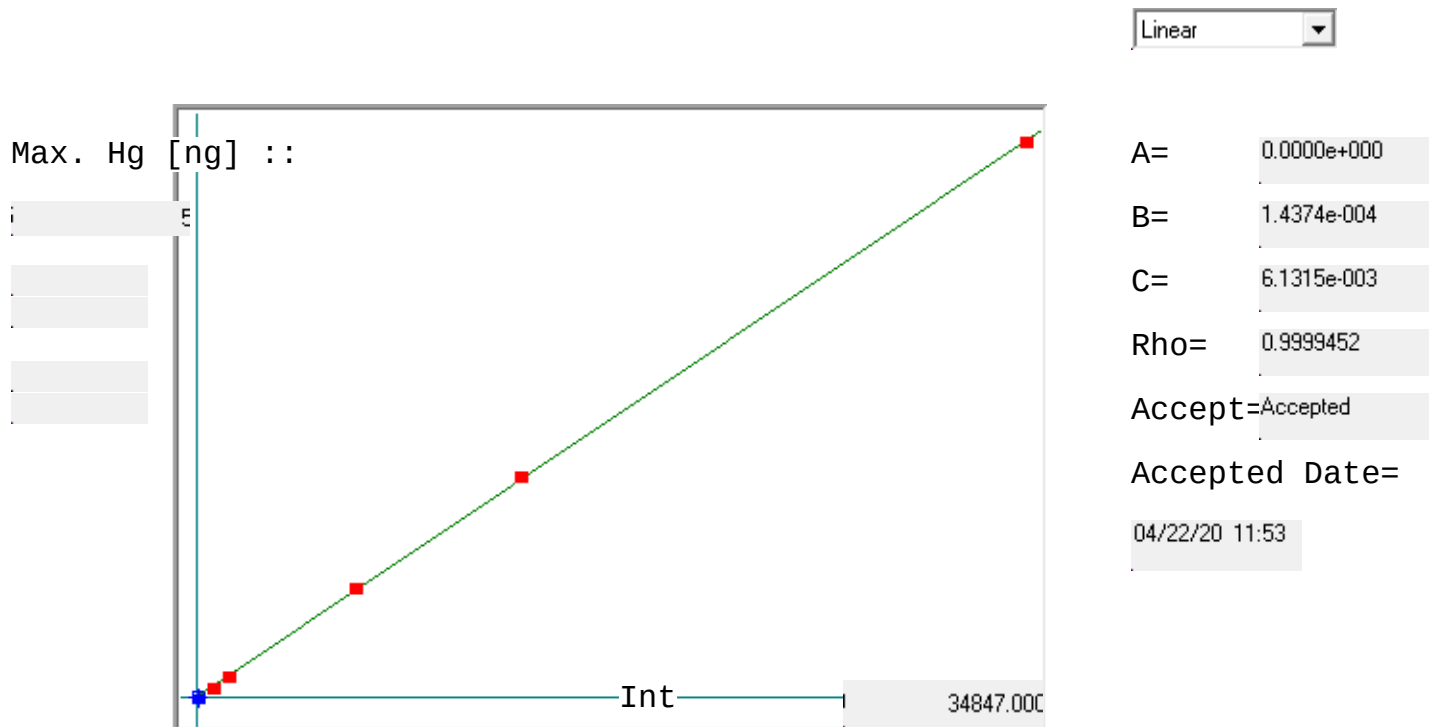
Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
ZZZZZZ	1.00	1440																											
ZZZZZZ	1.00	1443																											
ZZZZZZ	1.00	1445																											
ZZZZZZ	1.00	1448																											
ZZZZZZ	1.00	1450																											
ZZZZZZ	1.00	1453																											
ZZZZZZ	1.00	1455																											
ZZZZZZ	1.00	1458																											
ZZZZZZ	1.00	1500																											
ZZZZZZ	1.00	1503																											
ZZZZZZ	1.00	1505																											
ZZZZZZ	1.00	1508																											
ZZZZZZ	1.00	1510																											
ZZZZZZ	1.00	1513																											
ZZZZZZ	1.00	1515																											
ZZZZZZ	1.00	1518																											
ZZZZZZ	1.00	1520																											

Raw Sample Data



7470A/245.1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4
S0 20HG0642 04/23/20	0.000	0.019	0.019	87	0.000	87			
S01 20HG0643 04/23/20	0.100	0.111	0.011	733	0.0 %	733			
S0220HG0644 04/23/20	0.200	0.205	0.005	1387	0.0 %	1387			
S03 20HG0645 04/23/20	1.000	0.978	-0.022	6761	0.0 %	6761			
S04 20HG0646 04/23/20	2.000	1.971	-0.029	13673	0.0 %	13673			
S05 20HG0647 04/23/20	5.000	5.015	0.015	34847	0.0 %	34847			

HG6042220A

Method: 7470A/245.1

Operator: KSH2

Date of Analysis: 22 Apr 2020 10:58:00

Sample ID	Extended ID	Conc.	Units	μ Abs.	Date
S0 20HG0642 04/23/20 - 1		-	PPB	87	22 Apr 2020 11:38:35
S01 20HG0643 04/23/20 - 1		-	PPB	733	22 Apr 2020 11:41:08
S0220HG0644 04/23/20 - 1		-	PPB	1387	22 Apr 2020 11:43:40
S03 20HG0645 04/23/20 - 1		-	PPB	6761	22 Apr 2020 11:46:12
S04 20HG0646 04/23/20 - 1		-	PPB	13673	22 Apr 2020 11:48:44
S05 20HG0647 04/23/20 - 1		-	PPB	34847	22 Apr 2020 11:51:15
ICV 20HG0648 04/23/20 - 1		96.4%	1.9273 PPB	13366	22 Apr 2020 11:53:45
ICB 20HG0642 04/23/20 - 1		0.0086	PPB	17	22 Apr 2020 11:56:16
LLCCV 20HG0644 04/23/20 - 1		101.1%	0.2022 PPB	1364	22 Apr 2020 11:58:49
CCV 20HG0646 04/23/20 - 1		96.9%	1.9387 PPB	13445	22 Apr 2020 12:01:21
CCB 20HG0642 04/23/20 - 1		0.0067	PPB	4	22 Apr 2020 12:03:51
SnCl2 - 1	IM9947-01	0.0579	PPB	360	22 Apr 2020 12:06:23
VQ51710001TC - 1	PBW	0.0572	PPB	355	22 Apr 2020 12:08:54
VQ51710002TC - 1	LCS	2.0156	PPB	13980	22 Apr 2020 12:11:25
VD14038001TC - 1	MAY_GYP-SB6 (2-3')	0.0631	PPB	396	22 Apr 2020 12:13:56
VD14038003TC - 1	MAY_GYP-SB6 (12-13')	0.0518	PPB	318	22 Apr 2020 12:16:27
VD14038005TC - 1	MAY_GYP-SB7 (2-3')	0.0267	PPB	143	22 Apr 2020 12:18:58
VD14038010TC - 1	MAY_GYP-SB7 (27-28')	0.0694	PPB	440	22 Apr 2020 12:21:29
VD17051001TC - 1	Rox_CPA_1BRL (3-5)	0.0505	PPB	309	22 Apr 2020 12:24:01
VD17051001MSTC - 1	Rox_CPA_1BRL (3-5)S	2.0576	PPB	14272	22 Apr 2020 12:26:33
VD17051001MDTC - 1	Rox_CPA_1BRL (3-5)SD	2.0277	PPB	14064	22 Apr 2020 12:29:05
CCV 20HG0646 04/23/20 - 1		95.7%	1.9140 PPB	13273	22 Apr 2020 12:31:37
CCB 20HG0642 04/23/20 - 1		0.0094	PPB	23	22 Apr 2020 12:34:08
VD17051003TC - 1	Rox_CPA_1BRL (13-15)	0.0769	PPB	492	22 Apr 2020 12:36:40
VD17051004TC - 1	Rox_CPA_1BRL (15-17)	0.0720	PPB	458	22 Apr 2020 12:39:13
VQ51711001 - 1	PBW	0.0564	PPB	350	22 Apr 2020 12:41:44
VQ51711002 - 1	LCS	1.9518	PPB	13536	22 Apr 2020 12:44:14
VD21066001 - 1	B20011	0.0543	PPB	335	22 Apr 2020 12:46:45
VD16047003 - 1	WW Pipe 001	0.0708	PPB	450	22 Apr 2020 12:49:16
VD17062007 - 1	WW-Pipe 002	0.0593	PPB	370	22 Apr 2020 12:51:47
VD17073003 - 1	WW Pipe 001	0.0695	PPB	441	22 Apr 2020 12:54:18
VD18013003 - 1	WW Pipe 001	0.1313	PPB	871	22 Apr 2020 12:56:49
VD21073001 - 1	Effluent	0.0618	PPB	387	22 Apr 2020 12:59:21
CCV 20HG0646 04/23/20 - 1		96.3%	1.9255 PPB	13353	22 Apr 2020 13:01:53
CCB 20HG0642 04/23/20 - 1		0.0096	PPB	24	22 Apr 2020 13:04:23
VD21073001S - 1	EffluentS	1.9509	PPB	13530	22 Apr 2020 13:06:55
VD21073001SD - 1	EffluentSD	2.0153	PPB	13978	22 Apr 2020 13:09:27
VD21062001 - 1	Effluent Pipe 1	0.0344	PPB	197	22 Apr 2020 13:12:00
VQ51713001 - 1	PBW	0.0435	PPB	260	22 Apr 2020 13:14:33
VQ51713002 - 1	LCS	1.9838	PPB	13759	22 Apr 2020 13:17:04
VD17087001 - 1	16C1	0.0280	PPB	152	22 Apr 2020 13:19:35
VD17087002 - 1	16MW8	0.0639	PPB	402	22 Apr 2020 13:22:07
VD17087003 - 1	16MW9	0.0323	PPB	182	22 Apr 2020 13:24:37
VD17087004 - 1	16WC1A	0.0347	PPB	199	22 Apr 2020 13:27:09
VD17087004S - 1	16WC1AS	1.7554	PPB	12170	22 Apr 2020 13:29:40
CCV 20HG0646 04/23/20 - 1		96.1%	1.9214 PPB	13325	22 Apr 2020 13:32:12
CCB 20HG0642 04/23/20 - 1		0.0103	PPB	29	22 Apr 2020 13:34:43
VD17087004SD - 1	16WC1ASD	1.7465	PPB	12108	22 Apr 2020 13:37:15
VD17087005 - 1	16WDUP	0.0173	PPB	78	22 Apr 2020 13:39:47
VD17087006 - 1	16WC1B	0.1703	PPB	1142	22 Apr 2020 13:42:20
VD17091001 - 1	16-2	0.0470	PPB	284	22 Apr 2020 13:44:52
VD17091002 - 1	16-3	0.0416	PPB	247	22 Apr 2020 13:47:25
VD17091003 - 1	16-4	0.0406	PPB	240	22 Apr 2020 13:49:58
VD17091004 - 1	16WC2B	0.0445	PPB	267	22 Apr 2020 13:52:29
VD17091005 - 1	16SPRING	0.0445	PPB	267	22 Apr 2020 13:55:00
VD21024002 - 1	5W5B	0.0510	PPB	312	22 Apr 2020 13:57:32
VD21024003 - 1	5W7B	0.0619	PPB	388	22 Apr 2020 14:00:03
CCV 20HG0646 04/23/20 - 1		96.7%	1.9339 PPB	13412	22 Apr 2020 14:02:35
CCB 20HG0642 04/23/20 - 1		0.0080	PPB	13	22 Apr 2020 14:05:05
VD21024003S - 1	5W7BS	1.9904	PPB	13805	22 Apr 2020 14:07:37
VD21024003SD - 1	5W7BSD	1.9160	PPB	13287	22 Apr 2020 14:10:09
VD21024004 - 1	5WC21	0.0330	PPB	187	22 Apr 2020 14:12:40
VD21024005 - 1	5WDUP	0.0435	PPB	260	22 Apr 2020 14:15:12
VD21024006 - 1	5WC22	0.0360	PPB	208	22 Apr 2020 14:17:44
VD21024007 - 1	5WC23	0.0327	PPB	185	22 Apr 2020 14:20:16
VQ51712001 - 1	PBW	0.0268	PPB	144	22 Apr 2020 14:22:49
VQ51712002 - 1	LCS	1.9969	PPB	13850	22 Apr 2020 14:25:21
VD15011019 - 1	MW-17	0.0158	PPB	67	22 Apr 2020 14:27:53
VD15011020 - 1	MW-18	0.0261	PPB	139	22 Apr 2020 14:30:24
CCV 20HG0646 04/23/20 - 1		95.7%	1.9131 PPB	13267	22 Apr 2020 14:32:56
CCB 20HG0642 04/23/20 - 1		0.0103	PPB	29	22 Apr 2020 14:35:26
VD15011021 - 1	MW-20	0.0181	PPB	83	22 Apr 2020 14:37:58
VD15011022 - 1	MW-21	0.0198	PPB	95	22 Apr 2020 14:40:30
VD15011023 - 1	MW-22	0.0186	PPB	87	22 Apr 2020 14:43:01
VD15011024 - 1	MW-23	0.0406	PPB	240	22 Apr 2020 14:45:33
VD15011025 - 1	MW-28	0.0234	PPB	120	22 Apr 2020 14:48:04
VD15011026 - 1	MW-26	0.0326	PPB	184	22 Apr 2020 14:50:36
VD15011027 - 1	MW-24	0.0194	PPB	92	22 Apr 2020 14:53:08
VD15011028 - 1	MW-27	0.0333	PPB	189	22 Apr 2020 14:55:40
VD15011029 - 1	MW-25	0.0192	PPB	91	22 Apr 2020 14:58:12

HG6042220A

Method: 7470A/245.1

Operator: KSH2

Date of Analysis: 22 Apr 2020 10:58:00

Sample ID	Extended ID	Conc.	Units	μ Abs.	Date
VD15011030 - 1	MW-29	0.0218	PPB	109	22 Apr 2020 15:00:45
CCV 20HG0646 04/23/20 - 1		95.8% 1.9158	PPB	13286	22 Apr 2020 15:03:17
CCB 20HG0642 04/23/20 - 1		0.0100	PPB	27	22 Apr 2020 15:05:47
VD15011030S - 1	MW-29S	1.9860	PPB	13774	22 Apr 2020 15:08:19
VD15011030SD - 1	MW-29SD	1.9348	PPB	13418	22 Apr 2020 15:10:51
VD15011031 - 1	DUP	0.1884	PPB	1268	22 Apr 2020 15:13:22
VD15011032 - 1	EQ BLANK	0.0146	PPB	59	22 Apr 2020 15:15:54
CCV 20HG0646 04/23/20 - 1		95.4% 1.9076	PPB	13229	22 Apr 2020 15:18:26
CCB 20HG0642 04/23/20 - 1		0.0120	PPB	41	22 Apr 2020 15:20:56

Raw Supportive Data



Analyst: JMH

Level 2 Analyst: KSH-2

Prep Batch: 51707

Printed: 05/18/20 1504

Status: Level 2 review released

Matrix: ERROR

7470A-P - Mercury Preparation Linked: 7470A,245.1 and 7470A-P Draper

Start Date: 04/22/2020 0027

End Date: 04/22/2020 0227

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1:HNO3/KMnO4/K2S2O8/NaCl-N-2CH3Cl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Hot Block ID: Hot Block#11

Thermometer ID:1134

Start Temperature (°C): 93

End Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51707-004	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20-H30642	0.0	50			CAL 0
VQ51707-104	Standard	Conc = 0.00010 mg/L	1	245.1	40.000	20-H30643	0.0	50			4/23/20
VQ51707-204	Standard	Conc = 0.00020 mg/L	1	245.1	40.000	20-H30644	0.0	50			4/23/20
VQ51707-304	Standard	Conc = 0.0010 mg/L	1	245.1	40.000	20-H30645	0.0	50			4/23/20
VQ51707-404	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20-H30646	0.0	50			4/23/20
VQ51707-504	Standard	Conc = 0.0050 mg/L	1	245.1	40.000	20-H30647	0.0	50			4/23/20
VQ51707-604	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20-H30642	0.0	50			CCB
VQ51707-704	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20-H30646	0.0	50			CCV
VQ51707-804	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20-H30642	0.0	50			ICB
VQ51707-904	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20-H30648	0.0	50			ICV

(end of report)

Total Samples: 0

Analyst: JMH

Level 2 Analyst: NJT

Prep Batch: 51713

Printed: 05/18/20 1503

Status: Level 2 review released

Matrix: Aqueous

7470A-P Draper - Mercury Preparation and 7470A-P

Start Date: 04/22/2020 0029

End Date: 04/22/2020 0229

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-N-2CH3Cl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Hot Block ID: Hot Block#9

Thermometer ID: 326394

Start Temperature (°C): 97

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51713-001	MB	FBW	1	7470A	40.000		0.0	50			LCS/MS/MSD Pipet ID: 388
VQ51713-002	LCS	LCS	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD17087-001	Sample	16C1	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-002	Sample	16MA8	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-003	Sample	16MA9	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-004	Sample	16AC1A	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-004MSMS		16AC1AS	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD17087-004MDMSD		16AC1ASD	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD17087-005	Sample	16ADUP	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17087-006	Sample	16AC1B	1	7470A	40.000		0.0	50	05/14/2020 2359	04/27/2020	
VD17091-001	Sample	16-2	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD17091-002	Sample	16-3	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD17091-003	Sample	16-5	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	njt 5-11-20 changed client ID from 16-4 to 16-5
VD17091-004	Sample	16AC2B	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD17091-005	Sample	16SPRING	1	7470A	40.000		0.0	50	05/13/2020 2359	05/01/2020	
VD21024-002	Sample	5W5B	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-003	Sample	5W7B	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-003MSMS		5W7BS	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD21024-003MDMSD		5W7BSD	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD21024-004	Sample	5WC1	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-005	Sample	5ADUP	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-006	Sample	5WC22	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VD21024-007	Sample	5WC23	1	7470A	40.000		0.0	50	05/18/2020 2359	05/01/2020	
VQ51713-004	Standard	Conc = 0.0 mg/L	1	7470A	40.000		0.0	50			FB 51707

Analyst: JMH

Level 2 Analyst: NJT

Prep Batch: 51713

Printed: 05/18/20 1503

Status: Level 2 review released

Matrix: Aqueous

7470A-P Draper - Mercury Preparation and 7470A-P

Start Date: 04/22/2020 0029

End Date: 04/22/2020 0229

Digestion Cup ID: 20-608

Kit Solvent: H2SO4/1:1:HNO3/KMnO4/K2S2O8/NaCl-N-2CH3Cl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Hot Block ID: Hot Block#9

Thermometer ID:326394

Start Temperature (°C): 97

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
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(end of report) Total Samples: 17

Cyanide

Cyanide Cover Sheet

Prep Method 335.4 / 9012B-A / SM4500-CN C-2011 / SM4500-CN B-2011 / 10-204-00-1-X / SW-846 Reactives
Analysis Method: 335.4 / 9012B-A / SM4500-CN E-2011 / SM4500-CN G-2011

Instrument ID: AA2, Lachate Quickchem Automated Flow-Injection Ion Analyzer, SN A83000-1090

Analytical Batch(es): 52088, 52090

Prep Information	Analysis Information
Analyst: KFE Prep Batch(es): 502043, 502044 Prep Date(s): 4/24/2020 Prep Start Time: 1054, 1250 Prep End Time: 1224, 1420 Pipette ID(s): 376, 378	Analyst: KFE Analysis Date(s): 4/24/2020 Analysis Start Time: 1454 Analysis End Time: 1557

Reagents and Consumables	Instrument Information
Chloramine T: CNR20-137 Potassium Phosphate Buffer: CNR20-129 Pyridine-Barituristic Acid: CNR20-135 0.25 N Sodium Hydroxide: CNR20-131 A/B	Expires: 4/24/2020 Expires: 5/22/2020 Expires: 10/23/2020 Expires: 10/22/2020
	Filter Wavelength: 580 nm Sample Loop Length: 150 cm Pump Speed: 35 Cycle Period: 45 s Inject to Peak Start: 24.0 s

Calibration Information			
Standard	Concentration (mg/L)	Reference ID	
ICAL	0.2	CNC255-07	
ICAL	0.1	CNC255-06	
ICAL	0.08	CNC255-05	
ICAL	0.05	CNC255-04	
ICAL	0.02	CNC255-03	
ICAL	0.01	CNC255-02	Standards Expire: 4/25/2020
ICAL	0.005	CNC255-01	LCR Expires: 10/20/2020
ICV	0.08	CNC255-08	ICV Expires: 4/25/2020
CCV	0.1	CNC255-06	CCV Expires: 4/25/2020

Comments

Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-001			
Description: 16C1				Matrix: Aqueous			
Date Sampled: 04/16/2020 1205				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1512	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-002			
Description: 16MW8				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1513	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-003			
Description: 16MW9				Matrix: Aqueous			
Date Sampled: 04/16/2020 1105				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1514	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-004			
Description: 16WC1A				Matrix: Aqueous			
Date Sampled: 04/16/2020 0925				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1515	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-005			
Description: 16WDUP				Matrix: Aqueous			
Date Sampled: 04/16/2020 0950				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1521	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Inorganic non-metals

Client: Draper Aden Associates				Laboratory ID: VD17087-006			
Description: 16WC1B				Matrix: Aqueous			
Date Sampled: 04/16/2020 0835				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	9012B	(Cyanide - To) 9012B	1	04/24/2020 1522	KFE	04/24/2020 1054	52043

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Cyanide - Total	57-12-5	9012B	20	U	20	5.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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QC Summary

Inorganic non-metals - MB

Sample ID: VQ52043-001

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Cyanide - Total	20	U	1	20	5.0	ug/L	04/24/2020 1507

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Inorganic non-metals - LCS

Sample ID: VQ52043-002

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Cyanide - Total	100	93		1	93	90-110	04/24/2020 1508

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Inorganic non-metals - MS

Sample ID: VD17087-004MS

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Cyanide - Total	0.0	100	83	N	1	83	90-110	04/24/2020 1516

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Inorganic non-metals - MSD

Sample ID: VD17087-004MD

Matrix: Aqueous

Batch: 52043

Prep Method: 9012B

Analytical Method: 9012B

Prep Date: 04/24/2020 1054

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Cyanide - Total	0.0	100	87	N	1	87	3.9	90-110	20	04/24/2020 1520

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17087

Analyst: KFE

Level 2 Analyst: N/A

Status: Level 1 review released

Matrix: Aqueous

Prep Batch: 52043

9012B-Draper - Cyanide distillation

Start Date: 04/24/2020 1054

End Date: 04/24/2020 1224

Ext Solvent: NaOH/NH₂SO₃H/H₂SO₄/MgCl₂·6H₂O/Ca(OCl)₂/NaAsO₂

Reagents Vol. (mL): 50mL/0.2g/5mL/2mL/NA/NA

Chem ID: CNR20-131/19-2285/CNR20-136/19-2698/NA/NA

Hot Block ID: Hot Block #3

Thermometer ID: 326364

Start Temperature
End Temperature

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Concentration
VQ52043-001	MB		1	9012B	50		0.0	50.0			B
VQ52043-002	LCS		1	9012B	50	CNC255-10	0.5	50.0			p
VQ52043-004	Standard	Conc = 0.0 mg/L	1	9012B	50	CNC255-13	0.5	50.0			p
VQ52043-104	Standard	Conc = 0.0 mg/L	1	9012B	50	CNC255-09	1.0	50.0			p
VD17087-001	Sample	16C1	1	9012B	50		0.0	50.0	04/30/2020 2359	04/27/2020	
VD17087-002	Sample	16MW8	1	9012B	50		0.0	50.0	04/30/2020 2359	04/27/2020	
VD17087-003	Sample	16MW9	1	9012B	50		0.0	50.0	04/30/2020 2359	04/27/2020	
VD17087-004	Sample	16WC1A	1	9012B	50		0.0	50.0	04/30/2020 2359	04/27/2020	
VD17087-004MS MS			1	9012B	50	CNC255-10	0.5	50.0			p
VD17087-004MD MSD			1	9012B	50	CNC255-10	0.5	50.0			p
VD17087-005	Sample	16WDUP	1	9012B	50		0.0	50.0	04/30/2020 2359	04/27/2020	
VD17087-006	Sample	16WC1B	1	9012B	50		0.0	50.0	04/30/2020 2359	04/27/2020	

(end of report)

Total Samples: 6

Analyst: KFE
Status: Open

Cyanide Analytical Batch: 52090
9012B - Cyanide - Total

Printed: 4/24/2020 4:24:51 PM

Start Date: 04/24/2020 1507

End Date: 04/24/2020 1522

Sample ID	Method	QC Code	Run Matrix	Cup	%S	Dil	Instrument Reading	Final Result (ug/L)	Reported Result (ug/L)	%Rec	RPD / PD	PQL	Qualifiers	Analysis Date	Initial Weight (g)	Initial Volume (mL)	Final Volume (mL)
VQ52043-001	9012B	MB	1 Aqueous	3	100	1	-0.689	0	0.00			20		04/24/2020 1507	0	50	50
VQ52043-002	9012B	LCS	1 Aqueous	4	100	1	92.5	92.5	93	93	0.00	20		04/24/2020 1508	0	50	50
VQ52043-004	9012B	Standard	1 Aqueous	5	100	1	55	55	55	110.00				04/24/2020 1509	0	50	50
VQ52043-104	9012B	Standard	1 Aqueous	6	100	1	185	185	190	92.50				04/24/2020 1510	0	50	50
VD17087-001	9012B	Sample	1 Aqueous	7	100	1	-0.147	0	ND			20		04/24/2020 1512	0	50	50
VD17087-002	9012B	Sample	1 Aqueous	8	100	1	-0.195	0	ND			20		04/24/2020 1513	0	50	50
VD17087-003	9012B	Sample	1 Aqueous	9	100	1	0.0216	0.0216	ND			20		04/24/2020 1514	0	50	50
VD17087-004	9012B	Sample	1 Aqueous	10	100	1	1.57	1.57	ND			20	S	04/24/2020 1515	0	50	50
VD17087-004MS	9012B	MS	1 Aqueous	11	100	1	83.4	83.4	83	83	3.9	20		04/24/2020 1516	0	50	50
VD17087-004MD	9012B	MSD	1 Aqueous	12	100	1	86.7	86.7	87	87	3.9	20		04/24/2020 1520	0	50	50
VD17087-005	9012B	Sample	1 Aqueous	13	100	1	-0.0213	0	ND			20		04/24/2020 1521	0	50	50
VD17087-006	9012B	Sample	1 Aqueous	14	100	1	0.403	0.403	ND			20		04/24/2020 1522	0	50	50

Total Items: 12 (6 samples)

(end of report)

Analyst: KFE

Instrument ID: AA2 Method: 9012B / 335.4 / SM 4500-CN 2011 / REACTIVES

Date : 4/24/2020

Original Run Filename: OM_4-24-2020_14-53-38.OMN created 4/24/2020 14:53:38
 Original Run Author's Signature: [Omnion User]
 Current Run Filename: OM_4-24-2020_14-53-38.OMN last modified 4/24/2020 15:59:32
 Current Run Author's Signature: [Omnion User]
 Description: Default New Run

Sample	Cup No.	Channel 2		Detection Time	MDF	Description
		Cyanide Conc.	Area (V.s)			
ICAL 0.20 MG/L	S1	0.200	4.76	4/24/2020@14:54:28		
ICAL 0.10 MG/L	S2	0.100	2.43	4/24/2020@14:55:37		
ICAL 0.08 MG/L	S3	0.0800	1.96	4/24/2020@14:56:47		
ICAL 0.05 MG/L	88	0.0500	1.22	4/24/2020@14:57:57		
ICAL 0.02 MG/L	89	0.0200	0.490	4/24/2020@14:59:07		
ICAL 0.01 MG/L	S9	0.0100	0.244	4/24/2020@15:00:17		
ICAL 0.005MG/L	90	5.00e-3	0.125	4/24/2020@15:01:27		
ICAL 0 MG/L	S11	0.00	1.63e-4	4/24/2020@15:02:37		
ICV 0.08 MG/L	S10	0.0783	1.88	4/24/2020@15:03:47		ICV 98%
Known Conc:		0.0800				
Calibration:		Table/Fig. 1				
ICB	S11	-5.26e-4	3.66e-3	4/24/2020@15:04:57		ICB PASS
Known Conc:		0.00				
LOQ 0.01 MG/L	S9	9.77e-3	0.249	4/24/2020@15:06:07		LOQ 98%
Known Conc:		100				
VQ52043-001	3	-6.89e-4	-2.28e-4	4/24/2020@15:07:18		MB PASS
VQ52043-002	4	0.0925	2.22	4/24/2020@15:08:28		LCS 93%
VQ52043-004	5	0.0550	1.33	4/24/2020@15:09:39		LOW STD 110%
VQ52043-104	6	0.185	4.44	4/24/2020@15:10:49		HIGH STD 93%
VD17087-001 16C1	7	-1.47e-4	0.0127	4/24/2020@15:12:00		
VD17087-002 16MW8	8	-1.95e-4	0.0116	4/24/2020@15:13:10		
VD17087-003 16MW9	9	2.16e-5	0.0167	4/24/2020@15:14:20		
VD17087-004 16WC1A	10	1.57e-3	0.0536	4/24/2020@15:15:30		
VD17087-004MS	11	0.0834	2.01	4/24/2020@15:16:39		% MS REC 83%
CCV	S2	0.101	2.42	4/24/2020@15:17:49		CCV 101%
Known Conc:		100				
CCB	S11	-5.47e-4	3.16e-3	4/24/2020@15:18:58		CCB PASS
Known Conc:		100				
VD17087-004MD	12	0.0867	2.09	4/24/2020@15:20:08		% MD REC 87%
VD17087-005 16WDUP	13	-2.13e-5	0.0157	4/24/2020@15:21:18		
VD17087-006 16WC1B	14	4.03e-4	0.0258	4/24/2020@15:22:27		

RPD 3.9%

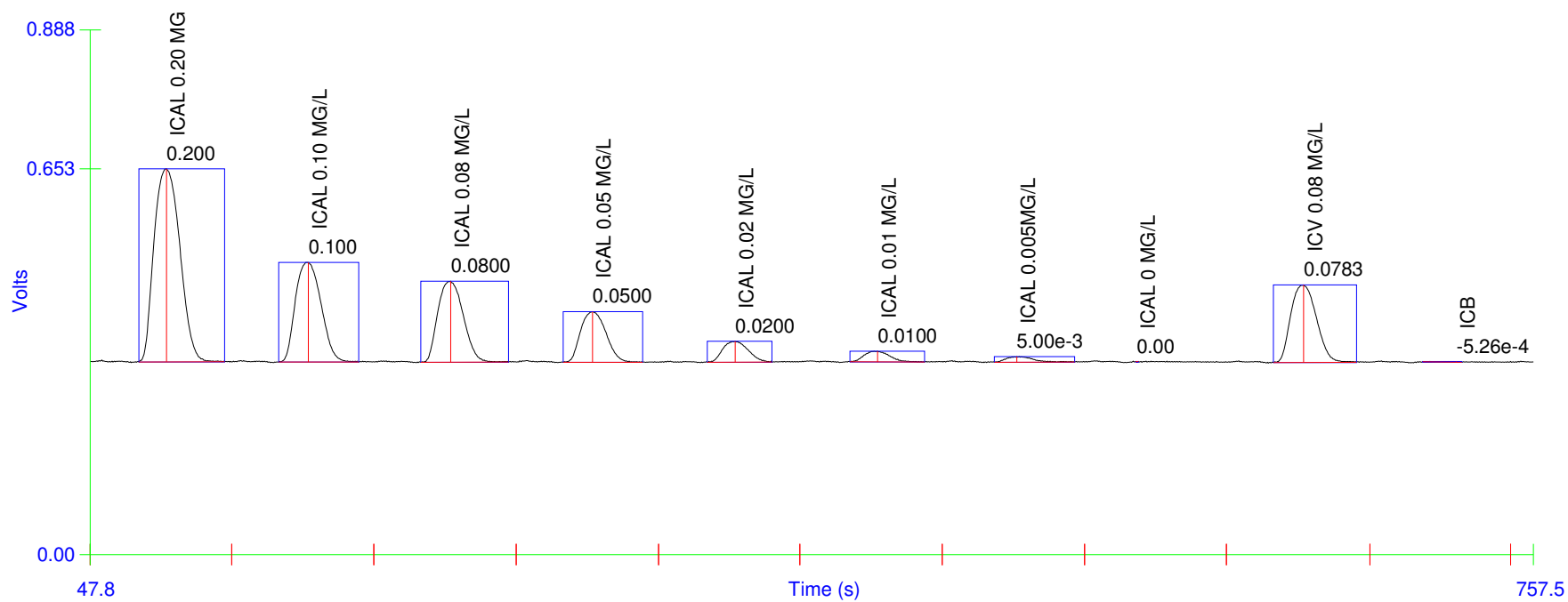
VD13017-001 T-700 Quarterly	15	0.171	4.09	4/24/2020@15:23:36		
VD13018-001 Quarterly Liq. Slurry	18	0.195	4.66	4/24/2020@15:24:47		
VD22047-005 200402-RE0013 (WW-2)	19	-3.74e-4	7.28e-3	4/24/2020@15:25:58		
VD22047-005MS	20	7.91e-5	0.0181	4/24/2020@15:27:08		
VD22047-005MD	21	7.05e-4	0.0330	4/24/2020@15:28:19		
VD22047-006 200403-RE0005 (WW-1)	22	-3.18e-4	8.62e-3	4/24/2020@15:29:30		
VD22047-007 200403-RE0013 (WW-2)	23	2.97e-4	0.0233	4/24/2020@15:30:40		
CCV	S2	0.102	2.44	4/24/2020@15:31:49		CCV 102%
Known Conc:		100				
CCB	S11	-1.41e-3	-0.0175	4/24/2020@15:33:00		CCB PASS
Known Conc:		100				
VD22047-008 200404-RE0005 (WW-1)	24	-1.60e-4	0.0124	4/24/2020@15:34:10		
VD22047-009 200404-RE0013 (WW-2)	25	3.67e-4	0.0250	4/24/2020@15:35:20		
VD23017-001 AE95728	26	3.17e-4	0.0238	4/24/2020@15:36:30		
VD23018-001 AE95734	27	-6.41e-5	0.0147	4/24/2020@15:37:40		
MB REACTIVES 4/24/20	28	-5.30e-4	3.57e-3	4/24/2020@15:38:49		REACTIVES START HERE
VD22014-004	29	-6.62e-4	4.22e-4	4/24/2020@15:39:59		
VD22014-005	30	-6.94e-4	-3.39e-4	4/24/2020@15:41:08		
VD22014-005DU	33	-2.18e-4	0.0110	4/24/2020@15:42:19		
VD22014-006	34	-3.24e-4	8.49e-3	4/24/2020@15:43:30		
VD22014-007	35	-2.52e-4	0.0102	4/24/2020@15:44:41		
CCV	S2	0.101	2.44	4/24/2020@15:45:50		CCV 101%
Known Conc:		100				
CCB	S11	-6.35e-4	1.07e-3	4/24/2020@15:47:01		CCB PASS
Known Conc:		100				
VD22014-008	36	-2.32e-4	0.0107	4/24/2020@15:48:12		
VD22014-009	37	-7.58e-4	-1.89e-3	4/24/2020@15:49:23		
VD22014-010	38	-6.24e-4	1.31e-3	4/24/2020@15:50:33		
VD22014-011	39	-7.29e-4	-1.19e-3	4/24/2020@15:51:43		
VD23039-001	40	-6.75e-4	1.01e-4	4/24/2020@15:52:53		
VD22123-001	41	-7.05e-4	-6.21e-4	4/24/2020@15:54:03		
CCV	S2	0.102	2.44	4/24/2020@15:56:37		CCV 102%
Known Conc:		100				
CCB	S11	-3.90e-4	6.89e-3	4/24/2020@15:57:47		CCB PASS
Known Conc:		100				

Analyte Properties Table for OM_4-24-2020_14-53-38.OMN

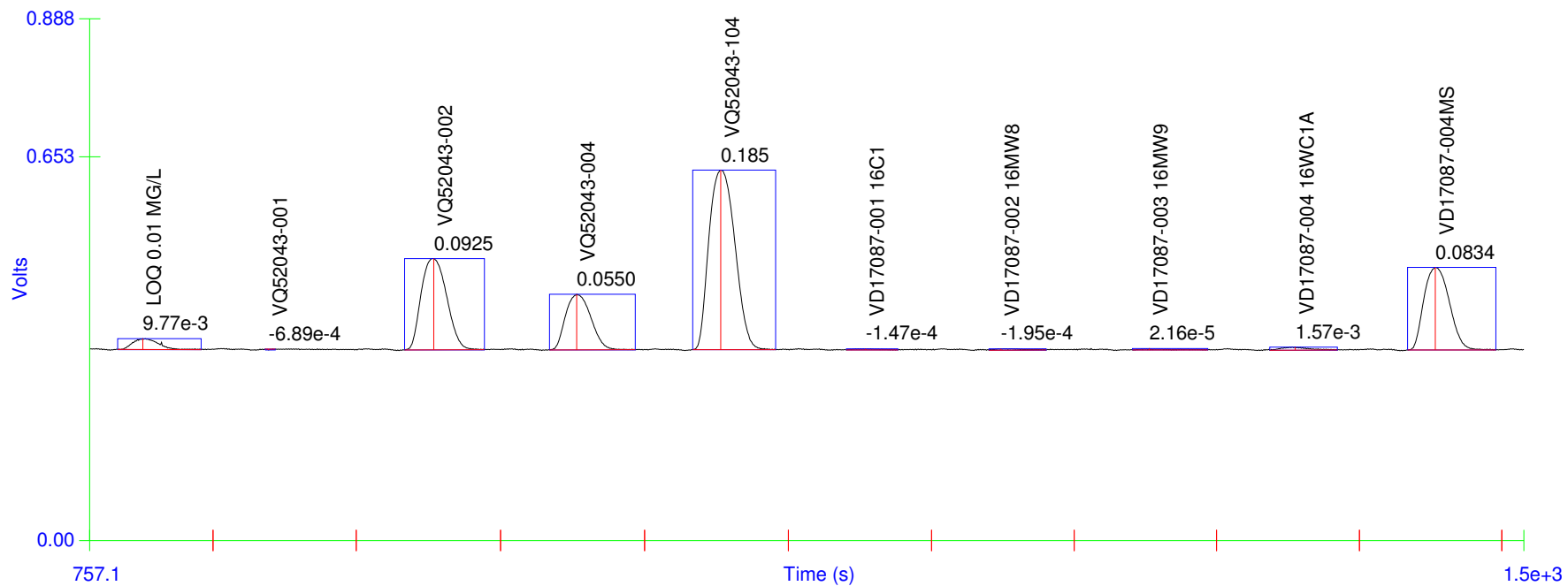
Property	Channel 2
Concentration Units	Cyanide

Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	False
% of High Standard	110
Quik Chem Method	
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	23
Peak Base Width	45

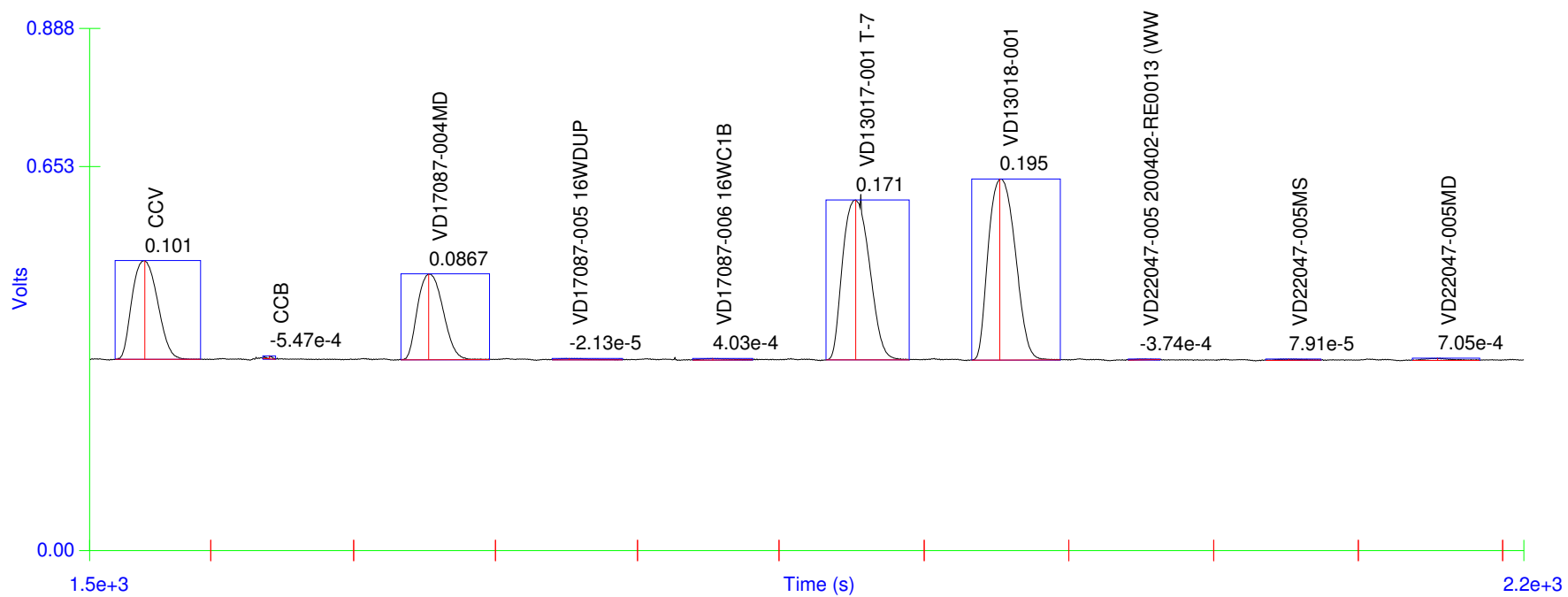
Channel 2: Set 1 of 6



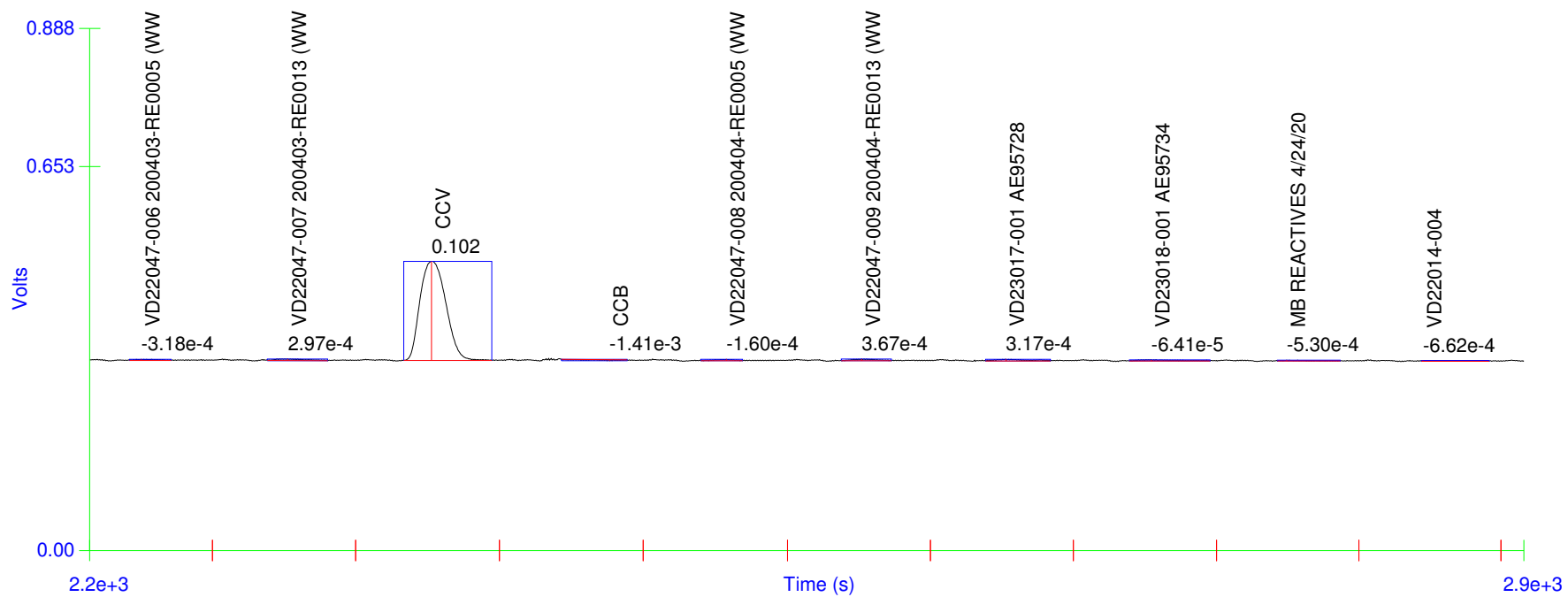
Channel 2: Set 2 of 6



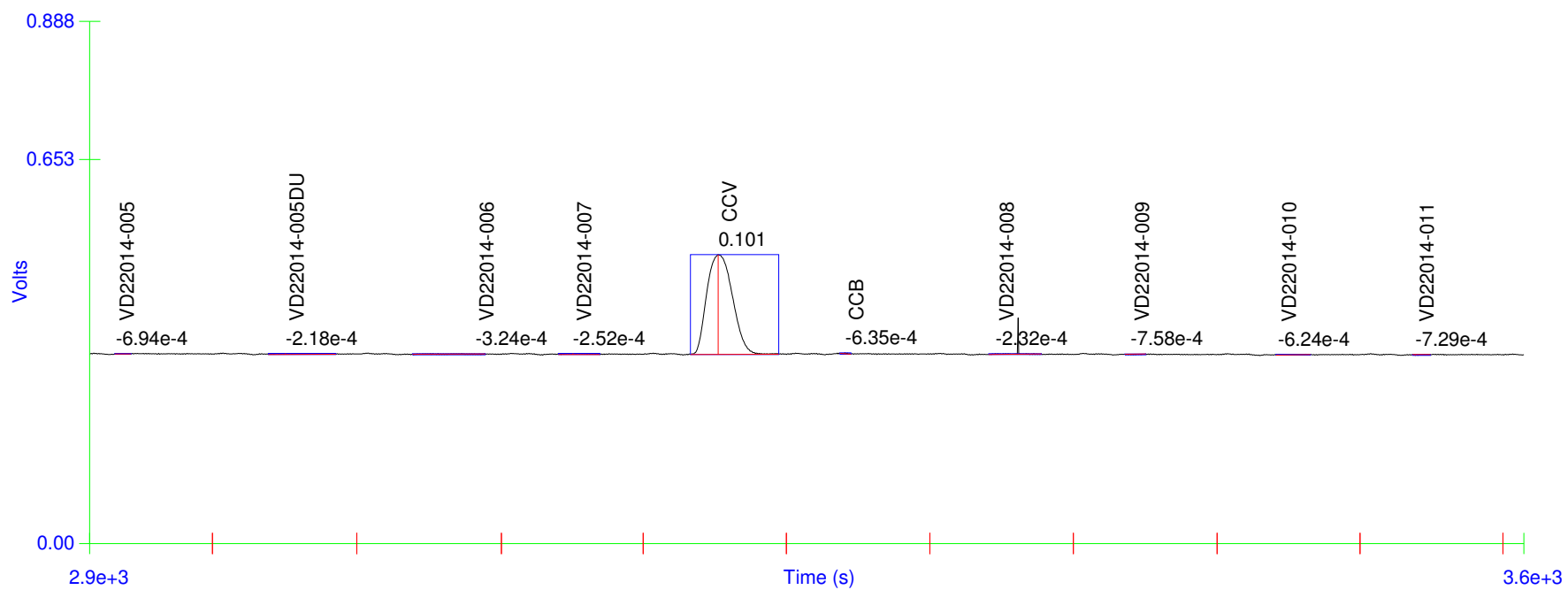
Channel 2: Set 3 of 6



Channel 2: Set 4 of 6



Channel 2: Set 5 of 6



Channel 2: Set 6 of 6

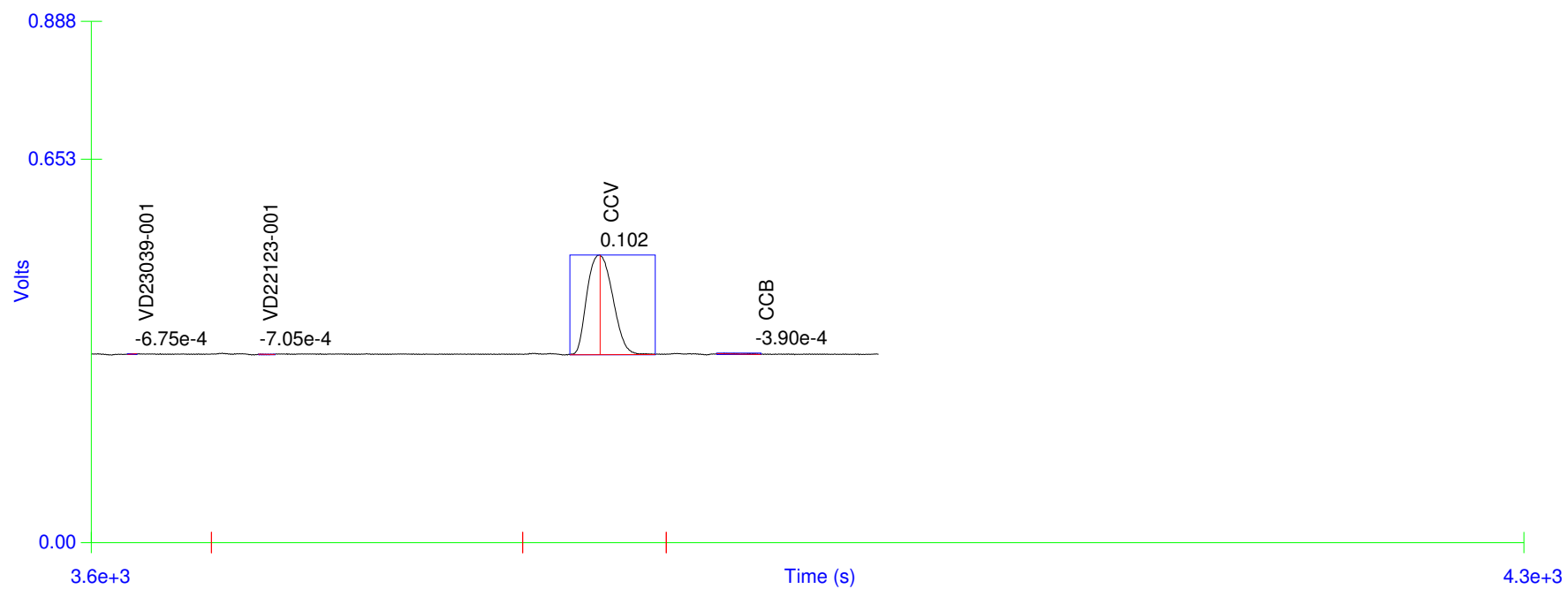
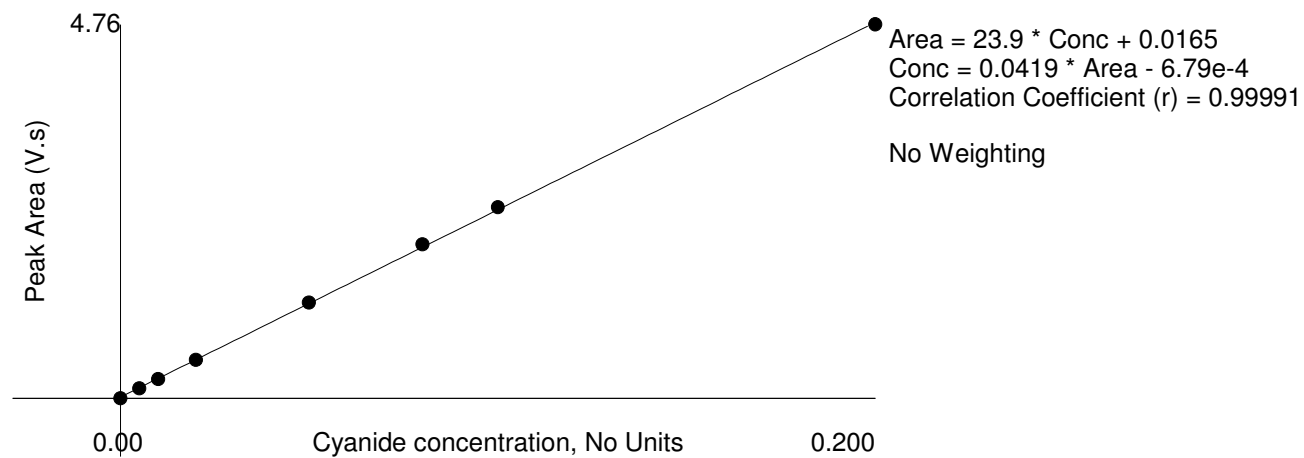


Table 1: Cyanide

	Known Conc. ()	Rep	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc. ()	Detection Date	Detection Time
1	0.200	1	4.76	0.327	0.0	0.6	0.199	4/24/2020	14:54:28
2	0.100	1	2.43	0.169	0.0	-1.2	0.101	4/24/2020	14:55:37
3	0.0800	1	1.96	0.137	0.0	-1.8	0.0814	4/24/2020	14:56:47
4	0.0500	1	1.22	0.0855	0.0	-0.6	0.0503	4/24/2020	14:57:57
5	0.0200	1	0.490	0.0355	0.0	0.7	0.0199	4/24/2020	14:59:07
6	0.0100	1	0.244	0.0180	0.0	4.2	9.56e-3	4/24/2020	15:00:17
7	5.00e-3	1	0.125	9.53e-3	0.0	8.3	4.54e-3	4/24/2020	15:01:27
8	0.00	1	1.63e-4	-1.22e-3			-6.73e-4	4/24/2020	15:02:37

Figure 1: Cyanide



Cyanide Sample Preparation Log

Date: 4/24/2020

Analyst: KFE

Prep Batch: 52043 / 52044

pH Strip ID: 19-2040
Potassium Iodide Strip ID: 18-2363
Lead Acetate Paper ID: 18-2364
Acetate Buffer ID: 19-1682
Acetate Buffer Expiry Date: 3/31/2021

Snap-Cup ID: NA
Micro-dist Tube ID: NA
Nitrate Strip ID: NA
Sulfamic Acid ID: 19-2285
Sulfamic Acid Expiry Date: 10/31/2024

Sample ID	pH > 12 SU? (Y/N)	Chlorine Present? (Y/N)	Sulfide Present? (Y/N)	Nitrate Present? (Y/N)	Comments
VD13017-001	Y	N	N	NA	
VD13018-001	N*	N	N	NA	NCM 33673
VD17087-001	Y	N	N	NA	
VD17087-002	Y	N	N	NA	
VD17087-003	Y	N	N	NA	
VD17087-004	Y	N	N	NA	
VD17087-005	Y	N	N	NA	
VD17087-006	Y	N	N	NA	
VD22047-005	Y	N	N	NA	
VD22047-006	Y	N	N	NA	
VD22047-007	Y	N	N	NA	
VD22047-008	Y	N	N	NA	
VD22047-009	Y	N	N	NA	
VD23017-001	Y	N	N	NA	
VD23018-001	Y	N	N	NA	

Y = Yes N = No

CLP Samples only: If samples test positive for pH, Chlorine, or Sulfide contact the PM immediately and wait for further instruction. Document in the comment section.

If sample test positive for nitrate/nitrite add 0.2 g of sulfamic acid (applicable to aqueous Midi-distillation method only).

Level 2 Reviewed by:
Date:

Cyanide - Standard Prep Log
SM4500-CN B-2011 / SM4500-CN C-2011 / SM4500-CN E-2011 /
SM4500-CN G-2011 / 335.4 / 9012B/CLP SOW ISM02.4

Date: 4/24/2020	Analyst: KFE	ICAL ID: CNC 255	Level 2 Reviewed by:
Expiration Date: 4/25/2020	Pipettes: 243 378 376 380	Snap Cup ID: 20-893/20-354	Level 2 Date:

Sodium Hydroxide Solution		
Sodium Hydroxide Solution ID: CNR20-131 A/B	Expiration Date: 10/22/2020	Concentration: 0.25 N

CN Stock to CN Working Stock

CN Stock	CN Stock ID	Expiration Date	Concentration (mg/L)	Volume of Stock used to make Working Stock (mL)	Final Volume (mLs)	Concentration of Working Stock (mg/L)	Working Stock ID	Working Stock Expiration Date
ICAL/CCV Stock ID:	20-507	7/31/2020	1000	0.5	50	10	CNC255 -09	4/25/2020
ICV Stock ID:	20-399	8/28/2021	1000	0.5	50	10	CNC255 -10	4/25/2020
CN ISM ICV Stock ID:	NA	NA	9.9					

CN Working Stock to CN Intermediate

CN Working Stock	CN Working Stock ID	Expiration Date	Concentration (mg/L)	Volume of Stock used to make Intermediate Stock (mL)	Final Volume (mLs)	Concentration of Intermediate Standard (mg/L)	Intermediate Standard ID	Intermediate Expiration Date
ICAL/CCV Working Stock	CNC255 -09	4/25/2020	10	5	50	1	CNC255 -11	4/25/2020
ICV Working Stock	CNC255 -10	4/25/2020	10	5	50	1	CNC255 -12	4/25/2020
Distilled Standard Working Stock	CNC255 -09	4/25/2020	10	5	10	5	CNC255 -13	4/25/2020

ICAL	ICAL Levels	Conc.	Final Volume	mLs of ICAL Int.	mLs of ICV Int.
Levels	ID#	(mg/L)	(mLs)	CNC255 -11	CNC255 -12
L1	CNC255 -01	0.005	100	0.5	NA
L2	CNC255 -02	0.01	50	0.5	NA
L3	CNC255 -03	0.02	50	1	NA
L4	CNC255 -04	0.05	50	2.5	NA
L5	CNC255 -05	0.08	50	4	NA
L6	CNC255 -06	0.1	50	5	NA
L7	CNC255 -07	0.2	50	10	NA
ICV	CNC255 -08	0.08	50	NA	4
ISM Levels	ID#	(mg/L)	(mLs)		NA
ISM ICV	CNC255 -14	0.099	NA	NA	#VALUE!

$$\text{Final Concentration } \left(\frac{\text{mg}}{\text{L}}\right) = \frac{(\text{Concentration of Stock } (\frac{\text{mg}}{\text{L}}) \times \text{Volume of Stock (mL)})}{\text{Final Volume (mL)}}$$

$$\text{Volume of Stock (mL)} = \frac{(\text{Final Volume (mL)} \times \text{Final Concentration } (\frac{\text{mg}}{\text{L}}))}{\text{Concentration of Stock } (\frac{\text{mg}}{\text{L}})}$$



Report of Analysis

Draper Aden Associates

2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier

Project Name: RAAP HWMU16

Project Number: B03204-20A

Lot Number: **VD17091**

Date Completed: 05/07/2020

Revision Date: 05/11/2020

05/11/2020

Approved and released by:
Project Manager: **Cathy S. Dover**



The electronic signature above is the equivalent of a handwritten signature.

This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative Draper Aden Associates Lot Number: VD17091

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Pace Analytical Services, LLC ("Pace") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Pace policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

This PDF report has been revised to correct the sample ID for VD17091-003 to "16-5". All other data is reported as in the original report.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

PACE ANALYTICAL SERVICES, LLC

Sample Summary
Draper Aden Associates
Lot Number: VD17091
Project Name: RAAP HWMU16
Project Number: B03204-20A

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	16-2	Aqueous	04/15/2020 1020	04/17/2020
002	16-3	Aqueous	04/15/2020 1200	04/17/2020
003	16-5	Aqueous	04/15/2020 0845	04/17/2020
004	16WC2B	Aqueous	04/15/2020 0940	04/17/2020
005	16SPRING	Aqueous	04/15/2020 0900	04/17/2020

(5 samples)

Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-001			
Description: 16-2				Matrix: Aqueous			
Date Sampled: 04/15/2020 1020				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1344	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-001			
Description: 16-2				Matrix: Aqueous			
Date Sampled: 04/15/2020 1020				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1706	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	200		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%

H = Out of holding time W = Reported on wet weight basis D = Dilution > 1

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-002			
Description: 16-3				Matrix: Aqueous			
Date Sampled: 04/15/2020 1200				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1347	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-002			
Description: 16-3				Matrix: Aqueous			
Date Sampled: 04/15/2020 1200				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1712	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	770		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis

D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-003			
Description: 16-5				Matrix: Aqueous			
Date Sampled: 04/15/2020 0845				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1349	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-003			
Description: 16-5				Matrix: Aqueous			
Date Sampled: 04/15/2020 0845				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1718	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	170		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis

D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-004			
Description: 16WC2B				Matrix: Aqueous			
Date Sampled: 04/15/2020 0940				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1352	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-004			
Description: 16WC2B				Matrix: Aqueous			
Date Sampled: 04/15/2020 0940				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1723	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	120		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-005			
Description: 16SPRING				Matrix: Aqueous			
Date Sampled: 04/15/2020 0900				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1355	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-005			
Description: 16SPRING				Matrix: Aqueous			
Date Sampled: 04/15/2020 0900				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1729	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	170		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

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QC Summary

ICP-MS - MB

Sample ID: VQ51455-001

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Arsenic	10	U	1	10	ug/L	04/22/2020 1654
Barium	10	U	1	10	ug/L	04/22/2020 1654
Beryllium	1.0	U	1	1.0	ug/L	04/22/2020 1654
Cadmium	1.0	U	1	1.0	ug/L	04/22/2020 1654
Chromium	5.0	U	1	5.0	ug/L	04/22/2020 1654
Cobalt	5.0	U	1	5.0	ug/L	04/22/2020 1654
Copper	5.0	U	1	5.0	ug/L	04/22/2020 1654
Lead	3.0	U	1	3.0	ug/L	04/22/2020 1654
Nickel	10	U	1	10	ug/L	04/22/2020 1654
Vanadium	10	U	1	10	ug/L	04/22/2020 1654
Zinc	30	U	1	30	ug/L	04/22/2020 1654

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: VQ51455-002

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	100	100		1	102	80-120	04/22/2020 1700
Barium	100	100		1	101	80-120	04/22/2020 1700
Beryllium	100	98		1	98	80-120	04/22/2020 1700
Cadmium	100	100		1	100	80-120	04/22/2020 1700
Chromium	100	99		1	99	80-120	04/22/2020 1700
Cobalt	100	100		1	100	80-120	04/22/2020 1700
Copper	100	99		1	99	80-120	04/22/2020 1700
Lead	100	100		1	102	80-120	04/22/2020 1700
Nickel	100	100		1	100	80-120	04/22/2020 1700
Vanadium	100	99		1	99	80-120	04/22/2020 1700
Zinc	100	100		1	101	80-120	04/22/2020 1700

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: VD17091-005MS

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.0	100	100		1	100	75-125	04/22/2020 1735
Barium	170	100	270		1	99	75-125	04/22/2020 1735
Beryllium	0.0	100	96		1	96	75-125	04/22/2020 1735
Cadmium	0.0	100	97		1	97	75-125	04/22/2020 1735
Chromium	0.0	100	98		1	98	75-125	04/22/2020 1735
Cobalt	0.0	100	93		1	93	75-125	04/22/2020 1735
Copper	0.0	100	94		1	94	75-125	04/22/2020 1735
Lead	0.0	100	95		1	95	75-125	04/22/2020 1735
Nickel	0.0	100	93		1	93	75-125	04/22/2020 1735
Vanadium	0.0	100	96		1	96	75-125	04/22/2020 1735
Zinc	0.0	100	96		1	96	75-125	04/22/2020 1735

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17091

ICP-MS - MSD

Sample ID: VD17091-005MD

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.0	100	100		1	103	2.8	75-125	20	04/22/2020 1753
Barium	170	100	280		1	106	2.6	75-125	20	04/22/2020 1753
Beryllium	0.0	100	98		1	98	2.9	75-125	20	04/22/2020 1753
Cadmium	0.0	100	97		1	97	0.13	75-125	20	04/22/2020 1753
Chromium	0.0	100	97		1	97	0.072	75-125	20	04/22/2020 1753
Cobalt	0.0	100	94		1	94	0.80	75-125	20	04/22/2020 1753
Copper	0.0	100	97		1	97	3.1	75-125	20	04/22/2020 1753
Lead	0.0	100	99		1	99	3.7	75-125	20	04/22/2020 1753
Nickel	0.0	100	94		1	94	0.44	75-125	20	04/22/2020 1753
Vanadium	0.0	100	96		1	96	0.16	75-125	20	04/22/2020 1753
Zinc	0.0	100	99		1	99	2.5	75-125	20	04/22/2020 1753

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MB

Sample ID: VQ51713-001

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Mercury	2.0	U	1	2.0	ug/L	04/22/2020 1314

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17091

Mercury - LCS

Sample ID: VQ51713-002

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.0		1	99	80-120	04/22/2020 1317

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17091

Chain of Custody and Miscellaneous Documents

10/10/10

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B & QC

Report to QL, DL listed below and provide estimated results ("J").

Analyzed by Method 6020B
not 6020A as noted. JCF
3-25 -2020

HWMU 16					
Analyte	Method Ref	LOQ	LOD	CAS#	Units
ANTIMONY	6020A	2	0.5 0.4	7440-38-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.2	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1	7440-50-8	UG/L
LEAD	6020A	3 2	1 0.2	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.3 0.2	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	2.5 4	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-65-6	UG/L

15 analytes

These are Appendix IX wells. Report estimated results.

Rev 12/2016 per class 1 permit mod
Rev 2019 – red reflects DEQ pre approval in 2019. Class 1 permit mod remains pending as of 3-25-2020
tr:\environmental\h5g\databases\raap\sample event set up\semi-annual events\hwmu-16\hwmu16-target analyte list-annual rev 10 - 2014.doc

OK JCF 3-25-2020
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HWMU16
Radford Army Ammunition Plant (RFAAP)
Semiannual Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-82-1	2-3 (per DEQ 2019- class 1 permit mod pending)
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-5	30

Method SW 7470A/CVAA

12	Mercury	7439-97-6 2/7470A	2
----	---------	-------------------	---

Notes:

- Antimony, selenium and silver deleted 4-6,2012.
- 11 Zinc QL increased 11 2016, lead increased to 2 ppb.
- 10/2016 JCF- rev 102017
- **10/2018 -- Changed to 6020 "B" for Shealy. 6020 "A" can still be used. No other changes. Still current.**

Above applies to wells 16-2, 16-3, 16-5, 16WC2B and 16Spring

Report to at or above QL only. JCF 3-25-2020

c:\environmental\files\databases\sample event set up\semi-annual events\hwmu-16\hwmu16-target analyte list-q as of 10-2018.doc
JCF 11/04/2004

OK JCF 3-25-2020

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 7470A

THIS APPLIES TO ALL WELLS AND QC

Method SW 7470A/CVAA	CAS#	Required LOQ
1 Mercury	7439-97-8	2 / 0.2 ug/l

Report to permit DL (0.2 ug/l) for 16C1, 16MW8, 16MW9,
16WC1A, 16WDUP, 16WC1B, QC. (Appendix IX wells)-jcf
3-25-2020

Report to at or above QL for remaining wells. jcf 3-25-
2020

I:\environmental\bbg\data\bases\comp\sample event set up\semi-annual events\Hwmu-16\hwmu16-target analyte list-annual rev 10-2014.doc

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-20A

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, 16WC1B
AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

**These are Appendix IX wells.
Report estimated results.**

LOD revised 4Q2016 class 1 permit mod

\\env\iconnect\atl\bgl\data\us\rap\sample event\semi-annual events\hwmu-16\hwmc16-target analyte list-annual rev 10 - 2014.doc

OK JCF 3-25-2020

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PACE ANALYTICAL SERVICES, LLC

Shealy Environmental Services, Inc.
Document Number: ME0048C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Draper

Cooler Inspected by/date: LKH / 04/17/2020 Lot #: VDI7087

Means of receipt: ☐ SESI ☐ Client ☒ UPS ☒ FedEx ☐ Other: _____		
☒ Yes ☐ No	1. Were custody seals present on the cooler?	
☒ Yes ☐ No ☐ NA	2. If custody seals were present, were they intact and unbroken?	
pH Strip ID: 20-0209 Chlorine Strip ID: 20-0278 Tested by: BMG		
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA		
2.4 / 2.4 °C NA / NA °C NA / NA °C NA / NA °C		
Method: ☒ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C		
Method of coolant: ☒ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None		
☐ Yes ☐ No ☒ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).	
☒ Yes ☐ No ☐ NA	4. Is the commercial courier's packing slip attached to this form?	
☒ Yes ☐ No	5. Were proper custody procedures (relinquished/received) followed?	
☒ Yes ☐ No	6. Were sample IDs listed on the COC?	
☒ Yes ☐ No	7. Were sample IDs listed on all sample containers?	
☒ Yes ☐ No	8. Was collection date & time listed on the COC?	
☒ Yes ☐ No	9. Was collection date & time listed on all sample containers?	
☒ Yes ☐ No	10. Did all container label information (ID, date, time) agree with the COC?	
☒ Yes ☐ No	11. Were tests to be performed listed on the COC?	
☒ Yes ☐ No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?	
☒ Yes ☐ No	13. Was adequate sample volume available?	
☒ Yes ☐ No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
☐ Yes ☒ No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?	
☐ Yes ☐ No ☒ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?	
☒ Yes ☐ No ☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?	
☒ Yes ☐ No ☐ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?	
☒ Yes ☐ No ☐ NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?	
☐ Yes ☐ No ☒ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
☐ Yes ☒ No	21. Was the quote number listed on the container label? If yes, Quote # NA	
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H ₂ SO ₄ , HNO ₃ , HCl, NaOH using SR # NA.		
Time of preservation NA If more than one preservative is needed, please note in the comments below.		
Sample(s) NA were received with bubbles >6 mm in diameter.		
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is <i>no</i>) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: NA.		
SR barcode labels applied by: BMG Date: 04/17/2020		

Comments:

PACE ANALYTICAL SERVICES, LLC

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Draper

Cooler Inspected by/date: LKH / 04/17/2020 Lot #: VD17091

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☒ FedEx ☐ Other: _____	
☒ Yes ☐ No	1. Were custody seals present on the cooler?
☒ Yes ☐ No ☐ NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: 20-0209 Chlorine Strip ID: 20-0278 Tested by: BMG	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA	
2.4 / 2.4 °C NA / NA °C NA / NA °C NA / NA °C	
Method: ☒ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C	
Method of coolant: ☒ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None	
☐ Yes ☐ No ☒ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☒ Yes ☐ No ☐ NA	4. Is the commercial courier's packing slip attached to this form?
☒ Yes ☐ No	5. Were proper custody procedures (relinquished/received) followed?
☒ Yes ☐ No	6. Were sample IDs listed on the COC?
☒ Yes ☐ No	7. Were sample IDs listed on all sample containers?
☒ Yes ☐ No	8. Was collection date & time listed on the COC?
☒ Yes ☐ No	9. Was collection date & time listed on all sample containers?
☒ Yes ☐ No	10. Did all container label information (ID, date, time) agree with the COC?
☒ Yes ☐ No	11. Were tests to be performed listed on the COC?
☒ Yes ☐ No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☒ Yes ☐ No	13. Was adequate sample volume available?
☐ Yes ☒ No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes ☒ No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes ☐ No ☒ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
☒ Yes ☐ No ☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes ☐ No ☒ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☒ Yes ☐ No ☐ NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes ☐ No ☒ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes ☒ No	21. Was the quote number listed on the container label? If yes, Quote # NA
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H ₂ SO ₄ , HNO ₃ , HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: NA	
SR barcode labels applied by: BMG Date: 04/17/2020	

Comments:

Metals



Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-001			
Description: 16-2				Matrix: Aqueous			
Date Sampled: 04/15/2020 1020				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1344	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates**Laboratory ID: **VD17091-001**Description: **16-2**Matrix: **Aqueous**Date Sampled: **04/15/2020 1020**Project Name: **RAAP HWMU16**Date Received: **04/17/2020**Project Number: **B03204-20A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1706	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	200		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

U = Not detected at or above the DL

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-002			
Description: 16-3				Matrix: Aqueous			
Date Sampled: 04/15/2020 1200				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1347	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-002			
Description: 16-3				Matrix: Aqueous			
Date Sampled: 04/15/2020 1200				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1712	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	770		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis

D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-003			
Description: 16-5				Matrix: Aqueous			
Date Sampled: 04/15/2020 0845				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1349	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-003			
Description: 16-5				Matrix: Aqueous			
Date Sampled: 04/15/2020 0845				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1718	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	170		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis

D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-004			
Description: 16WC2B				Matrix: Aqueous			
Date Sampled: 04/15/2020 0940				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1352	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%
H = Out of holding time	W = Reported on wet weight basis	D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-004			
Description: 16WC2B				Matrix: Aqueous			
Date Sampled: 04/15/2020 0940				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1723	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	120		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis D = Dilution > 1

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Mercury

Client: Draper Aden Associates				Laboratory ID: VD17091-005			
Description: 16SPRING				Matrix: Aqueous			
Date Sampled: 04/15/2020 0900				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	04/22/2020 1355	KSH2	04/22/2020 0029	51713

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

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U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis D = Dilution > 1

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ICP-MS

Client: Draper Aden Associates				Laboratory ID: VD17091-005			
Description: 16SPRING				Matrix: Aqueous			
Date Sampled: 04/15/2020 0900				Project Name: RAAP HWMU16			
Date Received: 04/17/2020				Project Number: B03204-20A			

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	04/22/2020 1729	BPK	04/21/2020 1542	51455

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	7440-39-3	6020B	170		10	ug/L	1
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	3.0	U	3.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40%
H = Out of holding time W = Reported on wet weight basis

D = Dilution > 1

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QC Summary

ICP-MS - MB

Sample ID: VQ51455-001

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Arsenic	10	U	1	10	ug/L	04/22/2020 1654
Barium	10	U	1	10	ug/L	04/22/2020 1654
Beryllium	1.0	U	1	1.0	ug/L	04/22/2020 1654
Cadmium	1.0	U	1	1.0	ug/L	04/22/2020 1654
Chromium	5.0	U	1	5.0	ug/L	04/22/2020 1654
Cobalt	5.0	U	1	5.0	ug/L	04/22/2020 1654
Copper	5.0	U	1	5.0	ug/L	04/22/2020 1654
Lead	3.0	U	1	3.0	ug/L	04/22/2020 1654
Nickel	10	U	1	10	ug/L	04/22/2020 1654
Vanadium	10	U	1	10	ug/L	04/22/2020 1654
Zinc	30	U	1	30	ug/L	04/22/2020 1654

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17091

ICP-MS - LCS

Sample ID: VQ51455-002

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	100	100		1	102	80-120	04/22/2020 1700
Barium	100	100		1	101	80-120	04/22/2020 1700
Beryllium	100	98		1	98	80-120	04/22/2020 1700
Cadmium	100	100		1	100	80-120	04/22/2020 1700
Chromium	100	99		1	99	80-120	04/22/2020 1700
Cobalt	100	100		1	100	80-120	04/22/2020 1700
Copper	100	99		1	99	80-120	04/22/2020 1700
Lead	100	100		1	102	80-120	04/22/2020 1700
Nickel	100	100		1	100	80-120	04/22/2020 1700
Vanadium	100	99		1	99	80-120	04/22/2020 1700
Zinc	100	100		1	101	80-120	04/22/2020 1700

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: VD17091

ICP-MS - MS

Sample ID: VD17091-005MS

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.0	100	100		1	100	75-125	04/22/2020 1735
Barium	170	100	270		1	99	75-125	04/22/2020 1735
Beryllium	0.0	100	96		1	96	75-125	04/22/2020 1735
Cadmium	0.0	100	97		1	97	75-125	04/22/2020 1735
Chromium	0.0	100	98		1	98	75-125	04/22/2020 1735
Cobalt	0.0	100	93		1	93	75-125	04/22/2020 1735
Copper	0.0	100	94		1	94	75-125	04/22/2020 1735
Lead	0.0	100	95		1	95	75-125	04/22/2020 1735
Nickel	0.0	100	93		1	93	75-125	04/22/2020 1735
Vanadium	0.0	100	96		1	96	75-125	04/22/2020 1735
Zinc	0.0	100	96		1	96	75-125	04/22/2020 1735

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VD17091

ICP-MS - MSD

Sample ID: VD17091-005MD

Matrix: Aqueous

Batch: 51455

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 04/21/2020 1542

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.0	100	100		1	103	2.8	75-125	20	04/22/2020 1753
Barium	170	100	280		1	106	2.6	75-125	20	04/22/2020 1753
Beryllium	0.0	100	98		1	98	2.9	75-125	20	04/22/2020 1753
Cadmium	0.0	100	97		1	97	0.13	75-125	20	04/22/2020 1753
Chromium	0.0	100	97		1	97	0.072	75-125	20	04/22/2020 1753
Cobalt	0.0	100	94		1	94	0.80	75-125	20	04/22/2020 1753
Copper	0.0	100	97		1	97	3.1	75-125	20	04/22/2020 1753
Lead	0.0	100	99		1	99	3.7	75-125	20	04/22/2020 1753
Nickel	0.0	100	94		1	94	0.44	75-125	20	04/22/2020 1753
Vanadium	0.0	100	96		1	96	0.16	75-125	20	04/22/2020 1753
Zinc	0.0	100	99		1	99	2.5	75-125	20	04/22/2020 1753

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VD17091

Mercury - MB

Sample ID: VQ51713-001

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Mercury	2.0	U	1	2.0	ug/L	04/22/2020 1314

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: VD17091

Mercury - LCS

Sample ID: VQ51713-002

Matrix: Aqueous

Batch: 51713

Prep Method:

Analytical Method: 7470A

Prep Date: 04/22/2020 0029

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	2.0		1	99	80-120	04/22/2020 1317

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and $\geq$ DL

+ = RPD is out of criteria

LOD = Limit of Detection

U = Not detected at or above the detection limit

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

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QC Data for Lot Number: VD17091

ICP-MS Metals



- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: VD17091

Method Type: ICP-MS

SOW No.: _____

Contract: RAAP HWMU16

Lab Code: _____

Case No.: _____

SAS No.: _____

Lab Sample ID	Client Sample ID	QC Description
VD17091-001	16-2	
VD17091-002	16-3	
VD17091-003	16-5	
VD17091-004	16WC2B	
VD17091-005	16SPRING	
VD17091-005S	16SPRINGS	Matrix Spike
VD17091-005SD	16SPRINGSD	Matrix Spike Duplicate

Were ICP interelement corrections applied?	Yes/No	Yes	_____
Were ICP background corrections applied?	Yes/No	Yes	_____
If yes - were raw data generated before applications of background corrections?	Yes/No	No	_____

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates SDG No.: VD17091

Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Arsenic	207.23	200.0	104	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Barium	198.90	200.0	99	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Beryllium	200.83	200.0	100	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Cadmium	191.13	200.0	96	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Chromium	189.33	200.0	95	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Cobalt	186.13	200.0	93	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Copper	192.73	200.0	96	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Lead	186.03	200.0	93	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Nickel	185.53	200.0	93	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Vanadium	195.60	200.0	98	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
	Zinc	191.47	200.0	96	90.0 - 110.0	MS	4/22/2020	14:57	MS2042220C 6020B ONLY, g
CCV1									
	Arsenic	299.23	300.0	100	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Barium	303.70	300.0	101	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Beryllium	302.77	300.0	101	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Cadmium	292.00	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Chromium	295.03	300.0	98	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Cobalt	290.47	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Copper	283.87	300.0	95	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Lead	286.73	300.0	96	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Nickel	285.87	300.0	95	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Vanadium	299.80	300.0	100	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
	Zinc	290.63	300.0	97	90.0 - 110.0	MS	4/22/2020	15:14	MS2042220C 6020B ONLY, g
CCV2									
	Arsenic	310.37	300.0	103	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Barium	307.47	300.0	102	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Beryllium	313.27	300.0	104	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Cadmium	296.43	300.0	99	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Chromium	298.90	300.0	100	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Cobalt	295.87	300.0	99	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Copper	300.53	300.0	100	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Lead	293.67	300.0	98	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Nickel	290.00	300.0	97	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Vanadium	306.77	300.0	102	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g
	Zinc	298.97	300.0	100	90.0 - 110.0	MS	4/22/2020	16:25	MS2042220C 6020B ONLY, g

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates SDG No.: VD17091

Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV3									
	Arsenic	312.10	300.0	104	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Barium	307.43	300.0	102	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Beryllium	312.07	300.0	104	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Cadmium	297.63	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Chromium	299.17	300.0	100	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Cobalt	296.97	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Copper	297.57	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Lead	295.93	300.0	99	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Nickel	293.23	300.0	98	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Vanadium	304.93	300.0	102	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
	Zinc	300.07	300.0	100	90.0 - 110.0	MS	4/22/2020	17:41	MS2042220C 6020B ONLY, g
CCV4									
	Arsenic	312.10	300.0	104	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Barium	308.40	300.0	103	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Beryllium	310.40	300.0	103	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Cadmium	295.80	300.0	99	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Chromium	296.03	300.0	99	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Cobalt	292.23	300.0	97	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Copper	299.17	300.0	100	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Lead	295.87	300.0	99	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Nickel	286.37	300.0	95	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Vanadium	304.57	300.0	102	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g
	Zinc	298.53	300.0	100	90.0 - 110.0	MS	4/22/2020	18:51	MS2042220C 6020B ONLY, g

- 3a -
INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17091

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	½ LOQ	½ LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Arsenic	-0.058	+/-1.000	U	1.000	1.000	MS	4/22/2020	15:02	MS2042220C 6
	Barium	-0.038	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Beryllium	0.006	+/-0.200	U	0.200	0.200	MS	4/22/2020	15:02	MS2042220C 6
	Cadmium	0.006	+/-0.250	U	0.250	0.250	MS	4/22/2020	15:02	MS2042220C 6
	Chromium	-0.015	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Cobalt	0.008	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Copper	0.035	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Lead	0.014	+/-0.500	U	0.500	0.500	MS	4/22/2020	15:02	MS2042220C 6
	Nickel	-0.001	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Vanadium	-0.003	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:02	MS2042220C 6
	Zinc	-0.091	+/-5.000	U	5.000	5.000	MS	4/22/2020	15:02	MS2042220C 6
CCB1	Arsenic	-0.067	+/-1.000	U	1.000	1.000	MS	4/22/2020	15:20	MS2042220C 6
	Barium	-0.038	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Beryllium	-0.017	+/-0.200	U	0.200	0.200	MS	4/22/2020	15:20	MS2042220C 6
	Cadmium	0.018	+/-0.250	U	0.250	0.250	MS	4/22/2020	15:20	MS2042220C 6
	Chromium	0.019	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Cobalt	0.017	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Copper	0.021	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Lead	0.015	+/-0.500	U	0.500	0.500	MS	4/22/2020	15:20	MS2042220C 6
	Nickel	0.002	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Vanadium	0.029	+/-2.500	U	2.500	2.500	MS	4/22/2020	15:20	MS2042220C 6
	Zinc	0.008	+/-5.000	U	5.000	5.000	MS	4/22/2020	15:20	MS2042220C 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17091

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	½ LOQ	½ LOQ	M	Analysis Date	Analysis Time	Run
CCB2	Arsenic	-0.111	+/-1.000	U	1.000	1.000	MS	4/22/2020	16:31	MS2042220C 6
	Barium	-0.041	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Beryllium	-0.008	+/-0.200	U	0.200	0.200	MS	4/22/2020	16:31	MS2042220C 6
	Cadmium	0.018	+/-0.250	U	0.250	0.250	MS	4/22/2020	16:31	MS2042220C 6
	Chromium	0.011	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Cobalt	0.008	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Copper	0.007	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Lead	0.021	+/-0.500	U	0.500	0.500	MS	4/22/2020	16:31	MS2042220C 6
	Nickel	-0.008	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Vanadium	0.018	+/-2.500	U	2.500	2.500	MS	4/22/2020	16:31	MS2042220C 6
	Zinc	0.038	+/-5.000	U	5.000	5.000	MS	4/22/2020	16:31	MS2042220C 6
CCB3	Arsenic	-0.001	+/-1.000	U	1.000	1.000	MS	4/22/2020	17:47	MS2042220C 6
	Barium	-0.033	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Beryllium	-0.011	+/-0.200	U	0.200	0.200	MS	4/22/2020	17:47	MS2042220C 6
	Cadmium	0.015	+/-0.250	U	0.250	0.250	MS	4/22/2020	17:47	MS2042220C 6
	Chromium	0.005	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Cobalt	0.009	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Copper	0.014	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Lead	0.021	+/-0.500	U	0.500	0.500	MS	4/22/2020	17:47	MS2042220C 6
	Nickel	-0.021	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Vanadium	0.005	+/-2.500	U	2.500	2.500	MS	4/22/2020	17:47	MS2042220C 6
	Zinc	-0.089	+/-5.000	U	5.000	5.000	MS	4/22/2020	17:47	MS2042220C 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17091

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	½ LOQ	½ LOQ	M	Analysis Date	Analysis Time	Run
CCB4	Arsenic	-0.114	+/-1.000	U	1.000	1.000	MS	4/22/2020	18:57	MS2042220C 6
	Barium	-0.022	+/-2.500	U	2.500	2.500	MS	4/22/2020	18:57	MS2042220C 6
	Beryllium	-0.001	+/-0.200	U	0.200	0.200	MS	4/22/2020	18:57	MS2042220C 6
	Cadmium	0.018	+/-0.250	U	0.250	0.250	MS	4/22/2020	18:57	MS2042220C 6
	Chromium	-0.009	+/-2.500	U	2.500	2.500	MS	4/22/2020	18:57	MS2042220C 6
	Cobalt	0.002	+/-2.500	U	2.500	2.500	MS	4/22/2020	18:57	MS2042220C 6
	Copper	0.026	+/-2.500	U	2.500	2.500	MS	4/22/2020	18:57	MS2042220C 6
	Lead	0.018	+/-0.500	U	0.500	0.500	MS	4/22/2020	18:57	MS2042220C 6
	Nickel	0.010	+/-2.500	U	2.500	2.500	MS	4/22/2020	18:57	MS2042220C 6
	Vanadium	0.006	+/-2.500	U	2.500	2.500	MS	4/22/2020	18:57	MS2042220C 6
	Zinc	0.024	+/-5.000	U	5.000	5.000	MS	4/22/2020	18:57	MS2042220C 6

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INTERFERENCE CHECK SAMPLE

Client: Draper Aden Associates

SDG No.: VD17091

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

ICS Source: Inorganic Ventures

Instrument ID: ICPMS2

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Arsenic	-0.43			-4.00 to 4.00	4/22/2020	15:08	MS2042220C 6
	Barium	0.0040			-10.0000 to 10.000	4/22/2020	15:08	MS2042220C 6
	Beryllium	-0.017			-0.800 to 0.800	4/22/2020	15:08	MS2042220C 6
	Cadmium	0.046			-1.000 to 1.000	4/22/2020	15:08	MS2042220C 6
	Chromium	-1.1			-10.0 to 10.0	4/22/2020	15:08	MS2042220C 6
	Cobalt	0.24			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Copper	-0.14			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Lead	0.055			-2.000 to 2.000	4/22/2020	15:08	MS2042220C 6
	Nickel	0.56			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Vanadium	-0.95			-10.00 to 10.00	4/22/2020	15:08	MS2042220C 6
	Zinc	1.4			-20.0 to 20.0	4/22/2020	15:08	MS2042220C 6

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SERIAL DILUTION SAMPLE SUMMARY

Client: Draper Aden Associates SDG No.: VD17091
 Contract: RAAP HWMU16 Lab Code: Case No.: SAS No.:
 Matrix: WATER Level: Client ID: 16SPRINGL
 Sample ID: VD17091-005 Serial Dilution ID: VD17091-005L
 Batch Number: 51455

Analyte	Initial Result ug/L	C	Serial Result ug/L	C	% Difference	Qual	Acceptance Limits	M
Arsenic	10.00	U	50.00	U			10.00 %	MS
Barium	170.90		165.95		2.9		10.00 %	MS
Beryllium	1.00	U	5.00	U			10.00 %	MS
Cadmium	1.00	U	5.00	U			10.00 %	MS
Chromium	5.00	U	25.00	U			10.00 %	MS
Cobalt	5.00	U	25.00	U			10.00 %	MS
Copper	5.00	U	25.00	U			10.00 %	MS
Lead	3.00	U	15.00	U			10.00 %	MS
Nickel	10.00	U	50.00	U			10.00 %	MS
Vanadium	10.00	U	50.00	U			10.00 %	MS
Zinc	30.00	U	150.00	U			10.00 %	MS

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Case No.: SAS No.: SDG No.: VD17091

Instrument ID Number: ICPMS2 Run Number: MS2042220C 6020B ONLY, generated

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N
ZZZZZZ	1.00	1403																									
BLANK	1.00	1409				X	X	X	X		X	X	X	X					X						X	X	
CAL1	1.00	1415				X	X	X	X		X	X	X	X					X						X	X	
MW12644	1.00	1421				X	X	X	X		X	X	X	X					X						X	X	
CAL2	1.00	1427				X	X	X	X		X	X	X	X					X						X	X	
CAL3	1.00	1433				X	X	X	X		X	X	X	X					X						X	X	
CAL4	1.00	1439				X	X	X	X		X	X	X	X					X						X	X	
CAL5	1.00	1445																									
CAL6	1.00	1451																									
ICV1	1.00	1457				X	X	X	X		X	X	X	X					X						X	X	
ICB1	1.00	1502				X	X	X	X		X	X	X	X					X						X	X	
ICSA	1.00	1508				X	X	X	X		X	X	X	X					X						X	X	
CCV1	1.00	1514				X	X	X	X		X	X	X	X					X						X	X	
CCB1	1.00	1520				X	X	X	X		X	X	X	X					X						X	X	
ZZZZZZ	1.00	1526																									
ZZZZZZ	1.00	1532																									
ZZZZZZ	1.00	1538																									
ZZZZZZ	1.00	1544																									
ZZZZZZ	1.00	1549																									
ZZZZZZ	1.00	1555																									
ZZZZZZ	1.00	1601																									
ZZZZZZ	1.00	1607																									
ZZZZZZ	5.00	1613																									
ZZZZZZ	1.00	1619																									
CCV2	1.00	1625				X	X	X	X		X	X	X	X					X						X	X	
CCB2	1.00	1631				X	X	X	X		X	X	X	X					X						X	X	
ZZZZZZ	1.00	1637																									
ZZZZZZ	1.00	1642																									
ZZZZZZ	1.00	1648																									
V051455-001	1.00	1654				X	X	X	X		X	X	X	X					X						X	X	
V051455-002	1.00	1700				X	X	X	X		X	X	X	X					X						X	X	
VD17091-001	1.00	1706				X	X	X	X		X	X	X	X					X						X	X	
VD17091-002	1.00	1712				X	X	X	X		X	X	X	X					X						X	X	
VD17091-003	1.00	1718				X	X	X	X		X	X	X	X					X						X	X	
VD17091-004	1.00	1723				X	X	X	X		X	X	X	X					X						X	X	
VD17091-005	1.00	1729				X	X	X	X		X	X	X	X					X						X	X	

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17091

Instrument ID Number: ICPMS2 Run Number: MS2042220C 6020B ONLY, generated

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
VD17091-005S	1.00	1735				X	X	X	X		X	X	X		X			X						X	X						
CCV3	1.00	1741				X	X	X	X		X	X	X		X			X						X	X						
CCB3	1.00	1747				X	X	X	X		X	X	X		X			X						X	X						
VD17091-005SD	1.00	1753				X	X	X	X		X	X	X		X			X						X	X						
VD17091-005L	5.00	1759				X	X	X	X		X	X	X		X			X						X	X						
ZZZZZZ	1.00	1804																													
ZZZZZZ	1.00	1810																													
ZZZZZZ	1.00	1816																													
ZZZZZZ	1.00	1822																													
ZZZZZZ	1.00	1828																													
ZZZZZZ	1.00	1834																													
ZZZZZZ	5.00	1840																													
ZZZZZZ	1.00	1845																													
CCV4	1.00	1851				X	X	X	X		X	X	X		X			X						X	X						
CCB4	1.00	1857				X	X	X	X		X	X	X		X			X						X	X						
ZZZZZZ	1.00	1903																													
ZZZZZZ	1.00	1909																													
ZZZZZZ	1.00	1915																													
ZZZZZZ	1.00	1921																													

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17091ICP-MS Instrument ID: ICPMS2 Start Date: 04/22/2020 End Date: 04/22/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
TUNE	ZZZZZZ	1403												
BLANK	BLANK IM9936-01	1409	100		100		100		100		100		100	
CAL1	CAL1 MW-12643	1415	99		99		100		99		100		100	
MW12644	MW12644	1421	99		98		98		97		99		97	
CAL2	CAL2 MW-12645	1427	96		96		96		95		98		94	
CAL3	CAL3 MW-12520	1433	96		91		91		88		95		89	
CAL4	CAL4 MW-12521	1439	93		86		86		82		92		84	
CAL5	CAL5 MW-12618	1445	88		83		82		82		90		83	
CAL6	CAL6 MW-12619	1451	86		83		79		82		88		83	
ICV1	ICV1	1457	90		86		83		87		93		86	
ICB1	ICB1	1502	96		91		90		88		94		89	
ICSA	ICSA	1508	89		84		80		78		92		83	
CCV1	CCV1	1514	92		88		85		85		96		88	
CCB1	CCB1	1520	99		94		92		89		98		92	
VQ51454-001	ZZZZZZ	1526												
VQ51454-002	ZZZZZZ	1532												
VD17087-001	ZZZZZZ	1538												
VD17087-002	ZZZZZZ	1544												
VD17087-003	ZZZZZZ	1549												
VD17087-004	ZZZZZZ	1555												
VD17087-004	ZZZZZZ	1601												
VD17087-004	ZZZZZZ	1607												
VD17087-004	ZZZZZZ	1613												
VD17087-004	ZZZZZZ	1619												
CCV2	CCV2	1625	81		75		75		75		82		75	
CCB2	CCB2	1631	86		81		82		81		84		79	
LR	ZZZZZZ	1637												
VD17087-005	ZZZZZZ	1642												
VD17087-006	ZZZZZZ	1648												
VQ51455-001	VQ51455-001MB	1654	88		80		86		76		85		76	
VQ51455-002	LCS	1700	85		77		81		73		82		74	
VD17091-001	16-2	1706	85		79		86		77		85		78	
VD17091-002	16-3	1712	88		81		89		79		86		80	
VD17091-003	16-5	1718	86		79		86		76		84		78	
VD17091-004	16WC2B	1723	86		79		87		76		84		78	
VD17091-005	16SPRING	1729	84		77		85		75		84		77	
VD17091-005	16SPRINGS	1735	84		76		84		73		84		75	
CCV3	CCV3	1741	76		71		73		71		78		71	
CCB3	CCB3	1747	81		75		78		75		79		73	
VD17091-005	16SPRINGSD	1753	82		74		81		73		80		73	
VD17091-005	16SPRINGL	1759	85		78		83		76		81		76	
VD17091-005	ZZZZZZ	1804												
VD15011-023	ZZZZZZ	1810												
VD15011-024	ZZZZZZ	1816												
VD15011-029	ZZZZZZ	1822												

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16Lab Code: _____ Case No.: _____ NRAS No.: _____ SDG NO.: VD17091ICP-MS Instrument ID: ICPMS2 Start Date: 04/22/2020 End Date: 04/22/2020

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element 209Bi	Q	Element 115In	Q	Element 6Li	Q	Element 45Sc	Q	Element 159Tb	Q	Element 89Y	Q
VD15011-029	ZZZZZZ	1828												
VD15011-029	ZZZZZZ	1834												
VD15011-029	ZZZZZZ	1840												
VD15011-029	ZZZZZZ	1845												
CCV4	CCV4	1851	77		71		75		72		77		71	
CCB4	CCB4	1857	82		75		78		75		79		73	
VD15011-030	ZZZZZZ	1903												
VD15011-031	ZZZZZZ	1909												
CCV	ZZZZZZ	1915												
CCB	ZZZZZZ	1921												

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16
 Lab Code: Case No.: MA No.: SDG No.: VD17091
 Instrument ID: ICPMS2 Start Date: 4/22/2020
 Analytical Method: ICP-MS Run Batch: MS2042220C 6020B ONLY, generated 1
 Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Arsenic	0.00	0	0	2.00	1.7	-17	10.0	11	7
Barium	0.00	0	0	5.00	4.9	-2	25.0	25	1
Beryllium	0.00	0	0	0.400	0.32	-20	2.00	2.1	4
Cadmium	0.00	0	0	0.100	0.10	0	0.500	0.50	0
Chromium	0.00	0	0	5.00	4.9	-1	25.0	25	-2
Cobalt	0.00	0	0	1.00	1.0	2	5.00	4.9	-1
Copper	0.00	0	0	5.00	5.3	5	25.0	26	3
Lead	0.00	0	0	1.00	0.92	-8	5.00	4.7	-5
Nickel	0.00	0	0	5.00	5.1	1	25.0	25	0
Vanadium	0.00	0	0	5.00	5.0	-1	25.0	25	-1
Zinc	0.00	0	0	10.0	10	4	50.0	50	-1

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: Case No.: MA No.: SDG No.: VD17091

Instrument ID: ICPMS2 Start Date: 4/22/2020

Analytical Method: ICP-MS Run Batch: MS2042220C 6020B ONLY, generate

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Arsenic	250	249	0	500	502	0			
Barium	250	249	-1	500	504	1			
Beryllium	250	249	0	500	500	0			
Cadmium	250	244	-2	500	503	1			
Chromium	250	246	-2	500	504	1			
Cobalt	250	248	-1	500	504	1			
Copper	250	253	1	500	499	0			
Lead	250	246	-2	500	503	1			
Nickel	250	250	0	500	500	0			
Vanadium	250	245	-2	500	503	1			
Zinc	250	247	-1	500	500	0			

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Pace Analytical Services, LLC Contract: RAAP HWMU16

Lab Code: Case No.: MA No.: SDG No.: VD17091

Instrument ID: ICPMS2 Start Date: 4/22/2020

Analytical Method: ICP-MS Run Batch: MS2042220C 6020B ONLY, generate

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Arsenic				4.00	4.2	5			
Barium				10.0	9.5	-5			
Beryllium				0.800	0.77	-3			
Cadmium				0.200	0.23	16			
Chromium				10.0	9.9	-1			
Cobalt				2.00	1.9	-4			
Copper				10.0	10	3			
Lead				2.00	1.9	-7			
Nickel				10.0	10	1			
Vanadium				10.0	9.9	-1			
Zinc				20.0	20	1			

Raw Sample Data



Performance Report

Sample details

Acquired at : 4/22/2020 07:25:01

Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Mass Calibration verification

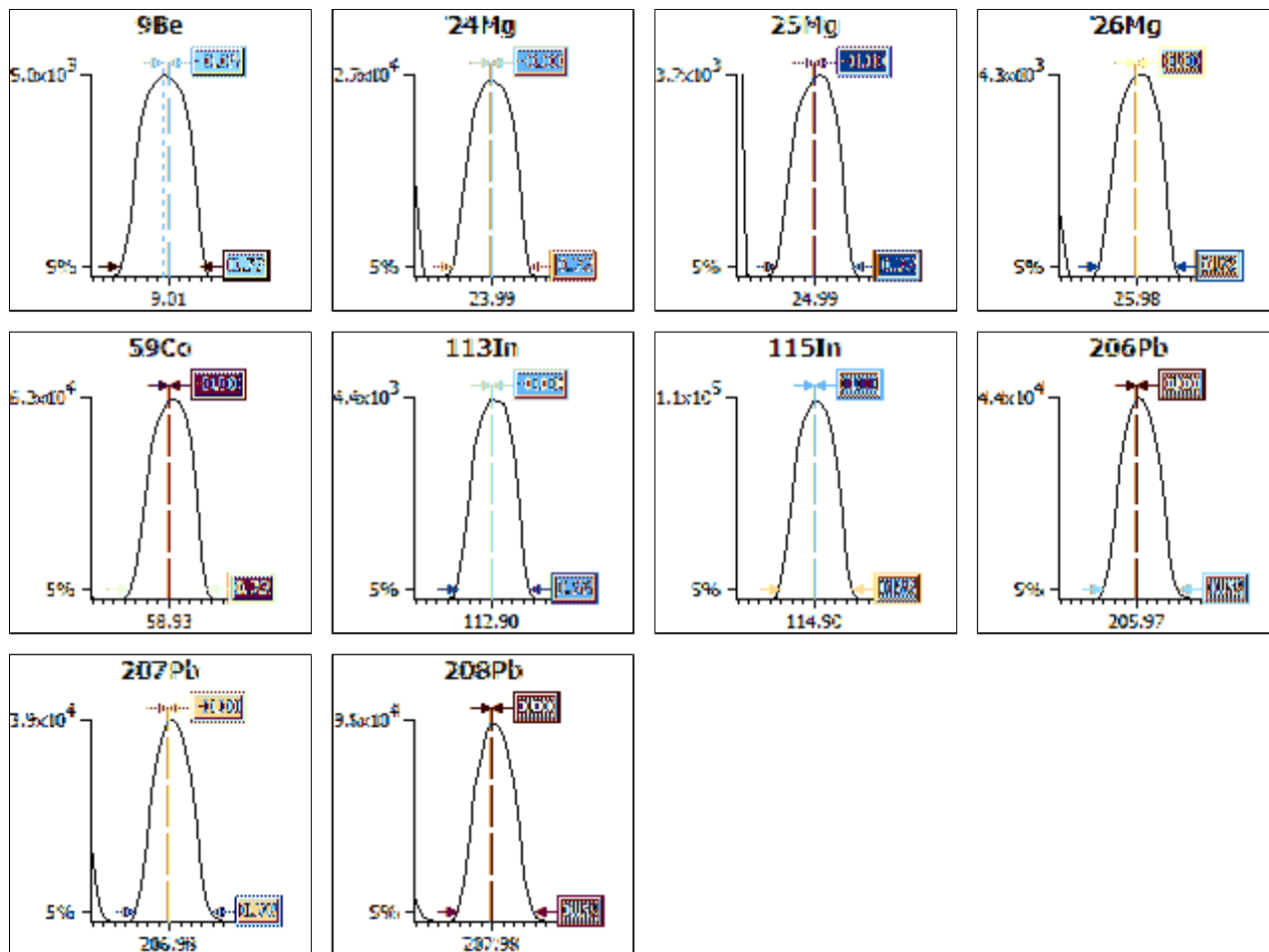
Acquisition parameters

Sweeps : 25

Dwell : 10.0 mSecs

Point spacing : 0.05 amu

Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.77	-0.05
24Mg	0.85	0.65	0.10	0.72	-0.00
25Mg	0.85	0.65	0.10	0.72	-0.00
26Mg	0.85	0.65	0.10	0.72	0.00
59Co	0.85	0.65	0.10	0.72	-0.00
113In	0.85	0.65	0.10	0.66	-0.00
115In	0.85	0.65	0.10	0.66	0.00
206Pb	0.85	0.65	0.10	0.72	0.00
207Pb	0.85	0.65	0.10	0.72	-0.00
208Pb	0.85	0.65	0.10	0.72	0.00

Sample details

Acquired at : 4/22/2020 07:25:01

Report name : Shealy Performance Report ICPMS2 [9/11/2019 10:14:14]

Tune conditions

Major		Minor		Global		Add. Gases
Extraction	-109.8	Lens 3	-196.1	Standard resolution	100	
Lens 1	-1208	Forward power	1404	High resolution	90	
Lens 2	-87.1	Horizontal	95	Analogue Detector	2304	
Focus	15.5	Vertical	811	PC Detector	3627	
D1	-43.1	DA	-49.4			
D2	-147	Cool	13.0			
Pole Bias	1.0	Auxiliary	1.00			
Hexapole Bias	-2.0	Sampling Depth	100			
Nebuliser	0.81					

Sensitivity and stability results**Acquisition parameters**

Sweeps : 130

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	56Ar O	59Co	136Ba + +	101Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	-	5.0%	-	-
	CountRate	-	>5000	>1000	>1000	>1000	-	>10000	-	-
1	07:26:23	0.000	5409.301	27450.613	3686.132	4399.526	130848.01	64315.939	1123.916	0.000
2	07:26:55	0.000	5364.659	27489.191	3713.835	4522.663	132205.13	63958.817	1063.908	0.000
3	07:27:27	0.000	5300.006	27213.748	3888.524	4448.011	131150.79	64154.806	1128.532	0.000
4	07:27:58	0.000	5262.292	26832.618	3719.222	4516.506	131850.03	63903.817	1124.685	0.000
5	07:28:30	0.000	5276.146	26531.737	3779.247	4524.972	132913.03	64505.738	1253.933	0.000
x		0.000	5322.481	27103.581	3757.392	4482.336	131793.40	64167.823	1138.995	0.000
s		0.00	62.43	412.82	80.79	56.23	826.59	249.84	69.62	0.00
%RSD		0.000	1.173	1.523	2.150	1.254	0.627	0.389	6.113	0.000

Run	Time	113In	115In	138Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	5.0%	5.0%	-	-	-	5.0%	5.0%	5.0%	-
	CountRate	>1000	>10000	-	-	-	>10000	>10000	>10000	<2
1	07:26:23	4835.901	110392.36	89481.300	121160.51	1859.421	45683.728	39864.908	97292.465	0.000
2	07:26:55	4615.787	110301.27	89214.077	121656.30	1754.015	45698.417	39846.365	97577.029	0.000
3	07:27:27	4847.446	110829.17	88668.781	120214.22	1836.339	45903.292	39793.828	97115.200	0.000
4	07:27:58	4799.728	110221.85	88567.027	121261.07	1799.409	45277.859	39306.329	96434.939	0.000
5	07:28:30	4865.148	110297.38	88538.288	121036.57	1815.566	45171.950	39562.823	96152.742	0.000
x		4792.802	110408.41	88893.895	121065.73	1812.950	45547.049	39674.851	96914.475	0.000
s		101.81	242.85	427.65	529.58	39.91	308.90	238.77	598.40	0.00
%RSD		2.124	0.220	0.481	0.437	2.201	0.678	0.602	0.617	0.000

Ratio results

Run	Time	56Ar O / 59Co	136Ba + + / 138Ba	115In / 101Bkg	156Ce O / 140Ce
Ratio limits		-	-	-	-
1	07:26:23	2.034	0.013	INF	0.015
2	07:26:55	2.067	0.012	INF	0.014
3	07:27:27	2.044	0.013	INF	0.015
4	07:27:58	2.063	0.013	INF	0.015
5	07:28:30	2.060	0.014	INF	0.015
x		2.0539	0.0128	0.0000	0.0150
s		0.01	0.00	0.00	0.00
%RSD		0.6772	6.4035	0.0000	2.4942

Result : The performance report passed.

FORM 11-IN

ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Pace Analytical Services, LLC Contract: _____

Lab Code: _____ Case No.: _____ MA No.: _____ SDG No.: _____

Instrument ID: ICPMS2Run Batch: MS2042220C 6020B ONLY, gene Date: 4/22/2020

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	45Sc	
Antimony	159Tb	
Arsenic	115In	
Barium	115In	
Beryllium	6Li	
Boron	6Li	45Sc
Cadmium	115In	
Calcium	45Sc	
Chromium	45Sc	
Cobalt	45Sc	
Copper	115In	
Iron	45Sc	
Lead	159Tb	
Magnesium	45Sc	
Manganese	45Sc	
Molybdenum	115In	
Nickel	45Sc	
Potassium	6Li	45Sc
Selenium	115In	
Silicon	6Li	
Silver	115In	
Sodium	45Sc	
Strontium	45Sc	
Thallium	159Tb	
Tin	115In	159Tb
Titanium	45Sc	
Vanadium	45Sc	
Zinc	115In	

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2041020A 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	DELL
Last Edit Timestamp	4/22/2020 14:01:42
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.

Underlining indicates that a data warning flag is set.

Column headings	Result cells	Data warning flags
No flag	Internal Standard	I - Invalid calibration
Semi Quant	Excluded	T - Tripped
Standard Addition	QC Warning	F - Interference correction failed
Multi Element	QC Failure	M - Result over max
	Transient TRA only:	V - Valley integration failed
	Peak Not Found	D - Different method used
	Manually Edited	
	Merged Peak	

Fully Quantitative Concentrations

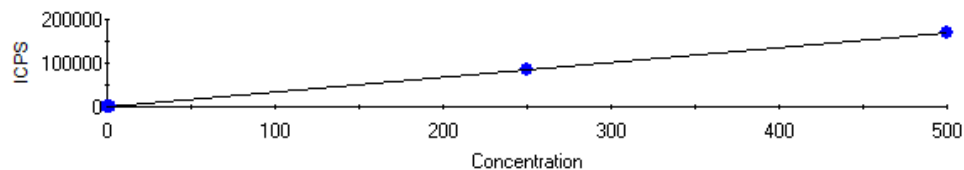
Id	Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si	39K
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000	400.000
4	MW12644	0.800		100.000	800.000	800.000	800.000	800.000	80.000		800.000
5	cal2 MW-12645	2.000			2000.000	2000.000	2000.000	2000.000	200.000		2000.000
6	cal3 MW-12520	250.000	250.000	250.000					250.000	250.000	
7	cal4 MW-12521	500.000	500.000	500.000					500.000	500.000	
8	cal5 MW-12618				50000.000	50000.000	50000.000	50000.000		5000.000	50000.000
9	cal6 MW-12619				100000.000	100000.000	100000.000	100000.000		10000.000	100000.000
Id	Label	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe	57Fe	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000	50.000	1.000
4	MW12644	800.000	800.000	10.000	10.000	10.000	10.000			100.000	2.000
5	cal2 MW-12645	2000.000	2000.000	25.000	25.000	25.000	25.000				5.000
6	cal3 MW-12520			250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521			500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618	50000.000	50000.000					50000.000	50000.000	50000.000	
9	cal6 MW-12619	100000.000	100000.000					100000.000	100000.000	100000.000	
Id	Label	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	82Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	5.000	5.000	5.000	5.000	10.000	10.000	10.000	2.000	5.000	5.000
4	MW12644	10.000			10.000	20.000			4.000		10.000
5	cal2 MW-12645	25.000	25.000	25.000	25.000	50.000	50.000	50.000	10.000	25.000	25.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag	106Cd	111Cd	114Cd	116Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	10.000	10.000	10.000	10.000	1.000	1.000	0.100	0.100	0.100	20.000
4	MW12644	20.000		20.000	20.000	2.000				0.200	
5	cal2 MW-12645	50.000	50.000	50.000	50.000	5.000	5.000	0.500	0.500	0.500	100.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	118Sn	121Sb	123Sb	135Ba	137Ba	203Tl	205Tl	206Pb	207Pb	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	20.000	2.000	2.000	5.000	5.000	0.500	0.500	1.000	1.000	1.000
4	MW12644	40.000		4.000	10.000	10.000	1.000	1.000	2.000	2.000	2.000
5	cal2 MW-12645	100.000	10.000	10.000	25.000	25.000	2.500	2.500	5.000	5.000	5.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	232Th	238U								
		ppb	ppb								

3	cal1 MW-12643	50.000
4	MW12644	
5	cal2 MW-12645	250.000
6	cal3 MW-12520	
7	cal4 MW-12521	500.000
8	cal5 MW-12618	
9	cal6 MW-12619	

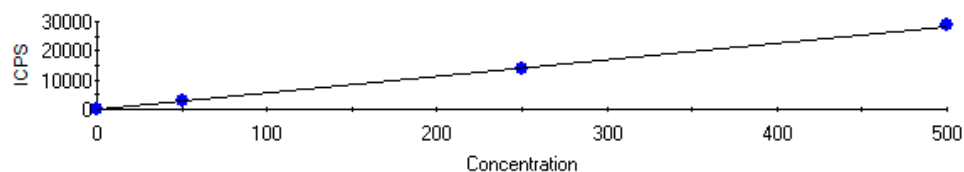
Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	TUNE MW12522	Unknown	1.000	0	1	5	144
2	BLANK IM9936-01	Blank	1.000	0	1	1	144
3	cal1 MW-12643	Fully Quant Standard	1.000	4	5	3	144
4	MW12644	Fully Quant Standard	1.000	4	5	4	144
5	cal2 MW-12645	Fully Quant Standard	1.000	4	5	5	144
6	cal3 MW-12520	Fully Quant Standard	1.000	4	5	6	144
7	cal4 MW-12521	Fully Quant Standard	1.000	4	5	7	144
8	cal5 MW-12618	Fully Quant Standard	1.000	4	5	8	144
9	cal6 MW-12619	Fully Quant Standard	1.000	4	5	9	144
10	ICV MW12789 PREP 4/22/20	QC Sample	1.000	4	5	11	144
11	ICB IM9936-01	QC Sample	1.000	0	1	1	144
12	ICSA MW12579	QC Sample	1.000	4	5	12	144
13	CCV MW12620	QC Sample	1.000	0	1	8	144
14	CCB IM9936-01	QC Sample	1.000	0	1	1	144
15	VQ51454-001	QC Sample	1.000	1	1	1	144
16	VQ51454-002	QC Sample	1.000	1	1	2	144
17	VD17087-001	Unknown	1.000	1	1	3	144
18	VD17087-002	Unknown	1.000	1	1	4	144
19	VD17087-003	Unknown	1.000	1	1	5	144
20	VD17087-004	Unknown	1.000	1	1	6	144
21	VD17087-004S	Unknown	1.000	1	1	7	144
22	VD17087-004SD	Unknown	1.000	1	1	8	144
23	VD17087-004L(5)	Unknown	1.000	1	1	9	144
24	VD17087-004A	Unknown	1.000	1	1	10	144
25	CCV MW12620	QC Sample	1.000	0	1	8	144
26	CCB IM9936-01	QC Sample	1.000	0	1	1	144
27	LR MW12519	QC Sample	1.000	4	5	10	144
28	VD17087-005	Unknown	1.000	1	2	1	144
29	VD17087-006	Unknown	1.000	1	2	2	144
30	VQ51455-001	QC Sample	1.000	1	2	3	144
31	VQ51455-002	QC Sample	1.000	1	2	4	144
32	VD17091-001	Unknown	1.000	1	2	5	144
33	VD17091-002	Unknown	1.000	1	2	6	144
34	VD17091-003	Unknown	1.000	1	2	7	144
35	VD17091-004	Unknown	1.000	1	2	8	144
36	VD17091-005	Unknown	1.000	1	2	9	144
37	VD17091-005S	Unknown	1.000	1	2	10	144
38	CCV MW12620	QC Sample	1.000	0	1	8	144
39	CCB IM9936-01	QC Sample	1.000	0	1	1	144
40	VD17091-005SD	Unknown	1.000	1	3	1	144
41	VD17091-005L(5)	Unknown	1.000	1	3	2	144
42	VD17091-005A	Unknown	1.000	1	3	3	144
43	VD15011-023	Unknown	1.000	1	3	4	144
44	VD15011-024	Unknown	1.000	1	3	5	144
45	VD15011-029	Unknown	1.000	1	3	6	144
46	VD15011-029S	Unknown	1.000	1	3	7	144
47	VD15011-029SD	Unknown	1.000	1	3	8	144
48	VD15011-029L(5)	Unknown	1.000	1	3	9	144
49	VD15011-029A	Unknown	1.000	1	3	10	144
50	CCV MW12620	QC Sample	1.000	0	1	8	144
51	CCB IM9936-01	QC Sample	1.000	0	1	1	144
52	VD15011-030	Unknown	1.000	1	4	1	144
53	VD15011-031	Unknown	1.000	1	4	2	144
54	CCV MW12620	QC Sample	1.000	0	1	8	144
55	CCB IM9936-01	QC Sample	1.000	0	1	1	144
56	IS MW12650	Unknown	1.000	0	3	5	144
57	RINSE	Unknown	1.000	0	1	5	144

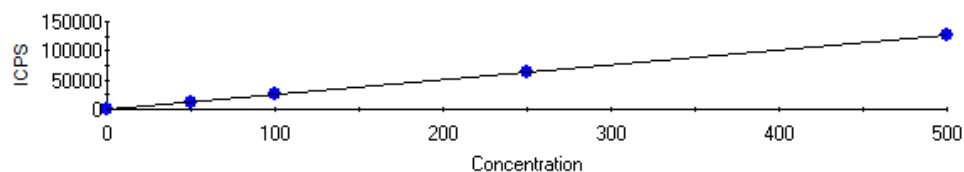
Fully Quant Calibration

9Be FQ Block 1

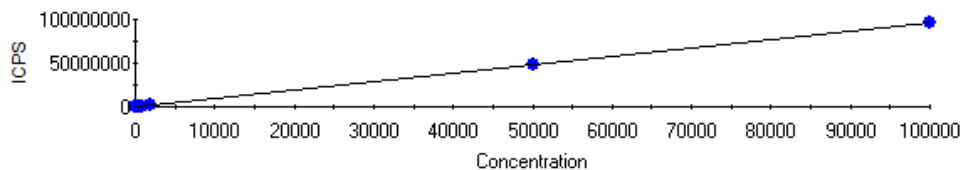
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	17.41	0.00
cal1 MW-12643	0.400	0.319	0.081	124.13	20.28
MW12644	0.800	0.773	0.027	276.22	3.34
cal2 MW-12645	2.000	2.093	0.093	717.75	4.63
cal3 MW-12520	250.000	249.004	0.996	83353.54	0.40
cal4 MW-12521	500.000	500.284	0.284	167451.19	0.06

10B FQ Block 1

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	45.39	0.00
cal1 MW-12643	50.000	48.739	1.261	2813.14	2.52
cal3 MW-12520	250.000	241.226	8.774	13743.93	3.51
cal4 MW-12521	500.000	504.513	4.513	28695.20	0.90

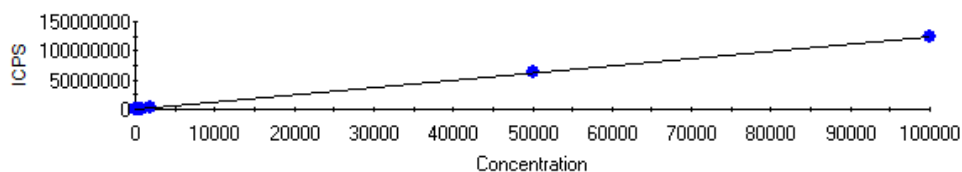
11B FQ Block 1

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	259.78	0.00
cal1 MW-12643	50.000	48.754	1.246	12486.19	2.49
MW12644	100.000	101.493	1.493	25711.93	1.49
cal3 MW-12520	250.000	253.028	3.028	63713.69	1.21
cal4 MW-12521	500.000	506.041	6.041	127164.11	1.21

23Na FQ Block 1

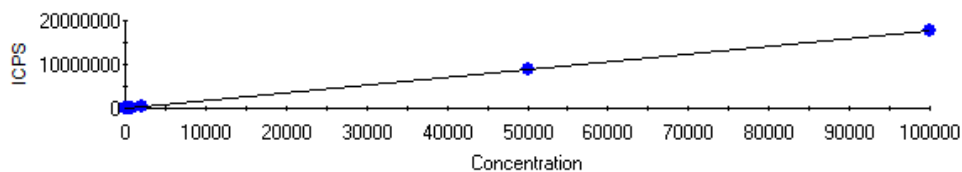
Intercept CPS=9081.467041 Intercept Conc=9.511486
Sensitivity=954.789514 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	9081.47	0.00
cal1 MW-12643	400.000	435.301	35.301	424702.76	8.83
MW12644	800.000	861.839	61.839	831956.13	7.73
cal2 MW-12645	2000.000	2033.523	33.523	1950668.08	1.68
cal5 MW-12618	50000.000	50210.227	210.227	47949279.90	0.42
cal6 MW-12619	100000.000	99893.580	106.420	95386424.16	0.11

24Mg FQ Block 1

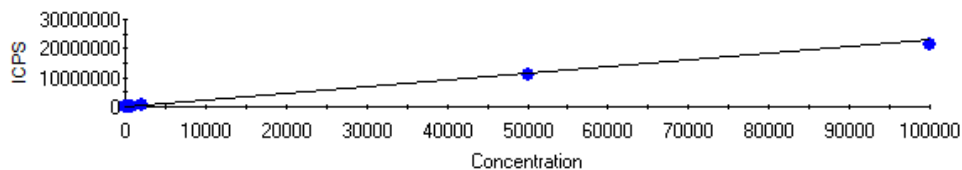
Intercept CPS=1922.859718 Intercept Conc=1.554999
Sensitivity=1236.566718 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1922.86	0.00
cal1 MW-12643	400.000	460.593	60.593	571477.24	15.15
MW12644	800.000	929.015	129.015	1150711.33	16.13
cal2 MW-12645	2000.000	2105.382	105.382	2605368.73	5.27
cal5 MW-12618	50000.000	50224.435	224.435	62107787.51	0.45
cal6 MW-12619	100000.000	99884.400	115.600	123515648.10	0.12

25Mg FQ Block 1

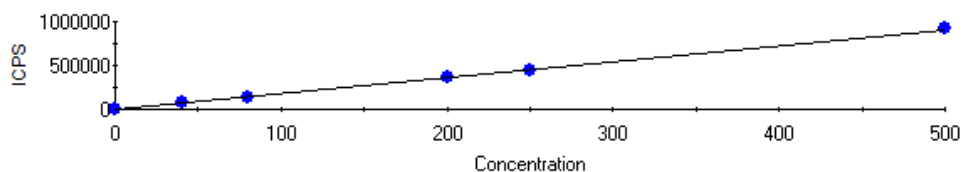
Intercept CPS=292.166635 Intercept Conc=1.634104
Sensitivity=178.793162 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	292.17	0.00
cal1 MW-12643	400.000	440.972	40.972	79134.87	10.24
MW12644	800.000	875.407	75.407	156808.95	9.43
cal2 MW-12645	2000.000	2202.546	202.546	394092.30	10.13
cal5 MW-12618	50000.000	50027.630	27.630	8944890.33	0.06
cal6 MW-12619	100000.000	99981.367	18.633	17876276.92	0.02

26Mg FQ Block 1

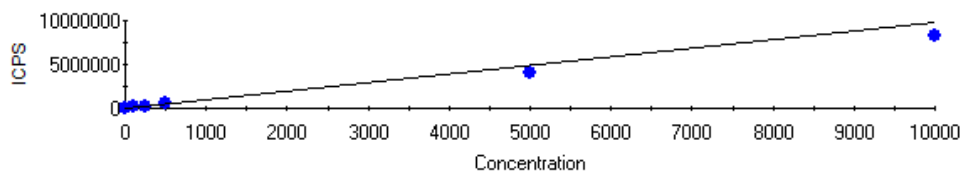
Intercept CPS=316.242242 Intercept Conc=1.382628
Sensitivity=228.725442 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	316.24	0.00
cal1 MW-12643	400.000	408.932	8.932	93849.28	2.23
MW12644	800.000	820.013	20.013	187874.17	2.50
cal2 MW-12645	2000.000	2075.598	75.598	475058.32	3.78
cal5 MW-12618	50000.000	47406.908	2593.092	10843482.19	5.19
cal6 MW-12619	100000.000	93631.014	6368.986	21416111.34	6.37

27Al FQ Block 1

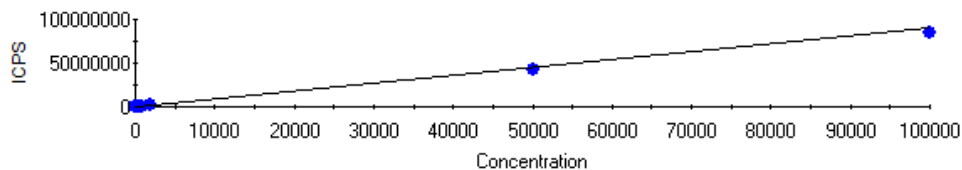
Intercept CPS=290.538306 Intercept Conc=0.160557
Sensitivity=1809.560040 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	290.54	0.00
cal1 MW-12643	40.000	40.088	0.088	72832.60	0.22
MW12644	80.000	79.498	0.502	144146.59	0.63
cal2 MW-12645	200.000	198.000	2.000	358583.54	1.00
cal3 MW-12520	250.000	249.320	0.680	451450.89	0.27
cal4 MW-12521	500.000	507.479	7.479	918604.46	1.50

28Si FQ Block 1

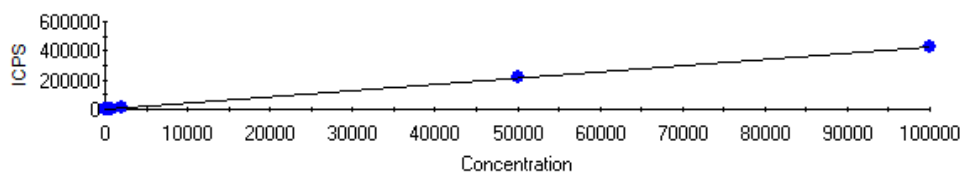
Intercept CPS=12337.884504 Intercept Conc=12.657863
Sensitivity=974.720983 Correlation Coeff=0.999794

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	12337.88	0.00
cal1 MW-12643	100.000	91.948	8.052	101961.52	8.05
cal3 MW-12520	250.000	250.326	0.326	256336.26	0.13
cal4 MW-12521	500.000	519.016	19.016	518233.96	3.80
cal5 MW-12618	5000.000	4085.008	914.992	3994081.26	18.30
cal6 MW-12619	10000.000	8437.520	1562.480	8236565.20	15.62

39K FQ Block 1

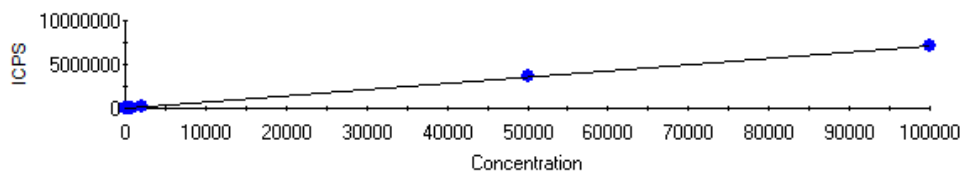
Intercept CPS=55155.248519 Intercept Conc=61.185574
Sensitivity=901.442034 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	55155.25	0.00
cal1 MW-12643	400.000	408.983	8.983	423829.34	2.25
MW12644	800.000	829.017	29.017	802465.62	3.63
cal2 MW-12645	2000.000	1975.043	24.957	1835541.64	1.25
cal5 MW-12618	50000.000	46544.282	3455.718	42012127.88	6.91
cal6 MW-12619	100000.000	93683.232	6316.768	84505158.38	6.32

43Ca FQ Block 1

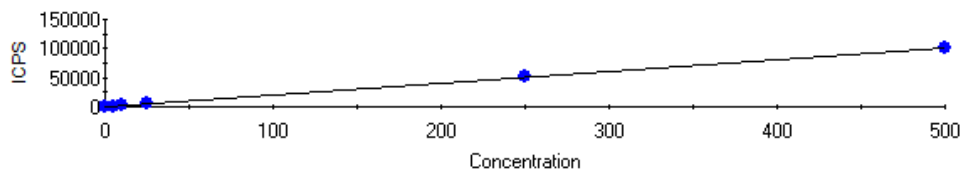
Intercept CPS=13.309839 Intercept Conc=3.106645
Sensitivity=4.284313 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.31	0.00
cal1 MW-12643	400.000	407.549	7.549	1759.38	1.89
MW12644	800.000	816.911	16.911	3513.21	2.11
cal2 MW-12645	2000.000	2109.470	109.470	9050.94	5.47
cal5 MW-12618	50000.000	50327.382	327.382	215631.56	0.65
cal6 MW-12619	100000.000	99833.954	166.046	427733.20	0.17

44Ca FQ Block 1

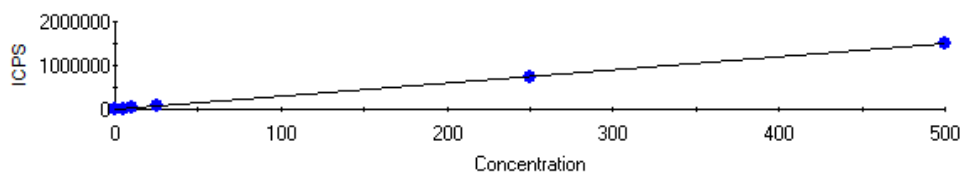
Intercept CPS=473.527476 Intercept Conc=6.620990
Sensitivity=71.519134 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	473.53	0.00
cal1 MW-12643	400.000	398.436	1.564	28969.30	0.39
MW12644	800.000	803.052	3.052	57907.14	0.38
cal2 MW-12645	2000.000	2021.146	21.146	145024.17	1.06
cal5 MW-12618	50000.000	49748.849	251.151	3558468.18	0.50
cal6 MW-12619	100000.000	100075.317	75.317	7157773.55	0.08

47Ti FQ Block 1

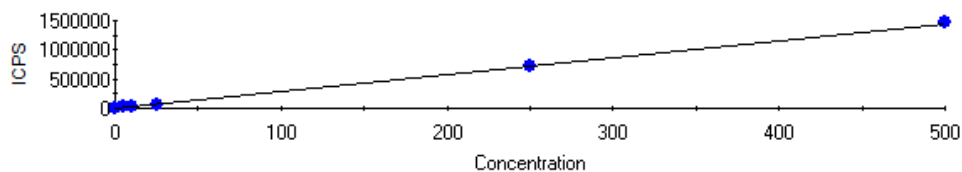
Intercept CPS=9.331027 Intercept Conc=0.045710
Sensitivity=204.134446 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	9.33	0.00
cal1 MW-12643	5.000	5.035	0.035	1037.25	0.71
MW12644	10.000	9.708	0.292	1990.97	2.92
cal2 MW-12645	25.000	25.820	0.820	5280.14	3.28
cal3 MW-12520	250.000	247.584	2.416	50549.71	0.97
cal4 MW-12521	500.000	499.900	0.100	102056.05	0.02

51V FQ Block 1

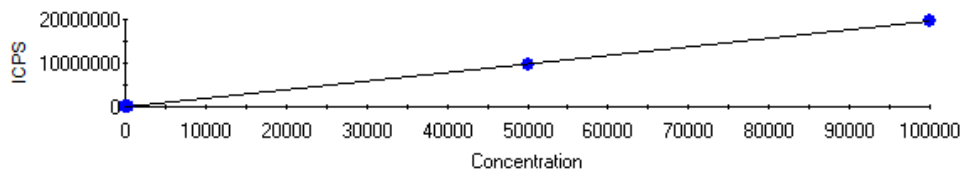
Intercept CPS=148.899046 Intercept Conc=0.049658
Sensitivity=2998.500176 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	148.90	0.00
cal1 MW-12643	5.000	4.965	0.035	15035.60	0.71
MW12644	10.000	9.873	0.127	29754.56	1.27
cal2 MW-12645	25.000	24.653	0.347	74071.73	1.39
cal3 MW-12520	250.000	244.919	5.081	734537.48	2.03
cal4 MW-12521	500.000	502.561	2.561	1507077.85	0.51

52Cr FQ Block 1

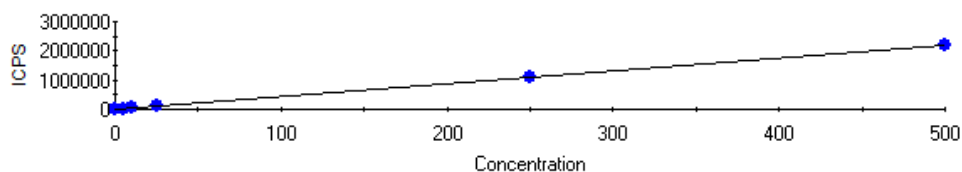
Intercept CPS=477.143826 Intercept Conc=0.164490
Sensitivity=2900.739688 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	477.14	0.00
cal1 MW-12643	5.000	4.933	0.067	14787.25	1.33
MW12644	10.000	9.883	0.117	29145.57	1.17
cal2 MW-12645	25.000	24.535	0.465	71647.62	1.86
cal3 MW-12520	250.000	245.643	4.357	713023.03	1.74
cal4 MW-12521	500.000	504.022	4.022	1462513.77	0.80

54Fe FQ Block 1

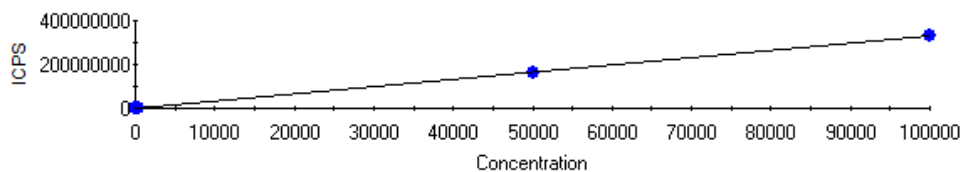
Intercept CPS=3028.697078 Intercept Conc=15.473761
Sensitivity=195.731154 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	3028.70	0.00
cal1 MW-12643	50.000	55.059	5.059	13805.52	10.12
cal3 MW-12520	250.000	383.256	133.256	78043.80	53.30
cal4 MW-12521	500.000	778.116	278.116	155330.22	55.62
cal5 MW-12618	50000.000	49978.998	21.002	9785475.74	0.04
cal6 MW-12619	100000.000	100008.775	8.775	19577861.60	0.01

55Mn FQ Block 1

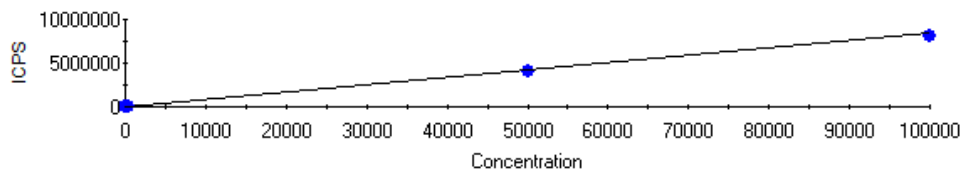
Intercept CPS=326.878583 Intercept Conc=0.074158
Sensitivity=4407.859604 Correlation Coeff=0.999889

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	326.88	0.00
cal1 MW-12643	5.000	4.751	0.249	21270.74	4.97
MW12644	10.000	9.375	0.625	41650.66	6.25
cal2 MW-12645	25.000	24.287	0.713	107378.49	2.85
cal3 MW-12520	250.000	243.609	6.391	1074120.96	2.56
cal4 MW-12521	500.000	503.246	3.246	2218565.38	0.65

56Fe FQ Block 1

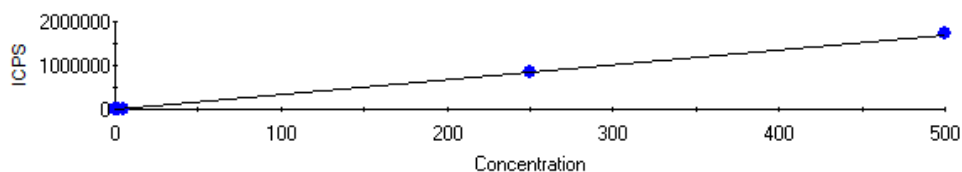
Intercept CPS=113497.874209 Intercept Conc=34.481929
Sensitivity=3291.517569 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	113497.87	0.00
cal1 MW-12643	50.000	55.879	5.879	297425.73	11.76
cal3 MW-12520	250.000	281.000	31.000	1038414.52	12.40
cal4 MW-12521	500.000	568.023	68.023	1983154.35	13.60
cal5 MW-12618	50000.000	50084.999	84.999	164969150.70	0.17
cal6 MW-12619	100000.000	99957.080	42.920	329123983.36	0.04

57Fe FQ Block 1

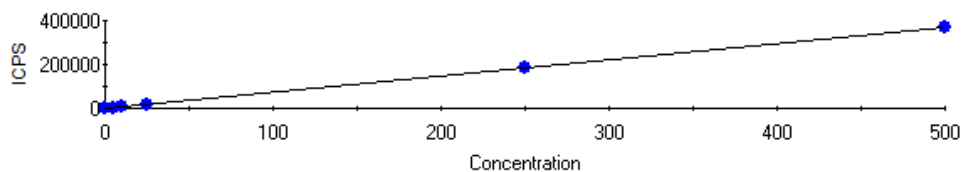
Intercept CPS=1411.920479 Intercept Conc=16.795136
Sensitivity=84.067226 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1411.92	0.00
cal1 MW-12643	50.000	49.040	0.960	5534.59	1.92
MW12644	100.000	100.074	0.074	9824.90	0.07
cal3 MW-12520	250.000	261.310	11.310	23379.55	4.52
cal4 MW-12521	500.000	525.472	25.472	45586.93	5.09
cal5 MW-12618	50000.000	47976.564	2023.436	4034668.57	4.05
cal6 MW-12619	100000.000	96052.550	3947.450	8076283.34	3.95

59Co FQ Block 1

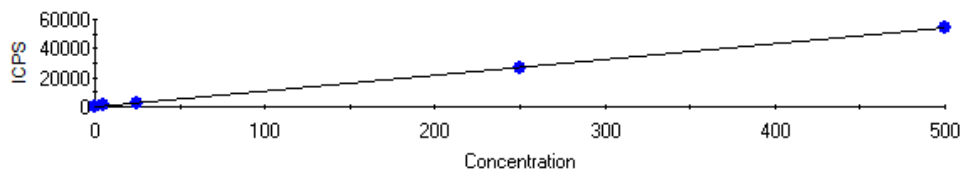
Intercept CPS=43.976845 Intercept Conc=0.012884
Sensitivity=3413.173268 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	43.98	0.00
cal1 MW-12643	1.000	1.022	0.022	3533.39	2.23
MW12644	2.000	1.921	0.079	6599.96	3.96
cal2 MW-12645	5.000	4.937	0.063	16895.65	1.26
cal3 MW-12520	250.000	248.386	1.614	847828.70	0.65
cal4 MW-12521	500.000	503.631	3.631	1719022.97	0.73

60Ni FQ Block 1

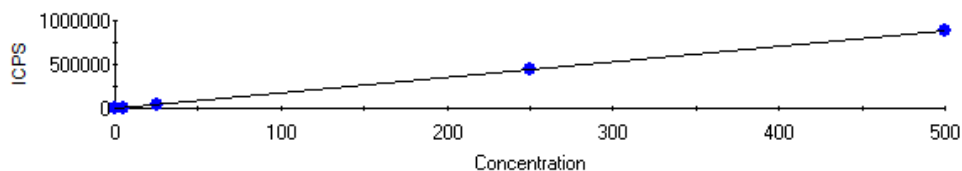
Intercept CPS=38.671749 Intercept Conc=0.052844
Sensitivity=731.814899 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	38.67	0.00
cal1 MW-12643	5.000	5.074	0.074	3751.79	1.48
MW12644	10.000	10.067	0.067	7406.21	0.67
cal2 MW-12645	25.000	25.048	0.048	18369.50	0.19
cal3 MW-12520	250.000	250.076	0.076	183048.06	0.03
cal4 MW-12521	500.000	499.957	0.043	365914.99	0.01

62Ni FQ Block 1

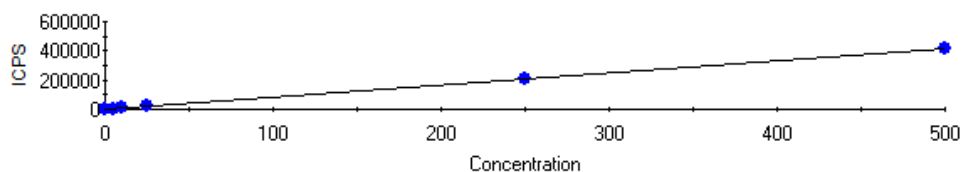
Intercept CPS=82.722291 Intercept Conc=0.766077
Sensitivity=107.981717 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	82.72	0.00
cal1 MW-12643	5.000	5.393	0.393	665.12	7.87
cal2 MW-12645	25.000	24.952	0.048	2777.13	0.19
cal3 MW-12520	250.000	249.699	0.301	27045.64	0.12
cal4 MW-12521	500.000	500.149	0.149	54089.67	0.03

63Cu FQ Block 1

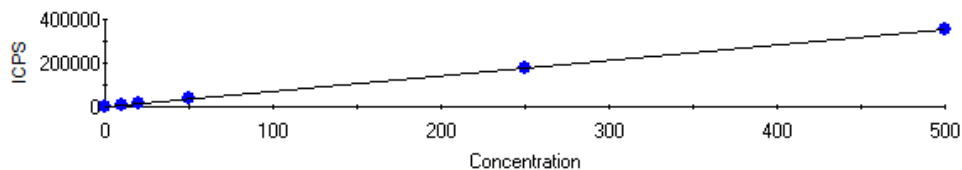
Intercept CPS=185.273004 Intercept Conc=0.103753
Sensitivity=1785.718369 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	185.27	0.00
cal1 MW-12643	5.000	5.075	0.075	9247.10	1.49
cal2 MW-12645	25.000	25.134	0.134	45066.88	0.53
cal3 MW-12520	250.000	250.364	0.364	447265.48	0.15
cal4 MW-12521	500.000	499.810	0.190	892705.89	0.04

65Cu FQ Block 1

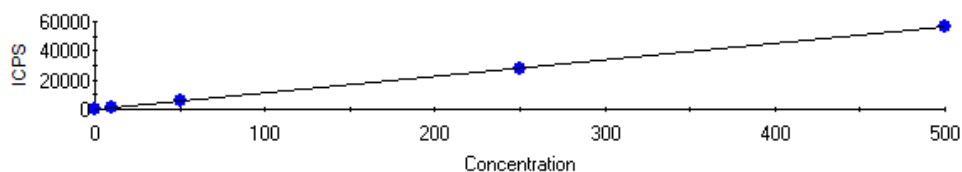
Intercept CPS=58.638104 Intercept Conc=0.070746
Sensitivity=828.852530 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	58.64	0.00
cal1 MW-12643	5.000	5.273	0.273	4429.24	5.46
MW12644	10.000	10.339	0.339	8628.25	3.39
cal2 MW-12645	25.000	25.723	0.723	21378.88	2.89
cal3 MW-12520	250.000	252.483	2.483	209329.75	0.99
cal4 MW-12521	500.000	498.713	1.287	413418.08	0.26

66Zn FQ Block 1

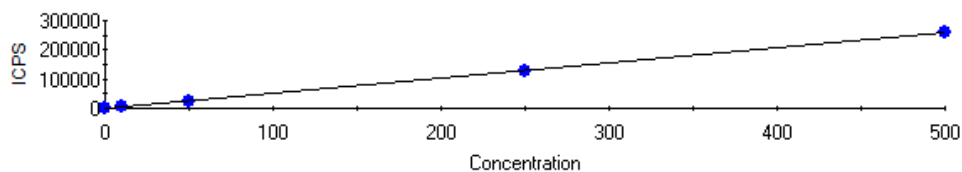
Intercept CPS=689.329668 Intercept Conc=0.981101
Sensitivity=702.608335 Correlation Coeff=0.999986

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	689.33	0.00
cal1 MW-12643	10.000	10.381	0.381	7983.42	3.81
MW12644	20.000	20.235	0.235	14906.55	1.17
cal2 MW-12645	50.000	49.720	0.280	35623.28	0.56
cal3 MW-12520	250.000	247.300	2.700	174444.06	1.08
cal4 MW-12521	500.000	499.890	0.110	351915.99	0.02

67Zn FQ Block 1

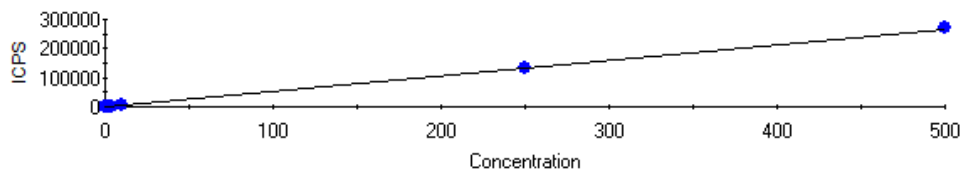
Intercept CPS=108.019241 Intercept Conc=0.958163
Sensitivity=112.735723 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	108.02	0.00
cal1 MW-12643	10.000	9.769	0.231	1209.36	2.31
cal2 MW-12645	50.000	49.210	0.790	5655.76	1.58
cal3 MW-12520	250.000	249.397	0.603	28223.92	0.24
cal4 MW-12521	500.000	500.385	0.385	56519.32	0.08

68Zn FQ Block 1

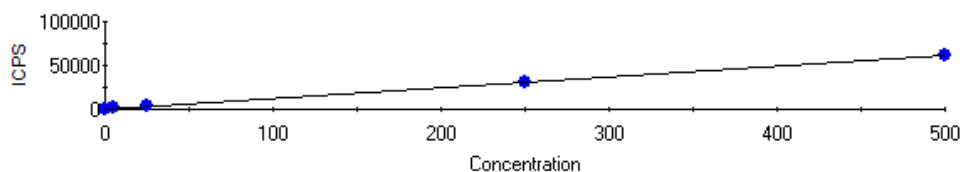
Intercept CPS=452.050933 Intercept Conc=0.877083
Sensitivity=515.402875 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	452.05	0.00
cal1 MW-12643	10.000	10.013	0.013	5612.57	0.13
cal2 MW-12645	50.000	49.278	0.722	25849.85	1.44
cal3 MW-12520	250.000	249.423	0.577	129005.60	0.23
cal4 MW-12521	500.000	504.697	4.697	260574.17	0.94

75As FQ Block 1

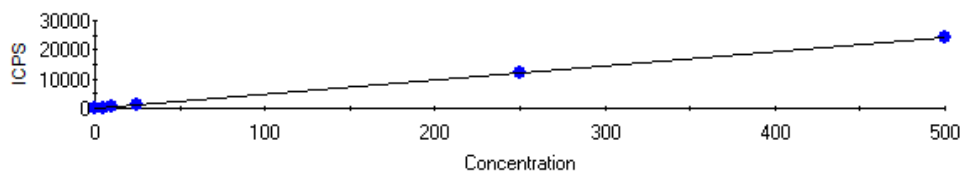
Intercept CPS=97.527066 Intercept Conc=0.182258
Sensitivity=535.105443 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	97.53	0.00
cal1 MW-12643	2.000	1.662	0.338	986.81	16.91
MW12644	4.000	4.205	0.205	2347.53	5.12
cal2 MW-12645	10.000	10.727	0.727	5837.34	7.27
cal3 MW-12520	250.000	248.783	1.217	133222.89	0.49
cal4 MW-12521	500.000	502.183	2.183	268818.28	0.44

78Se FQ Block 1

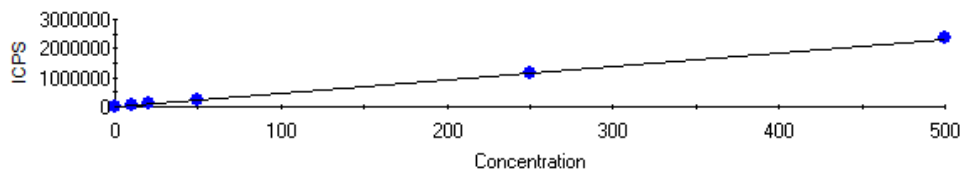
Intercept CPS=438.681361 Intercept Conc=3.607565
Sensitivity=121.600396 Correlation Coeff=0.999976

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	438.68	0.00
cal1 MW-12643	5.000	5.470	0.470	1103.87	9.41
cal2 MW-12645	25.000	23.890	1.110	3343.68	4.44
cal3 MW-12520	250.000	247.347	2.653	30516.21	1.06
cal4 MW-12521	500.000	501.377	1.377	61406.35	0.28

82Se FQ Block 1

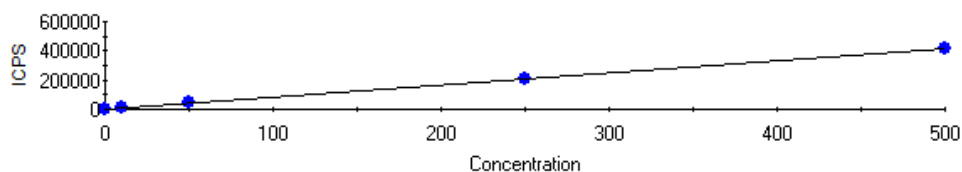
Intercept CPS=38.175900 Intercept Conc=0.792060
Sensitivity=48.198218 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	38.18	0.00
cal1 MW-12643	5.000	4.690	0.310	264.22	6.20
MW12644	10.000	10.428	0.428	540.79	4.28
cal2 MW-12645	25.000	25.117	0.117	1248.78	0.47
cal3 MW-12520	250.000	248.194	1.806	12000.68	0.72
cal4 MW-12521	500.000	500.892	0.892	24180.26	0.18

88Sr FQ Block 1

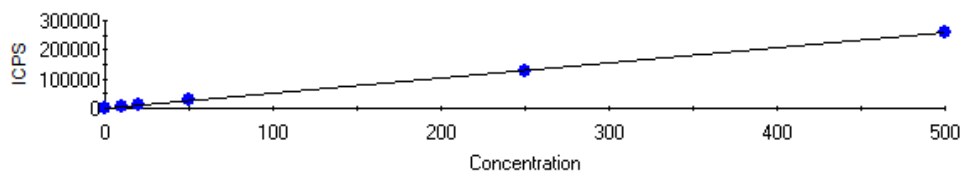
Intercept CPS=26.669572 Intercept Conc=0.005712
Sensitivity=4669.312453 Correlation Coeff=0.999966

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	26.67	0.00
cal1 MW-12643	10.000	9.526	0.474	44507.08	4.74
MW12644	20.000	18.996	1.004	88723.39	5.02
cal2 MW-12645	50.000	48.782	1.218	227806.74	2.44
cal3 MW-12520	250.000	246.543	3.457	1151213.18	1.38
cal4 MW-12521	500.000	501.900	1.900	2343554.09	0.38

95Mo FQ Block 1

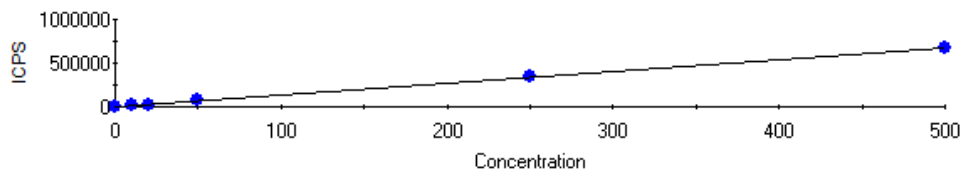
Intercept CPS=122.755766 Intercept Conc=0.148531
Sensitivity=826.463547 Correlation Coeff=0.999930

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	122.76	0.00
cal1 MW-12643	10.000	10.073	0.073	8447.57	0.73
cal2 MW-12645	50.000	51.366	1.366	42575.20	2.73
cal3 MW-12520	250.000	245.528	4.472	203042.87	1.79
cal4 MW-12521	500.000	502.081	2.081	415074.68	0.42

97Mo FQ Block 1

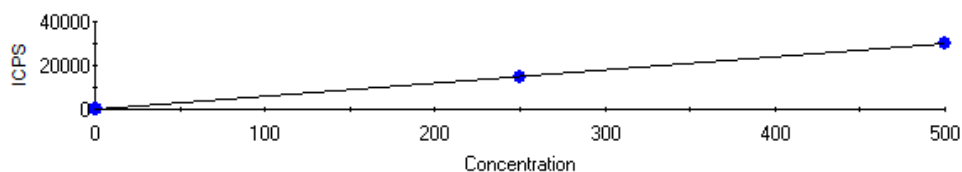
Intercept CPS=81.403631 Intercept Conc=0.157165
Sensitivity=517.948534 Correlation Coeff=0.999971

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	81.40	0.00
cal1 MW-12643	10.000	10.419	0.419	5477.82	4.19
MW12644	20.000	20.406	0.406	10650.83	2.03
cal2 MW-12645	50.000	51.462	1.462	26735.99	2.92
cal3 MW-12520	250.000	247.237	2.763	128137.21	1.11
cal4 MW-12521	500.000	501.211	1.211	259682.86	0.24

98Mo FQ Block 1

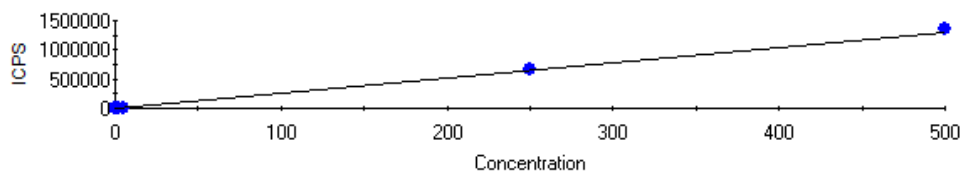
Intercept CPS=230.422493 Intercept Conc=0.169552
Sensitivity=1359.011305 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	230.42	0.00
cal1 MW-12643	10.000	9.902	0.098	13687.58	0.98
MW12644	20.000	19.964	0.036	27361.49	0.18
cal2 MW-12645	50.000	50.635	0.635	69044.24	1.27
cal3 MW-12520	250.000	247.746	2.254	336920.69	0.90
cal4 MW-12521	500.000	501.067	1.067	681185.65	0.21

106Cd FQ Block 1

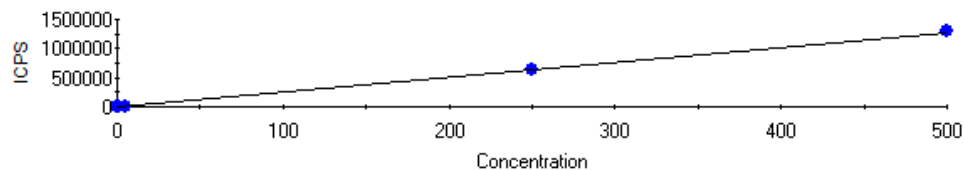
Intercept CPS=95.736912 Intercept Conc=1.595103
Sensitivity=60.019270 Correlation Coeff=0.999938

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	95.74	0.00
cal1 MW-12643	0.100	0.025	0.075	97.22	75.30
cal2 MW-12645	0.500	1.056	0.556	159.13	111.24
cal3 MW-12520	250.000	245.500	4.500	14830.47	1.80
cal4 MW-12521	500.000	502.249	2.249	30240.38	0.45

107Ag FQ Block 1

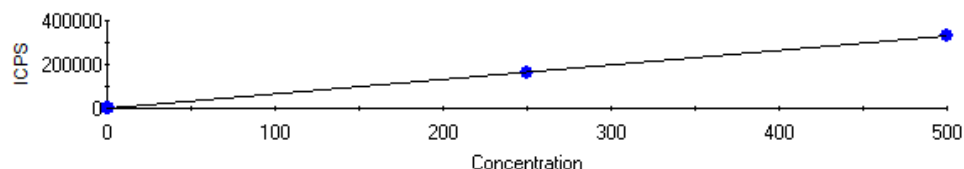
Intercept CPS=18.695937 Intercept Conc=0.007198
Sensitivity=2597.375088 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.70	0.00
cal1 MW-12643	1.000	1.012	0.012	2647.60	1.21
MW12644	2.000	1.985	0.015	5175.68	0.73
cal2 MW-12645	5.000	4.938	0.062	12843.31	1.25
cal3 MW-12520	250.000	254.854	4.854	661971.09	1.94
cal4 MW-12521	500.000	518.092	18.092	1345698.85	3.62

109Ag FQ Block 1

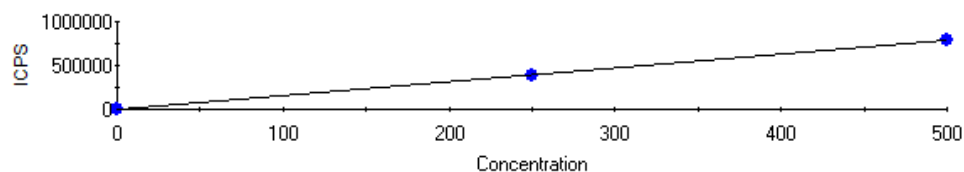
Intercept CPS=10.674132 Intercept Conc=0.004163
Sensitivity=2563.831690 Correlation Coeff=0.999912

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	10.67	0.00
cal1 MW-12643	1.000	1.018	0.018	2620.36	1.79
cal2 MW-12645	5.000	4.977	0.023	12771.85	0.45
cal3 MW-12520	250.000	248.640	1.360	637480.67	0.54
cal4 MW-12521	500.000	511.244	11.244	1310754.39	2.25

111Cd FQ Block 1

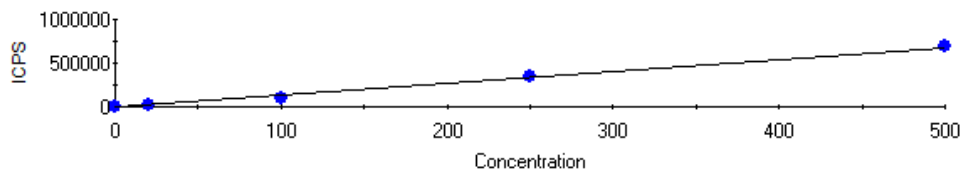
Intercept CPS=7.568163 Intercept Conc=0.011472
Sensitivity=659.706996 Correlation Coeff=0.999937

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	7.57	0.00
cal1 MW-12643	0.100	0.065	0.035	50.40	35.07
cal2 MW-12645	0.500	0.407	0.093	275.93	18.64
cal3 MW-12520	250.000	245.349	4.651	161866.13	1.86
cal4 MW-12521	500.000	502.326	2.326	331395.23	0.47

114Cd FQ Block 1

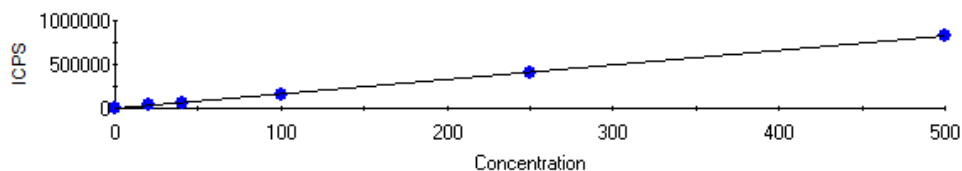
Intercept CPS=5.172680 Intercept Conc=0.003271
Sensitivity=1581.251230 Correlation Coeff=0.999913

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	5.17	0.00
cal1 MW-12643	0.100	0.100	0.000	163.71	0.26
MW12644	0.200	0.232	0.032	371.40	15.80
cal2 MW-12645	0.500	0.498	0.002	792.73	0.39
cal3 MW-12520	250.000	244.342	5.658	386370.80	2.26
cal4 MW-12521	500.000	502.829	2.829	795104.36	0.57

116Sn FQ Block 1

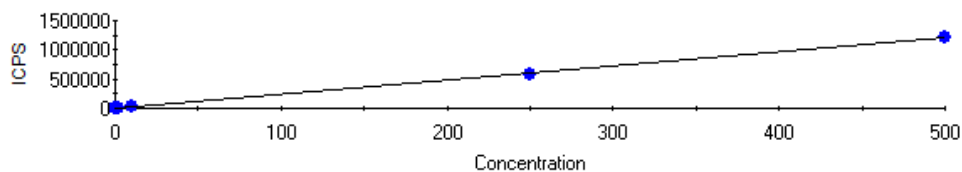
Intercept CPS=41.373472 Intercept Conc=0.030335
Sensitivity=1363.887110 Correlation Coeff=0.998229

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	41.37	0.00
cal1 MW-12643	20.000	13.167	6.833	18000.29	34.16
cal2 MW-12645	100.000	69.533	30.467	94876.81	30.47
cal3 MW-12520	250.000	247.003	2.997	336925.10	1.20
cal4 MW-12521	500.000	507.865	7.865	692712.36	1.57

118Sn FQ Block 1

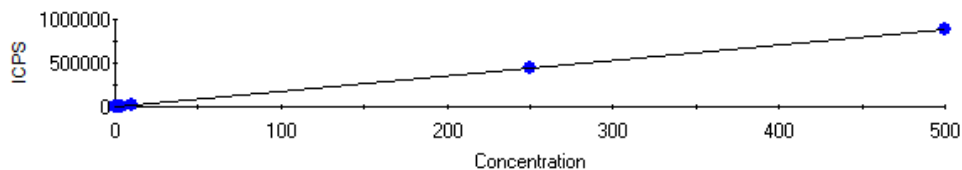
Intercept CPS=53.371023 Intercept Conc=0.032507
Sensitivity=1641.818798 Correlation Coeff=0.999946

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	53.37	0.00
cal1 MW-12643	20.000	19.004	0.996	31253.81	4.98
MW12644	40.000	38.372	1.628	63053.18	4.07
cal2 MW-12645	100.000	98.768	1.232	162212.54	1.23
cal3 MW-12520	250.000	245.806	4.194	403622.43	1.68
cal4 MW-12521	500.000	502.513	2.513	825089.40	0.50

121Sb FQ Block 1

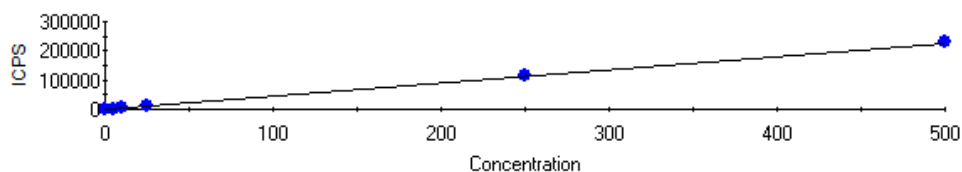
Intercept CPS=215.958008 Intercept Conc=0.089744
Sensitivity=2406.388624 Correlation Coeff=0.999837

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	215.96	0.00
cal1 MW-12643	2.000	1.994	0.006	5014.57	0.29
cal2 MW-12645	10.000	10.104	0.104	24530.41	1.04
cal3 MW-12520	250.000	242.600	7.400	584004.82	2.96
cal4 MW-12521	500.000	503.698	3.698	1212309.46	0.74

123Sb FQ Block 1

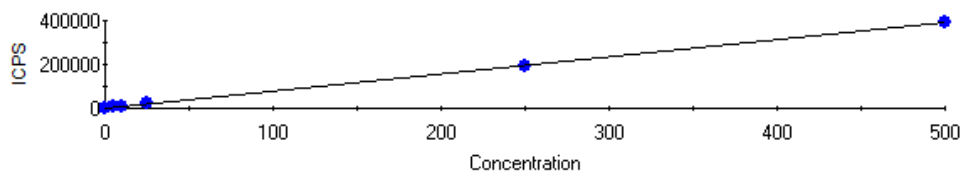
Intercept CPS=173.260345 Intercept Conc=0.098539
Sensitivity=1758.289147 Correlation Coeff=0.999977

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	173.26	0.00
cal1 MW-12643	2.000	2.126	0.126	3911.60	6.31
MW12644	4.000	4.224	0.224	7599.66	5.59
cal2 MW-12645	10.000	10.751	0.751	19077.10	7.51
cal3 MW-12520	250.000	247.273	2.727	434950.06	1.09
cal4 MW-12521	500.000	501.346	1.346	881685.13	0.27

135Ba FQ Block 1

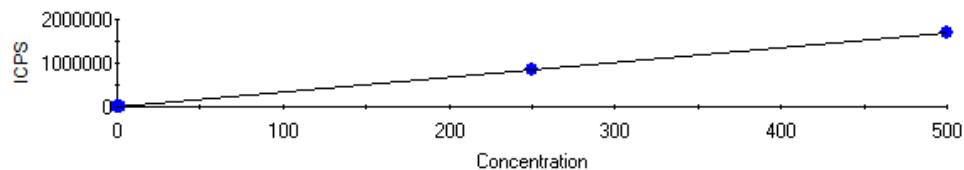
Intercept CPS=18.663998 Intercept Conc=0.041245
Sensitivity=452.520037 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.66	0.00
cal1 MW-12643	5.000	4.892	0.108	2232.17	2.17
MW12644	10.000	9.546	0.454	4338.21	4.54
cal2 MW-12645	25.000	25.292	0.292	11463.82	1.17
cal3 MW-12520	250.000	248.654	1.346	112539.36	0.54
cal4 MW-12521	500.000	504.277	4.277	228213.94	0.86

137Ba FQ Block 1

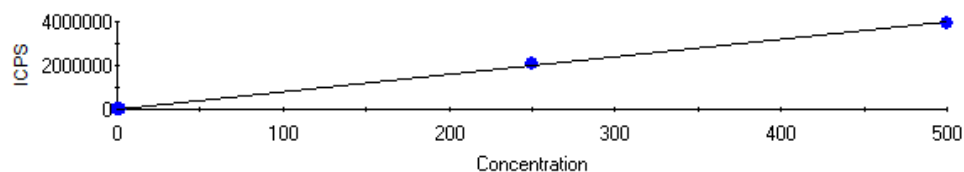
Intercept CPS=13.327659 Intercept Conc=0.017035
Sensitivity=782.388041 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.33	0.00
cal1 MW-12643	5.000	5.004	0.004	3928.38	0.08
MW12644	10.000	10.123	0.123	7933.72	1.23
cal2 MW-12645	25.000	25.102	0.102	19653.14	0.41
cal3 MW-12520	250.000	249.942	0.058	195565.14	0.02
cal4 MW-12521	500.000	499.993	0.007	391202.11	0.00

203Tl FQ Block 1

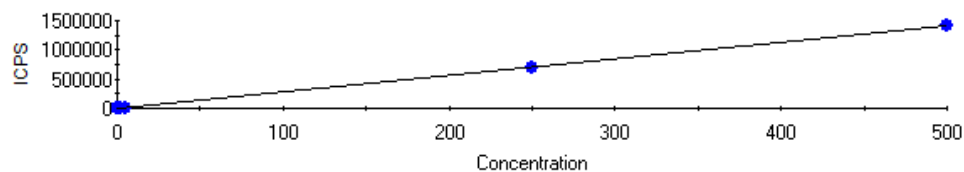
Intercept CPS=39.986560 Intercept Conc=0.011906
Sensitivity=3358.420779 Correlation Coeff=0.999958

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	39.99	0.00
cal1 MW-12643	0.500	0.516	0.016	1773.38	3.23
MW12644	1.000	1.015	0.015	3450.36	1.55
cal2 MW-12645	2.500	2.512	0.012	8477.22	0.49
cal3 MW-12520	250.000	249.577	0.423	838225.33	0.17
cal4 MW-12521	500.000	509.135	9.135	1709928.25	1.83

205Tl FQ Block 1

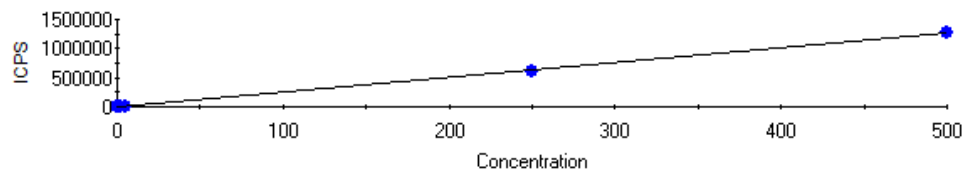
Intercept CPS=113.404042 Intercept Conc=0.014226
Sensitivity=7971.680418 Correlation Coeff=0.999600

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	113.40	0.00
cal1 MW-12643	0.500	0.525	0.025	4295.96	4.94
MW12644	1.000	1.001	0.001	8095.16	0.13
cal2 MW-12645	2.500	2.569	0.069	20595.83	2.78
cal3 MW-12520	250.000	262.067	12.067	2089230.11	4.83
cal4 MW-12521	500.000	493.966	6.034	3937852.33	1.21

206Pb FQ Block 1

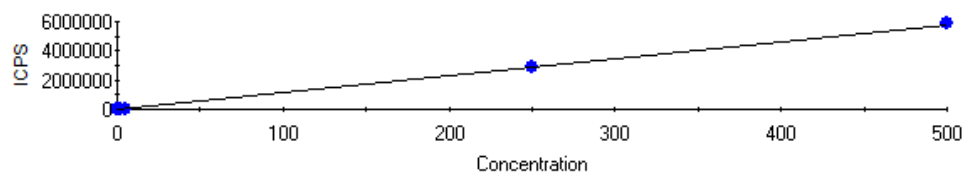
Intercept CPS=80.034582 Intercept Conc=0.028266
Sensitivity=2831.455827 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	80.03	0.00
cal1 MW-12643	1.000	0.938	0.062	2735.43	6.22
MW12644	2.000	1.931	0.069	5546.58	3.47
cal2 MW-12645	5.000	4.764	0.236	13567.74	4.73
cal3 MW-12520	250.000	247.587	2.413	701112.81	0.97
cal4 MW-12521	500.000	501.209	1.209	1419231.37	0.24

207Pb FQ Block 1

Intercept CPS=78.726709 Intercept Conc=0.031313
Sensitivity=2514.215145 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	78.73	0.00
cal1 MW-12643	1.000	0.942	0.058	2446.97	5.81
MW12644	2.000	1.845	0.155	4717.45	7.75
cal2 MW-12645	5.000	4.864	0.136	12308.66	2.71
cal3 MW-12520	250.000	246.130	3.870	618902.98	1.55
cal4 MW-12521	500.000	501.937	1.937	1262056.33	0.39

208Pb FQ Block 1

Intercept CPS=365.445135 Intercept Conc=0.031423
Sensitivity=11629.851619 Correlation Coeff=0.999942

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	365.45	0.00
cal1 MW-12643	1.000	0.916	0.084	11017.69	8.41
MW12644	2.000	1.870	0.130	22116.02	6.49
cal2 MW-12645	5.000	4.743	0.257	55524.01	5.14
cal3 MW-12520	250.000	245.646	4.354	2857193.14	1.74
cal4 MW-12521	500.000	502.980	2.980	5849947.53	0.60

Dilution Corrected Concentrations

TUNE MW12522 4/22/2020 14:03:49

User Pre-dilution: 1.000

User Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	100.4%	-0.040	0.388	0.720	121.900	1.040	0.048	-0.016	0.245	1.190
2	14:04:43	100.5%	-0.004	0.583	0.750	122.500	1.315	0.126	-0.010	0.105	1.205
3	14:05:10	99.1%	-0.004	0.723	0.571	127.200	1.097	0.187	0.092	0.135	1.133
X		100.0%	-0.016	0.565	0.680	123.900	1.151	0.121	0.022	0.162	1.176
S		0.8%	0.021	0.168	0.096	2.877	0.145	0.070	0.061	0.074	0.038
%RSD		0.8	128.900	29.750	14.060	2.322	12.580	57.860	271.500	45.680	3.220
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	0.944	377.600	0.631	2.441	2.629	101.0%	-0.026	0.024	0.053	56.000
2	14:04:43	0.966	372.100	0.603	5.404	3.123	98.7%	0.073	0.034	0.055	55.050
3	14:05:10	1.589	377.700	0.758	0.617	3.362	100.3%	0.052	-0.012	0.035	94.330
X		1.166	375.800	0.664	2.821	3.038	100.0%	0.033	0.015	0.047	68.460
S		0.366	3.229	0.083	2.416	0.374	1.2%	0.052	0.024	0.011	22.410
%RSD		31.410	0.859	12.490	85.650	12.310	1.2	158.900	160.500	23.080	32.730
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	2.116	0.020	0.954	-0.868	0.014	-0.020	-0.069	-0.002	0.039	-0.006
2	14:04:43	1.647	0.032	1.180	2.049	0.013	0.041	0.172	0.025	0.041	0.070
3	14:05:10	1.606	0.026	1.081	0.002	0.008	-0.009	-0.175	0.026	0.016	0.033
X		1.790	0.026	1.071	0.395	0.012	0.004	-0.024	0.017	0.032	0.033
S		0.283	0.006	0.113	1.498	0.003	0.033	0.178	0.016	0.014	0.038
%RSD		15.830	21.820	10.570	379.700	26.540	845.100	738.100	97.590	43.260	116.400
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.154	0.248	-0.088	-0.500	1.745	3.152	6.136	-0.184	5.713	0.004
2	14:04:43	-0.095	0.129	0.062	0.192	1.936	2.752	7.069	0.397	2.945	0.001
3	14:05:10	0.001	0.234	0.020	-0.737	1.323	3.128	5.160	0.022	2.553	0.005
X		-0.083	0.204	-0.002	-0.348	1.668	3.011	6.122	0.078	3.737	0.003
S		0.078	0.065	0.077	0.483	0.313	0.225	0.954	0.294	1.723	0.002
%RSD		94.410	31.780	3600.000	138.700	18.780	7.454	15.590	377.500	46.090	55.240
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	101.8%	0.086	0.034	0.097	-0.213	0.002	0.005	0.024	0.013	101.0%
2	14:04:43	98.7%	0.091	0.116	0.122	0.493	0.004	0.004	0.006	0.013	99.1%
3	14:05:10	99.5%	0.094	0.106	0.073	-0.125	-0.001	0.004	0.012	0.011	99.9%
X		100.0%	0.090	0.085	0.097	0.051	0.002	0.004	0.014	0.013	100.0%
S		1.7%	0.004	0.044	0.025	0.385	0.002	0.001	0.009	0.001	0.9%
%RSD		1.7	4.104	52.280	25.480	749.100	155.500	19.910	65.870	11.870	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.001	-0.006	0.060	0.063	0.055	0.100	99.9%	0.008	-0.002	0.025
2	14:04:43	0.011	0.007	0.061	0.022	0.039	0.075	99.8%	0.008	0.007	0.018
3	14:05:10	0.008	0.004	0.033	0.024	0.056	0.039	100.3%	0.007	0.003	0.029
X		0.006	0.002	0.052	0.036	0.050	0.072	100.0%	0.008	0.003	0.024
S		0.006	0.007	0.016	0.023	0.010	0.031	0.2%	0.001	0.005	0.006
%RSD		109.100	409.400	30.630	63.310	19.120	42.790	0.2	8.799	171.100	22.860
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:04:16	0.023	0.022	100.8%							
2	14:04:43	0.018	0.014	99.3%							
3	14:05:10	0.013	0.021	100.0%							
X		0.018	0.019	100.0%							
S		0.005	0.004	0.7%							
%RSD		26.910	21.190	0.7							

BLANK IM9936-01 4/22/2020 14:09:41

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	98.9%	0.045	0.166	0.011	-2.391	-0.067	-0.043	-0.015	0.291	-0.023
2	14:10:35	100.5%	-0.016	-0.243	0.050	-1.602	-0.124	-0.026	-0.037	-0.161	0.018
3	14:11:02	100.6%	-0.028	0.077	-0.061	3.993	0.191	0.069	0.053	-0.130	0.004
X		100.0%	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S		0.9%	0.039	0.216	0.056	3.480	0.168	0.060	0.047	0.252	0.021
%RSD		0.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.032	6.536	0.627	-1.226	0.647	99.3%	-0.006	-0.003	-0.003	8.527
2	14:10:35	0.170	-4.374	-0.379	-0.311	-0.145	100.2%	0.013	0.024	-0.006	-15.590
3	14:11:02	-0.202	-2.162	-0.248	1.537	-0.501	100.5%	-0.007	-0.021	0.010	7.063
X		0.000	0.000	-0.000	0.000	0.000	100.0%	-0.000	0.000	-0.000	0.000
S		0.188	5.768	0.547	1.407	0.588	0.6%	0.011	0.023	0.008	13.520
%RSD		0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000	0.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.071	0.014	0.267	-0.594	-0.002	-0.003	0.129	0.015	-0.003	-0.030
2	14:10:35	0.602	-0.009	-0.142	0.208	0.002	0.018	-0.027	-0.025	-0.004	-0.024
3	14:11:02	-0.673	-0.005	-0.125	0.387	-0.000	-0.015	-0.103	0.010	0.006	0.054
X		-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
S		0.640	0.012	0.231	0.522	0.002	0.017	0.118	0.022	0.006	0.047
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.074	0.042	0.143	0.444	0.154	-0.339	1.718	0.344	0.366	-0.001
2	14:10:35	-0.000	-0.016	-0.075	-0.580	-0.211	0.240	-1.220	-0.231	-0.359	0.001
3	14:11:02	-0.074	-0.026	-0.067	0.135	0.058	0.099	-0.499	-0.113	-0.007	0.000
X		0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	0.000
S		0.074	0.036	0.124	0.525	0.189	0.302	1.531	0.304	0.362	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	100.1%	0.037	0.029	-0.014	-0.401	0.002	0.001	0.000	0.001	99.3%
2	14:10:35	99.9%	-0.009	-0.042	0.025	0.398	-0.004	-0.001	-0.006	0.001	100.5%
3	14:11:02	100.1%	-0.028	0.013	-0.011	0.003	0.002	0.001	0.006	-0.001	100.1%
X		100.0%	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	100.0%
S		0.1%	0.033	0.037	0.021	0.400	0.004	0.001	0.006	0.001	0.6%
%RSD		0.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.008	0.012	-0.008	-0.010	-0.006	0.014	100.7%	0.000	-0.002	-0.002
2	14:10:35	-0.007	0.001	0.005	-0.010	-0.006	-0.002	99.8%	-0.001	0.000	-0.006
3	14:11:02	-0.001	-0.013	0.003	0.020	0.012	-0.012	99.5%	0.001	0.002	0.007
X		-0.000	0.000	-0.000	-0.000	-0.000	0.000	100.0%	-0.000	-0.000	-0.000
S		0.008	0.012	0.007	0.018	0.010	0.013	0.6%	0.001	0.002	0.007
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:10:08	-0.006	-0.002	99.4%							
2	14:10:35	0.001	-0.001	99.6%							
3	14:11:02	0.005	0.003	101.0%							
X		0.000	-0.000	100.0%							
S		0.006	0.003	0.8%							
%RSD		0.000	0.000	0.8							

cal1 MW-12643 4/22/2020 14:15:34

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.2%	0.282	48.210	49.120	-2.992	431.100	455.100	431.600	406.100	40.000
2	14:16:28	99.5%	0.272	48.150	48.960	-4.847	439.000	467.600	450.100	409.600	39.740
3	14:16:55	100.0%	0.402	49.870	48.180	-15.710	435.800	459.100	441.200	411.100	40.520
X		99.9%	0.319	48.740	48.750	-7.850	435.300	460.600	441.000	408.900	40.090
S		0.4%	0.072	0.976	0.506	6.871	3.957	6.419	9.223	2.600	0.399
%RSD		0.4	22.720	2.002	1.037	87.530	0.909	1.394	2.092	0.636	0.995
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	90.630	5.325	411.600	402.800	387.300	99.8%	5.215	4.948	4.975	44.460
2	14:16:28	92.890	-8.681	410.700	398.900	420.200	98.5%	4.909	5.003	4.920	174.200
3	14:16:55	92.320	-25.720	404.600	420.900	387.800	98.2%	4.982	4.943	4.904	44.960
X		91.950	-9.690	409.000	407.500	398.400	98.8%	5.035	4.965	4.933	87.890
S		1.175	15.540	3.804	11.740	18.870	0.9%	0.160	0.033	0.037	74.790
%RSD		1.277	160.400	0.930	2.880	4.735	0.9	3.168	0.664	0.754	85.090
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	55.900	4.699	55.500	47.180	0.963	5.155	5.319	5.005	5.174	10.160
2	14:16:28	54.680	4.786	56.280	50.240	1.030	5.316	5.366	5.302	5.292	10.400
3	14:16:55	54.600	4.769	55.860	49.690	1.074	4.751	5.495	4.917	5.353	10.580
X		55.060	4.751	55.880	49.040	1.022	5.074	5.393	5.075	5.273	10.380
S		0.729	0.046	0.390	1.631	0.056	0.291	0.091	0.201	0.091	0.214
%RSD		1.324	0.973	0.698	3.325	5.495	5.734	1.690	3.970	1.725	2.064
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	9.583	9.434	1.914	4.777	-0.213	0.191	23.720	5.141	1.448	9.395
2	14:16:28	10.220	10.540	2.133	6.035	-0.203	-0.548	22.450	5.376	-2.164	9.537
3	14:16:55	9.502	10.060	0.938	5.599	0.766	-0.271	15.870	3.553	0.410	9.646
X		9.769	10.010	1.662	5.470	0.117	-0.209	20.680	4.690	-0.102	9.526
S		0.395	0.556	0.636	0.639	0.562	0.373	4.213	0.991	1.860	0.126
%RSD		4.046	5.558	38.270	11.670	482.100	178.300	20.370	21.140	1822.000	1.319
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.1%	9.870	10.170	9.831	0.066	0.939	1.049	0.058	0.117	100.4%
2	14:16:28	99.6%	10.250	10.380	9.908	0.338	0.979	0.992	0.077	0.103	99.3%
3	14:16:55	99.2%	10.100	10.700	9.967	-0.330	1.118	1.012	0.059	0.081	98.5%
X		99.6%	10.070	10.420	9.902	0.025	1.012	1.018	0.065	0.100	99.4%
S		0.4%	0.190	0.265	0.068	0.336	0.094	0.029	0.011	0.018	0.9%
%RSD		0.5	1.890	2.544	0.688	1359.000	9.283	2.846	16.450	18.310	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	13.140	18.480	2.003	2.189	4.659	5.066	100.4%	0.516	0.530	0.885
2	14:16:28	13.000	19.010	2.027	1.993	5.069	4.818	99.1%	0.522	0.511	0.931
3	14:16:55	13.370	19.520	1.952	2.197	4.946	5.128	99.6%	0.510	0.533	0.997
X		13.170	19.000	1.994	2.126	4.892	5.004	99.7%	0.516	0.525	0.938
S		0.187	0.520	0.038	0.115	0.210	0.164	0.6%	0.006	0.012	0.056
%RSD		1.420	2.738	1.926	5.414	4.299	3.273	0.7	1.156	2.285	5.991
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:16:01	0.997	0.899	98.2%							
2	14:16:28	0.903	0.899	100.0%							
3	14:16:55	0.925	0.950	99.4%							
X		0.942	0.916	99.2%							
S		0.049	0.029	0.9%							
%RSD		5.230	3.206	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	98.9%	0.830	95.090	98.440	-7.755	870.000	920.200	871.400	832.800	79.790
2	14:22:23	98.2%	0.703	98.940	104.100	-7.550	860.800	931.100	871.600	805.400	78.710
3	14:22:50	96.9%	0.787	97.300	102.000	-8.019	854.700	935.700	883.200	821.800	79.990
X		98.0%	0.773	97.110	101.500	-7.775	861.800	929.000	875.400	820.000	79.500
S		1.0%	0.065	1.933	2.849	0.235	7.728	7.943	6.738	13.800	0.685
%RSD		1.1	8.405	1.990	2.807	3.024	0.897	0.855	0.770	1.683	0.862
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	188.700	-26.180	833.000	841.900	816.600	96.7%	10.630	9.848	10.020	158.000
2	14:22:23	186.600	-39.240	824.500	763.500	795.700	97.7%	9.944	10.190	9.768	47.370
3	14:22:50	195.400	-44.840	829.500	845.400	796.800	97.0%	8.544	9.582	9.865	250.500
X		190.200	-36.750	829.000	816.900	803.100	97.1%	9.708	9.873	9.883	152.000
S		4.629	9.576	4.312	46.300	11.770	0.5%	1.065	0.305	0.125	101.700
%RSD		2.433	26.060	0.520	5.668	1.465	0.5	10.970	3.090	1.269	66.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	112.000	9.373	114.000	104.400	1.965	9.984	11.490	10.220	10.620	19.850
2	14:22:23	111.000	9.330	113.600	98.060	1.839	9.714	10.420	9.869	9.914	20.000
3	14:22:50	110.900	9.422	111.100	97.800	1.959	10.500	9.893	10.160	10.490	20.850
X		111.300	9.375	112.900	100.100	1.921	10.070	10.600	10.080	10.340	20.230
S		0.623	0.046	1.587	3.719	0.071	0.402	0.815	0.187	0.374	0.539
%RSD		0.560	0.489	1.406	3.716	3.703	3.989	7.691	1.852	3.614	2.664
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	19.680	19.340	4.078	10.020	-0.071	0.214	51.050	11.520	-1.336	18.910
2	14:22:23	17.900	19.060	4.570	9.333	0.524	0.463	50.220	10.730	3.490	18.910
3	14:22:50	18.780	19.790	3.967	9.238	0.411	0.373	42.240	9.040	2.475	19.170
X		18.790	19.400	4.205	9.530	0.288	0.350	47.840	10.430	1.543	19.000
S		0.892	0.369	0.321	0.426	0.316	0.126	4.864	1.266	2.544	0.152
%RSD		4.749	1.901	7.633	4.471	109.800	36.070	10.170	12.140	164.900	0.801
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	96.5%	20.110	20.480	19.770	0.630	1.992	1.912	0.072	0.149	98.2%
2	14:22:23	97.3%	20.360	20.420	20.250	-0.123	1.984	1.883	0.125	0.227	98.6%
3	14:22:50	95.7%	19.980	20.320	19.880	0.393	1.980	1.961	0.085	0.319	97.6%
X		96.5%	20.150	20.410	19.960	0.300	1.985	1.919	0.094	0.232	98.1%
S		0.8%	0.197	0.079	0.253	0.385	0.006	0.040	0.027	0.085	0.5%
%RSD		0.8	0.979	0.387	1.265	128.300	0.310	2.068	29.200	36.590	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	27.030	37.710	3.964	4.178	9.768	10.150	98.6%	1.006	1.007	1.913
2	14:22:23	26.600	38.080	3.891	4.267	9.305	10.240	99.1%	1.042	0.990	1.918
3	14:22:50	26.700	39.330	4.244	4.226	9.563	9.976	98.2%	0.999	1.007	1.961
X		26.780	38.370	4.033	4.224	9.546	10.120	98.6%	1.015	1.001	1.931
S		0.225	0.848	0.186	0.045	0.232	0.136	0.4%	0.023	0.010	0.026
%RSD		0.839	2.210	4.621	1.057	2.433	1.345	0.4	2.288	1.002	1.365
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:21:56	1.867	1.893	98.8%							
2	14:22:23	1.825	1.837	100.0%							
3	14:22:50	1.843	1.881	98.0%							
X		1.845	1.870	99.0%							
S		0.021	0.029	1.0%							
%RSD		1.157	1.574	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	97.0%	2.068	244.200	247.700	-6.594	1973.000	2066.000	2175.000	2038.000	193.700
2	14:28:18	94.4%	2.087	252.000	257.600	-7.551	2063.000	2132.000	2243.000	2090.000	199.900
3	14:28:45	95.6%	2.123	255.100	259.300	-6.314	2065.000	2118.000	2190.000	2099.000	200.400
X		95.7%	2.093	250.400	254.900	-6.820	2034.000	2105.000	2203.000	2076.000	198.000
S		1.3%	0.028	5.627	6.290	0.648	52.800	34.510	35.540	33.050	3.725
%RSD		1.3	1.348	2.247	2.468	9.508	2.596	1.639	1.613	1.592	1.881
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	488.800	-43.640	1858.000	2059.000	1997.000	97.3%	25.180	24.020	23.840	636.100
2	14:28:18	506.300	-49.900	1942.000	2150.000	2045.000	93.0%	26.010	25.450	25.010	178.800
3	14:28:45	493.300	-55.240	2124.000	2120.000	2021.000	93.2%	26.270	24.500	24.750	414.800
X		496.100	-49.590	1975.000	2109.000	2021.000	94.5%	25.820	24.650	24.540	409.900
S		9.091	5.808	136.000	45.890	24.140	2.4%	0.571	0.728	0.619	228.700
%RSD		1.832	11.710	6.885	2.175	1.194	2.6	2.209	2.953	2.521	55.790
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	277.700	23.810	278.400	251.100	4.924	24.040	25.360	25.140	26.410	49.940
2	14:28:18	294.400	24.620	297.500	276.600	4.867	25.760	24.610	25.220	25.130	49.160
3	14:28:45	289.000	24.420	290.500	262.400	5.021	25.340	24.880	25.040	25.620	50.060
X		287.000	24.290	288.800	263.400	4.937	25.050	24.950	25.130	25.720	49.720
S		8.516	0.421	9.664	12.770	0.078	0.898	0.378	0.090	0.644	0.487
%RSD		2.967	1.734	3.346	4.849	1.575	3.586	1.516	0.359	2.505	0.980
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	48.680	48.310	10.760	23.220	-0.150	0.300	114.200	25.670	-0.527	48.360
2	14:28:18	50.430	50.330	11.570	24.660	0.170	0.313	119.100	26.130	-0.844	49.400
3	14:28:45	48.520	49.190	9.847	23.780	0.934	-0.272	107.500	23.550	3.763	48.590
X		49.210	49.280	10.730	23.890	0.318	0.114	113.600	25.120	0.797	48.780
S		1.059	1.013	0.864	0.724	0.557	0.334	5.825	1.375	2.573	0.548
%RSD		2.152	2.056	8.056	3.032	175.100	293.800	5.128	5.474	322.800	1.124
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	94.9%	51.770	51.020	50.950	0.882	4.901	5.122	0.352	0.455	96.1%
2	14:28:18	93.8%	50.230	51.040	50.140	1.305	5.015	4.893	0.435	0.504	96.8%
3	14:28:45	94.3%	52.100	52.330	50.810	0.982	4.897	4.917	0.434	0.535	95.1%
X		94.4%	51.370	51.460	50.640	1.056	4.938	4.977	0.407	0.498	96.0%
S		0.6%	1.001	0.752	0.436	0.221	0.067	0.126	0.048	0.041	0.9%
%RSD		0.6	1.949	1.460	0.860	20.910	1.360	2.531	11.750	8.149	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	69.280	99.910	9.850	10.990	25.580	25.190	97.9%	2.589	2.559	4.816
2	14:28:18	69.460	96.770	10.260	10.680	24.840	25.050	98.6%	2.467	2.601	4.642
3	14:28:45	69.860	99.620	10.210	10.580	25.460	25.070	97.2%	2.481	2.548	4.832
X		69.530	98.770	10.100	10.750	25.290	25.100	97.9%	2.512	2.569	4.764
S		0.294	1.739	0.222	0.213	0.399	0.074	0.7%	0.067	0.028	0.105
%RSD		0.423	1.761	2.195	1.980	1.578	0.295	0.7	2.653	1.087	2.209
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:27:51	4.764	4.726	95.9%							
2	14:28:18	4.828	4.685	95.6%							
3	14:28:45	5.001	4.818	97.2%							
X		4.864	4.743	96.3%							
S		0.123	0.068	0.9%							
%RSD		2.523	1.433	0.9							

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User Pre-dilution: 1.000

Run		Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47		93.2%	244.700	237.900	252.800	4.196	269.300	281.500	268.300	248.000	246.800
2	14:34:14		91.1%	249.500	238.300	250.800	-0.992	271.600	283.300	265.400	261.400	252.800
3	14:34:41		88.2%	252.800	247.500	255.600	4.568	274.400	282.600	265.800	256.500	248.400
X			90.9%	249.000	241.200	253.000	2.591	271.800	282.500	266.500	255.300	249.300
S			2.5%	4.080	5.424	2.416	3.108	2.545	0.893	1.592	6.749	3.106
%RSD			2.7	1.639	2.248	0.955	120.000	0.936	0.316	0.598	2.644	1.246
Run	Time		28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47		245.100	-72.390	250.200	375.100	310.300	89.6%	243.900	243.200	242.900	2911.000
2	14:34:14		248.500	-83.970	254.900	387.500	310.000	87.0%	251.400	248.900	248.900	2648.000
3	14:34:41		257.300	-91.300	257.200	342.900	309.500	87.2%	247.500	242.700	245.100	2978.000
X			250.300	-82.550	254.100	368.500	309.900	87.9%	247.600	244.900	245.600	2846.000
S			6.308	9.533	3.568	22.990	0.381	1.5%	3.779	3.451	3.071	174.800
%RSD			2.520	11.550	1.404	6.238	0.123	1.7	1.526	1.409	1.250	6.144
Run	Time		54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47		377.000	243.100	280.000	258.300	244.500	249.100	244.700	244.300	250.100	242.500
2	14:34:14		394.500	246.900	283.400	269.800	253.900	252.500	256.800	255.200	255.800	251.400
3	14:34:41		378.300	240.800	279.600	255.800	246.800	248.700	247.600	251.500	251.500	248.000
X			383.300	243.600	281.000	261.300	248.400	250.100	249.700	250.400	252.500	247.300
S			9.776	3.076	2.054	7.491	4.903	2.098	6.340	5.527	2.970	4.479
%RSD			2.551	1.263	0.731	2.867	1.974	0.839	2.539	2.208	1.176	1.811
Run	Time		67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47		247.000	248.600	246.100	249.000	0.843	0.295	1102.000	243.700	0.923	244.600
2	14:34:14		252.200	252.600	252.400	251.100	-0.038	-0.601	1128.000	247.200	-0.616	247.400
3	14:34:41		249.000	247.000	247.900	242.000	0.240	-0.470	1167.000	253.700	-1.811	247.600
X			249.400	249.400	248.800	247.300	0.348	-0.259	1132.000	248.200	-0.502	246.500
S			2.672	2.874	3.256	4.756	0.450	0.484	32.940	5.113	1.371	1.650
%RSD			1.072	1.152	1.309	1.923	129.300	186.900	2.910	2.060	273.200	0.669
Run	Time		89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47		90.2%	243.100	242.400	242.100	239.300	255.700	246.900	245.700	242.900	92.0%
2	14:34:14		88.7%	249.300	251.700	248.700	250.300	257.200	250.800	247.000	246.800	91.2%
3	14:34:41		87.4%	244.200	247.600	252.400	246.900	251.600	248.300	243.400	243.300	90.9%
X			88.7%	245.500	247.200	247.700	245.500	254.900	248.600	245.300	244.300	91.4%
S			1.4%	3.309	4.706	5.227	5.607	2.900	1.980	1.819	2.170	0.6%
%RSD			1.6	1.348	1.903	2.110	2.284	1.138	0.796	0.741	0.888	0.6
Run	Time		116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47		246.000	248.100	240.100	242.500	247.100	248.400	96.3%	249.500	258.800	242.600
2	14:34:14		249.000	245.000	243.900	251.400	251.100	252.100	94.1%	250.100	267.900	253.600
3	14:34:41		246.000	244.300	243.900	247.900	247.800	249.400	94.2%	249.100	259.500	246.600
X			247.000	245.800	242.600	247.300	248.700	249.900	94.9%	249.600	262.100	247.600
S			1.731	2.029	2.206	4.485	2.158	1.912	1.2%	0.465	5.030	5.614
%RSD			0.701	0.825	0.909	1.814	0.868	0.765	1.3	0.186	1.919	2.268
Run	Time		207Pb	208Pb	209Bi							
			ppb	ppb	ppb							
1	14:33:47		241.100	241.100	95.7%							
2	14:34:14		250.500	250.600	95.9%							
3	14:34:41		246.900	245.200	95.0%							
X			246.100	245.600	95.5%							
S			4.744	4.745	0.5%							
%RSD			1.927	1.932	0.5							

cal4 MW-12521 4/22/2020 14:39:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.6%	<u>m 507.300</u>	<u>m 511.100</u>	<u>m 512.100</u>	8.931	547.400	576.000	546.800	502.900	<u>m 500.800</u>
2	14:40:09	87.0%	498.100	<u>m 505.600</u>	<u>m 500.900</u>	-0.852	564.200	564.300	545.200	518.300	<u>m 510.000</u>
3	14:40:36	85.9%	495.500	496.800	<u>m 505.100</u>	3.933	560.500	571.100	552.500	527.600	<u>m 511.700</u>
X		85.8%	<u>m 500.300</u>	<u>m 504.500</u>	<u>m 506.000</u>	4.004	557.400	570.400	548.200	516.300	<u>m 507.500</u>
S		1.2%	<u>m 6.191</u>	<u>m 7.234</u>	<u>m 5.622</u>	4.892	8.875	5.880	3.826	12.450	<u>m 5.836</u>
%RSD		1.4	<u>m 1.238</u>	<u>m 1.434</u>	<u>m 1.111</u>	122.200	1.592	1.031	0.698	2.412	<u>m 1.150</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	519.600	-83.370	512.000	731.900	607.800	83.1%	498.600	<u>m 501.200</u>	<u>m 506.000</u>	1378.000
2	14:40:09	517.200	-98.600	512.400	675.500	602.000	82.4%	499.700	<u>m 503.300</u>	<u>m 501.800</u>	3295.000
3	14:40:36	520.200	-105.700	506.000	791.000	617.000	80.9%	<u>m 501.400</u>	<u>m 503.200</u>	<u>m 504.300</u>	5078.000
X		519.000	-95.900	510.100	732.800	609.000	82.1%	<u>m 499.900</u>	<u>m 502.600</u>	<u>m 504.000</u>	3250.000
S		1.583	11.430	3.560	57.780	7.572	1.1%	<u>m 1.415</u>	<u>m 1.139</u>	<u>m 2.088</u>	1851.000
%RSD		0.305	11.920	0.698	7.884	1.243	1.4	<u>m 0.283</u>	<u>m 0.227</u>	<u>m 0.414</u>	56.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	773.300	499.300	561.400	527.400	498.500	497.400	497.800	<u>m 503.800</u>	<u>m 501.900</u>	497.700
2	14:40:09	772.600	498.200	566.200	521.300	<u>m 505.800</u>	496.300	498.800	<u>m 501.600</u>	<u>m 501.500</u>	<u>m 503.100</u>
3	14:40:36	788.400	<u>m 512.200</u>	576.500	527.700	<u>m 506.600</u>	<u>m 506.200</u>	<u>m 503.900</u>	494.100	492.800	498.900
X		778.100	<u>m 503.200</u>	568.000	525.500	<u>m 503.600</u>	<u>m 500.000</u>	<u>m 500.100</u>	<u>m 499.800</u>	<u>m 498.700</u>	<u>m 499.900</u>
S		8.941	<u>m 7.789</u>	7.693	3.598	<u>m 4.420</u>	<u>m 5.426</u>	<u>m 3.241</u>	<u>m 5.096</u>	<u>m 5.102</u>	<u>m 2.867</u>
%RSD		1.149	<u>m 1.548</u>	1.354	0.685	<u>m 0.878</u>	<u>m 1.085</u>	<u>m 0.648</u>	<u>m 1.020</u>	<u>m 1.023</u>	<u>m 0.574</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	491.600	497.200	491.500	498.200	-0.023	-0.281	2239.000	494.100	-1.286	<u>m 503.300</u>
2	14:40:09	<u>m 505.400</u>	<u>m 510.100</u>	<u>m 508.000</u>	<u>m 510.800</u>	0.152	-0.685	2250.000	497.200	3.502	<u>m 501.300</u>
3	14:40:36	<u>m 504.100</u>	<u>m 506.800</u>	<u>m 507.000</u>	495.200	-0.103	-0.606	2317.000	<u>m 511.400</u>	0.964	<u>m 501.100</u>
X		<u>m 500.400</u>	<u>m 504.700</u>	<u>m 502.200</u>	<u>m 501.400</u>	0.009	-0.524	2269.000	<u>m 500.900</u>	1.060	<u>m 501.900</u>
S		<u>m 7.616</u>	<u>m 6.704</u>	<u>m 9.280</u>	<u>m 8.261</u>	0.131	0.214	42.340	<u>m 9.230</u>	2.396	<u>m 1.213</u>
%RSD		<u>m 1.522</u>	<u>m 1.328</u>	<u>m 1.848</u>	<u>m 1.648</u>	1499.000	40.850	1.866	<u>m 1.843</u>	226.000	<u>m 0.242</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.8%	493.000	488.300	490.700	<u>m 509.700</u>	<u>m 514.500</u>	<u>m 506.100</u>	496.900	498.200	86.6%
2	14:40:09	84.2%	<u>m 503.000</u>	<u>m 503.900</u>	<u>m 505.300</u>	494.100	<u>m 518.000</u>	<u>m 506.200</u>	<u>m 501.400</u>	<u>m 502.800</u>	85.7%
3	14:40:36	83.4%	<u>m 510.200</u>	<u>m 511.500</u>	<u>m 507.200</u>	<u>m 503.000</u>	<u>m 521.700</u>	<u>m 521.400</u>	<u>m 508.600</u>	<u>m 507.400</u>	85.0%
X		84.1%	<u>m 502.100</u>	<u>m 501.200</u>	<u>m 501.100</u>	<u>m 502.200</u>	<u>m 518.100</u>	<u>m 511.200</u>	<u>m 502.300</u>	<u>m 502.800</u>	85.8%
S		0.7%	<u>m 8.662</u>	<u>m 11.840</u>	<u>m 9.061</u>	<u>m 7.797</u>	<u>m 3.612</u>	<u>m 8.801</u>	<u>m 5.893</u>	<u>m 4.626</u>	0.8%
%RSD		0.8	<u>m 1.725</u>	<u>m 2.363</u>	<u>m 1.808</u>	<u>m 1.553</u>	<u>m 0.697</u>	<u>m 1.721</u>	<u>m 1.173</u>	<u>m 0.920</u>	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	496.400	488.100	497.000	<u>m 502.400</u>	500.000	497.200	92.4%	<u>m 512.500</u>	<u>m 489.300</u>	499.900
2	14:40:09	<u>m 515.800</u>	<u>m 510.200</u>	<u>m 508.300</u>	<u>m 501.000</u>	<u>m 508.300</u>	<u>m 504.400</u>	92.3%	<u>m 510.800</u>	<u>m 496.100</u>	497.900
3	14:40:36	<u>m 511.400</u>	<u>m 509.200</u>	<u>m 505.800</u>	<u>m 500.700</u>	<u>m 504.600</u>	498.400	91.9%	<u>m 504.000</u>	<u>m 496.500</u>	<u>m 505.800</u>
X		<u>m 507.900</u>	<u>m 502.500</u>	<u>m 503.700</u>	<u>m 501.300</u>	<u>m 504.300</u>	<u>m 500.000</u>	92.2%	<u>m 509.100</u>	<u>m 494.000</u>	<u>m 501.200</u>
S		<u>m 10.160</u>	<u>m 12.460</u>	<u>m 5.938</u>	<u>m 0.894</u>	<u>m 4.170</u>	<u>m 3.902</u>	0.3%	<u>m 4.492</u>	<u>m 4.023</u>	<u>m 4.109</u>
%RSD		<u>m 2.000</u>	<u>m 2.480</u>	<u>m 1.179</u>	<u>m 0.178</u>	<u>m 0.827</u>	<u>m 0.780</u>	0.3	<u>m 0.882</u>	<u>m 0.814</u>	<u>m 0.820</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:39:42	<u>m 502.900</u>	<u>m 503.900</u>	92.8%							
2	14:40:09	497.000	<u>m 501.300</u>	92.4%							
3	14:40:36	<u>m 505.900</u>	<u>m 503.700</u>	92.8%							
X		<u>m 501.900</u>	<u>m 503.000</u>	92.7%							
S		<u>m 4.532</u>	<u>m 1.435</u>	0.2%							
%RSD		<u>m 0.903</u>	<u>m 0.285</u>	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	81.7%	-0.023	4.861	5.207	-13.390	±50410.000	±49520.000	±49620.000	±47840.000	1.047
2	14:46:06	81.3%	0.021	5.894	4.543	-6.239	±49480.000	±50720.000	±50970.000	±46750.000	1.182
3	14:46:33	82.9%	0.020	4.464	4.333	-12.190	±50740.000	±50430.000	±49490.000	±47630.000	1.124
X		82.0%	0.006	5.073	4.694	-10.610	±50210.000	±50220.000	±50030.000	±47410.000	1.118
S		0.8%	0.025	0.738	0.456	3.830	±655.600	±626.400	±822.900	±582.600	0.068
%RSD		1.0	401.900	14.550	9.721	36.110	±1.306	±1.247	±1.645	±1.229	6.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±3995.000	-112.100	±46110.000	50710.000	±49440.000	80.8%	0.391	0.031	0.219	-62.520
2	14:46:06	±4151.000	-114.600	±46790.000	50070.000	±49660.000	82.8%	0.499	0.022	0.138	-66.410
3	14:46:33	±4109.000	-129.200	±46740.000	50200.000	±50140.000	83.0%	0.450	0.010	0.172	-64.220
X		±4085.000	-118.700	±46540.000	50330.000	±49750.000	82.2%	0.447	0.021	0.177	-64.390
S		±80.730	9.209	±379.700	338.600	±355.200	1.2%	0.054	0.010	0.041	1.949
%RSD		±1.976	7.761	±0.816	0.673	±0.714	1.5	12.070	49.180	23.080	3.027
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±49610.000	0.648	±50060.000	±48140.000	2.240	2.154	6.527	0.380	0.250	1.061
2	14:46:06	±50420.000	0.599	±49870.000	±47470.000	2.264	2.033	4.737	0.303	0.265	1.124
3	14:46:33	±49910.000	0.698	±50330.000	±48310.000	2.254	1.845	4.368	0.404	0.164	0.901
X		±49980.000	0.648	±50080.000	±47980.000	2.252	2.010	5.211	0.362	0.226	1.029
S		±407.400	0.050	±234.500	±443.600	0.012	0.156	1.154	0.053	0.054	0.115
%RSD		±0.815	7.654	±0.468	±0.924	0.535	7.746	22.160	14.600	23.970	11.160
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.958	1.246	0.190	1.416	1.357	-0.686	-0.094	-0.111	0.593	0.396
2	14:46:06	1.089	0.970	0.193	0.220	1.305	-0.193	-0.644	-0.095	-0.370	0.398
3	14:46:33	1.211	0.937	0.490	0.757	2.382	-0.097	2.842	0.629	0.048	0.388
X		1.086	1.051	0.291	0.798	1.681	-0.325	0.701	0.141	0.090	0.394
S		0.127	0.170	0.173	0.599	0.607	0.316	1.874	0.423	0.483	0.006
%RSD		11.650	16.170	59.410	75.130	36.120	97.270	267.300	299.600	534.600	1.426
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	82.2%	1.114	0.925	0.898	0.099	0.037	0.043	0.036	0.006	82.8%
2	14:46:06	83.6%	0.932	0.965	0.959	0.083	0.026	0.058	-0.001	0.032	83.3%
3	14:46:33	83.9%	0.991	0.991	0.977	0.223	0.033	0.029	-0.009	0.014	84.1%
X		83.2%	1.012	0.960	0.945	0.135	0.032	0.043	0.009	0.017	83.4%
S		0.9%	0.093	0.033	0.041	0.076	0.006	0.014	0.024	0.013	0.6%
%RSD		1.1	9.148	3.483	4.362	56.460	17.780	32.840	279.200	78.090	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.394	0.656	0.975	0.980	0.055	0.043	88.6%	0.034	0.056	0.043
2	14:46:06	0.370	0.576	0.962	0.978	-0.009	0.048	90.7%	0.049	0.050	0.047
3	14:46:33	0.356	0.550	0.955	0.899	0.032	0.036	89.6%	0.057	0.030	0.033
X		0.374	0.594	0.964	0.952	0.026	0.042	89.6%	0.047	0.045	0.041
S		0.019	0.055	0.010	0.046	0.033	0.006	1.0%	0.011	0.014	0.007
%RSD		5.100	9.271	1.017	4.807	125.700	13.960	1.1	24.220	29.990	16.950
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:45:39	0.041	0.042	87.2%							
2	14:46:06	0.055	0.047	87.3%							
3	14:46:33	0.040	0.041	88.3%							
X		0.045	0.043	87.6%							
S		0.008	0.003	0.6%							
%RSD		18.710	7.218	0.7							

cal6 MW-12619 4/22/2020 14:51:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	79.0%	0.008	2.040	2.002	-12.050	97620.000	99400.000	99970.000	92370.000	1.284
2	14:52:01	78.5%	-0.022	3.057	2.109	-12.490	99940.000	100300.000	100100.000	93540.000	1.110
3	14:52:28	79.9%	0.008	2.168	2.017	-7.497	102100.000	100000.000	99910.000	94990.000	1.242
X		79.2%	-0.002	2.422	2.043	-10.680	99890.000	99880.000	99980.000	93630.000	1.212
S		0.7%	0.017	0.554	0.058	2.765	2253.000	438.200	82.360	1314.000	0.091
%RSD		0.9	966.100	22.890	2.818	25.890	2.256	0.439	0.082	1.403	7.469
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	8443.000	-120.800	92050.000	97570.000	99170.000	82.5%	1.047	-0.047	0.322	-50.120
2	14:52:01	8514.000	-120.200	94110.000	100700.000	100800.000	81.6%	0.675	-0.003	0.325	-85.880
3	14:52:28	8356.000	-136.700	94880.000	101200.000	100300.000	82.0%	1.006	-0.059	0.329	-32.570
X		8438.000	-125.900	93680.000	99830.000	100100.000	82.0%	0.909	-0.037	0.325	-56.190
S		78.890	9.348	1463.000	1976.000	823.700	0.5%	0.204	0.030	0.003	27.170
%RSD		0.935	7.427	1.562	1.979	0.823	0.6	22.440	80.560	1.033	48.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	98930.000	1.260	98730.000	95040.000	4.634	3.816	9.785	0.496	0.353	1.858
2	14:52:01	100200.000	1.295	101400.000	96680.000	4.516	3.478	7.679	0.658	0.387	2.121
3	14:52:28	100900.000	1.346	99770.000	96440.000	4.559	3.749	8.544	0.660	0.440	2.066
X		100000.000	1.300	99960.000	96050.000	4.569	3.681	8.669	0.605	0.394	2.015
S		983.900	0.043	1324.000	886.400	0.059	0.179	1.058	0.094	0.044	0.139
%RSD		0.984	3.298	1.325	0.923	1.300	4.863	12.210	15.530	11.210	6.880
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	1.643	1.930	0.408	1.353	4.998	1.237	-0.222	-0.533	3.522	0.769
2	14:52:01	1.788	1.758	0.508	1.607	5.128	0.020	0.673	0.086	0.496	0.774
3	14:52:28	1.463	1.932	0.619	1.961	5.225	0.013	1.682	0.468	-0.742	0.813
X		1.631	1.873	0.512	1.640	5.117	0.423	0.711	0.007	1.092	0.785
S		0.163	0.099	0.105	0.305	0.114	0.704	0.952	0.505	2.194	0.024
%RSD		9.971	5.309	20.580	18.600	2.226	166.300	134.000	7155.000	200.900	3.062
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	83.9%	0.347	0.234	0.182	-0.328	0.013	0.011	0.009	-0.001	83.0%
2	14:52:01	83.8%	0.381	0.317	0.232	0.563	0.021	0.024	-0.013	0.003	83.1%
3	14:52:28	82.2%	0.330	0.280	0.155	0.178	0.010	0.022	-0.013	-0.006	83.0%
X		83.3%	0.353	0.277	0.190	0.138	0.014	0.019	-0.006	-0.001	83.0%
S		1.0%	0.026	0.042	0.039	0.447	0.006	0.007	0.013	0.005	0.1%
%RSD		1.2	7.419	15.040	20.470	324.600	39.080	37.380	227.100	358.100	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	0.058	0.090	0.601	0.632	0.012	0.001	88.4%	0.012	0.018	0.037
2	14:52:01	0.072	0.183	0.635	0.608	-0.009	0.072	89.2%	0.011	0.016	0.029
3	14:52:28	0.065	0.082	0.543	0.567	0.023	0.061	87.2%	0.009	0.018	0.048
X		0.065	0.118	0.593	0.602	0.008	0.045	88.3%	0.011	0.017	0.038
S		0.007	0.056	0.047	0.033	0.016	0.038	1.0%	0.002	0.001	0.010
%RSD		10.750	47.630	7.850	5.499	193.300	85.780	1.1	14.500	6.342	25.250
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:51:33	0.019	0.029	85.0%							
2	14:52:01	0.022	0.026	86.2%							
3	14:52:28	0.049	0.032	85.4%							
X		0.030	0.029	85.5%							
S		0.016	0.003	0.6%							
%RSD		54.620	10.390	0.7							

ICV MW12789 PREP 4/22/20 4/22/2020 14:57:03 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	84.0%	199.200	207.800	207.100	-4.914	±39660.000	±40640.000	±40090.000	±36740.000	191.300
2	14:57:57	81.8%	199.400	191.400	207.500	-0.411	±40030.000	±41330.000	±41130.000	±37400.000	192.500
3	14:58:24	83.8%	203.900	199.100	198.500	-5.660	±40640.000	±39960.000	±40280.000	±37800.000	195.100
X		83.2%	100.417%	199.400	102.179%	-3.661	±100.280%	±40640.000	±40500.000	±93.286%	96.496%
S		1.2%	n/a	8.206	n/a	2.840	±n/a	±686.400	±552.300	±n/a	n/a
%RSD		1.5	1.331	4.115	2.506	77.560	±1.242	±1.689	±1.364	±1.426	1.012
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	2479.000	-134.900	±37820.000	39320.000	±38960.000	87.1%	194.500	193.800	188.600	1698.000
2	14:57:57	±2397.000	-147.300	±37470.000	39360.000	±38850.000	87.0%	194.900	194.100	189.600	1903.000
3	14:58:24	2579.000	-151.300	±38030.000	39720.000	±39110.000	86.1%	197.600	198.900	189.800	2048.000
X		±2485.000	-144.500	±94.437%	39470.000	±97.429%	86.7%	97.840%	97.815%	94.669%	1883.000
S		±91.380	8.585	±n/a	220.700	±n/a	0.6%	n/a	n/a	n/a	175.900
%RSD		±3.677	5.942	±0.751	0.559	±0.337	0.6	0.864	1.467	0.352	9.338
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	±39520.000	184.700	±39030.000	±37470.000	183.700	182.800	190.300	186.900	195.700	191.400
2	14:57:57	±38980.000	185.400	±38830.000	±37650.000	185.400	183.900	195.600	190.200	190.500	192.600
3	14:58:24	±39910.000	183.700	±39860.000	±37940.000	189.300	189.900	191.800	189.100	192.000	190.400
X		±39470.000	92.295%	±98.093%	±94.212%	93.053%	92.754%	192.600	188.700	96.365%	95.720%
S		±466.200	n/a	±n/a	±n/a	n/a	n/a	2.737	1.674	n/a	n/a
%RSD		±1.181	0.452	±1.390	±0.632	1.544	2.052	1.422	0.887	1.369	0.580
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	186.000	186.000	210.600	190.800	1.578	-0.749	895.400	203.500	3.284	192.800
2	14:57:57	190.200	185.600	208.000	190.200	1.691	-0.174	870.600	195.500	0.346	192.800
3	14:58:24	191.100	188.800	203.100	185.500	3.551	0.518	857.800	193.200	1.966	191.700
X		189.100	186.800	103.630%	188.800	2.273	-0.135	874.600	98.706%	1.866	96.221%
S		2.738	1.744	n/a	2.888	1.108	0.634	19.120	n/a	1.472	n/a
%RSD		1.448	0.934	1.825	1.529	48.730	469.600	2.186	2.745	78.880	0.346
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	86.1%	204.700	201.600	197.200	186.200	200.200	196.800	194.200	192.100	85.6%
2	14:57:57	85.8%	201.700	204.000	201.500	191.600	197.600	194.400	192.500	191.000	86.6%
3	14:58:24	87.0%	205.600	200.300	199.300	187.400	198.400	192.300	195.300	190.300	87.1%
X		86.3%	102.007%	100.983%	99.664%	188.400	99.366%	194.500	97.004%	95.574%	86.4%
S		0.6%	n/a	n/a	n/a	2.849	n/a	2.279	n/a	n/a	0.8%
%RSD		0.7	1.014	0.913	1.096	1.512	0.651	1.172	0.729	0.471	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	198.700	199.000	201.800	198.900	203.700	197.100	92.6%	198.300	198.500	189.900
2	14:57:57	197.300	197.100	200.000	199.800	197.900	196.400	91.9%	198.200	202.400	190.200
3	14:58:24	198.600	195.800	198.600	198.700	195.100	195.800	93.2%	200.200	201.300	188.100
X		99.086%	98.650%	200.200	99.577%	99.434%	98.228%	92.6%	198.900	100.363%	189.400
S		n/a	n/a	1.611	n/a	n/a	n/a	0.7%	1.137	n/a	1.115
%RSD		0.387	0.833	0.805	0.297	2.208	0.332	0.7	0.572	0.996	0.589
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:57:30	185.600	186.100	89.2%							
2	14:57:57	187.000	185.300	89.0%							
3	14:58:24	187.400	186.700	90.5%							
X		186.700	93.015%	89.6%							
S		0.952	n/a	0.8%							
%RSD		0.510	0.391	0.9							

ICB IM9936-01 4/22/2020 15:02:57 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	90.0%	0.014	1.168	0.996	-7.239	10.510	1.429	0.625	1.756	-0.003
2	15:03:50	89.2%	0.015	0.930	1.126	-0.044	10.430	1.855	1.373	1.261	0.019
3	15:04:17	89.8%	-0.012	1.684	1.413	-1.978	9.389	1.321	0.964	1.230	0.013
X		89.7%	0.006	1.261	1.178	-3.087	10.110	1.535	0.988	1.416	0.010
S		0.5%	0.015	0.385	0.213	3.723	0.626	0.282	0.374	0.295	0.012
%RSD		0.5	269.500	30.560	18.090	120.600	6.194	18.380	37.910	20.870	120.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.398	-164.600	18.060	1.109	1.965	88.6%	-0.046	-0.029	-0.018	-52.490
2	15:03:50	2.865	-167.200	17.660	-0.969	1.640	87.3%	0.022	0.014	-0.027	-77.080
3	15:04:17	2.612	-170.900	16.110	2.217	2.053	87.7%	-0.001	0.005	-0.001	-80.190
X		2.625	-167.600	17.270	0.786	1.886	87.9%	-0.008	-0.003	-0.015	-69.920
S		0.234	3.130	1.029	1.617	0.217	0.6%	0.034	0.023	0.013	15.180
%RSD		8.908	1.868	5.956	205.800	11.530	0.7	408.800	733.000	86.110	21.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.569	0.019	-2.481	5.389	0.008	0.021	1.199	0.048	0.077	-0.054
2	15:03:50	2.547	0.010	-1.282	3.909	0.003	-0.028	0.846	0.044	0.019	-0.187
3	15:04:17	0.515	0.024	-2.410	1.817	0.014	0.003	0.755	0.041	0.008	-0.031
X		1.877	0.018	-2.058	3.705	0.008	-0.001	0.933	0.044	0.035	-0.091
S		1.180	0.007	0.672	1.795	0.005	0.025	0.235	0.004	0.037	0.084
%RSD		62.840	40.380	32.670	48.450	62.910	2212.000	25.170	8.382	106.000	93.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.165	0.185	-0.017	0.078	0.219	-0.448	0.286	0.496	-3.489	0.003
2	15:03:50	-0.068	0.114	-0.008	-0.091	0.020	-0.590	-1.358	0.028	-2.659	0.003
3	15:04:17	-0.517	0.061	-0.148	0.907	0.105	-0.067	-3.065	-0.611	-0.644	0.006
X		-0.140	0.120	-0.058	0.298	0.115	-0.368	-1.379	-0.029	-2.264	0.004
S		0.347	0.062	0.078	0.534	0.100	0.271	1.676	0.556	1.463	0.002
%RSD		247.500	51.920	135.900	179.300	86.900	73.460	121.500	1913.000	64.610	40.530
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	88.3%	0.116	0.113	0.071	0.464	0.005	0.009	0.007	-0.000	91.5%
2	15:03:50	88.1%	0.160	0.055	0.161	-0.781	0.011	0.006	-0.006	0.010	91.0%
3	15:04:17	89.3%	0.163	0.096	0.131	0.092	-0.000	0.011	-0.013	0.008	91.7%
X		88.6%	0.146	0.088	0.121	-0.075	0.005	0.009	-0.004	0.006	91.4%
S		0.6%	0.026	0.030	0.046	0.639	0.006	0.003	0.010	0.005	0.3%
%RSD		0.7	17.920	33.960	37.860	854.800	115.300	28.760	274.700	90.480	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.015	0.055	0.166	0.188	-0.032	0.005	93.7%	0.009	0.008	0.026
2	15:03:50	0.047	0.085	0.207	0.206	-0.041	0.005	93.4%	0.017	0.009	0.020
3	15:04:17	0.018	0.052	0.210	0.228	-0.041	-0.012	94.7%	0.013	0.004	0.012
X		0.026	0.064	0.194	0.207	-0.038	-0.000	93.9%	0.013	0.007	0.019
S		0.018	0.018	0.025	0.020	0.006	0.010	0.7%	0.004	0.003	0.007
%RSD		67.840	28.170	12.720	9.699	14.670	2142.000	0.7	29.250	36.430	36.290
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:03:23	0.009	0.016	95.8%							
2	15:03:50	0.010	0.015	95.6%							
3	15:04:17	0.019	0.010	97.5%							
X		0.013	0.014	96.3%							
S		0.006	0.003	1.0%							
%RSD		43.580	24.960	1.1							

ICSA MW12579 4/22/2020 15:08:50 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	78.7%	-0.006	1.571	1.135	576.300	TM 102400.000	T 98940.000	T 98500.000	T 97450.000	TM 93260.000
2	15:09:44	81.3%	-0.023	1.557	0.818	568.800	TM 105000.000	TM 100400.000	TM 101100.000	T 99790.000	TM 93460.000
3	15:10:11	80.7%	-0.022	0.872	0.879	573.700	TM 102900.000	T 99460.000	T 98780.000	T 96230.000	TM 91470.000
X		80.2%	-1.#IO%	1.333	1.#IO%	573.000	TM 103.442%	TM 99610.000	TM 99450.000	T 97.821%	TM 92.731%
S		1.4%	n/a	0.400	n/a	3.796	TM n/a	TM 759.000	TM 1419.000	T n/a	TM n/a
%RSD		1.7	54.060	29.960	17.820	0.662	TM 1.315	TM 0.762	TM 1.426	T 1.848	TM 1.181
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	16.400	T 30650.000	T 91370.000	M 101100.000	TM 101300.000	76.9%	M 2145.000	-0.908	-1.011	3401.000
2	15:09:44	14.890	T 30500.000	T 93550.000	M 101500.000	TM 103400.000	76.6%	M 2164.000	-0.992	-1.203	3523.000
3	15:10:11	15.070	T 30120.000	T 92500.000	M 100100.000	TM 100700.000	79.0%	M 2064.000	-0.938	-1.036	3554.000
X		15.450	T 30420.000	T 92.476%	M 100900.000	TM 101.821%	77.5%	M 106.210%	-1.#IO%	-1.#IO%	3493.000
S		0.821	T 272.000	T n/a	M 719.600	TM n/a	1.3%	M n/a	n/a	n/a	81.130
%RSD		5.309	T 0.894	T 1.178	M 0.713	TM 1.361	1.7	M 2.482	4.475	9.618	2.323
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	TM 102500.000	0.117	TM 102500.000	T 98890.000	0.230	0.395	13.250	-1.352	-0.083	1.351
2	15:09:44	TM 105000.000	0.133	TM 104500.000	TM 100200.000	0.239	0.775	15.190	-1.202	-0.044	1.397
3	15:10:11	TM 100300.000	0.142	TM 101700.000	T 98630.000	0.250	0.508	16.070	-1.103	-0.278	1.424
X		TM 102600.000	1.#IO%	TM 102900.000	TM 99.240%	1.#IO%	1.#IO%	14.840	-1.219	-1.#IO%	1.#IO%
S		TM 2322.000	n/a	TM 1466.000	TM n/a	n/a	n/a	1.441	0.126	n/a	n/a
%RSD		TM 2.263	9.627	TM 1.425	TM 0.850	4.233	34.870	9.712	10.300	93.090	2.680
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	1.381	0.499	-0.865	1.869	5.292	0.697	-2.705	-2.378	13.360	0.876
2	15:09:44	0.645	0.688	0.048	1.895	7.401	0.735	-2.779	-1.971	9.884	0.819
3	15:10:11	1.532	0.507	-0.471	1.583	7.786	1.446	-1.931	-2.399	14.550	0.868
X		1.186	0.565	-1.#IO%	1.782	6.826	0.959	-2.472	-1.#IO%	12.600	0.854
S		0.475	0.107	n/a	0.173	1.343	0.422	0.470	n/a	2.425	0.031
%RSD		40.030	18.960	106.700	9.698	19.670	43.990	19.000	10.710	19.250	3.637
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	80.9%	M 2098.000	M 2066.000	M 2146.000	-0.809	0.009	0.022	-6.316	0.031	83.8%
2	15:09:44	83.0%	M 2129.000	M 2115.000	M 2116.000	-0.793	0.022	0.043	-6.189	0.119	83.1%
3	15:10:11	83.6%	M 2127.000	M 2092.000	M 2147.000	0.058	0.013	0.033	-6.516	-0.012	84.7%
X		82.5%	M 2118.000	M 104.549%	M 2137.000	-0.515	1.#IO%	0.032	-6.340	1.#IO%	83.9%
S		1.4%	M 17.440	M n/a	M 17.560	0.496	n/a	0.010	0.165	n/a	0.8%
%RSD		1.7	M 0.823	M 1.163	M 0.822	96.300	45.730	32.160	2.603	145.700	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	0.781	0.048	0.140	0.096	0.033	0.036	91.2%	0.030	0.025	0.051
2	15:09:44	0.695	0.075	0.153	0.155	-0.009	0.042	91.7%	0.020	0.007	0.058
3	15:10:11	0.733	0.093	0.121	0.116	-0.010	0.012	93.3%	0.017	0.007	0.050
X		1.#IO%	1.#IO%	0.138	1.#IO%	0.004	1.#IO%	92.1%	0.022	1.#IO%	0.053
S		n/a	n/a	0.016	n/a	0.024	n/a	1.1%	0.007	n/a	0.004
%RSD		5.795	31.120	11.570	24.350	548.100	53.260	1.2	29.620	80.160	8.065
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:09:17	0.082	0.065	88.5%							
2	15:09:44	0.055	0.049	88.8%							
3	15:10:11	0.044	0.051	90.3%							
X		0.060	1.#IO%	89.2%							
S		0.020	n/a	1.0%							
%RSD		32.480	16.140	1.1							

CCV MW12620 4/22/2020 15:14:45 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	86.4%	298.300	289.000	302.400	-8.235	60660.000	62060.000	61560.000	57320.000	297.700
2	15:15:39	83.8%	305.700	288.600	296.300	0.794	61350.000	61760.000	60940.000	58670.000	297.700
3	15:16:06	83.4%	304.300	297.000	304.800	-5.554	61760.000	63630.000	62910.000	58300.000	298.500
X		84.5%	100.920%	97.180%	100.388%	-4.332	102.099%	62480.000	61800.000	96.835%	99.315%
S		1.6%	n/a	n/a	n/a	4.637	n/a	1008.000	1004.000	n/a	n/a
%RSD		1.9	1.307	1.620	1.442	107.000	0.908	1.613	1.625	1.201	0.161
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	2694.000	-73.840	56500.000	61700.000	61050.000	86.0%	297.200	300.800	293.100	1466.000
2	15:15:39	2787.000	-83.180	58070.000	62120.000	62760.000	84.4%	300.700	297.700	300.300	3433.000
3	15:16:06	2765.000	-92.850	57790.000	61870.000	62500.000	84.6%	301.200	300.900	291.700	1796.000
X		2748.000	-83.290	95.756%	61900.000	103.506%	85.0%	99.908%	99.931%	98.347%	2232.000
S		48.620	9.507	n/a	208.600	n/a	0.9%	n/a	n/a	n/a	1054.000
%RSD		1.769	11.410	1.451	0.337	1.487	1.0	0.723	0.613	1.572	47.210
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	61710.000	286.200	60920.000	58780.000	287.300	281.700	293.900	276.200	284.400	293.700
2	15:15:39	63150.000	293.500	62570.000	60130.000	293.800	289.500	304.100	280.900	285.600	294.800
3	15:16:06	61610.000	286.300	61960.000	59540.000	290.300	286.400	303.500	280.500	281.600	283.400
X		62160.000	96.217%	61820.000	99.141%	96.833%	95.295%	300.500	279.200	94.614%	96.877%
S		861.100	n/a	837.800	n/a	n/a	n/a	5.733	2.591	n/a	n/a
%RSD		1.385	1.451	1.355	1.133	1.120	1.374	1.908	0.928	0.728	2.171
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	282.400	289.000	299.000	286.300	3.895	-0.139	1300.000	293.100	4.335	294.800
2	15:15:39	288.500	289.200	301.900	292.200	4.802	0.050	1315.000	297.200	-0.973	299.800
3	15:16:06	284.800	282.900	296.800	286.400	3.387	0.662	1288.000	285.600	0.276	296.500
X		285.200	287.000	99.741%	288.300	4.028	0.191	1301.000	97.319%	1.213	99.018%
S		3.055	3.572	n/a	3.361	0.717	0.419	13.270	n/a	2.775	n/a
%RSD		1.071	1.244	0.860	1.166	17.800	219.100	1.020	2.003	228.800	0.859
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	88.6%	310.100	310.000	305.800	293.600	297.200	291.500	294.500	292.600	88.3%
2	15:15:39	87.6%	321.400	314.600	311.400	288.300	302.000	297.200	294.200	292.800	87.2%
3	15:16:06	87.6%	310.600	311.100	308.500	299.000	293.600	288.200	291.000	290.600	88.8%
X		88.0%	104.676%	103.962%	308.600	293.600	99.205%	292.300	293.200	97.341%	88.1%
S		0.6%	n/a	n/a	2.802	5.334	n/a	4.542	1.922	n/a	0.8%
%RSD		0.6	2.033	0.775	0.908	1.816	1.422	1.554	0.656	0.412	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	295.700	299.800	297.500	292.400	301.200	295.000	96.6%	306.300	307.600	286.900
2	15:15:39	302.700	303.200	303.100	297.100	305.900	300.700	94.8%	304.800	313.100	296.700
3	15:16:06	298.900	296.700	299.100	300.300	304.000	301.400	95.0%	305.100	309.100	289.200
X		99.707%	99.973%	299.900	98.868%	101.237%	99.682%	95.5%	305.400	103.314%	96.976%
S		n/a	n/a	2.893	n/a	n/a	n/a	1.0%	0.814	n/a	n/a
%RSD		1.173	1.093	0.965	1.350	0.774	1.178	1.1	0.267	0.919	1.775
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:15:12	282.200	282.000	91.4%							
2	15:15:39	291.900	290.900	92.5%							
3	15:16:06	286.900	287.300	92.1%							
X		95.670%	95.576%	92.0%							
S		n/a	n/a	0.6%							
%RSD		1.679	1.564	0.6							

CCB IM9936-01 4/22/2020 15:20:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run		Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06		93.3%	-0.039	1.844	1.807	-6.426	17.540	2.288	2.421	1.961	0.111
2	15:21:33		92.9%	-0.001	1.709	1.980	-10.380	16.100	1.855	1.982	2.518	0.123
3	15:22:00		90.3%	-0.012	1.736	1.798	-1.885	15.260	2.061	1.651	2.070	0.091
X			92.2%	-0.017	1.763	1.862	-6.229	16.300	2.068	2.018	2.183	0.109
S			1.7%	0.020	0.071	0.102	4.249	1.153	0.216	0.386	0.295	0.016
%RSD			1.8	114.100	4.055	5.507	68.220	7.073	10.450	19.150	13.530	15.090
Run	Time		28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06		0.794	-147.300	19.050	1.069	4.135	89.4%	0.064	0.059	0.031	-91.900
2	15:21:33		0.676	-146.600	18.610	-1.003	4.091	88.8%	0.065	0.003	0.025	-69.970
3	15:22:00		0.936	-159.200	16.910	0.018	2.363	89.7%	0.064	0.025	0.002	-81.240
X			0.802	-151.000	18.190	0.028	3.529	89.3%	0.064	0.029	0.019	-81.040
S			0.130	7.084	1.131	1.036	1.011	0.5%	0.001	0.028	0.016	10.970
%RSD			16.230	4.691	6.215	3732.000	28.640	0.5	0.890	98.070	81.440	13.530
Run	Time		54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06		1.803	0.054	-0.167	2.251	0.011	0.002	3.044	0.113	0.021	0.122
2	15:21:33		1.750	0.053	-0.716	4.594	0.014	-0.016	2.406	0.093	0.036	-0.001
3	15:22:00		1.215	0.059	-0.999	4.276	0.026	0.020	1.506	0.062	0.006	-0.096
X			1.589	0.055	-0.627	3.707	0.017	0.002	2.319	0.089	0.021	0.008
S			0.325	0.004	0.423	1.271	0.008	0.018	0.773	0.025	0.015	0.109
%RSD			20.470	6.663	67.460	34.280	49.440	826.100	33.320	28.550	70.520	1317.000
Run	Time		67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06		-0.211	0.129	-0.006	0.134	0.125	-0.022	-1.102	-0.125	-1.119	0.009
2	15:21:33		-0.329	-0.061	-0.138	0.549	0.217	0.205	-2.342	-0.389	-1.144	0.007
3	15:22:00		-0.410	0.013	-0.058	-0.106	-0.085	0.105	-1.539	-0.315	-0.349	0.005
X			-0.317	0.027	-0.067	0.192	0.086	0.096	-1.661	-0.276	-0.871	0.007
S			0.100	0.096	0.066	0.332	0.154	0.114	0.629	0.136	0.452	0.002
%RSD			31.670	351.900	98.700	172.600	180.100	118.400	37.850	49.330	51.940	33.860
Run	Time		89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06		91.0%	0.364	0.382	0.329	0.335	0.016	0.004	-0.007	0.008	94.5%
2	15:21:33		91.8%	0.291	0.348	0.437	0.539	-0.006	0.009	-0.014	0.021	94.7%
3	15:22:00		91.6%	0.377	0.295	0.410	0.338	0.008	0.012	-0.001	0.024	93.9%
X			91.5%	0.344	0.342	0.392	0.404	0.006	0.009	-0.007	0.018	94.4%
S			0.4%	0.046	0.044	0.056	0.117	0.011	0.004	0.007	0.008	0.4%
%RSD			0.5	13.490	12.810	14.340	29.010	182.200	49.340	90.630	48.010	0.5
Run	Time		116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
			ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06		0.088	0.140	0.318	0.342	-0.032	0.004	97.6%	0.004	0.016	0.027
2	15:21:33		0.118	0.150	0.292	0.308	-0.041	-0.006	96.9%	0.004	0.008	0.018
3	15:22:00		0.129	0.151	0.315	0.366	-0.041	-0.001	99.0%	0.017	0.003	0.023
X			0.112	0.147	0.308	0.339	-0.038	-0.001	97.8%	0.008	0.009	0.023
S			0.021	0.006	0.014	0.029	0.005	0.005	1.1%	0.008	0.006	0.004
%RSD			19.240	4.201	4.677	8.636	14.170	495.900	1.1	92.590	73.160	18.390
Run	Time		207Pb	208Pb	209Bi							
			ppb	ppb	ppb							
1	15:21:06		0.019	0.012	98.7%							
2	15:21:33		0.026	0.016	99.1%							
3	15:22:00		0.020	0.017	99.6%							
X			0.022	0.015	99.1%							
S			0.004	0.003	0.4%							
%RSD			17.270	19.380	0.4							

VQ51454-001 4/22/2020 15:26:29 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

User File Location: 15000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	93.8%	-0.001	1.123	1.406	-22.450	21.590	-0.272	-0.711	-0.139	0.854
2	15:27:23	91.3%	0.000	1.147	0.799	-16.940	18.610	-0.330	-0.527	-0.356	0.820
3	15:27:51	92.5%	-0.000	0.835	0.871	-14.560	17.490	-0.376	-0.543	-0.399	0.817
X		92.5%	-0.000	1.035	1.025	-17.980	19.230	-0.326	-0.594	-0.298	0.830
S		1.2%	0.001	0.174	0.332	4.047	2.117	0.052	0.102	0.139	0.021
%RSD		1.3	188.800	16.780	32.330	22.510	11.010	15.980	17.130	46.800	2.505
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	2.413	71750.000	37.090	-2.036	3.646	87.2%	0.089	-0.076	0.726	4709.000
2	15:27:23	2.815	71340.000	33.120	-0.956	3.426	86.8%	0.045	-0.349	0.707	5036.000
3	15:27:51	2.136	73120.000	30.290	4.555	2.493	85.3%	0.092	-0.173	0.805	5106.000
X		2.455	72070.000	33.500	0.521	3.188	86.4%	0.075	-0.199	0.746	4951.000
S		0.342	934.800	3.415	3.535	0.612	1.0%	0.027	0.138	0.052	211.900
%RSD		13.910	1.297	10.200	678.500	19.200	1.2	35.410	69.410	6.980	4.281
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	6.804	-0.002	2.964	3.349	-0.010	0.154	2.549	0.243	0.143	1.002
2	15:27:23	6.157	-0.003	2.546	4.356	-0.010	0.105	1.836	0.162	0.075	1.161
3	15:27:51	9.112	0.004	3.522	4.013	-0.007	0.101	1.145	0.117	0.089	0.798
X		7.358	-0.001	3.010	3.906	-0.009	0.120	1.843	0.174	0.102	0.987
S		1.554	0.004	0.490	0.512	0.002	0.030	0.702	0.064	0.036	0.182
%RSD		21.120	564.400	16.260	13.110	17.470	24.790	38.090	36.660	35.020	18.430
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.998	0.859	-0.331	-0.163	7.074	6.034	-0.252	-0.147	0.514	-0.005
2	15:27:23	0.817	1.027	-0.657	-0.078	5.758	5.816	-0.987	-0.757	3.867	0.008
3	15:27:51	1.228	0.998	-0.454	0.094	6.646	5.765	-1.432	-0.243	-0.661	-0.003
X		1.014	0.961	-0.480	-0.049	6.492	5.872	-0.890	-0.382	1.240	0.000
S		0.206	0.090	0.165	0.131	0.671	0.143	0.596	0.328	2.350	0.007
%RSD		20.330	9.353	34.270	265.700	10.340	2.435	66.980	85.790	189.500	15640.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	90.7%	0.045	0.160	0.068	0.056	-0.001	0.003	-0.006	-0.001	92.5%
2	15:27:23	89.1%	0.165	0.194	0.087	-0.366	0.004	0.011	-0.006	-0.004	92.5%
3	15:27:51	90.1%	0.140	0.107	0.062	0.395	0.012	0.003	-0.006	0.004	90.6%
X		90.0%	0.117	0.154	0.073	0.029	0.005	0.005	-0.006	-0.001	91.9%
S		0.8%	0.063	0.044	0.013	0.381	0.006	0.005	0.000	0.004	1.1%
%RSD		0.9	54.250	28.330	18.270	1333.000	117.700	88.680	1.937	697.200	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.062	0.096	0.139	0.085	-0.032	-0.012	96.5%	0.012	0.010	0.035
2	15:27:23	0.058	0.112	0.114	0.147	-0.032	0.015	97.2%	0.005	0.002	0.034
3	15:27:51	0.106	0.115	0.105	0.121	-0.012	-0.012	96.1%	0.014	0.008	0.008
X		0.075	0.108	0.119	0.118	-0.025	-0.003	96.6%	0.010	0.007	0.026
S		0.026	0.010	0.018	0.031	0.011	0.016	0.6%	0.005	0.004	0.015
%RSD		35.070	9.294	14.790	26.250	45.340	593.800	0.6	43.540	65.440	58.110
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:26:56	0.025	0.021	98.5%							
2	15:27:23	0.021	0.015	97.5%							
3	15:27:51	0.010	0.010	98.6%							
X		0.019	0.015	98.2%							
S		0.008	0.005	0.6%							
%RSD		40.930	32.860	0.6							

VQ51454-002 4/22/2020 15:32:21 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	91.1%	98.150	103.800	104.500	-11.310	1146.000	1166.000	1088.000	1049.000	100.900
2	15:33:15	88.2%	101.000	96.250	99.160	-18.110	1153.000	1128.000	1061.000	1060.000	103.600
3	15:33:42	90.2%	100.400	102.700	105.700	-14.670	1183.000	1175.000	1108.000	1088.000	104.100
X		89.8%	99.854%	100.900	103.100	-14.700	116.058%	1156.000	1086.000	106.560%	102.863%
S		1.5%	n/a	4.067	3.488	3.402	n/a	24.910	23.670	n/a	n/a
%RSD		1.7	1.506	4.031	3.383	23.150	1.712	2.154	2.180	1.862	1.648
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	848.700	71730.000	1027.000	1059.000	1029.000	84.3%	100.100	96.270	98.510	11490.000
2	15:33:15	894.300	71850.000	1033.000	1032.000	1055.000	81.8%	103.400	99.910	101.000	12620.000
3	15:33:42	855.500	73320.000	1058.000	1207.000	1075.000	80.1%	101.400	99.500	101.800	14580.000
X		866.100	72300.000	103.922%	1099.000	105.318%	82.1%	101.650%	98.560%	100.454%	12900.000
S		24.600	884.800	n/a	94.150	n/a	2.1%	n/a	n/a	n/a	1565.000
%RSD		2.840	1.224	1.604	8.566	2.211	2.6	1.633	2.019	1.715	12.140
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	1146.000	98.530	1021.000	1057.000	97.800	99.250	97.810	100.600	97.800	100.700
2	15:33:15	1177.000	99.780	1042.000	1061.000	100.500	101.400	104.700	101.600	101.600	105.500
3	15:33:42	1183.000	101.400	1066.000	1123.000	100.800	102.700	104.200	100.500	101.000	101.600
X		1168.000	99.919%	1043.000	108.037%	99.706%	101.142%	102.200	100.912%	100.103%	102.619%
S		19.440	n/a	22.220	n/a	n/a	n/a	3.847	n/a	n/a	n/a
%RSD		1.664	1.463	2.131	3.410	1.665	1.741	3.763	0.584	2.017	2.506
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	101.900	101.100	102.200	101.600	6.255	5.171	448.300	97.120	0.383	98.340
2	15:33:15	104.600	104.800	103.200	102.900	4.416	5.835	471.200	103.000	0.060	101.100
3	15:33:42	103.700	104.100	104.200	98.660	5.611	5.311	466.900	104.900	0.817	98.480
X		103.400	103.400	103.187%	101.100	5.427	5.439	462.200	101.697%	0.420	99.320
S		1.382	1.958	n/a	2.173	0.933	0.350	12.160	n/a	0.380	1.582
%RSD		1.337	1.894	0.973	2.150	17.200	6.430	2.631	4.008	90.440	1.593
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	85.6%	97.890	98.470	100.600	98.420	102.100	100.100	97.400	98.850	89.0%
2	15:33:15	83.8%	100.700	101.600	103.000	104.900	102.000	101.800	101.300	99.840	86.3%
3	15:33:42	86.1%	102.800	100.300	99.810	100.900	104.800	102.400	102.800	101.300	85.5%
X		85.2%	100.500	100.100	101.100	101.400	102.975%	101.400	100.500	100.002%	86.9%
S		1.2%	2.486	1.562	1.666	3.276	n/a	1.167	2.774	n/a	1.8%
%RSD		1.4	2.474	1.560	1.647	3.230	1.517	1.150	2.760	1.239	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	99.620	98.770	97.610	99.070	99.520	97.740	94.7%	101.900	104.700	100.900
2	15:33:15	102.600	101.900	100.100	100.600	103.400	99.960	93.5%	101.600	106.300	101.500
3	15:33:42	102.700	101.800	101.900	102.200	104.600	102.300	90.8%	102.200	109.000	104.300
X		101.600	100.837%	99.880	100.620%	102.500	100.012%	93.0%	101.900	106.672%	102.200
S		1.744	n/a	2.176	n/a	2.672	n/a	2.0%	0.268	n/a	1.851
%RSD		1.716	1.776	2.179	1.541	2.606	2.301	2.2	0.263	2.030	1.811
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:32:48	100.800	99.530	95.1%							
2	15:33:15	100.600	99.580	94.9%							
3	15:33:42	103.700	102.000	95.0%							
X		101.700	100.385%	95.0%							
S		1.728	n/a	0.1%							
%RSD		1.698	1.435	0.1							

VD17087-001

4/22/2020 15:38:12

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	94.7%	0.024	1.545	1.482	-62.820	14576.000	118690.000	119140.000	126910.000	2.039
2	15:39:06	93.3%	-0.014	1.168	1.512	-62.080	14463.000	118180.000	118410.000	126290.000	1.881
3	15:39:33	91.2%	-0.026	1.241	1.230	-63.790	14576.000	118450.000	118960.000	127000.000	2.000
X		93.1%	-0.005	1.318	1.408	-62.900	14538.000	118440.000	118830.000	126730.000	1.973
S		1.7%	0.026	0.200	0.155	0.855	165.020	1252.000	1380.400	1385.700	0.083
%RSD		1.9	492.500	15.180	10.980	1.359	1.433	1.367	2.020	1.443	4.185
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	15740.000	162410.000	12997.000	85070.000	183830.000	84.6%	0.672	-1.017	0.941	12400.000
2	15:39:06	15733.000	161180.000	12912.000	83500.000	182910.000	85.7%	0.526	-0.174	0.939	13290.000
3	15:39:33	15907.000	162750.000	13024.000	86450.000	186030.000	82.8%	0.546	-1.134	0.888	15150.000
X		15793.000	162110.000	12977.000	85010.000	184260.000	84.4%	0.581	-0.775	0.923	13610.000
S		198.500	1827.600	158.590	1477.000	11606.000	1.5%	0.079	0.523	0.030	1405.000
%RSD		1.700	1.332	1.968	1.738	1.906	1.7	13.610	67.540	3.280	10.320
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	13.320	79.890	26.200	134.200	0.511	4.333	3.305	0.194	0.167	1.398
2	15:39:06	12.560	77.510	25.070	132.100	0.579	3.948	3.904	0.144	0.225	1.454
3	15:39:33	12.410	79.440	24.890	131.900	0.531	4.233	3.127	0.119	0.230	1.391
X		12.760	78.950	25.390	132.700	0.540	4.171	3.445	0.152	0.207	1.414
S		0.488	1.265	0.711	1.268	0.035	0.200	0.407	0.038	0.035	0.035
%RSD		3.826	1.602	2.799	0.955	6.551	4.794	11.810	24.950	16.810	2.444
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	5.788	4.162	-0.843	-0.277	14.850	15.860	-1.791	-0.889	3.495	42.250
2	15:39:06	4.435	4.259	0.234	0.343	14.480	16.200	-0.919	-0.305	0.662	42.420
3	15:39:33	5.298	4.069	-1.034	-0.603	14.640	13.250	1.345	0.126	1.205	43.450
X		5.174	4.163	-0.547	-0.179	14.660	15.100	-0.455	-0.356	1.787	42.700
S		0.685	0.095	0.684	0.480	0.186	1.611	1.619	0.509	1.503	0.648
%RSD		13.240	2.285	124.900	268.600	1.268	10.660	355.900	143.100	84.120	1.517
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	89.0%	0.135	0.064	0.040	1.568	0.055	0.055	0.050	0.040	87.1%
2	15:39:06	88.0%	0.164	0.097	0.115	0.503	0.050	0.042	0.036	0.043	88.1%
3	15:39:33	86.3%	0.069	0.066	0.048	2.190	0.039	0.070	0.072	0.034	86.6%
X		87.8%	0.123	0.076	0.068	1.420	0.048	0.055	0.053	0.039	87.3%
S		1.4%	0.049	0.018	0.041	0.853	0.008	0.014	0.018	0.005	0.8%
%RSD		1.6	39.620	24.320	60.100	60.050	16.870	25.070	34.540	11.920	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	0.054	0.104	0.094	0.070	168.500	168.000	93.0%	0.035	0.039	0.023
2	15:39:06	0.123	0.058	0.103	0.097	167.300	164.900	92.9%	0.031	0.041	-0.005
3	15:39:33	0.081	0.107	0.123	0.068	170.800	168.800	92.9%	0.042	0.025	-0.001
X		0.086	0.090	0.107	0.079	168.900	167.200	92.9%	0.036	0.035	0.006
S		0.035	0.027	0.015	0.016	1.739	2.104	0.1%	0.006	0.009	0.016
%RSD		40.380	30.430	14.080	20.800	1.030	1.258	0.1	16.140	24.900	273.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:38:39	0.011	0.011	91.3%							
2	15:39:06	0.005	0.002	92.1%							
3	15:39:33	0.001	0.004	92.4%							
X		0.006	0.006	91.9%							
S		0.005	0.005	0.6%							
%RSD		90.120	79.090	0.6							

VD17087-002

4/22/2020 15:44:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	86.5%	0.280	1.234	1.672	-39.460	<u>7197.000</u>	<u>4819.000</u>	5061.000	6051.000	22.810
2	15:44:57	84.7%	0.230	2.056	1.688	-41.020	<u>7112.000</u>	<u>4735.000</u>	5016.000	6112.000	23.050
3	15:45:24	83.6%	0.234	1.910	1.255	-35.900	<u>7238.000</u>	<u>4896.000</u>	5258.000	6205.000	25.000
X		84.9%	0.248	1.733	1.538	-38.790	<u>7182.000</u>	<u>4816.000</u>	5111.000	6123.000	23.620
S		1.5%	0.028	0.438	0.246	2.626	<u>64.300</u>	<u>80.350</u>	128.900	77.480	1.204
%RSD		1.7	11.110	25.290	15.960	6.770	<u>0.895</u>	<u>1.668</u>	2.522	1.265	5.098
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	<u>4940.000</u>	<u>62130.000</u>	<u>3657.000</u>	10760.000	10320.000	76.8%	0.516	-1.537	1.471	27260.000
2	15:44:57	<u>5018.000</u>	<u>62980.000</u>	<u>3692.000</u>	10570.000	10490.000	76.3%	0.519	-1.682	1.299	26400.000
3	15:45:24	<u>5090.000</u>	<u>63960.000</u>	<u>3765.000</u>	10820.000	10600.000	76.0%	0.625	-1.397	1.308	25980.000
X		<u>5016.000</u>	<u>63020.000</u>	<u>3705.000</u>	10720.000	10470.000	76.4%	0.553	-1.539	1.359	26550.000
S		<u>74.740</u>	<u>917.300</u>	<u>54.820</u>	127.900	138.200	0.4%	0.062	0.143	0.097	648.500
%RSD		<u>1.490</u>	<u>1.456</u>	<u>1.480</u>	1.194	1.320	0.5	11.190	9.275	7.126	2.443
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	1940.000	<u>838.200</u>	<u>1791.000</u>	1849.000	2.606	4.445	4.395	6.510	6.547	30.060
2	15:44:57	1938.000	<u>847.200</u>	<u>1804.000</u>	1824.000	2.654	4.560	4.039	6.430	6.735	29.730
3	15:45:24	1929.000	<u>845.700</u>	<u>1831.000</u>	1865.000	2.789	5.003	4.887	6.470	6.642	29.350
X		1936.000	<u>843.700</u>	<u>1809.000</u>	1846.000	2.683	4.669	4.440	6.470	6.641	29.710
S		6.150	<u>4.800</u>	<u>20.340</u>	20.620	0.095	0.294	0.426	0.040	0.094	0.354
%RSD		0.318	<u>0.569</u>	<u>1.124</u>	1.117	3.541	6.305	9.591	0.615	1.417	1.191
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	31.950	29.980	-1.390	-0.216	22.670	23.780	-3.751	-0.918	0.436	39.770
2	15:44:57	31.550	31.700	-1.103	-0.648	23.440	24.890	2.345	0.387	1.292	39.850
3	15:45:24	33.740	31.290	0.150	-0.908	25.540	21.790	-0.760	-0.148	-0.046	39.400
X		32.420	30.990	-0.781	-0.591	23.880	23.490	-0.722	-0.227	0.561	39.670
S		1.165	0.899	0.819	0.349	1.485	1.570	3.048	0.656	0.678	0.237
%RSD		3.595	2.900	104.900	59.170	6.219	6.687	422.100	289.800	120.900	0.597
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	85.9%	-0.023	0.034	0.019	1.266	0.016	0.011	0.250	0.167	80.8%
2	15:44:57	86.0%	0.071	-0.024	0.043	0.627	0.006	0.015	0.248	0.187	81.4%
3	15:45:24	87.2%	0.064	0.050	-0.021	1.082	0.010	0.013	0.209	0.231	82.1%
X		86.3%	0.037	0.020	0.014	0.992	0.010	0.013	0.236	0.195	81.4%
S		0.7%	0.052	0.039	0.033	0.329	0.005	0.002	0.023	0.033	0.7%
%RSD		0.8	139.600	197.400	238.600	33.180	46.450	14.250	9.768	16.950	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	0.133	0.054	0.061	0.037	155.700	151.600	89.1%	0.067	0.080	0.229
2	15:44:57	0.124	0.054	0.047	0.049	150.000	146.200	89.1%	0.071	0.083	0.276
3	15:45:24	0.066	0.071	0.091	0.026	150.400	147.100	87.7%	0.064	0.080	0.281
X		0.108	0.060	0.066	0.037	152.000	148.300	88.6%	0.067	0.081	0.262
S		0.036	0.010	0.022	0.012	3.190	2.904	0.8%	0.004	0.002	0.029
%RSD		33.750	16.280	33.580	30.970	2.098	1.958	0.9	5.850	2.372	11.040
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:44:30	0.258	0.250	90.3%							
2	15:44:57	0.253	0.274	90.1%							
3	15:45:24	0.248	0.259	90.2%							
X		0.253	0.261	90.2%							
S		0.005	0.012	0.1%							
%RSD		1.994	4.557	0.1							

VD17087-003

4/22/2020 15:49:55

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	89.7%	0.015	0.954	1.334	-68.750	5700.000	27480.000	28330.000	43740.000	1.777
2	15:50:49	91.4%	-0.052	1.456	1.359	-68.100	5751.000	27420.000	28420.000	44670.000	1.876
3	15:51:17	89.8%	0.001	1.383	1.468	-68.050	5789.000	27920.000	28470.000	44930.000	1.874
X		90.3%	-0.012	1.264	1.387	-68.300	5747.000	27610.000	28400.000	44440.000	1.842
S		1.0%	0.035	0.272	0.071	0.393	44.470	274.500	71.600	623.100	0.056
%RSD		1.1	291.500	21.480	5.145	0.575	0.774	0.995	0.252	1.402	3.056
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	7638.000	59840.000	3130.000	138600.000	136800.000	80.2%	0.687	-0.523	0.787	13210.000
2	15:50:49	7518.000	61660.000	3192.000	141900.000	140300.000	80.7%	0.829	-1.300	0.850	14590.000
3	15:51:17	7668.000	62680.000	3217.000	144000.000	141400.000	79.4%	0.966	-0.875	0.883	15160.000
X		7608.000	61390.000	3180.000	141500.000	139500.000	80.1%	0.827	-0.899	0.840	14320.000
S		79.270	1442.000	45.040	2705.000	2420.000	0.6%	0.139	0.389	0.049	1000.000
%RSD		1.042	2.348	1.416	1.912	1.734	0.8	16.830	43.250	5.784	6.983
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	2617.000	511.000	2468.000	2705.000	6.997	17.380	17.060	0.216	0.200	1.514
2	15:50:49	2666.000	515.000	2507.000	2756.000	7.039	16.850	19.300	0.144	0.323	1.807
3	15:51:17	2670.000	522.300	2546.000	2780.000	7.182	17.340	17.000	0.195	0.284	1.576
X		2651.000	516.100	2507.000	2747.000	7.073	17.190	17.790	0.185	0.269	1.632
S		29.860	5.690	39.260	38.540	0.097	0.294	1.312	0.037	0.062	0.154
%RSD		1.126	1.102	1.566	1.403	1.374	1.710	7.372	20.010	23.220	9.455
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	13.550	10.660	1.695	-0.508	37.570	40.490	0.807	0.078	0.596	83.160
2	15:50:49	13.500	10.820	2.189	-0.399	40.220	38.110	-3.280	-0.876	0.939	81.450
3	15:51:17	12.970	10.340	2.332	-0.431	44.300	37.040	3.920	0.998	-1.186	85.040
X		13.340	10.610	2.072	-0.446	40.700	38.550	0.482	0.066	0.116	83.220
S		0.319	0.247	0.335	0.056	3.388	1.767	3.611	0.937	1.141	1.796
%RSD		2.391	2.328	16.140	12.620	8.325	4.585	748.700	1411.000	980.800	2.159
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	82.3%	-0.033	-0.055	-0.059	0.697	0.019	0.018	0.003	0.010	83.5%
2	15:50:49	83.9%	0.078	-0.018	-0.036	1.669	0.013	0.026	0.017	0.001	83.3%
3	15:51:17	82.6%	0.018	0.026	-0.028	2.393	0.006	0.016	0.010	0.000	84.2%
X		82.9%	0.021	-0.016	-0.041	1.586	0.012	0.020	0.010	0.003	83.7%
S		0.8%	0.055	0.041	0.016	0.851	0.007	0.005	0.007	0.005	0.4%
%RSD		1.0	261.300	259.800	39.160	53.670	52.440	25.100	74.150	150.500	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	0.012	0.055	0.029	0.014	612.300	613.500	89.2%	0.051	0.037	0.014
2	15:50:49	0.026	0.043	0.035	0.027	617.500	614.600	90.3%	0.048	0.043	-0.009
3	15:51:17	0.015	0.063	0.030	0.019	610.300	617.100	88.8%	0.047	0.043	0.010
X		0.018	0.053	0.031	0.020	613.400	615.100	89.4%	0.049	0.041	0.005
S		0.007	0.010	0.003	0.007	3.692	1.847	0.8%	0.002	0.003	0.013
%RSD		42.380	18.380	10.180	34.510	0.602	0.300	0.8	4.393	8.449	256.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:50:23	-0.005	0.008	88.9%							
2	15:50:49	-0.003	-0.001	89.3%							
3	15:51:17	0.001	0.006	89.1%							
X		-0.002	0.004	89.1%							
S		0.003	0.005	0.2%							
%RSD		126.900	115.600	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	83.3%	0.020	2.025	2.184	-56.960	±6585.000	±21420.000	±21910.000	±31900.000	4.457
2	15:56:42	82.0%	0.050	1.787	2.108	-56.230	±6600.000	±21850.000	±21980.000	±31960.000	4.544
3	15:57:09	81.0%	-0.037	2.737	2.263	-59.200	±6624.000	±21740.000	±22250.000	±32110.000	4.710
X		82.1%	0.011	2.183	2.185	-57.460	±6603.000	±21670.000	±22050.000	±31990.000	4.570
S		1.1%	0.044	0.494	0.077	1.548	±19.580	±224.500	±182.200	±108.700	0.129
%RSD		1.4	410.000	22.650	3.542	2.695	±0.296	±1.036	±0.826	±0.340	2.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	±5353.000	±63990.000	2444.000	94030.000	±91280.000	73.0%	0.625	-0.188	0.419	5858.000
2	15:56:42	±5417.000	±64510.000	2482.000	93510.000	±92760.000	72.1%	0.878	-0.365	0.418	5671.000
3	15:57:09	±5412.000	±64860.000	2503.000	94610.000	±93580.000	71.1%	0.781	-0.259	0.395	5416.000
X		±5394.000	±64450.000	2476.000	94050.000	±92540.000	72.1%	0.762	-0.271	0.411	5648.000
S		±35.320	±441.600	29.890	551.200	±1166.000	0.9%	0.128	0.089	0.013	222.200
%RSD		±0.655	±0.685	1.207	0.586	±1.260	1.3	16.750	32.980	3.241	3.934
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	4426.000	TM 6808.000	±4083.000	4326.000	17.610	14.510	12.890	1.230	1.284	19.600
2	15:56:42	4463.000	TM 7015.000	±4245.000	4416.000	17.810	15.150	14.190	1.105	1.570	18.030
3	15:57:09	4549.000	TM 7055.000	±4272.000	4524.000	17.820	15.360	13.880	1.319	1.304	19.600
X		4480.000	TM 6959.000	±4200.000	4422.000	17.750	15.010	13.650	1.218	1.386	19.080
S		63.220	TM 132.300	±102.300	98.970	0.118	0.443	0.679	0.108	0.159	0.908
%RSD		1.411	TM 1.901	±2.437	2.238	0.666	2.954	4.973	8.861	11.490	4.759
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	23.430	22.720	1.472	0.150	26.440	23.990	-0.610	-0.471	2.384	98.630
2	15:56:42	21.840	23.270	1.557	-0.587	25.610	24.070	-2.961	-1.009	2.483	98.450
3	15:57:09	25.480	23.490	1.003	-0.567	24.630	23.810	-1.476	-0.685	2.521	98.550
X		23.580	23.160	1.344	-0.335	25.560	23.960	-1.683	-0.722	2.463	98.540
S		1.824	0.395	0.298	0.420	0.907	0.133	1.189	0.271	0.070	0.091
%RSD		7.737	1.705	22.190	125.400	3.549	0.555	70.660	37.490	2.863	0.092
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	77.3%	0.191	0.134	0.214	1.880	-0.001	0.002	0.011	0.019	76.9%
2	15:56:42	76.2%	0.238	0.231	0.264	1.974	0.003	0.010	0.026	0.030	77.6%
3	15:57:09	75.9%	0.236	0.160	0.091	2.649	0.003	0.006	0.004	0.014	75.4%
X		76.5%	0.222	0.175	0.190	2.168	0.002	0.006	0.013	0.021	76.7%
S		0.7%	0.027	0.050	0.089	0.419	0.002	0.004	0.011	0.008	1.1%
%RSD		0.9	11.950	28.580	47.030	19.340	155.100	66.540	85.200	39.230	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	0.061	0.106	0.015	0.034	355.300	348.200	85.6%	0.059	0.064	0.034
2	15:56:42	0.060	0.055	0.042	0.040	349.800	345.400	83.9%	0.070	0.069	0.036
3	15:57:09	0.059	0.077	0.058	0.035	368.200	355.400	83.2%	0.077	0.063	0.052
X		0.060	0.079	0.038	0.037	357.800	349.700	84.2%	0.069	0.065	0.041
S		0.001	0.026	0.022	0.003	9.455	5.180	1.2%	0.009	0.003	0.010
%RSD		1.745	32.350	57.500	7.846	2.643	1.481	1.4	13.120	4.776	23.420
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:56:15	0.039	0.031	83.8%							
2	15:56:42	0.043	0.038	85.5%							
3	15:57:09	0.047	0.042	84.8%							
X		0.043	0.037	84.7%							
S		0.004	0.006	0.9%							
%RSD		9.023	14.800	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	79.9%	100.400	41.680	43.820	-55.160	7796.000	22550.000	22840.000	33340.000	108.900
2	16:02:34	80.1%	100.300	43.660	45.680	-58.290	7833.000	22810.000	23340.000	34130.000	109.100
3	16:03:01	80.3%	96.300	41.790	46.780	-57.710	7970.000	22940.000	23170.000	33820.000	108.200
X		80.1%	98.980	42.380	45.430	-57.050	7866.000	22770.000	23120.000	33760.000	108.700
S		0.2%	2.324	1.113	1.496	1.665	91.480	197.600	253.100	396.300	0.494
%RSD		0.2	2.348	2.627	3.293	2.918	1.163	0.868	1.095	1.174	0.454
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	6328.000	62520.000	3250.000	97430.000	95250.000	71.1%	102.200	99.420	101.200	5434.000
2	16:02:34	6229.000	63280.000	3247.000	97860.000	96130.000	70.8%	101.900	100.800	100.600	4915.000
3	16:03:01	6225.000	63270.000	3216.000	97650.000	96590.000	70.9%	102.200	98.200	99.650	6372.000
X		6260.000	63020.000	3238.000	97650.000	95990.000	70.9%	102.100	99.460	100.500	5574.000
S		58.270	438.100	18.730	212.800	680.900	0.1%	0.172	1.279	0.806	738.400
%RSD		0.931	0.695	0.579	0.218	0.709	0.2	0.168	1.286	0.802	13.250
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	5736.000	7040.000	5291.000	5594.000	114.300	110.600	114.300	97.120	98.750	113.700
2	16:02:34	5756.000	7133.000	5378.000	5646.000	115.200	109.600	115.900	96.030	95.040	116.200
3	16:03:01	5813.000	7347.000	5371.000	5600.000	116.300	109.600	113.700	98.560	97.490	116.600
X		5769.000	7173.000	5347.000	5613.000	115.300	109.900	114.600	97.240	97.090	115.500
S		40.080	157.500	48.080	28.770	0.997	0.563	1.145	1.269	1.887	1.528
%RSD		0.695	2.196	0.899	0.512	0.865	0.512	0.999	1.305	1.944	1.323
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	122.000	122.400	103.000	97.670	26.910	24.340	412.700	90.980	1.672	201.800
2	16:02:34	121.600	123.200	107.400	98.140	26.210	27.090	452.300	102.000	-0.842	199.700
3	16:03:01	123.000	120.400	104.300	97.000	24.660	24.430	437.500	97.510	-0.302	202.900
X		122.200	122.000	104.900	97.600	25.930	25.290	434.200	96.810	0.176	201.400
S		0.718	1.457	2.249	0.576	1.152	1.563	19.990	5.519	1.323	1.626
%RSD		0.588	1.194	2.144	0.590	4.443	6.180	4.605	5.700	751.900	0.807
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	74.3%	102.700	102.900	102.100	103.200	100.800	98.600	99.600	100.000	75.4%
2	16:02:34	75.6%	103.100	106.500	101.100	111.900	102.800	99.700	99.660	100.600	75.1%
3	16:03:01	74.5%	105.400	105.000	103.400	101.600	101.100	99.940	101.900	102.700	74.9%
X		74.8%	103.700	104.800	102.200	105.600	101.600	99.410	100.400	101.100	75.2%
S		0.7%	1.499	1.839	1.150	5.560	1.075	0.716	1.285	1.374	0.3%
%RSD		0.9	1.446	1.755	1.125	5.265	1.058	0.720	1.280	1.359	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	101.300	102.000	102.100	100.600	460.100	458.200	81.5%	102.300	108.200	102.800
2	16:02:34	103.600	103.600	105.000	101.200	474.000	456.100	83.0%	103.900	108.600	103.500
3	16:03:01	103.600	104.200	104.100	101.500	474.600	464.200	82.4%	105.500	110.900	105.500
X		102.800	103.300	103.700	101.100	469.600	459.500	82.3%	103.900	109.200	103.900
S		1.333	1.170	1.499	0.431	8.172	4.191	0.8%	1.573	1.431	1.399
%RSD		1.296	1.133	1.445	0.426	1.740	0.912	0.9	1.514	1.311	1.347
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:02:07	102.700	102.200	84.1%							
2	16:02:34	102.700	101.600	84.4%							
3	16:03:01	103.400	102.700	83.9%							
X		102.900	102.200	84.2%							
S		0.431	0.522	0.3%							
%RSD		0.418	0.511	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	81.5%	96.790	43.840	45.320	-55.750	7740.000	22520.000	22940.000	33110.000	106.400
2	16:08:27	79.9%	95.900	41.470	45.390	-59.790	7683.000	22160.000	22990.000	33500.000	108.000
3	16:08:53	82.3%	96.230	46.170	45.290	-59.080	7795.000	22370.000	23000.000	33560.000	107.800
X		81.2%	96.310	43.830	45.330	-58.210	7739.000	22350.000	22980.000	33390.000	107.400
S		1.2%	0.448	2.350	0.053	2.158	55.980	182.000	28.470	246.600	0.858
%RSD		1.5	0.465	5.362	0.117	3.708	0.723	0.814	0.124	0.739	0.799
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5956.000	60520.000	3186.000	95050.000	93880.000	71.3%	98.700	97.390	98.240	4658.000
2	16:08:27	6192.000	61000.000	3192.000	97520.000	94770.000	70.9%	103.900	99.610	97.660	5858.000
3	16:08:53	6064.000	61880.000	3213.000	98310.000	96920.000	70.5%	104.700	101.200	99.980	5015.000
X		6070.000	61130.000	3197.000	96960.000	95190.000	70.9%	102.400	99.390	98.630	5177.000
S		118.200	691.000	14.140	1698.000	1563.000	0.4%	3.266	1.901	1.207	616.000
%RSD		1.948	1.130	0.442	1.752	1.642	0.6	3.188	1.913	1.224	11.900
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5680.000	TM 7145.000	5300.000	5498.000	110.800	110.100	110.600	95.810	95.250	114.600
2	16:08:27	5739.000	TM 7097.000	5336.000	5566.000	113.800	109.100	110.400	96.640	93.960	114.600
3	16:08:53	5776.000	TM 7177.000	5291.000	5544.000	115.600	110.000	111.800	94.980	96.660	114.400
X		5732.000	TM 7140.000	5309.000	5536.000	113.400	109.700	111.000	95.810	95.290	114.500
S		48.230	TM 40.100	23.690	34.870	2.460	0.599	0.769	0.831	1.352	0.109
%RSD		0.841	TM 0.562	0.446	0.630	2.169	0.546	0.693	0.867	1.419	0.095
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	120.700	118.400	99.850	94.400	23.320	23.450	433.800	96.700	0.142	193.700
2	16:08:27	124.600	122.100	103.600	92.240	23.510	22.460	454.100	100.100	-0.778	201.500
3	16:08:53	119.200	120.600	105.300	96.070	22.930	23.430	423.000	94.100	1.638	197.100
X		121.500	120.300	102.900	94.240	23.250	23.120	437.000	96.950	0.334	197.400
S		2.763	1.848	2.789	1.923	0.297	0.566	15.760	2.985	1.220	3.907
%RSD		2.274	1.535	2.710	2.040	1.277	2.447	3.606	3.079	365.300	1.979
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	75.2%	101.700	102.100	99.810	94.470	98.190	96.440	98.540	98.470	75.6%
2	16:08:27	74.1%	101.200	99.750	101.200	103.600	100.500	98.800	100.600	98.440	75.6%
3	16:08:53	74.9%	101.300	101.800	100.700	99.580	98.870	99.950	100.300	98.730	75.2%
X		74.8%	101.400	101.200	100.600	99.220	99.190	98.400	99.810	98.550	75.4%
S		0.6%	0.275	1.299	0.685	4.583	1.197	1.789	1.121	0.159	0.3%
%RSD		0.7	0.271	1.283	0.681	4.619	1.207	1.818	1.123	0.161	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	100.800	98.180	101.200	97.460	460.500	455.900	83.4%	98.340	107.000	100.700
2	16:08:27	101.600	101.700	102.400	97.060	465.100	442.500	84.5%	103.200	104.900	100.300
3	16:08:53	102.700	102.300	103.000	99.730	465.200	452.100	83.4%	101.200	106.800	101.500
X		101.700	100.700	102.200	98.080	463.600	450.200	83.8%	100.900	106.200	100.800
S		0.982	2.225	0.901	1.438	2.673	6.926	0.6%	2.453	1.113	0.627
%RSD		0.966	2.209	0.882	1.466	0.577	1.539	0.8	2.431	1.048	0.622
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:07:59	98.570	98.090	86.6%							
2	16:08:27	98.450	98.220	84.4%							
3	16:08:53	101.200	100.700	84.7%							
X		99.410	99.000	85.2%							
S		1.557	1.462	1.2%							
%RSD		1.566	1.477	1.4							

VD17087-004L(5)

4/22/2020 16:13:24

User Pre-dilution: 1.000

User Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	84.5%	-0.010	1.608	1.659	-28.190	1344.000	<u>5506.000</u>	5872.000	6544.000	1.221
2	16:14:18	83.5%	-0.009	0.785	1.499	-28.600	1409.000	<u>5820.000</u>	6094.000	6635.000	1.203
3	16:14:45	83.1%	0.034	1.092	1.325	-28.430	1389.000	<u>5666.000</u>	6014.000	6818.000	1.135
X		83.7%	0.005	1.162	1.494	-28.400	1381.000	<u>5664.000</u>	5993.000	6665.000	1.186
S		0.7%	0.025	0.416	0.167	0.206	33.640	<u>157.200</u>	112.100	139.500	0.045
%RSD		0.8	483.400	35.770	11.180	0.726	2.437	<u>2.775</u>	1.871	2.094	3.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	1219.000	14160.000	534.100	18440.000	18210.000	79.0%	0.029	-0.092	0.108	1213.000
2	16:14:18	1215.000	14540.000	544.500	18910.000	18530.000	77.0%	0.132	-0.203	0.115	1289.000
3	16:14:45	1235.000	14570.000	540.200	19150.000	18670.000	76.6%	0.185	0.044	0.111	1099.000
X		1223.000	14420.000	539.600	18830.000	18470.000	77.6%	0.115	-0.084	0.111	1200.000
S		10.640	227.500	5.216	360.200	233.900	1.3%	0.079	0.124	0.004	95.420
%RSD		0.870	1.577	0.967	1.912	1.266	1.7	68.870	148.000	3.160	7.949
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	865.000	<u>TM 1331.000</u>	<u>805.400</u>	858.600	3.430	2.873	2.608	0.234	0.245	4.214
2	16:14:18	877.400	<u>TM 1337.000</u>	938.400	869.900	3.522	3.055	3.129	0.246	0.305	3.881
3	16:14:45	880.200	<u>TM 1393.000</u>	<u>841.700</u>	894.900	3.671	3.094	2.715	0.245	0.341	4.095
X		874.200	<u>TM 1353.000</u>	<u>861.800</u>	874.500	3.541	3.007	2.818	0.242	0.297	4.063
S		8.094	<u>TM 34.060</u>	<u>68.760</u>	18.570	0.122	0.118	0.275	0.007	0.048	0.169
%RSD		0.926	<u>TM 2.517</u>	<u>7.978</u>	2.124	3.432	3.929	9.764	2.916	16.300	4.150
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	4.840	4.678	0.210	0.103	5.098	4.313	-0.314	-0.375	2.186	19.280
2	16:14:18	5.030	5.291	0.247	-0.603	5.676	6.051	-1.719	0.048	-3.345	19.920
3	16:14:45	5.862	5.553	0.437	-0.241	5.832	3.718	0.289	0.213	-1.432	20.340
X		5.244	5.174	0.298	-0.247	5.535	4.694	-0.581	-0.038	-0.864	19.850
S		0.544	0.449	0.122	0.353	0.387	1.212	1.030	0.303	2.809	0.532
%RSD		10.370	8.679	40.850	143.000	6.987	25.820	177.300	795.000	325.200	2.682
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	78.9%	0.065	0.047	0.050	0.661	-0.003	0.004	-0.005	0.007	79.5%
2	16:14:18	79.4%	0.109	0.024	0.073	0.131	-0.005	0.004	0.003	0.010	80.9%
3	16:14:45	77.4%	0.085	0.072	0.003	1.458	-0.001	-0.000	-0.012	0.006	80.9%
X		78.6%	0.086	0.048	0.042	0.750	-0.003	0.002	-0.005	0.008	80.4%
S		1.1%	0.022	0.024	0.036	0.668	0.002	0.002	0.007	0.002	0.8%
%RSD		1.3	25.600	50.170	85.480	89.040	56.570	98.100	154.700	22.810	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	0.040	0.065	0.014	-0.057	69.730	68.810	86.9%	0.040	0.038	0.024
2	16:14:18	-0.005	0.067	-0.022	-0.034	68.700	68.200	84.4%	0.030	0.042	0.009
3	16:14:45	0.031	0.070	-0.043	-0.034	69.500	69.430	84.4%	0.026	0.026	-0.003
X		0.022	0.067	-0.017	-0.041	69.310	68.810	85.2%	0.032	0.035	0.010
S		0.024	0.002	0.029	0.013	0.544	0.615	1.4%	0.007	0.008	0.014
%RSD		108.000	3.481	166.400	31.760	0.784	0.893	1.7	21.100	22.840	138.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:13:51	0.007	0.007	88.0%							
2	16:14:18	-0.001	-0.000	87.8%							
3	16:14:45	0.001	-0.002	87.4%							
X		0.002	0.002	87.7%							
S		0.004	0.005	0.3%							
%RSD		194.200	285.000	0.3							

VD17087-004A 4/22/2020 16:19:17

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	79.6%	98.230	45.370	49.990	-52.900	7326.000	21860.000	22540.000	31600.000	105.100
2	16:20:11	80.3%	100.900	45.780	49.720	-57.560	7613.000	22110.000	22300.000	32590.000	107.900
3	16:20:38	79.6%	98.520	49.060	51.840	-52.260	7593.000	22360.000	22750.000	32330.000	106.500
X		79.9%	99.210	46.740	50.520	-54.240	7511.000	22110.000	22530.000	32170.000	106.500
S		0.4%	1.451	2.023	1.154	2.891	160.200	249.600	224.500	509.100	1.441
%RSD		0.5	1.463	4.329	2.285	5.330	2.132	1.129	0.997	1.582	1.353
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	6221.000	63370.000	3173.000	93590.000	91390.000	72.3%	96.440	98.900	98.990	5844.000
2	16:20:11	6039.000	64790.000	3243.000	94590.000	94430.000	69.9%	105.500	102.600	102.700	5453.000
3	16:20:38	6177.000	64620.000	3241.000	95480.000	92580.000	71.1%	105.700	99.940	100.700	5858.000
X		6146.000	64260.000	3219.000	94550.000	92800.000	71.1%	102.600	100.500	100.800	5718.000
S		94.720	773.200	40.180	944.700	1533.000	1.2%	5.301	1.911	1.842	229.700
%RSD		1.541	1.203	1.248	0.999	1.652	1.7	5.169	1.901	1.828	4.018
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	5584.000	TM 6775.000	5114.000	5258.000	112.800	109.600	112.100	96.010	95.880	115.500
2	16:20:11	5682.000	TM 7059.000	5291.000	5475.000	117.000	111.400	114.000	98.900	95.670	117.500
3	16:20:38	5514.000	TM 6905.000	5160.000	5417.000	115.600	112.900	110.700	96.250	99.650	118.300
X		5593.000	TM 6913.000	5188.000	5383.000	115.200	111.300	112.300	97.060	97.070	117.100
S		84.440	TM 142.000	92.160	112.300	2.129	1.685	1.695	1.602	2.237	1.426
%RSD		1.510	TM 2.054	1.776	2.086	1.849	1.514	1.510	1.650	2.305	1.218
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	120.200	120.500	104.500	98.200	23.680	23.100	442.300	100.200	0.621	192.800
2	16:20:11	125.700	125.500	105.100	101.200	23.390	23.280	440.800	96.900	1.269	197.300
3	16:20:38	121.600	121.000	106.500	98.960	25.760	22.790	432.700	98.060	0.639	196.600
X		122.500	122.300	105.400	99.440	24.280	23.060	438.600	98.400	0.843	195.600
S		2.857	2.771	1.005	1.542	1.295	0.250	5.170	1.691	0.369	2.397
%RSD		2.332	2.265	0.954	1.551	5.334	1.082	1.179	1.719	43.780	1.226
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	75.2%	104.000	104.600	101.400	100.800	101.200	100.700	102.100	100.900	74.5%
2	16:20:11	73.2%	102.900	104.000	102.300	104.400	102.100	99.180	102.600	100.700	74.6%
3	16:20:38	75.1%	106.000	107.200	104.100	100.500	103.700	100.700	102.900	103.100	74.2%
X		74.5%	104.300	105.300	102.600	101.900	102.300	100.200	102.500	101.500	74.4%
S		1.1%	1.604	1.723	1.358	2.190	1.262	0.877	0.393	1.329	0.2%
%RSD		1.5	1.538	1.637	1.324	2.149	1.233	0.875	0.383	1.309	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	104.400	105.000	94.170	90.830	455.000	440.200	81.7%	104.800	108.800	102.400
2	16:20:11	103.000	101.000	94.800	90.330	454.400	439.800	82.8%	103.700	107.800	102.700
3	16:20:38	104.100	105.000	97.160	93.610	459.900	449.600	82.8%	104.600	109.700	102.400
X		103.800	103.700	95.380	91.590	456.400	443.200	82.4%	104.300	108.800	102.500
S		0.713	2.286	1.575	1.768	3.055	5.560	0.7%	0.593	0.959	0.162
%RSD		0.687	2.205	1.651	1.930	0.669	1.255	0.8	0.568	0.881	0.158
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:19:44	102.800	102.300	83.6%							
2	16:20:11	101.900	100.600	83.9%							
3	16:20:38	103.600	102.000	83.7%							
X		102.800	101.600	83.7%							
S		0.867	0.903	0.2%							
%RSD		0.844	0.888	0.2							

CCV MW12620 4/22/2020 16:25:12 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	73.9%	322.900	290.400	295.400	3.415	63910.000	61750.000	61450.000	59570.000	306.200
2	16:26:06	76.0%	308.600	274.200	291.200	3.310	63060.000	61710.000	60760.000	58670.000	298.700
3	16:26:33	75.9%	308.300	297.300	300.100	4.705	62920.000	62540.000	61760.000	58160.000	293.900
X		75.3%	104.417%	95.763%	98.529%	3.810	105.493%	62000.000	61320.000	58.003%	99.877%
S		1.2%	n/a	n/a	n/a	0.777	n/a	469.800	509.700	n/a	n/a
%RSD		1.6	2.671	4.114	1.506	20.380	0.852	0.758	0.831	1.220	2.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	2842.000	526.500	59420.000	62530.000	62530.000	74.3%	308.300	310.100	303.200	3162.000
2	16:26:06	2774.000	463.300	58790.000	62410.000	62340.000	75.5%	308.800	303.900	296.700	3186.000
3	16:26:33	2755.000	449.600	59340.000	62090.000	62290.000	76.2%	310.600	306.300	296.800	2286.000
X		2790.000	479.800	98.638%	62340.000	103.973%	75.3%	103.085%	102.252%	99.636%	2878.000
S		45.710	41.020	n/a	230.700	n/a	1.0%	n/a	n/a	n/a	513.000
%RSD		1.638	8.549	0.579	0.370	0.207	1.3	0.398	1.013	1.251	17.820
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	62900.000	294.600	62500.000	59920.000	299.800	292.900	302.500	292.500	297.200	295.200
2	16:26:06	62160.000	290.900	61250.000	59580.000	293.600	289.900	285.600	289.800	301.500	298.000
3	16:26:33	62270.000	290.300	61340.000	58700.000	294.200	287.200	290.500	286.100	302.900	303.700
X		62440.000	97.309%	61690.000	99.001%	98.610%	96.669%	292.900	289.500	100.176%	99.652%
S		403.500	n/a	698.200	n/a	n/a	n/a	8.706	3.221	n/a	n/a
%RSD		0.646	0.802	1.132	1.054	1.154	0.972	2.973	1.113	0.981	1.443
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	290.800	289.500	311.000	289.600	0.219	-0.134	1344.000	304.700	-2.316	288.900
2	16:26:06	284.900	290.200	307.000	289.600	0.829	0.588	1322.000	298.100	0.114	298.900
3	16:26:33	299.900	288.600	313.100	286.900	0.999	-0.431	1362.000	310.800	1.058	295.900
X		291.900	289.400	103.461%	288.700	0.683	0.008	1343.000	101.512%	-0.381	98.188%
S		7.520	0.778	n/a	1.569	0.410	0.524	19.740	n/a	1.741	n/a
%RSD		2.577	0.269	0.994	0.543	60.070	6885.000	1.470	2.090	456.600	1.754
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	75.7%	316.800	310.600	308.500	282.300	296.900	299.400	296.200	295.100	75.3%
2	16:26:06	75.1%	317.600	317.200	315.400	302.000	305.500	299.100	300.000	295.300	75.3%
3	16:26:33	75.3%	323.300	324.600	319.100	291.400	303.500	297.200	298.200	298.900	74.7%
X		75.3%	106.410%	105.836%	314.300	291.900	100.657%	298.600	298.100	98.810%	75.1%
S		0.3%	n/a	n/a	5.379	9.867	n/a	1.189	1.889	n/a	0.4%
%RSD		0.4	1.112	2.205	1.711	3.380	1.477	0.398	0.633	0.709	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	302.300	300.100	302.100	298.100	304.000	296.700	81.6%	306.400	319.400	299.800
2	16:26:06	305.600	303.700	302.700	295.900	306.700	304.600	82.4%	301.800	309.500	294.600
3	16:26:33	307.200	303.400	307.400	297.100	311.700	305.500	81.3%	307.300	319.700	302.400
X		101.678%	100.804%	304.100	99.001%	102.500%	100.752%	81.8%	305.200	105.395%	99.647%
S		n/a	n/a	2.863	n/a	n/a	n/a	0.6%	2.928	n/a	n/a
%RSD		0.813	0.657	0.942	0.378	1.274	1.612	0.7	0.960	1.820	1.332
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:25:39	291.400	293.500	80.2%							
2	16:26:06	292.700	290.800	81.2%							
3	16:26:33	297.000	296.700	81.1%							
X		97.898%	97.887%	80.8%							
S		n/a	n/a	0.6%							
%RSD		0.999	1.005	0.7							

CCB IM9936-01 4/22/2020 16:31:06 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	81.2%	-0.023	2.003	1.848	5.986	0.811	2.175	2.307	1.537	0.021
2	16:32:01	82.6%	0.006	2.348	1.953	-0.964	0.490	2.116	2.015	2.591	0.010
3	16:32:28	81.5%	-0.008	1.869	1.597	-7.647	0.573	2.364	2.568	2.345	0.045
X		81.8%	-0.008	2.073	1.799	-0.875	0.625	2.218	2.296	2.158	0.025
S		0.7%	0.014	0.247	0.183	6.817	0.167	0.129	0.277	0.552	0.017
%RSD		0.9	172.200	11.930	10.160	779.000	26.660	5.831	12.040	25.560	68.600
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.676	285.100	10.940	2.709	2.297	80.3%	0.028	0.026	0.023	-76.780
2	16:32:01	0.983	237.000	9.201	0.333	2.103	81.4%	-0.022	0.028	0.012	-67.110
3	16:32:28	1.437	241.700	9.808	3.917	2.005	79.8%	-0.021	-0.000	-0.000	-59.580
X		1.365	254.600	9.982	2.320	2.135	80.5%	-0.005	0.018	0.011	-67.820
S		0.352	26.500	0.881	1.823	0.149	0.9%	0.028	0.016	0.011	8.622
%RSD		25.810	10.410	8.822	78.610	6.969	1.1	554.900	88.570	101.100	12.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.891	0.075	-2.464	2.588	0.010	-0.019	-0.120	-0.011	0.006	0.030
2	16:32:01	0.641	0.054	-2.279	3.892	0.003	0.021	-0.357	0.005	0.008	0.029
3	16:32:28	2.517	0.082	-1.388	4.207	0.009	-0.025	-0.116	0.000	0.007	0.054
X		1.683	0.070	-2.044	3.563	0.008	-0.008	-0.198	-0.002	0.007	0.038
S		0.955	0.014	0.575	0.858	0.004	0.025	0.138	0.009	0.001	0.014
%RSD		56.740	20.590	28.140	24.090	53.410	324.200	69.790	443.500	11.590	37.330
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.107	-0.032	-0.029	-0.184	0.066	-0.511	0.085	-0.284	2.116	0.007
2	16:32:01	-0.070	0.192	-0.187	0.588	0.078	0.470	-0.781	-0.170	-0.116	0.006
3	16:32:28	-0.244	0.198	-0.115	-0.123	-0.154	-0.159	-0.341	-0.443	2.614	0.004
X		-0.069	0.119	-0.111	0.094	-0.003	-0.066	-0.346	-0.299	1.538	0.006
S		0.175	0.131	0.079	0.429	0.131	0.497	0.433	0.137	1.454	0.002
%RSD		254.700	110.000	71.580	458.100	3872.000	748.200	125.400	45.880	94.500	27.970
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	79.6%	0.267	0.335	0.234	0.382	0.006	0.005	0.017	0.015	81.6%
2	16:32:01	78.5%	0.305	0.258	0.222	-0.002	0.008	0.015	0.002	0.020	80.0%
3	16:32:28	79.1%	0.163	0.263	0.152	0.481	0.006	0.023	0.002	0.020	80.8%
X		79.1%	0.245	0.285	0.202	0.287	0.007	0.015	0.007	0.018	80.8%
S		0.6%	0.074	0.043	0.044	0.255	0.001	0.009	0.008	0.003	0.8%
%RSD		0.7	30.060	15.050	21.900	88.810	18.130	60.300	118.400	18.120	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.085	0.107	0.314	0.345	-0.041	-0.011	84.6%	0.008	0.009	0.008
2	16:32:01	0.138	0.141	0.361	0.321	-0.041	0.008	82.9%	-0.002	0.009	0.016
3	16:32:28	0.100	0.142	0.351	0.338	-0.041	0.002	82.9%	0.006	0.004	0.019
X		0.108	0.130	0.342	0.335	-0.041	-0.000	83.5%	0.004	0.007	0.015
S		0.028	0.020	0.025	0.012	0.000	0.010	1.0%	0.005	0.003	0.006
%RSD		25.610	15.060	7.312	3.661	0.000	2630.000	1.2	135.700	39.320	38.350
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:31:33	0.012	0.017	85.8%							
2	16:32:01	0.034	0.026	85.9%							
3	16:32:28	0.026	0.021	85.5%							
X		0.024	0.021	85.7%							
S		0.011	0.005	0.2%							
%RSD		46.410	22.870	0.3							

LR MW12519 4/22/2020 16:37:01 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	69.0%	M 1044.000	M 1970.000	M 2056.000	6.651	TM 122700.000	TM 123000.000	TM 125000.000	TM 115200.000	TM 112800.000
2	16:37:56	69.9%	M 1032.000	M 1811.000	M 1870.000	4.291	TM 126400.000	TM 120300.000	TM 119100.000	TM 118300.000	TM 115100.000
3	16:38:22	68.0%	M 1070.000	M 1956.000	M 1999.000	2.916	TM 125200.000	TM 124500.000	TM 123800.000	TM 117700.000	TM 115400.000
X		69.0%	M 104.881%	M 95.610%	M 98.748%	4.620	TM 103.978%	TM 122600.000	TM 122600.000	TM 97.559%	TM 95.332%
S		0.9%	M n/a	M n/a	M n/a	1.889	TM n/a	TM 2149.000	TM 3075.000	TM n/a	TM n/a
%RSD		1.4	M 1.864	M 4.608	M 4.836	40.890	TM 1.505	TM 1.753	TM 2.507	TM 1.382	TM 1.243
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	7.434	208.400	TM 118300.000	M 125500.000	TM 124700.000	70.3%	M 2009.000	TM 1889.000	TM 1875.000	40380.000
2	16:37:56	7.139	167.600	TM 117800.000	M 125700.000	TM 126400.000	69.3%	M 2043.000	TM 1956.000	TM 1933.000	32590.000
3	16:38:22	8.377	174.100	TM 117900.000	M 125600.000	TM 126700.000	68.8%	M 2047.000	TM 1939.000	TM 1915.000	37640.000
X		7.650	183.400	TM 98.343%	M 125600.000	TM 104.933%	69.5%	M 101.650%	TM 96.400%	TM 95.382%	36870.000
S		0.646	21.940	TM n/a	M 122.900	TM n/a	0.8%	M n/a	TM n/a	TM n/a	3949.000
%RSD		8.450	11.970	TM 0.234	M 0.098	TM 0.866	1.1	M 1.014	TM 1.811	TM 1.569	10.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	TM 122800.000	TM 1816.000	TM 120900.000	TM 116900.000	TM 1838.000	M 1862.000	M 1880.000	M 1900.000	M 1942.000	M 1947.000
2	16:37:56	TM 126200.000	TM 1880.000	TM 124300.000	TM 119500.000	TM 1887.000	M 1890.000	M 1895.000	M 1873.000	M 1948.000	M 1939.000
3	16:38:22	TM 127000.000	TM 1904.000	TM 124600.000	TM 120900.000	TM 1891.000	M 1951.000	M 1972.000	M 1951.000	M 1948.000	M 1956.000
X		TM 125300.000	TM 93.325%	TM 123300.000	TM 99.254%	TM 93.591%	M 95.037%	M 1915.000	M 1908.000	M 97.301%	M 97.373%
S		TM 2238.000	TM n/a	TM 2066.000	TM n/a	TM n/a	M n/a	M 49.320	M 39.620	M n/a	M n/a
%RSD		TM 1.786	TM 2.435	TM 1.676	TM 1.717	TM 1.578	M 2.383	M 2.575	M 2.077	M 0.186	M 0.422
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2040.000	M 1998.000	M 2070.000	M 1822.000	1.829	0.827	8499.000	M 1945.000	17.980	TM 1995.000
2	16:37:56	M 2041.000	M 1985.000	M 2062.000	M 1840.000	1.553	-0.393	8526.000	M 1962.000	17.290	TM 1975.000
3	16:38:22	M 2030.000	M 2007.000	M 2056.000	M 1826.000	3.133	-0.434	8468.000	M 1934.000	15.930	TM 2005.000
X		M 2037.000	M 1997.000	M 103.154%	M 1829.000	2.171	-0.000	8498.000	M 97.357%	17.070	TM 99.580%
S		M 5.721	M 10.830	M n/a	M 9.593	0.844	0.716	29.400	M n/a	1.046	TM n/a
%RSD		M 0.281	M 0.543	M 0.338	M 0.524	38.870	3799000.000	0.346	M 0.725	6.129	TM 0.787
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	70.4%	M 2236.000	M 2182.000	M 2198.000	M 1940.000	297.600	293.500	M 1999.000	M 2021.000	69.4%
2	16:37:56	71.2%	M 2224.000	M 2203.000	M 2176.000	M 1969.000	295.500	290.400	M 1974.000	M 2026.000	69.6%
3	16:38:22	70.6%	M 2232.000	M 2226.000	M 2235.000	M 1978.000	299.700	292.900	M 1985.000	M 2031.000	69.5%
X		70.7%	M 2230.000	M 110.186%	M 2203.000	M 1962.000	297.600	292.300	M 1986.000	M 101.292%	69.5%
S		0.4%	M 6.150	M n/a	M 29.920	M 19.860	2.084	1.658	M 12.550	M n/a	0.1%
%RSD		0.6	M 0.276	M 0.983	M 1.358	M 1.012	0.700	0.567	M 0.632	M 0.248	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2059.000	M 2072.000	M 1063.000	M 1019.000	TM 10440.000	TM 10090.000	77.5%	M 788.800	TM 757.700	TM 1796.000
2	16:37:56	M 2077.000	M 2100.000	M 1069.000	M 1017.000	TM 10630.000	TM 10280.000	78.4%	M 785.500	TM 744.000	TM 1780.000
3	16:38:22	M 2084.000	M 2094.000	M 1061.000	M 1020.000	TM 10610.000	TM 10260.000	78.1%	M 790.800	TM 741.200	TM 1819.000
X		M 2073.000	M 104.440%	M 1064.000	M 101.856%	TM 105.608%	TM 10210.000	78.0%	M 788.400	TM 74.766%	TM 1798.000
S		M 12.600	M n/a	M 4.306	M n/a	TM n/a	TM 105.500	0.5%	M 2.663	TM n/a	TM 19.520
%RSD		M 0.608	M 0.689	M 0.405	M 0.133	TM 0.998	TM 1.034	0.6	M 0.338	TM 1.177	TM 1.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:37:29	TM 1761.000	TM 1804.000	74.5%							
2	16:37:56	TM 1757.000	TM 1796.000	75.8%							
3	16:38:22	TM 1792.000	TM 1818.000	75.3%							
X		TM 1770.000	TM 90.300%	75.2%							
S		TM 19.100	TM n/a	0.7%							
%RSD		TM 1.079	TM 0.611	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	83.1%	0.135	7.134	6.909	-59.360	±6406.000	±21060.000	±21610.000	±30690.000	3.359
2	16:43:48	82.8%	0.063	5.741	6.392	-58.650	±6702.000	±21530.000	±22160.000	±31250.000	3.709
3	16:44:15	80.8%	0.037	6.079	6.198	-55.830	±6552.000	±21470.000	±21770.000	±31100.000	3.743
X		82.2%	0.078	6.318	6.500	-57.950	±6553.000	±21350.000	±21850.000	±31010.000	3.603
S		1.2%	0.051	0.726	0.368	1.866	±147.900	±251.300	±282.900	±292.000	0.212
%RSD		1.5	64.830	11.500	5.655	3.220	±2.257	±1.177	±1.295	±0.941	5.898
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	±5404.000	±60120.000	±2249.000	91780.000	±89780.000	75.5%	0.733	0.028	0.401	3938.000
2	16:43:48	±5372.000	±61440.000	±2320.000	94650.000	±91420.000	73.4%	0.381	0.034	0.425	4047.000
3	16:44:15	±5514.000	±61040.000	2445.000	91580.000	±91330.000	73.8%	0.485	0.132	0.397	3964.000
X		±5430.000	±60870.000	±2338.000	92670.000	±90840.000	74.2%	0.533	0.065	0.408	3983.000
S		±74.550	±673.800	±99.180	1718.000	±925.200	1.1%	0.181	0.058	0.015	57.090
%RSD		±1.373	±1.107	±4.242	1.854	±1.018	1.4	33.920	90.110	3.645	1.433
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4478.000	±6730.000	±4153.000	4353.000	17.410	14.730	12.980	1.004	0.978	17.740
2	16:43:48	4509.000	±6876.000	±4280.000	4384.000	17.660	15.160	14.670	0.957	0.950	17.620
3	16:44:15	4529.000	±6879.000	±4188.000	4362.000	17.710	14.300	14.590	1.003	1.217	17.470
X		4506.000	±6828.000	±4207.000	4366.000	17.590	14.730	14.080	0.988	1.048	17.610
S		25.660	±85.120	±65.730	15.830	0.160	0.429	0.954	0.027	0.147	0.138
%RSD		0.570	±1.247	±1.562	0.363	0.910	2.913	6.774	2.690	14.030	0.785
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	21.780	22.080	2.439	-0.541	19.300	16.530	1.694	0.240	0.901	95.340
2	16:43:48	22.740	23.590	1.794	0.493	19.680	18.060	0.430	0.196	-0.884	98.190
3	16:44:15	24.380	22.070	1.785	0.172	16.660	17.450	4.271	0.798	1.013	97.840
X		22.960	22.580	2.006	0.042	18.550	17.350	2.132	0.411	0.344	97.120
S		1.316	0.878	0.375	0.529	1.648	0.769	1.957	0.335	1.064	1.554
%RSD		5.729	3.889	18.690	1272.000	8.887	4.435	91.820	81.510	309.900	1.600
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	77.8%	1.532	1.120	1.175	0.992	0.020	0.028	0.060	0.136	78.6%
2	16:43:48	76.1%	1.396	1.156	1.448	0.460	0.025	0.026	0.100	0.105	77.1%
3	16:44:15	76.4%	1.163	1.144	1.056	3.170	0.029	0.012	0.031	0.100	77.2%
X		76.8%	1.364	1.140	1.226	1.540	0.025	0.022	0.064	0.114	77.6%
S		0.9%	0.187	0.018	0.201	1.436	0.004	0.009	0.035	0.020	0.9%
%RSD		1.2	13.700	1.614	16.410	93.220	17.330	39.290	54.500	17.290	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4.263	6.298	0.450	0.543	346.600	345.900	85.1%	0.759	0.759	0.130
2	16:43:48	4.239	6.349	0.492	0.534	353.400	348.900	84.6%	0.615	0.658	0.130
3	16:44:15	3.981	5.647	0.549	0.478	354.400	351.100	83.9%	0.528	0.563	0.081
X		4.161	6.098	0.497	0.518	351.500	348.600	84.5%	0.634	0.660	0.114
S		0.157	0.391	0.050	0.035	4.224	2.585	0.6%	0.117	0.098	0.028
%RSD		3.764	6.416	10.040	6.761	1.202	0.742	0.7	18.390	14.890	24.810
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:43:21	0.124	0.128	85.7%							
2	16:43:48	0.091	0.109	85.8%							
3	16:44:15	0.090	0.092	85.0%							
X		0.102	0.110	85.5%							
S		0.019	0.018	0.4%							
%RSD		19.000	16.400	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	81.3%	-0.023	7.315	6.997	-32.990	2821.000	16610.000	16670.000	19450.000	8.122
2	16:49:40	83.1%	-0.009	6.521	7.584	-27.570	2810.000	17440.000	17320.000	19290.000	7.591
3	16:50:06	82.6%	0.006	7.440	6.401	-28.090	2713.000	16910.000	17150.000	19040.000	7.143
X		82.3%	-0.009	7.092	6.994	-29.550	2781.000	16990.000	17050.000	19260.000	7.619
S		0.9%	0.014	0.498	0.592	2.989	59.230	422.700	333.200	207.900	0.490
%RSD		1.1	166.400	7.027	8.458	10.110	2.130	2.489	1.954	1.079	6.429
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	2500.000	72250.000	3835.000	46540.000	45360.000	72.7%	0.843	-0.656	0.782	6637.000
2	16:49:40	2469.000	73060.000	3790.000	46190.000	45820.000	73.2%	0.329	-0.030	0.811	6153.000
3	16:50:06	2421.000	72110.000	3754.000	45740.000	45070.000	73.6%	0.487	-0.544	0.783	6336.000
X		2463.000	72470.000	3793.000	46160.000	45410.000	73.2%	0.553	-0.410	0.792	6376.000
S		39.980	514.700	40.660	403.600	377.900	0.4%	0.263	0.334	0.016	244.200
%RSD		1.623	0.710	1.072	0.875	0.832	0.6	47.640	81.510	2.051	3.830
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	162.300	4554.000	171.300	220.700	4.839	3.449	3.053	0.585	0.623	3.910
2	16:49:40	163.100	4503.000	166.900	219.900	4.696	3.329	2.826	0.672	0.612	4.032
3	16:50:06	158.300	4432.000	163.000	215.600	4.628	3.266	2.907	0.648	0.687	4.188
X		161.300	4496.000	167.100	218.700	4.721	3.348	2.929	0.635	0.641	4.043
S		2.566	61.020	4.169	2.772	0.108	0.093	0.115	0.045	0.041	0.139
%RSD		1.591	1.357	2.495	1.267	2.290	2.767	3.926	7.081	6.357	3.438
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	5.876	5.697	0.440	0.168	10.870	10.960	1.345	0.630	-2.342	179.100
2	16:49:40	6.779	5.928	-0.402	-0.081	10.440	11.190	-1.039	-0.120	-0.894	181.700
3	16:50:06	5.842	5.704	0.316	-0.017	12.930	10.640	-0.514	-0.018	-0.866	176.600
X		6.166	5.776	0.118	0.023	11.410	10.930	-0.069	0.164	-1.367	179.100
S		0.531	0.131	0.455	0.129	1.331	0.279	1.253	0.406	0.844	2.540
%RSD		8.616	2.275	385.200	551.700	11.660	2.556	1808.000	247.400	61.730	1.418
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	76.9%	0.184	0.271	0.225	2.808	0.060	0.053	0.107	0.158	75.8%
2	16:49:40	76.4%	0.264	0.136	0.262	3.713	0.043	0.053	0.154	0.156	76.3%
3	16:50:06	75.6%	0.248	0.164	0.151	4.512	0.043	0.075	0.098	0.150	77.0%
X		76.3%	0.232	0.190	0.213	3.677	0.049	0.060	0.119	0.154	76.4%
S		0.6%	0.042	0.071	0.057	0.853	0.010	0.012	0.030	0.004	0.6%
%RSD		0.8	18.280	37.370	26.690	23.190	20.000	20.600	25.170	2.685	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	1.353	1.965	0.194	0.200	135.300	131.400	83.1%	0.096	0.113	0.043
2	16:49:40	1.611	2.128	0.194	0.212	131.500	130.400	84.2%	0.105	0.108	0.027
3	16:50:06	1.434	2.023	0.244	0.166	134.700	129.700	83.2%	0.123	0.113	0.023
X		1.466	2.039	0.211	0.193	133.900	130.500	83.5%	0.108	0.111	0.031
S		0.132	0.082	0.029	0.024	2.027	0.845	0.6%	0.014	0.003	0.011
%RSD		9.017	4.042	13.570	12.270	1.514	0.648	0.8	12.560	2.710	34.790
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:49:13	0.030	0.032	85.0%							
2	16:49:40	0.006	0.015	83.8%							
3	16:50:06	0.015	0.016	86.1%							
X		0.017	0.021	85.0%							
S		0.012	0.009	1.2%							
%RSD		70.160	44.690	1.4							

VQ51455-001 4/22/2020 16:54:36 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

User File Location: 16:55											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	85.9%	-0.038	2.938	2.320	-15.940	11.130	-0.040	0.023	0.142	0.873
2	16:55:30	85.6%	-0.010	2.177	2.767	-7.961	11.430	-0.054	0.133	0.067	0.747
3	16:55:57	86.5%	-0.052	2.934	2.589	-9.317	12.150	0.008	0.105	0.270	0.825
X		86.0%	-0.033	2.683	2.559	-11.070	11.570	-0.029	0.087	0.160	0.815
S		0.4%	0.021	0.438	0.225	4.270	0.525	0.033	0.057	0.102	0.064
%RSD		0.5	63.820	16.340	8.793	38.560	4.538	114.500	65.790	64.110	7.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.995	74510.000	13.170	5.528	5.646	75.7%	0.110	-0.458	0.706	9213.000
2	16:55:30	1.149	75030.000	11.790	4.265	6.700	76.0%	0.006	-0.802	0.632	9028.000
3	16:55:57	0.404	76180.000	12.330	4.348	6.032	75.1%	0.033	-0.920	0.768	9472.000
X		0.849	75240.000	12.430	4.714	6.126	75.6%	0.049	-0.727	0.702	9238.000
S		0.394	857.300	0.699	0.707	0.533	0.4%	0.054	0.240	0.068	223.300
%RSD		46.360	1.139	5.623	14.990	8.708	0.6	109.200	33.040	9.675	2.417
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	9.209	0.123	18.480	3.134	-0.005	0.034	-0.423	0.008	0.135	0.827
2	16:55:30	8.948	0.158	16.720	1.613	-0.005	0.033	-0.035	0.041	0.038	0.808
3	16:55:57	6.450	0.138	17.310	2.202	-0.007	0.042	-0.076	0.062	0.075	0.674
X		8.202	0.140	17.500	2.316	-0.006	0.036	-0.178	0.037	0.083	0.770
S		1.523	0.018	0.897	0.767	0.001	0.005	0.214	0.027	0.049	0.083
%RSD		18.570	12.580	5.122	33.100	15.190	12.840	119.900	73.620	58.920	10.790
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	1.137	1.139	-1.451	-0.037	7.982	8.609	-2.528	-0.522	-0.453	0.001
2	16:55:30	1.334	0.893	-1.253	-0.570	7.709	8.077	-2.488	-0.334	-1.846	0.002
3	16:55:57	1.238	1.023	-0.819	-0.247	7.339	9.259	-1.565	-0.940	4.294	0.008
X		1.236	1.018	-1.174	-0.285	7.677	8.648	-2.194	-0.599	0.665	0.004
S		0.098	0.123	0.323	0.268	0.323	0.592	0.544	0.310	3.219	0.004
%RSD		7.946	12.090	27.530	94.290	4.207	6.842	24.820	51.740	484.100	98.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	76.7%	0.070	0.056	0.024	0.439	-0.003	-0.002	-0.012	-0.006	79.7%
2	16:55:30	75.7%	0.125	0.076	0.086	0.528	0.004	-0.002	-0.012	0.017	79.6%
3	16:55:57	76.8%	0.071	0.115	0.016	0.945	-0.003	-0.000	-0.005	0.013	79.4%
X		76.4%	0.089	0.082	0.042	0.637	-0.001	-0.002	-0.010	0.008	79.6%
S		0.6%	0.032	0.030	0.039	0.270	0.004	0.001	0.004	0.013	0.1%
%RSD		0.8	35.660	36.470	91.920	42.340	599.300	73.400	46.130	155.000	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.653	1.052	0.103	0.076	-0.030	-0.011	84.7%	0.026	0.031	-0.005
2	16:55:30	0.890	0.995	0.074	0.086	0.014	0.014	84.9%	0.023	0.031	0.002
3	16:55:57	0.751	1.039	0.101	0.108	-0.041	0.008	84.7%	0.019	0.037	0.005
X		0.765	1.029	0.093	0.090	-0.019	0.004	84.8%	0.023	0.033	0.001
S		0.119	0.030	0.016	0.016	0.029	0.013	0.1%	0.003	0.004	0.005
%RSD		15.550	2.886	17.480	18.220	154.500	347.900	0.1	14.890	11.490	830.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:55:03	0.004	-0.001	87.8%							
2	16:55:30	-0.011	-0.008	89.0%							
3	16:55:57	0.001	-0.003	87.9%							
X		-0.002	-0.004	88.2%							
S		0.008	0.003	0.7%							
%RSD		410.600	76.180	0.8							

VQ51455-002 4/22/2020 17:00:27 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	82.1%	95.910	98.680	100.600	-16.300	1128.000	1120.000	1069.000	1044.000	101.300
2	17:01:20	80.0%	99.280	100.100	106.900	-5.824	1181.000	1151.000	1076.000	1068.000	105.500
3	17:01:47	79.9%	97.850	102.100	103.500	-7.680	1157.000	1141.000	1064.000	1066.000	103.000
X		80.7%	97.680%	100.300	103.700	-9.935	115.524%	1138.000	1070.000	105.970%	103.286%
S		1.2%	n/a	1.701	3.124	5.590	n/a	16.000	5.645	n/a	n/a
%RSD		1.5	1.732	1.697	3.013	56.270	2.314	1.407	0.528	1.262	2.039
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	832.900	71980.000	1007.000	1063.000	1064.000	74.0%	96.800	100.000	97.320	8804.000
2	17:01:20	859.900	74610.000	1029.000	1106.000	1075.000	71.5%	97.320	98.960	100.700	9702.000
3	17:01:47	850.200	73630.000	1017.000	1122.000	1049.000	72.4%	97.490	97.180	100.100	10100.000
X		847.700	73410.000	101.769%	1097.000	106.283%	72.6%	97.203%	98.710%	99.375%	9536.000
S		13.640	1330.000	n/a	30.590	n/a	1.3%	n/a	n/a	n/a	664.400
%RSD		1.609	1.811	1.090	2.789	1.235	1.8	0.368	1.444	1.815	6.967
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	1147.000	98.130	1032.000	1041.000	99.180	98.630	95.300	100.800	98.770	100.700
2	17:01:20	1183.000	99.480	1072.000	1069.000	99.820	99.300	99.810	101.100	98.060	101.500
3	17:01:47	1157.000	98.150	1050.000	1049.000	99.950	100.700	98.660	101.300	99.050	100.900
X		1162.000	98.586%	1052.000	105.292%	99.650%	99.552%	97.920	101.051%	98.626%	101.021%
S		18.680	n/a	19.920	n/a	n/a	n/a	2.345	n/a	n/a	n/a
%RSD		1.608	0.787	1.895	1.392	0.416	1.074	2.395	0.231	0.520	0.402
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	103.200	100.900	103.400	97.970	6.678	5.667	488.200	105.800	-2.277	96.550
2	17:01:20	106.800	103.000	103.100	100.400	5.704	5.875	459.600	98.580	3.727	97.340
3	17:01:47	99.040	102.300	98.960	100.700	6.508	6.788	450.200	97.170	-0.247	99.970
X		103.000	102.000	101.816%	99.670	6.297	6.110	466.000	100.533%	0.401	97.960
S		3.862	1.050	n/a	1.480	0.520	0.596	19.780	n/a	3.054	1.791
%RSD		3.749	1.030	2.429	1.485	8.262	9.760	4.246	4.627	761.300	1.828
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	74.3%	97.230	98.720	99.650	99.180	101.700	98.950	99.220	98.010	77.6%
2	17:01:20	73.3%	101.200	97.300	100.200	102.900	100.500	97.920	99.190	100.700	76.6%
3	17:01:47	73.2%	99.670	100.600	101.700	99.330	102.500	101.300	99.950	100.000	76.5%
X		73.6%	99.360	98.870	100.500	100.500	101.547%	99.400	99.450	99.568%	76.9%
S		0.6%	1.996	1.651	1.070	2.102	n/a	1.751	0.430	n/a	0.6%
%RSD		0.8	2.009	1.669	1.065	2.092	1.030	1.761	0.432	1.404	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	101.200	98.820	97.180	98.470	97.780	98.930	82.8%	102.400	106.500	103.300
2	17:01:20	100.200	99.390	99.680	98.200	99.070	101.000	81.7%	103.100	108.100	103.000
3	17:01:47	101.000	100.100	99.650	99.820	104.800	101.200	81.6%	100.700	108.700	103.600
X		100.800	99.449%	98.840	98.832%	100.500	100.387%	82.0%	102.100	107.767%	103.300
S		0.527	n/a	1.436	n/a	3.717	n/a	0.7%	1.247	n/a	0.306
%RSD		0.523	0.668	1.453	0.882	3.697	1.254	0.8	1.221	1.058	0.296
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:00:53	102.500	101.100	84.9%							
2	17:01:20	102.400	102.400	85.4%							
3	17:01:47	103.700	103.700	85.9%							
X		102.900	102.399%	85.4%							
S		0.731	n/a	0.5%							
%RSD		0.711	1.269	0.6							

VD17091-001 4/22/2020 17:06:16

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	85.4%	0.004	4.764	5.073	-54.570	4116.000	14030.000	14290.000	19880.000	4.950
2	17:07:10	86.2%	-0.038	4.402	4.655	-58.370	4140.000	14090.000	14330.000	19980.000	4.958
3	17:07:37	86.3%	0.017	4.856	4.960	-55.480	4234.000	13970.000	14430.000	20170.000	4.682
X		86.0%	-0.006	4.674	4.896	-56.140	4163.000	14030.000	14350.000	20010.000	4.863
S		0.5%	0.029	0.240	0.217	1.983	62.560	62.410	68.820	146.100	0.157
%RSD		0.6	509.100	5.138	4.422	3.533	1.503	0.445	0.480	0.730	3.230
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5084.000	62060.000	2848.000	76070.000	74580.000	77.1%	0.412	-0.884	1.236	11130.000
2	17:07:10	5055.000	62840.000	2842.000	75990.000	75470.000	77.1%	0.691	-0.471	1.247	12230.000
3	17:07:37	5058.000	63390.000	2853.000	76740.000	75820.000	76.7%	0.389	-1.827	1.305	14120.000
X		5066.000	62760.000	2848.000	76270.000	75290.000	77.0%	0.497	-1.061	1.263	12500.000
S		15.630	666.100	5.691	410.100	639.000	0.2%	0.168	0.695	0.037	1513.000
%RSD		0.309	1.061	0.200	0.538	0.849	0.3	33.840	65.510	2.903	12.100
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	23.950	1.082	30.880	132.600	0.063	0.543	-0.093	0.195	0.169	1.065
2	17:07:10	26.380	1.034	30.670	126.500	0.048	0.741	-0.430	0.180	0.259	1.139
3	17:07:37	25.850	1.009	30.610	127.600	0.056	0.646	-0.428	0.151	0.304	1.319
X		25.390	1.042	30.720	128.900	0.056	0.643	-0.317	0.175	0.244	1.175
S		1.281	0.037	0.142	3.235	0.008	0.099	0.194	0.022	0.069	0.131
%RSD		5.044	3.579	0.463	2.510	13.710	15.390	61.160	12.680	28.240	11.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5.425	4.235	-0.993	-0.334	7.872	6.580	-1.147	-0.455	1.377	38.600
2	17:07:10	6.169	3.750	-0.220	0.185	5.834	6.722	-0.657	-0.288	0.924	38.420
3	17:07:37	6.514	3.673	-0.682	-0.351	7.061	6.923	-0.238	0.011	-0.528	38.690
X		6.036	3.886	-0.632	-0.167	6.922	6.742	-0.681	-0.244	0.591	38.570
S		0.557	0.305	0.389	0.305	1.026	0.172	0.455	0.236	0.995	0.135
%RSD		9.224	7.840	61.580	183.100	14.820	2.552	66.850	96.610	168.400	0.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	77.5%	0.370	0.453	0.273	0.352	0.001	0.002	0.002	0.012	78.5%
2	17:07:10	77.2%	0.281	0.273	0.330	0.418	-0.001	0.006	-0.006	0.016	78.9%
3	17:07:37	78.2%	0.320	0.404	0.353	2.181	-0.001	-0.000	-0.014	0.033	78.5%
X		77.6%	0.324	0.377	0.319	0.984	-0.001	0.002	-0.006	0.020	78.6%
S		0.5%	0.045	0.093	0.041	1.038	0.001	0.003	0.008	0.011	0.3%
%RSD		0.6	13.780	24.660	12.950	105.500	171.500	122.900	139.500	54.730	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	0.388	0.471	0.158	0.107	198.400	193.800	84.3%	0.056	0.047	0.027
2	17:07:10	0.318	0.588	0.196	0.158	197.300	196.100	85.3%	0.036	0.058	0.031
3	17:07:37	0.384	0.545	0.149	0.120	203.100	195.900	85.5%	0.040	0.035	0.023
X		0.363	0.535	0.168	0.128	199.600	195.200	85.0%	0.044	0.047	0.027
S		0.039	0.059	0.025	0.026	3.087	1.289	0.7%	0.011	0.012	0.004
%RSD		10.730	11.020	14.820	20.680	1.547	0.660	0.8	24.560	24.770	15.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:06:43	0.016	0.022	85.8%							
2	17:07:10	0.036	0.028	84.3%							
3	17:07:37	0.026	0.023	85.7%							
X		0.026	0.024	85.3%							
S		0.010	0.003	0.9%							
%RSD		38.360	13.850	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	89.1%	-0.012	1.575	1.884	-42.400	558.000	13140.000	13380.000	17660.000	16.490
2	17:13:02	88.7%	-0.039	1.996	1.725	-52.100	551.100	13190.000	13490.000	17970.000	15.120
3	17:13:29	88.0%	0.016	2.087	1.850	-43.830	566.200	13400.000	13410.000	17980.000	14.440
X		88.6%	-0.012	1.886	1.820	-46.110	558.400	13240.000	13430.000	17870.000	15.350
S		0.5%	0.027	0.273	0.084	5.237	7.534	137.400	59.210	184.600	1.041
%RSD		0.6	236.500	14.490	4.610	11.360	1.349	1.038	0.441	1.033	6.783
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	3296.000	63360.000	944.700	19640.000	19760.000	79.3%	0.597	-1.412	2.309	24750.000
2	17:13:02	3238.000	62290.000	942.800	19990.000	20170.000	78.8%	0.452	-1.666	2.486	26210.000
3	17:13:29	3320.000	63000.000	958.900	20200.000	20440.000	78.6%	0.403	-1.485	2.444	26430.000
X		3285.000	62880.000	948.800	19940.000	20120.000	78.9%	0.484	-1.521	2.413	25800.000
S		42.450	544.200	8.806	281.400	337.800	0.4%	0.101	0.131	0.093	913.900
%RSD		1.292	0.866	0.928	1.411	1.679	0.5	20.830	8.590	3.839	3.543
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	24.000	1.009	35.580	45.930	0.024	0.161	-0.112	0.143	0.321	1.266
2	17:13:02	26.050	0.971	35.940	45.200	0.026	0.204	-0.108	0.212	0.289	1.343
3	17:13:29	24.460	0.994	36.810	45.040	0.023	0.198	-0.295	0.183	0.355	1.249
X		24.840	0.991	36.110	45.390	0.024	0.187	-0.171	0.179	0.321	1.286
S		1.076	0.019	0.633	0.477	0.001	0.023	0.107	0.035	0.033	0.050
%RSD		4.331	1.927	1.752	1.052	5.996	12.390	62.260	19.500	10.330	3.883
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	20.110	12.500	-0.916	-0.404	5.906	4.863	-2.701	-0.399	-1.552	25.020
2	17:13:02	18.870	12.630	-0.480	-0.754	4.928	5.813	-4.059	-0.712	-1.530	25.060
3	17:13:29	17.920	12.620	-0.835	-0.103	7.004	5.555	-1.245	-0.401	0.803	24.840
X		18.970	12.580	-0.744	-0.420	5.946	5.411	-2.668	-0.504	-0.760	24.980
S		1.101	0.071	0.232	0.326	1.038	0.491	1.407	0.180	1.353	0.117
%RSD		5.805	0.563	31.190	77.460	17.460	9.076	52.750	35.740	178.100	0.468
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	80.4%	0.142	0.045	0.142	0.628	0.000	0.002	0.040	0.008	80.1%
2	17:13:02	79.8%	0.224	0.135	0.101	0.506	-0.003	0.002	-0.005	0.013	81.8%
3	17:13:29	78.9%	0.195	0.217	0.155	0.200	-0.005	0.002	0.040	-0.003	80.4%
X		79.7%	0.187	0.133	0.133	0.444	-0.003	0.002	0.025	0.006	80.8%
S		0.7%	0.042	0.086	0.028	0.221	0.003	0.000	0.026	0.008	0.9%
%RSD		0.9	22.370	64.820	21.280	49.650	107.700	4.082	104.200	129.100	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	0.226	0.379	0.120	0.116	774.900	764.000	86.0%	0.018	0.016	0.023
2	17:13:02	0.349	0.404	0.106	0.095	754.200	759.600	85.7%	0.024	0.022	0.044
3	17:13:29	0.301	0.414	0.090	0.094	767.800	763.000	86.2%	0.018	0.016	0.031
X		0.292	0.399	0.106	0.102	765.600	762.200	86.0%	0.020	0.018	0.033
S		0.062	0.018	0.015	0.012	10.540	2.322	0.3%	0.003	0.003	0.011
%RSD		21.320	4.442	14.000	11.950	1.376	0.305	0.3	15.620	18.740	33.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:12:35	0.024	0.027	87.4%							
2	17:13:02	0.043	0.025	87.7%							
3	17:13:29	0.017	0.025	87.4%							
X		0.028	0.026	87.5%							
S		0.014	0.001	0.2%							
%RSD		48.510	5.330	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	86.7%	-0.052	14.880	17.060	-38.650	3355.000	20540.000	20660.000	25620.000	3.923
2	17:18:55	87.1%	0.017	15.380	15.860	-42.290	3368.000	20210.000	20340.000	25270.000	3.901
3	17:19:22	84.8%	-0.024	13.430	15.040	-42.020	3496.000	20500.000	20710.000	26780.000	4.086
X		86.2%	-0.020	14.560	15.990	-40.980	3406.000	20410.000	20570.000	25890.000	3.970
S		1.2%	0.035	1.016	1.016	2.028	78.340	181.400	201.100	792.900	0.101
%RSD		1.4	174.700	6.979	6.357	4.949	2.300	0.889	0.978	3.063	2.546
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	4035.000	57450.000	1725.000	66970.000	66460.000	77.3%	0.486	-1.306	1.369	18000.000
2	17:18:55	3977.000	56920.000	1691.000	67270.000	66930.000	77.8%	0.534	-0.819	1.398	18010.000
3	17:19:22	4008.000	58400.000	1739.000	70360.000	68380.000	73.7%	0.327	-0.288	1.529	18840.000
X		4007.000	57590.000	1718.000	68200.000	67260.000	76.3%	0.449	-0.804	1.432	18280.000
S		29.110	750.800	24.790	1876.000	997.900	2.2%	0.109	0.509	0.085	479.200
%RSD		0.727	1.304	1.443	2.751	1.484	2.9	24.190	63.300	5.966	2.621
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	14.370	0.338	25.520	105.800	0.025	1.085	0.384	0.406	0.544	1.526
2	17:18:55	12.530	0.355	25.090	105.400	0.041	1.128	0.711	0.423	0.562	1.571
3	17:19:22	15.710	0.358	28.650	112.000	0.038	1.052	0.491	0.532	0.509	1.780
X		14.200	0.350	26.420	107.700	0.035	1.089	0.528	0.454	0.538	1.625
S		1.598	0.011	1.940	3.719	0.009	0.038	0.167	0.069	0.027	0.136
%RSD		11.250	3.153	7.342	3.452	24.850	3.491	31.580	15.130	4.949	8.334
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	5.199	4.150	0.086	0.734	14.430	14.870	-1.195	-0.271	-0.074	63.430
2	17:18:55	6.614	4.282	0.383	0.409	15.300	14.430	1.185	0.390	-0.988	63.430
3	17:19:22	5.453	4.078	-0.497	0.283	13.640	13.600	-1.558	-0.433	0.503	63.700
X		5.755	4.170	-0.009	0.475	14.460	14.300	-0.523	-0.105	-0.186	63.520
S		0.755	0.103	0.447	0.233	0.834	0.646	1.490	0.436	0.752	0.156
%RSD		13.110	2.478	4718.000	48.930	5.771	4.520	285.100	416.500	403.500	0.245
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	78.3%	1.341	0.895	1.313	0.740	0.003	-0.000	-0.010	-0.007	79.3%
2	17:18:55	77.8%	1.288	1.043	1.248	3.014	-0.005	0.002	0.014	-0.001	78.5%
3	17:19:22	76.9%	1.146	1.325	1.185	1.190	-0.003	-0.000	-0.001	0.003	78.2%
X		77.7%	1.258	1.088	1.249	1.648	-0.002	0.000	0.001	-0.002	78.7%
S		0.7%	0.101	0.218	0.064	1.204	0.004	0.001	0.012	0.005	0.6%
%RSD		0.9	8.035	20.080	5.122	73.060	202.100	247.200	1147.000	271.300	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	0.232	0.329	0.037	0.025	162.800	163.400	84.9%	0.037	0.033	0.033
2	17:18:55	0.231	0.344	0.051	0.036	168.600	164.100	84.7%	0.028	0.027	0.025
3	17:19:22	0.239	0.328	0.054	0.053	166.200	166.600	82.8%	0.035	0.029	0.038
X		0.234	0.334	0.047	0.038	165.900	164.700	84.1%	0.033	0.030	0.032
S		0.005	0.009	0.009	0.014	2.913	1.697	1.1%	0.004	0.003	0.007
%RSD		2.034	2.773	18.890	37.150	1.756	1.030	1.4	13.520	10.160	20.630
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:18:27	0.040	0.025	86.0%							
2	17:18:55	0.038	0.026	86.5%							
3	17:19:22	0.021	0.024	84.4%							
X		0.033	0.025	85.6%							
S		0.011	0.001	1.1%							
%RSD		32.560	3.233	1.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	87.7%	-0.038	4.016	4.544	-35.020	665.300	19520.000	19590.000	23580.000	9.747
2	17:24:47	86.7%	-0.024	4.884	4.163	-36.460	681.600	19610.000	19450.000	23950.000	10.140
3	17:25:14	85.3%	-0.024	5.407	4.547	-33.630	680.900	19430.000	19590.000	23940.000	10.220
X		86.6%	-0.029	4.769	4.418	-35.040	675.900	19520.000	19550.000	23820.000	10.040
S		1.2%	0.008	0.703	0.221	1.415	9.236	90.340	82.790	210.800	0.254
%RSD		1.4	28.250	14.730	5.002	4.039	1.366	0.463	0.424	0.885	2.530
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	2914.000	66700.000	1157.000	26570.000	26740.000	76.7%	0.363	-1.009	0.955	29020.000
2	17:24:47	2911.000	67440.000	1158.000	26600.000	26570.000	76.4%	0.134	-2.030	0.991	30090.000
3	17:25:14	3055.000	67890.000	1171.000	26920.000	26880.000	76.2%	0.289	-1.769	1.008	31050.000
X		2960.000	67340.000	1162.000	26700.000	26730.000	76.4%	0.262	-1.603	0.985	30060.000
S		82.360	600.900	8.162	196.400	156.000	0.3%	0.117	0.531	0.027	1014.000
%RSD		2.782	0.892	0.702	0.736	0.584	0.3	44.650	33.100	2.740	3.373
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	23.680	0.515	40.190	56.490	0.031	0.268	-0.042	0.162	0.248	1.121
2	17:24:47	21.780	0.521	40.070	57.610	0.022	0.255	-0.524	0.131	0.215	1.327
3	17:25:14	21.960	0.495	40.010	53.300	0.055	0.284	-0.134	0.116	0.126	1.322
X		22.480	0.510	40.090	55.800	0.036	0.269	-0.233	0.136	0.196	1.256
S		1.048	0.014	0.091	2.236	0.017	0.015	0.256	0.024	0.064	0.117
%RSD		4.664	2.652	0.227	4.007	46.170	5.493	109.800	17.430	32.380	9.349
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	5.359	3.036	-0.360	0.149	9.260	9.468	-1.192	-0.265	-0.073	43.590
2	17:24:47	4.674	3.277	0.654	-0.067	8.717	9.386	-2.142	-0.417	-0.548	43.690
3	17:25:14	4.606	3.433	-1.873	-0.262	9.674	9.622	-0.624	-0.287	0.956	45.380
X		4.880	3.249	-0.526	-0.060	9.217	9.492	-1.319	-0.323	0.112	44.220
S		0.416	0.200	1.272	0.206	0.480	0.120	0.767	0.082	0.768	1.004
%RSD		8.531	6.153	241.700	341.900	5.208	1.263	58.110	25.490	687.800	2.271
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	78.4%	2.205	2.094	2.315	2.005	0.001	-0.002	0.002	0.009	78.6%
2	17:24:47	78.6%	2.295	1.933	2.274	0.495	-0.005	0.002	0.010	0.010	79.4%
3	17:25:14	76.9%	2.019	2.486	2.231	1.665	-0.005	-0.002	-0.005	0.009	78.6%
X		78.0%	2.173	2.171	2.274	1.389	-0.003	-0.001	0.002	0.010	78.9%
S		0.9%	0.141	0.284	0.042	0.792	0.003	0.002	0.007	0.001	0.5%
%RSD		1.2	6.478	13.090	1.846	57.050	103.600	257.500	358.200	7.452	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	0.201	0.174	0.038	0.076	115.000	111.900	84.5%	0.010	0.014	-0.010
2	17:24:47	0.206	0.239	0.081	0.056	115.400	114.400	84.1%	0.009	0.003	-0.006
3	17:25:14	0.249	0.294	0.059	0.074	114.800	113.900	84.3%	0.010	0.004	-0.010
X		0.219	0.236	0.059	0.069	115.100	113.400	84.3%	0.010	0.007	-0.009
S		0.027	0.060	0.021	0.011	0.269	1.349	0.2%	0.001	0.006	0.002
%RSD		12.160	25.490	35.820	16.460	0.234	1.189	0.2	7.118	90.270	22.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:24:20	-0.011	-0.010	85.8%							
2	17:24:47	-0.014	-0.015	85.0%							
3	17:25:14	-0.020	-0.014	85.7%							
X		-0.015	-0.013	85.5%							
S		0.005	0.002	0.4%							
%RSD		31.590	18.670	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	85.0%	-0.024	15.580	15.230	-48.140	5644.000	18240.000	18390.000	24150.000	25.240
2	17:30:37	86.0%	0.004	14.640	15.690	-43.610	5647.000	18140.000	18220.000	24360.000	25.510
3	17:31:04	84.9%	-0.052	15.490	15.190	-45.050	5730.000	18060.000	18190.000	24550.000	20.320
X		85.3%	-0.024	15.240	15.370	-45.600	5674.000	18140.000	18270.000	24350.000	23.690
S		0.6%	0.028	0.518	0.281	2.315	48.950	91.810	108.100	199.400	2.917
%RSD		0.7	115.200	3.398	1.830	5.077	0.863	0.506	0.592	0.819	12.310
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	4202.000	65400.000	2323.000	75930.000	74100.000	74.6%	0.978	-0.907	1.372	23980.000
2	17:30:37	4043.000	64300.000	2112.000	73830.000	73190.000	75.4%	0.812	-1.531	1.309	23670.000
3	17:31:04	4156.000	64510.000	2274.000	73660.000	74450.000	75.1%	0.894	-1.719	1.429	23910.000
X		4134.000	64740.000	2236.000	74470.000	73910.000	75.0%	0.895	-1.386	1.370	23850.000
S		81.850	584.800	110.400	1266.000	653.500	0.4%	0.083	0.425	0.060	159.900
%RSD		1.980	0.903	4.935	1.699	0.884	0.5	9.297	30.690	4.395	0.670
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	91.650	12.030	104.000	191.800	0.077	0.548	-0.319	0.109	0.206	1.187
2	17:30:37	90.260	12.130	102.800	190.900	0.057	0.621	-0.226	0.208	0.284	1.026
3	17:31:04	91.060	12.140	102.700	186.500	0.065	0.668	0.320	0.117	0.220	1.185
X		90.990	12.100	103.200	189.700	0.066	0.612	-0.075	0.145	0.237	1.133
S		0.698	0.062	0.751	2.829	0.010	0.061	0.345	0.055	0.041	0.092
%RSD		0.767	0.516	0.728	1.491	14.830	9.904	458.800	37.900	17.460	8.140
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	6.045	3.480	-0.207	0.421	15.170	15.180	0.391	0.401	-2.337	69.310
2	17:30:37	5.612	3.270	-0.878	0.347	16.830	15.800	1.299	0.278	0.014	69.040
3	17:31:04	5.205	3.706	-0.636	-0.381	16.420	15.400	-1.094	-0.133	-0.932	69.660
X		5.621	3.485	-0.574	0.129	16.140	15.460	0.199	0.182	-1.085	69.340
S		0.420	0.218	0.340	0.443	0.863	0.314	1.208	0.279	1.183	0.314
%RSD		7.470	6.267	59.290	342.900	5.345	2.030	608.500	153.600	109.000	0.453
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	76.4%	0.384	0.348	0.343	3.143	-0.007	-0.002	0.002	0.009	76.4%
2	17:30:37	76.9%	0.308	0.342	0.277	1.898	0.003	-0.004	-0.005	-0.000	77.4%
3	17:31:04	76.9%	0.306	0.399	0.280	2.702	-0.003	-0.002	-0.013	0.002	77.8%
X		76.7%	0.332	0.363	0.300	2.581	-0.003	-0.003	-0.005	0.004	77.2%
S		0.3%	0.044	0.031	0.037	0.631	0.005	0.001	0.008	0.005	0.7%
%RSD		0.4	13.370	8.603	12.380	24.460	195.300	41.520	144.500	129.800	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	0.138	0.227	0.039	0.004	171.100	165.500	84.7%	0.014	0.014	0.023
2	17:30:37	0.117	0.215	0.034	0.039	172.600	170.400	82.9%	0.011	0.010	0.026
3	17:31:04	0.117	0.242	0.027	0.017	169.000	169.600	82.8%	0.005	0.005	0.025
X		0.124	0.228	0.033	0.020	170.900	168.500	83.5%	0.010	0.009	0.025
S		0.012	0.014	0.006	0.018	1.805	2.632	1.0%	0.004	0.005	0.001
%RSD		9.960	5.918	18.530	89.780	1.056	1.562	1.2	43.370	48.570	5.625
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:30:10	0.012	0.017	84.3%							
2	17:30:37	0.026	0.031	84.4%							
3	17:31:04	0.019	0.025	83.8%							
X		0.019	0.024	84.2%							
S		0.007	0.007	0.3%							
%RSD		37.840	29.450	0.4							

VD17091-005S 4/22/2020 17:35:36

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	84.1%	95.740	65.590	68.430	-49.900	16534.000	118410.000	118990.000	125380.000	179.600
2	17:36:29	84.4%	94.860	61.380	67.480	-42.000	16714.000	118810.000	119000.000	125320.000	173.600
3	17:36:56	82.4%	95.900	66.000	69.270	-45.740	16817.000	118680.000	119130.000	125240.000	176.000
X		83.6%	95.500	64.320	68.390	-45.880	16688.000	118630.000	119040.000	125310.000	176.400
S		1.1%	0.564	2.559	0.893	3.955	1143.300	1200.700	1177.820	1171.090	3.009
%RSD		1.3	0.591	3.978	1.305	8.620	12.143	11.077	110.409	110.281	1.706
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	14847.000	164450.000	12985.000	74220.000	173680.000	73.9%	98.730	96.680	96.990	26640.000
2	17:36:29	14755.000	165290.000	13047.000	75490.000	175050.000	73.6%	99.480	95.800	98.150	26470.000
3	17:36:56	14931.000	166000.000	12988.000	75860.000	175680.000	72.5%	104.500	96.980	97.460	25360.000
X		14844.000	165250.000	13006.000	75190.000	174800.000	73.4%	100.900	96.490	97.530	26160.000
S		187.960	1775.500	134.760	857.600	11025.000	0.7%	3.153	0.614	0.583	693.500
%RSD		1.816	1.189	1.156	1.141	11.370	1.0	3.124	0.636	0.598	2.651
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	1209.000	108.400	11137.000	1228.000	93.740	93.360	91.630	94.560	93.170	94.830
2	17:36:29	1233.000	106.000	11122.000	1225.000	93.320	93.410	95.960	93.840	95.100	97.120
3	17:36:56	1220.000	107.500	11115.000	1221.000	93.220	93.120	93.390	93.290	93.120	97.020
X		1221.000	107.300	11124.000	1225.000	93.430	93.300	93.660	93.900	93.800	96.320
S		11.850	1.223	11.230	3.355	0.275	0.155	2.177	0.635	1.126	1.294
%RSD		0.971	1.140	10.999	0.274	0.295	0.166	2.325	0.676	1.201	1.343
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	103.800	99.190	97.920	94.840	16.400	16.840	449.600	99.270	1.096	166.200
2	17:36:29	102.500	96.830	103.000	97.340	16.110	15.370	430.500	95.800	-2.767	164.800
3	17:36:56	101.600	98.660	99.610	92.630	18.020	16.790	443.800	99.370	2.064	163.100
X		102.600	98.230	100.200	94.940	16.840	16.330	441.300	98.150	0.131	164.700
S		1.092	1.238	2.575	2.354	1.028	0.833	9.826	2.037	2.556	1.544
%RSD		1.064	1.260	2.570	2.480	6.102	5.102	2.227	2.075	1955.000	0.938
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	75.1%	100.500	98.660	99.620	95.980	97.860	94.430	95.060	94.980	76.5%
2	17:36:29	74.4%	100.400	99.490	99.930	102.400	98.670	95.910	97.180	97.650	75.8%
3	17:36:56	75.3%	100.700	99.600	98.980	94.300	99.080	95.420	96.700	97.700	75.4%
X		75.0%	100.600	99.250	99.510	97.550	98.540	95.250	96.310	96.780	75.9%
S		0.5%	0.125	0.513	0.482	4.265	0.618	0.757	1.113	1.556	0.6%
%RSD		0.6	0.124	0.517	0.484	4.372	0.627	0.795	1.155	1.608	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	96.360	96.290	96.950	95.970	267.500	261.200	84.0%	97.850	99.660	95.270
2	17:36:29	98.570	99.320	98.200	96.190	269.100	265.400	83.1%	99.380	102.900	96.800
3	17:36:56	100.400	98.650	99.070	95.920	271.500	269.800	83.5%	99.220	101.000	96.460
X		98.450	98.090	98.070	96.030	269.400	265.500	83.5%	98.810	101.200	96.170
S		2.027	1.592	1.068	0.145	2.022	4.306	0.5%	0.839	1.637	0.802
%RSD		2.059	1.623	1.089	0.151	0.750	1.622	0.5	0.849	1.618	0.834
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:36:02	94.550	94.010	83.9%							
2	17:36:29	96.760	95.910	83.9%							
3	17:36:56	96.180	95.070	84.2%							
X		95.830	95.000	84.0%							
S		1.143	0.956	0.2%							
%RSD		1.193	1.006	0.2							

CCV MW12620 4/22/2020 17:41:29 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	73.6%	315.600	280.800	299.300	8.345	±62440.000	±61300.000	±60970.000	±58900.000	302.800
2	17:42:24	73.8%	307.800	285.100	306.600	5.804	±63430.000	±62260.000	±62620.000	±60310.000	310.800
3	17:42:51	72.4%	312.800	297.300	305.800	10.090	±62660.000	±62440.000	±62500.000	±58670.000	304.200
X		73.3%	104.030%	95.910%	101.301%	8.080	±104.739%	±62000.000	±62030.000	±98.823%	101.983%
S		0.7%	n/a	n/a	n/a	2.156	±n/a	±609.000	±925.400	±n/a	n/a
%RSD		1.0	1.271	2.964	1.308	26.680	±0.825	±0.982	±1.492	±1.493	1.387
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	3037.000	669.200	±58050.000	61940.000	±61810.000	71.2%	301.800	305.400	300.500	2918.000
2	17:42:24	±2799.000	624.400	±58220.000	62600.000	±63670.000	71.0%	308.700	309.000	303.200	2786.000
3	17:42:51	±2825.000	594.900	±57930.000	61490.000	±61920.000	72.2%	307.400	300.400	293.800	4008.000
X		±2887.000	629.500	±96.774%	62010.000	±104.113%	71.4%	101.993%	101.640%	99.719%	3237.000
S		±130.700	37.430	±n/a	561.600	±n/a	0.6%	n/a	n/a	n/a	670.700
%RSD		±4.529	5.946	±0.250	0.906	±1.668	0.9	1.194	1.407	1.616	20.720
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	±62390.000	294.600	±62170.000	±59180.000	299.300	295.100	306.200	286.600	298.700	298.200
2	17:42:24	±63190.000	294.000	±63620.000	±60990.000	299.200	294.900	296.900	286.400	297.900	300.900
3	17:42:51	±62210.000	290.000	±62510.000	±59590.000	292.400	289.700	298.000	289.000	296.100	301.100
X		±62600.000	97.623%	±62770.000	±99.870%	98.997%	97.750%	300.300	287.300	99.186%	100.020%
S		±517.900	n/a	±759.100	±n/a	n/a	n/a	5.081	1.422	n/a	n/a
%RSD		±0.827	0.843	±1.209	±1.584	1.335	1.051	1.692	0.495	0.453	0.539
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	286.000	290.800	314.000	286.000	0.393	-0.581	1354.000	305.400	-1.647	295.900
2	17:42:24	291.800	289.100	311.900	293.600	1.122	-0.558	1345.000	305.400	0.315	296.000
3	17:42:51	300.500	288.700	310.400	288.600	0.208	-0.063	1344.000	300.100	1.984	298.500
X		292.800	289.600	104.037%	289.400	0.575	-0.401	1348.000	101.216%	0.218	98.939%
S		7.292	1.133	n/a	3.873	0.483	0.293	5.707	n/a	1.818	n/a
%RSD		2.491	0.391	0.577	1.338	84.080	73.020	0.423	1.000	835.500	0.491
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	70.8%	320.800	315.200	312.300	295.100	303.700	297.300	300.800	296.800	71.1%
2	17:42:24	72.3%	318.700	320.300	308.400	283.500	300.800	292.600	294.800	295.600	71.7%
3	17:42:51	70.1%	321.100	318.800	319.300	295.600	304.600	296.300	296.800	300.500	71.3%
X		71.1%	106.742%	106.034%	313.300	291.400	101.012%	295.400	297.400	99.201%	71.4%
S		1.1%	n/a	n/a	5.512	6.876	n/a	2.495	3.046	n/a	0.3%
%RSD		1.5	0.407	0.815	1.759	2.360	0.662	0.845	1.024	0.858	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	308.800	305.700	301.700	292.900	307.600	296.900	78.6%	310.400	314.700	296.800
2	17:42:24	306.000	306.200	304.800	296.500	306.800	300.900	77.9%	310.000	313.800	298.200
3	17:42:51	307.100	305.500	311.400	307.500	307.900	303.700	77.4%	308.900	318.600	299.800
X		102.438%	101.947%	306.000	99.651%	102.489%	100.178%	77.9%	309.800	105.241%	99.422%
S		n/a	n/a	4.932	n/a	n/a	n/a	0.6%	0.801	n/a	n/a
%RSD		0.457	0.116	1.612	2.539	0.185	1.140	0.8	0.259	0.807	0.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:41:56	292.900	292.700	76.2%							
2	17:42:24	297.800	296.900	76.5%							
3	17:42:51	297.100	298.200	75.9%							
X		98.643%	98.653%	76.2%							
S		n/a	n/a	0.3%							
%RSD		0.894	0.974	0.4							

CCB IM9936-01 4/22/2020 17:47:24 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	79.1%	-0.037	2.022	2.883	9.522	0.016	1.935	1.217	1.412	0.041
2	17:48:18	77.8%	-0.006	2.557	2.618	14.000	0.510	2.270	1.784	1.699	0.064
3	17:48:45	77.7%	0.010	2.843	1.926	16.460	0.386	1.887	2.274	1.438	0.036
X		78.2%	-0.011	2.474	2.476	13.330	0.304	2.030	1.758	1.516	0.047
S		0.8%	0.024	0.417	0.494	3.519	0.257	0.209	0.529	0.159	0.015
%RSD		1.0	212.700	16.850	19.970	26.400	84.450	10.280	30.100	10.480	31.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.534	386.400	10.590	0.654	3.969	74.5%	-0.046	-0.014	-0.022	-35.100
2	17:48:18	0.822	364.100	9.863	3.126	3.236	74.9%	-0.046	0.017	0.027	-47.580
3	17:48:45	0.501	356.200	9.429	4.423	3.828	74.4%	-0.019	0.013	0.010	-42.880
X		0.619	368.900	9.960	2.734	3.678	74.6%	-0.037	0.005	0.005	-41.860
S		0.177	15.670	0.585	1.914	0.389	0.3%	0.015	0.017	0.025	6.303
%RSD		28.550	4.248	5.871	70.010	10.580	0.4	41.170	308.500	503.300	15.060
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	2.202	0.005	-3.338	5.697	0.006	-0.009	0.030	0.011	-0.001	-0.108
2	17:48:18	2.318	0.026	-3.499	6.711	0.017	-0.031	-0.272	0.005	0.015	-0.098
3	17:48:45	2.410	0.038	-3.171	4.118	0.004	-0.023	-0.169	-0.025	0.028	-0.061
X		2.310	0.023	-3.336	5.509	0.009	-0.021	-0.137	-0.003	0.014	-0.089
S		0.104	0.017	0.164	1.306	0.007	0.011	0.153	0.019	0.014	0.025
%RSD		4.521	72.240	4.905	23.710	74.270	53.460	112.000	644.800	105.100	28.090
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	83Kr	88Sr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.048	0.098	-0.078	0.180	0.133	-0.313	-1.386	-0.553	1.682	0.001
2	17:48:18	-0.336	0.024	-0.065	0.630	-0.667	-0.913	-1.376	-0.341	0.215	0.009
3	17:48:45	0.198	0.251	0.138	0.388	-0.351	-0.839	2.670	0.764	-1.244	0.007
X		-0.030	0.124	-0.001	0.399	-0.295	-0.688	-0.031	-0.043	0.218	0.006
S		0.275	0.116	0.121	0.225	0.403	0.327	2.339	0.707	1.463	0.004
%RSD		921.100	93.260	8590.000	56.460	136.400	47.560	7634.000	1635.000	672.500	70.780
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	73.6%	0.162	0.187	0.277	0.086	0.005	0.010	0.003	0.020	76.3%
2	17:48:18	73.4%	0.207	0.158	0.167	-0.053	0.014	0.015	-0.005	0.025	73.5%
3	17:48:45	72.9%	0.167	0.284	0.193	0.222	0.010	0.036	0.020	0.000	73.6%
X		73.3%	0.179	0.210	0.212	0.085	0.009	0.020	0.006	0.015	74.5%
S		0.4%	0.025	0.066	0.057	0.137	0.004	0.014	0.013	0.013	1.6%
%RSD		0.5	13.700	31.360	27.040	161.600	46.990	67.710	207.800	86.350	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.131	0.200	0.361	0.342	-0.041	-0.017	79.6%	0.020	0.004	0.013
2	17:48:18	0.141	0.195	0.397	0.349	-0.029	-0.004	78.3%	0.009	0.017	0.042
3	17:48:45	0.157	0.218	0.291	0.250	-0.029	0.003	78.3%	0.010	0.010	0.024
X		0.143	0.204	0.350	0.314	-0.033	-0.006	78.7%	0.013	0.010	0.026
S		0.013	0.012	0.054	0.055	0.007	0.010	0.7%	0.006	0.006	0.015
%RSD		9.061	5.886	15.390	17.550	20.880	177.500	0.9	47.460	60.880	56.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:47:51	0.011	0.014	82.1%							
2	17:48:18	0.026	0.031	81.0%							
3	17:48:45	0.028	0.018	81.1%							
X		0.021	0.021	81.4%							
S		0.009	0.009	0.6%							
%RSD		43.440	42.430	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	81.0%	98.030	63.600	67.350	-45.940	18540.000	18540.000	19110.000	25590.000	171.500
2	17:54:09	80.0%	99.760	69.510	68.870	-44.090	18980.000	18980.000	19410.000	25550.000	173.100
3	17:54:36	81.5%	97.220	66.430	69.840	-43.320	19460.000	19460.000	19620.000	26160.000	177.800
X		80.8%	98.340	66.510	68.690	-44.450	18990.000	18990.000	19380.000	25760.000	174.100
S		0.8%	1.298	2.952	1.254	1.350	189.800	462.200	253.000	342.200	3.281
%RSD		1.0	1.320	4.438	1.826	3.038	2.793	2.434	1.305	1.328	1.884
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	5061.000	62800.000	2998.000	75570.000	75440.000	74.1%	98.930	94.480	95.830	14610.000
2	17:54:09	5143.000	64470.000	3097.000	75650.000	76360.000	73.0%	97.880	95.480	98.310	16470.000
3	17:54:36	4981.000	65930.000	3116.000	77650.000	77640.000	71.6%	102.600	99.060	98.250	17810.000
X		5062.000	64400.000	3070.000	76290.000	76480.000	72.9%	99.810	96.340	97.460	16300.000
S		81.140	1566.000	63.540	1178.000	1103.000	1.3%	2.489	2.406	1.420	1603.000
%RSD		1.603	2.431	2.070	1.544	1.442	1.7	2.494	2.498	1.457	9.839
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	1204.000	106.300	1094.000	1218.000	92.340	92.480	94.430	94.760	96.560	99.410
2	17:54:09	1218.000	107.000	1133.000	1229.000	94.190	93.450	94.380	94.260	97.290	99.250
3	17:54:36	1273.000	112.200	1154.000	1275.000	96.010	95.200	98.700	94.400	96.480	97.570
X		1231.000	108.500	1127.000	1241.000	94.180	93.710	95.830	94.470	96.780	98.740
S		36.540	3.240	30.290	30.210	1.832	1.377	2.481	0.254	0.446	1.022
%RSD		2.967	2.986	2.689	2.434	1.946	1.469	2.589	0.269	0.461	1.035
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	98.690	99.430	102.100	98.210	12.570	10.780	427.200	96.470	2.198	165.400
2	17:54:09	102.900	101.000	101.700	97.190	15.580	13.660	453.100	102.100	-2.247	167.600
3	17:54:36	101.500	100.800	105.000	97.030	14.040	13.650	455.800	101.600	-1.745	167.100
X		101.000	100.400	103.000	97.480	14.060	12.700	445.400	100.000	-0.598	166.700
S		2.134	0.858	1.798	0.639	1.509	1.663	15.790	3.112	2.434	1.120
%RSD		2.112	0.855	1.746	0.655	10.730	13.090	3.544	3.110	406.900	0.672
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	73.4%	102.400	100.800	98.340	104.100	97.980	97.030	96.180	97.590	73.4%
2	17:54:09	73.4%	102.500	102.400	100.400	93.490	98.760	96.860	99.240	96.310	73.8%
3	17:54:36	73.5%	102.900	100.400	101.000	102.100	99.890	98.440	96.840	96.820	74.4%
X		73.4%	102.600	101.200	99.910	99.900	98.880	97.440	97.420	96.910	73.9%
S		0.0%	0.239	1.009	1.383	5.652	0.959	0.867	1.612	0.645	0.5%
%RSD		0.1	0.233	0.997	1.384	5.657	0.970	0.890	1.655	0.665	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	99.790	99.480	100.300	99.920	275.200	269.400	79.2%	99.300	105.200	103.000
2	17:54:09	99.120	100.400	100.500	98.060	278.300	274.300	81.2%	99.660	103.500	98.000
3	17:54:36	99.560	101.400	100.200	100.500	275.900	272.500	80.6%	100.900	105.000	100.300
X		99.490	100.400	100.300	99.500	276.400	272.100	80.4%	99.940	104.600	100.400
S		0.344	0.955	0.146	1.284	1.616	2.485	1.0%	0.823	0.958	2.511
%RSD		0.346	0.950	0.145	1.291	0.584	0.914	1.3	0.823	0.916	2.500
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:53:42	100.600	100.300	82.5%							
2	17:54:09	98.350	96.910	82.1%							
3	17:54:36	98.980	98.450	82.1%							
X		99.310	98.540	82.2%							
S		1.160	1.677	0.2%							
%RSD		1.168	1.702	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	82.7%	0.006	6.386	5.822	-19.410	1182.000	4478.000	4753.000	5091.000	7.650
2	17:59:59	82.7%	-0.038	6.263	5.797	-20.090	1184.000	4575.000	4845.000	5037.000	6.579
3	18:00:26	81.9%	-0.008	6.438	6.219	-15.610	1232.000	4645.000	4870.000	5177.000	6.651
X		82.5%	-0.013	6.362	5.946	-18.370	1199.000	4566.000	4822.000	5102.000	6.960
S		0.5%	0.022	0.090	0.237	2.414	28.240	83.700	61.740	70.330	0.599
%RSD		0.6	165.500	1.416	3.984	13.140	2.355	1.833	1.280	1.379	8.602
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	922.500	13900.000	483.900	14950.000	14640.000	76.1%	0.212	-0.220	0.310	5719.000
2	17:59:59	907.800	14200.000	489.100	14720.000	14590.000	76.9%	0.184	-0.756	0.257	5859.000
3	18:00:26	940.200	14600.000	508.600	15400.000	14860.000	75.1%	0.189	-0.184	0.300	5865.000
X		923.500	14230.000	493.900	15020.000	14700.000	76.0%	0.195	-0.387	0.289	5814.000
S		16.200	351.600	13.050	342.700	143.700	0.9%	0.015	0.320	0.028	82.970
%RSD		1.755	2.470	2.642	2.281	0.978	1.2	7.659	82.860	9.793	1.427
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	16.270	2.417	33.430	41.210	-0.001	0.177	0.257	0.044	0.034	0.346
2	17:59:59	17.190	2.419	31.210	40.910	0.015	0.118	-0.188	0.051	0.065	0.341
3	18:00:26	18.050	2.469	32.500	41.210	0.023	0.137	-0.125	0.024	0.067	0.404
X		17.170	2.435	32.380	41.110	0.012	0.144	-0.019	0.040	0.055	0.364
S		0.892	0.030	1.113	0.170	0.012	0.030	0.240	0.014	0.019	0.035
%RSD		5.194	1.213	3.436	0.414	96.790	21.080	1297.000	34.410	34.130	9.578
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	1.858	0.756	0.128	-0.291	3.116	2.943	1.437	0.455	-1.344	13.680
2	17:59:59	2.004	0.854	-0.030	0.044	2.390	2.035	0.352	-0.068	0.975	13.550
3	18:00:26	0.982	0.811	-0.042	0.169	2.779	2.382	-1.462	-0.685	2.553	14.340
X		1.615	0.807	0.018	-0.026	2.762	2.453	0.109	-0.099	0.728	13.850
S		0.552	0.049	0.095	0.238	0.363	0.459	1.465	0.570	1.960	0.423
%RSD		34.220	6.133	514.500	916.200	13.160	18.690	1341.000	573.700	269.400	3.055
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	75.2%	0.086	0.118	0.020	-0.302	0.003	-0.000	-0.004	0.012	78.5%
2	17:59:59	76.5%	0.187	0.190	0.159	0.205	0.005	-0.002	-0.013	0.002	77.9%
3	18:00:26	74.9%	0.103	0.124	0.037	0.403	0.003	-0.004	0.004	-0.002	76.9%
X		75.5%	0.125	0.144	0.072	0.102	0.003	-0.002	-0.005	0.004	77.8%
S		0.9%	0.054	0.040	0.076	0.363	0.001	0.002	0.008	0.007	0.8%
%RSD		1.1	43.120	27.540	105.900	356.400	33.540	91.540	178.000	189.800	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	0.059	0.132	0.009	-0.014	31.310	32.870	80.5%	0.031	0.033	0.002
2	17:59:59	0.067	0.145	0.021	0.005	32.710	33.940	81.3%	0.035	0.041	0.001
3	18:00:26	0.095	0.170	0.015	0.010	35.550	33.910	81.4%	0.036	0.028	-0.007
X		0.074	0.149	0.015	0.001	33.190	33.570	81.1%	0.034	0.034	-0.002
S		0.019	0.019	0.006	0.013	2.160	0.610	0.5%	0.003	0.006	0.005
%RSD		25.600	12.900	36.810	2229.000	6.507	1.817	0.6	8.281	18.660	333.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:59:32	-0.010	-0.004	84.7%							
2	17:59:59	0.008	-0.002	84.3%							
3	18:00:26	-0.006	-0.010	85.6%							
X		-0.003	-0.005	84.9%							
S		0.009	0.004	0.6%							
%RSD		360.500	85.050	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	83.3%	94.560	67.350	69.490	-45.490	18320.000	18210.000	18210.000	23860.000	121.900
2	18:05:49	83.6%	97.930	74.210	75.520	-44.280	19020.000	19020.000	19020.000	25260.000	125.400
3	18:06:16	82.8%	100.600	70.980	74.650	-45.150	18770.000	18770.000	19150.000	25440.000	127.100
X		83.2%	97.690	70.850	73.220	-44.970	18700.000	18700.000	18790.000	24850.000	124.800
S		0.4%	3.026	3.436	3.257	0.621	101.300	356.000	509.300	864.600	2.640
%RSD		0.5	3.098	4.849	4.449	1.381	1.535	1.904	2.710	3.479	2.116
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	4731.000	62730.000	2928.000	71750.000	71670.000	74.7%	98.640	96.080	97.020	19730.000
2	18:05:49	4720.000	64540.000	3061.000	73410.000	72790.000	72.9%	103.600	96.810	97.740	22040.000
3	18:06:16	4793.000	65390.000	3073.000	74940.000	74010.000	72.5%	100.400	99.020	100.900	20280.000
X		4748.000	64220.000	3021.000	73370.000	72820.000	73.4%	100.900	97.310	98.540	20680.000
S		39.350	1360.000	80.720	1597.000	1167.000	1.2%	2.502	1.529	2.044	1206.000
%RSD		0.829	2.118	2.672	2.177	1.603	1.6	2.481	1.571	2.074	5.833
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	1203.000	107.500	1109.000	1216.000	93.890	94.200	97.310	94.980	97.860	99.190
2	18:05:49	1220.000	108.300	1120.000	1220.000	97.110	95.720	96.170	97.200	98.880	99.120
3	18:06:16	1255.000	109.600	1122.000	1230.000	96.540	94.550	98.100	95.580	95.570	98.370
X		1226.000	108.500	1117.000	1222.000	95.850	94.820	97.190	95.920	97.440	98.890
S		26.770	1.049	7.339	7.008	1.719	0.795	0.969	1.145	1.693	0.454
%RSD		2.184	0.967	0.657	0.574	1.794	0.839	0.997	1.194	1.738	0.459
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	103.000	99.570	104.600	93.700	14.910	16.190	449.400	100.300	0.651	164.000
2	18:05:49	102.700	99.700	106.300	94.760	14.680	14.010	436.700	99.330	-0.855	162.300
3	18:06:16	103.900	99.310	102.900	92.280	15.660	13.590	425.600	95.280	0.615	161.900
X		103.200	99.520	104.600	93.580	15.080	14.600	437.200	98.300	0.137	162.800
S		0.645	0.196	1.696	1.240	0.511	1.394	11.890	2.651	0.859	1.090
%RSD		0.625	0.197	1.622	1.325	3.390	9.553	2.719	2.697	627.300	0.670
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	74.3%	102.700	101.800	100.500	103.500	100.500	98.260	97.470	98.280	75.3%
2	18:05:49	75.5%	102.800	102.200	100.800	103.200	100.200	98.580	100.700	98.420	74.7%
3	18:06:16	75.3%	104.000	102.600	101.900	98.410	99.130	97.720	98.500	96.730	75.5%
X		75.0%	103.200	102.200	101.100	101.700	99.960	98.190	98.890	97.810	75.1%
S		0.6%	0.733	0.413	0.740	2.868	0.729	0.433	1.651	0.937	0.4%
%RSD		0.8	0.710	0.405	0.732	2.820	0.730	0.441	1.670	0.958	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	101.500	100.300	89.670	89.200	269.000	259.900	82.1%	97.820	105.300	100.700
2	18:05:49	99.670	100.600	90.880	90.060	269.600	265.700	81.9%	101.700	105.200	100.000
3	18:06:16	99.870	98.980	92.280	89.680	265.400	262.400	83.1%	102.200	103.400	97.180
X		100.300	99.940	90.940	89.650	268.000	262.700	82.4%	100.600	104.600	99.290
S		0.991	0.851	1.308	0.429	2.316	2.896	0.6%	2.407	1.091	1.856
%RSD		0.988	0.852	1.438	0.478	0.864	1.102	0.8	2.393	1.042	1.869
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:05:22	98.820	98.850	84.5%							
2	18:05:49	99.090	98.580	83.0%							
3	18:06:16	98.410	96.760	82.3%							
X		98.770	98.060	83.3%							
S		0.342	1.139	1.1%							
%RSD		0.346	1.162	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	81.9%	-0.008	5.226	5.304	-27.570	72570.000	33380.000	34850.000	56570.000	190.800
2	18:11:38	81.0%	0.051	4.937	5.510	-30.930	73630.000	33520.000	34830.000	55840.000	188.700
3	18:12:05	80.8%	-0.008	4.062	4.914	-35.070	74500.000	33490.000	34760.000	56430.000	195.200
X		81.3%	0.012	4.742	5.243	-31.190	73570.000	33470.000	34810.000	56280.000	191.600
S		0.6%	0.034	0.606	0.303	3.758	971.300	71.640	48.010	391.900	3.299
%RSD		0.7	290.500	12.780	5.772	12.050	1.320	0.214	0.138	0.696	1.722
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	TM 10150.000	57200.000	2020.000	69290.000	69540.000	71.6%	5.397	0.607	0.977	15490.000
2	18:11:38	TM 10430.000	58450.000	2034.000	69040.000	68420.000	71.2%	5.240	-0.178	0.987	15990.000
3	18:12:05	TM 10400.000	58170.000	2045.000	70270.000	69780.000	71.1%	4.917	0.939	1.029	15120.000
X		TM 10330.000	57940.000	2033.000	69530.000	69240.000	71.3%	5.185	0.456	0.998	15530.000
S		TM 154.700	657.800	12.310	649.500	727.800	0.3%	0.245	0.573	0.028	435.100
%RSD		TM 1.498	1.135	0.606	0.934	1.051	0.4	4.719	125.700	2.801	2.801
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	4178.000	TM 2823.000	3895.000	4039.000	6.968	3.472	2.750	0.592	0.592	4.117
2	18:11:38	4173.000	TM 2912.000	3980.000	4072.000	6.885	3.426	3.501	0.736	0.671	4.077
3	18:12:05	4197.000	TM 2894.000	3949.000	4115.000	7.281	3.347	3.768	0.693	0.794	3.859
X		4182.000	TM 2876.000	3941.000	4075.000	7.045	3.415	3.340	0.673	0.686	4.018
S		12.370	TM 46.920	42.820	38.370	0.209	0.063	0.528	0.074	0.102	0.139
%RSD		0.296	TM 1.631	1.087	0.942	2.962	1.856	15.810	11.000	14.800	3.457
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	11.830	10.090	13.840	-0.015	1763.000	1781.000	8.131	1.595	0.220	M 643.800
2	18:11:38	11.310	8.866	15.180	-0.288	1777.000	1768.000	5.609	0.574	3.662	M 656.400
3	18:12:05	11.900	9.772	14.100	1.171	1825.000	1810.000	4.669	0.340	3.706	M 657.900
X		11.680	9.576	14.370	0.289	1788.000	1786.000	6.137	0.837	2.529	M 652.700
S		0.320	0.635	0.709	0.775	32.640	21.490	1.790	0.667	2.000	M 7.729
%RSD		2.742	6.637	4.934	267.900	1.825	1.203	29.180	79.790	79.080	M 1.184
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	73.8%	0.645	0.701	0.704	15.390	0.009	0.004	-0.007	0.015	73.8%
2	18:11:38	74.1%	0.844	0.423	0.601	17.570	0.001	0.004	0.043	0.054	73.2%
3	18:12:05	73.6%	0.735	0.748	0.626	10.230	0.007	0.009	0.035	0.022	73.4%
X		73.8%	0.741	0.624	0.644	14.400	0.006	0.006	0.024	0.030	73.5%
S		0.2%	0.100	0.175	0.054	3.766	0.004	0.002	0.027	0.021	0.3%
%RSD		0.3	13.440	28.090	8.346	26.160	71.110	42.800	112.200	69.110	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	0.279	0.443	0.496	0.452	421.000	419.600	80.5%	0.023	0.008	0.144
2	18:11:38	0.278	0.397	0.383	0.459	434.700	423.200	81.5%	0.015	0.012	0.147
3	18:12:05	0.265	0.422	0.433	0.362	431.200	420.000	81.9%	0.013	0.010	0.136
X		0.274	0.421	0.437	0.424	428.900	420.900	81.3%	0.017	0.010	0.142
S		0.008	0.023	0.057	0.054	7.133	1.986	0.7%	0.005	0.002	0.006
%RSD		2.890	5.468	12.940	12.780	1.663	0.472	0.9	30.130	17.180	4.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:11:11	0.129	0.130	79.0%							
2	18:11:38	0.139	0.126	80.3%							
3	18:12:05	0.147	0.123	80.4%							
X		0.138	0.126	79.9%							
S		0.009	0.004	0.8%							
%RSD		6.742	2.794	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	82.9%	-0.009	0.937	1.105	-66.960	TM 144200.000	TM 48430.000	TM 50720.000	TM 86250.000	7.965
2	18:17:29	82.9%	-0.038	0.916	1.239	-66.840	TM 147300.000	TM 48640.000	TM 51070.000	TM 87110.000	8.537
3	18:17:56	84.7%	-0.010	0.736	1.345	-66.080	TM 148100.000	TM 49300.000	TM 51390.000	TM 88760.000	9.126
X		83.5%	-0.019	0.863	1.230	-66.630	TM 146500.000	TM 48790.000	TM 51060.000	TM 87370.000	8.543
S		1.0%	0.016	0.111	0.121	0.474	TM 2021.000	TM 452.400	TM 335.400	TM 1279.000	0.581
%RSD		1.2	87.680	12.820	9.795	0.712	TM 1.379	TM 0.927	TM 0.657	TM 1.464	6.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	TM 14000.000	TM 58950.000	1491.000	TM 105000.000	TM 103300.000	76.8%	1.384	4.547	0.824	17180.000
2	18:17:29	TM 14230.000	TM 60190.000	1522.000	TM 105600.000	TM 107100.000	75.9%	1.272	5.536	0.830	17760.000
3	18:17:56	TM 13700.000	TM 60490.000	1511.000	TM 105800.000	TM 107000.000	75.1%	1.702	4.821	0.882	18920.000
X		TM 13980.000	TM 59880.000	1508.000	TM 105500.000	TM 105800.000	75.9%	1.453	4.968	0.846	17950.000
S		TM 261.700	TM 818.500	15.700	TM 447.900	TM 2137.000	0.8%	0.224	0.511	0.032	885.600
%RSD		TM 1.873	TM 1.367	1.041	TM 0.425	TM 2.020	1.1	15.390	10.280	3.784	4.933
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	271.400	TM 556.400	284.700	406.800	1.528	2.397	1.888	1.067	1.141	1.850
2	18:17:29	269.100	TM 544.800	288.500	390.500	1.537	2.260	0.943	1.074	0.894	1.900
3	18:17:56	267.200	TM 560.300	287.400	400.100	1.564	2.218	1.207	1.109	1.042	1.634
X		269.200	TM 553.800	286.900	399.100	1.543	2.292	1.346	1.083	1.026	1.795
S		2.124	TM 8.064	1.930	8.213	0.019	0.093	0.488	0.022	0.125	0.142
%RSD		0.789	TM 1.456	0.673	2.058	1.204	4.075	36.230	2.051	12.140	7.894
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	8.085	6.621	0.519	0.428	2233.000	2211.000	10.610	2.062	0.560	TM 963.000
2	18:17:29	9.185	5.961	-0.321	-0.080	2195.000	2204.000	7.547	1.157	2.395	TM 969.700
3	18:17:56	8.559	5.862	0.484	0.623	2228.000	2259.000	12.610	2.420	1.054	TM 976.300
X		8.610	6.148	0.228	0.324	2219.000	2225.000	10.260	1.880	1.336	TM 969.700
S		0.551	0.412	0.475	0.363	20.750	30.140	2.551	0.651	0.950	TM 6.640
%RSD		6.406	6.710	208.700	112.100	0.935	1.355	24.870	34.650	71.100	TM 0.685
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	75.5%	1.068	1.082	1.016	19.580	0.003	-0.000	0.088	0.141	76.0%
2	18:17:29	76.7%	0.935	1.203	1.008	23.540	0.001	0.012	0.137	0.169	75.5%
3	18:17:56	75.5%	1.064	0.897	1.081	18.760	-0.003	0.002	0.183	0.135	76.2%
X		75.9%	1.022	1.061	1.035	20.630	0.000	0.005	0.136	0.148	75.9%
S		0.7%	0.076	0.155	0.040	2.552	0.003	0.007	0.047	0.018	0.4%
%RSD		0.9	7.400	14.570	3.909	12.370	1265.000	140.000	35.030	12.420	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	0.358	0.423	0.288	0.241	330.000	320.900	84.2%	0.027	0.033	0.051
2	18:17:29	0.237	0.388	0.300	0.343	331.200	326.300	82.9%	0.033	0.026	0.052
3	18:17:56	0.254	0.361	0.291	0.272	328.800	326.100	84.7%	0.033	0.028	0.048
X		0.283	0.391	0.293	0.285	330.000	324.400	83.9%	0.031	0.029	0.050
S		0.066	0.031	0.006	0.052	1.170	3.036	0.9%	0.004	0.004	0.002
%RSD		23.230	7.915	2.068	18.300	0.354	0.936	1.1	11.760	12.470	3.377
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:17:02	0.039	0.031	79.5%							
2	18:17:29	0.057	0.040	81.4%							
3	18:17:56	0.034	0.034	82.3%							
X		0.043	0.035	81.1%							
S		0.012	0.005	1.4%							
%RSD		27.620	13.600	1.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	84.3%	-0.024	2.946	3.686	-44.420	<u>TM 150200.000</u>	<u>45710.000</u>	<u>46770.000</u>	<u>74450.000</u>	43.420
2	18:23:20	86.0%	0.017	3.928	3.515	-46.430	<u>TM 147500.000</u>	<u>44850.000</u>	<u>45670.000</u>	<u>72600.000</u>	41.350
3	18:23:47	84.6%	-0.038	3.226	3.335	-48.890	<u>TM 149400.000</u>	<u>45520.000</u>	<u>46790.000</u>	<u>74540.000</u>	41.790
X		85.0%	-0.015	3.367	3.512	-46.580	<u>TM 149000.000</u>	<u>45360.000</u>	<u>46410.000</u>	<u>73860.000</u>	42.190
S		0.9%	0.029	0.506	0.175	2.243	<u>TM 1413.000</u>	<u>449.000</u>	<u>640.100</u>	<u>1094.000</u>	1.094
%RSD		1.1	195.300	15.040	4.998	4.815	<u>TM 0.948</u>	<u>0.990</u>	<u>1.379</u>	<u>1.480</u>	2.593
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	<u>9461.000</u>	<u>67060.000</u>	1472.000	<u>M 199000.000</u>	<u>TM 194600.000</u>	74.3%	2.117	1.603	0.815	15450.000
2	18:23:20	<u>9406.000</u>	<u>66940.000</u>	1435.000	<u>M 195000.000</u>	<u>TM 194600.000</u>	76.8%	1.689	0.588	0.794	15930.000
3	18:23:47	<u>9395.000</u>	<u>67440.000</u>	<u>1399.000</u>	<u>M 196200.000</u>	<u>TM 195600.000</u>	75.6%	1.742	1.225	0.809	15890.000
X		<u>9421.000</u>	<u>67150.000</u>	<u>1435.000</u>	<u>M 196800.000</u>	<u>TM 195000.000</u>	75.6%	1.849	1.139	0.806	15760.000
S		<u>35.640</u>	<u>262.800</u>	<u>36.430</u>	<u>M 2076.000</u>	<u>TM 578.800</u>	1.3%	0.234	0.513	0.011	266.700
%RSD		<u>0.378</u>	<u>0.391</u>	<u>2.539</u>	<u>M 1.055</u>	<u>TM 0.297</u>	1.7	12.630	45.050	1.361	1.692
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	39.270	<u>TM 1036.000</u>	53.200	327.700	0.465	11.610	10.550	0.716	0.787	2.860
2	18:23:20	40.890	<u>TM 1015.000</u>	52.420	319.800	0.521	11.010	10.950	0.796	0.827	2.598
3	18:23:47	39.520	<u>TM 1042.000</u>	54.210	316.500	0.508	11.780	8.688	0.819	0.826	2.851
X		39.890	<u>TM 1031.000</u>	53.280	321.400	0.498	11.470	10.060	0.777	0.813	2.770
S		0.874	<u>TM 14.230</u>	0.897	5.759	0.029	0.401	1.208	0.054	0.023	0.149
%RSD		2.190	<u>TM 1.380</u>	1.684	1.792	5.863	3.500	12.010	6.965	2.822	5.368
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	19.520	15.180	-0.342	-0.038	2746.000	2730.000	7.026	1.071	1.896	<u>TM 946.900</u>
2	18:23:20	19.210	14.080	1.973	-0.156	2712.000	2757.000	1.717	-0.299	2.802	<u>TM 971.700</u>
3	18:23:47	20.100	15.140	1.708	0.161	2801.000	2850.000	6.198	1.105	0.058	<u>TM 987.900</u>
X		19.610	14.800	1.113	-0.011	2753.000	2779.000	4.980	0.626	1.585	<u>TM 968.800</u>
S		0.452	0.625	1.267	0.160	44.520	62.790	2.857	0.801	1.398	<u>TM 20.630</u>
%RSD		2.304	4.222	113.800	1447.000	1.617	2.260	57.360	128.000	88.200	<u>TM 2.129</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	77.3%	0.629	0.649	0.621	21.250	0.011	0.008	0.440	0.458	74.7%
2	18:23:20	77.3%	0.595	0.664	0.600	27.290	0.003	0.004	0.487	0.457	76.2%
3	18:23:47	76.1%	0.732	0.566	0.636	26.900	0.003	0.008	0.383	0.403	74.7%
X		76.9%	0.652	0.626	0.619	25.150	0.006	0.007	0.437	0.439	75.2%
S		0.7%	0.072	0.053	0.019	3.376	0.005	0.003	0.052	0.031	0.9%
%RSD		0.9	11.000	8.394	2.995	13.420	83.260	36.200	11.920	7.119	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	0.455	0.447	0.154	0.184	<u>M 918.400</u>	<u>M 906.500</u>	83.7%	0.009	0.004	0.071
2	18:23:20	0.434	0.374	0.218	0.117	<u>M 916.500</u>	<u>M 889.400</u>	84.4%	0.001	0.004	0.044
3	18:23:47	0.420	0.456	0.179	0.140	<u>M 948.000</u>	<u>M 910.400</u>	85.9%	0.004	0.001	0.059
X		0.436	0.425	0.184	0.147	<u>M 927.600</u>	<u>M 902.100</u>	84.7%	0.005	0.003	0.058
S		0.018	0.045	0.032	0.034	<u>M 17.670</u>	<u>M 11.170</u>	1.1%	0.004	0.002	0.014
%RSD		4.093	10.500	17.690	23.180	<u>M 1.905</u>	<u>M 1.238</u>	1.3	80.670	58.890	23.910
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:22:53	0.028	0.053	81.3%							
2	18:23:20	0.040	0.045	81.1%							
3	18:23:47	0.035	0.052	82.2%							
X		0.034	0.050	81.6%							
S		0.006	0.004	0.6%							
%RSD		18.530	8.570	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	83.1%	99.540	33.600	36.370	-48.140	<u>TM 150000.000</u>	<u>T 45650.000</u>	<u>T 47030.000</u>	<u>T 74950.000</u>	176.800
2	18:29:14	81.8%	98.180	32.200	37.370	-45.530	<u>TM 149200.000</u>	<u>T 46080.000</u>	<u>T 47480.000</u>	<u>T 73420.000</u>	171.700
3	18:29:41	80.9%	98.930	33.610	37.170	-49.800	<u>TM 151100.000</u>	<u>T 47100.000</u>	<u>T 48470.000</u>	<u>T 76130.000</u>	176.500
X		82.0%	98.880	33.140	36.970	-47.820	<u>TM 150100.000</u>	<u>T 46280.000</u>	<u>T 47660.000</u>	<u>T 74830.000</u>	175.000
S		1.1%	0.678	0.816	0.529	2.153	<u>TM 975.400</u>	<u>T 743.800</u>	<u>T 736.300</u>	<u>T 1363.000</u>	2.866
%RSD		1.3	0.686	2.462	1.430	4.501	<u>TM 0.650</u>	<u>T 1.607</u>	<u>T 1.545</u>	<u>T 1.821</u>	1.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	<u>TM 10070.000</u>	<u>T 67120.000</u>	<u>T 2202.000</u>	<u>M 199700.000</u>	<u>TM 195900.000</u>	73.5%	101.500	100.500	96.420	18320.000
2	18:29:14	<u>TM 10260.000</u>	<u>T 66530.000</u>	<u>T 2197.000</u>	<u>M 195300.000</u>	<u>TM 194700.000</u>	74.2%	100.800	99.980	95.780	18070.000
3	18:29:41	<u>TM 10300.000</u>	<u>T 68500.000</u>	<u>T 2231.000</u>	<u>M 197900.000</u>	<u>TM 197600.000</u>	72.7%	100.900	101.500	96.990	18800.000
X		<u>TM 10210.000</u>	<u>T 67380.000</u>	<u>T 2210.000</u>	<u>M 197600.000</u>	<u>TM 196100.000</u>	73.5%	101.100	100.700	96.400	18400.000
S		<u>TM 125.200</u>	<u>T 1012.000</u>	<u>T 18.530</u>	<u>M 2237.000</u>	<u>TM 1492.000</u>	0.7%	0.375	0.778	0.606	369.500
%RSD		<u>TM 1.226</u>	<u>T 1.502</u>	<u>T 0.839</u>	<u>M 1.132</u>	<u>TM 0.761</u>	1.0	0.371	0.772	0.629	2.008
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	1144.000	<u>TM 1126.000</u>	<u>T 1083.000</u>	1364.000	94.250	103.700	103.600	92.500	94.130	95.400
2	18:29:14	1145.000	<u>TM 1127.000</u>	<u>T 1070.000</u>	1326.000	92.870	103.400	104.000	90.570	97.170	96.810
3	18:29:41	1143.000	<u>TM 1129.000</u>	<u>T 1078.000</u>	1367.000	93.610	103.100	103.700	92.720	95.130	96.400
X		1144.000	<u>TM 1127.000</u>	<u>T 1077.000</u>	1352.000	93.580	103.400	103.800	91.930	95.480	96.200
S		1.145	<u>TM 1.422</u>	<u>T 6.568</u>	23.120	0.690	0.310	0.214	1.184	1.546	0.727
%RSD		0.100	<u>TM 0.126</u>	<u>T 0.610</u>	1.710	0.737	0.299	0.207	1.288	1.620	0.756
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	112.700	103.700	103.200	90.480	2721.000	2735.000	439.800	99.670	0.071	<u>TM 1053.000</u>
2	18:29:14	118.500	107.100	104.100	91.750	2797.000	2799.000	444.000	100.600	-0.335	<u>TM 1085.000</u>
3	18:29:41	114.700	106.300	103.300	92.220	2816.000	2833.000	427.200	95.400	1.136	<u>TM 1062.000</u>
X		115.300	105.700	103.500	91.480	2778.000	2789.000	437.000	98.540	0.290	<u>TM 1067.000</u>
S		2.915	1.795	0.492	0.897	50.360	50.150	8.783	2.757	0.760	<u>TM 16.550</u>
%RSD		2.529	1.699	0.476	0.981	1.813	1.798	2.010	2.798	261.600	<u>TM 1.552</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	76.2%	102.100	102.900	99.490	112.800	95.870	95.040	96.510	96.130	75.3%
2	18:29:14	74.6%	103.800	105.200	103.500	123.800	98.450	95.930	98.270	95.620	74.2%
3	18:29:41	74.7%	106.100	104.200	103.200	122.800	97.510	94.620	98.920	97.490	74.9%
X		75.1%	104.000	104.100	102.000	119.800	97.280	95.200	97.900	96.410	74.8%
S		0.9%	1.997	1.173	2.213	6.062	1.307	0.666	1.248	0.967	0.6%
%RSD		1.2	1.921	1.127	2.169	5.060	1.343	0.699	1.275	1.003	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	99.110	97.830	99.370	97.480	<u>M 1015.000</u>	<u>M 990.400</u>	82.8%	101.100	99.900	95.190
2	18:29:14	101.600	102.300	102.200	97.460	<u>M 1034.000</u>	<u>M 995.500</u>	82.5%	101.300	101.600	96.840
3	18:29:41	99.590	101.500	102.500	98.590	<u>M 1011.000</u>	<u>M 994.900</u>	82.2%	103.100	103.600	98.050
X		100.100	100.600	101.400	97.840	<u>M 1020.000</u>	<u>M 993.600</u>	82.5%	101.800	101.700	96.690
S		1.335	2.394	1.728	0.644	<u>M 12.490</u>	<u>M 2.775</u>	0.3%	1.117	1.869	1.436
%RSD		1.334	2.380	1.705	0.658	<u>M 1.225</u>	<u>M 0.279</u>	0.4	1.097	1.838	1.485
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:28:47	97.190	95.260	79.5%							
2	18:29:14	96.760	95.780	80.8%							
3	18:29:41	96.370	96.370	79.7%							
X		96.770	95.810	80.0%							
S		0.407	0.555	0.7%							
%RSD		0.421	0.579	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	83.6%	97.400	30.460	35.660	-46.350	<u>TM 146200.000</u>	<u>T 45160.000</u>	<u>T 47060.000</u>	<u>T 73310.000</u>	168.900
2	18:35:04	84.0%	97.310	32.840	35.220	-50.780	<u>TM 149900.000</u>	<u>T 45220.000</u>	<u>T 47240.000</u>	<u>T 74550.000</u>	172.400
3	18:35:31	82.9%	97.810	33.470	37.560	-50.220	<u>TM 150500.000</u>	<u>T 45760.000</u>	<u>T 46870.000</u>	<u>T 74000.000</u>	172.400
X		83.5%	97.500	32.260	36.150	-49.110	<u>TM 148900.000</u>	<u>T 45380.000</u>	<u>T 47060.000</u>	<u>T 73950.000</u>	171.300
S		0.6%	0.267	1.588	1.247	2.412	<u>TM 2303.000</u>	<u>T 333.500</u>	<u>T 184.700</u>	<u>T 619.200</u>	2.056
%RSD		0.7	0.273	4.924	3.449	4.911	<u>TM 1.547</u>	<u>T 0.735</u>	<u>T 0.393</u>	<u>T 0.837</u>	1.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	<u>T 9834.000</u>	<u>T 67130.000</u>	2304.000	<u>M 192800.000</u>	<u>TM 188600.000</u>	74.5%	97.590	97.610	93.350	17970.000
2	18:35:04	<u>T 9565.000</u>	<u>T 67920.000</u>	2374.000	<u>M 198100.000</u>	<u>TM 193700.000</u>	72.9%	100.200	98.730	95.660	18410.000
3	18:35:31	<u>T 9844.000</u>	<u>T 66980.000</u>	<u>T 2158.000</u>	<u>M 193700.000</u>	<u>TM 192200.000</u>	73.8%	101.400	99.250	96.400	17980.000
X		<u>T 9747.000</u>	<u>T 67340.000</u>	<u>T 2279.000</u>	<u>M 194900.000</u>	<u>TM 191500.000</u>	73.7%	99.720	98.530	95.140	18120.000
S		<u>T 158.000</u>	<u>T 505.100</u>	<u>T 110.300</u>	<u>M 2858.000</u>	<u>TM 2590.000</u>	0.8%	1.926	0.840	1.594	252.900
%RSD		<u>T 1.621</u>	<u>T 0.750</u>	<u>T 4.838</u>	<u>M 1.467</u>	<u>TM 1.352</u>	1.1	1.931	0.852	1.676	1.395
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	1148.000	<u>TM 1096.000</u>	<u>T 1062.000</u>	1323.000	91.680	99.230	107.700	90.250	92.840	95.360
2	18:35:04	1148.000	<u>TM 1112.000</u>	<u>T 1059.000</u>	1322.000	93.730	103.800	102.900	91.020	95.200	98.640
3	18:35:31	1122.000	<u>TM 1113.000</u>	<u>T 1066.000</u>	1333.000	92.570	100.500	98.400	90.510	95.160	96.080
X		1139.000	<u>TM 1107.000</u>	<u>T 1062.000</u>	1326.000	92.660	101.200	103.000	90.590	94.400	96.690
S		14.560	<u>TM 9.616</u>	<u>T 3.431</u>	6.264	1.028	2.366	4.649	0.392	1.351	1.724
%RSD		1.278	<u>TM 0.869</u>	<u>T 0.323</u>	0.472	1.110	2.339	4.513	0.433	1.431	1.783
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	110.200	105.600	102.100	93.620	2637.000	2671.000	462.100	105.100	0.063	<u>TM 1022.000</u>
2	18:35:04	112.400	104.700	104.400	90.260	2695.000	2732.000	458.700	104.200	1.135	<u>TM 1062.000</u>
3	18:35:31	110.400	103.300	105.400	91.350	2686.000	2746.000	418.200	95.310	2.533	<u>TM 1055.000</u>
X		111.000	104.500	104.000	91.750	2672.000	2716.000	446.300	101.500	1.244	<u>TM 1046.000</u>
S		1.211	1.197	1.711	1.714	30.960	40.330	24.400	5.400	1.239	<u>TM 21.350</u>
%RSD		1.091	1.145	1.646	1.868	1.159	1.485	5.468	5.319	99.610	<u>TM 2.041</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	76.2%	102.100	102.100	101.800	116.200	95.920	93.940	94.800	93.670	75.2%
2	18:35:04	74.7%	105.100	103.700	101.600	120.500	96.440	94.590	98.500	96.570	73.7%
3	18:35:31	75.3%	104.100	103.600	101.700	127.500	97.420	96.600	97.430	97.830	74.0%
X		75.4%	103.800	103.100	101.700	121.400	96.590	95.040	96.910	96.020	74.3%
S		0.7%	1.540	0.893	0.100	5.731	0.758	1.387	1.903	2.132	0.8%
%RSD		1.0	1.484	0.866	0.098	4.721	0.785	1.459	1.963	2.220	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	97.430	98.550	98.920	96.350	<u>M 988.700</u>	<u>M 972.700</u>	82.5%	98.850	99.390	95.670
2	18:35:04	100.900	99.570	100.500	98.020	<u>M 1007.000</u>	<u>M 978.700</u>	81.7%	100.800	101.000	98.520
3	18:35:31	99.640	99.400	102.200	97.280	<u>M 1002.000</u>	<u>M 976.500</u>	82.5%	100.600	100.300	97.070
X		99.330	99.170	100.500	97.220	<u>M 999.500</u>	<u>M 976.000</u>	82.2%	100.100	100.300	97.090
S		1.756	0.547	1.617	0.836	<u>M 9.690</u>	<u>M 3.018</u>	0.5%	1.080	0.813	1.427
%RSD		1.768	0.552	1.609	0.859	<u>M 0.970</u>	<u>M 0.309</u>	0.6	1.079	0.811	1.470
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:34:37	95.170	93.540	80.1%							
2	18:35:04	97.510	96.500	79.9%							
3	18:35:31	95.860	95.360	80.2%							
X		96.180	95.130	80.1%							
S		1.200	1.495	0.1%							
%RSD		1.248	1.571	0.2							

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User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	84.8%	0.018	1.685	2.029	-28.460	±29020.000	±12050.000	±12060.000	±14420.000	9.291
2	18:40:55	85.0%	-0.024	2.215	2.250	-27.240	±29400.000	±12260.000	±12260.000	±14670.000	11.650
3	18:41:22	86.0%	-0.038	1.805	1.889	-23.720	±30610.000	±12480.000	±12650.000	±15190.000	9.323
X		85.3%	-0.015	1.902	2.056	-26.470	±29680.000	±12270.000	±12320.000	±14760.000	10.090
S		0.6%	0.029	0.278	0.182	2.459	±828.300	±213.400	±302.600	±388.700	1.354
%RSD		0.8	202.600	14.600	8.849	9.290	±2.791	±1.740	±2.456	±2.633	13.420
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	±1959.000	14710.000	314.700	37990.000	±37660.000	79.6%	0.299	0.037	0.291	5673.000
2	18:40:55	2110.000	14800.000	313.200	39100.000	±38630.000	78.1%	0.280	-0.123	0.238	5890.000
3	18:41:22	2156.000	15190.000	±336.100	40660.000	±39850.000	78.1%	0.305	-0.298	0.262	5999.000
X		±2075.000	14900.000	±321.300	39250.000	±38710.000	78.6%	0.295	-0.128	0.264	5854.000
S		±103.400	257.000	±12.780	1342.000	±1096.000	0.9%	0.013	0.167	0.027	165.700
%RSD		±4.982	1.725	±3.978	3.418	±2.830	1.1	4.386	130.500	10.080	2.831
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	8.741	210.200	25.010	70.020	0.103	2.461	2.026	0.165	0.138	0.712
2	18:40:55	8.838	211.600	25.320	75.650	0.092	2.516	2.222	0.174	0.237	0.699
3	18:41:22	10.370	216.000	24.960	73.170	0.107	2.109	2.031	0.137	0.226	0.743
X		9.316	212.600	25.100	72.950	0.101	2.362	2.093	0.159	0.201	0.718
S		0.914	3.022	0.191	2.818	0.008	0.221	0.112	0.019	0.054	0.022
%RSD		9.806	1.421	0.762	3.863	7.721	9.350	5.336	12.210	27.000	3.124
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	4.083	3.348	0.418	-0.421	552.000	537.600	6.292	1.181	1.310	189.700
2	18:40:55	4.667	3.648	0.276	-0.119	530.100	542.100	1.139	0.207	-0.083	189.100
3	18:41:22	4.944	3.524	-0.147	-0.851	558.100	576.000	1.832	0.209	1.006	202.700
X		4.565	3.507	0.182	-0.464	546.800	551.900	3.088	0.532	0.744	193.800
S		0.440	0.150	0.294	0.367	14.710	20.980	2.797	0.562	0.732	7.711
%RSD		9.633	4.286	161.300	79.250	2.690	3.801	90.590	105.500	98.400	3.978
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	78.1%	0.086	0.178	0.090	5.490	-0.007	0.002	0.080	0.074	78.3%
2	18:40:55	78.3%	0.049	0.159	0.071	4.309	0.001	0.002	0.057	0.081	78.3%
3	18:41:22	75.8%	0.137	0.146	0.067	6.191	-0.001	0.002	0.131	0.074	76.3%
X		77.4%	0.091	0.161	0.076	5.330	-0.003	0.002	0.089	0.076	77.6%
S		1.4%	0.044	0.016	0.013	0.951	0.004	0.000	0.038	0.004	1.2%
%RSD		1.8	48.440	9.868	16.450	17.850	161.200	4.893	41.940	5.563	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	0.127	0.110	-0.033	-0.047	178.000	172.100	83.8%	0.133	0.134	-0.015
2	18:40:55	0.089	0.073	-0.043	-0.042	180.100	175.700	84.2%	0.095	0.134	0.010
3	18:41:22	0.089	0.180	-0.010	-0.004	185.800	183.200	82.1%	0.134	0.125	-0.009
X		0.102	0.121	-0.029	-0.031	181.300	177.000	83.4%	0.121	0.131	-0.005
S		0.022	0.055	0.017	0.023	4.024	5.636	1.1%	0.022	0.006	0.013
%RSD		21.410	45.160	59.650	74.970	2.219	3.184	1.4	18.330	4.256	286.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:40:28	0.001	-0.004	82.9%							
2	18:40:55	-0.011	-0.002	83.4%							
3	18:41:22	0.004	-0.006	83.7%							
X		-0.002	-0.004	83.3%							
S		0.008	0.002	0.4%							
%RSD		374.000	54.820	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	80.8%	101.500	36.370	38.300	-46.050	<u>TM 149200.000</u>	<u>T 45610.000</u>	<u>T 47410.000</u>	<u>T 74910.000</u>	<u>T 165.500</u>
2	18:46:47	81.1%	98.770	34.450	38.890	-45.120	<u>TM 148100.000</u>	<u>T 45820.000</u>	<u>T 47310.000</u>	<u>T 74180.000</u>	153.000
3	18:47:14	80.8%	100.700	33.860	37.310	-46.280	<u>TM 152600.000</u>	<u>T 46280.000</u>	<u>T 47500.000</u>	<u>T 76410.000</u>	<u>T 150.200</u>
X		80.9%	100.300	34.890	38.170	-45.820	<u>TM 150000.000</u>	<u>T 45900.000</u>	<u>T 47410.000</u>	<u>T 75170.000</u>	<u>T 156.200</u>
S		0.2%	1.410	1.312	0.800	0.617	<u>TM 2378.000</u>	<u>T 340.100</u>	<u>T 98.400</u>	<u>T 1135.000</u>	<u>T 8.145</u>
%RSD		0.2	1.405	3.759	2.096	1.346	<u>TM 1.586</u>	<u>T 0.741</u>	<u>T 0.208</u>	<u>T 1.510</u>	<u>T 5.214</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	<u>TM 10760.000</u>	<u>T 66770.000</u>	<u>T 2177.000</u>	<u>M 195500.000</u>	<u>TM 197700.000</u>	74.4%	104.600	99.360	96.330	17740.000
2	18:46:47	<u>TM 10730.000</u>	<u>T 67330.000</u>	<u>T 2220.000</u>	<u>M 197500.000</u>	<u>TM 196000.000</u>	74.7%	102.500	98.980	96.940	18100.000
3	18:47:14	<u>TM 10810.000</u>	<u>T 67280.000</u>	<u>T 2199.000</u>	<u>M 196800.000</u>	<u>TM 195500.000</u>	73.3%	105.600	101.400	97.450	17820.000
X		<u>TM 10760.000</u>	<u>T 67130.000</u>	<u>T 2198.000</u>	<u>M 196600.000</u>	<u>TM 196400.000</u>	74.1%	104.200	99.910	96.910	17890.000
S		<u>TM 39.550</u>	<u>T 313.300</u>	<u>T 21.560</u>	<u>M 1017.000</u>	<u>TM 1152.000</u>	0.8%	1.582	1.301	0.561	188.700
%RSD		<u>TM 0.367</u>	<u>T 0.467</u>	<u>T 0.981</u>	<u>M 0.517</u>	<u>TM 0.587</u>	1.0	1.518	1.303	0.579	1.055
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	1158.000	<u>TM 1108.000</u>	<u>T 1076.000</u>	1337.000	94.300	102.800	101.400	93.690	97.630	98.930
2	18:46:47	1147.000	<u>TM 1123.000</u>	<u>T 1069.000</u>	1337.000	93.450	101.800	105.900	91.770	94.610	100.300
3	18:47:14	1163.000	<u>TM 1129.000</u>	<u>T 1074.000</u>	1348.000	96.800	106.800	105.500	93.710	96.830	99.620
X		1156.000	<u>TM 1120.000</u>	<u>T 1073.000</u>	1341.000	94.850	103.800	104.300	93.060	96.360	99.630
S		8.000	<u>TM 11.030</u>	<u>T 3.516</u>	6.310	1.740	2.639	2.468	1.112	1.564	0.701
%RSD		0.692	<u>TM 0.985</u>	<u>T 0.328</u>	0.471	1.835	2.542	2.367	1.195	1.624	0.703
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	106.700	107.900	106.700	94.180	2774.000	2765.000	430.200	98.660	-0.823	<u>TM 1068.000</u>
2	18:46:47	111.800	105.400	106.900	95.210	2764.000	2803.000	471.800	105.000	1.665	<u>TM 1070.000</u>
3	18:47:14	109.300	108.100	109.700	91.670	2787.000	2814.000	450.200	102.400	-0.787	<u>TM 1099.000</u>
X		109.300	107.100	107.800	93.690	2775.000	2794.000	450.700	102.000	0.018	<u>TM 1079.000</u>
S		2.550	1.535	1.670	1.818	11.580	25.470	20.790	3.183	1.426	<u>TM 17.360</u>
%RSD		2.334	1.433	1.550	1.941	0.417	0.911	4.613	3.120	7918.000	<u>TM 1.609</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	74.5%	104.900	104.300	102.700	126.200	97.380	97.250	100.300	98.470	73.3%
2	18:46:47	73.8%	104.600	103.300	104.400	126.000	97.120	95.270	96.730	97.410	74.7%
3	18:47:14	73.9%	107.100	108.300	105.900	124.500	98.370	97.630	100.300	98.300	73.3%
X		74.1%	105.500	105.300	104.300	125.600	97.630	96.720	99.120	98.060	73.8%
S		0.4%	1.343	2.661	1.604	0.941	0.660	1.267	2.068	0.569	0.8%
%RSD		0.5	1.272	2.527	1.538	0.749	0.677	1.310	2.086	0.581	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	102.300	102.500	91.370	89.520	<u>M 1009.000</u>	<u>M 992.900</u>	81.3%	103.600	104.400	99.670
2	18:46:47	99.850	100.800	90.190	89.010	<u>M 1015.000</u>	<u>M 988.900</u>	82.7%	104.300	102.200	96.240
3	18:47:14	103.400	103.700	93.970	90.370	<u>M 1034.000</u>	<u>M 1004.000</u>	81.9%	104.300	104.400	98.010
X		101.800	102.400	91.840	89.630	<u>M 1020.000</u>	<u>M 995.400</u>	82.0%	104.100	103.700	97.970
S		1.807	1.436	1.936	0.688	<u>M 13.000</u>	<u>M 8.010</u>	0.7%	0.417	1.246	1.718
%RSD		1.774	1.403	2.108	0.767	<u>M 1.275</u>	<u>M 0.805</u>	0.8	0.401	1.202	1.753
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:46:20	98.450	97.610	79.6%							
2	18:46:47	95.440	95.250	78.9%							
3	18:47:14	98.680	97.490	79.0%							
X		97.520	96.780	79.1%							
S		1.808	1.332	0.4%							
%RSD		1.854	1.377	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	75.9%	306.000	301.000	301.200	10.440	61830.000	61630.000	61810.000	57580.000	297.300
2	18:52:42	74.1%	311.200	311.200	311.500	8.046	63150.000	63730.000	63450.000	59360.000	306.900
3	18:53:09	74.1%	314.000	287.400	297.900	3.578	63230.000	61200.000	61030.000	58890.000	304.500
X		74.7%	103.459%	99.950%	101.166%	7.355	104.562%	62190.000	62090.000	97.687%	100.961%
S		1.0%	n/a	n/a	n/a	3.483	n/a	1351.000	1232.000	n/a	n/a
%RSD		1.4	1.300	3.982	2.345	47.350	1.254	2.172	1.985	1.572	1.658
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	62700.000	603.200	58190.000	63190.000	62360.000	73.2%	308.600	300.400	294.700	3470.000
2	18:52:42	62756.000	599.700	58600.000	63970.000	62970.000	71.3%	309.800	308.300	298.400	2260.000
3	18:53:09	62776.000	546.100	57510.000	62180.000	61900.000	72.7%	301.800	305.000	295.000	4612.000
X		62744.000	583.000	96.835%	63120.000	104.020%	72.4%	102.247%	101.528%	98.681%	3447.000
S		639.590	31.990	n/a	893.300	n/a	1.0%	n/a	n/a	n/a	1176.000
%RSD		1.443	5.486	0.944	1.415	0.860	1.4	1.402	1.300	0.695	34.120
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	61650.000	287.000	62560.000	59310.000	286.300	281.200	288.000	285.800	299.700	300.200
2	18:52:42	62890.000	295.400	62520.000	59940.000	297.900	292.800	294.800	291.200	298.200	296.300
3	18:53:09	61940.000	290.700	62240.000	59770.000	292.500	285.100	289.400	289.100	299.600	299.100
X		62160.000	97.008%	62440.000	99.455%	97.413%	95.451%	290.700	288.700	99.718%	99.522%
S		649.700	n/a	171.900	n/a	n/a	n/a	3.592	2.753	n/a	n/a
%RSD		1.045	1.449	0.275	0.541	1.970	2.079	1.236	0.954	0.279	0.677
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	286.300	284.200	306.500	291.100	23.010	24.830	1314.000	298.400	-0.193	292.200
2	18:52:42	292.700	291.400	313.700	287.400	24.150	21.920	1384.000	312.500	-1.151	300.000
3	18:53:09	298.100	288.700	316.100	293.700	25.500	23.910	1391.000	313.500	1.433	300.200
X		292.400	288.100	104.028%	290.700	24.220	23.550	1363.000	102.714%	0.030	99.155%
S		5.912	3.632	n/a	3.170	1.246	1.488	42.620	n/a	1.306	n/a
%RSD		2.022	1.260	1.598	1.090	5.147	6.317	3.127	2.741	4406.000	1.520
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	72.0%	315.600	308.500	303.800	289.200	299.000	292.000	292.400	294.600	71.9%
2	18:52:42	71.2%	317.000	314.200	313.600	293.200	303.900	294.700	293.900	291.600	71.3%
3	18:53:09	70.5%	324.100	325.000	322.200	283.500	304.800	297.700	296.800	301.200	71.0%
X		71.3%	106.304%	105.297%	313.200	288.600	100.850%	294.800	294.400	98.594%	71.4%
S		0.7%	n/a	n/a	9.217	4.866	n/a	2.884	2.240	n/a	0.4%
%RSD		1.0	1.436	2.659	2.943	1.686	1.035	0.978	0.761	1.654	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	304.200	298.000	298.200	296.100	306.600	304.600	77.7%	300.800	317.000	293.400
2	18:52:42	305.000	305.900	308.100	301.700	305.600	301.900	77.2%	304.300	316.600	295.900
3	18:53:09	305.900	302.700	305.500	302.700	313.000	305.400	76.8%	309.400	320.100	301.600
X		101.683%	100.729%	303.900	100.065%	102.801%	101.318%	77.2%	304.800	105.954%	98.994%
S		n/a	n/a	5.150	n/a	n/a	n/a	0.5%	4.340	n/a	n/a
%RSD		0.275	1.321	1.694	1.180	1.301	0.592	0.6	1.424	0.599	1.397
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:52:15	292.600	292.000	77.3%							
2	18:52:42	294.500	296.300	77.0%							
3	18:53:09	298.600	299.300	76.5%							
X		98.406%	98.624%	76.9%							
S		n/a	n/a	0.4%							
%RSD		1.040	1.248	0.5							

CCB IM9936-01 4/22/2020 18:57:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	77.8%	-0.006	2.477	2.513	10.660	0.378	1.736	1.860	0.936	0.082
2	18:58:36	78.4%	-0.006	3.043	2.572	16.440	0.596	1.907	2.217	1.932	-0.013
3	18:59:03	78.0%	0.009	2.264	1.677	15.170	0.214	1.914	2.341	1.960	0.034
X		78.1%	-0.001	2.595	2.254	14.090	0.396	1.853	2.139	1.609	0.035
S		0.3%	0.009	0.403	0.500	3.036	0.192	0.101	0.250	0.583	0.048
%RSD		0.4	884.200	15.520	22.210	21.540	48.450	5.437	11.680	36.240	137.900
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.874	337.000	8.667	8.147	5.214	74.7%	0.059	0.007	0.003	-49.580
2	18:58:36	3.213	324.500	9.047	6.862	3.531	74.9%	-0.046	-0.008	-0.052	-40.000
3	18:59:03	2.906	322.900	8.554	3.133	3.472	74.8%	0.085	0.019	0.022	-58.230
X		2.998	328.100	8.756	6.047	4.072	74.8%	0.033	0.006	-0.009	-49.270
S		0.187	7.706	0.258	2.604	0.989	0.1%	0.069	0.013	0.038	9.118
%RSD		6.245	2.349	2.951	43.060	24.290	0.2	210.500	211.800	423.600	18.510
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.373	0.006	-4.309	5.446	0.001	-0.002	-0.072	0.012	0.045	-0.030
2	18:58:36	2.039	0.026	-4.019	5.750	0.004	0.020	-0.123	-0.002	0.025	0.152
3	18:59:03	2.148	0.016	-3.876	5.912	0.001	0.013	-0.320	-0.019	0.007	-0.050
X		2.187	0.016	-4.068	5.702	0.002	0.010	-0.172	-0.003	0.026	0.024
S		0.171	0.010	0.221	0.237	0.002	0.011	0.131	0.015	0.019	0.111
%RSD		7.802	63.480	5.424	4.149	79.070	105.600	76.450	511.400	75.280	465.300
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	-0.523	0.075	0.033	-0.218	11.540	11.930	2.236	0.227	1.790	0.007
2	18:58:36	-0.056	0.223	-0.225	-0.172	10.890	11.700	-2.921	-0.487	-1.316	0.013
3	18:59:03	-0.378	0.160	-0.149	-0.578	12.980	10.530	-0.288	-0.193	0.793	0.006
X		-0.319	0.153	-0.114	-0.323	11.800	11.390	-0.325	-0.151	0.422	0.009
S		0.239	0.074	0.132	0.222	1.071	0.751	2.579	0.359	1.586	0.003
%RSD		74.810	48.680	116.300	68.880	9.072	6.596	794.700	237.300	375.500	39.730
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	72.2%	0.278	0.359	0.245	0.569	0.003	-0.002	-0.013	0.033	74.8%
2	18:58:36	74.6%	0.253	0.362	0.250	0.702	0.013	0.010	-0.013	0.011	75.9%
3	18:59:03	72.1%	0.137	0.340	0.165	0.115	0.009	0.015	0.004	0.011	74.6%
X		73.0%	0.223	0.353	0.220	0.462	0.009	0.008	-0.008	0.018	75.1%
S		1.4%	0.075	0.012	0.048	0.308	0.005	0.009	0.010	0.013	0.7%
%RSD		1.9	33.860	3.400	21.610	66.630	59.440	114.100	126.800	69.590	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	0.126	0.117	0.344	0.346	-0.029	0.016	79.8%	0.007	0.010	0.050
2	18:58:36	0.132	0.166	0.374	0.426	-0.006	0.009	79.3%	0.017	0.010	0.029
3	18:59:03	0.139	0.205	0.375	0.338	-0.029	-0.004	78.3%	0.010	0.011	0.022
X		0.132	0.163	0.364	0.370	-0.022	0.007	79.1%	0.012	0.011	0.034
S		0.006	0.044	0.018	0.049	0.013	0.010	0.8%	0.005	0.001	0.014
%RSD		4.670	27.290	4.846	13.240	61.490	138.200	1.0	44.870	7.880	42.570
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:58:09	0.022	0.022	80.7%							
2	18:58:36	0.013	0.020	81.9%							
3	18:59:03	0.009	0.013	82.1%							
X		0.015	0.018	81.5%							
S		0.007	0.005	0.8%							
%RSD		45.760	25.970	1.0							

VD15011-030 4/22/2020 19:03:33

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	78.9%	0.069	23.960	25.710	5.622	14470.000	10090.000	10830.000	11410.000	M 1431.000
2	19:04:26	77.6%	0.148	25.950	25.750	12.550	14220.000	10020.000	10710.000	11310.000	TM 1284.000
3	19:04:53	76.0%	0.058	24.950	26.520	8.954	14650.000	10100.000	10850.000	11590.000	M 1440.000
X		77.5%	0.092	24.950	25.990	9.041	14450.000	10070.000	10800.000	11440.000	TM 1385.000
S		1.4%	0.049	0.996	0.459	3.463	216.800	43.200	73.250	145.100	TM 87.470
%RSD		1.8	53.500	3.991	1.767	38.300	1.500	0.429	0.678	1.269	TM 6.314
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	6880.000	67200.000	1477.000	17680.000	17240.000	68.2%	11.110	1.337	2.604	18340.000
2	19:04:26	7129.000	66600.000	1466.000	17450.000	17010.000	69.7%	11.230	0.571	2.533	20550.000
3	19:04:53	7087.000	67800.000	1497.000	17280.000	17360.000	68.2%	11.140	1.576	2.670	21390.000
X		7032.000	67200.000	1480.000	17470.000	17200.000	68.7%	11.160	1.161	2.603	20090.000
S		133.100	599.100	15.900	200.700	175.300	0.9%	0.062	0.525	0.069	1580.000
%RSD		1.892	0.892	1.074	1.149	1.019	1.3	0.555	45.220	2.647	7.861
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	942.200	286.300	995.700	917.700	1.767	9.356	8.909	3.391	3.341	7.860
2	19:04:26	923.900	287.600	993.400	920.800	1.855	10.090	8.428	3.190	3.404	8.227
3	19:04:53	960.000	291.300	997.000	912.600	1.758	9.610	9.558	3.200	3.020	8.016
X		942.000	288.400	995.400	917.000	1.794	9.685	8.965	3.261	3.255	8.034
S		18.050	2.593	1.818	4.137	0.054	0.372	0.567	0.113	0.206	0.184
%RSD		1.917	0.899	0.183	0.451	3.000	3.840	6.325	3.476	6.330	2.290
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	10.350	8.783	1.602	-0.337	107.700	106.100	-1.253	-0.470	1.337	74.600
2	19:04:26	9.349	9.006	0.781	-1.106	107.400	105.400	2.921	0.767	-0.642	74.800
3	19:04:53	10.280	8.434	0.024	-0.759	112.000	111.600	-0.758	-0.159	-0.191	74.920
X		9.992	8.741	0.803	-0.734	109.000	107.700	0.303	0.046	0.168	74.770
S		0.558	0.288	0.789	0.385	2.597	3.408	2.280	0.644	1.037	0.160
%RSD		5.583	3.298	98.300	52.460	2.382	3.166	751.900	1396.000	616.700	0.214
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	72.6%	0.012	0.043	-0.034	4.163	0.019	0.027	0.538	0.413	69.4%
2	19:04:26	71.5%	0.025	0.120	0.013	1.596	0.010	0.027	0.414	0.468	69.7%
3	19:04:53	72.8%	0.033	0.047	0.025	2.937	0.014	0.028	0.460	0.433	72.0%
X		72.3%	0.023	0.070	0.001	2.899	0.015	0.028	0.471	0.438	70.4%
S		0.7%	0.011	0.043	0.032	1.284	0.004	0.001	0.063	0.028	1.4%
%RSD		1.0	46.080	61.990	2254.000	44.300	30.550	2.355	13.340	6.325	2.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	0.357	0.327	0.404	0.324	90.820	88.800	76.5%	0.028	0.022	0.834
2	19:04:26	0.436	0.394	0.455	0.407	90.590	87.300	78.8%	0.012	0.017	0.865
3	19:04:53	0.454	0.362	0.345	0.386	86.870	88.340	77.0%	0.028	0.019	0.932
X		0.416	0.361	0.402	0.372	89.430	88.150	77.4%	0.023	0.020	0.877
S		0.051	0.034	0.055	0.043	2.215	0.772	1.2%	0.009	0.003	0.050
%RSD		12.320	9.349	13.670	11.670	2.477	0.876	1.5	40.700	14.240	5.721
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:03:59	0.894	0.888	78.5%							
2	19:04:26	0.845	0.807	79.8%							
3	19:04:53	0.891	0.895	80.3%							
X		0.877	0.863	79.5%							
S		0.027	0.049	0.9%							
%RSD		3.090	5.698	1.1							

VD15011-031 4/22/2020 19:09:22

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	79.9%	-0.022	11.170	11.470	-1.305	29810.000	15910.000	15880.000	18360.000	21.820
2	19:10:16	78.1%	0.009	12.140	11.180	0.710	30180.000	16630.000	16660.000	18380.000	21.900
3	19:10:43	78.8%	-0.007	10.050	11.310	-4.206	30100.000	16080.000	16490.000	18540.000	21.460
X		78.9%	-0.006	11.120	11.320	-1.600	30030.000	16210.000	16350.000	18430.000	21.730
S		0.9%	0.016	1.045	0.146	2.471	196.500	373.800	409.500	97.630	0.232
%RSD		1.2	241.600	9.396	1.287	154.400	0.654	2.306	2.505	0.530	1.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	TM 19260.000	269300.000	2224.000	71910.000	71870.000	70.9%	1.889	0.390	1.936	25120.000
2	19:10:16	TM 19870.000	71080.000	2443.000	71940.000	71030.000	71.1%	1.910	0.116	1.920	26970.000
3	19:10:43	TM 19660.000	69870.000	2383.000	72930.000	72210.000	71.4%	2.396	1.118	2.036	27790.000
X		TM 19600.000	70080.000	2350.000	72260.000	71700.000	71.2%	2.065	0.541	1.964	26630.000
S		TM 309.100	908.900	113.400	582.500	606.100	0.3%	0.287	0.518	0.063	1368.000
%RSD		TM 1.577	1.297	4.827	0.806	0.845	0.4	13.880	95.620	3.196	5.138
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	139.900	160.000	136.800	222.900	0.665	15.180	13.970	1.934	1.686	14.250
2	19:10:16	143.300	160.400	139.800	230.700	0.679	14.800	14.760	2.046	2.306	13.520
3	19:10:43	141.000	160.800	140.200	224.500	0.709	15.370	13.440	2.128	2.148	14.290
X		141.400	160.400	138.900	226.100	0.684	15.120	14.060	2.036	2.047	14.020
S		1.710	0.399	1.882	4.137	0.023	0.290	0.661	0.098	0.322	0.434
%RSD		1.209	0.249	1.354	1.830	3.293	1.921	4.700	4.789	15.740	3.092
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	17.980	16.730	-0.181	0.064	796.800	813.000	0.899	-0.445	4.005	159.400
2	19:10:16	20.690	16.770	0.445	-0.173	826.500	815.700	8.144	1.249	3.482	158.500
3	19:10:43	18.850	17.360	-2.214	0.286	812.600	807.500	0.885	0.246	-1.135	159.800
X		19.170	16.950	-0.650	0.059	812.000	812.100	3.310	0.350	2.117	159.300
S		1.385	0.351	1.390	0.230	14.870	4.207	4.187	0.852	2.829	0.632
%RSD		7.224	2.069	213.800	389.700	1.831	0.518	126.500	243.300	133.600	0.397
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	70.7%	0.663	0.677	0.649	2.424	-0.007	0.004	0.229	0.311	72.2%
2	19:10:16	70.8%	0.615	0.630	0.547	3.625	-0.003	0.000	0.248	0.289	71.6%
3	19:10:43	70.8%	0.730	0.892	0.516	2.872	0.001	0.000	0.238	0.240	72.2%
X		70.8%	0.669	0.733	0.571	2.974	-0.003	0.002	0.238	0.280	72.0%
S		0.0%	0.058	0.139	0.069	0.607	0.004	0.002	0.010	0.036	0.3%
%RSD		0.1	8.635	19.020	12.170	20.410	146.200	154.200	4.032	12.990	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	0.310	0.404	1.891	1.749	176.000	171.900	79.4%	0.020	0.016	0.183
2	19:10:16	0.358	0.370	1.983	1.966	176.800	174.200	78.0%	0.027	0.019	0.222
3	19:10:43	0.424	0.441	1.845	1.734	176.900	172.700	79.1%	0.014	0.017	0.215
X		0.364	0.405	1.906	1.816	176.600	172.900	78.8%	0.020	0.017	0.206
S		0.057	0.035	0.070	0.130	0.521	1.132	0.7%	0.007	0.002	0.020
%RSD		15.680	8.735	3.677	7.165	0.295	0.655	0.9	32.760	9.372	9.867
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:09:49	0.211	0.194	79.0%							
2	19:10:16	0.160	0.192	80.3%							
3	19:10:43	0.198	0.179	79.2%							
X		0.190	0.188	79.5%							
S		0.026	0.008	0.7%							
%RSD		13.850	4.141	0.9							

CCV MW12620 4/22/2020 19:15:14 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	74.0%	311.600	289.600	305.000	9.785	±61640.000	±61790.000	±62140.000	±57450.000	298.100
2	19:16:08	73.5%	310.600	297.700	306.400	5.068	±63300.000	±62550.000	±62330.000	±59270.000	301.800
3	19:16:35	74.8%	303.200	291.300	302.100	6.933	±62270.000	±62160.000	±62300.000	±59000.000	300.700
X		74.1%	102.826%	97.617%	101.501%	7.262	±104.004%	±62170.000	±62260.000	±97.621%	100.059%
S		0.7%	n/a	n/a	n/a	2.376	±n/a	±379.800	±101.000	±n/a	n/a
%RSD		0.9	1.482	1.452	0.721	32.710	±1.338	±0.611	±0.162	±1.671	0.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±2746.000	488.700	±57510.000	60740.000	±61820.000	73.0%	306.300	300.500	292.800	3458.000
2	19:16:08	±2779.000	471.400	±57320.000	62440.000	±62220.000	72.2%	306.900	305.900	300.500	2818.000
3	19:16:35	±2780.000	418.400	±56760.000	61760.000	±61650.000	73.4%	309.200	304.300	296.000	2046.000
X		±2768.000	459.500	±95.329%	61650.000	±103.158%	72.9%	102.477%	101.194%	98.805%	2774.000
S		±19.380	36.610	±n/a	854.700	±n/a	0.6%	n/a	n/a	n/a	707.100
%RSD		±0.700	7.967	±0.682	1.386	±0.480	0.9	0.494	0.914	1.304	25.490
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±62250.000	286.000	±61190.000	±58800.000	291.600	287.300	279.400	287.600	305.900	301.300
2	19:16:08	±61670.000	292.500	±61560.000	±59900.000	294.300	287.300	292.300	290.000	300.200	298.300
3	19:16:35	±60990.000	286.700	±61830.000	±59210.000	292.600	289.000	291.200	288.100	307.700	309.000
X		±61640.000	96.129%	±61530.000	±98.838%	97.607%	95.949%	287.700	288.600	101.532%	100.945%
S		±630.600	n/a	±325.100	±n/a	n/a	n/a	7.176	1.266	n/a	n/a
%RSD		±1.023	1.237	±0.528	±0.942	0.466	0.337	2.495	0.439	1.285	1.818
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	295.600	289.000	317.000	293.500	13.790	13.680	1393.000	318.700	4.991	296.900
2	19:16:08	292.000	287.200	314.900	294.600	15.010	15.440	1413.000	318.900	3.486	296.200
3	19:16:35	294.200	287.600	324.500	291.600	12.460	13.690	1368.000	319.400	1.903	293.900
X		293.900	287.900	106.272%	293.200	13.750	14.270	1391.000	106.342%	3.460	98.548%
S		1.806	0.955	n/a	1.512	1.272	1.015	22.410	n/a	1.544	n/a
%RSD		0.615	0.332	1.586	0.516	9.250	7.111	1.611	0.117	44.630	0.536
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	70.8%	317.200	313.800	310.200	300.300	305.900	296.600	295.500	295.400	70.1%
2	19:16:08	70.6%	322.900	322.000	313.300	293.800	303.000	291.400	297.700	291.300	70.8%
3	19:16:35	71.0%	326.900	326.900	317.100	316.600	312.400	307.400	302.600	299.000	69.0%
X		70.8%	107.444%	106.960%	313.500	303.600	102.365%	298.500	298.600	98.405%	70.0%
S		0.2%	n/a	n/a	3.445	11.780	n/a	8.144	3.646	n/a	0.9%
%RSD		0.3	1.517	2.062	1.099	3.882	1.573	2.729	1.221	1.295	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	304.500	305.300	305.300	296.900	311.600	301.000	76.9%	307.400	309.300	290.100
2	19:16:08	303.000	302.900	302.300	303.600	302.800	298.600	75.8%	304.200	314.100	293.600
3	19:16:35	311.100	312.400	311.600	299.400	319.000	304.600	76.5%	312.200	312.400	296.500
X		102.070%	102.282%	306.400	99.983%	103.709%	100.463%	76.4%	307.900	103.990%	97.806%
S		n/a	n/a	4.742	n/a	n/a	n/a	0.5%	4.008	n/a	n/a
%RSD		1.414	1.600	1.548	1.133	2.610	1.013	0.7	1.301	0.779	1.101
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:15:41	293.600	290.600	74.9%							
2	19:16:08	294.200	294.300	75.6%							
3	19:16:35	291.500	290.300	74.0%							
X		97.704%	97.242%	74.8%							
S		n/a	n/a	0.8%							
%RSD		0.483	0.758	1.1							

CCB IM9936-01 4/22/2020 19:21:07 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	78.2%	0.009	2.114	2.581	21.380	-0.122	2.030	2.090	2.522	0.036
2	19:22:00	77.5%	-0.021	1.754	2.091	22.110	0.002	1.963	2.000	2.350	0.006
3	19:22:27	77.3%	-0.021	3.897	1.912	6.236	-0.202	1.984	1.275	1.907	0.044
X		77.7%	-0.011	2.588	2.195	16.570	-0.107	1.993	1.789	2.260	0.029
S		0.4%	0.017	1.148	0.346	8.960	0.103	0.034	0.447	0.317	0.020
%RSD		0.6	158.000	44.340	15.790	54.060	96.120	1.722	24.990	14.040	71.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.940	267.400	8.835	4.337	4.379	75.3%	-0.020	0.018	0.010	-55.530
2	19:22:00	2.200	257.700	9.470	-0.600	3.666	74.5%	-0.046	0.033	-0.011	-58.050
3	19:22:27	1.879	254.500	7.164	0.603	4.270	75.5%	0.006	-0.002	-0.026	-54.870
X		2.006	259.900	8.490	1.447	4.105	75.1%	-0.020	0.017	-0.009	-56.150
S		0.171	6.747	1.191	2.574	0.384	0.5%	0.026	0.018	0.018	1.679
%RSD		8.495	2.596	14.030	177.900	9.360	0.7	131.600	107.400	196.900	2.991
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.855	0.017	-3.507	5.653	0.017	0.034	0.071	0.011	0.025	-0.190
2	19:22:00	2.553	0.012	-2.995	8.757	0.004	-0.023	-0.617	-0.016	0.033	-0.134
3	19:22:27	1.312	0.015	-3.618	3.311	-0.002	0.020	0.264	-0.014	0.001	-0.031
X		1.907	0.015	-3.373	5.907	0.006	0.010	-0.094	-0.006	0.019	-0.118
S		0.623	0.003	0.333	2.732	0.010	0.030	0.463	0.015	0.017	0.081
%RSD		32.650	17.330	9.862	46.250	149.300	296.600	493.000	241.200	85.990	68.080
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.001	-0.048	-0.037	-0.292	8.759	7.486	0.657	0.020	0.740	0.012
2	19:22:00	-0.235	0.062	-0.215	0.752	8.479	7.634	-0.834	-0.637	3.240	0.012
3	19:22:27	0.142	0.170	0.028	-0.253	6.576	6.376	1.147	0.145	0.732	0.011
X		-0.031	0.061	-0.074	0.069	7.938	7.165	0.323	-0.158	1.571	0.012
S		0.191	0.109	0.126	0.592	1.188	0.687	1.032	0.420	1.446	0.001
%RSD		615.600	178.300	169.400	858.300	14.970	9.592	319.200	266.700	92.050	6.045
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	72.8%	0.185	0.211	0.210	0.013	0.007	0.010	0.043	0.018	75.5%
2	19:22:00	72.8%	0.247	0.247	0.292	0.477	0.005	0.015	-0.013	0.016	74.6%
3	19:22:27	72.9%	0.255	0.352	0.207	-0.060	0.016	0.015	-0.013	0.017	74.3%
X		72.8%	0.229	0.270	0.236	0.143	0.009	0.013	0.006	0.017	74.8%
S		0.1%	0.039	0.073	0.048	0.292	0.006	0.003	0.033	0.001	0.6%
%RSD		0.1	16.890	27.220	20.330	203.300	59.750	19.220	571.400	4.905	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.117	0.190	0.342	0.316	-0.030	-0.010	77.9%	0.000	0.013	0.019
2	19:22:00	0.131	0.127	0.350	0.403	-0.029	-0.010	78.9%	0.003	0.003	0.033
3	19:22:27	0.104	0.209	0.339	0.405	-0.017	0.023	78.2%	0.013	0.006	0.024
X		0.117	0.175	0.344	0.375	-0.025	0.001	78.3%	0.005	0.007	0.025
S		0.013	0.043	0.006	0.051	0.007	0.019	0.5%	0.007	0.005	0.007
%RSD		11.490	24.550	1.702	13.590	27.250	2331.000	0.7	128.200	71.380	27.440
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:21:33	0.016	0.012	80.3%							
2	19:22:00	0.021	0.026	80.5%							
3	19:22:27	0.011	0.013	81.8%							
X		0.016	0.017	80.9%							
S		0.005	0.008	0.9%							
%RSD		30.210	44.480	1.1							

Performance Report

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2041020A 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	DELL
Last Edit Timestamp	4/22/2020 14:01:42
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.

Underlining indicates that a data warning flag is set.

Column headings	Result cells	Data warning flags
No flag	Internal Standard	I - Invalid calibration
Semi Quant	Excluded	T - Tripped
Standard Addition	QC Warning	F - Interference correction failed
Multi Element	QC Failure	M - Result over max
	Transient TRA only:	V - Valley integration failed
	Peak Not Found	D - Different method used
	Manually Edited	
	Merged Peak	

Fully Quantitative Concentrations

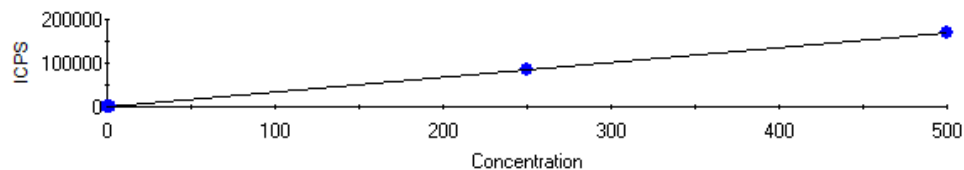
Id	Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si	39K
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000	400.000
4	MW12644	0.800		100.000	800.000	800.000	800.000	800.000	80.000		800.000
5	cal2 MW-12645	2.000			2000.000	2000.000	2000.000	2000.000	200.000		2000.000
6	cal3 MW-12520	250.000	250.000	250.000					250.000	250.000	
7	cal4 MW-12521	500.000	500.000	500.000					500.000	500.000	
8	cal5 MW-12618				50000.000	50000.000	50000.000	50000.000		5000.000	50000.000
9	cal6 MW-12619				100000.000	100000.000	100000.000	100000.000		10000.000	100000.000
Id	Label	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe	57Fe	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000	50.000	1.000
4	MW12644	800.000	800.000	10.000	10.000	10.000	10.000			100.000	2.000
5	cal2 MW-12645	2000.000	2000.000	25.000	25.000	25.000	25.000				5.000
6	cal3 MW-12520			250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521			500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618	50000.000	50000.000					50000.000	50000.000	50000.000	
9	cal6 MW-12619	100000.000	100000.000					100000.000	100000.000	100000.000	
Id	Label	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	82Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	5.000	5.000	5.000	5.000	10.000	10.000	10.000	2.000	5.000	5.000
4	MW12644	10.000			10.000	20.000			4.000		10.000
5	cal2 MW-12645	25.000	25.000	25.000	25.000	50.000	50.000	50.000	10.000	25.000	25.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag	106Cd	111Cd	114Cd	116Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	10.000	10.000	10.000	10.000	1.000	1.000	0.100	0.100	0.100	20.000
4	MW12644	20.000		20.000	20.000	2.000				0.200	
5	cal2 MW-12645	50.000	50.000	50.000	50.000	5.000	5.000	0.500	0.500	0.500	100.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	118Sn	121Sb	123Sb	135Ba	137Ba	203Tl	205Tl	206Pb	207Pb	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
3	cal1 MW-12643	20.000	2.000	2.000	5.000	5.000	0.500	0.500	1.000	1.000	1.000
4	MW12644	40.000		4.000	10.000	10.000	1.000	1.000	2.000	2.000	2.000
5	cal2 MW-12645	100.000	10.000	10.000	25.000	25.000	2.500	2.500	5.000	5.000	5.000
6	cal3 MW-12520	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
7	cal4 MW-12521	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
8	cal5 MW-12618										
9	cal6 MW-12619										
Id	Label	232Th	238U								
		ppb	ppb								

3	cal1 MW-12643	50.000
4	MW12644	
5	cal2 MW-12645	250.000
6	cal3 MW-12520	
7	cal4 MW-12521	500.000
8	cal5 MW-12618	
9	cal6 MW-12619	

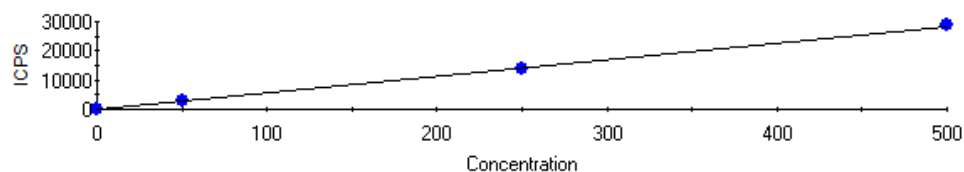
Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	TUNE MW12522	Unknown	1.000	0	1	5	144
2	BLANK IM9936-01	Blank	1.000	0	1	1	144
3	cal1 MW-12643	Fully Quant Standard	1.000	4	5	3	144
4	MW12644	Fully Quant Standard	1.000	4	5	4	144
5	cal2 MW-12645	Fully Quant Standard	1.000	4	5	5	144
6	cal3 MW-12520	Fully Quant Standard	1.000	4	5	6	144
7	cal4 MW-12521	Fully Quant Standard	1.000	4	5	7	144
8	cal5 MW-12618	Fully Quant Standard	1.000	4	5	8	144
9	cal6 MW-12619	Fully Quant Standard	1.000	4	5	9	144
10	ICV MW12789 PREP 4/22/20	QC Sample	1.000	4	5	11	144
11	ICB IM9936-01	QC Sample	1.000	0	1	1	144
12	ICSA MW12579	QC Sample	1.000	4	5	12	144
13	CCV MW12620	QC Sample	1.000	0	1	8	144
14	CCB IM9936-01	QC Sample	1.000	0	1	1	144
15	VQ51454-001	QC Sample	1.000	1	1	1	144
16	VQ51454-002	QC Sample	1.000	1	1	2	144
17	VD17087-001	Unknown	1.000	1	1	3	144
18	VD17087-002	Unknown	1.000	1	1	4	144
19	VD17087-003	Unknown	1.000	1	1	5	144
20	VD17087-004	Unknown	1.000	1	1	6	144
21	VD17087-004S	Unknown	1.000	1	1	7	144
22	VD17087-004SD	Unknown	1.000	1	1	8	144
23	VD17087-004L(5)	Unknown	1.000	1	1	9	144
24	VD17087-004A	Unknown	1.000	1	1	10	144
25	CCV MW12620	QC Sample	1.000	0	1	8	144
26	CCB IM9936-01	QC Sample	1.000	0	1	1	144
27	LR MW12519	QC Sample	1.000	4	5	10	144
28	VD17087-005	Unknown	1.000	1	2	1	144
29	VD17087-006	Unknown	1.000	1	2	2	144
30	VQ51455-001	QC Sample	1.000	1	2	3	144
31	VQ51455-002	QC Sample	1.000	1	2	4	144
32	VD17091-001	Unknown	1.000	1	2	5	144
33	VD17091-002	Unknown	1.000	1	2	6	144
34	VD17091-003	Unknown	1.000	1	2	7	144
35	VD17091-004	Unknown	1.000	1	2	8	144
36	VD17091-005	Unknown	1.000	1	2	9	144
37	VD17091-005S	Unknown	1.000	1	2	10	144
38	CCV MW12620	QC Sample	1.000	0	1	8	144
39	CCB IM9936-01	QC Sample	1.000	0	1	1	144
40	VD17091-005SD	Unknown	1.000	1	3	1	144
41	VD17091-005L(5)	Unknown	1.000	1	3	2	144
42	VD17091-005A	Unknown	1.000	1	3	3	144
43	VD15011-023	Unknown	1.000	1	3	4	144
44	VD15011-024	Unknown	1.000	1	3	5	144
45	VD15011-029	Unknown	1.000	1	3	6	144
46	VD15011-029S	Unknown	1.000	1	3	7	144
47	VD15011-029SD	Unknown	1.000	1	3	8	144
48	VD15011-029L(5)	Unknown	1.000	1	3	9	144
49	VD15011-029A	Unknown	1.000	1	3	10	144
50	CCV MW12620	QC Sample	1.000	0	1	8	144
51	CCB IM9936-01	QC Sample	1.000	0	1	1	144
52	VD15011-030	Unknown	1.000	1	4	1	144
53	VD15011-031	Unknown	1.000	1	4	2	144
54	CCV MW12620	QC Sample	1.000	0	1	8	144
55	CCB IM9936-01	QC Sample	1.000	0	1	1	144
56	IS MW12650	Unknown	1.000	0	3	5	144
57	RINSE	Unknown	1.000	0	1	5	144

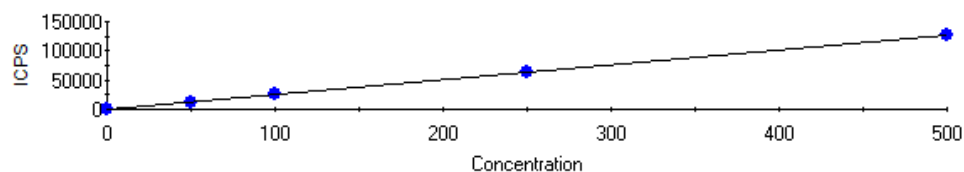
Fully Quant Calibration

9Be FQ Block 1

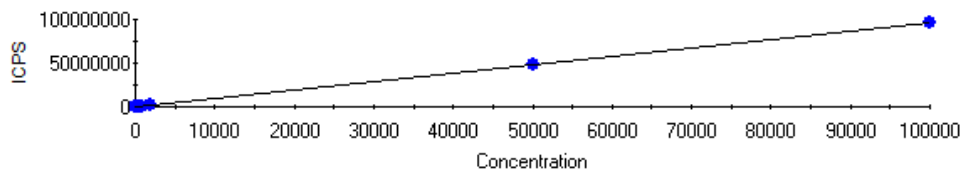
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	17.41	0.00
cal1 MW-12643	0.400	0.319	0.081	124.13	20.28
MW12644	0.800	0.773	0.027	276.22	3.34
cal2 MW-12645	2.000	2.093	0.093	717.75	4.63
cal3 MW-12520	250.000	249.004	0.996	83353.54	0.40
cal4 MW-12521	500.000	500.284	0.284	167451.19	0.06

10B FQ Block 1

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	45.39	0.00
cal1 MW-12643	50.000	48.739	1.261	2813.14	2.52
cal3 MW-12520	250.000	241.226	8.774	13743.93	3.51
cal4 MW-12521	500.000	504.513	4.513	28695.20	0.90

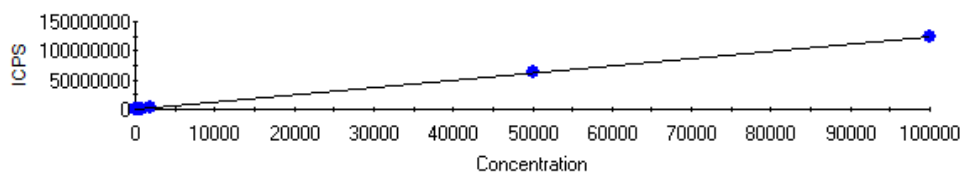
11B FQ Block 1

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	259.78	0.00
cal1 MW-12643	50.000	48.754	1.246	12486.19	2.49
MW12644	100.000	101.493	1.493	25711.93	1.49
cal3 MW-12520	250.000	253.028	3.028	63713.69	1.21
cal4 MW-12521	500.000	506.041	6.041	127164.11	1.21

23Na FQ Block 1

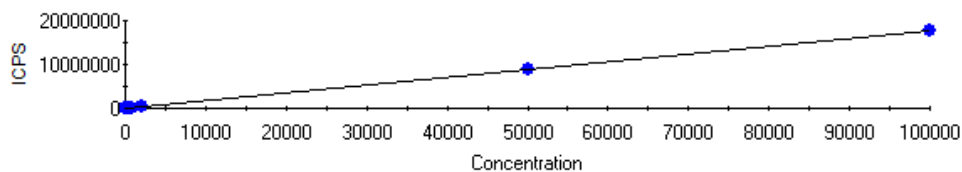
Intercept CPS=9081.467041 Intercept Conc=9.511486
Sensitivity=954.789514 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	9081.47	0.00
cal1 MW-12643	400.000	435.301	35.301	424702.76	8.83
MW12644	800.000	861.839	61.839	831956.13	7.73
cal2 MW-12645	2000.000	2033.523	33.523	1950668.08	1.68
cal5 MW-12618	50000.000	50210.227	210.227	47949279.90	0.42
cal6 MW-12619	100000.000	99893.580	106.420	95386424.16	0.11

24Mg FQ Block 1

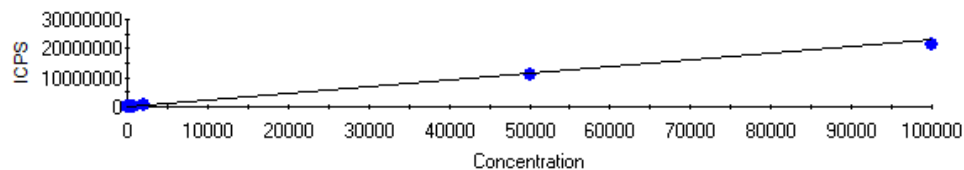
Intercept CPS=1922.859718 Intercept Conc=1.554999
Sensitivity=1236.566718 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1922.86	0.00
cal1 MW-12643	400.000	460.593	60.593	571477.24	15.15
MW12644	800.000	929.015	129.015	1150711.33	16.13
cal2 MW-12645	2000.000	2105.382	105.382	2605368.73	5.27
cal5 MW-12618	50000.000	50224.435	224.435	62107787.51	0.45
cal6 MW-12619	100000.000	99884.400	115.600	123515648.10	0.12

25Mg FQ Block 1

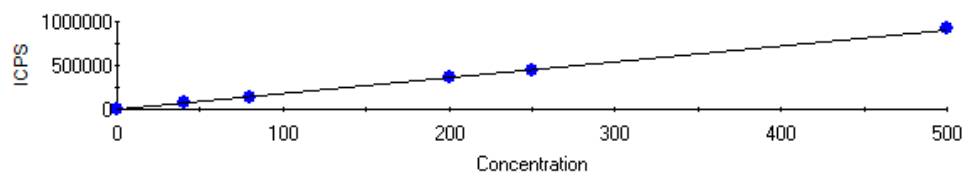
Intercept CPS=292.166635 Intercept Conc=1.634104
Sensitivity=178.793162 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	292.17	0.00
cal1 MW-12643	400.000	440.972	40.972	79134.87	10.24
MW12644	800.000	875.407	75.407	156808.95	9.43
cal2 MW-12645	2000.000	2202.546	202.546	394092.30	10.13
cal5 MW-12618	50000.000	50027.630	27.630	8944890.33	0.06
cal6 MW-12619	100000.000	99981.367	18.633	17876276.92	0.02

26Mg FQ Block 1

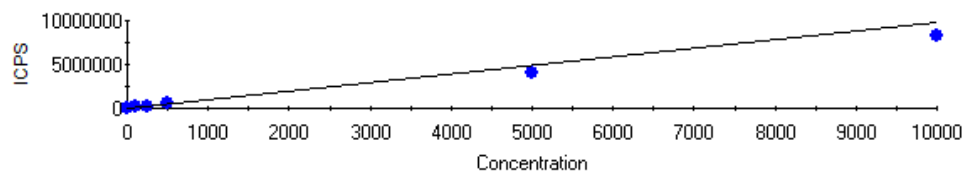
Intercept CPS=316.242242 Intercept Conc=1.382628
Sensitivity=228.725442 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	316.24	0.00
cal1 MW-12643	400.000	408.932	8.932	93849.28	2.23
MW12644	800.000	820.013	20.013	187874.17	2.50
cal2 MW-12645	2000.000	2075.598	75.598	475058.32	3.78
cal5 MW-12618	50000.000	47406.908	2593.092	10843482.19	5.19
cal6 MW-12619	100000.000	93631.014	6368.986	21416111.34	6.37

27Al FQ Block 1

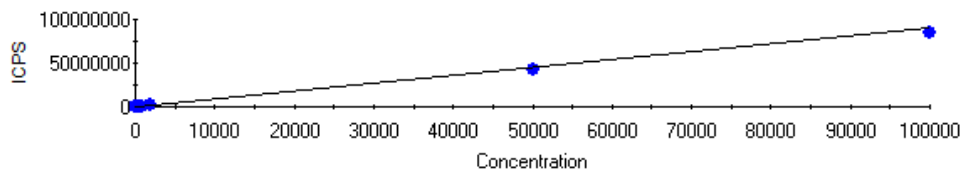
Intercept CPS=290.538306 Intercept Conc=0.160557
Sensitivity=1809.560040 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	290.54	0.00
cal1 MW-12643	40.000	40.088	0.088	72832.60	0.22
MW12644	80.000	79.498	0.502	144146.59	0.63
cal2 MW-12645	200.000	198.000	2.000	358583.54	1.00
cal3 MW-12520	250.000	249.320	0.680	451450.89	0.27
cal4 MW-12521	500.000	507.479	7.479	918604.46	1.50

28Si FQ Block 1

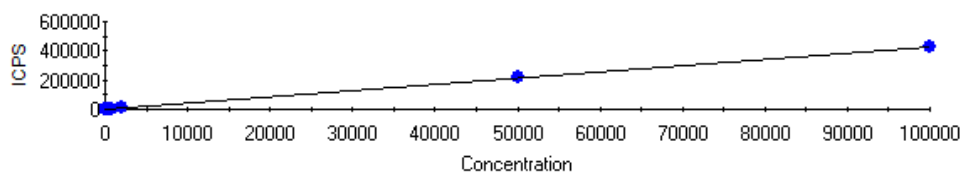
Intercept CPS=12337.884504 Intercept Conc=12.657863
Sensitivity=974.720983 Correlation Coeff=0.999794

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	12337.88	0.00
cal1 MW-12643	100.000	91.948	8.052	101961.52	8.05
cal3 MW-12520	250.000	250.326	0.326	256336.26	0.13
cal4 MW-12521	500.000	519.016	19.016	518233.96	3.80
cal5 MW-12618	5000.000	4085.008	914.992	3994081.26	18.30
cal6 MW-12619	10000.000	8437.520	1562.480	8236565.20	15.62

39K FQ Block 1

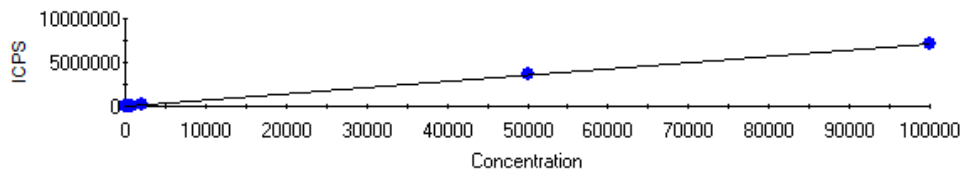
Intercept CPS=55155.248519 Intercept Conc=61.185574
Sensitivity=901.442034 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	55155.25	0.00
cal1 MW-12643	400.000	408.983	8.983	423829.34	2.25
MW12644	800.000	829.017	29.017	802465.62	3.63
cal2 MW-12645	2000.000	1975.043	24.957	1835541.64	1.25
cal5 MW-12618	50000.000	46544.282	3455.718	42012127.88	6.91
cal6 MW-12619	100000.000	93683.232	6316.768	84505158.38	6.32

43Ca FQ Block 1

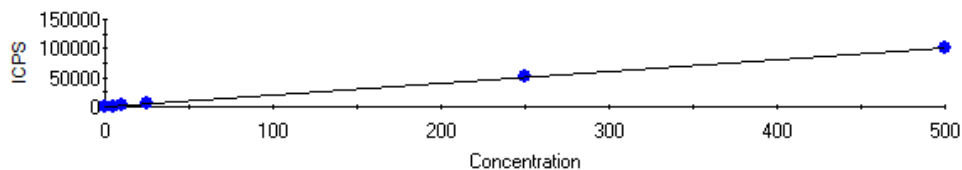
Intercept CPS=13.309839 Intercept Conc=3.106645
Sensitivity=4.284313 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.31	0.00
cal1 MW-12643	400.000	407.549	7.549	1759.38	1.89
MW12644	800.000	816.911	16.911	3513.21	2.11
cal2 MW-12645	2000.000	2109.470	109.470	9050.94	5.47
cal5 MW-12618	50000.000	50327.382	327.382	215631.56	0.65
cal6 MW-12619	100000.000	99833.954	166.046	427733.20	0.17

44Ca FQ Block 1

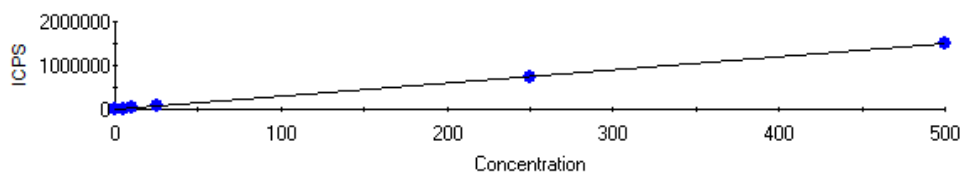
Intercept CPS=473.527476 Intercept Conc=6.620990
Sensitivity=71.519134 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	473.53	0.00
cal1 MW-12643	400.000	398.436	1.564	28969.30	0.39
MW12644	800.000	803.052	3.052	57907.14	0.38
cal2 MW-12645	2000.000	2021.146	21.146	145024.17	1.06
cal5 MW-12618	50000.000	49748.849	251.151	3558468.18	0.50
cal6 MW-12619	100000.000	100075.317	75.317	7157773.55	0.08

47Ti FQ Block 1

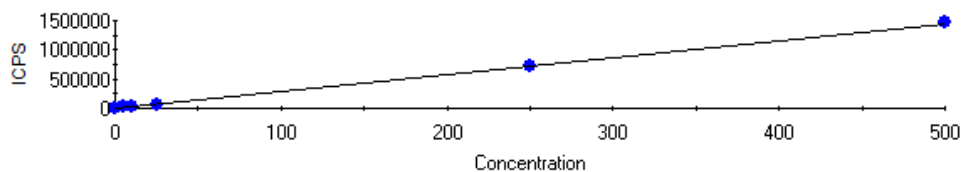
Intercept CPS=9.331027 Intercept Conc=0.045710
Sensitivity=204.134446 Correlation Coeff=0.999987

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	9.33	0.00
cal1 MW-12643	5.000	5.035	0.035	1037.25	0.71
MW12644	10.000	9.708	0.292	1990.97	2.92
cal2 MW-12645	25.000	25.820	0.820	5280.14	3.28
cal3 MW-12520	250.000	247.584	2.416	50549.71	0.97
cal4 MW-12521	500.000	499.900	0.100	102056.05	0.02

51V FQ Block 1

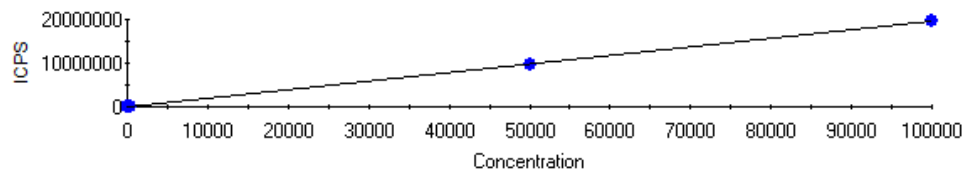
Intercept CPS=148.899046 Intercept Conc=0.049658
Sensitivity=2998.500176 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	148.90	0.00
cal1 MW-12643	5.000	4.965	0.035	15035.60	0.71
MW12644	10.000	9.873	0.127	29754.56	1.27
cal2 MW-12645	25.000	24.653	0.347	74071.73	1.39
cal3 MW-12520	250.000	244.919	5.081	734537.48	2.03
cal4 MW-12521	500.000	502.561	2.561	1507077.85	0.51

52Cr FQ Block 1

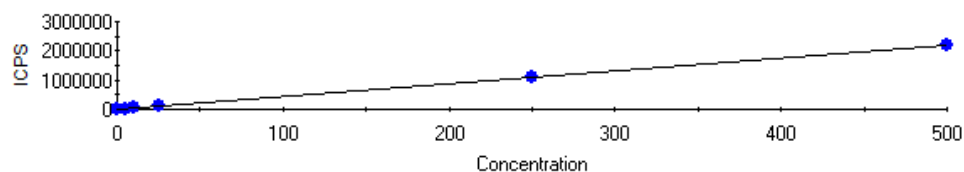
Intercept CPS=477.143826 Intercept Conc=0.164490
Sensitivity=2900.739688 Correlation Coeff=0.999929

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	477.14	0.00
cal1 MW-12643	5.000	4.933	0.067	14787.25	1.33
MW12644	10.000	9.883	0.117	29145.57	1.17
cal2 MW-12645	25.000	24.535	0.465	71647.62	1.86
cal3 MW-12520	250.000	245.643	4.357	713023.03	1.74
cal4 MW-12521	500.000	504.022	4.022	1462513.77	0.80

54Fe FQ Block 1

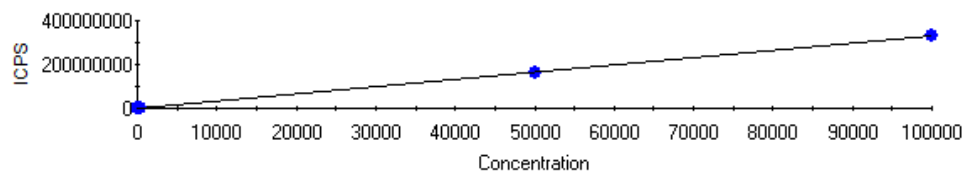
Intercept CPS=3028.697078 Intercept Conc=15.473761
Sensitivity=195.731154 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	3028.70	0.00
cal1 MW-12643	50.000	55.059	5.059	13805.52	10.12
cal3 MW-12520	250.000	383.256	133.256	78043.80	53.30
cal4 MW-12521	500.000	778.116	278.116	155330.22	55.62
cal5 MW-12618	50000.000	49978.998	21.002	9785475.74	0.04
cal6 MW-12619	100000.000	100008.775	8.775	19577861.60	0.01

55Mn FQ Block 1

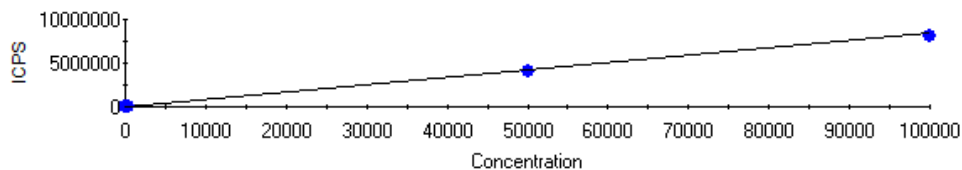
Intercept CPS=326.878583 Intercept Conc=0.074158
Sensitivity=4407.859604 Correlation Coeff=0.999889

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	326.88	0.00
cal1 MW-12643	5.000	4.751	0.249	21270.74	4.97
MW12644	10.000	9.375	0.625	41650.66	6.25
cal2 MW-12645	25.000	24.287	0.713	107378.49	2.85
cal3 MW-12520	250.000	243.609	6.391	1074120.96	2.56
cal4 MW-12521	500.000	503.246	3.246	2218565.38	0.65

56Fe FQ Block 1

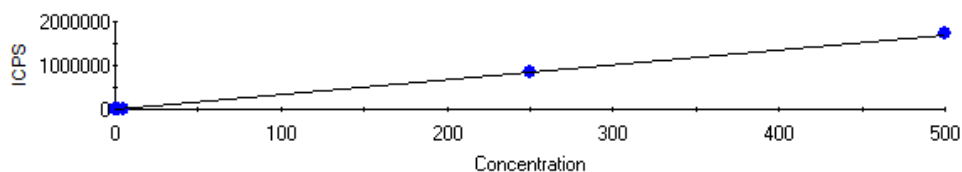
Intercept CPS=113497.874209 Intercept Conc=34.481929
Sensitivity=3291.517569 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	113497.87	0.00
cal1 MW-12643	50.000	55.879	5.879	297425.73	11.76
cal3 MW-12520	250.000	281.000	31.000	1038414.52	12.40
cal4 MW-12521	500.000	568.023	68.023	1983154.35	13.60
cal5 MW-12618	50000.000	50084.999	84.999	164969150.70	0.17
cal6 MW-12619	100000.000	99957.080	42.920	329123983.36	0.04

57Fe FQ Block 1

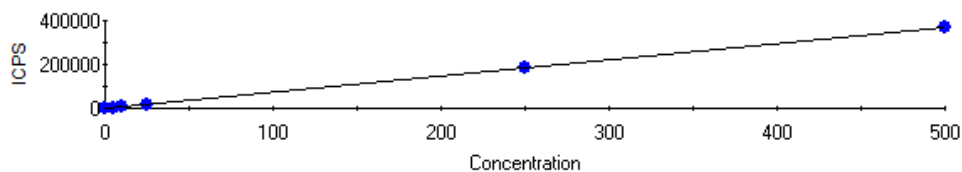
Intercept CPS=1411.920479 Intercept Conc=16.795136
Sensitivity=84.067226 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	1411.92	0.00
cal1 MW-12643	50.000	49.040	0.960	5534.59	1.92
MW12644	100.000	100.074	0.074	9824.90	0.07
cal3 MW-12520	250.000	261.310	11.310	23379.55	4.52
cal4 MW-12521	500.000	525.472	25.472	45586.93	5.09
cal5 MW-12618	50000.000	47976.564	2023.436	4034668.57	4.05
cal6 MW-12619	100000.000	96052.550	3947.450	8076283.34	3.95

59Co FQ Block 1

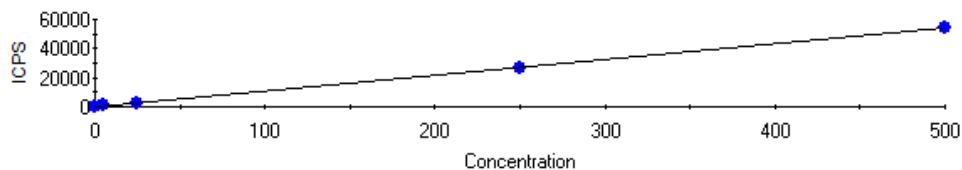
Intercept CPS=43.976845 Intercept Conc=0.012884
Sensitivity=3413.173268 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	43.98	0.00
cal1 MW-12643	1.000	1.022	0.022	3533.39	2.23
MW12644	2.000	1.921	0.079	6599.96	3.96
cal2 MW-12645	5.000	4.937	0.063	16895.65	1.26
cal3 MW-12520	250.000	248.386	1.614	847828.70	0.65
cal4 MW-12521	500.000	503.631	3.631	1719022.97	0.73

60Ni FQ Block 1

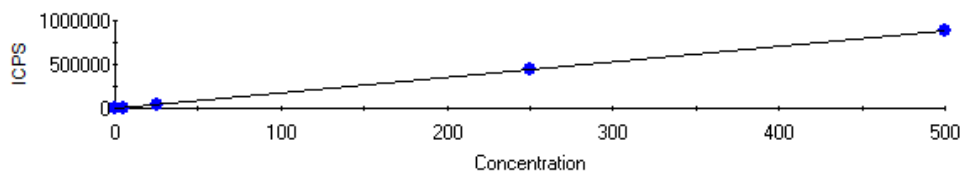
Intercept CPS=38.671749 Intercept Conc=0.052844
Sensitivity=731.814899 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	38.67	0.00
cal1 MW-12643	5.000	5.074	0.074	3751.79	1.48
MW12644	10.000	10.067	0.067	7406.21	0.67
cal2 MW-12645	25.000	25.048	0.048	18369.50	0.19
cal3 MW-12520	250.000	250.076	0.076	183048.06	0.03
cal4 MW-12521	500.000	499.957	0.043	365914.99	0.01

62Ni FQ Block 1

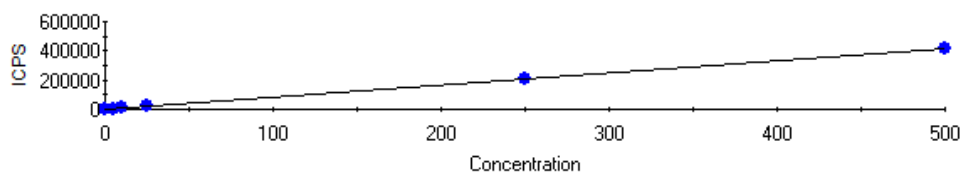
Intercept CPS=82.722291 Intercept Conc=0.766077
Sensitivity=107.981717 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	82.72	0.00
cal1 MW-12643	5.000	5.393	0.393	665.12	7.87
cal2 MW-12645	25.000	24.952	0.048	2777.13	0.19
cal3 MW-12520	250.000	249.699	0.301	27045.64	0.12
cal4 MW-12521	500.000	500.149	0.149	54089.67	0.03

63Cu FQ Block 1

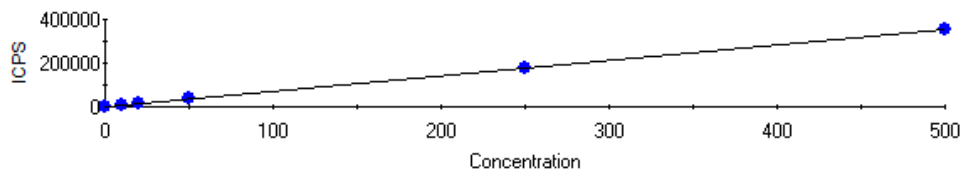
Intercept CPS=185.273004 Intercept Conc=0.103753
Sensitivity=1785.718369 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	185.27	0.00
cal1 MW-12643	5.000	5.075	0.075	9247.10	1.49
cal2 MW-12645	25.000	25.134	0.134	45066.88	0.53
cal3 MW-12520	250.000	250.364	0.364	447265.48	0.15
cal4 MW-12521	500.000	499.810	0.190	892705.89	0.04

65Cu FQ Block 1

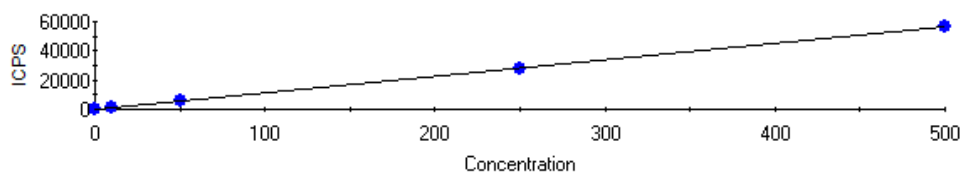
Intercept CPS=58.638104 Intercept Conc=0.070746
Sensitivity=828.852530 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	58.64	0.00
cal1 MW-12643	5.000	5.273	0.273	4429.24	5.46
MW12644	10.000	10.339	0.339	8628.25	3.39
cal2 MW-12645	25.000	25.723	0.723	21378.88	2.89
cal3 MW-12520	250.000	252.483	2.483	209329.75	0.99
cal4 MW-12521	500.000	498.713	1.287	413418.08	0.26

66Zn FQ Block 1

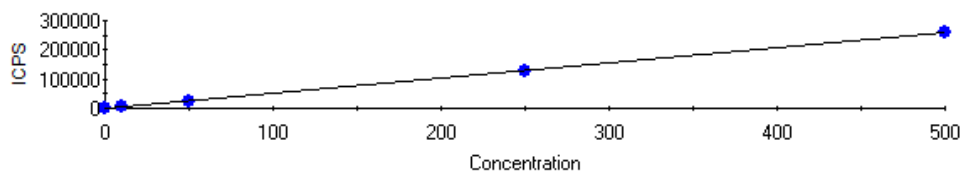
Intercept CPS=689.329668 Intercept Conc=0.981101
Sensitivity=702.608335 Correlation Coeff=0.999986

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	689.33	0.00
cal1 MW-12643	10.000	10.381	0.381	7983.42	3.81
MW12644	20.000	20.235	0.235	14906.55	1.17
cal2 MW-12645	50.000	49.720	0.280	35623.28	0.56
cal3 MW-12520	250.000	247.300	2.700	174444.06	1.08
cal4 MW-12521	500.000	499.890	0.110	351915.99	0.02

67Zn FQ Block 1

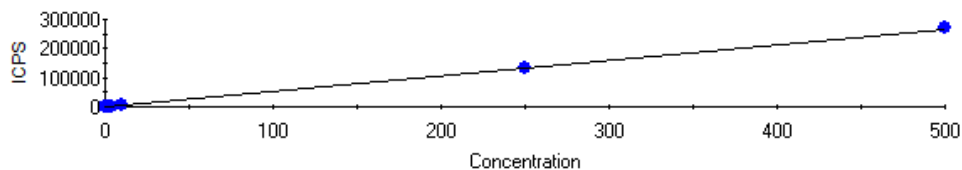
Intercept CPS=108.019241 Intercept Conc=0.958163
Sensitivity=112.735723 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	108.02	0.00
cal1 MW-12643	10.000	9.769	0.231	1209.36	2.31
cal2 MW-12645	50.000	49.210	0.790	5655.76	1.58
cal3 MW-12520	250.000	249.397	0.603	28223.92	0.24
cal4 MW-12521	500.000	500.385	0.385	56519.32	0.08

68Zn FQ Block 1

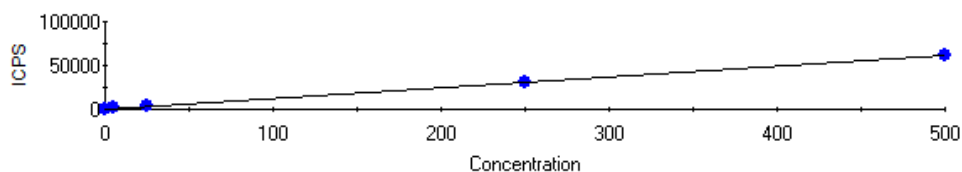
Intercept CPS=452.050933 Intercept Conc=0.877083
Sensitivity=515.402875 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	452.05	0.00
cal1 MW-12643	10.000	10.013	0.013	5612.57	0.13
cal2 MW-12645	50.000	49.278	0.722	25849.85	1.44
cal3 MW-12520	250.000	249.423	0.577	129005.60	0.23
cal4 MW-12521	500.000	504.697	4.697	260574.17	0.94

75As FQ Block 1

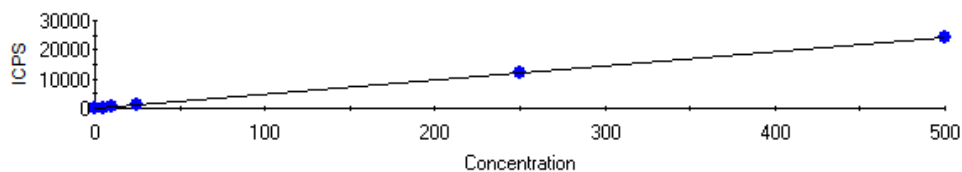
Intercept CPS=97.527066 Intercept Conc=0.182258
Sensitivity=535.105443 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	97.53	0.00
cal1 MW-12643	2.000	1.662	0.338	986.81	16.91
MW12644	4.000	4.205	0.205	2347.53	5.12
cal2 MW-12645	10.000	10.727	0.727	5837.34	7.27
cal3 MW-12520	250.000	248.783	1.217	133222.89	0.49
cal4 MW-12521	500.000	502.183	2.183	268818.28	0.44

78Se FQ Block 1

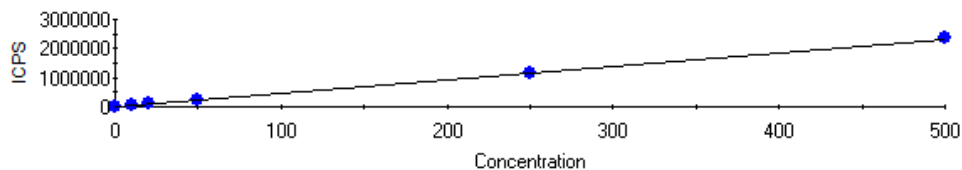
Intercept CPS=438.681361 Intercept Conc=3.607565
Sensitivity=121.600396 Correlation Coeff=0.999976

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	438.68	0.00
cal1 MW-12643	5.000	5.470	0.470	1103.87	9.41
cal2 MW-12645	25.000	23.890	1.110	3343.68	4.44
cal3 MW-12520	250.000	247.347	2.653	30516.21	1.06
cal4 MW-12521	500.000	501.377	1.377	61406.35	0.28

82Se FQ Block 1

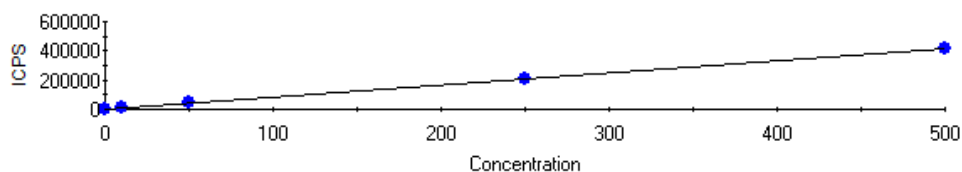
Intercept CPS=38.175900 Intercept Conc=0.792060
Sensitivity=48.198218 Correlation Coeff=0.999990

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	38.18	0.00
cal1 MW-12643	5.000	4.690	0.310	264.22	6.20
MW12644	10.000	10.428	0.428	540.79	4.28
cal2 MW-12645	25.000	25.117	0.117	1248.78	0.47
cal3 MW-12520	250.000	248.194	1.806	12000.68	0.72
cal4 MW-12521	500.000	500.892	0.892	24180.26	0.18

88Sr FQ Block 1

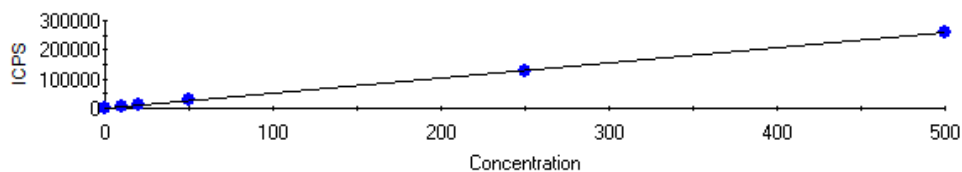
Intercept CPS=26.669572 Intercept Conc=0.005712
Sensitivity=4669.312453 Correlation Coeff=0.999966

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	26.67	0.00
cal1 MW-12643	10.000	9.526	0.474	44507.08	4.74
MW12644	20.000	18.996	1.004	88723.39	5.02
cal2 MW-12645	50.000	48.782	1.218	227806.74	2.44
cal3 MW-12520	250.000	246.543	3.457	1151213.18	1.38
cal4 MW-12521	500.000	501.900	1.900	2343554.09	0.38

95Mo FQ Block 1

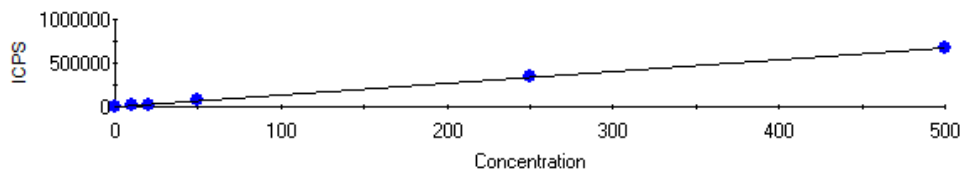
Intercept CPS=122.755766 Intercept Conc=0.148531
Sensitivity=826.463547 Correlation Coeff=0.999930

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	122.76	0.00
cal1 MW-12643	10.000	10.073	0.073	8447.57	0.73
cal2 MW-12645	50.000	51.366	1.366	42575.20	2.73
cal3 MW-12520	250.000	245.528	4.472	203042.87	1.79
cal4 MW-12521	500.000	502.081	2.081	415074.68	0.42

97Mo FQ Block 1

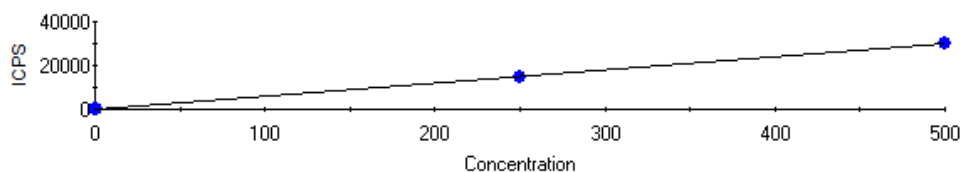
Intercept CPS=81.403631 Intercept Conc=0.157165
Sensitivity=517.948534 Correlation Coeff=0.999971

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	81.40	0.00
cal1 MW-12643	10.000	10.419	0.419	5477.82	4.19
MW12644	20.000	20.406	0.406	10650.83	2.03
cal2 MW-12645	50.000	51.462	1.462	26735.99	2.92
cal3 MW-12520	250.000	247.237	2.763	128137.21	1.11
cal4 MW-12521	500.000	501.211	1.211	259682.86	0.24

98Mo FQ Block 1

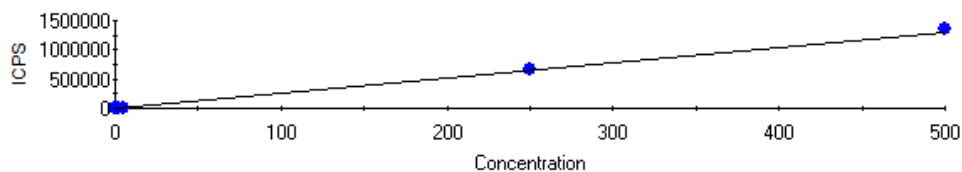
Intercept CPS=230.422493 Intercept Conc=0.169552
Sensitivity=1359.011305 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	230.42	0.00
cal1 MW-12643	10.000	9.902	0.098	13687.58	0.98
MW12644	20.000	19.964	0.036	27361.49	0.18
cal2 MW-12645	50.000	50.635	0.635	69044.24	1.27
cal3 MW-12520	250.000	247.746	2.254	336920.69	0.90
cal4 MW-12521	500.000	501.067	1.067	681185.65	0.21

106Cd FQ Block 1

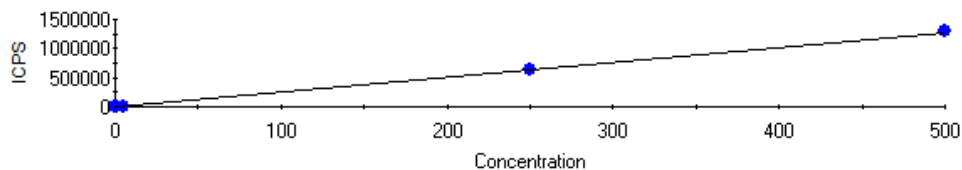
Intercept CPS=95.736912 Intercept Conc=1.595103
Sensitivity=60.019270 Correlation Coeff=0.999938

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	95.74	0.00
cal1 MW-12643	0.100	0.025	0.075	97.22	75.30
cal2 MW-12645	0.500	1.056	0.556	159.13	111.24
cal3 MW-12520	250.000	245.500	4.500	14830.47	1.80
cal4 MW-12521	500.000	502.249	2.249	30240.38	0.45

107Ag FQ Block 1

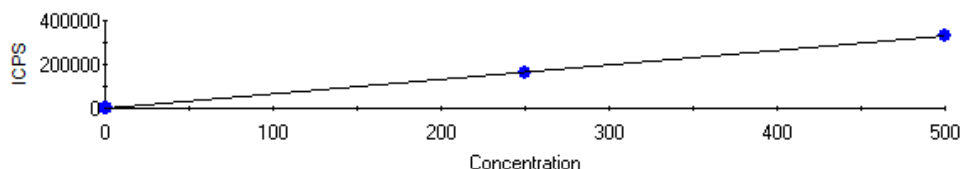
Intercept CPS=18.695937 Intercept Conc=0.007198
Sensitivity=2597.375088 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.70	0.00
cal1 MW-12643	1.000	1.012	0.012	2647.60	1.21
MW12644	2.000	1.985	0.015	5175.68	0.73
cal2 MW-12645	5.000	4.938	0.062	12843.31	1.25
cal3 MW-12520	250.000	254.854	4.854	661971.09	1.94
cal4 MW-12521	500.000	518.092	18.092	1345698.85	3.62

109Ag FQ Block 1

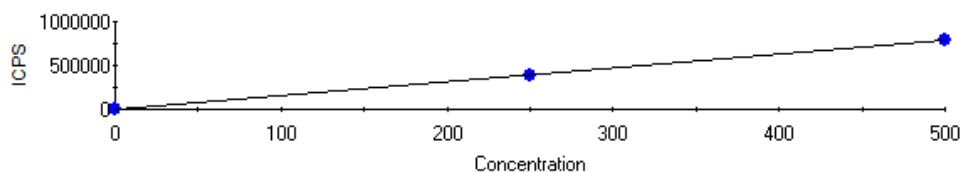
Intercept CPS=10.674132 Intercept Conc=0.004163
Sensitivity=2563.831690 Correlation Coeff=0.999912

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	10.67	0.00
cal1 MW-12643	1.000	1.018	0.018	2620.36	1.79
cal2 MW-12645	5.000	4.977	0.023	12771.85	0.45
cal3 MW-12520	250.000	248.640	1.360	637480.67	0.54
cal4 MW-12521	500.000	511.244	11.244	1310754.39	2.25

111Cd FQ Block 1

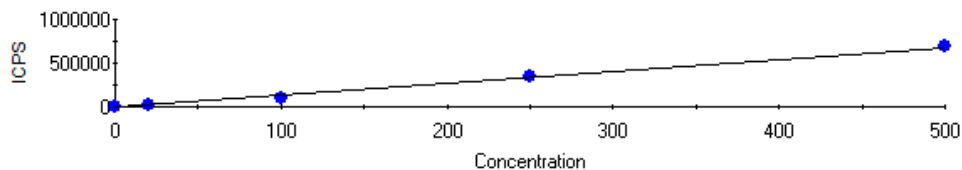
Intercept CPS=7.568163 Intercept Conc=0.011472
Sensitivity=659.706996 Correlation Coeff=0.999937

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	7.57	0.00
cal1 MW-12643	0.100	0.065	0.035	50.40	35.07
cal2 MW-12645	0.500	0.407	0.093	275.93	18.64
cal3 MW-12520	250.000	245.349	4.651	161866.13	1.86
cal4 MW-12521	500.000	502.326	2.326	331395.23	0.47

114Cd FQ Block 1

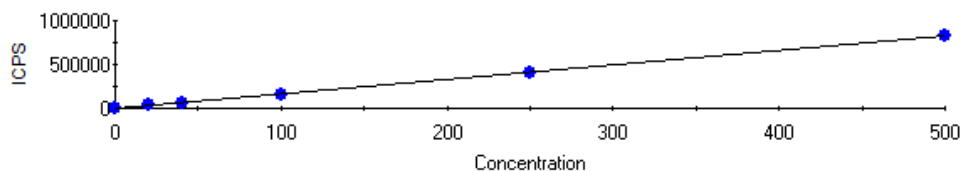
Intercept CPS=5.172680 Intercept Conc=0.003271
Sensitivity=1581.251230 Correlation Coeff=0.999913

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	5.17	0.00
cal1 MW-12643	0.100	0.100	0.000	163.71	0.26
MW12644	0.200	0.232	0.032	371.40	15.80
cal2 MW-12645	0.500	0.498	0.002	792.73	0.39
cal3 MW-12520	250.000	244.342	5.658	386370.80	2.26
cal4 MW-12521	500.000	502.829	2.829	795104.36	0.57

116Sn FQ Block 1

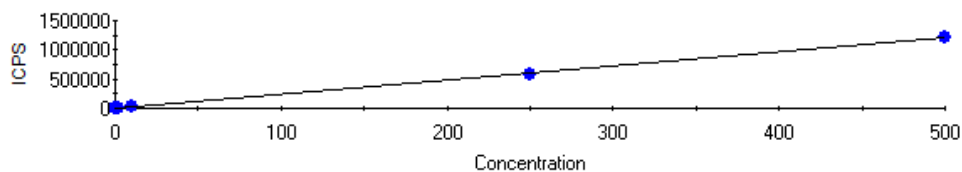
Intercept CPS=41.373472 Intercept Conc=0.030335
Sensitivity=1363.887110 Correlation Coeff=0.998229

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	41.37	0.00
cal1 MW-12643	20.000	13.167	6.833	18000.29	34.16
cal2 MW-12645	100.000	69.533	30.467	94876.81	30.47
cal3 MW-12520	250.000	247.003	2.997	336925.10	1.20
cal4 MW-12521	500.000	507.865	7.865	692712.36	1.57

118Sn FQ Block 1

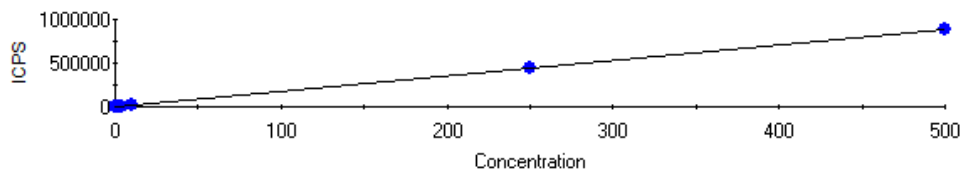
Intercept CPS=53.371023 Intercept Conc=0.032507
Sensitivity=1641.818798 Correlation Coeff=0.999946

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	53.37	0.00
cal1 MW-12643	20.000	19.004	0.996	31253.81	4.98
MW12644	40.000	38.372	1.628	63053.18	4.07
cal2 MW-12645	100.000	98.768	1.232	162212.54	1.23
cal3 MW-12520	250.000	245.806	4.194	403622.43	1.68
cal4 MW-12521	500.000	502.513	2.513	825089.40	0.50

121Sb FQ Block 1

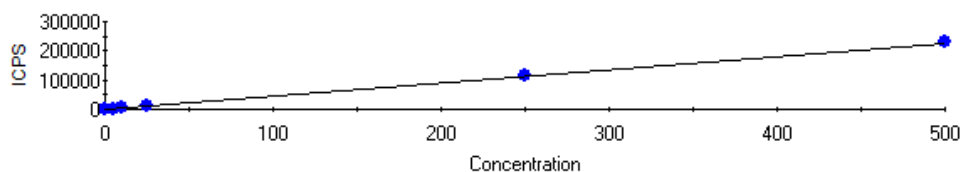
Intercept CPS=215.958008 Intercept Conc=0.089744
Sensitivity=2406.388624 Correlation Coeff=0.999837

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	215.96	0.00
cal1 MW-12643	2.000	1.994	0.006	5014.57	0.29
cal2 MW-12645	10.000	10.104	0.104	24530.41	1.04
cal3 MW-12520	250.000	242.600	7.400	584004.82	2.96
cal4 MW-12521	500.000	503.698	3.698	1212309.46	0.74

123Sb FQ Block 1

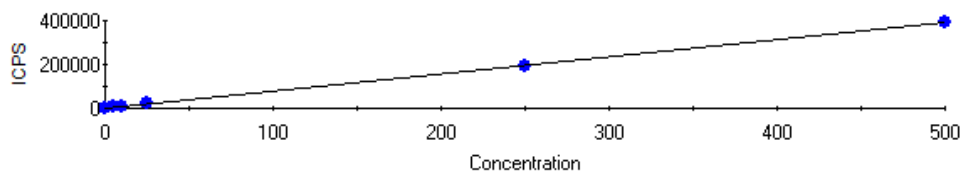
Intercept CPS=173.260345 Intercept Conc=0.098539
Sensitivity=1758.289147 Correlation Coeff=0.999977

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	173.26	0.00
cal1 MW-12643	2.000	2.126	0.126	3911.60	6.31
MW12644	4.000	4.224	0.224	7599.66	5.59
cal2 MW-12645	10.000	10.751	0.751	19077.10	7.51
cal3 MW-12520	250.000	247.273	2.727	434950.06	1.09
cal4 MW-12521	500.000	501.346	1.346	881685.13	0.27

135Ba FQ Block 1

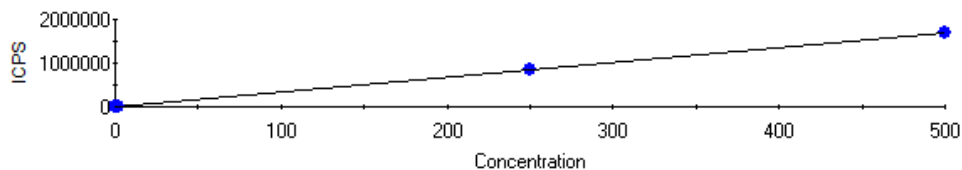
Intercept CPS=18.663998 Intercept Conc=0.041245
Sensitivity=452.520037 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	18.66	0.00
cal1 MW-12643	5.000	4.892	0.108	2232.17	2.17
MW12644	10.000	9.546	0.454	4338.21	4.54
cal2 MW-12645	25.000	25.292	0.292	11463.82	1.17
cal3 MW-12520	250.000	248.654	1.346	112539.36	0.54
cal4 MW-12521	500.000	504.277	4.277	228213.94	0.86

137Ba FQ Block 1

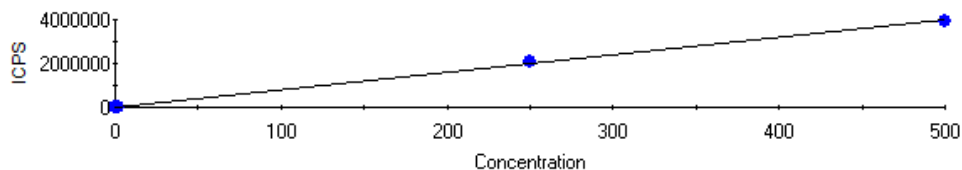
Intercept CPS=13.327659 Intercept Conc=0.017035
Sensitivity=782.388041 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	13.33	0.00
cal1 MW-12643	5.000	5.004	0.004	3928.38	0.08
MW12644	10.000	10.123	0.123	7933.72	1.23
cal2 MW-12645	25.000	25.102	0.102	19653.14	0.41
cal3 MW-12520	250.000	249.942	0.058	195565.14	0.02
cal4 MW-12521	500.000	499.993	0.007	391202.11	0.00

203Tl FQ Block 1

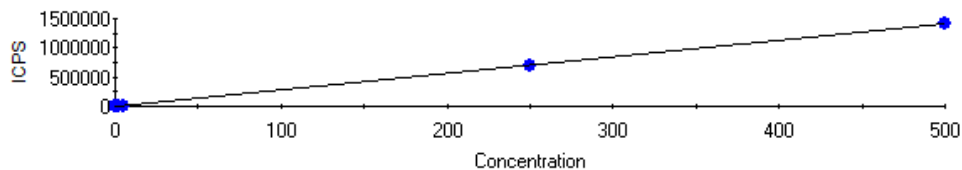
Intercept CPS=39.986560 Intercept Conc=0.011906
Sensitivity=3358.420779 Correlation Coeff=0.999958

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	39.99	0.00
cal1 MW-12643	0.500	0.516	0.016	1773.38	3.23
MW12644	1.000	1.015	0.015	3450.36	1.55
cal2 MW-12645	2.500	2.512	0.012	8477.22	0.49
cal3 MW-12520	250.000	249.577	0.423	838225.33	0.17
cal4 MW-12521	500.000	509.135	9.135	1709928.25	1.83

205Tl FQ Block 1

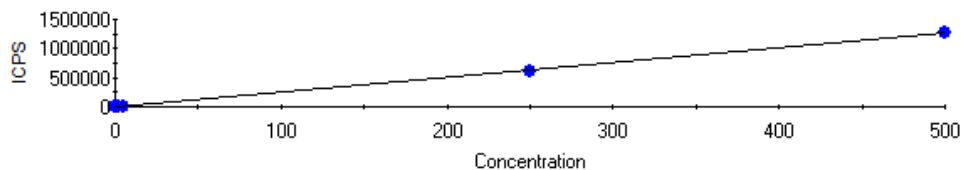
Intercept CPS=113.404042 Intercept Conc=0.014226
Sensitivity=7971.680418 Correlation Coeff=0.999600

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	113.40	0.00
cal1 MW-12643	0.500	0.525	0.025	4295.96	4.94
MW12644	1.000	1.001	0.001	8095.16	0.13
cal2 MW-12645	2.500	2.569	0.069	20595.83	2.78
cal3 MW-12520	250.000	262.067	12.067	2089230.11	4.83
cal4 MW-12521	500.000	493.966	6.034	3937852.33	1.21

206Pb FQ Block 1

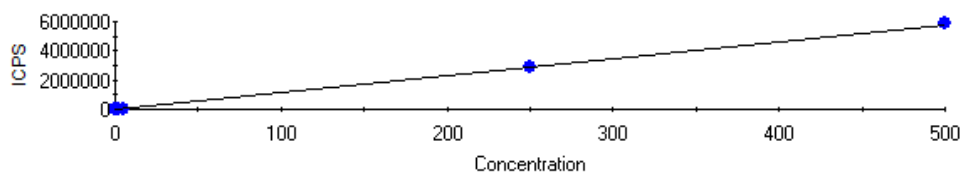
Intercept CPS=80.034582 Intercept Conc=0.028266
Sensitivity=2831.455827 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	80.03	0.00
cal1 MW-12643	1.000	0.938	0.062	2735.43	6.22
MW12644	2.000	1.931	0.069	5546.58	3.47
cal2 MW-12645	5.000	4.764	0.236	13567.74	4.73
cal3 MW-12520	250.000	247.587	2.413	701112.81	0.97
cal4 MW-12521	500.000	501.209	1.209	1419231.37	0.24

207Pb FQ Block 1

Intercept CPS=78.726709 Intercept Conc=0.031313
Sensitivity=2514.215145 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	0.000	0.000	78.73	0.00
cal1 MW-12643	1.000	0.942	0.058	2446.97	5.81
MW12644	2.000	1.845	0.155	4717.45	7.75
cal2 MW-12645	5.000	4.864	0.136	12308.66	2.71
cal3 MW-12520	250.000	246.130	3.870	618902.98	1.55
cal4 MW-12521	500.000	501.937	1.937	1262056.33	0.39

208Pb FQ Block 1

Intercept CPS=365.445135 Intercept Conc=0.031423
Sensitivity=11629.851619 Correlation Coeff=0.999942

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9936-01	0.000	-0.000	0.000	365.45	0.00
cal1 MW-12643	1.000	0.916	0.084	11017.69	8.41
MW12644	2.000	1.870	0.130	22116.02	6.49
cal2 MW-12645	5.000	4.743	0.257	55524.01	5.14
cal3 MW-12520	250.000	245.646	4.354	2857193.14	1.74
cal4 MW-12521	500.000	502.980	2.980	5849947.53	0.60

Dilution Corrected Concentrations

TUNE MW12522 4/22/2020 14:03:49

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	100.4%	-0.040	0.388	0.720	121.900	1.040	0.048	-0.016	0.245	1.190
2	14:04:43	100.5%	-0.004	0.583	0.750	122.500	1.315	0.126	-0.010	0.105	1.205
3	14:05:10	99.1%	-0.004	0.723	0.571	127.200	1.097	0.187	0.092	0.135	1.133
X		100.0%	-0.016	0.565	0.680	123.900	1.151	0.121	0.022	0.162	1.176
S		0.8%	0.021	0.168	0.096	2.877	0.145	0.070	0.061	0.074	0.038
%RSD		0.8	128.900	29.750	14.060	2.322	12.580	57.860	271.500	45.680	3.220
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	0.944	377.600	0.631	2.441	2.629	101.0%	-0.026	0.024	0.053	56.000
2	14:04:43	0.966	372.100	0.603	5.404	3.123	98.7%	0.073	0.034	0.055	55.050
3	14:05:10	1.589	377.700	0.758	0.617	3.362	100.3%	0.052	-0.012	0.035	94.330
X		1.166	375.800	0.664	2.821	3.038	100.0%	0.033	0.015	0.047	68.460
S		0.366	3.229	0.083	2.416	0.374	1.2%	0.052	0.024	0.011	22.410
%RSD		31.410	0.859	12.490	85.650	12.310	1.2	158.900	160.500	23.080	32.730
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	2.116	0.020	0.954	-0.868	0.014	-0.020	-0.069	-0.002	0.039	-0.006
2	14:04:43	1.647	0.032	1.180	2.049	0.013	0.041	0.172	0.025	0.041	0.070
3	14:05:10	1.606	0.026	1.081	0.002	0.008	-0.009	-0.175	0.026	0.016	0.033
X		1.790	0.026	1.071	0.395	0.012	0.004	-0.024	0.017	0.032	0.033
S		0.283	0.006	0.113	1.498	0.003	0.033	0.178	0.016	0.014	0.038
%RSD		15.830	21.820	10.570	379.700	26.540	845.100	738.100	97.590	43.260	116.400
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.154	0.248	-0.088	-0.500	1.745	3.152	6.136	-0.184	5.713	0.004
2	14:04:43	-0.095	0.129	0.062	0.192	1.936	2.752	7.069	0.397	2.945	0.001
3	14:05:10	0.001	0.234	0.020	-0.737	1.323	3.128	5.160	0.022	2.553	0.005
X		-0.083	0.204	-0.002	-0.348	1.668	3.011	6.122	0.078	3.737	0.003
S		0.078	0.065	0.077	0.483	0.313	0.225	0.954	0.294	1.723	0.002
%RSD		94.410	31.780	3600.000	138.700	18.780	7.454	15.590	377.500	46.090	55.240
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	101.8%	0.086	0.034	0.097	-0.213	0.002	0.005	0.024	0.013	101.0%
2	14:04:43	98.7%	0.091	0.116	0.122	0.493	0.004	0.004	0.006	0.013	99.1%
3	14:05:10	99.5%	0.094	0.106	0.073	-0.125	-0.001	0.004	0.012	0.011	99.9%
X		100.0%	0.090	0.085	0.097	0.051	0.002	0.004	0.014	0.013	100.0%
S		1.7%	0.004	0.044	0.025	0.385	0.002	0.001	0.009	0.001	0.9%
%RSD		1.7	4.104	52.280	25.480	749.100	155.500	19.910	65.870	11.870	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:16	-0.001	-0.006	0.060	0.063	0.055	0.100	99.9%	0.008	-0.002	0.025
2	14:04:43	0.011	0.007	0.061	0.022	0.039	0.075	99.8%	0.008	0.007	0.018
3	14:05:10	0.008	0.004	0.033	0.024	0.056	0.039	100.3%	0.007	0.003	0.029
X		0.006	0.002	0.052	0.036	0.050	0.072	100.0%	0.008	0.003	0.024
S		0.006	0.007	0.016	0.023	0.010	0.031	0.2%	0.001	0.005	0.006
%RSD		109.100	409.400	30.630	63.310	19.120	42.790	0.2	8.799	171.100	22.860
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:04:16	0.023	0.022	100.8%							
2	14:04:43	0.018	0.014	99.3%							
3	14:05:10	0.013	0.021	100.0%							
X		0.018	0.019	100.0%							
S		0.005	0.004	0.7%							
%RSD		26.910	21.190	0.7							

BLANK IM9936-01 4/22/2020 14:09:41

User Pre-dilution: 1.000

user Prejudition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	98.9%	0.045	0.166	0.011	-2.391	-0.067	-0.043	-0.015	0.291	-0.023
2	14:10:35	100.5%	-0.016	-0.243	0.050	-1.602	-0.124	-0.026	-0.037	-0.161	0.018
3	14:11:02	100.6%	-0.028	0.077	-0.061	3.993	0.191	0.069	0.053	-0.130	0.004
X		100.0%	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S		0.9%	0.039	0.216	0.056	3.480	0.168	0.060	0.047	0.252	0.021
%RSD		0.9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.032	6.536	0.627	-1.226	0.647	99.3%	-0.006	-0.003	-0.003	8.527
2	14:10:35	0.170	-4.374	-0.379	-0.311	-0.145	100.2%	0.013	0.024	-0.006	-15.590
3	14:11:02	-0.202	-2.162	-0.248	1.537	-0.501	100.5%	-0.007	-0.021	0.010	7.063
X		0.000	0.000	-0.000	0.000	0.000	100.0%	-0.000	0.000	-0.000	0.000
S		0.188	5.768	0.547	1.407	0.588	0.6%	0.011	0.023	0.008	13.520
%RSD		0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000	0.000
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.071	0.014	0.267	-0.594	-0.002	-0.003	0.129	0.015	-0.003	-0.030
2	14:10:35	0.602	-0.009	-0.142	0.208	0.002	0.018	-0.027	-0.025	-0.004	-0.024
3	14:11:02	-0.673	-0.005	-0.125	0.387	-0.000	-0.015	-0.103	0.010	0.006	0.054
X		-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000
S		0.640	0.012	0.231	0.522	0.002	0.017	0.118	0.022	0.006	0.047
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.074	0.042	0.143	0.444	0.154	-0.339	1.718	0.344	0.366	-0.001
2	14:10:35	-0.000	-0.016	-0.075	-0.580	-0.211	0.240	-1.220	-0.231	-0.359	0.001
3	14:11:02	-0.074	-0.026	-0.067	0.135	0.058	0.099	-0.499	-0.113	-0.007	0.000
X		0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	0.000
S		0.074	0.036	0.124	0.525	0.189	0.302	1.531	0.304	0.362	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	100.1%	0.037	0.029	-0.014	-0.401	0.002	0.001	0.000	0.001	99.3%
2	14:10:35	99.9%	-0.009	-0.042	0.025	0.398	-0.004	-0.001	-0.006	0.001	100.5%
3	14:11:02	100.1%	-0.028	0.013	-0.011	0.003	0.002	0.001	0.006	-0.001	100.1%
X		100.0%	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	100.0%
S		0.1%	0.033	0.037	0.021	0.400	0.004	0.001	0.006	0.001	0.6%
%RSD		0.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:08	0.008	0.012	-0.008	-0.010	-0.006	0.014	100.7%	0.000	-0.002	-0.002
2	14:10:35	-0.007	0.001	0.005	-0.010	-0.006	-0.002	99.8%	-0.001	0.000	-0.006
3	14:11:02	-0.001	-0.013	0.003	0.020	0.012	-0.012	99.5%	0.001	0.002	0.007
X		-0.000	0.000	-0.000	-0.000	-0.000	0.000	100.0%	-0.000	-0.000	-0.000
S		0.008	0.012	0.007	0.018	0.010	0.013	0.6%	0.001	0.002	0.007
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:10:08	-0.006	-0.002	99.4%							
2	14:10:35	0.001	-0.001	99.6%							
3	14:11:02	0.005	0.003	101.0%							
X		0.000	-0.000	100.0%							
S		0.006	0.003	0.8%							
%RSD		0.000	0.000	0.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.2%	0.282	48.210	49.120	-2.992	431.100	455.100	431.600	406.100	40.000
2	14:16:28	99.5%	0.272	48.150	48.960	-4.847	439.000	467.600	450.100	409.600	39.740
3	14:16:55	100.0%	0.402	49.870	48.180	-15.710	435.800	459.100	441.200	411.100	40.520
X		99.9%	0.319	48.740	48.750	-7.850	435.300	460.600	441.000	408.900	40.090
S		0.4%	0.072	0.976	0.506	6.871	3.957	6.419	9.223	2.600	0.399
%RSD		0.4	22.720	2.002	1.037	87.530	0.909	1.394	2.092	0.636	0.995
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	90.630	5.325	411.600	402.800	387.300	99.8%	5.215	4.948	4.975	44.460
2	14:16:28	92.890	-8.681	410.700	398.900	420.200	98.5%	4.909	5.003	4.920	174.200
3	14:16:55	92.320	-25.720	404.600	420.900	387.800	98.2%	4.982	4.943	4.904	44.960
X		91.950	-9.690	409.000	407.500	398.400	98.8%	5.035	4.965	4.933	87.890
S		1.175	15.540	3.804	11.740	18.870	0.9%	0.160	0.033	0.037	74.790
%RSD		1.277	160.400	0.930	2.880	4.735	0.9	3.168	0.664	0.754	85.090
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	55.900	4.699	55.500	47.180	0.963	5.155	5.319	5.005	5.174	10.160
2	14:16:28	54.680	4.786	56.280	50.240	1.030	5.316	5.366	5.302	5.292	10.400
3	14:16:55	54.600	4.769	55.860	49.690	1.074	4.751	5.495	4.917	5.353	10.580
X		55.060	4.751	55.880	49.040	1.022	5.074	5.393	5.075	5.273	10.380
S		0.729	0.046	0.390	1.631	0.056	0.291	0.091	0.201	0.091	0.214
%RSD		1.324	0.973	0.698	3.325	5.495	5.734	1.690	3.970	1.725	2.064
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	9.583	9.434	1.914	4.777	-0.213	0.191	23.720	5.141	1.448	9.395
2	14:16:28	10.220	10.540	2.133	6.035	-0.203	-0.548	22.450	5.376	-2.164	9.537
3	14:16:55	9.502	10.060	0.938	5.599	0.766	-0.271	15.870	3.553	0.410	9.646
X		9.769	10.010	1.662	5.470	0.117	-0.209	20.680	4.690	-0.102	9.526
S		0.395	0.556	0.636	0.639	0.562	0.373	4.213	0.991	1.860	0.126
%RSD		4.046	5.558	38.270	11.670	482.100	178.300	20.370	21.140	1822.000	1.319
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	100.1%	9.870	10.170	9.831	0.066	0.939	1.049	0.058	0.117	100.4%
2	14:16:28	99.6%	10.250	10.380	9.908	0.338	0.979	0.992	0.077	0.103	99.3%
3	14:16:55	99.2%	10.100	10.700	9.967	-0.330	1.118	1.012	0.059	0.081	98.5%
X		99.6%	10.070	10.420	9.902	0.025	1.012	1.018	0.065	0.100	99.4%
S		0.4%	0.190	0.265	0.068	0.336	0.094	0.029	0.011	0.018	0.9%
%RSD		0.5	1.890	2.544	0.688	1359.000	9.283	2.846	16.450	18.310	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:01	13.140	18.480	2.003	2.189	4.659	5.066	100.4%	0.516	0.530	0.885
2	14:16:28	13.000	19.010	2.027	1.993	5.069	4.818	99.1%	0.522	0.511	0.931
3	14:16:55	13.370	19.520	1.952	2.197	4.946	5.128	99.6%	0.510	0.533	0.997
X		13.170	19.000	1.994	2.126	4.892	5.004	99.7%	0.516	0.525	0.938
S		0.187	0.520	0.038	0.115	0.210	0.164	0.6%	0.006	0.012	0.056
%RSD		1.420	2.738	1.926	5.414	4.299	3.273	0.7	1.156	2.285	5.991
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:16:01	0.997	0.899	98.2%							
2	14:16:28	0.903	0.899	100.0%							
3	14:16:55	0.925	0.950	99.4%							
X		0.942	0.916	99.2%							
S		0.049	0.029	0.9%							
%RSD		5.230	3.206	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	98.9%	0.830	95.090	98.440	-7.755	870.000	920.200	871.400	832.800	79.790
2	14:22:23	98.2%	0.703	98.940	104.100	-7.550	860.800	931.100	871.600	805.400	78.710
3	14:22:50	96.9%	0.787	97.300	102.000	-8.019	854.700	935.700	883.200	821.800	79.990
X		98.0%	0.773	97.110	101.500	-7.775	861.800	929.000	875.400	820.000	79.500
S		1.0%	0.065	1.933	2.849	0.235	7.728	7.943	6.738	13.800	0.685
%RSD		1.1	8.405	1.990	2.807	3.024	0.897	0.855	0.770	1.683	0.862
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	188.700	-26.180	833.000	841.900	816.600	96.7%	10.630	9.848	10.020	158.000
2	14:22:23	186.600	-39.240	824.500	763.500	795.700	97.7%	9.944	10.190	9.768	47.370
3	14:22:50	195.400	-44.840	829.500	845.400	796.800	97.0%	8.544	9.582	9.865	250.500
X		190.200	-36.750	829.000	816.900	803.100	97.1%	9.708	9.873	9.883	152.000
S		4.629	9.576	4.312	46.300	11.770	0.5%	1.065	0.305	0.125	101.700
%RSD		2.433	26.060	0.520	5.668	1.465	0.5	10.970	3.090	1.269	66.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	112.000	9.373	114.000	104.400	1.965	9.984	11.490	10.220	10.620	19.850
2	14:22:23	111.000	9.330	113.600	98.060	1.839	9.714	10.420	9.869	9.914	20.000
3	14:22:50	110.900	9.422	111.100	97.800	1.959	10.500	9.893	10.160	10.490	20.850
X		111.300	9.375	112.900	100.100	1.921	10.070	10.600	10.080	10.340	20.230
S		0.623	0.046	1.587	3.719	0.071	0.402	0.815	0.187	0.374	0.539
%RSD		0.560	0.489	1.406	3.716	3.703	3.989	7.691	1.852	3.614	2.664
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	19.680	19.340	4.078	10.020	-0.071	0.214	51.050	11.520	-1.336	18.910
2	14:22:23	17.900	19.060	4.570	9.333	0.524	0.463	50.220	10.730	3.490	18.910
3	14:22:50	18.780	19.790	3.967	9.238	0.411	0.373	42.240	9.040	2.475	19.170
X		18.790	19.400	4.205	9.530	0.288	0.350	47.840	10.430	1.543	19.000
S		0.892	0.369	0.321	0.426	0.316	0.126	4.864	1.266	2.544	0.152
%RSD		4.749	1.901	7.633	4.471	109.800	36.070	10.170	12.140	164.900	0.801
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	96.5%	20.110	20.480	19.770	0.630	1.992	1.912	0.072	0.149	98.2%
2	14:22:23	97.3%	20.360	20.420	20.250	-0.123	1.984	1.883	0.125	0.227	98.6%
3	14:22:50	95.7%	19.980	20.320	19.880	0.393	1.980	1.961	0.085	0.319	97.6%
X		96.5%	20.150	20.410	19.960	0.300	1.985	1.919	0.094	0.232	98.1%
S		0.8%	0.197	0.079	0.253	0.385	0.006	0.040	0.027	0.085	0.5%
%RSD		0.8	0.979	0.387	1.265	128.300	0.310	2.068	29.200	36.590	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:56	27.030	37.710	3.964	4.178	9.768	10.150	98.6%	1.006	1.007	1.913
2	14:22:23	26.600	38.080	3.891	4.267	9.305	10.240	99.1%	1.042	0.990	1.918
3	14:22:50	26.700	39.330	4.244	4.226	9.563	9.976	98.2%	0.999	1.007	1.961
X		26.780	38.370	4.033	4.224	9.546	10.120	98.6%	1.015	1.001	1.931
S		0.225	0.848	0.186	0.045	0.232	0.136	0.4%	0.023	0.010	0.026
%RSD		0.839	2.210	4.621	1.057	2.433	1.345	0.4	2.288	1.002	1.365
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:21:56	1.867	1.893	98.8%							
2	14:22:23	1.825	1.837	100.0%							
3	14:22:50	1.843	1.881	98.0%							
X		1.845	1.870	99.0%							
S		0.021	0.029	1.0%							
%RSD		1.157	1.574	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	97.0%	2.068	244.200	247.700	-6.594	1973.000	2066.000	2175.000	2038.000	193.700
2	14:28:18	94.4%	2.087	252.000	257.600	-7.551	2063.000	2132.000	2243.000	2090.000	199.900
3	14:28:45	95.6%	2.123	255.100	259.300	-6.314	2065.000	2118.000	2190.000	2099.000	200.400
X		95.7%	2.093	250.400	254.900	-6.820	2034.000	2105.000	2203.000	2076.000	198.000
S		1.3%	0.028	5.627	6.290	0.648	52.800	34.510	35.540	33.050	3.725
%RSD		1.3	1.348	2.247	2.468	9.508	2.596	1.639	1.613	1.592	1.881
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	488.800	-43.640	1858.000	2059.000	1997.000	97.3%	25.180	24.020	23.840	636.100
2	14:28:18	506.300	-49.900	1942.000	2150.000	2045.000	93.0%	26.010	25.450	25.010	178.800
3	14:28:45	493.300	-55.240	2124.000	2120.000	2021.000	93.2%	26.270	24.500	24.750	414.800
X		496.100	-49.590	1975.000	2109.000	2021.000	94.5%	25.820	24.650	24.540	409.900
S		9.091	5.808	136.000	45.890	24.140	2.4%	0.571	0.728	0.619	228.700
%RSD		1.832	11.710	6.885	2.175	1.194	2.6	2.209	2.953	2.521	55.790
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	277.700	23.810	278.400	251.100	4.924	24.040	25.360	25.140	26.410	49.940
2	14:28:18	294.400	24.620	297.500	276.600	4.867	25.760	24.610	25.220	25.130	49.160
3	14:28:45	289.000	24.420	290.500	262.400	5.021	25.340	24.880	25.040	25.620	50.060
X		287.000	24.290	288.800	263.400	4.937	25.050	24.950	25.130	25.720	49.720
S		8.516	0.421	9.664	12.770	0.078	0.898	0.378	0.090	0.644	0.487
%RSD		2.967	1.734	3.346	4.849	1.575	3.586	1.516	0.359	2.505	0.980
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	48.680	48.310	10.760	23.220	-0.150	0.300	114.200	25.670	-0.527	48.360
2	14:28:18	50.430	50.330	11.570	24.660	0.170	0.313	119.100	26.130	-0.844	49.400
3	14:28:45	48.520	49.190	9.847	23.780	0.934	-0.272	107.500	23.550	3.763	48.590
X		49.210	49.280	10.730	23.890	0.318	0.114	113.600	25.120	0.797	48.780
S		1.059	1.013	0.864	0.724	0.557	0.334	5.825	1.375	2.573	0.548
%RSD		2.152	2.056	8.056	3.032	175.100	293.800	5.128	5.474	322.800	1.124
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	94.9%	51.770	51.020	50.950	0.882	4.901	5.122	0.352	0.455	96.1%
2	14:28:18	93.8%	50.230	51.040	50.140	1.305	5.015	4.893	0.435	0.504	96.8%
3	14:28:45	94.3%	52.100	52.330	50.810	0.982	4.897	4.917	0.434	0.535	95.1%
X		94.4%	51.370	51.460	50.640	1.056	4.938	4.977	0.407	0.498	96.0%
S		0.6%	1.001	0.752	0.436	0.221	0.067	0.126	0.048	0.041	0.9%
%RSD		0.6	1.949	1.460	0.860	20.910	1.360	2.531	11.750	8.149	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:51	69.280	99.910	9.850	10.990	25.580	25.190	97.9%	2.589	2.559	4.816
2	14:28:18	69.460	96.770	10.260	10.680	24.840	25.050	98.6%	2.467	2.601	4.642
3	14:28:45	69.860	99.620	10.210	10.580	25.460	25.070	97.2%	2.481	2.548	4.832
X		69.530	98.770	10.100	10.750	25.290	25.100	97.9%	2.512	2.569	4.764
S		0.294	1.739	0.222	0.213	0.399	0.074	0.7%	0.067	0.028	0.105
%RSD		0.423	1.761	2.195	1.980	1.578	0.295	0.7	2.653	1.087	2.209
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:27:51	4.764	4.726	95.9%							
2	14:28:18	4.828	4.685	95.6%							
3	14:28:45	5.001	4.818	97.2%							
X		4.864	4.743	96.3%							
S		0.123	0.068	0.9%							
%RSD		2.523	1.433	0.9							

cal3 MW-12520 4/22/2020 14:33:19

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	93.2%	244.700	237.900	252.800	4.196	269.300	281.500	268.300	248.000	246.800
2	14:34:14	91.1%	249.500	238.300	250.800	-0.992	271.600	283.300	265.400	261.400	252.800
3	14:34:41	88.2%	252.800	247.500	255.600	4.568	274.400	282.600	265.800	256.500	248.400
X		90.9%	249.000	241.200	253.000	2.591	271.800	282.500	266.500	255.300	249.300
S		2.5%	4.080	5.424	2.416	3.108	2.545	0.893	1.592	6.749	3.106
%RSD		2.7	1.639	2.248	0.955	120.000	0.936	0.316	0.598	2.644	1.246
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	245.100	-72.390	250.200	375.100	310.300	89.6%	243.900	243.200	242.900	2911.000
2	14:34:14	248.500	-83.970	254.900	387.500	310.000	87.0%	251.400	248.900	248.900	2648.000
3	14:34:41	257.300	-91.300	257.200	342.900	309.500	87.2%	247.500	242.700	245.100	2978.000
X		250.300	-82.550	254.100	368.500	309.900	87.9%	247.600	244.900	245.600	2846.000
S		6.308	9.533	3.568	22.990	0.381	1.5%	3.779	3.451	3.071	174.800
%RSD		2.520	11.550	1.404	6.238	0.123	1.7	1.526	1.409	1.250	6.144
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	377.000	243.100	280.000	258.300	244.500	249.100	244.700	244.300	250.100	242.500
2	14:34:14	394.500	246.900	283.400	269.800	253.900	252.500	256.800	255.200	255.800	251.400
3	14:34:41	378.300	240.800	279.600	255.800	246.800	248.700	247.600	251.500	251.500	248.000
X		383.300	243.600	281.000	261.300	248.400	250.100	249.700	250.400	252.500	247.300
S		9.776	3.076	2.054	7.491	4.903	2.098	6.340	5.527	2.970	4.479
%RSD		2.551	1.263	0.731	2.867	1.974	0.839	2.539	2.208	1.176	1.811
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	247.000	248.600	246.100	249.000	0.843	0.295	1102.000	243.700	0.923	244.600
2	14:34:14	252.200	252.600	252.400	251.100	-0.038	-0.601	1128.000	247.200	-0.616	247.400
3	14:34:41	249.000	247.000	247.900	242.000	0.240	-0.470	1167.000	253.700	-1.811	247.600
X		249.400	249.400	248.800	247.300	0.348	-0.259	1132.000	248.200	-0.502	246.500
S		2.672	2.874	3.256	4.756	0.450	0.484	32.940	5.113	1.371	1.650
%RSD		1.072	1.152	1.309	1.923	129.300	186.900	2.910	2.060	273.200	0.669
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	90.2%	243.100	242.400	242.100	239.300	255.700	246.900	245.700	242.900	92.0%
2	14:34:14	88.7%	249.300	251.700	248.700	250.300	257.200	250.800	247.000	246.800	91.2%
3	14:34:41	87.4%	244.200	247.600	252.400	246.900	251.600	248.300	243.400	243.300	90.9%
X		88.7%	245.500	247.200	247.700	245.500	254.900	248.600	245.300	244.300	91.4%
S		1.4%	3.309	4.706	5.227	5.607	2.900	1.980	1.819	2.170	0.6%
%RSD		1.6	1.348	1.903	2.110	2.284	1.138	0.796	0.741	0.888	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:47	246.000	248.100	240.100	242.500	247.100	248.400	96.3%	249.500	258.800	242.600
2	14:34:14	249.000	245.000	243.900	251.400	251.100	252.100	94.1%	250.100	267.900	253.600
3	14:34:41	246.000	244.300	243.900	247.900	247.800	249.400	94.2%	249.100	259.500	246.600
X		247.000	245.800	242.600	247.300	248.700	249.900	94.9%	249.600	262.100	247.600
S		1.731	2.029	2.206	4.485	2.158	1.912	1.2%	0.465	5.030	5.614
%RSD		0.701	0.825	0.909	1.814	0.868	0.765	1.3	0.186	1.919	2.268
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:33:47	241.100	241.100	95.7%							
2	14:34:14	250.500	250.600	95.9%							
3	14:34:41	246.900	245.200	95.0%							
X		246.100	245.600	95.5%							
S		4.744	4.745	0.5%							
%RSD		1.927	1.932	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.6%	<u>m 507.300</u>	<u>m 511.100</u>	<u>m 512.100</u>	8.931	547.400	576.000	546.800	502.900	<u>m 500.800</u>
2	14:40:09	87.0%	498.100	<u>m 505.600</u>	<u>m 500.900</u>	-0.852	564.200	564.300	545.200	518.300	<u>m 510.000</u>
3	14:40:36	85.9%	495.500	496.800	<u>m 505.100</u>	3.933	560.500	571.100	552.500	527.600	<u>m 511.700</u>
X		85.8%	<u>m 500.300</u>	<u>m 504.500</u>	<u>m 506.000</u>	4.004	557.400	570.400	548.200	516.300	<u>m 507.500</u>
S		1.2%	<u>m 6.191</u>	<u>m 7.234</u>	<u>m 5.622</u>	4.892	8.875	5.880	3.826	12.450	<u>m 5.836</u>
%RSD		1.4	<u>m 1.238</u>	<u>m 1.434</u>	<u>m 1.111</u>	122.200	1.592	1.031	0.698	2.412	<u>m 1.150</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	519.600	-83.370	512.000	731.900	607.800	83.1%	498.600	<u>m 501.200</u>	<u>m 506.000</u>	1378.000
2	14:40:09	517.200	-98.600	512.400	675.500	602.000	82.4%	499.700	<u>m 503.300</u>	<u>m 501.800</u>	3295.000
3	14:40:36	520.200	-105.700	506.000	791.000	617.000	80.9%	<u>m 501.400</u>	<u>m 503.200</u>	<u>m 504.300</u>	5078.000
X		519.000	-95.900	510.100	732.800	609.000	82.1%	<u>m 499.900</u>	<u>m 502.600</u>	<u>m 504.000</u>	3250.000
S		1.583	11.430	3.560	57.780	7.572	1.1%	<u>m 1.415</u>	<u>m 1.139</u>	<u>m 2.088</u>	1851.000
%RSD		0.305	11.920	0.698	7.884	1.243	1.4	<u>m 0.283</u>	<u>m 0.227</u>	<u>m 0.414</u>	56.940
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	773.300	499.300	561.400	527.400	498.500	497.400	497.800	<u>m 503.800</u>	<u>m 501.900</u>	497.700
2	14:40:09	772.600	498.200	566.200	521.300	<u>m 505.800</u>	496.300	498.800	<u>m 501.600</u>	<u>m 501.500</u>	<u>m 503.100</u>
3	14:40:36	788.400	<u>m 512.200</u>	576.500	527.700	<u>m 506.600</u>	<u>m 506.200</u>	<u>m 503.900</u>	494.100	492.800	498.900
X		778.100	<u>m 503.200</u>	568.000	525.500	<u>m 503.600</u>	<u>m 500.000</u>	<u>m 500.100</u>	<u>m 499.800</u>	<u>m 498.700</u>	<u>m 499.900</u>
S		8.941	<u>m 7.789</u>	7.693	3.598	<u>m 4.420</u>	<u>m 5.426</u>	<u>m 3.241</u>	<u>m 5.096</u>	<u>m 5.102</u>	<u>m 2.867</u>
%RSD		1.149	<u>m 1.548</u>	1.354	0.685	<u>m 0.878</u>	<u>m 1.085</u>	<u>m 0.648</u>	<u>m 1.020</u>	<u>m 1.023</u>	<u>m 0.574</u>
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	491.600	497.200	491.500	498.200	-0.023	-0.281	2239.000	494.100	-1.286	<u>m 503.300</u>
2	14:40:09	<u>m 505.400</u>	<u>m 510.100</u>	<u>m 508.000</u>	<u>m 510.800</u>	0.152	-0.685	2250.000	497.200	3.502	<u>m 501.300</u>
3	14:40:36	<u>m 504.100</u>	<u>m 506.800</u>	<u>m 507.000</u>	495.200	-0.103	-0.606	2317.000	<u>m 511.400</u>	0.964	<u>m 501.100</u>
X		<u>m 500.400</u>	<u>m 504.700</u>	<u>m 502.200</u>	<u>m 501.400</u>	0.009	-0.524	2269.000	<u>m 500.900</u>	1.060	<u>m 501.900</u>
S		<u>m 7.616</u>	<u>m 6.704</u>	<u>m 9.280</u>	<u>m 8.261</u>	0.131	0.214	42.340	<u>m 9.230</u>	2.396	<u>m 1.213</u>
%RSD		<u>m 1.522</u>	<u>m 1.328</u>	<u>m 1.848</u>	<u>m 1.648</u>	1499.000	40.850	1.866	<u>m 1.843</u>	226.000	<u>m 0.242</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	84.8%	493.000	488.300	490.700	<u>m 509.700</u>	<u>m 514.500</u>	<u>m 506.100</u>	496.900	498.200	86.6%
2	14:40:09	84.2%	<u>m 503.000</u>	<u>m 503.900</u>	<u>m 505.300</u>	494.100	<u>m 518.000</u>	<u>m 506.200</u>	<u>m 501.400</u>	<u>m 502.800</u>	85.7%
3	14:40:36	83.4%	<u>m 510.200</u>	<u>m 511.500</u>	<u>m 507.200</u>	<u>m 503.000</u>	<u>m 521.700</u>	<u>m 521.400</u>	<u>m 508.600</u>	<u>m 507.400</u>	85.0%
X		84.1%	<u>m 502.100</u>	<u>m 501.200</u>	<u>m 501.100</u>	<u>m 502.200</u>	<u>m 518.100</u>	<u>m 511.200</u>	<u>m 502.300</u>	<u>m 502.800</u>	85.8%
S		0.7%	<u>m 8.662</u>	<u>m 11.840</u>	<u>m 9.061</u>	<u>m 7.797</u>	<u>m 3.612</u>	<u>m 8.801</u>	<u>m 5.893</u>	<u>m 4.626</u>	0.8%
%RSD		0.8	<u>m 1.725</u>	<u>m 2.363</u>	<u>m 1.808</u>	<u>m 1.553</u>	<u>m 0.697</u>	<u>m 1.721</u>	<u>m 1.173</u>	<u>m 0.920</u>	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:42	496.400	488.100	497.000	<u>m 502.400</u>	500.000	497.200	92.4%	<u>m 512.500</u>	<u>m 489.300</u>	499.900
2	14:40:09	<u>m 515.800</u>	<u>m 510.200</u>	<u>m 508.300</u>	<u>m 501.000</u>	<u>m 508.300</u>	<u>m 504.400</u>	92.3%	<u>m 510.800</u>	<u>m 496.100</u>	497.900
3	14:40:36	<u>m 511.400</u>	<u>m 509.200</u>	<u>m 505.800</u>	<u>m 500.700</u>	<u>m 504.600</u>	498.400	91.9%	<u>m 504.000</u>	<u>m 496.500</u>	<u>m 505.800</u>
X		<u>m 507.900</u>	<u>m 502.500</u>	<u>m 503.700</u>	<u>m 501.300</u>	<u>m 504.300</u>	<u>m 500.000</u>	92.2%	<u>m 509.100</u>	<u>m 494.000</u>	<u>m 501.200</u>
S		<u>m 10.160</u>	<u>m 12.460</u>	<u>m 5.938</u>	<u>m 0.894</u>	<u>m 4.170</u>	<u>m 3.902</u>	0.3%	<u>m 4.492</u>	<u>m 4.023</u>	<u>m 4.109</u>
%RSD		<u>m 2.000</u>	<u>m 2.480</u>	<u>m 1.179</u>	<u>m 0.178</u>	<u>m 0.827</u>	<u>m 0.780</u>	0.3	<u>m 0.882</u>	<u>m 0.814</u>	<u>m 0.820</u>
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:39:42	<u>m 502.900</u>	<u>m 503.900</u>	92.8%							
2	14:40:09	497.000	<u>m 501.300</u>	92.4%							
3	14:40:36	<u>m 505.900</u>	<u>m 503.700</u>	92.8%							
X		<u>m 501.900</u>	<u>m 503.000</u>	92.7%							
S		<u>m 4.532</u>	<u>m 1.435</u>	0.2%							
%RSD		<u>m 0.903</u>	<u>m 0.285</u>	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	81.7%	-0.023	4.861	5.207	-13.390	±50410.000	±49520.000	±49620.000	±47840.000	1.047
2	14:46:06	81.3%	0.021	5.894	4.543	-6.239	±49480.000	±50720.000	±50970.000	±46750.000	1.182
3	14:46:33	82.9%	0.020	4.464	4.333	-12.190	±50740.000	±50430.000	±49490.000	±47630.000	1.124
X		82.0%	0.006	5.073	4.694	-10.610	±50210.000	±50220.000	±50030.000	±47410.000	1.118
S		0.8%	0.025	0.738	0.456	3.830	±655.600	±626.400	±822.900	±582.600	0.068
%RSD		1.0	401.900	14.550	9.721	36.110	±1.306	±1.247	±1.645	±1.229	6.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±3995.000	-112.100	±46110.000	50710.000	±49440.000	80.8%	0.391	0.031	0.219	-62.520
2	14:46:06	±4151.000	-114.600	±46790.000	50070.000	±49660.000	82.8%	0.499	0.022	0.138	-66.410
3	14:46:33	±4109.000	-129.200	±46740.000	50200.000	±50140.000	83.0%	0.450	0.010	0.172	-64.220
X		±4085.000	-118.700	±46540.000	50330.000	±49750.000	82.2%	0.447	0.021	0.177	-64.390
S		±80.730	9.209	±379.700	338.600	±355.200	1.2%	0.054	0.010	0.041	1.949
%RSD		±1.976	7.761	±0.816	0.673	±0.714	1.5	12.070	49.180	23.080	3.027
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	±49610.000	0.648	±50060.000	±48140.000	2.240	2.154	6.527	0.380	0.250	1.061
2	14:46:06	±50420.000	0.599	±49870.000	±47470.000	2.264	2.033	4.737	0.303	0.265	1.124
3	14:46:33	±49910.000	0.698	±50330.000	±48310.000	2.254	1.845	4.368	0.404	0.164	0.901
X		±49980.000	0.648	±50080.000	±47980.000	2.252	2.010	5.211	0.362	0.226	1.029
S		±407.400	0.050	±234.500	±443.600	0.012	0.156	1.154	0.053	0.054	0.115
%RSD		±0.815	7.654	±0.468	±0.924	0.535	7.746	22.160	14.600	23.970	11.160
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.958	1.246	0.190	1.416	1.357	-0.686	-0.094	-0.111	0.593	0.396
2	14:46:06	1.089	0.970	0.193	0.220	1.305	-0.193	-0.644	-0.095	-0.370	0.398
3	14:46:33	1.211	0.937	0.490	0.757	2.382	-0.097	2.842	0.629	0.048	0.388
X		1.086	1.051	0.291	0.798	1.681	-0.325	0.701	0.141	0.090	0.394
S		0.127	0.170	0.173	0.599	0.607	0.316	1.874	0.423	0.483	0.006
%RSD		11.650	16.170	59.410	75.130	36.120	97.270	267.300	299.600	534.600	1.426
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	82.2%	1.114	0.925	0.898	0.099	0.037	0.043	0.036	0.006	82.8%
2	14:46:06	83.6%	0.932	0.965	0.959	0.083	0.026	0.058	-0.001	0.032	83.3%
3	14:46:33	83.9%	0.991	0.991	0.977	0.223	0.033	0.029	-0.009	0.014	84.1%
X		83.2%	1.012	0.960	0.945	0.135	0.032	0.043	0.009	0.017	83.4%
S		0.9%	0.093	0.033	0.041	0.076	0.006	0.014	0.024	0.013	0.6%
%RSD		1.1	9.148	3.483	4.362	56.460	17.780	32.840	279.200	78.090	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:39	0.394	0.656	0.975	0.980	0.055	0.043	88.6%	0.034	0.056	0.043
2	14:46:06	0.370	0.576	0.962	0.978	-0.009	0.048	90.7%	0.049	0.050	0.047
3	14:46:33	0.356	0.550	0.955	0.899	0.032	0.036	89.6%	0.057	0.030	0.033
X		0.374	0.594	0.964	0.952	0.026	0.042	89.6%	0.047	0.045	0.041
S		0.019	0.055	0.010	0.046	0.033	0.006	1.0%	0.011	0.014	0.007
%RSD		5.100	9.271	1.017	4.807	125.700	13.960	1.1	24.220	29.990	16.950
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:45:39	0.041	0.042	87.2%							
2	14:46:06	0.055	0.047	87.3%							
3	14:46:33	0.040	0.041	88.3%							
X		0.045	0.043	87.6%							
S		0.008	0.003	0.6%							
%RSD		18.710	7.218	0.7							

cal6 MW-12619 4/22/2020 14:51:07

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	79.0%	0.008	2.040	2.002	-12.050	97620.000	99400.000	99970.000	92370.000	1.284
2	14:52:01	78.5%	-0.022	3.057	2.109	-12.490	99940.000	100300.000	100100.000	93540.000	1.110
3	14:52:28	79.9%	0.008	2.168	2.017	-7.497	102100.000	100000.000	99910.000	94990.000	1.242
X		79.2%	-0.002	2.422	2.043	-10.680	99890.000	99880.000	99980.000	93630.000	1.212
S		0.7%	0.017	0.554	0.058	2.765	2253.000	438.200	82.360	1314.000	0.091
%RSD		0.9	966.100	22.890	2.818	25.890	2.256	0.439	0.082	1.403	7.469
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	8443.000	-120.800	92050.000	97570.000	99170.000	82.5%	1.047	-0.047	0.322	-50.120
2	14:52:01	8514.000	-120.200	94110.000	100700.000	100800.000	81.6%	0.675	-0.003	0.325	-85.880
3	14:52:28	8356.000	-136.700	94880.000	101200.000	100300.000	82.0%	1.006	-0.059	0.329	-32.570
X		8438.000	-125.900	93680.000	99830.000	100100.000	82.0%	0.909	-0.037	0.325	-56.190
S		78.890	9.348	1463.000	1976.000	823.700	0.5%	0.204	0.030	0.003	27.170
%RSD		0.935	7.427	1.562	1.979	0.823	0.6	22.440	80.560	1.033	48.350
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	98930.000	1.260	98730.000	95040.000	4.634	3.816	9.785	0.496	0.353	1.858
2	14:52:01	100200.000	1.295	101400.000	96680.000	4.516	3.478	7.679	0.658	0.387	2.121
3	14:52:28	100900.000	1.346	99770.000	96440.000	4.559	3.749	8.544	0.660	0.440	2.066
X		100000.000	1.300	99960.000	96050.000	4.569	3.681	8.669	0.605	0.394	2.015
S		983.900	0.043	1324.000	886.400	0.059	0.179	1.058	0.094	0.044	0.139
%RSD		0.984	3.298	1.325	0.923	1.300	4.863	12.210	15.530	11.210	6.880
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	1.643	1.930	0.408	1.353	4.998	1.237	-0.222	-0.533	3.522	0.769
2	14:52:01	1.788	1.758	0.508	1.607	5.128	0.020	0.673	0.086	0.496	0.774
3	14:52:28	1.463	1.932	0.619	1.961	5.225	0.013	1.682	0.468	-0.742	0.813
X		1.631	1.873	0.512	1.640	5.117	0.423	0.711	0.007	1.092	0.785
S		0.163	0.099	0.105	0.305	0.114	0.704	0.952	0.505	2.194	0.024
%RSD		9.971	5.309	20.580	18.600	2.226	166.300	134.000	7155.000	200.900	3.062
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	83.9%	0.347	0.234	0.182	-0.328	0.013	0.011	0.009	-0.001	83.0%
2	14:52:01	83.8%	0.381	0.317	0.232	0.563	0.021	0.024	-0.013	0.003	83.1%
3	14:52:28	82.2%	0.330	0.280	0.155	0.178	0.010	0.022	-0.013	-0.006	83.0%
X		83.3%	0.353	0.277	0.190	0.138	0.014	0.019	-0.006	-0.001	83.0%
S		1.0%	0.026	0.042	0.039	0.447	0.006	0.007	0.013	0.005	0.1%
%RSD		1.2	7.419	15.040	20.470	324.600	39.080	37.380	227.100	358.100	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:33	0.058	0.090	0.601	0.632	0.012	0.001	88.4%	0.012	0.018	0.037
2	14:52:01	0.072	0.183	0.635	0.608	-0.009	0.072	89.2%	0.011	0.016	0.029
3	14:52:28	0.065	0.082	0.543	0.567	0.023	0.061	87.2%	0.009	0.018	0.048
X		0.065	0.118	0.593	0.602	0.008	0.045	88.3%	0.011	0.017	0.038
S		0.007	0.056	0.047	0.033	0.016	0.038	1.0%	0.002	0.001	0.010
%RSD		10.750	47.630	7.850	5.499	193.300	85.780	1.1	14.500	6.342	25.250
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:51:33	0.019	0.029	85.0%							
2	14:52:01	0.022	0.026	86.2%							
3	14:52:28	0.049	0.032	85.4%							
X		0.030	0.029	85.5%							
S		0.016	0.003	0.6%							
%RSD		54.620	10.390	0.7							

ICV MW12789 PREP 4/22/20 4/22/2020 14:57:03 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	84.0%	199.200	207.800	207.100	-4.914	±39660.000	±40640.000	±40090.000	±36740.000	191.300
2	14:57:57	81.8%	199.400	191.400	207.500	-0.411	±40030.000	±41330.000	±41130.000	±37400.000	192.500
3	14:58:24	83.8%	203.900	199.100	198.500	-5.660	±40640.000	±39960.000	±40280.000	±37800.000	195.100
X		83.2%	100.417%	199.400	102.179%	-3.661	±100.280%	±40640.000	±40500.000	±93.286%	96.496%
S		1.2%	n/a	8.206	n/a	2.840	±n/a	±686.400	±552.300	±n/a	n/a
%RSD		1.5	1.331	4.115	2.506	77.560	±1.242	±1.689	±1.364	±1.426	1.012
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	2479.000	-134.900	±37820.000	39320.000	±38960.000	87.1%	194.500	193.800	188.600	1698.000
2	14:57:57	±2397.000	-147.300	±37470.000	39360.000	±38850.000	87.0%	194.900	194.100	189.600	1903.000
3	14:58:24	2579.000	-151.300	±38030.000	39720.000	±39110.000	86.1%	197.600	198.900	189.800	2048.000
X		±2485.000	-144.500	±94.437%	39470.000	±97.429%	86.7%	97.840%	97.815%	94.669%	1883.000
S		±91.380	8.585	±n/a	220.700	±n/a	0.6%	n/a	n/a	n/a	175.900
%RSD		±3.677	5.942	±0.751	0.559	±0.337	0.6	0.864	1.467	0.352	9.338
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	±39520.000	184.700	±39030.000	±37470.000	183.700	182.800	190.300	186.900	195.700	191.400
2	14:57:57	±38980.000	185.400	±38830.000	±37650.000	185.400	183.900	195.600	190.200	190.500	192.600
3	14:58:24	±39910.000	183.700	±39860.000	±37940.000	189.300	189.900	191.800	189.100	192.000	190.400
X		±39470.000	92.295%	±98.093%	±94.212%	93.053%	92.754%	192.600	188.700	96.365%	95.720%
S		±466.200	n/a	±n/a	±n/a	n/a	n/a	2.737	1.674	n/a	n/a
%RSD		±1.181	0.452	±1.390	±0.632	1.544	2.052	1.422	0.887	1.369	0.580
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	186.000	186.000	210.600	190.800	1.578	-0.749	895.400	203.500	3.284	192.800
2	14:57:57	190.200	185.600	208.000	190.200	1.691	-0.174	870.600	195.500	0.346	192.800
3	14:58:24	191.100	188.800	203.100	185.500	3.551	0.518	857.800	193.200	1.966	191.700
X		189.100	186.800	103.630%	188.800	2.273	-0.135	874.600	98.706%	1.866	96.221%
S		2.738	1.744	n/a	2.888	1.108	0.634	19.120	n/a	1.472	n/a
%RSD		1.448	0.934	1.825	1.529	48.730	469.600	2.186	2.745	78.880	0.346
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	86.1%	204.700	201.600	197.200	186.200	200.200	196.800	194.200	192.100	85.6%
2	14:57:57	85.8%	201.700	204.000	201.500	191.600	197.600	194.400	192.500	191.000	86.6%
3	14:58:24	87.0%	205.600	200.300	199.300	187.400	198.400	192.300	195.300	190.300	87.1%
X		86.3%	102.007%	100.983%	99.664%	188.400	99.366%	194.500	97.004%	95.574%	86.4%
S		0.6%	n/a	n/a	n/a	2.849	n/a	2.279	n/a	n/a	0.8%
%RSD		0.7	1.014	0.913	1.096	1.512	0.651	1.172	0.729	0.471	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:30	198.700	199.000	201.800	198.900	203.700	197.100	92.6%	198.300	198.500	189.900
2	14:57:57	197.300	197.100	200.000	199.800	197.900	196.400	91.9%	198.200	202.400	190.200
3	14:58:24	198.600	195.800	198.600	198.700	195.100	195.800	93.2%	200.200	201.300	188.100
X		99.086%	98.650%	200.200	99.577%	99.434%	98.228%	92.6%	198.900	100.363%	189.400
S		n/a	n/a	1.611	n/a	n/a	n/a	0.7%	1.137	n/a	1.115
%RSD		0.387	0.833	0.805	0.297	2.208	0.332	0.7	0.572	0.996	0.589
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	14:57:30	185.600	186.100	89.2%							
2	14:57:57	187.000	185.300	89.0%							
3	14:58:24	187.400	186.700	90.5%							
X		186.700	93.015%	89.6%							
S		0.952	n/a	0.8%							
%RSD		0.510	0.391	0.9							

ICB IM9936-01 4/22/2020 15:02:57 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	90.0%	0.014	1.168	0.996	-7.239	10.510	1.429	0.625	1.756	-0.003
2	15:03:50	89.2%	0.015	0.930	1.126	-0.044	10.430	1.855	1.373	1.261	0.019
3	15:04:17	89.8%	-0.012	1.684	1.413	-1.978	9.389	1.321	0.964	1.230	0.013
X		89.7%	0.006	1.261	1.178	-3.087	10.110	1.535	0.988	1.416	0.010
S		0.5%	0.015	0.385	0.213	3.723	0.626	0.282	0.374	0.295	0.012
%RSD		0.5	269.500	30.560	18.090	120.600	6.194	18.380	37.910	20.870	120.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.398	-164.600	18.060	1.109	1.965	88.6%	-0.046	-0.029	-0.018	-52.490
2	15:03:50	2.865	-167.200	17.660	-0.969	1.640	87.3%	0.022	0.014	-0.027	-77.080
3	15:04:17	2.612	-170.900	16.110	2.217	2.053	87.7%	-0.001	0.005	-0.001	-80.190
X		2.625	-167.600	17.270	0.786	1.886	87.9%	-0.008	-0.003	-0.015	-69.920
S		0.234	3.130	1.029	1.617	0.217	0.6%	0.034	0.023	0.013	15.180
%RSD		8.908	1.868	5.956	205.800	11.530	0.7	408.800	733.000	86.110	21.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	2.569	0.019	-2.481	5.389	0.008	0.021	1.199	0.048	0.077	-0.054
2	15:03:50	2.547	0.010	-1.282	3.909	0.003	-0.028	0.846	0.044	0.019	-0.187
3	15:04:17	0.515	0.024	-2.410	1.817	0.014	0.003	0.755	0.041	0.008	-0.031
X		1.877	0.018	-2.058	3.705	0.008	-0.001	0.933	0.044	0.035	-0.091
S		1.180	0.007	0.672	1.795	0.005	0.025	0.235	0.004	0.037	0.084
%RSD		62.840	40.380	32.670	48.450	62.910	2212.000	25.170	8.382	106.000	93.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.165	0.185	-0.017	0.078	0.219	-0.448	0.286	0.496	-3.489	0.003
2	15:03:50	-0.068	0.114	-0.008	-0.091	0.020	-0.590	-1.358	0.028	-2.659	0.003
3	15:04:17	-0.517	0.061	-0.148	0.907	0.105	-0.067	-3.065	-0.611	-0.644	0.006
X		-0.140	0.120	-0.058	0.298	0.115	-0.368	-1.379	-0.029	-2.264	0.004
S		0.347	0.062	0.078	0.534	0.100	0.271	1.676	0.556	1.463	0.002
%RSD		247.500	51.920	135.900	179.300	86.900	73.460	121.500	1913.000	64.610	40.530
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	88.3%	0.116	0.113	0.071	0.464	0.005	0.009	0.007	-0.000	91.5%
2	15:03:50	88.1%	0.160	0.055	0.161	-0.781	0.011	0.006	-0.006	0.010	91.0%
3	15:04:17	89.3%	0.163	0.096	0.131	0.092	-0.000	0.011	-0.013	0.008	91.7%
X		88.6%	0.146	0.088	0.121	-0.075	0.005	0.009	-0.004	0.006	91.4%
S		0.6%	0.026	0.030	0.046	0.639	0.006	0.003	0.010	0.005	0.3%
%RSD		0.7	17.920	33.960	37.860	854.800	115.300	28.760	274.700	90.480	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:23	0.015	0.055	0.166	0.188	-0.032	0.005	93.7%	0.009	0.008	0.026
2	15:03:50	0.047	0.085	0.207	0.206	-0.041	0.005	93.4%	0.017	0.009	0.020
3	15:04:17	0.018	0.052	0.210	0.228	-0.041	-0.012	94.7%	0.013	0.004	0.012
X		0.026	0.064	0.194	0.207	-0.038	-0.000	93.9%	0.013	0.007	0.019
S		0.018	0.018	0.025	0.020	0.006	0.010	0.7%	0.004	0.003	0.007
%RSD		67.840	28.170	12.720	9.699	14.670	2142.000	0.7	29.250	36.430	36.290
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:03:23	0.009	0.016	95.8%							
2	15:03:50	0.010	0.015	95.6%							
3	15:04:17	0.019	0.010	97.5%							
X		0.013	0.014	96.3%							
S		0.006	0.003	1.0%							
%RSD		43.580	24.960	1.1							

ICSA MW12579 4/22/2020 15:08:50 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	78.7%	-0.006	1.571	1.135	576.300	TM 102400.000	TM 98940.000	TM 98500.000	TM 97450.000	TM 93260.000
2	15:09:44	81.3%	-0.023	1.557	0.818	568.800	TM 105000.000	TM 100400.000	TM 101100.000	TM 99790.000	TM 93460.000
3	15:10:11	80.7%	-0.022	0.872	0.879	573.700	TM 102900.000	TM 99460.000	TM 98780.000	TM 96230.000	TM 91470.000
X		80.2%	-1.#IO%	1.333	1.#IO%	573.000	TM 103.442%	TM 99610.000	TM 99450.000	TM 97.821%	TM 92.731%
S		1.4%	n/a	0.400	n/a	3.796	TM n/a	TM 759.000	TM 1419.000	TM n/a	TM n/a
%RSD		1.7	54.060	29.960	17.820	0.662	TM 1.315	TM 0.762	TM 1.426	TM 1.848	TM 1.181
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	16.400	TM 30650.000	TM 91370.000	TM 101100.000	TM 101300.000	76.9%	TM 2145.000	-0.908	-1.011	3401.000
2	15:09:44	14.890	TM 30500.000	TM 93550.000	TM 101500.000	TM 103400.000	76.6%	TM 2164.000	-0.992	-1.203	3523.000
3	15:10:11	15.070	TM 30120.000	TM 92500.000	TM 100100.000	TM 100700.000	79.0%	TM 2064.000	-0.938	-1.036	3554.000
X		15.450	TM 30420.000	TM 92.476%	TM 100900.000	TM 101.821%	77.5%	TM 106.210%	-1.#IO%	-1.#IO%	3493.000
S		0.821	TM 272.000	TM n/a	TM 719.600	TM n/a	1.3%	TM n/a	n/a	n/a	81.130
%RSD		5.309	TM 0.894	TM 1.178	TM 0.713	TM 1.361	1.7	TM 2.482	4.475	9.618	2.323
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	TM 102500.000	0.117	TM 102500.000	TM 98890.000	0.230	0.395	13.250	-1.352	-0.083	1.351
2	15:09:44	TM 105000.000	0.133	TM 104500.000	TM 100200.000	0.239	0.775	15.190	-1.202	-0.044	1.397
3	15:10:11	TM 100300.000	0.142	TM 101700.000	TM 98630.000	0.250	0.508	16.070	-1.103	-0.278	1.424
X		TM 102600.000	1.#IO%	TM 102900.000	TM 99.240%	1.#IO%	1.#IO%	14.840	-1.219	-1.#IO%	1.#IO%
S		TM 2322.000	n/a	TM 1466.000	TM n/a	n/a	n/a	1.441	0.126	n/a	n/a
%RSD		TM 2.263	9.627	TM 1.425	TM 0.850	4.233	34.870	9.712	10.300	93.090	2.680
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	1.381	0.499	-0.865	1.869	5.292	0.697	-2.705	-2.378	13.360	0.876
2	15:09:44	0.645	0.688	0.048	1.895	7.401	0.735	-2.779	-1.971	9.884	0.819
3	15:10:11	1.532	0.507	-0.471	1.583	7.786	1.446	-1.931	-2.399	14.550	0.868
X		1.186	0.565	-1.#IO%	1.782	6.826	0.959	-2.472	-1.#IO%	12.600	0.854
S		0.475	0.107	n/a	0.173	1.343	0.422	0.470	n/a	2.425	0.031
%RSD		40.030	18.960	106.700	9.698	19.670	43.990	19.000	10.710	19.250	3.637
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	80.9%	TM 2098.000	TM 2066.000	TM 2146.000	-0.809	0.009	0.022	-6.316	0.031	83.8%
2	15:09:44	83.0%	TM 2129.000	TM 2115.000	TM 2116.000	-0.793	0.022	0.043	-6.189	0.119	83.1%
3	15:10:11	83.6%	TM 2127.000	TM 2092.000	TM 2147.000	0.058	0.013	0.033	-6.516	-0.012	84.7%
X		82.5%	TM 2118.000	TM 104.549%	TM 2137.000	-0.515	1.#IO%	0.032	-6.340	1.#IO%	83.9%
S		1.4%	TM 17.440	TM n/a	TM 17.560	0.496	n/a	0.010	0.165	n/a	0.8%
%RSD		1.7	TM 0.823	TM 1.163	TM 0.822	96.300	45.730	32.160	2.603	145.700	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:17	0.781	0.048	0.140	0.096	0.033	0.036	91.2%	0.030	0.025	0.051
2	15:09:44	0.695	0.075	0.153	0.155	-0.009	0.042	91.7%	0.020	0.007	0.058
3	15:10:11	0.733	0.093	0.121	0.116	-0.010	0.012	93.3%	0.017	0.007	0.050
X		1.#IO%	1.#IO%	0.138	1.#IO%	0.004	1.#IO%	92.1%	0.022	1.#IO%	0.053
S		n/a	n/a	0.016	n/a	0.024	n/a	1.1%	0.007	n/a	0.004
%RSD		5.795	31.120	11.570	24.350	548.100	53.260	1.2	29.620	80.160	8.065
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:09:17	0.082	0.065	88.5%							
2	15:09:44	0.055	0.049	88.8%							
3	15:10:11	0.044	0.051	90.3%							
X		0.060	1.#IO%	89.2%							
S		0.020	n/a	1.0%							
%RSD		32.480	16.140	1.1							

CCV MW12620 4/22/2020 15:14:45 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	86.4%	298.300	289.000	302.400	-8.235	60660.000	62060.000	61560.000	57320.000	297.700
2	15:15:39	83.8%	305.700	288.600	296.300	0.794	61350.000	61760.000	60940.000	58670.000	297.700
3	15:16:06	83.4%	304.300	297.000	304.800	-5.554	61760.000	63630.000	62910.000	58300.000	298.500
X		84.5%	100.920%	97.180%	100.388%	-4.332	102.099%	62480.000	61800.000	96.835%	99.315%
S		1.6%	n/a	n/a	n/a	4.637	n/a	1008.000	1004.000	n/a	n/a
%RSD		1.9	1.307	1.620	1.442	107.000	0.908	1.613	1.625	1.201	0.161
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	2694.000	-73.840	56500.000	61700.000	61050.000	86.0%	297.200	300.800	293.100	1466.000
2	15:15:39	2787.000	-83.180	58070.000	62120.000	62760.000	84.4%	300.700	297.700	300.300	3433.000
3	15:16:06	2765.000	-92.850	57790.000	61870.000	62500.000	84.6%	301.200	300.900	291.700	1796.000
X		2748.000	-83.290	95.756%	61900.000	103.506%	85.0%	99.908%	99.931%	98.347%	2232.000
S		48.620	9.507	n/a	208.600	n/a	0.9%	n/a	n/a	n/a	1054.000
%RSD		1.769	11.410	1.451	0.337	1.487	1.0	0.723	0.613	1.572	47.210
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	61710.000	286.200	60920.000	58780.000	287.300	281.700	293.900	276.200	284.400	293.700
2	15:15:39	63150.000	293.500	62570.000	60130.000	293.800	289.500	304.100	280.900	285.600	294.800
3	15:16:06	61610.000	286.300	61960.000	59540.000	290.300	286.400	303.500	280.500	281.600	283.400
X		62160.000	96.217%	61820.000	99.141%	96.833%	95.295%	300.500	279.200	94.614%	96.877%
S		861.100	n/a	837.800	n/a	n/a	n/a	5.733	2.591	n/a	n/a
%RSD		1.385	1.451	1.355	1.133	1.120	1.374	1.908	0.928	0.728	2.171
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	282.400	289.000	299.000	286.300	3.895	-0.139	1300.000	293.100	4.335	294.800
2	15:15:39	288.500	289.200	301.900	292.200	4.802	0.050	1315.000	297.200	-0.973	299.800
3	15:16:06	284.800	282.900	296.800	286.400	3.387	0.662	1288.000	285.600	0.276	296.500
X		285.200	287.000	99.741%	288.300	4.028	0.191	1301.000	97.319%	1.213	99.018%
S		3.055	3.572	n/a	3.361	0.717	0.419	13.270	n/a	2.775	n/a
%RSD		1.071	1.244	0.860	1.166	17.800	219.100	1.020	2.003	228.800	0.859
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	88.6%	310.100	310.000	305.800	293.600	297.200	291.500	294.500	292.600	88.3%
2	15:15:39	87.6%	321.400	314.600	311.400	288.300	302.000	297.200	294.200	292.800	87.2%
3	15:16:06	87.6%	310.600	311.100	308.500	299.000	293.600	288.200	291.000	290.600	88.8%
X		88.0%	104.676%	103.962%	308.600	293.600	99.205%	292.300	293.200	97.341%	88.1%
S		0.6%	n/a	n/a	2.802	5.334	n/a	4.542	1.922	n/a	0.8%
%RSD		0.6	2.033	0.775	0.908	1.816	1.422	1.554	0.656	0.412	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:12	295.700	299.800	297.500	292.400	301.200	295.000	96.6%	306.300	307.600	286.900
2	15:15:39	302.700	303.200	303.100	297.100	305.900	300.700	94.8%	304.800	313.100	296.700
3	15:16:06	298.900	296.700	299.100	300.300	304.000	301.400	95.0%	305.100	309.100	289.200
X		99.707%	99.973%	299.900	98.868%	101.237%	99.682%	95.5%	305.400	103.314%	96.976%
S		n/a	n/a	2.893	n/a	n/a	n/a	1.0%	0.814	n/a	n/a
%RSD		1.173	1.093	0.965	1.350	0.774	1.178	1.1	0.267	0.919	1.775
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:15:12	282.200	282.000	91.4%							
2	15:15:39	291.900	290.900	92.5%							
3	15:16:06	286.900	287.300	92.1%							
X		95.670%	95.576%	92.0%							
S		n/a	n/a	0.6%							
%RSD		1.679	1.564	0.6							

■ CCB IM9936-01 4/22/2020 15:20:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

User File Location: 15:00											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	93.3%	-0.039	1.844	1.807	-6.426	17.540	2.288	2.421	1.961	0.111
2	15:21:33	92.9%	-0.001	1.709	1.980	-10.380	16.100	1.855	1.982	2.518	0.123
3	15:22:00	90.3%	-0.012	1.736	1.798	-1.885	15.260	2.061	1.651	2.070	0.091
X		92.2%	-0.017	1.763	1.862	-6.229	16.300	2.068	2.018	2.183	0.109
S		1.7%	0.020	0.071	0.102	4.249	1.153	0.216	0.386	0.295	0.016
%RSD		1.8	114.100	4.055	5.507	68.220	7.073	10.450	19.150	13.530	15.090
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	0.794	-147.300	19.050	1.069	4.135	89.4%	0.064	0.059	0.031	-91.900
2	15:21:33	0.676	-146.600	18.610	-1.003	4.091	88.8%	0.065	0.003	0.025	-69.970
3	15:22:00	0.936	-159.200	16.910	0.018	2.363	89.7%	0.064	0.025	0.002	-81.240
X		0.802	-151.000	18.190	0.028	3.529	89.3%	0.064	0.029	0.019	-81.040
S		0.130	7.084	1.131	1.036	1.011	0.5%	0.001	0.028	0.016	10.970
%RSD		16.230	4.691	6.215	3732.000	28.640	0.5	0.890	98.070	81.440	13.530
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	1.803	0.054	-0.167	2.251	0.011	0.002	3.044	0.113	0.021	0.122
2	15:21:33	1.750	0.053	-0.716	4.594	0.014	-0.016	2.406	0.093	0.036	-0.001
3	15:22:00	1.215	0.059	-0.999	4.276	0.026	0.020	1.506	0.062	0.006	-0.096
X		1.589	0.055	-0.627	3.707	0.017	0.002	2.319	0.089	0.021	0.008
S		0.325	0.004	0.423	1.271	0.008	0.018	0.773	0.025	0.015	0.109
%RSD		20.470	6.663	67.460	34.280	49.440	826.100	33.320	28.550	70.520	1317.000
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	-0.211	0.129	-0.006	0.134	0.125	-0.022	-1.102	-0.125	-1.119	0.009
2	15:21:33	-0.329	-0.061	-0.138	0.549	0.217	0.205	-2.342	-0.389	-1.144	0.007
3	15:22:00	-0.410	0.013	-0.058	-0.106	-0.085	0.105	-1.539	-0.315	-0.349	0.005
X		-0.317	0.027	-0.067	0.192	0.086	0.096	-1.661	-0.276	-0.871	0.007
S		0.100	0.096	0.066	0.332	0.154	0.114	0.629	0.136	0.452	0.002
%RSD		31.670	351.900	98.700	172.600	180.100	118.400	37.850	49.330	51.940	33.860
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	91.0%	0.364	0.382	0.329	0.335	0.016	0.004	-0.007	0.008	94.5%
2	15:21:33	91.8%	0.291	0.348	0.437	0.539	-0.006	0.009	-0.014	0.021	94.7%
3	15:22:00	91.6%	0.377	0.295	0.410	0.338	0.008	0.012	-0.001	0.024	93.9%
X		91.5%	0.344	0.342	0.392	0.404	0.006	0.009	-0.007	0.018	94.4%
S		0.4%	0.046	0.044	0.056	0.117	0.011	0.004	0.007	0.008	0.4%
%RSD		0.5	13.490	12.810	14.340	29.010	182.200	49.340	90.630	48.010	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:06	0.088	0.140	0.318	0.342	-0.032	0.004	97.6%	0.004	0.016	0.027
2	15:21:33	0.118	0.150	0.292	0.308	-0.041	-0.006	96.9%	0.004	0.008	0.018
3	15:22:00	0.129	0.151	0.315	0.366	-0.041	-0.001	99.0%	0.017	0.003	0.023
X		0.112	0.147	0.308	0.339	-0.038	-0.001	97.8%	0.008	0.009	0.023
S		0.021	0.006	0.014	0.029	0.005	0.005	1.1%	0.008	0.006	0.004
%RSD		19.240	4.201	4.677	8.636	14.170	495.900	1.1	92.590	73.160	18.390
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:21:06	0.019	0.012	98.7%							
2	15:21:33	0.026	0.016	99.1%							
3	15:22:00	0.020	0.017	99.6%							
X		0.022	0.015	99.1%							
S		0.004	0.003	0.4%							
%RSD		17.270	19.380	0.4							

VQ51454-001 4/22/2020 15:26:29 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

User File Location: 15000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	93.8%	-0.001	1.123	1.406	-22.450	21.590	-0.272	-0.711	-0.139	0.854
2	15:27:23	91.3%	0.000	1.147	0.799	-16.940	18.610	-0.330	-0.527	-0.356	0.820
3	15:27:51	92.5%	-0.000	0.835	0.871	-14.560	17.490	-0.376	-0.543	-0.399	0.817
X		92.5%	-0.000	1.035	1.025	-17.980	19.230	-0.326	-0.594	-0.298	0.830
S		1.2%	0.001	0.174	0.332	4.047	2.117	0.052	0.102	0.139	0.021
%RSD		1.3	188.800	16.780	32.330	22.510	11.010	15.980	17.130	46.800	2.505
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	2.413	71750.000	37.090	-2.036	3.646	87.2%	0.089	-0.076	0.726	4709.000
2	15:27:23	2.815	71340.000	33.120	-0.956	3.426	86.8%	0.045	-0.349	0.707	5036.000
3	15:27:51	2.136	73120.000	30.290	4.555	2.493	85.3%	0.092	-0.173	0.805	5106.000
X		2.455	72070.000	33.500	0.521	3.188	86.4%	0.075	-0.199	0.746	4951.000
S		0.342	934.800	3.415	3.535	0.612	1.0%	0.027	0.138	0.052	211.900
%RSD		13.910	1.297	10.200	678.500	19.200	1.2	35.410	69.410	6.980	4.281
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	6.804	-0.002	2.964	3.349	-0.010	0.154	2.549	0.243	0.143	1.002
2	15:27:23	6.157	-0.003	2.546	4.356	-0.010	0.105	1.836	0.162	0.075	1.161
3	15:27:51	9.112	0.004	3.522	4.013	-0.007	0.101	1.145	0.117	0.089	0.798
X		7.358	-0.001	3.010	3.906	-0.009	0.120	1.843	0.174	0.102	0.987
S		1.554	0.004	0.490	0.512	0.002	0.030	0.702	0.064	0.036	0.182
%RSD		21.120	564.400	16.260	13.110	17.470	24.790	38.090	36.660	35.020	18.430
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.998	0.859	-0.331	-0.163	7.074	6.034	-0.252	-0.147	0.514	-0.005
2	15:27:23	0.817	1.027	-0.657	-0.078	5.758	5.816	-0.987	-0.757	3.867	0.008
3	15:27:51	1.228	0.998	-0.454	0.094	6.646	5.765	-1.432	-0.243	-0.661	-0.003
X		1.014	0.961	-0.480	-0.049	6.492	5.872	-0.890	-0.382	1.240	0.000
S		0.206	0.090	0.165	0.131	0.671	0.143	0.596	0.328	2.350	0.007
%RSD		20.330	9.353	34.270	265.700	10.340	2.435	66.980	85.790	189.500	15640.000
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	90.7%	0.045	0.160	0.068	0.056	-0.001	0.003	-0.006	-0.001	92.5%
2	15:27:23	89.1%	0.165	0.194	0.087	-0.366	0.004	0.011	-0.006	-0.004	92.5%
3	15:27:51	90.1%	0.140	0.107	0.062	0.395	0.012	0.003	-0.006	0.004	90.6%
X		90.0%	0.117	0.154	0.073	0.029	0.005	0.005	-0.006	-0.001	91.9%
S		0.8%	0.063	0.044	0.013	0.381	0.006	0.005	0.000	0.004	1.1%
%RSD		0.9	54.250	28.330	18.270	1333.000	117.700	88.680	1.937	697.200	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:56	0.062	0.096	0.139	0.085	-0.032	-0.012	96.5%	0.012	0.010	0.035
2	15:27:23	0.058	0.112	0.114	0.147	-0.032	0.015	97.2%	0.005	0.002	0.034
3	15:27:51	0.106	0.115	0.105	0.121	-0.012	-0.012	96.1%	0.014	0.008	0.008
X		0.075	0.108	0.119	0.118	-0.025	-0.003	96.6%	0.010	0.007	0.026
S		0.026	0.010	0.018	0.031	0.011	0.016	0.6%	0.005	0.004	0.015
%RSD		35.070	9.294	14.790	26.250	45.340	593.800	0.6	43.540	65.440	58.110
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:26:56	0.025	0.021	98.5%							
2	15:27:23	0.021	0.015	97.5%							
3	15:27:51	0.010	0.010	98.6%							
X		0.019	0.015	98.2%							
S		0.008	0.005	0.6%							
%RSD		40.930	32.860	0.6							

VQ51454-002 4/22/2020 15:32:21 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	91.1%	98.150	103.800	104.500	-11.310	1146.000	1166.000	1088.000	1049.000	100.900
2	15:33:15	88.2%	101.000	96.250	99.160	-18.110	1153.000	1128.000	1061.000	1060.000	103.600
3	15:33:42	90.2%	100.400	102.700	105.700	-14.670	1183.000	1175.000	1108.000	1088.000	104.100
X		89.8%	99.854%	100.900	103.100	-14.700	116.058%	1156.000	1086.000	106.560%	102.863%
S		1.5%	n/a	4.067	3.488	3.402	n/a	24.910	23.670	n/a	n/a
%RSD		1.7	1.506	4.031	3.383	23.150	1.712	2.154	2.180	1.862	1.648
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	848.700	71730.000	1027.000	1059.000	1029.000	84.3%	100.100	96.270	98.510	11490.000
2	15:33:15	894.300	71850.000	1033.000	1032.000	1055.000	81.8%	103.400	99.910	101.000	12620.000
3	15:33:42	855.500	73320.000	1058.000	1207.000	1075.000	80.1%	101.400	99.500	101.800	14580.000
X		866.100	72300.000	103.922%	1099.000	105.318%	82.1%	101.650%	98.560%	100.454%	12900.000
S		24.600	884.800	n/a	94.150	n/a	2.1%	n/a	n/a	n/a	1565.000
%RSD		2.840	1.224	1.604	8.566	2.211	2.6	1.633	2.019	1.715	12.140
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	1146.000	98.530	1021.000	1057.000	97.800	99.250	97.810	100.600	97.800	100.700
2	15:33:15	1177.000	99.780	1042.000	1061.000	100.500	101.400	104.700	101.600	101.600	105.500
3	15:33:42	1183.000	101.400	1066.000	1123.000	100.800	102.700	104.200	100.500	101.000	101.600
X		1168.000	99.919%	1043.000	108.037%	99.706%	101.142%	102.200	100.912%	100.103%	102.619%
S		19.440	n/a	22.220	n/a	n/a	n/a	3.847	n/a	n/a	n/a
%RSD		1.664	1.463	2.131	3.410	1.665	1.741	3.763	0.584	2.017	2.506
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	101.900	101.100	102.200	101.600	6.255	5.171	448.300	97.120	0.383	98.340
2	15:33:15	104.600	104.800	103.200	102.900	4.416	5.835	471.200	103.000	0.060	101.100
3	15:33:42	103.700	104.100	104.200	98.660	5.611	5.311	466.900	104.900	0.817	98.480
X		103.400	103.400	103.187%	101.100	5.427	5.439	462.200	101.697%	0.420	99.320
S		1.382	1.958	n/a	2.173	0.933	0.350	12.160	n/a	0.380	1.582
%RSD		1.337	1.894	0.973	2.150	17.200	6.430	2.631	4.008	90.440	1.593
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	85.6%	97.890	98.470	100.600	98.420	102.100	100.100	97.400	98.850	89.0%
2	15:33:15	83.8%	100.700	101.600	103.000	104.900	102.000	101.800	101.300	99.840	86.3%
3	15:33:42	86.1%	102.800	100.300	99.810	100.900	104.800	102.400	102.800	101.300	85.5%
X		85.2%	100.500	100.100	101.100	101.400	102.975%	101.400	100.500	100.002%	86.9%
S		1.2%	2.486	1.562	1.666	3.276	n/a	1.167	2.774	n/a	1.8%
%RSD		1.4	2.474	1.560	1.647	3.230	1.517	1.150	2.760	1.239	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:48	99.620	98.770	97.610	99.070	99.520	97.740	94.7%	101.900	104.700	100.900
2	15:33:15	102.600	101.900	100.100	100.600	103.400	99.960	93.5%	101.600	106.300	101.500
3	15:33:42	102.700	101.800	101.900	102.200	104.600	102.300	90.8%	102.200	109.000	104.300
X		101.600	100.837%	99.880	100.620%	102.500	100.012%	93.0%	101.900	106.672%	102.200
S		1.744	n/a	2.176	n/a	2.672	n/a	2.0%	0.268	n/a	1.851
%RSD		1.716	1.776	2.179	1.541	2.606	2.301	2.2	0.263	2.030	1.811
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:32:48	100.800	99.530	95.1%							
2	15:33:15	100.600	99.580	94.9%							
3	15:33:42	103.700	102.000	95.0%							
X		101.700	100.385%	95.0%							
S		1.728	n/a	0.1%							
%RSD		1.698	1.435	0.1							

VD17087-001

4/22/2020 15:38:12

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	94.7%	0.024	1.545	1.482	-62.820	14576.000	118690.000	119140.000	126910.000	2.039
2	15:39:06	93.3%	-0.014	1.168	1.512	-62.080	14463.000	118180.000	118410.000	126290.000	1.881
3	15:39:33	91.2%	-0.026	1.241	1.230	-63.790	14576.000	118450.000	118960.000	127000.000	2.000
X		93.1%	-0.005	1.318	1.408	-62.900	14538.000	118440.000	118830.000	126730.000	1.973
S		1.7%	0.026	0.200	0.155	0.855	165.020	1252.000	1380.400	1385.700	0.083
%RSD		1.9	492.500	15.180	10.980	1.359	1.433	1.367	2.020	1.443	4.185
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	15740.000	162410.000	12997.000	85070.000	183830.000	84.6%	0.672	-1.017	0.941	12400.000
2	15:39:06	15733.000	161180.000	12912.000	83500.000	182910.000	85.7%	0.526	-0.174	0.939	13290.000
3	15:39:33	15907.000	162750.000	13024.000	86450.000	186030.000	82.8%	0.546	-1.134	0.888	15150.000
X		15793.000	162110.000	12977.000	85010.000	184260.000	84.4%	0.581	-0.775	0.923	13610.000
S		198.500	1827.600	158.590	1477.000	11606.000	1.5%	0.079	0.523	0.030	1405.000
%RSD		1.700	1.332	1.968	1.738	1.906	1.7	13.610	67.540	3.280	10.320
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	13.320	79.890	26.200	134.200	0.511	4.333	3.305	0.194	0.167	1.398
2	15:39:06	12.560	77.510	25.070	132.100	0.579	3.948	3.904	0.144	0.225	1.454
3	15:39:33	12.410	79.440	24.890	131.900	0.531	4.233	3.127	0.119	0.230	1.391
X		12.760	78.950	25.390	132.700	0.540	4.171	3.445	0.152	0.207	1.414
S		0.488	1.265	0.711	1.268	0.035	0.200	0.407	0.038	0.035	0.035
%RSD		3.826	1.602	2.799	0.955	6.551	4.794	11.810	24.950	16.810	2.444
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	5.788	4.162	-0.843	-0.277	14.850	15.860	-1.791	-0.889	3.495	42.250
2	15:39:06	4.435	4.259	0.234	0.343	14.480	16.200	-0.919	-0.305	0.662	42.420
3	15:39:33	5.298	4.069	-1.034	-0.603	14.640	13.250	1.345	0.126	1.205	43.450
X		5.174	4.163	-0.547	-0.179	14.660	15.100	-0.455	-0.356	1.787	42.700
S		0.685	0.095	0.684	0.480	0.186	1.611	1.619	0.509	1.503	0.648
%RSD		13.240	2.285	124.900	268.600	1.268	10.660	355.900	143.100	84.120	1.517
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	89.0%	0.135	0.064	0.040	1.568	0.055	0.055	0.050	0.040	87.1%
2	15:39:06	88.0%	0.164	0.097	0.115	0.503	0.050	0.042	0.036	0.043	88.1%
3	15:39:33	86.3%	0.069	0.066	0.048	2.190	0.039	0.070	0.072	0.034	86.6%
X		87.8%	0.123	0.076	0.068	1.420	0.048	0.055	0.053	0.039	87.3%
S		1.4%	0.049	0.018	0.041	0.853	0.008	0.014	0.018	0.005	0.8%
%RSD		1.6	39.620	24.320	60.100	60.050	16.870	25.070	34.540	11.920	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:39	0.054	0.104	0.094	0.070	168.500	168.000	93.0%	0.035	0.039	0.023
2	15:39:06	0.123	0.058	0.103	0.097	167.300	164.900	92.9%	0.031	0.041	-0.005
3	15:39:33	0.081	0.107	0.123	0.068	170.800	168.800	92.9%	0.042	0.025	-0.001
X		0.086	0.090	0.107	0.079	168.900	167.200	92.9%	0.036	0.035	0.006
S		0.035	0.027	0.015	0.016	1.739	2.104	0.1%	0.006	0.009	0.016
%RSD		40.380	30.430	14.080	20.800	1.030	1.258	0.1	16.140	24.900	273.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:38:39	0.011	0.011	91.3%							
2	15:39:06	0.005	0.002	92.1%							
3	15:39:33	0.001	0.004	92.4%							
X		0.006	0.006	91.9%							
S		0.005	0.005	0.6%							
%RSD		90.120	79.090	0.6							

VD17087-002

4/22/2020 15:44:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	86.5%	0.280	1.234	1.672	-39.460	<u>7197.000</u>	<u>4819.000</u>	5061.000	6051.000	22.810
2	15:44:57	84.7%	0.230	2.056	1.688	-41.020	<u>7112.000</u>	<u>4735.000</u>	5016.000	6112.000	23.050
3	15:45:24	83.6%	0.234	1.910	1.255	-35.900	<u>7238.000</u>	<u>4896.000</u>	5258.000	6205.000	25.000
X		84.9%	0.248	1.733	1.538	-38.790	<u>7182.000</u>	<u>4816.000</u>	5111.000	6123.000	23.620
S		1.5%	0.028	0.438	0.246	2.626	<u>64.300</u>	<u>80.350</u>	128.900	77.480	1.204
%RSD		1.7	11.110	25.290	15.960	6.770	<u>0.895</u>	<u>1.668</u>	2.522	1.265	5.098
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	<u>4940.000</u>	<u>62130.000</u>	<u>3657.000</u>	10760.000	10320.000	76.8%	0.516	-1.537	1.471	27260.000
2	15:44:57	<u>5018.000</u>	<u>62980.000</u>	<u>3692.000</u>	10570.000	10490.000	76.3%	0.519	-1.682	1.299	26400.000
3	15:45:24	<u>5090.000</u>	<u>63960.000</u>	<u>3765.000</u>	10820.000	10600.000	76.0%	0.625	-1.397	1.308	25980.000
X		<u>5016.000</u>	<u>63020.000</u>	<u>3705.000</u>	10720.000	10470.000	76.4%	0.553	-1.539	1.359	26550.000
S		<u>74.740</u>	<u>917.300</u>	<u>54.820</u>	127.900	138.200	0.4%	0.062	0.143	0.097	648.500
%RSD		<u>1.490</u>	<u>1.456</u>	<u>1.480</u>	1.194	1.320	0.5	11.190	9.275	7.126	2.443
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	1940.000	<u>838.200</u>	<u>1791.000</u>	1849.000	2.606	4.445	4.395	6.510	6.547	30.060
2	15:44:57	1938.000	<u>847.200</u>	<u>1804.000</u>	1824.000	2.654	4.560	4.039	6.430	6.735	29.730
3	15:45:24	1929.000	<u>845.700</u>	<u>1831.000</u>	1865.000	2.789	5.003	4.887	6.470	6.642	29.350
X		1936.000	<u>843.700</u>	<u>1809.000</u>	1846.000	2.683	4.669	4.440	6.470	6.641	29.710
S		6.150	<u>4.800</u>	<u>20.340</u>	20.620	0.095	0.294	0.426	0.040	0.094	0.354
%RSD		0.318	<u>0.569</u>	<u>1.124</u>	1.117	3.541	6.305	9.591	0.615	1.417	1.191
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	31.950	29.980	-1.390	-0.216	22.670	23.780	-3.751	-0.918	0.436	39.770
2	15:44:57	31.550	31.700	-1.103	-0.648	23.440	24.890	2.345	0.387	1.292	39.850
3	15:45:24	33.740	31.290	0.150	-0.908	25.540	21.790	-0.760	-0.148	-0.046	39.400
X		32.420	30.990	-0.781	-0.591	23.880	23.490	-0.722	-0.227	0.561	39.670
S		1.165	0.899	0.819	0.349	1.485	1.570	3.048	0.656	0.678	0.237
%RSD		3.595	2.900	104.900	59.170	6.219	6.687	422.100	289.800	120.900	0.597
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	85.9%	-0.023	0.034	0.019	1.266	0.016	0.011	0.250	0.167	80.8%
2	15:44:57	86.0%	0.071	-0.024	0.043	0.627	0.006	0.015	0.248	0.187	81.4%
3	15:45:24	87.2%	0.064	0.050	-0.021	1.082	0.010	0.013	0.209	0.231	82.1%
X		86.3%	0.037	0.020	0.014	0.992	0.010	0.013	0.236	0.195	81.4%
S		0.7%	0.052	0.039	0.033	0.329	0.005	0.002	0.023	0.033	0.7%
%RSD		0.8	139.600	197.400	238.600	33.180	46.450	14.250	9.768	16.950	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:30	0.133	0.054	0.061	0.037	155.700	151.600	89.1%	0.067	0.080	0.229
2	15:44:57	0.124	0.054	0.047	0.049	150.000	146.200	89.1%	0.071	0.083	0.276
3	15:45:24	0.066	0.071	0.091	0.026	150.400	147.100	87.7%	0.064	0.080	0.281
X		0.108	0.060	0.066	0.037	152.000	148.300	88.6%	0.067	0.081	0.262
S		0.036	0.010	0.022	0.012	3.190	2.904	0.8%	0.004	0.002	0.029
%RSD		33.750	16.280	33.580	30.970	2.098	1.958	0.9	5.850	2.372	11.040
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:44:30	0.258	0.250	90.3%							
2	15:44:57	0.253	0.274	90.1%							
3	15:45:24	0.248	0.259	90.2%							
X		0.253	0.261	90.2%							
S		0.005	0.012	0.1%							
%RSD		1.994	4.557	0.1							

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User Pre-dilution: 1.000

User Predefined: 1.000											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	89.7%	0.015	0.954	1.334	-68.750	±5700.000	±27480.000	±28330.000	±43740.000	1.777
2	15:50:49	91.4%	-0.052	1.456	1.359	-68.100	±5751.000	±27420.000	±28420.000	±44670.000	1.876
3	15:51:17	89.8%	0.001	1.383	1.468	-68.050	±5789.000	±27920.000	±28470.000	±44930.000	1.874
X		90.3%	-0.012	1.264	1.387	-68.300	±5747.000	±27610.000	±28400.000	±44440.000	1.842
S		1.0%	0.035	0.272	0.071	0.393	±44.470	±274.500	±71.600	±623.100	0.056
%RSD		1.1	291.500	21.480	5.145	0.575	±0.774	±0.995	±0.252	±1.402	3.056
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	±7638.000	±59840.000	±3130.000	M 138600.000	TM 136800.000	80.2%	0.687	-0.523	0.787	13210.000
2	15:50:49	±7518.000	±61660.000	±3192.000	M 141900.000	TM 140300.000	80.7%	0.829	-1.300	0.850	14590.000
3	15:51:17	±7668.000	±62680.000	±3217.000	M 144000.000	TM 141400.000	79.4%	0.966	-0.875	0.883	15160.000
X		±7608.000	±61390.000	±3180.000	M 141500.000	TM 139500.000	80.1%	0.827	-0.899	0.840	14320.000
S		±79.270	±1442.000	±45.040	M 2705.000	TM 2420.000	0.6%	0.139	0.389	0.049	1000.000
%RSD		±1.042	±2.348	±1.416	M 1.912	TM 1.734	0.8	16.830	43.250	5.784	6.983
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	2617.000	M 511.000	±2468.000	2705.000	6.997	17.380	17.060	0.216	0.200	1.514
2	15:50:49	2666.000	M 515.000	±2507.000	2756.000	7.039	16.850	19.300	0.144	0.323	1.807
3	15:51:17	2670.000	M 522.300	±2546.000	2780.000	7.182	17.340	17.000	0.195	0.284	1.576
X		2651.000	M 516.100	±2507.000	2747.000	7.073	17.190	17.790	0.185	0.269	1.632
S		29.860	M 5.690	±39.260	38.540	0.097	0.294	1.312	0.037	0.062	0.154
%RSD		1.126	M 1.102	±1.566	1.403	1.374	1.710	7.372	20.010	23.220	9.455
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	13.550	10.660	1.695	-0.508	37.570	40.490	0.807	0.078	0.596	83.160
2	15:50:49	13.500	10.820	2.189	-0.399	40.220	38.110	-3.280	-0.876	0.939	81.450
3	15:51:17	12.970	10.340	2.332	-0.431	44.300	37.040	3.920	0.998	-1.186	85.040
X		13.340	10.610	2.072	-0.446	40.700	38.550	0.482	0.066	0.116	83.220
S		0.319	0.247	0.335	0.056	3.388	1.767	3.611	0.937	1.141	1.796
%RSD		2.391	2.328	16.140	12.620	8.325	4.585	748.700	1411.000	980.800	2.159
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	82.3%	-0.033	-0.055	-0.059	0.697	0.019	0.018	0.003	0.010	83.5%
2	15:50:49	83.9%	0.078	-0.018	-0.036	1.669	0.013	0.026	0.017	0.001	83.3%
3	15:51:17	82.6%	0.018	0.026	-0.028	2.393	0.006	0.016	0.010	0.000	84.2%
X		82.9%	0.021	-0.016	-0.041	1.586	0.012	0.020	0.010	0.003	83.7%
S		0.8%	0.055	0.041	0.016	0.851	0.007	0.005	0.007	0.005	0.4%
%RSD		1.0	261.300	259.800	39.160	53.670	52.440	25.100	74.150	150.500	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:23	0.012	0.055	0.029	0.014	M 612.300	M 613.500	89.2%	0.051	0.037	0.014
2	15:50:49	0.026	0.043	0.035	0.027	M 617.500	M 614.600	90.3%	0.048	0.043	-0.009
3	15:51:17	0.015	0.063	0.030	0.019	M 610.300	M 617.100	88.8%	0.047	0.043	0.010
X		0.018	0.053	0.031	0.020	M 613.400	M 615.100	89.4%	0.049	0.041	0.005
S		0.007	0.010	0.003	0.007	M 3.692	M 1.847	0.8%	0.002	0.003	0.013
%RSD		42.380	18.380	10.180	34.510	M 0.602	M 0.300	0.8	4.393	8.449	256.000
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:50:23	-0.005	0.008	88.9%							
2	15:50:49	-0.003	-0.001	89.3%							
3	15:51:17	0.001	0.006	89.1%							
X		-0.002	0.004	89.1%							
S		0.003	0.005	0.2%							
%RSD		126.900	115.600	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	83.3%	0.020	2.025	2.184	-56.960	±6585.000	±21420.000	±21910.000	±31900.000	4.457
2	15:56:42	82.0%	0.050	1.787	2.108	-56.230	±6600.000	±21850.000	±21980.000	±31960.000	4.544
3	15:57:09	81.0%	-0.037	2.737	2.263	-59.200	±6624.000	±21740.000	±22250.000	±32110.000	4.710
X		82.1%	0.011	2.183	2.185	-57.460	±6603.000	±21670.000	±22050.000	±31990.000	4.570
S		1.1%	0.044	0.494	0.077	1.548	±19.580	±224.500	±182.200	±108.700	0.129
%RSD		1.4	410.000	22.650	3.542	2.695	±0.296	±1.036	±0.826	±0.340	2.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	±5353.000	±63990.000	2444.000	94030.000	±91280.000	73.0%	0.625	-0.188	0.419	5858.000
2	15:56:42	±5417.000	±64510.000	2482.000	93510.000	±92760.000	72.1%	0.878	-0.365	0.418	5671.000
3	15:57:09	±5412.000	±64860.000	2503.000	94610.000	±93580.000	71.1%	0.781	-0.259	0.395	5416.000
X		±5394.000	±64450.000	2476.000	94050.000	±92540.000	72.1%	0.762	-0.271	0.411	5648.000
S		±35.320	±441.600	29.890	551.200	±1166.000	0.9%	0.128	0.089	0.013	222.200
%RSD		±0.655	±0.685	1.207	0.586	±1.260	1.3	16.750	32.980	3.241	3.934
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	4426.000	TM 6808.000	±4083.000	4326.000	17.610	14.510	12.890	1.230	1.284	19.600
2	15:56:42	4463.000	TM 7015.000	±4245.000	4416.000	17.810	15.150	14.190	1.105	1.570	18.030
3	15:57:09	4549.000	TM 7055.000	±4272.000	4524.000	17.820	15.360	13.880	1.319	1.304	19.600
X		4480.000	TM 6959.000	±4200.000	4422.000	17.750	15.010	13.650	1.218	1.386	19.080
S		63.220	TM 132.300	±102.300	98.970	0.118	0.443	0.679	0.108	0.159	0.908
%RSD		1.411	TM 1.901	±2.437	2.238	0.666	2.954	4.973	8.861	11.490	4.759
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	23.430	22.720	1.472	0.150	26.440	23.990	-0.610	-0.471	2.384	98.630
2	15:56:42	21.840	23.270	1.557	-0.587	25.610	24.070	-2.961	-1.009	2.483	98.450
3	15:57:09	25.480	23.490	1.003	-0.567	24.630	23.810	-1.476	-0.685	2.521	98.550
X		23.580	23.160	1.344	-0.335	25.560	23.960	-1.683	-0.722	2.463	98.540
S		1.824	0.395	0.298	0.420	0.907	0.133	1.189	0.271	0.070	0.091
%RSD		7.737	1.705	22.190	125.400	3.549	0.555	70.660	37.490	2.863	0.092
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	77.3%	0.191	0.134	0.214	1.880	-0.001	0.002	0.011	0.019	76.9%
2	15:56:42	76.2%	0.238	0.231	0.264	1.974	0.003	0.010	0.026	0.030	77.6%
3	15:57:09	75.9%	0.236	0.160	0.091	2.649	0.003	0.006	0.004	0.014	75.4%
X		76.5%	0.222	0.175	0.190	2.168	0.002	0.006	0.013	0.021	76.7%
S		0.7%	0.027	0.050	0.089	0.419	0.002	0.004	0.011	0.008	1.1%
%RSD		0.9	11.950	28.580	47.030	19.340	155.100	66.540	85.200	39.230	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:15	0.061	0.106	0.015	0.034	355.300	348.200	85.6%	0.059	0.064	0.034
2	15:56:42	0.060	0.055	0.042	0.040	349.800	345.400	83.9%	0.070	0.069	0.036
3	15:57:09	0.059	0.077	0.058	0.035	368.200	355.400	83.2%	0.077	0.063	0.052
X		0.060	0.079	0.038	0.037	357.800	349.700	84.2%	0.069	0.065	0.041
S		0.001	0.026	0.022	0.003	9.455	5.180	1.2%	0.009	0.003	0.010
%RSD		1.745	32.350	57.500	7.846	2.643	1.481	1.4	13.120	4.776	23.420
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	15:56:15	0.039	0.031	83.8%							
2	15:56:42	0.043	0.038	85.5%							
3	15:57:09	0.047	0.042	84.8%							
X		0.043	0.037	84.7%							
S		0.004	0.006	0.9%							
%RSD		9.023	14.800	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	79.9%	100.400	41.680	43.820	-55.160	7796.000	22550.000	22840.000	33340.000	108.900
2	16:02:34	80.1%	100.300	43.660	45.680	-58.290	7833.000	22810.000	23340.000	34130.000	109.100
3	16:03:01	80.3%	96.300	41.790	46.780	-57.710	7970.000	22940.000	23170.000	33820.000	108.200
X		80.1%	98.980	42.380	45.430	-57.050	7866.000	22770.000	23120.000	33760.000	108.700
S		0.2%	2.324	1.113	1.496	1.665	91.480	197.600	253.100	396.300	0.494
%RSD		0.2	2.348	2.627	3.293	2.918	1.163	0.868	1.095	1.174	0.454
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	6328.000	62520.000	3250.000	97430.000	95250.000	71.1%	102.200	99.420	101.200	5434.000
2	16:02:34	6229.000	63280.000	3247.000	97860.000	96130.000	70.8%	101.900	100.800	100.600	4915.000
3	16:03:01	6225.000	63270.000	3216.000	97650.000	96590.000	70.9%	102.200	98.200	99.650	6372.000
X		6260.000	63020.000	3238.000	97650.000	95990.000	70.9%	102.100	99.460	100.500	5574.000
S		58.270	438.100	18.730	212.800	680.900	0.1%	0.172	1.279	0.806	738.400
%RSD		0.931	0.695	0.579	0.218	0.709	0.2	0.168	1.286	0.802	13.250
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	5736.000	7040.000	5291.000	5594.000	114.300	110.600	114.300	97.120	98.750	113.700
2	16:02:34	5756.000	7133.000	5378.000	5646.000	115.200	109.600	115.900	96.030	95.040	116.200
3	16:03:01	5813.000	7347.000	5371.000	5600.000	116.300	109.600	113.700	98.560	97.490	116.600
X		5769.000	7173.000	5347.000	5613.000	115.300	109.900	114.600	97.240	97.090	115.500
S		40.080	157.500	48.080	28.770	0.997	0.563	1.145	1.269	1.887	1.528
%RSD		0.695	2.196	0.899	0.512	0.865	0.512	0.999	1.305	1.944	1.323
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	122.000	122.400	103.000	97.670	26.910	24.340	412.700	90.980	1.672	201.800
2	16:02:34	121.600	123.200	107.400	98.140	26.210	27.090	452.300	102.000	-0.842	199.700
3	16:03:01	123.000	120.400	104.300	97.000	24.660	24.430	437.500	97.510	-0.302	202.900
X		122.200	122.000	104.900	97.600	25.930	25.290	434.200	96.810	0.176	201.400
S		0.718	1.457	2.249	0.576	1.152	1.563	19.990	5.519	1.323	1.626
%RSD		0.588	1.194	2.144	0.590	4.443	6.180	4.605	5.700	751.900	0.807
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	74.3%	102.700	102.900	102.100	103.200	100.800	98.600	99.600	100.000	75.4%
2	16:02:34	75.6%	103.100	106.500	101.100	111.900	102.800	99.700	99.660	100.600	75.1%
3	16:03:01	74.5%	105.400	105.000	103.400	101.600	101.100	99.940	101.900	102.700	74.9%
X		74.8%	103.700	104.800	102.200	105.600	101.600	99.410	100.400	101.100	75.2%
S		0.7%	1.499	1.839	1.150	5.560	1.075	0.716	1.285	1.374	0.3%
%RSD		0.9	1.446	1.755	1.125	5.265	1.058	0.720	1.280	1.359	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:07	101.300	102.000	102.100	100.600	460.100	458.200	81.5%	102.300	108.200	102.800
2	16:02:34	103.600	103.600	105.000	101.200	474.000	456.100	83.0%	103.900	108.600	103.500
3	16:03:01	103.600	104.200	104.100	101.500	474.600	464.200	82.4%	105.500	110.900	105.500
X		102.800	103.300	103.700	101.100	469.600	459.500	82.3%	103.900	109.200	103.900
S		1.333	1.170	1.499	0.431	8.172	4.191	0.8%	1.573	1.431	1.399
%RSD		1.296	1.133	1.445	0.426	1.740	0.912	0.9	1.514	1.311	1.347
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:02:07	102.700	102.200	84.1%							
2	16:02:34	102.700	101.600	84.4%							
3	16:03:01	103.400	102.700	83.9%							
X		102.900	102.200	84.2%							
S		0.431	0.522	0.3%							
%RSD		0.418	0.511	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	81.5%	96.790	43.840	45.320	-55.750	7740.000	22520.000	22940.000	33110.000	106.400
2	16:08:27	79.9%	95.900	41.470	45.390	-59.790	7683.000	22160.000	22990.000	33500.000	108.000
3	16:08:53	82.3%	96.230	46.170	45.290	-59.080	7795.000	22370.000	23000.000	33560.000	107.800
X		81.2%	96.310	43.830	45.330	-58.210	7739.000	22350.000	22980.000	33390.000	107.400
S		1.2%	0.448	2.350	0.053	2.158	55.980	182.000	28.470	246.600	0.858
%RSD		1.5	0.465	5.362	0.117	3.708	0.723	0.814	0.124	0.739	0.799
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5956.000	60520.000	3186.000	95050.000	93880.000	71.3%	98.700	97.390	98.240	4658.000
2	16:08:27	6192.000	61000.000	3192.000	97520.000	94770.000	70.9%	103.900	99.610	97.660	5858.000
3	16:08:53	6064.000	61880.000	3213.000	98310.000	96920.000	70.5%	104.700	101.200	99.980	5015.000
X		6070.000	61130.000	3197.000	96960.000	95190.000	70.9%	102.400	99.390	98.630	5177.000
S		118.200	691.000	14.140	1698.000	1563.000	0.4%	3.266	1.901	1.207	616.000
%RSD		1.948	1.130	0.442	1.752	1.642	0.6	3.188	1.913	1.224	11.900
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	5680.000	TM 7145.000	5300.000	5498.000	110.800	110.100	110.600	95.810	95.250	114.600
2	16:08:27	5739.000	TM 7097.000	5336.000	5566.000	113.800	109.100	110.400	96.640	93.960	114.600
3	16:08:53	5776.000	TM 7177.000	5291.000	5544.000	115.600	110.000	111.800	94.980	96.660	114.400
X		5732.000	TM 7140.000	5309.000	5536.000	113.400	109.700	111.000	95.810	95.290	114.500
S		48.230	TM 40.100	23.690	34.870	2.460	0.599	0.769	0.831	1.352	0.109
%RSD		0.841	TM 0.562	0.446	0.630	2.169	0.546	0.693	0.867	1.419	0.095
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	120.700	118.400	99.850	94.400	23.320	23.450	433.800	96.700	0.142	193.700
2	16:08:27	124.600	122.100	103.600	92.240	23.510	22.460	454.100	100.100	-0.778	201.500
3	16:08:53	119.200	120.600	105.300	96.070	22.930	23.430	423.000	94.100	1.638	197.100
X		121.500	120.300	102.900	94.240	23.250	23.120	437.000	96.950	0.334	197.400
S		2.763	1.848	2.789	1.923	0.297	0.566	15.760	2.985	1.220	3.907
%RSD		2.274	1.535	2.710	2.040	1.277	2.447	3.606	3.079	365.300	1.979
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	75.2%	101.700	102.100	99.810	94.470	98.190	96.440	98.540	98.470	75.6%
2	16:08:27	74.1%	101.200	99.750	101.200	103.600	100.500	98.800	100.600	98.440	75.6%
3	16:08:53	74.9%	101.300	101.800	100.700	99.580	98.870	99.950	100.300	98.730	75.2%
X		74.8%	101.400	101.200	100.600	99.220	99.190	98.400	99.810	98.550	75.4%
S		0.6%	0.275	1.299	0.685	4.583	1.197	1.789	1.121	0.159	0.3%
%RSD		0.7	0.271	1.283	0.681	4.619	1.207	1.818	1.123	0.161	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:59	100.800	98.180	101.200	97.460	460.500	455.900	83.4%	98.340	107.000	100.700
2	16:08:27	101.600	101.700	102.400	97.060	465.100	442.500	84.5%	103.200	104.900	100.300
3	16:08:53	102.700	102.300	103.000	99.730	465.200	452.100	83.4%	101.200	106.800	101.500
X		101.700	100.700	102.200	98.080	463.600	450.200	83.8%	100.900	106.200	100.800
S		0.982	2.225	0.901	1.438	2.673	6.926	0.6%	2.453	1.113	0.627
%RSD		0.966	2.209	0.882	1.466	0.577	1.539	0.8	2.431	1.048	0.622
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:07:59	98.570	98.090	86.6%							
2	16:08:27	98.450	98.220	84.4%							
3	16:08:53	101.200	100.700	84.7%							
X		99.410	99.000	85.2%							
S		1.557	1.462	1.2%							
%RSD		1.566	1.477	1.4							

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User Pre-dilution: 1.000

User Prediction: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	84.5%	-0.010	1.608	1.659	-28.190	1344.000	<u>5506.000</u>	5872.000	6544.000	1.221
2	16:14:18	83.5%	-0.009	0.785	1.499	-28.600	1409.000	<u>5820.000</u>	6094.000	6635.000	1.203
3	16:14:45	83.1%	0.034	1.092	1.325	-28.430	1389.000	<u>5666.000</u>	6014.000	6818.000	1.135
X		83.7%	0.005	1.162	1.494	-28.400	1381.000	<u>5664.000</u>	5993.000	6665.000	1.186
S		0.7%	0.025	0.416	0.167	0.206	33.640	<u>157.200</u>	112.100	139.500	0.045
%RSD		0.8	483.400	35.770	11.180	0.726	2.437	<u>2.775</u>	1.871	2.094	3.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	1219.000	14160.000	534.100	18440.000	18210.000	79.0%	0.029	-0.092	0.108	1213.000
2	16:14:18	1215.000	14540.000	544.500	18910.000	18530.000	77.0%	0.132	-0.203	0.115	1289.000
3	16:14:45	1235.000	14570.000	540.200	19150.000	18670.000	76.6%	0.185	0.044	0.111	1099.000
X		1223.000	14420.000	539.600	18830.000	18470.000	77.6%	0.115	-0.084	0.111	1200.000
S		10.640	227.500	5.216	360.200	233.900	1.3%	0.079	0.124	0.004	95.420
%RSD		0.870	1.577	0.967	1.912	1.266	1.7	68.870	148.000	3.160	7.949
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	865.000	<u>TM 1331.000</u>	<u>805.400</u>	858.600	3.430	2.873	2.608	0.234	0.245	4.214
2	16:14:18	877.400	<u>TM 1337.000</u>	938.400	869.900	3.522	3.055	3.129	0.246	0.305	3.881
3	16:14:45	880.200	<u>TM 1393.000</u>	<u>841.700</u>	894.900	3.671	3.094	2.715	0.245	0.341	4.095
X		874.200	<u>TM 1353.000</u>	<u>861.800</u>	874.500	3.541	3.007	2.818	0.242	0.297	4.063
S		8.094	<u>TM 34.060</u>	<u>68.760</u>	18.570	0.122	0.118	0.275	0.007	0.048	0.169
%RSD		0.926	<u>TM 2.517</u>	<u>7.978</u>	2.124	3.432	3.929	9.764	2.916	16.300	4.150
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	4.840	4.678	0.210	0.103	5.098	4.313	-0.314	-0.375	2.186	19.280
2	16:14:18	5.030	5.291	0.247	-0.603	5.676	6.051	-1.719	0.048	-3.345	19.920
3	16:14:45	5.862	5.553	0.437	-0.241	5.832	3.718	0.289	0.213	-1.432	20.340
X		5.244	5.174	0.298	-0.247	5.535	4.694	-0.581	-0.038	-0.864	19.850
S		0.544	0.449	0.122	0.353	0.387	1.212	1.030	0.303	2.809	0.532
%RSD		10.370	8.679	40.850	143.000	6.987	25.820	177.300	795.000	325.200	2.682
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	78.9%	0.065	0.047	0.050	0.661	-0.003	0.004	-0.005	0.007	79.5%
2	16:14:18	79.4%	0.109	0.024	0.073	0.131	-0.005	0.004	0.003	0.010	80.9%
3	16:14:45	77.4%	0.085	0.072	0.003	1.458	-0.001	-0.000	-0.012	0.006	80.9%
X		78.6%	0.086	0.048	0.042	0.750	-0.003	0.002	-0.005	0.008	80.4%
S		1.1%	0.022	0.024	0.036	0.668	0.002	0.002	0.007	0.002	0.8%
%RSD		1.3	25.600	50.170	85.480	89.040	56.570	98.100	154.700	22.810	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:51	0.040	0.065	0.014	-0.057	69.730	68.810	86.9%	0.040	0.038	0.024
2	16:14:18	-0.005	0.067	-0.022	-0.034	68.700	68.200	84.4%	0.030	0.042	0.009
3	16:14:45	0.031	0.070	-0.043	-0.034	69.500	69.430	84.4%	0.026	0.026	-0.003
X		0.022	0.067	-0.017	-0.041	69.310	68.810	85.2%	0.032	0.035	0.010
S		0.024	0.002	0.029	0.013	0.544	0.615	1.4%	0.007	0.008	0.014
%RSD		108.000	3.481	166.400	31.760	0.784	0.893	1.7	21.100	22.840	138.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:13:51	0.007	0.007	88.0%							
2	16:14:18	-0.001	-0.000	87.8%							
3	16:14:45	0.001	-0.002	87.4%							
X		0.002	0.002	87.7%							
S		0.004	0.005	0.3%							
%RSD		194.200	285.000	0.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	79.6%	98.230	45.370	49.990	-52.900	7326.000	21860.000	22540.000	31600.000	105.100
2	16:20:11	80.3%	100.900	45.780	49.720	-57.560	7613.000	22110.000	22300.000	32590.000	107.900
3	16:20:38	79.6%	98.520	49.060	51.840	-52.260	7593.000	22360.000	22750.000	32330.000	106.500
X		79.9%	99.210	46.740	50.520	-54.240	7511.000	22110.000	22530.000	32170.000	106.500
S		0.4%	1.451	2.023	1.154	2.891	160.200	249.600	224.500	509.100	1.441
%RSD		0.5	1.463	4.329	2.285	5.330	2.132	1.129	0.997	1.582	1.353
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	6221.000	63370.000	3173.000	93590.000	91390.000	72.3%	96.440	98.900	98.990	5844.000
2	16:20:11	6039.000	64790.000	3243.000	94590.000	94430.000	69.9%	105.500	102.600	102.700	5453.000
3	16:20:38	6177.000	64620.000	3241.000	95480.000	92580.000	71.1%	105.700	99.940	100.700	5858.000
X		6146.000	64260.000	3219.000	94550.000	92800.000	71.1%	102.600	100.500	100.800	5718.000
S		94.720	773.200	40.180	944.700	1533.000	1.2%	5.301	1.911	1.842	229.700
%RSD		1.541	1.203	1.248	0.999	1.652	1.7	5.169	1.901	1.828	4.018
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	5584.000	TM 6775.000	5114.000	5258.000	112.800	109.600	112.100	96.010	95.880	115.500
2	16:20:11	5682.000	TM 7059.000	5291.000	5475.000	117.000	111.400	114.000	98.900	95.670	117.500
3	16:20:38	5514.000	TM 6905.000	5160.000	5417.000	115.600	112.900	110.700	96.250	99.650	118.300
X		5593.000	TM 6913.000	5188.000	5383.000	115.200	111.300	112.300	97.060	97.070	117.100
S		84.440	TM 142.000	92.160	112.300	2.129	1.685	1.695	1.602	2.237	1.426
%RSD		1.510	TM 2.054	1.776	2.086	1.849	1.514	1.510	1.650	2.305	1.218
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	120.200	120.500	104.500	98.200	23.680	23.100	442.300	100.200	0.621	192.800
2	16:20:11	125.700	125.500	105.100	101.200	23.390	23.280	440.800	96.900	1.269	197.300
3	16:20:38	121.600	121.000	106.500	98.960	25.760	22.790	432.700	98.060	0.639	196.600
X		122.500	122.300	105.400	99.440	24.280	23.060	438.600	98.400	0.843	195.600
S		2.857	2.771	1.005	1.542	1.295	0.250	5.170	1.691	0.369	2.397
%RSD		2.332	2.265	0.954	1.551	5.334	1.082	1.179	1.719	43.780	1.226
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	75.2%	104.000	104.600	101.400	100.800	101.200	100.700	102.100	100.900	74.5%
2	16:20:11	73.2%	102.900	104.000	102.300	104.400	102.100	99.180	102.600	100.700	74.6%
3	16:20:38	75.1%	106.000	107.200	104.100	100.500	103.700	100.700	102.900	103.100	74.2%
X		74.5%	104.300	105.300	102.600	101.900	102.300	100.200	102.500	101.500	74.4%
S		1.1%	1.604	1.723	1.358	2.190	1.262	0.877	0.393	1.329	0.2%
%RSD		1.5	1.538	1.637	1.324	2.149	1.233	0.875	0.383	1.309	0.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:44	104.400	105.000	94.170	90.830	455.000	440.200	81.7%	104.800	108.800	102.400
2	16:20:11	103.000	101.000	94.800	90.330	454.400	439.800	82.8%	103.700	107.800	102.700
3	16:20:38	104.100	105.000	97.160	93.610	459.900	449.600	82.8%	104.600	109.700	102.400
X		103.800	103.700	95.380	91.590	456.400	443.200	82.4%	104.300	108.800	102.500
S		0.713	2.286	1.575	1.768	3.055	5.560	0.7%	0.593	0.959	0.162
%RSD		0.687	2.205	1.651	1.930	0.669	1.255	0.8	0.568	0.881	0.158
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:19:44	102.800	102.300	83.6%							
2	16:20:11	101.900	100.600	83.9%							
3	16:20:38	103.600	102.000	83.7%							
X		102.800	101.600	83.7%							
S		0.867	0.903	0.2%							
%RSD		0.844	0.888	0.2							

CCV MW12620 4/22/2020 16:25:12 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

user Prejudition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	73.9%	322.900	290.400	295.400	3.415	63910.000	61750.000	61450.000	59570.000	306.200
2	16:26:06	76.0%	308.600	274.200	291.200	3.310	63060.000	61710.000	60760.000	58670.000	298.700
3	16:26:33	75.9%	308.300	297.300	300.100	4.705	62920.000	62540.000	61760.000	58160.000	293.900
X		75.3%	104.417%	95.763%	98.529%	3.810	105.493%	62000.000	61320.000	58.003%	99.877%
S		1.2%	n/a	n/a	n/a	0.777	n/a	469.800	509.700	n/a	n/a
%RSD		1.6	2.671	4.114	1.506	20.380	0.852	0.758	0.831	1.220	2.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	2842.000	526.500	59420.000	62530.000	62530.000	74.3%	308.300	310.100	303.200	3162.000
2	16:26:06	2774.000	463.300	58790.000	62410.000	62340.000	75.5%	308.800	303.900	296.700	3186.000
3	16:26:33	2755.000	449.600	59340.000	62090.000	62290.000	76.2%	310.600	306.300	296.800	2286.000
X		2790.000	479.800	98.638%	62340.000	103.973%	75.3%	103.085%	102.252%	99.636%	2878.000
S		45.710	41.020	n/a	230.700	n/a	1.0%	n/a	n/a	n/a	513.000
%RSD		1.638	8.549	0.579	0.370	0.207	1.3	0.398	1.013	1.251	17.820
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	62900.000	294.600	62500.000	59920.000	299.800	292.900	302.500	292.500	297.200	295.200
2	16:26:06	62160.000	290.900	61250.000	59580.000	293.600	289.900	285.600	289.800	301.500	298.000
3	16:26:33	62270.000	290.300	61340.000	58700.000	294.200	287.200	290.500	286.100	302.900	303.700
X		62440.000	97.309%	61690.000	99.001%	98.610%	96.669%	292.900	289.500	100.176%	99.652%
S		403.500	n/a	698.200	n/a	n/a	n/a	8.706	3.221	n/a	n/a
%RSD		0.646	0.802	1.132	1.054	1.154	0.972	2.973	1.113	0.981	1.443
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	290.800	289.500	311.000	289.600	0.219	-0.134	1344.000	304.700	-2.316	288.900
2	16:26:06	284.900	290.200	307.000	289.600	0.829	0.588	1322.000	298.100	0.114	298.900
3	16:26:33	299.900	288.600	313.100	286.900	0.999	-0.431	1362.000	310.800	1.058	295.900
X		291.900	289.400	103.461%	288.700	0.683	0.008	1343.000	101.512%	-0.381	98.188%
S		7.520	0.778	n/a	1.569	0.410	0.524	19.740	n/a	1.741	n/a
%RSD		2.577	0.269	0.994	0.543	60.070	6885.000	1.470	2.090	456.600	1.754
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	75.7%	316.800	310.600	308.500	282.300	296.900	299.400	296.200	295.100	75.3%
2	16:26:06	75.1%	317.600	317.200	315.400	302.000	305.500	299.100	300.000	295.300	75.3%
3	16:26:33	75.3%	323.300	324.600	319.100	291.400	303.500	297.200	298.200	298.900	74.7%
X		75.3%	106.410%	105.836%	314.300	291.900	100.657%	298.600	298.100	98.810%	75.1%
S		0.3%	n/a	n/a	5.379	9.867	n/a	1.189	1.889	n/a	0.4%
%RSD		0.4	1.112	2.205	1.711	3.380	1.477	0.398	0.633	0.709	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:25:39	302.300	300.100	302.100	298.100	304.000	296.700	81.6%	306.400	319.400	299.800
2	16:26:06	305.600	303.700	302.700	295.900	306.700	304.600	82.4%	301.800	309.500	294.600
3	16:26:33	307.200	303.400	307.400	297.100	311.700	305.500	81.3%	307.300	319.700	302.400
X		101.678%	100.804%	304.100	99.001%	102.500%	100.752%	81.8%	305.200	105.395%	99.647%
S		n/a	n/a	2.863	n/a	n/a	n/a	0.6%	2.928	n/a	n/a
%RSD		0.813	0.657	0.942	0.378	1.274	1.612	0.7	0.960	1.820	1.332
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:25:39	291.400	293.500	80.2%							
2	16:26:06	292.700	290.800	81.2%							
3	16:26:33	297.000	296.700	81.1%							
X		97.898%	97.887%	80.8%							
S		n/a	n/a	0.6%							
%RSD		0.999	1.005	0.7							

CCB IM9936-01 4/22/2020 16:31:06 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	81.2%	-0.023	2.003	1.848	5.986	0.811	2.175	2.307	1.537	0.021
2	16:32:01	82.6%	0.006	2.348	1.953	-0.964	0.490	2.116	2.015	2.591	0.010
3	16:32:28	81.5%	-0.008	1.869	1.597	-7.647	0.573	2.364	2.568	2.345	0.045
X		81.8%	-0.008	2.073	1.799	-0.875	0.625	2.218	2.296	2.158	0.025
S		0.7%	0.014	0.247	0.183	6.817	0.167	0.129	0.277	0.552	0.017
%RSD		0.9	172.200	11.930	10.160	779.000	26.660	5.831	12.040	25.560	68.600
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.676	285.100	10.940	2.709	2.297	80.3%	0.028	0.026	0.023	-76.780
2	16:32:01	0.983	237.000	9.201	0.333	2.103	81.4%	-0.022	0.028	0.012	-67.110
3	16:32:28	1.437	241.700	9.808	3.917	2.005	79.8%	-0.021	-0.000	-0.000	-59.580
X		1.365	254.600	9.982	2.320	2.135	80.5%	-0.005	0.018	0.011	-67.820
S		0.352	26.500	0.881	1.823	0.149	0.9%	0.028	0.016	0.011	8.622
%RSD		25.810	10.410	8.822	78.610	6.969	1.1	554.900	88.570	101.100	12.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	1.891	0.075	-2.464	2.588	0.010	-0.019	-0.120	-0.011	0.006	0.030
2	16:32:01	0.641	0.054	-2.279	3.892	0.003	0.021	-0.357	0.005	0.008	0.029
3	16:32:28	2.517	0.082	-1.388	4.207	0.009	-0.025	-0.116	0.000	0.007	0.054
X		1.683	0.070	-2.044	3.563	0.008	-0.008	-0.198	-0.002	0.007	0.038
S		0.955	0.014	0.575	0.858	0.004	0.025	0.138	0.009	0.001	0.014
%RSD		56.740	20.590	28.140	24.090	53.410	324.200	69.790	443.500	11.590	37.330
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.107	-0.032	-0.029	-0.184	0.066	-0.511	0.085	-0.284	2.116	0.007
2	16:32:01	-0.070	0.192	-0.187	0.588	0.078	0.470	-0.781	-0.170	-0.116	0.006
3	16:32:28	-0.244	0.198	-0.115	-0.123	-0.154	-0.159	-0.341	-0.443	2.614	0.004
X		-0.069	0.119	-0.111	0.094	-0.003	-0.066	-0.346	-0.299	1.538	0.006
S		0.175	0.131	0.079	0.429	0.131	0.497	0.433	0.137	1.454	0.002
%RSD		254.700	110.000	71.580	458.100	3872.000	748.200	125.400	45.880	94.500	27.970
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	79.6%	0.267	0.335	0.234	0.382	0.006	0.005	0.017	0.015	81.6%
2	16:32:01	78.5%	0.305	0.258	0.222	-0.002	0.008	0.015	0.002	0.020	80.0%
3	16:32:28	79.1%	0.163	0.263	0.152	0.481	0.006	0.023	0.002	0.020	80.8%
X		79.1%	0.245	0.285	0.202	0.287	0.007	0.015	0.007	0.018	80.8%
S		0.6%	0.074	0.043	0.044	0.255	0.001	0.009	0.008	0.003	0.8%
%RSD		0.7	30.060	15.050	21.900	88.810	18.130	60.300	118.400	18.120	1.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:33	0.085	0.107	0.314	0.345	-0.041	-0.011	84.6%	0.008	0.009	0.008
2	16:32:01	0.138	0.141	0.361	0.321	-0.041	0.008	82.9%	-0.002	0.009	0.016
3	16:32:28	0.100	0.142	0.351	0.338	-0.041	0.002	82.9%	0.006	0.004	0.019
X		0.108	0.130	0.342	0.335	-0.041	-0.000	83.5%	0.004	0.007	0.015
S		0.028	0.020	0.025	0.012	0.000	0.010	1.0%	0.005	0.003	0.006
%RSD		25.610	15.060	7.312	3.661	0.000	2630.000	1.2	135.700	39.320	38.350
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:31:33	0.012	0.017	85.8%							
2	16:32:01	0.034	0.026	85.9%							
3	16:32:28	0.026	0.021	85.5%							
X		0.024	0.021	85.7%							
S		0.011	0.005	0.2%							
%RSD		46.410	22.870	0.3							

LR MW12519 4/22/2020 16:37:01 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	69.0%	M 1044.000	M 1970.000	M 2056.000	6.651	TM 122700.000	TM 123000.000	TM 125000.000	TM 115200.000	TM 112800.000
2	16:37:56	69.9%	M 1032.000	M 1811.000	M 1870.000	4.291	TM 126400.000	TM 120300.000	TM 119100.000	TM 118300.000	TM 115100.000
3	16:38:22	68.0%	M 1070.000	M 1956.000	M 1999.000	2.916	TM 125200.000	TM 124500.000	TM 123800.000	TM 117700.000	TM 115400.000
X		69.0%	M 104.881%	M 95.610%	M 98.748%	4.620	TM 103.978%	TM 122600.000	TM 122600.000	TM 97.559%	TM 95.332%
S		0.9%	M n/a	M n/a	M n/a	1.889	TM n/a	TM 2149.000	TM 3075.000	TM n/a	TM n/a
%RSD		1.4	M 1.864	M 4.608	M 4.836	40.890	TM 1.505	TM 1.753	TM 2.507	TM 1.382	TM 1.243
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	7.434	208.400	TM 118300.000	M 125500.000	TM 124700.000	70.3%	M 2009.000	TM 1889.000	TM 1875.000	40380.000
2	16:37:56	7.139	167.600	TM 117800.000	M 125700.000	TM 126400.000	69.3%	M 2043.000	TM 1956.000	TM 1933.000	32590.000
3	16:38:22	8.377	174.100	TM 117900.000	M 125600.000	TM 126700.000	68.8%	M 2047.000	TM 1939.000	TM 1915.000	37640.000
X		7.650	183.400	TM 98.343%	M 125600.000	TM 104.933%	69.5%	M 101.650%	TM 96.400%	TM 95.382%	36870.000
S		0.646	21.940	TM n/a	M 122.900	TM n/a	0.8%	M n/a	TM n/a	TM n/a	3949.000
%RSD		8.450	11.970	TM 0.234	M 0.098	TM 0.866	1.1	M 1.014	TM 1.811	TM 1.569	10.710
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	TM 122800.000	TM 1816.000	TM 120900.000	TM 116900.000	TM 1838.000	M 1862.000	M 1880.000	M 1900.000	M 1942.000	M 1947.000
2	16:37:56	TM 126200.000	TM 1880.000	TM 124300.000	TM 119500.000	TM 1887.000	M 1890.000	M 1895.000	M 1873.000	M 1948.000	M 1939.000
3	16:38:22	TM 127000.000	TM 1904.000	TM 124600.000	TM 120900.000	TM 1891.000	M 1951.000	M 1972.000	M 1951.000	M 1948.000	M 1956.000
X		TM 125300.000	TM 93.325%	TM 123300.000	TM 99.254%	TM 93.591%	M 95.037%	M 1915.000	M 1908.000	M 97.301%	M 97.373%
S		TM 2238.000	TM n/a	TM 2066.000	TM n/a	TM n/a	M n/a	M 49.320	M 39.620	M n/a	M n/a
%RSD		TM 1.786	TM 2.435	TM 1.676	TM 1.717	TM 1.578	M 2.383	M 2.575	M 2.077	M 0.186	M 0.422
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2040.000	M 1998.000	M 2070.000	M 1822.000	1.829	0.827	8499.000	M 1945.000	17.980	TM 1995.000
2	16:37:56	M 2041.000	M 1985.000	M 2062.000	M 1840.000	1.553	-0.393	8526.000	M 1962.000	17.290	TM 1975.000
3	16:38:22	M 2030.000	M 2007.000	M 2056.000	M 1826.000	3.133	-0.434	8468.000	M 1934.000	15.930	TM 2005.000
X		M 2037.000	M 1997.000	M 103.154%	M 1829.000	2.171	-0.000	8498.000	M 97.357%	17.070	TM 99.580%
S		M 5.721	M 10.830	M n/a	M 9.593	0.844	0.716	29.400	M n/a	1.046	TM n/a
%RSD		M 0.281	M 0.543	M 0.338	M 0.524	38.870	3799000.000	0.346	M 0.725	6.129	TM 0.787
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	70.4%	M 2236.000	M 2182.000	M 2198.000	M 1940.000	297.600	293.500	M 1999.000	M 2021.000	69.4%
2	16:37:56	71.2%	M 2224.000	M 2203.000	M 2176.000	M 1969.000	295.500	290.400	M 1974.000	M 2026.000	69.6%
3	16:38:22	70.6%	M 2232.000	M 2226.000	M 2235.000	M 1978.000	299.700	292.900	M 1985.000	M 2031.000	69.5%
X		70.7%	M 2230.000	M 110.186%	M 2203.000	M 1962.000	297.600	292.300	M 1986.000	M 101.292%	69.5%
S		0.4%	M 6.150	M n/a	M 29.920	M 19.860	2.084	1.658	M 12.550	M n/a	0.1%
%RSD		0.6	M 0.276	M 0.983	M 1.358	M 1.012	0.700	0.567	M 0.632	M 0.248	0.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:29	M 2059.000	M 2072.000	M 1063.000	M 1019.000	TM 10440.000	TM 10090.000	77.5%	M 788.800	TM 757.700	TM 1796.000
2	16:37:56	M 2077.000	M 2100.000	M 1069.000	M 1017.000	TM 10630.000	TM 10280.000	78.4%	M 785.500	TM 744.000	TM 1780.000
3	16:38:22	M 2084.000	M 2094.000	M 1061.000	M 1020.000	TM 10610.000	TM 10260.000	78.1%	M 790.800	TM 741.200	TM 1819.000
X		M 2073.000	M 104.440%	M 1064.000	M 101.856%	TM 105.608%	TM 10210.000	78.0%	M 788.400	TM 74.766%	TM 1798.000
S		M 12.600	M n/a	M 4.306	M n/a	TM n/a	TM 105.500	0.5%	M 2.663	TM n/a	TM 19.520
%RSD		M 0.608	M 0.689	M 0.405	M 0.133	TM 0.998	TM 1.034	0.6	M 0.338	TM 1.177	TM 1.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:37:29	TM 1761.000	TM 1804.000	74.5%							
2	16:37:56	TM 1757.000	TM 1796.000	75.8%							
3	16:38:22	TM 1792.000	TM 1818.000	75.3%							
X		TM 1770.000	TM 90.300%	75.2%							
S		TM 19.100	TM n/a	0.7%							
%RSD		TM 1.079	TM 0.611	0.9							

VD17087-005 4/22/2020 16:42:54

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	83.1%	0.135	7.134	6.909	-59.360	±6406.000	±21060.000	±21610.000	±30690.000	3.359
2	16:43:48	82.8%	0.063	5.741	6.392	-58.650	±6702.000	±21530.000	±22160.000	±31250.000	3.709
3	16:44:15	80.8%	0.037	6.079	6.198	-55.830	±6552.000	±21470.000	±21770.000	±31100.000	3.743
X		82.2%	0.078	6.318	6.500	-57.950	±6553.000	±21350.000	±21850.000	±31010.000	3.603
S		1.2%	0.051	0.726	0.368	1.866	±147.900	±251.300	±282.900	±292.000	0.212
%RSD		1.5	64.830	11.500	5.655	3.220	±2.257	±1.177	±1.295	±0.941	5.898
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	±5404.000	±60120.000	±2249.000	91780.000	±89780.000	75.5%	0.733	0.028	0.401	3938.000
2	16:43:48	±5372.000	±61440.000	±2320.000	94650.000	±91420.000	73.4%	0.381	0.034	0.425	4047.000
3	16:44:15	±5514.000	±61040.000	2445.000	91580.000	±91330.000	73.8%	0.485	0.132	0.397	3964.000
X		±5430.000	±60870.000	±2338.000	92670.000	±90840.000	74.2%	0.533	0.065	0.408	3983.000
S		±74.550	±673.800	±99.180	1718.000	±925.200	1.1%	0.181	0.058	0.015	57.090
%RSD		±1.373	±1.107	±4.242	1.854	±1.018	1.4	33.920	90.110	3.645	1.433
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4478.000	±6730.000	±4153.000	4353.000	17.410	14.730	12.980	1.004	0.978	17.740
2	16:43:48	4509.000	±6876.000	±4280.000	4384.000	17.660	15.160	14.670	0.957	0.950	17.620
3	16:44:15	4529.000	±6879.000	±4188.000	4362.000	17.710	14.300	14.590	1.003	1.217	17.470
X		4506.000	±6828.000	±4207.000	4366.000	17.590	14.730	14.080	0.988	1.048	17.610
S		25.660	±85.120	±65.730	15.830	0.160	0.429	0.954	0.027	0.147	0.138
%RSD		0.570	±1.247	±1.562	0.363	0.910	2.913	6.774	2.690	14.030	0.785
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	21.780	22.080	2.439	-0.541	19.300	16.530	1.694	0.240	0.901	95.340
2	16:43:48	22.740	23.590	1.794	0.493	19.680	18.060	0.430	0.196	-0.884	98.190
3	16:44:15	24.380	22.070	1.785	0.172	16.660	17.450	4.271	0.798	1.013	97.840
X		22.960	22.580	2.006	0.042	18.550	17.350	2.132	0.411	0.344	97.120
S		1.316	0.878	0.375	0.529	1.648	0.769	1.957	0.335	1.064	1.554
%RSD		5.729	3.889	18.690	1272.000	8.887	4.435	91.820	81.510	309.900	1.600
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	77.8%	1.532	1.120	1.175	0.992	0.020	0.028	0.060	0.136	78.6%
2	16:43:48	76.1%	1.396	1.156	1.448	0.460	0.025	0.026	0.100	0.105	77.1%
3	16:44:15	76.4%	1.163	1.144	1.056	3.170	0.029	0.012	0.031	0.100	77.2%
X		76.8%	1.364	1.140	1.226	1.540	0.025	0.022	0.064	0.114	77.6%
S		0.9%	0.187	0.018	0.201	1.436	0.004	0.009	0.035	0.020	0.9%
%RSD		1.2	13.700	1.614	16.410	93.220	17.330	39.290	54.500	17.290	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:21	4.263	6.298	0.450	0.543	346.600	345.900	85.1%	0.759	0.759	0.130
2	16:43:48	4.239	6.349	0.492	0.534	353.400	348.900	84.6%	0.615	0.658	0.130
3	16:44:15	3.981	5.647	0.549	0.478	354.400	351.100	83.9%	0.528	0.563	0.081
X		4.161	6.098	0.497	0.518	351.500	348.600	84.5%	0.634	0.660	0.114
S		0.157	0.391	0.050	0.035	4.224	2.585	0.6%	0.117	0.098	0.028
%RSD		3.764	6.416	10.040	6.761	1.202	0.742	0.7	18.390	14.890	24.810
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:43:21	0.124	0.128	85.7%							
2	16:43:48	0.091	0.109	85.8%							
3	16:44:15	0.090	0.092	85.0%							
X		0.102	0.110	85.5%							
S		0.019	0.018	0.4%							
%RSD		19.000	16.400	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	81.3%	-0.023	7.315	6.997	-32.990	2821.000	16610.000	16670.000	19450.000	8.122
2	16:49:40	83.1%	-0.009	6.521	7.584	-27.570	2810.000	17440.000	17320.000	19290.000	7.591
3	16:50:06	82.6%	0.006	7.440	6.401	-28.090	2713.000	16910.000	17150.000	19040.000	7.143
X		82.3%	-0.009	7.092	6.994	-29.550	2781.000	16990.000	17050.000	19260.000	7.619
S		0.9%	0.014	0.498	0.592	2.989	59.230	422.700	333.200	207.900	0.490
%RSD		1.1	166.400	7.027	8.458	10.110	2.130	2.489	1.954	1.079	6.429
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	2500.000	72250.000	3835.000	46540.000	45360.000	72.7%	0.843	-0.656	0.782	6637.000
2	16:49:40	2469.000	73060.000	3790.000	46190.000	45820.000	73.2%	0.329	-0.030	0.811	6153.000
3	16:50:06	2421.000	72110.000	3754.000	45740.000	45070.000	73.6%	0.487	-0.544	0.783	6336.000
X		2463.000	72470.000	3793.000	46160.000	45410.000	73.2%	0.553	-0.410	0.792	6376.000
S		39.980	514.700	40.660	403.600	377.900	0.4%	0.263	0.334	0.016	244.200
%RSD		1.623	0.710	1.072	0.875	0.832	0.6	47.640	81.510	2.051	3.830
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	162.300	4554.000	171.300	220.700	4.839	3.449	3.053	0.585	0.623	3.910
2	16:49:40	163.100	4503.000	166.900	219.900	4.696	3.329	2.826	0.672	0.612	4.032
3	16:50:06	158.300	4432.000	163.000	215.600	4.628	3.266	2.907	0.648	0.687	4.188
X		161.300	4496.000	167.100	218.700	4.721	3.348	2.929	0.635	0.641	4.043
S		2.566	61.020	4.169	2.772	0.108	0.093	0.115	0.045	0.041	0.139
%RSD		1.591	1.357	2.495	1.267	2.290	2.767	3.926	7.081	6.357	3.438
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	5.876	5.697	0.440	0.168	10.870	10.960	1.345	0.630	-2.342	179.100
2	16:49:40	6.779	5.928	-0.402	-0.081	10.440	11.190	-1.039	-0.120	-0.894	181.700
3	16:50:06	5.842	5.704	0.316	-0.017	12.930	10.640	-0.514	-0.018	-0.866	176.600
X		6.166	5.776	0.118	0.023	11.410	10.930	-0.069	0.164	-1.367	179.100
S		0.531	0.131	0.455	0.129	1.331	0.279	1.253	0.406	0.844	2.540
%RSD		8.616	2.275	385.200	551.700	11.660	2.556	1808.000	247.400	61.730	1.418
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	76.9%	0.184	0.271	0.225	2.808	0.060	0.053	0.107	0.158	75.8%
2	16:49:40	76.4%	0.264	0.136	0.262	3.713	0.043	0.053	0.154	0.156	76.3%
3	16:50:06	75.6%	0.248	0.164	0.151	4.512	0.043	0.075	0.098	0.150	77.0%
X		76.3%	0.232	0.190	0.213	3.677	0.049	0.060	0.119	0.154	76.4%
S		0.6%	0.042	0.071	0.057	0.853	0.010	0.012	0.030	0.004	0.6%
%RSD		0.8	18.280	37.370	26.690	23.190	20.000	20.600	25.170	2.685	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:13	1.353	1.965	0.194	0.200	135.300	131.400	83.1%	0.096	0.113	0.043
2	16:49:40	1.611	2.128	0.194	0.212	131.500	130.400	84.2%	0.105	0.108	0.027
3	16:50:06	1.434	2.023	0.244	0.166	134.700	129.700	83.2%	0.123	0.113	0.023
X		1.466	2.039	0.211	0.193	133.900	130.500	83.5%	0.108	0.111	0.031
S		0.132	0.082	0.029	0.024	2.027	0.845	0.6%	0.014	0.003	0.011
%RSD		9.017	4.042	13.570	12.270	1.514	0.648	0.8	12.560	2.710	34.790
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:49:13	0.030	0.032	85.0%							
2	16:49:40	0.006	0.015	83.8%							
3	16:50:06	0.015	0.016	86.1%							
X		0.017	0.021	85.0%							
S		0.012	0.009	1.2%							
%RSD		70.160	44.690	1.4							

VQ51455-001 4/22/2020 16:54:36 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

User File Location: 16:55											
Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	85.9%	-0.038	2.938	2.320	-15.940	11.130	-0.040	0.023	0.142	0.873
2	16:55:30	85.6%	-0.010	2.177	2.767	-7.961	11.430	-0.054	0.133	0.067	0.747
3	16:55:57	86.5%	-0.052	2.934	2.589	-9.317	12.150	0.008	0.105	0.270	0.825
X		86.0%	-0.033	2.683	2.559	-11.070	11.570	-0.029	0.087	0.160	0.815
S		0.4%	0.021	0.438	0.225	4.270	0.525	0.033	0.057	0.102	0.064
%RSD		0.5	63.820	16.340	8.793	38.560	4.538	114.500	65.790	64.110	7.821
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.995	74510.000	13.170	5.528	5.646	75.7%	0.110	-0.458	0.706	9213.000
2	16:55:30	1.149	75030.000	11.790	4.265	6.700	76.0%	0.006	-0.802	0.632	9028.000
3	16:55:57	0.404	76180.000	12.330	4.348	6.032	75.1%	0.033	-0.920	0.768	9472.000
X		0.849	75240.000	12.430	4.714	6.126	75.6%	0.049	-0.727	0.702	9238.000
S		0.394	857.300	0.699	0.707	0.533	0.4%	0.054	0.240	0.068	223.300
%RSD		46.360	1.139	5.623	14.990	8.708	0.6	109.200	33.040	9.675	2.417
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	9.209	0.123	18.480	3.134	-0.005	0.034	-0.423	0.008	0.135	0.827
2	16:55:30	8.948	0.158	16.720	1.613	-0.005	0.033	-0.035	0.041	0.038	0.808
3	16:55:57	6.450	0.138	17.310	2.202	-0.007	0.042	-0.076	0.062	0.075	0.674
X		8.202	0.140	17.500	2.316	-0.006	0.036	-0.178	0.037	0.083	0.770
S		1.523	0.018	0.897	0.767	0.001	0.005	0.214	0.027	0.049	0.083
%RSD		18.570	12.580	5.122	33.100	15.190	12.840	119.900	73.620	58.920	10.790
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	1.137	1.139	-1.451	-0.037	7.982	8.609	-2.528	-0.522	-0.453	0.001
2	16:55:30	1.334	0.893	-1.253	-0.570	7.709	8.077	-2.488	-0.334	-1.846	0.002
3	16:55:57	1.238	1.023	-0.819	-0.247	7.339	9.259	-1.565	-0.940	4.294	0.008
X		1.236	1.018	-1.174	-0.285	7.677	8.648	-2.194	-0.599	0.665	0.004
S		0.098	0.123	0.323	0.268	0.323	0.592	0.544	0.310	3.219	0.004
%RSD		7.946	12.090	27.530	94.290	4.207	6.842	24.820	51.740	484.100	98.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	76.7%	0.070	0.056	0.024	0.439	-0.003	-0.002	-0.012	-0.006	79.7%
2	16:55:30	75.7%	0.125	0.076	0.086	0.528	0.004	-0.002	-0.012	0.017	79.6%
3	16:55:57	76.8%	0.071	0.115	0.016	0.945	-0.003	-0.000	-0.005	0.013	79.4%
X		76.4%	0.089	0.082	0.042	0.637	-0.001	-0.002	-0.010	0.008	79.6%
S		0.6%	0.032	0.030	0.039	0.270	0.004	0.001	0.004	0.013	0.1%
%RSD		0.8	35.660	36.470	91.920	42.340	599.300	73.400	46.130	155.000	0.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:03	0.653	1.052	0.103	0.076	-0.030	-0.011	84.7%	0.026	0.031	-0.005
2	16:55:30	0.890	0.995	0.074	0.086	0.014	0.014	84.9%	0.023	0.031	0.002
3	16:55:57	0.751	1.039	0.101	0.108	-0.041	0.008	84.7%	0.019	0.037	0.005
X		0.765	1.029	0.093	0.090	-0.019	0.004	84.8%	0.023	0.033	0.001
S		0.119	0.030	0.016	0.016	0.029	0.013	0.1%	0.003	0.004	0.005
%RSD		15.550	2.886	17.480	18.220	154.500	347.900	0.1	14.890	11.490	830.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	16:55:03	0.004	-0.001	87.8%							
2	16:55:30	-0.011	-0.008	89.0%							
3	16:55:57	0.001	-0.003	87.9%							
X		-0.002	-0.004	88.2%							
S		0.008	0.003	0.7%							
%RSD		410.600	76.180	0.8							

VQ51455-002 4/22/2020 17:00:27 QC Status: WARNING (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	82.1%	95.910	98.680	100.600	-16.300	1128.000	1120.000	1069.000	1044.000	101.300
2	17:01:20	80.0%	99.280	100.100	106.900	-5.824	1181.000	1151.000	1076.000	1068.000	105.500
3	17:01:47	79.9%	97.850	102.100	103.500	-7.680	1157.000	1141.000	1064.000	1066.000	103.000
X		80.7%	97.680%	100.300	103.700	-9.935	115.524%	1138.000	1070.000	105.970%	103.286%
S		1.2%	n/a	1.701	3.124	5.590	n/a	16.000	5.645	n/a	n/a
%RSD		1.5	1.732	1.697	3.013	56.270	2.314	1.407	0.528	1.262	2.039
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	832.900	71980.000	1007.000	1063.000	1064.000	74.0%	96.800	100.000	97.320	8804.000
2	17:01:20	859.900	74610.000	1029.000	1106.000	1075.000	71.5%	97.320	98.960	100.700	9702.000
3	17:01:47	850.200	73630.000	1017.000	1122.000	1049.000	72.4%	97.490	97.180	100.100	10100.000
X		847.700	73410.000	101.769%	1097.000	106.283%	72.6%	97.203%	98.710%	99.375%	9536.000
S		13.640	1330.000	n/a	30.590	n/a	1.3%	n/a	n/a	n/a	664.400
%RSD		1.609	1.811	1.090	2.789	1.235	1.8	0.368	1.444	1.815	6.967
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	1147.000	98.130	1032.000	1041.000	99.180	98.630	95.300	100.800	98.770	100.700
2	17:01:20	1183.000	99.480	1072.000	1069.000	99.820	99.300	99.810	101.100	98.060	101.500
3	17:01:47	1157.000	98.150	1050.000	1049.000	99.950	100.700	98.660	101.300	99.050	100.900
X		1162.000	98.586%	1052.000	105.292%	99.650%	99.552%	97.920	101.051%	98.626%	101.021%
S		18.680	n/a	19.920	n/a	n/a	n/a	2.345	n/a	n/a	n/a
%RSD		1.608	0.787	1.895	1.392	0.416	1.074	2.395	0.231	0.520	0.402
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	103.200	100.900	103.400	97.970	6.678	5.667	488.200	105.800	-2.277	96.550
2	17:01:20	106.800	103.000	103.100	100.400	5.704	5.875	459.600	98.580	3.727	97.340
3	17:01:47	99.040	102.300	98.960	100.700	6.508	6.788	450.200	97.170	-0.247	99.970
X		103.000	102.000	101.816%	99.670	6.297	6.110	466.000	100.533%	0.401	97.960
S		3.862	1.050	n/a	1.480	0.520	0.596	19.780	n/a	3.054	1.791
%RSD		3.749	1.030	2.429	1.485	8.262	9.760	4.246	4.627	761.300	1.828
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	74.3%	97.230	98.720	99.650	99.180	101.700	98.950	99.220	98.010	77.6%
2	17:01:20	73.3%	101.200	97.300	100.200	102.900	100.500	97.920	99.190	100.700	76.6%
3	17:01:47	73.2%	99.670	100.600	101.700	99.330	102.500	101.300	99.950	100.000	76.5%
X		73.6%	99.360	98.870	100.500	100.500	101.547%	99.400	99.450	99.568%	76.9%
S		0.6%	1.996	1.651	1.070	2.102	n/a	1.751	0.430	n/a	0.6%
%RSD		0.8	2.009	1.669	1.065	2.092	1.030	1.761	0.432	1.404	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:53	101.200	98.820	97.180	98.470	97.780	98.930	82.8%	102.400	106.500	103.300
2	17:01:20	100.200	99.390	99.680	98.200	99.070	101.000	81.7%	103.100	108.100	103.000
3	17:01:47	101.000	100.100	99.650	99.820	104.800	101.200	81.6%	100.700	108.700	103.600
X		100.800	99.449%	98.840	98.832%	100.500	100.387%	82.0%	102.100	107.767%	103.300
S		0.527	n/a	1.436	n/a	3.717	n/a	0.7%	1.247	n/a	0.306
%RSD		0.523	0.668	1.453	0.882	3.697	1.254	0.8	1.221	1.058	0.296
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:00:53	102.500	101.100	84.9%							
2	17:01:20	102.400	102.400	85.4%							
3	17:01:47	103.700	103.700	85.9%							
X		102.900	102.399%	85.4%							
S		0.731	n/a	0.5%							
%RSD		0.711	1.269	0.6							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	85.4%	0.004	4.764	5.073	-54.570	4116.000	14030.000	14290.000	19880.000	4.950
2	17:07:10	86.2%	-0.038	4.402	4.655	-58.370	4140.000	14090.000	14330.000	19980.000	4.958
3	17:07:37	86.3%	0.017	4.856	4.960	-55.480	4234.000	13970.000	14430.000	20170.000	4.682
X		86.0%	-0.006	4.674	4.896	-56.140	4163.000	14030.000	14350.000	20010.000	4.863
S		0.5%	0.029	0.240	0.217	1.983	62.560	62.410	68.820	146.100	0.157
%RSD		0.6	509.100	5.138	4.422	3.533	1.503	0.445	0.480	0.730	3.230
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5084.000	62060.000	2848.000	76070.000	74580.000	77.1%	0.412	-0.884	1.236	11130.000
2	17:07:10	5055.000	62840.000	2842.000	75990.000	75470.000	77.1%	0.691	-0.471	1.247	12230.000
3	17:07:37	5058.000	63390.000	2853.000	76740.000	75820.000	76.7%	0.389	-1.827	1.305	14120.000
X		5066.000	62760.000	2848.000	76270.000	75290.000	77.0%	0.497	-1.061	1.263	12500.000
S		15.630	666.100	5.691	410.100	639.000	0.2%	0.168	0.695	0.037	1513.000
%RSD		0.309	1.061	0.200	0.538	0.849	0.3	33.840	65.510	2.903	12.100
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	23.950	1.082	30.880	132.600	0.063	0.543	-0.093	0.195	0.169	1.065
2	17:07:10	26.380	1.034	30.670	126.500	0.048	0.741	-0.430	0.180	0.259	1.139
3	17:07:37	25.850	1.009	30.610	127.600	0.056	0.646	-0.428	0.151	0.304	1.319
X		25.390	1.042	30.720	128.900	0.056	0.643	-0.317	0.175	0.244	1.175
S		1.281	0.037	0.142	3.235	0.008	0.099	0.194	0.022	0.069	0.131
%RSD		5.044	3.579	0.463	2.510	13.710	15.390	61.160	12.680	28.240	11.110
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	5.425	4.235	-0.993	-0.334	7.872	6.580	-1.147	-0.455	1.377	38.600
2	17:07:10	6.169	3.750	-0.220	0.185	5.834	6.722	-0.657	-0.288	0.924	38.420
3	17:07:37	6.514	3.673	-0.682	-0.351	7.061	6.923	-0.238	0.011	-0.528	38.690
X		6.036	3.886	-0.632	-0.167	6.922	6.742	-0.681	-0.244	0.591	38.570
S		0.557	0.305	0.389	0.305	1.026	0.172	0.455	0.236	0.995	0.135
%RSD		9.224	7.840	61.580	183.100	14.820	2.552	66.850	96.610	168.400	0.350
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	77.5%	0.370	0.453	0.273	0.352	0.001	0.002	0.002	0.012	78.5%
2	17:07:10	77.2%	0.281	0.273	0.330	0.418	-0.001	0.006	-0.006	0.016	78.9%
3	17:07:37	78.2%	0.320	0.404	0.353	2.181	-0.001	-0.000	-0.014	0.033	78.5%
X		77.6%	0.324	0.377	0.319	0.984	-0.001	0.002	-0.006	0.020	78.6%
S		0.5%	0.045	0.093	0.041	1.038	0.001	0.003	0.008	0.011	0.3%
%RSD		0.6	13.780	24.660	12.950	105.500	171.500	122.900	139.500	54.730	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:06:43	0.388	0.471	0.158	0.107	198.400	193.800	84.3%	0.056	0.047	0.027
2	17:07:10	0.318	0.588	0.196	0.158	197.300	196.100	85.3%	0.036	0.058	0.031
3	17:07:37	0.384	0.545	0.149	0.120	203.100	195.900	85.5%	0.040	0.035	0.023
X		0.363	0.535	0.168	0.128	199.600	195.200	85.0%	0.044	0.047	0.027
S		0.039	0.059	0.025	0.026	3.087	1.289	0.7%	0.011	0.012	0.004
%RSD		10.730	11.020	14.820	20.680	1.547	0.660	0.8	24.560	24.770	15.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:06:43	0.016	0.022	85.8%							
2	17:07:10	0.036	0.028	84.3%							
3	17:07:37	0.026	0.023	85.7%							
X		0.026	0.024	85.3%							
S		0.010	0.003	0.9%							
%RSD		38.360	13.850	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	89.1%	-0.012	1.575	1.884	-42.400	558.000	13140.000	13380.000	17660.000	16.490
2	17:13:02	88.7%	-0.039	1.996	1.725	-52.100	551.100	13190.000	13490.000	17970.000	15.120
3	17:13:29	88.0%	0.016	2.087	1.850	-43.830	566.200	13400.000	13410.000	17980.000	14.440
X		88.6%	-0.012	1.886	1.820	-46.110	558.400	13240.000	13430.000	17870.000	15.350
S		0.5%	0.027	0.273	0.084	5.237	7.534	137.400	59.210	184.600	1.041
%RSD		0.6	236.500	14.490	4.610	11.360	1.349	1.038	0.441	1.033	6.783
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	3296.000	63360.000	944.700	19640.000	19760.000	79.3%	0.597	-1.412	2.309	24750.000
2	17:13:02	3238.000	62290.000	942.800	19990.000	20170.000	78.8%	0.452	-1.666	2.486	26210.000
3	17:13:29	3320.000	63000.000	958.900	20200.000	20440.000	78.6%	0.403	-1.485	2.444	26430.000
X		3285.000	62880.000	948.800	19940.000	20120.000	78.9%	0.484	-1.521	2.413	25800.000
S		42.450	544.200	8.806	281.400	337.800	0.4%	0.101	0.131	0.093	913.900
%RSD		1.292	0.866	0.928	1.411	1.679	0.5	20.830	8.590	3.839	3.543
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	24.000	1.009	35.580	45.930	0.024	0.161	-0.112	0.143	0.321	1.266
2	17:13:02	26.050	0.971	35.940	45.200	0.026	0.204	-0.108	0.212	0.289	1.343
3	17:13:29	24.460	0.994	36.810	45.040	0.023	0.198	-0.295	0.183	0.355	1.249
X		24.840	0.991	36.110	45.390	0.024	0.187	-0.171	0.179	0.321	1.286
S		1.076	0.019	0.633	0.477	0.001	0.023	0.107	0.035	0.033	0.050
%RSD		4.331	1.927	1.752	1.052	5.996	12.390	62.260	19.500	10.330	3.883
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	20.110	12.500	-0.916	-0.404	5.906	4.863	-2.701	-0.399	-1.552	25.020
2	17:13:02	18.870	12.630	-0.480	-0.754	4.928	5.813	-4.059	-0.712	-1.530	25.060
3	17:13:29	17.920	12.620	-0.835	-0.103	7.004	5.555	-1.245	-0.401	0.803	24.840
X		18.970	12.580	-0.744	-0.420	5.946	5.411	-2.668	-0.504	-0.760	24.980
S		1.101	0.071	0.232	0.326	1.038	0.491	1.407	0.180	1.353	0.117
%RSD		5.805	0.563	31.190	77.460	17.460	9.076	52.750	35.740	178.100	0.468
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	80.4%	0.142	0.045	0.142	0.628	0.000	0.002	0.040	0.008	80.1%
2	17:13:02	79.8%	0.224	0.135	0.101	0.506	-0.003	0.002	-0.005	0.013	81.8%
3	17:13:29	78.9%	0.195	0.217	0.155	0.200	-0.005	0.002	0.040	-0.003	80.4%
X		79.7%	0.187	0.133	0.133	0.444	-0.003	0.002	0.025	0.006	80.8%
S		0.7%	0.042	0.086	0.028	0.221	0.003	0.000	0.026	0.008	0.9%
%RSD		0.9	22.370	64.820	21.280	49.650	107.700	4.082	104.200	129.100	1.2
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:35	0.226	0.379	0.120	0.116	774.900	764.000	86.0%	0.018	0.016	0.023
2	17:13:02	0.349	0.404	0.106	0.095	754.200	759.600	85.7%	0.024	0.022	0.044
3	17:13:29	0.301	0.414	0.090	0.094	767.800	763.000	86.2%	0.018	0.016	0.031
X		0.292	0.399	0.106	0.102	765.600	762.200	86.0%	0.020	0.018	0.033
S		0.062	0.018	0.015	0.012	10.540	2.322	0.3%	0.003	0.003	0.011
%RSD		21.320	4.442	14.000	11.950	1.376	0.305	0.3	15.620	18.740	33.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:12:35	0.024	0.027	87.4%							
2	17:13:02	0.043	0.025	87.7%							
3	17:13:29	0.017	0.025	87.4%							
X		0.028	0.026	87.5%							
S		0.014	0.001	0.2%							
%RSD		48.510	5.330	0.2							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	86.7%	-0.052	14.880	17.060	-38.650	3355.000	20540.000	20660.000	25620.000	3.923
2	17:18:55	87.1%	0.017	15.380	15.860	-42.290	3368.000	20210.000	20340.000	25270.000	3.901
3	17:19:22	84.8%	-0.024	13.430	15.040	-42.020	3496.000	20500.000	20710.000	26780.000	4.086
X		86.2%	-0.020	14.560	15.990	-40.980	3406.000	20410.000	20570.000	25890.000	3.970
S		1.2%	0.035	1.016	1.016	2.028	78.340	181.400	201.100	792.900	0.101
%RSD		1.4	174.700	6.979	6.357	4.949	2.300	0.889	0.978	3.063	2.546
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	4035.000	57450.000	1725.000	66970.000	66460.000	77.3%	0.486	-1.306	1.369	18000.000
2	17:18:55	3977.000	56920.000	1691.000	67270.000	66930.000	77.8%	0.534	-0.819	1.398	18010.000
3	17:19:22	4008.000	58400.000	1739.000	70360.000	68380.000	73.7%	0.327	-0.288	1.529	18840.000
X		4007.000	57590.000	1718.000	68200.000	67260.000	76.3%	0.449	-0.804	1.432	18280.000
S		29.110	750.800	24.790	1876.000	997.900	2.2%	0.109	0.509	0.085	479.200
%RSD		0.727	1.304	1.443	2.751	1.484	2.9	24.190	63.300	5.966	2.621
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	14.370	0.338	25.520	105.800	0.025	1.085	0.384	0.406	0.544	1.526
2	17:18:55	12.530	0.355	25.090	105.400	0.041	1.128	0.711	0.423	0.562	1.571
3	17:19:22	15.710	0.358	28.650	112.000	0.038	1.052	0.491	0.532	0.509	1.780
X		14.200	0.350	26.420	107.700	0.035	1.089	0.528	0.454	0.538	1.625
S		1.598	0.011	1.940	3.719	0.009	0.038	0.167	0.069	0.027	0.136
%RSD		11.250	3.153	7.342	3.452	24.850	3.491	31.580	15.130	4.949	8.334
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	5.199	4.150	0.086	0.734	14.430	14.870	-1.195	-0.271	-0.074	63.430
2	17:18:55	6.614	4.282	0.383	0.409	15.300	14.430	1.185	0.390	-0.988	63.430
3	17:19:22	5.453	4.078	-0.497	0.283	13.640	13.600	-1.558	-0.433	0.503	63.700
X		5.755	4.170	-0.009	0.475	14.460	14.300	-0.523	-0.105	-0.186	63.520
S		0.755	0.103	0.447	0.233	0.834	0.646	1.490	0.436	0.752	0.156
%RSD		13.110	2.478	4718.000	48.930	5.771	4.520	285.100	416.500	403.500	0.245
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	78.3%	1.341	0.895	1.313	0.740	0.003	-0.000	-0.010	-0.007	79.3%
2	17:18:55	77.8%	1.288	1.043	1.248	3.014	-0.005	0.002	0.014	-0.001	78.5%
3	17:19:22	76.9%	1.146	1.325	1.185	1.190	-0.003	-0.000	-0.001	0.003	78.2%
X		77.7%	1.258	1.088	1.249	1.648	-0.002	0.000	0.001	-0.002	78.7%
S		0.7%	0.101	0.218	0.064	1.204	0.004	0.001	0.012	0.005	0.6%
%RSD		0.9	8.035	20.080	5.122	73.060	202.100	247.200	1147.000	271.300	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:18:27	0.232	0.329	0.037	0.025	162.800	163.400	84.9%	0.037	0.033	0.033
2	17:18:55	0.231	0.344	0.051	0.036	168.600	164.100	84.7%	0.028	0.027	0.025
3	17:19:22	0.239	0.328	0.054	0.053	166.200	166.600	82.8%	0.035	0.029	0.038
X		0.234	0.334	0.047	0.038	165.900	164.700	84.1%	0.033	0.030	0.032
S		0.005	0.009	0.009	0.014	2.913	1.697	1.1%	0.004	0.003	0.007
%RSD		2.034	2.773	18.890	37.150	1.756	1.030	1.4	13.520	10.160	20.630
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:18:27	0.040	0.025	86.0%							
2	17:18:55	0.038	0.026	86.5%							
3	17:19:22	0.021	0.024	84.4%							
X		0.033	0.025	85.6%							
S		0.011	0.001	1.1%							
%RSD		32.560	3.233	1.3							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	87.7%	-0.038	4.016	4.544	-35.020	665.300	19520.000	19590.000	23580.000	9.747
2	17:24:47	86.7%	-0.024	4.884	4.163	-36.460	681.600	19610.000	19450.000	23950.000	10.140
3	17:25:14	85.3%	-0.024	5.407	4.547	-33.630	680.900	19430.000	19590.000	23940.000	10.220
X		86.6%	-0.029	4.769	4.418	-35.040	675.900	19520.000	19550.000	23820.000	10.040
S		1.2%	0.008	0.703	0.221	1.415	9.236	90.340	82.790	210.800	0.254
%RSD		1.4	28.250	14.730	5.002	4.039	1.366	0.463	0.424	0.885	2.530
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	2914.000	66700.000	1157.000	26570.000	26740.000	76.7%	0.363	-1.009	0.955	29020.000
2	17:24:47	2911.000	67440.000	1158.000	26600.000	26570.000	76.4%	0.134	-2.030	0.991	30090.000
3	17:25:14	3055.000	67890.000	1171.000	26920.000	26880.000	76.2%	0.289	-1.769	1.008	31050.000
X		2960.000	67340.000	1162.000	26700.000	26730.000	76.4%	0.262	-1.603	0.985	30060.000
S		82.360	600.900	8.162	196.400	156.000	0.3%	0.117	0.531	0.027	1014.000
%RSD		2.782	0.892	0.702	0.736	0.584	0.3	44.650	33.100	2.740	3.373
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	23.680	0.515	40.190	56.490	0.031	0.268	-0.042	0.162	0.248	1.121
2	17:24:47	21.780	0.521	40.070	57.610	0.022	0.255	-0.524	0.131	0.215	1.327
3	17:25:14	21.960	0.495	40.010	53.300	0.055	0.284	-0.134	0.116	0.126	1.322
X		22.480	0.510	40.090	55.800	0.036	0.269	-0.233	0.136	0.196	1.256
S		1.048	0.014	0.091	2.236	0.017	0.015	0.256	0.024	0.064	0.117
%RSD		4.664	2.652	0.227	4.007	46.170	5.493	109.800	17.430	32.380	9.349
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	5.359	3.036	-0.360	0.149	9.260	9.468	-1.192	-0.265	-0.073	43.590
2	17:24:47	4.674	3.277	0.654	-0.067	8.717	9.386	-2.142	-0.417	-0.548	43.690
3	17:25:14	4.606	3.433	-1.873	-0.262	9.674	9.622	-0.624	-0.287	0.956	45.380
X		4.880	3.249	-0.526	-0.060	9.217	9.492	-1.319	-0.323	0.112	44.220
S		0.416	0.200	1.272	0.206	0.480	0.120	0.767	0.082	0.768	1.004
%RSD		8.531	6.153	241.700	341.900	5.208	1.263	58.110	25.490	687.800	2.271
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	78.4%	2.205	2.094	2.315	2.005	0.001	-0.002	0.002	0.009	78.6%
2	17:24:47	78.6%	2.295	1.933	2.274	0.495	-0.005	0.002	0.010	0.010	79.4%
3	17:25:14	76.9%	2.019	2.486	2.231	1.665	-0.005	-0.002	-0.005	0.009	78.6%
X		78.0%	2.173	2.171	2.274	1.389	-0.003	-0.001	0.002	0.010	78.9%
S		0.9%	0.141	0.284	0.042	0.792	0.003	0.002	0.007	0.001	0.5%
%RSD		1.2	6.478	13.090	1.846	57.050	103.600	257.500	358.200	7.452	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:20	0.201	0.174	0.038	0.076	115.000	111.900	84.5%	0.010	0.014	-0.010
2	17:24:47	0.206	0.239	0.081	0.056	115.400	114.400	84.1%	0.009	0.003	-0.006
3	17:25:14	0.249	0.294	0.059	0.074	114.800	113.900	84.3%	0.010	0.004	-0.010
X		0.219	0.236	0.059	0.069	115.100	113.400	84.3%	0.010	0.007	-0.009
S		0.027	0.060	0.021	0.011	0.269	1.349	0.2%	0.001	0.006	0.002
%RSD		12.160	25.490	35.820	16.460	0.234	1.189	0.2	7.118	90.270	22.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:24:20	-0.011	-0.010	85.8%							
2	17:24:47	-0.014	-0.015	85.0%							
3	17:25:14	-0.020	-0.014	85.7%							
X		-0.015	-0.013	85.5%							
S		0.005	0.002	0.4%							
%RSD		31.590	18.670	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	85.0%	-0.024	15.580	15.230	-48.140	5644.000	18240.000	18390.000	24150.000	25.240
2	17:30:37	86.0%	0.004	14.640	15.690	-43.610	5647.000	18140.000	18220.000	24360.000	25.510
3	17:31:04	84.9%	-0.052	15.490	15.190	-45.050	5730.000	18060.000	18190.000	24550.000	20.320
X		85.3%	-0.024	15.240	15.370	-45.600	5674.000	18140.000	18270.000	24350.000	23.690
S		0.6%	0.028	0.518	0.281	2.315	48.950	91.810	108.100	199.400	2.917
%RSD		0.7	115.200	3.398	1.830	5.077	0.863	0.506	0.592	0.819	12.310
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	4202.000	65400.000	2323.000	75930.000	74100.000	74.6%	0.978	-0.907	1.372	23980.000
2	17:30:37	4043.000	64300.000	2112.000	73830.000	73190.000	75.4%	0.812	-1.531	1.309	23670.000
3	17:31:04	4156.000	64510.000	2274.000	73660.000	74450.000	75.1%	0.894	-1.719	1.429	23910.000
X		4134.000	64740.000	2236.000	74470.000	73910.000	75.0%	0.895	-1.386	1.370	23850.000
S		81.850	584.800	110.400	1266.000	653.500	0.4%	0.083	0.425	0.060	159.900
%RSD		1.980	0.903	4.935	1.699	0.884	0.5	9.297	30.690	4.395	0.670
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	91.650	12.030	104.000	191.800	0.077	0.548	-0.319	0.109	0.206	1.187
2	17:30:37	90.260	12.130	102.800	190.900	0.057	0.621	-0.226	0.208	0.284	1.026
3	17:31:04	91.060	12.140	102.700	186.500	0.065	0.668	0.320	0.117	0.220	1.185
X		90.990	12.100	103.200	189.700	0.066	0.612	-0.075	0.145	0.237	1.133
S		0.698	0.062	0.751	2.829	0.010	0.061	0.345	0.055	0.041	0.092
%RSD		0.767	0.516	0.728	1.491	14.830	9.904	458.800	37.900	17.460	8.140
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	6.045	3.480	-0.207	0.421	15.170	15.180	0.391	0.401	-2.337	69.310
2	17:30:37	5.612	3.270	-0.878	0.347	16.830	15.800	1.299	0.278	0.014	69.040
3	17:31:04	5.205	3.706	-0.636	-0.381	16.420	15.400	-1.094	-0.133	-0.932	69.660
X		5.621	3.485	-0.574	0.129	16.140	15.460	0.199	0.182	-1.085	69.340
S		0.420	0.218	0.340	0.443	0.863	0.314	1.208	0.279	1.183	0.314
%RSD		7.470	6.267	59.290	342.900	5.345	2.030	608.500	153.600	109.000	0.453
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	76.4%	0.384	0.348	0.343	3.143	-0.007	-0.002	0.002	0.009	76.4%
2	17:30:37	76.9%	0.308	0.342	0.277	1.898	0.003	-0.004	-0.005	-0.000	77.4%
3	17:31:04	76.9%	0.306	0.399	0.280	2.702	-0.003	-0.002	-0.013	0.002	77.8%
X		76.7%	0.332	0.363	0.300	2.581	-0.003	-0.003	-0.005	0.004	77.2%
S		0.3%	0.044	0.031	0.037	0.631	0.005	0.001	0.008	0.005	0.7%
%RSD		0.4	13.370	8.603	12.380	24.460	195.300	41.520	144.500	129.800	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:10	0.138	0.227	0.039	0.004	171.100	165.500	84.7%	0.014	0.014	0.023
2	17:30:37	0.117	0.215	0.034	0.039	172.600	170.400	82.9%	0.011	0.010	0.026
3	17:31:04	0.117	0.242	0.027	0.017	169.000	169.600	82.8%	0.005	0.005	0.025
X		0.124	0.228	0.033	0.020	170.900	168.500	83.5%	0.010	0.009	0.025
S		0.012	0.014	0.006	0.018	1.805	2.632	1.0%	0.004	0.005	0.001
%RSD		9.960	5.918	18.530	89.780	1.056	1.562	1.2	43.370	48.570	5.625
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:30:10	0.012	0.017	84.3%							
2	17:30:37	0.026	0.031	84.4%							
3	17:31:04	0.019	0.025	83.8%							
X		0.019	0.024	84.2%							
S		0.007	0.007	0.3%							
%RSD		37.840	29.450	0.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	84.1%	95.740	65.590	68.430	-49.900	±6534.000	±18410.000	±18990.000	±25380.000	179.600
2	17:36:29	84.4%	94.860	61.380	67.480	-42.000	±6714.000	±18810.000	±19000.000	±25320.000	173.600
3	17:36:56	82.4%	95.900	66.000	69.270	-45.740	±6817.000	±18680.000	±19130.000	±25240.000	176.000
X		83.6%	95.500	64.320	68.390	-45.880	±6688.000	±18630.000	±19040.000	±25310.000	176.400
S		1.1%	0.564	2.559	0.893	3.955	±143.300	±200.700	±77.820	±71.090	3.009
%RSD		1.3	0.591	3.978	1.305	8.620	±2.143	±1.077	±0.409	±0.281	1.706
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	±4847.000	±64450.000	±2985.000	74220.000	±73680.000	73.9%	98.730	96.680	96.990	26640.000
2	17:36:29	±4755.000	±65290.000	±3047.000	75490.000	±75050.000	73.6%	99.480	95.800	98.150	26470.000
3	17:36:56	±4931.000	±66000.000	±2988.000	75860.000	±75680.000	72.5%	104.500	96.980	97.460	25360.000
X		±4844.000	±65250.000	±3006.000	75190.000	±74800.000	73.4%	100.900	96.490	97.530	26160.000
S		±87.960	±775.500	±34.760	857.600	±1025.000	0.7%	3.153	0.614	0.583	693.500
%RSD		±1.816	±1.189	±1.156	1.141	±1.370	1.0	3.124	0.636	0.598	2.651
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	1209.000	108.400	±1137.000	1228.000	93.740	93.360	91.630	94.560	93.170	94.830
2	17:36:29	1233.000	106.000	±1122.000	1225.000	93.320	93.410	95.960	93.840	95.100	97.120
3	17:36:56	1220.000	107.500	±1115.000	1221.000	93.220	93.120	93.390	93.290	93.120	97.020
X		1221.000	107.300	±1124.000	1225.000	93.430	93.300	93.660	93.900	93.800	96.320
S		11.850	1.223	±11.230	3.355	0.275	0.155	2.177	0.635	1.126	1.294
%RSD		0.971	1.140	±0.999	0.274	0.295	0.166	2.325	0.676	1.201	1.343
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	103.800	99.190	97.920	94.840	16.400	16.840	449.600	99.270	1.096	166.200
2	17:36:29	102.500	96.830	103.000	97.340	16.110	15.370	430.500	95.800	-2.767	164.800
3	17:36:56	101.600	98.660	99.610	92.630	18.020	16.790	443.800	99.370	2.064	163.100
X		102.600	98.230	100.200	94.940	16.840	16.330	441.300	98.150	0.131	164.700
S		1.092	1.238	2.575	2.354	1.028	0.833	9.826	2.037	2.556	1.544
%RSD		1.064	1.260	2.570	2.480	6.102	5.102	2.227	2.075	1955.000	0.938
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	75.1%	100.500	98.660	99.620	95.980	97.860	94.430	95.060	94.980	76.5%
2	17:36:29	74.4%	100.400	99.490	99.930	102.400	98.670	95.910	97.180	97.650	75.8%
3	17:36:56	75.3%	100.700	99.600	98.980	94.300	99.080	95.420	96.700	97.700	75.4%
X		75.0%	100.600	99.250	99.510	97.550	98.540	95.250	96.310	96.780	75.9%
S		0.5%	0.125	0.513	0.482	4.265	0.618	0.757	1.113	1.556	0.6%
%RSD		0.6	0.124	0.517	0.484	4.372	0.627	0.795	1.155	1.608	0.8
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:02	96.360	96.290	96.950	95.970	267.500	261.200	84.0%	97.850	99.660	95.270
2	17:36:29	98.570	99.320	98.200	96.190	269.100	265.400	83.1%	99.380	102.900	96.800
3	17:36:56	100.400	98.650	99.070	95.920	271.500	269.800	83.5%	99.220	101.000	96.460
X		98.450	98.090	98.070	96.030	269.400	265.500	83.5%	98.810	101.200	96.170
S		2.027	1.592	1.068	0.145	2.022	4.306	0.5%	0.839	1.637	0.802
%RSD		2.059	1.623	1.089	0.151	0.750	1.622	0.5	0.849	1.618	0.834
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:36:02	94.550	94.010	83.9%							
2	17:36:29	96.760	95.910	83.9%							
3	17:36:56	96.180	95.070	84.2%							
X		95.830	95.000	84.0%							
S		1.143	0.956	0.2%							
%RSD		1.193	1.006	0.2							

CCV MW12620 4/22/2020 17:41:29 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	73.6%	315.600	280.800	299.300	8.345	±62440.000	±61300.000	±60970.000	±58900.000	302.800
2	17:42:24	73.8%	307.800	285.100	306.600	5.804	±63430.000	±62260.000	±62620.000	±60310.000	310.800
3	17:42:51	72.4%	312.800	297.300	305.800	10.090	±62660.000	±62440.000	±62500.000	±58670.000	304.200
X		73.3%	104.030%	95.910%	101.301%	8.080	±104.739%	±62000.000	±62030.000	±98.823%	101.983%
S		0.7%	n/a	n/a	n/a	2.156	±n/a	±609.000	±925.400	±n/a	n/a
%RSD		1.0	1.271	2.964	1.308	26.680	±0.825	±0.982	±1.492	±1.493	1.387
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	3037.000	669.200	±58050.000	61940.000	±61810.000	71.2%	301.800	305.400	300.500	2918.000
2	17:42:24	±2799.000	624.400	±58220.000	62600.000	±63670.000	71.0%	308.700	309.000	303.200	2786.000
3	17:42:51	±2825.000	594.900	±57930.000	61490.000	±61920.000	72.2%	307.400	300.400	293.800	4008.000
X		±2887.000	629.500	±96.774%	62010.000	±104.113%	71.4%	101.993%	101.640%	99.719%	3237.000
S		±130.700	37.430	±n/a	561.600	±n/a	0.6%	n/a	n/a	n/a	670.700
%RSD		±4.529	5.946	±0.250	0.906	±1.668	0.9	1.194	1.407	1.616	20.720
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	±62390.000	294.600	±62170.000	±59180.000	299.300	295.100	306.200	286.600	298.700	298.200
2	17:42:24	±63190.000	294.000	±63620.000	±60990.000	299.200	294.900	296.900	286.400	297.900	300.900
3	17:42:51	±62210.000	290.000	±62510.000	±59590.000	292.400	289.700	298.000	289.000	296.100	301.100
X		±62600.000	97.623%	±62770.000	±99.870%	98.997%	97.750%	300.300	287.300	99.186%	100.020%
S		±517.900	n/a	±759.100	±n/a	n/a	n/a	5.081	1.422	n/a	n/a
%RSD		±0.827	0.843	±1.209	±1.584	1.335	1.051	1.692	0.495	0.453	0.539
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	286.000	290.800	314.000	286.000	0.393	-0.581	1354.000	305.400	-1.647	295.900
2	17:42:24	291.800	289.100	311.900	293.600	1.122	-0.558	1345.000	305.400	0.315	296.000
3	17:42:51	300.500	288.700	310.400	288.600	0.208	-0.063	1344.000	300.100	1.984	298.500
X		292.800	289.600	104.037%	289.400	0.575	-0.401	1348.000	101.216%	0.218	98.939%
S		7.292	1.133	n/a	3.873	0.483	0.293	5.707	n/a	1.818	n/a
%RSD		2.491	0.391	0.577	1.338	84.080	73.020	0.423	1.000	835.500	0.491
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	70.8%	320.800	315.200	312.300	295.100	303.700	297.300	300.800	296.800	71.1%
2	17:42:24	72.3%	318.700	320.300	308.400	283.500	300.800	292.600	294.800	295.600	71.7%
3	17:42:51	70.1%	321.100	318.800	319.300	295.600	304.600	296.300	296.800	300.500	71.3%
X		71.1%	106.742%	106.034%	313.300	291.400	101.012%	295.400	297.400	99.201%	71.4%
S		1.1%	n/a	n/a	5.512	6.876	n/a	2.495	3.046	n/a	0.3%
%RSD		1.5	0.407	0.815	1.759	2.360	0.662	0.845	1.024	0.858	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:56	308.800	305.700	301.700	292.900	307.600	296.900	78.6%	310.400	314.700	296.800
2	17:42:24	306.000	306.200	304.800	296.500	306.800	300.900	77.9%	310.000	313.800	298.200
3	17:42:51	307.100	305.500	311.400	307.500	307.900	303.700	77.4%	308.900	318.600	299.800
X		102.438%	101.947%	306.000	99.651%	102.489%	100.178%	77.9%	309.800	105.241%	99.422%
S		n/a	n/a	4.932	n/a	n/a	n/a	0.6%	0.801	n/a	n/a
%RSD		0.457	0.116	1.612	2.539	0.185	1.140	0.8	0.259	0.807	0.510
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:41:56	292.900	292.700	76.2%							
2	17:42:24	297.800	296.900	76.5%							
3	17:42:51	297.100	298.200	75.9%							
X		98.643%	98.653%	76.2%							
S		n/a	n/a	0.3%							
%RSD		0.894	0.974	0.4							

CCB IM9936-01 4/22/2020 17:47:24 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	79.1%	-0.037	2.022	2.883	9.522	0.016	1.935	1.217	1.412	0.041
2	17:48:18	77.8%	-0.006	2.557	2.618	14.000	0.510	2.270	1.784	1.699	0.064
3	17:48:45	77.7%	0.010	2.843	1.926	16.460	0.386	1.887	2.274	1.438	0.036
X		78.2%	-0.011	2.474	2.476	13.330	0.304	2.030	1.758	1.516	0.047
S		0.8%	0.024	0.417	0.494	3.519	0.257	0.209	0.529	0.159	0.015
%RSD		1.0	212.700	16.850	19.970	26.400	84.450	10.280	30.100	10.480	31.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.534	386.400	10.590	0.654	3.969	74.5%	-0.046	-0.014	-0.022	-35.100
2	17:48:18	0.822	364.100	9.863	3.126	3.236	74.9%	-0.046	0.017	0.027	-47.580
3	17:48:45	0.501	356.200	9.429	4.423	3.828	74.4%	-0.019	0.013	0.010	-42.880
X		0.619	368.900	9.960	2.734	3.678	74.6%	-0.037	0.005	0.005	-41.860
S		0.177	15.670	0.585	1.914	0.389	0.3%	0.015	0.017	0.025	6.303
%RSD		28.550	4.248	5.871	70.010	10.580	0.4	41.170	308.500	503.300	15.060
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	2.202	0.005	-3.338	5.697	0.006	-0.009	0.030	0.011	-0.001	-0.108
2	17:48:18	2.318	0.026	-3.499	6.711	0.017	-0.031	-0.272	0.005	0.015	-0.098
3	17:48:45	2.410	0.038	-3.171	4.118	0.004	-0.023	-0.169	-0.025	0.028	-0.061
X		2.310	0.023	-3.336	5.509	0.009	-0.021	-0.137	-0.003	0.014	-0.089
S		0.104	0.017	0.164	1.306	0.007	0.011	0.153	0.019	0.014	0.025
%RSD		4.521	72.240	4.905	23.710	74.270	53.460	112.000	644.800	105.100	28.090
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	83Kr	88Sr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.048	0.098	-0.078	0.180	0.133	-0.313	-1.386	-0.553	1.682	0.001
2	17:48:18	-0.336	0.024	-0.065	0.630	-0.667	-0.913	-1.376	-0.341	0.215	0.009
3	17:48:45	0.198	0.251	0.138	0.388	-0.351	-0.839	2.670	0.764	-1.244	0.007
X		-0.030	0.124	-0.001	0.399	-0.295	-0.688	-0.031	-0.043	0.218	0.006
S		0.275	0.116	0.121	0.225	0.403	0.327	2.339	0.707	1.463	0.004
%RSD		921.100	93.260	8590.000	56.460	136.400	47.560	7634.000	1635.000	672.500	70.780
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	73.6%	0.162	0.187	0.277	0.086	0.005	0.010	0.003	0.020	76.3%
2	17:48:18	73.4%	0.207	0.158	0.167	-0.053	0.014	0.015	-0.005	0.025	73.5%
3	17:48:45	72.9%	0.167	0.284	0.193	0.222	0.010	0.036	0.020	0.000	73.6%
X		73.3%	0.179	0.210	0.212	0.085	0.009	0.020	0.006	0.015	74.5%
S		0.4%	0.025	0.066	0.057	0.137	0.004	0.014	0.013	0.013	1.6%
%RSD		0.5	13.700	31.360	27.040	161.600	46.990	67.710	207.800	86.350	2.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:51	0.131	0.200	0.361	0.342	-0.041	-0.017	79.6%	0.020	0.004	0.013
2	17:48:18	0.141	0.195	0.397	0.349	-0.029	-0.004	78.3%	0.009	0.017	0.042
3	17:48:45	0.157	0.218	0.291	0.250	-0.029	0.003	78.3%	0.010	0.010	0.024
X		0.143	0.204	0.350	0.314	-0.033	-0.006	78.7%	0.013	0.010	0.026
S		0.013	0.012	0.054	0.055	0.007	0.010	0.7%	0.006	0.006	0.015
%RSD		9.061	5.886	15.390	17.550	20.880	177.500	0.9	47.460	60.880	56.700
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:47:51	0.011	0.014	82.1%							
2	17:48:18	0.026	0.031	81.0%							
3	17:48:45	0.028	0.018	81.1%							
X		0.021	0.021	81.4%							
S		0.009	0.009	0.6%							
%RSD		43.440	42.430	0.7							

VD17091-005SD

4/22/2020 17:53:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	81.0%	98.030	63.600	67.350	-45.940	18540.000	18540.000	19110.000	25590.000	171.500
2	17:54:09	80.0%	99.760	69.510	68.870	-44.090	18980.000	18980.000	19410.000	25550.000	173.100
3	17:54:36	81.5%	97.220	66.430	69.840	-43.320	19460.000	19460.000	19620.000	26160.000	177.800
X		80.8%	98.340	66.510	68.690	-44.450	18990.000	18990.000	19380.000	25760.000	174.100
S		0.8%	1.298	2.952	1.254	1.350	189.800	462.200	253.000	342.200	3.281
%RSD		1.0	1.320	4.438	1.826	3.038	2.793	2.434	1.305	1.328	1.884
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	5061.000	62800.000	2998.000	75570.000	75440.000	74.1%	98.930	94.480	95.830	14610.000
2	17:54:09	5143.000	64470.000	3097.000	75650.000	76360.000	73.0%	97.880	95.480	98.310	16470.000
3	17:54:36	4981.000	65930.000	3116.000	77650.000	77640.000	71.6%	102.600	99.060	98.250	17810.000
X		5062.000	64400.000	3070.000	76290.000	76480.000	72.9%	99.810	96.340	97.460	16300.000
S		81.140	1566.000	63.540	1178.000	1103.000	1.3%	2.489	2.406	1.420	1603.000
%RSD		1.603	2.431	2.070	1.544	1.442	1.7	2.494	2.498	1.457	9.839
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	1204.000	106.300	1094.000	1218.000	92.340	92.480	94.430	94.760	96.560	99.410
2	17:54:09	1218.000	107.000	1133.000	1229.000	94.190	93.450	94.380	94.260	97.290	99.250
3	17:54:36	1273.000	112.200	1154.000	1275.000	96.010	95.200	98.700	94.400	96.480	97.570
X		1231.000	108.500	1127.000	1241.000	94.180	93.710	95.830	94.470	96.780	98.740
S		36.540	3.240	30.290	30.210	1.832	1.377	2.481	0.254	0.446	1.022
%RSD		2.967	2.986	2.689	2.434	1.946	1.469	2.589	0.269	0.461	1.035
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	98.690	99.430	102.100	98.210	12.570	10.780	427.200	96.470	2.198	165.400
2	17:54:09	102.900	101.000	101.700	97.190	15.580	13.660	453.100	102.100	-2.247	167.600
3	17:54:36	101.500	100.800	105.000	97.030	14.040	13.650	455.800	101.600	-1.745	167.100
X		101.000	100.400	103.000	97.480	14.060	12.700	445.400	100.000	-0.598	166.700
S		2.134	0.858	1.798	0.639	1.509	1.663	15.790	3.112	2.434	1.120
%RSD		2.112	0.855	1.746	0.655	10.730	13.090	3.544	3.110	406.900	0.672
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	73.4%	102.400	100.800	98.340	104.100	97.980	97.030	96.180	97.590	73.4%
2	17:54:09	73.4%	102.500	102.400	100.400	93.490	98.760	96.860	99.240	96.310	73.8%
3	17:54:36	73.5%	102.900	100.400	101.000	102.100	99.890	98.440	96.840	96.820	74.4%
X		73.4%	102.600	101.200	99.910	99.900	98.880	97.440	97.420	96.910	73.9%
S		0.0%	0.239	1.009	1.383	5.652	0.959	0.867	1.612	0.645	0.5%
%RSD		0.1	0.233	0.997	1.384	5.657	0.970	0.890	1.655	0.665	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:53:42	99.790	99.480	100.300	99.920	275.200	269.400	79.2%	99.300	105.200	103.000
2	17:54:09	99.120	100.400	100.500	98.060	278.300	274.300	81.2%	99.660	103.500	98.000
3	17:54:36	99.560	101.400	100.200	100.500	275.900	272.500	80.6%	100.900	105.000	100.300
X		99.490	100.400	100.300	99.500	276.400	272.100	80.4%	99.940	104.600	100.400
S		0.344	0.955	0.146	1.284	1.616	2.485	1.0%	0.823	0.958	2.511
%RSD		0.346	0.950	0.145	1.291	0.584	0.914	1.3	0.823	0.916	2.500
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:53:42	100.600	100.300	82.5%							
2	17:54:09	98.350	96.910	82.1%							
3	17:54:36	98.980	98.450	82.1%							
X		99.310	98.540	82.2%							
S		1.160	1.677	0.2%							
%RSD		1.168	1.702	0.2							

VD17091-005L(5)

4/22/2020 17:59:06

User Pre-dilution: 1.000

user Predefinition: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	82.7%	0.006	6.386	5.822	-19.410	1182.000	4478.000	4753.000	5091.000	7.650
2	17:59:59	82.7%	-0.038	6.263	5.797	-20.090	1184.000	4575.000	4845.000	5037.000	6.579
3	18:00:26	81.9%	-0.008	6.438	6.219	-15.610	1232.000	4645.000	4870.000	5177.000	6.651
X		82.5%	-0.013	6.362	5.946	-18.370	1199.000	4566.000	4822.000	5102.000	6.960
S		0.5%	0.022	0.090	0.237	2.414	28.240	83.700	61.740	70.330	0.599
%RSD		0.6	165.500	1.416	3.984	13.140	2.355	1.833	1.280	1.379	8.602
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	922.500	13900.000	483.900	14950.000	14640.000	76.1%	0.212	-0.220	0.310	5719.000
2	17:59:59	907.800	14200.000	489.100	14720.000	14590.000	76.9%	0.184	-0.756	0.257	5859.000
3	18:00:26	940.200	14600.000	508.600	15400.000	14860.000	75.1%	0.189	-0.184	0.300	5865.000
X		923.500	14230.000	493.900	15020.000	14700.000	76.0%	0.195	-0.387	0.289	5814.000
S		16.200	351.600	13.050	342.700	143.700	0.9%	0.015	0.320	0.028	82.970
%RSD		1.755	2.470	2.642	2.281	0.978	1.2	7.659	82.860	9.793	1.427
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	16.270	2.417	33.430	41.210	-0.001	0.177	0.257	0.044	0.034	0.346
2	17:59:59	17.190	2.419	31.210	40.910	0.015	0.118	-0.188	0.051	0.065	0.341
3	18:00:26	18.050	2.469	32.500	41.210	0.023	0.137	-0.125	0.024	0.067	0.404
X		17.170	2.435	32.380	41.110	0.012	0.144	-0.019	0.040	0.055	0.364
S		0.892	0.030	1.113	0.170	0.012	0.030	0.240	0.014	0.019	0.035
%RSD		5.194	1.213	3.436	0.414	96.790	21.080	1297.000	34.410	34.130	9.578
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	1.858	0.756	0.128	-0.291	3.116	2.943	1.437	0.455	-1.344	13.680
2	17:59:59	2.004	0.854	-0.030	0.044	2.390	2.035	0.352	-0.068	0.975	13.550
3	18:00:26	0.982	0.811	-0.042	0.169	2.779	2.382	-1.462	-0.685	2.553	14.340
X		1.615	0.807	0.018	-0.026	2.762	2.453	0.109	-0.099	0.728	13.850
S		0.552	0.049	0.095	0.238	0.363	0.459	1.465	0.570	1.960	0.423
%RSD		34.220	6.133	514.500	916.200	13.160	18.690	1341.000	573.700	269.400	3.055
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	75.2%	0.086	0.118	0.020	-0.302	0.003	-0.000	-0.004	0.012	78.5%
2	17:59:59	76.5%	0.187	0.190	0.159	0.205	0.005	-0.002	-0.013	0.002	77.9%
3	18:00:26	74.9%	0.103	0.124	0.037	0.403	0.003	-0.004	0.004	-0.002	76.9%
X		75.5%	0.125	0.144	0.072	0.102	0.003	-0.002	-0.005	0.004	77.8%
S		0.9%	0.054	0.040	0.076	0.363	0.001	0.002	0.008	0.007	0.8%
%RSD		1.1	43.120	27.540	105.900	356.400	33.540	91.540	178.000	189.800	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:32	0.059	0.132	0.009	-0.014	31.310	32.870	80.5%	0.031	0.033	0.002
2	17:59:59	0.067	0.145	0.021	0.005	32.710	33.940	81.3%	0.035	0.041	0.001
3	18:00:26	0.095	0.170	0.015	0.010	35.550	33.910	81.4%	0.036	0.028	-0.007
X		0.074	0.149	0.015	0.001	33.190	33.570	81.1%	0.034	0.034	-0.002
S		0.019	0.019	0.006	0.013	2.160	0.610	0.5%	0.003	0.006	0.005
%RSD		25.600	12.900	36.810	2229.000	6.507	1.817	0.6	8.281	18.660	333.900
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	17:59:32	-0.010	-0.004	84.7%							
2	17:59:59	0.008	-0.002	84.3%							
3	18:00:26	-0.006	-0.010	85.6%							
X		-0.003	-0.005	84.9%							
S		0.009	0.004	0.6%							
%RSD		360.500	85.050	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	83.3%	94.560	67.350	69.490	-45.490	18320.000	18210.000	18210.000	23860.000	121.900
2	18:05:49	83.6%	97.930	74.210	75.520	-44.280	16675.000	19020.000	19020.000	25260.000	125.400
3	18:06:16	82.8%	100.600	70.980	74.650	-45.150	16643.000	18770.000	19150.000	25440.000	127.100
X		83.2%	97.690	70.850	73.220	-44.970	16601.000	18700.000	18790.000	24850.000	124.800
S		0.4%	3.026	3.436	3.257	0.621	101.300	356.000	509.300	864.600	2.640
%RSD		0.5	3.098	4.849	4.449	1.381	1.535	1.904	2.710	3.479	2.116
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	4731.000	62730.000	2928.000	71750.000	71670.000	74.7%	98.640	96.080	97.020	19730.000
2	18:05:49	4720.000	64540.000	3061.000	73410.000	72790.000	72.9%	103.600	96.810	97.740	22040.000
3	18:06:16	4793.000	65390.000	3073.000	74940.000	74010.000	72.5%	100.400	99.020	100.900	20280.000
X		4748.000	64220.000	3021.000	73370.000	72820.000	73.4%	100.900	97.310	98.540	20680.000
S		39.350	1360.000	80.720	1597.000	1167.000	1.2%	2.502	1.529	2.044	1206.000
%RSD		0.829	2.118	2.672	2.177	1.603	1.6	2.481	1.571	2.074	5.833
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	1203.000	107.500	1109.000	1216.000	93.890	94.200	97.310	94.980	97.860	99.190
2	18:05:49	1220.000	108.300	1120.000	1220.000	97.110	95.720	96.170	97.200	98.880	99.120
3	18:06:16	1255.000	109.600	1122.000	1230.000	96.540	94.550	98.100	95.580	95.570	98.370
X		1226.000	108.500	1117.000	1222.000	95.850	94.820	97.190	95.920	97.440	98.890
S		26.770	1.049	7.339	7.008	1.719	0.795	0.969	1.145	1.693	0.454
%RSD		2.184	0.967	0.657	0.574	1.794	0.839	0.997	1.194	1.738	0.459
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	103.000	99.570	104.600	93.700	14.910	16.190	449.400	100.300	0.651	164.000
2	18:05:49	102.700	99.700	106.300	94.760	14.680	14.010	436.700	99.330	-0.855	162.300
3	18:06:16	103.900	99.310	102.900	92.280	15.660	13.590	425.600	95.280	0.615	161.900
X		103.200	99.520	104.600	93.580	15.080	14.600	437.200	98.300	0.137	162.800
S		0.645	0.196	1.696	1.240	0.511	1.394	11.890	2.651	0.859	1.090
%RSD		0.625	0.197	1.622	1.325	3.390	9.553	2.719	2.697	627.300	0.670
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	74.3%	102.700	101.800	100.500	103.500	100.500	98.260	97.470	98.280	75.3%
2	18:05:49	75.5%	102.800	102.200	100.800	103.200	100.200	98.580	100.700	98.420	74.7%
3	18:06:16	75.3%	104.000	102.600	101.900	98.410	99.130	97.720	98.500	96.730	75.5%
X		75.0%	103.200	102.200	101.100	101.700	99.960	98.190	98.890	97.810	75.1%
S		0.6%	0.733	0.413	0.740	2.868	0.729	0.433	1.651	0.937	0.4%
%RSD		0.8	0.710	0.405	0.732	2.820	0.730	0.441	1.670	0.958	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:05:22	101.500	100.300	89.670	89.200	269.000	259.900	82.1%	97.820	105.300	100.700
2	18:05:49	99.670	100.600	90.880	90.060	269.600	265.700	81.9%	101.700	105.200	100.000
3	18:06:16	99.870	98.980	92.280	89.680	265.400	262.400	83.1%	102.200	103.400	97.180
X		100.300	99.940	90.940	89.650	268.000	262.700	82.4%	100.600	104.600	99.290
S		0.991	0.851	1.308	0.429	2.316	2.896	0.6%	2.407	1.091	1.856
%RSD		0.988	0.852	1.438	0.478	0.864	1.102	0.8	2.393	1.042	1.869
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:05:22	98.820	98.850	84.5%							
2	18:05:49	99.090	98.580	83.0%							
3	18:06:16	98.410	96.760	82.3%							
X		98.770	98.060	83.3%							
S		0.342	1.139	1.1%							
%RSD		0.346	1.162	1.4							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	81.9%	-0.008	5.226	5.304	-27.570	72570.000	33380.000	34850.000	56570.000	190.800
2	18:11:38	81.0%	0.051	4.937	5.510	-30.930	73630.000	33520.000	34830.000	55840.000	188.700
3	18:12:05	80.8%	-0.008	4.062	4.914	-35.070	74500.000	33490.000	34760.000	56430.000	195.200
X		81.3%	0.012	4.742	5.243	-31.190	73570.000	33470.000	34810.000	56280.000	191.600
S		0.6%	0.034	0.606	0.303	3.758	971.300	71.640	48.010	391.900	3.299
%RSD		0.7	290.500	12.780	5.772	12.050	1.320	0.214	0.138	0.696	1.722
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	TM 10150.000	57200.000	2020.000	69290.000	69540.000	71.6%	5.397	0.607	0.977	15490.000
2	18:11:38	TM 10430.000	58450.000	2034.000	69040.000	68420.000	71.2%	5.240	-0.178	0.987	15990.000
3	18:12:05	TM 10400.000	58170.000	2045.000	70270.000	69780.000	71.1%	4.917	0.939	1.029	15120.000
X		TM 10330.000	57940.000	2033.000	69530.000	69240.000	71.3%	5.185	0.456	0.998	15530.000
S		TM 154.700	657.800	12.310	649.500	727.800	0.3%	0.245	0.573	0.028	435.100
%RSD		TM 1.498	1.135	0.606	0.934	1.051	0.4	4.719	125.700	2.801	2.801
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	4178.000	TM 2823.000	3895.000	4039.000	6.968	3.472	2.750	0.592	0.592	4.117
2	18:11:38	4173.000	TM 2912.000	3980.000	4072.000	6.885	3.426	3.501	0.736	0.671	4.077
3	18:12:05	4197.000	TM 2894.000	3949.000	4115.000	7.281	3.347	3.768	0.693	0.794	3.859
X		4182.000	TM 2876.000	3941.000	4075.000	7.045	3.415	3.340	0.673	0.686	4.018
S		12.370	TM 46.920	42.820	38.370	0.209	0.063	0.528	0.074	0.102	0.139
%RSD		0.296	TM 1.631	1.087	0.942	2.962	1.856	15.810	11.000	14.800	3.457
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	11.830	10.090	13.840	-0.015	1763.000	1781.000	8.131	1.595	0.220	M 643.800
2	18:11:38	11.310	8.866	15.180	-0.288	1777.000	1768.000	5.609	0.574	3.662	M 656.400
3	18:12:05	11.900	9.772	14.100	1.171	1825.000	1810.000	4.669	0.340	3.706	M 657.900
X		11.680	9.576	14.370	0.289	1788.000	1786.000	6.137	0.837	2.529	M 652.700
S		0.320	0.635	0.709	0.775	32.640	21.490	1.790	0.667	2.000	M 7.729
%RSD		2.742	6.637	4.934	267.900	1.825	1.203	29.180	79.790	79.080	M 1.184
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	73.8%	0.645	0.701	0.704	15.390	0.009	0.004	-0.007	0.015	73.8%
2	18:11:38	74.1%	0.844	0.423	0.601	17.570	0.001	0.004	0.043	0.054	73.2%
3	18:12:05	73.6%	0.735	0.748	0.626	10.230	0.007	0.009	0.035	0.022	73.4%
X		73.8%	0.741	0.624	0.644	14.400	0.006	0.006	0.024	0.030	73.5%
S		0.2%	0.100	0.175	0.054	3.766	0.004	0.002	0.027	0.021	0.3%
%RSD		0.3	13.440	28.090	8.346	26.160	71.110	42.800	112.200	69.110	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:11	0.279	0.443	0.496	0.452	421.000	419.600	80.5%	0.023	0.008	0.144
2	18:11:38	0.278	0.397	0.383	0.459	434.700	423.200	81.5%	0.015	0.012	0.147
3	18:12:05	0.265	0.422	0.433	0.362	431.200	420.000	81.9%	0.013	0.010	0.136
X		0.274	0.421	0.437	0.424	428.900	420.900	81.3%	0.017	0.010	0.142
S		0.008	0.023	0.057	0.054	7.133	1.986	0.7%	0.005	0.002	0.006
%RSD		2.890	5.468	12.940	12.780	1.663	0.472	0.9	30.130	17.180	4.086
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:11:11	0.129	0.130	79.0%							
2	18:11:38	0.139	0.126	80.3%							
3	18:12:05	0.147	0.123	80.4%							
X		0.138	0.126	79.9%							
S		0.009	0.004	0.8%							
%RSD		6.742	2.794	1.0							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	82.9%	-0.009	0.937	1.105	-66.960	TM 144200.000	TM 48430.000	TM 50720.000	TM 86250.000	7.965
2	18:17:29	82.9%	-0.038	0.916	1.239	-66.840	TM 147300.000	TM 48640.000	TM 51070.000	TM 87110.000	8.537
3	18:17:56	84.7%	-0.010	0.736	1.345	-66.080	TM 148100.000	TM 49300.000	TM 51390.000	TM 88760.000	9.126
X		83.5%	-0.019	0.863	1.230	-66.630	TM 146500.000	TM 48790.000	TM 51060.000	TM 87370.000	8.543
S		1.0%	0.016	0.111	0.121	0.474	TM 2021.000	TM 452.400	TM 335.400	TM 1279.000	0.581
%RSD		1.2	87.680	12.820	9.795	0.712	TM 1.379	TM 0.927	TM 0.657	TM 1.464	6.800
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	TM 14000.000	TM 58950.000	1491.000	TM 105000.000	TM 103300.000	76.8%	1.384	4.547	0.824	17180.000
2	18:17:29	TM 14230.000	TM 60190.000	1522.000	TM 105600.000	TM 107100.000	75.9%	1.272	5.536	0.830	17760.000
3	18:17:56	TM 13700.000	TM 60490.000	1511.000	TM 105800.000	TM 107000.000	75.1%	1.702	4.821	0.882	18920.000
X		TM 13980.000	TM 59880.000	1508.000	TM 105500.000	TM 105800.000	75.9%	1.453	4.968	0.846	17950.000
S		TM 261.700	TM 818.500	15.700	TM 447.900	TM 2137.000	0.8%	0.224	0.511	0.032	885.600
%RSD		TM 1.873	TM 1.367	1.041	TM 0.425	TM 2.020	1.1	15.390	10.280	3.784	4.933
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	271.400	TM 556.400	284.700	406.800	1.528	2.397	1.888	1.067	1.141	1.850
2	18:17:29	269.100	TM 544.800	288.500	390.500	1.537	2.260	0.943	1.074	0.894	1.900
3	18:17:56	267.200	TM 560.300	287.400	400.100	1.564	2.218	1.207	1.109	1.042	1.634
X		269.200	TM 553.800	286.900	399.100	1.543	2.292	1.346	1.083	1.026	1.795
S		2.124	TM 8.064	1.930	8.213	0.019	0.093	0.488	0.022	0.125	0.142
%RSD		0.789	TM 1.456	0.673	2.058	1.204	4.075	36.230	2.051	12.140	7.894
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	8.085	6.621	0.519	0.428	2233.000	2211.000	10.610	2.062	0.560	TM 963.000
2	18:17:29	9.185	5.961	-0.321	-0.080	2195.000	2204.000	7.547	1.157	2.395	TM 969.700
3	18:17:56	8.559	5.862	0.484	0.623	2228.000	2259.000	12.610	2.420	1.054	TM 976.300
X		8.610	6.148	0.228	0.324	2219.000	2225.000	10.260	1.880	1.336	TM 969.700
S		0.551	0.412	0.475	0.363	20.750	30.140	2.551	0.651	0.950	TM 6.640
%RSD		6.406	6.710	208.700	112.100	0.935	1.355	24.870	34.650	71.100	TM 0.685
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	75.5%	1.068	1.082	1.016	19.580	0.003	-0.000	0.088	0.141	76.0%
2	18:17:29	76.7%	0.935	1.203	1.008	23.540	0.001	0.012	0.137	0.169	75.5%
3	18:17:56	75.5%	1.064	0.897	1.081	18.760	-0.003	0.002	0.183	0.135	76.2%
X		75.9%	1.022	1.061	1.035	20.630	0.000	0.005	0.136	0.148	75.9%
S		0.7%	0.076	0.155	0.040	2.552	0.003	0.007	0.047	0.018	0.4%
%RSD		0.9	7.400	14.570	3.909	12.370	1265.000	140.000	35.030	12.420	0.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:02	0.358	0.423	0.288	0.241	330.000	320.900	84.2%	0.027	0.033	0.051
2	18:17:29	0.237	0.388	0.300	0.343	331.200	326.300	82.9%	0.033	0.026	0.052
3	18:17:56	0.254	0.361	0.291	0.272	328.800	326.100	84.7%	0.033	0.028	0.048
X		0.283	0.391	0.293	0.285	330.000	324.400	83.9%	0.031	0.029	0.050
S		0.066	0.031	0.006	0.052	1.170	3.036	0.9%	0.004	0.004	0.002
%RSD		23.230	7.915	2.068	18.300	0.354	0.936	1.1	11.760	12.470	3.377
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:17:02	0.039	0.031	79.5%							
2	18:17:29	0.057	0.040	81.4%							
3	18:17:56	0.034	0.034	82.3%							
X		0.043	0.035	81.1%							
S		0.012	0.005	1.4%							
%RSD		27.620	13.600	1.8							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	84.3%	-0.024	2.946	3.686	-44.420	TM 150200.000	TM 45710.000	TM 46770.000	TM 74450.000	43.420
2	18:23:20	86.0%	0.017	3.928	3.515	-46.430	TM 147500.000	TM 44850.000	TM 45670.000	TM 72600.000	41.350
3	18:23:47	84.6%	-0.038	3.226	3.335	-48.890	TM 149400.000	TM 45520.000	TM 46790.000	TM 74540.000	41.790
X		85.0%	-0.015	3.367	3.512	-46.580	TM 149000.000	TM 45360.000	TM 46410.000	TM 73860.000	42.190
S		0.9%	0.029	0.506	0.175	2.243	TM 1413.000	TM 449.000	TM 640.100	TM 1094.000	1.094
%RSD		1.1	195.300	15.040	4.998	4.815	TM 0.948	TM 0.990	TM 1.379	TM 1.480	2.593
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	TM 9461.000	TM 67060.000	1472.000	TM 199000.000	TM 194600.000	74.3%	2.117	1.603	0.815	15450.000
2	18:23:20	TM 9406.000	TM 66940.000	1435.000	TM 195000.000	TM 194600.000	76.8%	1.689	0.588	0.794	15930.000
3	18:23:47	TM 9395.000	TM 67440.000	TM 1399.000	TM 196200.000	TM 195600.000	75.6%	1.742	1.225	0.809	15890.000
X		TM 9421.000	TM 67150.000	TM 1435.000	TM 196800.000	TM 195000.000	75.6%	1.849	1.139	0.806	15760.000
S		TM 35.640	TM 262.800	TM 36.430	TM 2076.000	TM 578.800	1.3%	0.234	0.513	0.011	266.700
%RSD		TM 0.378	TM 0.391	TM 2.539	TM 1.055	TM 0.297	1.7	12.630	45.050	1.361	1.692
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	39.270	TM 1036.000	53.200	327.700	0.465	11.610	10.550	0.716	0.787	2.860
2	18:23:20	40.890	TM 1015.000	52.420	319.800	0.521	11.010	10.950	0.796	0.827	2.598
3	18:23:47	39.520	TM 1042.000	54.210	316.500	0.508	11.780	8.688	0.819	0.826	2.851
X		39.890	TM 1031.000	53.280	321.400	0.498	11.470	10.060	0.777	0.813	2.770
S		0.874	TM 14.230	0.897	5.759	0.029	0.401	1.208	0.054	0.023	0.149
%RSD		2.190	TM 1.380	1.684	1.792	5.863	3.500	12.010	6.965	2.822	5.368
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	19.520	15.180	-0.342	-0.038	2746.000	2730.000	7.026	1.071	1.896	TM 946.900
2	18:23:20	19.210	14.080	1.973	-0.156	2712.000	2757.000	1.717	-0.299	2.802	TM 971.700
3	18:23:47	20.100	15.140	1.708	0.161	2801.000	2850.000	6.198	1.105	0.058	TM 987.900
X		19.610	14.800	1.113	-0.011	2753.000	2779.000	4.980	0.626	1.585	TM 968.800
S		0.452	0.625	1.267	0.160	44.520	62.790	2.857	0.801	1.398	TM 20.630
%RSD		2.304	4.222	113.800	1447.000	1.617	2.260	57.360	128.000	88.200	TM 2.129
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	77.3%	0.629	0.649	0.621	21.250	0.011	0.008	0.440	0.458	74.7%
2	18:23:20	77.3%	0.595	0.664	0.600	27.290	0.003	0.004	0.487	0.457	76.2%
3	18:23:47	76.1%	0.732	0.566	0.636	26.900	0.003	0.008	0.383	0.403	74.7%
X		76.9%	0.652	0.626	0.619	25.150	0.006	0.007	0.437	0.439	75.2%
S		0.7%	0.072	0.053	0.019	3.376	0.005	0.003	0.052	0.031	0.9%
%RSD		0.9	11.000	8.394	2.995	13.420	83.260	36.200	11.920	7.119	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:22:53	0.455	0.447	0.154	0.184	TM 918.400	TM 906.500	83.7%	0.009	0.004	0.071
2	18:23:20	0.434	0.374	0.218	0.117	TM 916.500	TM 889.400	84.4%	0.001	0.004	0.044
3	18:23:47	0.420	0.456	0.179	0.140	TM 948.000	TM 910.400	85.9%	0.004	0.001	0.059
X		0.436	0.425	0.184	0.147	TM 927.600	TM 902.100	84.7%	0.005	0.003	0.058
S		0.018	0.045	0.032	0.034	TM 17.670	TM 11.170	1.1%	0.004	0.002	0.014
%RSD		4.093	10.500	17.690	23.180	TM 1.905	TM 1.238	1.3	80.670	58.890	23.910
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:22:53	0.028	0.053	81.3%							
2	18:23:20	0.040	0.045	81.1%							
3	18:23:47	0.035	0.052	82.2%							
X		0.034	0.050	81.6%							
S		0.006	0.004	0.6%							
%RSD		18.530	8.570	0.7							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	83.1%	99.540	33.600	36.370	-48.140	TM 150000.000	T 45650.000	T 47030.000	T 74950.000	176.800
2	18:29:14	81.8%	98.180	32.200	37.370	-45.530	TM 149200.000	T 46080.000	T 47480.000	T 73420.000	171.700
3	18:29:41	80.9%	98.930	33.610	37.170	-49.800	TM 151100.000	T 47100.000	T 48470.000	T 76130.000	176.500
X		82.0%	98.880	33.140	36.970	-47.820	TM 150100.000	T 46280.000	T 47660.000	T 74830.000	175.000
S		1.1%	0.678	0.816	0.529	2.153	TM 975.400	T 743.800	T 736.300	T 1363.000	2.866
%RSD		1.3	0.686	2.462	1.430	4.501	TM 0.650	T 1.607	T 1.545	T 1.821	1.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	TM 10070.000	T 67120.000	T 2202.000	M 199700.000	TM 195900.000	73.5%	101.500	100.500	96.420	18320.000
2	18:29:14	TM 10260.000	T 66530.000	T 2197.000	M 195300.000	TM 194700.000	74.2%	100.800	99.980	95.780	18070.000
3	18:29:41	TM 10300.000	T 68500.000	T 2231.000	M 197900.000	TM 197600.000	72.7%	100.900	101.500	96.990	18800.000
X		TM 10210.000	T 67380.000	T 2210.000	M 197600.000	TM 196100.000	73.5%	101.100	100.700	96.400	18400.000
S		TM 125.200	T 1012.000	T 18.530	M 2237.000	TM 1492.000	0.7%	0.375	0.778	0.606	369.500
%RSD		TM 1.226	T 1.502	T 0.839	M 1.132	TM 0.761	1.0	0.371	0.772	0.629	2.008
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	1144.000	TM 1126.000	T 1083.000	1364.000	94.250	103.700	103.600	92.500	94.130	95.400
2	18:29:14	1145.000	TM 1127.000	T 1070.000	1326.000	92.870	103.400	104.000	90.570	97.170	96.810
3	18:29:41	1143.000	TM 1129.000	T 1078.000	1367.000	93.610	103.100	103.700	92.720	95.130	96.400
X		1144.000	TM 1127.000	T 1077.000	1352.000	93.580	103.400	103.800	91.930	95.480	96.200
S		1.145	TM 1.422	T 6.568	23.120	0.690	0.310	0.214	1.184	1.546	0.727
%RSD		0.100	TM 0.126	T 0.610	1.710	0.737	0.299	0.207	1.288	1.620	0.756
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	112.700	103.700	103.200	90.480	2721.000	2735.000	439.800	99.670	0.071	TM 1053.000
2	18:29:14	118.500	107.100	104.100	91.750	2797.000	2799.000	444.000	100.600	-0.335	TM 1085.000
3	18:29:41	114.700	106.300	103.300	92.220	2816.000	2833.000	427.200	95.400	1.136	TM 1062.000
X		115.300	105.700	103.500	91.480	2778.000	2789.000	437.000	98.540	0.290	TM 1067.000
S		2.915	1.795	0.492	0.897	50.360	50.150	8.783	2.757	0.760	TM 16.550
%RSD		2.529	1.699	0.476	0.981	1.813	1.798	2.010	2.798	261.600	TM 1.552
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	76.2%	102.100	102.900	99.490	112.800	95.870	95.040	96.510	96.130	75.3%
2	18:29:14	74.6%	103.800	105.200	103.500	123.800	98.450	95.930	98.270	95.620	74.2%
3	18:29:41	74.7%	106.100	104.200	103.200	122.800	97.510	94.620	98.920	97.490	74.9%
X		75.1%	104.000	104.100	102.000	119.800	97.280	95.200	97.900	96.410	74.8%
S		0.9%	1.997	1.173	2.213	6.062	1.307	0.666	1.248	0.967	0.6%
%RSD		1.2	1.921	1.127	2.169	5.060	1.343	0.699	1.275	1.003	0.7
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:47	99.110	97.830	99.370	97.480	M 1015.000	M 990.400	82.8%	101.100	99.900	95.190
2	18:29:14	101.600	102.300	102.200	97.460	M 1034.000	M 995.500	82.5%	101.300	101.600	96.840
3	18:29:41	99.590	101.500	102.500	98.590	M 1011.000	M 994.900	82.2%	103.100	103.600	98.050
X		100.100	100.600	101.400	97.840	M 1020.000	M 993.600	82.5%	101.800	101.700	96.690
S		1.335	2.394	1.728	0.644	M 12.490	M 2.775	0.3%	1.117	1.869	1.436
%RSD		1.334	2.380	1.705	0.658	M 1.225	M 0.279	0.4	1.097	1.838	1.485
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:28:47	97.190	95.260	79.5%							
2	18:29:14	96.760	95.780	80.8%							
3	18:29:41	96.370	96.370	79.7%							
X		96.770	95.810	80.0%							
S		0.407	0.555	0.7%							
%RSD		0.421	0.579	0.9							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	83.6%	97.400	30.460	35.660	-46.350	<u>TM 146200.000</u>	<u>T 45160.000</u>	<u>T 47060.000</u>	<u>T 73310.000</u>	168.900
2	18:35:04	84.0%	97.310	32.840	35.220	-50.780	<u>TM 149900.000</u>	<u>T 45220.000</u>	<u>T 47240.000</u>	<u>T 74550.000</u>	172.400
3	18:35:31	82.9%	97.810	33.470	37.560	-50.220	<u>TM 150500.000</u>	<u>T 45760.000</u>	<u>T 46870.000</u>	<u>T 74000.000</u>	172.400
X		83.5%	97.500	32.260	36.150	-49.110	<u>TM 148900.000</u>	<u>T 45380.000</u>	<u>T 47060.000</u>	<u>T 73950.000</u>	171.300
S		0.6%	0.267	1.588	1.247	2.412	<u>TM 2303.000</u>	<u>T 333.500</u>	<u>T 184.700</u>	<u>T 619.200</u>	2.056
%RSD		0.7	0.273	4.924	3.449	4.911	<u>TM 1.547</u>	<u>T 0.735</u>	<u>T 0.393</u>	<u>T 0.837</u>	1.200
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	<u>T 9834.000</u>	<u>T 67130.000</u>	2304.000	<u>M 192800.000</u>	<u>TM 188600.000</u>	74.5%	97.590	97.610	93.350	17970.000
2	18:35:04	<u>T 9565.000</u>	<u>T 67920.000</u>	2374.000	<u>M 198100.000</u>	<u>TM 193700.000</u>	72.9%	100.200	98.730	95.660	18410.000
3	18:35:31	<u>T 9844.000</u>	<u>T 66980.000</u>	<u>T 2158.000</u>	<u>M 193700.000</u>	<u>TM 192200.000</u>	73.8%	101.400	99.250	96.400	17980.000
X		<u>T 9747.000</u>	<u>T 67340.000</u>	<u>T 2279.000</u>	<u>M 194900.000</u>	<u>TM 191500.000</u>	73.7%	99.720	98.530	95.140	18120.000
S		<u>T 158.000</u>	<u>T 505.100</u>	<u>T 110.300</u>	<u>M 2858.000</u>	<u>TM 2590.000</u>	0.8%	1.926	0.840	1.594	252.900
%RSD		<u>T 1.621</u>	<u>T 0.750</u>	<u>T 4.838</u>	<u>M 1.467</u>	<u>TM 1.352</u>	1.1	1.931	0.852	1.676	1.395
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	1148.000	<u>TM 1096.000</u>	<u>T 1062.000</u>	1323.000	91.680	99.230	107.700	90.250	92.840	95.360
2	18:35:04	1148.000	<u>TM 1112.000</u>	<u>T 1059.000</u>	1322.000	93.730	103.800	102.900	91.020	95.200	98.640
3	18:35:31	1122.000	<u>TM 1113.000</u>	<u>T 1066.000</u>	1333.000	92.570	100.500	98.400	90.510	95.160	96.080
X		1139.000	<u>TM 1107.000</u>	<u>T 1062.000</u>	1326.000	92.660	101.200	103.000	90.590	94.400	96.690
S		14.560	<u>TM 9.616</u>	<u>T 3.431</u>	6.264	1.028	2.366	4.649	0.392	1.351	1.724
%RSD		1.278	<u>TM 0.869</u>	<u>T 0.323</u>	0.472	1.110	2.339	4.513	0.433	1.431	1.783
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	110.200	105.600	102.100	93.620	2637.000	2671.000	462.100	105.100	0.063	<u>TM 1022.000</u>
2	18:35:04	112.400	104.700	104.400	90.260	2695.000	2732.000	458.700	104.200	1.135	<u>TM 1062.000</u>
3	18:35:31	110.400	103.300	105.400	91.350	2686.000	2746.000	418.200	95.310	2.533	<u>TM 1055.000</u>
X		111.000	104.500	104.000	91.750	2672.000	2716.000	446.300	101.500	1.244	<u>TM 1046.000</u>
S		1.211	1.197	1.711	1.714	30.960	40.330	24.400	5.400	1.239	<u>TM 21.350</u>
%RSD		1.091	1.145	1.646	1.868	1.159	1.485	5.468	5.319	99.610	<u>TM 2.041</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	76.2%	102.100	102.100	101.800	116.200	95.920	93.940	94.800	93.670	75.2%
2	18:35:04	74.7%	105.100	103.700	101.600	120.500	96.440	94.590	98.500	96.570	73.7%
3	18:35:31	75.3%	104.100	103.600	101.700	127.500	97.420	96.600	97.430	97.830	74.0%
X		75.4%	103.800	103.100	101.700	121.400	96.590	95.040	96.910	96.020	74.3%
S		0.7%	1.540	0.893	0.100	5.731	0.758	1.387	1.903	2.132	0.8%
%RSD		1.0	1.484	0.866	0.098	4.721	0.785	1.459	1.963	2.220	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:37	97.430	98.550	98.920	96.350	<u>M 988.700</u>	<u>M 972.700</u>	82.5%	98.850	99.390	95.670
2	18:35:04	100.900	99.570	100.500	98.020	<u>M 1007.000</u>	<u>M 978.700</u>	81.7%	100.800	101.000	98.520
3	18:35:31	99.640	99.400	102.200	97.280	<u>M 1002.000</u>	<u>M 976.500</u>	82.5%	100.600	100.300	97.070
X		99.330	99.170	100.500	97.220	<u>M 999.500</u>	<u>M 976.000</u>	82.2%	100.100	100.300	97.090
S		1.756	0.547	1.617	0.836	<u>M 9.690</u>	<u>M 3.018</u>	0.5%	1.080	0.813	1.427
%RSD		1.768	0.552	1.609	0.859	<u>M 0.970</u>	<u>M 0.309</u>	0.6	1.079	0.811	1.470
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:34:37	95.170	93.540	80.1%							
2	18:35:04	97.510	96.500	79.9%							
3	18:35:31	95.860	95.360	80.2%							
X		96.180	95.130	80.1%							
S		1.200	1.495	0.1%							
%RSD		1.248	1.571	0.2							

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User Pre-dilution: 1.000

user file location: 12000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	84.8%	0.018	1.685	2.029	-28.460	±29020.000	±12050.000	±12060.000	±14420.000	9.291
2	18:40:55	85.0%	-0.024	2.215	2.250	-27.240	±29400.000	±12260.000	±12260.000	±14670.000	11.650
3	18:41:22	86.0%	-0.038	1.805	1.889	-23.720	±30610.000	±12480.000	±12650.000	±15190.000	9.323
X		85.3%	-0.015	1.902	2.056	-26.470	±29680.000	±12270.000	±12320.000	±14760.000	10.090
S		0.6%	0.029	0.278	0.182	2.459	±828.300	±213.400	±302.600	±388.700	1.354
%RSD		0.8	202.600	14.600	8.849	9.290	±2.791	±1.740	±2.456	±2.633	13.420
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	±1959.000	14710.000	314.700	37990.000	±37660.000	79.6%	0.299	0.037	0.291	5673.000
2	18:40:55	2110.000	14800.000	313.200	39100.000	±38630.000	78.1%	0.280	-0.123	0.238	5890.000
3	18:41:22	2156.000	15190.000	±336.100	40660.000	±39850.000	78.1%	0.305	-0.298	0.262	5999.000
X		±2075.000	14900.000	±321.300	39250.000	±38710.000	78.6%	0.295	-0.128	0.264	5854.000
S		±103.400	257.000	±12.780	1342.000	±1096.000	0.9%	0.013	0.167	0.027	165.700
%RSD		±4.982	1.725	±3.978	3.418	±2.830	1.1	4.386	130.500	10.080	2.831
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	8.741	210.200	25.010	70.020	0.103	2.461	2.026	0.165	0.138	0.712
2	18:40:55	8.838	211.600	25.320	75.650	0.092	2.516	2.222	0.174	0.237	0.699
3	18:41:22	10.370	216.000	24.960	73.170	0.107	2.109	2.031	0.137	0.226	0.743
X		9.316	212.600	25.100	72.950	0.101	2.362	2.093	0.159	0.201	0.718
S		0.914	3.022	0.191	2.818	0.008	0.221	0.112	0.019	0.054	0.022
%RSD		9.806	1.421	0.762	3.863	7.721	9.350	5.336	12.210	27.000	3.124
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	4.083	3.348	0.418	-0.421	552.000	537.600	6.292	1.181	1.310	189.700
2	18:40:55	4.667	3.648	0.276	-0.119	530.100	542.100	1.139	0.207	-0.083	189.100
3	18:41:22	4.944	3.524	-0.147	-0.851	558.100	576.000	1.832	0.209	1.006	202.700
X		4.565	3.507	0.182	-0.464	546.800	551.900	3.088	0.532	0.744	193.800
S		0.440	0.150	0.294	0.367	14.710	20.980	2.797	0.562	0.732	7.711
%RSD		9.633	4.286	161.300	79.250	2.690	3.801	90.590	105.500	98.400	3.978
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	78.1%	0.086	0.178	0.090	5.490	-0.007	0.002	0.080	0.074	78.3%
2	18:40:55	78.3%	0.049	0.159	0.071	4.309	0.001	0.002	0.057	0.081	78.3%
3	18:41:22	75.8%	0.137	0.146	0.067	6.191	-0.001	0.002	0.131	0.074	76.3%
X		77.4%	0.091	0.161	0.076	5.330	-0.003	0.002	0.089	0.076	77.6%
S		1.4%	0.044	0.016	0.013	0.951	0.004	0.000	0.038	0.004	1.2%
%RSD		1.8	48.440	9.868	16.450	17.850	161.200	4.893	41.940	5.563	1.5
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:28	0.127	0.110	-0.033	-0.047	178.000	172.100	83.8%	0.133	0.134	-0.015
2	18:40:55	0.089	0.073	-0.043	-0.042	180.100	175.700	84.2%	0.095	0.134	0.010
3	18:41:22	0.089	0.180	-0.010	-0.004	185.800	183.200	82.1%	0.134	0.125	-0.009
X		0.102	0.121	-0.029	-0.031	181.300	177.000	83.4%	0.121	0.131	-0.005
S		0.022	0.055	0.017	0.023	4.024	5.636	1.1%	0.022	0.006	0.013
%RSD		21.410	45.160	59.650	74.970	2.219	3.184	1.4	18.330	4.256	286.600
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:40:28	0.001	-0.004	82.9%							
2	18:40:55	-0.011	-0.002	83.4%							
3	18:41:22	0.004	-0.006	83.7%							
X		-0.002	-0.004	83.3%							
S		0.008	0.002	0.4%							
%RSD		374.000	54.820	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	80.8%	101.500	36.370	38.300	-46.050	<u>TM 149200.000</u>	<u>TM 45610.000</u>	<u>TM 47410.000</u>	<u>TM 74910.000</u>	<u>TM 165.500</u>
2	18:46:47	81.1%	98.770	34.450	38.890	-45.120	<u>TM 148100.000</u>	<u>TM 45820.000</u>	<u>TM 47310.000</u>	<u>TM 74180.000</u>	153.000
3	18:47:14	80.8%	100.700	33.860	37.310	-46.280	<u>TM 152600.000</u>	<u>TM 46280.000</u>	<u>TM 47500.000</u>	<u>TM 76410.000</u>	<u>TM 150.200</u>
X		80.9%	100.300	34.890	38.170	-45.820	<u>TM 150000.000</u>	<u>TM 45900.000</u>	<u>TM 47410.000</u>	<u>TM 75170.000</u>	<u>TM 156.200</u>
S		0.2%	1.410	1.312	0.800	0.617	<u>TM 2378.000</u>	<u>TM 340.100</u>	<u>TM 98.400</u>	<u>TM 1135.000</u>	<u>TM 8.145</u>
%RSD		0.2	1.405	3.759	2.096	1.346	<u>TM 1.586</u>	<u>TM 0.741</u>	<u>TM 0.208</u>	<u>TM 1.510</u>	<u>TM 5.214</u>
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	<u>TM 10760.000</u>	<u>TM 66770.000</u>	<u>TM 2177.000</u>	<u>M 195500.000</u>	<u>TM 197700.000</u>	74.4%	104.600	99.360	96.330	17740.000
2	18:46:47	<u>TM 10730.000</u>	<u>TM 67330.000</u>	<u>TM 2220.000</u>	<u>M 197500.000</u>	<u>TM 196000.000</u>	74.7%	102.500	98.980	96.940	18100.000
3	18:47:14	<u>TM 10810.000</u>	<u>TM 67280.000</u>	<u>TM 2199.000</u>	<u>M 196800.000</u>	<u>TM 195500.000</u>	73.3%	105.600	101.400	97.450	17820.000
X		<u>TM 10760.000</u>	<u>TM 67130.000</u>	<u>TM 2198.000</u>	<u>M 196600.000</u>	<u>TM 196400.000</u>	74.1%	104.200	99.910	96.910	17890.000
S		<u>TM 39.550</u>	<u>TM 313.300</u>	<u>TM 21.560</u>	<u>M 1017.000</u>	<u>TM 1152.000</u>	0.8%	1.582	1.301	0.561	188.700
%RSD		<u>TM 0.367</u>	<u>TM 0.467</u>	<u>TM 0.981</u>	<u>M 0.517</u>	<u>TM 0.587</u>	1.0	1.518	1.303	0.579	1.055
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	1158.000	<u>TM 1108.000</u>	<u>TM 1076.000</u>	1337.000	94.300	102.800	101.400	93.690	97.630	98.930
2	18:46:47	1147.000	<u>TM 1123.000</u>	<u>TM 1069.000</u>	1337.000	93.450	101.800	105.900	91.770	94.610	100.300
3	18:47:14	1163.000	<u>TM 1129.000</u>	<u>TM 1074.000</u>	1348.000	96.800	106.800	105.500	93.710	96.830	99.620
X		1156.000	<u>TM 1120.000</u>	<u>TM 1073.000</u>	1341.000	94.850	103.800	104.300	93.060	96.360	99.630
S		8.000	<u>TM 11.030</u>	<u>TM 3.516</u>	6.310	1.740	2.639	2.468	1.112	1.564	0.701
%RSD		0.692	<u>TM 0.985</u>	<u>TM 0.328</u>	0.471	1.835	2.542	2.367	1.195	1.624	0.703
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	106.700	107.900	106.700	94.180	2774.000	2765.000	430.200	98.660	-0.823	<u>TM 1068.000</u>
2	18:46:47	111.800	105.400	106.900	95.210	2764.000	2803.000	471.800	105.000	1.665	<u>TM 1070.000</u>
3	18:47:14	109.300	108.100	109.700	91.670	2787.000	2814.000	450.200	102.400	-0.787	<u>TM 1099.000</u>
X		109.300	107.100	107.800	93.690	2775.000	2794.000	450.700	102.000	0.018	<u>TM 1079.000</u>
S		2.550	1.535	1.670	1.818	11.580	25.470	20.790	3.183	1.426	<u>TM 17.360</u>
%RSD		2.334	1.433	1.550	1.941	0.417	0.911	4.613	3.120	7918.000	<u>TM 1.609</u>
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	74.5%	104.900	104.300	102.700	126.200	97.380	97.250	100.300	98.470	73.3%
2	18:46:47	73.8%	104.600	103.300	104.400	126.000	97.120	95.270	96.730	97.410	74.7%
3	18:47:14	73.9%	107.100	108.300	105.900	124.500	98.370	97.630	100.300	98.300	73.3%
X		74.1%	105.500	105.300	104.300	125.600	97.630	96.720	99.120	98.060	73.8%
S		0.4%	1.343	2.661	1.604	0.941	0.660	1.267	2.068	0.569	0.8%
%RSD		0.5	1.272	2.527	1.538	0.749	0.677	1.310	2.086	0.581	1.1
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:20	102.300	102.500	91.370	89.520	<u>M 1009.000</u>	<u>M 992.900</u>	81.3%	103.600	104.400	99.670
2	18:46:47	99.850	100.800	90.190	89.010	<u>M 1015.000</u>	<u>M 988.900</u>	82.7%	104.300	102.200	96.240
3	18:47:14	103.400	103.700	93.970	90.370	<u>M 1034.000</u>	<u>M 1004.000</u>	81.9%	104.300	104.400	98.010
X		101.800	102.400	91.840	89.630	<u>M 1020.000</u>	<u>M 995.400</u>	82.0%	104.100	103.700	97.970
S		1.807	1.436	1.936	0.688	<u>M 13.000</u>	<u>M 8.010</u>	0.7%	0.417	1.246	1.718
%RSD		1.774	1.403	2.108	0.767	<u>M 1.275</u>	<u>M 0.805</u>	0.8	0.401	1.202	1.753
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:46:20	98.450	97.610	79.6%							
2	18:46:47	95.440	95.250	78.9%							
3	18:47:14	98.680	97.490	79.0%							
X		97.520	96.780	79.1%							
S		1.808	1.332	0.4%							
%RSD		1.854	1.377	0.5							

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	75.9%	306.000	301.000	301.200	10.440	61830.000	61630.000	61810.000	57580.000	297.300
2	18:52:42	74.1%	311.200	311.200	311.500	8.046	63150.000	63730.000	63450.000	59360.000	306.900
3	18:53:09	74.1%	314.000	287.400	297.900	3.578	63230.000	61200.000	61030.000	58890.000	304.500
X		74.7%	103.459%	99.950%	101.166%	7.355	104.562%	62190.000	62090.000	97.687%	100.961%
S		1.0%	n/a	n/a	n/a	3.483	n/a	1351.000	1232.000	n/a	n/a
%RSD		1.4	1.300	3.982	2.345	47.350	1.254	2.172	1.985	1.572	1.658
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cl O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	2700.000	603.200	58190.000	63190.000	62360.000	73.2%	308.600	300.400	294.700	3470.000
2	18:52:42	2756.000	599.700	58600.000	63970.000	62970.000	71.3%	309.800	308.300	298.400	2260.000
3	18:53:09	2776.000	546.100	57510.000	62180.000	61900.000	72.7%	301.800	305.000	295.000	4612.000
X		2744.000	583.000	96.835%	63120.000	104.020%	72.4%	102.247%	101.528%	98.681%	3447.000
S		39.590	31.990	n/a	893.300	n/a	1.0%	n/a	n/a	n/a	1176.000
%RSD		1.443	5.486	0.944	1.415	0.860	1.4	1.402	1.300	0.695	34.120
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	61650.000	287.000	62560.000	59310.000	286.300	281.200	288.000	285.800	299.700	300.200
2	18:52:42	62890.000	295.400	62520.000	59940.000	297.900	292.800	294.800	291.200	298.200	296.300
3	18:53:09	61940.000	290.700	62240.000	59770.000	292.500	285.100	289.400	289.100	299.600	299.100
X		62160.000	97.008%	62440.000	99.455%	97.413%	95.451%	290.700	288.700	99.718%	99.522%
S		649.700	n/a	171.900	n/a	n/a	n/a	3.592	2.753	n/a	n/a
%RSD		1.045	1.449	0.275	0.541	1.970	2.079	1.236	0.954	0.279	0.677
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	286.300	284.200	306.500	291.100	23.010	24.830	1314.000	298.400	-0.193	292.200
2	18:52:42	292.700	291.400	313.700	287.400	24.150	21.920	1384.000	312.500	-1.151	300.000
3	18:53:09	298.100	288.700	316.100	293.700	25.500	23.910	1391.000	313.500	1.433	300.200
X		292.400	288.100	104.028%	290.700	24.220	23.550	1363.000	102.714%	0.030	99.155%
S		5.912	3.632	n/a	3.170	1.246	1.488	42.620	n/a	1.306	n/a
%RSD		2.022	1.260	1.598	1.090	5.147	6.317	3.127	2.741	4406.000	1.520
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	72.0%	315.600	308.500	303.800	289.200	299.000	292.000	292.400	294.600	71.9%
2	18:52:42	71.2%	317.000	314.200	313.600	293.200	303.900	294.700	293.900	291.600	71.3%
3	18:53:09	70.5%	324.100	325.000	322.200	283.500	304.800	297.700	296.800	301.200	71.0%
X		71.3%	106.304%	105.297%	313.200	288.600	100.850%	294.800	294.400	98.594%	71.4%
S		0.7%	n/a	n/a	9.217	4.866	n/a	2.884	2.240	n/a	0.4%
%RSD		1.0	1.436	2.659	2.943	1.686	1.035	0.978	0.761	1.654	0.6
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:15	304.200	298.000	298.200	296.100	306.600	304.600	77.7%	300.800	317.000	293.400
2	18:52:42	305.000	305.900	308.100	301.700	305.600	301.900	77.2%	304.300	316.600	295.900
3	18:53:09	305.900	302.700	305.500	302.700	313.000	305.400	76.8%	309.400	320.100	301.600
X		101.683%	100.729%	303.900	100.065%	102.801%	101.318%	77.2%	304.800	105.954%	98.994%
S		n/a	n/a	5.150	n/a	n/a	n/a	0.5%	4.340	n/a	n/a
%RSD		0.275	1.321	1.694	1.180	1.301	0.592	0.6	1.424	0.599	1.397
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:52:15	292.600	292.000	77.3%							
2	18:52:42	294.500	296.300	77.0%							
3	18:53:09	298.600	299.300	76.5%							
X		98.406%	98.624%	76.9%							
S		n/a	n/a	0.4%							
%RSD		1.040	1.248	0.5							

CCB IM9936-01 4/22/2020 18:57:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	77.8%	-0.006	2.477	2.513	10.660	0.378	1.736	1.860	0.936	0.082
2	18:58:36	78.4%	-0.006	3.043	2.572	16.440	0.596	1.907	2.217	1.932	-0.013
3	18:59:03	78.0%	0.009	2.264	1.677	15.170	0.214	1.914	2.341	1.960	0.034
X		78.1%	-0.001	2.595	2.254	14.090	0.396	1.853	2.139	1.609	0.035
S		0.3%	0.009	0.403	0.500	3.036	0.192	0.101	0.250	0.583	0.048
%RSD		0.4	884.200	15.520	22.210	21.540	48.450	5.437	11.680	36.240	137.900
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.874	337.000	8.667	8.147	5.214	74.7%	0.059	0.007	0.003	-49.580
2	18:58:36	3.213	324.500	9.047	6.862	3.531	74.9%	-0.046	-0.008	-0.052	-40.000
3	18:59:03	2.906	322.900	8.554	3.133	3.472	74.8%	0.085	0.019	0.022	-58.230
X		2.998	328.100	8.756	6.047	4.072	74.8%	0.033	0.006	-0.009	-49.270
S		0.187	7.706	0.258	2.604	0.989	0.1%	0.069	0.013	0.038	9.118
%RSD		6.245	2.349	2.951	43.060	24.290	0.2	210.500	211.800	423.600	18.510
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	2.373	0.006	-4.309	5.446	0.001	-0.002	-0.072	0.012	0.045	-0.030
2	18:58:36	2.039	0.026	-4.019	5.750	0.004	0.020	-0.123	-0.002	0.025	0.152
3	18:59:03	2.148	0.016	-3.876	5.912	0.001	0.013	-0.320	-0.019	0.007	-0.050
X		2.187	0.016	-4.068	5.702	0.002	0.010	-0.172	-0.003	0.026	0.024
S		0.171	0.010	0.221	0.237	0.002	0.011	0.131	0.015	0.019	0.111
%RSD		7.802	63.480	5.424	4.149	79.070	105.600	76.450	511.400	75.280	465.300
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	-0.523	0.075	0.033	-0.218	11.540	11.930	2.236	0.227	1.790	0.007
2	18:58:36	-0.056	0.223	-0.225	-0.172	10.890	11.700	-2.921	-0.487	-1.316	0.013
3	18:59:03	-0.378	0.160	-0.149	-0.578	12.980	10.530	-0.288	-0.193	0.793	0.006
X		-0.319	0.153	-0.114	-0.323	11.800	11.390	-0.325	-0.151	0.422	0.009
S		0.239	0.074	0.132	0.222	1.071	0.751	2.579	0.359	1.586	0.003
%RSD		74.810	48.680	116.300	68.880	9.072	6.596	794.700	237.300	375.500	39.730
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	72.2%	0.278	0.359	0.245	0.569	0.003	-0.002	-0.013	0.033	74.8%
2	18:58:36	74.6%	0.253	0.362	0.250	0.702	0.013	0.010	-0.013	0.011	75.9%
3	18:59:03	72.1%	0.137	0.340	0.165	0.115	0.009	0.015	0.004	0.011	74.6%
X		73.0%	0.223	0.353	0.220	0.462	0.009	0.008	-0.008	0.018	75.1%
S		1.4%	0.075	0.012	0.048	0.308	0.005	0.009	0.010	0.013	0.7%
%RSD		1.9	33.860	3.400	21.610	66.630	59.440	114.100	126.800	69.590	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:09	0.126	0.117	0.344	0.346	-0.029	0.016	79.8%	0.007	0.010	0.050
2	18:58:36	0.132	0.166	0.374	0.426	-0.006	0.009	79.3%	0.017	0.010	0.029
3	18:59:03	0.139	0.205	0.375	0.338	-0.029	-0.004	78.3%	0.010	0.011	0.022
X		0.132	0.163	0.364	0.370	-0.022	0.007	79.1%	0.012	0.011	0.034
S		0.006	0.044	0.018	0.049	0.013	0.010	0.8%	0.005	0.001	0.014
%RSD		4.670	27.290	4.846	13.240	61.490	138.200	1.0	44.870	7.880	42.570
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	18:58:09	0.022	0.022	80.7%							
2	18:58:36	0.013	0.020	81.9%							
3	18:59:03	0.009	0.013	82.1%							
X		0.015	0.018	81.5%							
S		0.007	0.005	0.8%							
%RSD		45.760	25.970	1.0							

VD15011-030 4/22/2020 19:03:33

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	78.9%	0.069	23.960	25.710	5.622	14470.000	10090.000	10830.000	11410.000	M 1431.000
2	19:04:26	77.6%	0.148	25.950	25.750	12.550	14220.000	10020.000	10710.000	11310.000	TM 1284.000
3	19:04:53	76.0%	0.058	24.950	26.520	8.954	14650.000	10100.000	10850.000	11590.000	M 1440.000
X		77.5%	0.092	24.950	25.990	9.041	14450.000	10070.000	10800.000	11440.000	TM 1385.000
S		1.4%	0.049	0.996	0.459	3.463	216.800	43.200	73.250	145.100	TM 87.470
%RSD		1.8	53.500	3.991	1.767	38.300	1.500	0.429	0.678	1.269	TM 6.314
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	6880.000	67200.000	1477.000	17680.000	17240.000	68.2%	11.110	1.337	2.604	18340.000
2	19:04:26	7129.000	66600.000	1466.000	17450.000	17010.000	69.7%	11.230	0.571	2.533	20550.000
3	19:04:53	7087.000	67800.000	1497.000	17280.000	17360.000	68.2%	11.140	1.576	2.670	21390.000
X		7032.000	67200.000	1480.000	17470.000	17200.000	68.7%	11.160	1.161	2.603	20090.000
S		133.100	599.100	15.900	200.700	175.300	0.9%	0.062	0.525	0.069	1580.000
%RSD		1.892	0.892	1.074	1.149	1.019	1.3	0.555	45.220	2.647	7.861
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	942.200	286.300	995.700	917.700	1.767	9.356	8.909	3.391	3.341	7.860
2	19:04:26	923.900	287.600	993.400	920.800	1.855	10.090	8.428	3.190	3.404	8.227
3	19:04:53	960.000	291.300	997.000	912.600	1.758	9.610	9.558	3.200	3.020	8.016
X		942.000	288.400	995.400	917.000	1.794	9.685	8.965	3.261	3.255	8.034
S		18.050	2.593	1.818	4.137	0.054	0.372	0.567	0.113	0.206	0.184
%RSD		1.917	0.899	0.183	0.451	3.000	3.840	6.325	3.476	6.330	2.290
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	10.350	8.783	1.602	-0.337	107.700	106.100	-1.253	-0.470	1.337	74.600
2	19:04:26	9.349	9.006	0.781	-1.106	107.400	105.400	2.921	0.767	-0.642	74.800
3	19:04:53	10.280	8.434	0.024	-0.759	112.000	111.600	-0.758	-0.159	-0.191	74.920
X		9.992	8.741	0.803	-0.734	109.000	107.700	0.303	0.046	0.168	74.770
S		0.558	0.288	0.789	0.385	2.597	3.408	2.280	0.644	1.037	0.160
%RSD		5.583	3.298	98.300	52.460	2.382	3.166	751.900	1396.000	616.700	0.214
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	72.6%	0.012	0.043	-0.034	4.163	0.019	0.027	0.538	0.413	69.4%
2	19:04:26	71.5%	0.025	0.120	0.013	1.596	0.010	0.027	0.414	0.468	69.7%
3	19:04:53	72.8%	0.033	0.047	0.025	2.937	0.014	0.028	0.460	0.433	72.0%
X		72.3%	0.023	0.070	0.001	2.899	0.015	0.028	0.471	0.438	70.4%
S		0.7%	0.011	0.043	0.032	1.284	0.004	0.001	0.063	0.028	1.4%
%RSD		1.0	46.080	61.990	2254.000	44.300	30.550	2.355	13.340	6.325	2.0
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:59	0.357	0.327	0.404	0.324	90.820	88.800	76.5%	0.028	0.022	0.834
2	19:04:26	0.436	0.394	0.455	0.407	90.590	87.300	78.8%	0.012	0.017	0.865
3	19:04:53	0.454	0.362	0.345	0.386	86.870	88.340	77.0%	0.028	0.019	0.932
X		0.416	0.361	0.402	0.372	89.430	88.150	77.4%	0.023	0.020	0.877
S		0.051	0.034	0.055	0.043	2.215	0.772	1.2%	0.009	0.003	0.050
%RSD		12.320	9.349	13.670	11.670	2.477	0.876	1.5	40.700	14.240	5.721
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:03:59	0.894	0.888	78.5%							
2	19:04:26	0.845	0.807	79.8%							
3	19:04:53	0.891	0.895	80.3%							
X		0.877	0.863	79.5%							
S		0.027	0.049	0.9%							
%RSD		3.090	5.698	1.1							

VD15011-031 4/22/2020 19:09:22

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	79.9%	-0.022	11.170	11.470	-1.305	29810.000	15910.000	15880.000	18360.000	21.820
2	19:10:16	78.1%	0.009	12.140	11.180	0.710	30180.000	16630.000	16660.000	18380.000	21.900
3	19:10:43	78.8%	-0.007	10.050	11.310	-4.206	30100.000	16080.000	16490.000	18540.000	21.460
X		78.9%	-0.006	11.120	11.320	-1.600	30030.000	16210.000	16350.000	18430.000	21.730
S		0.9%	0.016	1.045	0.146	2.471	196.500	373.800	409.500	97.630	0.232
%RSD		1.2	241.600	9.396	1.287	154.400	0.654	2.306	2.505	0.530	1.068
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	TM 19260.000	269300.000	2224.000	71910.000	71870.000	70.9%	1.889	0.390	1.936	25120.000
2	19:10:16	TM 19870.000	71080.000	2443.000	71940.000	71030.000	71.1%	1.910	0.116	1.920	26970.000
3	19:10:43	TM 19660.000	69870.000	2383.000	72930.000	72210.000	71.4%	2.396	1.118	2.036	27790.000
X		TM 19600.000	70080.000	2350.000	72260.000	71700.000	71.2%	2.065	0.541	1.964	26630.000
S		TM 309.100	908.900	113.400	582.500	606.100	0.3%	0.287	0.518	0.063	1368.000
%RSD		TM 1.577	1.297	4.827	0.806	0.845	0.4	13.880	95.620	3.196	5.138
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	139.900	160.000	136.800	222.900	0.665	15.180	13.970	1.934	1.686	14.250
2	19:10:16	143.300	160.400	139.800	230.700	0.679	14.800	14.760	2.046	2.306	13.520
3	19:10:43	141.000	160.800	140.200	224.500	0.709	15.370	13.440	2.128	2.148	14.290
X		141.400	160.400	138.900	226.100	0.684	15.120	14.060	2.036	2.047	14.020
S		1.710	0.399	1.882	4.137	0.023	0.290	0.661	0.098	0.322	0.434
%RSD		1.209	0.249	1.354	1.830	3.293	1.921	4.700	4.789	15.740	3.092
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	17.980	16.730	-0.181	0.064	796.800	813.000	0.899	-0.445	4.005	159.400
2	19:10:16	20.690	16.770	0.445	-0.173	826.500	815.700	8.144	1.249	3.482	158.500
3	19:10:43	18.850	17.360	-2.214	0.286	812.600	807.500	0.885	0.246	-1.135	159.800
X		19.170	16.950	-0.650	0.059	812.000	812.100	3.310	0.350	2.117	159.300
S		1.385	0.351	1.390	0.230	14.870	4.207	4.187	0.852	2.829	0.632
%RSD		7.224	2.069	213.800	389.700	1.831	0.518	126.500	243.300	133.600	0.397
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	70.7%	0.663	0.677	0.649	2.424	-0.007	0.004	0.229	0.311	72.2%
2	19:10:16	70.8%	0.615	0.630	0.547	3.625	-0.003	0.000	0.248	0.289	71.6%
3	19:10:43	70.8%	0.730	0.892	0.516	2.872	0.001	0.000	0.238	0.240	72.2%
X		70.8%	0.669	0.733	0.571	2.974	-0.003	0.002	0.238	0.280	72.0%
S		0.0%	0.058	0.139	0.069	0.607	0.004	0.002	0.010	0.036	0.3%
%RSD		0.1	8.635	19.020	12.170	20.410	146.200	154.200	4.032	12.990	0.4
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:49	0.310	0.404	1.891	1.749	176.000	171.900	79.4%	0.020	0.016	0.183
2	19:10:16	0.358	0.370	1.983	1.966	176.800	174.200	78.0%	0.027	0.019	0.222
3	19:10:43	0.424	0.441	1.845	1.734	176.900	172.700	79.1%	0.014	0.017	0.215
X		0.364	0.405	1.906	1.816	176.600	172.900	78.8%	0.020	0.017	0.206
S		0.057	0.035	0.070	0.130	0.521	1.132	0.7%	0.007	0.002	0.020
%RSD		15.680	8.735	3.677	7.165	0.295	0.655	0.9	32.760	9.372	9.867
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:09:49	0.211	0.194	79.0%							
2	19:10:16	0.160	0.192	80.3%							
3	19:10:43	0.198	0.179	79.2%							
X		0.190	0.188	79.5%							
S		0.026	0.008	0.7%							
%RSD		13.850	4.141	0.9							

CCV MW12620 4/22/2020 19:15:14 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	74.0%	311.600	289.600	305.000	9.785	±61640.000	±61790.000	±62140.000	±57450.000	298.100
2	19:16:08	73.5%	310.600	297.700	306.400	5.068	±63300.000	±62550.000	±62330.000	±59270.000	301.800
3	19:16:35	74.8%	303.200	291.300	302.100	6.933	±62270.000	±62160.000	±62300.000	±59000.000	300.700
X		74.1%	102.826%	97.617%	101.501%	7.262	±104.004%	±62170.000	±62260.000	±97.621%	100.059%
S		0.7%	n/a	n/a	n/a	2.376	±n/a	±379.800	±101.000	±n/a	n/a
%RSD		0.9	1.482	1.452	0.721	32.710	±1.338	±0.611	±0.162	±1.671	0.637
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±2746.000	488.700	±57510.000	60740.000	±61820.000	73.0%	306.300	300.500	292.800	3458.000
2	19:16:08	±2779.000	471.400	±57320.000	62440.000	±62220.000	72.2%	306.900	305.900	300.500	2818.000
3	19:16:35	±2780.000	418.400	±56760.000	61760.000	±61650.000	73.4%	309.200	304.300	296.000	2046.000
X		±2768.000	459.500	±95.329%	61650.000	±103.158%	72.9%	102.477%	101.194%	98.805%	2774.000
S		±19.380	36.610	±n/a	854.700	±n/a	0.6%	n/a	n/a	n/a	707.100
%RSD		±0.700	7.967	±0.682	1.386	±0.480	0.9	0.494	0.914	1.304	25.490
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	±62250.000	286.000	±61190.000	±58800.000	291.600	287.300	279.400	287.600	305.900	301.300
2	19:16:08	±61670.000	292.500	±61560.000	±59900.000	294.300	287.300	292.300	290.000	300.200	298.300
3	19:16:35	±60990.000	286.700	±61830.000	±59210.000	292.600	289.000	291.200	288.100	307.700	309.000
X		±61640.000	96.129%	±61530.000	±98.838%	97.607%	95.949%	287.700	288.600	101.532%	100.945%
S		±630.600	n/a	±325.100	±n/a	n/a	n/a	7.176	1.266	n/a	n/a
%RSD		±1.023	1.237	±0.528	±0.942	0.466	0.337	2.495	0.439	1.285	1.818
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	295.600	289.000	317.000	293.500	13.790	13.680	1393.000	318.700	4.991	296.900
2	19:16:08	292.000	287.200	314.900	294.600	15.010	15.440	1413.000	318.900	3.486	296.200
3	19:16:35	294.200	287.600	324.500	291.600	12.460	13.690	1368.000	319.400	1.903	293.900
X		293.900	287.900	106.272%	293.200	13.750	14.270	1391.000	106.342%	3.460	98.548%
S		1.806	0.955	n/a	1.512	1.272	1.015	22.410	n/a	1.544	n/a
%RSD		0.615	0.332	1.586	0.516	9.250	7.111	1.611	0.117	44.630	0.536
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	70.8%	317.200	313.800	310.200	300.300	305.900	296.600	295.500	295.400	70.1%
2	19:16:08	70.6%	322.900	322.000	313.300	293.800	303.000	291.400	297.700	291.300	70.8%
3	19:16:35	71.0%	326.900	326.900	317.100	316.600	312.400	307.400	302.600	299.000	69.0%
X		70.8%	107.444%	106.960%	313.500	303.600	102.365%	298.500	298.600	98.405%	70.0%
S		0.2%	n/a	n/a	3.445	11.780	n/a	8.144	3.646	n/a	0.9%
%RSD		0.3	1.517	2.062	1.099	3.882	1.573	2.729	1.221	1.295	1.3
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:41	304.500	305.300	305.300	296.900	311.600	301.000	76.9%	307.400	309.300	290.100
2	19:16:08	303.000	302.900	302.300	303.600	302.800	298.600	75.8%	304.200	314.100	293.600
3	19:16:35	311.100	312.400	311.600	299.400	319.000	304.600	76.5%	312.200	312.400	296.500
X		102.070%	102.282%	306.400	99.983%	103.709%	100.463%	76.4%	307.900	103.990%	97.806%
S		n/a	n/a	4.742	n/a	n/a	n/a	0.5%	4.008	n/a	n/a
%RSD		1.414	1.600	1.548	1.133	2.610	1.013	0.7	1.301	0.779	1.101
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:15:41	293.600	290.600	74.9%							
2	19:16:08	294.200	294.300	75.6%							
3	19:16:35	291.500	290.300	74.0%							
X		97.704%	97.242%	74.8%							
S		n/a	n/a	0.8%							
%RSD		0.483	0.758	1.1							

CCB IM9936-01 4/22/2020 19:21:07 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg	27Al
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	78.2%	0.009	2.114	2.581	21.380	-0.122	2.030	2.090	2.522	0.036
2	19:22:00	77.5%	-0.021	1.754	2.091	22.110	0.002	1.963	2.000	2.350	0.006
3	19:22:27	77.3%	-0.021	3.897	1.912	6.236	-0.202	1.984	1.275	1.907	0.044
X		77.7%	-0.011	2.588	2.195	16.570	-0.107	1.993	1.789	2.260	0.029
S		0.4%	0.017	1.148	0.346	8.960	0.103	0.034	0.447	0.317	0.020
%RSD		0.6	158.000	44.340	15.790	54.060	96.120	1.722	24.990	14.040	71.100
Run	Time	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V	52Cr	53Cr O
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.940	267.400	8.835	4.337	4.379	75.3%	-0.020	0.018	0.010	-55.530
2	19:22:00	2.200	257.700	9.470	-0.600	3.666	74.5%	-0.046	0.033	-0.011	-58.050
3	19:22:27	1.879	254.500	7.164	0.603	4.270	75.5%	0.006	-0.002	-0.026	-54.870
X		2.006	259.900	8.490	1.447	4.105	75.1%	-0.020	0.017	-0.009	-56.150
S		0.171	6.747	1.191	2.574	0.384	0.5%	0.026	0.018	0.018	1.679
%RSD		8.495	2.596	14.030	177.900	9.360	0.7	131.600	107.400	196.900	2.991
Run	Time	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	1.855	0.017	-3.507	5.653	0.017	0.034	0.071	0.011	0.025	-0.190
2	19:22:00	2.553	0.012	-2.995	8.757	0.004	-0.023	-0.617	-0.016	0.033	-0.134
3	19:22:27	1.312	0.015	-3.618	3.311	-0.002	0.020	0.264	-0.014	0.001	-0.031
X		1.907	0.015	-3.373	5.907	0.006	0.010	-0.094	-0.006	0.019	-0.118
S		0.623	0.003	0.333	2.732	0.010	0.030	0.463	0.015	0.017	0.081
%RSD		32.650	17.330	9.862	46.250	149.300	296.600	493.000	241.200	85.990	68.080
Run	Time	67Zn	68Zn	75As	78Se	79Br	81Br	82Kr	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.001	-0.048	-0.037	-0.292	8.759	7.486	0.657	0.020	0.740	0.012
2	19:22:00	-0.235	0.062	-0.215	0.752	8.479	7.634	-0.834	-0.637	3.240	0.012
3	19:22:27	0.142	0.170	0.028	-0.253	6.576	6.376	1.147	0.145	0.732	0.011
X		-0.031	0.061	-0.074	0.069	7.938	7.165	0.323	-0.158	1.571	0.012
S		0.191	0.109	0.126	0.592	1.188	0.687	1.032	0.420	1.446	0.001
%RSD		615.600	178.300	169.400	858.300	14.970	9.592	319.200	266.700	92.050	6.045
Run	Time	89Y	95Mo	97Mo	98Mo	106Cd	107Ag	109Ag	111Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	72.8%	0.185	0.211	0.210	0.013	0.007	0.010	0.043	0.018	75.5%
2	19:22:00	72.8%	0.247	0.247	0.292	0.477	0.005	0.015	-0.013	0.016	74.6%
3	19:22:27	72.9%	0.255	0.352	0.207	-0.060	0.016	0.015	-0.013	0.017	74.3%
X		72.8%	0.229	0.270	0.236	0.143	0.009	0.013	0.006	0.017	74.8%
S		0.1%	0.039	0.073	0.048	0.292	0.006	0.003	0.033	0.001	0.6%
%RSD		0.1	16.890	27.220	20.330	203.300	59.750	19.220	571.400	4.905	0.9
Run	Time	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:21:33	0.117	0.190	0.342	0.316	-0.030	-0.010	77.9%	0.000	0.013	0.019
2	19:22:00	0.131	0.127	0.350	0.403	-0.029	-0.010	78.9%	0.003	0.003	0.033
3	19:22:27	0.104	0.209	0.339	0.405	-0.017	0.023	78.2%	0.013	0.006	0.024
X		0.117	0.175	0.344	0.375	-0.025	0.001	78.3%	0.005	0.007	0.025
S		0.013	0.043	0.006	0.051	0.007	0.019	0.5%	0.007	0.005	0.007
%RSD		11.490	24.550	1.702	13.590	27.250	2331.000	0.7	128.200	71.380	27.440
Run	Time	207Pb	208Pb	209Bi							
		ppb	ppb	ppb							
1	19:21:33	0.016	0.012	80.3%							
2	19:22:00	0.021	0.026	80.5%							
3	19:22:27	0.011	0.013	81.8%							
X		0.016	0.017	80.9%							
S		0.005	0.008	0.9%							
%RSD		30.210	44.480	1.1							

Performance Report

Raw Supportive Data



Analyst: WCM

Level 2 Analyst: NJT

Prep Batch: 51455

Printed: 05/11/20 0742

Status: Level 2 review released

Matrix: Aqueous

3005A Draper 3 - Total Recoverable Acid Digestion (ICP-MS) and 3005A

Start Date: 04/21/2020 1542

End Date: 04/21/2020 2042

Digestion Cup ID: 20-608

Ext Solvent: 1:1 HNO3/1:1 HCl

Reagents Vol. (mL): 1, 0.5

Chem ID: IM9923-01, IM9922-01

Hot Block ID: Hot Block#10

Thermometer ID: 1172

Start Temperature (°C): 93

End Temperature (°C): 93

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51455-001	MB	FBW	1	6020B	50		0.0	50			PIPET ID 388
VQ51455-002	LCS	LCS	1	6020B	50	20-664	0.5	50			
VD17091-001	Sample	16-2	1	6020B	50		0.0	50	10/12/2020 2359	05/01/2020	
VD17091-002	Sample	16-3	1	6020B	50		0.0	50	10/12/2020 2359	05/01/2020	
VD17091-003	Sample	16-5	1	6020B	50		0.0	50	10/12/2020 2359	05/01/2020	njt 5-11-20 changed client ID from 16-4 to 16-5
VD17091-004	Sample	16WC2B	1	6020B	50		0.0	50	10/12/2020 2359	05/01/2020	
VD17091-005	Sample	16SPRING	1	6020B	50		0.0	50	10/12/2020 2359	05/01/2020	
VD17091-005MSMS		16SPRINGS	1	6020B	50	20-664	0.5	50			
VD17091-005MDM&D		16SPRINGSD	1	6020B	50	20-664	0.5	50			

(end of report)

Total Samples: 5

Mercury



- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: VD17091

Method Type: CVAA

SOW No.: _____

Contract: RAAP HWMU16

Lab Code: _____

Case No.: _____

SAS No.: _____

Lab Sample ID

Client Sample ID

QC Description

VD17091-001

16-2

VD17091-002

16-3

VD17091-003

16-5

VD17091-004

16WC2B

VD17091-005

16SPRING

Were ICP interelement corrections applied?

Yes/No

Yes

Were ICP background corrections applied?

Yes/No

Yes

If yes - were raw data generated before
applications of background corrections?

Yes/No

No

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: _____

Date: _____

Title: _____

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates

SDG No.: VD17091

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic VenturesInorganic Ventu

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Mercury	1.927300	2.000000	96	90.0 - 110.0	CV	4/22/2020	11:53	HG6042220A
CCV1	Mercury	1.938700	2.000000	97	80.0 - 120.0	CV	4/22/2020	12:01	HG6042220A
CCV2	Mercury	1.925500	2.000000	96	80.0 - 120.0	CV	4/22/2020	13:01	HG6042220A
CCV3	Mercury	1.921400	2.000000	96	80.0 - 120.0	CV	4/22/2020	13:32	HG6042220A
CCV4	Mercury	1.933900	2.000000	97	80.0 - 120.0	CV	4/22/2020	14:02	HG6042220A

CRDL STANDARD FOR AA & ICP

SDG No.: VD17091

AA CRDL Standard Source: _____

ICP CRDL Standard Source:

LLCCV 20HG0644								
Mercury	0.202200	0.200000	101	50 - 150	CV	4/22/2020	11:58	HG6042220A

- 3a -
INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates

SDG No.: VD17091

Contract: RAAP HWMU16

Lab Code:

Case No.:

SAS No.:

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOQ	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	0.008600	+/-2.000000	U	2.000000	2.000000	CV	4/22/2020	11:56	HG6042220A
CCB1	Mercury	0.006700	+/-2.000000	U	2.000000	2.000000	CV	4/22/2020	12:03	HG6042220A
CCB2	Mercury	0.009600	+/-2.000000	U	2.000000	2.000000	CV	4/22/2020	13:04	HG6042220A
CCB3	Mercury	0.010300	+/-2.000000	U	2.000000	2.000000	CV	4/22/2020	13:34	HG6042220A
CCB4	Mercury	0.008000	+/-2.000000	U	2.000000	2.000000	CV	4/22/2020	14:05	HG6042220A

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17091

Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
S0 20HG0642	1.00	1138															X														
S01 20HG0643	1.00	1141															X														
S0220HG0644	1.00	1143															X														
S03 20HG0645	1.00	1146															X														
S04 20HG0646	1.00	1148															X														
S05 20HG0647	1.00	1151															X														
ICV1	1.00	1153															X														
ICB1	1.00	1156															X														
LLCCV 20HG0644	1.00	1158															X														
CCV1	1.00	1201															X														
CCB1	1.00	1203															X														
ZZZZZZ	1.00	1206																													
ZZZZZZ	1.00	1208																													
ZZZZZZ	1.00	1211																													
ZZZZZZ	1.00	1213																													
ZZZZZZ	1.00	1216																													
ZZZZZZ	1.00	1218																													
ZZZZZZ	1.00	1221																													
ZZZZZZ	1.00	1224																													
ZZZZZZ	1.00	1226																													
ZZZZZZ	1.00	1229																													
ZZZZZZ	1.00	1231																													
ZZZZZZ	1.00	1234																													
ZZZZZZ	1.00	1236																													
ZZZZZZ	1.00	1239																													
ZZZZZZ	1.00	1241																													
ZZZZZZ	1.00	1244																													
ZZZZZZ	1.00	1246																													
ZZZZZZ	1.00	1249																													
ZZZZZZ	1.00	1251																													
ZZZZZZ	1.00	1254																													
ZZZZZZ	1.00	1256																													
ZZZZZZ	1.00	1259																													
CCV2	1.00	1301															X														
CCB2	1.00	1304															X														
ZZZZZZ	1.00	1306																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17091

Instrument ID Number: Hg6 Run Number: HG6042220A

Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1.00	1309																													
ZZZZZZ	1.00	1312																													
V051713-001	1.00	1314																X													
V051713-002	1.00	1317																X													
ZZZZZZ	1.00	1319																													
ZZZZZZ	1.00	1322																													
ZZZZZZ	1.00	1324																													
ZZZZZZ	1.00	1327																													
ZZZZZZ	1.00	1329																													
CCV3	1.00	1332																X													
CCB3	1.00	1334																X													
ZZZZZZ	1.00	1337																													
ZZZZZZ	1.00	1339																													
ZZZZZZ	1.00	1342																													
VD17091-001	1.00	1344																X													
VD17091-002	1.00	1347																X													
VD17091-003	1.00	1349																X													
VD17091-004	1.00	1352																X													
VD17091-005	1.00	1355																X													
ZZZZZZ	1.00	1357																													
ZZZZZZ	1.00	1400																													
CCV4	1.00	1402																X													
CCB4	1.00	1405																X													
ZZZZZZ	1.00	1407																													
ZZZZZZ	1.00	1410																													
ZZZZZZ	1.00	1412																													
ZZZZZZ	1.00	1415																													
ZZZZZZ	1.00	1417																													
ZZZZZZ	1.00	1420																													
ZZZZZZ	1.00	1422																													
ZZZZZZ	1.00	1425																													
ZZZZZZ	1.00	1427																													
ZZZZZZ	1.00	1430																													
ZZZZZZ	1.00	1432																													
ZZZZZZ	1.00	1435																													
ZZZZZZ	1.00	1437																													

ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: VD17091

Instrument ID Number: Hg6 Run Number: HG6042220A

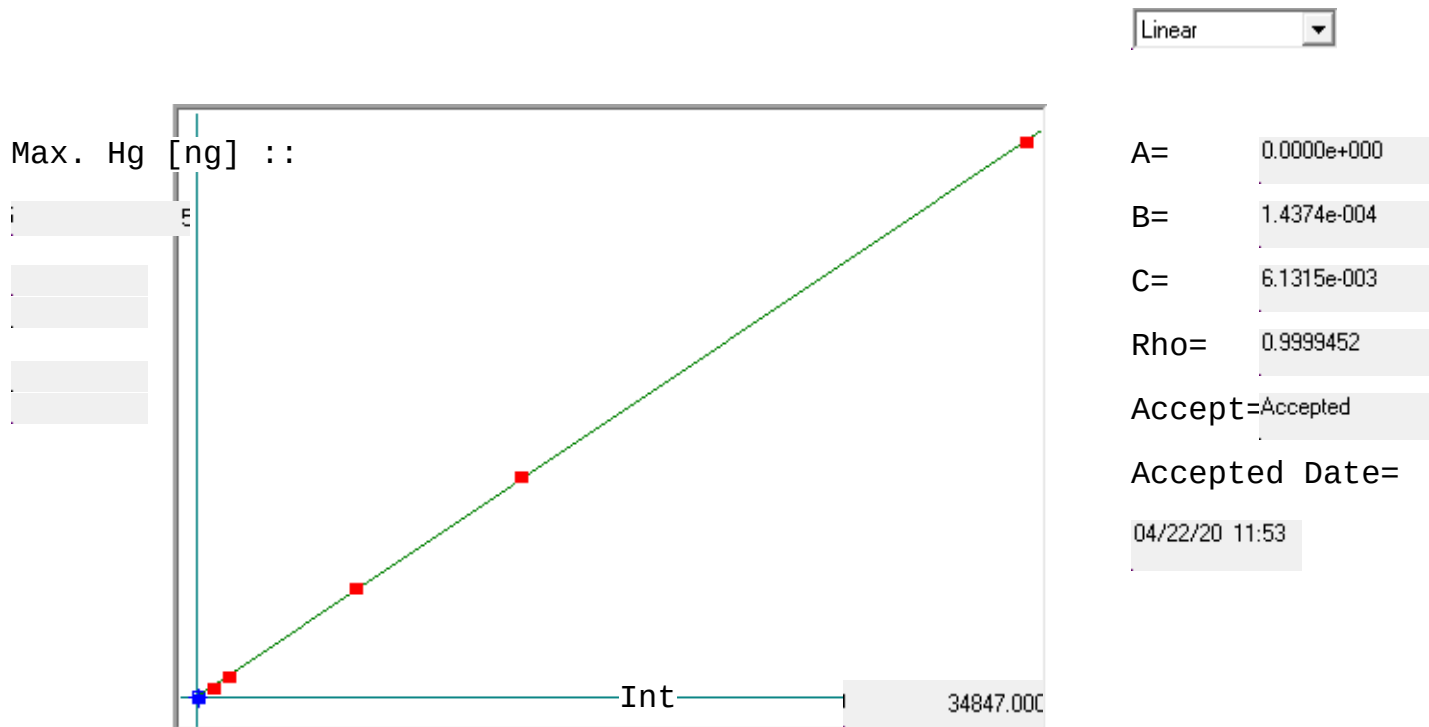
Start Date: 4/22/2020 End Date: 4/22/2020

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N
ZZZZZZ	1.00	1440																									
ZZZZZZ	1.00	1443																									
ZZZZZZ	1.00	1445																									
ZZZZZZ	1.00	1448																									
ZZZZZZ	1.00	1450																									
ZZZZZZ	1.00	1453																									
ZZZZZZ	1.00	1455																									
ZZZZZZ	1.00	1458																									
ZZZZZZ	1.00	1500																									
ZZZZZZ	1.00	1503																									
ZZZZZZ	1.00	1505																									
ZZZZZZ	1.00	1508																									
ZZZZZZ	1.00	1510																									
ZZZZZZ	1.00	1513																									
ZZZZZZ	1.00	1515																									
ZZZZZZ	1.00	1518																									
ZZZZZZ	1.00	1520																									

Raw Sample Data



7470A/245.1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4
S0 20HG0642 04/23/20	0.000	0.019	0.019	87	0.000	87			
S01 20HG0643 04/23/20	0.100	0.111	0.011	733	0.0 %	733			
S0220HG0644 04/23/20	0.200	0.205	0.005	1387	0.0 %	1387			
S03 20HG0645 04/23/20	1.000	0.978	-0.022	6761	0.0 %	6761			
S04 20HG0646 04/23/20	2.000	1.971	-0.029	13673	0.0 %	13673			
S05 20HG0647 04/23/20	5.000	5.015	0.015	34847	0.0 %	34847			

HG6042220A

Method: 7470A/245.1

Operator: KSH2

Date of Analysis: 22 Apr 2020 10:58:00

Sample ID	Extended ID	Conc.	Units	μ Abs.	Date
S0 20HG0642 04/23/20 - 1		-	PPB	87	22 Apr 2020 11:38:35
S01 20HG0643 04/23/20 - 1		-	PPB	733	22 Apr 2020 11:41:08
S0220HG0644 04/23/20 - 1		-	PPB	1387	22 Apr 2020 11:43:40
S03 20HG0645 04/23/20 - 1		-	PPB	6761	22 Apr 2020 11:46:12
S04 20HG0646 04/23/20 - 1		-	PPB	13673	22 Apr 2020 11:48:44
S05 20HG0647 04/23/20 - 1		-	PPB	34847	22 Apr 2020 11:51:15
ICV 20HG0648 04/23/20 - 1		96.4%	1.9273 PPB	13366	22 Apr 2020 11:53:45
ICB 20HG0642 04/23/20 - 1		0.0086	PPB	17	22 Apr 2020 11:56:16
LLCCV 20HG0644 04/23/20 - 1		101.1%	0.2022 PPB	1364	22 Apr 2020 11:58:49
CCV 20HG0646 04/23/20 - 1		96.9%	1.9387 PPB	13445	22 Apr 2020 12:01:21
CCB 20HG0642 04/23/20 - 1		0.0067	PPB	4	22 Apr 2020 12:03:51
SnCl2 - 1	IM9947-01	0.0579	PPB	360	22 Apr 2020 12:06:23
VQ51710001TC - 1	PBW	0.0572	PPB	355	22 Apr 2020 12:08:54
VQ51710002TC - 1	LCS	2.0156	PPB	13980	22 Apr 2020 12:11:25
VD14038001TC - 1	MAY_GYP-SB6 (2-3')	0.0631	PPB	396	22 Apr 2020 12:13:56
VD14038003TC - 1	MAY_GYP-SB6 (12-13')	0.0518	PPB	318	22 Apr 2020 12:16:27
VD14038005TC - 1	MAY_GYP-SB7 (2-3')	0.0267	PPB	143	22 Apr 2020 12:18:58
VD14038010TC - 1	MAY_GYP-SB7 (27-28')	0.0694	PPB	440	22 Apr 2020 12:21:29
VD17051001TC - 1	Rox_CPA_1BRL (3-5)	0.0505	PPB	309	22 Apr 2020 12:24:01
VD17051001MSTC - 1	Rox_CPA_1BRL (3-5)S	2.0576	PPB	14272	22 Apr 2020 12:26:33
VD17051001MDTC - 1	Rox_CPA_1BRL (3-5)SD	2.0277	PPB	14064	22 Apr 2020 12:29:05
CCV 20HG0646 04/23/20 - 1		95.7%	1.9140 PPB	13273	22 Apr 2020 12:31:37
CCB 20HG0642 04/23/20 - 1		0.0094	PPB	23	22 Apr 2020 12:34:08
VD17051003TC - 1	Rox_CPA_1BRL (13-15)	0.0769	PPB	492	22 Apr 2020 12:36:40
VD17051004TC - 1	Rox_CPA_1BRL (15-17)	0.0720	PPB	458	22 Apr 2020 12:39:13
VQ51711001 - 1	PBW	0.0564	PPB	350	22 Apr 2020 12:41:44
VQ51711002 - 1	LCS	1.9518	PPB	13536	22 Apr 2020 12:44:14
VD21066001 - 1	B20011	0.0543	PPB	335	22 Apr 2020 12:46:45
VD16047003 - 1	WW Pipe 001	0.0708	PPB	450	22 Apr 2020 12:49:16
VD17062007 - 1	WW-Pipe 002	0.0593	PPB	370	22 Apr 2020 12:51:47
VD17073003 - 1	WW Pipe 001	0.0695	PPB	441	22 Apr 2020 12:54:18
VD18013003 - 1	WW Pipe 001	0.1313	PPB	871	22 Apr 2020 12:56:49
VD21073001 - 1	Effluent	0.0618	PPB	387	22 Apr 2020 12:59:21
CCV 20HG0646 04/23/20 - 1		96.3%	1.9255 PPB	13353	22 Apr 2020 13:01:53
CCB 20HG0642 04/23/20 - 1		0.0096	PPB	24	22 Apr 2020 13:04:23
VD21073001S - 1	EffluentS	1.9509	PPB	13530	22 Apr 2020 13:06:55
VD21073001SD - 1	EffluentSD	2.0153	PPB	13978	22 Apr 2020 13:09:27
VD21062001 - 1	Effluent Pipe 1	0.0344	PPB	197	22 Apr 2020 13:12:00
VQ51713001 - 1	PBW	0.0435	PPB	260	22 Apr 2020 13:14:33
VQ51713002 - 1	LCS	1.9838	PPB	13759	22 Apr 2020 13:17:04
VD17087001 - 1	16C1	0.0280	PPB	152	22 Apr 2020 13:19:35
VD17087002 - 1	16MW8	0.0639	PPB	402	22 Apr 2020 13:22:07
VD17087003 - 1	16MW9	0.0323	PPB	182	22 Apr 2020 13:24:37
VD17087004 - 1	16WC1A	0.0347	PPB	199	22 Apr 2020 13:27:09
VD17087004S - 1	16WC1AS	1.7554	PPB	12170	22 Apr 2020 13:29:40
CCV 20HG0646 04/23/20 - 1		96.1%	1.9214 PPB	13325	22 Apr 2020 13:32:12
CCB 20HG0642 04/23/20 - 1		0.0103	PPB	29	22 Apr 2020 13:34:43
VD17087004SD - 1	16WC1ASD	1.7465	PPB	12108	22 Apr 2020 13:37:15
VD17087005 - 1	16WDUP	0.0173	PPB	78	22 Apr 2020 13:39:47
VD17087006 - 1	16WC1B	0.1703	PPB	1142	22 Apr 2020 13:42:20
VD17091001 - 1	16-2	0.0470	PPB	284	22 Apr 2020 13:44:52
VD17091002 - 1	16-3	0.0416	PPB	247	22 Apr 2020 13:47:25
VD17091003 - 1	16-4 16-5 njt 5-11-20	0.0406	PPB	240	22 Apr 2020 13:49:58
VD17091004 - 1	16WC2B	0.0445	PPB	267	22 Apr 2020 13:52:29
VD17091005 - 1	16SPRING	0.0445	PPB	267	22 Apr 2020 13:55:00
VD21024002 - 1	5W5B	0.0510	PPB	312	22 Apr 2020 13:57:32
VD21024003 - 1	5W7B	0.0619	PPB	388	22 Apr 2020 14:00:03
CCV 20HG0646 04/23/20 - 1		96.7%	1.9339 PPB	13412	22 Apr 2020 14:02:35
CCB 20HG0642 04/23/20 - 1		0.0080	PPB	13	22 Apr 2020 14:05:05
VD21024003S - 1	5W7BS	1.9904	PPB	13805	22 Apr 2020 14:07:37
VD21024003SD - 1	5W7BSD	1.9160	PPB	13287	22 Apr 2020 14:10:09
VD21024004 - 1	5WC21	0.0330	PPB	187	22 Apr 2020 14:12:40
VD21024005 - 1	5WDUP	0.0435	PPB	260	22 Apr 2020 14:15:12
VD21024006 - 1	5WC22	0.0360	PPB	208	22 Apr 2020 14:17:44
VD21024007 - 1	5WC23	0.0327	PPB	185	22 Apr 2020 14:20:16
VQ51712001 - 1	PBW	0.0268	PPB	144	22 Apr 2020 14:22:49
VQ51712002 - 1	LCS	1.9969	PPB	13850	22 Apr 2020 14:25:21
VD15011019 - 1	MW-17	0.0158	PPB	67	22 Apr 2020 14:27:53
VD15011020 - 1	MW-18	0.0261	PPB	139	22 Apr 2020 14:30:24
CCV 20HG0646 04/23/20 - 1		95.7%	1.9131 PPB	13267	22 Apr 2020 14:32:56
CCB 20HG0642 04/23/20 - 1		0.0103	PPB	29	22 Apr 2020 14:35:26
VD15011021 - 1	MW-20	0.0181	PPB	83	22 Apr 2020 14:37:58
VD15011022 - 1	MW-21	0.0198	PPB	95	22 Apr 2020 14:40:30
VD15011023 - 1	MW-22	0.0186	PPB	87	22 Apr 2020 14:43:01
VD15011024 - 1	MW-23	0.0406	PPB	240	22 Apr 2020 14:45:33
VD15011025 - 1	MW-28	0.0234	PPB	120	22 Apr 2020 14:48:04
VD15011026 - 1	MW-26	0.0326	PPB	184	22 Apr 2020 14:50:36
VD15011027 - 1	MW-24	0.0194	PPB	92	22 Apr 2020 14:53:08
VD15011028 - 1	MW-27	0.0333	PPB	189	22 Apr 2020 14:55:40
VD15011029 - 1	MW-25	0.0192	PPB	91	22 Apr 2020 14:58:12

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HG6042220A

Method: 7470A/245.1

Operator: KSH2

Date of Analysis: 22 Apr 2020 10:58:00

Sample ID	Extended ID	Conc.	Units	μ Abs.	Date
VD15011030 - 1	MW-29	0.0218	PPB	109	22 Apr 2020 15:00:45
CCV 20HG0646 04/23/20 - 1		95.8% 1.9158	PPB	13286	22 Apr 2020 15:03:17
CCB 20HG0642 04/23/20 - 1		0.0100	PPB	27	22 Apr 2020 15:05:47
VD15011030S - 1	MW-29S	1.9860	PPB	13774	22 Apr 2020 15:08:19
VD15011030SD - 1	MW-29SD	1.9348	PPB	13418	22 Apr 2020 15:10:51
VD15011031 - 1	DUP	0.1884	PPB	1268	22 Apr 2020 15:13:22
VD15011032 - 1	EQ BLANK	0.0146	PPB	59	22 Apr 2020 15:15:54
CCV 20HG0646 04/23/20 - 1		95.4% 1.9076	PPB	13229	22 Apr 2020 15:18:26
CCB 20HG0642 04/23/20 - 1		0.0120	PPB	41	22 Apr 2020 15:20:56

Raw Supportive Data



Analyst: JMH

Level 2 Analyst: KSH-2

Prep Batch: 51707

Printed: 05/04/20 10:12

Status: Level 2 review released

Matrix: ERROR

7470A-P - Mercury Preparation Linked: 7470A,245.1 and 7470A-P Draper

Start Date: 04/22/2020 0027

End Date: 04/22/2020 0227

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Hot Block ID: Hot Block#11

Thermometer ID:1134

Start Temperature (°C): 93

End Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51707-004	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20-HG0642	0.0	50			CAL 0
VQ51707-104	Standard	Conc = 0.00010 mg/L	1	245.1	40.000	20-HG0643	0.0	50			4/23/20
VQ51707-204	Standard	Conc = 0.00020 mg/L	1	245.1	40.000	20-HG0644	0.0	50			4/23/20
VQ51707-304	Standard	Conc = 0.0010 mg/L	1	245.1	40.000	20-HG0645	0.0	50			4/23/20
VQ51707-404	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20-HG0646	0.0	50			4/23/20
VQ51707-504	Standard	Conc = 0.0050 mg/L	1	245.1	40.000	20-HG0647	0.0	50			4/23/20
VQ51707-604	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20-HG0642	0.0	50			CCB
VQ51707-704	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20-HG0646	0.0	50			CCV
VQ51707-804	Standard	Conc = 0.0 mg/L	1	245.1	40.000	20-HG0642	0.0	50			ICB
VQ51707-904	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	20-HG0648	0.0	50			ICV

(end of report)

Total Samples: 0

Analyst: JMH

Level 2 Analyst: NJT

Prep Batch: 51713

Printed: 05/11/20 07:51

Status: Level 2 review released

Matrix: Aqueous

7470A-P Draper - Mercury Preparation and 7470A-P

Start Date: 04/22/2020 00:29

End Date: 04/22/2020 02:29

Digestion Cup ID: 20-608

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-N-2CH3Cl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Hot Block ID: Hot Block#9

Thermometer ID: 326394

Start Temperature (°C): 97

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
VQ51713-001	MB	FBW	1	7470A	40.000		0.0	50			LCS/MS/MSD Pipet ID: 388
VQ51713-002	LCS	LCS	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD17087-001	Sample	16C1	1	7470A	40.000		0.0	50	05/14/2020 23:59	04/27/2020	
VD17087-002	Sample	16MA8	1	7470A	40.000		0.0	50	05/14/2020 23:59	04/27/2020	
VD17087-003	Sample	16MA9	1	7470A	40.000		0.0	50	05/14/2020 23:59	04/27/2020	
VD17087-004	Sample	16AC1A	1	7470A	40.000		0.0	50	05/14/2020 23:59	04/27/2020	
VD17087-004MSMS		16AC1AS	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD17087-004MDMSD		16AC1ASD	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD17087-005	Sample	16ADUP	1	7470A	40.000		0.0	50	05/14/2020 23:59	04/27/2020	
VD17087-006	Sample	16AC1B	1	7470A	40.000		0.0	50	05/14/2020 23:59	04/27/2020	
VD17091-001	Sample	16-2	1	7470A	40.000		0.0	50	05/13/2020 23:59	05/01/2020	
VD17091-002	Sample	16-3	1	7470A	40.000		0.0	50	05/13/2020 23:59	05/01/2020	
VD17091-003	Sample	16-5	1	7470A	40.000		0.0	50	05/13/2020 23:59	05/01/2020	njt 5-11-20 changed client ID from 16-4 to 16-5
VD17091-004	Sample	16AC2B	1	7470A	40.000		0.0	50	05/13/2020 23:59	05/01/2020	
VD17091-005	Sample	16SPRING	1	7470A	40.000		0.0	50	05/13/2020 23:59	05/01/2020	
VD21024-002	Sample	5W5B	1	7470A	40.000		0.0	50	05/18/2020 23:59	05/01/2020	
VD21024-003	Sample	5W7B	1	7470A	40.000		0.0	50	05/18/2020 23:59	05/01/2020	
VD21024-003MSMS		5W7BS	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD21024-003MDMSD		5W7BSD	1	7470A	40.000	20-H30640 (4/23/20)	0.8	50			
VD21024-004	Sample	5WC1	1	7470A	40.000		0.0	50	05/18/2020 23:59	05/01/2020	
VD21024-005	Sample	5ADUP	1	7470A	40.000		0.0	50	05/18/2020 23:59	05/01/2020	
VD21024-006	Sample	5WC22	1	7470A	40.000		0.0	50	05/18/2020 23:59	05/01/2020	
VD21024-007	Sample	5WC23	1	7470A	40.000		0.0	50	05/18/2020 23:59	05/01/2020	
VQ51713-004	Standard	Conc = 0.0 mg/L	1	7470A	40.000		0.0	50			FB 51707

Analyst: JMH

Level 2 Analyst: NJT

Prep Batch: 51713

Printed: 05/11/20 07:51

Status: Level 2 review released

Matrix: Aqueous

7470A-P Draper - Mercury Preparation and 7470A-P

Start Date: 04/22/2020 00:29

End Date: 04/22/2020 02:29

Digestion Cup ID: 20-608

Ext Solvent: H₂SO₄/1:1:HNO₃/KMnO₄/K₂S₂O₈/NaCl-N-2CH₃CO

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Chem ID: 19-2689, IM9923-01, IM9933-01, IM9894-01, IM9942-01

Hot Block ID: Hot Block#9

Thermometer ID: 326394

Start Temperature (°C): 97

End Temperature (°C): 96

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
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(end of report)

Total Samples: 17