Table of Contents – Sampling Data Review & Validation Reports

For the file named

"June to July 2017 – Grenada Manufacturing LLC – Sampling Data Review and Validation Reports.pdf"

Note: This table of contents shows the organization of results for air sampling conducted in June and July 2017 at the Grenada Manufacturing Facility (Grenada, MS). ***For June****, eight (8) radiello cartridge samples and seven (7) summa canisters were taken during a similar 24-hour period (namely June 28 to 29, 2017.* ***For July****, four (4) radiello cartridge samples were taken during a 7-day period (namely July 13 to July 20, 2017). Note that both of these sampling events were undertaken per the Grenada Manufacturing LLC - Workplan on Revised Indoor Air Monitoring Plan (dated July 13, 2017 and posted on-line @ epa.gov/grenadacleanup).*

1. Sample Key and Data Summary Tables – Indoor and Ambient Air, May to July 2017

2. Data Review and Validation Reports for 24 Hour Sampling

ARCADIS Data Review -- Indoor and Outdoor Air (June 28 – 29, 2017) – 24 Hour - Radiello Cartridge Sampling **[Report #28167R]**

EUROFINS Electronic Comprehensive Validation Package (June 28- 29, 2017) – 24 Hour – Eight (8) Radiello 130 (Solvent) Cartridge Samples **[Work Order #1707036R1]**

ARCADIS Data Review -- Indoor and Outdoor Air (June 28 – 29, 2017) – 24 Hour – Summa Canister Sampling **[Report #28166R]**

EUROFINS Electronic Comprehensive Validation Package (June 28- 29, 2017) – 24 Hour – Seven (7) 6-Liter Summa Canister Samples **[Work Order #1707045R3]**

3. Data Review and Validation Reports for 7 Day Sampling

ARCADIS Data Review -- Indoor and Outdoor Air (July 13- July 20, 2017) – 7 Day - Radiello Cartridge Sampling **[Report #28194R]**

EUROFINS Electronic Comprehensive Validation Package (July 13- July 20, 2017)– 7 Day – Four (4) Radiello 130 (Solvent) Cartridge Samples **[Work Order 1707320]**

Table 1
Summary of Indoor Air Analytical Results
Grenada Manufacturing
Grenada, Mississippi

Sample Details								Constituent (µg/m^3)										
Sample Location ID	Sample ID	Sample Location	Consultant	Worker Shift	Sample Duration‡	Sample Dates	Analysis	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,2-TCA	Benzene	Methylene Chloride	PCE	TCE	Toluene	Vinyl Chloride
Indoor Air - Zone B: Production Area																		
A-5	548 JU	CMM Room / C-12	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 57	NA	< 59	NA	< 73	< 55	NA	< 74	< 63	< 59	NA
	103 JX		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 69	< 59	< 55	NA
	538 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 51	NA	< 52	NA	< 65	< 49	NA	< 66	< 57	< 53	NA
	096 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	3.4 J	NA	< 3.3	< 2.5	NA	< 3.4	20	4.4 J	NA
	R-A-5		Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	2.9 J	NA	< 0.81	< 0.60	NA	< 0.82	7.4	7.3 J	NA
	A-5-BC		Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.13	< 0.064	1.4	< 0.64	< 0.18	0.30	< 1.1	< 0.22	5.8	1.7	< 0.041
	A-5-BC		Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.94	< 3.8 UJ	2.0 J	< 2.4 UJ	< 1.1 UJ	< 3.6	NA	< 1.2	6.4	2.0	< 3.2 UJ
B-3	552 JU	F-16	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 59	NA	< 60	NA	< 75	< 56	NA	< 76	< 65	< 61	NA
	104 JX		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 69	< 59	< 55	NA
	543 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 52	NA	< 54	NA	< 67	< 50	NA	< 68	< 58	< 54	NA
	092 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	< 2.7	NA	< 3.3	< 2.5	NA	< 3.4	29	3.9 J	NA
	R-B-3		Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	1.4 J	NA	< 0.81	< 0.61	NA	< 0.82	13	3.3 J	NA
	B-3-BC		Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.13	0.073	1.8	< 0.65	< 0.18	0.28	< 1.1	0.47	25	1.4	< 0.042
	B-3-BC		Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.82	< 3.3 UJ	2.2 J	< 2.1 UJ	< 0.96 UJ	< 3.2	NA	< 1.1	28	1.5	< 2.8 UJ
B-4	550 JU	D-14	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 57	NA	< 59	NA	< 74	< 55	NA	< 75	< 64	< 60	NA
	B-4 (050217) 1ST		Arcadis	1st	8-hrs	5/2/2017	TO-15	< 2.02	< 1.98	4.7	35.2	< 2.73	< 1.60	< 1.74	< 3.39	51.4	30.3	< 1.28
	118 JX		Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	NU	NA	ND	4.3	NA	< 2.1	230 E (J)	37	NA
	431 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	< 2.0	NA	< 2.1	120	6.6	NA
	557 JU		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 69	< 59	< 55	NA
	B-4 (050217) 2ND		Arcadis	2nd	8-hrs	5/2/2017	TO-15	< 2.02	< 1.98	4.00	< 1.98	< 2.73	< 1.60	< 1.74	< 3.39	33.6	2.34	< 1.28
	123 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	NU	NA	ND	4.5	NA	< 2.1	280 E (J)	59	NA
	438 JX		Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	< 1.9	NA	< 2.1	110	7.2	NA
	540 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 52	NA	< 54	NA	< 67	< 50	NA	< 68	< 58	< 54	NA
	B-4 (050117) 3RD		Arcadis	3rd	8-hrs	5/1/2017	TO-15	< 2.02	< 1.98	< 1.98	< 1.98	< 2.73	< 1.60	59.1	< 3.39	13.8	31.2	< 1.28
	111 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	NU	NA	ND	3.8	NA	< 2.2	210 E (J)	34	NA
	104 QK		Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	2.1	NA	< 2.0	75	38	NA
	088 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	5.5 J	NA	< 3.3	< 2.5	NA	< 3.4	46	5.1 J	NA
	425 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 130	< 1.3	NA	6.0 J	NA	< 1.7	< 1.2	NA	< 1.7	1.2	5.2 J	NA
	B-4-BC		Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.50	< 0.24	1.1	< 2.4	< 0.68	< 0.99	< 4.3	< 0.84	6.1	1.7	< 0.16
	B-4-BC		Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.86	< 3.5 UJ	1.4 J	< 2.2 UJ	< 1.0 UJ	< 3.3	NA	< 1.1	6.9	1.8	< 3.0 UJ
	R-B-4		Arcadis	All	7-days	7/13/2017 - 7/20/2017	RAD 130	< 0.13	< 0.53 UJ	2.4 J	< 0.33 UJ	< 0.15 UJ	< 0.50	NA	< 0.17	11.0	3.5	< 0.45 UJ
B-6	539 JU	B-19	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 57	NA	< 59	NA	< 73	< 55	NA	< 74	< 63	< 59	NA
	120 JX		Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	3.9	NA	< 2.1	180 E (J)	21	NA
	432 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	< 2.0	NA	< 2.1	67	4.1	NA
	556 JU		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 69	< 59	< 55	NA
	418 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	NU	NA	ND	4.2	NA	< 2.1	240 E (J)	26	NA
B-6	098 QK	B-19	Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	< 1.9	NA	< 2.1	60	3.4	NA
	539 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 51	NA	< 53	NA	< 65	< 49	NA	< 67	< 57	< 53	NA
	119 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	NU	NA	ND	2.9	NA	< 1.9	130	12	NA
	109 QK**		Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	1.9	NA	< 2.0	90	19	NA
	093 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	19 J	NA	< 3.3	< 2.5	NA	< 3.4	40	3.3 J	NA
	424 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 130	< 1.3	NA	13 J	NA	< 1.7	< 1.2	NA	< 1.7	1.2	3.6 J	NA

Table 1
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Grenada Manufacturing
Grenada, Mississippi

Sample Details								Constituent (µg/m^3)										
Sample Location ID	Sample ID	Sample Location	Consultant	Worker Shift	Sample Duration‡	Sample Dates	Analysis	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,2-TCA	Benzene	Methylene Chloride	PCE	TCE	Toluene	Vinyl Chloride
	B-6-BC		Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.13	< 0.065	2.5	< 0.65	< 0.18	< 0.26	< 1.1	< 0.22	4.8	0.51	< 0.042
	B-6-BC		Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.91	< 3.7 UJ	7.6 J	< 2.3 UJ	< 1.1 UJ	< 3.5	NA	< 1.2	12	< 0.95	< 3.1 UJ
	R-B-6		Arcadis	All	7-days	7/13/2017 - 7/20/2017	RAD 130	< 0.13	< 0.53 UJ	1.9 J	< 0.33 UJ	< 0.15 UJ	< 0.50	NA	< 0.17	6.1	1.5	< 0.44 UJ
B-8	553 JU	G-18	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 58	NA	< 60	NA	< 74	< 56	NA	< 76	< 65	< 60	NA
	105 JX		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 69	< 51	NA	< 70	< 60	< 56	NA
	544 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 70	< 60	< 55	NA
	090 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	< 2.7	NA	< 3.3	< 2.5	NA	< 3.4	14	< 2.7 UJ	NA
	B-8-BC		Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.14	< 0.068	1.2	< 0.68	< 0.19	0.63	< 1.2	< 0.23	7.1	1.5	< 0.044
	B-8-BC		Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.80	< 3.2 UJ	1.6 J	< 2.1 UJ	< 0.94 UJ	< 3.1	NA	< 1.0	8.0	1.5	< 2.7 UJ
B-9	551 JU	E-10	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 58	NA	< 60	NA	< 75	< 56	NA	< 76	< 65	< 60	NA
	117 JX		Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	NU	NA	ND	3.9	NA	< 2.2	86	14	NA
	433 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 2.0	NA	< 2.2	14	3.8	NA
	558 JU		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 69	< 59	< 55	NA
	419 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	NU	NA	ND	4.2	NA	< 2.1	91	15	NA
	099 QK		Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.9	NA	< 2.1	13	2.7	NA
	542 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 51	NA	< 53	NA	< 66	< 50	NA	< 67	< 57	< 54	NA
	116 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	NU	NA	ND	3.5	NA	< 1.9	76	13	NA
	106 QK		Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.8	NA	< 2.0	26	29	NA
	091 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	11 J	NA	< 3.3	< 2.5	NA	< 3.4	75	5.2 J	NA
	426 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 130	< 1.3	NA	6.0 J	NA	< 1.7	< 1.2	NA	< 1.7	1.2	3.9 J	NA
	B-9-BC		Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.12	< 0.061	1.8	< 0.61	< 0.17	0.44	< 1.1	0.26	12	1.9	< 0.040
	B-9-BC		Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.88	< 3.6 UJ	2.5 J	< 2.3 UJ	< 1.0 UJ	< 3.4	NA	< 1.2	14	2.0	< 3.0 UJ
QA/QC																		
B-4	541 JU	D-14	Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 52	NA	< 54	NA	< 67	< 50	NA	< 68	< 58	< 58	NA
B-3	546 JU	F-16	Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 52	NA	< 54	NA	< 67	< 50	NA	< 68	< 58	< 54	NA
B-4	089 QK	D-14	Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	5.3 J	NA	< 3.3	< 2.5	NA	< 3.4	45	4.9 J	NA
B-3	094 QK	F-16	Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	< 2.7	NA	< 3.3	< 2.5	NA	< 3.4	22	3.7 J	NA
B-4	110 JX	D-14	Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	NU	NA	ND	3.5	NA	< 2.2	190 E (J)	37	NA
B-9	107 QK	E-10	Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	NU	NA	ND	2.0	NA	< 2.0	65	< 1.7	NA
B-3	DUP-5	F-16	Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	1.6 J	NA	< 0.81	< 0.61	NA	< 0.82	20	3.5 J	NA
B-4	DUP-1-BC	D-14	Arcadis	All	24-hrs	6/28/2017	TO-15	< 0.14	< 0.069	1.1	< 0.69	< 0.19	0.41	< 1.2	< 0.24	6.2	1.6	< 0.044
B-4	DUP-1-BC	D-14	Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.86	< 3.5 UJ	1.5 J	< 2.2 UJ	< 1.0 UJ	< 3.3	NA	< 1.1	7.3	1.9	< 3.0 UJ
B-4	DUP-2-BC	D-14	Arcadis	All	7-days	7/13/2017 - 7/20/2017	RAD 130	< 0.13	< 0.53 UJ	1.5 J	< 0.33 UJ	< 0.15 UJ	< 0.50	NA	< 0.17	11.0	3.2	< 0.45 UJ

Notes:

‡	Sample duration is approximate.
*	Laboratory inadvertently prepared samples for RAD 130 analysis.
**	Samples 105 QK and 109 QK were inadvertently switched.
₸	Samples collected May 2017 at B-4, B-6 and B-9 follow Program A sampling
₸₸	Samples collected May 2017 at A-5, B-3 and B-8 follow Program C sampling

Abbreviations:

µg/m^3	micrograms per cubic meter.
DCA	Dichloroethane.
DCE	Dichloroethene.
C	Estimated concentration due to calculated sampling rate.
E	The compound was quantitated above the calibration range.
J	The compound was positively identified; however, the associated numerical value is an estimated concentration only.
(J)	The compound was positively identified; however, the associated numerical value is an estimated concentration only because the reported concentrations are greater than the instrument calibration range.

Table 1
Summary of Indoor Air Analytical Results
Grenada Manufacturing
Grenada, Mississippi

Sample Details								Constituent (µg/m^3)										
Sample Location ID	Sample ID	Sample Location	Consultant	Worker Shift	Sample Duration‡	Sample Dates	Analysis	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,2-TCA	Benzene	Methylene Chloride	PCE	TCE	Toluene	Vinyl Chloride

NA	Not available by Method Radiello 130 Solvent Panel Scan and/or Method Radiello 145 Thermal Desorption.
ND	Not detected by Method Radiello 145 Thermal Desorption. Due to unpublished uptake rates for the compound the quantitation limit cannot be identified.
NU	Detected by Method Radiello 145 Thermal Desorption. Due to unpublished uptake rates for the compound the quantitation limit cannot be identified.
PCE	Tetrachloroethene.
RAD 130	Samples collected in Radiello 130 passive samples and analyzed by solvent panel scan by gas chromatography/mass spectrometry.
RAD 145	Samples collected in Radiello 145 passive samples and analyzed by thermal desorption scan by gas chromatography/mass spectrometry.
TCA	Trichloroethane.
TCE	Trichloroethene.
TO-15	TO-15 samples collected in 6-liter summa canisters and analyzed by modified U.S. Environmental Protection Agency Method TO-15 gas chromatography/mass spectrometry.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

Table 1a
Summary of Ambient Air Analytical Results Associated with Indoor Air
Grenada Manufacturing
Grenada, Mississippi

Sample Details								Constituent (µg/m^3)										
Sample Location ID	Sample ID	Sample Location	Consultant	Worker Shift	Sample Duration‡	Sample Dates	Analysis	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,2-TCA	Benzene	Methylene Chloride	PCE	TCE	Toluene	Vinyl Chloride
Ambient Air																		
AMB-N	554 JU	North side of facility	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 58	NA	< 60	NA	< 75	< 56	NA	< 76	< 65	< 60	NA
	115 JX		Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.9	NA	< 2.2	< 2.1	7.4	NA
	435 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 2.0	NA	< 2.2	< 2.0	7.1	NA
	106 JX		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 69	< 51	NA	< 70	< 60	< 56	NA
	421 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.9	NA	< 2.1	2.9	4.7	NA
	101 QK		Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.9	NA	< 2.1	< 2.0	3.8	NA
	547 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 53	NA	< 55	NA	< 68	< 51	NA	< 69	< 59	< 55	NA
	114 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	ND	NA	ND	2.7	NA	< 2.0	< 1.9	6.8	NA
AMB-N	108 QK	North side of facility	Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	1.9	NA	< 2.0	< 1.8	21	NA
	097 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	< 2.7	NA	< 3.3	< 2.5	NA	< 3.4	< 2.9	< 2.7 UJ	NA
	428 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 130	< 1.3	NA	< 1.3	NA	< 1.7	< 1.2	NA	< 1.7	< 1.4	1.7 J	NA
	Amb-R-N		Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	< 0.65	NA	< 0.81	< 0.60	NA	< 0.82	< 0.70	0.77 J	NA
AMB-S	555 JU	South side of facility	Arcadis	1st	8-hrs	5/2/2017	RAD 145*	< 58	NA	< 60	NA	< 75	< 56	NA	< 76	< 65	< 61	NA
	122 JX		Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.8	NA	< 2.2	< 2.0	8.1	NA
	434 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 2.0	NA	< 2.2	< 2.0	10	NA
	107 JX		Arcadis	2nd	8-hrs	5/2/2017	RAD 145*	< 53	NA	< 55	NA	< 69	< 51	NA	< 70	< 60	< 56	NA
	420 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.7	NA	< 2.1	< 2.0	4.9	NA
	100 QK		Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.9	NA	< 2.1	< 2.0	4.0	NA
	545 JU		Arcadis	3rd	8-hrs	5/1/2017	RAD 145*	< 55	NA	< 57	NA	< 71	< 53	NA	< 72	< 62	< 57	NA
	121 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	ND	NA	ND	3.2	NA	< 2.0	< 1.9	9.0	NA
	105 QK**		Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	2.1	NA	< 2.0	< 1.9	18	NA
	095 QK		Arcadis	All	7-days	5/1/2017 - 5/8/2017	RAD 130	< 2.6	NA	< 2.7	NA	< 3.3	< 2.5	NA	< 3.4	< 2.9	< 2.7 UJ	NA
	427 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 130	< 1.3	NA	< 1.3	NA	< 1.7	< 1.2	NA	< 1.7	< 1.4	< 1.3	NA
	Amb-R-S		Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	< 0.65	NA	< 0.81	< 0.60	NA	< 0.82	< 0.70	< 0.65	NA
AMB-E	108 JX	East side of facility	Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.6	NA	< 2.2	< 2.1	25	NA
	437 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 2.1	NA	< 2.3	< 2.2	13	NA
	423 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.3	NA	< 2.1	< 2.0	18	NA
	103 QK		Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.9	NA	< 2.1	< 2.0	5.0	NA
	109 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	ND	NA	ND	2.2	NA	< 2.0	< 1.9	21	NA
	111 QK		Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.8	NA	< 2.0	< 1.9	36	NA
	430 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 145	ND	NA	ND	NA	ND	0.28	NA	0.10	0.17	6.9 EJ	NA
	Amb-R-E		Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	< 0.65	NA	< 0.81	< 0.61	NA	< 0.82	< 0.70	4.5 J	NA
AMB-W	113 JX	West side of facility	Arcadis	1st	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	2.8	NA	< 2.2	< 2.0	8.7	NA
	436 JX		Arcadis	1st	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 2.0	NA	< 2.2	< 2.0	14	NA
	422 JX		Arcadis	2nd	8-hrs	5/9/2017	RAD 145	ND	NA	ND	NA	ND	3.0	NA	< 2.1	< 2.0	9.1	NA
	102 QK		Arcadis	2nd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.9	NA	< 2.1	< 2.0	4.1	NA
	112 JX		Arcadis	3rd	8-hrs	5/8/2017	RAD 145	ND	NA	ND	NA	NA	3.2	NA	< 2.0	< 1.9	8.8	NA
	110 QK		Arcadis	3rd	8-hrs	5/16/2017	RAD 145	ND	NA	ND	NA	ND	< 1.8	NA	< 2.0	< 1.9	15	NA
	429 JX		Arcadis	All	14-days	5/1/2017 - 5/15/2017	RAD 130	< 1.3	NA	< 1.3	NA	< 1.7	< 1.2	NA	< 1.7	< 1.4	< 1.3	NA
	Amb-R-W		Arcadis	All	30-days	5/1/2017 - 5/30/2017	RAD 130	< 0.63	NA	< 0.65	NA	< 0.81	< 0.60	NA	< 0.82	< 0.70	< 0.65	NA
AMB-SE	Amb-1-BC	Southeast side of the facility	Arcadis	All	24-hrs	6/28/2017	RAD 130	< 0.80	< 3.2 UJ	< 0.99 UJ	< 2.1 UJ	< 0.94 UJ	< 3.1	NA	< 1.0	< 0.90	< 0.84	< 2.7 UJ

Notes:

Table 1a
Summary of Ambient Air Analytical Results Associated with Indoor Air
Grenada Manufacturing
Grenada, Mississippi

Sample Details								Constituent (µg/m^3)										
Sample Location ID	Sample ID	Sample Location	Consultant	Worker Shift	Sample Duration‡	Sample Dates	Analysis	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,2-TCA	Benzene	Methylene Chloride	PCE	TCE	Toluene	Vinyl Chloride

‡ Sample duration is approximate.
* Laboratory inadvertently prepared samples for RAD 130 analysis.
** Samples 105 QK and 109 QK were inadvertently switched.
ŧ Samples collected May 2017 at B-4, B-6 and B-9 follow Program A sampling
ŧŧ Samples collected May 2017 at A-5, B-3 and B-8 follow Program C sampling

Abbreviations:

µg/m^3	micrograms per cubic meter.
DCA	Dichloroethane.
DCE	Dichloroethene.
C	Estimated concentration due to calculated sampling rate.
E	The compound was quantitated above the calibration range.
J	The compound was positively identified; however, the associated numerical value is an estimated concentration only.
(J)	The compound was positively identified; however, the associated numerical value is an estimated concentration only because the reported concentrations are greater than the instrument calibration range.
NA	Not available by Method Radiello 130 Solvent Panel Scan and/or Method Radiello 145 Thermal Desorption.
ND	Not detected by Method Radiello 145 Thermal Desorption. Due to unpublished uptake rates for the compound the quantitation limit cannot be identified.
NU	Detected by Method Radiello 145 Thermal Desorption. Due to unpublished uptake rates for the compound the quantitation limit cannot be identified.
PCE	Tetrachloroethene.
RAD 130	Samples collected in Radiello 130 passive samples and analyzed by solvent panel scan by gas chromatography/mass spectrometry.
RAD 145	Samples collected in Radiello 145 passive samples and analyzed by thermal desorption scan by gas chromatography/mass spectrometry.
TCA	Trichloroethane.
TCE	Trichloroethene.
TO-15	TO-15 samples collected in 6-liter summa canisters and analyzed by modified U.S. Environmental Protection Agency Method TO-15 gas chromatography/mass spectrometry.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

ARCADIS Design & Consultancy for natural and built assets

Grenada Manufacturing

DATA REVIEW

Grenada, Mississippi

Volatile Organic Compound (VOC) Analyses

SDG #1707036R1

Analyses Performed By:
Eurofins/Air Toxic
Folsom, California

Report #28167R
Review Level: Tier III
Project: LA003307.0009.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #1707036R1 for samples collected in association with the Grenada Manufacturing site, located in Grenada, Mississippi. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis			
					VOC	SVOC	MET	MISC
B-8-BC (062817)	1707036R1-01	Air	6/28/2017		X			
B-3-BC (062817)	1707036R1-02	Air	6/28/2017		X			
B-9-BC (062817)	1707036R1-03	Air	6/28/2017		X			
A-5-BC (062817)	1707036R1-04	Air	6/28/2017		X			
B-6-BC (062817)	1707036R1-05	Air	6/28/2017		X			
B-4-BC (062817)	1707036R1-06	Air	6/28/2017		X			
Dup-1-BC (062817)	1707036R1-07	Air	6/28/2017	B-4-BC (062817)	X			
Amb-1-BC (062817)	1707036R1-08	Air	6/28/2017		X			

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Samples were collected using Radiello cartidges and analysis was performed using the Solvent Panel Scan method. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Solvent Panel Scan (SOP: IH-AN-Solvent Panel)	Air	60 days from collection to analysis	Cool to <6ºC

All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 24-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (30%) and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (30%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts are ± 40% of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

7. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 25% for air matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for air matrices.

Laboratory duplicate analysis was not performed using a sample from this SDG.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for air matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for air matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result (mg/m^3)	Duplicate Result (mg/m^3)	RPD
B-4-BC (062817)/ Dup-1-BC (062817)	Trichloroethene	6.9	7.3	5.6%
	Toluene	1.8	1.9	AC
	cis-1,2-Dichloroethene	1.4	1.5	

Note:

AC	Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

To calculate ug/m3 concentrations in the Lab Blank and in sample Amb-1-BC (062817), a sampling duration of 1601 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples. Associated compounds exhibiting an adjusted rate were flagged by the laboratory as “C” (C = Estimated concentration due to calculated sampling rate.) and were qualified as estimated (J/UJ).

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: Solvent Panel Scan	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Dilution Factor		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Todd Church

SIGNATURE:

DATE: August 8, 2017

PEER REVIEW: Dennis Capria

DATE: August 11, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.
C - Estimated concentration due to calculated sampling rate
CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Client Sample ID: B-8-BC (062817)

Lab ID#: 1707036R1-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071107simr1**	**Date of Collection: 6/29/17 11:27:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 11:14 AM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.80	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.2	Not Detected C	Not Detected C	UJ
cis-1,2-Dichloroethene	0.10	0.99	0.16 C	1.6 C	J
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected C	UJ
Benzene	0.40	3.1	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.0	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	0.94	Not Detected C	Not Detected C	UJ
Trichloroethene	0.10	0.90	0.90	8.0	
Toluene	0.10	0.84	0.18	1.5	
Vinyl Chloride	0.40	2.7	Not Detected C	Not Detected C	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1601 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

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Client Sample ID: B-3-BC (062817)

Lab ID#: 1707036R1-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071108simr1**	**Date of Collection: 6/29/17 11:10:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 11:39 AM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.82	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.3	Not Detected C	Not Detected ~~C~~	UJ
cis-1,2-Dichloroethene	0.10	1.0	0.22 C	2.2 ~~C~~	J
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected ~~C~~	UJ
Benzene	0.40	3.2	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.1	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	0.96	Not Detected C	Not Detected ~~C~~	UJ
Trichloroethene	0.10	0.92	3.1	28	
Toluene	0.10	0.86	0.18	1.5	
Vinyl Chloride	0.40	2.8	Not Detected C	Not Detected ~~C~~	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1564 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: B-9-BC (062817)

Lab ID#: 1707036R1-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071109simr1**	**Date of Collection: 6/29/17 9:47:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 12:04 PM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.88	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.6	Not Detected C	Not Detected ~~C~~	UJ
cis-1,2-Dichloroethene	0.10	1.1	0.23 C	2.5 ~~C~~	J
trans-1,2-Dichloroethene	0.20	2.3	Not Detected C	Not Detected ~~C~~	UJ
Benzene	0.40	3.4	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.2	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	1.0	Not Detected C	Not Detected ~~C~~	UJ
Trichloroethene	0.10	0.98	1.4	14	
Toluene	0.10	0.92	0.22	2.0	
Vinyl Chloride	0.40	3.0	Not Detected C	Not Detected ~~C~~	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1456 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

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Client Sample ID: A-5-BC (062817)

Lab ID#: 1707036R1-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071110simr1**	**Date of Collection: 6/29/17 8:40:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 12:29 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.94	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.8	Not Detected C	Not Detected C	UJ
cis-1,2-Dichloroethene	0.10	1.2	0.17 C	2.0 C	J
trans-1,2-Dichloroethene	0.20	2.4	Not Detected C	Not Detected C	UJ
Benzene	0.40	3.6	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.2	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	1.1	Not Detected C	Not Detected C	UJ
Trichloroethene	0.10	1.0	0.61	6.4	
Toluene	0.10	0.98	0.20	2.0	
Vinyl Chloride	0.40	3.2	Not Detected C	Not Detected C	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1368 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: B-6-BC (062817)

Lab ID#: 1707036R1-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071111simr1**	**Date of Collection: 6/29/17 9:55:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 12:54 PM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.91	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.7	Not Detected C	Not Detected ~~C~~	UJ
cis-1,2-Dichloroethene	0.10	1.1	0.67 C	7.6 ~~C~~	
trans-1,2-Dichloroethene	0.20	2.3	Not Detected C	Not Detected ~~C~~	UJ
Benzene	0.40	3.5	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.2	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	1.1	Not Detected C	Not Detected ~~C~~	UJ
Trichloroethene	0.10	1.0	1.2	12	
Toluene	0.10	0.95	Not Detected	Not Detected	
Vinyl Chloride	0.40	3.1	Not Detected C	Not Detected ~~C~~	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1411 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

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Client Sample ID: B-4-BC (062817)

Lab ID#: 1707036R1-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071112simr1**	**Date of Collection: 6/29/17 11:44:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 01:19 PM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.86	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.5	Not Detected C	Not Detected ~~C~~	UJ
cis-1,2-Dichloroethene	0.10	1.1	0.14 C	1.4 C	J
trans-1,2-Dichloroethene	0.20	2.2	Not Detected C	Not Detected ~~C~~	UJ
Benzene	0.40	3.3	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.1	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	1.0	Not Detected C	Not Detected ~~C~~	UJ
Trichloroethene	0.10	0.96	0.71	6.9	
Toluene	0.10	0.90	0.20	1.8	
Vinyl Chloride	0.40	3.0	Not Detected C	Not Detected ~~C~~	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1487 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Client Sample ID: Dup-1-BC (062817)

Lab ID#: 1707036R1-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071113simr1**	**Date of Collection: 6/29/17**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 01:45 PM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.86	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.5	Not Detected C	Not Detected ~~C~~	UJ
cis-1,2-Dichloroethene	0.10	1.1	0.14 C	1.5 C	J
trans-1,2-Dichloroethene	0.20	2.2	Not Detected C	Not Detected ~~C~~	UJ
Benzene	0.40	3.3	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.1	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	1.0	Not Detected C	Not Detected ~~C~~	UJ
Trichloroethene	0.10	0.96	0.76	7.3	
Toluene	0.10	0.90	0.21	1.9	
Vinyl Chloride	0.40	3.0	Not Detected C	Not Detected ~~C~~	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1487 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

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Client Sample ID: Amb-1-BC (062817)

Lab ID#: 1707036R1-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071114simr1**	**Date of Collection: 6/30/17 12:06:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 02:10 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.80	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	3.2	Not Detected C	Not Detected C	UJ
cis-1,2-Dichloroethene	0.10	0.99	Not Detected C	Not Detected C	UJ
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected C	UJ
Benzene	0.40	3.1	Not Detected	Not Detected	
Tetrachloroethene	0.10	1.0	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	0.94	Not Detected C	Not Detected C	UJ
Trichloroethene	0.10	0.90	Not Detected	Not Detected	
Toluene	0.10	0.84	Not Detected	Not Detected	
Vinyl Chloride	0.40	2.7	Not Detected C	Not Detected C	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1601 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Passive S.E. RAD130/SKC

INVENTORY SHEET

Work Order #: 1707036R1

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Comments:

Completed by:

Amanda Whittaker	Amanda Whittaker / Document Control	8/1/17
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1707036R1

Work Order Summary

CLIENT:	Ms. Sarah Jonker Arcadis U.S., Inc. 150 W Market St, Ste 728 Indianapolis, IN 46204	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	317-231-6500	**P.O. #**	LA003307.0009
FAX:	317-231-6514	**PROJECT #**	LA003307.0009 Meritar Grenada
DATE RECEIVED:	07/05/2017	**CONTACT:**	Ausha Scott
DATE COMPLETED:	07/17/2017		
DATE REISSUED:	07/31/2017		

FRACTION #	NAME	TEST
01A	B-8-BC (062817)	Passive S.E. RAD130/SKC
02A	B-3-BC (062817)	Passive S.E. RAD130/SKC
03A	B-9-BC (062817)	Passive S.E. RAD130/SKC
04A	A-5-BC (062817)	Passive S.E. RAD130/SKC
05A	B-6-BC (062817)	Passive S.E. RAD130/SKC
06A	B-4-BC (062817)	Passive S.E. RAD130/SKC
07A	Dup-1-BC (062817)	Passive S.E. RAD130/SKC
08A	Amb-1-BC (062817)	Passive S.E. RAD130/SKC
09A	Lab Blank	Passive S.E. RAD130/SKC
10A	LCS	Passive S.E. RAD130/SKC
10AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 07/31/17

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
Arcadis U.S., Inc.
Workorder# 1707036R1

Eight Radiello 130 (Solvent) samples were received on July 05, 2017. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

To calculate ug/m3 concentrations in the Lab Blank and in sample Amb-1-BC (062817), a sampling duration of 1601 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

The workorder was reissued on 7/31/2017 to report additional compounds for all samples as required by the project specifications.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.
C - Estimated concentration due to calculated sampling rate
CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
B-8-BC (062817)	1707036R1-01A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
B-3-BC (062817)	1707036R1-02A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
B-9-BC (062817)	1707036R1-03A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
A-5-BC (062817)	1707036R1-04A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
B-6-BC (062817)	1707036R1-05A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
B-4-BC (062817)	1707036R1-06A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
Dup-1-BC (062817)	1707036R1-07A	6/29/2017	7/ 5/2017	7/11/2017	12	7/11/2017	0	Good
Amb-1-BC (062817)	1707036R1-08A	6/30/2017	7/ 5/2017	7/11/2017	11	7/11/2017	0	Good
Lab Blank	1707036R1-09A	NA	NA	7/11/2017	NA	7/11/2017	0	Good
LCS	1707036R1-10A	NA	NA	7/11/2017	NA	7/11/2017	0	Good
LCSD	1707036R1-10AA	NA	NA	7/11/2017	NA	7/11/2017	0	Good

Sample Results and Raw Data

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: B-8-BC (062817)

Lab ID#: 1707036R1-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	0.99	0.16 C	1.6 C
Trichloroethene	0.10	0.90	0.90	8.0
Toluene	0.10	0.84	0.18	1.5

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Client Sample ID: B-8-BC (062817)

Lab ID#: 1707036R1-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071107simr1**	**Date of Collection: 6/29/17 11:27:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 11:14 AM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.80	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.2	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.99	0.16 C	1.6 C
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected C
Benzene	0.40	3.1	Not Detected	Not Detected
Tetrachloroethene	0.10	1.0	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.94	Not Detected C	Not Detected C
Trichloroethene	0.10	0.90	0.90	8.0
Toluene	0.10	0.84	0.18	1.5
Vinyl Chloride	0.40	2.7	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1601 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

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Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071107simr1.d
Lab Smp Id: 1707036R1-01A
Inj Date : 11-JUL-2017 11:14
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-01A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	170024	5.14541	10.2908
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	184719	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	641	0.08123	0.162462
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	4487	0.44905	0.898101
26 Toluene-CCC	92	10.680	10.680	(0.976)	1967	0.08958	0.179154
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:26

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071107simr1.d
Lab Smp Id: 1707036R1-01A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	184719	-9.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:26

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-01A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.2908	102.91	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071107simr1.d

Page 1

Date : 11-JUL-2017 11:14

Client ID:

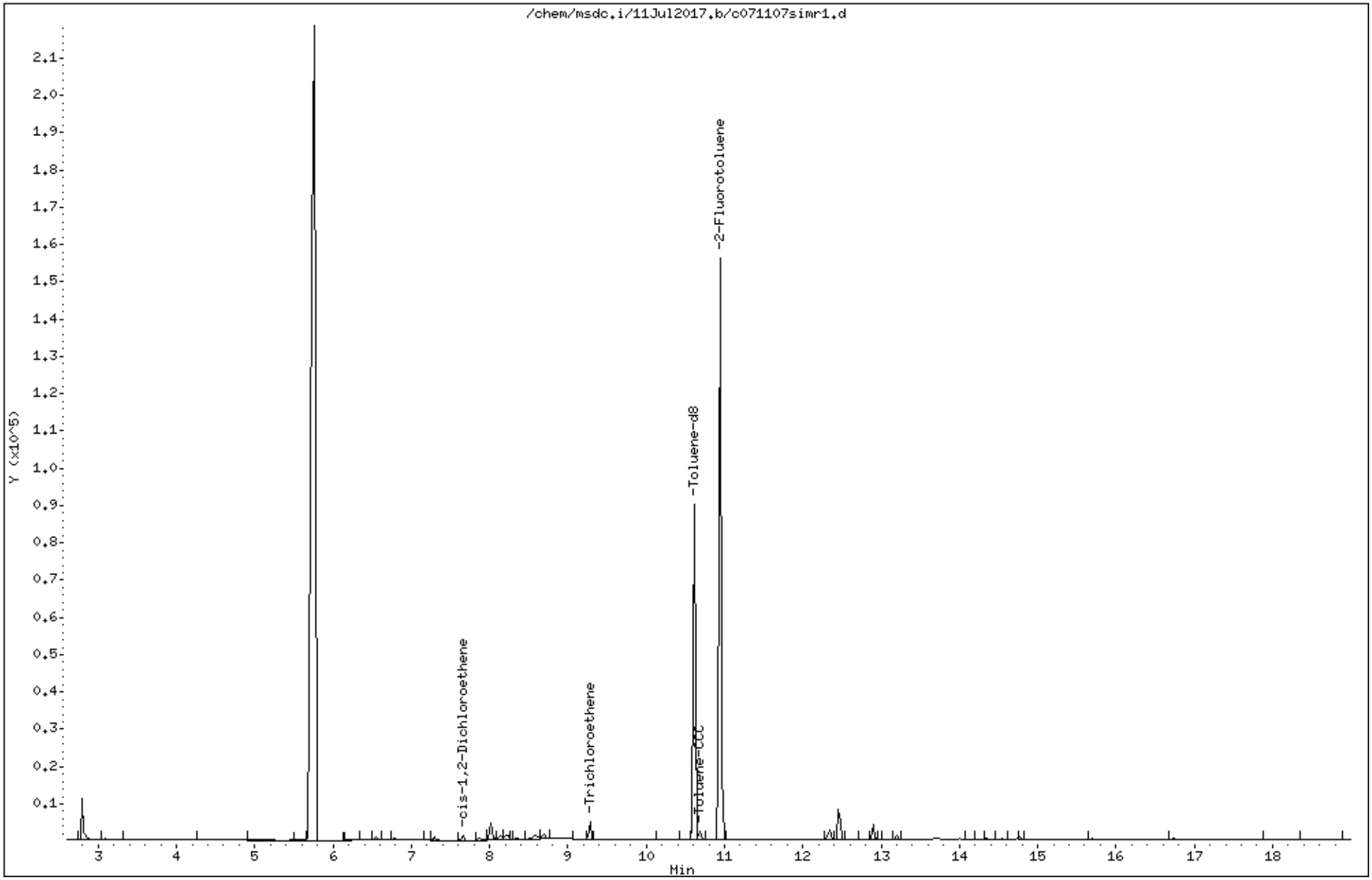
Instrument: msdc.i

Sample Info: ;1707036R1-01A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071107simr1.d

Date : 11-JUL-2017 11:14

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-01A;

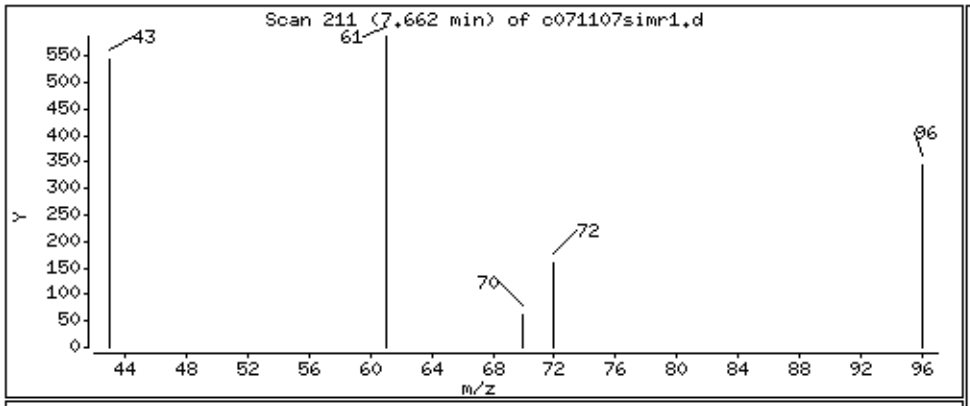
Operator: gm

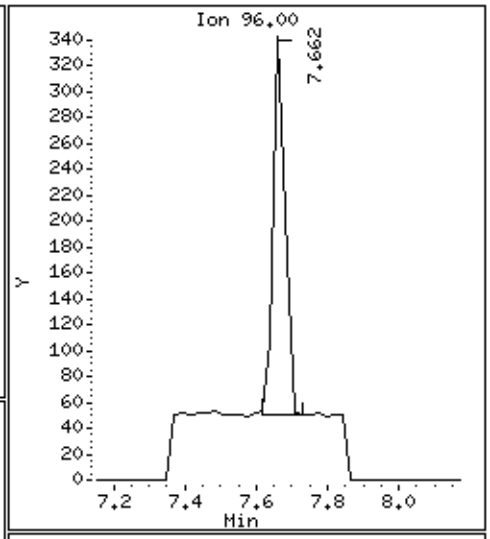
Column phase: DB-5.625

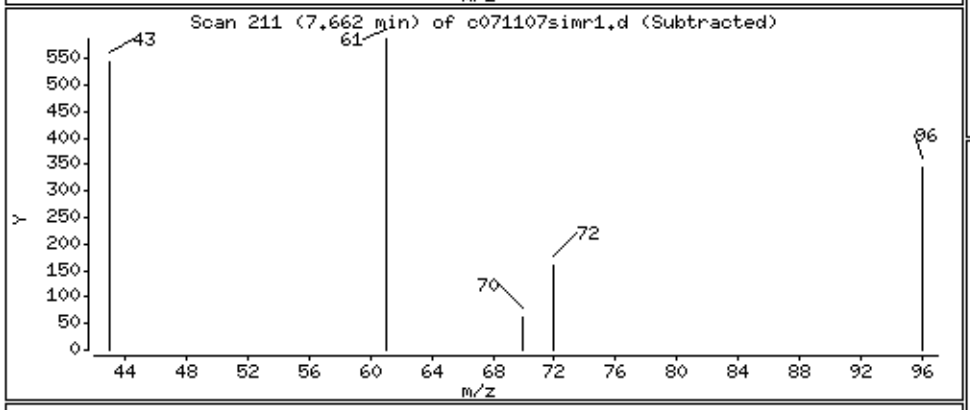
Column diameter: 0.25

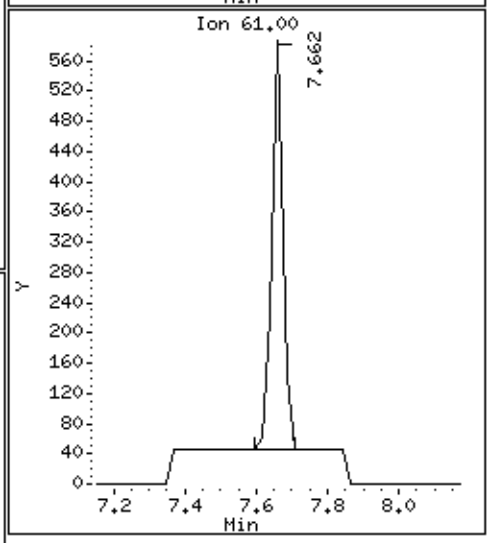
14 cis-1,2-Dichloroethene

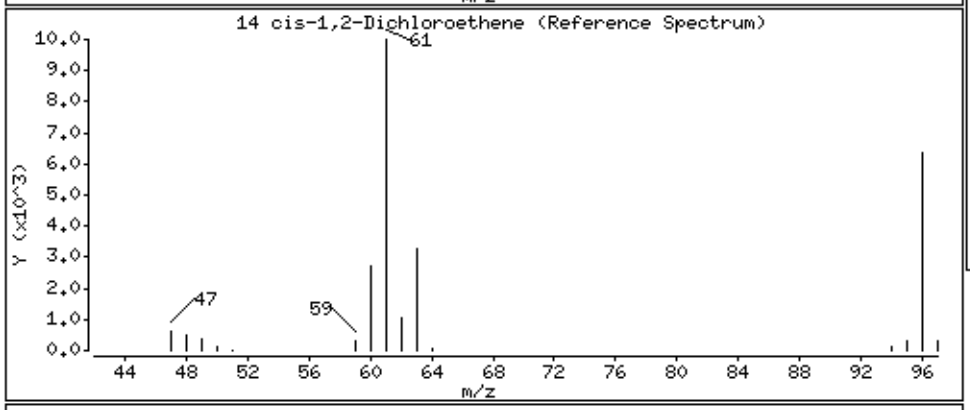
Concentration: 0.162462 ug

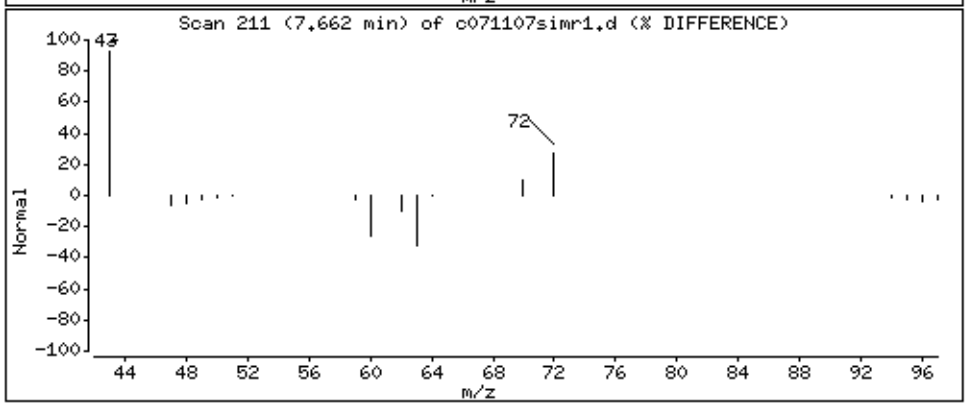












Data File: /chem/msdc.i/11Jul2017.b/c071107simr1.d

Date : 11-JUL-2017 11:14

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-01A;

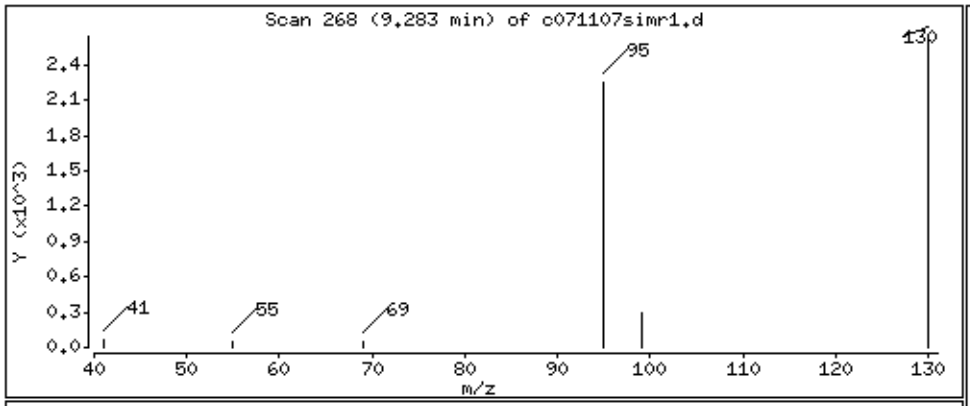
Operator: gm

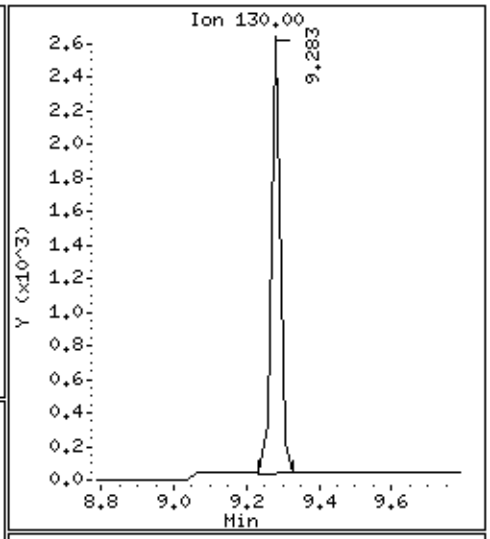
Column phase: DB-5.625

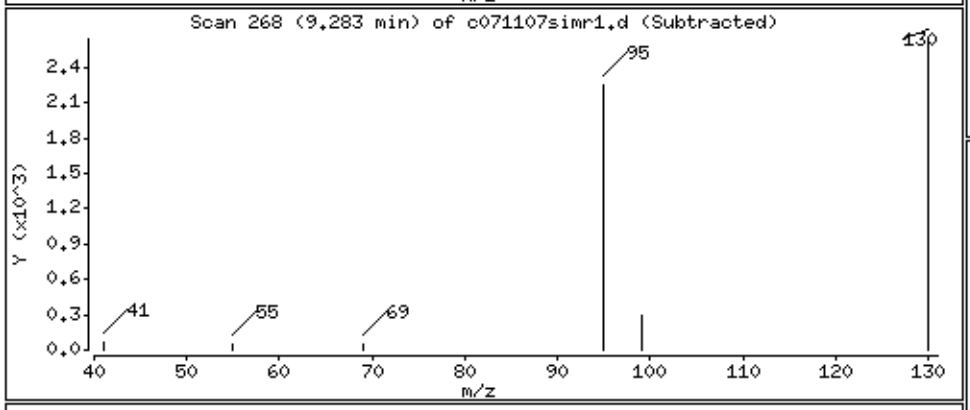
Column diameter: 0.25

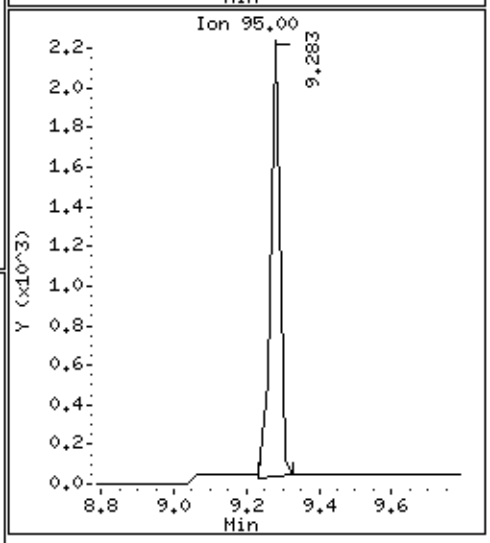
22 Trichloroethene

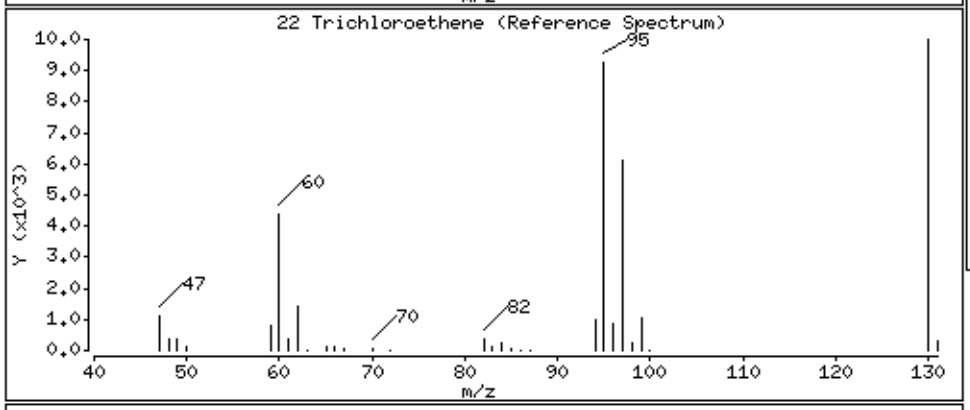
Concentration: 0.898101 ug

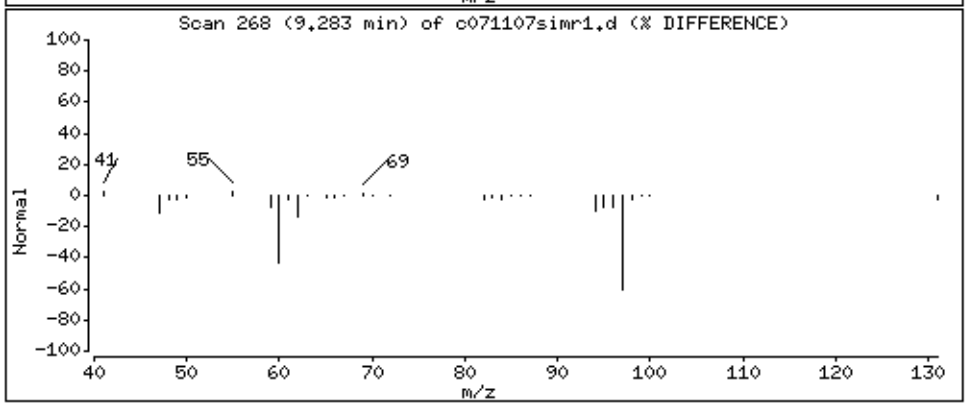












Data File: /chem/msdc.i/11Jul2017.b/c071107simr1.d

Date : 11-JUL-2017 11:14

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-01A;

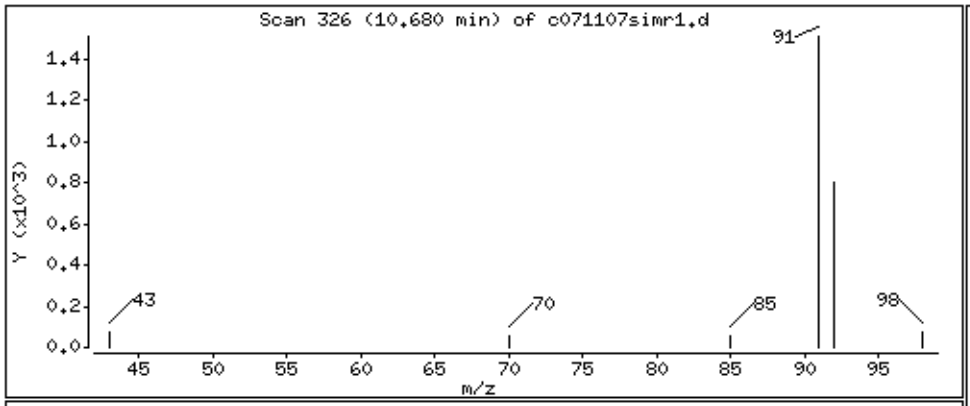
Operator: gm

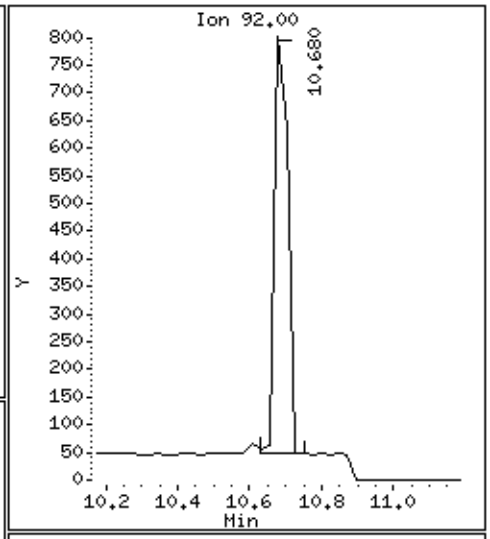
Column phase: DB-5.625

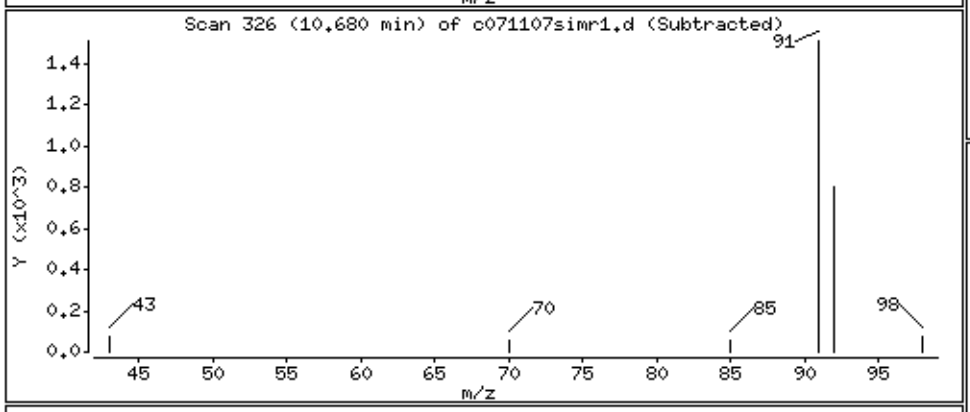
Column diameter: 0.25

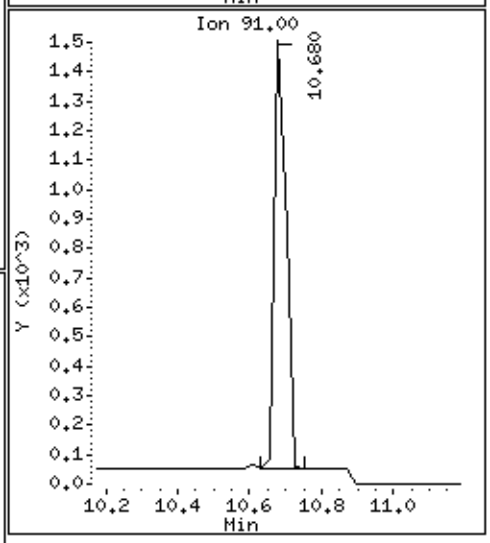
26 Toluene-CCC

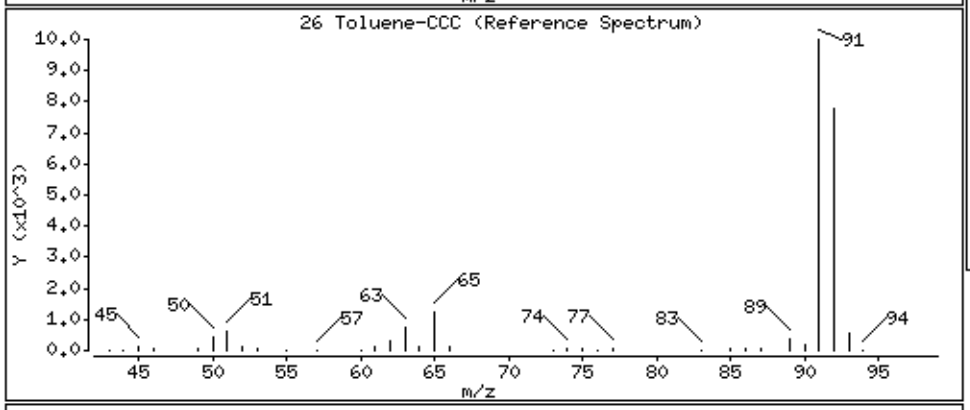
Concentration: 0.179154 ug

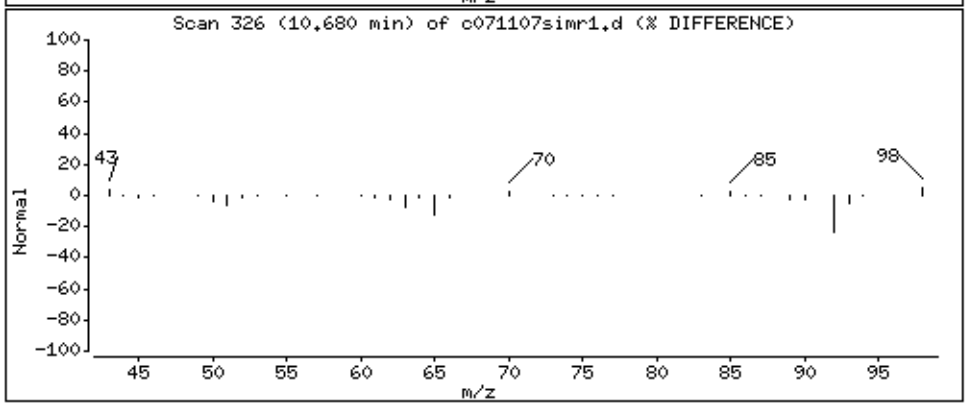












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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: B-3-BC (062817)

Lab ID#: 1707036R1-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	1.0	0.22 C	2.2 C
Trichloroethene	0.10	0.92	3.1	28
Toluene	0.10	0.86	0.18	1.5

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Client Sample ID: B-3-BC (062817)

Lab ID#: 1707036R1-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071108simr1**	**Date of Collection: 6/29/17 11:10:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 11:39 AM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.82	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.3	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	1.0	0.22 C	2.2 C
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected C
Benzene	0.40	3.2	Not Detected	Not Detected
Tetrachloroethene	0.10	1.1	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.96	Not Detected C	Not Detected C
Trichloroethene	0.10	0.92	3.1	28
Toluene	0.10	0.86	0.18	1.5
Vinyl Chloride	0.40	2.8	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1564 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071108simr1.d
Lab Smp Id: 1707036R1-02A
Inj Date : 11-JUL-2017 11:39
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-02A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	167813	5.12103	10.2421
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	183185	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	844	0.10785	0.215703
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	15422	1.55633	3.11266
26 Toluene-CCC	92	10.680	10.680	(0.976)	1961	0.09005	0.180103
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:26

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071108simr1.d
Lab Smp Id: 1707036R1-02A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	183185	-9.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:26

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-02A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.2421	102.42	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071108simr1.d

Page 1

Date : 11-JUL-2017 11:39

Client ID:

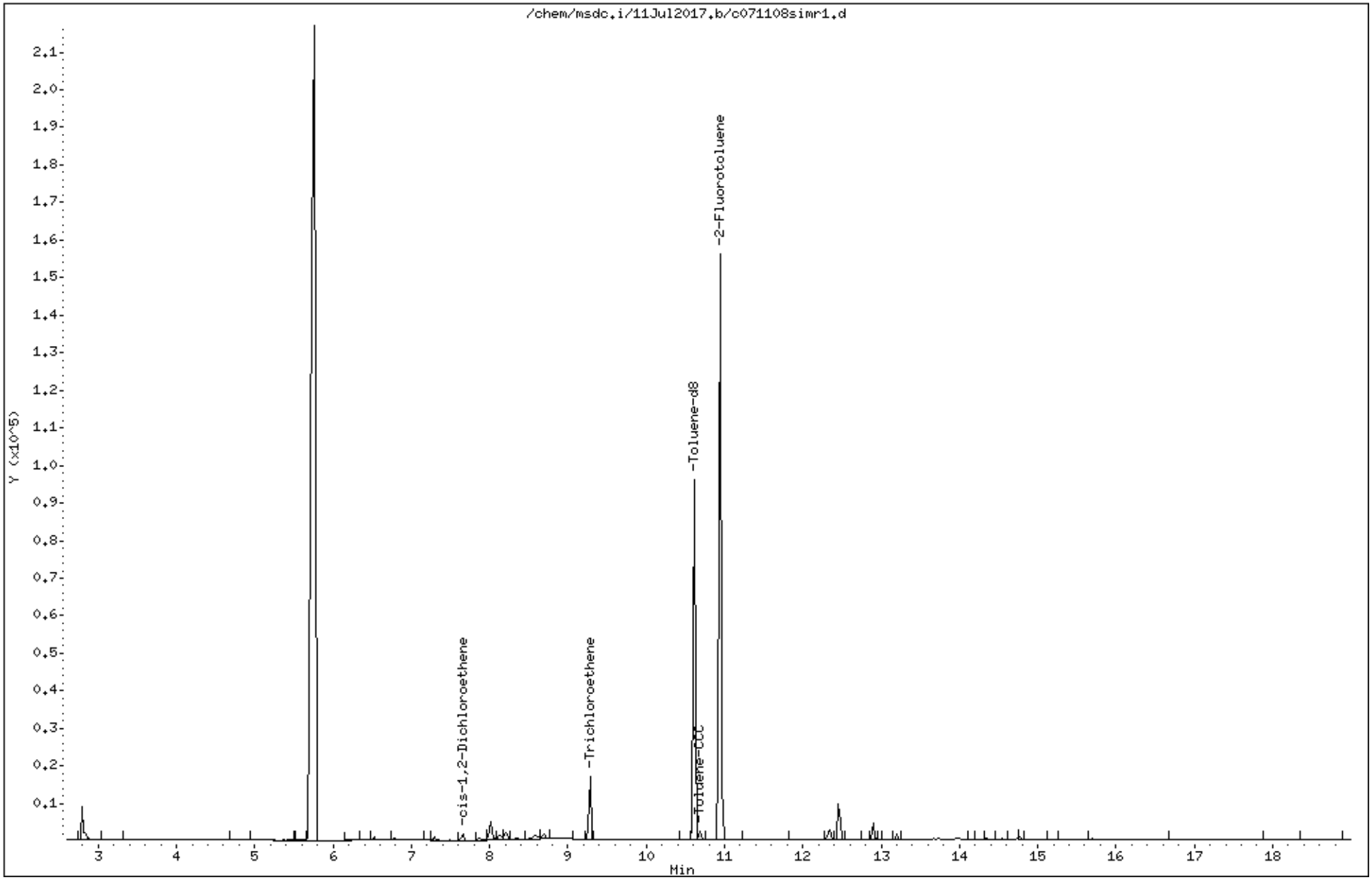
Instrument: msdc.i

Sample Info: ;1707036R1-02A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071108simr1.d

Date : 11-JUL-2017 11:39

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-02A;

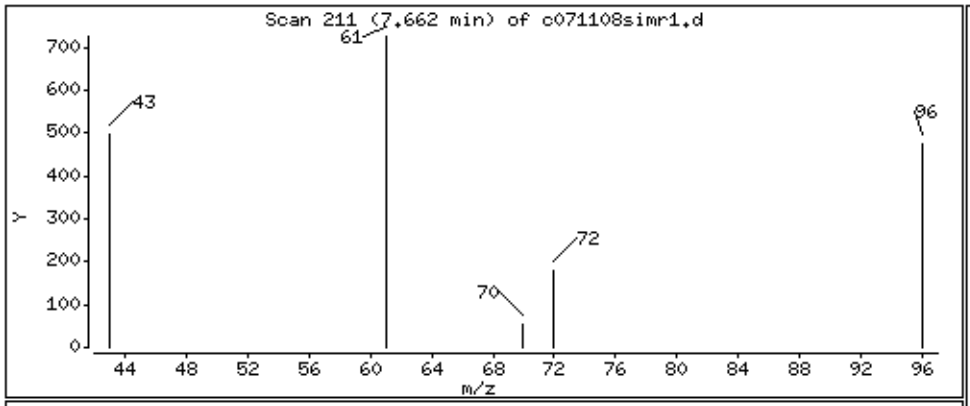
Operator: gm

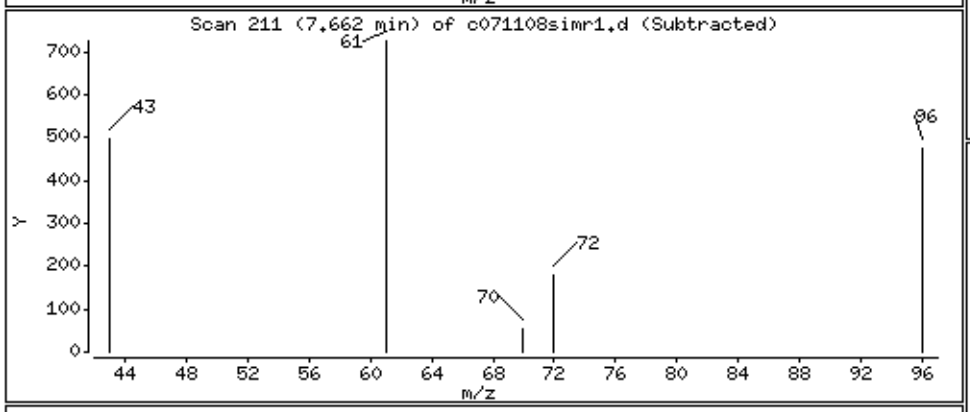
Column phase: DB-5.625

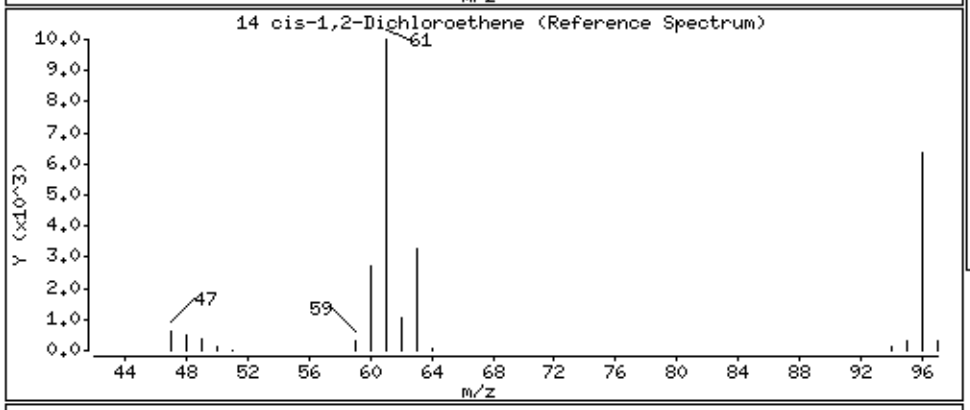
Column diameter: 0.25

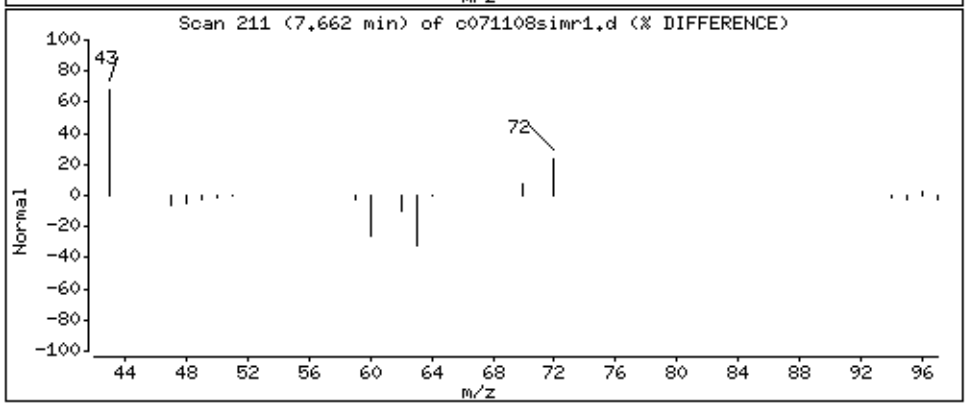
14 cis-1,2-Dichloroethene

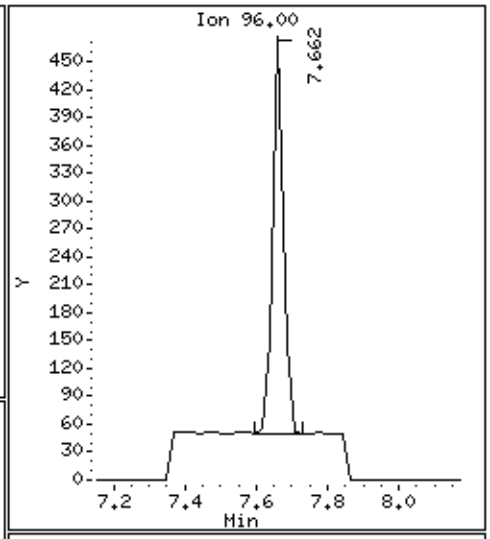
Concentration: 0.215703 ug

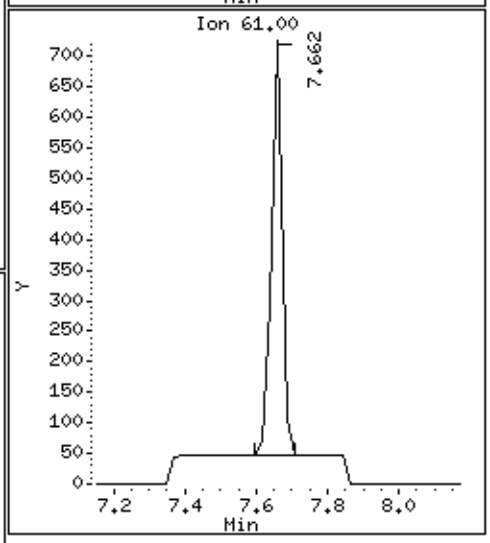












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Date : 11-JUL-2017 11:39

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-02A;

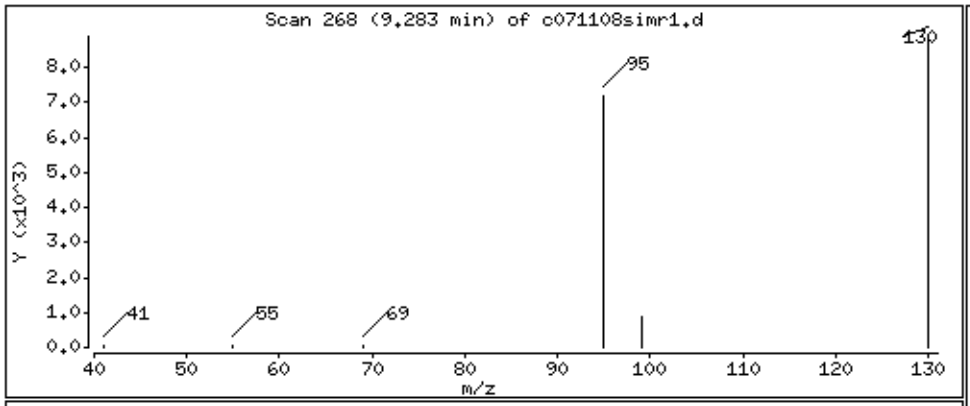
Operator: gm

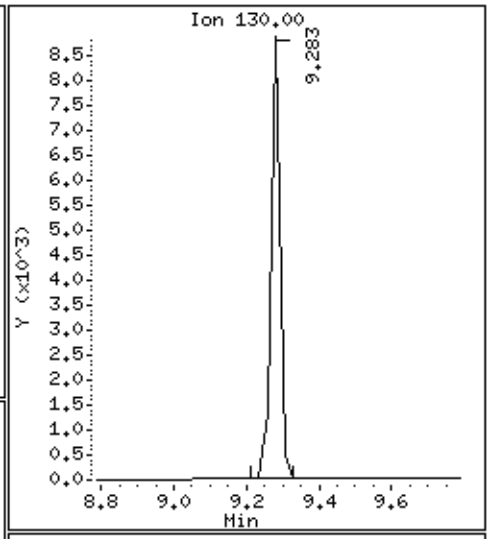
Column phase: DB-5.625

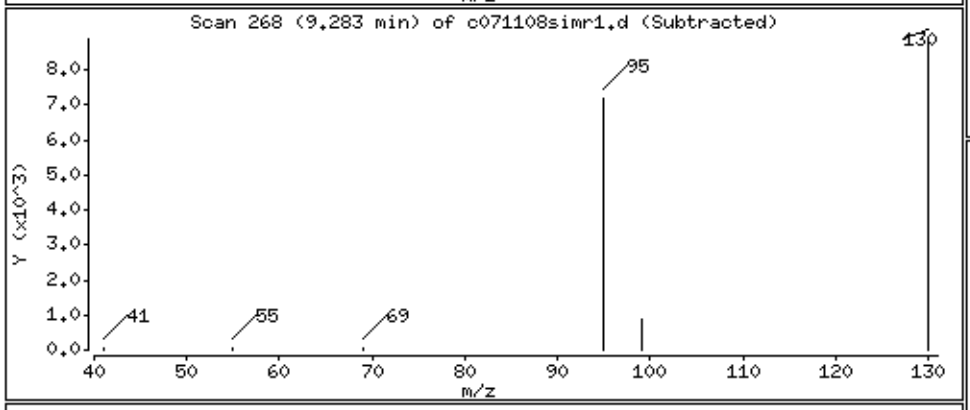
Column diameter: 0.25

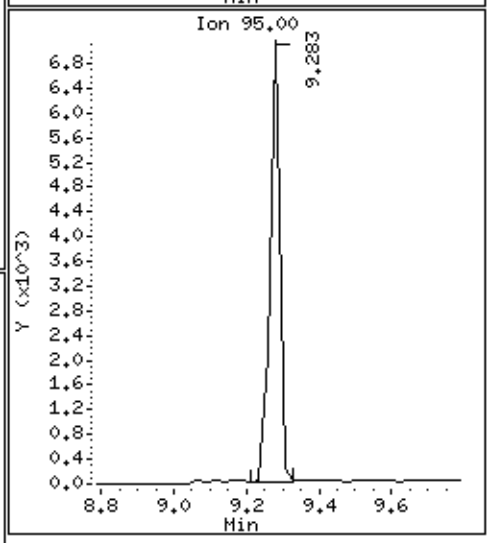
22 Trichloroethene

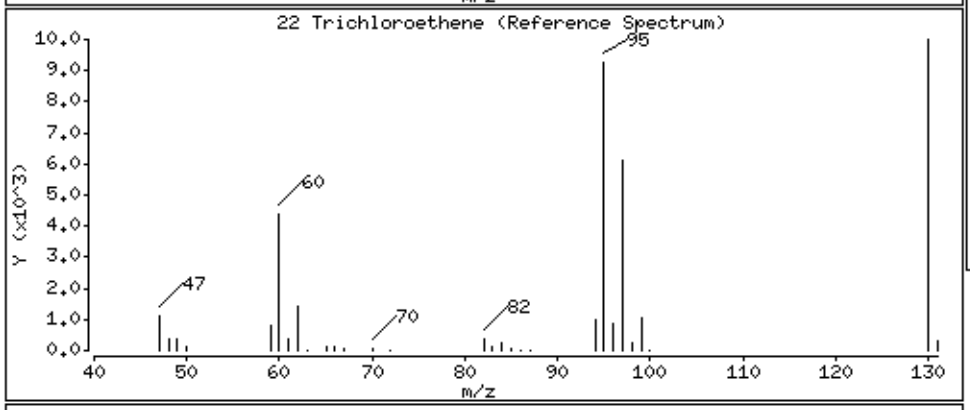
Concentration: 3.11266 ug

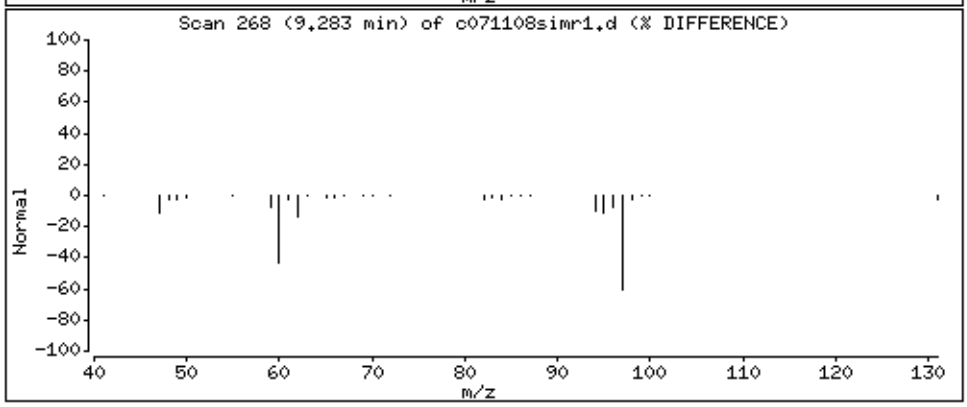












Data File: /chem/msdc.i/11Jul2017.b/c071108simr1.d

Date : 11-JUL-2017 11:39

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-02A;

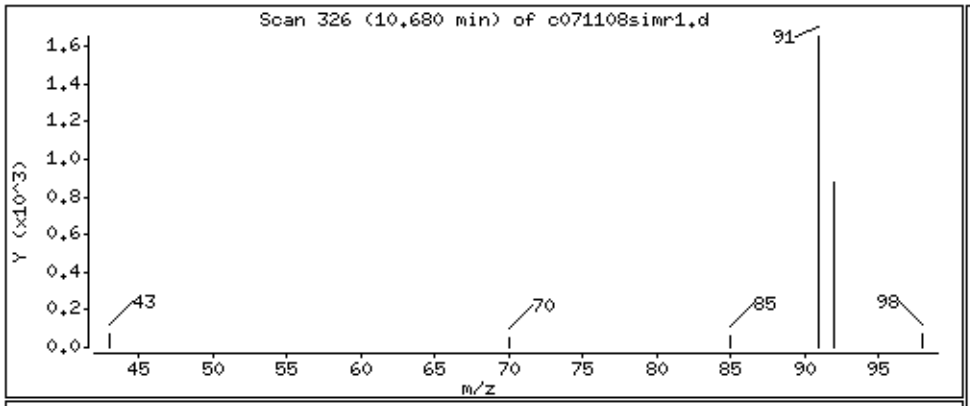
Operator: gm

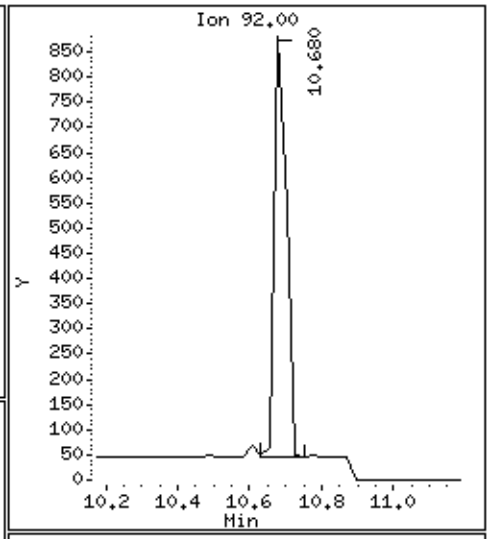
Column phase: DB-5.625

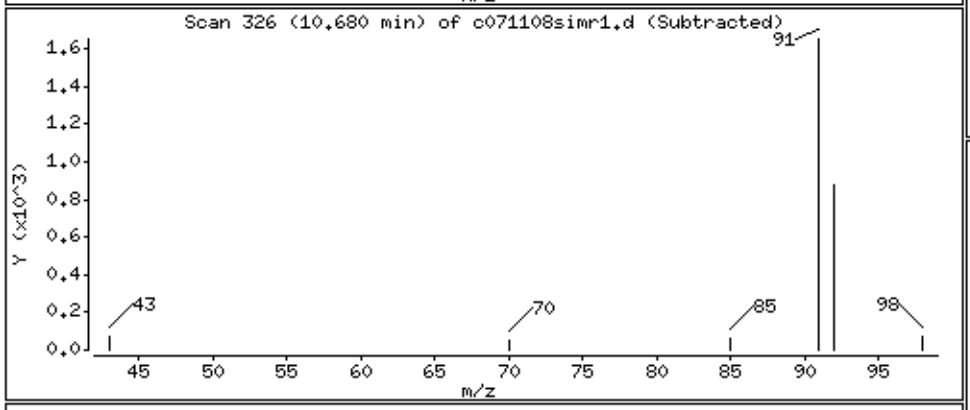
Column diameter: 0.25

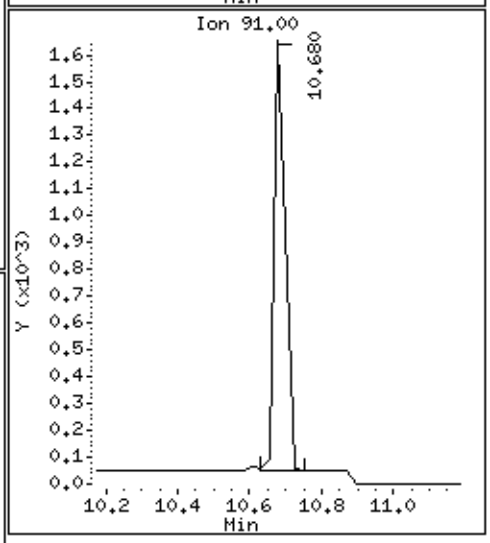
26 Toluene-CCC

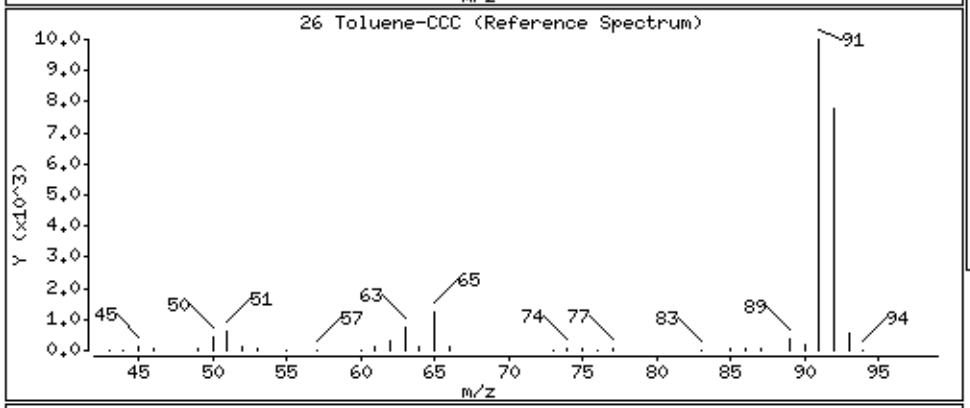
Concentration: 0.180103 ug

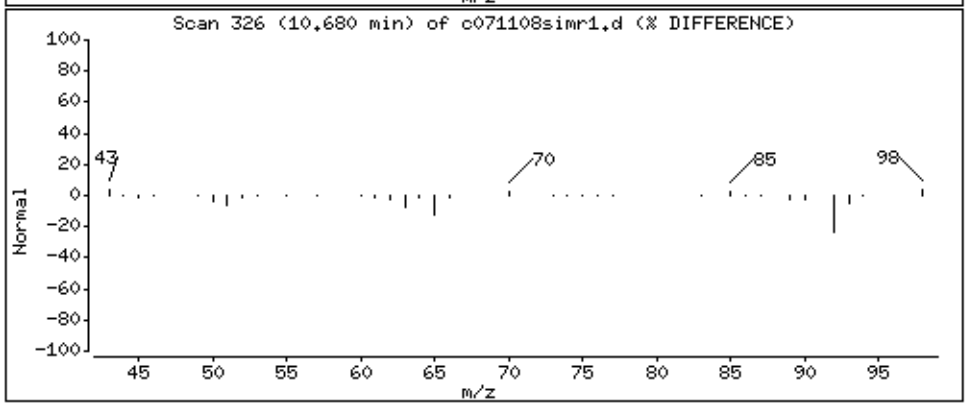












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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: B-9-BC (062817)

Lab ID#: 1707036R1-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	1.1	0.23 C	2.5 C
Trichloroethene	0.10	0.98	1.4	14
Toluene	0.10	0.92	0.22	2.0

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Client Sample ID: B-9-BC (062817)

Lab ID#: 1707036R1-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071109simr1**	**Date of Collection: 6/29/17 9:47:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 12:04 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.88	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.6	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	1.1	0.23 C	2.5 C
trans-1,2-Dichloroethene	0.20	2.3	Not Detected C	Not Detected C
Benzene	0.40	3.4	Not Detected	Not Detected
Tetrachloroethene	0.10	1.2	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	1.0	Not Detected C	Not Detected C
Trichloroethene	0.10	0.98	1.4	14
Toluene	0.10	0.92	0.22	2.0
Vinyl Chloride	0.40	3.0	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1456 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071109simr1.d
Lab Smp Id: 1707036R1-03A
Inj Date : 11-JUL-2017 12:04
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-03A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	160867	5.02839	10.0568
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	178838	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	867	0.11348	0.226968
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	6913	0.71459	1.42918
26 Toluene-CCC	92	10.680	10.680	(0.976)	2357	0.11087	0.221735
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071109simr1.d
Lab Smp Id: 1707036R1-03A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	178838	-11.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-03A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.0568	100.57	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071109simr1.d

Date : 11-JUL-2017 12:04

Client ID:

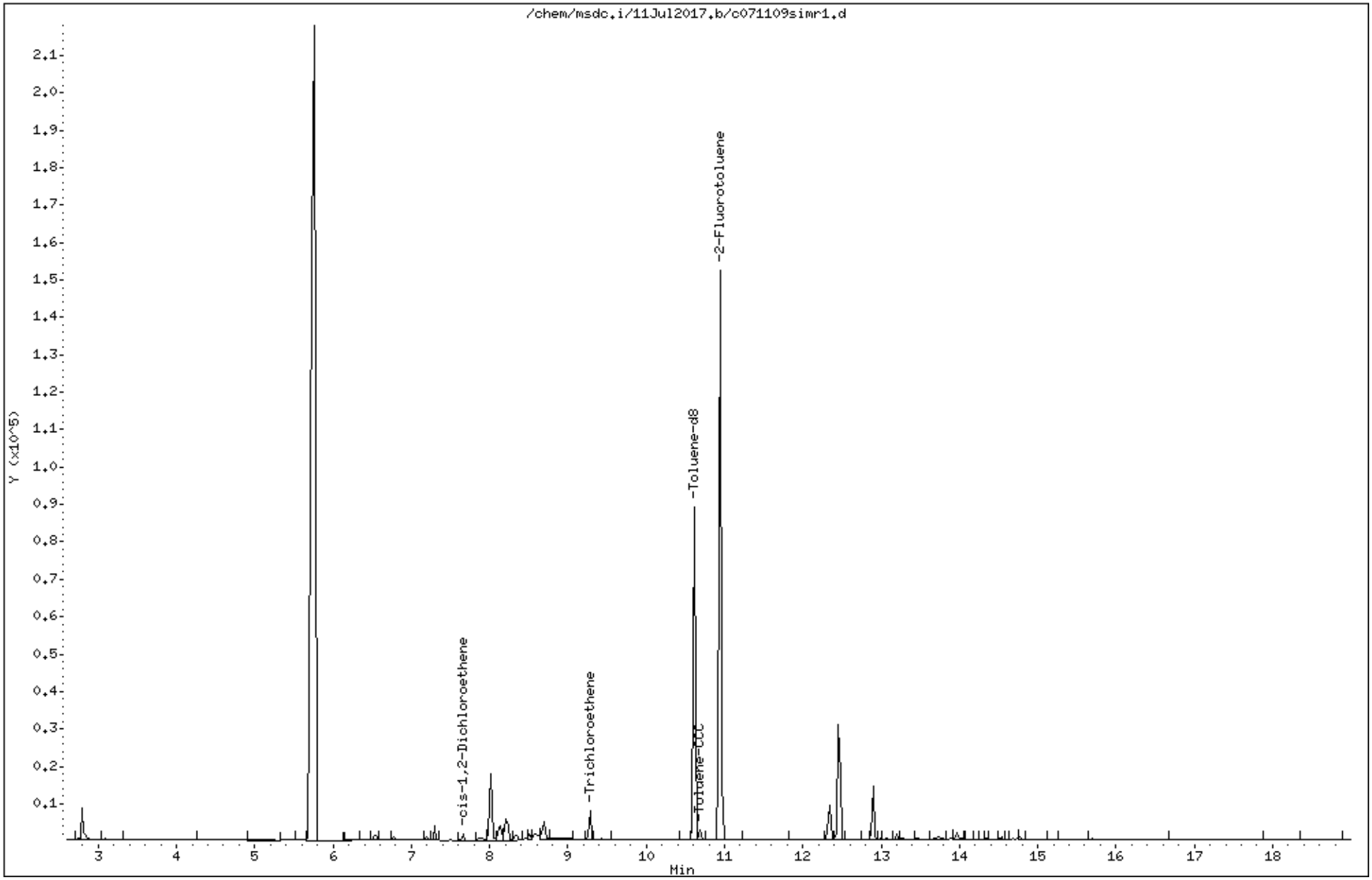
Instrument: msdc.i

Sample Info: ;1707036R1-03A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071109simr1.d

Date : 11-JUL-2017 12:04

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-03A;

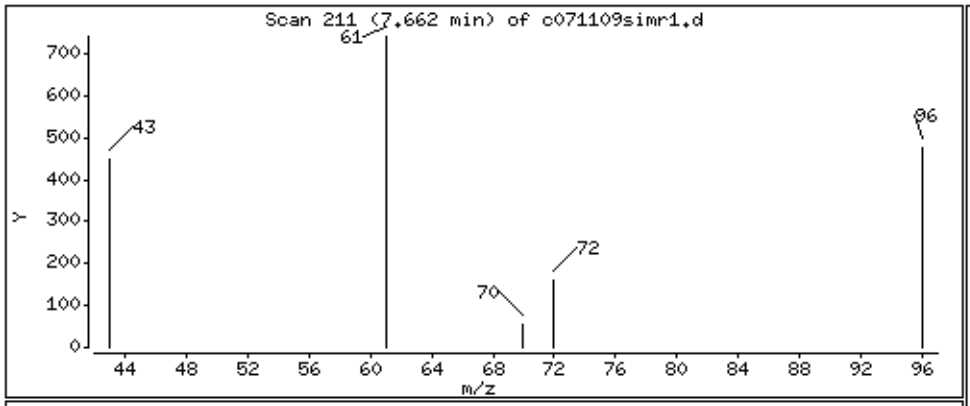
Operator: gm

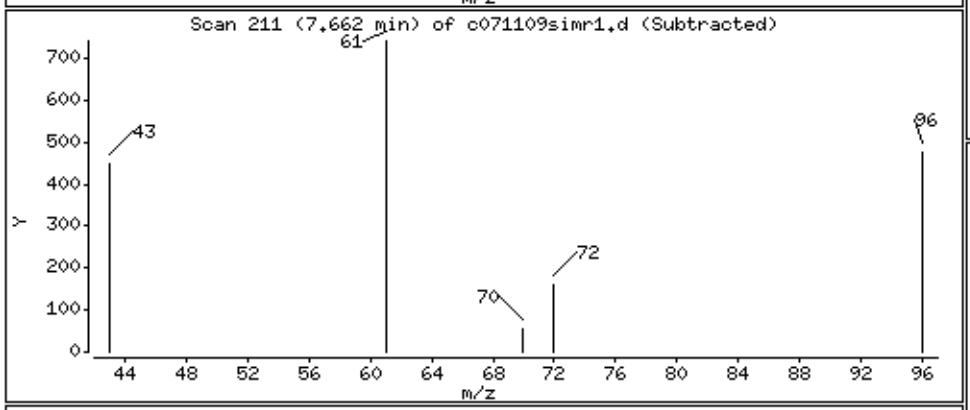
Column phase: DB-5.625

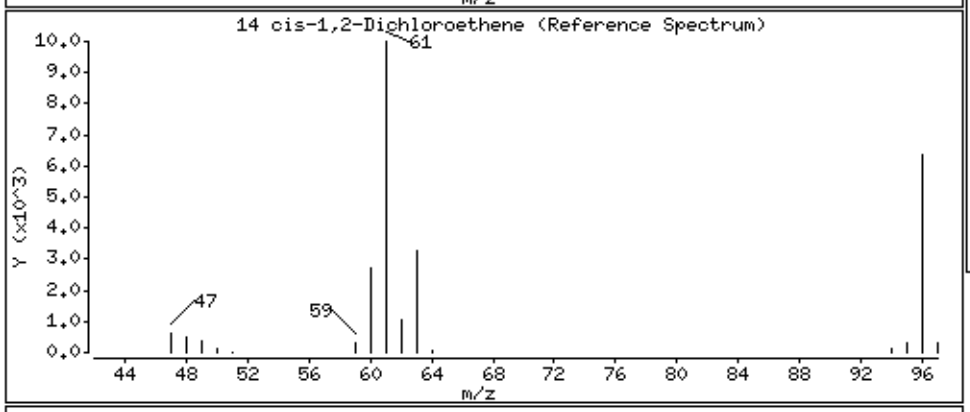
Column diameter: 0.25

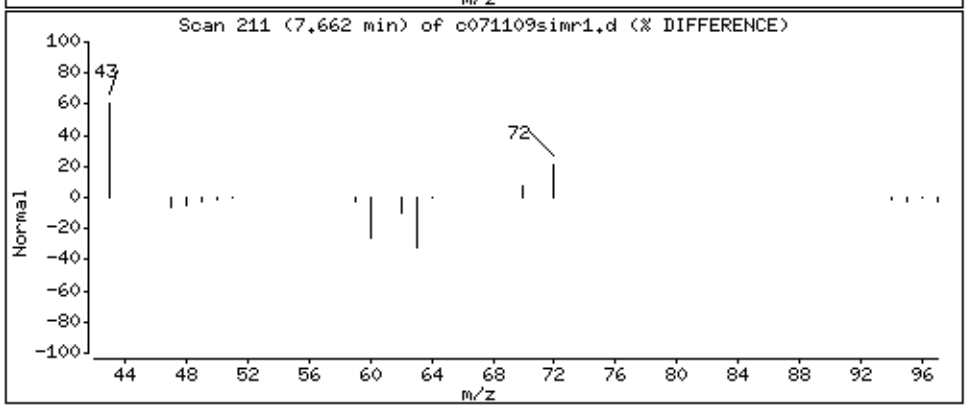
14 cis-1,2-Dichloroethene

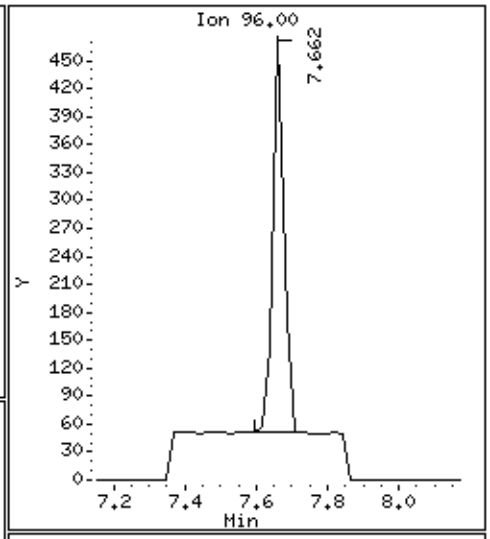
Concentration: 0.226968 ug

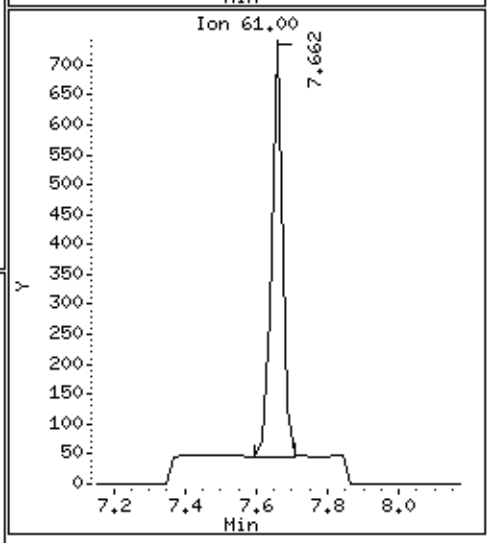












Data File: /chem/msdc.i/11Jul2017.b/c071109simr1.d

Date : 11-JUL-2017 12:04

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-03A;

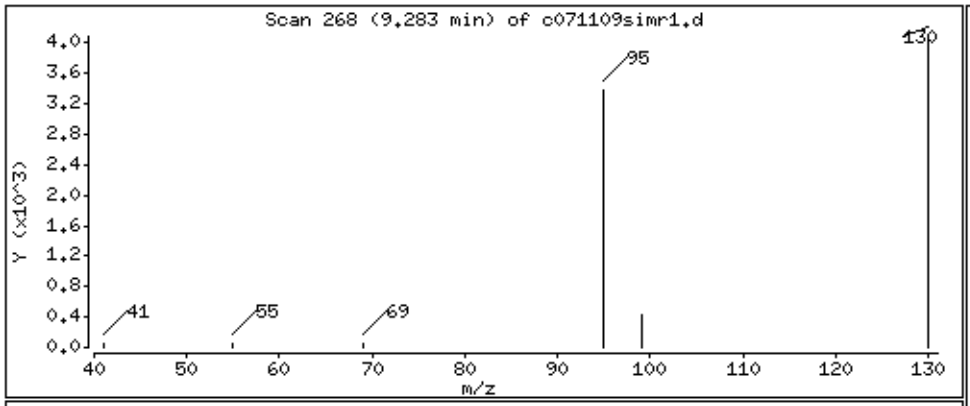
Operator: gm

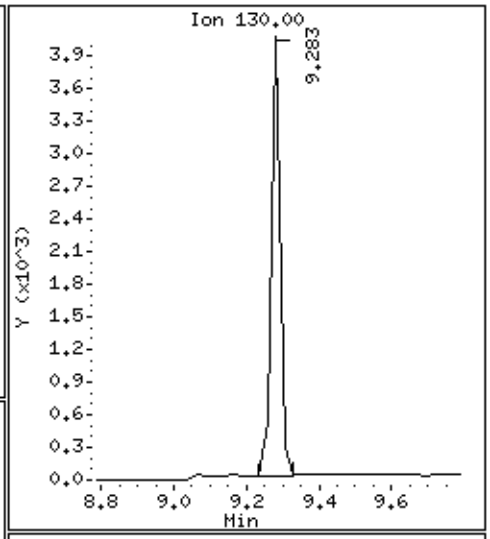
Column phase: DB-5.625

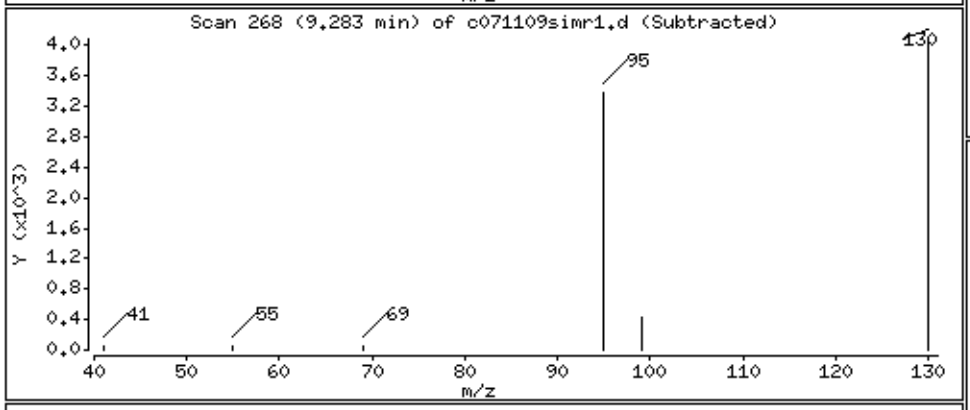
Column diameter: 0.25

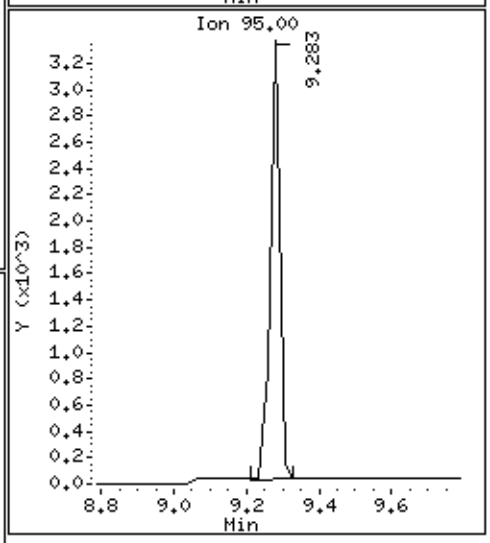
22 Trichloroethene

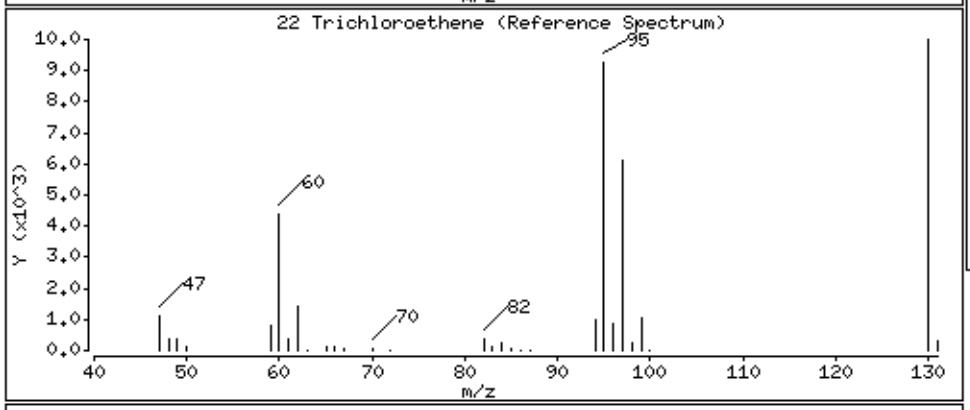
Concentration: 1.42918 ug

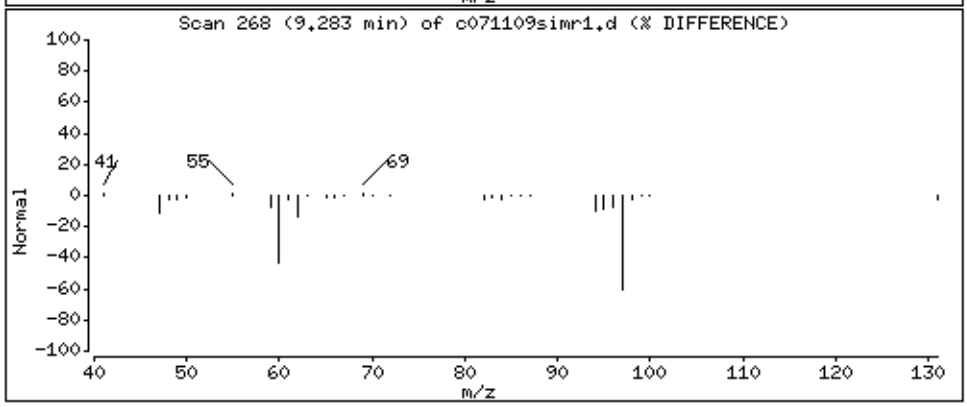












Data File: /chem/msdc.i/11Jul2017.b/c071109simr1.d

Date : 11-JUL-2017 12:04

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-03A;

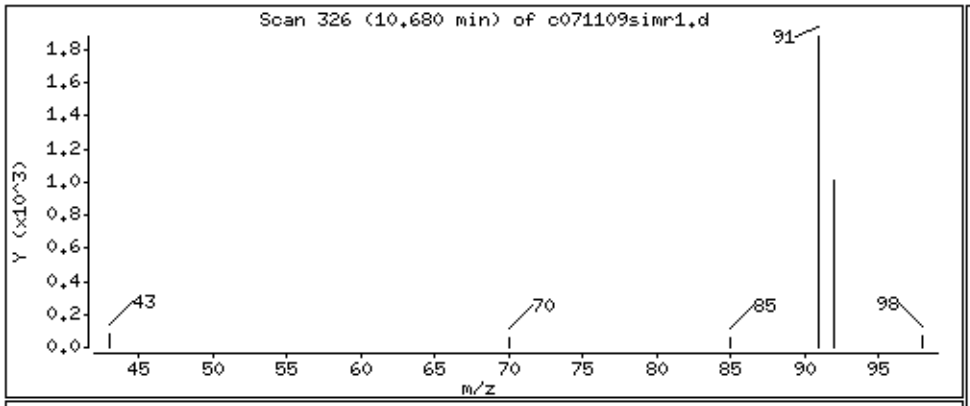
Operator: gm

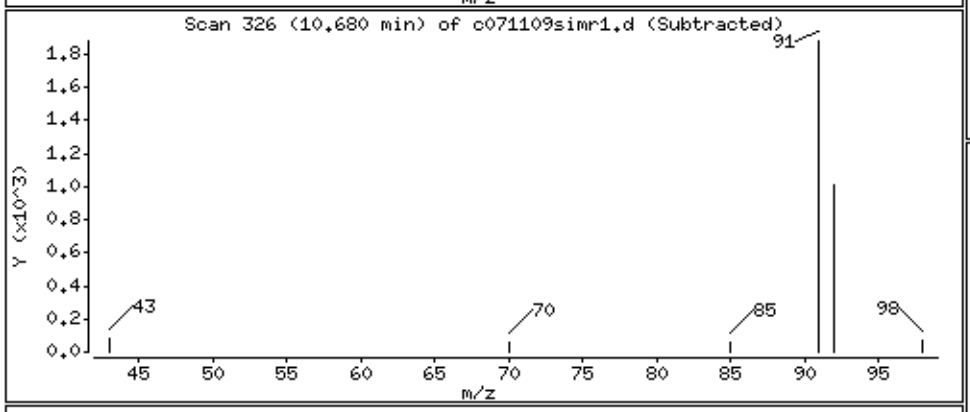
Column phase: DB-5.625

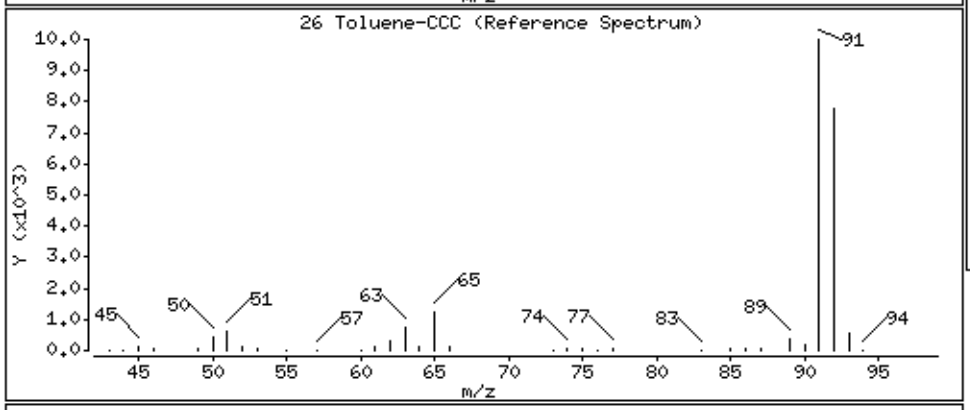
Column diameter: 0.25

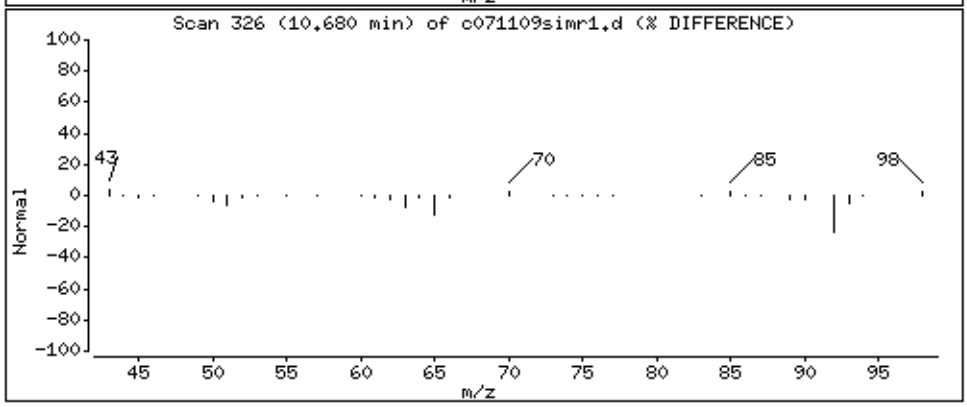
26 Toluene-CCC

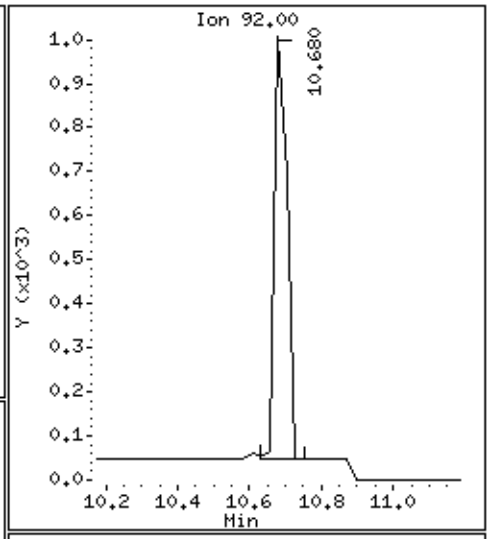
Concentration: 0.221735 ug

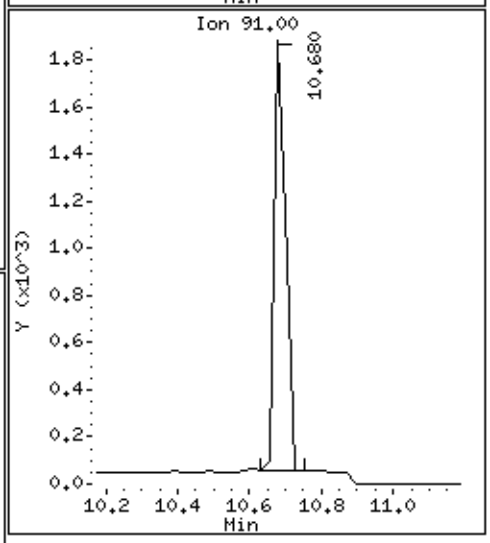












Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: A-5-BC (062817)

Lab ID#: 1707036R1-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	1.2	0.17 C	2.0 C
Trichloroethene	0.10	1.0	0.61	6.4
Toluene	0.10	0.98	0.20	2.0

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Client Sample ID: A-5-BC (062817)

Lab ID#: 1707036R1-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071110simr1**	**Date of Collection: 6/29/17 8:40:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 12:29 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.94	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.8	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	1.2	0.17 C	2.0 C
trans-1,2-Dichloroethene	0.20	2.4	Not Detected C	Not Detected C
Benzene	0.40	3.6	Not Detected	Not Detected
Tetrachloroethene	0.10	1.2	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	1.1	Not Detected C	Not Detected C
Trichloroethene	0.10	1.0	0.61	6.4
Toluene	0.10	0.98	0.20	2.0
Vinyl Chloride	0.40	3.2	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1368 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071110simr1.d
Lab Smp Id: 1707036R1-04A
Inj Date : 11-JUL-2017 12:29
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-04A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	163990	5.04752	10.0950
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	181619	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	662	0.08532	0.170648
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	3009	0.30628	0.612550
26 Toluene-CCC	92	10.680	10.680	(0.976)	2175	0.10074	0.201480
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071110simr1.d
Lab Smp Id: 1707036R1-04A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	181619	-10.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-04A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.0950	100.95	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071110simr1.d

Date : 11-JUL-2017 12:29

Client ID:

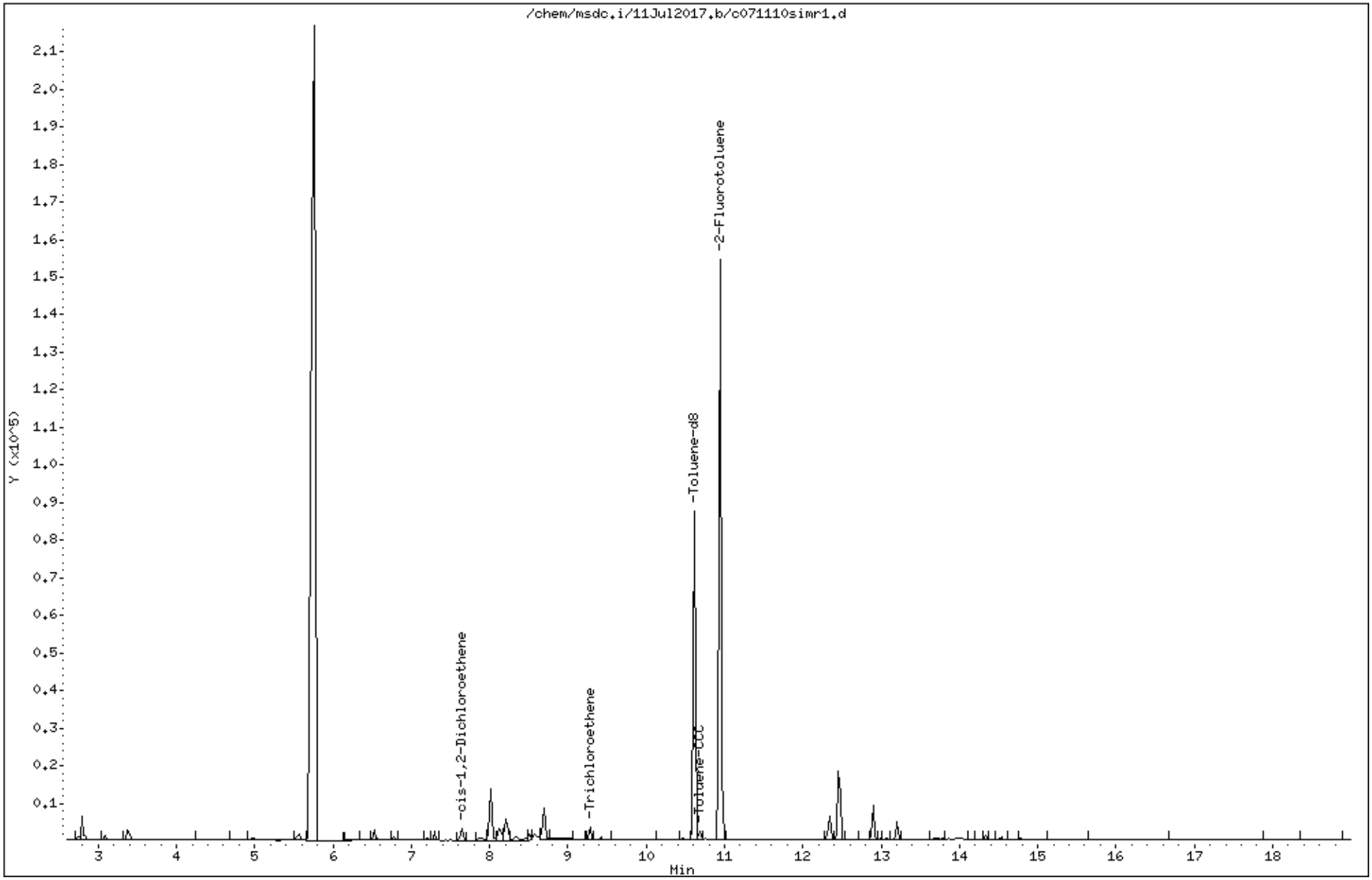
Instrument: msdc.i

Sample Info: ;1707036R1-04A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071110simr1.d

Date : 11-JUL-2017 12:29

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-04A;

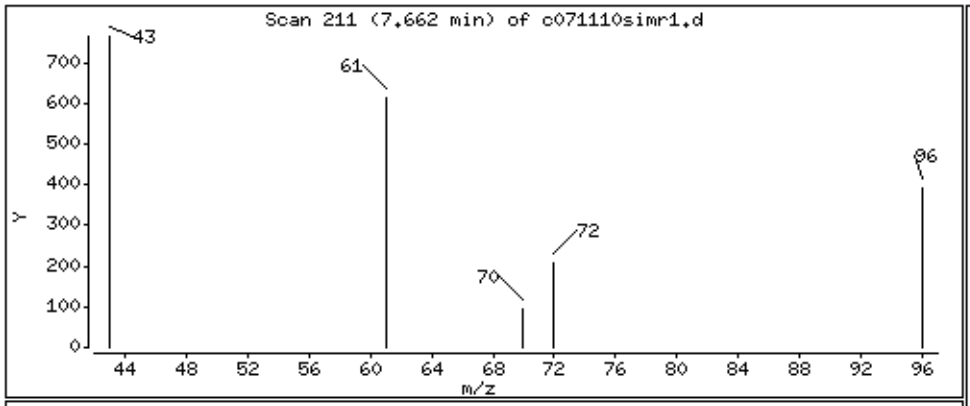
Operator: gm

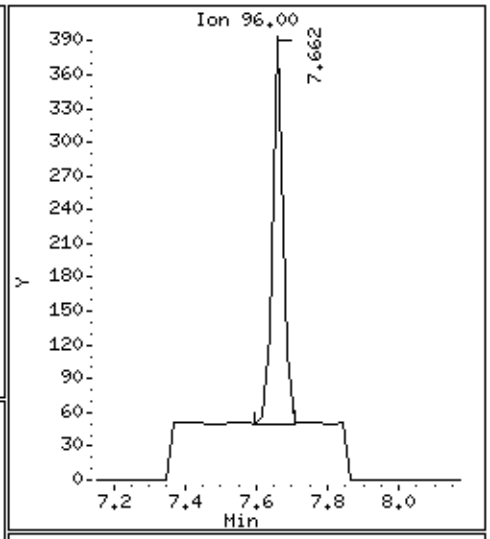
Column phase: DB-5.625

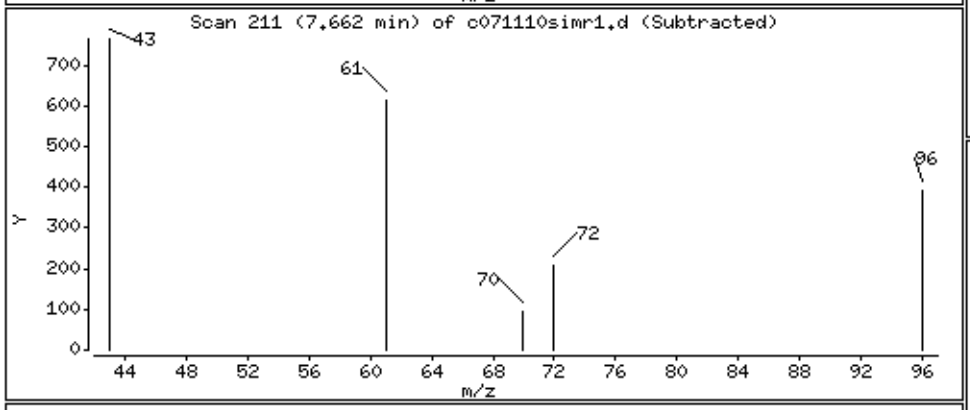
Column diameter: 0.25

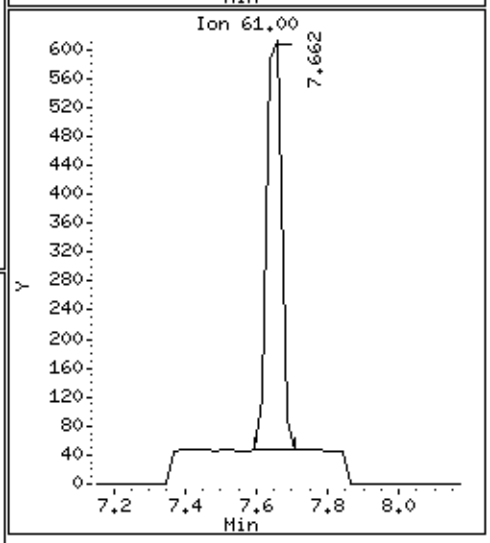
14 cis-1,2-Dichloroethene

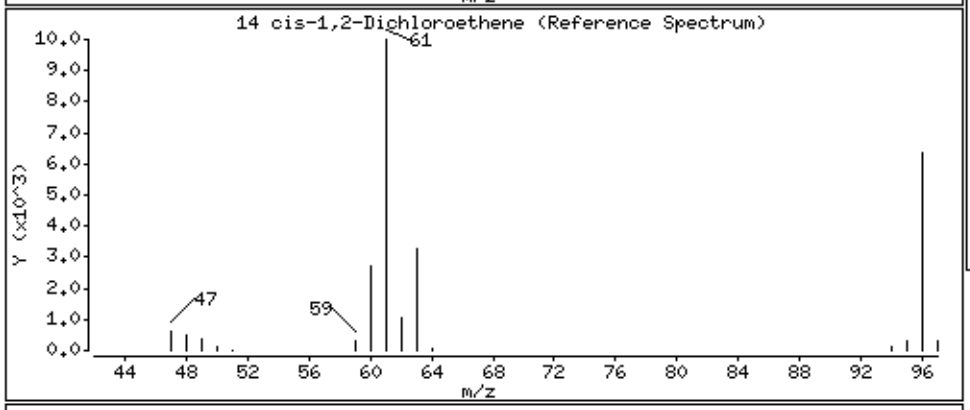
Concentration: 0.170648 ug

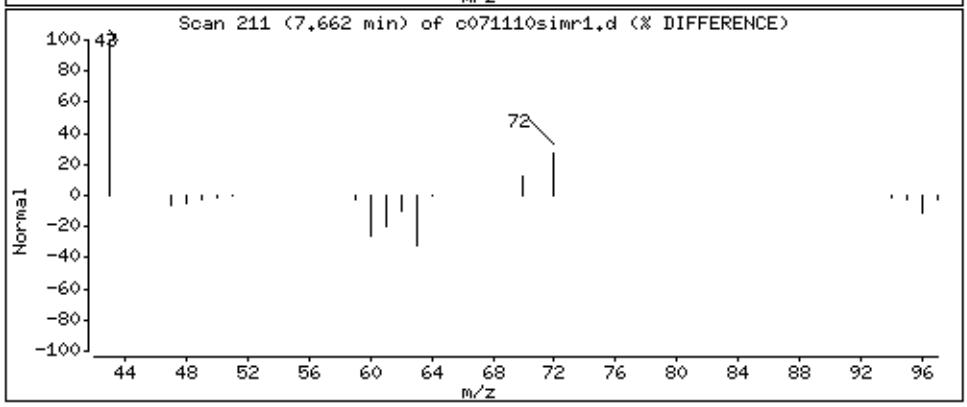












Data File: /chem/msdc.i/11Jul2017.b/c071110simr1.d

Date : 11-JUL-2017 12:29

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-04A;

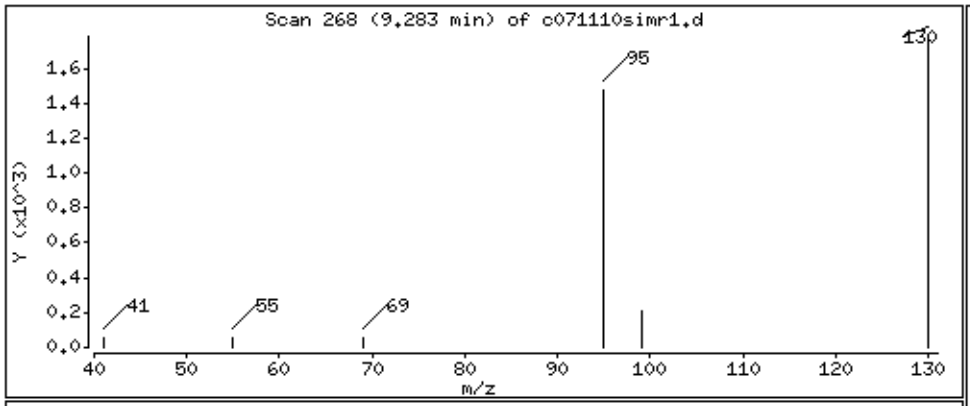
Operator: gm

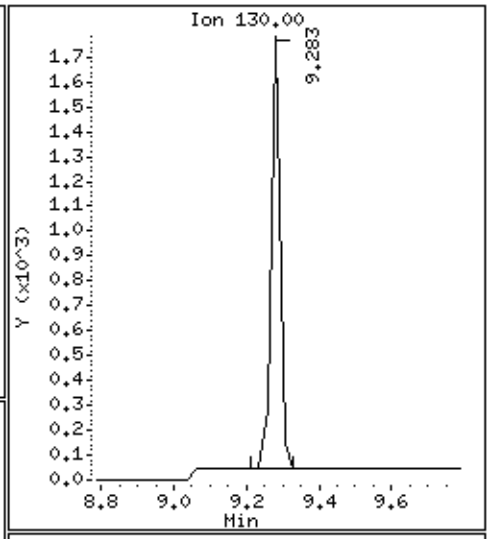
Column phase: DB-5.625

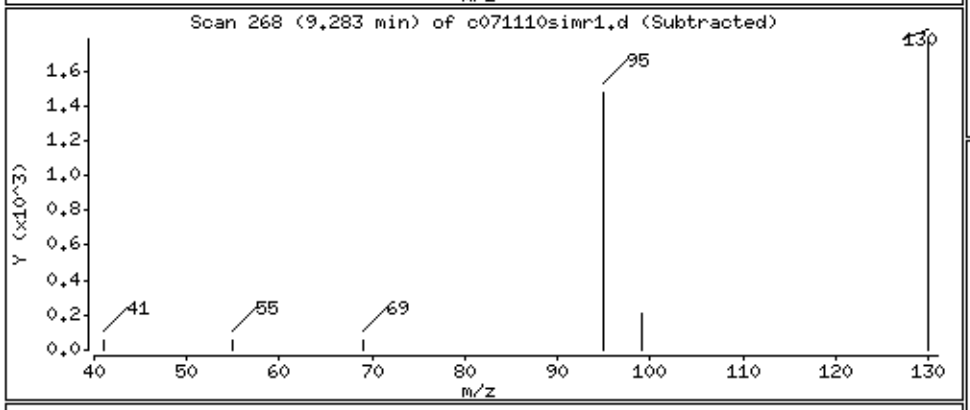
Column diameter: 0.25

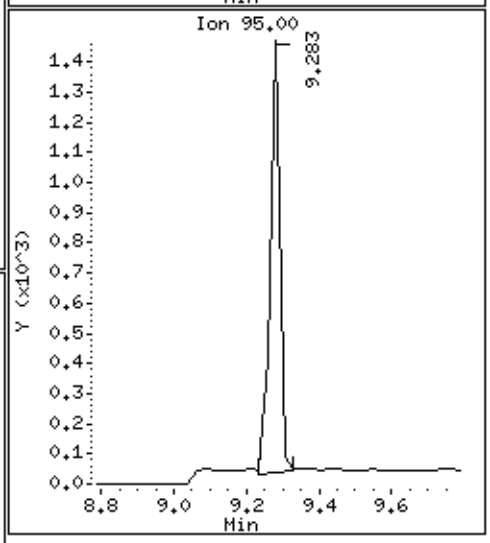
22 Trichloroethene

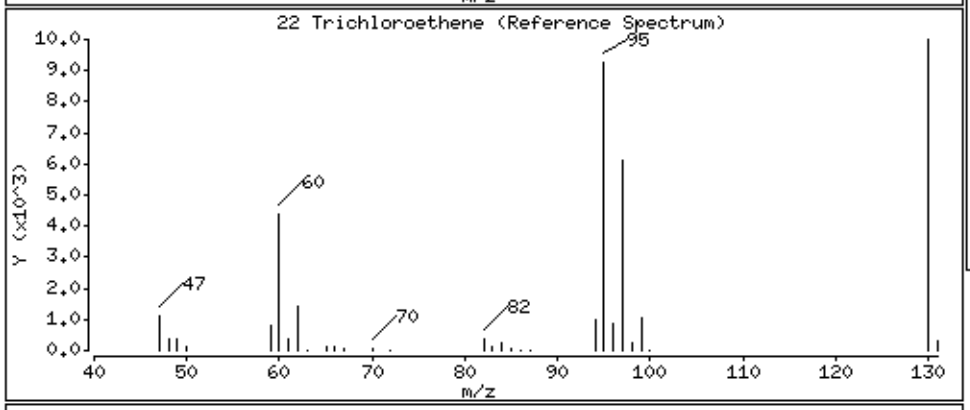
Concentration: 0.612550 ug

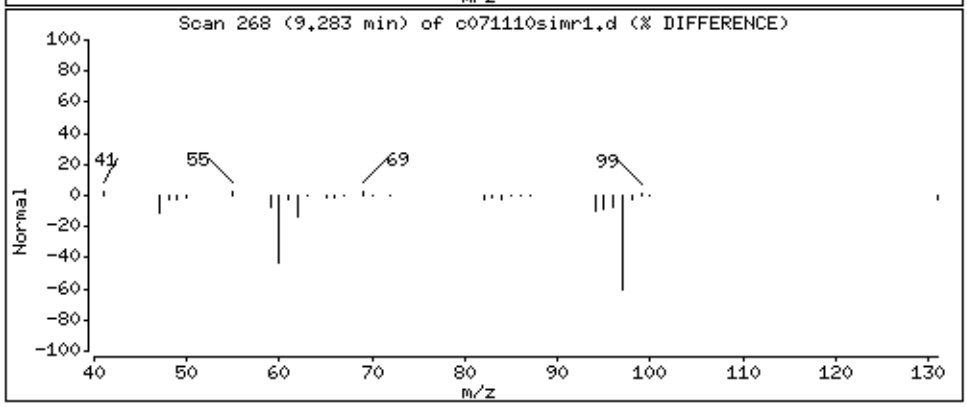












Data File: /chem/msdc.i/11Jul2017.b/c071110simr1.d

Date : 11-JUL-2017 12:29

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-04A;

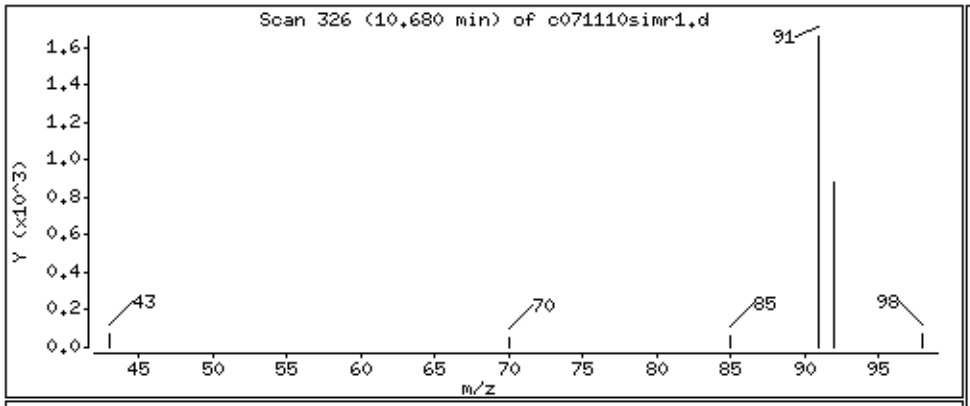
Operator: gm

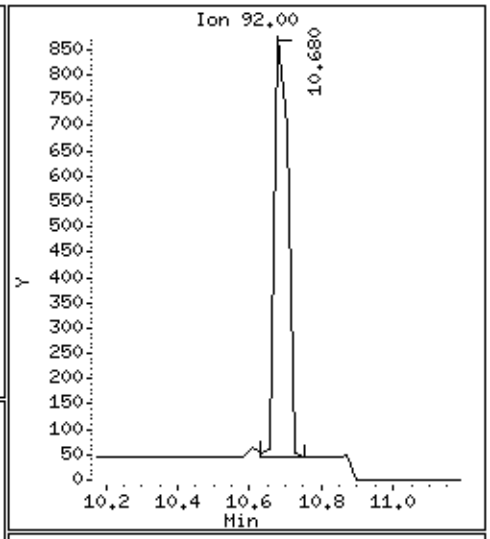
Column phase: DB-5.625

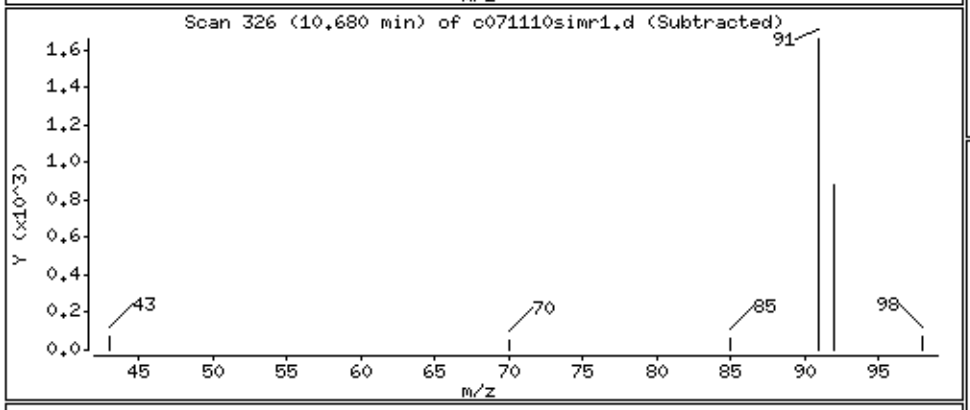
Column diameter: 0.25

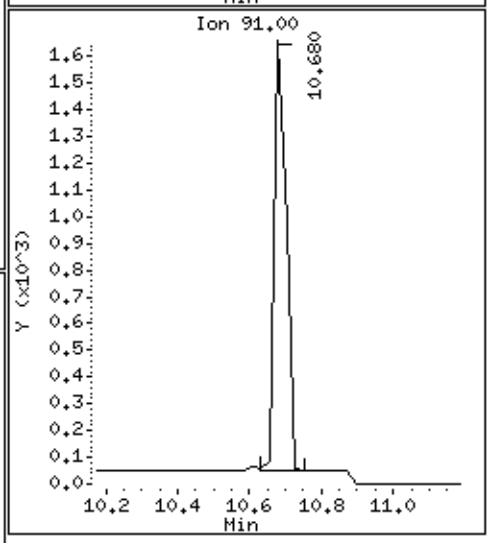
26 Toluene-CCC

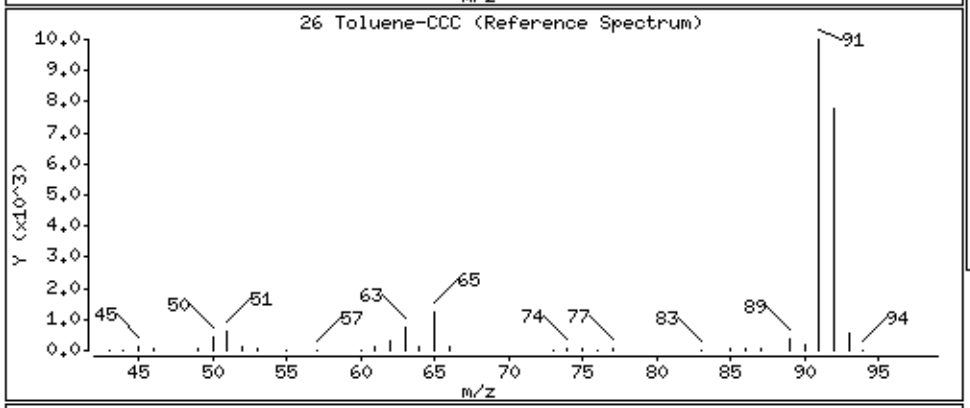
Concentration: 0.201480 ug

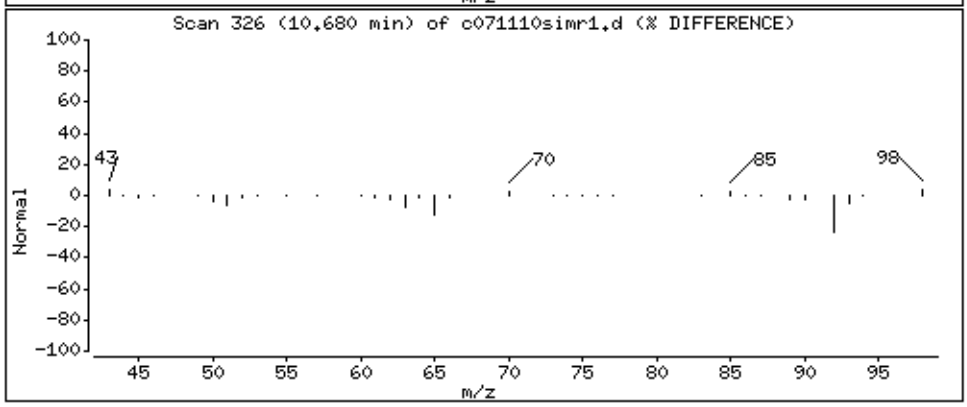












Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: B-6-BC (062817)

Lab ID#: 1707036R1-05A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	1.1	0.67 C	7.6 C
Trichloroethene	0.10	1.0	1.2	12

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Client Sample ID: B-6-BC (062817)

Lab ID#: 1707036R1-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071111simr1**	**Date of Collection: 6/29/17 9:55:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 12:54 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.91	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.7	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	1.1	0.67 C	7.6 C
trans-1,2-Dichloroethene	0.20	2.3	Not Detected C	Not Detected C
Benzene	0.40	3.5	Not Detected	Not Detected
Tetrachloroethene	0.10	1.2	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	1.1	Not Detected C	Not Detected C
Trichloroethene	0.10	1.0	1.2	12
Toluene	0.10	0.95	Not Detected	Not Detected
Vinyl Chloride	0.40	3.1	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1411 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071111simr1.d
Lab Smp Id: 1707036R1-05A
Inj Date : 11-JUL-2017 12:54
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-05A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	166923	4.99393	9.98786
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	186851	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	2691	0.33713	0.674253
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	5822	0.57601	1.15201
26 Toluene-CCC	92	Compound Not Detected.					
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071111simr1.d
Lab Smp Id: 1707036R1-05A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	186851	-8.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-05A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	9.98786	99.88	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071111simr1.d

Date : 11-JUL-2017 12:54

Client ID:

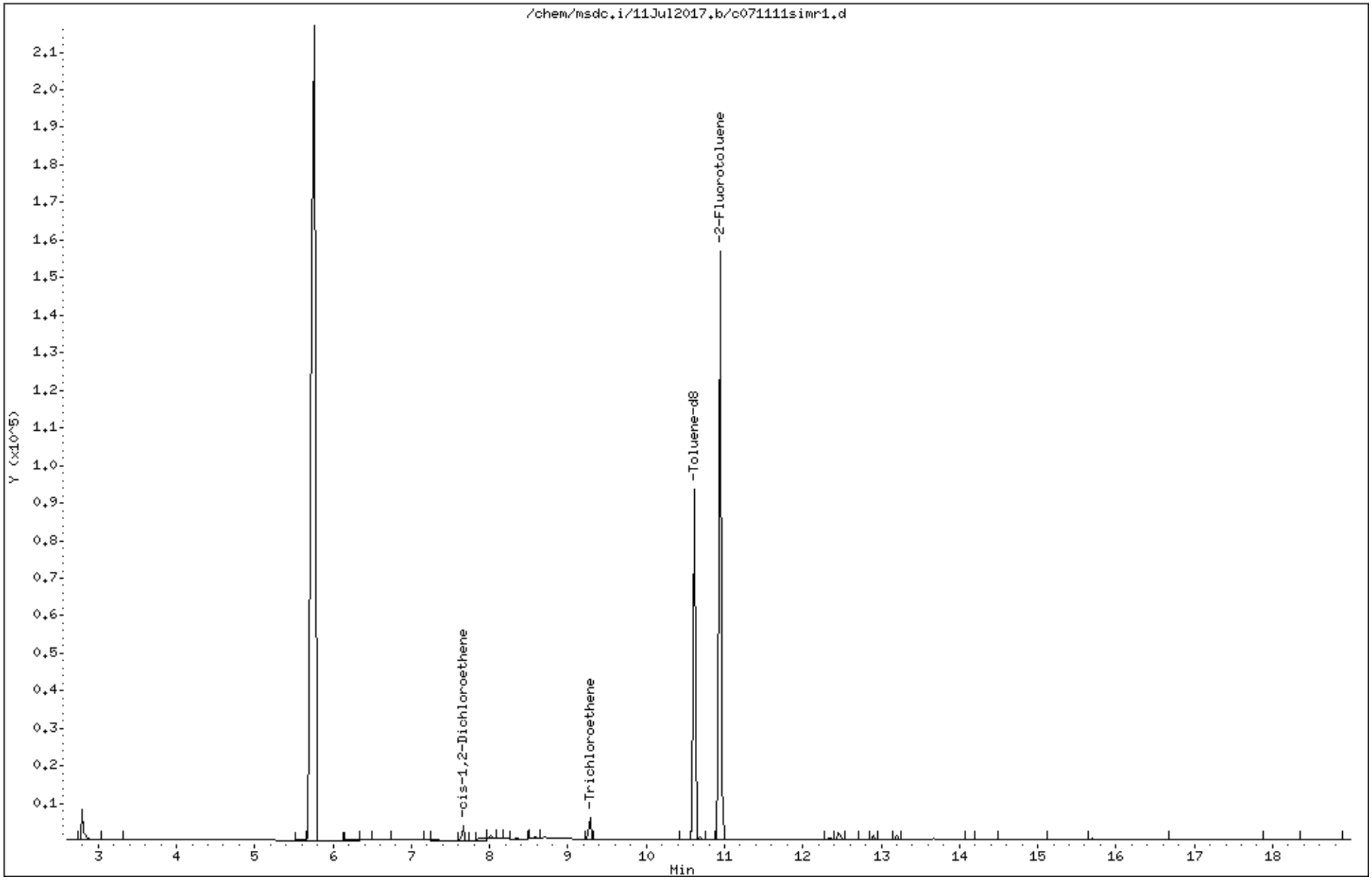
Instrument: msdc.i

Sample Info: ;1707036R1-05A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071111simr1.d

Date : 11-JUL-2017 12:54

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-05A;

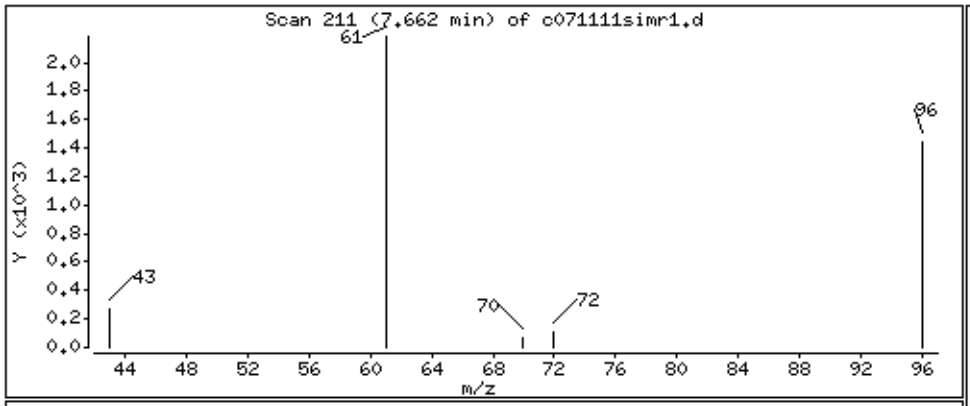
Operator: gm

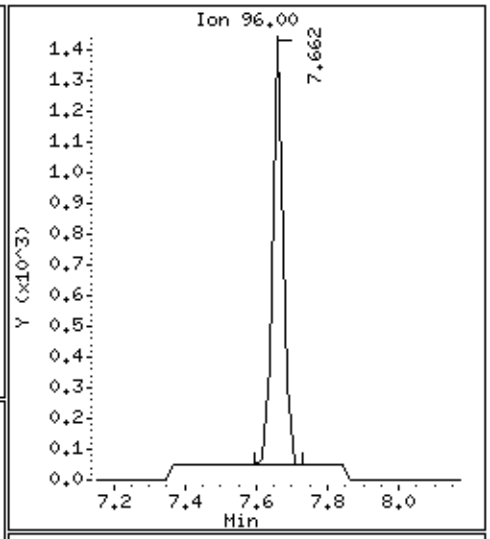
Column phase: DB-5.625

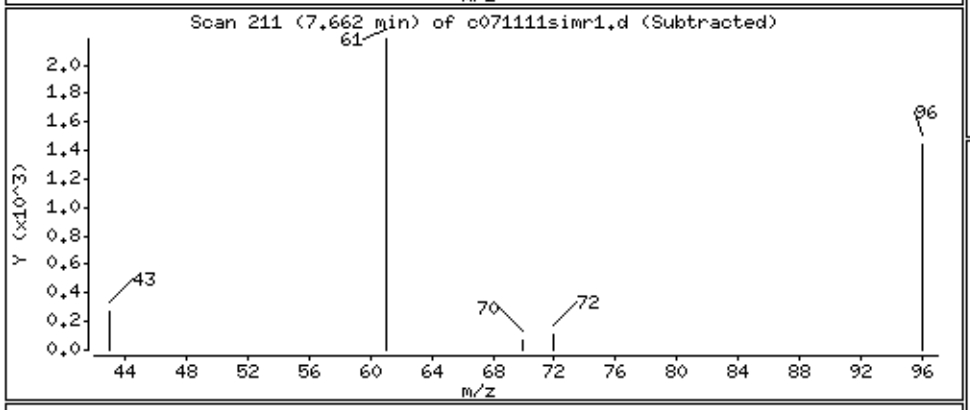
Column diameter: 0.25

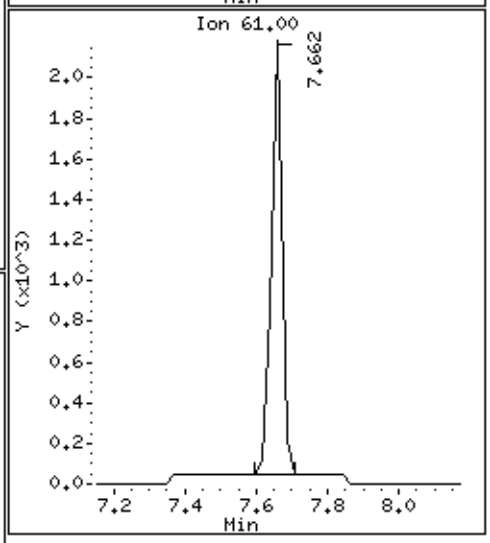
14 cis-1,2-Dichloroethene

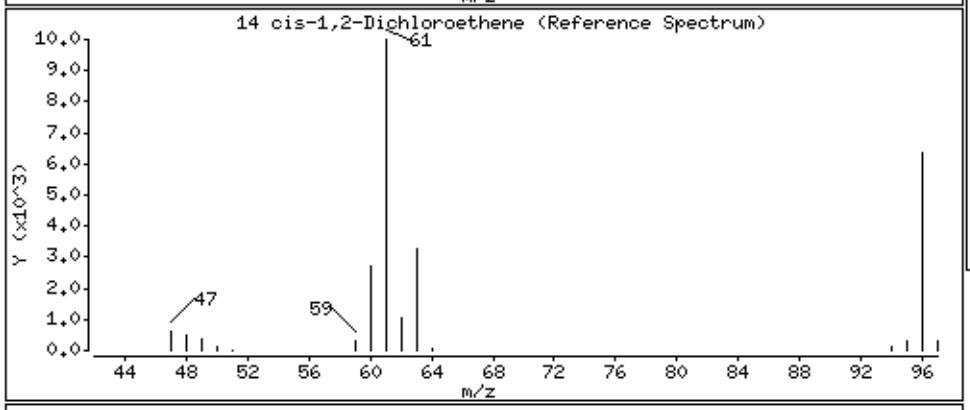
Concentration: 0.674253 ug

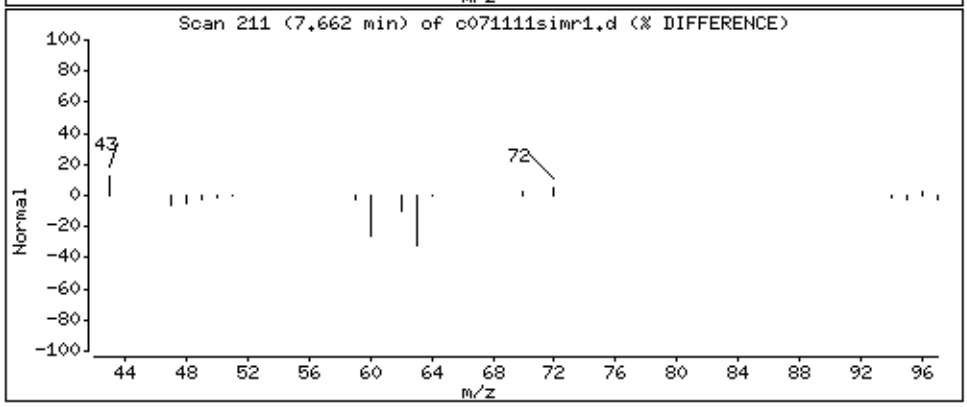












Data File: /chem/msdc.i/11Jul2017.b/c071111simr1.d

Date : 11-JUL-2017 12:54

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-05A;

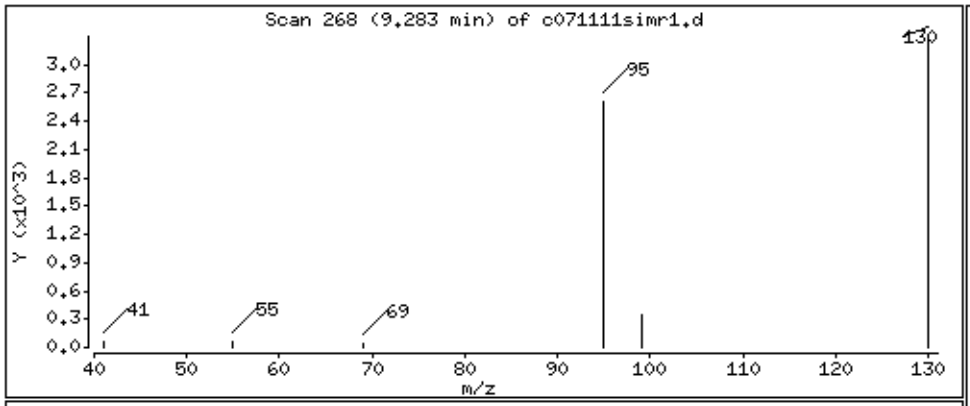
Operator: gm

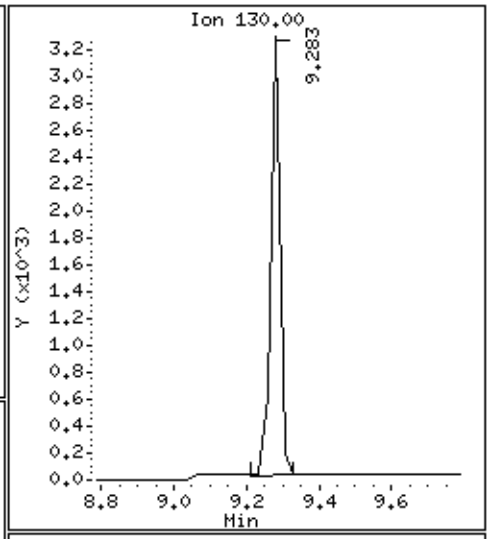
Column phase: DB-5.625

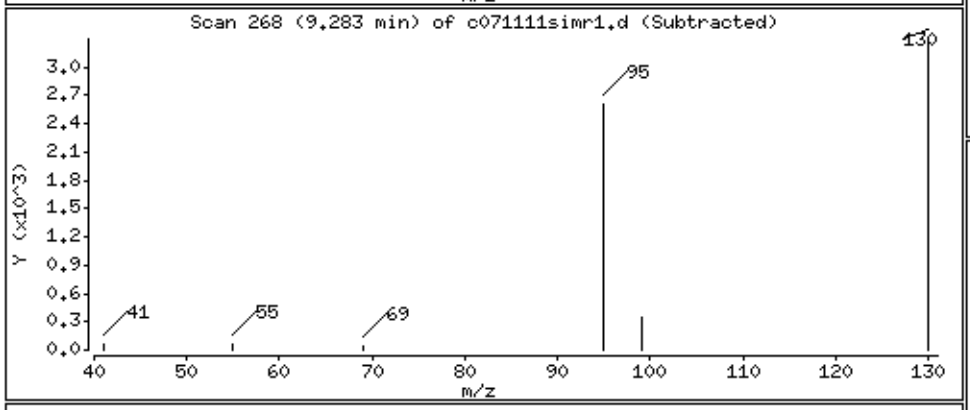
Column diameter: 0.25

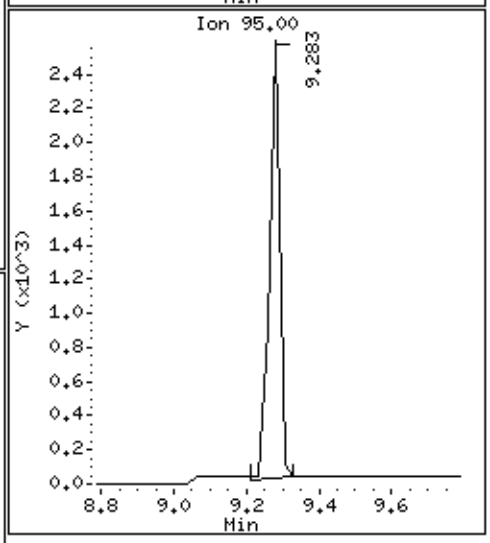
22 Trichloroethene

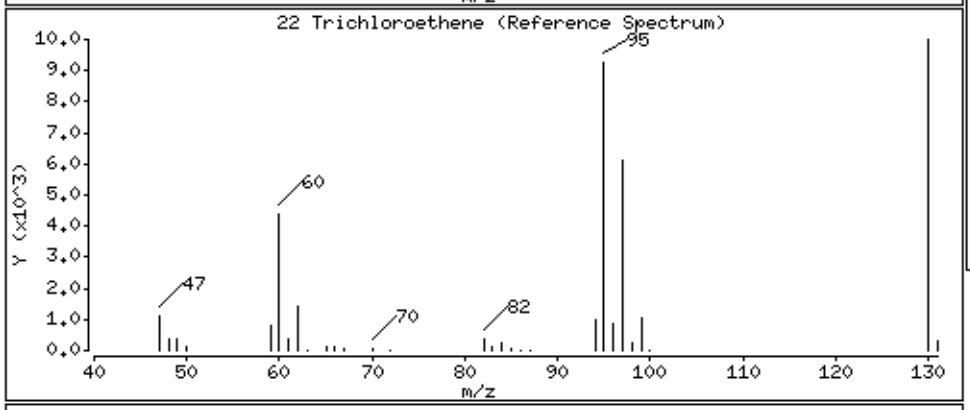
Concentration: 1.15201 ug

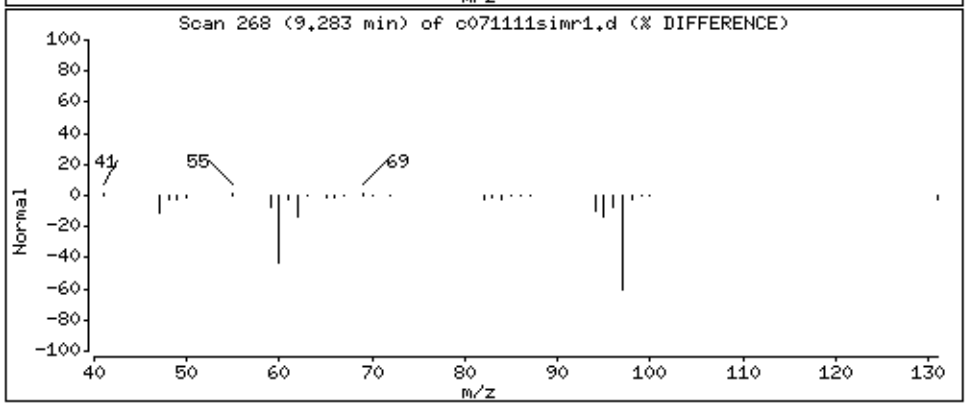












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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: B-4-BC (062817)

Lab ID#: 1707036R1-06A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	1.1	0.14 C	1.4 C
Trichloroethene	0.10	0.96	0.71	6.9
Toluene	0.10	0.90	0.20	1.8

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Client Sample ID: B-4-BC (062817)

Lab ID#: 1707036R1-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071112simr1**	**Date of Collection: 6/29/17 11:44:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 01:19 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.86	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.5	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	1.1	0.14 C	1.4 C
trans-1,2-Dichloroethene	0.20	2.2	Not Detected C	Not Detected C
Benzene	0.40	3.3	Not Detected	Not Detected
Tetrachloroethene	0.10	1.1	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	1.0	Not Detected C	Not Detected C
Trichloroethene	0.10	0.96	0.71	6.9
Toluene	0.10	0.90	0.20	1.8
Vinyl Chloride	0.40	3.0	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1487 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071112simr1.d
Lab Smp Id: 1707036R1-06A
Inj Date : 11-JUL-2017 13:19
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-06A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	172590	5.07899	10.1580
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	189959	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	548	0.06753	0.135059
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	3667	0.35686	0.713726
26 Toluene-CCC	92	10.680	10.680	(0.976)	2297	0.10172	0.203439
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071112simr1.d
Lab Smp Id: 1707036R1-06A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	189959	-6.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-06A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.1580	101.58	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071112simr1.d

Page 1

Date : 11-JUL-2017 13:19

Client ID:

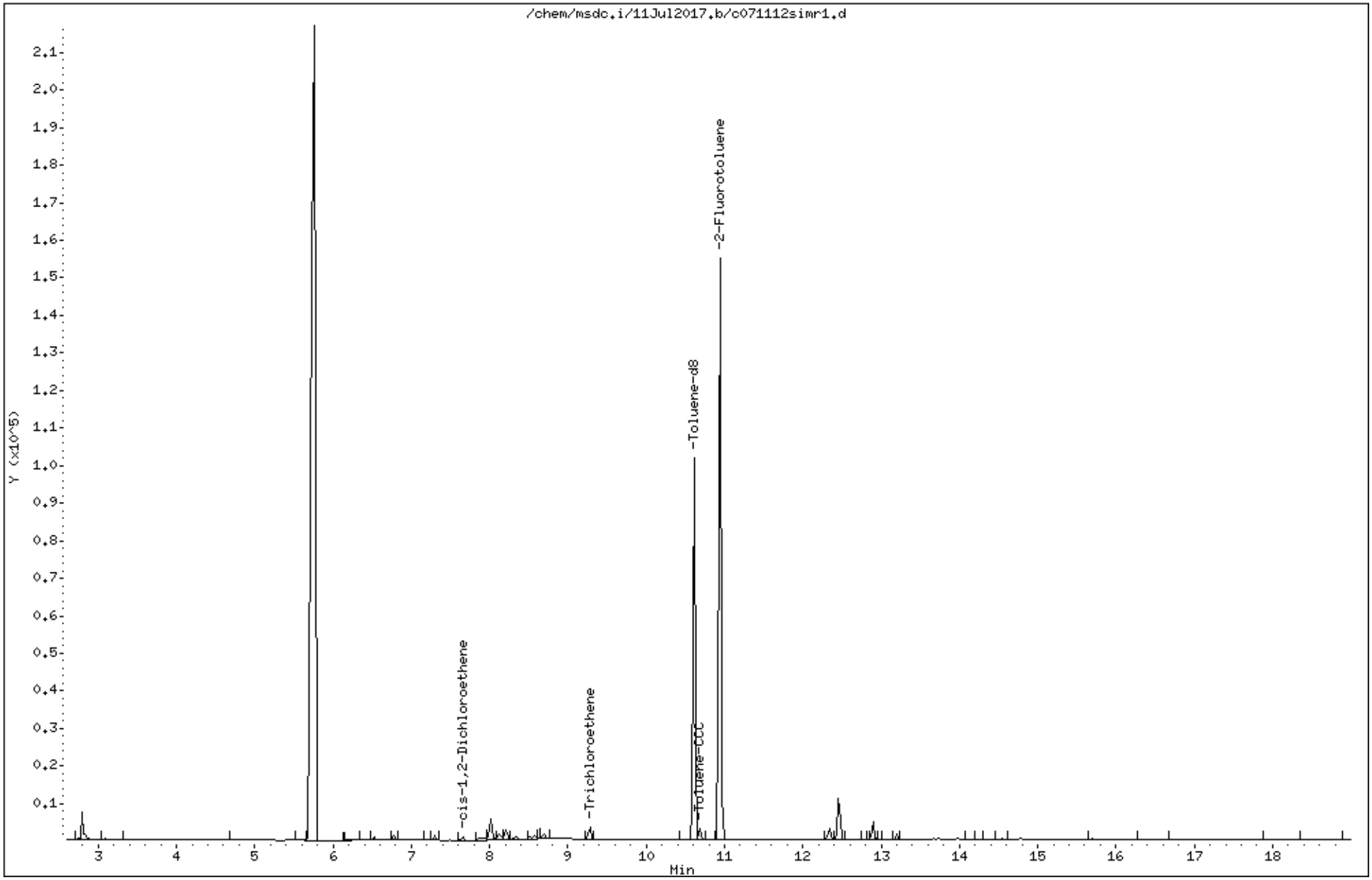
Instrument: msdc.i

Sample Info: ;1707036R1-06A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071112simr1.d

Date : 11-JUL-2017 13:19

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-06A;

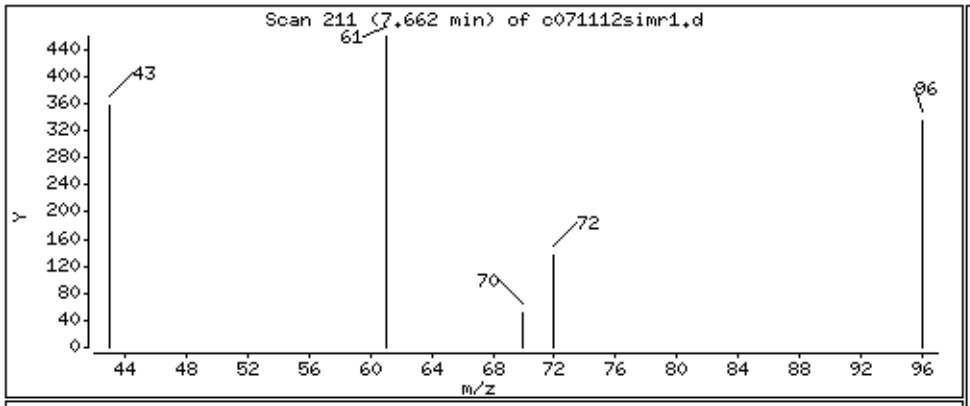
Operator: gm

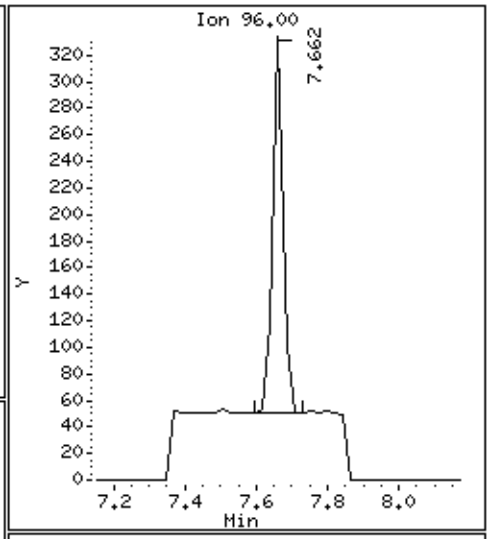
Column phase: DB-5.625

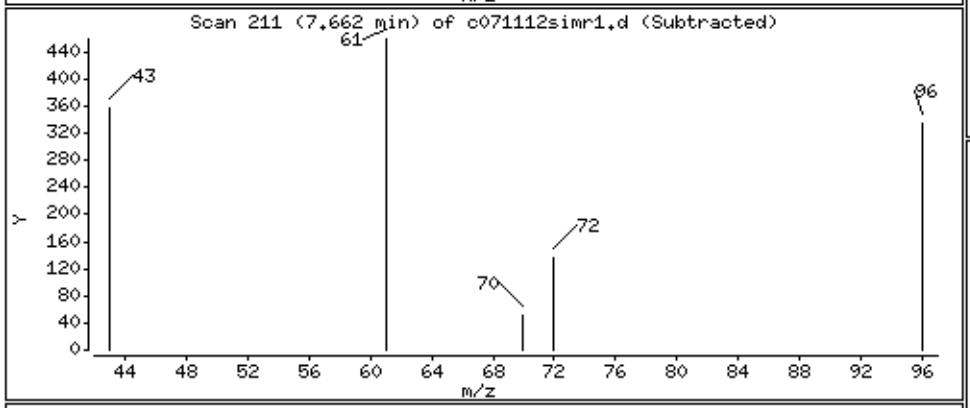
Column diameter: 0.25

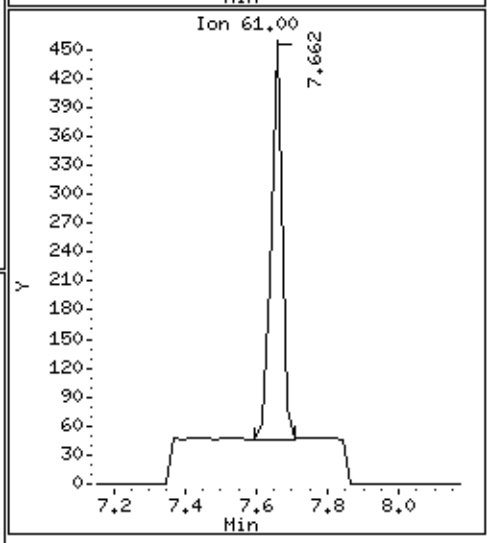
14 cis-1,2-Dichloroethene

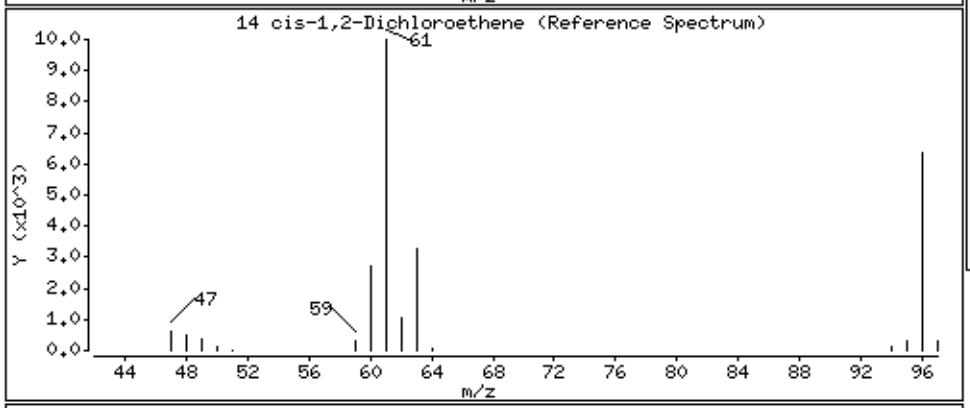
Concentration: 0.135059 ug

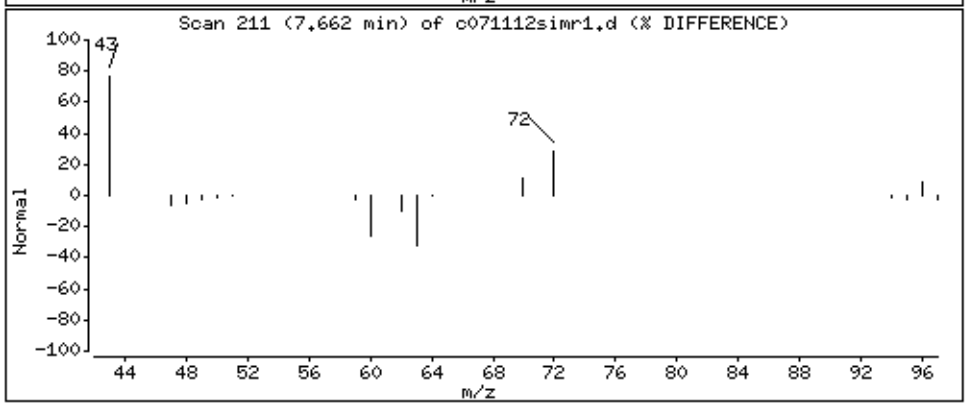












Data File: /chem/msdc.i/11Jul2017.b/c071112simr1.d

Date : 11-JUL-2017 13:19

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-06A;

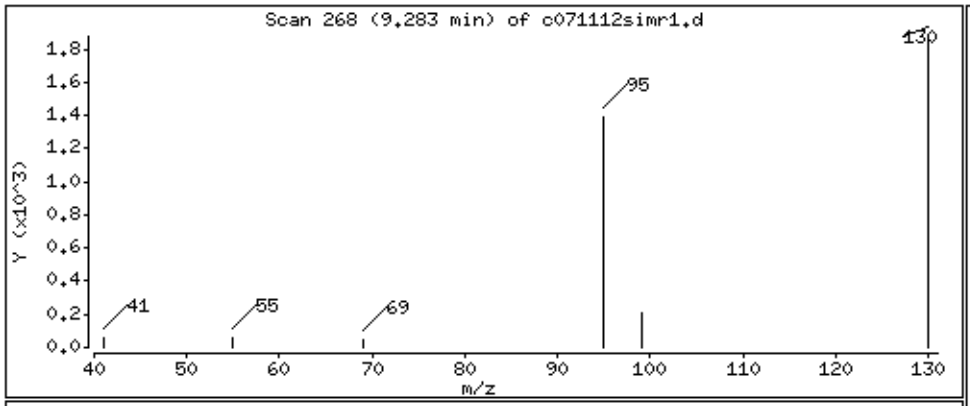
Operator: gm

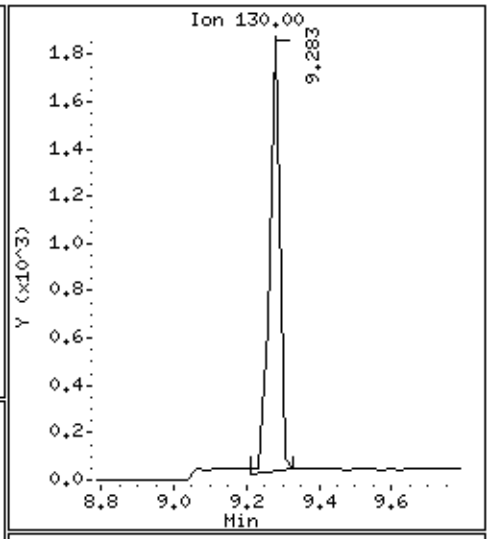
Column phase: DB-5.625

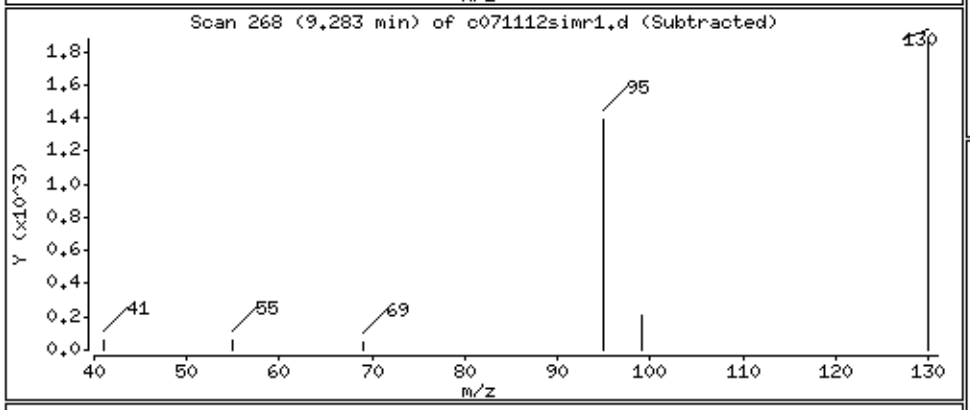
Column diameter: 0.25

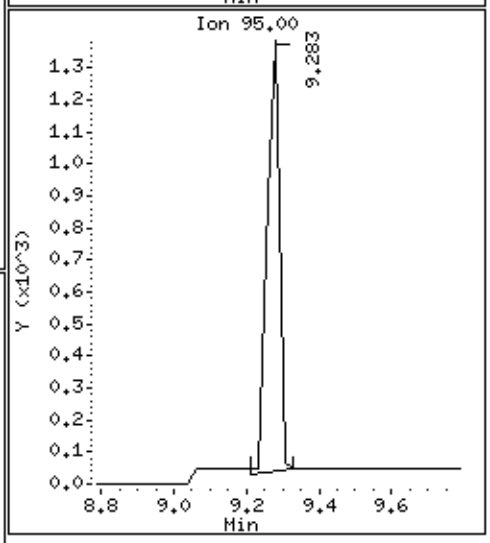
22 Trichloroethene

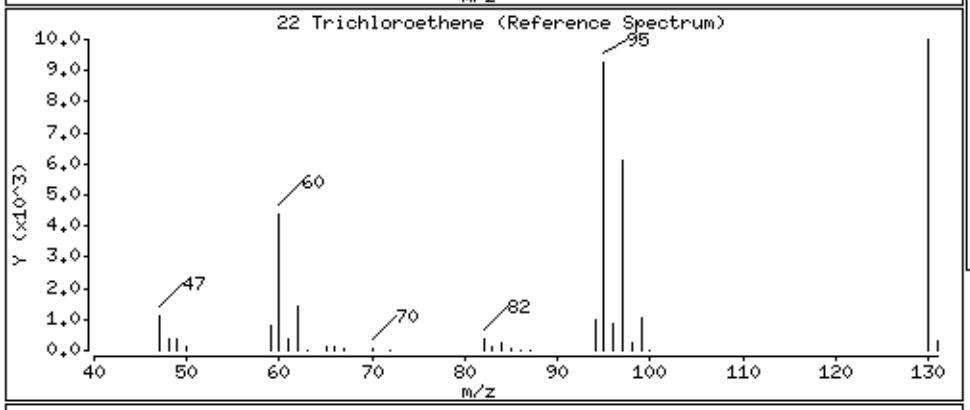
Concentration: 0.713726 ug

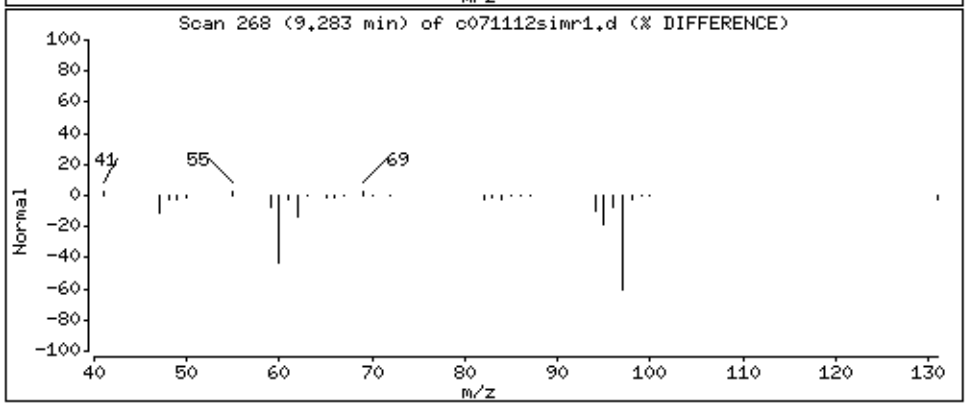












Data File: /chem/msdc.i/11Jul2017.b/c071112simr1.d

Date : 11-JUL-2017 13:19

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-06A;

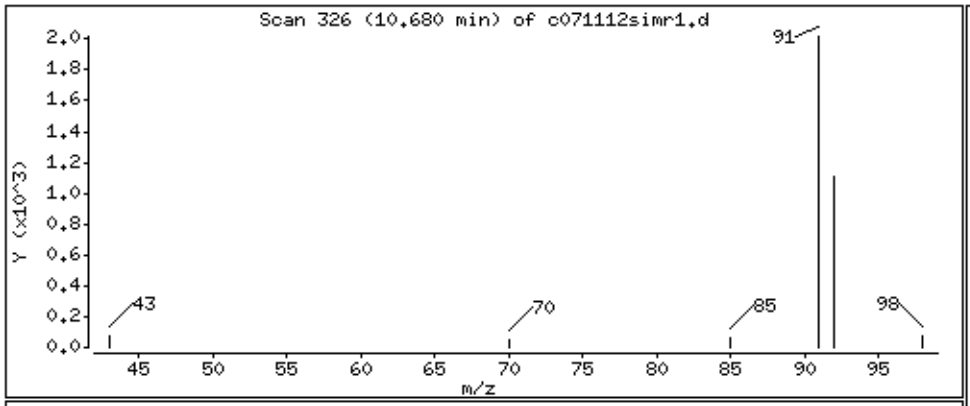
Operator: gm

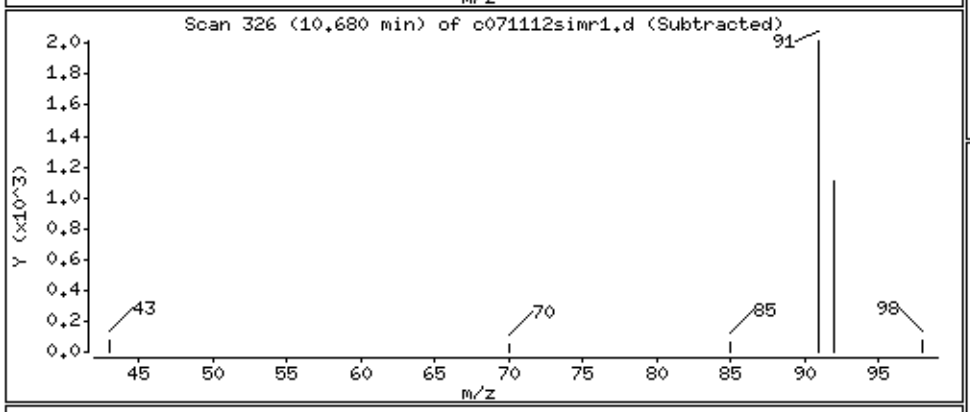
Column phase: DB-5.625

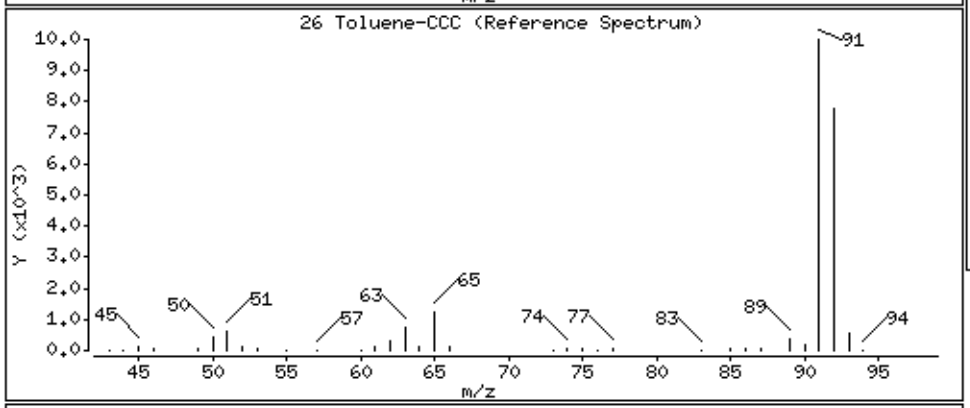
Column diameter: 0.25

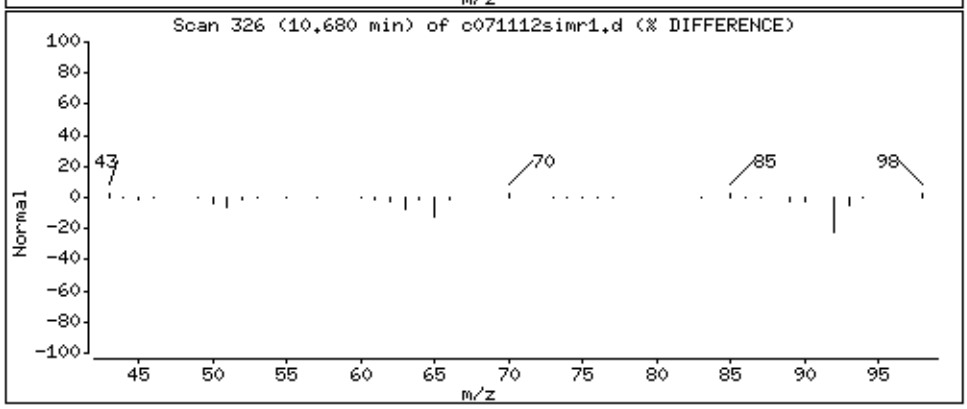
26 Toluene-CCC

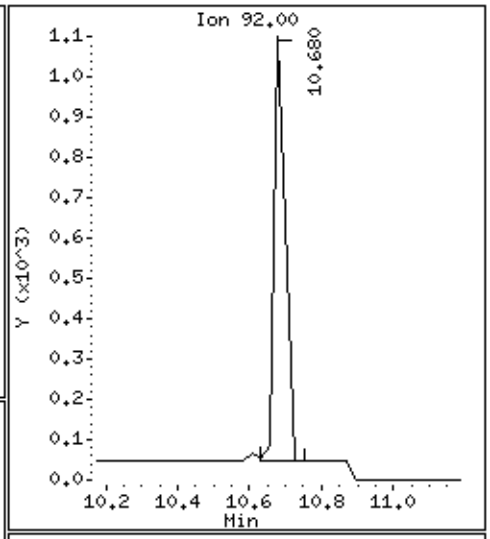
Concentration: 0.203439 ug

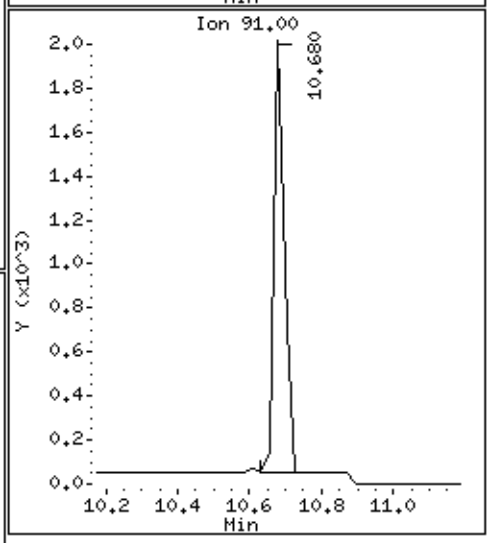












Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: Dup-1-BC (062817)

Lab ID#: 1707036R1-07A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	1.1	0.14 C	1.5 C
Trichloroethene	0.10	0.96	0.76	7.3
Toluene	0.10	0.90	0.21	1.9

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Client Sample ID: Dup-1-BC (062817)

Lab ID#: 1707036R1-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071113simr1**	**Date of Collection: 6/29/17**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 01:45 PM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.86	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.5	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	1.1	0.14 C	1.5 C
trans-1,2-Dichloroethene	0.20	2.2	Not Detected C	Not Detected C
Benzene	0.40	3.3	Not Detected	Not Detected
Tetrachloroethene	0.10	1.1	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	1.0	Not Detected C	Not Detected C
Trichloroethene	0.10	0.96	0.76	7.3
Toluene	0.10	0.90	0.21	1.9
Vinyl Chloride	0.40	3.0	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1487 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071113simr1.d
Lab Smp Id: 1707036R1-07A
Inj Date : 11-JUL-2017 13:45
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-07A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	167763	5.05444	10.1089
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	185543	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	543	0.06851	0.137012
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	3797	0.37831	0.756618
26 Toluene-CCC	92	10.680	10.680	(0.976)	2312	0.10482	0.209641
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071113simr1.d
Lab Smp Id: 1707036R1-07A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	185543	-8.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-07A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.1089	101.09	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071113simr1.d

Date : 11-JUL-2017 13:45

Client ID:

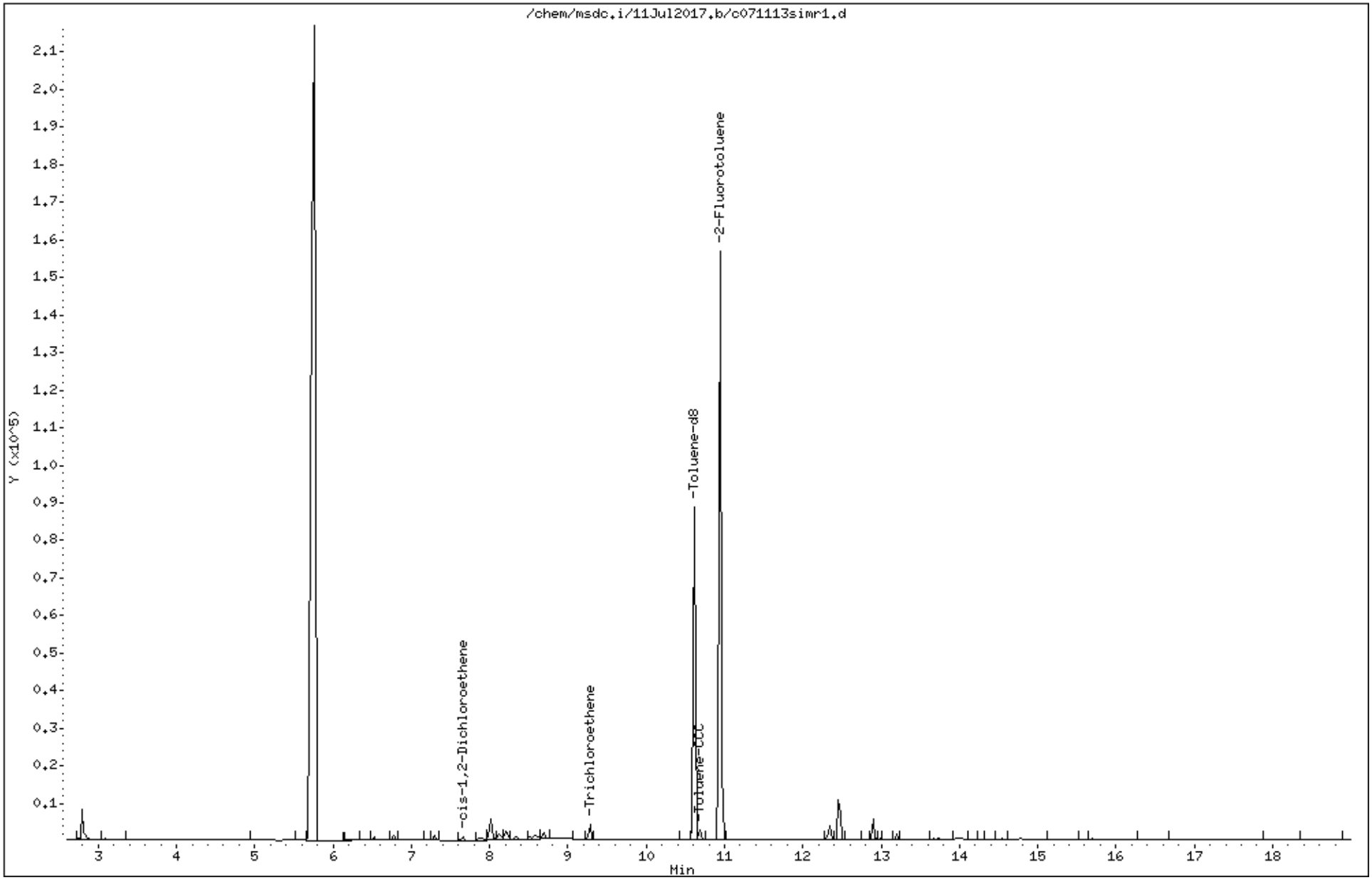
Instrument: msdc.i

Sample Info: ;1707036R1-07A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071113simr1.d

Date : 11-JUL-2017 13:45

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-07A;

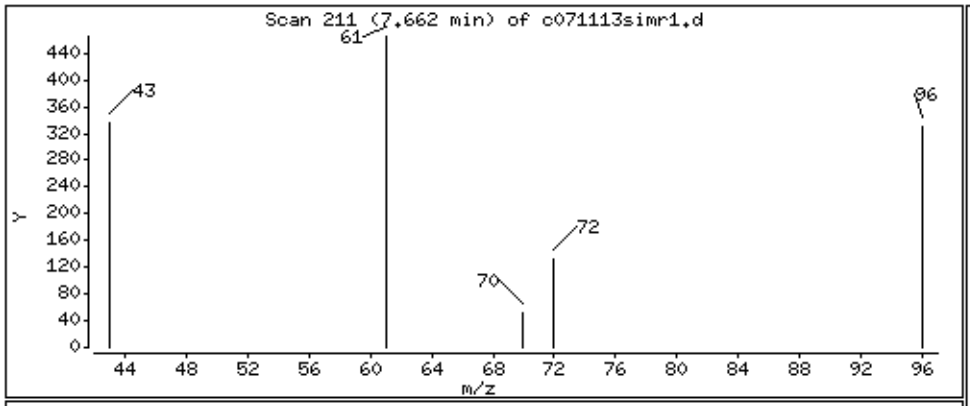
Operator: gm

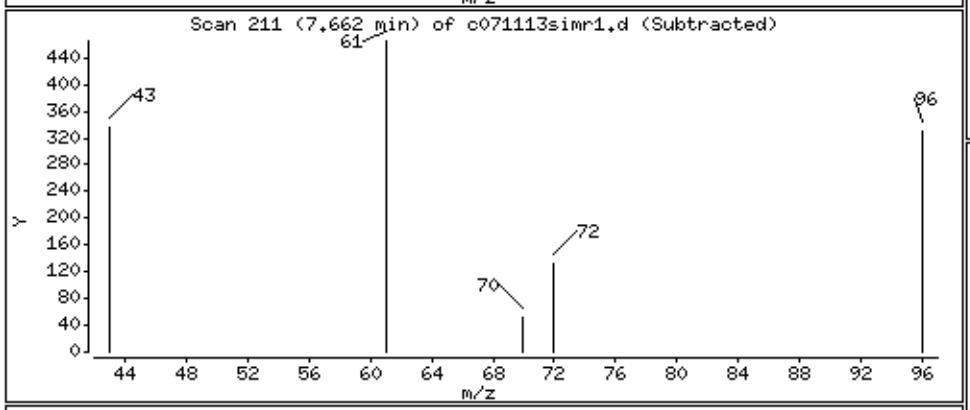
Column phase: DB-5.625

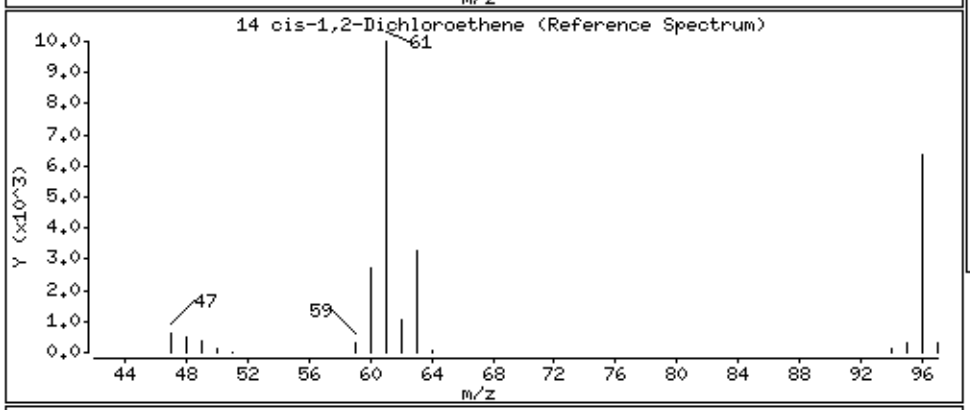
Column diameter: 0.25

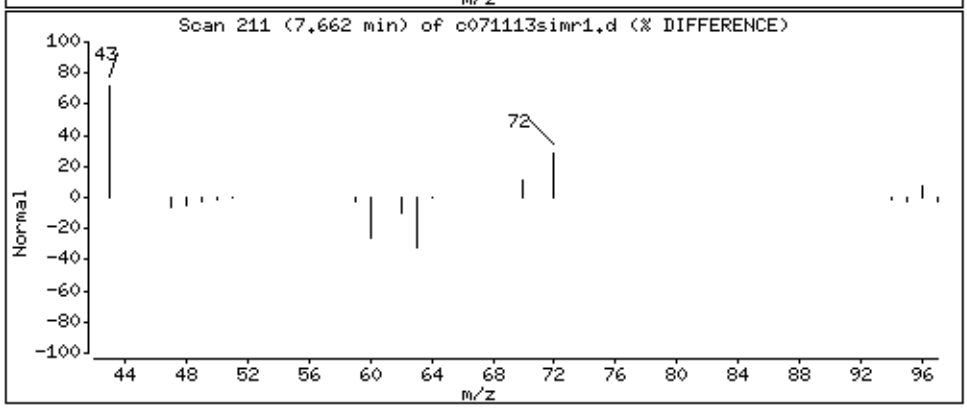
14 cis-1,2-Dichloroethene

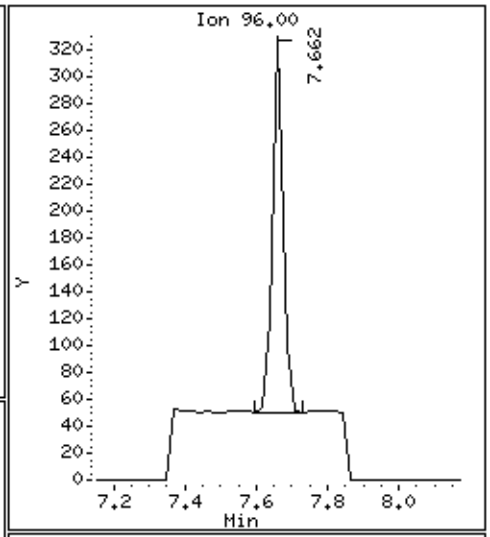
Concentration: 0.137012 ug

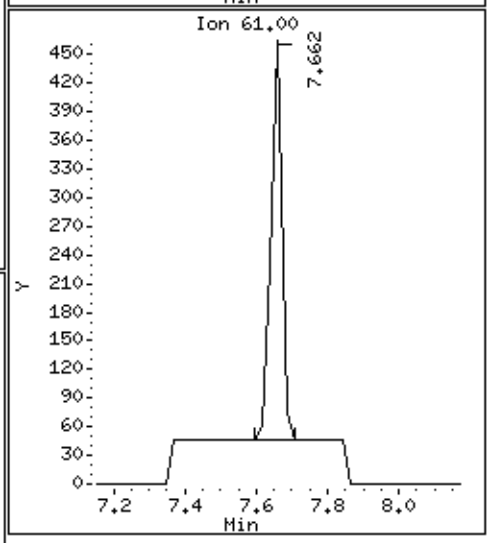












Data File: /chem/msdc.i/11Jul2017.b/c071113simr1.d

Date : 11-JUL-2017 13:45

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-07A;

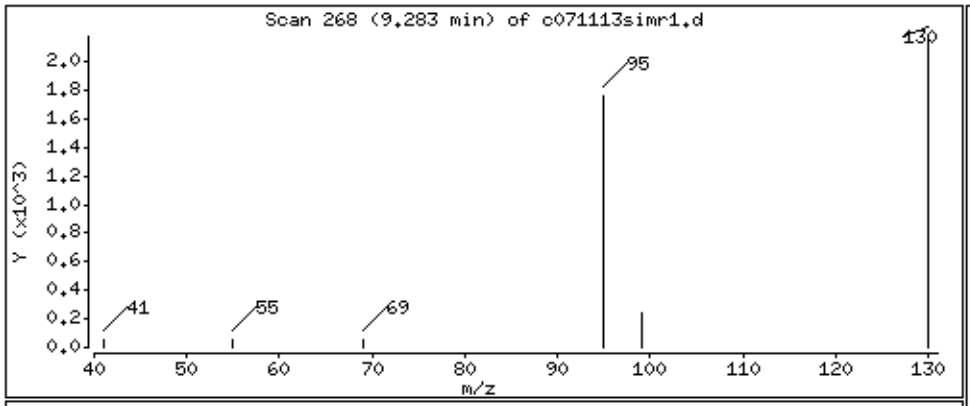
Operator: gm

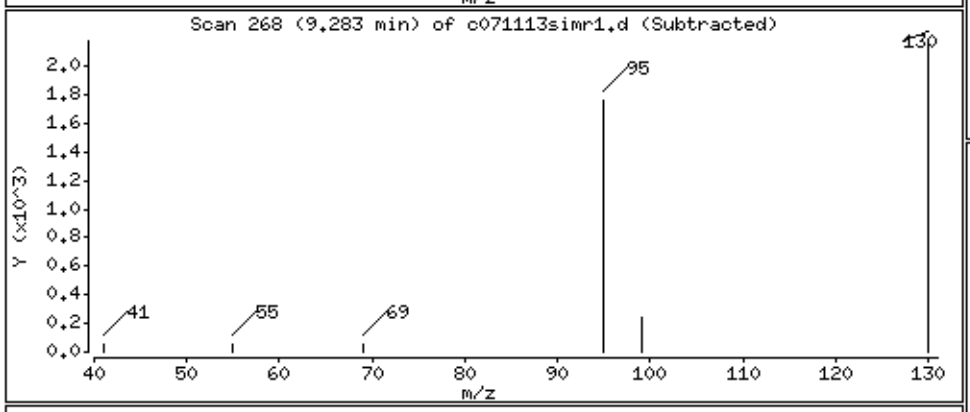
Column phase: DB-5.625

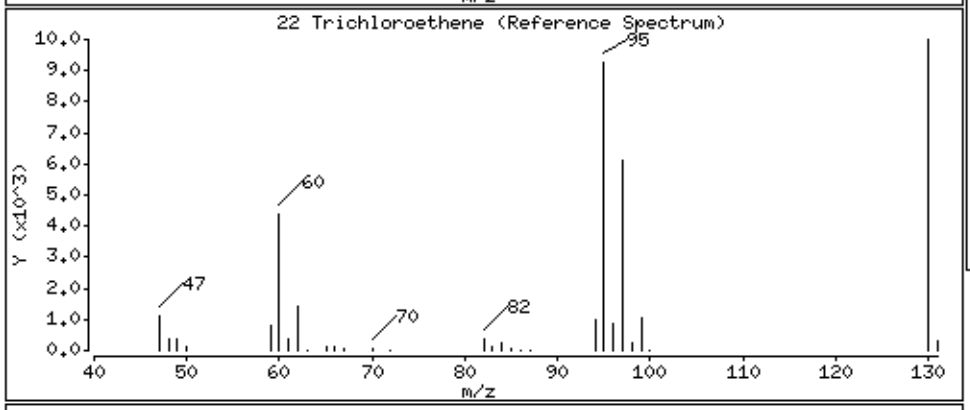
Column diameter: 0.25

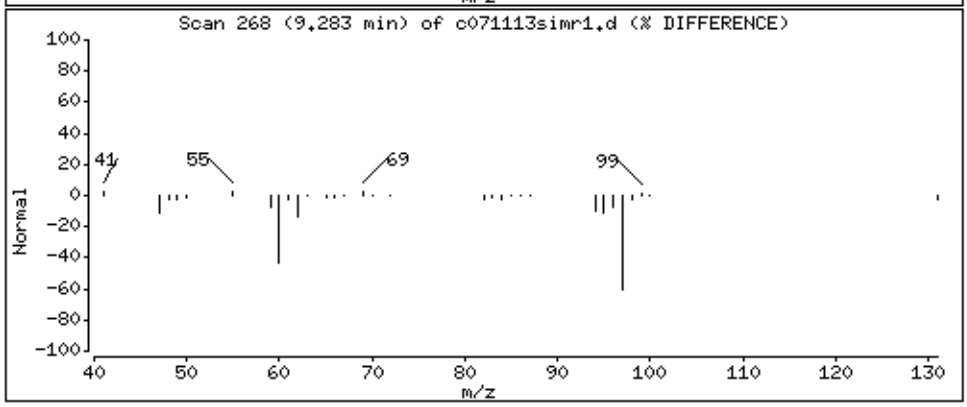
22 Trichloroethene

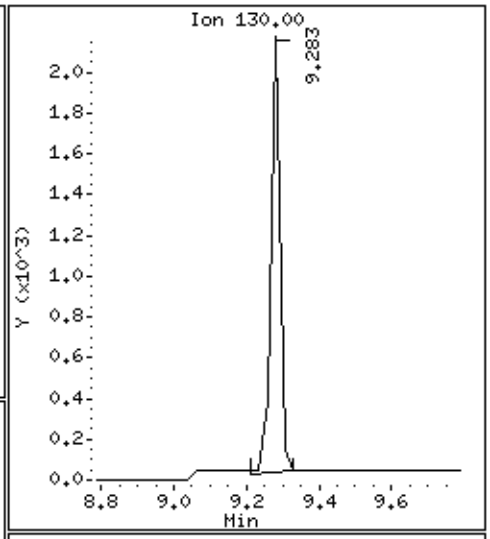
Concentration: 0.756618 ug

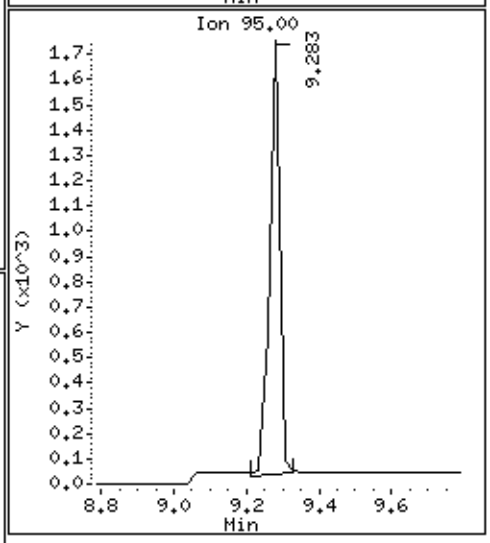












Data File: /chem/msdc.i/11Jul2017.b/c071113simr1.d

Date : 11-JUL-2017 13:45

Client ID:

Instrument: msdc.i

Sample Info: ;1707036R1-07A;

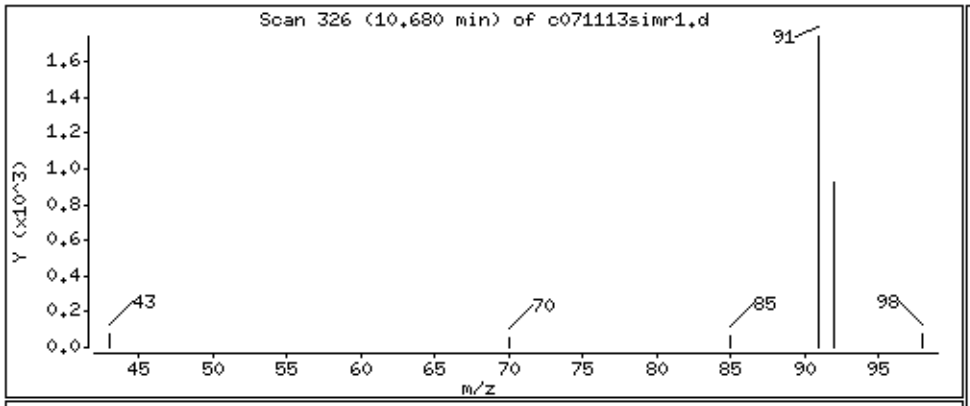
Operator: gm

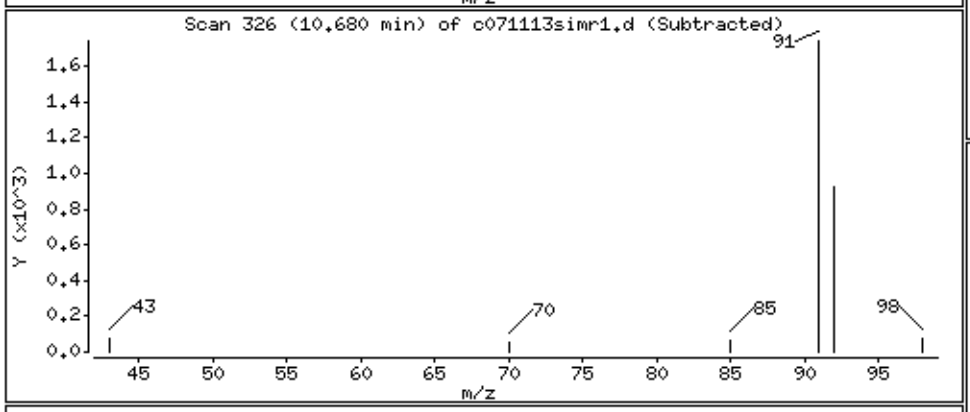
Column phase: DB-5.625

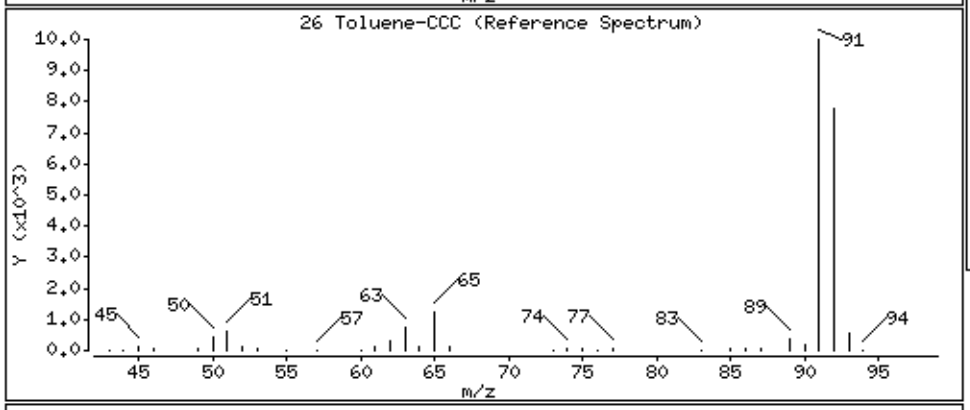
Column diameter: 0.25

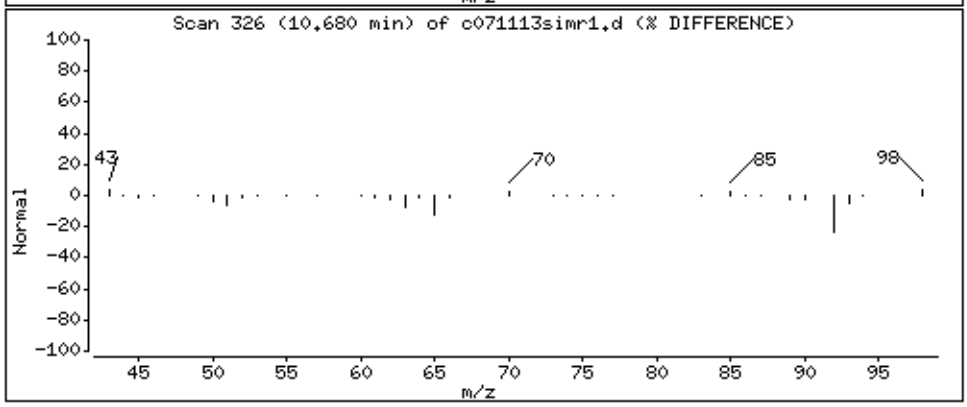
26 Toluene-CCC

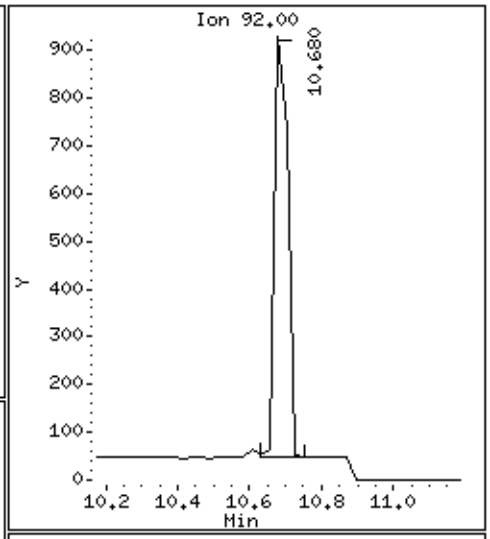
Concentration: 0.209641 ug

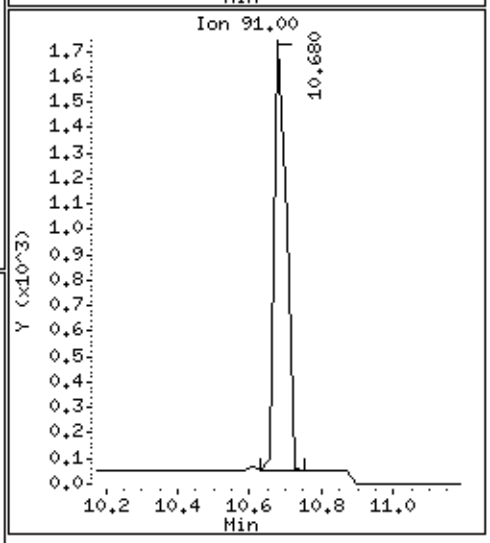












Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: Amb-1-BC (062817)

Lab ID#: 1707036R1-08A

No Detections Were Found.

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Client Sample ID: Amb-1-BC (062817)

Lab ID#: 1707036R1-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071114simr1**	**Date of Collection: 6/30/17 12:06:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 02:10 PM**
		Date of Extraction: 7/11/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.80	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.2	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.99	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected C
Benzene	0.40	3.1	Not Detected	Not Detected
Tetrachloroethene	0.10	1.0	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.94	Not Detected C	Not Detected C
Trichloroethene	0.10	0.90	Not Detected	Not Detected
Toluene	0.10	0.84	Not Detected	Not Detected
Vinyl Chloride	0.40	2.7	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1601 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071114simr1.d
Lab Smp Id: 1707036R1-08A
Inj Date : 11-JUL-2017 14:10
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036R1-08A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 31-Jul-2017 14:21 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	164460	5.08761	10.1752
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	180704	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	Compound Not Detected.					
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	Compound Not Detected.					
26 Toluene-CCC	92	Compound Not Detected.					
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071114simr1.d
Lab Smp Id: 1707036R1-08A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	180704	-11.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 31-Jul-2017 14:27

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036R1-08A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.1752	101.75	70-130

Data File: /chem/msdc.i/11Jul2017.b/c071114simr1.d

Date : 11-JUL-2017 14:10

Client ID:

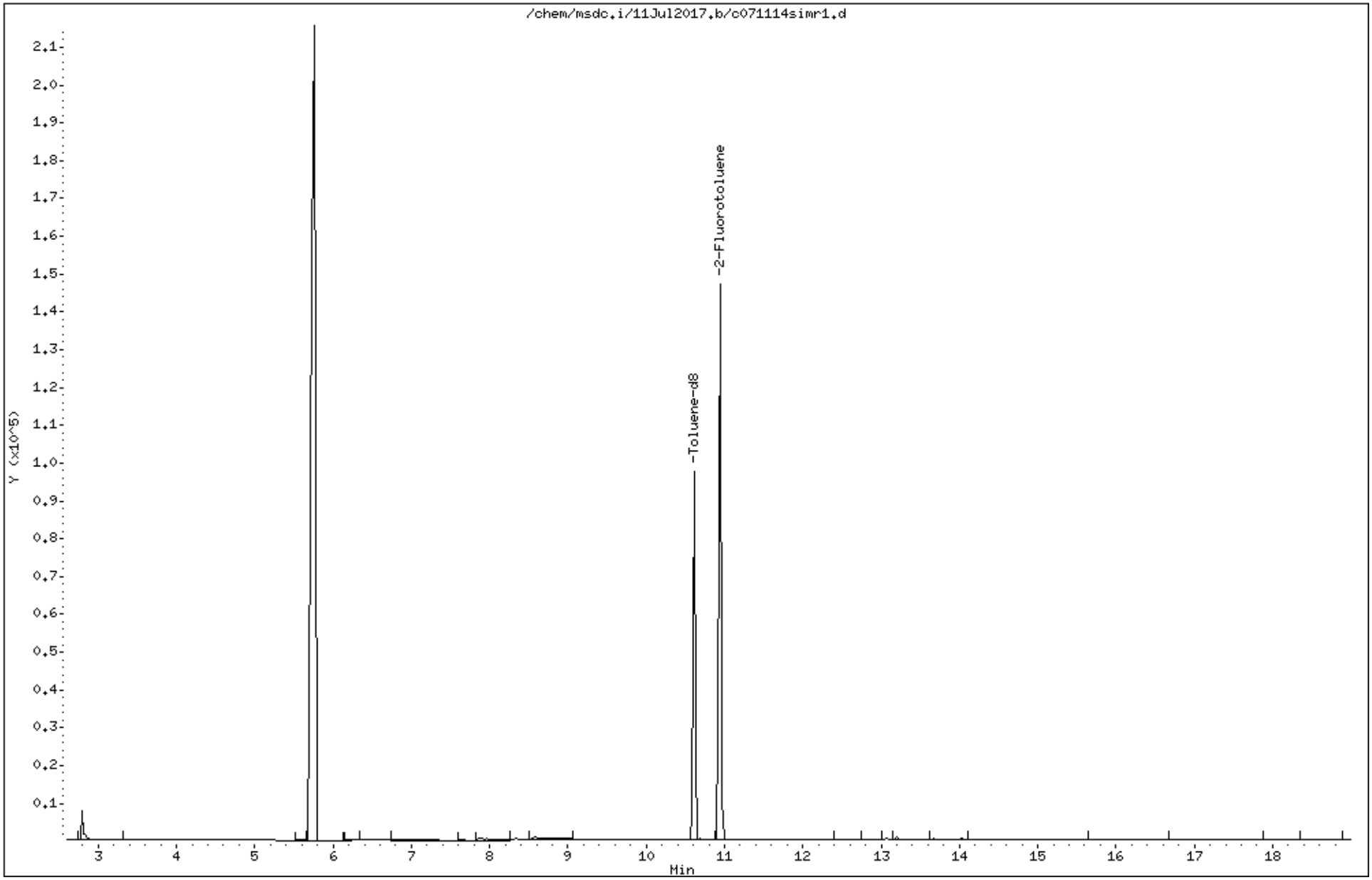
Instrument: msdc.i

Sample Info: ;1707036R1-08A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



QC Results and Raw Data

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1707036R1-09A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071106sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 10:49 AM**	
		Date of Extraction: 7/11/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.80	Not Detected	Not Detected
1,1-Dichloroethene	0.40	3.2	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.99	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	2.1	Not Detected C	Not Detected C
Benzene	0.40	3.1	Not Detected	Not Detected
Tetrachloroethene	0.10	1.0	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.94	Not Detected C	Not Detected C
Trichloroethene	0.10	0.90	Not Detected	Not Detected
Toluene	0.10	0.84	Not Detected	Not Detected
Vinyl Chloride	0.40	2.7	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.0F , duration time = 1601 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071106sim.d
Lab Smp Id: 1707036/042B Client Smp ID: LAB BLANK
Inj Date : 11-JUL-2017 10:49
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036/042B;LAB BLANK
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 11-Jul-2017 09:52 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allRL.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
1 Chloromethane	50	Compound Not Detected.					
2 Vinyl Chloride	62	Compound Not Detected.					
3 Ethanol	45	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
5 Acetone	58	Compound Not Detected.					
7 MTBE	73	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
9 Hexane	57	Compound Not Detected.					
10 Halothane	117	Compound Not Detected.					
11 1,1-Dichloroethane-SPCC	63	Compound Not Detected.					
12 Ethyl Acetate	70	Compound Not Detected.					
13 2-Butanone	72	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	Compound Not Detected.					
15 Chloroform-CCC	83	Compound Not Detected.					
16 Cyclohexane	84	Compound Not Detected.					
17 1,1,1-Trichloroethane	97	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	18 Carbon Tetrachloride	117	Compound Not Detected.					
	19 Benzene	78	Compound Not Detected.					
	20 1,2-Dichloroethane	62	Compound Not Detected.					
	21 Heptane	71	Compound Not Detected.					
	22 Trichloroethene	130	Compound Not Detected.					
	23 Methyl Methacrylate	69	Compound Not Detected.					
	24 4-Methyl-2-pentanone	85	Compound Not Detected.					
$	25 Toluene-d8	98	10.608	10.608	(0.969)	187257	5.09147	10.1829
	26 Toluene-CCC	92	Compound Not Detected.					
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	205597	5.00000	
	28 1,1,2-Trichloroethane	97	Compound Not Detected.					
	29 Tetrachloroethene	164	Compound Not Detected.					
	30 Chlorobenzene	112	Compound Not Detected.					
	31 Ethylbenzene-CCC	106	Compound Not Detected.					
	33 m,p-Xylene	106	Compound Not Detected.					
	34 o-Xylene	106	Compound Not Detected.					
	35 Styrene	104	Compound Not Detected.					
	36 a-Pinene	93	Compound Not Detected.					
	37 1,1,2,2-Tetrachloroethane-SPC	83	Compound Not Detected.					
	38 Propylbenzene	91	Compound Not Detected.					
	40 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
	41 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	42 R-(+)-Limonene	68	Compound Not Detected.					
	43 1,3-Dichlorobenzene	146	Compound Not Detected.					
	44 1,4-Dichlorobenzene	146	Compound Not Detected.					
	45 1,2-Dichlorobenzene	146	Compound Not Detected.					
	46 1,4-Dithiane	120	Compound Not Detected.					
	47 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
	48 Naphthalene	128	Compound Not Detected.					
	49 1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Report Date: 11-Jul-2017 11:06

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071106sim.d
Lab Smp Id: 1707036/042B
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34
Client Smp ID: LAB BLANK
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	205597	1.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 11-Jul-2017 11:06

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036/042B
Client Smp ID: LAB BLANK
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: allRL.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.1829	101.83	0-130

Data File: /chem/msdc.i/11Jul2017.b/c071106sim.d

Date : 11-JUL-2017 10:49

Client ID: LAB BLANK

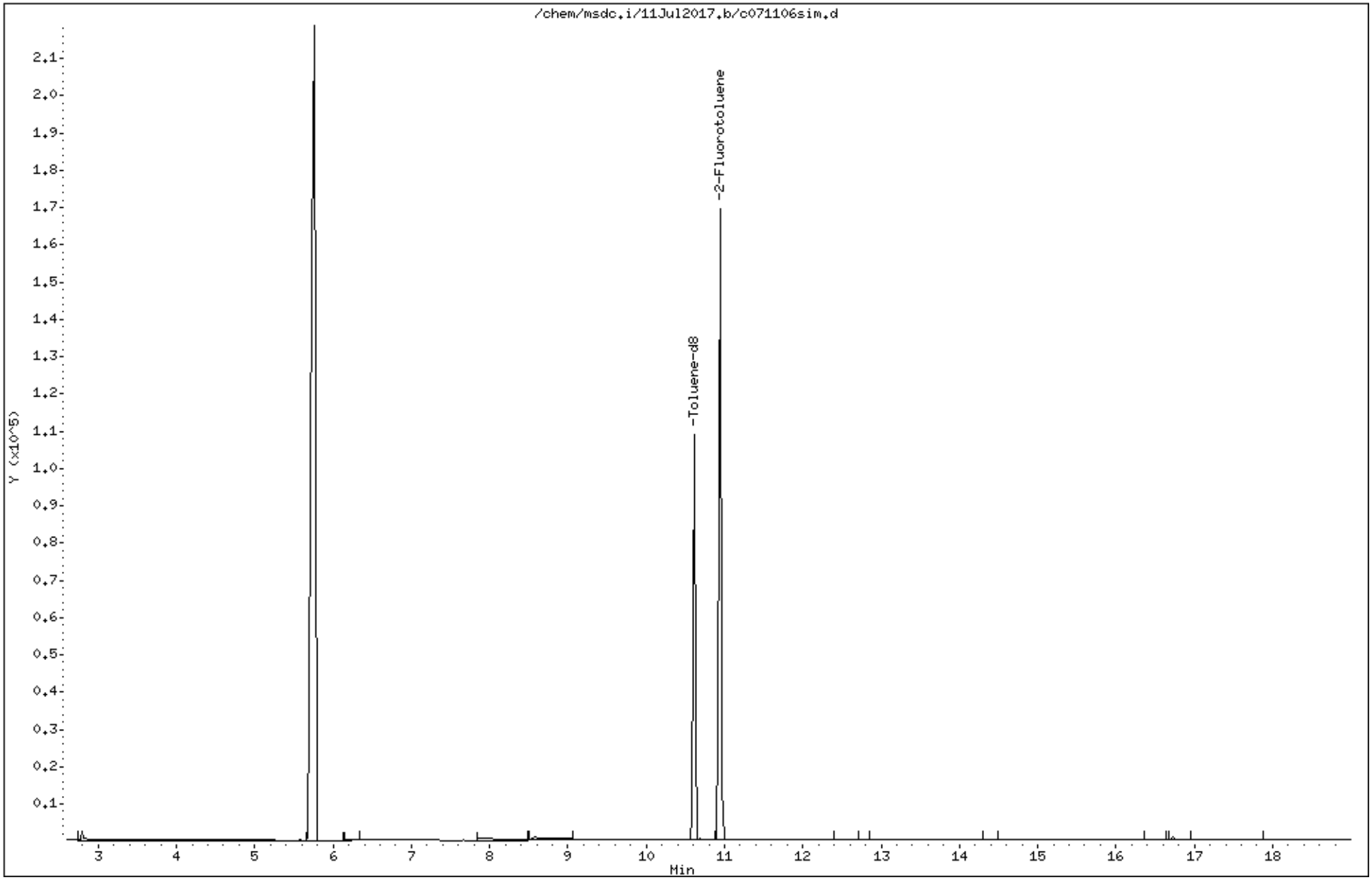
Instrument: msdc.i

Sample Info: ;1707036/042B;LAB BLANK

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



LEVEL-IV VALIDATABLE

VOCS BY PASSIVE SAMPLER - GC/MS

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1707036R1

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY									
		Toluene-d8	#		#		#		#	TOTAL OUT
01	B-8-BC (062817)	103								0
02	B-3-BC (062817)	102								0
03	B-9-BC (062817)	100								0
04	A-5-BC (062817)	101								0
05	B-6-BC (062817)	100								0
06	B-4-BC (062817)	102								0
07	Dup-1-BC (062817)	101								0
08	Amb-1-BC (062817)	102								0
09	Lab Blank	102								0
10	LCS	103								0
11	LCSD	103								0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

Toluene-d8 70 - 130

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: c071105sim.d & c071104sim.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/11/17 & 7/11/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
79-00-5	1,1,2-Trichloroethane	99		96		3.1	
75-35-4	1,1-Dichloroethene	96		82		16	
107-06-2	1,2-Dichloroethane	96		89		7.6	
71-43-2	Benzene	99		94		5.2	
156-59-2	cis-1,2-Dichloroethene	97		88		9.7	
127-18-4	Tetrachloroethene	99		101		2.0	
108-88-3	Toluene	97		97		0	
156-60-5	trans-1,2-Dichloroethene	105		90		15	
79-01-6	Trichloroethene	102		96		6.1	
75-01-4	Vinyl Chloride	87		74		16	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Calibration File Names:
Level 1: /chem/msdc.i/21Jun2017.b/c062103sim.d
Level 2: /chem/msdc.i/21Jun2017.b/c062104sim.d
Level 3: /chem/msdc.i/21Jun2017.b/c062105sim.d
Level 4: /chem/msdc.i/21Jun2017.b/c062106sim.d
Level 5: /chem/msdc.i/21Jun2017.b/c062107sim.d
Level 6: /chem/msdc.i/21Jun2017.b/c062108sim.d
Level 7: /chem/msdc.i/21Jun2017.b/c062109sim.d
Level 8: /chem/msdc.i/21Jun2017.b/c062110sim.d
Level 9: /chem/msdc.i/21Jun2017.b/c062111sim.d
Level 10: /chem/msdc.i/21Jun2017.b/c062112sim.d
Level 11: /chem/msdc.i/21Jun2017.b/c062113sim.d

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
1 Chloromethane	+++++	+++++	0.02863	0.05216	0.05098	0.05616		
	0.04989	0.02871	+++++	+++++	+++++		0.04442	27.874
2 Vinyl Chloride	+++++	+++++	0.12497	0.23249	0.23184	0.24842		
	0.21245	0.13443	0.15198	0.18345	0.16582		0.18732	24.463
3 Ethanol	+++++	+++++	0.04800	0.07602	0.08304	0.08676		
	0.07280	0.05065	0.04950	0.06094	0.05591		0.06485	23.228
4 1,1-Dichloroethene-CCC	+++++	+++++	0.12050	0.17802	0.20056	0.19822		
	0.17039	0.12873	0.13028	0.14707	0.14032		0.15712	19.410
5 Acetone	+++++	+++++	0.09881	0.14436	0.15589	0.16110		
	0.13449	0.09603	0.09766	0.11567	0.10877		0.12364	20.873
7 MTBE	+++++	0.54987	0.49242	0.57493	0.68651	0.66038		
	0.55779	0.49624	0.46107	0.48933	0.48861		0.54571	14.047

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
8 trans-1,2-Dichloroethene	+++++	+++++	0.18836	0.20132	0.24053	0.23132		
	0.20074	0.16355	0.16447	0.17039	0.17474		0.19283	14.673
9 Hexane	+++++	0.58186	0.53495	0.48014	0.61245	0.59193		
	0.53146	0.42191	0.46239	0.41308	0.44432		0.50745	14.394
10 Halothane	+++++	0.14031	0.10891	0.15360	0.17659	0.17529		
	0.14637	0.11132	0.11386	0.13085	0.12407		0.13812	18.035
11 1,1-Dichloroethane-SPCC	+++++	0.45668	0.35156	0.42197	0.49977	0.47894		
	0.39918	0.34459	0.32656	0.35597	0.34206		0.39773	15.887
12 Ethyl Acetate	+++++	+++++	0.04999	0.05974	0.07349	0.07205		
	0.06100	0.05206	0.05085	0.05397	0.05231		0.05839	15.406
13 2-Butanone	+++++	0.14684	0.11123	0.13455	0.16284	0.15666		
	0.13007	0.11006	0.10650	0.11664	0.11165		0.12870	16.161
14 cis-1,2-Dichloroethene	+++++	0.22834	0.18935	0.22139	0.26939	0.25906		
	0.21733	0.18813	0.18231	0.19299	0.18768		0.21360	14.625
15 Chloroform-CCC	+++++	0.36383	0.31614	0.31627	0.36707	0.35472		
	0.30613	0.31042	0.26553	0.26633	0.26671		0.31331	12.542
16 Cyclohexane	+++++	0.36830	0.30919	0.32441	0.43183	0.37461		
	0.30817	0.29239	0.28288	0.29605	0.29216		0.32800	14.709
17 1,1,1-Trichloroethane	+++++	0.36624	0.32425	0.36297	0.46521	0.42414		
	0.35019	0.30571	0.31018	0.32396	0.31470		0.35476	14.889

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
18 Carbon Tetrachloride	+++++	0.36108	0.31399	0.33856	0.43269	0.39119		
	0.32270	0.29337	0.29526	0.30446	0.29883		0.33521	13.900
19 Benzene	+++++	+++++	+++++	0.84884	0.96284	0.90438		
	0.79706	0.82846	0.70634	0.68064	0.66350		0.79901	13.567
20 1,2-Dichloroethane	+++++	0.42057	0.34312	0.36750	0.45089	0.41637		
	0.34250	0.30694	0.30100	0.31874	0.31252		0.35802	15.004
21 Heptane	+++++	0.30571	0.29959	0.28640	0.36279	0.31757		
	0.26501	0.26370	0.25657	0.25316	0.24758		0.28581	12.683
22 Trichloroethene	+++++	0.28714	0.27062	0.26374	0.34847	0.30818		
	0.25700	0.25747	0.23918	0.23566	0.23722		0.27047	13.203
23 Methyl Methacrylate	+++++	0.25551	0.23520	0.23905	0.32051	0.27981		
	0.23446	0.23358	0.21662	0.21673	0.22146		0.24529	13.283
24 4-Methyl-2-pentanone	+++++	+++++	0.09451	0.09072	0.12105	0.11002		
	0.09599	0.09867	0.08970	0.08756	0.08518		0.09704	11.969
26 Toluene-CCC	+++++	0.66783	0.61010	0.56772	0.74639	0.64509		
	0.56493	0.59280	0.53457	0.50698	0.50742		0.59438	12.749
28 1,1,2-Trichloroethane	+++++	0.25516	0.23967	0.22740	0.29742	0.26619		
	0.22831	0.23797	0.21467	0.20623	0.20665		0.23797	12.022
29 Tetrachloroethene	+++++	0.26686	0.25424	0.23230	0.31513	0.26910		
	0.23225	0.25311	0.22950	0.21182	0.21202		0.24763	12.635

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
30 Chlorobenzene	+++++	0.80022	0.78472	0.71124	0.97293	0.81556		
	0.70162	0.77169	0.70372	0.64343	0.65364		0.75588	12.817
31 Ethylbenzene-CCC	+++++	0.39444	0.40237	0.35779	0.49172	0.40868		
	0.35122	0.39766	0.36364	0.32914	0.33750		0.38341	12.353
33 m,p-Xylene	0.45122	0.48075	0.46072	0.41938	0.56206	0.47142		
	0.41636	0.46062	0.42161	0.38893	0.40535		0.44895	10.631
34 o-Xylene	+++++	0.50517	0.42124	0.38933	0.51794	0.45110		
	0.40693	0.43487	0.37880	0.34271	0.34086		0.41889	14.471
35 Styrene	+++++	0.93159	0.85093	0.76848	1.04834	0.88634		
	0.79379	0.89572	0.79855	0.69224	+++++		0.85178	12.223
36 a-Pinene	+++++	0.59699	0.58676	0.51019	0.69623	0.58347		
	0.51372	0.59067	0.51896	0.45800	0.44883		0.55038	13.581
37 1,1,2,2-Tetrachloroethane-SPC	+++++	0.55710	0.51410	0.45665	0.61754	0.50511		
	0.43526	0.49341	0.45150	0.40802	0.40891		0.48476	13.787
38 Propylbenzene	+++++	1.49384	1.64955	1.41527	2.00923	1.64482		
	1.39896	1.68100	1.57911	1.40540	+++++		1.58635	12.226
40 1,3,5-Trimethylbenzene	+++++	1.02409	0.82279	0.78161	1.00477	0.86195		
	0.78304	0.85919	0.76820	0.72790	0.79817		0.84317	11.741
41 1,2,4-Trimethylbenzene	+++++	1.00208	0.90505	0.83026	1.09708	0.92483		
	0.84594	0.94903	0.86536	0.79756	0.85480		0.90720	9.949

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
42 R-(+)-Limonene	+++++	+++++	+++++	+++++	0.50568	0.41756		
	0.37148	0.45592	0.42540	0.37348	0.37445		0.41771	12.059
43 1,3-Dichlorobenzene	+++++	0.69362	0.60166	0.56864	0.74928	0.65233		
	0.57807	0.63531	0.53944	0.47886	0.49496		0.59922	14.277
44 1,4-Dichlorobenzene	+++++	0.74967	0.75741	0.66907	0.89733	0.74338		
	0.64491	0.74476	0.69855	0.63119	0.64731		0.71836	11.051
45 1,2-Dichlorobenzene	+++++	0.70737	0.66820	0.58649	0.81340	0.68373		
	0.60796	0.68894	0.57948	0.51126	0.50122		0.63481	15.112
46 1,4-Dithiane	+++++	0.47387	0.46742	0.40264	0.55210	0.45551		
	0.40934	0.48695	0.42698	0.36964	0.37199		0.44165	12.845
47 1,2,4-Trichlorobenzene	+++++	0.47216	0.44111	0.39127	0.54266	0.46495		
	0.40270	0.47900	0.41065	0.35421	0.35970		0.43184	13.697
48 Naphthalene	+++++	1.43676	1.27151	1.19757	1.61024	1.43023		
	1.22870	1.49861	1.30564	1.12403	1.14661		1.32499	12.222
49 1,2,3-Trichlorobenzene	+++++	0.46459	0.41975	0.38239	0.51968	0.44657		
	0.39140	0.46250	0.40681	0.35072	0.36207		0.42065	12.528
$ 25 Toluene-d8	0.88624	0.90871	0.88372	0.89845	0.88042	0.88409		
	0.91239	0.90097	0.88899	0.89842	0.89635		0.89443	1.183

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

```
|Average %RSD Results.                              |
|==================================================|
|Calculated Average %RSD = 14.2441120               |
|Maximun Average %RSD    =         30               |
|* Passed Average %RSD Test.                        |
|__________________________________________________|
```

Calibration History

Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Start Cal Date: 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.02500		
21-JUN-2017 08:04	mpxylene	/chem/msdc.i/21Jun2017.b/c062103sim.d
Cal Level: 2 , Cal Amount: 0.05000		
21-JUN-2017 08:30	0.05	/chem/msdc.i/21Jun2017.b/c062104sim.d
Cal Level: 3 , Cal Amount: 0.10000		
21-JUN-2017 08:56	0.1	/chem/msdc.i/21Jun2017.b/c062105sim.d
Cal Level: 4 , Cal Amount: 0.20000		
21-JUN-2017 09:21	0.2	/chem/msdc.i/21Jun2017.b/c062106sim.d
Cal Level: 5 , Cal Amount: 0.50000		
21-JUN-2017 09:46	all	/chem/msdc.i/21Jun2017.b/c062107sim.d
Cal Level: 6 , Cal Amount: 1.00000		
21-JUN-2017 10:12	all	/chem/msdc.i/21Jun2017.b/c062108sim.d
Cal Level: 7 , Cal Amount: 5.00000		
21-JUN-2017 10:39	all	/chem/msdc.i/21Jun2017.b/c062109sim.d
Cal Level: 8 , Cal Amount: 20.00000		
21-JUN-2017 11:06	all	/chem/msdc.i/21Jun2017.b/c062110sim.d

```
+-------------------+-----------------+-----------------------------------------+

+-------------------+-----------------+-----------------------------------------+
| Cal Level: 9 , Cal Amount: 50.00000                                           |
+===============================================================================+
|21-JUN-2017 11:39 |all-cm           |/chem/msdc.i/21Jun2017.b/c062111sim.d   |
+-------------------+-----------------+-----------------------------------------+

+-------------------+-----------------+-----------------------------------------+
| Cal Level: 10, Cal Amount: 100.00000                                          |
+===============================================================================+
|21-JUN-2017 12:06 |100              |/chem/msdc.i/21Jun2017.b/c062112sim.d   |
+-------------------+-----------------+-----------------------------------------+

+-------------------+-----------------+-----------------------------------------+
| Cal Level: 11, Cal Amount: 200.00000                                          |
+===============================================================================+
|21-JUN-2017 12:33 |200              |/chem/msdc.i/21Jun2017.b/c062113sim.d   |
+-------------------+-----------------+-----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 7
+-------------------+-----------------+-----------------------------------------+
| Ccal Level: 7 , Ccal Amount: 5.00000                                          |
+===============================================================================+
|21-JUN-2017 10:39 |all              |/chem/msdc.i/21Jun2017.b/c062109sima.d  |
+-------------------+-----------------+-----------------------------------------+
| Ccal Level: 7 , Ccal Amount: 5.00000                                          |
+===============================================================================+
|21-JUN-2017 10:39 |all              |/chem/msdc.i/21Jun2017.b/c062109sim.d   |
+-------------------+-----------------+-----------------------------------------+
```

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:12 gmash
Curve Type : Average

Calibration File Names:
Level 1: /chem/msdc.i/21Jun2017.b/c062103sim.d
Level 2: /chem/msdc.i/21Jun2017.b/c062104sim.d
Level 3: /chem/msdc.i/21Jun2017.b/c062105sim.d
Level 4: /chem/msdc.i/21Jun2017.b/c062106sim.d
Level 5: /chem/msdc.i/21Jun2017.b/c062107sim.d
Level 6: /chem/msdc.i/21Jun2017.b/c062108sim.d
Level 7: /chem/msdc.i/21Jun2017.b/c062109sim.d
Level 8: /chem/msdc.i/21Jun2017.b/c062110sim.d
Level 9: /chem/msdc.i/21Jun2017.b/c062111sim.d
Level 10: /chem/msdc.i/21Jun2017.b/c062112sim.d
Level 11: /chem/msdc.i/21Jun2017.b/c062113sim.d

gm 6/21/17

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
1 Chloromethane	+++++	+++++	0.02863	0.05216	0.05098	0.05616		
	0.04989	0.02871	+++++	+++++	+++++		0.04442	27.874
2 Vinyl Chloride	+++++	+++++	0.12497	0.23249	0.23184	0.24842		
	0.21245	0.13443	0.15198	0.18345	0.16582		0.18732	24.463
3 Ethanol	+++++	+++++	0.04800	0.07602	0.08304	0.08676		
	0.07280	0.05065	0.04950	0.06094	0.05591		0.06485	23.228
4 1,1-Dichloroethene-CCC	+++++	+++++	0.12050	0.17802	0.20056	0.19822		
	0.17039	0.12873	0.13028	0.14707	0.14032		0.15712	19.410
5 Acetone	+++++	+++++	0.09881	0.14436	0.15589	0.16110		
	0.13449	0.09603	0.09766	0.11567	0.10877		0.12364	20.873
7 MTBE	+++++	0.54987	0.49242	0.57493	0.68651	0.66038		
	0.55779	0.49624	0.46107	0.48933	0.48861		0.54571	14.047

Initial Calibration Narrative

An 11 point initial calibration was analyzed on MSD-C on 6/21/2017. The curve passed for SOP 100.

ICV - file ID: C062115sim (1 out; Chloromethane at 173%), STD # 2848-5-5.0

Tune file: C062101

All compounds were curved from 0.05ug/mL to 200ug/mL, but there are exceptions. Please refer to ICAL summary for calibration ranges for each compound.

2-Propanol was not included in the ICAL.

Unit: ug/mL

The analysis based on 2uL injection in slow mode.

Eurofins Air Toxics, Inc. **MSD-C** **Logbook #: 2821**

BFB Injection Date: 6/21/17
BFB Injection Time: 0724
BFB File ID: C062101

IS/S Std.#: 2744-196-125	Exp. Date: 10/3/17
2-Fluorotoluene SIM: 266829	

Verified CCV IS vs ICAL mid-point (-50% to +100% D) gm
initials

Calculation Check:

µg/L of compound $= \frac{Area_{Sample}}{Area_{IS}} \times \frac{Conc._{IS}}{RRF} \times DF = \frac{(141610)}{(251495)} \times \frac{(5.0)}{(0.54571)} \times 1.00 = 5.16 \mu g$

File ID:	C062115SIM
Compound:	MTBE
Initials:	gm

Reported Result 5.16 µg

	Use	File #	Sample / Client Name	Vial #	DF	Date Analyzed	Time Analyzed	Initial	Comments
1	✓	C062101	2810-101 BFB	1	1.00	6/21/17	0724	gm	
2	✓	02	CS_2 Blank	2			0735		
3	✓	03	2848-4-0.025	3			0804		Level 1
4	✓	04	-0.05	4			0830		Level 2
5	✓	05	-0.10	5			0856		Level 3.
6	✓	06	-0.20	6			0921		Level 4.
7	✓	07	-0.50	7			0946		Level 5.
8	✓	08	-1.0	8			1012		Level 6.
9	✓	09	-5.0	9			1039		Level 7. /CCV
10	✓	10	-20	10			1106		Level 8.
11	✓	11	-50	11			1139		Level 9.
12	✓	12	-100	12			1206		Level 10.
13	✓	13	-200	13			1233		Level 11.
14	✓	14	CS_2 Blank	14			1259		
15	✓	15	2848-5-5.0	15	✓	✓	1325	✓	ICV

Reviewed: gm Date: 6/22/17

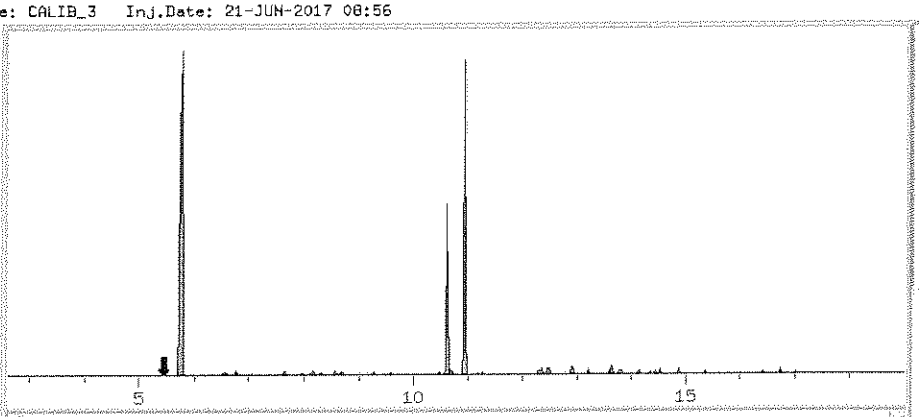
TargetReview: eeyore: 2848-4-0.10: /chem/msdc.i/21Jun2017.b/c062105sim.d

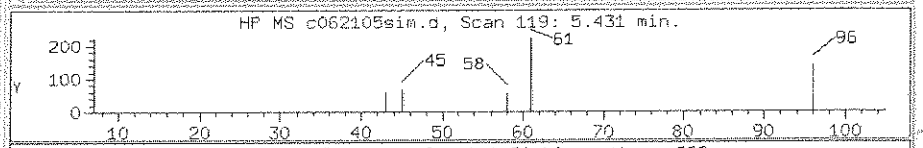
File Properties Edit Display Process Spectra Help

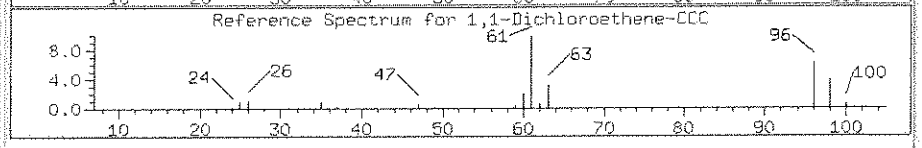
Sample: 2848-4-0.10 Type: CALIB_3 Inj.Date: 21-JUN-2017 08:56

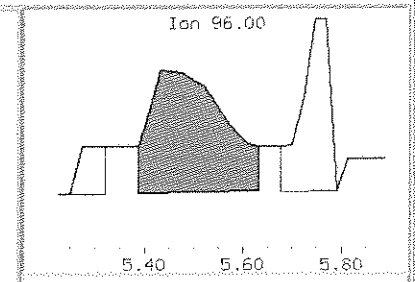
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeti
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

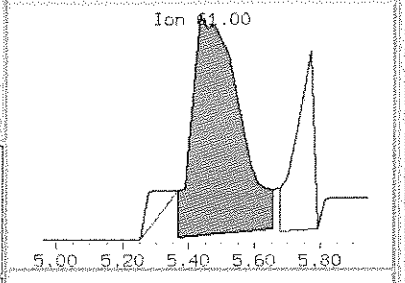
c062105sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.297	224	0.0141828	0.0141828	100	a	
	5.297	129			58		
2	5.431	1534	0.100000	0.100000	100		
	5.431	2208			139		
3	5.768	1525	0.0962701	0.0962701	100	a	
	5.768	668			44		

Before
gmv
6/21/17

TargetReview: eeyore: 2048-4-0.10: /chem/msdc.i/21Jun2017.b/c062105sim.d

File Security Edit Display Process Spectra Help

Sample: 2048-4-0.10 Type: CALIB_3 Inj.Date: 21-JUN-2017 08:56

+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeth
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeth
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

c062105sim.d

Manual Int

Time: 5.431 Done

Area: 1417 Help

Height: 174

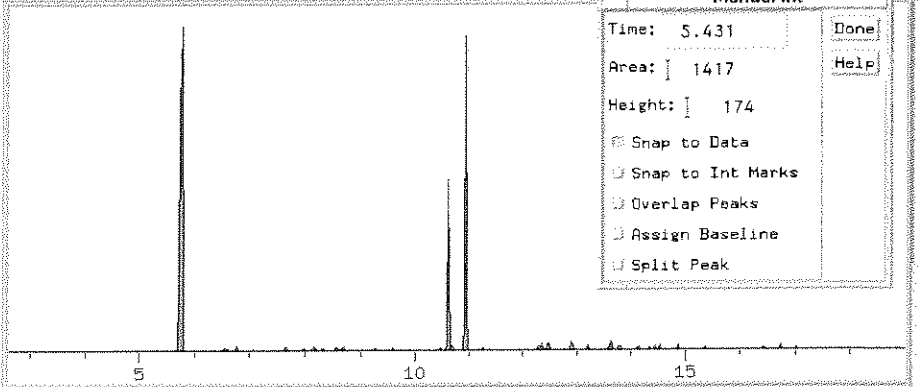
Snap to Data

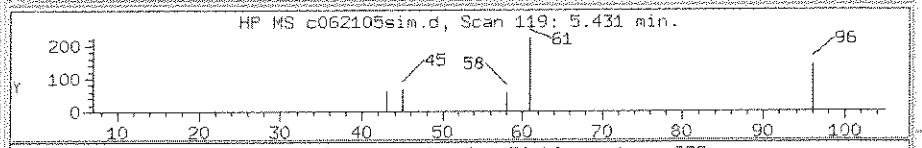
Snap to Int Marks

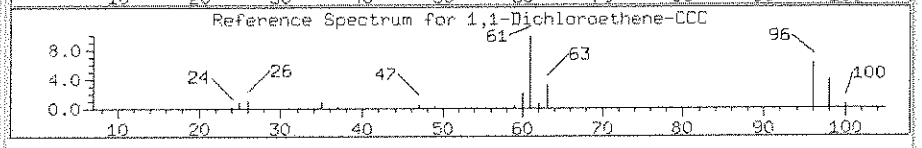
Overlap Peaks

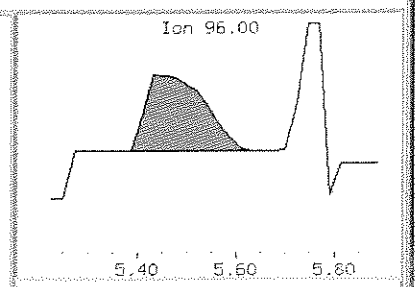
Assign Baseline

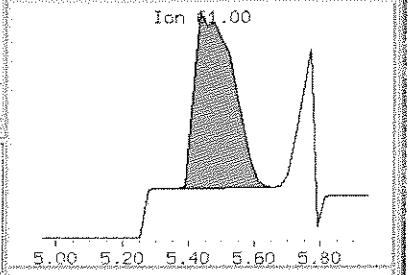
Split Peak











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.431	299	0.100000	0.100000	100	M	
	5.431	1417			194		

- Mark 1,1-Dichloroethena-CCC Undetected.

6/21/17
AT

gm
6/21/17

After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
Subtract Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

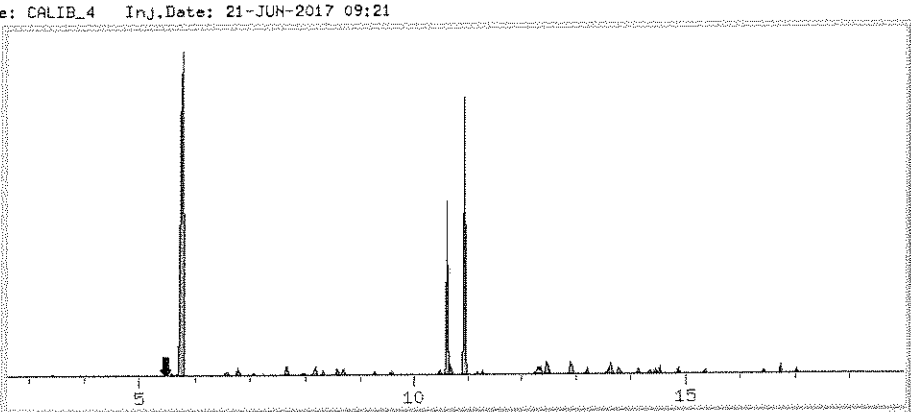
TargetReview: eeyore: 2848-4-0.20: /chem/msdc.i/21Jun2017.b/c062106sim.d

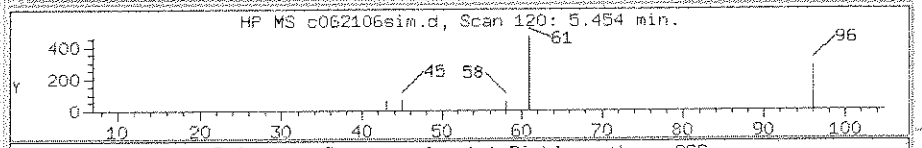
File Processing Edit Display Process Spectra Help

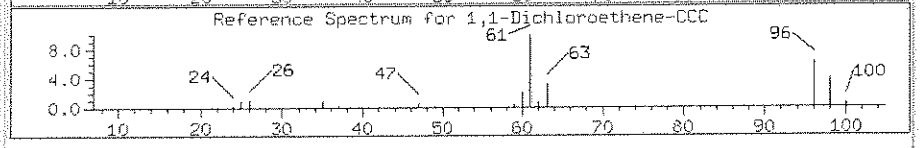
Sample: 2848-4-0.20 Type: CALIB_4 Inj.Date: 21-JUN-2017 09:21

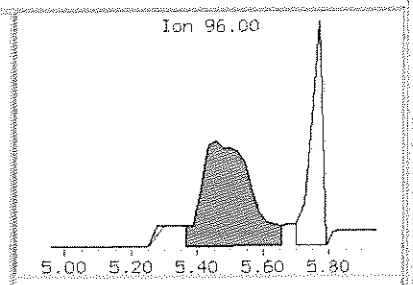
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeth
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeth
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

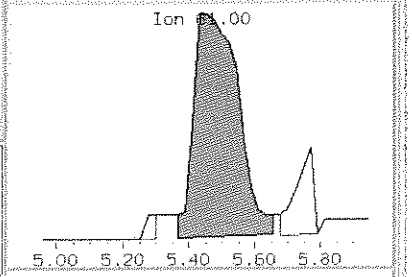
c062106sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.275	37	0.00355685	0.00355685	100	a	
	5.275	138			367		
2	5.454	2963	0.276963	0.276963	100		
	5.431	4372			149		
3	5.768	1465	0.138355	0.138355	100		
	5.768	673			46		

Before

JM
6/21/17

Targetreview eeyore: 2846-4-0.20: /chem/msdc.i/21Jun2017.b/c062106sim.d

File Searching Edit Display Report Spectra Help

Sample: 2846-4-0.20 Type: CALIB_4 Inj.Date: 21-JUN-2017 09:21

+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeti
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

c062106sim.d

Manual Int
Time: 5.431
Area: 3562
Height: 410
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak

Ion 96.00

HP MS c062106sim.d, Scan 120: 5.454 min.

Reference Spectrum for 1,1-Dichloroethene-CCC

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	1926	0.238672	0.238672	100	M	
	5.431	3562			185		

- Mark 1,1-Dichloroethene-CCC Undetected.

Calc'd 17 AG

Gm 6/21/17

After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Mismatched	
Corrected Peak Integration	

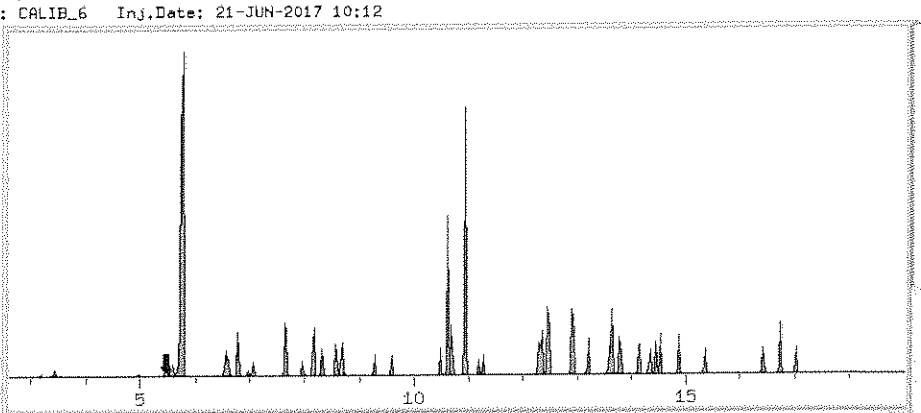
TargetReview: eeyore: 2848-4-1.0: /chem/msdc.i/21Jun2017.b/c062108sim.d

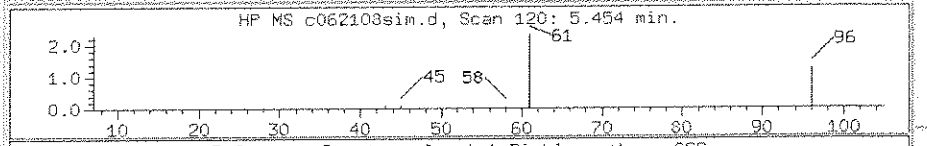
File Security Edit Display Process Spectra Help

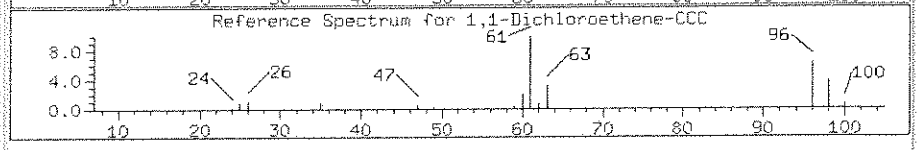
Sample: 2848-4-1.0 Type: CALIB_6 Inj.Date: 21-JUN-2017 10:12

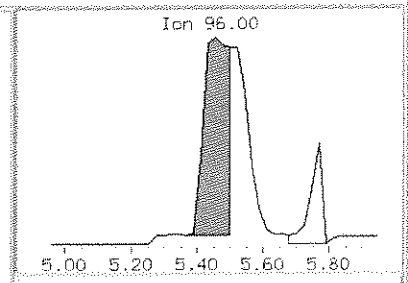
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
* 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeti
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

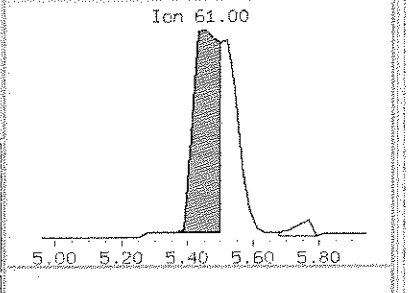
c062107sim.d
c062108sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	6890	1.04828	1.04828	100		
	5.454	13290			193		
2	5.768	1540	0.234440	0.234440	100		
	5.768	666			43		

- Mark 1,1-Dichloroethene-CCC Undetected.

Before
gw
6/21/17

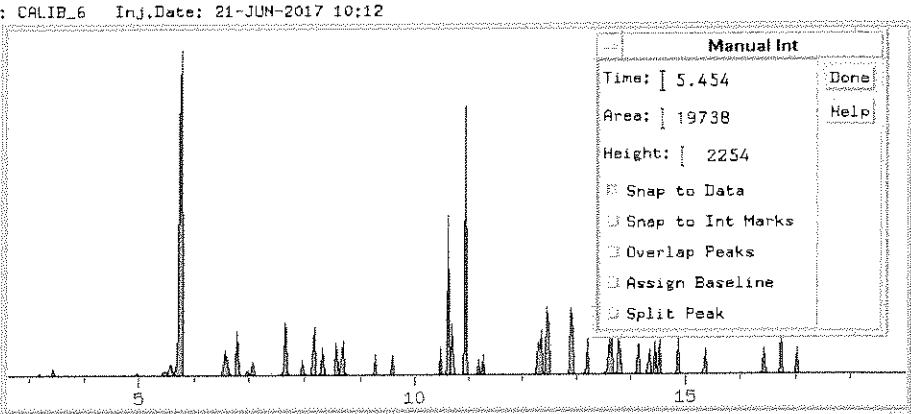
TargetReview: eeyore 2040-4-1.D:/Chem/msdc1/21Jun2017.b/c062108sim.d

File Security Edit Display Process Spectra Help

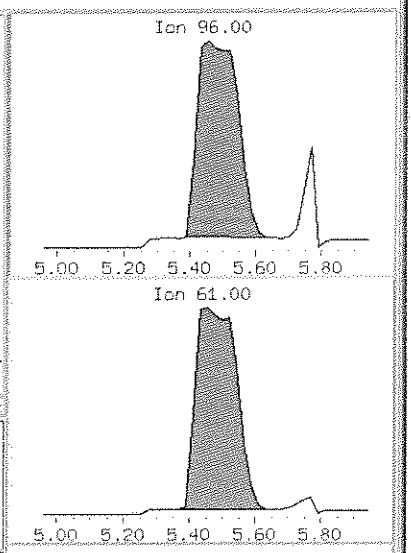
Sample: 2040-4-1.0 Type: CALIB_6 Inj.Date: 21-JUN-2017 10:12

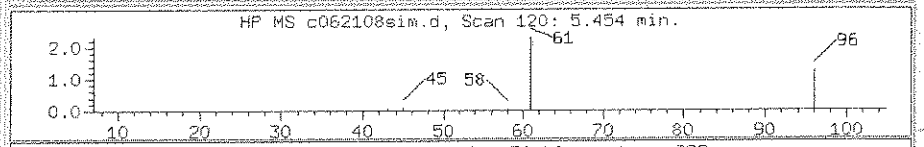
1 Chloromethane
2 Vinyl Chloride
3 Ethanol
4 1,1-Dichloroet
5 Acetone
7 MTBE
8 trans-1,2-Dich.
9 Hexane
10 Halothane
11 1,1-Dichloroetl
12 Ethyl Acetate
13 2-Butanone
14 cis-1,2-Dichlo
15 Chloroform-CCC
16 Cyclohexane
17 1,1,1-Trichlor
18 Carbon Tetrach.
19 Benzene
20 1,2-Dichloroetl
21 Heptane
22 Trichloroethen
23 Methyl Methacr
24 4-Methyl-2-pen
25 Toluene-d8
26 Toluene-CCC

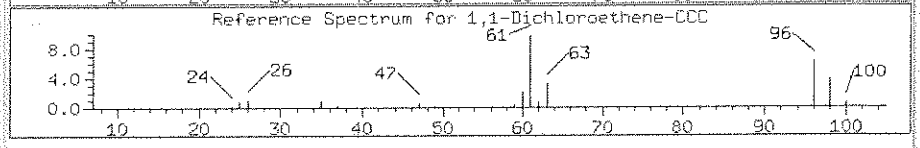
c062107sim.d
c062108sim.d



Manual Int
Time: 5.454
Area: 19738
Height: 2254
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak







Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	10302	1.13715	1.13715	100	M	
	5.454	19738			192		

- Mark 1,1-Dichloroethene-CCC Undetected.

6/21/17
AC

Jm
6/21/17

After

Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

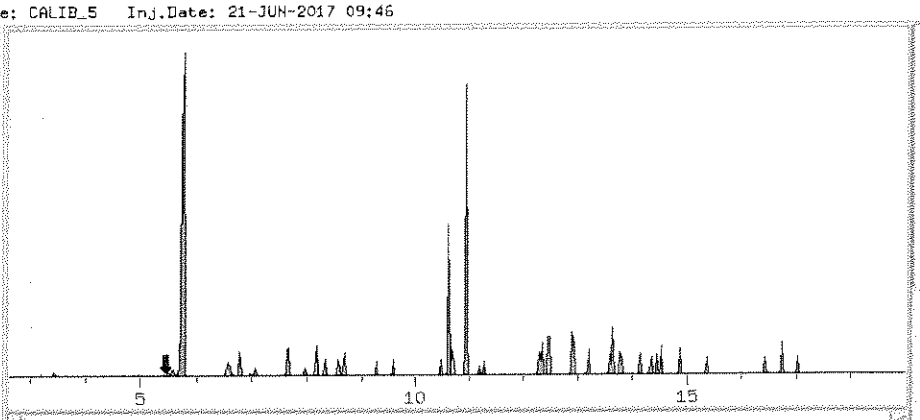
TargetReview: eeyore: 2848-4-0.50: /chem/msdc.i/21Jun2017.b/c062107sim.d

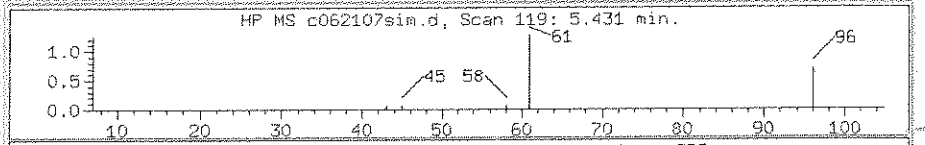
File Security Edit Display Process Spectra Help

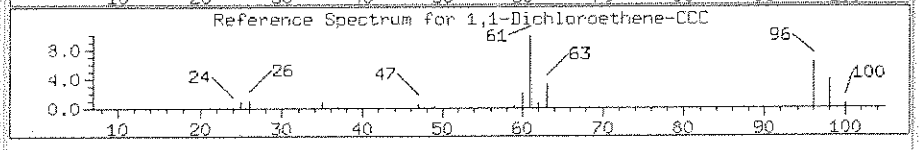
Sample: 2848-4-0.50 Type: CALIB_5 Inj.Date: 21-JUN-2017 09:46

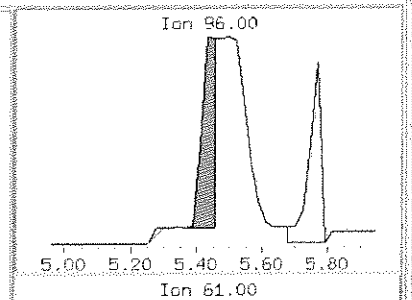
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroetl
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroetl
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

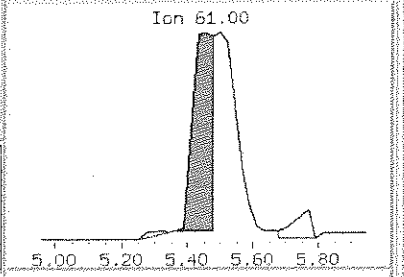
c062107sim.d
c062108sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.274	37	0.00539369	0.00539369	100	a	
	5.319	129			344		
2	5.431	5055	0.200024	0.200024	100		
	5.454	5693			272		
3	5.767	1548	0.221816	0.221816	100		
	5.767	657			42		

Before
gm
6/21/17

Targetfleview: eeyore: 2048-4-0.50: /chem/msdc.i/21.jun2017.b/c062107sim.d

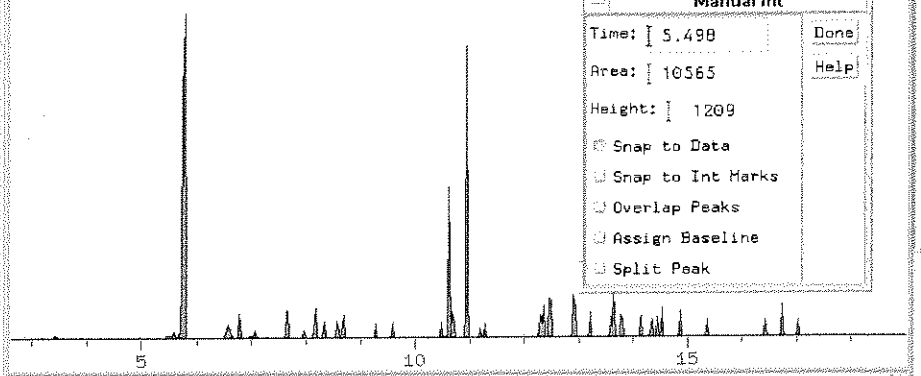
File Security Edit Display Process Spectra Help

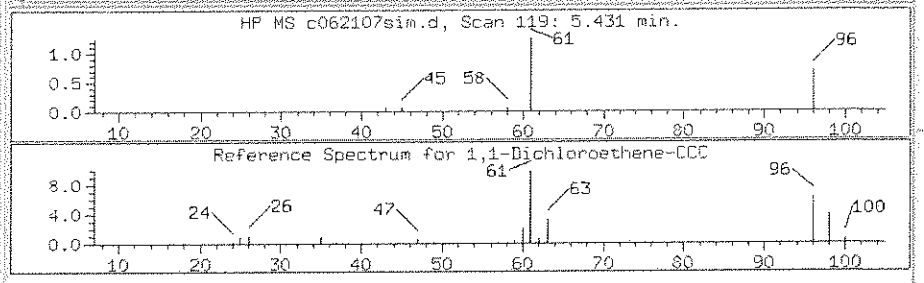
Sample: 2048-4-0.50 Type: CALIB_5 Inj.Date: 21-JUN-2017 09:46

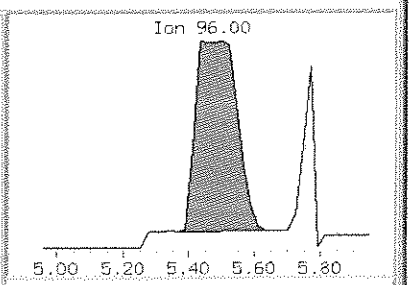
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeti
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

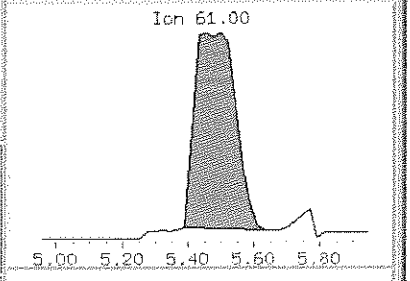
c062107sim.d
c062108sim.d

Manual Int
Time: 5.498
Area: 10565
Height: 1209
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.431	5630	0.650106	0.650106	100	M	
	5.498	10565			188		

- Mark 1,1-Dichloroethene-CCC Undetected.

After

Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

gm 6/24/17

6/21/17 AF

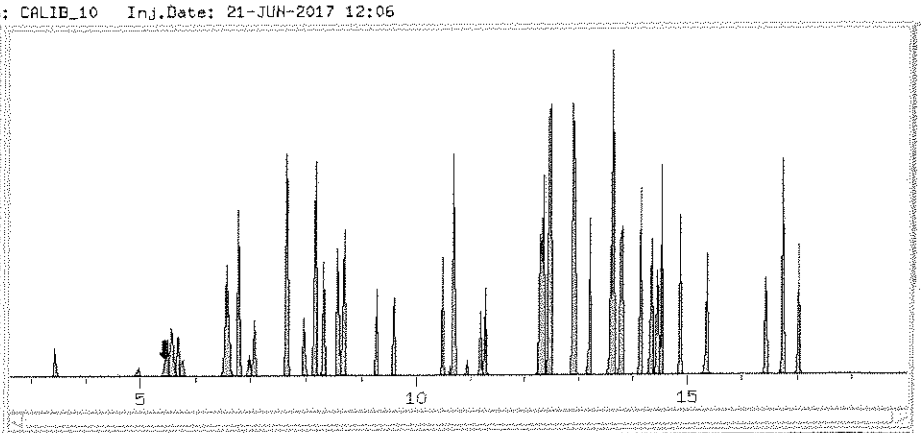
TargetReview: eeyore: 2848-4-100: /chem/msdc.i/21Jun2017.b/c062112sim.d

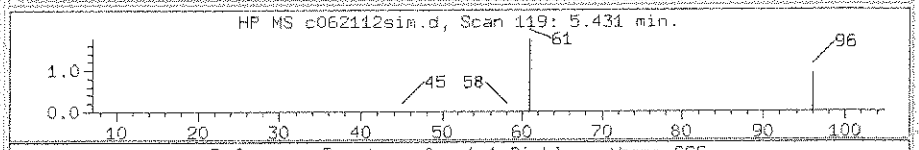
File Security Edit Display Present Spectra Help

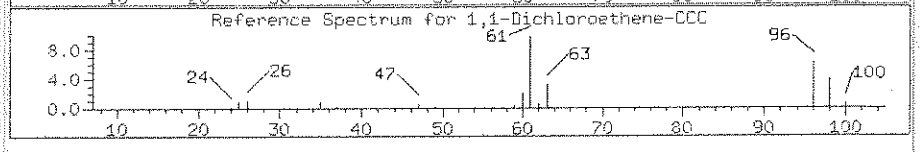
Sample: 2848-4-100 Type: CALIB_10 Inj.Date: 21-JUN-2017 12:06

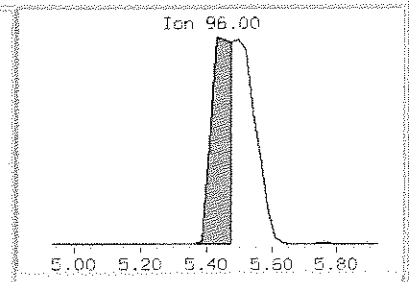
+	2	Vinyl Chloride
+	3	Ethanol
+	4	1,1-Dichloroet
+	5	Acetone
+	7	MTBE
+	8	trans-1,2-Dich
+	9	Hexane
+	10	Halothane
+	11	1,1-Dichloroet
+	12	Ethyl Acetate
+	13	2-Butanone
+	14	cis-1,2-Dichlo
+	15	Chloroform-CCC
+	16	Cyclohexane
+	17	1,1,1-Trichlor
+	18	Carbon Tetrach
+	19	Benzene
+	20	1,2-Dichloroet
+	21	Heptane
+	22	Trichloroethen
+	23	Methyl Methacr
+	24	4-Methyl-2-pen
*+	25	Toluene-d8
+	26	Toluene-CCC
*+	27	2-Fluorotolue

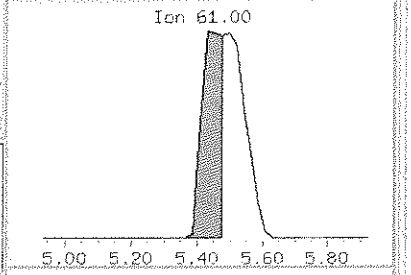
c062112sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.274	372	0.0435883	0.0435883	100	aQ	
	5.431	841071			225736		
2	5.431	434044	50.7777	50.7777	100		
	5.431	841071			194		
3	5.767	1738	0.203400	0.203400	100		
	5.767	537			31		

Before
gw
6/21/17

TargetReview: peyora: 2848-4-100: /chem/msdc.i/21-Jun2017.b/c062112sim.d

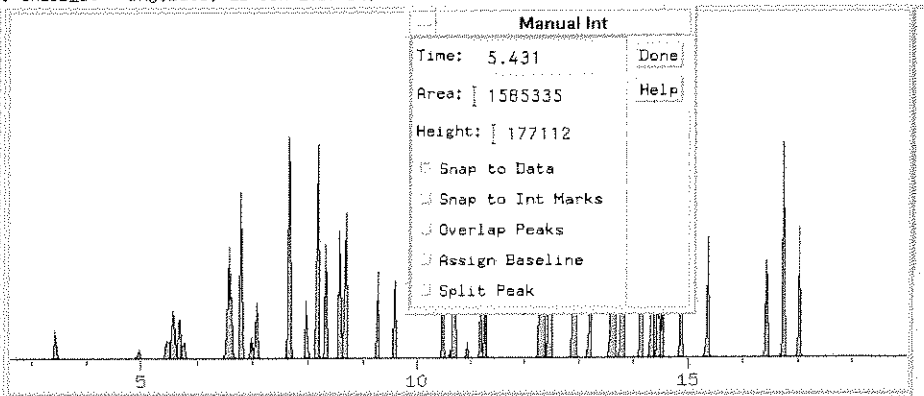
File Required Edit Display Process Spectra Help

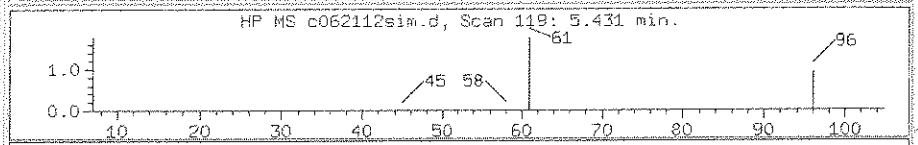
Sample: 2848-4-100 Type: CALIB_10 Inj.Date: 21-JUN-2017 12:06

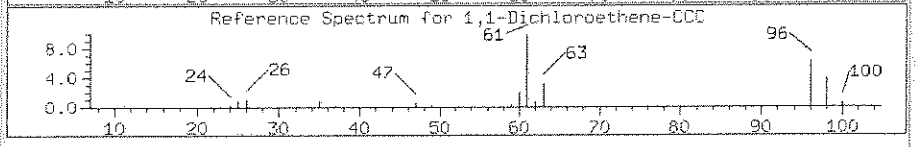
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroet
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroet
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC
*+ 27 2-Fluorotoluen

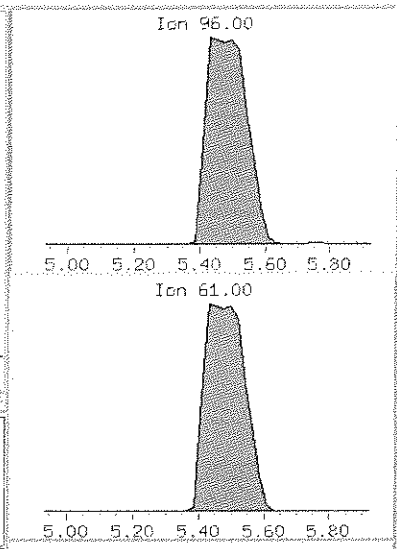
c062112sim.d

Manual Int
Time: 5.431
Area: 1585335
Height: 177112
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.431	835991	92.3709	92.3709	100	M	
	5.431	1585335			190		

- Mark 1,1-Dichloroethene-CCC Undetected.

6/21/17
AcT

After

Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

gm
6/21/17

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062115sim.d
Lab Smp Id: 2848-5-5.0 Client Smp ID: ICV
Inj Date : 21-JUN-2017 13:25
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-5-5.0;ICV
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 13:16 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 15 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
1 Chloromethane	50	3.203	3.203	(0.293)	19332	8.65244	8.65244(R)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	58785	6.23931	6.23931
3 Ethanol	45	4.961	4.961	(0.453)	19645	6.02285	6.02285
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	43071	5.45002	5.45002
5 Acetone	58	5.566	5.566	(0.508)	35091	5.64259	5.64259
7 MTBE	73	6.555	6.555	(0.599)	141610	5.15904	5.15904
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	50270	5.18311	5.18310
9 Hexane	57	6.775	6.775	(0.619)	134265	5.26032	5.26032
10 Halothane	117	6.961	6.961	(0.636)	37856	5.44914	5.44914
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	100654	5.03135	5.03135
12 Ethyl Acetate	70	7.640	7.640	(0.698)	15201	5.17633	5.17633
13 2-Butanone	72	7.662	7.662	(0.700)	33235	5.13398	5.13398
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	54791	5.09981	5.09981
15 Chloroform-CCC	83	7.956	7.956	(0.727)	75211	4.77250	4.77250
16 Cyclohexane	84	8.172	8.172	(0.747)	78293	4.74560	4.74560
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	88705	4.97121	4.97121

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	81834	4.85353	4.85353
	19 Benzene	78	8.572	8.573	(0.783)	193822	4.82273	4.82273
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	86622	4.81027	4.81027
	21 Heptane	71	8.696	8.696	(0.794)	68899	4.79270	4.79270
	22 Trichloroethene	130	9.283	9.283	(0.848)	65107	4.78580	4.78580
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	58271	4.72295	4.72295
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	23856	4.88743	4.88743
$	25 Toluene-d8	98	10.608	10.608	(0.969)	225432	5.01081	5.01081(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	140228	4.69041	4.69041
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	251495	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	57247	4.78278	4.78278
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	58543	4.70016	4.70016
	30 Chlorobenzene	112	12.300	12.300	(1.124)	175166	4.60722	4.60722
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	88900	4.60970	4.60970
	33 m,p-Xylene	106	12.454	12.454	(1.138)	203561	9.01448	9.01448
	34 o-Xylene	106	12.901	12.901	(1.179)	93778	4.45079	4.45079
	35 Styrene	104	12.928	12.928	(1.181)	196729	4.59180	4.59180
	36 a-Pinene	93	13.203	13.203	(1.206)	145589	5.25902	5.25902
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	109644	4.49676	4.49676
	38 Propylbenzene	91	13.642	13.642	(1.246)	345823	4.33405	4.33404
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	182318	4.29887	4.29887
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	201775	4.42186	4.42186
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	96619	4.59865	4.59865
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	137361	4.55746	4.55746
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	159428	4.41230	4.41230
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	146284	4.58139	4.58139
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	100420	4.52051	4.52051
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	97628	4.49463	4.49463
	48 Naphthalene	128	16.730	16.730	(1.529)	296977	4.45606	4.45606
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	94972	4.48866	4.48866

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Report Date: 21-Jun-2017 13:42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062115sim.d
Lab Smp Id: 2848-5-5.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: ICV
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	251495	-5.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 21-Jun-2017 13:42

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 21Jun2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 2848-5-5.0
Client Smp ID: ICV
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: LCS
SpikeList File: ICV.spk
Quant Type: ISTD
Sublist File: all.sub
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
1 Chloromethane	5.00000	8.65244	173.05*	70-130
2 Vinyl Chloride	5.00000	6.23931	124.79	50-140
3 Ethanol	5.00000	6.02285	120.46	70-130
4 1,1-Dichloroethene	5.00000	5.45002	109.00	70-130
5 Acetone	5.00000	5.64259	112.85	70-130
7 MTBE	5.00000	5.15904	103.18	70-130
8 trans-1,2-Dichloro	5.00000	5.18310	103.66	70-130
9 Hexane	5.00000	5.26032	105.21	70-130
10 Halothane	5.00000	5.44914	108.98	70-130
11 1,1-Dichloroethane	5.00000	5.03135	100.63	80-120
12 Ethyl Acetate	5.00000	5.17633	103.53	70-130
13 2-Butanone	5.00000	5.13398	102.68	70-130
14 cis-1,2-Dichloroet	5.00000	5.09981	102.00	80-120
15 Chloroform-CCC	5.00000	4.77250	95.45	80-120
16 Cyclohexane	5.00000	4.74560	94.91	70-130
17 1,1,1-Trichloroeth	5.00000	4.97121	99.42	80-120
18 Carbon Tetrachlori	5.00000	4.85353	97.07	80-120
19 Benzene	5.00000	4.82273	96.45	70-130
20 1,2-Dichloroethane	5.00000	4.81027	96.21	80-120
21 Heptane	5.00000	4.79270	95.85	80-120
22 Trichloroethene	5.00000	4.78580	95.72	80-120
23 Methyl Methacrylat	5.00000	4.72295	94.46	70-130
24 4-Methyl-2-pentano	5.00000	4.88743	97.75	70-130
26 Toluene-CCC	5.00000	4.69041	93.81	80-120
28 1,1,2-Trichloroeth	5.00000	4.78278	95.66	80-120
29 Tetrachloroethene	5.00000	4.70016	94.00	80-120
30 Chlorobenzene	5.00000	4.60722	92.14	80-120
31 Ethylbenzene-CCC	5.00000	4.60970	92.19	80-120
33 m,p-Xylene	10.0000	9.01448	90.14	80-120
34 o-Xylene	5.00000	4.45079	89.02	70-130
35 Styrene	5.00000	4.59180	91.84	70-130
36 a-Pinene	5.00000	5.25902	105.18	70-130
37 1,1,2,2-Tetrachlor	5.00000	4.49676	89.94	70-130

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
38 Propylbenzene	5.00000	4.33404	86.68	80-120
40 1,3,5-Trimethylben	5.00000	4.29887	85.98	80-120
41 1,2,4-Trimethylben	5.00000	4.42186	88.44	80-120
42 R-(+)-Limonene	5.00000	4.59865	91.97	70-130
43 1,3-Dichlorobenzen	5.00000	4.55746	91.15	70-130
44 1,4-Dichlorobenzen	5.00000	4.41230	88.25	70-130
45 1,2-Dichlorobenzen	5.00000	4.58139	91.63	70-130
46 1,4-Dithiane	5.00000	4.52051	90.41	70-130
47 1,2,4-Trichloroben	5.00000	4.49463	89.89	70-130
48 Naphthalene	5.00000	4.45606	89.12	70-130
49 1,2,3-Trichloroben	5.00000	4.48866	89.77	70-130

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	5.00000	5.01081	100.22	70-130

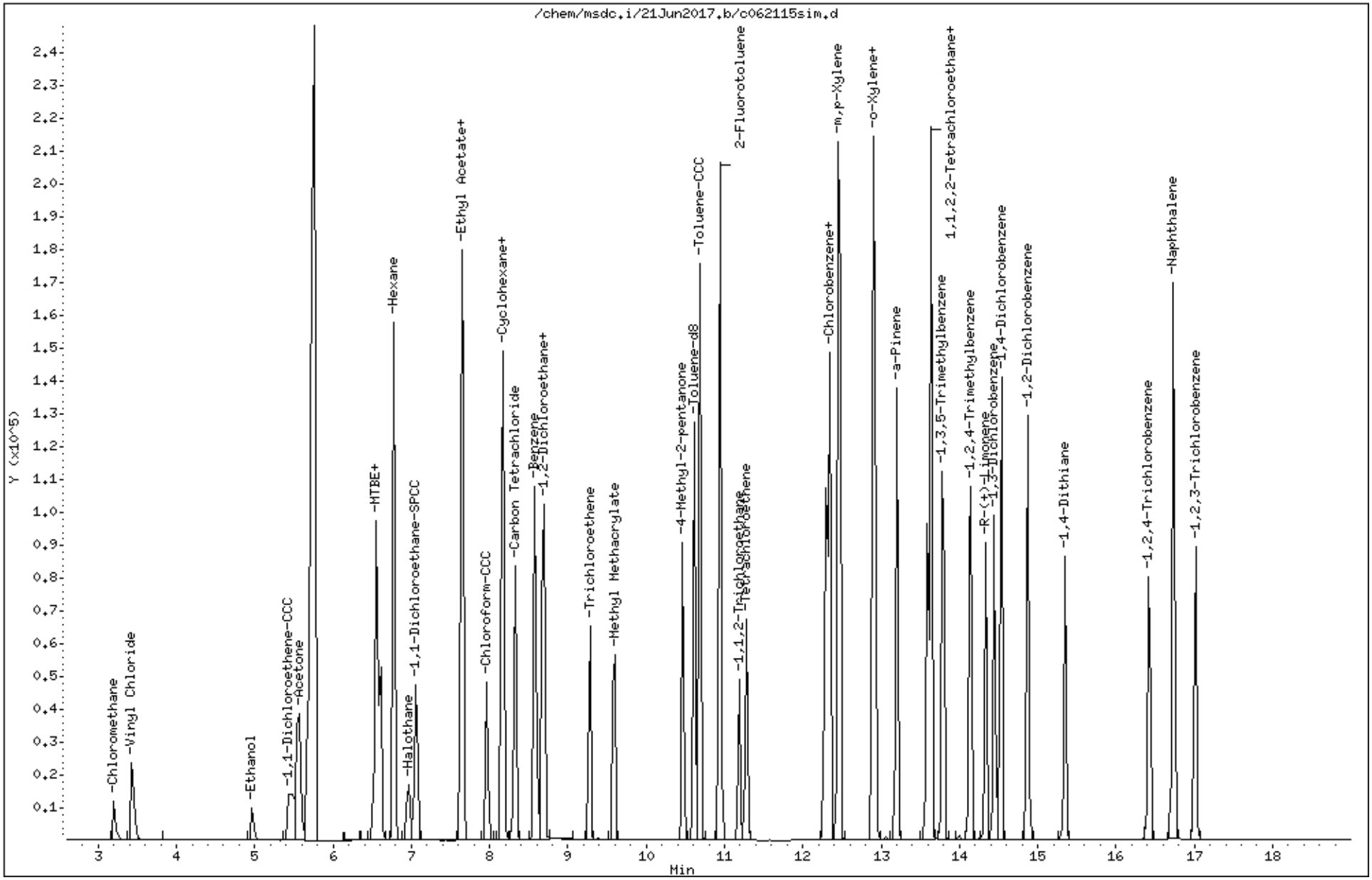
Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d
Date : 21-JUN-2017 13:25
Client ID: ICV
Sample Info: ;2848-5-5.0;ICV

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

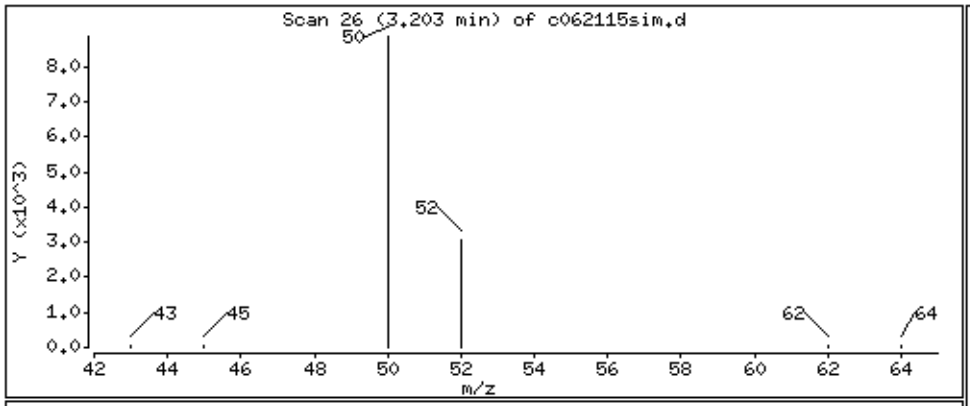
Operator: gm

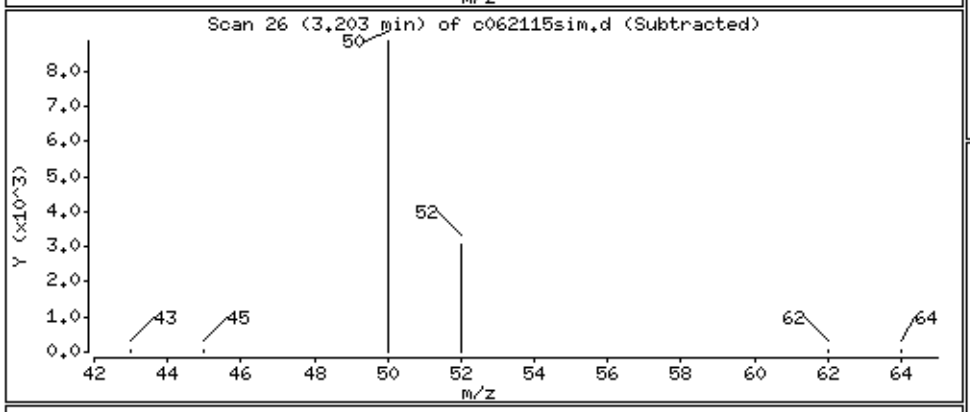
Column phase: DB-5.625

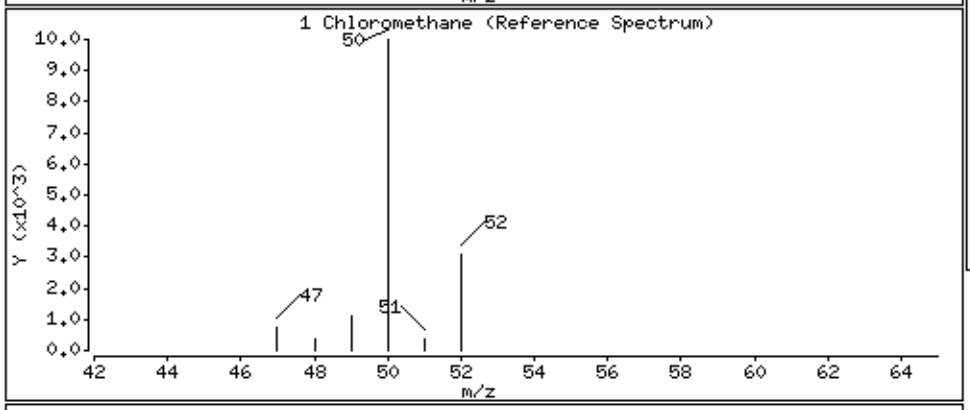
Column diameter: 0.25

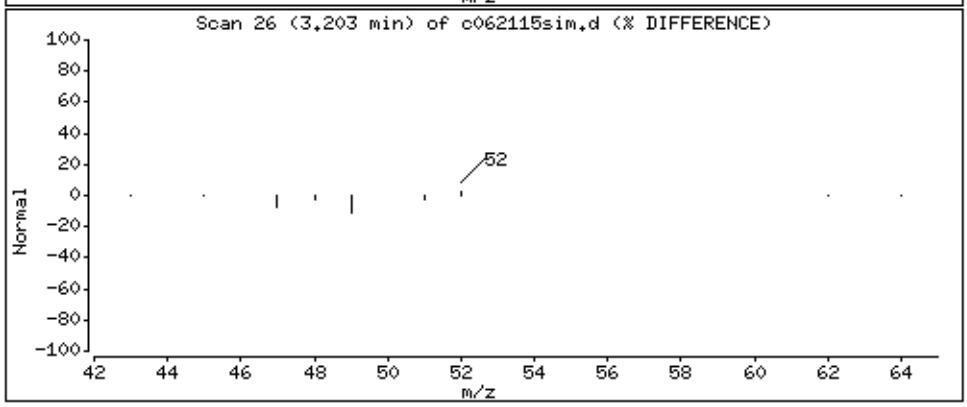
1 Chloromethane

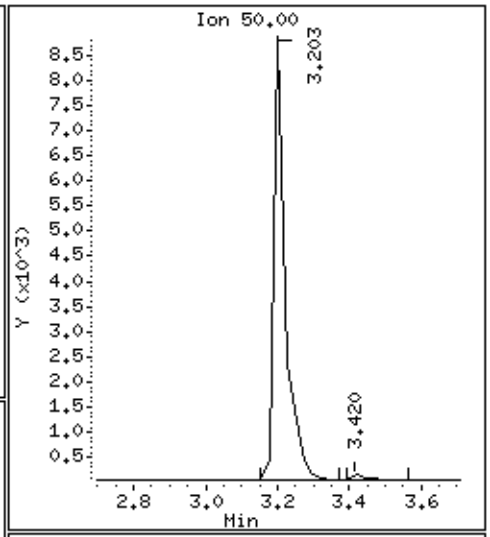
Concentration: 8.65244 ug

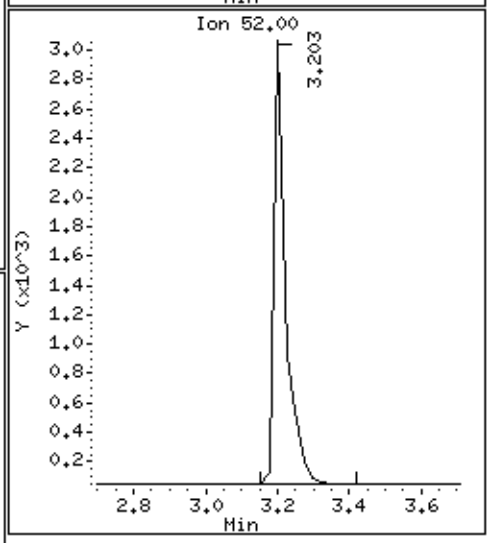












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

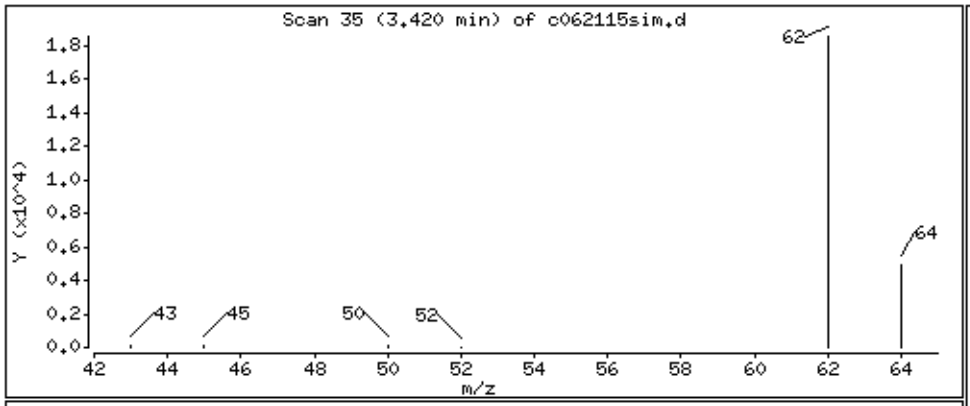
Operator: gm

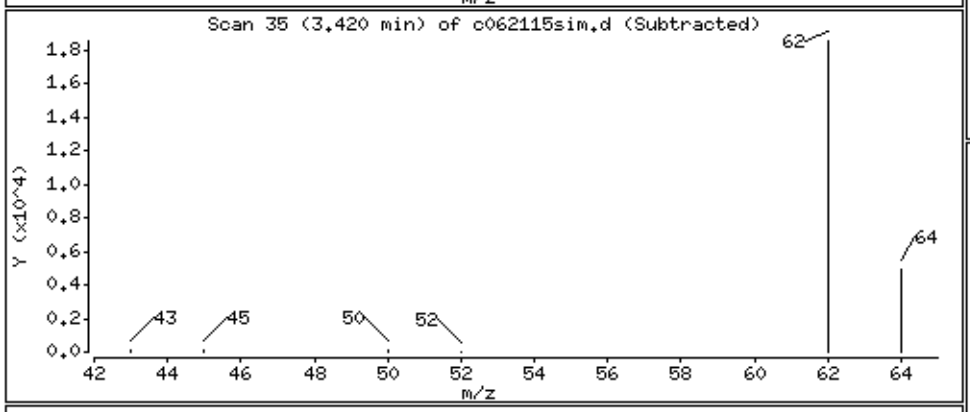
Column phase: DB-5.625

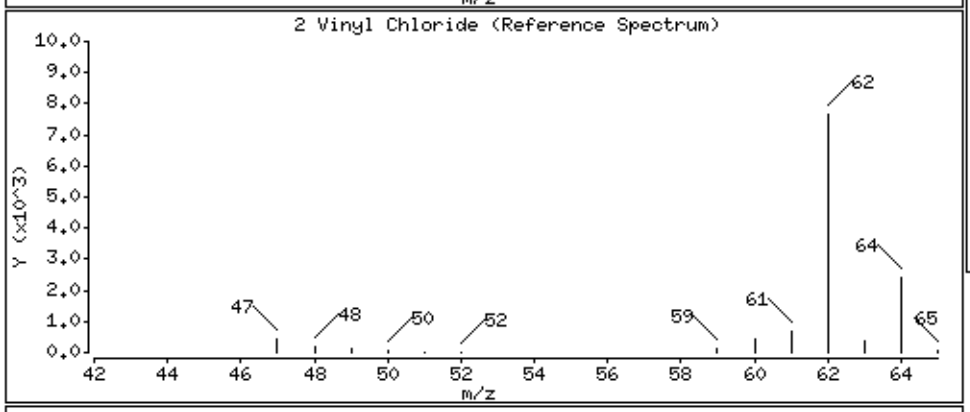
Column diameter: 0.25

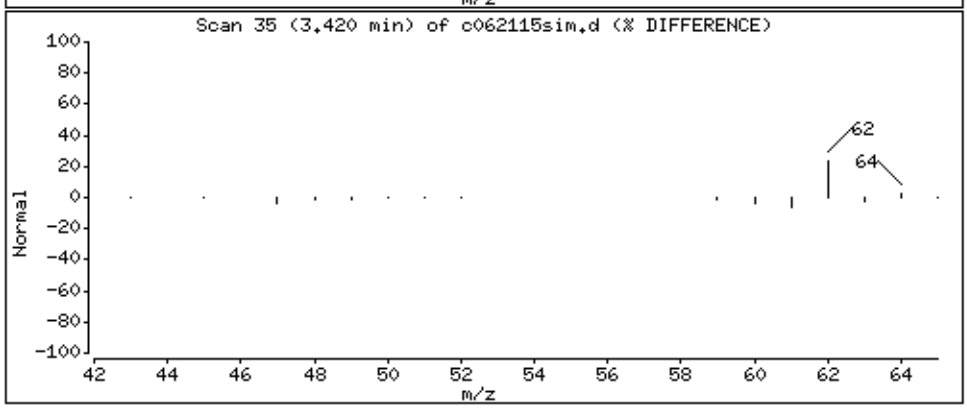
2 Vinyl Chloride

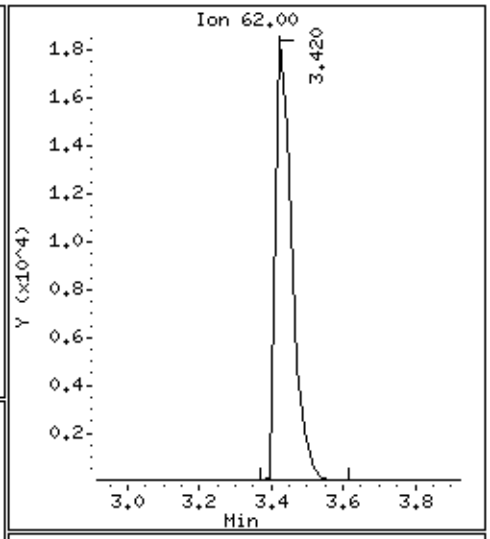
Concentration: 6.23931 ug

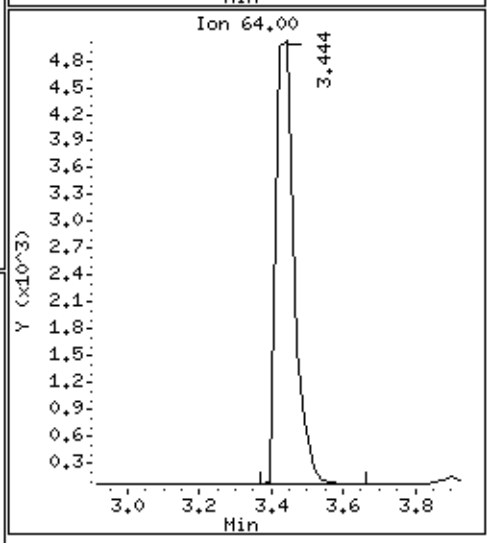












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

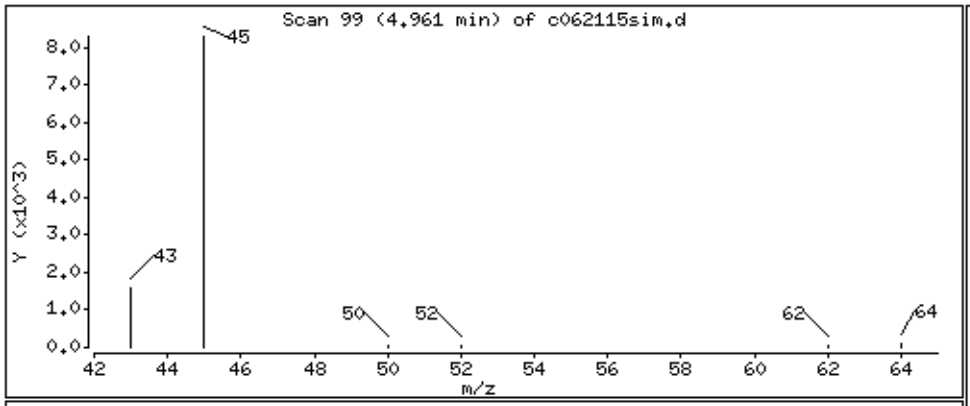
Operator: gm

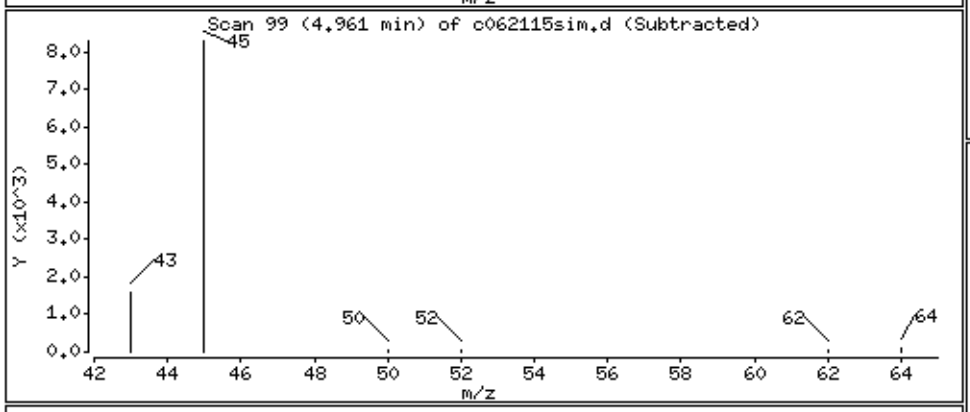
Column phase: DB-5.625

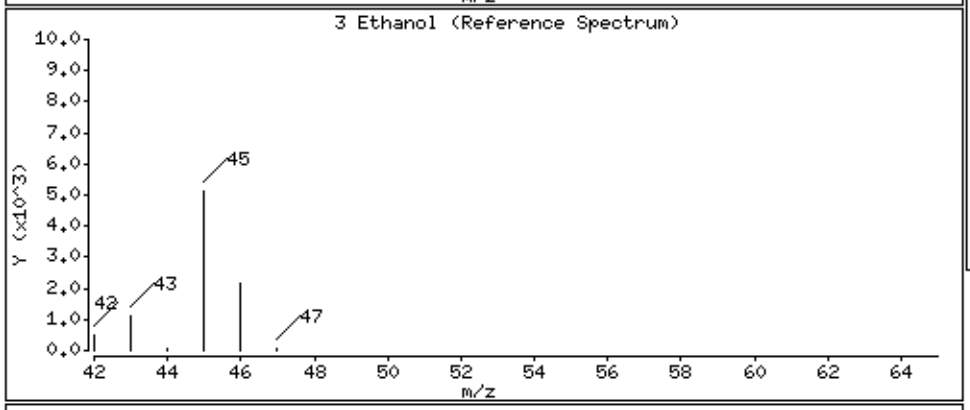
Column diameter: 0.25

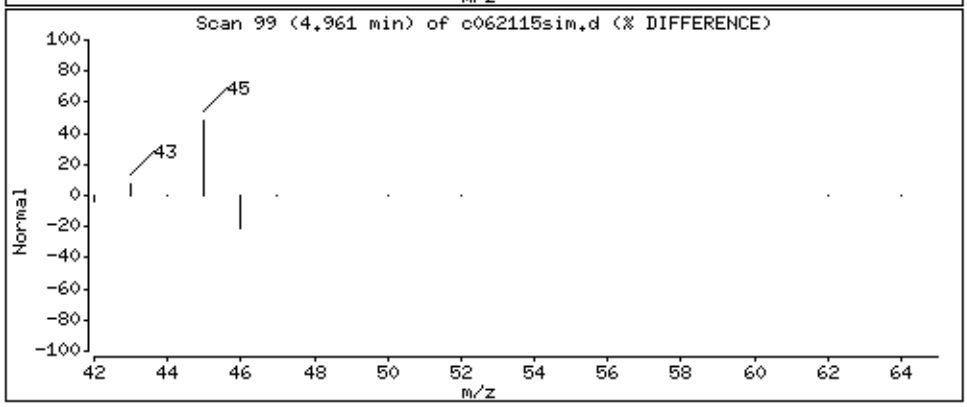
3 Ethanol

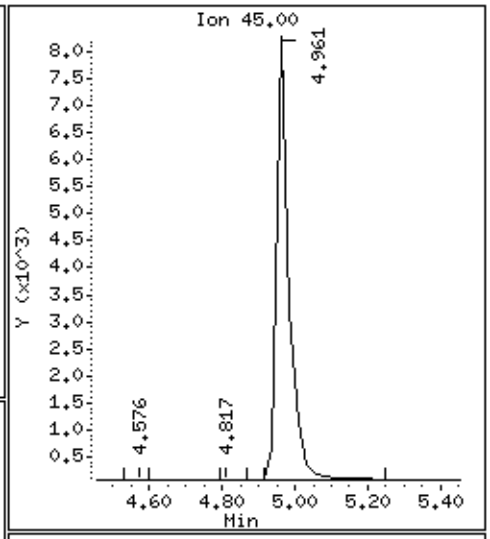
Concentration: 6.02285 ug

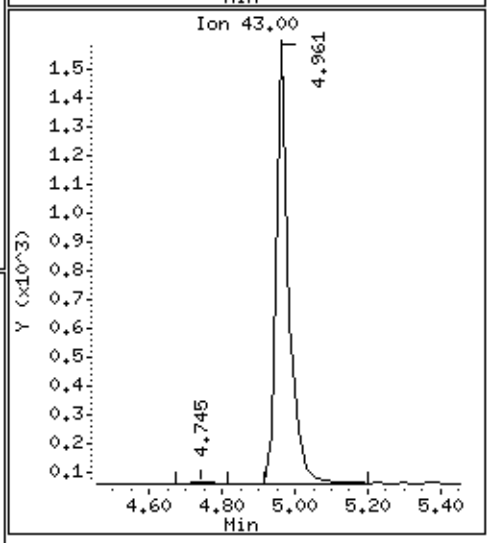












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

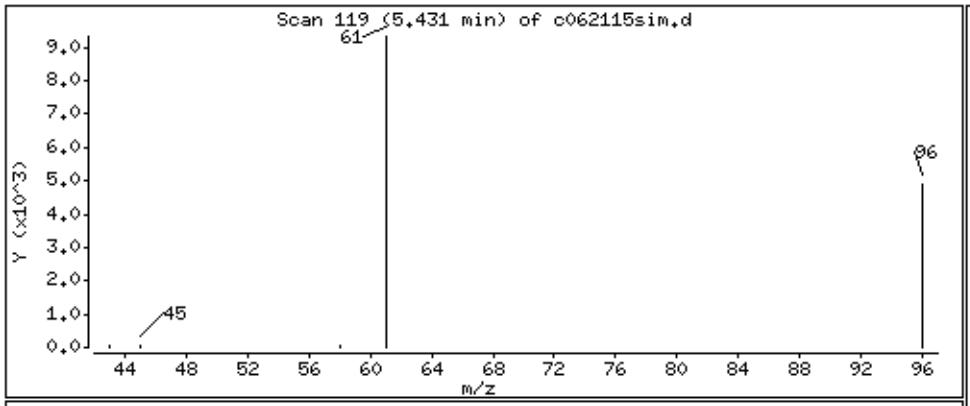
Operator: gm

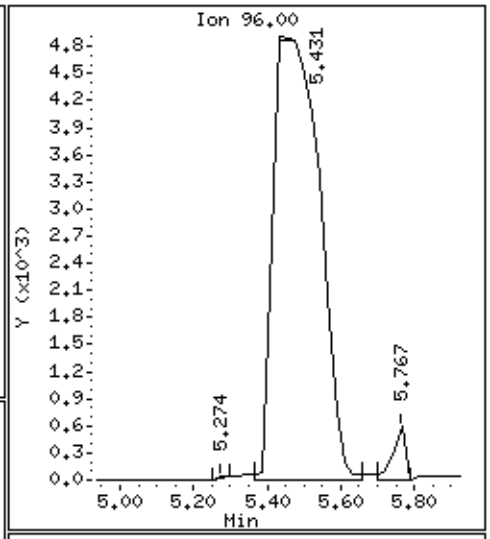
Column phase: DB-5.625

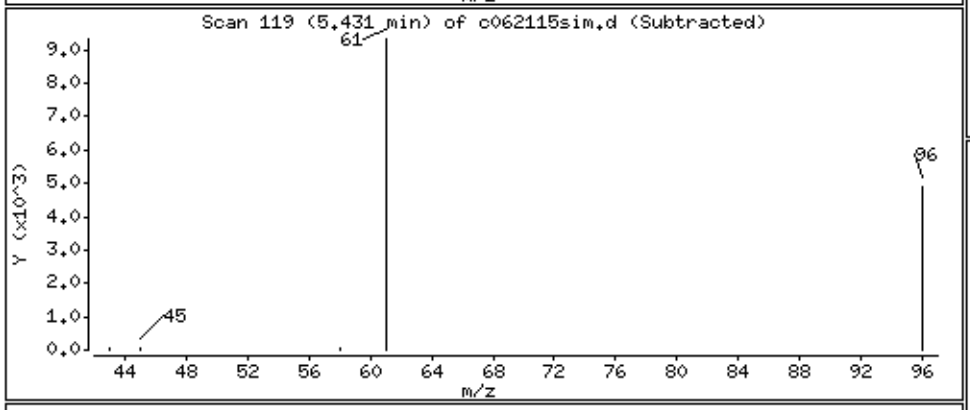
Column diameter: 0.25

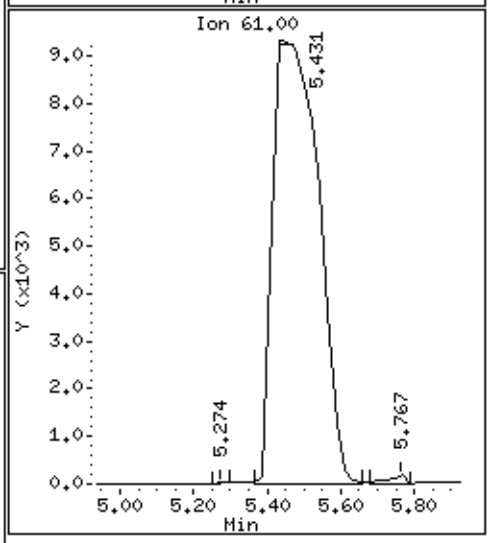
4 1,1-Dichloroethene-CCC

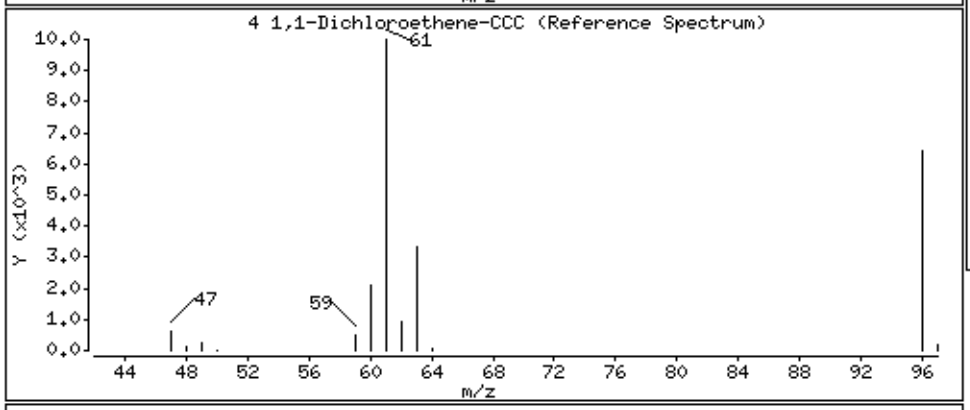
Concentration: 5.45002 ug

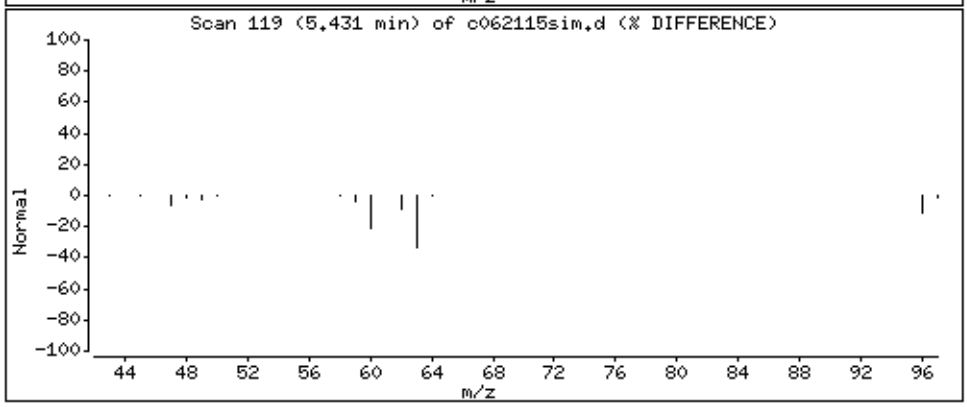












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

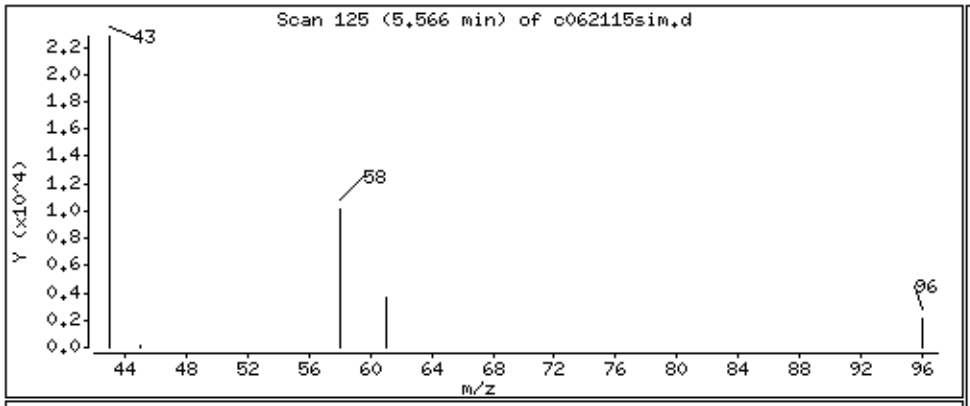
Operator: gm

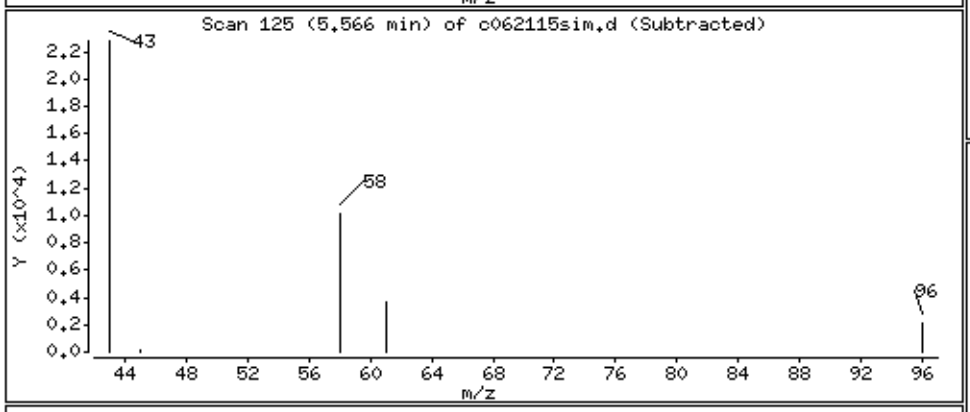
Column phase: DB-5.625

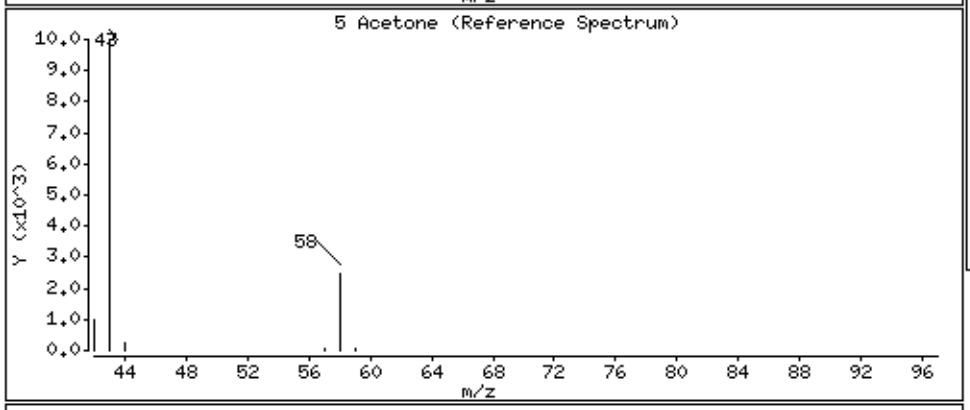
Column diameter: 0.25

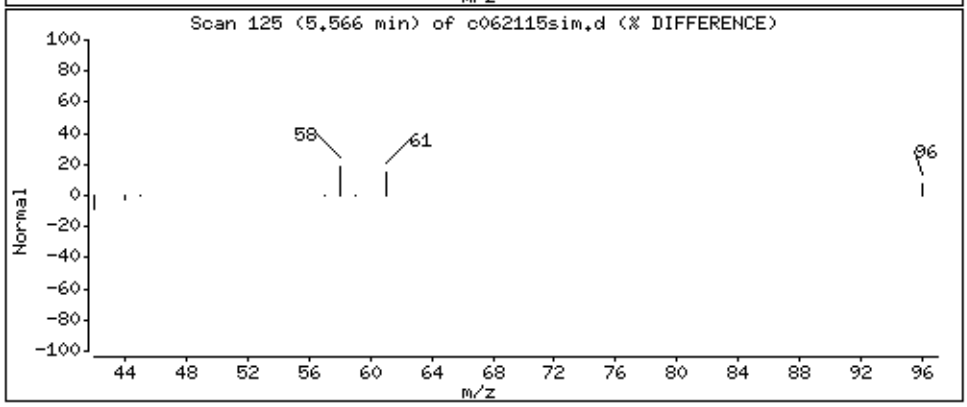
5 Acetone

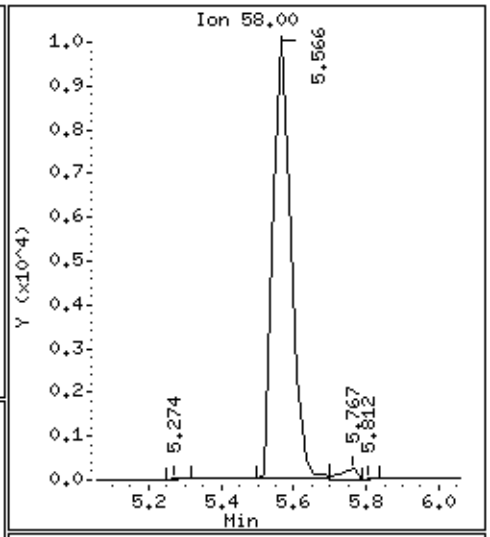
Concentration: 5.64259 ug

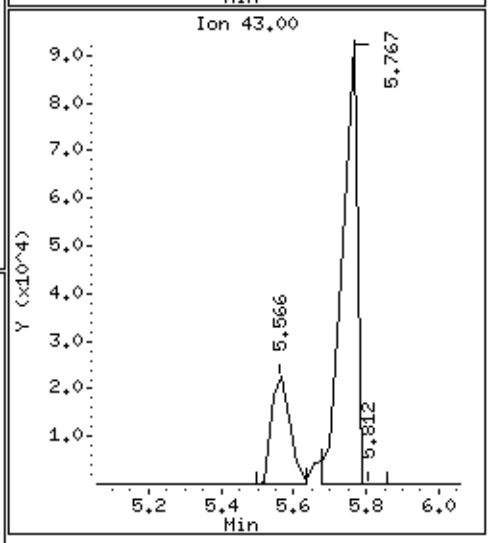












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

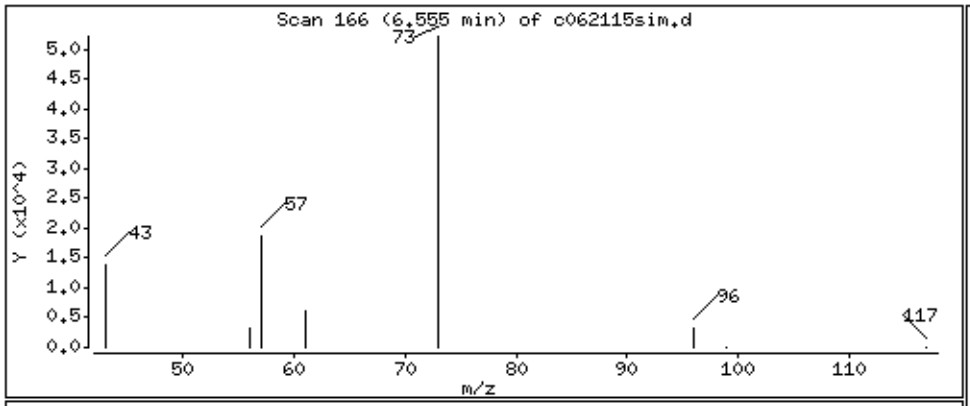
Operator: gm

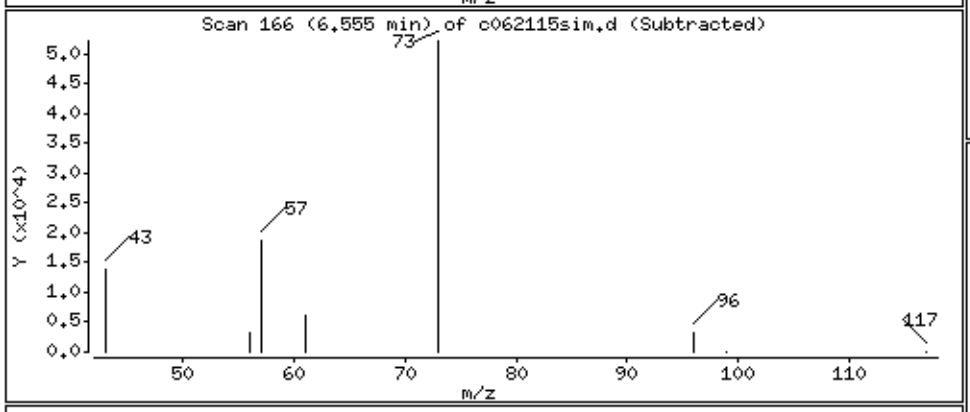
Column phase: DB-5.625

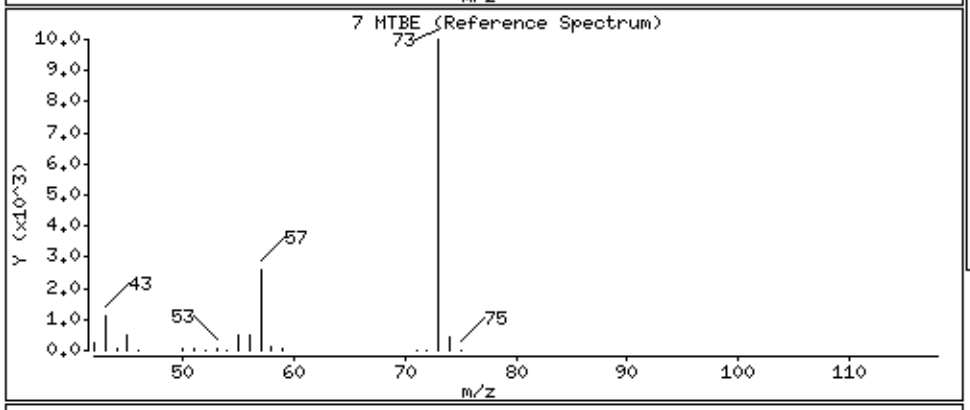
Column diameter: 0.25

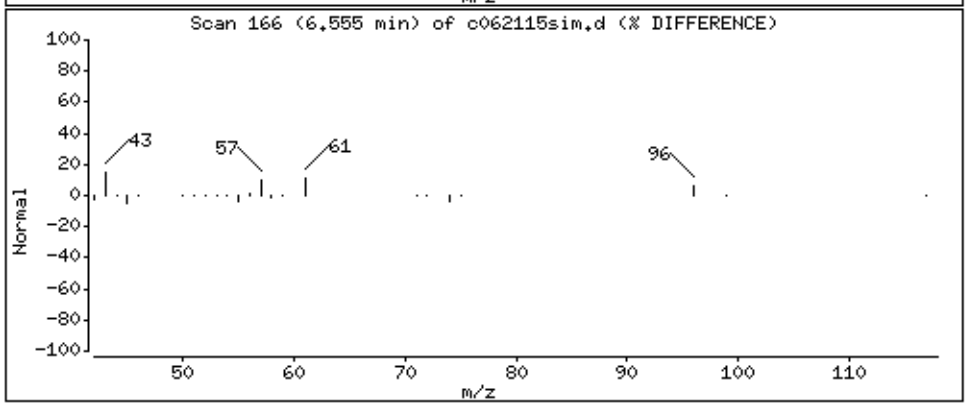
7 MTBE

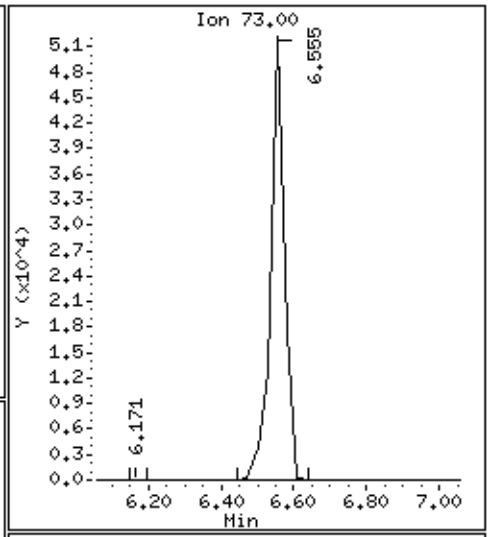
Concentration: 5.15904 ug

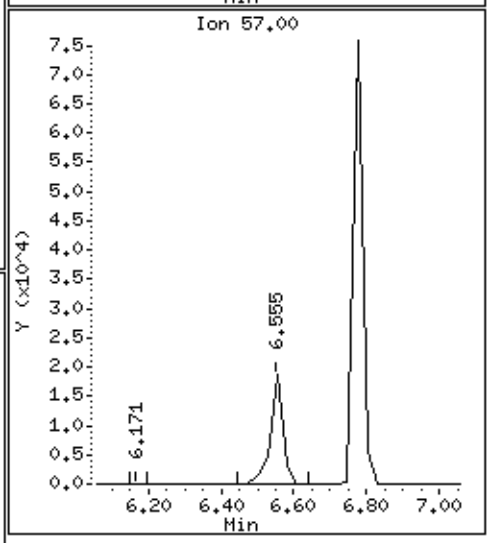












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

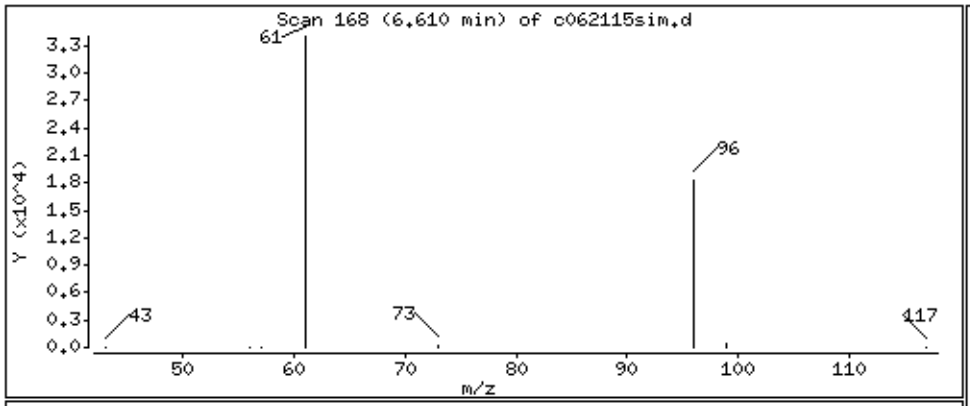
Operator: gm

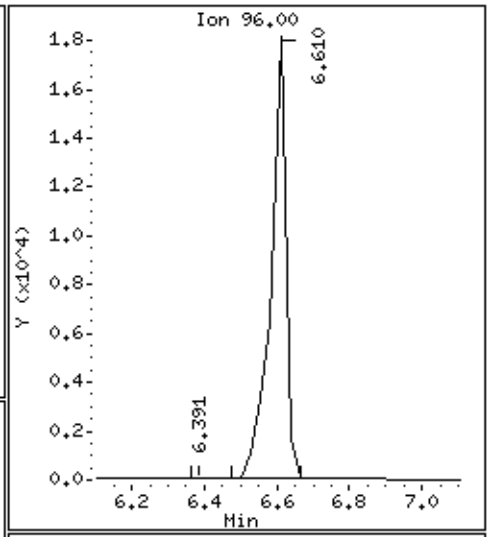
Column phase: DB-5.625

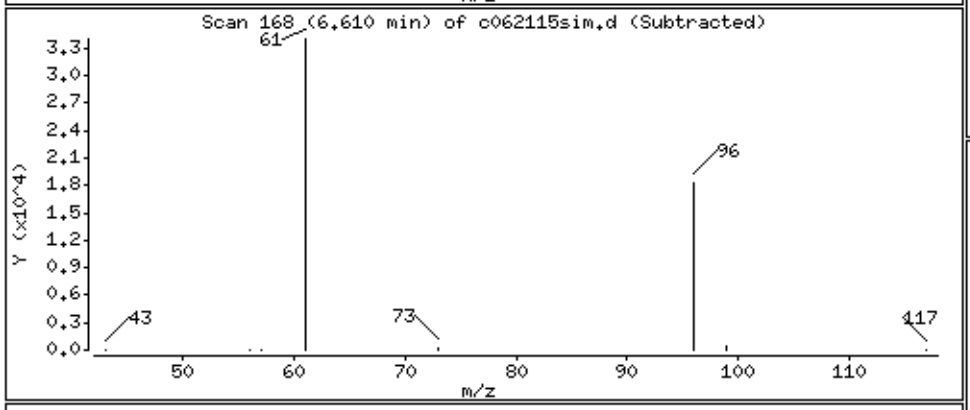
Column diameter: 0.25

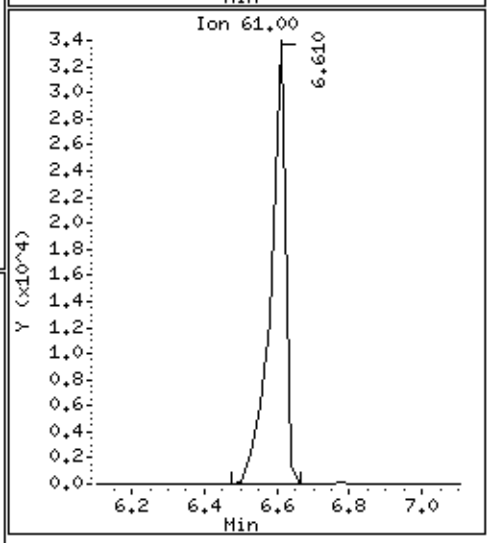
8 trans-1,2-Dichloroethene

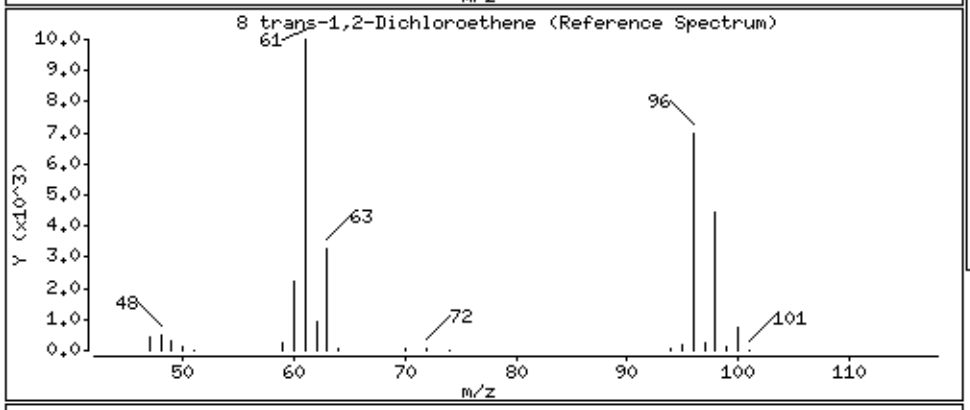
Concentration: 5.18310 ug

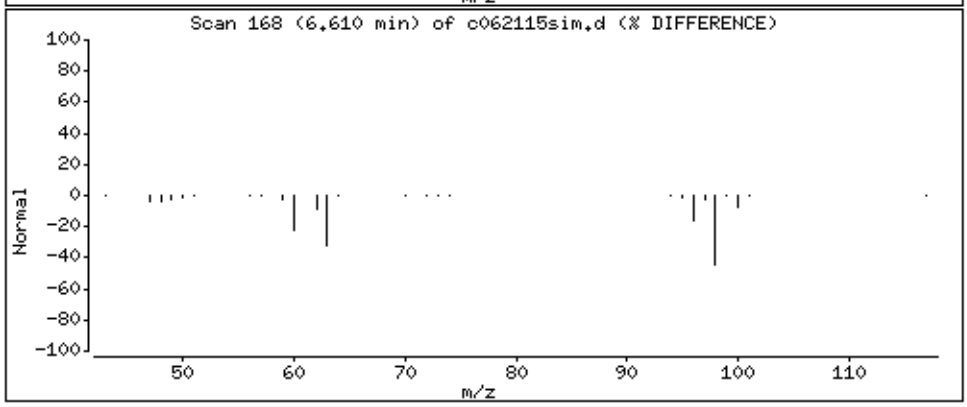












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

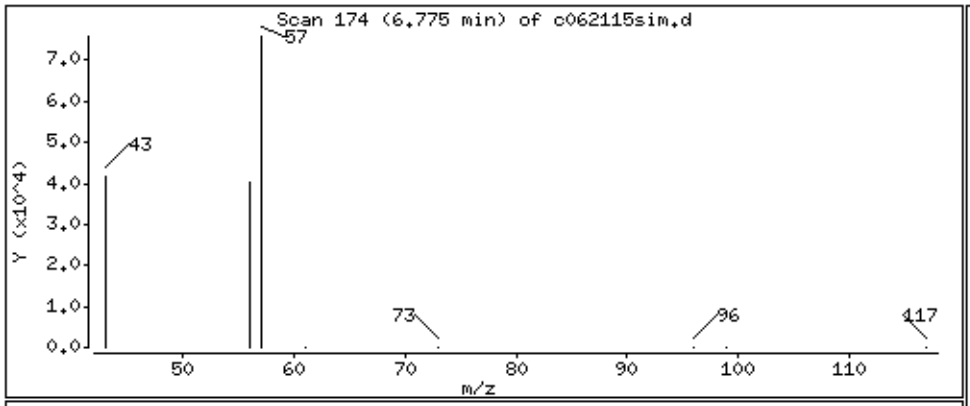
Operator: gm

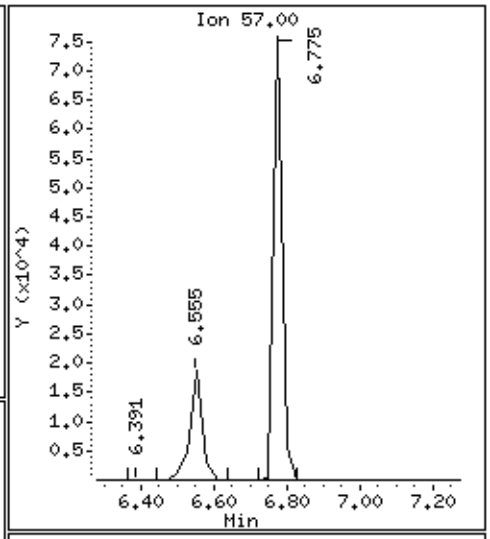
Column phase: DB-5.625

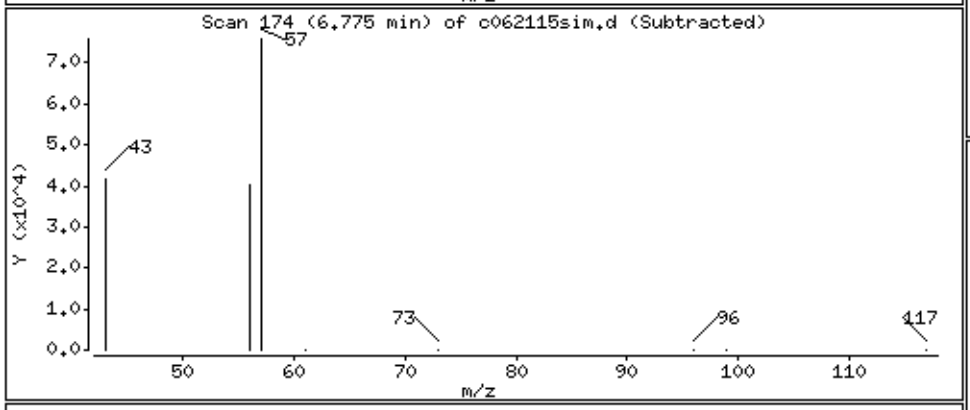
Column diameter: 0.25

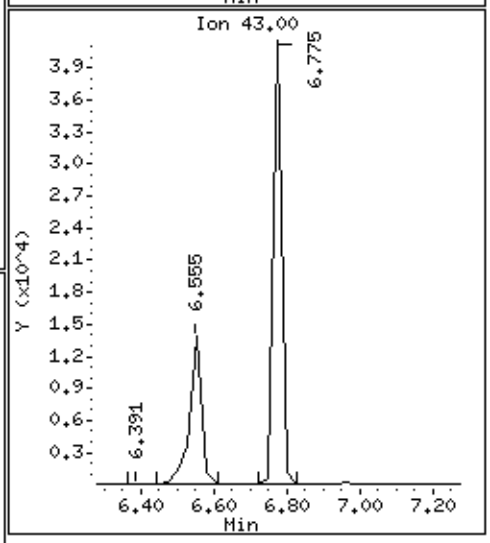
9 Hexane

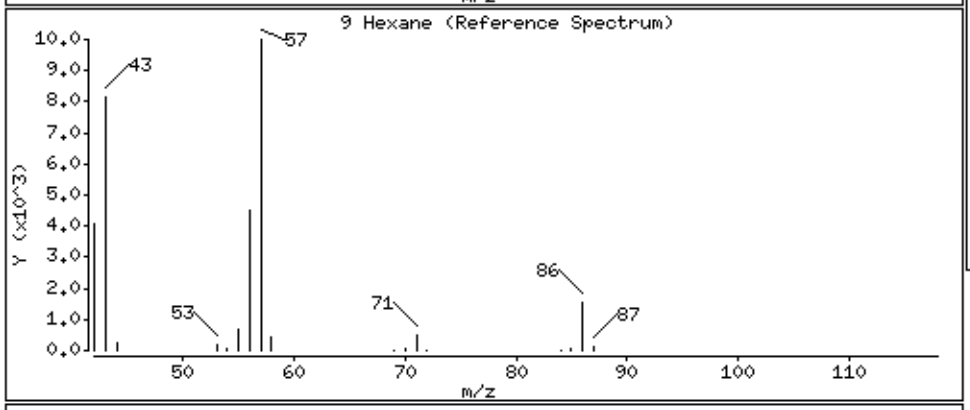
Concentration: 5.26032 ug

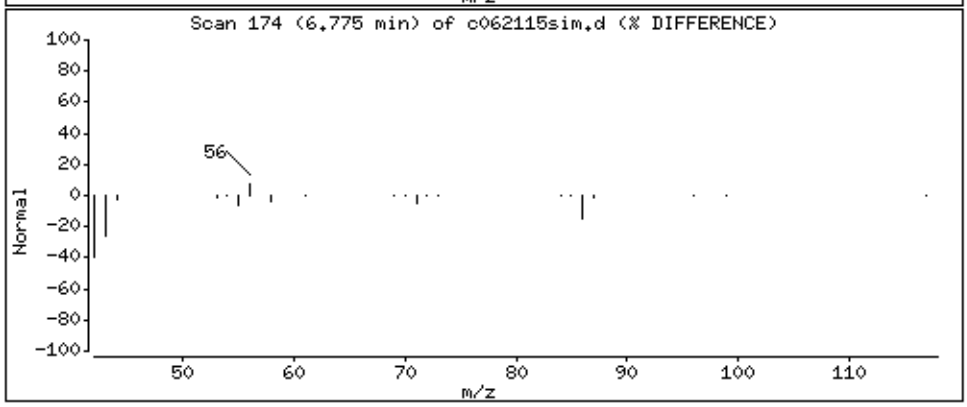












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

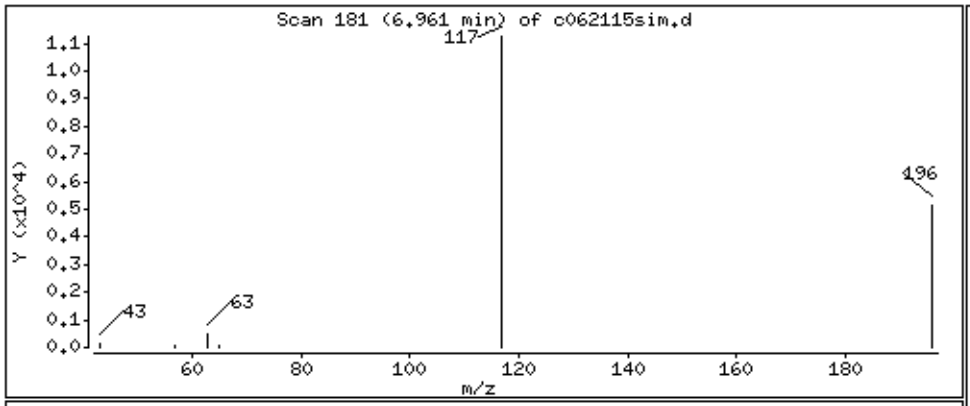
Operator: gm

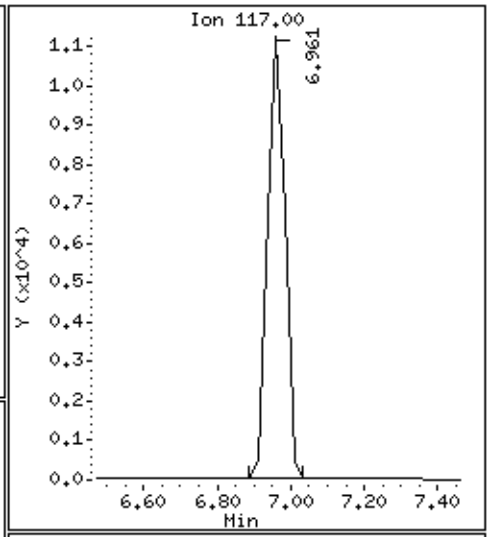
Column phase: DB-5.625

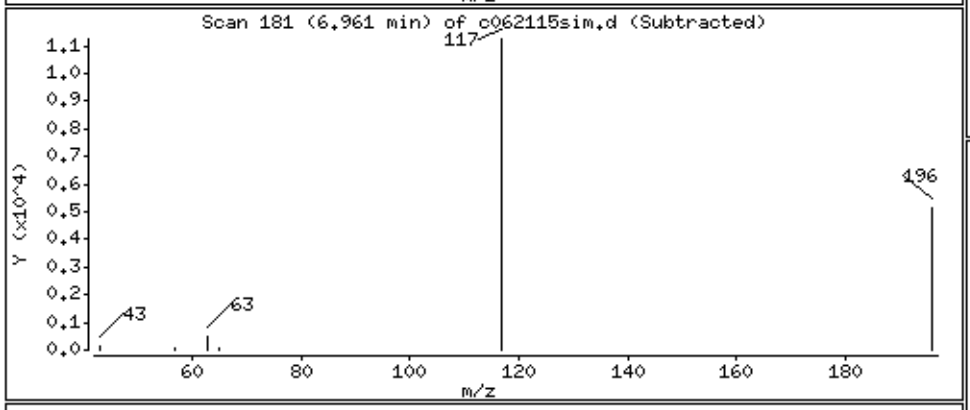
Column diameter: 0.25

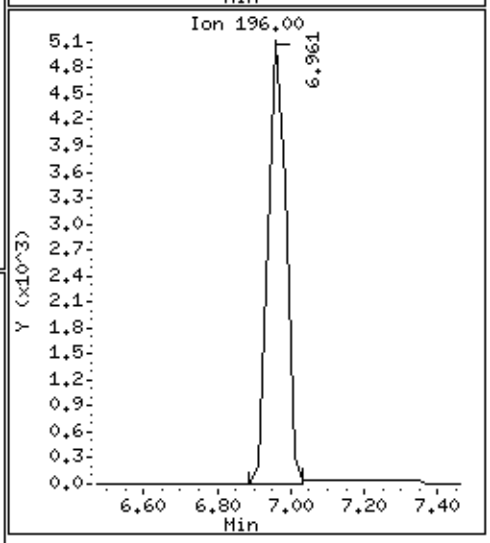
10 Halothane

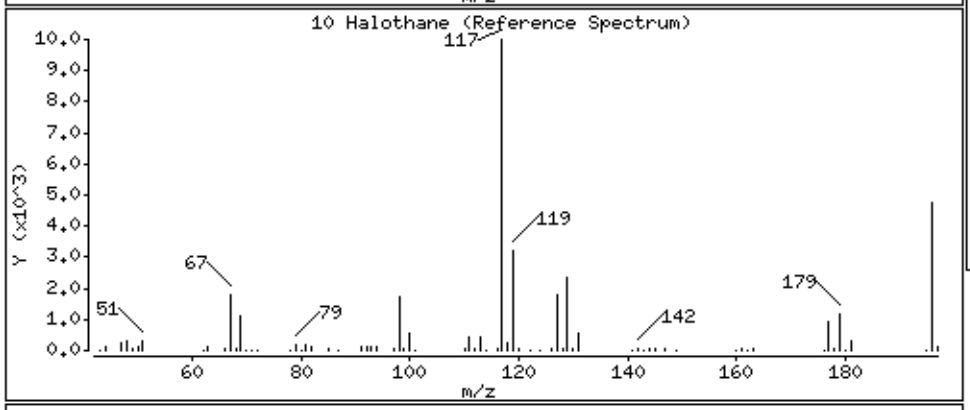
Concentration: 5.44914 ug

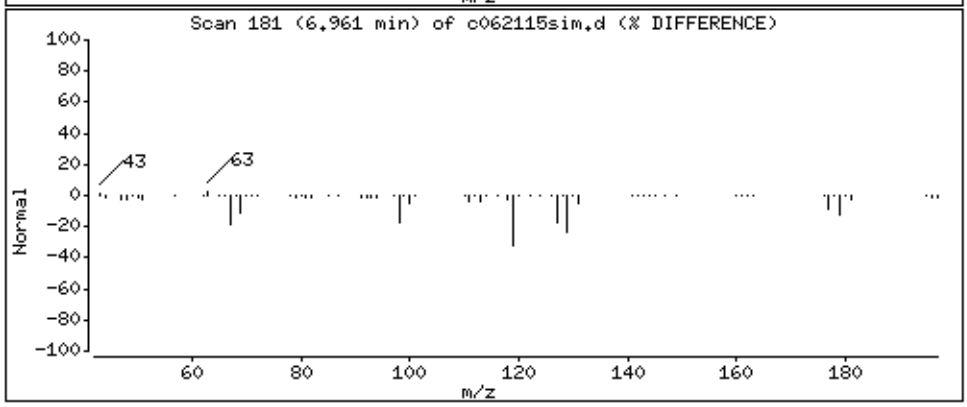












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

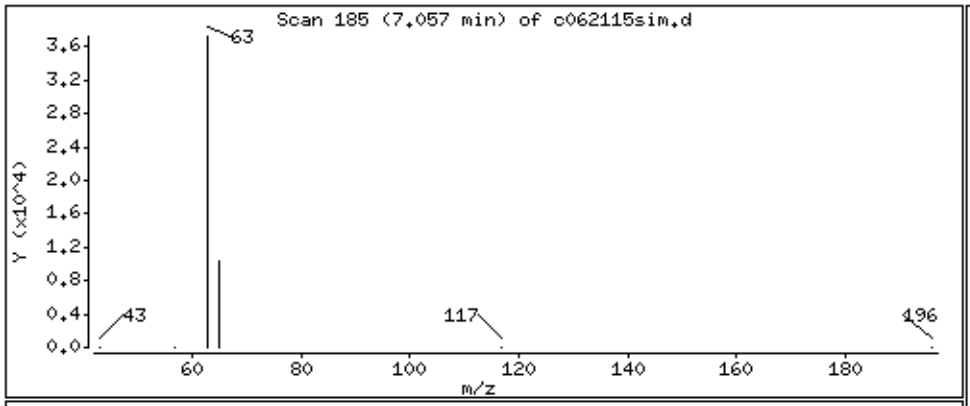
Operator: gm

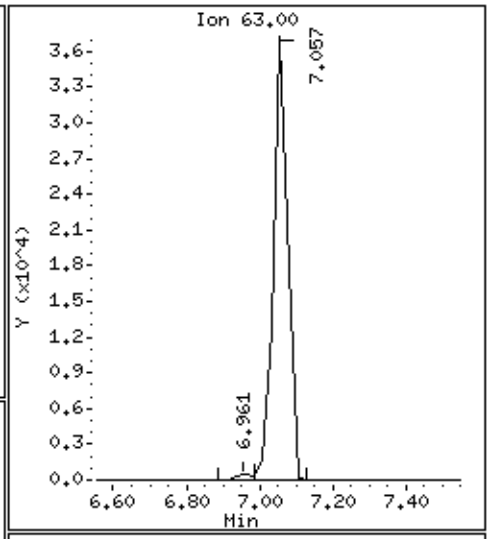
Column phase: DB-5.625

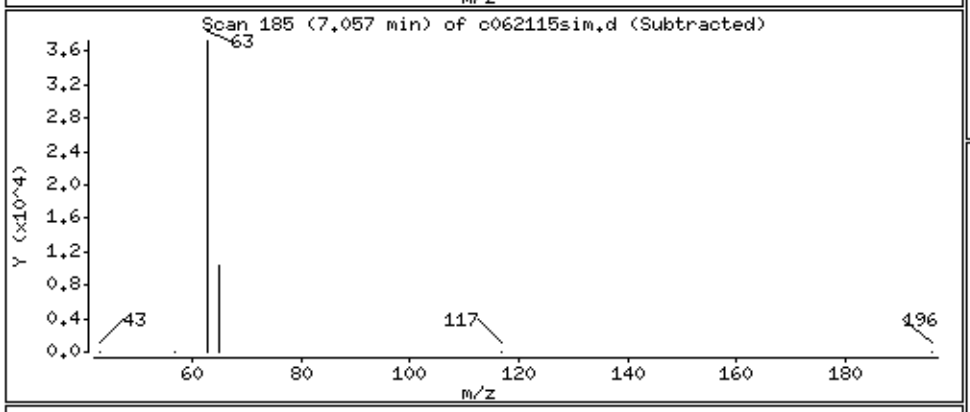
Column diameter: 0.25

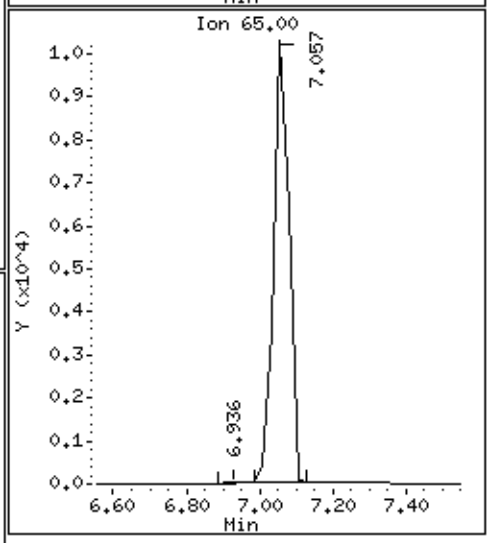
11 1,1-Dichloroethane-SPCC

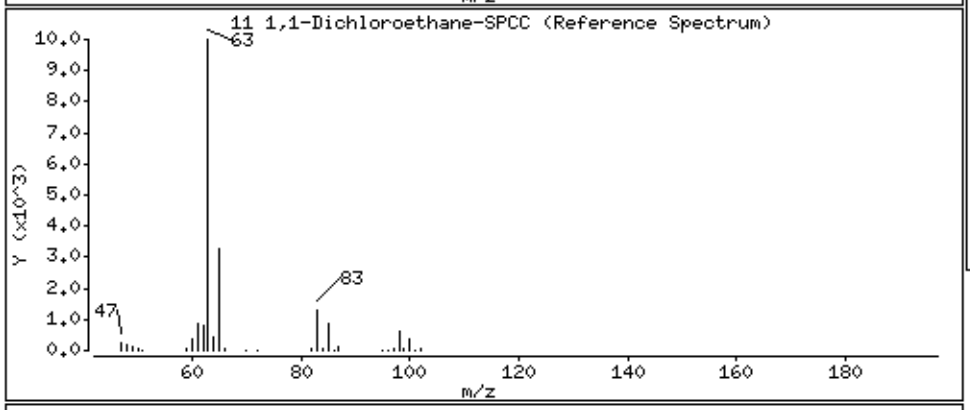
Concentration: 5.03135 ug

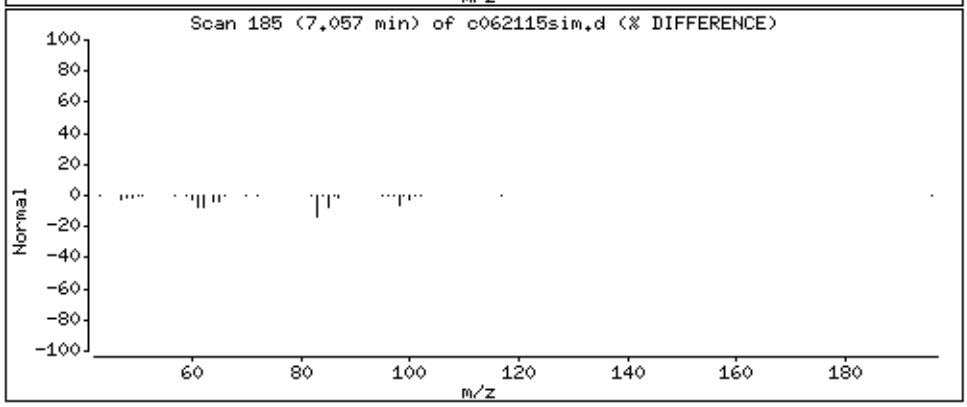












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

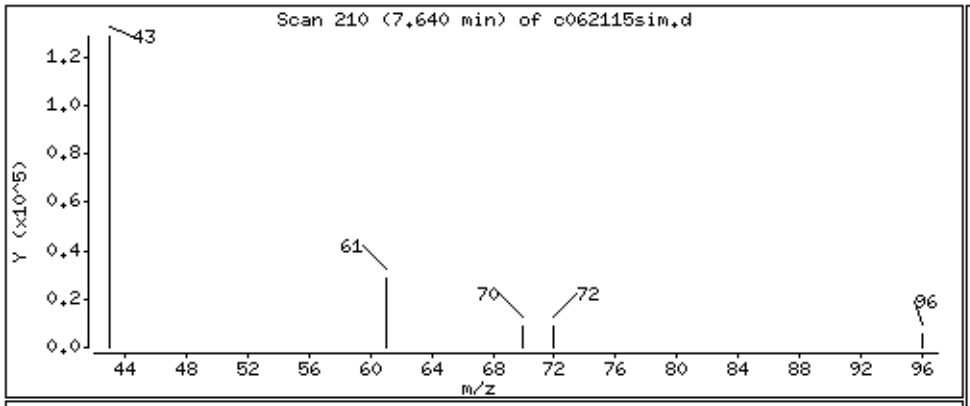
Operator: gm

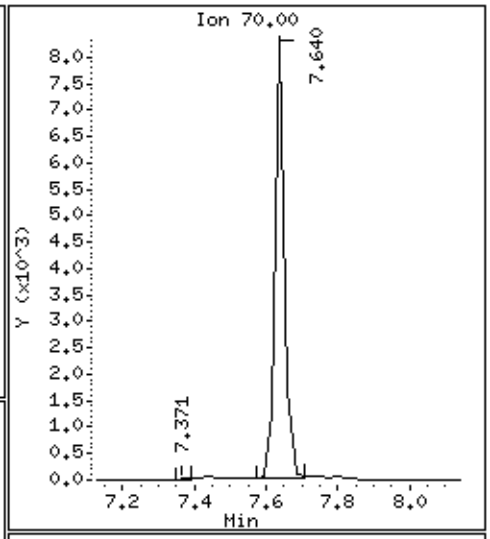
Column phase: DB-5.625

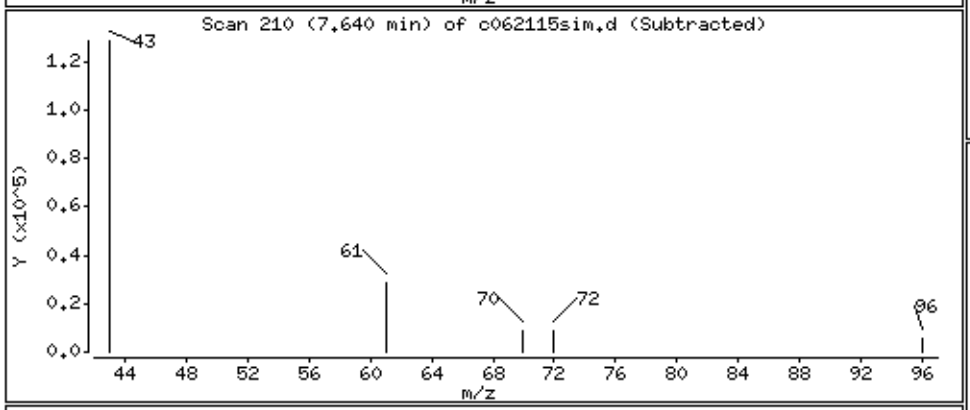
Column diameter: 0.25

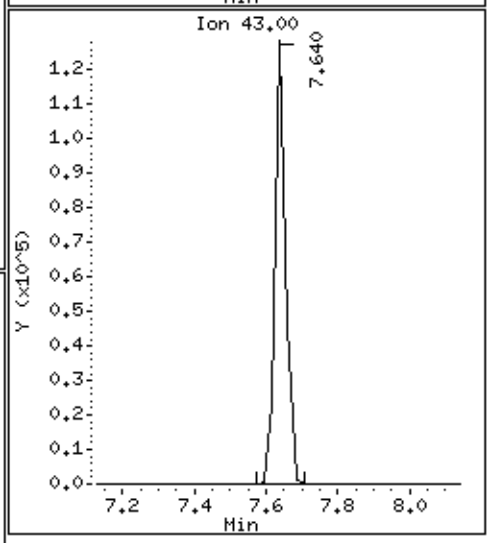
12 Ethyl Acetate

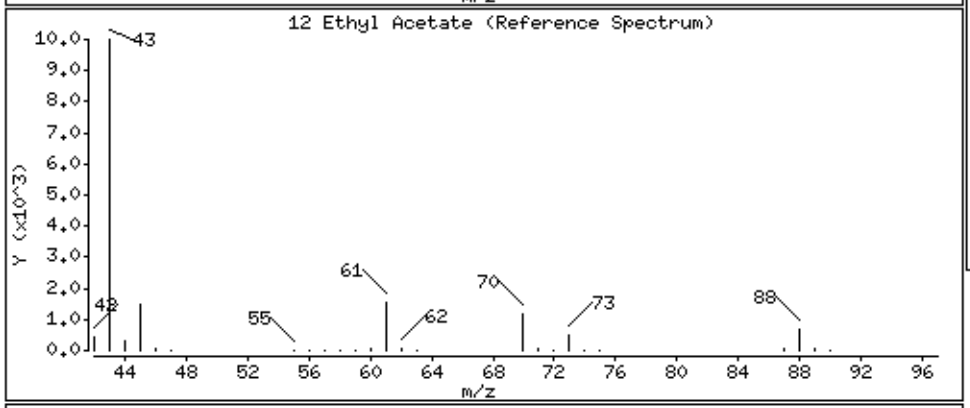
Concentration: 5.17633 ug

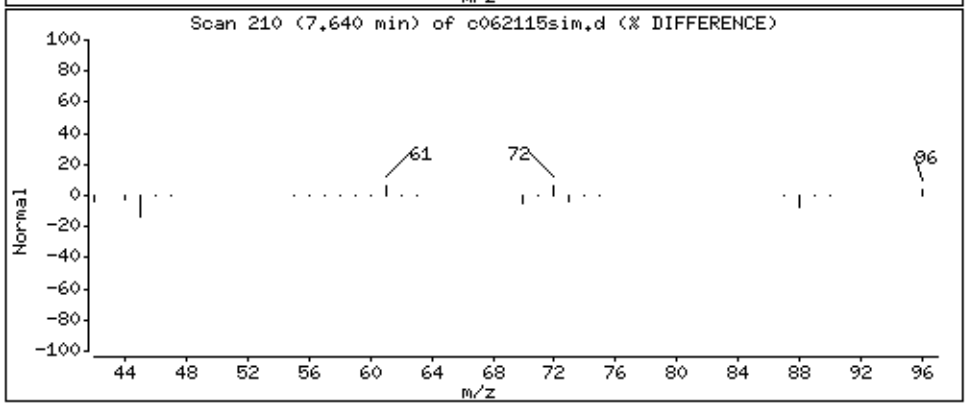












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

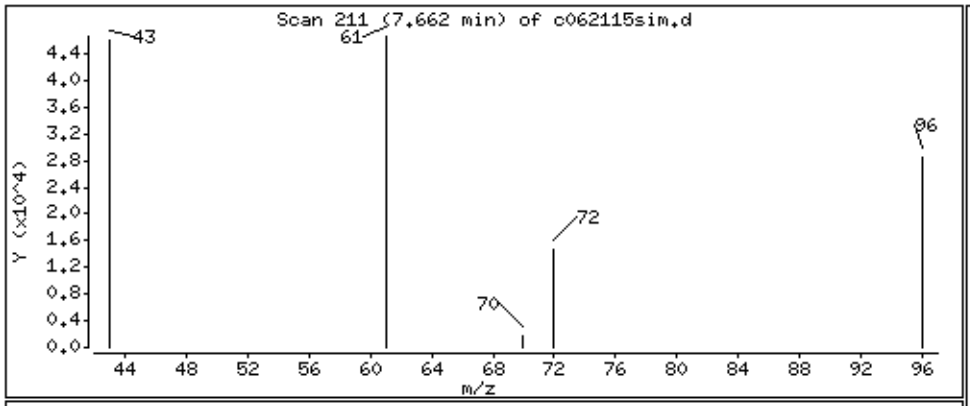
Operator: gm

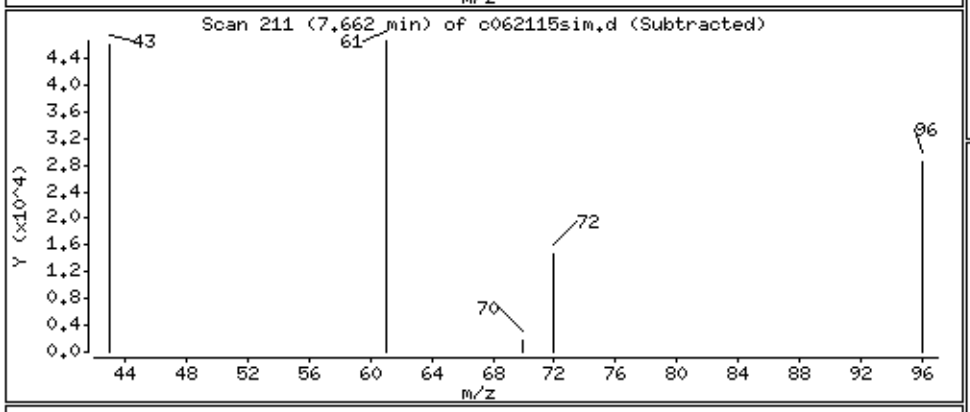
Column phase: DB-5.625

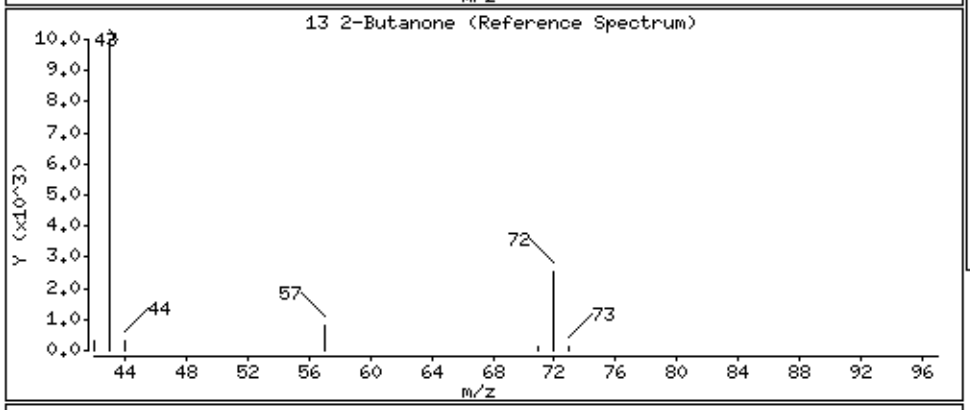
Column diameter: 0.25

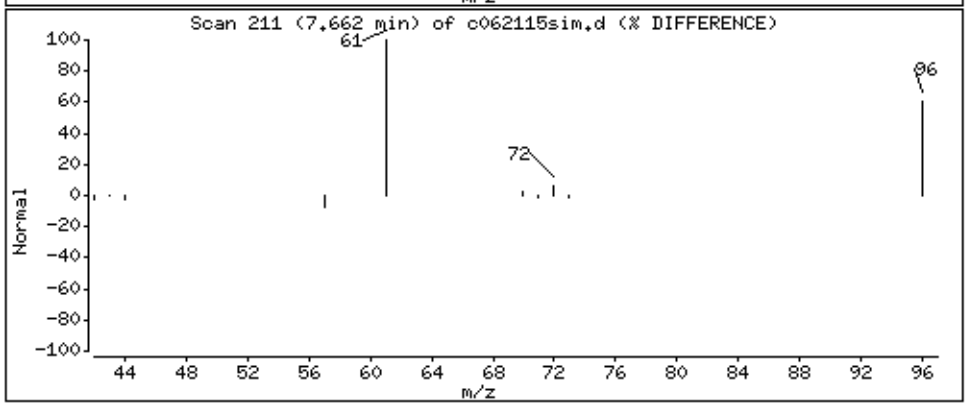
13 2-Butanone

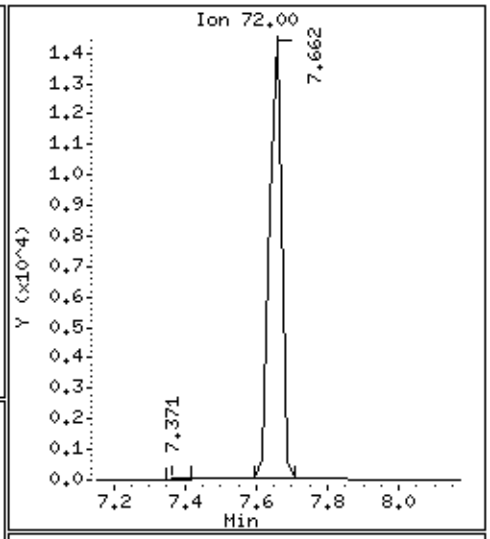
Concentration: 5.13398 ug

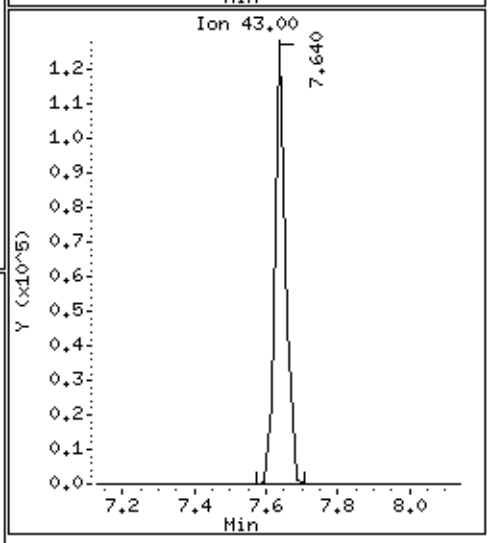












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

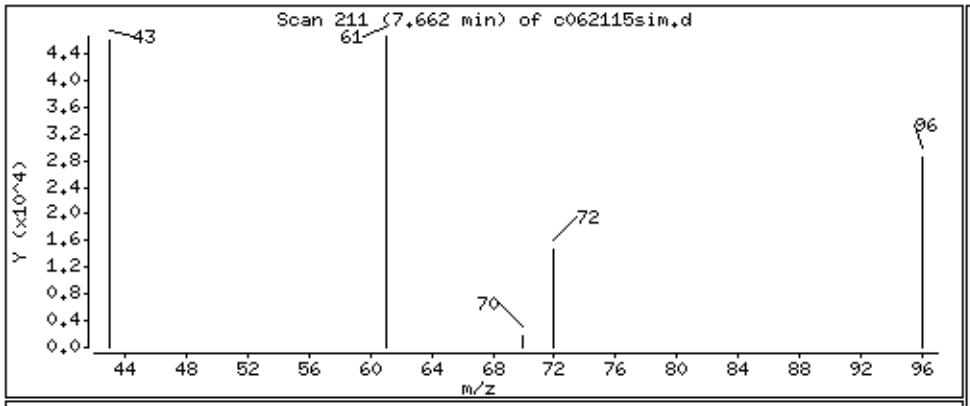
Operator: gm

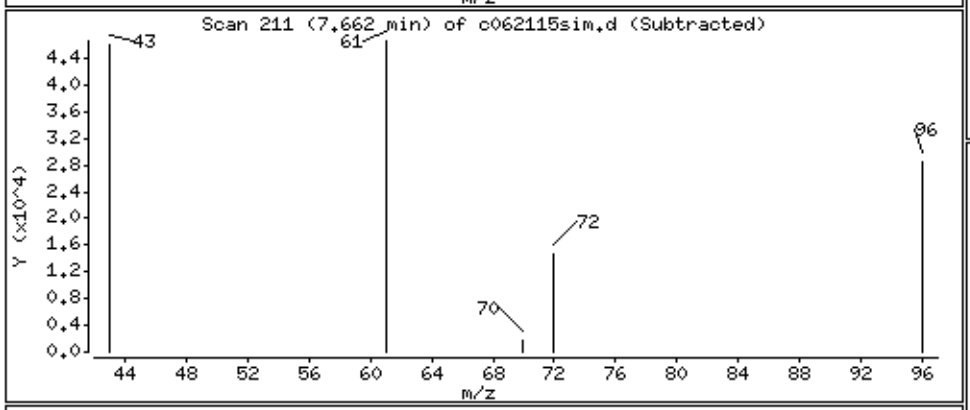
Column phase: DB-5.625

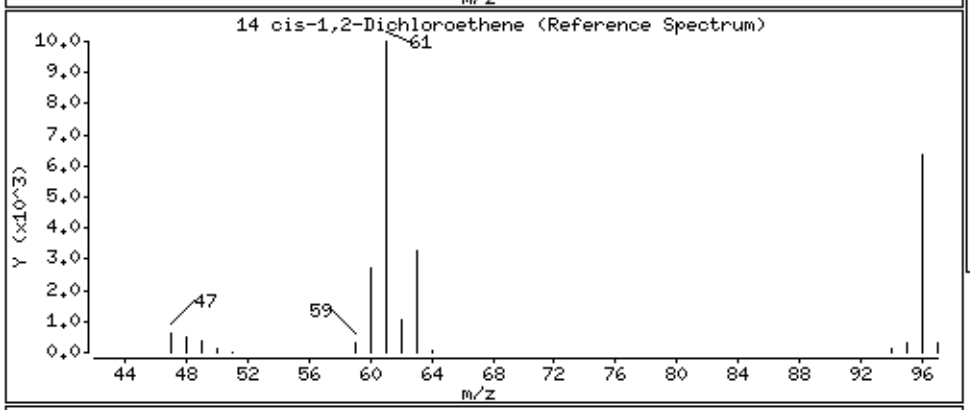
Column diameter: 0.25

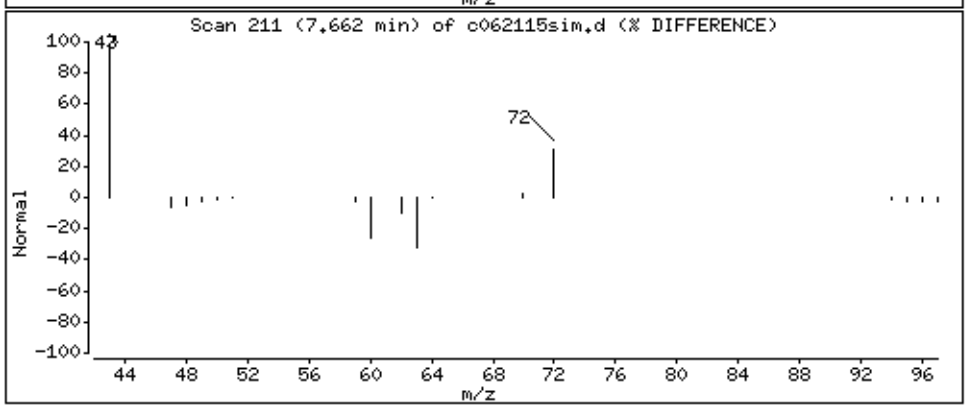
14 cis-1,2-Dichloroethene

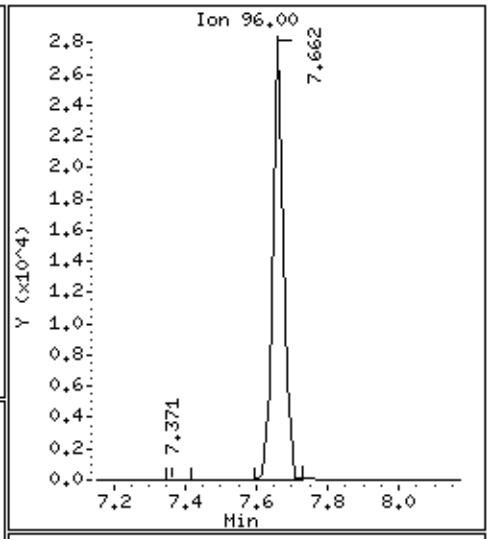
Concentration: 5.09981 ug

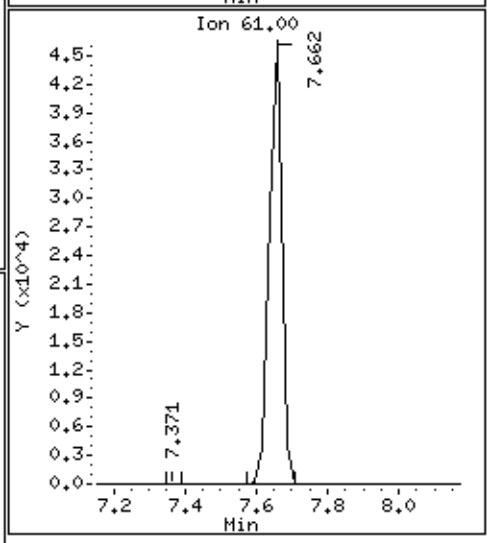












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

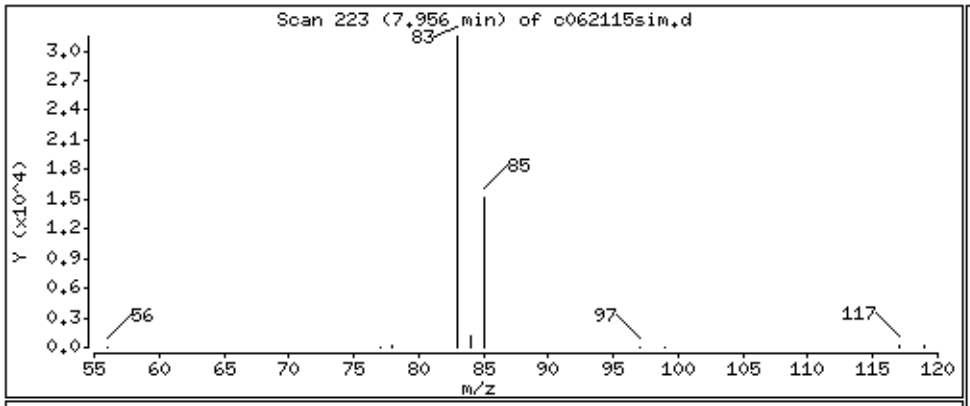
Operator: gm

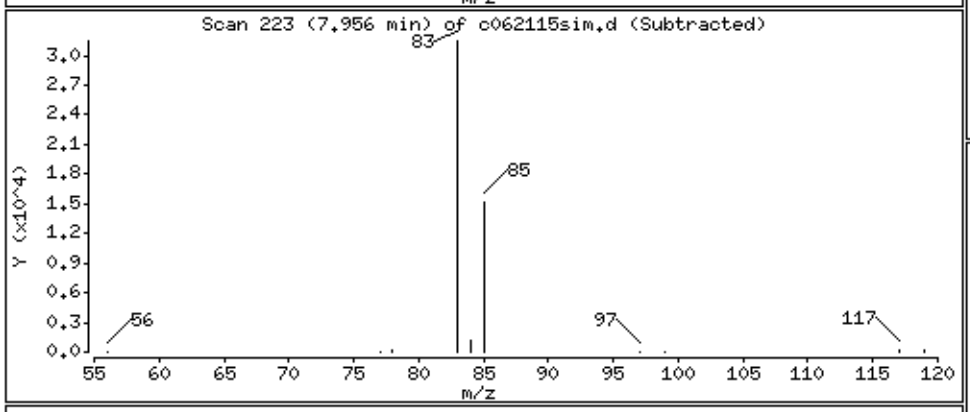
Column phase: DB-5.625

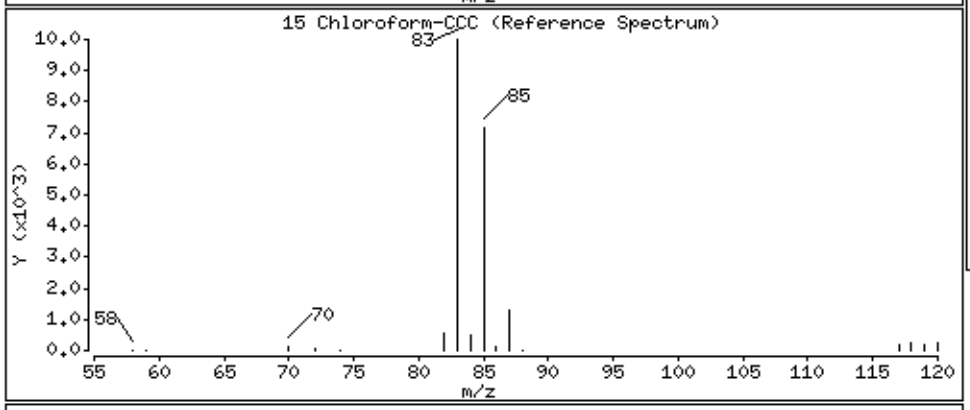
Column diameter: 0.25

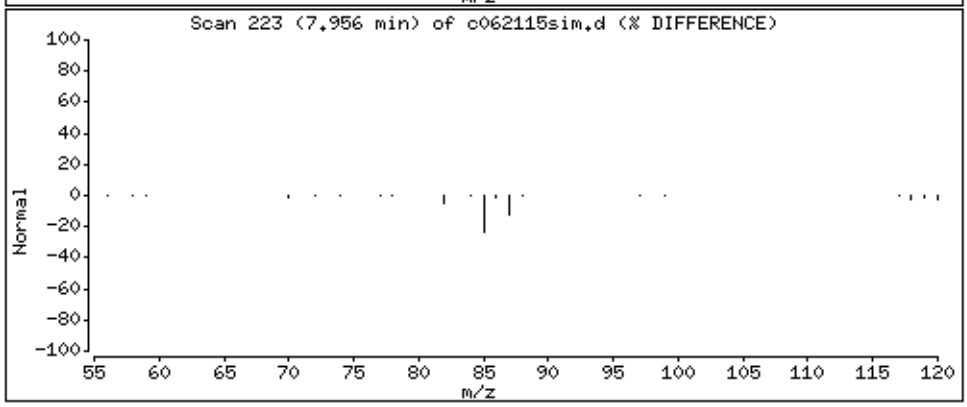
15 Chloroform-CCC

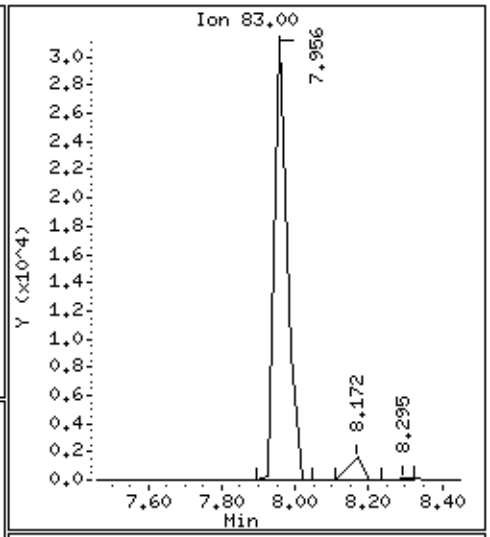
Concentration: 4.77250 ug

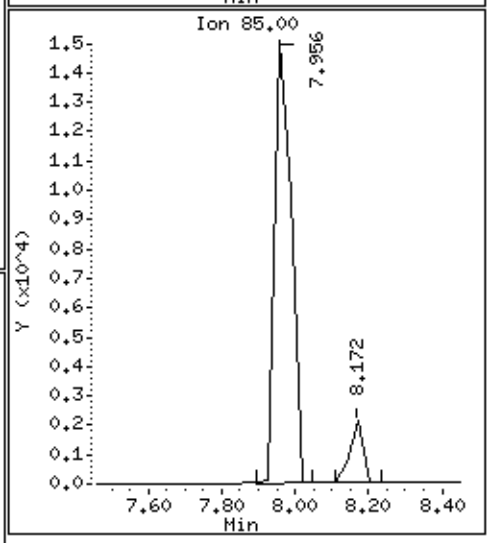












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

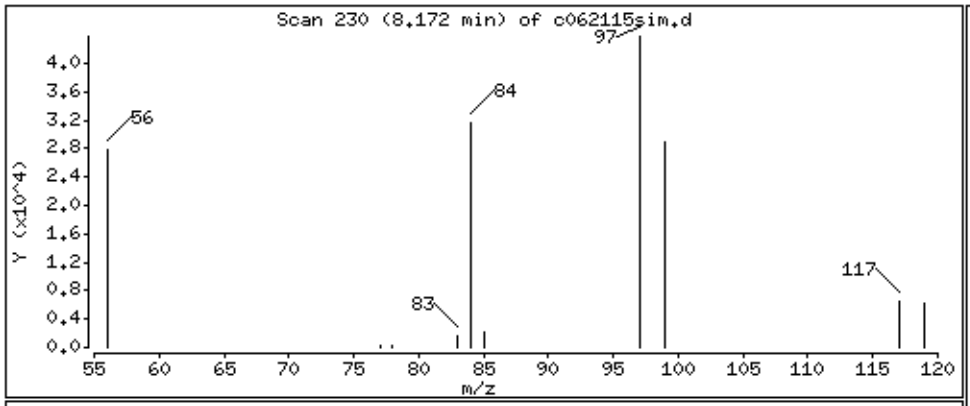
Operator: gm

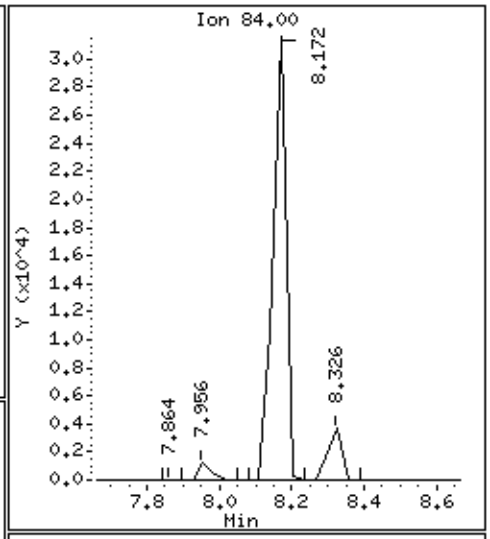
Column phase: DB-5.625

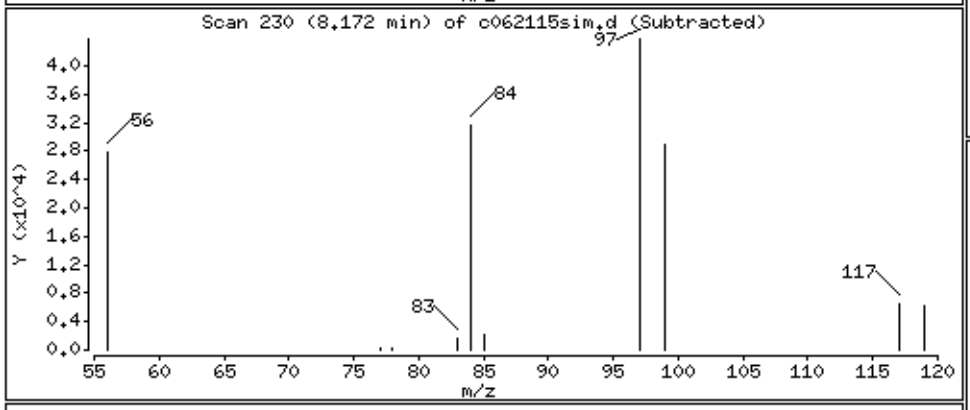
Column diameter: 0.25

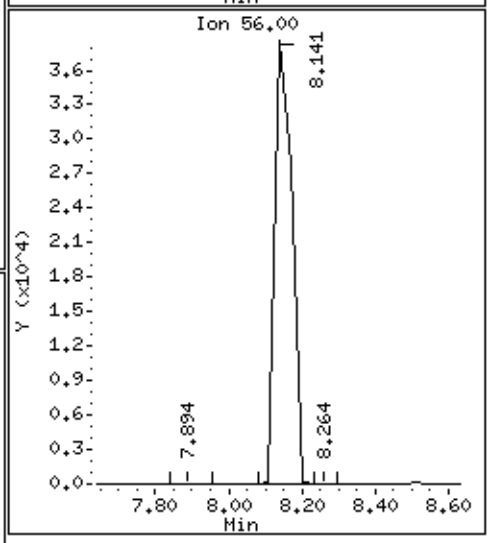
16 Cyclohexane

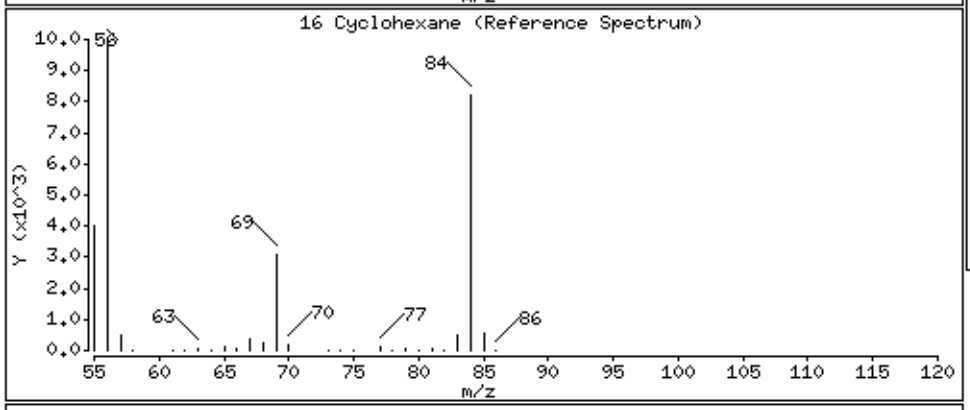
Concentration: 4.74560 ug

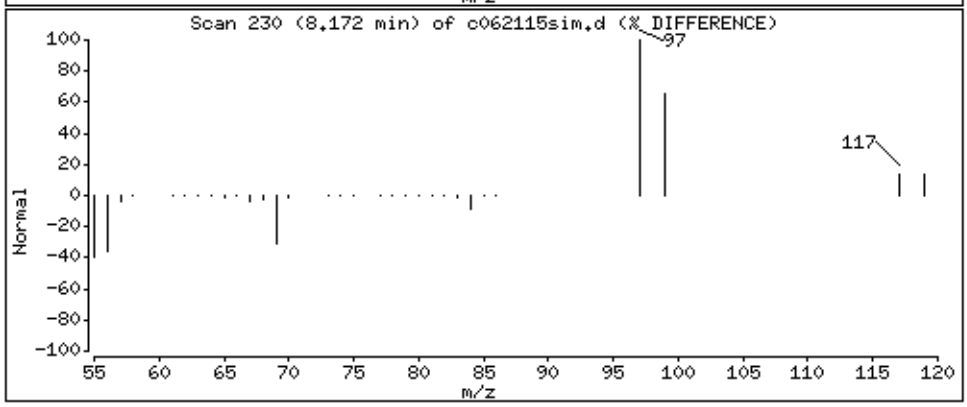












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

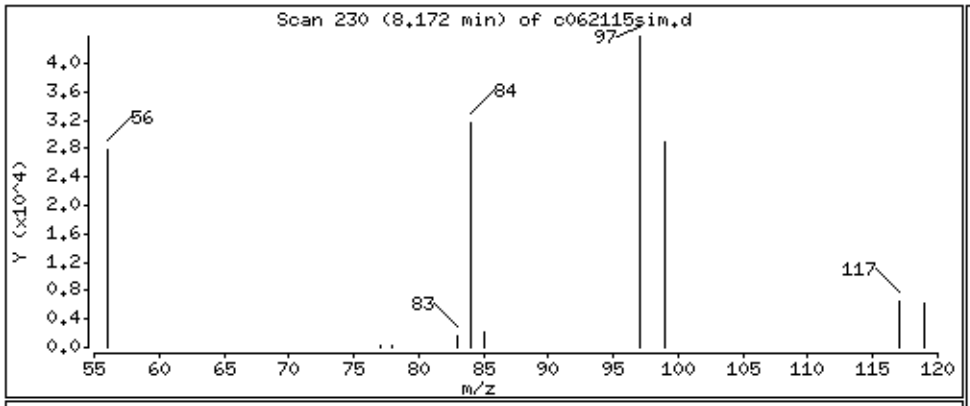
Operator: gm

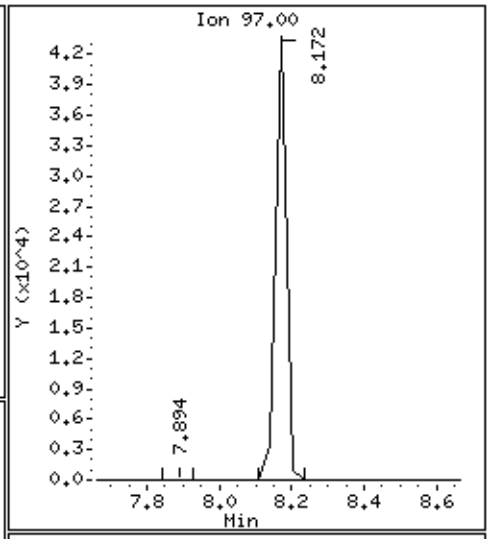
Column phase: DB-5.625

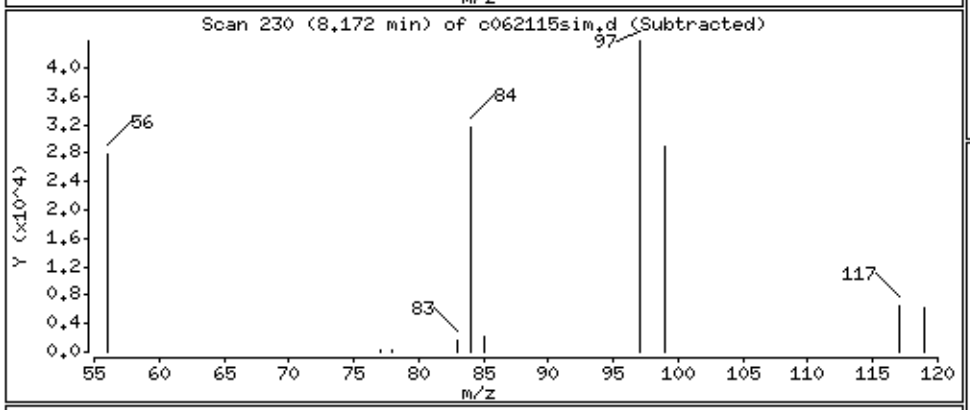
Column diameter: 0.25

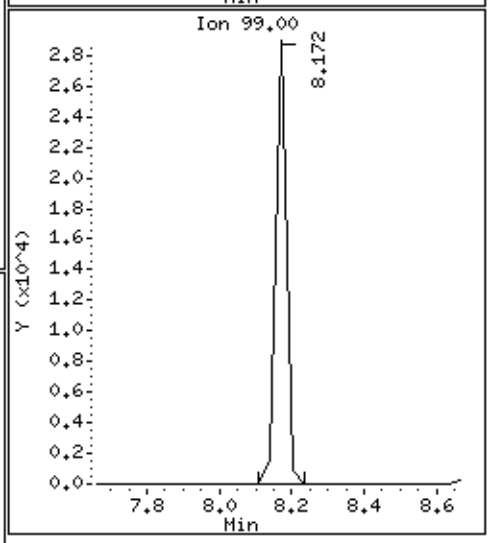
17 1,1,1-Trichloroethane

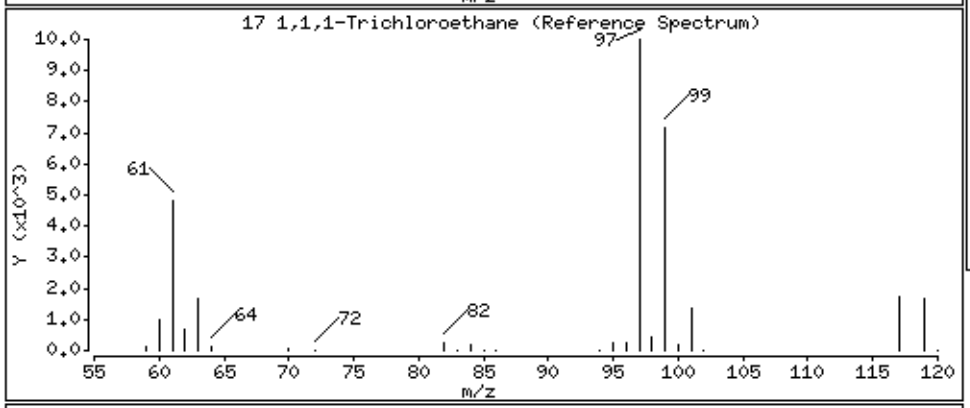
Concentration: 4.97121 ug

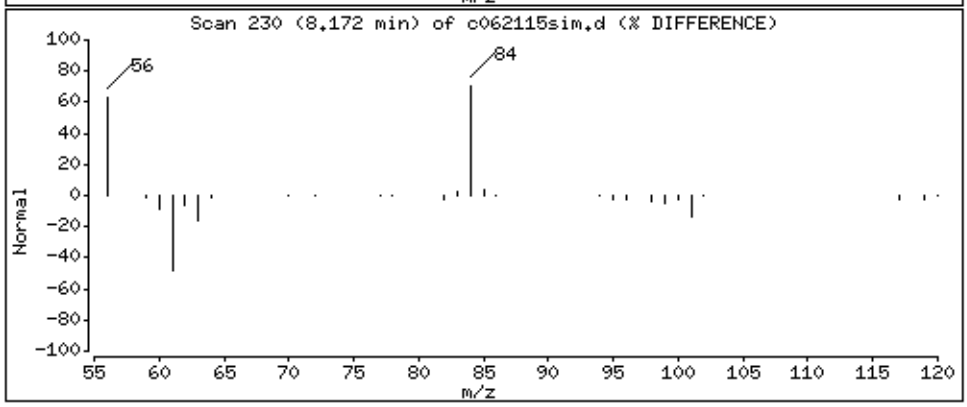












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

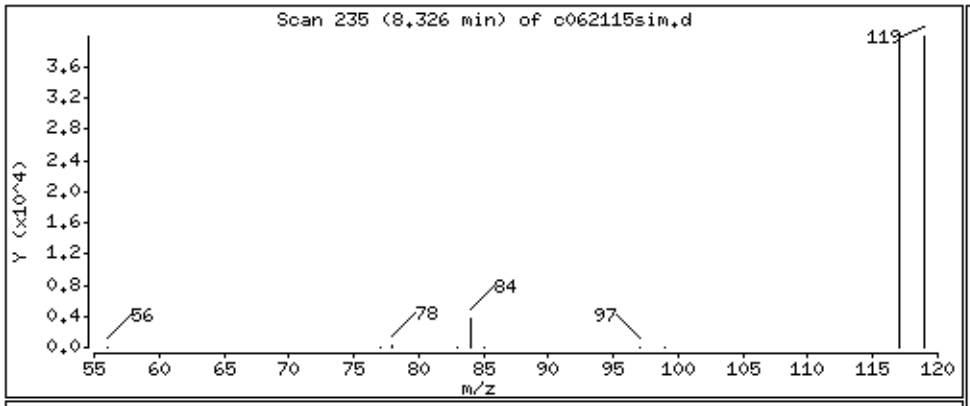
Operator: gm

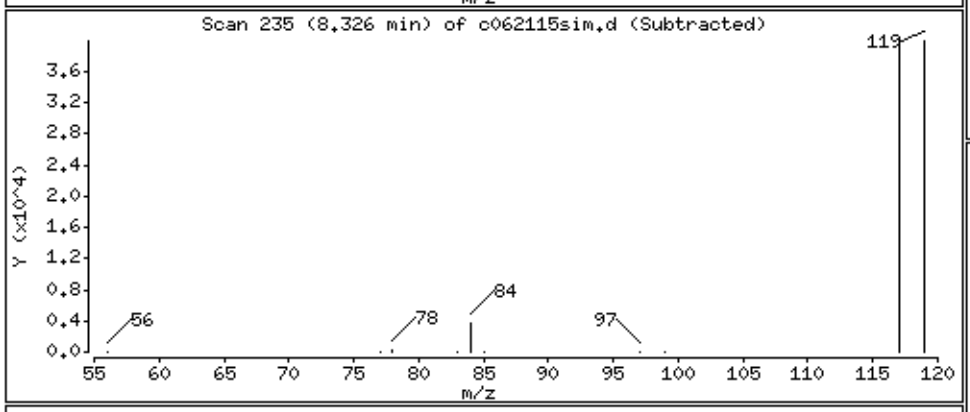
Column phase: DB-5.625

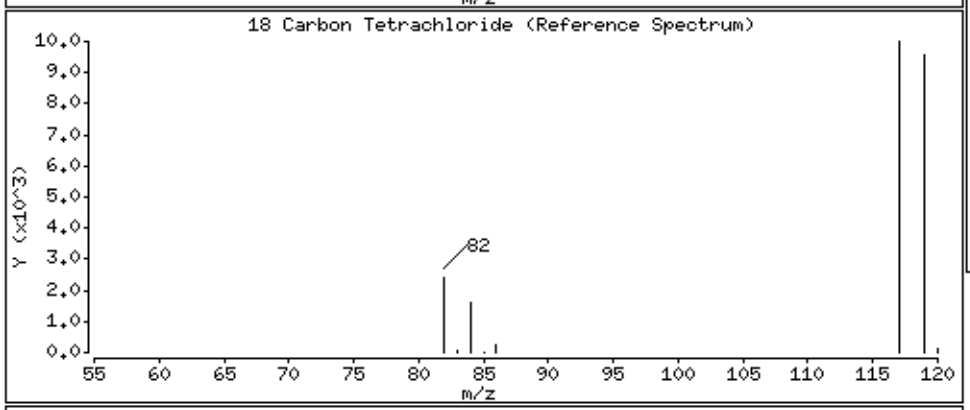
Column diameter: 0.25

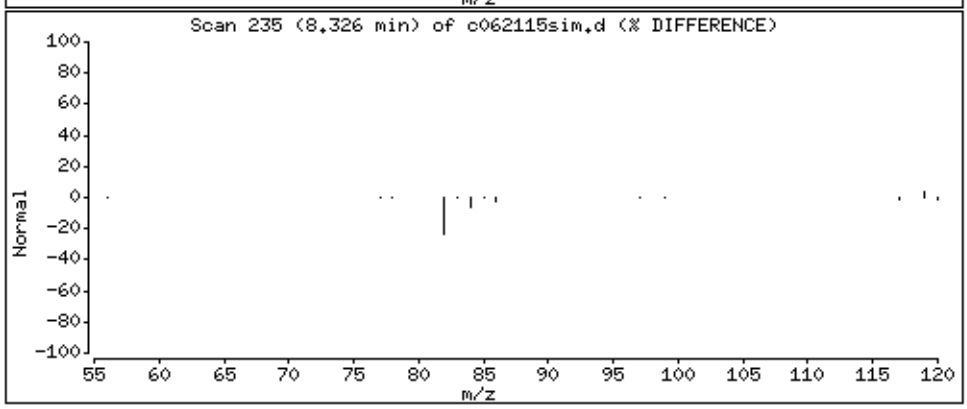
18 Carbon Tetrachloride

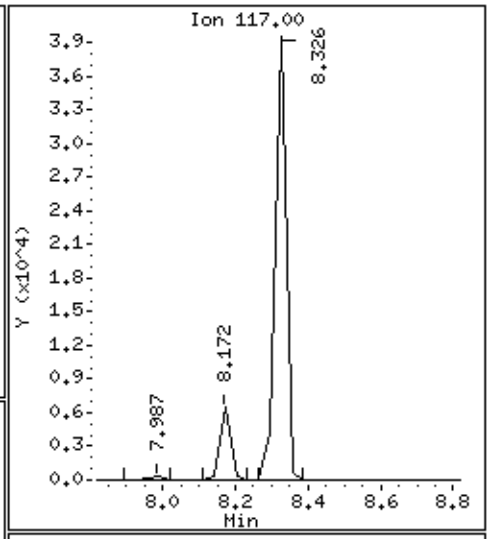
Concentration: 4.85353 ug

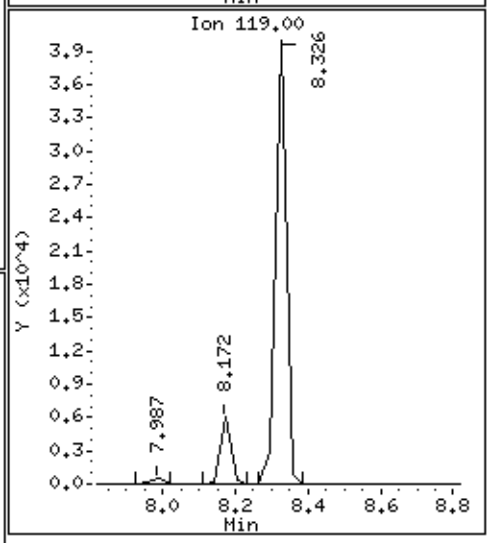












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

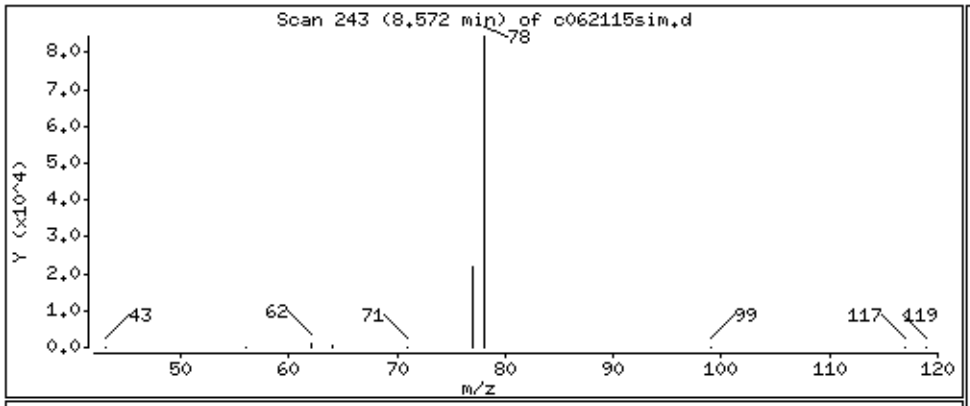
Operator: gm

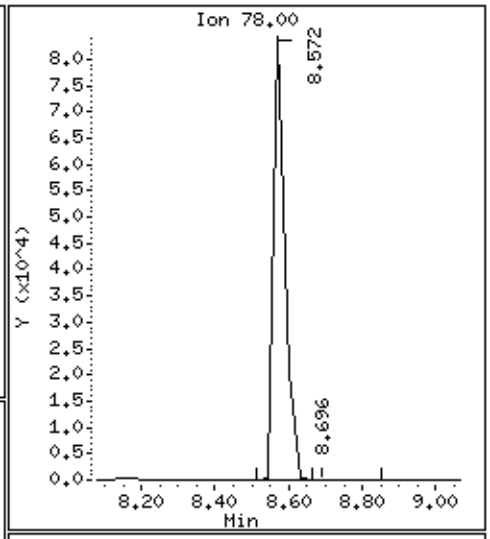
Column phase: DB-5.625

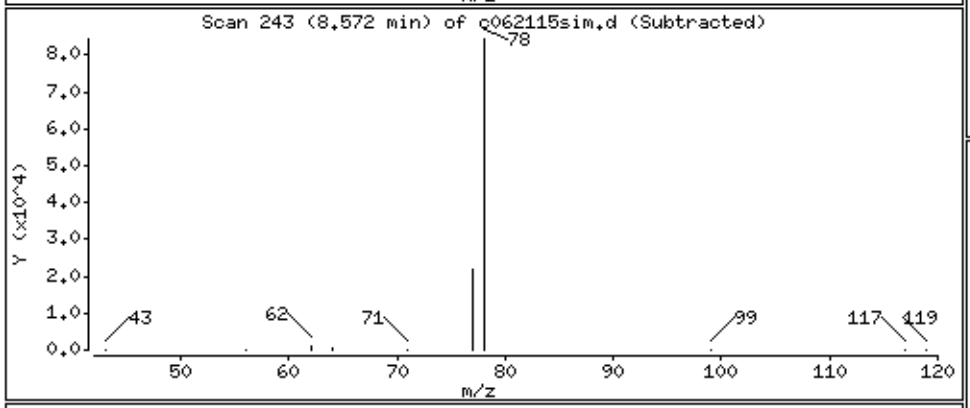
Column diameter: 0.25

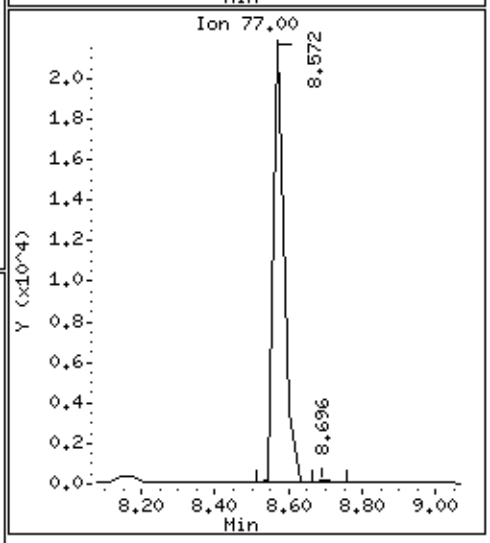
19 Benzene

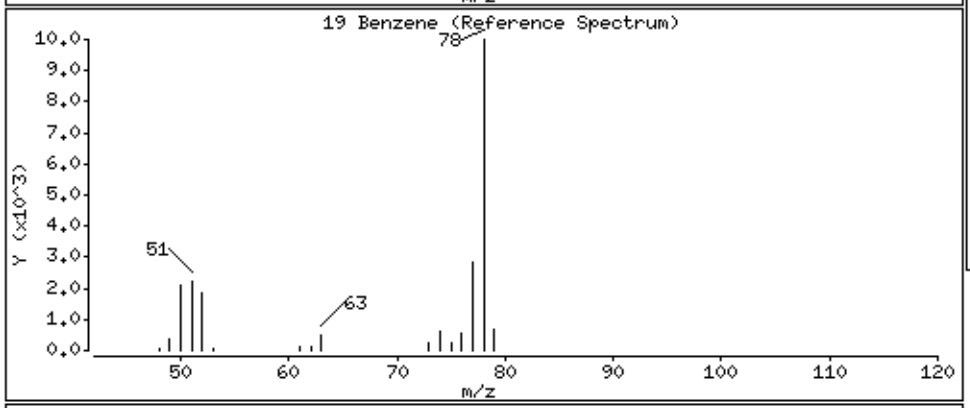
Concentration: 4.82273 ug

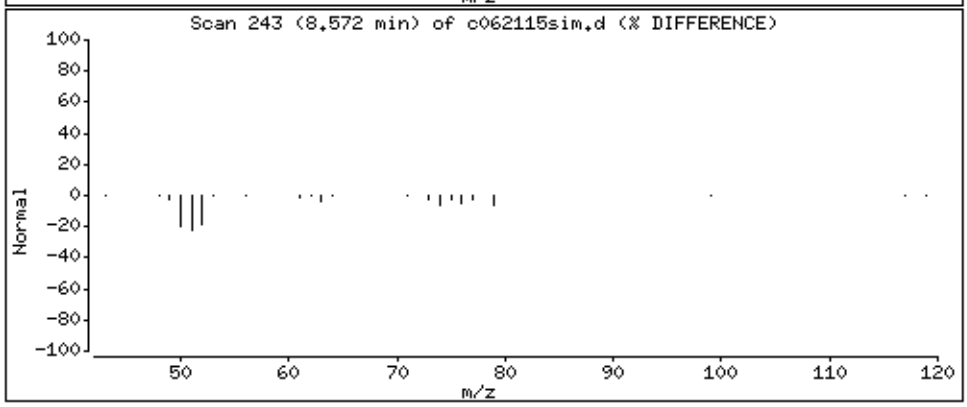












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

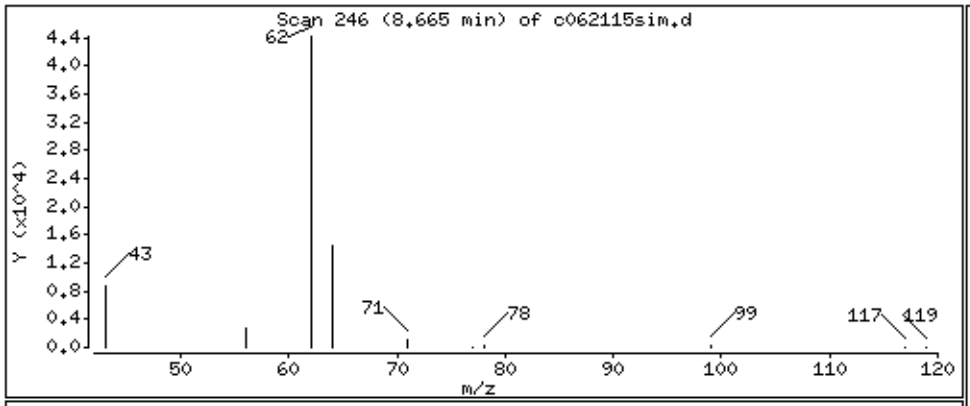
Operator: gm

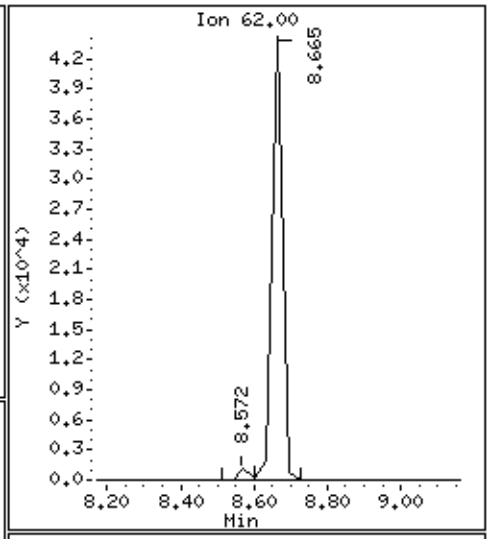
Column phase: DB-5.625

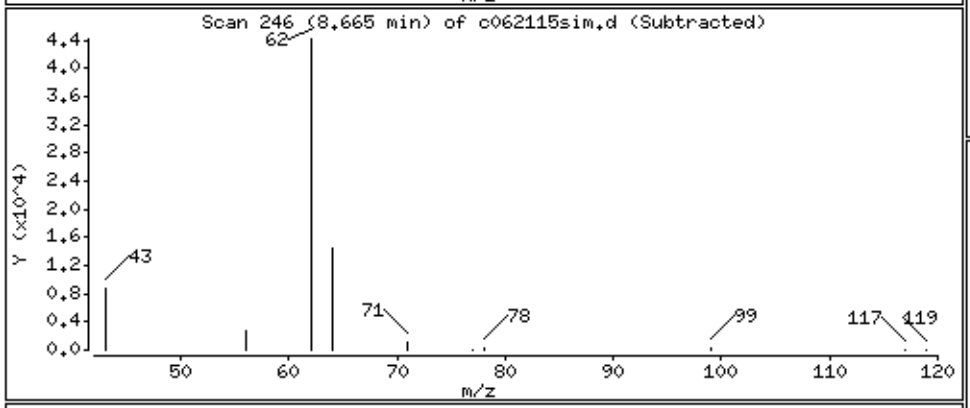
Column diameter: 0.25

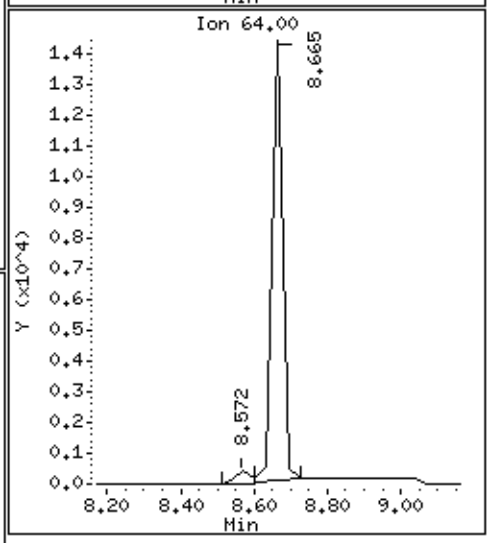
20 1,2-Dichloroethane

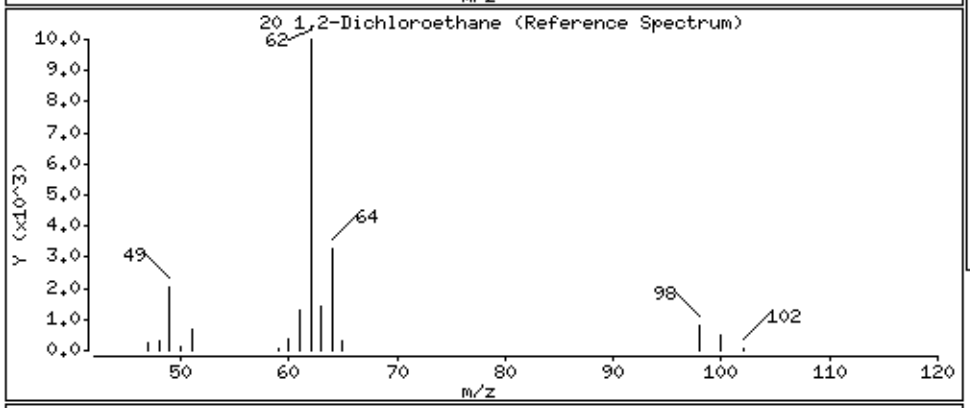
Concentration: 4.81027 ug

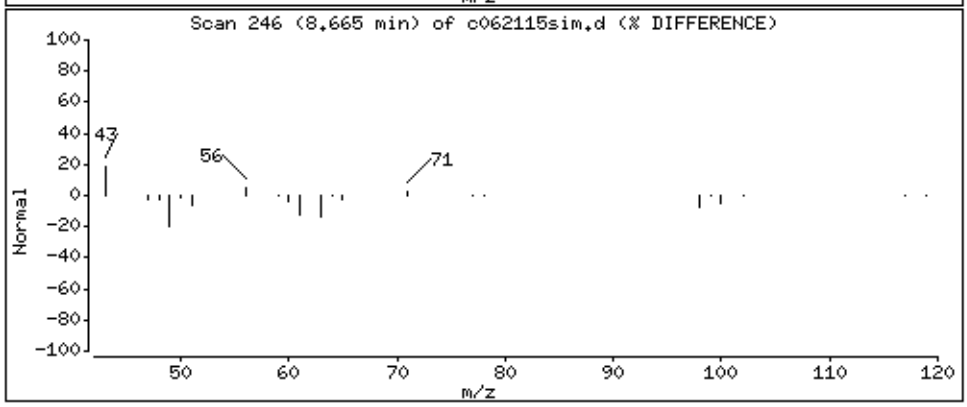












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

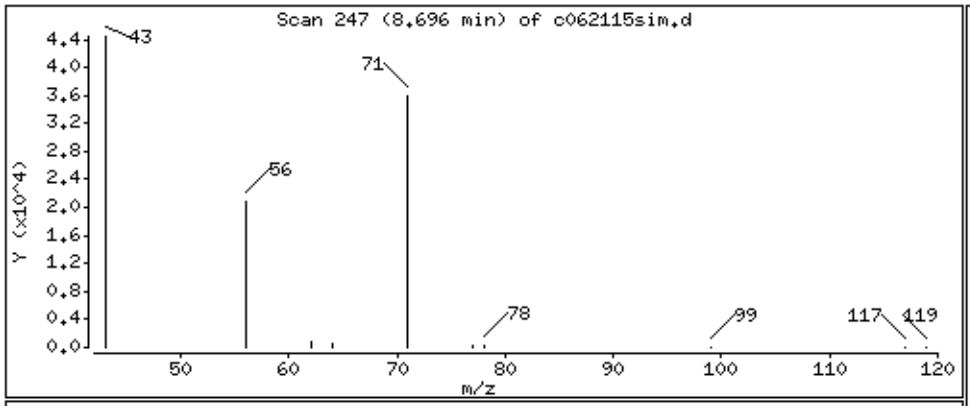
Operator: gm

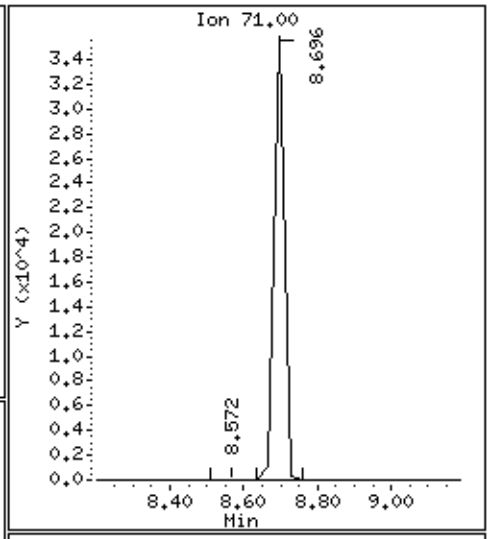
Column phase: DB-5.625

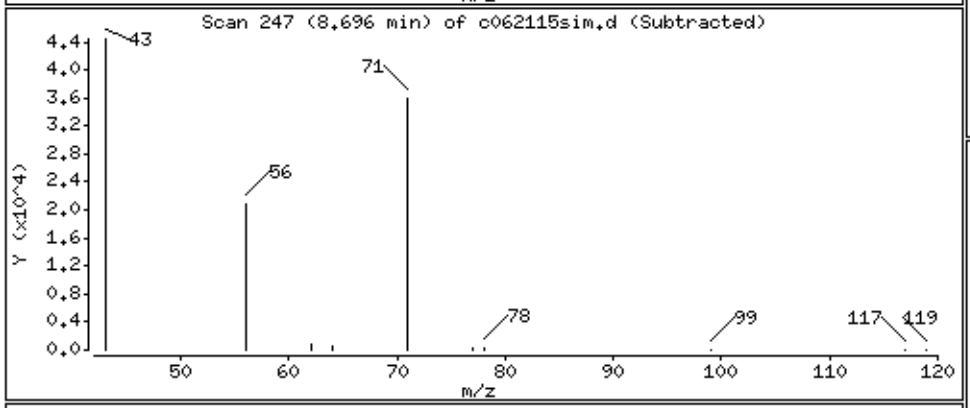
Column diameter: 0.25

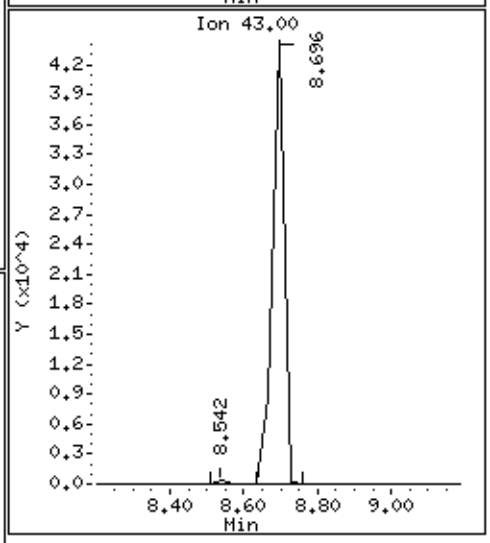
21 Heptane

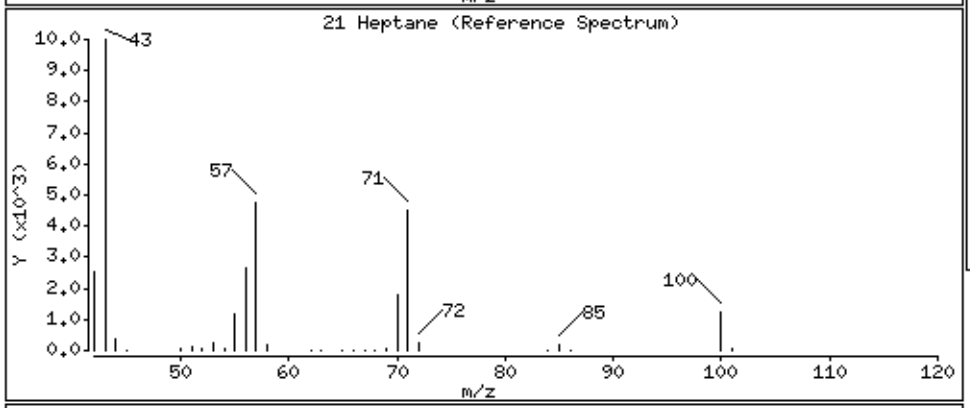
Concentration: 4.79270 ug

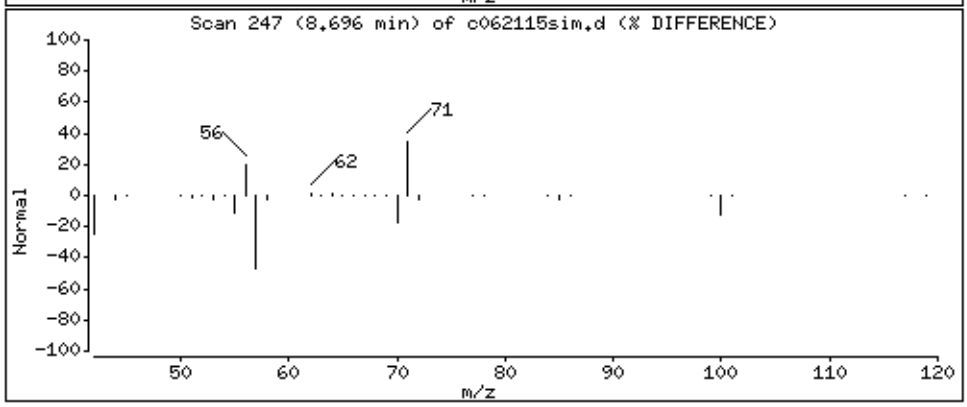












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

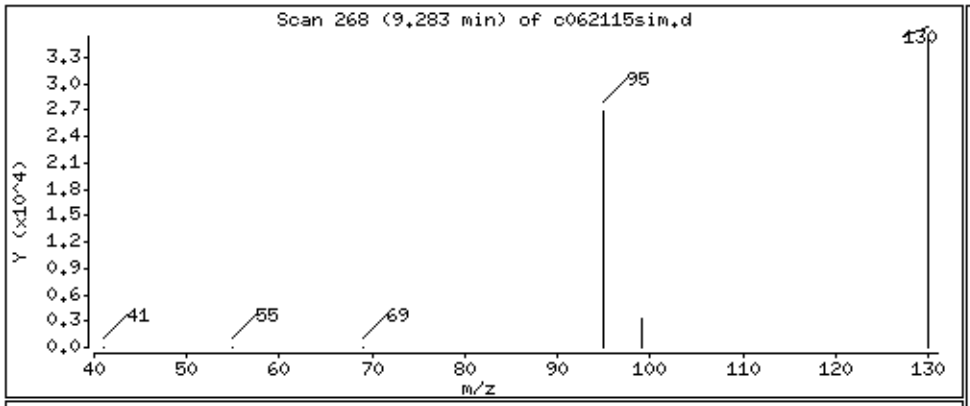
Operator: gm

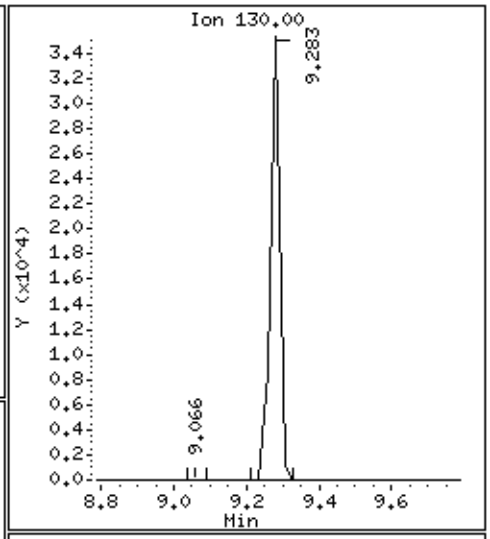
Column phase: DB-5.625

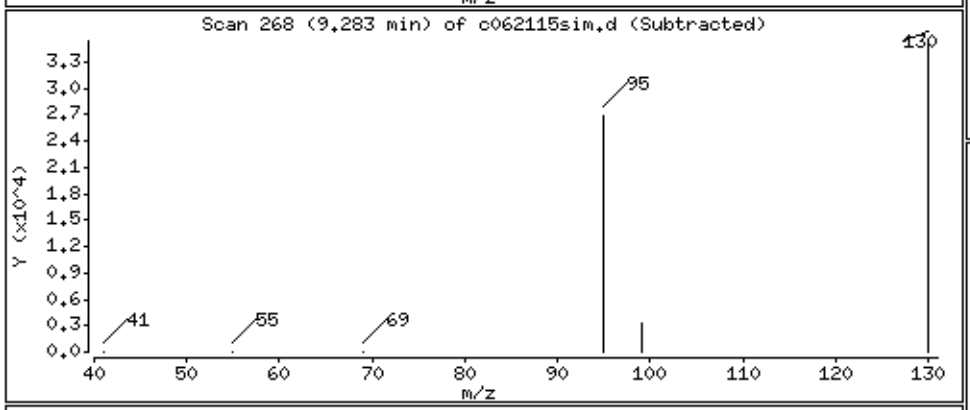
Column diameter: 0.25

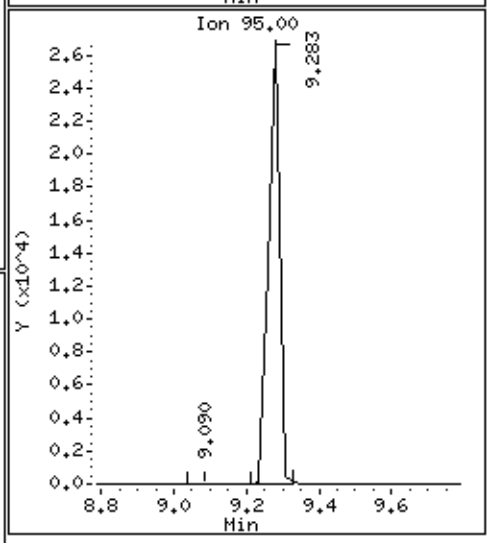
22 Trichloroethene

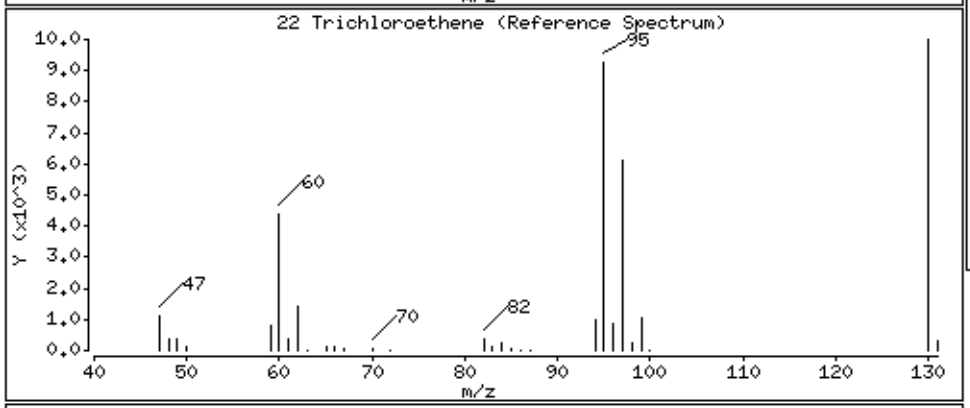
Concentration: 4.78580 ug

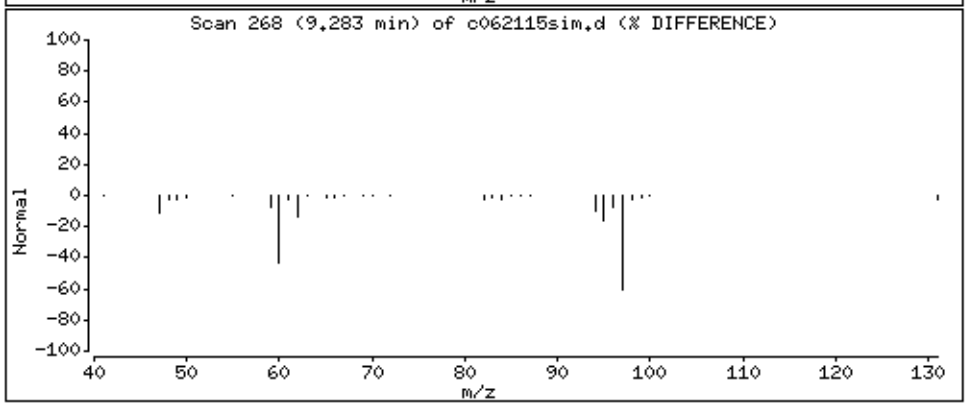












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

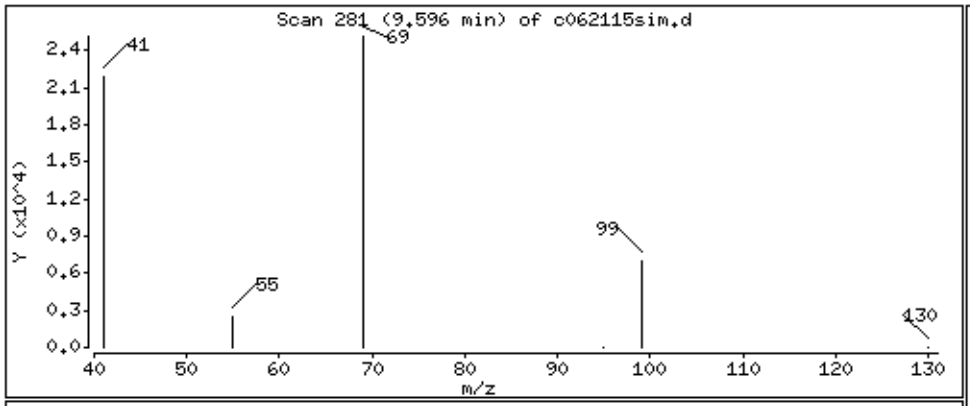
Operator: gm

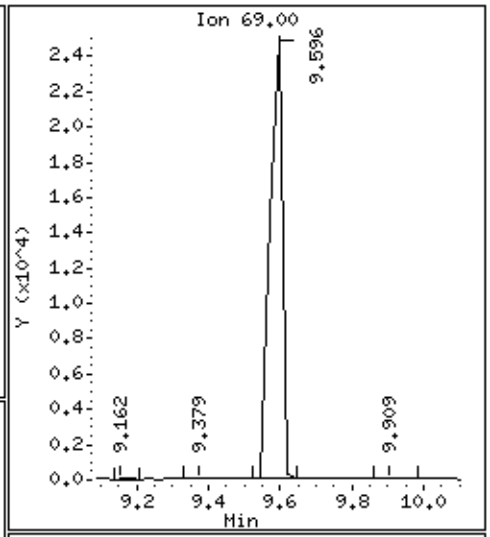
Column phase: DB-5.625

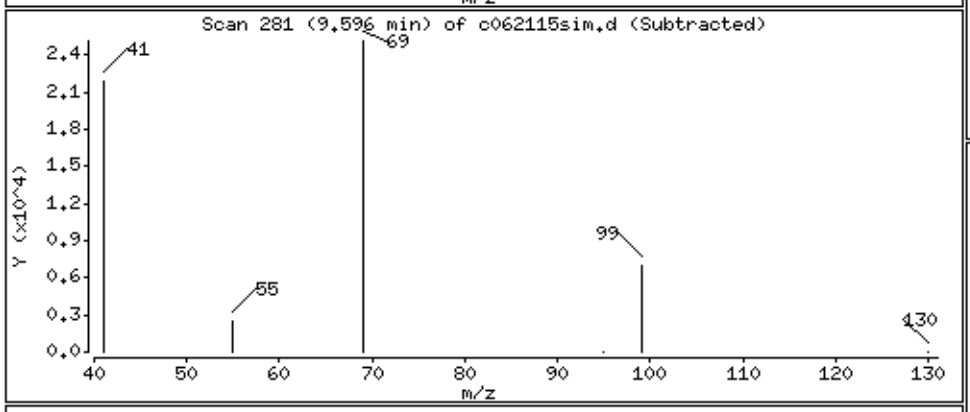
Column diameter: 0.25

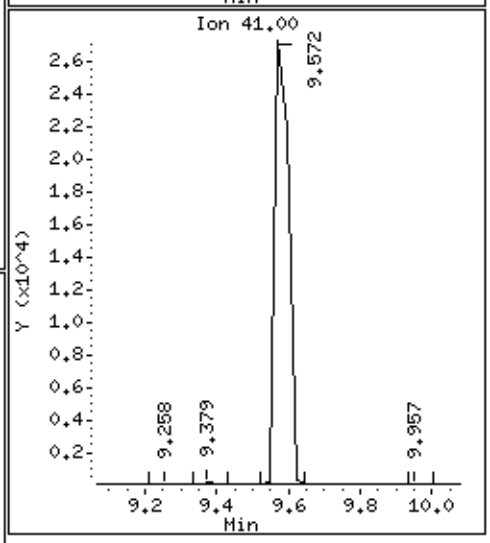
23 Methyl Methacrylate

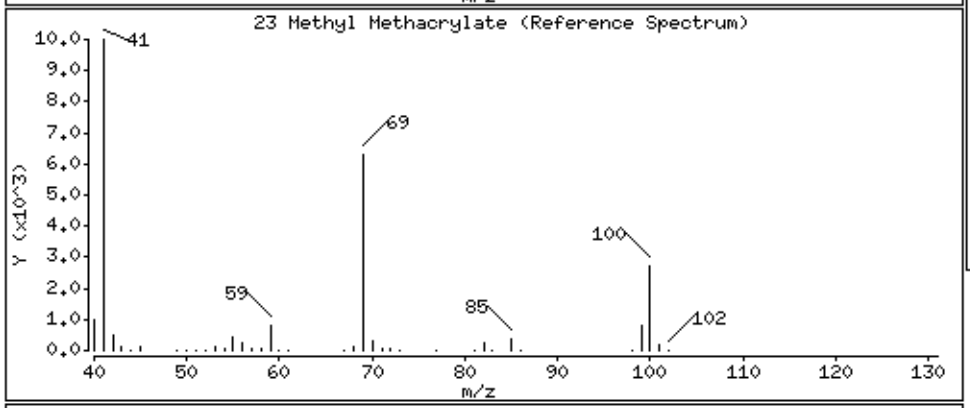
Concentration: 4.72295 ug

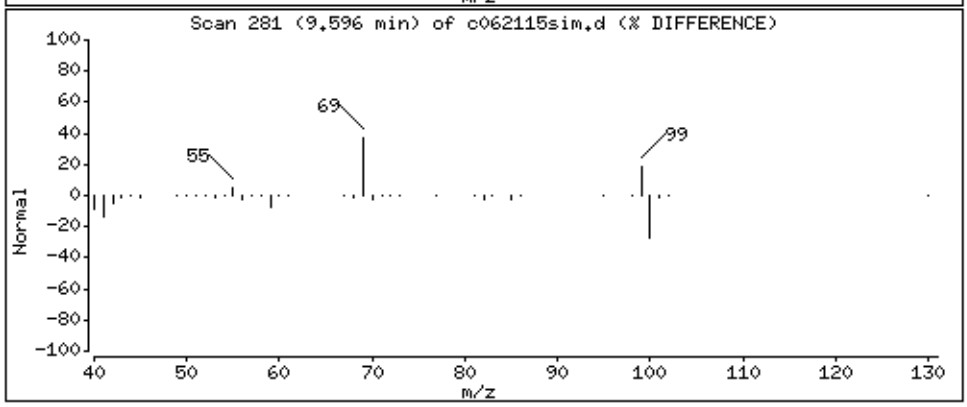












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

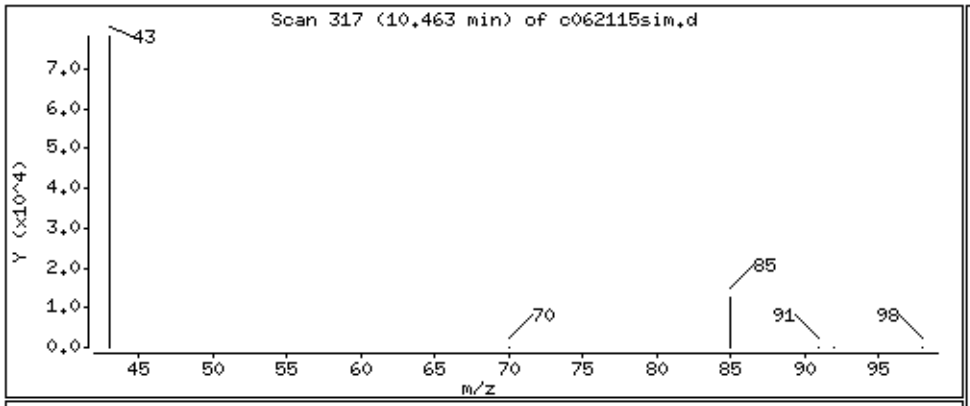
Operator: gm

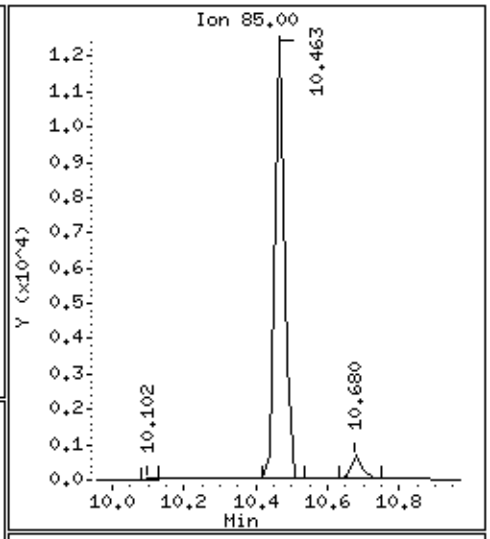
Column phase: DB-5.625

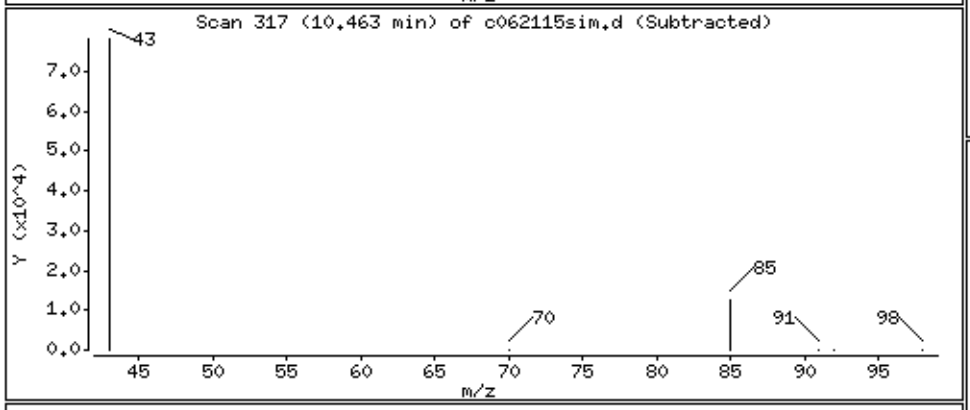
Column diameter: 0.25

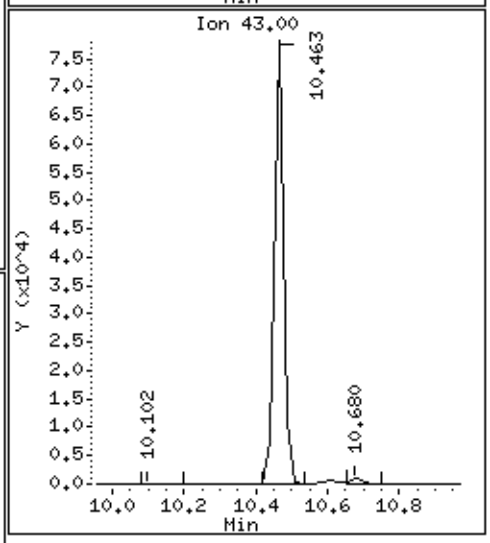
24 4-Methyl-2-pentanone

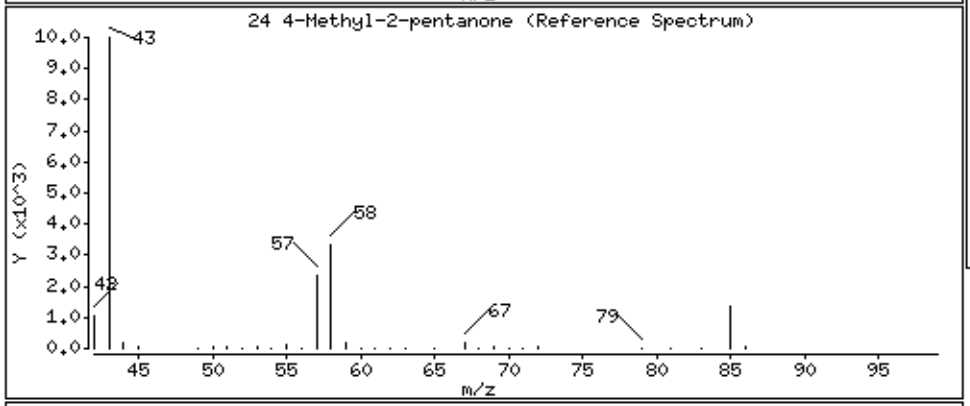
Concentration: 4.88743 ug

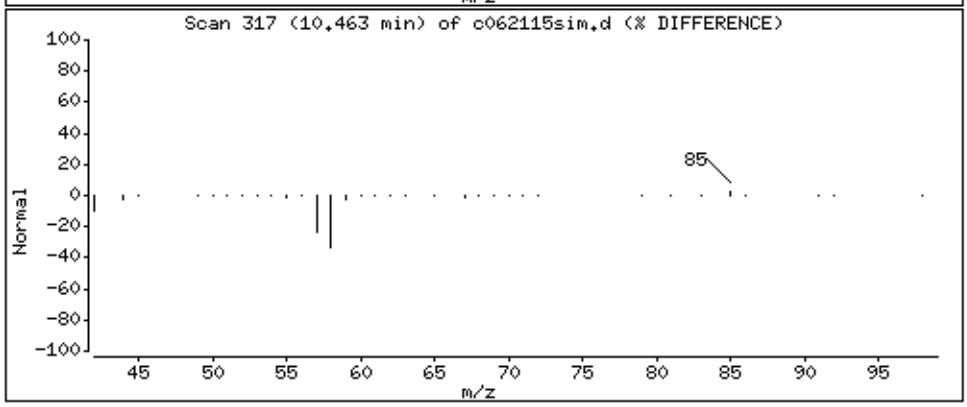












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

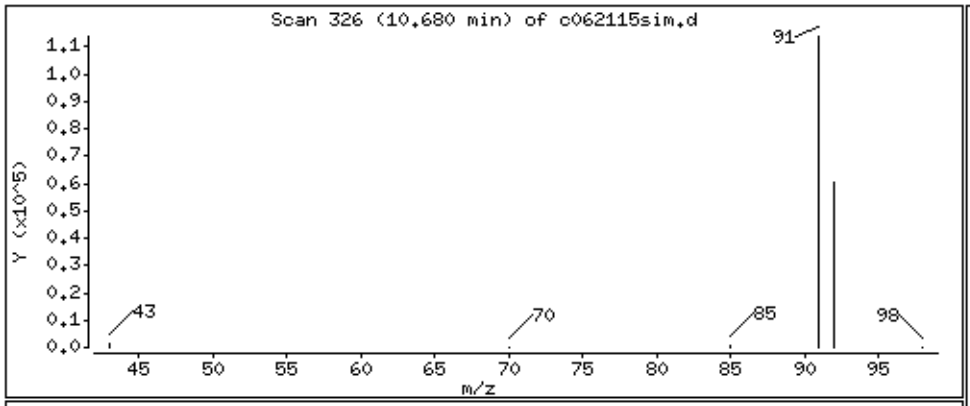
Operator: gm

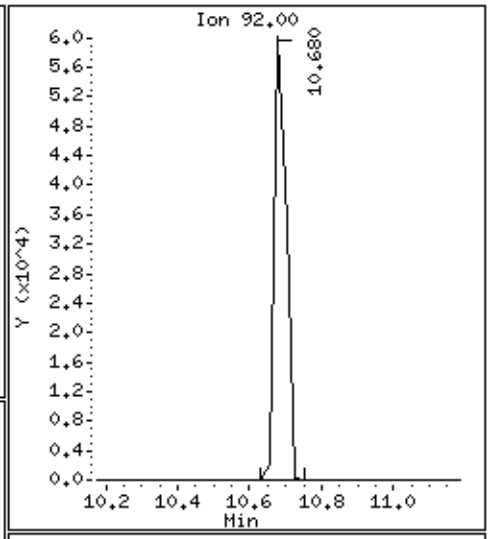
Column phase: DB-5.625

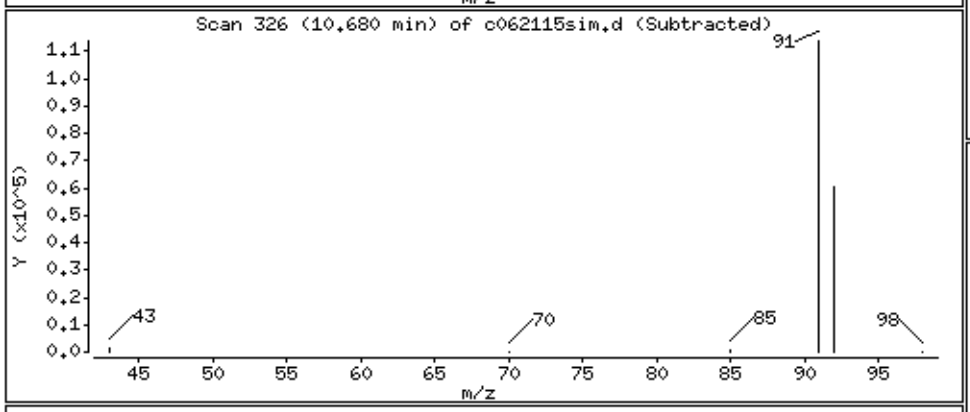
Column diameter: 0.25

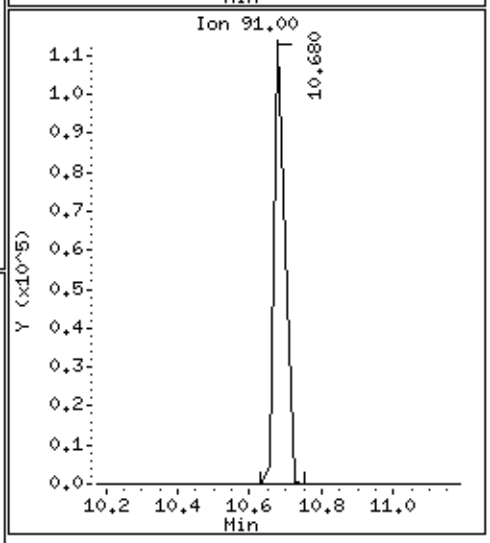
26 Toluene-CCC

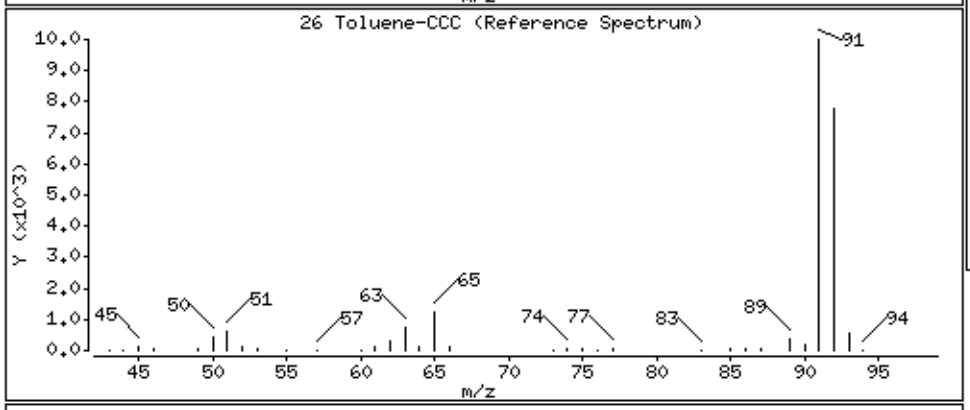
Concentration: 4.69041 ug

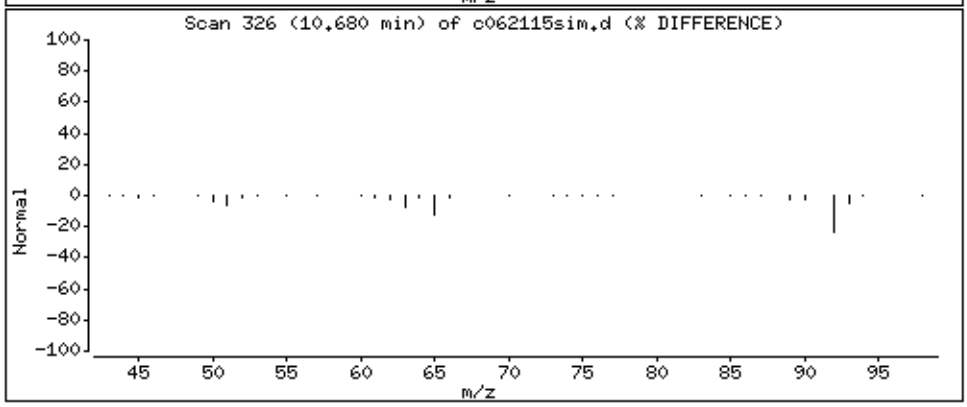












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

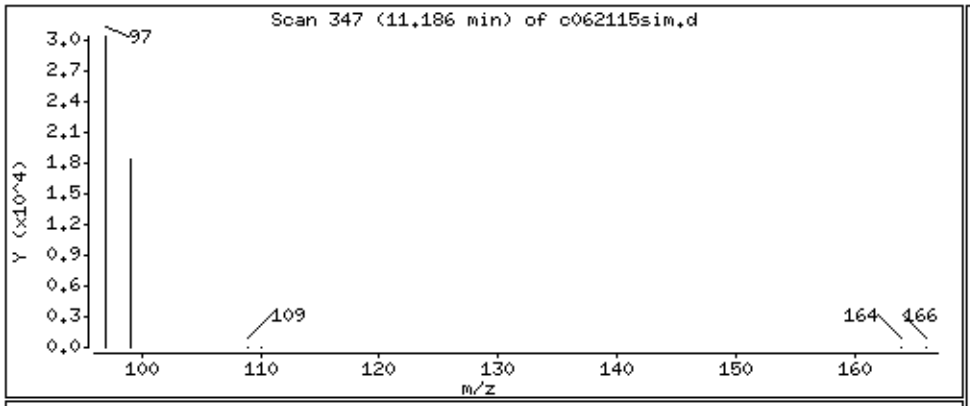
Operator: gm

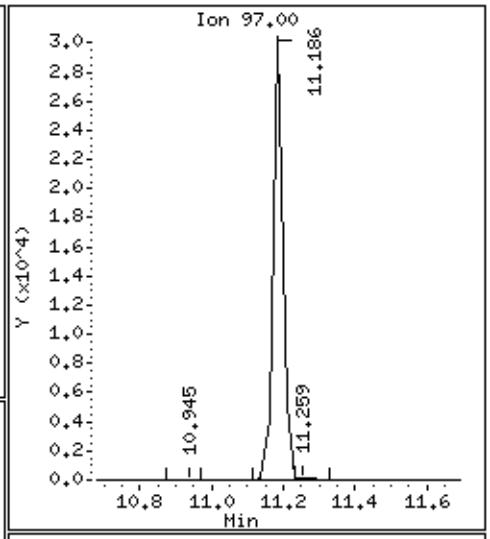
Column phase: DB-5.625

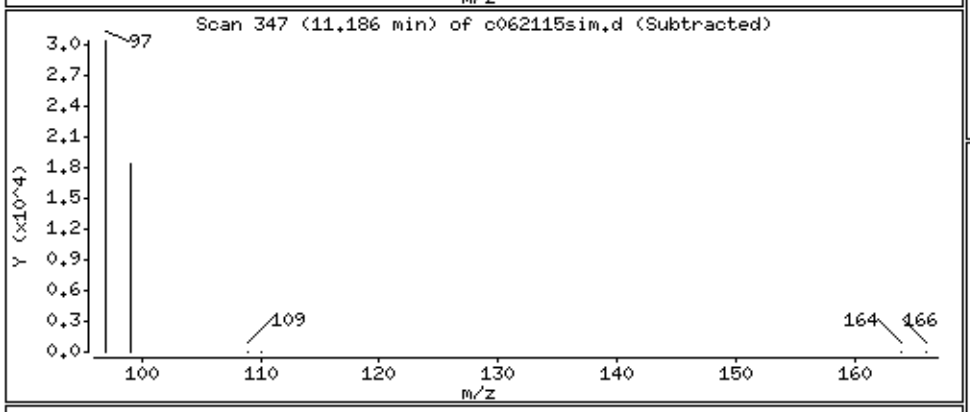
Column diameter: 0.25

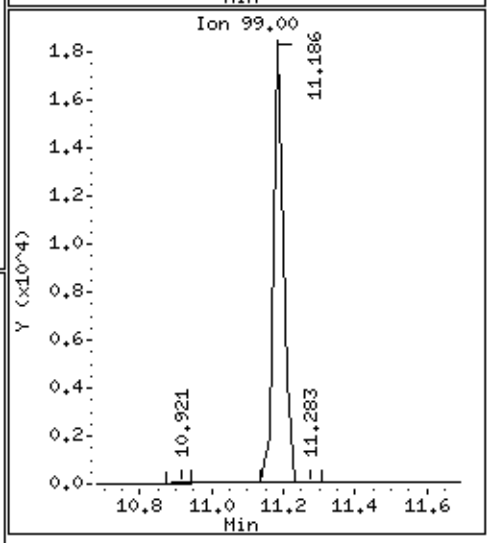
28 1,1,2-Trichloroethane

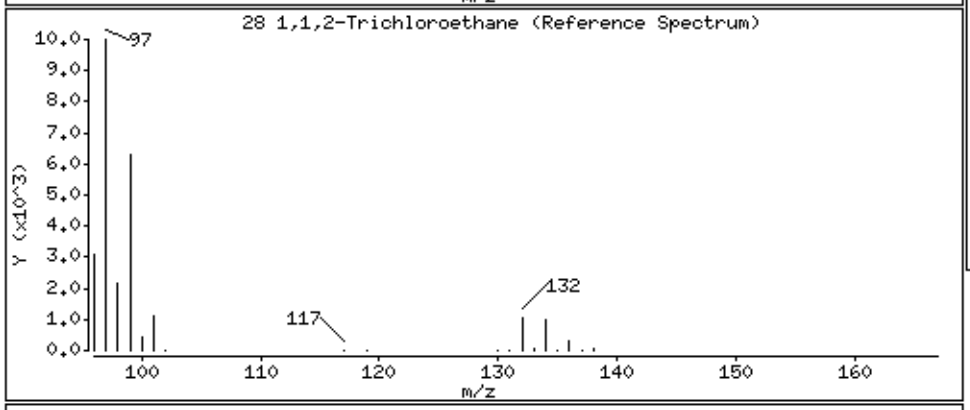
Concentration: 4.78278 ug

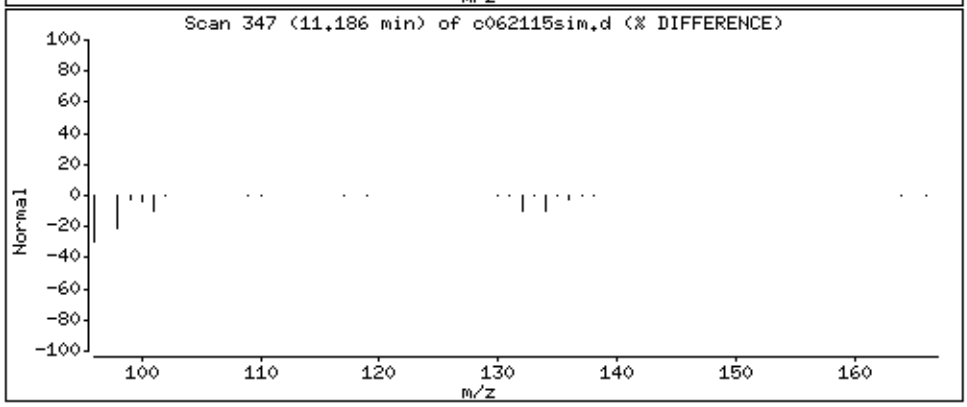












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

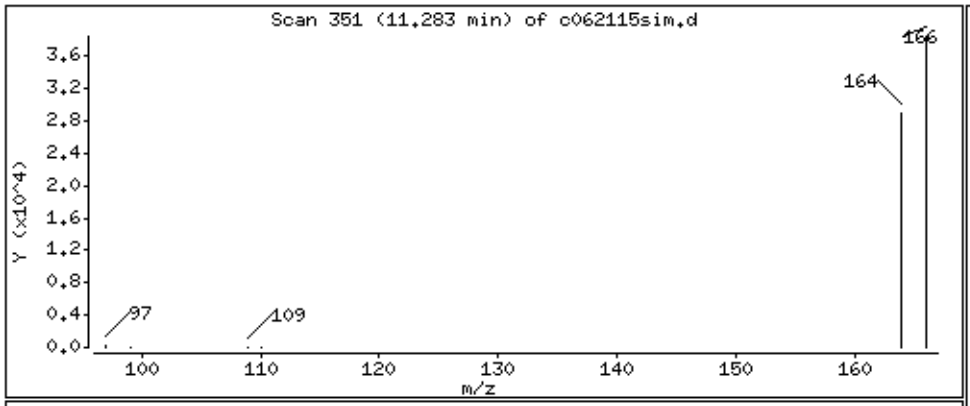
Operator: gm

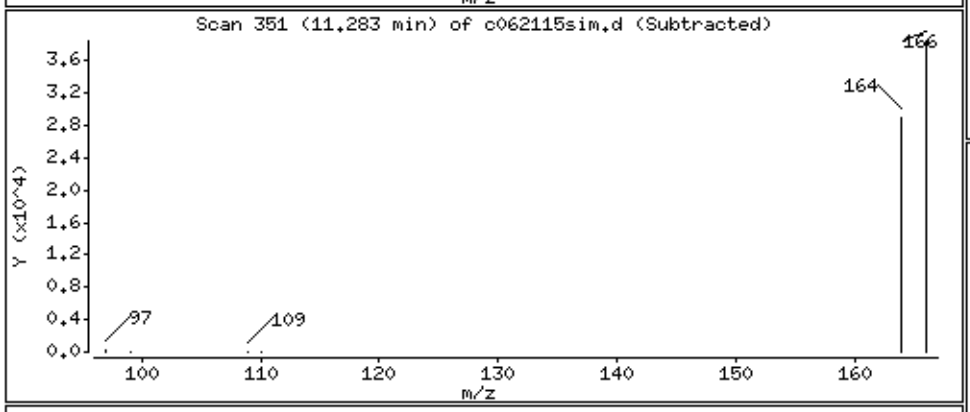
Column phase: DB-5.625

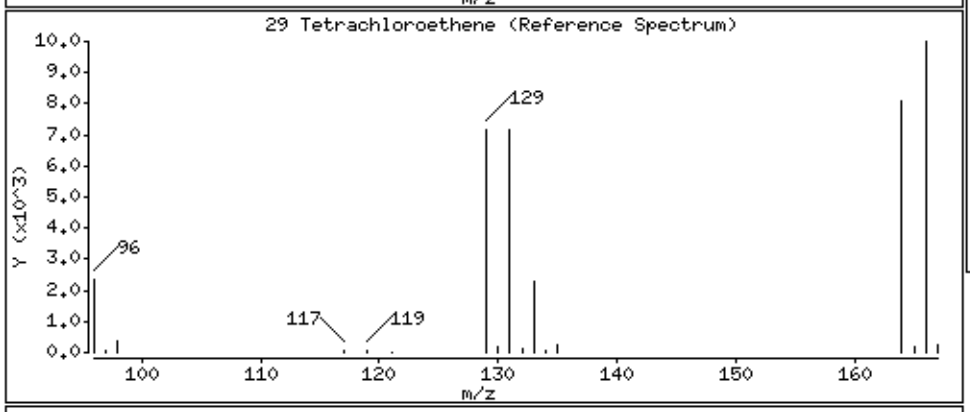
Column diameter: 0.25

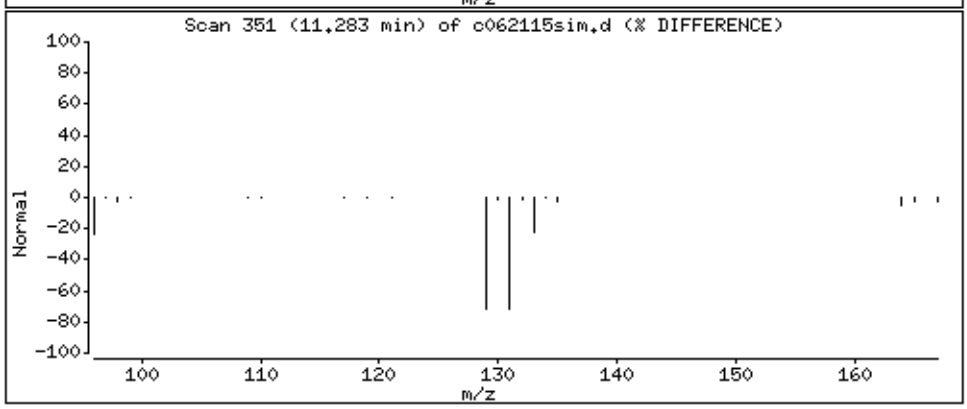
29 Tetrachloroethene

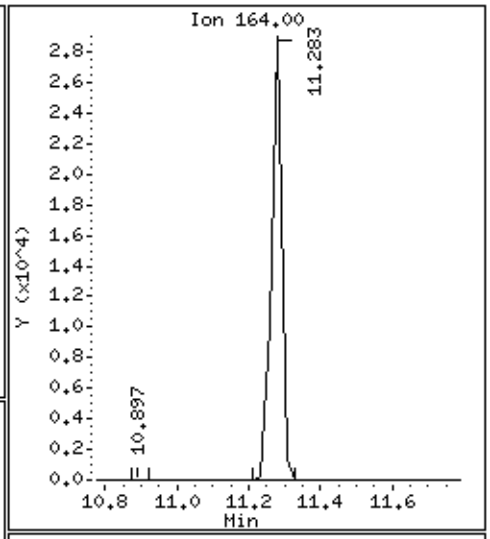
Concentration: 4.70016 ug

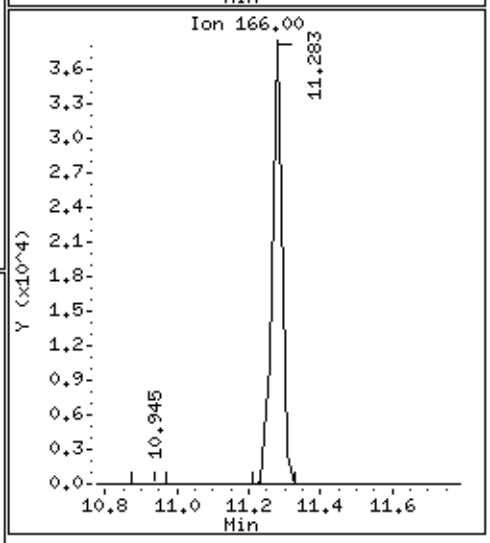












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

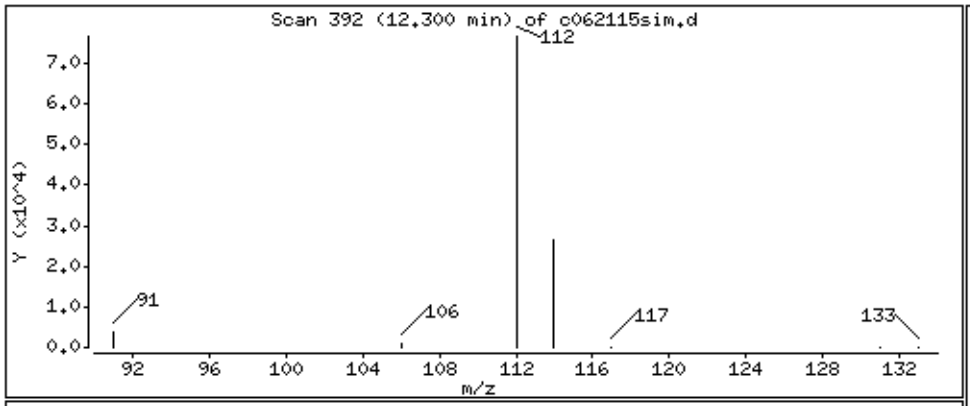
Operator: gm

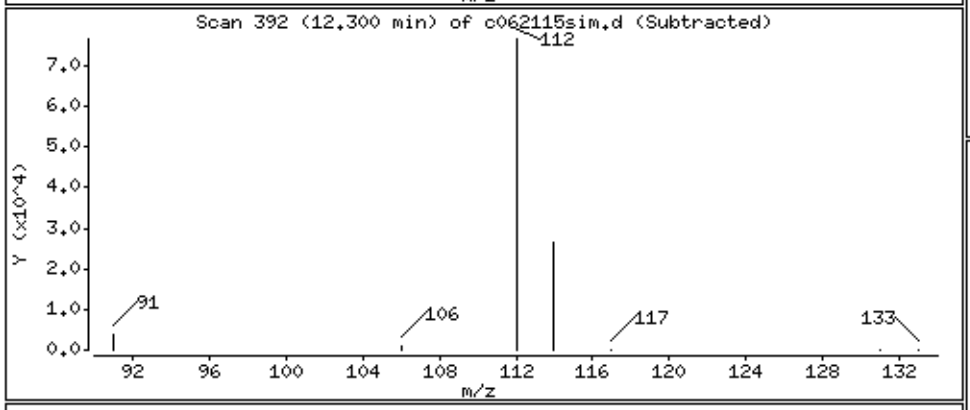
Column phase: DB-5.625

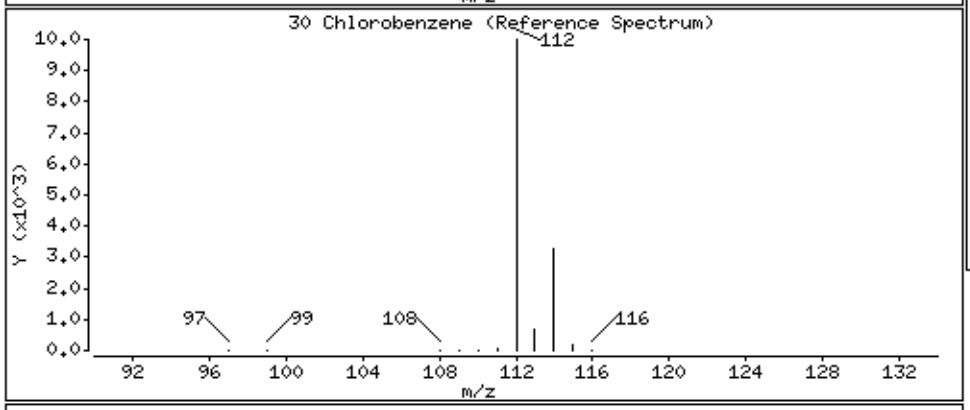
Column diameter: 0.25

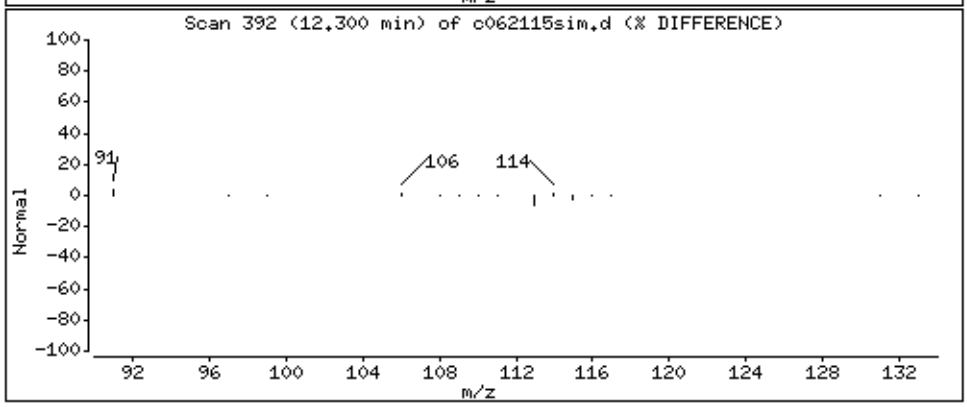
30 Chlorobenzene

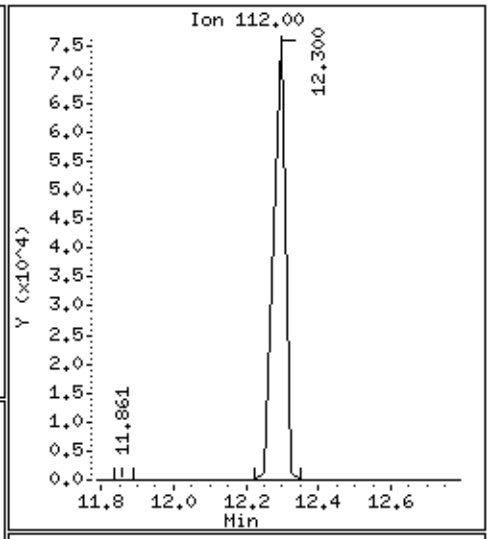
Concentration: 4.60722 ug

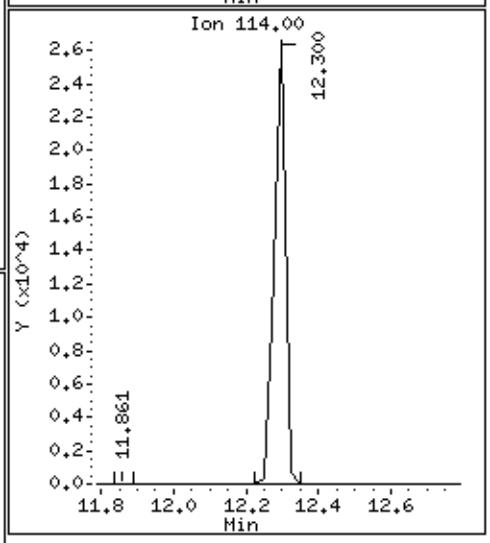












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

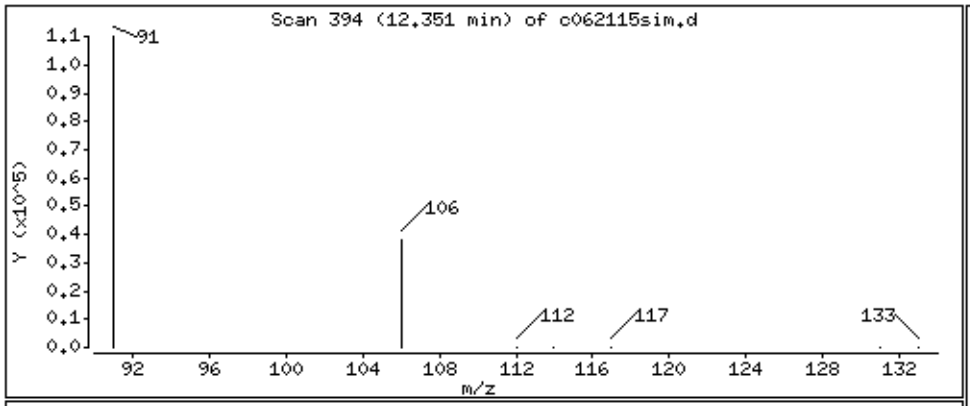
Operator: gm

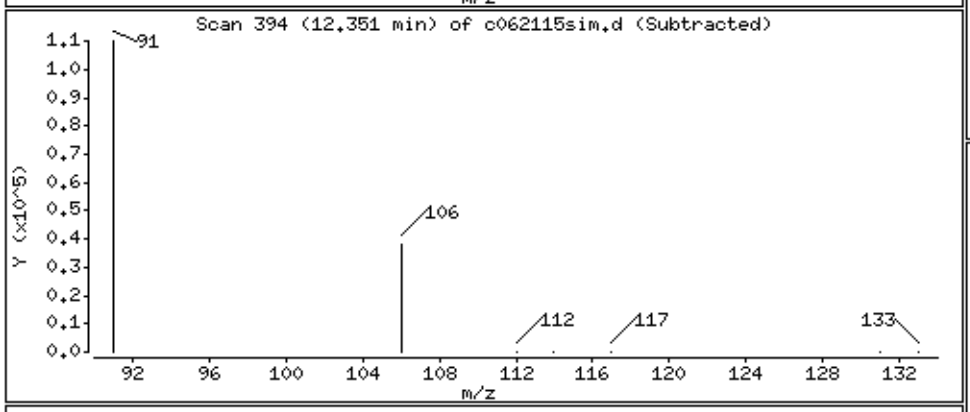
Column phase: DB-5.625

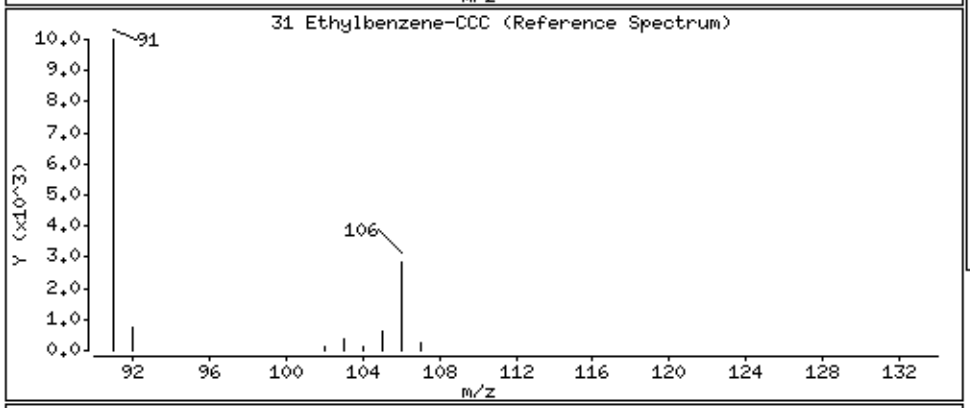
Column diameter: 0.25

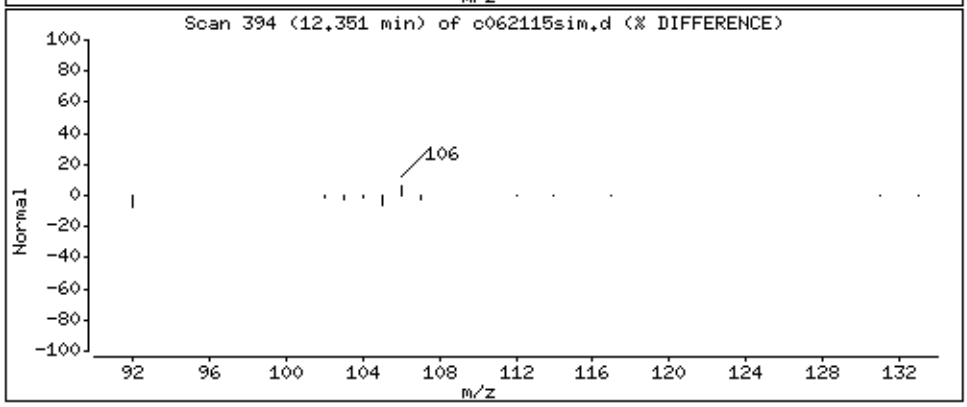
31 Ethylbenzene-CCC

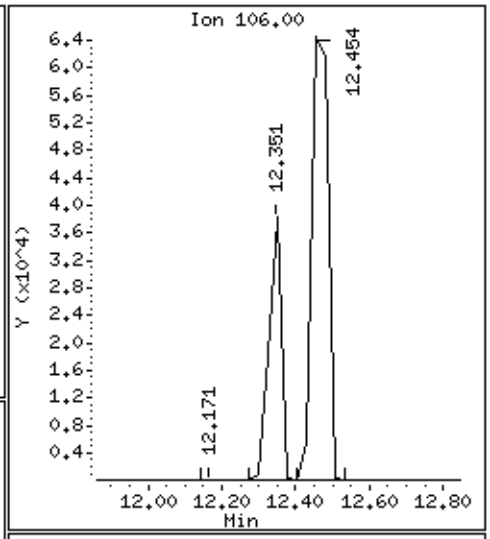
Concentration: 4.60970 ug

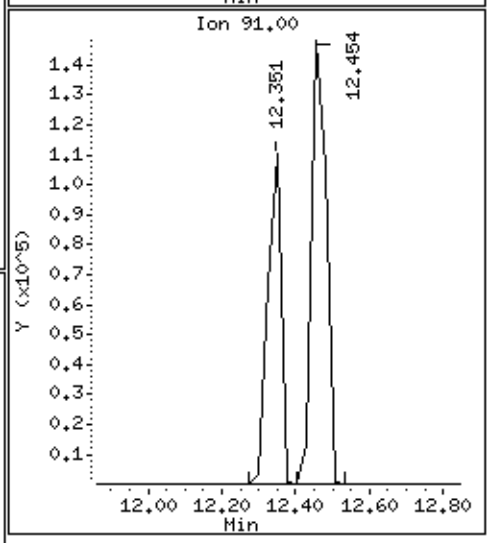












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

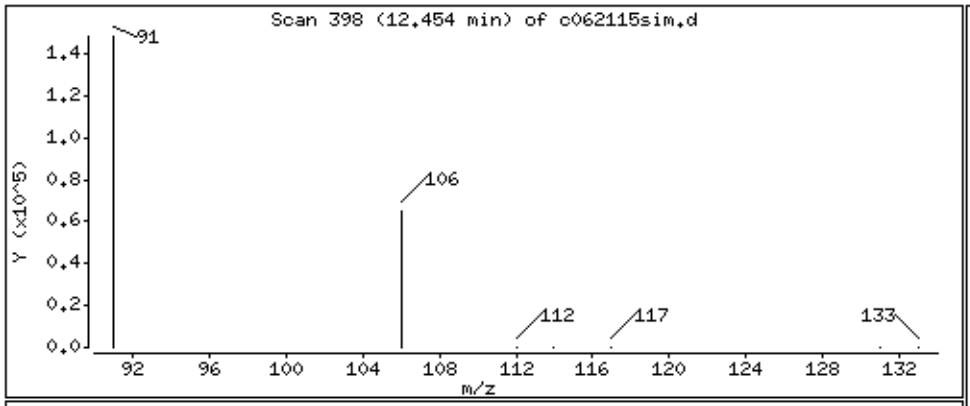
Operator: gm

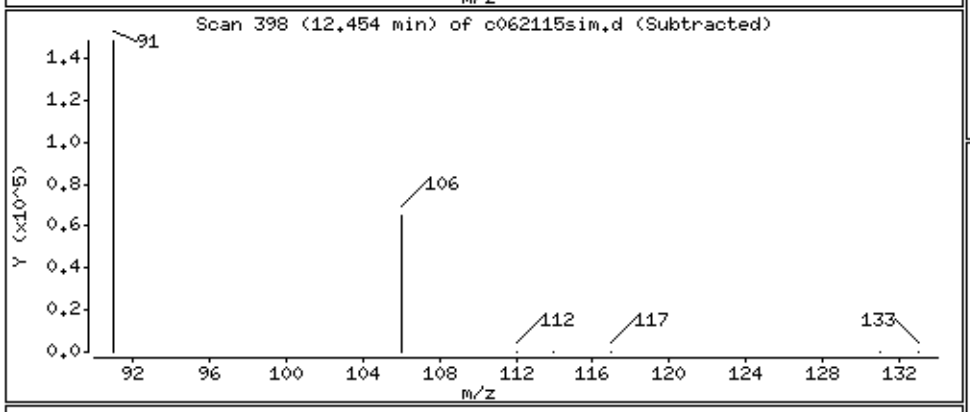
Column phase: DB-5.625

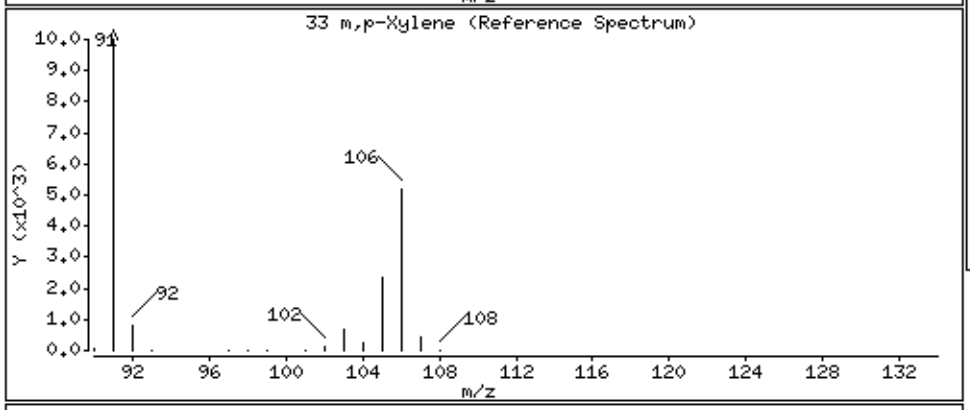
Column diameter: 0.25

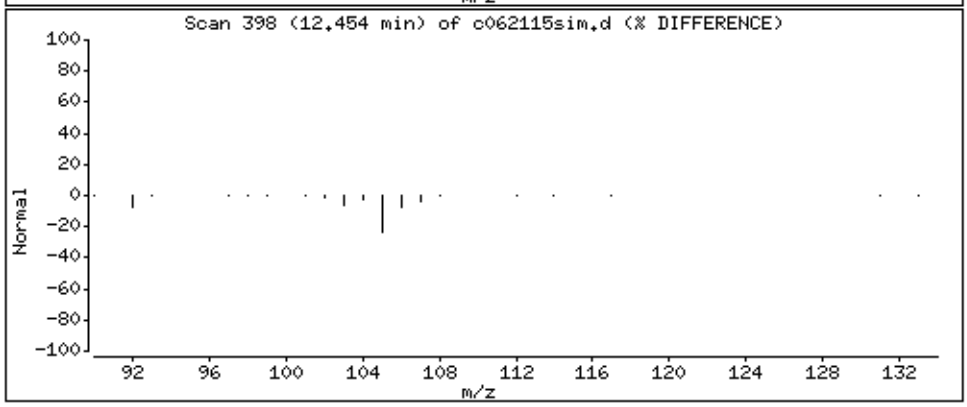
33 m,p-Xylene

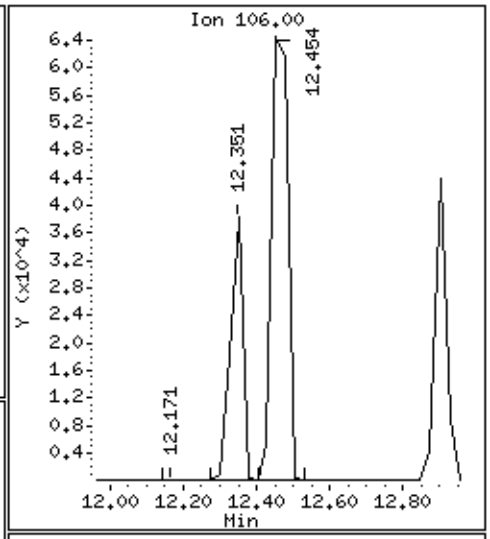
Concentration: 9.01448 ug

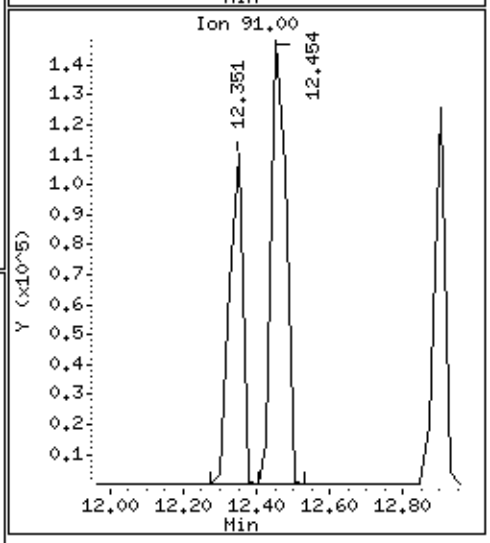












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

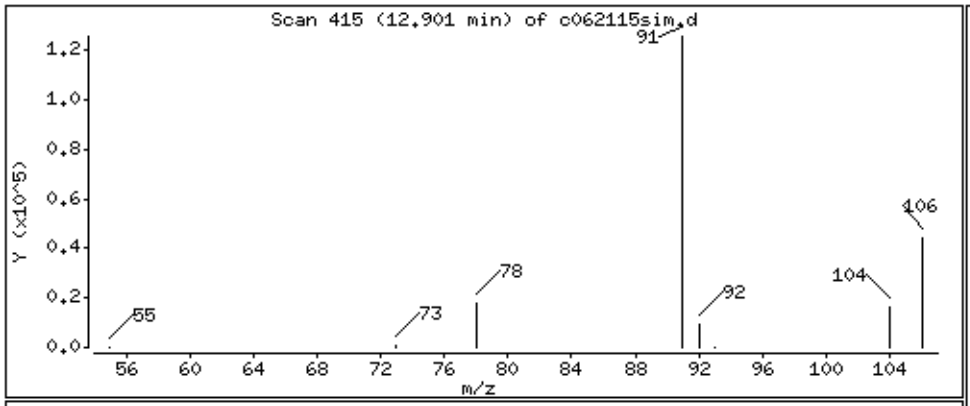
Operator: gm

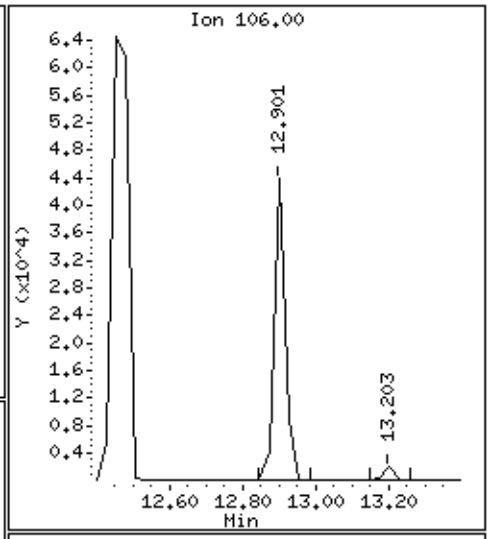
Column phase: DB-5.625

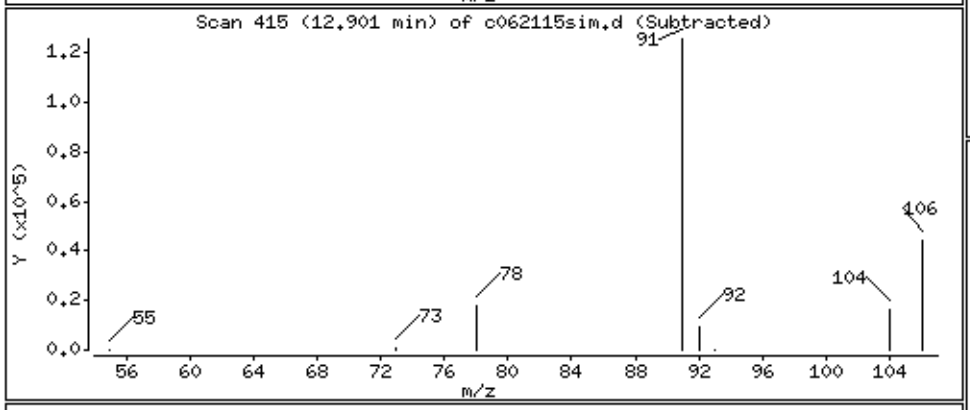
Column diameter: 0.25

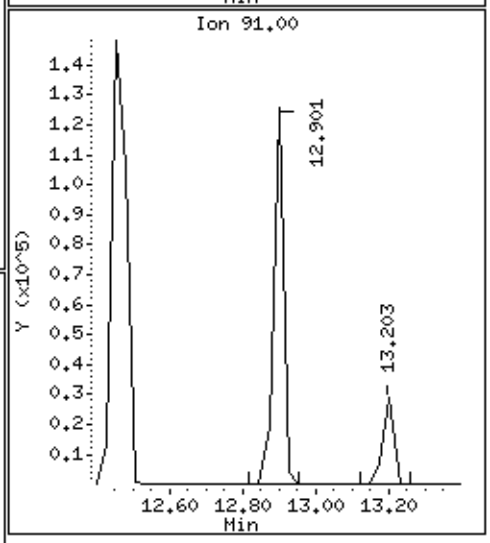
34 o-Xylene

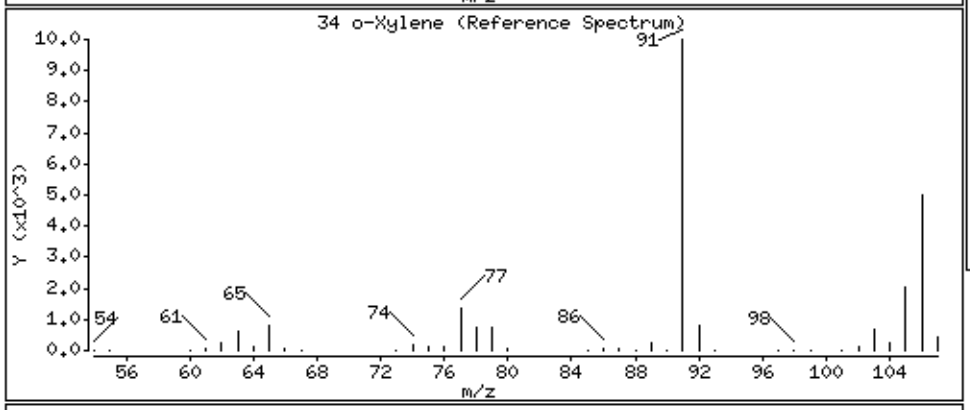
Concentration: 4.45079 ug

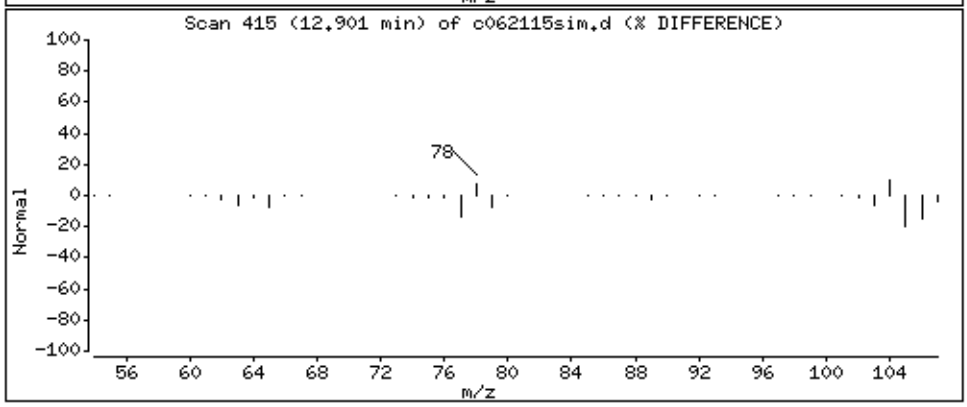












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

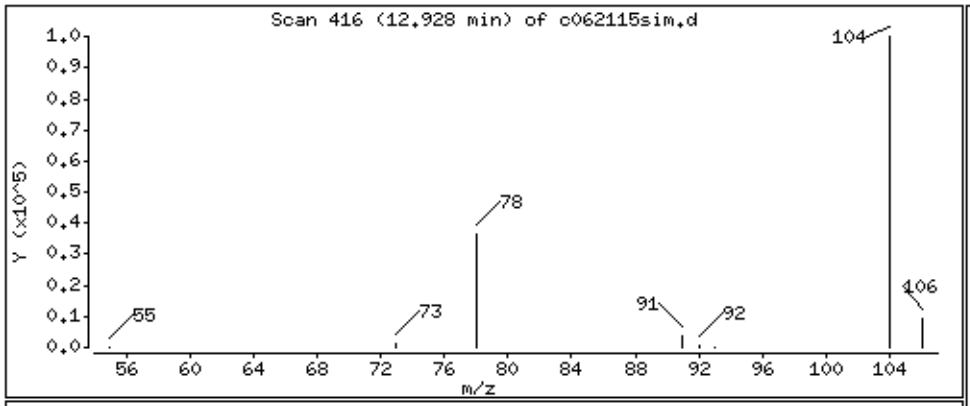
Operator: gm

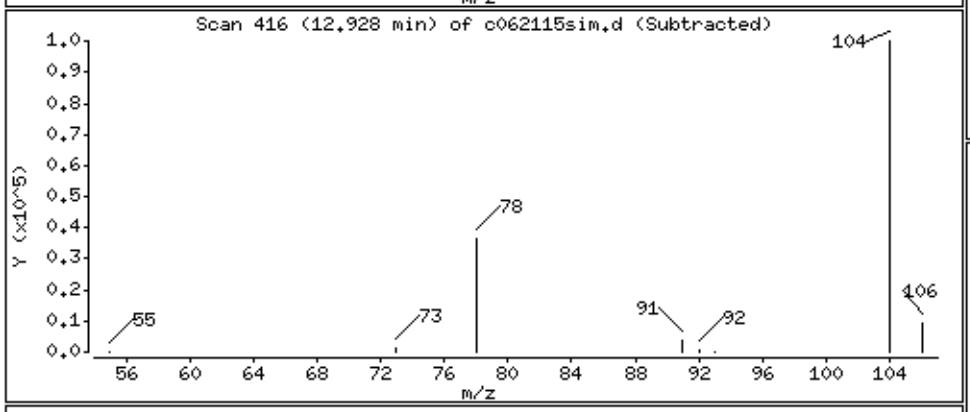
Column phase: DB-5.625

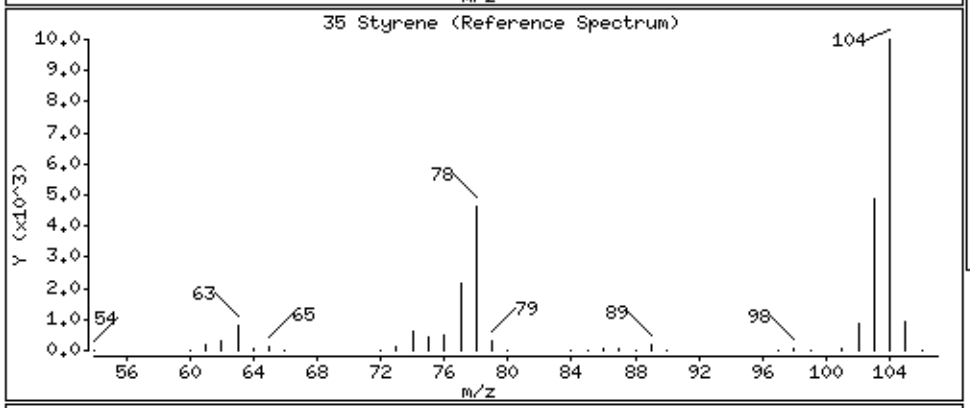
Column diameter: 0.25

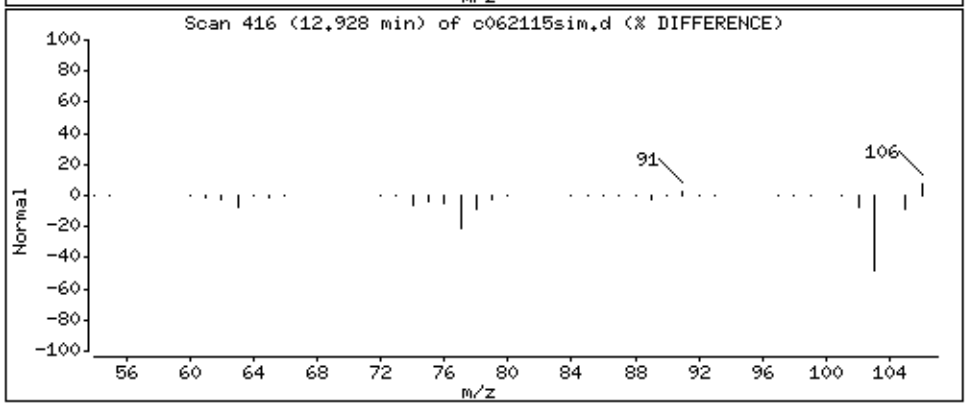
35 Styrene

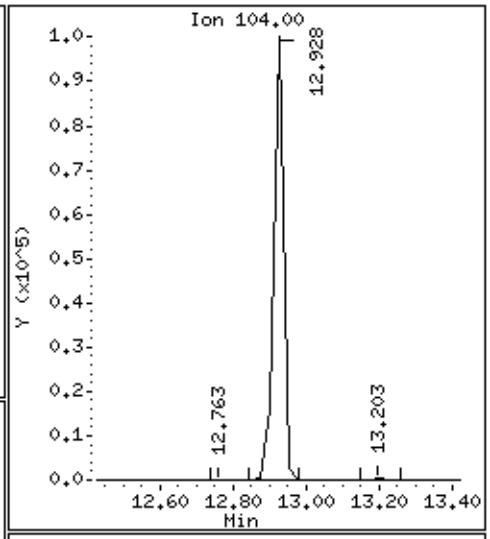
Concentration: 4.59180 ug

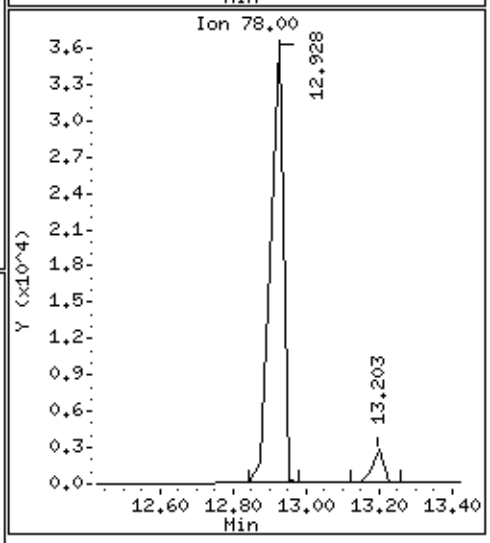












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

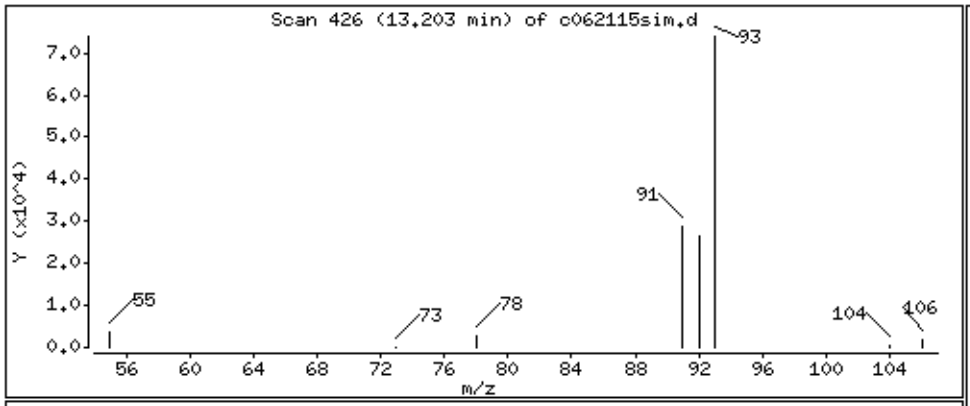
Operator: gm

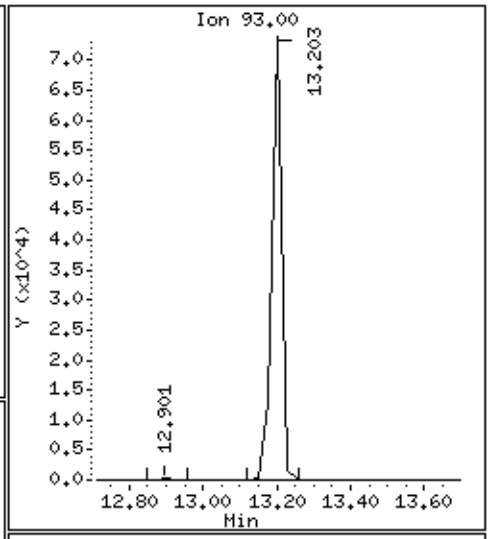
Column phase: DB-5.625

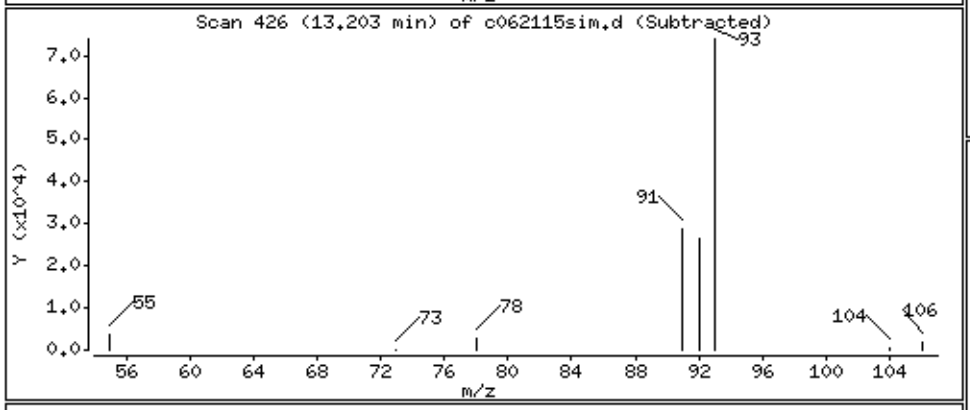
Column diameter: 0.25

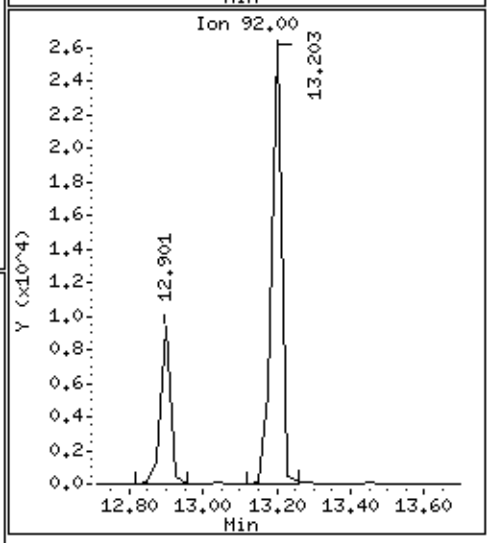
36 a-Pinene

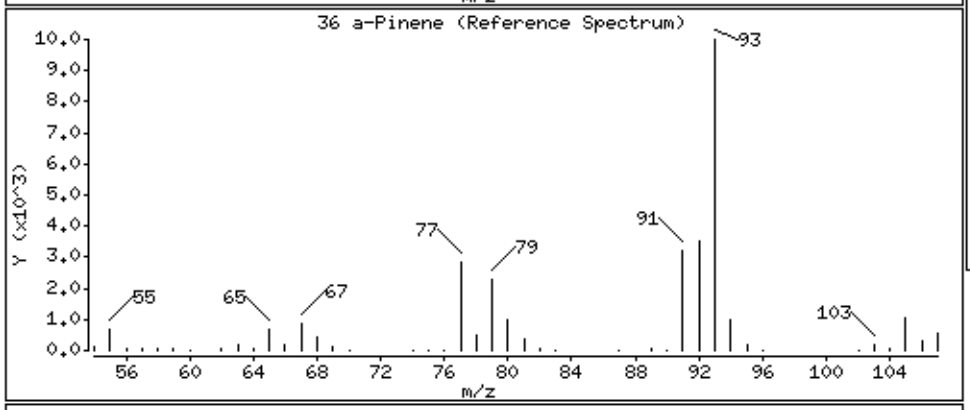
Concentration: 5.25902 ug

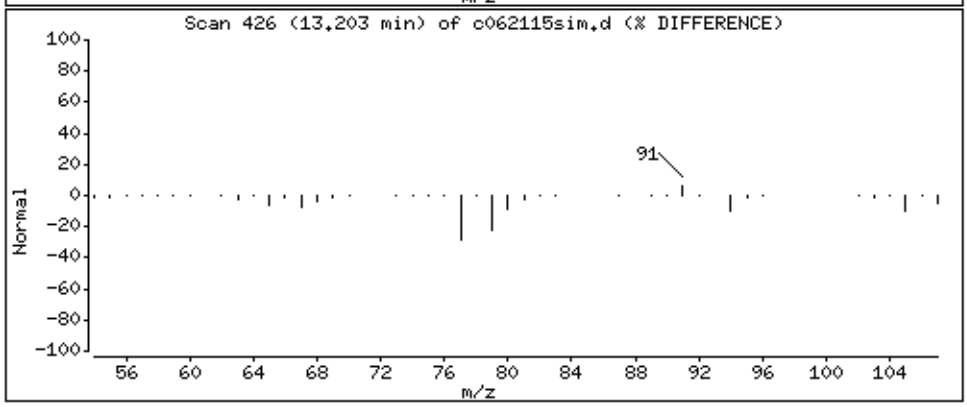












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

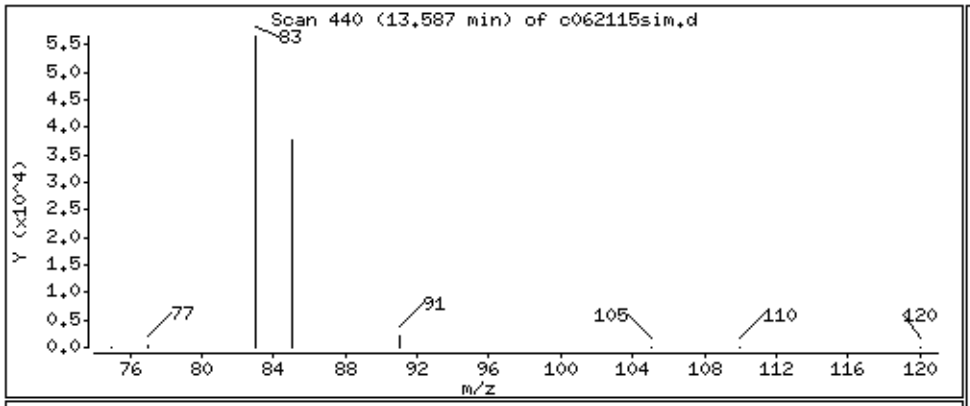
Operator: gm

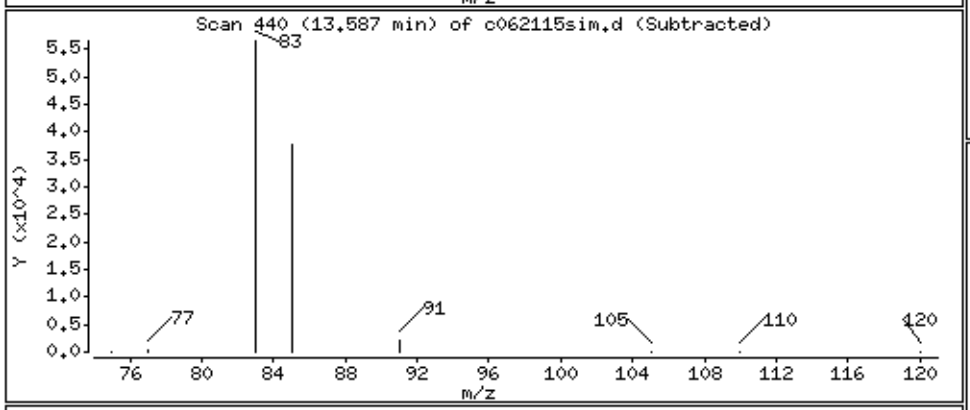
Column phase: DB-5.625

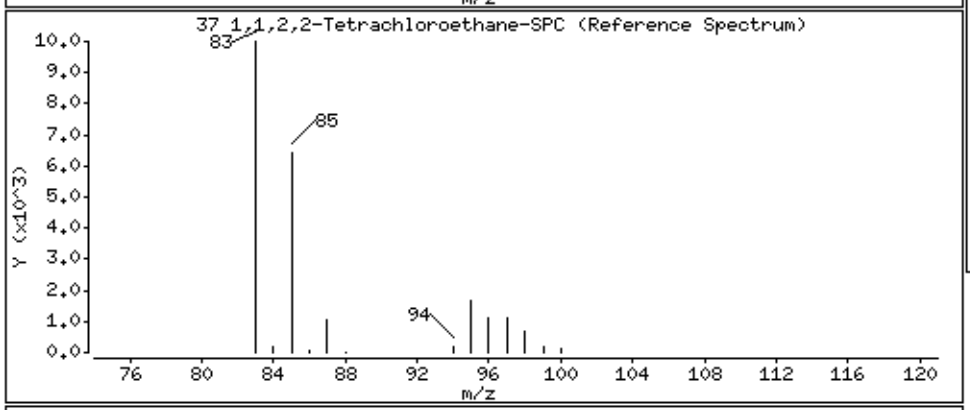
Column diameter: 0.25

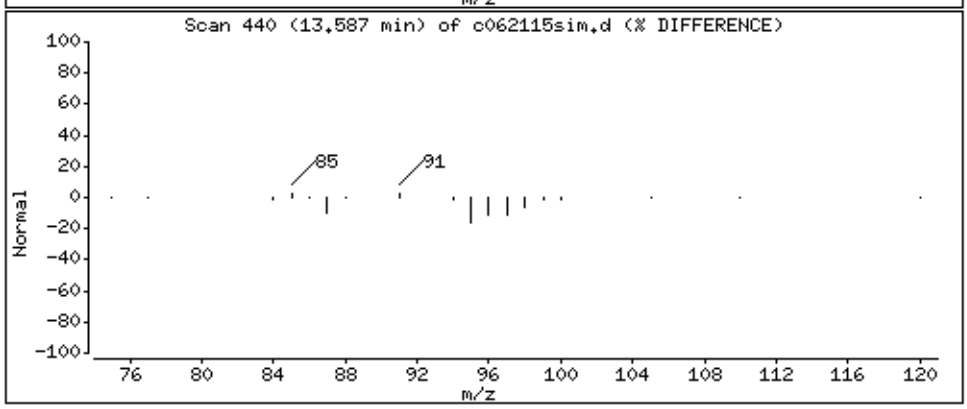
37 1,1,2,2-Tetrachloroethane-SPC

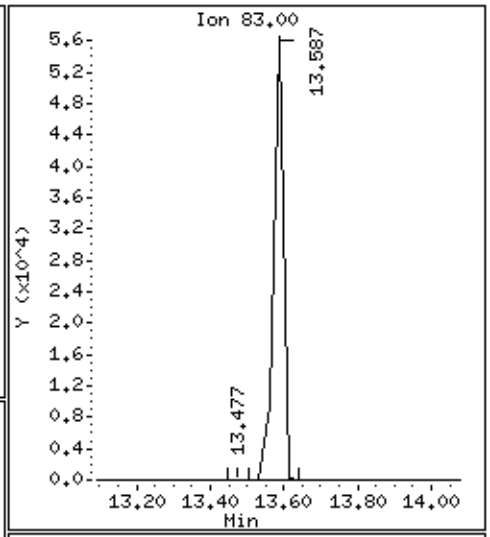
Concentration: 4.49676 ug

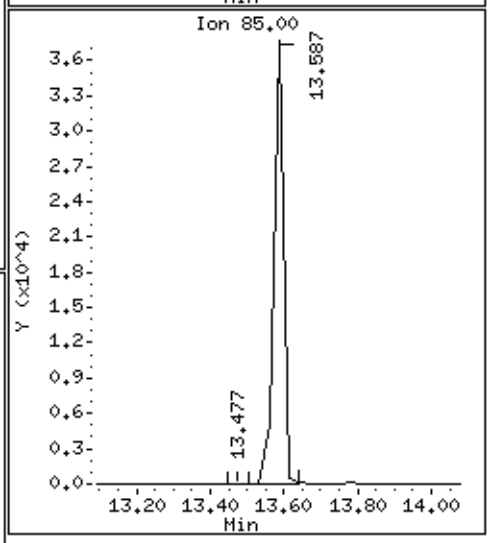












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

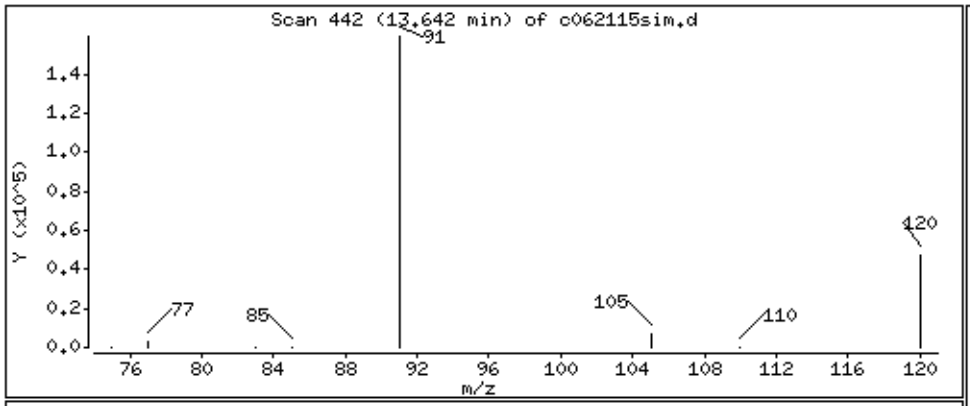
Operator: gm

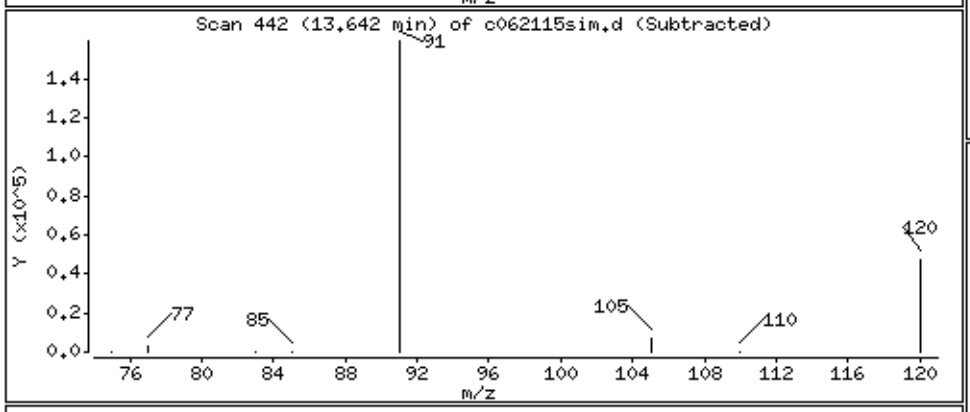
Column phase: DB-5.625

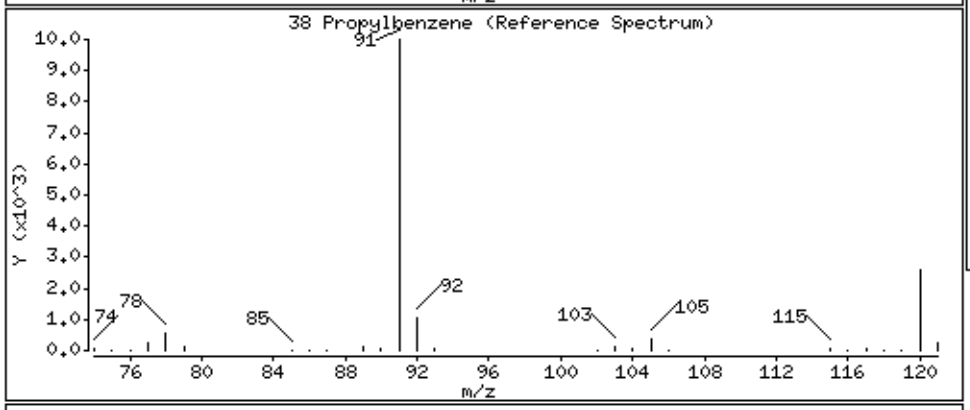
Column diameter: 0.25

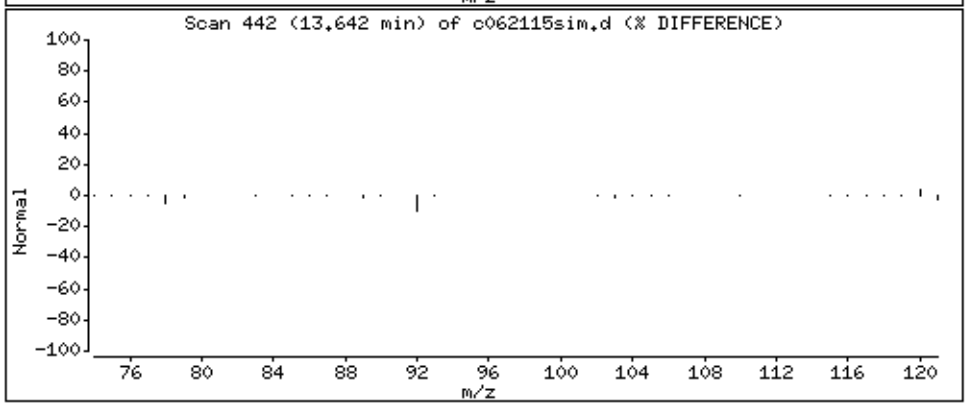
38 Propylbenzene

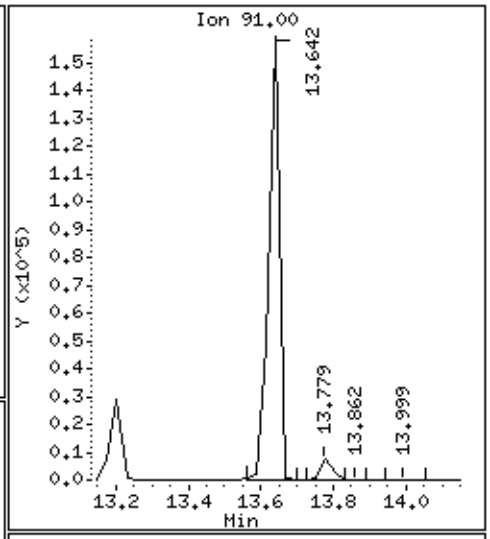
Concentration: 4.33404 ug

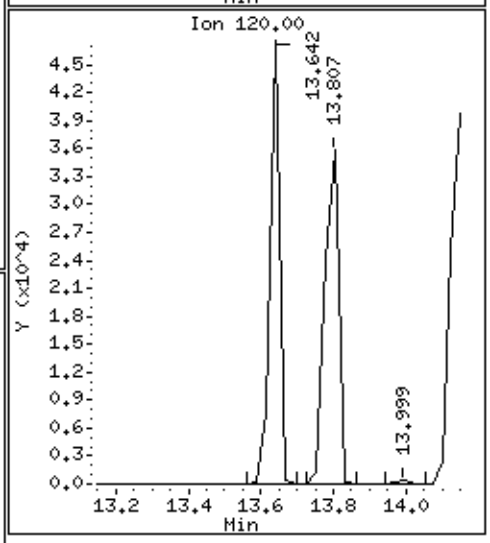












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

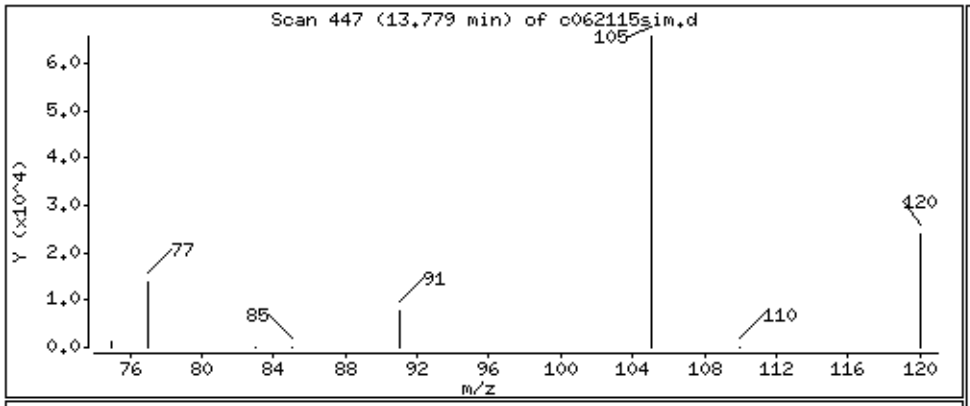
Operator: gm

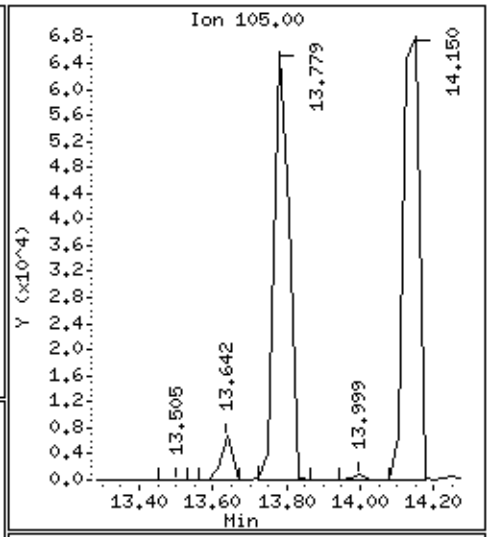
Column phase: DB-5.625

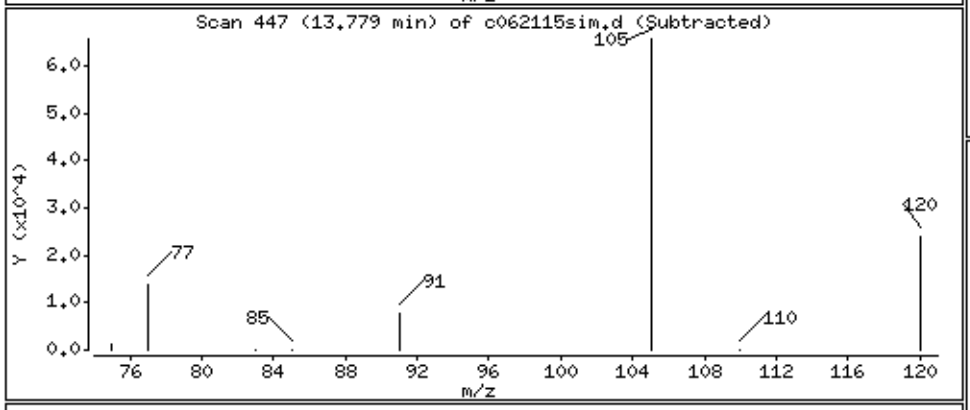
Column diameter: 0.25

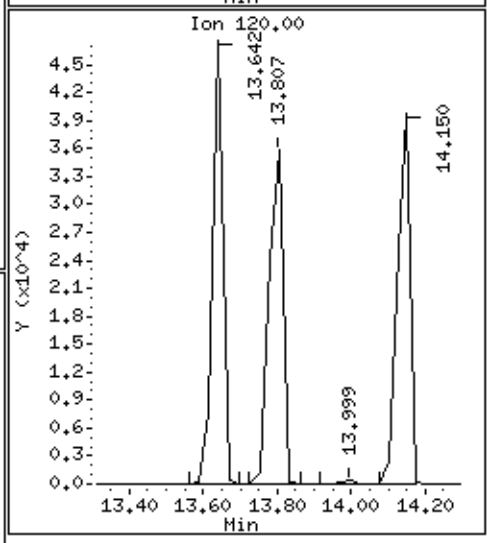
40 1,3,5-Trimethylbenzene

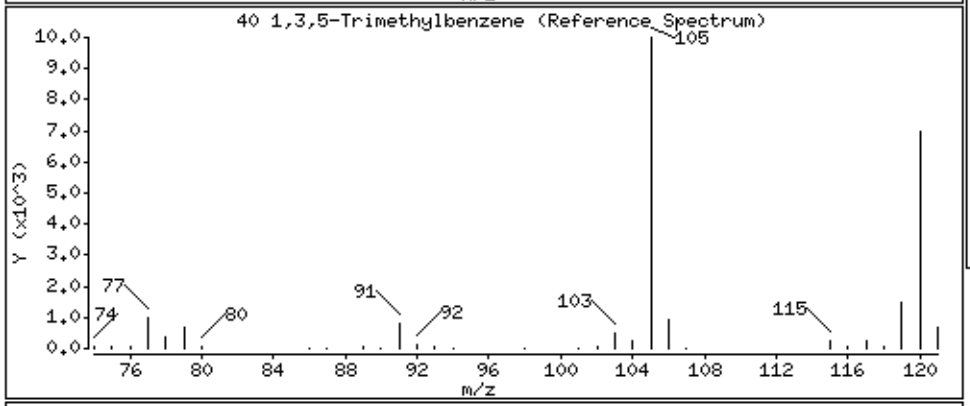
Concentration: 4.29887 ug

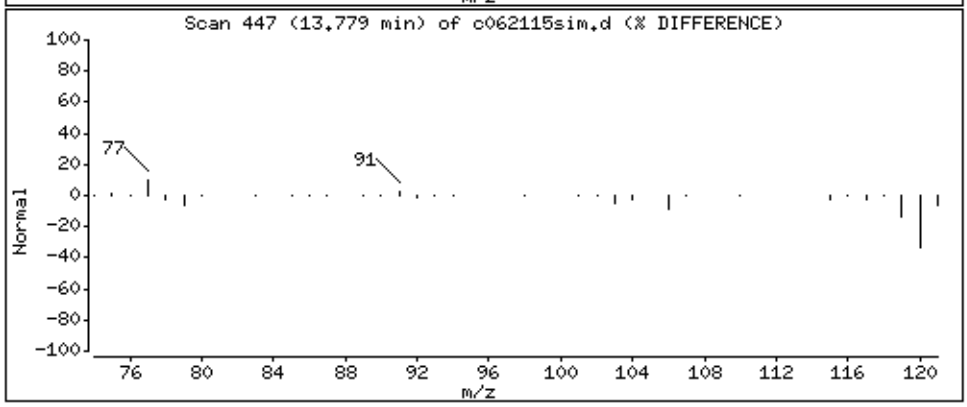












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

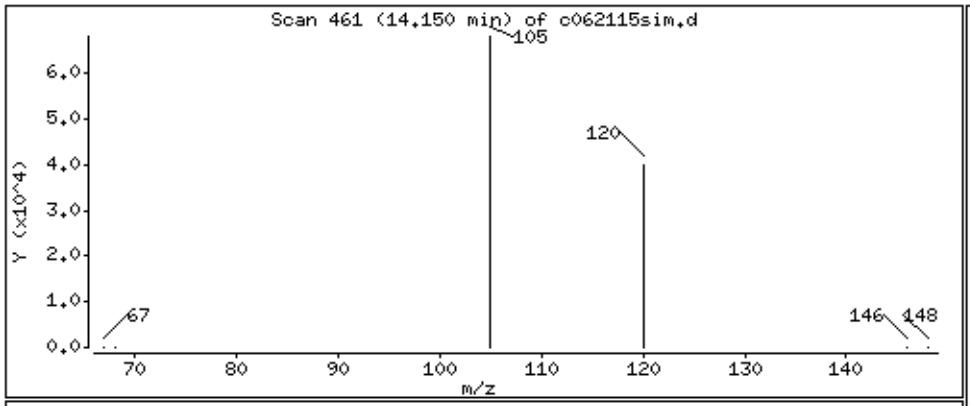
Operator: gm

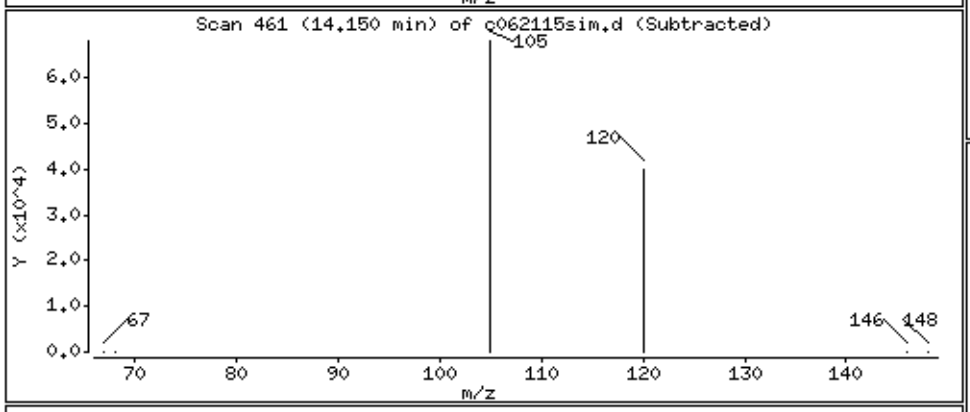
Column phase: DB-5.625

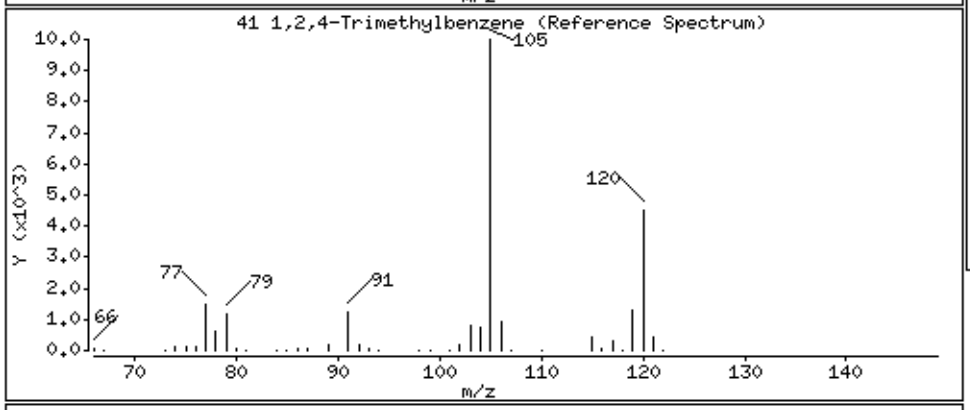
Column diameter: 0.25

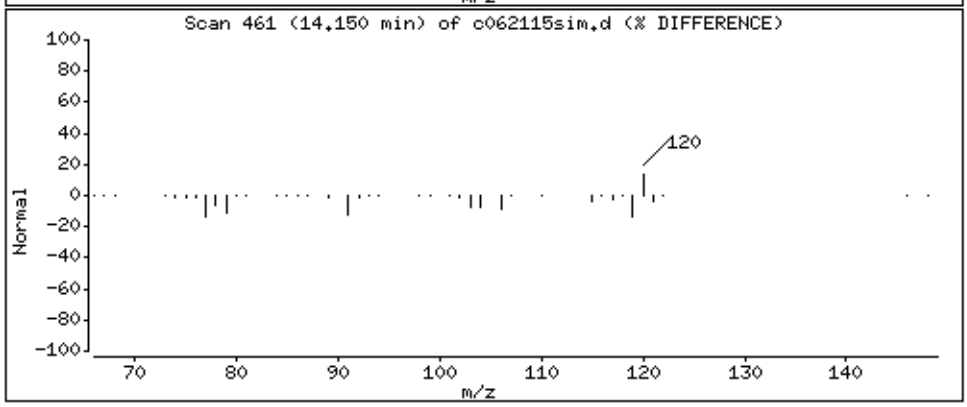
41 1,2,4-Trimethylbenzene

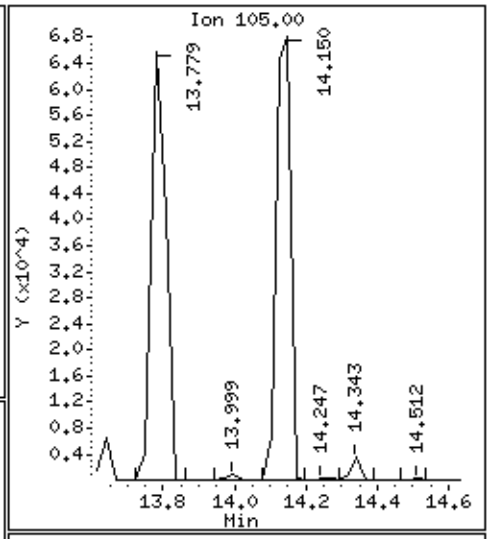
Concentration: 4.42186 ug

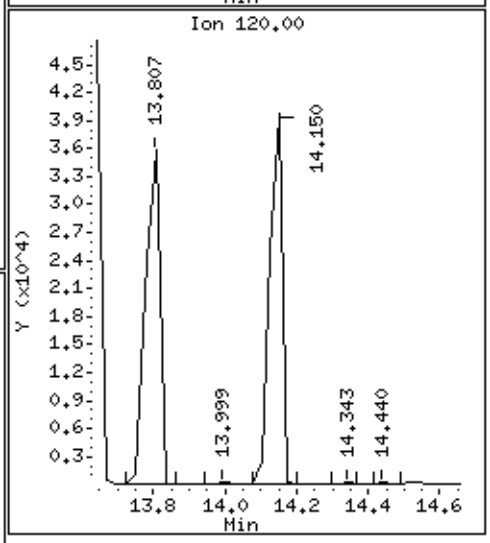












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

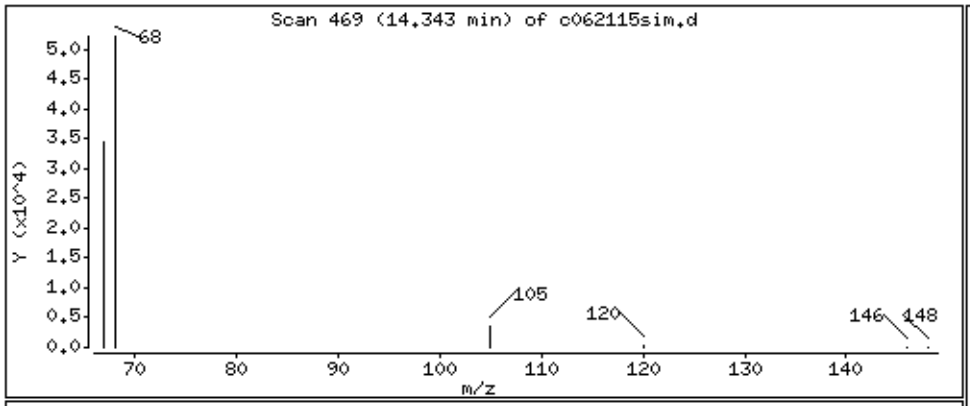
Operator: gm

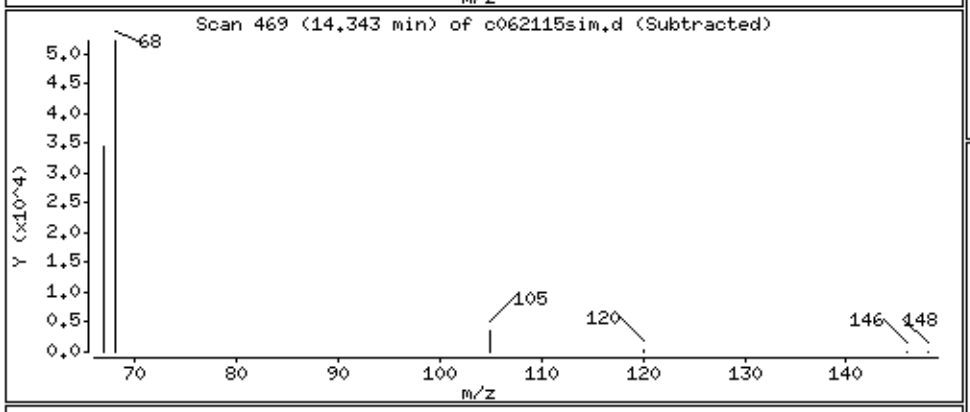
Column phase: DB-5.625

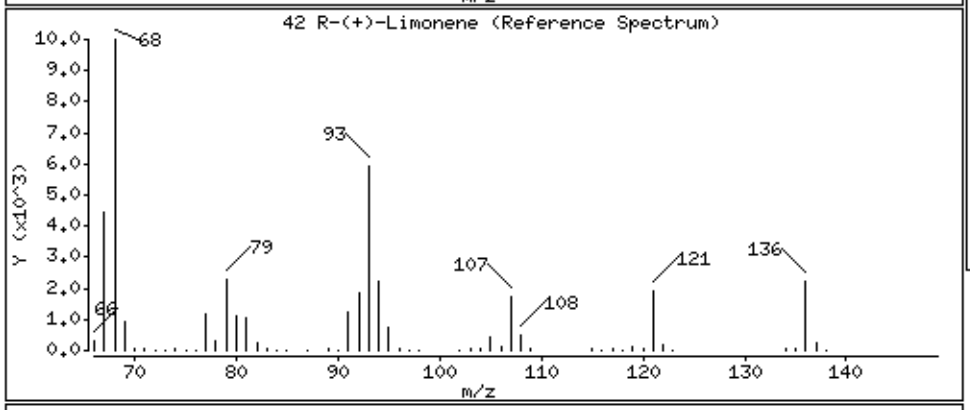
Column diameter: 0.25

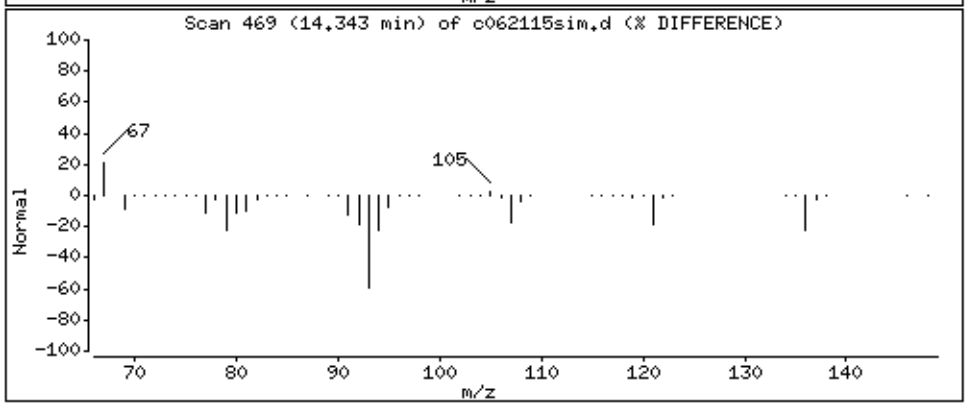
42 R-(+)-Limonene

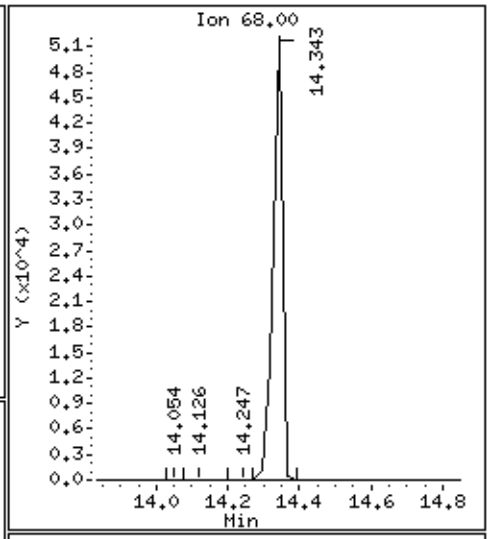
Concentration: 4.59865 ug

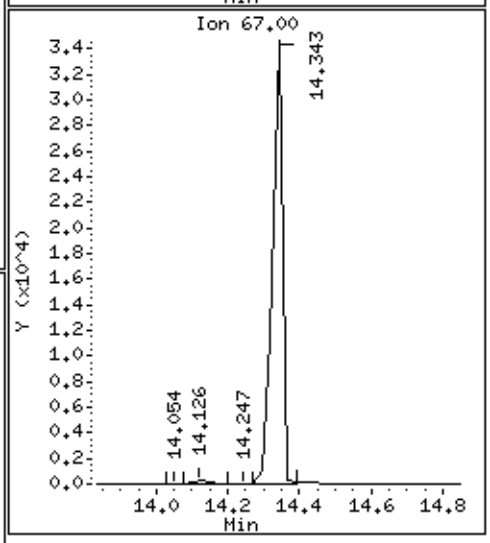












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

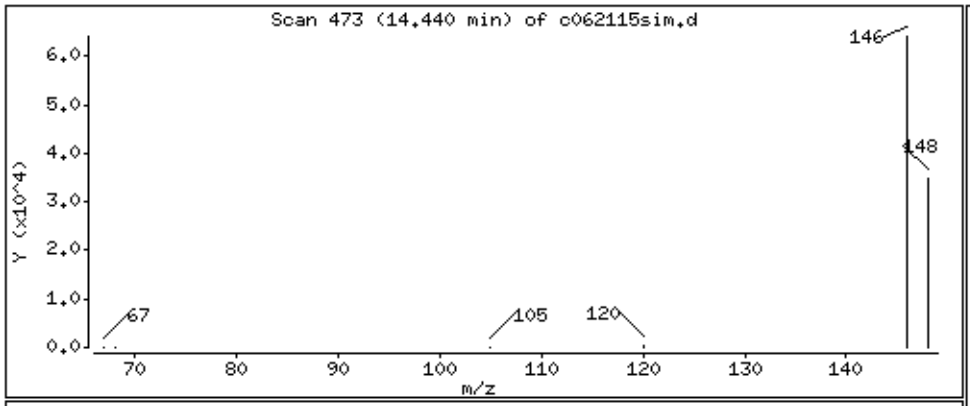
Operator: gm

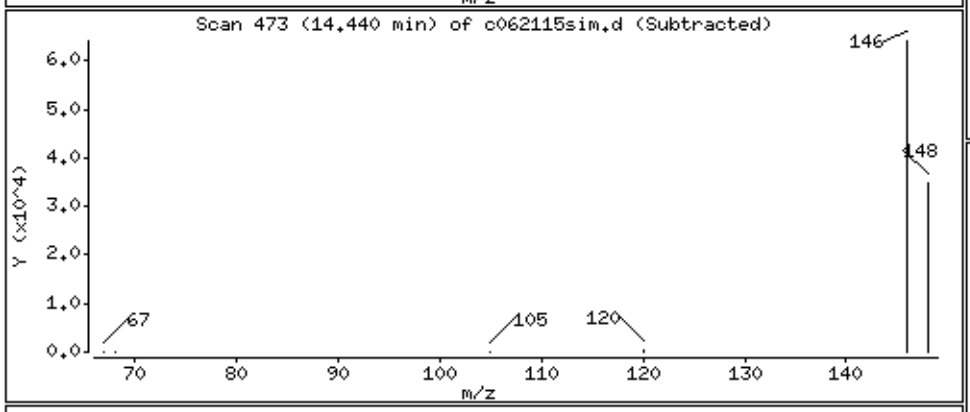
Column phase: DB-5.625

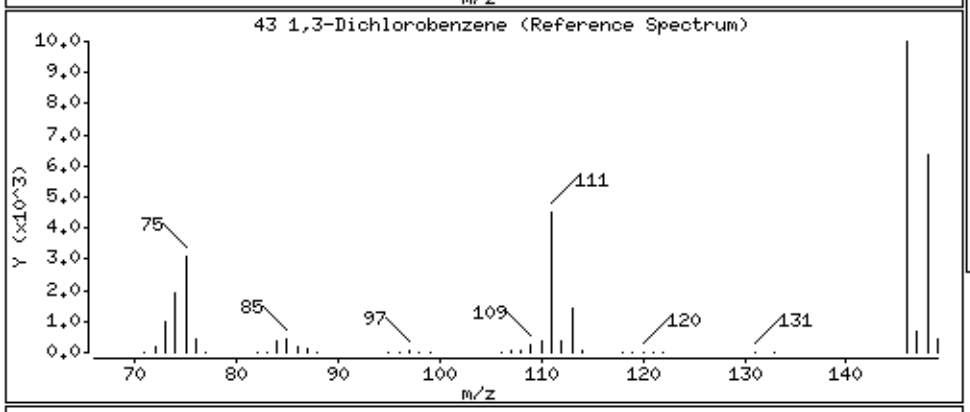
Column diameter: 0.25

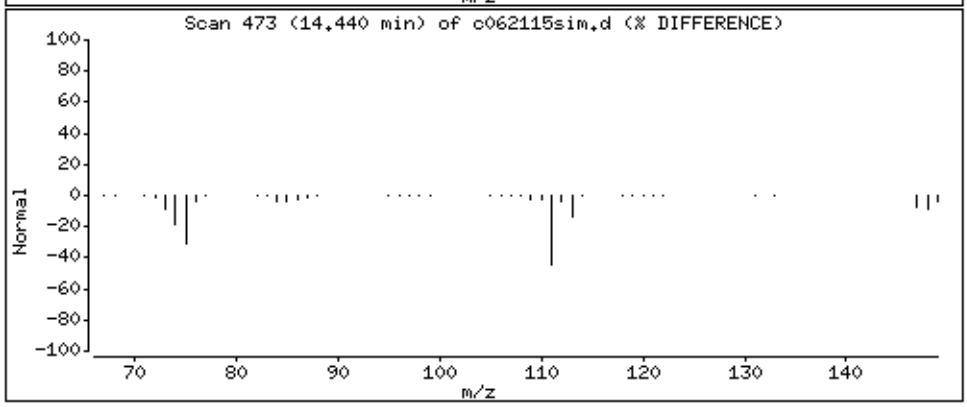
43 1,3-Dichlorobenzene

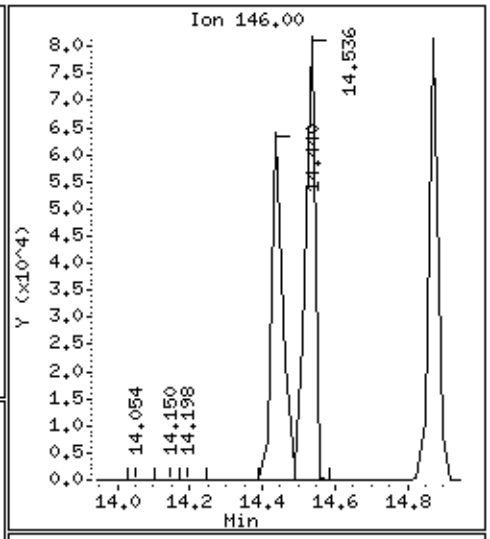
Concentration: 4.55746 ug

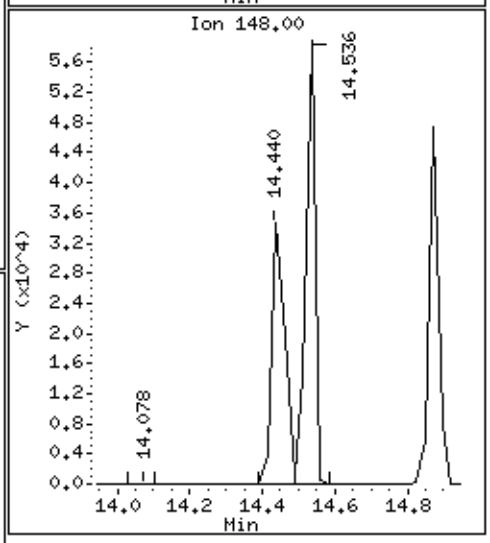












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

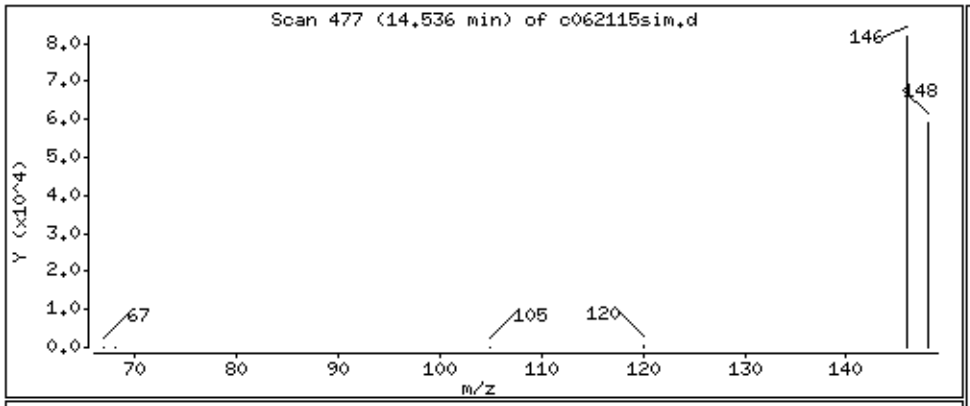
Operator: gm

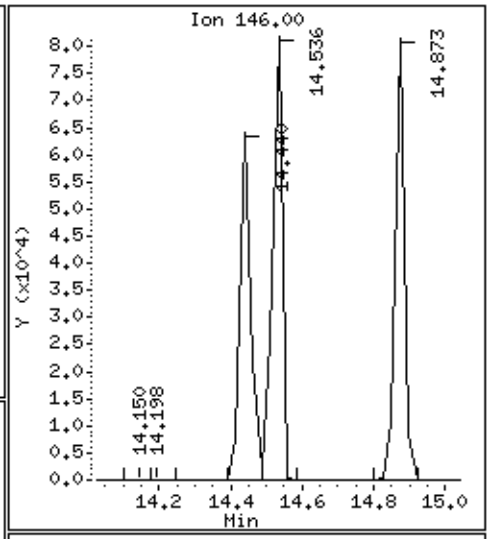
Column phase: DB-5.625

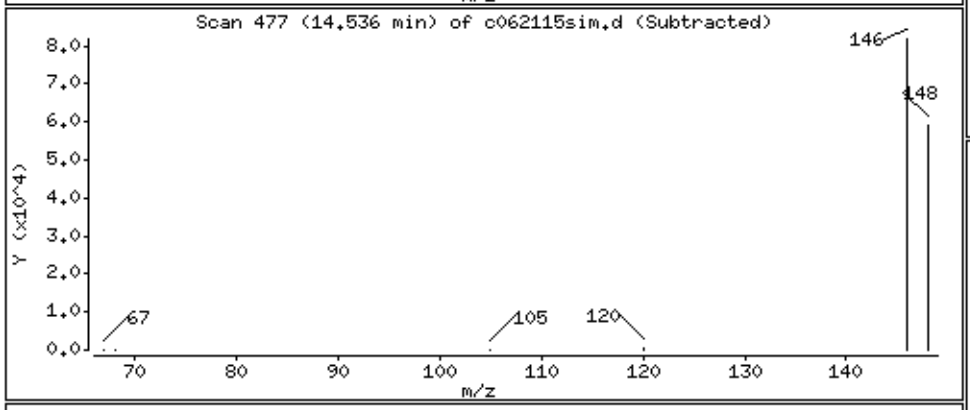
Column diameter: 0.25

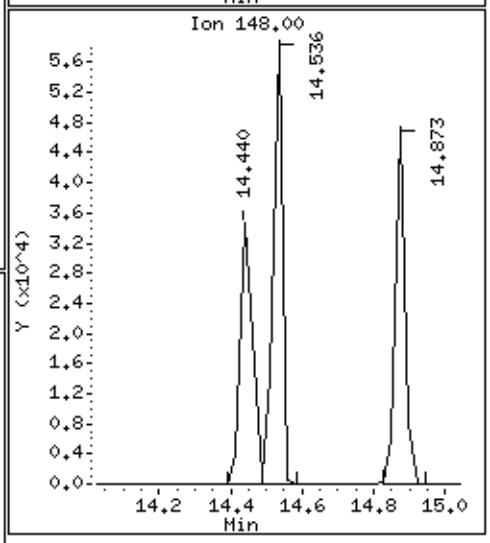
44 1,4-Dichlorobenzene

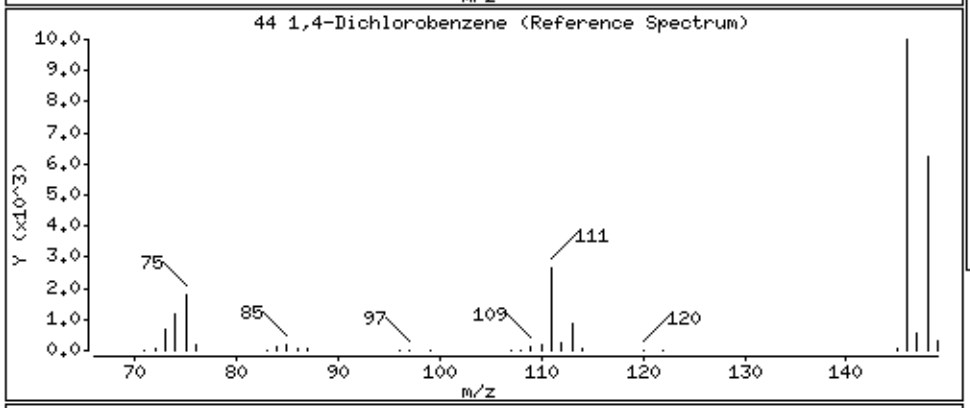
Concentration: 4.41230 ug

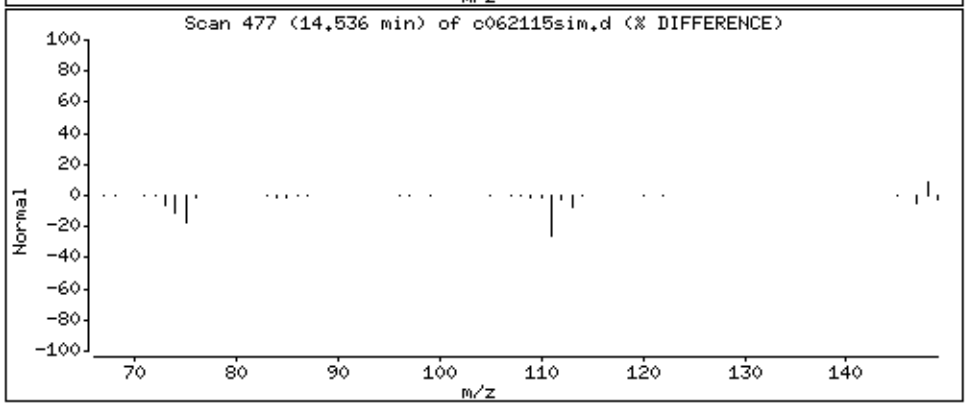












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

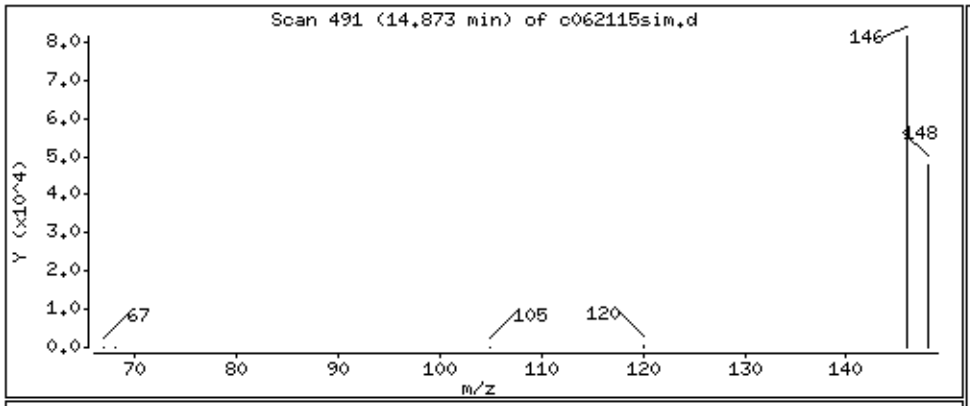
Operator: gm

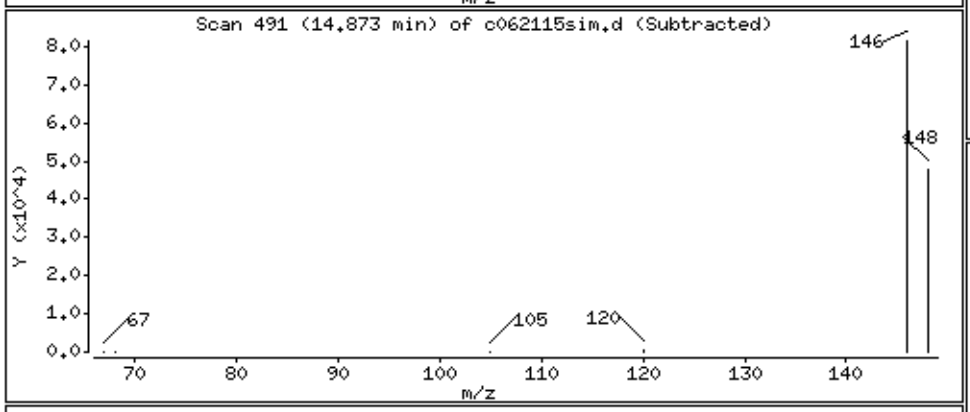
Column phase: DB-5.625

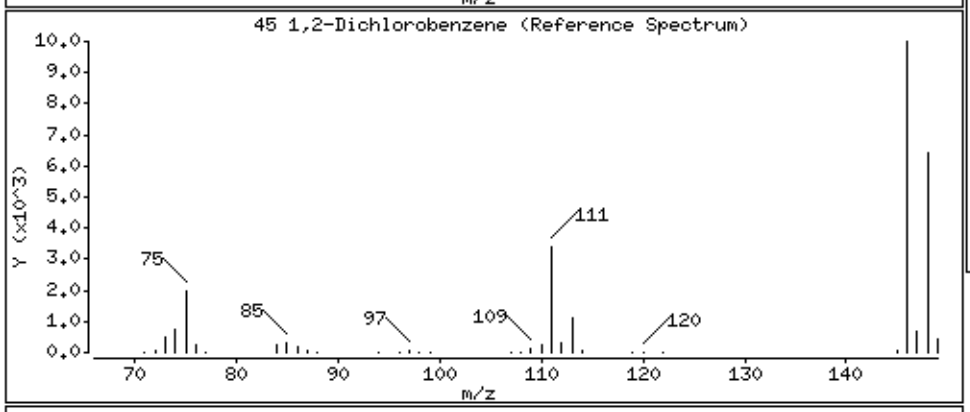
Column diameter: 0.25

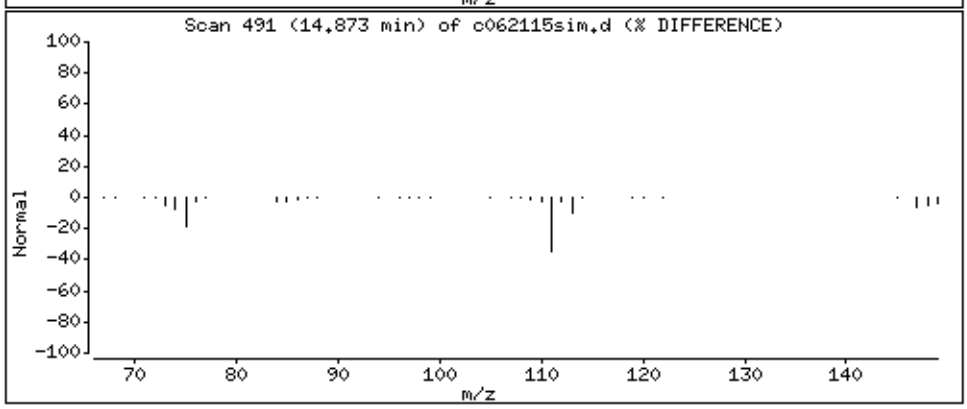
45 1,2-Dichlorobenzene

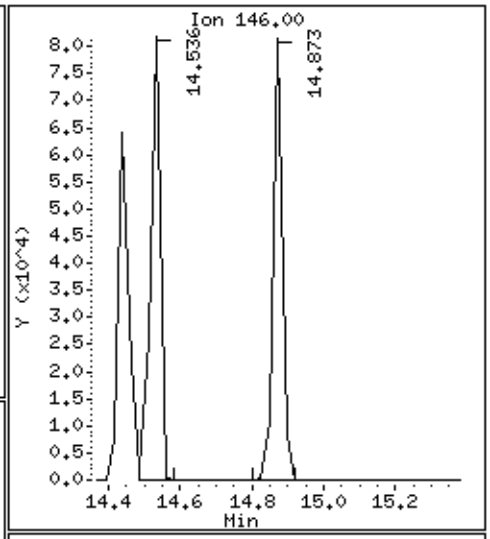
Concentration: 4.58139 ug

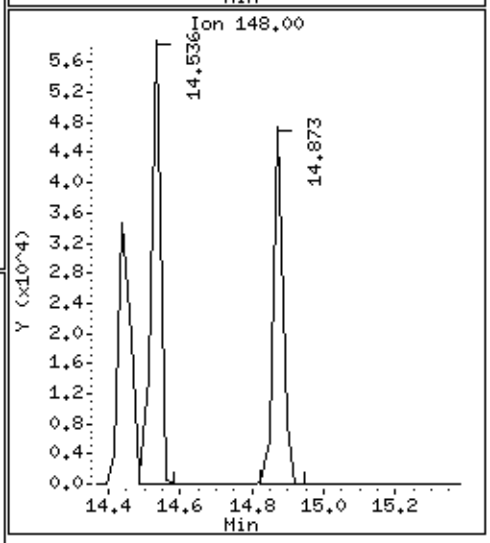












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

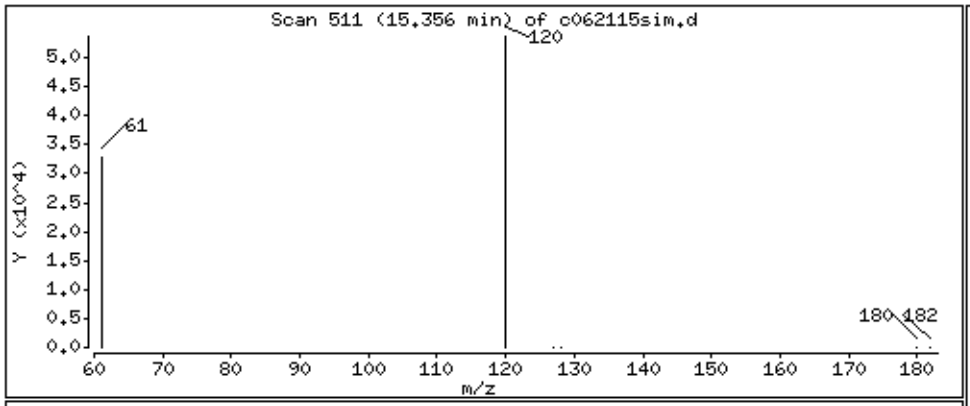
Operator: gm

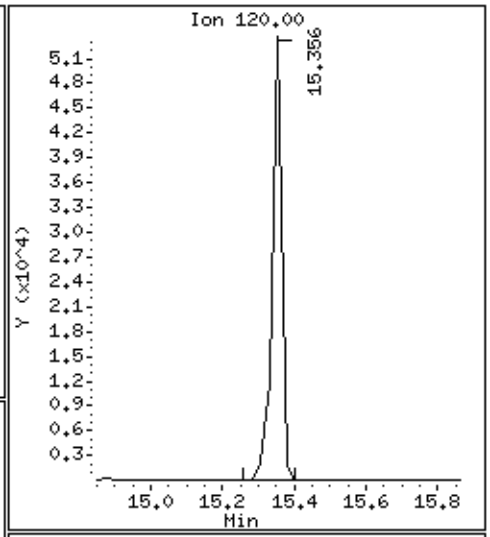
Column phase: DB-5.625

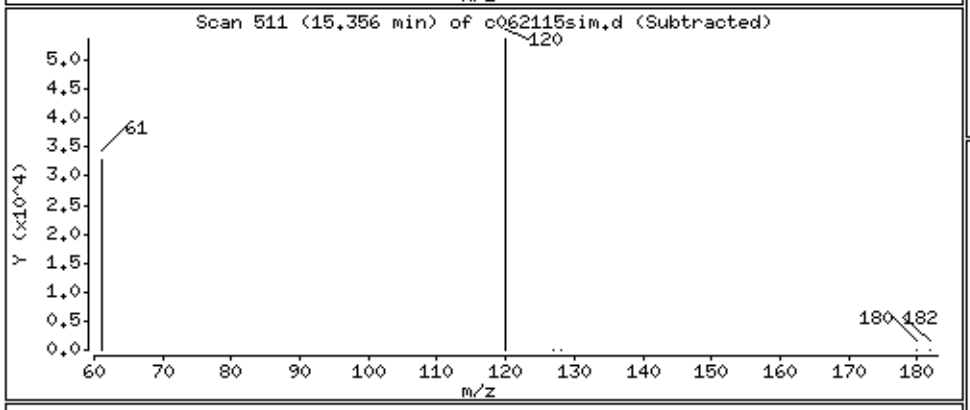
Column diameter: 0.25

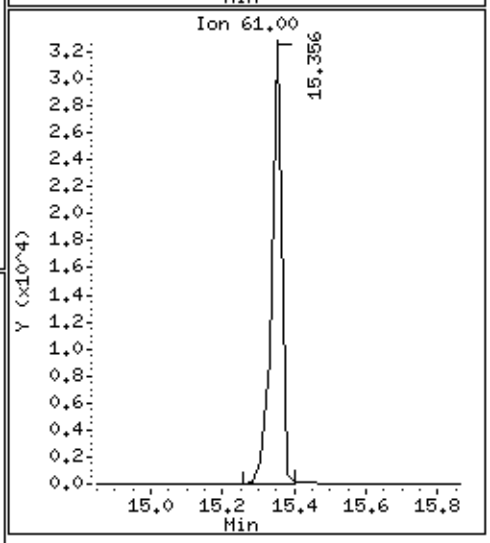
46 1,4-Dithiane

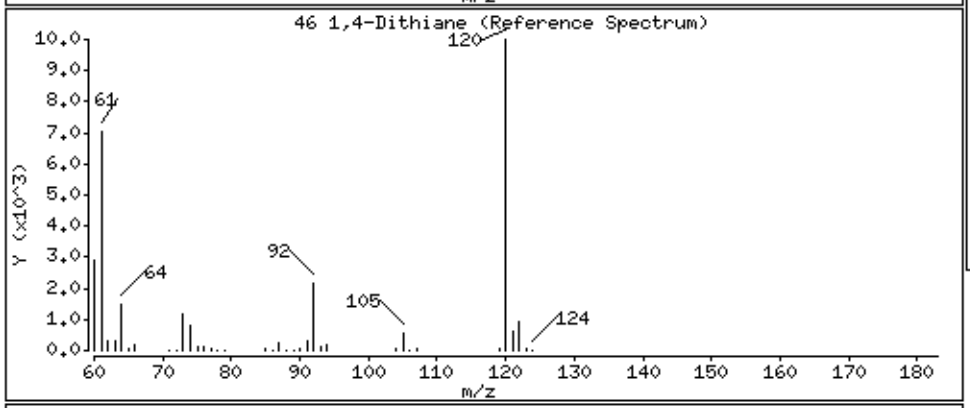
Concentration: 4.52051 ug

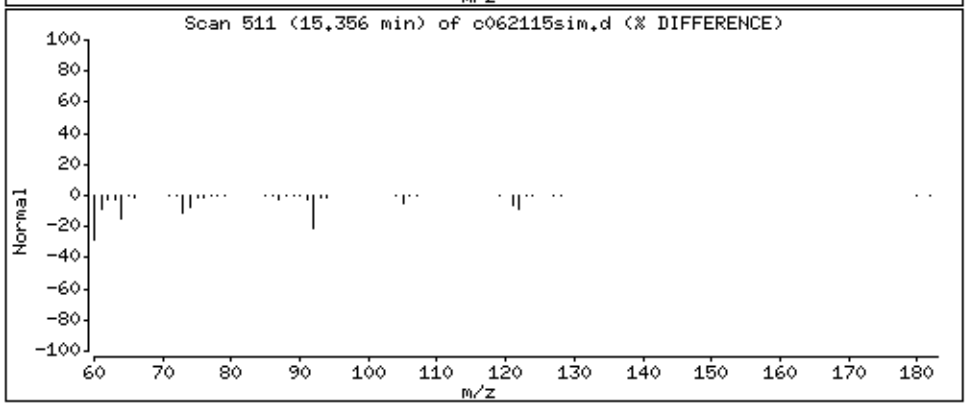












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

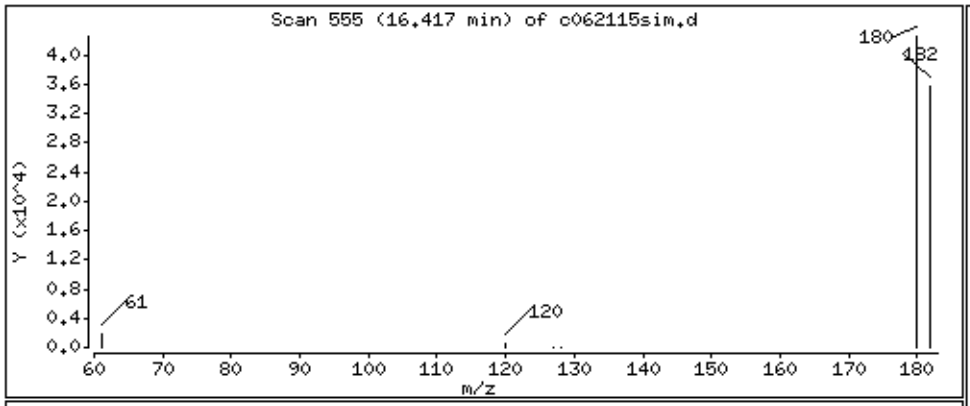
Operator: gm

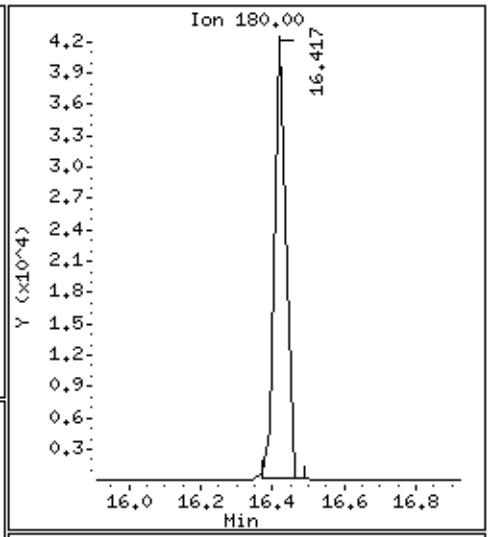
Column phase: DB-5.625

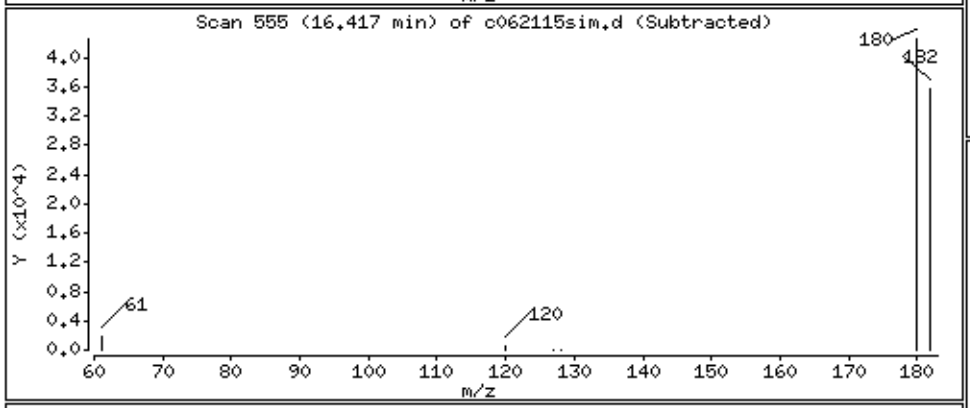
Column diameter: 0.25

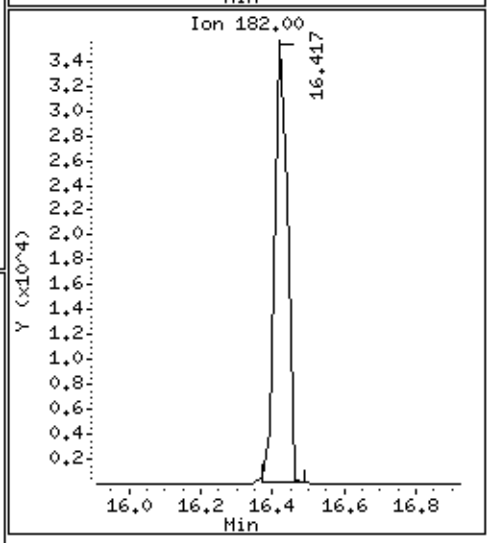
47 1,2,4-Trichlorobenzene

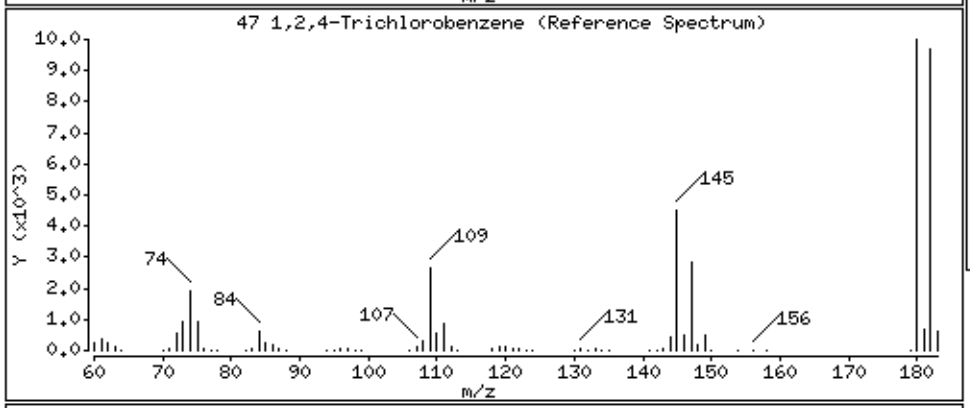
Concentration: 4.49463 ug

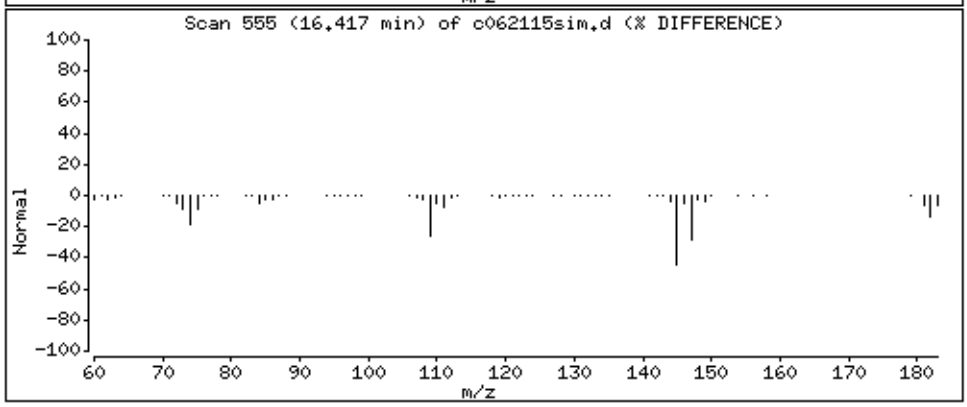












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

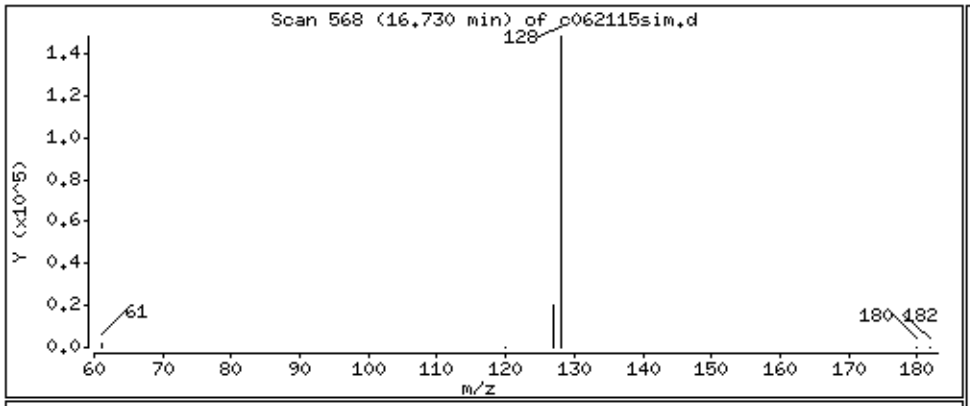
Operator: gm

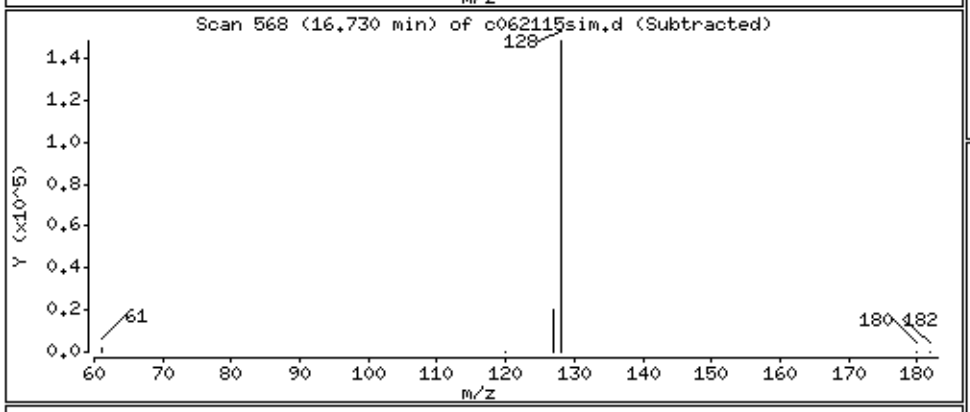
Column phase: DB-5.625

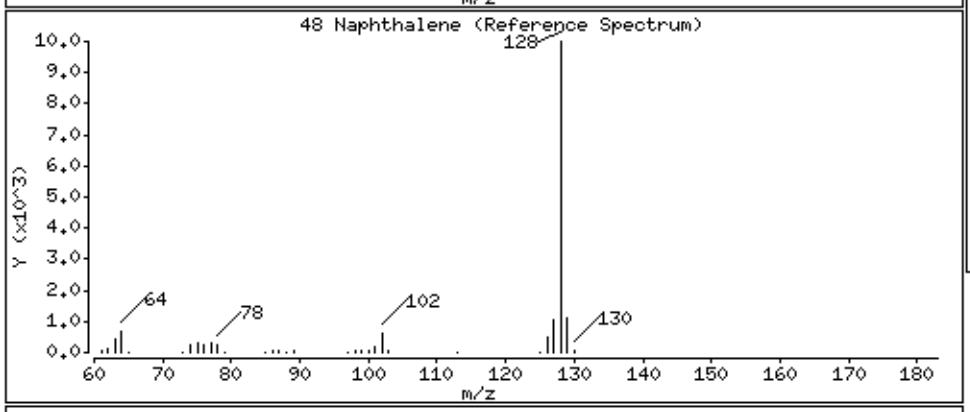
Column diameter: 0.25

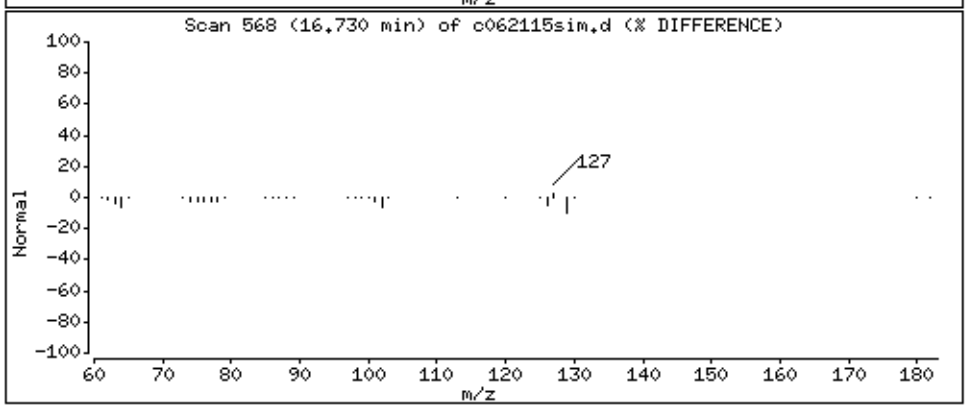
48 Naphthalene

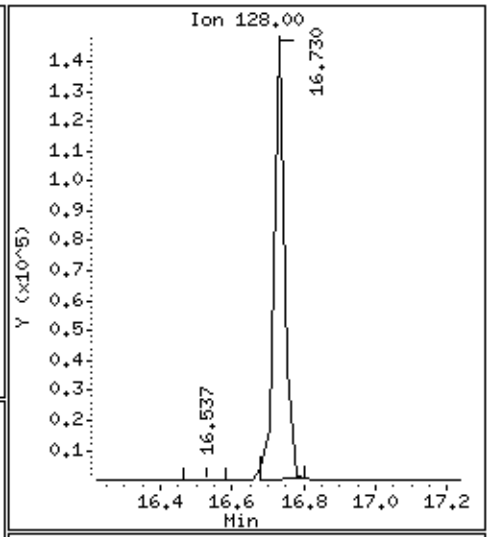
Concentration: 4.45606 ug

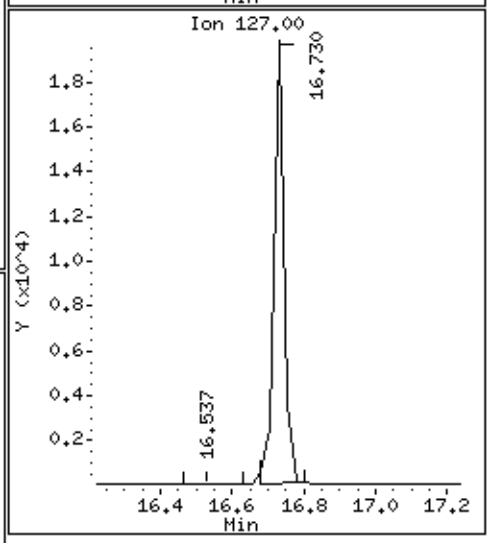












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

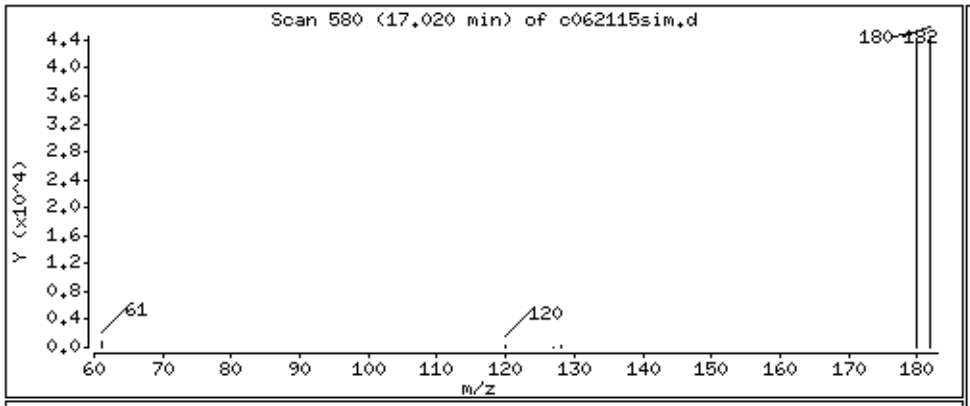
Operator: gm

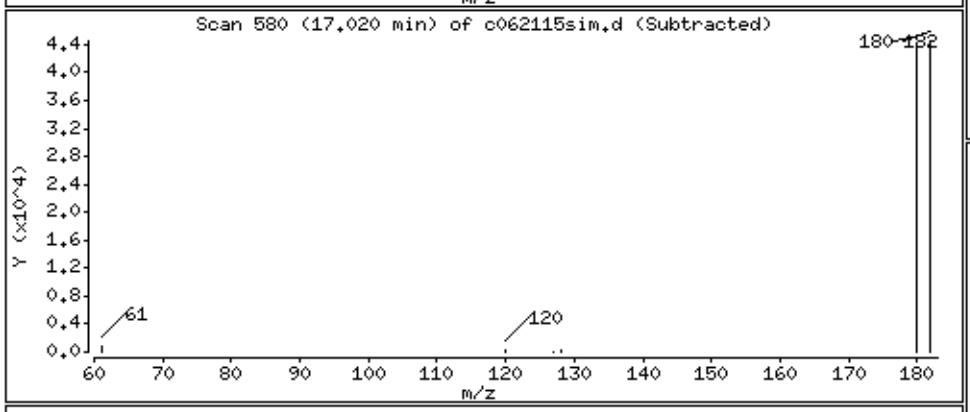
Column phase: DB-5.625

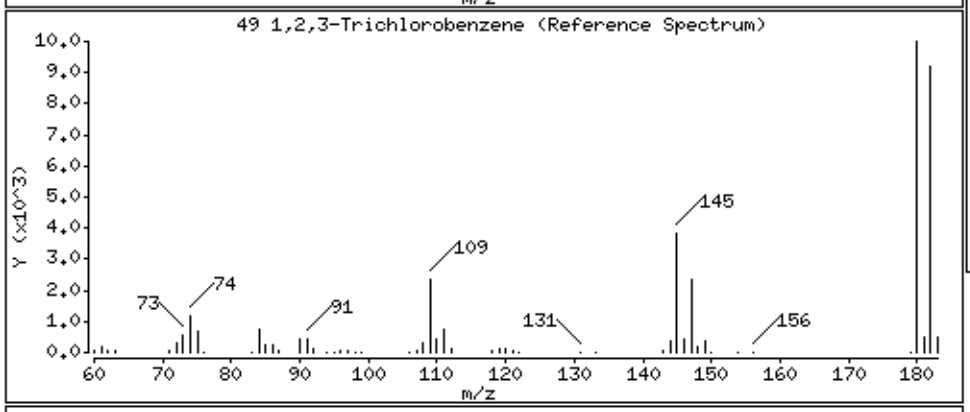
Column diameter: 0.25

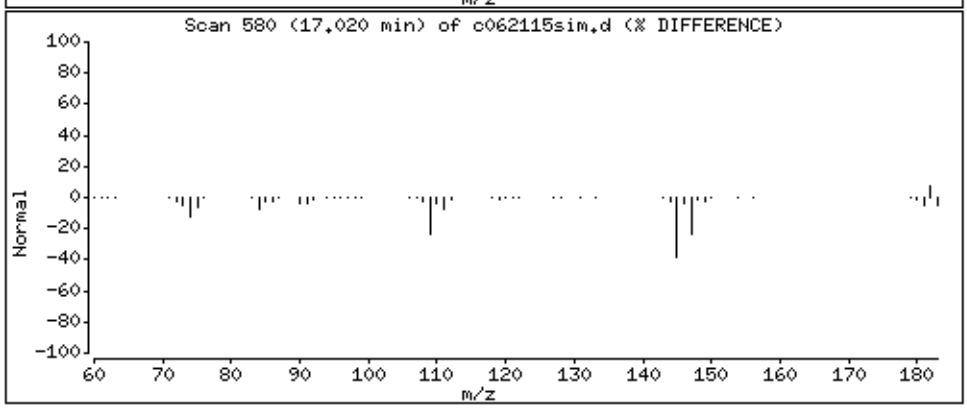
49 1,2,3-Trichlorobenzene

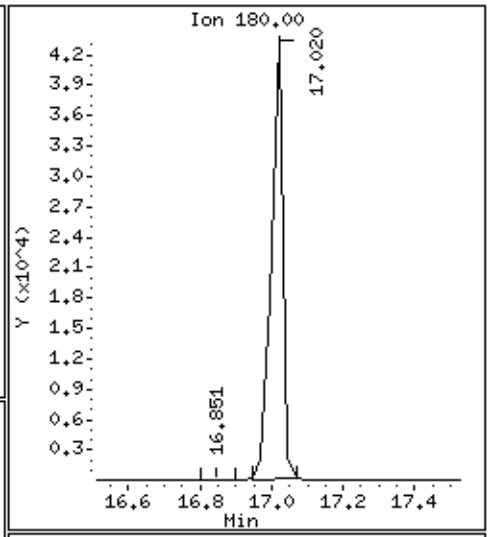
Concentration: 4.48866 ug

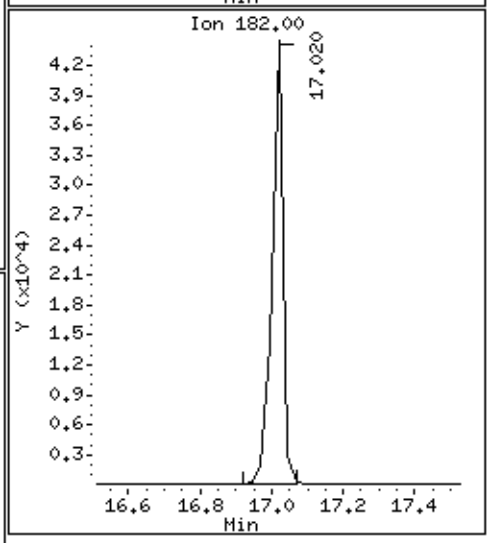












Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062103sim.d
Lab Smp Id: 2848-4-0.025 Client Smp ID: Level 1
Inj Date : 21-JUN-2017 08:04
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.025;Level 1
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 08:04 Cal File: c062103sim.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: mpxylene.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	298080	5.00000	
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	264171	5.00000	4.95975
33 m,p-Xylene	106	12.480	12.454	(1.140)	1345	0.05000	0.0484156

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062103sim.d
Lab Smp Id: 2848-4-0.025
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 1
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	298080	11.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062103sim.d

Page 1

Date : 21-JUN-2017 08:04

Client ID: Level 1

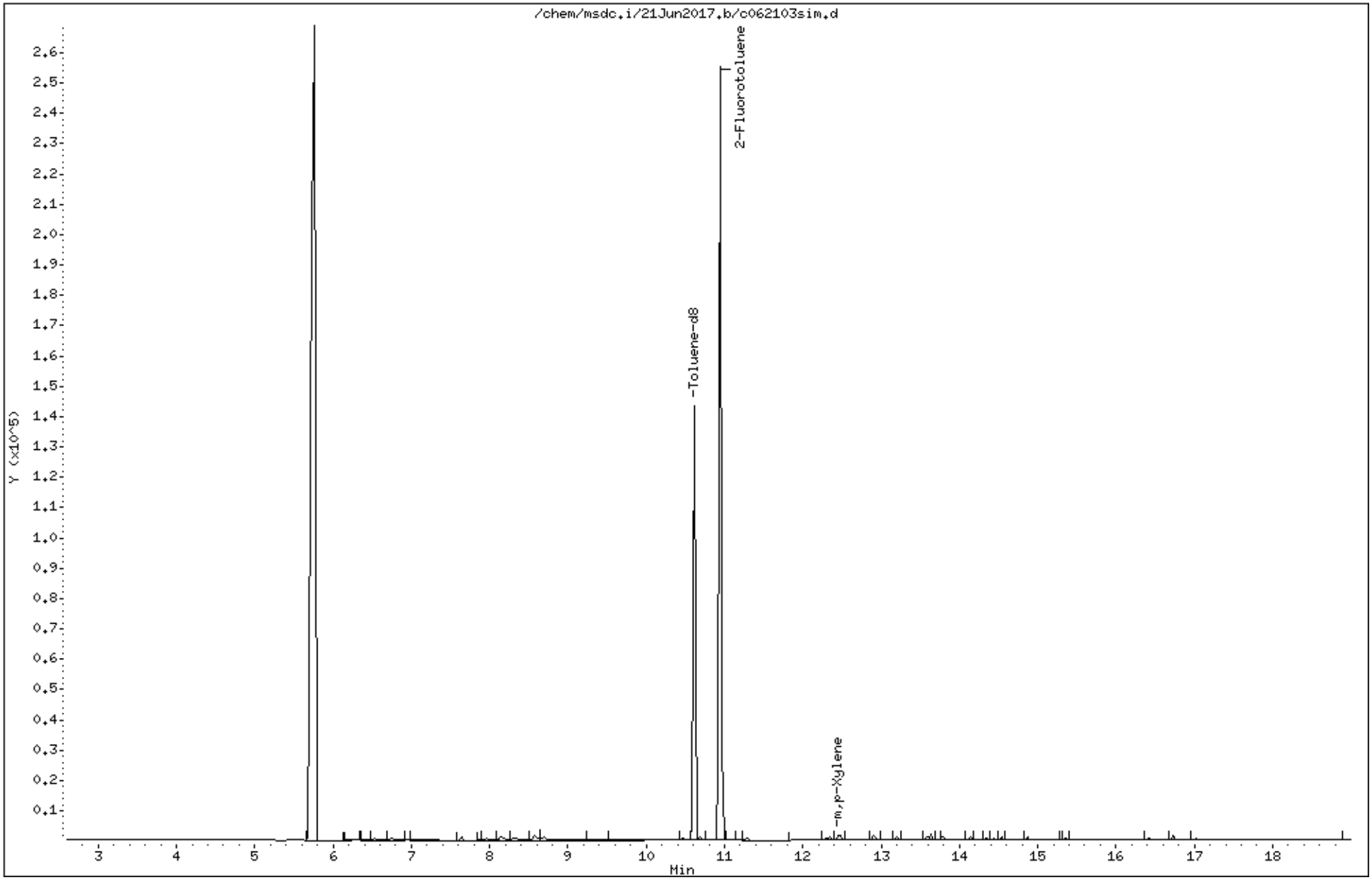
Instrument: msdc.i

Sample Info: ;2848-4-0.025;Level 1

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062104sim.d
Lab Smp Id: 2848-4-0.05 Client Smp ID: Level 2
Inj Date : 21-JUN-2017 08:30
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.05;Level 2
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 08:30 Cal File: c062104sim.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0.05.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
7 MTBE	73	6.555	6.555	(0.599)	1599	0.05000	0.0468389
9 Hexane	57	6.775	6.775	(0.619)	1692	0.05000	0.0523755
10 Halothane	117	6.960	6.961	(0.636)	408	0.05000	0.0467130
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	1328	0.05000	0.0525302
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	664	0.05000	0.0494651
13 2-Butanone	72	7.662	7.662	(0.700)	427	0.05000	0.0523066
15 Chloroform-CCC	83	7.956	7.956	(0.727)	1058	0.05000	0.0539232
16 Cyclohexane	84	8.172	8.172	(0.747)	1071	0.05000	0.0522041
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	1065	0.05000	0.0479161
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	1050	0.05000	0.0501453
20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	1223	0.05000	0.0538976
21 Heptane	71	8.696	8.696	(0.794)	889	0.05000	0.0499241
22 Trichloroethene	130	9.283	9.283	(0.848)	835	0.05000	0.0496456
23 Methyl Methacrylate	69	9.596	9.596	(0.877)	743	0.05000	0.0489933
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	264248	5.00000	5.08550
26 Toluene-CCC	92	10.680	10.680	(0.976)	1942	0.05000	0.0526946

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	290794	5.00000	
28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	742	0.05000	0.0505555
29 Tetrachloroethene	164	11.283	11.283	(1.031)	776	0.05000	0.0509956
30 Chlorobenzene	112	12.299	12.300	(1.124)	2327	0.05000	0.0501572
31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	1147	0.05000	0.0491772
33 m,p-Xylene	106	12.454	12.454	(1.138)	2796	0.10000	0.103168
34 o-Xylene	106	12.901	12.901	(1.179)	1469	0.05000	0.0563027
35 Styrene	104	12.928	12.928	(1.181)	2709	0.05000	0.0529364(a)
36 a-Pinene	93	13.203	13.203	(1.206)	1736	0.05000	0.0513556
37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	1620	0.05000	0.0541613
38 Propylbenzene	91	13.642	13.642	(1.246)	4344	0.05000	0.0466259
40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	2978	0.05000	0.0582062
41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	2914	0.05000	0.0536330
42 R-(+)-Limonene	68	14.343	14.343	(1.310)	1304	0.05000	0.0519526
43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	2017	0.05000	0.0541383
44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	2180	0.05000	0.0504063
45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	2057	0.05000	0.0521770
46 1,4-Dithiane	120	15.356	15.356	(1.403)	1378	0.05000	0.0514915
47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	1373	0.05000	0.0521750
48 Naphthalene	128	16.730	16.730	(1.529)	4178	0.05000	0.0527250
49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	1351	0.05000	0.0531085

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062104sim.d
Lab Smp Id: 2848-4-0.05
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 2
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	290794	8.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062104sim.d

Date : 21-JUN-2017 08:30

Client ID: Level 2

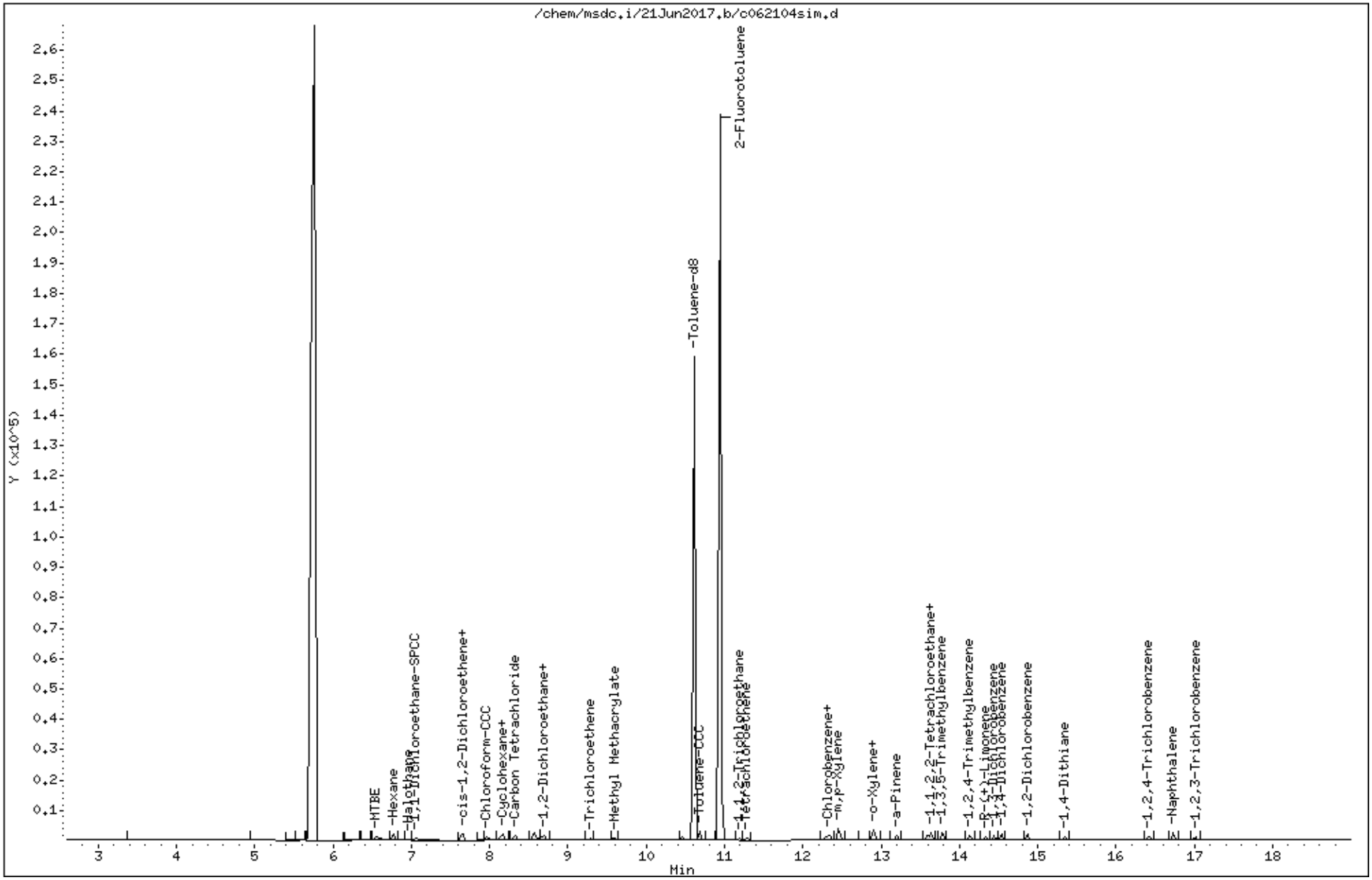
Sample Info: ;2848-4-0.05;Level 2

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062105sim.d
Lab Smp Id: 2848-4-0.10 Client Smp ID: Level 3
Inj Date : 21-JUN-2017 08:56
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.10;Level 3
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 08:56 Cal File: c062105sim.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0.1.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	173	0.10000	0.0602029(a)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	755	0.10000	0.0594985(a)
3 Ethanol	45	4.986	4.961	(0.455)	290	0.10000	0.0654629(a)
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	728	0.10000	0.0694356(aM)
5 Acetone	58	5.566	5.566	(0.508)	597	0.10000	0.0711246(a)
7 MTBE	73	6.555	6.555	(0.599)	2975	0.10000	0.0838892(a)
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	1138	0.10000	0.0886581(a)
9 Hexane	57	6.775	6.775	(0.619)	3232	0.10000	0.0963074
10 Halothane	117	6.961	6.961	(0.636)	658	0.10000	0.0725210
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	2124	0.10000	0.0808773
12 Ethyl Acetate	70	7.640	7.640	(0.698)	302	0.10000	0.0790251(a)
13 2-Butanone	72	7.662	7.662	(0.700)	672	0.10000	0.0792426(a)
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	1144	0.10000	0.0820384
15 Chloroform-CCC	83	7.956	7.956	(0.727)	1910	0.10000	0.0937096
16 Cyclohexane	84	8.172	8.172	(0.747)	1868	0.10000	0.0876501
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	1959	0.10000	0.0848451

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	1897	0.10000	0.0872106
	19 Benzene	78	8.573	8.573	(0.783)	5492	0.10000	0.103500
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	2073	0.10000	0.0879434
	21 Heptane	71	8.696	8.696	(0.794)	1810	0.10000	0.0978471
	22 Trichloroethene	130	9.283	9.283	(0.848)	1635	0.10000	0.0935778
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	1421	0.10000	0.0901992
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	571	0.10000	0.0922439(a)
$	25 Toluene-d8	98	10.608	10.608	(0.969)	266957	5.00000	4.94565
	26 Toluene-CCC	92	10.680	10.680	(0.976)	3686	0.10000	0.0962794
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	302082	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	1448	0.10000	0.0949716
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	1536	0.10000	0.0971680
	30 Chlorobenzene	112	12.300	12.300	(1.124)	4741	0.10000	0.0983710
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	2431	0.10000	0.100334
	33 m,p-Xylene	106	12.480	12.454	(1.140)	5567	0.20000	0.197739
	34 o-Xylene	106	12.901	12.901	(1.179)	2545	0.10000	0.0938979
	35 Styrene	104	12.928	12.928	(1.181)	5141	0.10000	0.0967061(a)
	36 a-Pinene	93	13.203	13.203	(1.206)	3545	0.10000	0.100952
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	3106	0.10000	0.0999622
	38 Propylbenzene	91	13.642	13.642	(1.246)	9966	0.10000	0.102972
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	4971	0.10000	0.0935296
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	5468	0.10000	0.0968794
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	2553	0.10000	0.0979132
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	3635	0.10000	0.0939212
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	4576	0.10000	0.101853
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	4037	0.10000	0.0985744
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	2824	0.10000	0.101581
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	2665	0.10000	0.0974876
	48 Naphthalene	128	16.730	16.730	(1.529)	7682	0.10000	0.0933217
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	2536	0.10000	0.0959662

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062105sim.d
Lab Smp Id: 2848-4-0.10
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 3
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	302082	13.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062105sim.d

Date : 21-JUN-2017 08:56

Client ID: Level 3

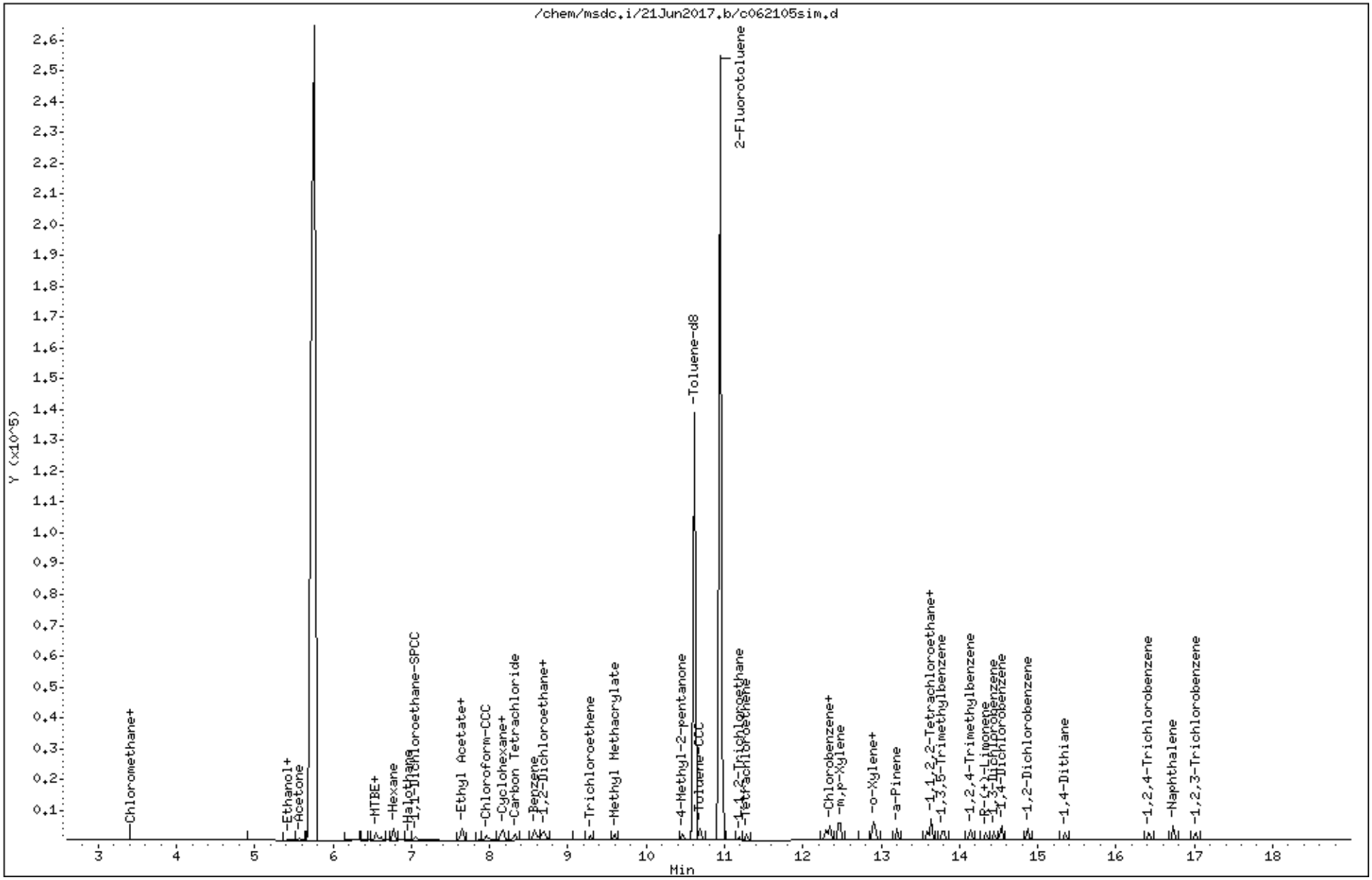
Sample Info: ;2848-4-0.10;Level 3

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062106sim.d
Lab Smp Id: 2848-4-0.20 Client Smp ID: Level 4
Inj Date : 21-JUN-2017 09:21
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.20;Level 4
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 09:21 Cal File: c062106sim.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0.2.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	564	0.20000	0.219315
2 Vinyl Chloride	62	3.420	3.420	(0.312)	2514	0.20000	0.221382
3 Ethanol	45	4.961	4.961	(0.453)	822	0.20000	0.207342
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	1925	0.20000	0.205163(M)
5 Acetone	58	5.566	5.566	(0.508)	1561	0.20000	0.207810
7 MTBE	73	6.583	6.555	(0.601)	6217	0.20000	0.195892
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	2177	0.20000	0.189519
9 Hexane	57	6.775	6.775	(0.619)	5192	0.20000	0.172878
10 Halothane	117	6.961	6.961	(0.636)	1661	0.20000	0.204562
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	4563	0.20000	0.194151
12 Ethyl Acetate	70	7.640	7.640	(0.698)	646	0.20000	0.188890
13 2-Butanone	72	7.662	7.662	(0.700)	1455	0.20000	0.191721
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	2394	0.20000	0.191837
15 Chloroform-CCC	83	7.956	7.956	(0.727)	3420	0.20000	0.187497
16 Cyclohexane	84	8.172	8.172	(0.747)	3508	0.20000	0.183930
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	3925	0.20000	0.189955

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	3661	0.20000	0.188070
	19 Benzene	78	8.573	8.573	(0.783)	9179	0.20000	0.193297
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	3974	0.20000	0.188386
	21 Heptane	71	8.696	8.696	(0.794)	3097	0.20000	0.187080
	22 Trichloroethene	130	9.283	9.283	(0.848)	2852	0.20000	0.182399
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	2585	0.20000	0.183352
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	981	0.20000	0.177088
$	25 Toluene-d8	98	10.608	10.608	(0.969)	242886	5.00000	5.02808
	26 Toluene-CCC	92	10.680	10.680	(0.976)	6139	0.20000	0.179182
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	270338	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	2459	0.20000	0.180219
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	2512	0.20000	0.177570
	30 Chlorobenzene	112	12.300	12.300	(1.124)	7691	0.20000	0.178319
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	3869	0.20000	0.178434
	33 m,p-Xylene	106	12.454	12.454	(1.138)	9070	0.40000	0.359994
	34 o-Xylene	106	12.901	12.901	(1.179)	4210	0.20000	0.173567
	35 Styrene	104	12.928	12.928	(1.181)	8310	0.20000	0.174673
	36 a-Pinene	93	13.203	13.203	(1.206)	5517	0.20000	0.175558
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	4938	0.20000	0.177584
	38 Propylbenzene	91	13.642	13.642	(1.246)	15304	0.20000	0.176693
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	8452	0.20000	0.177698
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	8978	0.20000	0.177746
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	3971	0.20000	0.170180
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	6149	0.20000	0.177534
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	7235	0.20000	0.179947
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	6342	0.20000	0.173041
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	4354	0.20000	0.175006
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	4231	0.20000	0.172947
	48 Naphthalene	128	16.730	16.730	(1.529)	12950	0.20000	0.175791
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	4135	0.20000	0.174849

QC Flag Legend

M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062106sim.d
Lab Smp Id: 2848-4-0.20
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 4
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	270338	1.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

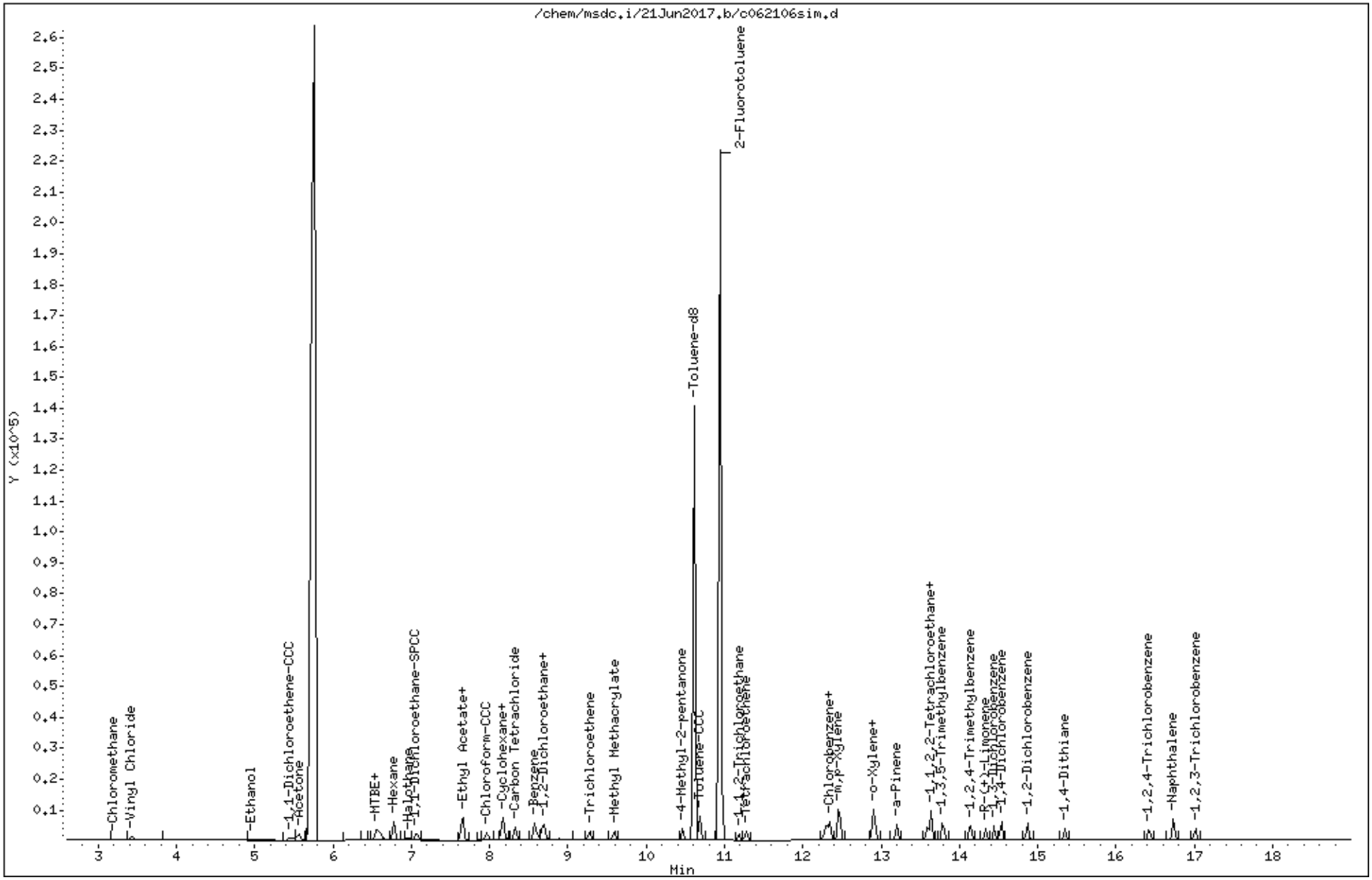
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062106sim.d
Date : 21-JUN-2017 09:21
Client ID: Level 4
Sample Info: ;2848-4-0.20;Level 4

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062107sim.d
Lab Smp Id: 2848-4-0.50 Client Smp ID: Level 5
Inj Date : 21-JUN-2017 09:46
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.50;Level 5
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 09:46 Cal File: c062107sim.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	1431	0.50000	0.535893
2 Vinyl Chloride	62	3.420	3.420	(0.312)	6508	0.50000	0.551917
3 Ethanol	45	4.961	4.961	(0.453)	2331	0.50000	0.566248
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	5630	0.50000	0.577865(M)
5 Acetone	58	5.566	5.566	(0.508)	4376	0.50000	0.561035
7 MTBE	73	6.555	6.555	(0.599)	19271	0.50000	0.584777
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	6752	0.50000	0.566077
9 Hexane	57	6.775	6.775	(0.619)	17192	0.50000	0.551292
10 Halothane	117	6.960	6.961	(0.636)	4957	0.50000	0.587927
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	14029	0.50000	0.574865
12 Ethyl Acetate	70	7.639	7.640	(0.698)	2063	0.50000	0.580931
13 2-Butanone	72	7.662	7.662	(0.700)	4571	0.50000	0.580053
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	7562	0.50000	0.583572
15 Chloroform-CCC	83	7.956	7.956	(0.727)	10304	0.50000	0.544031
16 Cyclohexane	84	8.172	8.172	(0.747)	12122	0.50000	0.612092
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	13059	0.50000	0.608652

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	12146	0.50000	0.600900
	19 Benzene	78	8.572	8.573	(0.783)	27028	0.50000	0.548141
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	12657	0.50000	0.577832
	21 Heptane	71	8.696	8.696	(0.794)	10184	0.50000	0.592454
	22 Trichloroethene	130	9.282	9.283	(0.848)	9782	0.50000	0.602490
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	8997	0.50000	0.614572
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	3398	0.50000	0.590734
$	25 Toluene-d8	98	10.608	10.608	(0.969)	247144	5.00000	4.92719
	26 Toluene-CCC	92	10.704	10.680	(0.978)	20952	0.50000	0.588939
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	280710	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	8349	0.50000	0.589286
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	8846	0.50000	0.602207
	30 Chlorobenzene	112	12.299	12.300	(1.124)	27311	0.50000	0.609820
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	13803	0.50000	0.613058
	33 m,p-Xylene	106	12.480	12.454	(1.140)	31555	1.00000	1.20616
	34 o-Xylene	106	12.901	12.901	(1.179)	14539	0.50000	0.577257
	35 Styrene	104	12.928	12.928	(1.181)	29428	0.50000	0.595708
	36 a-Pinene	93	13.203	13.203	(1.206)	19544	0.50000	0.598935
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	17335	0.50000	0.600379
	38 Propylbenzene	91	13.642	13.642	(1.246)	56401	0.50000	0.627121
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	28205	0.50000	0.571082
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	30796	0.50000	0.587170
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	14195	0.50000	0.585858
	43 1,3-Dichlorobenzene	146	14.439	14.440	(1.319)	21033	0.50000	0.584827
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	25189	0.50000	0.603346
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	22833	0.50000	0.599978
	46 1,4-Dithiane	120	15.355	15.356	(1.403)	15498	0.50000	0.599915
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	15233	0.50000	0.599660
	48 Naphthalene	128	16.730	16.730	(1.529)	45201	0.50000	0.590913
	49 1,2,3-Trichlorobenzene	180	17.019	17.020	(1.555)	14588	0.50000	0.594062

QC Flag Legend

M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062107sim.d
Lab Smp Id: 2848-4-0.50
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 5
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	280710	5.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

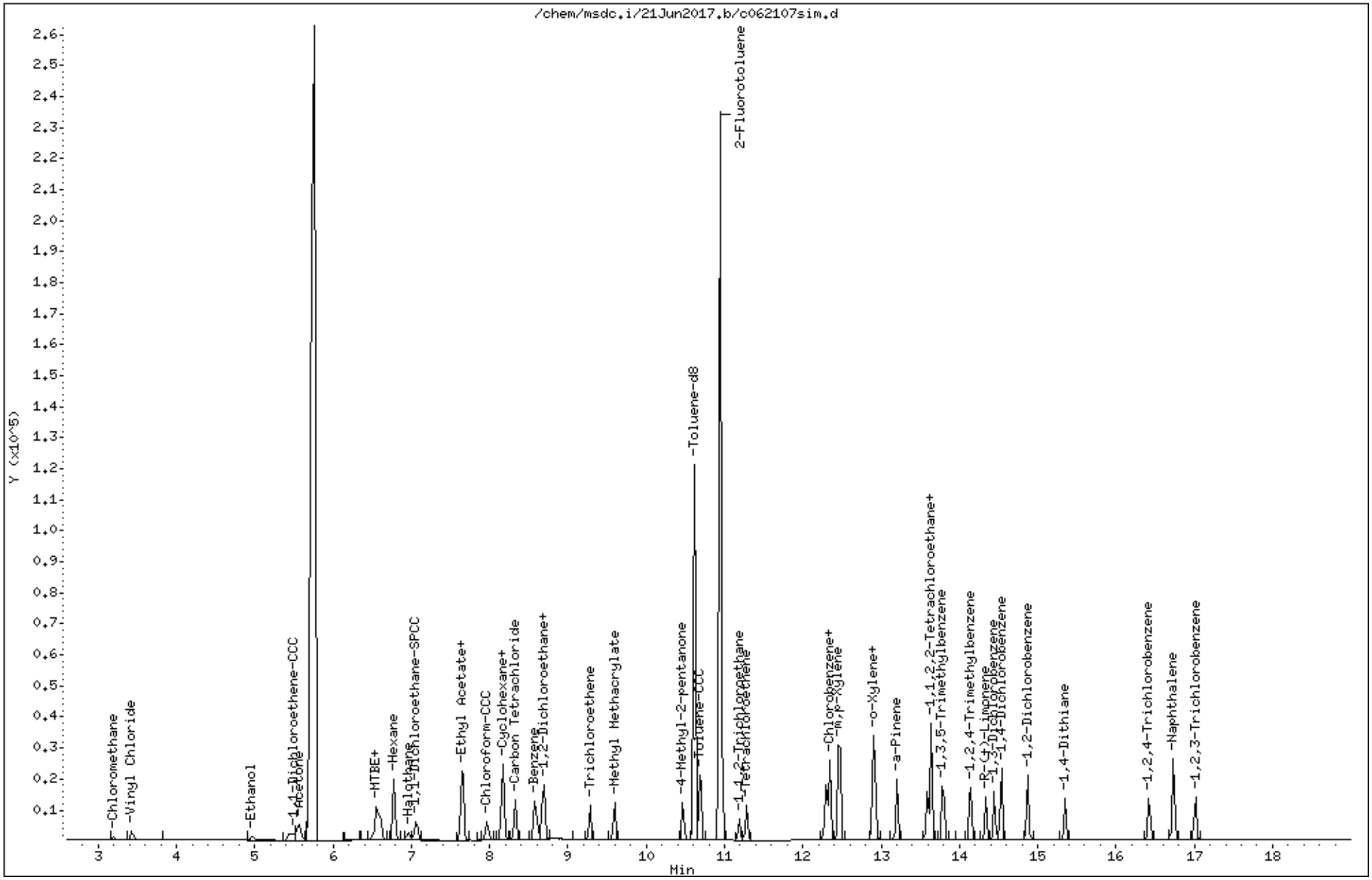
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062107sim.d
Date : 21-JUN-2017 09:46
Client ID: Level 5
Sample Info: ;2848-4-0.50;Level 5

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062108sim.d
Lab Smp Id: 2848-4-1.0 Client Smp ID: Level 6
Inj Date : 21-JUN-2017 10:12
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-1.0;Level 6
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:12 Cal File: c062108sim.d
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	2920	1.00000	1.18078
2 Vinyl Chloride	62	3.420	3.420	(0.312)	12916	1.00000	1.18278
3 Ethanol	45	4.961	4.961	(0.453)	4511	1.00000	1.18327
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	10306	1.00000	1.14224(M)
5 Acetone	58	5.566	5.566	(0.508)	8376	1.00000	1.15957
7 MTBE	73	6.555	6.555	(0.599)	34335	1.00000	1.12505
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	12027	1.00000	1.08880
9 Hexane	57	6.775	6.775	(0.619)	30776	1.00000	1.06565
10 Halothane	117	6.961	6.961	(0.636)	9114	1.00000	1.16724
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	24901	1.00000	1.10180
12 Ethyl Acetate	70	7.640	7.640	(0.698)	3746	1.00000	1.13904
13 2-Butanone	72	7.662	7.662	(0.700)	8145	1.00000	1.11608
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	13469	1.00000	1.12238
15 Chloroform-CCC	83	7.956	7.956	(0.727)	18443	1.00000	1.05147
16 Cyclohexane	84	8.172	8.172	(0.747)	19477	1.00000	1.06197
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	22052	1.00000	1.10983

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	20339	1.00000	1.08654
	19 Benzene	78	8.573	8.573	(0.783)	47021	1.00000	1.02972
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	21648	1.00000	1.06718
	21 Heptane	71	8.696	8.696	(0.794)	16511	1.00000	1.03719
	22 Trichloroethene	130	9.283	9.283	(0.848)	16023	1.00000	1.06565
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	14548	1.00000	1.07307
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	5720	1.00000	1.07377
$	25 Toluene-d8	98	10.608	10.608	(0.969)	229831	5.00000	4.94773
	26 Toluene-CCC	92	10.680	10.680	(0.976)	33540	1.00000	1.01802
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	259962	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	13840	1.00000	1.05481
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	13991	1.00000	1.02848
	30 Chlorobenzene	112	12.300	12.300	(1.124)	42403	1.00000	1.02237
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	21248	1.00000	1.01905
	33 m,p-Xylene	106	12.454	12.454	(1.138)	49021	2.00000	2.02334
	34 o-Xylene	106	12.901	12.901	(1.179)	23454	1.00000	1.00554
	35 Styrene	104	12.928	12.928	(1.181)	46083	1.00000	1.00731
	36 a-Pinene	93	13.203	13.203	(1.206)	30336	1.00000	1.00386
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	26262	1.00000	0.982149
	38 Propylbenzene	91	13.642	13.642	(1.246)	85518	1.00000	1.02676
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	44815	1.00000	0.979814
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	48084	1.00000	0.989962
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	21710	1.00000	0.967532
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	33916	1.00000	1.01831
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	38650	1.00000	0.999662
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	35549	1.00000	1.00867
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	23683	1.00000	0.989917
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	24174	1.00000	1.02758
	48 Naphthalene	128	16.730	16.730	(1.529)	74361	1.00000	1.04971
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	23218	1.00000	1.02096

QC Flag Legend

M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062108sim.d
Lab Smp Id: 2848-4-1.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 6
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	259962	-2.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

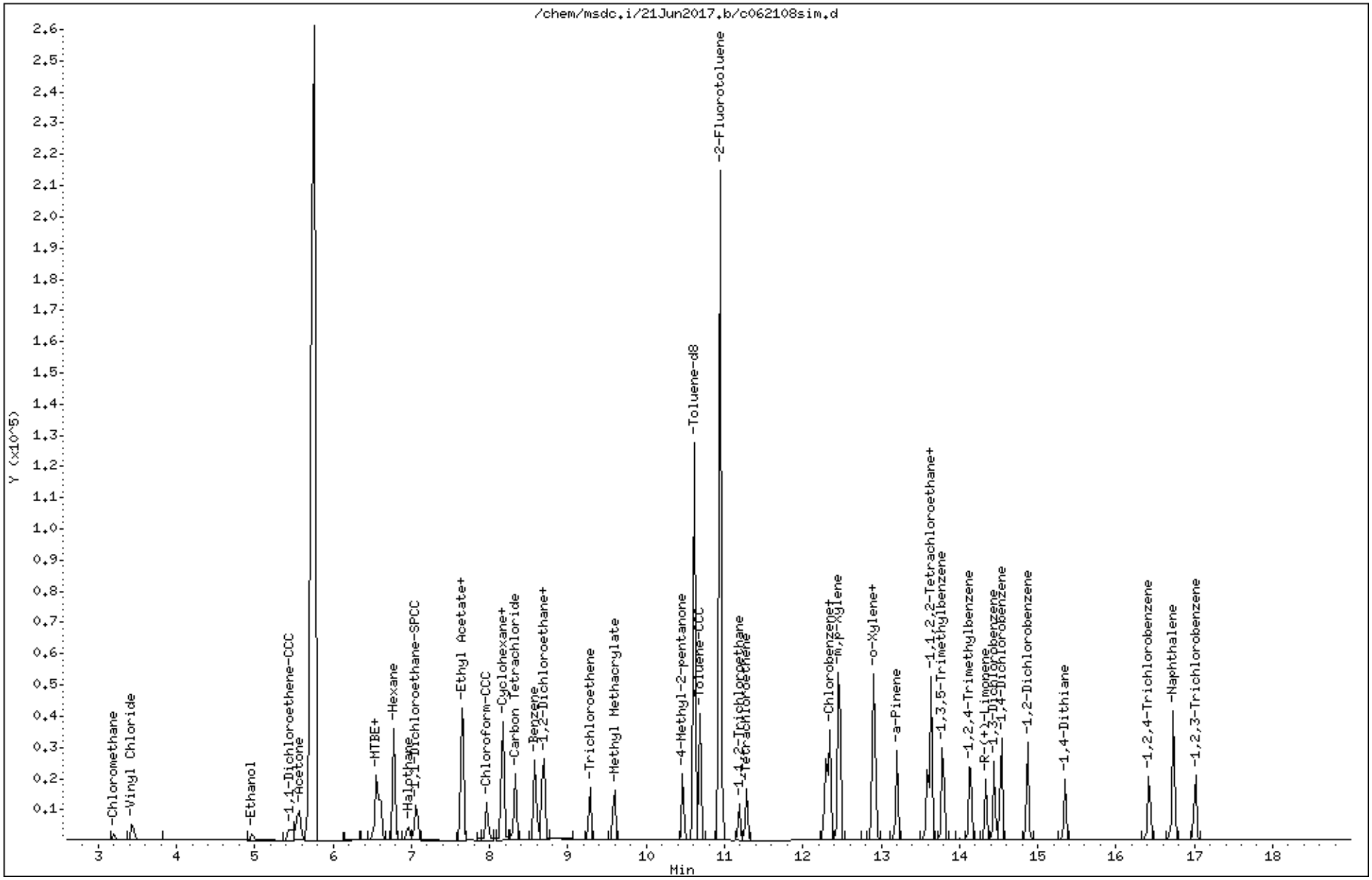
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062108sim.d
Date : 21-JUN-2017 10:12
Client ID: Level 6
Sample Info: ;2848-4-1.0;Level 6

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062109sim.d
Lab Smp Id: 2848-4-5.0 Client Smp ID: Level 7
Inj Date : 21-JUN-2017 10:39
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-5.0;Level 7
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 13:16 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	13311	5.00000	5.61507
2 Vinyl Chloride	62	3.420	3.420	(0.312)	56687	5.00000	5.67084
3 Ethanol	45	4.961	4.961	(0.453)	19426	5.00000	5.61340
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	45465	5.00000	5.42225
5 Acetone	58	5.566	5.566	(0.508)	35887	5.00000	5.43883
7 MTBE	73	6.555	6.555	(0.599)	148835	5.00000	5.11065
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	53564	5.00000	5.20530
9 Hexane	57	6.775	6.775	(0.619)	141810	5.00000	5.23664
10 Halothane	117	6.961	6.961	(0.636)	39055	5.00000	5.29867
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	106514	5.00000	5.01831
12 Ethyl Acetate	70	7.640	7.640	(0.698)	16277	5.00000	5.22406
13 2-Butanone	72	7.662	7.662	(0.700)	34706	5.00000	5.05301
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	57990	5.00000	5.08738
15 Chloroform-CCC	83	7.956	7.956	(0.727)	81684	5.00000	4.88533
16 Cyclohexane	84	8.172	8.172	(0.747)	82228	5.00000	4.69768
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	93440	5.00000	4.93561

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	86105	5.00000	4.81332
	19 Benzene	78	8.573	8.573	(0.783)	212678	5.00000	4.98779
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	91388	5.00000	4.78327
	21 Heptane	71	8.696	8.696	(0.794)	70713	5.00000	4.63620
	22 Trichloroethene	130	9.283	9.283	(0.848)	68576	5.00000	4.75105
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	62562	5.00000	4.77929
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	25613	5.00000	4.94569
$	25 Toluene-d8	98	10.608	10.608	(0.969)	243453	5.00000	5.10039(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	150739	5.00000	4.75222
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	266829	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	60919	5.00000	4.79702
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	61972	5.00000	4.68950
	30 Chlorobenzene	112	12.300	12.300	(1.124)	187213	5.00000	4.64111
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	93716	5.00000	4.58017
	33 m,p-Xylene	106	12.454	12.454	(1.138)	222192	10.0000	9.27406
	34 o-Xylene	106	12.901	12.901	(1.179)	108581	5.00000	4.85720
	35 Styrene	104	12.928	12.928	(1.181)	211806	5.00000	4.65961
	36 a-Pinene	93	13.203	13.203	(1.206)	137075	5.00000	4.66692
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	116140	5.00000	4.48944
	38 Propylbenzene	91	13.642	13.642	(1.246)	373284	5.00000	4.40937
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	208938	5.00000	4.64342
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	225720	5.00000	4.66235
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	99121	5.00000	4.44660
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	154246	5.00000	4.82356
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	172082	5.00000	4.48881
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	162222	5.00000	4.78857
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	109224	5.00000	4.63427
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	107451	5.00000	4.66256
	48 Naphthalene	128	16.730	16.730	(1.529)	327852	5.00000	4.63663
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	104437	5.00000	4.65234

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 21-Jun-2017 13:16

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062109sim.d
Lab Smp Id: 2848-4-5.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 7
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	266829	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

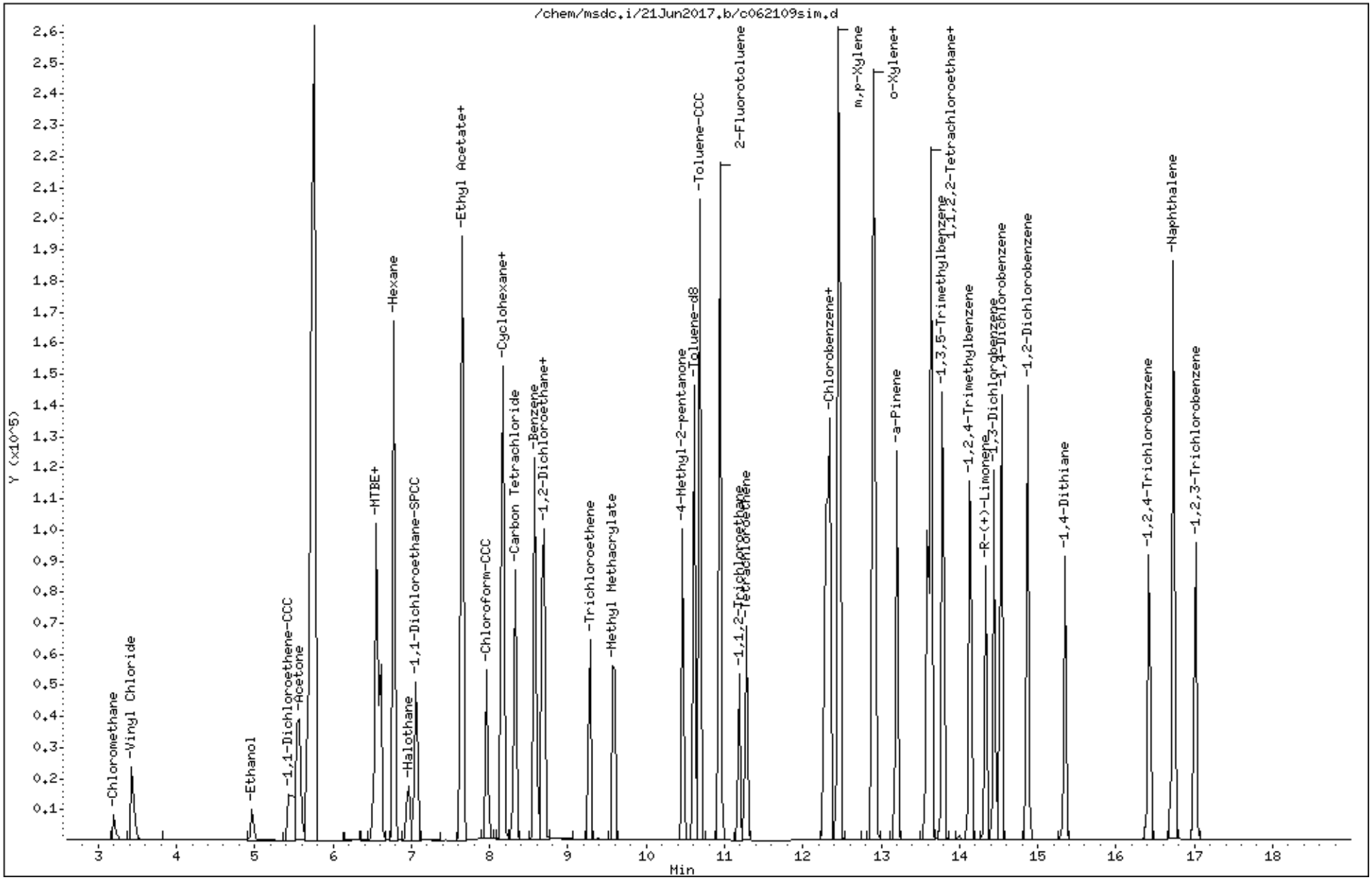
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062109sim.d
Date : 21-JUN-2017 10:39
Client ID: Level 7
Sample Info: ;2848-4-5.0;Level 7

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062110sim.d
Lab Smp Id: 2848-4-20 Client Smp ID: Level 8
Inj Date : 21-JUN-2017 11:06
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-20;Level 8
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:42 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 11:06 Cal File: c062110sim.d
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	33204	20.0000	12.9270
2 Vinyl Chloride	62	3.420	3.420	(0.312)	155470	20.0000	13.6182
3 Ethanol	45	4.961	4.961	(0.453)	58580	20.0000	14.5671
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	148877	20.0000	15.5034
5 Acetone	58	5.566	5.566	(0.508)	111055	20.0000	14.5740
7 MTBE	73	6.555	6.555	(0.599)	573887	20.0000	17.2898
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	189142	20.0000	16.0104
9 Hexane	57	6.775	6.775	(0.619)	487928	20.0000	15.7315
10 Halothane	117	6.961	6.961	(0.636)	128740	20.0000	15.3941
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	398514	20.0000	16.3386
12 Ethyl Acetate	70	7.640	7.640	(0.698)	60212	20.0000	16.9624
13 2-Butanone	72	7.640	7.662	(0.698)	127283	20.0000	16.1813
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	217564	20.0000	16.7437
15 Chloroform-CCC	83	7.956	7.956	(0.727)	358990	20.0000	18.6150
16 Cyclohexane	84	8.141	8.172	(0.744)	338148	20.0000	16.9932
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	353548	20.0000	16.4695

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	339281	20.0000	16.7398
	19 Benzene	78	8.573	8.573	(0.783)	958094	20.0000	19.0819
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	354965	20.0000	16.2284
	21 Heptane	71	8.696	8.696	(0.794)	304960	20.0000	17.5733
	22 Trichloroethene	130	9.283	9.283	(0.848)	297756	20.0000	18.0893
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	270125	20.0000	18.1859
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	114112	20.0000	19.3804
$	25 Toluene-d8	98	10.608	10.608	(0.969)	260488	5.00000	5.03685(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	685567	20.0000	18.8840
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	289120	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	275212	20.0000	19.0147
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	292713	20.0000	19.4379
	30 Chlorobenzene	112	12.300	12.300	(1.124)	892442	20.0000	19.4380
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	459881	20.0000	19.8553
	33 m,p-Xylene	106	12.480	12.454	(1.140)	1065398	40.0000	39.5962
	34 o-Xylene	106	12.901	12.901	(1.179)	502916	20.0000	19.4722
	35 Styrene	104	12.928	12.928	(1.181)	1035884	20.0000	20.3072
	36 a-Pinene	93	13.203	13.203	(1.206)	683103	20.0000	20.2779
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	570616	20.0000	19.2997
	38 Propylbenzene	91	13.642	13.642	(1.246)	1944045	20.0000	20.8400
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	993635	20.0000	19.5987
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	1097535	20.0000	20.2714
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	527257	20.0000	20.8342
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	734726	20.0000	19.8583
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	861295	20.0000	20.0259
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	796742	20.0000	20.2794
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	563152	20.0000	20.9903
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	553958	20.0000	20.9968
	48 Naphthalene	128	16.730	16.730	(1.529)	1733112	20.0000	21.6884
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	534876	20.0000	20.9759

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 21-Jun-2017 11:42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062110sim.d
Lab Smp Id: 2848-4-20
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 8
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	289120	8.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062110sim.d

Date : 21-JUN-2017 11:06

Client ID: Level 8

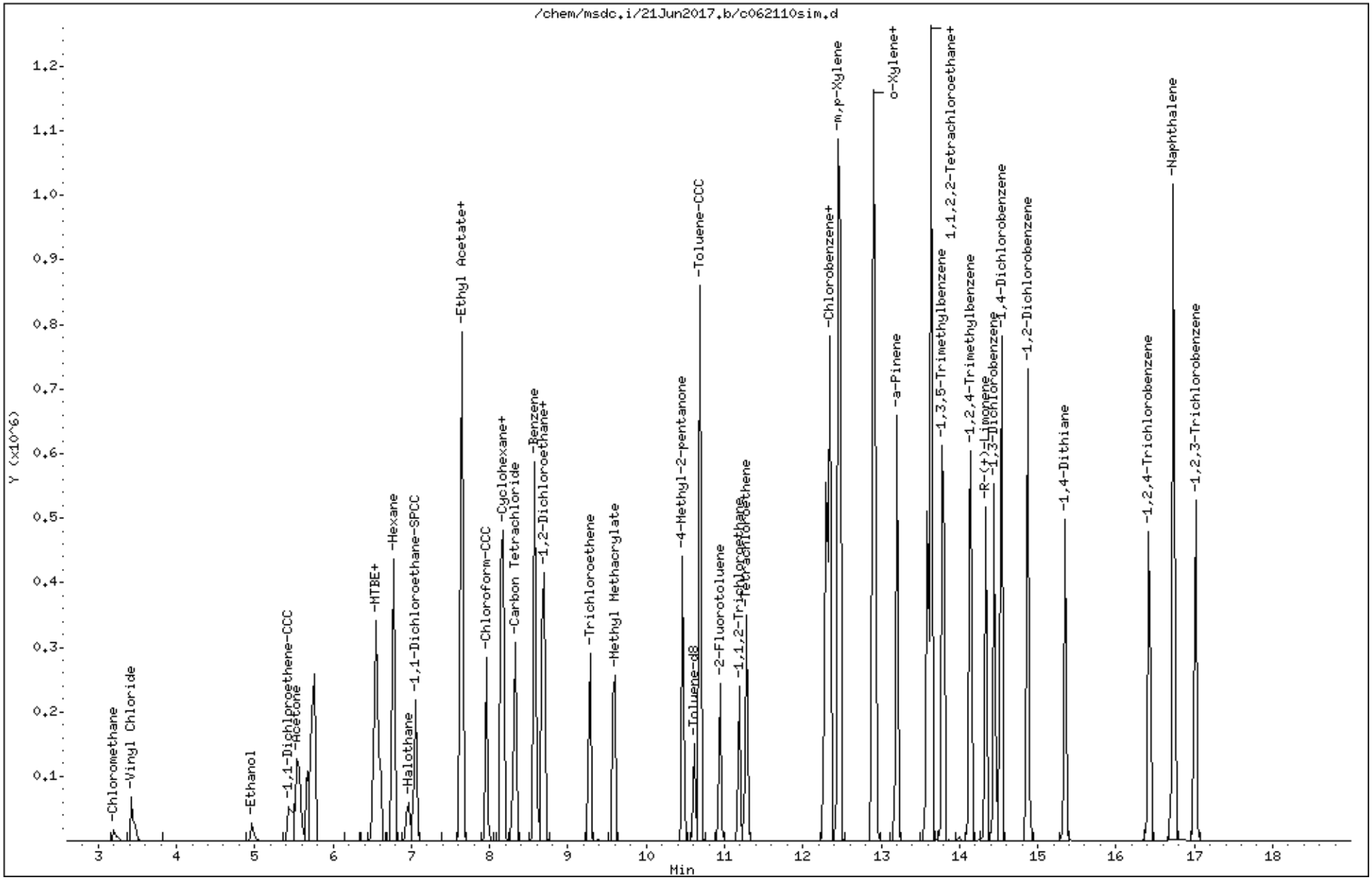
Sample Info: ;2848-4-20;Level 8

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062111sim.d
Lab Smp Id: 2848-4-50 Client Smp ID: Level 9
Inj Date : 21-JUN-2017 11:39
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-50;Level 9
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 12:08 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 11:39 Cal File: c062111sim.d
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all-cm.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	450910	50.0000	39.7981
3 Ethanol	45	4.961	4.961	(0.453)	146867	50.0000	37.1177
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	386515	50.0000	40.4692
5 Acetone	58	5.566	5.566	(0.508)	289757	50.0000	38.4784
7 MTBE	73	6.555	6.555	(0.599)	1367948	50.0000	41.1742
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	487967	50.0000	41.4045
9 Hexane	57	6.775	6.775	(0.619)	1371853	50.0000	43.8584
10 Halothane	117	6.960	6.961	(0.636)	337812	50.0000	40.4387
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	968857	50.0000	39.8330
12 Ethyl Acetate	70	7.639	7.640	(0.698)	150870	50.0000	42.4583
13 2-Butanone	72	7.662	7.662	(0.700)	315967	50.0000	40.2355
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	540894	50.0000	41.5451
15 Chloroform-CCC	83	7.956	7.956	(0.727)	787785	50.0000	40.8483
16 Cyclohexane	84	8.172	8.172	(0.747)	839272	50.0000	42.0358
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	920284	50.0000	42.6532
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	875997	50.0000	42.9647

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	19 Benzene	78	8.572	8.573	(0.783)	2095626	50.0000	41.9778
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	893040	50.0000	40.8291
	21 Heptane	71	8.696	8.696	(0.794)	761215	50.0000	43.5354
	22 Trichloroethene	130	9.282	9.283	(0.848)	709631	50.0000	42.8678
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	642688	50.0000	43.0070
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	266122	50.0000	44.8066
$	25 Toluene-d8	98	10.608	10.608	(0.969)	263754	5.00000	4.97321
	26 Toluene-CCC	92	10.680	10.680	(0.976)	1586018	50.0000	43.3779
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	296689	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	636915	50.0000	43.6593
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	680901	50.0000	44.7263
	30 Chlorobenzene	112	12.299	12.300	(1.124)	2087866	50.0000	44.9539
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	1078878	50.0000	45.9210
	33 m,p-Xylene	106	12.480	12.454	(1.140)	2501726	100.000	91.5619
	34 o-Xylene	106	12.901	12.901	(1.179)	1123849	50.0000	43.2246
	35 Styrene	104	12.928	12.928	(1.181)	2369205	50.0000	45.8030
	36 a-Pinene	93	13.203	13.203	(1.206)	1539683	50.0000	45.1559
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	1339544	50.0000	44.8062
	38 Propylbenzene	91	13.642	13.642	(1.246)	4685047	50.0000	49.0719
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	2279161	50.0000	44.4967
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	2567427	50.0000	46.6524
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	1262104	50.0000	48.8728
	43 1,3-Dichlorobenzene	146	14.439	14.440	(1.319)	1600446	50.0000	42.9970
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	2072523	50.0000	47.3185
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	1719268	50.0000	43.4430
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	1266792	50.0000	46.4758
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	1218352	50.0000	45.5708
	48 Naphthalene	128	16.730	16.730	(1.529)	3873678	50.0000	47.5673
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	1206974	50.0000	46.5768

Report Date: 21-Jun-2017 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062111sim.d
Lab Smp Id: 2848-4-50
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 9
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	296689	11.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062111sim.d

Date : 21-JUN-2017 11:39

Client ID: Level 9

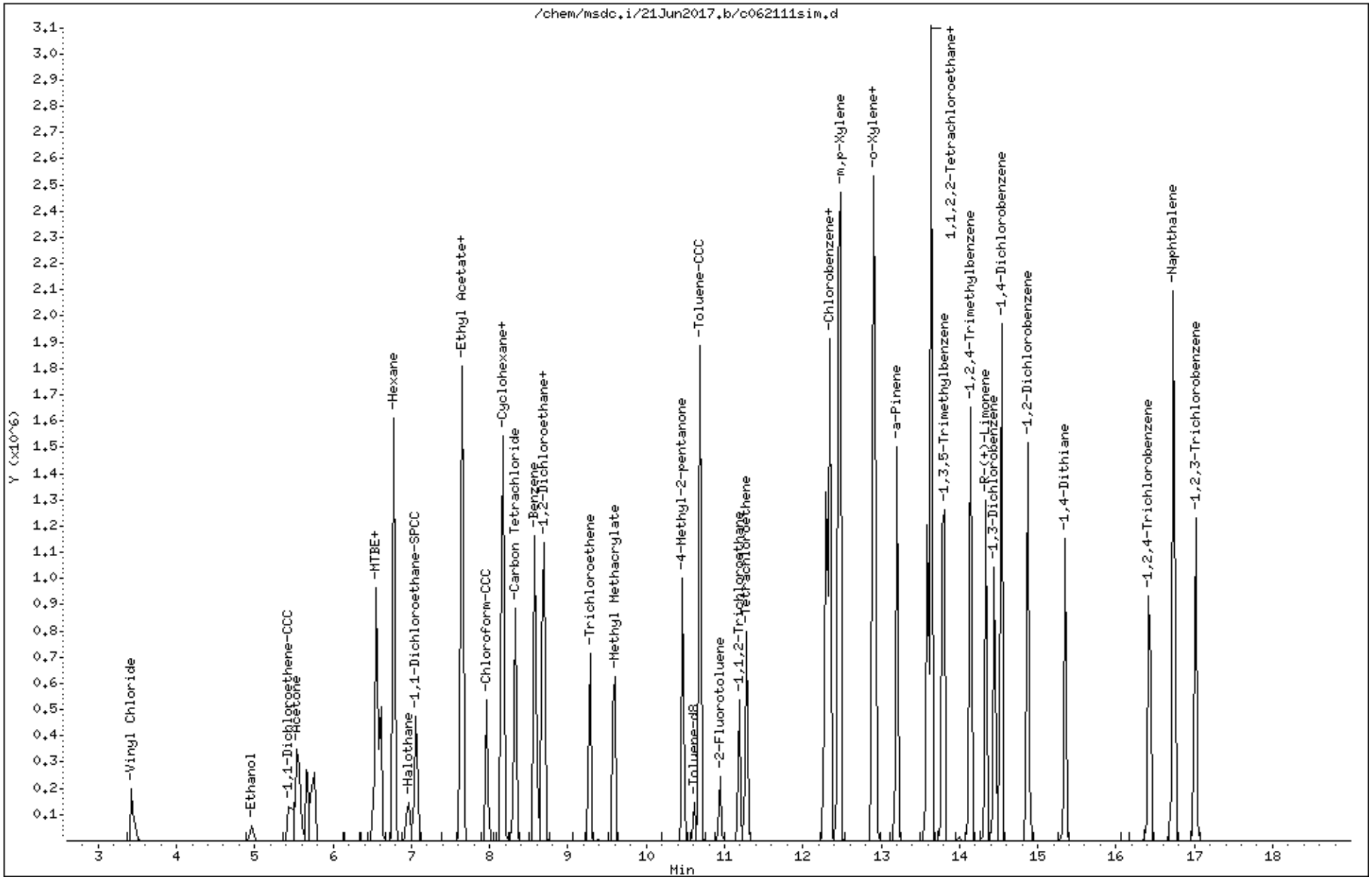
Sample Info: ;2848-4-50;Level 9

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062112sim.d
Lab Smp Id: 2848-4-100 Client Smp ID: Level 10
Inj Date : 21-JUN-2017 12:06
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-100;Level 10
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 12:33 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 12:06 Cal File: c062112sim.d
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 100.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	1042734	100.000	96.5492
3 Ethanol	45	4.961	4.961	(0.453)	346409	100.000	92.3869
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	835991	100.000	92.3708(M)
5 Acetone	58	5.543	5.566	(0.506)	657492	100.000	92.1666
7 MTBE	73	6.555	6.555	(0.599)	2781418	100.000	88.6370
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	968533	100.000	87.3418
9 Hexane	57	6.775	6.775	(0.619)	2347978	100.000	80.2926
10 Halothane	117	6.961	6.961	(0.636)	743763	100.000	93.6790
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	2023396	100.000	88.1308
12 Ethyl Acetate	70	7.640	7.640	(0.698)	306760	100.000	91.2478
13 2-Butanone	72	7.662	7.662	(0.700)	663017	100.000	89.3145
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	1097009	100.000	89.1527
15 Chloroform-CCC	83	7.956	7.956	(0.727)	1513829	100.000	83.6206
16 Cyclohexane	84	8.172	8.172	(0.747)	1682797	100.000	89.1770
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	1841431	100.000	90.1877
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	1730599	100.000	89.7440

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	19 Benzene	78	8.573	8.573	(0.783)	3868859	100.000	83.1707
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	1811779	100.000	87.7910
	21 Heptane	71	8.696	8.696	(0.794)	1439005	100.000	87.2802
	22 Trichloroethene	130	9.283	9.283	(0.848)	1339533	100.000	85.9563
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	1231922	100.000	87.4118
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	497696	100.000	88.8678
$	25 Toluene-d8	98	10.608	10.608	(0.969)	255338	5.00000	5.02337(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	2881735	100.000	83.9304
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	284207	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	1172213	100.000	85.4119
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	1204010	100.000	84.1926
	30 Chlorobenzene	112	12.300	12.300	(1.124)	3657368	100.000	83.8637
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	1870875	100.000	84.7169
	33 m,p-Xylene	106	12.480	12.454	(1.140)	4421474	200.000	171.597
	34 o-Xylene	106	12.901	12.901	(1.179)	1948026	100.000	80.1544
	35 Styrene	104	12.928	12.928	(1.181)	3934811	100.000	81.2706
	36 a-Pinene	93	13.203	13.203	(1.206)	2603320	100.000	81.5426
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	2319239	100.000	82.7312
	38 Propylbenzene	91	13.642	13.642	(1.246)	7988517	100.000	88.5934
	40 1,3,5-Trimethylbenzene	105	13.807	13.779	(1.261)	4137489	100.000	85.8199
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	4533460	100.000	87.3543
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	2122923	100.000	87.8948
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	2721898	100.000	78.3986
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	3587768	100.000	86.9104
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	2906055	100.000	78.6975
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	2101108	100.000	82.2555
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	2013378	100.000	80.5286
	48 Naphthalene	128	16.730	16.730	(1.529)	6389153	100.000	83.5830(A)
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	1993534	100.000	82.1052

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Report Date: 21-Jun-2017 12:33

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062112sim.d
Lab Smp Id: 2848-4-100
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 10
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	284207	6.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

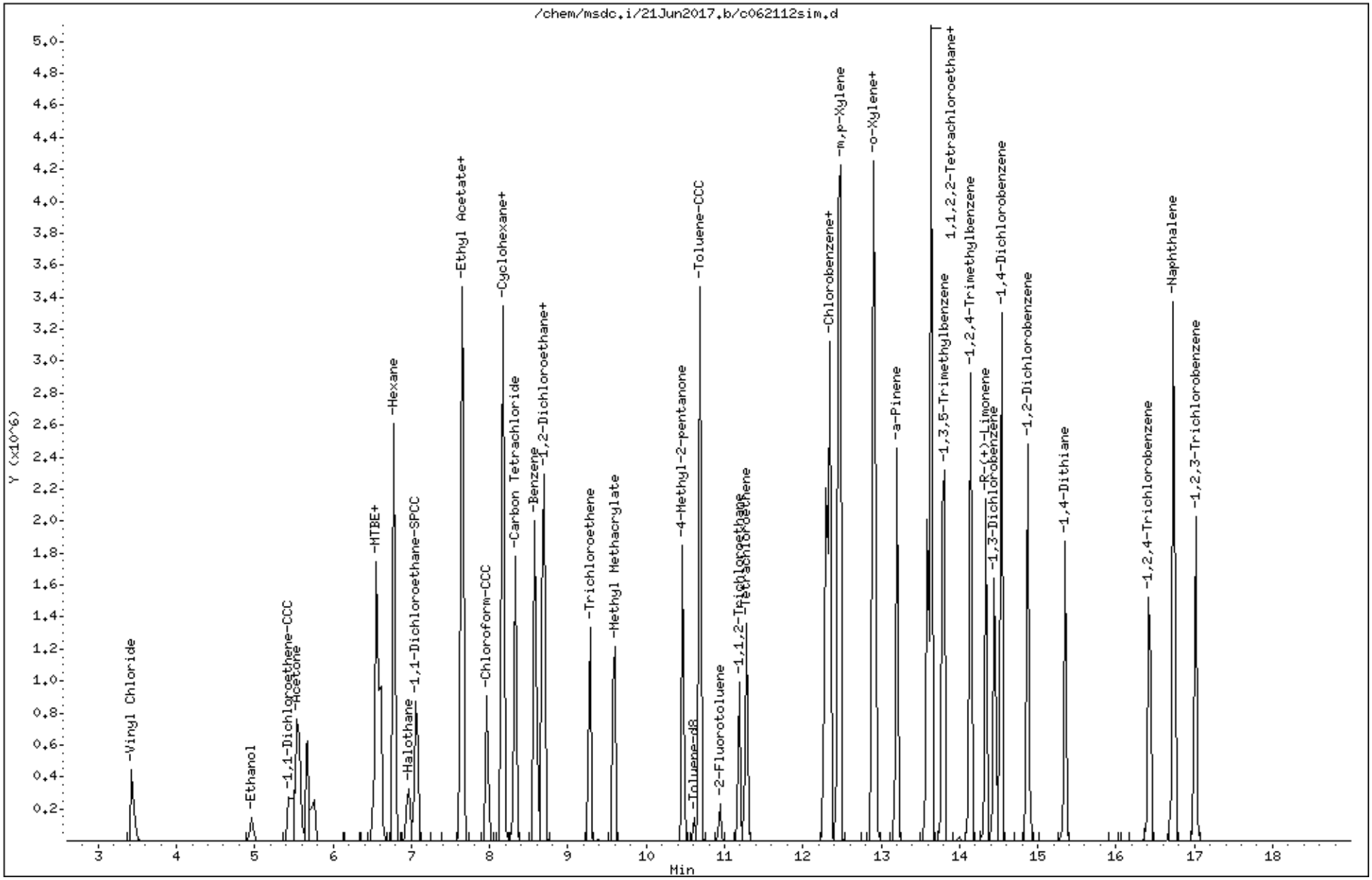
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062112sim.d
Date : 21-JUN-2017 12:06
Client ID: Level 10
Sample Info: ;2848-4-100;Level 10

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062113sim.d
Lab Smp Id: 2848-4-200 Client Smp ID: Level 11
Inj Date : 21-JUN-2017 12:33
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-200;Level 11
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 13:12 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 12:33 Cal File: c062113sim.d
Als bottle: 13 Calibration Sample, Level: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 200.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	1796582	200.000	177.044
3 Ethanol	45	4.961	4.961	(0.453)	605768	200.000	172.432(A)
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	1520326	200.000	178.611
5 Acetone	58	5.543	5.566	(0.506)	1178454	200.000	175.934
7 MTBE	73	6.555	6.555	(0.599)	5293988	200.000	179.070
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	1893249	200.000	181.238
9 Hexane	57	6.775	6.775	(0.619)	4814092	200.000	175.117
10 Halothane	117	6.961	6.961	(0.636)	1344254	200.000	179.656
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	3706157	200.000	172.006
12 Ethyl Acetate	70	7.640	7.640	(0.698)	566812	200.000	179.202
13 2-Butanone	72	7.662	7.662	(0.700)	1209740	200.000	173.503
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	2033517	200.000	175.735
15 Chloroform-CCC	83	7.956	7.956	(0.727)	2889741	200.000	170.249
16 Cyclohexane	84	8.172	8.172	(0.747)	3165501	200.000	178.146
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	3409722	200.000	177.418
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	3237774	200.000	178.292

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	19 Benzene	78	8.573	8.573	(0.783)	7188961	200.000	166.081
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	3386083	200.000	174.583
	21 Heptane	71	8.696	8.696	(0.794)	2682449	200.000	173.246
	22 Trichloroethene	130	9.283	9.283	(0.848)	2570257	200.000	175.414
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	2399441	200.000	180.564
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	922957	200.000	175.557
$	25 Toluene-d8	98	10.608	10.608	(0.969)	242795	5.00000	5.01070(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	5497778	200.000	170.737
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	270871	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	2238990	200.000	173.676
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	2297182	200.000	171.236
	30 Chlorobenzene	112	12.300	12.300	(1.124)	7082066	200.000	172.948(A)
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	3656722	200.000	176.047
	33 m,p-Xylene	106	12.480	12.454	(1.140)	8783739	400.000	361.152
	34 o-Xylene	106	12.901	12.901	(1.179)	3693119	200.000	162.740(A)
	35 Styrene	104	12.928	12.928	(1.181)	7206047	200.000	156.163(A)
	36 a-Pinene	93	13.203	13.203	(1.206)	4863016	200.000	163.098(A)
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	4430473	200.000	168.706
	40 1,3,5-Trimethylbenzene	105	13.807	13.779	(1.261)	8648064	200.000	189.325(A)
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	9261631	200.000	188.448(A)
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	4057126	200.000	179.288
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	5362814	200.000	165.202
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	7013537	200.000	180.220
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	5430654	200.000	157.913
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	4030443	200.000	168.456
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	3897251	200.000	166.587
	48 Naphthalene	128	16.730	16.730	(1.529)	12423361	200.000	173.074(A)
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	3923001	200.000	172.149

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 21-Jun-2017 13:12

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062113sim.d
Lab Smp Id: 2848-4-200
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 11
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	270871	1.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062113sim.d

Date : 21-JUN-2017 12:33

Client ID: Level 11

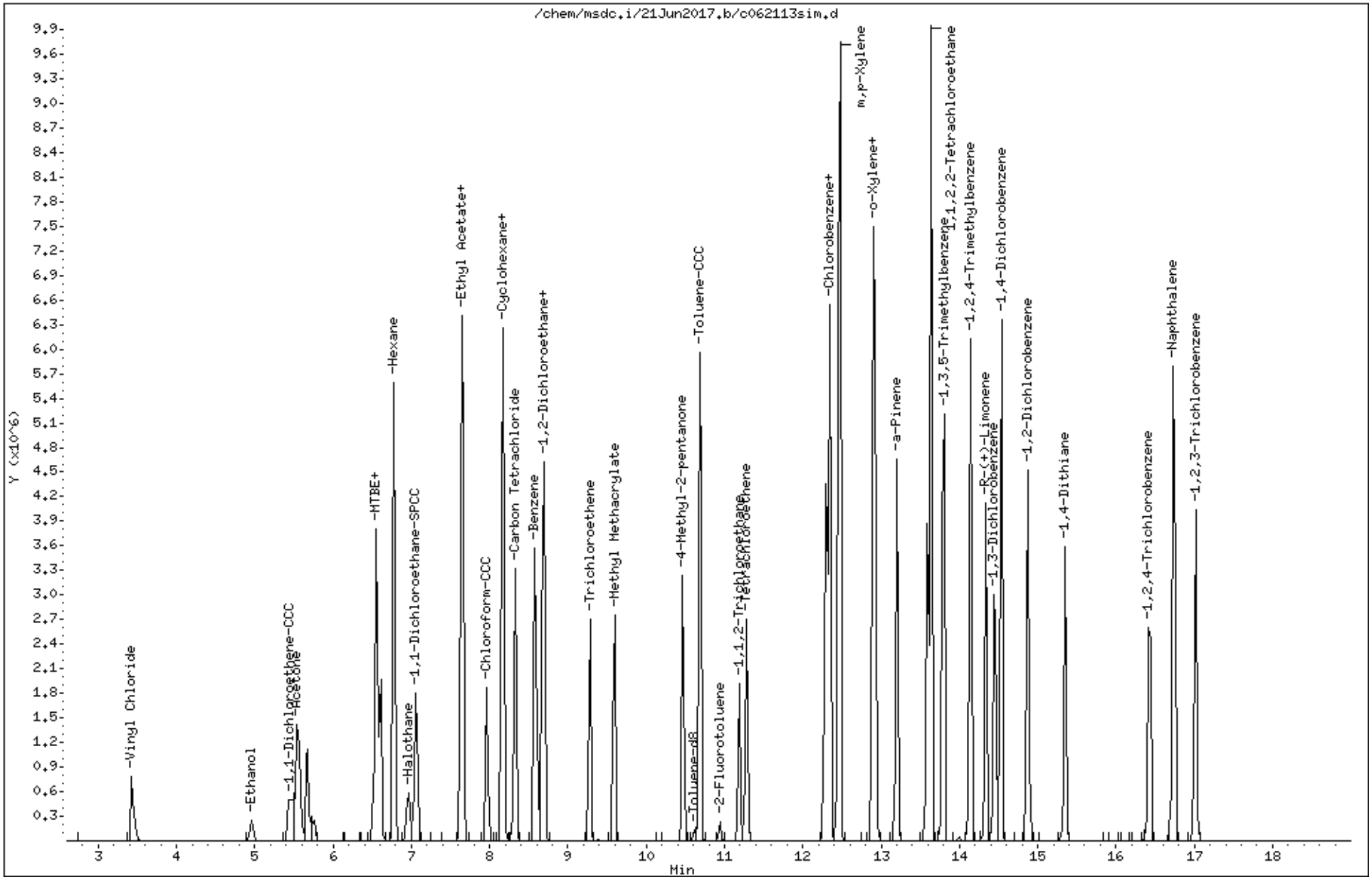
Sample Info: ;2848-4-200;Level 11

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msdc.i Injection Date: 11-JUL-2017 09:34
Lab File ID: c071103sim.d Init. Cal. Date(s): 21-JUN-2017 21-JUN-2017
Analysis Type: AIR Init. Cal. Times: 08:04 12:33
Lab Sample ID: 2848-4-5.0 Quant Type: ISTD
Method: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m

	COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Chloromethane	0.04442	0.03390	0.020	23.69137	40.00000	Averaged
	2 Vinyl Chloride	0.18732	0.15881	0.050	15.21976	40.00000	Averaged
	3 Ethanol	0.06485	0.04614	0.030	28.85140	30.00000	Averaged
	4 1,1-Dichloroethene-CCC	0.15712	0.14700	0.050	6.43940	30.00000	Averaged
	5 Acetone	0.12364	0.10724	0.040	13.26289	30.00000	Averaged
	7 MTBE	0.54571	0.49970	0.050	8.43118	30.00000	Averaged
	8 trans-1,2-Dichloroethene	0.19283	0.17450	0.050	9.50498	30.00000	Averaged
	9 Hexane	0.50745	0.47737	0.020	5.92653	30.00000	Averaged
	10 Halothane	0.13812	0.12583	0.050	8.89642	30.00000	Averaged
	11 1,1-Dichloroethane-SPCC	0.39773	0.36022	0.050	9.43012	20.00000	Averaged
	12 Ethyl Acetate	0.05839	0.05466	0.050	6.37519	30.00000	Averaged
	13 2-Butanone	0.12870	0.11457	0.050	10.97946	30.00000	Averaged
	14 cis-1,2-Dichloroethene	0.21360	0.19852	0.050	7.05803	20.00000	Averaged
	15 Chloroform-CCC	0.31331	0.28568	0.050	8.82016	20.00000	Averaged
	16 Cyclohexane	0.32800	0.30618	0.050	6.65263	30.00000	Averaged
	17 1,1,1-Trichloroethane	0.35476	0.34944	0.050	1.49890	20.00000	Averaged
	18 Carbon Tetrachloride	0.33521	0.32897	0.050	1.86299	20.00000	Averaged
	19 Benzene	0.79901	0.73307	0.050	8.25211	30.00000	Averaged
	20 1,2-Dichloroethane	0.35802	0.34017	0.050	4.98446	20.00000	Averaged
	21 Heptane	0.28581	0.26390	0.050	7.66544	20.00000	Averaged
	22 Trichloroethene	0.27047	0.26160	0.050	3.27915	20.00000	Averaged
	23 Methyl Methacrylate	0.24529	0.22719	0.050	7.38128	30.00000	Averaged
	24 4-Methyl-2-pentanone	0.09704	0.09601	0.050	1.06861	30.00000	Averaged
$	25 Toluene-d8	0.89443	0.88117	0.050	1.48245	30.00000	Averaged
	26 Toluene-CCC	0.59438	0.56548	0.050	4.86241	20.00000	Averaged
	28 1,1,2-Trichloroethane	0.23797	0.23038	0.050	3.18814	20.00000	Averaged
	29 Tetrachloroethene	0.24763	0.24395	0.050	1.48838	20.00000	Averaged
	30 Chlorobenzene	0.75588	0.72622	0.050	3.92329	20.00000	Averaged
	31 Ethylbenzene-CCC	0.38341	0.36250	0.050	5.45600	20.00000	Averaged
	33 m,p-Xylene	0.44895	0.42133	0.050	6.15152	20.00000	Averaged
	34 o-Xylene	0.41889	0.41165	0.050	1.72914	30.00000	Averaged
	35 Styrene	0.85178	0.84452	0.050	0.85175	30.00000	Averaged
	36 a-Pinene	0.55038	0.53861	0.050	2.13846	30.00000	Averaged
	37 1,1,2,2-Tetrachloroethane-S	0.48476	0.44458	0.050	8.28871	30.00000	Averaged
	38 Propylbenzene	1.58635	1.42058	0.050	10.45000	20.00000	Averaged
	40 1,3,5-Trimethylbenzene	0.84317	0.78506	0.050	6.89224	20.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msdc.i Injection Date: 11-JUL-2017 09:34
Lab File ID: c071103sim.d Init. Cal. Date(s): 21-JUN-2017 21-JUN-2017
Analysis Type: AIR Init. Cal. Times: 08:04 12:33
Lab Sample ID: 2848-4-5.0 Quant Type: ISTD
Method: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
41 1,2,4-Trimethylbenzene	0.90720	0.83575	0.050	7.87627	20.00000	Averaged
42 R-(+)-Limonene	0.41771	0.36393	0.050	12.87412	30.00000	Averaged
43 1,3-Dichlorobenzene	0.59922	0.58868	0.050	1.75850	30.00000	Averaged
44 1,4-Dichlorobenzene	0.71836	0.66670	0.050	7.19103	30.00000	Averaged
45 1,2-Dichlorobenzene	0.63481	0.63677	0.050	-0.30957	30.00000	Averaged
46 1,4-Dithiane	0.44165	0.41805	0.050	5.34269	30.00000	Averaged
47 1,2,4-Trichlorobenzene	0.43184	0.40947	0.050	5.18107	30.00000	Averaged
48 Naphthalene	1.32499	1.22026	0.050	7.90404	30.00000	Averaged
49 1,2,3-Trichlorobenzene	0.42065	0.38366	0.050	8.79334	30.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 7.10368
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071103sim.d
Lab Smp Id: 2848-4-5.0 Client Smp ID: CCV
Inj Date : 11-JUL-2017 09:34
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-5.0;CCV
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 11-Jul-2017 09:52 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	6887	5.00000	3.81543
2 Vinyl Chloride	62	3.420	3.420	(0.312)	32265	5.00000	4.23901
3 Ethanol	45	4.961	4.961	(0.453)	9374	5.00000	3.55743
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	29867	5.00000	4.67803
5 Acetone	58	5.566	5.566	(0.508)	21789	5.00000	4.33686
7 MTBE	73	6.555	6.555	(0.599)	101526	5.00000	4.57844
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	35453	5.00000	4.52475
9 Hexane	57	6.775	6.775	(0.619)	96989	5.00000	4.70367
10 Halothane	117	6.961	6.961	(0.636)	25565	5.00000	4.55518
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	73187	5.00000	4.52849
12 Ethyl Acetate	70	7.640	7.640	(0.698)	11106	5.00000	4.68124
13 2-Butanone	72	7.662	7.662	(0.700)	23278	5.00000	4.45103
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	40334	5.00000	4.64710
15 Chloroform-CCC	83	7.956	7.956	(0.727)	58042	5.00000	4.55899
16 Cyclohexane	84	8.172	8.172	(0.747)	62207	5.00000	4.66737
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	70996	5.00000	4.92506

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	66837	5.00000	4.90685
	19 Benzene	78	8.572	8.572	(0.783)	148940	5.00000	4.58739
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	69113	5.00000	4.75078
	21 Heptane	71	8.696	8.696	(0.794)	53617	5.00000	4.61673
	22 Trichloroethene	130	9.283	9.283	(0.848)	53150	5.00000	4.83604
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	46158	5.00000	4.63094
	24 4-Methyl-2-pentanone	85	10.463	10.463	(0.956)	19506	5.00000	4.94657
$	25 Toluene-d8	98	10.608	10.608	(0.969)	179030	5.00000	4.92588
	26 Toluene-CCC	92	10.680	10.680	(0.976)	114890	5.00000	4.75688
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	203172	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.186	(1.022)	46807	5.00000	4.84059
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	49563	5.00000	4.92558
	30 Chlorobenzene	112	12.300	12.300	(1.124)	147548	5.00000	4.80384
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	73649	5.00000	4.72720
	33 m,p-Xylene	106	12.454	12.454	(1.138)	171205	10.0000	9.38485
	34 o-Xylene	106	12.901	12.901	(1.179)	83636	5.00000	4.91354
	35 Styrene	104	12.928	12.928	(1.181)	171583	5.00000	4.95741
	36 a-Pinene	93	13.203	13.203	(1.206)	109431	5.00000	4.89308
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	90326	5.00000	4.58556
	38 Propylbenzene	91	13.642	13.642	(1.246)	288622	5.00000	4.47750
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	159502	5.00000	4.65539
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	169800	5.00000	4.60619
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	73941	5.00000	4.35629
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	119603	5.00000	4.91207
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	135455	5.00000	4.64045
	45 1,2-Dichlorobenzene	146	14.873	14.873	(1.359)	129374	5.00000	5.01548
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	84936	5.00000	4.73286
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	83192	5.00000	4.74095
	48 Naphthalene	128	16.730	16.730	(1.529)	247923	5.00000	4.60480
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	77949	5.00000	4.56033

Report Date: 11-Jul-2017 09:52

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071103sim.d
Lab Smp Id: 2848-4-5.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34
Client Smp ID: CCV
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	203172	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

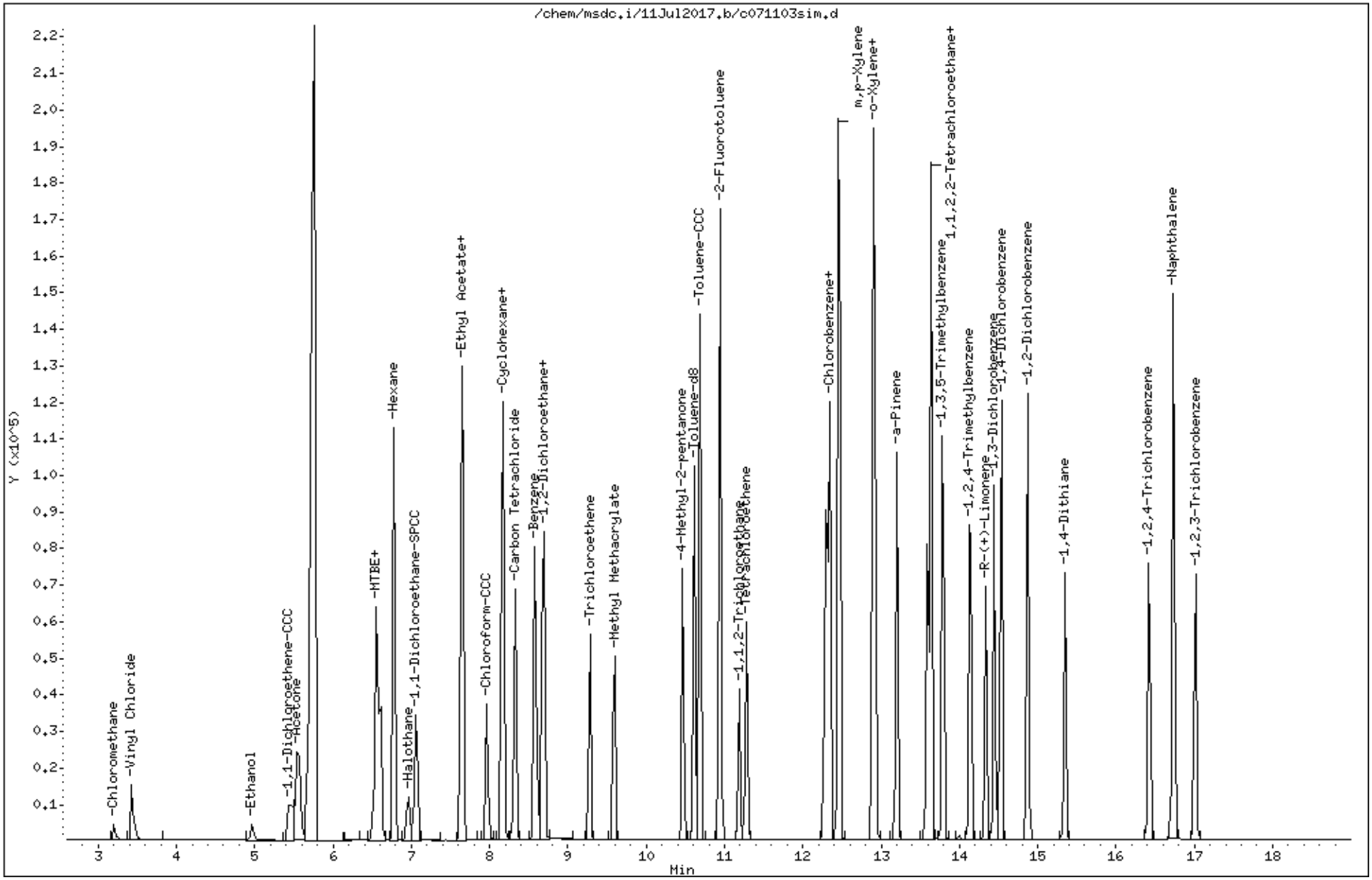
Data File: /chem/msdc.i/11Jul2017.b/c071103sim.d
Date : 11-JUL-2017 09:34
Client ID: CCV
Sample Info: ;2848-4-5.0;CCV

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1707036R1-10A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071104sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 09:59 AM**
		Date of Extraction: 7/11/17

Compound	%Recovery	Method Limits
1,2-Dichloroethane	96	70-130
1,1-Dichloroethene	96	70-130
cis-1,2-Dichloroethene	97	70-130
trans-1,2-Dichloroethene	105	70-130
Benzene	99	70-130
Tetrachloroethene	99	70-130
1,1,2-Trichloroethane	99	70-130
Trichloroethene	102	70-130
Toluene	97	70-130
Vinyl Chloride	87	50-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

Report Date: 11-Jul-2017 10:42

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036/042B
Client Smp ID: LCS
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: LCS
SpikeList File: RadLCS-CM.spk
Quant Type: ISTD
Sublist File: all-cm.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 Vinyl Chloride	10.0000	8.71825	87.18	50-140
3 Ethanol	10.0000	4.89606	48.96*	50-130
4 1,1-Dichloroethene	10.0000	9.65314	96.53	70-130
5 Acetone	10.0000	7.87735	78.77	70-130
7 MTBE	10.0000	10.6618	106.62	70-130
8 trans-1,2-Dichloro	10.0000	10.4685	104.68	70-130
9 Hexane	10.0000	11.9374	119.37	70-130
10 Halothane	10.0000	9.73668	97.37	70-130
11 1,1-Dichloroethane	10.0000	9.54200	95.42	70-130
12 Ethyl Acetate	10.0000	9.52680	95.27	70-130
13 2-Butanone	10.0000	8.54619	85.46	70-130
14 cis-1,2-Dichloroet	10.0000	9.67527	96.75	70-130
15 Chloroform-CCC	10.0000	10.1469	101.47	70-130
16 Cyclohexane	10.0000	9.72274	97.23	70-130
17 1,1,1-Trichloroeth	10.0000	10.2249	102.25	70-130
18 Carbon Tetrachlori	10.0000	9.93035	99.30	70-130
19 Benzene	10.0000	9.87825	98.78	70-130
20 1,2-Dichloroethane	10.0000	9.55305	95.53	70-130
21 Heptane	10.0000	9.99308	99.93	70-130
22 Trichloroethene	10.0000	10.2349	102.35	70-130
23 Methyl Methacrylat	10.0000	9.11046	91.10	70-130
24 4-Methyl-2-pentano	10.0000	9.91971	99.20	70-130
26 Toluene-CCC	10.0000	9.67928	96.79	70-130
28 1,1,2-Trichloroeth	10.0000	9.86762	98.68	70-130
29 Tetrachloroethene	10.0000	9.92412	99.24	70-130
30 Chlorobenzene	10.0000	8.96899	89.69	70-130
31 Ethylbenzene-CCC	10.0000	9.71134	97.11	70-130
33 m,p-Xylene	20.0000	18.5619	92.81	70-130
34 o-Xylene	10.0000	9.23606	92.36	70-130
35 Styrene	10.0000	6.05905	60.59	20-100
36 a-Pinene	10.0000	12.0330	120.33	70-130
37 1,1,2,2-Tetrachlor	10.0000	8.30867	83.09	70-130
38 Propylbenzene	10.0000	8.81121	88.11	70-130

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
40 1,3,5-Trimethylben	10.0000	9.14625	91.46	70-130
41 1,2,4-Trimethylben	10.0000	8.52475	85.25	70-130
42 R-(+)-Limonene	10.0000	9.26617	92.66	70-130
43 1,3-Dichlorobenzen	10.0000	8.54846	85.48	50-110
44 1,4-Dichlorobenzen	10.0000	7.56226	75.62	50-110
45 1,2-Dichlorobenzen	10.0000	8.00356	80.04	50-110
46 1,4-Dithiane	10.0000	8.57898	85.79	50-110
47 1,2,4-Trichloroben	10.0000	6.68660	66.87	20-110
48 Naphthalene	10.0000	1.98813	19.88	5-80
49 1,2,3-Trichloroben	10.0000	5.49101	54.91	20-110

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.2721	102.72	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071104sim.d
Lab Smp Id: 1707036/042B Client Smp ID: LCS
Inj Date : 11-JUL-2017 09:59
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036/042B;LCS
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 11-Jul-2017 09:52 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all-cm.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	29415	4.35913	8.71825
3 Ethanol	45	4.961	4.961	(0.453)	5719	2.44803	4.89606(R)
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	27320	4.82657	9.65314
5 Acetone	58	5.566	5.566	(0.508)	17543	3.93868	7.87735
7 MTBE	73	6.555	6.555	(0.599)	104803	5.33089	10.6618
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	36360	5.23424	10.4685
9 Hexane	57	6.775	6.775	(0.619)	109113	5.96870	11.9374
10 Halothane	117	6.961	6.961	(0.636)	24223	4.86834	9.73668
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	68360	4.77100	9.54200
12 Ethyl Acetate	70	7.640	7.640	(0.698)	10019	4.76340	9.52680
13 2-Butanone	72	7.640	7.662	(0.698)	19812	4.27310	8.54619
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	37225	4.83763	9.67527
15 Chloroform-CCC	83	7.956	7.956	(0.727)	57265	5.07345	10.1469
16 Cyclohexane	84	8.172	8.172	(0.747)	57443	4.86137	9.72274
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	65338	5.11244	10.2249
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	59960	4.96517	9.93035

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	19 Benzene	78	8.573	8.572	(0.783)	142170	4.93912	9.87825
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	61605	4.77653	9.55305
	21 Heptane	71	8.696	8.696	(0.794)	51446	4.99654	9.99308
	22 Trichloroethene	130	9.283	9.283	(0.848)	49863	5.11746	10.2349
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	40253	4.55523	9.11046
	24 4-Methyl-2-pentanone	85	10.464	10.463	(0.956)	17339	4.95986	9.91971
$	25 Toluene-d8	98	10.608	10.608	(0.969)	165495	5.13603	10.2721
	26 Toluene-CCC	92	10.680	10.680	(0.976)	103630	4.83964	9.67928
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	180127	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.186	(1.022)	42297	4.93381	9.86762
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	44266	4.96206	9.92412
	30 Chlorobenzene	112	12.300	12.300	(1.124)	122116	4.48450	8.96899
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	67069	4.85567	9.71134
	33 m,p-Xylene	106	12.454	12.454	(1.138)	150105	9.28093	18.5619
	34 o-Xylene	106	12.901	12.901	(1.179)	69689	4.61803	9.23606
	35 Styrene	104	12.928	12.928	(1.181)	92962	3.02953	6.05905
	36 a-Pinene	93	13.203	13.203	(1.206)	119293	6.01649	12.0330
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	72549	4.15433	8.30867
	38 Propylbenzene	91	13.642	13.642	(1.246)	251776	4.40560	8.81121
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	138911	4.57313	9.14625
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	139303	4.26237	8.52475
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	69719	4.63308	9.26617
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	92267	4.27423	8.54846
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	97852	3.78113	7.56226
	45 1,2-Dichlorobenzene	146	14.874	14.873	(1.359)	91517	4.00178	8.00356
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	68247	4.28949	8.57898
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	52012	3.34330	6.68660
	48 Naphthalene	128	16.730	16.730	(1.529)	47450	0.99407	1.98813
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	41605	2.74551	5.49101

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Report Date: 11-Jul-2017 10:42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071104sim.d
Lab Smp Id: 1707036/042B
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34
Client Smp ID: LCS
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	180127	-11.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

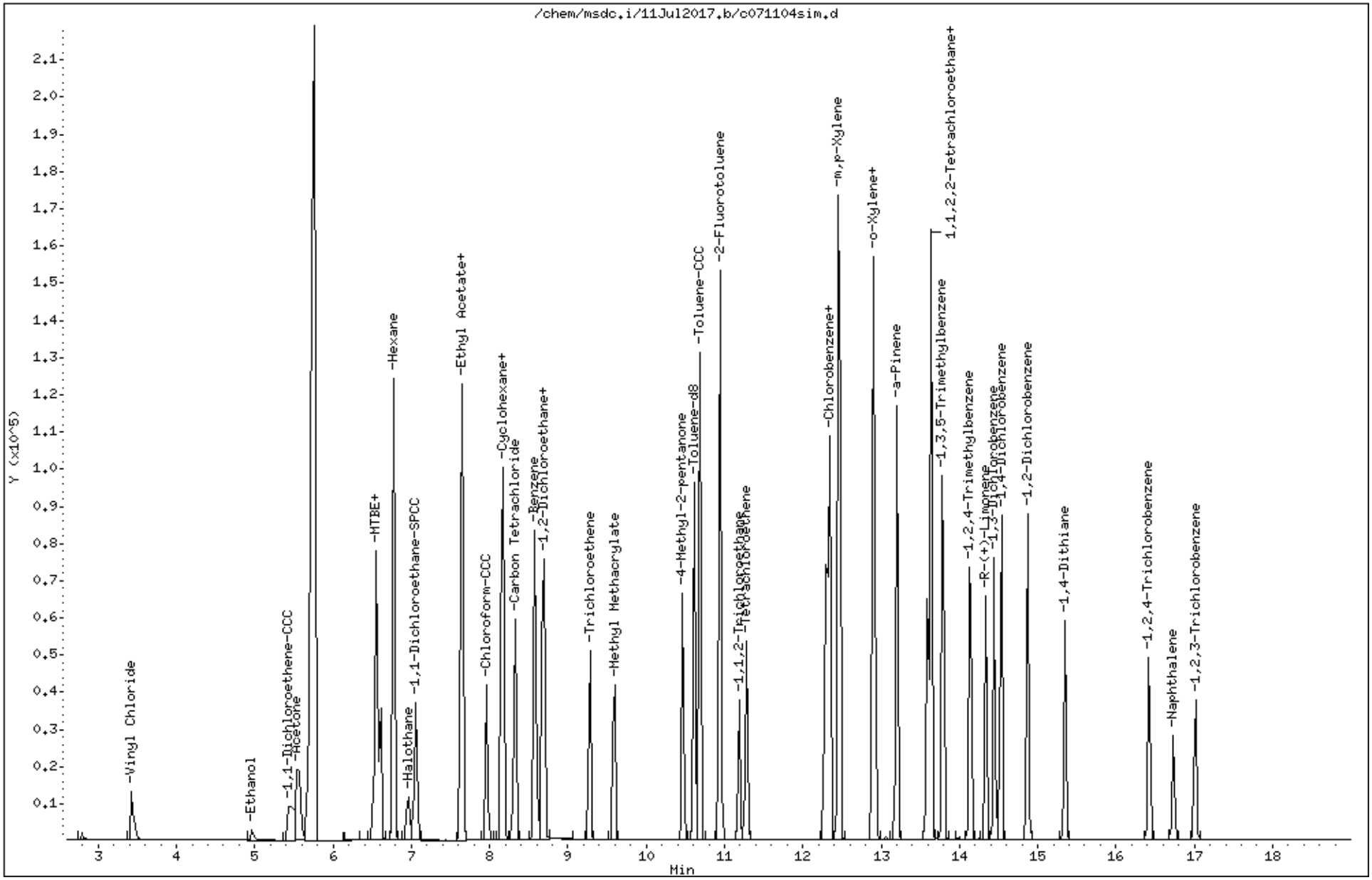
Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d
Date : 11-JUL-2017 09:59
Client ID: LCS
Sample Info: ;1707036/042B;LCS

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

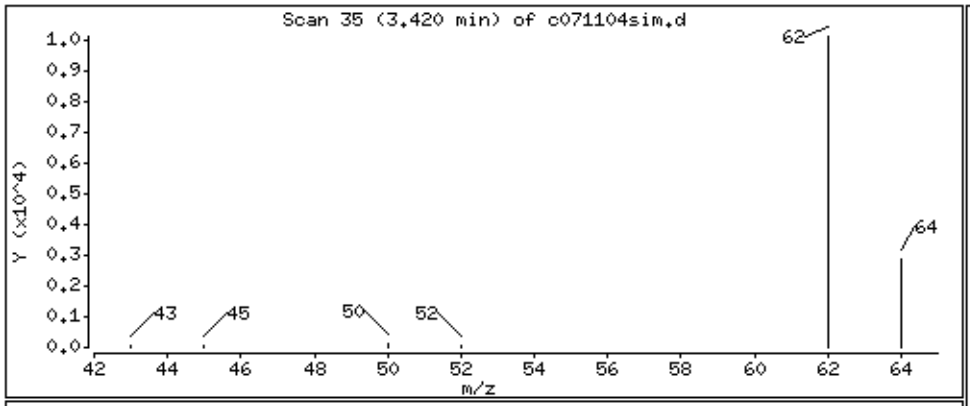
Operator: gm

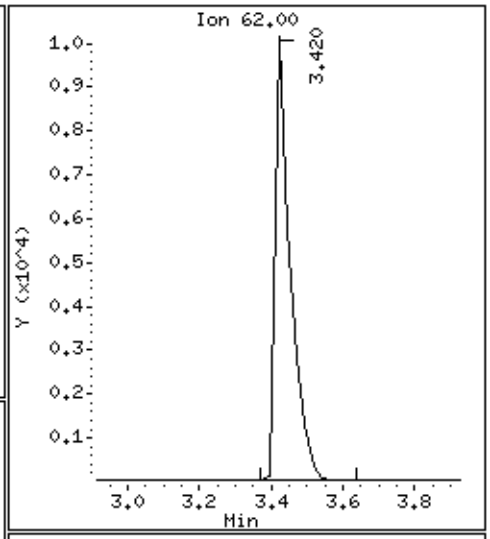
Column phase: DB-5.625

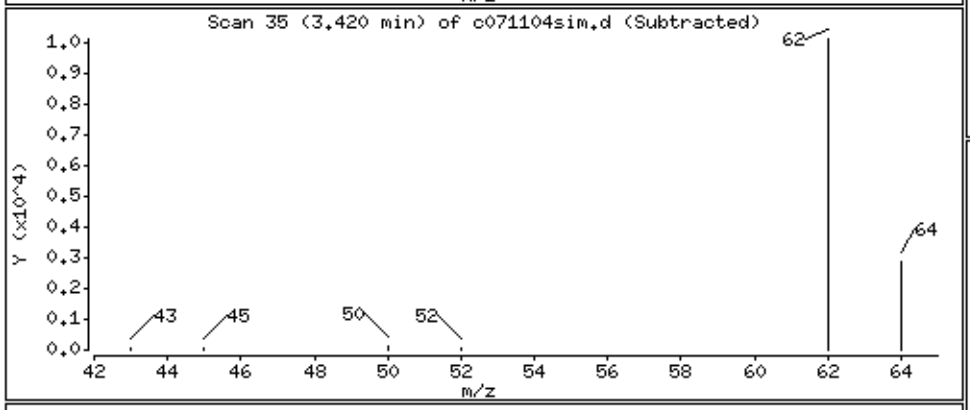
Column diameter: 0.25

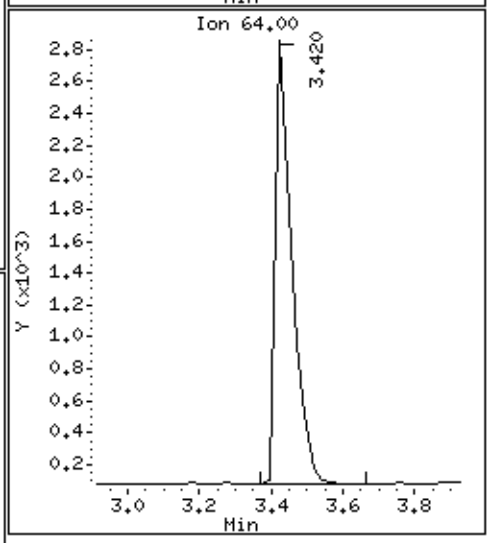
2 Vinyl Chloride

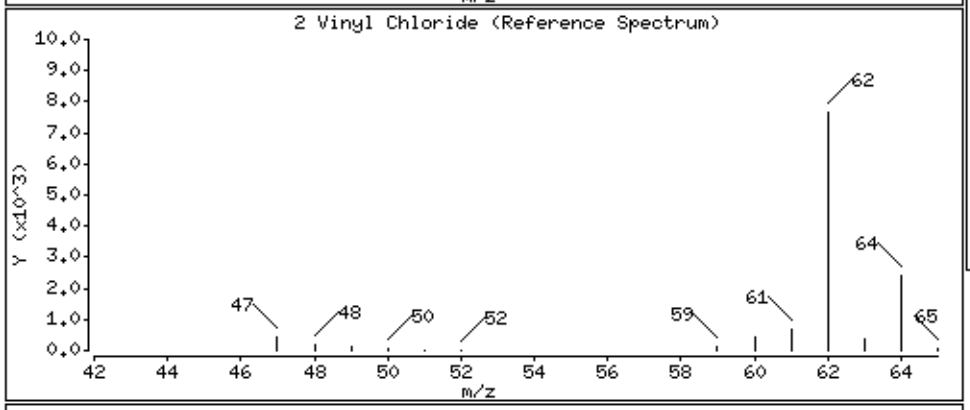
Concentration: 8.71825 ug

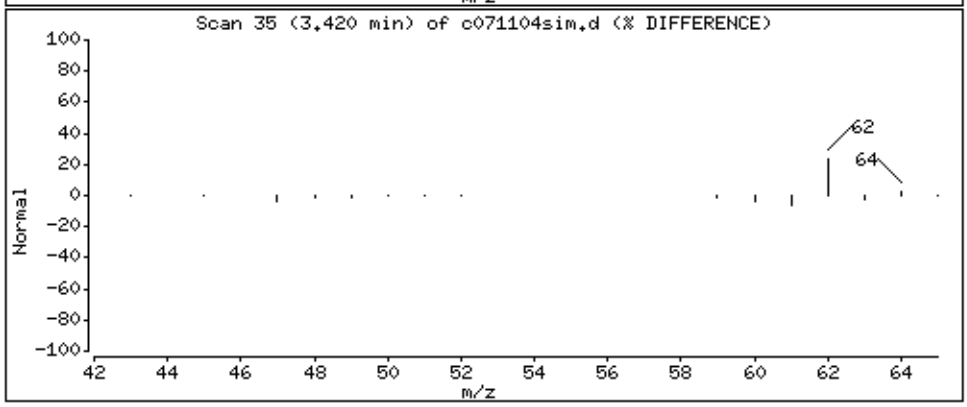












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

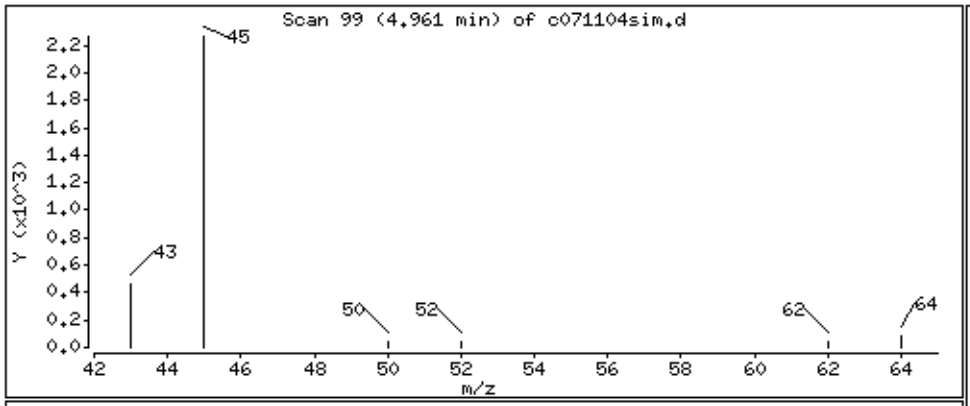
Operator: gm

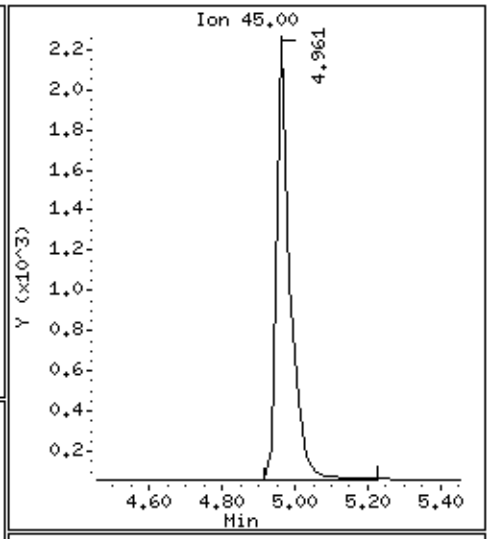
Column phase: DB-5.625

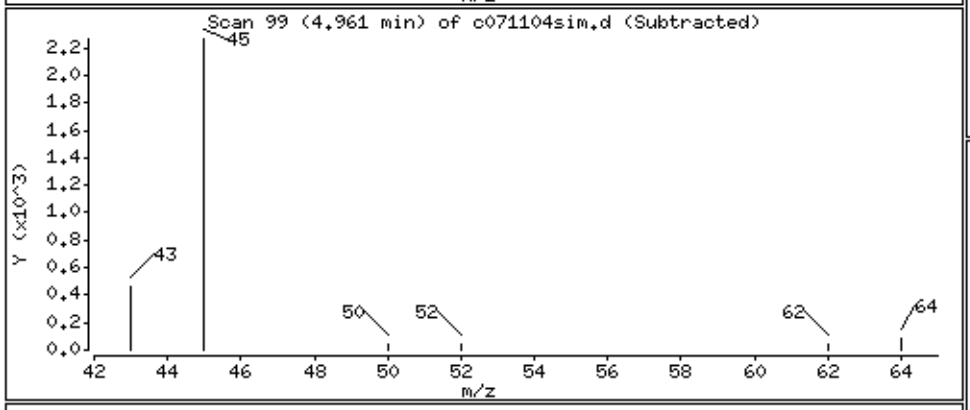
Column diameter: 0.25

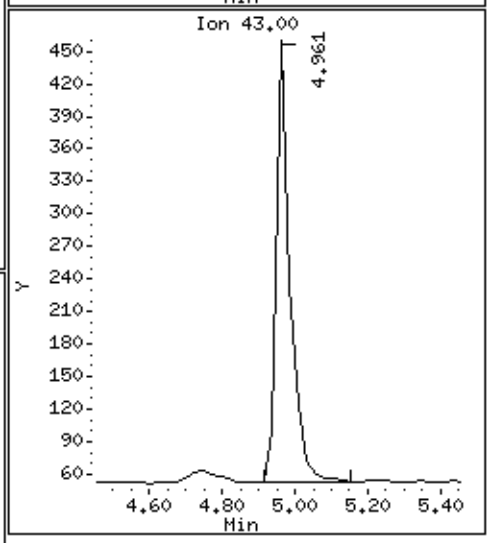
3 Ethanol

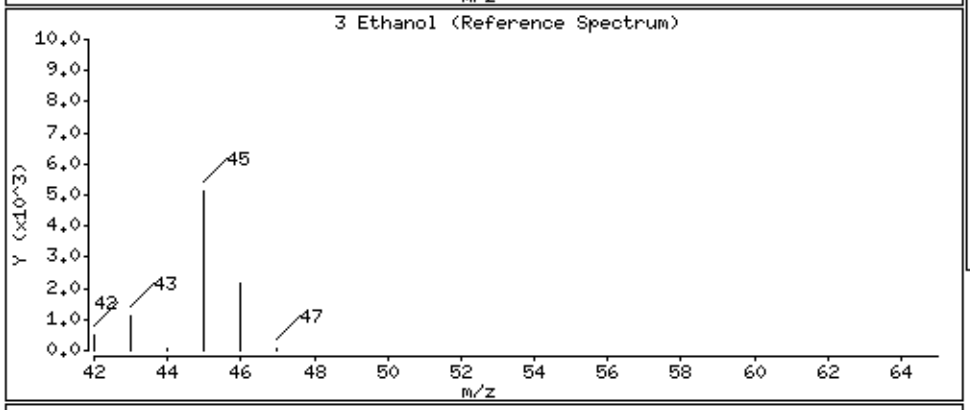
Concentration: 4.89606 ug

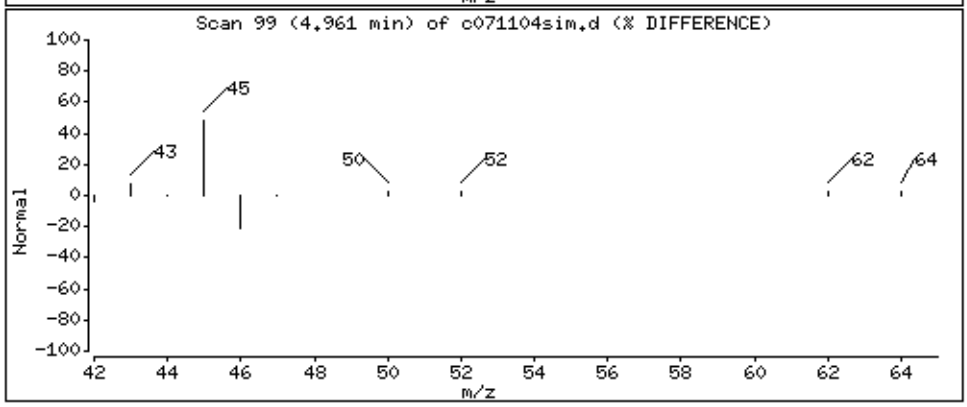












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

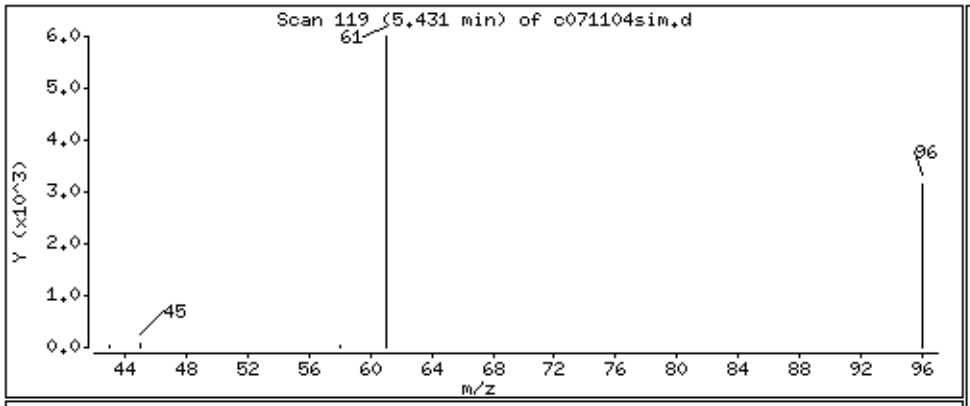
Operator: gm

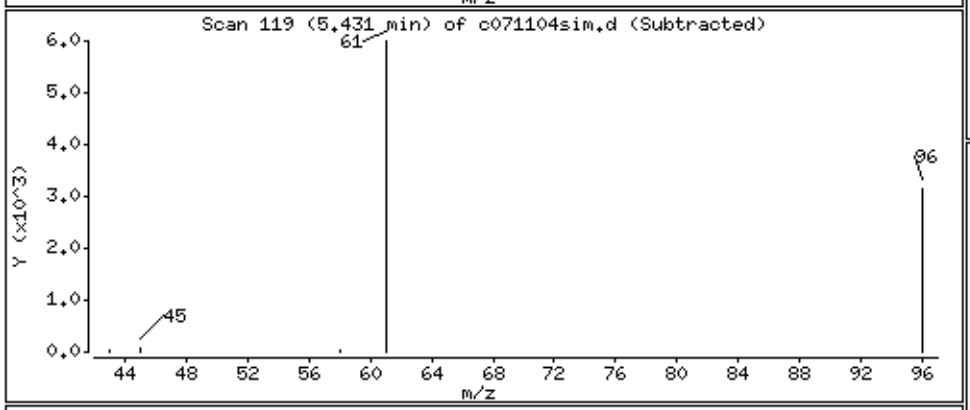
Column phase: DB-5.625

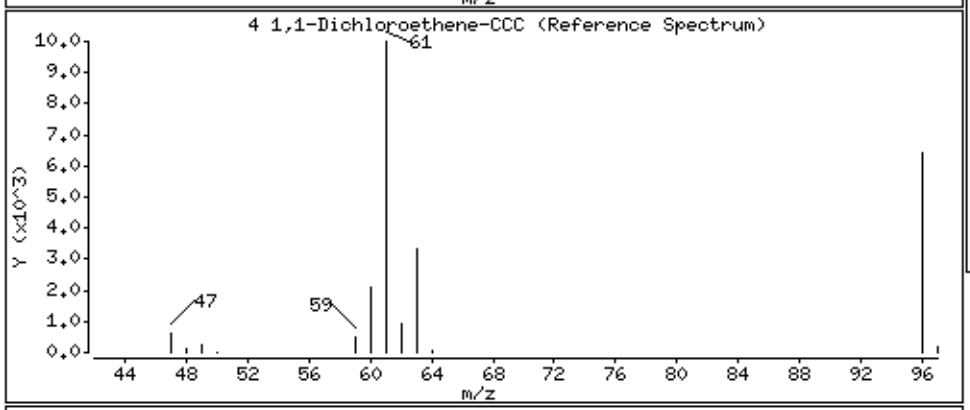
Column diameter: 0.25

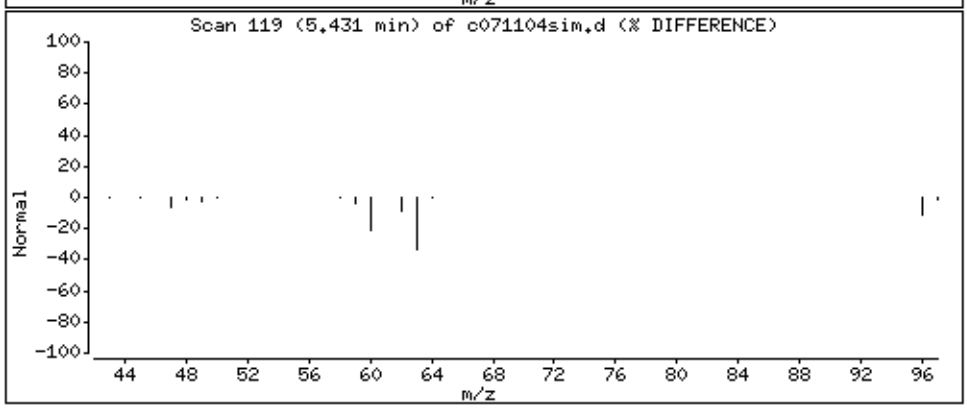
4 1,1-Dichloroethene-CCC

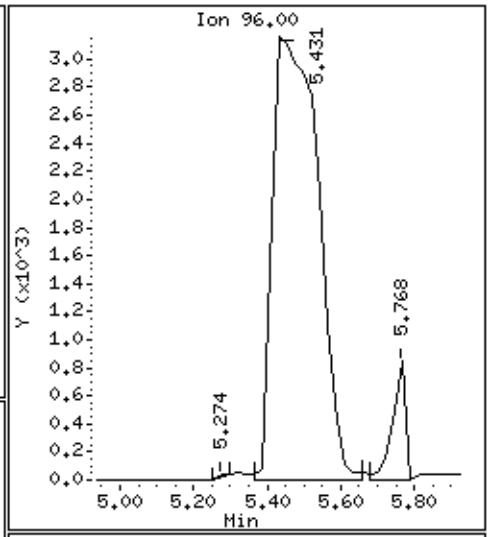
Concentration: 9.65314 ug

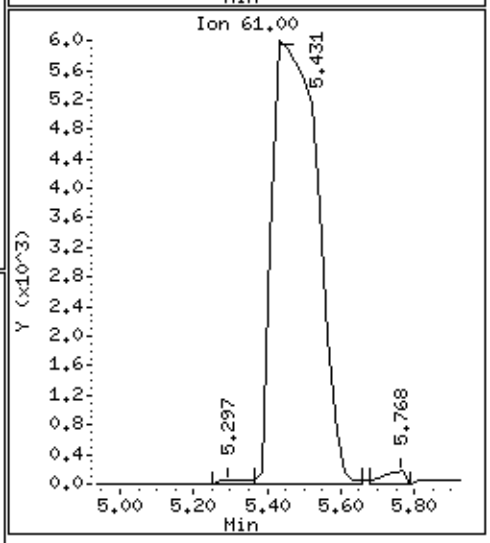












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

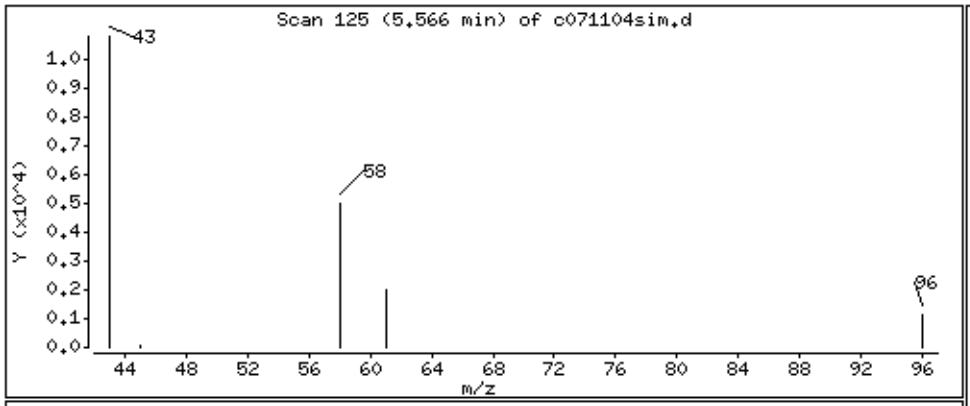
Operator: gm

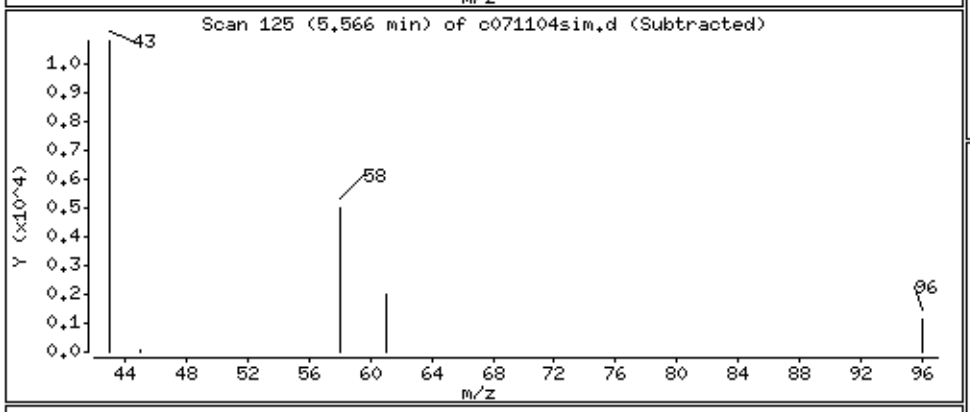
Column phase: DB-5.625

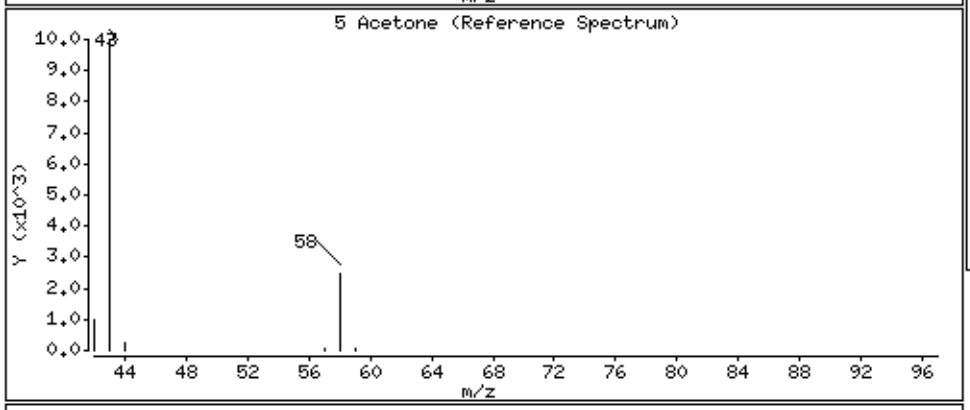
Column diameter: 0.25

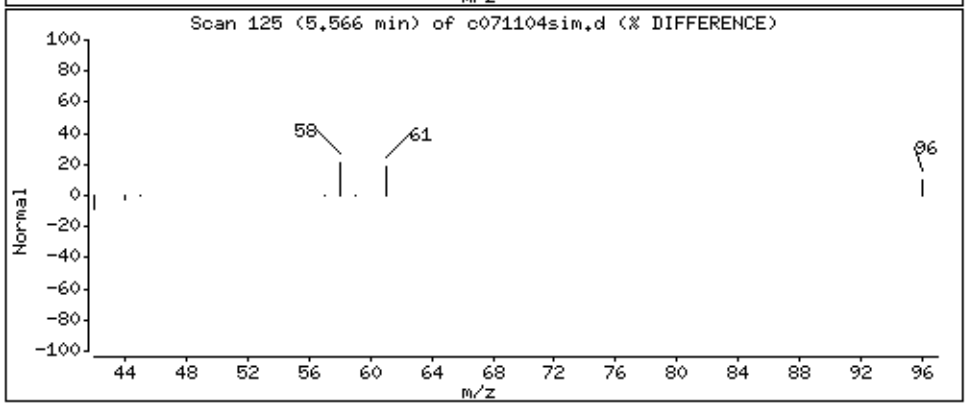
5 Acetone

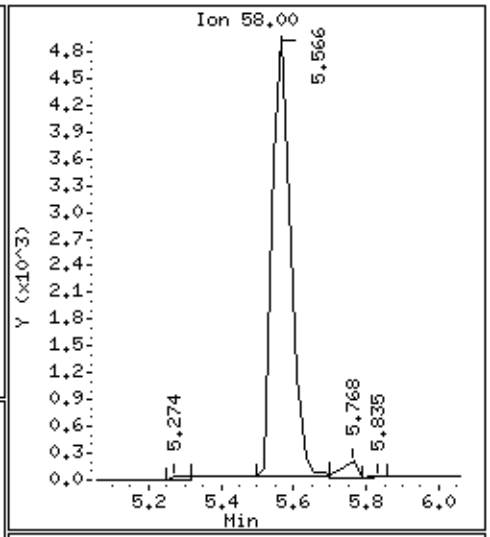
Concentration: 7.87735 ug

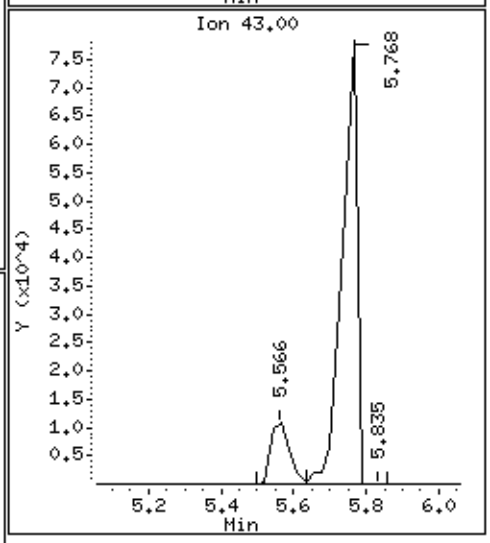












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

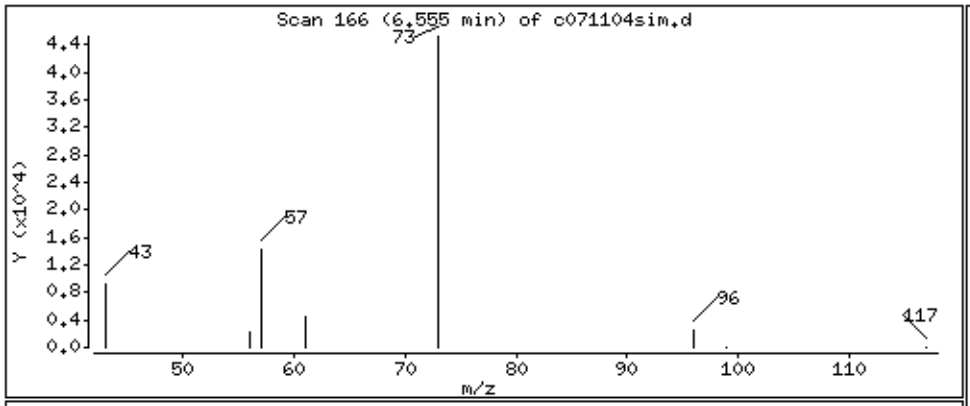
Operator: gm

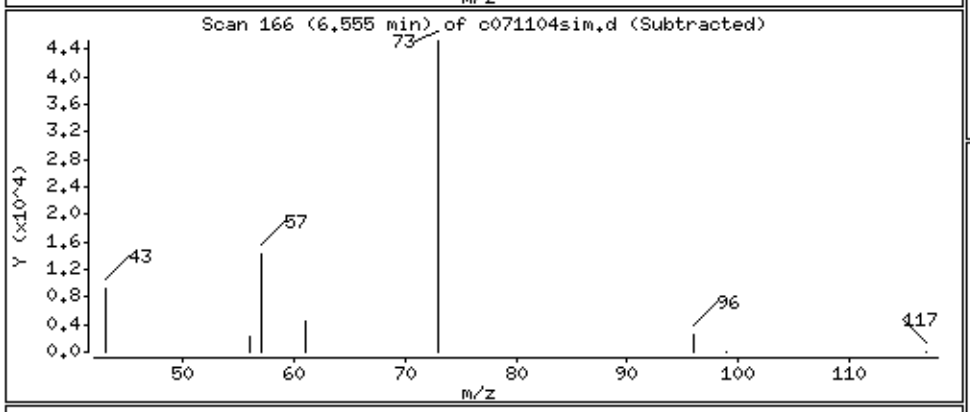
Column phase: DB-5.625

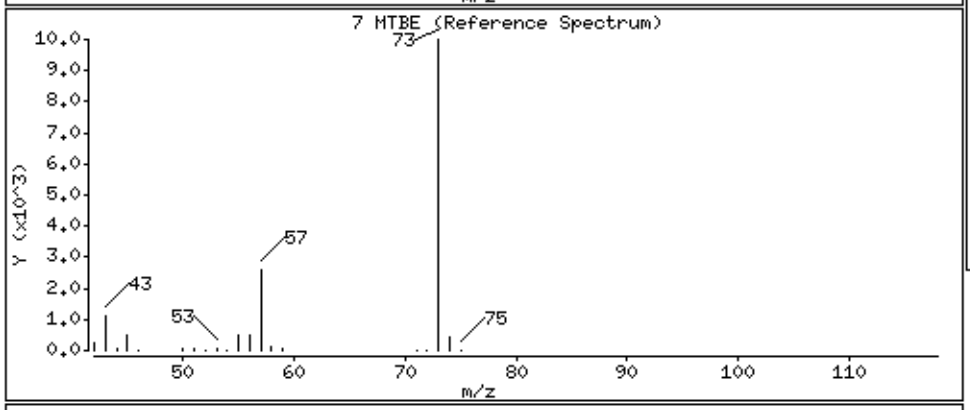
Column diameter: 0.25

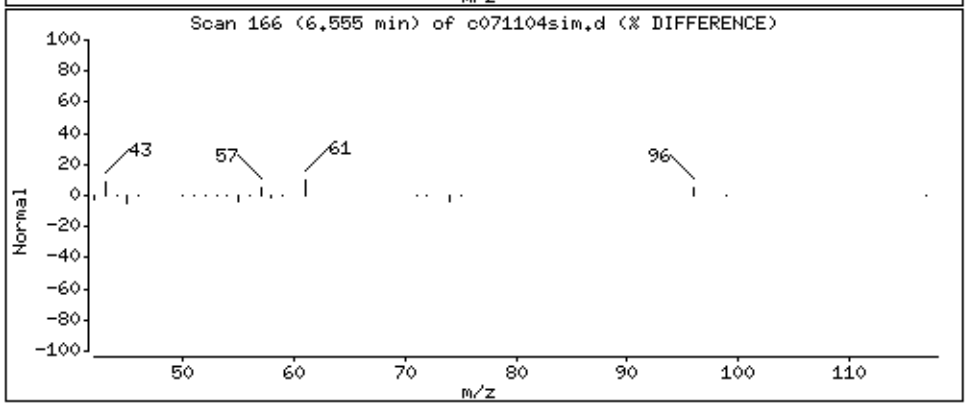
7 MTBE

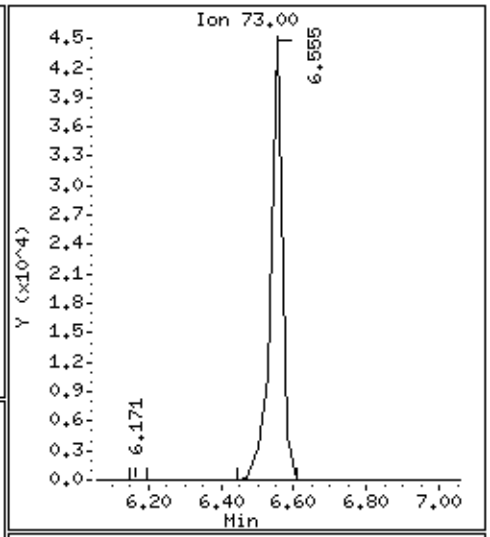
Concentration: 10.6618 ug

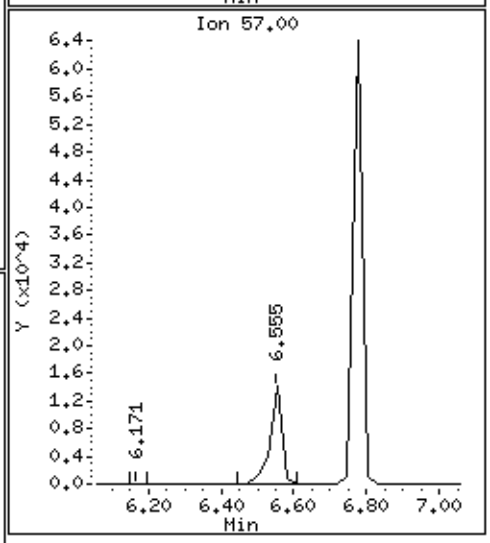












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

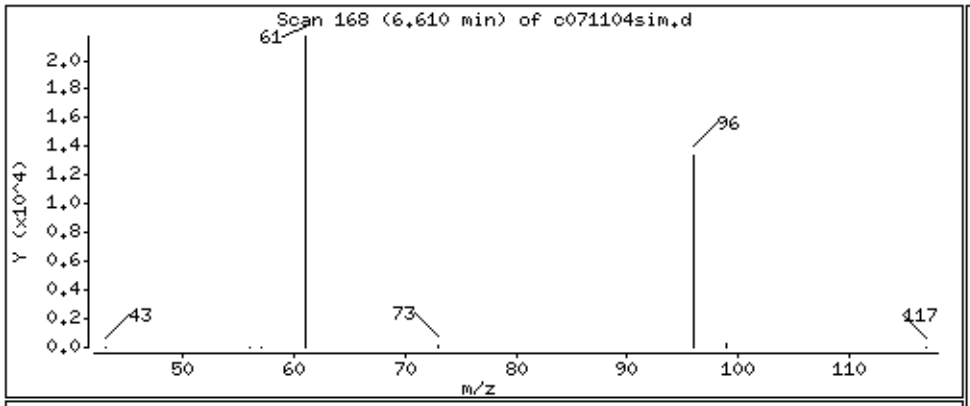
Operator: gm

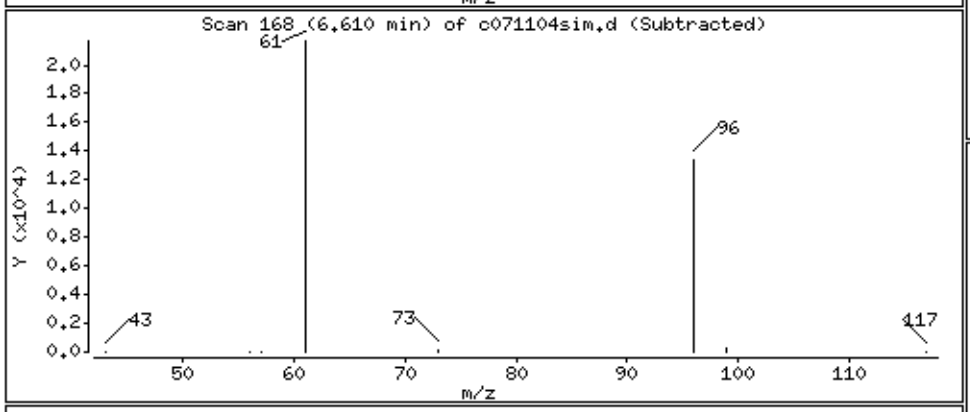
Column phase: DB-5.625

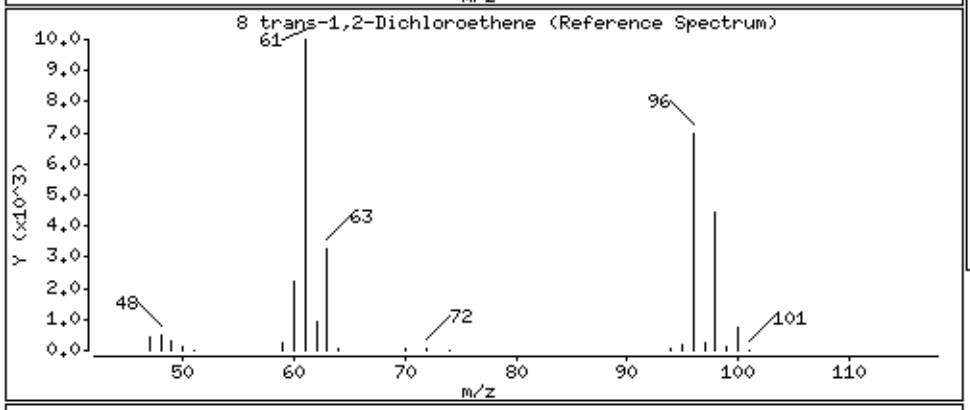
Column diameter: 0.25

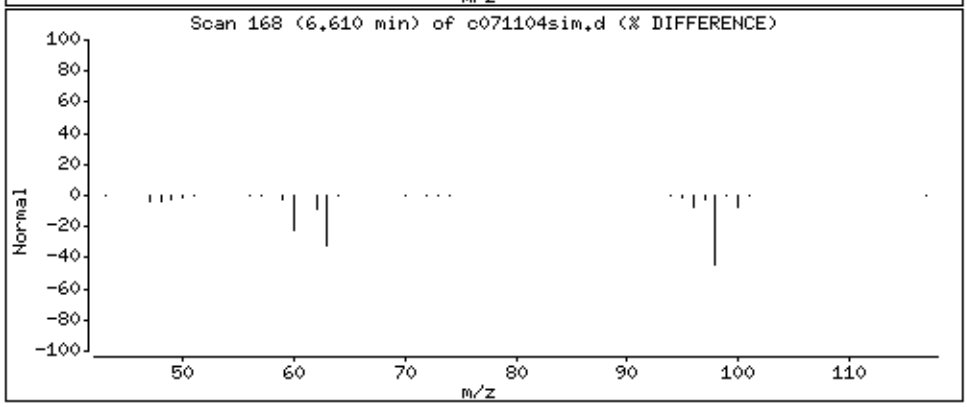
8 trans-1,2-Dichloroethene

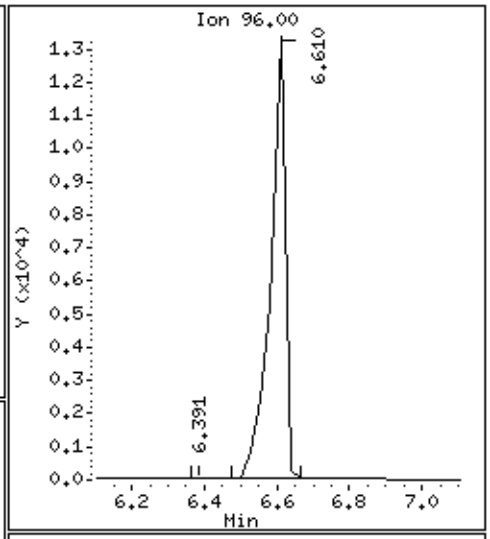
Concentration: 10.4685 ug

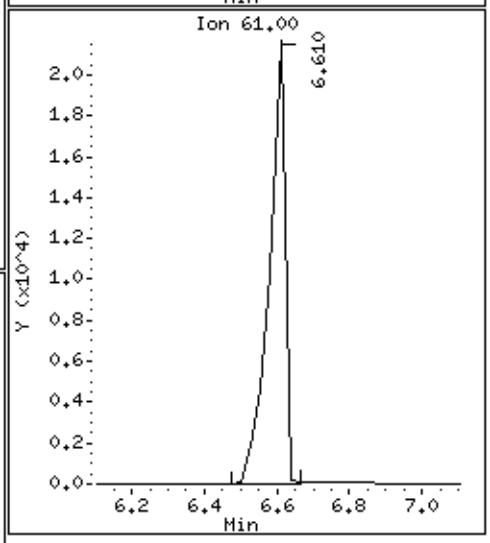












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

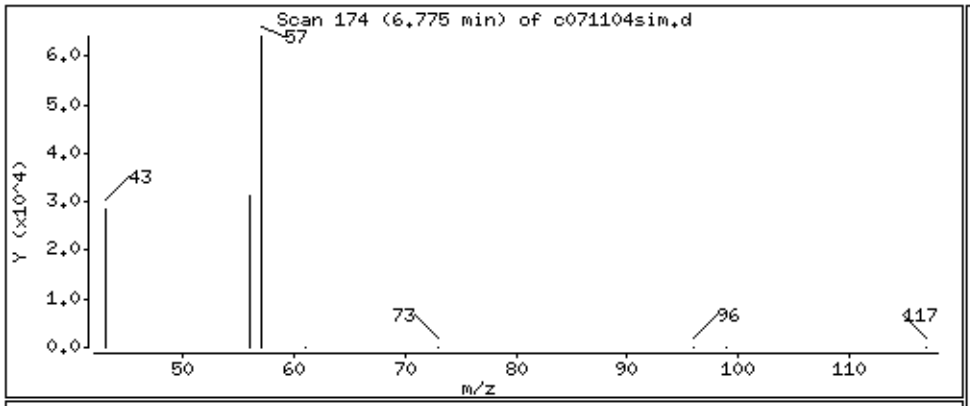
Operator: gm

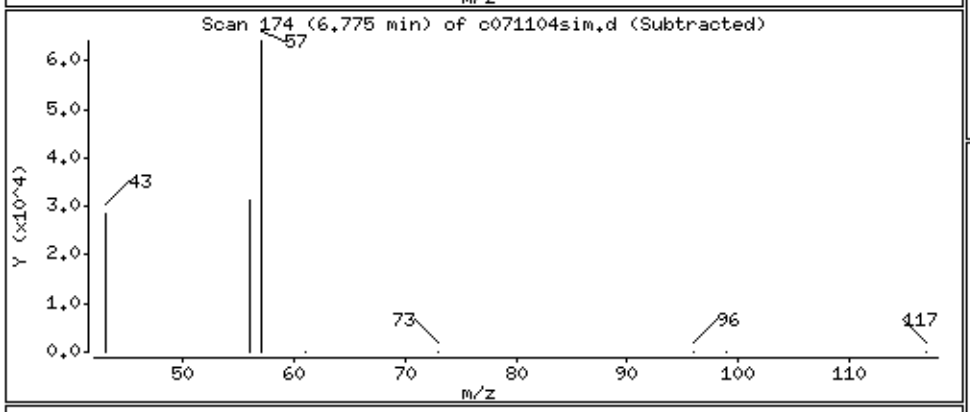
Column phase: DB-5.625

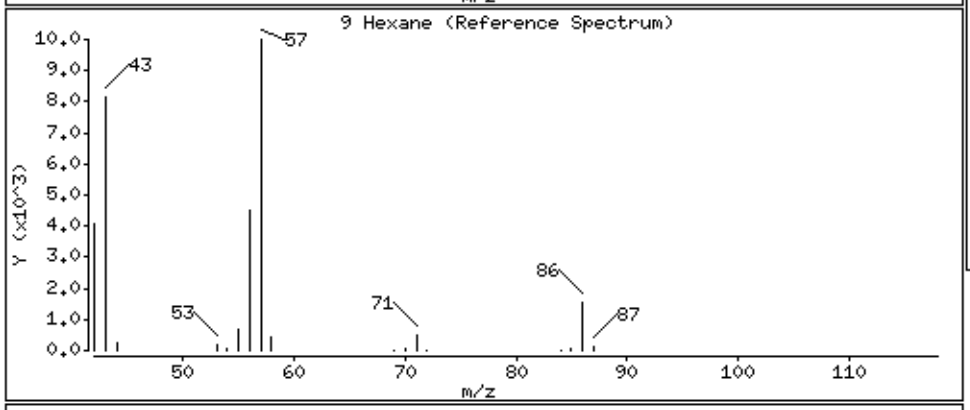
Column diameter: 0.25

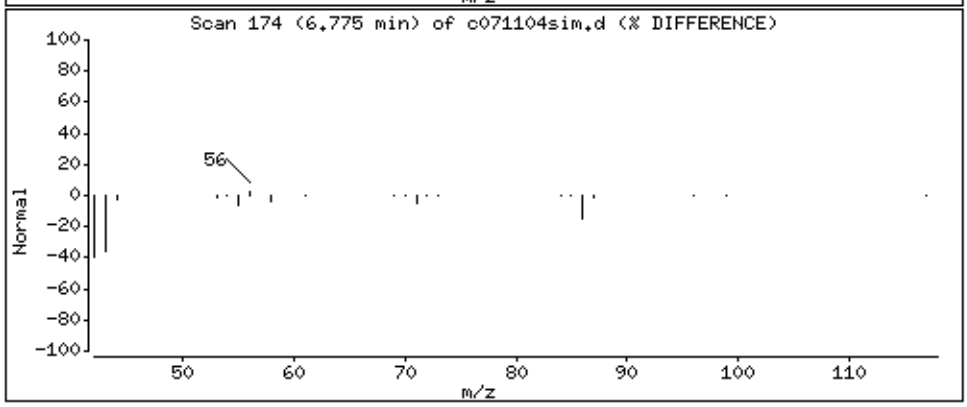
9 Hexane

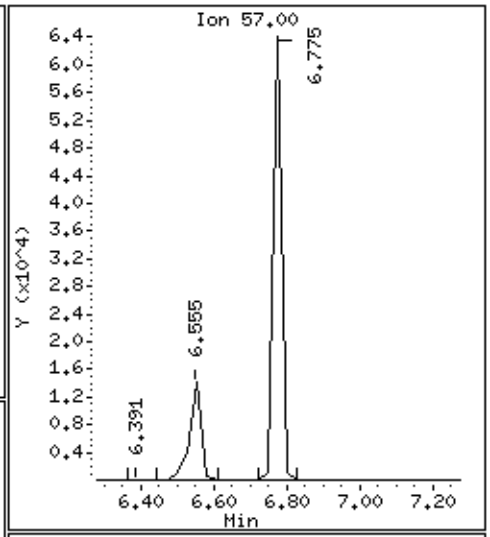
Concentration: 11.9374 ug

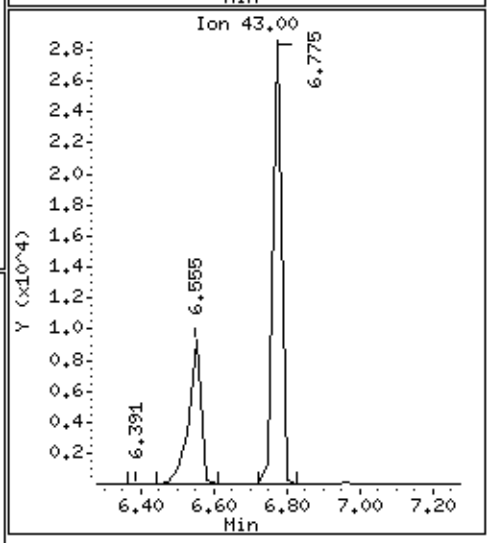












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

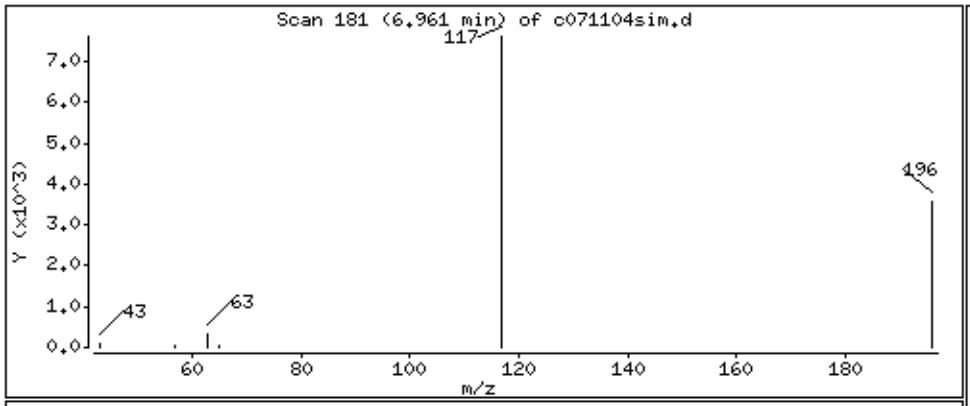
Operator: gm

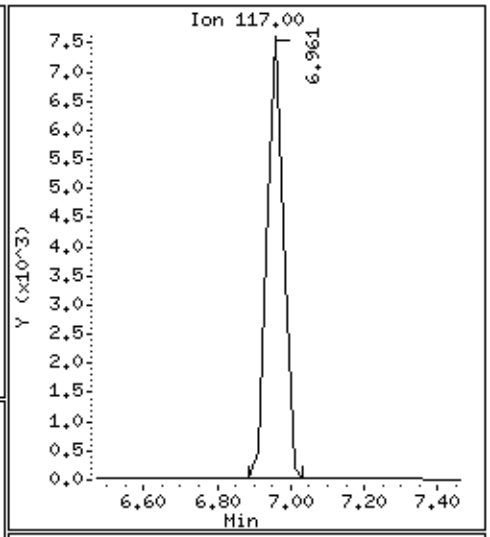
Column phase: DB-5.625

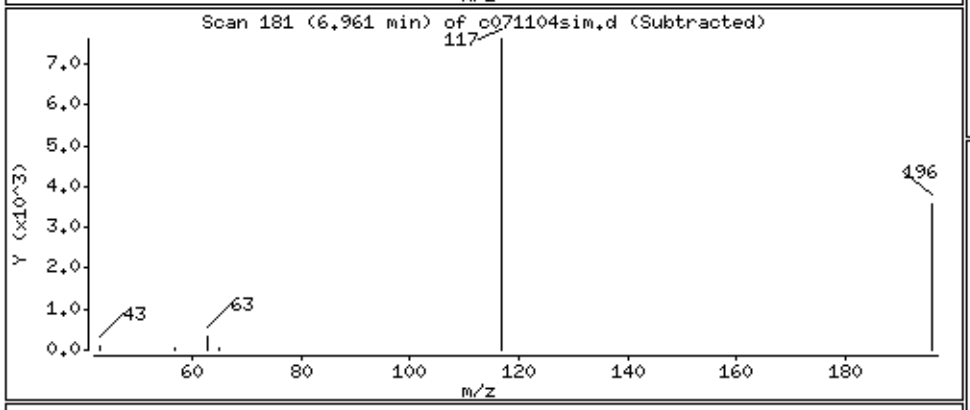
Column diameter: 0.25

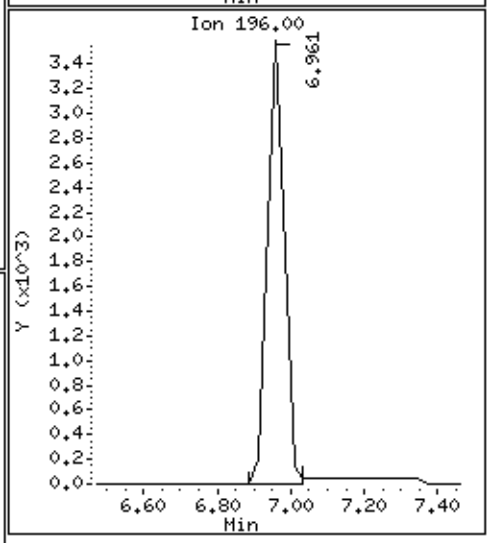
10 Halothane

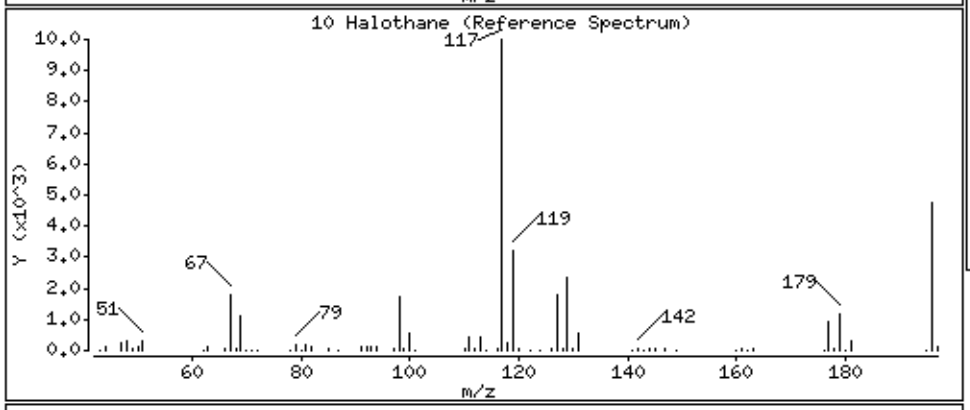
Concentration: 9.73668 ug

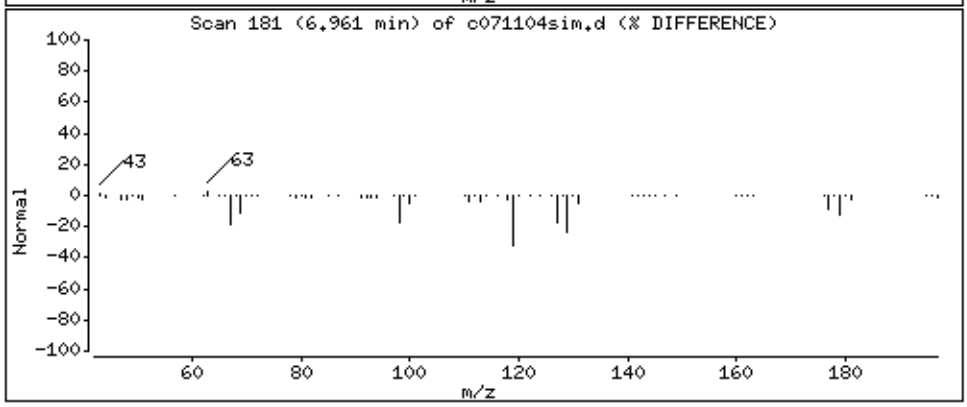












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

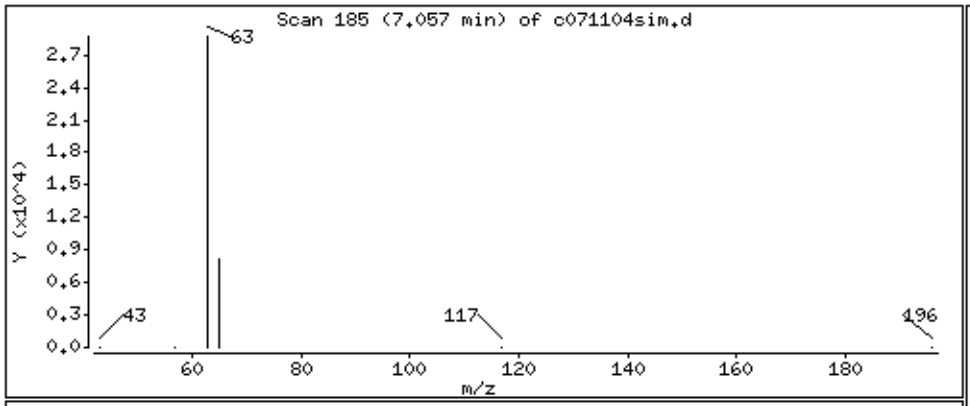
Operator: gm

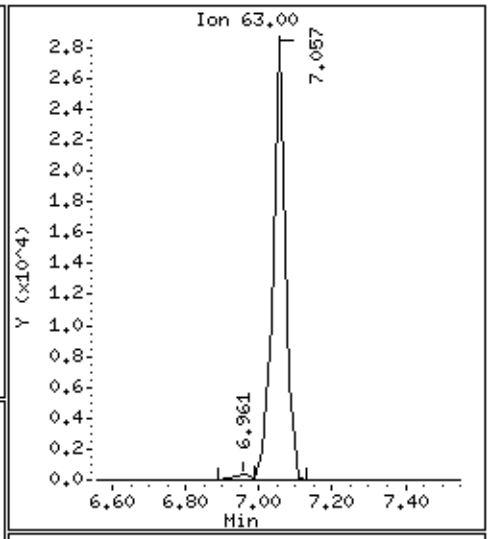
Column phase: DB-5.625

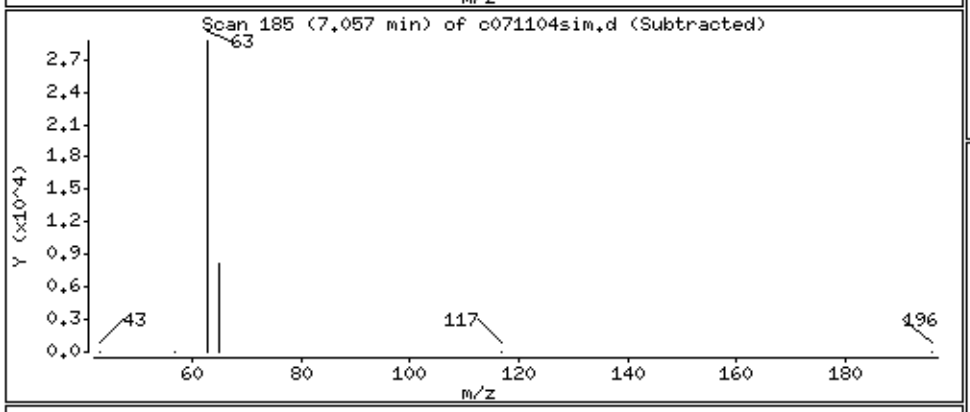
Column diameter: 0.25

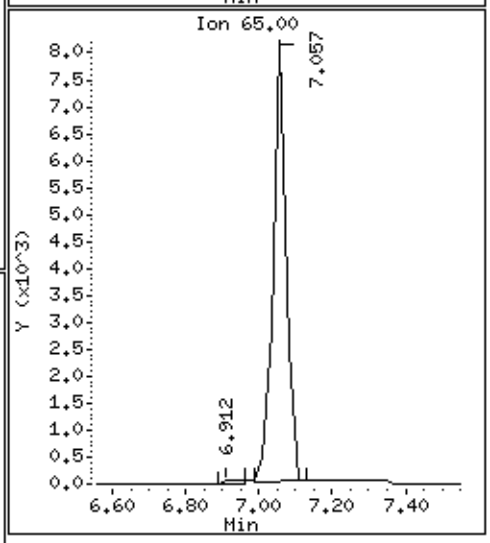
11 1,1-Dichloroethane-SPCC

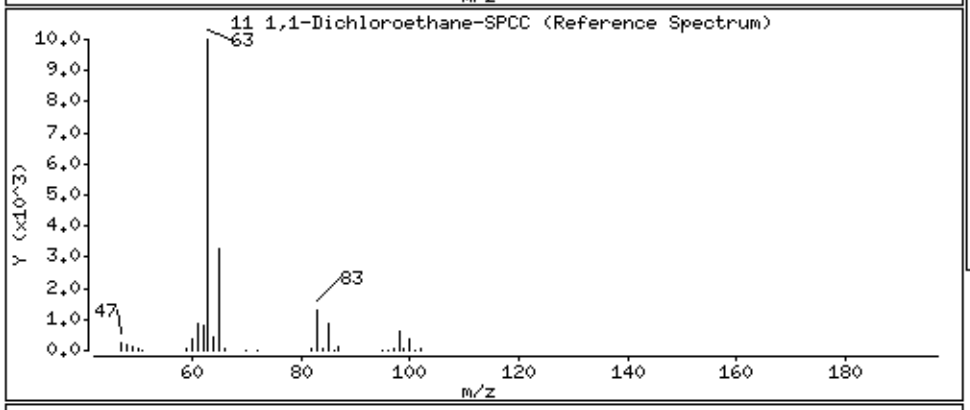
Concentration: 9.54200 ug

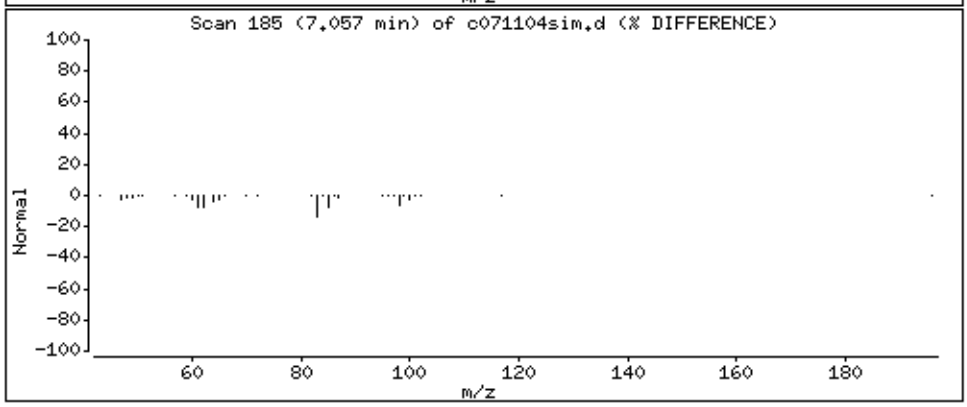












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

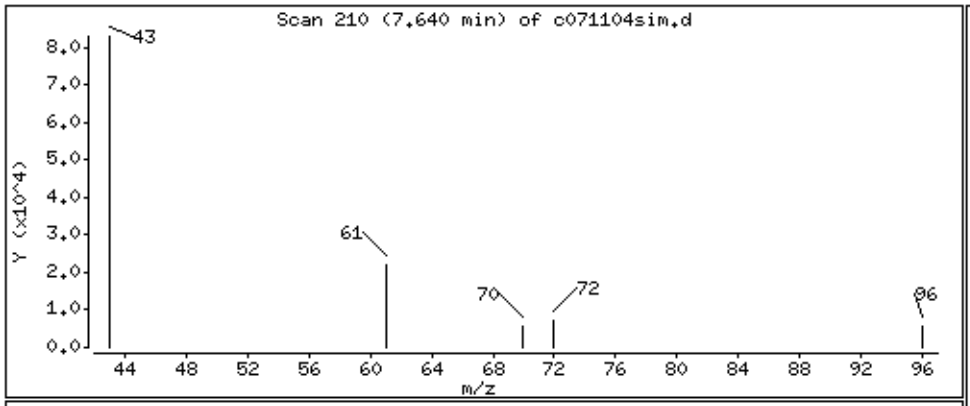
Operator: gm

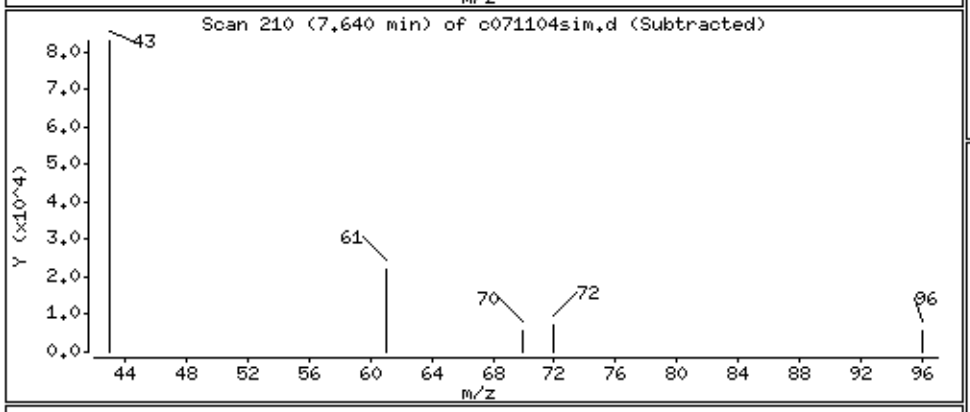
Column phase: DB-5.625

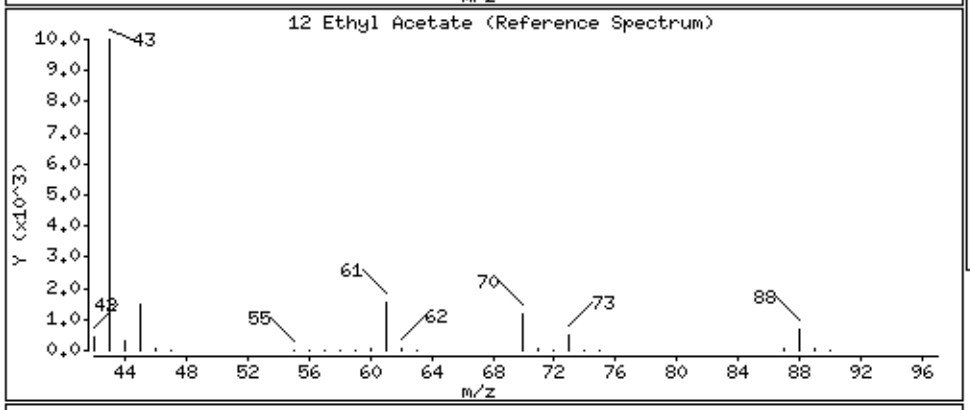
Column diameter: 0.25

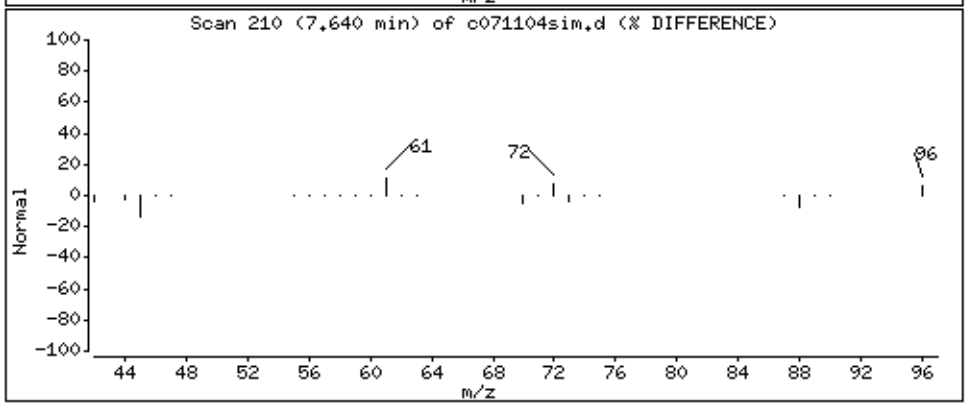
12 Ethyl Acetate

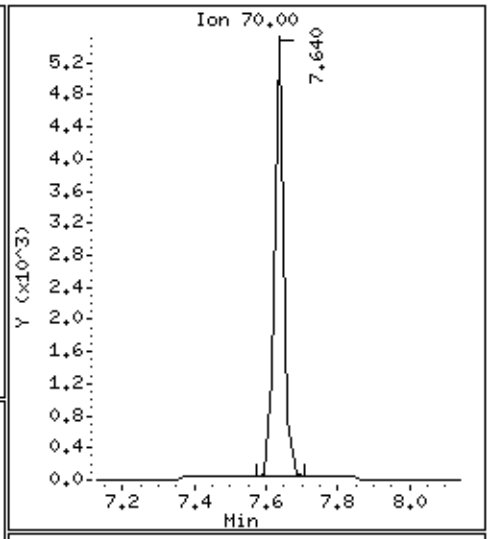
Concentration: 9.52680 ug

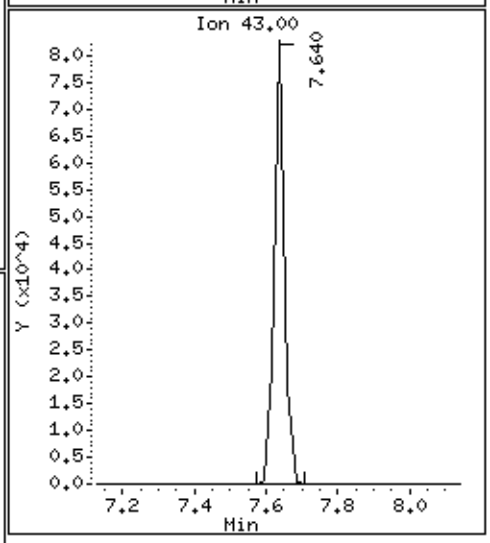












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

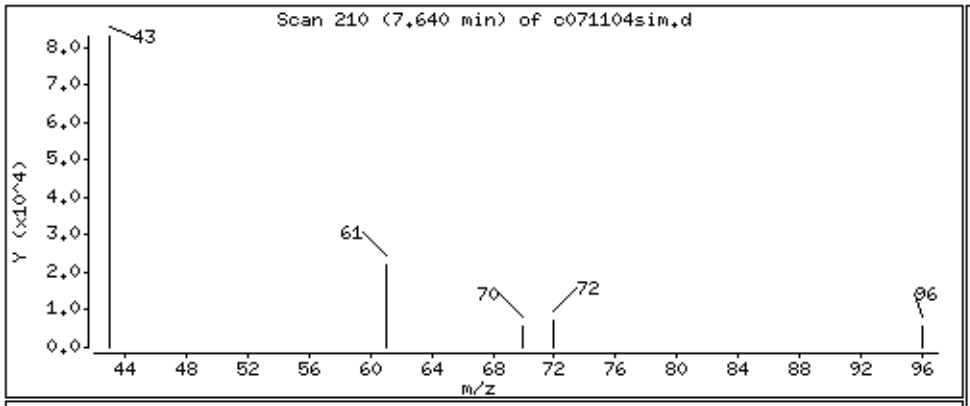
Operator: gm

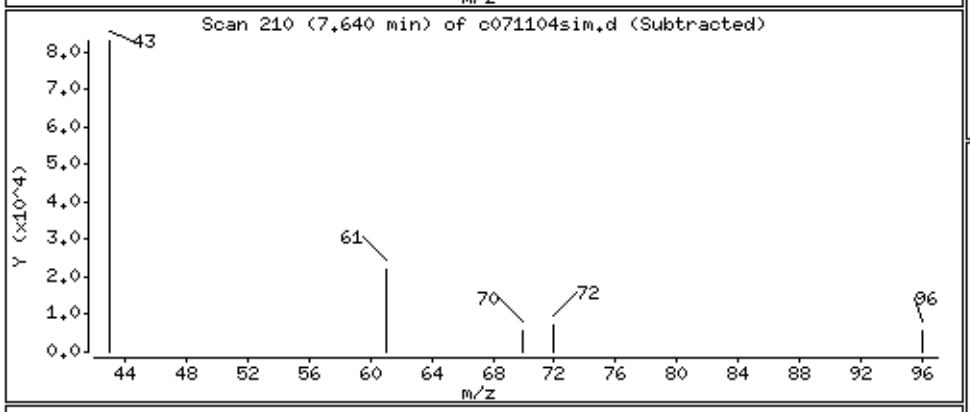
Column phase: DB-5.625

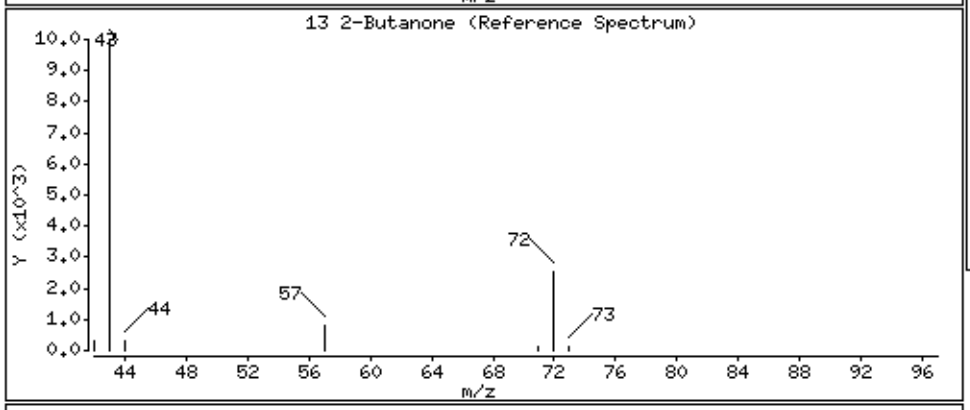
Column diameter: 0.25

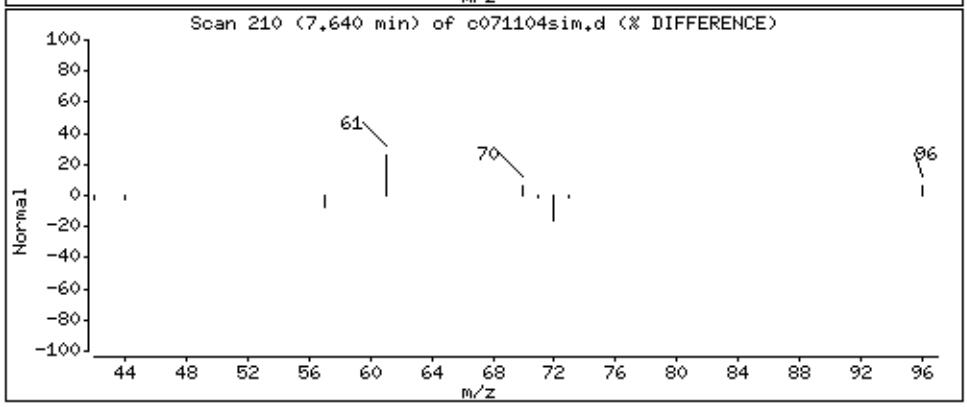
13 2-Butanone

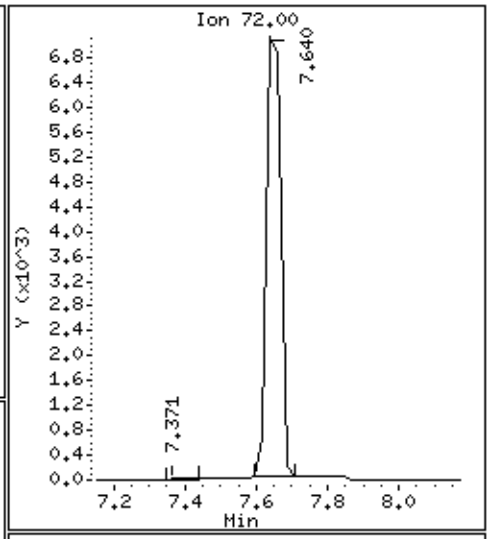
Concentration: 8.54619 ug

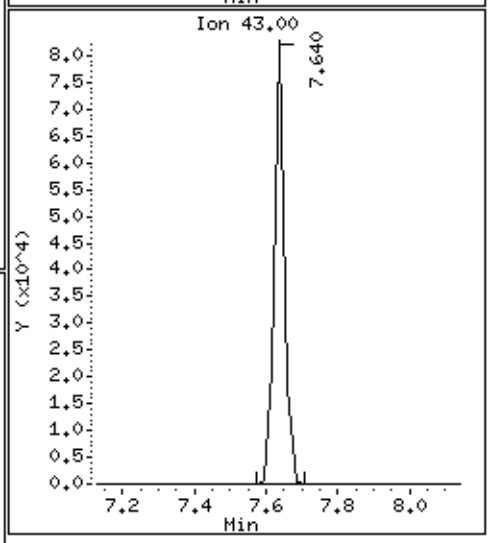












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

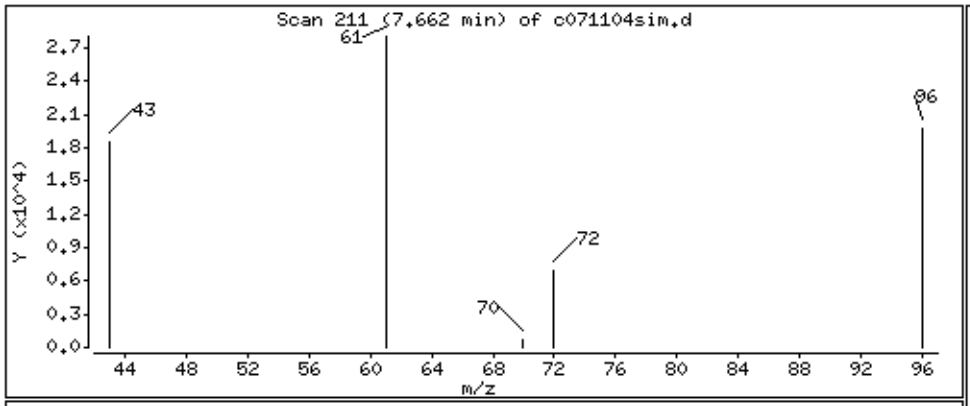
Operator: gm

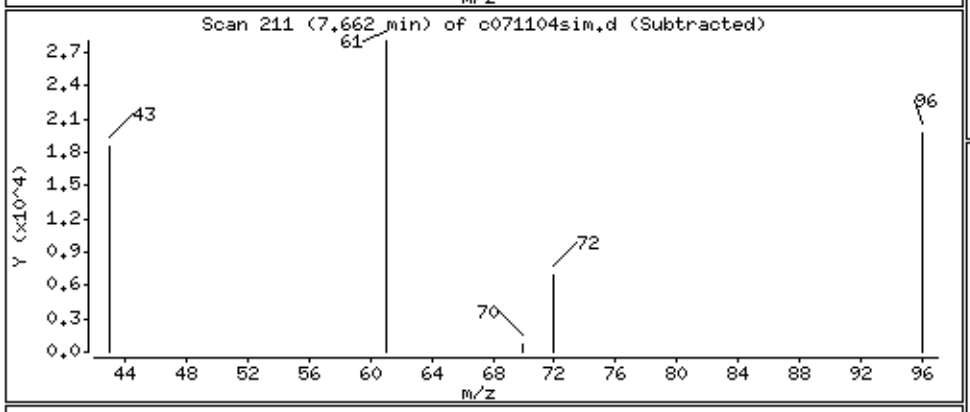
Column phase: DB-5.625

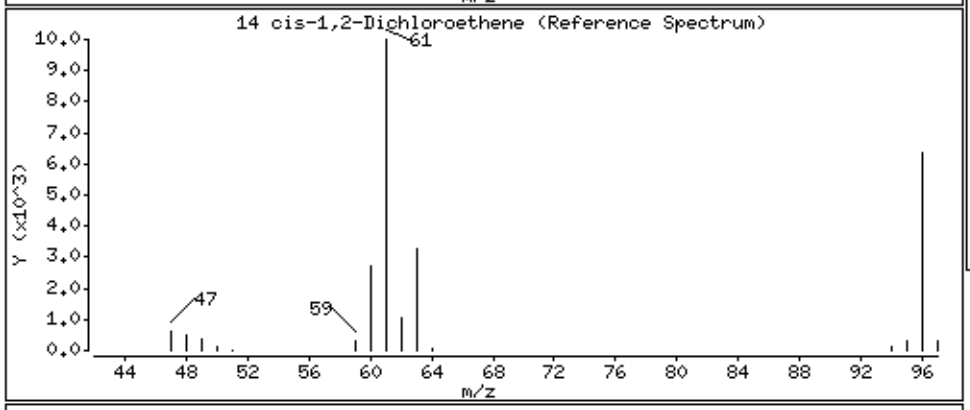
Column diameter: 0.25

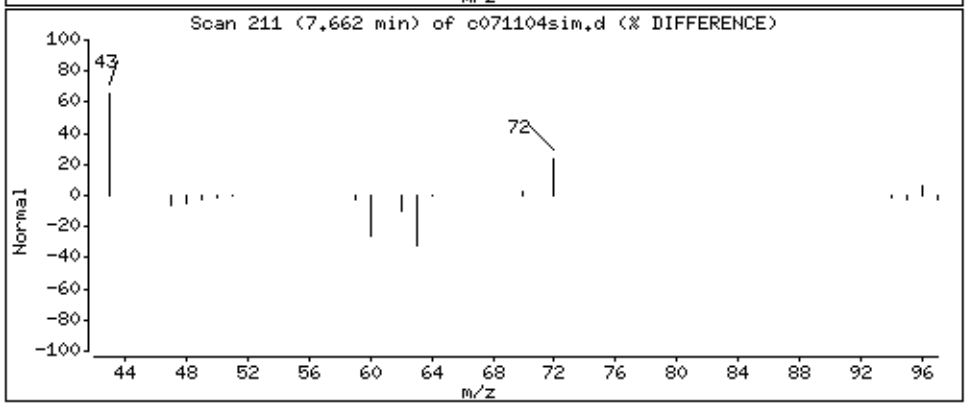
14 cis-1,2-Dichloroethene

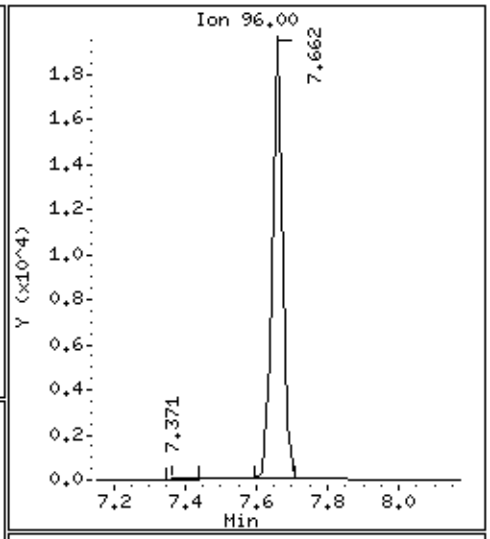
Concentration: 9.67527 ug

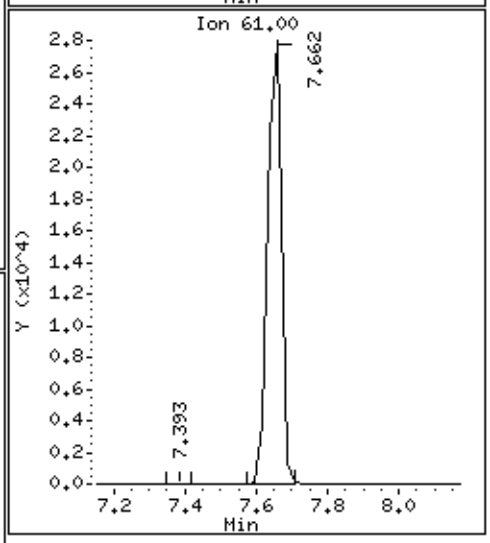












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

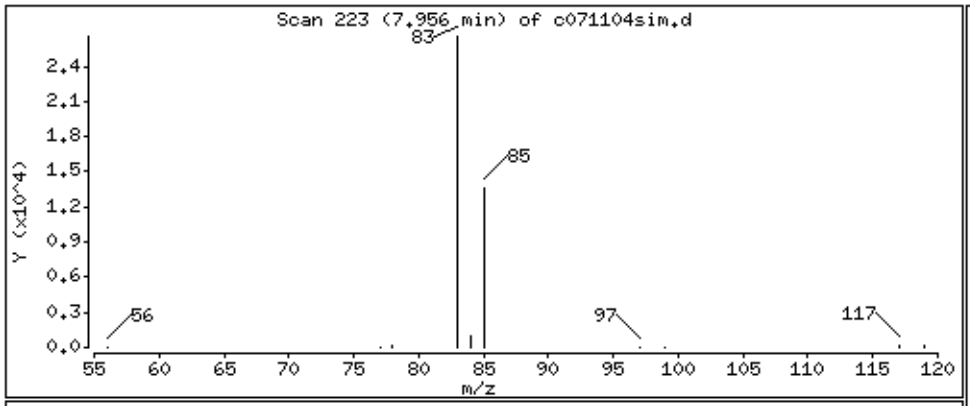
Operator: gm

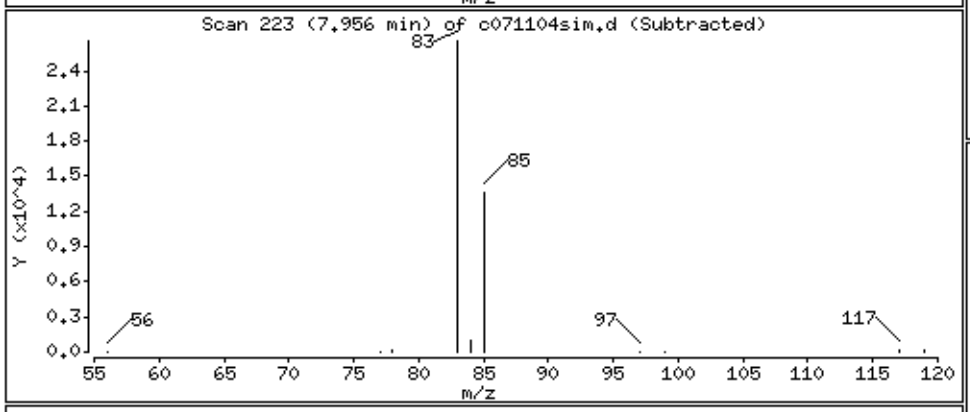
Column phase: DB-5.625

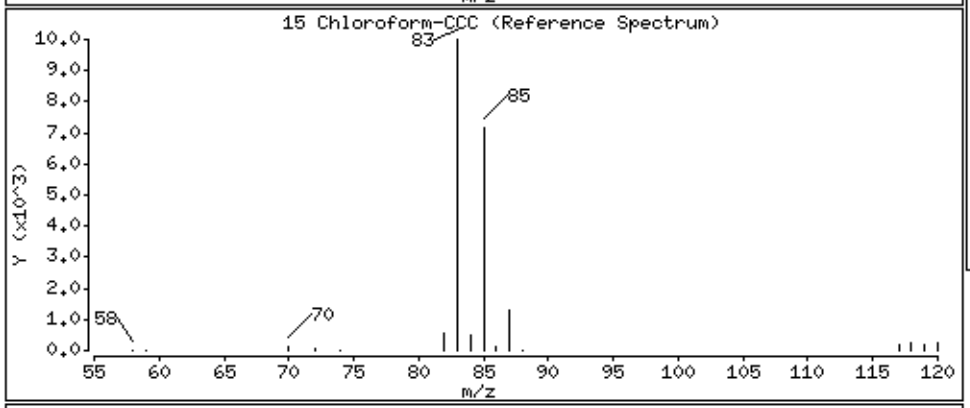
Column diameter: 0.25

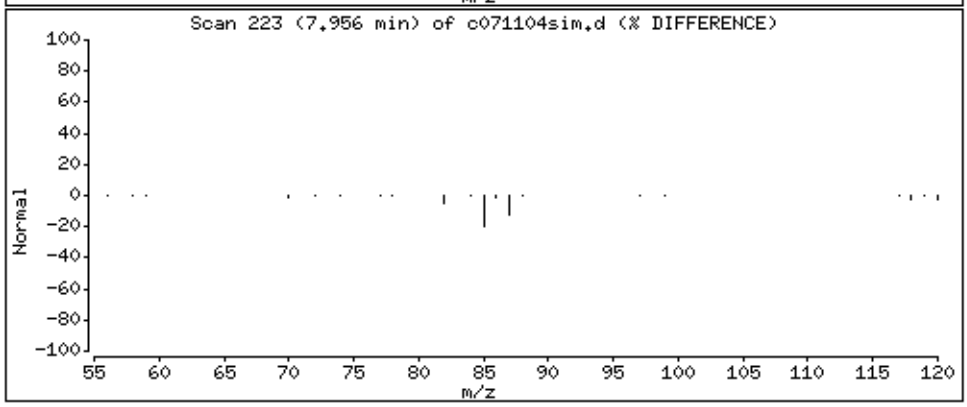
15 Chloroform-CCC

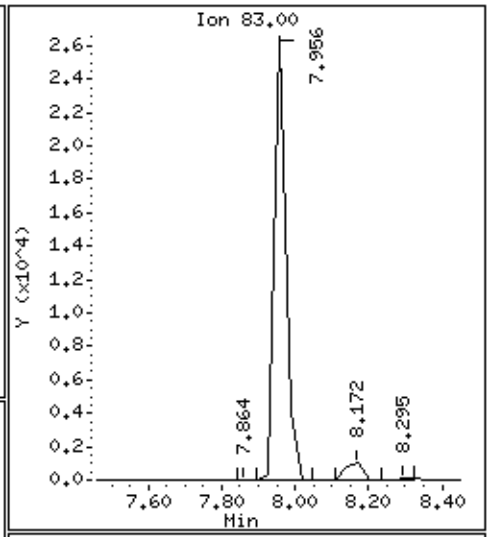
Concentration: 10.1469 ug

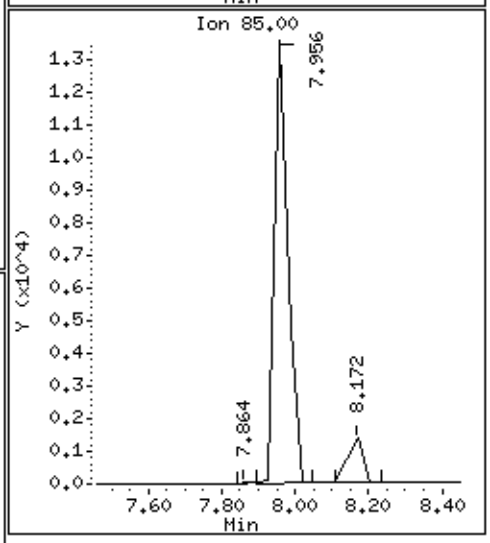












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

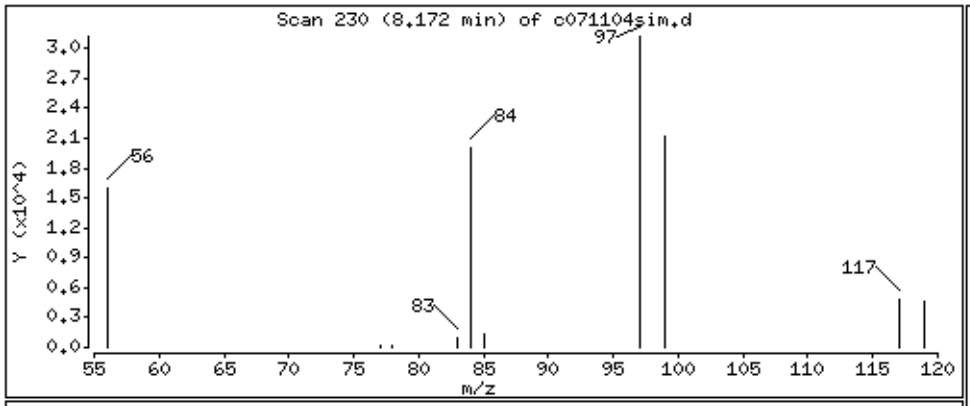
Operator: gm

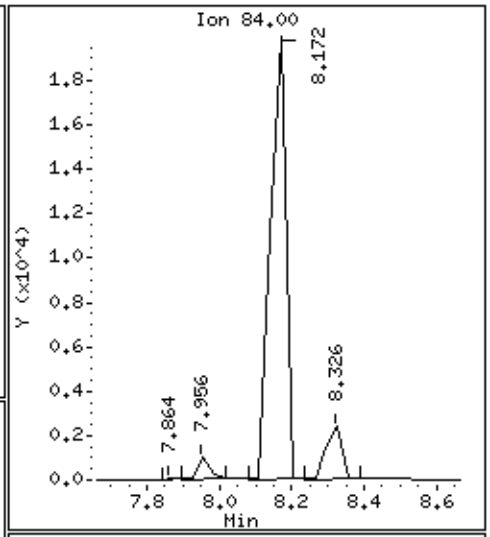
Column phase: DB-5.625

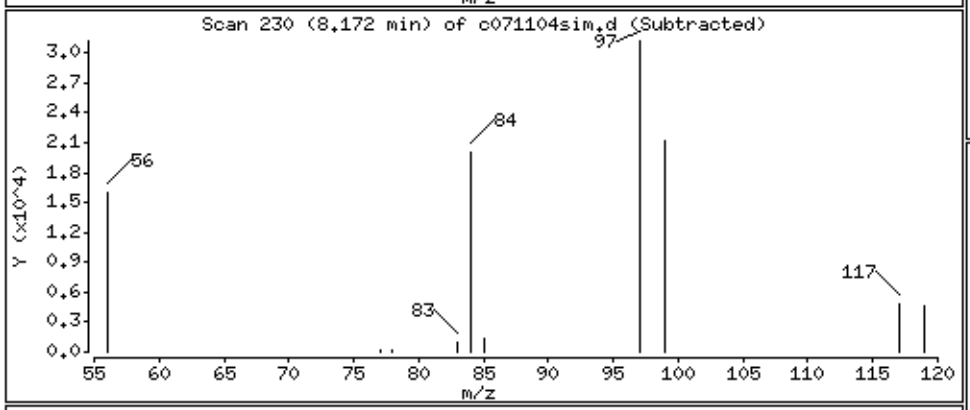
Column diameter: 0.25

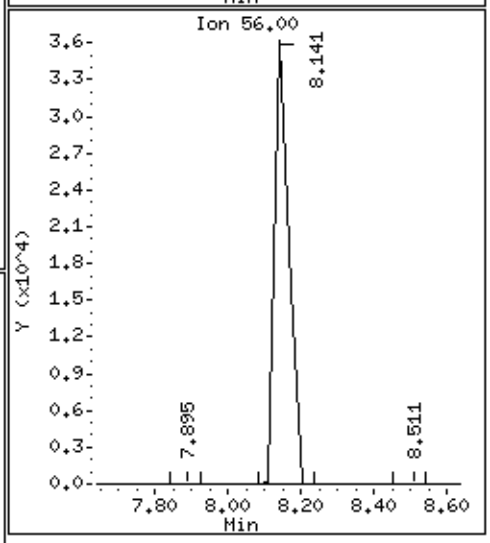
16 Cyclohexane

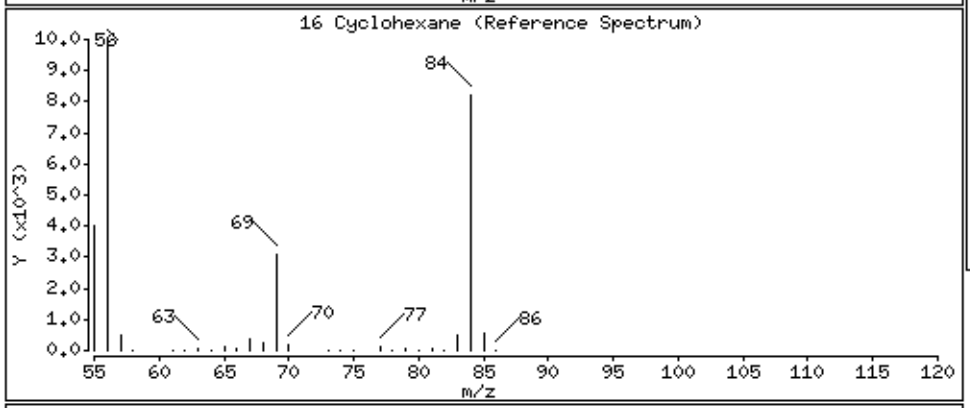
Concentration: 9.72274 ug

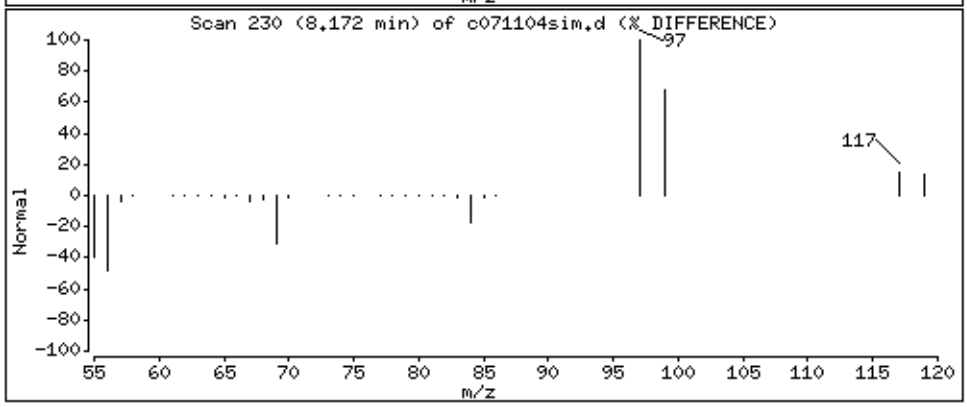












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

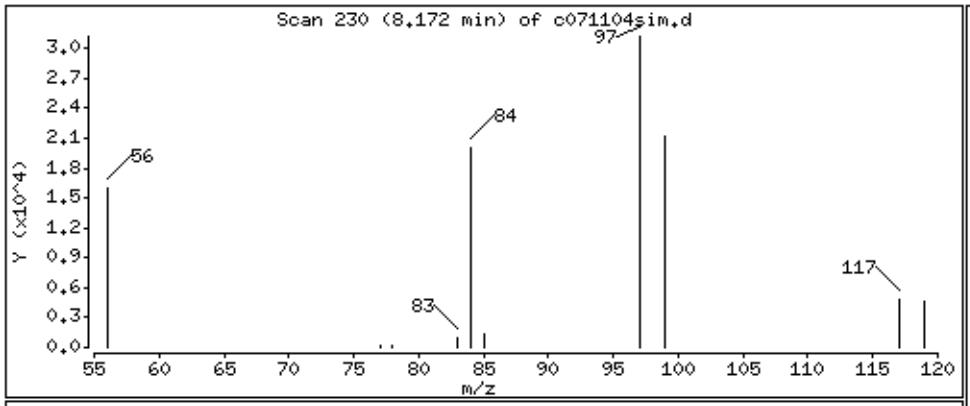
Operator: gm

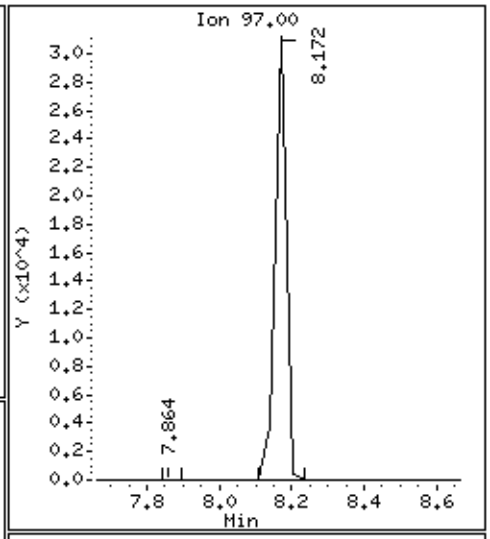
Column phase: DB-5.625

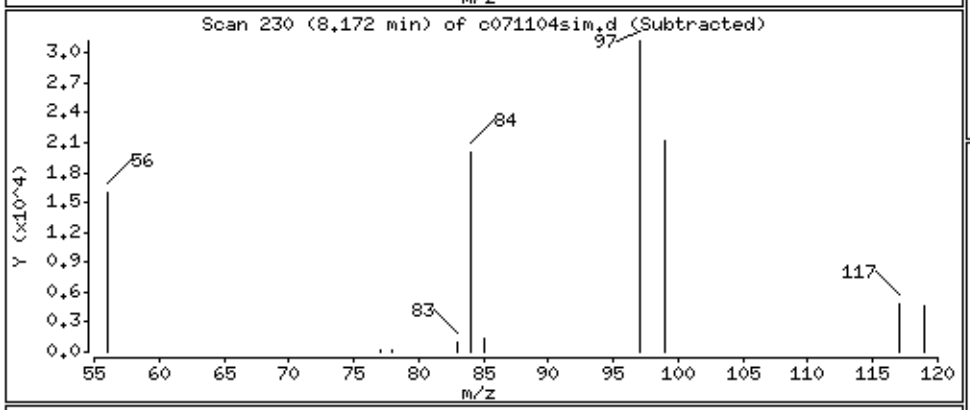
Column diameter: 0.25

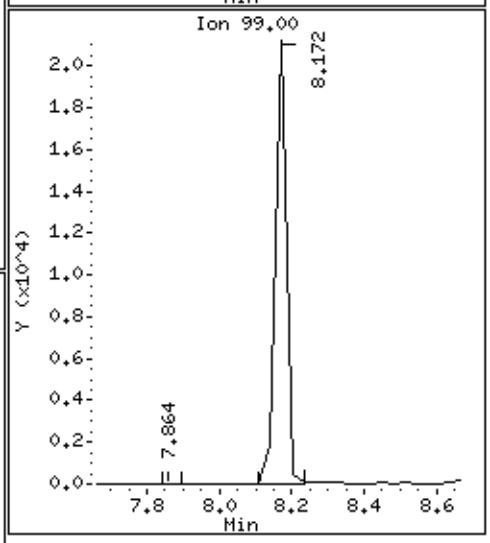
17 1,1,1-Trichloroethane

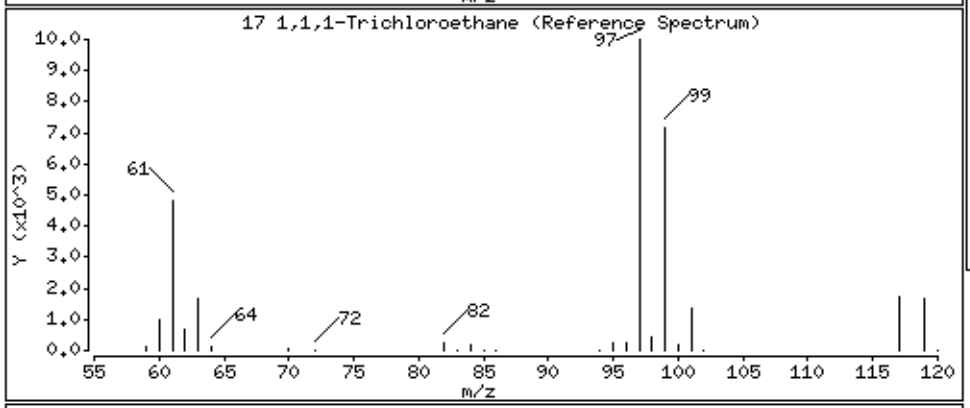
Concentration: 10.2249 ug

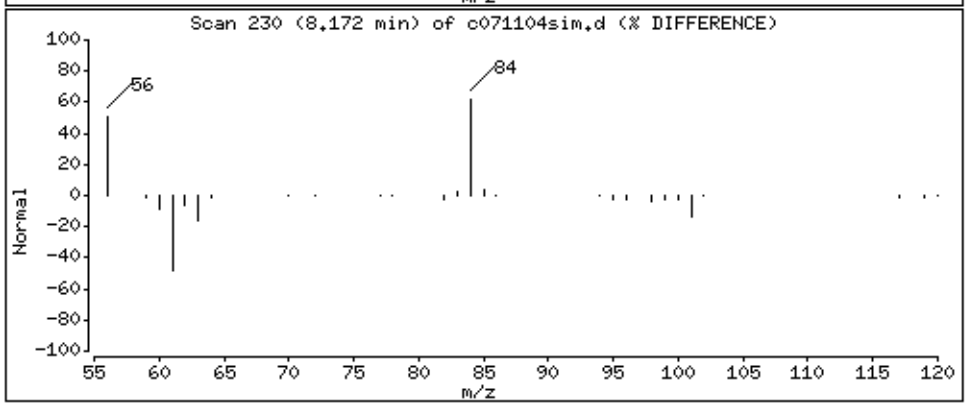












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

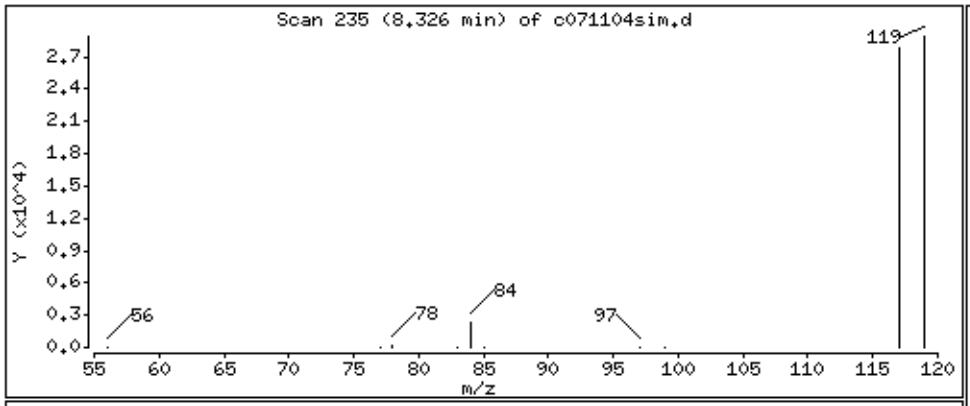
Operator: gm

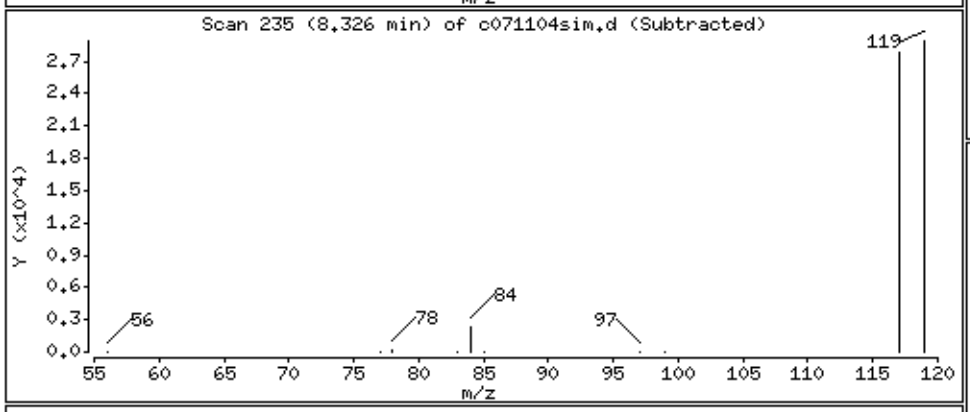
Column phase: DB-5.625

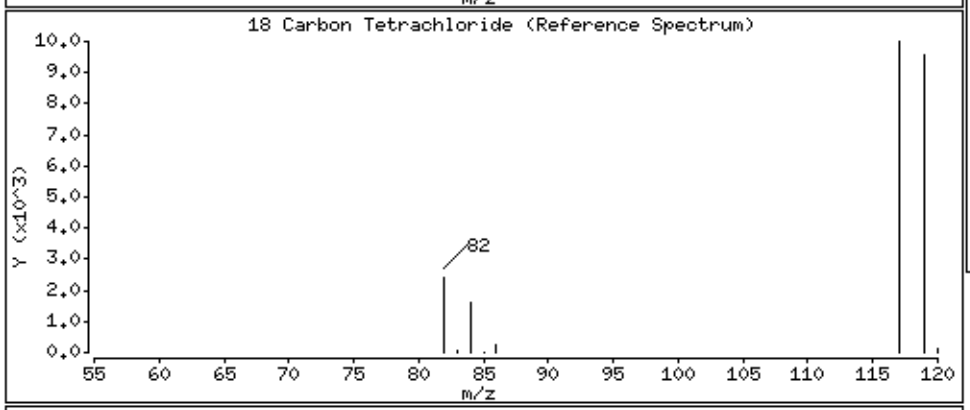
Column diameter: 0.25

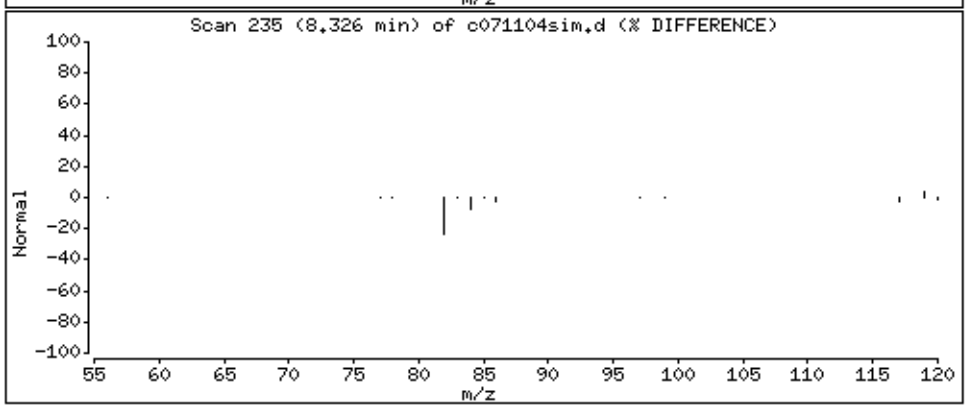
18 Carbon Tetrachloride

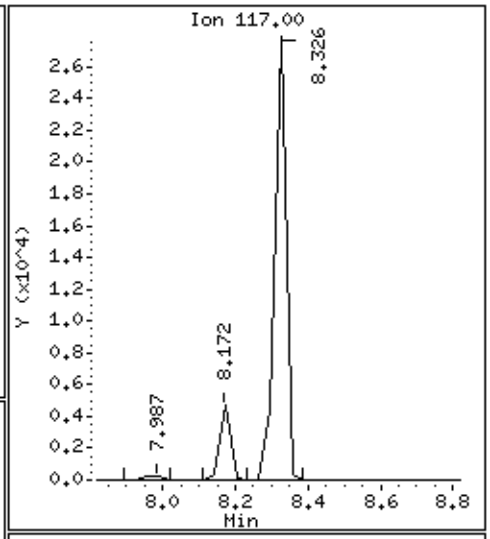
Concentration: 9.93035 ug

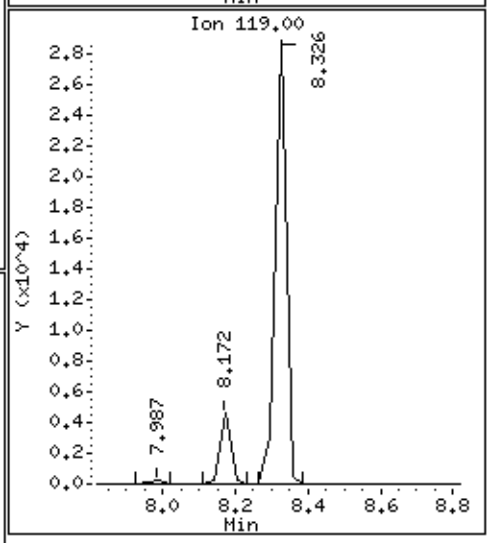












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

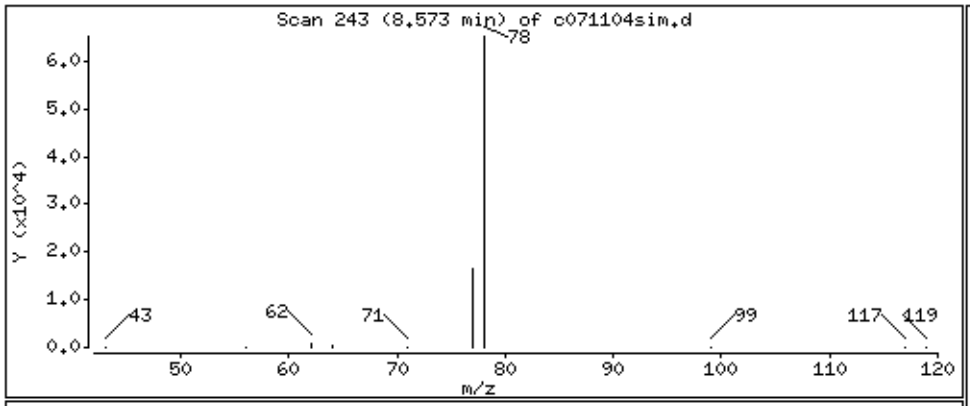
Operator: gm

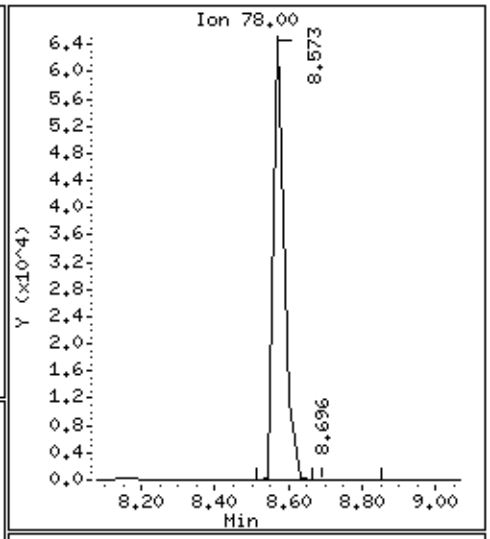
Column phase: DB-5.625

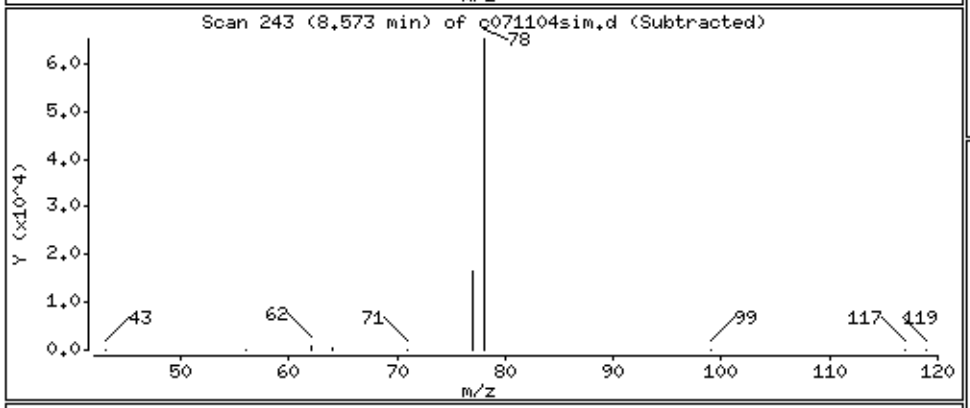
Column diameter: 0.25

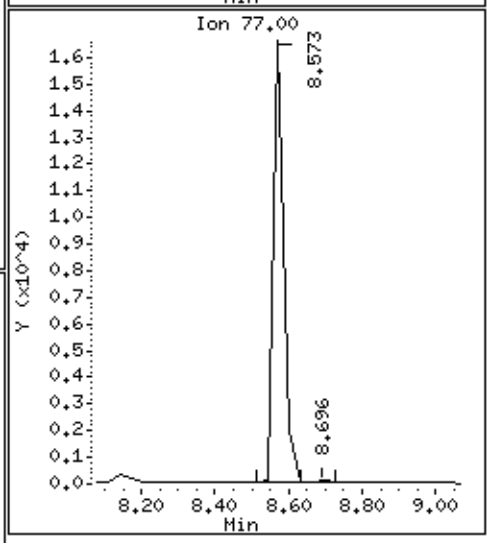
19 Benzene

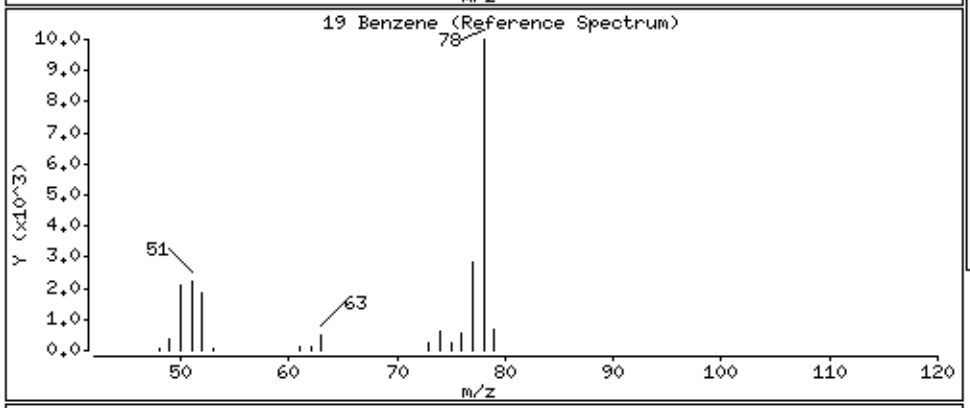
Concentration: 9.87825 ug

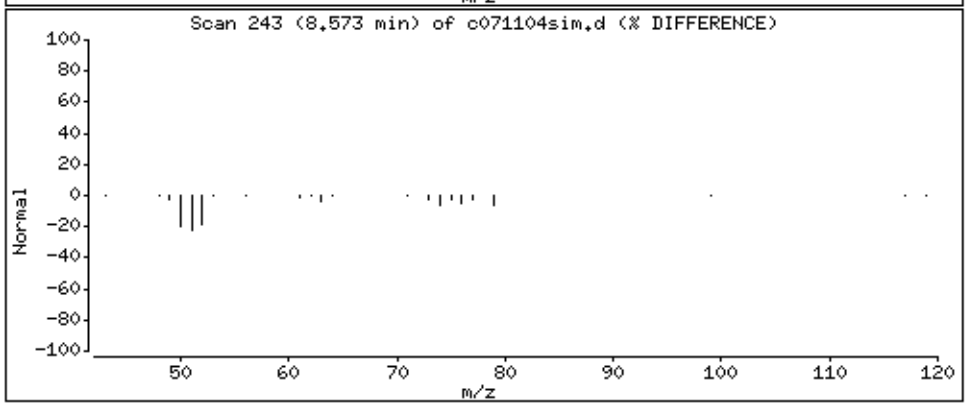












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

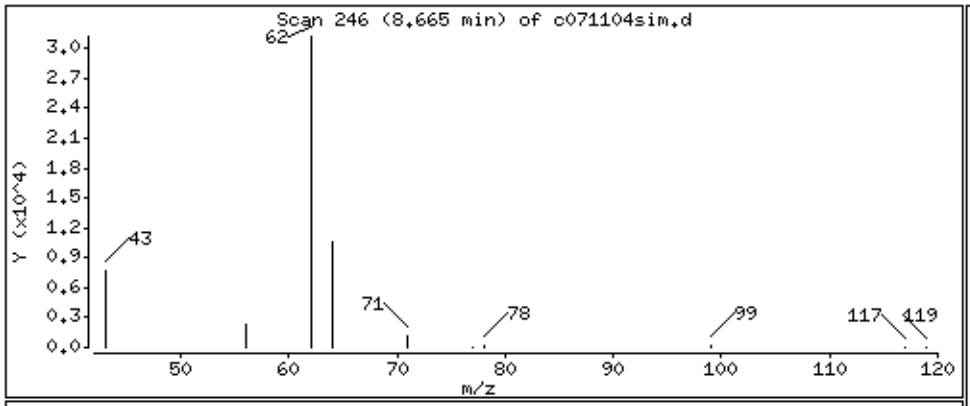
Operator: gm

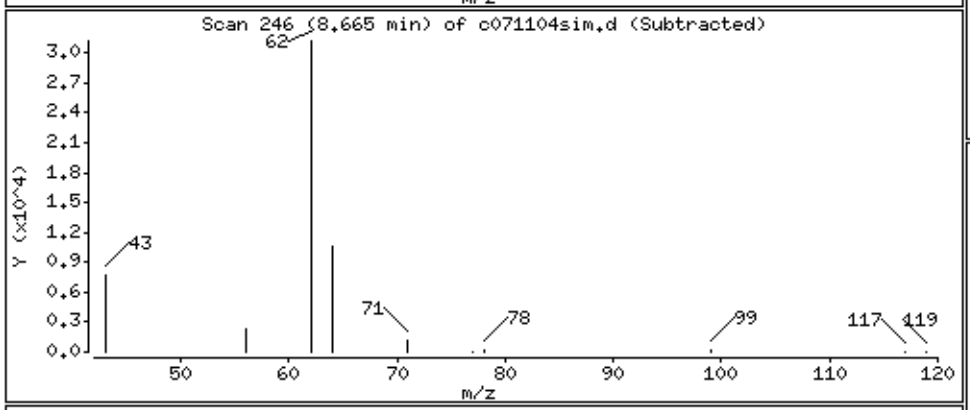
Column phase: DB-5.625

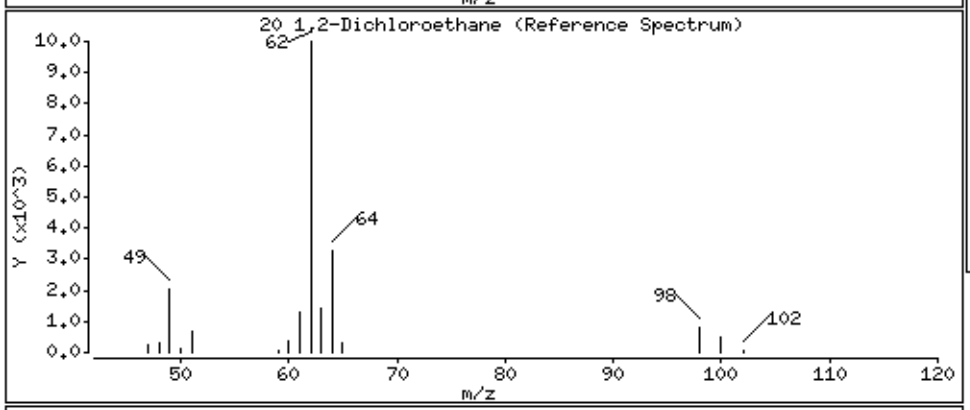
Column diameter: 0.25

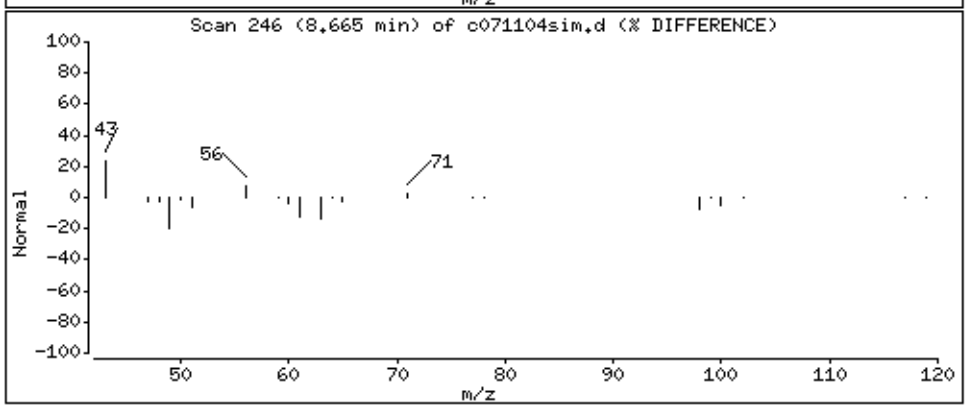
20 1,2-Dichloroethane

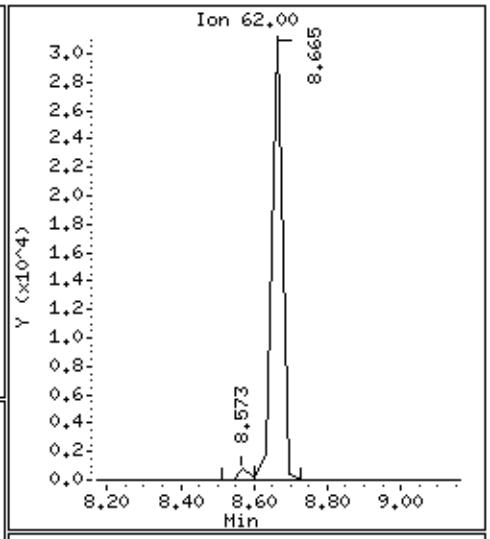
Concentration: 9.55305 ug

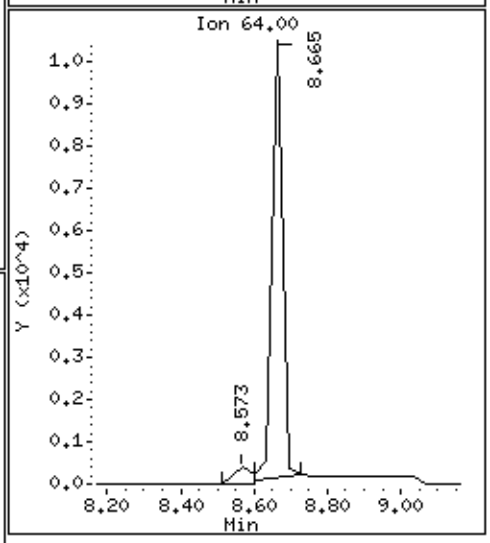












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

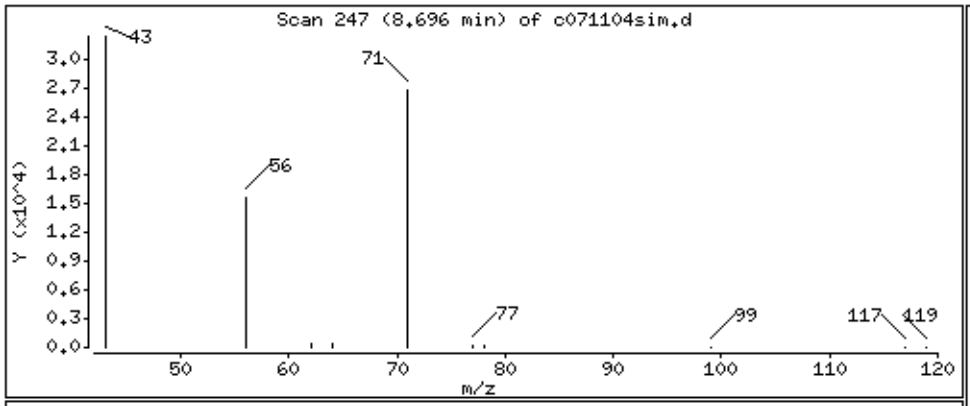
Operator: gm

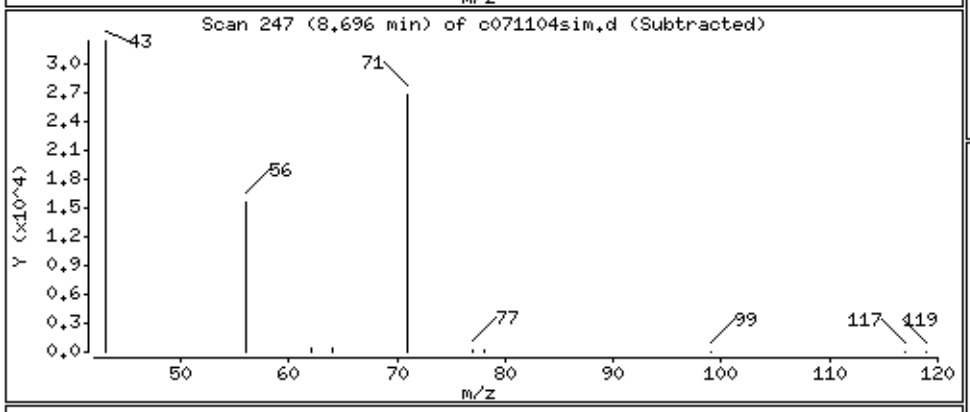
Column phase: DB-5.625

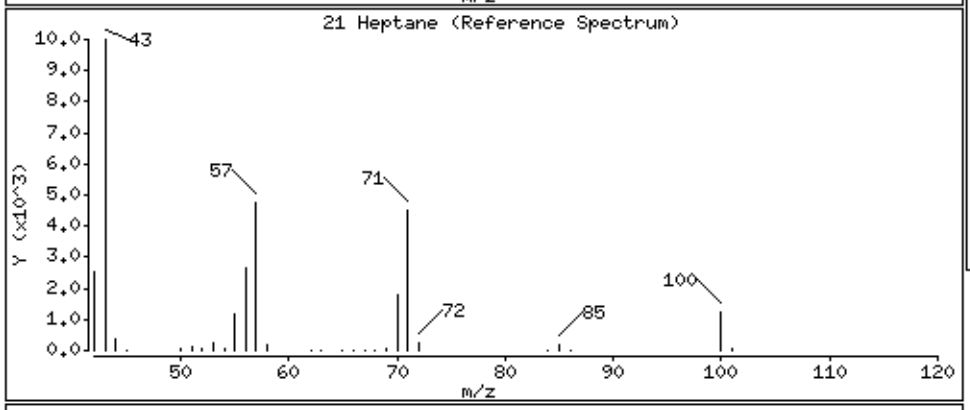
Column diameter: 0.25

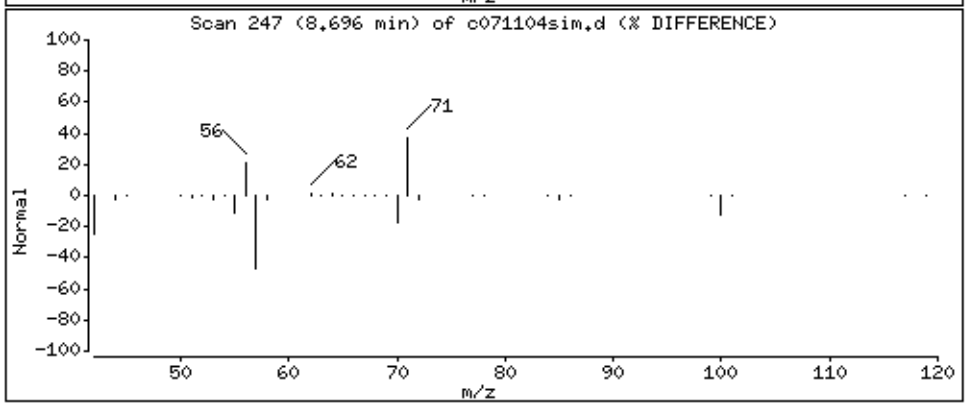
21 Heptane

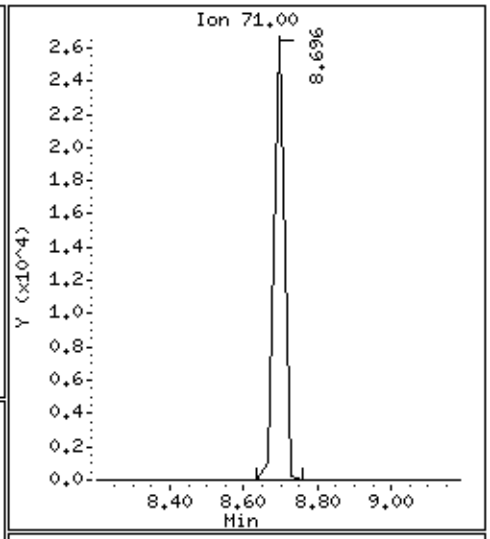
Concentration: 9.99308 ug

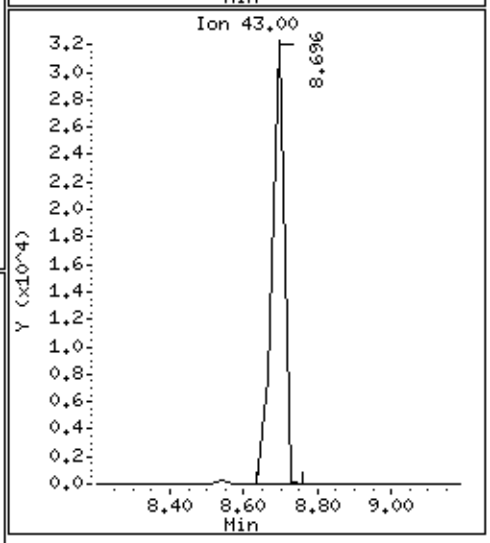












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

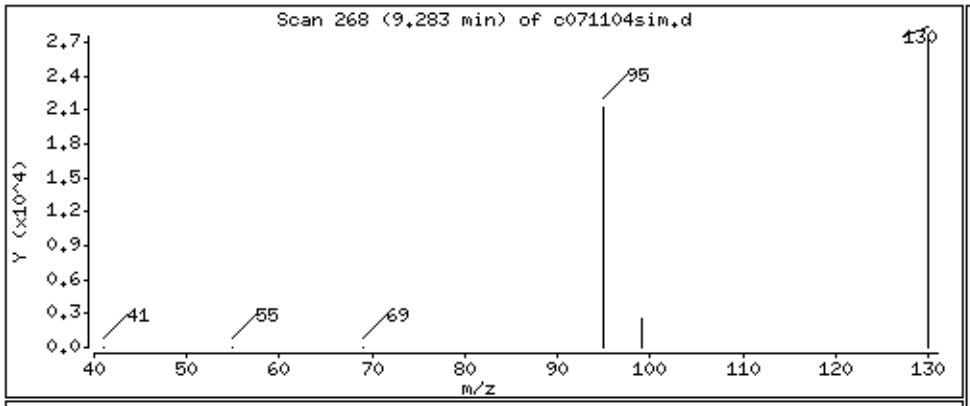
Operator: gm

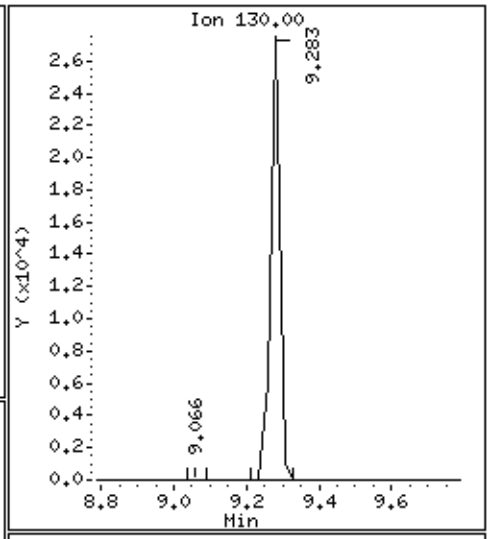
Column phase: DB-5.625

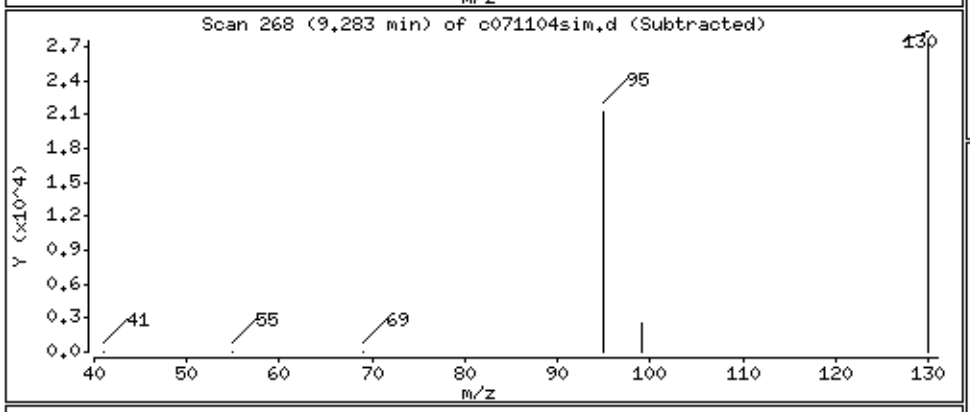
Column diameter: 0.25

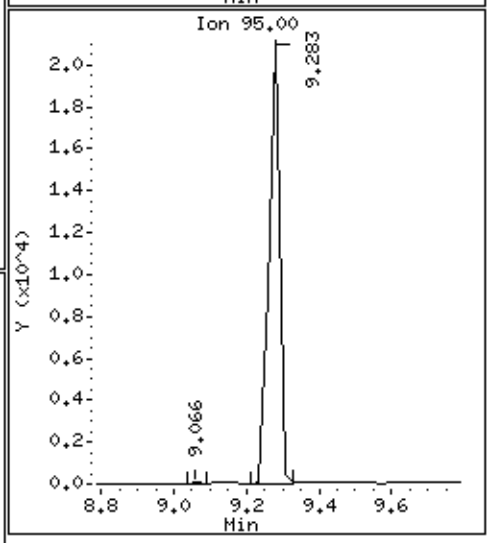
22 Trichloroethene

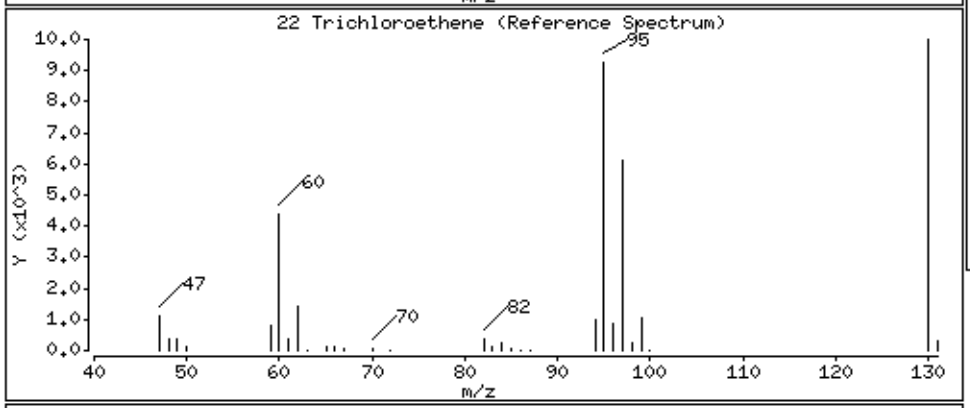
Concentration: 10.2349 ug

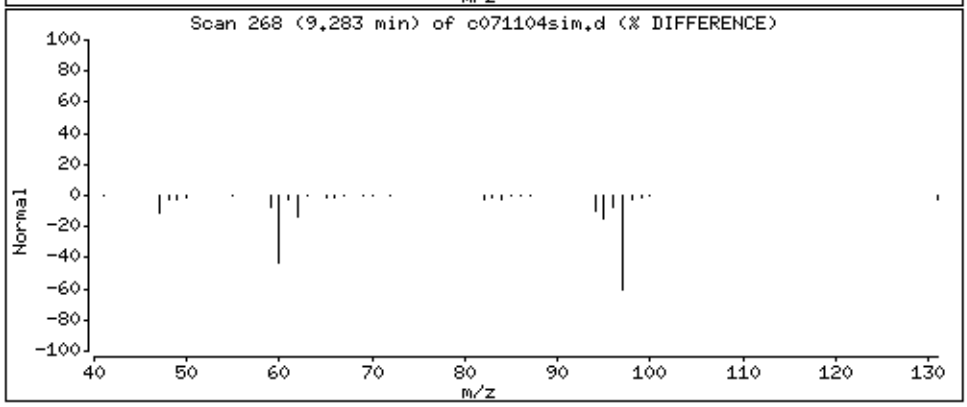












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

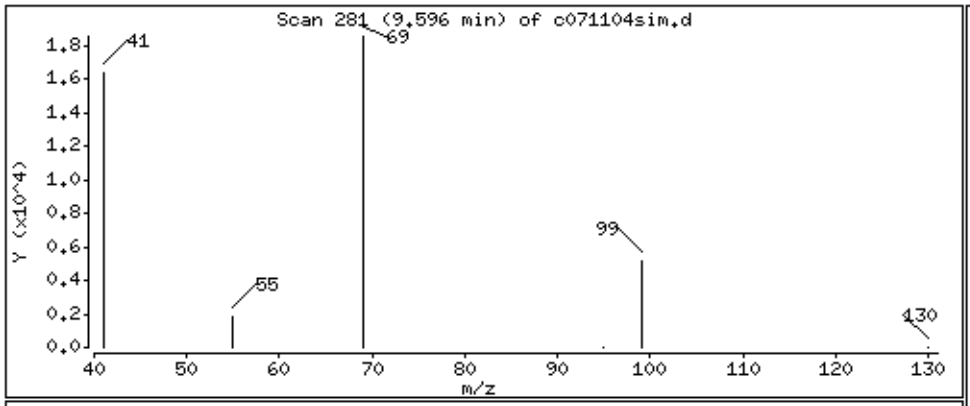
Operator: gm

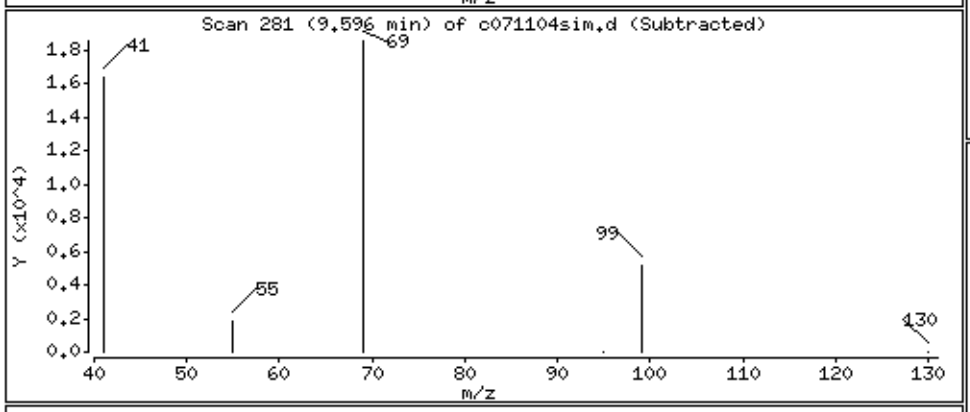
Column phase: DB-5.625

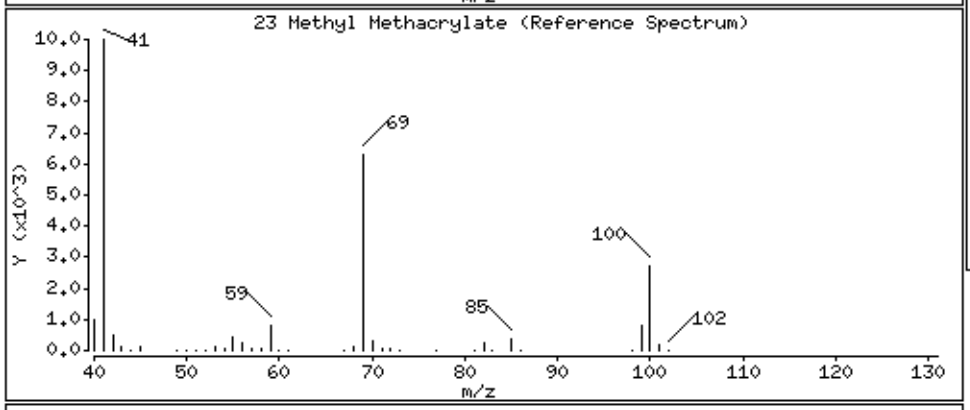
Column diameter: 0.25

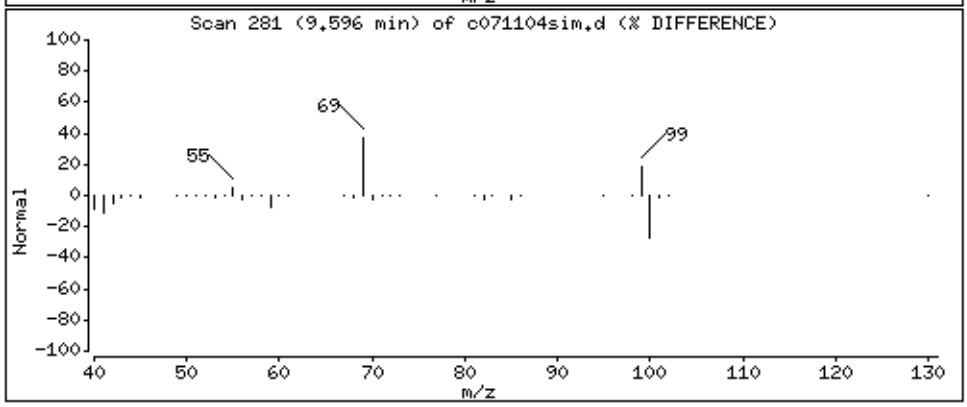
23 Methyl Methacrylate

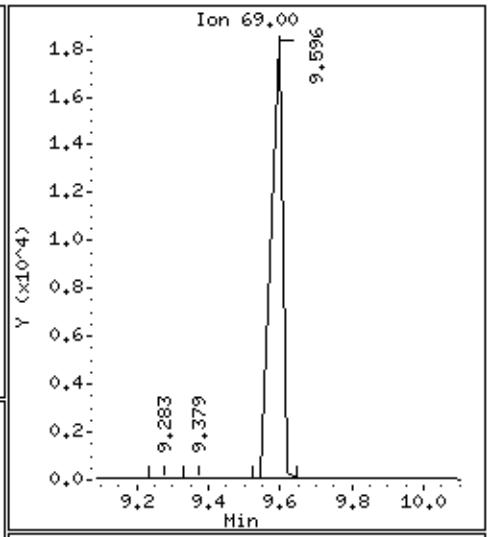
Concentration: 9.11046 ug

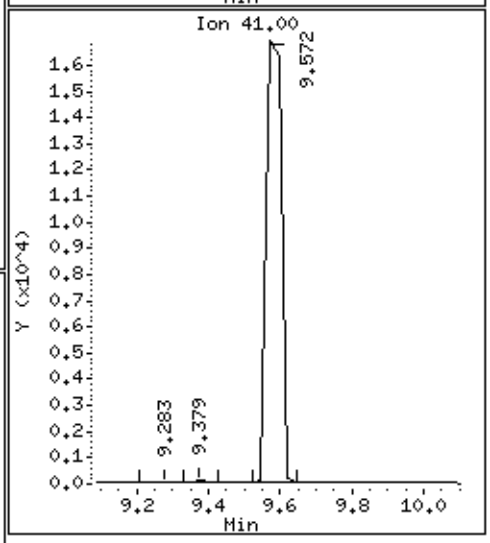












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

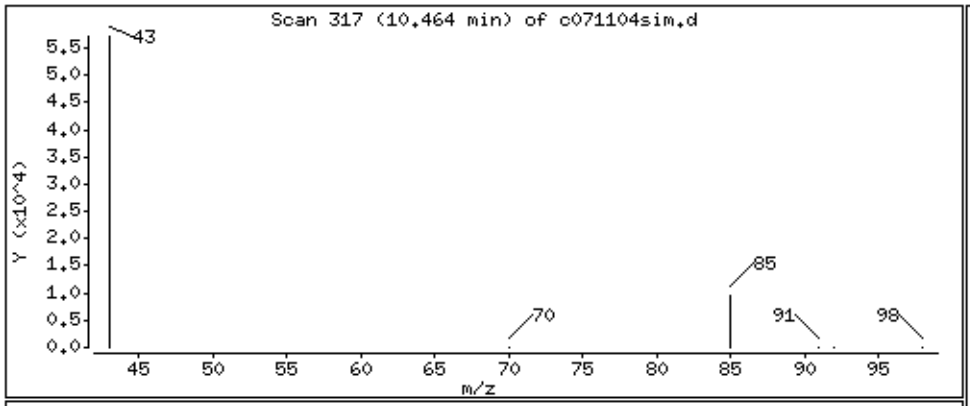
Operator: gm

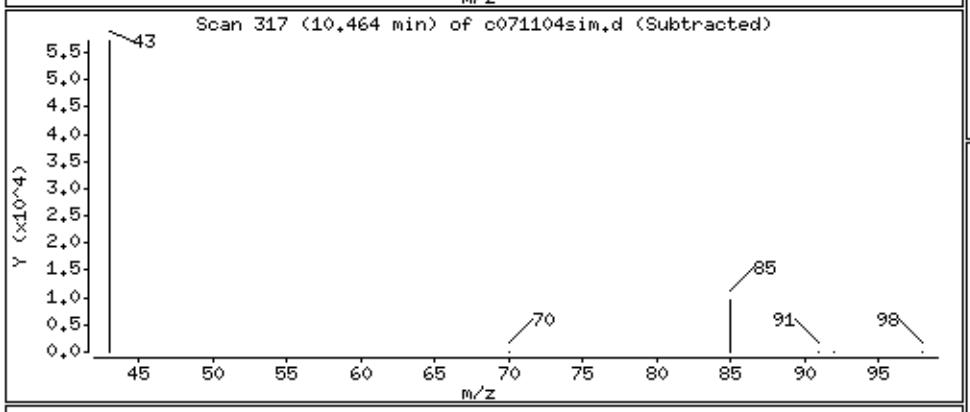
Column phase: DB-5.625

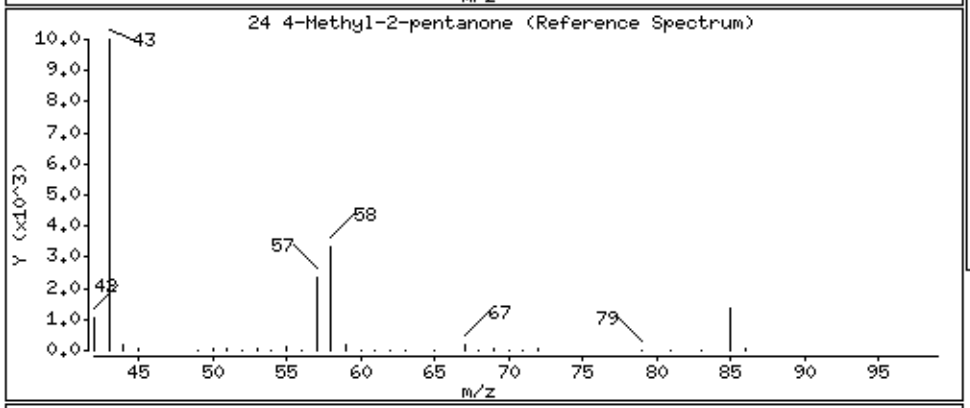
Column diameter: 0.25

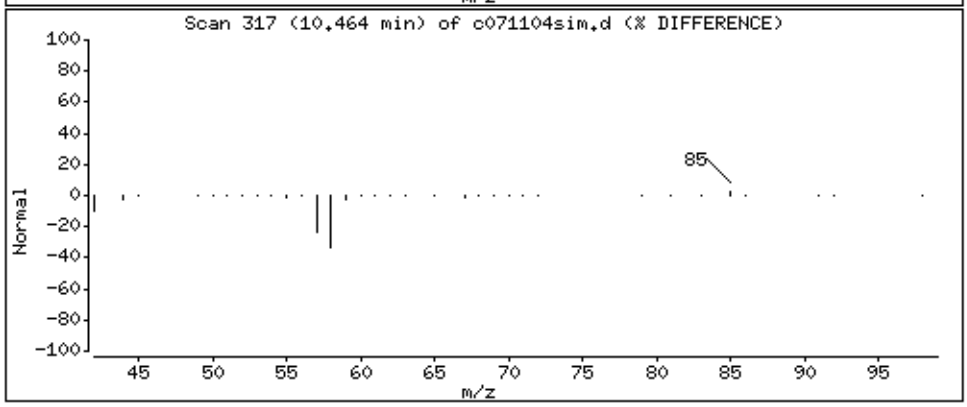
24 4-Methyl-2-pentanone

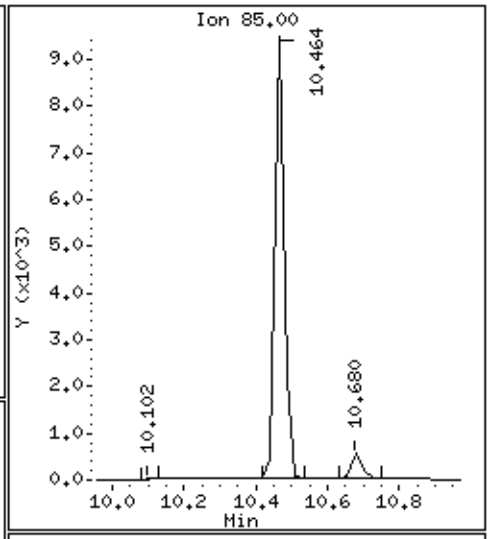
Concentration: 9.91971 ug

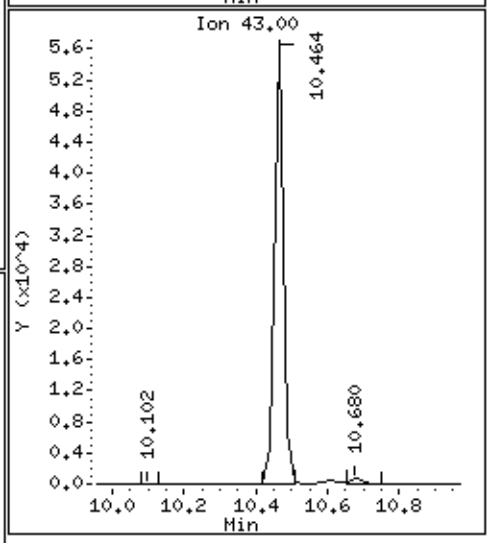












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

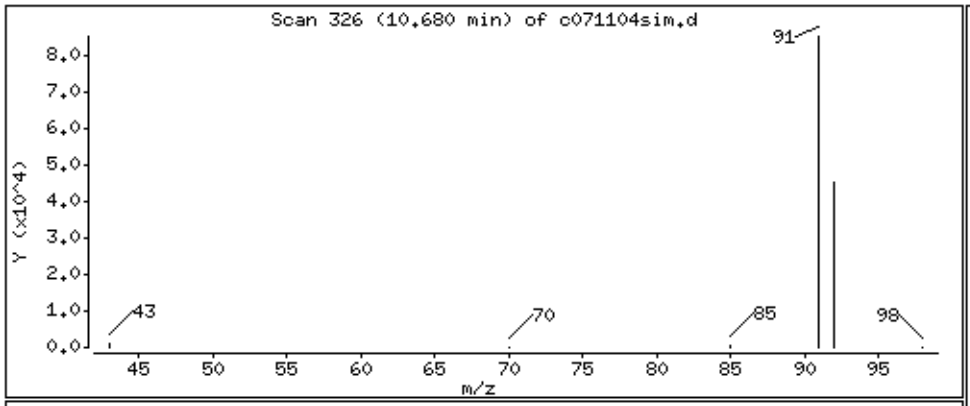
Operator: gm

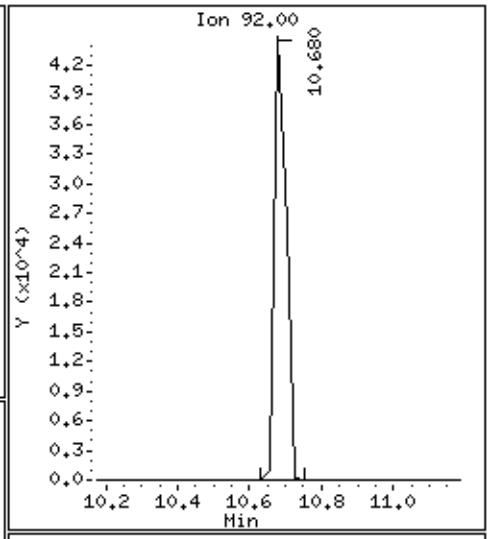
Column phase: DB-5.625

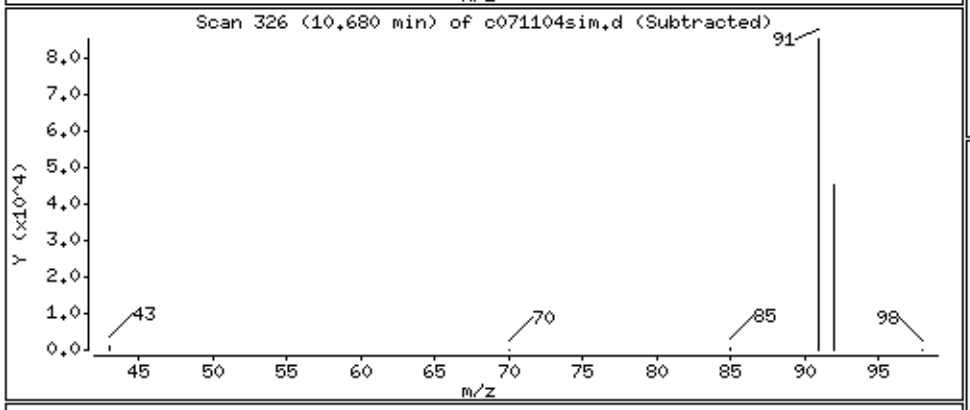
Column diameter: 0.25

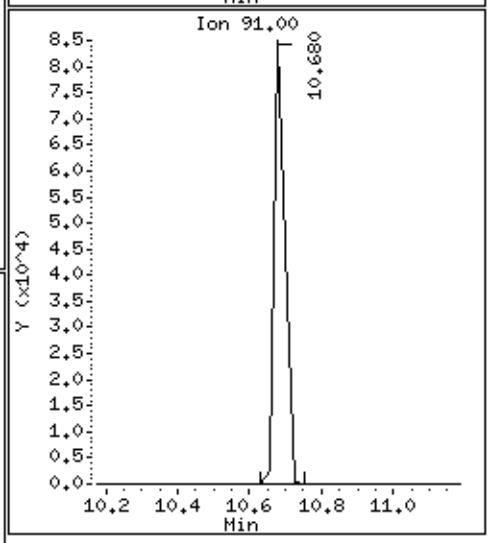
26 Toluene-CCC

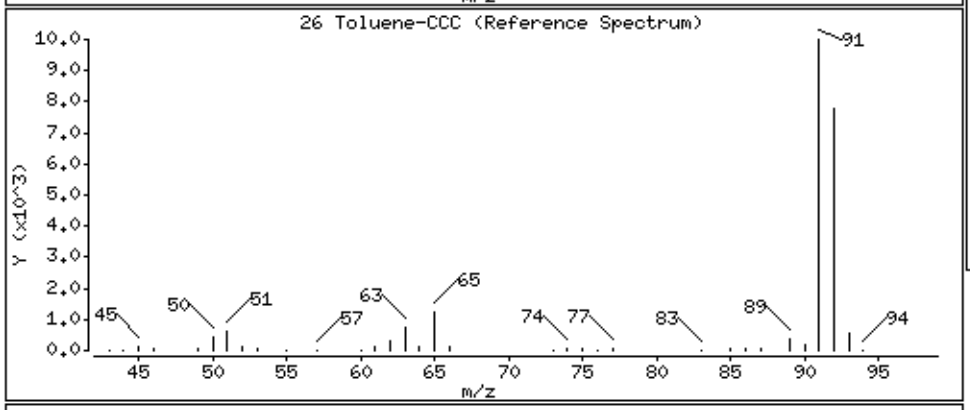
Concentration: 9.67928 ug

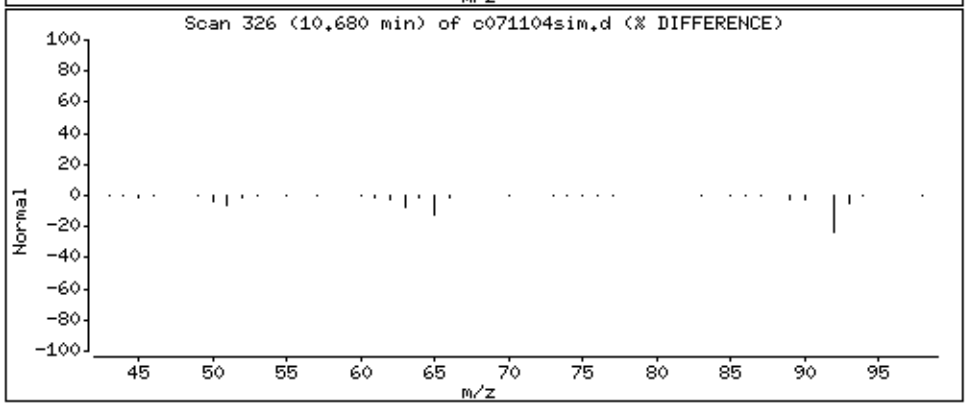












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

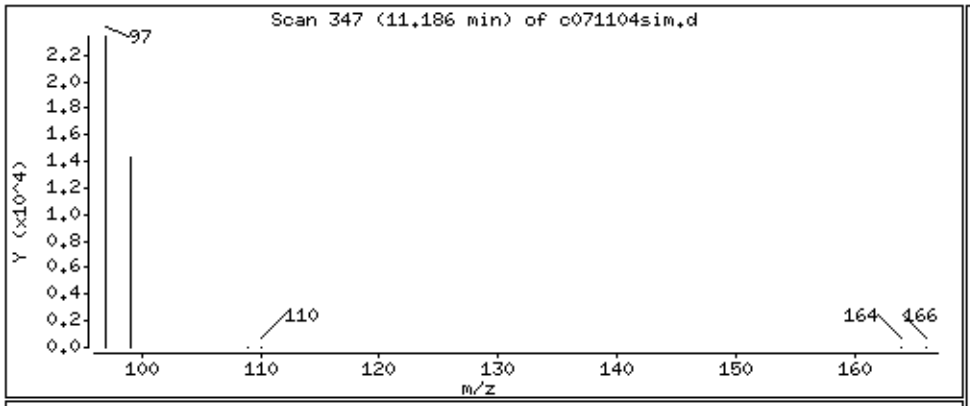
Operator: gm

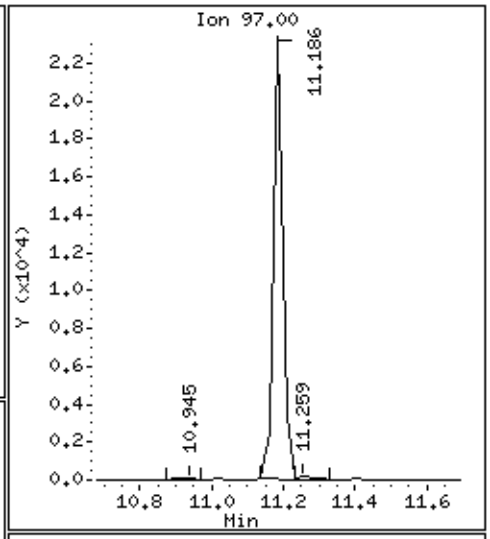
Column phase: DB-5.625

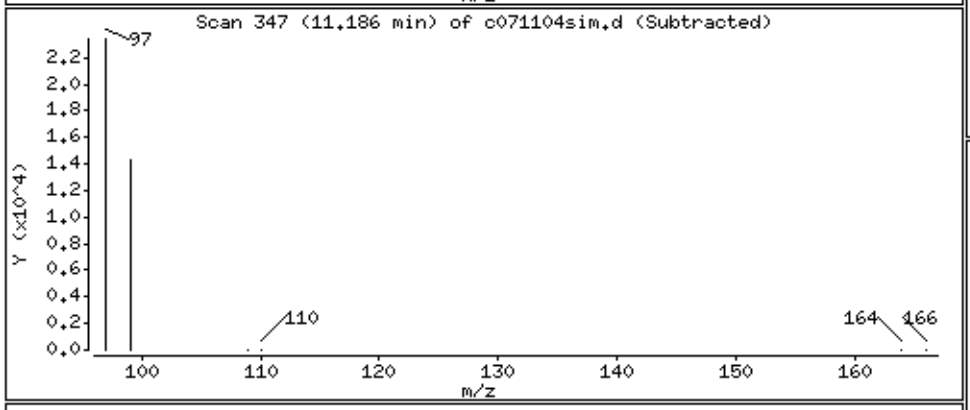
Column diameter: 0.25

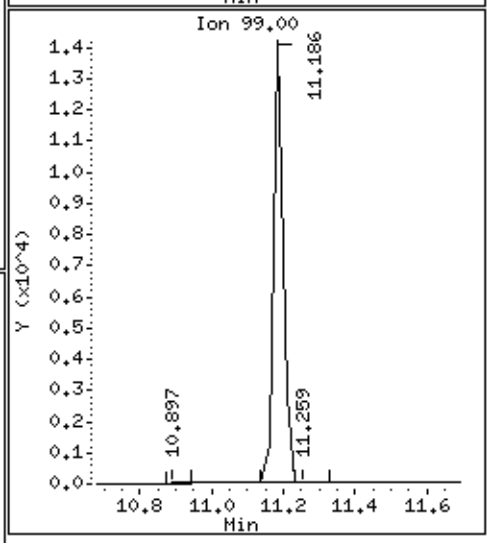
28 1,1,2-Trichloroethane

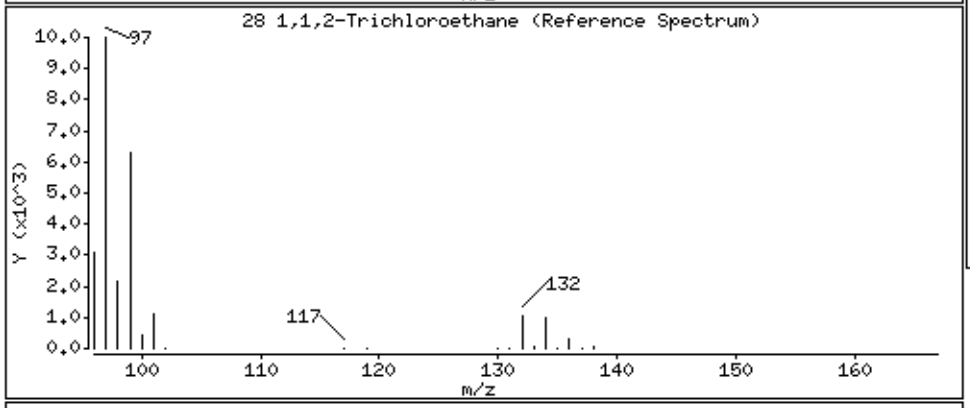
Concentration: 9.86762 ug

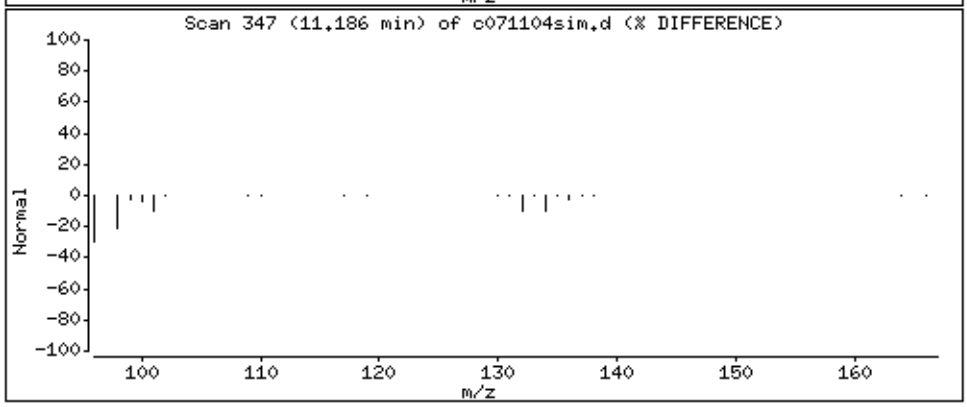












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

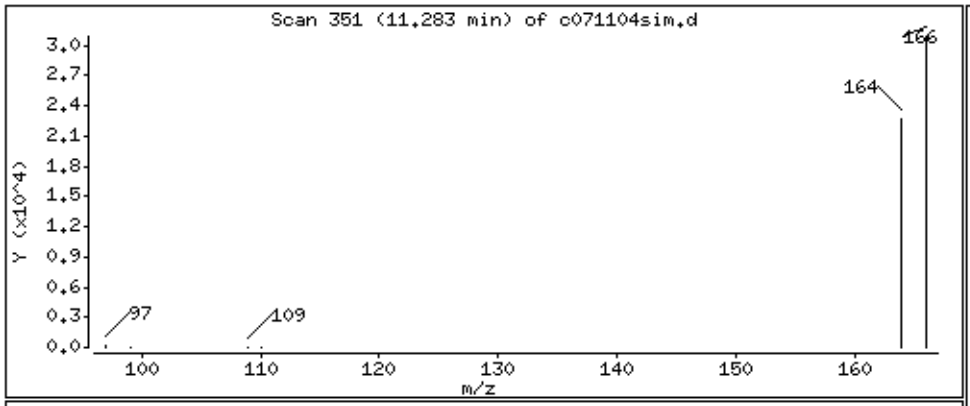
Operator: gm

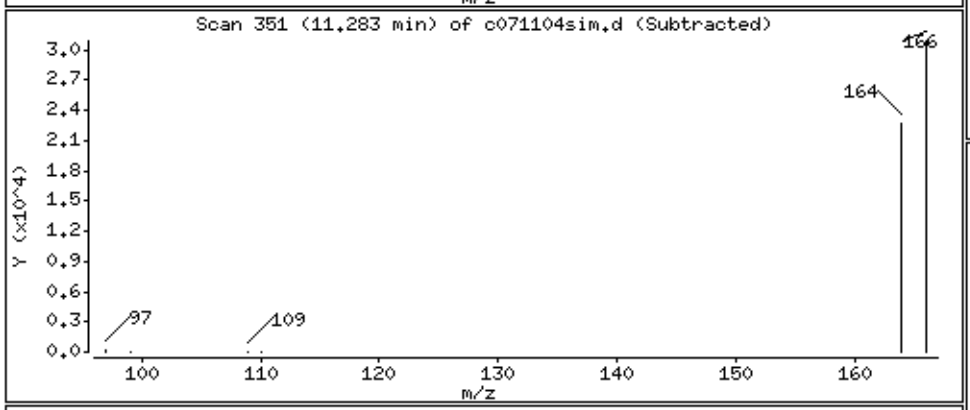
Column phase: DB-5.625

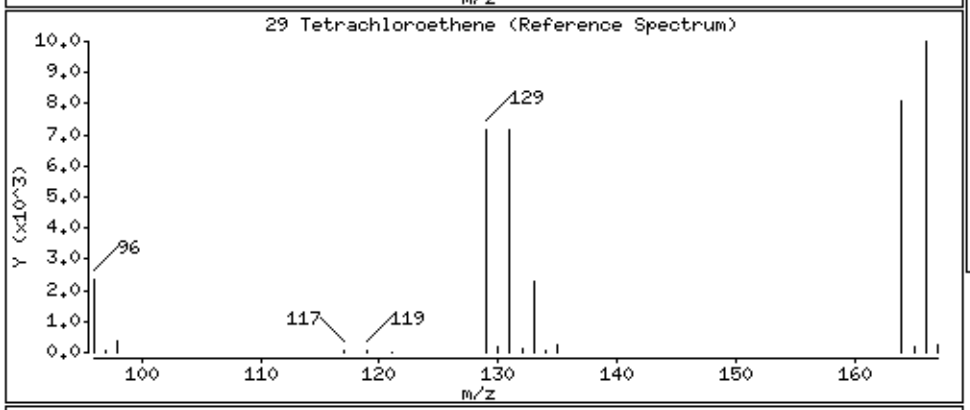
Column diameter: 0.25

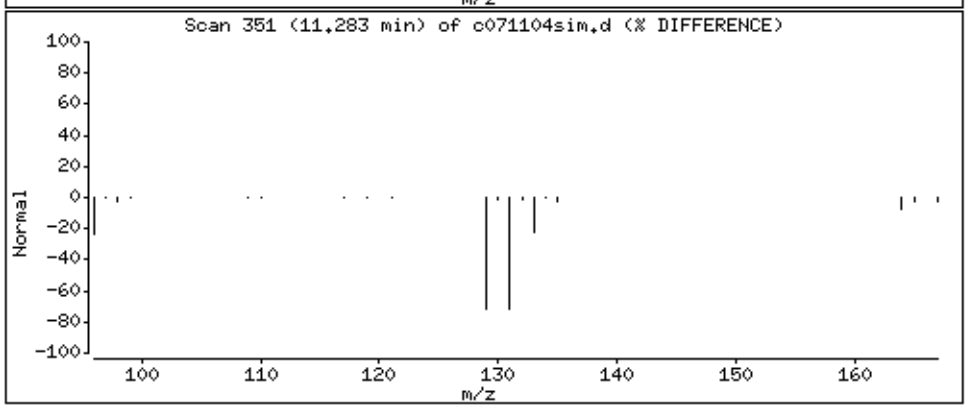
29 Tetrachloroethene

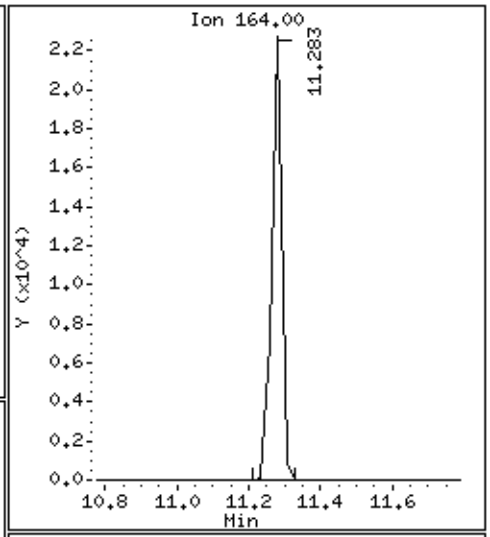
Concentration: 9.92412 ug

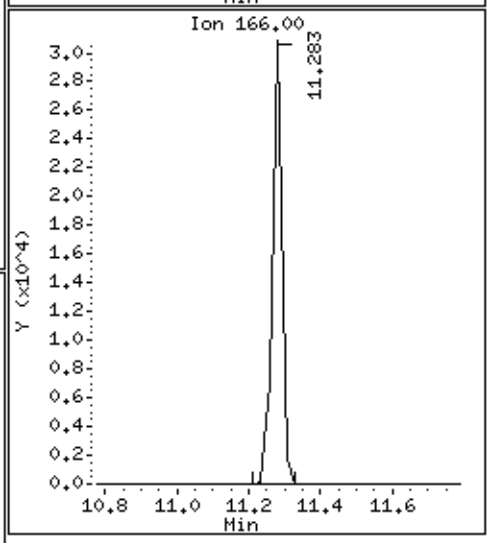












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

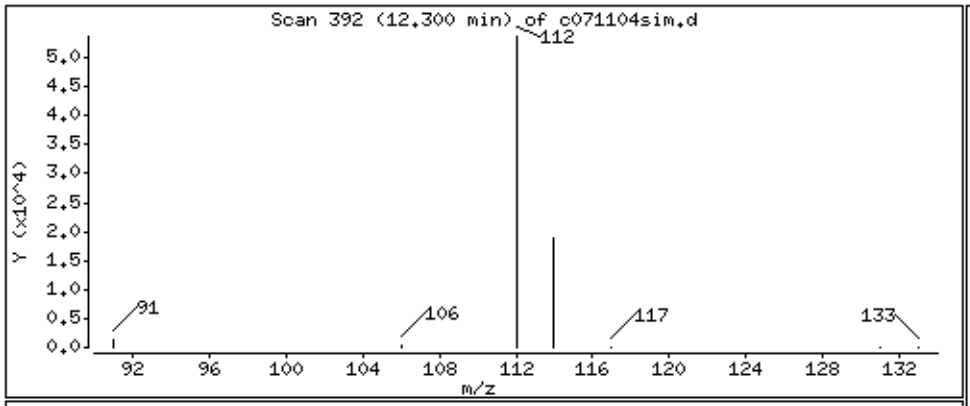
Operator: gm

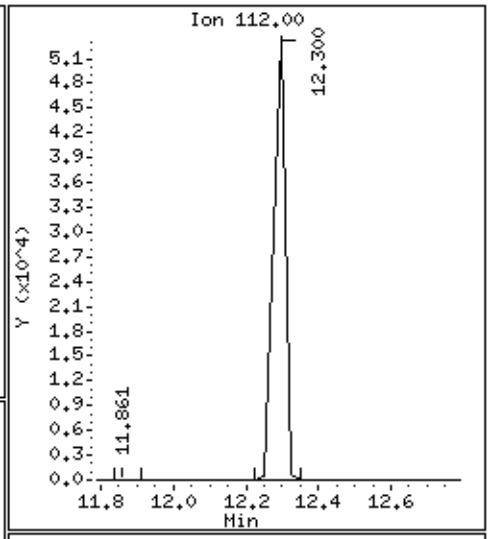
Column phase: DB-5.625

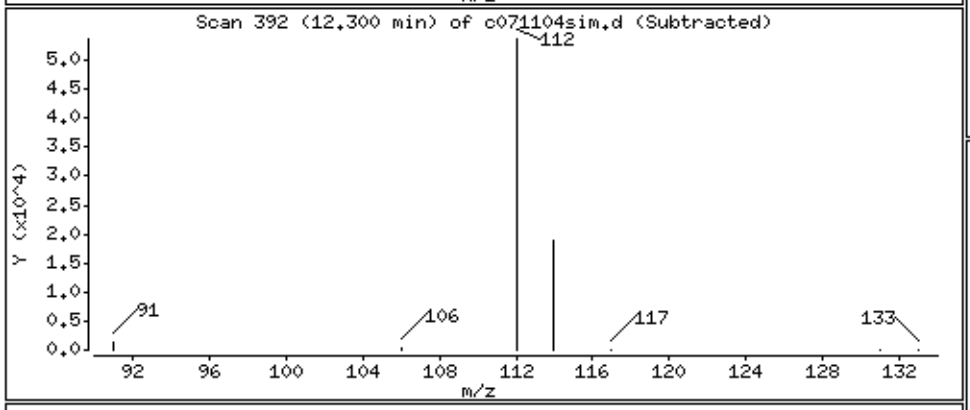
Column diameter: 0.25

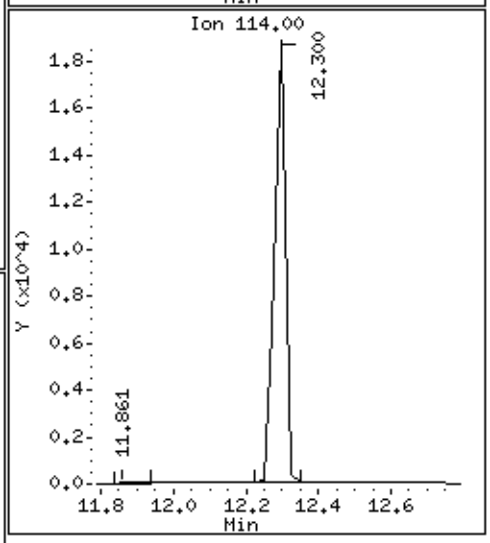
30 Chlorobenzene

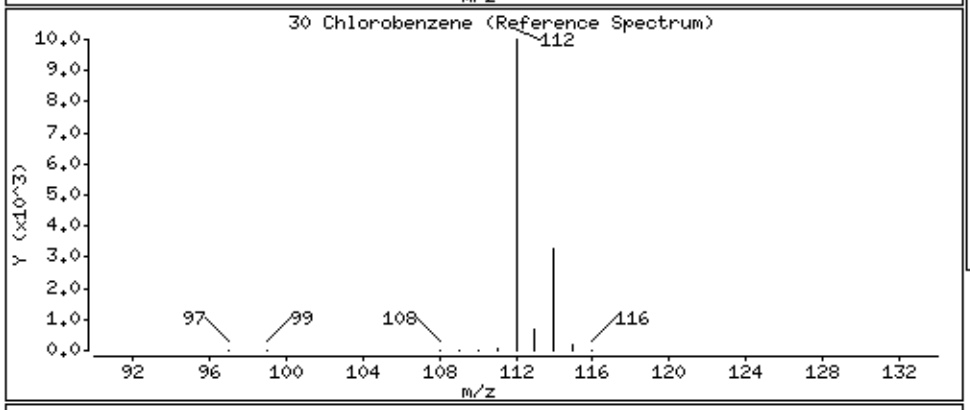
Concentration: 8.96899 ug

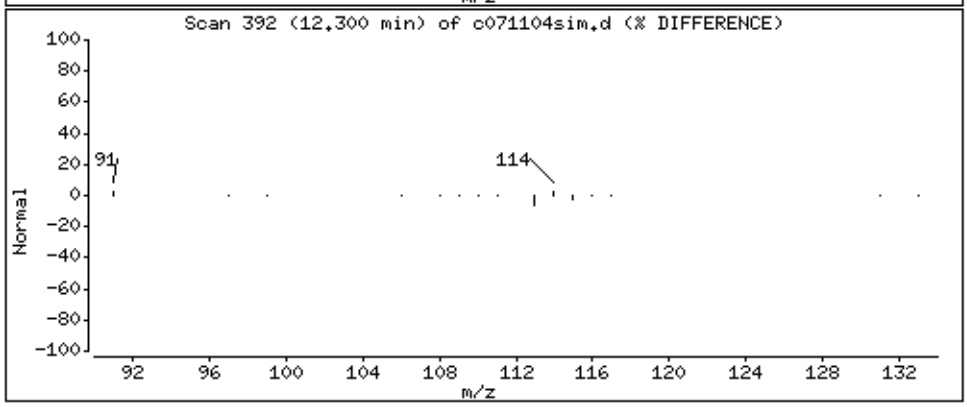












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

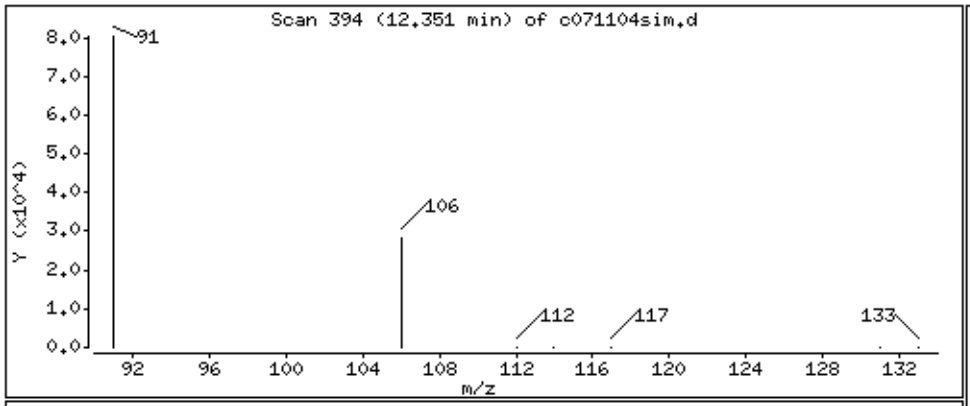
Operator: gm

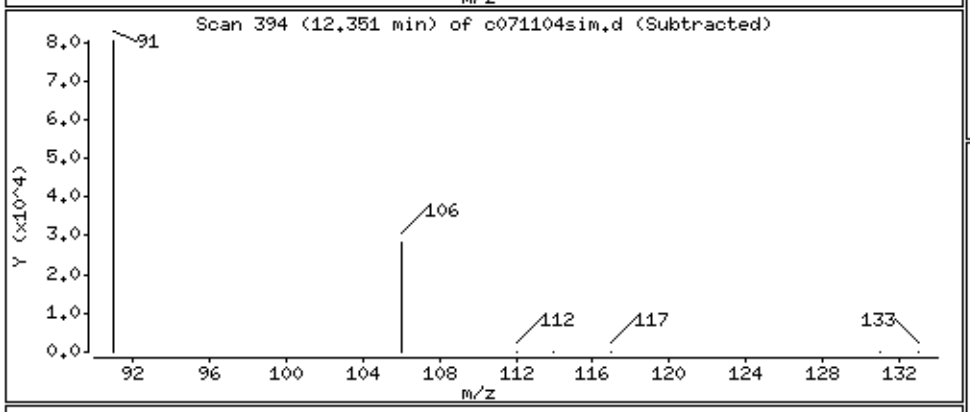
Column phase: DB-5.625

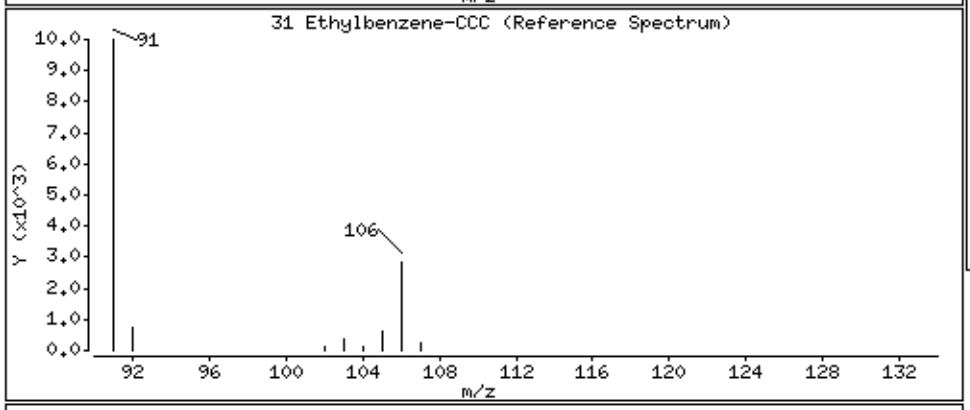
Column diameter: 0.25

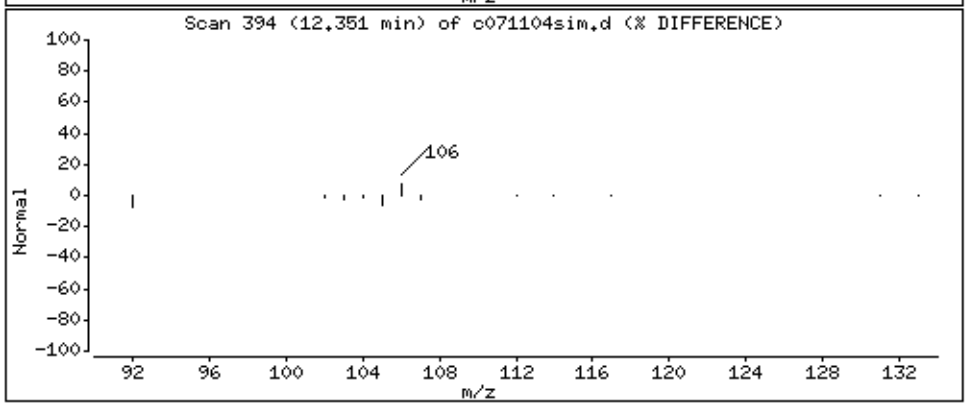
31 Ethylbenzene-CCC

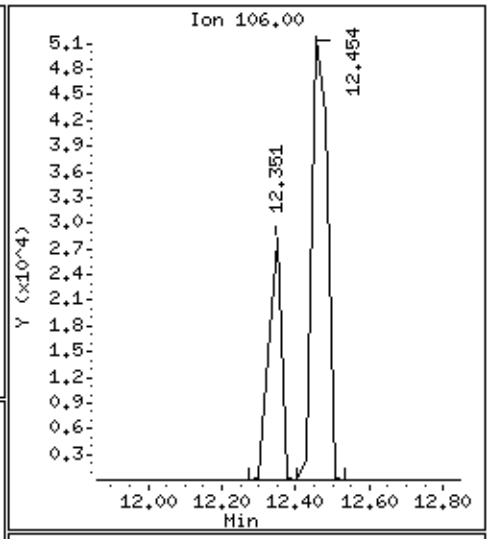
Concentration: 9.71134 ug

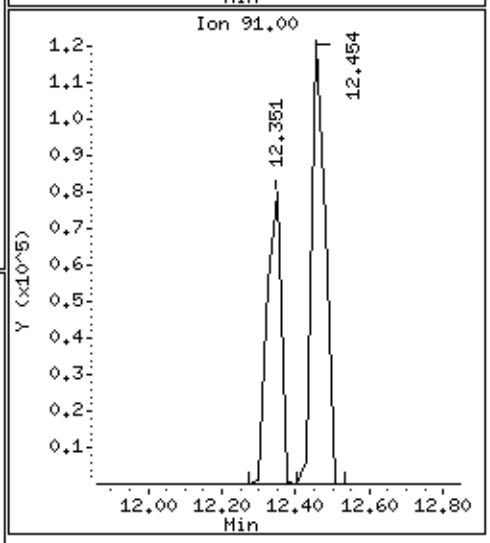












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

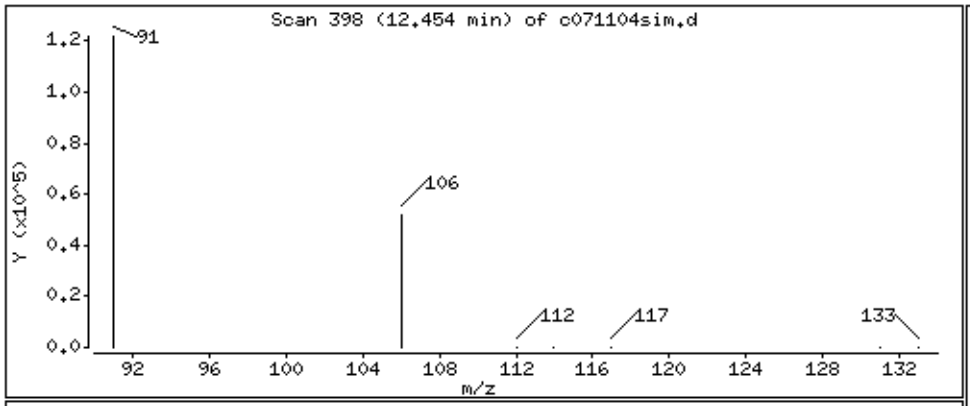
Operator: gm

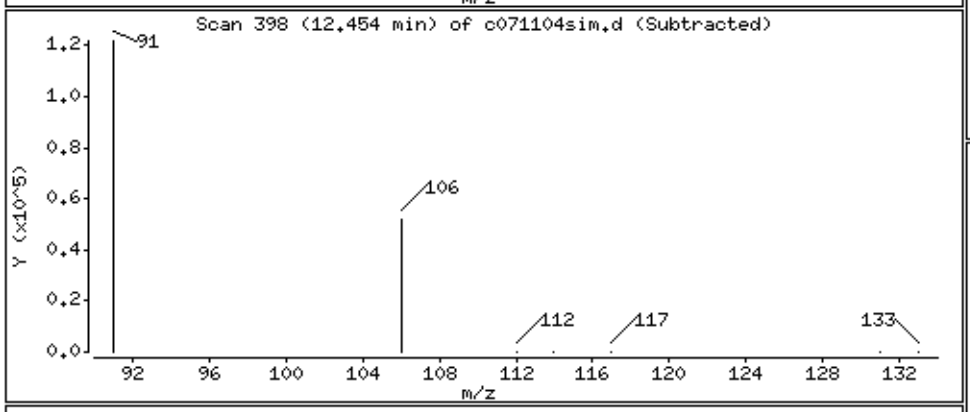
Column phase: DB-5.625

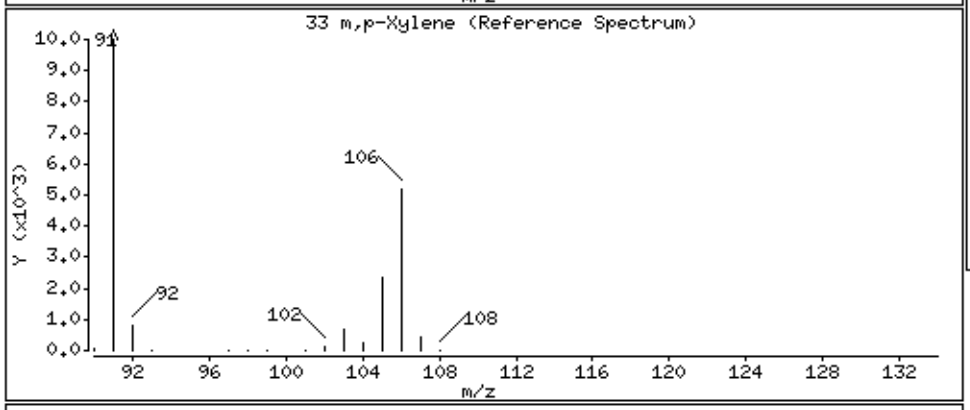
Column diameter: 0.25

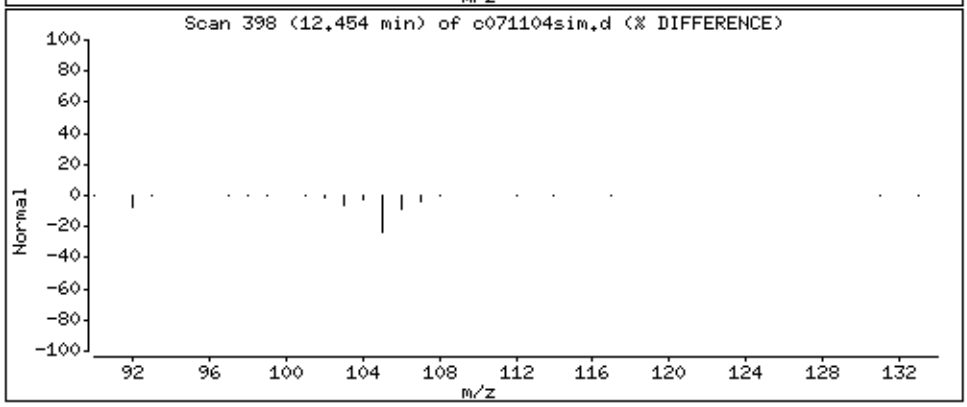
33 m,p-Xylene

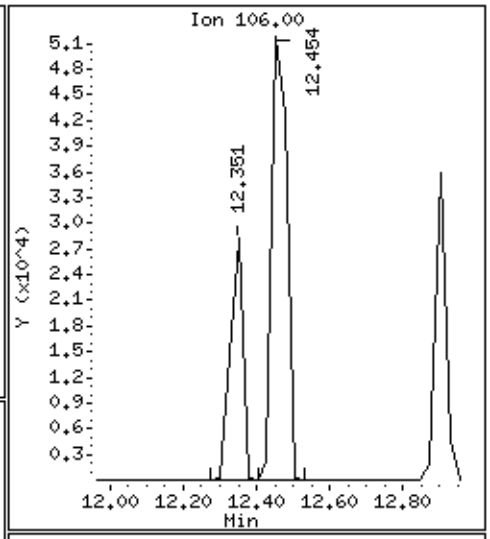
Concentration: 18.5619 ug

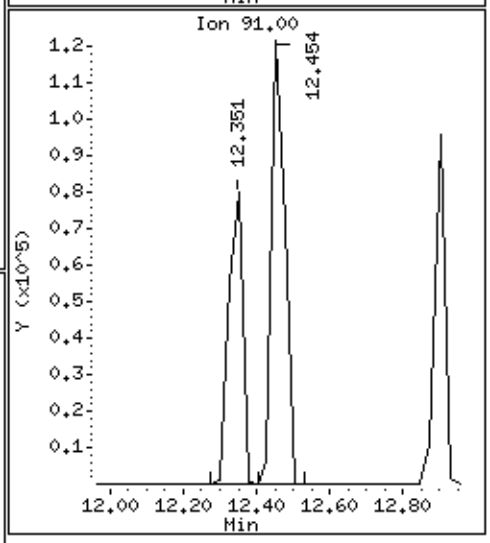












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

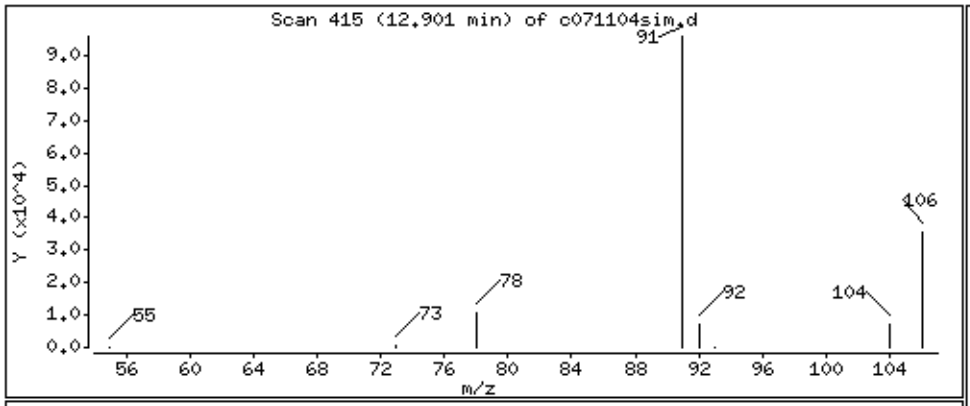
Operator: gm

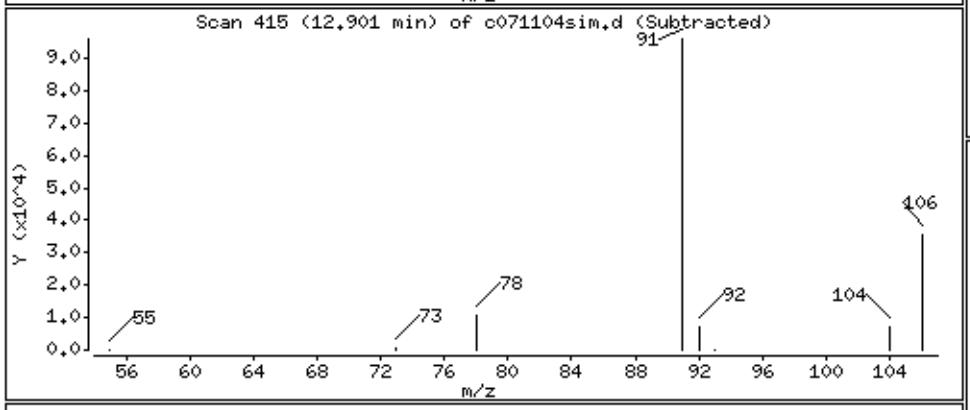
Column phase: DB-5.625

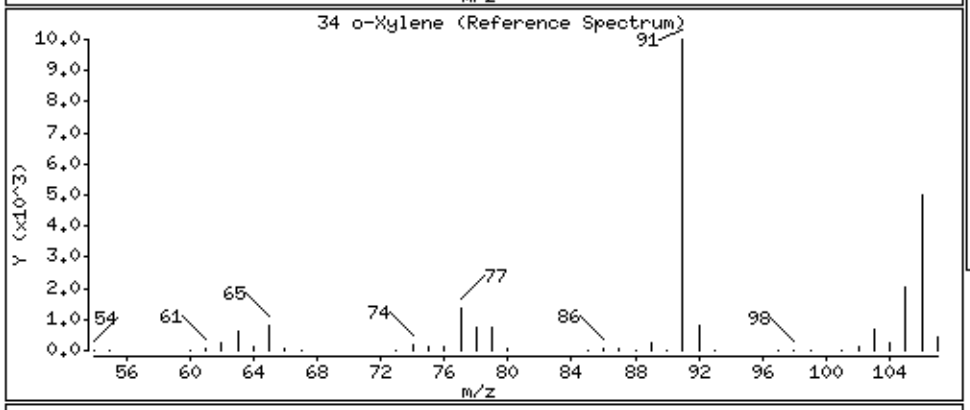
Column diameter: 0.25

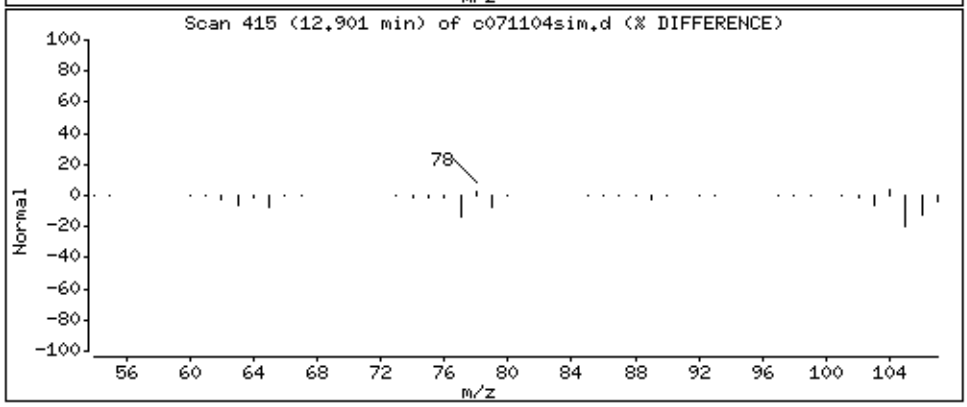
34 o-Xylene

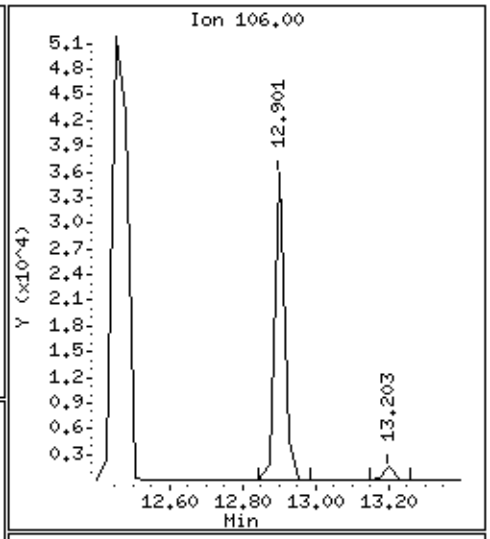
Concentration: 9.23606 ug

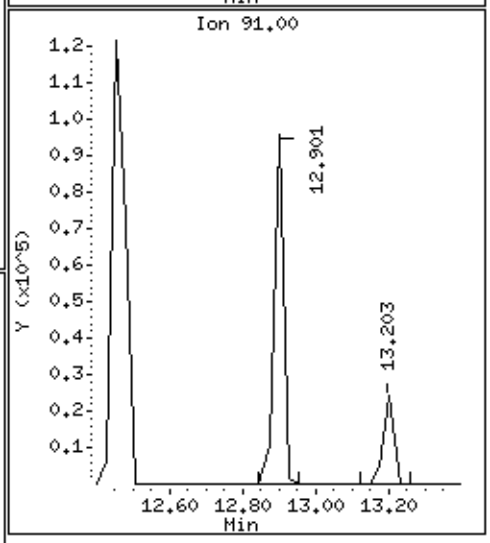












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

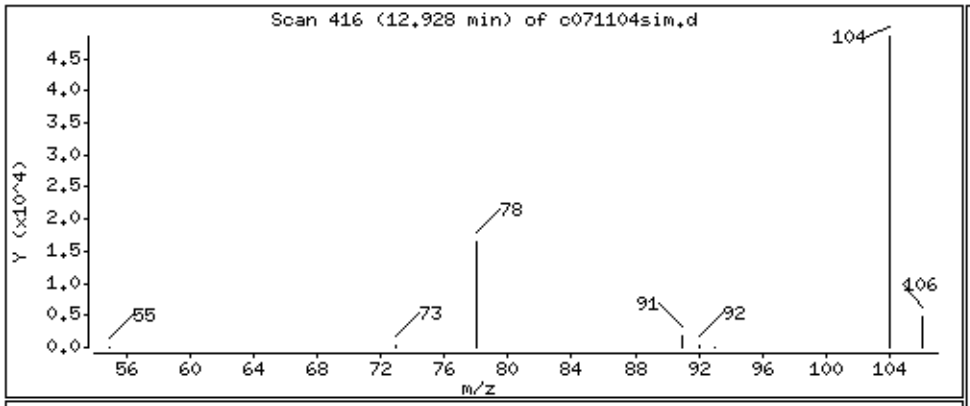
Operator: gm

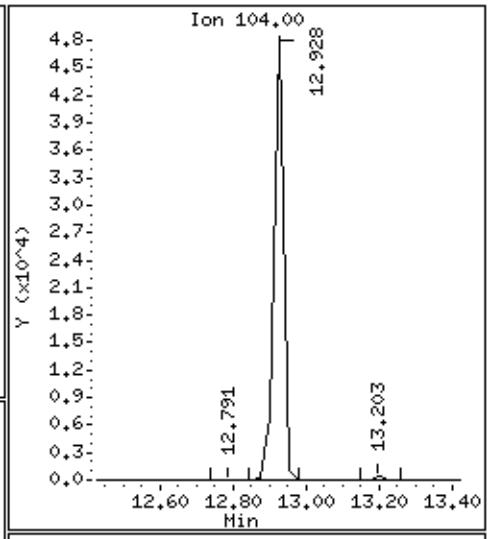
Column phase: DB-5.625

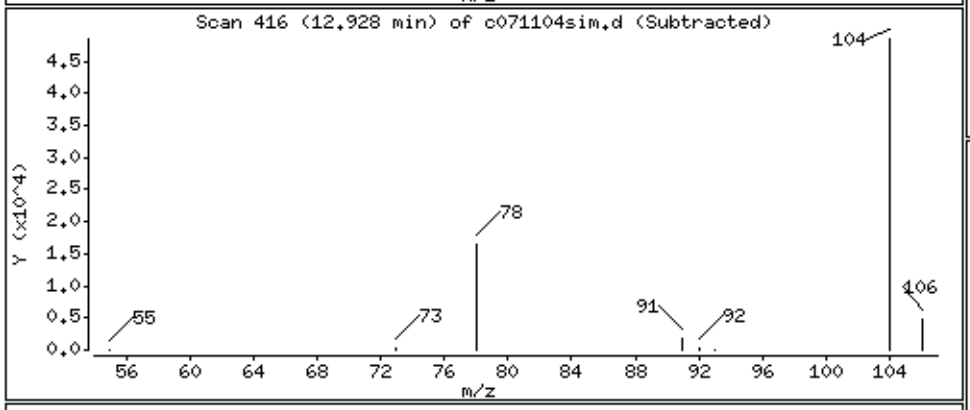
Column diameter: 0.25

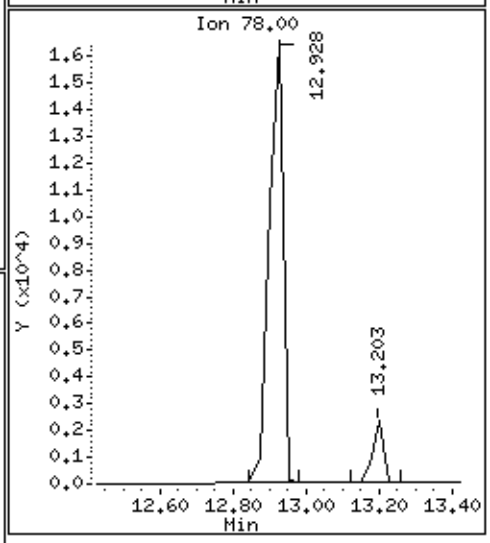
35 Styrene

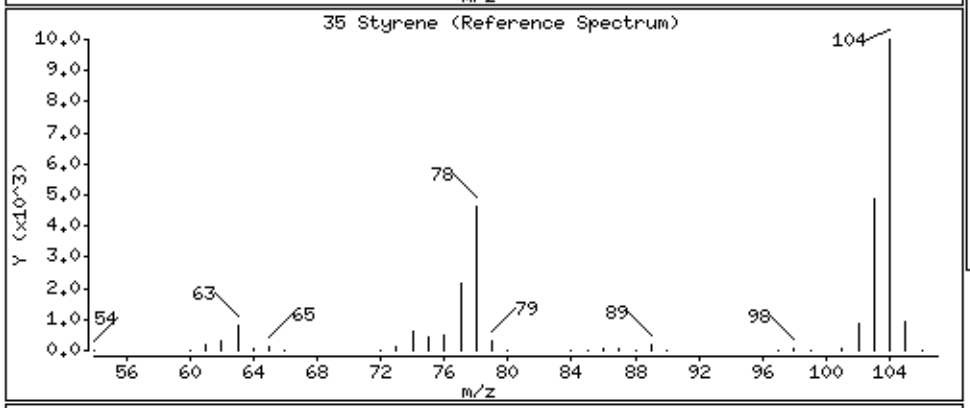
Concentration: 6.05905 ug

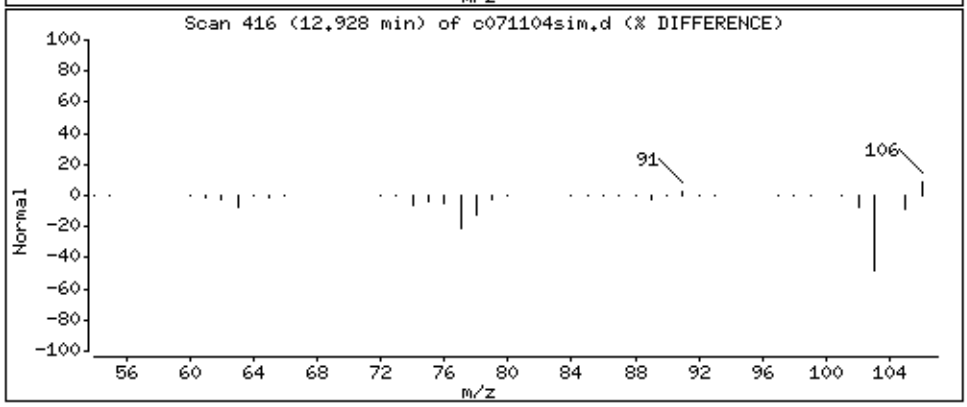












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

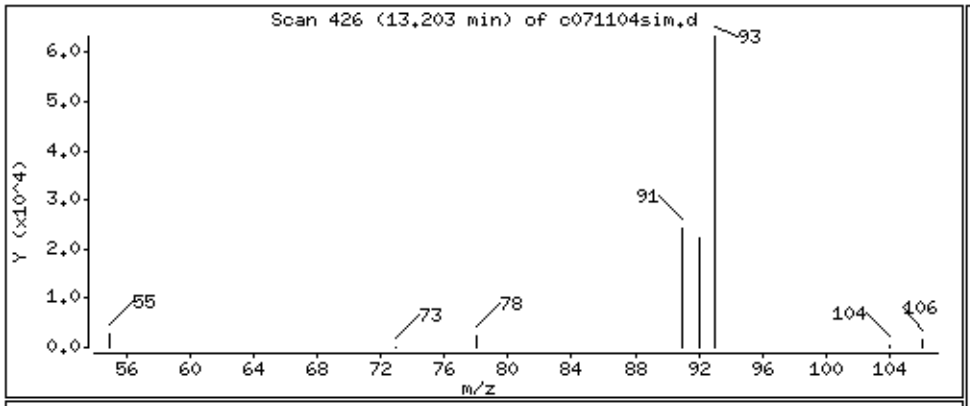
Operator: gm

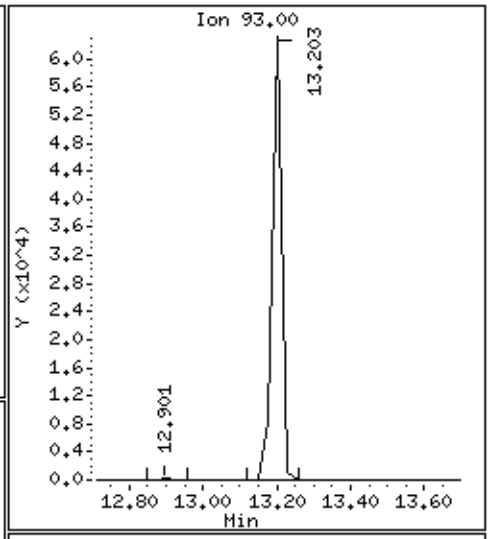
Column phase: DB-5.625

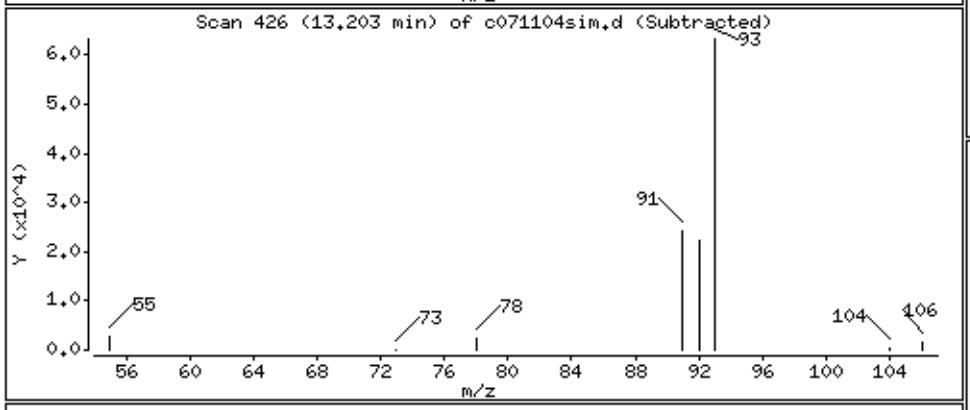
Column diameter: 0.25

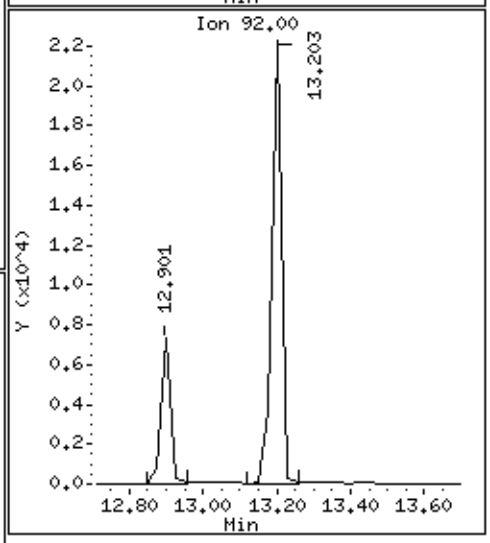
36 a-Pinene

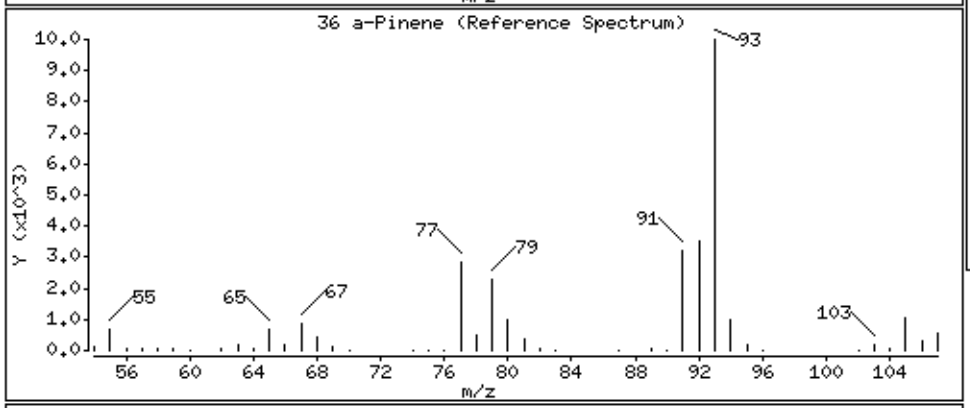
Concentration: 12.0330 ug

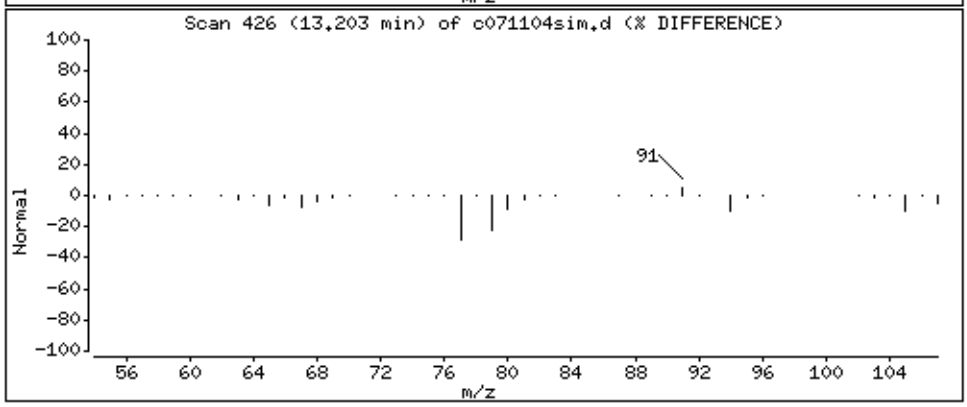












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

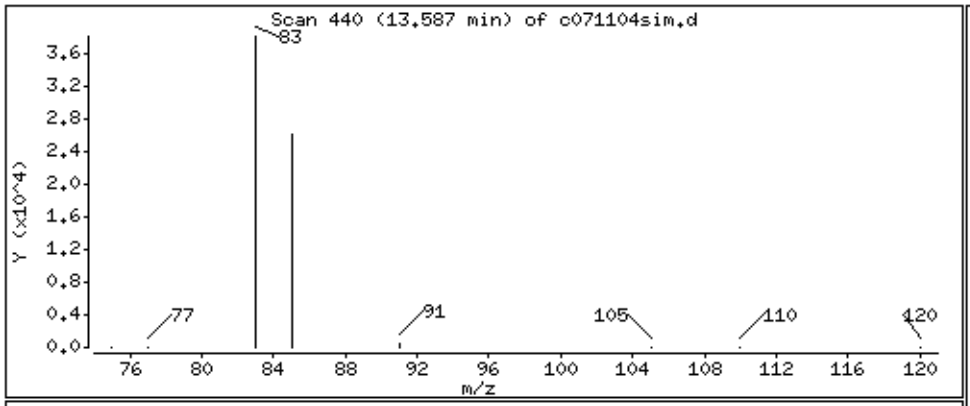
Operator: gm

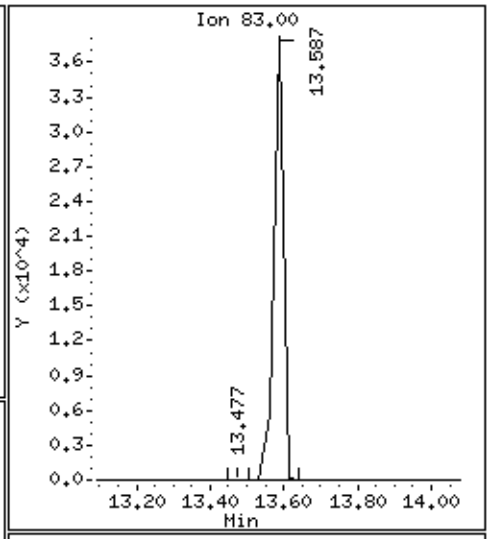
Column phase: DB-5.625

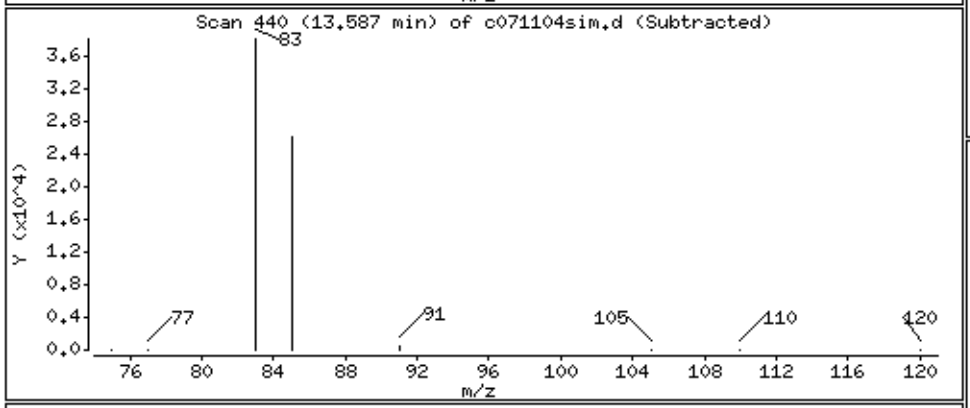
Column diameter: 0.25

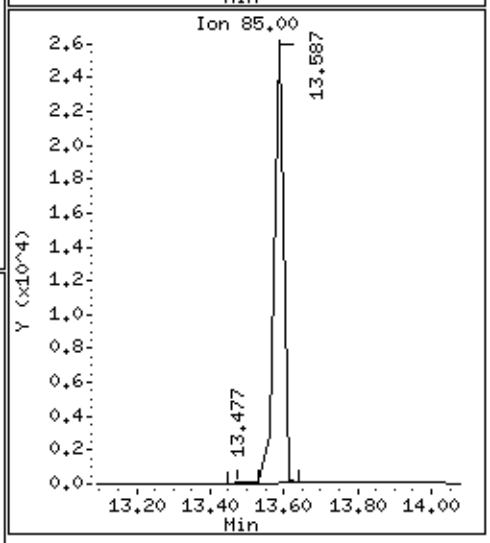
37 1,1,2,2-Tetrachloroethane-SPC

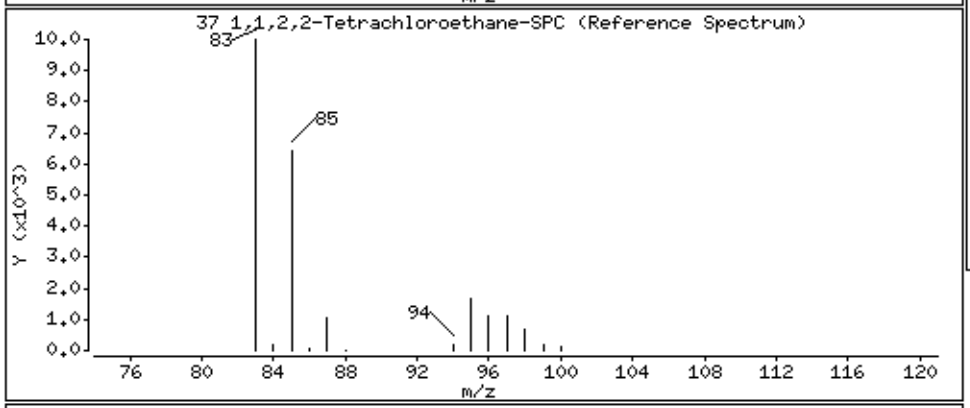
Concentration: 8.30867 ug

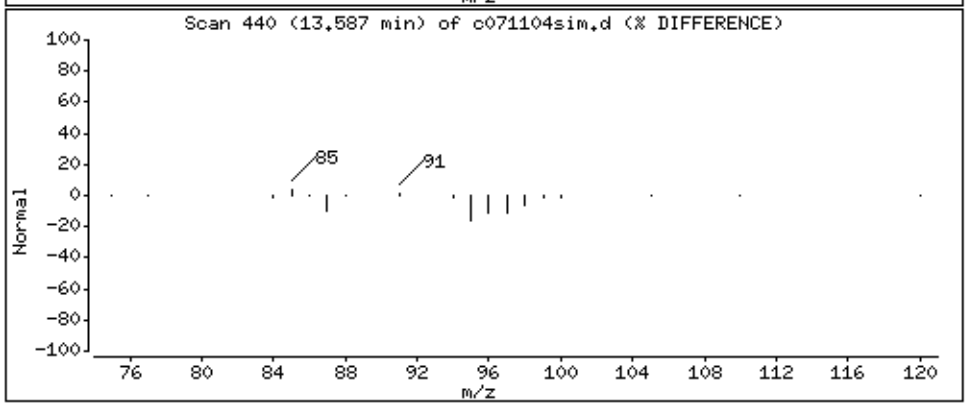












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

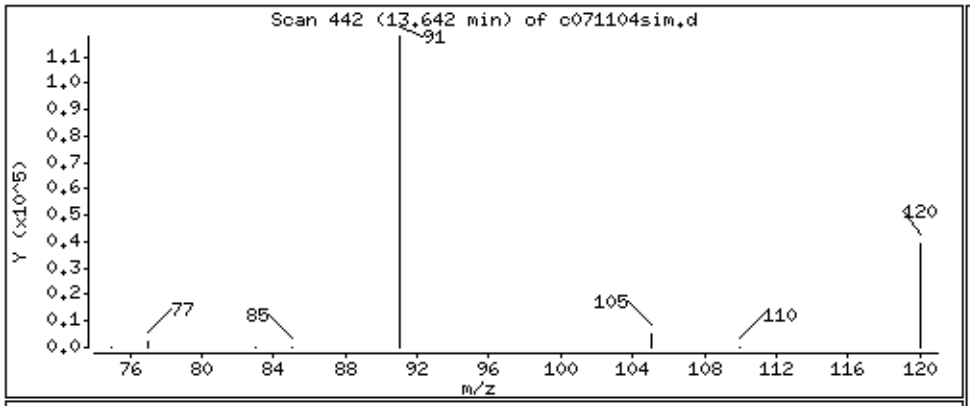
Operator: gm

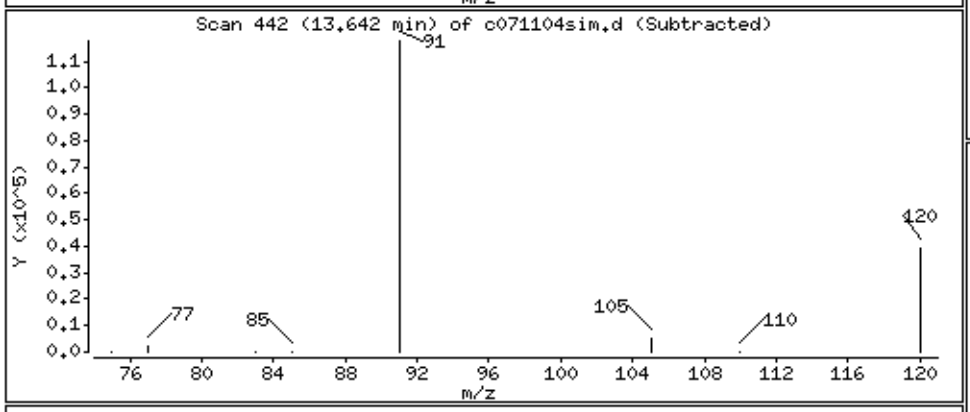
Column phase: DB-5.625

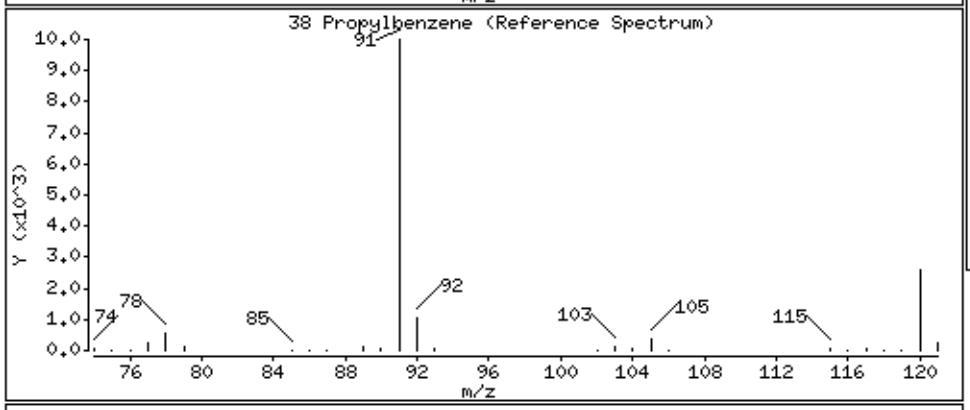
Column diameter: 0.25

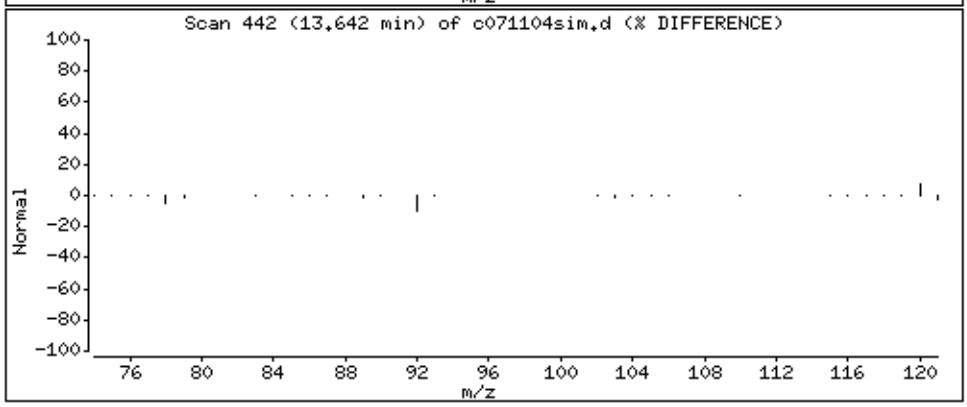
38 Propylbenzene

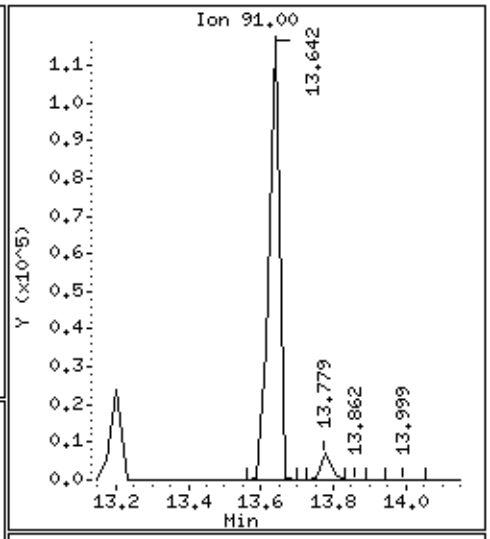
Concentration: 8.81121 ug

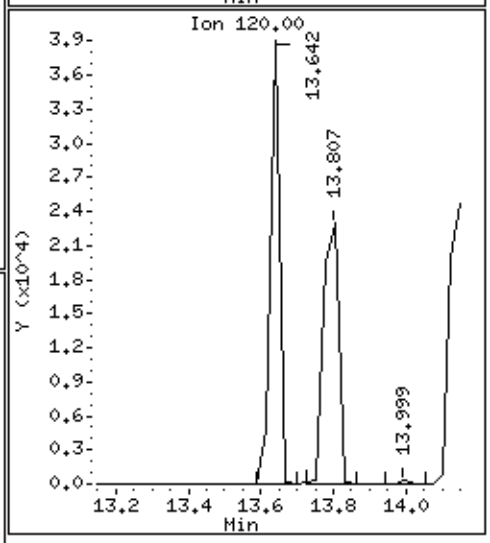












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

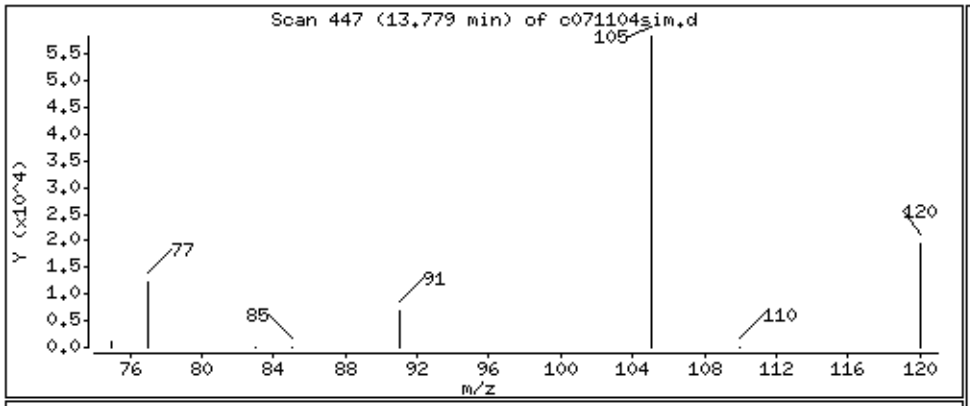
Operator: gm

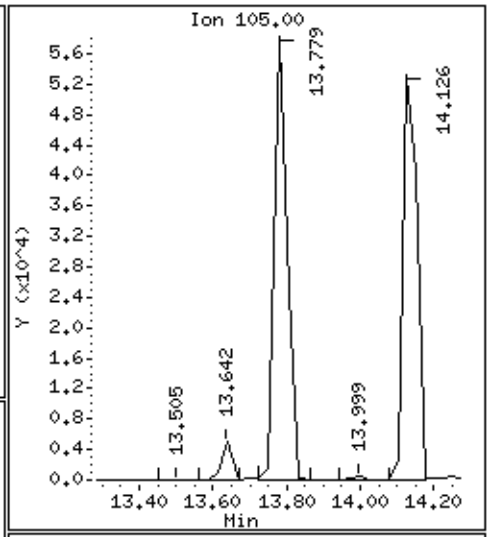
Column phase: DB-5.625

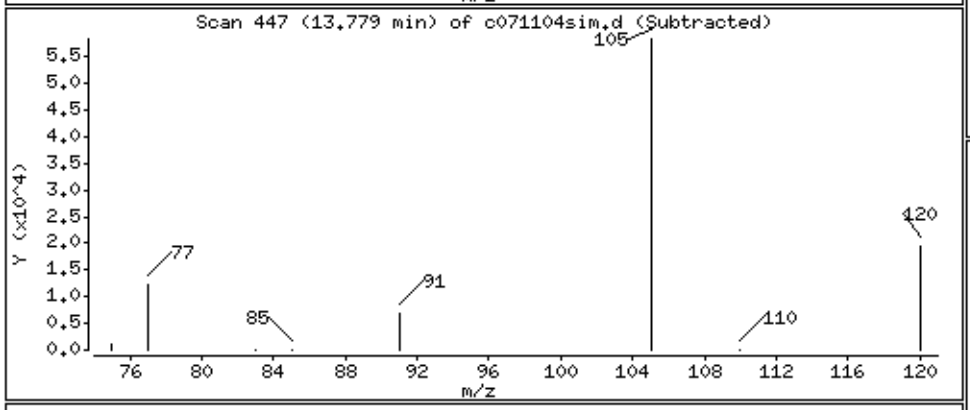
Column diameter: 0.25

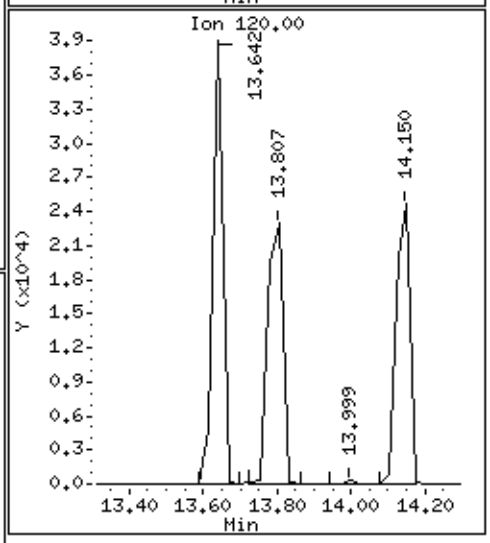
40 1,3,5-Trimethylbenzene

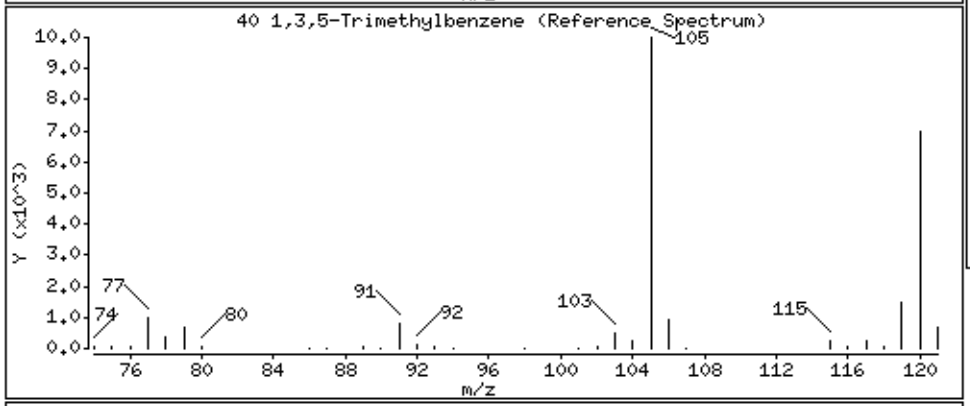
Concentration: 9.14625 ug

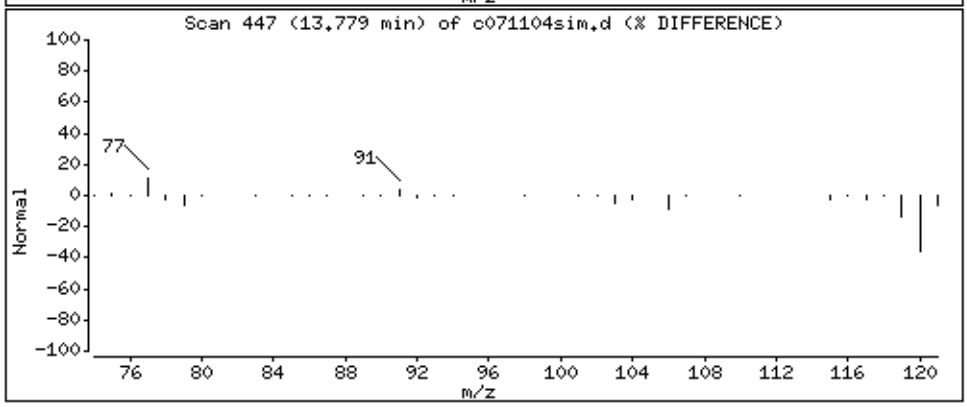












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

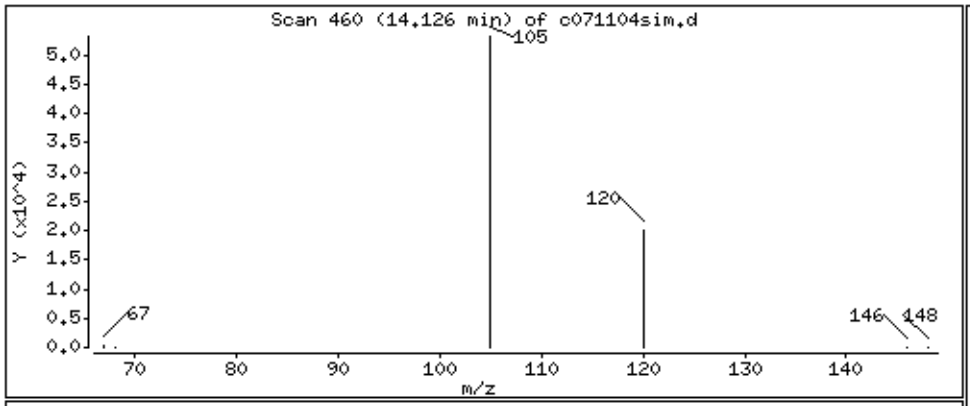
Operator: gm

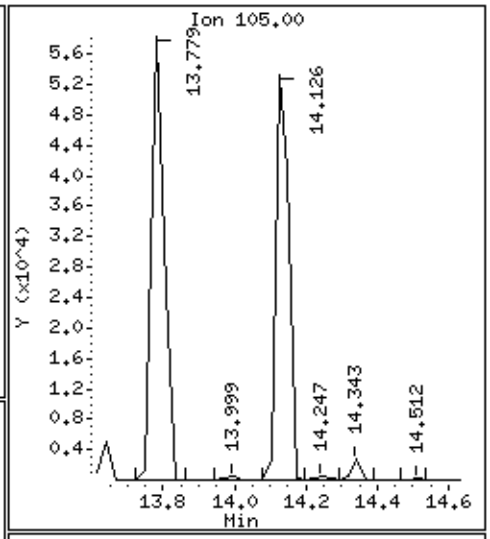
Column phase: DB-5.625

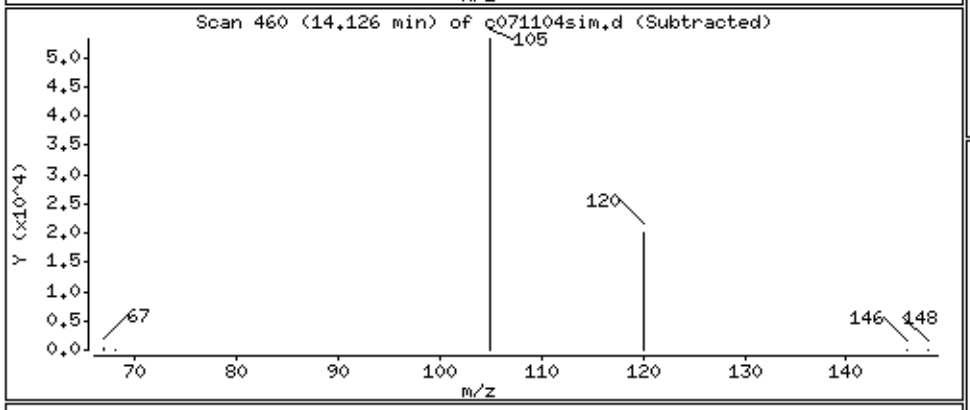
Column diameter: 0.25

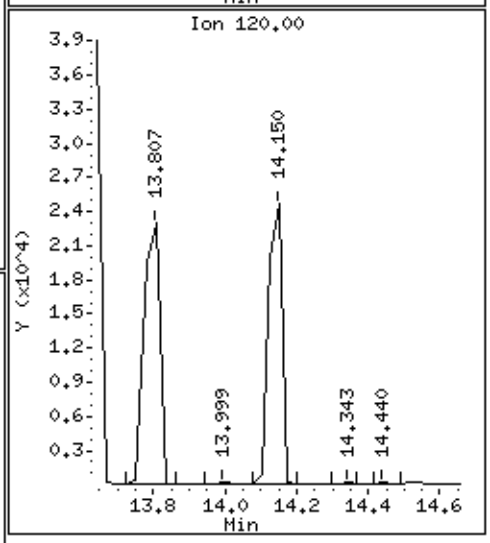
41 1,2,4-Trimethylbenzene

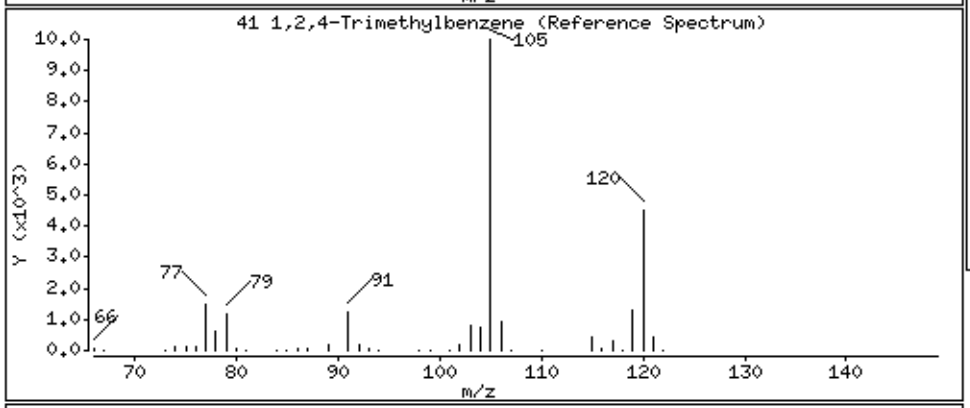
Concentration: 8.52475 ug

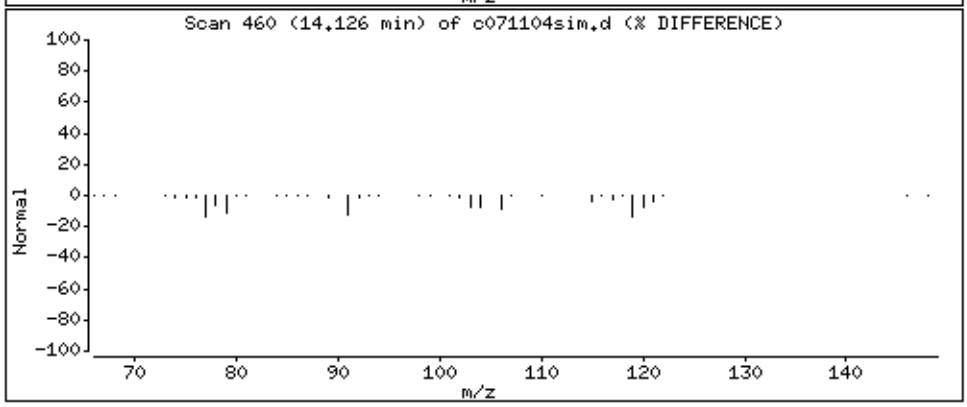












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

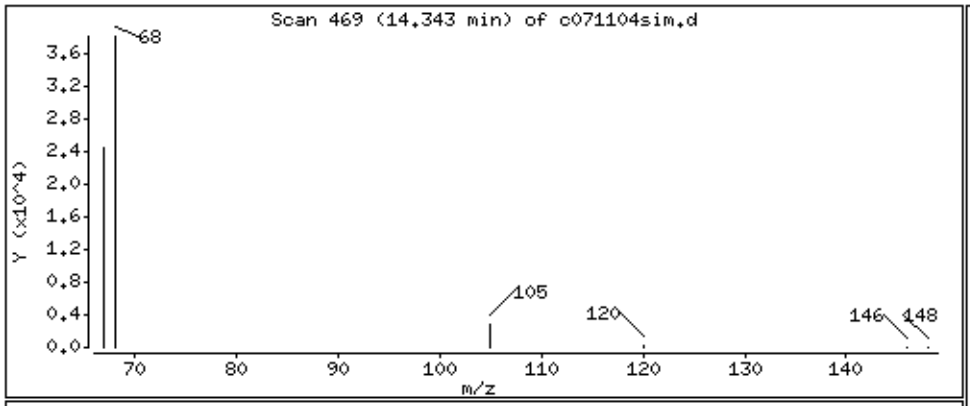
Operator: gm

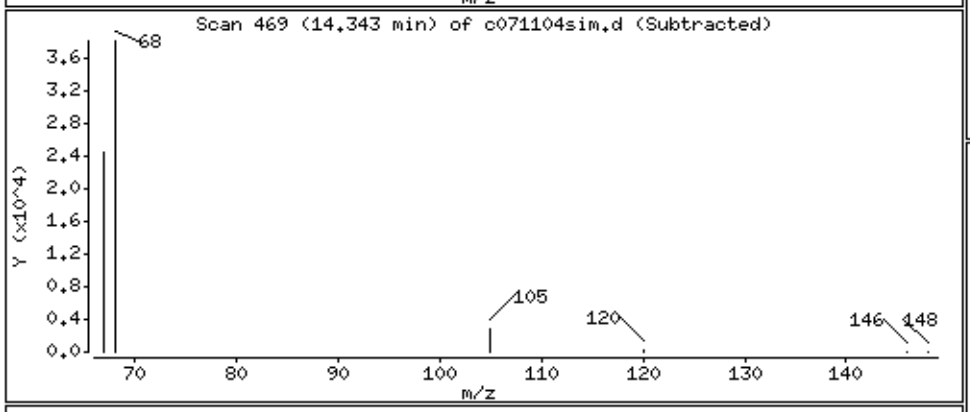
Column phase: DB-5.625

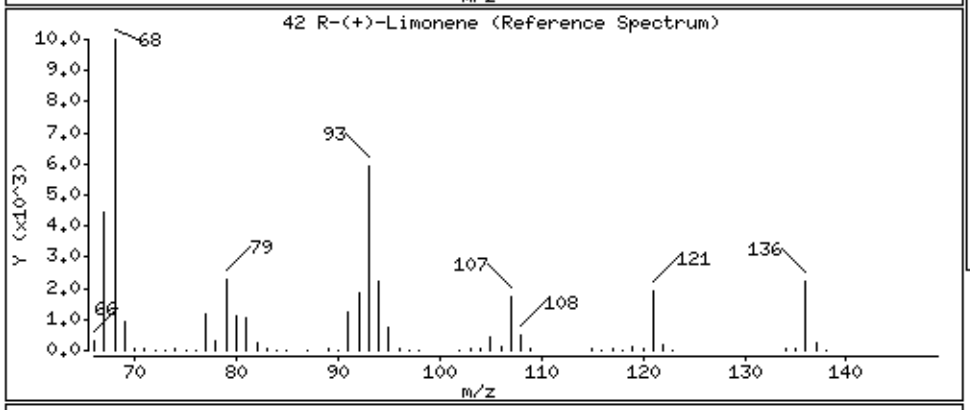
Column diameter: 0.25

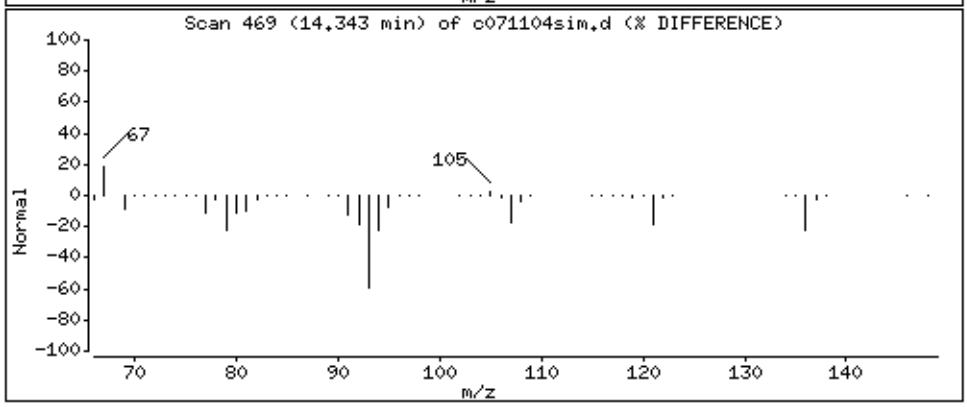
42 R-(+)-Limonene

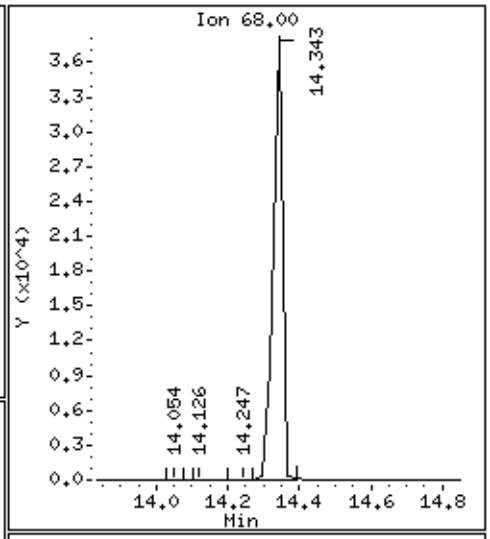
Concentration: 9.26617 ug

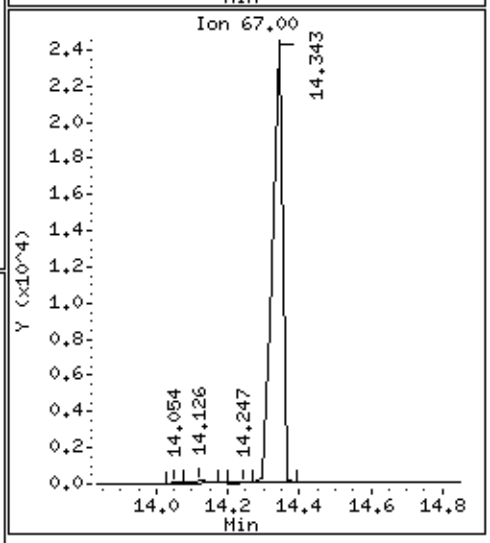












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

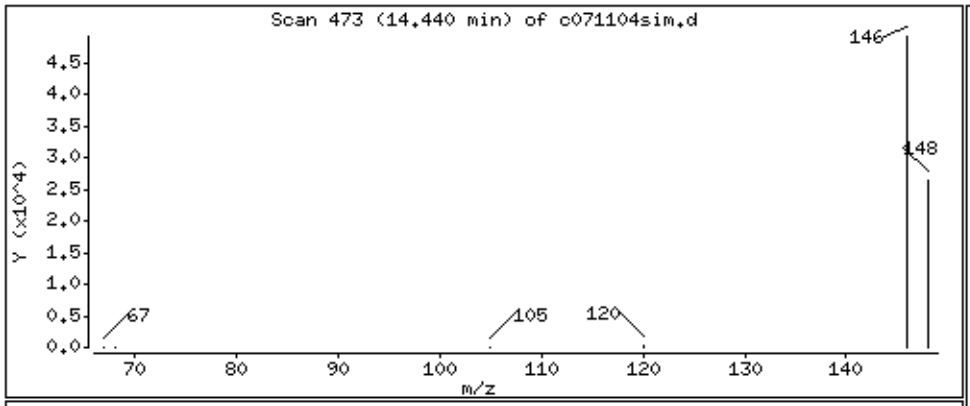
Operator: gm

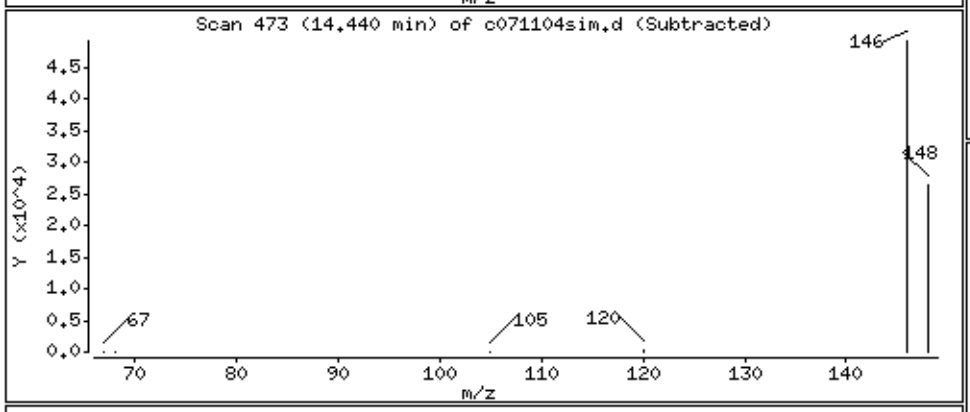
Column phase: DB-5.625

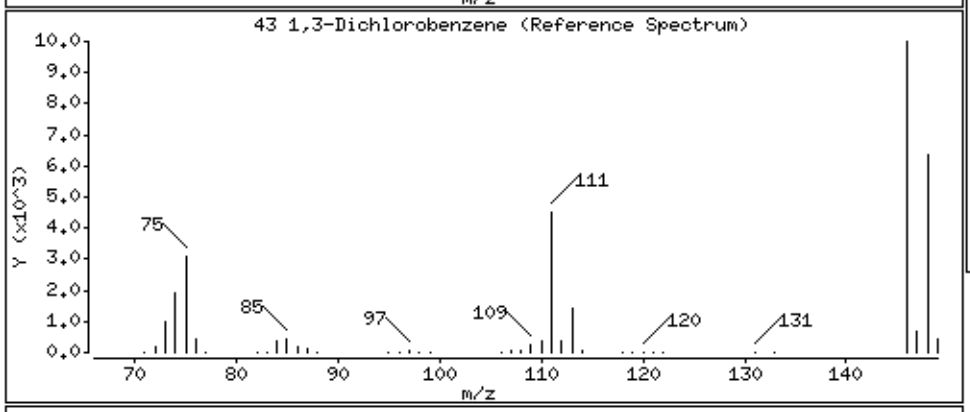
Column diameter: 0.25

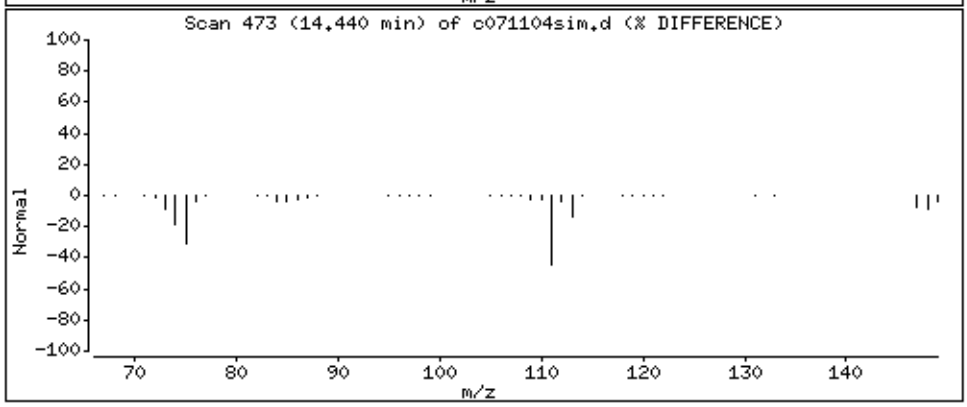
43 1,3-Dichlorobenzene

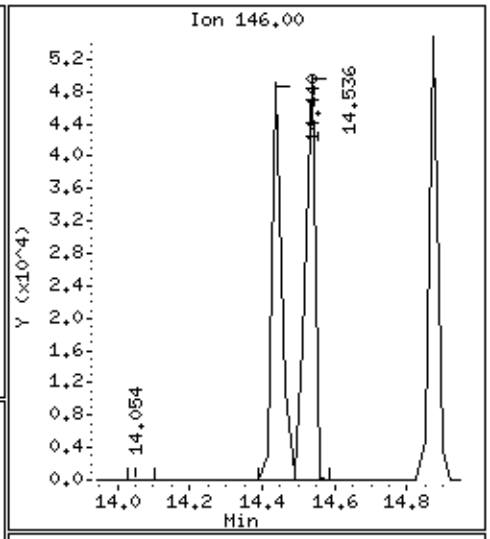
Concentration: 8.54846 ug

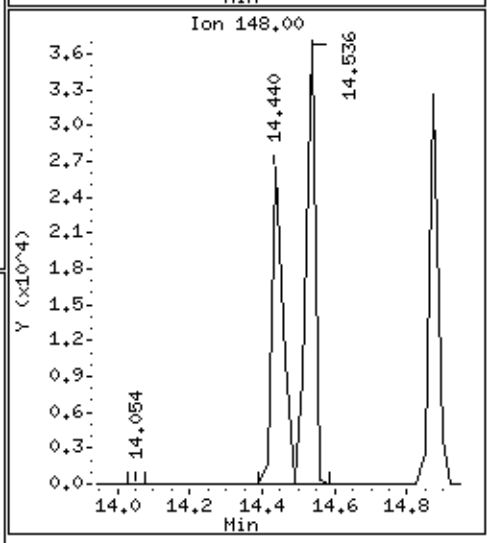












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

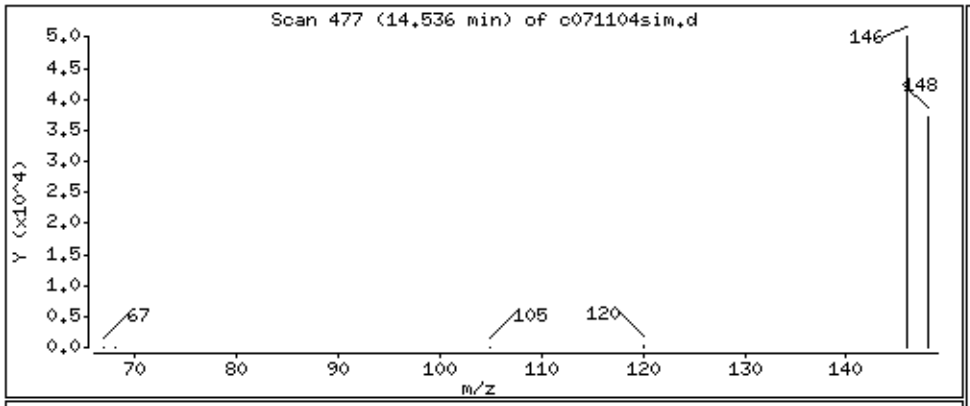
Operator: gm

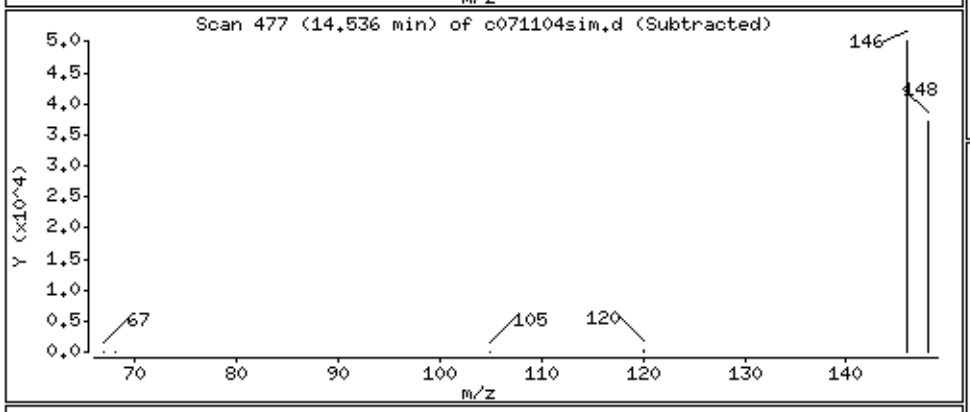
Column phase: DB-5.625

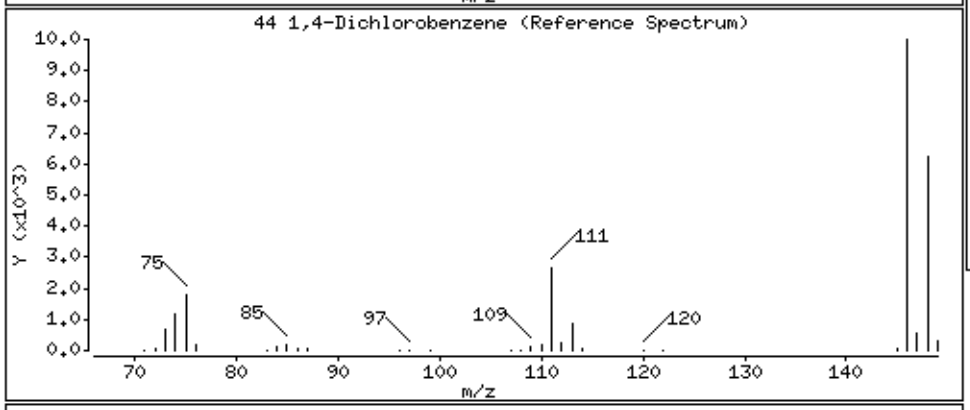
Column diameter: 0.25

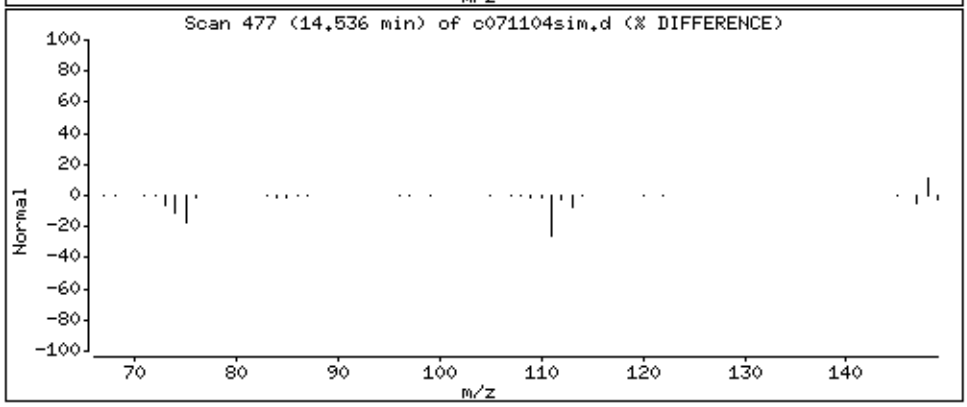
44 1,4-Dichlorobenzene

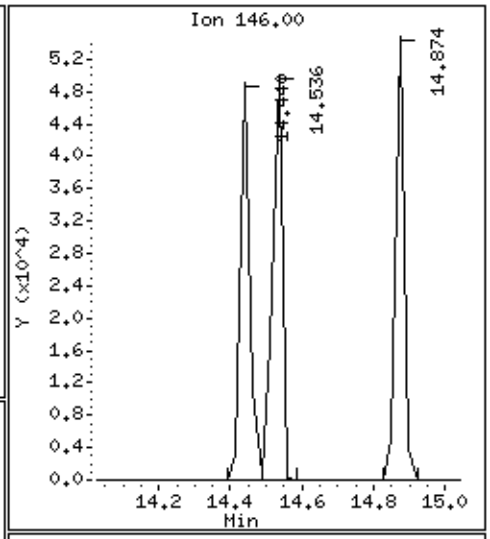
Concentration: 7.56226 ug

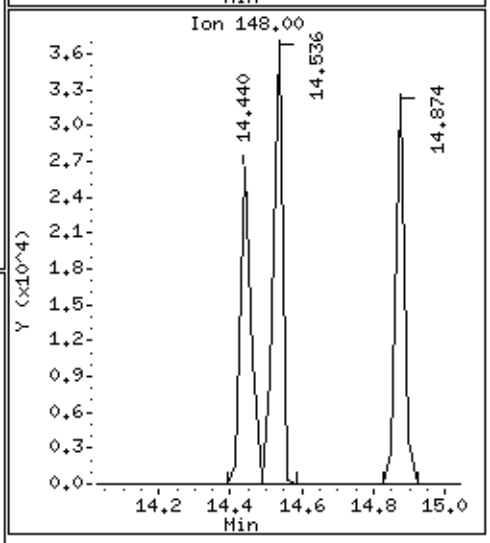












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

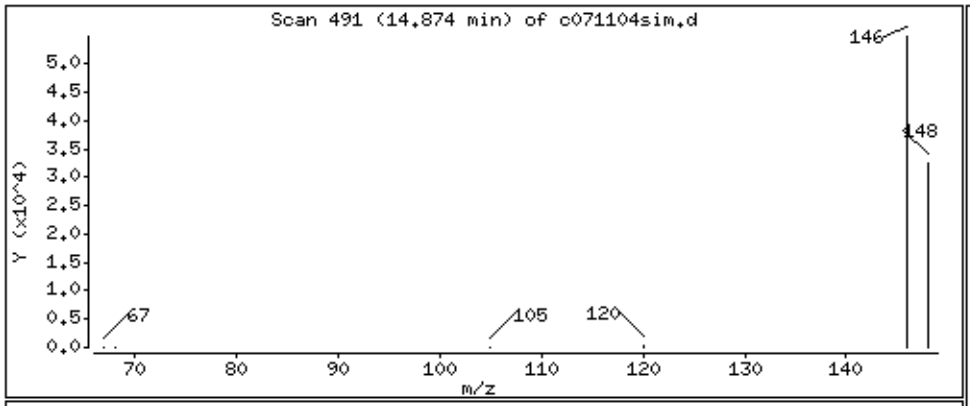
Operator: gm

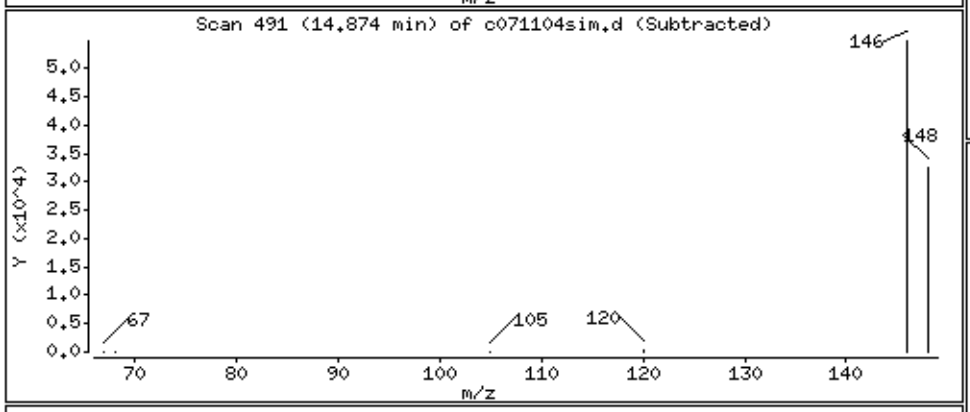
Column phase: DB-5.625

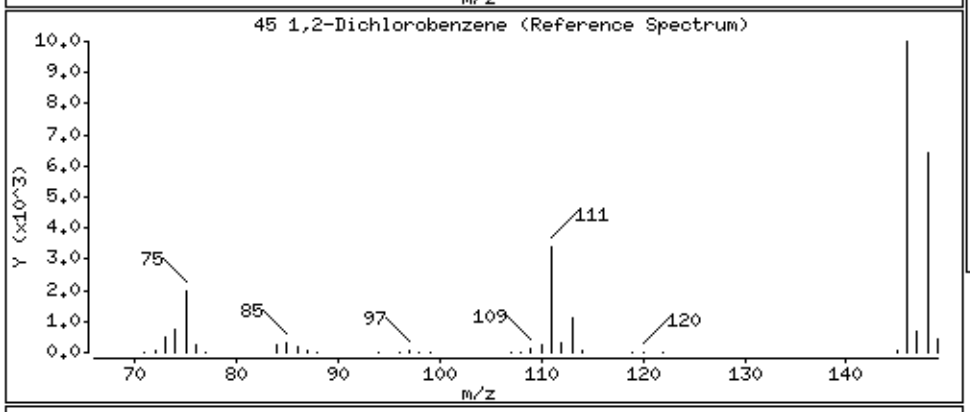
Column diameter: 0.25

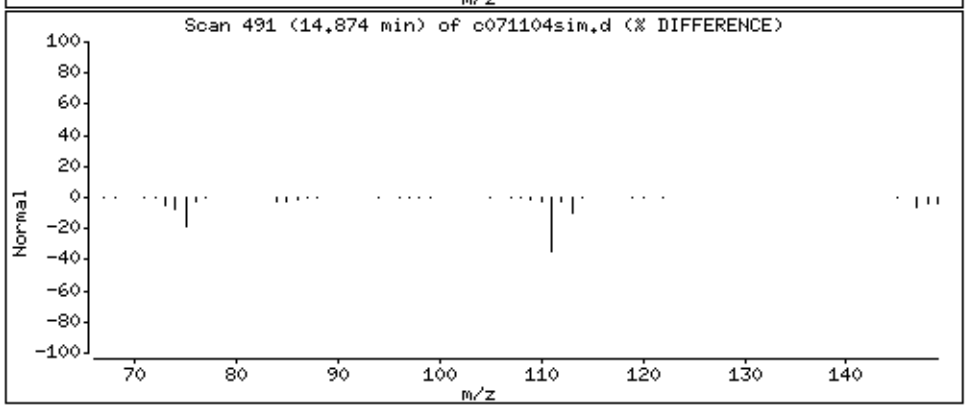
45 1,2-Dichlorobenzene

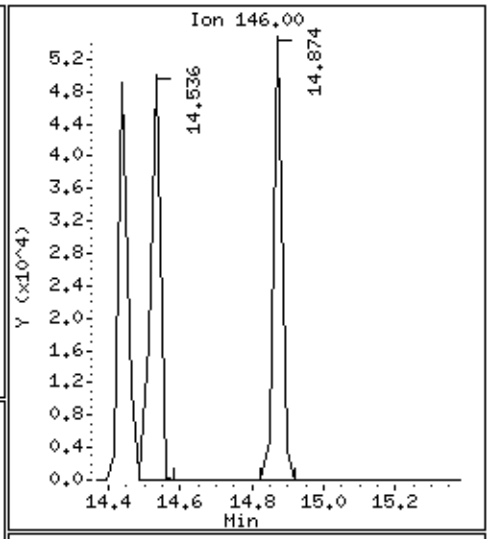
Concentration: 8.00356 ug

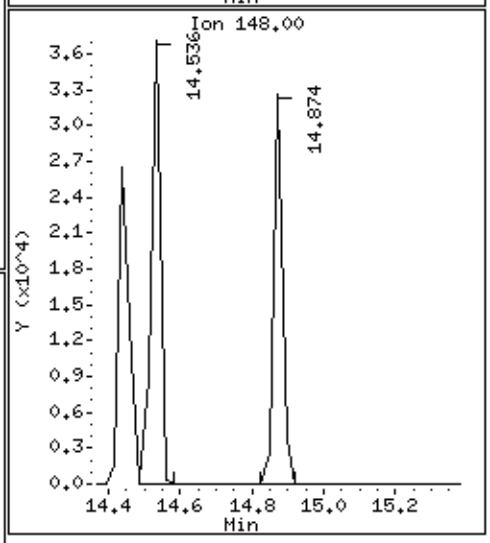












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

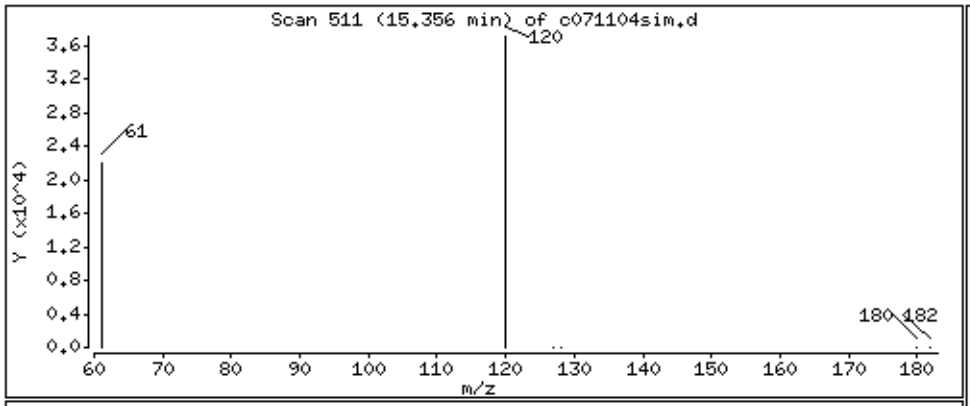
Operator: gm

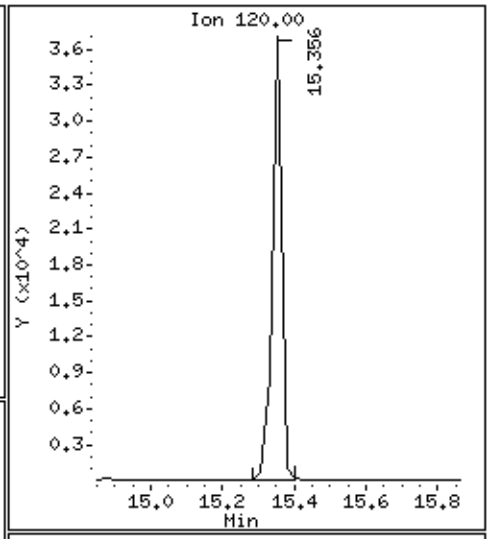
Column phase: DB-5.625

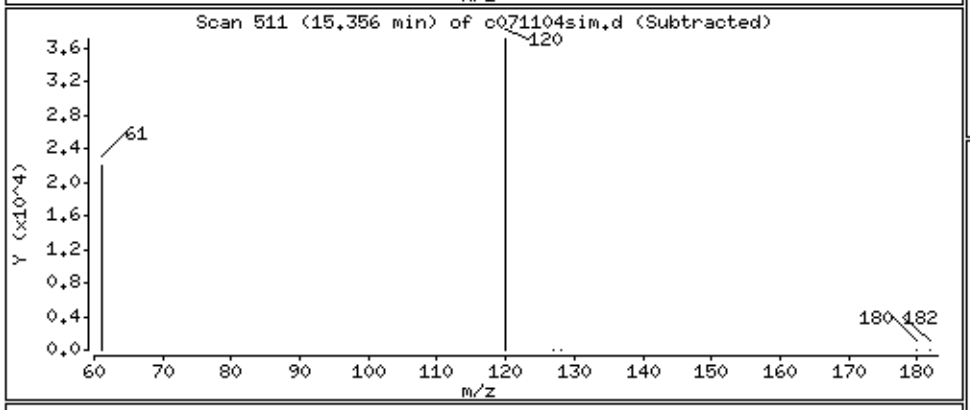
Column diameter: 0.25

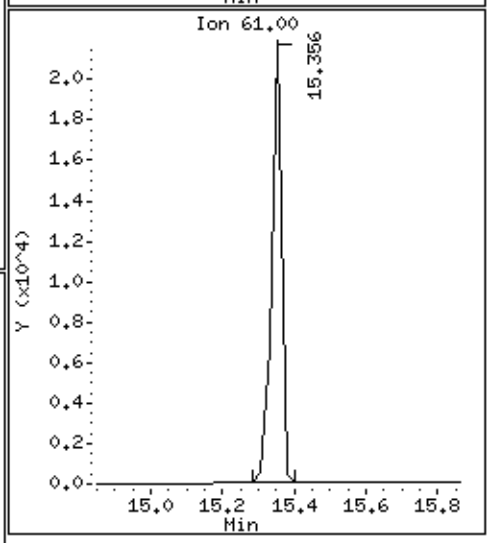
46 1,4-Dithiane

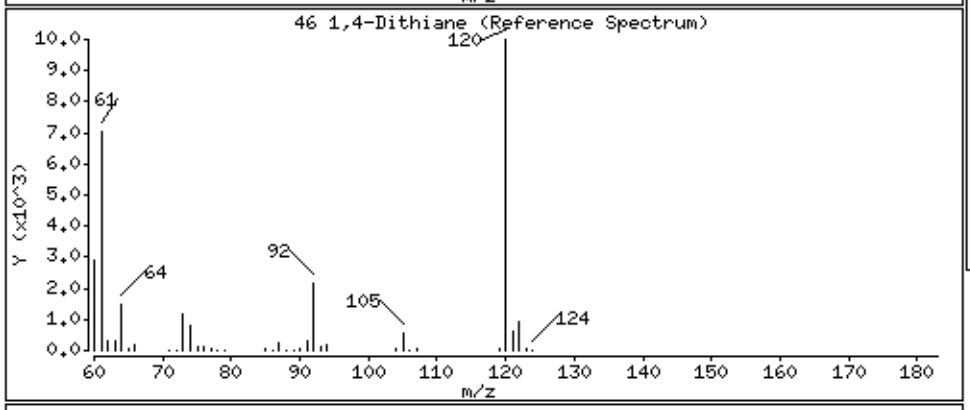
Concentration: 8.57898 ug

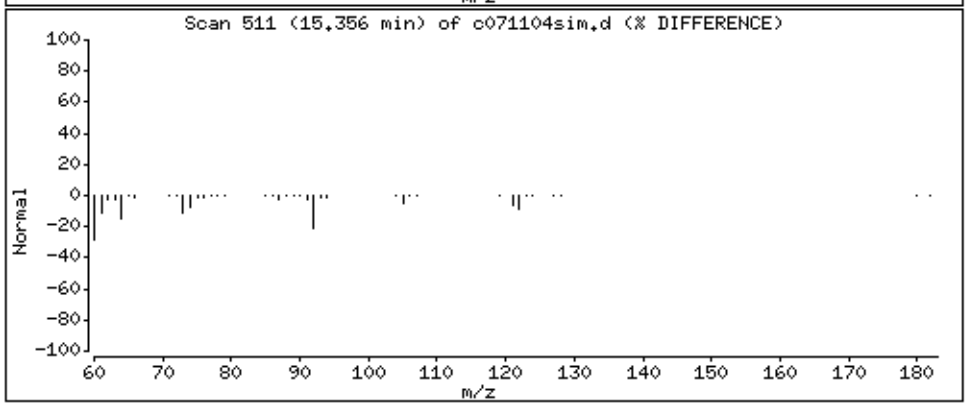












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

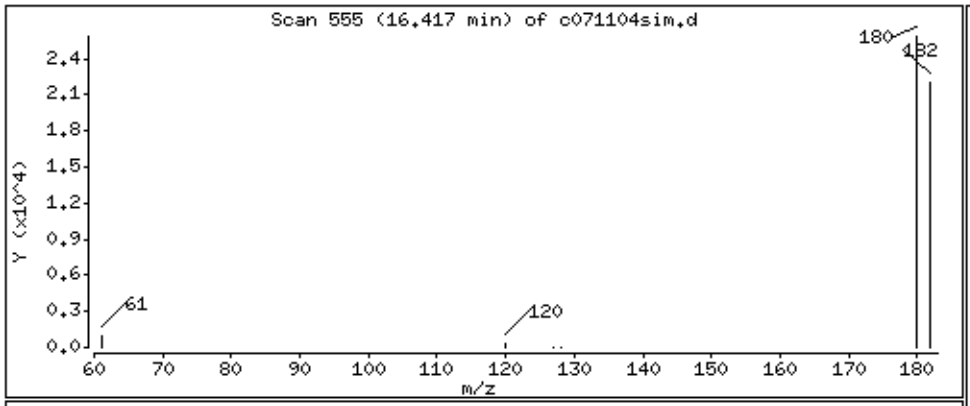
Operator: gm

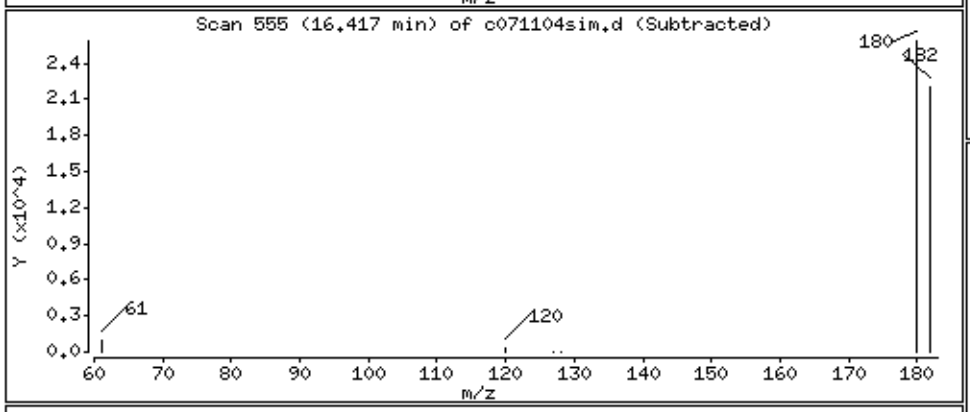
Column phase: DB-5.625

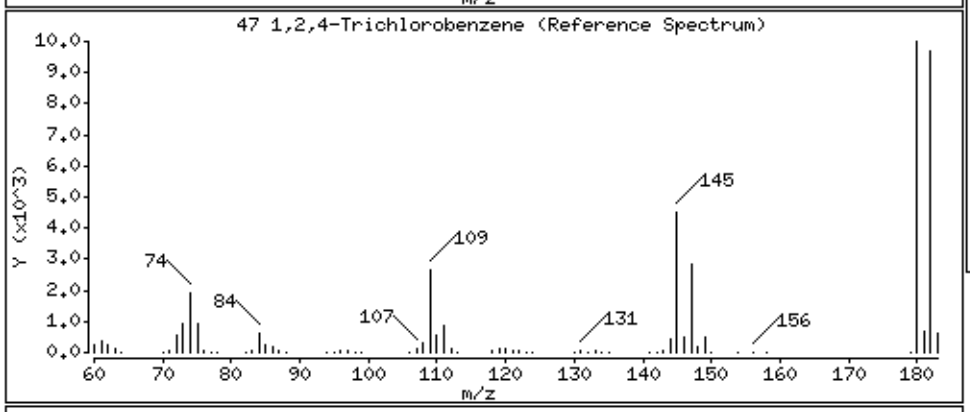
Column diameter: 0.25

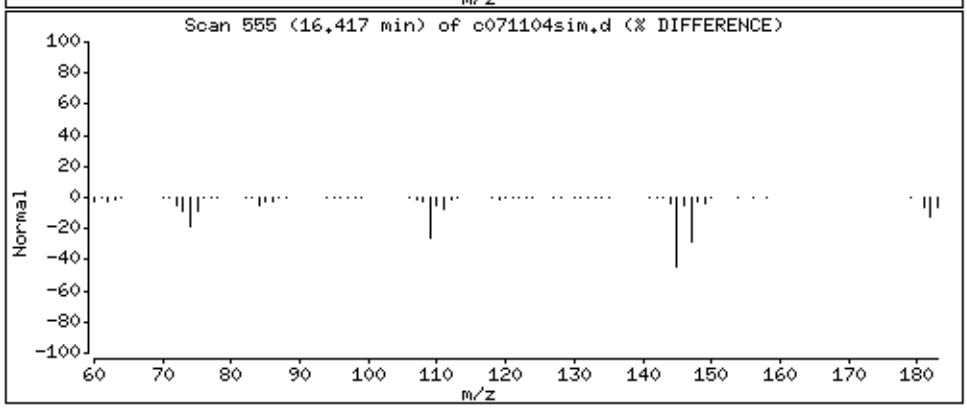
47 1,2,4-Trichlorobenzene

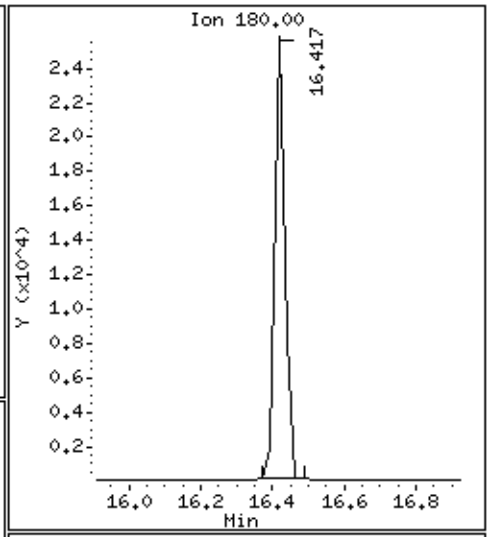
Concentration: 6.68660 ug

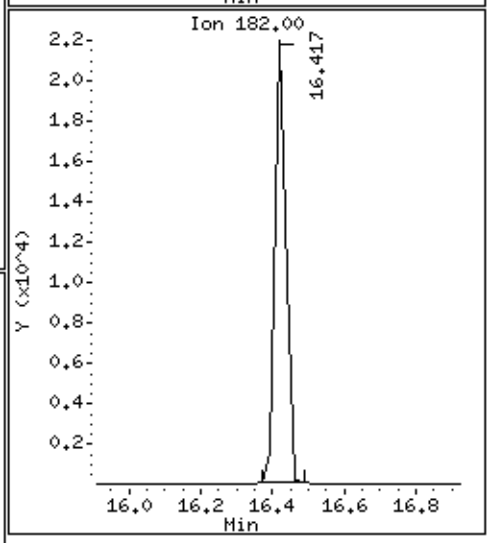












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

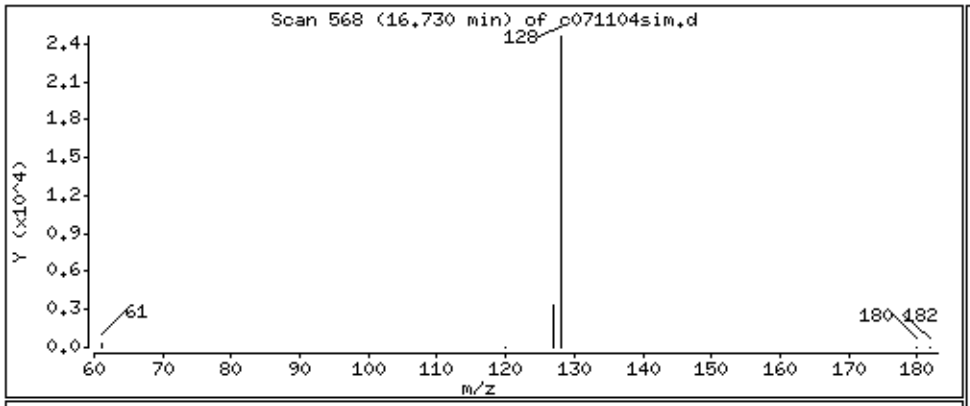
Operator: gm

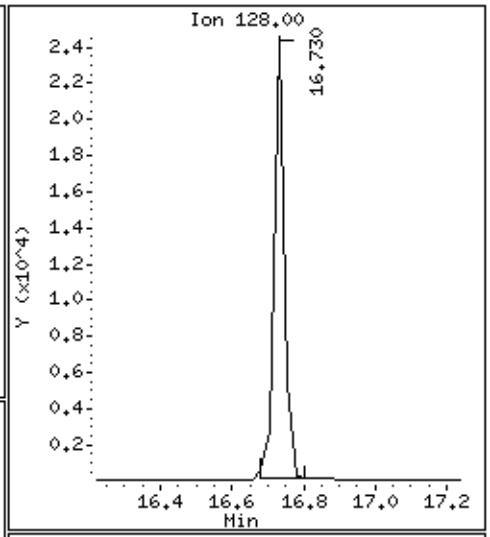
Column phase: DB-5.625

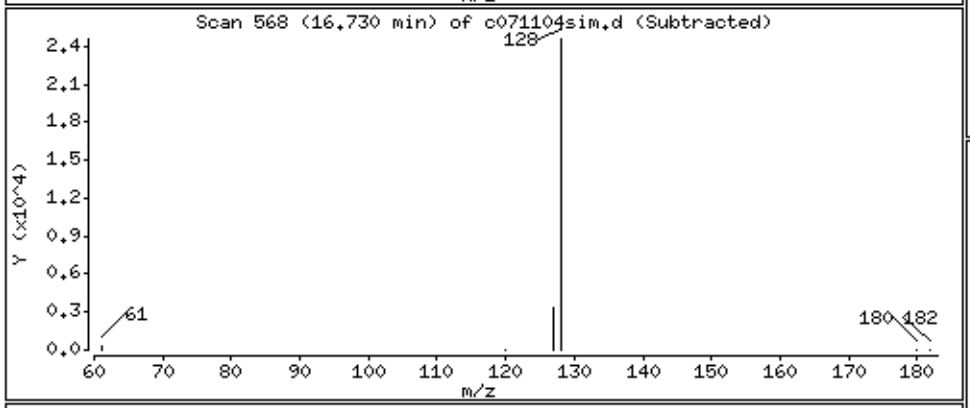
Column diameter: 0.25

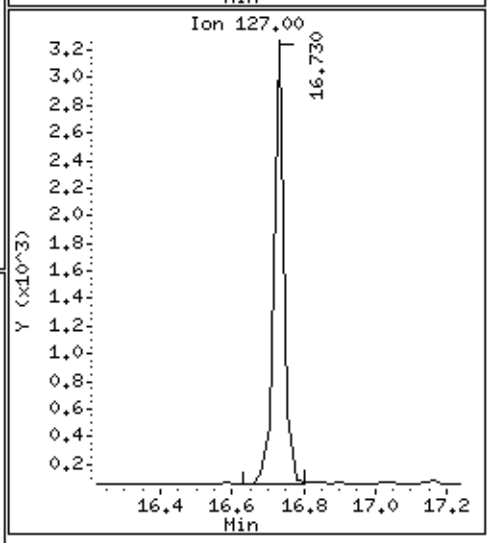
48 Naphthalene

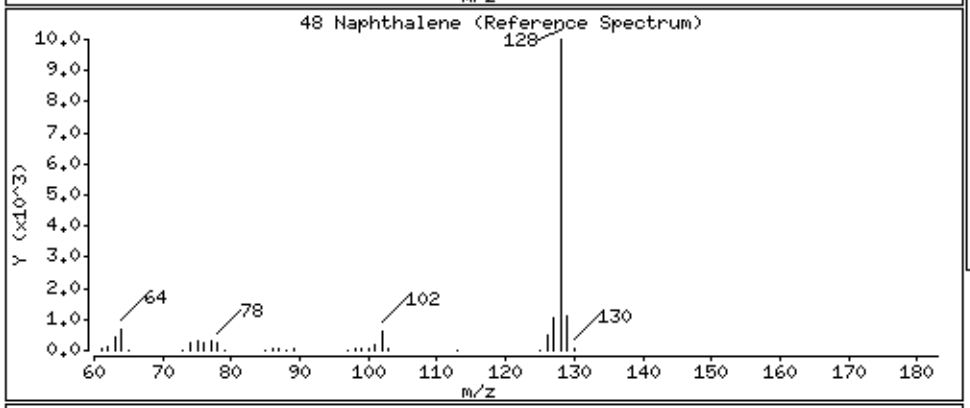
Concentration: 1.98813 ug

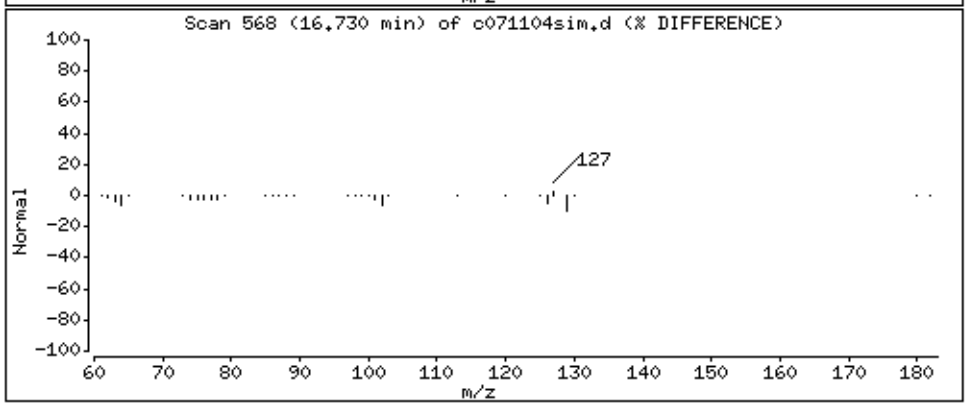












Data File: /chem/msdc.i/11Jul2017.b/c071104sim.d

Date : 11-JUL-2017 09:59

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707036/042B;LCS

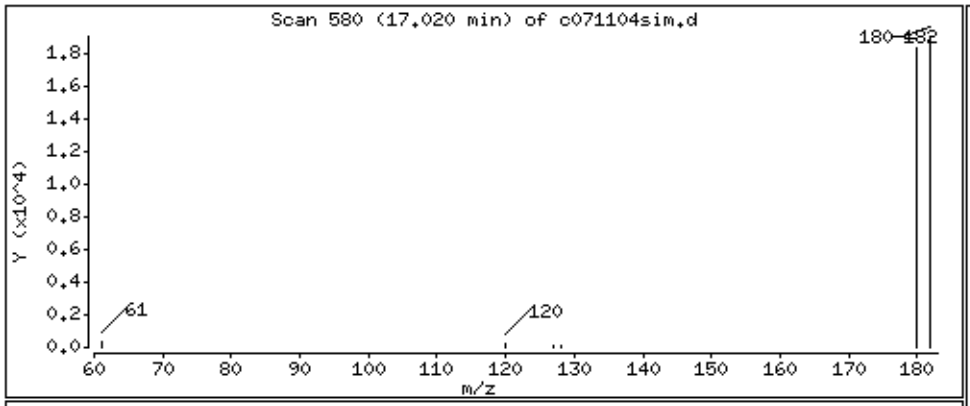
Operator: gm

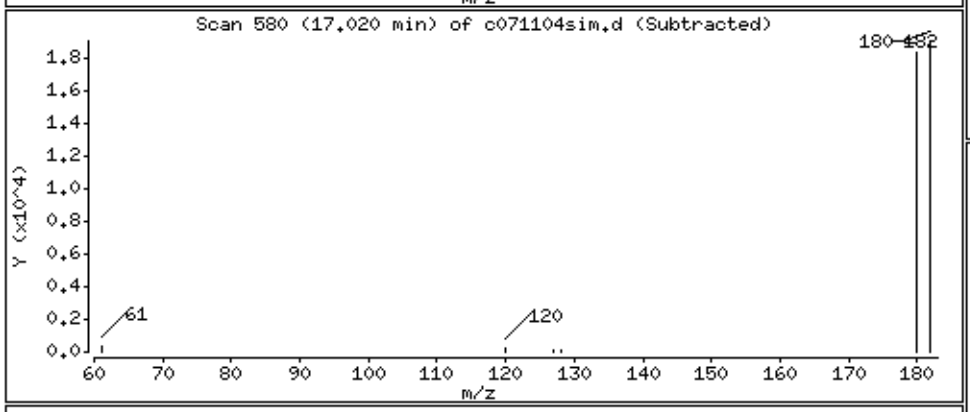
Column phase: DB-5.625

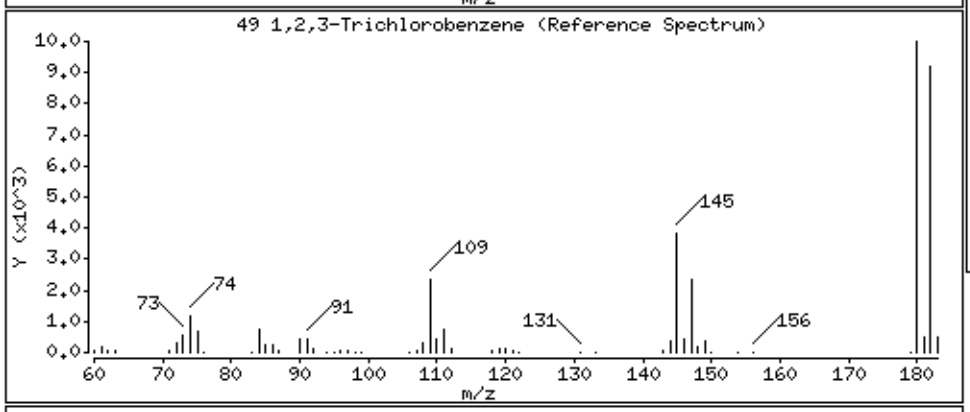
Column diameter: 0.25

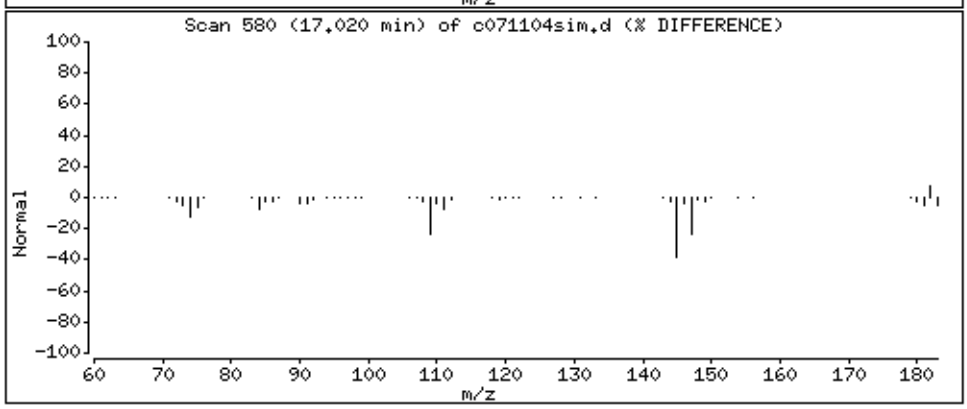
49 1,2,3-Trichlorobenzene

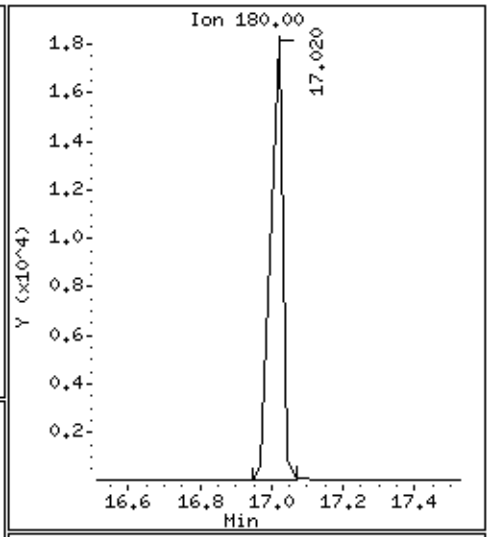
Concentration: 5.49101 ug

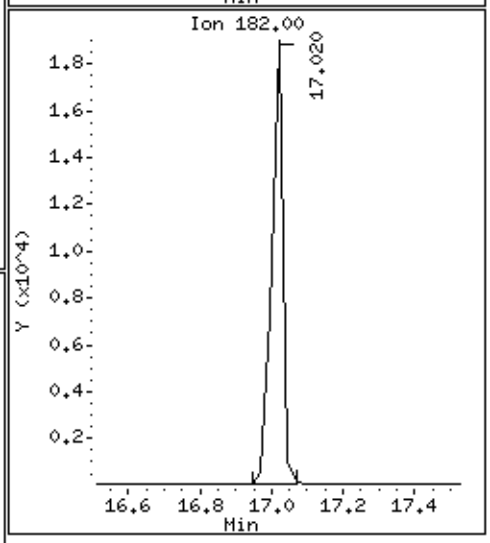












eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707036R1-10AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c071105sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 10:24 AM**	
		Date of Extraction: 7/11/17	

Compound	**%Recovery**	**Method Limits**
1,2-Dichloroethane	89	70-130
1,1-Dichloroethene	82	70-130
cis-1,2-Dichloroethene	88	70-130
trans-1,2-Dichloroethene	90	70-130
Benzene	94	70-130
Tetrachloroethene	101	70-130
1,1,2-Trichloroethane	96	70-130
Trichloroethene	96	70-130
Toluene	97	70-130
Vinyl Chloride	74	50-140

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	103	70-130

Report Date: 11-Jul-2017 10:43

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707036/042B
Client Smp ID: LCSD
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: LCSD
SpikeList File: RadLCS-CM.spk
Quant Type: ISTD
Sublist File: all-cm.sub
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 Vinyl Chloride	10.0000	7.37678	73.77	50-140
3 Ethanol	10.0000	4.15855	41.59*	50-130
4 1,1-Dichloroethene	10.0000	8.23506	82.35	70-130
5 Acetone	10.0000	6.78788	67.88*	70-130
7 MTBE	10.0000	9.11708	91.17	70-130
8 trans-1,2-Dichloro	10.0000	9.02765	90.28	70-130
9 Hexane	10.0000	10.6706	106.71	70-130
10 Halothane	10.0000	8.53044	85.30	70-130
11 1,1-Dichloroethane	10.0000	8.51913	85.19	70-130
12 Ethyl Acetate	10.0000	8.57836	85.78	70-130
13 2-Butanone	10.0000	7.76657	77.67	70-130
14 cis-1,2-Dichloroet	10.0000	8.77112	87.71	70-130
15 Chloroform-CCC	10.0000	9.04660	90.47	70-130
16 Cyclohexane	10.0000	9.31955	93.20	70-130
17 1,1,1-Trichloroeth	10.0000	9.59570	95.96	70-130
18 Carbon Tetrachlori	10.0000	9.47538	94.75	70-130
19 Benzene	10.0000	9.40893	94.09	70-130
20 1,2-Dichloroethane	10.0000	8.87932	88.79	70-130
21 Heptane	10.0000	9.48187	94.82	70-130
22 Trichloroethene	10.0000	9.65352	96.54	70-130
23 Methyl Methacrylat	10.0000	8.60623	86.06	70-130
24 4-Methyl-2-pentano	10.0000	9.75138	97.51	70-130
26 Toluene-CCC	10.0000	9.71485	97.15	70-130
28 1,1,2-Trichloroeth	10.0000	9.64007	96.40	70-130
29 Tetrachloroethene	10.0000	10.0850	100.85	70-130
30 Chlorobenzene	10.0000	9.20555	92.06	70-130
31 Ethylbenzene-CCC	10.0000	10.1038	101.04	70-130
33 m,p-Xylene	20.0000	19.3403	96.70	70-130
34 o-Xylene	10.0000	9.33302	93.33	70-130
35 Styrene	10.0000	6.29437	62.94	20-100
36 a-Pinene	10.0000	12.4776	124.78	70-130
37 1,1,2,2-Tetrachlor	10.0000	8.65876	86.59	70-130
38 Propylbenzene	10.0000	9.50953	95.10	70-130

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
40 1,3,5-Trimethylben	10.0000	9.72415	97.24	70-130
41 1,2,4-Trimethylben	10.0000	9.23912	92.39	70-130
42 R-(+)-Limonene	10.0000	10.2842	102.84	70-130
43 1,3-Dichlorobenzen	10.0000	9.08271	90.83	50-110
44 1,4-Dichlorobenzen	10.0000	8.11485	81.15	50-110
45 1,2-Dichlorobenzen	10.0000	8.54658	85.47	50-110
46 1,4-Dithiane	10.0000	9.38478	93.85	50-110
47 1,2,4-Trichloroben	10.0000	7.41944	74.19	20-110
48 Naphthalene	10.0000	2.03615	20.36	5-80
49 1,2,3-Trichloroben	10.0000	6.12354	61.24	20-110

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.3124	103.12	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/11Jul2017.b/c071105sim.d
Lab Smp Id: 1707036/042B Client Smp ID: LCSD
Inj Date : 11-JUL-2017 10:24
Operator : gm Inst ID: msdc.i
Smp Info : ;1707036/042B;LCSD
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 11-Jul-2017 09:52 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all-cm.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	27495	3.68839	7.37678
3 Ethanol	45	4.961	4.961	(0.453)	5366	2.07928	4.15855(R)
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	25746	4.11753	8.23506(M)
5 Acetone	58	5.566	5.566	(0.508)	16700	3.39394	6.78788(R)
7 MTBE	73	6.555	6.555	(0.599)	99000	4.55854	9.11708
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	34638	4.51382	9.02765
9 Hexane	57	6.775	6.775	(0.619)	107744	5.33529	10.6706
10 Halothane	117	6.960	6.961	(0.636)	23444	4.26522	8.53044
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	67421	4.25956	8.51913
12 Ethyl Acetate	70	7.639	7.640	(0.698)	9966	4.28918	8.57836
13 2-Butanone	72	7.662	7.662	(0.700)	19890	3.88329	7.76657
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	37279	4.38556	8.77112
15 Chloroform-CCC	83	7.956	7.956	(0.727)	56400	4.52330	9.04660
16 Cyclohexane	84	8.172	8.172	(0.747)	60825	4.65978	9.31955
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	67736	4.79785	9.59570
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	63202	4.73769	9.47538

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	19 Benzene	78	8.572	8.572	(0.783)	149591	4.70447	9.40893
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	63255	4.43966	8.87932
	21 Heptane	71	8.696	8.696	(0.794)	53924	4.74093	9.48187
	22 Trichloroethene	130	9.282	9.283	(0.848)	51954	4.82676	9.65352
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	42006	4.30312	8.60623
	24 4-Methyl-2-pentanone	85	10.463	10.463	(0.956)	18830	4.87569	9.75138
$	25 Toluene-d8	98	10.608	10.608	(0.969)	183536	5.15619	10.3124
	26 Toluene-CCC	92	10.680	10.680	(0.976)	114899	4.85743	9.71485
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	198982	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.186	(1.022)	45647	4.82003	9.64007
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	49693	5.04249	10.0850
	30 Chlorobenzene	112	12.299	12.300	(1.124)	138457	4.60278	9.20555
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	77085	5.05193	10.1038
	33 m,p-Xylene	106	12.454	12.454	(1.138)	172772	9.67017	19.3403
	34 o-Xylene	106	12.901	12.901	(1.179)	77793	4.66651	9.33302
	35 Styrene	104	12.928	12.928	(1.181)	106682	3.14718	6.29437
	36 a-Pinene	93	13.203	13.203	(1.206)	136650	6.23880	12.4776
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	83521	4.32938	8.65876
	38 Propylbenzene	91	13.642	13.642	(1.246)	300174	4.75477	9.50953
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	163148	4.86207	9.72415
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	166781	4.61956	9.23912
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	85479	5.14211	10.2842
	43 1,3-Dichlorobenzene	146	14.439	14.440	(1.319)	108296	4.54135	9.08271
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	115994	4.05742	8.11485
	45 1,2-Dichlorobenzene	146	14.873	14.873	(1.359)	107956	4.27329	8.54658
	46 1,4-Dithiane	120	15.355	15.356	(1.403)	82473	4.69239	9.38478
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	63754	3.70972	7.41944
	48 Naphthalene	128	16.730	16.730	(1.529)	53683	1.01808	2.03615
	49 1,2,3-Trichlorobenzene	180	17.019	17.020	(1.555)	51255	3.06177	6.12354

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Report Date: 11-Jul-2017 10:43

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c071105sim.d
Lab Smp Id: 1707036/042B
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/11Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 11-JUL-2017
Calibration Time: 09:34
Client Smp ID: LCSD
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	203172	101586	406344	198982	-2.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

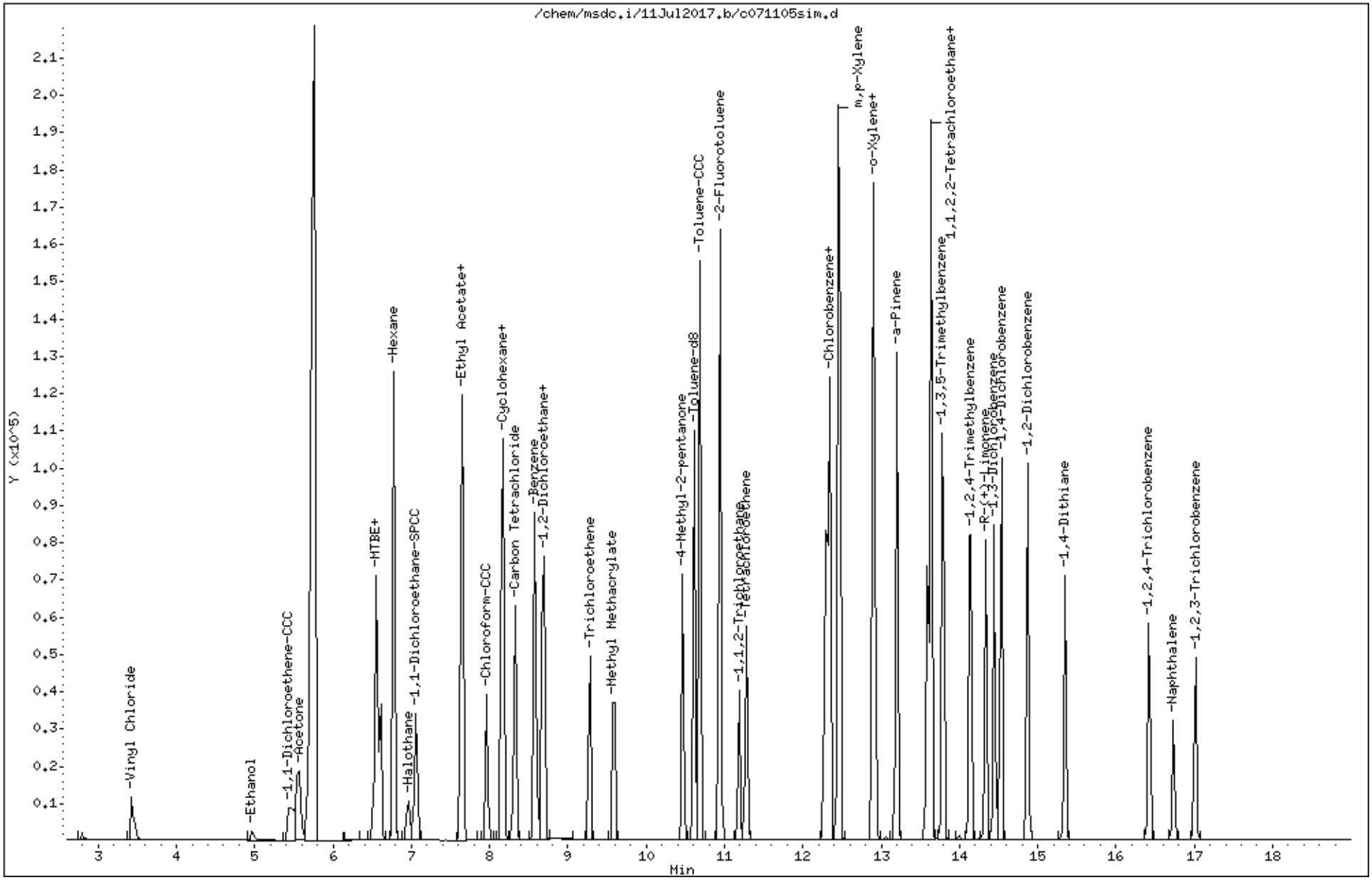
Sample Info: ;1707036/042B;LCSD

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

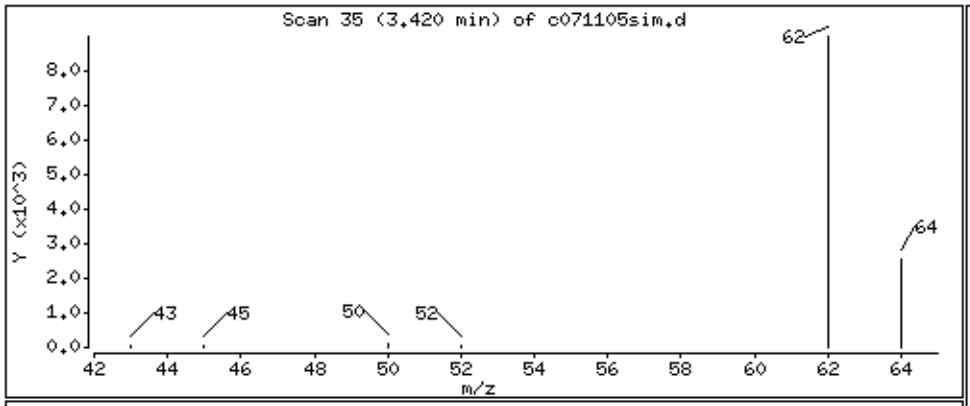
Operator: gm

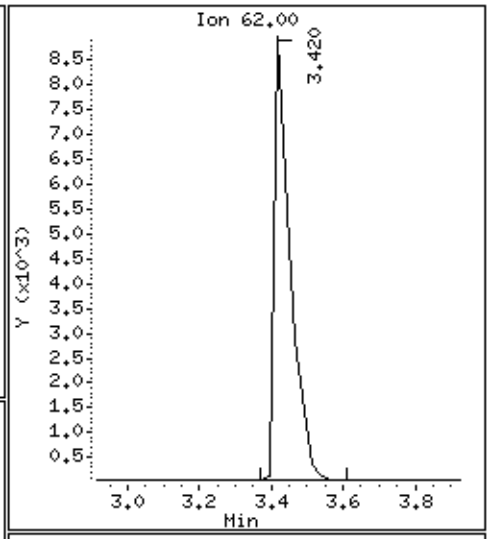
Column phase: DB-5.625

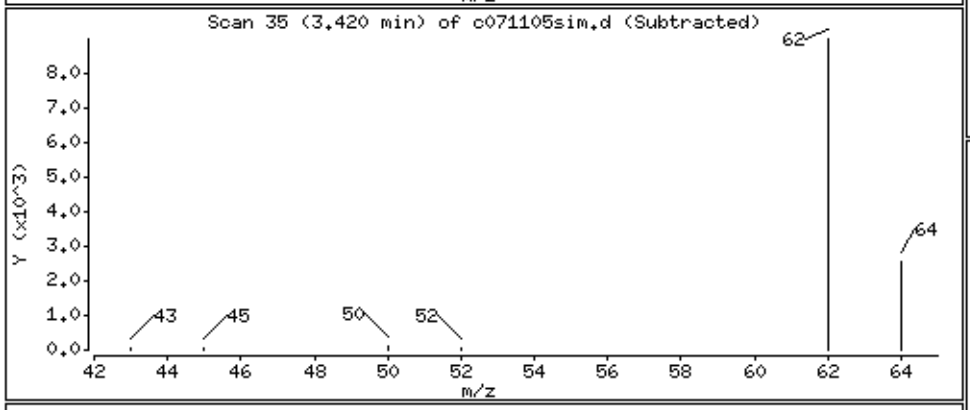
Column diameter: 0.25

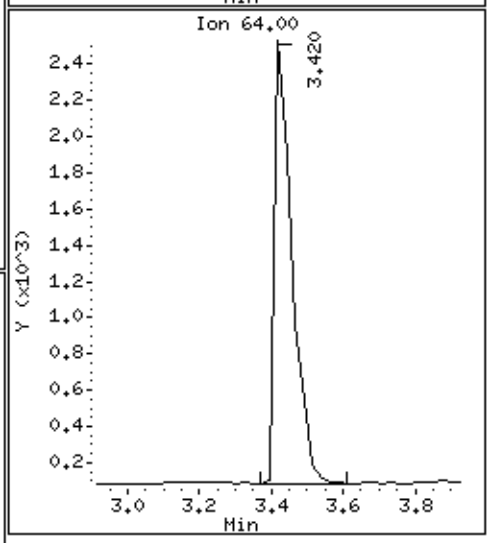
2 Vinyl Chloride

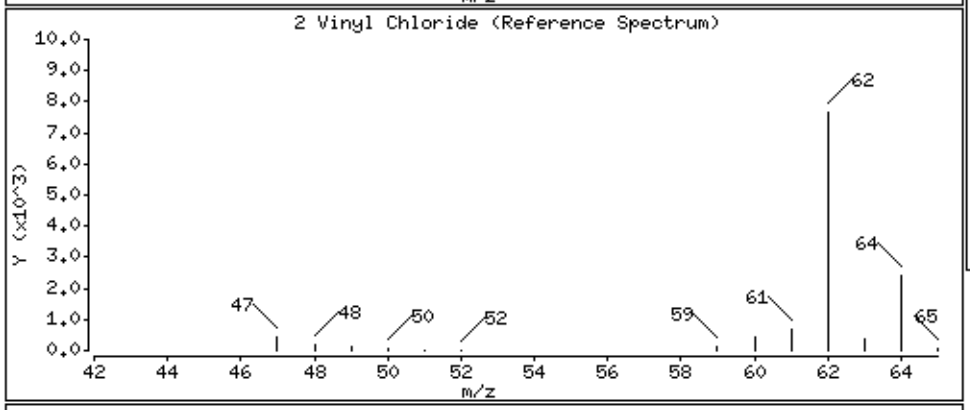
Concentration: 7.37678 ug

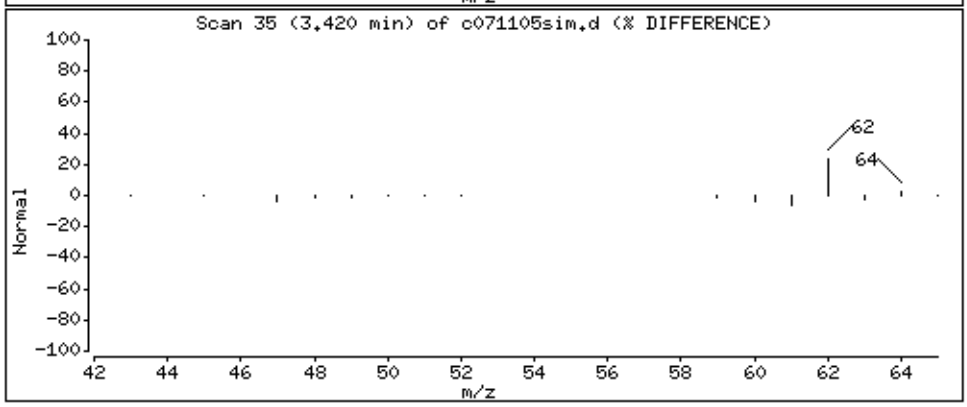












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

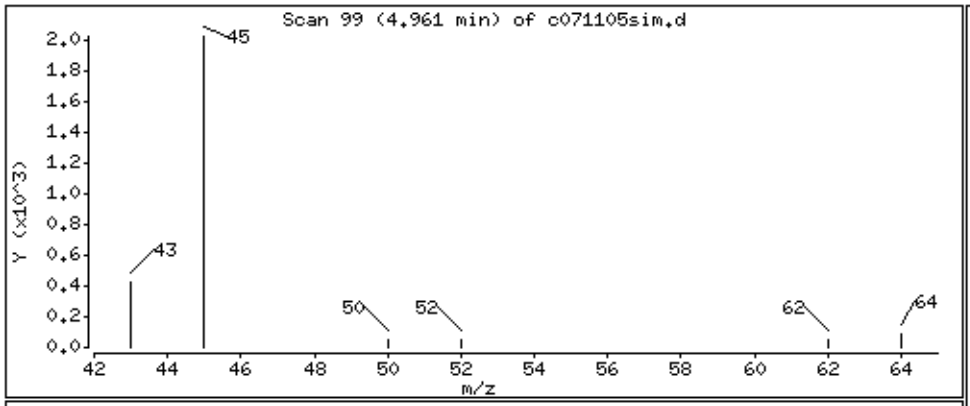
Operator: gm

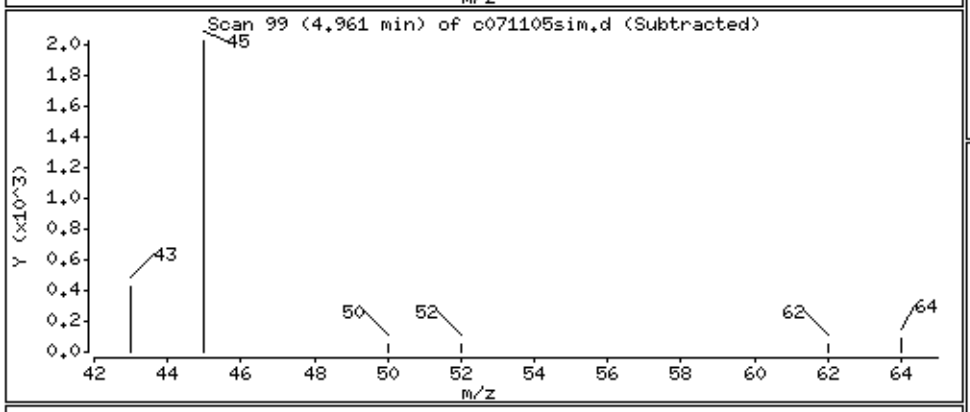
Column phase: DB-5.625

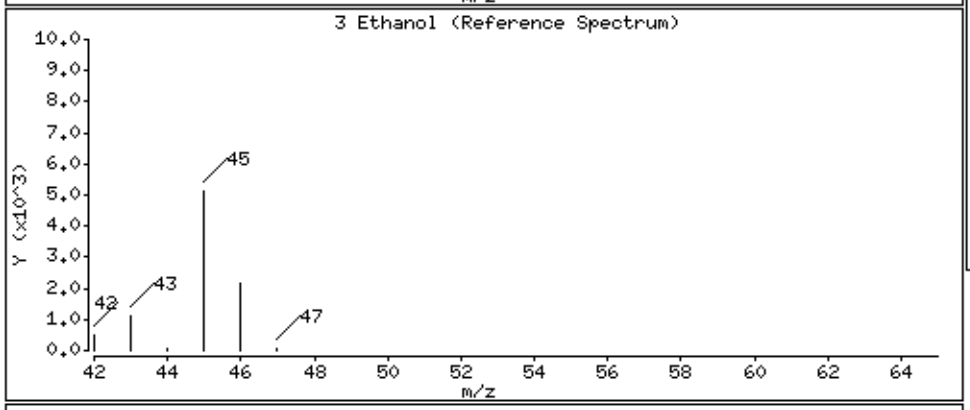
Column diameter: 0.25

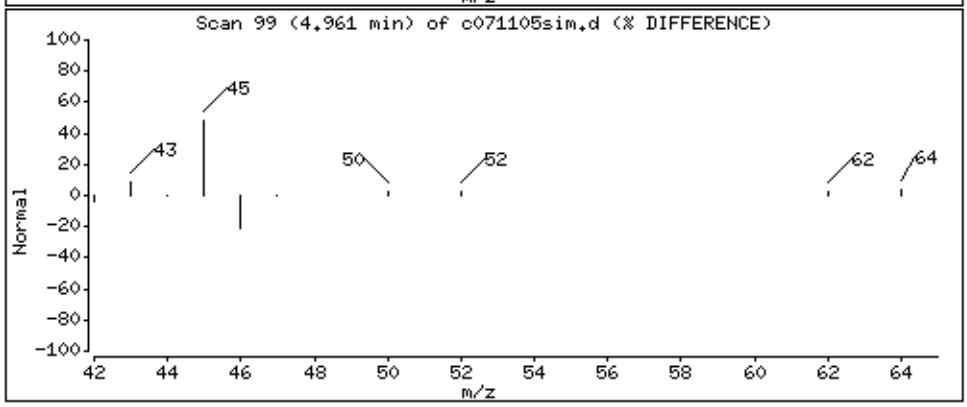
3 Ethanol

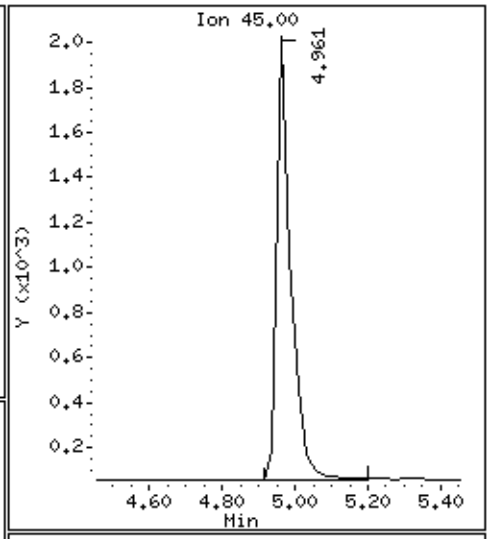
Concentration: 4.15855 ug

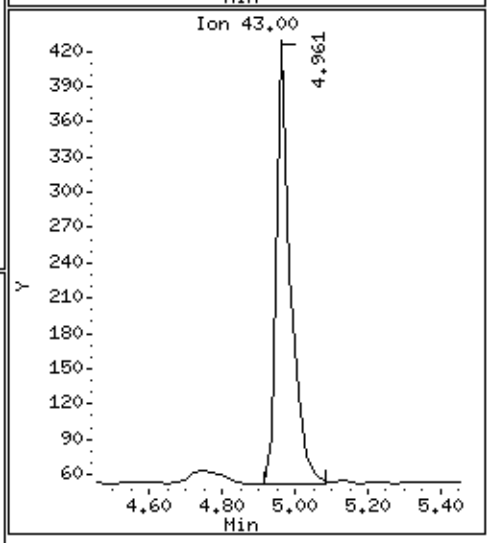












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

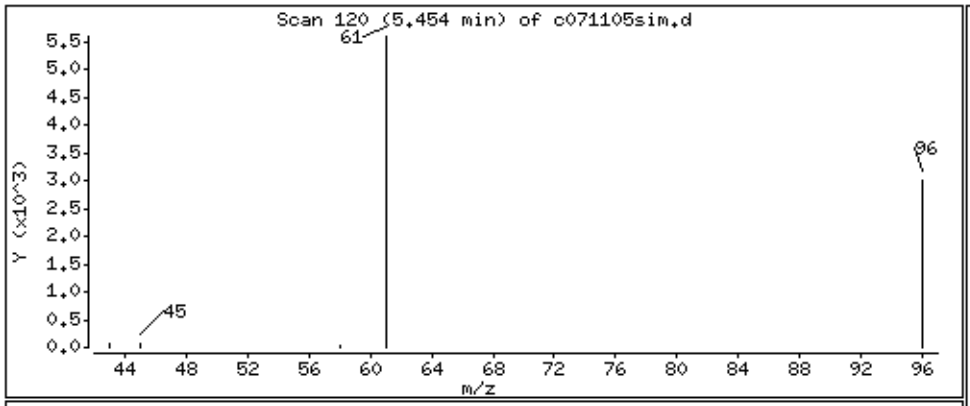
Operator: gm

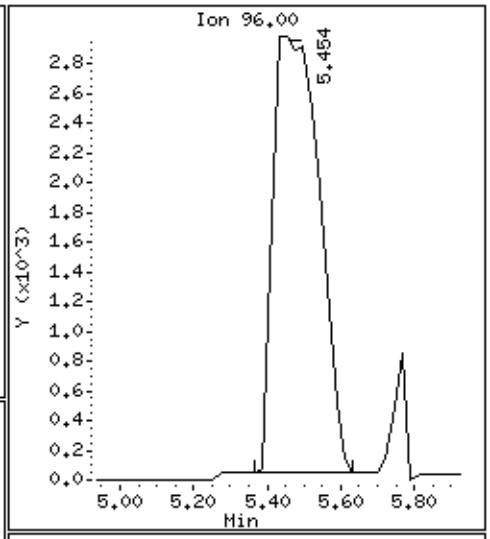
Column phase: DB-5.625

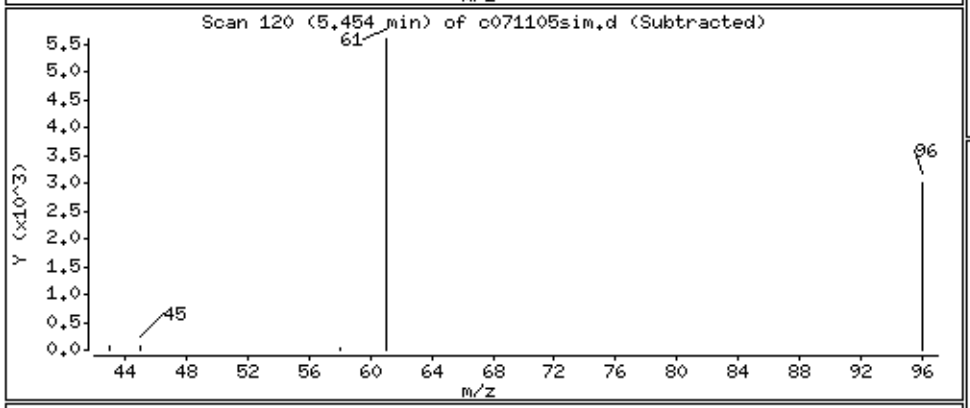
Column diameter: 0.25

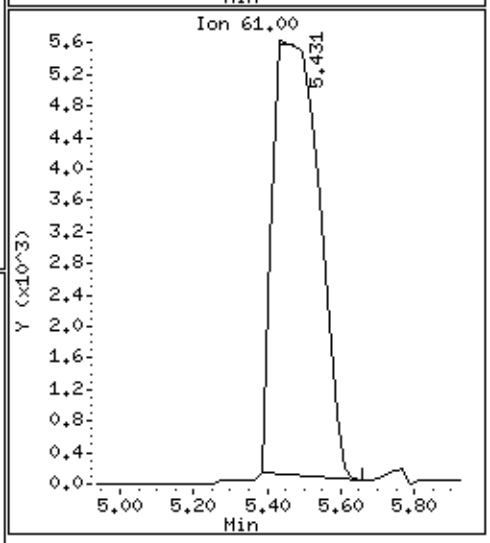
4 1,1-Dichloroethene-CCC

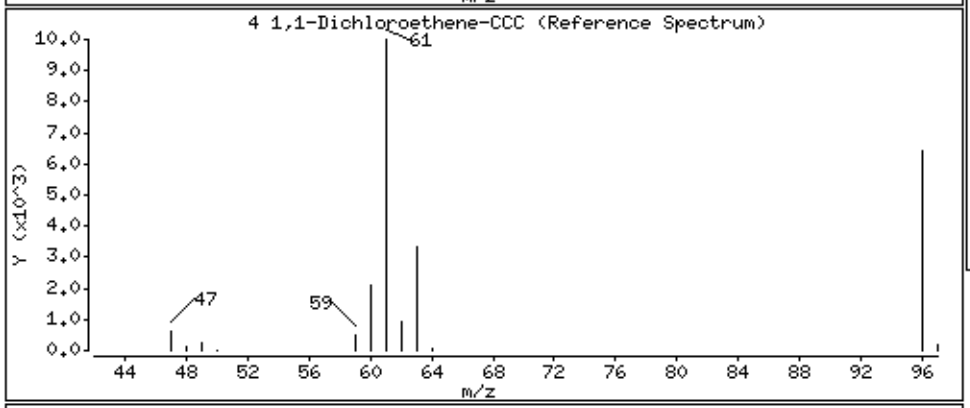
Concentration: 8.23506 ug

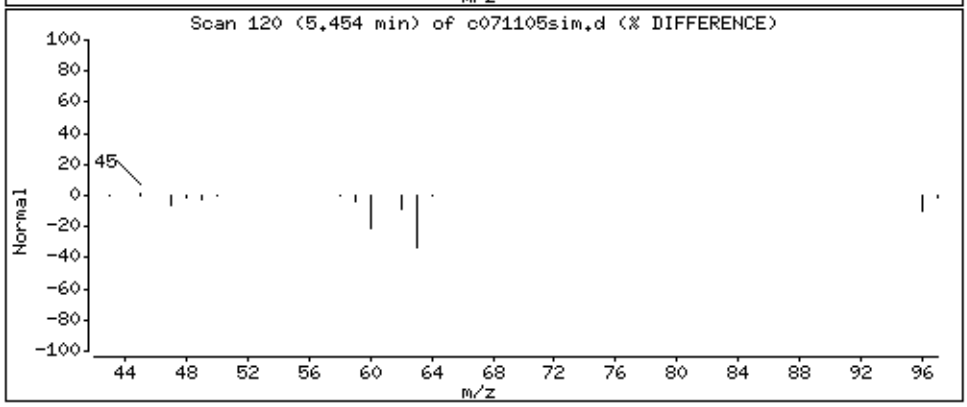












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

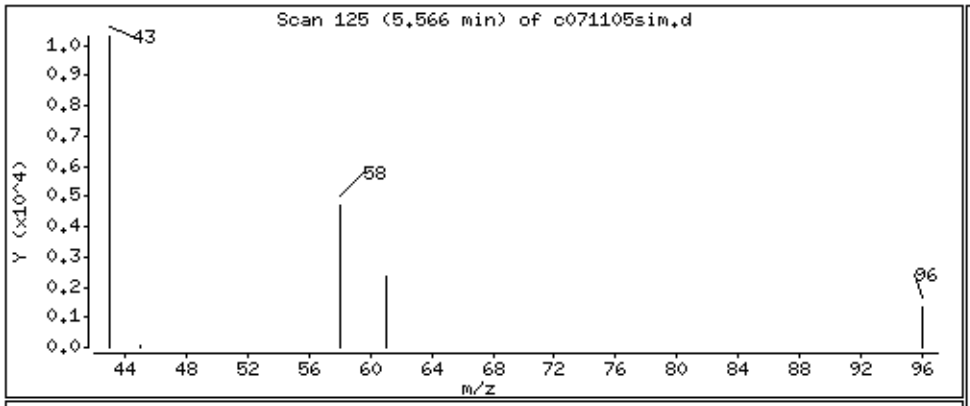
Operator: gm

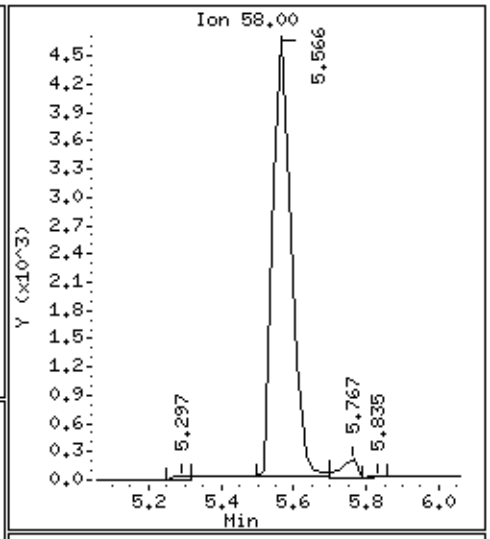
Column phase: DB-5.625

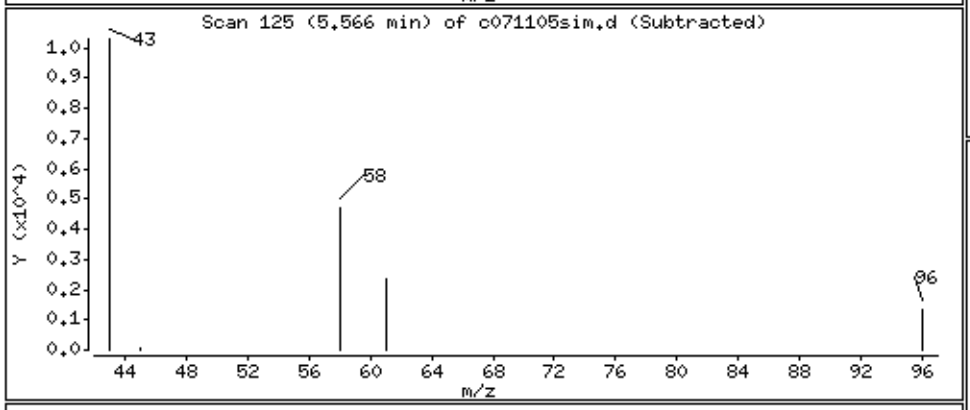
Column diameter: 0.25

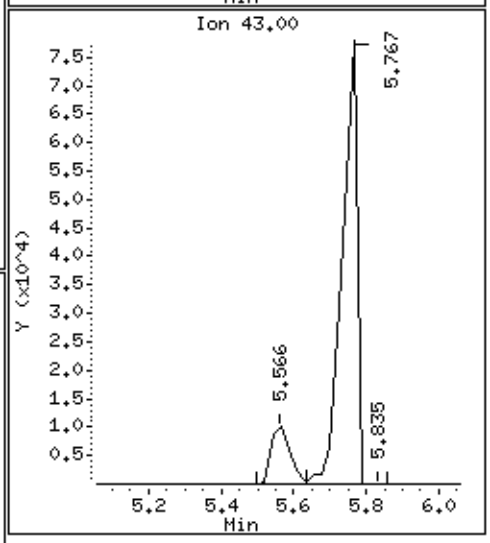
5 Acetone

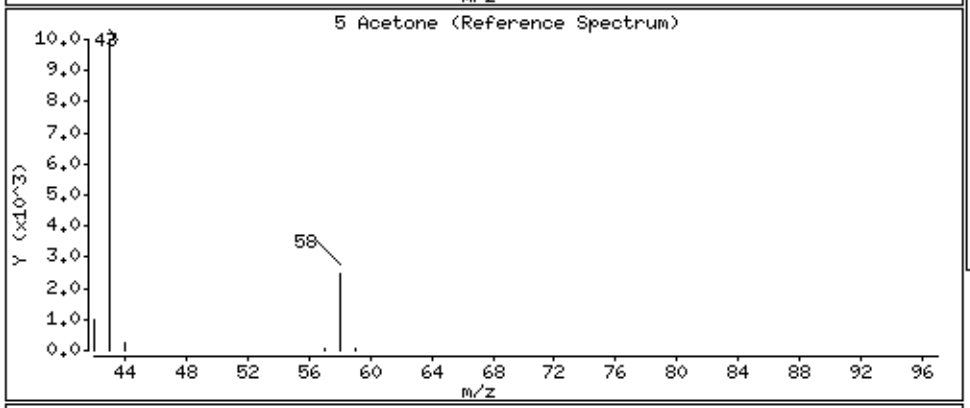
Concentration: 6.78788 ug

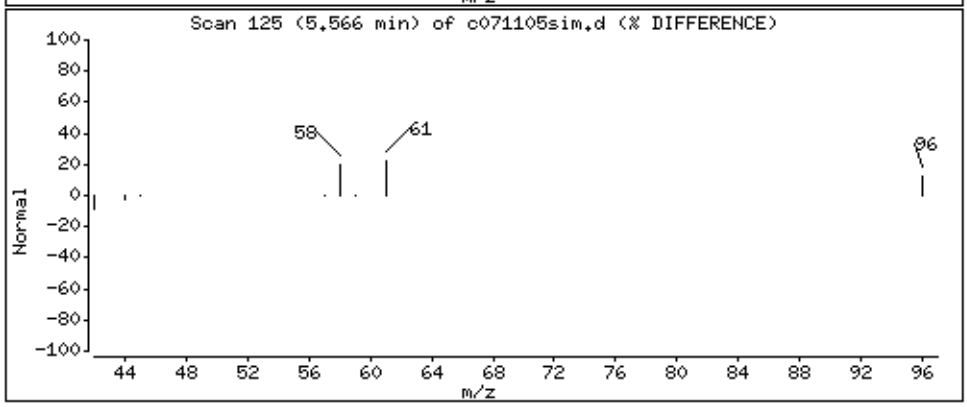












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

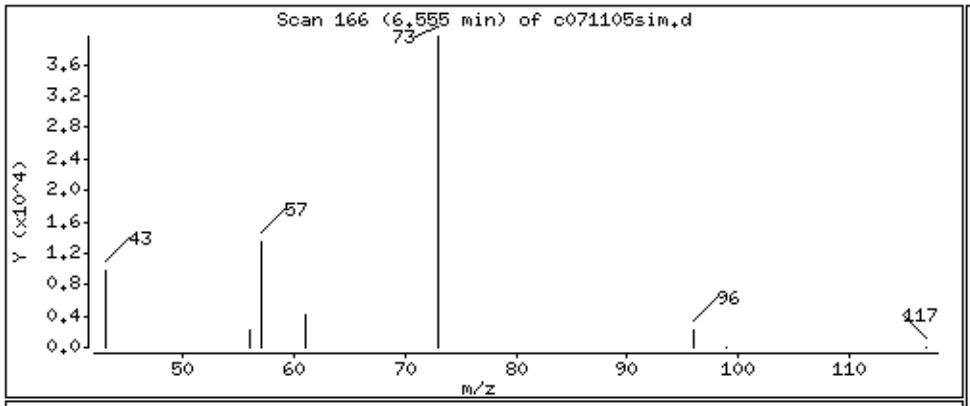
Operator: gm

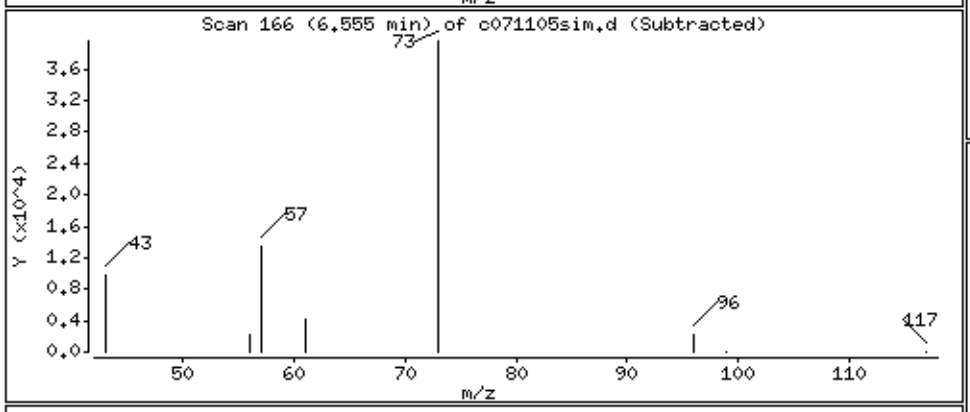
Column phase: DB-5.625

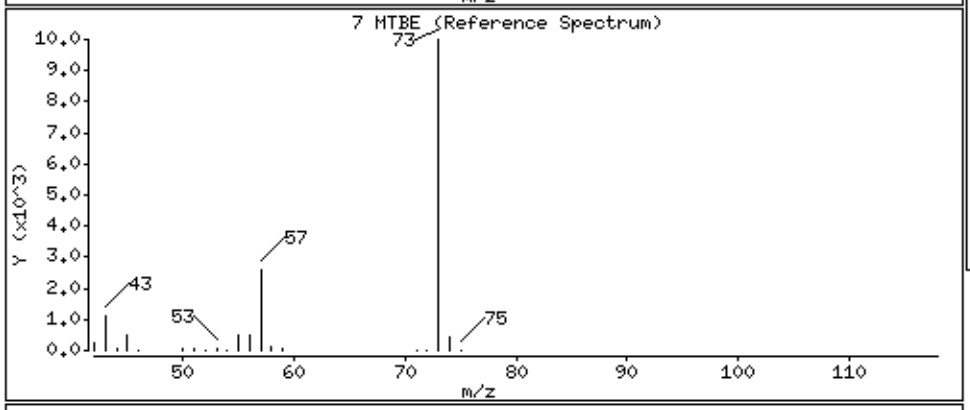
Column diameter: 0.25

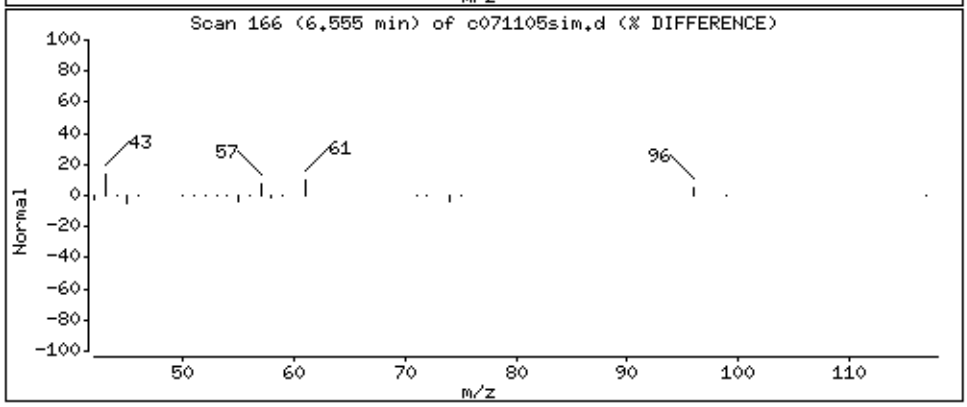
7 MTBE

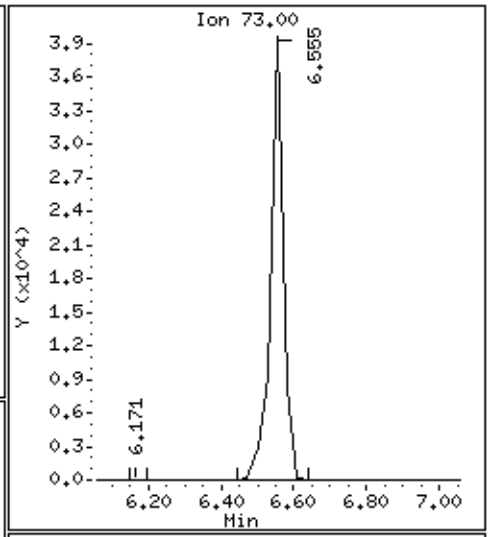
Concentration: 9.11708 ug

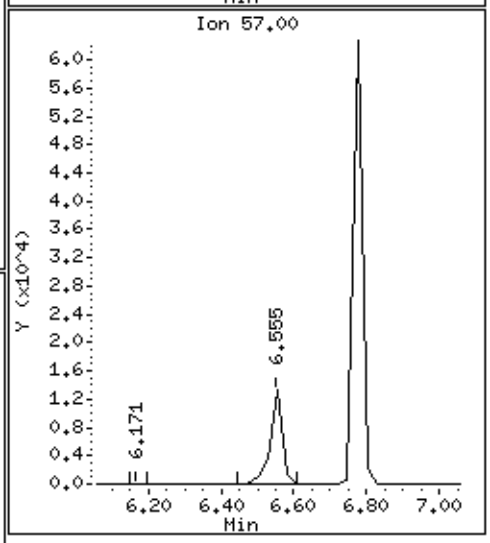












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

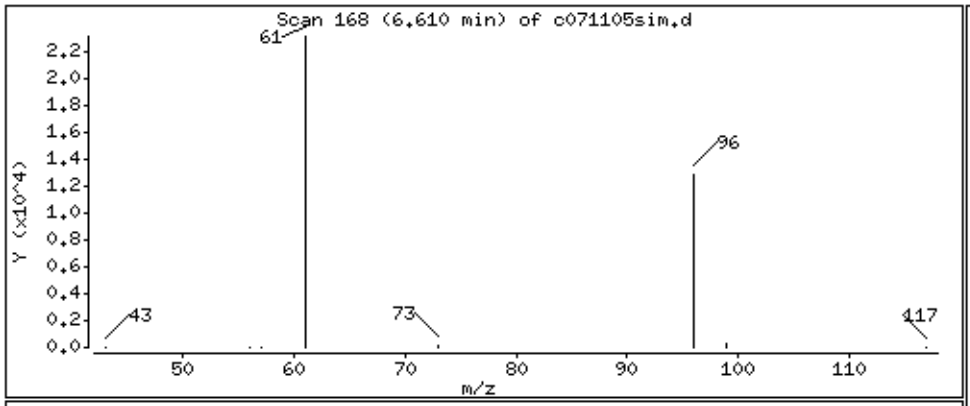
Operator: gm

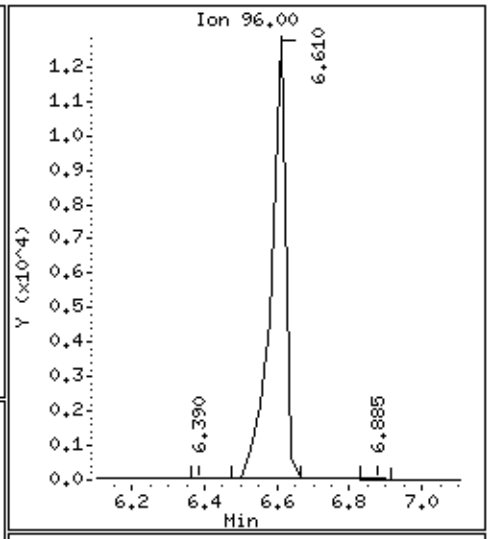
Column phase: DB-5.625

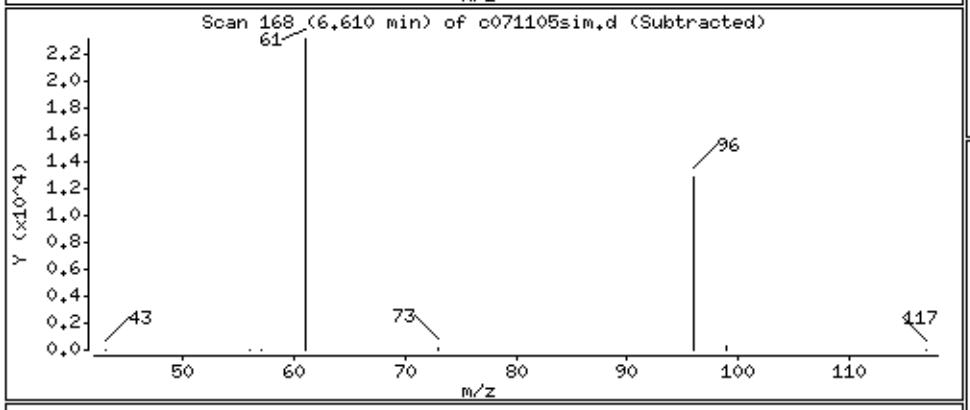
Column diameter: 0.25

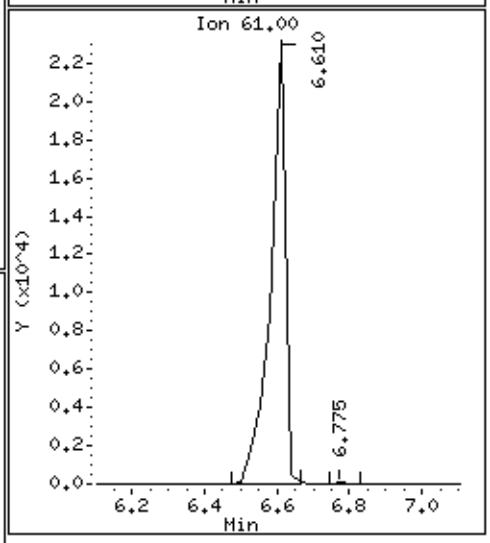
8 trans-1,2-Dichloroethene

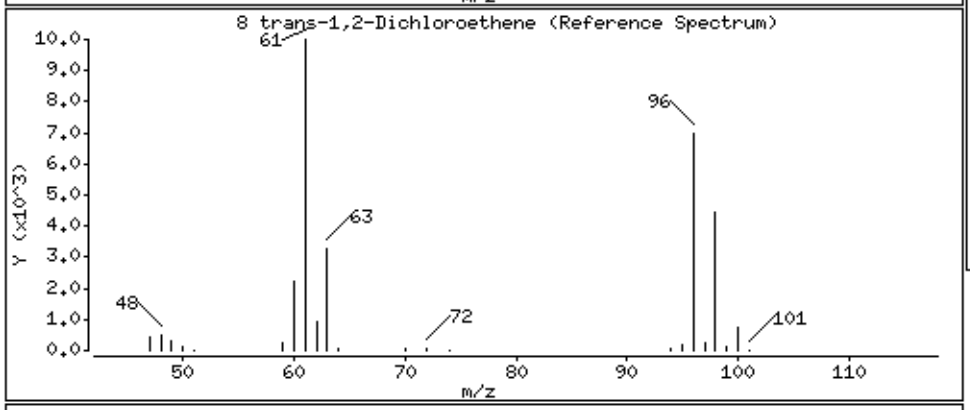
Concentration: 9.02765 ug

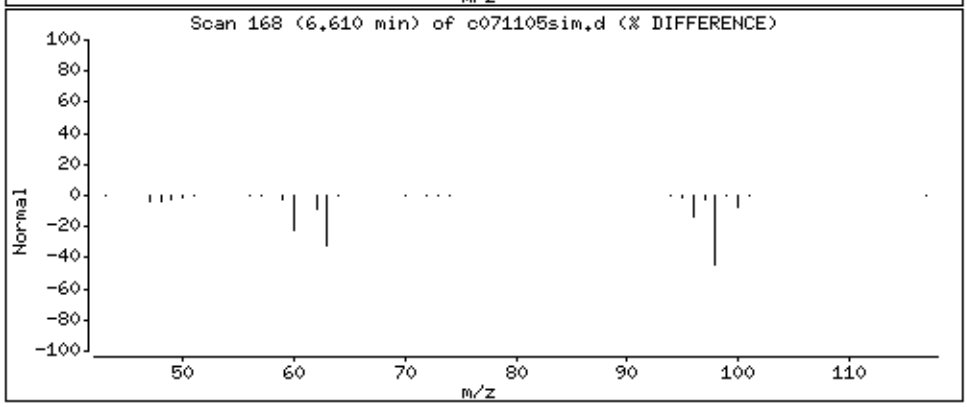












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

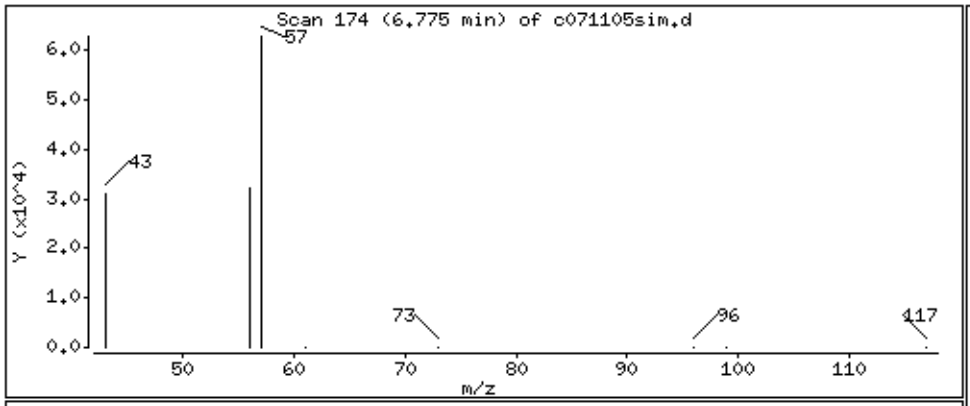
Operator: gm

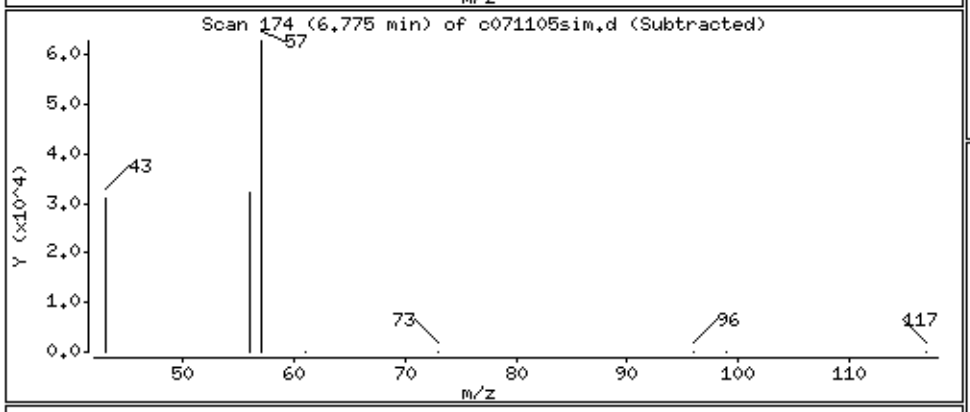
Column phase: DB-5.625

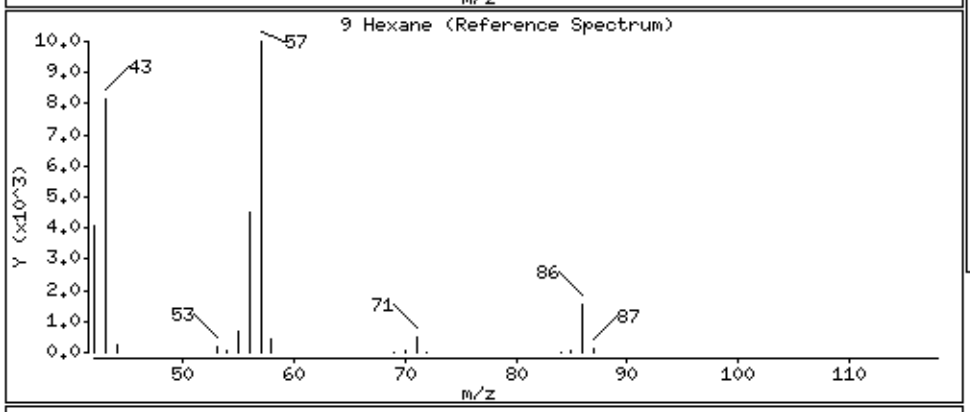
Column diameter: 0.25

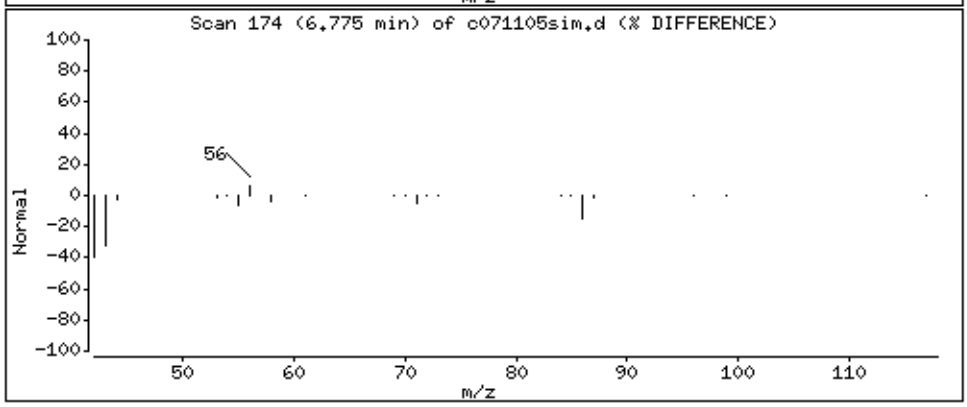
9 Hexane

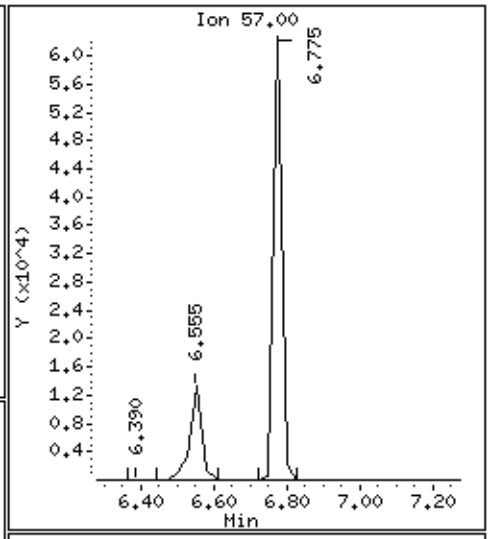
Concentration: 10.6706 ug

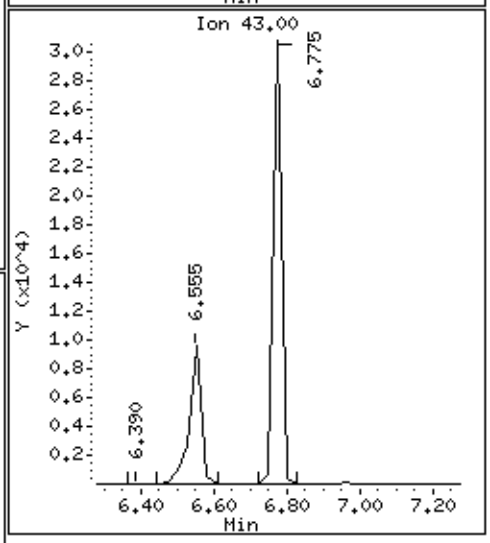












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

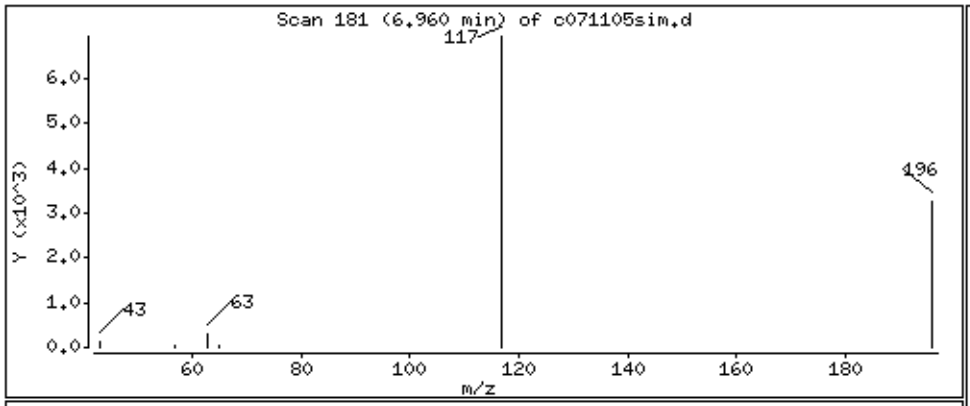
Operator: gm

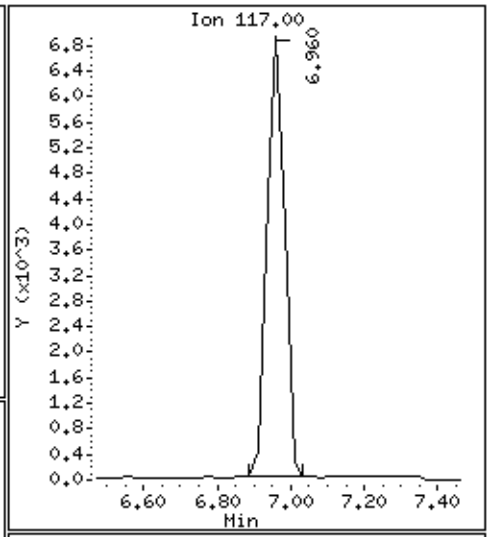
Column phase: DB-5.625

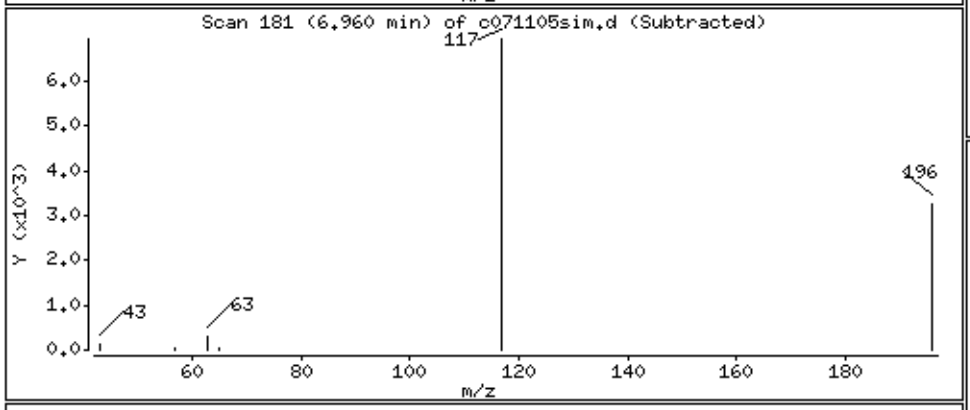
Column diameter: 0.25

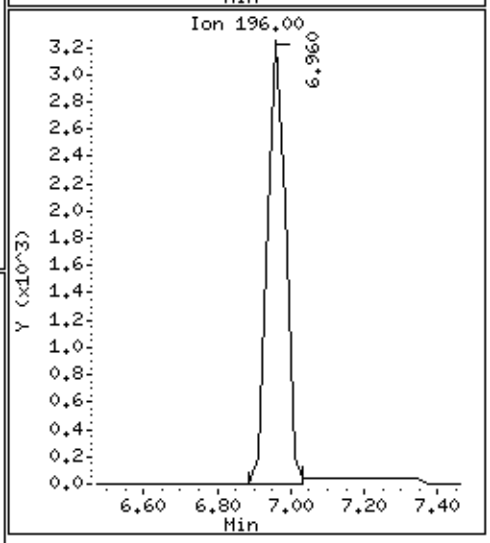
10 Halothane

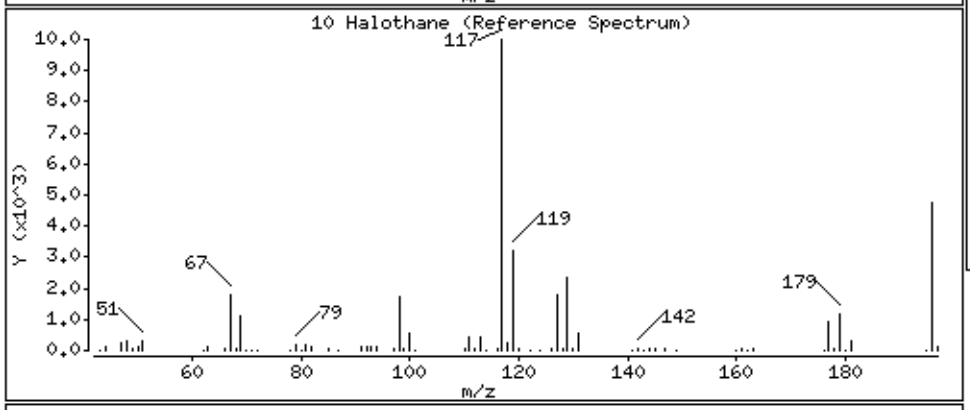
Concentration: 8.53044 ug

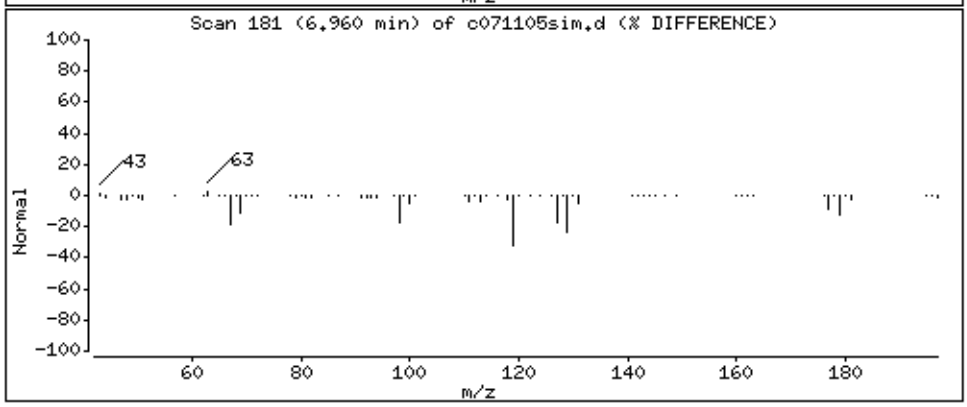












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

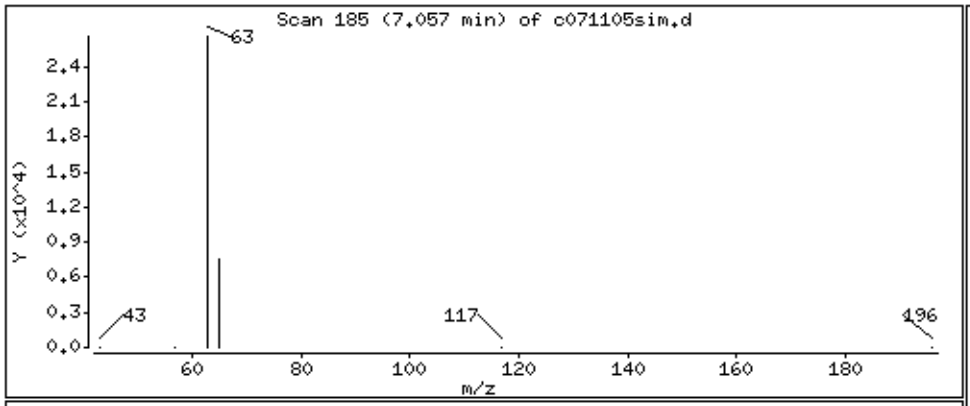
Operator: gm

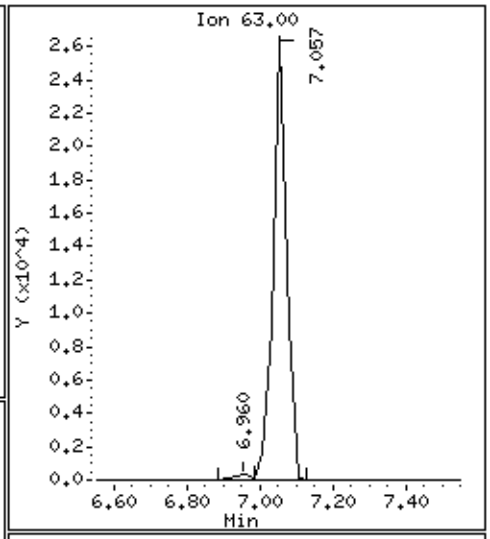
Column phase: DB-5.625

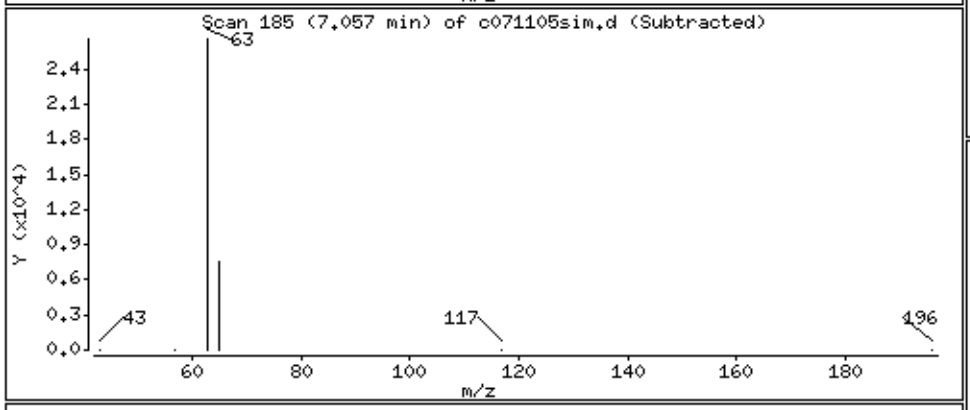
Column diameter: 0.25

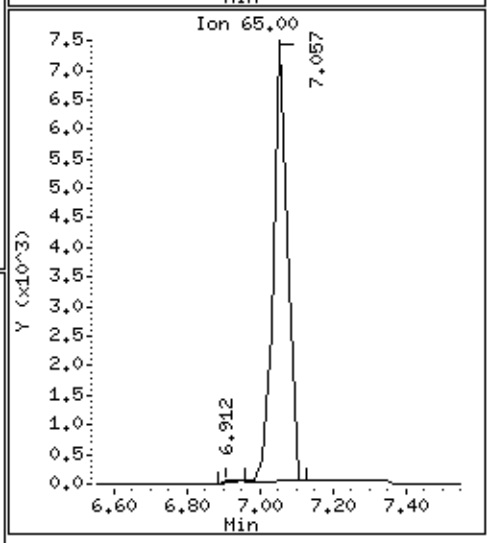
11 1,1-Dichloroethane-SPCC

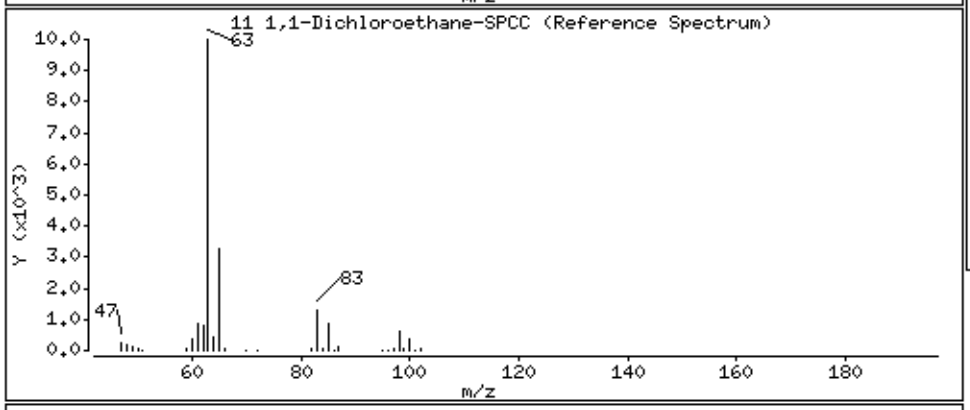
Concentration: 8.51913 ug

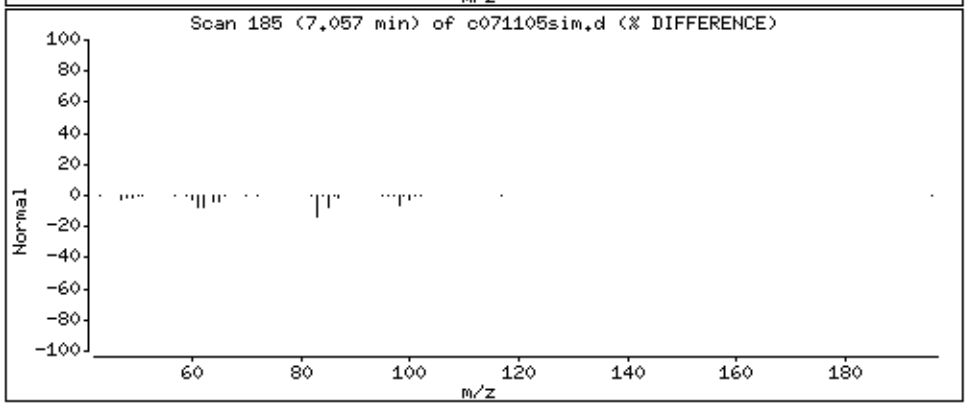












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

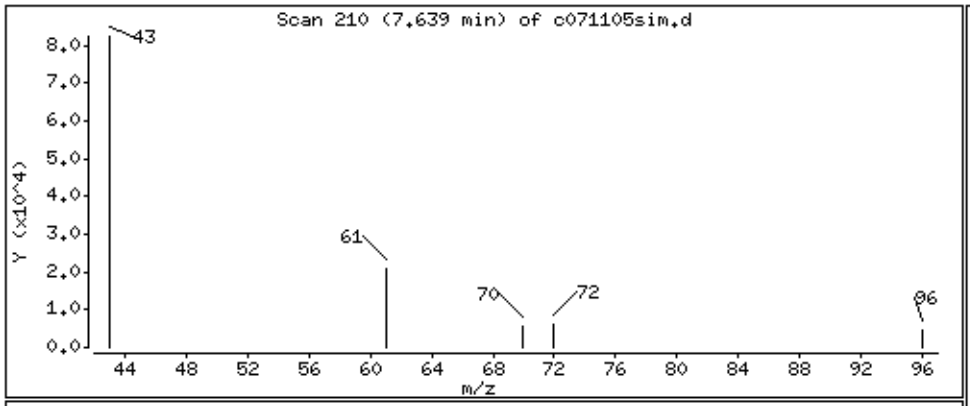
Operator: gm

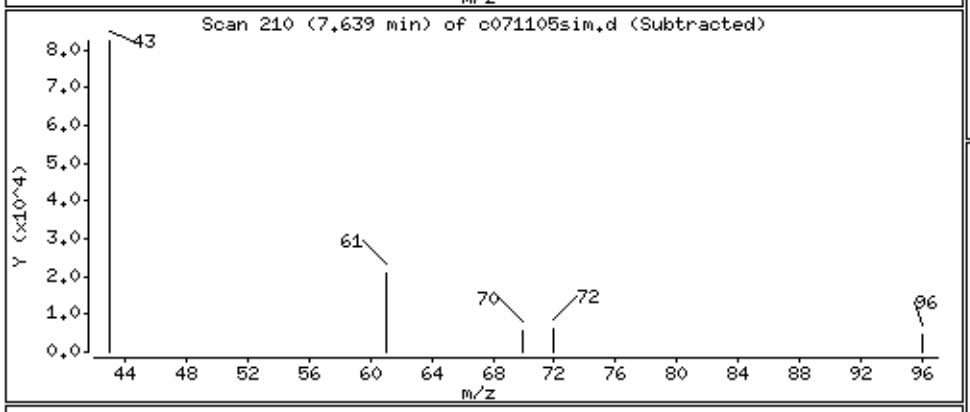
Column phase: DB-5.625

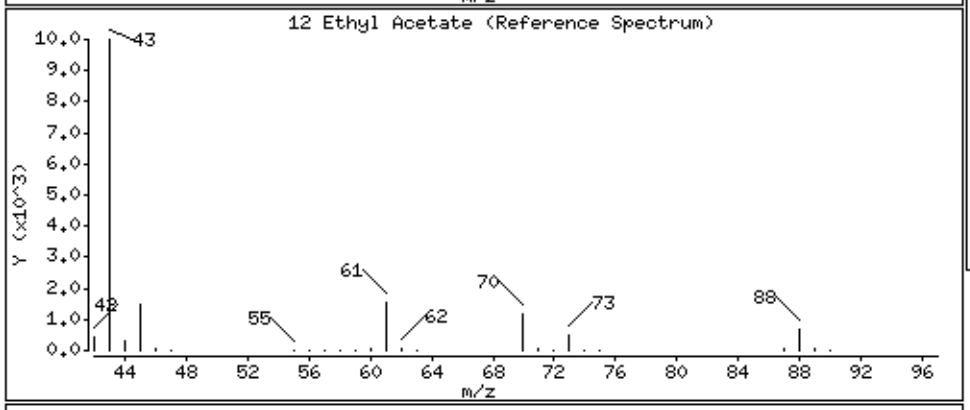
Column diameter: 0.25

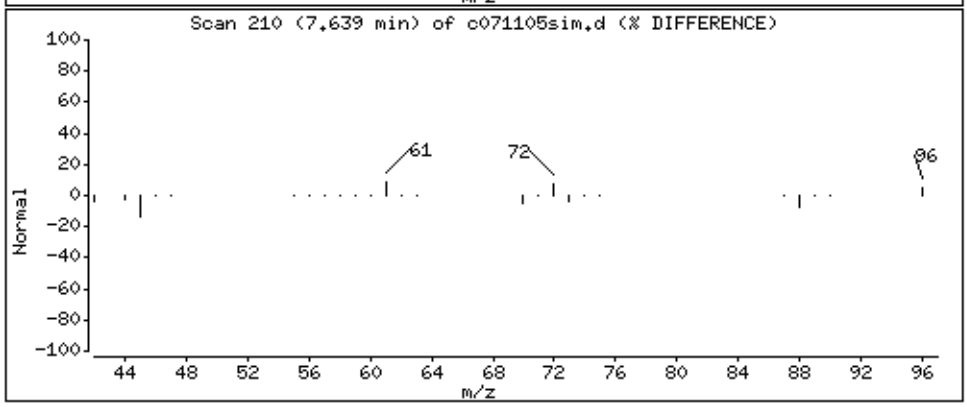
12 Ethyl Acetate

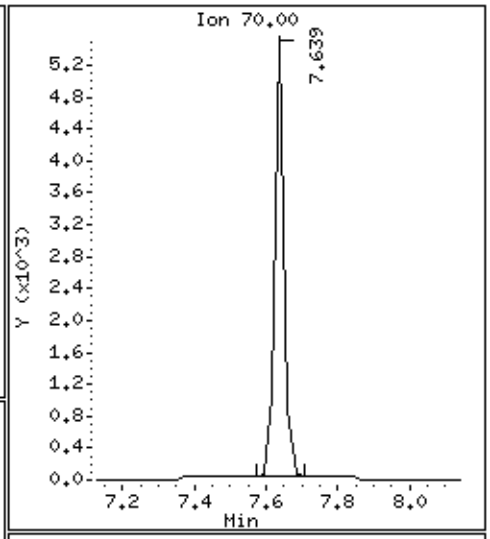
Concentration: 8.57836 ug

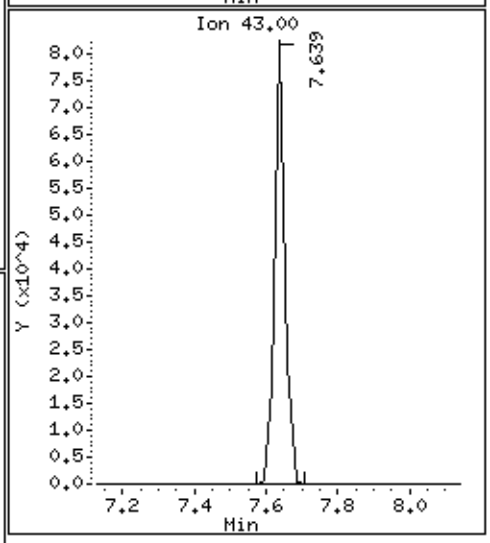












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

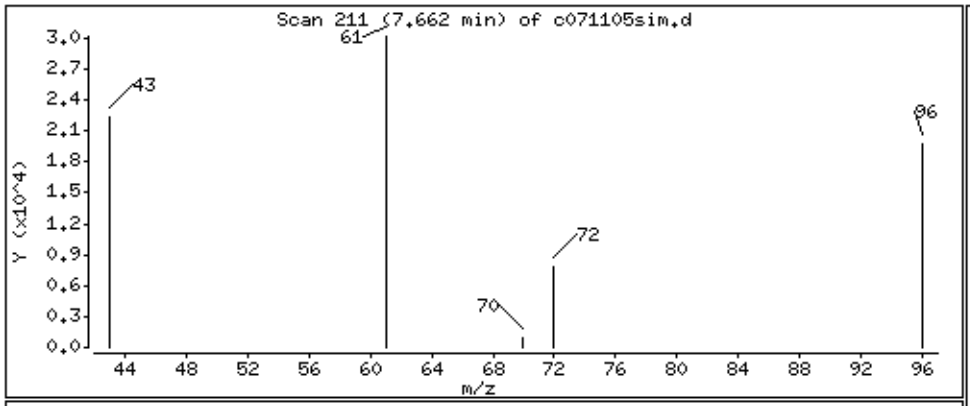
Operator: gm

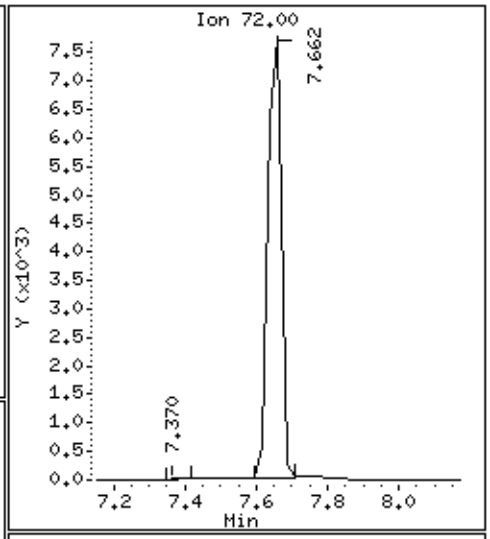
Column phase: DB-5.625

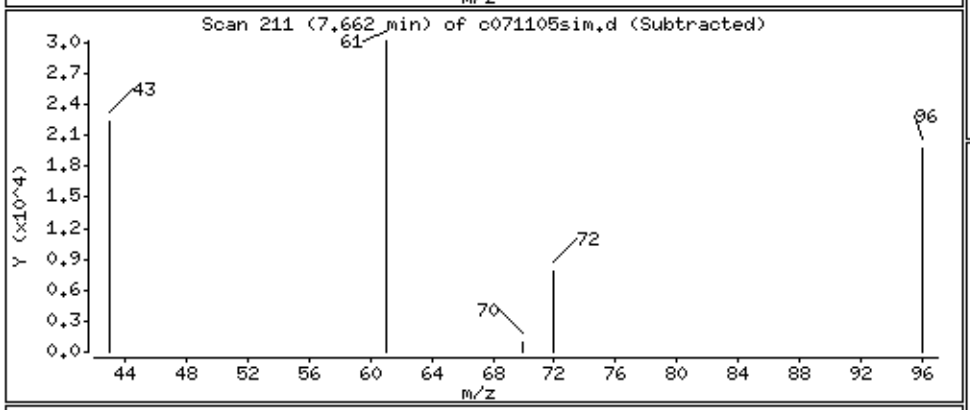
Column diameter: 0.25

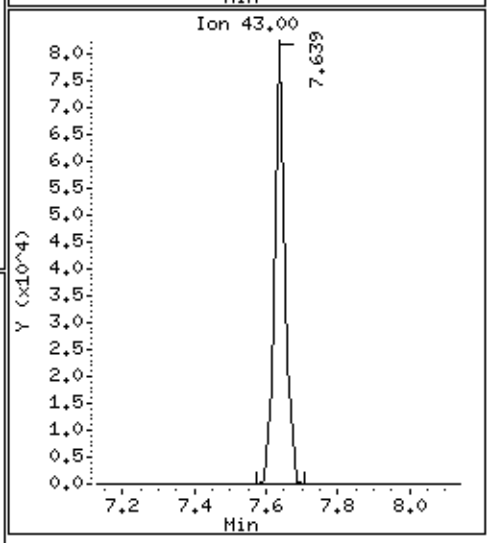
13 2-Butanone

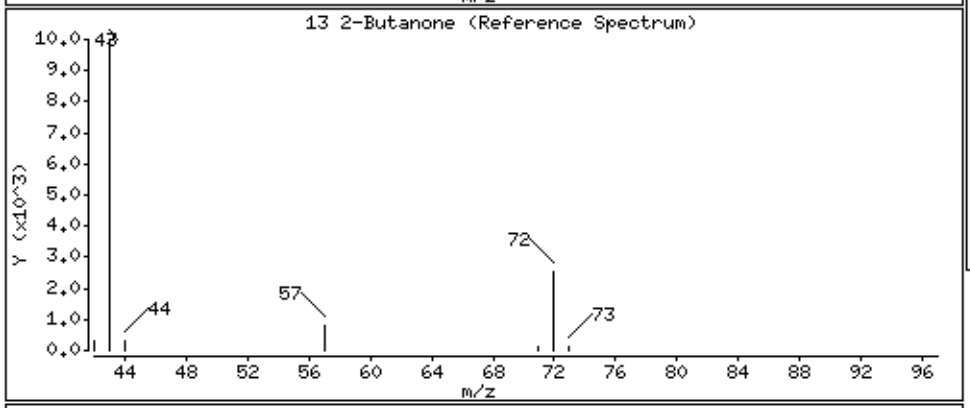
Concentration: 7.76657 ug

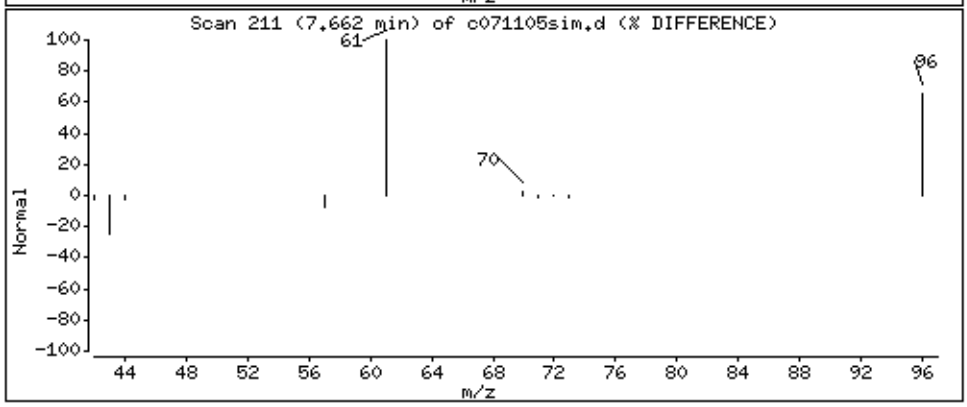












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

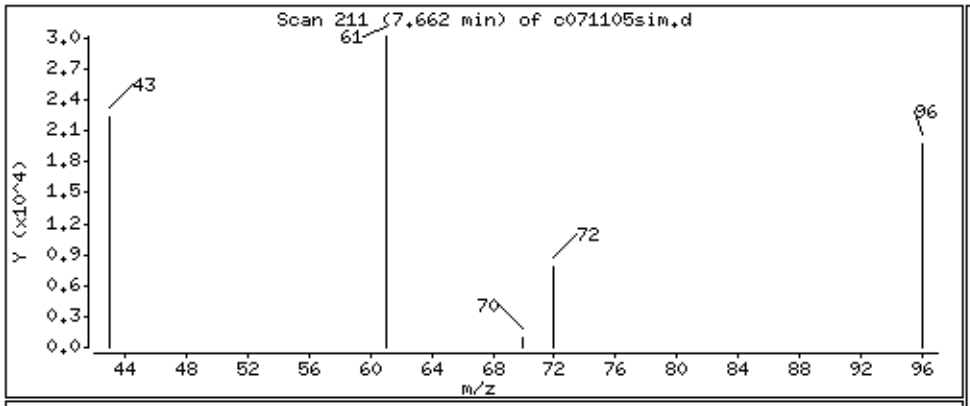
Operator: gm

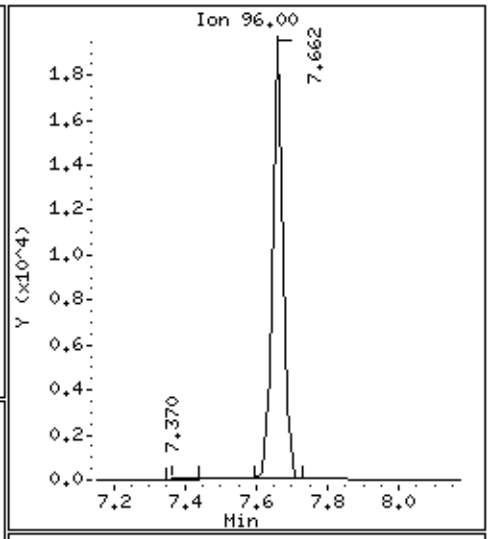
Column phase: DB-5.625

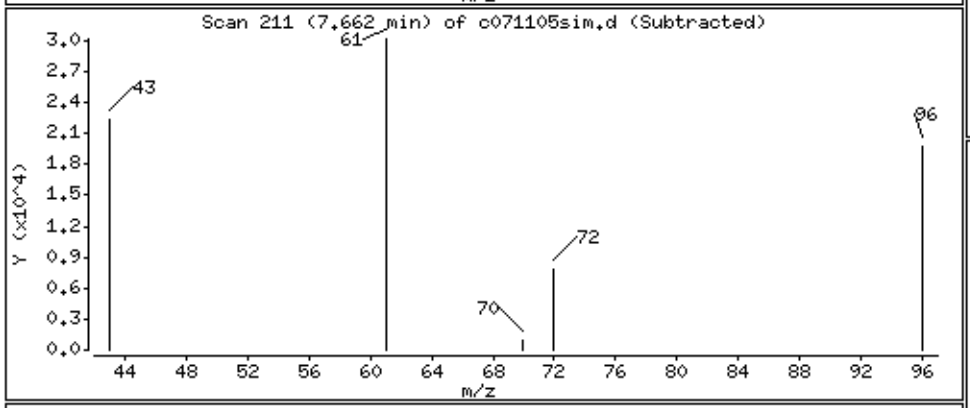
Column diameter: 0.25

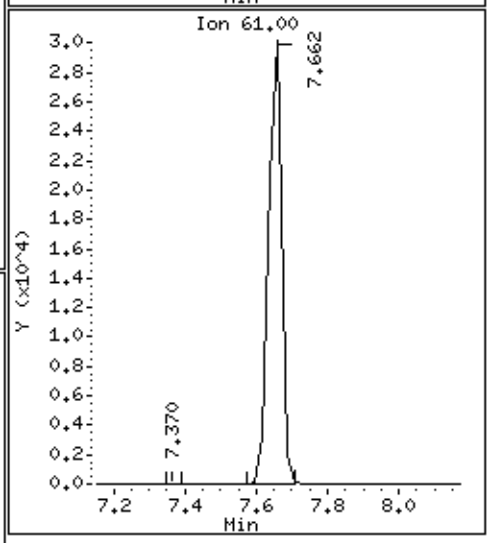
14 cis-1,2-Dichloroethene

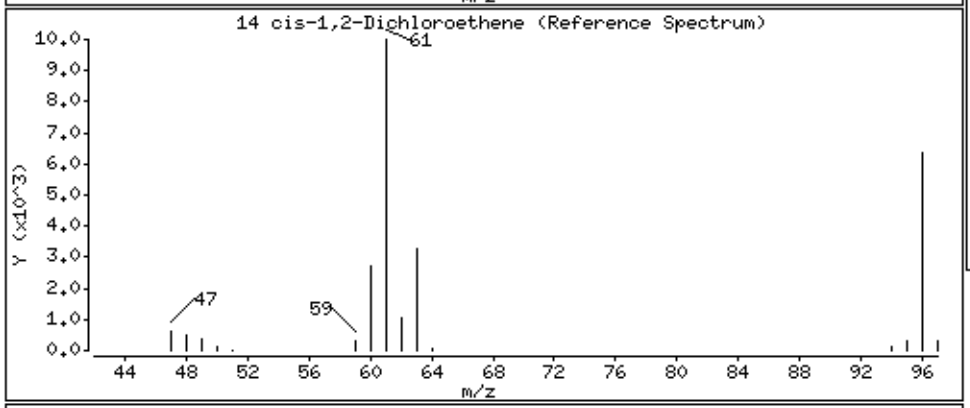
Concentration: 8.77112 ug

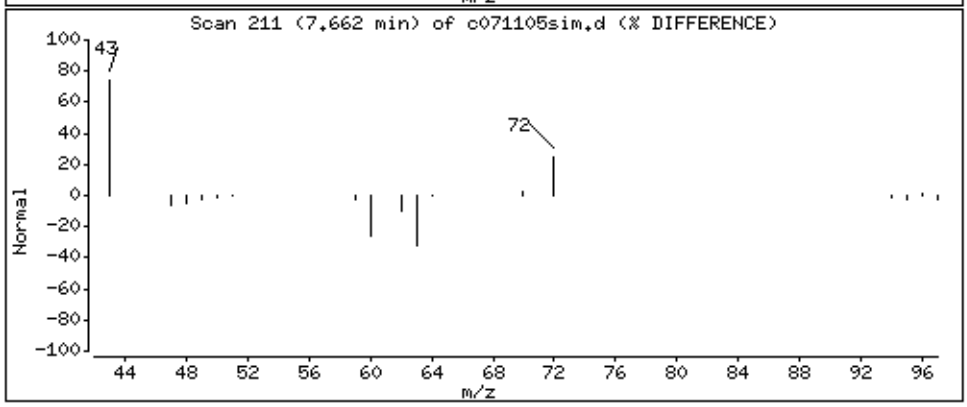












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

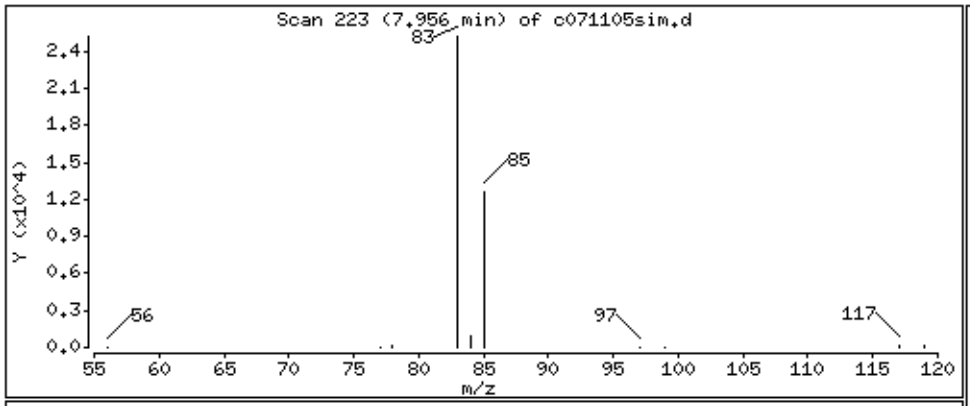
Operator: gm

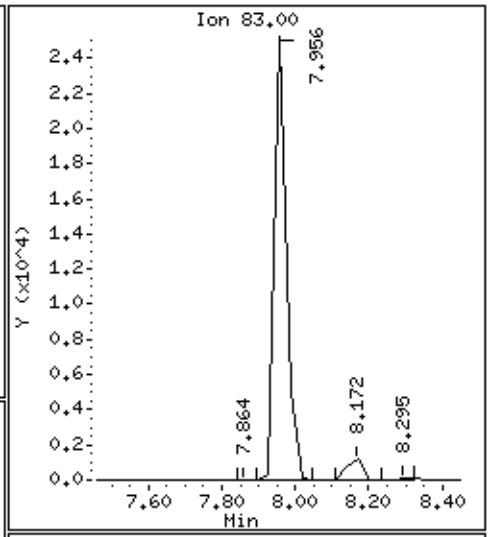
Column phase: DB-5.625

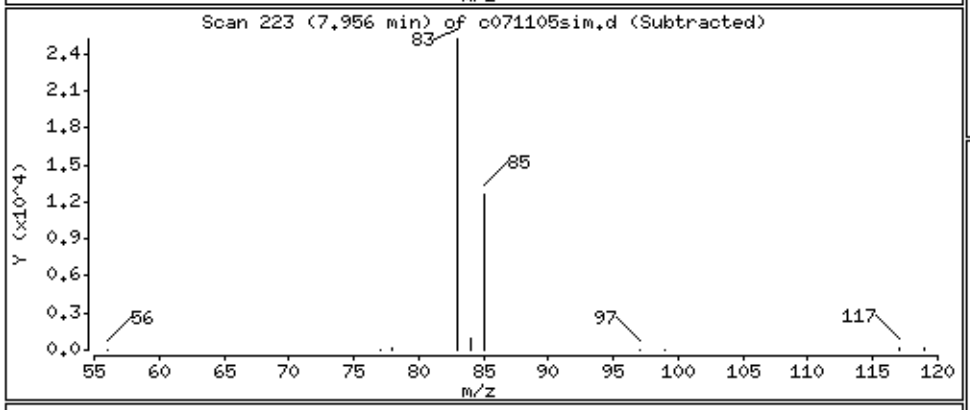
Column diameter: 0.25

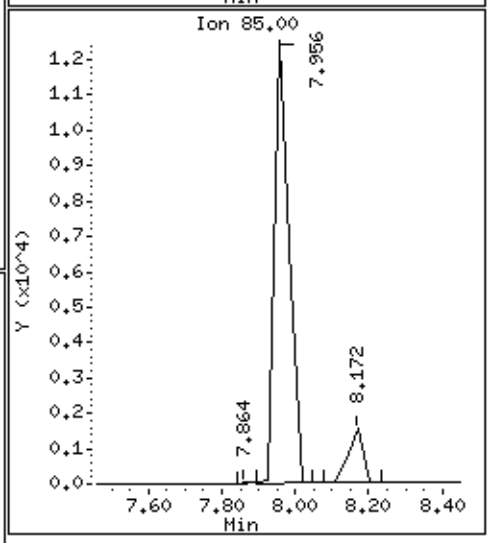
15 Chloroform-CCC

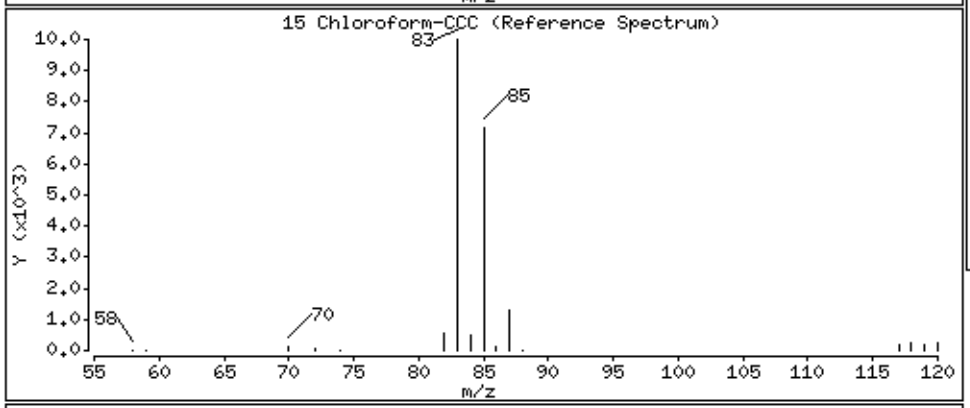
Concentration: 9.04660 ug

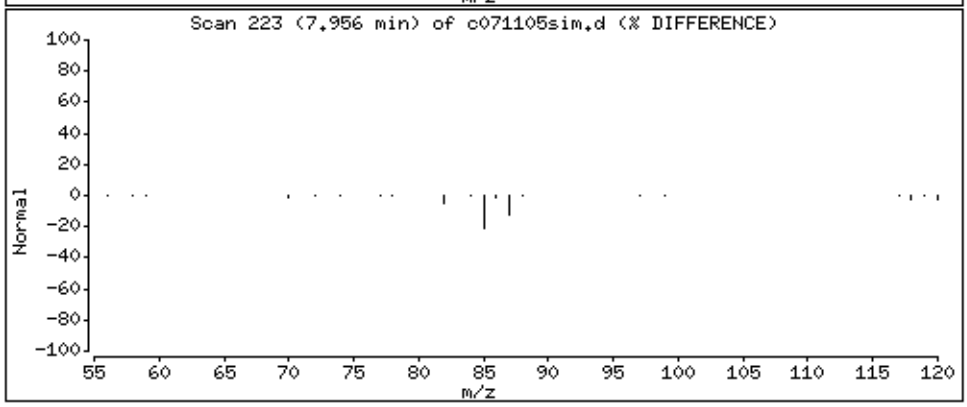












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

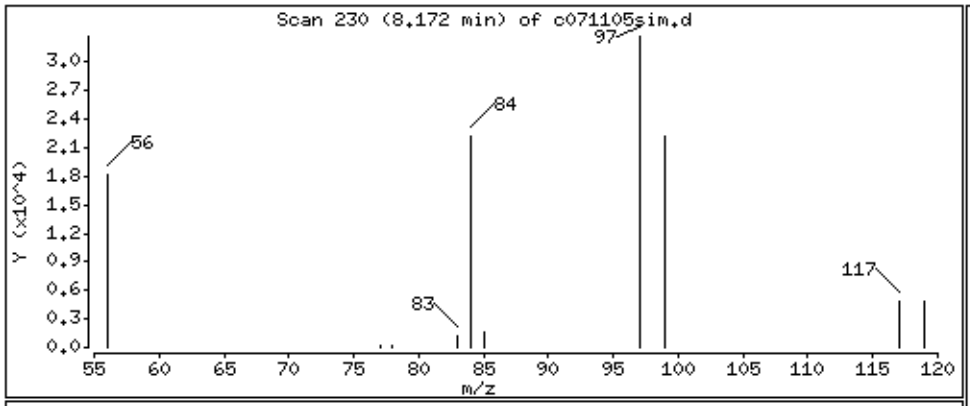
Operator: gm

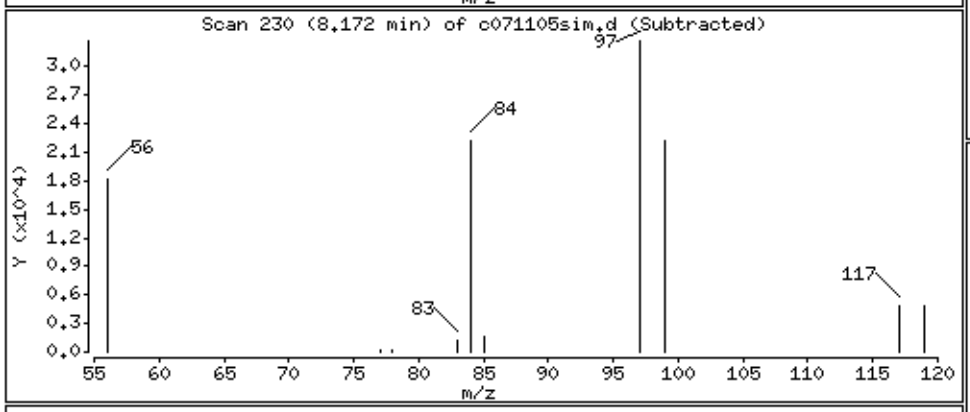
Column phase: DB-5.625

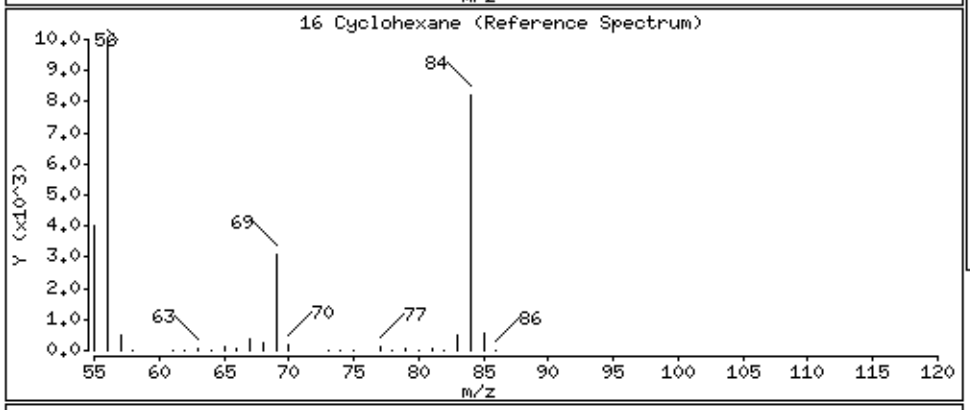
Column diameter: 0.25

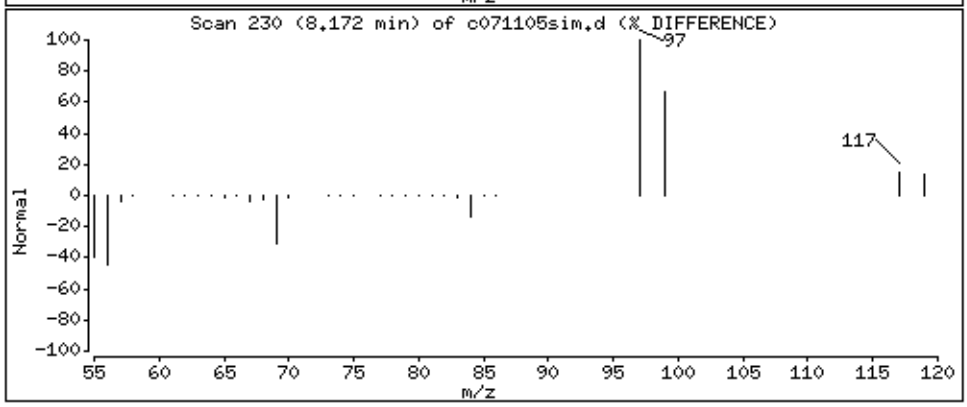
16 Cyclohexane

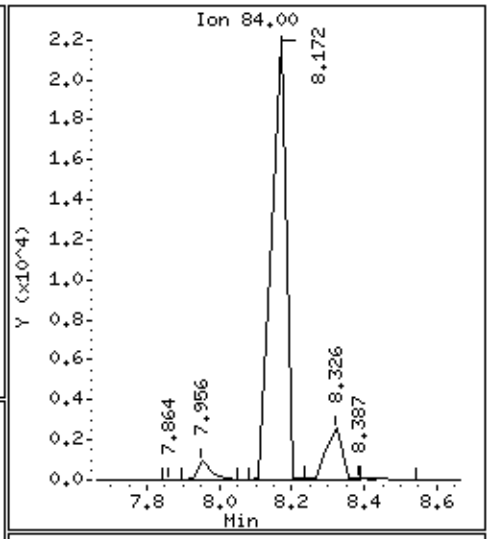
Concentration: 9.31955 ug

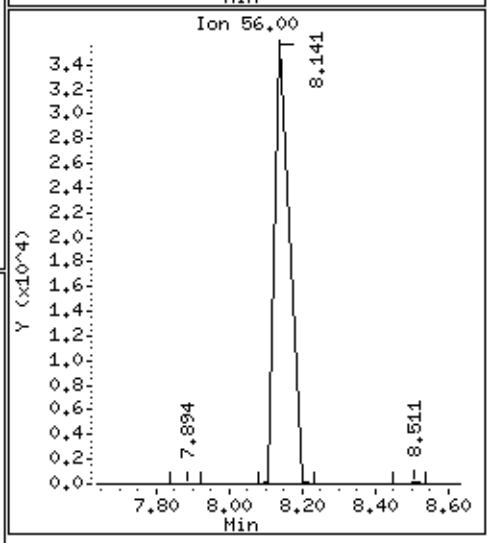












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

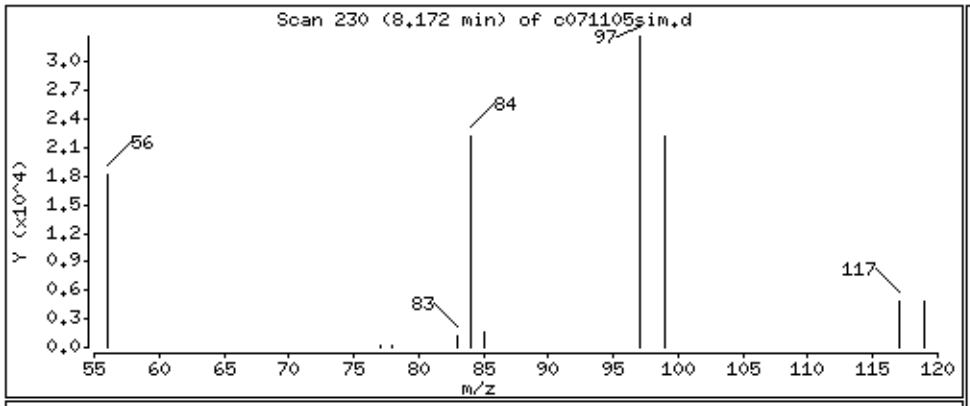
Operator: gm

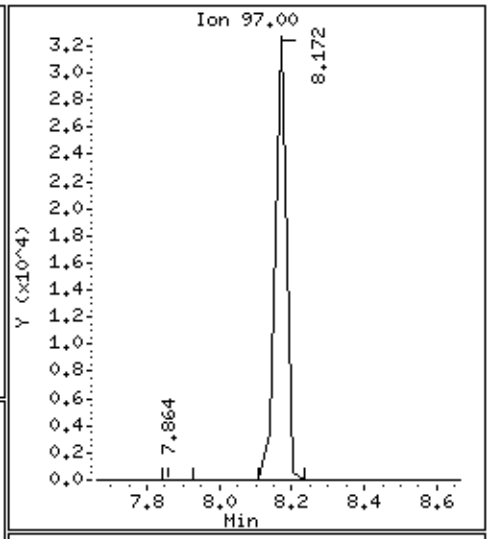
Column phase: DB-5.625

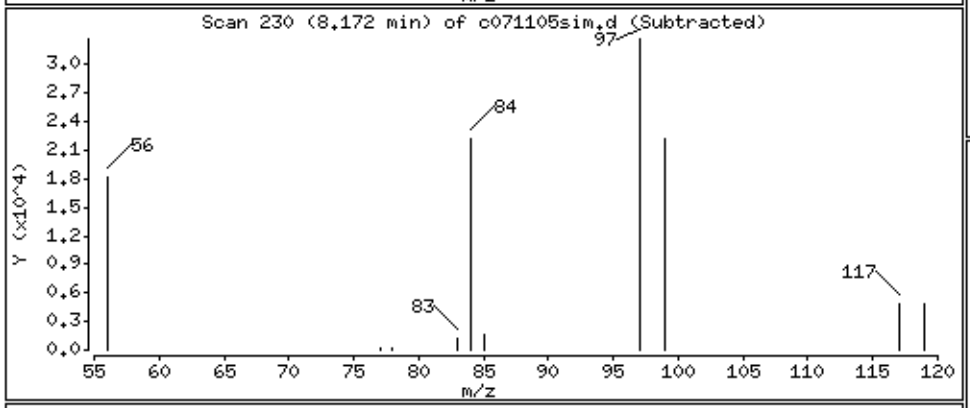
Column diameter: 0.25

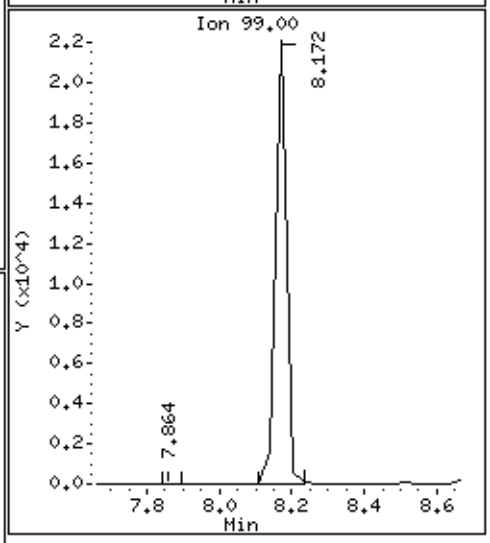
17 1,1,1-Trichloroethane

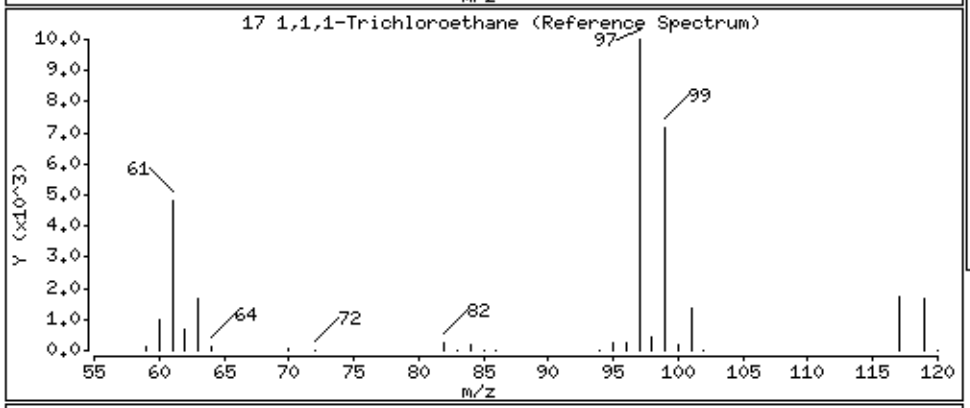
Concentration: 9.59570 ug

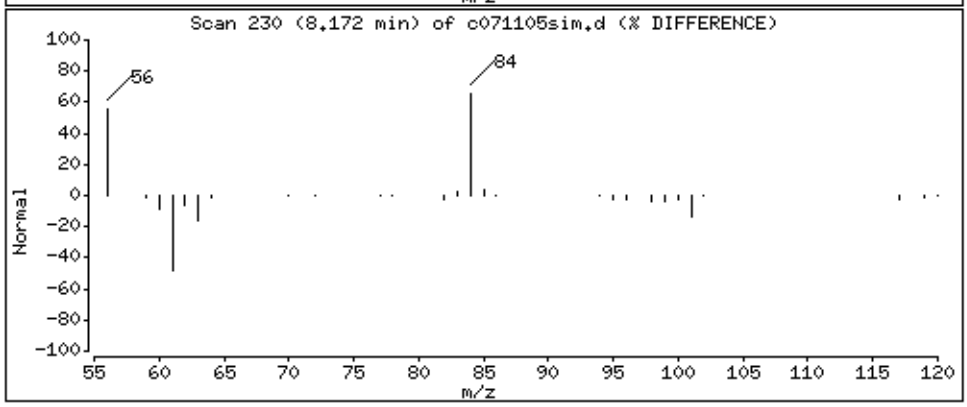












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

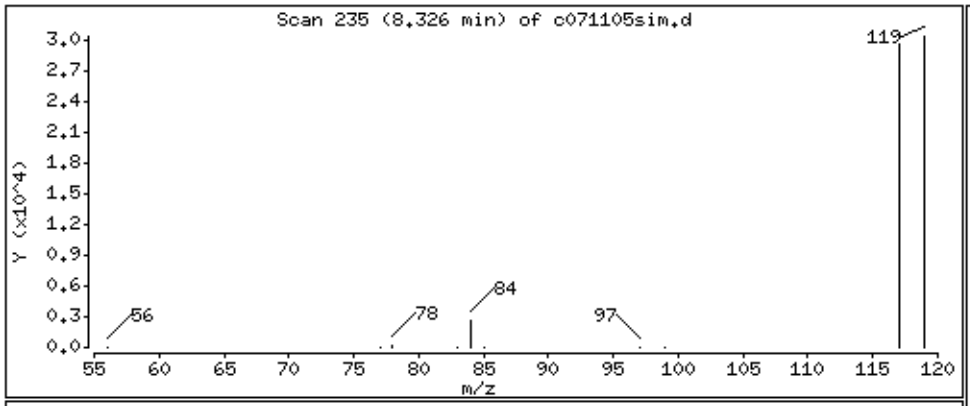
Operator: gm

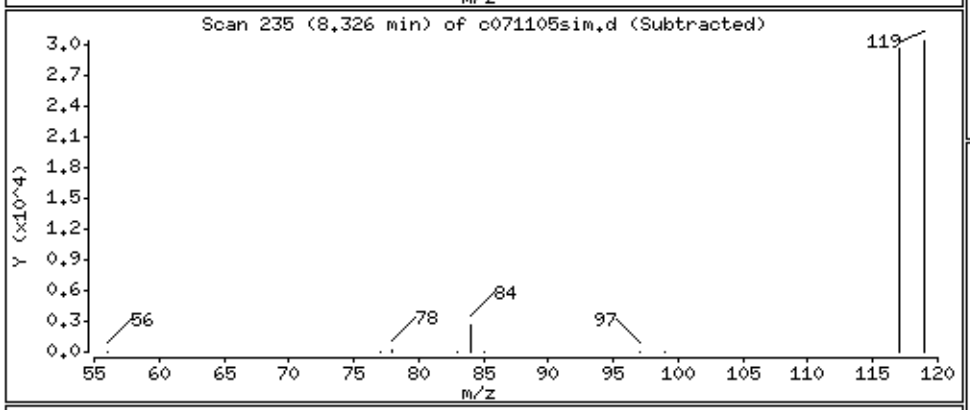
Column phase: DB-5.625

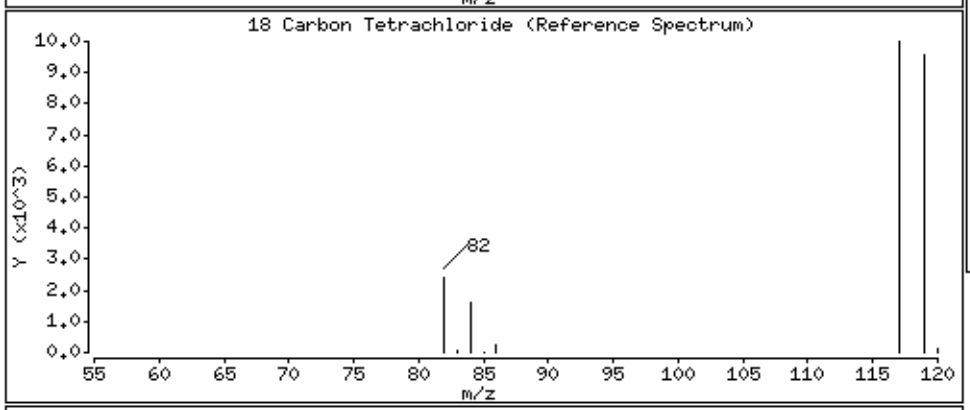
Column diameter: 0.25

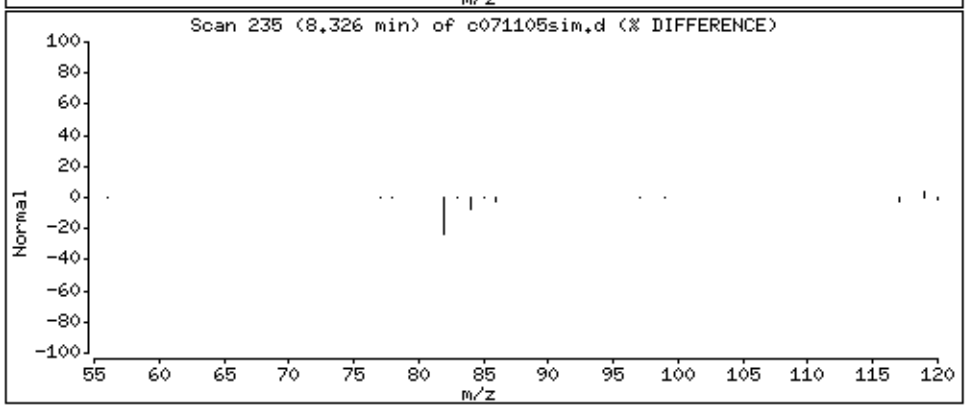
18 Carbon Tetrachloride

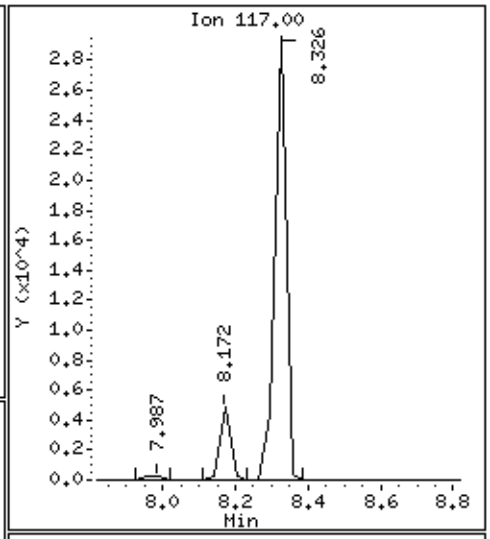
Concentration: 9.47538 ug

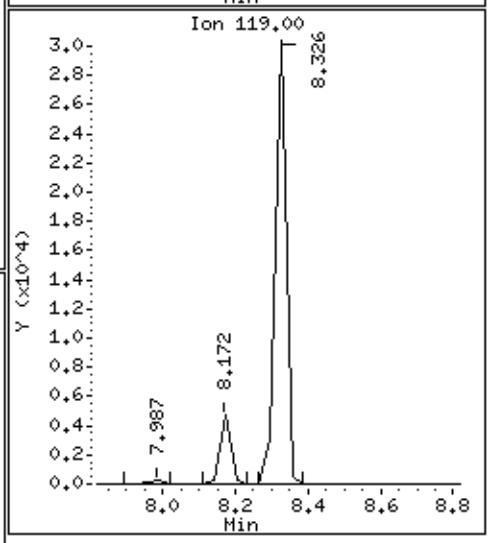












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

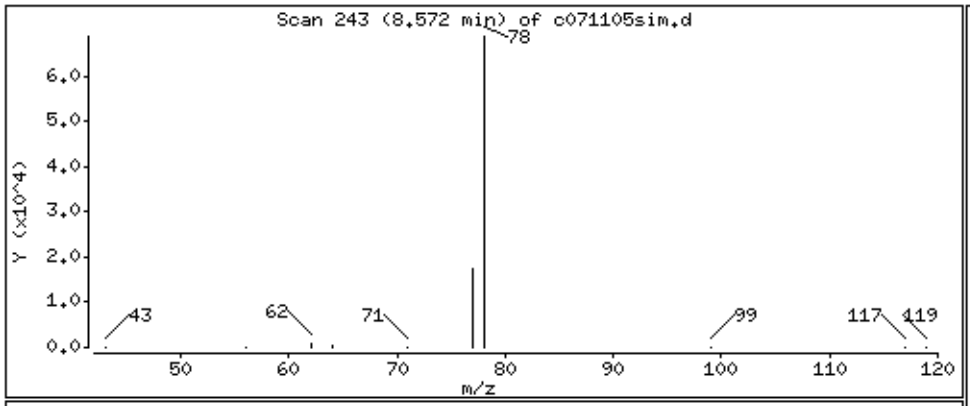
Operator: gm

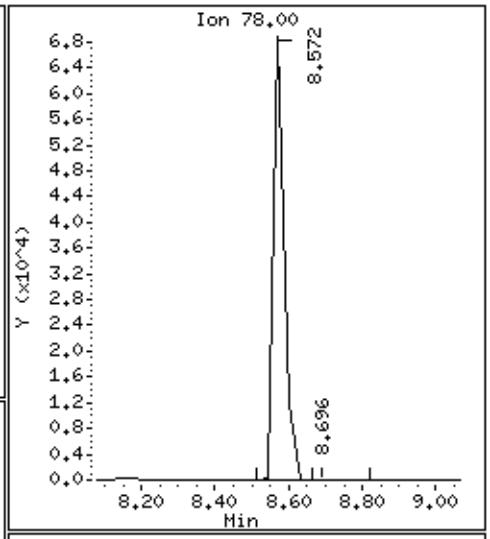
Column phase: DB-5.625

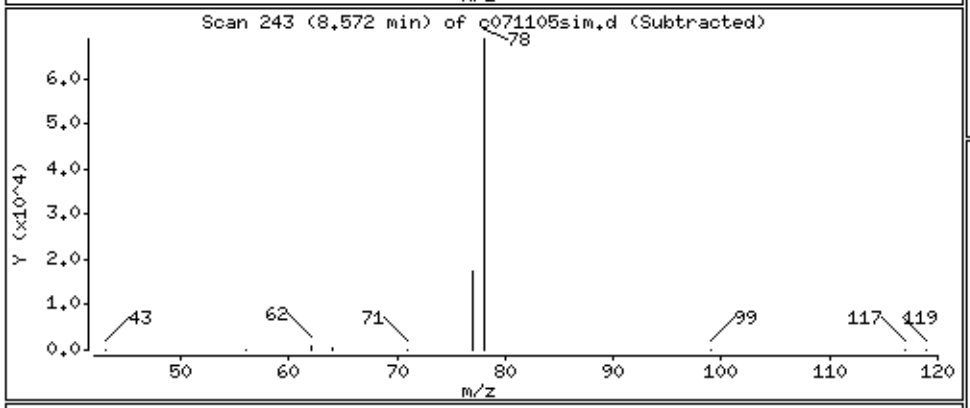
Column diameter: 0.25

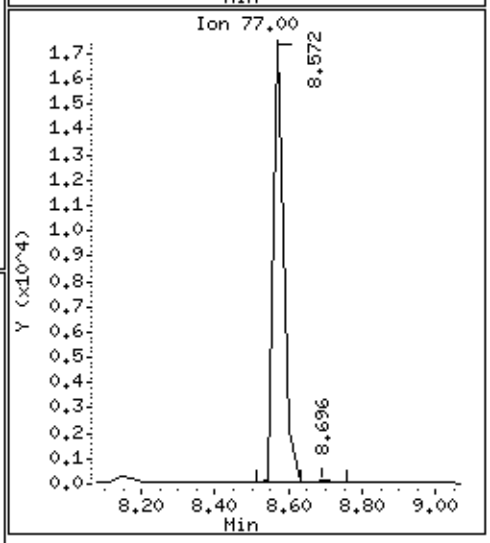
19 Benzene

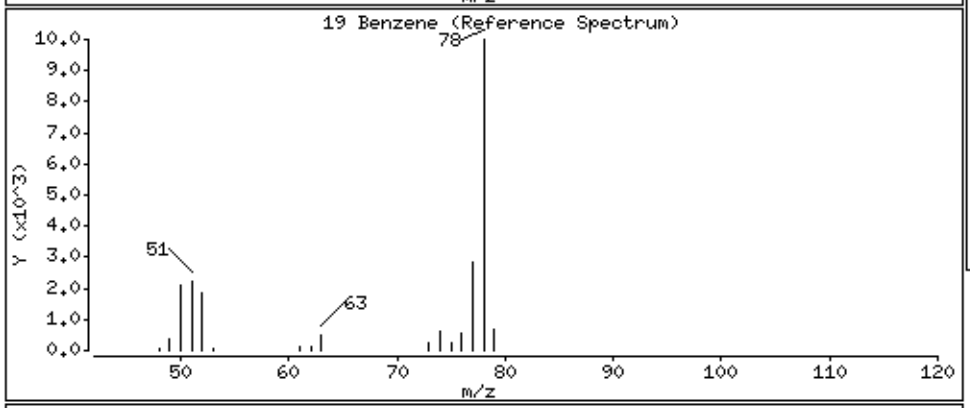
Concentration: 9.40893 ug

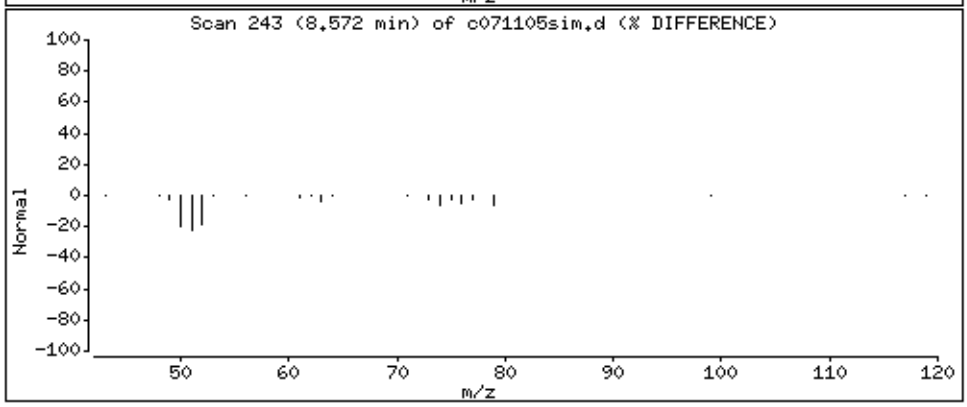












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

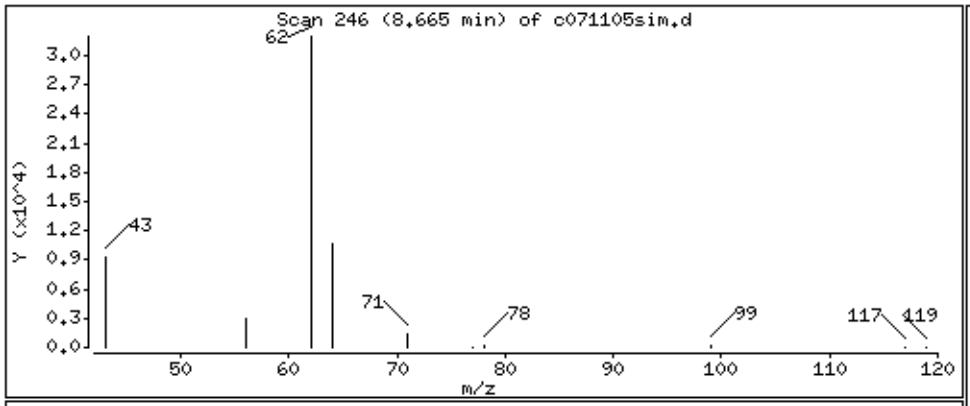
Operator: gm

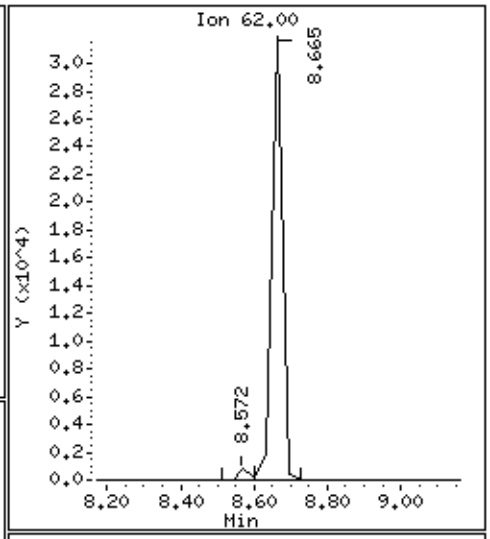
Column phase: DB-5.625

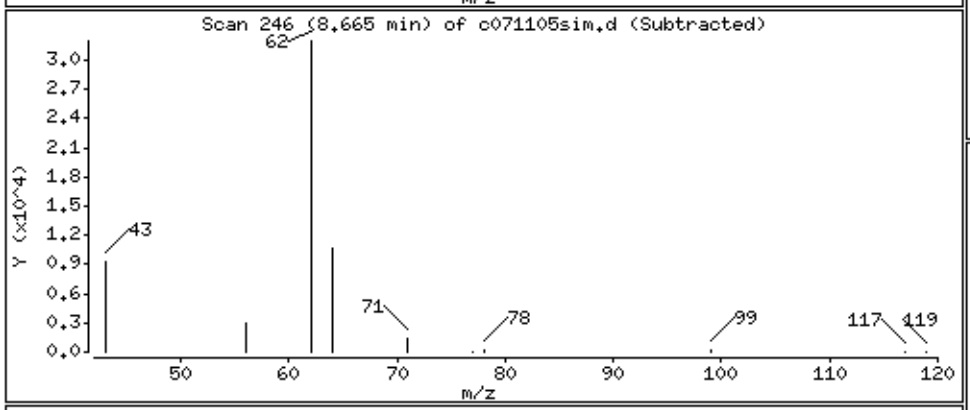
Column diameter: 0.25

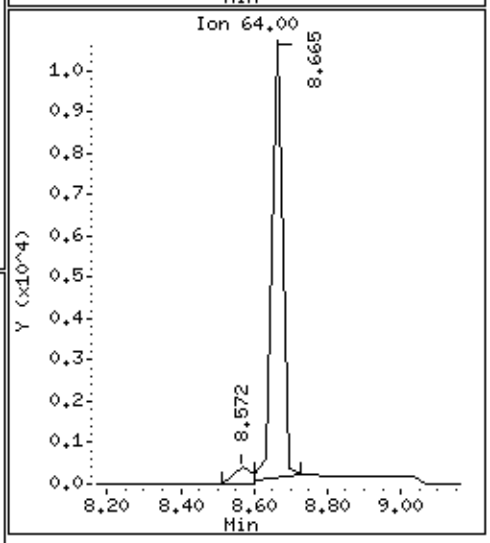
20 1,2-Dichloroethane

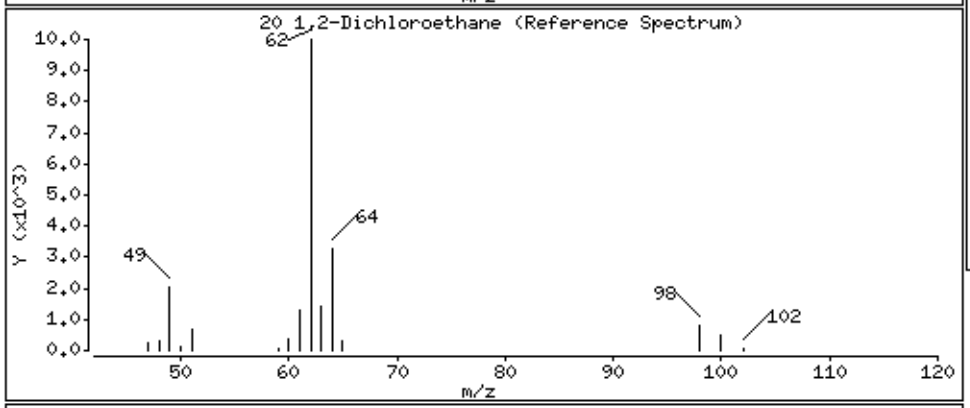
Concentration: 8.87932 ug

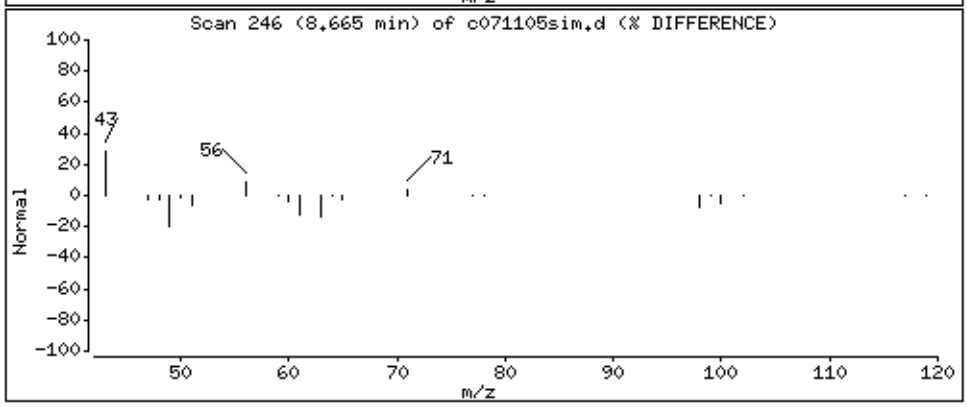












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

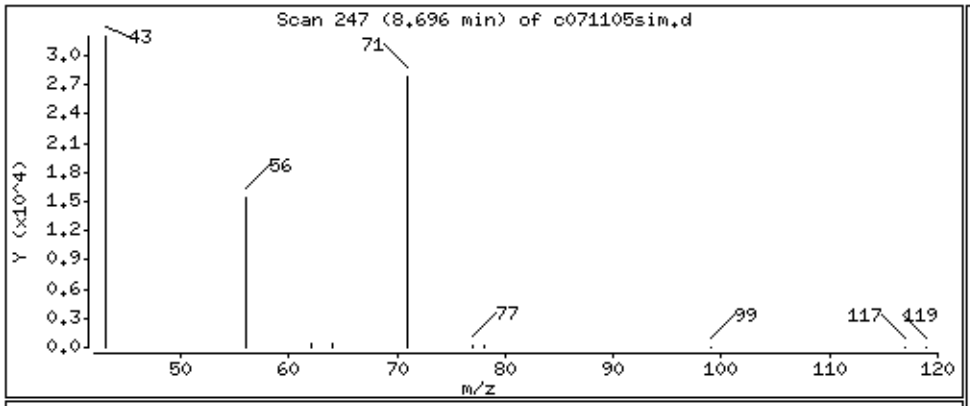
Operator: gm

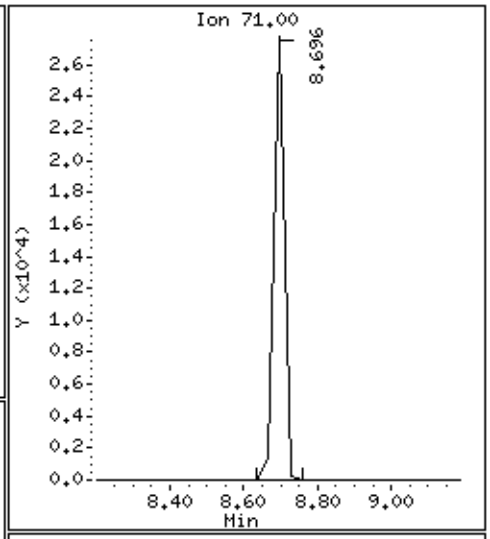
Column phase: DB-5.625

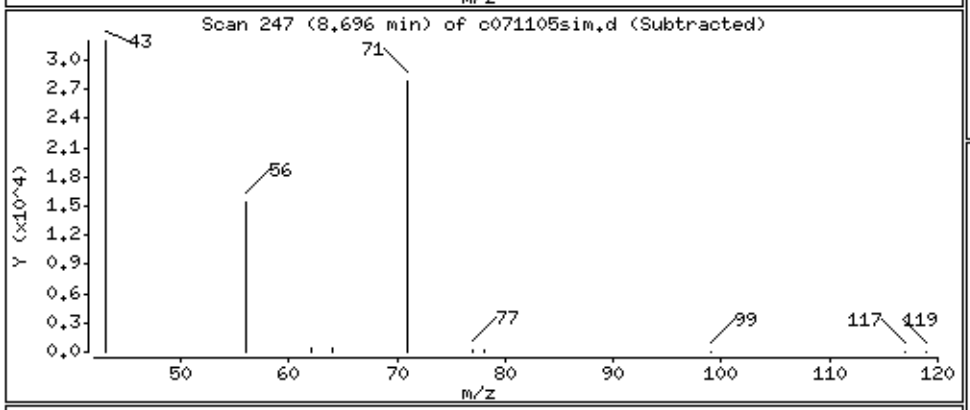
Column diameter: 0.25

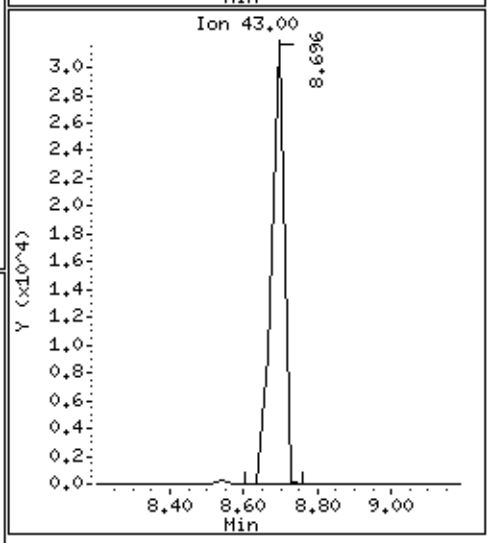
21 Heptane

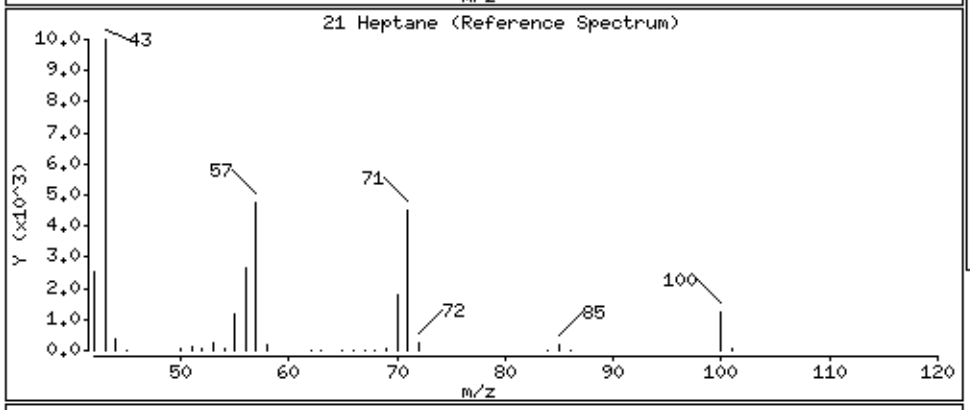
Concentration: 9.48187 ug

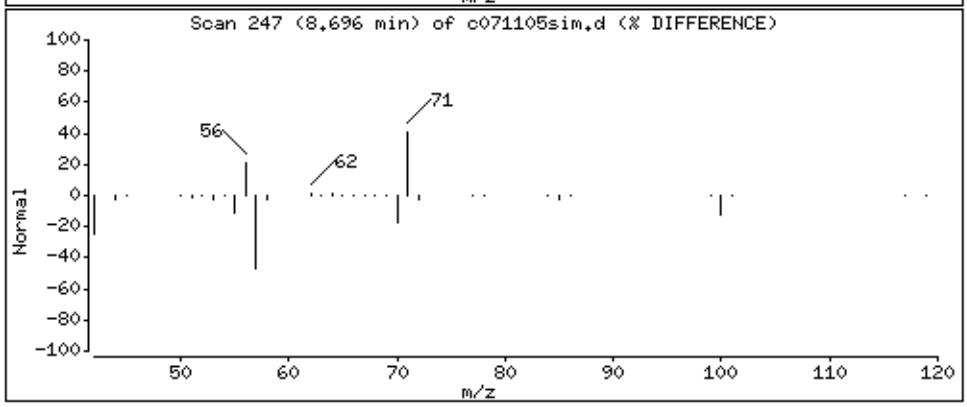












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

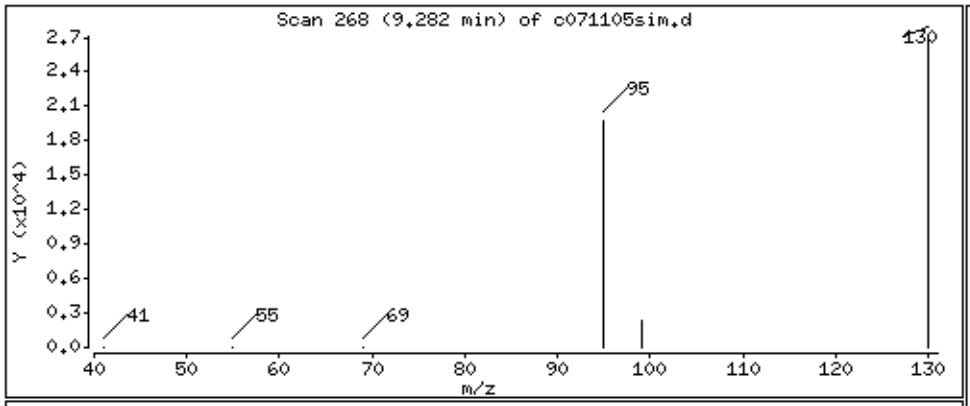
Operator: gm

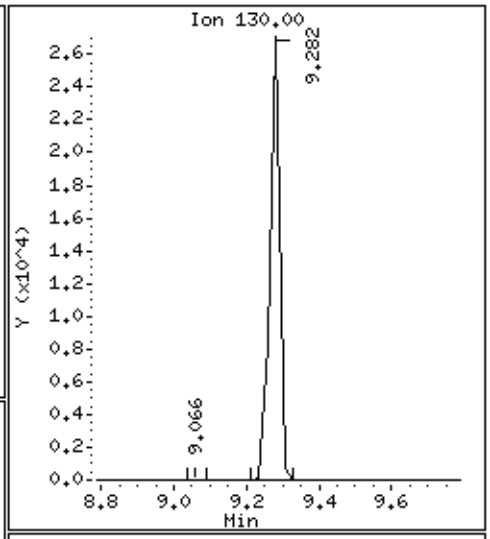
Column phase: DB-5.625

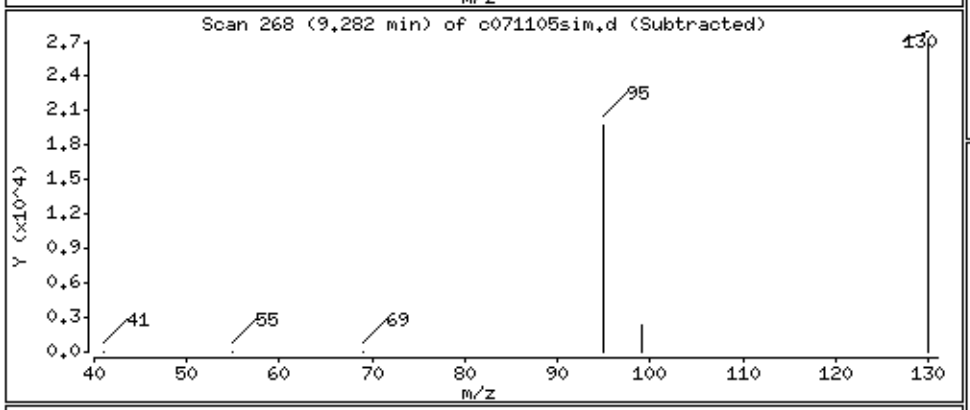
Column diameter: 0.25

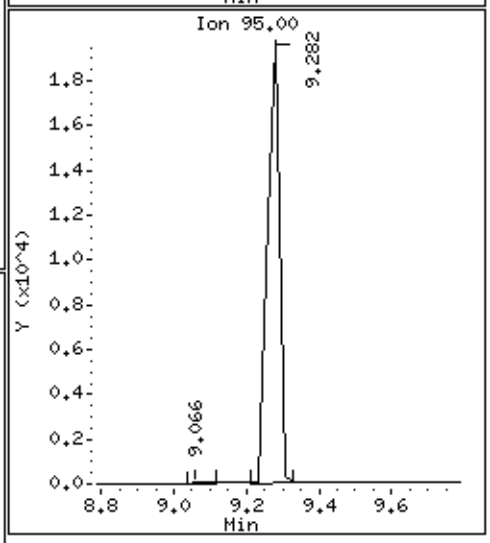
22 Trichloroethene

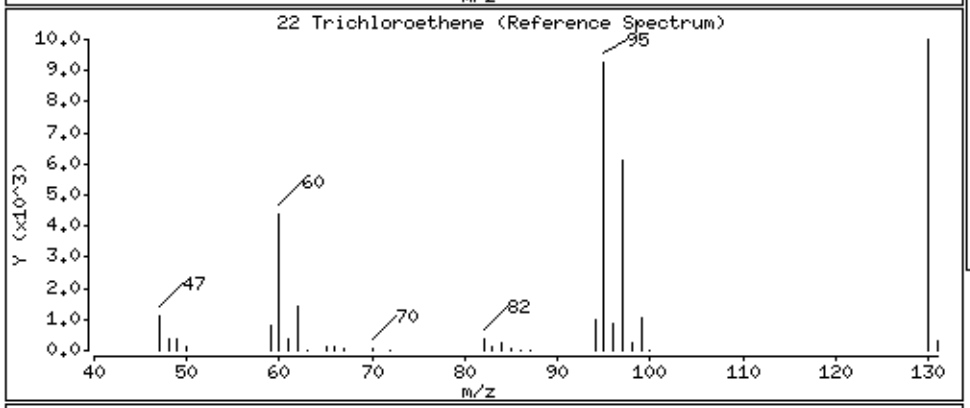
Concentration: 9.65352 ug

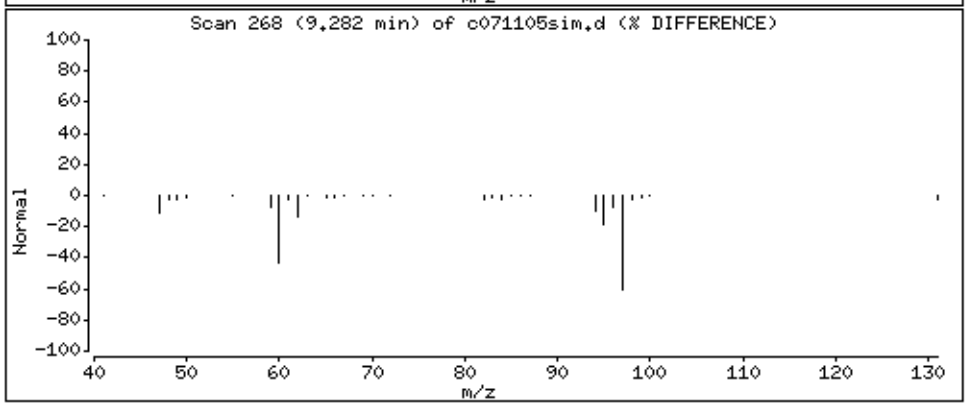












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

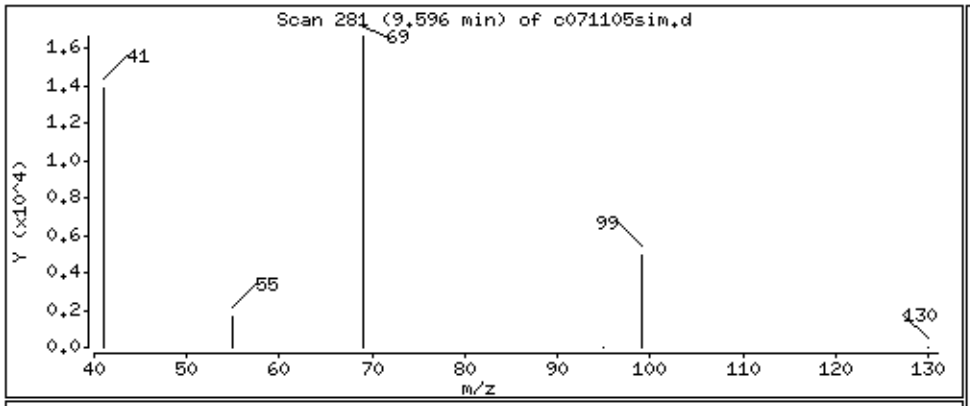
Operator: gm

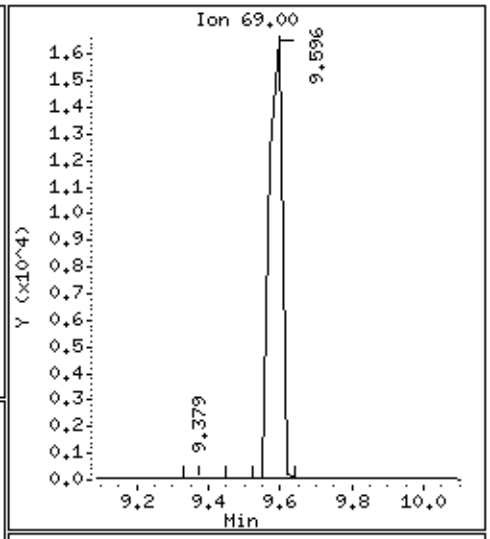
Column phase: DB-5.625

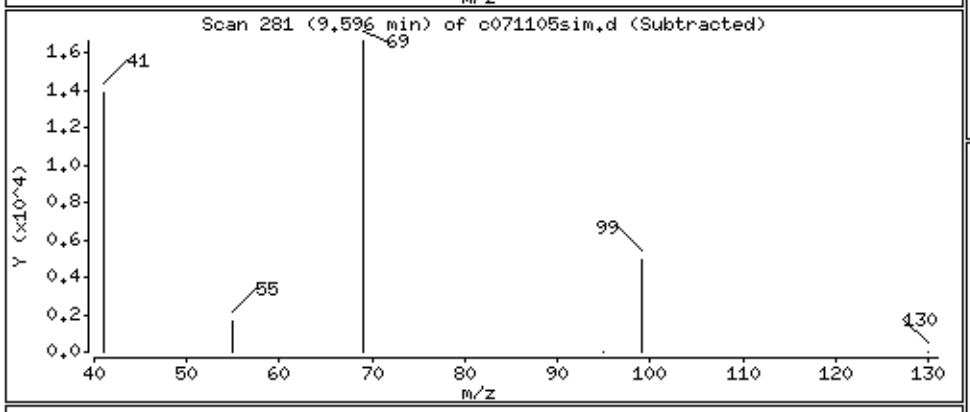
Column diameter: 0.25

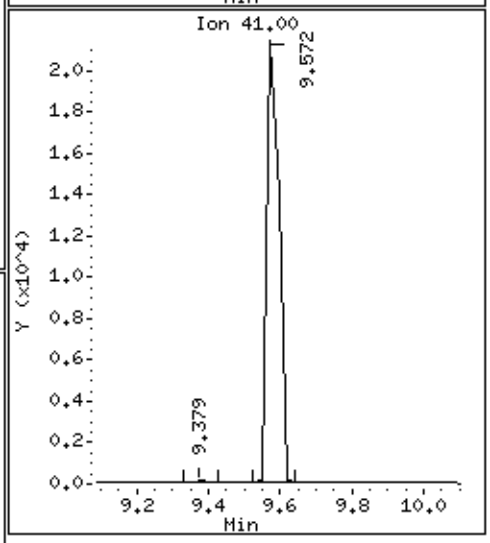
23 Methyl Methacrylate

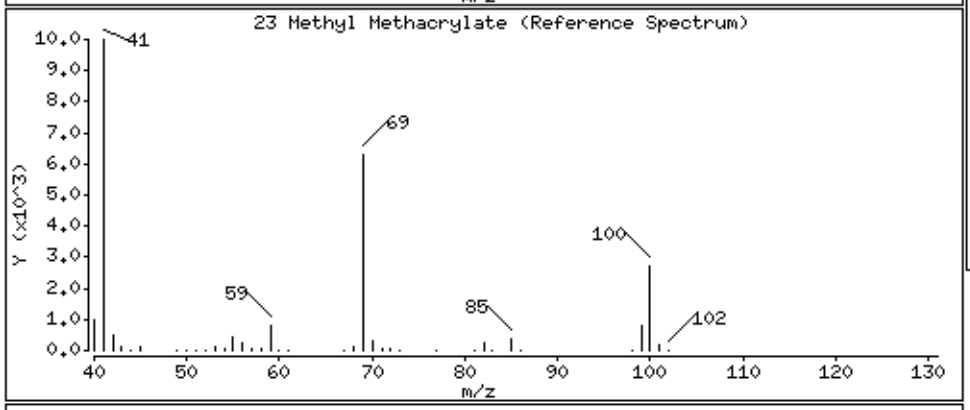
Concentration: 8.60623 ug

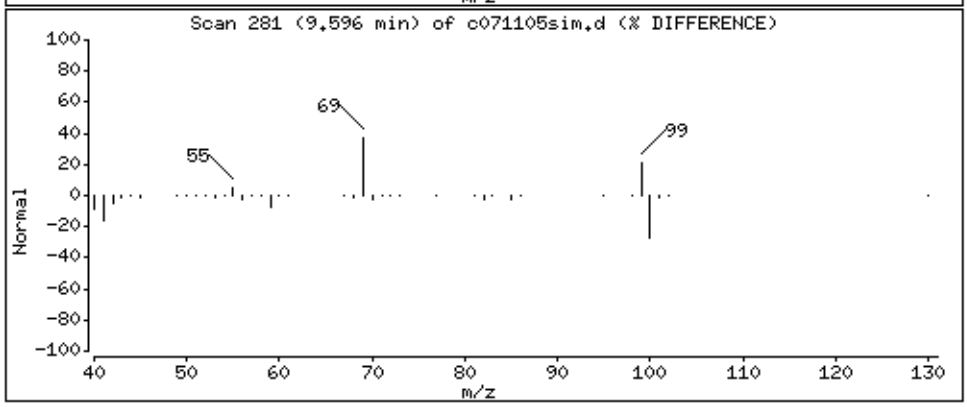












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

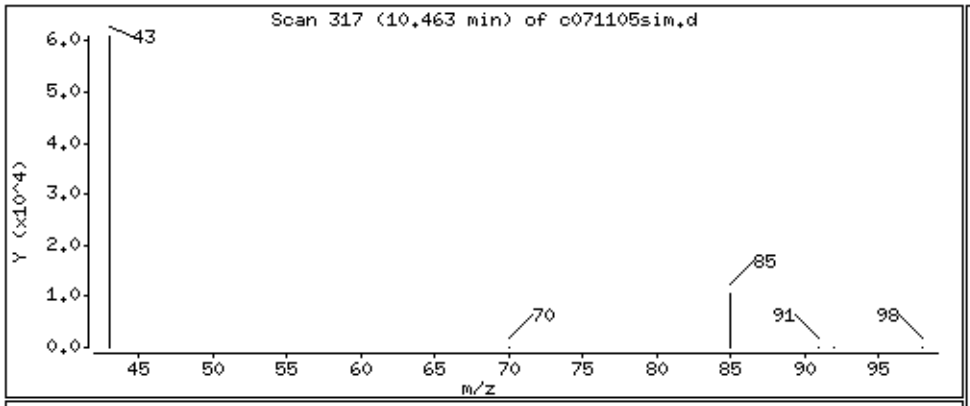
Operator: gm

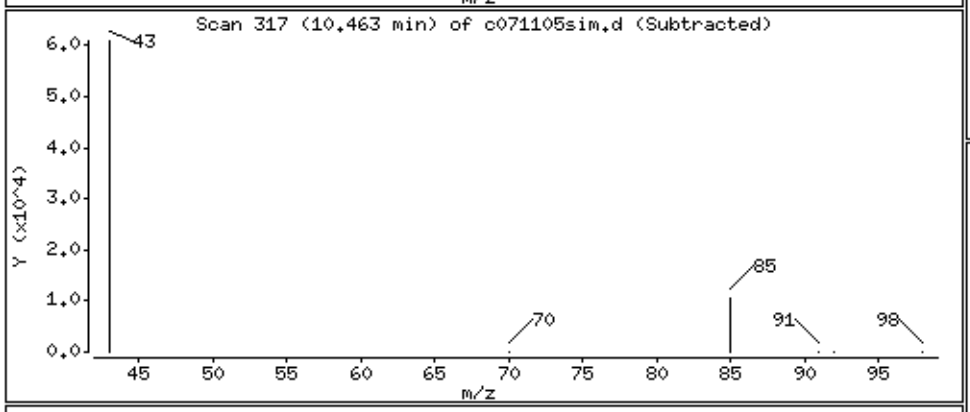
Column phase: DB-5.625

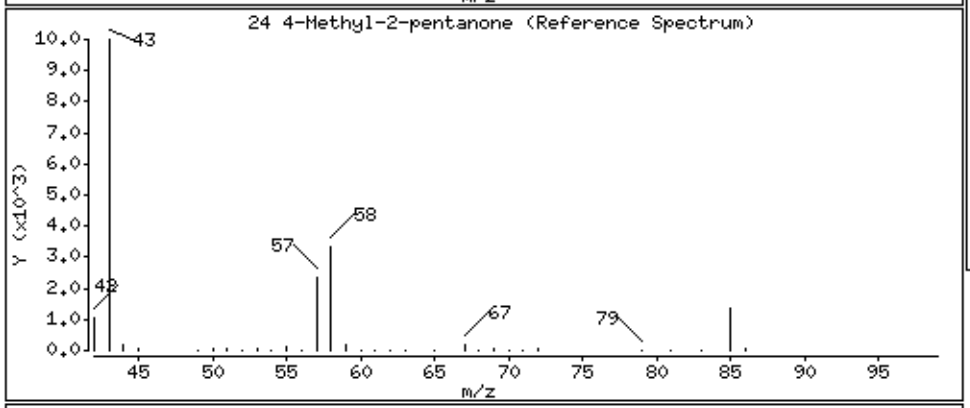
Column diameter: 0.25

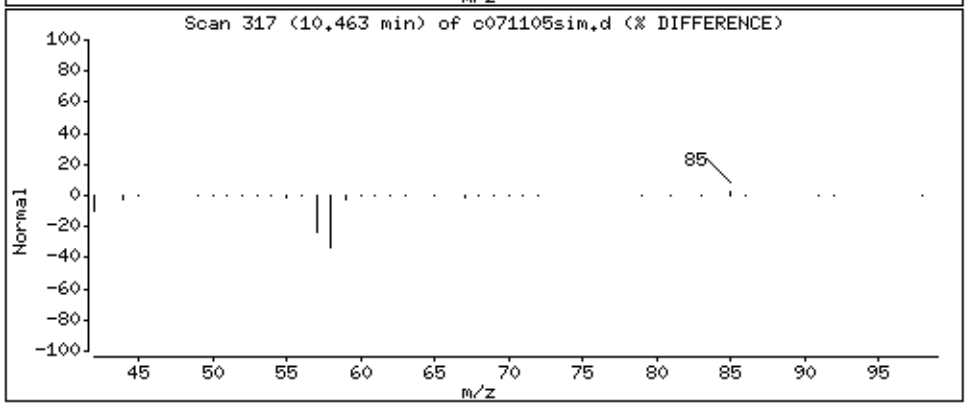
24 4-Methyl-2-pentanone

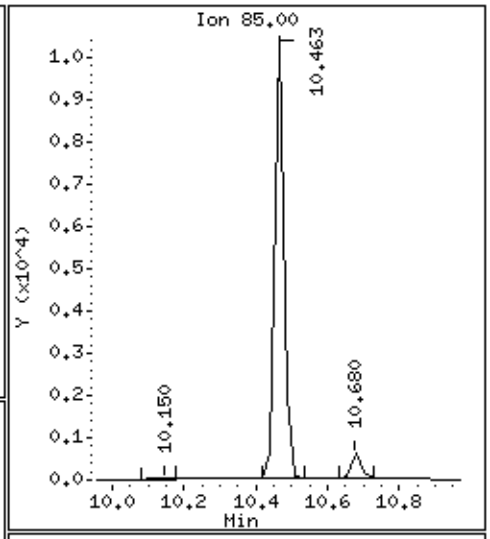
Concentration: 9.75138 ug

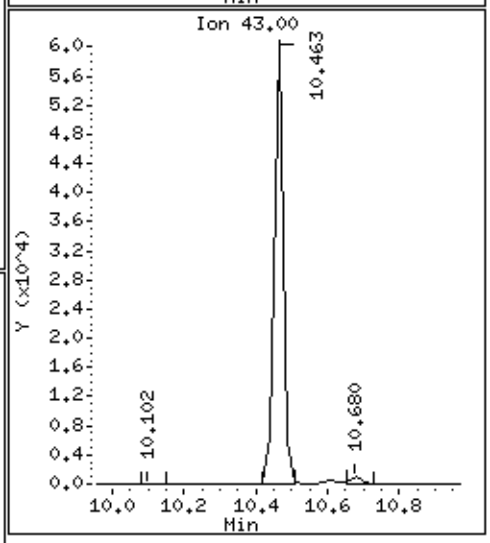












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

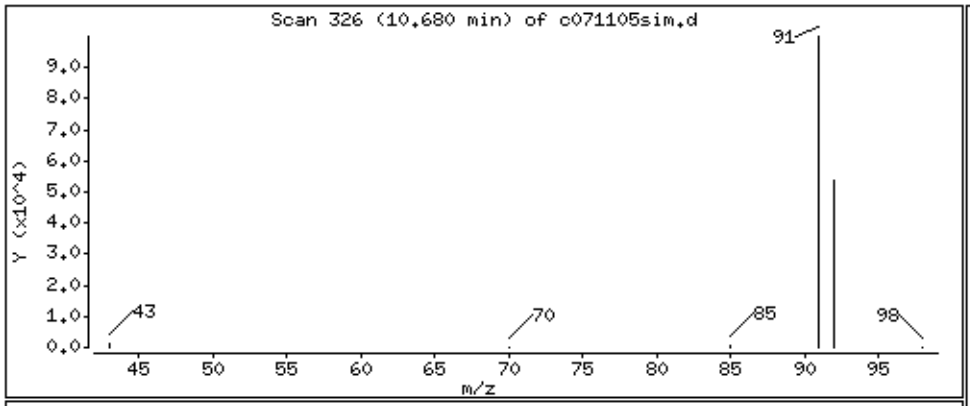
Operator: gm

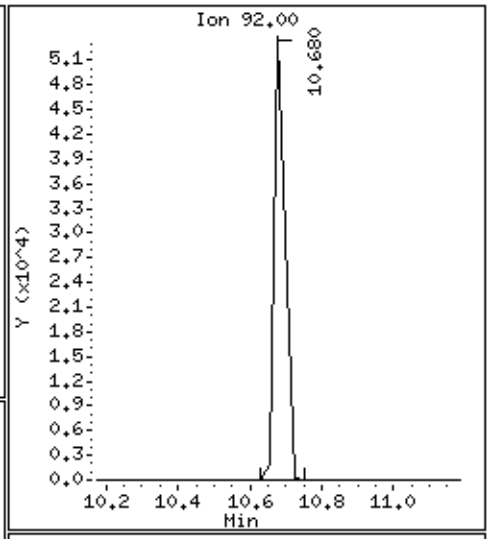
Column phase: DB-5.625

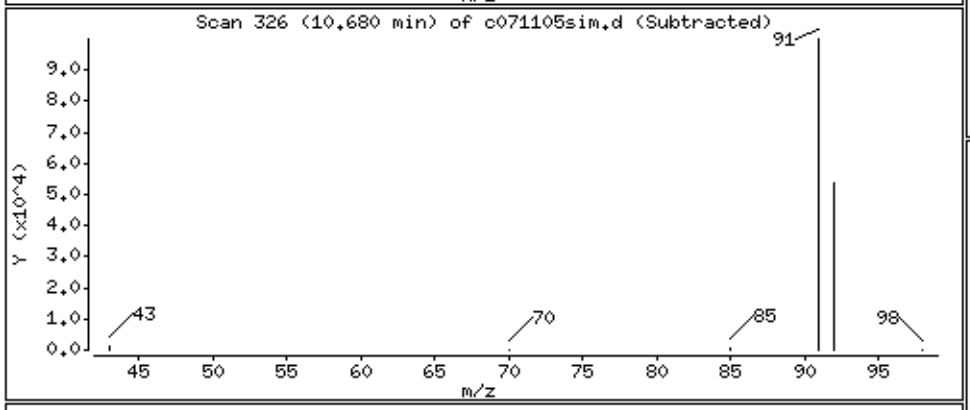
Column diameter: 0.25

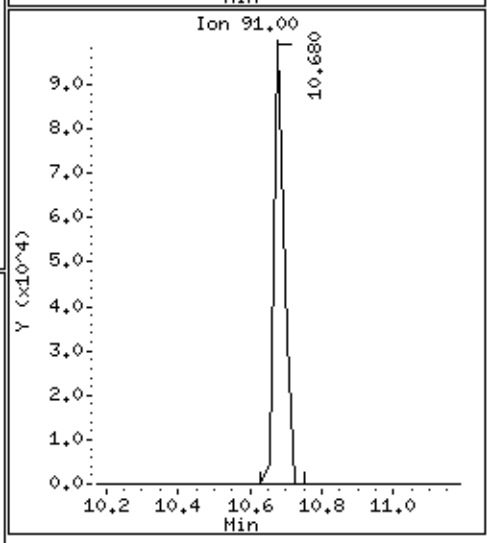
26 Toluene-CCC

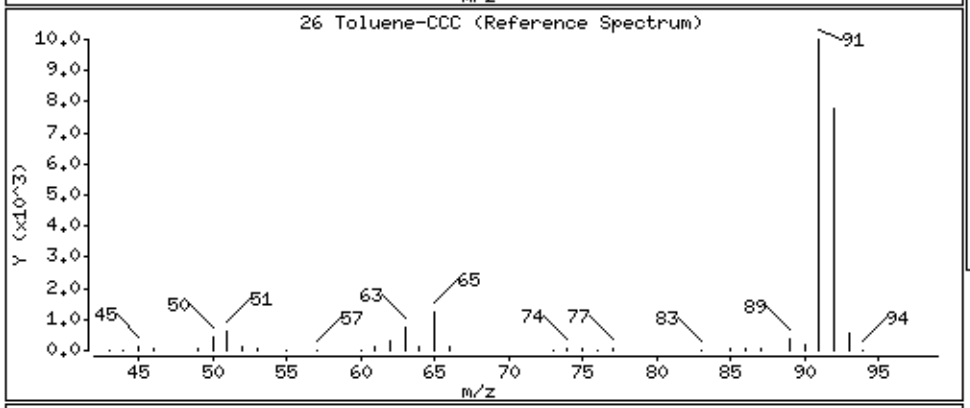
Concentration: 9.71485 ug

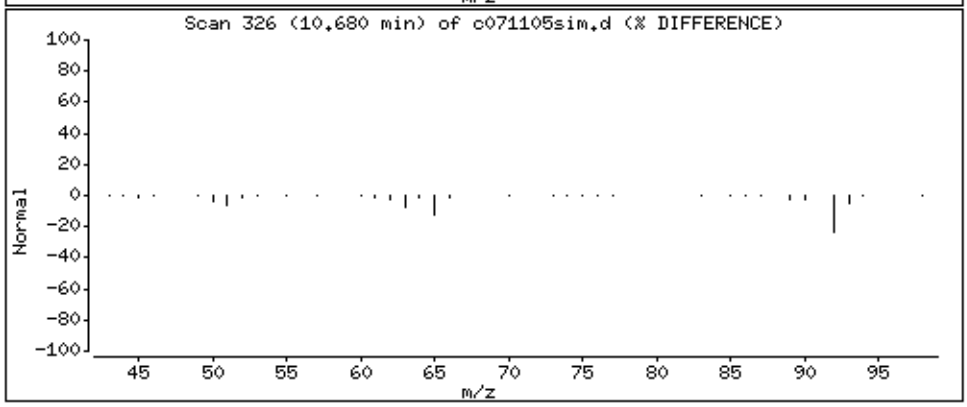












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

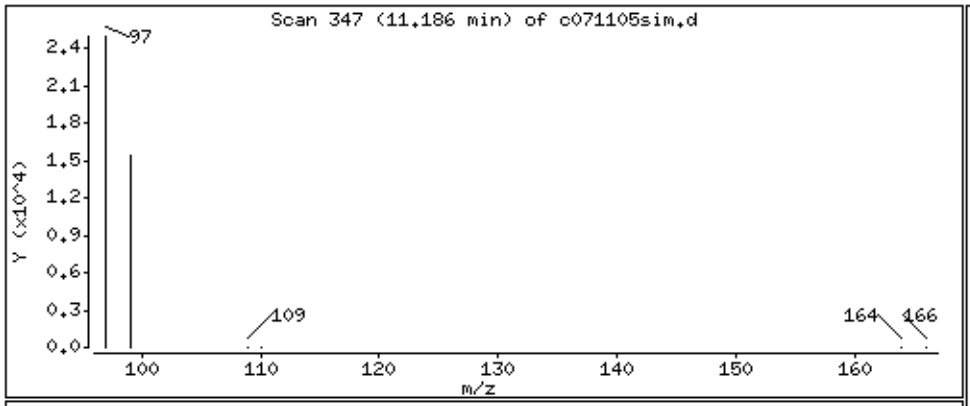
Operator: gm

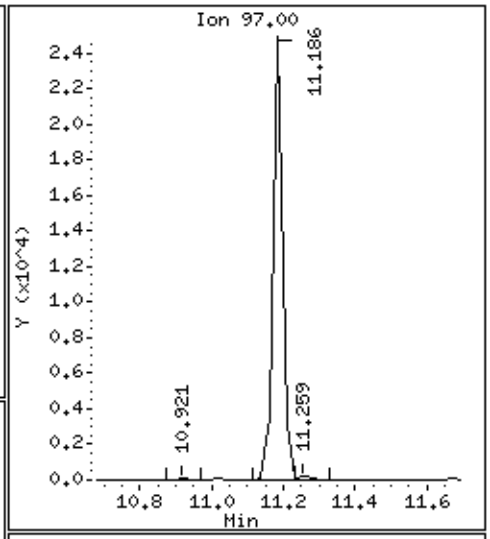
Column phase: DB-5.625

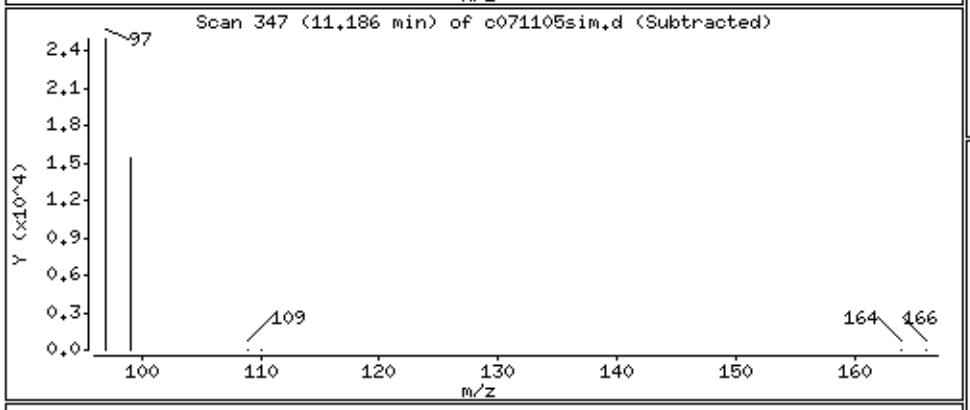
Column diameter: 0.25

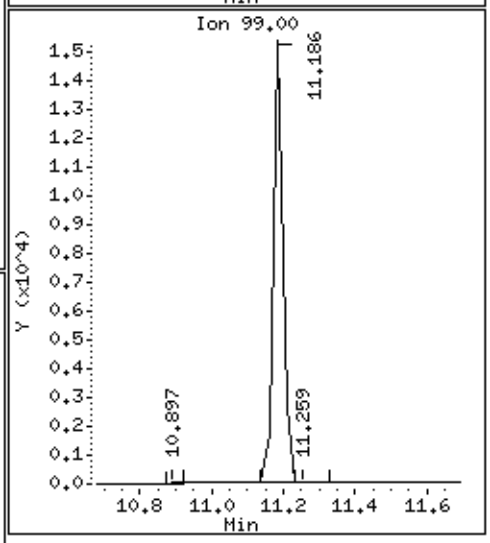
28 1,1,2-Trichloroethane

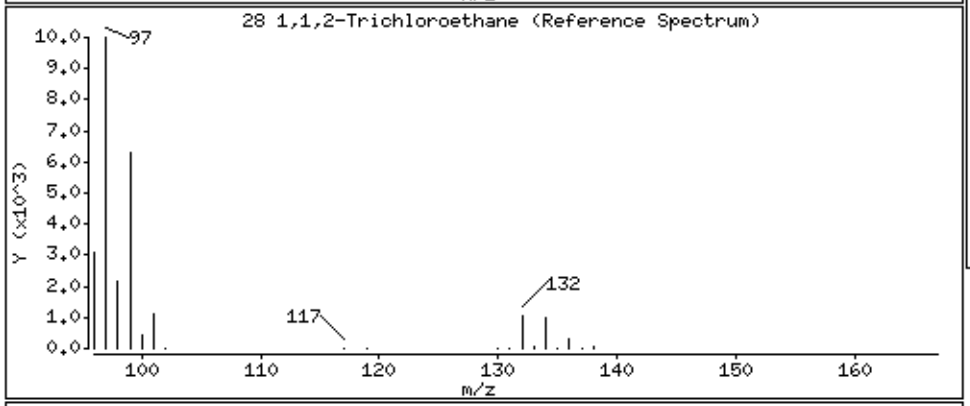
Concentration: 9.64007 ug

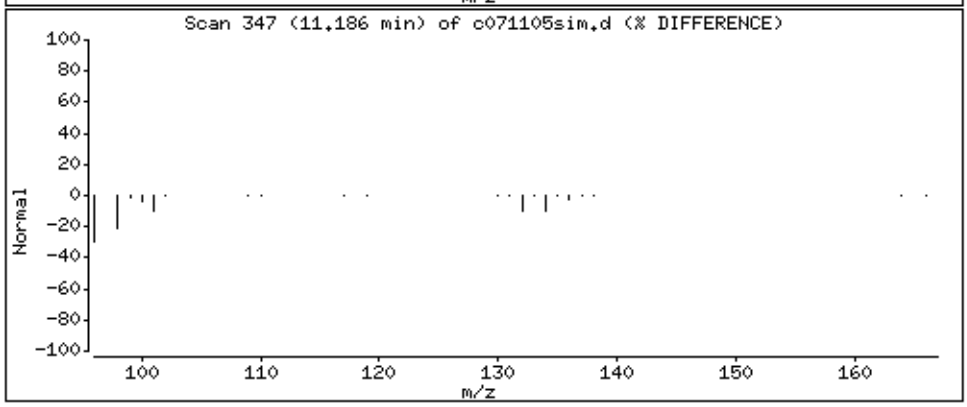












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

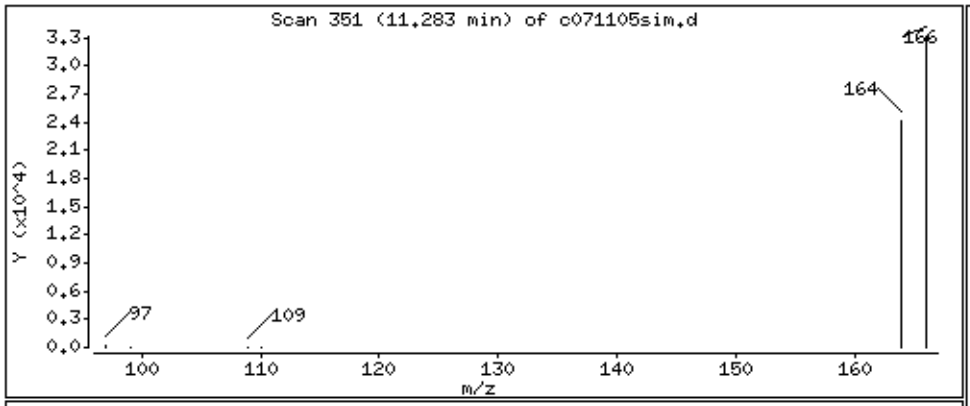
Operator: gm

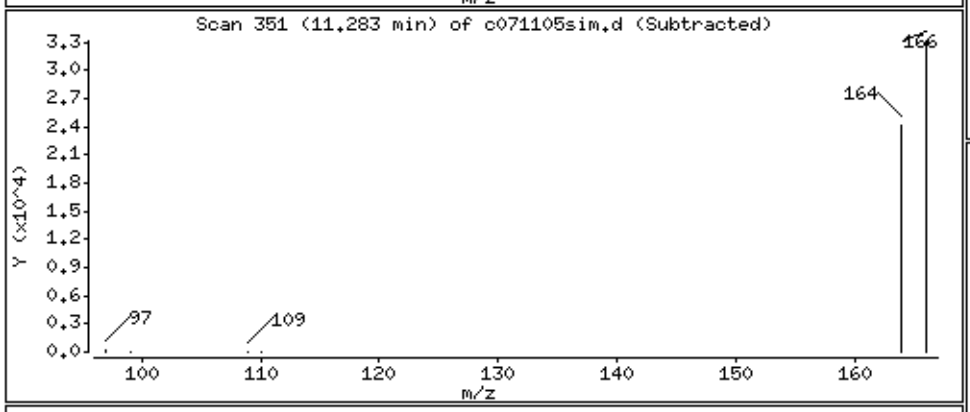
Column phase: DB-5.625

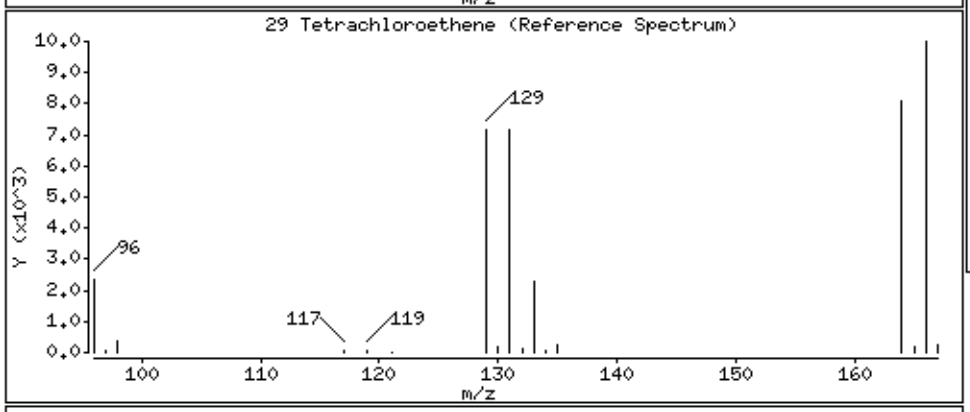
Column diameter: 0.25

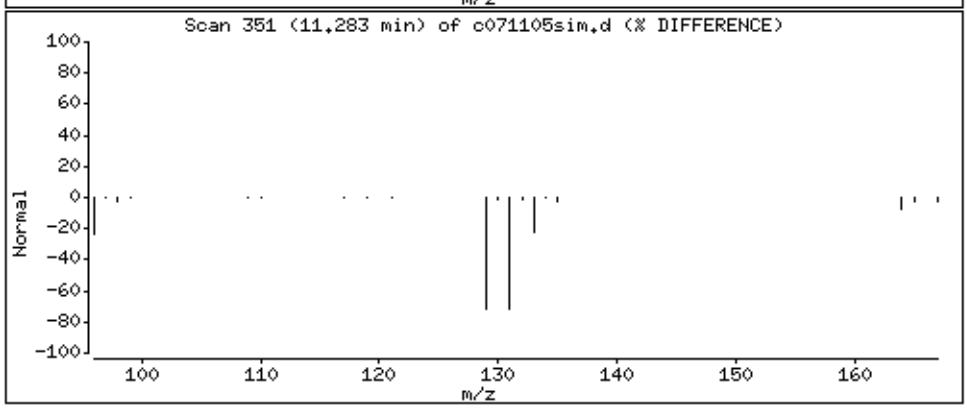
29 Tetrachloroethene

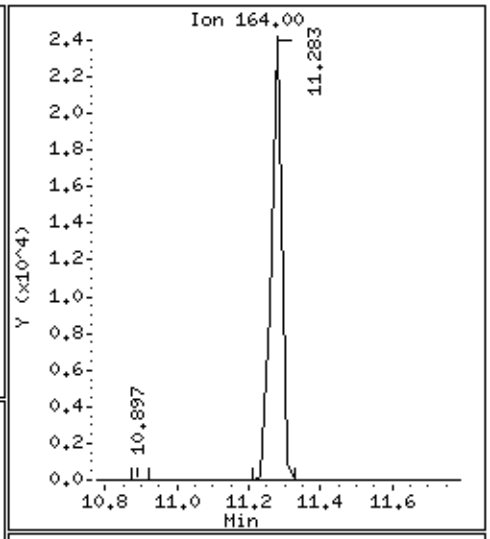
Concentration: 10.0850 ug

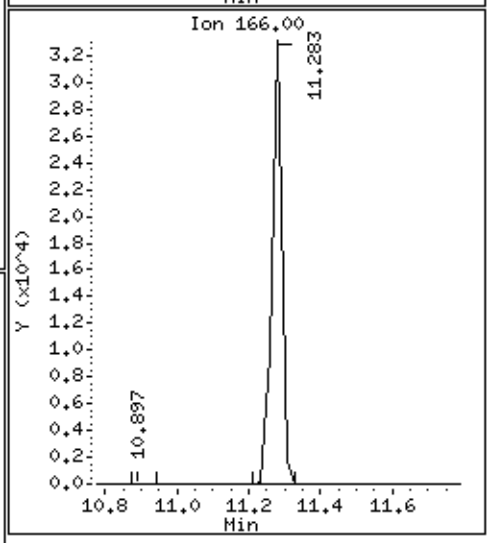












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

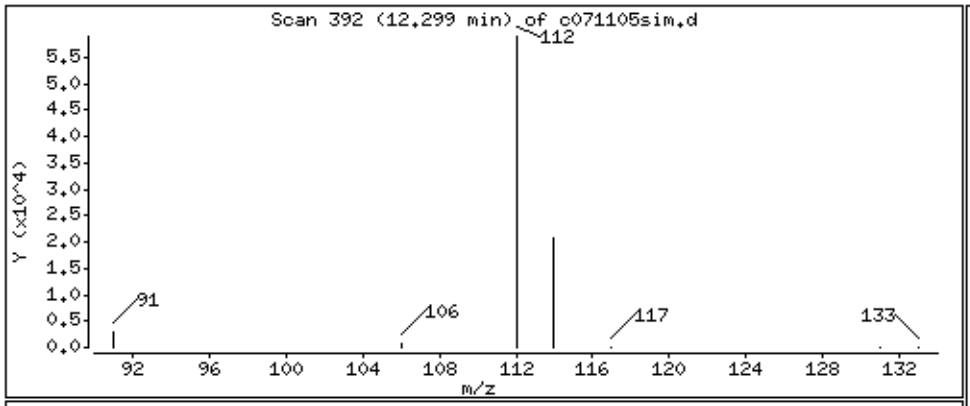
Operator: gm

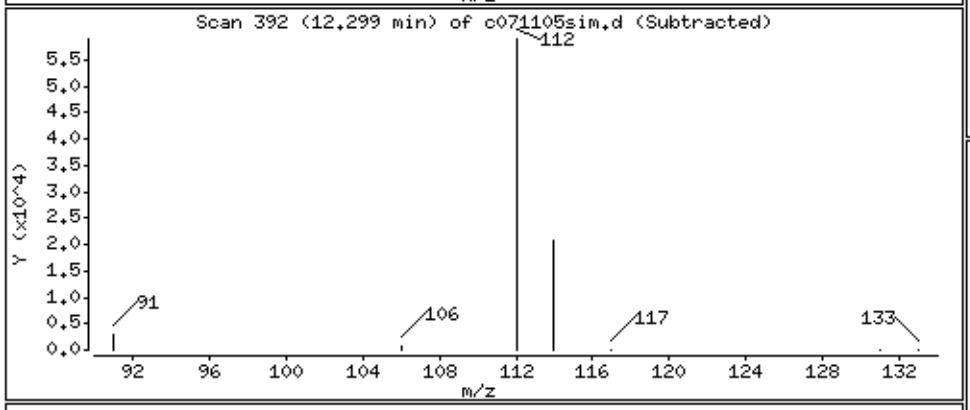
Column phase: DB-5.625

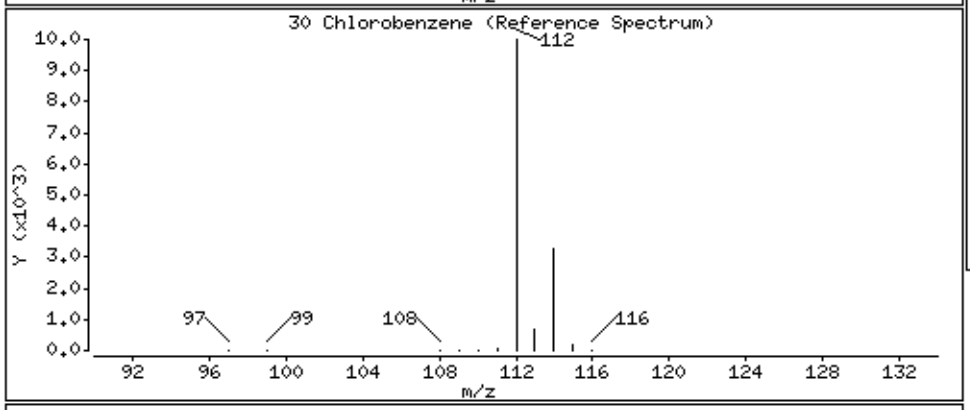
Column diameter: 0.25

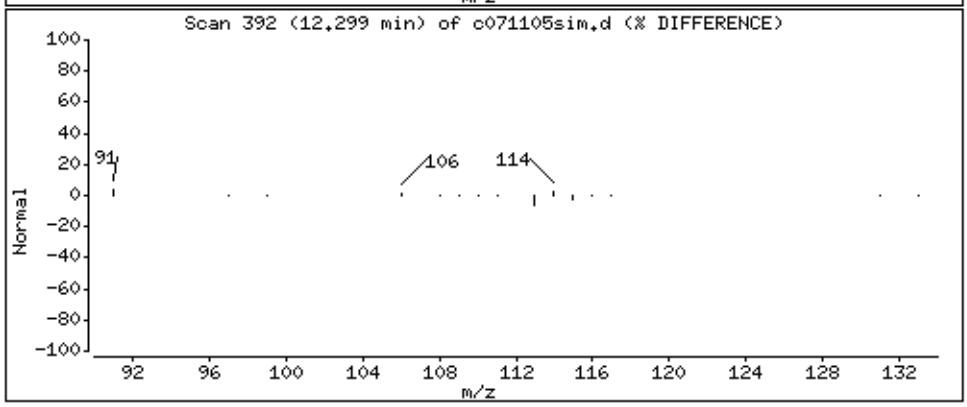
30 Chlorobenzene

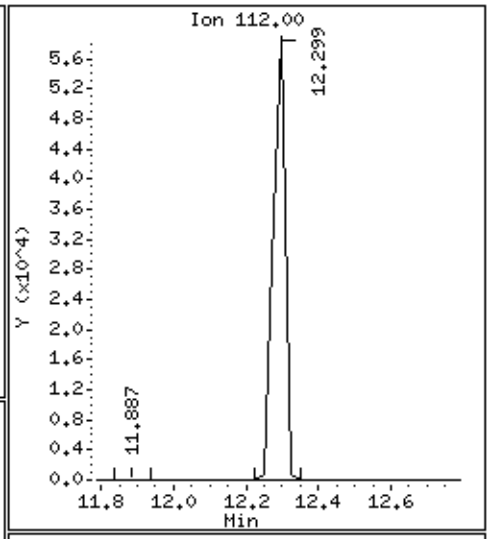
Concentration: 9.20555 ug

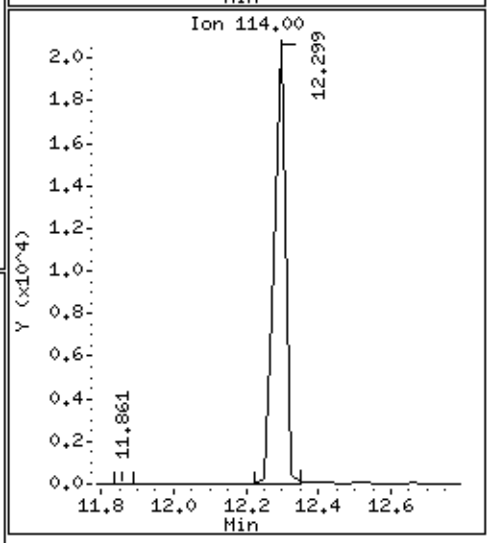












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

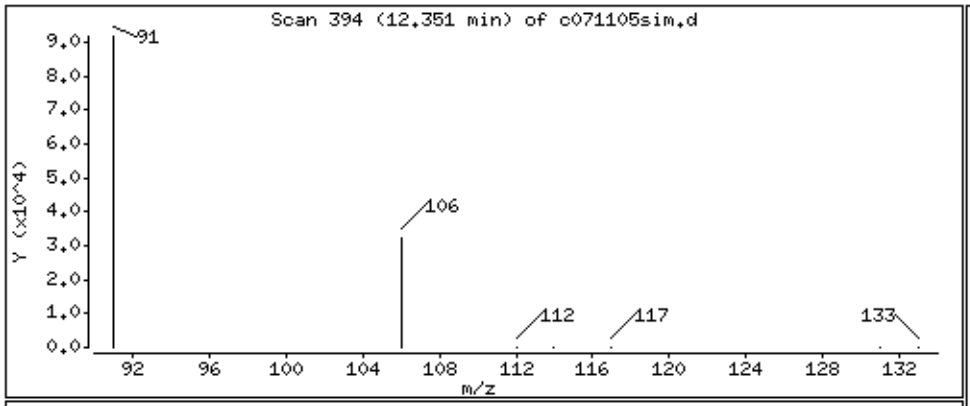
Operator: gm

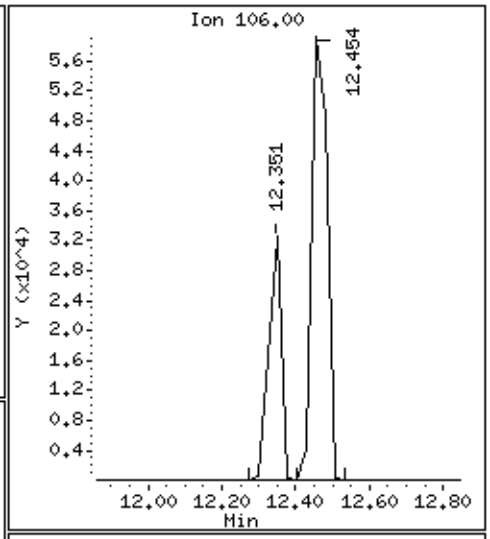
Column phase: DB-5.625

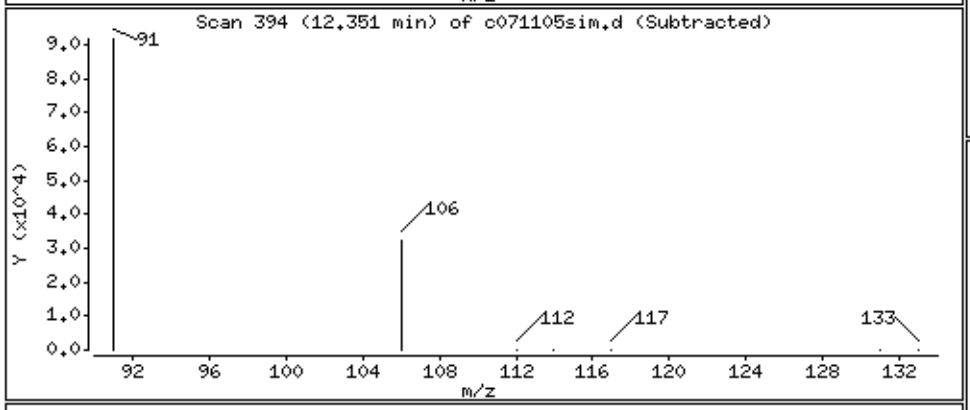
Column diameter: 0.25

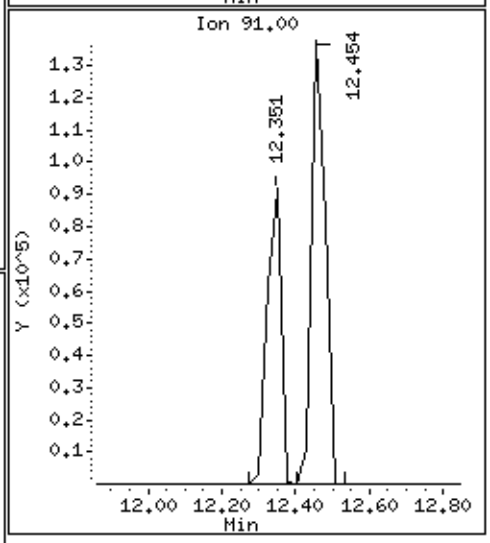
31 Ethylbenzene-CCC

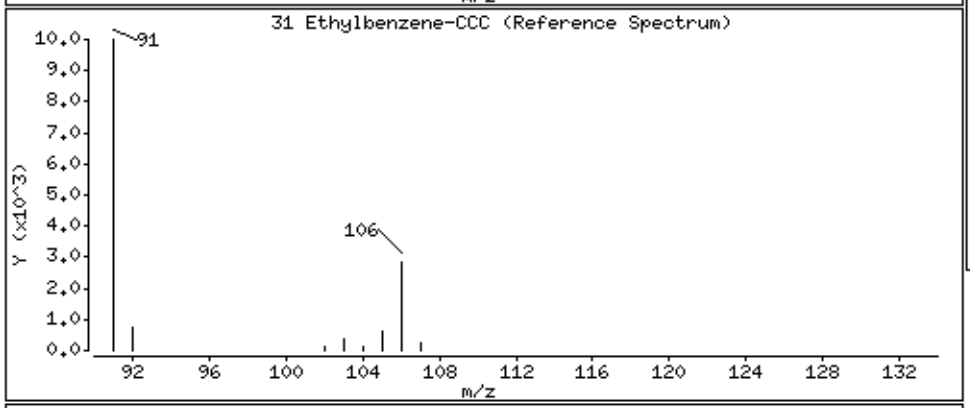
Concentration: 10.1038 ug

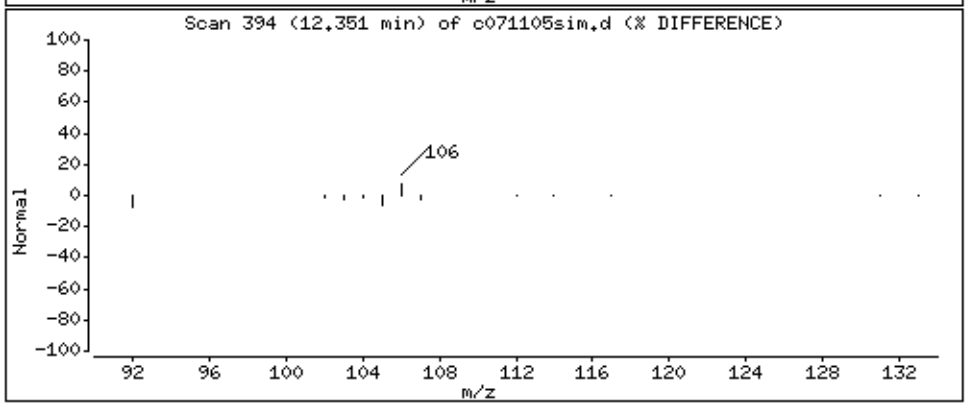












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

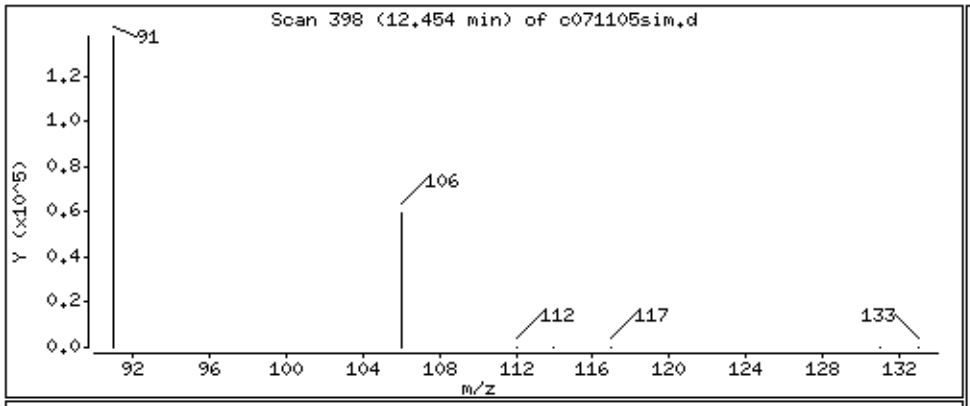
Operator: gm

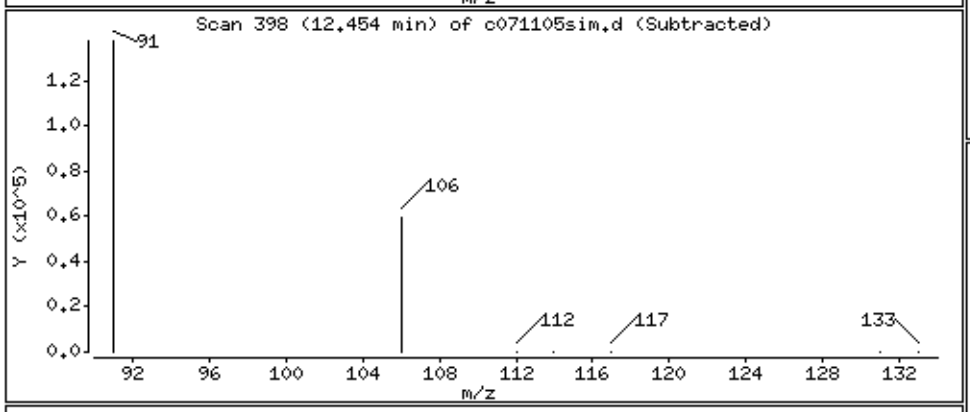
Column phase: DB-5.625

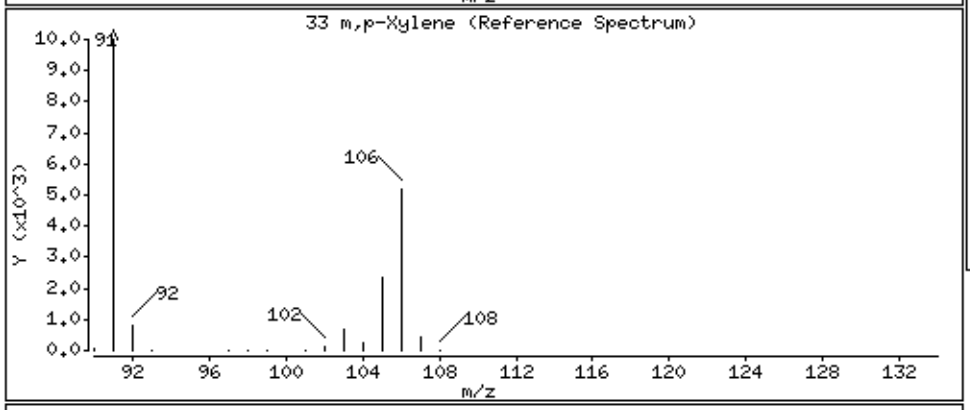
Column diameter: 0.25

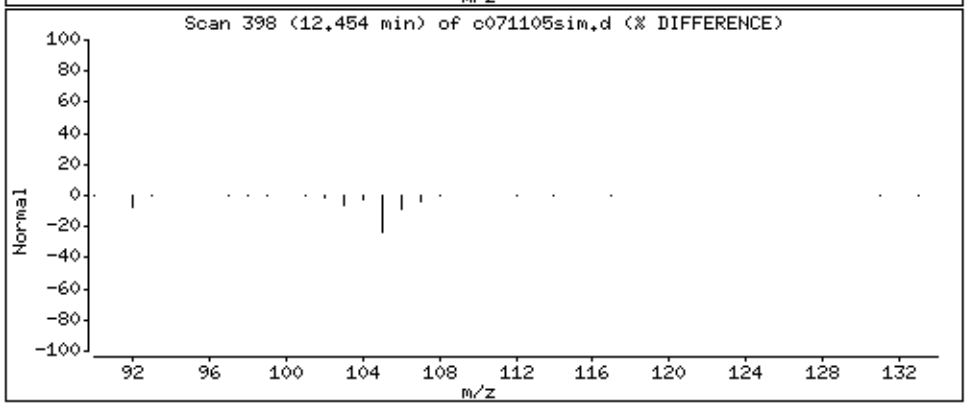
33 m,p-Xylene

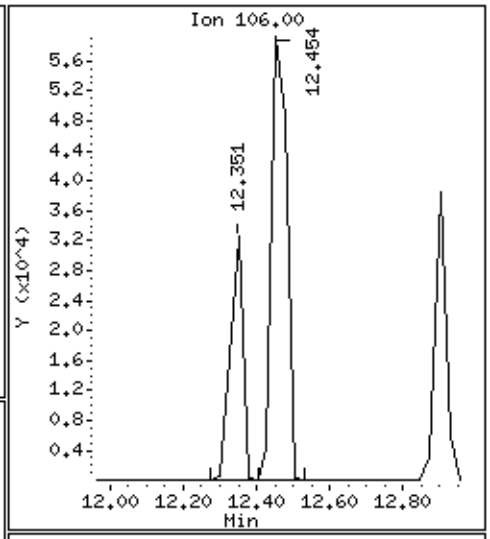
Concentration: 19.3403 ug

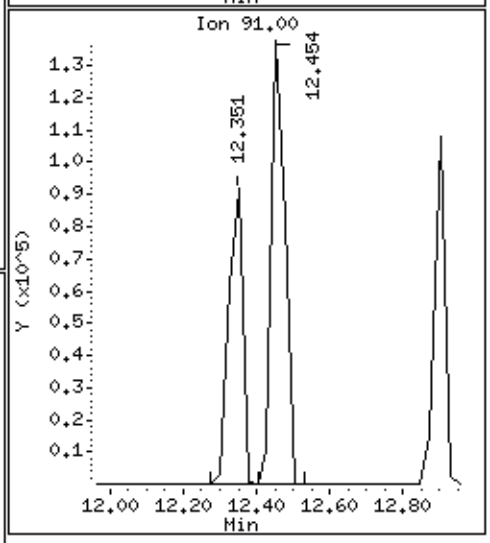












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

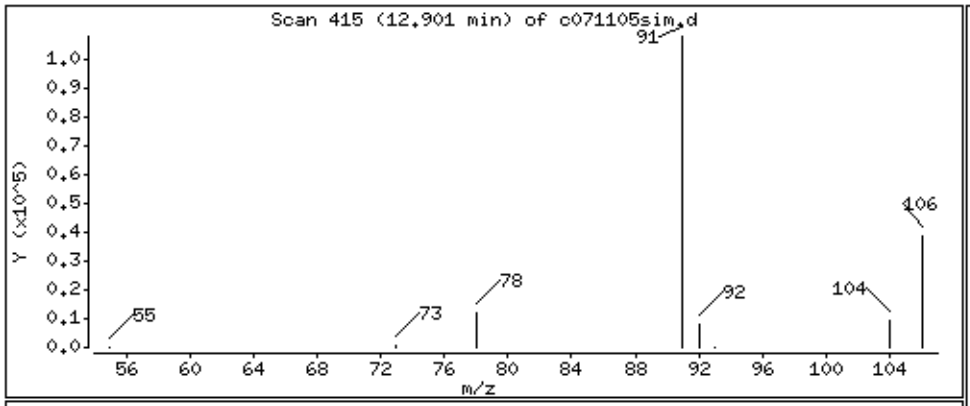
Operator: gm

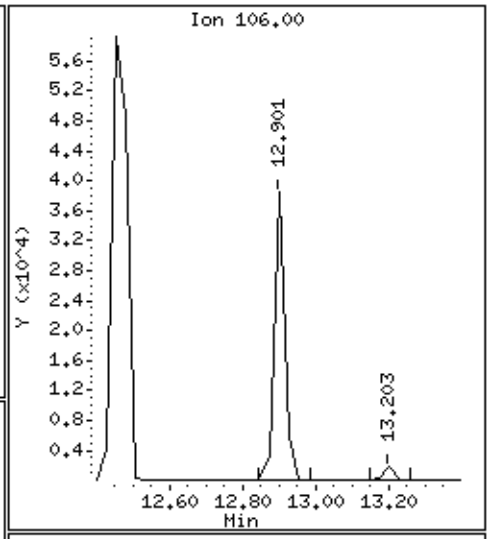
Column phase: DB-5.625

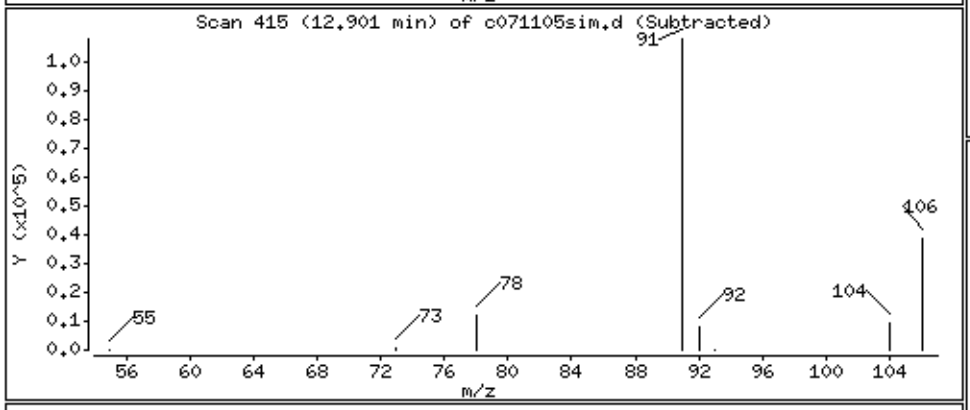
Column diameter: 0.25

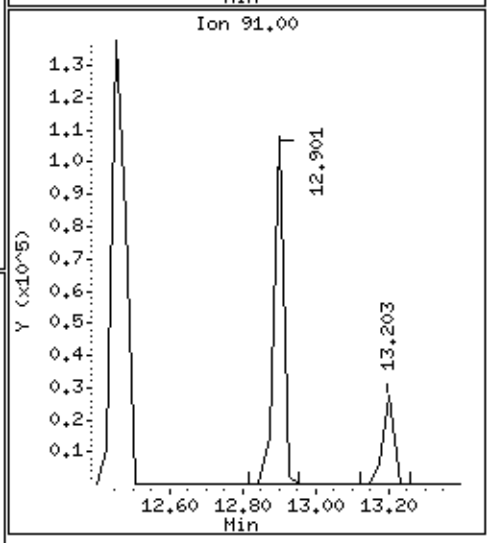
34 o-Xylene

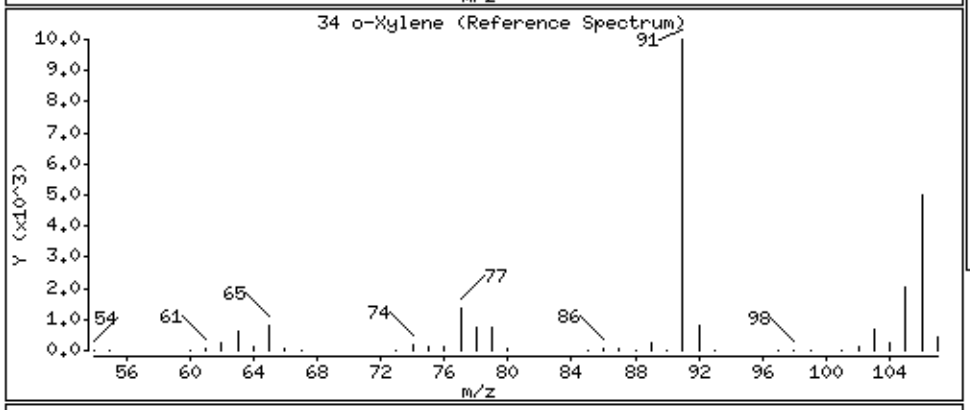
Concentration: 9.33302 ug

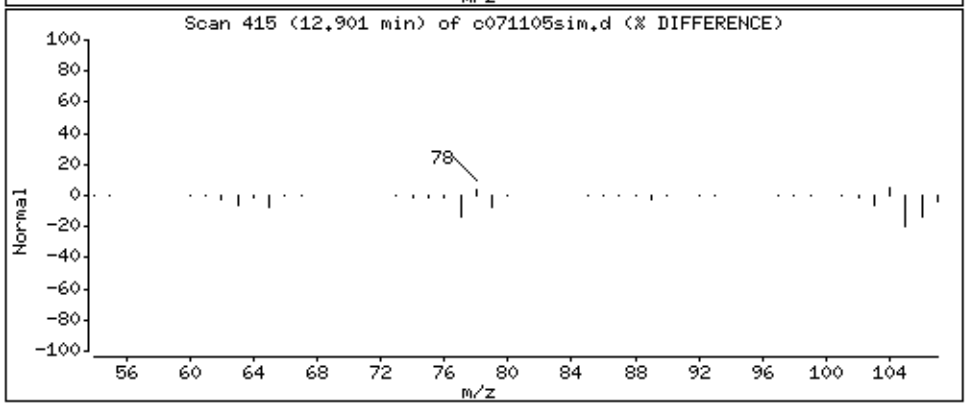












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

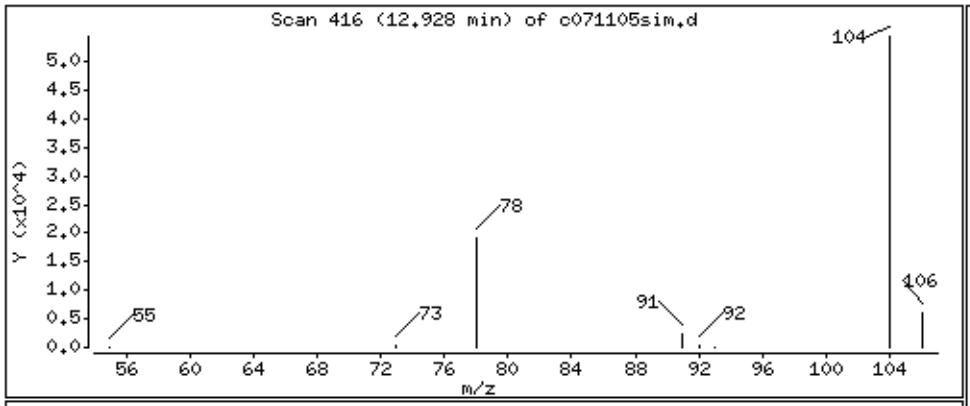
Operator: gm

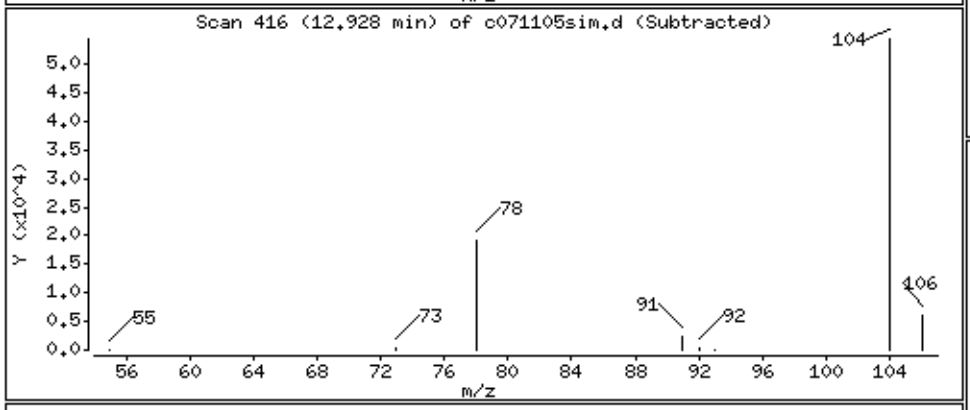
Column phase: DB-5.625

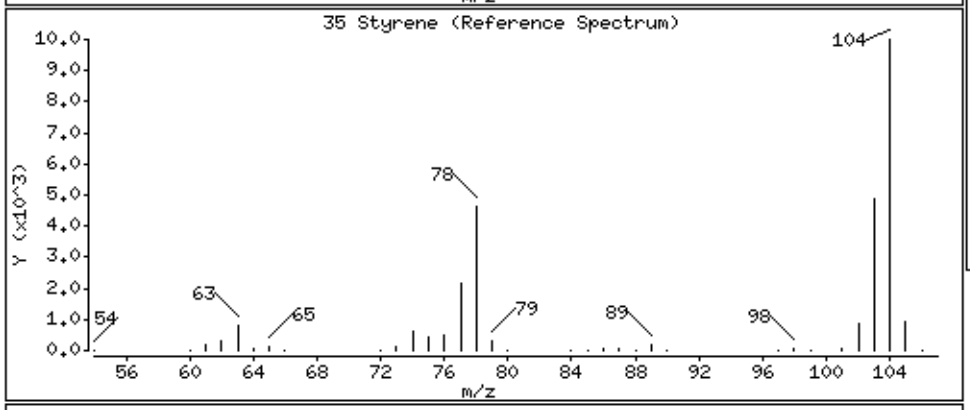
Column diameter: 0.25

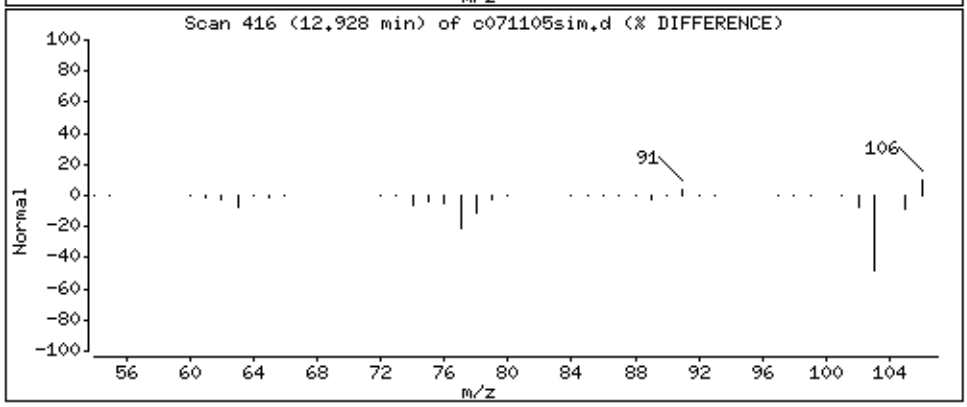
35 Styrene

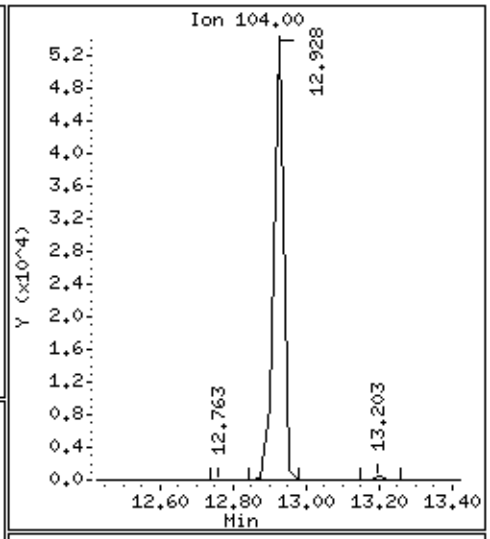
Concentration: 6.29437 ug

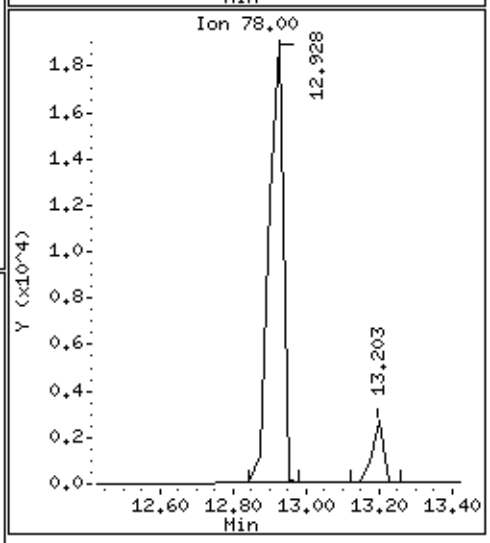












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

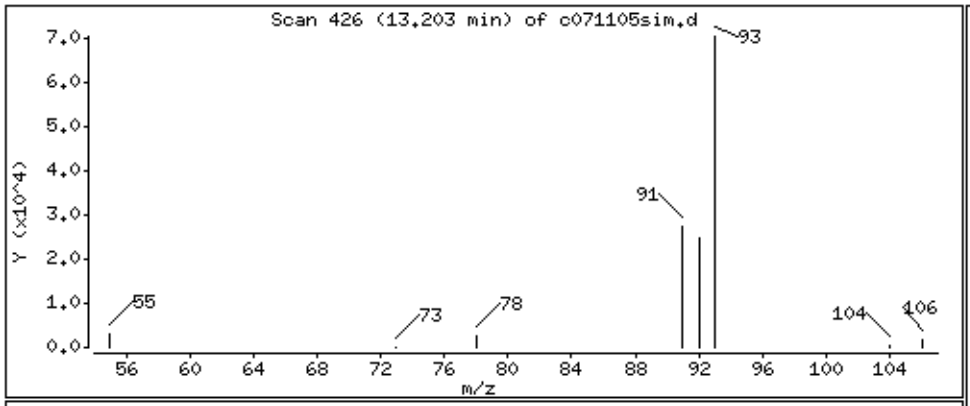
Operator: gm

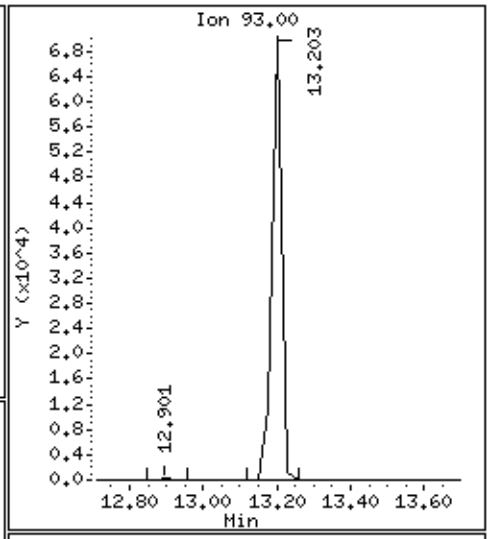
Column phase: DB-5.625

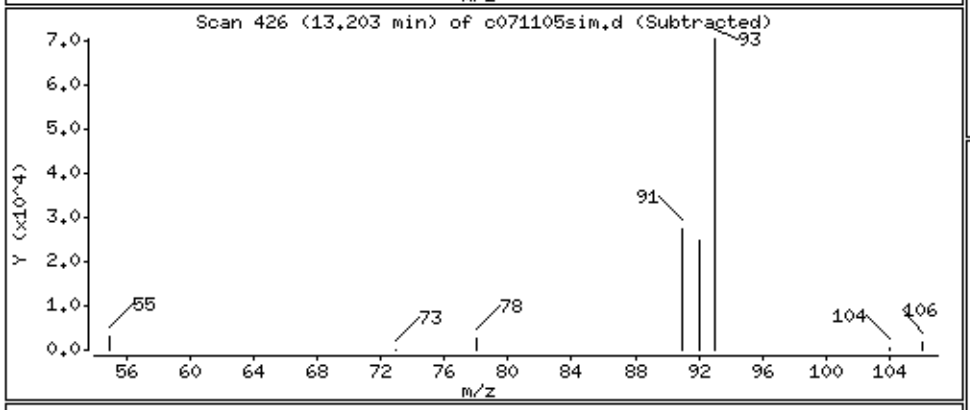
Column diameter: 0.25

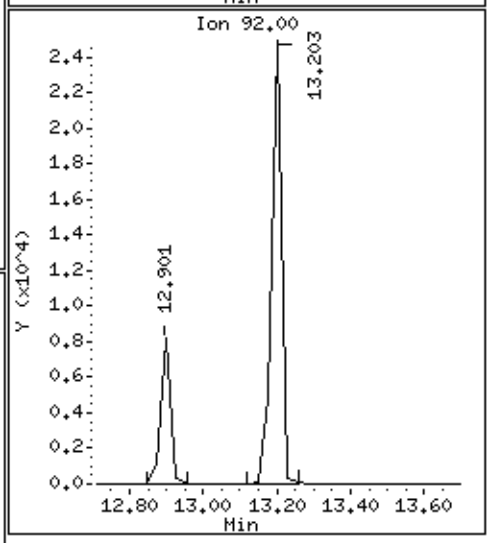
36 a-Pinene

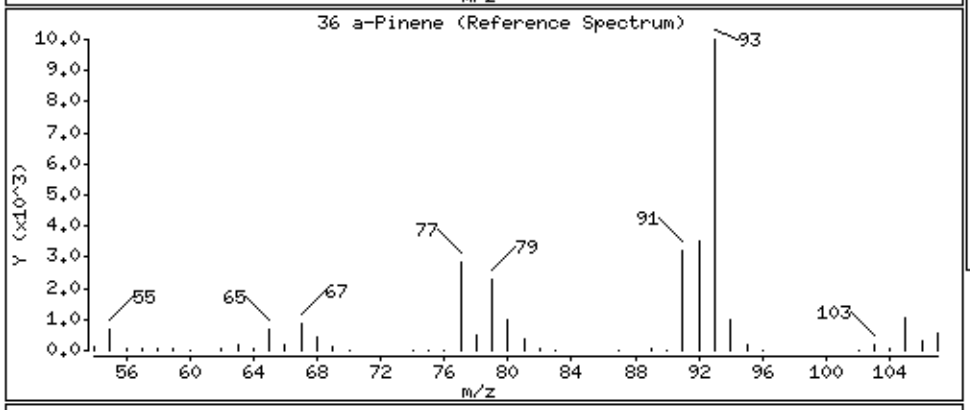
Concentration: 12.4776 ug

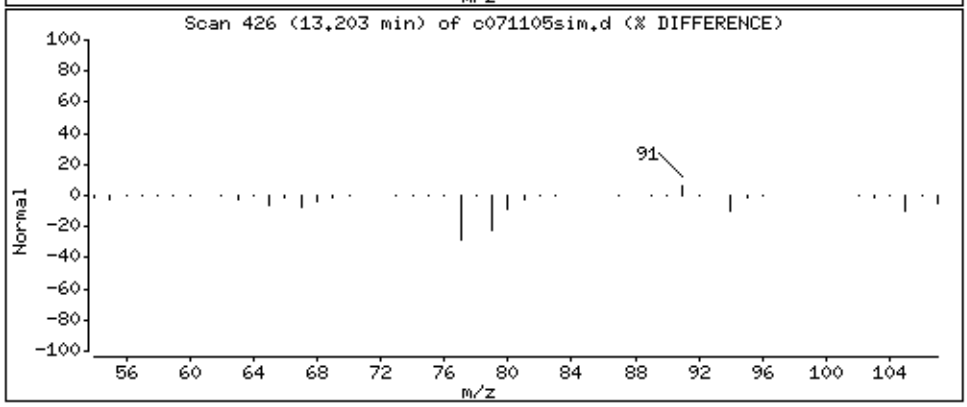












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

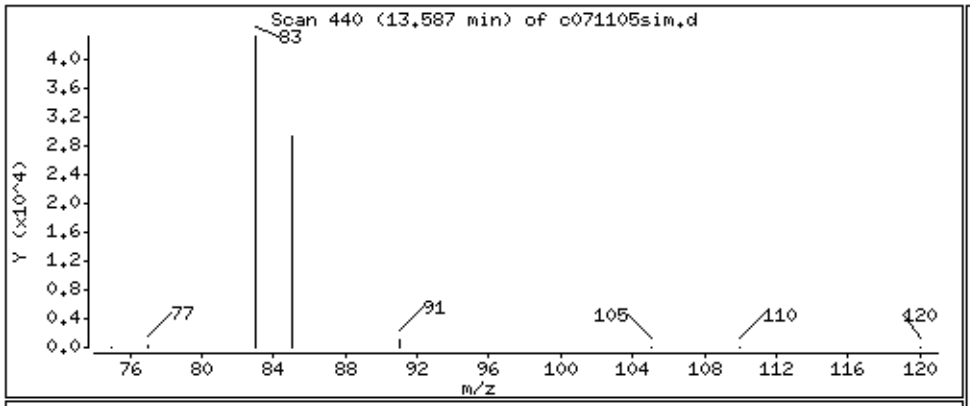
Operator: gm

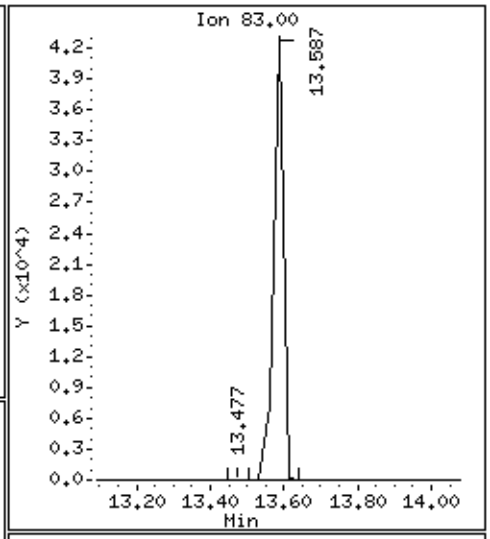
Column phase: DB-5.625

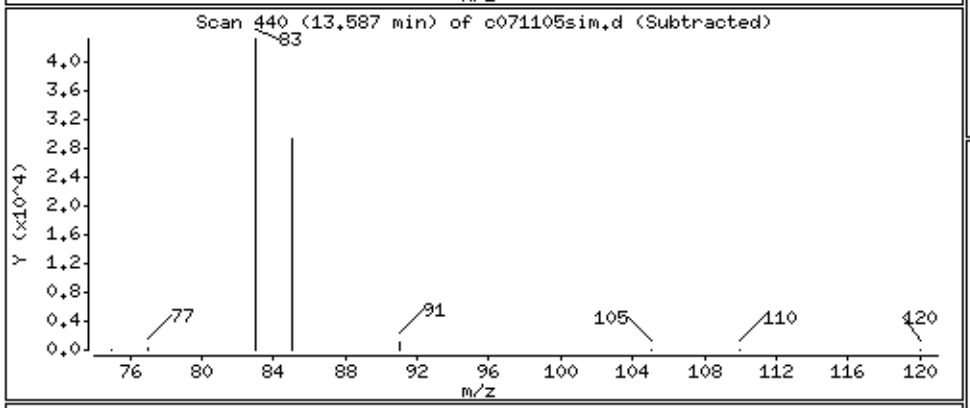
Column diameter: 0.25

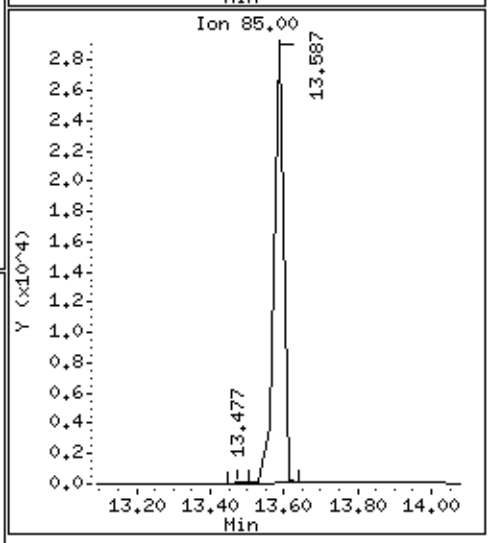
37 1,1,2,2-Tetrachloroethane-SPC

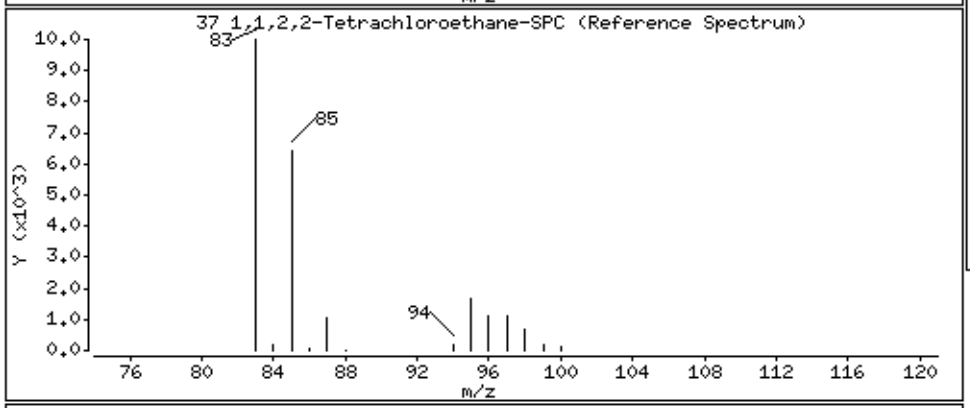
Concentration: 8.65876 ug

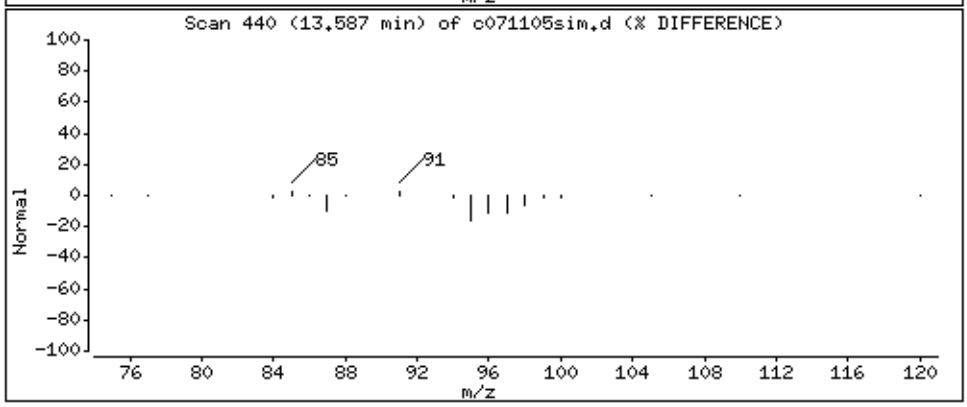












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

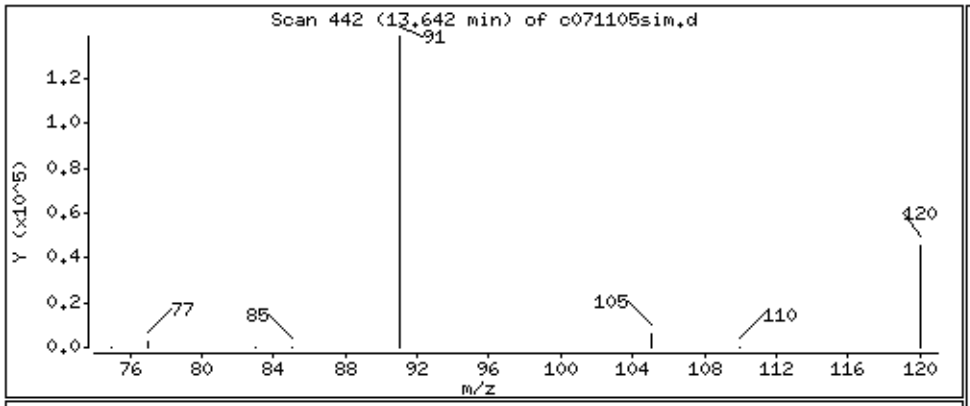
Operator: gm

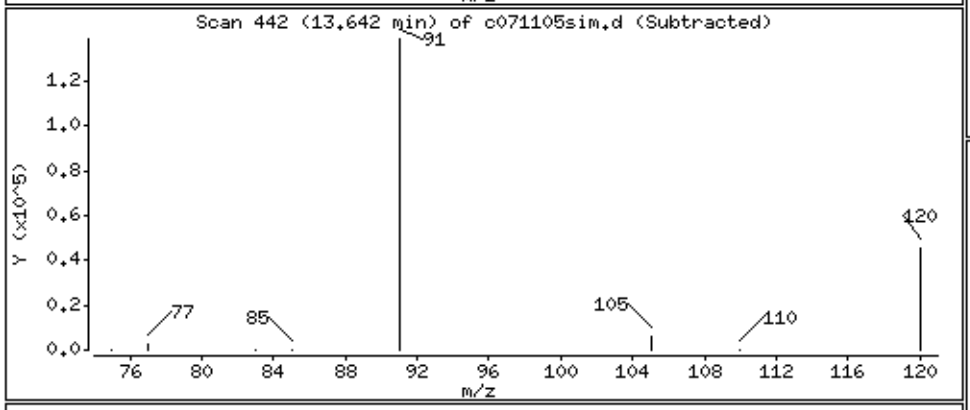
Column phase: DB-5.625

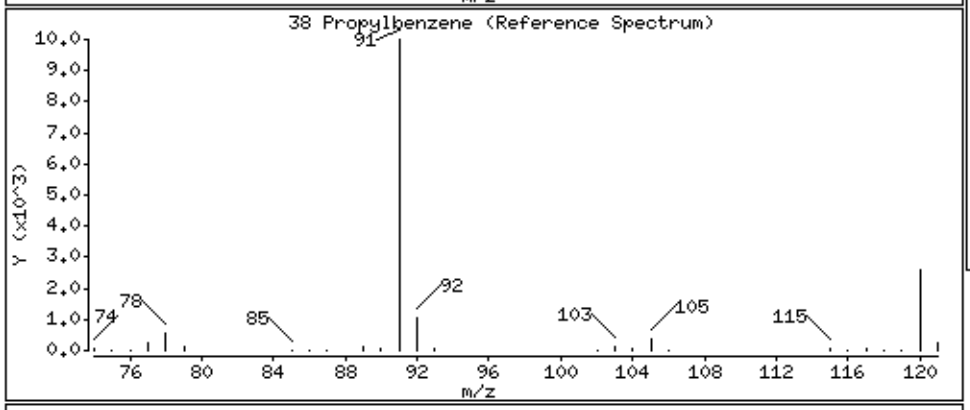
Column diameter: 0.25

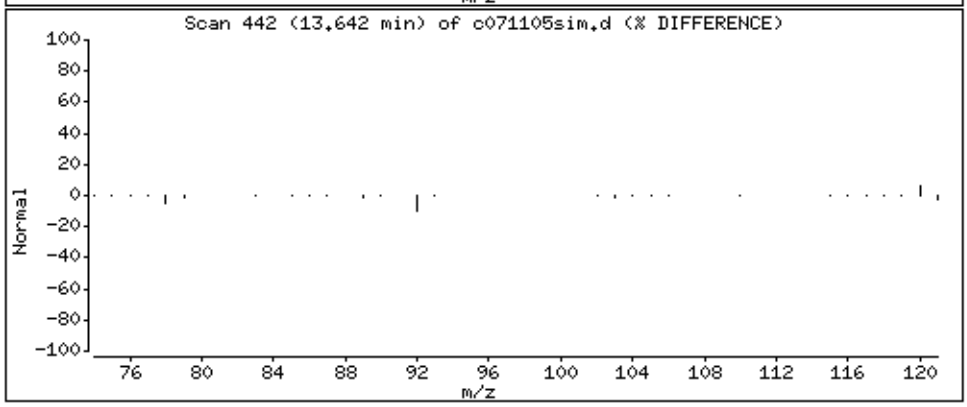
38 Propylbenzene

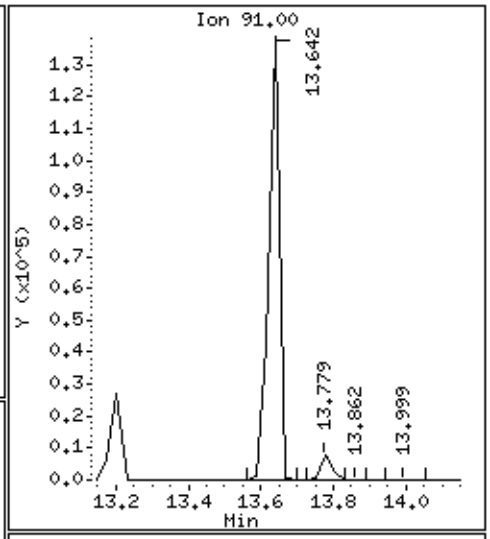
Concentration: 9.50953 ug

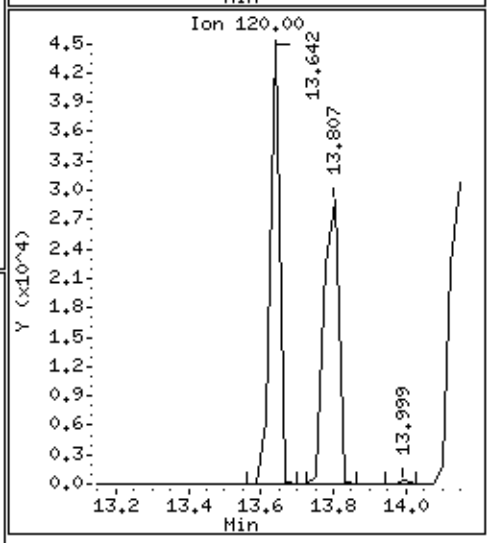












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

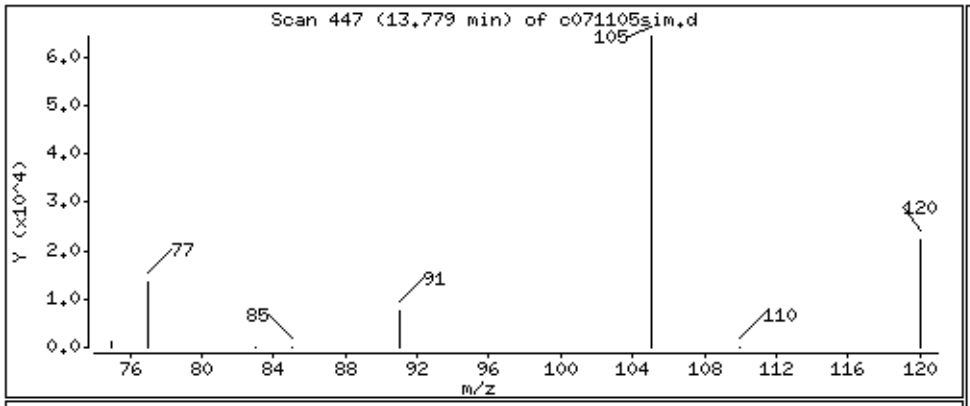
Operator: gm

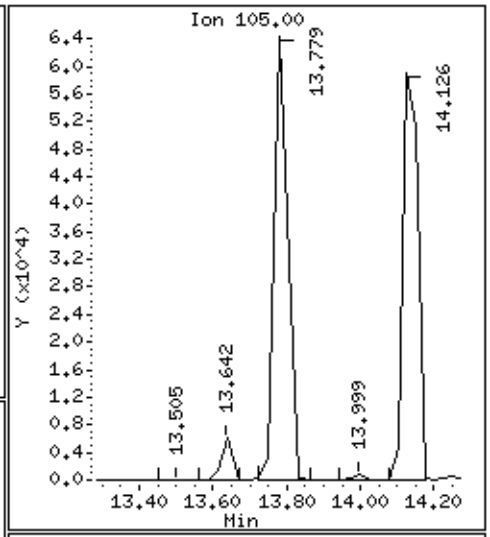
Column phase: DB-5.625

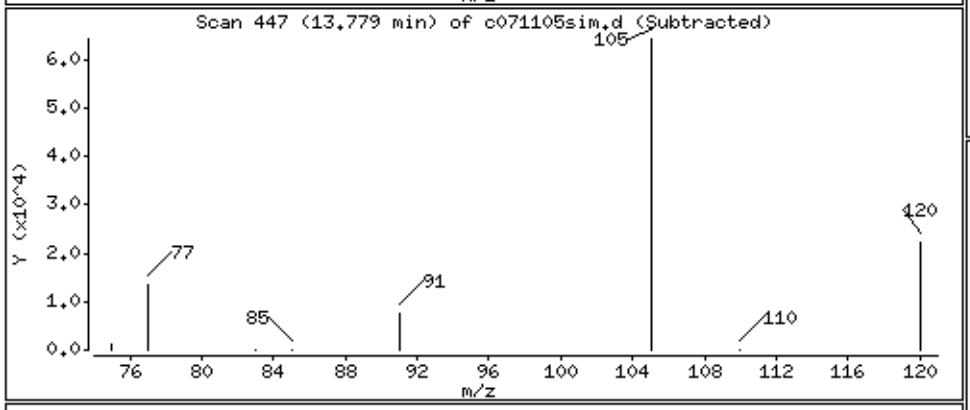
Column diameter: 0.25

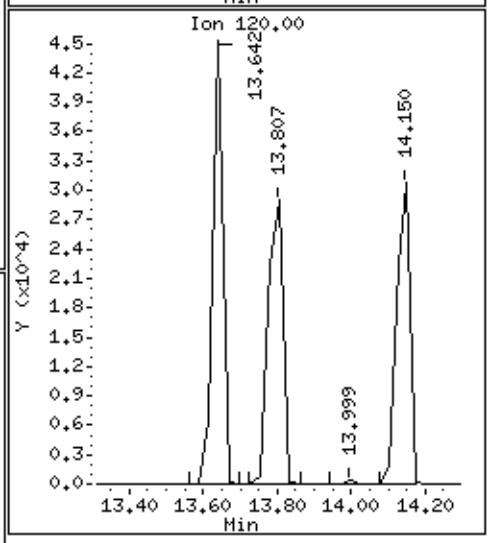
40 1,3,5-Trimethylbenzene

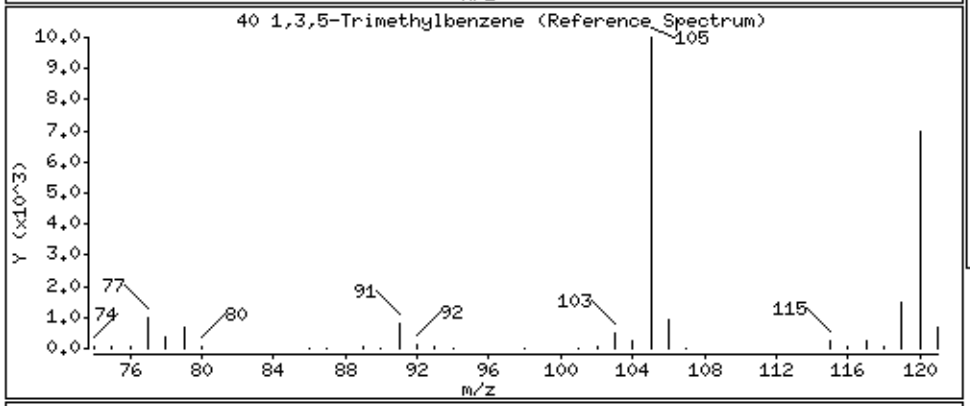
Concentration: 9.72415 ug

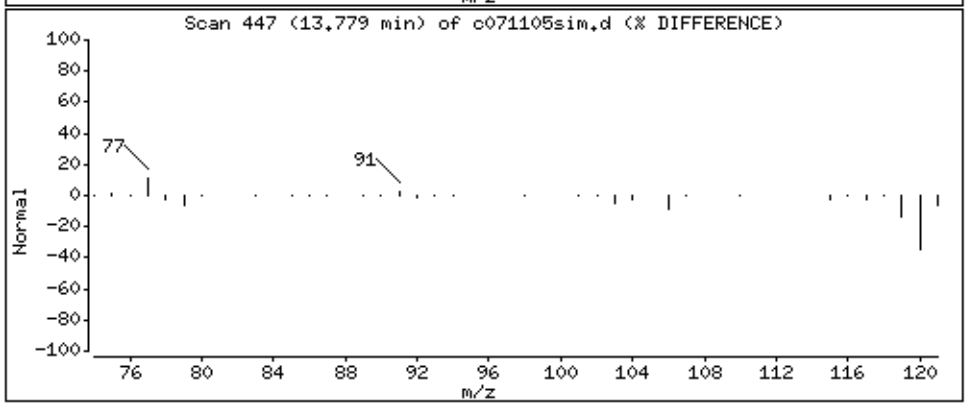












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

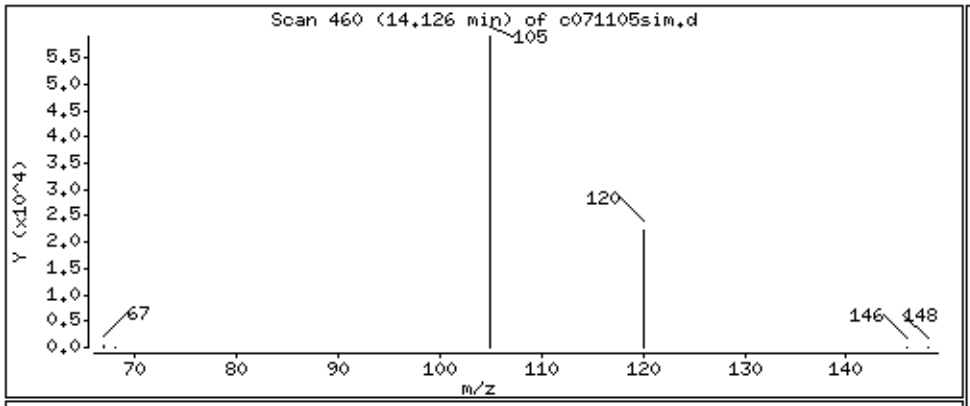
Operator: gm

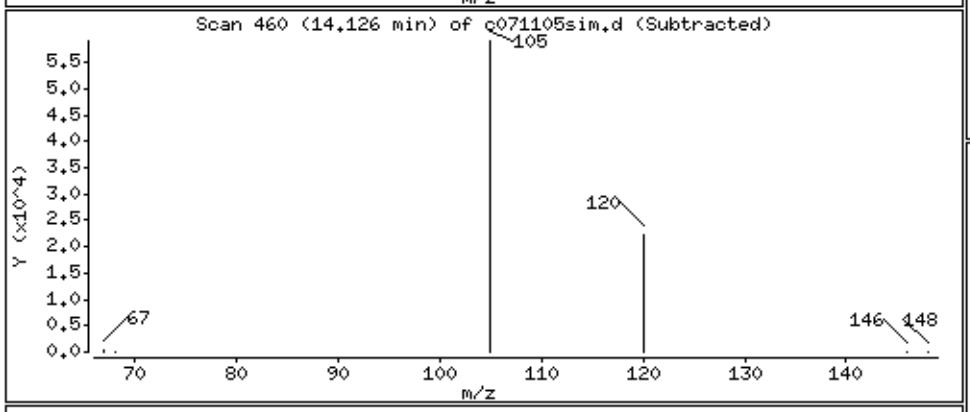
Column phase: DB-5.625

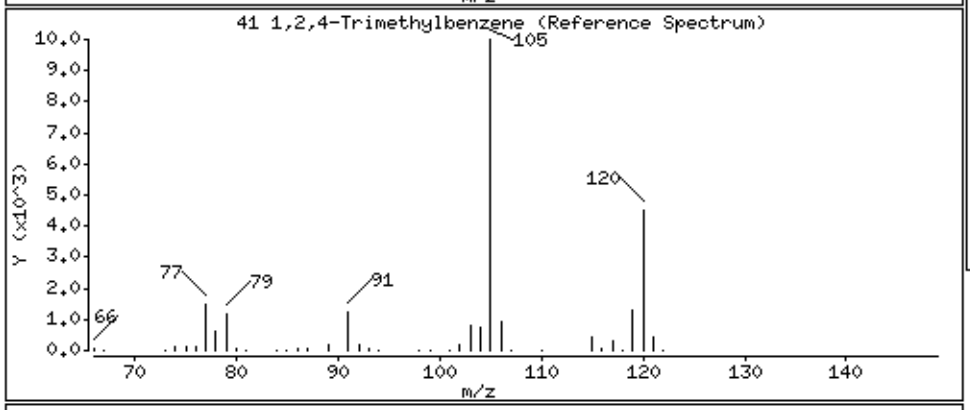
Column diameter: 0.25

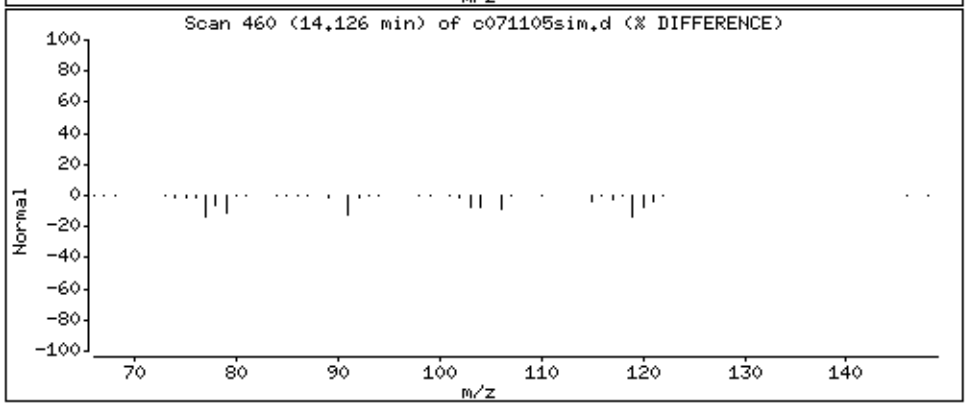
41 1,2,4-Trimethylbenzene

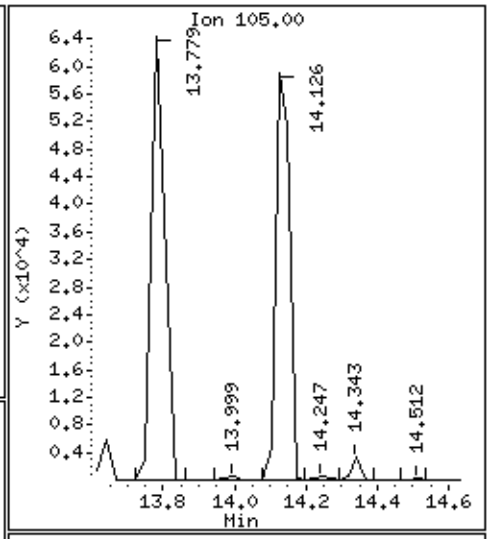
Concentration: 9.23912 ug

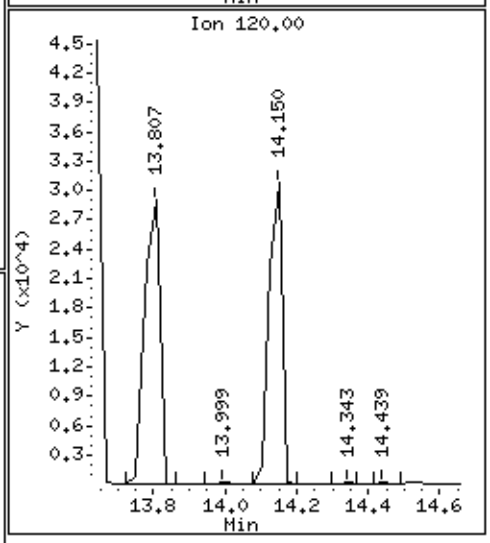












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

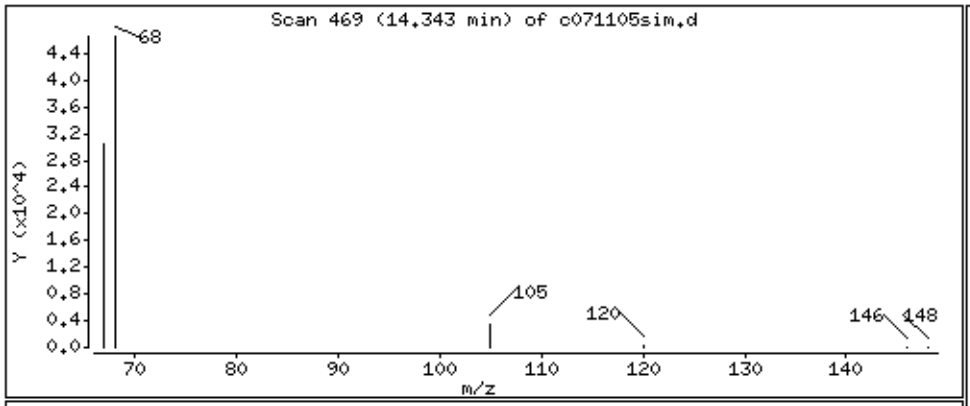
Operator: gm

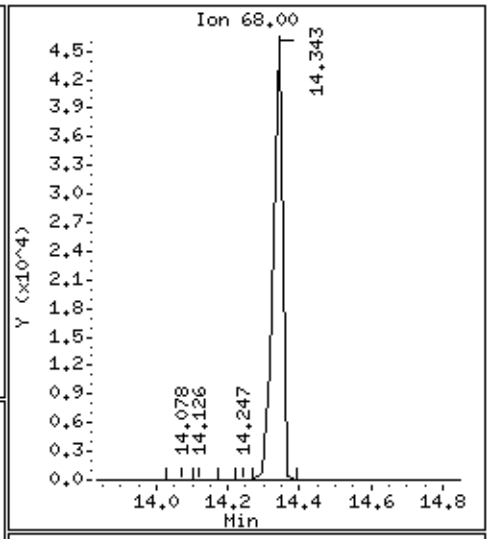
Column phase: DB-5.625

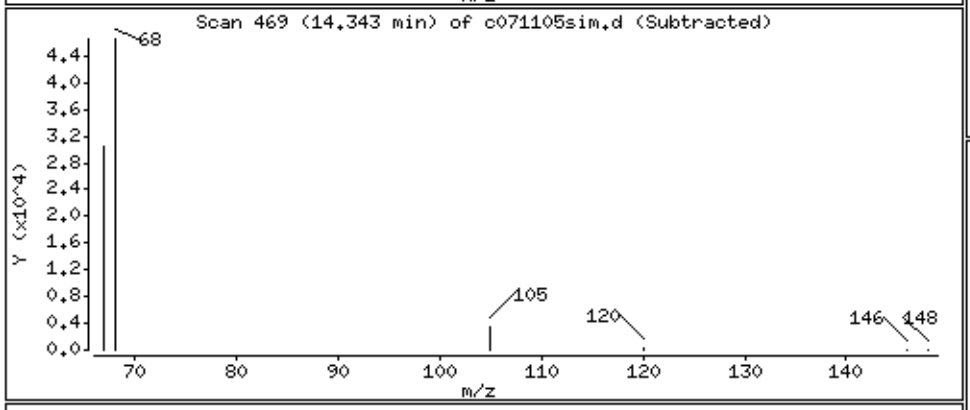
Column diameter: 0.25

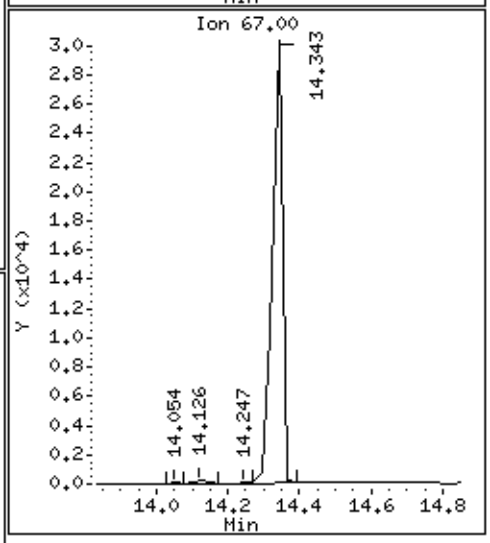
42 R-(+)-Limonene

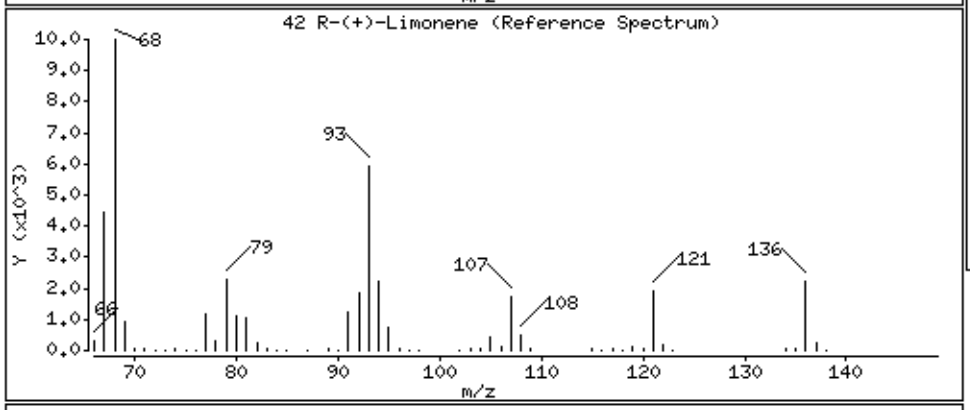
Concentration: 10.2842 ug

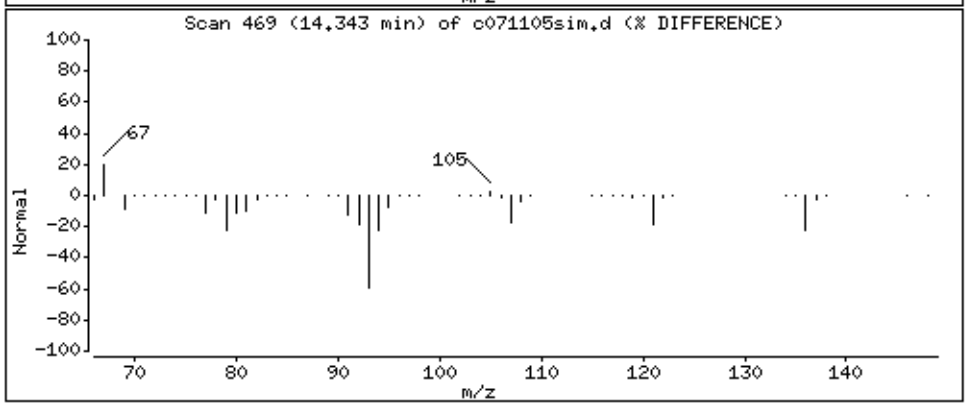












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

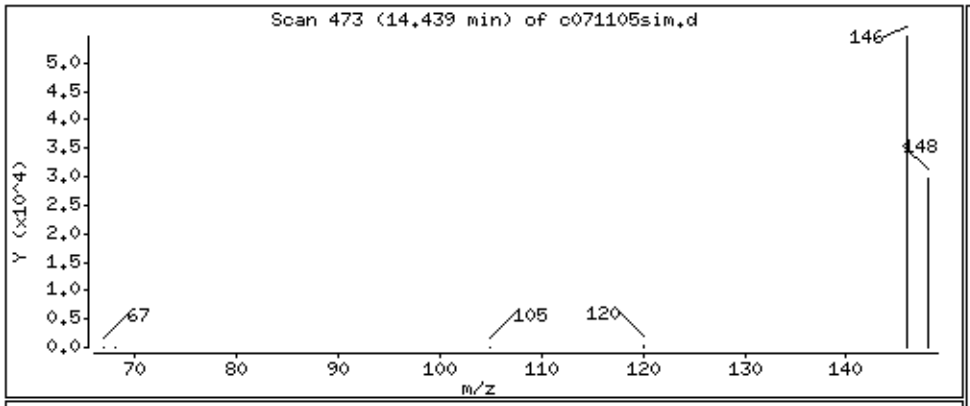
Operator: gm

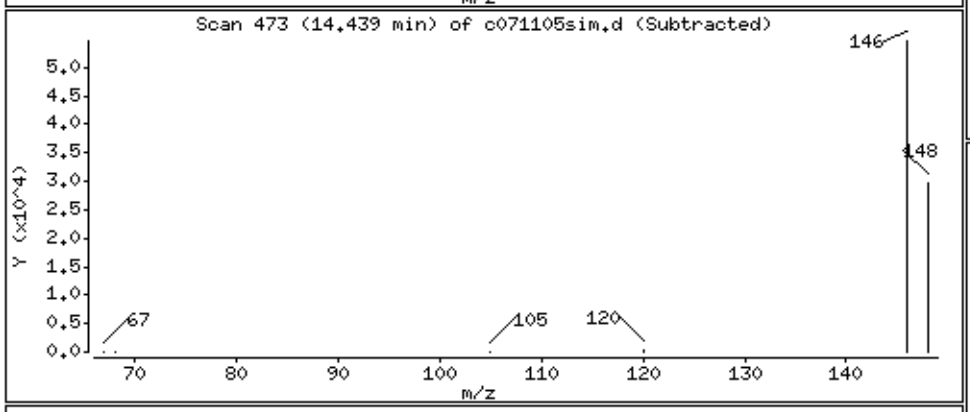
Column phase: DB-5.625

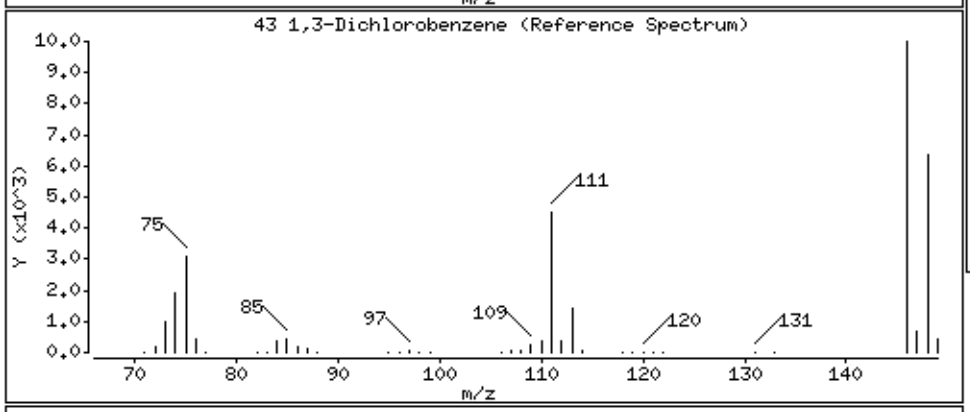
Column diameter: 0.25

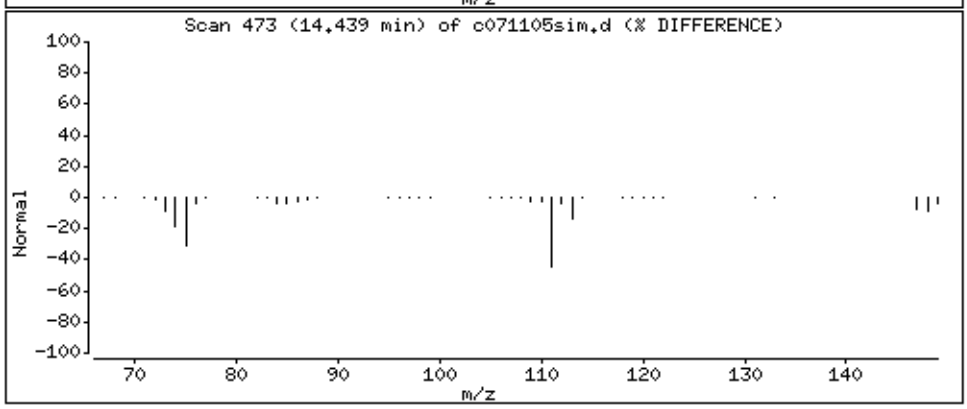
43 1,3-Dichlorobenzene

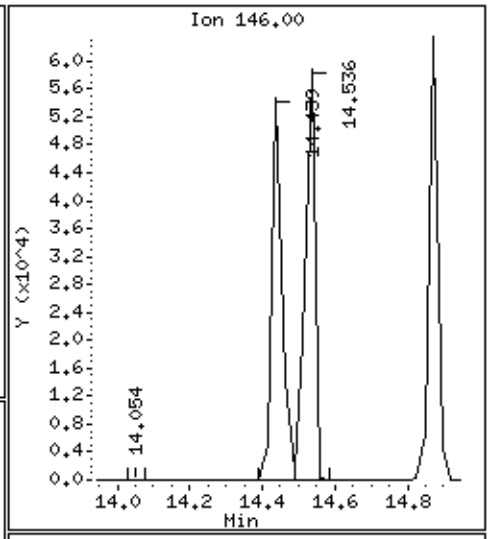
Concentration: 9.08271 ug

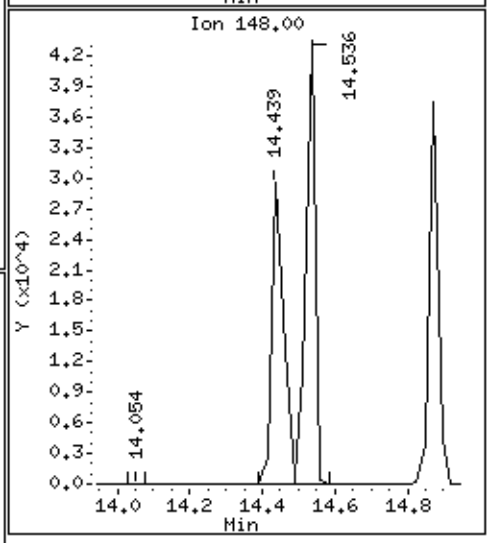












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

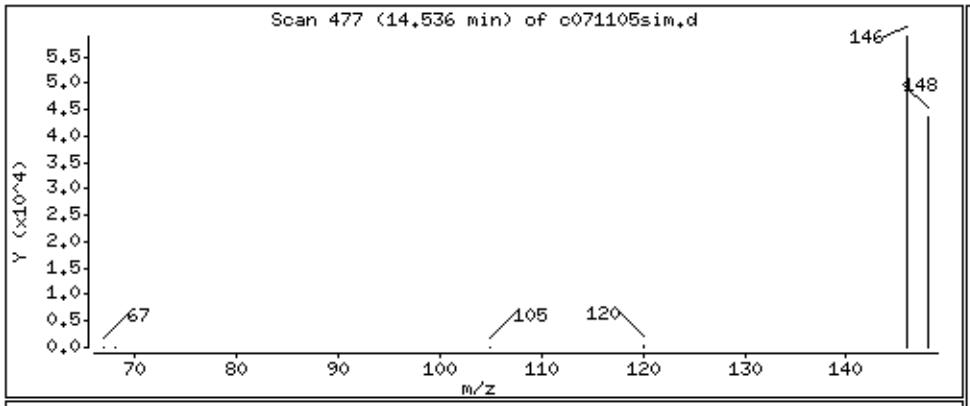
Operator: gm

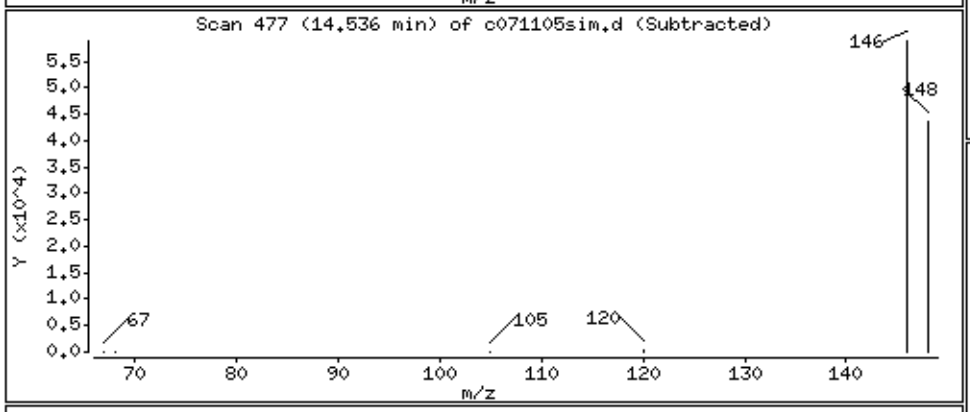
Column phase: DB-5.625

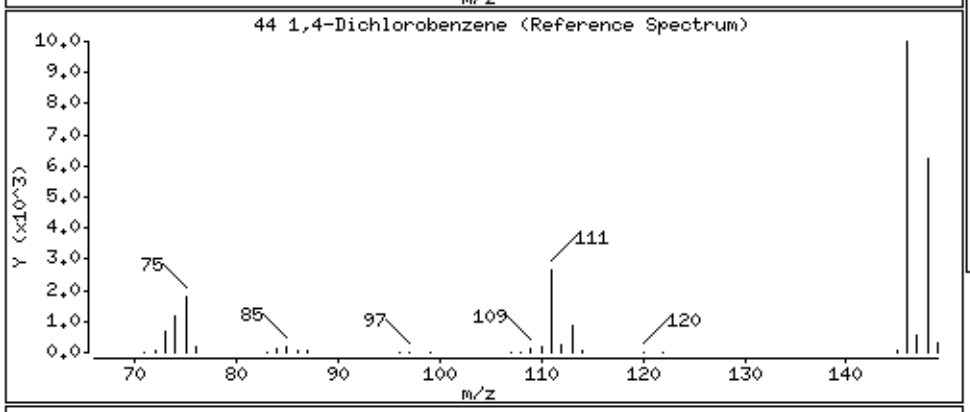
Column diameter: 0.25

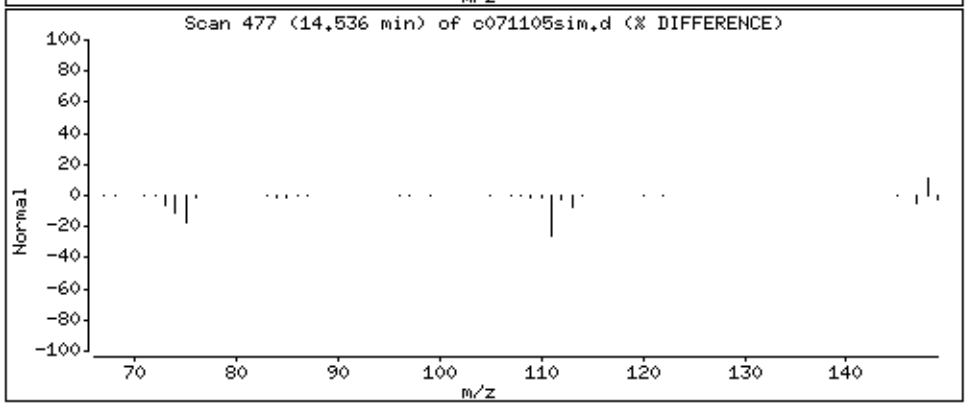
44 1,4-Dichlorobenzene

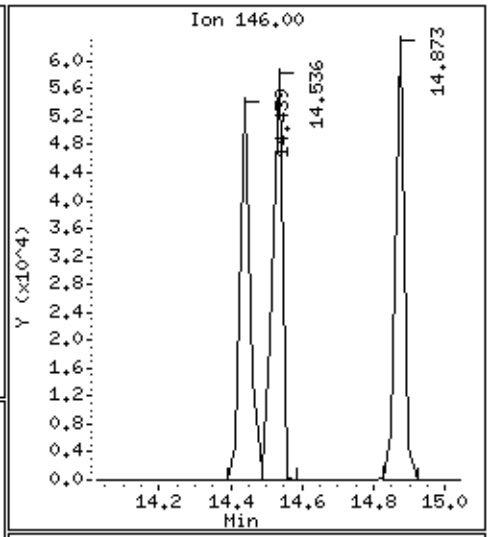
Concentration: 8.11485 ug

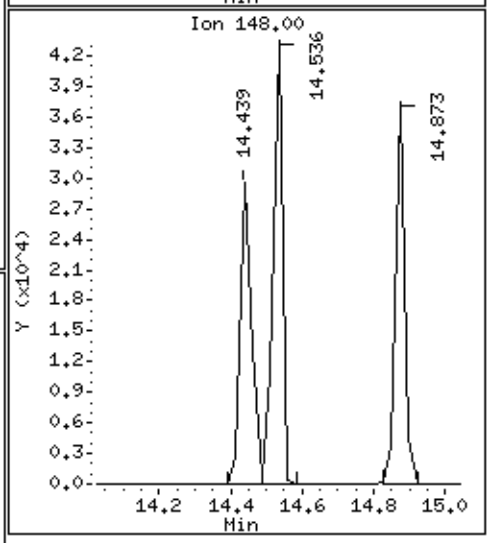












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

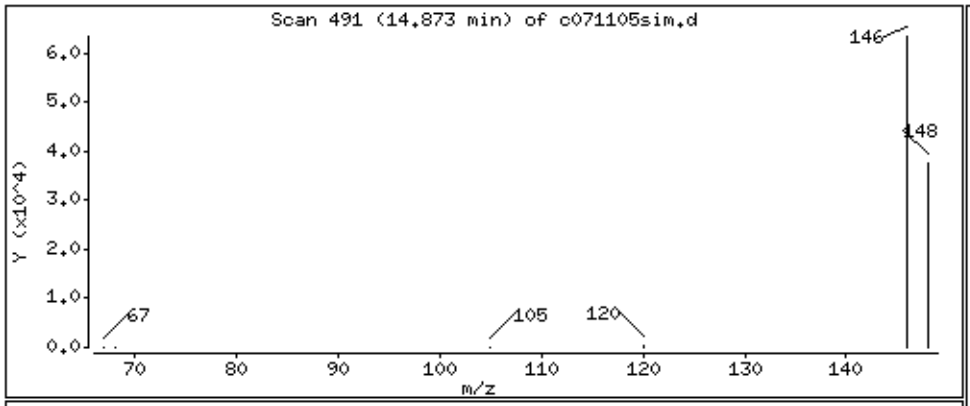
Operator: gm

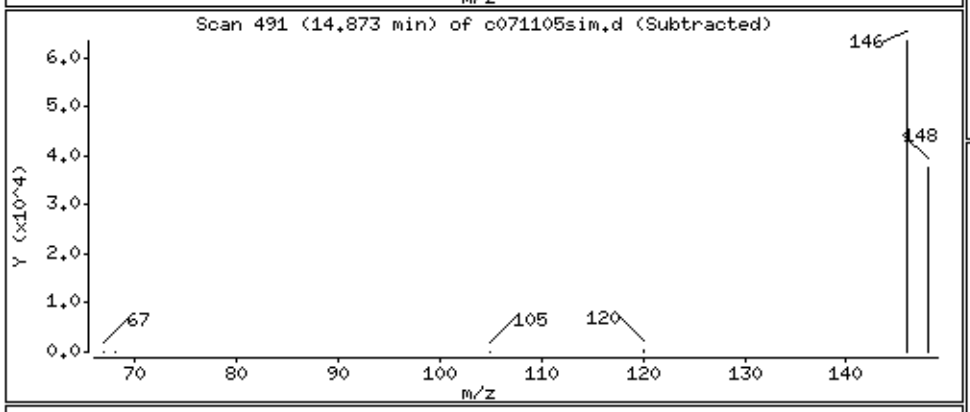
Column phase: DB-5.625

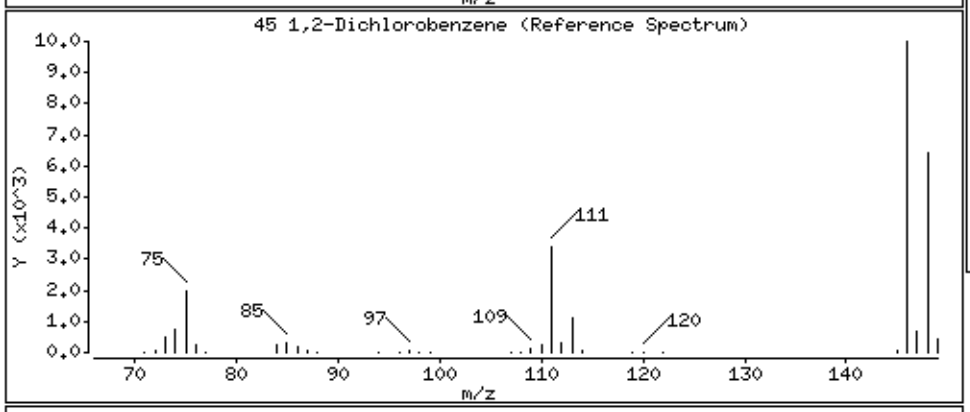
Column diameter: 0.25

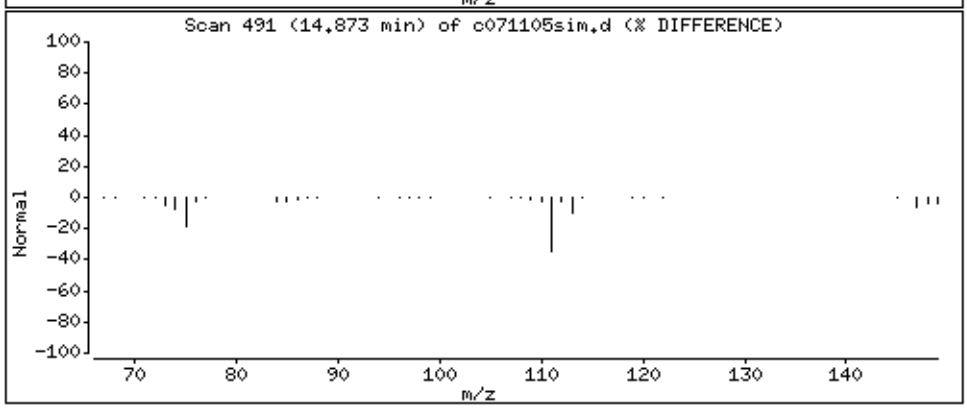
45 1,2-Dichlorobenzene

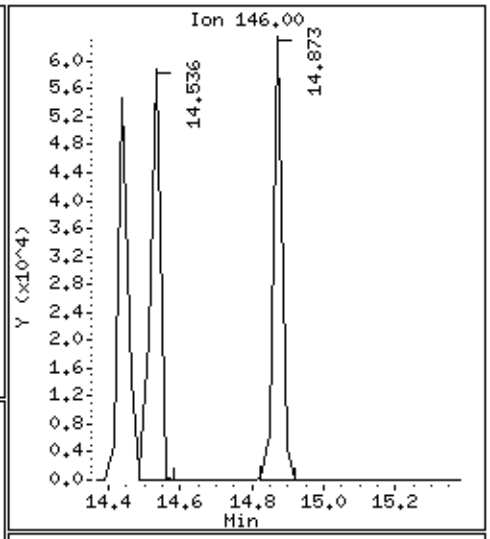
Concentration: 8.54658 ug

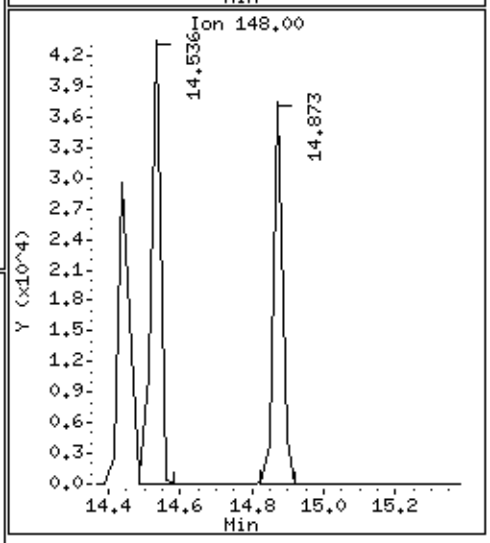












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

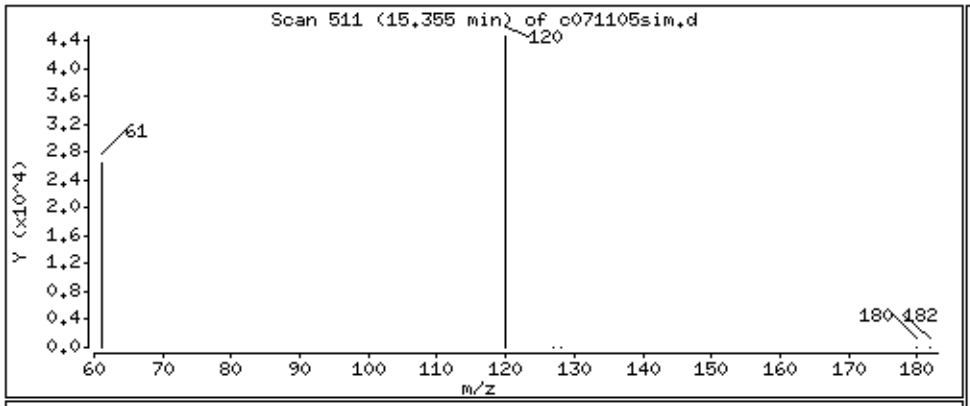
Operator: gm

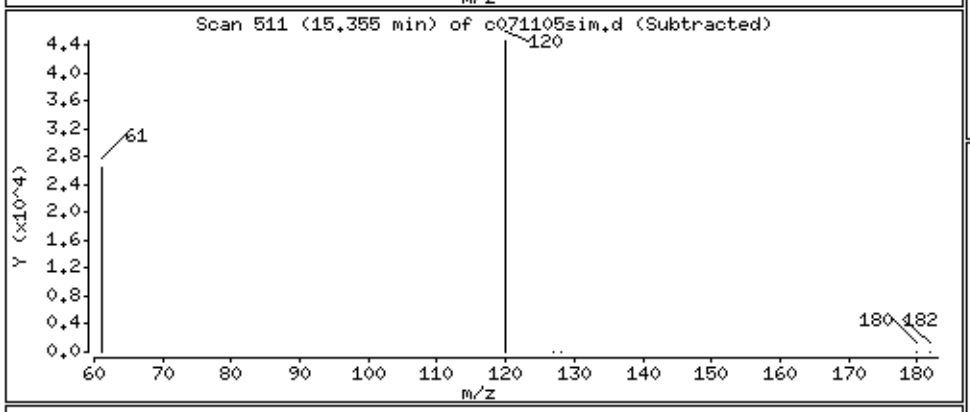
Column phase: DB-5.625

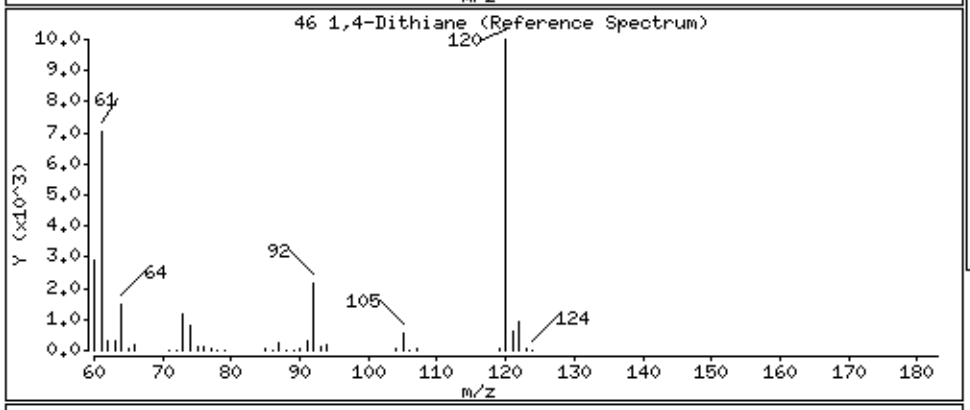
Column diameter: 0.25

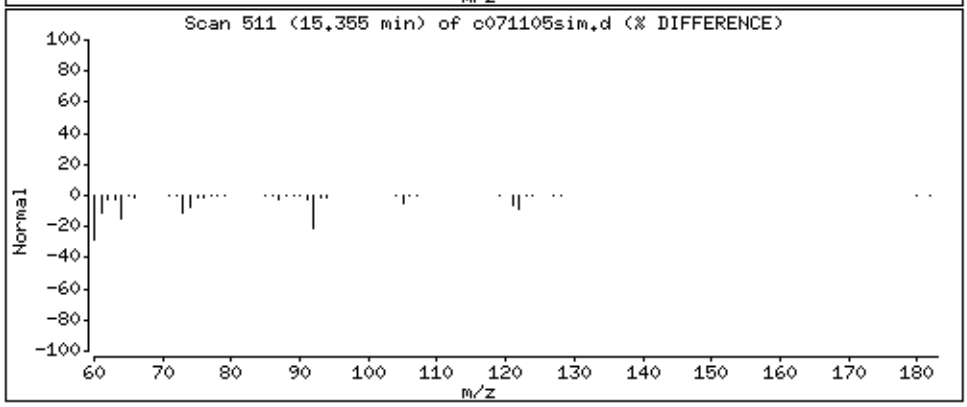
46 1,4-Dithiane

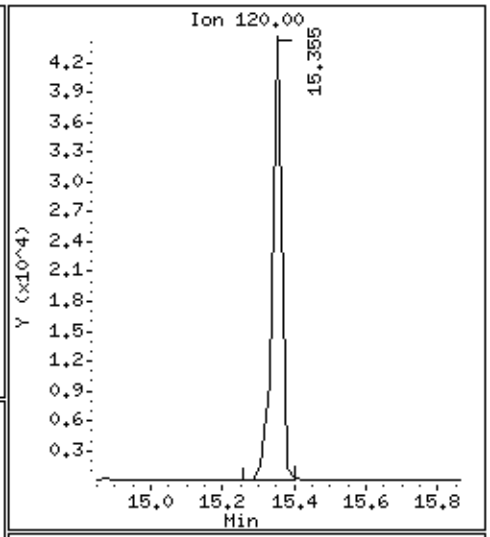
Concentration: 9.38478 ug

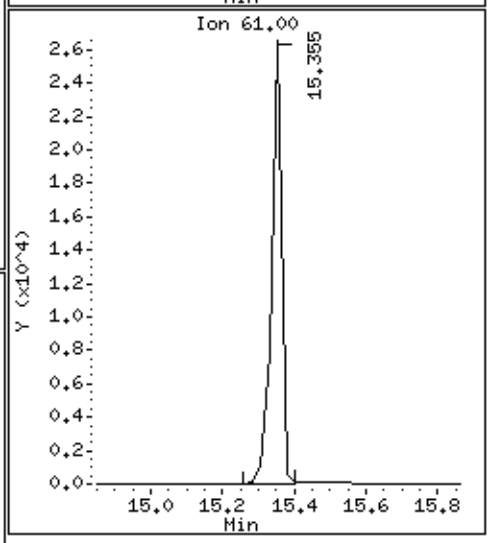












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

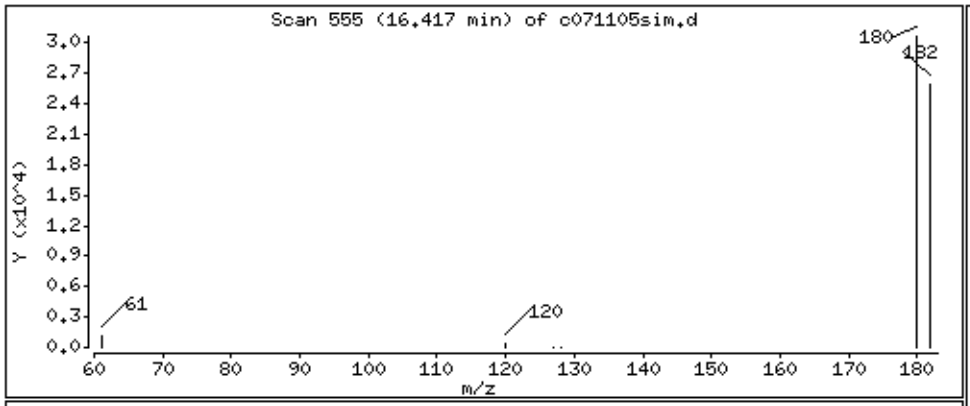
Operator: gm

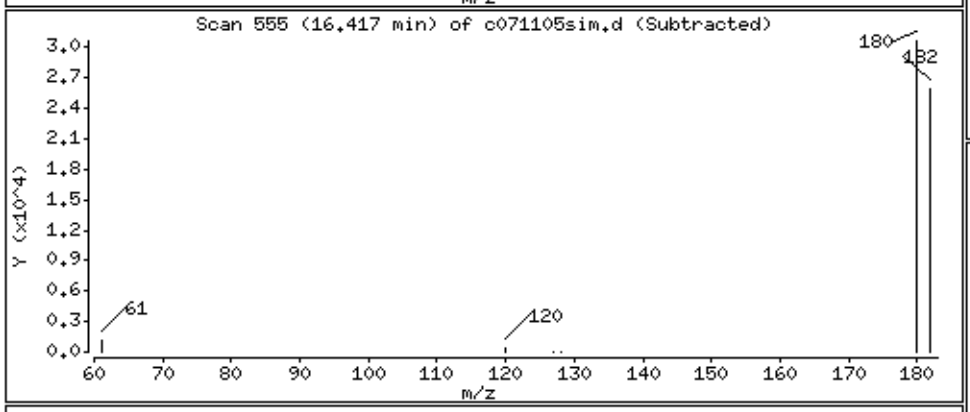
Column phase: DB-5.625

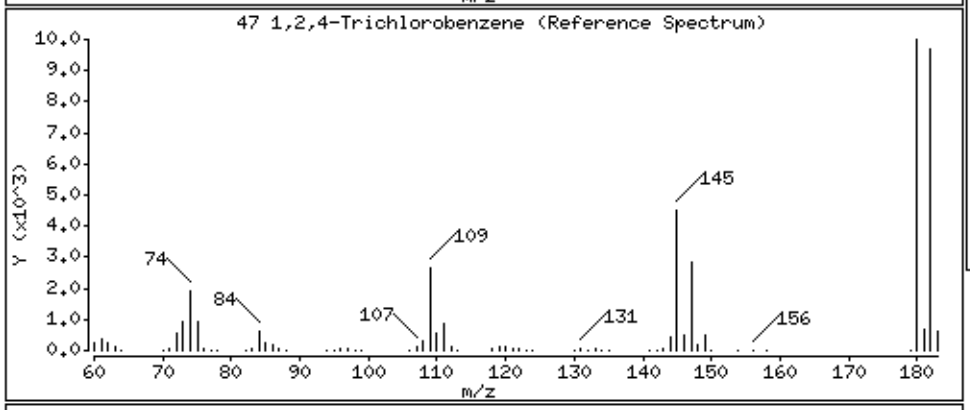
Column diameter: 0.25

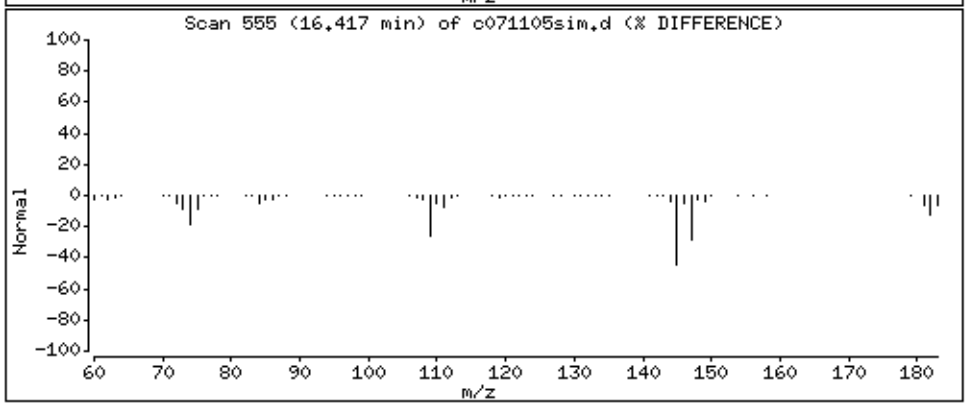
47 1,2,4-Trichlorobenzene

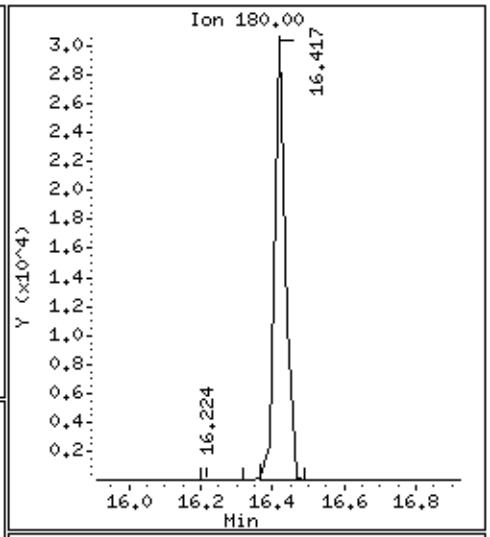
Concentration: 7.41944 ug

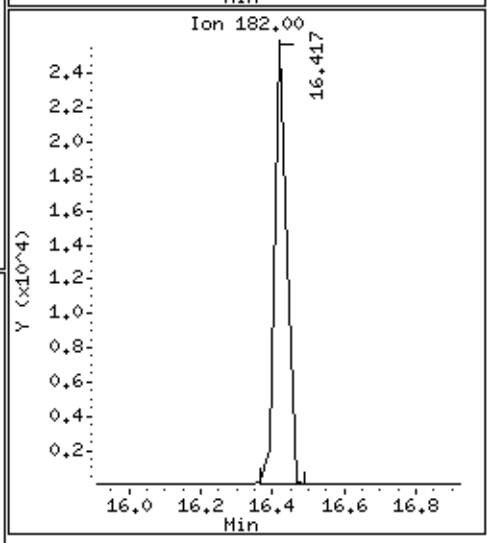












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

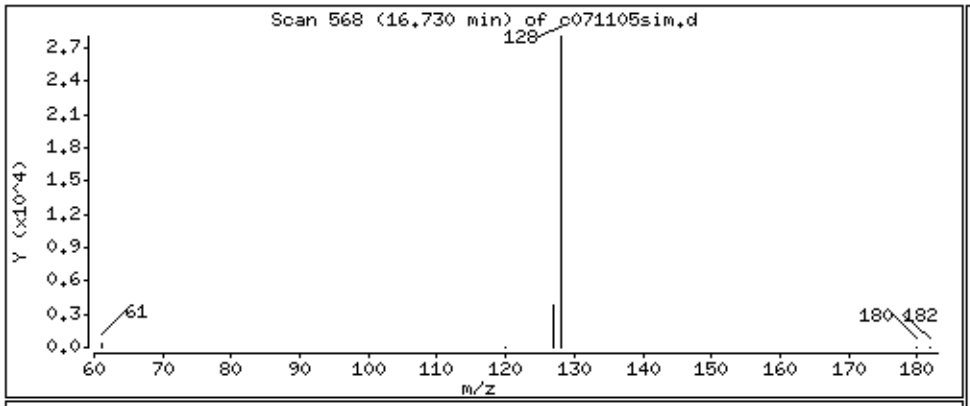
Operator: gm

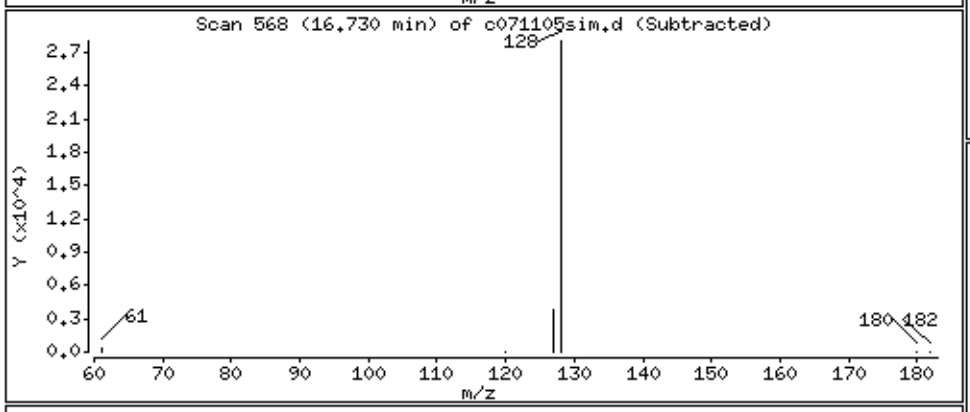
Column phase: DB-5.625

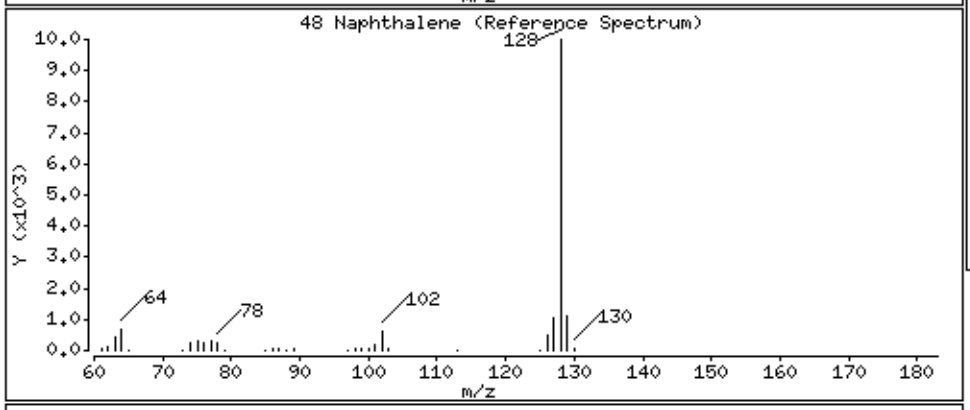
Column diameter: 0.25

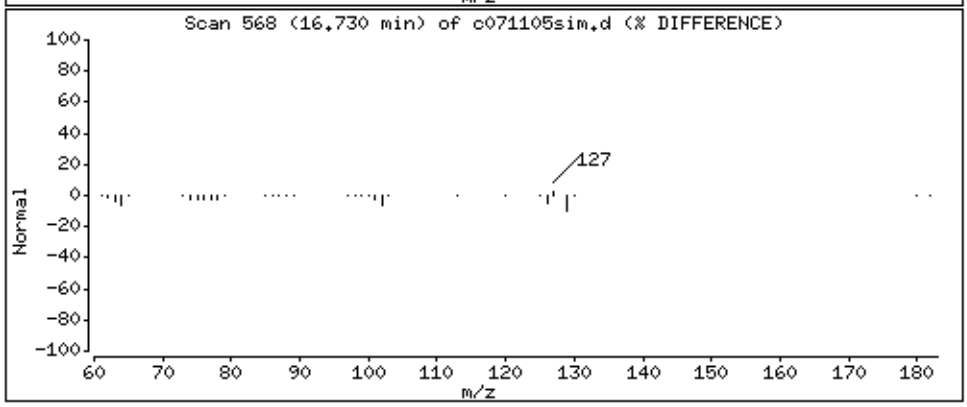
48 Naphthalene

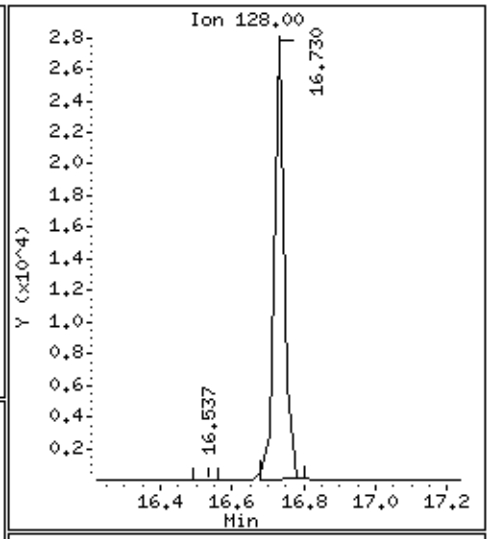
Concentration: 2.03615 ug

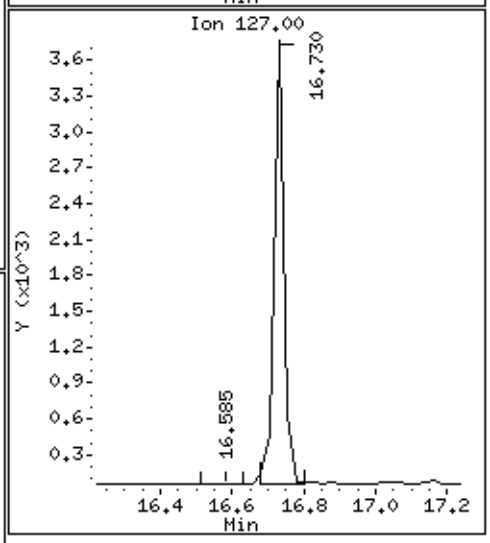












Data File: /chem/msdc.i/11Jul2017.b/c071105sim.d

Date : 11-JUL-2017 10:24

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707036/042B;LCSD

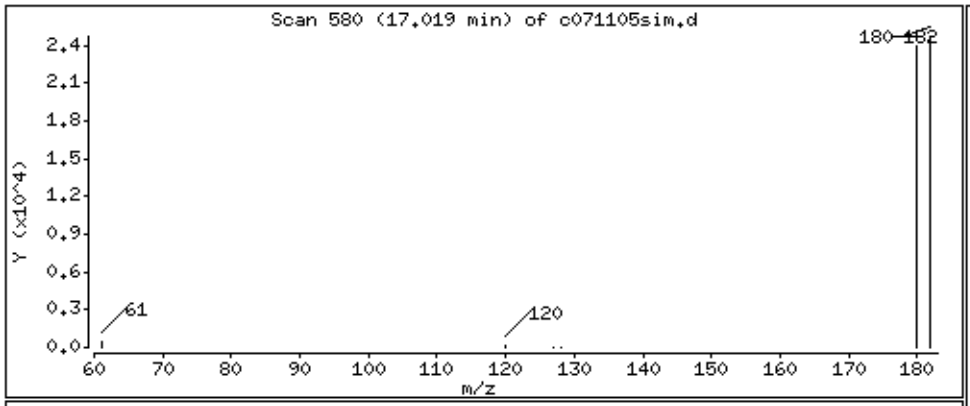
Operator: gm

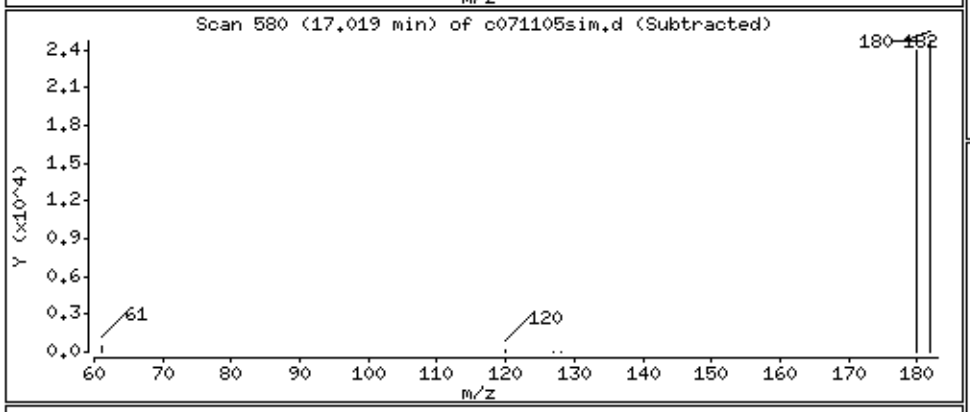
Column phase: DB-5.625

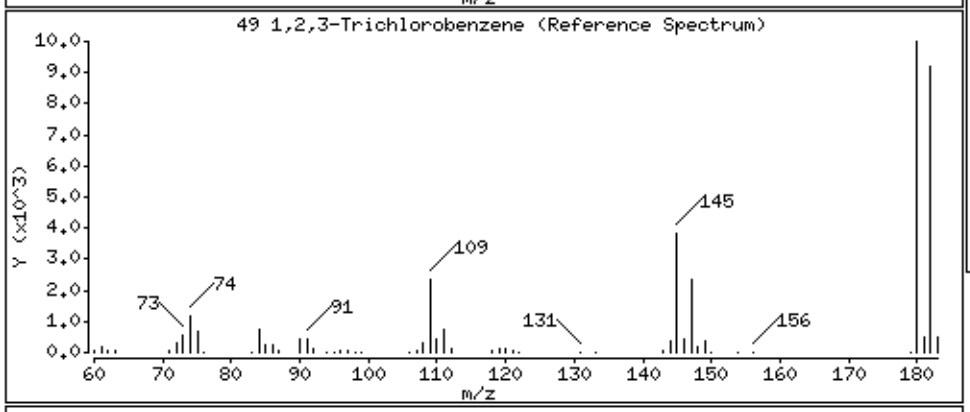
Column diameter: 0.25

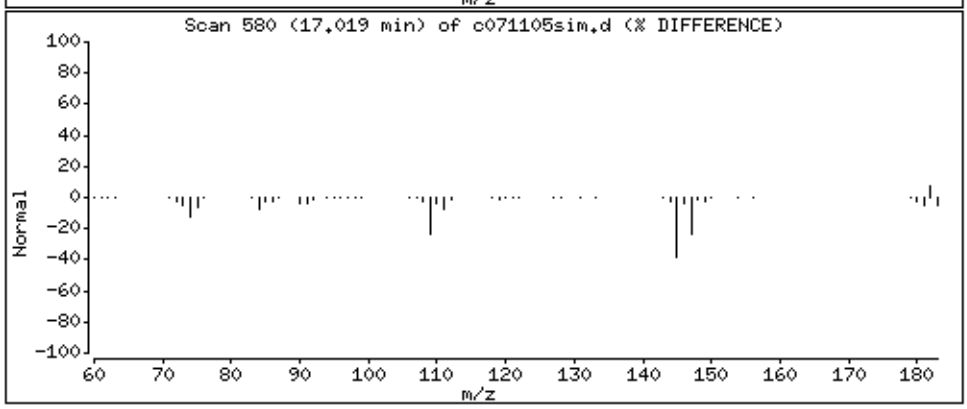
49 1,2,3-Trichlorobenzene

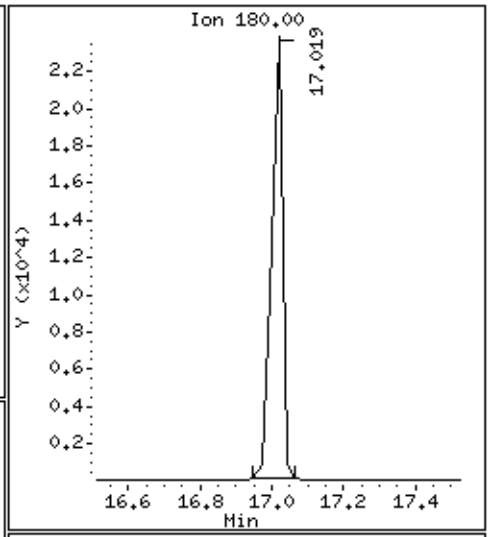
Concentration: 6.12354 ug

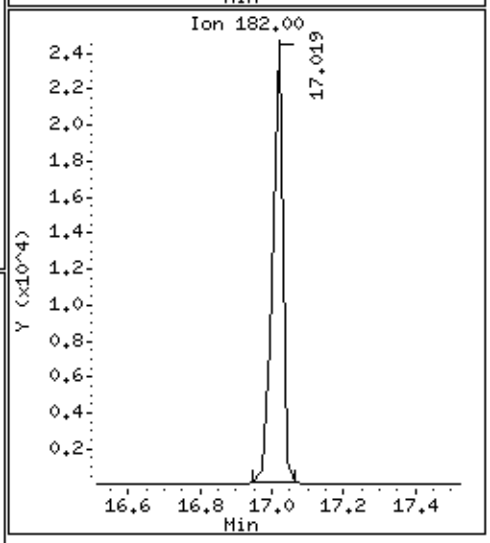












Eurofins Air Toxics, Inc.

Application Sample Preparation Logbook **Logbook #: 2837**

Work Order # 1707036 | 042B **Solvent:** CS_2 **Lot #:** 56181

GC/GCMS Application # 48 **Spike I.D.:** 2848-5-500 **Exp.:** 12/20/17

Date Prepared 7/11/17 **N2/Zero Air** NA

Matrix type Rad 130 **IS + Surr ID** 2744-196-125 **Exp.:** 10/3/17

Fraction	Clients I.D. #	Sample Weight or Cartridge type & size	Final Volume (mL)	Spike Amount (µL or mL)	IS +Surr (µL)	Comments
LCS	NA	Rad 130 Lot # 17015	2.0mL	20µL	80µL	
Lab Blank	↓	↓		NA		
1707036-01A	B-8-BC (062817)	Unknown				205 WW ✓
-02A	B-3-BC					206 WW ✓
-03A	B-9-BC					207 WW ✓
-04A	A-5-BC					208 WW ✓
-05A	B-6-BC					209 WW ✓
-06A	B-4-BC					210 WW ✓
-07A	Dup-1-BC					211 WW ✓
↓ -08A	Amb-1-BC ↓					212 WW ✓
1707042B-03A	A40-AA03-062917					552 WW ✓
-04A	-AA04-					553 WW ✓
-07A	-AA07-					556 WW ✓
-08A	-AA08-					557 WW ✓
↓ -09A	↓ -AA09- ↓	↓	↓	↓	↓	558 WW ✓

Procedure:

Procedure for Radiello Extraction

1. Add 80uL of a internal standard and surrogate STD mix (2744-196-125) to all samples, lab Blank and desorption levels
2. Add spike standard (2848-5-500, 20uL) to LCS
3. Add 2mL Carbon Disulfide to all samples, Lab Blank and all desorption levels and shake for 30 minutes.
4. Transfer the extracts to 2mL vials and analyze them.

gm 7/11/17

Reviewed by: gm Date: 7/11/17

Eurofins Air Toxics, Inc. **MSD-C** **Logbook #: 2821**

0305 of 0328

BFB Injection Date: 7/11/17
BFB Injection Time: 0855
BFB File ID: C071101

IS/S Std.#: 2744-196-125	Exp. Date: 10/3/17
2-Fluorotoluene	SIM: 203172

Verified CCV IS vs ICAL mid-point (-50% to +100% D) gm *initials*

File ID:	C071108SIM
Compound:	TCE
Initials:	gm

Calculation Check:

µg/L of compound $= \frac{Area_{Sample}}{Area_{IS}} \times \frac{Conc._{IS}}{RRF} \times DF = \frac{(15422)}{(183185)} \times \frac{(5.0)}{(0.27047)} \times 2.00 =$ 3.1 µg

Reported Result 3.1 µg

	Use	File #	Sample / Client Name	Vial #	DF	Date Analyzed	Time Analyzed	Initial	Comments
1	✓	C071101	2810-101 BFB	1	1.00	7/11/17	0855	gm	
2	X	02	2848-4-5.0 CCV	2			0907		
3	✓	03	↓	3			0934		
4	✓	04	1707036/042B-LCS	4			0959		
5	✓	05	-LCSD	4			1024		
6	✓	06	-BLK	5			1049		
7	✓	07	1707036-01A	6			1114	gm	
8	✓	08	-02A	7			1139		
9	✓	09	-03A	8			1204		
10	✓	10	-04A	9			1229		
11	✓	11	-05A	10			1254		
12	✓	12	-06A	11			1319		
13	✓	13	-07A	12			1345		
14	✓	14	-08A	13			1410		
15	✓	15	1707042B-03A	14	✓	✓	1435	✓	

Reviewed: gm Date: 7/12/17

Eurofins Air Toxics Inc.

Data file : /var/chem/msdc.i/21Jun2017.b/c062101.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 21-JUN-2017 07:24
Operator : gm Inst ID: msdc.i
Smp Info : ;2810-101;BFB
Misc Info :
Comment :
Method : /var/chem/msdc.i/21Jun2017.b/bfbr.m
Meth Date : 21-Jun-2017 07:37 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
6.339	6.490	-0.151	95	124285			100.00- 100.00	100.00
6.339	6.490	-0.151	50	19680			8.00- 40.00	15.83
6.339	6.490	-0.151	75	52245			30.00- 66.00	42.04
6.339	6.490	-0.151	96	7962			5.00- 9.00	6.41
6.339	6.490	-0.151	173	1002			0.00- 2.00	0.98
6.339	6.490	-0.151	174	102194			50.00- 120.00	82.23
6.339	6.490	-0.151	175	7862			4.00- 9.00	7.69
6.339	6.490	-0.151	176	98837			93.00- 101.00	96.72
6.339	6.490	-0.151	177	6484			5.00- 9.00	6.56

Data File: /var/chem/msdc.i/21Jun2017.b/c062101.d

Date : 21-JUN-2017 07:24

Client ID: BFB

Instrument: msdc.i

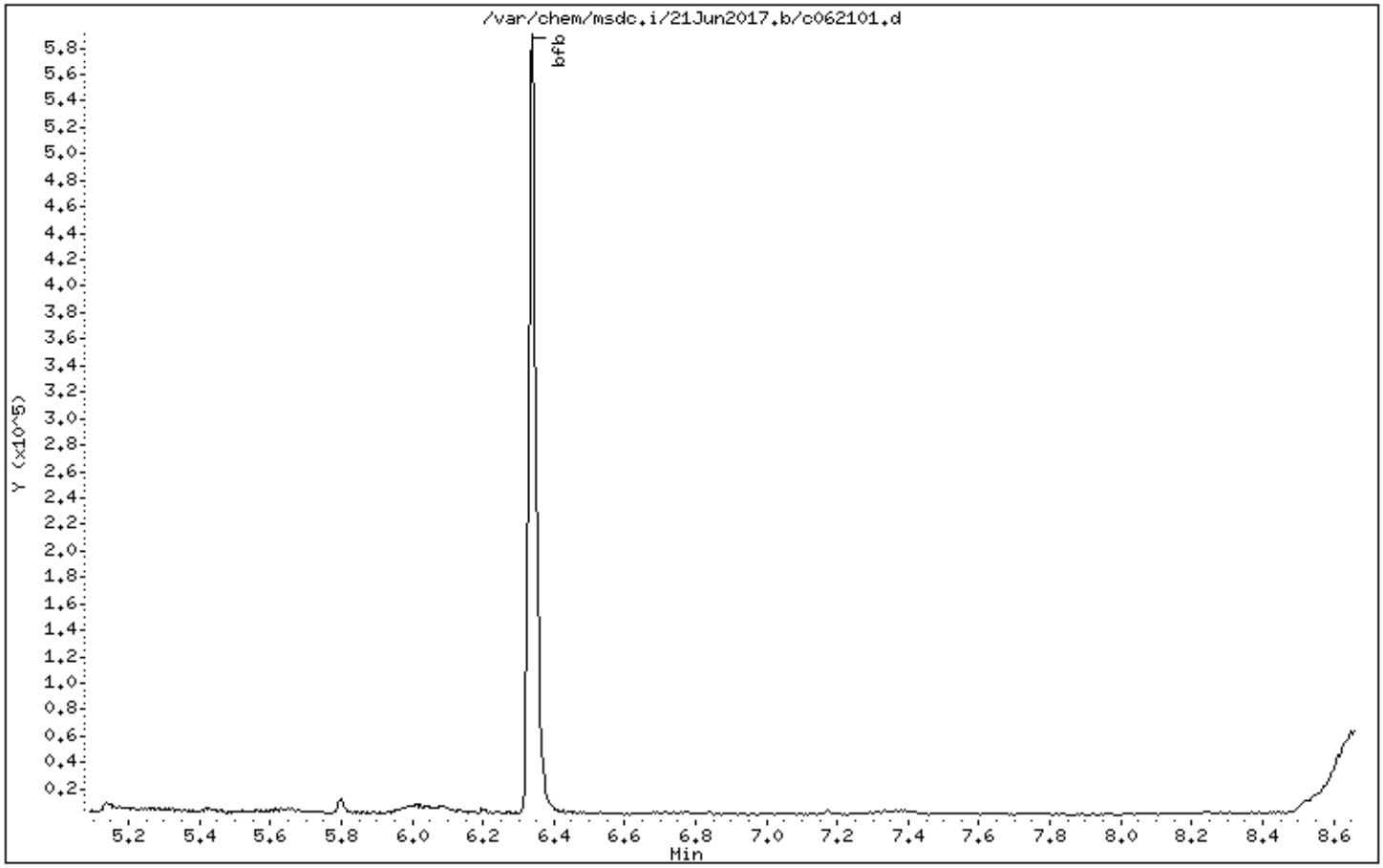
Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00



Data File: /var/chem/msdc.i/21Jun2017.b/c062101.d

Date : 21-JUN-2017 07:24

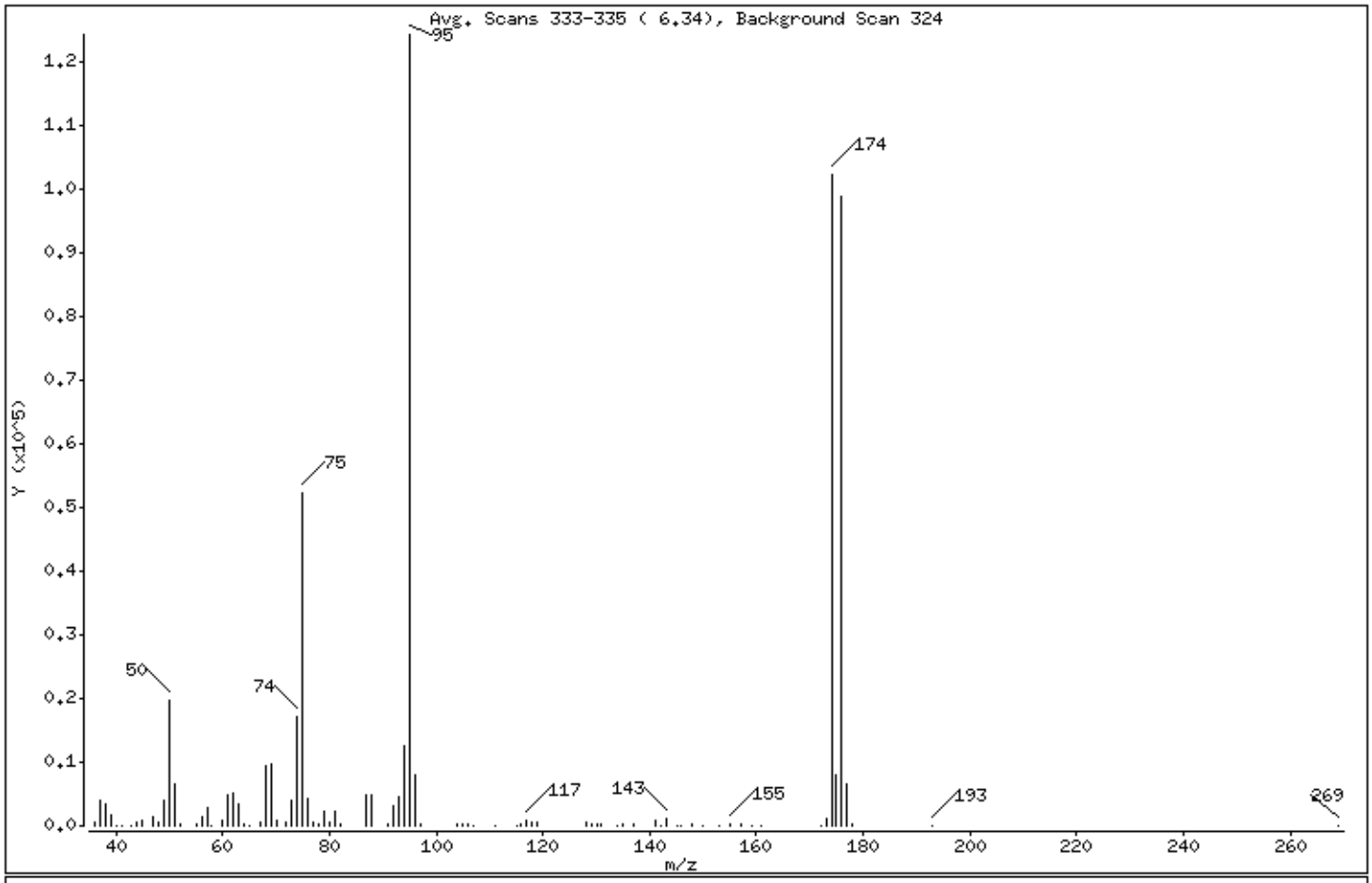
Client ID: BFB Instrument: msdc.i

Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0 Operator: gm

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	15.83
75	30.00 - 66.00% of mass 95	42.04
96	5.00 - 9.00% of mass 95	6.41
173	Less than 2.00% of mass 174	0.81 (0.98)
174	50.00 - 120.00% of mass 95	82.23
175	4.00 - 9.00% of mass 174	6.33 (7.69)
176	93.00 - 101.00% of mass 174	79.52 (96.72)
177	5.00 - 9.00% of mass 176	5.22 (6.56)

Data File: /var/chem/msdc.i/21Jun2017.b/c062101.d

Date : 21-JUN-2017 07:24

Client ID: BFB

Instrument: msdc.i

Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00

Data File: c062101.d
Spectrum: Avg. Scans 333-335 (6.34), Background Scan 324
Location of Maximum: 95.00
Number of points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	586	63.00	3553	93.00	4655	141.00	959
37.00	3916	64.00	406	94.00	12603	142.00	60
38.00	3325	65.00	55	95.00	124280	143.00	1025
39.00	1677	67.00	455	96.00	7962	145.00	69
40.00	113	68.00	9502	97.00	240	146.00	101
41.00	55	69.00	9672	104.00	364	148.00	289
43.00	87	70.00	755	105.00	220	150.00	52
44.00	644	72.00	539	106.00	419	153.00	83
45.00	786	73.00	4096	107.00	125	155.00	319
47.00	1559	74.00	17080	111.00	50	157.00	150
48.00	573	75.00	52240	115.00	82	159.00	53
49.00	3964	76.00	4333	116.00	403	161.00	139
50.00	19680	77.00	598	117.00	749	172.00	58
51.00	6709	78.00	413	118.00	446	173.00	1002
52.00	321	79.00	2201	119.00	611	174.00	102192
55.00	370	80.00	711	128.00	442	175.00	7862
56.00	1533	81.00	2320	129.00	204	176.00	98832
57.00	2899	82.00	405	130.00	400	177.00	6484
58.00	60	87.00	4911	131.00	144	178.00	153
60.00	979	88.00	4749	134.00	59	193.00	58
61.00	4843	91.00	257	135.00	280	269.00	57
62.00	5015	92.00	3023	137.00	195		

Eurofins Air Toxics Inc.

Data file : /var/chem/msdc.i/11Jul2017.b/c071101.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 11-JUL-2017 08:55
Operator : gm Inst ID: msdc.i
Smp Info : ;2810-101;BFB
Misc Info :
Comment :
Method : /var/chem/msdc.i/11Jul2017.b/bfbr.m
Meth Date : 11-Jul-2017 08:59 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
6.328	6.490	-0.162	95	179946			100.00- 100.00	100.00
6.328	6.490	-0.162	50	28533			8.00- 40.00	15.86
6.328	6.490	-0.162	75	77634			30.00- 66.00	43.14
6.328	6.490	-0.162	96	12304			5.00- 9.00	6.84
6.328	6.490	-0.162	173	1562			0.00- 2.00	1.03
6.328	6.490	-0.162	174	152064			50.00- 120.00	84.51
6.328	6.490	-0.162	175	11269			4.00- 9.00	7.41
6.328	6.490	-0.162	176	146277			93.00- 101.00	96.19
6.328	6.490	-0.162	177	9504			5.00- 9.00	6.50

Data File: /var/chem/msdc.i/11Jul2017.b/c071101.d

Date : 11-JUL-2017 08:55

Client ID: BFB

Instrument: msdc.i

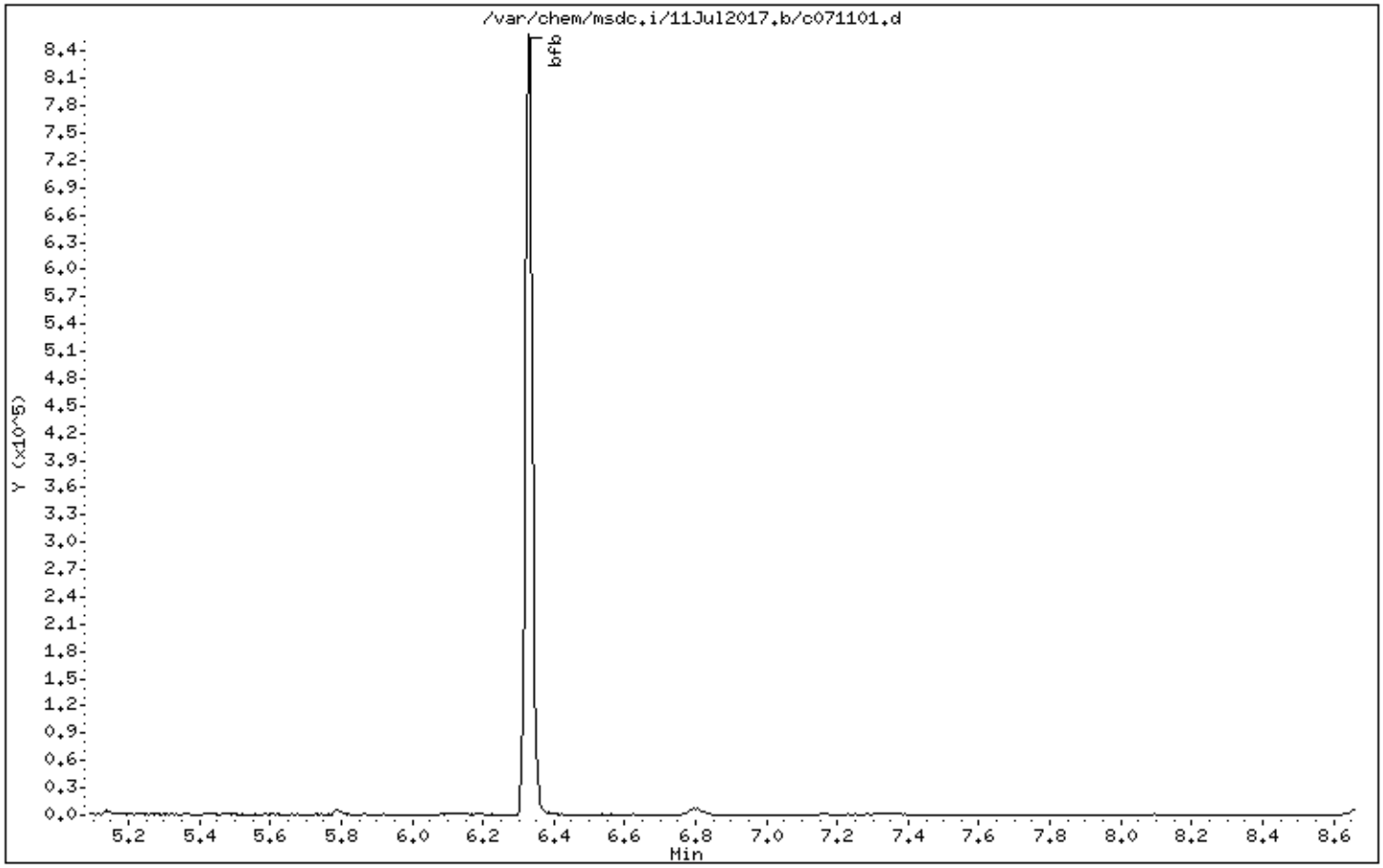
Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00



Data File: /var/chem/msdc.i/11Jul2017.b/c071101.d

Date : 11-JUL-2017 08:55

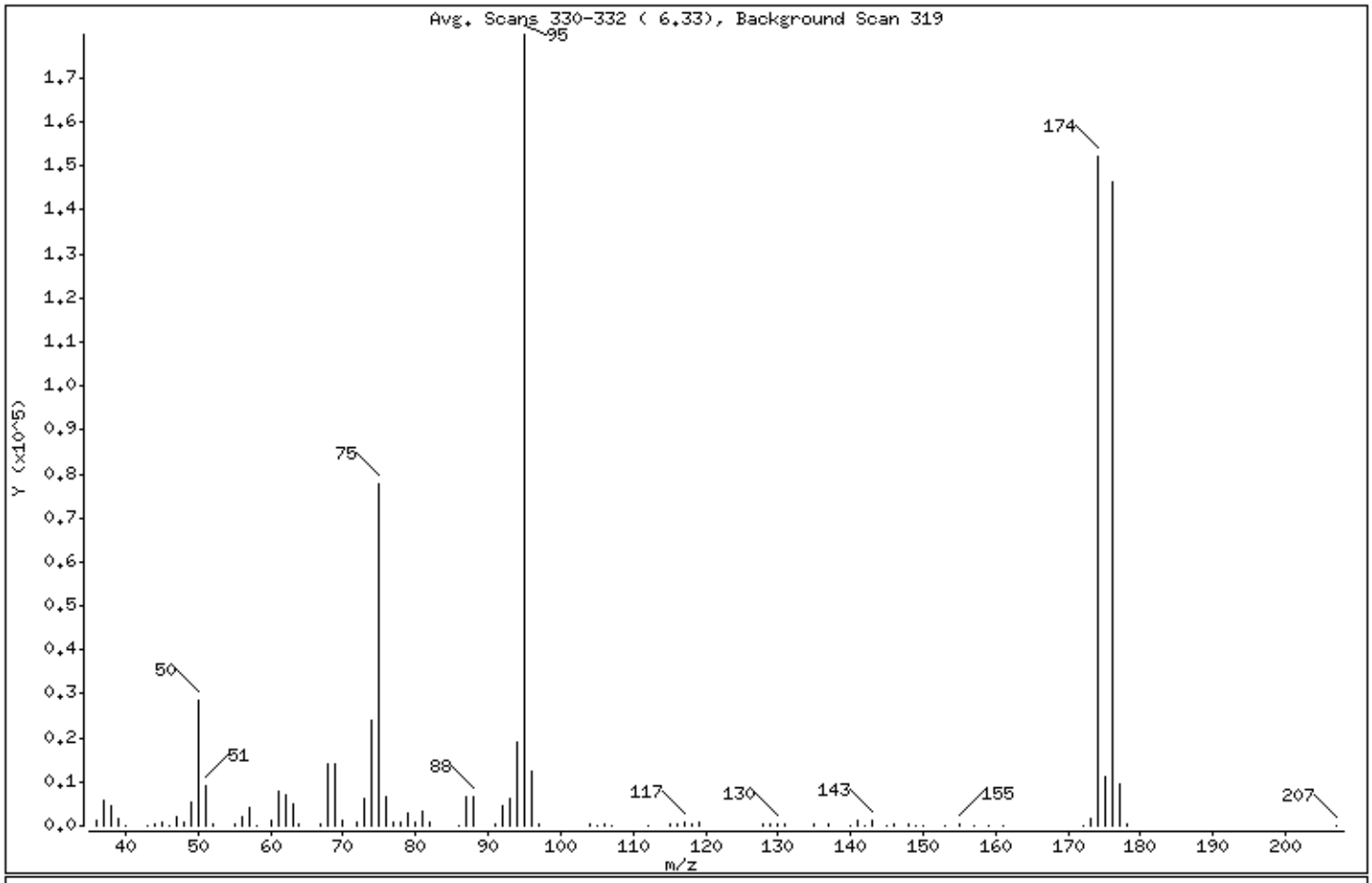
Client ID: BFB Instrument: msdc.i

Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0 Operator: gm

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	15.86
75	30.00 - 66.00% of mass 95	43.14
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.87 (1.03)
174	50.00 - 120.00% of mass 95	84.51
175	4.00 - 9.00% of mass 174	6.26 (7.41)
176	93.00 - 101.00% of mass 174	81.29 (96.19)
177	5.00 - 9.00% of mass 176	5.28 (6.50)

Data File: /var/chem/msdc.i/11Jul2017.b/c071101.d

Date : 11-JUL-2017 08:55

Client ID: BFB

Instrument: msdc.i

Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00

Data File: c071101.d
Spectrum: Avg. Scans 330-332 (6.33), Background Scan 319
Location of Maximum: 95.00
Number of points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1039	63.00	5055	93.00	6157	141.00	1273
37.00	5806	64.00	414	94.00	19064	142.00	162
38.00	4462	67.00	378	95.00	179904	143.00	1445
39.00	1852	68.00	13982	96.00	12304	145.00	71
40.00	74	69.00	14050	97.00	322	146.00	292
43.00	201	70.00	1158	104.00	608	148.00	447
44.00	534	72.00	951	105.00	165	149.00	116
45.00	939	73.00	6399	106.00	545	150.00	77
46.00	53	74.00	23872	107.00	65	153.00	60
47.00	2160	75.00	77632	112.00	65	155.00	445
48.00	825	76.00	6491	115.00	225	157.00	193
49.00	5516	77.00	880	116.00	469	159.00	91
50.00	28528	78.00	746	117.00	933	161.00	158
51.00	9267	79.00	2868	118.00	540	172.00	139
52.00	377	80.00	887	119.00	755	173.00	1562
55.00	305	81.00	3120	128.00	537	174.00	152064
56.00	2067	82.00	684	129.00	208	175.00	11269
57.00	4114	86.00	176	130.00	563	176.00	146240
58.00	111	87.00	6439	131.00	246	177.00	9504
60.00	1332	88.00	6567	135.00	301	178.00	241
61.00	7814	91.00	554	137.00	230	207.00	167
62.00	6996	92.00	4344	140.00	56		

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Air Toxics, Ltd. at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

PASSIVE SAMPLE COLLECTION

eurofins | Air Toxics

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Eurofins assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Steve Sharp
Collected by: (Print and Sign) Brian Colby
Company: Arcadis Email: steve.sharp@arcadis.com
Address: 150 W. Market St, Ste. 788 City: Indianapolis State: IN Zip: 46204
Phone: (317) 231-6500 Fax: (317) 231-6594

Project Info:
P.O. #: See below
Project #: IN003307.0009
Project Name: Mentor Grounds

Turn Around Time: ☑ Normal ☐ Rush ____ specify

Reporting Units: ☐ ppmv ☐ ppbv ☐ µg/m3 ☑ mg/m3

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Air Temperature	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
01A	B-8-BC (062817)	205 MW	6/28/17	2046	6/29/17	2327	80°F	See Attached List	☑	☐	☐	☐
02A	B-3-BC (062817)	206 MW	↓	2106	↓	2310	↓	↓	☑	☐	☐	☐
03A	B-9-BC (062817)	207 MW		2131		2147			☑	☐	☐	☐
04A	A-5-BC (062817)	208 MW		2152		2040			☑	☐	☐	☐
05A	B-6-BC (062817)	209 MW		2224		2155			☑	☐	☐	☐
06A	B-4-BC (062817)	210 MW		2257		2344			☑	☐	☐	☐
07A	Dup-1-BC (062817)	211 MW		—		—			☑	☐	☐	☐
08A	Amb-1-BC (062817)	212 MW	↓	2322	↓ 6/30/17	1206	↓	↓	☐	☑	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	6/30/17 1030	[signature] GAR	0250 07/05/17
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No None	1707036

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1707036R1

Client

Ms. Sarah Jonker
Arcadis U.S., Inc.
150 W Market St, Ste 728
Indianapolis, IN 46204

Phone

317-231-6500

Fax

317-231-6514

Date Promised: 07/31/17
Date Completed: 7/31/17
Date Received: 7/5/17
PO#: LA003307.0009
Project#: LA003307.0009 Meritar Grenada

Sales Rep: N/A

Total $: $ 0.00
Logged By: JV

Fraction	Sample #	Analysis	Collected	Amount$
01A	B-8-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
02A	B-3-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
03A	B-9-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
04A	A-5-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
05A	B-6-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
06A	B-4-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
07A	Dup-1-BC (062817)	Passive S.E. RAD130/SKC	6/29/2017	$0.00
08A	Amb-1-BC (062817)	Passive S.E. RAD130/SKC	6/30/2017	$0.00
09A	Lab Blank	Passive S.E. RAD130/SKC	NA	$0.00
10A	LCS	Passive S.E. RAD130/SKC	NA	$0.00
10AA	LCSD	Passive S.E. RAD130/SKC	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Grenada/20635

BILL TO: Accounts Payable
Arcadis U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch, CO 80129

Analysis Code: Other GC

REMARKS: A 2% discount is applied per Eurofins/Arcadis MSA

TERMS: PWP-NTE 120

Reporting Method: Passive SE GC/MS (Sh)-Arcadis (Grenada) v1

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

Other Records

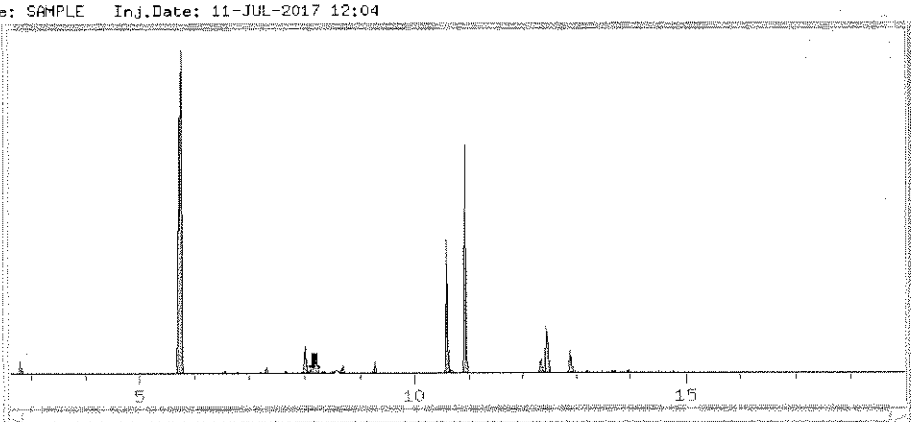
TargetReview: eeyore: 1707036-03A: /chem/msdc.i/11Jul2017.b/c071109sim.d

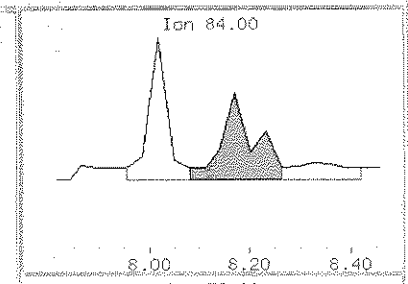
File Searching Edit Display Process Spectra Help

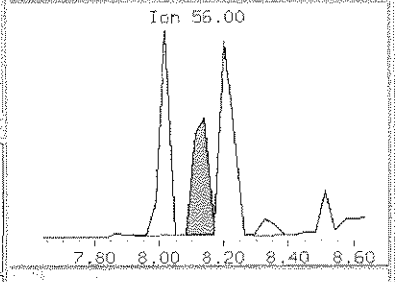
Sample: 1707036-03A Type: SAMPLE Inj.Date: 11-JUL-2017 12:04

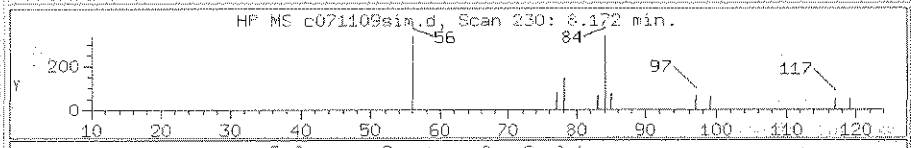
3 Ethanol
+ 5 Acetone
7 MTBE
+ 9 Hexane
12 Ethyl Acetate
13 2-Butanone
15 Chloroform-CCC
+ 16 Cyclohexane
17 1,1,1-Trichlor
18 Carbon Tetrach.
19 Benzene
20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC
*+ 27 2-Fluorotoluen
29 Tetrachloroeth
30 Chlorobenzene
+ 31 Ethylbenzene-C
+ 33 m,p-Xylene
+ 34 o-Xylene
35 Styrene
38 Propylbenzene

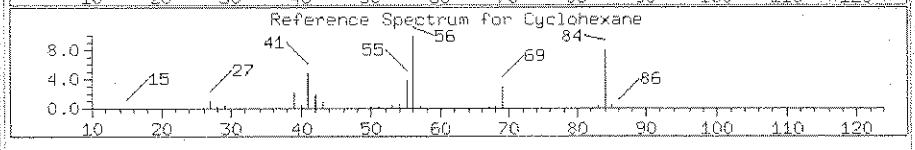
c071107sim.d
c071108sim.d
c071109sim.d
c071110sim.d
c071111sim.d
c071112sim.d
c071113sim.d
c071114sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	8.018	3473	0.296023	0.592046	100		
	8.018	11604			334		
2	8.172	1846	0.140282	0.280563	100		
	8.141	11003			669		
3	8.326	594	0.0505914	0.101183	100		
	8.326	1317			222		

Before
gm
7/17/17

Targetfiveview.pavora: 1707036--03A: /chem/madc.i/11Jul2017.b/c071109sim.d

File Searching Edit Display Process Spectra Help

Sample: 1707036-03A Type: SAMPLE Inj.Date: 11-JUL-2017 12:04

3 Ethanol
| 5 Acetone
7 MTBE
| 9 Hexane
12 Ethyl Acetate
13 2-Butanone
15 Chloroform-CCC
+| 16 Cyclohexane
17 1,1,1-Trichlor
18 Carbon Tetrach.
19 Benzene
20 1,2-Dichloroetl
+ 21 Heptane
+ 22 Trichloroethen
24 4-Methyl-2-pen
*+ 25 Toluene-d8
+ 26 Toluene-CCC
*+ 27 2-Fluorotoluen
29 Tetrachloroeth
30 Chlorobenzene
+ 31 Ethylbenzene-C
+ 33 m,p-Xylene
+ 34 o-Xylene
35 Styrene
38 Propylbenzene

c071107sim.d
c071108sim.d
c071109sim.d
c071110sim.d
c071111sim.d
c071112sim.d
c071113sim.d
c071114sim.d

Manual Int
Time: 8.172
Area: 799
Height: 291
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak

Ion 84.00

Ion 56.00

HP MS c071109sim.d, Scan 230: 8.172 min.

Reference Spectrum for Cyclohexane

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	8.172	799	0.0680860	0.136172	100	M	
	8.141	11003			1377		

- Mark Cyclohexane Undetected.

gm
7/17/17

After

Correct Baseline	✓
Split Peak	✓
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

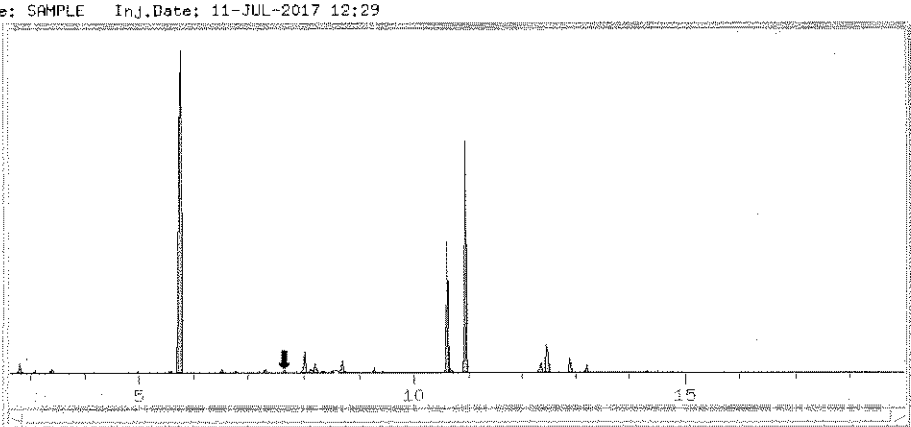
TargetReview: eeyore: 1707036-04A: /chem/msdc.i/11Jul2017.b/c071110sim.d

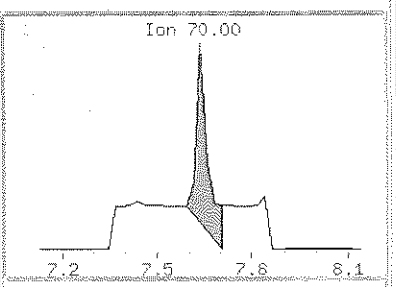
File Scoring Edit Display Process Spectra Help

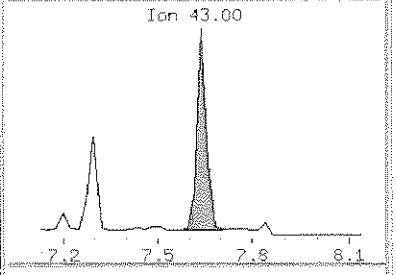
Sample: 1707036-04A Type: SAMPLE Inj.Date: 11-JUL-2017 12:29

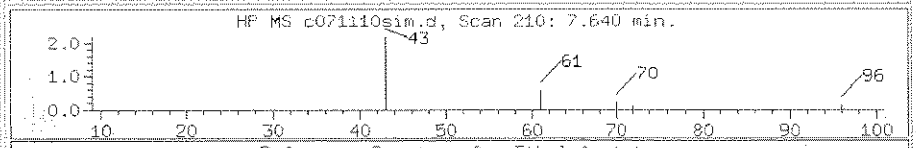
- 3 Ethanol
- 5 Acetone
- 7 MTBE
- 9 Hexane
- 12 Ethyl Acetate
- 13 2-Butanone
- 15 Chloroform-CCC
- 16 Cyclohexane
- 17 1,1,1-Trichlor
- 18 Carbon Tetrach.
- 19 Benzene
- 20 1,2-Dichloroetl
- 21 Heptane
- 22 Trichloroethen
- 24 4-Methyl-2-pen
- 25 Toluene-d8
- 26 Toluene-CCC
- 27 2-Fluorotoluen
- 29 Tetrachloroeth
- 30 Chlorobenzene
- 31 Ethylbenzene-C
- 33 m,p-Xylene
- 34 o-Xylene
- 35 Styrene
- 38 Propylbenzene

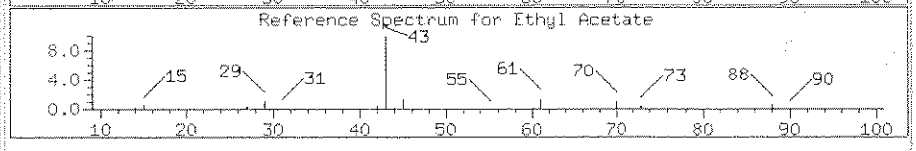
c071107sim.d
c071108sim.d
c071109sim.d
c071110sim.d
c071111sim.d
c071112sim.d
c071113sim.d
c071114sim.d







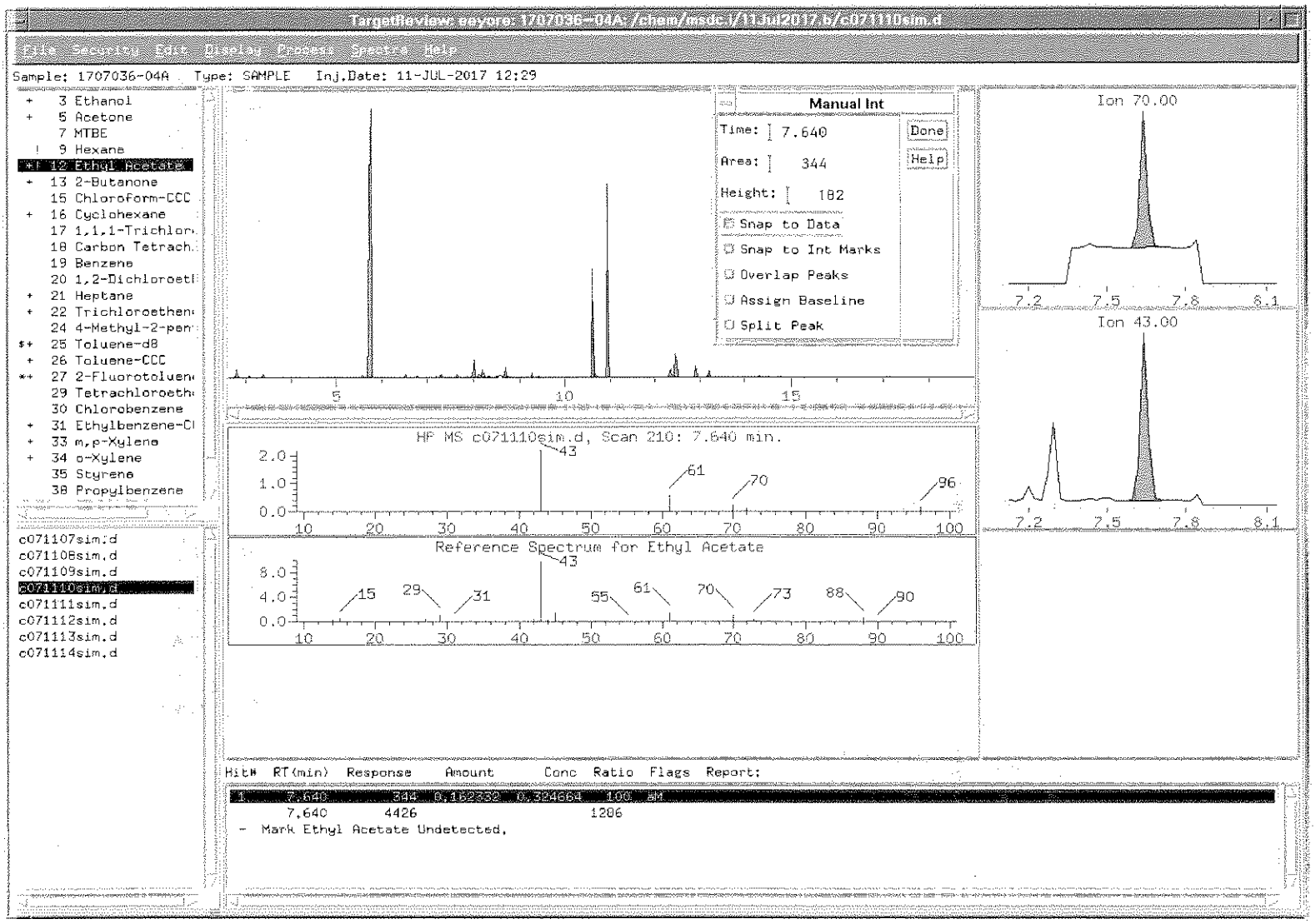




Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	7.640	541	0.255096	0.510191	100		
	7.640	4426			817		

- Mark Ethyl Acetate Undetected.

Before
JM
7/17/17



gm
7/17/17

After

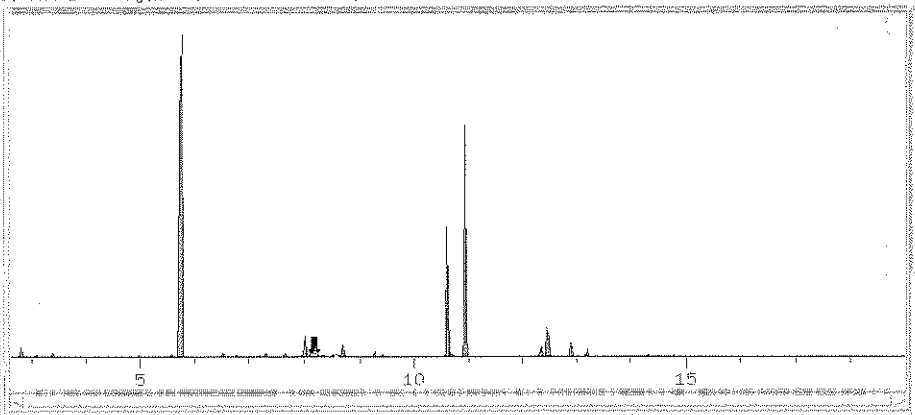
Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

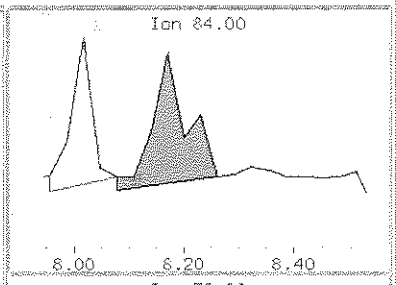
TargetReview: eeyore: 1707036-04A: /chem/msdc.i/11Jul2017.b/c071110sim.d

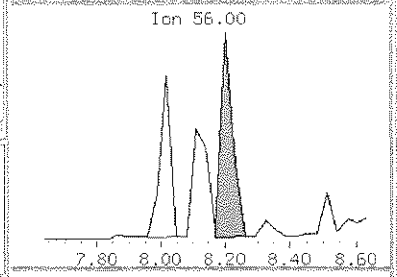
File Separate Edit Display Compare Spectra Help

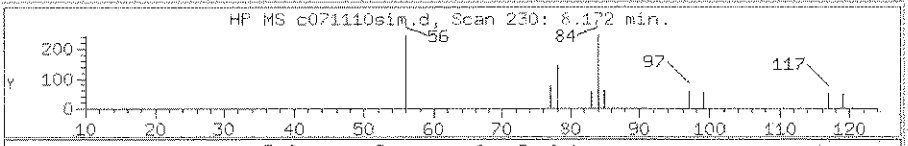
Sample: 1707036-04A Type: SAMPLE Inj.Date: 11-JUL-2017 12:29

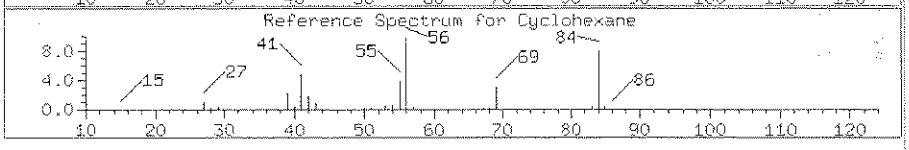
- + 3 Ethanol
- + 5 Acetone
- 7 MTBE
- ! 9 Hexane
- +! 12 Ethyl Acetate
- + 13 2-Butanone
- 15 Chloroform-CCC
- + 16 Cyclohexane
- 17 1,1,1-Trichlor
- 18 Carbon Tetrach.
- 19 Benzene
- 20 1,2-Dichloroetl
- + 21 Heptane
- + 22 Trichloroethen
- 24 4-Methyl-2-pen
- $+ 25 Toluene-d8
- + 26 Toluene-CCC
- *+ 27 2-Fluorotoluen
- 29 Tetrachloroeth
- 30 Chlorobenzene
- + 31 Ethylbenzene-C
- + 33 m,p-Xylene
- + 34 o-Xylene
- 35 Styrene
- 38 Propylbenzene









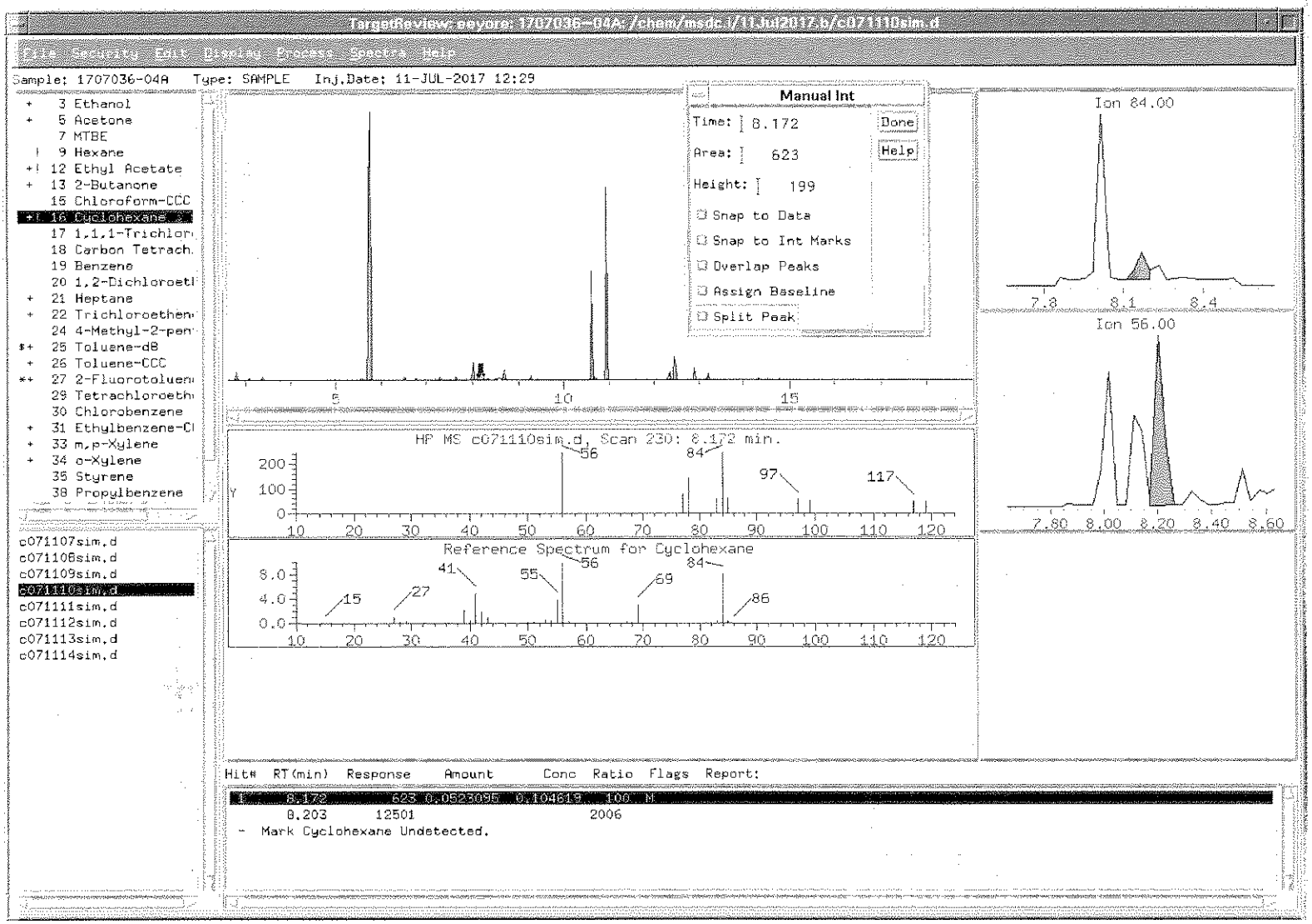


c071107sim.d
c071108sim.d
c071109sim.d
c071110sim.d
c071111sim.d
c071112sim.d
c071113sim.d
c071114sim.d

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	8.018	2487	0.208743	0.417485	100		
	8.018	9016			363		
2	8.172	940	0.0788976	0.157796	100		
	8.203	12501			1330		

- Mark Cyclohexane Undetected.

Reference
gm
7/17/17



gm
7/17/17

After

Correct Baseline	✓
Split Peak	✓
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Compound Listing

Passive SE GC/MS (Sh)-Arcadis (Grenada) v1

CAS Number	Compound	Detection Limit ug	Type
71-43-2	Benzene	0.40	
107-06-2	1,2-Dichloroethane	0.10	
79-01-6	Trichloroethene	0.10	
108-88-3	Toluene	0.10	
127-18-4	Tetrachloroethene	0.10	
2037-26-5	Toluene-d8		
75-35-4	1,1-Dichloroethene	0.40	
156-59-2	cis-1,2-Dichloroethene	0.10	
156-60-5	trans-1,2-Dichloroethene	0.20	
79-00-5	1,1,2-Trichloroethane	0.10	
75-01-4	Vinyl Chloride	0.40	

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 05/24/17
Workorder # 1707036	Form F1.27	Revision #14	Revision Date: 05/24/17	Page 1 of 2

S1	S2	S3	S4	D	***Section 1* – Spec Out**				
					Initials/Instrument/Date	**S1:** MSD-C gm 7/11/17	**S2:**	**S3:**	**S4:**
✓				■	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓				■	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
✓				■	Manual Integrations included and approved				
✓				✓	Chain of Custody verified for special comments (add comments below)				
✓				■	Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

Ethanol ✓ in LCS (49%)

Ethanol, Acetone ✓ in LCSD (42%, 68%)

A1	A2	A3	A4	D	***Section 2* – Sample Analysis**				
					Initials/Date	**A1:** gm 7/12/17	**A2:**	**A3:**	**A4:**
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, Canister #s Verified and dilution ranges are met per SOP (ex. Over-ranged/overdiluted)				
✓				✓	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
✓				✓	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓				■	12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks, samples following bad loads on CIAAs have been verified (system blks, confirmation runs).				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes:

06A, 07A- Field dups.

D1	D2	D3	D4	T	3T	***Section 3* – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date	**D1:** gm 7/17/17	**D2:**	**D3:**	**D4:**
✓					■	CAR # *(if applicable)*				
✓					■	Spectra Verified *(documentation of spectral defense included if applicable)*				
✓					■	TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
✓					■	Lab Narrative is correct				
✓					■	TPH/NMOC calculations complete and included in folder				

Special notes:

A	3T	***Section 4*- Atlas Data Entry**	**Lumen verified and included in folder**	**Circle one: Yes/No**
		Initials/Date: gm 7/17/17	**3rd Tier:** *(needed only for DOD or per client request)*	
✓		Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
	✓	Manually entered results are checked		
	✓	At least one result per sample is verified against Target quant sheets		
	✓	Appropriate data qualifier flags are applied		
	✓	Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*

Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 05/24/17
	Form F1.27	Revision #14	Revision Date: 05/24/17	Page 2 of 2
Reissued				

Workorder # :	**Reason for Reissue:**			
1707036R1	to change the reporting list.			
W	**T**	**3T**	**Q**	
✓				Reissue Request form Present
✓				Client or QA or Lab contact present with reason for reissue
✓				Review all affected data
✓				Report header has correct R1, R2 etc
✓				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
✓				Date for Reissue in Report Header matches date in Lab Narrative
✓				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
NA				Corrective Action issued - #
✓				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)
gm 7/31/17			

Workorder # :	**Reason for Reissue:**			
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable

ARCADIS Design & Consultancy for natural and built assets

Grenada Manufacturing

DATA REVIEW

Grenada, Mississippi

Volatile Organic Compound (VOC) Analyses

SDG #1707045R3

Analyses Performed By:
Eurofins/Air Toxic
Folsom, California

Report #28166R
Review Level: Tier III
Project: LA003307.0009.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #1707045R3 for samples collected in association with the Grenada Manufacturing site, located in Grenada, Mississippi. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis			
					VOC	SVOC	MET	MISC
B-8-BC (062817)	1707045R3-01	Air	06/28/2017		X			
B-3-BC (062817)	1707045R3-02	Air	06/28/2017		X			
B-9-BC (062817)	1707045R3-03	Air	06/28/2017		X			
A-5-BC (062817)	1707045R3-04	Air	06/28/2017		X			
B-6-BC (062817)	1707045R3-05	Air	06/28/2017		X			
B-4-BC (062817)	1707045R3-06	Air	06/28/2017		X			
DUP-1-BC (062817)	1707045R3-07	Air	06/28/2017	B-4-BC (062817)	X			

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

Note: Sample B-4-BC (062817) was received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) Method TO-15. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and USEPA Region II SOP HW-31- Validating Air Samples Volatile Organic Analysis of Ambient Air In Canister by Method TO-15 of October 2006.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation	Return Canister Pressure
EPA TO-15	Air	30 days from collection to analysis	Ambient temperature	< -1" Hg

All samples were analyzed within the specified holding time and canister pressure criteria with the following exception:

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 24-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (30%) and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (30%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts are ± 40% of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

6. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

7. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

8. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 25% for air matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for air matrices.

Laboratory duplicate analysis was not performed using a sample from this SDG.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for air matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for air matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result (µg/m^3)	Duplicate Result (µg/m^3)	RPD
B-4-BC (062817)/ DUP-1-BC (062817)	cis-1,2-Dichloroethene	1.1	1.1	0.0%
	Benzene	0.99 U	0.41	AC
	Trichloroethene	6.1	6.2	1.6%
	Toluene	1.7	1.6	6.1%

Note:

AC = Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Note: Sample B-4-BC (062817) was received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: EPA TO-15	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Canister return pressure (<-1”Hg)		X		X	
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

VOCs: EPA TO-15	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					

%RSD Percent relative difference

%R Percent recovery

RPD Relative percent difference

%D Percent difference

VALIDATION PERFORMED BY: Todd Church

SIGNATURE:

DATE: August 8, 2017

PEER REVIEW: Dennis Capria

DATE: August 9, 20117

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Steve Sharp
Collected by: (Print and Sign) Brian Leskin
Company: Arcadis Email: steve.sharp@arcadis.com
Address: 150 W. Market St, Ste 728 City: Indianapolis State: IN Zip: 46204
Phone: (317) 231-6500 Fax: (317) 231-6514

Project Info:
P.O. #: See below
Project #: LA003307.0009
Project Name: Meridian Crossing

Turn Around Time: ☑ Normal ☐ Rush (specify)

Lab Use Only: Pressurized by: Date: Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	B-8-BC (062817)	34192	6/28/17	6/29/17 2046-2327	TO15 see project list	-30	-8.5		
02A	B-3-BC (062817)	33536		2106-2310			-7.0		
03A	B-9-BC (062817)	6L1244		2131-2147			-5.5		
04A	A-5-BC (062817)	21007		2152-2040			-7.0		
05A	B-6-BC (062817)	6L1597		2224-2155			-7.5		
06A	B-4-BC (062817)	6L1581		2257-2344			-25		
07A	DUP-1-BC (062817)	6L0847		—			-8.5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	6/30/17 1030	[signature] EAT	07/05/17 0850
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Ged Gx		NA	Good	Yes No ~~None~~	1707045

07/06/17

Form 1293 rev.11

same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

The workorder was re-issued on 7/25/2017 for the following reasons:

1. To correct the dilution factor in laboratory blank 1707045R1-08E due to data entry error.

2. To correct identification of the following sample B-6-BC (062817) due to laboratory transcription error.

Per client request, the workorder was re-issued on 8/11/2017 to amend the target compound list as required by the specific project. Changing the compound list caused some previously reported compounds to become not reported.

The workorder was reissued on 8/14/2017 to correct the final report format.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Client Sample ID: B-8-BC (062817)

Lab ID#: 1707045R3-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071120r2**	**Date of Collection:**	**6/29/17 11:27:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**7/11/17 09:40 PM**

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Methylene Chloride	0.34	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

eurofins | Air Toxics

Client Sample ID: B-8-BC (062817)

Lab ID#: 1707045R3-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071120simr2**	**Date of Collection:**	**6/29/17 11:27:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**7/11/17 09:40 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
cis-1,2-Dichloroethene	0.034	0.31	0.14	1.2
Benzene	0.086	0.20	0.27	0.63
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	1.3	0.18	7.1
Toluene	0.034	0.40	0.13	1.5
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: B-3-BC (062817)

Lab ID#: 1707045R3-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071219r2**	**Date of Collection:**	**6/29/17 11:10:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**7/12/17 09:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.33	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: B-3-BC (062817)

Lab ID#: 1707045R3-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071219simr2**	**Date of Collection:**	**6/29/17 11:10:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**7/12/17 09:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	0.018	0.065	0.073
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.033	0.44	0.13	1.8
Benzene	0.082	0.086	0.26	0.28
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	4.7	0.18	25
Toluene	0.033	0.37	0.12	1.4
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.069	0.22	0.47

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: B-9-BC (062817)

Lab ID#: 1707045R3-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071307r2**	**Date of Collection:**	**6/29/17 9:47:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**7/13/17 11:53 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.31	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: B-9-BC (062817)

Lab ID#: 1707045R3-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071307simr2**	**Date of Collection:**	**6/29/17 9:47:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**7/13/17 11:53 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
cis-1,2-Dichloroethene	0.031	0.45	0.12	1.8
Benzene	0.078	0.14	0.25	0.44
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	2.2	0.17	12
Toluene	0.031	0.50	0.12	1.9
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.038	0.21	0.26

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: A-5-BC (062817)

Lab ID#: 1707045R3-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071311r2**	**Date of Collection:**	**6/29/17 8:40:00 PM**
Dil. Factor:	**1.62**	**Date of Analysis:**	**7/13/17 02:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.32	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: A-5-BC (062817)

Lab ID#: 1707045R3-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071311simr2**	**Date of Collection:**	**6/29/17 8:40:00 PM**
Dil. Factor:	**1.62**	**Date of Analysis:**	**7/13/17 02:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
cis-1,2-Dichloroethene	0.032	0.35	0.13	1.4
Benzene	0.081	0.095	0.26	0.30
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	1.1	0.17	5.8
Toluene	0.032	0.44	0.12	1.7
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: B-6-BC (062817)

Lab ID#: 1707045R3-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071308r2**	**Date of Collection:**	**6/29/17 9:55:00 PM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**7/13/17 12:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.33	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: B-6-BC (062817)

Lab ID#: 1707045R3-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071308simr2**	**Date of Collection:**	**6/29/17 9:55:00 PM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**7/13/17 12:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.033	0.63	0.13	2.5
Benzene	0.082	Not Detected	0.26	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.89	0.18	4.8
Toluene	0.033	0.14	0.12	0.51
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: B-4-BC (062817)

Lab ID#: 1707045R3-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071309r2**	**Date of Collection:**	**6/29/17 11:44:00 PM**
Dil. Factor:	**6.19**	**Date of Analysis:**	**7/13/17 01:21 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	1.2	Not Detected	4.3	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: B-4-BC (062817)

Lab ID#: 1707045R3-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071309simr2**	**Date of Collection:**	**6/29/17 11:44:00 PM**
Dil. Factor:	**6.19**	**Date of Analysis:**	**7/13/17 01:21 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.062	Not Detected	0.16	Not Detected
1,1-Dichloroethene	0.062	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.62	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.12	0.28	0.49	1.1
Benzene	0.31	Not Detected	0.99	Not Detected
1,2-Dichloroethane	0.12	Not Detected	0.50	Not Detected
Trichloroethene	0.12	1.1	0.66	6.1
Toluene	0.12	0.46	0.47	1.7
1,1,2-Trichloroethane	0.12	Not Detected	0.68	Not Detected
Tetrachloroethene	0.12	Not Detected	0.84	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: DUP-1-BC (062817)

Lab ID#: 1707045R3-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071310r2**	**Date of Collection: 6/29/17**	
Dil. Factor:	**1.74**	**Date of Analysis: 7/13/17 02:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.35	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: DUP-1-BC (062817)

Lab ID#: 1707045R3-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071310simr2**	**Date of Collection:**	**6/29/17**
Dil. Factor:	**1.74**	**Date of Analysis:**	**7/13/17 02:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.069	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.035	0.27	0.14	1.1
Benzene	0.087	0.13	0.28	0.41
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	1.2	0.19	6.2
Toluene	0.035	0.44	0.13	1.6
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15

INVENTORY SHEET

Work Order #: 1707045R3

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Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	8/15/17
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1707045R3

Work Order Summary

CLIENT:	Ms. Sarah Jonker Arcadis U.S., Inc. 150 W Market St, Ste 728 Indianapolis, IN 46204	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	317-231-6500	**P.O. #**	LA003307.0009
FAX:	317-231-6514	**PROJECT #**	LA003307.0009 Meritor Grenada
DATE RECEIVED:	07/05/2017	**CONTACT:**	Ausha Scott
DATE COMPLETED:	07/14/2017		
DATE REISSUED:	08/14/2017		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	B-8-BC (062817)	Modified TO-15	6.5 "Hg	5.1 psi
01B	B-8-BC (062817)	Modified TO-15	6.5 "Hg	5.1 psi
02A	B-3-BC (062817)	Modified TO-15	5.5 "Hg	5 psi
02B	B-3-BC (062817)	Modified TO-15	5.5 "Hg	5 psi
03A	B-9-BC (062817)	Modified TO-15	3.9 "Hg	5.2 psi
03B	B-9-BC (062817)	Modified TO-15	3.9 "Hg	5.2 psi
04A	A-5-BC (062817)	Modified TO-15	5.1 "Hg	5.1 psi
04B	A-5-BC (062817)	Modified TO-15	5.1 "Hg	5.1 psi
05A	B-6-BC (062817)	Modified TO-15	5.5 "Hg	5.1 psi
05B	B-6-BC (062817)	Modified TO-15	5.5 "Hg	5.1 psi
06A	B-4-BC (062817)	Modified TO-15	23.5 "Hg	5.1 psi
06B	B-4-BC (062817)	Modified TO-15	23.5 "Hg	5.1 psi
07A	DUP-1-BC (062817)	Modified TO-15	6.7 "Hg	5.2 psi
07B	DUP-1-BC (062817)	Modified TO-15	6.7 "Hg	5.2 psi
08A	Lab Blank	Modified TO-15	NA	NA
08B	Lab Blank	Modified TO-15	NA	NA
08C	Lab Blank	Modified TO-15	NA	NA
08D	Lab Blank	Modified TO-15	NA	NA
08E	Lab Blank	Modified TO-15	NA	NA
08F	Lab Blank	Modified TO-15	NA	NA
09A	CCV	Modified TO-15	NA	NA
09B	CCV	Modified TO-15	NA	NA
09C	CCV	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1707045R3

Work Order Summary

CLIENT:	Ms. Sarah Jonker Arcadis U.S., Inc. 150 W Market St, Ste 728 Indianapolis, IN 46204	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	317-231-6500	**P.O. #**	LA003307.0009
FAX:	317-231-6514	**PROJECT #**	LA003307.0009 Meritor Grenada
DATE RECEIVED:	07/05/2017	**CONTACT:**	Ausha Scott
DATE COMPLETED:	07/14/2017		
DATE REISSUED:	08/14/2017		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
09D	CCV	Modified TO-15	NA	NA
09E	CCV	Modified TO-15	NA	NA
09F	CCV	Modified TO-15	NA	NA
10A	LCS	Modified TO-15	NA	NA
10AA	LCSD	Modified TO-15	NA	NA
10B	LCS	Modified TO-15	NA	NA
10BB	LCSD	Modified TO-15	NA	NA
10C	LCS	Modified TO-15	NA	NA
10CC	LCSD	Modified TO-15	NA	NA
10D	LCS	Modified TO-15	NA	NA
10DD	LCSD	Modified TO-15	NA	NA
10E	LCS	Modified TO-15	NA	NA
10EE	LCSD	Modified TO-15	NA	NA
10F	LCS	Modified TO-15	NA	NA
10FF	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 08/14/17

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Arcadis U.S., Inc.
Workorder# 1707045R3

Seven 6 Liter Summa Canister (100% Certified) samples were received on July 05, 2017. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

Sample B-4-BC (062817) was received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a

"sim" extension on the SIM data file.

The workorder was re-issued on 7/25/2017 for the following reasons:

1. To correct the dilution factor in laboratory blank 1707045R1-08E due to data entry error.

2. To correct identification of the following sample B-6-BC (062817) due to laboratory transcription error.

Per client request, the workorder was re-issued on 8/11/2017 to amend the target compound list as required by the specific project. Changing the compound list caused some previously reported compounds to become not reported.

The workorder was reissued on 8/14/2017 to correct the final report format.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
B-8-BC (062817)	1707045R3-01A	6/29/2017	7/ 5/2017	NA	12	7/11/2017	NA	Good
B-8-BC (062817)	1707045R3-01B	6/29/2017	7/ 5/2017	NA	12	7/11/2017	NA	Good
B-3-BC (062817)	1707045R3-02A	6/29/2017	7/ 5/2017	NA	13	7/12/2017	NA	Good
B-3-BC (062817)	1707045R3-02B	6/29/2017	7/ 5/2017	NA	13	7/12/2017	NA	Good
B-9-BC (062817)	1707045R3-03A	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
B-9-BC (062817)	1707045R3-03B	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
A-5-BC (062817)	1707045R3-04A	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
A-5-BC (062817)	1707045R3-04B	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
B-6-BC (062817)	1707045R3-05A	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
B-6-BC (062817)	1707045R3-05B	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
B-4-BC (062817)	1707045R3-06A	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
B-4-BC (062817)	1707045R3-06B	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
DUP-1-BC (062817)	1707045R3-07A	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
DUP-1-BC (062817)	1707045R3-07B	6/29/2017	7/ 5/2017	NA	14	7/13/2017	NA	Good
Lab Blank	1707045R3-08A	NA	NA	NA	NA	7/11/2017	NA	Good
Lab Blank	1707045R3-08B	NA	NA	NA	NA	7/11/2017	NA	Good
Lab Blank	1707045R3-08C	NA	NA	NA	NA	7/12/2017	NA	Good
Lab Blank	1707045R3-08D	NA	NA	NA	NA	7/12/2017	NA	Good
Lab Blank	1707045R3-08E	NA	NA	NA	NA	7/13/2017	NA	Good
Lab Blank	1707045R3-08F	NA	NA	NA	NA	7/13/2017	NA	Good
CCV	1707045R3-09A	NA	NA	NA	NA	7/11/2017	NA	Good
CCV	1707045R3-09B	NA	NA	NA	NA	7/11/2017	NA	Good
CCV	1707045R3-09C	NA	NA	NA	NA	7/12/2017	NA	Good
CCV	1707045R3-09D	NA	NA	NA	NA	7/12/2017	NA	Good
CCV	1707045R3-09E	NA	NA	NA	NA	7/13/2017	NA	Good
CCV	1707045R3-09F	NA	NA	NA	NA	7/13/2017	NA	Good
LCS	1707045R3-10A	NA	NA	NA	NA	7/11/2017	NA	Good
LCSD	1707045R3-10A	NA	NA	NA	NA	7/11/2017	NA	Good
LCS	1707045R3-10B	NA	NA	NA	NA	7/11/2017	NA	Good
LCSD	1707045R3-10B	NA	NA	NA	NA	7/11/2017	NA	Good
LCS	1707045R3-10C	NA	NA	NA	NA	7/12/2017	NA	Good
LCSD	1707045R3-10C	NA	NA	NA	NA	7/12/2017	NA	Good

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
LCS	1707045R3-10D	NA	NA	NA	NA	7/12/2017	NA	Good
LCSD	1707045R3-10D	NA	NA	NA	NA	7/12/2017	NA	Good
LCS	1707045R3-10E	NA	NA	NA	NA	7/13/2017	NA	Good
LCSD	1707045R3-10E	NA	NA	NA	NA	7/13/2017	NA	Good
LCS	1707045R3-10F	NA	NA	NA	NA	7/13/2017	NA	Good
LCSD	1707045R3-10F	NA	NA	NA	NA	7/13/2017	NA	Good

Sample Results and Raw Data

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-8-BC (062817)

Lab ID#: 1707045R3-01A

No Detections Were Found.

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Client Sample ID: B-8-BC (062817)

Lab ID#: 1707045R3-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071120r2**	**Date of Collection:**	**6/29/17 11:27:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**7/11/17 09:40 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.34	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071120r2.d
Lab Smp Id: 1707045-01A
Inj Date : 11-JUL-2017 21:40
Operator : ea Inst ID: msde.i
Smp Info : 250mL# 34192
Misc Info : 6.5"Hg-5.1psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m
Meth Date : 11-Aug-2017 16:05 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1
Dil Factor: 1.72000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	134856	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	100501			46.85- 106.85	74.52
15.391	15.391 (1.000)	49	228554			226.12- 286.12	169.48
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	222030	5.26973	5.270	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	98142			17.94- 77.94	44.20
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	430480	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	65931			0.00- 44.91	15.32
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.275	19.276 (1.152)	98	401993	4.85355	4.854	80.00- 120.00	100.00
19.275	19.276 (1.152)	70	48196			0.00- 41.31	11.99
19.275	19.276 (1.152)	100	265896			38.24- 98.24	66.14
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.156	22.156 (1.000)	117	400385	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.156	(1.000)	82	195247			19.53- 79.53	48.76
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.077)	174	243660	5.21058	5.210	80.00- 120.00	100.00
23.856	23.856	(1.077)	95	271157			81.42- 141.42	111.28
23.856	23.856	(1.077)	176	231825			66.35- 126.35	95.14

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071120r2.d
Lab Smp Id: 1707045-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 6.5"Hg-5.1psi

Calibration Date: 11-JUL-2017
Calibration Time: 07:33

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	138043	82826	193260	134856	-2.31
123 1,4-Difluorobenze	475818	285491	666145	430480	-9.53
163 Chlorobenzene-d5	449910	269946	629874	400385	-11.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:06

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-01A
Level: LOW
Operator: ea
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 6.5"Hg-5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.270	105.39	70-130
$ 146 Toluene-d8	5.000	4.854	97.07	70-130
$ 177 4-Bromofluorobenze	5.000	5.210	104.21	70-130

Data File: /chem/msde.i/11Jul2017.b/e071120r2.d

Date : 11-JUL-2017 21:40

Client ID:

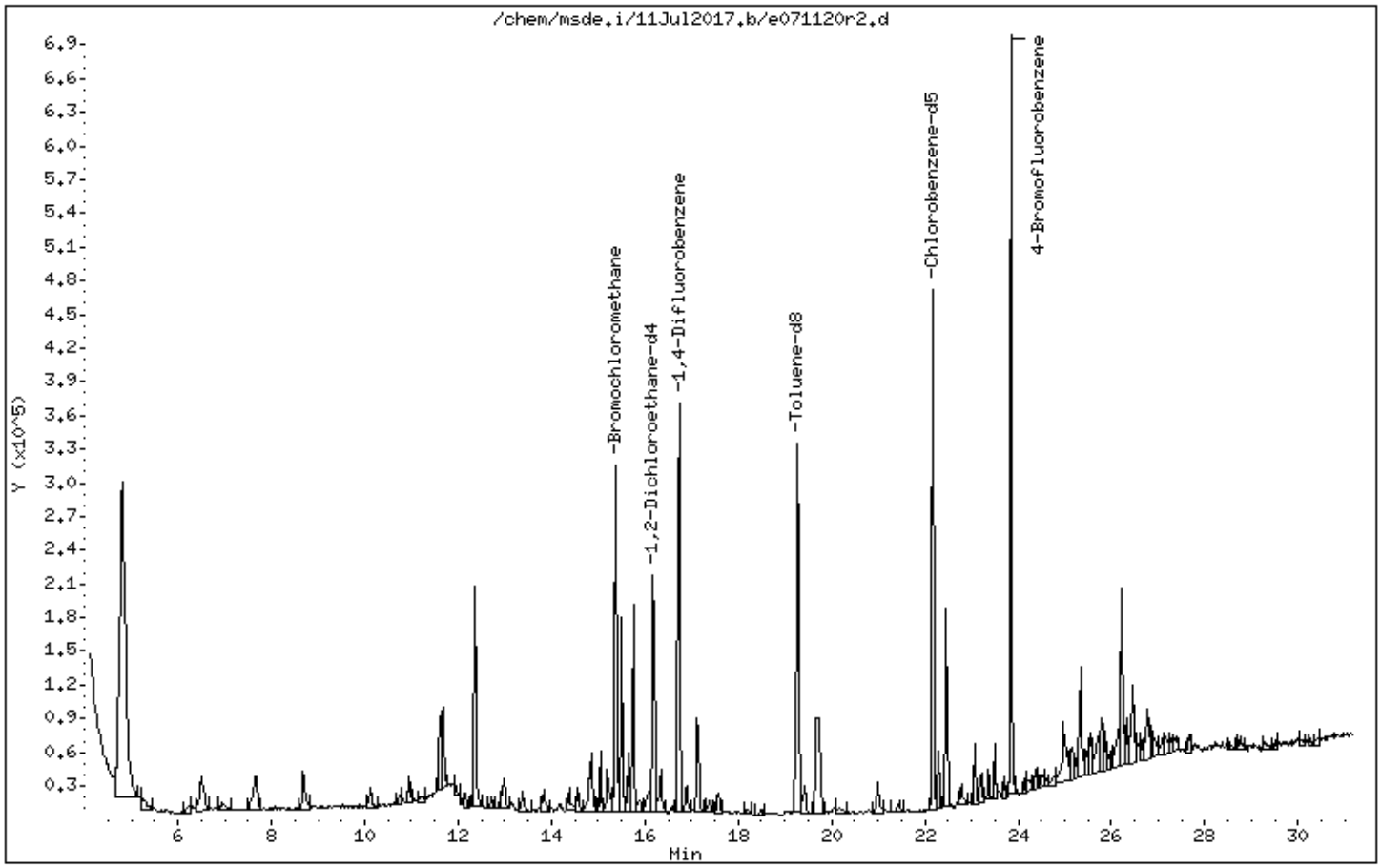
Instrument: msde.i

Sample Info: 250mL# 34192

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-8-BC (062817)

Lab ID#: 1707045R3-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.034	0.31	0.14	1.2
Benzene	0.086	0.20	0.27	0.63
Trichloroethene	0.034	1.3	0.18	7.1
Toluene	0.034	0.40	0.13	1.5

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Client Sample ID: B-8-BC (062817)

Lab ID#: 1707045R3-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071120simr2**	**Date of Collection:**	**6/29/17 11:27:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**7/11/17 09:40 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
cis-1,2-Dichloroethene	0.034	0.31	0.14	1.2
Benzene	0.086	0.20	0.27	0.63
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	1.3	0.18	7.1
Toluene	0.034	0.40	0.13	1.5
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071120simr2.d
Lab Smp Id: 1707045-01B
Inj Date : 11-JUL-2017 21:40
Operator : ea Inst ID: msde.i
Smp Info : 250mL# 34192
Misc Info : 6.5"Hg-5.1psi
Comment : SIM - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:06 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.72000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
12 cis-1,2-Dichloroethene						CAS #: 156-59-2	
15.060	15.060 (0.978)	98	5196	0.17926	0.3083	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	14380			222.17- 282.17	276.75
15.060	15.060 (0.978)	96	8094			125.16- 185.16	155.77
* 13 Bromochloromethane						CAS #: 74-97-5	
15.405	15.405 (1.000)	130	138633	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	107267			47.63- 107.63	77.37
15.374	15.405 (1.000)	49	252884			150.43- 210.43	182.41
17 Benzene						CAS #: 71-43-2	
16.197	16.197 (0.968)	78	12893	0.11411	0.1963	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	5750			0.00- 53.68	44.60
$ 18 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.197	16.197 (1.051)	65	240845	5.41230	5.412	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	104657			19.71- 79.71	43.45
* 20 1,4-Difluorobenzene						CAS #: 540-36-3	
16.727	16.727 (1.000)	114	472698	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 20 1,4-Difluorobenzene (continued)							
16.727	16.727 (1.000)	88	69048			0.00- 44.62	14.61
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	54315	0.77000	1.324	80.00- 120.00	100.00
17.136	17.136 (1.024)	95	47353			57.80- 117.80	87.18
17.136	17.136 (1.024)	97	31014			26.87- 86.87	57.10
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	371521	4.88702	4.887	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	44548			0.00- 41.18	11.99
19.289	19.289 (1.153)	100	239841			35.44- 95.44	64.56
23 Toluene					CAS #: 108-88-3		
19.424	19.424 (1.161)	91	30148	0.23249	0.3999	80.00- 120.00	100.00
19.424	19.424 (1.161)	92	17074			28.44- 88.44	56.63
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	441280	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	188103			12.99- 72.99	42.63
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.847 (1.077)	174	272687	5.12890	5.129	80.00- 120.00	100.00
23.847	23.847 (1.076)	95	281445			73.66- 133.66	103.21
23.869	23.847 (1.077)	176	263949			67.29- 127.29	96.80

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071120simr2.d
Lab Smp Id: 1707045-01B
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 6.5"Hg-5.1psi

Calibration Date: 11-JUL-2017
Calibration Time: 07:33

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145812	87487	204137	138633	-4.92
20 1,4-Difluorobenze	526665	315999	737331	472698	-10.25
28 Chlorobenzene-d5	479389	287633	671145	441280	-7.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.41	15.08	15.74	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:07

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 11Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-01B
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 6.5"Hg-5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.412	108.25	70-130
$ 22 Toluene-d8	5.000	4.887	97.74	70-130
$ 33 4-Bromofluorobenze	5.000	5.129	102.58	70-130

Data File: /chem/msde.i/11Jul2017.b/e071120simr2.d

Date : 11-JUL-2017 21:40

Client ID:

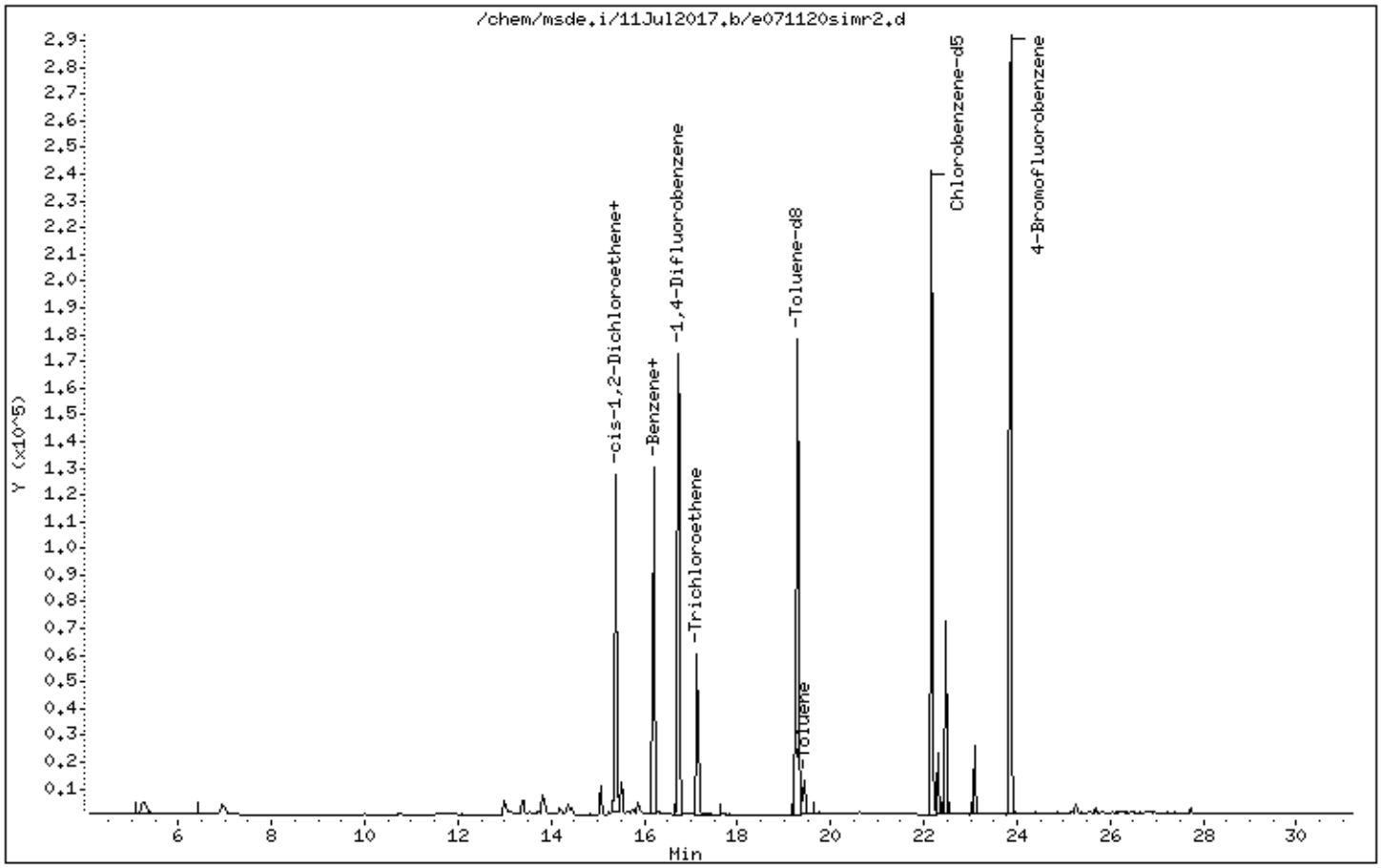
Instrument: msde.i

Sample Info: 250mL# 34192

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/11Jul2017.b/e071120simr2.d

Date : 11-JUL-2017 21:40

Client ID:

Instrument: msde.i

Sample Info: 250mL# 34192

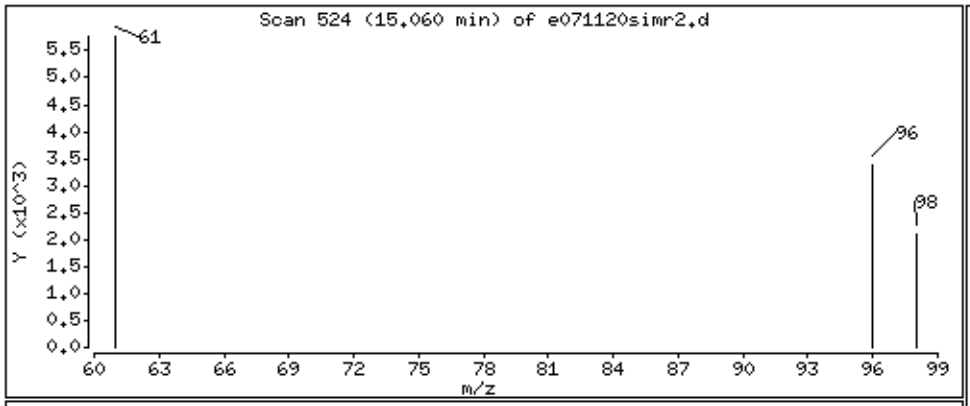
Operator: ea

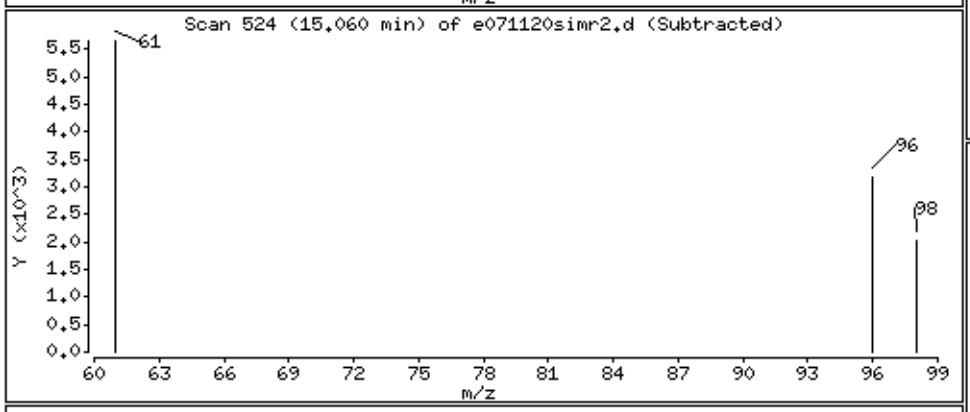
Column phase: RTX-624

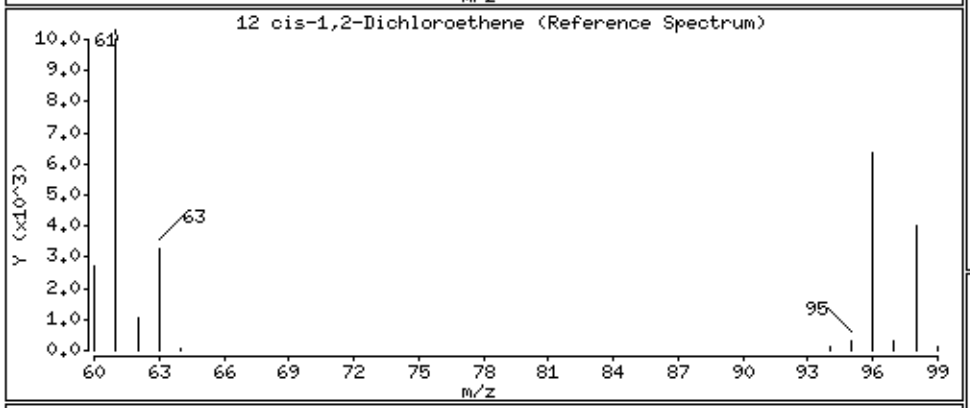
Column diameter: 0.32

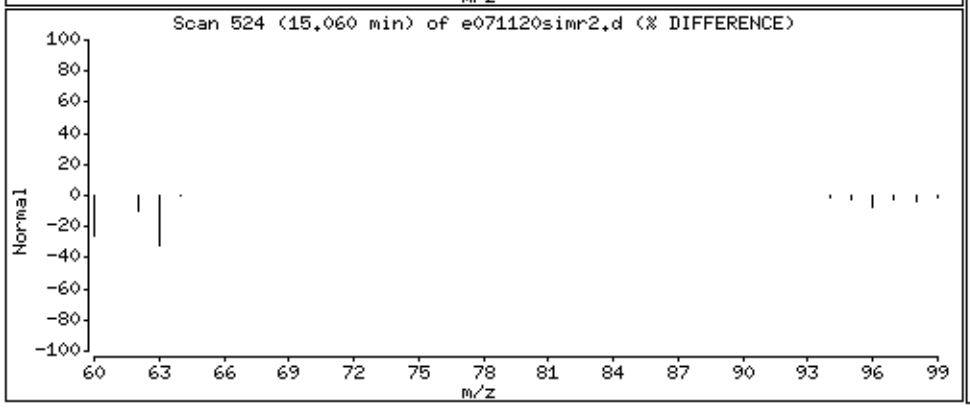
12 cis-1,2-Dichloroethene

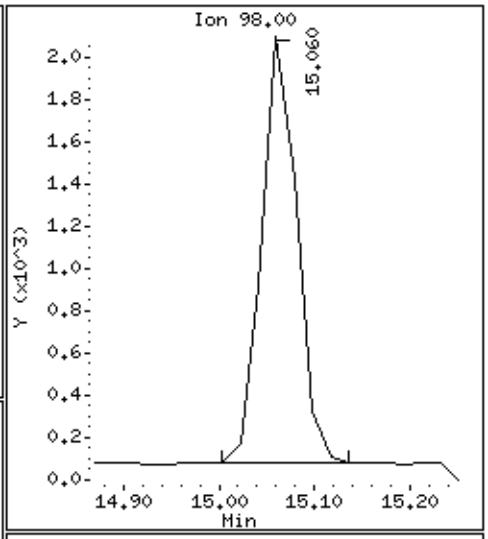
Concentration: 0.3083 PPBV

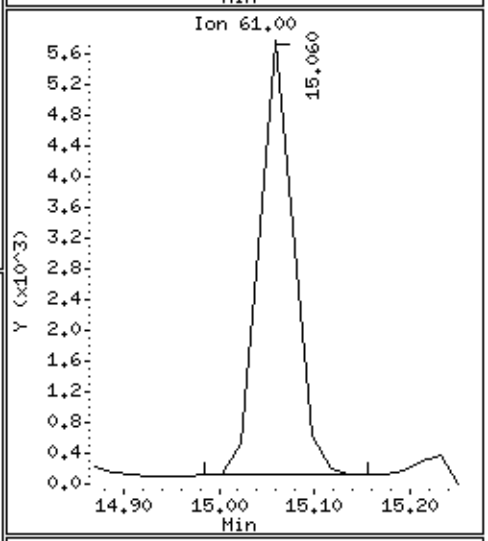


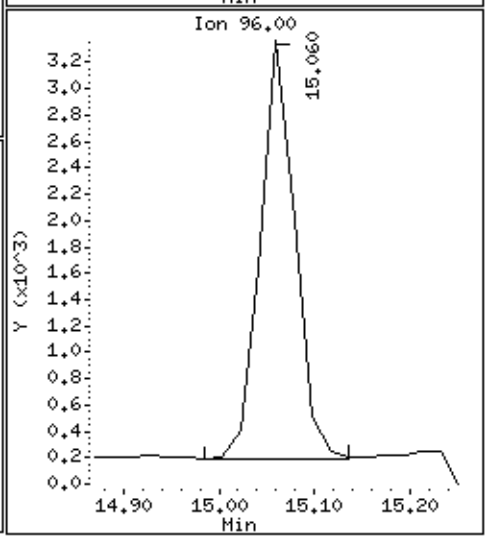












Data File: /chem/msde.i/11Jul2017.b/e071120simr2.d

Date : 11-JUL-2017 21:40

Client ID:

Instrument: msde.i

Sample Info: 250mL# 34192

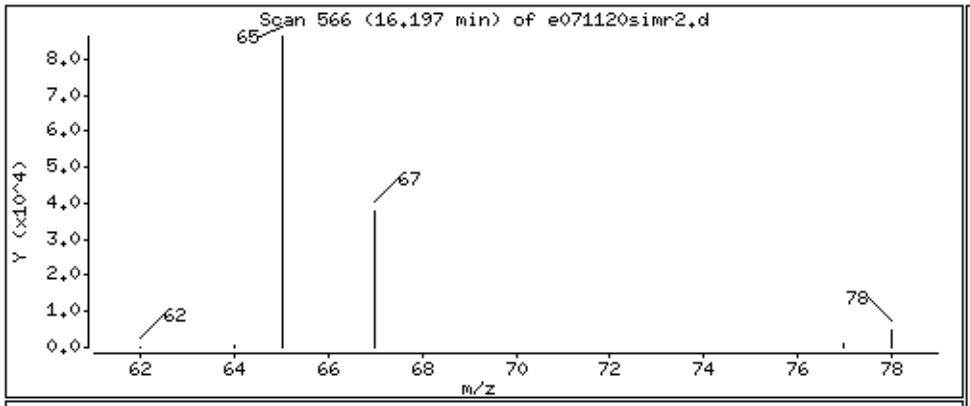
Operator: ea

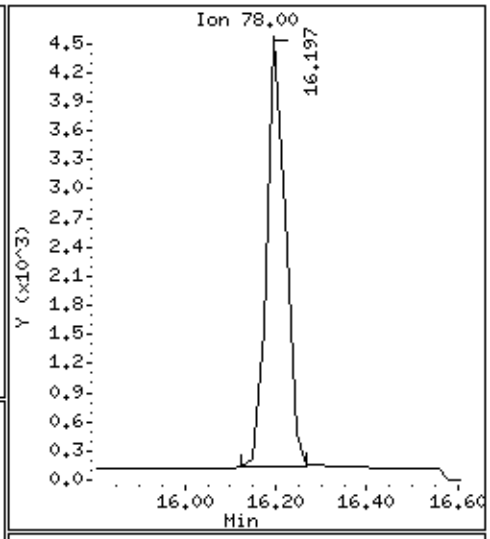
Column phase: RTX-624

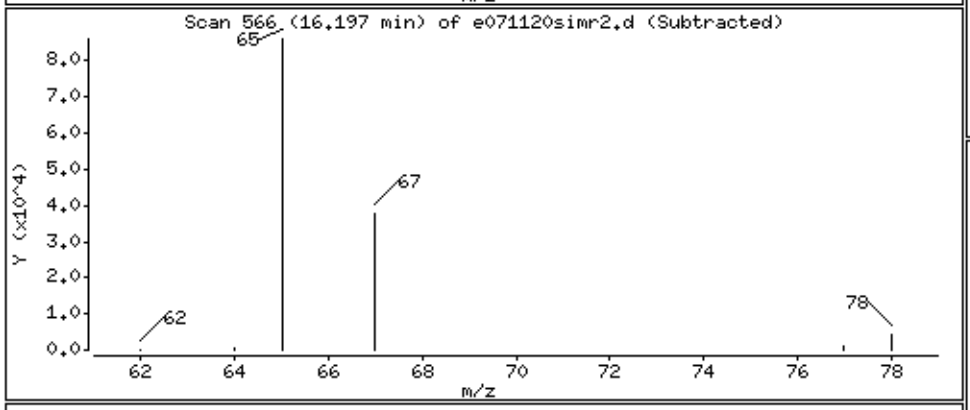
Column diameter: 0.32

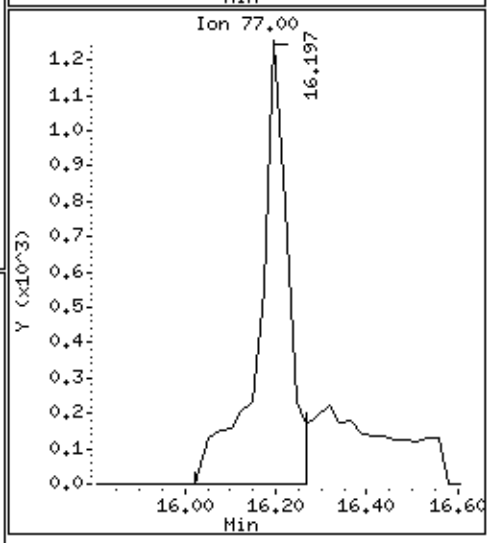
17 Benzene

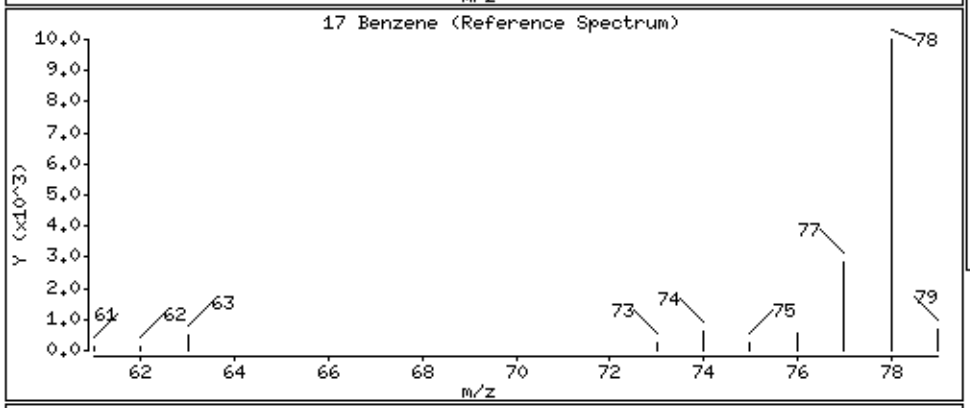
Concentration: 0.1963 PPBV

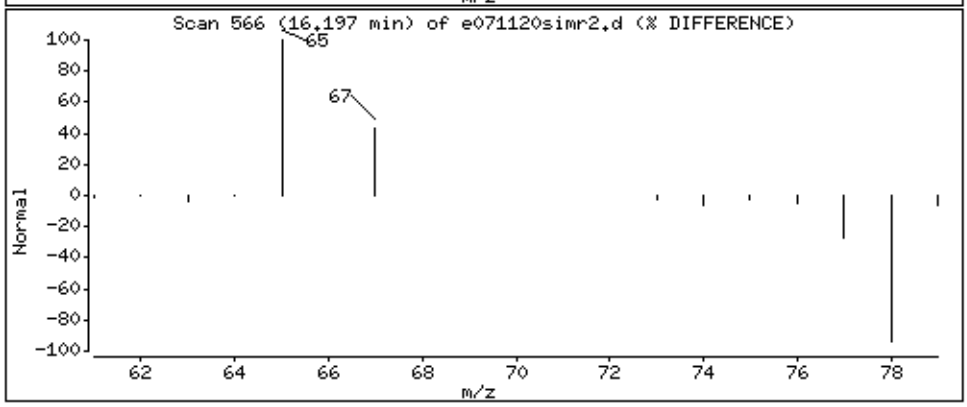












Data File: /chem/msde.i/11Jul2017.b/e071120simr2.d

Date : 11-JUL-2017 21:40

Client ID:

Instrument: msde.i

Sample Info: 250mL# 34192

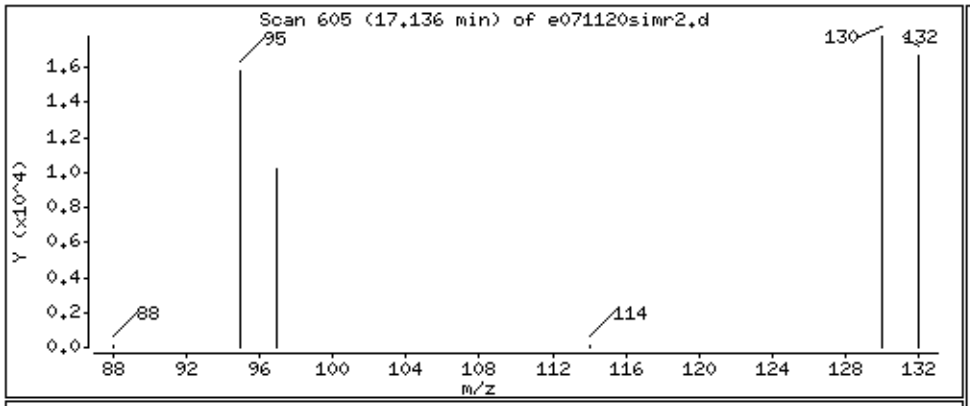
Operator: ea

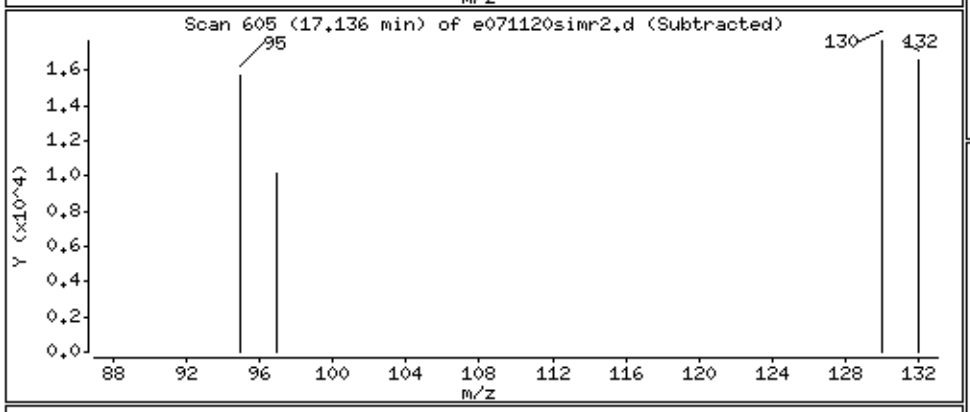
Column phase: RTX-624

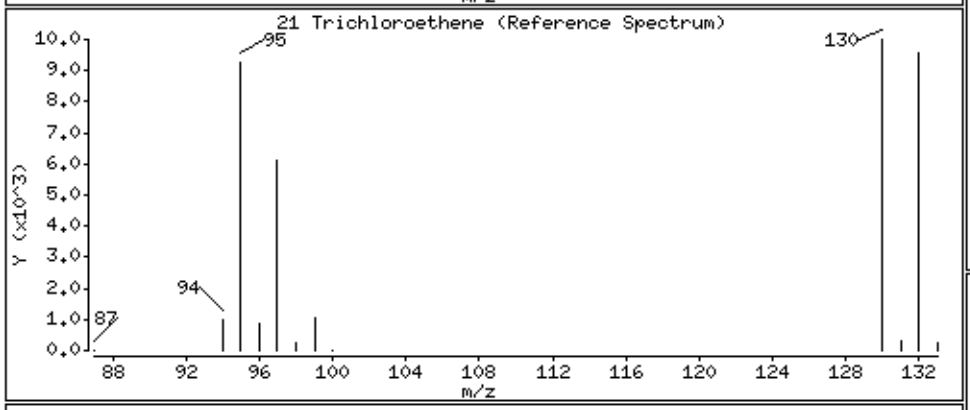
Column diameter: 0.32

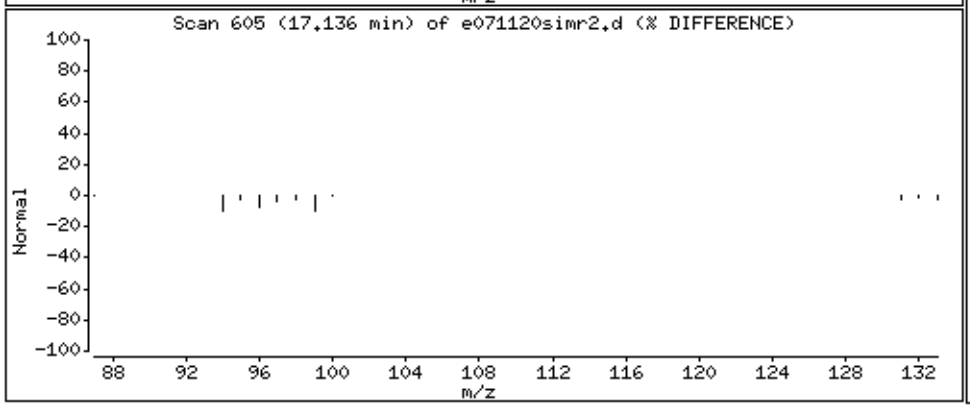
21 Trichloroethene

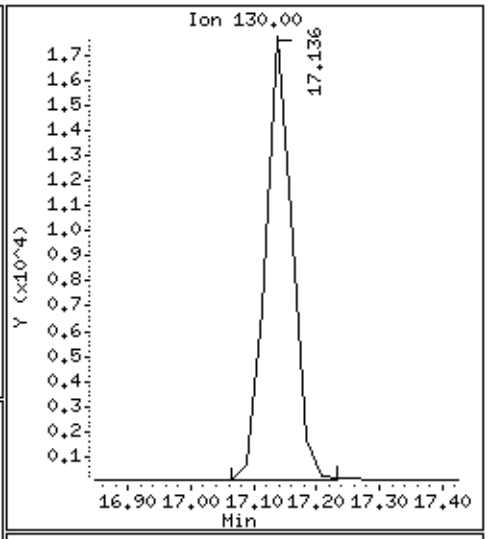
Concentration: 1.324 PPBV

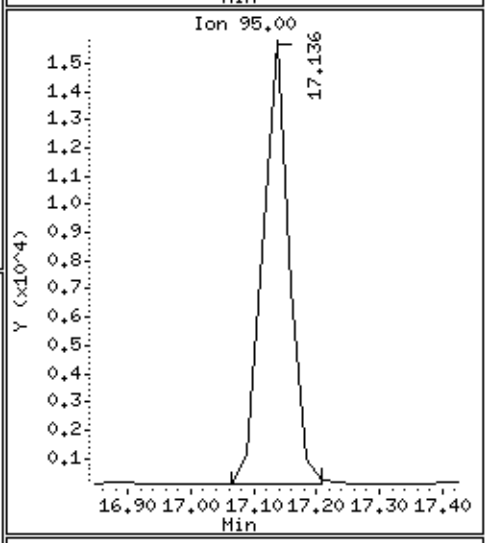


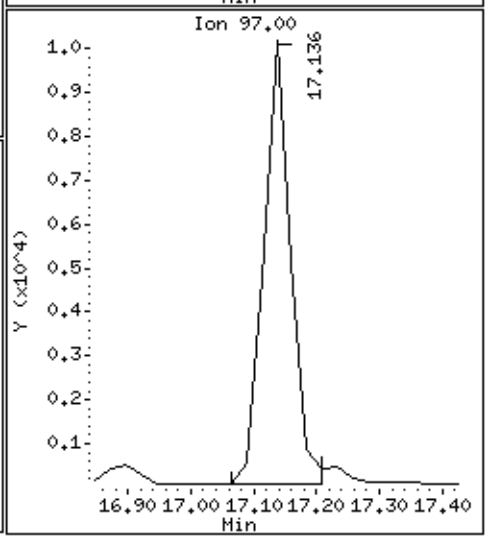












Data File: /chem/msde.i/11Jul2017.b/e071120simr2.d

Date : 11-JUL-2017 21:40

Client ID:

Instrument: msde.i

Sample Info: 250mL# 34192

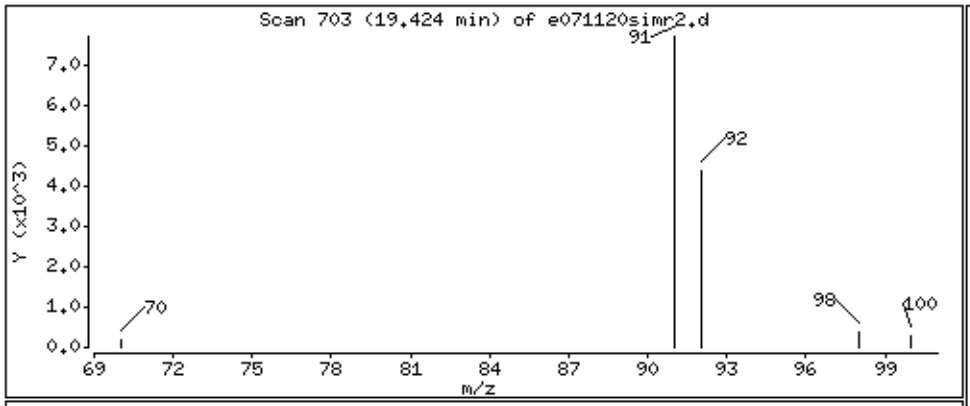
Operator: ea

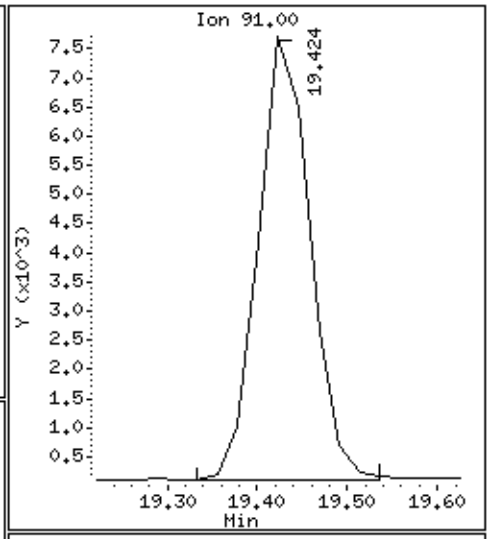
Column phase: RTX-624

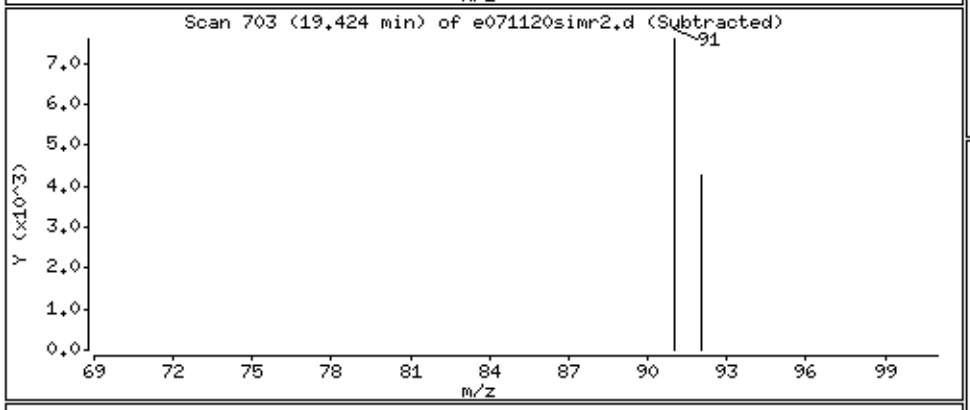
Column diameter: 0.32

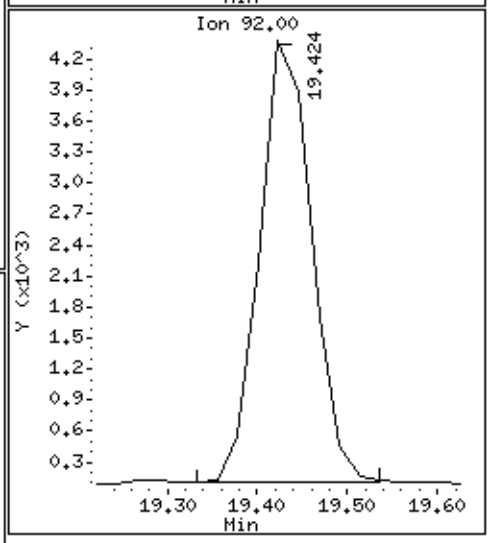
23 Toluene

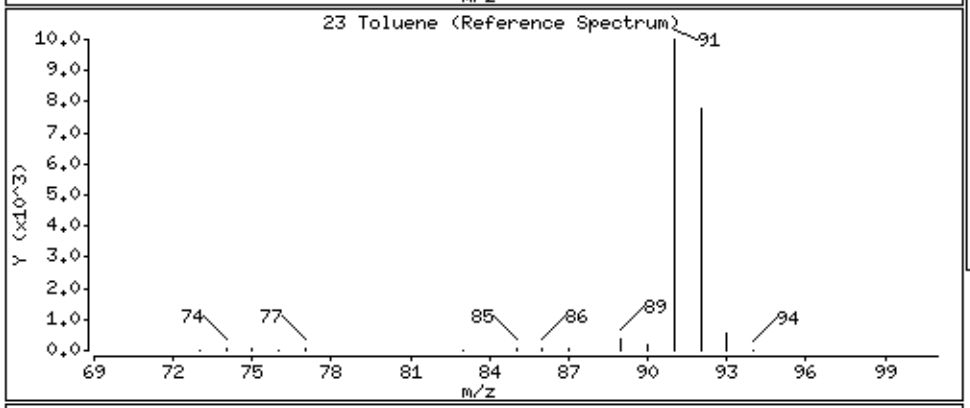
Concentration: 0.3999 PPBV

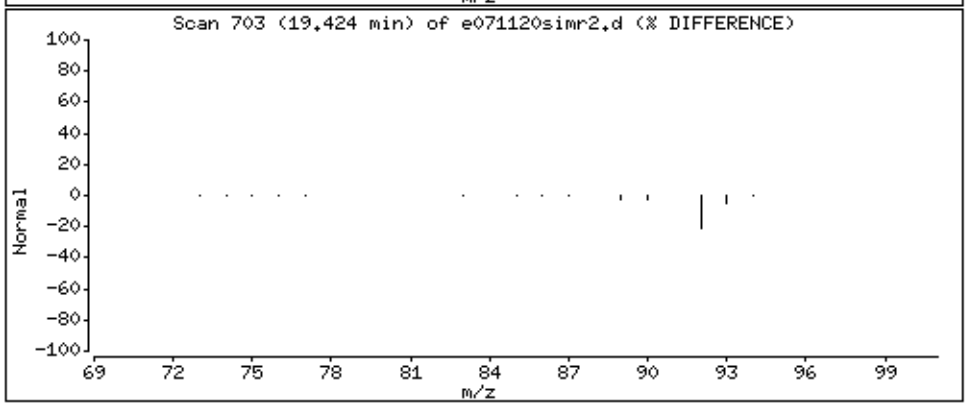












Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-3-BC (062817)

Lab ID#: 1707045R3-02A

No Detections Were Found.

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Client Sample ID: B-3-BC (062817)

Lab ID#: 1707045R3-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071219r2**	**Date of Collection:**	**6/29/17 11:10:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**7/12/17 09:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.33	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071219r2.d
Lab Smp Id: 1707045-02A
Inj Date : 12-JUL-2017 21:44
Operator : ea Inst ID: msde.i
Smp Info : 250mL#33536
Misc Info : 5.5"Hg-5psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 11-Aug-2017 16:09 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 15:33 Cal File: e071212.d
Als bottle: 1
Dil Factor: 1.64000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	129506	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	96509			46.85- 106.85	74.52
15.391	15.391 (1.000)	49	225356			226.12- 286.12	174.01
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	223589	5.52596	5.526	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	93705			17.94- 77.94	41.91
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	435385	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	64139			0.00- 44.91	14.73
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.275	19.275 (1.152)	98	407302	4.86225	4.862	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	49450			0.00- 41.31	12.14
19.275	19.275 (1.152)	100	270094			38.24- 98.24	66.31
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.156 (1.000)	117	409557	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.177	22.156	(1.000)	82	198908			19.53- 79.53	48.57
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	240929	5.03679	5.037	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	273533			81.42- 141.42	113.53
23.856	23.856	(1.076)	176	234920			66.35- 126.35	97.51

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071219r2.d
Lab Smp Id: 1707045-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 5.5"Hg-5psi

Calibration Date: 12-JUL-2017
Calibration Time: 07:45

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	129506	-3.57
123 1,4-Difluorobenze	480550	288330	672770	435385	-9.40
163 Chlorobenzene-d5	431542	258925	604159	409557	-5.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:11

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 12Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-02A
Level: LOW Operator: ea
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 5.5"Hg-5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.526	110.52	70-130
$ 146 Toluene-d8	5.000	4.862	97.24	70-130
$ 177 4-Bromofluorobenze	5.000	5.037	100.74	70-130

Data File: /chem/msde.i/12Jul2017.b/e071219r2.d

Date : 12-JUL-2017 21:44

Client ID:

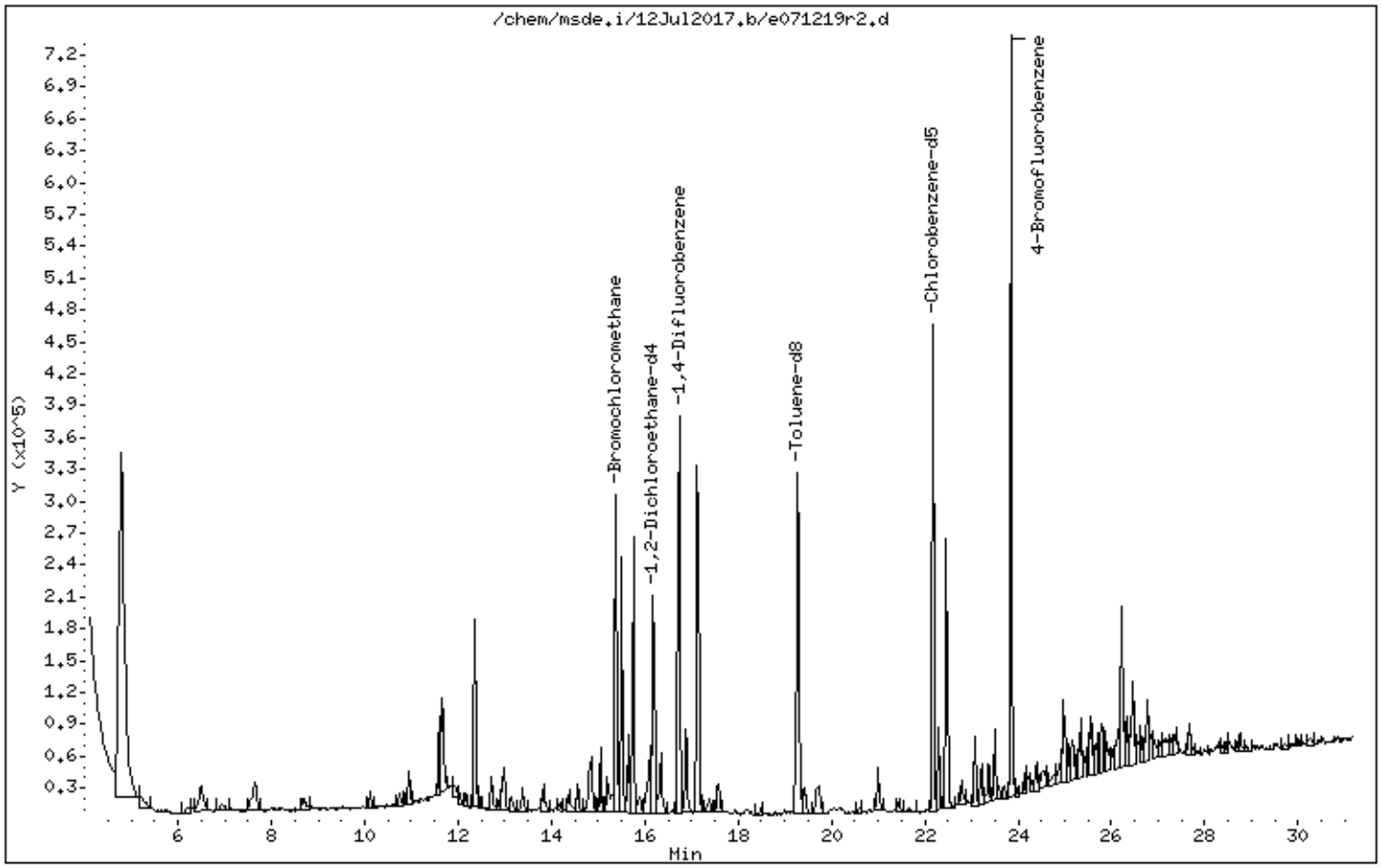
Instrument: msde.i

Sample Info: 250mL#33536

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-3-BC (062817)

Lab ID#: 1707045R3-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	0.018	0.065	0.073
cis-1,2-Dichloroethene	0.033	0.44	0.13	1.8
Benzene	0.082	0.086	0.26	0.28
Trichloroethene	0.033	4.7	0.18	25
Toluene	0.033	0.37	0.12	1.4
Tetrachloroethene	0.033	0.069	0.22	0.47

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Client Sample ID: B-3-BC (062817)

Lab ID#: 1707045R3-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071219simr2**	**Date of Collection:**	**6/29/17 11:10:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**7/12/17 09:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	0.018	0.065	0.073
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.033	0.44	0.13	1.8
Benzene	0.082	0.086	0.26	0.28
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	4.7	0.18	25
Toluene	0.033	0.37	0.12	1.4
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	0.069	0.22	0.47

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071219simr2.d
Lab Smp Id: 1707045-02B
Inj Date : 12-JUL-2017 21:44
Operator : ea Inst ID: msde.i
Smp Info : 250mL#33536
Misc Info : 5.5"Hg-5psi
Comment : SIM - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:09 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.64000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.094	12.113 (0.785)	98	277	0.01120	0.01837	80.00- 120.00	100.00
12.094	12.113 (0.785)	61	736			300.85- 360.85	265.70
12.094	12.113 (0.785)	96	463			126.45- 186.45	167.15
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	7577	0.27072	0.4440	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	20146			222.17- 282.17	265.88
15.060	15.060 (0.978)	96	11801			125.16- 185.16	155.75
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	133857	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	102874			47.63- 107.63	76.85
15.374	15.405 (1.000)	49	244546			150.43- 210.43	182.69
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	6063	0.05259	0.08624	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	4233			0.00- 53.68	69.82
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	236802	5.51132	5.511	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 18 1,2-Dichloroethane-d4 (continued)							
16.197	16.197 (1.051)	67	102141			19.71- 79.71	43.13
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	482340	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	70245			0.00- 44.62	14.56
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	208175	2.89220	4.743	80.00- 120.00	100.00
17.136	17.136 (1.024)	95	183023			57.80- 117.80	87.92
17.136	17.136 (1.024)	97	119347			26.87- 86.87	57.33
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	373637	4.81661	4.817	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	44712			0.00- 41.18	11.97
19.289	19.289 (1.153)	100	243337			35.44- 95.44	65.13
23 Toluene					CAS #: 108-88-3		
19.423	19.423 (1.161)	91	30222	0.22840	0.3746	80.00- 120.00	100.00
19.423	19.423 (1.161)	92	17105			28.44- 88.44	56.60
26 Tetrachloroethene					CAS #: 127-18-4		
20.616	20.616 (0.930)	166	3436	0.04201	0.06889	80.00- 120.00	100.00
20.616	20.616 (0.930)	129	2871			50.99- 110.99	83.56
20.616	20.616 (0.930)	131	3044			51.53- 111.53	88.59
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	435476	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	188602			12.99- 72.99	43.31
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	272307	5.19001	5.190	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	283739			73.66- 133.66	104.20
23.869	23.869 (1.077)	176	264375			67.29- 127.29	97.09

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071219simr2.d
Lab Smp Id: 1707045-02B
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 5.5"Hg-5psi

Calibration Date: 12-JUL-2017
Calibration Time: 07:45

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	143363	86018	200708	133857	-6.63
20 1,4-Difluorobenze	516813	310088	723538	482340	-6.67
28 Chlorobenzene-d5	470445	282267	658623	435476	-7.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:10

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-02B
Level: LOW
Operator: ea
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 5.5"Hg-5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.511	110.23	70-130
$ 22 Toluene-d8	5.000	4.817	96.33	70-130
$ 33 4-Bromofluorobenze	5.000	5.190	103.80	70-130

Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

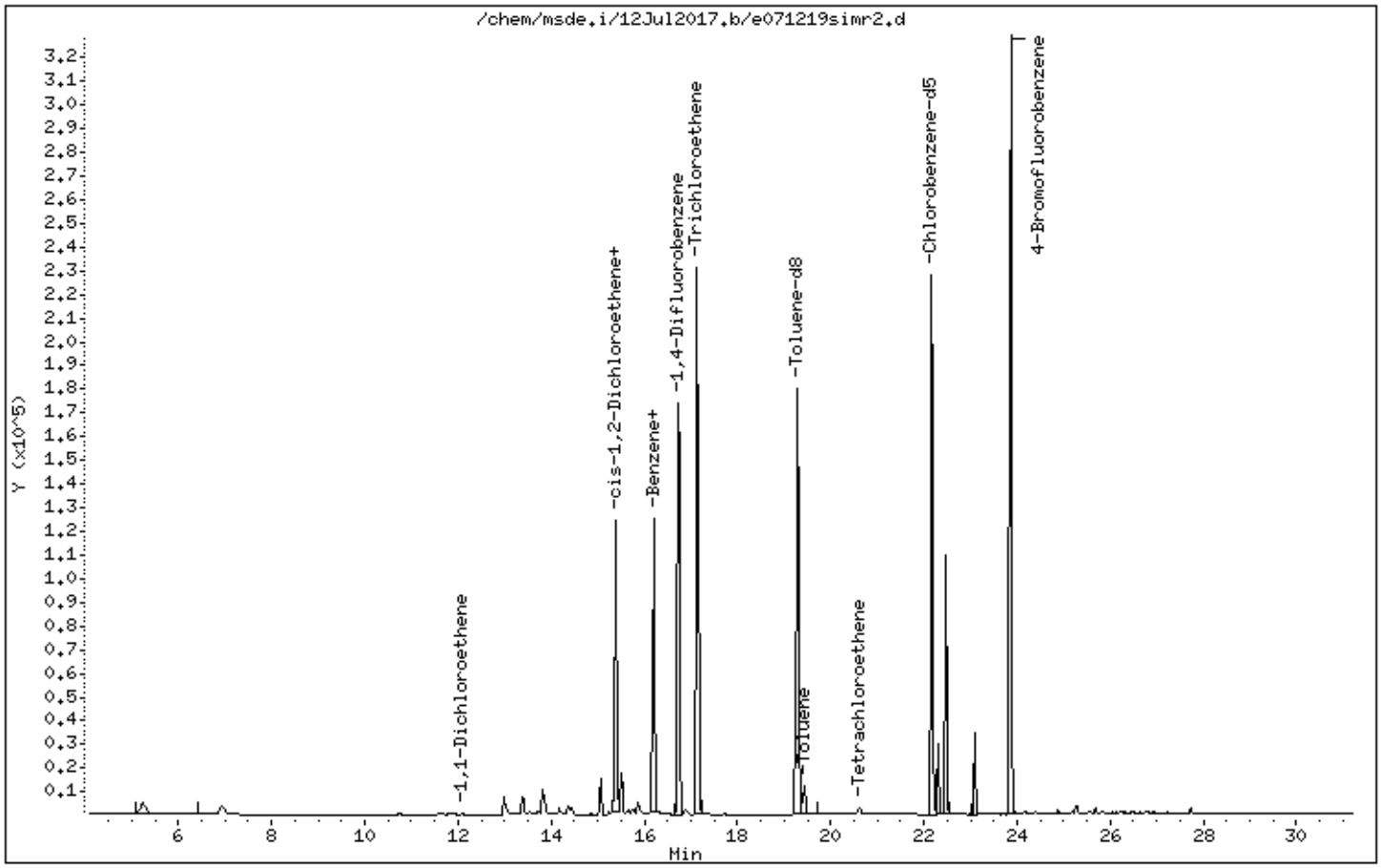
Instrument: msde.i

Sample Info: 250mL#33536

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

Instrument: msde.i

Sample Info: 250mL#33536

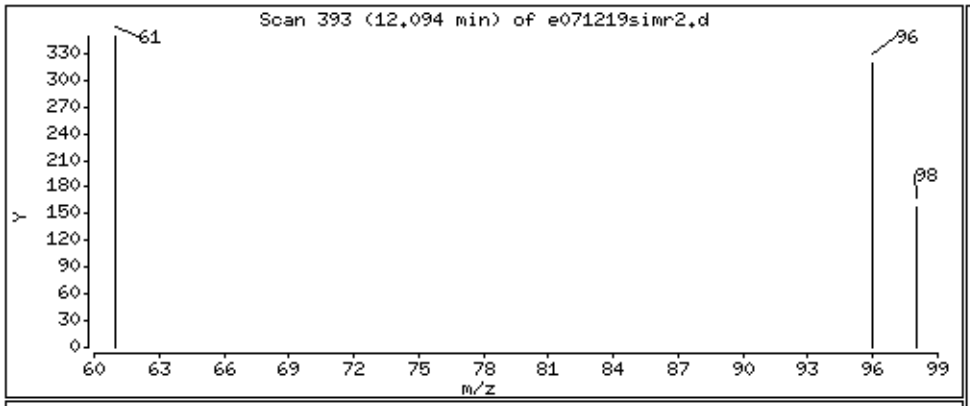
Operator: ea

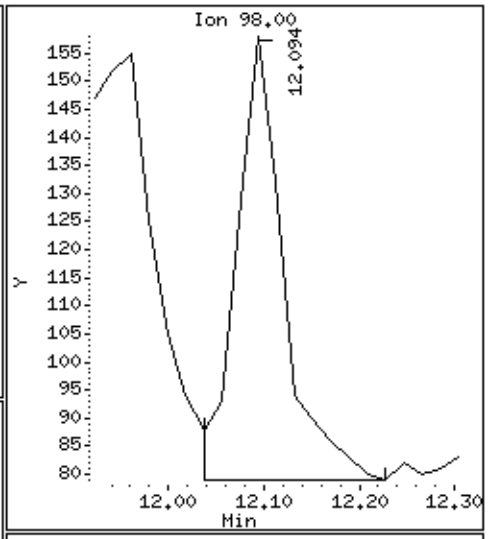
Column phase: RTX-624

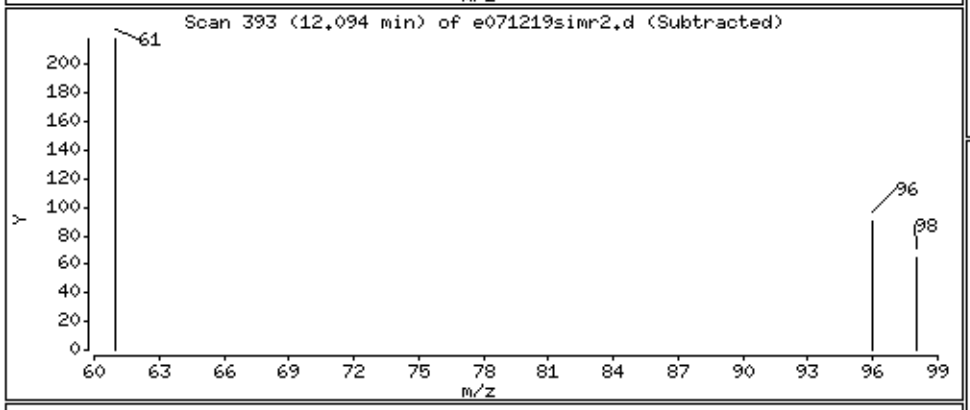
Column diameter: 0.32

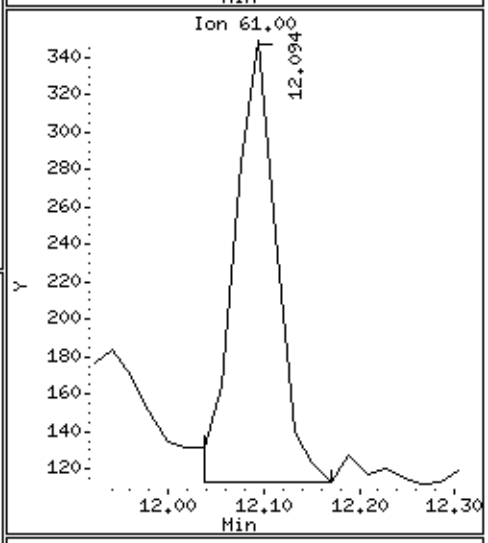
8 1,1-Dichloroethene

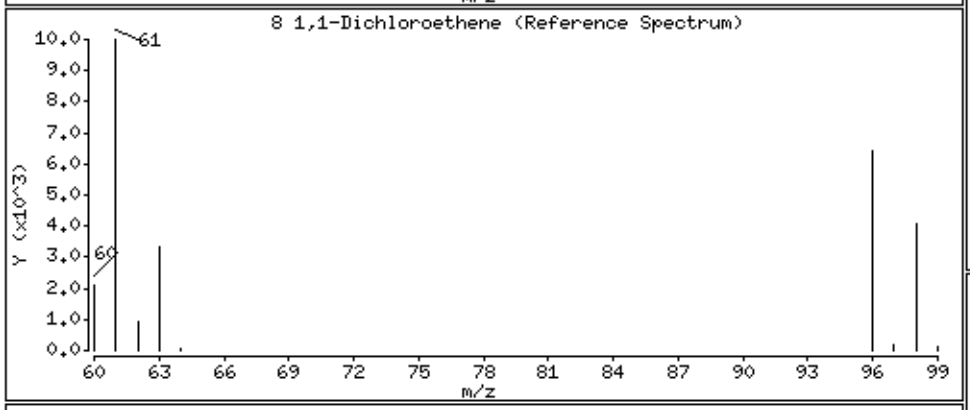
Concentration: 0.01837 PPBV

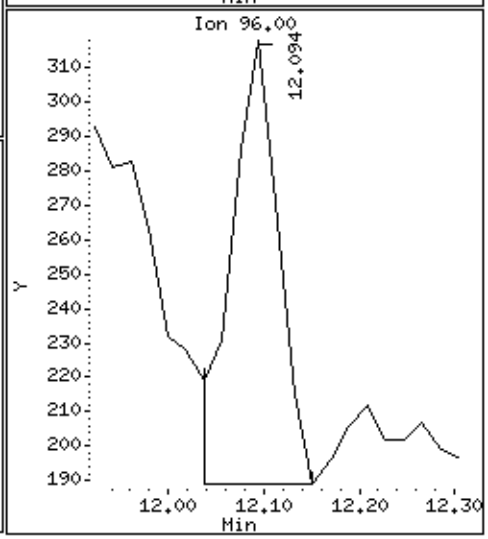


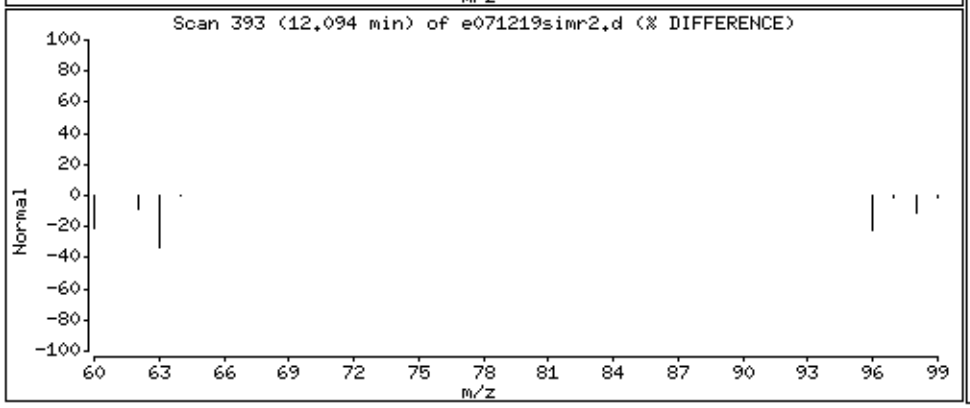












Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

Instrument: msde.i

Sample Info: 250mL#33536

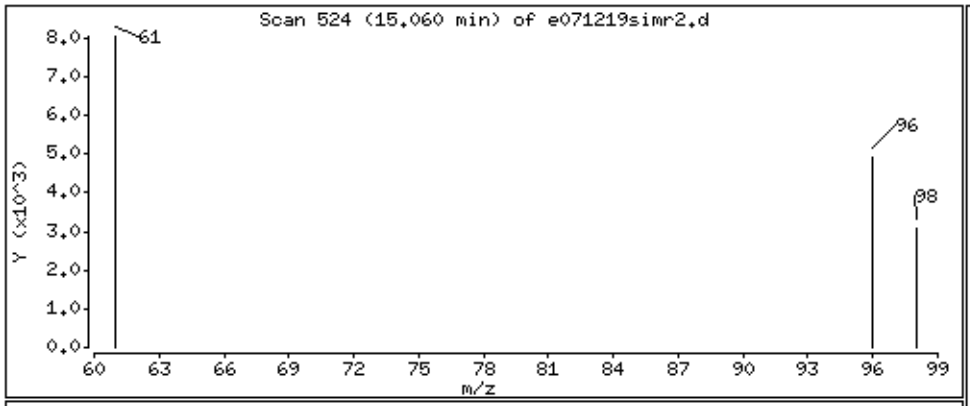
Operator: ea

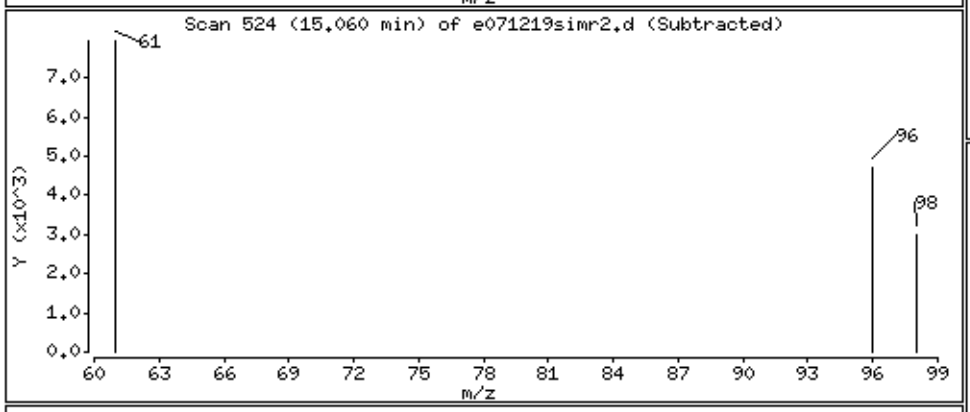
Column phase: RTX-624

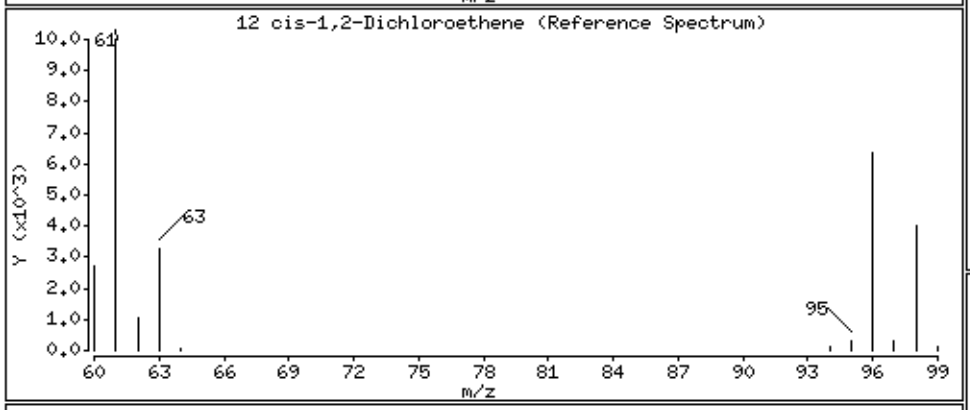
Column diameter: 0.32

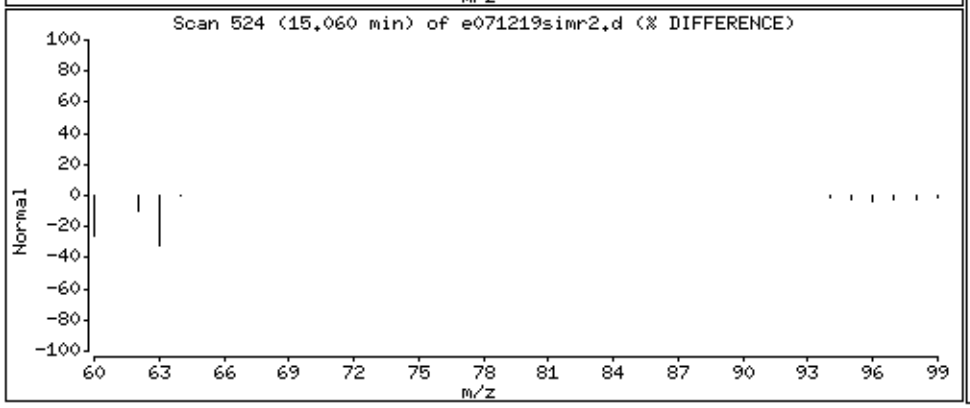
12 cis-1,2-Dichloroethene

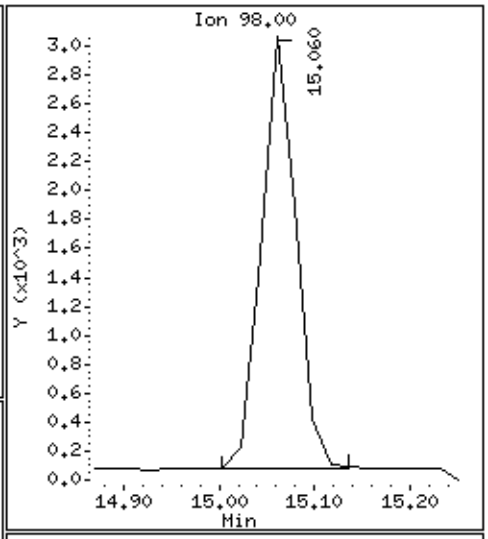
Concentration: 0.4440 PPBV

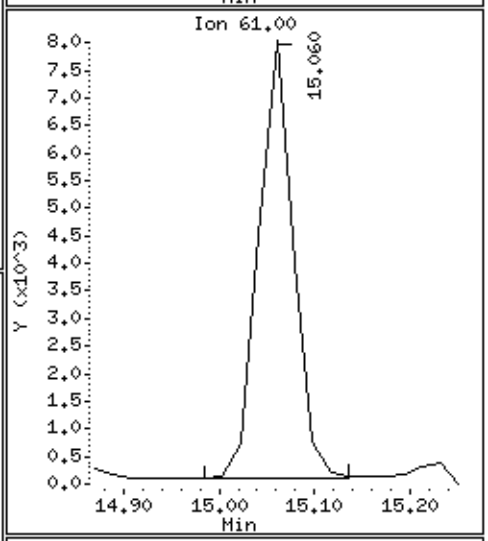


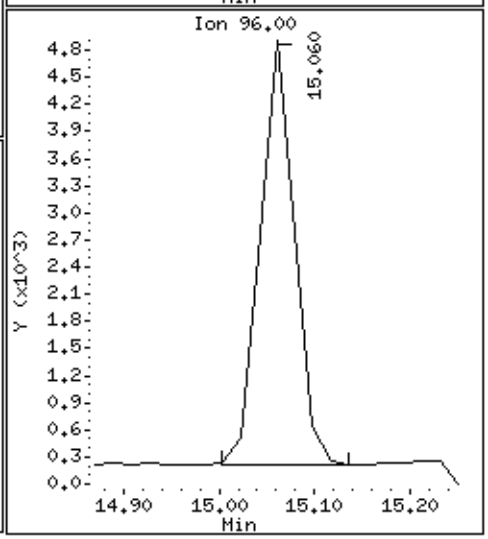












Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

Instrument: msde.i

Sample Info: 250mL#33536

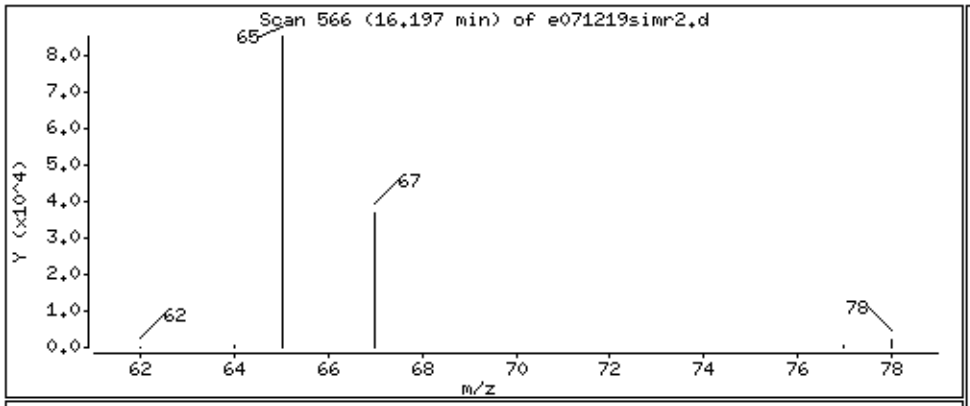
Operator: ea

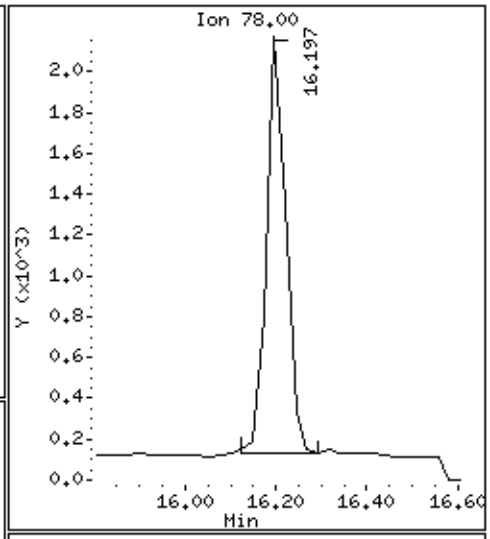
Column phase: RTX-624

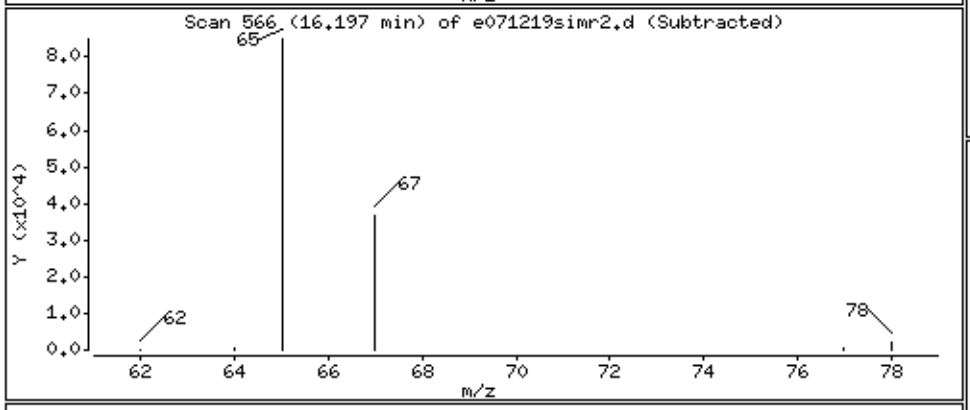
Column diameter: 0.32

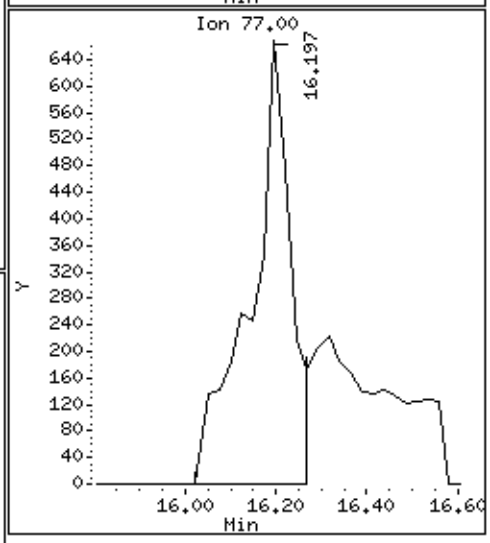
17 Benzene

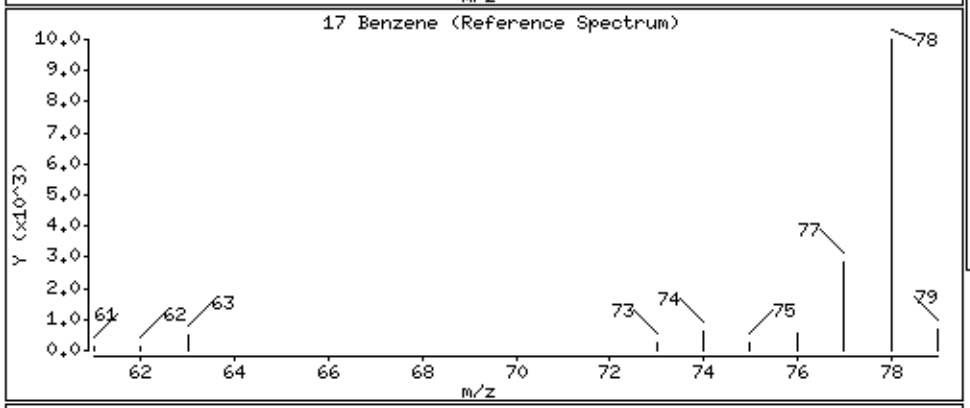
Concentration: 0.08624 PPBV

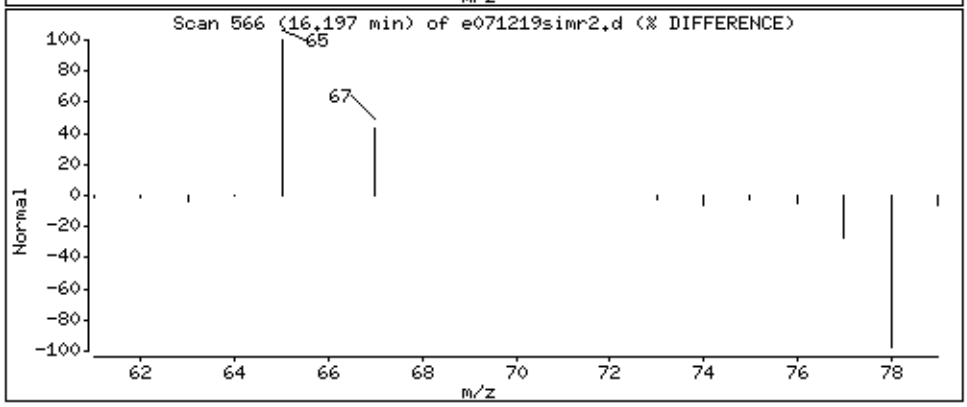












Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

Instrument: msde.i

Sample Info: 250mL#33536

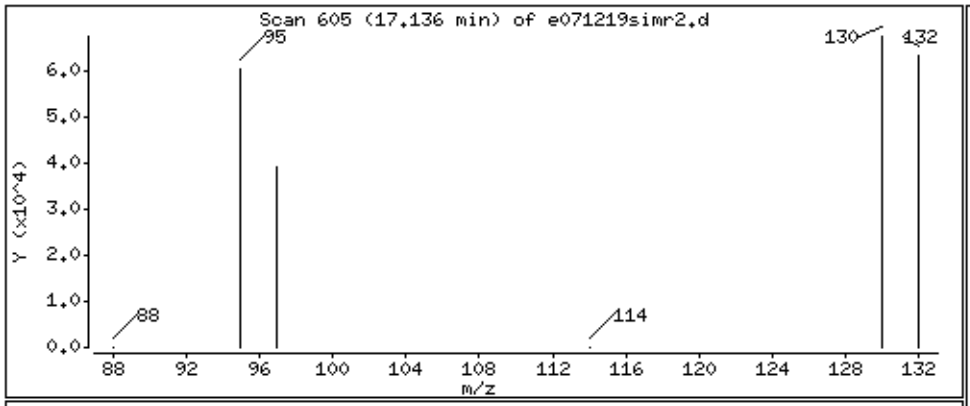
Operator: ea

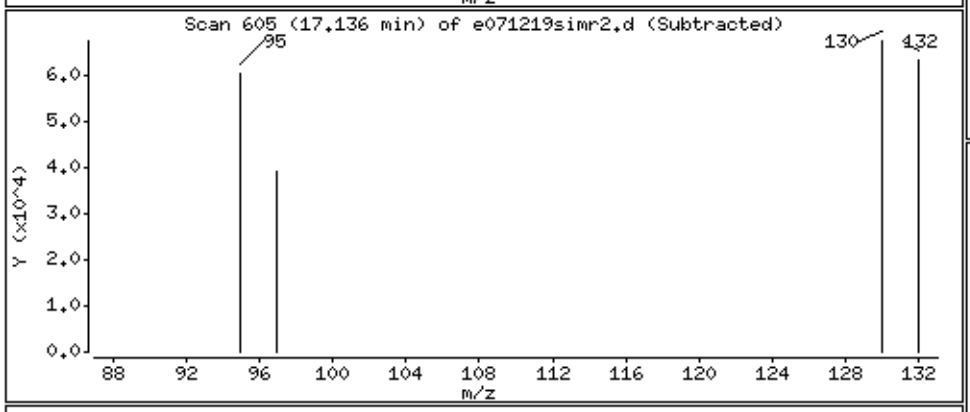
Column phase: RTX-624

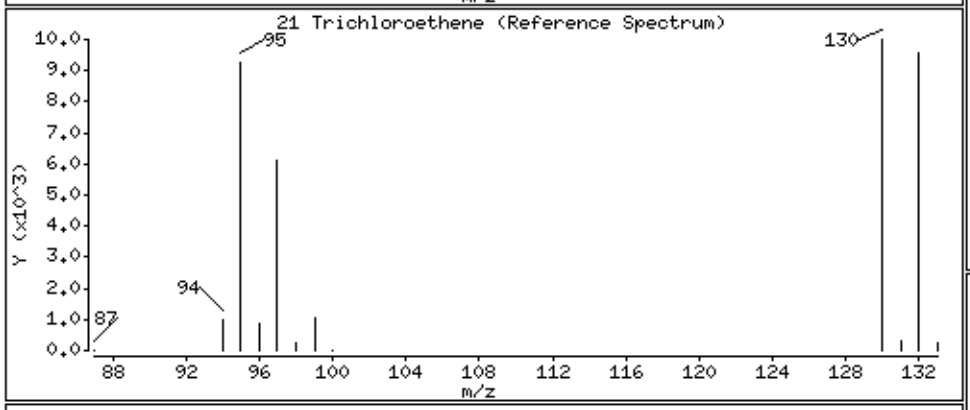
Column diameter: 0.32

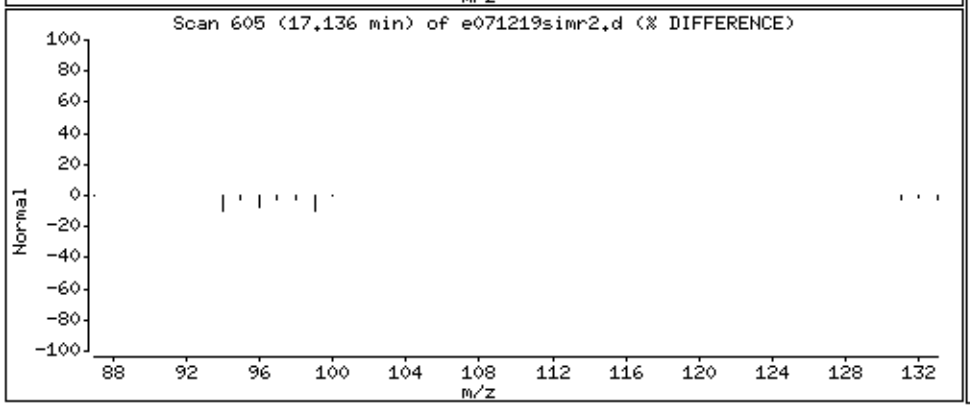
21 Trichloroethene

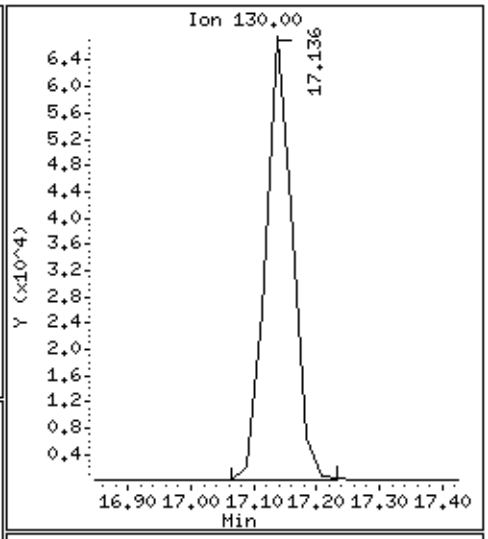
Concentration: 4.743 PPBV

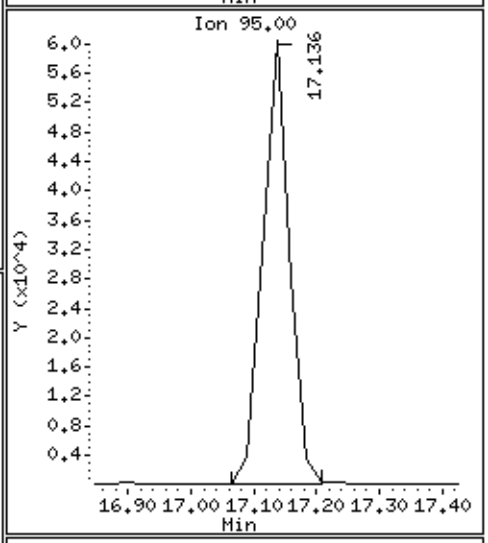


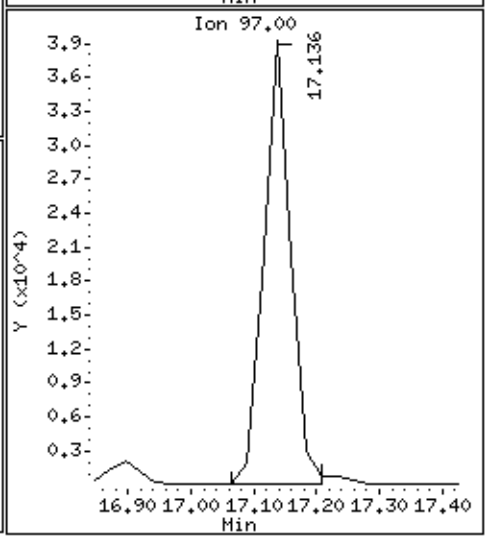












Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

Instrument: msde.i

Sample Info: 250mL#33536

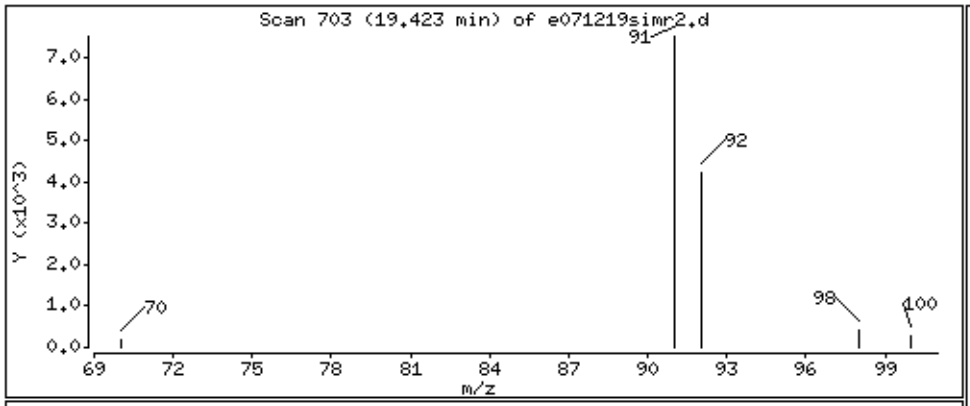
Operator: ea

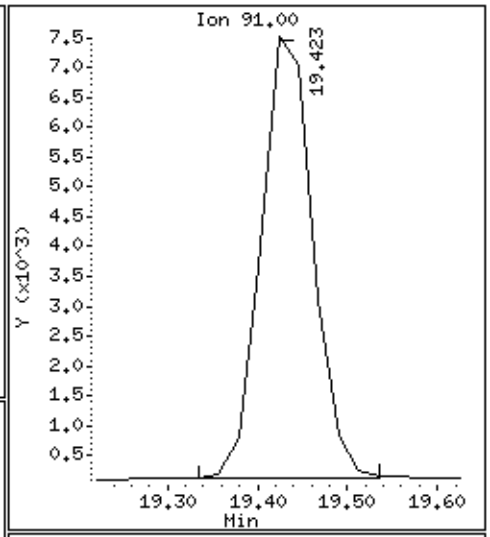
Column phase: RTX-624

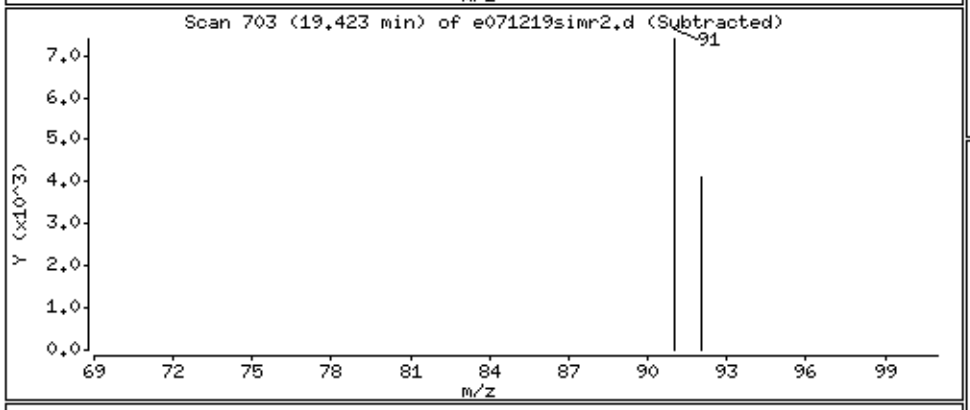
Column diameter: 0.32

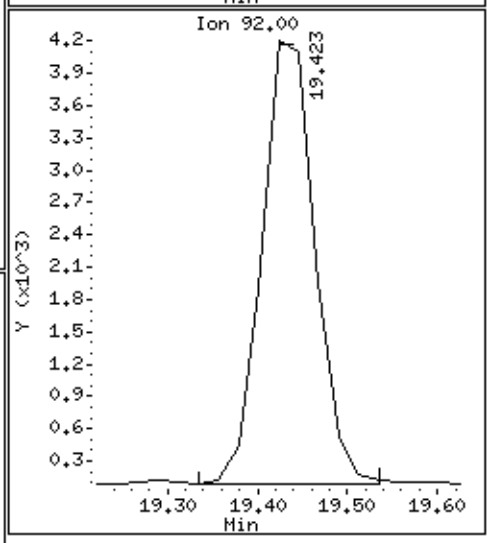
23 Toluene

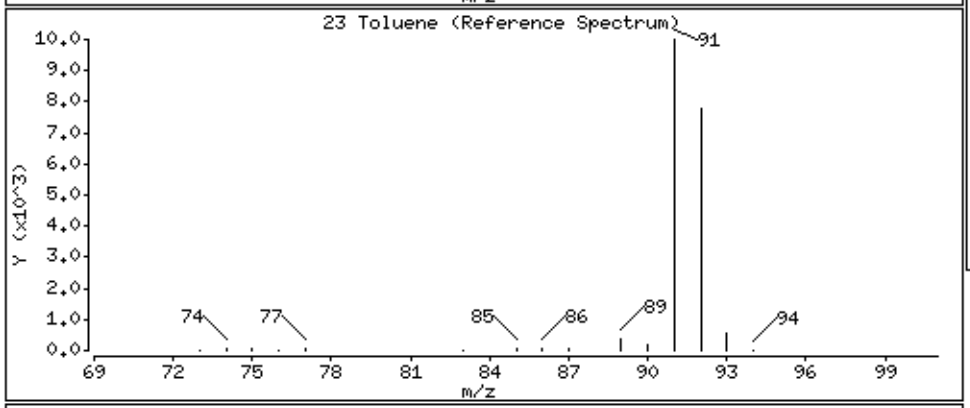
Concentration: 0.3746 PPBV

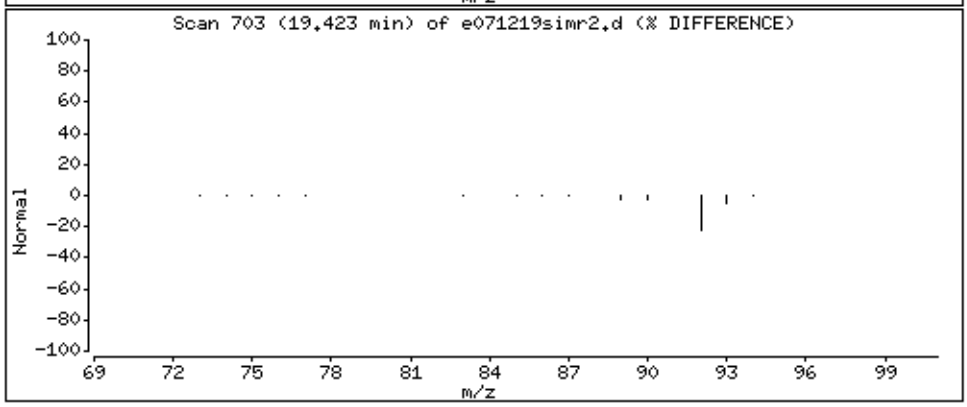












Data File: /chem/msde.i/12Jul2017.b/e071219simr2.d

Date : 12-JUL-2017 21:44

Client ID:

Instrument: msde.i

Sample Info: 250mL#33536

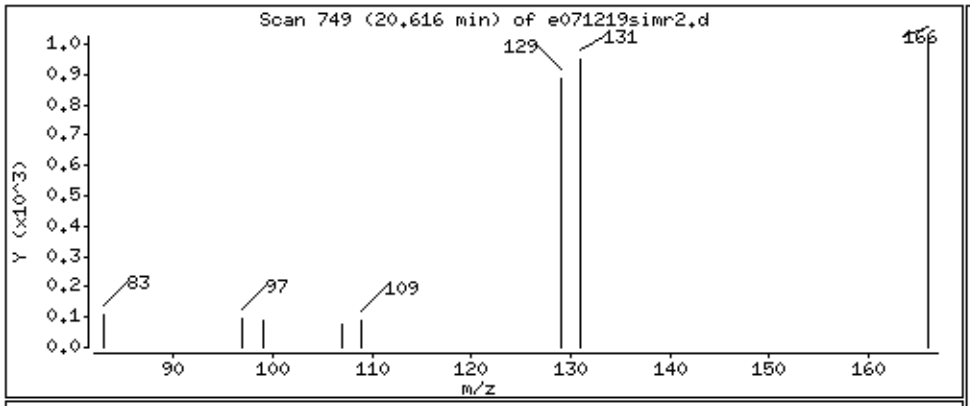
Operator: ea

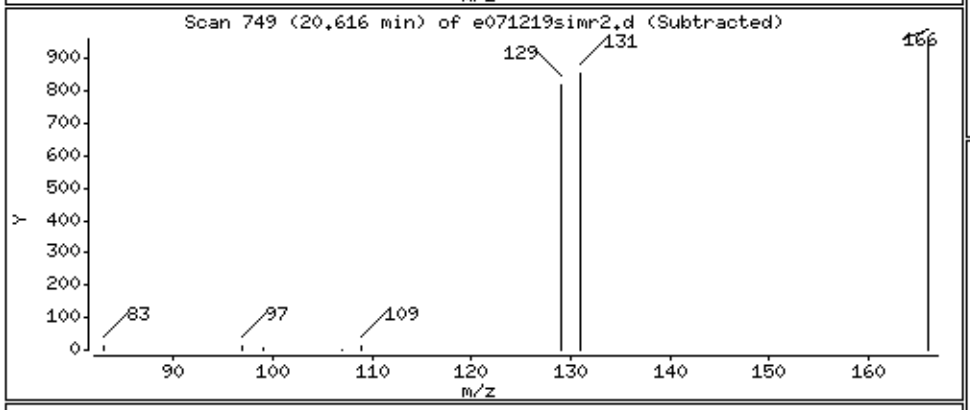
Column phase: RTX-624

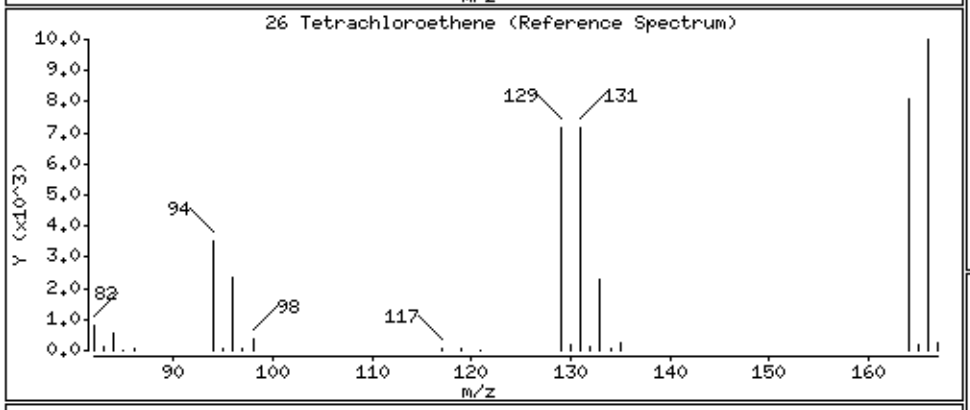
Column diameter: 0.32

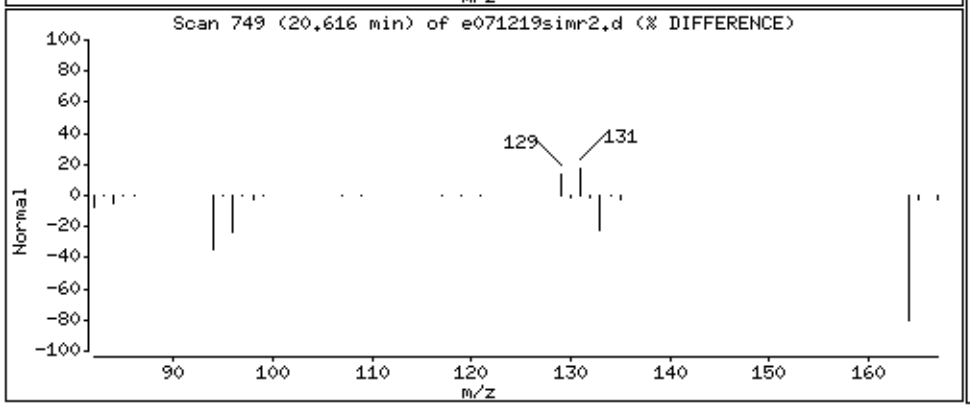
26 Tetrachloroethene

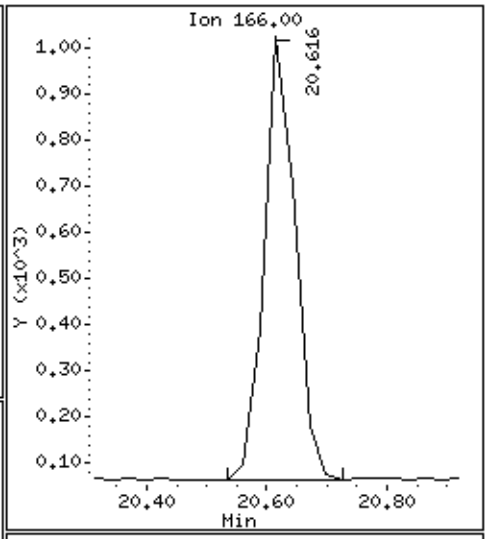
Concentration: 0.06889 PPBV

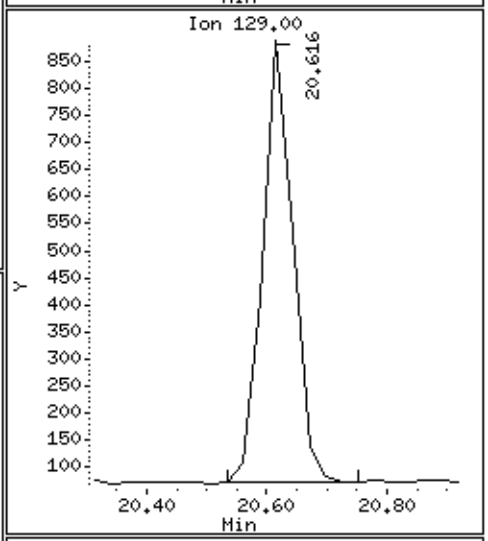


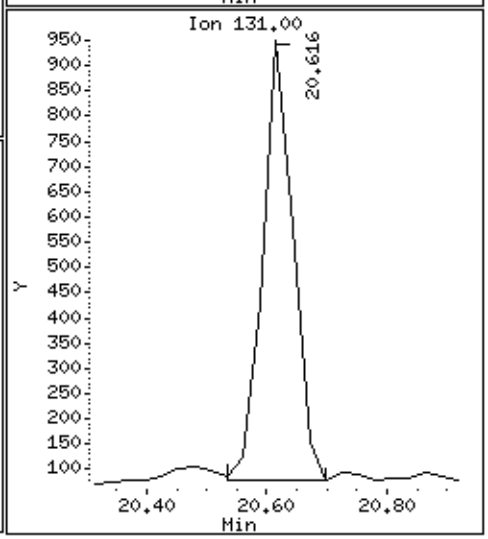












Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-9-BC (062817)

Lab ID#: 1707045R3-03A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: B-9-BC (062817)

Lab ID#: 1707045R3-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071307r2**	**Date of Collection:**	**6/29/17 9:47:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**7/13/17 11:53 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.31	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	108	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071307r2.d
Lab Smp Id: 1707045-03A
Inj Date : 13-JUL-2017 11:53
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 6L1244
Misc Info : 3.9"Hg -> 5.2psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 11-Aug-2017 16:14 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1
Dil Factor: 1.55000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	135993	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	101432			46.85- 106.85	74.59
15.391	15.391 (1.000)	49	228739			226.12- 286.12	168.20
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	226305	5.32629	5.326	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	95496			17.94- 77.94	42.20
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	464523	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	69187			0.00- 44.91	14.89
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.276	19.275 (1.152)	98	422763	4.73025	4.730	80.00- 120.00	100.00
19.276	19.275 (1.152)	70	46709			0.00- 41.31	11.05
19.276	19.275 (1.152)	100	277754			38.24- 98.24	65.70
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.156 (1.000)	117	411155	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.157	22.156	(1.000)	82	195952			19.53- 79.53	47.66
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	259417	5.40222	5.402	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	280011			81.42- 141.42	107.94
23.856	23.856	(1.076)	176	237558			66.35- 126.35	91.57

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071307r2.d
Lab Smp Id: 1707045-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 3.9"Hg -> 5.2psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	135993	7.30
123 1,4-Difluorobenze	464912	278947	650877	464523	-0.08
163 Chlorobenzene-d5	425008	255005	595011	411155	-3.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-03A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 3.9"Hg -> 5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.326	106.53	70-130
$ 146 Toluene-d8	5.000	4.730	94.60	70-130
$ 177 4-Bromofluorobenze	5.000	5.402	108.04	70-130

Data File: /chem/msde.i/13Jul2017.b/e071307r2.d

Date : 13-JUL-2017 11:53

Client ID:

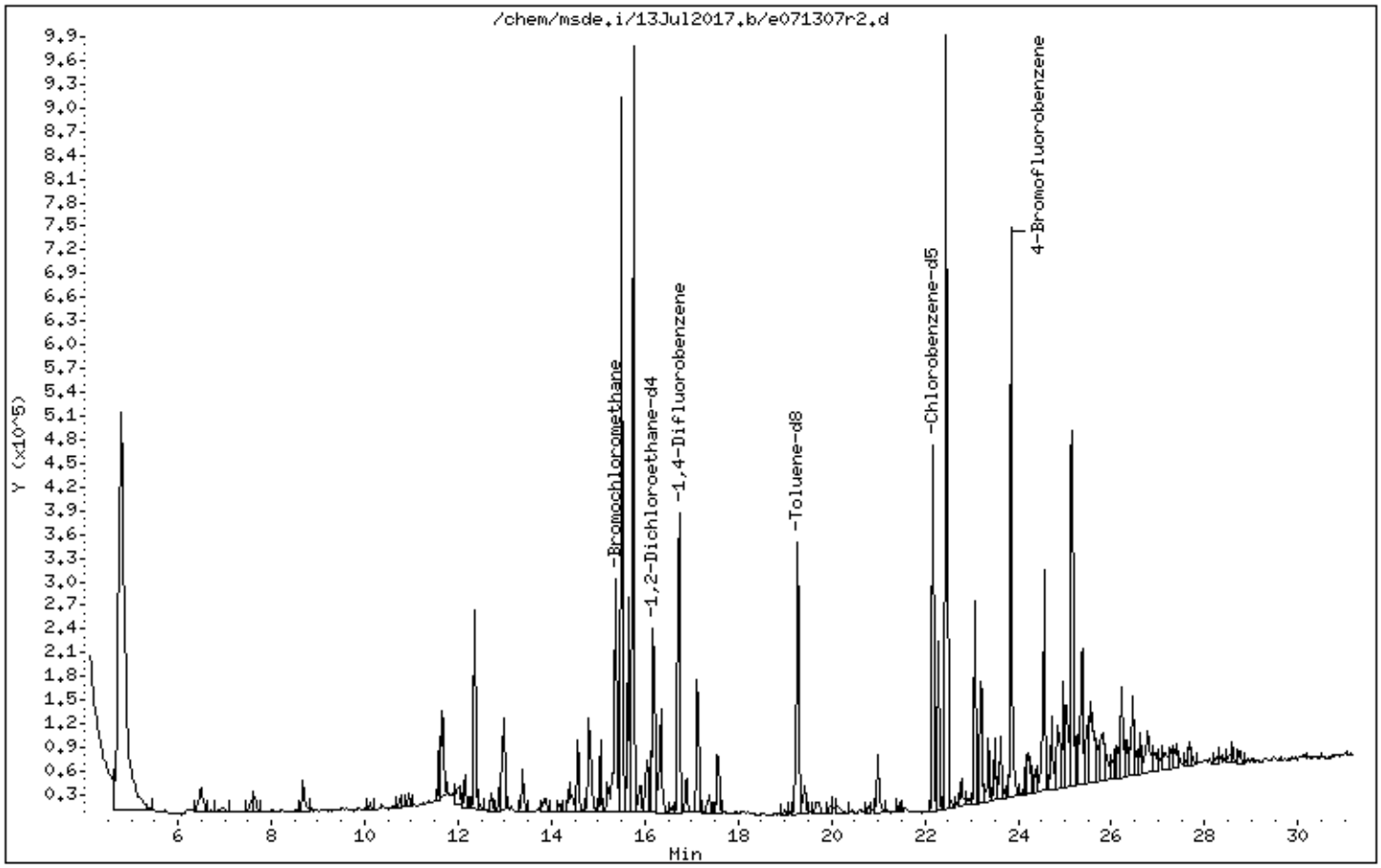
Instrument: msde.i

Sample Info: 250mL# 6L1244

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-9-BC (062817)

Lab ID#: 1707045R3-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.031	0.45	0.12	1.8
Benzene	0.078	0.14	0.25	0.44
Trichloroethene	0.031	2.2	0.17	12
Toluene	0.031	0.50	0.12	1.9
Tetrachloroethene	0.031	0.038	0.21	0.26

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Client Sample ID: B-9-BC (062817)

Lab ID#: 1707045R3-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071307simr2**	**Date of Collection:**	**6/29/17 9:47:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**7/13/17 11:53 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
cis-1,2-Dichloroethene	0.031	0.45	0.12	1.8
Benzene	0.078	0.14	0.25	0.44
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	2.2	0.17	12
Toluene	0.031	0.50	0.12	1.9
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.038	0.21	0.26

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071307simr2.d
Lab Smp Id: 1707045-03B
Inj Date : 13-JUL-2017 11:53
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 6L1244
Misc Info : 3.9"Hg -> 5.2psi
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:15 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.55000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
12 cis-1,2-Dichloroethene						CAS #: 156-59-2	
15.060	15.060 (0.978)	98	8364	0.29342	0.4548	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	22394			222.17- 282.17	267.74
15.060	15.060 (0.978)	96	12999			125.16- 185.16	155.42
* 13 Bromochloromethane						CAS #: 74-97-5	
15.405	15.405 (1.000)	130	136330	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	105820			47.63- 107.63	77.62
15.374	15.405 (1.000)	49	249210			150.43- 210.43	182.80
17 Benzene						CAS #: 71-43-2	
16.197	16.197 (0.968)	78	10758	0.08865	0.1374	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	6384			0.00- 53.68	59.34
$ 18 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.197	16.197 (1.051)	65	243122	5.55577	5.556	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	104905			19.71- 79.71	43.15
* 20 1,4-Difluorobenzene						CAS #: 540-36-3	
16.727	16.727 (1.000)	114	507691	5.00000		80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

*  20 1,4-Difluorobenzene (continued)
 16.727  16.727 (1.000)    88     74159                     0.00-  44.62    14.61
-------------------------------------------------------------------------------
   21 Trichloroethene                                CAS #: 79-01-6
 17.136  17.136 (1.024)   130    108556 1.43287    2.221  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95     94822                    57.80- 117.80    87.35
 17.136  17.136 (1.024)    97     61987                    26.87-  86.87    57.10
-------------------------------------------------------------------------------
$  22 Toluene-d8                                     CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    390560 4.78336    4.783  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     45467                     0.00-  41.18    11.64
 19.289  19.289 (1.153)   100    253198                    35.44-  95.44    64.83
-------------------------------------------------------------------------------
   23 Toluene                                        CAS #: 108-88-3
 19.424  19.424 (1.161)    91     44754 0.32134   0.4981  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92     25636                    28.44-  88.44    57.28
-------------------------------------------------------------------------------
   26 Tetrachloroethene                              CAS #: 127-18-4
 20.616  20.616 (0.930)   166      2061 0.02441  0.03784  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129      1714                    50.99- 110.99    83.16
 20.616  20.616 (0.930)   131      1821                    51.53- 111.53    88.36
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                               CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    449439 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    195357                    12.99-  72.99    43.47
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                           CAS #: 460-00-4
 23.869  23.869 (1.077)   174    284130 5.24711    5.247  80.00- 120.00   100.00
 23.847  23.869 (1.076)    95    297016                    73.66- 133.66   104.54
 23.869  23.869 (1.077)   176    276490                    67.29- 127.29    97.31
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071307simr2.d
Lab Smp Id: 1707045-03B
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 3.9"Hg -> 5.2psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	136330	-4.01
20 1,4-Difluorobenze	516009	309605	722413	507691	-1.61
28 Chlorobenzene-d5	463677	278206	649148	449439	-3.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 13Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-03B
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 3.9"Hg -> 5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.556	111.12	70-130
$ 22 Toluene-d8	5.000	4.783	95.67	70-130
$ 33 4-Bromofluorobenze	5.000	5.247	104.94	70-130

Data File: /chem/msde.i/13Jul2017.b/e071307simr2.d

Date : 13-JUL-2017 11:53

Client ID:

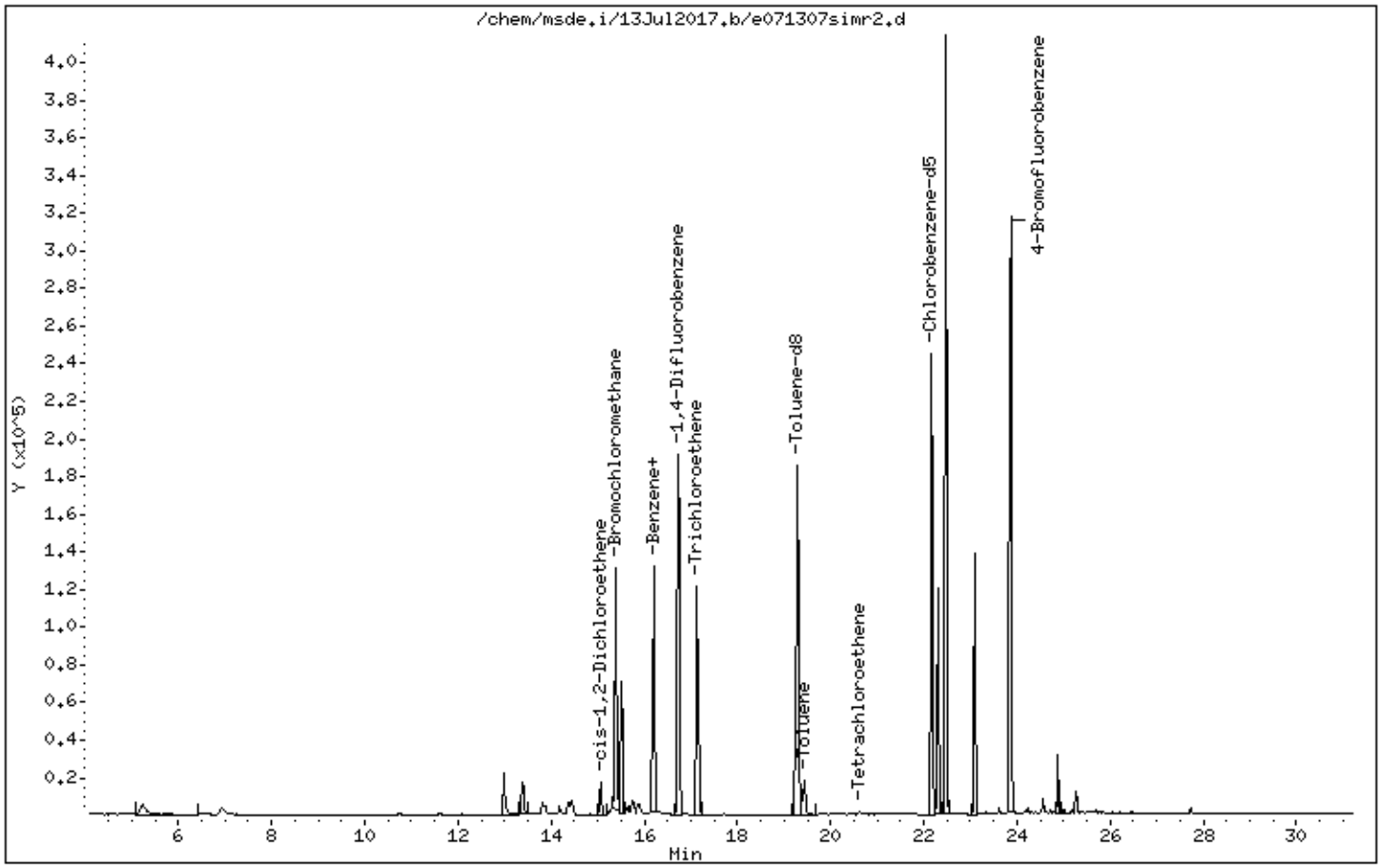
Instrument: msde.i

Sample Info: 250mL# 6L1244

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Date : 13-JUL-2017 11:53

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L1244

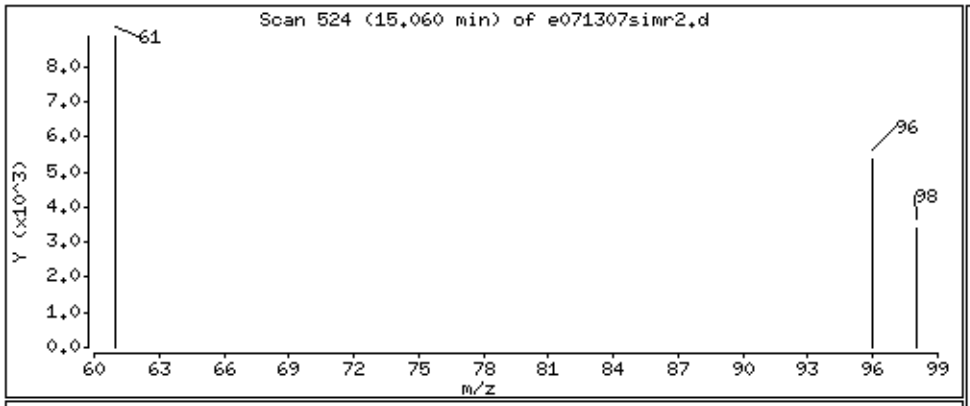
Operator: ef

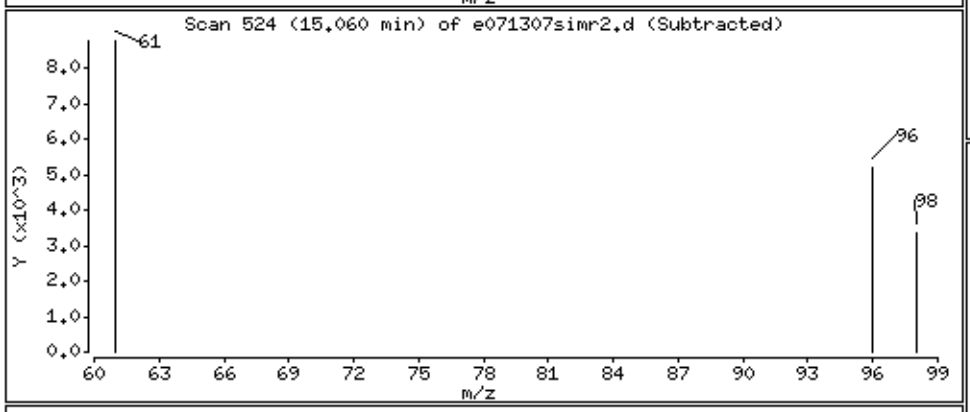
Column phase: RTX-624

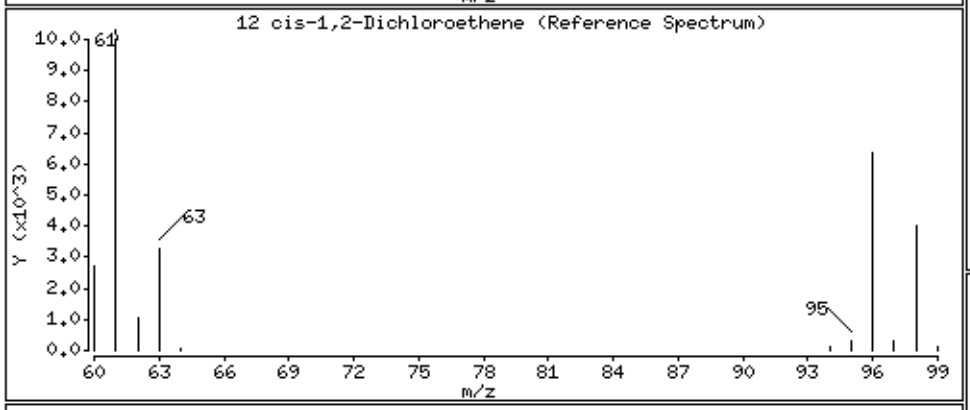
Column diameter: 0.32

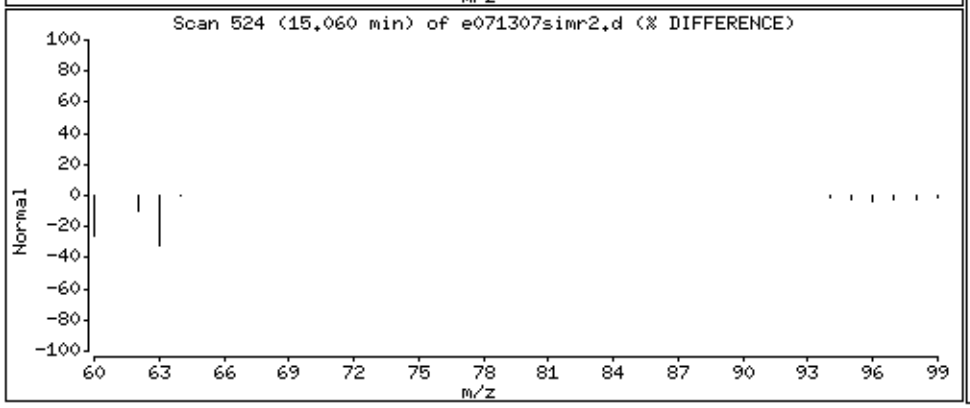
12 cis-1,2-Dichloroethene

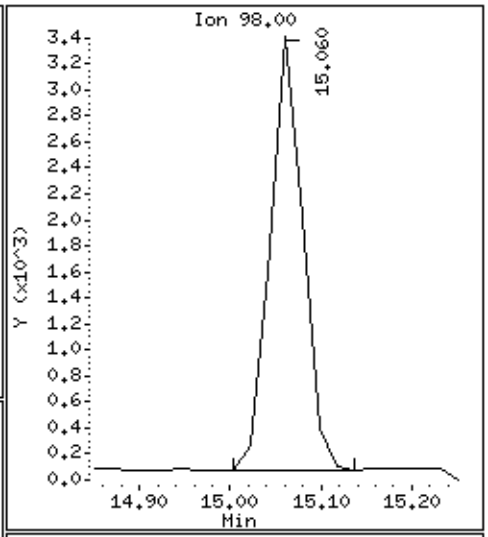
Concentration: 0.4548 PPBV

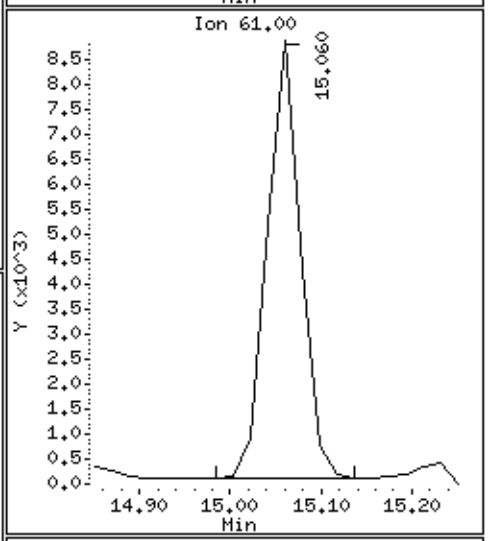


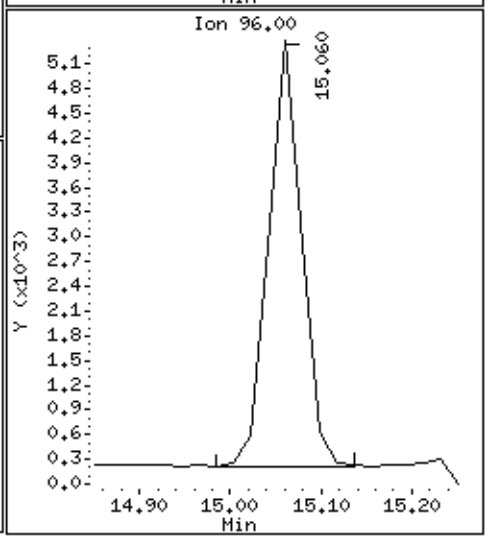












Data File: /chem/msde.i/13Jul2017.b/e071307simr2.d

Date : 13-JUL-2017 11:53

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L1244

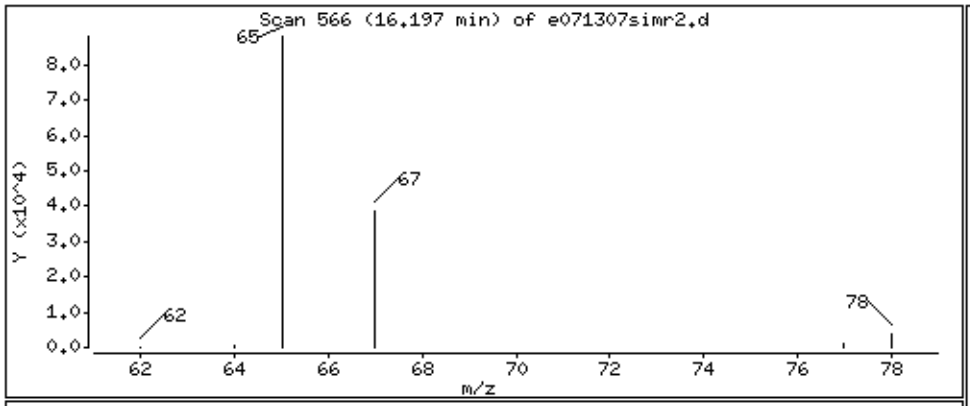
Operator: ef

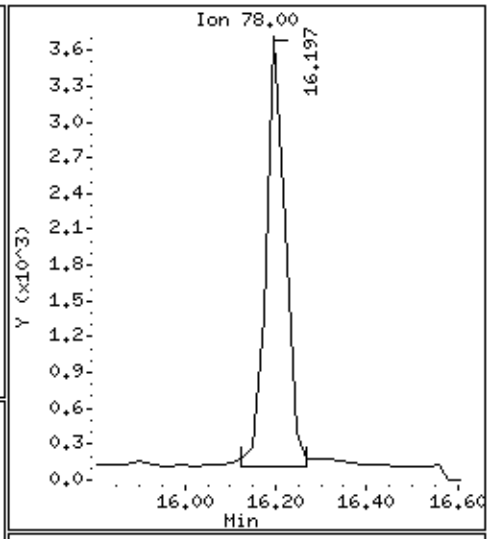
Column phase: RTX-624

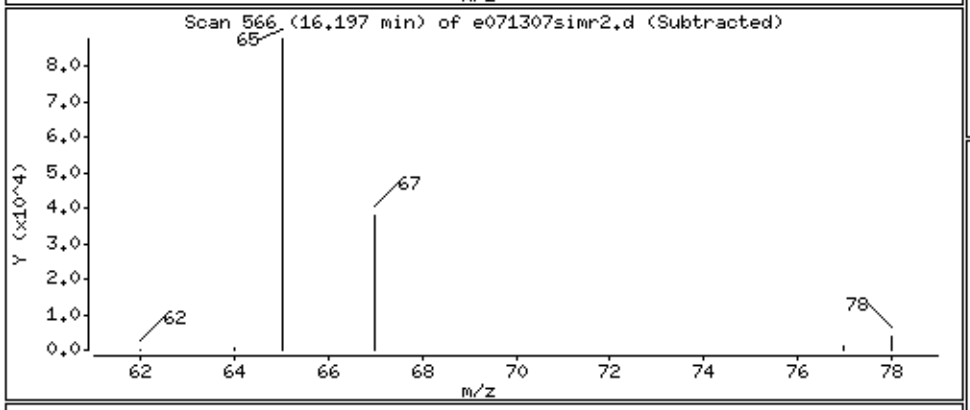
Column diameter: 0.32

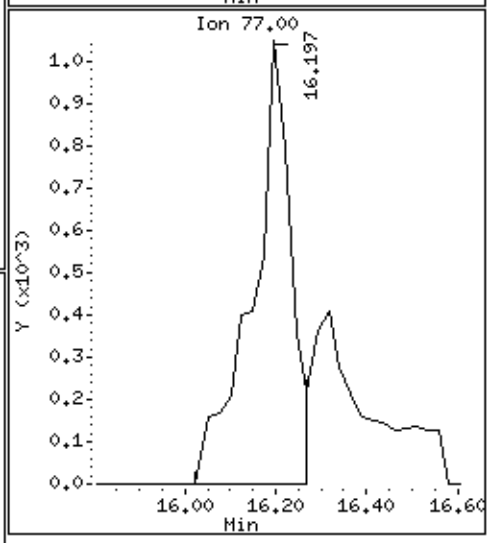
17 Benzene

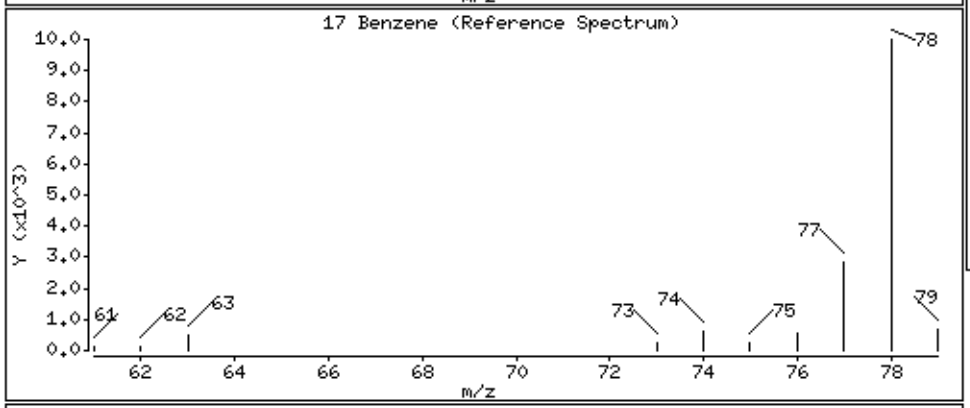
Concentration: 0.1374 PPBV

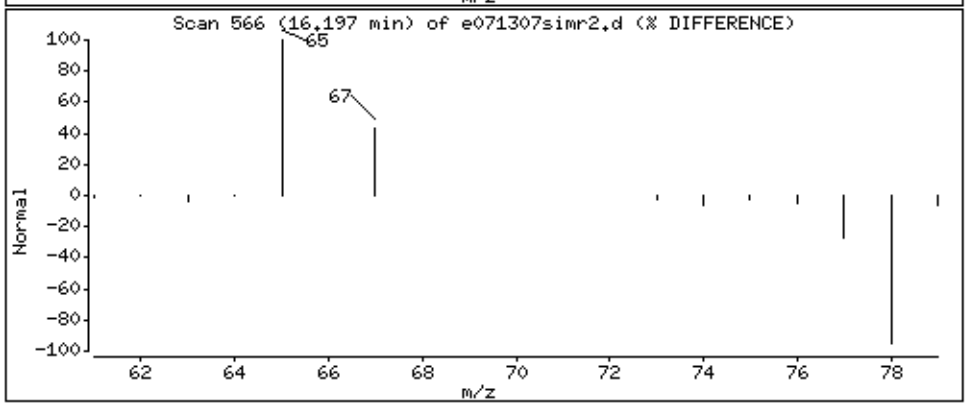












Data File: /chem/msde.i/13Jul2017.b/e071307simr2.d

Date : 13-JUL-2017 11:53

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L1244

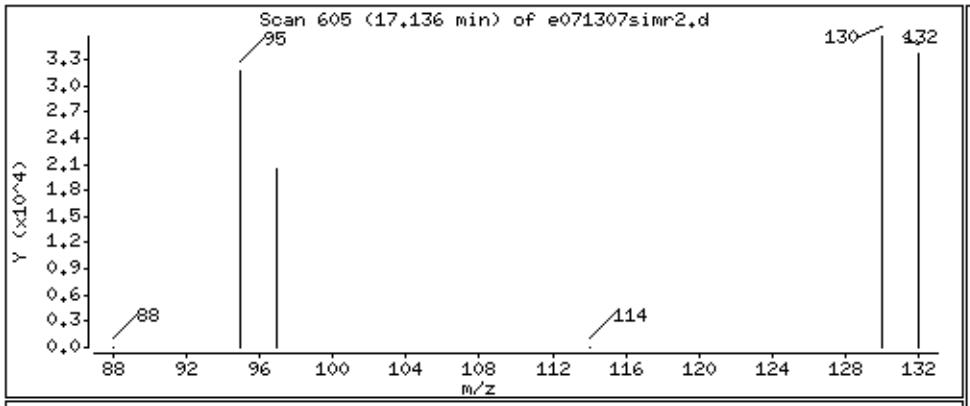
Operator: ef

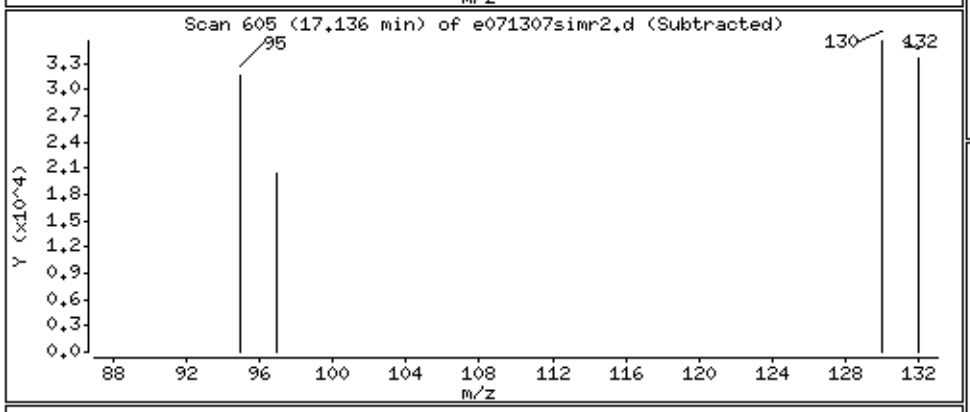
Column phase: RTX-624

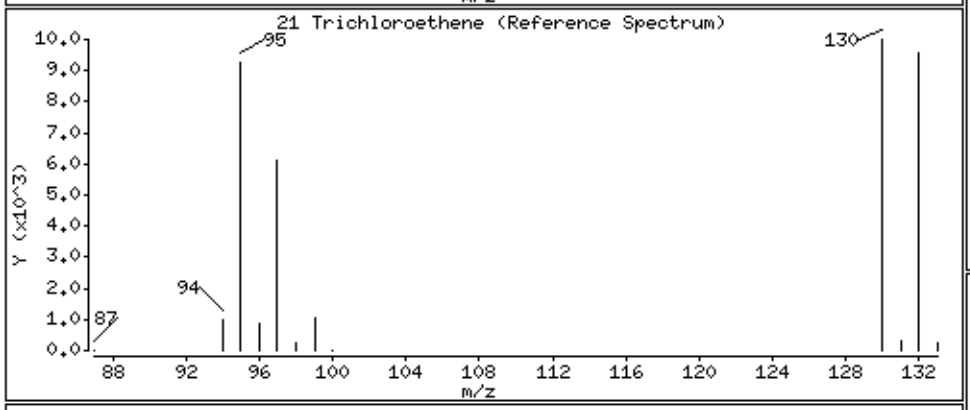
Column diameter: 0.32

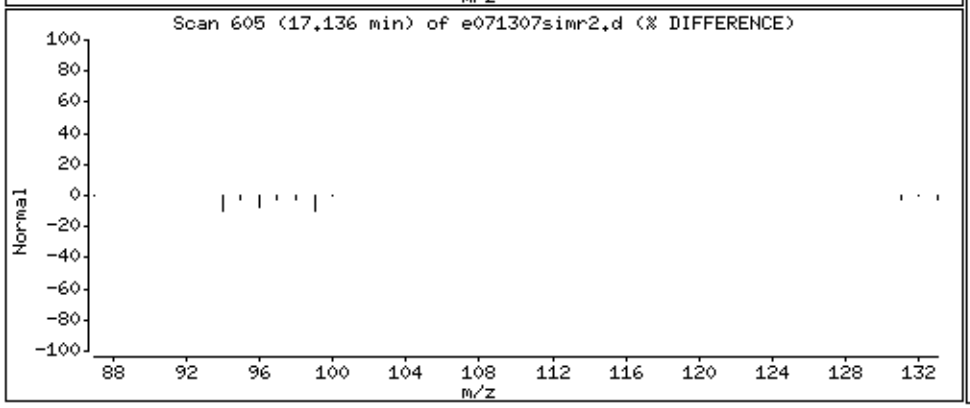
21 Trichloroethene

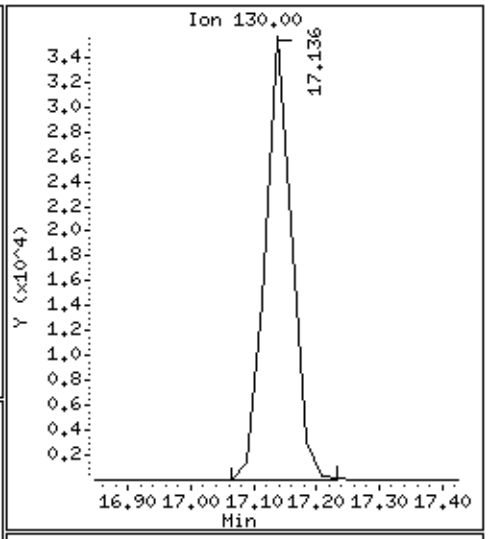
Concentration: 2.221 PPBV

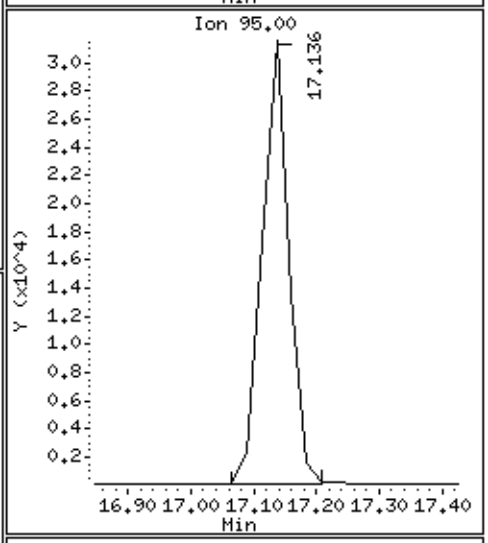


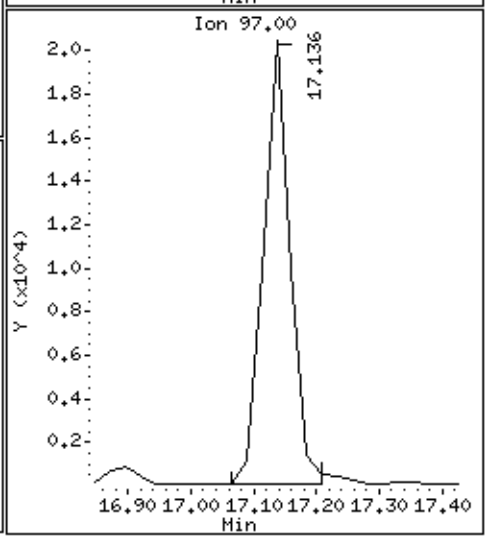












Data File: /chem/msde.i/13Jul2017.b/e071307simr2.d

Date : 13-JUL-2017 11:53

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L1244

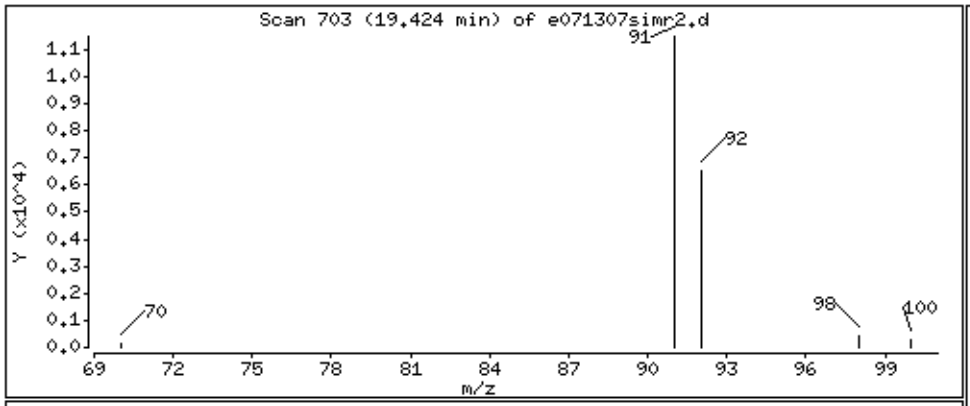
Operator: ef

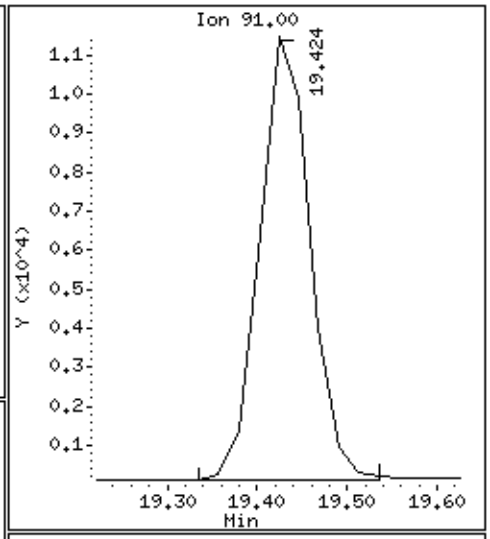
Column phase: RTX-624

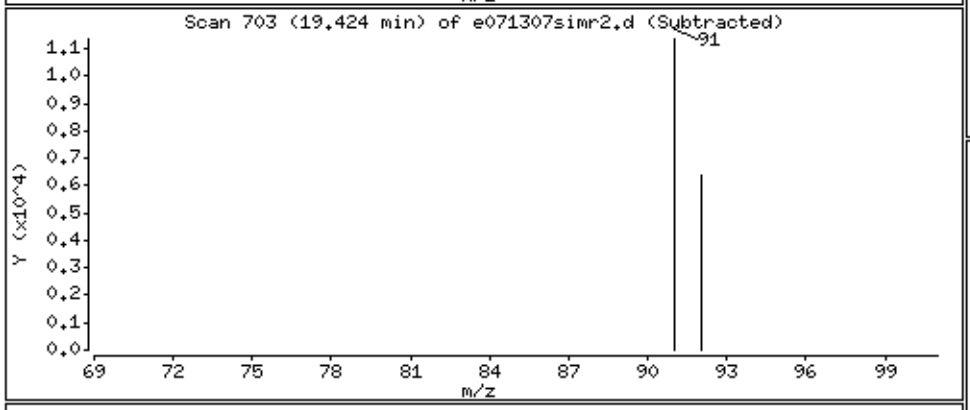
Column diameter: 0.32

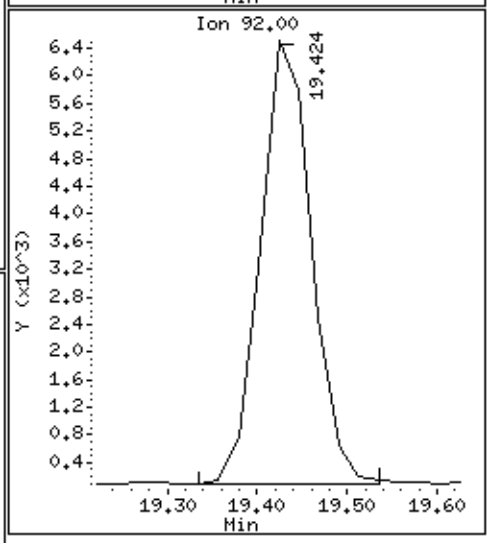
23 Toluene

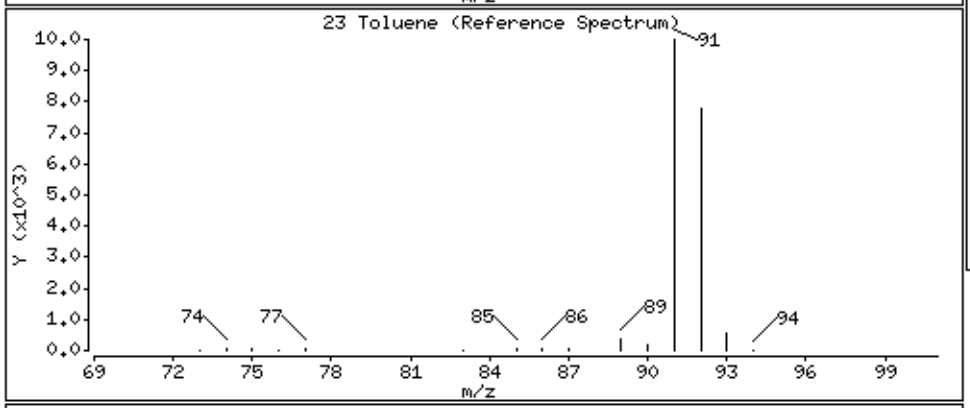
Concentration: 0.4981 PPBV

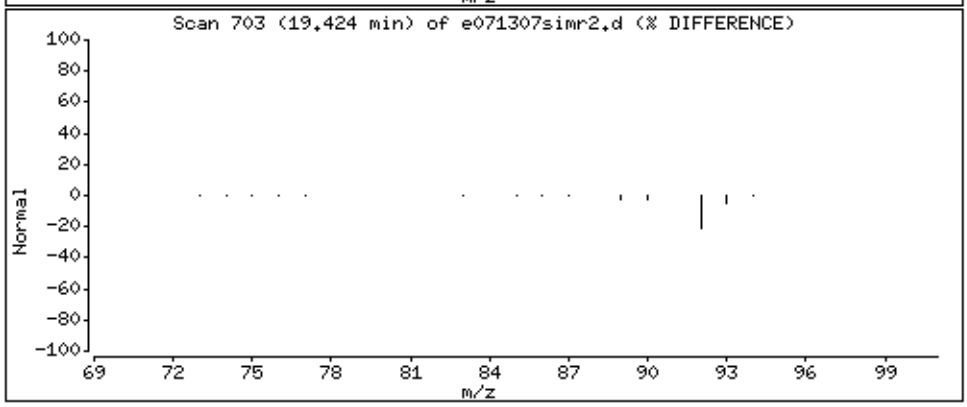












Data File: /chem/msde.i/13Jul2017.b/e071307simr2.d

Date : 13-JUL-2017 11:53

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L1244

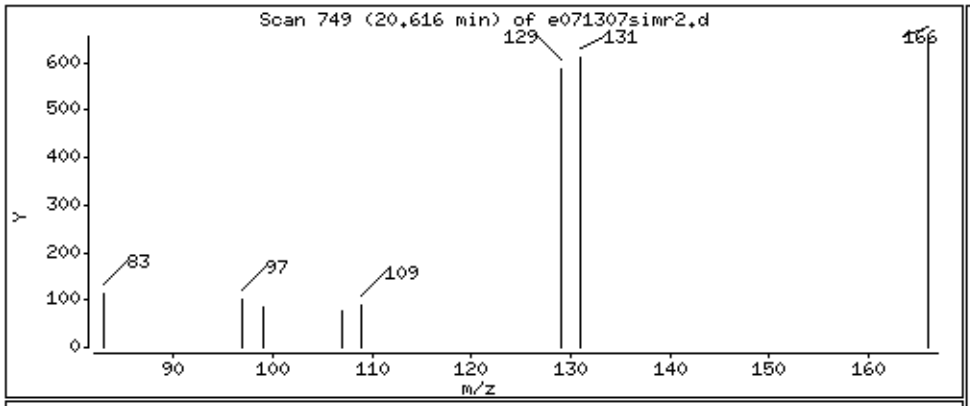
Operator: ef

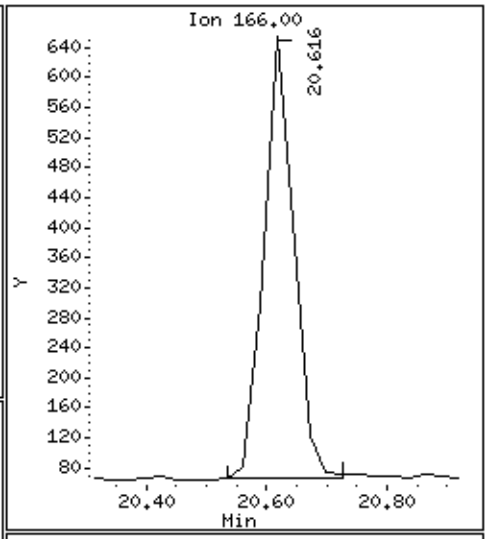
Column phase: RTX-624

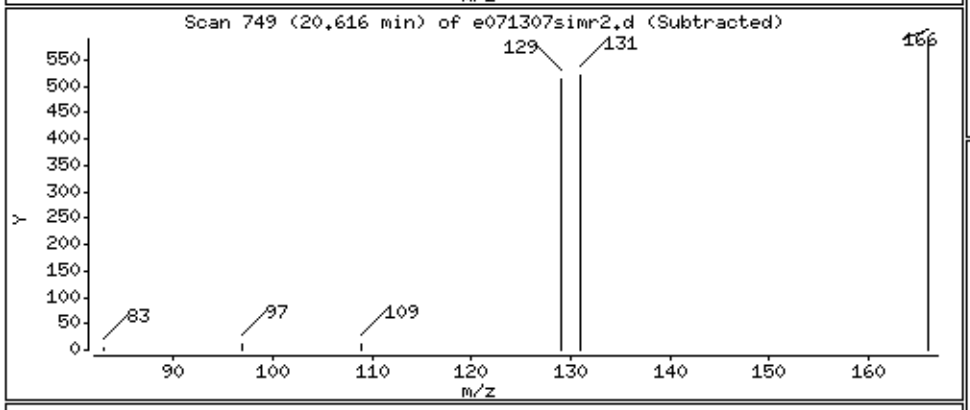
Column diameter: 0.32

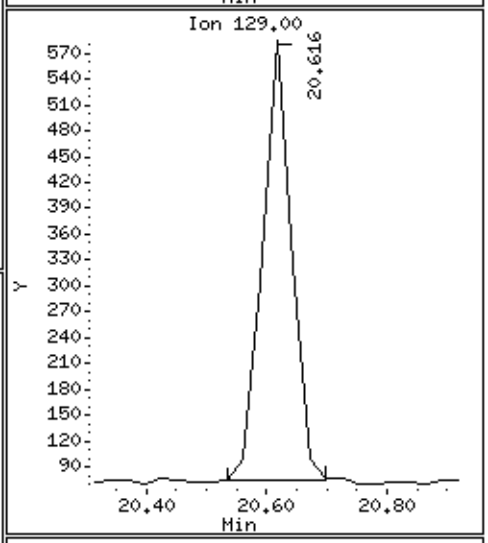
26 Tetrachloroethene

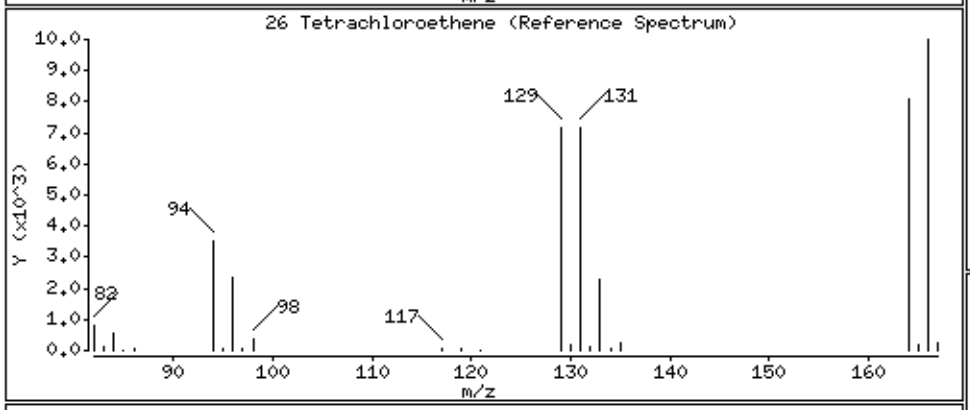
Concentration: 0.03784 PPBV

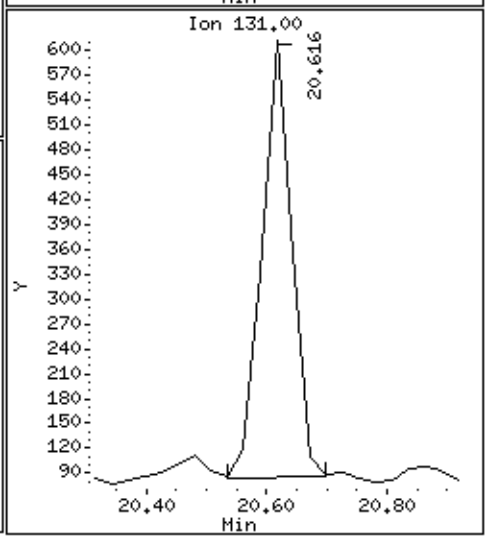


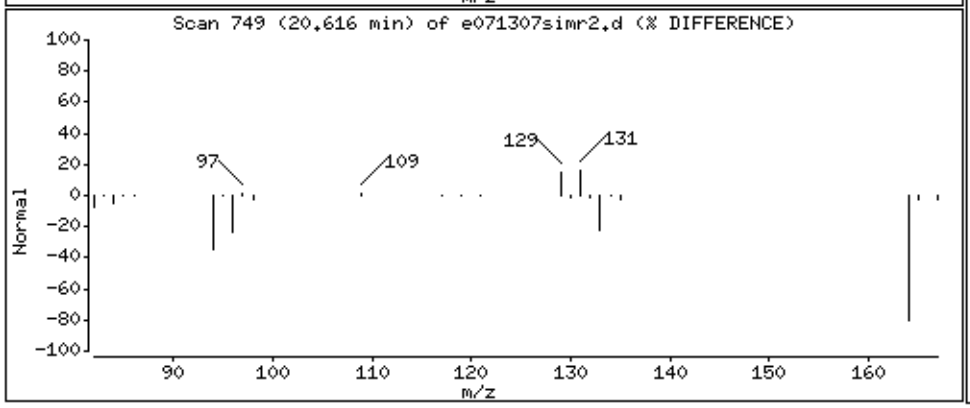












Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: A-5-BC (062817)

Lab ID#: 1707045R3-04A

No Detections Were Found.

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Client Sample ID: A-5-BC (062817)

Lab ID#: 1707045R3-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071311r2**	**Date of Collection:**	**6/29/17 8:40:00 PM**
Dil. Factor:	**1.62**	**Date of Analysis:**	**7/13/17 02:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.32	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071311r2.d
Lab Smp Id: 1707045-04A
Inj Date : 13-JUL-2017 14:44
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 21007
Misc Info : 5.1"Hg -> 5.1psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 11-Aug-2017 16:14 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1
Dil Factor: 1.62000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	120133	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	97441			46.85- 106.85	81.11
15.391	15.391 (1.000)	49	220237			226.12- 286.12	183.33
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	216563	5.76991	5.770	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	93640			17.94- 77.94	43.24
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	424818	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	63859			0.00- 44.91	15.03
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.275	19.275 (1.152)	98	390585	4.77867	4.779	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	48964			0.00- 41.31	12.54
19.275	19.275 (1.152)	100	256062			38.24- 98.24	65.56
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.156 (1.000)	117	392640	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.156	(1.000)	82	195464			19.53- 79.53	49.78
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	237295	5.17456	5.174	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	264550			81.42- 141.42	111.49
23.856	23.856	(1.076)	176	230476			66.35- 126.35	97.13

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071311r2.d
Lab Smp Id: 1707045-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 5.1"Hg -> 5.1psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	120133	-5.22
123 1,4-Difluorobenze	464912	278947	650877	424818	-8.62
163 Chlorobenzene-d5	425008	255005	595011	392640	-7.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-04A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 5.1"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.770	115.40	70-130
$ 146 Toluene-d8	5.000	4.779	95.57	70-130
$ 177 4-Bromofluorobenze	5.000	5.174	103.49	70-130

Data File: /chem/msde.i/13Jul2017.b/e071311r2.d

Date : 13-JUL-2017 14:44

Client ID:

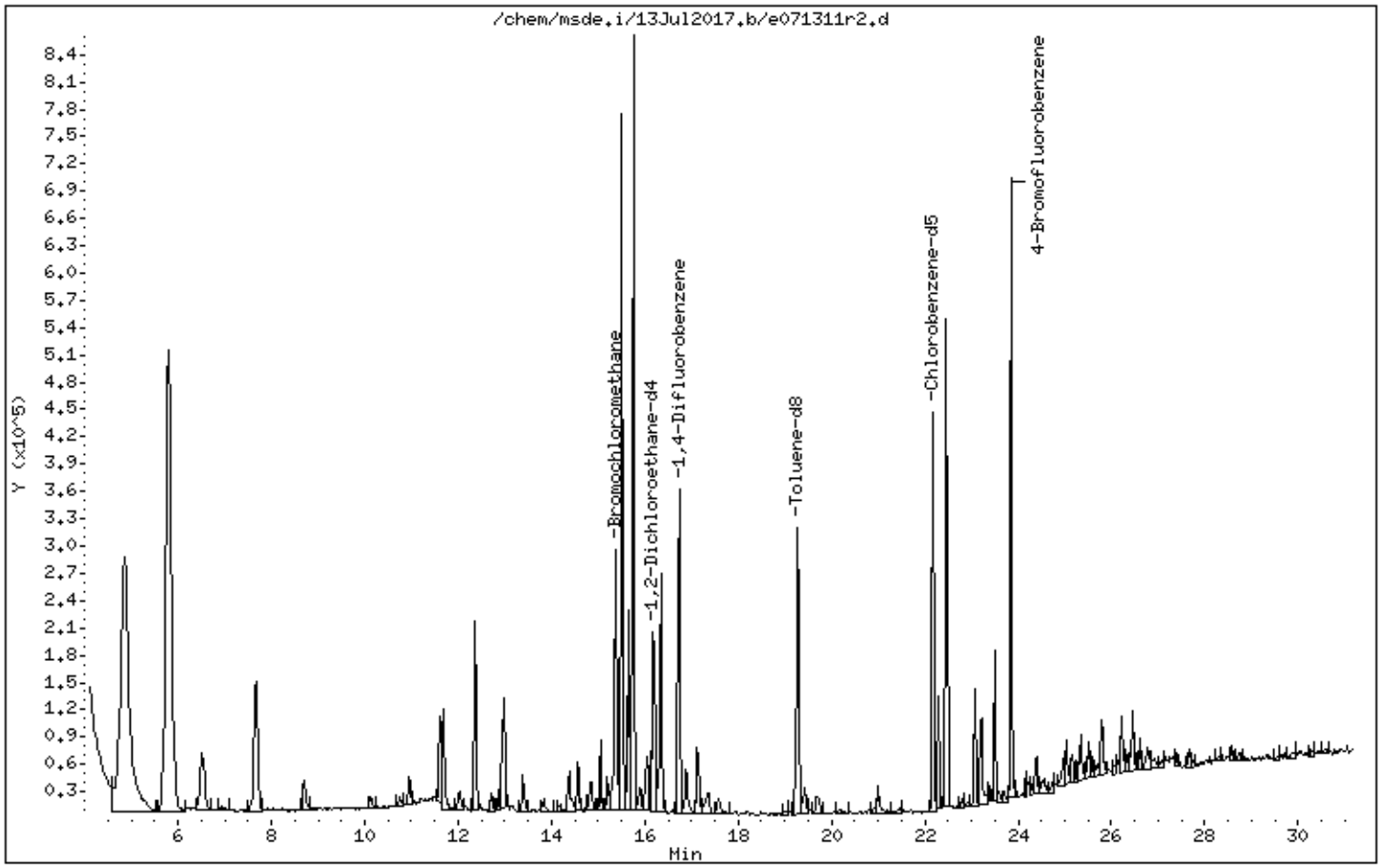
Instrument: msde.i

Sample Info: 250mL# 21007

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: A-5-BC (062817)

Lab ID#: 1707045R3-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.032	0.35	0.13	1.4
Benzene	0.081	0.095	0.26	0.30
Trichloroethene	0.032	1.1	0.17	5.8
Toluene	0.032	0.44	0.12	1.7

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Client Sample ID: A-5-BC (062817)

Lab ID#: 1707045R3-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071311simr2**	**Date of Collection:**	**6/29/17 8:40:00 PM**
Dil. Factor:	**1.62**	**Date of Analysis:**	**7/13/17 02:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
cis-1,2-Dichloroethene	0.032	0.35	0.13	1.4
Benzene	0.081	0.095	0.26	0.30
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	1.1	0.17	5.8
Toluene	0.032	0.44	0.12	1.7
1,1,2-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071311simr2.d
Lab Smp Id: 1707045-04B
Inj Date : 13-JUL-2017 14:44
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 21007
Misc Info : 5.1"Hg -> 5.1psi
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:15 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.62000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
12 cis-1,2-Dichloroethene						CAS #: 156-59-2	
15.060	15.060 (0.978)	98	5922	0.21811	0.3533	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	22652			222.17- 282.17	382.51
15.060	15.060 (0.978)	96	9331			125.16- 185.16	157.57
* 13 Bromochloromethane						CAS #: 74-97-5	
15.405	15.405 (1.000)	130	129855	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	100440			47.63- 107.63	77.35
15.374	15.405 (1.000)	49	237729			150.43- 210.43	183.07
17 Benzene						CAS #: 71-43-2	
16.197	16.197 (0.968)	78	6524	0.05888	0.09538	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	2288			0.00- 53.68	35.07
$ 18 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.197	16.197 (1.051)	65	228960	5.49303	5.493	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	99238			19.71- 79.71	43.34
* 20 1,4-Difluorobenzene						CAS #: 540-36-3	
16.727	16.727 (1.000)	114	463574	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 20 1,4-Difluorobenzene (continued)							
16.727	16.727 (1.000)	88	67968			0.00- 44.62	14.66
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	45693	0.66052	1.070	80.00- 120.00	100.00
17.136	17.136 (1.024)	95	40217			57.80- 117.80	88.02
17.136	17.136 (1.024)	97	26794			26.87- 86.87	58.64
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	360711	4.83821	4.838	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	42745			0.00- 41.18	11.85
19.289	19.289 (1.153)	100	233903			35.44- 95.44	64.84
23 Toluene					CAS #: 108-88-3		
19.423	19.424 (1.161)	91	34836	0.27393	0.4438	80.00- 120.00	100.00
19.423	19.424 (1.161)	92	19736			28.44- 88.44	56.65
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	423499	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	183618			12.99- 72.99	43.36
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	266278	5.21863	5.219	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	277773			73.66- 133.66	104.32
23.869	23.869 (1.077)	176	258036			67.29- 127.29	96.90

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071311simr2.d
Lab Smp Id: 1707045-04B
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 5.1"Hg -> 5.1psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	129855	-8.57
20 1,4-Difluorobenze	516009	309605	722413	463574	-10.16
28 Chlorobenzene-d5	463677	278206	649148	423499	-8.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-04B
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 5.1"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.493	109.86	70-130
$ 22 Toluene-d8	5.000	4.838	96.76	70-130
$ 33 4-Bromofluorobenze	5.000	5.219	104.37	70-130

Data File: /chem/msde.i/13Jul2017.b/e071311simr2.d

Date : 13-JUL-2017 14:44

Client ID:

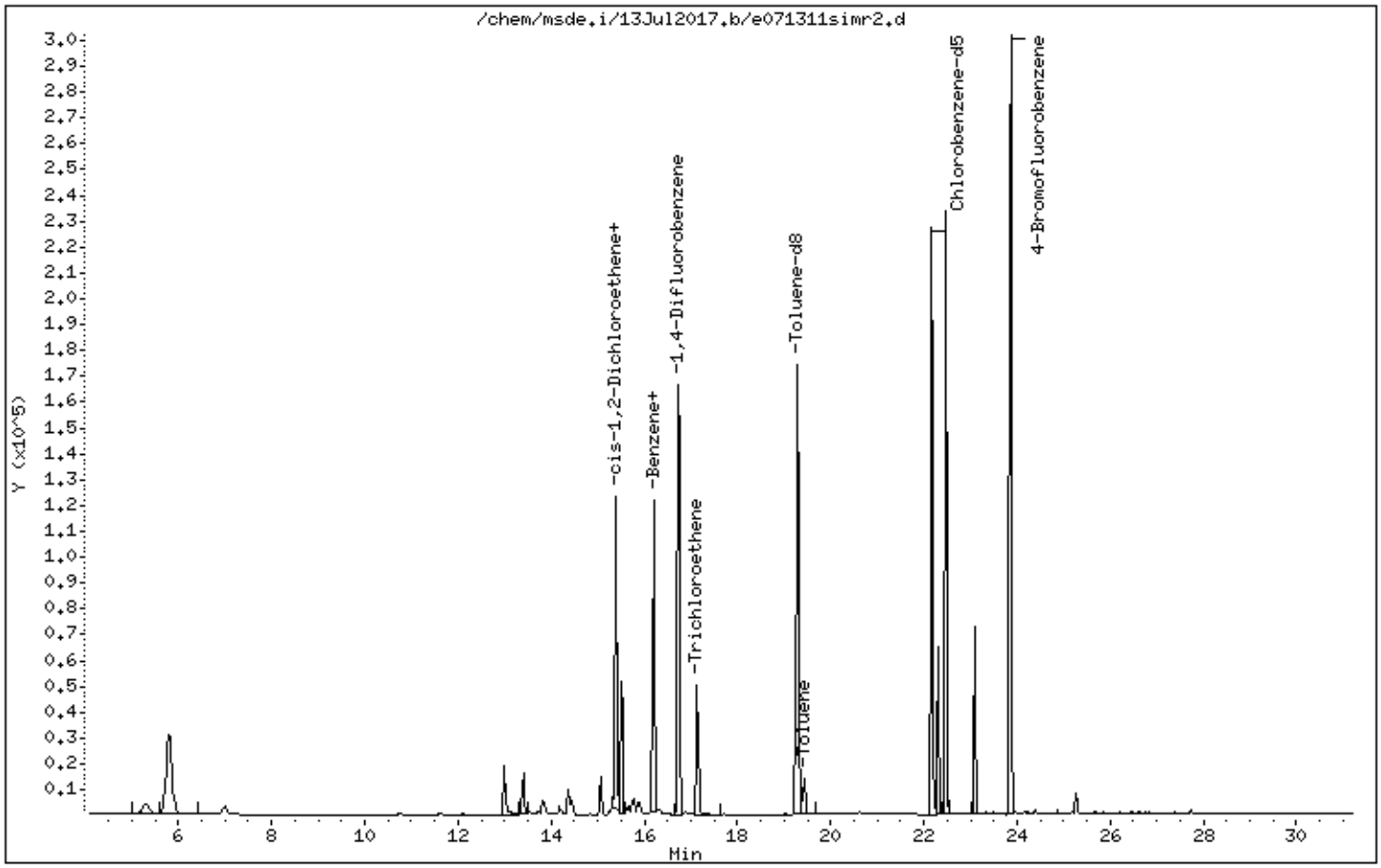
Instrument: msde.i

Sample Info: 250mL# 21007

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Date : 13-JUL-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# 21007

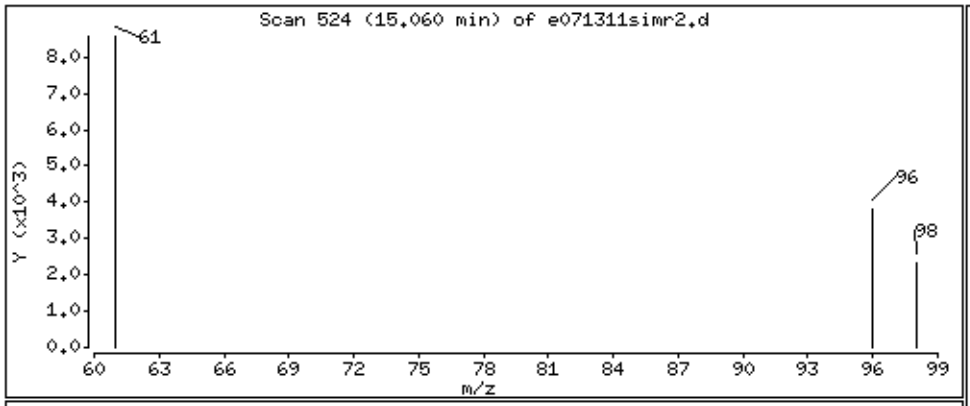
Operator: ef

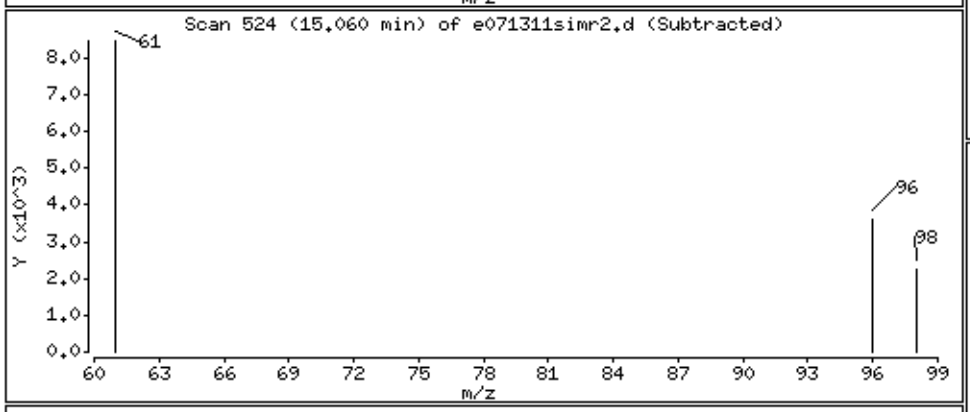
Column phase: RTX-624

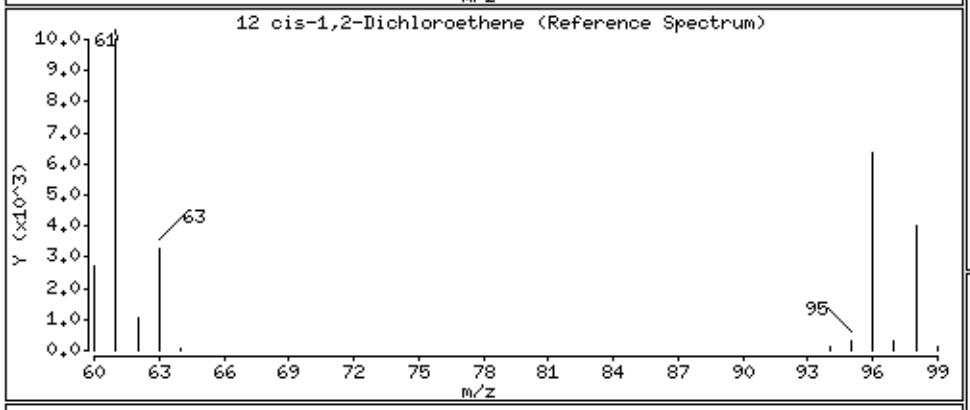
Column diameter: 0.32

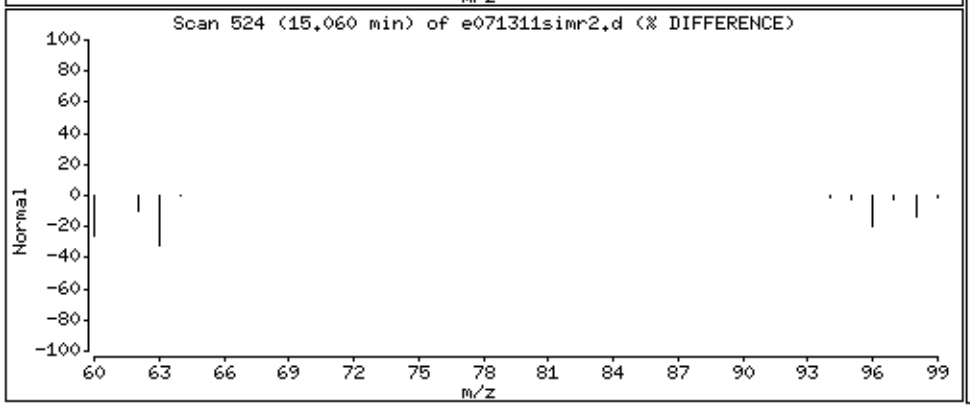
12 cis-1,2-Dichloroethene

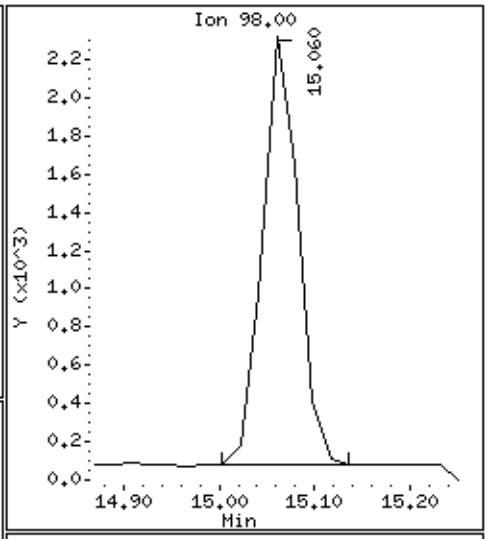
Concentration: 0.3533 PPBV

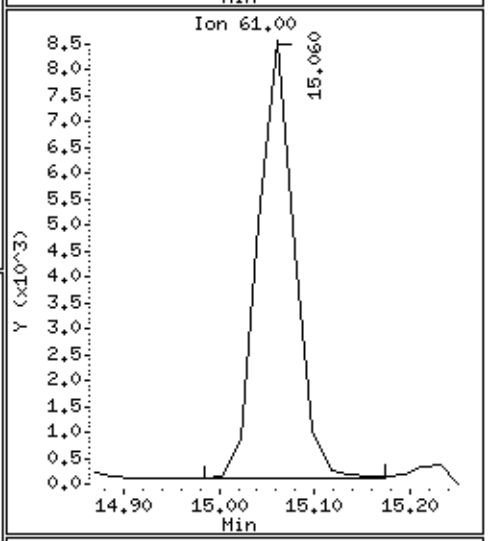


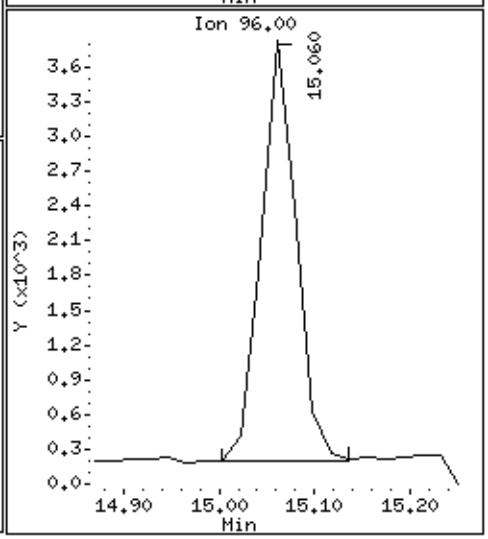












Data File: /chem/msde.i/13Jul2017.b/e071311simr2.d

Date : 13-JUL-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# 21007

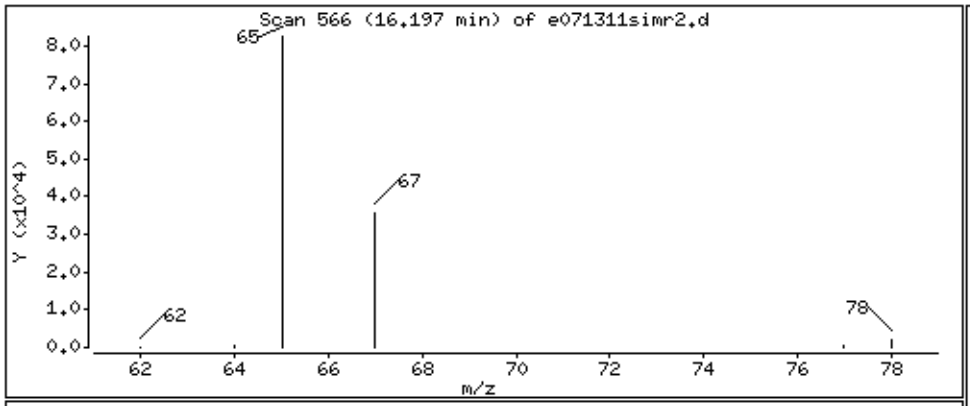
Operator: ef

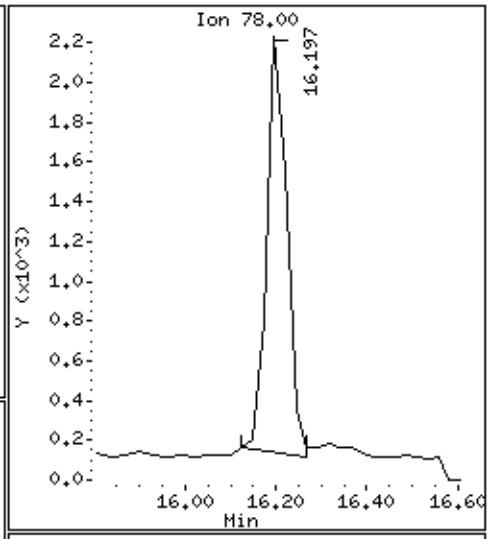
Column phase: RTX-624

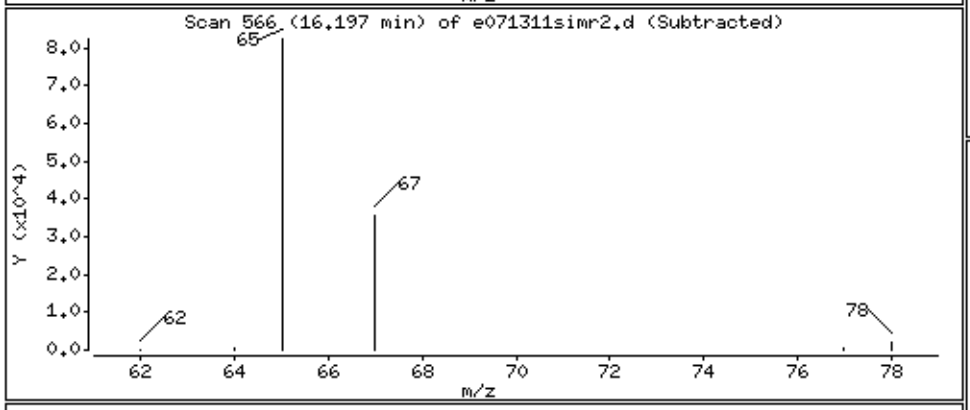
Column diameter: 0.32

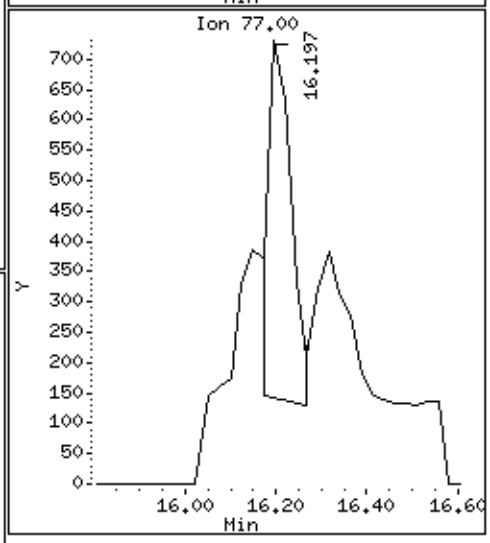
17 Benzene

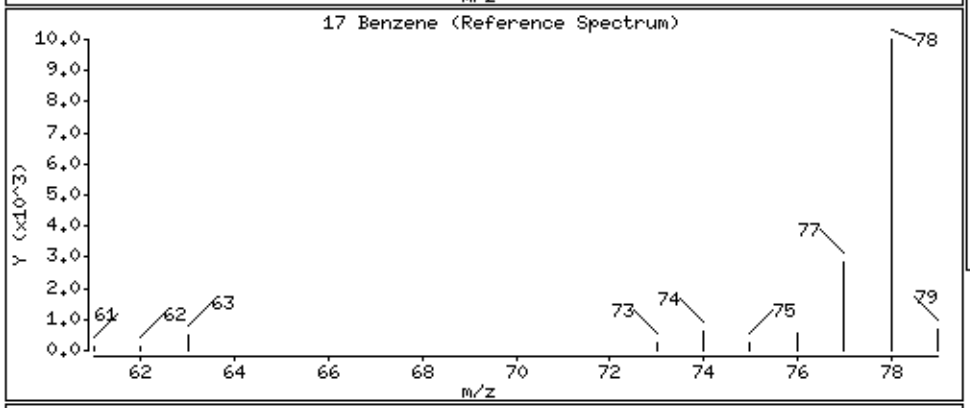
Concentration: 0.09538 PPBV

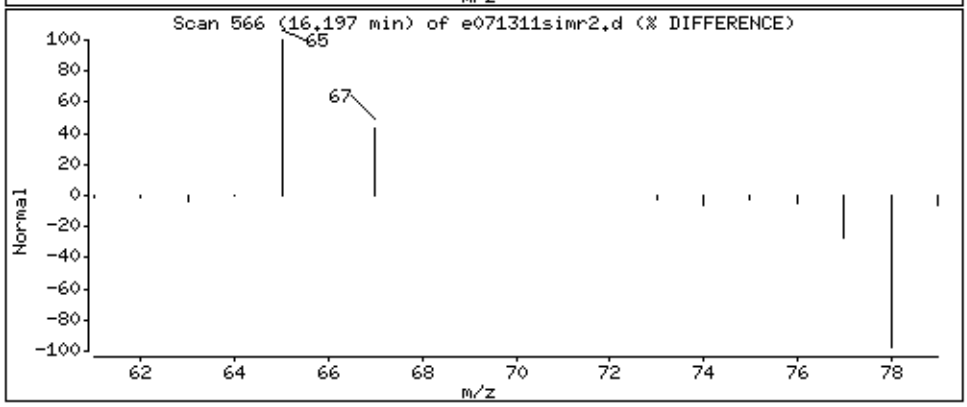












Data File: /chem/msde.i/13Jul2017.b/e071311simr2.d

Date : 13-JUL-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# 21007

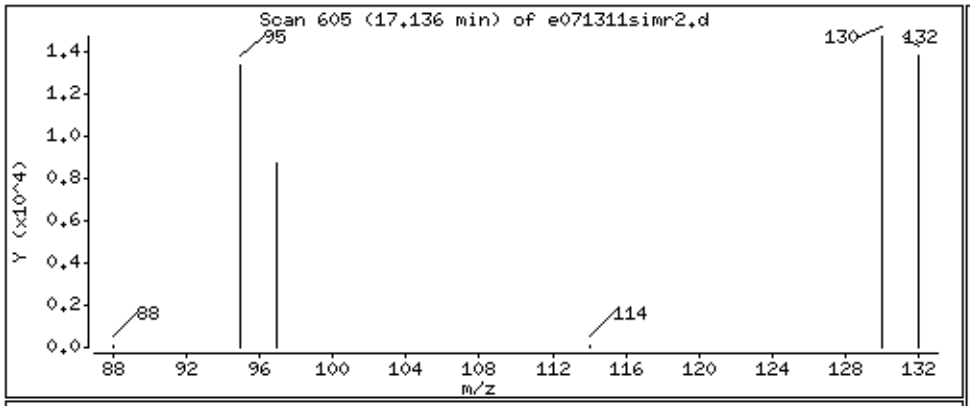
Operator: ef

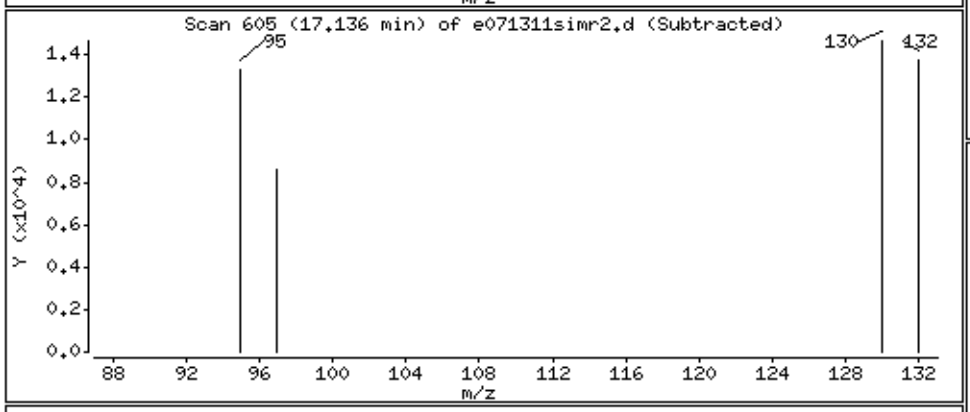
Column phase: RTX-624

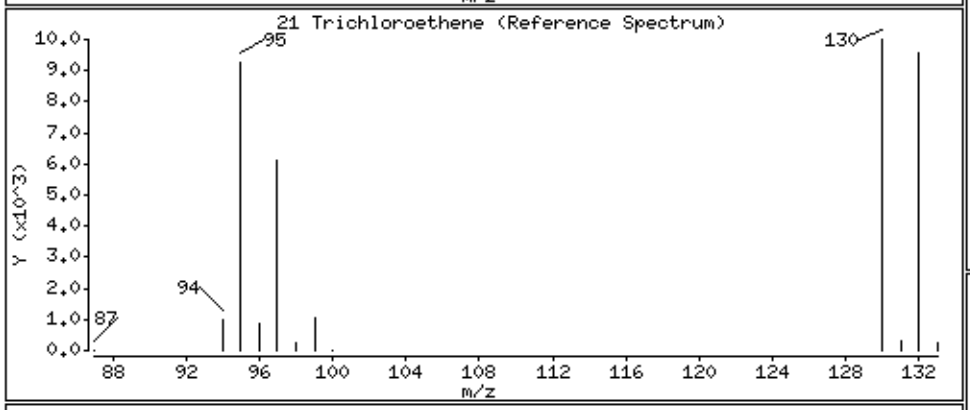
Column diameter: 0.32

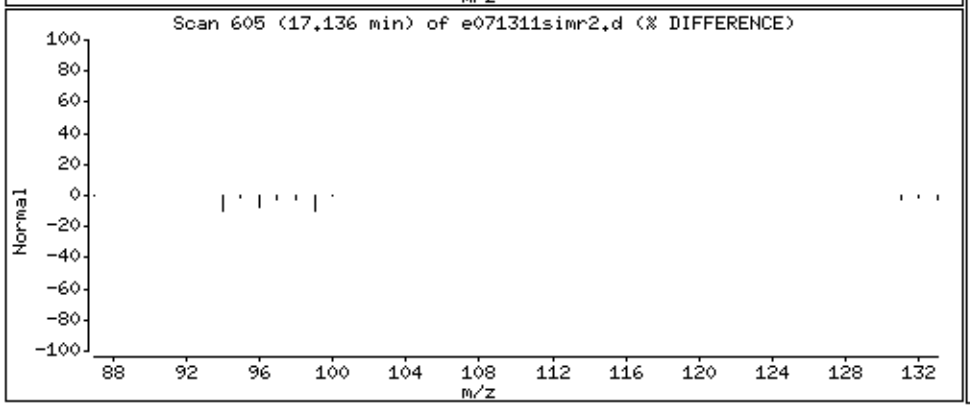
21 Trichloroethene

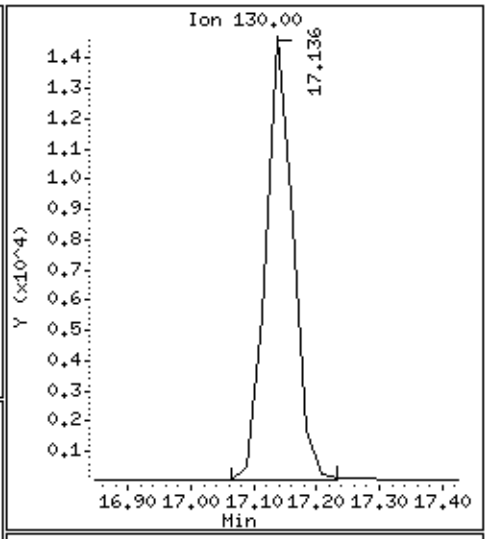
Concentration: 1.070 PPBV

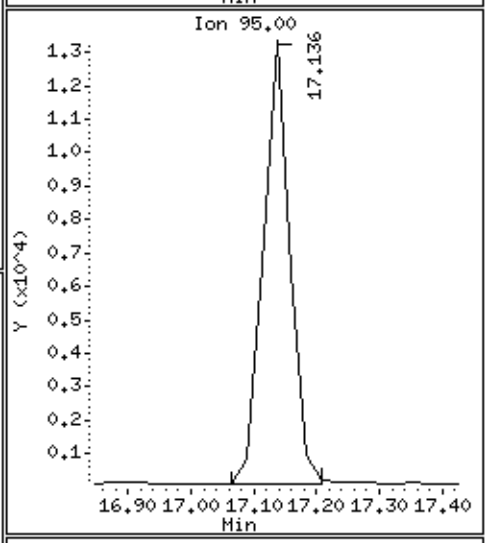


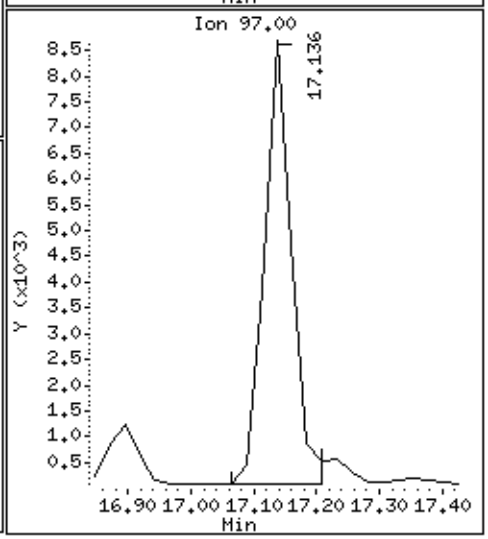












Data File: /chem/msde.i/13Jul2017.b/e071311simr2.d

Date : 13-JUL-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# 21007

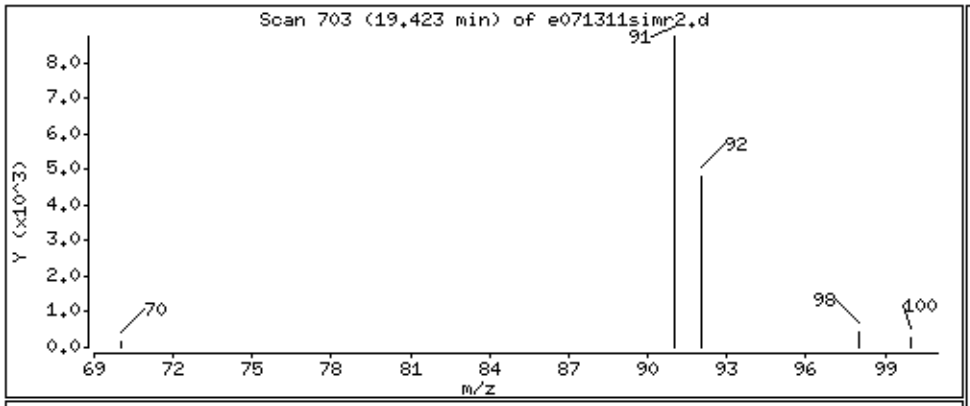
Operator: ef

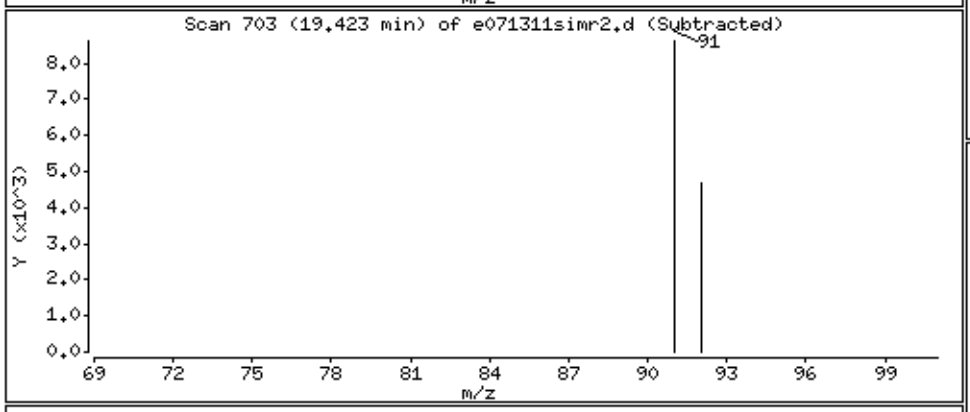
Column phase: RTX-624

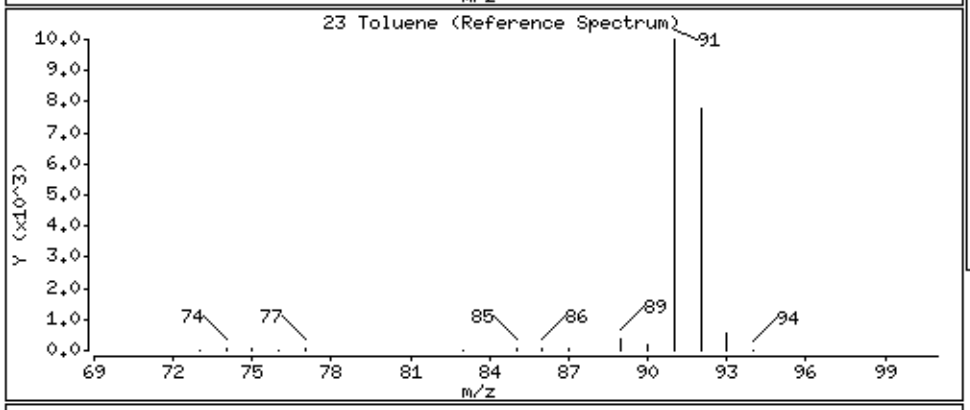
Column diameter: 0.32

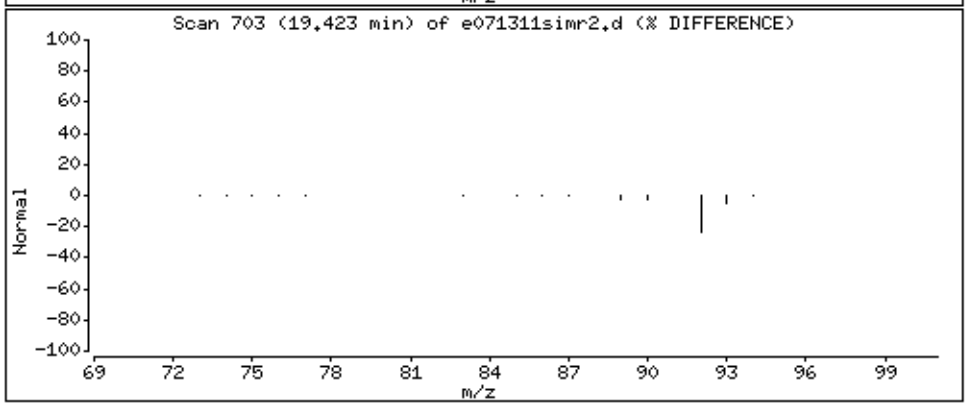
23 Toluene

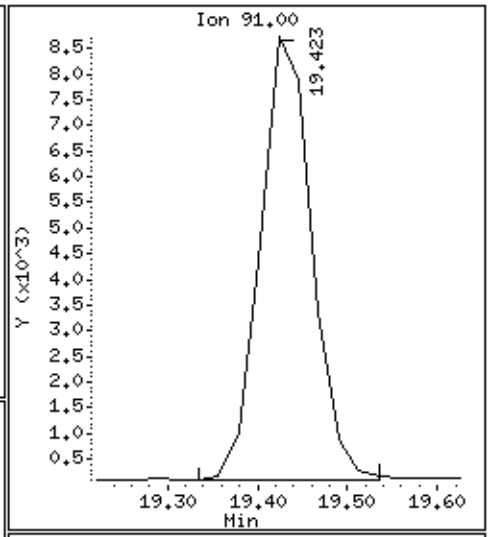
Concentration: 0.4438 PPBV

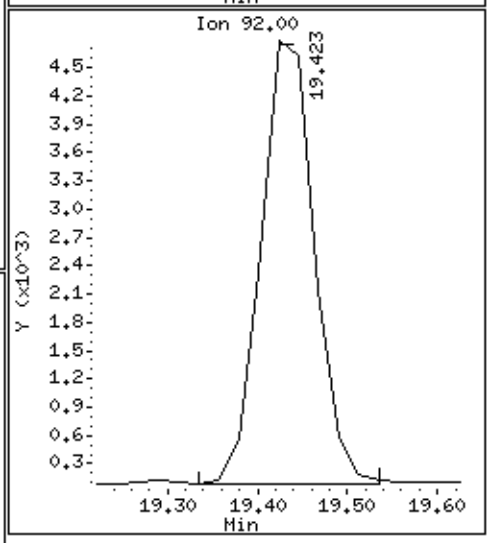












Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-6-BC (062817)

Lab ID#: 1707045R3-05A

No Detections Were Found.

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Client Sample ID: B-6-BC (062817)

Lab ID#: 1707045R3-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071308r2**	**Date of Collection:**	**6/29/17 9:55:00 PM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**7/13/17 12:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.33	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071308r2.d
Lab Smp Id: 1707045-05A
Inj Date : 13-JUL-2017 12:35
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N2536
Misc Info : 5.5"Hg -> 5.1psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 11-Aug-2017 16:14 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1
Dil Factor: 1.65000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	128477	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	98528			46.85- 106.85	76.69
15.391	15.391 (1.000)	49	229482			226.12- 286.12	178.62
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	220939	5.50420	5.504	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	92819			17.94- 77.94	42.01
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	442721	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	62377			0.00- 44.91	14.09
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.275	19.275 (1.152)	98	406578	4.77318	4.773	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	50658			0.00- 41.31	12.46
19.275	19.275 (1.152)	100	273461			38.24- 98.24	67.26
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.156 (1.000)	117	421383	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)							
22.156	22.156 (1.000)	82	201632			19.53- 79.53	47.85
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	248481	5.04888	5.049	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	281778			81.42- 141.42	113.40
23.856	23.856 (1.076)	176	233860			66.35- 126.35	94.12

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071308r2.d
Lab Smp Id: 1707045-05A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 5.5"Hg -> 5.1psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	128477	1.37
123 1,4-Difluorobenze	464912	278947	650877	442721	-4.77
163 Chlorobenzene-d5	425008	255005	595011	421383	-0.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 13Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-05A
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 5.5"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.504	110.08	70-130
$ 146 Toluene-d8	5.000	4.773	95.46	70-130
$ 177 4-Bromofluorobenze	5.000	5.049	100.98	70-130

Data File: /chem/msde.i/13Jul2017.b/e071308r2.d

Date : 13-JUL-2017 12:35

Client ID:

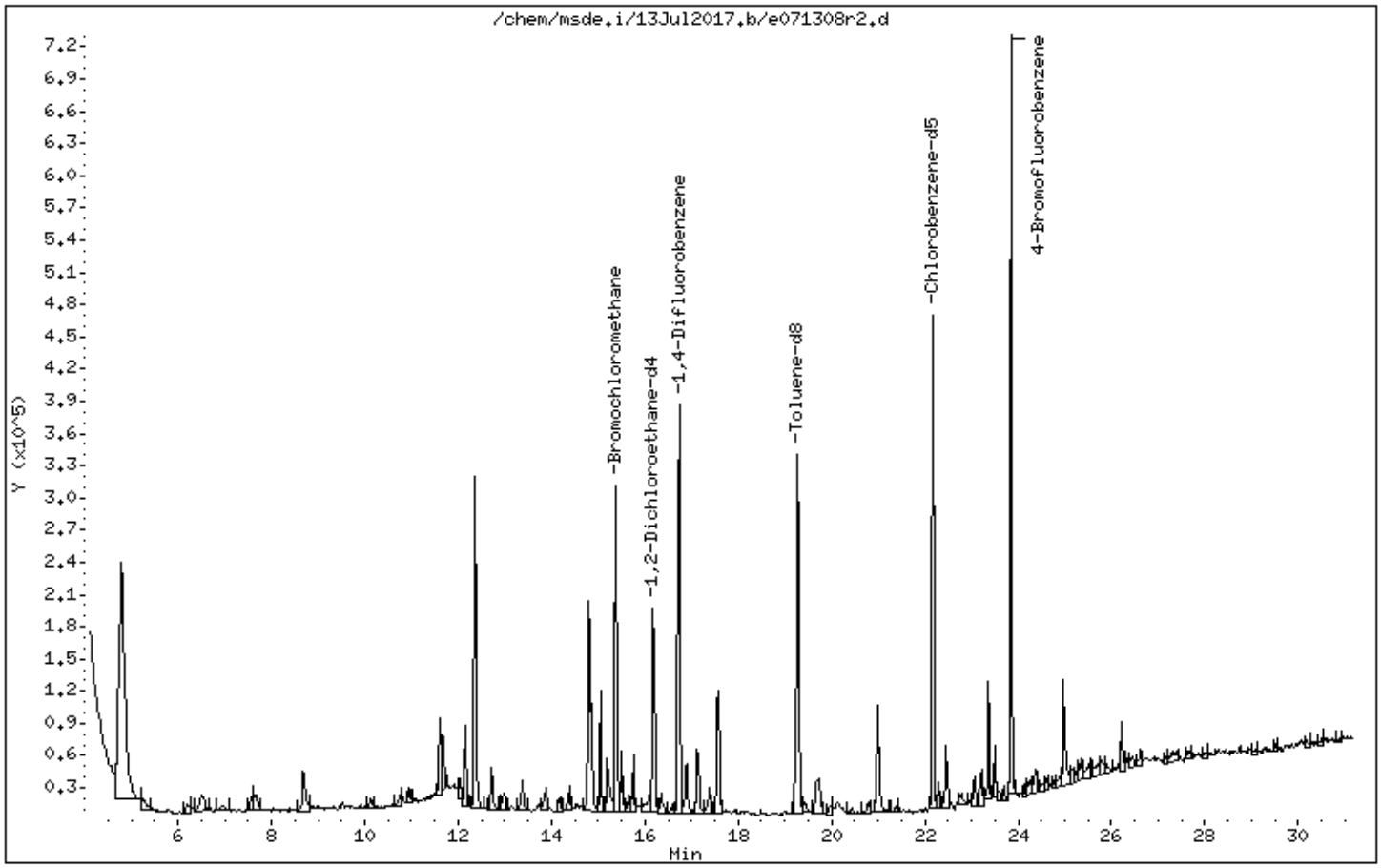
Instrument: msde.i

Sample Info: 250mL# N2536

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-6-BC (062817)

Lab ID#: 1707045R3-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.033	0.63	0.13	2.5
Trichloroethene	0.033	0.89	0.18	4.8
Toluene	0.033	0.14	0.12	0.51

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Client Sample ID: B-6-BC (062817)

Lab ID#: 1707045R3-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071308simr2**	**Date of Collection:**	**6/29/17 9:55:00 PM**
Dil. Factor:	**1.65**	**Date of Analysis:**	**7/13/17 12:35 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.033	0.63	0.13	2.5
Benzene	0.082	Not Detected	0.26	Not Detected
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	0.89	0.18	4.8
Toluene	0.033	0.14	0.12	0.51
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071308simr2.d
Lab Smp Id: 1707045-05B
Inj Date : 13-JUL-2017 12:35
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N2536
Misc Info : 5.5"Hg -> 5.1psi
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:15 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.65000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	10694	0.37948	0.6261	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	29679			222.17- 282.17	277.53
15.060	15.060 (0.978)	96	16846			125.16- 185.16	157.53
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	134778	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	104528			47.63- 107.63	77.56
15.374	15.405 (1.000)	49	244953			150.43- 210.43	181.75
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	236628	5.46963	5.470	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	102203			19.71- 79.71	43.19
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	485456	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	71421			0.00- 44.62	14.71
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	39204	0.54117	0.8929	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
21 Trichloroethene (continued)							
17.136	17.136 (1.024)	95	34792			57.80- 117.80	88.75
17.136	17.136 (1.024)	97	23371			26.87- 86.87	59.61
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	380986	4.87982	4.880	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	45426			0.00- 41.18	11.92
19.289	19.289 (1.153)	100	248281			35.44- 95.44	65.17
23 Toluene					CAS #: 108-88-3		
19.423	19.424 (1.161)	91	10956	0.08227	0.1357	80.00- 120.00	100.00
19.423	19.424 (1.161)	92	6344			28.44- 88.44	57.90
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	443095	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	192065			12.99- 72.99	43.35
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	279471	5.23496	5.235	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	289209			73.66- 133.66	103.48
23.869	23.869 (1.077)	176	271127			67.29- 127.29	97.01

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071308simr2.d
Lab Smp Id: 1707045-05B
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 5.5"Hg -> 5.1psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	134778	-5.10
20 1,4-Difluorobenze	516009	309605	722413	485456	-5.92
28 Chlorobenzene-d5	463677	278206	649148	443095	-4.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-05B
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 5.5"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.470	109.39	70-130
$ 22 Toluene-d8	5.000	4.880	97.60	70-130
$ 33 4-Bromofluorobenze	5.000	5.235	104.70	70-130

Data File: /chem/msde.i/13Jul2017.b/e071308simr2.d

Date : 13-JUL-2017 12:35

Client ID:

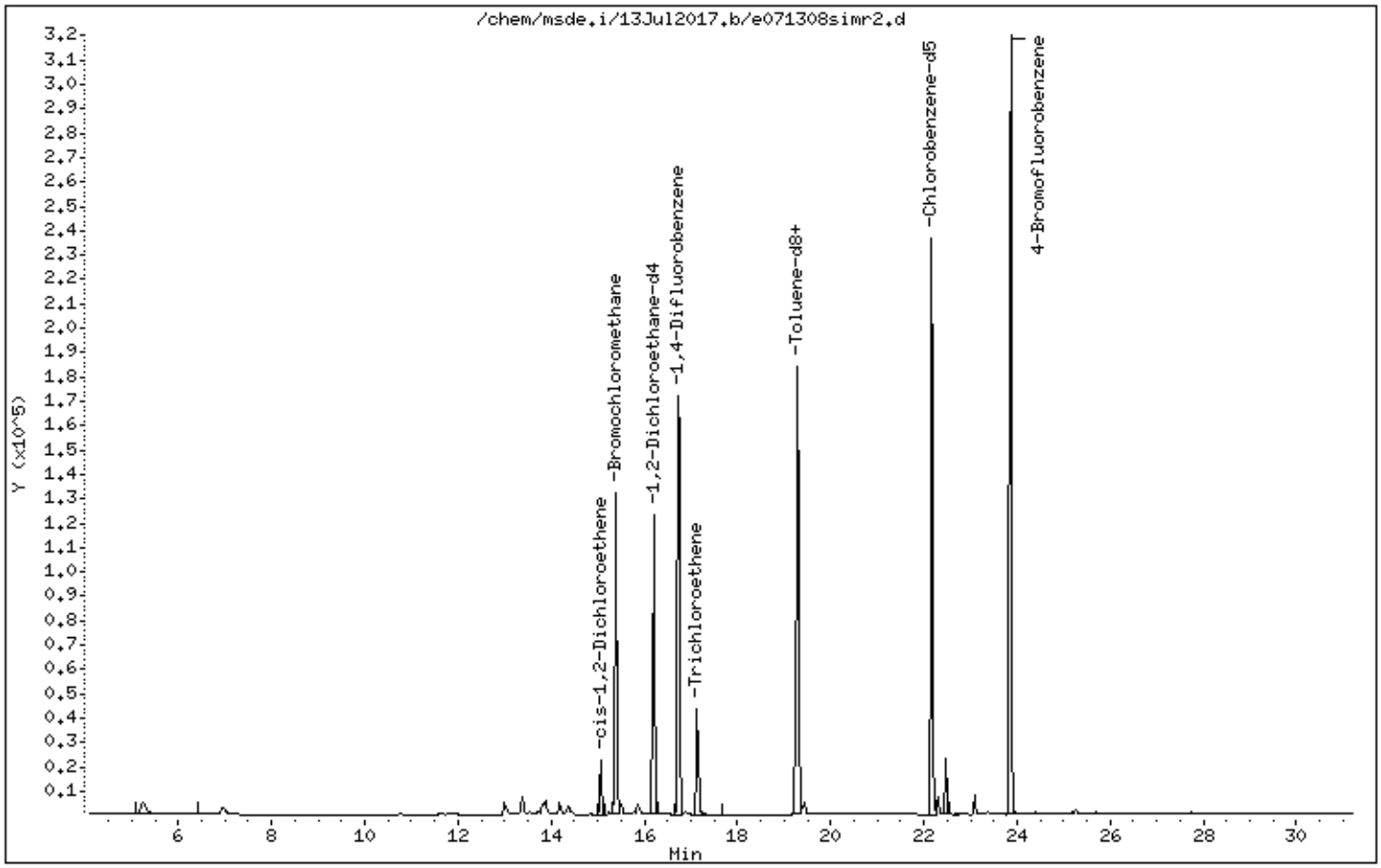
Instrument: msde.i

Sample Info: 250mL# N2536

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/13Jul2017.b/e071308simr2.d

Date : 13-JUL-2017 12:35

Client ID:

Instrument: msde.i

Sample Info: 250mL# N2536

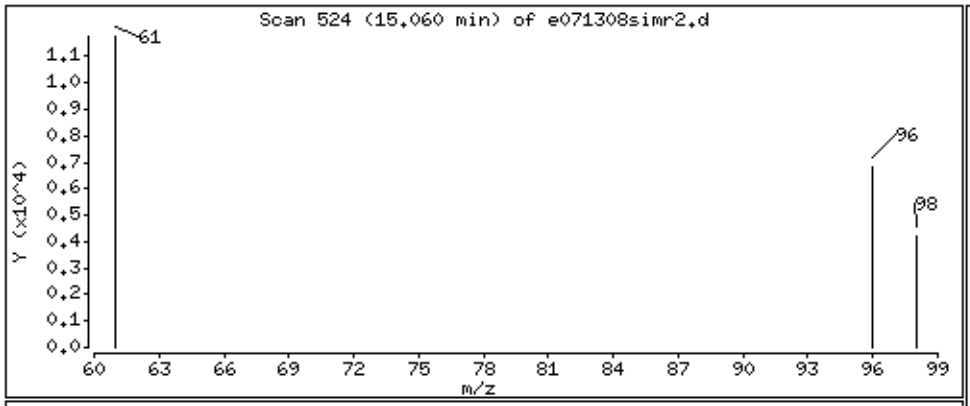
Operator: ef

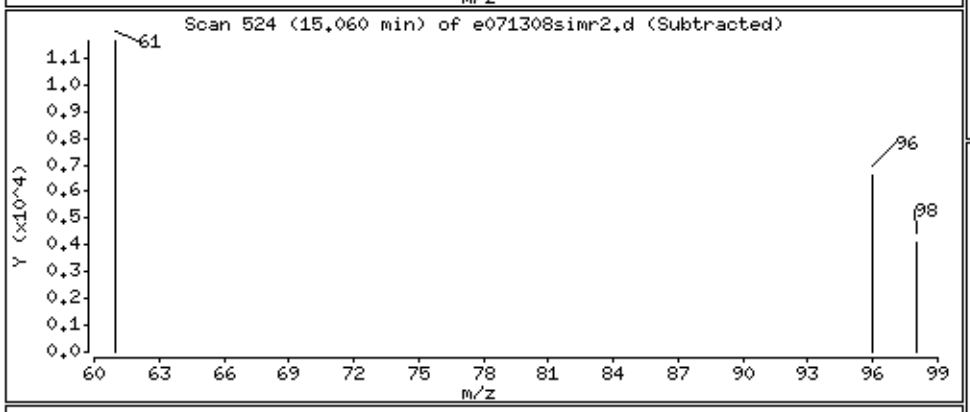
Column phase: RTX-624

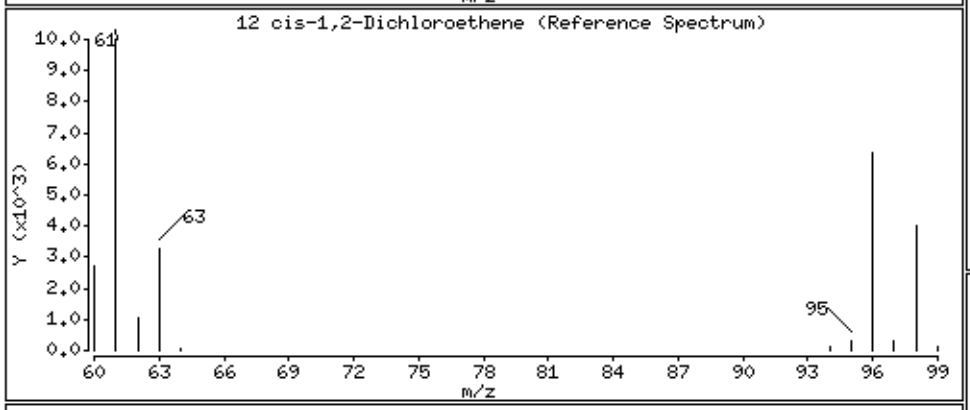
Column diameter: 0.32

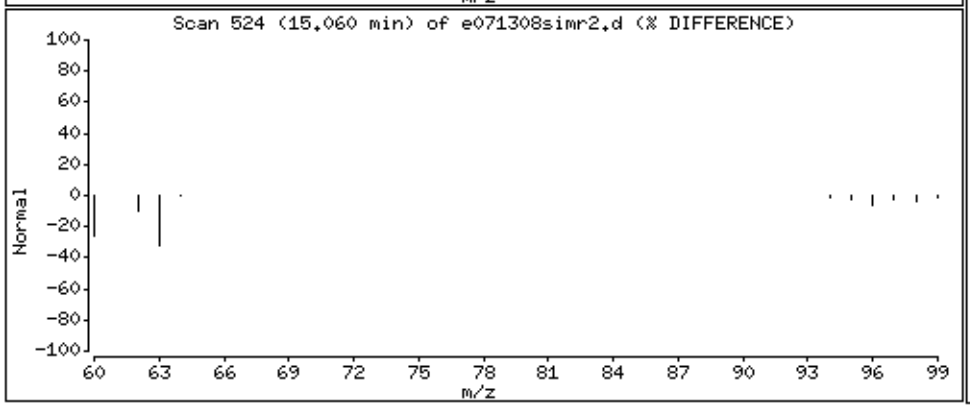
12 cis-1,2-Dichloroethene

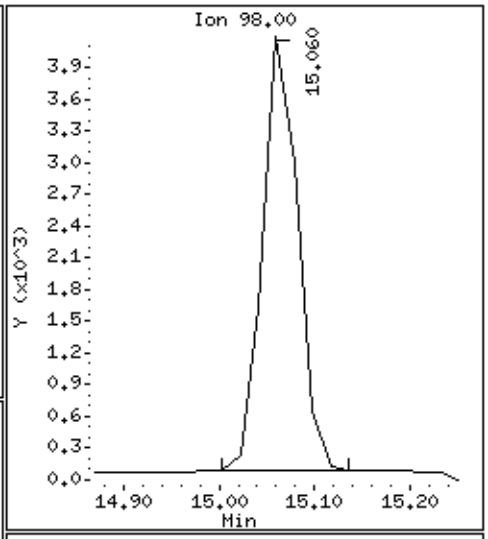
Concentration: 0.6261 PPBV

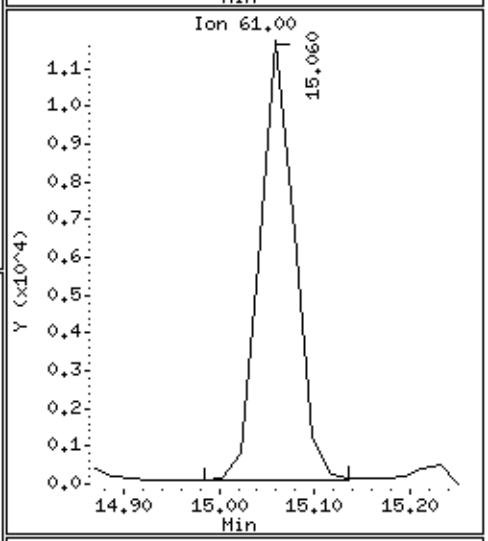


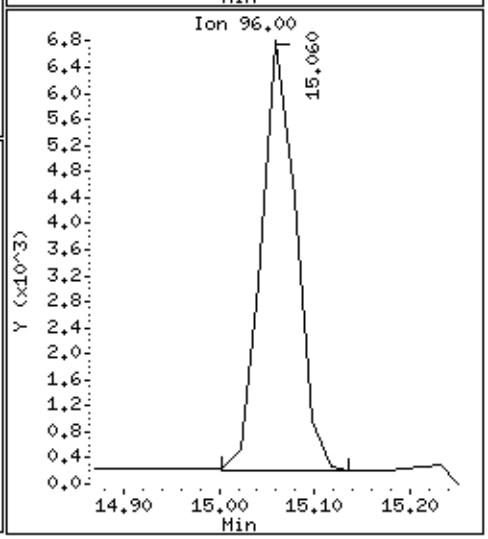












Data File: /chem/msde.i/13Jul2017.b/e071308simr2.d

Date : 13-JUL-2017 12:35

Client ID:

Instrument: msde.i

Sample Info: 250mL# N2536

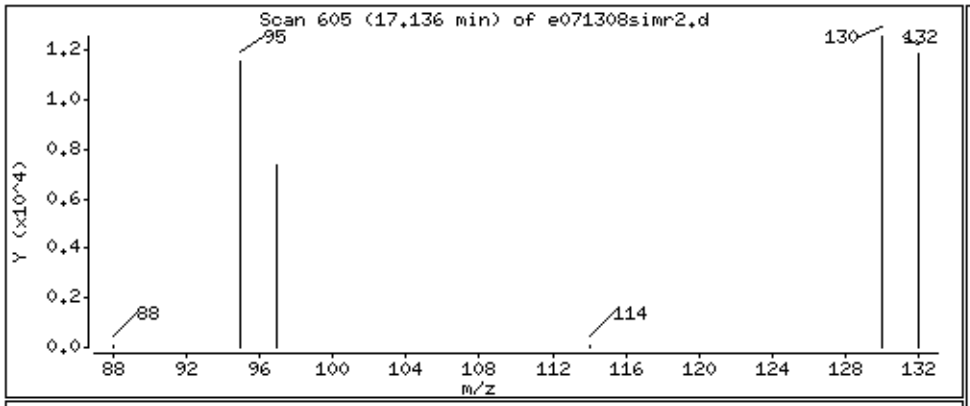
Operator: ef

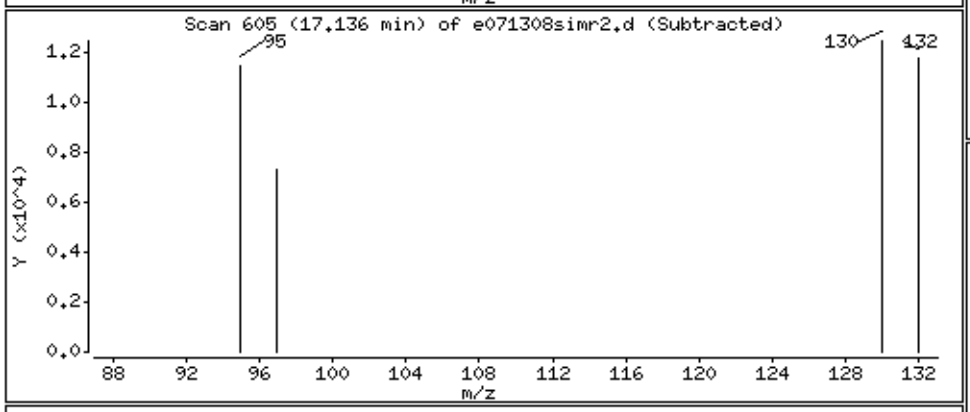
Column phase: RTX-624

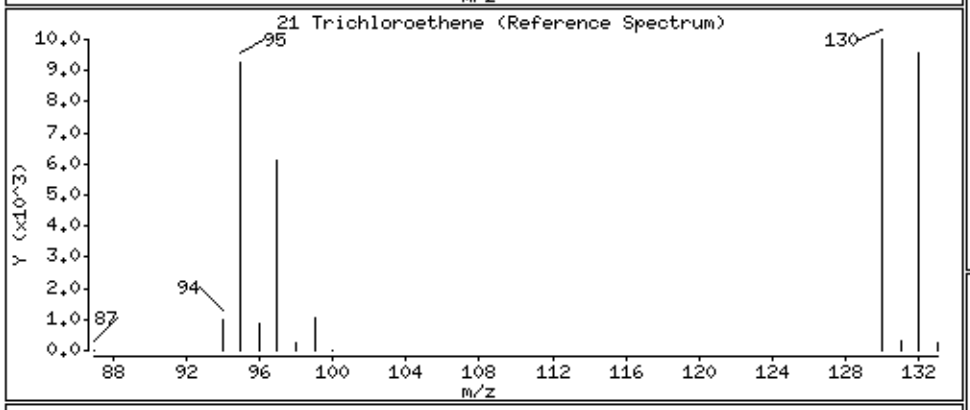
Column diameter: 0.32

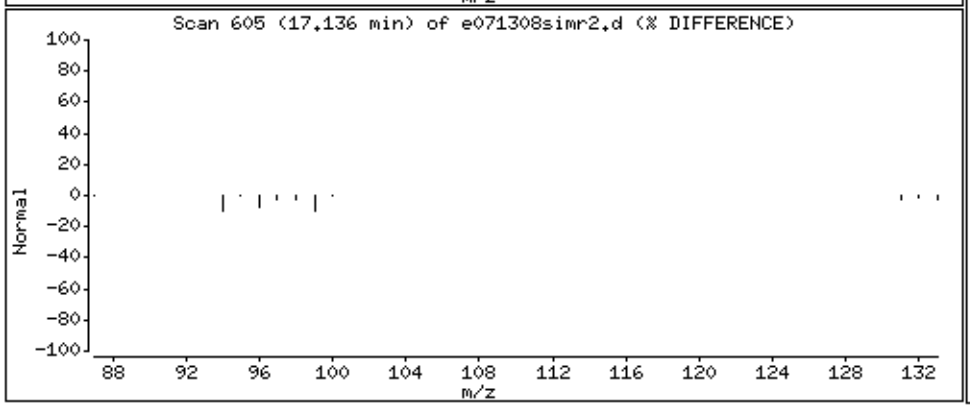
21 Trichloroethene

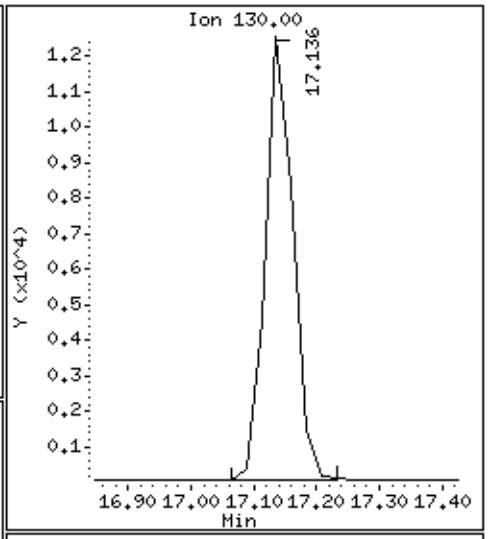
Concentration: 0.8929 PPBV

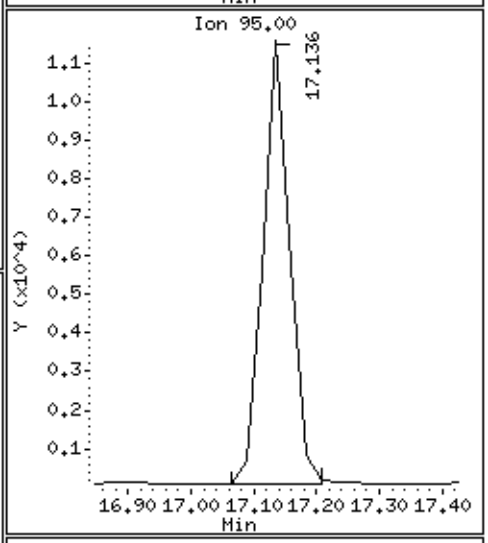


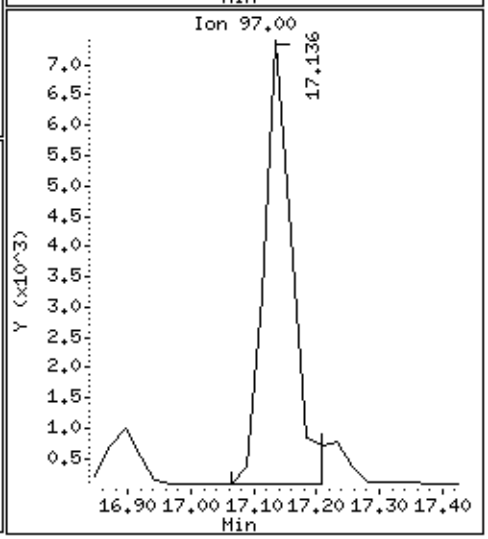












Data File: /chem/msde.i/13Jul2017.b/e071308simr2.d

Date : 13-JUL-2017 12:35

Client ID:

Instrument: msde.i

Sample Info: 250mL# N2536

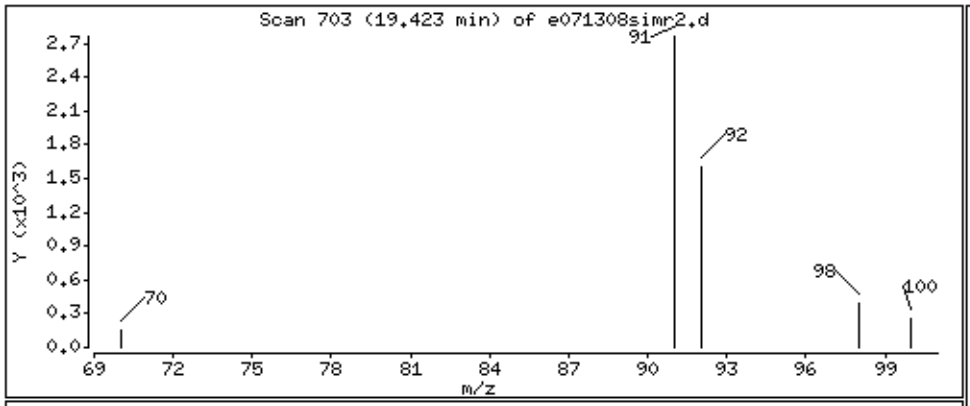
Operator: ef

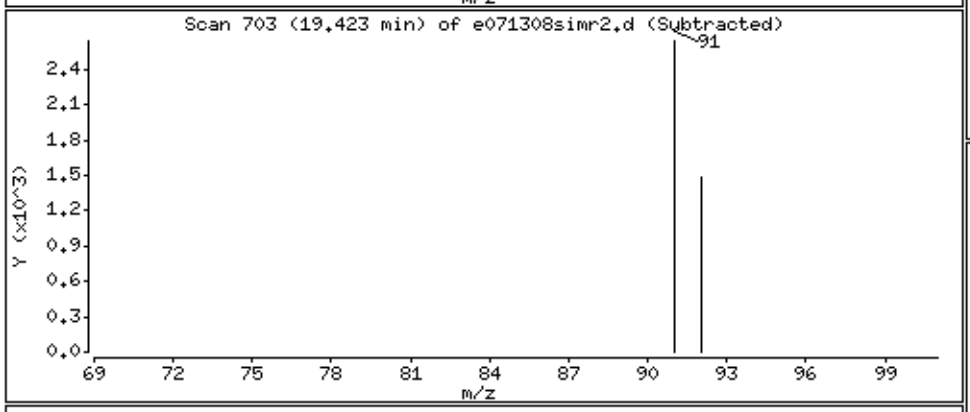
Column phase: RTX-624

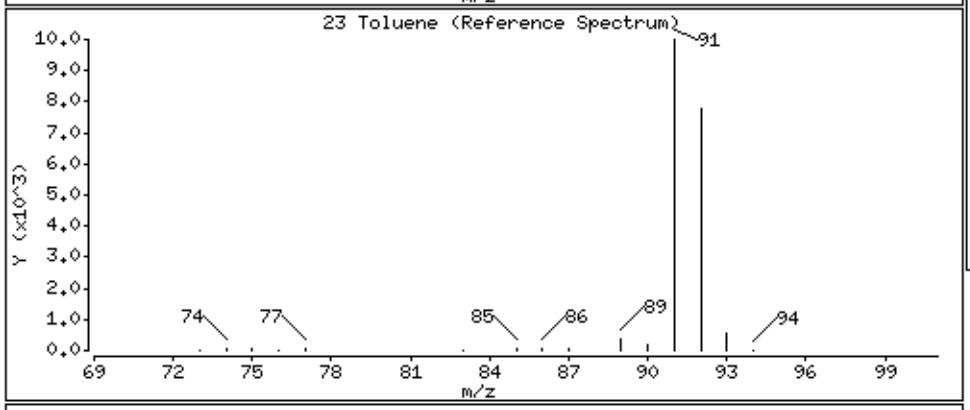
Column diameter: 0.32

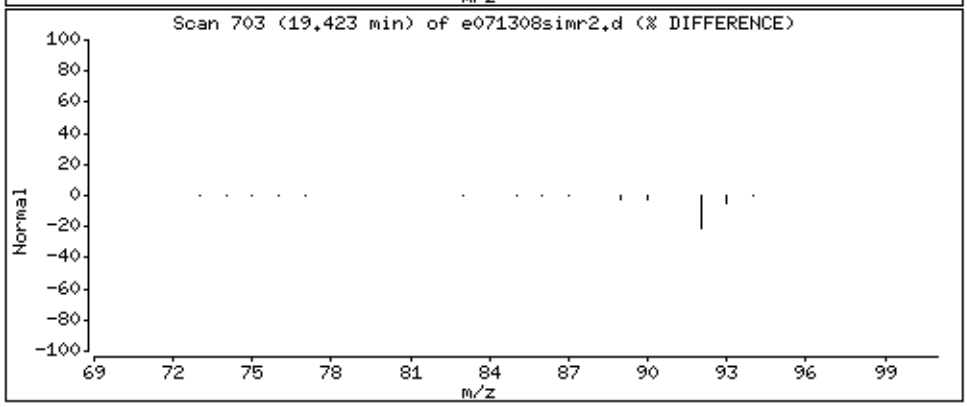
23 Toluene

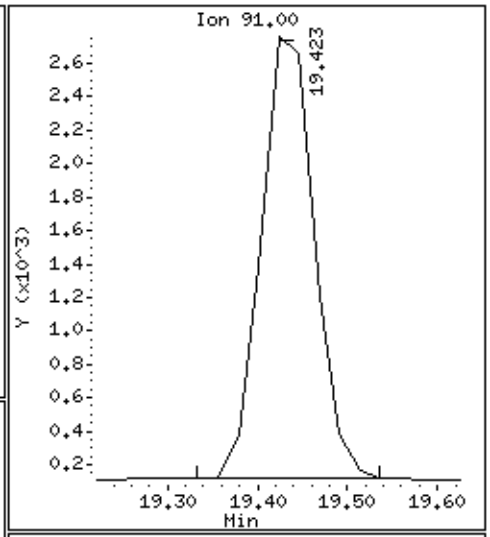
Concentration: 0.1357 PPBV

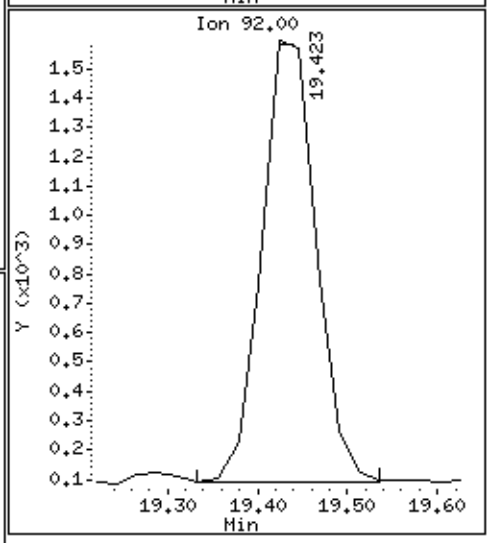












Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-4-BC (062817)

Lab ID#: 1707045R3-06A

No Detections Were Found.

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Client Sample ID: B-4-BC (062817)

Lab ID#: 1707045R3-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071309r2**	**Date of Collection:**	**6/29/17 11:44:00 PM**
Dil. Factor:	**6.19**	**Date of Analysis:**	**7/13/17 01:21 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	1.2	Not Detected	4.3	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071309r2.d
Lab Smp Id: 1707045-06A
Inj Date : 13-JUL-2017 13:21
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N2508
Misc Info : 23.5"Hg -> 5.1psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 11-Aug-2017 16:14 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1
Dil Factor: 6.19000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	123659	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	95183			46.85- 106.85	76.97
15.391	15.391 (1.000)	49	214471			226.12- 286.12	173.44
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	209083	5.41178	5.412	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	93473			17.94- 77.94	44.71
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	430665	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	62792			0.00- 44.91	14.58
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	392309	4.73459	4.734	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	44997			0.00- 41.31	11.47
19.275	19.275 (1.152)	100	263398			38.24- 98.24	67.14
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.156	22.156 (1.000)	117	397367	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.156	(1.000)	82	191943			19.53- 79.53	48.30
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.077)	174	234814	5.05954	5.060	80.00- 120.00	100.00
23.856	23.856	(1.077)	95	255046			81.42- 141.42	108.62
23.856	23.856	(1.077)	176	224455			66.35- 126.35	95.59

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071309r2.d
Lab Smp Id: 1707045-06A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 23.5"Hg -> 5.1psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	123659	-2.44
123 1,4-Difluorobenze	464912	278947	650877	430665	-7.37
163 Chlorobenzene-d5	425008	255005	595011	397367	-6.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 13Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-06A
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 23.5"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.412	108.24	70-130
$ 146 Toluene-d8	5.000	4.734	94.69	70-130
$ 177 4-Bromofluorobenze	5.000	5.060	101.19	70-130

Data File: /chem/msde.i/13Jul2017.b/e071309r2.d

Date : 13-JUL-2017 13:21

Client ID:

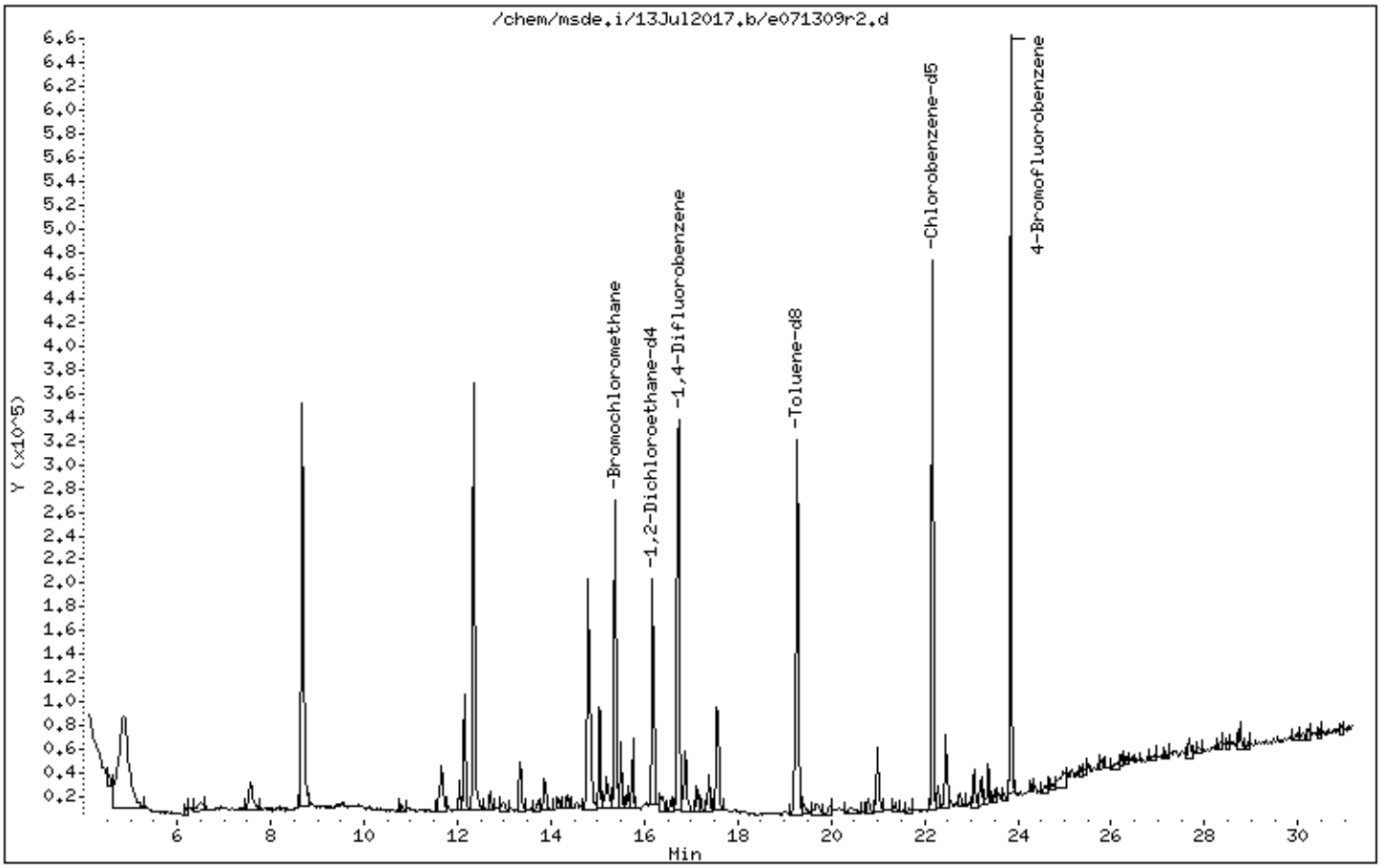
Instrument: msde.i

Sample Info: 250mL# N2508

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: B-4-BC (062817)

Lab ID#: 1707045R3-06B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.12	0.28	0.49	1.1
Trichloroethene	0.12	1.1	0.66	6.1
Toluene	0.12	0.46	0.47	1.7

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Client Sample ID: B-4-BC (062817)

Lab ID#: 1707045R3-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071309simr2**	**Date of Collection:**	**6/29/17 11:44:00 PM**
Dil. Factor:	**6.19**	**Date of Analysis:**	**7/13/17 01:21 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.062	Not Detected	0.16	Not Detected
1,1-Dichloroethene	0.062	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.62	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.12	0.28	0.49	1.1
Benzene	0.31	Not Detected	0.99	Not Detected
1,2-Dichloroethane	0.12	Not Detected	0.50	Not Detected
Trichloroethene	0.12	1.1	0.66	6.1
Toluene	0.12	0.46	0.47	1.7
1,1,2-Trichloroethane	0.12	Not Detected	0.68	Not Detected
Tetrachloroethene	0.12	Not Detected	0.84	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071309simr2.d
Lab Smp Id: 1707045-06B
Inj Date : 13-JUL-2017 13:21
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N2508
Misc Info : 23.5"Hg -> 5.1psi
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:15 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 6.19000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	1221	0.04528	0.2803	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	3397			222.17- 282.17	278.21
15.060	15.060 (0.978)	96	1900			125.16- 185.16	155.61
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	128960	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	99897			47.63- 107.63	77.46
15.374	15.405 (1.000)	49	237760			150.43- 210.43	184.37
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	226521	5.47223	5.472	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	98554			19.71- 79.71	43.51
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	462742	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	67607			0.00- 44.62	14.61
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	12610	0.18261	1.130	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
21 Trichloroethene (continued)							
17.136	17.136 (1.024)	95	11309			57.80- 117.80	89.68
17.136	17.136 (1.024)	97	7733			26.87- 86.87	61.32
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	368459	4.95102	4.951	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	43982			0.00- 41.18	11.94
19.289	19.289 (1.153)	100	239705			35.44- 95.44	65.06
23 Toluene					CAS #: 108-88-3		
19.423	19.424 (1.161)	91	9379	0.07388	0.4573	80.00- 120.00	100.00
19.423	19.424 (1.161)	92	5269			28.44- 88.44	56.18
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	428444	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	186822			12.99- 72.99	43.60
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	261313	5.06222	5.062	80.00- 120.00	100.00
23.847	23.869 (1.076)	95	271371			73.66- 133.66	103.85
23.869	23.869 (1.077)	176	254158			67.29- 127.29	97.26

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071309simr2.d
Lab Smp Id: 1707045-06B
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 23.5"Hg -> 5.1psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	128960	-9.20
20 1,4-Difluorobenze	516009	309605	722413	462742	-10.32
28 Chlorobenzene-d5	463677	278206	649148	428444	-7.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1707045-06B
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 23.5"Hg -> 5.1psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.472	109.44	70-130
$ 22 Toluene-d8	5.000	4.951	99.02	70-130
$ 33 4-Bromofluorobenze	5.000	5.062	101.24	70-130

Data File: /chem/msde.i/13Jul2017.b/e071309simr2.d

Date : 13-JUL-2017 13:21

Client ID:

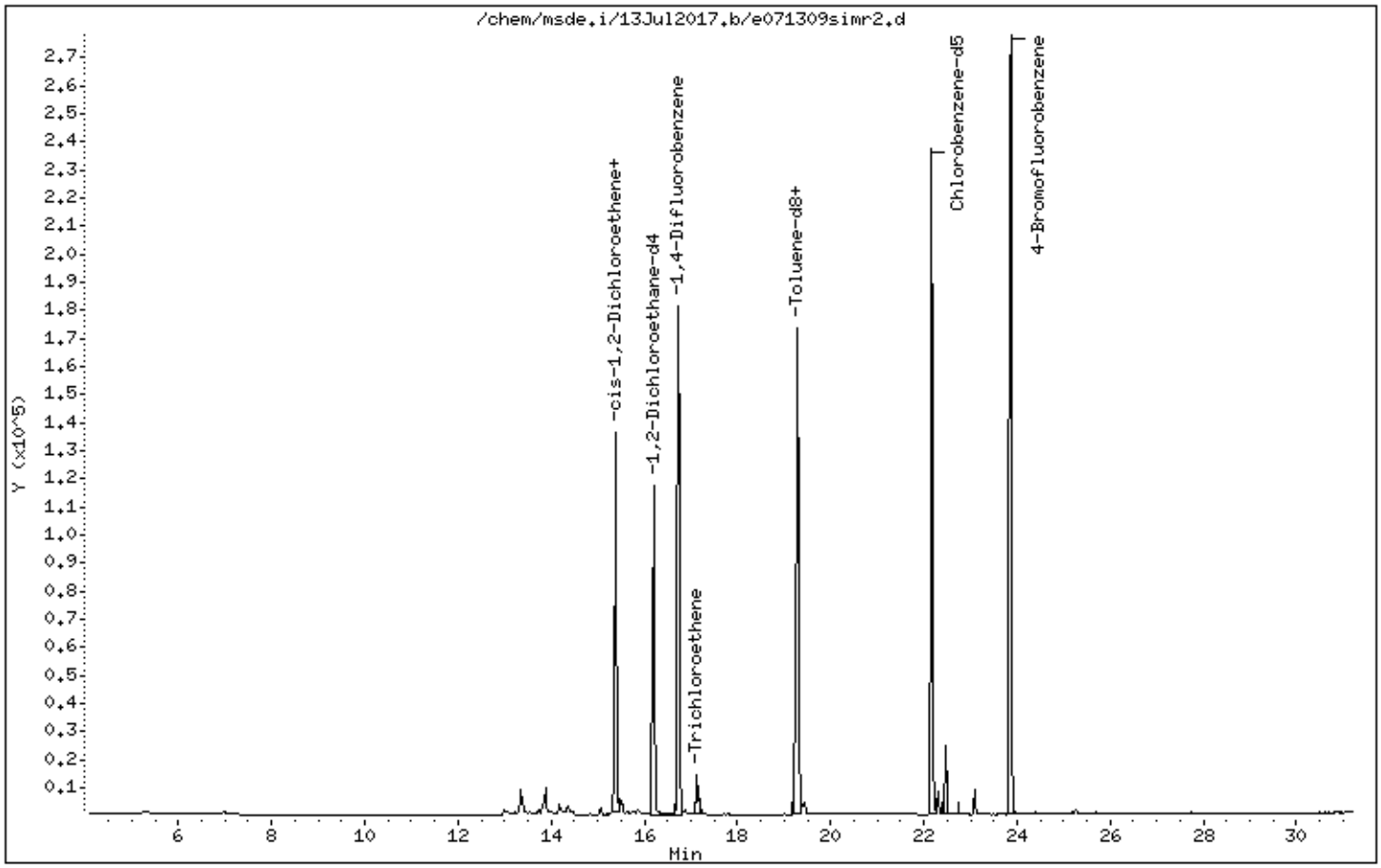
Instrument: msde.i

Sample Info: 250mL# N2508

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/13Jul2017.b/e071309simr2.d

Date : 13-JUL-2017 13:21

Client ID:

Instrument: msde.i

Sample Info: 250mL# N2508

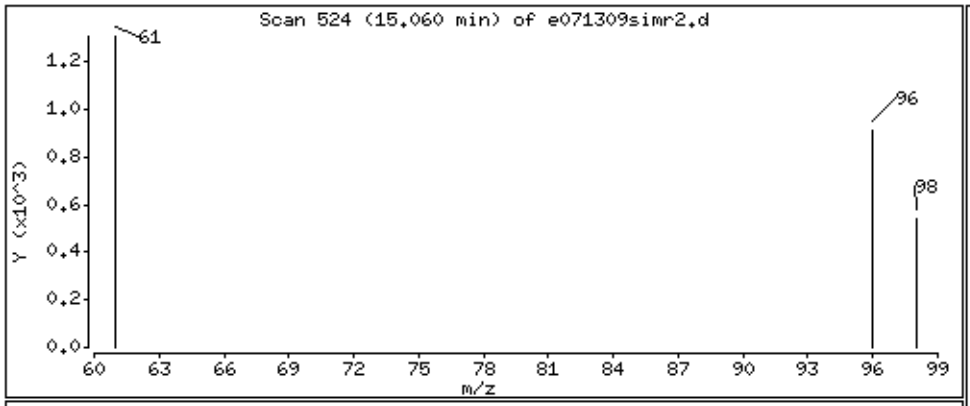
Operator: ef

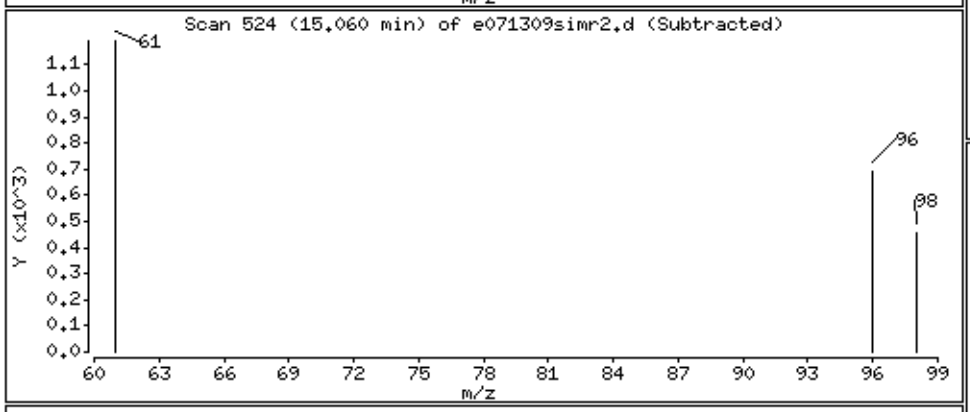
Column phase: RTX-624

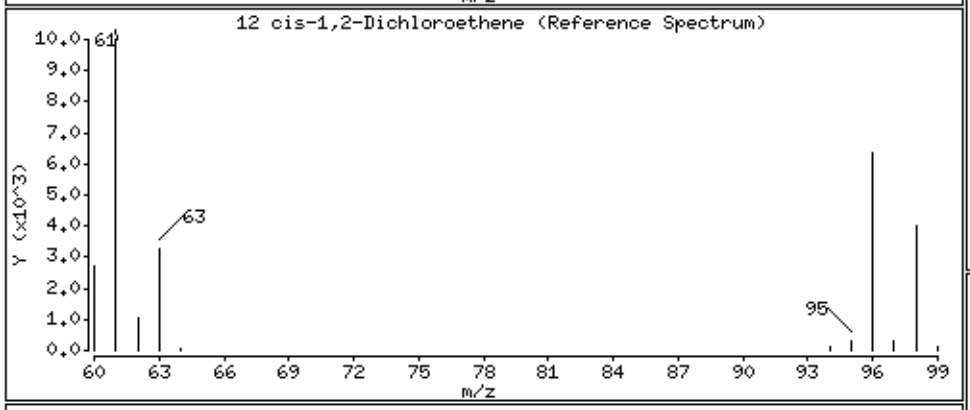
Column diameter: 0.32

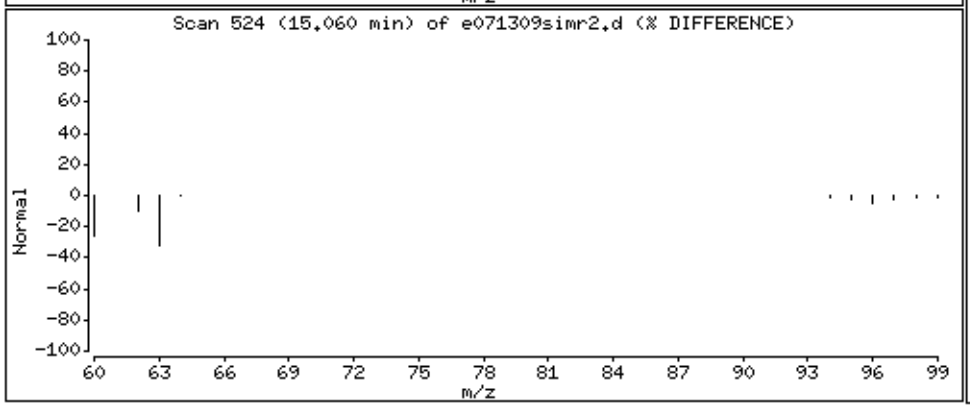
12 cis-1,2-Dichloroethene

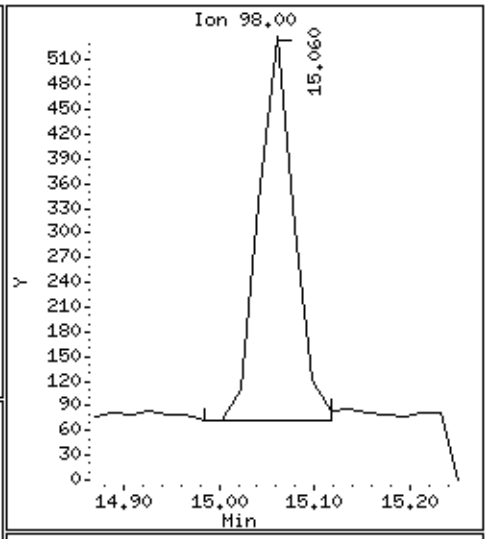
Concentration: 0.2803 PPBV

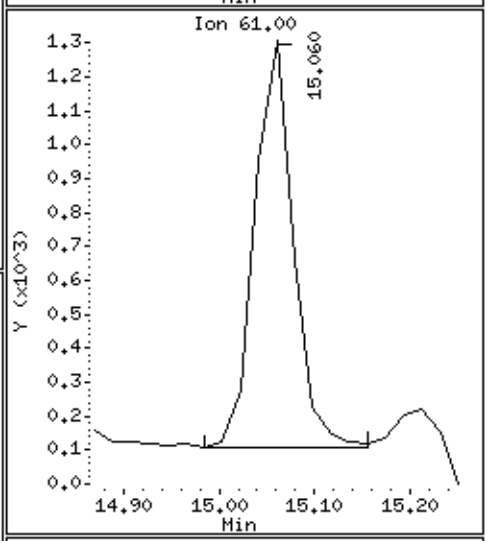


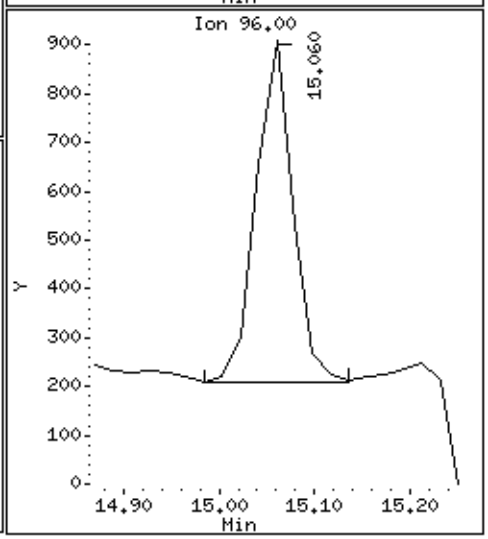












Data File: /chem/msde.i/13Jul2017.b/e071309simr2.d

Date : 13-JUL-2017 13:21

Client ID:

Instrument: msde.i

Sample Info: 250mL# N2508

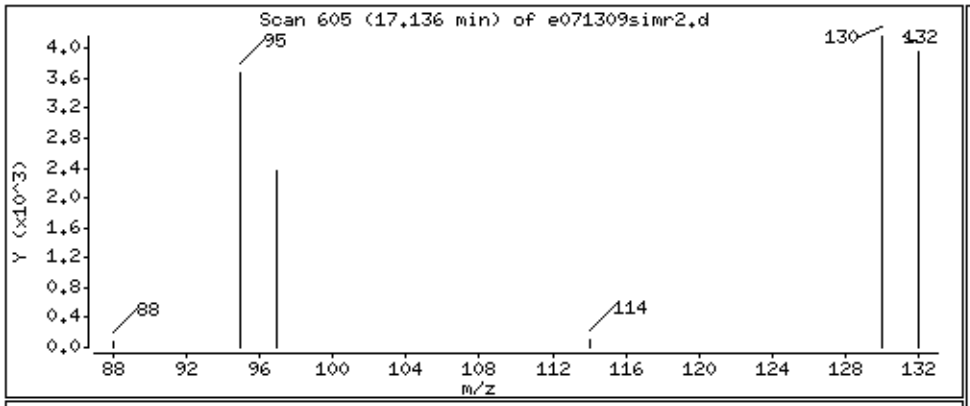
Operator: ef

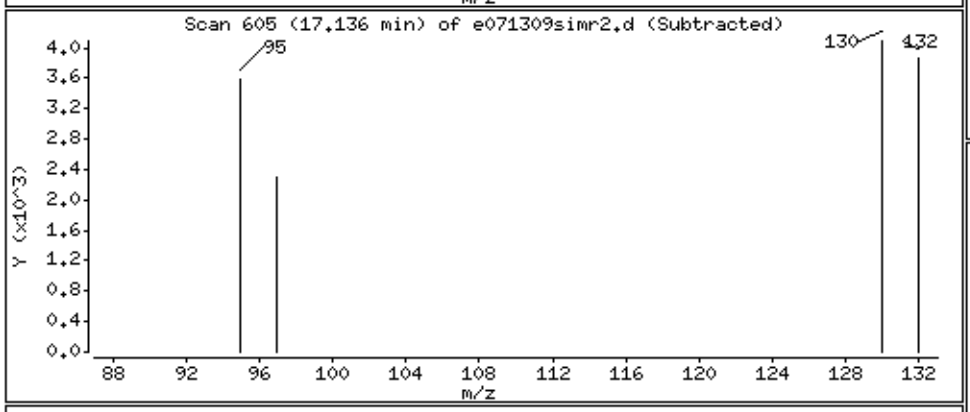
Column phase: RTX-624

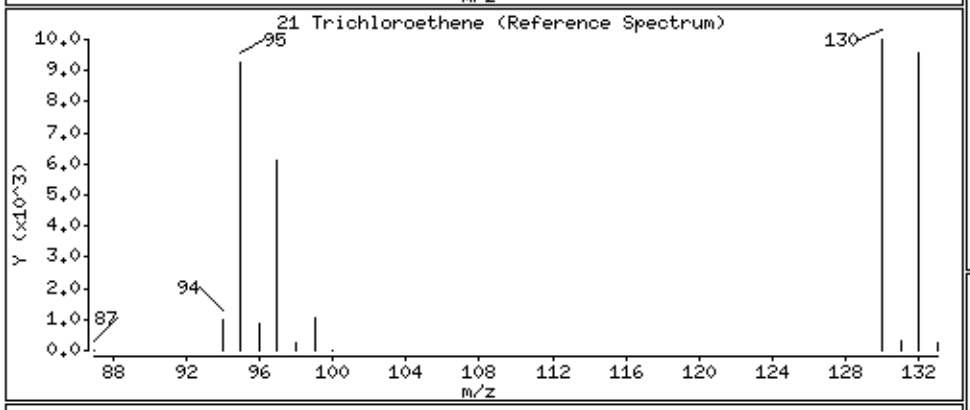
Column diameter: 0.32

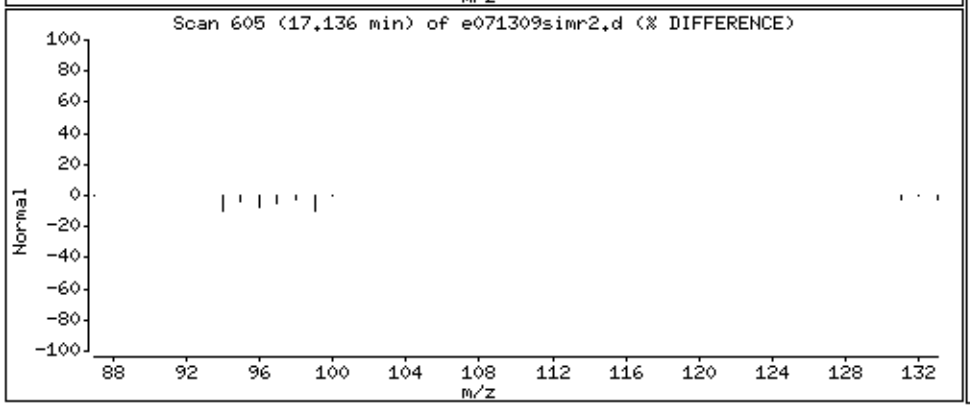
21 Trichloroethene

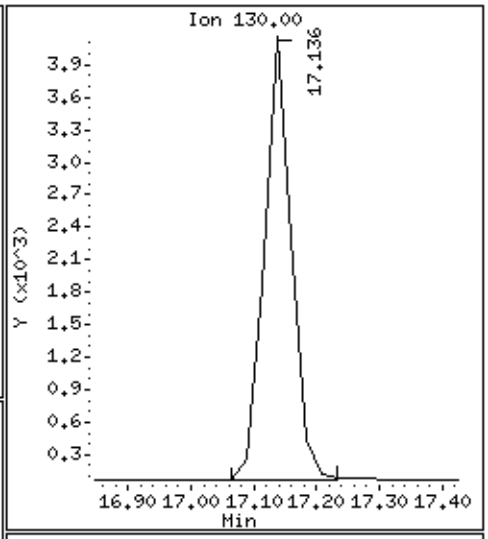
Concentration: 1.130 PPBV

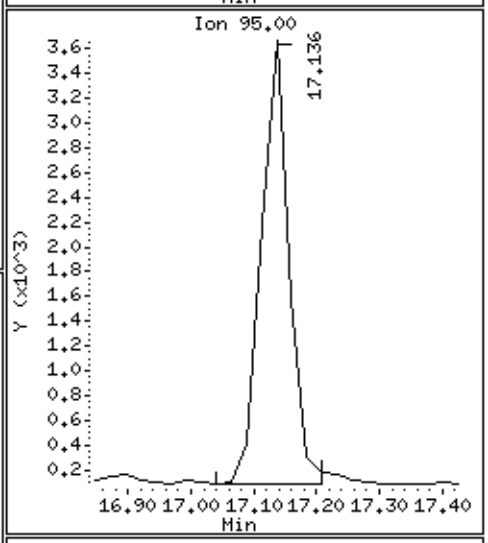


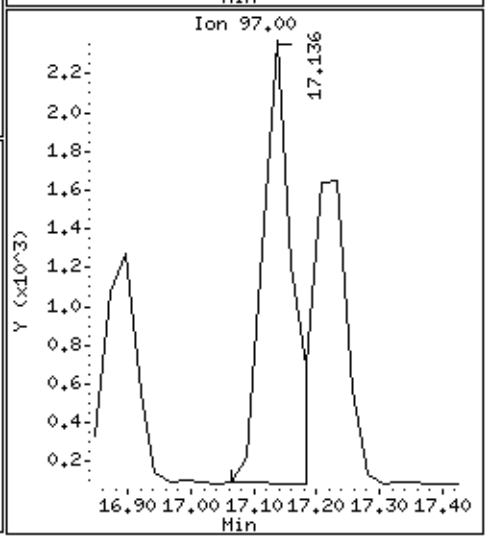












Data File: /chem/msde.i/13Jul2017.b/e071309simr2.d

Date : 13-JUL-2017 13:21

Client ID:

Instrument: msde.i

Sample Info: 250mL# N2508

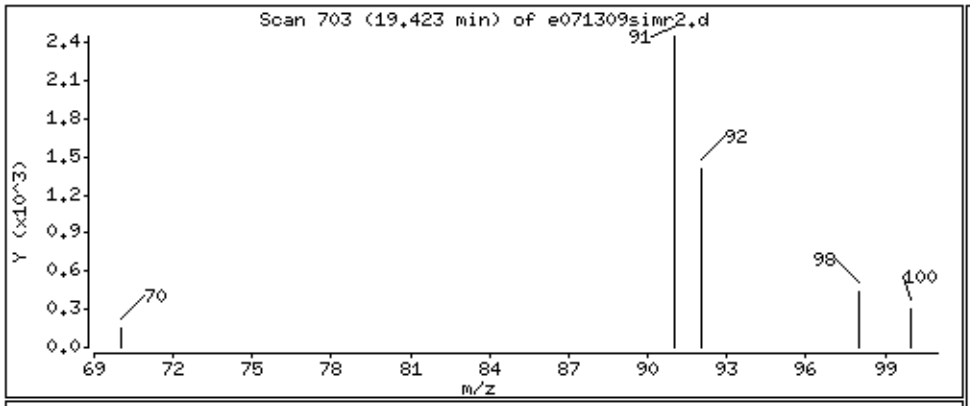
Operator: ef

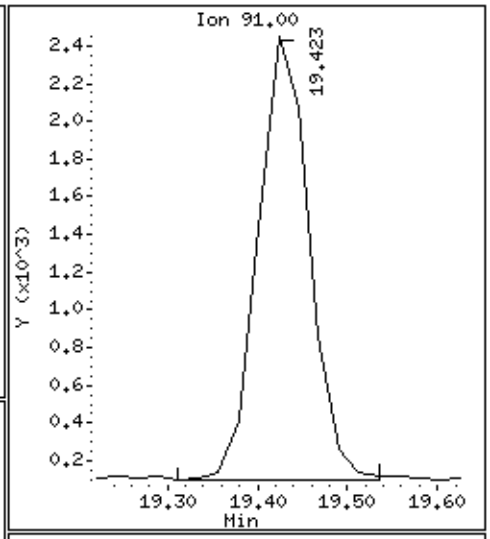
Column phase: RTX-624

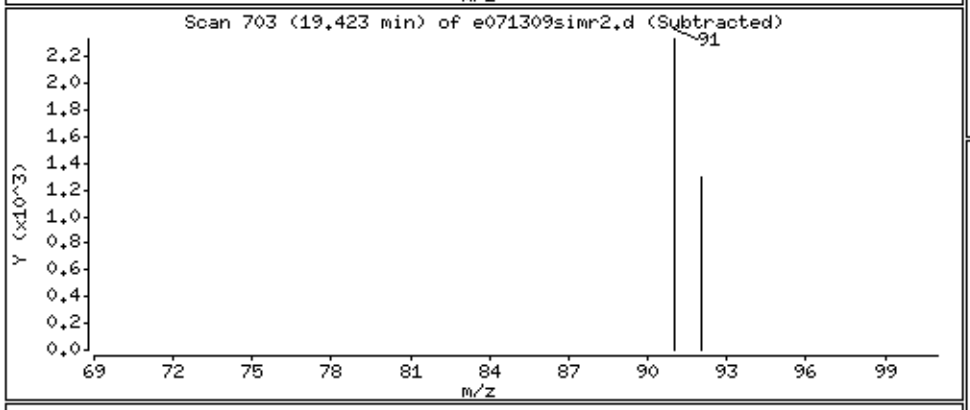
Column diameter: 0.32

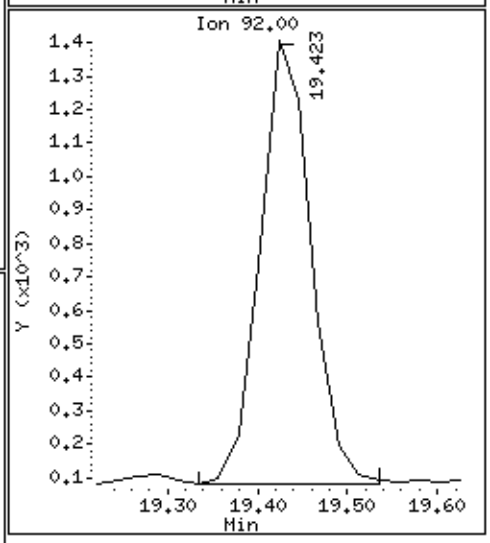
23 Toluene

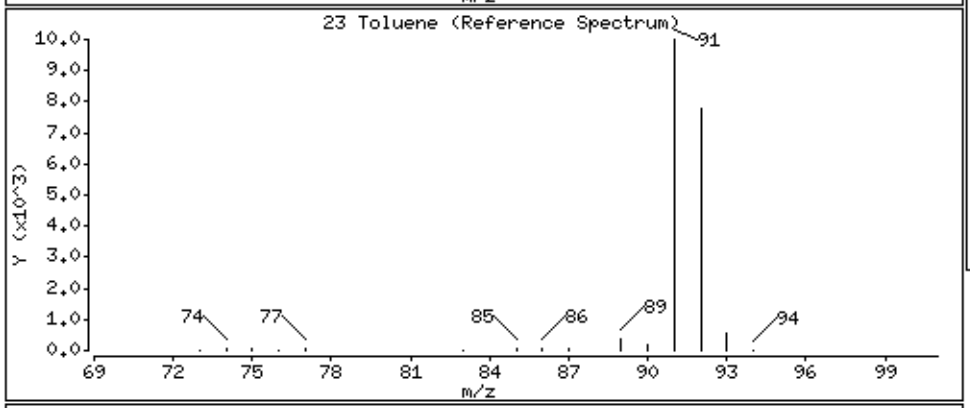
Concentration: 0.4573 PPBV

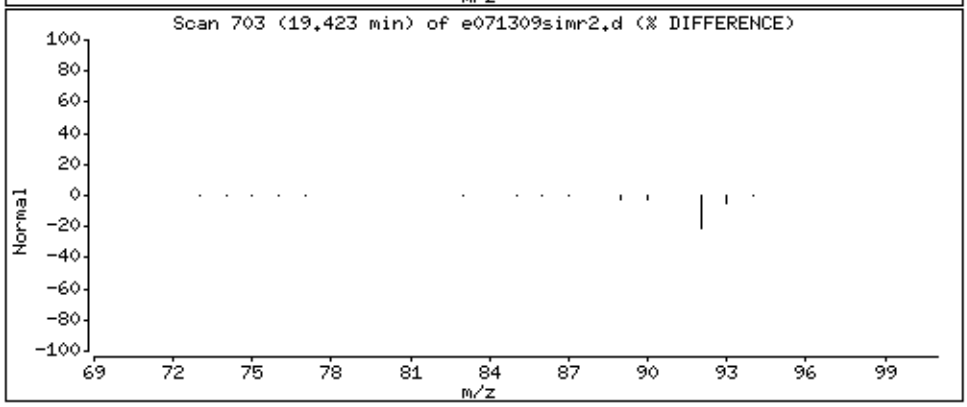












Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: DUP-1-BC (062817)

Lab ID#: 1707045R3-07A

No Detections Were Found.

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Client Sample ID: DUP-1-BC (062817)

Lab ID#: 1707045R3-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071310r2**	**Date of Collection:**	**6/29/17**
Dil. Factor:	**1.74**	**Date of Analysis:**	**7/13/17 02:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.35	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	104	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071310r2.d
Lab Smp Id: 1707045-07A
Inj Date : 13-JUL-2017 14:02
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N1631
Misc Info : 6.7"Hg -> 5.2psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 11-Aug-2017 16:14 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1
Dil Factor: 1.74000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	122764	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	98826			46.85- 106.85	80.50
15.391	15.391 (1.000)	49	231327			226.12- 286.12	188.43
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	230006	5.99674	5.997	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	96447			17.94- 77.94	41.93
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	448070	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	67543			0.00- 44.91	15.07
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	405733	4.70640	4.706	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	45184			0.00- 41.31	11.14
19.275	19.275 (1.152)	100	270425			38.24- 98.24	66.65
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.156 (1.000)	117	409342	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.177	22.156	(1.000)	82	199372			19.53- 79.53	48.71
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	248952	5.20725	5.207	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	278918			81.42- 141.42	112.04
23.856	23.856	(1.076)	176	240017			66.35- 126.35	96.41

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071310r2.d
Lab Smp Id: 1707045-07A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 6.7"Hg -> 5.2psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	122764	-3.14
123 1,4-Difluorobenze	464912	278947	650877	448070	-3.62
163 Chlorobenzene-d5	425008	255005	595011	409342	-3.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 13Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-07A
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 6.7"Hg -> 5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.997	119.93	70-130
$ 146 Toluene-d8	5.000	4.706	94.13	70-130
$ 177 4-Bromofluorobenze	5.000	5.207	104.15	70-130

Data File: /chem/msde.i/13Jul2017.b/e071310r2.d

Date : 13-JUL-2017 14:02

Client ID:

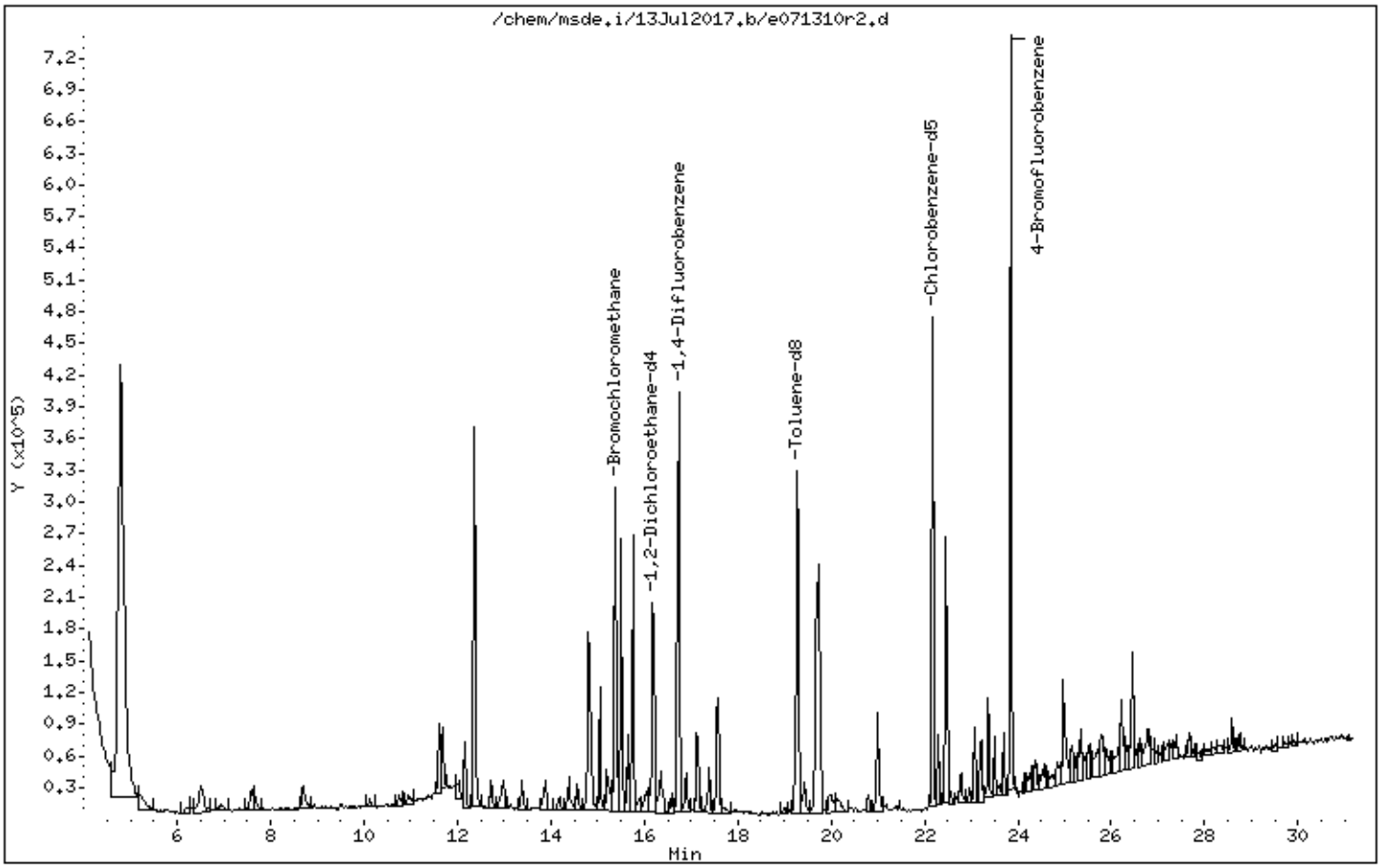
Instrument: msde.i

Sample Info: 250mL# N1631

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: DUP-1-BC (062817)

Lab ID#: 1707045R3-07B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.035	0.27	0.14	1.1
Benzene	0.087	0.13	0.28	0.41
Trichloroethene	0.035	1.2	0.19	6.2
Toluene	0.035	0.44	0.13	1.6

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Client Sample ID: DUP-1-BC (062817)

Lab ID#: 1707045R3-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071310simr2**	**Date of Collection:**	**6/29/17**
Dil. Factor:	**1.74**	**Date of Analysis:**	**7/13/17 02:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.069	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.035	0.27	0.14	1.1
Benzene	0.087	0.13	0.28	0.41
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	1.2	0.19	6.2
Toluene	0.035	0.44	0.13	1.6
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071310simr2.d
Lab Smp Id: 1707045-07B
Inj Date : 13-JUL-2017 14:02
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N1631
Misc Info : 6.7"Hg -> 5.2psi
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 11-Aug-2017 16:15 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.74000
Integrator: HP RTE Compound Sublist: Arc20635r2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
12 cis-1,2-Dichloroethene						CAS #: 156-59-2	
15.060	15.060 (0.978)	98	4397	0.15555	0.2706	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	11992			222.17- 282.17	272.73
15.060	15.060 (0.978)	96	6902			125.16- 185.16	156.97
* 13 Bromochloromethane						CAS #: 74-97-5	
15.405	15.405 (1.000)	130	135196	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	104241			47.63- 107.63	77.10
15.374	15.405 (1.000)	49	246598			150.43- 210.43	182.40
17 Benzene						CAS #: 71-43-2	
16.197	16.197 (0.967)	78	8769	0.07444	0.1295	80.00- 120.00	100.00
16.197	16.197 (0.967)	77	3176			0.00- 53.68	36.22
$ 18 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.197	16.197 (1.051)	65	237910	5.48227	5.482	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	103253			19.71- 79.71	43.40
* 20 1,4-Difluorobenzene						CAS #: 540-36-3	
16.751	16.727 (1.000)	114	492824	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 20 1,4-Difluorobenzene (continued)							
16.727	16.727 (1.000)	88	72417			0.00- 44.62	14.69
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.023)	130	49212	0.66916	1.164	80.00- 120.00	100.00
17.136	17.136 (1.023)	95	43224			57.80- 117.80	87.83
17.136	17.136 (1.023)	97	28570			26.87- 86.87	58.05
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.152)	98	380196	4.79690	4.797	80.00- 120.00	100.00
19.289	19.289 (1.152)	70	44482			0.00- 41.18	11.70
19.289	19.289 (1.152)	100	247996			35.44- 95.44	65.23
23 Toluene					CAS #: 108-88-3		
19.423	19.424 (1.160)	91	34046	0.25183	0.4382	80.00- 120.00	100.00
19.446	19.424 (1.161)	92	19371			28.44- 88.44	56.90
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	446861	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	193880			12.99- 72.99	43.39
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	279217	5.18613	5.186	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	292111			73.66- 133.66	104.62
23.869	23.869 (1.077)	176	270737			67.29- 127.29	96.96

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071310simr2.d
Lab Smp Id: 1707045-07B
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 6.7"Hg -> 5.2psi

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	135196	-4.81
20 1,4-Difluorobenze	516009	309605	722413	492824	-4.49
28 Chlorobenzene-d5	463677	278206	649148	446861	-3.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.75	0.14
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Aug-2017 16:20

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 13Jul2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1707045-07B
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09.spk Quant Type: ISTD
Sublist File: Arc20635r2.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 6.7"Hg -> 5.2psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.482	109.65	70-130
$ 22 Toluene-d8	5.000	4.797	95.94	70-130
$ 33 4-Bromofluorobenze	5.000	5.186	103.72	70-130

Data File: /chem/msde.i/13Jul2017.b/e071310simr2.d

Date : 13-JUL-2017 14:02

Client ID:

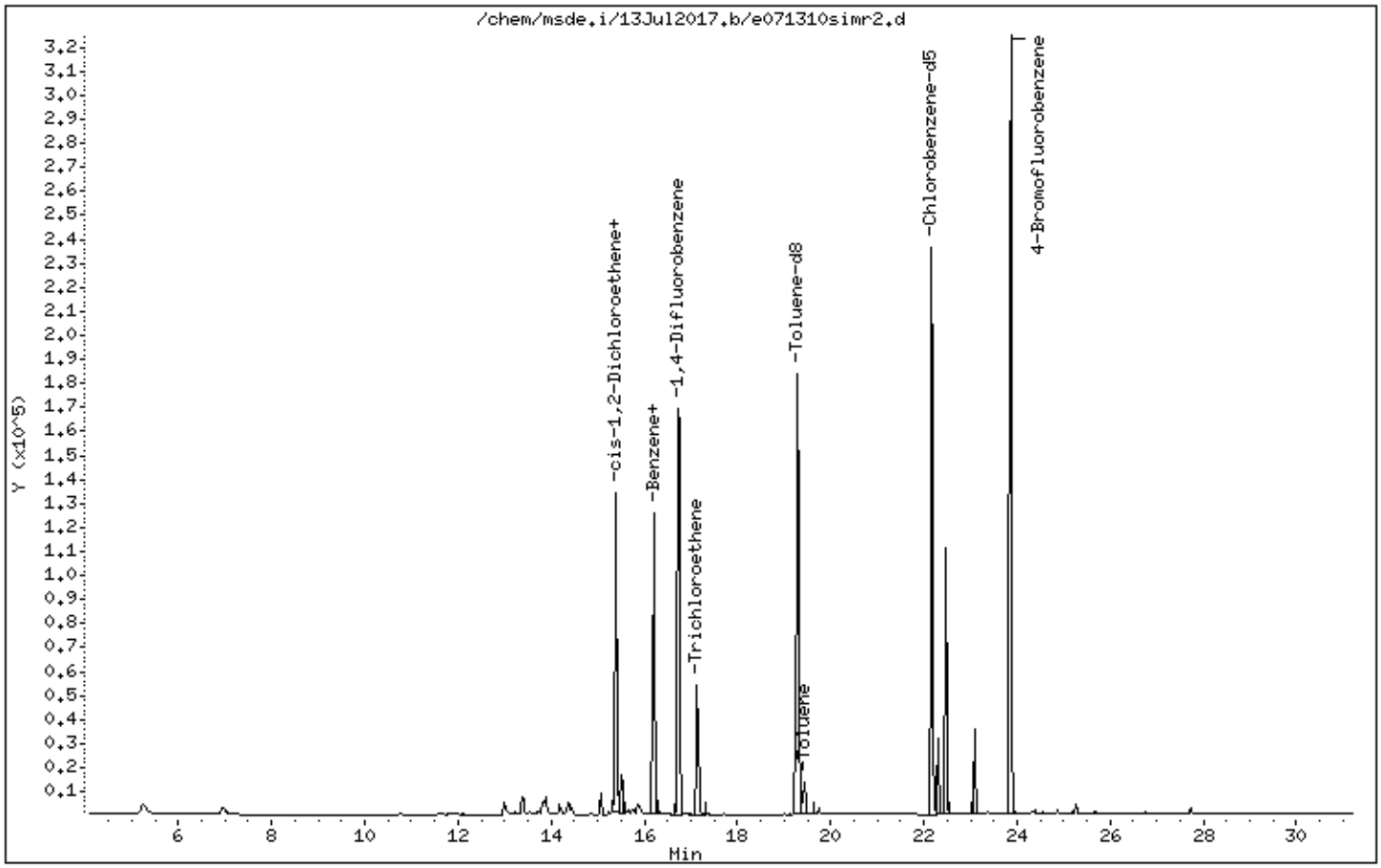
Instrument: msde.i

Sample Info: 250mL# N1631

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/13Jul2017.b/e071310simr2.d

Date : 13-JUL-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1631

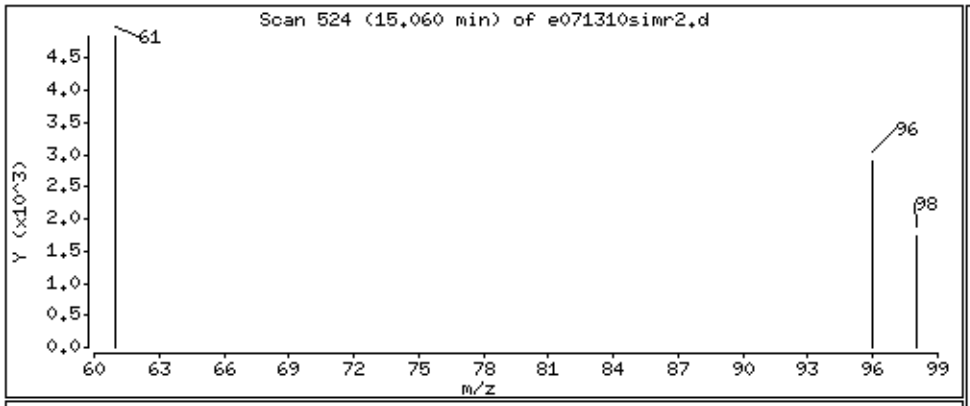
Operator: ef

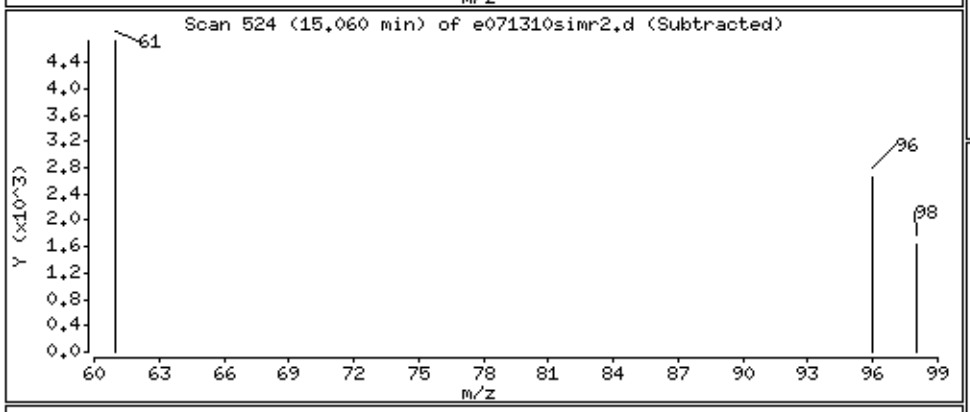
Column phase: RTX-624

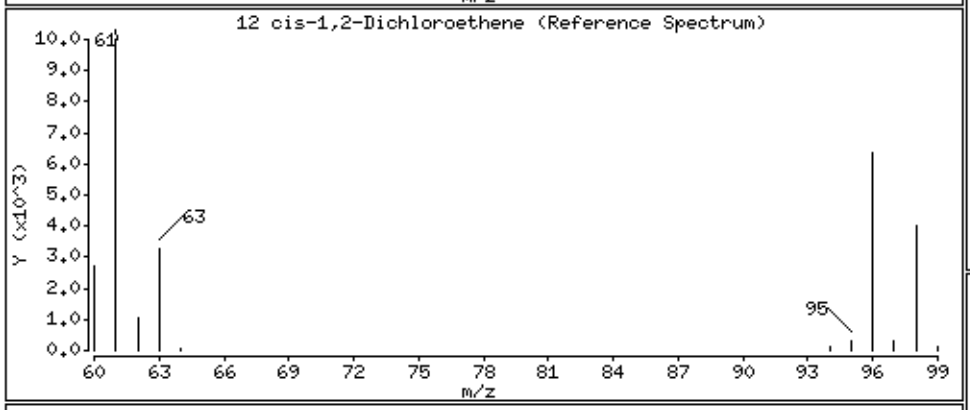
Column diameter: 0.32

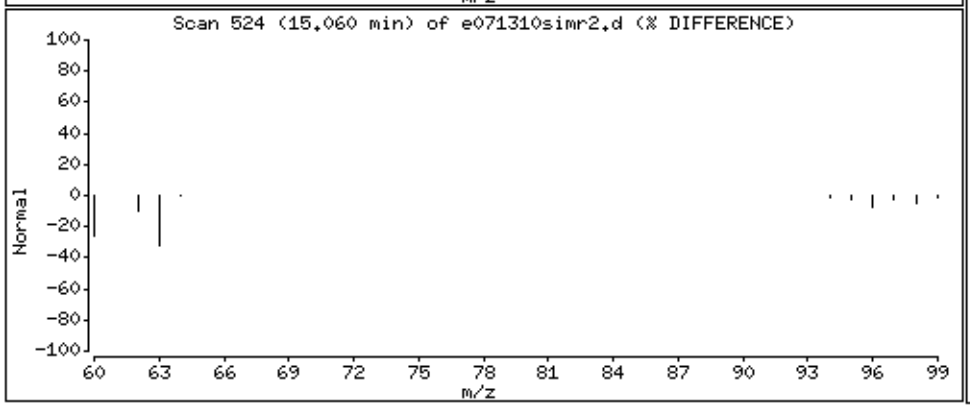
12 cis-1,2-Dichloroethene

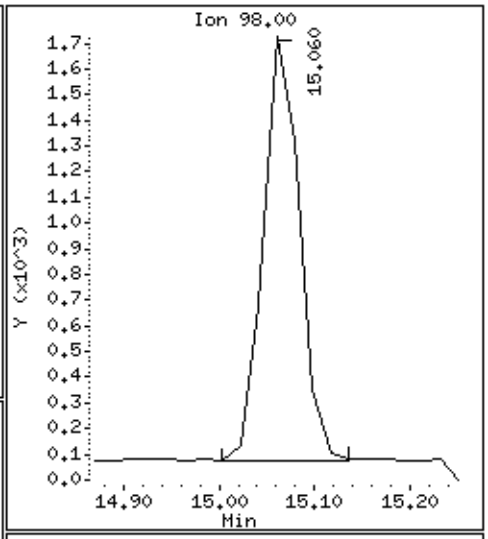
Concentration: 0.2706 PPBV

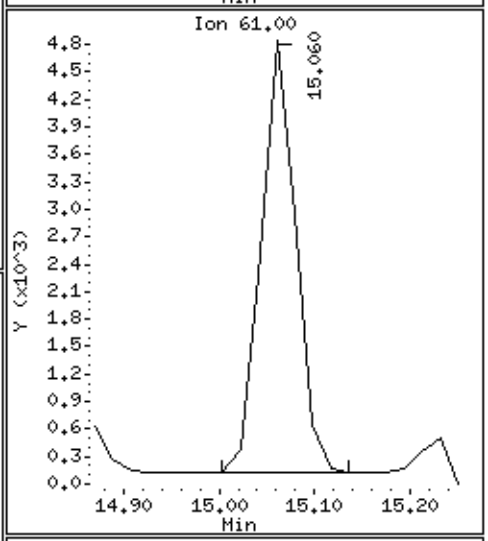


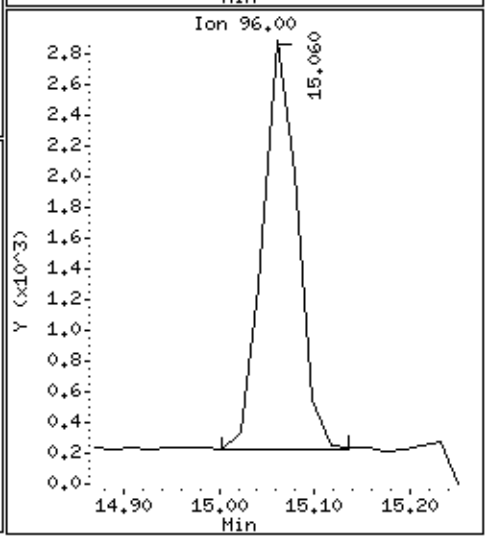












Data File: /chem/msde.i/13Jul2017.b/e071310simr2.d

Date : 13-JUL-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1631

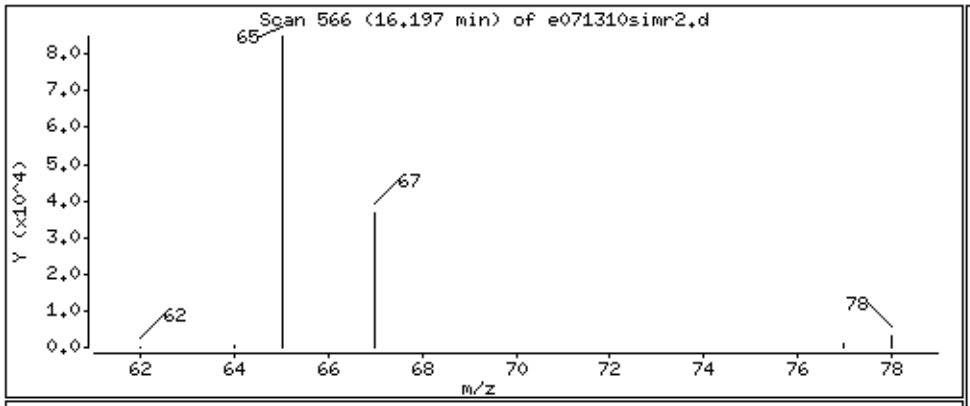
Operator: ef

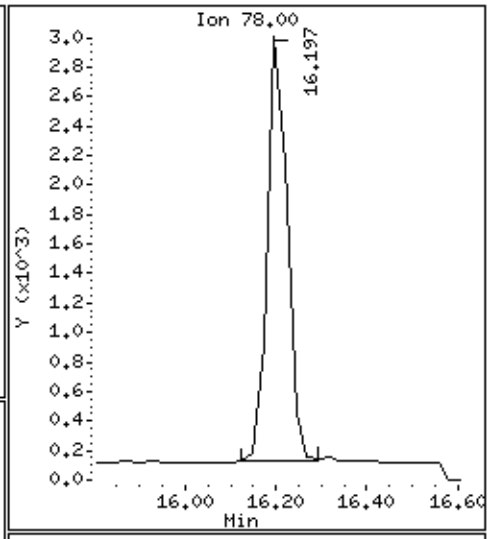
Column phase: RTX-624

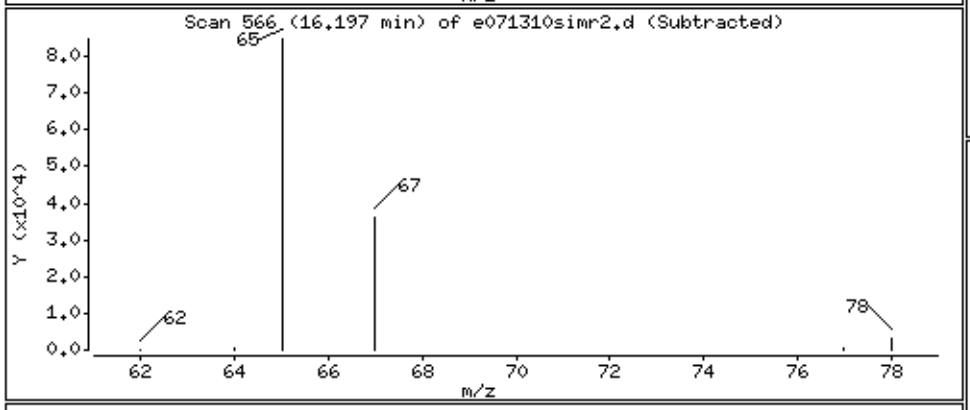
Column diameter: 0.32

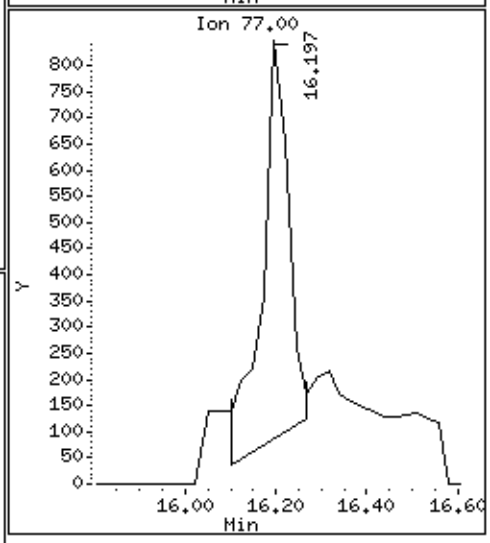
17 Benzene

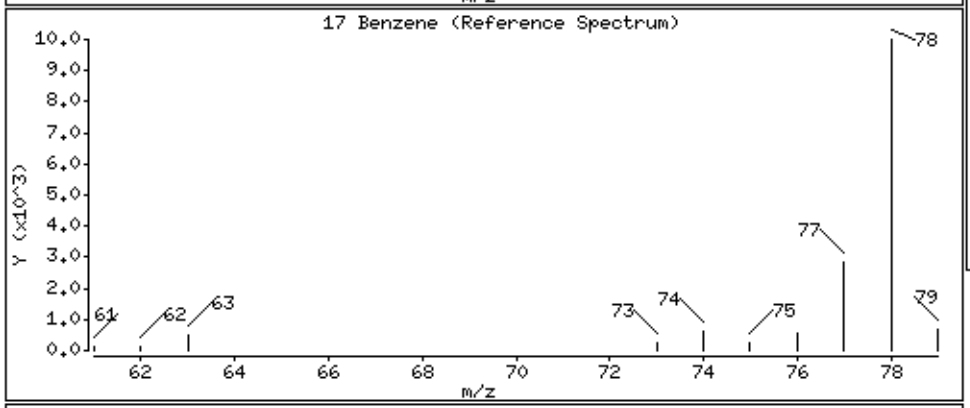
Concentration: 0.1295 PPBV

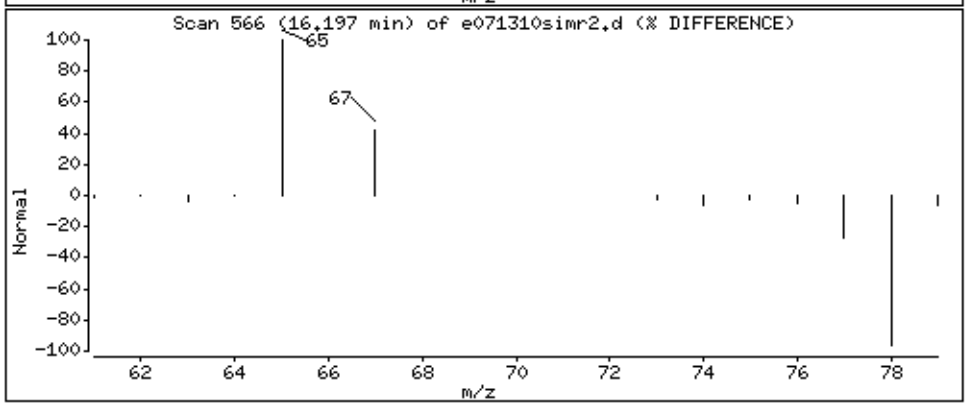












Data File: /chem/msde.i/13Jul2017.b/e071310simr2.d

Date : 13-JUL-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1631

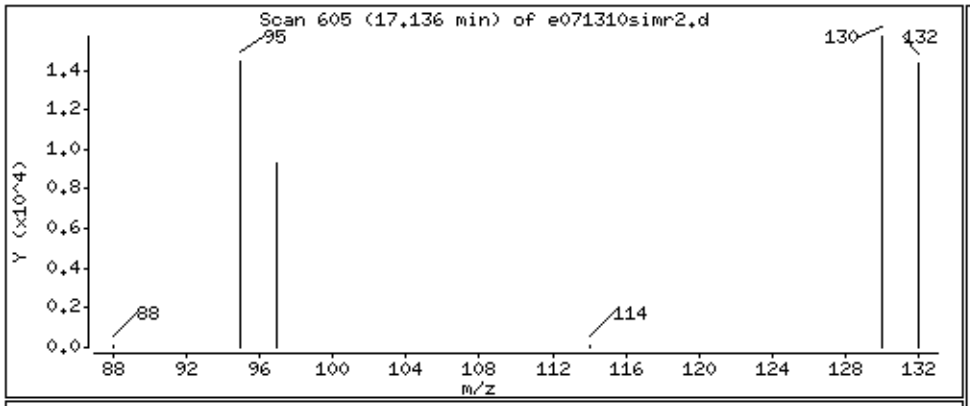
Operator: ef

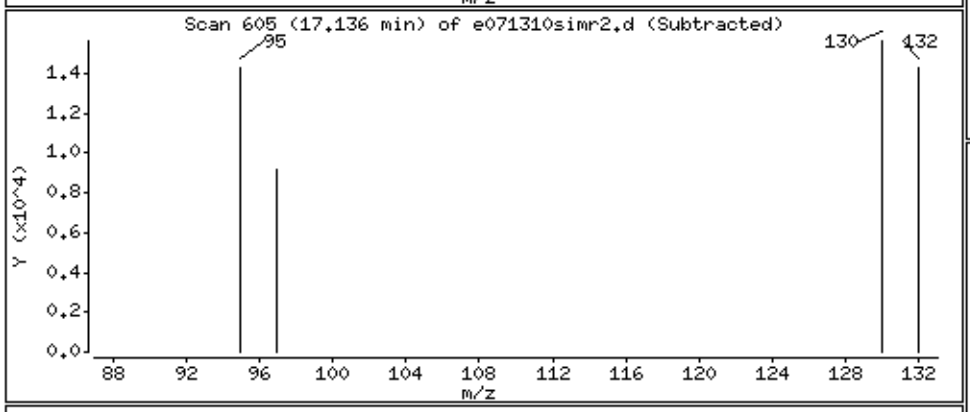
Column phase: RTX-624

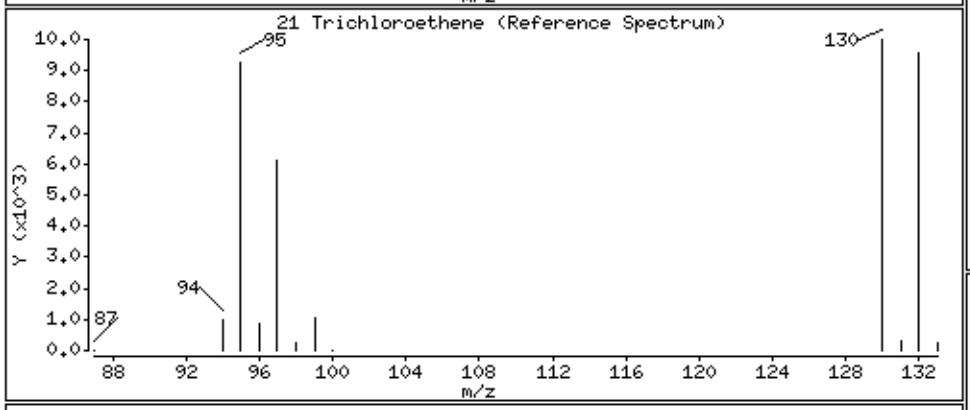
Column diameter: 0.32

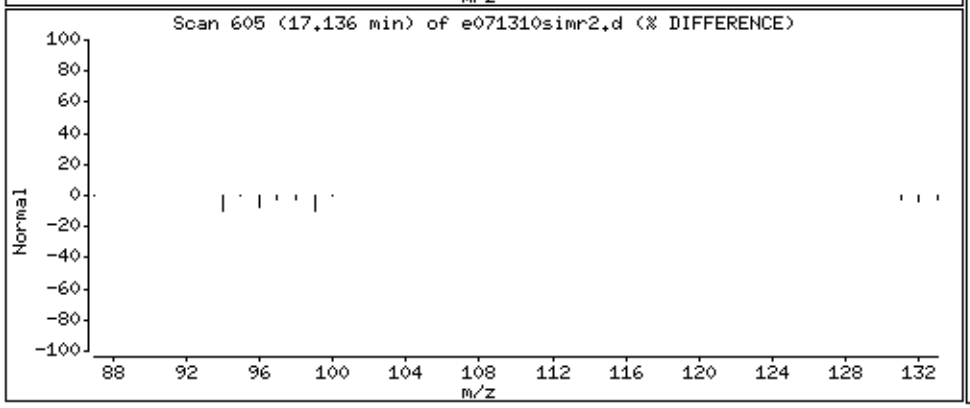
21 Trichloroethene

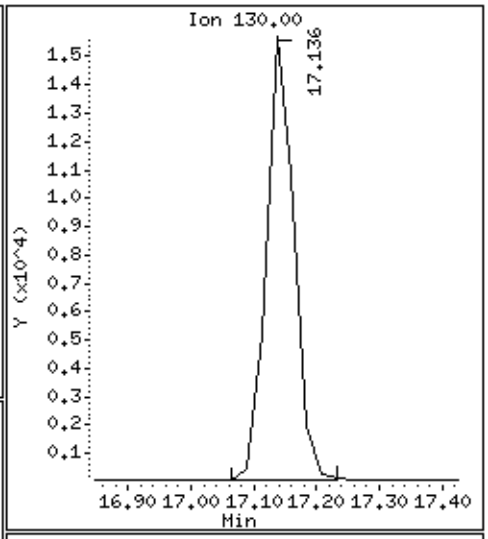
Concentration: 1.164 PPBV

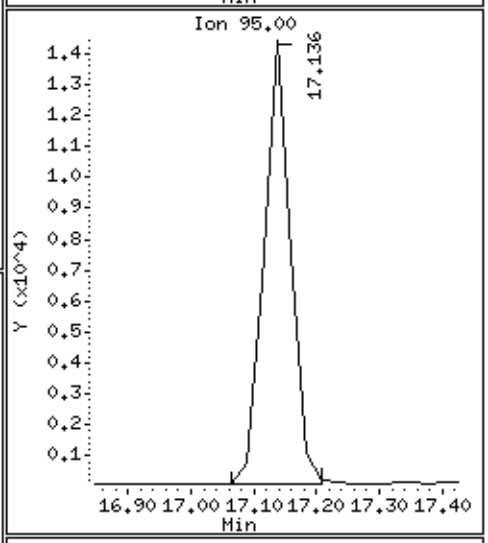


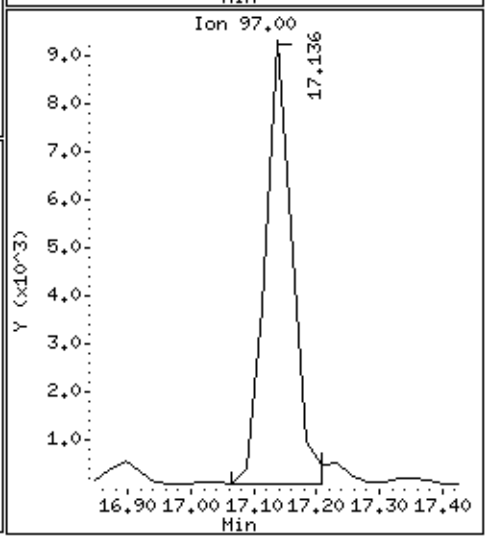












Data File: /chem/msde.i/13Jul2017.b/e071310simr2.d

Date : 13-JUL-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1631

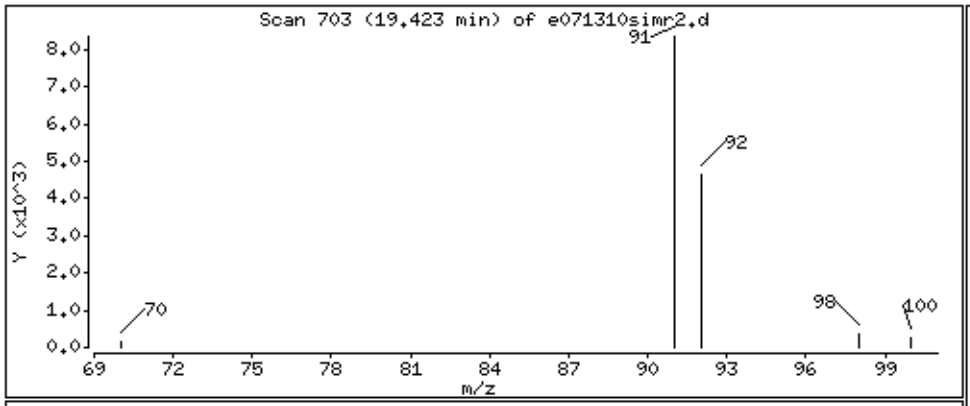
Operator: ef

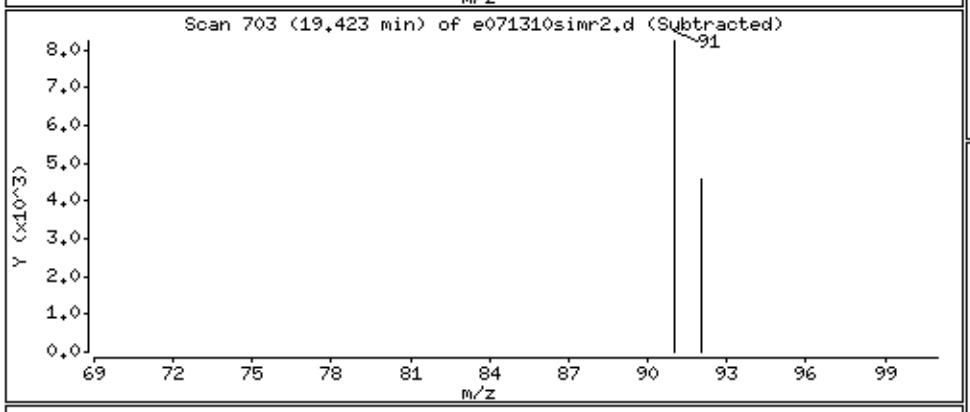
Column phase: RTX-624

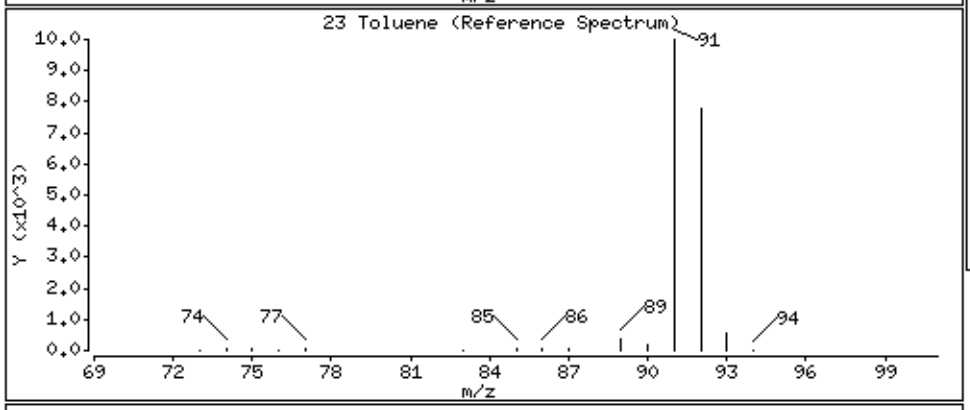
Column diameter: 0.32

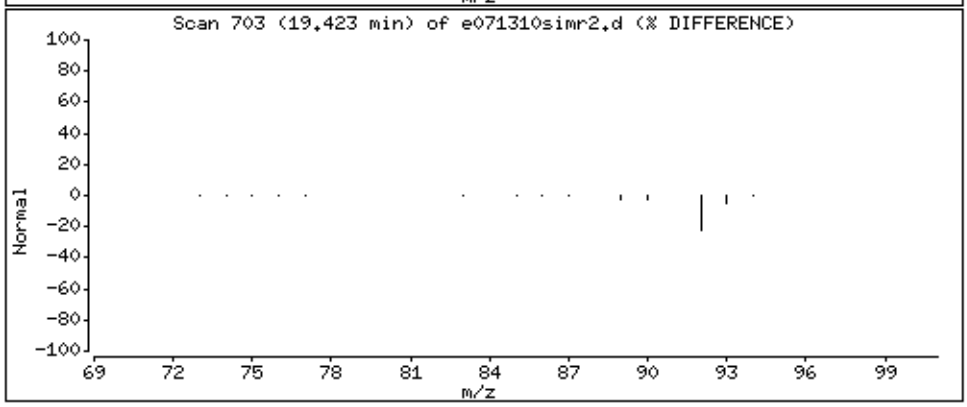
23 Toluene

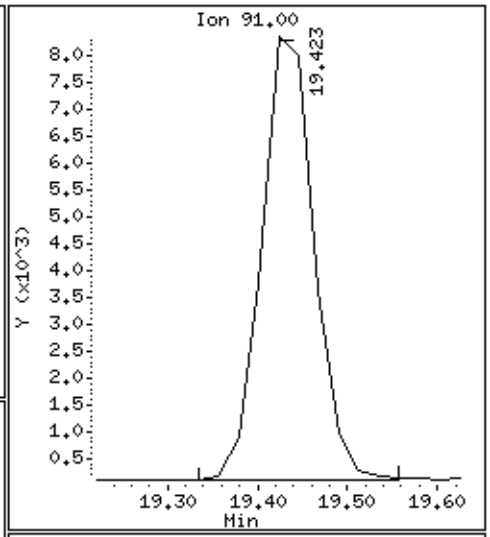
Concentration: 0.4382 PPBV

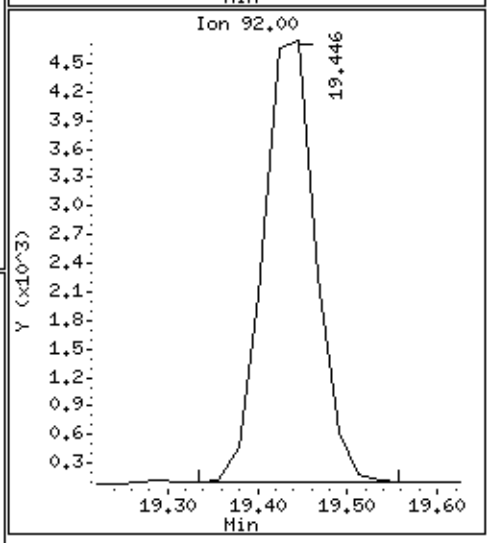












QC Results and Raw Data

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1707045R3-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 10:25 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.20	Not Detected	0.69	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /var/chem/msde.i/11Jul2017.b/e071106.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 11-JUL-2017 10:25
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 34202
Misc Info : Humid
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	108864	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	85733			46.85- 106.85	78.75
15.391	15.391 (1.000)	49	194353			226.12- 286.12	178.53
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	186162	5.47333	5.473	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	81148			17.94- 77.94	43.59
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	363276	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	51783			0.00- 44.91	14.25
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.276 (1.152)	98	348361	4.98410	4.984	80.00- 120.00	100.00
19.275	19.276 (1.152)	70	40227			0.00- 41.31	11.55
19.275	19.276 (1.152)	100	230322			38.24- 98.24	66.12
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.156	22.156 (1.000)	117	353102	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.156	(1.000)	82	171769			19.53- 79.53	48.65
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.077)	174	197720	4.79435	4.794	80.00- 120.00	100.00
23.856	23.856	(1.077)	95	218142			81.42- 141.42	110.33
23.856	23.856	(1.077)	176	191311			66.35- 126.35	96.76

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071106.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: Humid

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	138043	82826	193260	108864	-21.14
123 1,4-Difluorobenze	475818	285491	666145	363276	-23.65
163 Chlorobenzene-d5	449910	269946	629874	353102	-21.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Jul-2017 10:58

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.473	109.47	70-130
$ 146 Toluene-d8	5.000	4.984	99.68	70-130
$ 177 4-Bromofluorobenze	5.000	4.794	95.89	70-130

Data File: /chem/msde.i/11Jul2017.b/e071106.d

Date : 11-JUL-2017 10:25

Client ID: Lab Blank

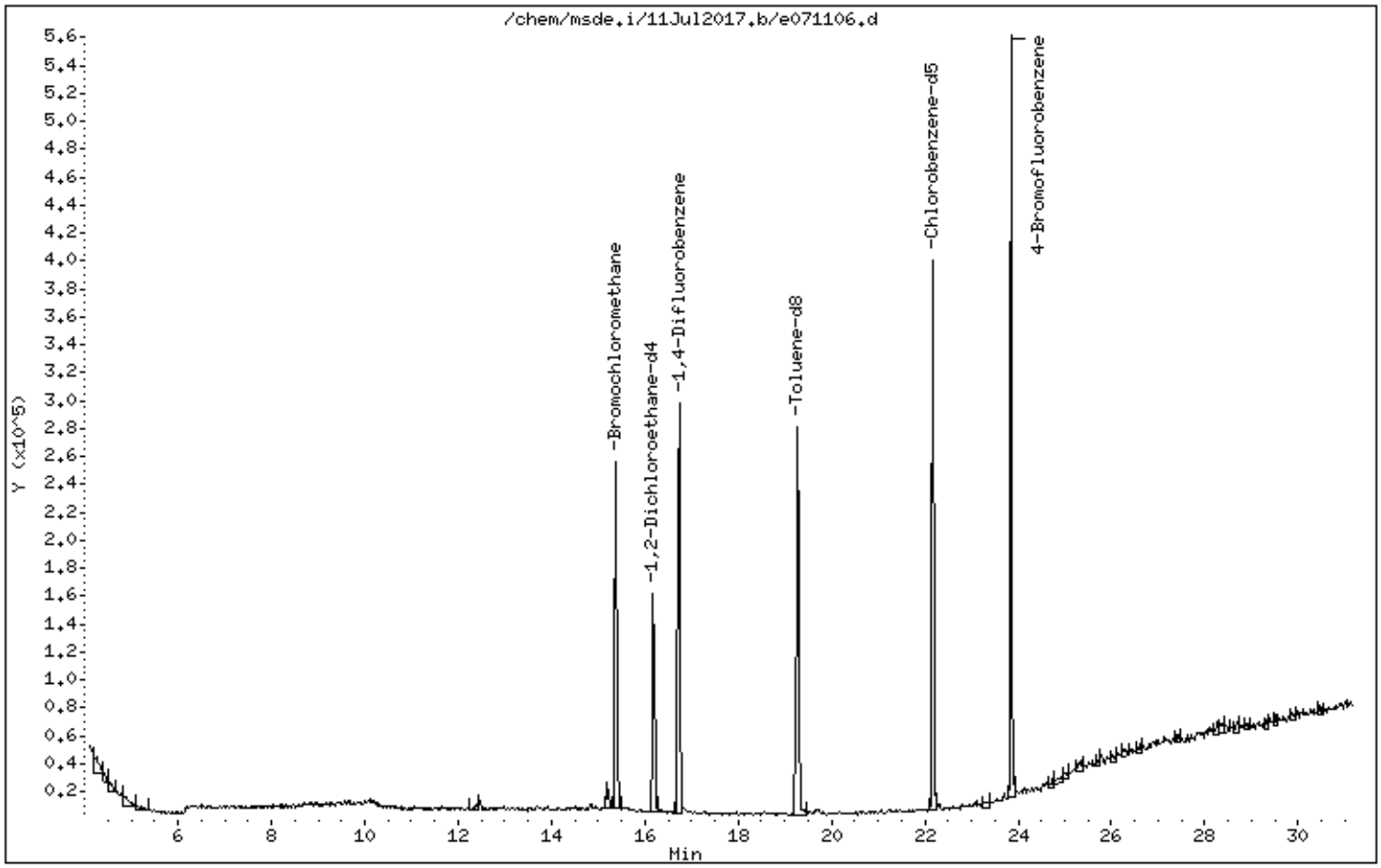
Instrument: msde.i

Sample Info: 250mL# 34202

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: Lab Blank

Lab ID#: 1707045R3-08B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071106sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 10:25 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /var/chem/msde.i/11Jul2017.b/e071106sim.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 11-JUL-2017 10:25
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 34202
Misc Info : Humid
Comment : SIM - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	116667	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	90187			47.63- 107.63	77.30
15.374	15.374 (1.000)	49	209882			150.43- 210.43	179.90
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	197846	5.28311	5.283	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	86171			19.71- 79.71	43.55
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	396409	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	58166			0.00- 44.62	14.67
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	322607	5.06029	5.060	80.00- 120.00	100.00
19.289	19.267 (1.153)	70	37496			0.00- 41.18	11.62
19.289	19.289 (1.153)	100	210130			35.44- 95.44	65.14
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	379117	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 28 Chlorobenzene-d5 (continued)								
22.170	22.170	(1.000)	82	164310			12.99- 72.99	43.34
$ 33 4-Bromofluorobenzene						CAS #: 460-00-4		
23.869	23.847	(1.077)	174	228518	5.00289	5.003	80.00- 120.00	100.00
23.847	23.847	(1.076)	95	234376			73.66- 133.66	102.56
23.869	23.869	(1.077)	176	220902			67.29- 127.29	96.67

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071106sim.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: Humid

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145812	87487	204137	116667	-19.99
20 1,4-Difluorobenze	526665	315999	737331	396409	-24.73
28 Chlorobenzene-d5	479389	287633	671145	379117	-20.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.41	15.08	15.74	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 11-Jul-2017 10:58

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.283	105.66	70-130
$ 22 Toluene-d8	5.000	5.060	101.21	70-130
$ 33 4-Bromofluorobenze	5.000	5.003	100.06	70-130

Data File: /chem/msde.i/11Jul2017.b/e071106sim.d

Date : 11-JUL-2017 10:25

Client ID: Lab Blank

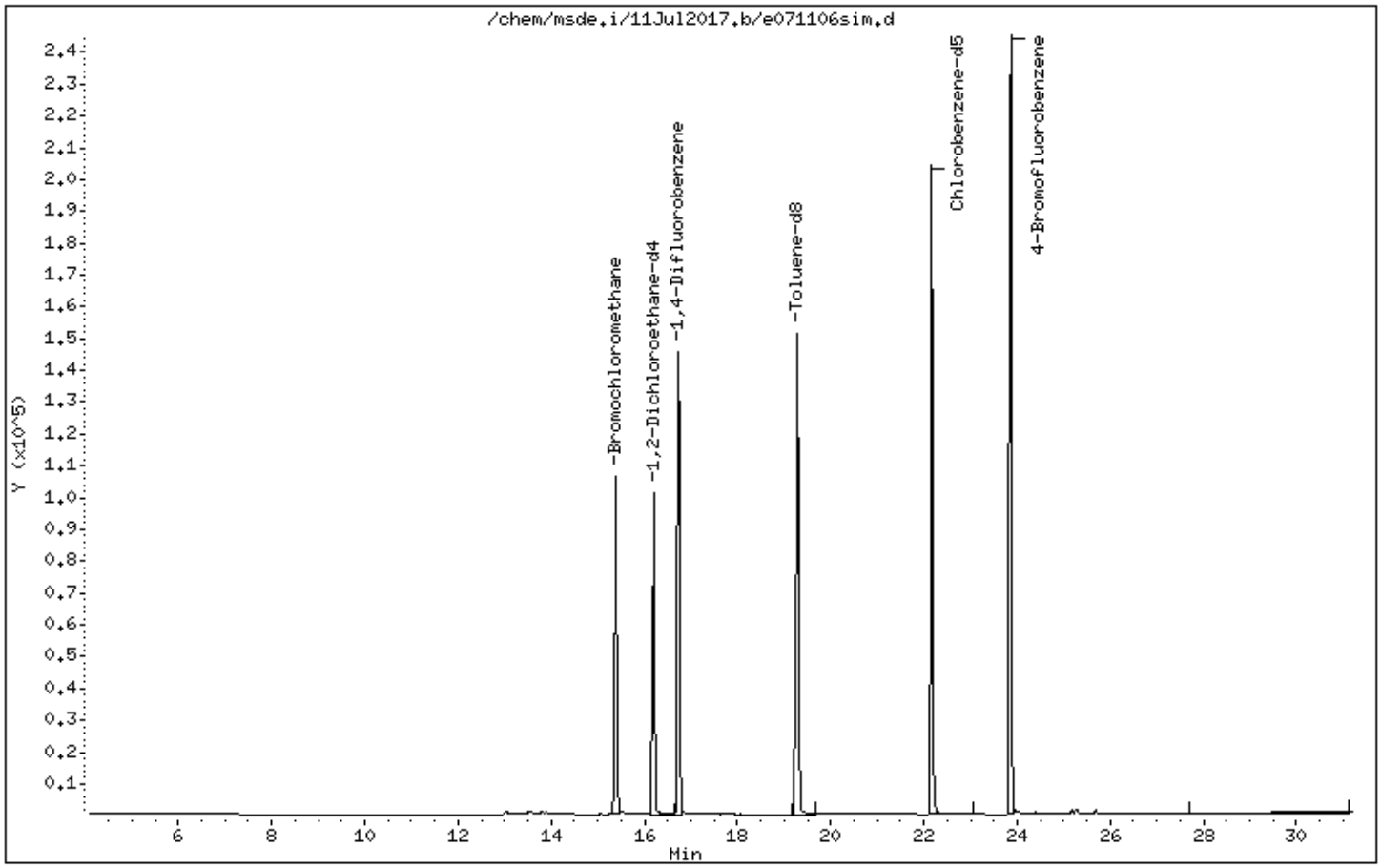
Instrument: msde.i

Sample Info: 250mL# 34202

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: Lab Blank

Lab ID#: 1707045R3-08C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071214**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 05:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.20	Not Detected	0.69	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071214.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 12-JUL-2017 17:15
Operator : ea Inst ID: msde.i
Smp Info : 250mL# 34202
Misc Info : humid
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 17:57 ealcan Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1 QC Sample: Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	115815	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	85681			46.85- 106.85	73.98
15.391	15.391 (1.000)	49	195509			226.12- 286.12	168.81
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	195873	5.41323	5.413	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	82039			17.94- 77.94	41.88
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	371425	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	55713			0.00- 44.91	15.00
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	350040	4.89825	4.898	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	42219			0.00- 41.31	12.06
19.275	19.275 (1.152)	100	232390			38.24- 98.24	66.39
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.157 (1.000)	117	358169	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.157	(1.000)	82	174172			19.53- 79.53	48.63
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	202401	4.83842	4.838	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	220892			81.42- 141.42	109.14
23.856	23.856	(1.076)	176	197943			66.35- 126.35	97.80

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071214.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: humid

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	115815	-13.76
123 1,4-Difluorobenze	480550	288330	672770	371425	-22.71
163 Chlorobenzene-d5	431542	258925	604159	358169	-17.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 12-Jul-2017 18:01

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ea
Data Type: MS DATA
SampleType: Sample
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.413	108.26	70-130
$ 146 Toluene-d8	5.000	4.898	97.96	70-130
$ 177 4-Bromofluorobenze	5.000	4.838	96.77	70-130

Data File: /chem/msde.i/12Jul2017.b/e071214.d

Date : 12-JUL-2017 17:15

Client ID: Lab Blank

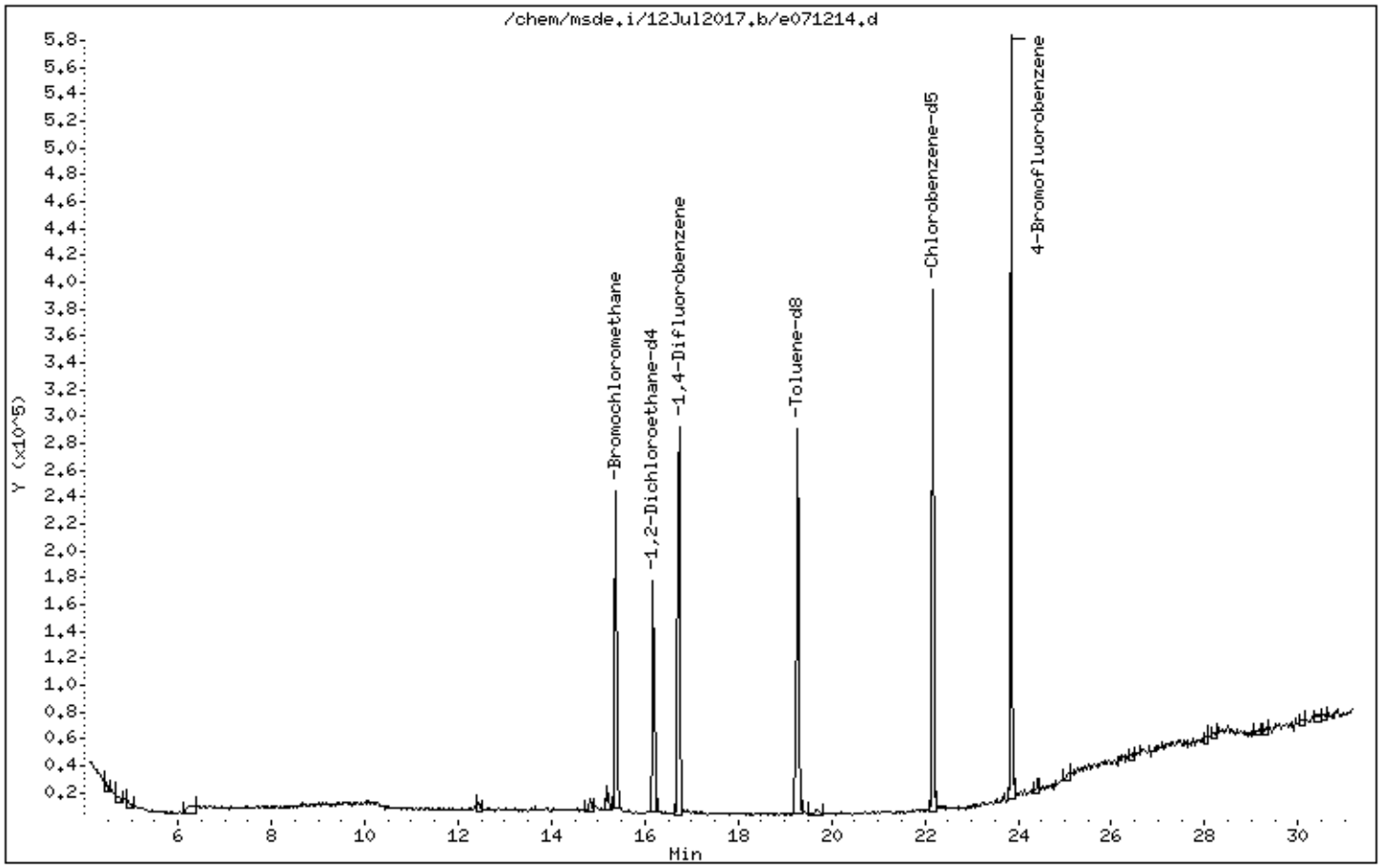
Instrument: msde.i

Sample Info: 250mL# 34202

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: Lab Blank

Lab ID#: 1707045R3-08D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071214sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 05:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071214sim.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 12-JUL-2017 17:15
Operator : ea Inst ID: msde.i
Smp Info : 250mL# 34202
Misc Info : humid
Comment : SIM - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 12-Jul-2017 18:02 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	119236	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	92334			47.63- 107.63	77.44
15.374	15.374 (1.000)	49	216011			150.43- 210.43	181.16
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	203643	5.32076	5.321	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	88545			19.71- 79.71	43.48
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	402150	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	58662			0.00- 44.62	14.59
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	325788	5.03723	5.037	80.00- 120.00	100.00
19.289	19.267 (1.153)	70	37728			0.00- 41.18	11.58
19.289	19.289 (1.153)	100	210956			35.44- 95.44	64.75
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	384037	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 28 Chlorobenzene-d5 (continued)								
22.170	22.170	(1.000)	82	166353			12.99- 72.99	43.32
$ 33 4-Bromofluorobenzene						CAS #: 460-00-4		
23.869	23.869	(1.077)	174	227406	4.91476	4.915	80.00- 120.00	100.00
23.869	23.847	(1.077)	95	234620			73.66- 133.66	103.17
23.869	23.869	(1.077)	176	221372			67.29- 127.29	97.35

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071214sim.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: humid

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	143363	86018	200708	119236	-16.83
20 1,4-Difluorobenze	516813	310088	723538	402150	-22.19
28 Chlorobenzene-d5	470445	282267	658623	384037	-18.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 13-Jul-2017 10:56

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ea
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.321	106.42	70-130
$ 22 Toluene-d8	5.000	5.037	100.74	70-130
$ 33 4-Bromofluorobenze	5.000	4.915	98.30	70-130

Data File: /chem/msde.i/12Jul2017.b/e071214sim.d

Date : 12-JUL-2017 17:15

Client ID: Lab Blank

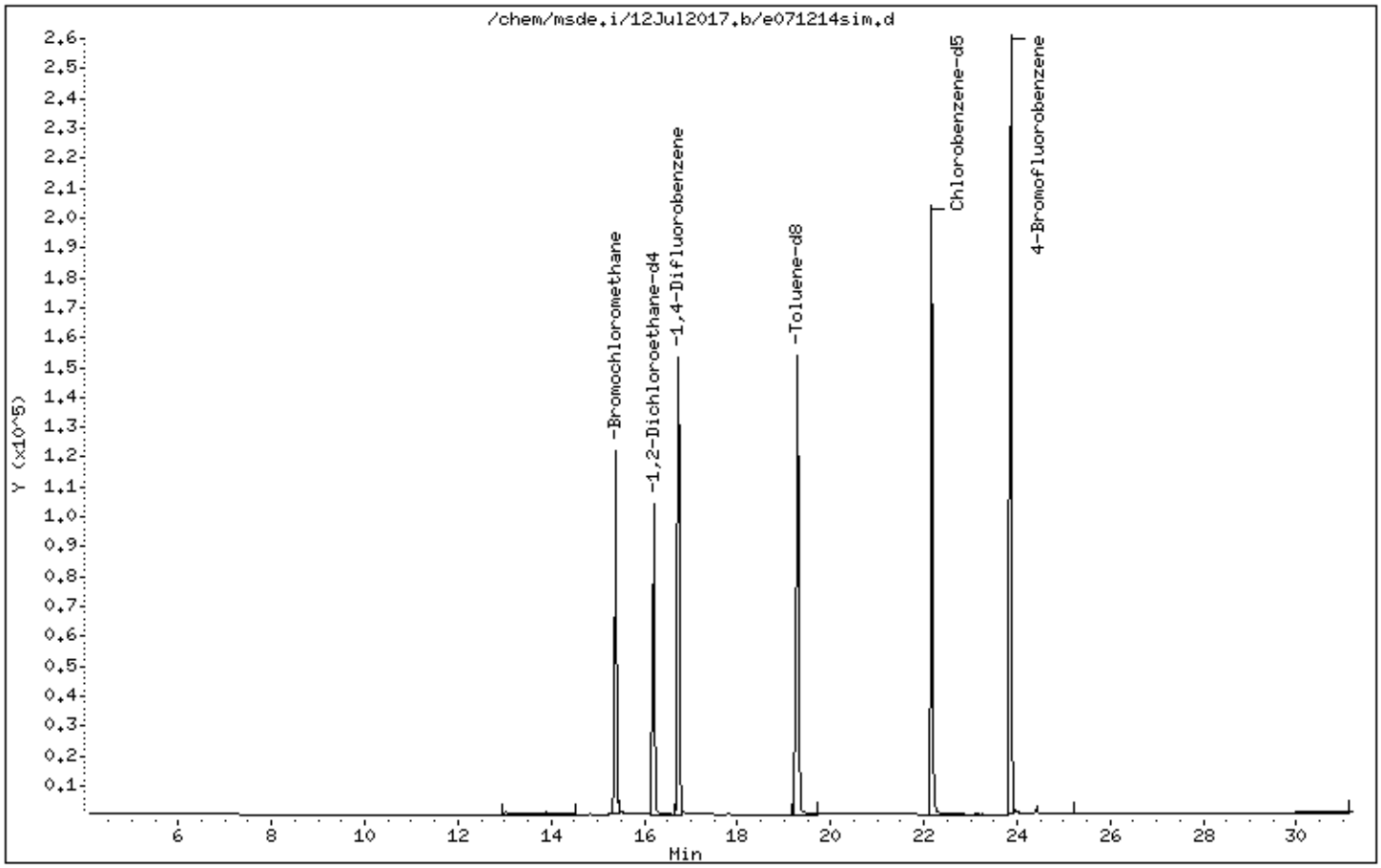
Instrument: msde.i

Sample Info: 250mL# 34202

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: Lab Blank

Lab ID#: 1707045R3-08E

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071306r1**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 11:01 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methylene Chloride	0.20	Not Detected	0.69	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071306r1.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 13-JUL-2017 11:01
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 34202
Misc Info : Humid
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 11:29 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	118052	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	92971			46.85- 106.85	78.75
15.391	15.391 (1.000)	49	208260			226.12- 286.12	176.41
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	196751	5.33443	5.334	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	87584			17.94- 77.94	44.52
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	395407	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	56267			0.00- 44.91	14.23
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.276	19.275 (1.152)	98	365483	4.80415	4.804	80.00- 120.00	100.00
19.276	19.275 (1.152)	70	42213			0.00- 41.31	11.55
19.276	19.275 (1.152)	100	248489			38.24- 98.24	67.99
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.156 (1.000)	117	376797	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.156	(1.000)	82	182070			19.53- 79.53	48.32
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	218291	4.96030	4.960	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	236125			81.42- 141.42	108.17
23.856	23.856	(1.076)	176	206878			66.35- 126.35	94.77

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071306r1.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: Humid

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	118052	-6.86
123 1,4-Difluorobenze	464912	278947	650877	395407	-14.95
163 Chlorobenzene-d5	425008	255005	595011	376797	-11.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 24-Jul-2017 15:00

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.334	106.69	70-130
$ 146 Toluene-d8	5.000	4.804	96.08	70-130
$ 177 4-Bromofluorobenze	5.000	4.960	99.21	70-130

Data File: /chem/msde.i/13Jul2017.b/e071306r1.d

Date : 13-JUL-2017 11:01

Client ID: Lab Blank

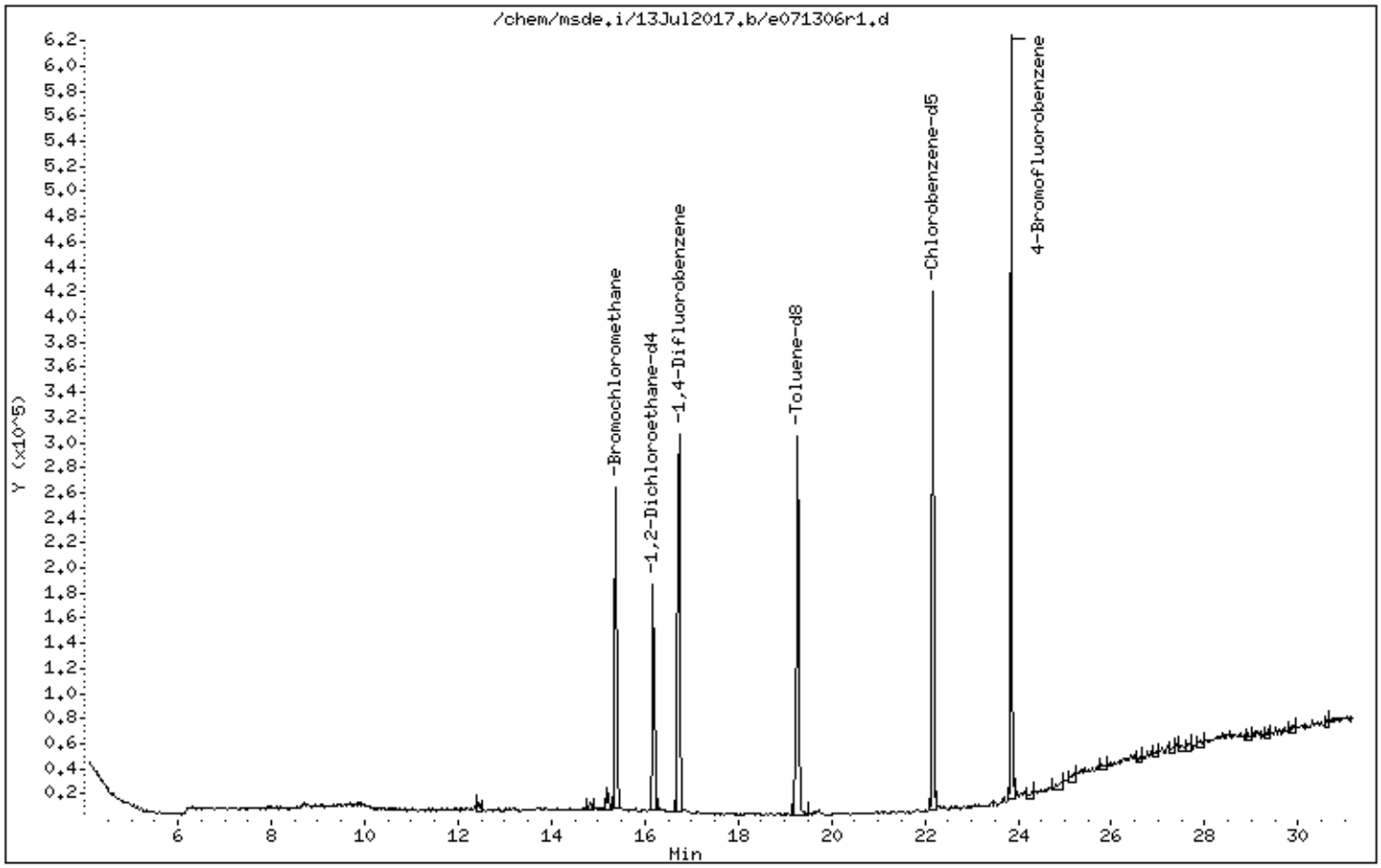
Instrument: msde.i

Sample Info: 250mL# 34202

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1707045R3-08F

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071306sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 11:01 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071306sim.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 13-JUL-2017 11:01
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 34202
Misc Info : Humid
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 13-Jul-2017 08:30 chemist Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 13 Bromochloromethane						CAS #: 74-97-5	
15.405	15.405 (1.000)	130	123142	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	94972			47.63- 107.63	77.12
15.374	15.374 (1.000)	49	225031			150.43- 210.43	182.74
$ 18 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.197	16.197 (1.051)	65	214440	5.42515	5.425	80.00- 120.00	100.00
16.197	16.197 (1.051)	67	92875			19.71- 79.71	43.31
* 20 1,4-Difluorobenzene						CAS #: 540-36-3	
16.727	16.727 (1.000)	114	429324	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	63212			0.00- 44.62	14.72
$ 22 Toluene-d8						CAS #: 2037-26-5	
19.289	19.289 (1.153)	98	348203	5.04305	5.043	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	40622			0.00- 41.18	11.67
19.289	19.289 (1.153)	100	225198			35.44- 95.44	64.67
* 28 Chlorobenzene-d5						CAS #: 3114-55-4	
22.170	22.170 (1.000)	117	405456	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 28 Chlorobenzene-d5 (continued)								
22.170	22.170	(1.000)	82	174959			12.99- 72.99	43.15
$ 33 4-Bromofluorobenzene						CAS #: 460-00-4		
23.869	23.869	(1.077)	174	242144	4.95683	4.957	80.00- 120.00	100.00
23.869	23.847	(1.077)	95	251149			73.66- 133.66	103.72
23.869	23.869	(1.077)	176	235644			67.29- 127.29	97.32

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071306sim.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: Humid

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	123142	-13.30
20 1,4-Difluorobenze	516009	309605	722413	429324	-16.80
28 Chlorobenzene-d5	463677	278206	649148	405456	-12.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 13-Jul-2017 11:32

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.425	108.50	70-130
$ 22 Toluene-d8	5.000	5.043	100.86	70-130
$ 33 4-Bromofluorobenze	5.000	4.957	99.14	70-130

Data File: /chem/msde.i/13Jul2017.b/e071306sim.d

Date : 13-JUL-2017 11:01

Client ID: Lab Blank

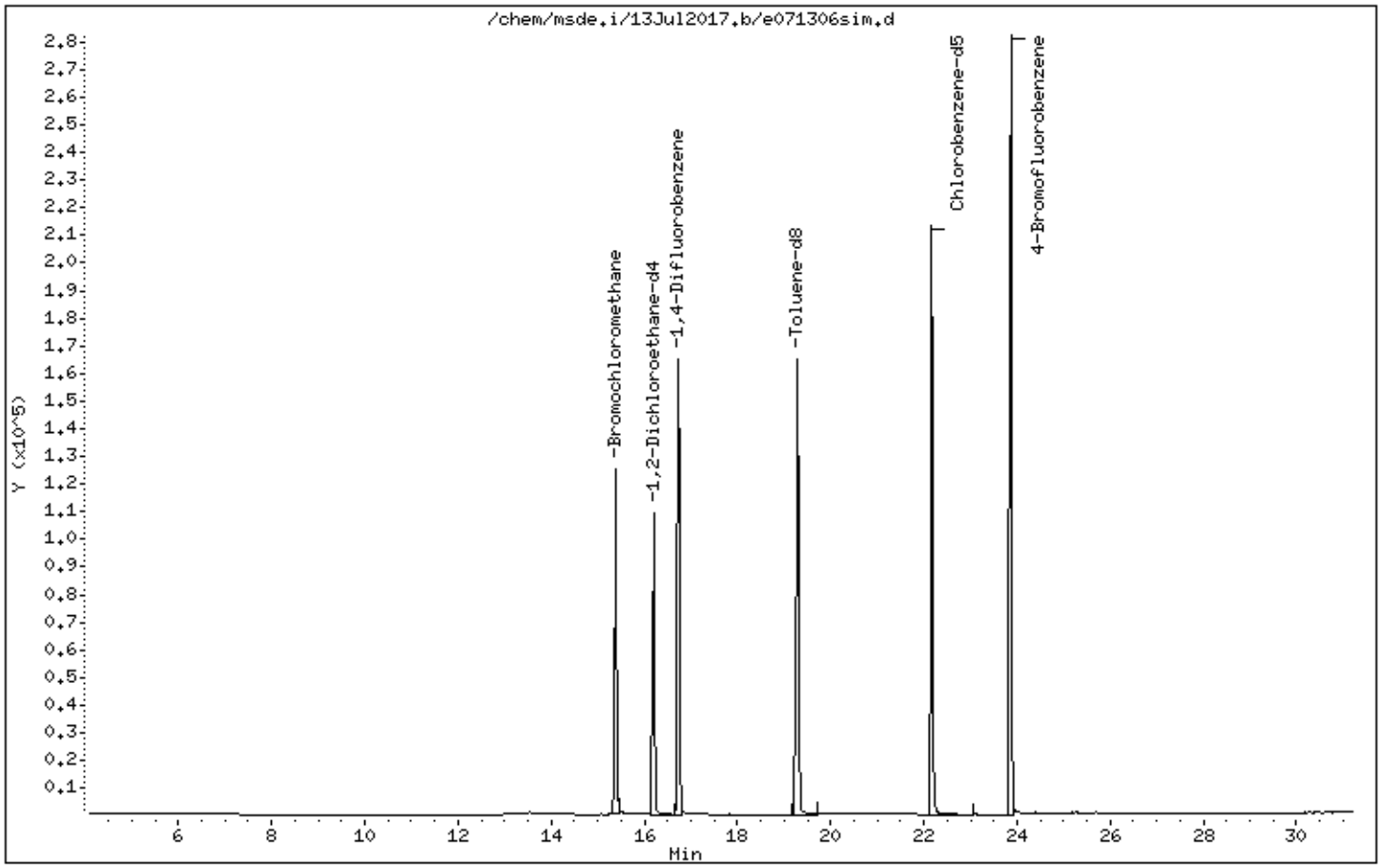
Instrument: msde.i

Sample Info: 250mL# 34202

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1707045R3

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B-8-BC (062817)	105		97		104				0
02	B-8-BC (062817)	108		98		102				0
03	B-3-BC (062817)	110		97		101				0
04	B-3-BC (062817)	110		96		104				0
05	B-9-BC (062817)	106		95		108				0
06	B-9-BC (062817)	111		96		105				0
07	A-5-BC (062817)	115		96		103				0
08	A-5-BC (062817)	110		97		104				0
09	B-6-BC (062817)	110		95		101				0
10	B-6-BC (062817)	109		98		105				0
11	B-4-BC (062817)	108		95		101				0
12	B-4-BC (062817)	109		99		101				0
13	DUP-1-BC (062817)	120		94		104				0
14	DUP-1-BC (062817)	110		96		104				0
15	Lab Blank	109		100		96				0
16	Lab Blank	106		101		100				0
17	Lab Blank	108		98		97				0
18	Lab Blank	106		101		98				0
19	Lab Blank	107		96		99				0
20	Lab Blank	108		101		99				0
21	CCV	102		102		102				0
22	CCV	99		102		103				0
23	CCV	106		99		102				0
24	CCV	100		101		102				0

Surrogate Recovery Limits

1,2-Dichloroethane-d4 70 - 130
Toluene-d8 70 - 130
4-Bromofluorobenzene 70 - 130

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1707045R3

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								TOTAL OUT
			#		#		#		#	
01	CCV	113		101		101				0
02	CCV	101		101		103				0
03	LCS	105		98		99				0
04	LCSD	105		100		104				0
05	LCS	98		102		103				0
06	LCSD	98		102		102				0
07	LCS	103		103		104				0
08	LCSD	108		100		100				0
09	LCS	98		102		104				0
10	LCSD	99		102		104				0
11	LCS	106		104		99				0
12	LCSD	104		99		99				0
13	LCS	101		102		102				0
14	LCSD	100		101		102				0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS SIM/Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1707045R3
Lab File ID:	e071102.d	Date Analyzed:	07/11/2017
Instrument ID:	msde.i	Time Analyzed:	07:33 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	449910		22.16		475818		16.74		138043		15.39	
	UPPER LIMIT	629874		22.49		666145		17.07		193260		15.72	
	LOWER LIMIT	269946		21.83		285491		16.41		82826		15.06	
	CLIENT SAMPLE NO												
01	B-8-BC (062817)	400385		22.16		430480		16.74		134856		15.39	
03	Lab Blank	353102		22.16		363276		16.74		108864		15.39	
05	CCV	449910		22.16		475818		16.74		138043		15.39	
07	LCS	419636		22.16		457033		16.74		124342		15.39	
08	LCSD	424253		22.16		445124		16.74		129976		15.39	
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS SIM/Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1707045R3
Lab File ID:	e071102sim.d	Date Analyzed:	07/11/2017
Instrument ID:	msde.i	Time Analyzed:	07:33 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	479389		22.17		526665		16.73		145812		15.41	
	UPPER LIMIT	671145		22.50		737331		17.06		204137		15.74	
	LOWER LIMIT	287633		21.84		315999		16.40		87487		15.08	
	CLIENT SAMPLE NO												
02	B-8-BC (062817)	441280		22.17		472698		16.73		138633		15.4	
04	Lab Blank	379117		22.17		396409		16.73		116667		15.4	
06	CCV	479389		22.17		526665		16.73		145812		15.41	
09	LCS	450836		22.17		489853		16.73		135291		15.4	
10	LCSD	456351		22.17		493122		16.73		135119		15.4	
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS SIM/Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1707045R3
Lab File ID:	e071202sim.d	Date Analyzed:	07/12/2017
Instrument ID:	msde.i	Time Analyzed:	07:45 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	470445		22.17		516813		16.73		143363		15.4	
	UPPER LIMIT	658623		22.50		723538		17.06		200708		15.73	
	LOWER LIMIT	282267		21.84		310088		16.40		86018		15.07	
	CLIENT SAMPLE NO												
02	B-3-BC (062817)	435476		22.17		482340		16.73		133857		15.4	
04	Lab Blank	384037		22.17		402150		16.73		119236		15.4	
06	CCV	470445		22.17		516813		16.73		143363		15.4	
09	LCS	425868		22.17		461199		16.73		129864		15.41	
10	LCSD	432806		22.17		467879		16.73		129167		15.4	
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS SIM/Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1707045R3
Lab File ID:	e071202.d	Date Analyzed:	07/12/2017
Instrument ID:	msde.i	Time Analyzed:	07:45 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	431542		22.16		480550		16.74		134296		15.39	
	UPPER LIMIT	604159		22.49		672770		17.07		188014		15.72	
	LOWER LIMIT	258925		21.83		288330		16.41		80578		15.06	
	CLIENT SAMPLE NO												
01	B-3-BC (062817)	409557		22.18		435385		16.74		129506		15.39	
03	Lab Blank	358169		22.18		371425		16.74		115815		15.39	
05	CCV	431542		22.16		480550		16.74		134296		15.39	
07	LCS	392775		22.16		415069		16.74		122929		15.39	
08	LCSD	399901		22.16		424597		16.74		119934		15.39	
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS SIM/Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1707045R3
Lab File ID:	e071302sim.d	Date Analyzed:	07/13/2017
Instrument ID:	msde.i	Time Analyzed:	07:57 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	463677		22.17		516009		16.73		142028		15.4	
	UPPER LIMIT	649148		22.50		722413		17.06		198839		15.73	
	LOWER LIMIT	278206		21.84		309605		16.40		85217		15.07	
	CLIENT SAMPLE NO												
02	B-9-BC (062817)	449439		22.17		507691		16.73		136330		15.41	
04	A-5-BC (062817)	423499		22.17		463574		16.73		129855		15.4	
06	B-6-BC (062817)	443095		22.17		485456		16.73		134778		15.4	
08	B-4-BC (062817)	428444		22.17		462742		16.73		128960		15.4	
10	DUP-1-BC (062817)	446861		22.17		492824		16.75		135196		15.4	
12	Lab Blank	405456		22.17		429324		16.73		123142		15.41	
14	CCV	463677		22.17		516009		16.73		142028		15.4	
17	LCS	461407		22.17		503925		16.73		136887		15.4	
18	LCSD	465355		22.17		508795		16.73		138473		15.41	
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

Modified EPA Method TO-15 GC/MS SIM/Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1707045R3
Lab File ID:	e071302.d	Date Analyzed:	07/13/2017
Instrument ID:	msde.i	Time Analyzed:	07:57 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	425008		22.16		464912		16.74		126746		15.39	
	UPPER LIMIT	595011		22.49		650877		17.07		177444		15.72	
	LOWER LIMIT	255005		21.83		278947		16.41		76048		15.06	
	CLIENT SAMPLE NO												
01	B-9-BC (062817)	411155		22.18		464523		16.74		135993		15.39	
03	A-5-BC (062817)	392640		22.18		424818		16.74		120133		15.39	
05	B-6-BC (062817)	421383		22.18		442721		16.74		128477		15.39	
07	B-4-BC (062817)	397367		22.16		430665		16.74		123659		15.39	
09	DUP-1-BC (062817)	409342		22.18		448070		16.74		122764		15.39	
11	Lab Blank	376797		22.18		395407		16.74		118052		15.39	
13	CCV	425008		22.16		464912		16.74		126746		15.39	
15	LCS	441569		22.16		455184		16.74		132014		15.39	
16	LCSD	431424		22.16		463468		16.74		131610		15.39	
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e071104.d & e071103.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/11/17 & 7/11/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
95-63-6	1,2,4-Trimethylbenzene	105		101		3.9	
75-09-2	Methylene Chloride	99		95		4.1	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e071104sim.d & e071103sim.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/11/17 & 7/11/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
79-00-5	1,1,2-Trichloroethane	102		101		0.98	
75-35-4	1,1-Dichloroethene	98		97		1.0	
107-06-2	1,2-Dichloroethane	103		102		0.98	
71-43-2	Benzene	91		90		1.1	
67-66-3	Chloroform	99		98		1.0	
156-59-2	cis-1,2-Dichloroethene	109		108		0.92	
127-18-4	Tetrachloroethene	100		99		1.0	
108-88-3	Toluene	99		98		1.0	
156-60-5	trans-1,2-Dichloroethene	88		88		0	
79-01-6	Trichloroethene	96		95		1.0	
75-01-4	Vinyl Chloride	106		106		0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e071204.d & e071203.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/12/17 & 7/12/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
95-63-6	1,2,4-Trimethylbenzene	117		115		1.7	
75-09-2	Methylene Chloride	103		104		0.97	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e071204sim.d & e071203sim.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/12/17 & 7/12/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
79-00-5	1,1,2-Trichloroethane	110		108		1.8	
75-35-4	1,1-Dichloroethene	102		103		0.98	
107-06-2	1,2-Dichloroethane	112		110		1.8	
71-43-2	Benzene	97		96		1.0	
67-66-3	Chloroform	104		104		0	
156-59-2	cis-1,2-Dichloroethene	113		114		0.88	
127-18-4	Tetrachloroethene	107		105		1.9	
108-88-3	Toluene	106		105		0.95	
156-60-5	trans-1,2-Dichloroethene	92		92		0	
79-01-6	Trichloroethene	100		99		1.0	
75-01-4	Vinyl Chloride	112		113		0.89	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e071304.d & e071303.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/13/17 & 7/13/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
95-63-6	1,2,4-Trimethylbenzene	96		94		2.1	
75-09-2	Methylene Chloride	84		86		2.4	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e071304sim.d & e071303sim.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/13/17 & 7/13/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
79-00-5	1,1,2-Trichloroethane	92		90		2.2	
75-35-4	1,1-Dichloroethene	89		87		2.3	
107-06-2	1,2-Dichloroethane	93		92		1.1	
71-43-2	Benzene	80		80		0	
67-66-3	Chloroform	90		89		1.1	
156-59-2	cis-1,2-Dichloroethene	98		98		0	
127-18-4	Tetrachloroethene	91		89		2.2	
108-88-3	Toluene	88		88		0	
156-60-5	trans-1,2-Dichloroethene	80		78		2.5	
79-01-6	Trichloroethene	86		85		1.2	
75-01-4	Vinyl Chloride	96		95		1.0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/03Jul2017.b/e070314.d
Level 8: /chem/msde.i/03Jul2017.b/e070315.d
Level 12: /chem/msde.i/03Jul2017.b/e070316.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	RRF	% RSD
	20.000 Level 15	40.000 Level 16						
9 Propylene	+++++	+++++	+++++	1.83127	1.87073	1.74413		
	1.63636	1.63893					1.74428	6.168
11 Freon 12	+++++	5.33595	4.10893	4.16336	4.65449	4.33471		
	4.08457	3.95460					4.37666	10.957
15 Freon 114	2.52679	3.93567	3.24091	3.25975	3.46092	3.24421		
	3.07298	3.00254					3.21797	12.443
17 Chloromethane	+++++	+++++	1.94386	1.95514	1.91651	1.75261		
	1.74335	1.69968					1.83519	6.281
23 Butane	+++++	+++++	0.34297	0.35860	0.35329	0.33058		
	0.32182	0.31483					0.33701	5.192
25 Vinyl Chloride	+++++	2.04589	1.29590	1.26627	1.46132	1.35180		
	1.26802	1.26726					1.42235	19.958
26 1,3-Butadiene	+++++	1.73250	1.37286	1.28144	1.48734	1.38492		
	1.33968	1.40481					1.42908	10.337

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
29 Bromomethane	+++++	+++++	1.06343	0.91904	1.12248	1.04834		
	1.00761	0.95078					1.01861	7.388
30 Chloroethane	+++++	+++++	0.64857	0.55741	0.68636	0.58292		
	0.54378	0.51824					0.58955	11.022
31 Isopentane	+++++	+++++	1.37623	1.36434	1.52172	1.22857		
	1.19615	1.16213					1.30819	10.459
35 Freon 11	4.48932	5.97490	5.03231	4.98338	5.49441	5.02672		
	4.54593	4.37404					4.99013	10.858
42 Ethanol	+++++	+++++	1.01182	0.71518	0.93343	0.87961		
	0.74400	0.66682					0.82514	16.553
49 Freon 113	3.30045	3.62032	2.99075	3.06013	3.36305	3.05814		
	2.87980	2.76939					3.13025	8.921
50 1,1-Dichloroethene	+++++	1.08923	0.81924	0.81148	0.92941	0.86439		
	0.83085	0.79819					0.87754	11.761
52 Acetone	+++++	+++++	0.94972	0.88829	0.88696	0.84989		
	0.79891	0.75957					0.85556	7.992
56 Carbon Disulfide	+++++	+++++	4.23221	3.89325	3.79998	3.53055		
	3.36797	3.20365					3.67127	10.271
57 2-Propanol	+++++	+++++	3.89905	3.56137	4.31558	4.09559		
	4.01236	3.92588					3.96831	6.284

Eurofins Air Toxics Inc.

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Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
58 3-Chloropropene	+++++	+++++	0.77307	0.68500	0.77219	0.75802		
	0.73298	0.71085					0.73868	4.831
66 Methylene Chloride	+++++	1.70739	1.06259	1.09388	1.25272	1.14820		
	1.08188	0.99778					1.19206	20.187
71 tert-Butyl alcohol	+++++	+++++	3.54215	3.57087	4.31731	4.11843		
	3.92307	3.87435					3.89103	7.786
72 Methyl tert-butyl ether	+++++	5.02569	3.86597	3.79181	4.45696	4.17731		
	4.02294	3.92582					4.18093	10.382
73 trans-1,2-Dichloroethene	+++++	0.94371	1.02767	0.88408	0.99712	0.93897		
	0.90400	0.85514					0.93581	6.539
78 Hexane	+++++	2.97313	2.59755	2.52971	3.13937	2.90220		
	2.75531	2.67809					2.79648	7.813
83 Isopropyl ether	+++++	+++++	7.14654	7.07825	8.59964	8.06298		
	7.63582	7.39754					7.65346	7.656
82 1,1-Dichloroethane	+++++	3.50735	2.87428	2.72516	3.23046	2.97804		
	2.81103	2.72873					2.97929	9.773
86 Vinyl Acetate	+++++	+++++	0.28140	0.31177	0.40589	0.38117		
	0.36545	0.36501					0.35178	13.155
88 Ethyl-tert-butyl ether	+++++	+++++	5.42551	5.36676	6.62177	6.25968		
	5.97971	5.83821					5.91527	8.173

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
91 cis-1,2-Dichloroethene	+++++	1.03393	1.02293	0.90725	1.07095	0.96876		
	0.94203	0.91903					0.98070	6.395
92 2-Butanone	+++++	+++++	0.49534	0.55707	0.67409	0.63186		
	0.61792	0.61015					0.59774	10.500
99 Tetrahydrofuran	+++++	+++++	2.41401	2.24310	2.92902	2.78818		
	2.68322	2.65707					2.61910	9.563
100 Chloroform	+++++	3.87174	3.50976	3.28609	3.81905	3.48324		
	3.30120	3.21442					3.49793	7.447
102 Cyclohexane	+++++	1.96352	1.54132	1.65497	1.96169	1.83533		
	1.74922	1.67398					1.76858	9.048
103 1,1,1-Trichloroethane	4.37646	4.90763	4.06276	4.27739	4.64559	4.27220		
	4.07689	3.91906					4.31725	7.554
106 Carbon Tetrachloride	4.60572	4.52285	3.48632	3.51236	5.35856	4.91855		
	4.64172	4.50009					4.44327	14.539
113 2,2,4-Trimethylpentane	+++++	4.69935	4.06314	4.07100	4.66353	4.35041		
	4.12128	3.99475					4.28050	6.912
116 Benzene	+++++	1.45044	1.14174	1.13098	1.26373	1.20032		
	1.12360	1.07616					1.19814	10.562
119 tert-Amyl methyl ether	+++++	+++++	0.27570	0.30914	0.38008	0.36943		
	0.34221	0.33494					0.33525	11.517

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
120 1,2-Dichloroethane	0.75168	1.01011	0.84769	0.81577	0.90412	0.86498		
	0.81442	0.79240					0.85015	9.348
121 Heptane	+++++	0.51710	0.50066	0.48083	0.56873	0.54269		
	0.51948	0.49526					0.51782	5.786
125 Trichloroethene	0.60530	0.88525	0.68467	0.70514	0.75899	0.71865		
	0.67846	0.66185					0.71229	11.636
127 Methylcyclohexane	+++++	+++++	0.61554	0.63707	0.72304	0.71860		
	0.68106	0.65637					0.67195	6.491
132 1,2-Dichloropropane	+++++	0.67849	0.49434	0.46382	0.51591	0.48636		
	0.47716	0.45817					0.51061	14.984
136 1,4-Dioxane	+++++	0.22747	0.26630	0.27207	0.30859	0.30507		
	0.29078	0.28957					0.27998	9.957
138 Bromodichloromethane	1.07505	1.20410	1.05229	1.05600	1.18254	1.11633		
	1.07559	1.02996					1.09898	5.780
144 cis-1,3-Dichloropropene	+++++	0.75570	0.63611	0.64205	0.78759	0.75814		
	0.73120	0.72790					0.71981	8.140
145 4-Methyl-2-pentanone	+++++	1.48610	1.32505	1.44385	1.78197	1.77003		
	1.72056	1.68084					1.60120	11.289
147 Toluene	+++++	1.68206	1.40843	1.39755	1.59420	1.51450		
	1.45054	1.40695					1.49346	7.331

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

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End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
150 trans-1,3-Dichloropropene	+++++	0.71949	0.70432	0.68423	0.86265	0.80160		
	0.78049	0.76286					0.75938	8.184
155 1,1,2-Trichloroethane	0.51170	0.59696	0.50413	0.52507	0.62368	0.58753		
	0.55175	0.53171					0.55407	7.909
156 Tetrachloroethene	0.80682	1.07127	0.91392	0.87220	1.01120	0.96521		
	0.89135	0.88042					0.92655	9.160
158 2-Hexanone	+++++	+++++	0.38357	0.43241	0.68816	0.68764		
	0.68715	0.69828					0.59620	24.600
160 Dibromochloromethane	1.35511	1.45998	1.24232	1.26900	1.55221	1.48175		
	1.38665	1.36745					1.38931	7.589
161 1,2-Dibromoethane (EDB)	0.91275	0.89302	0.90141	0.86015	1.04528	1.00069		
	0.92738	0.91728					0.93224	6.509
165 Chlorobenzene	+++++	1.64723	1.38617	1.35341	1.54904	1.44536		
	1.35180	1.33002					1.43758	8.284
167 Ethyl Benzene	+++++	0.75883	0.56752	0.59061	0.73830	0.70535		
	0.66462	0.65450					0.66853	10.729
169 m,p-Xylene	+++++	0.62903	0.68105	0.70627	0.84026	0.80714		
	0.78080	0.76741					0.74457	10.074
171 o-Xylene	+++++	0.65822	0.61902	0.62467	0.78166	0.74161		
	0.71135	0.70409					0.69152	8.760

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
172 Styrene	+++++	1.06297	0.99766	1.03418	1.29994	1.25841		
	1.21256	1.20686					1.15323	10.352
174 Bromoform	1.04158	1.36018	1.12516	1.10888	1.41098	1.34022		
	1.28822	1.24382					1.23988	10.813
175 Cumene	+++++	2.17508	2.06326	2.02541	2.56266	2.47776		
	2.31954	2.21415					2.26255	8.942
181 1,1,2,2-Tetrachloroethane	0.75374	1.11512	0.84348	0.85449	0.97256	0.90735		
	0.85315	0.80903					0.88862	12.595
182 Propylbenzene	+++++	1.99302	1.86390	1.90823	2.24219	2.12857		
	2.01643	1.95288					2.01503	6.505
188 4-Ethyltoluene	1.31316	1.52043	1.41855	1.40697	1.78328	1.73711		
	1.64562	1.60127					1.55330	10.768
190 1,3,5-Trimethylbenzene	1.24382	1.24503	1.14559	1.15351	1.40321	1.36030		
	1.25876	1.20988					1.25251	7.239
196 1,2,4-Trimethylbenzene	1.07176	1.12758	0.84206	0.86418	1.03654	1.02638		
	0.97272	0.97494					0.98952	9.912
208 1,3-Dichlorobenzene	1.09979	1.17557	1.01774	1.00266	1.14305	1.10448		
	1.05558	1.01838					1.07716	5.902
209 1,4-Dichlorobenzene	1.25067	0.96663	0.92869	0.93942	1.05671	1.02948		
	1.01143	0.98332					1.02079	10.055

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
212 alpha-Chlorotoluene	+++++	1.32476	1.31308	1.29047	1.50011	1.51579		
	1.47353	1.45209					1.40997	6.856
214 1,2-Dichlorobenzene	1.05549	1.00135	0.91895	0.95932	1.04188	1.02891		
	0.98257	0.96590					0.99430	4.671
226 1,2,4-Trichlorobenzene	0.48559	0.32236	0.38661	0.38311	0.41771	0.44740		
	0.48015	0.50174					0.42809	14.466
227 Hexachlorobutadiene	+++++	0.73576	0.78000	0.81160	0.80979	0.82245		
	0.78833	0.79598					0.79199	3.632
228 Naphthalene	+++++	+++++	+++++	0.66294	0.81217	0.85605		
	0.96197	1.03165					0.86496	16.439
$ 117 1,2-Dichloroethane-d4	1.57792	1.61914	1.61957	1.60310	1.50167	1.57326		
	1.49759	1.50495					1.56215	3.395
$ 146 Toluene-d8	0.97802	0.95922	0.94914	0.97088	0.95611	0.96693		
	0.96316	0.95256					0.96200	1.008
$ 177 4-Bromofluorobenzene	0.55042	0.56720	0.58843	0.59637	0.58764	0.60812		
	0.58068	0.59288					0.58397	3.082

Calibration History

Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Start Cal Date: 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
03-JUL-2017 14:35	Level5	/chem/msde.i/03Jul2017.b/e070312.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 0.10000		
03-JUL-2017 15:18	Level6	/chem/msde.i/03Jul2017.b/e070313.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 0.50000		
03-JUL-2017 15:59	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070314.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 1.00000		
03-JUL-2017 16:41	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070315.d

Injection Date	Sublist	Calibration File
Cal Level: 12, Cal Amount: 5.00000		
03-JUL-2017 17:24	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070316.d

Injection Date	Sublist	Calibration File
Cal Level: 13, Cal Amount: 10.00000		
03-JUL-2017 18:31	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070317.d

Injection Date	Sublist	Calibration File
Cal Level: 15, Cal Amount: 20.00000		
03-JUL-2017 19:26	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070318.d

Injection Date	Sublist	Calibration File
Cal Level: 16, Cal Amount: 40.00000		

```
|03-JUL-2017 20:10 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070319.d      |
+------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 13
+------------------+-----------------+----------------------------------------+
| Ccal Level: 13, Ccal Amount: 10.000                                          |
+==============================================================================+
|03-JUL-2017 18:31 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070317.d      |
+------------------+-----------------+----------------------------------------+
| Ccal Level: 13, Ccal Amount: 10.000                                          |
+==============================================================================+
|03-JUL-2017 18:31 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070317a.d     |
+------------------+-----------------+----------------------------------------+
```

Curve Name: E17$_L$0703A

Initial Calibration Narrative

A TO-15 initial calibration was analyzed on 7/3/17 on MSD-E.

The instrument was set up to do Full Scan and Selective Ion Monitoring (SIM) simultaneously.

Tune Files: E070305 (ICAL), E070501 (ICV).
ICAL: Zero (0) out.
ICV: Two (2) out; Ethanol @ 133.0%, 2-Hexanone @ 133.0%. File E070503a.
DOD 5.0 ICV: Two (2) out; Ethanol @ 133.0%, 2-Hexanone @ 133.0%. File E070503c.
DOD 4.2 ICV: Two (2) out; Freon 114 @ 128.9%, cis-1,2-Dichloroethene @ 129.4%. File E070503d.
BTEX RL Spike: Zero (0) out; file E070313x.

Spike sublists have been updated to reflect 15% difference between requested concentration and certified concentration of Bromoform.

Naphthalene was calibrated from 0.1ppbv-4.0ppbv.*

The following compounds were calibrated down to a special RL of 0.05ppbv:

Freon 114	Bromodichloromethane	4-Ethyltoluene
Freon 11	1,1,2-Trichloroethane	1,3,5-Trimethylbenzene
Freon 113	Tetrachloroethane	1,2,4-Trimethylbenzene
1,1,1-Trichloroethane	Dibromochloromethane	1,3-Dichlorobenzene
Carbon Tetrachloride	1,2-Dibromomethane (EDB)	1,4-Dichlorobenzene
1,2-Dichloroethane	Bromoform	1,2-Dichlorobenzene
Trichloroethane	1,1,2,2-Tetrachloroethane	1,2,4-Trichlorobenzene

*The quantitation ion peak (128 amu) is sufficiently resolved for accurate quantification of Naphthalene at the special reporting limit of 0.1ppbv. However, the secondary mass ion peak (127 amu) for Naphthalene is not completely baseline-resolved. Identification of Naphthalene based on the presence and abundance ratio of confirmation ion is reliable at the lowest concentrations even when insufficient baseline resolution of the secondary mass ion peak (127 amu). The spectrum of Naphthalene in this ICAL point will be used as the reference to determine the ion ratio target in the samples for this ICAL.

TO-15 MDL was analyzed on 10/18/16.
AT-1 MDL was analyzed on 4/11/17.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e1710703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/03Jul2017.b/e070314.d
Level 8: /chem/msde.i/03Jul2017.b/e070315.d
Level 12: /chem/msde.i/03Jul2017.b/e070316.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	RRF	% RSD
	20.000 Level 15	40.000 Level 16						
9 Propylene	+++++	+++++	+++++	1.83127	1.87073	1.74413		
	1.63636	1.63893					1.74428	6.168
11 Freon 12	+++++	5.33595	4.10893	4.16336	4.65449	4.33471		
	4.08457	3.95460					4.37666	10.957
15 Freon 114	2.52679	3.93567	3.24091	3.25975	3.46092	3.24421		
	3.07298	3.00254					3.21797	12.443
17 Chloromethane	+++++	+++++	1.94386	1.95514	1.91651	1.75261		
	1.74335	1.69968					1.83519	6.281
23 Butane	+++++	+++++	0.34297	0.35860	0.35329	0.33058		
	0.32182	0.31483					0.33701	5.192
25 Vinyl Chloride	+++++	2.04589	1.29590	1.26627	1.46132	1.35180		
	1.26802	1.26726					1.42235	19.958
26 1,3-Butadiene	+++++	1.73250	1.37286	1.28144	1.48734	1.38492		
	1.33968	1.40481					1.42908	10.337

Flow meter # C57476 Exp. 4/5/18
Nominal Flow: 24.2 mL/min
Actual Flow: 25.6 mL/min

Eurofins Air Toxics, Inc.

MSD-E

Logbook #2847

BFB Verification of 176/174 m/z Ratio: (352000/362469) x100 = 97.11	
Method Name: E170703A / E170703A	

IS/S Std. #:	2850-162	Exp. Date:	9/1/17
BCM	LL: 139842		Sim: 145377
1,4-DFB	482877		538106
CB-d5	450551		493246

Verified CCV IS vs ICAL mid-point (-40%D): MB

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	E070306	BFB Tune check	2810-89	50ng	2.0ppm	BF	1.00	BF	7/3/17	1011	BF	
2	/	06	ICAL Level 3	2850-228	0.01ppbv	50mL	BF	1.00	BF		1032	BF	Exp. 9/27/17
3	/	07	System Blank	34202	Humid	250mL	BF	1.00	BF		1120	BF	
4	/	08	ICAL Level 2	2850-228	0.005ppbv	25mL	BF	1.00	BF		1203	BF	Exp. 9/27/17
5	/	07	4		0.02ppbv	100mL	BF	1.00	BF		1244	BF	
6	N/A /	10	5		0.05ppbv	250mL	BF	1.00	BF		N/A	N/A	Photo.100 / [illegible]
7	/	11	System Blank	34202	Humid	250mL	BF	1.00	BF		1352	BF	
8	/	12	ICAL Level 5	2850-228	0.05ppbv	250mL	BF	1.00	BF		1435	BF	Exp. 9/27/17
9	/	13	6	2850-229	0.1ppbv	25mL	BF	1.00	BF		1518	BF	
10	/	14	7		0.5ppbv	125mL	BF	1.00	BF		1559	BF	
11	/	15	8		1.0ppbv	250mL	BF	1.00	BF		1641	BF	
12	/	16	12	2850-229	5.0ppbv	25mL	BF	1.00	BF		1724	BF	Exp. 9/27/17
13	/	17	13		10ppbv	50mL	MB	1.00	MB		1831	BF	
14	/	18	15		20ppbv	100mL	MB	1.00	MB		1926	BF	
15	/	19	16		40ppbv	200mL	MB	1.00	MB		2010	BF	
16	X /	20	System Blank	34202	Humid	250mL	MB	1.00	MB		2103	BF	
17	/	21									2155	MB	OK for ICV

MB
Reviewed

7/3/17
Date

0199 of 0328

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2847**

BFB Verification of 176/174 m/z Ratio: 324352 | 334208 x100= 91.05%	
Method Name: E17L0703A | E17S0703A	

IS/S Std. #: 2850-162		Exp. Date: 9/1/17	
BCM	LL: 143804	Sim: 1520920	
1,4-DFB	523048	570710	
CB-d5	480557	515276	

Verified CCV IS vs ICAL mid-point (-40%D): 88

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

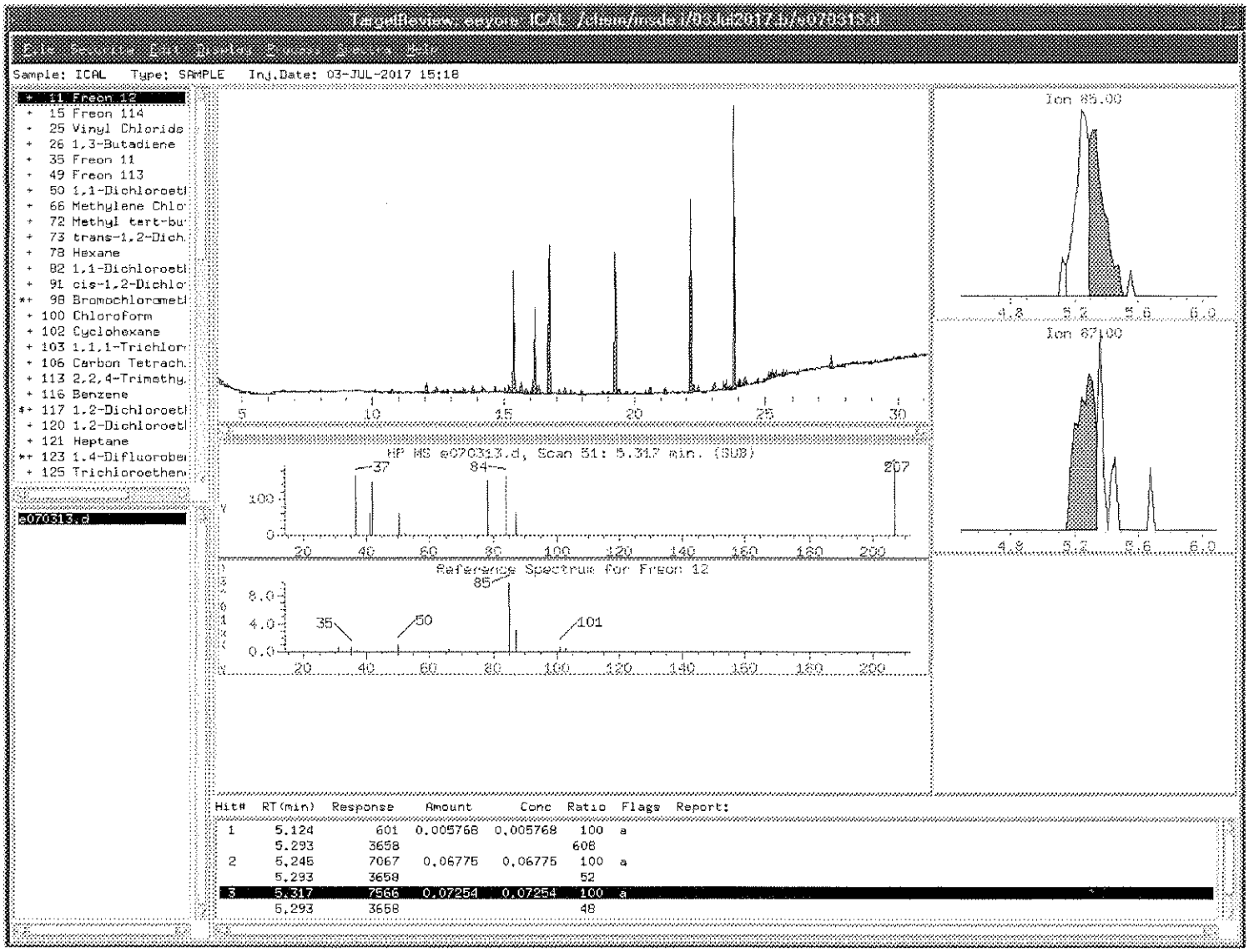
	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E070501	BFB tune check	2810-89	50ng	2.0ml	SW	1.00	SW	7/5/17	0721	SW	
2	✓	02	CCV (50ppbv)	2850-222	10ppbv	50ml	SW	1	SW		0752	[illegible]	Exp: 9/27/17 Ø out
3	✓	03	LCS (50ppbv) *	2850-197	10ppbv	50ml	[illegible]	1.00	[illegible]		0902	[illegible]	Exp. 9/19/17
4	✓	~~04~~	~~LCSD (50ppbv)~~	~~2850-199~~	~~10ppbv~~	~~50ml~~	~~[illegible]~~	~~1.00~~	~~[illegible]~~		~~1002~~	~~[illegible]~~	~~Exp. 9/19/17~~
5		05	LAB Blank	34/202	Humid	250ml	[illegible]	1.00	[illegible]				~~Exp.~~ [illegible] 7/5/17
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17												[illegible]	7/5/17

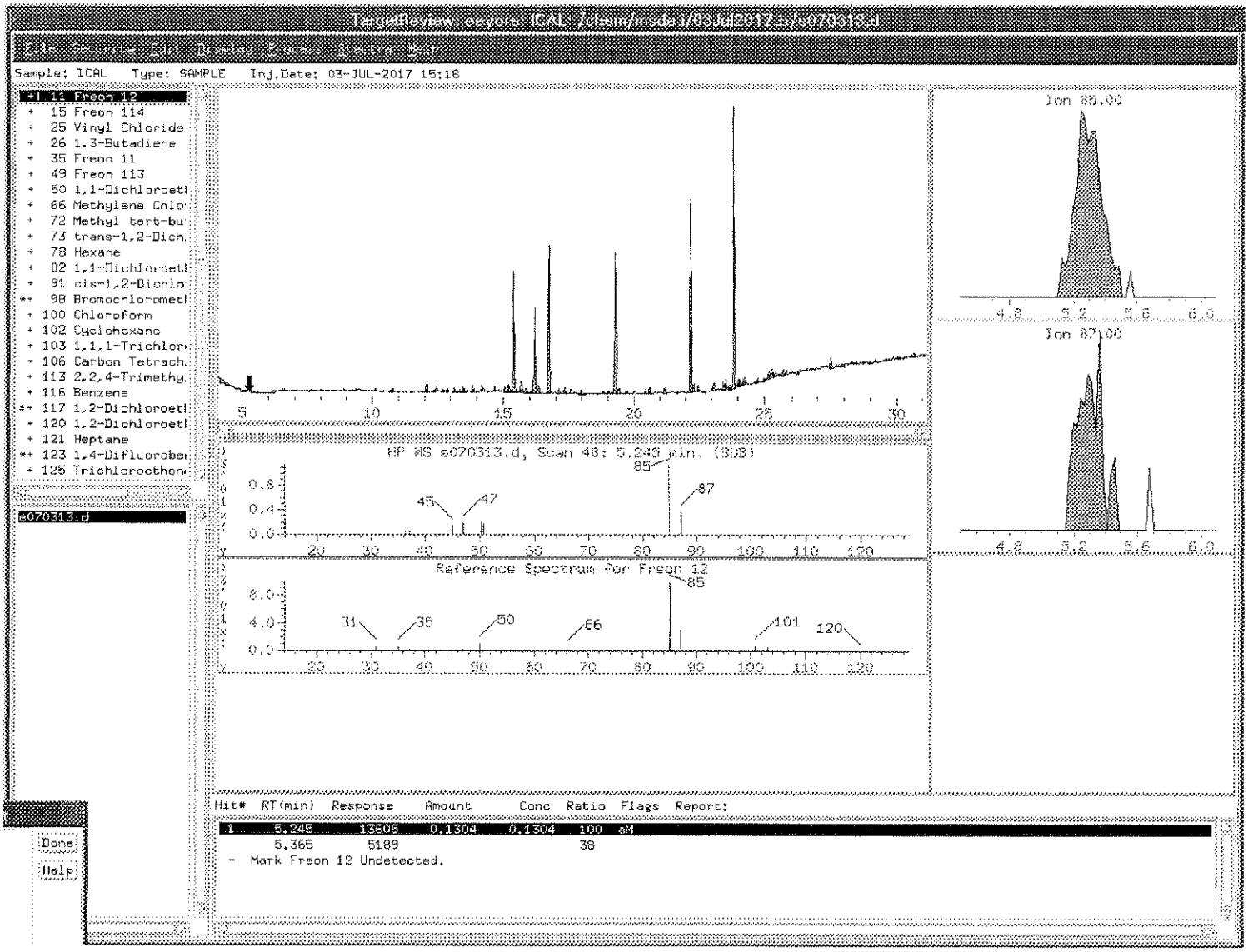
Reviewed

7/5/17
Date

* ICV. ll: 2 out
6mil Ø out

0200 of 0328


Targetfiveview: ecrom ICAL /c:/msdchem/msdata/03Jul2017.d/e070313.d
Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 15:18
+ 11 Freon 12
+ 15 Freon 114
+ 25 Vinyl Chloride
+ 26 1,3-Butadiene
+ 35 Freon 11
+ 49 Freon 113
+ 50 1,1-Dichloroeth
+ 66 Methylene Chlo
+ 72 Methyl tert-bu
+ 73 trans-1,2-Dich
+ 78 Hexane
+ 82 1,1-Dichloroeth
+ 91 cis-1,2-Dichlo
*+ 98 Bromochlorometh
+ 100 Chloroform
+ 102 Cyclohexane
+ 103 1,1,1-Trichlor
+ 106 Carbon Tetrach
+ 113 2,2,4-Trimethy
+ 116 Benzene
*+ 117 1,2-Dichloroeth
+ 120 1,2-Dichloroeth
+ 121 Heptane
*+ 123 1,4-Difluorobe
+ 125 Trichloroethen
e070313.d
Ion 85.00
Ion 67.00
HP MS e070313.d, Scan 51: 5.317 min. (SUB)
Reference Spectrum for Freon 12
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 5.124 601 0.005768 0.005768 100 a
5.293 3658 608
2 5.246 7067 0.06775 0.06775 100 a
5.293 3658 52
3 5.317 7566 0.07254 0.07254 100 a
5.293 3658 48



BS 7/5/17

After

BS 7/5/17

Correct Baseline	X
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Modified EPA Methods TO-14A/TO-15 Low Level
Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Freon 12
Freon 114
Chloromethane
Vinyl Chloride
1,3-Butadiene
Bromomethane
Chloroethane
Freon 11
Ethanol
Freon 113
1,1-Dichloroethene
Acetone
2-Propanol
Carbon Disulfide
3-Chloropropene
Methylene Chloride
Methyl tert-butyl ether
trans-1,2-Dichloroethene
Hexane
1,1-Dichloroethane
2-Butanone (Methyl Ethyl Ketone)
cis-1,2-Dichloroethene
Tetrahydrofuran
Chloroform
1,1,1-Trichloroethane
Cyclohexane
Carbon Tetrachloride
2,2,4-Trimethylpentane
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Heptane
Trichloroethene
1,2-Dichloropropane
1,4-Dioxane
Bromodichloromethane
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethene
2-Hexanone
Dibromochloromethane
1,2-Dibromoethane (EDB)
Chlorobenzene
Ethyl Benzene
m,p-Xylene
o-Xylene
Styrene
Bromoform
Cumene
1,1,2,2-Tetrachloroethane
Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
alpha-Chlorotoluene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Surrogates:
Bromofluorobenzene

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/05Jul2017.b/e070503.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 05-JUL-2017 09:02
Operator : ef Inst ID: msde.i
Smp Info : 50mL #2850-197
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/05Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:14 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	529883	12.0486	12.048	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	346036			36.86- 96.86	65.30
4.835	4.835 (0.314)	39	396972			46.23- 106.23	74.92
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1373821	12.4497	12.450	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	439083			1.93- 61.93	31.96
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	1045527	12.8862	12.886	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	330205			1.36- 61.36	31.58
6.594	6.594 (0.428)	85	1117636			85.72- 145.72	106.90
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	596797	12.8978	12.898	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	168589			1.40- 61.40	28.25
23 Butane					CAS #: 106-97-8		
7.658	7.641 (0.498)	58	104881	12.3430	12.343	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.641 (0.498)	43	1030091			939.22- 999.22	982.15
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	423465	11.8082	11.808	80.00- 120.00	100.00
7.814	7.797 (0.508)	64	124247			0.00- 59.78	29.34
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	429762	11.9273	11.927	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	512364			90.63- 150.63	119.22
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	320988	12.4983	12.498	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	300514			63.10- 123.10	93.62
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	183155	12.3217	12.322	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	80314			13.74- 73.74	43.85
9.986	9.986 (0.649)	66	56231			0.11- 60.11	30.70
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	384162	11.6470	11.647	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	661494			149.05- 209.05	172.19
10.119	10.119 (0.657)	42	568644			122.74- 182.74	148.02
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1484571	11.7994	11.799	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	954696			35.39- 95.39	64.31
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	276685	13.2993	13.299	80.00- 120.00	100.00(R)
11.662	11.662 (0.758)	46	110528			10.30- 70.30	39.95
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	916167	11.6083	11.608	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	582239			33.74- 93.74	63.55
12.081	12.081 (0.785)	101	986748			78.29- 138.29	107.70
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	261178	11.8043	11.804	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	872571			307.46- 367.46	334.09
12.100	12.100 (0.786)	96	403505			127.87- 187.87	154.49
52 Acetone					CAS #: 67-64-1		
12.366	12.347 (0.803)	58	247309	11.4647	11.465	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1105173			407.61- 467.61	446.88

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	970352	10.4830	10.483	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.690 (0.826)	45	1263818	12.6314	12.631	80.00- 120.00	100.00
12.709	12.690 (0.826)	43	257144			0.00- 50.43	20.35
12.709	12.690 (0.826)	59	38097			0.00- 33.00	3.01
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	212792	11.4253	11.425	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1139428			511.05- 571.05	535.47
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	342339	11.3901	11.390	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	789401			205.99- 265.99	230.59
13.149	13.149 (0.854)	51	243050			40.46- 100.46	71.00
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	1246448	11.8242	11.824	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	371022			0.79- 60.79	29.77
13.478	13.478 (0.876)	41	437854			7.43- 67.43	35.13
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	239841	10.1650	10.165	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	667723			247.42- 307.42	278.40
13.533	13.533 (0.879)	96	371608			122.37- 182.37	154.94
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	858995	12.1829	12.183	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	694629			51.15- 111.15	80.87
13.835	13.835 (0.899)	86	101088			0.00- 41.56	11.77
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	873577	11.6295	11.629	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	268060			0.00- 59.55	30.69
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	110832	12.4958	12.496	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	175296			118.75- 178.75	158.16
14.247	14.247 (0.926)	43	2050369			1798.00-1858.00	1849.98
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	319834	12.9349	12.935	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	819404			229.72- 289.72	256.20
15.047	15.047 (0.978)	96	506057			126.60- 186.60	158.22

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   92 2-Butanone                                    CAS #: 78-93-3
 15.047  15.028 (0.978)    72    185257 12.2923   12.292  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1432585                  750.92- 810.92   773.30
 15.047  15.028 (0.978)    57     92429                   19.16-  79.16    49.89
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 15.360  15.360 (0.998)    42    794879 12.0371   12.037  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71    168617                    0.00-  50.51    21.21
 15.360  15.360 (0.998)    72    176673                    0.00-  51.95    22.23
-------------------------------------------------------------------------------
*  98 Bromochloromethane                            CAS #: 74-97-5
 15.391  15.391 (1.000)   130    126066 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     95295                   46.85- 106.85    75.59
 15.391  15.391 (1.000)    49    346702                  226.12- 286.12   275.02
-------------------------------------------------------------------------------
  100 Chloroform                                    CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1033788 11.7218   11.722  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    693847                   35.38-  95.38    67.12
-------------------------------------------------------------------------------
  102 Cyclohexane                                   CAS #: 110-82-7
 15.669  15.669 (1.018)    84    546631 12.2586   12.259  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    948676                  148.59- 208.59   173.55
 15.669  15.669 (1.018)    41    654843                   91.63- 151.63   119.80
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                         CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1277639 11.7374   11.737  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    831587                   34.20-  94.20    65.09
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1158780 10.3436   10.344  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1213211                   73.79- 133.79   104.70
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1255933 11.6371   11.637  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   3813415                  276.72- 336.72   303.63
 16.111  16.111 (1.047)    41   1321970                   82.40- 142.40   105.26
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78   1227518 11.1381   11.138  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    290249                    0.00-  53.88    23.65
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    203065 5.15566    5.156  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     98229                   17.94-  77.94    48.37
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62    878237 11.2308   11.231  80.00- 120.00   100.00
```

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  120 1,2-Dichloroethane (continued)
 16.304  16.304 (0.974)    64    274051                     0.66-  60.66    31.20
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57    548732 11.5205   11.520  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    182152                     3.00-  63.00    33.20
 16.352  16.352 (0.977)    43   1291270                   207.00- 267.00   235.32
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    459917 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     70397                     0.00-  44.91    15.31
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.123  17.123 (1.023)   130    759528 11.5925   11.592  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    664753                   58.18- 118.18    87.52
 17.123  17.123 (1.023)    97    427941                   26.25-  86.25    56.34
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.340  17.340 (1.036)    83    740936 11.9877   11.988  80.00- 120.00   100.00
 17.340  17.340 (1.036)    55    942865                   98.42- 158.42   127.25
 17.340  17.340 (1.036)    56    287069                    9.03-  69.03    38.74
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.556  17.556 (1.049)    63    511145 10.8829   10.883  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    369361                   44.02- 104.02    72.26
 17.556  17.556 (1.049)    41    485692                   65.46- 125.46    95.02
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.677 (1.058)    88    307189 11.9281   11.928  80.00- 120.00   100.00
 17.701  17.677 (1.058)    58    280516                   62.58- 122.58    91.32
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   1183028 11.7029   11.703  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    779791                   36.66-  96.66    65.91
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    737100 11.1326   11.133  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    242435                    3.68-  63.68    32.89
 18.805  18.805 (1.124)    39    684432                   62.50- 122.50    92.85
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43   1798611 12.2119   12.212  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58    529881                    0.00-  59.19    29.46
 18.984  18.984 (1.134)    85    188436                    0.00-  40.34    10.48
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    442491 5.00056    5.000  80.00- 120.00   100.00
```

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.275  19.275 (1.152)    70     48771                     0.00-  41.31    11.02
 19.275  19.275 (1.152)   100    299166                    38.24-  98.24    67.61
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1570878 11.4351   11.435  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    914698                    28.10-  88.10    58.23
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    794355 12.1785   12.178  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    256526                     3.36-  63.36    32.29
 19.998  19.998 (0.903)    39    616665                    49.78- 109.78    77.63
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    561291 11.7941   11.794  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    347916                    32.24-  92.24    61.98
 20.438  20.438 (0.922)    83    442844                    48.02- 108.02    78.90
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.930)   166    948801 11.9219   11.922  80.00- 120.00   100.00
 20.603  20.603 (0.930)   129    760469                    49.93- 109.93    80.15
 20.603  20.603 (0.930)   131    742160                    47.75- 107.75    78.22
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    681106 13.3002   13.300  80.00- 120.00   100.00(R)
 20.767  20.767 (0.937)    43   1719758                   225.15- 285.15   252.49
 20.767  20.767 (0.937)   100    116767                     0.00-  47.79    17.14
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1399184 11.7250   11.725  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127   1085030                    46.75- 106.75    77.55
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.482  21.482 (0.970)   107    960146 11.9907   11.991  80.00- 120.00   100.00
 21.482  21.482 (0.970)   109    929006                    67.69- 127.69    96.76
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    429470 5.00000            80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    212494                    19.53-  79.53    49.48
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.219  22.219 (1.003)   112   1395336 11.3002   11.300  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    436587                     1.36-  61.36    31.29
 22.219  22.219 (1.003)    77    752322                    24.91-  84.91    53.92
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    672114 11.7046   11.705  80.00- 120.00   100.00
```

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   2102077                   280.28- 340.28   312.76
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    780924 12.2107   12.211  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1602936                   173.14- 233.14   205.26
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    731234 12.3109   12.311  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1549275                   184.94- 244.94   211.87
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104   1234492 12.4627   12.463  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    655390                    23.72-  83.72    53.09
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1677779 15.7540   15.754  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    863543                    22.28-  82.28    51.47
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   2402086 12.3603   12.360  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    664744                     0.00-  57.53    27.67
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    256374 5.11117    5.111  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    290413                    81.42- 141.42   113.28
 23.856  23.856 (1.077)   176    251074                    66.35- 126.35    97.93
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    873132 11.4394   11.439  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    597850                    38.02-  98.02    68.47
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   2136884 12.3463   12.346  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    557529                     0.00-  56.42    26.09
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.094)   105   1703583 12.7687   12.769  80.00- 120.00   100.00
 24.237  24.237 (1.094)   120    532333                     0.46-  60.46    31.25
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1297005 12.0558   12.056  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    636862                    18.43-  78.43    49.10
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105   1012709 11.9151   11.915  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
24.753	24.753 (1.117)	120	464703			16.45- 76.45	45.89
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.135)	146	1087362	11.7526	11.752	80.00- 120.00	100.00
25.157	25.157 (1.135)	148	689598			33.61- 93.61	63.42
25.157	25.157 (1.135)	111	423041			9.29- 69.29	38.91
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	1030794	11.7563	11.756	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	649403			34.28- 94.28	63.00
25.246	25.269 (1.139)	111	390021			7.48- 67.48	37.84
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1548294	12.7844	12.784	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	369531			0.00- 53.55	23.87
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	1005860	11.7776	11.778	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	650007			33.54- 93.54	64.62
25.672	25.672 (1.159)	111	407592			10.04- 70.04	40.52
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	464080	12.6212	12.621	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	442437			66.37- 126.37	95.34
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	777814	11.4339	11.434	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	501630			32.58- 92.58	64.49
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.251)	128	54048	0.72748	0.7275	80.00- 120.00	100.00
27.712	27.712 (1.251)	127	6641			0.00- 41.67	12.29
M 239 Total Xylene					CAS #: 1330-20-7		
			1512158	24.5217	24.522		

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070503.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/05Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	126066	-9.85
123 1,4-Difluorobenze	482877	289726	676028	459917	-4.75
163 Chlorobenzene-d5	450551	270331	630771	429470	-4.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 05-Jul-2017 10:15

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 05Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/05Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	12.048	120.49	60-140
11 Freon 12	10.000	12.450	124.50	70-130
15 Freon 114	10.000	12.886	128.86	70-130
17 Chloromethane	10.000	12.898	128.98	70-130
23 Butane	10.000	12.343	123.43	60-140
25 Vinyl Chloride	10.000	11.808	118.08	70-130
26 1,3-Butadiene	10.000	11.927	119.27	70-130
29 Bromomethane	10.000	12.498	124.98	70-130
30 Chloroethane	10.000	12.322	123.22	70-130
31 Isopentane	10.000	11.647	116.47	60-140
35 Freon 11	10.000	11.799	117.99	70-130
42 Ethanol	10.000	13.299	132.99*	70-130
49 Freon 113	10.000	11.608	116.08	70-130
50 1,1-Dichloroethene	10.000	11.804	118.04	70-130
52 Acetone	10.000	11.465	114.65	70-130
56 Carbon Disulfide	10.000	10.483	104.83	70-130
57 2-Propanol	10.000	12.631	126.31	70-130
58 3-Chloropropene	10.000	11.425	114.25	70-130
66 Methylene Chloride	10.000	11.390	113.90	70-130
72 Methyl tert-butyl	10.000	11.824	118.24	70-130
73 trans-1,2-Dichloro	10.000	10.165	101.65	70-130
78 Hexane	10.000	12.183	121.83	70-130
82 1,1-Dichloroethane	10.000	11.629	116.29	70-130
86 Vinyl Acetate	10.000	12.496	124.96	60-140
91 cis-1,2-Dichloroet	10.000	12.935	129.35	70-130
92 2-Butanone	10.000	12.292	122.92	70-130
99 Tetrahydrofuran	10.000	12.037	120.37	70-130
100 Chloroform	10.000	11.722	117.22	70-130
103 1,1,1-Trichloroeth	10.000	11.737	117.37	70-130
106 Carbon Tetrachlori	10.000	10.344	103.44	70-130
102 Cyclohexane	10.000	12.259	122.59	70-130
113 2,2,4-Trimethylpen	10.000	11.637	116.37	70-130
116 Benzene	10.000	11.138	111.38	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	11.231	112.31	70-130
121 Heptane	10.000	11.520	115.20	70-130
125 Trichloroethene	10.000	11.592	115.93	70-130
127 Methylcyclohexane	10.000	11.988	119.88	60-140
132 1,2-Dichloropropan	10.000	10.883	108.83	70-130
136 1,4-Dioxane	10.000	11.928	119.28	70-130
138 Bromodichlorometha	10.000	11.703	117.03	70-130
144 cis-1,3-Dichloropr	10.000	11.133	111.33	70-130
145 4-Methyl-2-pentano	10.000	12.212	122.12	70-130
147 Toluene	10.000	11.435	114.35	70-130
150 trans-1,3-Dichloro	10.000	12.178	121.79	70-130
155 1,1,2-Trichloroeth	10.000	11.794	117.94	70-130
156 Tetrachloroethene	10.000	11.922	119.22	70-130
158 2-Hexanone	10.000	13.300	133.00*	70-130
160 Dibromochlorometha	10.000	11.725	117.25	70-130
161 1,2-Dibromoethane	10.000	11.991	119.91	70-130
165 Chlorobenzene	10.000	11.300	113.00	70-130
167 Ethyl Benzene	10.000	11.705	117.05	70-130
169 m,p-Xylene	10.000	12.211	122.11	70-130
171 o-Xylene	10.000	12.311	123.11	70-130
172 Styrene	10.000	12.463	124.63	70-130
174 Bromoform	13.000	15.754	121.18	70-130
175 Cumene	10.000	12.360	123.60	70-130
181 1,1,2,2-Tetrachlor	10.000	11.439	114.39	70-130
182 Propylbenzene	10.000	12.346	123.46	70-130
188 4-Ethyltoluene	10.000	12.769	127.69	70-130
190 1,3,5-Trimethylben	10.000	12.056	120.56	70-130
196 1,2,4-Trimethylben	10.000	11.915	119.15	70-130
208 1,3-Dichlorobenzen	10.000	11.752	117.53	70-130
209 1,4-Dichlorobenzen	10.000	11.756	117.56	70-130
212 alpha-Chlorotoluen	10.000	12.784	127.84	70-130
214 1,2-Dichlorobenzen	10.000	11.778	117.78	70-130
226 1,2,4-Trichloroben	10.000	12.621	126.21	70-130
227 Hexachlorobutadien	10.000	11.434	114.34	70-130
228 Naphthalene	1.000	0.7275	72.75	60-140
M 239 Total Xylene	20.000	24.522	122.61	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.156	103.11	70-130
$ 146 Toluene-d8	5.000	5.000	100.01	70-130
$ 177 4-Bromofluorobenze	5.000	5.111	102.22	70-130

Data File: /chem/msde.i/05Jul2017.b/e070503.d

Date : 05-JUL-2017 09:02

Client ID: LCS

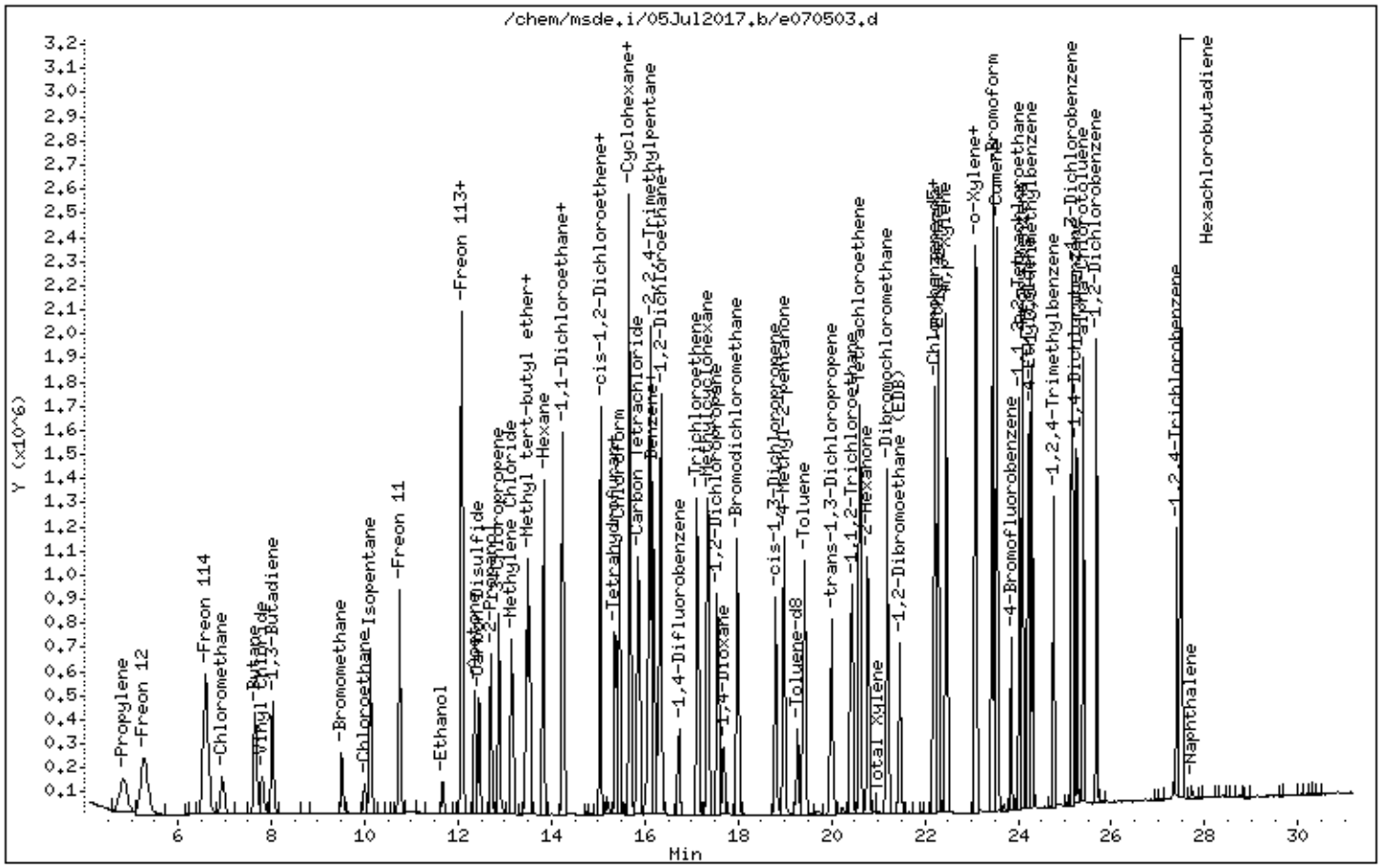
Instrument: msde.i

Sample Info: 50mL #2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070312.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 03-JUL-2017 14:35
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-228
Misc Info : 0.05ppbv (0.05ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 14:35 Cal File: e070312.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level5.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
15 Freon 114					CAS #: 76-14-2		
6.643	6.643 (0.432)	135	3560	0.05000	0.03926	80.00- 120.00	100.00(a)
6.643	6.643 (0.432)	137	929			1.36- 61.36	26.10
6.594	6.594 (0.428)	85	5001			85.72- 145.72	140.48
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	6325	0.05000	0.04498	80.00- 120.00	100.00(a)
10.747	10.747 (0.698)	103	4111			35.39- 95.39	65.00
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	4650	0.05000	0.05272	80.00- 120.00	100.00(a)
12.100	12.100 (0.786)	153	2405			33.74- 93.74	51.72
12.100	12.100 (0.786)	101	4291			78.29- 138.29	92.28
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	140890	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	107928			46.85- 106.85	76.60
15.391	15.391 (1.000)	49	234949			226.12- 286.12	166.76
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	6166	0.05000	0.05068	80.00- 120.00	100.00(a)

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  103 1,1,1-Trichloroethane (continued)
 15.669  15.669 (1.018)    99      4305                    34.20-  94.20    69.82
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.885  15.885 (1.032)   119      6489 0.05000  0.05183  80.00- 120.00   100.00(a)
 15.885  15.885 (1.032)   117      5437                    73.79- 133.79    83.79
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    222313 5.00000    5.050  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     98483                    17.94-  77.94    44.30
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62      3610 0.05000  0.04421  80.00- 120.00   100.00(a)
 16.304  16.304 (0.974)    64      1336                     0.66-  60.66    37.01
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    480255 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     73277                     0.00-  44.91    15.26
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.123 (1.023)   130      2907 0.05000  0.04249  80.00- 120.00   100.00(a)
 17.123  17.123 (1.023)    95      2723                    58.18- 118.18    93.67
 17.123  17.123 (1.023)    97      1920                    26.25-  86.25    66.05
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 17.990  17.990 (1.075)    83      5163 0.05000  0.04891  80.00- 120.00   100.00(a)
 17.990  17.990 (1.075)    85      3066                    36.66-  96.66    59.38
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.276  19.276 (1.152)    98    469700 5.00000    5.083  80.00- 120.00   100.00
 19.276  19.276 (1.152)    70     52812                     0.00-  41.31    11.24
 19.276  19.276 (1.152)   100    308915                    38.24-  98.24    65.77
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.438  20.438 (0.922)    97      2391 0.05000  0.04618  80.00- 120.00   100.00(a)
 20.438  20.438 (0.922)    99      1630                    32.24-  92.24    68.17
 20.438  20.438 (0.922)    83      1897                    48.02- 108.02    79.34
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.603  20.603 (0.929)   166      3770 0.05000  0.04354  80.00- 120.00   100.00(a)
 20.630  20.630 (0.930)   129      3429                    49.93- 109.93    90.95
 20.630  20.630 (0.930)   131      4581                    47.75- 107.75   121.51
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129      6332 0.05000  0.04877  80.00- 120.00   100.00(a)
 21.207  21.207 (0.956)   127      5051                    46.75- 106.75    79.77
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  161 1,2-Dibromoethane (EDB)                          CAS #: 106-93-4
 21.482  21.482 (0.969)   107      4265 0.05000  0.04895  80.00- 120.00   100.00(a)
 21.482  21.482 (0.969)   109      4123                   67.69- 127.69    96.67
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    467269 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    226386                   19.53-  79.53    48.45
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 23.452  23.452 (1.057)   173      4867 0.05000  0.04200  80.00- 120.00   100.00(a)
 23.452  23.452 (1.057)   171      3036                   22.28-  82.28    62.38
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.856  23.856 (1.076)   174    257196 5.00000    4.713  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    290749                   81.42- 141.42   113.05
 23.856  23.856 (1.076)   176    253489                   66.35- 126.35    98.56
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 24.035  24.035 (1.084)    83      3522 0.05000  0.04241  80.00- 120.00   100.00(a)
 24.035  24.035 (1.084)    85      2980                   38.02-  98.02    84.61
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                   CAS #: 622-96-8
 24.237  24.237 (1.093)   105      6136 0.05000  0.04227  80.00- 120.00   100.00(a)
 24.237  24.237 (1.093)   120      3074                    0.46-  60.46    50.10
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                           CAS #: 108-67-8
 24.304  24.304 (1.096)   105      5812 0.05000  0.04965  80.00- 120.00   100.00(a)
 24.304  24.304 (1.096)   120      3030                   18.43-  78.43    52.13
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                           CAS #: 95-63-6
 24.775  24.775 (1.117)   105      5008 0.05000  0.05416  80.00- 120.00   100.00(a)
 24.753  24.753 (1.116)   120      1883                   16.45-  76.45    37.60
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                              CAS #: 541-73-1
 25.157  25.157 (1.134)   146      5139 0.05000  0.05105  80.00- 120.00   100.00(a)
 25.157  25.157 (1.134)   148      2772                   33.61-  93.61    53.94
 25.157  25.157 (1.134)   111      1846                    9.29-  69.29    35.92
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                              CAS #: 106-46-7
 25.269  25.269 (1.139)   146      5844 0.05000  0.06126  80.00- 120.00   100.00(a)
 25.269  25.269 (1.139)   148      3218                   34.28-  94.28    55.07
 25.269  25.269 (1.139)   111      1930                    7.48-  67.48    33.03
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                              CAS #: 95-50-1
 25.695  25.695 (1.159)   146      4932 0.05000  0.05308  80.00- 120.00   100.00(a)
 25.695  25.695 (1.159)   148      3205                   33.54-  93.54    64.98
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
25.672	25.672 (1.158)	111	1681			10.04- 70.04	34.08
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.421	27.421 (1.236)	180	2269	0.05000	0.05672	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	1584			66.37- 126.37	69.81

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070312.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 0.05ppbv (0.05ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	140890	0.75
123 1,4-Difluorobenze	482877	289726	676028	480255	-0.54
163 Chlorobenzene-d5	450551	270331	630771	467269	3.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070312.d

Date : 03-JUL-2017 14:35

Client ID: Level 5

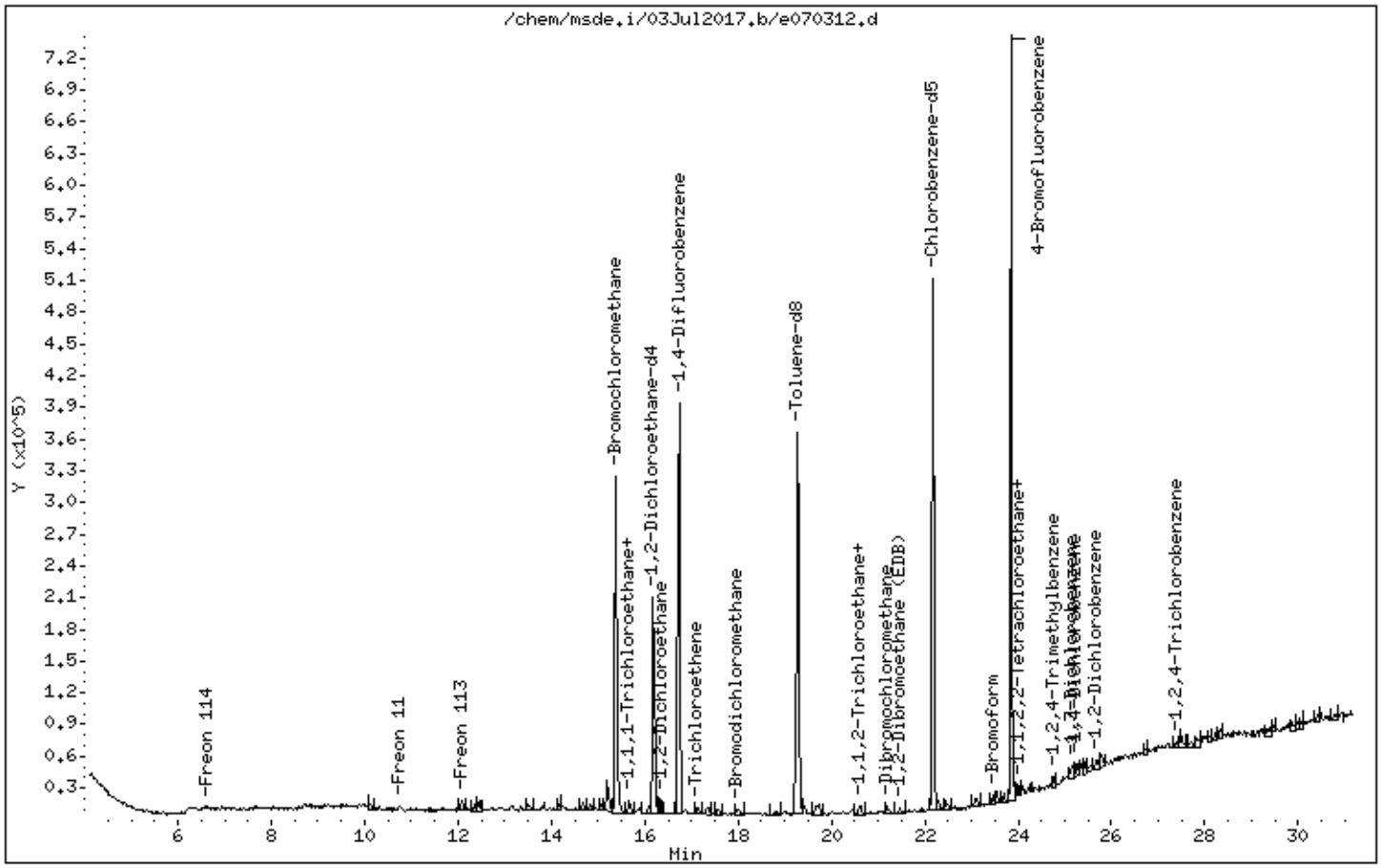
Instrument: msde.i

Sample Info: 250mL# 2850-228

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070313.d
Lab Smp Id: ICAL Client Smp ID: Level 6
Inj Date : 03-JUL-2017 15:18
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-229
Misc Info : 0.1ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 15:18 Cal File: e070313.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level6.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.245	5.245 (0.341)	85	13604	0.10000	0.1219	80.00- 120.00	100.00(aM)
5.365	5.365 (0.349)	87	5189			1.93- 61.93	38.14
15 Freon 114					CAS #: 76-14-2		
6.570	6.570 (0.427)	135	10034	0.10000	0.1223	80.00- 120.00	100.00(a)
6.594	6.594 (0.428)	137	3151			1.36- 61.36	31.40
6.570	6.570 (0.427)	85	11435			85.72- 145.72	113.96
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	5216	0.10000	0.1438	80.00- 120.00	100.00(a)
7.814	7.814 (0.508)	64	1106			0.00- 59.78	21.20
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	4417	0.10000	0.1212	80.00- 120.00	100.00(a)
8.022	8.022 (0.521)	39	5599			90.63- 150.63	126.76
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	15233	0.10000	0.1197	80.00- 120.00	100.00(a)
10.766	10.766 (0.700)	103	11039			35.39- 95.39	72.47

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113                                     CAS #: 76-13-1
 12.081  12.081 (0.785)   151      9230 0.10000   0.1156  80.00- 120.00   100.00(a)
 12.081  12.081 (0.785)   153      6232                   33.74-  93.74    67.52
 12.081  12.081 (0.785)   101     11068                   78.29- 138.29   119.91
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.100  12.100 (0.786)    98      2777 0.10000   0.1241  80.00- 120.00   100.00(a)
 12.100  12.100 (0.786)    61      9593                  307.46- 367.46   345.44
 12.100  12.100 (0.786)    96      5435                  127.87- 187.87   195.71
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 13.149  13.149 (0.854)    84      4353 0.10000   0.1432  80.00- 120.00   100.00(a)
 13.149  13.149 (0.854)    49      9028                  205.99- 265.99   207.40
 13.149  13.149 (0.854)    51      3284                   40.46- 100.46    75.44
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                       CAS #: 1634-04-4
 13.478  13.478 (0.876)    73     12813 0.10000   0.1202  80.00- 120.00   100.00(a)
 13.478  13.478 (0.876)    57      3694                    0.79-  60.79    28.83
 13.478  13.478 (0.876)    41      2850                    7.43-  67.43    22.24
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                      CAS #: 156-60-5
 13.533  13.533 (0.879)    98      2406 0.10000   0.1008  80.00- 120.00   100.00(a)
 13.533  13.533 (0.879)    61      6501                  247.42- 307.42   270.20
 13.533  13.533 (0.879)    96      5030                  122.37- 182.37   209.06
-------------------------------------------------------------------------------
   78 Hexane                                        CAS #: 110-54-3
 13.835  13.835 (0.899)    57      7580 0.10000   0.1063  80.00- 120.00   100.00(Ta)
 13.835  13.835 (0.899)    43      7119                   51.15- 111.15    93.92
  0.000   1.000 (0.000)    86         0                    0.00-  41.56     0.00
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                            CAS #: 75-34-3
 14.220  14.220 (0.924)    63      8942 0.10000   0.1177  80.00- 120.00   100.00(a)
 14.247  14.247 (0.926)    65      1833                    0.00-  59.55    20.50
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.047  15.047 (0.978)    98      2636 0.10000   0.1054  80.00- 120.00   100.00(a)
 15.047  15.047 (0.978)    61      7360                  229.72- 289.72   279.21
 15.047  15.047 (0.978)    96      5788                  126.60- 186.60   219.58
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    127475 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     97962                   46.85- 106.85    76.85
 15.391  15.391 (1.000)    49    223385                  226.12- 286.12   175.24
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83      9871 0.10000   0.1107  80.00- 120.00   100.00(a)
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  100 Chloroform (continued)
 15.453  15.453 (1.004)    85      8102                    35.38-  95.38    82.08
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84      5006 0.10000   0.1110  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56      8120                  148.59- 208.59   162.21
 15.669  15.669 (1.018)    41      8323                   91.63- 151.63   166.26
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.669  15.669 (1.018)    97     12512 0.10000   0.1137  80.00- 120.00   100.00(a)
 15.669  15.669 (1.018)    99      9491                   34.20-  94.20    75.86
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.854  15.854 (1.030)   119     11531 0.10000   0.1018  80.00- 120.00   100.00(a)
 15.854  15.854 (1.030)   117     12061                   73.79- 133.79   104.60
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                       CAS #: 540-84-1
 16.111  16.111 (1.047)    56     11981 0.10000   0.1098  80.00- 120.00   100.00(a)
 16.111  16.111 (1.047)    57     32577                  276.72- 336.72   271.91
 16.111  16.111 (1.047)    41     14791                   82.40- 142.40   123.45
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 16.183  16.183 (0.967)    78     13301 0.10000   0.1210  80.00- 120.00   100.00(a)
 16.183  16.183 (0.967)    77      3418                    0.00-  53.88    25.70
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    206400 5.00000    5.182  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     93247                   17.94-  77.94    45.18
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.304  16.304 (0.974)    62      9263 0.10000   0.1188  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64      3031                    0.66-  60.66    32.72
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57      4742 0.10000  0.09986  80.00- 120.00   100.00(a)
 16.352  16.352 (0.977)   100      1680                    3.00-  63.00    35.43
 16.352  16.352 (0.977)    43     13036                  207.00- 267.00   274.91
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    458516 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     67259                    0.00-  44.91    14.67
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.123  17.123 (1.023)   130      8118 0.10000   0.1243  80.00- 120.00   100.00(a)
 17.123  17.123 (1.023)    95      6876                   58.18- 118.18    84.70
 17.123  17.123 (1.023)    97      4504                   26.25-  86.25    55.48
-------------------------------------------------------------------------------
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.556  17.556 (1.049)    63      6222 0.10000   0.1329  80.00- 120.00   100.00(a)
 17.556  17.556 (1.049)    62      3585                   44.02- 104.02    57.62
 17.556  17.556 (1.049)    41      6017                   65.46- 125.46    96.71
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88      2086 0.10000  0.08125  80.00- 120.00   100.00(a)
 17.701  17.701 (1.058)    58      2641                   62.58- 122.58   126.61
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83     11042 0.10000   0.1096  80.00- 120.00   100.00(a)
 17.990  17.990 (1.075)    85      6604                   36.66-  96.66    59.81
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75      6930 0.10000   0.1050  80.00- 120.00   100.00(a)
 18.782  18.782 (1.122)    77      2581                    3.68-  63.68    37.24
 18.805  18.805 (1.124)    39      7807                   62.50- 122.50   112.66
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.007  19.007 (1.136)    43     13628 0.10000  0.09281  80.00- 120.00   100.00(a)
 19.007  19.007 (1.136)    58      3454                    0.00-  59.19    25.34
 19.029  19.029 (1.137)    85      1660                    0.00-  40.34    12.18
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    439817 5.00000    4.986  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     47462                    0.00-  41.31    10.79
 19.275  19.275 (1.152)   100    286596                   38.24-  98.24    65.16
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91     15425 0.10000   0.1126  80.00- 120.00   100.00(a)
 19.432  19.432 (1.161)    92      9349                   28.10-  88.10    60.61
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75      6236 0.10000  0.09475  80.00- 120.00   100.00(a)
 20.053  20.053 (0.904)    77      3405                    3.36-  63.36    54.60
 20.026  20.026 (0.903)    39      5930                   49.78- 109.78    95.09
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97      5174 0.10000   0.1077  80.00- 120.00   100.00(a)
 20.438  20.438 (0.922)    99      3757                   32.24-  92.24    72.61
 20.438  20.438 (0.922)    83      5326                   48.02- 108.02   102.94
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.929)   166      9285 0.10000   0.1156  80.00- 120.00   100.00(a)
 20.630  20.630 (0.930)   129      8666                   49.93- 109.93    93.33
 20.603  20.603 (0.929)   131      7148                   47.75- 107.75    76.98
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129     12654 0.10000   0.1051  80.00- 120.00   100.00(a)
 21.207  21.207 (0.956)   127     10525                   46.75- 106.75    83.18
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107      7740 0.10000  0.09579  80.00- 120.00   100.00(a)
 21.482  21.482 (0.969)   109      8098                   67.69- 127.69   104.63
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    433363 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    199882                   19.53-  79.53    46.12
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112     14277 0.10000   0.1146  80.00- 120.00   100.00(a)
 22.219  22.219 (1.002)   114      4051                    1.36-  61.36    28.37
 22.219  22.219 (1.002)    77     12322                   24.91-  84.91    86.31
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.302  22.302 (1.006)   106      6577 0.10000   0.1135  80.00- 120.00   100.00(a)
 22.302  22.302 (1.006)    91     18570                  280.28- 340.28   282.35
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106      5452 0.10000  0.08448  80.00- 120.00   100.00(a)
 22.467  22.467 (1.013)    91     12699                  173.14- 233.14   232.92
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.040)   106      5705 0.10000  0.09518  80.00- 120.00   100.00(a)
 23.089  23.089 (1.041)    91     14482                  184.94- 244.94   253.85
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104      9213 0.10000  0.09217  80.00- 120.00   100.00(a)
 23.110  23.110 (1.042)    78      5862                   23.72-  83.72    63.63
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173     11789 0.10000   0.1097  80.00- 120.00   100.00(a)
 23.452  23.452 (1.057)   171      5944                   22.28-  82.28    50.42
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.062)   105     18852 0.10000  0.09613  80.00- 120.00   100.00(a)
 23.564  23.564 (1.063)   120      6389                    0.00-  57.53    33.89
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    245804 5.00000    4.856  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    268671                   81.42- 141.42   109.30
 23.856  23.856 (1.076)   176    228689                   66.35- 126.35    93.04
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane						CAS #: 79-34-5	
24.035	24.035 (1.084)	83	9665	0.10000	0.1255	80.00- 120.00	100.00(a)
24.035	24.035 (1.084)	85	5129			38.02- 98.02	53.07
182 Propylbenzene						CAS #: 103-65-1	
24.102	24.102 (1.087)	91	17274	0.10000	0.09891	80.00- 120.00	100.00(a)
24.102	24.102 (1.087)	120	4576			0.00- 56.42	26.49
188 4-Ethyltoluene						CAS #: 622-96-8	
24.237	24.237 (1.093)	105	13178	0.10000	0.09788	80.00- 120.00	100.00(a)
24.237	24.237 (1.093)	120	4692			0.46- 60.46	35.60
190 1,3,5-Trimethylbenzene						CAS #: 108-67-8	
24.304	24.304 (1.096)	105	10791	0.10000	0.09940	80.00- 120.00	100.00(a)
24.304	24.304 (1.096)	120	5716			18.43- 78.43	52.97
196 1,2,4-Trimethylbenzene						CAS #: 95-63-6	
24.775	24.775 (1.117)	105	9773	0.10000	0.1140	80.00- 120.00	100.00(a)
24.775	24.775 (1.117)	120	4638			16.45- 76.45	47.46
208 1,3-Dichlorobenzene						CAS #: 541-73-1	
25.156	25.156 (1.134)	146	10189	0.10000	0.1091	80.00- 120.00	100.00(a)
25.156	25.156 (1.134)	148	7064			33.61- 93.61	69.33
25.156	25.156 (1.134)	111	3402			9.29- 69.29	33.39
209 1,4-Dichlorobenzene						CAS #: 106-46-7	
25.269	25.269 (1.139)	146	8378	0.10000	0.09469	80.00- 120.00	100.00(a)
25.269	25.269 (1.139)	148	5487			34.28- 94.28	65.49
25.269	25.269 (1.139)	111	3552			7.48- 67.48	42.40
212 alpha-Chlorotoluene						CAS #: 100-44-7	
25.403	25.403 (1.145)	91	11482	0.10000	0.09396	80.00- 120.00	100.00(a)
25.403	25.403 (1.145)	126	2578			0.00- 53.55	22.45
214 1,2-Dichlorobenzene						CAS #: 95-50-1	
25.672	25.672 (1.158)	146	8679	0.10000	0.1007	80.00- 120.00	100.00(a)
25.672	25.672 (1.158)	148	7320			33.54- 93.54	84.34
25.672	25.672 (1.158)	111	3510			10.04- 70.04	40.44
226 1,2,4-Trichlorobenzene						CAS #: 120-82-1	
27.398	27.398 (1.235)	180	2794	0.10000	0.07530	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	2617			66.37- 126.37	93.66
227 Hexachlorobutadiene						CAS #: 87-68-3	
27.488	27.488 (1.239)	225	6377	0.10000	0.09290	80.00- 120.00	100.00(a)
27.488	27.488 (1.239)	223	4798			32.58- 92.58	75.24

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070313.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 0.1ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 6
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	127475	-8.84
123 1,4-Difluorobenze	482877	289726	676028	458516	-5.04
163 Chlorobenzene-d5	450551	270331	630771	433363	-3.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070313.d

Date : 03-JUL-2017 15:18

Client ID: Level 6

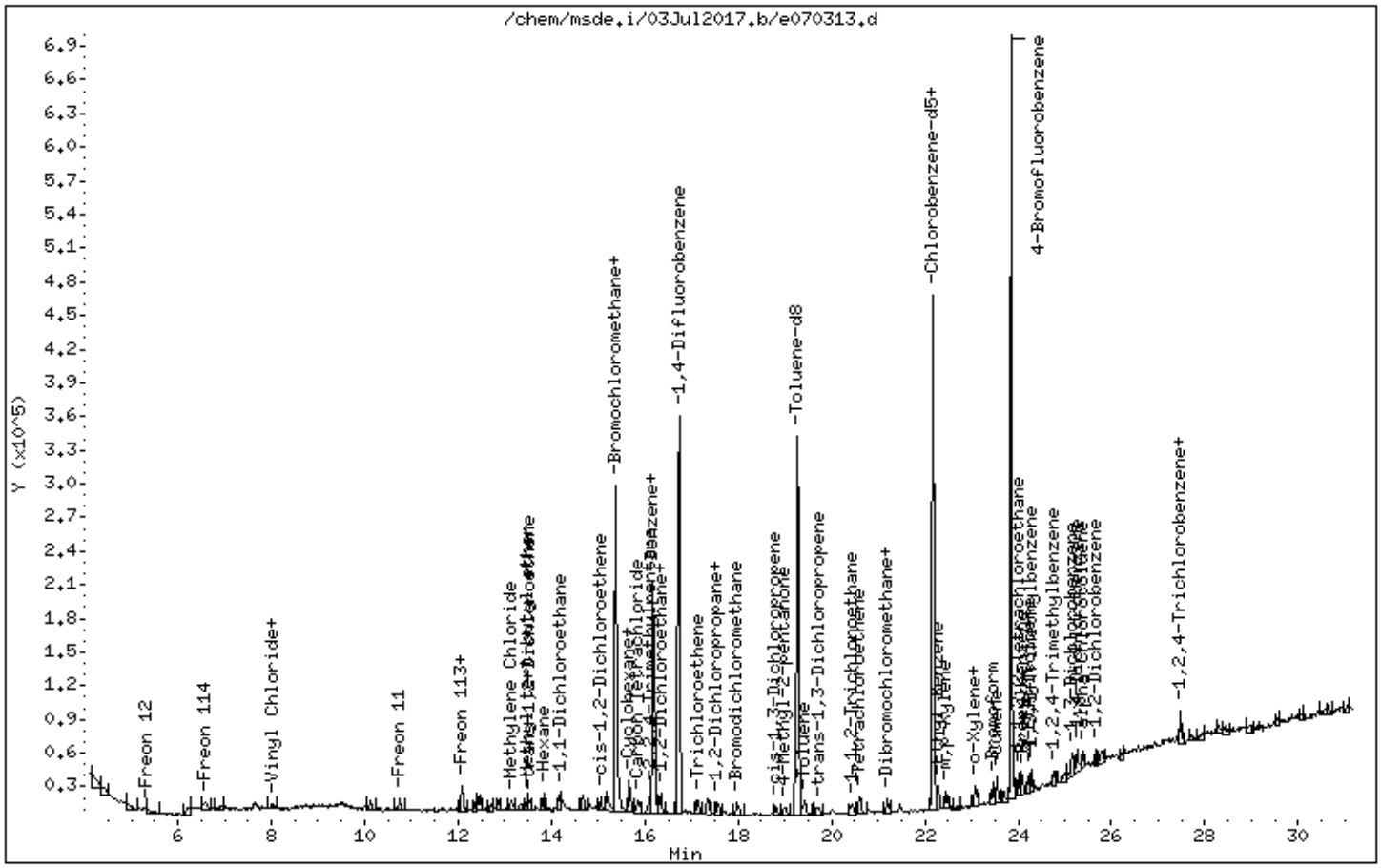
Instrument: msde.i

Sample Info: 25mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070314.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 03-JUL-2017 15:59
Operator : ef Inst ID: msde.i
Smp Info : 125mL# 2850-229
Misc Info : 0.5ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 15:59 Cal File: e070314.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.293	5.293 (0.344)	85	53661	0.50000	0.4694	80.00- 120.00	100.00
5.293	5.293 (0.344)	87	19242			1.93- 61.93	35.86
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	42325	0.50000	0.5036	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	14356			1.36- 61.36	33.92
6.618	6.618 (0.430)	85	51163			85.72- 145.72	120.88
17 Chloromethane					CAS #: 74-87-3		
6.980	6.980 (0.454)	50	25386	0.50000	0.5296	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	9703			1.40- 61.40	38.22
23 Butane					CAS #: 106-97-8		
7.640	7.640 (0.496)	58	4479	0.50000	0.5088	80.00- 120.00	100.00
7.658	7.658 (0.498)	43	40610			939.22- 999.22	906.68
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	16924	0.50000	0.4556	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	4998			0.00- 59.78	29.53

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	17929	0.50000	0.4803	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	21165			90.63- 150.63	118.05
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	13888	0.50000	0.5220	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	12181			63.10- 123.10	87.71
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	8470	0.50000	0.5500	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	4454			13.74- 73.74	52.59
10.005	10.005 (0.650)	66	2715			0.11- 60.11	32.05
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	17973	0.50000	0.5260	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	37012			149.05- 209.05	205.93
10.138	10.138 (0.659)	42	30927			122.74- 182.74	172.07
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	65720	0.50000	0.5042	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	41791			35.39- 95.39	63.59
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	13214	0.50000	0.6131	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	4027			10.30- 70.30	30.48
49 Freon 113					CAS #: 76-13-1		
12.100	12.100 (0.786)	151	39058	0.50000	0.4777	80.00- 120.00	100.00
12.100	12.100 (0.786)	153	25020			33.74- 93.74	64.06
12.081	12.081 (0.785)	101	44652			78.29- 138.29	114.32
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	10699	0.50000	0.4668	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	38180			307.46- 367.46	356.86
12.100	12.100 (0.786)	96	18251			127.87- 187.87	170.59
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	12403	0.50000	0.5550	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	57353			407.61- 467.61	462.41
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.461 (0.810)	76	55271	0.50000	0.5764	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	50920	0.50000	0.4913	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	10721			0.00- 50.43	21.05

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
57 2-Propanol (continued)							
12.690	12.690 (0.824)	59	1668			0.00- 33.00	3.28
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	10096	0.50000	0.5233	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	48325			511.05- 571.05	478.65
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	13877	0.50000	0.4457	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	34828			205.99- 265.99	250.98
13.149	13.149 (0.854)	51	10866			40.46- 100.46	78.30
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	46259	0.50000	0.4552	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	15878			0.00- 56.56	34.32
13.341	13.341 (0.867)	57	6448			0.00- 41.82	13.94
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	50488	0.50000	0.4623	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	17341			0.79- 60.79	34.35
13.478	13.478 (0.876)	41	18405			7.43- 67.43	36.45
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	13421	0.50000	0.5491	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	31732			247.42- 307.42	236.44
13.533	13.533 (0.879)	96	20672			122.37- 182.37	154.03
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	33923	0.50000	0.4644	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	29810			51.15- 111.15	87.88
13.835	13.835 (0.899)	86	3688			0.00- 41.56	10.87
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	93331	0.50000	0.4669	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	17410			0.00- 45.86	18.65
14.192	14.192 (0.922)	59	7996			0.00- 38.07	8.57
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	37537	0.50000	0.4824	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	12114			0.00- 59.55	32.27
86 Vinyl Acetate					CAS #: 108-05-4		
14.275	14.275 (0.927)	86	3675	0.50000	0.4000	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	5386			118.75- 178.75	146.56
14.275	14.275 (0.927)	43	51446			1798.00-1858.00	1399.89

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
14.666	14.666 (0.953)	59	70855	0.50000	0.4586	80.00- 120.00	100.00
14.666	14.666 (0.953)	87	23785			2.81- 62.81	33.57
14.666	14.666 (0.953)	41	18596			0.00- 53.89	26.25
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	13359	0.50000	0.5215	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	35442			229.72- 289.72	265.30
15.047	15.047 (0.978)	96	18447			126.60- 186.60	138.09
92 2-Butanone					CAS #: 78-93-3		
15.047	15.047 (0.978)	72	6469	0.50000	0.4143	80.00- 120.00	100.00
15.047	15.047 (0.978)	43	52782			750.92- 810.92	815.92
15.047	15.047 (0.978)	57	3810			19.16- 79.16	58.90
99 Tetrahydrofuran					CAS #: 109-99-9		
15.391	15.391 (1.000)	42	31526	0.50000	0.4608	80.00- 120.00	100.00
15.391	15.391 (1.000)	71	7262			0.00- 50.51	23.03
15.391	15.391 (1.000)	72	7194			0.00- 51.95	22.82
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	130596	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	97966			46.85- 106.85	75.01
15.391	15.391 (1.000)	49	227566			226.12- 286.12	174.25
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	45836	0.50000	0.5017	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	33187			35.38- 95.38	72.40
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	20129	0.50000	0.4358	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	38674			148.59- 208.59	192.13
15.669	15.669 (1.018)	41	27916			91.63- 151.63	138.69
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	53058	0.50000	0.4705	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	36165			34.20- 94.20	68.16
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	45530	0.50000	0.3923	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	52256			73.79- 133.79	114.77
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	53063	0.50000	0.4746	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	153612			276.72- 336.72	289.49
16.111	16.111 (1.047)	41	58243			82.40- 142.40	109.76

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  116 Benzene                                        CAS #: 71-43-2
 16.183  16.183 (0.967)    78     52717 0.50000   0.4765  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77     12619                    0.00-  53.88    23.94
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                          CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    211510 5.00000    5.184  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     91360                   17.94-  77.94    43.19
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                         CAS #: 994-05-8
 16.207  16.207 (0.968)    87     12730 0.50000   0.4112  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73     48923                  321.94- 381.94   384.31
 16.231  16.231 (0.970)    55     19633                  100.72- 160.72   154.23
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                             CAS #: 107-06-2
 16.303  16.303 (0.974)    62     39140 0.50000   0.4986  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64     12558                    0.66-  60.66    32.08
-------------------------------------------------------------------------------
  121 Heptane                                        CAS #: 142-82-5
 16.352  16.352 (0.977)    57     23117 0.50000   0.4834  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100      8327                    3.00-  63.00    36.02
 16.352  16.352 (0.977)    43     50836                  207.00- 267.00   219.91
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    461727 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69488                    0.00-  44.91    15.05
-------------------------------------------------------------------------------
  125 Trichloroethene                                CAS #: 79-01-6
 17.123  17.123 (1.023)   130     31613 0.50000   0.4806  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95     29635                   58.18- 118.18    93.74
 17.123  17.123 (1.023)    97     17994                   26.25-  86.25    56.92
-------------------------------------------------------------------------------
  127 Methylcyclohexane                              CAS #: 108-87-2
 17.364  17.364 (1.037)    83     28421 0.50000   0.4580  80.00- 120.00   100.00
 17.364  17.364 (1.037)    55     40342                   98.42- 158.42   141.94
 17.339  17.339 (1.036)    56     13284                    9.03-  69.03    46.74
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                            CAS #: 78-87-5
 17.556  17.556 (1.049)    63     22825 0.50000   0.4841  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62     16128                   44.02- 104.02    70.66
 17.556  17.556 (1.049)    41     20824                   65.46- 125.46    91.23
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                    CAS #: 123-91-1
 17.701  17.701 (1.058)    88     12296 0.50000   0.4756  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58     11562                   62.58- 122.58    94.03
-------------------------------------------------------------------------------
  138 Bromodichloromethane                           CAS #: 75-27-4
 17.990  17.990 (1.075)    83     48587 0.50000   0.4788  80.00- 120.00   100.00
```

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  138 Bromodichloromethane (continued)
 17.990  17.990 (1.075)    85     30890                    36.66-  96.66    63.58
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                       CAS #: 10061-01-5
 18.805  18.805 (1.124)    75     29371 0.50000   0.4418  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77     10264                     3.68-  63.68    34.95
 18.805  18.805 (1.124)    39     26916                    62.50- 122.50    91.64
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 18.984  18.984 (1.134)    43     61181 0.50000   0.4138  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58     16738                     0.00-  59.19    27.36
 19.006  19.006 (1.136)    85      6830                     0.00-  40.34    11.16
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    438242 5.00000    4.933  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     51756                     0.00-  41.31    11.81
 19.275  19.275 (1.152)   100    291409                    38.24-  98.24    66.49
-------------------------------------------------------------------------------
  147 Toluene                                       CAS #: 108-88-3
 19.432  19.432 (1.161)    91     65031 0.50000   0.4715  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92     35607                    28.10-  88.10    54.75
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                     CAS #: 10061-02-6
 19.998  19.998 (0.902)    75     30757 0.50000   0.4637  80.00- 120.00   100.00
 19.998  19.998 (0.902)    77      9748                     3.36-  63.36    31.69
 19.998  19.998 (0.902)    39     26093                    49.78- 109.78    84.84
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.438  20.438 (0.922)    97     22015 0.50000   0.4549  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99     14512                    32.24-  92.24    65.92
 20.438  20.438 (0.922)    83     18154                    48.02- 108.02    82.46
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.603  20.603 (0.929)   166     39910 0.50000   0.4932  80.00- 120.00   100.00
 20.603  20.603 (0.929)   129     30853                    49.93- 109.93    77.31
 20.603  20.603 (0.929)   131     30407                    47.75- 107.75    76.19
-------------------------------------------------------------------------------
  158 2-Hexanone                                    CAS #: 591-78-6
 20.795  20.795 (0.938)    58     16750 0.50000   0.3217  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43     43963                   225.15- 285.15   262.47
 20.795  20.795 (0.938)   100      3876                     0.00-  47.79    23.14
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129     54251 0.50000   0.4471  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127     42082                    46.75- 106.75    77.57
-------------------------------------------------------------------------------
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  161 1,2-Dibromoethane (EDB)                          CAS #: 106-93-4
 21.482  21.482 (0.969)   107     39364 0.50000   0.4835  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109     38318                   67.69- 127.69    97.34
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    436692 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    209956                   19.53-  79.53    48.08
-------------------------------------------------------------------------------
  165 Chlorobenzene                                    CAS #: 108-90-7
 22.219  22.219 (1.002)   112     60533 0.50000   0.4821  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114     19886                    1.36-  61.36    32.85
 22.219  22.219 (1.002)    77     36268                   24.91-  84.91    59.91
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                    CAS #: 100-41-4
 22.281  22.281 (1.005)   106     24783 0.50000   0.4244  80.00- 120.00   100.00
 22.281  22.281 (1.005)    91     78373                  280.28- 340.28   316.24
-------------------------------------------------------------------------------
  169 m,p-Xylene                                       CAS #: 108-38-3
 22.467  22.467 (1.013)   106     29741 0.50000   0.4573  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91     59149                  173.14- 233.14   198.88
-------------------------------------------------------------------------------
  171 o-Xylene                                         CAS #: 95-47-6
 23.089  23.089 (1.041)   106     27032 0.50000   0.4476  80.00- 120.00   100.00
 23.069  23.069 (1.040)    91     60012                  184.94- 244.94   222.00
-------------------------------------------------------------------------------
  172 Styrene                                          CAS #: 100-42-5
 23.110  23.110 (1.042)   104     43567 0.50000   0.4326  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78     24561                   23.72-  83.72    56.38
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 23.452  23.452 (1.057)   173     49135 0.50000   0.4537  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171     24427                   22.28-  82.28    49.71
-------------------------------------------------------------------------------
  175 Cumene                                           CAS #: 98-82-8
 23.542  23.542 (1.062)   105     90101 0.50000   0.4560  80.00- 120.00   100.00
 23.542  23.542 (1.062)   120     25956                    0.00-  57.53    28.81
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.856  23.856 (1.076)   174    256962 5.00000    5.038  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    279041                   81.42- 141.42   108.59
 23.856  23.856 (1.076)   176    244807                   66.35- 126.35    95.27
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 24.035  24.035 (1.084)    83     36834 0.50000   0.4746  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85     27740                   38.02-  98.02    75.31
-------------------------------------------------------------------------------
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.086)	91	81395	0.50000	0.4625	80.00- 120.00	100.00
24.080	24.080 (1.086)	120	19277			0.00- 56.42	23.68
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	61947	0.50000	0.4566	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	18942			0.46- 60.46	30.58
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	50027	0.50000	0.4573	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	25218			18.43- 78.43	50.41
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.116)	105	36772	0.50000	0.4255	80.00- 120.00	100.00
24.753	24.753 (1.116)	120	16253			16.45- 76.45	44.20
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	44444	0.50000	0.4724	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	29502			33.61- 93.61	66.38
25.156	25.156 (1.134)	111	16648			9.29- 69.29	37.46
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	40555	0.50000	0.4549	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	28253			34.28- 94.28	69.67
25.269	25.269 (1.139)	111	15917			7.48- 67.48	39.25
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	57341	0.50000	0.4656	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	13310			0.00- 53.55	23.21
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	40130	0.50000	0.4621	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	26133			33.54- 93.54	65.12
25.672	25.672 (1.158)	111	15703			10.04- 70.04	39.13
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	16883	0.50000	0.4516	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	16143			66.37- 126.37	95.62
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	34062	0.50000	0.4924	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	23065			32.58- 92.58	67.71

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070314.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 0.5ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	130596	-6.61
123 1,4-Difluorobenze	482877	289726	676028	461727	-4.38
163 Chlorobenzene-d5	450551	270331	630771	436692	-3.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070314.d

Date : 03-JUL-2017 15:59

Client ID: Level 7

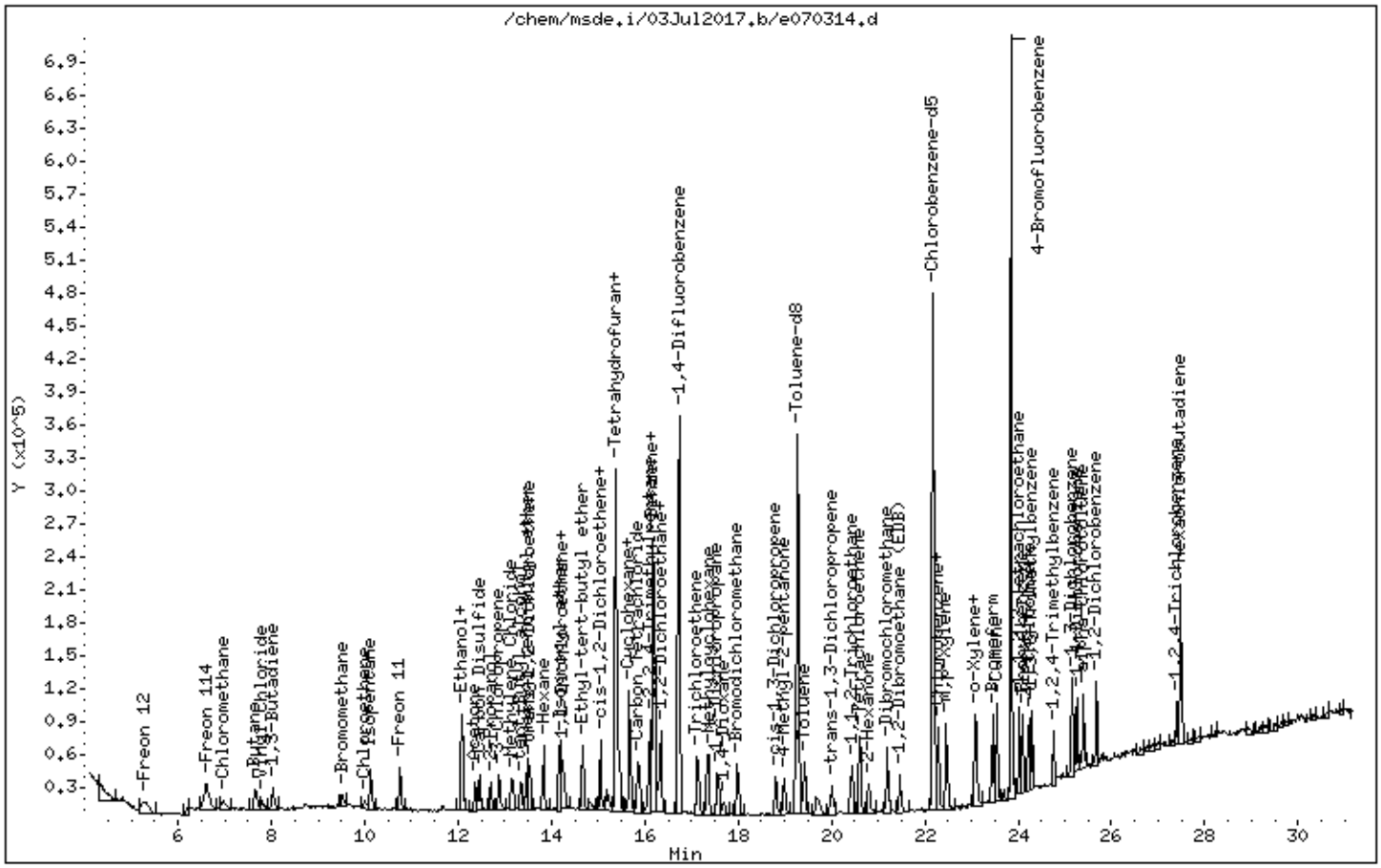
Instrument: msde.i

Sample Info: 125mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070315.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 03-JUL-2017 16:41
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-229
Misc Info : 1.0ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 16:41 Cal File: e070315.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.859	4.859 (0.316)	41	47824	1.00000	1.050	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	18240			36.86- 96.86	38.14
4.835	4.835 (0.314)	39	20219			46.23- 106.23	42.28
11 Freon 12					CAS #: 75-71-8		
5.293	5.293 (0.344)	85	108727	1.00000	0.9513	80.00- 120.00	100.00
5.317	5.317 (0.345)	87	34486			1.93- 61.93	31.72
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	85129	1.00000	1.013	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	26620			1.36- 61.36	31.27
6.618	6.618 (0.430)	85	99539			85.72- 145.72	116.93
17 Chloromethane					CAS #: 74-87-3		
6.980	6.980 (0.454)	50	51059	1.00000	1.065	80.00- 120.00	100.00
7.004	7.004 (0.455)	52	14696			1.40- 61.40	28.78
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	9365	1.00000	1.064	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.675	7.675 (0.499)	43	82977			939.22- 999.22	886.03
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	33069	1.00000	0.8903	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	10020			0.00- 59.78	30.30
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	33465	1.00000	0.8967	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	40476			90.63- 150.63	120.95
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	24001	1.00000	0.9022	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	24396			63.10- 123.10	101.65
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	14557	1.00000	0.9455	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	7629			13.74- 73.74	52.41
10.005	10.005 (0.650)	66	5335			0.11- 60.11	36.65
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	35630	1.00000	1.043	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	67273			149.05- 209.05	188.81
10.138	10.138 (0.659)	42	58129			122.74- 182.74	163.15
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	130142	1.00000	0.9986	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	84666			35.39- 95.39	65.06
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	18677	1.00000	0.8667	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	7998			10.30- 70.30	42.82
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	79916	1.00000	0.9776	80.00- 120.00	100.00
12.100	12.100 (0.786)	153	50945			33.74- 93.74	63.75
12.081	12.081 (0.785)	101	85509			78.29- 138.29	107.00
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	21192	1.00000	0.9247	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	73754			307.46- 367.46	348.03
12.100	12.100 (0.786)	96	35433			127.87- 187.87	167.20
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	23198	1.00000	1.038	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	104379			407.61- 467.61	449.95

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.462 (0.810)	76	101673	1.00000	1.060	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	93006	1.00000	0.8974	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	20266			0.00- 50.43	21.79
12.709	12.709 (0.826)	59	2506			0.00- 33.00	2.69
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	17889	1.00000	0.9273	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	98894			511.05- 571.05	552.82
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	28567	1.00000	0.9176	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	62443			205.99- 265.99	218.58
13.149	13.149 (0.854)	51	19492			40.46- 100.46	68.23
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	93254	1.00000	0.9177	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	32731			0.00- 56.56	35.10
13.341	13.341 (0.867)	57	11976			0.00- 41.82	12.84
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	99024	1.00000	0.9069	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	32130			0.79- 60.79	32.45
13.478	13.478 (0.876)	41	40503			7.43- 67.43	40.90
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	23088	1.00000	0.9447	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	61634			247.42- 307.42	266.95
13.533	13.533 (0.879)	96	37111			122.37- 182.37	160.74
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	66064	1.00000	0.9046	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	56496			51.15- 111.15	85.52
13.835	13.835 (0.899)	86	8030			0.00- 41.56	12.15
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	184850	1.00000	0.9248	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	29894			0.00- 45.86	16.17
14.192	14.192 (0.922)	59	15977			0.00- 38.07	8.64
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	71168	1.00000	0.9147	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	22388			0.00- 59.55	31.46

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86      8142 1.00000   0.8863  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42     12380                   118.75- 178.75   152.05
 14.247  14.247 (0.926)    43    123239                  1798.00-1858.00  1513.62
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59    140154 1.00000   0.9073  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87     47086                     2.81-  62.81    33.60
 14.685  14.685 (0.954)    41     34285                     0.00-  53.89    24.46
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98     23693 1.00000   0.9251  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61     62255                   229.72- 289.72   262.76
 15.047  15.047 (0.978)    96     36657                   126.60- 186.60   154.72
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72     14548 1.00000   0.9320  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    110963                   750.92- 810.92   762.74
 15.047  15.047 (0.978)    57      7820                    19.16-  79.16    53.75
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42     58579 1.00000   0.8564  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71     11974                     0.00-  50.51    20.44
 15.391  15.391 (1.000)    72     16191                     0.00-  51.95    27.64
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    130576 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    100921                    46.85- 106.85    77.29
 15.391  15.391 (1.000)    49    236473                   226.12- 286.12   181.10
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83     85817 1.00000   0.9394  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85     59384                    35.38-  95.38    69.20
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84     43220 1.00000   0.9358  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56     74186                   148.59- 208.59   171.65
 15.669  15.669 (1.018)    41     55659                    91.63- 151.63   128.78
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97    111705 1.00000   0.9908  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99     67027                    34.20-  94.20    60.00
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119     91726 1.00000   0.7905  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117     93522                    73.79- 133.79   101.96
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56    106315 1.00000   0.9510  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57    305353                  276.72- 336.72   287.22
 16.111  16.111 (1.047)    41    116511                   82.40- 142.40   109.59
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78    102793 1.00000   0.9440  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77     25122                    0.00-  53.88    24.44
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    209327 5.00000    5.131  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     89903                   17.94-  77.94    42.95
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.207  16.207 (0.968)    87     28097 1.00000   0.9221  80.00- 120.00   100.00
 16.207  16.207 (0.968)    73    100690                  321.94- 381.94   358.37
 16.207  16.207 (0.968)    55     42248                  100.72- 160.72   150.36
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62     74144 1.00000   0.9596  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64     22592                    0.66-  60.66    30.47
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57     43702 1.00000   0.9286  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100     14828                    3.00-  63.00    33.93
 16.352  16.352 (0.977)    43    102841                  207.00- 267.00   235.32
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    454441 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     68227                    0.00-  44.91    15.01
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.123 (1.023)   130     64089 1.00000   0.9900  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95     55773                   58.18- 118.18    87.02
 17.123  17.123 (1.023)    97     35264                   26.25-  86.25    55.02
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.340  17.340 (1.036)    83     57902 1.00000   0.9481  80.00- 120.00   100.00
 17.340  17.340 (1.036)    55     73355                   98.42- 158.42   126.69
 17.340  17.340 (1.036)    56     23743                    9.03-  69.03    41.01
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63     42156 1.00000   0.9084  80.00- 120.00   100.00
 17.581  17.581 (1.050)    62     30598                   44.02- 104.02    72.58
 17.556  17.556 (1.049)    41     43346                   65.46- 125.46   102.82
-------------------------------------------------------------------------------
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	24728	1.00000	0.9718	80.00- 120.00	100.00
17.701	17.701 (1.058)	58	25180			62.58- 122.58	101.83
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	95978	1.00000	0.9609	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	60407			36.66- 96.66	62.94
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	58355	1.00000	0.8920	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	20218			3.68- 63.68	34.65
18.805	18.805 (1.124)	39	56500			62.50- 122.50	96.82
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	131229	1.00000	0.9017	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	38772			0.00- 59.19	29.55
18.984	18.984 (1.134)	85	14005			0.00- 40.34	10.67
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	441206	5.00000	5.046	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	48160			0.00- 41.31	10.92
19.275	19.275 (1.152)	100	294904			38.24- 98.24	66.84
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	127021	1.00000	0.9358	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	76528			28.10- 88.10	60.25
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	59821	1.00000	0.9010	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	18488			3.36- 63.36	30.91
19.998	19.998 (0.903)	39	46808			49.78- 109.78	78.25
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	45906	1.00000	0.9477	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	29053			32.24- 92.24	63.29
20.438	20.438 (0.922)	83	36636			48.02- 108.02	79.81
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.930)	166	76255	1.00000	0.9413	80.00- 120.00	100.00
20.603	20.603 (0.930)	129	63904			49.93- 109.93	83.80
20.603	20.603 (0.930)	131	60060			47.75- 107.75	78.76
158 2-Hexanone					CAS #: 591-78-6		
20.795	20.795 (0.939)	58	37805	1.00000	0.7253	80.00- 120.00	100.00
20.795	20.795 (0.939)	43	103161			225.15- 285.15	272.88
20.795	20.795 (0.939)	100	7478			0.00- 47.79	19.78

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.957)   129    110947 1.00000   0.9134  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127     87013                   46.75- 106.75    78.43
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.970)   107     75202 1.00000   0.9227  80.00- 120.00   100.00
 21.482  21.482 (0.970)   109     75502                   67.69- 127.69   100.40
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    437143 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    213115                   19.53-  79.53    48.75
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.003)   112    118327 1.00000   0.9414  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114     38583                    1.36-  61.36    32.61
 22.219  22.219 (1.003)    77     66353                   24.91-  84.91    56.08
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.006)   106     51636 1.00000   0.8834  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91    166566                  280.28- 340.28   322.58
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.014)   106     61748 1.00000   0.9486  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91    117157                  173.14- 233.14   189.73
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.041)   106     54614 1.00000   0.9033  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91    113374                  184.94- 244.94   207.59
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.043)   104     90417 1.00000   0.8968  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78     47692                   23.72-  83.72    52.75
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.058)   173     96948 1.00000   0.8943  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171     50536                   22.28-  82.28    52.13
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.063)   105    177079 1.00000   0.8952  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120     52682                    0.00-  57.53    29.75
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.077)   174    260701 5.00000    5.106  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    287267                   81.42- 141.42   110.19
 23.856  23.856 (1.077)   176    250038                   66.35- 126.35    95.91
-------------------------------------------------------------------------------
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	74707	1.00000	0.9616	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	49814			38.02- 98.02	66.68
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	166834	1.00000	0.9470	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	43702			0.00- 56.42	26.19
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	123009	1.00000	0.9058	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	38371			0.46- 60.46	31.19
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	100850	1.00000	0.9210	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	49062			18.43- 78.43	48.65
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	75554	1.00000	0.8733	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	35782			16.45- 76.45	47.36
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.135)	146	87661	1.00000	0.9308	80.00- 120.00	100.00
25.156	25.156 (1.135)	148	57014			33.61- 93.61	65.04
25.156	25.156 (1.135)	111	33833			9.29- 69.29	38.60
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	82132	1.00000	0.9203	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	50955			34.28- 94.28	62.04
25.269	25.269 (1.140)	111	29513			7.48- 67.48	35.93
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	112824	1.00000	0.9152	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	26069			0.00- 53.55	23.11
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	83872	1.00000	0.9648	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	50488			33.54- 93.54	60.20
25.672	25.672 (1.159)	111	32569			10.04- 70.04	38.83
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	33495	1.00000	0.8949	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	32472			66.37- 126.37	96.95
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	70957	1.00000	1.025	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	43078			32.58- 92.58	60.71

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	5796	0.10000	0.07664	80.00- 120.00	100.00(a)
27.712	27.712	(1.251)	127	1989			0.00- 41.67	34.32

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070315.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 1.0ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	130576	-6.63
123 1,4-Difluorobenze	482877	289726	676028	454441	-5.89
163 Chlorobenzene-d5	450551	270331	630771	437143	-2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070315.d

Date : 03-JUL-2017 16:41

Client ID: Level 8

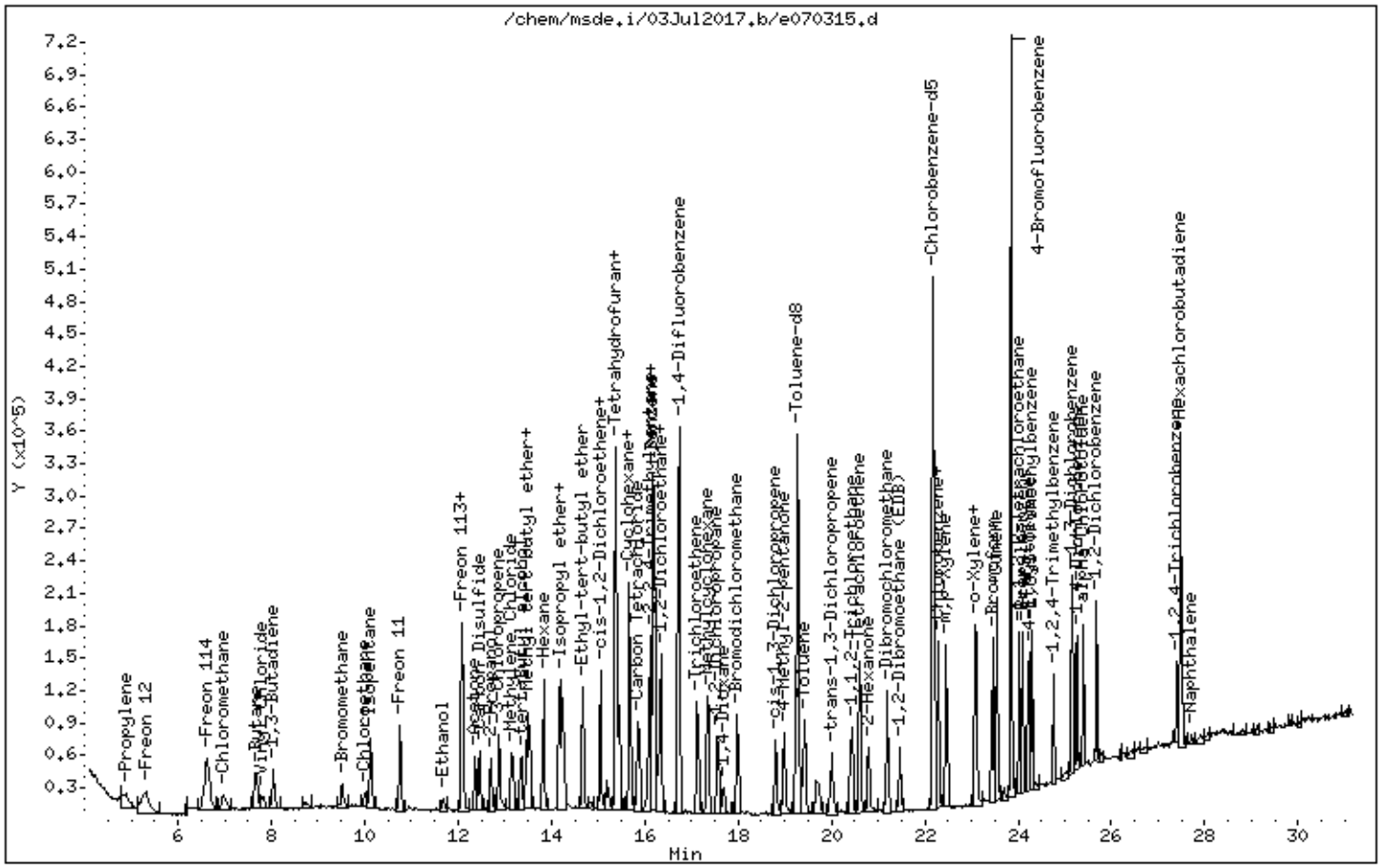
Instrument: msde.i

Sample Info: 250mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070316.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 03-JUL-2017 17:24
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-222
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 17:24 Cal File: e070316.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.811	4.811 (0.313)	41	259354	5.00000	5.362	80.00- 120.00	100.00
4.811	4.811 (0.313)	42	166139			36.86- 96.86	64.06
4.835	4.835 (0.314)	39	195313			46.23- 106.23	75.31
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	645289	5.00000	5.317	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	197413			1.93- 61.93	30.59
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	479815	5.00000	5.377	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	149449			1.36- 61.36	31.15
6.570	6.570 (0.427)	85	552633			85.72- 145.72	115.18
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	265701	5.00000	5.222	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	82890			1.40- 61.40	31.20
23 Butane					CAS #: 106-97-8		
7.640	7.640 (0.496)	58	48979	5.00000	5.241	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	465522			939.22- 999.22	950.45
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	202594	5.00000	5.137	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	58852			0.00- 59.78	29.05
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	206202	5.00000	5.204	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	243245			90.63- 150.63	117.96
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	155618	5.00000	5.510	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	151065			63.10- 123.10	97.07
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	95156	5.00000	5.821	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	42661			13.74- 73.74	44.83
9.986	9.986 (0.649)	66	28992			0.11- 60.11	30.47
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	210968	5.00000	5.816	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	384669			149.05- 209.05	182.34
10.119	10.119 (0.657)	42	333946			122.74- 182.74	158.29
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	761734	5.00000	5.505	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	491080			35.39- 95.39	64.47
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	129409	5.00000	5.656	80.00- 120.00	100.00
11.661	11.661 (0.758)	46	51769			10.30- 70.30	40.00
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	466247	5.00000	5.372	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	296642			33.74- 93.74	63.62
12.081	12.081 (0.785)	101	495001			78.29- 138.29	106.17
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	128851	5.00000	5.296	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	430669			307.46- 367.46	334.24
12.100	12.100 (0.786)	96	201438			127.87- 187.87	156.33
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	122966	5.00000	5.184	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	558142			407.61- 467.61	453.90

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.461 (0.810)	76	526821	5.00000	5.175	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	598303	5.00000	5.438	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	123968			0.00- 50.43	20.72
12.690	12.690 (0.824)	59	17575			0.00- 33.00	2.94
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	107055	5.00000	5.227	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	589318			511.05- 571.05	550.48
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	173675	5.00000	5.254	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	400975			205.99- 265.99	230.88
13.149	13.149 (0.854)	51	120439			40.46- 100.46	69.35
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	598543	5.00000	5.548	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	163097			0.00- 56.56	27.25
13.341	13.341 (0.867)	57	69111			0.00- 41.82	11.55
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	617904	5.00000	5.330	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	193222			0.79- 60.79	31.27
13.478	13.478 (0.876)	41	230570			7.43- 67.43	37.31
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	138239	5.00000	5.328	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	387207			247.42- 307.42	280.10
13.533	13.533 (0.879)	96	216098			122.37- 182.37	156.32
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	435236	5.00000	5.613	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	355685			51.15- 111.15	81.72
13.835	13.835 (0.899)	86	50127			0.00- 41.56	11.52
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	1192237	5.00000	5.618	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	188982			0.00- 45.86	15.85
14.165	14.165 (0.920)	59	98390			0.00- 38.07	8.25
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	447865	5.00000	5.422	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	130548			0.00- 59.55	29.15

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	56272	5.00000	5.769	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	83368			118.75- 178.75	148.15
14.247	14.247 (0.926)	43	975204			1798.00-1858.00	1733.02
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
14.666	14.666 (0.953)	59	918029	5.00000	5.597	80.00- 120.00	100.00
14.666	14.666 (0.953)	87	301524			2.81- 62.81	32.84
14.666	14.666 (0.953)	41	228273			0.00- 53.89	24.87
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	148474	5.00000	5.460	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	378275			229.72- 289.72	254.78
15.047	15.047 (0.978)	96	230032			126.60- 186.60	154.93
92 2-Butanone					CAS #: 78-93-3		
15.028	15.028 (0.976)	72	93455	5.00000	5.639	80.00- 120.00	100.00
15.028	15.028 (0.976)	43	717781			750.92- 810.92	768.05
15.028	15.028 (0.976)	57	46221			19.16- 79.16	49.46
99 Tetrahydrofuran					CAS #: 109-99-9		
15.360	15.360 (0.998)	42	406074	5.00000	5.592	80.00- 120.00	100.00
15.360	15.360 (0.998)	71	88519			0.00- 50.51	21.80
15.360	15.360 (0.998)	72	90050			0.00- 51.95	22.18
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	138638	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	105426			46.85- 106.85	76.04
15.391	15.391 (1.000)	49	296182			226.12- 286.12	213.64
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	529465	5.00000	5.459	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	347896			35.38- 95.38	65.71
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	271965	5.00000	5.546	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	485499			148.59- 208.59	178.52
15.669	15.669 (1.018)	41	329277			91.63- 151.63	121.07
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	644055	5.00000	5.380	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	408782			34.20- 94.20	63.47
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	742900	5.00000	6.030	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	776923			73.79- 133.79	104.58

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane                          CAS #: 540-84-1
 16.111  16.111 (1.047)    56    646542 5.00000    5.447  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   1939537                  276.72- 336.72   299.99
 16.111  16.111 (1.047)    41    730599                   82.40- 142.40   113.00
-------------------------------------------------------------------------------
  116 Benzene                                         CAS #: 71-43-2
 16.183  16.183 (0.967)    78    619000 5.00000    5.274  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    144997                    0.00-  53.88    23.42
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                           CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    208189 5.00000    4.806  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67    100543                   17.94-  77.94    48.29
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                          CAS #: 994-05-8
 16.207  16.207 (0.968)    87    186170 5.00000    5.668  80.00- 120.00   100.00
 16.207  16.207 (0.968)    73    664756                  321.94- 381.94   357.07
 16.207  16.207 (0.968)    55    252234                  100.72- 160.72   135.49
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                              CAS #: 107-06-2
 16.303  16.303 (0.974)    62    442857 5.00000    5.317  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    131113                    0.66-  60.66    29.61
-------------------------------------------------------------------------------
  121 Heptane                                         CAS #: 142-82-5
 16.352  16.352 (0.977)    57    278577 5.00000    5.492  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100     93358                    3.00-  63.00    33.51
 16.352  16.352 (0.977)    43    657434                  207.00- 267.00   236.00
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                             CAS #: 540-36-3
 16.737  16.737 (1.000)   114    489821 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     70085                    0.00-  44.91    14.31
-------------------------------------------------------------------------------
  125 Trichloroethene                                 CAS #: 79-01-6
 17.123  17.123 (1.023)   130    371771 5.00000    5.328  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    324279                   58.18- 118.18    87.23
 17.123  17.123 (1.023)    97    209199                   26.25-  86.25    56.27
-------------------------------------------------------------------------------
  127 Methylcyclohexane                               CAS #: 108-87-2
 17.339  17.339 (1.036)    83    354161 5.00000    5.380  80.00- 120.00   100.00
 17.339  17.339 (1.036)    55    464643                   98.42- 158.42   131.20
 17.339  17.339 (1.036)    56    139969                    9.03-  69.03    39.52
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                             CAS #: 78-87-5
 17.556  17.556 (1.049)    63    252706 5.00000    5.052  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    180749                   44.02- 104.02    71.53
 17.556  17.556 (1.049)    41    245100                   65.46- 125.46    96.99
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.677  17.677 (1.056)    88    151152 5.00000    5.511  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58    141534                   62.58- 122.58    93.64
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83    579235 5.00000    5.380  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    382768                   36.66-  96.66    66.08
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    385777 5.00000    5.471  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    123384                    3.68-  63.68    31.98
 18.805  18.805 (1.124)    39    359319                   62.50- 122.50    93.14
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43    872847 5.00000    5.564  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58    258470                    0.00-  59.19    29.61
 18.984  18.984 (1.134)    85     92777                    0.00-  40.34    10.63
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    468323 5.00000    4.969  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     50355                    0.00-  41.31    10.75
 19.275  19.275 (1.152)   100    306720                   38.24-  98.24    65.49
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91    780873 5.00000    5.337  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    458673                   28.10-  88.10    58.74
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    390756 5.00000    5.680  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    121150                    3.36-  63.36    31.00
 19.998  19.998 (0.903)    39    303033                   49.78- 109.78    77.55
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    282511 5.00000    5.628  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    173022                   32.24-  92.24    61.24
 20.438  20.438 (0.922)    83    219114                   48.02- 108.02    77.56
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.930)   166    458046 5.00000    5.457  80.00- 120.00   100.00
 20.603  20.603 (0.930)   129    372706                   49.93- 109.93    81.37
 20.603  20.603 (0.930)   131    366473                   47.75- 107.75    80.01
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    311718 5.00000    5.771  80.00- 120.00   100.00
 20.767  20.767 (0.937)    43    793762                  225.15- 285.15   254.64
 20.795  20.795 (0.939)   100     52344                    0.00-  47.79    16.79
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129    703107 5.00000    5.586  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    554125                   46.75- 106.75    78.81
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.482  21.482 (0.970)   107    473480 5.00000    5.606  80.00- 120.00   100.00
 21.482  21.482 (0.970)   109    471206                   67.69- 127.69    99.52
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    452971 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    221648                   19.53-  79.53    48.93
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.219  22.219 (1.003)   112    701670 5.00000    5.388  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    230239                    1.36-  61.36    32.81
 22.219  22.219 (1.003)    77    390968                   24.91-  84.91    55.72
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    334430 5.00000    5.522  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91   1032313                  280.28- 340.28   308.68
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    380615 5.00000    5.643  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91    777968                  173.14- 233.14   204.40
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    354068 5.00000    5.652  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91    743934                  184.94- 244.94   210.11
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104    588833 5.00000    5.636  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    310136                   23.72-  83.72    52.67
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173    639135 5.00000    5.690  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    334943                   22.28-  82.28    52.41
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1160811 5.00000    5.663  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    320764                    0.00-  57.53    27.63
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    266186 5.00000    5.031  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    299960                   81.42- 141.42   112.69
 23.856  23.856 (1.077)   176    256140                   66.35- 126.35    96.23
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	440541	5.00000	5.472	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	304000			38.02- 98.02	69.01
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1015646	5.00000	5.564	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	270415			0.00- 56.42	26.62
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	807772	5.00000	5.740	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	247320			0.46- 60.46	30.62
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	635613	5.00000	5.602	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	309875			18.43- 78.43	48.75
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	469524	5.00000	5.238	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	221114			16.45- 76.45	47.09
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.135)	146	517767	5.00000	5.306	80.00- 120.00	100.00
25.156	25.156 (1.135)	148	328029			33.61- 93.61	63.35
25.156	25.156 (1.135)	111	199754			9.29- 69.29	38.58
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	478658	5.00000	5.176	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	307257			34.28- 94.28	64.19
25.269	25.269 (1.140)	111	173234			7.48- 67.48	36.19
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	679506	5.00000	5.320	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	161155			0.00- 53.55	23.72
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	471941	5.00000	5.239	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	304391			33.54- 93.54	64.50
25.672	25.672 (1.159)	111	188983			10.04- 70.04	40.04
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	189211	5.00000	4.879	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	179084			66.37- 126.37	94.65
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	366812	5.00000	5.112	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	227015			32.58- 92.58	61.89

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	36789	0.50000	0.4695	80.00- 120.00	100.00
27.712	27.712	(1.251)	127	5917			0.00- 41.67	16.08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070316.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	138638	-0.86
123 1,4-Difluorobenze	482877	289726	676028	489821	1.44
163 Chlorobenzene-d5	450551	270331	630771	452971	0.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070316.d

Date : 03-JUL-2017 17:24

Client ID: Level 12

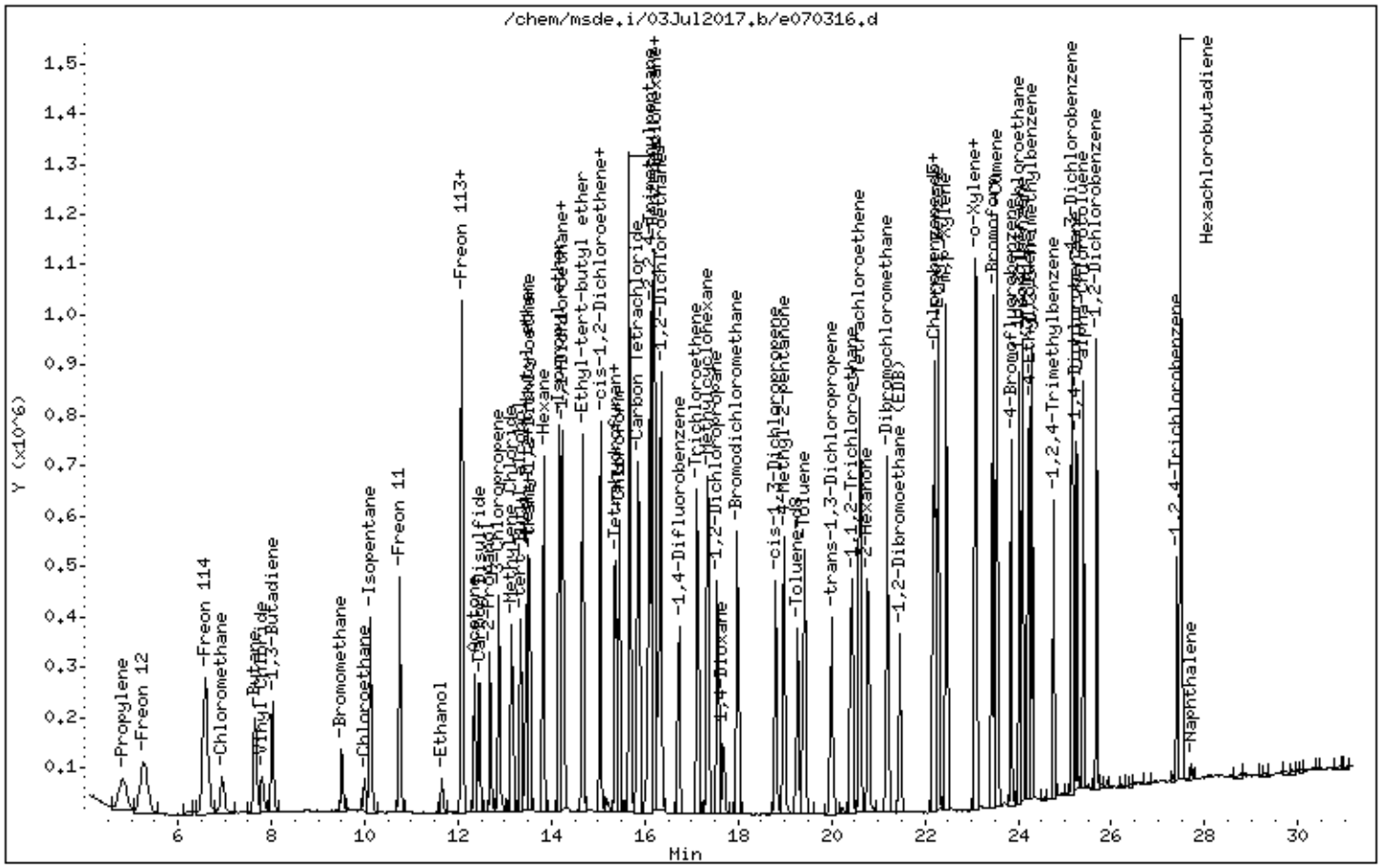
Instrument: msde.i

Sample Info: 25mL# 2850-222

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070317.d
Lab Smp Id: ICAL Client Smp ID: Level 13
Inj Date : 03-JUL-2017 18:31
Operator : mjs Inst ID: msde.i
Smp Info : 50mL #2850-222
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:12 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 Calibration Sample, Level: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	487804	10.0000	9.999	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	326158			36.86- 96.86	66.86
4.835	4.835 (0.314)	39	371870			46.23- 106.23	76.23
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1212350	10.0000	9.904	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	387048			1.93- 61.93	31.93
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	907355	10.0000	10.082	80.00- 120.00	100.00
6.570	6.570 (0.427)	137	284526			1.36- 61.36	31.36
6.594	6.594 (0.428)	85	1049950			85.72- 145.72	115.72
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	490178	10.0000	9.550	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	153905			1.40- 61.40	31.40
23 Butane					CAS #: 106-97-8		
7.641	7.641 (0.496)	58	92458	10.0000	9.809	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.641	7.641 (0.496)	43	896123			939.22- 999.22	969.22
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	378076	10.0000	9.504	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	112585			0.00- 59.78	29.78
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	387341	10.0000	9.691	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	467266			90.63- 150.63	120.63
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	293205	10.0000	10.292	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	272982			63.10- 123.10	93.10
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	163033	10.0000	9.888	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	71305			13.74- 73.74	43.74
9.986	9.986 (0.649)	66	49097			0.11- 60.11	30.11
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	343612	10.0000	9.391	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	615248			149.05- 209.05	179.05
10.119	10.119 (0.657)	42	524827			122.74- 182.74	152.74
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1405894	10.0000	10.073	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	919306			35.39- 95.39	65.39
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	246013	10.0000	10.660	80.00- 120.00	100.00
11.662	11.662 (0.758)	46	99155			10.30- 70.30	40.30
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	855312	10.0000	9.770	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	545172			33.74- 93.74	63.74
12.081	12.081 (0.785)	101	926203			78.29- 138.29	108.29
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	241756	10.0000	9.850	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	815821			307.46- 367.46	337.46
12.100	12.100 (0.786)	96	381659			127.87- 187.87	157.87
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	237700	10.0000	9.934	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1040199			407.61- 467.61	437.61

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	987438	10.0000	9.617	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	1145470	10.0000	10.321	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	234022			0.00- 50.43	20.43
12.690	12.690 (0.824)	59	34412			0.00- 33.00	3.00
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	212006	10.0000	10.262	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1147066			511.05- 571.05	541.05
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	321133	10.0000	9.632	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	757846			205.99- 265.99	235.99
13.149	13.149 (0.854)	51	226267			40.46- 100.46	70.46
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	1151858	10.0000	10.584	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	305983			0.00- 56.56	26.56
13.341	13.341 (0.867)	57	136147			0.00- 41.82	11.82
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	1168328	10.0000	9.991	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	359703			0.79- 60.79	30.79
13.478	13.478 (0.876)	41	437251			7.43- 67.43	37.43
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	262614	10.0000	10.034	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	728540			247.42- 307.42	277.42
13.533	13.533 (0.879)	96	400151			122.37- 182.37	152.37
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	811699	10.0000	10.378	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	658716			51.15- 111.15	81.15
13.835	13.835 (0.899)	86	93822			0.00- 41.56	11.56
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	2255087	10.0000	10.535	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	357716			0.00- 45.86	15.86
14.165	14.165 (0.920)	59	181924			0.00- 38.07	8.07
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	832909	10.0000	9.996	80.00- 120.00	100.00
14.220	14.220 (0.924)	65	246129			0.00- 59.55	29.55

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    106606 10.0000   10.835  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    158574                  118.75- 178.75   148.75
 14.247  14.247 (0.926)    43   1948761                  1798.00-1858.00  1828.00
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59   1750731 10.0000   10.582  80.00- 120.00   100.00
 14.666  14.666 (0.953)    87    574359                    2.81-  62.81    32.81
 14.666  14.666 (0.953)    41    418238                    0.00-  53.89    23.89
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    270948 10.0000    9.878  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61    703697                  229.72- 289.72   259.72
 15.047  15.047 (0.978)    96    424302                  126.60- 186.60   156.60
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.028  15.028 (0.976)    72    176722 10.0000   10.571  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1380060                  750.92- 810.92   780.92
 15.028  15.028 (0.976)    57     86884                   19.16-  79.16    49.16
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42    779810 10.0000   10.646  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71    159934                    0.00-  50.51    20.51
 15.360  15.360 (0.998)    72    171196                    0.00-  51.95    21.95
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    139842 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107466                   46.85- 106.85    76.85
 15.391  15.391 (1.000)    49    358168                  226.12- 286.12   256.12
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83    974207 10.0000    9.958  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    636914                   35.38-  95.38    65.38
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    513313 10.0000   10.377  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    916743                  148.59- 208.59   178.59
 15.669  15.669 (1.018)    41    624324                   91.63- 151.63   121.63
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1194865 10.0000    9.896  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    767069                   34.20-  94.20    64.20
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1375640 10.0000   11.070  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1427721                   73.79- 133.79   103.79
-------------------------------------------------------------------------------
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1216740 10.0000   10.163  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   3731978                  276.72- 336.72   306.72
 16.111  16.111 (1.047)    41   1367621                   82.40- 142.40   112.40
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78   1159216 10.0000   10.018  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    276841                    0.00-  53.88    23.88
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    220008 5.00000    5.036  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67    105482                   17.94-  77.94    47.94
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.207  16.207 (0.968)    87    356780 10.0000   11.020  80.00- 120.00   100.00
 16.207  16.207 (0.968)    73   1255638                  321.94- 381.94   351.94
 16.207  16.207 (0.968)    55    466370                  100.72- 160.72   130.72
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62    835354 10.0000   10.174  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64    256127                    0.66-  60.66    30.66
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    524108 10.0000   10.480  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    172944                    3.00-  63.00    33.00
 16.352  16.352 (0.977)    43   1242135                  207.00- 267.00   237.00
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    482877 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     71986                    0.00-  44.91    14.91
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.123 (1.023)   130    694037 10.0000   10.089  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    611986                   58.18- 118.18    88.18
 17.123  17.123 (1.023)    97    390390                   26.25-  86.25    56.25
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.340  17.340 (1.036)    83    693992 10.0000   10.694  80.00- 120.00   100.00
 17.340  17.340 (1.036)    55    891255                   98.42- 158.42   128.42
 17.340  17.340 (1.036)    56    270853                    9.03-  69.03    39.03
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63    469705 10.0000    9.525  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    347666                   44.02- 104.02    74.02
 17.556  17.556 (1.049)    41    448377                   65.46- 125.46    95.46
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	294620	10.0000	10.896	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	272752			62.58- 122.58	92.58
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	1078096	10.0000	10.158	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	718644			36.66- 96.66	66.66
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	732177	10.0000	10.532	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	246581			3.68- 63.68	33.68
18.805	18.805 (1.124)	39	677238			62.50- 122.50	92.50
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1709414	10.0000	11.054	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	498990			0.00- 59.19	29.19
18.984	18.984 (1.134)	85	176827			0.00- 40.34	10.34
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	466910	5.00000	5.026	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	52796			0.00- 41.31	11.31
19.275	19.275 (1.152)	100	318636			38.24- 98.24	68.24
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	1462635	10.0000	10.141	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	849763			28.10- 88.10	58.10
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	722325	10.0000	10.556	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	240960			3.36- 63.36	33.36
19.998	19.998 (0.903)	39	576237			49.78- 109.78	79.78
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	529423	10.0000	10.604	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	329506			32.24- 92.24	62.24
20.438	20.438 (0.922)	83	413046			48.02- 108.02	78.02
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.930)	166	869750	10.0000	10.417	80.00- 120.00	100.00
20.603	20.603 (0.930)	129	695149			49.93- 109.93	79.93
20.603	20.603 (0.930)	131	676243			47.75- 107.75	77.75
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.937)	58	619634	10.0000	11.534	80.00- 120.00	100.00
20.767	20.767 (0.937)	43	1580995			225.15- 285.15	255.15
20.767	20.767 (0.937)	100	110240			0.00- 47.79	17.79

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1335209 10.0000   10.665  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127   1024775                   46.75- 106.75    76.75
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.970)   107    901727 10.0000   10.734  80.00- 120.00   100.00
 21.482  21.482 (0.970)   109    880864                   67.69- 127.69    97.69
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    450551 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    223180                   19.53-  79.53    49.53
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.003)   112   1302420 10.0000   10.054  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    408459                    1.36-  61.36    31.36
 22.219  22.219 (1.003)    77    715171                   24.91-  84.91    54.91
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.006)   106    635590 10.0000   10.551  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91   1972106                  280.28- 340.28   310.28
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.014)   106    727315 10.0000   10.840  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1477497                  173.14- 233.14   203.14
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.041)   106    668262 10.0000   10.724  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1436347                  184.94- 244.94   214.94
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.043)   104   1133955 10.0000   10.912  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    609123                   23.72-  83.72    53.72
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1207676 10.0000   10.809  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    631407                   22.28-  82.28    52.28
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.063)   105   2232710 10.0000   10.951  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    614682                    0.00-  57.53    27.53
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.077)   174    273991 5.00000    5.207  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    305290                   81.42- 141.42   111.42
 23.856  23.856 (1.077)   176    263979                   66.35- 126.35    96.35
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	817617	10.0000	10.211	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	556129			38.02- 98.02	68.02
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1918057	10.0000	10.563	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	506707			0.00- 56.42	26.42
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	1565317	10.0000	11.183	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	476744			0.46- 60.46	30.46
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	1225768	10.0000	10.860	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	593609			18.43- 78.43	48.43
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	924876	10.0000	10.372	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	429650			16.45- 76.45	46.45
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.135)	146	995251	10.0000	10.254	80.00- 120.00	100.00
25.157	25.157 (1.135)	148	633112			33.61- 93.61	63.61
25.157	25.157 (1.135)	111	391010			9.29- 69.29	39.29
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	927668	10.0000	10.085	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	596331			34.28- 94.28	64.28
25.269	25.269 (1.140)	111	347695			7.48- 67.48	37.48
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1365878	10.0000	10.750	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	321598			0.00- 53.55	23.55
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	927156	10.0000	10.348	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	589101			33.54- 93.54	63.54
25.672	25.672 (1.159)	111	371229			10.04- 70.04	40.04
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	403157	10.0000	10.451	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	388512			66.37- 126.37	96.37
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	741115	10.0000	10.385	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	463760			32.58- 92.58	62.58

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	77139	1.00000	0.9897	80.00- 120.00	100.00
27.712	27.712	(1.251)	127	9004			0.00- 41.67	11.67

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070317.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 13
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	139842	0.00
123 1,4-Difluorobenze	482877	289726	676028	482877	0.00
163 Chlorobenzene-d5	450551	270331	630771	450551	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070317.d

Date : 03-JUL-2017 18:31

Client ID: Level 13

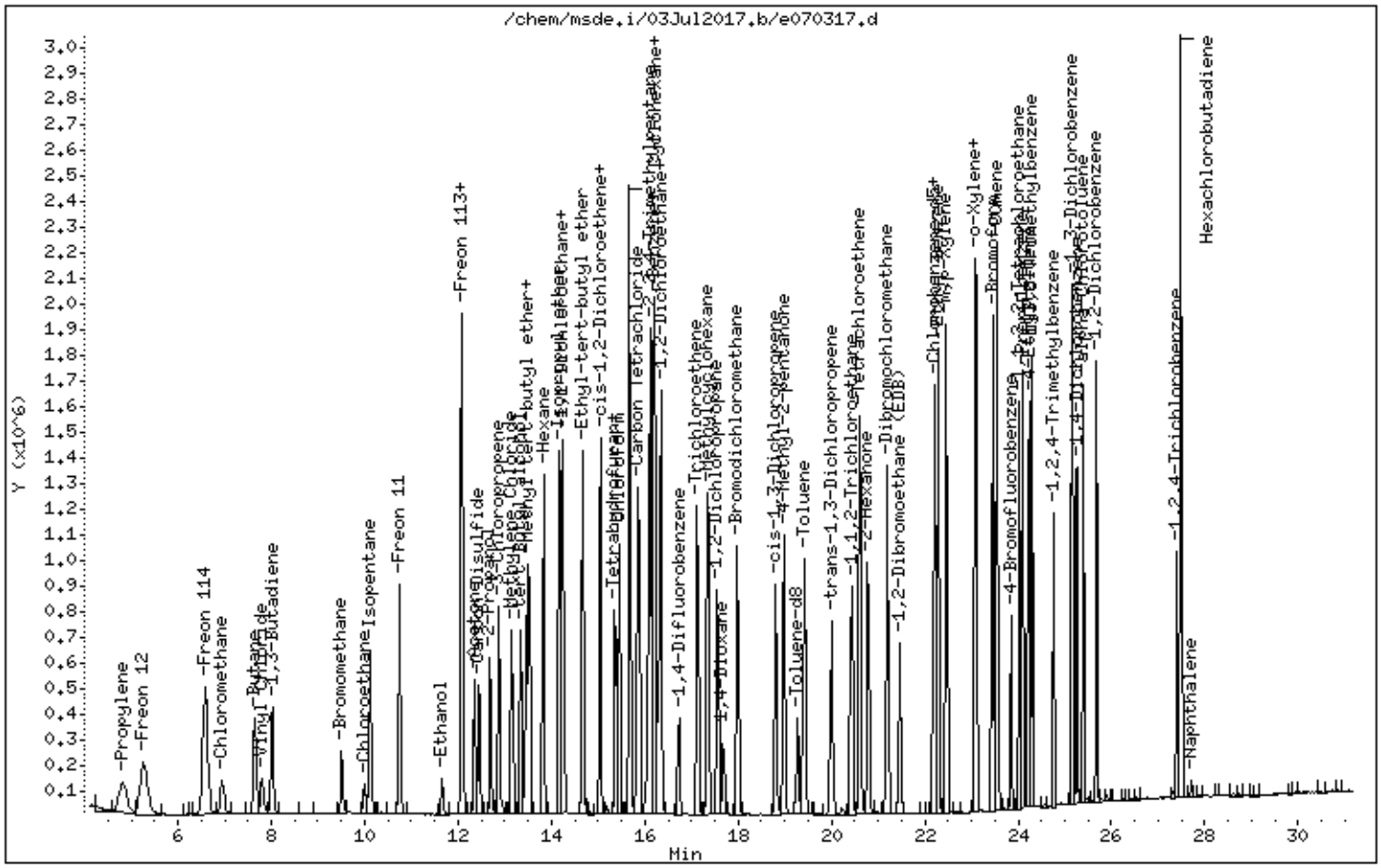
Instrument: msde.i

Sample Info: 50mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070318.d
Lab Smp Id: ICAL Client Smp ID: Level 15
Inj Date : 03-JUL-2017 19:26
Operator : mjs Inst ID: msde.i
Smp Info : 100mL #2850-222
Misc Info : 20ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 19:26 Cal File: e070318.d
Als bottle: 1 Calibration Sample, Level: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	932412	20.0000	18.762	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	622521			36.86- 96.86	66.76
4.835	4.835 (0.314)	39	715504			46.23- 106.23	76.74
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	2327421	20.0000	18.665	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	754284			1.93- 61.93	32.41
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	1751006	20.0000	19.099	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	554839			1.36- 61.36	31.69
6.594	6.594 (0.428)	85	2029789			85.72- 145.72	115.92
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	993377	20.0000	18.999	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	296382			1.40- 61.40	29.84
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	183376	20.0000	19.098	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	1783446			939.22- 999.22	972.56
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	722529	20.0000	17.830	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	210005			0.00- 59.78	29.07
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	763363	20.0000	18.749	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	914326			90.63- 150.63	119.78
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	574147	20.0000	19.784	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	528440			63.10- 123.10	92.04
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	309852	20.0000	18.447	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	136738			13.74- 73.74	44.13
9.986	9.986 (0.649)	66	95582			0.11- 60.11	30.85
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	681578	20.0000	18.287	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	1184295			149.05- 209.05	173.76
10.119	10.119 (0.657)	42	1017915			122.74- 182.74	149.35
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	2590309	20.0000	18.220	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	1667974			35.39- 95.39	64.39
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	423940	20.0000	18.033	80.00- 120.00	100.00
11.662	11.662 (0.758)	46	162875			10.30- 70.30	38.42
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	1640933	20.0000	18.400	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	1062929			33.74- 93.74	64.78
12.081	12.081 (0.785)	101	1809780			78.29- 138.29	110.29
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	473427	20.0000	18.936	80.00- 120.00	100.00
12.081	12.081 (0.785)	61	1586031			307.46- 367.46	335.01
12.100	12.100 (0.786)	96	736110			127.87- 187.87	155.49
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	455226	20.0000	18.676	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	2036898			407.61- 467.61	447.45

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	1919095	20.0000	18.348	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	2286275	20.0000	20.222	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	469412			0.00- 50.43	20.53
12.709	12.709 (0.826)	59	63322			0.00- 33.00	2.77
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	417656	20.0000	19.845	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	2249285			511.05- 571.05	538.55
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	616464	20.0000	18.151	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	1418440			205.99- 265.99	230.09
13.149	13.149 (0.854)	51	434540			40.46- 100.46	70.49
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	2235396	20.0000	20.165	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	606159			0.00- 56.56	27.12
13.369	13.369 (0.869)	57	263400			0.00- 41.82	11.78
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.479	13.479 (0.876)	73	2292305	20.0000	19.244	80.00- 120.00	100.00
13.479	13.479 (0.876)	57	684627			0.79- 60.79	29.87
13.479	13.479 (0.876)	41	820391			7.43- 67.43	35.79
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	515107	20.0000	19.320	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	1415224			247.42- 307.42	274.74
13.533	13.533 (0.879)	96	787828			122.37- 182.37	152.94
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	1569995	20.0000	19.706	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	1272024			51.15- 111.15	81.02
13.835	13.835 (0.899)	86	189047			0.00- 41.56	12.04
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	4350951	20.0000	19.954	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	683671			0.00- 45.86	15.71
14.192	14.192 (0.922)	59	362368			0.00- 38.07	8.33
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	1601747	20.0000	18.870	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	480782			0.00- 59.55	30.02

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    208235 20.0000   20.777  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    334347                  118.75- 178.75   160.56
 14.247  14.247 (0.926)    43   3978958                  1798.00-1858.00  1910.80
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   3407288 20.0000   20.218  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87   1103177                    2.81-  62.81    32.38
 14.685  14.685 (0.954)    41    805611                    0.00-  53.89    23.64
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    536777 20.0000   19.211  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61   1372998                  229.72- 289.72   255.79
 15.047  15.047 (0.978)    96    835419                  126.60- 186.60   155.64
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    352095 20.0000   20.675  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43   2746085                  750.92- 810.92   779.93
 15.047  15.047 (0.978)    57    173654                   19.16-  79.16    49.32
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.361  15.361 (0.998)    42   1528921 20.0000   20.490  80.00- 120.00   100.00
 15.361  15.361 (0.998)    71    321699                    0.00-  50.51    21.04
 15.361  15.361 (0.998)    72    344668                    0.00-  51.95    22.54
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    142452 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107844                   46.85- 106.85    75.71
 15.391  15.391 (1.000)    49    278937                  226.12- 286.12   195.81
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1881050 20.0000   18.875  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85   1262389                   35.38-  95.38    67.11
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    996717 20.0000   19.781  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56   1764546                  148.59- 208.59   177.04
 15.669  15.669 (1.018)    41   1212478                   91.63- 151.63   121.65
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   2323047 20.0000   18.886  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99   1509996                   34.20-  94.20    65.00
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119   2644887 20.0000   20.893  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   2763192                   73.79- 133.79   104.47
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	2348341	20.0000	19.256	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	7134441			276.72- 336.72	303.81
16.111	16.111 (1.047)	41	2547663			82.40- 142.40	108.49
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	2210769	20.0000	18.756	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	531184			0.00- 53.88	24.03
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	213334	5.00000	4.793	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	118284			17.94- 77.94	55.45
119 tert-Amyl methyl ether					CAS #: 994-05-8		
16.231	16.231 (0.970)	87	673328	20.0000	20.415	80.00- 120.00	100.00
16.231	16.231 (0.970)	73	2471746			321.94- 381.94	367.09
16.231	16.231 (0.970)	55	887183			100.72- 160.72	131.76
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.304	16.304 (0.974)	62	1602432	20.0000	19.160	80.00- 120.00	100.00
16.304	16.304 (0.974)	64	486602			0.66- 60.66	30.37
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	1022107	20.0000	20.064	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	338405			3.00- 63.00	33.11
16.352	16.352 (0.977)	43	2406713			207.00- 267.00	235.47
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	491893	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	72758			0.00- 44.91	14.79
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	1334914	20.0000	19.050	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	1173114			58.18- 118.18	87.88
17.123	17.123 (1.023)	97	761132			26.25- 86.25	57.02
127 Methylcyclohexane					CAS #: 108-87-2		
17.340	17.340 (1.036)	83	1340026	20.0000	20.271	80.00- 120.00	100.00
17.340	17.340 (1.036)	55	1707684			98.42- 158.42	127.44
17.340	17.340 (1.036)	56	522255			9.03- 69.03	38.97
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	938848	20.0000	18.690	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	686412			44.02- 104.02	73.11
17.556	17.556 (1.049)	41	878653			65.46- 125.46	93.59

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	572127	20.0000	20.771	80.00- 120.00	100.00
17.701	17.701 (1.058)	58	540368			62.58- 122.58	94.45
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	2116309	20.0000	19.574	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	1399660			36.66- 96.66	66.14
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	1438698	20.0000	20.316	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	477306			3.68- 63.68	33.18
18.805	18.805 (1.124)	39	1343526			62.50- 122.50	93.38
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	3385331	20.0000	21.491	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	990327			0.00- 59.19	29.25
18.984	18.984 (1.134)	85	350196			0.00- 40.34	10.34
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	473770	5.00000	5.006	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	55448			0.00- 41.31	11.70
19.275	19.275 (1.152)	100	317707			38.24- 98.24	67.06
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	2854051	20.0000	19.425	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	1652370			28.10- 88.10	57.90
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.902)	75	1453927	20.0000	20.556	80.00- 120.00	100.00
19.998	19.998 (0.902)	77	476934			3.36- 63.36	32.80
19.998	19.998 (0.902)	39	1162186			49.78- 109.78	79.93
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	1027829	20.0000	19.916	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	642807			32.24- 92.24	62.54
20.438	20.438 (0.922)	83	815153			48.02- 108.02	79.31
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.929)	166	1660442	20.0000	19.240	80.00- 120.00	100.00
20.603	20.603 (0.929)	129	1345218			49.93- 109.93	81.02
20.603	20.603 (0.929)	131	1318881			47.75- 107.75	79.43
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.936)	58	1280046	20.0000	23.051	80.00- 120.00	100.00
20.767	20.767 (0.936)	43	3210129			225.15- 285.15	250.78
20.795	20.795 (0.938)	100	216565			0.00- 47.79	16.92

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129   2583113 20.0000   19.962  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   2011202                   46.75- 106.75    77.86
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107   1727552 20.0000   19.896  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109   1687962                   67.69- 127.69    97.71
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    465710 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    226160                   19.53-  79.53    48.56
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112   2518188 20.0000   18.807  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114    813009                    1.36-  61.36    32.29
 22.219  22.219 (1.002)    77   1400139                   24.91-  84.91    55.60
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.005)   106   1238084 20.0000   19.883  80.00- 120.00   100.00
 22.281  22.281 (1.005)    91   3843511                  280.28- 340.28   310.44
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106   1454502 20.0000   20.973  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91   2938040                  173.14- 233.14   202.00
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.040)   106   1325138 20.0000   20.574  80.00- 120.00   100.00
 23.069  23.069 (1.040)    91   2801565                  184.94- 244.94   211.42
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104   2258812 20.0000   21.029  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78   1188909                   23.72-  83.72    52.63
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173   2399739 20.0000   20.780  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171   1247189                   22.28-  82.28    51.97
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.062)   105   4320925 20.0000   20.504  80.00- 120.00   100.00
 23.542  23.542 (1.062)   120   1190311                    0.00-  57.53    27.55
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    270429 5.00000    4.972  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    304050                   81.42- 141.42   112.43
 23.856  23.856 (1.076)   176    261865                   66.35- 126.35    96.83
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	1589291	20.0000	19.202	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	1091116			38.02- 98.02	68.65
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.086)	91	3756286	20.0000	20.014	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	1002816			0.00- 56.42	26.70
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	3065535	20.0000	21.189	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	960594			0.46- 60.46	31.34
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	2344874	20.0000	20.100	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	1147728			18.43- 78.43	48.95
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.116)	105	1812024	20.0000	19.660	80.00- 120.00	100.00
24.753	24.753 (1.116)	120	846607			16.45- 76.45	46.72
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.134)	146	1966373	20.0000	19.599	80.00- 120.00	100.00
25.157	25.157 (1.134)	148	1262465			33.61- 93.61	64.20
25.157	25.157 (1.134)	111	756273			9.29- 69.29	38.46
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	1884126	20.0000	19.816	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	1208461			34.28- 94.28	64.14
25.269	25.269 (1.139)	111	706100			7.48- 67.48	37.48
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	2744943	20.0000	20.901	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	647722			0.00- 53.55	23.60
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	1830378	20.0000	19.764	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	1172575			33.54- 93.54	64.06
25.672	25.672 (1.158)	111	732458			10.04- 70.04	40.02
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	894447	20.0000	22.432	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	852001			66.37- 126.37	95.25
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	1468536	20.0000	19.908	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	935331			32.58- 92.58	63.69

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.250)	128	179199	2.00000	2.224	80.00- 120.00	100.00
27.712	27.712	(1.250)	127	24597			0.00- 41.67	13.73

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070318.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 20ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 15
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	142452	1.87
123 1,4-Difluorobenze	482877	289726	676028	491893	1.87
163 Chlorobenzene-d5	450551	270331	630771	465710	3.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070318.d

Date : 03-JUL-2017 19:26

Client ID: Level 15

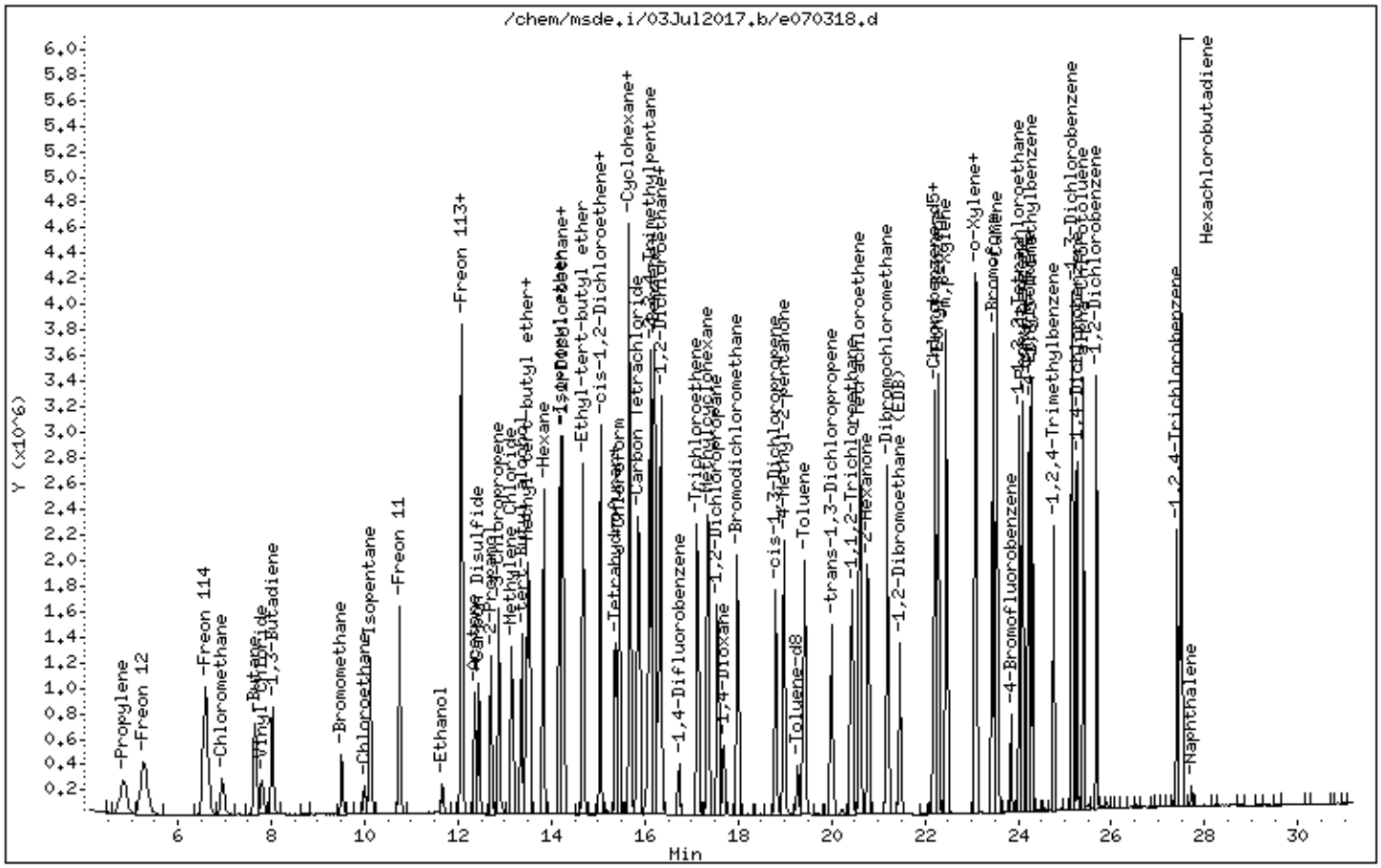
Instrument: msde.i

Sample Info: 100mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070319.d
Lab Smp Id: ICAL Client Smp ID: Level 16
Inj Date : 03-JUL-2017 20:10
Operator : mjs Inst ID: msde.i
Smp Info : 200mL #2850-222
Misc Info : 40ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 20:10 Cal File: e070319.d
Als bottle: 1 Calibration Sample, Level: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.859	4.859 (0.316)	41	1876186	40.0000	37.584	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	1219600			36.86- 96.86	65.00
4.835	4.835 (0.314)	39	1383126			46.23- 106.23	73.72
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	4527065	40.0000	36.143	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	1457433			1.93- 61.93	32.19
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	3437184	40.0000	37.322	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	1106330			1.36- 61.36	32.19
6.618	6.618 (0.430)	85	4012726			85.72- 145.72	116.74
17 Chloromethane					CAS #: 74-87-3		
6.980	6.980 (0.454)	50	1945720	40.0000	37.046	80.00- 120.00	100.00
6.980	6.980 (0.454)	52	548748			1.40- 61.40	28.20
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	360407	40.0000	37.367	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	3544432			939.22- 999.22	983.45
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	1450706	40.0000	35.638	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	422572			0.00- 59.78	29.13
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	1608172	40.0000	39.321	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	1901889			90.63- 150.63	118.26
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	1088411	40.0000	37.336	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	1031765			63.10- 123.10	94.80
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	593266	40.0000	35.162	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	268542			13.74- 73.74	45.27
10.005	10.005 (0.650)	66	183440			0.11- 60.11	30.92
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	1330357	40.0000	35.534	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	2332821			149.05- 209.05	175.35
10.119	10.119 (0.657)	42	1969074			122.74- 182.74	148.01
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	5007226	40.0000	35.062	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	3252442			35.39- 95.39	64.95
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	763350	40.0000	32.325	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	285543			10.30- 70.30	37.41
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	3170288	40.0000	35.389	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	2037418			33.74- 93.74	64.27
12.081	12.081 (0.785)	101	3472245			78.29- 138.29	109.52
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	913735	40.0000	36.383	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	3112997			307.46- 367.46	340.69
12.100	12.100 (0.786)	96	1440195			127.87- 187.87	157.62
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	869525	40.0000	35.512	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	3907139			407.61- 467.61	449.34

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	3667406	40.0000	34.905	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.728	12.728 (0.827)	45	4494196	40.0000	39.572	80.00- 120.00	100.00
12.728	12.728 (0.827)	43	881987			0.00- 50.43	19.63
12.728	12.728 (0.827)	59	129779			0.00- 33.00	2.89
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	813749	40.0000	38.492	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	4458489			511.05- 571.05	547.89
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	1142216	40.0000	33.481	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	2663125			205.99- 265.99	233.15
13.149	13.149 (0.854)	51	792683			40.46- 100.46	69.40
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	4435206	40.0000	39.828	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	1174534			0.00- 56.56	26.48
13.369	13.369 (0.869)	57	521291			0.00- 41.82	11.75
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	4494116	40.0000	37.559	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	1352317			0.79- 60.79	30.09
13.478	13.478 (0.876)	41	1594513			7.43- 67.43	35.48
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	978932	40.0000	36.552	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	2795604			247.42- 307.42	285.58
13.533	13.533 (0.879)	96	1545931			122.37- 182.37	157.92
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	3065767	40.0000	38.306	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	2477770			51.15- 111.15	80.82
13.835	13.835 (0.899)	86	352294			0.00- 41.56	11.49
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	8468413	40.0000	38.662	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	1314875			0.00- 45.86	15.53
14.192	14.192 (0.922)	59	700436			0.00- 38.07	8.27
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	3123739	40.0000	36.636	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	946074			0.00- 59.55	30.29

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    417851 40.0000   41.504  80.00- 120.00   100.00(A)
 14.247  14.247 (0.926)    42    653211                  118.75- 178.75   156.33
 14.247  14.247 (0.926)    43   7928596                  1798.00-1858.00  1897.47
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   6683348 40.0000   39.479  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87   2178117                    2.81-  62.81    32.59
 14.685  14.685 (0.954)    41   1544111                    0.00-  53.89    23.10
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98   1052073 40.0000   37.485  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61   2714602                  229.72- 289.72   258.02
 15.047  15.047 (0.978)    96   1648853                  126.60- 186.60   156.72
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    698478 40.0000   40.830  80.00- 120.00   100.00(A)
 15.047  15.047 (0.978)    43   5451104                  750.92- 810.92   780.43
 15.047  15.047 (0.978)    57    357881                   19.16-  79.16    51.24
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42   3041710 40.0000   40.580  80.00- 120.00   100.00(A)
 15.391  15.391 (1.000)    71    635357                    0.00-  50.51    20.89
 15.391  15.391 (1.000)    72    676162                    0.00-  51.95    22.23
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    143095 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    111289                   46.85- 106.85    77.77
 15.391  15.391 (1.000)    49    310401                  226.12- 286.12   216.92
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   3679738 40.0000   36.758  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85   2476433                   35.38-  95.38    67.30
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84   1916300 40.0000   37.860  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56   3422742                  148.59- 208.59   178.61
 15.669  15.669 (1.018)    41   2336532                   91.63- 151.63   121.93
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   4486383 40.0000   36.311  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99   2933730                   34.20-  94.20    65.39
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.884  15.884 (1.032)   119   5151518 40.0000   40.511  80.00- 120.00   100.00(A)
 15.884  15.884 (1.032)   117   5366015                   73.79- 133.79   104.16
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	4573029	40.0000	37.330	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	13930066			276.72- 336.72	304.61
16.111	16.111 (1.047)	41	5002703			82.40- 142.40	109.40
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	4289478	40.0000	35.928	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	1048255			0.00- 53.88	24.44
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	215351	5.00000	4.817	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	113149			17.94- 77.94	52.54
119 tert-Amyl methyl ether					CAS #: 994-05-8		
16.231	16.231 (0.970)	87	1335047	40.0000	39.963	80.00- 120.00	100.00
16.231	16.231 (0.970)	73	4793900			321.94- 381.94	359.08
16.231	16.231 (0.970)	55	1712421			100.72- 160.72	128.27
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.303	16.303 (0.974)	62	3158434	40.0000	37.283	80.00- 120.00	100.00
16.303	16.303 (0.974)	64	959557			0.66- 60.66	30.38
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	1974057	40.0000	38.257	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	640967			3.00- 63.00	32.47
16.352	16.352 (0.977)	43	4710636			207.00- 267.00	238.63
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	498239	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	72187			0.00- 44.91	14.49
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	2638092	40.0000	37.168	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	2286182			58.18- 118.18	86.66
17.123	17.123 (1.023)	97	1467948			26.25- 86.25	55.64
127 Methylcyclohexane					CAS #: 108-87-2		
17.364	17.364 (1.037)	83	2616249	40.0000	39.073	80.00- 120.00	100.00
17.340	17.340 (1.036)	55	3338187			98.42- 158.42	127.59
17.340	17.340 (1.036)	56	1024843			9.03- 69.03	39.17
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	1826233	40.0000	35.892	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	1331108			44.02- 104.02	72.89
17.556	17.556 (1.049)	41	1681349			65.46- 125.46	92.07

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88   1154199 40.0000   41.370  80.00- 120.00   100.00(A)
 17.701  17.701 (1.058)    58   1085586                   62.58- 122.58    94.06
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   4105332 40.0000   37.488  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85   2734595                   36.66-  96.66    66.61
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75   2901355 40.0000   40.449  80.00- 120.00   100.00(A)
 18.805  18.805 (1.124)    77    951325                    3.68-  63.68    32.79
 18.805  18.805 (1.124)    39   2643873                   62.50- 122.50    91.13
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43   6699698 40.0000   41.990  80.00- 120.00   100.00(A)
 18.984  18.984 (1.134)    58   1936502                    0.00-  59.19    28.90
 18.984  18.984 (1.134)    85    695135                    0.00-  40.34    10.38
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    474603 5.00000    4.951  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     54738                    0.00-  41.31    11.53
 19.275  19.275 (1.152)   100    320011                   38.24-  98.24    67.43
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   5607998 40.0000   37.683  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92   3277658                   28.10-  88.10    58.45
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.902)    75   2863961 40.0000   40.183  80.00- 120.00   100.00(A)
 19.998  19.998 (0.902)    77    930437                    3.36-  63.36    32.49
 19.998  19.998 (0.902)    39   2264046                   49.78- 109.78    79.05
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97   1996186 40.0000   38.386  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99   1270142                   32.24-  92.24    63.63
 20.438  20.438 (0.922)    83   1597333                   48.02- 108.02    80.02
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.929)   166   3305322 40.0000   38.009  80.00- 120.00   100.00
 20.603  20.603 (0.929)   129   2647385                   49.93- 109.93    80.09
 20.603  20.603 (0.929)   131   2606527                   47.75- 107.75    78.86
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.936)    58   2621531 40.0000   46.849  80.00- 120.00   100.00(A)
 20.767  20.767 (0.936)    43   6499721                  225.15- 285.15   247.94
 20.795  20.795 (0.938)   100    448523                    0.00-  47.79    17.11
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129   5133765 40.0000   39.371  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   3944407                   46.75- 106.75    76.83
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107   3443708 40.0000   39.358  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109   3367066                   67.69- 127.69    97.77
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    469282 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    225737                   19.53-  79.53    48.10
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112   4993231 40.0000   37.007  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114   1620234                    1.36-  61.36    32.45
 22.219  22.219 (1.002)    77   2746993                   24.91-  84.91    55.01
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.005)   106   2457163 40.0000   39.160  80.00- 120.00   100.00
 22.281  22.281 (1.005)    91   7620966                  280.28- 340.28   310.15
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106   2881070 40.0000   41.227  80.00- 120.00   100.00(A)
 22.467  22.467 (1.013)    91   5794652                  173.14- 233.14   201.13
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.040)   106   2643344 40.0000   40.727  80.00- 120.00   100.00(A)
 23.069  23.069 (1.040)    91   5611252                  184.94- 244.94   212.28
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104   4530876 40.0000   41.860  80.00- 120.00   100.00(A)
 23.110  23.110 (1.042)    78   2376780                   23.72-  83.72    52.46
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173   4669617 40.0000   40.127  80.00- 120.00   100.00(A)
 23.452  23.452 (1.057)   171   2401907                   22.28-  82.28    51.44
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.062)   105   8312473 40.0000   39.144  80.00- 120.00   100.00
 23.542  23.542 (1.062)   120   2305201                    0.00-  57.53    27.73
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    278230 5.00000    5.076  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    307874                   81.42- 141.42   110.65
 23.856  23.856 (1.076)   176    269340                   66.35- 126.35    96.80
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83   3037324 40.0000   36.418  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85   2073859                   38.02-  98.02    68.28
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.086)    91   7331623 40.0000   38.766  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120   1922097                    0.00-  56.42    26.22
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105   6011575 40.0000   41.235  80.00- 120.00   100.00(A)
 24.237  24.237 (1.093)   120   1861415                    0.46-  60.46    30.96
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105   4542189 40.0000   38.638  80.00- 120.00   100.00
 24.304  24.304 (1.096)   120   2234908                   18.43-  78.43    49.20
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.116)   105   3660187 40.0000   39.411  80.00- 120.00   100.00
 24.753  24.753 (1.116)   120   1693647                   16.45-  76.45    46.27
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.156  25.156 (1.134)   146   3823268 40.0000   37.817  80.00- 120.00   100.00
 25.156  25.156 (1.134)   148   2459004                   33.61-  93.61    64.32
 25.156  25.156 (1.134)   111   1465022                    9.29-  69.29    38.32
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.269  25.269 (1.139)   146   3691644 40.0000   38.532  80.00- 120.00   100.00
 25.269  25.269 (1.139)   148   2377069                   34.28-  94.28    64.39
 25.269  25.269 (1.139)   111   1373921                    7.48-  67.48    37.22
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.145)    91   5451536 40.0000   41.195  80.00- 120.00   100.00(A)
 25.403  25.403 (1.145)   126   1278948                    0.00-  53.55    23.46
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.672  25.672 (1.158)   146   3626232 40.0000   38.857  80.00- 120.00   100.00
 25.672  25.672 (1.158)   148   2326910                   33.54-  93.54    64.17
 25.672  25.672 (1.158)   111   1466753                   10.04-  70.04    40.45
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.235)   180   1883665 40.0000   46.882  80.00- 120.00   100.00(A)
 27.398  27.398 (1.235)   182   1807351                   66.37- 126.37    95.95
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.239)   225   2988310 40.0000   40.202  80.00- 120.00   100.00(A)
 27.488  27.488 (1.239)   223   1887856                   32.58-  92.58    63.17
-------------------------------------------------------------------------------
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.250)	128	387307	4.00000	4.771	80.00- 120.00	100.00
27.712	27.712	(1.250)	127	53430			0.00- 41.67	13.80

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070319.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 40ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 16
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	143095	2.33
123 1,4-Difluorobenze	482877	289726	676028	498239	3.18
163 Chlorobenzene-d5	450551	270331	630771	469282	4.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070319.d

Date : 03-JUL-2017 20:10

Client ID: Level 16

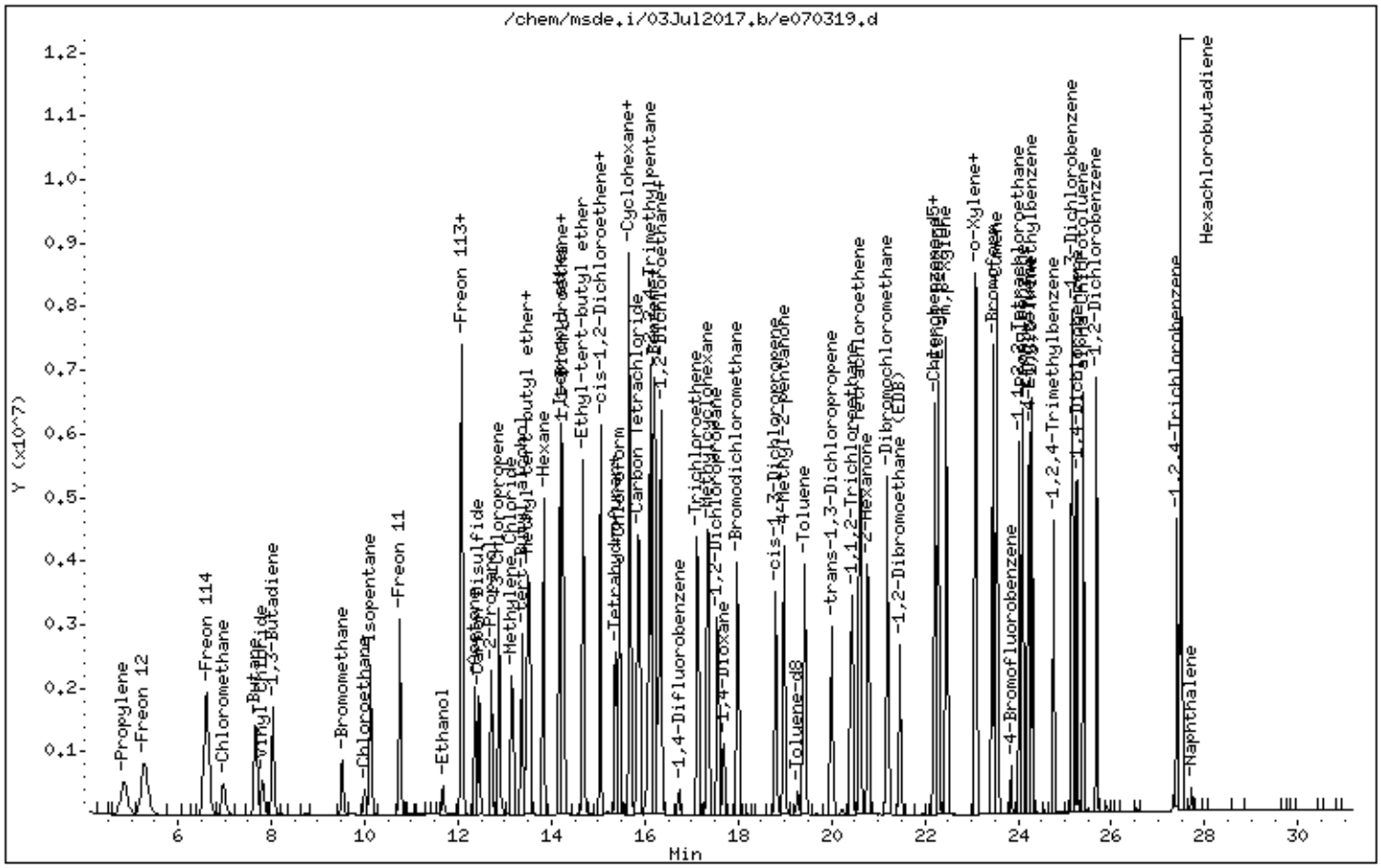
Instrument: msde.i

Sample Info: 200mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 10:32
End Cal Date : 03-JUL-2017 19:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Cal Date : 05-Jul-2017 13:04 sblack
Curve Type : Average

Calibration File Names:
Level 2: /chem/msde.i/03Jul2017.b/e070308sim.d
Level 3: /chem/msde.i/03Jul2017.b/e070306sim.d
Level 4: /chem/msde.i/03Jul2017.b/e070309sim.d
Level 5: /chem/msde.i/03Jul2017.b/e070312sim.d
Level 6: /chem/msde.i/03Jul2017.b/e070313sim.d
Level 7: /chem/msde.i/03Jul2017.b/e070314sim.d
Level 8: /chem/msde.i/03Jul2017.b/e070315sim.d
Level 12: /chem/msde.i/03Jul2017.b/e070316sim.d
Level 13: /chem/msde.i/03Jul2017.b/e070317sim.d
Level 15: /chem/msde.i/03Jul2017.b/e070318sim.d

Compound	0.00500 Level 2	0.01000 Level 3	0.02000 Level 4	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	___ RRF	% RSD
	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15				
1 Freon 12	+++++	+++++	4.27465	4.04059	5.16761	4.44097		
	4.27835	4.96727	4.54762	4.18927			4.48829	8.736
2 Freon 114	+++++	+++++	3.31036	2.96098	3.90760	3.39067		
	3.29553	3.74612	3.43257	3.21267			3.40706	8.770
3 Chloromethane	+++++	+++++	+++++	1.83067	2.18276	1.87381		
	1.95423	2.04447	1.90463	1.73842			1.93271	7.554
4 Vinyl Chloride	+++++	1.35663	1.27826	1.31013	1.53040	1.32850		
	1.28973	1.52201	1.41589	1.32373			1.37281	6.975
5 Chloroethane	+++++	+++++	+++++	0.60639	0.75884	0.63674		
	0.57472	0.71649	0.59783	0.55197			0.63471	11.983
6 Freon 11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 10:32
End Cal Date : 03-JUL-2017 19:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Cal Date : 05-Jul-2017 13:04 sblack
Curve Type : Average

Compound	0.00500 Level 2	0.01000 Level 3	0.02000 Level 4	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	___ RRF	% RSD
	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15				
7 Freon 113	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
8 1,1-Dichloroethene	1.09188	1.09440	0.77454	0.81799	0.99289	0.87143		
	0.84296	0.98888	0.91004	0.85405			0.92391	12.191
9 Methyl tert-butyl ether	+++++	+++++	3.12578	2.98329	3.74369	3.40913		
	3.35083	4.15206	3.82764	3.54935			3.51772	10.901
10 trans-1,2-Dichloroethene	+++++	1.01048	0.95740	0.81934	1.02778	0.92275		
	0.89340	1.07082	0.97792	0.90794			0.95420	8.098
11 1,1-Dichloroethane	+++++	+++++	2.81872	2.65745	3.35010	2.98608		
	2.92906	3.38432	3.07792	2.83781			3.00518	8.510
12 cis-1,2-Dichloroethene	1.36311	1.08391	0.94015	0.90181	1.10337	0.97292		
	0.94446	1.13108	1.04136	0.97224			1.04544	12.976
14 Chloroform	4.43706	3.93704	3.23963	3.19421	3.94722	3.51655		
	3.41850	3.94234	3.54888	3.27907			3.64605	11.088
15 1,1,1-Trichloroethane	+++++	+++++	4.37988	4.11157	4.99862	4.42403		
	4.28325	4.93590	4.43200	4.07316			4.45480	7.716
16 Carbon Tetrachloride	6.40522	5.20276	4.88359	4.51583	4.19762	3.65185		
	3.53080	5.52589	5.01673	4.60389			4.75342	18.164
17 Benzene	+++++	+++++	1.66079	1.33764	1.25285	1.04546		
	1.01589	1.16995	1.06806	1.01071			1.19517	18.597

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 10:32
End Cal Date : 03-JUL-2017 19:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Cal Date : 05-Jul-2017 13:04 sblack
Curve Type : Average

Compound	0.00500 Level 2	0.01000 Level 3	0.02000 Level 4	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	___ RRF	% RSD
	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15				
19 1,2-Dichloroethane	1.05760	0.89031	0.81550	0.77175	0.90911	0.81471		
	0.79501	0.91617	0.83690	0.80198			0.86090	9.907
21 Trichloroethene	0.91442	0.84365	0.76408	0.70684	0.78640	0.68410		
	0.66304	0.75306	0.69032	0.65545			0.74614	11.254
23 Toluene	+++++	+++++	1.48443	1.40387	1.44031	1.29462		
	1.26207	1.46095	1.34600	1.28095			1.37165	6.360
24 trans-1,3-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
25 1,1,2-Trichloroethane	+++++	0.56032	0.60112	0.51595	0.64283	0.55812		
	0.54147	0.63992	0.58575	0.56085			0.57848	7.439
26 Tetrachloroethene	1.02414	0.97274	0.97798	0.84460	1.01864	0.90297		
	0.86030	1.00153	0.91719	0.87123			0.93913	7.242
27 1,2-Dibromoethane (EDB)	1.05120	1.00711	0.97540	0.85379	1.01777	0.89807		
	0.87960	1.06400	0.97887	0.93486			0.96607	7.490
29 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
30 Ethyl Benzene	+++++	+++++	0.56812	0.52633	0.60967	0.55022		
	0.54757	0.68030	0.63078	0.61023			0.59040	8.714
31 m,p-Xylene	+++++	+++++	0.64442	0.62337	0.69479	0.61681		
	0.61973	0.78028	0.72749	0.70279			0.67621	8.843

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 10:32
End Cal Date : 03-JUL-2017 19:26
Quant Method : ISTD
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Cal Date : 05-Jul-2017 13:04 sblack
Curve Type : Average

Compound	0.00500 Level 2	0.01000 Level 3	0.02000 Level 4	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	___ RRF	% RSD
	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15				
32 o-Xylene	+++++	+++++	0.57483	0.54091	0.62360	0.56914		
	0.57396	0.71589	0.66817	0.64522			0.61397	9.709
34 1,1,2,2-Tetrachloroethane	1.02206	0.89359	0.86765	0.81006	0.98385	0.87618		
	0.85020	0.97295	0.88891	0.84346			0.90089	7.654
35 1,3-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
36 1,4-Dichlorobenzene	+++++	1.18416	0.97179	0.79948	0.97888	0.94945		
	0.95053	1.10753	1.03671	1.01824			0.99964	10.821
37 1,2-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
38 Naphthalene	+++++	+++++	+++++	+++++	0.94086	0.67527		
	0.61056	0.81858	0.83802	0.97074			0.80901	17.632
M 39 Total Xylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
$ 18 1,2-Dichloroethane-d4	1.62861	1.63583	1.62429	1.64595	1.63141	1.62681		
	1.62927	1.57350	1.52799	1.52574			1.60494	2.827
$ 22 Toluene-d8	0.79326	0.79572	0.80229	0.80775	0.79287	0.80690		
	0.81606	0.80945	0.80913	0.80785			0.80413	0.972
$ 33 4-Bromofluorobenzene	0.59166	0.59351	0.59765	0.59443	0.58892	0.60275		
	0.60831	0.61232	0.61470	0.61991			0.60242	1.796

Calibration History

Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Start Cal Date: 03-JUL-2017 10:32
End Cal Date : 03-JUL-2017 19:26

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 0.00500		
03-JUL-2017 12:03	Level2	/chem/msde.i/03Jul2017.b/e070308sim.d

Injection Date	Sublist	Calibration File
Cal Level: 3 , Cal Amount: 0.01000		
03-JUL-2017 10:32	Level3	/chem/msde.i/03Jul2017.b/e070306sim.d

Injection Date	Sublist	Calibration File
Cal Level: 4 , Cal Amount: 0.02000		
03-JUL-2017 12:44	Level4	/chem/msde.i/03Jul2017.b/e070309sim.d

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
03-JUL-2017 14:35	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070312sim.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 0.10000		
03-JUL-2017 15:18	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070313sim.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 0.50000		
03-JUL-2017 15:59	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070314sim.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 1.00000		
03-JUL-2017 16:41	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070315sim.d

Injection Date	Sublist	Calibration File
Cal Level: 12, Cal Amount: 5.00000		

```
|03-JUL-2017 17:24 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070316sim.d   |
+------------------+-----------------+----------------------------------------+

+------------------+-----------------+----------------------------------------+
| Cal Level: 13, Cal Amount: 10.00000                                         |
+=============================================================================+
|03-JUL-2017 18:31 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070317sim.d   |
+------------------+-----------------+----------------------------------------+

+------------------+-----------------+----------------------------------------+
| Cal Level: 15, Cal Amount: 20.00000                                         |
+=============================================================================+
|03-JUL-2017 19:26 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070318sim.d   |
+------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 13
+------------------+-----------------+----------------------------------------+
| Ccal Level: 13, Ccal Amount: 10.000                                         |
+=============================================================================+
|03-JUL-2017 18:31 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070317sim.d   |
+------------------+-----------------+----------------------------------------+
| Ccal Level: 13, Ccal Amount: 10.000                                         |
+=============================================================================+
|03-JUL-2017 18:31 |HILOcrvFULL      |/chem/msde.i/03Jul2017.b/e070317sima.d  |
+------------------+-----------------+----------------------------------------+
```

Curve Name: E17$_S$0703A

Initial Calibration Narrative

An initial calibration curve was analyzed on 7/3/17 on MSD-E.
The instrument was set up to do full scan and selective ion monitoring (SIM) simultaneously.
Tune File: E070305 (ICAL), E070501 (ICV).
ICAL: Zero (0) out.
ICV: Zero (0) out. File E070503sima.
DOD 5.0 ICV: Zero (0) out. File E070503simc.
DOD 4.2 ICV: Five (5) out; Freon 114 @ 126.6%, Vinyl Chloride @ 125.5%, 1,1-Dichloroethane @ 115.8%, cis-1,2-Dichloroethane @ 124.9%, 1,4-Dichlorobenzene @ 121.2%.

Benzene was calibrated from 0.02ppbv to 20ppbv.
Naphthalene was calibrated from 0.01ppbv-2.0ppbv.*

*The secondary mass ion peak, 127 amu, for Naphthalene shows baseline interference at the special reporting limit of 0.01ppbv. Identification of Naphthalene is however reliable at the lowest concentrations based on the presence and abundance ratio of the secondary ion. The spectrum of Naphthalene in this ICAL point will be used as the reference to determine the ion ratio target in the samples for this ICAL.

The following compounds were calibrated down to a special RL of 0.005ppbv:

1,1-Dichloroethene
cis-1,2-Dichloroethene
Chloroform
Carbon Tetrachloride
1,2-Dichloroethane*
Trichloroethene
Tetrachloroethene
1,2-Dibromomethane (EDB)
1,1,2,2-Tetrachloroethane

*The quantitation ion peak (62 amu) is sufficiently resolved for accurate quantification of 1,2-Dichloroethane (1,2-DCA) at the special reporting limit of 0.005 ppbv. However, the confirmation mass ion peak (64 amu) for 1,2-DCA is not baseline-resolved from the surrogate 1,2-Dichloroethane-d4 peak. Identification of 1,2-DCA based on the presence and abundance ratio of confirmation ion is less reliable at the lowest concentrations due to this interference with the surrogate's mass ion 64 peak.

The following compounds were not included in the ICAL:

Freon 11
Freon 113
trans-1,3-Dichloropropene
Chlorobenzene
1,3-Dichlorobenzene
1,2-Dichlorobenzene

MDL was analyzed on 10/19/16.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 10:32
End Cal Date : 03-JUL-2017 19:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Cal Date : 05-Jul-2017 16:49 efinn
Curve Type : Average

Calibration File Names:
Level 2: /chem/msde.i/03Jul2017.b/e070308sim.d
Level 3: /chem/msde.i/03Jul2017.b/e070306sim.d
Level 4: /chem/msde.i/03Jul2017.b/e070309sim.d
Level 5: /chem/msde.i/03Jul2017.b/e070312sim.d
Level 6: /chem/msde.i/03Jul2017.b/e070313sim.d
Level 7: /chem/msde.i/03Jul2017.b/e070314sim.d
Level 8: /chem/msde.i/03Jul2017.b/e070315sim.d
Level 12: /chem/msde.i/03Jul2017.b/e070316sim.d
Level 13: /chem/msde.i/03Jul2017.b/e070317sim.d
Level 15: /chem/msde.i/03Jul2017.b/e070318sim.d

BS 7/5/17

Compound	0.00500 Level 2	0.01000 Level 3	0.02000 Level 4	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	RRF	% RSD
	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15				
1 Freon 12	+++++	+++++	4.27465	4.04059	5.16761	4.44097		
	4.27835	4.96727	4.54762	4.18927			4.48829	8.736
2 Freon 114	+++++	+++++	3.31036	2.96098	3.90760	3.39067		
	3.29553	3.74612	3.43257	3.21267			3.40706	8.770
3 Chloromethane	+++++	+++++	+++++	1.83067	2.18276	1.87381		
	1.95423	2.04447	1.90463	1.73842			1.93271	7.554
4 Vinyl Chloride	+++++	1.35663	1.27826	1.31013	1.53040	1.32850		
	1.28973	1.52201	1.41589	1.32373			1.37281	6.975
5 Chloroethane	+++++	+++++	+++++	0.60639	0.75884	0.63674		
	0.57472	0.71649	0.59783	0.55197			0.63471	11.983
8 1,1-Dichloroethene	1.09188	1.09440	0.77454	0.81799	0.99289	0.87143		
	0.84296	0.98888	0.91004	0.85405			0.92391	12.191

Flow meter # CS7476 Exp. 4/5/18
Nominal Flow: 24.2 mL/min
Actual Flow: 25.6 mL/min

Eurofins Air Toxics, Inc.

MSD-E

Logbook #2847

BFB Verification of 176/174 m/z Ratio: (352000 / 362469) x100 = 97.11	
Method Name: E170703A / E170703A	

IS/S Std. #:	2850-162	Exp. Date: 9/1/17
BCM	LL: 159842	Sim: 145377
1,4-DFB	482877	538106
CB-d5	450551	493246

Verified CCV IS vs ICAL mid-point (-40%D): MB

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	E070305	BFB Tune check	2810-89	50mg	2.0ppm	BF	1.00	BF	7/3/17	1011	BF	
2	/	06	ICAL Level 3 BF 7/3/17	2850-228	0.01ppbv	50mL	BF	1.00	BF		1032	BF	Exp 9/27/17
3	/	07	System Blank	34202	Humid	250mL	BF	1.00	BF		1120	BF	
4	/	08	ICAL Level 2	2850-228	0.005ppbv	25mL	BF	1.00	BF		1203	BF	Exp. 9/27/17
5	/	09	4		0.02ppbv	100mL	BF	1.00	BF		1244	BF	
6	N/A	10	5		0.05ppbv	250mL	BF	1.00	BF		N/A	N/A	Product / [illegible]
7	/	11	System Blank	34202	Humid	250mL	BF	1.00	BF		1352	BF	
8	/	12	ICAL Level 5	2850-228	0.05ppbv	250mL	BF	1.00	BF		1435	BF	Exp. 9/27/17
9	/	13	6	2850-229	0.1ppbv	25mL	BF	1.00	BF		1518	BF	
10	/	14	7		0.5ppbv	125mL	BF	1.00	BF		1559	BF	
11	/	15	8		1.0ppbv	250mL	BF	1.00	BF		1641	BF	
12	/	16	12	2850-229	5.0ppbv	25mL	BF	1.00	BF		1724	BF	Exp. 9/27/17
13	/	17	13		10ppbv	50mL	MB	1.00	MB		1831	BF	
14	/	18	15		20ppbv	100mL	MB	1.00	MB		1926	BF	
15	/	19	16		40ppbv	200mL	MB	1.00	MB		2010	BF	
16	X	20	System Blank	34202	Humid	250mL	MB	1.00	MB		2103	BF	
17	/	21									2155	MB	OK for ICV

MB
Reviewed

7/3/17
Date

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2847**

BFB Verification of 176/174 m/z Ratio: 324352 / 334208 x100= 91.05%	
Method Name: E17L0703A / E17S0703A	

IS/S Std. #: 2850-162		Exp. Date: 9/1/17	
BCM	LL: 1473504	Std: 1520920	
1,4-DFB	523048	510710	
CB-d5	480557	515276	

Verified CCV IS vs ICAL mid-point (-40%D): 88

0306 of 0328

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E070501	BFB tune check	2810-89	50ng	2.0ml	SW	1.00	SW	7/5/17	0721	SW	
2	/	02	CCV (50ppbv)	2850-222	10ppbv	50mL	SW	1	SW		0752	SS	Exp: 9/27/17 Ø out
* 7/5/17	✓	03	LCS (50ppbv) *	2850-197	10ppbv	50mL	SS	1.00	SS		0902	SS	Exp. 9/19/17
4	✓	~~04~~	~~LCSD (50ppbv)~~	~~2850-199~~	~~10ppbv~~	~~50mL~~	~~SS~~	~~1.00~~	~~SS~~		~~1002~~	~~SS~~	~~Exp. 9/19/17~~
5		05	LAB BLANK	34/202	Humid	250mL	SS	1.00	SS				~~Exp. SS 7/5/17~~
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17												SS	9/5/17

Reviewed 7/5/17 Date

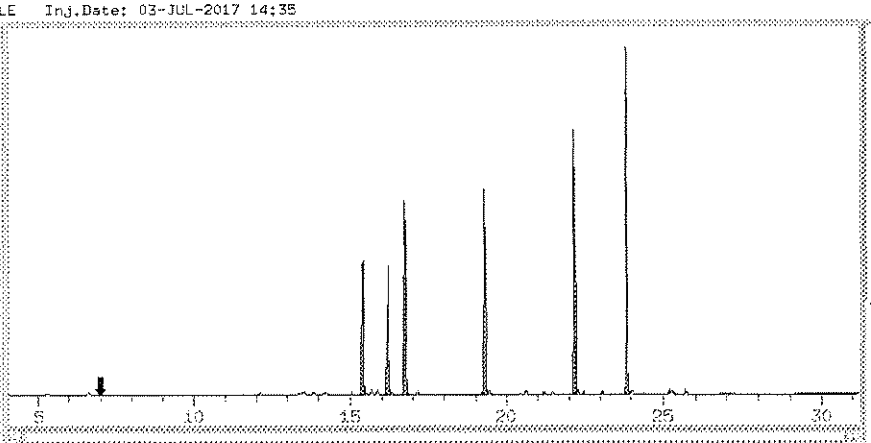
* ICV. 4: 2 out
6mi Ø out

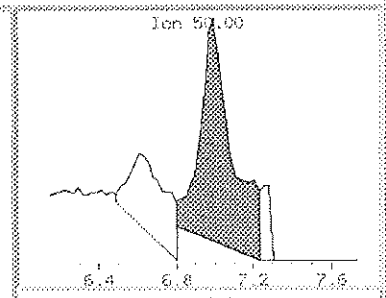
TargetReview: eaxrs: ICAL: /chem/msdb/03Jul2017 b/e070312.m/d

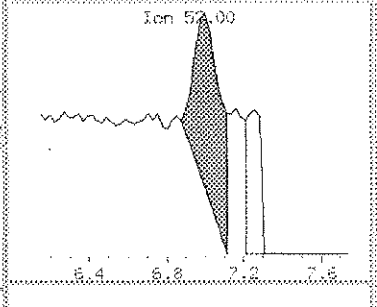
Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 14:35

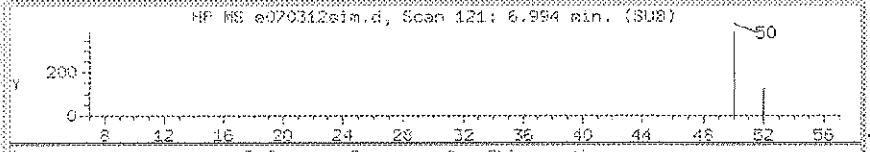
+ 1 Freon 12
+ 2 Freon 114
+ 3 Chloromethane
+ 4 Vinyl Chloride
+ 5 Chloroethane
+ 8 1,1-Dichloroetl
+ 9 Methyl tert-bu
+ 10 trans-1,2-Dich
+ 11 1,1-Dichloroetl
+ 12 cis-1,2-Dichlo
*+ 13 Bromochlorometl
+ 14 Chloroform
+ 15 1,1,1-Trichlor
+ 16 Carbon Tetrach
+ 17 Benzene
$+ 18 1,2-Dichloroetl
+ 19 1,2-Dichloroetl
*+ 20 1,4-Difluorobe
+ 21 Trichloroethen
$+ 22 Toluene-d8
+ 23 Toluene
+ 25 1,1,2-Trichlor
+ 26 Tetrachloroeth
+ 27 1,2-Dibromoeth
*+ 28 Chlorobenzene-

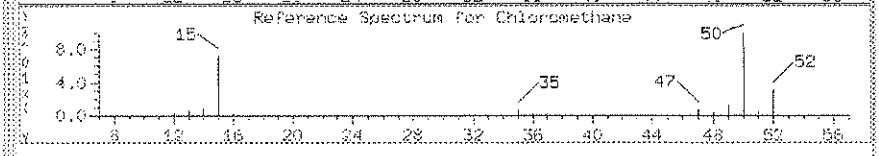
e070312sim.d



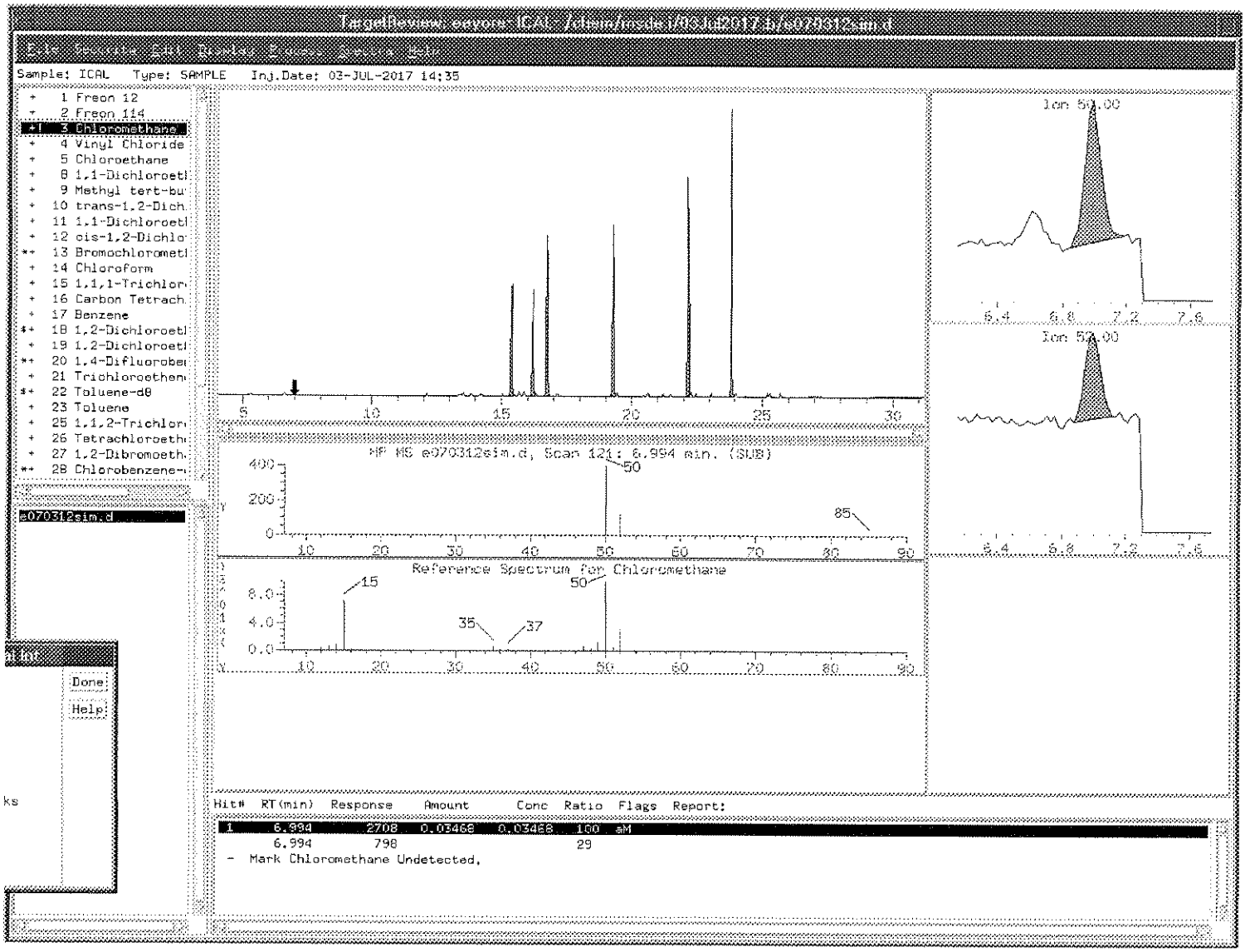








Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	6.608	2341	0.02998	0.02998	100	a	
	6.994	2022			86		
2	6.994	5952	0.07623	0.07623	100		
	6.994	2022			34		
3	7.283	702	0.009000	0.009000	100	a	
	7.259	882			126		



7/5/17

After 7/5/17

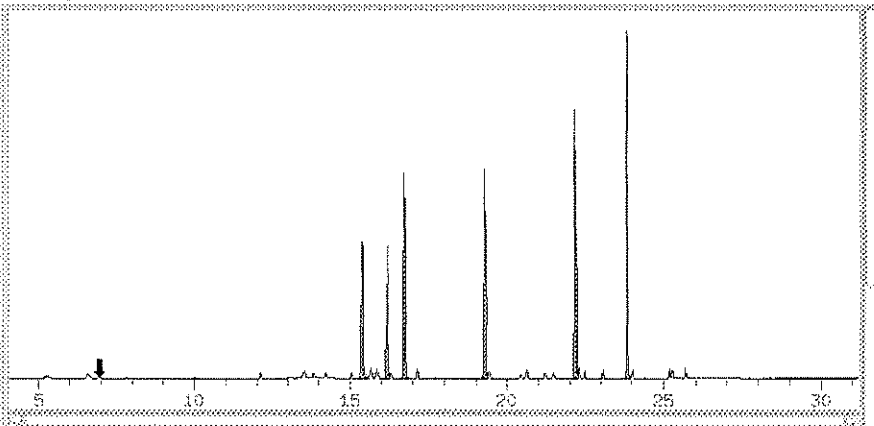
Correct Baseline	X
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

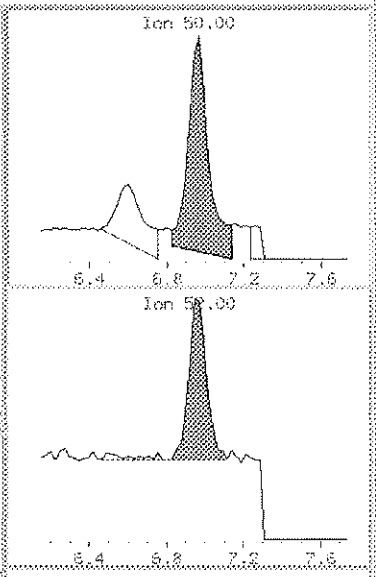
TargetReview: cavora: ICAL /chem/msdata/03JUL2017b/e070313sim.d

Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 15:18

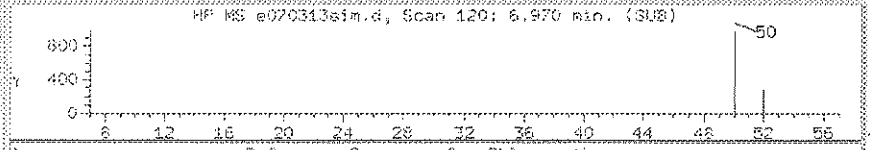
+ 1 Freon 12
+ 2 Freon 114
+ 3 Chloromethane
+ 4 Vinyl Chloride
+ 5 Chloroethane
+ 8 1,1-Dichloroetl
+ 9 Methyl tert-bu
+ 10 trans-1,2-Dich
+ 11 1,1-Dichloroetl
+ 12 cis-1,2-Dichlo
*+ 13 Bromochlorometl
+ 14 Chloroform
+ 15 1,1,1-Trichlor
+ 16 Carbon Tetrach
+ 17 Benzene
*+ 18 1,2-Dichloroetl
+ 19 1,2-Dichloroetl
*+ 20 1,4-Difluorobe
+ 21 Trichloroethen
*+ 22 Toluene-d8
+ 23 Toluene
+ 25 1,1,2-Trichlor
+ 26 Tetrachloroeth
+ 27 1,2-Dibromoeth
*+ 28 Chlorobenzene-

e070313sim.d

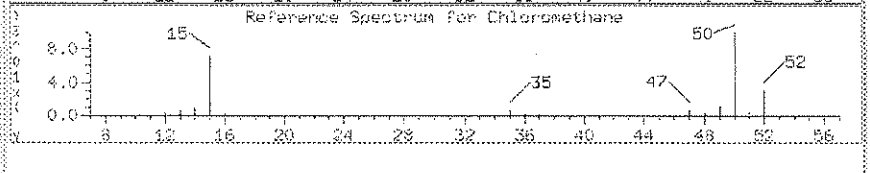




HP MS e070313sim.d, Scan 120; 6.970 min. (SUB)



Reference Spectrum for Chloromethane



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	6.608	3053	0.04204	0.04204	100	a	
	6.488	121			4		
2	6.970	8537	0.1175	0.1175	100		
	6.946	1893			22		
3	7.259	707	0.009736	0.009736	100	a	
	6.946	1893			268		

TargetReview.exe:ICAL 7/chem/msd1/03Jul2017 fr/e070313sim.d

Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 15:18

- 1 Freon 12
- 2 Freon 114
- *I 3 Chloromethane
- 4 Vinyl Chloride
- 5 Chloroethane
- 8 1,1-Dichloroetl
- 9 Methyl tert-bu
- 10 trans-1,2-Dich
- 11 1,1-Dichloroetl
- 12 cis-1,2-Dichlo
- *+ 13 Bromochlorometl
- 14 Chloroform
- 15 1,1,1-Trichlor
- 16 Carbon Tetrach
- 17 Benzene
- $+ 18 1,2-Dichloroetl
- 19 1,2-Dichloroetl
- *+ 20 1,4-Difluorobe
- 21 Trichloroethen
- $+ 22 Toluene-d8
- 23 Toluene
- 25 1,1,2-Trichlor
- 26 Tetrachloroeth
- 27 1,2-Dibromoeth
- *+ 28 Chlorobenzene-

e070313sim.d

Ion 50.00

Ion 52.00

NF MS e070313sim.d, Scan 120: 6.970 min. (SUB)

Reference Spectrum for Chloromethane

Manual Int

970 Done

906 Help

983

Data

Int Marks

Peaks

aseline

ak

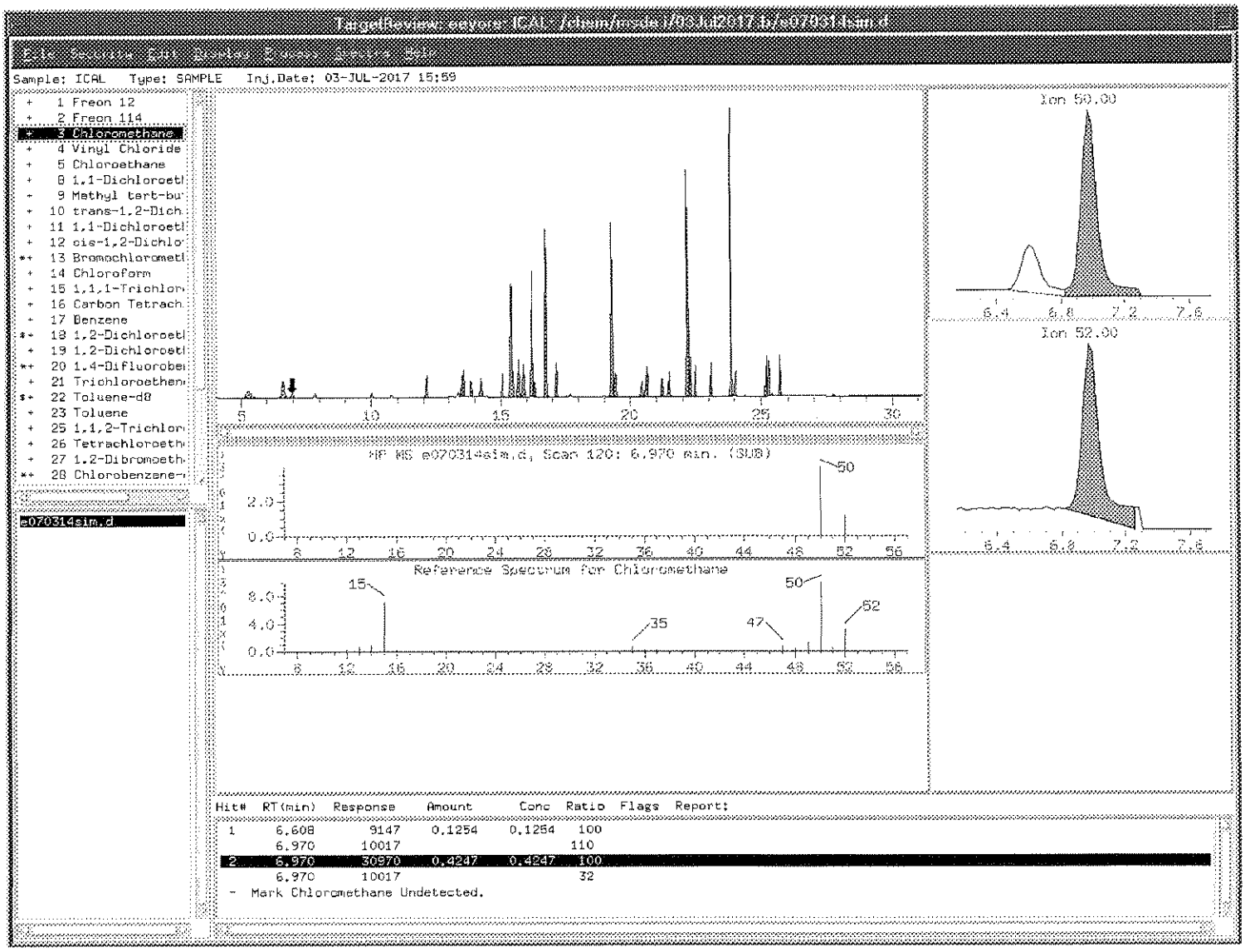
Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	6.970	6006	0.08270	0.08270	100	M	
	6.946	1893			32		

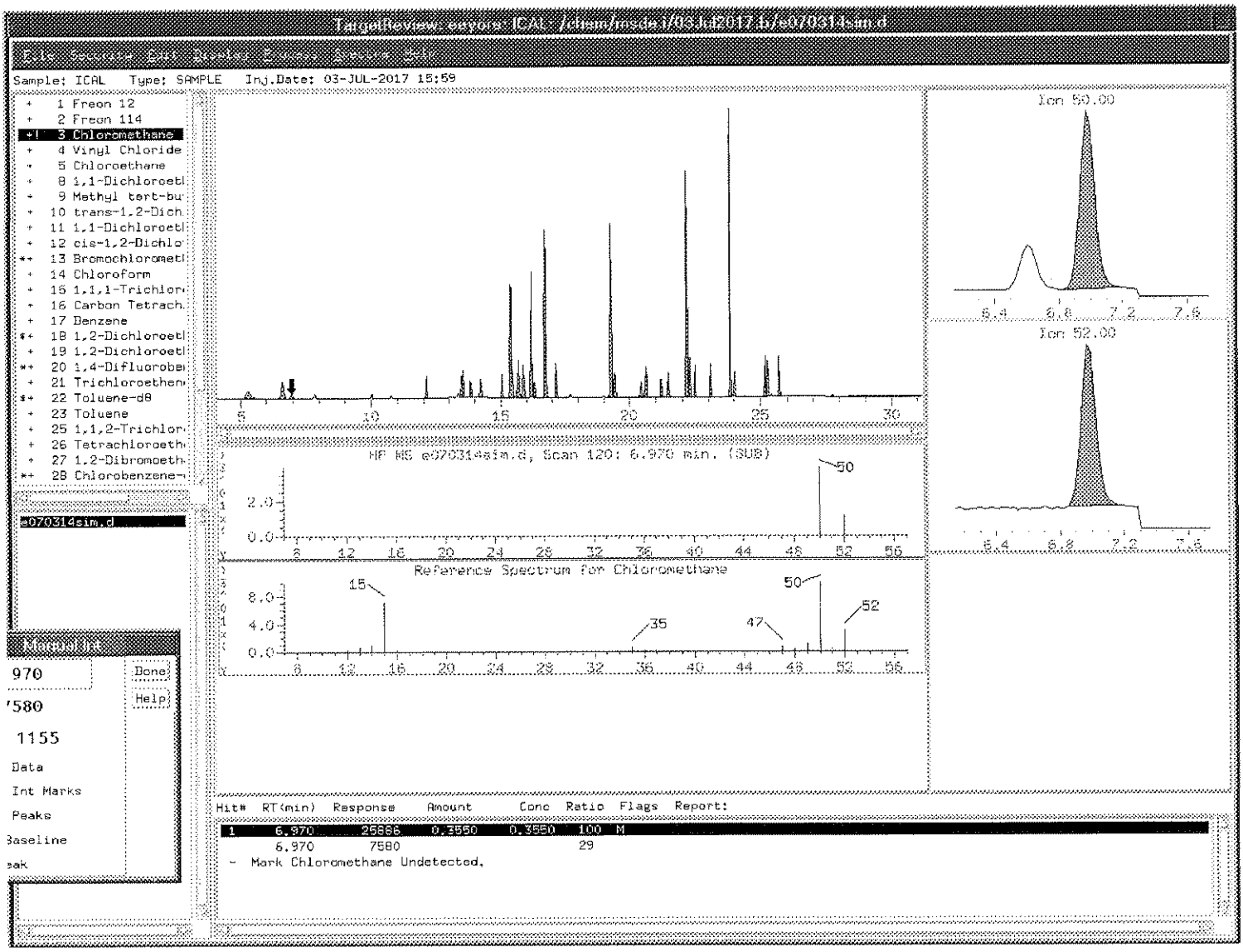
- Mark Chloromethane Undetected.

BT 7/5/17

After BT 7/5/17

Correct Baseline	X
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	


TargetReview: eevors: ICAL /chem/msd1/03Jul2017b/e070314sim.d
Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 15:59
+ 1 Freon 12
+ 2 Freon 114
+ 3 Chloromethane
+ 4 Vinyl Chloride
+ 5 Chloroethane
+ 8 1,1-Dichloroetl
+ 9 Methyl tert-bu
+ 10 trans-1,2-Dich
+ 11 1,1-Dichloroetl
+ 12 cis-1,2-Dichlo
*+ 13 Bromochlorometl
+ 14 Chloroform
+ 15 1,1,1-Trichlor
+ 16 Carbon Tetrach
+ 17 Benzene
*+ 18 1,2-Dichloroetl
+ 19 1,2-Dichloroetl
*+ 20 1,4-Difluorobe
+ 21 Trichloroethen
*+ 22 Toluene-d8
+ 23 Toluene
+ 25 1,1,2-Trichlor
+ 26 Tetrachloroeth
+ 27 1,2-Dibromoeth
*+ 28 Chlorobenzene-
e070314sim.d
Ion 50.00
Ion 52.00
HP MS e070314sim.d, Scan 120: 6.970 min. (SUB)
Reference Spectrum for Chloromethane
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.608 9147 0.1254 0.1254 100
6.970 10017 110
2 6.970 30970 0.4247 0.4247 100
6.970 10017 32
- Mark Chloromethane Undetected.



ES 7/5/17

After ES 7/5/17

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Modified EPA Methods TO-14A/TO-15 SIM
Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Dichlorodifluoromethane (Fr12)
Freon 114
Chloromethane
Vinyl Chloride
Chloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
Methyl tert-butyl ether
1,1-Dichloroethane
cis-1,2-Dichloroethene
Chloroform
1,1,1-Trichloroethane
Carbon Tetrachloride
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Trichloroethene
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
1,1,2-Trichloroethane
Tetrachloroethene
1,2-Dibromoethane
Ethyl Benzene
m,p-Xylene
o-Xylene
1,1,2,2-Tetrachloroethane
1,4-Dichlorobenzene
Naphthalene
Surrogates:
Bromofluorobenzene

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/05Jul2017.b/e070503sim.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 05-JUL-2017 09:02
Operator : ef Inst ID: msde.i
Smp Info : 50mL #2850-197
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/05Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:42 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 19:26 Cal File: e070318sim.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1495355	12.3270	12.327	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	483822			2.36- 62.36	32.35
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	1156857	12.5631	12.563	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	373363			2.09- 62.09	32.27
3 Chloromethane					CAS #: 74-87-3		
6.970	6.970 (0.452)	50	609734	11.6726	11.673	80.00- 120.00	100.00
6.970	6.970 (0.452)	52	189583			0.98- 60.98	31.09
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	465632	12.5496	12.550	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	134725			0.00- 58.64	28.93
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	195804	11.4141	11.414	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	59343			0.36- 60.36	30.31

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                            CAS #: 75-35-4
 12.113  12.113 (0.786)    98    286412 11.4699   11.470  80.00- 120.00   100.00
 12.094  12.113 (0.785)    61    943867                  300.85- 360.85   329.55
 12.094  12.113 (0.785)    96    448199                  126.45- 186.45   156.49
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                       CAS #: 1634-04-4
 13.492  13.492 (0.876)    73   1167590 12.2807   12.281  80.00- 120.00   100.00
 13.492  13.492 (0.876)    57    337968                    0.00-  59.46    28.95
 13.465  13.492 (0.874)    41    385288                    3.65-  63.65    33.00
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                      CAS #: 156-60-5
 13.547  13.547 (0.879)    98    260917 10.1171   10.117  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61    716490                  242.34- 302.34   274.60
 13.547  13.547 (0.879)    96    406390                  125.09- 185.09   155.75
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                            CAS #: 75-34-3
 14.233  14.233 (0.924)    63    941059 11.5862   11.586  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    289067                    0.54-  60.54    30.72
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.060  15.060 (0.978)    98    353013 12.4936   12.494  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61    888851                  222.17- 282.17   251.79
 15.060  15.060 (0.978)    96    548656                  125.16- 185.16   155.42
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    135137 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    104946                   47.63- 107.63    77.66
 15.374  15.405 (1.000)    49    242059                  150.43- 210.43   179.12
-------------------------------------------------------------------------------
   14 Chloroform                                    CAS #: 67-66-3
 15.467  15.436 (1.004)    83   1096307 11.1251   11.125  80.00- 120.00   100.00
 15.467  15.436 (1.004)    85    749877                   38.49-  98.49    68.40
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                         CAS #: 71-55-6
 15.682  15.682 (1.018)    97   1370614 11.3837   11.384  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99    895992                   35.44-  95.44    65.37
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                          CAS #: 56-23-5
 15.867  15.867 (1.030)   119   1238497 9.64017    9.640  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117   1272228                   72.67- 132.67   102.72
-------------------------------------------------------------------------------
   17 Benzene                                       CAS #: 71-43-2
 16.197  16.197 (0.968)    78   1220377 10.0954   10.095  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    288943                    0.00-  53.68    23.68
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    206668 4.76442    4.764  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67     99455                    19.71-  79.71    48.12
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    959040 11.0139   11.014  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    296276                     0.82-  60.82    30.89
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    505720 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     74188                     0.00-  44.62    14.67
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    808213 10.7095   10.709  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    709261                   57.80- 117.80    87.76
 17.136  17.136 (1.024)    97    459229                   26.87-  86.87    56.82
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    407733 5.01315    5.013  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     45310                     0.00-  41.18    11.11
 19.289  19.289 (1.153)   100    266535                   35.44-  95.44    65.37
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.423 (1.161)    91   1540209 11.1019   11.102  80.00- 120.00   100.00
 19.424  19.423 (1.161)    92    899873                   28.44-  88.44    58.43
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    617110 11.4541   11.454  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    388440                   32.77-  92.77    62.95
 20.424  20.424 (0.921)    83    475853                   47.27- 107.27    77.11
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    987667 11.2920   11.292  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    795574                   50.99- 110.99    80.55
 20.616  20.616 (0.930)   131    803558                   51.53- 111.53    81.36
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107   1039688 11.5553   11.555  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109   1036524                   69.74- 129.74    99.70
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    465676 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    198590                   12.99-  72.99    42.65
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106    661436 12.0289   12.029  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91   2060770                  281.21- 341.21   311.56
-------------------------------------------------------------------------------
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                     CAS #: 108-38-3
 22.481  22.481 (1.014)   106    768522 12.2028   12.203  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91   1569934                  173.96- 233.96   204.28
-------------------------------------------------------------------------------
   32 o-Xylene                                       CAS #: 95-47-6
 23.082  23.082 (1.041)   106    720421 12.5988   12.599  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91   1548247                  183.85- 243.85   214.91
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                            CAS #: 460-00-4
 23.869  23.869 (1.077)   174    292318 5.21009    5.210  80.00- 120.00   100.00
 23.869  23.869 (1.077)    95    303585                   73.66- 133.66   103.85
 23.869  23.869 (1.077)   176    284184                   67.29- 127.29    97.22
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 24.026  24.026 (1.084)    83    930515 11.0901   11.090  80.00- 120.00   100.00
 24.049  24.026 (1.085)    85    643618                   38.95-  98.95    69.17
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                            CAS #: 106-46-7
 25.260  25.260 (1.139)   146   1128560 12.1218   12.122  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    734516                   34.91-  94.91    65.08
 25.260  25.260 (1.139)   111    420758                    6.86-  66.86    37.28
-------------------------------------------------------------------------------
   38 Naphthalene                                    CAS #: 91-20-3
 27.726  27.726 (1.251)   128     56202 0.74591   0.7459  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127      7145                    0.00-  42.71    12.71
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070503sim.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/05Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 05-JUL-2017
Calibration Time: 07:52
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	152090	91254	212926	135137	-11.15
20 1,4-Difluorobenze	570710	342426	798994	505720	-11.39
28 Chlorobenzene-d5	515276	309166	721386	465676	-9.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 05-Jul-2017 16:48

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 05Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/05Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	12.327	123.27	70-130
2 Freon 114	10.000	12.563	125.63	70-130
3 Chloromethane	10.000	11.673	116.73	70-130
4 Vinyl Chloride	10.000	12.550	125.50	70-130
5 Chloroethane	10.000	11.414	114.14	70-130
8 1,1-Dichloroethene	10.000	11.470	114.70	70-130
9 Methyl tert-butyl	10.000	12.281	122.81	70-130
10 trans-1,2-Dichloro	10.000	10.117	101.17	70-130
11 1,1-Dichloroethane	10.000	11.586	115.86	70-130
12 cis-1,2-Dichloroet	10.000	12.494	124.94	70-130
14 Chloroform	10.000	11.125	111.25	70-130
15 1,1,1-Trichloroeth	10.000	11.384	113.84	70-130
16 Carbon Tetrachlori	10.000	9.640	96.40	60-140
17 Benzene	10.000	10.095	100.95	70-130
19 1,2-Dichloroethane	10.000	11.014	110.14	70-130
21 Trichloroethene	10.000	10.709	107.09	70-130
23 Toluene	10.000	11.102	111.02	70-130
25 1,1,2-Trichloroeth	10.000	11.454	114.54	70-130
26 Tetrachloroethene	10.000	11.292	112.92	70-130
27 1,2-Dibromoethane	10.000	11.555	115.55	70-130
30 Ethyl Benzene	10.000	12.029	120.29	70-130
31 m,p-Xylene	10.000	12.203	122.03	70-130
32 o-Xylene	10.000	12.599	125.99	70-130
34 1,1,2,2-Tetrachlor	10.000	11.090	110.90	70-130
36 1,4-Dichlorobenzen	10.000	12.122	121.22	70-130
38 Naphthalene	1.000	0.7459	74.59	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	4.764	95.29	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.013	100.26	70-130
$ 33 4-Bromofluorobenze	5.000	5.210	104.20	70-130

Data File: /chem/msde.i/05Jul2017.b/e070503sim.d

Date : 05-JUL-2017 09:02

Client ID: LCS

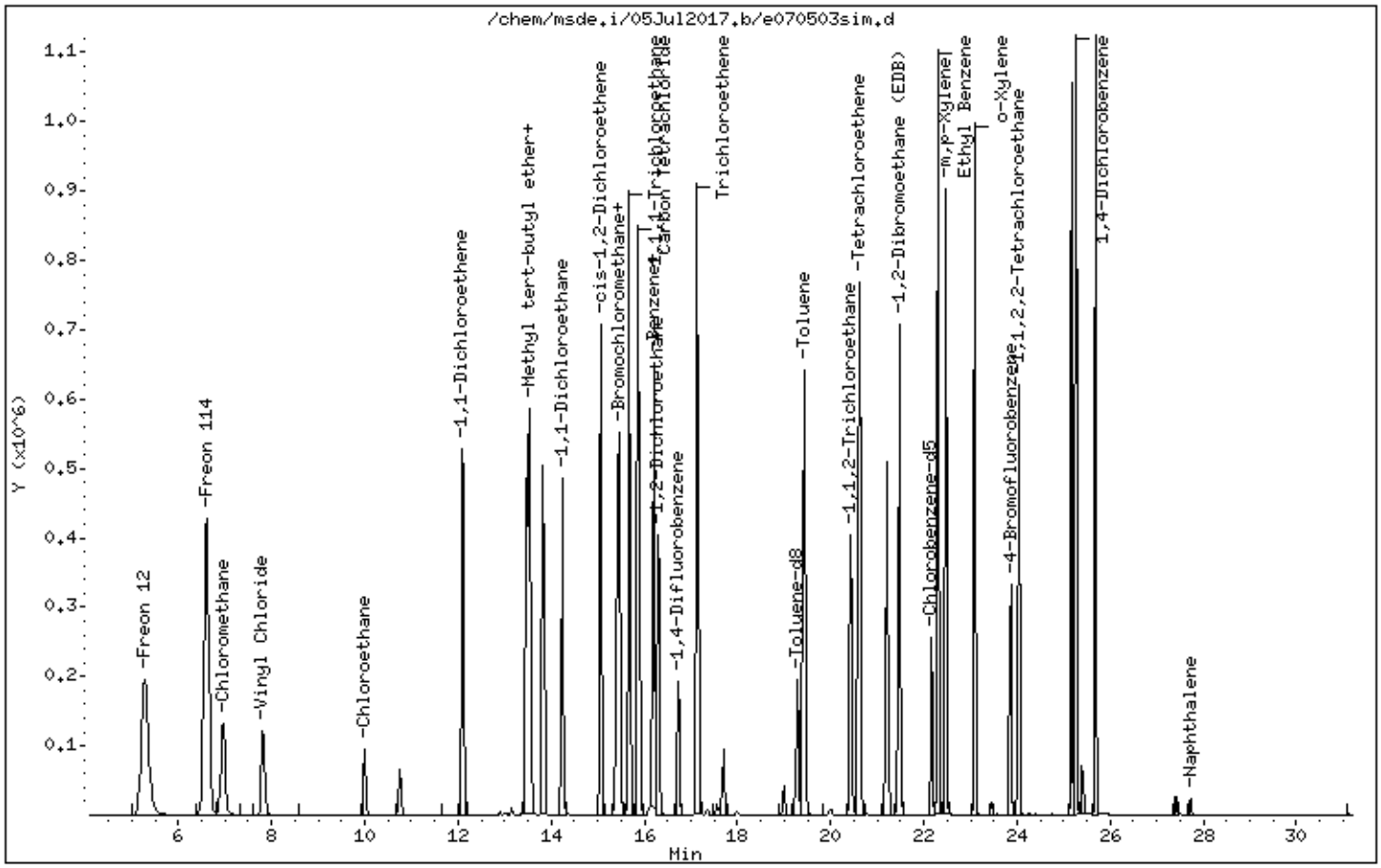
Instrument: msde.i

Sample Info: 50mL #2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070308sim.d
Lab Smp Id: ICAL Client Smp ID: Level 2
Inj Date : 03-JUL-2017 12:03
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-228
Misc Info : 0.005ppbv (0.05ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 12:03 Cal File: e070308sim.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	157	0.00500	0.005909	80.00- 120.00	100.00(a)
12.113	12.113 (0.786)	61	436			300.85- 360.85	277.71
12.094	12.094 (0.785)	96	290			126.45- 186.45	184.71
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	196	0.00500	0.006519	80.00- 120.00	100.00(a)
15.060	15.060 (0.978)	61	372			222.17- 282.17	189.80
15.060	15.060 (0.978)	96	286			125.16- 185.16	145.92
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	143789	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	110693			47.63- 107.63	76.98
15.374	15.374 (1.000)	49	251457			150.43- 210.43	174.88
14 Chloroform					CAS #: 67-66-3		
15.467	15.467 (1.004)	83	638	0.00500	0.006085	80.00- 120.00	100.00(a)
15.467	15.467 (1.004)	85	379			38.49- 98.49	59.40
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	921	0.00500	0.006737	80.00- 120.00	100.00(a)

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   16 Carbon Tetrachloride (continued)
 15.867  15.867 (1.030)   117       837                    72.67- 132.67    90.88
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    234176 5.00000    5.074  80.00- 120.00   100.00
 16.197  16.197 (1.051)    67    103540                   19.71-  79.71    44.21
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                           CAS #: 107-06-2
 16.293  16.293 (0.974)    62       554 0.00500  0.006142  80.00- 120.00   100.00(a)
 16.317  16.317 (0.976)    64       156                    0.82-  60.82    28.16
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.727  16.727 (1.000)   114    523829 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     76406                    0.00-  44.62    14.59
-------------------------------------------------------------------------------
   21 Trichloroethene                              CAS #: 79-01-6
 17.136  17.136 (1.024)   130       479 0.00500  0.006128  80.00- 120.00   100.00(a)
 17.136  17.136 (1.024)    95       449                   57.80- 117.80    93.74
 17.136  17.136 (1.024)    97       267                   26.87-  86.87    55.74
-------------------------------------------------------------------------------
$  22 Toluene-d8                                   CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    415532 5.00000    4.932  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     47118                    0.00-  41.18    11.34
 19.289  19.289 (1.153)   100    271908                   35.44-  95.44    65.44
-------------------------------------------------------------------------------
   26 Tetrachloroethene                            CAS #: 127-18-4
 20.616  20.616 (0.930)   166       492 0.00500  0.005452  80.00- 120.00   100.00(a)
 20.616  20.616 (0.930)   129       451                   50.99- 110.99    91.67
 20.616  20.616 (0.930)   131       463                   51.53- 111.53    94.11
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.495  21.495 (0.970)   107       505 0.00500  0.005441  80.00- 120.00   100.00(a)
 21.495  21.495 (0.970)   109       507                   69.74- 129.74   100.40
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    480404 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    206277                   12.99-  72.99    42.94
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.869  23.869 (1.077)   174    284235 5.00000    4.911  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    292187                   73.66- 133.66   102.80
 23.869  23.869 (1.077)   176    275716                   67.29- 127.29    97.00
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.049  24.049 (1.085)    83       491 0.00500  0.005672  80.00- 120.00   100.00(a)
 24.049  24.049 (1.085)    85       324                   38.95-  98.95    65.99
-------------------------------------------------------------------------------
```

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070308sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 0.005ppbv (0.05ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 2
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	143789	-1.09
20 1,4-Difluorobenze	538106	322864	753348	523829	-2.65
28 Chlorobenzene-d5	493246	295948	690544	480404	-2.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070308sim.d

Date : 03-JUL-2017 12:03

Client ID: Level 2

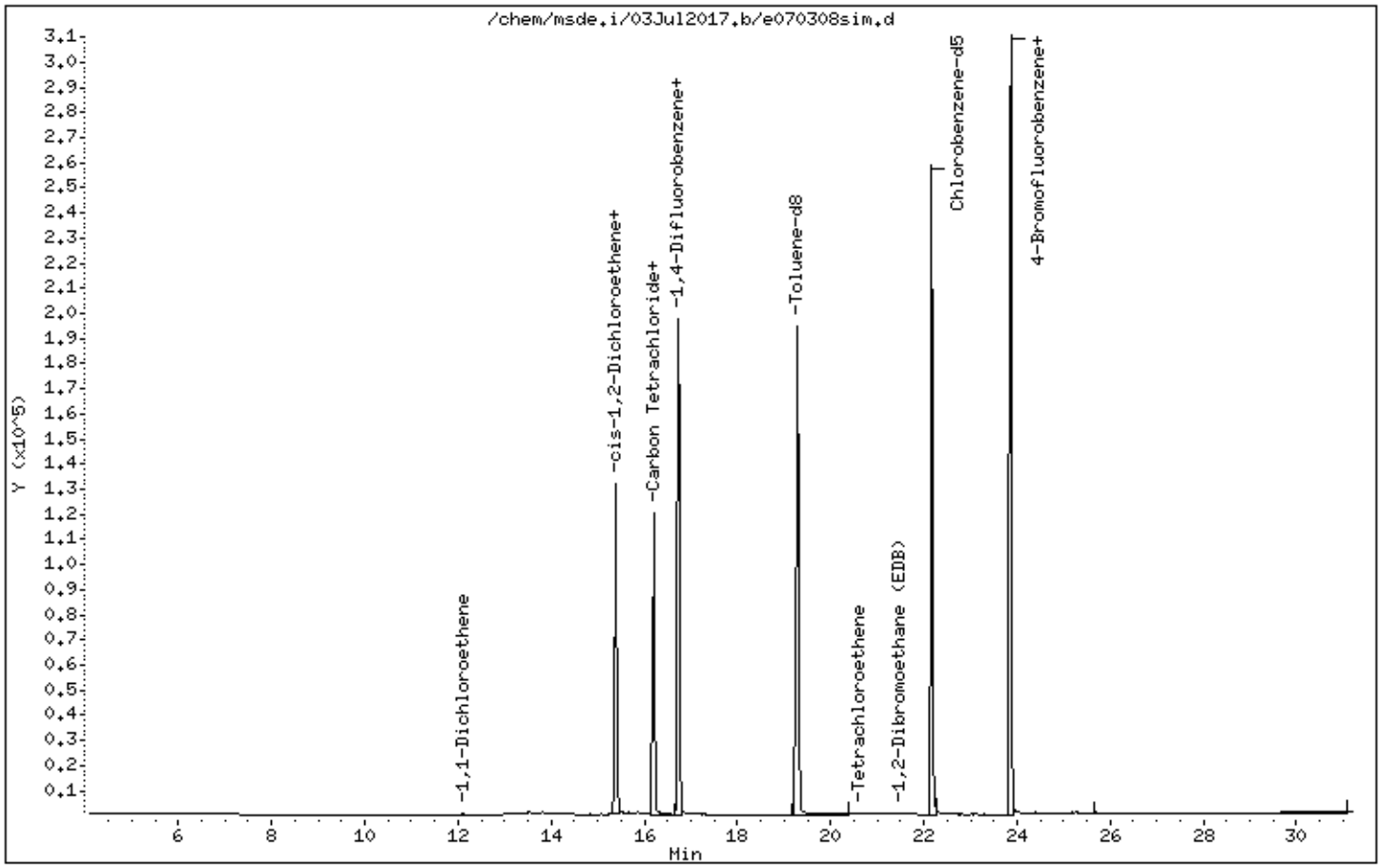
Instrument: msde.i

Sample Info: 25mL# 2850-228

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070306sim.d
Lab Smp Id: ICAL Client Smp ID: Level 3
Inj Date : 03-JUL-2017 10:32
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-228
Misc Info : 0.01ppbv (0.05ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 10:32 Cal File: e070306sim.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level3.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	388	0.01000	0.009882	80.00- 120.00	100.00(a)
7.810	7.810 (0.507)	64	185			0.00- 58.64	47.68
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	313	0.01000	0.01184	80.00- 120.00	100.00
12.113	12.113 (0.786)	61	830			300.85- 360.85	265.18
12.113	12.113 (0.786)	96	678			126.45- 186.45	216.61
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	289	0.01000	0.01059	80.00- 120.00	100.00(a)
13.547	13.547 (0.879)	61	765			242.34- 302.34	264.71
13.547	13.547 (0.879)	96	644			125.09- 185.09	222.84
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	310	0.01000	0.01037	80.00- 120.00	100.00(a)
15.060	15.060 (0.978)	61	748			222.17- 282.17	241.29
15.060	15.060 (0.978)	96	511			125.16- 185.16	164.84
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	143001	5.00000		80.00- 120.00	100.00

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

*  13 Bromochloromethane (continued)
 15.405  15.405 (1.000)   128    110074                    47.63- 107.63    76.97
 15.374  15.374 (1.000)    49    251938                   150.43- 210.43   176.18
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.467  15.467 (1.004)    83      1126 0.01000  0.01080  80.00- 120.00   100.00(a)
 15.467  15.467 (1.004)    85       734                    38.49-  98.49    65.19
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119      1488 0.01000  0.01094  80.00- 120.00   100.00(a)
 15.867  15.867 (1.030)   117      1529                    72.67- 132.67   102.76
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    233925 5.00000    5.096  80.00- 120.00   100.00
 16.197  16.197 (1.051)    67    103886                    19.71-  79.71    44.41
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                           CAS #: 107-06-2
 16.293  16.293 (0.974)    62       935 0.01000  0.01034  80.00- 120.00   100.00(a)
 16.293  16.293 (0.974)    64       351                     0.82-  60.82    37.54
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.727  16.727 (1.000)   114    525099 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     76536                     0.00-  44.62    14.58
-------------------------------------------------------------------------------
   21 Trichloroethene                              CAS #: 79-01-6
 17.136  17.136 (1.024)   130       886 0.01000  0.01131  80.00- 120.00   100.00(a)
 17.136  17.136 (1.024)    95       871                    57.80- 117.80    98.31
 17.136  17.136 (1.024)    97       558                    26.87-  86.87    62.98
-------------------------------------------------------------------------------
$  22 Toluene-d8                                   CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    417832 5.00000    4.948  80.00- 120.00   100.00
 19.267  19.267 (1.152)    70     47138                     0.00-  41.18    11.28
 19.289  19.289 (1.153)   100    273479                    35.44-  95.44    65.45
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.424  20.424 (0.921)    97       538 0.01000  0.009686  80.00- 120.00   100.00(a)
 20.424  20.424 (0.921)    99       324                    32.77-  92.77    60.22
 20.424  20.424 (0.921)    83       494                    47.27- 107.27    91.82
-------------------------------------------------------------------------------
   26 Tetrachloroethene                            CAS #: 127-18-4
 20.616  20.616 (0.930)   166       934 0.01000  0.01036  80.00- 120.00   100.00(a)
 20.616  20.616 (0.930)   129       779                    50.99- 110.99    83.40
 20.616  20.616 (0.930)   131       787                    51.53- 111.53    84.26
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.468  21.468 (0.968)   107       967 0.01000  0.01042  80.00- 120.00   100.00(a)
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   27 1,2-Dibromoethane (EDB) (continued)
 21.468  21.468 (0.968)   109      1011                    69.74- 129.74   104.55
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    480087 5.00000            80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    205293                    12.99-  72.99    42.76
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.847  23.847 (1.076)   174    284936 5.00000    4.926   80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    295213                    73.66- 133.66   103.61
 23.869  23.869 (1.077)   176    275701                    67.29- 127.29    96.76
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 24.026  24.026 (1.084)    83       858 0.01000  0.009919  80.00- 120.00   100.00(a)
 24.049  24.049 (1.085)    85       683                    38.95-  98.95    79.60
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                           CAS #: 106-46-7
 25.260  25.260 (1.139)   146      1137 0.01000  0.01184  80.00- 120.00   100.00(a)
 25.282  25.282 (1.140)   148       766                    34.91-  94.91    67.37
 25.260  25.260 (1.139)   111       484                     6.86-  66.86    42.57
-------------------------------------------------------------------------------
```

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070306sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 0.01ppbv (0.05ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 3
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	143001	-1.63
20 1,4-Difluorobenze	538106	322864	753348	525099	-2.42
28 Chlorobenzene-d5	493246	295948	690544	480087	-2.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070306sim.d

Date : 03-JUL-2017 10:32

Client ID: Level 3

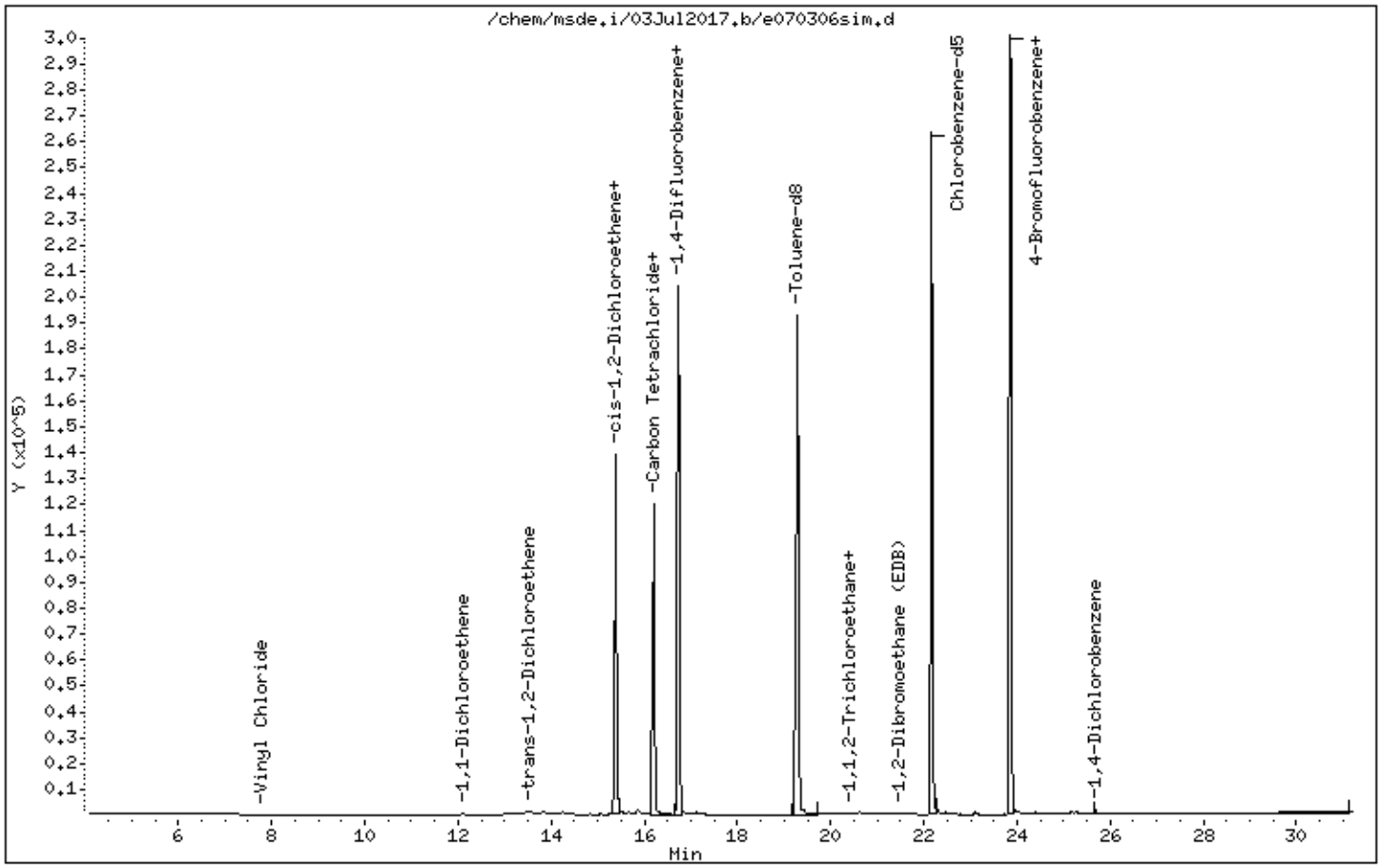
Instrument: msde.i

Sample Info: 50mL# 2850-228

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070309sim.d
Lab Smp Id: ICAL Client Smp ID: Level 4
Inj Date : 03-JUL-2017 12:44
Operator : ef Inst ID: msde.i
Smp Info : 100mL# 2850-228
Misc Info : 0.02ppbv (0.05ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 12:44 Cal File: e070309sim.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level4.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.307	5.307 (0.344)	85	2478	0.02000	0.01905	80.00- 120.00	100.00(a)
5.307	5.307 (0.344)	87	714			2.36- 62.36	28.81
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	1919	0.02000	0.01943	80.00- 120.00	100.00(a)
6.608	6.608 (0.429)	137	585			2.09- 62.09	30.48
4 Vinyl Chloride					CAS #: 75-01-4		
7.828	7.828 (0.508)	62	741	0.02000	0.01862	80.00- 120.00	100.00
7.845	7.845 (0.509)	64	263			0.00- 58.64	35.49
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	449	0.02000	0.01677	80.00- 120.00	100.00
12.113	12.113 (0.786)	61	1644			300.85- 360.85	366.15
12.113	12.113 (0.786)	96	989			126.45- 186.45	220.27
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	1812	0.02000	0.01777	80.00- 120.00	100.00(a)
13.492	13.492 (0.876)	57	540			0.00- 59.46	29.80

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    9 Methyl tert-butyl ether (continued)
 13.492  13.492 (0.876)    41       831                     3.65-  63.65    45.86
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63      1634 0.02000  0.01876  80.00- 120.00   100.00(a)
 14.233  14.233 (0.924)    65       541                     0.54-  60.54    33.11
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98       555 0.02000  0.02007  80.00- 120.00   100.00(a)
 13.547  13.547 (0.879)    61      1449                   242.34- 302.34   261.08
 13.547  13.547 (0.879)    96       890                   125.09- 185.09   160.36
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98       545 0.02000  0.01798  80.00- 120.00   100.00(a)
 15.060  15.060 (0.978)    61      1385                   222.17- 282.17   254.13
 15.060  15.060 (0.978)    96      1112                   125.16- 185.16   204.04
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    144924 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    112203                    47.63- 107.63    77.42
 15.374  15.374 (1.000)    49    253876                   150.43- 210.43   175.18
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.467  15.467 (1.004)    83      1878 0.02000  0.01777  80.00- 120.00   100.00(a)
 15.467  15.467 (1.004)    85      1355                    38.49-  98.49    72.15
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97      2539 0.02000  0.01966  80.00- 120.00   100.00(a)
 15.682  15.682 (1.018)    99      1607                    35.44-  95.44    63.29
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119      2831 0.02000  0.02055  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117      2883                    72.67- 132.67   101.84
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78      3456 0.02000  0.02779  80.00- 120.00   100.00(aH)
 16.197  16.197 (0.968)    77      1423                     0.00-  53.68    41.17
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    235399 5.00000    5.060  80.00- 120.00   100.00
 16.197  16.197 (1.051)    67    103840                    19.71-  79.71    44.11
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                           CAS #: 107-06-2
 16.317  16.317 (0.976)    62      1697 0.02000  0.01894  80.00- 120.00   100.00(a)
 16.317  16.317 (0.976)    64       586                     0.82-  60.82    34.53
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 20 1,4-Difluorobenzene						CAS #: 540-36-3	
16.727	16.727 (1.000)	114	520234	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	76038			0.00- 44.62	14.62
21 Trichloroethene						CAS #: 79-01-6	
17.136	17.136 (1.024)	130	1590	0.02000	0.02048	80.00- 120.00	100.00
17.136	17.136 (1.024)	95	1418			57.80- 117.80	89.18
17.136	17.136 (1.024)	97	951			26.87- 86.87	59.81
$ 22 Toluene-d8						CAS #: 2037-26-5	
19.289	19.289 (1.153)	98	417379	5.00000	4.988	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	47024			0.00- 41.18	11.27
19.289	19.289 (1.153)	100	271319			35.44- 95.44	65.01
23 Toluene						CAS #: 108-88-3	
19.424	19.424 (1.161)	91	3089	0.02000	0.02164	80.00- 120.00	100.00
19.446	19.446 (1.163)	92	1719			28.44- 88.44	55.65
25 1,1,2-Trichloroethane						CAS #: 79-00-5	
20.452	20.452 (0.922)	97	1166	0.02000	0.02078	80.00- 120.00	100.00
20.452	20.452 (0.922)	99	660			32.77- 92.77	56.60
20.424	20.424 (0.921)	83	825			47.27- 107.27	70.75
26 Tetrachloroethene						CAS #: 127-18-4	
20.616	20.616 (0.930)	166	1897	0.02000	0.02083	80.00- 120.00	100.00
20.616	20.616 (0.930)	129	1475			50.99- 110.99	77.75
20.616	20.616 (0.930)	131	1620			51.53- 111.53	85.40
27 1,2-Dibromoethane (EDB)						CAS #: 106-93-4	
21.495	21.495 (0.970)	107	1892	0.02000	0.02019	80.00- 120.00	100.00
21.495	21.495 (0.970)	109	1864			69.74- 129.74	98.52
* 28 Chlorobenzene-d5						CAS #: 3114-55-4	
22.170	22.170 (1.000)	117	484929	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	206607			12.99- 72.99	42.61
30 Ethyl Benzene						CAS #: 100-41-4	
22.295	22.295 (1.006)	106	1102	0.02000	0.01924	80.00- 120.00	100.00(a)
22.295	22.295 (1.006)	91	3515			281.21- 341.21	318.97
31 m,p-Xylene						CAS #: 108-38-3	
22.481	22.481 (1.014)	106	1250	0.02000	0.01906	80.00- 120.00	100.00(a)
22.481	22.481 (1.014)	91	2608			173.96- 233.96	208.64
32 o-Xylene						CAS #: 95-47-6	
23.082	23.082 (1.041)	106	1115	0.02000	0.01872	80.00- 120.00	100.00(a)

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 o-Xylene (continued)							
23.082	23.082 (1.041)	91	2413			183.85- 243.85	216.41
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	289819	5.00000	4.960	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	298435			73.66- 133.66	102.97
23.869	23.869 (1.077)	176	280386			67.29- 127.29	96.75
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.049	24.049 (1.085)	83	1683	0.02000	0.01926	80.00- 120.00	100.00(a)
24.049	24.049 (1.085)	85	1157			38.95- 98.95	68.75
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.282	25.282 (1.140)	146	1885	0.02000	0.01944	80.00- 120.00	100.00(a)
25.282	25.282 (1.140)	148	1324			34.91- 94.91	70.24
25.260	25.260 (1.139)	111	690			6.86- 66.86	36.60

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Report Date: 05-Jul-2017 16:39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070309sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 4
Level: LOW
Sample Type: AIR
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 0.02ppbv (0.05ppbv)

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	144924	-0.31
20 1,4-Difluorobenze	538106	322864	753348	520234	-3.32
28 Chlorobenzene-d5	493246	295948	690544	484929	-1.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070309sim.d

Date : 03-JUL-2017 12:44

Client ID: Level 4

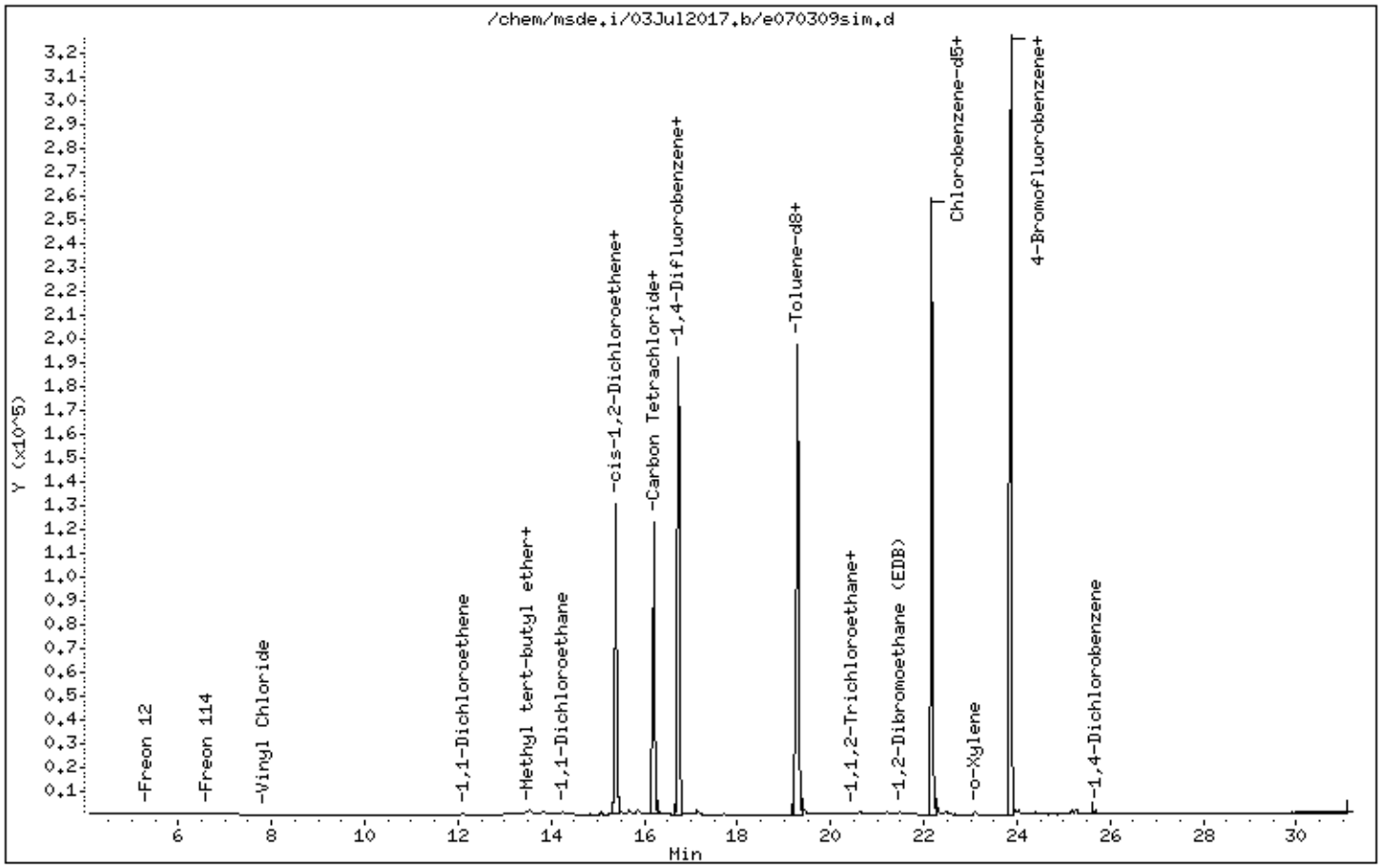
Instrument: msde.i

Sample Info: 100mL# 2850-228

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070312sim.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 03-JUL-2017 14:35
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-228
Misc Info : 0.05ppbv (0.05ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 14:35 Cal File: e070312sim.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.307	5.307 (0.344)	85	5977	0.05000	0.04501	80.00- 120.00	100.00(a)
5.331	5.331 (0.346)	87	2037			2.36- 62.36	34.08
2 Freon 114					CAS #: 76-14-2		
6.632	6.632 (0.431)	135	4380	0.05000	0.04345	80.00- 120.00	100.00(a)
6.632	6.632 (0.431)	137	1427			2.09- 62.09	32.58
3 Chloromethane					CAS #: 74-87-3		
6.994	6.994 (0.454)	50	2708	0.05000	0.04736	80.00- 120.00	100.00(aM)
6.994	6.994 (0.454)	52	797			0.98- 60.98	29.43
4 Vinyl Chloride					CAS #: 75-01-4		
7.828	7.828 (0.508)	62	1938	0.05000	0.04772	80.00- 120.00	100.00(a)
7.845	7.845 (0.509)	64	557			0.00- 58.64	28.74
5 Chloroethane					CAS #: 75-00-3		
10.019	10.019 (0.650)	64	897	0.05000	0.04777	80.00- 120.00	100.00(a)
10.019	10.019 (0.650)	66	349			0.36- 60.36	38.91

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                            CAS #: 75-35-4
 12.113  12.113 (0.786)    98      1210 0.05000  0.04427  80.00- 120.00   100.00(a)
 12.113  12.113 (0.786)    61      3896                  300.85- 360.85   321.98
 12.113  12.113 (0.786)    96      2114                  126.45- 186.45   174.71
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                       CAS #: 1634-04-4
 13.492  13.492 (0.876)    73      4413 0.05000  0.04240  80.00- 120.00   100.00(a)
 13.492  13.492 (0.876)    57      1200                    0.00-  59.46    27.19
 13.492  13.492 (0.876)    41      1660                    3.65-  63.65    37.62
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                      CAS #: 156-60-5
 13.547  13.547 (0.879)    98      1212 0.05000  0.04293  80.00- 120.00   100.00(a)
 13.547  13.547 (0.879)    61      3506                  242.34- 302.34   289.27
 13.547  13.547 (0.879)    96      1961                  125.09- 185.09   161.80
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                            CAS #: 75-34-3
 14.233  14.233 (0.924)    63      3931 0.05000  0.04421  80.00- 120.00   100.00(a)
 14.233  14.233 (0.924)    65      1205                    0.54-  60.54    30.65
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.060  15.060 (0.978)    98      1334 0.05000  0.04313  80.00- 120.00   100.00(a)
 15.060  15.060 (0.978)    61      3286                  222.17- 282.17   246.33
 15.060  15.060 (0.978)    96      2102                  125.16- 185.16   157.57
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    147924 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    114335                   47.63- 107.63    77.29
 15.374  15.374 (1.000)    49    259642                  150.43- 210.43   175.52
-------------------------------------------------------------------------------
   14 Chloroform                                    CAS #: 67-66-3
 15.467  15.467 (1.004)    83      4725 0.05000  0.04380  80.00- 120.00   100.00(a)
 15.467  15.467 (1.004)    85      3206                   38.49-  98.49    67.85
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                         CAS #: 71-55-6
 15.682  15.682 (1.018)    97      6082 0.05000  0.04615  80.00- 120.00   100.00(a)
 15.682  15.682 (1.018)    99      3955                   35.44-  95.44    65.03
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                          CAS #: 56-23-5
 15.867  15.867 (1.030)   119      6680 0.05000  0.04750  80.00- 120.00   100.00(a)
 15.867  15.867 (1.030)   117      7074                   72.67- 132.67   105.90
-------------------------------------------------------------------------------
   17 Benzene                                       CAS #: 71-43-2
 16.197  16.197 (0.968)    78      7089 0.05000  0.05596  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77      2313                    0.00-  53.68    32.63
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    243476 5.00000    5.128  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    107194                    19.71-  79.71    44.03
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.317  16.317 (0.976)    62      4090 0.05000  0.04482  80.00- 120.00   100.00(a)
 16.317  16.317 (0.976)    64      1326                     0.82-  60.82    32.42
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    529963 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     76871                     0.00-  44.62    14.50
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130      3746 0.05000  0.04737  80.00- 120.00   100.00(a)
 17.136  17.136 (1.024)    95      3296                    57.80- 117.80    87.99
 17.136  17.136 (1.024)    97      2170                    26.87-  86.87    57.93
-------------------------------------------------------------------------------
$  22 Toluene-d8                                   CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    428079 5.00000    5.022  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     48599                     0.00-  41.18    11.35
 19.289  19.289 (1.153)   100    280725                    35.44-  95.44    65.58
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91      7440 0.05000  0.05117  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92      4210                    28.44-  88.44    56.59
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.452  20.452 (0.922)    97      2584 0.05000  0.04460  80.00- 120.00   100.00(a)
 20.452  20.452 (0.922)    99      1580                    32.77-  92.77    61.15
 20.424  20.424 (0.921)    83      2079                    47.27- 107.27    80.46
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166      4230 0.05000  0.04497  80.00- 120.00   100.00(a)
 20.616  20.616 (0.930)   129      3494                    50.99- 110.99    82.60
 20.616  20.616 (0.930)   131      3601                    51.53- 111.53    85.13
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107      4276 0.05000  0.04419  80.00- 120.00   100.00(a)
 21.495  21.495 (0.970)   109      4296                    69.74- 129.74   100.47
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    500826 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    213693                   12.99-  72.99    42.67
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.295  22.295 (1.006)   106      2636 0.05000  0.04457  80.00- 120.00   100.00(a)
 22.295  22.295 (1.006)    91      8644                   281.21- 341.21   327.92
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	3122	0.05000	0.04609	80.00- 120.00	100.00(a)
22.481	22.481 (1.014)	91	6099			173.96- 233.96	195.36
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	2709	0.05000	0.04405	80.00- 120.00	100.00(a)
23.082	23.082 (1.041)	91	5787			183.85- 243.85	213.62
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	297707	5.00000	4.934	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	307065			73.66- 133.66	103.14
23.869	23.869 (1.077)	176	289597			67.29- 127.29	97.28
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.049	24.049 (1.085)	83	4057	0.05000	0.04496	80.00- 120.00	100.00(a)
24.049	24.049 (1.085)	85	2715			38.95- 98.95	66.92
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.282	25.282 (1.140)	146	4004	0.05000	0.03999	80.00- 120.00	100.00(a)
25.282	25.282 (1.140)	148	2626			34.91- 94.91	65.58
25.260	25.260 (1.139)	111	1739			6.86- 66.86	43.43

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070312sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 0.05ppbv (0.05ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	147924	1.75
20 1,4-Difluorobenze	538106	322864	753348	529963	-1.51
28 Chlorobenzene-d5	493246	295948	690544	500826	1.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070312sim.d

Date : 03-JUL-2017 14:35

Client ID: Level 5

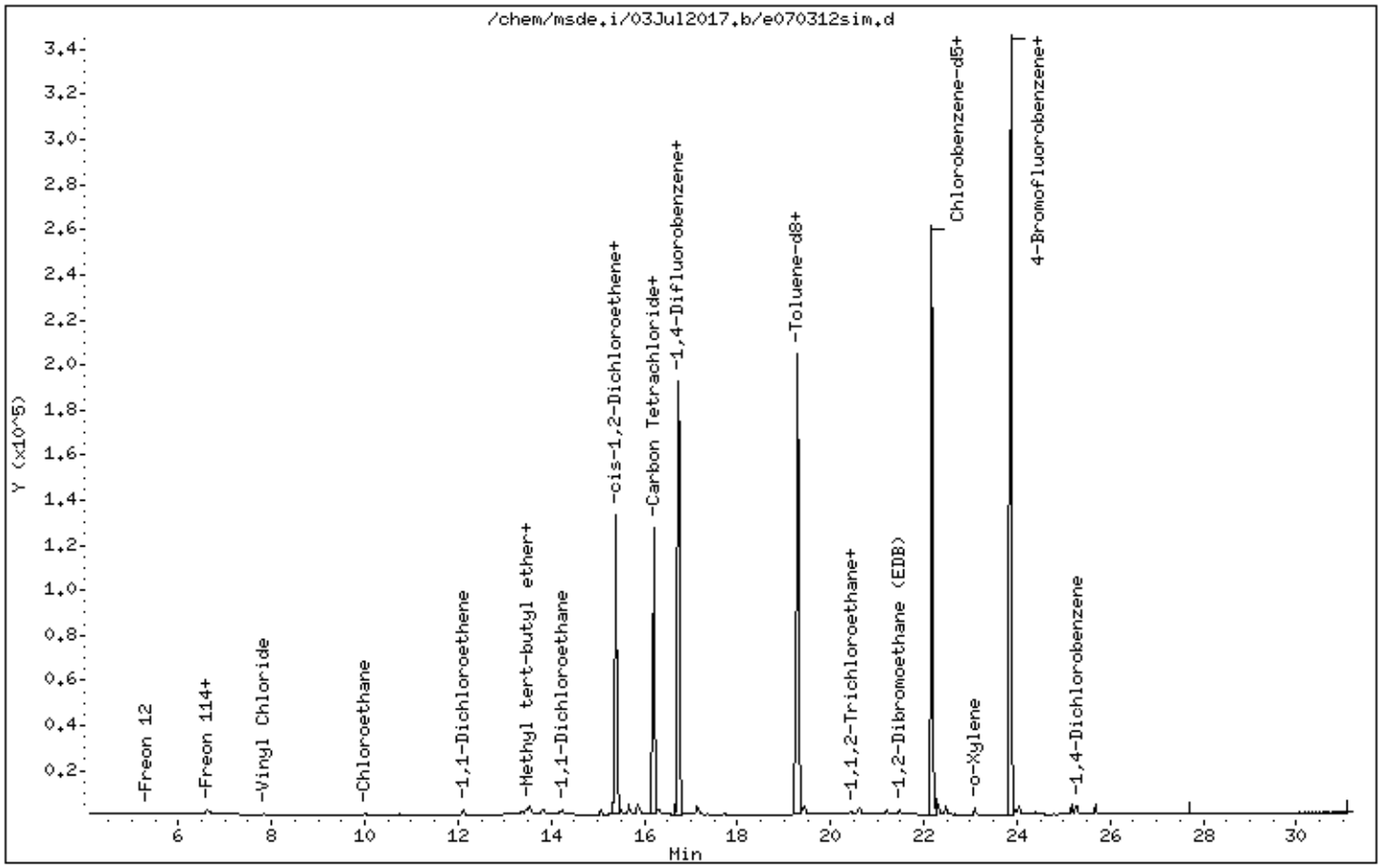
Instrument: msde.i

Sample Info: 250mL# 2850-228

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070313sim.d
Lab Smp Id: ICAL Client Smp ID: Level 6
Inj Date : 03-JUL-2017 15:18
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-229
Misc Info : 0.1ppbv (1.0ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 15:18 Cal File: e070313sim.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	14219	0.10000	0.1151	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	4655			2.36- 62.36	32.74
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	10752	0.10000	0.1147	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	3540			2.09- 62.09	32.92
3 Chloromethane					CAS #: 74-87-3		
6.970	6.970 (0.452)	50	6006	0.10000	0.1129	80.00- 120.00	100.00(M)
6.946	6.946 (0.451)	52	1893			0.98- 60.98	31.52
4 Vinyl Chloride					CAS #: 75-01-4		
7.828	7.828 (0.508)	62	4211	0.10000	0.1115	80.00- 120.00	100.00
7.828	7.828 (0.508)	64	1295			0.00- 58.64	30.75
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	2088	0.10000	0.1196	80.00- 120.00	100.00
10.018	10.018 (0.650)	66	616			0.36- 60.36	29.50

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                            CAS #: 75-35-4
 12.113  12.113 (0.786)    98      2732 0.10000   0.1075  80.00- 120.00   100.00
 12.113  12.113 (0.786)    61      9195                  300.85- 360.85   336.57
 12.113  12.113 (0.786)    96      4274                  126.45- 186.45   156.44
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                       CAS #: 1634-04-4
 13.492  13.492 (0.876)    73     10301 0.10000   0.1064  80.00- 120.00   100.00
 13.492  13.492 (0.876)    57      3090                    0.00-  59.46    30.00
 13.465  13.465 (0.874)    41      4028                    3.65-  63.65    39.10
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                      CAS #: 156-60-5
 13.547  13.547 (0.879)    98      2828 0.10000   0.1077  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61      7862                  242.34- 302.34   278.01
 13.547  13.547 (0.879)    96      4500                  125.09- 185.09   159.12
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                            CAS #: 75-34-3
 14.233  14.233 (0.924)    63      9218 0.10000   0.1115  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65      2830                    0.54-  60.54    30.70
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.060  15.060 (0.978)    98      3036 0.10000   0.1055  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61      7695                  222.17- 282.17   253.46
 15.060  15.060 (0.978)    96      4953                  125.16- 185.16   163.14
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    137578 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    105868                   47.63- 107.63    76.95
 15.374  15.374 (1.000)    49    241982                  150.43- 210.43   175.89
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.467  15.467 (1.004)    83     10861 0.10000   0.1083  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85      7417                   38.49-  98.49    68.29
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97     13754 0.10000   0.1122  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99      8947                   35.44-  95.44    65.05
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119     11550 0.10000  0.08831  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117     11890                   72.67- 132.67   102.94
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78     12578 0.10000   0.1048  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77      2896                    0.00-  53.68    23.02
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    224446 5.00000    5.082  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67     99090                    19.71-  79.71    44.15
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.317  16.317 (0.976)    62      9127 0.10000   0.1056  80.00- 120.00   100.00
 16.317  16.317 (0.976)    64      2859                     0.82-  60.82    31.32
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    501974 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     73049                     0.00-  44.62    14.55
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130      7895 0.10000   0.1054  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95      6893                    57.80- 117.80    87.31
 17.136  17.136 (1.024)    97      4597                    26.87-  86.87    58.23
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    398000 5.00000    4.930  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     45036                     0.00-  41.18    11.32
 19.289  19.289 (1.153)   100    260796                    35.44-  95.44    65.53
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91     14460 0.10000   0.1050  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92      8285                    28.44-  88.44    57.30
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97      5951 0.10000   0.1111  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99      3643                    32.77-  92.77    61.22
 20.424  20.424 (0.921)    83      4639                    47.27- 107.27    77.95
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166      9430 0.10000   0.1085  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129      7818                    50.99- 110.99    82.91
 20.616  20.616 (0.930)   131      7777                    51.53- 111.53    82.47
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107      9422 0.10000   0.1054  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109      9382                    69.74- 129.74    99.58
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    462874 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    198117                    12.99-  72.99    42.80
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106      5644 0.10000   0.1033  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91     18038                   281.21- 341.21   319.60
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	6432	0.10000	0.1027	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	13139			173.96- 233.96	204.28
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	5773	0.10000	0.1016	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	12593			183.85- 243.85	218.14
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	272598	5.00000	4.888	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	281864			73.66- 133.66	103.40
23.869	23.869 (1.077)	176	266555			67.29- 127.29	97.78
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.049	24.049 (1.085)	83	9108	0.10000	0.1092	80.00- 120.00	100.00
24.049	24.049 (1.085)	85	6214			38.95- 98.95	68.23
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	9062	0.10000	0.09792	80.00- 120.00	100.00
25.282	25.282 (1.140)	148	6283			34.91- 94.91	69.33
25.260	25.260 (1.139)	111	3336			6.86- 66.86	36.81
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	871	0.01000	0.01163	80.00- 120.00	100.00(a)
27.726	27.726 (1.251)	127	193			0.00- 42.71	22.16

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Report Date: 05-Jul-2017 16:39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070313sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 0.1ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 6
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	137578	-5.36
20 1,4-Difluorobenze	538106	322864	753348	501974	-6.71
28 Chlorobenzene-d5	493246	295948	690544	462874	-6.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070313sim.d

Date : 03-JUL-2017 15:18

Client ID: Level 6

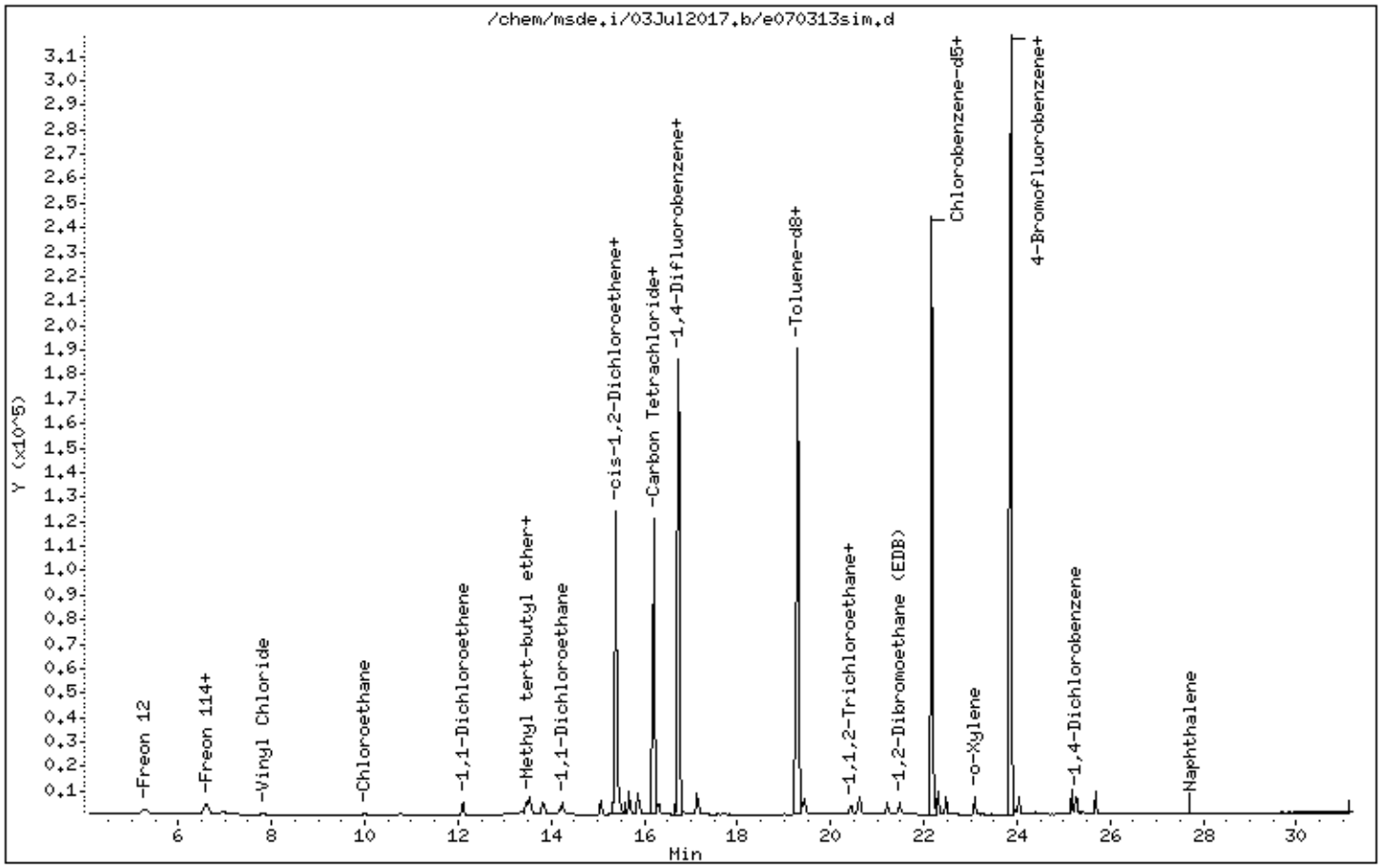
Instrument: msde.i

Sample Info: 25mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070314sim.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 03-JUL-2017 15:59
Operator : ef Inst ID: msde.i
Smp Info : 125mL# 2850-229
Misc Info : 0.5ppbv (1.0ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 15:59 Cal File: e070314sim.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	61348	0.50000	0.4947	80.00- 120.00	100.00
5.306	5.306 (0.344)	87	19780			2.36- 62.36	32.24
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	46839	0.50000	0.4976	80.00- 120.00	100.00
6.632	6.632 (0.431)	137	15112			2.09- 62.09	32.26
3 Chloromethane					CAS #: 74-87-3		
6.970	6.970 (0.452)	50	25885	0.50000	0.4848	80.00- 120.00	100.00(M)
6.970	6.970 (0.452)	52	7579			0.98- 60.98	29.28
4 Vinyl Chloride					CAS #: 75-01-4		
7.828	7.828 (0.508)	62	18352	0.50000	0.4839	80.00- 120.00	100.00
7.828	7.828 (0.508)	64	5468			0.00- 58.64	29.80
5 Chloroethane					CAS #: 75-00-3		
10.018	10.018 (0.650)	64	8796	0.50000	0.5016	80.00- 120.00	100.00
10.018	10.018 (0.650)	66	2648			0.36- 60.36	30.10

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.113  12.113 (0.786)    98     12038 0.50000   0.4716  80.00- 120.00   100.00
 12.113  12.113 (0.786)    61     40271                  300.85- 360.85   334.53
 12.113  12.113 (0.786)    96     19153                  126.45- 186.45   159.10
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73     47094 0.50000   0.4846  80.00- 120.00   100.00
 13.492  13.492 (0.876)    57     14182                    0.00-  59.46    30.11
 13.465  13.465 (0.874)    41     17891                    3.65-  63.65    37.99
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98     12747 0.50000   0.4835  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61     35299                  242.34- 302.34   276.92
 13.547  13.547 (0.879)    96     20171                  125.09- 185.09   158.24
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63     41250 0.50000   0.4968  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65     12363                    0.54-  60.54    29.97
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98     13440 0.50000   0.4653  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61     34113                  222.17- 282.17   253.82
 15.060  15.060 (0.978)    96     20740                  125.16- 185.16   154.32
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    138141 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    105965                   47.63- 107.63    76.71
 15.374  15.374 (1.000)    49    248861                  150.43- 210.43   180.15
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.467  15.467 (1.004)    83     48578 0.50000   0.4822  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85     32810                   38.49-  98.49    67.54
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97     61114 0.50000   0.4965  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99     39246                   35.44-  95.44    64.22
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119     50447 0.50000   0.3841  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117     52644                   72.67- 132.67   104.36
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78     52646 0.50000   0.4374  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77     12451                    0.00-  53.68    23.65
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    224729 5.00000    5.068  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67     97570                    19.71-  79.71    43.42
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62     41026 0.50000   0.4732  80.00- 120.00   100.00
 16.317  16.317 (0.976)    64     12910                     0.82-  60.82    31.47
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    503567 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     73614                     0.00-  44.62    14.62
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130     34449 0.50000   0.4584  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95     30104                    57.80- 117.80    87.39
 17.136  17.136 (1.024)    97     19522                    26.87-  86.87    56.67
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    406326 5.00000    5.017  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     45704                     0.00-  41.18    11.25
 19.289  19.289 (1.153)   100    264521                    35.44-  95.44    65.10
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91     65193 0.50000   0.4719  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92     37062                    28.44-  88.44    56.85
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97     26225 0.50000   0.4824  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99     16206                    32.77-  92.77    61.80
 20.424  20.424 (0.921)    83     20171                    47.27- 107.27    76.92
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166     42429 0.50000   0.4807  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129     34256                    50.99- 110.99    80.74
 20.616  20.616 (0.930)   131     34377                    51.53- 111.53    81.02
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107     42199 0.50000   0.4648  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109     41395                    69.74- 129.74    98.09
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    469883 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    200208                    12.99-  72.99    42.61
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106     25854 0.50000   0.4660  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91     82686                   281.21- 341.21   319.82
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	28983	0.50000	0.4561	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	59279			173.96- 233.96	204.53
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	26743	0.50000	0.4635	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	58529			183.85- 243.85	218.86
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	283220	5.00000	5.003	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	292595			73.66- 133.66	103.31
23.869	23.869 (1.077)	176	275442			67.29- 127.29	97.25
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.026	24.026 (1.084)	83	41170	0.50000	0.4863	80.00- 120.00	100.00
24.049	24.049 (1.085)	85	28167			38.95- 98.95	68.42
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	44613	0.50000	0.4749	80.00- 120.00	100.00
25.260	25.260 (1.139)	148	28479			34.91- 94.91	63.84
25.260	25.260 (1.139)	111	16236			6.86- 66.86	36.39
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	3173	0.05000	0.04173	80.00- 120.00	100.00(a)
27.726	27.726 (1.251)	127	546			0.00- 42.71	17.21

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Report Date: 05-Jul-2017 16:39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070314sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 0.5ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	138141	-4.98
20 1,4-Difluorobenze	538106	322864	753348	503567	-6.42
28 Chlorobenzene-d5	493246	295948	690544	469883	-4.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070314sim.d

Date : 03-JUL-2017 15:59

Client ID: Level 7

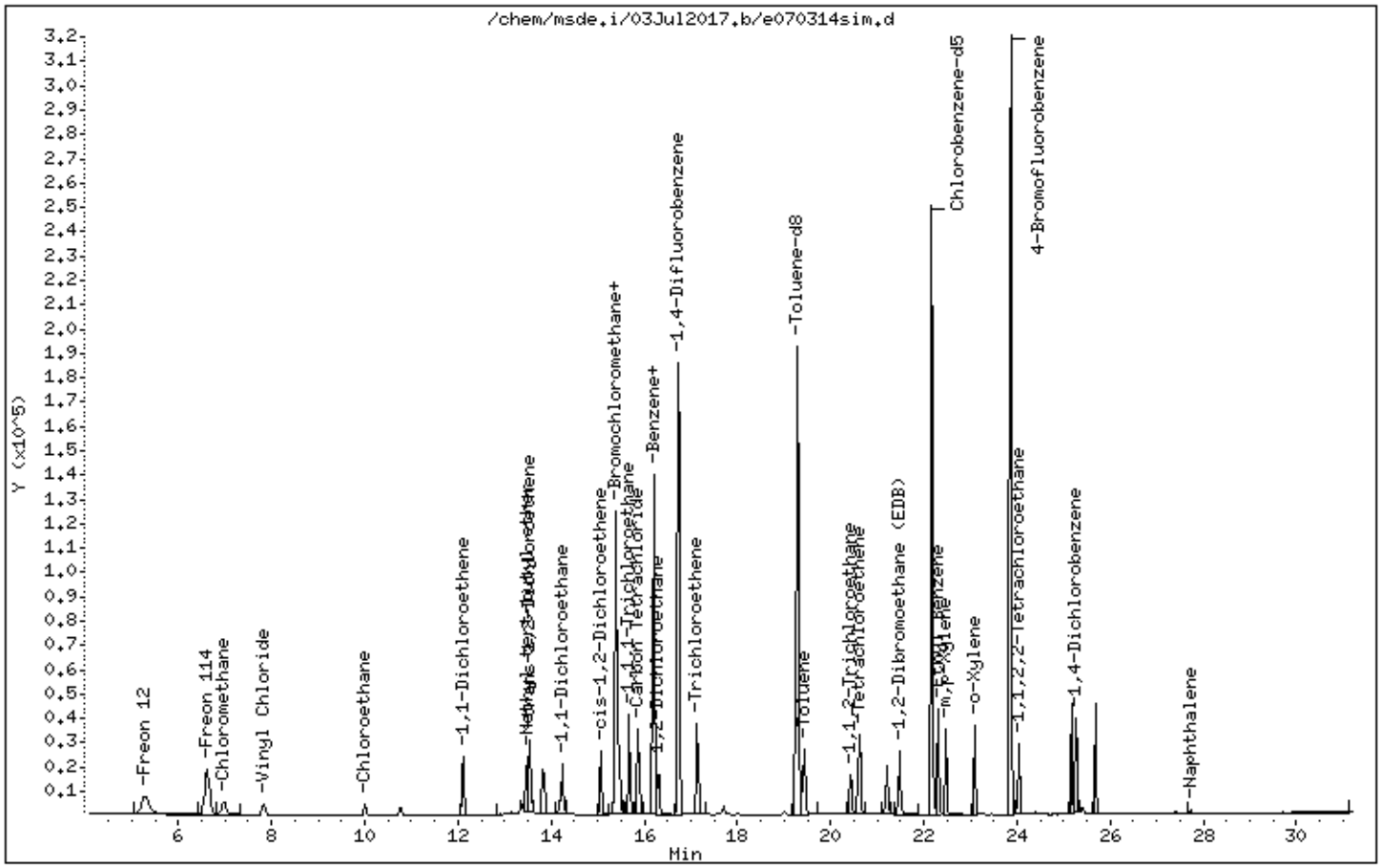
Instrument: msde.i

Sample Info: 125mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070315sim.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 03-JUL-2017 16:41
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-229
Misc Info : 1.0ppbv (1.0ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 16:41 Cal File: e070315sim.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.306	5.306 (0.344)	85	118744	1.00000	0.9532	80.00- 120.00	100.00
5.306	5.306 (0.344)	87	38136			2.36- 62.36	32.12
2 Freon 114					CAS #: 76-14-2		
6.632	6.632 (0.431)	135	91466	1.00000	0.9673	80.00- 120.00	100.00
6.632	6.632 (0.431)	137	29234			2.09- 62.09	31.96
3 Chloromethane					CAS #: 74-87-3		
6.994	6.994 (0.454)	50	54239	1.00000	1.011	80.00- 120.00	100.00
6.994	6.994 (0.454)	52	17403			0.98- 60.98	32.09
4 Vinyl Chloride					CAS #: 75-01-4		
7.828	7.828 (0.508)	62	35796	1.00000	0.9395	80.00- 120.00	100.00
7.828	7.828 (0.508)	64	10335			0.00- 58.64	28.87
5 Chloroethane					CAS #: 75-00-3		
10.018	10.018 (0.650)	64	15951	1.00000	0.9055	80.00- 120.00	100.00
10.018	10.018 (0.650)	66	5166			0.36- 60.36	32.39

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	23396	1.00000	0.9124	80.00- 120.00	100.00
12.113	12.113 (0.786)	61	78443			300.85- 360.85	335.28
12.113	12.113 (0.786)	96	36937			126.45- 186.45	157.88
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	93001	1.00000	0.9526	80.00- 120.00	100.00
13.492	13.492 (0.876)	57	27806			0.00- 59.46	29.90
13.465	13.465 (0.874)	41	34877			3.65- 63.65	37.50
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	24796	1.00000	0.9363	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	69846			242.34- 302.34	281.68
13.547	13.547 (0.879)	96	39097			125.09- 185.09	157.67
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.233	14.233 (0.924)	63	81295	1.00000	0.9747	80.00- 120.00	100.00
14.233	14.233 (0.924)	65	24376			0.54- 60.54	29.98
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	26213	1.00000	0.9034	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	67433			222.17- 282.17	257.25
15.060	15.060 (0.978)	96	41402			125.16- 185.16	157.94
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	138773	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	107481			47.63- 107.63	77.45
15.374	15.374 (1.000)	49	256530			150.43- 210.43	184.86
14 Chloroform					CAS #: 67-66-3		
15.467	15.467 (1.004)	83	94879	1.00000	0.9376	80.00- 120.00	100.00
15.467	15.467 (1.004)	85	64002			38.49- 98.49	67.46
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	118880	1.00000	0.9615	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	76720			35.44- 95.44	64.54
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	97996	1.00000	0.7428	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	102166			72.67- 132.67	104.26
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	102628	1.00000	0.8500	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	24128			0.00- 53.68	23.51
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	226099	5.00000	5.076	80.00- 120.00	100.00

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67     99514                    19.71-  79.71    44.01
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62     80314 1.00000   0.9234  80.00- 120.00   100.00
 16.317  16.317 (0.976)    64     24723                     0.82-  60.82    30.78
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    505115 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     73735                     0.00-  44.62    14.60
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130     66982 1.00000   0.8886  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95     58460                    57.80- 117.80    87.28
 17.136  17.136 (1.024)    97     37919                    26.87-  86.87    56.61
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    412203 5.00000    5.074  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     46016                     0.00-  41.18    11.16
 19.289  19.289 (1.153)   100    269181                    35.44-  95.44    65.30
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91    127498 1.00000   0.9201  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92     72952                    28.44-  88.44    57.22
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97     51348 1.00000   0.9360  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99     31829                    32.77-  92.77    61.99
 20.424  20.424 (0.921)    83     39542                    47.27- 107.27    77.01
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166     81583 1.00000   0.9161  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129     67185                    50.99- 110.99    82.35
 20.616  20.616 (0.930)   131     67121                    51.53- 111.53    82.27
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107     83413 1.00000   0.9105  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109     82462                    69.74- 129.74    98.86
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    474153 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    202565                    12.99-  72.99    42.72
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106     51926 1.00000   0.9274  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91    164406                   281.21- 341.21   316.62
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                     CAS #: 108-38-3
 22.481  22.481 (1.014)   106     58769 1.00000   0.9165  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91    120793                  173.96- 233.96   205.54
-------------------------------------------------------------------------------
   32 o-Xylene                                       CAS #: 95-47-6
 23.082  23.082 (1.041)   106     54429 1.00000   0.9348  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91    118294                  183.85- 243.85   217.34
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                            CAS #: 460-00-4
 23.869  23.869 (1.077)   174    288430 5.00000    5.049  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    299448                   73.66- 133.66   103.82
 23.869  23.869 (1.077)   176    281670                   67.29- 127.29    97.66
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 24.026  24.026 (1.084)    83     80625 1.00000   0.9437  80.00- 120.00   100.00
 24.049  24.049 (1.085)    85     55274                   38.95-  98.95    68.56
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                            CAS #: 106-46-7
 25.260  25.260 (1.139)   146     90139 1.00000   0.9509  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148     57996                   34.91-  94.91    64.34
 25.260  25.260 (1.139)   111     33434                    6.86-  66.86    37.09
-------------------------------------------------------------------------------
   38 Naphthalene                                    CAS #: 91-20-3
 27.726  27.726 (1.251)   128      5790 0.10000  0.07547  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127       895                    0.00-  42.71    15.46
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070315sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 1.0ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	138773	-4.54
20 1,4-Difluorobenze	538106	322864	753348	505115	-6.13
28 Chlorobenzene-d5	493246	295948	690544	474153	-3.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070315sim.d

Date : 03-JUL-2017 16:41

Client ID: Level 8

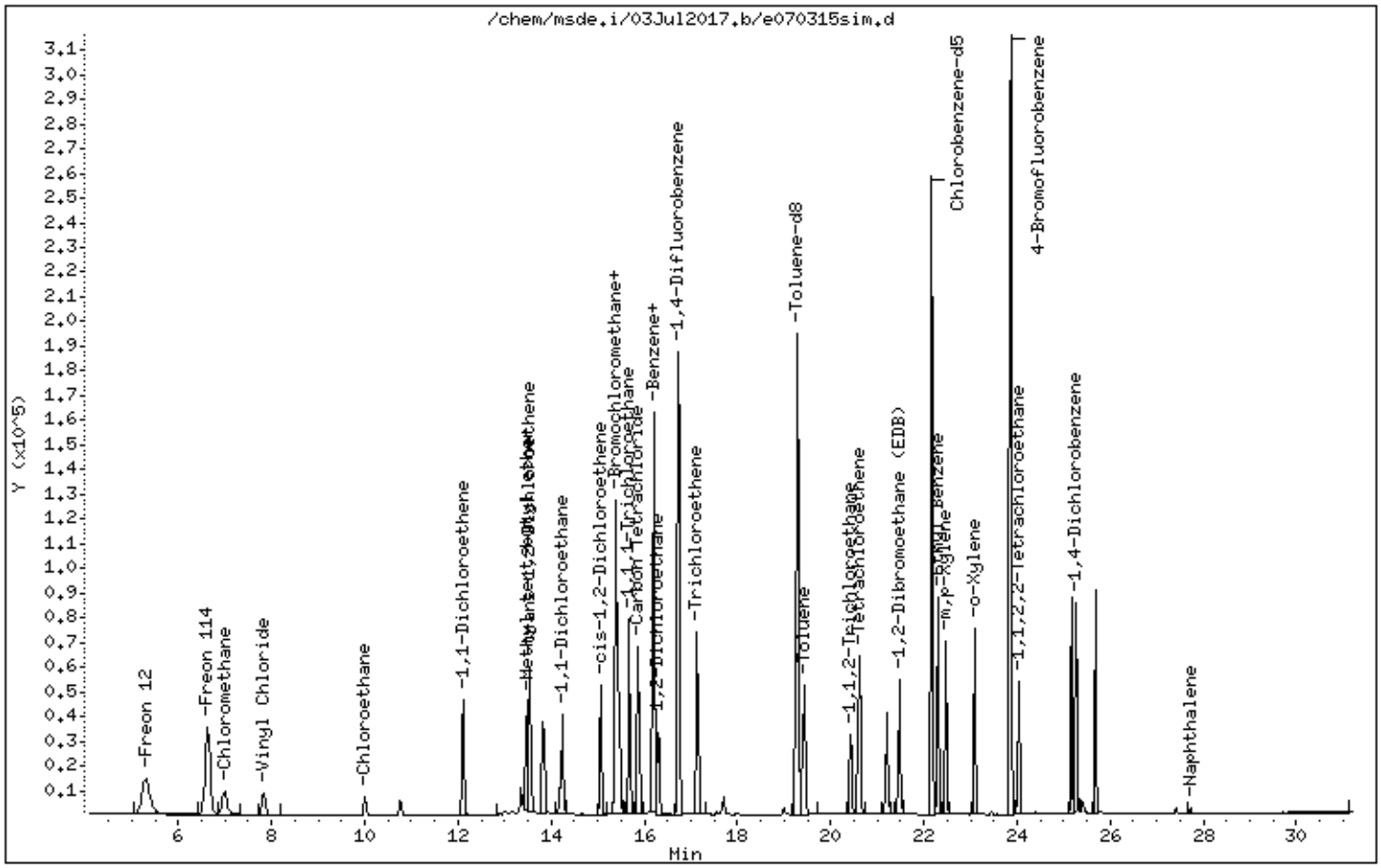
Instrument: msde.i

Sample Info: 250mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070316sim.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 03-JUL-2017 17:24
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-222
Misc Info : 5.0ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 17:24 Cal File: e070316sim.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	708378	5.00000	5.534	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	228847			2.36- 62.36	32.31
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	534230	5.00000	5.498	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	170878			2.09- 62.09	31.99
3 Chloromethane					CAS #: 74-87-3		
6.945	6.945 (0.451)	50	291560	5.00000	5.289	80.00- 120.00	100.00
6.945	6.945 (0.451)	52	94137			0.98- 60.98	32.29
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	217052	5.00000	5.543	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	61615			0.00- 58.64	28.39
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	102178	5.00000	5.644	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	31096			0.36- 60.36	30.43

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.113  12.113 (0.786)    98    141023 5.00000    5.352  80.00- 120.00   100.00
 12.094  12.094 (0.785)    61    473648                  300.85- 360.85   335.87
 12.113  12.113 (0.786)    96    222705                  126.45- 186.45   157.92
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73    592121 5.00000    5.902  80.00- 120.00   100.00
 13.465  13.465 (0.874)    57    174095                    0.00-  59.46    29.40
 13.465  13.465 (0.874)    41    204499                    3.65-  63.65    34.54
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98    152708 5.00000    5.611  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61    417584                  242.34- 302.34   273.45
 13.547  13.547 (0.879)    96    238138                  125.09- 185.09   155.94
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63    482635 5.00000    5.631  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    146286                    0.54-  60.54    30.31
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98    161302 5.00000    5.410  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61    410902                  222.17- 282.17   254.74
 15.060  15.060 (0.978)    96    251989                  125.16- 185.16   156.22
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    142609 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    110685                   47.63- 107.63    77.61
 15.374  15.374 (1.000)    49    324066                  150.43- 210.43   227.24
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.436  15.436 (1.002)    83    562213 5.00000    5.406  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85    381845                   38.49-  98.49    67.92
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97    703904 5.00000    5.540  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99    457409                   35.44-  95.44    64.98
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119    788041 5.00000    5.812  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117    815918                   72.67- 132.67   103.54
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78    622295 5.00000    4.894  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    146831                    0.00-  53.68    23.60
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    224395 5.00000    4.902  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    105116                    19.71-  79.71    46.84
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    487310 5.00000    5.321  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    149590                     0.82-  60.82    30.70
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    531901 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     77487                     0.00-  44.62    14.57
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    400551 5.00000    5.046  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    351758                   57.80- 117.80    87.82
 17.136  17.136 (1.024)    97    226696                   26.87-  86.87    56.60
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    430548 5.00000    5.033  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     48051                     0.00-  41.18    11.16
 19.289  19.289 (1.153)   100    281972                   35.44-  95.44    65.49
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91    777080 5.00000    5.326  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92    450150                   28.44-  88.44    57.93
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    311116 5.00000    5.531  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    194332                   32.77-  92.77    62.46
 20.424  20.424 (0.921)    83    239770                   47.27- 107.27    77.07
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    486924 5.00000    5.332  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    395534                   50.99- 110.99    81.23
 20.616  20.616 (0.930)   131    398674                   51.53- 111.53    81.88
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    517296 5.00000    5.507  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    510837                   69.74- 129.74    98.75
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    486182 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    207897                   12.99-  72.99    42.76
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106    330752 5.00000    5.761  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91   1032283                  281.21- 341.21   312.10
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                     CAS #: 108-38-3
 22.481  22.481 (1.014)   106    379358 5.00000    5.770  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91    778781                  173.96- 233.96   205.29
-------------------------------------------------------------------------------
   32 o-Xylene                                       CAS #: 95-47-6
 23.082  23.082 (1.041)   106    348051 5.00000    5.830  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91    749832                  183.85- 243.85   215.44
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                            CAS #: 460-00-4
 23.869  23.869 (1.077)   174    297697 5.00000    5.082  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    310443                   73.66- 133.66   104.28
 23.869  23.869 (1.077)   176    289648                   67.29- 127.29    97.30
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 24.026  24.026 (1.084)    83    473033 5.00000    5.400  80.00- 120.00   100.00
 24.049  24.049 (1.085)    85    325489                   38.95-  98.95    68.81
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                            CAS #: 106-46-7
 25.260  25.260 (1.139)   146    538459 5.00000    5.540  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    348165                   34.91-  94.91    64.66
 25.260  25.260 (1.139)   111    197367                    6.86-  66.86    36.65
-------------------------------------------------------------------------------
   38 Naphthalene                                    CAS #: 91-20-3
 27.726  27.726 (1.251)   128     39798 0.50000   0.5059  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127      5126                    0.00-  42.71    12.88
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070316sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	142609	-1.90
20 1,4-Difluorobenze	538106	322864	753348	531901	-1.15
28 Chlorobenzene-d5	493246	295948	690544	486182	-1.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070316sim.d

Date : 03-JUL-2017 17:24

Client ID: Level 12

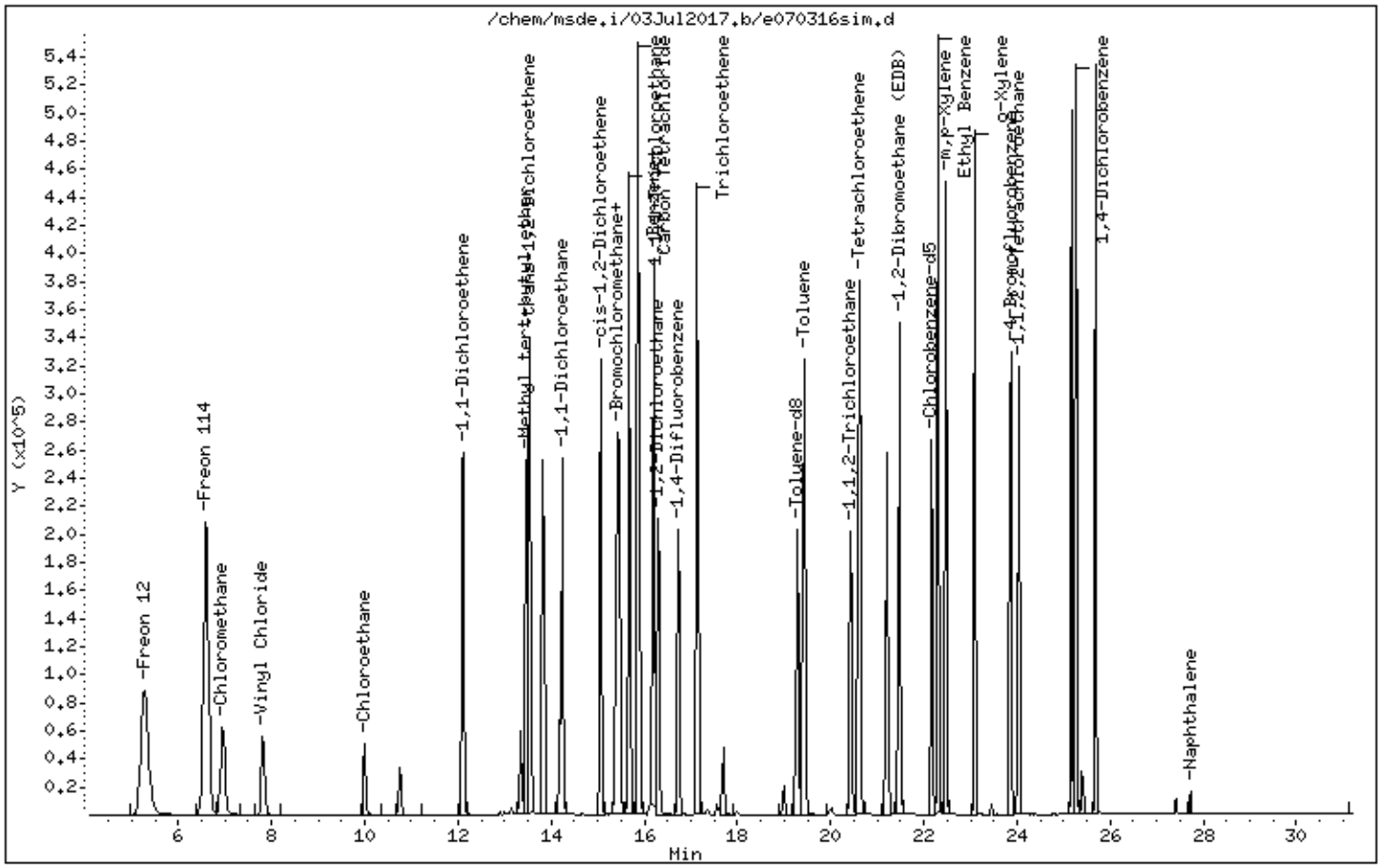
Instrument: msde.i

Sample Info: 25mL# 2850-222

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070317sim.d
Lab Smp Id: ICAL Client Smp ID: Level 13
Inj Date : 03-JUL-2017 18:31
Operator : mjs Inst ID: msde.i
Smp Info : 50mL #2850-222
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:49 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 Calibration Sample, Level: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1322238	10.0000	10.132	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	427859			2.36- 62.36	32.36
2 Freon 114					CAS #: 76-14-2		
6.584	6.584 (0.427)	135	998033	10.0000	10.075	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	320256			2.09- 62.09	32.09
3 Chloromethane					CAS #: 74-87-3		
6.946	6.946 (0.451)	50	553778	10.0000	9.855	80.00- 120.00	100.00
6.946	6.946 (0.451)	52	171534			0.98- 60.98	30.98
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	411675	10.0000	10.314	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	117886			0.00- 58.64	28.64
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	173821	10.0000	9.419	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	52765			0.36- 60.36	30.36

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.113  12.113 (0.786)    98    264597 10.0000    9.850  80.00- 120.00   100.00
 12.094  12.094 (0.785)    61    875409                  300.85- 360.85   330.85
 12.094  12.094 (0.785)    96    413971                  126.45- 186.45   156.45
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73   1112902 10.0000   10.881  80.00- 120.00   100.00
 13.465  13.465 (0.874)    57    327867                    0.00-  59.46    29.46
 13.465  13.465 (0.874)    41    374545                    3.65-  63.65    33.65
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98    284334 10.0000   10.248  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61    774368                  242.34- 302.34   272.34
 13.547  13.547 (0.879)    96    440984                  125.09- 185.09   155.09
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63    894917 10.0000   10.242  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    273267                    0.54-  60.54    30.54
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98    302779 10.0000    9.961  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61    763514                  222.17- 282.17   252.17
 15.060  15.060 (0.978)    96    469793                  125.16- 185.16   155.16
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    145377 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    112852                   47.63- 107.63    77.63
 15.374  15.374 (1.000)    49    262303                  150.43- 210.43   180.43
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.436  15.436 (1.002)    83   1031850 10.0000    9.733  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85    706731                   38.49-  98.49    68.49
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97   1288622 10.0000    9.949  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99    843220                   35.44-  95.44    65.44
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119   1458634 10.0000   10.554  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117   1497634                   72.67- 132.67   102.67
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78   1149462 10.0000    8.936  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    272159                    0.00-  53.68    23.68
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    222134 5.00000    4.760  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    110414                    19.71-  79.71    49.71
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    900687 10.0000    9.721  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    277583                     0.82-  60.82    30.82
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    538106 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     78688                     0.00-  44.62    14.62
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    742930 10.0000    9.252  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    652279                   57.80- 117.80    87.80
 17.136  17.136 (1.024)    97    422475                   26.87-  86.87    56.87
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    435400 5.00000    5.031  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     48664                     0.00-  41.18    11.18
 19.289  19.289 (1.153)   100    284939                   35.44-  95.44    65.44
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91   1448577 10.0000    9.813  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92    846477                   28.44-  88.44    58.44
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    577840 10.0000   10.126  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    362718                   32.77-  92.77    62.77
 20.424  20.424 (0.921)    83    446498                   47.27- 107.27    77.27
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    904804 10.0000    9.766  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    732761                   50.99- 110.99    80.99
 20.616  20.616 (0.930)   131    737674                   51.53- 111.53    81.53
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    965647 10.0000   10.132  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    963177                   69.74- 129.74    99.74
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    493246 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    212056                   12.99-  72.99    42.99
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106    622258 10.0000   10.684  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91   1936522                  281.21- 341.21   311.21
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                     CAS #: 108-38-3
 22.481  22.481 (1.014)   106    717661 10.0000   10.758  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91   1463776                  173.96- 233.96   203.96
-------------------------------------------------------------------------------
   32 o-Xylene                                       CAS #: 95-47-6
 23.082  23.082 (1.041)   106    659148 10.0000   10.883  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91   1409606                  183.85- 243.85   213.85
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                            CAS #: 460-00-4
 23.869  23.869 (1.077)   174    303197 5.00000    5.102  80.00- 120.00   100.00
 23.869  23.869 (1.077)    95    314306                   73.66- 133.66   103.66
 23.869  23.869 (1.077)   176    294987                   67.29- 127.29    97.29
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 24.026  24.026 (1.084)    83    876899 10.0000    9.867  80.00- 120.00   100.00
 24.049  24.049 (1.085)    85    604635                   38.95-  98.95    68.95
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                            CAS #: 106-46-7
 25.260  25.260 (1.139)   146   1022703 10.0000   10.371  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    663824                   34.91-  94.91    64.91
 25.260  25.260 (1.139)   111    376990                    6.86-  66.86    36.86
-------------------------------------------------------------------------------
   38 Naphthalene                                    CAS #: 91-20-3
 27.726  27.726 (1.251)   128     82670 1.00000    1.036  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127     10505                    0.00-  42.71    12.71
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070317sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 13
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	145377	0.00
20 1,4-Difluorobenze	538106	322864	753348	538106	0.00
28 Chlorobenzene-d5	493246	295948	690544	493246	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070317sim.d

Date : 03-JUL-2017 18:31

Client ID: Level 13

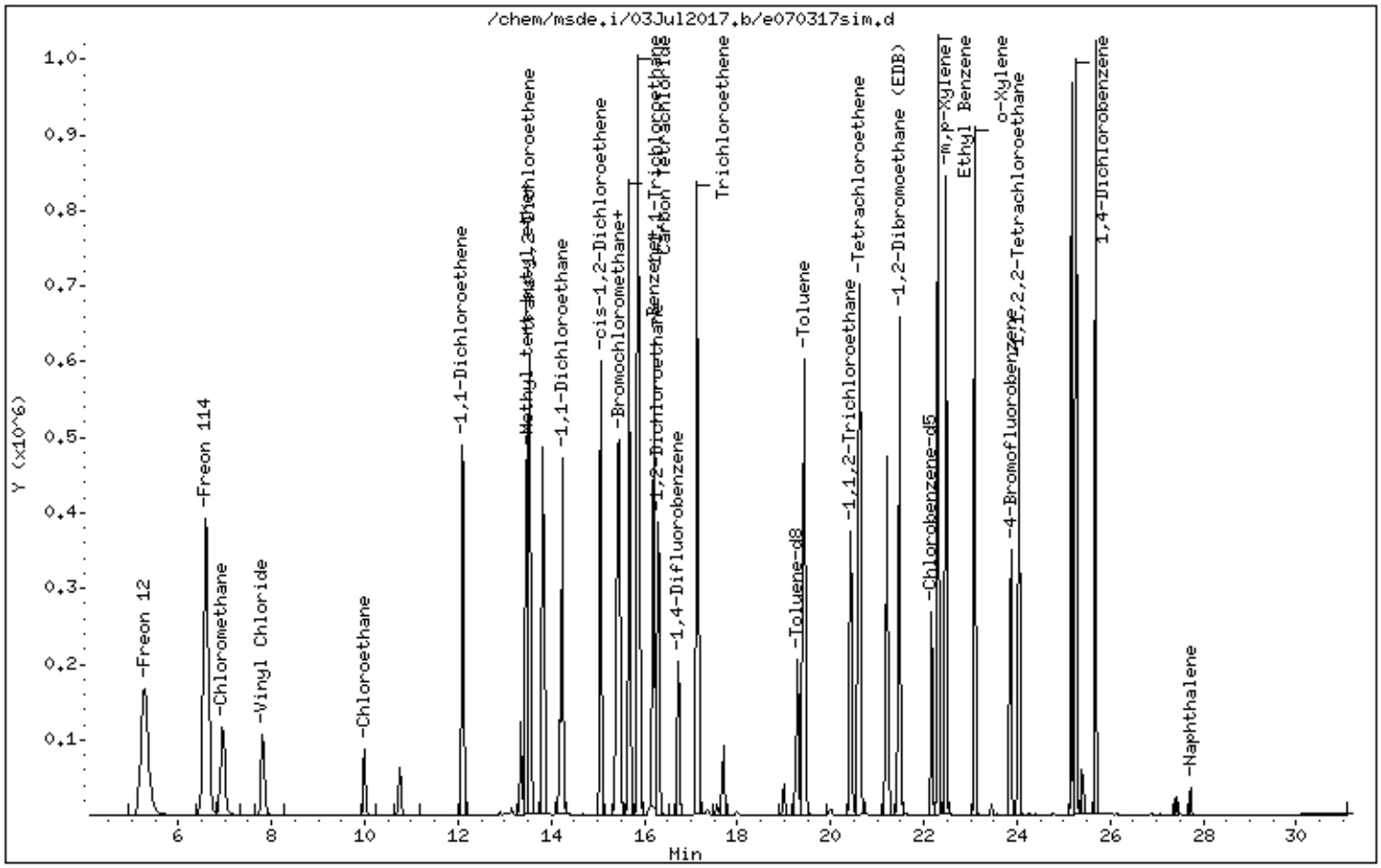
Instrument: msde.i

Sample Info: 50mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070318sim.d
Lab Smp Id: ICAL Client Smp ID: Level 15
Inj Date : 03-JUL-2017 19:26
Operator : mjs Inst ID: msde.i
Smp Info : 100mL #2850-222
Misc Info : 20ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 05-Jul-2017 16:39 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 19:26 Cal File: e070318sim.d
Als bottle: 1 Calibration Sample, Level: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	2527924	20.0000	18.668	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	824546			2.36- 62.36	32.62
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	1938618	20.0000	18.859	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	626262			2.09- 62.09	32.30
3 Chloromethane					CAS #: 74-87-3		
6.970	6.970 (0.452)	50	1049014	20.0000	17.989	80.00- 120.00	100.00
6.970	6.970 (0.452)	52	323583			0.98- 60.98	30.85
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	798778	20.0000	19.285	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	231109			0.00- 58.64	28.93
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	333075	20.0000	17.393	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	102284			0.36- 60.36	30.71

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.094  12.094 (0.785)    98    515360 20.0000   18.488  80.00- 120.00   100.00
 12.094  12.094 (0.785)    61   1685555                  300.85- 360.85   327.06
 12.094  12.094 (0.785)    96    801600                  126.45- 186.45   155.54
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73   2141779 20.0000   20.180  80.00- 120.00   100.00(A)
 13.492  13.492 (0.876)    57    644063                    0.00-  59.46    30.07
 13.492  13.492 (0.876)    41    739551                    3.65-  63.65    34.53
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98    547878 20.0000   19.030  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61   1494292                  242.34- 302.34   272.74
 13.547  13.547 (0.879)    96    847772                  125.09- 185.09   154.74
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63   1712412 20.0000   18.886  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    528308                    0.54-  60.54    30.85
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98    586675 20.0000   18.600  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61   1470814                  222.17- 282.17   250.70
 15.060  15.060 (0.978)    96    907442                  125.16- 185.16   154.68
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    150857 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    116273                   47.63- 107.63    77.07
 15.436  15.436 (1.000)    49    327777                  150.43- 210.43   217.28
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.467  15.467 (1.004)    83   1978680 20.0000   17.987  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85   1362545                   38.49-  98.49    68.86
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97   2457859 20.0000   18.287  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99   1615107                   35.44-  95.44    65.71
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119   2778116 20.0000   19.371  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117   2844940                   72.67- 132.67   102.41
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78   2194286 20.0000   16.913  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    519647                    0.00-  53.68    23.68
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    230169 5.00000    4.753  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    119992                    19.71-  79.71    52.13
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62   1741128 20.0000   18.631  80.00- 120.00   100.00
 16.317  16.317 (0.976)    64    541570                     0.82-  60.82    31.10
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    542757 5.00000            80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     79312                     0.00-  44.62    14.61
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130   1423003 20.0000   17.569  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95   1248931                   57.80- 117.80    87.77
 17.136  17.136 (1.024)    97    814469                   26.87-  86.87    57.24
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    438467 5.00000    5.023  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     49526                     0.00-  41.18    11.30
 19.289  19.289 (1.153)   100    288520                   35.44-  95.44    65.80
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91   2780979 20.0000   18.678  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92   1635464                   28.44-  88.44    58.81
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97   1117244 20.0000   19.390  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    703295                   32.77-  92.77    62.95
 20.424  20.424 (0.921)    83    857200                   47.27- 107.27    76.72
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166   1735540 20.0000   18.554  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129   1401895                   50.99- 110.99    80.78
 20.616  20.616 (0.930)   131   1411147                   51.53- 111.53    81.31
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107   1862299 20.0000   19.354  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109   1863262                   69.74- 129.74   100.05
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    498013 5.00000            80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    215654                   12.99-  72.99    43.30
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.295  22.295 (1.006)   106   1215603 20.0000   20.672  80.00- 120.00   100.00(A)
 22.295  22.295 (1.006)    91   3723289                  281.21- 341.21   306.29
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	1400000	20.0000	20.786	80.00- 120.00	100.00(A)
22.481	22.481 (1.014)	91	2818586			173.96- 233.96	201.33
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	1285321	20.0000	21.018	80.00- 120.00	100.00(A)
23.082	23.082 (1.041)	91	2732458			183.85- 243.85	212.59
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	308725	5.00000	5.145	80.00- 120.00	100.00
23.869	23.869 (1.077)	95	321360			73.66- 133.66	104.09
23.869	23.869 (1.077)	176	301837			67.29- 127.29	97.77
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.049	24.049 (1.085)	83	1680221	20.0000	18.725	80.00- 120.00	100.00
24.049	24.049 (1.085)	85	1169375			38.95- 98.95	69.60
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	2028394	20.0000	20.372	80.00- 120.00	100.00(A)
25.260	25.260 (1.139)	148	1327030			34.91- 94.91	65.42
25.260	25.260 (1.139)	111	757970			6.86- 66.86	37.37
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	193377	2.00000	2.400	80.00- 120.00	100.00
27.726	27.726 (1.251)	127	24360			0.00- 42.71	12.60

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 05-Jul-2017 16:39

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070318sim.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 20ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 15
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145377	87226	203528	150857	3.77
20 1,4-Difluorobenze	538106	322864	753348	542757	0.86
28 Chlorobenzene-d5	493246	295948	690544	498013	0.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070318sim.d

Date : 03-JUL-2017 19:26

Client ID: Level 15

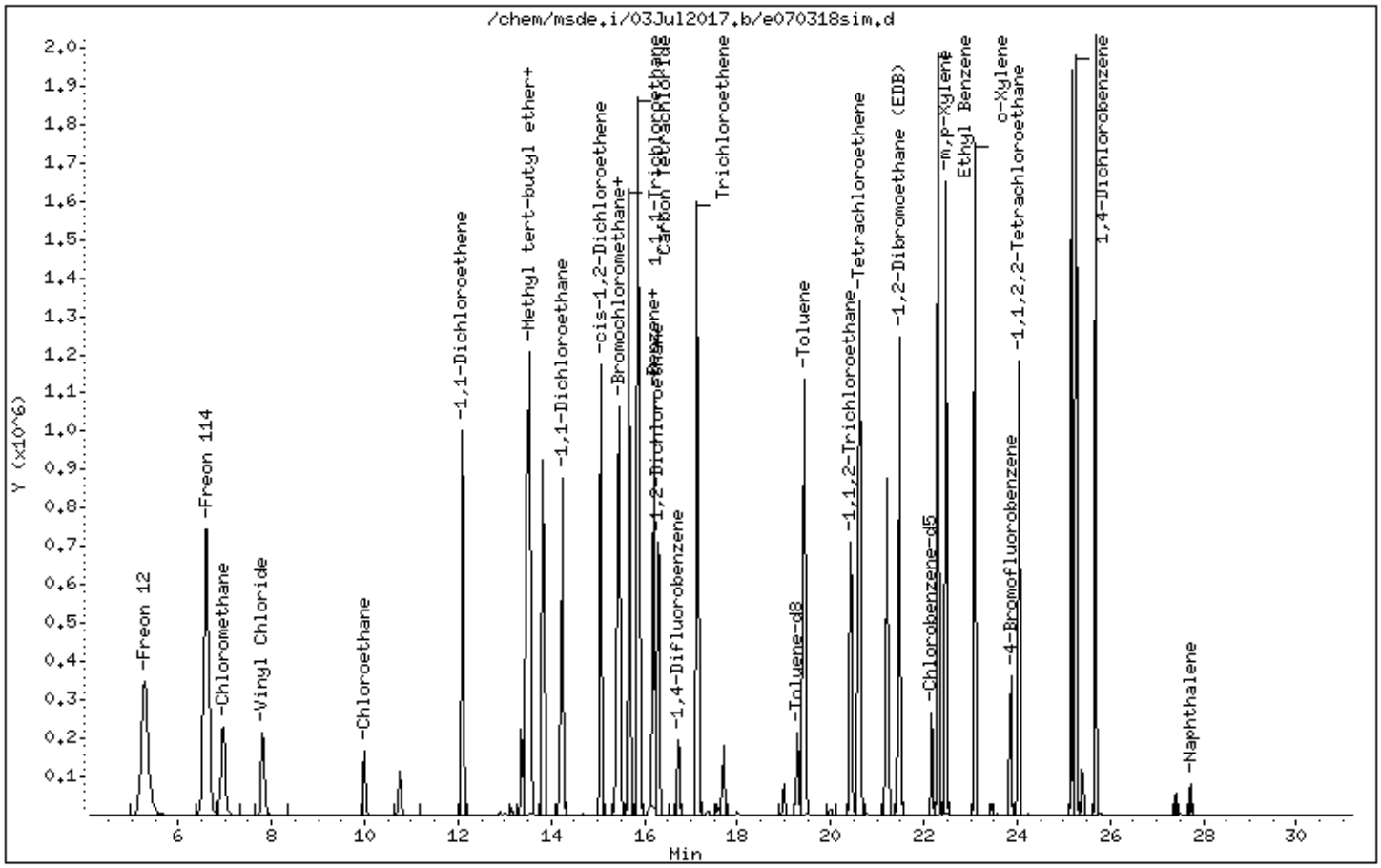
Instrument: msde.i

Sample Info: 100mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/12Jul2017.b/e071211.d
Level 8: /chem/msde.i/12Jul2017.b/e071212.d
Level 12: /chem/msde.i/12Jul2017.b/e071213.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16	___ RRF	% RSD
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Propylene	+++++	+++++	+++++	1.83127	1.87073	1.74413		
	1.63636	1.63893					1.74428	6.168
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Freon 12	+++++	5.33595	4.10893	4.16336	4.65449	4.33471		
	4.08457	3.95460					4.37666	10.957
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
15 Freon 114	2.52679	3.93567	3.24091	3.25975	3.46092	3.24421		
	3.07298	3.00254					3.21797	12.443
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
17 Chloromethane	+++++	+++++	1.94386	1.95514	1.91651	1.75261		
	1.74335	1.69968					1.83519	6.281

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
23 Butane	+++++	+++++	0.34297	0.35860	0.35329	0.33058		
	0.32182	0.31483					0.33701	5.192
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
25 Vinyl Chloride	+++++	2.04589	1.29590	1.26627	1.46132	1.35180		
	1.26802	1.26726					1.42235	19.958
26 1,3-Butadiene	+++++	1.73250	1.37286	1.28144	1.48734	1.38492		
	1.33968	1.40481					1.42908	10.337
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Bromomethane	+++++	+++++	1.06343	0.91904	1.12248	1.04834		
	1.00761	0.95078					1.01861	7.388
30 Chloroethane	+++++	+++++	0.64857	0.55741	0.68636	0.58292		
	0.54378	0.51824					0.58955	11.022
31 Isopentane	+++++	+++++	1.37623	1.36434	1.52172	1.22857		
	1.19615	1.16213					1.30819	10.459
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Pentane	+++++	+++++	2.77472	2.69769	2.75896	+++++		
	+++++	+++++					2.74379	1.483
35 Freon 11	4.48932	5.97490	5.03231	4.98338	5.49441	5.02672		
	4.54593	4.37404					4.99013	10.858
36 1-Pentene	+++++	+++++	1.10302	1.18535	1.11578	+++++		
	+++++	+++++					1.13472	3.905
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Eurofins Air Toxics Inc.

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Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Ethanol	+++++	+++++	1.01182	0.71518	0.93343	0.87961		
	0.74400	0.66682					0.82514	16.553
43 1,2-Dichloro-1-fluoroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 Ethyl Ether	+++++	+++++	0.43354	0.39794	0.42588	+++++		
	+++++	+++++					0.41912	4.471
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 Acrolein	+++++	+++++	0.91896	0.87299	0.84347	+++++		
	+++++	+++++					0.87847	4.330
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Freon 113	3.30045	3.62032	2.99075	3.06013	3.36305	3.05814		
	2.87980	2.76939					3.13025	8.921
50 1,1-Dichloroethene	+++++	1.08923	0.81924	0.81148	0.92941	0.86439		
	0.83085	0.79819					0.87754	11.761
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
52 Acetone	+++++	+++++	0.94972	0.88829	0.88696	0.84989		
	0.79891	0.75957					0.85556	7.992
53 Iodomethane	+++++	+++++	3.29296	3.13978	1.79210	+++++		
	+++++	+++++					2.74161	30.123 <-
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Carbon Disulfide	+++++	+++++	4.23221	3.89325	3.79998	3.53055		
	3.36797	3.20365					3.67127	10.271
57 2-Propanol	+++++	+++++	3.89905	3.56137	4.31558	4.09559		
	4.01236	3.92588					3.96831	6.284

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Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
58 3-Chloropropene	+++++	+++++	0.77307	0.68500	0.77219	0.75802		
	0.73298	0.71085					0.73868	4.831
59 Cyclopentene	+++++	+++++	2.32293	2.23346	2.18131	+++++		
	+++++	+++++					2.24590	3.189
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
63 Acetonitrile	+++++	+++++	2.85352	2.38325	2.16378	+++++		
	+++++	+++++					2.46685	14.285
64 Cyclopentane	+++++	+++++	0.56772	0.47339	0.51570	+++++		
	+++++	+++++					0.51894	9.105
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
66 Methylene Chloride	+++++	1.70739	1.06259	1.09388	1.25272	1.14820		
	1.08188	0.99778					1.19206	20.187
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
71 tert-Butyl alcohol	+++++	+++++	3.54215	3.57087	4.31731	4.11843		
	3.92307	3.87435					3.89103	7.786
72 Methyl tert-butyl ether	+++++	5.02569	3.86597	3.79181	4.45696	4.17731		
	4.02294	3.92582					4.18093	10.382
73 trans-1,2-Dichloroethene	+++++	0.94371	1.02767	0.88408	0.99712	0.93897		
	0.90400	0.85514					0.93581	6.539
74 Acrylonitrile	+++++	+++++	1.69048	1.50503	1.61979	+++++		
	+++++	+++++					1.60510	5.831
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
76 1-Hexene	+++++	+++++	0.98788	0.92159	0.99985	+++++		
	+++++	+++++					0.96977	4.347
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
78 Hexane	+++++	2.97313	2.59755	2.52971	3.13937	2.90220		
	2.75531	2.67809					2.79648	7.813
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
82 1,1-Dichloroethane	+++++	3.50735	2.87428	2.72516	3.23046	2.97804		
	2.81103	2.72873					2.97929	9.773
83 Isopropyl ether	+++++	+++++	7.14654	7.07825	8.59964	8.06298		
	7.63582	7.39754					7.65346	7.656
84 1-Propanol	+++++	+++++	+++++	+++++	0.39344	+++++		
	+++++	+++++					0.39344	0.000
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
86 Vinyl Acetate	+++++	+++++	0.28140	0.31177	0.40589	0.38117		
	0.36545	0.36501					0.35178	13.155
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
88 Ethyl-tert-butyl ether	+++++	+++++	5.42551	5.36676	6.62177	6.25968		
	5.97971	5.83821					5.91527	8.173
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
90 2,2-Dichloropropane	+++++	+++++	3.04627	2.96928	2.84728	+++++		
	+++++	+++++					2.95428	3.396
91 cis-1,2-Dichloroethene	+++++	1.03393	1.02293	0.90725	1.07095	0.96876		
	0.94203	0.91903					0.98070	6.395
92 2-Butanone	+++++	+++++	0.49534	0.55707	0.67409	0.63186		
	0.61792	0.61015					0.59774	10.500
93 Methyl Acrylate	+++++	+++++	2.05871	2.47807	2.88231	+++++		
	+++++	+++++					2.47303	16.653
94 Ethyl Acetate	+++++	+++++	0.20486	0.26126	0.21263	+++++		
	+++++	+++++					0.22625	13.510
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
99 Tetrahydrofuran	+++++	+++++	2.41401	2.24310	2.92902	2.78818		
	2.68322	2.65707					2.61910	9.563
100 Chloroform	+++++	3.87174	3.50976	3.28609	3.81905	3.48324		
	3.30120	3.21442					3.49793	7.447
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 Cyclohexane	+++++	1.96352	1.54132	1.65497	1.96169	1.83533		
	1.74922	1.67398					1.76858	9.048
103 1,1,1-Trichloroethane	4.37646	4.90763	4.06276	4.27739	4.64559	4.27220		
	4.07689	3.91906					4.31725	7.554
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
106 Carbon Tetrachloride	4.60572	4.52285	3.48632	3.51236	5.35856	4.91855		
	4.64172	4.50009					4.44327	14.539
107 1,1-Dichloropropene	+++++	+++++	0.64159	0.72318	0.72606	+++++		
	+++++	+++++					0.69695	6.882
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
113 2,2,4-Trimethylpentane	+++++	4.69935	4.06314	4.07100	4.66353	4.35041		
	4.12128	3.99475					4.28050	6.912
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
115 Isobutanol	+++++	+++++	1.50620	1.57860	2.01301	+++++		
	+++++	+++++					1.69927	16.131
116 Benzene	+++++	1.45044	1.14174	1.13098	1.26373	1.20032		
	1.12360	1.07616					1.19814	10.562
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
119 tert-Amyl methyl ether	+++++	+++++	0.27570	0.30914	0.38008	0.36943		
	0.34221	0.33494					0.33525	11.517
120 1,2-Dichloroethane	0.75168	1.01011	0.84769	0.81577	0.90412	0.86498		
	0.81442	0.79240					0.85015	9.348

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	20.000 Level 15	40.000 Level 16						
121 Heptane	+++++	0.51710	0.50066	0.48083	0.56873	0.54269		
	0.51948	0.49526					0.51782	5.786
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 n-Butanol	+++++	+++++	0.37283	0.50504	0.67703	+++++		
	+++++	+++++					0.51830	29.429
125 Trichloroethene	0.60530	0.88525	0.68467	0.70514	0.75899	0.71865		
	0.67846	0.66185					0.71229	11.636
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
127 Methylcyclohexane	+++++	+++++	0.61554	0.63707	0.72304	0.71860		
	0.68106	0.65637					0.67195	6.491
128 Ethyl acrylate	+++++	+++++	0.05466	0.04571	0.06395	+++++		
	+++++	+++++					0.05477	16.651
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
131 2-Pentanone	+++++	+++++	1.38102	1.55656	1.66942	+++++		
	+++++	+++++					1.53567	9.464

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	20.000 Level 15	40.000 Level 16						
132 1,2-Dichloropropane	+++++	0.67849	0.49434	0.46382	0.51591	0.48636		
	0.47716	0.45817					0.51061	14.984
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
134 Methyl Methacrylate	+++++	+++++	0.72745	0.73122	0.84778	+++++		
	+++++	+++++					0.76882	8.898
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
136 1,4-Dioxane	+++++	0.22747	0.26630	0.27207	0.30859	0.30507		
	0.29078	0.28957					0.27998	9.957
137 Dibromomethane	+++++	+++++	0.59357	0.54986	0.54452	+++++		
	+++++	+++++					0.56265	4.783
138 Bromodichloromethane	1.07505	1.20410	1.05229	1.05600	1.18254	1.11633		
	1.07559	1.02996					1.09898	5.780
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
140 bis(chloromethyl) Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 2-Chloroethyl Vinyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 cis-1,3-Dichloropropene	+++++	0.75570	0.63611	0.64205	0.78759	0.75814		
	0.73120	0.72790					0.71981	8.140
145 4-Methyl-2-pentanone	+++++	1.48610	1.32505	1.44385	1.78197	1.77003		
	1.72056	1.68084					1.60120	11.289
147 Toluene	+++++	1.68206	1.40843	1.39755	1.59420	1.51450		
	1.45054	1.40695					1.49346	7.331
148 Octane	+++++	+++++	0.36264	0.36172	0.38303	+++++		
	+++++	+++++					0.36913	3.263
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
150 trans-1,3-Dichloropropene	+++++	0.71949	0.70432	0.68423	0.86265	0.80160		
	0.78049	0.76286					0.75938	8.184
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
152 1-Chloro-2-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 13-Jul-2017 08:46 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 1,1,2-Trichloroethane	0.51170	0.59696	0.50413	0.52507	0.62368	0.58753		
	0.55175	0.53171					0.55407	7.909
156 Tetrachloroethene	0.80682	1.07127	0.91392	0.87220	1.01120	0.96521		
	0.89135	0.88042					0.92655	9.160
157 1,3-Dichloropropane	+++++	+++++	0.65743	0.64329	0.58141	+++++		
	+++++	+++++					0.62738	6.444
158 2-Hexanone	+++++	+++++	0.38357	0.43241	0.68816	0.68764		
	0.68715	0.69828					0.59620	24.600
159 Butyl Acetate	+++++	+++++	+++++	+++++	0.08637	+++++		
	+++++	+++++					0.08637	0.000
160 Dibromochloromethane	1.35511	1.45998	1.24232	1.26900	1.55221	1.48175		
	1.38665	1.36745					1.38931	7.589
161 1,2-Dibromoethane (EDB)	0.91275	0.89302	0.90141	0.86015	1.04528	1.00069		
	0.92738	0.91728					0.93224	6.509
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
165 Chlorobenzene	+++++	1.64723	1.38617	1.35341	1.54904	1.44536		
	1.35180	1.33002					1.43758	8.284
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
167 Ethyl Benzene	+++++	0.75883	0.56752	0.59061	0.73830	0.70535		
	0.66462	0.65450					0.66853	10.729
168 1,1,1,2-Tetrachloroethane	+++++	+++++	0.86375	0.87787	0.83852	+++++		
	+++++	+++++					0.86005	2.318
169 m,p-Xylene	+++++	0.62903	0.68105	0.70627	0.84026	0.80714		
	0.78080	0.76741					0.74457	10.074
170 Nonane	+++++	+++++	0.92445	0.94247	1.07682	+++++		
	+++++	+++++					0.98124	8.485
171 o-Xylene	+++++	0.65822	0.61902	0.62467	0.78166	0.74161		
	0.71135	0.70409					0.69152	8.760
172 Styrene	+++++	1.06297	0.99766	1.03418	1.29994	1.25841		
	1.21256	1.20686					1.15323	10.352
173 2-Heptanone	+++++	+++++	0.25660	0.33589	0.47469	+++++		
	+++++	+++++					0.35573	31.032 <-

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	20.000 Level 15	40.000 Level 16						
174 Bromoform	1.04158	1.36018	1.12516	1.10888	1.41098	1.34022		
	1.28822	1.24382					1.23988	10.813
175 Cumene	+++++	2.17508	2.06326	2.02541	2.56266	2.47776		
	2.31954	2.21415					2.26255	8.942
176 Cyclohexanone	+++++	+++++	0.39593	0.46788	0.46397	+++++		
	+++++	+++++					0.44259	9.142
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 Bromobenzene	+++++	+++++	0.68652	0.68205	0.67210	+++++		
	+++++	+++++					0.68022	1.085
181 1,1,2,2-Tetrachloroethane	0.75374	1.11512	0.84348	0.85449	0.97256	0.90735		
	0.85315	0.80903					0.88862	12.595
182 Propylbenzene	+++++	1.99302	1.86390	1.90823	2.24219	2.12857		
	2.01643	1.95288					2.01503	6.505
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
184 trans-1,4-Dichloro-2-butene	+++++	+++++	0.28398	0.32504	0.29661	+++++		
	+++++	+++++					0.30188	6.966

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	20.000 Level 15	40.000 Level 16						
185 1,2,3-Trichloropropane	+++++	+++++	0.30937	0.29835	0.27501	+++++		
	+++++	+++++					0.29424	5.962
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
187 Decane	+++++	+++++	0.36397	0.38364	0.41553	+++++		
	+++++	+++++					0.38771	6.712
188 4-Ethyltoluene	1.31316	1.52043	1.41855	1.40697	1.78328	1.73711		
	1.64562	1.60127					1.55330	10.768
189 2-Chlorotoluene	+++++	+++++	0.45593	0.45245	0.42388	+++++		
	+++++	+++++					0.44409	3.960
190 1,3,5-Trimethylbenzene	1.24382	1.24503	1.14559	1.15351	1.40321	1.36030		
	1.25876	1.20988					1.25251	7.239
191 4-Chlorotoluene	+++++	+++++	0.36018	0.35286	0.37926	+++++		
	+++++	+++++					0.36410	3.744
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
195 tert-Butylbenzene	+++++	+++++	1.00808	1.00664	1.06249	+++++		
	+++++	+++++					1.02574	3.104
196 1,2,4-Trimethylbenzene	1.07176	1.12758	0.84206	0.86418	1.03654	1.02638		
	0.97272	0.97494					0.98952	9.912
197 Pentachloroethane	+++++	+++++	0.38927	0.50056	0.37073	+++++		
	+++++	+++++					0.42019	16.711
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
203 sec-Butylbenzene	+++++	+++++	1.77803	1.71158	1.76910	+++++		
	+++++	+++++					1.75291	2.057
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
206 bis(2-Chloroethyl) Ether	+++++	+++++	0.57618	0.54618	0.66764	+++++		
	+++++	+++++					0.59667	10.603
207 p-Cymene	+++++	+++++	0.83535	0.94887	1.01445	+++++		
	+++++	+++++					0.93289	9.714
208 1,3-Dichlorobenzene	1.09979	1.17557	1.01774	1.00266	1.14305	1.10448		
	1.05558	1.01838					1.07716	5.902
209 1,4-Dichlorobenzene	1.25067	0.96663	0.92869	0.93942	1.05671	1.02948		
	1.01143	0.98332					1.02079	10.055
210 1,2,3-Trimethylbenzene	+++++	+++++	0.26862	0.26881	0.27323	+++++		
	+++++	+++++					0.27022	0.965
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
212 alpha-Chlorotoluene	+++++	1.32476	1.31308	1.29047	1.50011	1.51579		
	1.47353	1.45209					1.40997	6.856
213 Butylbenzene	+++++	+++++	0.19169	0.20450	0.19073	+++++		
	+++++	+++++					0.19564	3.929
214 1,2-Dichlorobenzene	1.05549	1.00135	0.91895	0.95932	1.04188	1.02891		
	0.98257	0.96590					0.99430	4.671

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	20.000 Level 15	40.000 Level 16						
215 Undecane	+++++	+++++	0.45548	0.41387	0.32983	+++++	0.39972	16.013
216 4-Ethyl-1,2-dimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
220 1,2,4,5-tetramethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
221 1,2-Dibromo-3-chloropropane	+++++	+++++	0.36925	0.31455	0.32273	+++++	0.33551	8.794
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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	20.000 Level 15	40.000 Level 16						
225 Dodecane	+++++	+++++	0.16829	0.16539	0.14286	+++++		
	+++++	+++++					0.15885	8.764
226 1,2,4-Trichlorobenzene	0.48559	0.32236	0.38661	0.38311	0.41771	0.44740		
	0.48015	0.50174					0.42809	14.466
227 Hexachlorobutadiene	+++++	0.73576	0.78000	0.81160	0.80979	0.82245		
	0.78833	0.79598					0.79199	3.632
228 Naphthalene	+++++	+++++	+++++	0.66294	0.81217	0.85605		
	0.96197	1.03165					0.86496	16.439
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 237 1,2-Dichloroethene (Total)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 239 Total Xylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
M 240 3 and 4-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
241 Total Volatile Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
242 TPH reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
243 TPH reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
244 TPH reference to Gasoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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245 TPH reference MineralSpirits	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
246 TPH reference to Stoddard	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
247 TVOC reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
248 TVOC reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
249 TVOC reference to Toluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
250 TVOC reference to Toluene-d8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
251 NMOC reference to Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
252 NMOC reference to Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
253 NMOC reference to Toluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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255 C4 - C5 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
256 C5 - C6 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
257 C6 - C7 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
258 C7 - C8 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
259 C8 - C9 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
260 C9 - C10 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
261 C10+ Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
262 C5 - C6 Aliphatic ref C5 + C6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
263 C6-C8 Aliphatic ref Heptane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
264 C8-C10 Aliphatic ref Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	20.000 Level 15	40.000 Level 16						
265 C10-C12 Aliphatic ref Dodecan	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
267 C8-C10 Aromatic ref 1,2,3-TMB	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
269 C10-C12 Aromatic 1,2,4,5-TMB	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
270 C10-C12 Aromatic Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 117 1,2-Dichloroethane-d4	1.57792	1.61914	1.61957	1.60310	1.50167	1.57326		
	1.49759	1.50495					1.56215	3.395
$ 146 Toluene-d8	0.97802	0.95922	0.94914	0.97088	0.95611	0.96693		
	0.96316	0.95256					0.96200	1.008
$ 177 4-Bromofluorobenzene	0.55042	0.56720	0.58843	0.59637	0.58764	0.60812		
	0.58068	0.59288					0.58397	3.082

Calibration History

Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Start Cal Date: 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
03-JUL-2017 14:35	Level5	/chem/msde.i/03Jul2017.b/e070312.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 0.10000		
03-JUL-2017 15:18	Level6	/chem/msde.i/03Jul2017.b/e070313.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 0.50000		
12-JUL-2017 14:50	ComboICAL-AT4	/chem/msde.i/12Jul2017.b/e071211.d
12-JUL-2017 12:40	AT4ICAL	/chem/msde.i/12Jul2017.b/e071208.d
12-JUL-2017 10:32	AcroleinICAL	/chem/msde.i/12Jul2017.b/e071205.d
03-JUL-2017 15:59	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070314.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 1.00000		
12-JUL-2017 15:33	ComboICAL-AT4	/chem/msde.i/12Jul2017.b/e071212.d
12-JUL-2017 13:23	AT4ICAL	/chem/msde.i/12Jul2017.b/e071209.d
12-JUL-2017 11:14	AcroleinICAL	/chem/msde.i/12Jul2017.b/e071206.d
03-JUL-2017 16:41	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070315.d

Injection Date	Sublist	Calibration File
Cal Level: 12, Cal Amount: 5.00000		
12-JUL-2017 16:15	ComboICAL-AT4	/chem/msde.i/12Jul2017.b/e071213.d
12-JUL-2017 14:08	AT4ICAL	/chem/msde.i/12Jul2017.b/e071210.d
12-JUL-2017 11:55	AcroleinICAL	/chem/msde.i/12Jul2017.b/e071207.d
03-JUL-2017 17:24	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070316.d

Injection Date	Sublist	Calibration File
Cal Level: 13, Cal Amount: 10.00000		
03-JUL-2017 18:31	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070317.d

Cal Level: 15, Cal Amount: 20.00000		
03-JUL-2017 19:26	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070318.d

Cal Level: 16, Cal Amount: 40.00000		
03-JUL-2017 20:10	HILOcrvFULL	/chem/msde.i/03Jul2017.b/e070319.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 13

Ccal Level: 13, Ccal Amount: 10.000		
12-JUL-2017 07:45	AT09	/chem/msde.i/12Jul2017.b/e071202.d
Ccal Level: 8 , Ccal Amount: 1.000		
12-JUL-2017 15:33	ComboCCV-AT4	/chem/msde.i/12Jul2017.b/e071212a.d
Ccal Level: 8 , Ccal Amount: 1.000		
12-JUL-2017 15:33	ComboICAL-AT4	/chem/msde.i/12Jul2017.b/e071212.d
Ccal Level: 8 , Ccal Amount: 1.000		
12-JUL-2017 13:23	AT4CCV	/chem/msde.i/12Jul2017.b/e071209a.d
Ccal Level: 8 , Ccal Amount: 1.000		
12-JUL-2017 11:14	AcroleinCCV	/chem/msde.i/12Jul2017.b/e071206a.d

Curve Name: E17$_L$0703B

Initial Calibration Narrative

A TO-15 initial calibration was analyzed on 7/3/17 on MSD-E.

The instrument was set up to do Full Scan and Selective Ion Monitoring (SIM) simultaneously.

Tune Files: E070305 (ICAL), E070S01 (ICV), e071201 (special ICALs).
ICAL: Zero (0) out.
ICV: Two (2) out; Ethanol @ 133.0%, 2-Hexanone @ 133.0%. File E070503a.
DOD 5.0 ICV: Two (2) out; Ethanol @ 133.0%, 2-Hexanone @ 133.0%. File E070503c.
DOD 4.2 ICV: Two (2) out; Freon 114 @ 128.9%, cis-1,2-Dichloroethene @ 129.4%. File E070503d.
BTEX RL Spike: Zero (0) out; file E070313x.

Spike sublists have been updated to reflect 15% difference between requested concentration and certified concentration of Bromoform.

Naphthalene was calibrated from 0.1ppbv-4.0ppbv.*

The following compounds were calibrated down to a special RL of 0.05ppbv:

Freon 114	Bromodichloromethane	4-Ethyltoluene
Freon 11	1,1,2-Trichloroethane	1,3,5-Trimethylbenzene
Freon 113	Tetrachloroethane	1,2,4-Trimethylbenzene
1,1,1-Trichloroethane	Dibromochloromethane	1,3-Dichlorobenzene
Carbon Tetrachloride	1,2-Dibromomethane (EDB)	1,4-Dichlorobenzene
1,2-Dichloroethane	Bromoform	1,2-Dichlorobenzene
Trichloroethane	1,1,2,2-Tetrachloroethane	1,2,4-Trichlorobenzene

*The quantitation ion peak (128 amu) is sufficiently resolved for accurate quantification of Naphthalene at the special reporting limit of 0.1ppbv. However, the secondary mass ion peak (127 amu) for Naphthalene is not completely baseline-resolved. Identification of Naphthalene based on the presence and abundance ratio of confirmation ion is reliable at the lowest concentrations even when insufficient baseline resolution of the secondary mass ion peak (127 amu). The spectrum of Naphthalene in this ICAL point will be used as the reference to determine the ion ratio target in the samples for this ICAL.

A three (3) point initial calibration for Acrolein was analyzed on 7/12/17 at 0.5ppbv, 1.0ppbv, and 5.0ppbv. Extended CCV # 2804-275 was used for the ICAL.

A three (3) point initial calibration for the AT-4 special was analyzed on 7/12/17 at 0.5ppbv, 1.0ppbv, and 5.0ppbv.

A three (3) point initial calibration for the Combination special was analyzed on 7/12/17 at 0.5ppbv, 1.0ppbv, and 5.0ppbv. The AT-4 specials were not included in the ICAL. **Multiple compounds have raised reporting limits due to poor peak quality at the lower levels. See ICAL summary pages for details.**

TO-15 MDL was analyzed on 10/18/16.
AT-1 MDL was analyzed on 4/11/17.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 14:08
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e17l0703b.m
Cal Date : 12-Jul-2017 15:56 efinn
Curve Type : Average

Please see Calibration History page(s) for all the calibration files.

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/12Jul2017.b/e071208.d
Level 8: /chem/msde.i/12Jul2017.b/e071209.d
Level 12: /chem/msde.i/12Jul2017.b/e071210.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

7/12/17

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	RRF	% RSD
	20.000 Level 15	40.000 Level 16						
46 Acrolein	+++++	+++++	0.91896	0.87299	0.84347	+++++		
	+++++	+++++					0.87847	4.330

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 14:08
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e1710703b.m
Cal Date : 12-Jul-2017 15:56 efinn
Curve Type : Average

Please see Calibration History page(s) for all the calibration files.

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/12Jul2017.b/e071208.d
Level 8: /chem/msde.i/12Jul2017.b/e071209.d
Level 12: /chem/msde.i/12Jul2017.b/e071210.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

EF 7/12/17

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16	$\overline{RRF}$	% RSD
63 Acetonitrile	+++++	+++++	2.85352	2.38325	2.16378	+++++	+++++	+++++	2.46685	14.285
74 Acrylonitrile	+++++	+++++	1.69048	1.50503	1.61979	+++++	+++++	+++++	1.60510	5.831
184 trans-1,4-Dichloro-2-butene	+++++	+++++	0.28398	0.32504	0.29661	+++++	+++++	+++++	0.30188	6.966
206 bis(2-Chloroethyl) Ether	+++++	+++++	0.57618	0.54618	0.66764	+++++	+++++	+++++	0.59667	10.603

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 12-JUL-2017 16:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/12Jul2017.b/e1710703b.m
Cal Date : 13-Jul-2017 08:38 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/12Jul2017.b/e071211.d
Level 8: /chem/msde.i/12Jul2017.b/e071212.d
Level 12: /chem/msde.i/12Jul2017.b/e071213.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

BF 7/13/17

Please see Calibration History page(s) for all the calibration files.

Compound	0.05000 Level 5 / 20.000 Level 15	0.10000 Level 6 / 40.000 Level 16	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	RRF	% RSD
36 1-Pentene	+++++	+++++	1.10302	1.18535	1.11578	+++++		
	+++++	+++++					1.13472	3.905
34 Pentane	+++++	+++++	2.77472	2.69769	2.75896	+++++		
	+++++	+++++					2.74379	1.483
44 Ethyl Ether	+++++	+++++	0.43354	0.39794	0.42588	+++++		
	+++++	+++++					0.41912	4.471
53 Iodomethane	+++++	+++++	3.29296	3.13978	1.79210	+++++		
	+++++	+++++					2.74161	30.123 <-
59 Cyclopentene	+++++	+++++	2.32293	2.23346	2.18131	+++++		
	+++++	+++++					2.24590	3.189
64 Cyclopentane	+++++	+++++	0.56772	0.47339	0.51570	+++++		
	+++++	+++++					0.51894	9.105
76 1-Hexene	+++++	+++++	0.98788	0.92159	0.99985	+++++		
	+++++	+++++					0.96977	4.347

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2017 14:35
End Cal Date : 03-JUL-2017 20:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/03Jul2017.b/e1710703a.m
Cal Date : 05-Jul-2017 10:12 efinn
Curve Type : Average

Please see Calibration History page(s) for all the calibration files.

Calibration File Names:
Level 5: /chem/msde.i/03Jul2017.b/e070312.d
Level 6: /chem/msde.i/03Jul2017.b/e070313.d
Level 7: /chem/msde.i/03Jul2017.b/e070314.d
Level 8: /chem/msde.i/03Jul2017.b/e070315.d
Level 12: /chem/msde.i/03Jul2017.b/e070316.d
Level 13: /chem/msde.i/03Jul2017.b/e070317.d
Level 15: /chem/msde.i/03Jul2017.b/e070318.d
Level 16: /chem/msde.i/03Jul2017.b/e070319.d

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7/5/17

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Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	5.000 Level 12	10.000 Level 13	___ RRF	% RSD
	20.000 Level 15	40.000 Level 16						
9 Propylene	+++++	+++++	+++++	1.83127	1.87073	1.74413		
	1.63636	1.63893					1.74428	6.168
11 Freon 12	+++++	5.33595	4.10893	4.16336	4.65449	4.33471		
	4.08457	3.95460					4.37666	10.957
15 Freon 114	2.52679	3.93567	3.24091	3.25975	3.46092	3.24421		
	3.07298	3.00254					3.21797	12.443
17 Chloromethane	+++++	+++++	1.94386	1.95514	1.91651	1.75261		
	1.74335	1.69968					1.83519	6.281
23 Butane	+++++	+++++	0.34297	0.35860	0.35329	0.33058		
	0.32182	0.31483					0.33701	5.192
25 Vinyl Chloride	+++++	2.04589	1.29590	1.26627	1.46132	1.35180		
	1.26802	1.26726					1.42235	19.958
26 1,3-Butadiene	+++++	1.73250	1.37286	1.28144	1.48734	1.38492		
	1.33968	1.40481					1.42908	10.337

Flow meter # CS7476 Exp. 4/5/18

Eurofins Air Toxics, Inc.

Nominal Flow: 24.2 mL/min

Actual Flow: 25.6 mL/min

MSD-E

Logbook #2847

BFB Verification of 176/174 m/z Ratio: (352000 / 362400) x 100 = 97.11	
Method Name: E170703A / E170703A	

IS/S Std. #: 2880-162		Exp. Date: 9/1/17
BCM	LL: 139842	sim: 145377
1,4-DFB	482877	538106
CB-dS	450551	493246

Verified CCV IS vs ICAL mid-point (-40%D): MB

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	E070306	BFB Tune check	2810-29	50psig	2.0ppm	BF	1.00	BF	7/3/17	1011	BF	
2	/	06	ICAL Level 3	2850-228	0.01ppbv	50mL	BF	1.00	BF		1032	BF	Exp. 9/17/17
3	/	07	System Blank	34202	Humid	250mL	BF	1.00	BF		1120	BF	
4	/	08	ICAL Level 2	2850-228	0.005ppbv	25mL	BF	1.00	BF		1203	BF	Exp. 9/27/17
5	/	07	4		0.02ppbv	100mL	BF	1.00	BF		1244	BF	
6	N/A /	10	5		0.05ppbv	250mL	BF	1.00	BF		N/A	N/A	Prepurified / [illegible]
7	/	11	System Blank	34202	Humid	250mL	BF	1.00	BF		1352	BF	
8	/	12	ICAL Level 5	2850-228	0.05ppbv	250mL	BF	1.00	BF		1435	BF	Exp. 9/27/17
9	/	13	6	2850-229	0.1ppbv	25mL	BF	1.00	BF		1518	BF	
10	/	14	7		0.5ppbv	125mL	BF	1.00	BF		1559	BF	
11	/	15	8		1.0ppbv	250mL	BF	1.00	BF		1641	BF	
12	/	16	12	2850-229	5.0ppbv	25mL	BF	1.00	BF		1724	BF	Exp. 9/27/17
13	/	17	13		10ppbv	50mL	MB	1.00	MB		1831	BF	
14	/	18	15		20ppbv	100mL	MB	1.00	MB		1926	BF	
15	/	19	16		40ppbv	200mL	MB	1.00	MB		2010	BF	
16	X	20	System Blank	34202	Humid	250mL	MB	1.00	MB		2103	BF	
17	/	21									2155	MB	OK for ICV

MB
Reviewed

7/3/17
Date

0414 of 0814

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2847**

BFB Verification of 176/174 m/z Ratio: 324352 | 334208 x100= 91.05%	
Method Name: E17L0703A | E17S0703A	

IS/S Std. #: 2880-162		Exp. Date: 9/1/17	
BCM	LL: 1473804	Sim: 1520920	
1,4-DFB	523048	570710	
CB-d5	480557	515276	

Verified CCV IS vs ICAL mid-point (-40%D): 88

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SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E070501	BFB tune check	2810-89	50ng	2.0ml	SW	1.00	SW	7/5/17	0721	SW	
2	✓	02	CCV (50ppbv)	2880-222	10ppbv	50ml	SW	1	SW		0752	[illegible]	Exp: 9/27/17 Ø out
3	✓	03	LCS (50ppbv) *	2880-197	10ppbv	50ml	[illegible]	1.00	[illegible]		0902	[illegible]	Exp. 7/19/17 [illegible]
4	✓	~~04~~	~~LCSD (50ppbv)~~	~~2880-199~~	~~10ppbv~~	~~50ml~~	~~[illegible]~~	~~1.00~~	~~[illegible]~~		~~1002~~	~~[illegible]~~	~~Exp. 9/19/17~~
5		05	LAB BLANK	34/202	HnMB	250ml	[illegible]	1.00	[illegible]				~~Exp.~~ 7/5/17
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17												[illegible]	7/5/17

[illegible] Reviewed 7/5/17 Date

* ICV. 11: 2 out
6ml Ø out

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2847**

BFB Verification of 176/174 m/z Ratio: 267008 | 280384 x100 = 95.231.	
Method Name: E17L0703A | E17S0703A	

IS/S Std. #: 2850-163		Exp. Date: 9/1/17	
BCM	LL: 134296	SIM:	143363
1,4-DFB	480560		516813
CB-d5	431542		470445

Verified CCV IS vs ICAL mid-point (-40%D): EA

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E071201	BFB tune check	2810-89	50ng	2.0µl	SW	1.00	SW	7/12/17	0719	SW	
2	✓	02	CCV (50ppbv)	2850-222	10ppbv	50mL	SW	1	SW		0746	EA	Exp. 9/27/17 8 out LL: 1 out
3	✓	03	LCS (50ppbv)	2850-248	10ppbv	50mL	EA	1.00	EA		0828	EA	Exp. 10/2/17 SIM: Ø out
4	✓	04	LCSD (50ppbv)	2850-248	10ppbv	50mL	EA	1.00	EA		0910	EA	Exp. 10/2/17
5	✓	05	ICAL level 7	2804-275	0.5ppbv	25mL	EA	1.00	EA		1032	EA	Exp. 9/22/17 EXTENDED CCV, ACROLEIN ONLY
6	✓	06	8	|	1.0ppbv	50mL	EA	1.00	EA		1114	EA	Exp. 9/22/17
7	✓	07	12		5.0ppbv	250mL	EA	1.00	EA		1155	EA	|
8	✓	08	7	2850-183	0.5ppbv	25mL	EA	1.00	EA		1240	EA	Exp. 9/9/17 Ar.4 ~~COMBO~~ 7/11/17
9	✓	09	8	|	1.0ppbv	50mL	EA	1.00	EA		1328	EA	
10	✓	10	12	|	5.0ppbv	250mL	EA	1.00	EA		1408	EA	|
11	✓	11	7	2850-184	0.5ppbv	25mL	EA	1.00	EA		1450	EA	Exp. 7/9/17 COMBO
12	✓	12	8	|	1.0ppbv	50mL	EA	1.00	EA		1533	EA	
13	✓	13	12	|	5.0ppbv	250mL	EA	1.00	EA		1615	EA	
14	✓	14	Lab Blank	34202	Humid	250mL	EA	1.00	EA		1715	EA	2RL
15	✓	15	1707021-01A	611290	6.9"Hg-4.8psig	25mL	EA	17.2	EA		1810	EA	dil TC Can# 611290
16	✓	16	↓ -03A	00345	6.1"Hg-4.9psig	15mL	EA	16.0	EA		1855	EA	dil TC
17	✗	17	System Blank	34202	Humid	250mL	EA	1.00	EA		1954	EA	TE7RL

EA 7/12/17

Reviewed

7/12/17
Date

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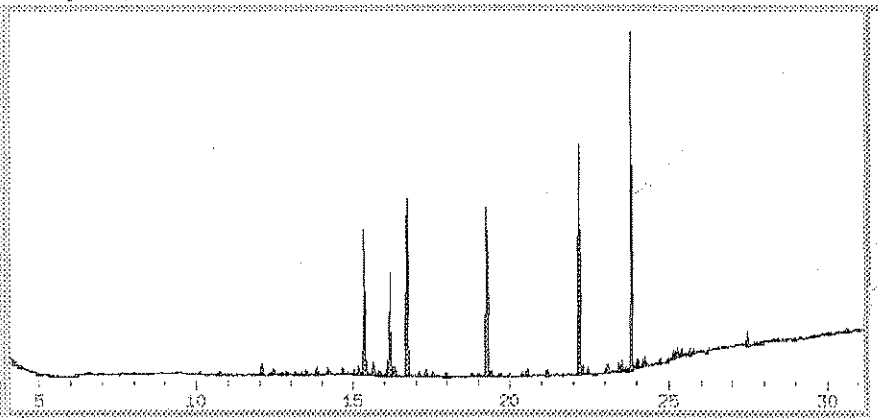
TargetReview Sample: ICAL /chem/hr-4k.i/03Jul2017.i/s070313.d

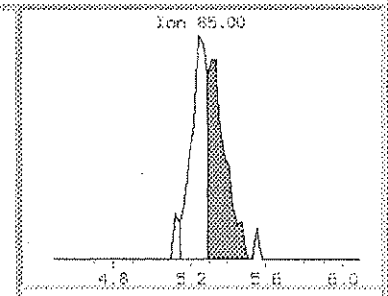
File Search Edit Number Report Spectra Help

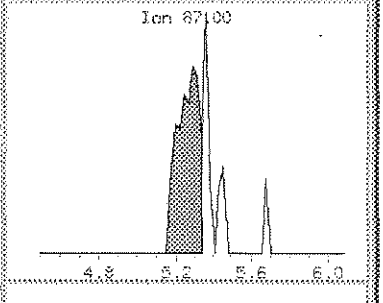
Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 15:18

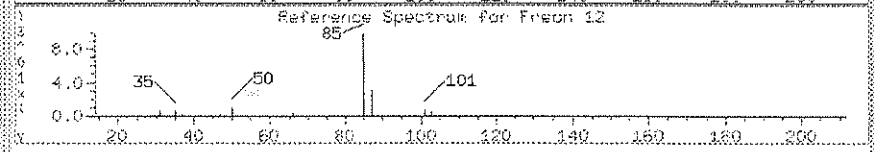
- * 11 Freon 12
- + 15 Freon 114
- + 25 Vinyl Chloride
- + 26 1,3-Butadiene
- + 35 Freon 11
- + 49 Freon 113
- + 50 1,1-Dichloroeth
- + 66 Methylene Chlo
- + 72 Methyl tert-bu
- + 73 trans-1,2-Dich
- + 78 Hexane
- + 82 1,1-Dichloroeth
- + 91 cis-1,2-Dichlo
- ** 98 Bromochlorometh
- + 100 Chloroform
- + 102 Cyclohexane
- + 103 1,1,1-Trichlor
- + 106 Carbon Tetrach
- + 113 2,2,4-Trimethy
- + 116 Benzene
- ** 117 1,2-Dichloroeth
- + 120 1,2-Dichloroeth
- + 121 Heptane
- ** 123 1,4-Difluorobe
- + 125 Trichloroethen

s070313.d









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2	5.245	7067	0.06775	0.06775	100	a	
	5.293	3658			52		
3	5.317	7566	0.07254	0.07254	100	a	
	5.293	3658			48		

Bstone

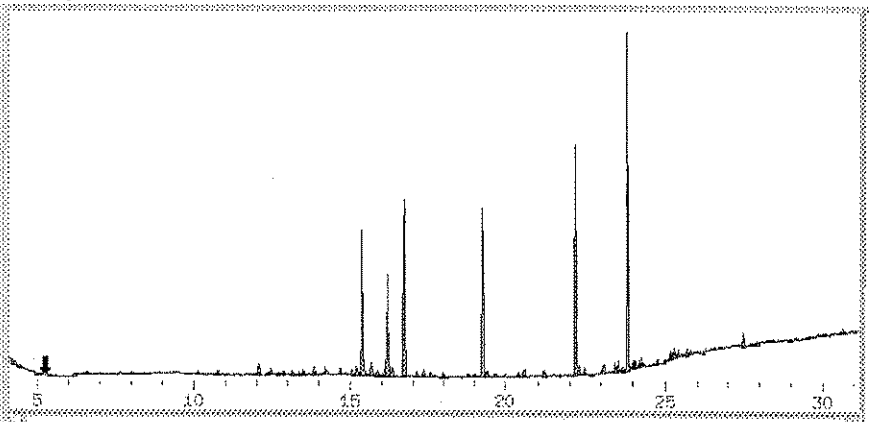
TargetReview: errors: ICAL /chem/msdata/03jul2017a/s070313.d

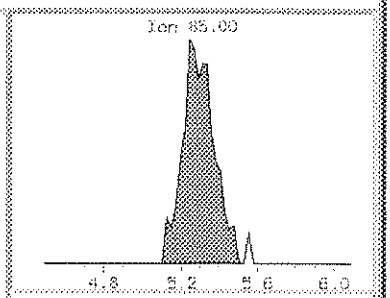
File Search Edit Manual Zoom Spectra Exit

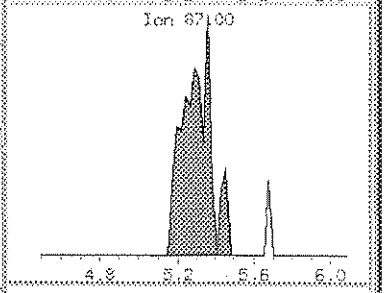
Sample: ICAL Type: SAMPLE Inj.Date: 03-JUL-2017 15:18

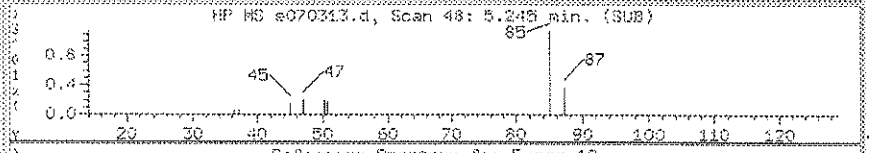
- +! 11 Freon 12
- + 15 Freon 114
- + 25 Vinyl Chloride
- + 26 1,3-Butadiene
- + 35 Freon 11
- + 49 Freon 113
- + 50 1,1-Dichloroeth
- + 66 Methylene Chlo
- + 72 Methyl tert-bu
- + 73 trans-1,2-Dich
- + 78 Hexane
- + 82 1,1-Dichloroeth
- + 91 cis-1,2-Dichlo
- *+ 98 Bromochlorometh
- + 100 Chloroform
- + 102 Cyclohexane
- + 103 1,1,1-Trichlor
- + 106 Carbon Tetrach
- + 113 2,2,4-Trimethy
- + 116 Benzene
- *+ 117 1,2-Dichloroeth
- + 120 1,2-Dichloroeth
- + 121 Heptane
- *+ 123 1,4-Difluorobe
- + 125 Trichloroethen

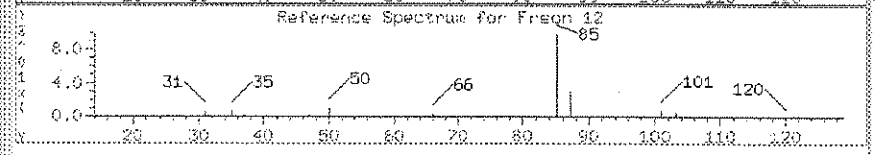
s070313.d











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1	5.245	18806	0.1304	0.1304	100	AM	
	5.365	5189			38		

- Mark Freon 12 Undetected.

Done

Help

BS 7/5/17

After

BS 7/5/17

Correct Baseline	X
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

Modified EPA Methods TO-14A/TO-15 Low Level
Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Freon 12
Freon 114
Chloromethane
Vinyl Chloride
1,3-Butadiene
Bromomethane
Chloroethane
Freon 11
Ethanol
Freon 113
1,1-Dichloroethene
Acetone
2-Propanol
Carbon Disulfide
3-Chloropropene
Methylene Chloride
Methyl tert-butyl ether
trans-1,2-Dichloroethene
Hexane
1,1-Dichloroethane
2-Butanone (Methyl Ethyl Ketone)
cis-1,2-Dichloroethene
Tetrahydrofuran
Chloroform
1,1,1-Trichloroethane
Cyclohexane
Carbon Tetrachloride
2,2,4-Trimethylpentane
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Heptane
Trichloroethene
1,2-Dichloropropane
1,4-Dioxane
Bromodichloromethane
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethene
2-Hexanone
Dibromochloromethane
1,2-Dibromoethane (EDB)
Chlorobenzene
Ethyl Benzene
m,p-Xylene
o-Xylene
Styrene
Bromoform
Cumene
1,1,2,2-Tetrachloroethane
Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
alpha-Chlorotoluene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Surrogates:
Bromofluorobenzene

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/05Jul2017.b/e070503.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 05-JUL-2017 09:02
Operator : ef Inst ID: msde.i
Smp Info : 50mL #2850-197
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/05Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 14:22 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.811 (0.314)	41	529883	12.0486	12.048	80.00- 120.00	100.00
4.835	4.811 (0.314)	42	346036			36.86- 96.86	65.30
4.835	4.811 (0.314)	39	396972			46.23- 106.23	74.92
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1373821	12.4497	12.450	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	439083			1.93- 61.93	31.96
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	1045527	12.8862	12.886	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	330205			1.36- 61.36	31.58
6.594	6.594 (0.428)	85	1117636			85.72- 145.72	106.90
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	596797	12.8978	12.898	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	168589			1.40- 61.40	28.25
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	104881	12.3430	12.343	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	1030091			939.22- 999.22	982.15
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	423465	11.8082	11.808	80.00- 120.00	100.00
7.814	7.797 (0.508)	64	124247			0.00- 59.78	29.34
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	429762	11.9273	11.927	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	512364			90.63- 150.63	119.22
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	320988	12.4983	12.498	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	300514			63.10- 123.10	93.62
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	183155	12.3217	12.322	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	80314			13.74- 73.74	43.85
9.986	9.986 (0.649)	66	56231			0.11- 60.11	30.70
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	384162	11.6470	11.647	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	661494			149.05- 209.05	172.19
10.119	10.119 (0.657)	42	568644			122.74- 182.74	148.02
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1484571	11.7994	11.799	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	954696			35.39- 95.39	64.31
42 Ethanol					CAS #: 64-17-5		
11.662	11.661 (0.758)	45	276685	13.2993	13.299	80.00- 120.00	100.00(R)
11.662	11.661 (0.758)	46	110528			10.30- 70.30	39.95
49 Freon 113					CAS #: 76-13-1		
12.081	12.080 (0.785)	151	916167	11.6083	11.608	80.00- 120.00	100.00
12.081	12.080 (0.785)	153	582239			33.74- 93.74	63.55
12.081	12.080 (0.785)	101	986748			78.29- 138.29	107.70
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	261178	11.8043	11.804	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	872571			307.46- 367.46	334.09
12.100	12.100 (0.786)	96	403505			127.87- 187.87	154.49
52 Acetone					CAS #: 67-64-1		
12.366	12.347 (0.803)	58	247309	11.4647	11.465	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1105173			407.61- 467.61	446.88

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.461 (0.808)	76	970352	10.4830	10.483	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.690 (0.826)	45	1263818	12.6314	12.631	80.00- 120.00	100.00
12.709	12.690 (0.826)	43	257144			0.00- 50.43	20.35
12.709	12.690 (0.826)	59	38097			0.00- 33.00	3.01
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	212792	11.4253	11.425	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1139428			511.05- 571.05	535.47
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	342339	11.3901	11.390	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	789401			205.99- 265.99	230.59
13.149	13.149 (0.854)	51	243050			40.46- 100.46	71.00
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	1246448	11.8242	11.824	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	371022			0.79- 60.79	29.77
13.478	13.478 (0.876)	41	437854			7.43- 67.43	35.13
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	239841	10.1650	10.165	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	667723			247.42- 307.42	278.40
13.533	13.533 (0.879)	96	371608			122.37- 182.37	154.94
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	858995	12.1829	12.183	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	694629			51.15- 111.15	80.87
13.835	13.835 (0.899)	86	101088			0.00- 41.56	11.77
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	873577	11.6295	11.629	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	268060			0.00- 59.55	30.69
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	110832	12.4958	12.496	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	175296			118.75- 178.75	158.16
14.247	14.247 (0.926)	43	2050369			1798.00-1858.00	1849.98
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	319834	12.9349	12.935	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	819404			229.72- 289.72	256.20
15.047	15.047 (0.978)	96	506057			126.60- 186.60	158.22

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   92 2-Butanone                                    CAS #: 78-93-3
 15.047  15.028 (0.978)    72    185257 12.2923   12.292  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1432585                  750.92- 810.92   773.30
 15.047  15.028 (0.978)    57     92429                   19.16-  79.16    49.89
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 15.360  15.360 (0.998)    42    794879 12.0371   12.037  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71    168617                    0.00-  50.51    21.21
 15.360  15.360 (0.998)    72    176673                    0.00-  51.95    22.23
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    126066 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     95295                   46.85- 106.85    75.59
 15.391  15.391 (1.000)    49    346702                  226.12- 286.12   275.02
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1033788 11.7218   11.722  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    693847                   35.38-  95.38    67.12
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    546631 12.2586   12.259  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    948676                  148.59- 208.59   173.55
 15.669  15.669 (1.018)    41    654843                   91.63- 151.63   119.80
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1277639 11.7374   11.737  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    831587                   34.20-  94.20    65.09
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1158780 10.3436   10.344  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1213211                   73.79- 133.79   104.70
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1255933 11.6371   11.637  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   3813415                  276.72- 336.72   303.63
 16.111  16.111 (1.047)    41   1321970                   82.40- 142.40   105.26
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.183  16.183 (0.967)    78   1227518 11.1381   11.138  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    290249                    0.00-  53.88    23.65
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    203065 5.15566    5.156  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     98229                   17.94-  77.94    48.37
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                          CAS #: 107-06-2
 16.304  16.303 (0.974)    62    878237 11.2308   11.231  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
120 1,2-Dichloroethane (continued)							
16.304	16.303 (0.974)	64	274051			0.66- 60.66	31.20
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	548732	11.5205	11.520	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	182152			3.00- 63.00	33.20
16.352	16.352 (0.977)	43	1291270			207.00- 267.00	235.32
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	459917	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	70397			0.00- 44.91	15.31
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	759528	11.5925	11.592	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	664753			58.18- 118.18	87.52
17.123	17.123 (1.023)	97	427941			26.25- 86.25	56.34
127 Methylcyclohexane					CAS #: 108-87-2		
17.340	17.339 (1.036)	83	740936	11.9877	11.988	80.00- 120.00	100.00
17.340	17.339 (1.036)	55	942865			98.42- 158.42	127.25
17.340	17.339 (1.036)	56	287069			9.03- 69.03	38.74
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	511145	10.8829	10.883	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	369361			44.02- 104.02	72.26
17.556	17.556 (1.049)	41	485692			65.46- 125.46	95.02
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.677 (1.058)	88	307189	11.9281	11.928	80.00- 120.00	100.00
17.701	17.677 (1.058)	58	280516			62.58- 122.58	91.32
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	1183028	11.7029	11.703	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	779791			36.66- 96.66	65.91
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	737100	11.1326	11.133	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	242435			3.68- 63.68	32.89
18.805	18.805 (1.124)	39	684432			62.50- 122.50	92.85
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1798611	12.2119	12.212	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	529881			0.00- 59.19	29.46
18.984	18.984 (1.134)	85	188436			0.00- 40.34	10.48
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	442491	5.00056	5.000	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.275  19.275 (1.152)    70     48771                     0.00-  41.31    11.02
 19.275  19.275 (1.152)   100    299166                    38.24-  98.24    67.61
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1570878 11.4351   11.435  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    914698                    28.10-  88.10    58.23
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    794355 12.1785   12.178  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    256526                     3.36-  63.36    32.29
 19.998  19.998 (0.903)    39    616665                    49.78- 109.78    77.63
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    561291 11.7941   11.794  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    347916                    32.24-  92.24    61.98
 20.438  20.438 (0.922)    83    442844                    48.02- 108.02    78.90
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.930)   166    948801 11.9219   11.922  80.00- 120.00   100.00
 20.603  20.603 (0.930)   129    760469                    49.93- 109.93    80.15
 20.603  20.603 (0.930)   131    742160                    47.75- 107.75    78.22
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    681106 13.3002   13.300  80.00- 120.00   100.00(R)
 20.767  20.767 (0.937)    43   1719758                   225.15- 285.15   252.49
 20.767  20.767 (0.937)   100    116767                     0.00-  47.79    17.14
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1399184 11.7250   11.725  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127   1085030                    46.75- 106.75    77.55
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.482  21.454 (0.970)   107    960146 11.9907   11.991  80.00- 120.00   100.00
 21.482  21.454 (0.970)   109    929006                    67.69- 127.69    96.76
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    429470 5.00000            80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    212494                    19.53-  79.53    49.48
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.219  22.218 (1.003)   112   1395336 11.3002   11.300  80.00- 120.00   100.00
 22.219  22.218 (1.003)   114    436587                     1.36-  61.36    31.29
 22.219  22.218 (1.003)    77    752322                    24.91-  84.91    53.92
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    672114 11.7046   11.705  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   2102077                   280.28- 340.28   312.76
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    780924 12.2107   12.211  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1602936                   173.14- 233.14   205.26
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    731234 12.3109   12.311  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1549275                   184.94- 244.94   211.87
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104   1234492 12.4627   12.463  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    655390                    23.72-  83.72    53.09
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1677779 15.7540   15.754  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    863543                    22.28-  82.28    51.47
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   2402086 12.3603   12.360  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    664744                     0.00-  57.53    27.67
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    256374 5.11117    5.111  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    290413                    81.42- 141.42   113.28
 23.856  23.856 (1.077)   176    251074                    66.35- 126.35    97.93
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    873132 11.4394   11.439  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    597850                    38.02-  98.02    68.47
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   2136884 12.3463   12.346  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    557529                     0.00-  56.42    26.09
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.094)   105   1703583 12.7687   12.769  80.00- 120.00   100.00
 24.237  24.237 (1.094)   120    532333                     0.46-  60.46    31.25
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1297005 12.0558   12.056  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    636862                    18.43-  78.43    49.10
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105   1012709 11.9151   11.915  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  196 1,2,4-Trimethylbenzene (continued)
 24.753  24.753 (1.117)   120    464703                    16.45-  76.45    45.89
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.157  25.156 (1.135)   146   1087362 11.7526   11.752  80.00- 120.00   100.00
 25.157  25.156 (1.135)   148    689598                   33.61-  93.61    63.42
 25.157  25.156 (1.135)   111    423041                    9.29-  69.29    38.91
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.269  25.268 (1.140)   146   1030794 11.7563   11.756  80.00- 120.00   100.00
 25.269  25.268 (1.140)   148    649403                   34.28-  94.28    63.00
 25.246  25.268 (1.139)   111    390021                    7.48-  67.48    37.84
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.147)    91   1548294 12.7844   12.784  80.00- 120.00   100.00
 25.403  25.403 (1.147)   126    369531                    0.00-  53.55    23.87
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.672  25.672 (1.159)   146   1005860 11.7776   11.778  80.00- 120.00   100.00
 25.672  25.672 (1.159)   148    650007                   33.54-  93.54    64.62
 25.672  25.672 (1.159)   111    407592                   10.04-  70.04    40.52
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.237)   180    464080 12.6212   12.621  80.00- 120.00   100.00
 27.398  27.398 (1.237)   182    442437                   66.37- 126.37    95.34
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.241)   225    777814 11.4339   11.434  80.00- 120.00   100.00
 27.488  27.488 (1.241)   223    501630                   32.58-  92.58    64.49
-------------------------------------------------------------------------------
  228 Naphthalene                                  CAS #: 91-20-3
 27.712  27.712 (1.251)   128     54048 0.72748   0.7275  80.00- 120.00   100.00
 27.712  27.712 (1.251)   127      6641                    0.00-  41.67    12.29
-------------------------------------------------------------------------------
M 239 Total Xylene                                 CAS #: 1330-20-7
                                1512158 24.5217   24.522
-------------------------------------------------------------------------------
```

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070503.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/05Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 05-JUL-2017
Calibration Time: 07:52
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	143504	86102	200906	126066	-12.15
123 1,4-Difluorobenze	523048	313829	732267	459917	-12.07
163 Chlorobenzene-d5	480559	288335	672783	429470	-10.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 05-Jul-2017 14:48

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 05Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/05Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	12.048	120.49	60-140
11 Freon 12	10.000	12.450	124.50	70-130
15 Freon 114	10.000	12.886	128.86	70-130
17 Chloromethane	10.000	12.898	128.98	70-130
23 Butane	10.000	12.343	123.43	60-140
25 Vinyl Chloride	10.000	11.808	118.08	70-130
26 1,3-Butadiene	10.000	11.927	119.27	70-130
29 Bromomethane	10.000	12.498	124.98	70-130
30 Chloroethane	10.000	12.322	123.22	70-130
31 Isopentane	10.000	11.647	116.47	60-140
35 Freon 11	10.000	11.799	117.99	70-130
42 Ethanol	10.000	13.299	132.99*	70-130
49 Freon 113	10.000	11.608	116.08	70-130
50 1,1-Dichloroethene	10.000	11.804	118.04	70-130
52 Acetone	10.000	11.465	114.65	70-130
56 Carbon Disulfide	10.000	10.483	104.83	70-130
57 2-Propanol	10.000	12.631	126.31	70-130
58 3-Chloropropene	10.000	11.425	114.25	70-130
66 Methylene Chloride	10.000	11.390	113.90	70-130
72 Methyl tert-butyl	10.000	11.824	118.24	70-130
73 trans-1,2-Dichloro	10.000	10.165	101.65	70-130
78 Hexane	10.000	12.183	121.83	70-130
82 1,1-Dichloroethane	10.000	11.629	116.29	70-130
86 Vinyl Acetate	10.000	12.496	124.96	60-140
91 cis-1,2-Dichloroet	10.000	12.935	129.35	70-130
92 2-Butanone	10.000	12.292	122.92	70-130
99 Tetrahydrofuran	10.000	12.037	120.37	70-130
100 Chloroform	10.000	11.722	117.22	70-130
103 1,1,1-Trichloroeth	10.000	11.737	117.37	70-130
106 Carbon Tetrachlori	10.000	10.344	103.44	70-130
102 Cyclohexane	10.000	12.259	122.59	70-130
113 2,2,4-Trimethylpen	10.000	11.637	116.37	70-130
116 Benzene	10.000	11.138	111.38	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	11.231	112.31	70-130
121 Heptane	10.000	11.520	115.20	70-130
125 Trichloroethene	10.000	11.592	115.93	70-130
127 Methylcyclohexane	10.000	11.988	119.88	60-140
132 1,2-Dichloropropan	10.000	10.883	108.83	70-130
136 1,4-Dioxane	10.000	11.928	119.28	70-130
138 Bromodichlorometha	10.000	11.703	117.03	70-130
144 cis-1,3-Dichloropr	10.000	11.133	111.33	70-130
145 4-Methyl-2-pentano	10.000	12.212	122.12	70-130
147 Toluene	10.000	11.435	114.35	70-130
150 trans-1,3-Dichloro	10.000	12.178	121.79	70-130
155 1,1,2-Trichloroeth	10.000	11.794	117.94	70-130
156 Tetrachloroethene	10.000	11.922	119.22	70-130
158 2-Hexanone	10.000	13.300	133.00*	70-130
160 Dibromochlorometha	10.000	11.725	117.25	70-130
161 1,2-Dibromoethane	10.000	11.991	119.91	70-130
165 Chlorobenzene	10.000	11.300	113.00	70-130
167 Ethyl Benzene	10.000	11.705	117.05	70-130
169 m,p-Xylene	10.000	12.211	122.11	70-130
171 o-Xylene	10.000	12.311	123.11	70-130
172 Styrene	10.000	12.463	124.63	70-130
174 Bromoform	13.000	15.754	121.18	70-130
175 Cumene	10.000	12.360	123.60	70-130
181 1,1,2,2-Tetrachlor	10.000	11.439	114.39	70-130
182 Propylbenzene	10.000	12.346	123.46	70-130
188 4-Ethyltoluene	10.000	12.769	127.69	70-130
190 1,3,5-Trimethylben	10.000	12.056	120.56	70-130
196 1,2,4-Trimethylben	10.000	11.915	119.15	70-130
208 1,3-Dichlorobenzen	10.000	11.752	117.53	70-130
209 1,4-Dichlorobenzen	10.000	11.756	117.56	70-130
212 alpha-Chlorotoluen	10.000	12.784	127.84	70-130
214 1,2-Dichlorobenzen	10.000	11.778	117.78	70-130
226 1,2,4-Trichloroben	10.000	12.621	126.21	70-130
227 Hexachlorobutadien	10.000	11.434	114.34	70-130
228 Naphthalene	1.000	0.7275	72.75	60-140
M 239 Total Xylene	20.000	24.522	122.61	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.156	103.11	70-130
$ 146 Toluene-d8	5.000	5.000	100.01	70-130
$ 177 4-Bromofluorobenze	5.000	5.111	102.22	70-130

Data File: /chem/msde.i/05Jul2017.b/e070503.d

Date : 05-JUL-2017 09:02

Client ID: LCS

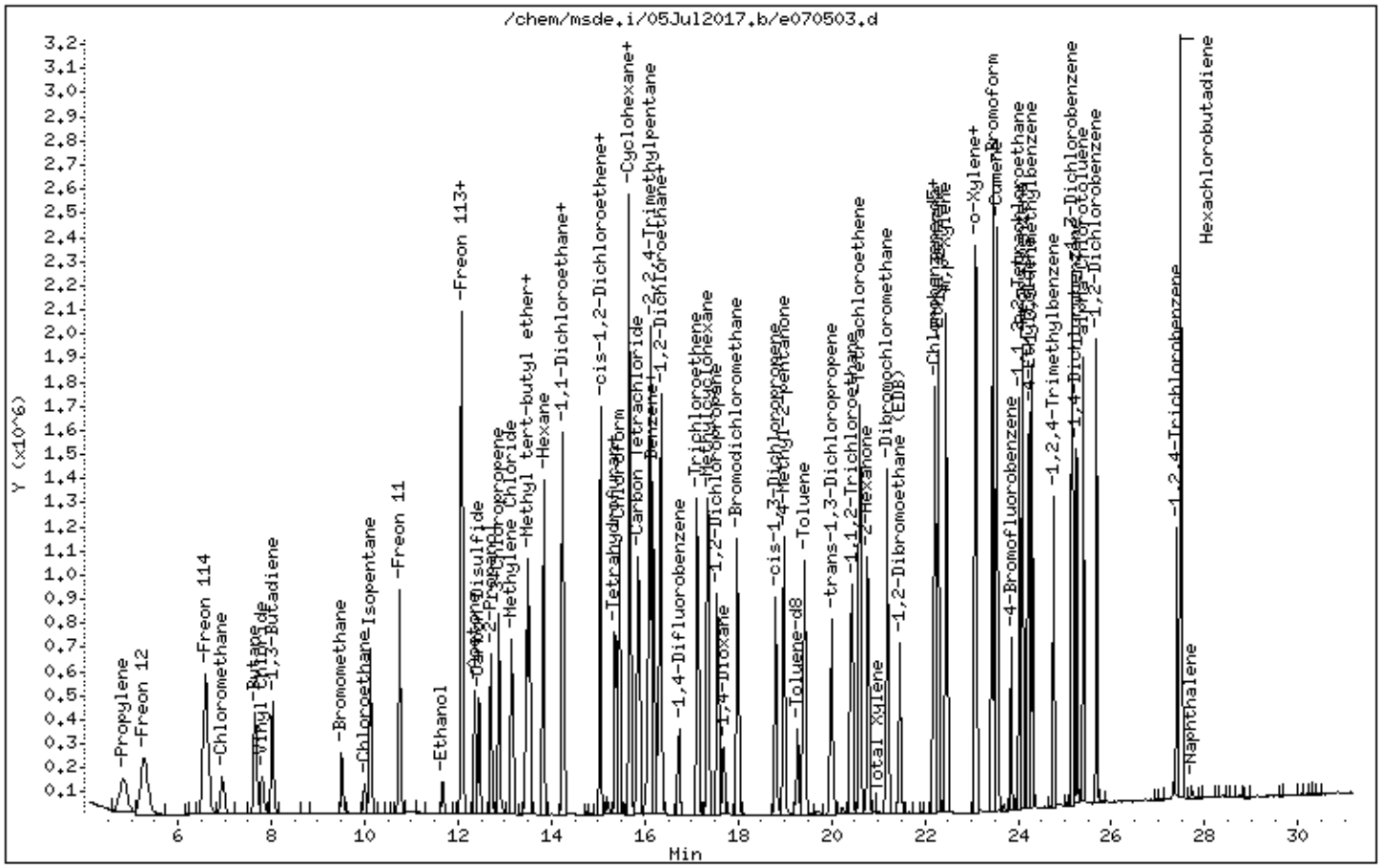
Instrument: msde.i

Sample Info: 50mL #2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070312.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 03-JUL-2017 14:35
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-228
Misc Info : 0.05ppbv (0.05ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 14:35 Cal File: e070312.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level5.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
15 Freon 114					CAS #: 76-14-2		
6.643	6.643 (0.432)	135	3560	0.05000	0.03926	80.00- 120.00	100.00(a)
6.643	6.643 (0.432)	137	929			1.36- 61.36	26.10
6.594	6.594 (0.428)	85	5001			85.72- 145.72	140.48
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	6325	0.05000	0.04498	80.00- 120.00	100.00(a)
10.747	10.747 (0.698)	103	4111			35.39- 95.39	65.00
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	4650	0.05000	0.05272	80.00- 120.00	100.00(a)
12.100	12.100 (0.786)	153	2405			33.74- 93.74	51.72
12.100	12.100 (0.786)	101	4291			78.29- 138.29	92.28
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	140890	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	107928			46.85- 106.85	76.60
15.391	15.391 (1.000)	49	234949			226.12- 286.12	166.76
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	6166	0.05000	0.05068	80.00- 120.00	100.00(a)

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  103 1,1,1-Trichloroethane (continued)
 15.669  15.669 (1.018)    99      4305                    34.20-  94.20    69.82
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.885  15.885 (1.032)   119      6489 0.05000  0.05183  80.00- 120.00   100.00(a)
 15.885  15.885 (1.032)   117      5437                    73.79- 133.79    83.79
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    222313 5.00000    5.050  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     98483                    17.94-  77.94    44.30
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62      3610 0.05000  0.04421  80.00- 120.00   100.00(a)
 16.304  16.304 (0.974)    64      1336                     0.66-  60.66    37.01
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    480255 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     73277                     0.00-  44.91    15.26
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.123 (1.023)   130      2907 0.05000  0.04249  80.00- 120.00   100.00(a)
 17.123  17.123 (1.023)    95      2723                    58.18- 118.18    93.67
 17.123  17.123 (1.023)    97      1920                    26.25-  86.25    66.05
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 17.990  17.990 (1.075)    83      5163 0.05000  0.04891  80.00- 120.00   100.00(a)
 17.990  17.990 (1.075)    85      3066                    36.66-  96.66    59.38
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.276  19.276 (1.152)    98    469700 5.00000    5.083  80.00- 120.00   100.00
 19.276  19.276 (1.152)    70     52812                     0.00-  41.31    11.24
 19.276  19.276 (1.152)   100    308915                    38.24-  98.24    65.77
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.438  20.438 (0.922)    97      2391 0.05000  0.04618  80.00- 120.00   100.00(a)
 20.438  20.438 (0.922)    99      1630                    32.24-  92.24    68.17
 20.438  20.438 (0.922)    83      1897                    48.02- 108.02    79.34
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.603  20.603 (0.929)   166      3770 0.05000  0.04354  80.00- 120.00   100.00(a)
 20.630  20.630 (0.930)   129      3429                    49.93- 109.93    90.95
 20.630  20.630 (0.930)   131      4581                    47.75- 107.75   121.51
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129      6332 0.05000  0.04877  80.00- 120.00   100.00(a)
 21.207  21.207 (0.956)   127      5051                    46.75- 106.75    79.77
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  161 1,2-Dibromoethane (EDB)                          CAS #: 106-93-4
 21.482  21.482 (0.969)   107      4265 0.05000  0.04895  80.00- 120.00   100.00(a)
 21.482  21.482 (0.969)   109      4123                   67.69- 127.69    96.67
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    467269 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    226386                   19.53-  79.53    48.45
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 23.452  23.452 (1.057)   173      4867 0.05000  0.04200  80.00- 120.00   100.00(a)
 23.452  23.452 (1.057)   171      3036                   22.28-  82.28    62.38
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.856  23.856 (1.076)   174    257196 5.00000    4.713  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    290749                   81.42- 141.42   113.05
 23.856  23.856 (1.076)   176    253489                   66.35- 126.35    98.56
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 24.035  24.035 (1.084)    83      3522 0.05000  0.04241  80.00- 120.00   100.00(a)
 24.035  24.035 (1.084)    85      2980                   38.02-  98.02    84.61
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                   CAS #: 622-96-8
 24.237  24.237 (1.093)   105      6136 0.05000  0.04227  80.00- 120.00   100.00(a)
 24.237  24.237 (1.093)   120      3074                    0.46-  60.46    50.10
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                           CAS #: 108-67-8
 24.304  24.304 (1.096)   105      5812 0.05000  0.04965  80.00- 120.00   100.00(a)
 24.304  24.304 (1.096)   120      3030                   18.43-  78.43    52.13
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                           CAS #: 95-63-6
 24.775  24.775 (1.117)   105      5008 0.05000  0.05416  80.00- 120.00   100.00(a)
 24.753  24.753 (1.116)   120      1883                   16.45-  76.45    37.60
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                              CAS #: 541-73-1
 25.157  25.157 (1.134)   146      5139 0.05000  0.05105  80.00- 120.00   100.00(a)
 25.157  25.157 (1.134)   148      2772                   33.61-  93.61    53.94
 25.157  25.157 (1.134)   111      1846                    9.29-  69.29    35.92
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                              CAS #: 106-46-7
 25.269  25.269 (1.139)   146      5844 0.05000  0.06126  80.00- 120.00   100.00(a)
 25.269  25.269 (1.139)   148      3218                   34.28-  94.28    55.07
 25.269  25.269 (1.139)   111      1930                    7.48-  67.48    33.03
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                              CAS #: 95-50-1
 25.695  25.695 (1.159)   146      4932 0.05000  0.05308  80.00- 120.00   100.00(a)
 25.695  25.695 (1.159)   148      3205                   33.54-  93.54    64.98
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
25.672	25.672 (1.158)	111	1681			10.04- 70.04	34.08
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.421	27.421 (1.236)	180	2269	0.05000	0.05672	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	1584			66.37- 126.37	69.81

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070312.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 0.05ppbv (0.05ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	140890	0.75
123 1,4-Difluorobenze	482877	289726	676028	480255	-0.54
163 Chlorobenzene-d5	450551	270331	630771	467269	3.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070312.d

Date : 03-JUL-2017 14:35

Client ID: Level 5

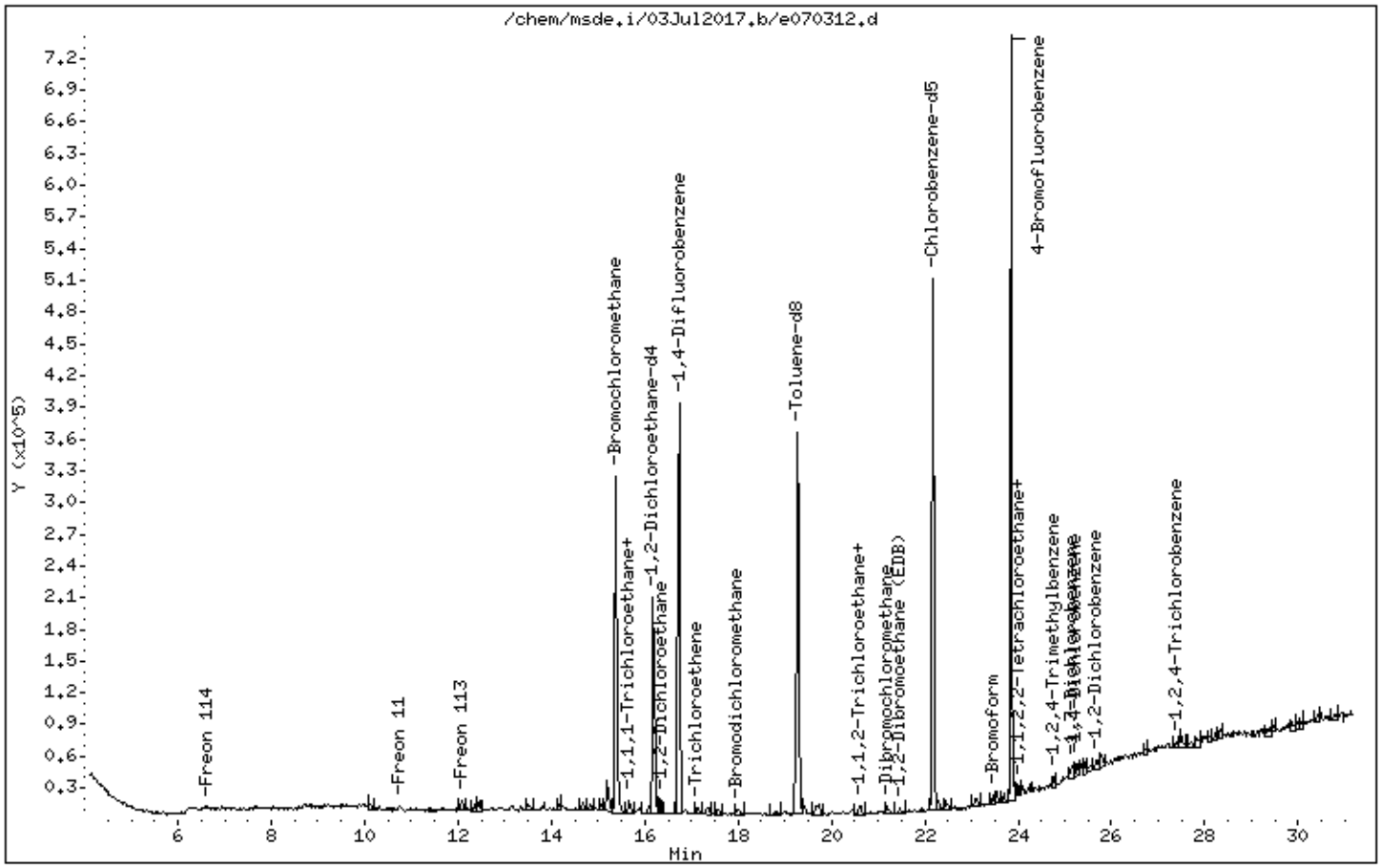
Instrument: msde.i

Sample Info: 250mL# 2850-228

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070313.d
Lab Smp Id: ICAL Client Smp ID: Level 6
Inj Date : 03-JUL-2017 15:18
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-229
Misc Info : 0.1ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 15:18 Cal File: e070313.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Level6.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.245	5.245 (0.341)	85	13604	0.10000	0.1219	80.00- 120.00	100.00(aM)
5.365	5.365 (0.349)	87	5189			1.93- 61.93	38.14
15 Freon 114					CAS #: 76-14-2		
6.570	6.570 (0.427)	135	10034	0.10000	0.1223	80.00- 120.00	100.00(a)
6.594	6.594 (0.428)	137	3151			1.36- 61.36	31.40
6.570	6.570 (0.427)	85	11435			85.72- 145.72	113.96
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	5216	0.10000	0.1438	80.00- 120.00	100.00(a)
7.814	7.814 (0.508)	64	1106			0.00- 59.78	21.20
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	4417	0.10000	0.1212	80.00- 120.00	100.00(a)
8.022	8.022 (0.521)	39	5599			90.63- 150.63	126.76
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	15233	0.10000	0.1197	80.00- 120.00	100.00(a)
10.766	10.766 (0.700)	103	11039			35.39- 95.39	72.47

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113                                     CAS #: 76-13-1
 12.081  12.081 (0.785)   151      9230 0.10000   0.1156  80.00- 120.00   100.00(a)
 12.081  12.081 (0.785)   153      6232                   33.74-  93.74    67.52
 12.081  12.081 (0.785)   101     11068                   78.29- 138.29   119.91
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.100  12.100 (0.786)    98      2777 0.10000   0.1241  80.00- 120.00   100.00(a)
 12.100  12.100 (0.786)    61      9593                  307.46- 367.46   345.44
 12.100  12.100 (0.786)    96      5435                  127.87- 187.87   195.71
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 13.149  13.149 (0.854)    84      4353 0.10000   0.1432  80.00- 120.00   100.00(a)
 13.149  13.149 (0.854)    49      9028                  205.99- 265.99   207.40
 13.149  13.149 (0.854)    51      3284                   40.46- 100.46    75.44
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                       CAS #: 1634-04-4
 13.478  13.478 (0.876)    73     12813 0.10000   0.1202  80.00- 120.00   100.00(a)
 13.478  13.478 (0.876)    57      3694                    0.79-  60.79    28.83
 13.478  13.478 (0.876)    41      2850                    7.43-  67.43    22.24
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                      CAS #: 156-60-5
 13.533  13.533 (0.879)    98      2406 0.10000   0.1008  80.00- 120.00   100.00(a)
 13.533  13.533 (0.879)    61      6501                  247.42- 307.42   270.20
 13.533  13.533 (0.879)    96      5030                  122.37- 182.37   209.06
-------------------------------------------------------------------------------
   78 Hexane                                        CAS #: 110-54-3
 13.835  13.835 (0.899)    57      7580 0.10000   0.1063  80.00- 120.00   100.00(Ta)
 13.835  13.835 (0.899)    43      7119                   51.15- 111.15    93.92
  0.000   1.000 (0.000)    86         0                    0.00-  41.56     0.00
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                            CAS #: 75-34-3
 14.220  14.220 (0.924)    63      8942 0.10000   0.1177  80.00- 120.00   100.00(a)
 14.247  14.247 (0.926)    65      1833                    0.00-  59.55    20.50
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.047  15.047 (0.978)    98      2636 0.10000   0.1054  80.00- 120.00   100.00(a)
 15.047  15.047 (0.978)    61      7360                  229.72- 289.72   279.21
 15.047  15.047 (0.978)    96      5788                  126.60- 186.60   219.58
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    127475 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     97962                   46.85- 106.85    76.85
 15.391  15.391 (1.000)    49    223385                  226.12- 286.12   175.24
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83      9871 0.10000   0.1107  80.00- 120.00   100.00(a)
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  100 Chloroform (continued)
 15.453  15.453 (1.004)    85      8102                    35.38-  95.38    82.08
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84      5006 0.10000   0.1110  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56      8120                  148.59- 208.59   162.21
 15.669  15.669 (1.018)    41      8323                   91.63- 151.63   166.26
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.669  15.669 (1.018)    97     12512 0.10000   0.1137  80.00- 120.00   100.00(a)
 15.669  15.669 (1.018)    99      9491                   34.20-  94.20    75.86
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.854  15.854 (1.030)   119     11531 0.10000   0.1018  80.00- 120.00   100.00(a)
 15.854  15.854 (1.030)   117     12061                   73.79- 133.79   104.60
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                       CAS #: 540-84-1
 16.111  16.111 (1.047)    56     11981 0.10000   0.1098  80.00- 120.00   100.00(a)
 16.111  16.111 (1.047)    57     32577                  276.72- 336.72   271.91
 16.111  16.111 (1.047)    41     14791                   82.40- 142.40   123.45
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 16.183  16.183 (0.967)    78     13301 0.10000   0.1210  80.00- 120.00   100.00(a)
 16.183  16.183 (0.967)    77      3418                    0.00-  53.88    25.70
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    206400 5.00000    5.182  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     93247                   17.94-  77.94    45.18
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.304  16.304 (0.974)    62      9263 0.10000   0.1188  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64      3031                    0.66-  60.66    32.72
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57      4742 0.10000  0.09986  80.00- 120.00   100.00(a)
 16.352  16.352 (0.977)   100      1680                    3.00-  63.00    35.43
 16.352  16.352 (0.977)    43     13036                  207.00- 267.00   274.91
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    458516 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     67259                    0.00-  44.91    14.67
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.123  17.123 (1.023)   130      8118 0.10000   0.1243  80.00- 120.00   100.00(a)
 17.123  17.123 (1.023)    95      6876                   58.18- 118.18    84.70
 17.123  17.123 (1.023)    97      4504                   26.25-  86.25    55.48
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	6222	0.10000	0.1329	80.00- 120.00	100.00(a)
17.556	17.556 (1.049)	62	3585			44.02- 104.02	57.62
17.556	17.556 (1.049)	41	6017			65.46- 125.46	96.71
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	2086	0.10000	0.08125	80.00- 120.00	100.00(a)
17.701	17.701 (1.058)	58	2641			62.58- 122.58	126.61
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	11042	0.10000	0.1096	80.00- 120.00	100.00(a)
17.990	17.990 (1.075)	85	6604			36.66- 96.66	59.81
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	6930	0.10000	0.1050	80.00- 120.00	100.00(a)
18.782	18.782 (1.122)	77	2581			3.68- 63.68	37.24
18.805	18.805 (1.124)	39	7807			62.50- 122.50	112.66
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
19.007	19.007 (1.136)	43	13628	0.10000	0.09281	80.00- 120.00	100.00(a)
19.007	19.007 (1.136)	58	3454			0.00- 59.19	25.34
19.029	19.029 (1.137)	85	1660			0.00- 40.34	12.18
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	439817	5.00000	4.986	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	47462			0.00- 41.31	10.79
19.275	19.275 (1.152)	100	286596			38.24- 98.24	65.16
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	15425	0.10000	0.1126	80.00- 120.00	100.00(a)
19.432	19.432 (1.161)	92	9349			28.10- 88.10	60.61
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
20.026	20.026 (0.903)	75	6236	0.10000	0.09475	80.00- 120.00	100.00(a)
20.053	20.053 (0.904)	77	3405			3.36- 63.36	54.60
20.026	20.026 (0.903)	39	5930			49.78- 109.78	95.09
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	5174	0.10000	0.1077	80.00- 120.00	100.00(a)
20.438	20.438 (0.922)	99	3757			32.24- 92.24	72.61
20.438	20.438 (0.922)	83	5326			48.02- 108.02	102.94
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.929)	166	9285	0.10000	0.1156	80.00- 120.00	100.00(a)
20.630	20.630 (0.930)	129	8666			49.93- 109.93	93.33
20.603	20.603 (0.929)	131	7148			47.75- 107.75	76.98

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129     12654 0.10000   0.1051  80.00- 120.00   100.00(a)
 21.207  21.207 (0.956)   127     10525                   46.75- 106.75    83.18
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107      7740 0.10000  0.09579  80.00- 120.00   100.00(a)
 21.482  21.482 (0.969)   109      8098                   67.69- 127.69   104.63
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    433363 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    199882                   19.53-  79.53    46.12
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112     14277 0.10000   0.1146  80.00- 120.00   100.00(a)
 22.219  22.219 (1.002)   114      4051                    1.36-  61.36    28.37
 22.219  22.219 (1.002)    77     12322                   24.91-  84.91    86.31
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.302  22.302 (1.006)   106      6577 0.10000   0.1135  80.00- 120.00   100.00(a)
 22.302  22.302 (1.006)    91     18570                  280.28- 340.28   282.35
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106      5452 0.10000  0.08448  80.00- 120.00   100.00(a)
 22.467  22.467 (1.013)    91     12699                  173.14- 233.14   232.92
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.040)   106      5705 0.10000  0.09518  80.00- 120.00   100.00(a)
 23.089  23.089 (1.041)    91     14482                  184.94- 244.94   253.85
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104      9213 0.10000  0.09217  80.00- 120.00   100.00(a)
 23.110  23.110 (1.042)    78      5862                   23.72-  83.72    63.63
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173     11789 0.10000   0.1097  80.00- 120.00   100.00(a)
 23.452  23.452 (1.057)   171      5944                   22.28-  82.28    50.42
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.062)   105     18852 0.10000  0.09613  80.00- 120.00   100.00(a)
 23.564  23.564 (1.063)   120      6389                    0.00-  57.53    33.89
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    245804 5.00000    4.856  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    268671                   81.42- 141.42   109.30
 23.856  23.856 (1.076)   176    228689                   66.35- 126.35    93.04
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	9665	0.10000	0.1255	80.00- 120.00	100.00(a)
24.035	24.035 (1.084)	85	5129			38.02- 98.02	53.07
182 Propylbenzene					CAS #: 103-65-1		
24.102	24.102 (1.087)	91	17274	0.10000	0.09891	80.00- 120.00	100.00(a)
24.102	24.102 (1.087)	120	4576			0.00- 56.42	26.49
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	13178	0.10000	0.09788	80.00- 120.00	100.00(a)
24.237	24.237 (1.093)	120	4692			0.46- 60.46	35.60
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	10791	0.10000	0.09940	80.00- 120.00	100.00(a)
24.304	24.304 (1.096)	120	5716			18.43- 78.43	52.97
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	9773	0.10000	0.1140	80.00- 120.00	100.00(a)
24.775	24.775 (1.117)	120	4638			16.45- 76.45	47.46
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	10189	0.10000	0.1091	80.00- 120.00	100.00(a)
25.156	25.156 (1.134)	148	7064			33.61- 93.61	69.33
25.156	25.156 (1.134)	111	3402			9.29- 69.29	33.39
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	8378	0.10000	0.09469	80.00- 120.00	100.00(a)
25.269	25.269 (1.139)	148	5487			34.28- 94.28	65.49
25.269	25.269 (1.139)	111	3552			7.48- 67.48	42.40
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	11482	0.10000	0.09396	80.00- 120.00	100.00(a)
25.403	25.403 (1.145)	126	2578			0.00- 53.55	22.45
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	8679	0.10000	0.1007	80.00- 120.00	100.00(a)
25.672	25.672 (1.158)	148	7320			33.54- 93.54	84.34
25.672	25.672 (1.158)	111	3510			10.04- 70.04	40.44
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	2794	0.10000	0.07530	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	2617			66.37- 126.37	93.66
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	6377	0.10000	0.09290	80.00- 120.00	100.00(a)
27.488	27.488 (1.239)	223	4798			32.58- 92.58	75.24

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070313.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 0.1ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 6
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	127475	-8.84
123 1,4-Difluorobenze	482877	289726	676028	458516	-5.04
163 Chlorobenzene-d5	450551	270331	630771	433363	-3.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070313.d

Date : 03-JUL-2017 15:18

Client ID: Level 6

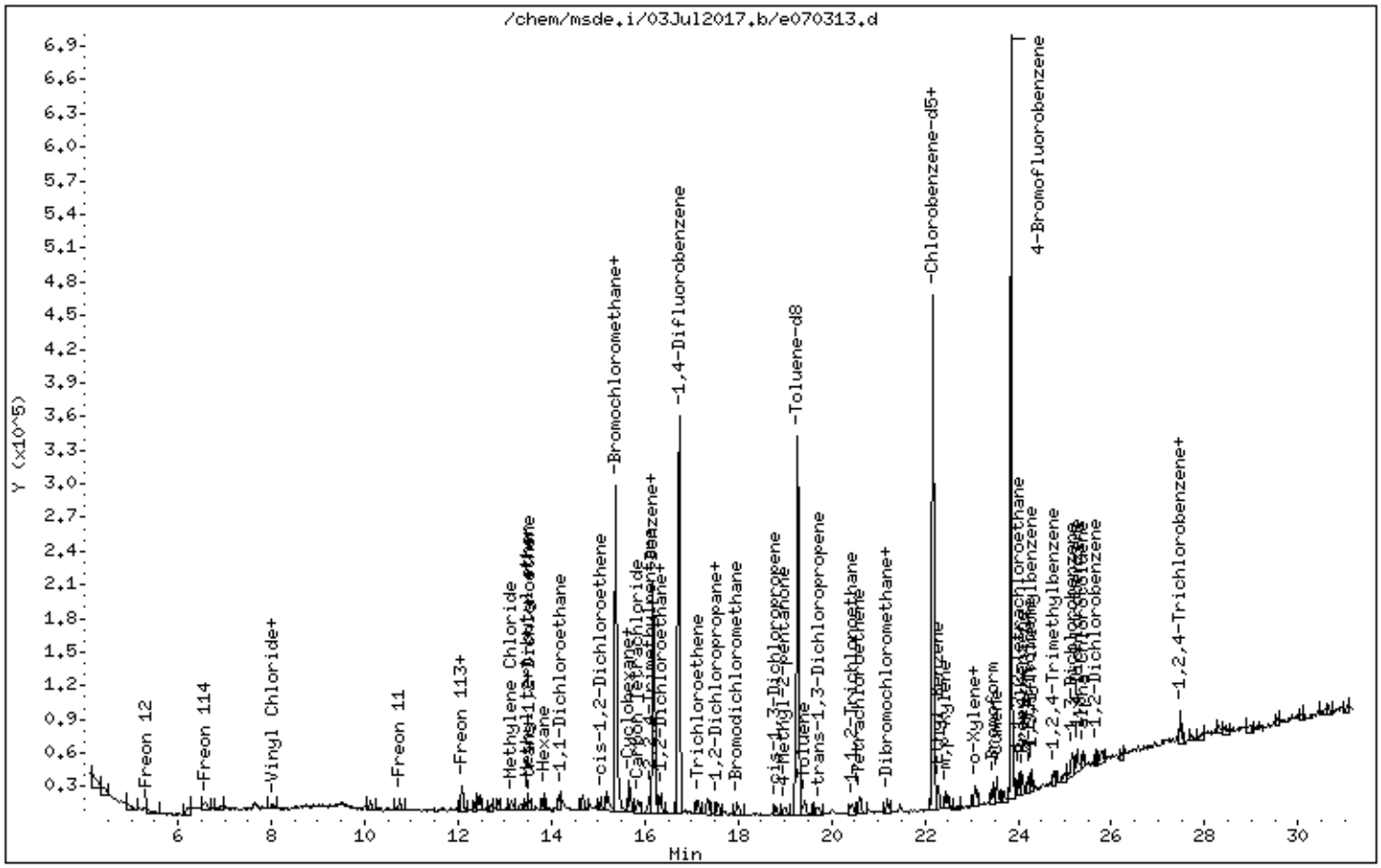
Instrument: msde.i

Sample Info: 25mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071211.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 12-JUL-2017 14:50
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-184
Misc Info : 0.5ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:46 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 14:50 Cal File: e071211.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-AT4.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.824	10.824 (0.703)	55	13843	0.50000	0.4860	0.00- 0.00	100.00(a)
10.824	10.824 (0.703)	42	25006			0.00- 0.00	180.64
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	34823	0.50000	0.5056	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	4259			0.00- 0.00	12.23
10.957	10.957 (0.712)	72	2106			0.00- 0.00	6.05
44 Ethyl Ether					CAS #: 60-29-7		
11.643	11.643 (0.756)	74	5441	0.50000	0.5172	0.00- 0.00	100.00(T)
11.643	11.643 (0.756)	59	10913			0.00- 0.00	200.57
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	41327	0.50000	0.6006	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	23181			0.00- 0.00	56.09
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	29153	0.50000	0.5171	80.00- 120.00	100.00

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   59 Cyclopentene (continued)
 12.900  12.900 (0.838)    68     10962                     0.00-   0.00    37.60
 12.900  12.900 (0.838)    53     10746                     0.00-   0.00    36.86
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.094  13.094 (0.851)    70      7125 0.50000   0.5470   0.00-   0.00   100.00
 13.094  13.094 (0.851)    55     13460                     0.00-   0.00   188.91
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.726  13.726 (0.892)    55     12398 0.50000   0.5093   0.00-   0.00   100.00
 13.726  13.726 (0.892)    41     22143                     0.00-   0.00   178.60
 13.726  13.726 (0.892)    84      3136                     0.00-   0.00    25.29
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                           CAS #: 594-20-7
 15.009  15.009 (0.975)    77     38231 0.50000   0.5156  80.00- 120.00   100.00
 15.009  15.009 (0.975)    79     13562                     0.00-   0.00    35.47
 15.009  15.009 (0.975)    97      6891                     0.00-   0.00    18.02
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.123  15.123 (0.983)    55     25837 0.50000   0.4162   0.00-   0.00   100.00(a)
 15.142  15.142 (0.984)    85      2890                     0.00-   0.00    11.19
 15.142  15.142 (0.984)    58      2872                     0.00-   0.00    11.12
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.047  15.047 (0.978)    70      2571 0.50000   0.4527   0.00-   0.00   100.00(a)
 15.047  15.047 (0.978)    43     45805                     0.00-   0.00  1781.60
 15.009  15.009 (0.975)    61     11344                     0.00-   0.00   441.23
-------------------------------------------------------------------------------
*  98 Bromochloromethane                            CAS #: 74-97-5
 15.391  15.391 (1.000)   130    125501 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     96217                    46.85- 106.85    76.67
 15.391  15.391 (1.000)    49    214153                   226.12- 286.12   170.64
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                           CAS #: 563-58-6
 15.885  15.885 (1.032)   110      8052 0.50000   0.4603  80.00- 120.00   100.00(a)
 15.885  15.885 (1.032)    75     29477                     0.00-   0.00   366.08
-------------------------------------------------------------------------------
  115 Isobutanol                                    CAS #: 78-83-1
 15.977  15.977 (1.038)    43     18903 0.50000   0.4432  80.00- 120.00   100.00(a)
 15.977  15.977 (1.038)    41     16926                     0.00-   0.00    89.54
 15.854  15.854 (1.030)    55       897                     0.00-   0.00     4.75
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    425018 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     62488                     0.00-  44.91    14.70
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
124 n-Butanol					CAS #: 71-36-3		
16.906	16.906 (1.010)	56	15846	0.50000	0.3597	80.00- 120.00	100.00(a)
16.906	16.906 (1.010)	41	17777			0.00- 0.00	112.19
16.906	16.906 (1.010)	43	12951			0.00- 0.00	81.73
128 Ethyl acrylate					CAS #: 140-88-5		
17.171	17.171 (1.026)	99	2323	0.50000	0.4990	0.00- 0.00	100.00(a)
17.171	17.171 (1.026)	45	6480			0.00- 0.00	278.95
17.195	17.195 (1.027)	55	38895			0.00- 0.00	1674.34
131 2-Pentanone					CAS #: 107-87-9		
17.388	17.388 (1.039)	43	58696	0.50000	0.4496	0.00- 0.00	100.00(a)
17.388	17.388 (1.039)	58	3871			0.00- 0.00	6.59
17.388	17.388 (1.039)	86	5822			0.00- 0.00	9.92
134 Methyl Methacrylate					CAS #: 80-62-6		
17.556	17.556 (1.049)	41	30918	0.50000	0.4731	0.00- 0.00	100.00(a)
17.556	17.556 (1.049)	69	12974			0.00- 0.00	41.96
17.556	17.556 (1.049)	100	5048			0.00- 0.00	16.33
137 Dibromomethane					CAS #: 74-95-3		
17.797	17.797 (1.063)	174	25228	0.50000	0.5275	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	22387			0.00- 0.00	88.74
17.797	17.797 (1.063)	95	17762			0.00- 0.00	70.41
148 Octane					CAS #: 111-65-9		
19.343	19.343 (1.156)	57	15413	0.50000	0.4912	0.00- 0.00	100.00(a)
19.343	19.343 (1.156)	85	12040			0.00- 0.00	78.12
19.343	19.343 (1.156)	43	52581			0.00- 0.00	341.15
157 1,3-Dichloropropane					CAS #: 142-28-9		
20.795	20.795 (0.939)	76	25877	0.50000	0.5239	80.00- 120.00	100.00
20.795	20.795 (0.939)	41	30814			0.00- 0.00	119.08
20.795	20.795 (0.939)	78	9063			0.00- 0.00	35.02
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.156	22.156 (1.000)	117	393609	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	190270			19.53- 79.53	48.34
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.322	22.322 (1.007)	131	33998	0.50000	0.5022	80.00- 120.00	100.00
22.322	22.322 (1.007)	117	22478			0.00- 0.00	66.12
22.322	22.322 (1.007)	95	14617			0.00- 0.00	42.99
170 Nonane					CAS #: 111-84-2		
22.302	22.302 (1.007)	43	36387	0.50000	0.4710	0.00- 0.00	100.00(a)

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  170 Nonane (continued)
 22.302  22.302 (1.007)    57     25951                     0.00-   0.00    71.32
 22.302  22.302 (1.007)    85      7757                     0.00-   0.00    21.32
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 23.214  23.214 (1.048)    58     10100 0.50000   0.3607  80.00- 120.00   100.00(a)
 23.214  23.214 (1.048)    43     25723                     0.00-   0.00   254.68
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 23.811  23.811 (1.075)    55     15584 0.50000   0.4473  80.00- 120.00   100.00(a)
 23.811  23.811 (1.075)    98      5364                     0.00-   0.00    34.42
 23.811  23.811 (1.075)    42     14185                     0.00-   0.00    91.02
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 24.058  24.058 (1.086)   156     27022 0.50000   0.5046  80.00- 120.00   100.00
 24.058  24.058 (1.086)   158     26062                     0.00-   0.00    96.45
 24.058  24.058 (1.086)    77     46638                     0.00-   0.00   172.59
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 24.125  24.125 (1.089)   110     12177 0.50000   0.5257  80.00- 120.00   100.00
 24.125  24.125 (1.089)    75     30578                     0.00-   0.00   251.11
 24.125  24.125 (1.089)    61      9929                     0.00-   0.00    81.54
-------------------------------------------------------------------------------
  187 Decane                                       CAS #: 124-18-5
 24.170  24.170 (1.091)    57     14326 0.50000   0.4694   0.00-   0.00   100.00(Ta)
 24.170  24.170 (1.091)    71      4463                     0.00-   0.00    31.15
  0.000   1.000 (0.000)   142         0                     0.00-   0.00     0.00
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 24.282  24.282 (1.096)   126     17946 0.50000   0.5133  80.00- 120.00   100.00
 24.282  24.282 (1.096)    91     40980                     0.00-   0.00   228.35
 24.259  24.259 (1.095)    65      5370                     0.00-   0.00    29.92
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 24.416  24.416 (1.102)   126     14177 0.50000   0.4946  80.00- 120.00   100.00(a)
 24.416  24.416 (1.102)    91     36293                     0.00-   0.00   256.00
 24.416  24.416 (1.102)    63      6570                     0.00-   0.00    46.34
-------------------------------------------------------------------------------
  195 tert-Butylbenzene                            CAS #: 98-06-6
 24.686  24.686 (1.114)   119     39679 0.50000   0.4914  80.00- 120.00   100.00(a)
 24.686  24.686 (1.114)   134     11127                     0.00-   0.00    28.04
 24.686  24.686 (1.114)    91     24097                     0.00-   0.00    60.73
-------------------------------------------------------------------------------
  197 Pentachloroethane                            CAS #: 76-01-7
 24.798  24.798 (1.119)   167     15322 0.50000   0.4632  80.00- 120.00   100.00(a)
 24.798  24.798 (1.119)   117     15183                     0.00-   0.00    99.09
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
197 Pentachloroethane (continued)							
24.798	24.798 (1.119)	169	8055			0.00- 0.00	52.57
203 sec-Butylbenzene					CAS #: 135-98-8		
24.932	24.932 (1.125)	105	69985	0.50000	0.5072	80.00- 120.00	100.00
24.932	24.932 (1.125)	134	15947			0.00- 0.00	22.79
24.932	24.932 (1.125)	91	11561			0.00- 0.00	16.52
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.132)	119	32880	0.50000	0.4477	80.00- 120.00	100.00(a)
25.089	25.089 (1.132)	134	10402			0.00- 0.00	31.64
25.089	25.089 (1.132)	91	9432			0.00- 0.00	28.69
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.246	25.246 (1.139)	120	10573	0.50000	0.4970	80.00- 120.00	100.00(a)
25.246	25.246 (1.139)	105	27128			0.00- 0.00	256.58
25.246	25.246 (1.139)	77	3331			0.00- 0.00	31.50
213 Butylbenzene					CAS #: 104-51-8		
25.538	25.538 (1.153)	134	7545	0.50000	0.4899	80.00- 120.00	100.00(a)
25.538	25.538 (1.153)	91	21688			0.00- 0.00	287.45
25.538	25.538 (1.153)	92	12631			0.00- 0.00	167.41
215 Undecane					CAS #: 1120-21-4		
25.493	25.493 (1.151)	57	17928	0.50000	0.5697	0.00- 0.00	100.00
25.493	25.493 (1.151)	43	19349			0.00- 0.00	107.93
25.493	25.493 (1.151)	85	4038			0.00- 0.00	22.52
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.524	26.524 (1.197)	157	14534	0.50000	0.5503	80.00- 120.00	100.00
26.524	26.524 (1.197)	75	11522			0.00- 0.00	79.28
26.524	26.524 (1.197)	155	9076			0.00- 0.00	62.45
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.201)	85	6624	0.50000	0.5297	0.00- 0.00	100.00
26.614	26.614 (1.201)	57	26800			0.00- 0.00	404.59
26.614	26.614 (1.201)	43	29965			0.00- 0.00	452.37

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071211.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 0.5ppbv (5.0ppbv) Combo

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	125501	-6.55
123 1,4-Difluorobenze	480550	288330	672770	425018	-11.56
163 Chlorobenzene-d5	431542	258925	604159	393609	-8.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071211.d

Date : 12-JUL-2017 14:50

Client ID: Level 7

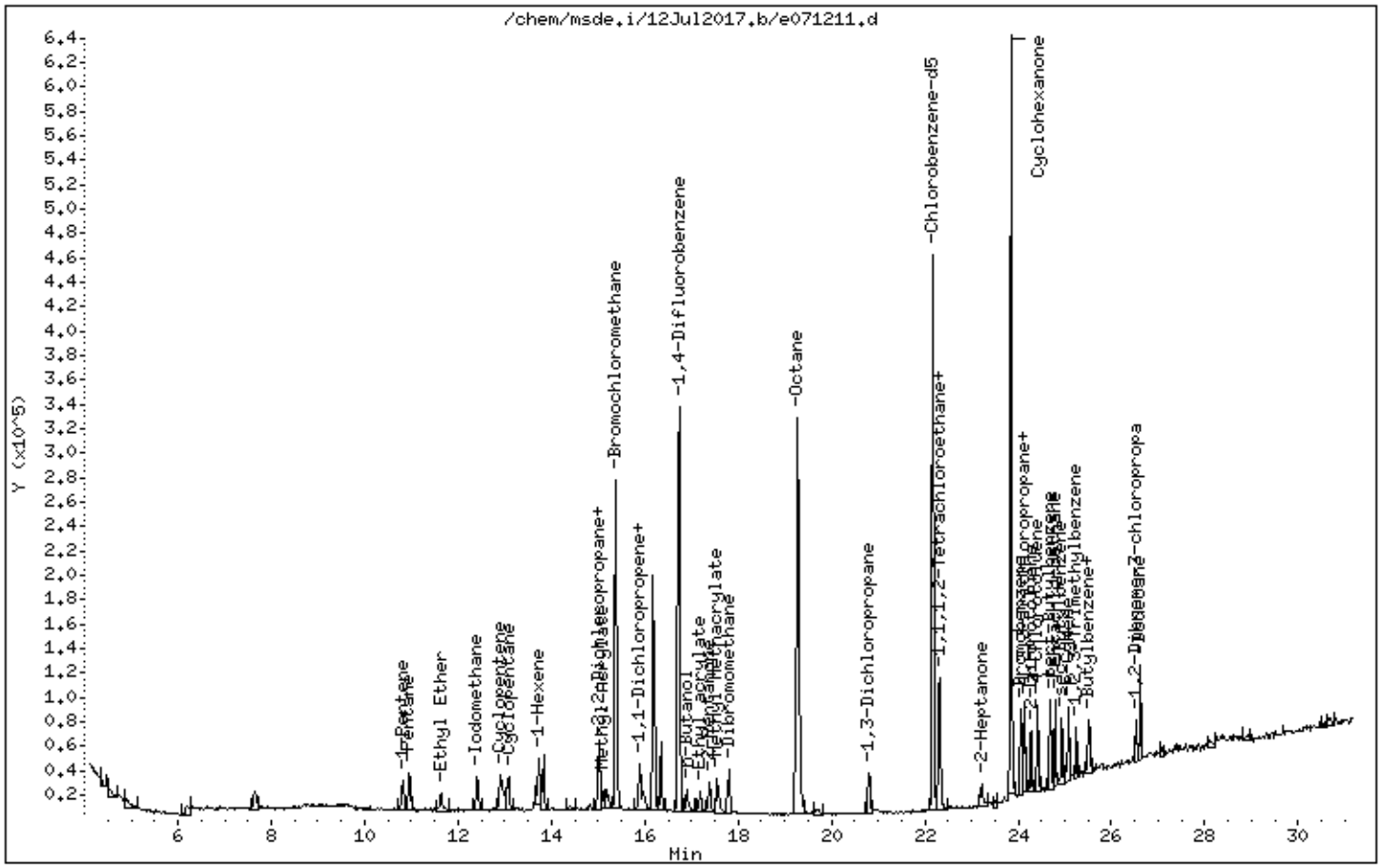
Instrument: msde.i

Sample Info: 25mL# 2850-184

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071208.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 12-JUL-2017 12:40
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-183
Misc Info : 0.5ppbv (5.0ppbv) AT-4
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 15:06 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 12:40 Cal File: e071208.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT4ICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
63 Acetonitrile					CAS #: 75-05-8		
13.012	13.012 (0.845)	41	32850	0.50000	0.5784	0.00- 0.00	100.00
12.984	12.984 (0.844)	40	18210			0.00- 0.00	55.43
13.012	13.012 (0.845)	39	5883			0.00- 0.00	17.91
74 Acrylonitrile					CAS #: 107-13-1		
13.643	13.643 (0.886)	53	19461	0.50000	0.5266	0.00- 0.00	100.00
13.643	13.643 (0.886)	52	18581			0.00- 0.00	95.48
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	115121	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	83882			46.85- 106.85	72.86
15.391	15.391 (1.000)	49	193634			226.12- 286.12	168.20
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	374904	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	56630			0.00- 44.91	15.11
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	356327	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)							
22.156	22.156 (1.000)	82	174432			19.53- 79.53	48.95
184 trans-1,4-Dichloro-2-butene					CAS #: 110-57-6		
24.125	24.125 (1.088)	75	10119	0.50000	0.4704	0.00- 0.00	100.00(a)
24.125	24.125 (1.088)	89	8404			0.00- 0.00	83.05
24.125	24.125 (1.088)	53	14926			0.00- 0.00	147.50
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.129)	93	20531	0.50000	0.4828	0.00- 0.00	100.00(a)
25.044	25.044 (1.129)	95	7628			0.00- 0.00	37.15
25.044	25.044 (1.129)	63	18188			0.00- 0.00	88.59

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071208.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 0.5ppbv (5.0ppbv) AT-4

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	115121	-14.28
123 1,4-Difluorobenze	480550	288330	672770	374904	-21.98
163 Chlorobenzene-d5	431542	258925	604159	356327	-17.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071208.d

Date : 12-JUL-2017 12:40

Client ID: Level 7

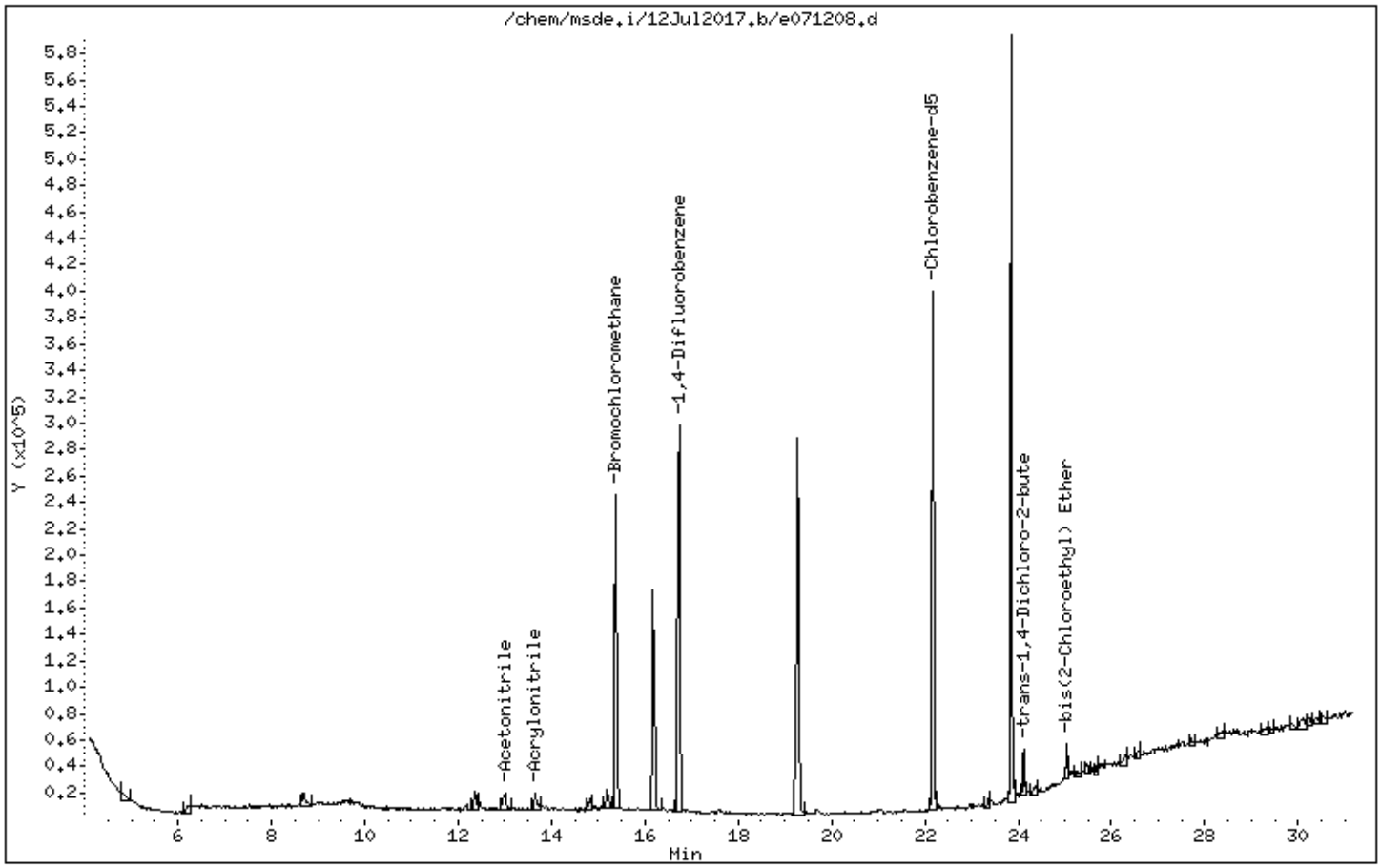
Instrument: msde.i

Sample Info: 25mL# 2850-183

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071205.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 12-JUL-2017 10:32
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2804-275
Misc Info : 0.5ppbv (5.0ppbv) Acrolein
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 14:59 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 10:32 Cal File: e071205.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AcroleinICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
46 Acrolein					CAS #: 107-02-8		
12.043	12.043 (0.782)	56	10881	0.50000	0.5230	0.00- 0.00	100.00
12.043	12.043 (0.782)	55	9544			0.00- 0.00	87.71
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	118406	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	92658			46.85- 106.85	78.25
15.391	15.391 (1.000)	49	205083			226.12- 286.12	173.20
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	423286	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	63117			0.00- 44.91	14.91
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	382166	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	187413			19.53- 79.53	49.04

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071205.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 0.5ppbv (5.0ppbv) Acrolein

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	118406	-11.83
123 1,4-Difluorobenze	480550	288330	672770	423286	-11.92
163 Chlorobenzene-d5	431542	258925	604159	382166	-11.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071205.d

Date : 12-JUL-2017 10:32

Client ID: Level 7

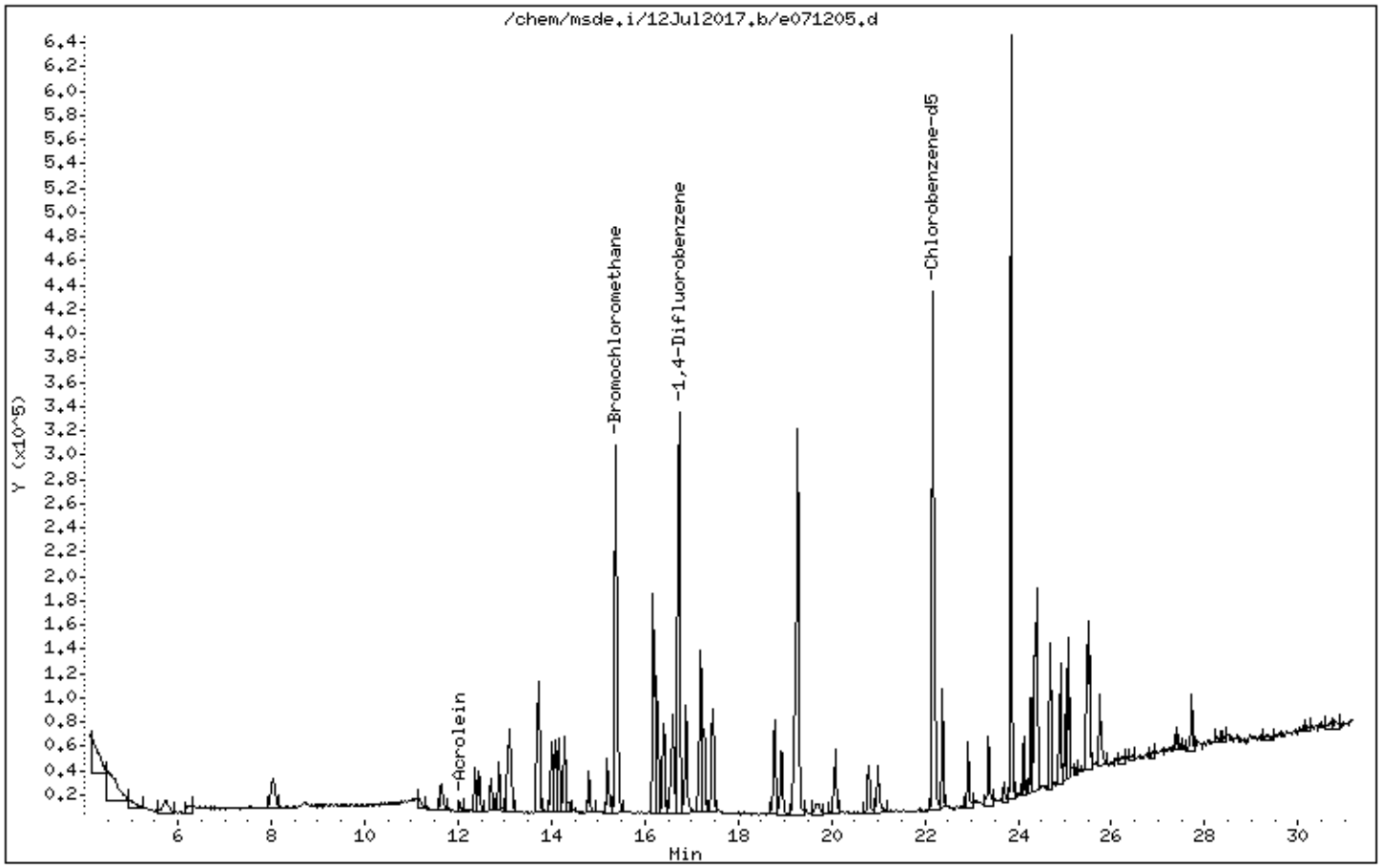
Instrument: msde.i

Sample Info: 25mL# 2804-275

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070314.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 03-JUL-2017 15:59
Operator : ef Inst ID: msde.i
Smp Info : 125mL# 2850-229
Misc Info : 0.5ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 15:59 Cal File: e070314.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
11 Freon 12					CAS #: 75-71-8		
5.293	5.293 (0.344)	85	53661	0.50000	0.4694	80.00- 120.00	100.00
5.293	5.293 (0.344)	87	19242			1.93- 61.93	35.86
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	42325	0.50000	0.5036	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	14356			1.36- 61.36	33.92
6.618	6.618 (0.430)	85	51163			85.72- 145.72	120.88
17 Chloromethane					CAS #: 74-87-3		
6.980	6.980 (0.454)	50	25386	0.50000	0.5296	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	9703			1.40- 61.40	38.22
23 Butane					CAS #: 106-97-8		
7.640	7.640 (0.496)	58	4479	0.50000	0.5088	80.00- 120.00	100.00
7.658	7.658 (0.498)	43	40610			939.22- 999.22	906.68
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	16924	0.50000	0.4556	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	4998			0.00- 59.78	29.53

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	17929	0.50000	0.4803	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	21165			90.63- 150.63	118.05
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	13888	0.50000	0.5220	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	12181			63.10- 123.10	87.71
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	8470	0.50000	0.5500	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	4454			13.74- 73.74	52.59
10.005	10.005 (0.650)	66	2715			0.11- 60.11	32.05
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	17973	0.50000	0.5260	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	37012			149.05- 209.05	205.93
10.138	10.138 (0.659)	42	30927			122.74- 182.74	172.07
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	65720	0.50000	0.5042	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	41791			35.39- 95.39	63.59
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	13214	0.50000	0.6131	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	4027			10.30- 70.30	30.48
49 Freon 113					CAS #: 76-13-1		
12.100	12.100 (0.786)	151	39058	0.50000	0.4777	80.00- 120.00	100.00
12.100	12.100 (0.786)	153	25020			33.74- 93.74	64.06
12.081	12.081 (0.785)	101	44652			78.29- 138.29	114.32
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	10699	0.50000	0.4668	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	38180			307.46- 367.46	356.86
12.100	12.100 (0.786)	96	18251			127.87- 187.87	170.59
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	12403	0.50000	0.5550	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	57353			407.61- 467.61	462.41
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.461 (0.810)	76	55271	0.50000	0.5764	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	50920	0.50000	0.4913	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	10721			0.00- 50.43	21.05

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
57 2-Propanol (continued)							
12.690	12.690 (0.824)	59	1668			0.00- 33.00	3.28
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	10096	0.50000	0.5233	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	48325			511.05- 571.05	478.65
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	13877	0.50000	0.4457	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	34828			205.99- 265.99	250.98
13.149	13.149 (0.854)	51	10866			40.46- 100.46	78.30
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	46259	0.50000	0.4552	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	15878			0.00- 56.56	34.32
13.341	13.341 (0.867)	57	6448			0.00- 41.82	13.94
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	50488	0.50000	0.4623	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	17341			0.79- 60.79	34.35
13.478	13.478 (0.876)	41	18405			7.43- 67.43	36.45
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	13421	0.50000	0.5491	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	31732			247.42- 307.42	236.44
13.533	13.533 (0.879)	96	20672			122.37- 182.37	154.03
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	33923	0.50000	0.4644	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	29810			51.15- 111.15	87.88
13.835	13.835 (0.899)	86	3688			0.00- 41.56	10.87
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	93331	0.50000	0.4669	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	17410			0.00- 45.86	18.65
14.192	14.192 (0.922)	59	7996			0.00- 38.07	8.57
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	37537	0.50000	0.4824	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	12114			0.00- 59.55	32.27
86 Vinyl Acetate					CAS #: 108-05-4		
14.275	14.275 (0.927)	86	3675	0.50000	0.4000	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	5386			118.75- 178.75	146.56
14.275	14.275 (0.927)	43	51446			1798.00-1858.00	1399.89

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
14.666	14.666 (0.953)	59	70855	0.50000	0.4586	80.00- 120.00	100.00
14.666	14.666 (0.953)	87	23785			2.81- 62.81	33.57
14.666	14.666 (0.953)	41	18596			0.00- 53.89	26.25
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	13359	0.50000	0.5215	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	35442			229.72- 289.72	265.30
15.047	15.047 (0.978)	96	18447			126.60- 186.60	138.09
92 2-Butanone					CAS #: 78-93-3		
15.047	15.047 (0.978)	72	6469	0.50000	0.4143	80.00- 120.00	100.00
15.047	15.047 (0.978)	43	52782			750.92- 810.92	815.92
15.047	15.047 (0.978)	57	3810			19.16- 79.16	58.90
99 Tetrahydrofuran					CAS #: 109-99-9		
15.391	15.391 (1.000)	42	31526	0.50000	0.4608	80.00- 120.00	100.00
15.391	15.391 (1.000)	71	7262			0.00- 50.51	23.03
15.391	15.391 (1.000)	72	7194			0.00- 51.95	22.82
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	130596	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	97966			46.85- 106.85	75.01
15.391	15.391 (1.000)	49	227566			226.12- 286.12	174.25
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	45836	0.50000	0.5017	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	33187			35.38- 95.38	72.40
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	20129	0.50000	0.4358	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	38674			148.59- 208.59	192.13
15.669	15.669 (1.018)	41	27916			91.63- 151.63	138.69
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	53058	0.50000	0.4705	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	36165			34.20- 94.20	68.16
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	45530	0.50000	0.3923	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	52256			73.79- 133.79	114.77
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	53063	0.50000	0.4746	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	153612			276.72- 336.72	289.49
16.111	16.111 (1.047)	41	58243			82.40- 142.40	109.76

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  116 Benzene                                        CAS #: 71-43-2
 16.183  16.183 (0.967)    78     52717 0.50000   0.4765  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77     12619                    0.00-  53.88    23.94
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                          CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    211510 5.00000    5.184  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     91360                   17.94-  77.94    43.19
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                         CAS #: 994-05-8
 16.207  16.207 (0.968)    87     12730 0.50000   0.4112  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73     48923                  321.94- 381.94   384.31
 16.231  16.231 (0.970)    55     19633                  100.72- 160.72   154.23
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                             CAS #: 107-06-2
 16.303  16.303 (0.974)    62     39140 0.50000   0.4986  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64     12558                    0.66-  60.66    32.08
-------------------------------------------------------------------------------
  121 Heptane                                        CAS #: 142-82-5
 16.352  16.352 (0.977)    57     23117 0.50000   0.4834  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100      8327                    3.00-  63.00    36.02
 16.352  16.352 (0.977)    43     50836                  207.00- 267.00   219.91
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    461727 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69488                    0.00-  44.91    15.05
-------------------------------------------------------------------------------
  125 Trichloroethene                                CAS #: 79-01-6
 17.123  17.123 (1.023)   130     31613 0.50000   0.4806  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95     29635                   58.18- 118.18    93.74
 17.123  17.123 (1.023)    97     17994                   26.25-  86.25    56.92
-------------------------------------------------------------------------------
  127 Methylcyclohexane                              CAS #: 108-87-2
 17.364  17.364 (1.037)    83     28421 0.50000   0.4580  80.00- 120.00   100.00
 17.364  17.364 (1.037)    55     40342                   98.42- 158.42   141.94
 17.339  17.339 (1.036)    56     13284                    9.03-  69.03    46.74
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                            CAS #: 78-87-5
 17.556  17.556 (1.049)    63     22825 0.50000   0.4841  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62     16128                   44.02- 104.02    70.66
 17.556  17.556 (1.049)    41     20824                   65.46- 125.46    91.23
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                    CAS #: 123-91-1
 17.701  17.701 (1.058)    88     12296 0.50000   0.4756  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58     11562                   62.58- 122.58    94.03
-------------------------------------------------------------------------------
  138 Bromodichloromethane                           CAS #: 75-27-4
 17.990  17.990 (1.075)    83     48587 0.50000   0.4788  80.00- 120.00   100.00
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  138 Bromodichloromethane (continued)
 17.990  17.990 (1.075)    85     30890                    36.66-  96.66    63.58
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                       CAS #: 10061-01-5
 18.805  18.805 (1.124)    75     29371 0.50000   0.4418  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77     10264                     3.68-  63.68    34.95
 18.805  18.805 (1.124)    39     26916                    62.50- 122.50    91.64
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 18.984  18.984 (1.134)    43     61181 0.50000   0.4138  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58     16738                     0.00-  59.19    27.36
 19.006  19.006 (1.136)    85      6830                     0.00-  40.34    11.16
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    438242 5.00000    4.933  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     51756                     0.00-  41.31    11.81
 19.275  19.275 (1.152)   100    291409                    38.24-  98.24    66.49
-------------------------------------------------------------------------------
  147 Toluene                                       CAS #: 108-88-3
 19.432  19.432 (1.161)    91     65031 0.50000   0.4715  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92     35607                    28.10-  88.10    54.75
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                     CAS #: 10061-02-6
 19.998  19.998 (0.902)    75     30757 0.50000   0.4637  80.00- 120.00   100.00
 19.998  19.998 (0.902)    77      9748                     3.36-  63.36    31.69
 19.998  19.998 (0.902)    39     26093                    49.78- 109.78    84.84
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.438  20.438 (0.922)    97     22015 0.50000   0.4549  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99     14512                    32.24-  92.24    65.92
 20.438  20.438 (0.922)    83     18154                    48.02- 108.02    82.46
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.603  20.603 (0.929)   166     39910 0.50000   0.4932  80.00- 120.00   100.00
 20.603  20.603 (0.929)   129     30853                    49.93- 109.93    77.31
 20.603  20.603 (0.929)   131     30407                    47.75- 107.75    76.19
-------------------------------------------------------------------------------
  158 2-Hexanone                                    CAS #: 591-78-6
 20.795  20.795 (0.938)    58     16750 0.50000   0.3217  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43     43963                   225.15- 285.15   262.47
 20.795  20.795 (0.938)   100      3876                     0.00-  47.79    23.14
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129     54251 0.50000   0.4471  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127     42082                    46.75- 106.75    77.57
-------------------------------------------------------------------------------
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  161 1,2-Dibromoethane (EDB)                          CAS #: 106-93-4
 21.482  21.482 (0.969)   107     39364 0.50000   0.4835  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109     38318                   67.69- 127.69    97.34
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    436692 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    209956                   19.53-  79.53    48.08
-------------------------------------------------------------------------------
  165 Chlorobenzene                                    CAS #: 108-90-7
 22.219  22.219 (1.002)   112     60533 0.50000   0.4821  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114     19886                    1.36-  61.36    32.85
 22.219  22.219 (1.002)    77     36268                   24.91-  84.91    59.91
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                    CAS #: 100-41-4
 22.281  22.281 (1.005)   106     24783 0.50000   0.4244  80.00- 120.00   100.00
 22.281  22.281 (1.005)    91     78373                  280.28- 340.28   316.24
-------------------------------------------------------------------------------
  169 m,p-Xylene                                       CAS #: 108-38-3
 22.467  22.467 (1.013)   106     29741 0.50000   0.4573  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91     59149                  173.14- 233.14   198.88
-------------------------------------------------------------------------------
  171 o-Xylene                                         CAS #: 95-47-6
 23.089  23.089 (1.041)   106     27032 0.50000   0.4476  80.00- 120.00   100.00
 23.069  23.069 (1.040)    91     60012                  184.94- 244.94   222.00
-------------------------------------------------------------------------------
  172 Styrene                                          CAS #: 100-42-5
 23.110  23.110 (1.042)   104     43567 0.50000   0.4326  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78     24561                   23.72-  83.72    56.38
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 23.452  23.452 (1.057)   173     49135 0.50000   0.4537  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171     24427                   22.28-  82.28    49.71
-------------------------------------------------------------------------------
  175 Cumene                                           CAS #: 98-82-8
 23.542  23.542 (1.062)   105     90101 0.50000   0.4560  80.00- 120.00   100.00
 23.542  23.542 (1.062)   120     25956                    0.00-  57.53    28.81
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.856  23.856 (1.076)   174    256962 5.00000    5.038  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    279041                   81.42- 141.42   108.59
 23.856  23.856 (1.076)   176    244807                   66.35- 126.35    95.27
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 24.035  24.035 (1.084)    83     36834 0.50000   0.4746  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85     27740                   38.02-  98.02    75.31
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.086)	91	81395	0.50000	0.4625	80.00- 120.00	100.00
24.080	24.080 (1.086)	120	19277			0.00- 56.42	23.68
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	61947	0.50000	0.4566	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	18942			0.46- 60.46	30.58
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	50027	0.50000	0.4573	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	25218			18.43- 78.43	50.41
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.116)	105	36772	0.50000	0.4255	80.00- 120.00	100.00
24.753	24.753 (1.116)	120	16253			16.45- 76.45	44.20
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	44444	0.50000	0.4724	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	29502			33.61- 93.61	66.38
25.156	25.156 (1.134)	111	16648			9.29- 69.29	37.46
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	40555	0.50000	0.4549	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	28253			34.28- 94.28	69.67
25.269	25.269 (1.139)	111	15917			7.48- 67.48	39.25
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	57341	0.50000	0.4656	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	13310			0.00- 53.55	23.21
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	40130	0.50000	0.4621	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	26133			33.54- 93.54	65.12
25.672	25.672 (1.158)	111	15703			10.04- 70.04	39.13
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	16883	0.50000	0.4516	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	16143			66.37- 126.37	95.62
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	34062	0.50000	0.4924	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	23065			32.58- 92.58	67.71

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070314.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 0.5ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	130596	-6.61
123 1,4-Difluorobenze	482877	289726	676028	461727	-4.38
163 Chlorobenzene-d5	450551	270331	630771	436692	-3.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070314.d

Date : 03-JUL-2017 15:59

Client ID: Level 7

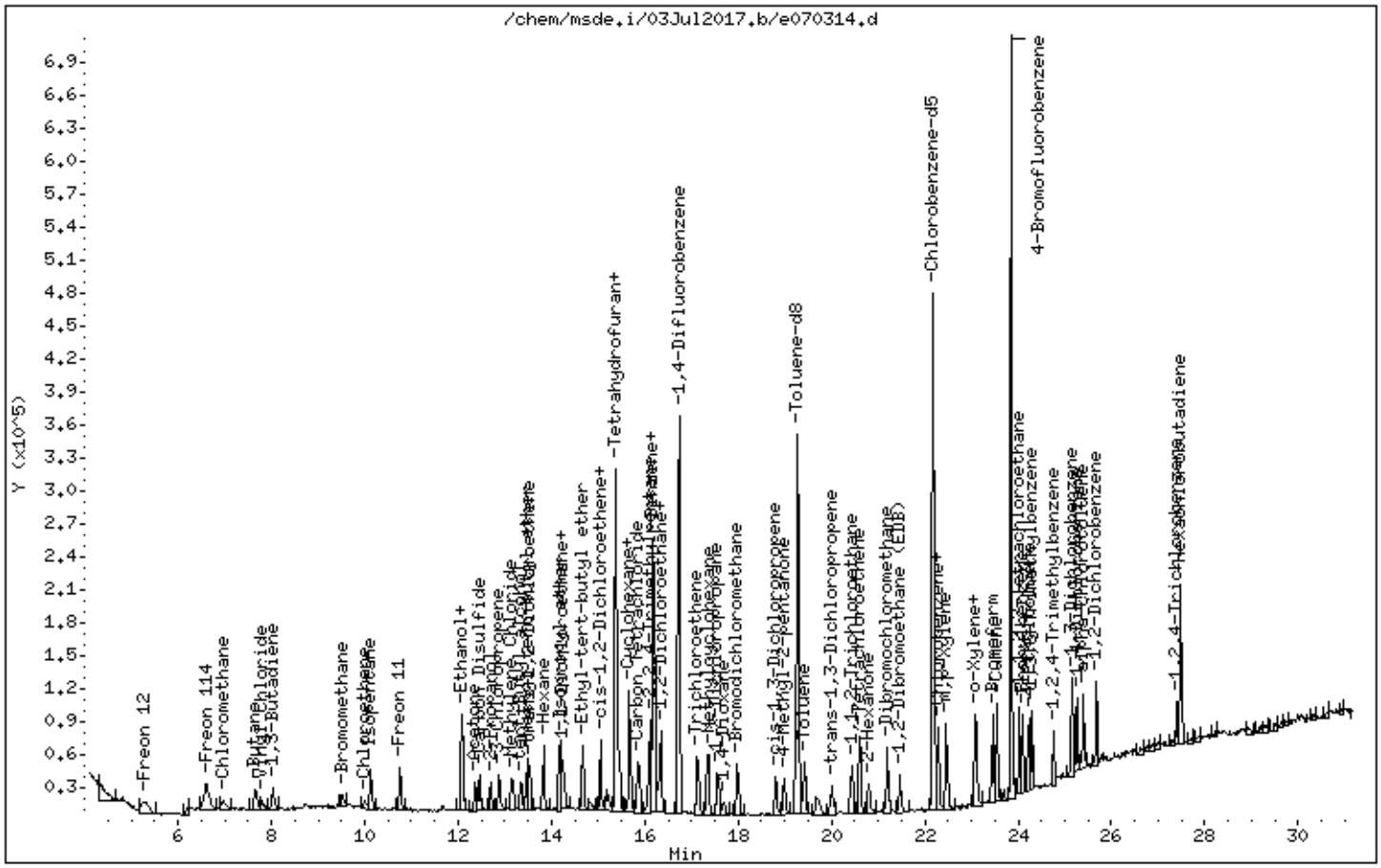
Instrument: msde.i

Sample Info: 125mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071212.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 12-JUL-2017 15:33
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-184
Misc Info : 1.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:46 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 15:33 Cal File: e071212.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-AT4.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.824	10.824 (0.703)	55	29269	1.00000	1.045	0.00- 0.00	100.00
10.824	10.824 (0.703)	42	45762			0.00- 0.00	156.35
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	66612	1.00000	0.9832	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	8193			0.00- 0.00	12.30
10.976	10.976 (0.713)	72	3703			0.00- 0.00	5.56
44 Ethyl Ether					CAS #: 60-29-7		
11.643	11.643 (0.756)	74	9826	1.00000	0.9495	0.00- 0.00	100.00(T)
11.643	11.643 (0.756)	59	21113			0.00- 0.00	214.87
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.404	12.404 (0.806)	142	77528	1.00000	1.145	0.00- 0.00	100.00
12.404	12.404 (0.806)	127	44560			0.00- 0.00	57.48
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	55149	1.00000	0.9945	80.00- 120.00	100.00

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   59 Cyclopentene (continued)
 12.900  12.900 (0.838)    68     20602                     0.00-   0.00    37.36
 12.900  12.900 (0.838)    53     19398                     0.00-   0.00    35.17
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
 13.094  13.094 (0.851)    70     11689 1.00000   0.9122    0.00-   0.00   100.00
 13.094  13.094 (0.851)    55     25780                     0.00-   0.00   220.55
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
 13.726  13.726 (0.892)    55     22756 1.00000   0.9503    0.00-   0.00   100.00
 13.726  13.726 (0.892)    41     45596                     0.00-   0.00   200.37
 13.726  13.726 (0.892)    84      6333                     0.00-   0.00    27.83
-------------------------------------------------------------------------------
   90 2,2-Dichloropropane                           CAS #: 594-20-7
 15.009  15.009 (0.975)    77     73318 1.00000    1.005   80.00- 120.00   100.00
 15.009  15.009 (0.975)    79     22355                     0.00-   0.00    30.49
 15.009  15.009 (0.975)    97     13318                     0.00-   0.00    18.16
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
 15.123  15.123 (0.983)    55     61189 1.00000    1.002    0.00-   0.00   100.00
 15.123  15.123 (0.983)    85      7075                     0.00-   0.00    11.56
 15.123  15.123 (0.983)    58      5126                     0.00-   0.00     8.38
-------------------------------------------------------------------------------
   94 Ethyl Acetate                                 CAS #: 141-78-6
 15.047  15.047 (0.978)    70      6451 1.00000    1.155    0.00-   0.00   100.00
 15.047  15.047 (0.978)    43    103372                     0.00-   0.00  1602.42
 15.009  15.009 (0.975)    61     21577                     0.00-   0.00   334.48
-------------------------------------------------------------------------------
*  98 Bromochloromethane                            CAS #: 74-97-5
 15.391  15.391 (1.000)   130    123461 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     94772                   46.85- 106.85    76.76
 15.391  15.391 (1.000)    49    221726                  226.12- 286.12   179.59
-------------------------------------------------------------------------------
  107 1,1-Dichloropropene                           CAS #: 563-58-6
 15.885  15.885 (1.032)   110     17857 1.00000    1.038   80.00- 120.00   100.00
 15.885  15.885 (1.032)    75     43157                     0.00-   0.00   241.68
-------------------------------------------------------------------------------
  115 Isobutanol                                    CAS #: 78-83-1
 15.977  15.977 (1.038)    43     38979 1.00000   0.9290   80.00- 120.00   100.00
 15.977  15.977 (1.038)    41     32575                     0.00-   0.00    83.57
 15.823  15.823 (1.028)    55       652                     0.00-   0.00     1.67
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    435477 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     65455                     0.00-  44.91    15.03
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
124 n-Butanol					CAS #: 71-36-3		
16.906	16.906 (1.010)	56	43987	1.00000	0.9744	80.00- 120.00	100.00
16.906	16.906 (1.010)	41	41645			0.00- 0.00	94.68
16.906	16.906 (1.010)	43	35527			0.00- 0.00	80.77
128 Ethyl acrylate					CAS #: 140-88-5		
17.171	17.171 (1.026)	99	3981	1.00000	0.8345	0.00- 0.00	100.00
17.195	17.195 (1.027)	45	10310			0.00- 0.00	258.98
17.171	17.171 (1.026)	55	83977			0.00- 0.00	2109.44
131 2-Pentanone					CAS #: 107-87-9		
17.388	17.388 (1.039)	43	135569	1.00000	1.014	0.00- 0.00	100.00
17.364	17.364 (1.037)	58	7409			0.00- 0.00	5.47
17.388	17.388 (1.039)	86	13690			0.00- 0.00	10.10
134 Methyl Methacrylate					CAS #: 80-62-6		
17.556	17.556 (1.049)	41	63686	1.00000	0.9511	0.00- 0.00	100.00
17.556	17.556 (1.049)	69	26814			0.00- 0.00	42.10
17.556	17.556 (1.049)	100	12847			0.00- 0.00	20.17
137 Dibromomethane					CAS #: 74-95-3		
17.797	17.797 (1.063)	174	47890	1.00000	0.9772	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	42827			0.00- 0.00	89.43
17.797	17.797 (1.063)	95	35222			0.00- 0.00	73.55
148 Octane					CAS #: 111-65-9		
19.343	19.343 (1.156)	57	31504	1.00000	0.9799	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	27614			0.00- 0.00	87.65
19.343	19.343 (1.156)	43	95027			0.00- 0.00	301.63
157 1,3-Dichloropropane					CAS #: 142-28-9		
20.795	20.795 (0.938)	76	51225	1.00000	1.025	80.00- 120.00	100.00
20.795	20.795 (0.938)	41	61956			0.00- 0.00	120.95
20.795	20.795 (0.938)	78	18536			0.00- 0.00	36.19
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	398146	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	192908			19.53- 79.53	48.45
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.322	22.322 (1.007)	131	69904	1.00000	1.021	80.00- 120.00	100.00
22.322	22.322 (1.007)	117	44551			0.00- 0.00	63.73
22.322	22.322 (1.007)	95	27170			0.00- 0.00	38.87
170 Nonane					CAS #: 111-84-2		
22.302	22.302 (1.006)	43	75048	1.00000	0.9605	0.00- 0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
170 Nonane (continued)							
22.302	22.302 (1.006)	57	49420			0.00- 0.00	65.85
22.302	22.302 (1.006)	85	14951			0.00- 0.00	19.92
173 2-Heptanone					CAS #: 110-43-0		
23.214	23.214 (1.047)	58	26747	1.00000	0.9442	80.00- 120.00	100.00
23.214	23.214 (1.047)	43	60847			0.00- 0.00	227.49
176 Cyclohexanone					CAS #: 108-94-1		
23.811	23.811 (1.074)	55	37257	1.00000	1.057	80.00- 120.00	100.00
23.811	23.811 (1.074)	98	12341			0.00- 0.00	33.12
23.811	23.811 (1.074)	42	29099			0.00- 0.00	78.10
180 Bromobenzene					CAS #: 108-86-1		
24.058	24.058 (1.085)	156	54311	1.00000	1.003	80.00- 120.00	100.00
24.058	24.058 (1.085)	158	51283			0.00- 0.00	94.42
24.058	24.058 (1.085)	77	83617			0.00- 0.00	153.96
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.125	24.125 (1.088)	110	23757	1.00000	1.014	80.00- 120.00	100.00
24.125	24.125 (1.088)	75	62665			0.00- 0.00	263.77
24.125	24.125 (1.088)	61	19607			0.00- 0.00	82.53
187 Decane					CAS #: 124-18-5		
24.170	24.170 (1.090)	57	30549	1.00000	0.9895	0.00- 0.00	100.00
24.170	24.170 (1.090)	71	8971			0.00- 0.00	29.37
24.170	24.170 (1.090)	142	1353			0.00- 0.00	4.43
189 2-Chlorotoluene					CAS #: 95-49-8		
24.282	24.282 (1.095)	126	36028	1.00000	1.019	80.00- 120.00	100.00
24.282	24.282 (1.095)	91	84858			0.00- 0.00	235.53
24.260	24.260 (1.094)	65	9326			0.00- 0.00	25.89
191 4-Chlorotoluene					CAS #: 106-43-4		
24.417	24.417 (1.101)	126	28098	1.00000	0.9691	80.00- 120.00	100.00
24.417	24.417 (1.101)	91	69008			0.00- 0.00	245.60
24.417	24.417 (1.101)	63	12733			0.00- 0.00	45.32
195 tert-Butylbenzene					CAS #: 98-06-6		
24.686	24.686 (1.113)	119	80158	1.00000	0.9814	80.00- 120.00	100.00
24.686	24.686 (1.113)	134	20178			0.00- 0.00	25.17
24.686	24.686 (1.113)	91	52020			0.00- 0.00	64.90
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.118)	167	39859	1.00000	1.191	80.00- 120.00	100.00
24.798	24.798 (1.118)	117	29911			0.00- 0.00	75.04

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
197 Pentachloroethane (continued)							
24.798	24.798 (1.118)	169	15193			0.00- 0.00	38.12
203 sec-Butylbenzene					CAS #: 135-98-8		
24.932	24.932 (1.124)	105	136292	1.00000	0.9764	80.00- 120.00	100.00
24.932	24.932 (1.124)	134	28218			0.00- 0.00	20.70
24.932	24.932 (1.124)	91	24736			0.00- 0.00	18.15
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	75558	1.00000	1.017	80.00- 120.00	100.00
25.089	25.089 (1.131)	134	20451			0.00- 0.00	27.07
25.089	25.089 (1.131)	91	17321			0.00- 0.00	22.92
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.246	25.246 (1.138)	120	21405	1.00000	0.9948	80.00- 120.00	100.00
25.246	25.246 (1.138)	105	50321			0.00- 0.00	235.09
25.246	25.246 (1.138)	77	8184			0.00- 0.00	38.23
213 Butylbenzene					CAS #: 104-51-8		
25.538	25.538 (1.152)	134	16284	1.00000	1.045	80.00- 120.00	100.00
25.538	25.538 (1.152)	91	48265			0.00- 0.00	296.40
25.538	25.538 (1.152)	92	25172			0.00- 0.00	154.58
215 Undecane					CAS #: 1120-21-4		
25.493	25.493 (1.149)	57	32956	1.00000	1.035	0.00- 0.00	100.00
25.493	25.493 (1.149)	43	38188			0.00- 0.00	115.88
25.493	25.493 (1.149)	85	7133			0.00- 0.00	21.64
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.524	26.524 (1.196)	157	25047	1.00000	0.9375	80.00- 120.00	100.00
26.524	26.524 (1.196)	75	22581			0.00- 0.00	90.15
26.524	26.524 (1.196)	155	18921			0.00- 0.00	75.54
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	13170	1.00000	1.041	0.00- 0.00	100.00
26.614	26.614 (1.200)	57	56810			0.00- 0.00	431.36
26.614	26.614 (1.200)	43	59220			0.00- 0.00	449.66

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071212.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 1.0ppbv (5.0ppbv) Combo

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	123461	-8.07
123 1,4-Difluorobenze	480550	288330	672770	435477	-9.38
163 Chlorobenzene-d5	431542	258925	604159	398146	-7.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071212.d

Date : 12-JUL-2017 15:33

Client ID: Level 8

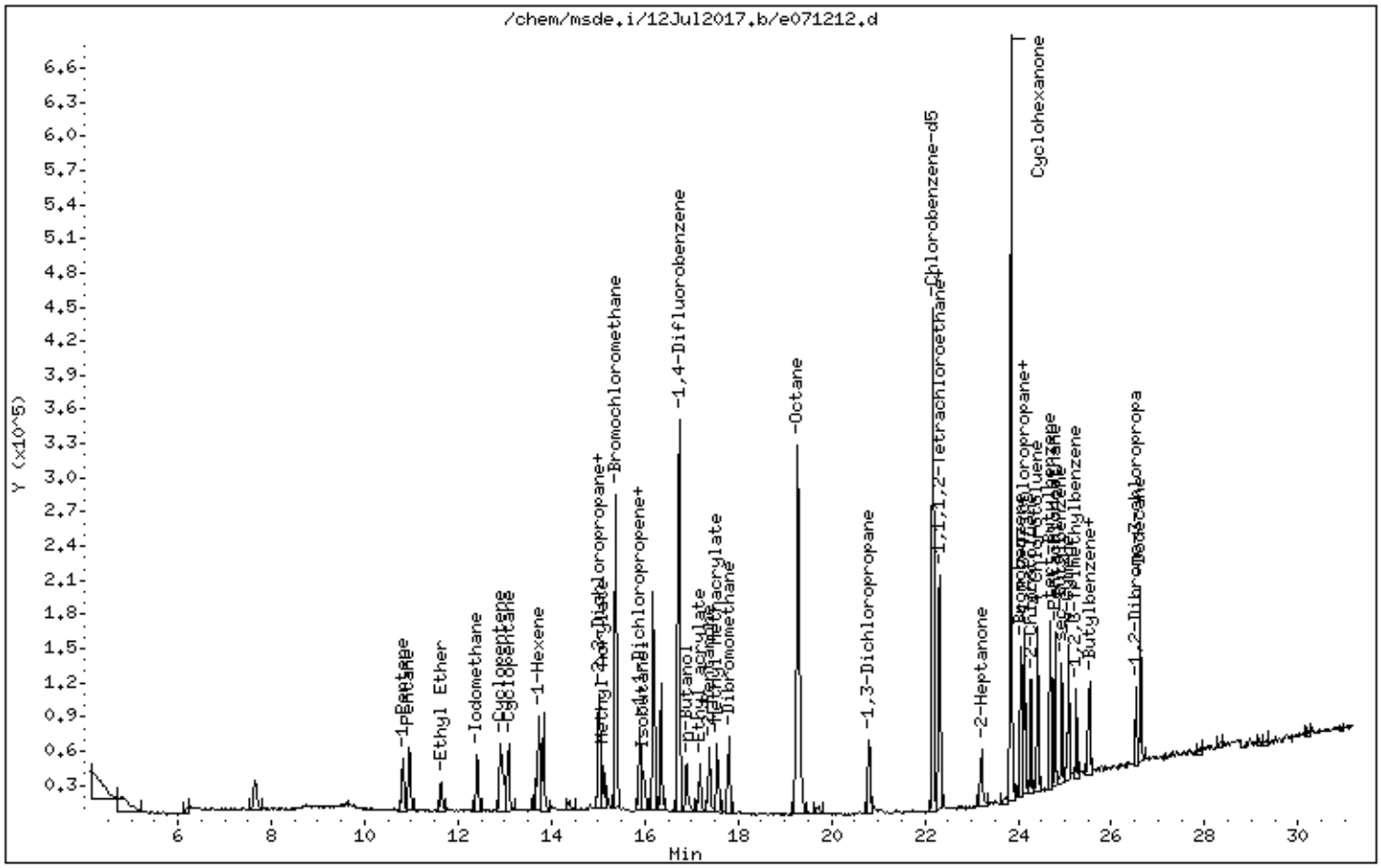
Instrument: msde.i

Sample Info: 50mL# 2850-184

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071209.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 12-JUL-2017 13:23
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-183
Misc Info : 1.0ppbv (5.0ppbv) AT-4
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 15:56 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 13:23 Cal File: e071209.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT4ICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
63 Acetonitrile					CAS #: 75-05-8		
13.012	13.012 (0.845)	41	53246	1.00000	0.9661	0.00- 0.00	100.00
13.012	13.012 (0.845)	40	32770			0.00- 0.00	61.54
13.012	13.012 (0.845)	39	11679			0.00- 0.00	21.93
74 Acrylonitrile					CAS #: 107-13-1		
13.643	13.643 (0.886)	53	33625	1.00000	0.9376	0.00- 0.00	100.00
13.643	13.643 (0.886)	52	31114			0.00- 0.00	92.53
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	111709	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	83646			46.85- 106.85	74.88
15.391	15.391 (1.000)	49	197264			226.12- 286.12	176.59
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	374145	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	55742			0.00- 44.91	14.90
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	354405	5.00000		80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)								
22.156	22.156	(1.000)	82	177236			19.53- 79.53	50.01
184 trans-1,4-Dichloro-2-butene						CAS #: 110-57-6		
24.125	24.125	(1.088)	75	23039	1.00000	1.077	0.00- 0.00	100.00
24.125	24.125	(1.088)	89	13570			0.00- 0.00	58.90
24.102	24.102	(1.087)	53	31296			0.00- 0.00	135.84
206 bis(2-Chloroethyl) Ether						CAS #: 111-44-4		
25.044	25.044	(1.129)	93	38714	1.00000	0.9154	0.00- 0.00	100.00
25.044	25.044	(1.129)	95	14758			0.00- 0.00	38.12
25.044	25.044	(1.129)	63	31736			0.00- 0.00	81.98

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071209.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 1.0ppbv (5.0ppbv) AT-4

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	111709	-16.82
123 1,4-Difluorobenze	480550	288330	672770	374145	-22.14
163 Chlorobenzene-d5	431542	258925	604159	354405	-17.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071209.d

Date : 12-JUL-2017 13:23

Client ID: Level 8

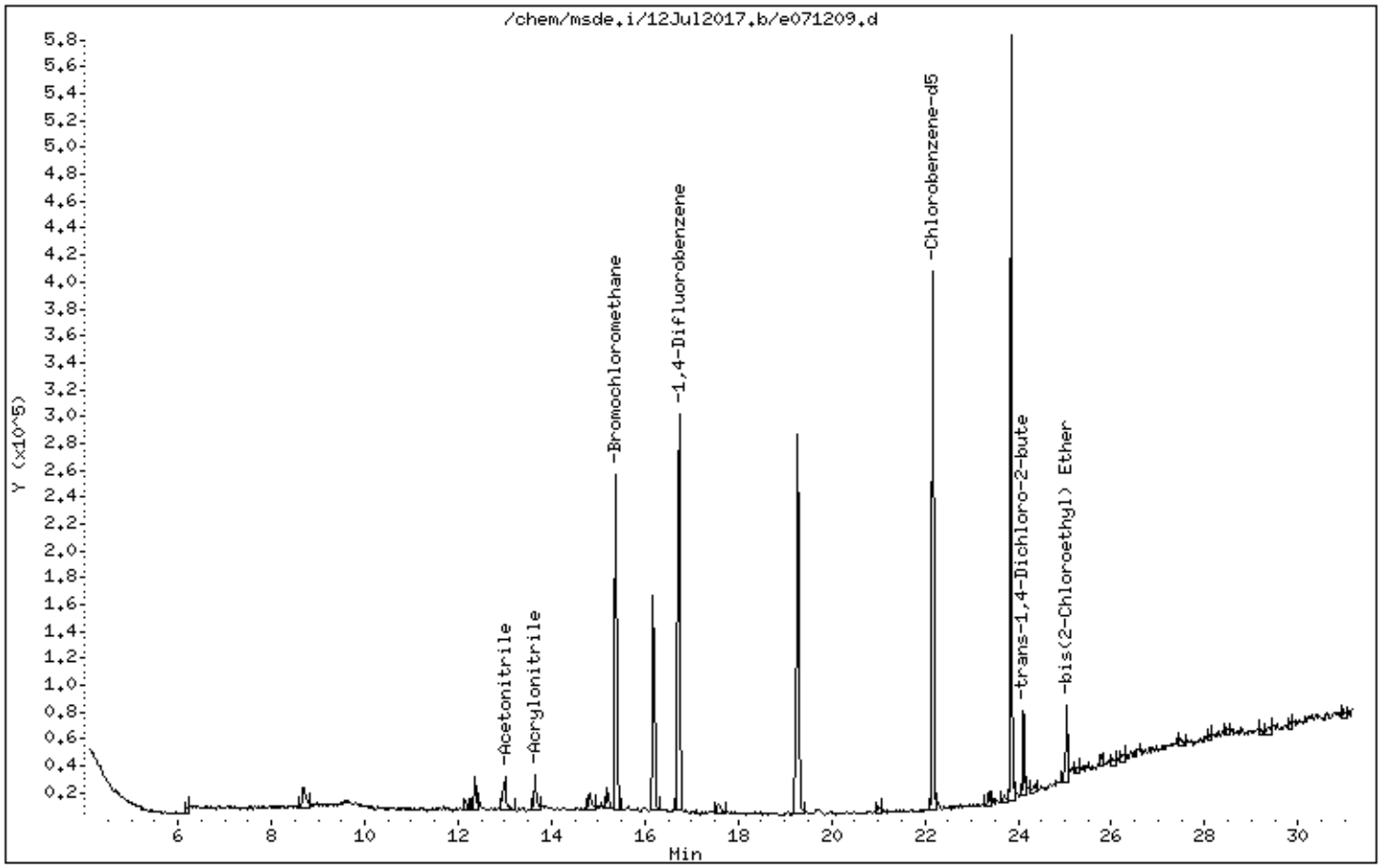
Instrument: msde.i

Sample Info: 50mL# 2850-183

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071206.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 12-JUL-2017 11:14
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2804-275
Misc Info : 1.0ppbv (5.0ppbv) Acrolein
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 15:56 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 13:23 Cal File: e071209.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AcroleinICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
46 Acrolein					CAS #: 107-02-8		
12.043	12.043 (0.782)	56	21173	1.00000	0.9938	0.00- 0.00	100.00
12.043	12.043 (0.782)	55	16877			0.00- 0.00	79.71
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	121267	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	90990			46.85- 106.85	75.03
15.391	15.391 (1.000)	49	209696			226.12- 286.12	172.92
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	417923	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	64117			0.00- 44.91	15.34
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	375661	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	187855			19.53- 79.53	50.01

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071206.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 1.0ppbv (5.0ppbv) Acrolein

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	121267	-9.70
123 1,4-Difluorobenze	480550	288330	672770	417923	-13.03
163 Chlorobenzene-d5	431542	258925	604159	375661	-12.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071206.d

Date : 12-JUL-2017 11:14

Client ID: Level 8

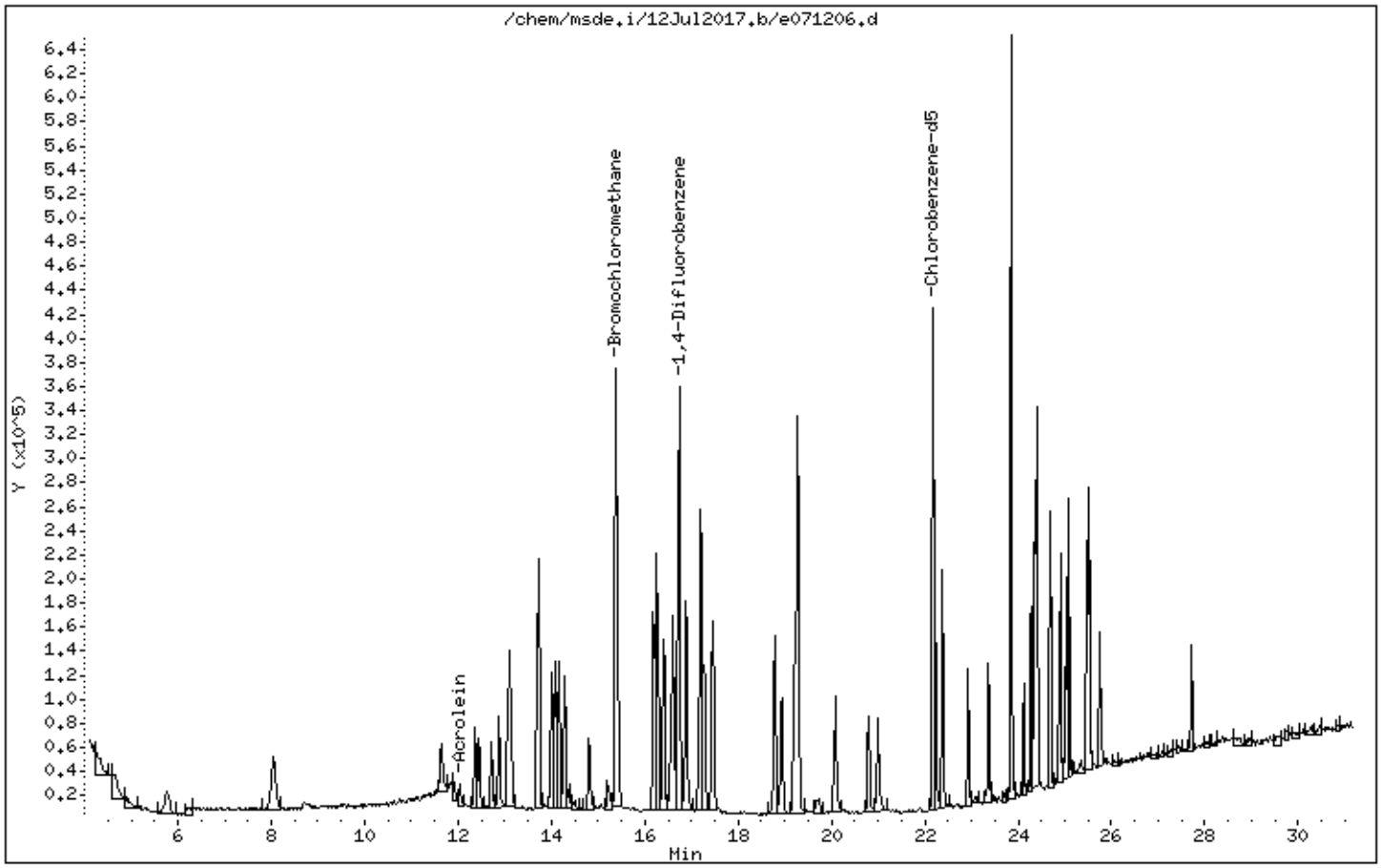
Instrument: msde.i

Sample Info: 50mL# 2804-275

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070315.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 03-JUL-2017 16:41
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-229
Misc Info : 1.0ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 16:41 Cal File: e070315.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.859	4.859 (0.316)	41	47824	1.00000	1.050	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	18240			36.86- 96.86	38.14
4.835	4.835 (0.314)	39	20219			46.23- 106.23	42.28
11 Freon 12					CAS #: 75-71-8		
5.293	5.293 (0.344)	85	108727	1.00000	0.9513	80.00- 120.00	100.00
5.317	5.317 (0.345)	87	34486			1.93- 61.93	31.72
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	85129	1.00000	1.013	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	26620			1.36- 61.36	31.27
6.618	6.618 (0.430)	85	99539			85.72- 145.72	116.93
17 Chloromethane					CAS #: 74-87-3		
6.980	6.980 (0.454)	50	51059	1.00000	1.065	80.00- 120.00	100.00
7.004	7.004 (0.455)	52	14696			1.40- 61.40	28.78
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	9365	1.00000	1.064	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.675	7.675 (0.499)	43	82977			939.22- 999.22	886.03
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	33069	1.00000	0.8903	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	10020			0.00- 59.78	30.30
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	33465	1.00000	0.8967	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	40476			90.63- 150.63	120.95
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	24001	1.00000	0.9022	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	24396			63.10- 123.10	101.65
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	14557	1.00000	0.9455	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	7629			13.74- 73.74	52.41
10.005	10.005 (0.650)	66	5335			0.11- 60.11	36.65
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	35630	1.00000	1.043	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	67273			149.05- 209.05	188.81
10.138	10.138 (0.659)	42	58129			122.74- 182.74	163.15
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	130142	1.00000	0.9986	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	84666			35.39- 95.39	65.06
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	18677	1.00000	0.8667	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	7998			10.30- 70.30	42.82
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	79916	1.00000	0.9776	80.00- 120.00	100.00
12.100	12.100 (0.786)	153	50945			33.74- 93.74	63.75
12.081	12.081 (0.785)	101	85509			78.29- 138.29	107.00
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	21192	1.00000	0.9247	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	73754			307.46- 367.46	348.03
12.100	12.100 (0.786)	96	35433			127.87- 187.87	167.20
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	23198	1.00000	1.038	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	104379			407.61- 467.61	449.95

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.462 (0.810)	76	101673	1.00000	1.060	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	93006	1.00000	0.8974	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	20266			0.00- 50.43	21.79
12.709	12.709 (0.826)	59	2506			0.00- 33.00	2.69
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	17889	1.00000	0.9273	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	98894			511.05- 571.05	552.82
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	28567	1.00000	0.9176	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	62443			205.99- 265.99	218.58
13.149	13.149 (0.854)	51	19492			40.46- 100.46	68.23
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	93254	1.00000	0.9177	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	32731			0.00- 56.56	35.10
13.341	13.341 (0.867)	57	11976			0.00- 41.82	12.84
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	99024	1.00000	0.9069	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	32130			0.79- 60.79	32.45
13.478	13.478 (0.876)	41	40503			7.43- 67.43	40.90
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	23088	1.00000	0.9447	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	61634			247.42- 307.42	266.95
13.533	13.533 (0.879)	96	37111			122.37- 182.37	160.74
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	66064	1.00000	0.9046	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	56496			51.15- 111.15	85.52
13.835	13.835 (0.899)	86	8030			0.00- 41.56	12.15
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	184850	1.00000	0.9248	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	29894			0.00- 45.86	16.17
14.192	14.192 (0.922)	59	15977			0.00- 38.07	8.64
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	71168	1.00000	0.9147	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	22388			0.00- 59.55	31.46

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86      8142 1.00000   0.8863  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42     12380                   118.75- 178.75   152.05
 14.247  14.247 (0.926)    43    123239                  1798.00-1858.00  1513.62
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59    140154 1.00000   0.9073  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87     47086                     2.81-  62.81    33.60
 14.685  14.685 (0.954)    41     34285                     0.00-  53.89    24.46
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98     23693 1.00000   0.9251  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61     62255                   229.72- 289.72   262.76
 15.047  15.047 (0.978)    96     36657                   126.60- 186.60   154.72
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72     14548 1.00000   0.9320  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    110963                   750.92- 810.92   762.74
 15.047  15.047 (0.978)    57      7820                    19.16-  79.16    53.75
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42     58579 1.00000   0.8564  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71     11974                     0.00-  50.51    20.44
 15.391  15.391 (1.000)    72     16191                     0.00-  51.95    27.64
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    130576 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    100921                    46.85- 106.85    77.29
 15.391  15.391 (1.000)    49    236473                   226.12- 286.12   181.10
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83     85817 1.00000   0.9394  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85     59384                    35.38-  95.38    69.20
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84     43220 1.00000   0.9358  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56     74186                   148.59- 208.59   171.65
 15.669  15.669 (1.018)    41     55659                    91.63- 151.63   128.78
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97    111705 1.00000   0.9908  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99     67027                    34.20-  94.20    60.00
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119     91726 1.00000   0.7905  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117     93522                    73.79- 133.79   101.96
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	106315	1.00000	0.9510	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	305353			276.72- 336.72	287.22
16.111	16.111 (1.047)	41	116511			82.40- 142.40	109.59
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	102793	1.00000	0.9440	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	25122			0.00- 53.88	24.44
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	209327	5.00000	5.131	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	89903			17.94- 77.94	42.95
119 tert-Amyl methyl ether					CAS #: 994-05-8		
16.207	16.207 (0.968)	87	28097	1.00000	0.9221	80.00- 120.00	100.00
16.207	16.207 (0.968)	73	100690			321.94- 381.94	358.37
16.207	16.207 (0.968)	55	42248			100.72- 160.72	150.36
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.304	16.304 (0.974)	62	74144	1.00000	0.9596	80.00- 120.00	100.00
16.304	16.304 (0.974)	64	22592			0.66- 60.66	30.47
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	43702	1.00000	0.9286	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	14828			3.00- 63.00	33.93
16.352	16.352 (0.977)	43	102841			207.00- 267.00	235.32
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	454441	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	68227			0.00- 44.91	15.01
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	64089	1.00000	0.9900	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	55773			58.18- 118.18	87.02
17.123	17.123 (1.023)	97	35264			26.25- 86.25	55.02
127 Methylcyclohexane					CAS #: 108-87-2		
17.340	17.340 (1.036)	83	57902	1.00000	0.9481	80.00- 120.00	100.00
17.340	17.340 (1.036)	55	73355			98.42- 158.42	126.69
17.340	17.340 (1.036)	56	23743			9.03- 69.03	41.01
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	42156	1.00000	0.9084	80.00- 120.00	100.00
17.581	17.581 (1.050)	62	30598			44.02- 104.02	72.58
17.556	17.556 (1.049)	41	43346			65.46- 125.46	102.82

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	24728	1.00000	0.9718	80.00- 120.00	100.00
17.701	17.701 (1.058)	58	25180			62.58- 122.58	101.83
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	95978	1.00000	0.9609	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	60407			36.66- 96.66	62.94
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	58355	1.00000	0.8920	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	20218			3.68- 63.68	34.65
18.805	18.805 (1.124)	39	56500			62.50- 122.50	96.82
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	131229	1.00000	0.9017	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	38772			0.00- 59.19	29.55
18.984	18.984 (1.134)	85	14005			0.00- 40.34	10.67
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	441206	5.00000	5.046	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	48160			0.00- 41.31	10.92
19.275	19.275 (1.152)	100	294904			38.24- 98.24	66.84
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	127021	1.00000	0.9358	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	76528			28.10- 88.10	60.25
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	59821	1.00000	0.9010	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	18488			3.36- 63.36	30.91
19.998	19.998 (0.903)	39	46808			49.78- 109.78	78.25
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	45906	1.00000	0.9477	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	29053			32.24- 92.24	63.29
20.438	20.438 (0.922)	83	36636			48.02- 108.02	79.81
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.930)	166	76255	1.00000	0.9413	80.00- 120.00	100.00
20.603	20.603 (0.930)	129	63904			49.93- 109.93	83.80
20.603	20.603 (0.930)	131	60060			47.75- 107.75	78.76
158 2-Hexanone					CAS #: 591-78-6		
20.795	20.795 (0.939)	58	37805	1.00000	0.7253	80.00- 120.00	100.00
20.795	20.795 (0.939)	43	103161			225.15- 285.15	272.88
20.795	20.795 (0.939)	100	7478			0.00- 47.79	19.78

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.957)   129    110947 1.00000   0.9134  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127     87013                   46.75- 106.75    78.43
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.970)   107     75202 1.00000   0.9227  80.00- 120.00   100.00
 21.482  21.482 (0.970)   109     75502                   67.69- 127.69   100.40
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    437143 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    213115                   19.53-  79.53    48.75
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.003)   112    118327 1.00000   0.9414  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114     38583                    1.36-  61.36    32.61
 22.219  22.219 (1.003)    77     66353                   24.91-  84.91    56.08
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.006)   106     51636 1.00000   0.8834  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91    166566                  280.28- 340.28   322.58
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.014)   106     61748 1.00000   0.9486  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91    117157                  173.14- 233.14   189.73
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.041)   106     54614 1.00000   0.9033  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91    113374                  184.94- 244.94   207.59
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.043)   104     90417 1.00000   0.8968  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78     47692                   23.72-  83.72    52.75
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.058)   173     96948 1.00000   0.8943  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171     50536                   22.28-  82.28    52.13
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.063)   105    177079 1.00000   0.8952  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120     52682                    0.00-  57.53    29.75
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.077)   174    260701 5.00000    5.106  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    287267                   81.42- 141.42   110.19
 23.856  23.856 (1.077)   176    250038                   66.35- 126.35    95.91
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	74707	1.00000	0.9616	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	49814			38.02- 98.02	66.68
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	166834	1.00000	0.9470	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	43702			0.00- 56.42	26.19
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	123009	1.00000	0.9058	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	38371			0.46- 60.46	31.19
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	100850	1.00000	0.9210	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	49062			18.43- 78.43	48.65
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	75554	1.00000	0.8733	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	35782			16.45- 76.45	47.36
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.135)	146	87661	1.00000	0.9308	80.00- 120.00	100.00
25.156	25.156 (1.135)	148	57014			33.61- 93.61	65.04
25.156	25.156 (1.135)	111	33833			9.29- 69.29	38.60
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	82132	1.00000	0.9203	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	50955			34.28- 94.28	62.04
25.269	25.269 (1.140)	111	29513			7.48- 67.48	35.93
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	112824	1.00000	0.9152	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	26069			0.00- 53.55	23.11
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	83872	1.00000	0.9648	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	50488			33.54- 93.54	60.20
25.672	25.672 (1.159)	111	32569			10.04- 70.04	38.83
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	33495	1.00000	0.8949	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	32472			66.37- 126.37	96.95
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	70957	1.00000	1.025	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	43078			32.58- 92.58	60.71

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	5796	0.10000	0.07664	80.00- 120.00	100.00(a)
27.712	27.712	(1.251)	127	1989			0.00- 41.67	34.32

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070315.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 1.0ppbv (1.0ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	130576	-6.63
123 1,4-Difluorobenze	482877	289726	676028	454441	-5.89
163 Chlorobenzene-d5	450551	270331	630771	437143	-2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070315.d

Date : 03-JUL-2017 16:41

Client ID: Level 8

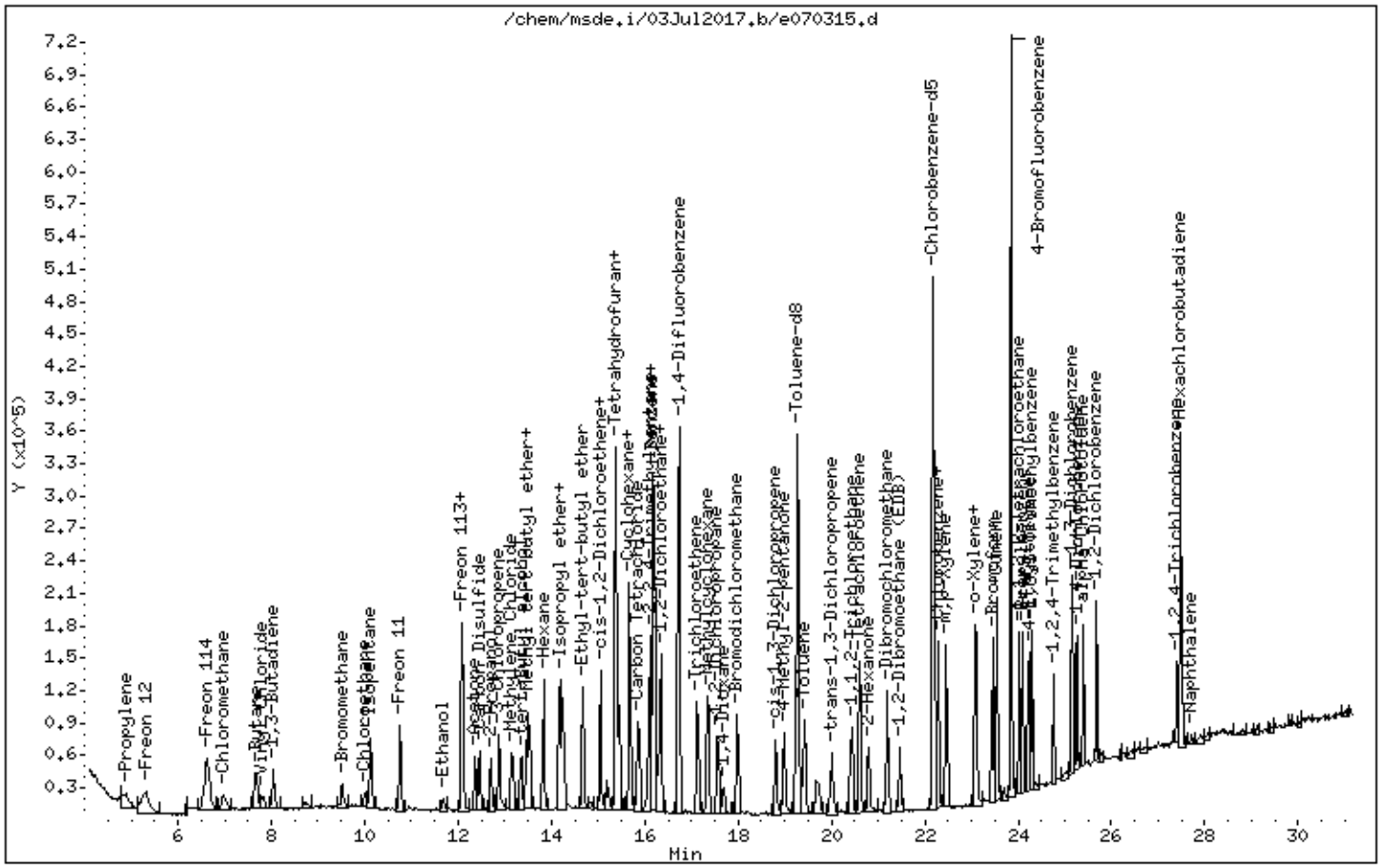
Instrument: msde.i

Sample Info: 250mL# 2850-229

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071213.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 12-JUL-2017 16:15
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-184
Misc Info : 5.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:46 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-AT4.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
36 1-Pentene					CAS #: 109-67-1		
10.824	10.824 (0.703)	55	141284	5.00000	4.916	0.00- 0.00	100.00
10.824	10.824 (0.703)	42	229092			0.00- 0.00	162.15
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	349350	5.00000	5.028	0.00- 0.00	100.00
10.957	10.957 (0.712)	57	43439			0.00- 0.00	12.43
10.976	10.976 (0.713)	72	19970			0.00- 0.00	5.72
44 Ethyl Ether					CAS #: 60-29-7		
11.643	11.643 (0.756)	74	53926	5.00000	5.080	0.00- 0.00	100.00(T)
11.643	11.643 (0.756)	59	108633			0.00- 0.00	201.45
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.424	12.424 (0.807)	142	226923	5.00000	3.268	0.00- 0.00	100.00
12.405	12.405 (0.806)	127	130772			0.00- 0.00	57.63
59 Cyclopentene					CAS #: 142-29-0		
12.900	12.900 (0.838)	67	276206	5.00000	4.856	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
59 Cyclopentene (continued)							
12.919	12.919 (0.839)	68	107208			0.00- 0.00	38.81
12.900	12.900 (0.838)	53	94627			0.00- 0.00	34.26
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	65300	5.00000	4.969	0.00- 0.00	100.00
13.094	13.094 (0.851)	55	131719			0.00- 0.00	201.71
76 1-Hexene					CAS #: 592-41-6		
13.726	13.726 (0.892)	55	126605	5.00000	5.155	0.00- 0.00	100.00
13.726	13.726 (0.892)	41	246032			0.00- 0.00	194.33
13.726	13.726 (0.892)	84	34788			0.00- 0.00	27.48
84 1-Propanol					CAS #: 71-23-8		
14.357	14.357 (0.933)	59	49819	5.00000	5.000	80.00- 120.00	100.00
14.357	14.357 (0.933)	42	53772			0.00- 0.00	107.93
14.357	14.357 (0.933)	41	39868			0.00- 0.00	80.03
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.009	15.009 (0.975)	77	360534	5.00000	4.819	80.00- 120.00	100.00
15.009	15.009 (0.975)	79	114274			0.00- 0.00	31.70
15.009	15.009 (0.975)	97	66721			0.00- 0.00	18.51
93 Methyl Acrylate					CAS #: 96-33-3		
15.123	15.123 (0.983)	55	364969	5.00000	5.827	0.00- 0.00	100.00
15.123	15.123 (0.983)	85	41463			0.00- 0.00	11.36
15.123	15.123 (0.983)	58	29071			0.00- 0.00	7.97
94 Ethyl Acetate					CAS #: 141-78-6		
15.028	15.028 (0.976)	70	26924	5.00000	4.699	0.00- 0.00	100.00
15.028	15.028 (0.976)	43	539276			0.00- 0.00	2002.96
15.028	15.028 (0.976)	61	111003			0.00- 0.00	412.28
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	126624	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	98539			46.85- 106.85	77.82
15.391	15.391 (1.000)	49	225404			226.12- 286.12	178.01
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.885	15.885 (1.032)	110	91937	5.00000	5.209	80.00- 120.00	100.00
15.885	15.885 (1.032)	75	219447			0.00- 0.00	238.69
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	254895	5.00000	5.923	80.00- 120.00	100.00
15.977	15.977 (1.038)	41	201689			0.00- 0.00	79.13
15.761	15.761 (1.024)	55	1131			0.00- 0.00	0.44

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	440240	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	67942			0.00- 44.91	15.43
124 n-Butanol						CAS #: 71-36-3	
16.882	16.882 (1.009)	56	298054	5.00000	6.531	80.00- 120.00	100.00
16.882	16.882 (1.009)	41	268329			0.00- 0.00	90.03
16.882	16.882 (1.009)	43	202846			0.00- 0.00	68.06
128 Ethyl acrylate						CAS #: 140-88-5	
17.171	17.171 (1.026)	99	28152	5.00000	5.838	0.00- 0.00	100.00
17.171	17.171 (1.026)	45	54686			0.00- 0.00	194.25
17.171	17.171 (1.026)	55	497589			0.00- 0.00	1767.51
131 2-Pentanone						CAS #: 107-87-9	
17.364	17.364 (1.037)	43	734947	5.00000	5.435	0.00- 0.00	100.00
17.364	17.364 (1.037)	58	42882			0.00- 0.00	5.83
17.364	17.364 (1.037)	86	74960			0.00- 0.00	10.20
134 Methyl Methacrylate						CAS #: 80-62-6	
17.557	17.557 (1.049)	41	373226	5.00000	5.514	0.00- 0.00	100.00
17.557	17.557 (1.049)	69	148913			0.00- 0.00	39.90
17.557	17.557 (1.049)	100	66674			0.00- 0.00	17.86
137 Dibromomethane						CAS #: 74-95-3	
17.798	17.798 (1.063)	174	239721	5.00000	4.839	0.00- 0.00	100.00
17.798	17.798 (1.063)	93	219401			0.00- 0.00	91.52
17.798	17.798 (1.063)	95	178363			0.00- 0.00	74.40
148 Octane						CAS #: 111-65-9	
19.343	19.343 (1.156)	57	168623	5.00000	5.188	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	133882			0.00- 0.00	79.40
19.343	19.343 (1.156)	43	505558			0.00- 0.00	299.82
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.795	20.795 (0.939)	76	237083	5.00000	4.634	80.00- 120.00	100.00
20.795	20.795 (0.939)	41	303236			0.00- 0.00	127.90
20.795	20.795 (0.939)	78	83974			0.00- 0.00	35.42
159 Butyl Acetate						CAS #: 123-86-4	
20.905	20.905 (0.944)	56	35220	5.00000	5.000	80.00- 120.00	100.00
20.905	20.905 (0.944)	73	6894			0.00- 0.00	19.57
20.905	20.905 (0.944)	43	94499			0.00- 0.00	268.31
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.157	22.157 (1.000)	117	407770	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)							
22.157	22.157 (1.000)	82	199067			19.53- 79.53	48.82
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.322	22.322 (1.007)	131	341925	5.00000	4.875	80.00- 120.00	100.00
22.322	22.322 (1.007)	117	197162			0.00- 0.00	57.66
22.322	22.322 (1.007)	95	124176			0.00- 0.00	36.32
170 Nonane					CAS #: 111-84-2		
22.302	22.302 (1.007)	43	439095	5.00000	5.487	0.00- 0.00	100.00
22.302	22.302 (1.007)	57	296777			0.00- 0.00	67.59
22.302	22.302 (1.007)	85	82803			0.00- 0.00	18.86
173 2-Heptanone					CAS #: 110-43-0		
23.193	23.193 (1.047)	58	193563	5.00000	6.672	80.00- 120.00	100.00
23.193	23.193 (1.047)	43	432592			0.00- 0.00	223.49
176 Cyclohexanone					CAS #: 108-94-1		
23.811	23.811 (1.075)	55	189193	5.00000	5.242	80.00- 120.00	100.00
23.811	23.811 (1.075)	98	60640			0.00- 0.00	32.05
23.811	23.811 (1.075)	42	159525			0.00- 0.00	84.32
180 Bromobenzene					CAS #: 108-86-1		
24.058	24.058 (1.086)	156	274061	5.00000	4.940	80.00- 120.00	100.00
24.058	24.058 (1.086)	158	259401			0.00- 0.00	94.65
24.058	24.058 (1.086)	77	450304			0.00- 0.00	164.31
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.125	24.125 (1.089)	110	112140	5.00000	4.673	80.00- 120.00	100.00
24.125	24.125 (1.089)	75	301642			0.00- 0.00	268.99
24.125	24.125 (1.089)	61	85805			0.00- 0.00	76.52
187 Decane					CAS #: 124-18-5		
24.170	24.170 (1.091)	57	169442	5.00000	5.359	0.00- 0.00	100.00
24.170	24.170 (1.091)	71	43022			0.00- 0.00	25.39
24.170	24.170 (1.091)	142	8139			0.00- 0.00	4.80
189 2-Chlorotoluene					CAS #: 95-49-8		
24.282	24.282 (1.096)	126	172847	5.00000	4.772	80.00- 120.00	100.00
24.260	24.260 (1.095)	91	447744			0.00- 0.00	259.04
24.260	24.260 (1.095)	65	48327			0.00- 0.00	27.96
191 4-Chlorotoluene					CAS #: 106-43-4		
24.417	24.417 (1.102)	126	154652	5.00000	5.208	80.00- 120.00	100.00
24.417	24.417 (1.102)	91	387933			0.00- 0.00	250.84
24.417	24.417 (1.102)	63	61202			0.00- 0.00	39.57

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
195 tert-Butylbenzene					CAS #: 98-06-6		
24.686	24.686 (1.114)	119	433250	5.00000	5.179	80.00- 120.00	100.00
24.686	24.686 (1.114)	134	102414			0.00- 0.00	23.64
24.686	24.686 (1.114)	91	277738			0.00- 0.00	64.11
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.119)	167	151173	5.00000	4.412	80.00- 120.00	100.00
24.798	24.798 (1.119)	117	142225			0.00- 0.00	94.08
24.798	24.798 (1.119)	169	73331			0.00- 0.00	48.51
203 sec-Butylbenzene					CAS #: 135-98-8		
24.932	24.932 (1.125)	105	721387	5.00000	5.046	80.00- 120.00	100.00
24.932	24.932 (1.125)	134	165400			0.00- 0.00	22.93
24.932	24.932 (1.125)	91	122479			0.00- 0.00	16.98
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.132)	119	413664	5.00000	5.437	80.00- 120.00	100.00
25.089	25.089 (1.132)	134	105600			0.00- 0.00	25.53
25.089	25.089 (1.132)	91	96318			0.00- 0.00	23.28
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.246	25.246 (1.139)	120	111413	5.00000	5.056	80.00- 120.00	100.00
25.246	25.246 (1.139)	105	268009			0.00- 0.00	240.55
25.246	25.246 (1.139)	77	34246			0.00- 0.00	30.74
213 Butylbenzene					CAS #: 104-51-8		
25.538	25.538 (1.153)	134	77775	5.00000	4.874	80.00- 120.00	100.00
25.538	25.538 (1.153)	91	261798			0.00- 0.00	336.61
25.538	25.538 (1.153)	92	135089			0.00- 0.00	173.69
215 Undecane					CAS #: 1120-21-4		
25.493	25.493 (1.151)	57	134493	5.00000	4.126	0.00- 0.00	100.00
25.493	25.493 (1.151)	43	152024			0.00- 0.00	113.03
25.493	25.493 (1.151)	85	27315			0.00- 0.00	20.31
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.524	26.524 (1.197)	157	131600	5.00000	4.810	80.00- 120.00	100.00
26.524	26.524 (1.197)	75	111328			0.00- 0.00	84.60
26.524	26.524 (1.197)	155	101093			0.00- 0.00	76.82
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.201)	85	58254	5.00000	4.497	0.00- 0.00	100.00
26.614	26.614 (1.201)	57	249337			0.00- 0.00	428.02
26.614	26.614 (1.201)	43	260597			0.00- 0.00	447.35

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071213.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 5.0ppbv (5.0ppbv) Combo

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	126624	-5.71
123 1,4-Difluorobenze	480550	288330	672770	440240	-8.39
163 Chlorobenzene-d5	431542	258925	604159	407770	-5.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071213.d

Date : 12-JUL-2017 16:15

Client ID: Level 12

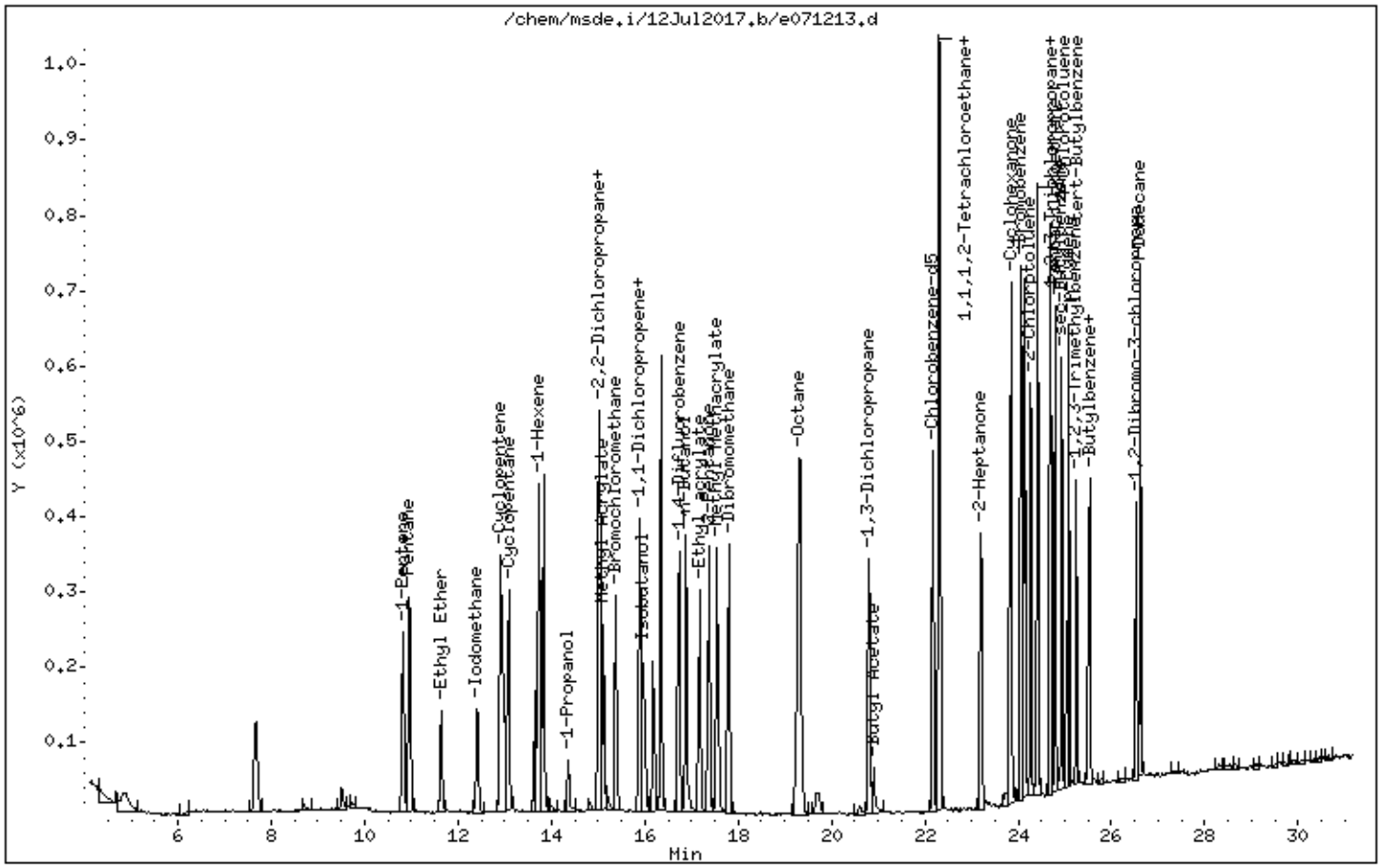
Instrument: msde.i

Sample Info: 250mL# 2850-184

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071210.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 12-JUL-2017 14:08
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2850-183
Misc Info : 5.0ppbv (5.0ppbv) AT-4
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 15:07 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 14:08 Cal File: e071210.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT4ICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
63 Acetonitrile					CAS #: 75-05-8		
12.984	12.984 (0.844)	41	233682	5.00000	4.386	0.00- 0.00	100.00
12.984	12.984 (0.844)	40	139221			0.00- 0.00	59.58
12.984	12.984 (0.844)	39	54911			0.00- 0.00	23.50
74 Acrylonitrile					CAS #: 107-13-1		
13.643	13.643 (0.886)	53	174932	5.00000	5.046	0.00- 0.00	100.00(A)
13.643	13.643 (0.886)	52	152044			0.00- 0.00	86.92
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	107997	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	91534			46.85- 106.85	84.76
15.391	15.391 (1.000)	49	200798			226.12- 286.12	185.93
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	376343	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	55213			0.00- 44.91	14.67
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.156	22.156 (1.000)	117	368445	5.00000		80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5 (continued)							
22.156	22.156 (1.000)	82	181430			19.53- 79.53	49.24
184 trans-1,4-Dichloro-2-butene					CAS #: 110-57-6		
24.102	24.102 (1.088)	75	109284	5.00000	4.913	0.00- 0.00	100.00
24.102	24.102 (1.088)	89	69139			0.00- 0.00	63.27
24.102	24.102 (1.088)	53	162685			0.00- 0.00	148.86
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.130)	93	245987	5.00000	5.595	0.00- 0.00	100.00(A)
25.044	25.044 (1.130)	95	76875			0.00- 0.00	31.25
25.044	25.044 (1.130)	63	187586			0.00- 0.00	76.26

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071210.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 5.0ppbv (5.0ppbv) AT-4

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	107997	-19.58
123 1,4-Difluorobenze	480550	288330	672770	376343	-21.68
163 Chlorobenzene-d5	431542	258925	604159	368445	-14.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071210.d

Date : 12-JUL-2017 14:08

Client ID: Level 12

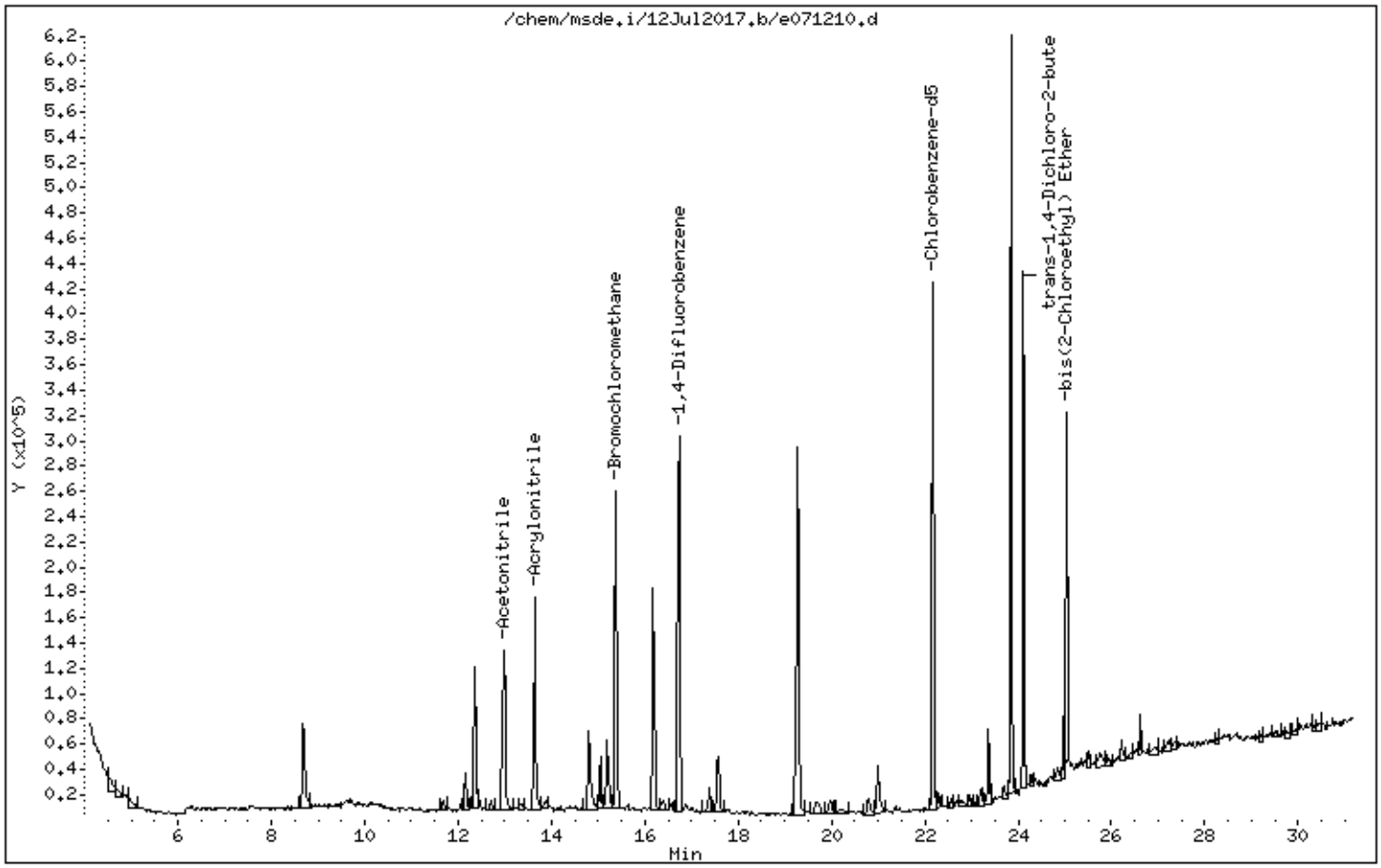
Instrument: msde.i

Sample Info: 250mL# 2850-183

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071207.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 12-JUL-2017 11:55
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 2804-275
Misc Info : 5.0ppbv (5.0ppbv) Acrolein
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 14:59 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 11:55 Cal File: e071207.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AcroleinICAL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
46 Acrolein					CAS #: 107-02-8		
12.042	12.042 (0.782)	56	101380	5.00000	4.801	0.00- 0.00	100.00
12.042	12.042 (0.782)	55	73896			0.00- 0.00	72.89
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	120194	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	94968			46.85- 106.85	79.01
15.391	15.391 (1.000)	49	218056			226.12- 286.12	181.42
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	448635	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	66724			0.00- 44.91	14.87
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	400289	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	209765			19.53- 79.53	52.40

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071207.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 5.0ppbv (5.0ppbv) Acrolein

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	120194	-10.50
123 1,4-Difluorobenze	480550	288330	672770	448635	-6.64
163 Chlorobenzene-d5	431542	258925	604159	400289	-7.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071207.d

Date : 12-JUL-2017 11:55

Client ID: Level 12

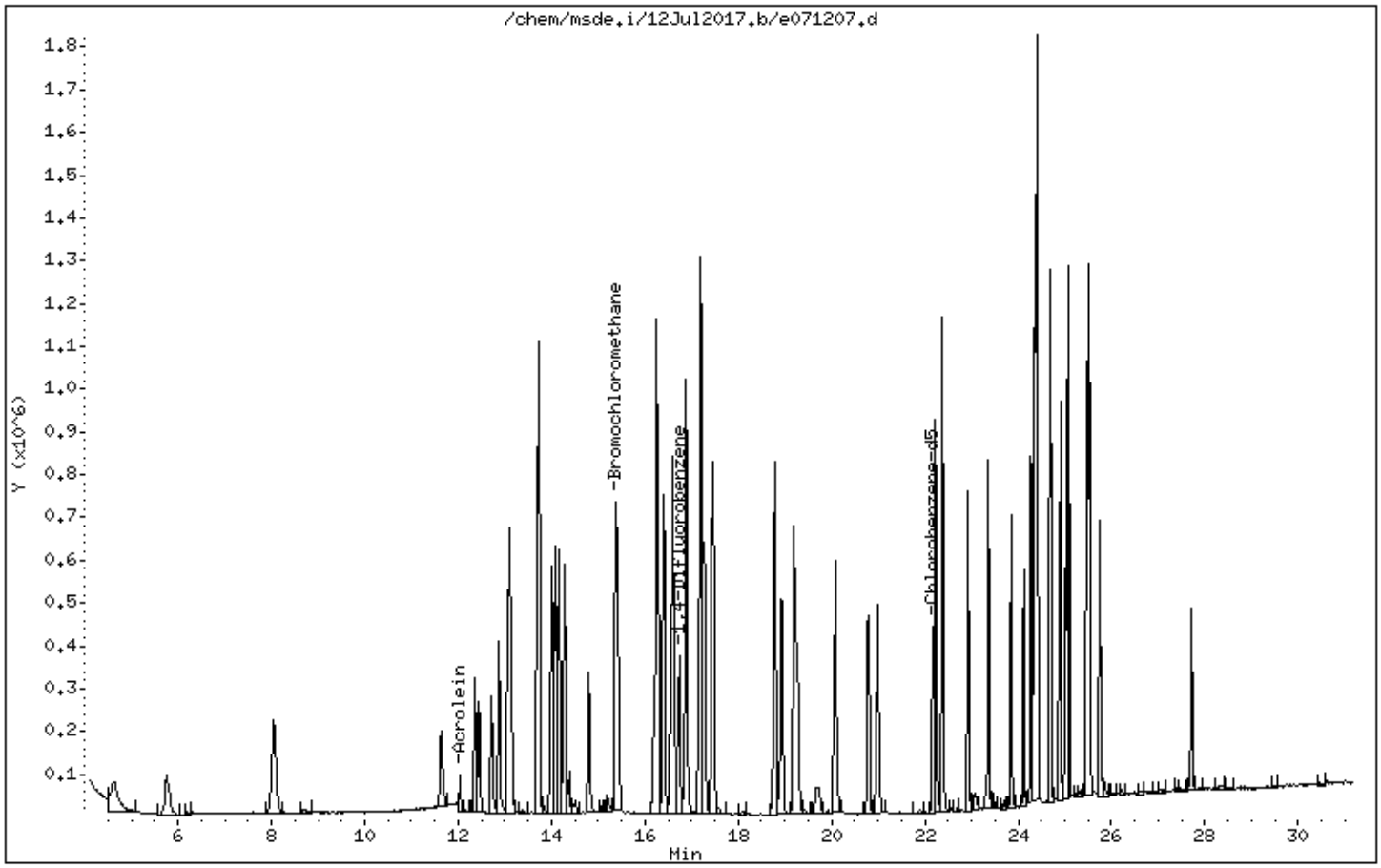
Instrument: msde.i

Sample Info: 250mL# 2804-275

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070316.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 03-JUL-2017 17:24
Operator : ef Inst ID: msde.i
Smp Info : 25mL# 2850-222
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 17:24 Cal File: e070316.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.811	4.811 (0.313)	41	259354	5.00000	5.362	80.00- 120.00	100.00
4.811	4.811 (0.313)	42	166139			36.86- 96.86	64.06
4.835	4.835 (0.314)	39	195313			46.23- 106.23	75.31
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	645289	5.00000	5.317	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	197413			1.93- 61.93	30.59
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	479815	5.00000	5.377	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	149449			1.36- 61.36	31.15
6.570	6.570 (0.427)	85	552633			85.72- 145.72	115.18
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	265701	5.00000	5.222	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	82890			1.40- 61.40	31.20
23 Butane					CAS #: 106-97-8		
7.640	7.640 (0.496)	58	48979	5.00000	5.241	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	465522			939.22- 999.22	950.45
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	202594	5.00000	5.137	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	58852			0.00- 59.78	29.05
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	206202	5.00000	5.204	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	243245			90.63- 150.63	117.96
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	155618	5.00000	5.510	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	151065			63.10- 123.10	97.07
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	95156	5.00000	5.821	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	42661			13.74- 73.74	44.83
9.986	9.986 (0.649)	66	28992			0.11- 60.11	30.47
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	210968	5.00000	5.816	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	384669			149.05- 209.05	182.34
10.119	10.119 (0.657)	42	333946			122.74- 182.74	158.29
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	761734	5.00000	5.505	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	491080			35.39- 95.39	64.47
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	129409	5.00000	5.656	80.00- 120.00	100.00
11.661	11.661 (0.758)	46	51769			10.30- 70.30	40.00
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	466247	5.00000	5.372	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	296642			33.74- 93.74	63.62
12.081	12.081 (0.785)	101	495001			78.29- 138.29	106.17
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	128851	5.00000	5.296	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	430669			307.46- 367.46	334.24
12.100	12.100 (0.786)	96	201438			127.87- 187.87	156.33
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	122966	5.00000	5.184	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	558142			407.61- 467.61	453.90

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.461 (0.810)	76	526821	5.00000	5.175	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	598303	5.00000	5.438	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	123968			0.00- 50.43	20.72
12.690	12.690 (0.824)	59	17575			0.00- 33.00	2.94
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	107055	5.00000	5.227	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	589318			511.05- 571.05	550.48
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	173675	5.00000	5.254	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	400975			205.99- 265.99	230.88
13.149	13.149 (0.854)	51	120439			40.46- 100.46	69.35
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	598543	5.00000	5.548	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	163097			0.00- 56.56	27.25
13.341	13.341 (0.867)	57	69111			0.00- 41.82	11.55
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	617904	5.00000	5.330	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	193222			0.79- 60.79	31.27
13.478	13.478 (0.876)	41	230570			7.43- 67.43	37.31
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	138239	5.00000	5.328	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	387207			247.42- 307.42	280.10
13.533	13.533 (0.879)	96	216098			122.37- 182.37	156.32
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	435236	5.00000	5.613	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	355685			51.15- 111.15	81.72
13.835	13.835 (0.899)	86	50127			0.00- 41.56	11.52
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	1192237	5.00000	5.618	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	188982			0.00- 45.86	15.85
14.165	14.165 (0.920)	59	98390			0.00- 38.07	8.25
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	447865	5.00000	5.422	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	130548			0.00- 59.55	29.15

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	56272	5.00000	5.769	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	83368			118.75- 178.75	148.15
14.247	14.247 (0.926)	43	975204			1798.00-1858.00	1733.02
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
14.666	14.666 (0.953)	59	918029	5.00000	5.597	80.00- 120.00	100.00
14.666	14.666 (0.953)	87	301524			2.81- 62.81	32.84
14.666	14.666 (0.953)	41	228273			0.00- 53.89	24.87
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	148474	5.00000	5.460	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	378275			229.72- 289.72	254.78
15.047	15.047 (0.978)	96	230032			126.60- 186.60	154.93
92 2-Butanone					CAS #: 78-93-3		
15.028	15.028 (0.976)	72	93455	5.00000	5.639	80.00- 120.00	100.00
15.028	15.028 (0.976)	43	717781			750.92- 810.92	768.05
15.028	15.028 (0.976)	57	46221			19.16- 79.16	49.46
99 Tetrahydrofuran					CAS #: 109-99-9		
15.360	15.360 (0.998)	42	406074	5.00000	5.592	80.00- 120.00	100.00
15.360	15.360 (0.998)	71	88519			0.00- 50.51	21.80
15.360	15.360 (0.998)	72	90050			0.00- 51.95	22.18
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	138638	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	105426			46.85- 106.85	76.04
15.391	15.391 (1.000)	49	296182			226.12- 286.12	213.64
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	529465	5.00000	5.459	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	347896			35.38- 95.38	65.71
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	271965	5.00000	5.546	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	485499			148.59- 208.59	178.52
15.669	15.669 (1.018)	41	329277			91.63- 151.63	121.07
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	644055	5.00000	5.380	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	408782			34.20- 94.20	63.47
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	742900	5.00000	6.030	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	776923			73.79- 133.79	104.58

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	646542	5.00000	5.447	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	1939537			276.72- 336.72	299.99
16.111	16.111 (1.047)	41	730599			82.40- 142.40	113.00
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	619000	5.00000	5.274	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	144997			0.00- 53.88	23.42
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	208189	5.00000	4.806	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	100543			17.94- 77.94	48.29
119 tert-Amyl methyl ether					CAS #: 994-05-8		
16.207	16.207 (0.968)	87	186170	5.00000	5.668	80.00- 120.00	100.00
16.207	16.207 (0.968)	73	664756			321.94- 381.94	357.07
16.207	16.207 (0.968)	55	252234			100.72- 160.72	135.49
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.303	16.303 (0.974)	62	442857	5.00000	5.317	80.00- 120.00	100.00
16.303	16.303 (0.974)	64	131113			0.66- 60.66	29.61
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	278577	5.00000	5.492	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	93358			3.00- 63.00	33.51
16.352	16.352 (0.977)	43	657434			207.00- 267.00	236.00
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	489821	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	70085			0.00- 44.91	14.31
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	371771	5.00000	5.328	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	324279			58.18- 118.18	87.23
17.123	17.123 (1.023)	97	209199			26.25- 86.25	56.27
127 Methylcyclohexane					CAS #: 108-87-2		
17.339	17.339 (1.036)	83	354161	5.00000	5.380	80.00- 120.00	100.00
17.339	17.339 (1.036)	55	464643			98.42- 158.42	131.20
17.339	17.339 (1.036)	56	139969			9.03- 69.03	39.52
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	252706	5.00000	5.052	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	180749			44.02- 104.02	71.53
17.556	17.556 (1.049)	41	245100			65.46- 125.46	96.99

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	151152	5.00000	5.511	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	141534			62.58- 122.58	93.64
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	579235	5.00000	5.380	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	382768			36.66- 96.66	66.08
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	385777	5.00000	5.471	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	123384			3.68- 63.68	31.98
18.805	18.805 (1.124)	39	359319			62.50- 122.50	93.14
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	872847	5.00000	5.564	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	258470			0.00- 59.19	29.61
18.984	18.984 (1.134)	85	92777			0.00- 40.34	10.63
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	468323	5.00000	4.969	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	50355			0.00- 41.31	10.75
19.275	19.275 (1.152)	100	306720			38.24- 98.24	65.49
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	780873	5.00000	5.337	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	458673			28.10- 88.10	58.74
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	390756	5.00000	5.680	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	121150			3.36- 63.36	31.00
19.998	19.998 (0.903)	39	303033			49.78- 109.78	77.55
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	282511	5.00000	5.628	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	173022			32.24- 92.24	61.24
20.438	20.438 (0.922)	83	219114			48.02- 108.02	77.56
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.930)	166	458046	5.00000	5.457	80.00- 120.00	100.00
20.603	20.603 (0.930)	129	372706			49.93- 109.93	81.37
20.603	20.603 (0.930)	131	366473			47.75- 107.75	80.01
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.937)	58	311718	5.00000	5.771	80.00- 120.00	100.00
20.767	20.767 (0.937)	43	793762			225.15- 285.15	254.64
20.795	20.795 (0.939)	100	52344			0.00- 47.79	16.79

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.957)   129    703107 5.00000    5.586  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    554125                   46.75- 106.75    78.81
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.970)   107    473480 5.00000    5.606  80.00- 120.00   100.00
 21.482  21.482 (0.970)   109    471206                   67.69- 127.69    99.52
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    452971 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    221648                   19.53-  79.53    48.93
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.003)   112    701670 5.00000    5.388  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    230239                    1.36-  61.36    32.81
 22.219  22.219 (1.003)    77    390968                   24.91-  84.91    55.72
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.006)   106    334430 5.00000    5.522  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91   1032313                  280.28- 340.28   308.68
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.014)   106    380615 5.00000    5.643  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91    777968                  173.14- 233.14   204.40
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.041)   106    354068 5.00000    5.652  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91    743934                  184.94- 244.94   210.11
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.043)   104    588833 5.00000    5.636  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    310136                   23.72-  83.72    52.67
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.058)   173    639135 5.00000    5.690  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    334943                   22.28-  82.28    52.41
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1160811 5.00000    5.663  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    320764                    0.00-  57.53    27.63
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.077)   174    266186 5.00000    5.031  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    299960                   81.42- 141.42   112.69
 23.856  23.856 (1.077)   176    256140                   66.35- 126.35    96.23
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	440541	5.00000	5.472	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	304000			38.02- 98.02	69.01
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1015646	5.00000	5.564	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	270415			0.00- 56.42	26.62
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	807772	5.00000	5.740	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	247320			0.46- 60.46	30.62
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	635613	5.00000	5.602	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	309875			18.43- 78.43	48.75
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	469524	5.00000	5.238	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	221114			16.45- 76.45	47.09
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.135)	146	517767	5.00000	5.306	80.00- 120.00	100.00
25.156	25.156 (1.135)	148	328029			33.61- 93.61	63.35
25.156	25.156 (1.135)	111	199754			9.29- 69.29	38.58
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	478658	5.00000	5.176	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	307257			34.28- 94.28	64.19
25.269	25.269 (1.140)	111	173234			7.48- 67.48	36.19
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	679506	5.00000	5.320	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	161155			0.00- 53.55	23.72
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	471941	5.00000	5.239	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	304391			33.54- 93.54	64.50
25.672	25.672 (1.159)	111	188983			10.04- 70.04	40.04
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	189211	5.00000	4.879	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	179084			66.37- 126.37	94.65
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	366812	5.00000	5.112	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	227015			32.58- 92.58	61.89

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	36789	0.50000	0.4695	80.00- 120.00	100.00
27.712	27.712	(1.251)	127	5917			0.00- 41.67	16.08

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070316.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	138638	-0.86
123 1,4-Difluorobenze	482877	289726	676028	489821	1.44
163 Chlorobenzene-d5	450551	270331	630771	452971	0.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070316.d

Date : 03-JUL-2017 17:24

Client ID: Level 12

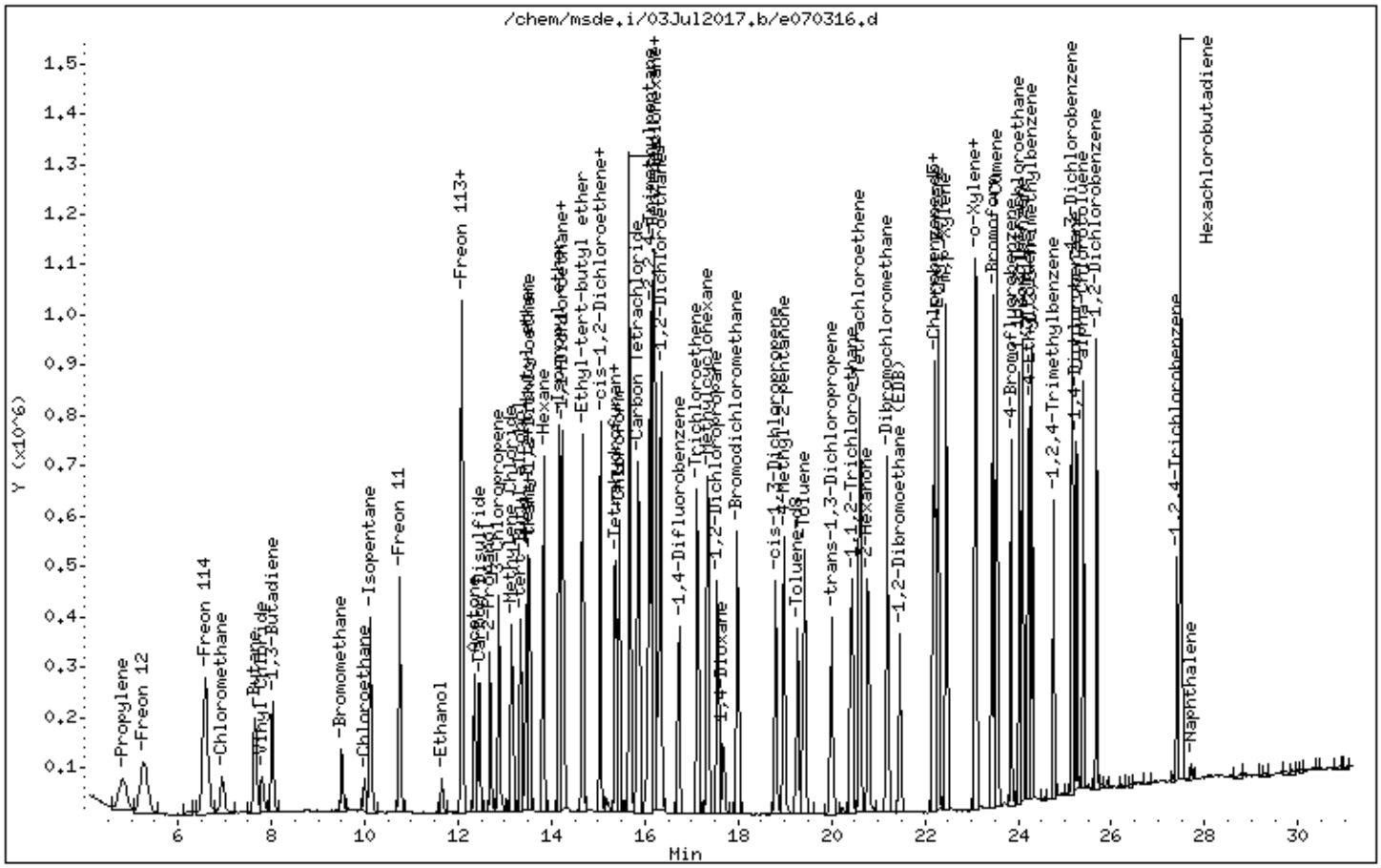
Instrument: msde.i

Sample Info: 25mL# 2850-222

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070317.d
Lab Smp Id: ICAL Client Smp ID: Level 13
Inj Date : 03-JUL-2017 18:31
Operator : mjs Inst ID: msde.i
Smp Info : 50mL #2850-222
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:12 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 Calibration Sample, Level: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	487804	10.0000	9.999	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	326158			36.86- 96.86	66.86
4.835	4.835 (0.314)	39	371870			46.23- 106.23	76.23
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1212350	10.0000	9.904	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	387048			1.93- 61.93	31.93
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	907355	10.0000	10.082	80.00- 120.00	100.00
6.570	6.570 (0.427)	137	284526			1.36- 61.36	31.36
6.594	6.594 (0.428)	85	1049950			85.72- 145.72	115.72
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	490178	10.0000	9.550	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	153905			1.40- 61.40	31.40
23 Butane					CAS #: 106-97-8		
7.641	7.641 (0.496)	58	92458	10.0000	9.809	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.641	7.641 (0.496)	43	896123			939.22- 999.22	969.22
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	378076	10.0000	9.504	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	112585			0.00- 59.78	29.78
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	387341	10.0000	9.691	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	467266			90.63- 150.63	120.63
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	293205	10.0000	10.292	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	272982			63.10- 123.10	93.10
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	163033	10.0000	9.888	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	71305			13.74- 73.74	43.74
9.986	9.986 (0.649)	66	49097			0.11- 60.11	30.11
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	343612	10.0000	9.391	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	615248			149.05- 209.05	179.05
10.119	10.119 (0.657)	42	524827			122.74- 182.74	152.74
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1405894	10.0000	10.073	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	919306			35.39- 95.39	65.39
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	246013	10.0000	10.660	80.00- 120.00	100.00
11.662	11.662 (0.758)	46	99155			10.30- 70.30	40.30
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	855312	10.0000	9.770	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	545172			33.74- 93.74	63.74
12.081	12.081 (0.785)	101	926203			78.29- 138.29	108.29
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	241756	10.0000	9.850	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	815821			307.46- 367.46	337.46
12.100	12.100 (0.786)	96	381659			127.87- 187.87	157.87
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	237700	10.0000	9.934	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1040199			407.61- 467.61	437.61

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	987438	10.0000	9.617	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	1145470	10.0000	10.321	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	234022			0.00- 50.43	20.43
12.690	12.690 (0.824)	59	34412			0.00- 33.00	3.00
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	212006	10.0000	10.262	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1147066			511.05- 571.05	541.05
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	321133	10.0000	9.632	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	757846			205.99- 265.99	235.99
13.149	13.149 (0.854)	51	226267			40.46- 100.46	70.46
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	1151858	10.0000	10.584	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	305983			0.00- 56.56	26.56
13.341	13.341 (0.867)	57	136147			0.00- 41.82	11.82
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	1168328	10.0000	9.991	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	359703			0.79- 60.79	30.79
13.478	13.478 (0.876)	41	437251			7.43- 67.43	37.43
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	262614	10.0000	10.034	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	728540			247.42- 307.42	277.42
13.533	13.533 (0.879)	96	400151			122.37- 182.37	152.37
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	811699	10.0000	10.378	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	658716			51.15- 111.15	81.15
13.835	13.835 (0.899)	86	93822			0.00- 41.56	11.56
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	2255087	10.0000	10.535	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	357716			0.00- 45.86	15.86
14.165	14.165 (0.920)	59	181924			0.00- 38.07	8.07
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	832909	10.0000	9.996	80.00- 120.00	100.00
14.220	14.220 (0.924)	65	246129			0.00- 59.55	29.55

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    106606 10.0000   10.835  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    158574                  118.75- 178.75   148.75
 14.247  14.247 (0.926)    43   1948761                  1798.00-1858.00  1828.00
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59   1750731 10.0000   10.582  80.00- 120.00   100.00
 14.666  14.666 (0.953)    87    574359                    2.81-  62.81    32.81
 14.666  14.666 (0.953)    41    418238                    0.00-  53.89    23.89
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    270948 10.0000    9.878  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61    703697                  229.72- 289.72   259.72
 15.047  15.047 (0.978)    96    424302                  126.60- 186.60   156.60
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.028  15.028 (0.976)    72    176722 10.0000   10.571  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1380060                  750.92- 810.92   780.92
 15.028  15.028 (0.976)    57     86884                   19.16-  79.16    49.16
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42    779810 10.0000   10.646  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71    159934                    0.00-  50.51    20.51
 15.360  15.360 (0.998)    72    171196                    0.00-  51.95    21.95
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    139842 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107466                   46.85- 106.85    76.85
 15.391  15.391 (1.000)    49    358168                  226.12- 286.12   256.12
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83    974207 10.0000    9.958  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    636914                   35.38-  95.38    65.38
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    513313 10.0000   10.377  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    916743                  148.59- 208.59   178.59
 15.669  15.669 (1.018)    41    624324                   91.63- 151.63   121.63
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1194865 10.0000    9.896  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    767069                   34.20-  94.20    64.20
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1375640 10.0000   11.070  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1427721                   73.79- 133.79   103.79
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	1216740	10.0000	10.163	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	3731978			276.72- 336.72	306.72
16.111	16.111 (1.047)	41	1367621			82.40- 142.40	112.40
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	1159216	10.0000	10.018	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	276841			0.00- 53.88	23.88
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	220008	5.00000	5.036	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	105482			17.94- 77.94	47.94
119 tert-Amyl methyl ether					CAS #: 994-05-8		
16.207	16.207 (0.968)	87	356780	10.0000	11.020	80.00- 120.00	100.00
16.207	16.207 (0.968)	73	1255638			321.94- 381.94	351.94
16.207	16.207 (0.968)	55	466370			100.72- 160.72	130.72
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.304	16.304 (0.974)	62	835354	10.0000	10.174	80.00- 120.00	100.00
16.304	16.304 (0.974)	64	256127			0.66- 60.66	30.66
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	524108	10.0000	10.480	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	172944			3.00- 63.00	33.00
16.352	16.352 (0.977)	43	1242135			207.00- 267.00	237.00
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	482877	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	71986			0.00- 44.91	14.91
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	694037	10.0000	10.089	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	611986			58.18- 118.18	88.18
17.123	17.123 (1.023)	97	390390			26.25- 86.25	56.25
127 Methylcyclohexane					CAS #: 108-87-2		
17.340	17.340 (1.036)	83	693992	10.0000	10.694	80.00- 120.00	100.00
17.340	17.340 (1.036)	55	891255			98.42- 158.42	128.42
17.340	17.340 (1.036)	56	270853			9.03- 69.03	39.03
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	469705	10.0000	9.525	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	347666			44.02- 104.02	74.02
17.556	17.556 (1.049)	41	448377			65.46- 125.46	95.46

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	294620	10.0000	10.896	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	272752			62.58- 122.58	92.58
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	1078096	10.0000	10.158	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	718644			36.66- 96.66	66.66
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	732177	10.0000	10.532	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	246581			3.68- 63.68	33.68
18.805	18.805 (1.124)	39	677238			62.50- 122.50	92.50
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1709414	10.0000	11.054	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	498990			0.00- 59.19	29.19
18.984	18.984 (1.134)	85	176827			0.00- 40.34	10.34
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	466910	5.00000	5.026	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	52796			0.00- 41.31	11.31
19.275	19.275 (1.152)	100	318636			38.24- 98.24	68.24
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	1462635	10.0000	10.141	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	849763			28.10- 88.10	58.10
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	722325	10.0000	10.556	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	240960			3.36- 63.36	33.36
19.998	19.998 (0.903)	39	576237			49.78- 109.78	79.78
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	529423	10.0000	10.604	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	329506			32.24- 92.24	62.24
20.438	20.438 (0.922)	83	413046			48.02- 108.02	78.02
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.930)	166	869750	10.0000	10.417	80.00- 120.00	100.00
20.603	20.603 (0.930)	129	695149			49.93- 109.93	79.93
20.603	20.603 (0.930)	131	676243			47.75- 107.75	77.75
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.937)	58	619634	10.0000	11.534	80.00- 120.00	100.00
20.767	20.767 (0.937)	43	1580995			225.15- 285.15	255.15
20.767	20.767 (0.937)	100	110240			0.00- 47.79	17.79

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
160 Dibromochloromethane					CAS #: 124-48-1		
21.207	21.207 (0.957)	129	1335209	10.0000	10.665	80.00- 120.00	100.00
21.207	21.207 (0.957)	127	1024775			46.75- 106.75	76.75
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.482	21.482 (0.970)	107	901727	10.0000	10.734	80.00- 120.00	100.00
21.482	21.482 (0.970)	109	880864			67.69- 127.69	97.69
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.156	22.156 (1.000)	117	450551	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	223180			19.53- 79.53	49.53
165 Chlorobenzene					CAS #: 108-90-7		
22.219	22.219 (1.003)	112	1302420	10.0000	10.054	80.00- 120.00	100.00
22.219	22.219 (1.003)	114	408459			1.36- 61.36	31.36
22.219	22.219 (1.003)	77	715171			24.91- 84.91	54.91
167 Ethyl Benzene					CAS #: 100-41-4		
22.281	22.281 (1.006)	106	635590	10.0000	10.551	80.00- 120.00	100.00
22.281	22.281 (1.006)	91	1972106			280.28- 340.28	310.28
169 m,p-Xylene					CAS #: 108-38-3		
22.467	22.467 (1.014)	106	727315	10.0000	10.840	80.00- 120.00	100.00
22.467	22.467 (1.014)	91	1477497			173.14- 233.14	203.14
171 o-Xylene					CAS #: 95-47-6		
23.069	23.069 (1.041)	106	668262	10.0000	10.724	80.00- 120.00	100.00
23.069	23.069 (1.041)	91	1436347			184.94- 244.94	214.94
172 Styrene					CAS #: 100-42-5		
23.110	23.110 (1.043)	104	1133955	10.0000	10.912	80.00- 120.00	100.00
23.110	23.110 (1.043)	78	609123			23.72- 83.72	53.72
174 Bromoform					CAS #: 75-25-2		
23.452	23.452 (1.058)	173	1207676	10.0000	10.809	80.00- 120.00	100.00
23.452	23.452 (1.058)	171	631407			22.28- 82.28	52.28
175 Cumene					CAS #: 98-82-8		
23.542	23.542 (1.063)	105	2232710	10.0000	10.951	80.00- 120.00	100.00
23.542	23.542 (1.063)	120	614682			0.00- 57.53	27.53
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.077)	174	273991	5.00000	5.207	80.00- 120.00	100.00
23.856	23.856 (1.077)	95	305290			81.42- 141.42	111.42
23.856	23.856 (1.077)	176	263979			66.35- 126.35	96.35

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	817617	10.0000	10.211	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	556129			38.02- 98.02	68.02
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1918057	10.0000	10.563	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	506707			0.00- 56.42	26.42
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	1565317	10.0000	11.183	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	476744			0.46- 60.46	30.46
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	1225768	10.0000	10.860	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	593609			18.43- 78.43	48.43
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	924876	10.0000	10.372	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	429650			16.45- 76.45	46.45
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.135)	146	995251	10.0000	10.254	80.00- 120.00	100.00
25.157	25.157 (1.135)	148	633112			33.61- 93.61	63.61
25.157	25.157 (1.135)	111	391010			9.29- 69.29	39.29
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	927668	10.0000	10.085	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	596331			34.28- 94.28	64.28
25.269	25.269 (1.140)	111	347695			7.48- 67.48	37.48
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1365878	10.0000	10.750	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	321598			0.00- 53.55	23.55
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	927156	10.0000	10.348	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	589101			33.54- 93.54	63.54
25.672	25.672 (1.159)	111	371229			10.04- 70.04	40.04
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	403157	10.0000	10.451	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	388512			66.37- 126.37	96.37
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	741115	10.0000	10.385	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	463760			32.58- 92.58	62.58

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	77139	1.00000	0.9897	80.00- 120.00	100.00
27.712	27.712	(1.251)	127	9004			0.00- 41.67	11.67

Report Date: 05-Jul-2017 10:12

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070317.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 13
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	139842	0.00
123 1,4-Difluorobenze	482877	289726	676028	482877	0.00
163 Chlorobenzene-d5	450551	270331	630771	450551	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070317.d

Date : 03-JUL-2017 18:31

Client ID: Level 13

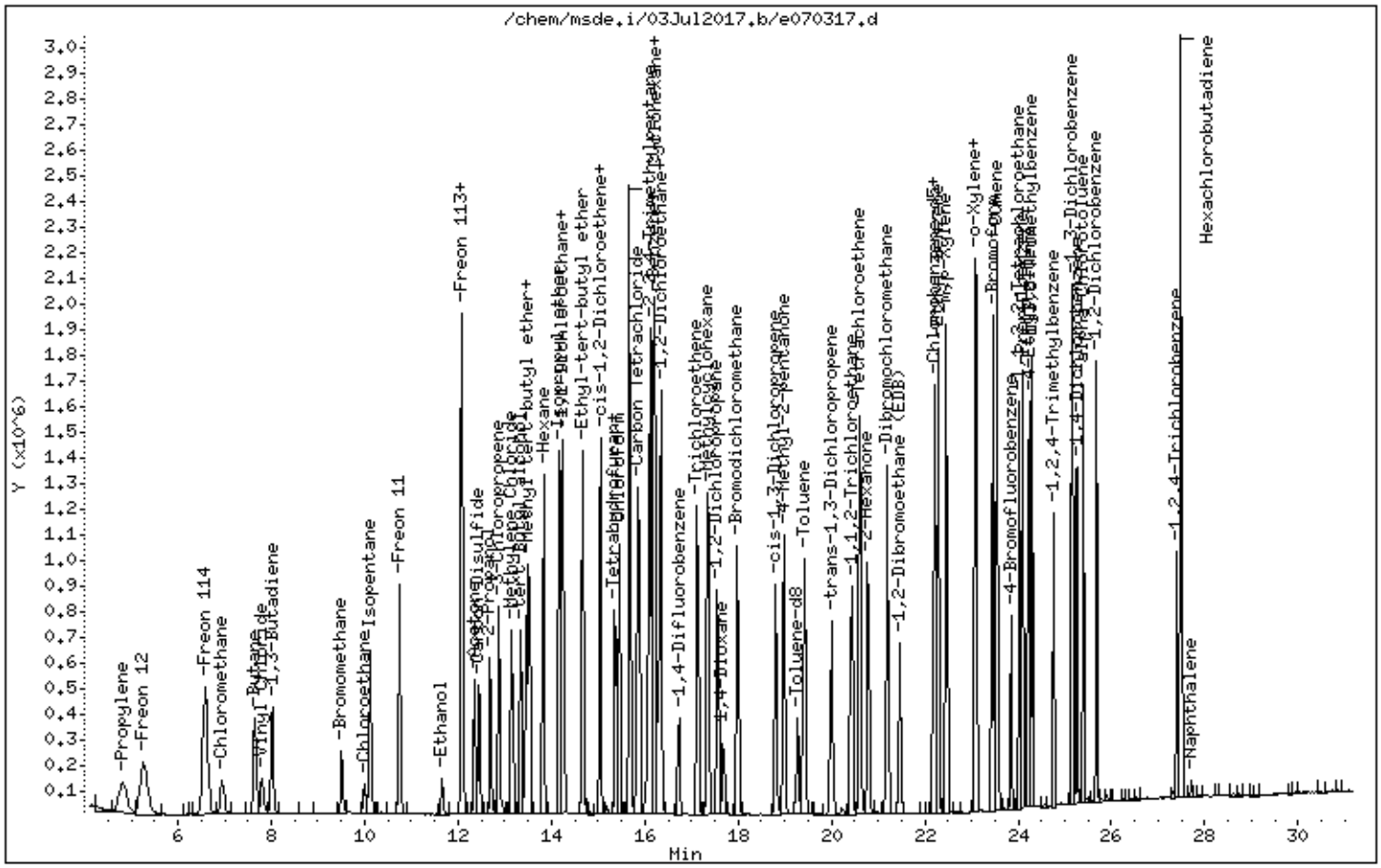
Instrument: msde.i

Sample Info: 50mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070318.d
Lab Smp Id: ICAL Client Smp ID: Level 15
Inj Date : 03-JUL-2017 19:26
Operator : mjs Inst ID: msde.i
Smp Info : 100mL #2850-222
Misc Info : 20ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 19:26 Cal File: e070318.d
Als bottle: 1 Calibration Sample, Level: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	932412	20.0000	18.762	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	622521			36.86- 96.86	66.76
4.835	4.835 (0.314)	39	715504			46.23- 106.23	76.74
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	2327421	20.0000	18.665	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	754284			1.93- 61.93	32.41
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	1751006	20.0000	19.099	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	554839			1.36- 61.36	31.69
6.594	6.594 (0.428)	85	2029789			85.72- 145.72	115.92
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	993377	20.0000	18.999	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	296382			1.40- 61.40	29.84
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	183376	20.0000	19.098	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	1783446			939.22- 999.22	972.56
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	722529	20.0000	17.830	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	210005			0.00- 59.78	29.07
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	763363	20.0000	18.749	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	914326			90.63- 150.63	119.78
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	574147	20.0000	19.784	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	528440			63.10- 123.10	92.04
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	309852	20.0000	18.447	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	136738			13.74- 73.74	44.13
9.986	9.986 (0.649)	66	95582			0.11- 60.11	30.85
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	681578	20.0000	18.287	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	1184295			149.05- 209.05	173.76
10.119	10.119 (0.657)	42	1017915			122.74- 182.74	149.35
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	2590309	20.0000	18.220	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	1667974			35.39- 95.39	64.39
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	423940	20.0000	18.033	80.00- 120.00	100.00
11.662	11.662 (0.758)	46	162875			10.30- 70.30	38.42
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	1640933	20.0000	18.400	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	1062929			33.74- 93.74	64.78
12.081	12.081 (0.785)	101	1809780			78.29- 138.29	110.29
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	473427	20.0000	18.936	80.00- 120.00	100.00
12.081	12.081 (0.785)	61	1586031			307.46- 367.46	335.01
12.100	12.100 (0.786)	96	736110			127.87- 187.87	155.49
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	455226	20.0000	18.676	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	2036898			407.61- 467.61	447.45

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	1919095	20.0000	18.348	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.709 (0.826)	45	2286275	20.0000	20.222	80.00- 120.00	100.00
12.709	12.709 (0.826)	43	469412			0.00- 50.43	20.53
12.709	12.709 (0.826)	59	63322			0.00- 33.00	2.77
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	417656	20.0000	19.845	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	2249285			511.05- 571.05	538.55
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	616464	20.0000	18.151	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	1418440			205.99- 265.99	230.09
13.149	13.149 (0.854)	51	434540			40.46- 100.46	70.49
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	2235396	20.0000	20.165	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	606159			0.00- 56.56	27.12
13.369	13.369 (0.869)	57	263400			0.00- 41.82	11.78
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.479	13.479 (0.876)	73	2292305	20.0000	19.244	80.00- 120.00	100.00
13.479	13.479 (0.876)	57	684627			0.79- 60.79	29.87
13.479	13.479 (0.876)	41	820391			7.43- 67.43	35.79
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	515107	20.0000	19.320	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	1415224			247.42- 307.42	274.74
13.533	13.533 (0.879)	96	787828			122.37- 182.37	152.94
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	1569995	20.0000	19.706	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	1272024			51.15- 111.15	81.02
13.835	13.835 (0.899)	86	189047			0.00- 41.56	12.04
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	4350951	20.0000	19.954	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	683671			0.00- 45.86	15.71
14.192	14.192 (0.922)	59	362368			0.00- 38.07	8.33
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	1601747	20.0000	18.870	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	480782			0.00- 59.55	30.02

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    208235 20.0000   20.777  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    334347                  118.75- 178.75   160.56
 14.247  14.247 (0.926)    43   3978958                  1798.00-1858.00  1910.80
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   3407288 20.0000   20.218  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87   1103177                    2.81-  62.81    32.38
 14.685  14.685 (0.954)    41    805611                    0.00-  53.89    23.64
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    536777 20.0000   19.211  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61   1372998                  229.72- 289.72   255.79
 15.047  15.047 (0.978)    96    835419                  126.60- 186.60   155.64
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    352095 20.0000   20.675  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43   2746085                  750.92- 810.92   779.93
 15.047  15.047 (0.978)    57    173654                   19.16-  79.16    49.32
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.361  15.361 (0.998)    42   1528921 20.0000   20.490  80.00- 120.00   100.00
 15.361  15.361 (0.998)    71    321699                    0.00-  50.51    21.04
 15.361  15.361 (0.998)    72    344668                    0.00-  51.95    22.54
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    142452 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    107844                   46.85- 106.85    75.71
 15.391  15.391 (1.000)    49    278937                  226.12- 286.12   195.81
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1881050 20.0000   18.875  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85   1262389                   35.38-  95.38    67.11
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    996717 20.0000   19.781  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56   1764546                  148.59- 208.59   177.04
 15.669  15.669 (1.018)    41   1212478                   91.63- 151.63   121.65
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   2323047 20.0000   18.886  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99   1509996                   34.20-  94.20    65.00
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119   2644887 20.0000   20.893  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   2763192                   73.79- 133.79   104.47
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   2348341 20.0000   19.256  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   7134441                   276.72- 336.72   303.81
 16.111  16.111 (1.047)    41   2547663                    82.40- 142.40   108.49
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78   2210769 20.0000   18.756  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    531184                     0.00-  53.88    24.03
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    213334 5.00000    4.793  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67    118284                    17.94-  77.94    55.45
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87    673328 20.0000   20.415  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73   2471746                   321.94- 381.94   367.09
 16.231  16.231 (0.970)    55    887183                   100.72- 160.72   131.76
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62   1602432 20.0000   19.160  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64    486602                     0.66-  60.66    30.37
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57   1022107 20.0000   20.064  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    338405                     3.00-  63.00    33.11
 16.352  16.352 (0.977)    43   2406713                   207.00- 267.00   235.47
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    491893 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     72758                     0.00-  44.91    14.79
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.123 (1.023)   130   1334914 20.0000   19.050  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95   1173114                    58.18- 118.18    87.88
 17.123  17.123 (1.023)    97    761132                    26.25-  86.25    57.02
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.340  17.340 (1.036)    83   1340026 20.0000   20.271  80.00- 120.00   100.00
 17.340  17.340 (1.036)    55   1707684                    98.42- 158.42   127.44
 17.340  17.340 (1.036)    56    522255                     9.03-  69.03    38.97
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63    938848 20.0000   18.690  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    686412                    44.02- 104.02    73.11
 17.556  17.556 (1.049)    41    878653                    65.46- 125.46    93.59
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	572127	20.0000	20.771	80.00- 120.00	100.00
17.701	17.701 (1.058)	58	540368			62.58- 122.58	94.45
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	2116309	20.0000	19.574	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	1399660			36.66- 96.66	66.14
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	1438698	20.0000	20.316	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	477306			3.68- 63.68	33.18
18.805	18.805 (1.124)	39	1343526			62.50- 122.50	93.38
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	3385331	20.0000	21.491	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	990327			0.00- 59.19	29.25
18.984	18.984 (1.134)	85	350196			0.00- 40.34	10.34
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	473770	5.00000	5.006	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	55448			0.00- 41.31	11.70
19.275	19.275 (1.152)	100	317707			38.24- 98.24	67.06
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	2854051	20.0000	19.425	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	1652370			28.10- 88.10	57.90
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.902)	75	1453927	20.0000	20.556	80.00- 120.00	100.00
19.998	19.998 (0.902)	77	476934			3.36- 63.36	32.80
19.998	19.998 (0.902)	39	1162186			49.78- 109.78	79.93
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	1027829	20.0000	19.916	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	642807			32.24- 92.24	62.54
20.438	20.438 (0.922)	83	815153			48.02- 108.02	79.31
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.929)	166	1660442	20.0000	19.240	80.00- 120.00	100.00
20.603	20.603 (0.929)	129	1345218			49.93- 109.93	81.02
20.603	20.603 (0.929)	131	1318881			47.75- 107.75	79.43
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.936)	58	1280046	20.0000	23.051	80.00- 120.00	100.00
20.767	20.767 (0.936)	43	3210129			225.15- 285.15	250.78
20.795	20.795 (0.938)	100	216565			0.00- 47.79	16.92

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129   2583113 20.0000   19.962  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   2011202                   46.75- 106.75    77.86
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107   1727552 20.0000   19.896  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109   1687962                   67.69- 127.69    97.71
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    465710 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    226160                   19.53-  79.53    48.56
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112   2518188 20.0000   18.807  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114    813009                    1.36-  61.36    32.29
 22.219  22.219 (1.002)    77   1400139                   24.91-  84.91    55.60
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.005)   106   1238084 20.0000   19.883  80.00- 120.00   100.00
 22.281  22.281 (1.005)    91   3843511                  280.28- 340.28   310.44
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106   1454502 20.0000   20.973  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91   2938040                  173.14- 233.14   202.00
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.040)   106   1325138 20.0000   20.574  80.00- 120.00   100.00
 23.069  23.069 (1.040)    91   2801565                  184.94- 244.94   211.42
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104   2258812 20.0000   21.029  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78   1188909                   23.72-  83.72    52.63
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173   2399739 20.0000   20.780  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171   1247189                   22.28-  82.28    51.97
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.062)   105   4320925 20.0000   20.504  80.00- 120.00   100.00
 23.542  23.542 (1.062)   120   1190311                    0.00-  57.53    27.55
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    270429 5.00000    4.972  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    304050                   81.42- 141.42   112.43
 23.856  23.856 (1.076)   176    261865                   66.35- 126.35    96.83
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	1589291	20.0000	19.202	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	1091116			38.02- 98.02	68.65
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.086)	91	3756286	20.0000	20.014	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	1002816			0.00- 56.42	26.70
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	3065535	20.0000	21.189	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	960594			0.46- 60.46	31.34
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	2344874	20.0000	20.100	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	1147728			18.43- 78.43	48.95
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.116)	105	1812024	20.0000	19.660	80.00- 120.00	100.00
24.753	24.753 (1.116)	120	846607			16.45- 76.45	46.72
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.134)	146	1966373	20.0000	19.599	80.00- 120.00	100.00
25.157	25.157 (1.134)	148	1262465			33.61- 93.61	64.20
25.157	25.157 (1.134)	111	756273			9.29- 69.29	38.46
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	1884126	20.0000	19.816	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	1208461			34.28- 94.28	64.14
25.269	25.269 (1.139)	111	706100			7.48- 67.48	37.48
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	2744943	20.0000	20.901	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	647722			0.00- 53.55	23.60
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	1830378	20.0000	19.764	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	1172575			33.54- 93.54	64.06
25.672	25.672 (1.158)	111	732458			10.04- 70.04	40.02
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	894447	20.0000	22.432	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	852001			66.37- 126.37	95.25
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	1468536	20.0000	19.908	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	935331			32.58- 92.58	63.69

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.250)	128	179199	2.00000	2.224	80.00- 120.00	100.00
27.712	27.712	(1.250)	127	24597			0.00- 41.67	13.73

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070318.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 20ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 15
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	142452	1.87
123 1,4-Difluorobenze	482877	289726	676028	491893	1.87
163 Chlorobenzene-d5	450551	270331	630771	465710	3.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070318.d

Date : 03-JUL-2017 19:26

Client ID: Level 15

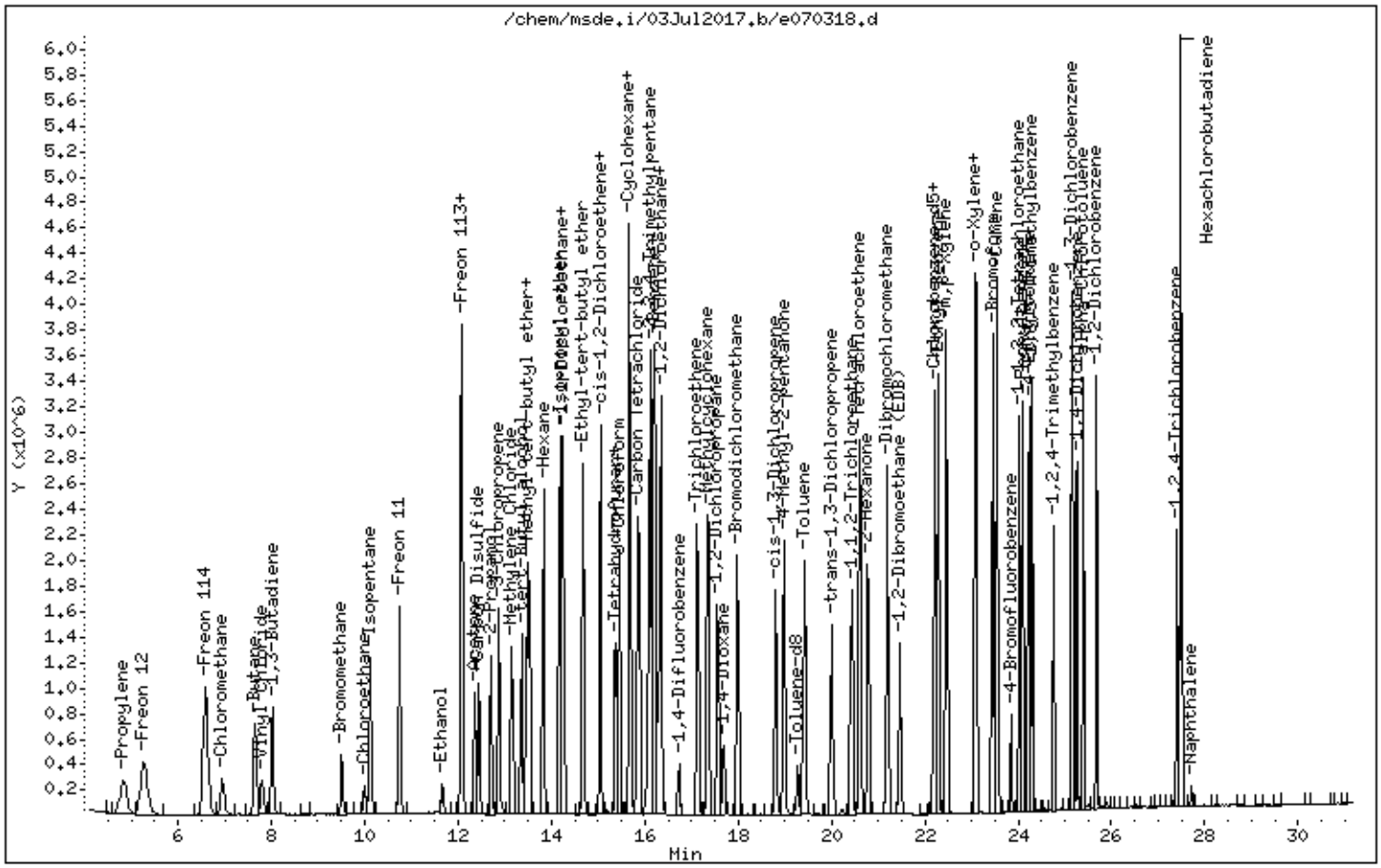
Instrument: msde.i

Sample Info: 100mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Jul2017.b/e070319.d
Lab Smp Id: ICAL Client Smp ID: Level 16
Inj Date : 03-JUL-2017 20:10
Operator : mjs Inst ID: msde.i
Smp Info : 200mL #2850-222
Misc Info : 40ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Jul2017.b/e17l0703a.m
Meth Date : 05-Jul-2017 10:10 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 20:10 Cal File: e070319.d
Als bottle: 1 Calibration Sample, Level: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HILOcrvFULL.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene						CAS #: 115-07-1	
4.859	4.859 (0.316)	41	1876186	40.0000	37.584	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	1219600			36.86- 96.86	65.00
4.835	4.835 (0.314)	39	1383126			46.23- 106.23	73.72
11 Freon 12						CAS #: 75-71-8	
5.269	5.269 (0.342)	85	4527065	40.0000	36.143	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	1457433			1.93- 61.93	32.19
15 Freon 114						CAS #: 76-14-2	
6.618	6.618 (0.430)	135	3437184	40.0000	37.322	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	1106330			1.36- 61.36	32.19
6.618	6.618 (0.430)	85	4012726			85.72- 145.72	116.74
17 Chloromethane						CAS #: 74-87-3	
6.980	6.980 (0.454)	50	1945720	40.0000	37.046	80.00- 120.00	100.00
6.980	6.980 (0.454)	52	548748			1.40- 61.40	28.20
23 Butane						CAS #: 106-97-8	
7.658	7.658 (0.498)	58	360407	40.0000	37.367	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	3544432			939.22- 999.22	983.45
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	1450706	40.0000	35.638	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	422572			0.00- 59.78	29.13
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	1608172	40.0000	39.321	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	1901889			90.63- 150.63	118.26
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	1088411	40.0000	37.336	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	1031765			63.10- 123.10	94.80
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	593266	40.0000	35.162	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	268542			13.74- 73.74	45.27
10.005	10.005 (0.650)	66	183440			0.11- 60.11	30.92
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	1330357	40.0000	35.534	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	2332821			149.05- 209.05	175.35
10.119	10.119 (0.657)	42	1969074			122.74- 182.74	148.01
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	5007226	40.0000	35.062	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	3252442			35.39- 95.39	64.95
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	763350	40.0000	32.325	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	285543			10.30- 70.30	37.41
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	3170288	40.0000	35.389	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	2037418			33.74- 93.74	64.27
12.081	12.081 (0.785)	101	3472245			78.29- 138.29	109.52
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	913735	40.0000	36.383	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	3112997			307.46- 367.46	340.69
12.100	12.100 (0.786)	96	1440195			127.87- 187.87	157.62
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	869525	40.0000	35.512	80.00- 120.00	100.00
12.366	12.366 (0.803)	43	3907139			407.61- 467.61	449.34

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide						CAS #: 75-15-0	
12.443	12.443 (0.808)	76	3667406	40.0000	34.905	80.00- 120.00	100.00
57 2-Propanol						CAS #: 67-63-0	
12.728	12.728 (0.827)	45	4494196	40.0000	39.572	80.00- 120.00	100.00
12.728	12.728 (0.827)	43	881987			0.00- 50.43	19.63
12.728	12.728 (0.827)	59	129779			0.00- 33.00	2.89
58 3-Chloropropene						CAS #: 107-05-1	
12.881	12.881 (0.837)	76	813749	40.0000	38.492	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	4458489			511.05- 571.05	547.89
66 Methylene Chloride						CAS #: 75-09-2	
13.149	13.149 (0.854)	84	1142216	40.0000	33.481	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	2663125			205.99- 265.99	233.15
13.149	13.149 (0.854)	51	792683			40.46- 100.46	69.40
71 tert-Butyl alcohol						CAS #: 75-65-0	
13.369	13.369 (0.869)	59	4435206	40.0000	39.828	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	1174534			0.00- 56.56	26.48
13.369	13.369 (0.869)	57	521291			0.00- 41.82	11.75
72 Methyl tert-butyl ether						CAS #: 1634-04-4	
13.478	13.478 (0.876)	73	4494116	40.0000	37.559	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	1352317			0.79- 60.79	30.09
13.478	13.478 (0.876)	41	1594513			7.43- 67.43	35.48
73 trans-1,2-Dichloroethene						CAS #: 156-60-5	
13.533	13.533 (0.879)	98	978932	40.0000	36.552	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	2795604			247.42- 307.42	285.58
13.533	13.533 (0.879)	96	1545931			122.37- 182.37	157.92
78 Hexane						CAS #: 110-54-3	
13.835	13.835 (0.899)	57	3065767	40.0000	38.306	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	2477770			51.15- 111.15	80.82
13.835	13.835 (0.899)	86	352294			0.00- 41.56	11.49
83 Isopropyl ether						CAS #: 108-20-3	
14.192	14.192 (0.922)	45	8468413	40.0000	38.662	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	1314875			0.00- 45.86	15.53
14.192	14.192 (0.922)	59	700436			0.00- 38.07	8.27
82 1,1-Dichloroethane						CAS #: 75-34-3	
14.247	14.247 (0.926)	63	3123739	40.0000	36.636	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	946074			0.00- 59.55	30.29

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    417851 40.0000   41.504  80.00- 120.00   100.00(A)
 14.247  14.247 (0.926)    42    653211                  118.75- 178.75   156.33
 14.247  14.247 (0.926)    43   7928596                  1798.00-1858.00  1897.47
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   6683348 40.0000   39.479  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87   2178117                    2.81-  62.81    32.59
 14.685  14.685 (0.954)    41   1544111                    0.00-  53.89    23.10
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98   1052073 40.0000   37.485  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61   2714602                  229.72- 289.72   258.02
 15.047  15.047 (0.978)    96   1648853                  126.60- 186.60   156.72
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    698478 40.0000   40.830  80.00- 120.00   100.00(A)
 15.047  15.047 (0.978)    43   5451104                  750.92- 810.92   780.43
 15.047  15.047 (0.978)    57    357881                   19.16-  79.16    51.24
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42   3041710 40.0000   40.580  80.00- 120.00   100.00(A)
 15.391  15.391 (1.000)    71    635357                    0.00-  50.51    20.89
 15.391  15.391 (1.000)    72    676162                    0.00-  51.95    22.23
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    143095 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    111289                   46.85- 106.85    77.77
 15.391  15.391 (1.000)    49    310401                  226.12- 286.12   216.92
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   3679738 40.0000   36.758  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85   2476433                   35.38-  95.38    67.30
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84   1916300 40.0000   37.860  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56   3422742                  148.59- 208.59   178.61
 15.669  15.669 (1.018)    41   2336532                   91.63- 151.63   121.93
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   4486383 40.0000   36.311  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99   2933730                   34.20-  94.20    65.39
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.884  15.884 (1.032)   119   5151518 40.0000   40.511  80.00- 120.00   100.00(A)
 15.884  15.884 (1.032)   117   5366015                   73.79- 133.79   104.16
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane						CAS #: 540-84-1	
16.111	16.111 (1.047)	56	4573029	40.0000	37.330	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	13930066			276.72- 336.72	304.61
16.111	16.111 (1.047)	41	5002703			82.40- 142.40	109.40
116 Benzene						CAS #: 71-43-2	
16.183	16.183 (0.967)	78	4289478	40.0000	35.928	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	1048255			0.00- 53.88	24.44
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0	
16.183	16.183 (1.051)	65	215351	5.00000	4.817	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	113149			17.94- 77.94	52.54
119 tert-Amyl methyl ether						CAS #: 994-05-8	
16.231	16.231 (0.970)	87	1335047	40.0000	39.963	80.00- 120.00	100.00
16.231	16.231 (0.970)	73	4793900			321.94- 381.94	359.08
16.231	16.231 (0.970)	55	1712421			100.72- 160.72	128.27
120 1,2-Dichloroethane						CAS #: 107-06-2	
16.303	16.303 (0.974)	62	3158434	40.0000	37.283	80.00- 120.00	100.00
16.303	16.303 (0.974)	64	959557			0.66- 60.66	30.38
121 Heptane						CAS #: 142-82-5	
16.352	16.352 (0.977)	57	1974057	40.0000	38.257	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	640967			3.00- 63.00	32.47
16.352	16.352 (0.977)	43	4710636			207.00- 267.00	238.63
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	498239	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	72187			0.00- 44.91	14.49
125 Trichloroethene						CAS #: 79-01-6	
17.123	17.123 (1.023)	130	2638092	40.0000	37.168	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	2286182			58.18- 118.18	86.66
17.123	17.123 (1.023)	97	1467948			26.25- 86.25	55.64
127 Methylcyclohexane						CAS #: 108-87-2	
17.364	17.364 (1.037)	83	2616249	40.0000	39.073	80.00- 120.00	100.00
17.340	17.340 (1.036)	55	3338187			98.42- 158.42	127.59
17.340	17.340 (1.036)	56	1024843			9.03- 69.03	39.17
132 1,2-Dichloropropane						CAS #: 78-87-5	
17.556	17.556 (1.049)	63	1826233	40.0000	35.892	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	1331108			44.02- 104.02	72.89
17.556	17.556 (1.049)	41	1681349			65.46- 125.46	92.07

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88   1154199 40.0000   41.370  80.00- 120.00   100.00(A)
 17.701  17.701 (1.058)    58   1085586                   62.58- 122.58    94.06
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   4105332 40.0000   37.488  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85   2734595                   36.66-  96.66    66.61
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75   2901355 40.0000   40.449  80.00- 120.00   100.00(A)
 18.805  18.805 (1.124)    77    951325                    3.68-  63.68    32.79
 18.805  18.805 (1.124)    39   2643873                   62.50- 122.50    91.13
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43   6699698 40.0000   41.990  80.00- 120.00   100.00(A)
 18.984  18.984 (1.134)    58   1936502                    0.00-  59.19    28.90
 18.984  18.984 (1.134)    85    695135                    0.00-  40.34    10.38
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    474603 5.00000    4.951  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     54738                    0.00-  41.31    11.53
 19.275  19.275 (1.152)   100    320011                   38.24-  98.24    67.43
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   5607998 40.0000   37.683  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92   3277658                   28.10-  88.10    58.45
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.902)    75   2863961 40.0000   40.183  80.00- 120.00   100.00(A)
 19.998  19.998 (0.902)    77    930437                    3.36-  63.36    32.49
 19.998  19.998 (0.902)    39   2264046                   49.78- 109.78    79.05
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97   1996186 40.0000   38.386  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99   1270142                   32.24-  92.24    63.63
 20.438  20.438 (0.922)    83   1597333                   48.02- 108.02    80.02
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.929)   166   3305322 40.0000   38.009  80.00- 120.00   100.00
 20.603  20.603 (0.929)   129   2647385                   49.93- 109.93    80.09
 20.603  20.603 (0.929)   131   2606527                   47.75- 107.75    78.86
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.936)    58   2621531 40.0000   46.849  80.00- 120.00   100.00(A)
 20.767  20.767 (0.936)    43   6499721                  225.15- 285.15   247.94
 20.795  20.795 (0.938)   100    448523                    0.00-  47.79    17.11
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129   5133765 40.0000   39.371  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   3944407                   46.75- 106.75    76.83
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107   3443708 40.0000   39.358  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109   3367066                   67.69- 127.69    97.77
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    469282 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    225737                   19.53-  79.53    48.10
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112   4993231 40.0000   37.007  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114   1620234                    1.36-  61.36    32.45
 22.219  22.219 (1.002)    77   2746993                   24.91-  84.91    55.01
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.005)   106   2457163 40.0000   39.160  80.00- 120.00   100.00
 22.281  22.281 (1.005)    91   7620966                  280.28- 340.28   310.15
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106   2881070 40.0000   41.227  80.00- 120.00   100.00(A)
 22.467  22.467 (1.013)    91   5794652                  173.14- 233.14   201.13
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.069  23.069 (1.040)   106   2643344 40.0000   40.727  80.00- 120.00   100.00(A)
 23.069  23.069 (1.040)    91   5611252                  184.94- 244.94   212.28
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104   4530876 40.0000   41.860  80.00- 120.00   100.00(A)
 23.110  23.110 (1.042)    78   2376780                   23.72-  83.72    52.46
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173   4669617 40.0000   40.127  80.00- 120.00   100.00(A)
 23.452  23.452 (1.057)   171   2401907                   22.28-  82.28    51.44
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.542  23.542 (1.062)   105   8312473 40.0000   39.144  80.00- 120.00   100.00
 23.542  23.542 (1.062)   120   2305201                    0.00-  57.53    27.73
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    278230 5.00000    5.076  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    307874                   81.42- 141.42   110.65
 23.856  23.856 (1.076)   176    269340                   66.35- 126.35    96.80
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83   3037324 40.0000   36.418  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85   2073859                   38.02-  98.02    68.28
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.086)    91   7331623 40.0000   38.766  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120   1922097                    0.00-  56.42    26.22
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105   6011575 40.0000   41.235  80.00- 120.00   100.00(A)
 24.237  24.237 (1.093)   120   1861415                    0.46-  60.46    30.96
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105   4542189 40.0000   38.638  80.00- 120.00   100.00
 24.304  24.304 (1.096)   120   2234908                   18.43-  78.43    49.20
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.116)   105   3660187 40.0000   39.411  80.00- 120.00   100.00
 24.753  24.753 (1.116)   120   1693647                   16.45-  76.45    46.27
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.156  25.156 (1.134)   146   3823268 40.0000   37.817  80.00- 120.00   100.00
 25.156  25.156 (1.134)   148   2459004                   33.61-  93.61    64.32
 25.156  25.156 (1.134)   111   1465022                    9.29-  69.29    38.32
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.269  25.269 (1.139)   146   3691644 40.0000   38.532  80.00- 120.00   100.00
 25.269  25.269 (1.139)   148   2377069                   34.28-  94.28    64.39
 25.269  25.269 (1.139)   111   1373921                    7.48-  67.48    37.22
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.145)    91   5451536 40.0000   41.195  80.00- 120.00   100.00(A)
 25.403  25.403 (1.145)   126   1278948                    0.00-  53.55    23.46
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.672  25.672 (1.158)   146   3626232 40.0000   38.857  80.00- 120.00   100.00
 25.672  25.672 (1.158)   148   2326910                   33.54-  93.54    64.17
 25.672  25.672 (1.158)   111   1466753                   10.04-  70.04    40.45
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.235)   180   1883665 40.0000   46.882  80.00- 120.00   100.00(A)
 27.398  27.398 (1.235)   182   1807351                   66.37- 126.37    95.95
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.239)   225   2988310 40.0000   40.202  80.00- 120.00   100.00(A)
 27.488  27.488 (1.239)   223   1887856                   32.58-  92.58    63.17
-------------------------------------------------------------------------------
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.250)	128	387307	4.00000	4.771	80.00- 120.00	100.00
27.712	27.712	(1.250)	127	53430			0.00- 41.67	13.80

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 05-Jul-2017 10:10

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e070319.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: mjs
Method File: /chem/msde.i/03Jul2017.b/e17l0703a.m
Misc Info: 40ppbv (50ppbv)

Calibration Date: 03-JUL-2017
Calibration Time: 18:31
Client Smp ID: Level 16
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	139842	83905	195779	143095	2.33
123 1,4-Difluorobenze	482877	289726	676028	498239	3.18
163 Chlorobenzene-d5	450551	270331	630771	469282	4.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.18	0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/03Jul2017.b/e070319.d

Date : 03-JUL-2017 20:10

Client ID: Level 16

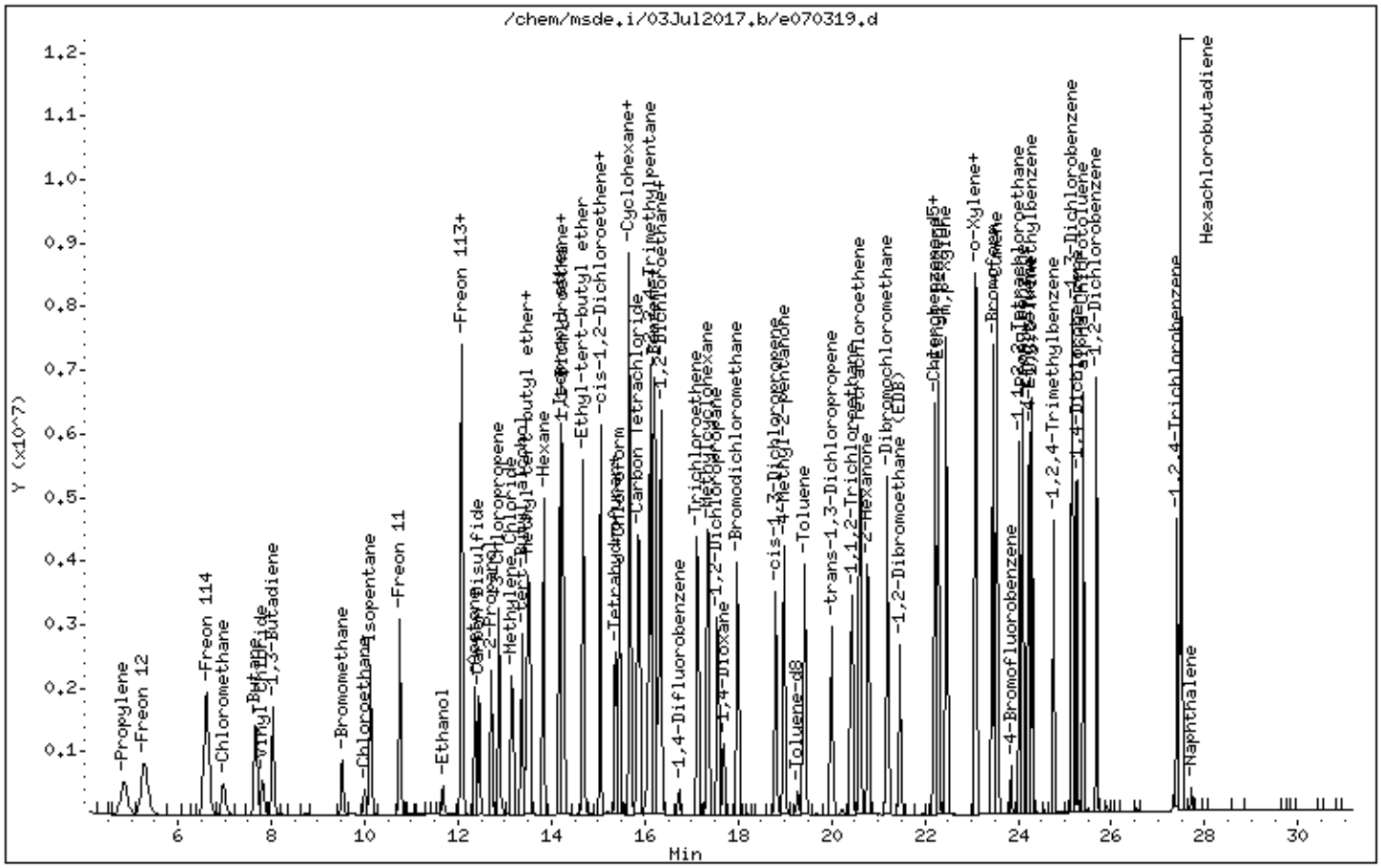
Instrument: msde.i

Sample Info: 200mL #2850-222

Operator: mjs

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: CCV

Lab ID#: 1707045R3-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 07:33 AM**	

Compound	**%Recovery**
Methylene Chloride	82

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 11-JUL-2017 07:33
Lab File ID: e071102.d Init. Cal. Date(s): 03-JUL-2017 03-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 20:10
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/11Jul2017.b/e17l0703a.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	%D / %DRIFT	MAX	CURVE TYPE
9 Propylene	1.74428	1.56437	0.010	10.31463	40.00000		Averaged
11 Freon 12	4.37666	3.83313	0.010	12.41876	30.00000		Averaged
15 Freon 114	3.21797	2.79406	0.010	13.17324	30.00000		Averaged
17 Chloromethane	1.83519	1.73691	0.010	5.35553	30.00000		Averaged
23 Butane	0.33701	0.28859	0.010	14.36948	40.00000		Averaged
25 Vinyl Chloride	1.42235	1.15772	0.010	18.60505	30.00000		Averaged
26 1,3-Butadiene	1.42908	1.21332	0.010	15.09744	30.00000		Averaged
29 Bromomethane	1.01861	0.77680	0.010	23.73942	30.00000		Averaged
30 Chloroethane	0.58955	0.51744	0.010	12.23045	30.00000		Averaged
31 Isopentane	1.30819	1.08817	0.010	16.81852	40.00000		Averaged
35 Freon 11	4.99013	4.50941	0.010	9.63336	30.00000		Averaged
42 Ethanol	0.82514	0.75748	0.010	8.20017	30.00000		Averaged
49 Freon 113	3.13025	2.68180	0.010	14.32648	30.00000		Averaged
50 1,1-Dichloroethene	0.87754	0.71782	0.010	18.20113	30.00000		Averaged
52 Acetone	0.85556	0.70989	0.010	17.02546	30.00000		Averaged
56 Carbon Disulfide	3.67127	3.21570	0.010	12.40886	30.00000		Averaged
57 2-Propanol	3.96831	3.50587	0.010	11.65318	30.00000		Averaged
58 3-Chloropropene	0.73868	0.60529	0.010	18.05846	30.00000		Averaged
66 Methylene Chloride	1.19206	0.98296	0.010	17.54118	30.00000		Averaged
71 tert-Butyl alcohol	3.89103	3.52698	0.010	9.35609	40.00000		Averaged
72 Methyl tert-butyl ether	4.18093	3.59700	0.010	13.96662	30.00000		Averaged
73 trans-1,2-Dichloroethene	0.93581	0.81986	0.010	12.39032	30.00000		Averaged
78 Hexane	2.79648	2.43270	0.010	13.00843	30.00000		Averaged
83 Isopropyl ether	7.65346	6.89918	0.010	9.85546	40.00000		Averaged
82 1,1-Dichloroethane	2.97929	2.53887	0.010	14.78274	30.00000		Averaged
86 Vinyl Acetate	0.35178	0.30352	0.010	13.71786	40.00000		Averaged
88 Ethyl-tert-butyl ether	5.91527	5.24483	0.010	11.33411	40.00000		Averaged
91 cis-1,2-Dichloroethene	0.98070	0.83201	0.010	15.16186	30.00000		Averaged
92 2-Butanone	0.59774	0.52983	0.010	11.36097	30.00000		Averaged
99 Tetrahydrofuran	2.61910	2.36494	0.010	9.70413	30.00000		Averaged
100 Chloroform	3.49793	3.01273	0.010	13.87097	30.00000		Averaged
102 Cyclohexane	1.76858	1.52095	0.010	14.00162	30.00000		Averaged
103 1,1,1-Trichloroethane	4.31725	3.76478	0.010	12.79668	30.00000		Averaged
106 Carbon Tetrachloride	4.44327	4.32745	0.010	2.60660	30.00000		Averaged
113 2,2,4-Trimethylpentane	4.28050	3.73470	0.010	12.75078	30.00000		Averaged
116 Benzene	1.19814	1.02725	0.010	14.26284	30.00000		Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 11-JUL-2017 07:33
Lab File ID: e071102.d Init. Cal. Date(s): 03-JUL-2017 03-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 20:10
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/11Jul2017.b/e17l0703a.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.56215	1.59122	0.010	-1.86091	30.00000	Averaged
119 tert-Amyl methyl ether	0.33525	0.30906	0.010	7.81252	40.00000	Averaged
120 1,2-Dichloroethane	0.85015	0.76151	0.010	10.42635	30.00000	Averaged
121 Heptane	0.51782	0.46422	0.010	10.35085	30.00000	Averaged
125 Trichloroethene	0.71229	0.60766	0.010	14.68857	30.00000	Averaged
127 Methylcyclohexane	0.67195	0.60251	0.010	10.33333	40.00000	Averaged
132 1,2-Dichloropropane	0.51061	0.41656	0.010	18.41891	30.00000	Averaged
136 1,4-Dioxane	0.27998	0.25508	0.010	8.89199	30.00000	Averaged
138 Bromodichloromethane	1.09898	0.96355	0.010	12.32362	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.71981	0.62235	0.010	13.53968	30.00000	Averaged
145 4-Methyl-2-pentanone	1.60120	1.50450	0.010	6.03955	30.00000	Averaged
$ 146 Toluene-d8	0.96200	0.97994	0.010	-1.86421	30.00000	Averaged
147 Toluene	1.49346	1.26725	0.010	15.14684	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.75938	0.66446	0.010	12.49944	30.00000	Averaged
155 1,1,2-Trichloroethane	0.55407	0.48988	0.010	11.58384	30.00000	Averaged
156 Tetrachloroethene	0.92655	0.80450	0.010	13.17223	30.00000	Averaged
158 2-Hexanone	0.59620	0.55317	0.010	7.21844	30.00000	Averaged
160 Dibromochloromethane	1.38931	1.24445	0.010	10.42669	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	0.93224	0.81210	0.010	12.88744	30.00000	Averaged
165 Chlorobenzene	1.43758	1.19127	0.010	17.13361	30.00000	Averaged
167 Ethyl Benzene	0.66853	0.57666	0.010	13.74316	30.00000	Averaged
169 m,p-Xylene	0.74457	0.68271	0.010	8.30810	30.00000	Averaged
171 o-Xylene	0.69152	0.61805	0.010	10.62369	30.00000	Averaged
172 Styrene	1.15323	1.04432	0.010	9.44394	30.00000	Averaged
174 Bromoform	1.23988	1.13008	0.010	8.85536	30.00000	Averaged
175 Cumene	2.26255	2.05437	0.010	9.20136	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.58397	0.59560	0.010	-1.99133	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	0.88862	0.74675	0.010	15.96515	30.00000	Averaged
182 Propylbenzene	2.01503	1.83089	0.010	9.13828	30.00000	Averaged
188 4-Ethyltoluene	1.55330	1.48092	0.010	4.65976	30.00000	Averaged
190 1,3,5-Trimethylbenzene	1.25251	1.10921	0.010	11.44136	30.00000	Averaged
196 1,2,4-Trimethylbenzene	0.98952	0.86496	0.010	12.58767	30.00000	Averaged
208 1,3-Dichlorobenzene	1.07716	0.92651	0.010	13.98545	30.00000	Averaged
209 1,4-Dichlorobenzene	1.02079	0.87177	0.010	14.59883	30.00000	Averaged
212 alpha-Chlorotoluene	1.40997	1.22709	0.010	12.97067	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 11-JUL-2017 07:33
Lab File ID: e071102.d Init. Cal. Date(s): 03-JUL-2017 03-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 20:10
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/11Jul2017.b/e17l0703a.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	0.99430	0.85789	0.010	13.71926	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.42809	0.36720	0.010	14.22217	30.00000	Averaged
227 Hexachlorobutadiene	0.79199	0.70027	0.010	11.58125	30.00000	Averaged
228 Naphthalene	0.86496	0.69633	0.010	19.49551	40.00000	Averaged
M 239 Total Xylene	++++	1.30076	0.010	++++	30.00000	Averaged <-

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071102.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 11-JUL-2017 07:33
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-222
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	431900	10.0000	8.968	80.00- 120.00	100.00
4.811	4.811 (0.313)	42	278789			36.86- 96.86	64.55
4.835	4.835 (0.314)	39	327450			46.23- 106.23	75.82
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1058274	10.0000	8.758	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	344233			1.93- 61.93	32.53
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	771401	10.0000	8.683	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	248720			1.36- 61.36	32.24
6.594	6.594 (0.428)	85	898925			85.72- 145.72	116.53
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	479536	10.0000	9.464	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	137337			1.40- 61.40	28.64
23 Butane					CAS #: 106-97-8		
7.641	7.641 (0.496)	58	79675	10.0000	8.563	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	795946			939.22- 999.22	998.99
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	319631	10.0000	8.139	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	93054			0.00- 59.78	29.11
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	334982	10.0000	8.490	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	409465			90.63- 150.63	122.23
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	214464	10.0000	7.626	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	200006			63.10- 123.10	93.26
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	142859	10.0000	8.777	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	65014			13.74- 73.74	45.51
9.986	9.986 (0.649)	66	44740			0.11- 60.11	31.32
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	300429	10.0000	8.318	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	539391			149.05- 209.05	179.54
10.119	10.119 (0.657)	42	464741			122.74- 182.74	154.69
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1244985	10.0000	9.037	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	799516			35.39- 95.39	64.22
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	209130	10.0000	9.180	80.00- 120.00	100.00
11.662	11.662 (0.758)	46	81255			10.30- 70.30	38.85
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	740407	10.0000	8.567	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	465036			33.74- 93.74	62.81
12.081	12.081 (0.785)	101	796724			78.29- 138.29	107.61
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	198180	10.0000	8.180	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	685719			307.46- 367.46	346.01
12.100	12.100 (0.786)	96	317012			127.87- 187.87	159.96
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	195992	10.0000	8.297	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	933525			407.61- 467.61	476.31

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.443 (0.808)	76	887811	10.0000	8.759	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	967922	10.0000	8.835	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	219720			0.00- 50.43	22.70
12.690	12.690 (0.824)	59	28209			0.00- 33.00	2.91
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	167112	10.0000	8.194	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	966347			511.05- 571.05	578.26
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	271382	10.0000	8.246	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	643518			205.99- 265.99	237.13
13.149	13.149 (0.854)	51	194695			40.46- 100.46	71.74
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	973750	10.0000	9.064	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	279283			0.00- 56.56	28.68
13.341	13.341 (0.867)	57	112759			0.00- 41.82	11.58
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.479	13.479 (0.876)	73	993080	10.0000	8.603	80.00- 120.00	100.00
13.479	13.479 (0.876)	57	307731			0.79- 60.79	30.99
13.479	13.479 (0.876)	41	388983			7.43- 67.43	39.17
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	226353	10.0000	8.761	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	613788			247.42- 307.42	271.16
13.533	13.533 (0.879)	96	336270			122.37- 182.37	148.56
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	671635	10.0000	8.699	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	560551			51.15- 111.15	83.46
13.835	13.835 (0.899)	86	79907			0.00- 41.56	11.90
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	1904767	10.0000	9.014	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	300137			0.00- 45.86	15.76
14.165	14.165 (0.920)	59	157178			0.00- 38.07	8.25
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.220	14.220 (0.924)	63	700947	10.0000	8.522	80.00- 120.00	100.00
14.220	14.220 (0.924)	65	211114			0.00- 59.55	30.12

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86     83799 10.0000    8.628  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    140722                  118.75- 178.75   167.93
 14.247  14.247 (0.926)    43   1636463                 1798.00-1858.00  1952.84
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59   1448024 10.0000    8.866  80.00- 120.00   100.00
 14.666  14.666 (0.953)    87    472821                    2.81-  62.81    32.65
 14.666  14.666 (0.953)    41    373811                    0.00-  53.89    25.82
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    229705 10.0000    8.484  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61    600164                  229.72- 289.72   261.28
 15.047  15.047 (0.978)    96    363731                  126.60- 186.60   158.35
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.028  15.028 (0.976)    72    146279 10.0000    8.864  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1191903                  750.92- 810.92   814.81
 15.028  15.028 (0.976)    57     77369                   19.16-  79.16    52.89
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.361  15.361 (0.998)    42    652927 10.0000    9.030  80.00- 120.00   100.00
 15.361  15.361 (0.998)    71    131445                    0.00-  50.51    20.13
 15.361  15.361 (0.998)    72    135298                    0.00-  51.95    20.72
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    138043 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    105834                   46.85- 106.85    76.67
 15.391  15.391 (1.000)    49    345780                  226.12- 286.12   250.49
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83    831773 10.0000    8.613  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    559185                   35.38-  95.38    67.23
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84    419912 10.0000    8.600  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    759946                  148.59- 208.59   180.98
 15.669  15.669 (1.018)    41    528078                   91.63- 151.63   125.76
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1039404 10.0000    8.720  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    661362                   34.20-  94.20    63.63
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1194749 10.0000    9.739  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1244331                   73.79- 133.79   104.15
-------------------------------------------------------------------------------
```

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1031098 10.0000    8.725  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   3044023                  276.72- 336.72   295.22
 16.111  16.111 (1.047)    41   1187733                   82.40- 142.40   115.19
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78    977568 10.0000    8.574  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    228431                    0.00-  53.88    23.37
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    219657 5.00000    5.093  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67    107658                   17.94-  77.94    49.01
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.207  16.207 (0.968)    87    294112 10.0000    9.219  80.00- 120.00   100.00
 16.207  16.207 (0.968)    73   1044704                  321.94- 381.94   355.21
 16.207  16.207 (0.968)    55    416331                  100.72- 160.72   141.56
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62    724677 10.0000    8.957  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64    223131                    0.66-  60.66    30.79
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    441772 10.0000    8.965  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    142479                    3.00-  63.00    32.25
 16.352  16.352 (0.977)    43   1059534                  207.00- 267.00   239.84
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    475818 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     71636                    0.00-  44.91    15.06
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.123  17.123 (1.023)   130    578275 10.0000    8.531  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    502456                   58.18- 118.18    86.89
 17.123  17.123 (1.023)    97    329300                   26.25-  86.25    56.95
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.340  17.340 (1.036)    83    573372 10.0000    8.967  80.00- 120.00   100.00
 17.340  17.340 (1.036)    55    736064                   98.42- 158.42   128.37
 17.340  17.340 (1.036)    56    230891                    9.03-  69.03    40.27
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.556  17.556 (1.049)    63    396414 10.0000    8.158  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    286325                   44.02- 104.02    72.23
 17.556  17.556 (1.049)    41    403719                   65.46- 125.46   101.84
-------------------------------------------------------------------------------
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.677  17.677 (1.056)    88    242746 10.0000    9.111  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58    229399                   62.58- 122.58    94.50
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83    916948 10.0000    8.768  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    614452                   36.66-  96.66    67.01
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    592254 10.0000    8.646  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    194943                    3.68-  63.68    32.92
 18.805  18.805 (1.124)    39    580702                   62.50- 122.50    98.05
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43   1431732 10.0000    9.396  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58    395999                    0.00-  59.19    27.66
 18.984  18.984 (1.134)    85    141730                    0.00-  40.34     9.90
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.276  19.276 (1.152)    98    466271 5.00000    5.093  80.00- 120.00   100.00
 19.276  19.276 (1.152)    70     54588                    0.00-  41.31    11.71
 19.276  19.276 (1.152)   100    307924                   38.24-  98.24    66.04
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.410  19.410 (1.160)    91   1205961 10.0000    8.485  80.00- 120.00   100.00
 19.410  19.410 (1.160)    92    711923                   28.10-  88.10    59.03
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    597893 10.0000    8.750  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    194278                    3.36-  63.36    32.49
 19.998  19.998 (0.903)    39    497998                   49.78- 109.78    83.29
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    440808 10.0000    8.842  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    275028                   32.24-  92.24    62.39
 20.438  20.438 (0.922)    83    340305                   48.02- 108.02    77.20
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.930)   166    723906 10.0000    8.683  80.00- 120.00   100.00
 20.603  20.603 (0.930)   129    573858                   49.93- 109.93    79.27
 20.603  20.603 (0.930)   131    568464                   47.75- 107.75    78.53
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    497749 10.0000    9.278  80.00- 120.00   100.00
 20.767  20.767 (0.937)    43   1319051                  225.15- 285.15   265.00
 20.767  20.767 (0.937)   100     88215                    0.00-  47.79    17.72
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                        CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1119781 10.0000    8.957  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    860075                   46.75- 106.75    76.81
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                     CAS #: 106-93-4
 21.454  21.454 (0.968)   107    730746 10.0000    8.711  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    728056                   67.69- 127.69    99.63
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                            CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    449910 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    210844                   19.53-  79.53    46.86
-------------------------------------------------------------------------------
  165 Chlorobenzene                               CAS #: 108-90-7
 22.219  22.219 (1.003)   112   1071927 10.0000    8.287  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    356058                    1.36-  61.36    33.22
 22.219  22.219 (1.003)    77    595283                   24.91-  84.91    55.53
-------------------------------------------------------------------------------
  167 Ethyl Benzene                               CAS #: 100-41-4
 22.281  22.281 (1.006)   106    518886 10.0000    8.626  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91   1628431                  280.28- 340.28   313.83
-------------------------------------------------------------------------------
  169 m,p-Xylene                                  CAS #: 108-38-3
 22.467  22.467 (1.014)   106    614314 10.0000    9.169  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1231956                  173.14- 233.14   200.54
-------------------------------------------------------------------------------
  171 o-Xylene                                    CAS #: 95-47-6
 23.069  23.069 (1.041)   106    556136 10.0000    8.938  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1193730                  184.94- 244.94   214.65
-------------------------------------------------------------------------------
  172 Styrene                                     CAS #: 100-42-5
 23.110  23.110 (1.043)   104    939696 10.0000    9.056  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    515504                   23.72-  83.72    54.86
-------------------------------------------------------------------------------
  174 Bromoform                                   CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1016873 10.0000    9.114  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    526389                   22.28-  82.28    51.77
-------------------------------------------------------------------------------
  175 Cumene                                      CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1848559 10.0000    9.080  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    516565                    0.00-  57.53    27.94
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                        CAS #: 460-00-4
 23.856  23.856 (1.077)   174    267966 5.00000    5.100  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    295624                   81.42- 141.42   110.32
 23.856  23.856 (1.077)   176    254778                   66.35- 126.35    95.08
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	671938	10.0000	8.403	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	461596			38.02- 98.02	68.70
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1647473	10.0000	9.086	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	426358			0.00- 56.42	25.88
188 4-Ethyltoluene					CAS #: 622-96-8		
24.215	24.215 (1.093)	105	1332561	10.0000	9.534	80.00- 120.00	100.00
24.215	24.215 (1.093)	120	416630			0.46- 60.46	31.27
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	998088	10.0000	8.856	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	490434			18.43- 78.43	49.14
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	778311	10.0000	8.741	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	360691			16.45- 76.45	46.34
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.135)	146	833694	10.0000	8.601	80.00- 120.00	100.00
25.157	25.157 (1.135)	148	536450			33.61- 93.61	64.35
25.157	25.157 (1.135)	111	331722			9.29- 69.29	39.79
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.246	25.246 (1.139)	146	784435	10.0000	8.540	80.00- 120.00	100.00
25.246	25.246 (1.139)	148	507194			34.28- 94.28	64.66
25.246	25.246 (1.139)	111	295798			7.48- 67.48	37.71
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1104161	10.0000	8.703	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	250924			0.00- 53.55	22.73
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	771945	10.0000	8.628	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	490219			33.54- 93.54	63.50
25.672	25.672 (1.159)	111	319152			10.04- 70.04	41.34
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	330416	10.0000	8.578	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	321921			66.37- 126.37	97.43
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	630113	10.0000	8.842	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	397571			32.58- 92.58	63.10

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	62657	1.00000	0.8050	80.00- 120.00	100.00
27.712	27.712	(1.251)	127	8032			0.00- 41.67	12.82
M 239 Total Xylene						CAS #: 1330-20-7		
				1170450	10.0000	18.107		

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071102.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	138043	82826	193260	138043	0.00
123 1,4-Difluorobenze	475818	285491	666145	475818	0.00
163 Chlorobenzene-d5	449910	269946	629874	449910	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/11Jul2017.b/e071102.d

Date : 11-JUL-2017 07:33

Client ID: CCV

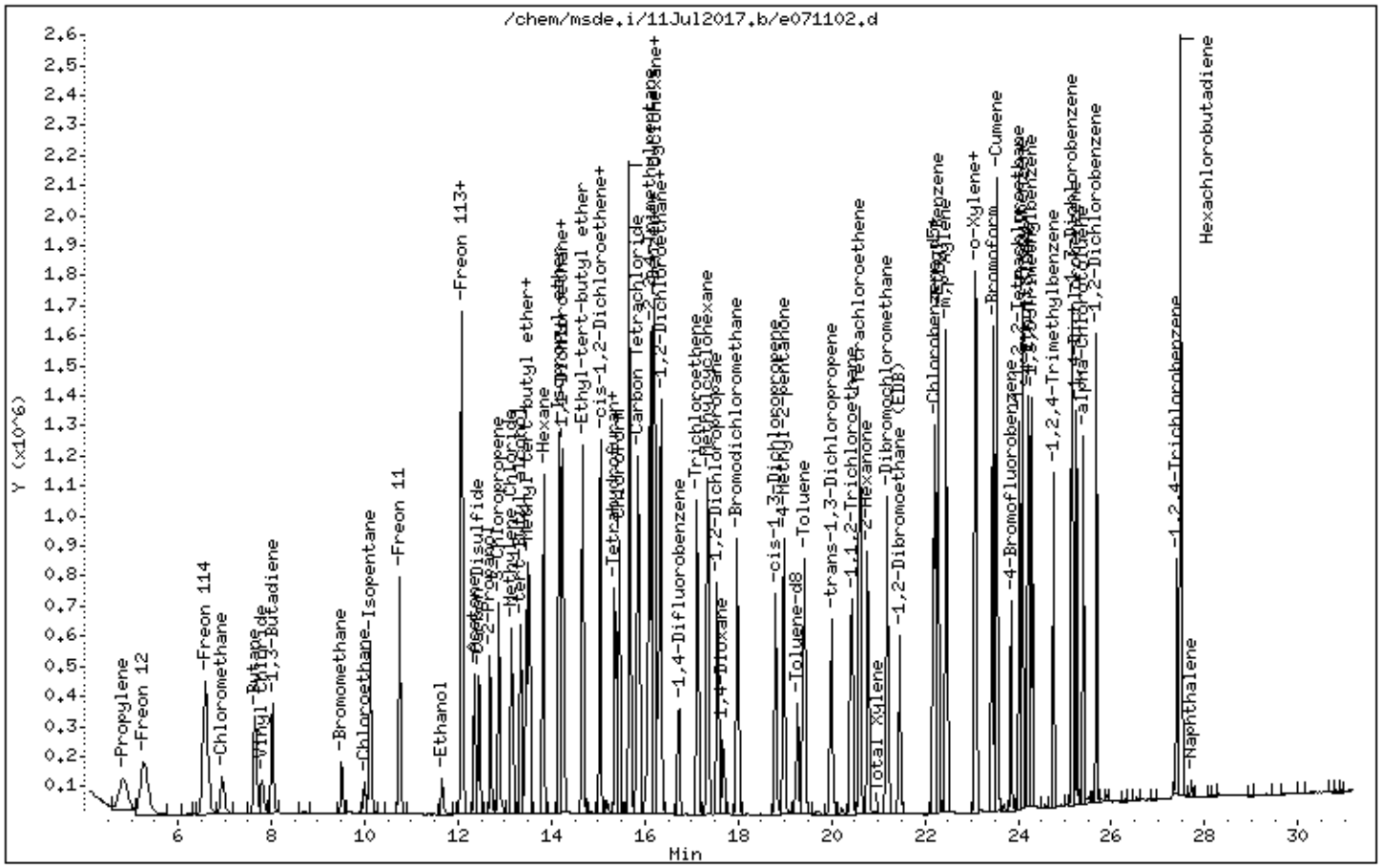
Instrument: msde.i

Sample Info: 50mL# 2850-222

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1707045R3-09B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071102sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 07:33 AM**	

Compound	**%Recovery**
Vinyl Chloride	87
1,1-Dichloroethene	82
trans-1,2-Dichloroethene	86
cis-1,2-Dichloroethene	84
Benzene	77
1,2-Dichloroethane	87
Trichloroethene	78
Toluene	83
1,1,2-Trichloroethane	86
Tetrachloroethene	84

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 11-JUL-2017 07:33
Lab File ID: e071102sim.d Init. Cal. Date(s): 03-JUL-2017 03-JUL-2017
Analysis Type: AIR Init. Cal. Times: 10:32 19:26
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m

	COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Freon 12	4.48829	3.97555	0.010	11.42399	30.00000	Averaged
	2 Freon 114	3.40706	2.94355	0.010	13.60431	30.00000	Averaged
	3 Chloromethane	1.93271	1.74035	0.010	9.95321	30.00000	Averaged
	4 Vinyl Chloride	1.37281	1.19203	0.010	13.16822	30.00000	Averaged
	5 Chloroethane	0.63471	0.50943	0.010	19.73836	30.00000	Averaged
	8 1,1-Dichloroethene	0.92391	0.75535	0.010	18.24388	30.00000	Averaged
	9 Methyl tert-butyl ether	3.51772	3.20767	0.010	8.81394	30.00000	Averaged
	10 trans-1,2-Dichloroethene	0.95420	0.82020	0.010	14.04387	30.00000	Averaged
	11 1,1-Dichloroethane	3.00518	2.60986	0.010	13.15477	30.00000	Averaged
	12 cis-1,2-Dichloroethene	1.04544	0.87354	0.010	16.44326	30.00000	Averaged
	14 Chloroform	3.64605	3.06289	0.010	15.99426	30.00000	Averaged
	15 1,1,1-Trichloroethane	4.45480	3.84136	0.010	13.77042	30.00000	Averaged
	16 Carbon Tetrachloride	4.75342	4.33763	0.010	8.74707	40.00000	Averaged
	17 Benzene	1.19517	0.91911	0.010	23.09786	30.00000	Averaged
$	18 1,2-Dichloroethane-d4	1.60494	1.58792	0.010	1.06038	30.00000	Averaged
	19 1,2-Dichloroethane	0.86090	0.75125	0.010	12.73750	30.00000	Averaged
	21 Trichloroethene	0.74614	0.58382	0.010	21.75400	30.00000	Averaged
$	22 Toluene-d8	0.80413	0.81672	0.010	-1.56592	30.00000	Averaged
	23 Toluene	1.37165	1.13994	0.010	16.89267	30.00000	Averaged
	25 1,1,2-Trichloroethane	0.57848	0.50041	0.010	13.49612	30.00000	Averaged
	26 Tetrachloroethene	0.93913	0.78763	0.010	16.13206	30.00000	Averaged
	27 1,2-Dibromoethane (EDB)	0.96607	0.83275	0.010	13.80049	30.00000	Averaged
	30 Ethyl Benzene	0.59040	0.54090	0.010	8.38458	30.00000	Averaged
	31 m,p-Xylene	0.67621	0.63144	0.010	6.62137	30.00000	Averaged
	32 o-Xylene	0.61397	0.56710	0.010	7.63357	30.00000	Averaged
$	33 4-Bromofluorobenzene	0.60242	0.61967	0.010	-2.86388	30.00000	Averaged
	34 1,1,2,2-Tetrachloroethane	0.90089	0.75587	0.010	16.09770	30.00000	Averaged
	36 1,4-Dichlorobenzene	0.99964	0.90448	0.010	9.51987	30.00000	Averaged
	38 Naphthalene	0.80901	0.69748	0.010	13.78548	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071102sim.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 11-JUL-2017 07:33
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-222
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1159366	10.0000	8.858	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	375368			2.36- 62.36	32.38
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	858411	10.0000	8.640	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	275193			2.09- 62.09	32.06
3 Chloromethane					CAS #: 74-87-3		
6.946	6.946 (0.451)	50	507527	10.0000	9.005	80.00- 120.00	100.00
6.970	6.970 (0.452)	52	157049			0.98- 60.98	30.94
4 Vinyl Chloride					CAS #: 75-01-4		
7.811	7.811 (0.507)	62	347626	10.0000	8.683	80.00- 120.00	100.00
7.811	7.811 (0.507)	64	99544			0.00- 58.64	28.64
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	148562	10.0000	8.026	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	45549			0.36- 60.36	30.66

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	220278	10.0000	8.176	80.00- 120.00	100.00
12.094	12.094 (0.785)	61	748107			300.85- 360.85	339.62
12.094	12.094 (0.785)	96	345983			126.45- 186.45	157.07
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	935434	10.0000	9.119	80.00- 120.00	100.00
13.465	13.465 (0.874)	57	277181			0.00- 59.46	29.63
13.465	13.465 (0.874)	41	335981			3.65- 63.65	35.92
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	239189	10.0000	8.596	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	667177			242.34- 302.34	278.93
13.547	13.547 (0.879)	96	371560			125.09- 185.09	155.34
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.233	14.233 (0.924)	63	761097	10.0000	8.684	80.00- 120.00	100.00
14.233	14.233 (0.924)	65	231282			0.54- 60.54	30.39
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	254744	10.0000	8.356	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	649913			222.17- 282.17	255.12
15.060	15.060 (0.978)	96	394194			125.16- 185.16	154.74
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	145812	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	112732			47.63- 107.63	77.31
15.374	15.374 (1.000)	49	383062			150.43- 210.43	262.71
14 Chloroform					CAS #: 67-66-3		
15.436	15.436 (1.002)	83	893212	10.0000	8.400	80.00- 120.00	100.00
15.436	15.436 (1.002)	85	608759			38.49- 98.49	68.15
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	1120232	10.0000	8.623	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	731530			35.44- 95.44	65.30
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	1264958	10.0000	9.125	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	1299532			72.67- 132.67	102.73
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	968127	10.0000	7.690	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	229019			0.00- 53.68	23.66
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	231538	5.00000	4.947	80.00- 120.00	100.00

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    111052                    19.71-  79.71    47.96
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    791310 10.0000    8.726  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    244057                     0.82-  60.82    30.84
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    526665 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     76924                     0.00-  44.62    14.61
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    614956 10.0000    7.825  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    543864                    57.80- 117.80    88.44
 17.136  17.136 (1.024)    97    353405                    26.87-  86.87    57.47
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    430138 5.00000    5.078  80.00- 120.00   100.00
 19.267  19.267 (1.152)    70     49270                     0.00-  41.18    11.45
 19.289  19.289 (1.153)   100    281042                    35.44-  95.44    65.34
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91   1200735 10.0000    8.311  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92    698739                    28.44-  88.44    58.19
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    479780 10.0000    8.650  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    301503                    32.77-  92.77    62.84
 20.424  20.424 (0.921)    83    370578                    47.27- 107.27    77.24
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    755163 10.0000    8.387  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    616574                    50.99- 110.99    81.65
 20.616  20.616 (0.930)   131    620431                    51.53- 111.53    82.16
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    798418 10.0000    8.620  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    795705                    69.74- 129.74    99.66
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    479389 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    205772                    12.99-  72.99    42.92
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.295  22.295 (1.006)   106    518603 10.0000    9.162  80.00- 120.00   100.00
 22.295  22.295 (1.006)    91   1609510                   281.21- 341.21   310.35
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                     CAS #: 108-38-3
 22.481  22.481 (1.014)   106    605407 10.0000    9.338  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91   1241696                  173.96- 233.96   205.10
-------------------------------------------------------------------------------
   32 o-Xylene                                       CAS #: 95-47-6
 23.082  23.082 (1.041)   106    543721 10.0000    9.237  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91   1173217                  183.85- 243.85   215.78
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                            CAS #: 460-00-4
 23.847  23.847 (1.076)   174    297062 5.00000    5.143  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    309411                   73.66- 133.66   104.16
 23.869  23.869 (1.077)   176    288414                   67.29- 127.29    97.09
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 24.026  24.026 (1.084)    83    724710 10.0000    8.390  80.00- 120.00   100.00
 24.026  24.026 (1.084)    85    500181                   38.95-  98.95    69.02
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                            CAS #: 106-46-7
 25.260  25.260 (1.139)   146    867192 10.0000    9.048  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    565555                   34.91-  94.91    65.22
 25.260  25.260 (1.139)   111    323754                    6.86-  66.86    37.33
-------------------------------------------------------------------------------
   38 Naphthalene                                    CAS #: 91-20-3
 27.726  27.726 (1.251)   128     66873 1.00000   0.8621  80.00- 120.00   100.00
 27.703  27.703 (1.250)   127      8782                    0.00-  42.71    13.13
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071102sim.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145812	87487	204137	145812	0.00
20 1,4-Difluorobenze	526665	315999	737331	526665	0.00
28 Chlorobenzene-d5	479389	287633	671145	479389	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.41	15.08	15.74	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/11Jul2017.b/e071102sim.d

Date : 11-JUL-2017 07:33

Client ID: CCV

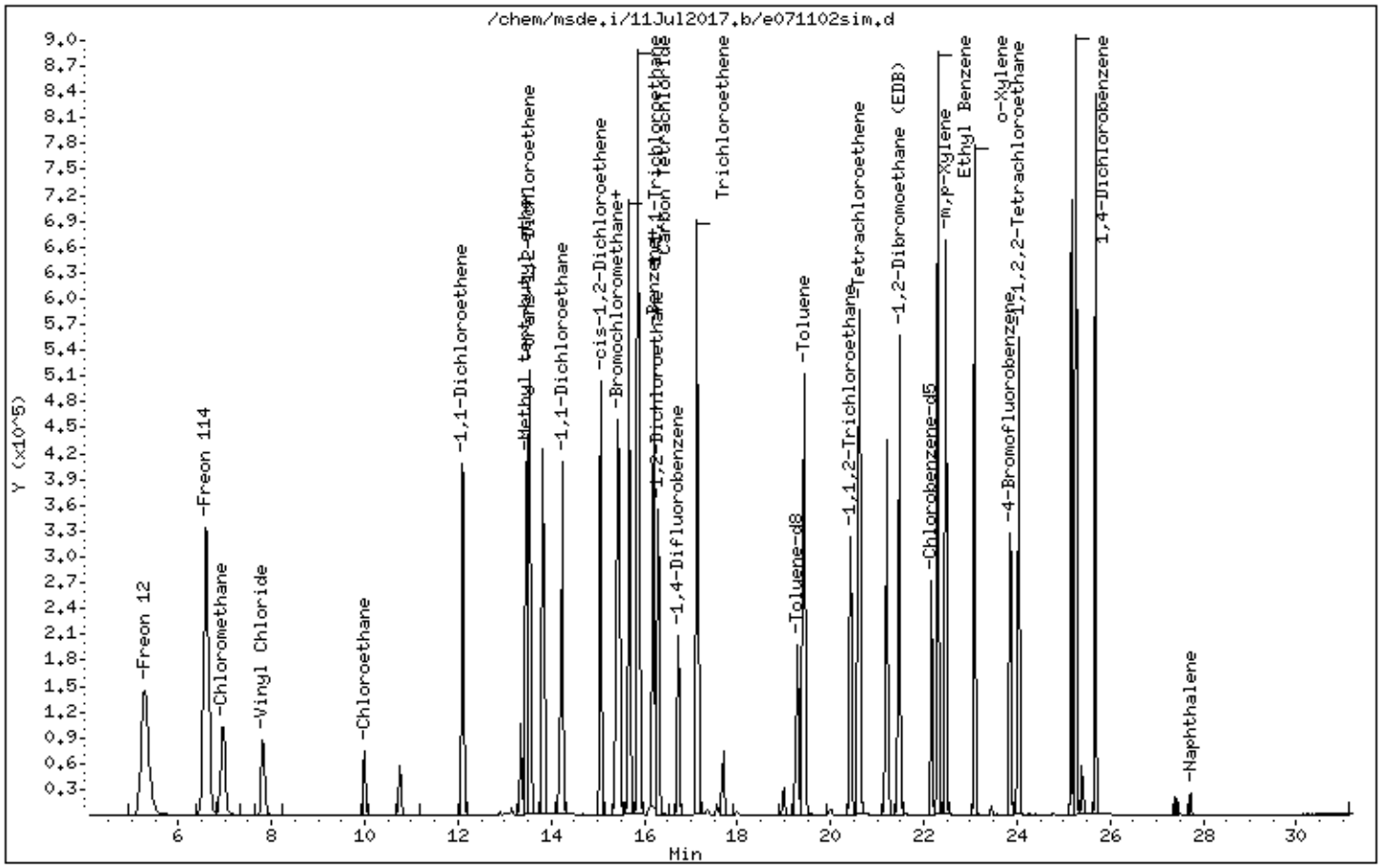
Instrument: msde.i

Sample Info: 50mL# 2850-222

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: CCV

Lab ID#: 1707045R3-09C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 07:45 AM**	

Compound	**%Recovery**
Methylene Chloride	80

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 12-JUL-2017 07:45
Lab File ID: e071202.d Init. Cal. Date(s): 03-JUL-2017 12-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 16:15
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/12Jul2017.b/e17l0703b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	%D / %DRIFT	MAX	CURVE TYPE
9 Propylene	1.74428	1.53242	0.010	12.14592	40.00000		Averaged
11 Freon 12	4.37666	3.81539	0.010	12.82416	30.00000		Averaged
15 Freon 114	3.21797	2.75737	0.010	14.31336	30.00000		Averaged
17 Chloromethane	1.83519	1.61509	0.010	11.99368	30.00000		Averaged
23 Butane	0.33701	0.27069	0.010	19.68140	40.00000		Averaged
25 Vinyl Chloride	1.42235	1.14127	0.010	19.76177	30.00000		Averaged
26 1,3-Butadiene	1.42908	1.18795	0.010	16.87302	30.00000		Averaged
29 Bromomethane	1.01861	0.81152	0.010	20.33130	30.00000		Averaged
30 Chloroethane	0.58955	0.52863	0.010	10.33354	30.00000		Averaged
31 Isopentane	1.30819	1.20732	0.010	7.71080	40.00000		Averaged
35 Freon 11	4.99013	4.48422	0.010	10.13820	30.00000		Averaged
42 Ethanol	0.82514	0.74722	0.010	9.44389	30.00000		Averaged
49 Freon 113	3.13025	2.63400	0.010	15.85351	30.00000		Averaged
50 1,1-Dichloroethene	0.87754	0.71299	0.010	18.75126	30.00000		Averaged
52 Acetone	0.85556	0.70513	0.010	17.58250	30.00000		Averaged
56 Carbon Disulfide	3.67127	3.18650	0.010	13.20429	30.00000		Averaged
57 2-Propanol	3.96831	3.44402	0.010	13.21174	30.00000		Averaged
58 3-Chloropropene	0.73868	0.63077	0.010	14.60843	30.00000		Averaged
66 Methylene Chloride	1.19206	0.95877	0.010	19.57058	30.00000		Averaged
71 tert-Butyl alcohol	3.89103	3.45918	0.010	11.09849	40.00000		Averaged
72 Methyl tert-butyl ether	4.18093	3.50396	0.010	16.19181	30.00000		Averaged
73 trans-1,2-Dichloroethene	0.93581	0.78472	0.010	16.14598	30.00000		Averaged
78 Hexane	2.79648	2.41361	0.010	13.69133	30.00000		Averaged
83 Isopropyl ether	7.65346	6.81674	0.010	10.93261	40.00000		Averaged
82 1,1-Dichloroethane	2.97929	2.50518	0.010	15.91352	30.00000		Averaged
86 Vinyl Acetate	0.35178	0.30833	0.010	12.35087	40.00000		Averaged
88 Ethyl-tert-butyl ether	5.91527	5.29263	0.010	10.52596	40.00000		Averaged
91 cis-1,2-Dichloroethene	0.98070	0.84944	0.010	13.38437	30.00000		Averaged
92 2-Butanone	0.59774	0.52670	0.010	11.88508	30.00000		Averaged
99 Tetrahydrofuran	2.61910	2.37649	0.010	9.26305	30.00000		Averaged
100 Chloroform	3.49793	2.97522	0.010	14.94350	30.00000		Averaged
102 Cyclohexane	1.76858	1.52337	0.010	13.86437	30.00000		Averaged
103 1,1,1-Trichloroethane	4.31725	3.73606	0.010	13.46199	30.00000		Averaged
106 Carbon Tetrachloride	4.44327	4.33155	0.010	2.51435	30.00000		Averaged
113 2,2,4-Trimethylpentane	4.28050	3.66915	0.010	14.28214	30.00000		Averaged
116 Benzene	1.19814	0.95951	0.010	19.91679	30.00000		Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 12-JUL-2017 07:45
Lab File ID: e071202.d Init. Cal. Date(s): 03-JUL-2017 12-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 16:15
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/12Jul2017.b/e17l0703b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.56215	1.66471	0.010	-6.56527	30.00000	Averaged
119 tert-Amyl methyl ether	0.33525	0.29876	0.010	10.88472	40.00000	Averaged
120 1,2-Dichloroethane	0.85015	0.72111	0.010	15.17853	30.00000	Averaged
121 Heptane	0.51782	0.43745	0.010	15.52093	30.00000	Averaged
125 Trichloroethene	0.71229	0.57901	0.010	18.71160	30.00000	Averaged
127 Methylcyclohexane	0.67195	0.55645	0.010	17.18803	40.00000	Averaged
132 1,2-Dichloropropane	0.51061	0.39344	0.010	22.94677	30.00000	Averaged
136 1,4-Dioxane	0.27998	0.23693	0.010	15.37543	30.00000	Averaged
138 Bromodichloromethane	1.09898	0.92004	0.010	16.28251	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.71981	0.60134	0.010	16.45838	30.00000	Averaged
145 4-Methyl-2-pentanone	1.60120	1.44319	0.010	9.86846	30.00000	Averaged
$ 146 Toluene-d8	0.96200	0.94919	0.010	1.33142	30.00000	Averaged
147 Toluene	1.49346	1.22197	0.010	18.17849	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.75938	0.65719	0.010	13.45617	30.00000	Averaged
155 1,1,2-Trichloroethane	0.55407	0.49401	0.010	10.83847	30.00000	Averaged
156 Tetrachloroethene	0.92655	0.80456	0.010	13.16596	30.00000	Averaged
158 2-Hexanone	0.59620	0.55761	0.010	6.47334	30.00000	Averaged
160 Dibromochloromethane	1.38931	1.24648	0.010	10.28057	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	0.93224	0.82078	0.010	11.95675	30.00000	Averaged
165 Chlorobenzene	1.43758	1.19411	0.010	16.93571	30.00000	Averaged
167 Ethyl Benzene	0.66853	0.57946	0.010	13.32306	30.00000	Averaged
169 m,p-Xylene	0.74457	0.69389	0.010	6.80661	30.00000	Averaged
171 o-Xylene	0.69152	0.61248	0.010	11.42914	30.00000	Averaged
172 Styrene	1.15323	1.02739	0.010	10.91120	30.00000	Averaged
174 Bromoform	1.23988	1.12910	0.010	8.93471	30.00000	Averaged
175 Cumene	2.26255	2.05863	0.010	9.01280	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.58397	0.59478	0.010	-1.85045	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	0.88862	0.75613	0.010	14.90882	30.00000	Averaged
182 Propylbenzene	2.01503	1.79439	0.010	10.94960	30.00000	Averaged
188 4-Ethyltoluene	1.55330	1.47329	0.010	5.15102	30.00000	Averaged
190 1,3,5-Trimethylbenzene	1.25251	1.11602	0.010	10.89716	30.00000	Averaged
196 1,2,4-Trimethylbenzene	0.98952	0.84096	0.010	15.01376	30.00000	Averaged
208 1,3-Dichlorobenzene	1.07716	0.90625	0.010	15.86639	30.00000	Averaged
209 1,4-Dichlorobenzene	1.02079	0.85906	0.010	15.84427	30.00000	Averaged
212 alpha-Chlorotoluene	1.40997	1.20068	0.010	14.84380	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 12-JUL-2017 07:45
Lab File ID: e071202.d Init. Cal. Date(s): 03-JUL-2017 12-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 16:15
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/12Jul2017.b/e17l0703b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	0.99430	0.84490	0.010	15.02572	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.42809	0.36855	0.010	13.90779	30.00000	Averaged
227 Hexachlorobutadiene	0.79199	0.71565	0.010	9.63905	30.00000	Averaged
228 Naphthalene	0.86496	0.68584	0.010	20.70775	40.00000	Averaged
M 239 Total Xylene	++++	1.30637	0.010	++++	30.00000	Averaged <-

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071202.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 12-JUL-2017 07:45
Operator : sw Inst ID: msde.i
Smp Info : 50mL# 2850-222
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:46 efinn Quant Type: ISTD
Cal Date : 12-JUL-2017 15:33 Cal File: e071212.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.811	4.811 (0.313)	41	411597	10.0000	8.785	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	275927			36.86- 96.86	67.04
4.835	4.835 (0.314)	39	307691			46.23- 106.23	74.76
11 Freon 12					CAS #: 75-71-8		
5.293	5.293 (0.344)	85	1024783	10.0000	8.718	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	326495			1.93- 61.93	31.86
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	740608	10.0000	8.569	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	236483			1.36- 61.36	31.93
6.594	6.594 (0.428)	85	861548			85.72- 145.72	116.33
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	433799	10.0000	8.801	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	137591			1.40- 61.40	31.72
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	72704	10.0000	8.032	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	757111			939.22- 999.22	1041.36
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	306536	10.0000	8.024	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	91003			0.00- 59.78	29.69
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	319074	10.0000	8.313	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	399334			90.63- 150.63	125.15
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	217967	10.0000	7.967	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	208866			63.10- 123.10	95.82
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	141985	10.0000	8.967	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	67720			13.74- 73.74	47.70
9.986	9.986 (0.649)	66	43207			0.11- 60.11	30.43
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	324276	10.0000	9.229	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	601773			149.05- 209.05	185.57
10.119	10.119 (0.657)	42	515997			122.74- 182.74	159.12
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1204425	10.0000	8.986	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	772246			35.39- 95.39	64.12
42 Ethanol					CAS #: 64-17-5		
11.642	11.642 (0.756)	45	200697	10.0000	9.056	80.00- 120.00	100.00
11.661	11.661 (0.758)	46	79133			10.30- 70.30	39.43
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	707471	10.0000	8.415	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	444625			33.74- 93.74	62.85
12.080	12.080 (0.785)	101	765667			78.29- 138.29	108.23
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	191504	10.0000	8.125	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	661826			307.46- 367.46	345.59
12.100	12.100 (0.786)	96	299750			127.87- 187.87	156.52
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	189392	10.0000	8.242	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	904224			407.61- 467.61	477.44

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.442	12.442 (0.808)	76	855869	10.0000	8.680	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	925037	10.0000	8.679	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	207375			0.00- 50.43	22.42
12.690	12.690 (0.824)	59	27395			0.00- 33.00	2.96
58 3-Chloropropene					CAS #: 107-05-1		
12.880	12.880 (0.837)	76	169421	10.0000	8.539	80.00- 120.00	100.00
12.880	12.880 (0.837)	41	930059			511.05- 571.05	548.96
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	257518	10.0000	8.043	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	638086			205.99- 265.99	247.78
13.149	13.149 (0.854)	51	189220			40.46- 100.46	73.48
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	929109	10.0000	8.890	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	274486			0.00- 56.56	29.54
13.341	13.341 (0.867)	57	112116			0.00- 41.82	12.07
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	941136	10.0000	8.381	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	296551			0.79- 60.79	31.51
13.478	13.478 (0.876)	41	373574			7.43- 67.43	39.69
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	210769	10.0000	8.385	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	599570			247.42- 307.42	284.47
13.533	13.533 (0.879)	96	327970			122.37- 182.37	155.61
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	648275	10.0000	8.631	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	538488			51.15- 111.15	83.06
13.835	13.835 (0.899)	86	79149			0.00- 41.56	12.21
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	1830922	10.0000	8.907	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	280301			0.00- 45.86	15.31
14.165	14.165 (0.920)	59	148444			0.00- 38.07	8.11
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.220	14.220 (0.924)	63	672872	10.0000	8.409	80.00- 120.00	100.00
14.220	14.220 (0.924)	65	207168			0.00- 59.55	30.79

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86     82816 10.0000    8.765  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    139683                  118.75- 178.75   168.67
 14.247  14.247 (0.926)    43   1557619                 1798.00-1858.00  1880.82
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.666  14.666 (0.953)    59   1421559 10.0000    8.947  80.00- 120.00   100.00
 14.666  14.666 (0.953)    87    456035                    2.81-  62.81    32.08
 14.666  14.666 (0.953)    41    365647                    0.00-  53.89    25.72
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.047  15.047 (0.978)    98    228152 10.0000    8.662  80.00- 120.00   100.00
 15.047  15.047 (0.978)    61    572185                  229.72- 289.72   250.79
 15.047  15.047 (0.978)    96    346891                  126.60- 186.60   152.04
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.028  15.028 (0.976)    72    141467 10.0000    8.811  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1144171                  750.92- 810.92   808.79
 15.028  15.028 (0.976)    57     73484                   19.16-  79.16    51.94
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.360 (0.998)    42    638307 10.0000    9.074  80.00- 120.00   100.00
 15.360  15.360 (0.998)    71    128997                    0.00-  50.51    20.21
 15.360  15.360 (0.998)    72    132274                    0.00-  51.95    20.72
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    134296 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    106819                   46.85- 106.85    79.54
 15.391  15.391 (1.000)    49    350380                  226.12- 286.12   260.90
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83    799119 10.0000    8.506  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    544160                   35.38-  95.38    68.09
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84    409166 10.0000    8.614  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    729192                  148.59- 208.59   178.21
 15.669  15.669 (1.018)    41    523104                   91.63- 151.63   127.85
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1003476 10.0000    8.654  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    651658                   34.20-  94.20    64.94
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1163420 10.0000    9.748  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1196108                   73.79- 133.79   102.81
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  113 2,2,4-Trimethylpentane                          CAS #: 540-84-1
 16.111  16.111 (1.047)    56    985504 10.0000    8.572  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   2937963                  276.72- 336.72   298.12
 16.111  16.111 (1.047)    41   1174002                   82.40- 142.40   119.13
-------------------------------------------------------------------------------
  116 Benzene                                         CAS #: 71-43-2
 16.183  16.183 (0.967)    78    922183 10.0000    8.008  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    223482                    0.00-  53.88    24.23
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                           CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    223564 5.00000    5.328  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67    103784                   17.94-  77.94    46.42
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                          CAS #: 994-05-8
 16.207  16.207 (0.968)    87    287138 10.0000    8.912  80.00- 120.00   100.00
 16.207  16.207 (0.968)    73   1012166                  321.94- 381.94   352.50
 16.207  16.207 (0.968)    55    400379                  100.72- 160.72   139.44
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                              CAS #: 107-06-2
 16.303  16.303 (0.974)    62    693055 10.0000    8.482  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    207663                    0.66-  60.66    29.96
-------------------------------------------------------------------------------
  121 Heptane                                         CAS #: 142-82-5
 16.352  16.352 (0.977)    57    420435 10.0000    8.448  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    138188                    3.00-  63.00    32.87
 16.352  16.352 (0.977)    43   1012394                  207.00- 267.00   240.80
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    480550 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69145                    0.00-  44.91    14.39
-------------------------------------------------------------------------------
  125 Trichloroethene                                 CAS #: 79-01-6
 17.123  17.123 (1.023)   130    556485 10.0000    8.129  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    482729                   58.18- 118.18    86.75
 17.123  17.123 (1.023)    97    306878                   26.25-  86.25    55.15
-------------------------------------------------------------------------------
  127 Methylcyclohexane                               CAS #: 108-87-2
 17.339  17.339 (1.036)    83    534806 10.0000    8.281  80.00- 120.00   100.00
 17.339  17.339 (1.036)    55    716639                   98.42- 158.42   134.00
 17.339  17.339 (1.036)    56    223757                    9.03-  69.03    41.84
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                             CAS #: 78-87-5
 17.556  17.556 (1.049)    63    378136 10.0000    7.705  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    278269                   44.02- 104.02    73.59
 17.556  17.556 (1.049)    41    395958                   65.46- 125.46   104.71
-------------------------------------------------------------------------------
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	227714	10.0000	8.462	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	224629			62.58- 122.58	98.65
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	884252	10.0000	8.372	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	582942			36.66- 96.66	65.92
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	577952	10.0000	8.354	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	182887			3.68- 63.68	31.64
18.805	18.805 (1.124)	39	569688			62.50- 122.50	98.57
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1387047	10.0000	9.013	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	388332			0.00- 59.19	28.00
18.984	18.984 (1.134)	85	138884			0.00- 40.34	10.01
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	456135	5.00000	4.933	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	52674			0.00- 41.31	11.55
19.275	19.275 (1.152)	100	299700			38.24- 98.24	65.70
147 Toluene					CAS #: 108-88-3		
19.410	19.410 (1.160)	91	1174439	10.0000	8.182	80.00- 120.00	100.00
19.410	19.410 (1.160)	92	663583			28.10- 88.10	56.50
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	567213	10.0000	8.654	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	193425			3.36- 63.36	34.10
19.998	19.998 (0.903)	39	484286			49.78- 109.78	85.38
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	426376	10.0000	8.916	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	263786			32.24- 92.24	61.87
20.438	20.438 (0.922)	83	333234			48.02- 108.02	78.15
156 Tetrachloroethene					CAS #: 127-18-4		
20.602	20.602 (0.930)	166	694402	10.0000	8.683	80.00- 120.00	100.00
20.602	20.602 (0.930)	129	562951			49.93- 109.93	81.07
20.602	20.602 (0.930)	131	556954			47.75- 107.75	80.21
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.937)	58	481262	10.0000	9.353	80.00- 120.00	100.00
20.767	20.767 (0.937)	43	1284073			225.15- 285.15	266.81
20.767	20.767 (0.937)	100	80511			0.00- 47.79	16.73

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                        CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1075817 10.0000    8.972  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    818622                   46.75- 106.75    76.09
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                     CAS #: 106-93-4
 21.454  21.454 (0.968)   107    708401 10.0000    8.804  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    687428                   67.69- 127.69    97.04
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                            CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    431542 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    212754                   19.53-  79.53    49.30
-------------------------------------------------------------------------------
  165 Chlorobenzene                               CAS #: 108-90-7
 22.218  22.218 (1.003)   112   1030620 10.0000    8.306  80.00- 120.00   100.00
 22.218  22.218 (1.003)   114    334410                    1.36-  61.36    32.45
 22.218  22.218 (1.003)    77    573730                   24.91-  84.91    55.67
-------------------------------------------------------------------------------
  167 Ethyl Benzene                               CAS #: 100-41-4
 22.281  22.281 (1.006)   106    500126 10.0000    8.668  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91   1551236                  280.28- 340.28   310.17
-------------------------------------------------------------------------------
  169 m,p-Xylene                                  CAS #: 108-38-3
 22.467  22.467 (1.014)   106    598883 10.0000    9.319  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1166045                  173.14- 233.14   194.70
-------------------------------------------------------------------------------
  171 o-Xylene                                    CAS #: 95-47-6
 23.068  23.068 (1.041)   106    528624 10.0000    8.857  80.00- 120.00   100.00
 23.068  23.068 (1.041)    91   1147489                  184.94- 244.94   217.07
-------------------------------------------------------------------------------
  172 Styrene                                     CAS #: 100-42-5
 23.110  23.110 (1.043)   104    886728 10.0000    8.909  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    485662                   23.72-  83.72    54.77
-------------------------------------------------------------------------------
  174 Bromoform                                   CAS #: 75-25-2
 23.452  23.452 (1.058)   173    974509 10.0000    9.106  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    508399                   22.28-  82.28    52.17
-------------------------------------------------------------------------------
  175 Cumene                                      CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1776772 10.0000    9.099  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    480137                    0.00-  57.53    27.02
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                        CAS #: 460-00-4
 23.856  23.856 (1.077)   174    256671 5.00000    5.092  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    287912                   81.42- 141.42   112.17
 23.856  23.856 (1.077)   176    243338                   66.35- 126.35    94.81
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	652607	10.0000	8.509	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	441853			38.02- 98.02	67.71
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1548712	10.0000	8.905	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	404793			0.00- 56.42	26.14
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	1271572	10.0000	9.485	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	395318			0.46- 60.46	31.09
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	963223	10.0000	8.910	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	467821			18.43- 78.43	48.57
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	725816	10.0000	8.499	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	344059			16.45- 76.45	47.40
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.135)	146	782171	10.0000	8.413	80.00- 120.00	100.00
25.156	25.156 (1.135)	148	505728			33.61- 93.61	64.66
25.156	25.156 (1.135)	111	314124			9.29- 69.29	40.16
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.246	25.246 (1.139)	146	741437	10.0000	8.416	80.00- 120.00	100.00
25.268	25.268 (1.140)	148	473048			34.28- 94.28	63.80
25.246	25.246 (1.139)	111	273160			7.48- 67.48	36.84
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1036288	10.0000	8.516	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	241680			0.00- 53.55	23.32
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	729218	10.0000	8.497	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	467392			33.54- 93.54	64.09
25.672	25.672 (1.159)	111	296651			10.04- 70.04	40.68
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	318088	10.0000	8.609	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	300427			66.37- 126.37	94.45
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	617664	10.0000	9.036	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	390718			32.58- 92.58	63.26

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.251)	128	59194	1.00000	0.7929	80.00- 120.00	100.00
27.712	27.712 (1.251)	127	7530			0.00- 41.67	12.72
M 239 Total Xylene					CAS #: 1330-20-7		
			1127507	10.0000	18.176		

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071202.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 12-JUL-2017
Calibration Time: 15:33
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	123461	74077	172845	134296	8.78
123 1,4-Difluorobenze	435477	261286	609668	480550	10.35
163 Chlorobenzene-d5	398146	238888	557404	431542	8.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.18	21.85	22.51	22.16	-0.09

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071202.d

Date : 12-JUL-2017 07:45

Client ID: CCV

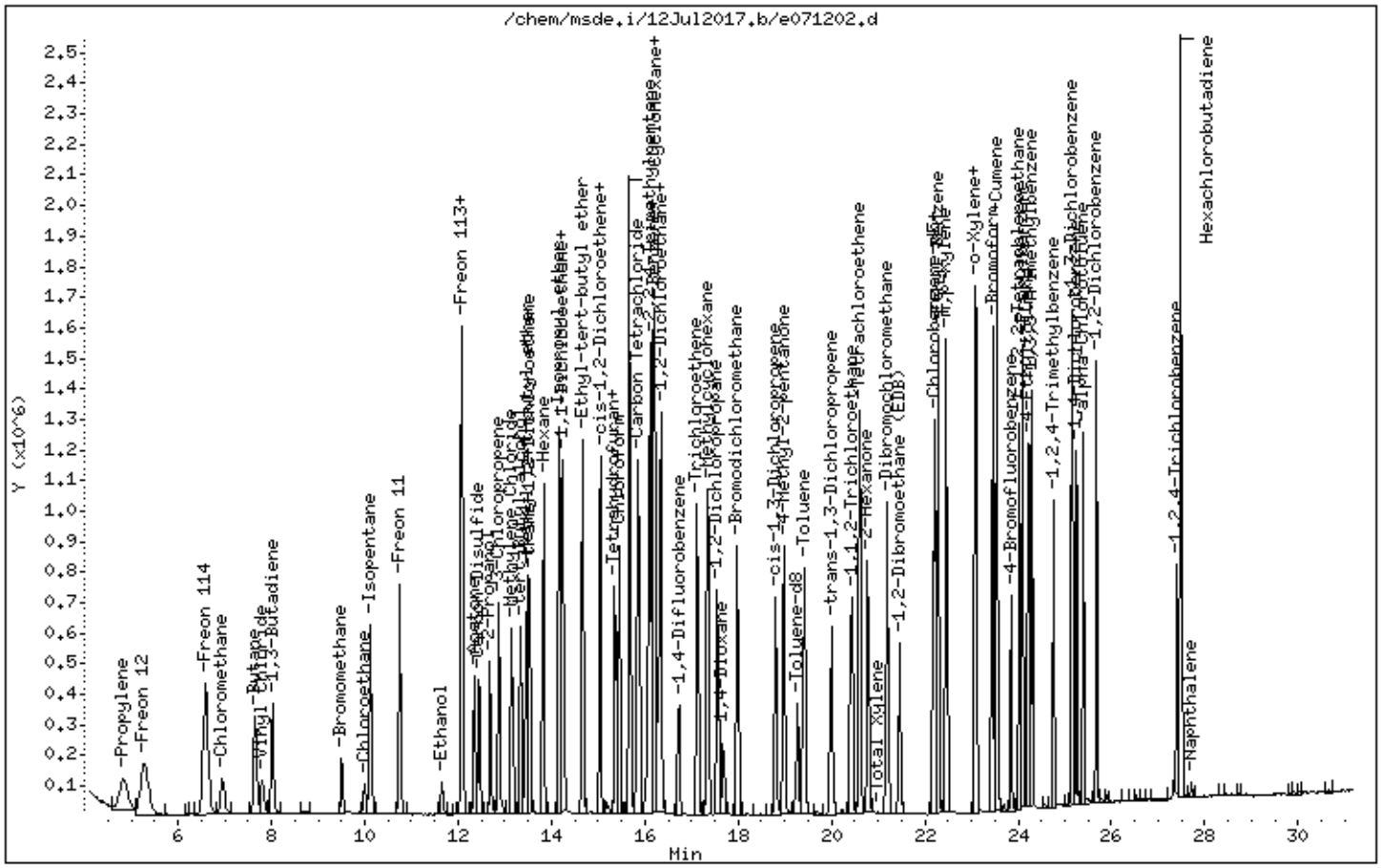
Instrument: msde.i

Sample Info: 50mL# 2850-222

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: CCV

Lab ID#: 1707045R3-09D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071202sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 07:45 AM**	

Compound	**%Recovery**
Vinyl Chloride	85
1,1-Dichloroethene	80
trans-1,2-Dichloroethene	84
cis-1,2-Dichloroethene	82
Benzene	75
1,2-Dichloroethane	86
Trichloroethene	77
Toluene	81
1,1,2-Trichloroethane	85
Tetrachloroethene	82

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 12-JUL-2017 07:45
Lab File ID: e071202sim.d Init. Cal. Date(s): 03-JUL-2017 03-JUL-2017
Analysis Type: AIR Init. Cal. Times: 10:32 19:26
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m

	COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Freon 12	4.48829	3.91803	0.010	12.70557	30.00000	Averaged
	2 Freon 114	3.40706	2.87797	0.010	15.52934	30.00000	Averaged
	3 Chloromethane	1.93271	1.69104	0.010	12.50442	30.00000	Averaged
	4 Vinyl Chloride	1.37281	1.16554	0.010	15.09785	30.00000	Averaged
	5 Chloroethane	0.63471	0.53536	0.010	15.65283	30.00000	Averaged
	8 1,1-Dichloroethene	0.92391	0.73654	0.010	20.27980	30.00000	Averaged
	9 Methyl tert-butyl ether	3.51772	3.14527	0.010	10.58783	30.00000	Averaged
	10 trans-1,2-Dichloroethene	0.95420	0.80262	0.010	15.88553	30.00000	Averaged
	11 1,1-Dichloroethane	3.00518	2.56421	0.010	14.67357	30.00000	Averaged
	12 cis-1,2-Dichloroethene	1.04544	0.85556	0.010	18.16247	30.00000	Averaged
	14 Chloroform	3.64605	2.99585	0.010	17.83304	30.00000	Averaged
	15 1,1,1-Trichloroethane	4.45480	3.77931	0.010	15.16327	30.00000	Averaged
	16 Carbon Tetrachloride	4.75342	4.29259	0.010	9.69475	40.00000	Averaged
	17 Benzene	1.19517	0.89659	0.010	24.98216	30.00000	Averaged
$	18 1,2-Dichloroethane-d4	1.60494	1.60371	0.010	0.07649	30.00000	Averaged
	19 1,2-Dichloroethane	0.86090	0.74306	0.010	13.68793	30.00000	Averaged
	21 Trichloroethene	0.74614	0.57367	0.010	23.11500	30.00000	Averaged
$	22 Toluene-d8	0.80413	0.81444	0.010	-1.28254	30.00000	Averaged
	23 Toluene	1.37165	1.11631	0.010	18.61583	30.00000	Averaged
	25 1,1,2-Trichloroethane	0.57848	0.48989	0.010	15.31496	30.00000	Averaged
	26 Tetrachloroethene	0.93913	0.77145	0.010	17.85451	30.00000	Averaged
	27 1,2-Dibromoethane (EDB)	0.96607	0.82354	0.010	14.75343	30.00000	Averaged
	30 Ethyl Benzene	0.59040	0.52457	0.010	11.14988	30.00000	Averaged
	31 m,p-Xylene	0.67621	0.61159	0.010	9.55641	30.00000	Averaged
	32 o-Xylene	0.61397	0.55228	0.010	10.04717	30.00000	Averaged
$	33 4-Bromofluorobenzene	0.60242	0.61753	0.010	-2.50866	30.00000	Averaged
	34 1,1,2,2-Tetrachloroethane	0.90089	0.74178	0.010	17.66181	30.00000	Averaged
	36 1,4-Dichlorobenzene	0.99964	0.87246	0.010	12.72232	30.00000	Averaged
	38 Naphthalene	0.80901	0.63526	0.010	21.47656	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071202sim.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 12-JUL-2017 07:45
Operator : sw Inst ID: msde.i
Smp Info : 50mL# 2850-222
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 12-Jul-2017 18:02 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1123401	10.0000	8.729	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	363727			2.36- 62.36	32.38
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	825188	10.0000	8.447	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	265125			2.09- 62.09	32.13
3 Chloromethane					CAS #: 74-87-3		
6.969	6.969 (0.452)	50	484865	10.0000	8.750	80.00- 120.00	100.00
6.969	6.969 (0.452)	52	144226			0.98- 60.98	29.75
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	334192	10.0000	8.490	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	96001			0.00- 58.64	28.73
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	153502	10.0000	8.435	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	46690			0.36- 60.36	30.42

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.113  12.113 (0.786)    98    211185 10.0000    7.972  80.00- 120.00   100.00
 12.094  12.094 (0.785)    61    721654                  300.85- 360.85   341.72
 12.113  12.113 (0.786)    96    332365                  126.45- 186.45   157.38
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73    901831 10.0000    8.941  80.00- 120.00   100.00
 13.465  13.465 (0.874)    57    264968                    0.00-  59.46    29.38
 13.465  13.465 (0.874)    41    324575                    3.65-  63.65    35.99
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98    230133 10.0000    8.411  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61    641304                  242.34- 302.34   278.67
 13.547  13.547 (0.879)    96    357744                  125.09- 185.09   155.45
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63    735227 10.0000    8.533  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    223388                    0.54-  60.54    30.38
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98    245312 10.0000    8.184  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61    627840                  222.17- 282.17   255.94
 15.060  15.060 (0.978)    96    378672                  125.16- 185.16   154.36
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    143363 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    110486                   47.63- 107.63    77.07
 15.374  15.374 (1.000)    49    377134                  150.43- 210.43   263.06
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.436  15.436 (1.002)    83    858987 10.0000    8.217  80.00- 120.00   100.00
 15.436  15.436 (1.002)    85    586629                   38.49-  98.49    68.29
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97   1083626 10.0000    8.484  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99    706985                   35.44-  95.44    65.24
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119   1230796 10.0000    9.030  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117   1263448                   72.67- 132.67   102.65
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78    926739 10.0000    7.502  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    220114                    0.00-  53.68    23.75
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    229913 5.00000    4.996  80.00- 120.00   100.00
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    109561                   19.71-  79.71    47.65
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    768050 10.0000    8.631  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    237240                    0.82-  60.82    30.89
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    516813 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     75005                    0.00-  44.62    14.51
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    592956 10.0000    7.688  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    524555                   57.80- 117.80    88.46
 17.136  17.136 (1.024)    97    341041                   26.87-  86.87    57.52
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    420914 5.00000    5.064  80.00- 120.00   100.00
 19.267  19.267 (1.152)    70     48369                    0.00-  41.18    11.49
 19.289  19.289 (1.153)   100    274585                   35.44-  95.44    65.24
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.423  19.423 (1.161)    91   1153843 10.0000    8.138  80.00- 120.00   100.00
 19.423  19.423 (1.161)    92    671277                   28.44-  88.44    58.18
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    460929 10.0000    8.468  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    288663                   32.77-  92.77    62.63
 20.424  20.424 (0.921)    83    354380                   47.27- 107.27    76.88
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    725854 10.0000    8.214  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    595915                   50.99- 110.99    82.10
 20.616  20.616 (0.930)   131    595732                   51.53- 111.53    82.07
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    774860 10.0000    8.525  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    772070                   69.74- 129.74    99.64
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    470445 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    203501                   12.99-  72.99    43.26
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106    493566 10.0000    8.885  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91   1545513                  281.21- 341.21   313.13
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                      CAS #: 108-38-3
 22.481  22.481 (1.014)   106    575438 10.0000    9.044  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91   1175488                  173.96- 233.96   204.28
-------------------------------------------------------------------------------
   32 o-Xylene                                        CAS #: 95-47-6
 23.082  23.082 (1.041)   106    519634 10.0000    8.995  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91   1119229                  183.85- 243.85   215.39
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.869  23.869 (1.077)   174    290513 5.00000    5.125  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    301748                   73.66- 133.66   103.87
 23.869  23.869 (1.077)   176    281505                   67.29- 127.29    96.90
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                       CAS #: 79-34-5
 24.026  24.026 (1.084)    83    697931 10.0000    8.234  80.00- 120.00   100.00
 24.026  24.026 (1.084)    85    481143                   38.95-  98.95    68.94
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                             CAS #: 106-46-7
 25.260  25.260 (1.139)   146    820892 10.0000    8.728  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    532695                   34.91-  94.91    64.89
 25.260  25.260 (1.139)   111    304594                    6.86-  66.86    37.11
-------------------------------------------------------------------------------
   38 Naphthalene                                     CAS #: 91-20-3
 27.726  27.726 (1.251)   128     59771 1.00000   0.7852  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127      7757                    0.00-  42.71    12.98
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071202sim.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	143363	86018	200708	143363	0.00
20 1,4-Difluorobenze	516813	310088	723538	516813	0.00
28 Chlorobenzene-d5	470445	282267	658623	470445	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071202sim.d

Date : 12-JUL-2017 07:45

Client ID: CCV

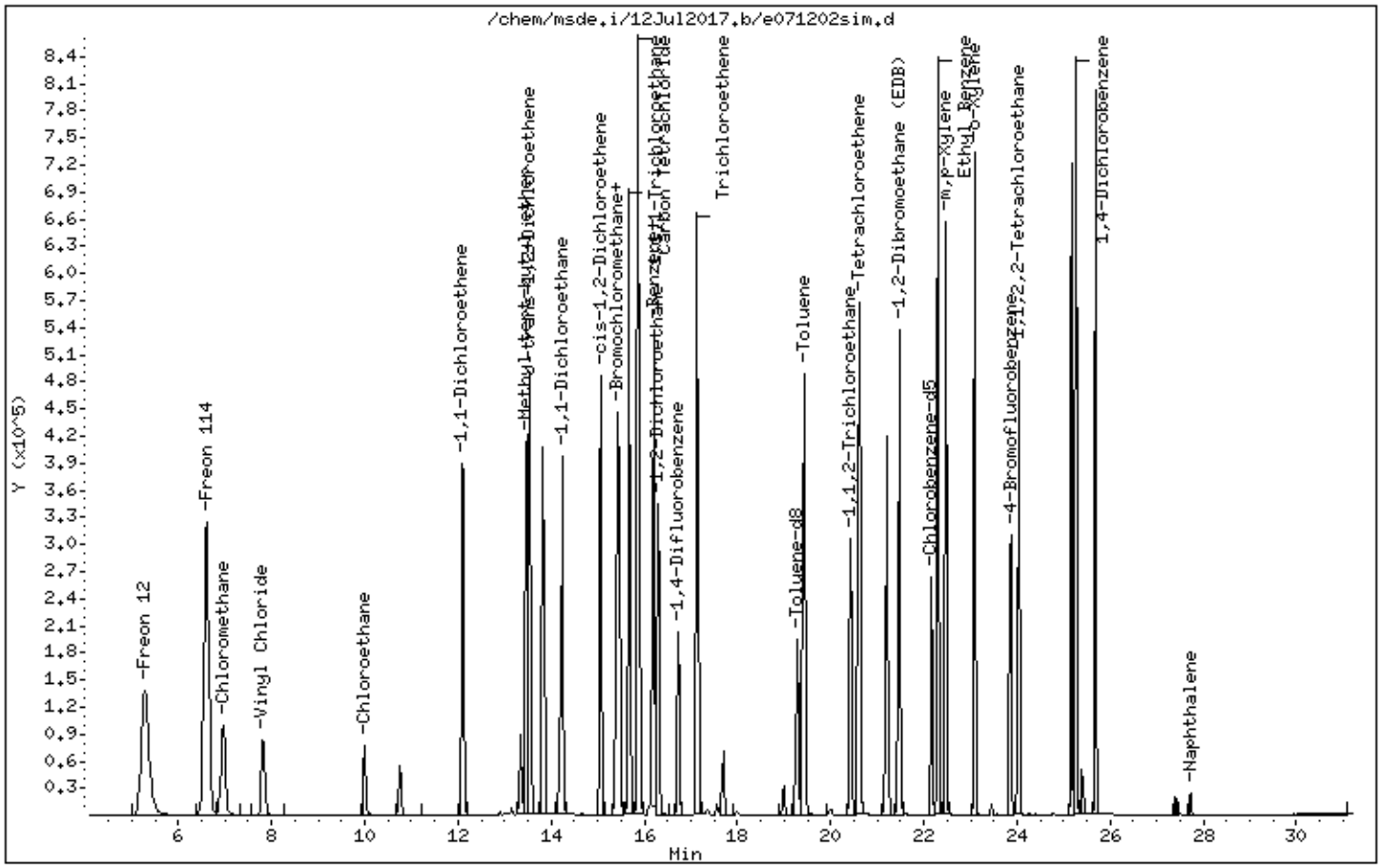
Instrument: msde.i

Sample Info: 50mL# 2850-222

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: CCV

Lab ID#: 1707045R3-09E

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 07:57 AM**	

Compound	**%Recovery**
Methylene Chloride	84

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 13-JUL-2017 07:57
Lab File ID: e071302.d Init. Cal. Date(s): 03-JUL-2017 12-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 16:15
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/13Jul2017.b/e17l0703b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	%D / %DRIFT	MAX	CURVE TYPE
9 Propylene	1.74428	1.58357	0.010	9.21360	40.00000		Averaged
11 Freon 12	4.37666	3.97204	0.010	9.24495	30.00000		Averaged
15 Freon 114	3.21797	2.82791	0.010	12.12142	30.00000		Averaged
17 Chloromethane	1.83519	1.79340	0.010	2.27718	30.00000		Averaged
23 Butane	0.33701	0.28892	0.010	14.27074	40.00000		Averaged
25 Vinyl Chloride	1.42235	1.16388	0.010	18.17222	30.00000		Averaged
26 1,3-Butadiene	1.42908	1.23222	0.010	13.77550	30.00000		Averaged
29 Bromomethane	1.01861	0.76500	0.010	24.89776	30.00000		Averaged
30 Chloroethane	0.58955	0.50049	0.010	15.10566	30.00000		Averaged
31 Isopentane	1.30819	1.14256	0.010	12.66096	40.00000		Averaged
35 Freon 11	4.99013	4.60978	0.010	7.62202	30.00000		Averaged
42 Ethanol	0.82514	0.80151	0.010	2.86400	30.00000		Averaged
49 Freon 113	3.13025	2.66763	0.010	14.77910	30.00000		Averaged
50 1,1-Dichloroethene	0.87754	0.74689	0.010	14.88874	30.00000		Averaged
52 Acetone	0.85556	0.73396	0.010	14.21264	30.00000		Averaged
56 Carbon Disulfide	3.67127	3.22426	0.010	12.17594	30.00000		Averaged
57 2-Propanol	3.96831	3.59876	0.010	9.31240	30.00000		Averaged
58 3-Chloropropene	0.73868	0.62241	0.010	15.74130	30.00000		Averaged
66 Methylene Chloride	1.19206	0.99829	0.010	16.25518	30.00000		Averaged
71 tert-Butyl alcohol	3.89103	3.52495	0.010	9.40835	40.00000		Averaged
72 Methyl tert-butyl ether	4.18093	3.62239	0.010	13.35930	30.00000		Averaged
73 trans-1,2-Dichloroethene	0.93581	0.79188	0.010	15.38035	30.00000		Averaged
78 Hexane	2.79648	2.45584	0.010	12.18101	30.00000		Averaged
83 Isopropyl ether	7.65346	7.11157	0.010	7.08033	40.00000		Averaged
82 1,1-Dichloroethane	2.97929	2.58173	0.010	13.34406	30.00000		Averaged
86 Vinyl Acetate	0.35178	0.31582	0.010	10.22262	40.00000		Averaged
88 Ethyl-tert-butyl ether	5.91527	5.39198	0.010	8.84652	40.00000		Averaged
91 cis-1,2-Dichloroethene	0.98070	0.84848	0.010	13.48192	30.00000		Averaged
92 2-Butanone	0.59774	0.54451	0.010	8.90588	30.00000		Averaged
99 Tetrahydrofuran	2.61910	2.40394	0.010	8.21517	30.00000		Averaged
100 Chloroform	3.49793	3.09673	0.010	11.46962	30.00000		Averaged
102 Cyclohexane	1.76858	1.56388	0.010	11.57383	30.00000		Averaged
103 1,1,1-Trichloroethane	4.31725	3.81101	0.010	11.72599	30.00000		Averaged
106 Carbon Tetrachloride	4.44327	4.40398	0.010	0.88425	30.00000		Averaged
113 2,2,4-Trimethylpentane	4.28050	3.79961	0.010	11.23431	30.00000		Averaged
116 Benzene	1.19814	0.95626	0.010	20.18809	30.00000		Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 13-JUL-2017 07:57
Lab File ID: e071302.d Init. Cal. Date(s): 03-JUL-2017 12-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 16:15
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/13Jul2017.b/e17l0703b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.56215	1.76685	0.010	-13.10355	30.00000	Averaged
119 tert-Amyl methyl ether	0.33525	0.29554	0.010	11.84615	40.00000	Averaged
120 1,2-Dichloroethane	0.85015	0.74036	0.010	12.91432	30.00000	Averaged
121 Heptane	0.51782	0.43946	0.010	15.13218	30.00000	Averaged
125 Trichloroethene	0.71229	0.57537	0.010	19.22239	30.00000	Averaged
127 Methylcyclohexane	0.67195	0.56881	0.010	15.34940	40.00000	Averaged
132 1,2-Dichloropropane	0.51061	0.39581	0.010	22.48376	30.00000	Averaged
136 1,4-Dioxane	0.27998	0.23715	0.010	15.29735	30.00000	Averaged
138 Bromodichloromethane	1.09898	0.91985	0.010	16.30039	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.71981	0.60309	0.010	16.21580	30.00000	Averaged
145 4-Methyl-2-pentanone	1.60120	1.43674	0.010	10.27131	30.00000	Averaged
$ 146 Toluene-d8	0.96200	0.97146	0.010	-0.98330	30.00000	Averaged
147 Toluene	1.49346	1.21785	0.010	18.45484	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.75938	0.65936	0.010	13.17046	30.00000	Averaged
155 1,1,2-Trichloroethane	0.55407	0.48245	0.010	12.92529	30.00000	Averaged
156 Tetrachloroethene	0.92655	0.78456	0.010	15.32434	30.00000	Averaged
158 2-Hexanone	0.59620	0.55153	0.010	7.49314	30.00000	Averaged
160 Dibromochloromethane	1.38931	1.21406	0.010	12.61440	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	0.93224	0.79995	0.010	14.19054	30.00000	Averaged
165 Chlorobenzene	1.43758	1.16858	0.010	18.71206	30.00000	Averaged
167 Ethyl Benzene	0.66853	0.56477	0.010	15.52108	30.00000	Averaged
169 m,p-Xylene	0.74457	0.66878	0.010	10.17831	30.00000	Averaged
171 o-Xylene	0.69152	0.60471	0.010	12.55249	30.00000	Averaged
172 Styrene	1.15323	1.01973	0.010	11.57551	30.00000	Averaged
174 Bromoform	1.23988	1.09841	0.010	11.40994	30.00000	Averaged
175 Cumene	2.26255	2.02827	0.010	10.35472	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.58397	0.59159	0.010	-1.30421	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	0.88862	0.72139	0.010	18.81870	30.00000	Averaged
182 Propylbenzene	2.01503	1.79786	0.010	10.77765	30.00000	Averaged
188 4-Ethyltoluene	1.55330	1.47111	0.010	5.29129	30.00000	Averaged
190 1,3,5-Trimethylbenzene	1.25251	1.12585	0.010	10.11285	30.00000	Averaged
196 1,2,4-Trimethylbenzene	0.98952	0.87904	0.010	11.16531	30.00000	Averaged
208 1,3-Dichlorobenzene	1.07716	0.90923	0.010	15.58975	30.00000	Averaged
209 1,4-Dichlorobenzene	1.02079	0.86105	0.010	15.64914	30.00000	Averaged
212 alpha-Chlorotoluene	1.40997	1.18488	0.010	15.96457	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 13-JUL-2017 07:57
Lab File ID: e071302.d Init. Cal. Date(s): 03-JUL-2017 12-JUL-2017
Analysis Type: AIR Init. Cal. Times: 14:35 16:15
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/13Jul2017.b/e17l0703b.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	0.99430	0.83201	0.010	16.32225	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.42809	0.37918	0.010	11.42395	30.00000	Averaged
227 Hexachlorobutadiene	0.79199	0.70348	0.010	11.17483	30.00000	Averaged
228 Naphthalene	0.86496	0.70965	0.010	17.95586	40.00000	Averaged
M 239 Total Xylene	++++	1.27350	0.010	++++	30.00000	Averaged <-

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /var/chem/msde.i/13Jul2017.b/e071302.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 13-JUL-2017 07:57
Operator : sw Inst ID: msde.i
Smp Info : 50mL# 2850-222
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:30 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.811	4.811 (0.313)	41	401423	10.0000	9.079	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	258403			36.86- 96.86	64.37
4.811	4.811 (0.313)	39	313885			46.23- 106.23	78.19
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1006880	10.0000	9.076	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	323421			1.93- 61.93	32.12
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	716852	10.0000	8.788	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	232250			1.36- 61.36	32.40
6.594	6.594 (0.428)	85	862400			85.72- 145.72	120.30
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	454613	10.0000	9.772	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	130788			1.40- 61.40	28.77
23 Butane					CAS #: 106-97-8		
7.640	7.640 (0.496)	58	73239	10.0000	8.573	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	737139			939.22- 999.22	1006.48
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	295034	10.0000	8.183	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	84328			0.00- 59.78	28.58
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	312357	10.0000	8.622	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	391642			90.63- 150.63	125.38
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	193922	10.0000	7.510	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	186023			63.10- 123.10	95.93
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	126871	10.0000	8.489	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	59401			13.74- 73.74	46.82
9.986	9.986 (0.649)	66	38427			0.11- 60.11	30.29
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	289630	10.0000	8.734	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	531341			149.05- 209.05	183.46
10.119	10.119 (0.657)	42	461567			122.74- 182.74	159.36
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1168542	10.0000	9.238	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	754053			35.39- 95.39	64.53
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	203177	10.0000	9.714	80.00- 120.00	100.00
11.661	11.661 (0.758)	46	73320			10.30- 70.30	36.09
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	676223	10.0000	8.522	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	428867			33.74- 93.74	63.42
12.081	12.081 (0.785)	101	737203			78.29- 138.29	109.02
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	189330	10.0000	8.511	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	653533			307.46- 367.46	345.18
12.100	12.100 (0.786)	96	295724			127.87- 187.87	156.20
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	186053	10.0000	8.579	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	867120			407.61- 467.61	466.06

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.442	12.442 (0.808)	76	817323	10.0000	8.782	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	912257	10.0000	9.069	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	204024			0.00- 50.43	22.36
12.690	12.690 (0.824)	59	25012			0.00- 33.00	2.74
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	157775	10.0000	8.426	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	908734			511.05- 571.05	575.97
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	253059	10.0000	8.374	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	606345			205.99- 265.99	239.61
13.149	13.149 (0.854)	51	181881			40.46- 100.46	71.87
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.341	13.341 (0.867)	59	893546	10.0000	9.059	80.00- 120.00	100.00
13.341	13.341 (0.867)	41	257608			0.00- 56.56	28.83
13.341	13.341 (0.867)	57	101199			0.00- 41.82	11.33
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	918246	10.0000	8.664	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	282464			0.79- 60.79	30.76
13.478	13.478 (0.876)	41	357766			7.43- 67.43	38.96
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	200736	10.0000	8.462	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	572177			247.42- 307.42	285.04
13.533	13.533 (0.879)	96	320375			122.37- 182.37	159.60
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	622536	10.0000	8.782	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	527681			51.15- 111.15	84.76
13.835	13.835 (0.899)	86	73970			0.00- 41.56	11.88
83 Isopropyl ether					CAS #: 108-20-3		
14.165	14.165 (0.920)	45	1802727	10.0000	9.292	80.00- 120.00	100.00
14.165	14.165 (0.920)	87	267414			0.00- 45.86	14.83
14.165	14.165 (0.920)	59	141608			0.00- 38.07	7.86
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.220	14.220 (0.924)	63	654449	10.0000	8.666	80.00- 120.00	100.00
14.220	14.220 (0.924)	65	188765			0.00- 59.55	28.84

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	80058	10.0000	8.978	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	133704			118.75- 178.75	167.01
14.247	14.247 (0.926)	43	1524696			1798.00-1858.00	1904.49
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
14.666	14.666 (0.953)	59	1366823	10.0000	9.115	80.00- 120.00	100.00
14.666	14.666 (0.953)	87	445090			2.81- 62.81	32.56
14.666	14.666 (0.953)	41	358699			0.00- 53.89	26.24
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	215083	10.0000	8.652	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	558739			229.72- 289.72	259.78
15.047	15.047 (0.978)	96	330208			126.60- 186.60	153.53
92 2-Butanone					CAS #: 78-93-3		
15.028	15.028 (0.976)	72	138028	10.0000	9.109	80.00- 120.00	100.00
15.028	15.028 (0.976)	43	1114540			750.92- 810.92	807.47
15.028	15.028 (0.976)	57	69750			19.16- 79.16	50.53
99 Tetrahydrofuran					CAS #: 109-99-9		
15.360	15.360 (0.998)	42	609379	10.0000	9.178	80.00- 120.00	100.00
15.360	15.360 (0.998)	71	120960			0.00- 50.51	19.85
15.360	15.360 (0.998)	72	131141			0.00- 51.95	21.52
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	126746	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	101594			46.85- 106.85	80.16
15.391	15.391 (1.000)	49	328019			226.12- 286.12	258.80
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	784996	10.0000	8.853	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	515111			35.38- 95.38	65.62
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	396432	10.0000	8.843	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	698975			148.59- 208.59	176.32
15.669	15.669 (1.018)	41	498852			91.63- 151.63	125.84
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	966060	10.0000	8.827	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	621078			34.20- 94.20	64.29
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	1116374	10.0000	9.912	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	1168605			73.79- 133.79	104.68

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	963171	10.0000	8.876	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	2842581			276.72- 336.72	295.13
16.111	16.111 (1.047)	41	1135637			82.40- 142.40	117.91
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	889151	10.0000	7.981	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	213777			0.00- 53.88	24.04
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	223941	5.00000	5.655	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	109684			17.94- 77.94	48.98
119 tert-Amyl methyl ether					CAS #: 994-05-8		
16.207	16.207 (0.968)	87	274797	10.0000	8.815	80.00- 120.00	100.00
16.207	16.207 (0.968)	73	973909			321.94- 381.94	354.41
16.207	16.207 (0.968)	55	375929			100.72- 160.72	136.80
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.303	16.303 (0.974)	62	688400	10.0000	8.708	80.00- 120.00	100.00
16.303	16.303 (0.974)	64	206088			0.66- 60.66	29.94
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	408625	10.0000	8.487	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	133257			3.00- 63.00	32.61
16.352	16.352 (0.977)	43	998967			207.00- 267.00	244.47
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	464912	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	72946			0.00- 44.91	15.69
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	534993	10.0000	8.078	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	477461			58.18- 118.18	89.25
17.123	17.123 (1.023)	97	293835			26.25- 86.25	54.92
127 Methylcyclohexane					CAS #: 108-87-2		
17.339	17.339 (1.036)	83	528890	10.0000	8.465	80.00- 120.00	100.00
17.339	17.339 (1.036)	55	683510			98.42- 158.42	129.23
17.339	17.339 (1.036)	56	209960			9.03- 69.03	39.70
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	368029	10.0000	7.752	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	272204			44.02- 104.02	73.96
17.556	17.556 (1.049)	41	385248			65.46- 125.46	104.68

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	220507	10.0000	8.470	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	209368			62.58- 122.58	94.95
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	855294	10.0000	8.370	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	575435			36.66- 96.66	67.28
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	560768	10.0000	8.378	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	186146			3.68- 63.68	33.19
18.805	18.805 (1.124)	39	561371			62.50- 122.50	100.11
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1335912	10.0000	8.973	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	377170			0.00- 59.19	28.23
18.984	18.984 (1.134)	85	134971			0.00- 40.34	10.10
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	451644	5.00000	5.049	80.00- 120.00	100.00
19.275	19.275 (1.152)	70	52819			0.00- 41.31	11.69
19.275	19.275 (1.152)	100	301224			38.24- 98.24	66.70
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	1132383	10.0000	8.154	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	645135			28.10- 88.10	56.97
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	560469	10.0000	8.683	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	188126			3.36- 63.36	33.57
19.998	19.998 (0.903)	39	473132			49.78- 109.78	84.42
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	410092	10.0000	8.707	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	258588			32.24- 92.24	63.06
20.438	20.438 (0.922)	83	321735			48.02- 108.02	78.45
156 Tetrachloroethene					CAS #: 127-18-4		
20.603	20.603 (0.930)	166	666889	10.0000	8.468	80.00- 120.00	100.00
20.603	20.603 (0.930)	129	550830			49.93- 109.93	82.60
20.603	20.603 (0.930)	131	549271			47.75- 107.75	82.36
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.937)	58	468807	10.0000	9.251	80.00- 120.00	100.00
20.767	20.767 (0.937)	43	1229453			225.15- 285.15	262.25
20.795	20.795 (0.939)	100	82736			0.00- 47.79	17.65

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1031967 10.0000    8.738  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    793924                   46.75- 106.75    76.93
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.454  21.454 (0.968)   107    679974 10.0000    8.581  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    672351                   67.69- 127.69    98.88
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    425008 5.00000           80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    209277                   19.53-  79.53    49.24
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.219  22.219 (1.003)   112    993309 10.0000    8.129  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    322175                    1.36-  61.36    32.43
 22.219  22.219 (1.003)    77    555777                   24.91-  84.91    55.95
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    480063 10.0000    8.448  80.00- 120.00   100.00
 22.281  22.281 (1.006)    91   1492292                  280.28- 340.28   310.85
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    568476 10.0000    8.982  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1150537                  173.14- 233.14   202.39
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    514017 10.0000    8.745  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1121610                  184.94- 244.94   218.20
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104    866790 10.0000    8.842  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    467599                   23.72-  83.72    53.95
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173    933667 10.0000    8.859  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    488276                   22.28-  82.28    52.30
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1724062 10.0000    8.964  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    478165                    0.00-  57.53    27.73
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    251429 5.00000    5.065  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    281631                   81.42- 141.42   112.01
 23.856  23.856 (1.077)   176    246039                   66.35- 126.35    97.86
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	613193	10.0000	8.118	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	418007			38.02- 98.02	68.17
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1528208	10.0000	8.922	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	400040			0.00- 56.42	26.18
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	1250467	10.0000	9.471	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	379769			0.46- 60.46	30.37
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	956989	10.0000	8.989	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	475994			18.43- 78.43	49.74
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	747196	10.0000	8.883	80.00- 120.00	100.00
24.753	24.753 (1.117)	120	344044			16.45- 76.45	46.04
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.135)	146	772861	10.0000	8.441	80.00- 120.00	100.00
25.156	25.156 (1.135)	148	500357			33.61- 93.61	64.74
25.156	25.156 (1.135)	111	299721			9.29- 69.29	38.78
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	731904	10.0000	8.435	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	468676			34.28- 94.28	64.04
25.246	25.246 (1.139)	111	279126			7.48- 67.48	38.14
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1007165	10.0000	8.404	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	235376			0.00- 53.55	23.37
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	707219	10.0000	8.368	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	456774			33.54- 93.54	64.59
25.672	25.672 (1.159)	111	288801			10.04- 70.04	40.84
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	322310	10.0000	8.858	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	306834			66.37- 126.37	95.20
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	597973	10.0000	8.882	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	385054			32.58- 92.58	64.39

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.251)	128	60321	1.00000	0.8204	80.00- 120.00	100.00
27.712	27.712	(1.251)	127	7998			0.00- 41.67	13.26
M 239 Total Xylene						CAS #: 1330-20-7		
				1082493	10.0000	17.727		

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071302.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	126746	0.00
123 1,4-Difluorobenze	464912	278947	650877	464912	0.00
163 Chlorobenzene-d5	425008	255005	595011	425008	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/13Jul2017.b/e071302.d

Date : 13-JUL-2017 07:57

Client ID: CCV

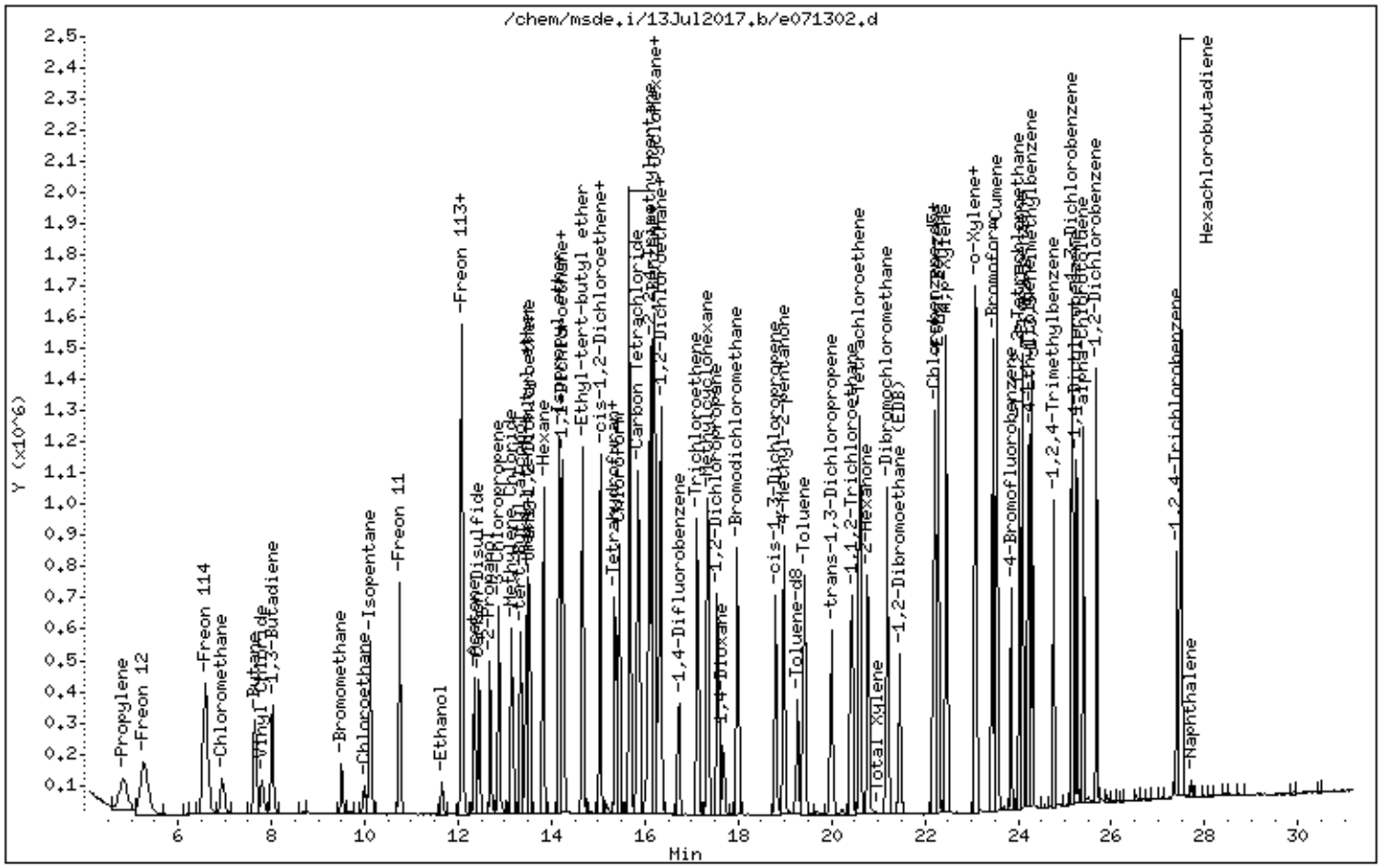
Instrument: msde.i

Sample Info: 50mL# 2850-222

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1707045R3-09F

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071302sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 07:57 AM**	

Compound	**%Recovery**
Vinyl Chloride	84
1,1-Dichloroethene	78
trans-1,2-Dichloroethene	82
cis-1,2-Dichloroethene	79
Benzene	72
1,2-Dichloroethane	84
Trichloroethene	75
Toluene	79
1,1,2-Trichloroethane	83
Tetrachloroethene	81

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 13-JUL-2017 07:57
Lab File ID: e071302sim.d Init. Cal. Date(s): 03-JUL-2017 03-JUL-2017
Analysis Type: AIR Init. Cal. Times: 10:32 19:26
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m

	COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	1 Freon 12	4.48829	3.85762	0.010	14.05150	30.00000	Averaged
	2 Freon 114	3.40706	2.83097	0.010	16.90885	30.00000	Averaged
	3 Chloromethane	1.93271	1.63971	0.010	15.16006	30.00000	Averaged
	4 Vinyl Chloride	1.37281	1.14930	0.010	16.28142	30.00000	Averaged
	5 Chloroethane	0.63471	0.48283	0.010	23.92913	30.00000	Averaged
	8 1,1-Dichloroethene	0.92391	0.72082	0.010	21.98146	30.00000	Averaged
	9 Methyl tert-butyl ether	3.51772	3.09354	0.010	12.05854	30.00000	Averaged
	10 trans-1,2-Dichloroethene	0.95420	0.78095	0.010	18.15662	30.00000	Averaged
	11 1,1-Dichloroethane	3.00518	2.50860	0.010	16.52431	30.00000	Averaged
	12 cis-1,2-Dichloroethene	1.04544	0.83051	0.010	20.55873	30.00000	Averaged
	14 Chloroform	3.64605	2.93773	0.010	19.42705	30.00000	Averaged
	15 1,1,1-Trichloroethane	4.45480	3.69642	0.010	17.02399	30.00000	Averaged
	16 Carbon Tetrachloride	4.75342	4.20429	0.010	11.55225	40.00000	Averaged
	17 Benzene	1.19517	0.86696	0.010	27.46113	30.00000	Averaged
$	18 1,2-Dichloroethane-d4	1.60494	1.61865	0.010	-0.85402	30.00000	Averaged
	19 1,2-Dichloroethane	0.86090	0.72352	0.010	15.95849	30.00000	Averaged
	21 Trichloroethene	0.74614	0.55845	0.010	25.15415	30.00000	Averaged
$	22 Toluene-d8	0.80413	0.81566	0.010	-1.43464	30.00000	Averaged
	23 Toluene	1.37165	1.08836	0.010	20.65337	30.00000	Averaged
	25 1,1,2-Trichloroethane	0.57848	0.48073	0.010	16.89739	30.00000	Averaged
	26 Tetrachloroethene	0.93913	0.76112	0.010	18.95472	30.00000	Averaged
	27 1,2-Dibromoethane (EDB)	0.96607	0.79510	0.010	17.69761	30.00000	Averaged
	30 Ethyl Benzene	0.59040	0.51403	0.010	12.93571	30.00000	Averaged
	31 m,p-Xylene	0.67621	0.59616	0.010	11.83857	30.00000	Averaged
	32 o-Xylene	0.61397	0.54478	0.010	11.26871	30.00000	Averaged
$	33 4-Bromofluorobenzene	0.60242	0.61843	0.010	-2.65796	30.00000	Averaged
	34 1,1,2,2-Tetrachloroethane	0.90089	0.71913	0.010	20.17578	30.00000	Averaged
	36 1,4-Dichlorobenzene	0.99964	0.87135	0.010	12.83360	30.00000	Averaged
	38 Naphthalene	0.80901	0.69820	0.010	13.69620	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /var/chem/msde.i/13Jul2017.b/e071302sim.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 13-JUL-2017 07:57
Operator : sw Inst ID: msde.i
Smp Info : 50mL# 2850-222
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 13-Jul-2017 08:30 chemist Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1095783	10.0000	8.595	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	355171			2.36- 62.36	32.41
2 Freon 114					CAS #: 76-14-2		
6.584	6.584 (0.427)	135	804155	10.0000	8.309	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	258227			2.09- 62.09	32.11
3 Chloromethane					CAS #: 74-87-3		
6.945	6.945 (0.451)	50	465771	10.0000	8.484	80.00- 120.00	100.00
6.970	6.970 (0.452)	52	143818			0.98- 60.98	30.88
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	326465	10.0000	8.372	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	93319			0.00- 58.64	28.58
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	137151	10.0000	7.607	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	42082			0.36- 60.36	30.68

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.113  12.113 (0.786)    98    204753 10.0000    7.802  80.00- 120.00   100.00
 12.094  12.094 (0.785)    61    703509                  300.85- 360.85   343.59
 12.094  12.094 (0.785)    96    322118                  126.45- 186.45   157.32
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73    878739 10.0000    8.794  80.00- 120.00   100.00
 13.465  13.465 (0.874)    57    257953                    0.00-  59.46    29.35
 13.465  13.465 (0.874)    41    314186                    3.65-  63.65    35.75
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98    221834 10.0000    8.184  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61    621990                  242.34- 302.34   280.38
 13.547  13.547 (0.879)    96    345434                  125.09- 185.09   155.72
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63    712583 10.0000    8.348  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    216123                    0.54-  60.54    30.33
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98    235912 10.0000    7.944  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61    610277                  222.17- 282.17   258.69
 15.060  15.060 (0.978)    96    366404                  125.16- 185.16   155.31
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    142028 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    110113                   47.63- 107.63    77.53
 15.374  15.374 (1.000)    49    369526                  150.43- 210.43   260.18
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.436  15.436 (1.002)    83    834481 10.0000    8.057  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85    567962                   38.49-  98.49    68.06
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97   1049992 10.0000    8.298  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99    686243                   35.44-  95.44    65.36
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119   1194257 10.0000    8.845  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117   1228952                   72.67- 132.67   102.91
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78    894720 10.0000    7.254  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    211895                    0.00-  53.68    23.68
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    229893 5.00000    5.043  80.00- 120.00   100.00
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    109181                    19.71-  79.71    47.49
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    746682 10.0000    8.404  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    229101                     0.82-  60.82    30.68
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    516009 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     75731                     0.00-  44.62    14.68
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    576331 10.0000    7.484  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    510780                    57.80- 117.80    88.63
 17.136  17.136 (1.024)    97    329866                    26.87-  86.87    57.24
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    420890 5.00000    5.072  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     48278                     0.00-  41.18    11.47
 19.289  19.289 (1.153)   100    273079                    35.44-  95.44    64.88
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91   1123205 10.0000    7.935  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92    651415                    28.44-  88.44    58.00
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    445809 10.0000    8.310  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    279497                    32.77-  92.77    62.69
 20.424  20.424 (0.921)    83    342482                    47.27- 107.27    76.82
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    705830 10.0000    8.104  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    578668                    50.99- 110.99    81.98
 20.616  20.616 (0.930)   131    582262                    51.53- 111.53    82.49
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    737337 10.0000    8.230  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    734541                    69.74- 129.74    99.62
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    463677 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    201789                    12.99-  72.99    43.52
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106    476688 10.0000    8.706  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91   1494586                   281.21- 341.21   313.54
-------------------------------------------------------------------------------
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                      CAS #: 108-38-3
 22.481  22.481 (1.014)   106    552849 10.0000    8.816  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91   1140797                  173.96- 233.96   206.35
-------------------------------------------------------------------------------
   32 o-Xylene                                        CAS #: 95-47-6
 23.082  23.082 (1.041)   106    505204 10.0000    8.873  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91   1100865                  183.85- 243.85   217.91
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.869  23.869 (1.077)   174    286750 5.00000    5.133  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    300105                   73.66- 133.66   104.66
 23.869  23.869 (1.077)   176    277821                   67.29- 127.29    96.89
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                       CAS #: 79-34-5
 24.026  24.026 (1.084)    83    666888 10.0000    7.982  80.00- 120.00   100.00
 24.049  24.049 (1.085)    85    460404                   38.95-  98.95    69.04
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                             CAS #: 106-46-7
 25.260  25.260 (1.139)   146    808051 10.0000    8.717  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    523596                   34.91-  94.91    64.80
 25.260  25.260 (1.139)   111    301959                    6.86-  66.86    37.37
-------------------------------------------------------------------------------
   38 Naphthalene                                     CAS #: 91-20-3
 27.726  27.726 (1.251)   128     64748 1.00000   0.8630  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127      8419                    0.00-  42.71    13.00
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071302sim.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: CCV
Level: LOW
Sample Type: AIR
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	142028	0.00
20 1,4-Difluorobenze	516009	309605	722413	516009	0.00
28 Chlorobenzene-d5	463677	278206	649148	463677	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/13Jul2017.b/e071302sim.d

Date : 13-JUL-2017 07:57

Client ID: CCV

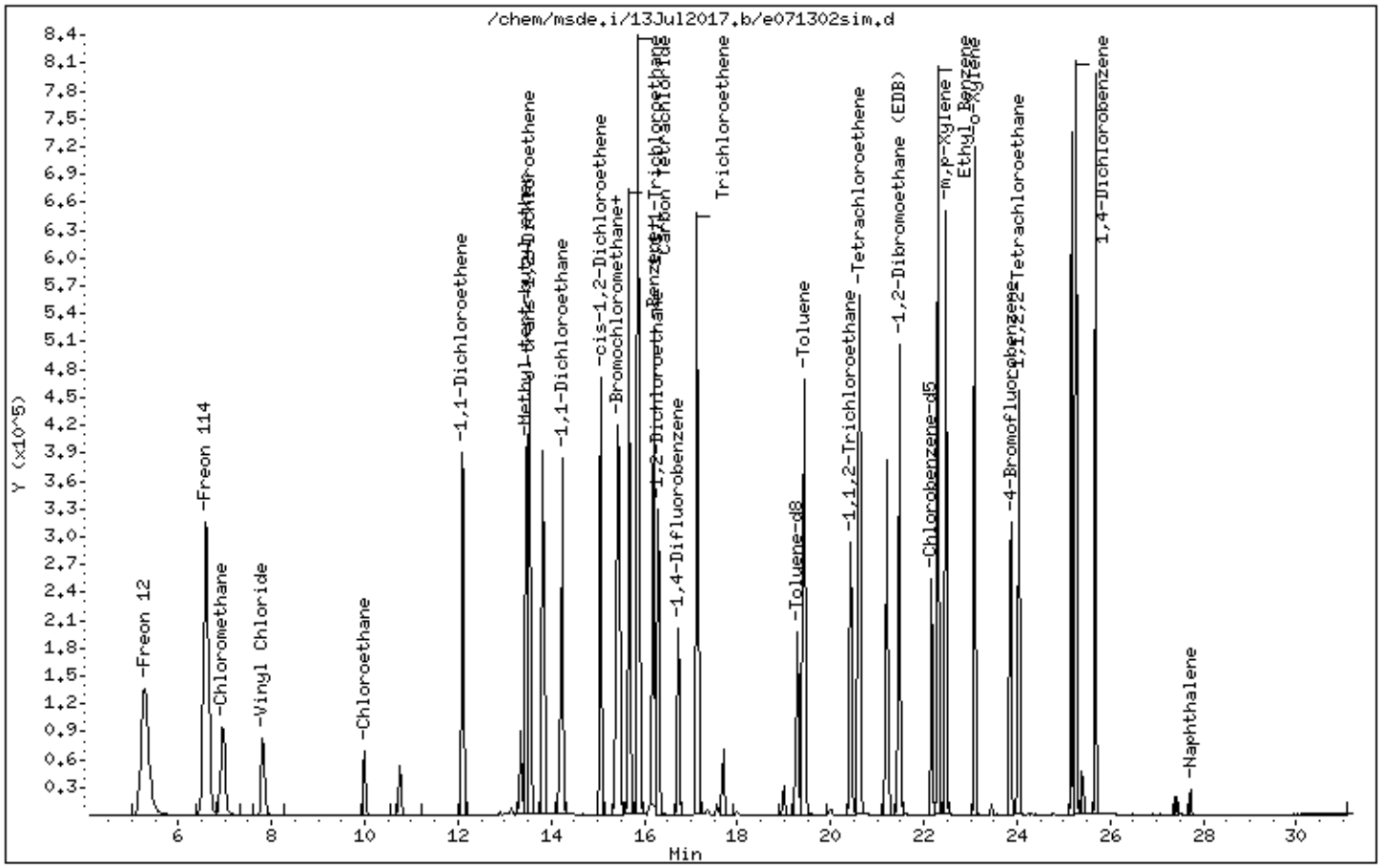
Instrument: msde.i

Sample Info: 50mL# 2850-222

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1707045R3-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 08:19 AM**	

Compound	**%Recovery**	**Method Limits**
Methylene Chloride	99	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Report Date: 11-Jul-2017 08:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	10.427	104.27	60-140
11 Freon 12	10.000	11.046	110.46	70-130
15 Freon 114	10.000	11.347	113.47	70-130
17 Chloromethane	10.000	11.687	116.87	70-130
23 Butane	10.000	10.186	101.86	60-140
25 Vinyl Chloride	10.000	10.309	103.09	70-130
26 1,3-Butadiene	10.000	10.410	104.10	70-130
29 Bromomethane	10.000	8.431	84.31	70-130
30 Chloroethane	10.000	10.620	106.20	70-130
31 Isopentane	10.000	10.388	103.88	60-140
35 Freon 11	10.000	10.808	108.08	70-130
42 Ethanol	10.000	11.906	119.06	70-130
49 Freon 113	10.000	10.422	104.22	70-130
50 1,1-Dichloroethene	10.000	10.311	103.11	70-130
52 Acetone	10.000	10.296	102.96	70-130
56 Carbon Disulfide	10.000	8.897	88.97	70-130
57 2-Propanol	10.000	11.416	114.16	70-130
58 3-Chloropropene	10.000	9.518	95.18	70-130
66 Methylene Chloride	10.000	9.933	99.33	70-130
72 Methyl tert-butyl	10.000	10.109	101.09	70-130
73 trans-1,2-Dichloro	10.000	8.874	88.74	70-130
78 Hexane	10.000	10.641	106.41	70-130
82 1,1-Dichloroethane	10.000	10.409	104.09	70-130
86 Vinyl Acetate	10.000	10.828	108.28	60-140
91 cis-1,2-Dichloroet	10.000	11.559	115.59	70-130
92 2-Butanone	10.000	10.446	104.46	70-130
99 Tetrahydrofuran	10.000	10.975	109.75	70-130
100 Chloroform	10.000	10.448	104.48	70-130
103 1,1,1-Trichloroeth	10.000	10.695	106.95	70-130
106 Carbon Tetrachlori	10.000	8.598	85.98	70-130
102 Cyclohexane	10.000	10.603	106.03	70-130
113 2,2,4-Trimethylpen	10.000	10.704	107.04	70-130
116 Benzene	10.000	9.713	97.13	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	10.250	102.50	70-130
121 Heptane	10.000	10.300	103.00	70-130
125 Trichloroethene	10.000	10.011	100.11	70-130
127 Methylcyclohexane	10.000	10.226	102.26	60-140
132 1,2-Dichloropropan	10.000	9.511	95.11	70-130
136 1,4-Dioxane	10.000	9.925	99.25	70-130
138 Bromodichlorometha	10.000	10.240	102.40	70-130
144 cis-1,3-Dichloropr	10.000	9.527	95.27	70-130
145 4-Methyl-2-pentano	10.000	10.918	109.18	70-130
147 Toluene	10.000	9.769	97.69	70-130
150 trans-1,3-Dichloro	10.000	10.359	103.59	70-130
155 1,1,2-Trichloroeth	10.000	10.698	106.98	70-130
156 Tetrachloroethene	10.000	10.418	104.18	70-130
158 2-Hexanone	10.000	11.449	114.49	70-130
160 Dibromochlorometha	10.000	10.478	104.78	70-130
161 1,2-Dibromoethane	10.000	10.461	104.61	70-130
165 Chlorobenzene	10.000	10.014	100.14	70-130
167 Ethyl Benzene	10.000	10.521	105.21	70-130
169 m,p-Xylene	10.000	10.760	107.60	70-130
171 o-Xylene	10.000	11.081	110.81	70-130
172 Styrene	10.000	11.064	110.64	70-130
174 Bromoform	13.000	13.720	105.54	70-130
175 Cumene	10.000	10.962	109.62	70-130
181 1,1,2,2-Tetrachlor	10.000	10.145	101.45	70-130
182 Propylbenzene	10.000	11.014	110.14	70-130
188 4-Ethyltoluene	10.000	11.450	114.50	70-130
190 1,3,5-Trimethylben	10.000	10.807	108.07	70-130
196 1,2,4-Trimethylben	10.000	10.480	104.80	70-130
208 1,3-Dichlorobenzen	10.000	10.528	105.28	70-130
209 1,4-Dichlorobenzen	10.000	10.619	106.19	70-130
212 alpha-Chlorotoluen	10.000	11.055	110.55	70-130
214 1,2-Dichlorobenzen	10.000	10.608	106.08	70-130
226 1,2,4-Trichloroben	10.000	11.332	113.32	70-130
227 Hexachlorobutadien	10.000	10.677	106.77	70-130
228 Naphthalene	1.000	0.6500	65.00	60-140
M 239 Total Xylene	20.000	21.841	109.20	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.261	105.21	70-130
$ 146 Toluene-d8	5.000	4.892	97.85	70-130
$ 177 4-Bromofluorobenze	5.000	4.966	99.32	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071103.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 11-JUL-2017 08:19
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	452300	10.4270	10.427	80.00- 120.00	100.00
4.835	4.811 (0.314)	42	301273			36.86- 96.86	66.61
4.835	4.835 (0.314)	39	355819			46.23- 106.23	78.67
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1202306	11.0465	11.046	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	393274			1.93- 61.93	32.71
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	908037	11.3468	11.347	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	280789			1.36- 61.36	30.92
6.594	6.594 (0.428)	85	976887			85.72- 145.72	107.58
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	533370	11.6868	11.687	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	154955			1.40- 61.40	29.05
23 Butane					CAS #: 106-97-8		
7.640	7.641 (0.496)	58	85367	10.1857	10.186	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.640	7.658 (0.496)	43	884672			939.22- 999.22	1036.31
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	364657	10.3093	10.309	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	104307			0.00- 59.78	28.60
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	369952	10.4097	10.410	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	445880			90.63- 150.63	120.52
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	213566	8.43087	8.431	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	202561			63.10- 123.10	94.85
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	155708	10.6205	10.620	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	73979			13.74- 73.74	47.51
9.986	9.986 (0.649)	66	49637			0.11- 60.11	31.88
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	337962	10.3884	10.388	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	600915			149.05- 209.05	177.81
10.119	10.119 (0.657)	42	510252			122.74- 182.74	150.98
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1341258	10.8081	10.808	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	867618			35.39- 95.39	64.69
42 Ethanol					CAS #: 64-17-5		
11.661	11.662 (0.758)	45	244310	11.9059	11.906	80.00- 120.00	100.00
11.661	11.662 (0.758)	46	92216			10.30- 70.30	37.75
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	811270	10.4217	10.422	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	513639			33.74- 93.74	63.31
12.081	12.081 (0.785)	101	865944			78.29- 138.29	106.74
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	225014	10.3108	10.311	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	764933			307.46- 367.46	339.95
12.100	12.100 (0.786)	96	348264			127.87- 187.87	154.77
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	219070	10.2964	10.296	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1004009			407.61- 467.61	458.30

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.442	12.443 (0.808)	76	812293	8.89708	8.897	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.690 (0.826)	45	1126592	11.4160	11.416	80.00- 120.00	100.00
12.709	12.690 (0.826)	43	245689			0.00- 50.43	21.81
12.709	12.690 (0.826)	59	33333			0.00- 33.00	2.96
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	174851	9.51831	9.518	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1000894			511.05- 571.05	572.43
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	294454	9.93273	9.933	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	710473			205.99- 265.99	241.28
13.149	13.149 (0.854)	51	215918			40.46- 100.46	73.33
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.479 (0.876)	73	1051081	10.1091	10.109	80.00- 120.00	100.00
13.478	13.479 (0.876)	57	321127			0.79- 60.79	30.55
13.478	13.479 (0.876)	41	409596			7.43- 67.43	38.97
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	206529	8.87449	8.874	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	593955			247.42- 307.42	287.59
13.533	13.533 (0.879)	96	325634			122.37- 182.37	157.67
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	739999	10.6407	10.641	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	629471			51.15- 111.15	85.06
13.835	13.835 (0.899)	86	89655			0.00- 41.56	12.12
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.220	14.220 (0.924)	63	771240	10.4094	10.409	80.00- 120.00	100.00
14.220	14.220 (0.924)	65	233574			0.00- 59.55	30.29
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	94723	10.8277	10.828	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	154380			118.75- 178.75	162.98
14.247	14.247 (0.926)	43	1783561			1798.00-1858.00	1882.91
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	281915	11.5594	11.559	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	729366			229.72- 289.72	258.72
15.047	15.047 (0.978)	96	437125			126.60- 186.60	155.06

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   92 2-Butanone                                   CAS #: 78-93-3
 15.028  15.028 (0.976)    72    155284 10.4464   10.446  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1280061                  750.92- 810.92   824.33
 15.028  15.028 (0.976)    57     79340                   19.16-  79.16    51.09
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.360  15.361 (0.998)    42    714811 10.9746   10.975  80.00- 120.00   100.00
 15.360  15.361 (0.998)    71    142953                    0.00-  50.51    20.00
 15.360  15.361 (0.998)    72    146774                    0.00-  51.95    20.53
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    124342 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     96396                   46.85- 106.85    77.52
 15.391  15.391 (1.000)    49    338852                  226.12- 286.12   272.52
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83    908836 10.4478   10.448  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    611696                   35.38-  95.38    67.31
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    466350 10.6032   10.603  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    832002                  148.59- 208.59   178.41
 15.669  15.669 (1.018)    41    593965                   91.63- 151.63   127.36
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1148302 10.6955   10.695  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    740021                   34.20-  94.20    64.44
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.854  15.854 (1.030)   119    950005 8.59753    8.598  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1000971                   73.79- 133.79   105.36
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1139450 10.7041   10.704  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   3275309                  276.72- 336.72   287.45
 16.111  16.111 (1.047)    41   1226367                   82.40- 142.40   107.63
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.183  16.183 (0.967)    78   1063709 9.71264    9.713  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    253837                    0.00-  53.88    23.86
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    204367 5.26065    5.261  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     98507                   17.94-  77.94    48.20
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                          CAS #: 107-06-2
 16.303  16.304 (0.974)    62    796514 10.2500   10.250  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  120 1,2-Dichloroethane (continued)
 16.303  16.304 (0.974)    64    247736                     0.66-  60.66    31.10
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57    487532 10.3002   10.300  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    153030                     3.00-  63.00    31.39
 16.352  16.352 (0.977)    43   1161623                   207.00- 267.00   238.27
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    457033 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     64239                     0.00-  44.91    14.06
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.123  17.123 (1.023)   130    651775 10.0107   10.011  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    573854                   58.18- 118.18    88.04
 17.123  17.123 (1.023)    97    371741                   26.25-  86.25    57.04
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.339  17.340 (1.036)    83    628112 10.2264   10.226  80.00- 120.00   100.00
 17.339  17.340 (1.036)    55    829988                   98.42- 158.42   132.14
 17.339  17.340 (1.036)    56    249963                    9.03-  69.03    39.80
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.556  17.556 (1.049)    63    443895 9.51071    9.511  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    322748                   44.02- 104.02    72.71
 17.556  17.556 (1.049)    41    448506                   65.46- 125.46   101.04
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.677  17.677 (1.056)    88    254001 9.92507    9.925  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58    240280                   62.58- 122.58    94.60
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   1028673 10.2402   10.240  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    678044                   36.66-  96.66    65.91
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    626813 9.52663    9.527  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    205062                    3.68-  63.68    32.72
 18.805  18.805 (1.124)    39    605590                   62.50- 122.50    96.61
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43   1597958 10.9180   10.918  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58    455808                    0.00-  59.19    28.52
 18.984  18.984 (1.134)    85    155622                    0.00-  40.34     9.74
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.276 (1.152)    98    430214 4.89249    4.892  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.275  19.276 (1.152)    70     50063                     0.00-  41.31    11.64
 19.275  19.276 (1.152)   100    284421                    38.24-  98.24    66.11
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.410  19.410 (1.160)    91   1333600 9.76906    9.769  80.00- 120.00   100.00
 19.410  19.410 (1.160)    92    788350                    28.10-  88.10    59.11
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    660205 10.3590   10.359  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    218666                     3.36-  63.36    33.12
 19.998  19.998 (0.903)    39    559706                    49.78- 109.78    84.78
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    497486 10.6983   10.698  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    298635                    32.24-  92.24    60.03
 20.438  20.438 (0.922)    83    387409                    48.02- 108.02    77.87
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.603 (0.930)   166    810169 10.4185   10.418  80.00- 120.00   100.00
 20.603  20.603 (0.930)   129    660740                    49.93- 109.93    81.56
 20.603  20.603 (0.930)   131    641187                    47.75- 107.75    79.14
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    572889 11.4492   11.449  80.00- 120.00   100.00
 20.767  20.767 (0.937)    43   1498341                   225.15- 285.15   261.54
 20.767  20.767 (0.937)   100     98692                     0.00-  47.79    17.23
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1221704 10.4777   10.478  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    945699                    46.75- 106.75    77.41
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.454  21.454 (0.968)   107    818507 10.4614   10.461  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    801259                    67.69- 127.69    97.89
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    419636 5.00000            80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    210150                    19.53-  79.53    50.08
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.218  22.219 (1.003)   112   1208178 10.0138   10.014  80.00- 120.00   100.00
 22.218  22.219 (1.003)   114    387023                     1.36-  61.36    32.03
 22.218  22.219 (1.003)    77    656704                    24.91-  84.91    54.35
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    590337 10.5214   10.521  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   1823570                   280.28- 340.28   308.90
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    672393 10.7601   10.760  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1384204                   173.14- 233.14   205.86
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    643092 11.0807   11.081  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1346169                   184.94- 244.94   209.33
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104   1070823 11.0637   11.064  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    578913                    23.72-  83.72    54.06
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1427746 13.7204   13.720  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    733169                    22.28-  82.28    51.35
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   2081488 10.9616   10.962  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    570818                     0.00-  57.53    27.42
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    243389 4.96602    4.966  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    276174                    81.42- 141.42   113.47
 23.856  23.856 (1.077)   176    241147                    66.35- 126.35    99.08
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    756622 10.1452   10.145  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    508188                    38.02-  98.02    67.17
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   1862616 11.0138   11.014  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    491723                     0.00-  56.42    26.40
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.214  24.215 (1.093)   105   1492668 11.4500   11.450  80.00- 120.00   100.00
 24.237  24.215 (1.094)   120    461430                     0.46-  60.46    30.91
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1135990 10.8066   10.807  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    549362                    18.43-  78.43    48.36
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105    870377 10.4804   10.480  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
24.753	24.753 (1.117)	120	412041			16.45- 76.45	47.34
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.157 (1.135)	146	951734	10.5277	10.528	80.00- 120.00	100.00
25.156	25.157 (1.135)	148	603584			33.61- 93.61	63.42
25.156	25.157 (1.135)	111	366409			9.29- 69.29	38.50
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.246	25.246 (1.139)	146	909787	10.6194	10.619	80.00- 120.00	100.00
25.246	25.246 (1.139)	148	579584			34.28- 94.28	63.71
25.246	25.246 (1.139)	111	341709			7.48- 67.48	37.56
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1308251	11.0555	11.055	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	309437			0.00- 53.55	23.65
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	885265	10.6085	10.608	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	580493			33.54- 93.54	65.57
25.672	25.672 (1.159)	111	364188			10.04- 70.04	41.14
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	407150	11.3324	11.332	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	390197			66.37- 126.37	95.84
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	709689	10.6769	10.677	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	453410			32.58- 92.58	63.89
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.251)	128	47183	0.64998	0.6500	80.00- 120.00	100.00
27.712	27.712 (1.251)	127	10892			0.00- 41.67	23.09
M 239 Total Xylene					CAS #: 1330-20-7		
			1315486	21.8408	21.841		

Report Date: 11-Jul-2017 08:52

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071103.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	138043	82826	193260	124342	-9.93
123 1,4-Difluorobenze	475818	285491	666145	457033	-3.95
163 Chlorobenzene-d5	449910	269946	629874	419636	-6.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/11Jul2017.b/e071103.d

Date : 11-JUL-2017 08:19

Client ID: LCS

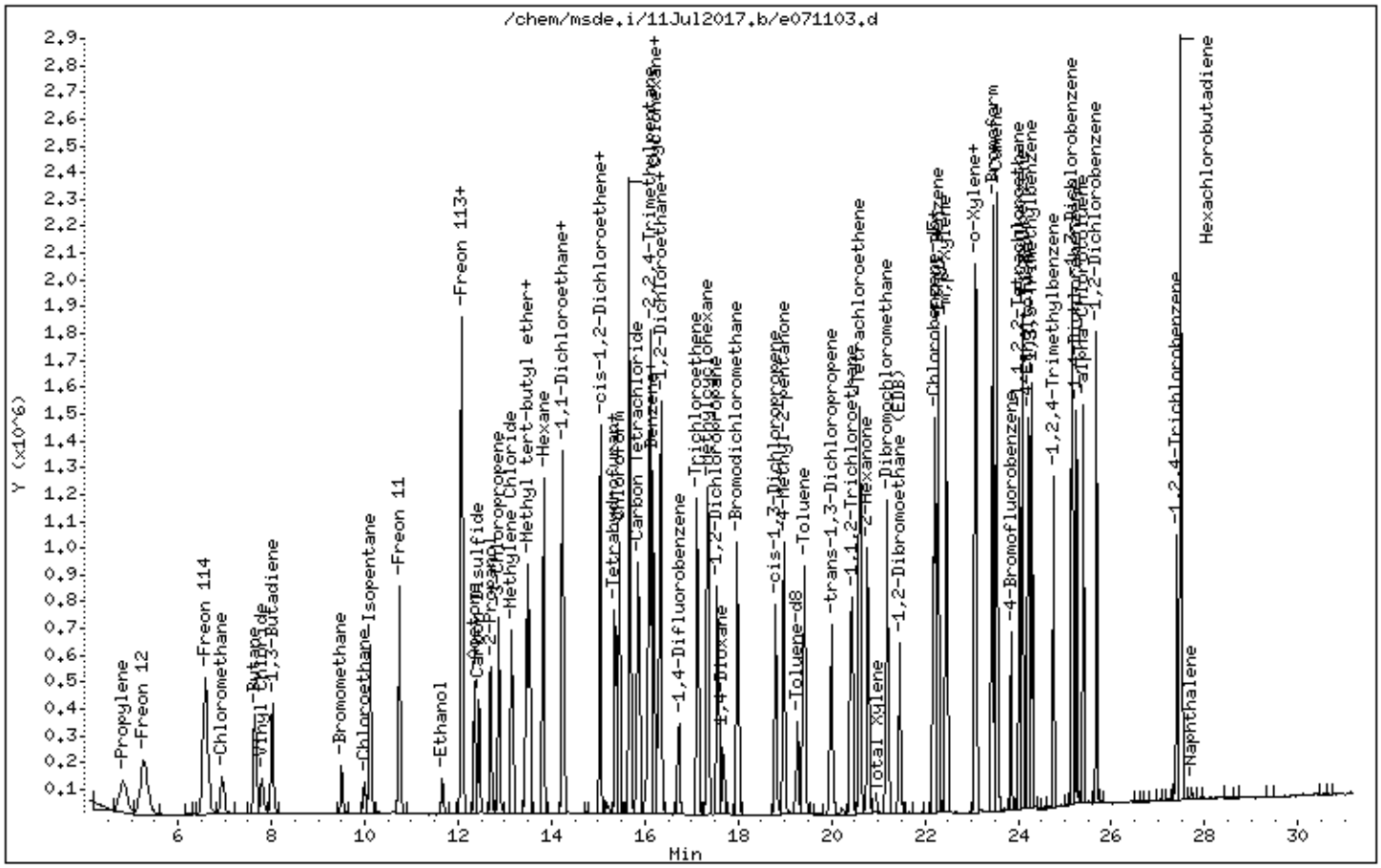
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCSD

Lab ID#: 1707045R3-10AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 09:02 AM**	

Compound	**%Recovery**	**Method Limits**
Methylene Chloride	95	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Report Date: 11-Jul-2017 09:37

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCSD
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	10.175	101.75	60-140
11 Freon 12	10.000	10.520	105.20	70-130
15 Freon 114	10.000	10.600	106.00	70-130
17 Chloromethane	10.000	10.253	102.53	70-130
23 Butane	10.000	9.790	97.90	60-140
25 Vinyl Chloride	10.000	9.774	97.75	70-130
26 1,3-Butadiene	10.000	10.003	100.03	70-130
29 Bromomethane	10.000	8.522	85.22	70-130
30 Chloroethane	10.000	10.212	102.12	70-130
31 Isopentane	10.000	9.663	96.63	60-140
35 Freon 11	10.000	10.795	107.95	70-130
42 Ethanol	10.000	11.151	111.51	70-130
49 Freon 113	10.000	9.680	96.80	70-130
50 1,1-Dichloroethene	10.000	9.702	97.02	70-130
52 Acetone	10.000	9.473	94.73	70-130
56 Carbon Disulfide	10.000	8.385	83.85	70-130
57 2-Propanol	10.000	10.711	107.11	70-130
58 3-Chloropropene	10.000	9.259	92.59	70-130
66 Methylene Chloride	10.000	9.479	94.79	70-130
72 Methyl tert-butyl	10.000	9.645	96.45	70-130
73 trans-1,2-Dichloro	10.000	8.748	87.48	70-130
78 Hexane	10.000	10.010	100.10	70-130
82 1,1-Dichloroethane	10.000	9.947	99.47	70-130
86 Vinyl Acetate	10.000	10.387	103.87	60-140
91 cis-1,2-Dichloroet	10.000	10.773	107.73	70-130
92 2-Butanone	10.000	10.078	100.78	70-130
99 Tetrahydrofuran	10.000	10.361	103.61	70-130
100 Chloroform	10.000	9.932	99.32	70-130
103 1,1,1-Trichloroeth	10.000	10.241	102.41	70-130
106 Carbon Tetrachlori	10.000	8.243	82.43	70-130
102 Cyclohexane	10.000	9.928	99.28	70-130
113 2,2,4-Trimethylpen	10.000	9.751	97.51	70-130
116 Benzene	10.000	9.998	99.98	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	10.714	107.14	70-130
121 Heptane	10.000	10.510	105.10	70-130
125 Trichloroethene	10.000	10.312	103.12	70-130
127 Methylcyclohexane	10.000	10.518	105.18	60-140
132 1,2-Dichloropropan	10.000	9.644	96.44	70-130
136 1,4-Dioxane	10.000	10.223	102.23	70-130
138 Bromodichlorometha	10.000	10.475	104.75	70-130
144 cis-1,3-Dichloropr	10.000	9.633	96.33	70-130
145 4-Methyl-2-pentano	10.000	11.151	111.51	70-130
147 Toluene	10.000	10.036	100.36	70-130
150 trans-1,3-Dichloro	10.000	10.274	102.74	70-130
155 1,1,2-Trichloroeth	10.000	10.509	105.09	70-130
156 Tetrachloroethene	10.000	10.463	104.63	70-130
158 2-Hexanone	10.000	11.509	115.09	70-130
160 Dibromochlorometha	10.000	10.317	103.17	70-130
161 1,2-Dibromoethane	10.000	10.336	103.37	70-130
165 Chlorobenzene	10.000	9.756	97.57	70-130
167 Ethyl Benzene	10.000	10.159	101.59	70-130
169 m,p-Xylene	10.000	10.641	106.41	70-130
171 o-Xylene	10.000	10.776	107.76	70-130
172 Styrene	10.000	10.710	107.10	70-130
174 Bromoform	13.000	13.468	103.60	70-130
175 Cumene	10.000	10.649	106.49	70-130
181 1,1,2,2-Tetrachlor	10.000	9.792	97.92	70-130
182 Propylbenzene	10.000	10.762	107.62	70-130
188 4-Ethyltoluene	10.000	10.941	109.41	70-130
190 1,3,5-Trimethylben	10.000	10.417	104.17	70-130
196 1,2,4-Trimethylben	10.000	10.118	101.18	70-130
208 1,3-Dichlorobenzen	10.000	10.082	100.82	70-130
209 1,4-Dichlorobenzen	10.000	10.006	100.06	70-130
212 alpha-Chlorotoluen	10.000	10.720	107.20	70-130
214 1,2-Dichlorobenzen	10.000	10.154	101.54	70-130
226 1,2,4-Trichloroben	10.000	10.020	100.20	70-130
227 Hexachlorobutadien	10.000	10.423	104.23	70-130
228 Naphthalene	1.000	0.5378	53.78*	60-140
M 239 Total Xylene	20.000	21.418	107.09	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.258	105.17	70-130
$ 146 Toluene-d8	5.000	5.023	100.47	70-130
$ 177 4-Bromofluorobenze	5.000	5.184	103.69	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071104.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 11-JUL-2017 09:02
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.835 (0.314)	41	461374	10.1751	10.175	80.00- 120.00	100.00
4.835	4.811 (0.314)	42	291104			36.86- 96.86	63.10
4.859	4.835 (0.316)	39	351980			46.23- 106.23	76.29
11 Freon 12					CAS #: 75-71-8		
5.269	5.269 (0.342)	85	1196934	10.5204	10.520	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	390537			1.93- 61.93	32.63
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	886710	10.6000	10.600	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	281239			1.36- 61.36	31.72
6.594	6.594 (0.428)	85	963538			85.72- 145.72	108.66
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	489128	10.2529	10.253	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	150704			1.40- 61.40	30.81
23 Butane					CAS #: 106-97-8		
7.658	7.641 (0.498)	58	85770	9.79026	9.790	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	891772			939.22- 999.22	1039.72
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.797 (0.508)	62	361409	9.77454	9.774	80.00- 120.00	100.00
7.814	7.797 (0.508)	64	107051			0.00- 59.78	29.62
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	371608	10.0031	10.003	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	455429			90.63- 150.63	122.56
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	225643	8.52154	8.522	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	214159			63.10- 123.10	94.91
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	156508	10.2123	10.212	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	74204			13.74- 73.74	47.41
9.986	9.986 (0.649)	66	47354			0.11- 60.11	30.26
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	328611	9.66310	9.663	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	595163			149.05- 209.05	181.11
10.119	10.119 (0.657)	42	506345			122.74- 182.74	154.09
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1400331	10.7950	10.795	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	904116			35.39- 95.39	64.56
42 Ethanol					CAS #: 64-17-5		
11.661	11.662 (0.758)	45	239192	11.1512	11.151	80.00- 120.00	100.00
11.661	11.662 (0.758)	46	89962			10.30- 70.30	37.61
49 Freon 113					CAS #: 76-13-1		
12.080	12.081 (0.785)	151	787650	9.67962	9.680	80.00- 120.00	100.00
12.080	12.081 (0.785)	153	509612			33.74- 93.74	64.70
12.080	12.081 (0.785)	101	860781			78.29- 138.29	109.28
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	221312	9.70157	9.702	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	761166			307.46- 367.46	343.93
12.100	12.100 (0.786)	96	346851			127.87- 187.87	156.72
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	210686	9.47310	9.473	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	992008			407.61- 467.61	470.85

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.443 (0.810)	76	800261	8.38534	8.385	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	1104910	10.7109	10.711	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	240770			0.00- 50.43	21.79
12.690	12.690 (0.824)	59	31800			0.00- 33.00	2.88
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	177789	9.25873	9.259	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1012665			511.05- 571.05	569.59
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	293731	9.47886	9.479	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	705494			205.99- 265.99	240.18
13.149	13.149 (0.854)	51	203323			40.46- 100.46	69.22
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.479 (0.876)	73	1048298	9.64532	9.645	80.00- 120.00	100.00
13.478	13.479 (0.876)	57	326147			0.79- 60.79	31.11
13.478	13.479 (0.876)	41	398356			7.43- 67.43	38.00
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	212807	8.74785	8.748	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	595023			247.42- 307.42	279.61
13.533	13.533 (0.879)	96	331082			122.37- 182.37	155.58
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	727694	10.0102	10.010	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	617549			51.15- 111.15	84.86
13.835	13.835 (0.899)	86	87764			0.00- 41.56	12.06
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.220 (0.926)	63	770380	9.94710	9.947	80.00- 120.00	100.00
14.247	14.220 (0.926)	65	225040			0.00- 59.55	29.21
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	94982	10.3866	10.387	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	151894			118.75- 178.75	159.92
14.247	14.247 (0.926)	43	1773675			1798.00-1858.00	1867.37
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	274632	10.7726	10.773	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	732929			229.72- 289.72	266.88
15.047	15.047 (0.978)	96	431390			126.60- 186.60	157.08

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone					CAS #: 78-93-3		
15.028	15.028 (0.976)	72	156595	10.0779	10.078	80.00- 120.00	100.00
15.028	15.028 (0.976)	43	1258612			750.92- 810.92	803.73
15.028	15.028 (0.976)	57	84864			19.16- 79.16	54.19
99 Tetrahydrofuran					CAS #: 109-99-9		
15.360	15.361 (0.998)	42	705444	10.3613	10.361	80.00- 120.00	100.00
15.360	15.361 (0.998)	71	144980			0.00- 50.51	20.55
15.360	15.361 (0.998)	72	150140			0.00- 51.95	21.28
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	129976	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	100995			46.85- 106.85	77.70
15.391	15.391 (1.000)	49	247292			226.12- 286.12	190.26
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	903114	9.93200	9.932	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	620557			35.38- 95.38	68.71
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	456449	9.92826	9.928	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	837725			148.59- 208.59	183.53
15.669	15.669 (1.018)	41	587153			91.63- 151.63	128.63
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	1149336	10.2411	10.241	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	724983			34.20- 94.20	63.08
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	952087	8.24288	8.243	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	991178			73.79- 133.79	104.11
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	1085044	9.75120	9.751	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	3261797			276.72- 336.72	300.61
16.111	16.111 (1.047)	41	1201147			82.40- 142.40	110.70
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	1066472	9.99841	9.998	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	251042			0.00- 53.88	23.54
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	213533	5.25832	5.258	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	94974			17.94- 77.94	44.48
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.303	16.304 (0.974)	62	810915	10.7145	10.714	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
120 1,2-Dichloroethane (continued)							
16.303	16.304 (0.974)	64	246093			0.66- 60.66	30.35
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	484482	10.5096	10.510	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	156262			3.00- 63.00	32.25
16.352	16.352 (0.977)	43	1149461			207.00- 267.00	237.26
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	445124	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	68241			0.00- 44.91	15.33
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	653903	10.3121	10.312	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	570739			58.18- 118.18	87.28
17.123	17.123 (1.023)	97	369135			26.25- 86.25	56.45
127 Methylcyclohexane					CAS #: 108-87-2		
17.339	17.340 (1.036)	83	629184	10.5180	10.518	80.00- 120.00	100.00
17.339	17.340 (1.036)	55	824455			98.42- 158.42	131.04
17.339	17.340 (1.036)	56	249168			9.03- 69.03	39.60
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	438372	9.64369	9.644	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	322830			44.02- 104.02	73.64
17.556	17.556 (1.049)	41	442790			65.46- 125.46	101.01
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	254816	10.2233	10.223	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	239172			62.58- 122.58	93.86
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	1024837	10.4750	10.475	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	678009			36.66- 96.66	66.16
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	617281	9.63278	9.633	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	203110			3.68- 63.68	32.90
18.805	18.805 (1.124)	39	606805			62.50- 122.50	98.30
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1589530	11.1509	11.151	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	438541			0.00- 59.19	27.59
18.984	18.984 (1.134)	85	160050			0.00- 40.34	10.07
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.276 (1.152)	98	430216	5.02342	5.023	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.275  19.276 (1.152)    70     50215                     0.00-  41.31    11.67
 19.275  19.276 (1.152)   100    290036                    38.24-  98.24    67.42
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.410 (1.161)    91   1334402 10.0365   10.036  80.00- 120.00   100.00
 19.432  19.410 (1.161)    92    778332                    28.10-  88.10    58.33
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    662022 10.2745   10.274  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    217876                     3.36-  63.36    32.91
 19.998  19.998 (0.903)    39    553104                    49.78- 109.78    83.55
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    494047 10.5087   10.509  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    300580                    32.24-  92.24    60.84
 20.438  20.438 (0.922)    83    371869                    48.02- 108.02    75.27
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.602  20.603 (0.930)   166    822581 10.4630   10.463  80.00- 120.00   100.00
 20.602  20.603 (0.930)   129    660300                    49.93- 109.93    80.27
 20.602  20.603 (0.930)   131    643780                    47.75- 107.75    78.26
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    582221 11.5091   11.509  80.00- 120.00   100.00
 20.767  20.767 (0.937)    43   1488604                   225.15- 285.15   255.68
 20.767  20.767 (0.937)   100     98276                     0.00-  47.79    16.88
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1216194 10.3169   10.317  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    939617                    46.75- 106.75    77.26
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.454  21.454 (0.968)   107    817642 10.3366   10.336  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    805600                    67.69- 127.69    98.53
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    424253 5.00000            80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    209373                    19.53-  79.53    49.35
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.218  22.219 (1.003)   112   1190096 9.75653    9.756  80.00- 120.00   100.00
 22.218  22.219 (1.003)   114    386442                     1.36-  61.36    32.47
 22.218  22.219 (1.003)    77    667104                    24.91-  84.91    56.05
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    576255 10.1587   10.159  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   1812873                  280.28- 340.28   314.60
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    672292 10.6414   10.641  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1367908                  173.14- 233.14   203.47
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    632313 10.7764   10.776  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1344437                  184.94- 244.94   212.62
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104   1047994 10.7100   10.710  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    572288                   23.72-  83.72    54.61
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1416952 13.4685   13.468  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    736888                   22.28-  82.28    52.01
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   2044442 10.6493   10.649  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    560261                    0.00-  57.53    27.40
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    256891 5.18446    5.184  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    278763                   81.42- 141.42   108.51
 23.856  23.856 (1.077)   176    241073                   66.35- 126.35    93.84
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    738328 9.79219    9.792  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    507473                   38.02-  98.02    68.73
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   1840011 10.7618   10.762  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    480792                    0.00-  56.42    26.13
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.215 (1.094)   105   1441971 10.9407   10.941  80.00- 120.00   100.00
 24.237  24.215 (1.094)   120    451421                    0.46-  60.46    31.31
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1107078 10.4170   10.417  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    530028                   18.43-  78.43    47.88
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105    849538 10.1182   10.118  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  196 1,2,4-Trimethylbenzene (continued)
 24.753  24.753 (1.117)   120    392042                    16.45-  76.45    46.15
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.156  25.157 (1.135)   146    921513 10.0825   10.082  80.00- 120.00   100.00
 25.156  25.157 (1.135)   148    593502                    33.61-  93.61    64.41
 25.156  25.157 (1.135)   111    359407                     9.29-  69.29    39.00
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.268  25.246 (1.140)   146    866692 10.0063   10.006  80.00- 120.00   100.00
 25.268  25.246 (1.140)   148    546552                    34.28-  94.28    63.06
 25.246  25.246 (1.139)   111    321853                     7.48-  67.48    37.14
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.147)    91   1282503 10.7199   10.720  80.00- 120.00   100.00
 25.403  25.403 (1.147)   126    302845                     0.00-  53.55    23.61
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.672  25.672 (1.159)   146    856701 10.1545   10.154  80.00- 120.00   100.00
 25.672  25.672 (1.159)   148    538080                    33.54-  93.54    62.81
 25.672  25.672 (1.159)   111    348270                    10.04-  70.04    40.65
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.237)   180    363954 10.0198   10.020  80.00- 120.00   100.00
 27.398  27.398 (1.237)   182    345073                    66.37- 126.37    94.81
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.241)   225    700465 10.4235   10.423  80.00- 120.00   100.00
 27.488  27.488 (1.241)   223    438710                    32.58-  92.58    62.63
-------------------------------------------------------------------------------
  228 Naphthalene                                  CAS #: 91-20-3
 27.712  27.712 (1.251)   128     39473 0.53785   0.5378  80.00- 120.00   100.00(R)
 27.712  27.712 (1.251)   127      5384                     0.00-  41.67    13.64
-------------------------------------------------------------------------------
M 239 Total Xylene                                 CAS #: 1330-20-7
                                1304606 21.4178   21.418
-------------------------------------------------------------------------------
```

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071104.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	138043	82826	193260	129976	-5.84
123 1,4-Difluorobenze	475818	285491	666145	445124	-6.45
163 Chlorobenzene-d5	449910	269946	629874	424253	-5.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/11Jul2017.b/e071104.d

Date : 11-JUL-2017 09:02

Client ID: LCSD

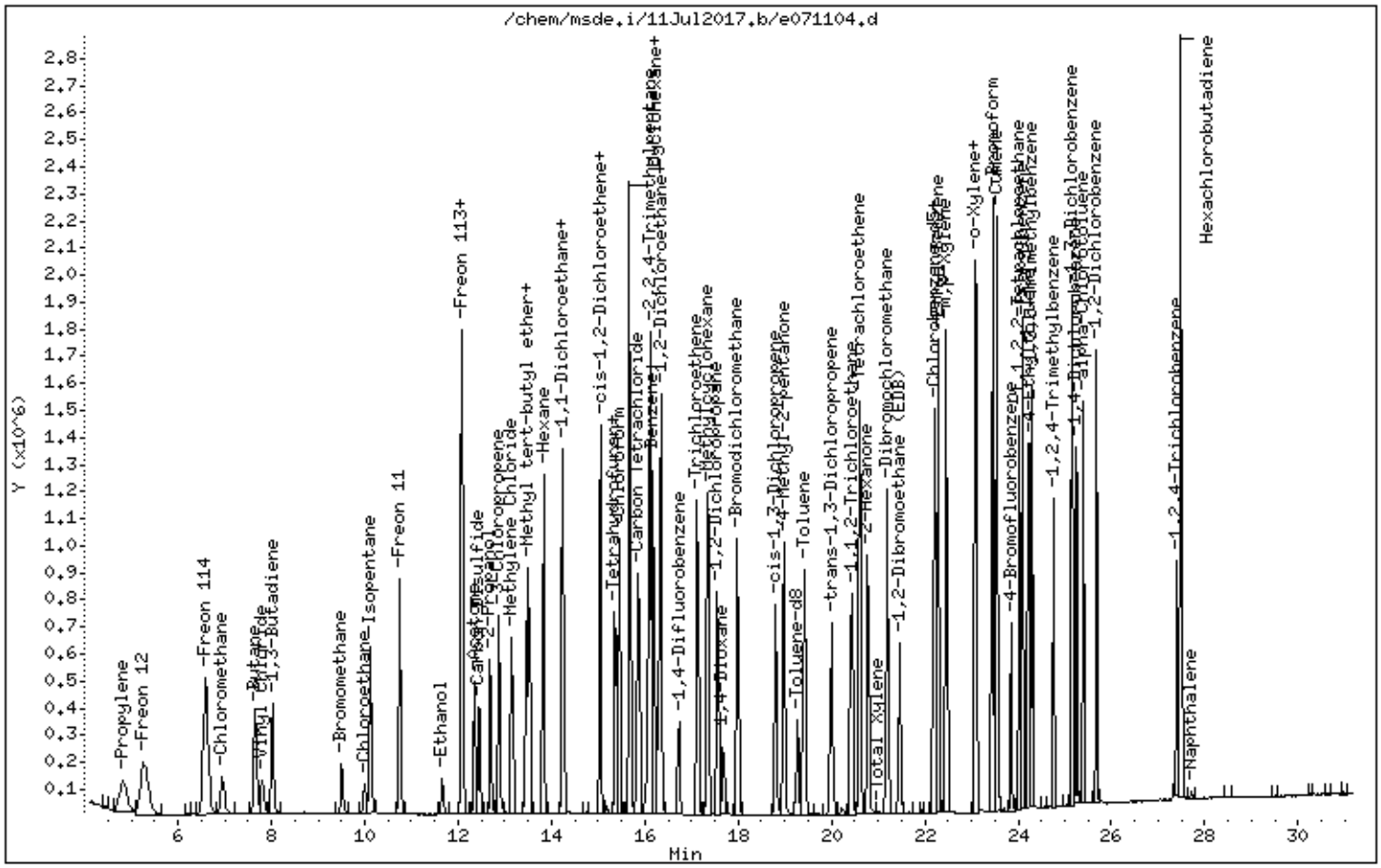
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1707045R3-10B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071103sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 08:19 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	106	70-130
1,1-Dichloroethene	98	70-130
trans-1,2-Dichloroethene	88	70-130
cis-1,2-Dichloroethene	109	70-130
Benzene	91	70-130
1,2-Dichloroethane	103	70-130
Trichloroethene	96	70-130
Toluene	99	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	100	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

Report Date: 11-Jul-2017 09:39

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	10.826	108.26	70-130
2 Freon 114	10.000	10.783	107.83	70-130
3 Chloromethane	10.000	10.708	107.08	70-130
4 Vinyl Chloride	10.000	10.642	106.42	70-130
5 Chloroethane	10.000	9.846	98.46	70-130
8 1,1-Dichloroethene	10.000	9.791	97.91	70-130
9 Methyl tert-butyl	10.000	10.479	104.79	70-130
10 trans-1,2-Dichloro	10.000	8.810	88.10	70-130
11 1,1-Dichloroethane	10.000	10.236	102.36	70-130
12 cis-1,2-Dichloroet	10.000	10.889	108.89	70-130
14 Chloroform	10.000	9.904	99.04	70-130
15 1,1,1-Trichloroeth	10.000	10.210	102.10	70-130
16 Carbon Tetrachlori	10.000	7.968	79.68	60-140
17 Benzene	10.000	9.122	91.22	70-130
19 1,2-Dichloroethane	10.000	10.319	103.19	70-130
21 Trichloroethene	10.000	9.604	96.04	70-130
23 Toluene	10.000	9.908	99.09	70-130
25 1,1,2-Trichloroeth	10.000	10.234	102.34	70-130
26 Tetrachloroethene	10.000	10.011	100.11	70-130
27 1,2-Dibromoethane	10.000	10.295	102.95	70-130
30 Ethyl Benzene	10.000	10.754	107.54	70-130
31 m,p-Xylene	10.000	10.973	109.73	70-130
32 o-Xylene	10.000	11.196	111.96	70-130
34 1,1,2,2-Tetrachlor	10.000	9.800	98.00	70-130
36 1,4-Dichlorobenzen	10.000	10.956	109.56	70-130
38 Naphthalene	1.000	0.6760	67.60	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	4.898	97.97	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.086	101.73	70-130
$ 33 4-Bromofluorobenze	5.000	5.157	103.14	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071103sim.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 11-JUL-2017 08:19
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1314814	10.8264	10.826	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	425250			2.36- 62.36	32.34
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	994096	10.7832	10.783	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	321073			2.09- 62.09	32.30
3 Chloromethane					CAS #: 74-87-3		
6.945	6.946 (0.451)	50	559988	10.7081	10.708	80.00- 120.00	100.00
6.945	6.970 (0.451)	52	173201			0.98- 60.98	30.93
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.811 (0.507)	62	395292	10.6416	10.642	80.00- 120.00	100.00
7.810	7.811 (0.507)	64	114104			0.00- 58.64	28.87
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	169093	9.84578	9.846	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	51821			0.36- 60.36	30.65

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	244774	9.79126	9.791	80.00- 120.00	100.00
12.094	12.094 (0.785)	61	827194			300.85- 360.85	337.94
12.094	12.094 (0.785)	96	382868			126.45- 186.45	156.42
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	997405	10.4788	10.479	80.00- 120.00	100.00
13.465	13.465 (0.874)	57	294979			0.00- 59.46	29.57
13.465	13.465 (0.874)	41	359534			3.65- 63.65	36.05
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	227468	8.81009	8.810	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	635229			242.34- 302.34	279.26
13.547	13.547 (0.879)	96	354628			125.09- 185.09	155.90
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.233	14.233 (0.924)	63	832351	10.2362	10.236	80.00- 120.00	100.00
14.233	14.233 (0.924)	65	253091			0.54- 60.54	30.41
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	308024	10.8890	10.889	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	787681			222.17- 282.17	255.72
15.060	15.060 (0.978)	96	477255			125.16- 185.16	154.94
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	135291	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	104300			47.63- 107.63	77.09
15.374	15.374 (1.000)	49	250255			150.43- 210.43	184.98
14 Chloroform					CAS #: 67-66-3		
15.436	15.436 (1.002)	83	977066	9.90382	9.904	80.00- 120.00	100.00
15.467	15.436 (1.004)	85	666024			38.49- 98.49	68.17
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	1230733	10.2103	10.210	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	801584			35.44- 95.44	65.13
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	1024798	7.96771	7.968	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	1053604			72.67- 132.67	102.81
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	1068075	9.12172	9.122	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	252932			0.00- 53.68	23.68
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	212721	4.89838	4.898	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    101147                    19.71-  79.71    47.55
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    870361 10.3193   10.319  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    269111                     0.82-  60.82    30.92
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    489853 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     71266                     0.00-  44.62    14.55
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    702020 9.60365    9.604  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    620933                   57.80- 117.80    88.45
 17.136  17.136 (1.024)    97    402179                   26.87-  86.87    57.29
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    400721 5.08652    5.086  80.00- 120.00   100.00
 19.267  19.267 (1.152)    70     45522                     0.00-  41.18    11.36
 19.289  19.289 (1.153)   100    261119                   35.44-  95.44    65.16
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.423  19.424 (1.161)    91   1331530 9.90859    9.908  80.00- 120.00   100.00
 19.423  19.424 (1.161)    92    774390                   28.44-  88.44    58.16
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    533815 10.2342   10.234  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    335967                   32.77-  92.77    62.94
 20.424  20.424 (0.921)    83    411747                   47.27- 107.27    77.13
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    847701 10.0108   10.011  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    697883                   50.99- 110.99    82.33
 20.616  20.616 (0.930)   131    696207                   51.53- 111.53    82.13
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    896793 10.2952   10.295  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    894046                   69.74- 129.74    99.69
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    450836 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    194438                   12.99-  72.99    43.13
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.295 (1.006)   106    572488 10.7540   10.754  80.00- 120.00   100.00
 22.294  22.295 (1.006)    91   1786274                  281.21- 341.21   312.02
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	669050	10.9731	10.973	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	1367829			173.96- 233.96	204.44
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	619791	11.1957	11.196	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	1339454			183.85- 243.85	216.11
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.847	23.847 (1.076)	174	280106	5.15677	5.157	80.00- 120.00	100.00
23.847	23.847 (1.076)	95	291753			73.66- 133.66	104.16
23.869	23.869 (1.077)	176	272393			67.29- 127.29	97.25
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.026	24.026 (1.084)	83	796033	9.79964	9.800	80.00- 120.00	100.00
24.026	24.026 (1.084)	85	552327			38.95- 98.95	69.38
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	987499	10.9558	10.956	80.00- 120.00	100.00
25.260	25.260 (1.139)	148	644108			34.91- 94.91	65.23
25.260	25.260 (1.139)	111	369443			6.86- 66.86	37.41
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	49313	0.67602	0.6760	80.00- 120.00	100.00
27.726	27.703 (1.251)	127	6287			0.00- 42.71	12.75

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071103sim.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145812	87487	204137	135291	-7.22
20 1,4-Difluorobenze	526665	315999	737331	489853	-6.99
28 Chlorobenzene-d5	479389	287633	671145	450836	-5.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.41	15.08	15.74	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/11Jul2017.b/e071103sim.d

Date : 11-JUL-2017 08:19

Client ID: LCS

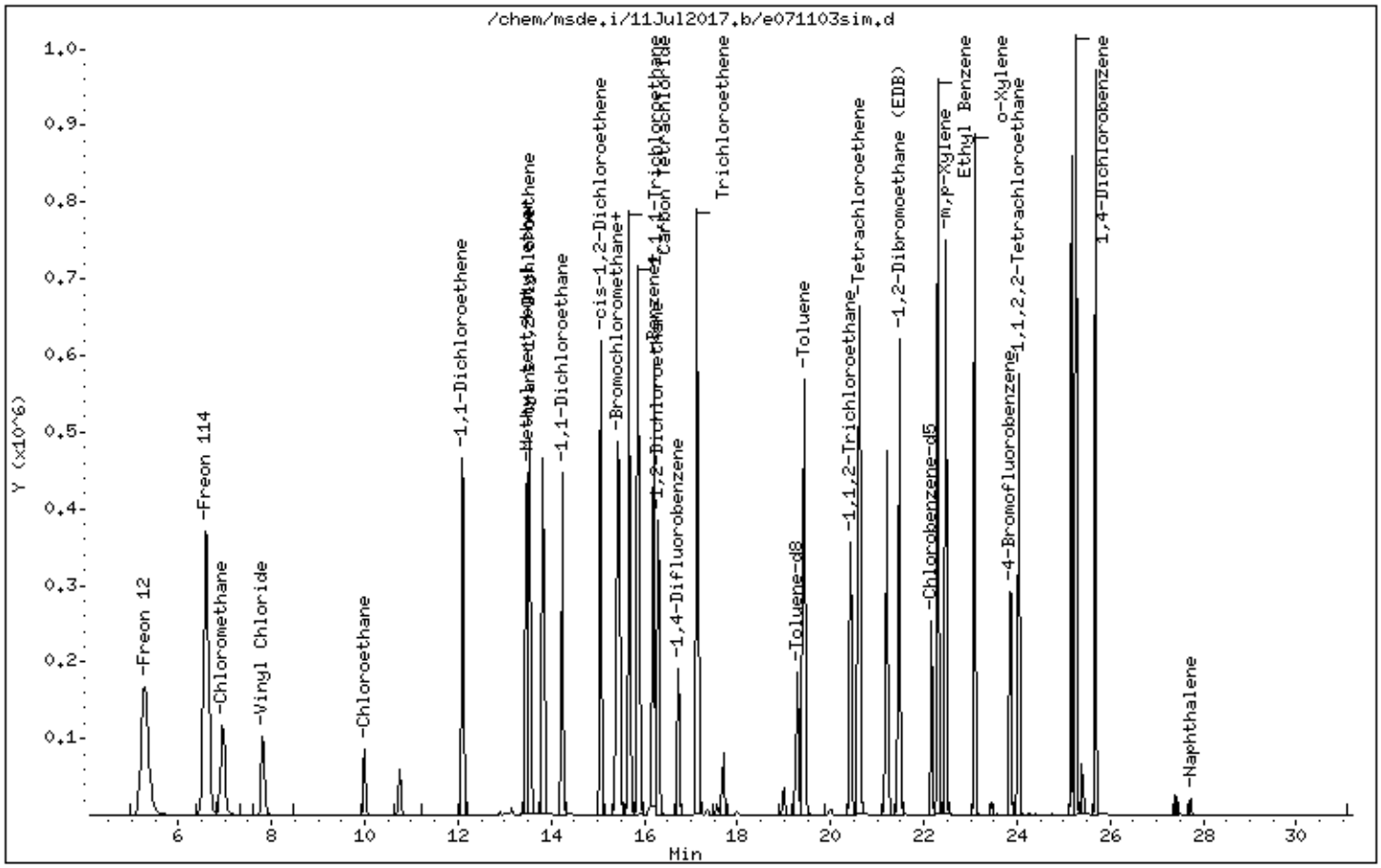
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCSD

Lab ID#: 1707045R3-10BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071104sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/11/17 09:02 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	106	70-130
1,1-Dichloroethene	97	70-130
trans-1,2-Dichloroethene	88	70-130
cis-1,2-Dichloroethene	108	70-130
Benzene	90	70-130
1,2-Dichloroethane	102	70-130
Trichloroethene	95	70-130
Toluene	98	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

Report Date: 11-Jul-2017 09:37

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 11Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCSD
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	10.756	107.56	70-130
2 Freon 114	10.000	10.794	107.94	70-130
3 Chloromethane	10.000	10.612	106.12	70-130
4 Vinyl Chloride	10.000	10.609	106.09	70-130
5 Chloroethane	10.000	9.703	97.03	70-130
8 1,1-Dichloroethene	10.000	9.746	97.46	70-130
9 Methyl tert-butyl	10.000	10.478	104.78	70-130
10 trans-1,2-Dichloro	10.000	8.829	88.29	70-130
11 1,1-Dichloroethane	10.000	10.213	102.13	70-130
12 cis-1,2-Dichloroet	10.000	10.823	108.23	70-130
14 Chloroform	10.000	9.838	98.38	70-130
15 1,1,1-Trichloroeth	10.000	10.181	101.81	70-130
16 Carbon Tetrachlori	10.000	7.906	79.06	60-140
17 Benzene	10.000	8.977	89.77	70-130
19 1,2-Dichloroethane	10.000	10.184	101.84	70-130
21 Trichloroethene	10.000	9.526	95.26	70-130
23 Toluene	10.000	9.845	98.45	70-130
25 1,1,2-Trichloroeth	10.000	10.080	100.80	70-130
26 Tetrachloroethene	10.000	9.875	98.75	70-130
27 1,2-Dibromoethane	10.000	10.082	100.82	70-130
30 Ethyl Benzene	10.000	10.662	106.62	70-130
31 m,p-Xylene	10.000	10.779	107.79	70-130
32 o-Xylene	10.000	11.038	110.39	70-130
34 1,1,2,2-Tetrachlor	10.000	9.658	96.58	70-130
36 1,4-Dichlorobenzen	10.000	10.532	105.32	70-130
38 Naphthalene	1.000	0.5623	56.23*	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	4.920	98.41	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.091	101.83	70-130
$ 33 4-Bromofluorobenze	5.000	5.123	102.45	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/11Jul2017.b/e071104sim.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 11-JUL-2017 09:02
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Meth Date : 11-Jul-2017 08:05 efinn Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1304610	10.7561	10.756	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	422204			2.36- 62.36	32.36
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	993782	10.7936	10.794	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	319296			2.09- 62.09	32.13
3 Chloromethane					CAS #: 74-87-3		
6.970	6.946 (0.452)	50	554255	10.6120	10.612	80.00- 120.00	100.00
6.970	6.970 (0.452)	52	171296			0.98- 60.98	30.91
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.811 (0.507)	62	393588	10.6093	10.609	80.00- 120.00	100.00
7.810	7.811 (0.507)	64	113479			0.00- 58.64	28.83
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	166426	9.70288	9.703	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	50511			0.36- 60.36	30.35

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	243335	9.74611	9.746	80.00- 120.00	100.00
12.094	12.094 (0.785)	61	827073			300.85- 360.85	339.89
12.113	12.094 (0.786)	96	382417			126.45- 186.45	157.16
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	996015	10.4775	10.478	80.00- 120.00	100.00
13.465	13.465 (0.874)	57	295739			0.00- 59.46	29.69
13.465	13.465 (0.874)	41	357721			3.65- 63.65	35.92
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	227659	8.82874	8.829	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	633329			242.34- 302.34	278.19
13.547	13.547 (0.879)	96	354824			125.09- 185.09	155.86
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.233	14.233 (0.924)	63	829407	10.2129	10.213	80.00- 120.00	100.00
14.233	14.233 (0.924)	65	252829			0.54- 60.54	30.48
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	305772	10.8231	10.823	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	786048			222.17- 282.17	257.07
15.060	15.060 (0.978)	96	476678			125.16- 185.16	155.89
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	135119	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	104742			47.63- 107.63	77.52
15.374	15.374 (1.000)	49	249123			150.43- 210.43	184.37
14 Chloroform					CAS #: 67-66-3		
15.436	15.436 (1.002)	83	969308	9.83769	9.838	80.00- 120.00	100.00
15.467	15.436 (1.004)	85	660437			38.49- 98.49	68.13
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	1225659	10.1811	10.181	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	797868			35.44- 95.44	65.10
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	1015571	7.90602	7.906	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	1045683			72.67- 132.67	102.97
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	1058137	8.97693	8.977	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	251154			0.00- 53.68	23.74
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	213401	4.92032	4.920	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 18 1,2-Dichloroethane-d4 (continued)							
16.197	16.197 (1.051)	67	101752			19.71- 79.71	47.68
19 1,2-Dichloroethane					CAS #: 107-06-2		
16.293	16.293 (0.974)	62	864654	10.1836	10.184	80.00- 120.00	100.00
16.293	16.293 (0.974)	64	266182			0.82- 60.82	30.78
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	493122	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	72285			0.00- 44.62	14.66
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	700987	9.52594	9.526	80.00- 120.00	100.00
17.136	17.136 (1.024)	95	618356			57.80- 117.80	88.21
17.136	17.136 (1.024)	97	400689			26.87- 86.87	57.16
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	403784	5.09143	5.091	80.00- 120.00	100.00
19.289	19.267 (1.153)	70	45700			0.00- 41.18	11.32
19.289	19.289 (1.153)	100	262575			35.44- 95.44	65.03
23 Toluene					CAS #: 108-88-3		
19.423	19.424 (1.161)	91	1331807	9.84495	9.845	80.00- 120.00	100.00
19.423	19.424 (1.161)	92	774270			28.44- 88.44	58.14
25 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.424	20.424 (0.921)	97	532198	10.0799	10.080	80.00- 120.00	100.00
20.424	20.424 (0.921)	99	334706			32.77- 92.77	62.89
20.424	20.424 (0.921)	83	408615			47.27- 107.27	76.78
26 Tetrachloroethene					CAS #: 127-18-4		
20.616	20.616 (0.930)	166	846439	9.87506	9.875	80.00- 120.00	100.00
20.616	20.616 (0.930)	129	689398			50.99- 110.99	81.45
20.616	20.616 (0.930)	131	695839			51.53- 111.53	82.21
27 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.468	21.468 (0.968)	107	888940	10.0817	10.082	80.00- 120.00	100.00
21.468	21.468 (0.968)	109	883765			69.74- 129.74	99.42
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	456351	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	195943			12.99- 72.99	42.94
30 Ethyl Benzene					CAS #: 100-41-4		
22.294	22.295 (1.006)	106	574520	10.6617	10.662	80.00- 120.00	100.00
22.294	22.295 (1.006)	91	1789971			281.21- 341.21	311.56

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene						CAS #: 108-38-3	
22.481	22.481 (1.014)	106	665250	10.7789	10.779	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	1362667			173.96- 233.96	204.84
32 o-Xylene						CAS #: 95-47-6	
23.082	23.082 (1.041)	106	618563	11.0385	11.038	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	1336033			183.85- 243.85	215.99
$ 33 4-Bromofluorobenzene						CAS #: 460-00-4	
23.869	23.847 (1.077)	174	281658	5.12268	5.123	80.00- 120.00	100.00
23.847	23.847 (1.076)	95	292329			73.66- 133.66	103.79
23.869	23.869 (1.077)	176	272552			67.29- 127.29	96.77
34 1,1,2,2-Tetrachloroethane						CAS #: 79-34-5	
24.026	24.026 (1.084)	83	794128	9.65804	9.658	80.00- 120.00	100.00
24.026	24.026 (1.084)	85	547776			38.95- 98.95	68.98
36 1,4-Dichlorobenzene						CAS #: 106-46-7	
25.260	25.260 (1.139)	146	960870	10.5315	10.532	80.00- 120.00	100.00
25.260	25.260 (1.139)	148	623470			34.91- 94.91	64.89
25.260	25.260 (1.139)	111	354221			6.86- 66.86	36.86
38 Naphthalene						CAS #: 91-20-3	
27.726	27.726 (1.251)	128	41522	0.56235	0.5623	80.00- 120.00	100.00(R)
27.726	27.703 (1.251)	127	5553			0.00- 42.71	13.37

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071104sim.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/11Jul2017.b/e17l0703a.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 11-JUL-2017
Calibration Time: 07:33
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	145812	87487	204137	135119	-7.33
20 1,4-Difluorobenze	526665	315999	737331	493122	-6.37
28 Chlorobenzene-d5	479389	287633	671145	456351	-4.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.41	15.08	15.74	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/11Jul2017.b/e071104sim.d

Date : 11-JUL-2017 09:02

Client ID: LCSD

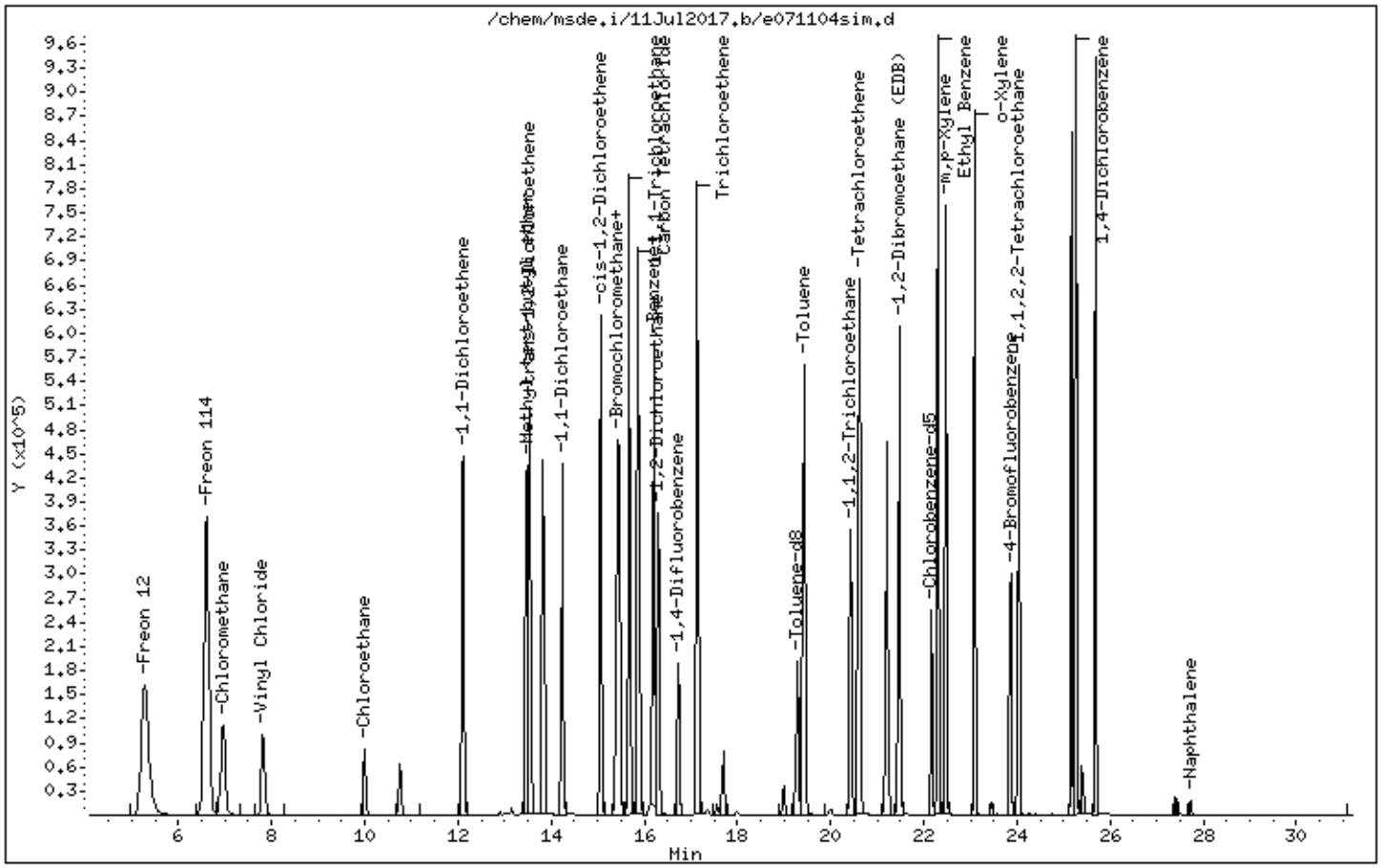
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1707045R3-10C

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 08:28 AM**	

Compound	**%Recovery**	**Method Limits**
Methylene Chloride	103	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

Report Date: 12-Jul-2017 14:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	10.991	109.91	60-140
11 Freon 12	10.000	11.350	113.50	70-130
15 Freon 114	10.000	11.300	113.00	70-130
17 Chloromethane	10.000	11.806	118.06	70-130
23 Butane	10.000	10.668	106.68	60-140
25 Vinyl Chloride	10.000	10.460	104.60	70-130
26 1,3-Butadiene	10.000	10.561	105.61	70-130
29 Bromomethane	10.000	9.445	94.45	70-130
30 Chloroethane	10.000	10.862	108.63	70-130
31 Isopentane	10.000	10.475	104.75	60-140
35 Freon 11	10.000	11.276	112.77	70-130
42 Ethanol	10.000	12.118	121.18	70-130
49 Freon 113	10.000	10.484	104.84	70-130
50 1,1-Dichloroethene	10.000	10.488	104.88	70-130
52 Acetone	10.000	10.407	104.07	70-130
56 Carbon Disulfide	10.000	8.904	89.04	70-130
57 2-Propanol	10.000	11.509	115.09	70-130
58 3-Chloropropene	10.000	9.831	98.31	70-130
66 Methylene Chloride	10.000	10.277	102.77	70-130
72 Methyl tert-butyl	10.000	10.363	103.63	70-130
73 trans-1,2-Dichloro	10.000	9.042	90.42	70-130
78 Hexane	10.000	10.930	109.30	70-130
82 1,1-Dichloroethane	10.000	10.607	106.07	70-130
86 Vinyl Acetate	10.000	11.198	111.98	60-140
91 cis-1,2-Dichloroet	10.000	11.633	116.33	70-130
92 2-Butanone	10.000	11.200	112.00	70-130
99 Tetrahydrofuran	10.000	11.246	112.47	70-130
100 Chloroform	10.000	10.658	106.58	70-130
103 1,1,1-Trichloroeth	10.000	11.000	110.00	70-130
106 Carbon Tetrachlori	10.000	12.018	120.18	70-130
102 Cyclohexane	10.000	11.023	110.23	70-130
113 2,2,4-Trimethylpen	10.000	10.465	104.65	70-130
116 Benzene	10.000	10.781	107.81	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	11.560	115.60	70-130
121 Heptane	10.000	11.395	113.95	70-130
125 Trichloroethene	10.000	10.940	109.40	70-130
127 Methylcyclohexane	10.000	11.335	113.35	60-140
132 1,2-Dichloropropan	10.000	10.517	105.17	70-130
136 1,4-Dioxane	10.000	11.332	113.32	70-130
138 Bromodichlorometha	10.000	11.606	116.06	70-130
144 cis-1,3-Dichloropr	10.000	10.734	107.34	70-130
145 4-Methyl-2-pentano	10.000	12.249	122.49	70-130
147 Toluene	10.000	10.938	109.38	70-130
150 trans-1,3-Dichloro	10.000	11.355	113.55	70-130
155 1,1,2-Trichloroeth	10.000	11.577	115.77	70-130
156 Tetrachloroethene	10.000	11.288	112.88	70-130
158 2-Hexanone	10.000	12.910	129.10	70-130
160 Dibromochlorometha	10.000	11.484	114.84	70-130
161 1,2-Dibromoethane	10.000	11.363	113.63	70-130
165 Chlorobenzene	10.000	10.760	107.61	70-130
167 Ethyl Benzene	10.000	11.266	112.66	70-130
169 m,p-Xylene	10.000	11.736	117.36	70-130
171 o-Xylene	10.000	11.679	116.79	70-130
172 Styrene	10.000	11.994	119.95	70-130
174 Bromoform	13.000	15.182	116.79	70-130
175 Cumene	10.000	11.881	118.81	70-130
181 1,1,2,2-Tetrachlor	10.000	11.162	111.63	70-130
182 Propylbenzene	10.000	12.080	120.80	70-130
188 4-Ethyltoluene	10.000	12.640	126.40	70-130
190 1,3,5-Trimethylben	10.000	11.889	118.89	70-130
196 1,2,4-Trimethylben	10.000	11.687	116.87	70-130
208 1,3-Dichlorobenzen	10.000	11.580	115.80	70-130
209 1,4-Dichlorobenzen	10.000	11.371	113.71	70-130
212 alpha-Chlorotoluen	10.000	12.206	122.06	70-130
214 1,2-Dichlorobenzen	10.000	11.463	114.63	70-130
226 1,2,4-Trichloroben	10.000	13.077	130.77*	70-130
227 Hexachlorobutadien	10.000	11.873	118.73	70-130
228 Naphthalene	1.000	0.6333	63.33	60-140
M 239 Total Xylene	20.000	23.415	117.07	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.143	102.85	70-130
$ 146 Toluene-d8	5.000	5.154	103.08	70-130
$ 177 4-Bromofluorobenze	5.000	5.226	104.51	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071203.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 12-JUL-2017 08:28
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-248
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 14:52 M86M Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.811 (0.314)	41	471343	10.9909	10.991	80.00- 120.00	100.00
4.811	4.835 (0.313)	42	298086			36.86- 96.86	63.24
4.859	4.835 (0.316)	39	354630			46.23- 106.23	75.24
11 Freon 12					CAS #: 75-71-8		
5.269	5.293 (0.342)	85	1221339	11.3503	11.350	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	392129			1.93- 61.93	32.11
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	893984	11.2996	11.300	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	291532			1.36- 61.36	32.61
6.594	6.594 (0.428)	85	975780			85.72- 145.72	109.15
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	532667	11.8056	11.806	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	158421			1.40- 61.40	29.74
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	88390	10.6676	10.668	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	901618			939.22- 999.22	1020.05
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.797 (0.508)	62	365777	10.4598	10.460	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	106423			0.00- 59.78	29.10
26 1,3-Butadiene					CAS #: 106-99-0		
8.023	8.022 (0.521)	54	371064	10.5610	10.561	80.00- 120.00	100.00
8.023	8.022 (0.521)	39	451137			90.63- 150.63	121.58
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	236546	9.44538	9.445	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	226597			63.10- 123.10	95.79
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	157447	10.8625	10.862	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	74074			13.74- 73.74	47.05
9.986	9.986 (0.649)	66	48154			0.11- 60.11	30.58
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	336920	10.4754	10.475	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	595751			149.05- 209.05	176.82
10.119	10.119 (0.657)	42	513406			122.74- 182.74	152.38
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1383481	11.2765	11.276	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	883191			35.39- 95.39	63.84
42 Ethanol					CAS #: 64-17-5		
11.662	11.642 (0.758)	45	245832	12.1178	12.118	80.00- 120.00	100.00
11.662	11.661 (0.758)	46	93624			10.30- 70.30	38.08
49 Freon 113					CAS #: 76-13-1		
12.081	12.080 (0.785)	151	806814	10.4835	10.484	80.00- 120.00	100.00
12.081	12.080 (0.785)	153	507428			33.74- 93.74	62.89
12.081	12.080 (0.785)	101	874424			78.29- 138.29	108.38
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	226282	10.4881	10.488	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	768025			307.46- 367.46	339.41
12.100	12.100 (0.786)	96	346756			127.87- 187.87	153.24
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	218914	10.4073	10.407	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1011861			407.61- 467.61	462.22

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.443	12.442 (0.808)	76	803724	8.90440	8.904	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.690 (0.826)	45	1122875	11.5091	11.509	80.00- 120.00	100.00
12.709	12.690 (0.826)	43	250318			0.00- 50.43	22.29
12.709	12.690 (0.826)	59	31843			0.00- 33.00	2.84
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.880 (0.837)	76	178549	9.83134	9.831	80.00- 120.00	100.00
12.881	12.880 (0.837)	41	1017787			511.05- 571.05	570.03
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	301211	10.2775	10.277	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	730370			205.99- 265.99	242.48
13.149	13.149 (0.854)	51	216040			40.46- 100.46	71.72
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.479	13.478 (0.876)	73	1065241	10.3631	10.363	80.00- 120.00	100.00
13.479	13.478 (0.876)	57	321587			0.79- 60.79	30.19
13.479	13.478 (0.876)	41	416534			7.43- 67.43	39.10
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	208037	9.04200	9.042	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	604342			247.42- 307.42	290.50
13.533	13.533 (0.879)	96	335503			122.37- 182.37	161.27
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	751511	10.9304	10.930	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	630357			51.15- 111.15	83.88
13.835	13.835 (0.899)	86	87439			0.00- 41.56	11.64
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.220 (0.926)	63	776974	10.6074	10.607	80.00- 120.00	100.00
14.247	14.220 (0.926)	65	232780			0.00- 59.55	29.96
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	96853	11.1984	11.198	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	156350			118.75- 178.75	161.43
14.247	14.247 (0.926)	43	1824281			1798.00-1858.00	1883.55
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	280489	11.6331	11.633	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	742475			229.72- 289.72	264.71
15.047	15.047 (0.978)	96	432929			126.60- 186.60	154.35

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   92 2-Butanone                                    CAS #: 78-93-3
 15.028  15.028 (0.976)    72    164588 11.1996   11.200  80.00- 120.00   100.00
 15.028  15.028 (0.976)    43   1287642                  750.92- 810.92   782.34
 15.028  15.028 (0.976)    57     82639                   19.16-  79.16    50.21
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 15.361  15.360 (0.998)    42    724199 11.2465   11.246  80.00- 120.00   100.00
 15.361  15.360 (0.998)    71    141127                    0.00-  50.51    19.49
 15.361  15.360 (0.998)    72    154343                    0.00-  51.95    21.31
-------------------------------------------------------------------------------
*  98 Bromochloromethane                            CAS #: 74-97-5
 15.391  15.391 (1.000)   130    122929 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128     93544                   46.85- 106.85    76.10
 15.391  15.391 (1.000)    49    334162                  226.12- 286.12   271.83
-------------------------------------------------------------------------------
  100 Chloroform                                    CAS #: 67-66-3
 15.453  15.453 (1.004)    83    916586 10.6580   10.658  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    629533                   35.38-  95.38    68.68
-------------------------------------------------------------------------------
  102 Cyclohexane                                   CAS #: 110-82-7
 15.669  15.669 (1.018)    84    479320 11.0234   11.023  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    862512                  148.59- 208.59   179.94
 15.669  15.669 (1.018)    41    605394                   91.63- 151.63   126.30
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                         CAS #: 71-55-6
 15.669  15.669 (1.018)    97   1167630 11.0005   11.000  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99    751590                   34.20-  94.20    64.37
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.854  15.854 (1.030)   119   1312829 12.0176   12.018  80.00- 120.00   100.00
 15.854  15.854 (1.030)   117   1359517                   73.79- 133.79   103.56
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1101303 10.4647   10.465  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   3318898                  276.72- 336.72   301.36
 16.111  16.111 (1.047)    41   1229895                   82.40- 142.40   111.68
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.183  16.183 (0.967)    78   1072281 10.7808   10.781  80.00- 120.00   100.00
 16.183  16.183 (0.967)    77    260967                    0.00-  53.88    24.34
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.183  16.183 (1.051)    65    197512 5.14263    5.143  80.00- 120.00   100.00
 16.183  16.183 (1.051)    67     97550                   17.94-  77.94    49.39
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.303 (0.974)    62    815829 11.5599   11.560  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
120 1,2-Dichloroethane (continued)							
16.304	16.303 (0.974)	64	251974			0.66- 60.66	30.89
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	489821	11.3948	11.395	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	159791			3.00- 63.00	32.62
16.352	16.352 (0.977)	43	1164989			207.00- 267.00	237.84
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	415069	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	62303			0.00- 44.91	15.01
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	646864	10.9397	10.940	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	562577			58.18- 118.18	86.97
17.123	17.123 (1.023)	97	365041			26.25- 86.25	56.43
127 Methylcyclohexane					CAS #: 108-87-2		
17.340	17.339 (1.036)	83	632270	11.3349	11.335	80.00- 120.00	100.00
17.340	17.339 (1.036)	55	839255			98.42- 158.42	132.74
17.340	17.339 (1.036)	56	254627			9.03- 69.03	40.27
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.557	17.556 (1.049)	63	445785	10.5169	10.517	80.00- 120.00	100.00
17.557	17.556 (1.049)	62	330947			44.02- 104.02	74.24
17.557	17.556 (1.049)	41	456527			65.46- 125.46	102.41
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	263377	11.3319	11.332	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	243098			62.58- 122.58	92.30
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	1058867	11.6065	11.606	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	699823			36.66- 96.66	66.09
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	641382	10.7336	10.734	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	208618			3.68- 63.68	32.53
18.805	18.805 (1.124)	39	620826			62.50- 122.50	96.80
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1628207	12.2494	12.249	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	461048			0.00- 59.19	28.32
18.984	18.984 (1.134)	85	164542			0.00- 40.34	10.11
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.276	19.275 (1.152)	98	411585	5.15387	5.154	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.276  19.275 (1.152)    70     45812                     0.00-  41.31    11.13
 19.276  19.275 (1.152)   100    265975                    38.24-  98.24    64.62
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.410 (1.161)    91   1356055 10.9379   10.938  80.00- 120.00   100.00
 19.432  19.410 (1.161)    92    789462                    28.10-  88.10    58.22
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    677361 11.3551   11.355  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    219782                     3.36-  63.36    32.45
 19.998  19.998 (0.903)    39    580792                    49.78- 109.78    85.74
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    503894 11.5772   11.577  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    307344                    32.24-  92.24    60.99
 20.438  20.438 (0.922)    83    378861                    48.02- 108.02    75.19
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.603  20.602 (0.930)   166    821618 11.2883   11.288  80.00- 120.00   100.00
 20.603  20.602 (0.930)   129    655899                    49.93- 109.93    79.83
 20.603  20.602 (0.930)   131    646891                    47.75- 107.75    78.73
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.768  20.767 (0.937)    58    604620 12.9097   12.910  80.00- 120.00   100.00
 20.768  20.767 (0.937)    43   1544907                   225.15- 285.15   255.52
 20.768  20.767 (0.937)   100    106217                     0.00-  47.79    17.57
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1253385 11.4845   11.484  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    983234                    46.75- 106.75    78.45
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.454  21.454 (0.968)   107    832144 11.3630   11.363  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    807823                    67.69- 127.69    97.08
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.157  22.156 (1.000)   117    392775 5.00000            80.00- 120.00   100.00
 22.157  22.156 (1.000)    82    187670                    19.53-  79.53    47.78
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.219  22.218 (1.003)   112   1215181 10.7606   10.760  80.00- 120.00   100.00
 22.219  22.218 (1.003)   114    393056                     1.36-  61.36    32.35
 22.219  22.218 (1.003)    77    664934                    24.91-  84.91    54.72
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    591646 11.2659   11.266  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
167 Ethyl Benzene (continued)							
22.281	22.281 (1.006)	91	1841081			280.28- 340.28	311.18
169 m,p-Xylene					CAS #: 108-38-3		
22.467	22.467 (1.014)	106	686415	11.7357	11.736	80.00- 120.00	100.00
22.467	22.467 (1.014)	91	1400976			173.14- 233.14	204.10
171 o-Xylene					CAS #: 95-47-6		
23.069	23.068 (1.041)	106	634443	11.6793	11.679	80.00- 120.00	100.00
23.069	23.068 (1.041)	91	1366857			184.94- 244.94	215.44
172 Styrene					CAS #: 100-42-5		
23.110	23.110 (1.043)	104	1086602	11.9945	11.994	80.00- 120.00	100.00
23.110	23.110 (1.043)	78	585870			23.72- 83.72	53.92
174 Bromoform					CAS #: 75-25-2		
23.452	23.452 (1.058)	173	1478733	15.1822	15.182	80.00- 120.00	100.00
23.452	23.452 (1.058)	171	761621			22.28- 82.28	51.51
175 Cumene					CAS #: 98-82-8		
23.542	23.542 (1.063)	105	2111720	11.8813	11.881	80.00- 120.00	100.00
23.542	23.542 (1.063)	120	575363			0.00- 57.53	27.25
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.077)	174	239715	5.22555	5.226	80.00- 120.00	100.00
23.856	23.856 (1.077)	95	270848			81.42- 141.42	112.99
23.856	23.856 (1.077)	176	229229			66.35- 126.35	95.63
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.085)	83	779205	11.1626	11.162	80.00- 120.00	100.00
24.035	24.035 (1.085)	85	534205			38.02- 98.02	68.56
182 Propylbenzene					CAS #: 103-65-1		
24.080	24.080 (1.087)	91	1912154	12.0800	12.080	80.00- 120.00	100.00
24.080	24.080 (1.087)	120	502239			0.00- 56.42	26.27
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.094)	105	1542281	12.6396	12.640	80.00- 120.00	100.00
24.237	24.237 (1.094)	120	475185			0.46- 60.46	30.81
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.097)	105	1169774	11.8890	11.889	80.00- 120.00	100.00
24.304	24.304 (1.097)	120	572530			18.43- 78.43	48.94
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.753	24.753 (1.117)	105	908489	11.6875	11.687	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
24.753	24.753 (1.117)	120	418601			16.45- 76.45	46.08
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.156 (1.135)	146	979878	11.5803	11.580	80.00- 120.00	100.00
25.157	25.156 (1.135)	148	623462			33.61- 93.61	63.63
25.157	25.156 (1.135)	111	378610			9.29- 69.29	38.64
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.246 (1.140)	146	911856	11.3714	11.371	80.00- 120.00	100.00
25.269	25.268 (1.140)	148	584090			34.28- 94.28	64.06
25.246	25.246 (1.139)	111	343344			7.48- 67.48	37.65
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1351991	12.2064	12.206	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	316834			0.00- 53.55	23.43
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	895374	11.4634	11.463	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	578407			33.54- 93.54	64.60
25.672	25.672 (1.159)	111	355441			10.04- 70.04	39.70
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	439759	13.0771	13.077	80.00- 120.00	100.00(R)
27.398	27.398 (1.237)	182	428110			66.37- 126.37	97.35
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	738690	11.8733	11.873	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	470908			32.58- 92.58	63.75
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.251)	128	43030	0.63330	0.6333	80.00- 120.00	100.00
27.712	27.712 (1.251)	127	9327			0.00- 41.67	21.68
M 239 Total Xylene					CAS #: 1330-20-7		
			1320858	23.4150	23.415		

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071203.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	122929	-8.46
123 1,4-Difluorobenze	480550	288330	672770	415069	-13.63
163 Chlorobenzene-d5	431542	258925	604159	392775	-8.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071203.d

Date : 12-JUL-2017 08:28

Client ID: LCS

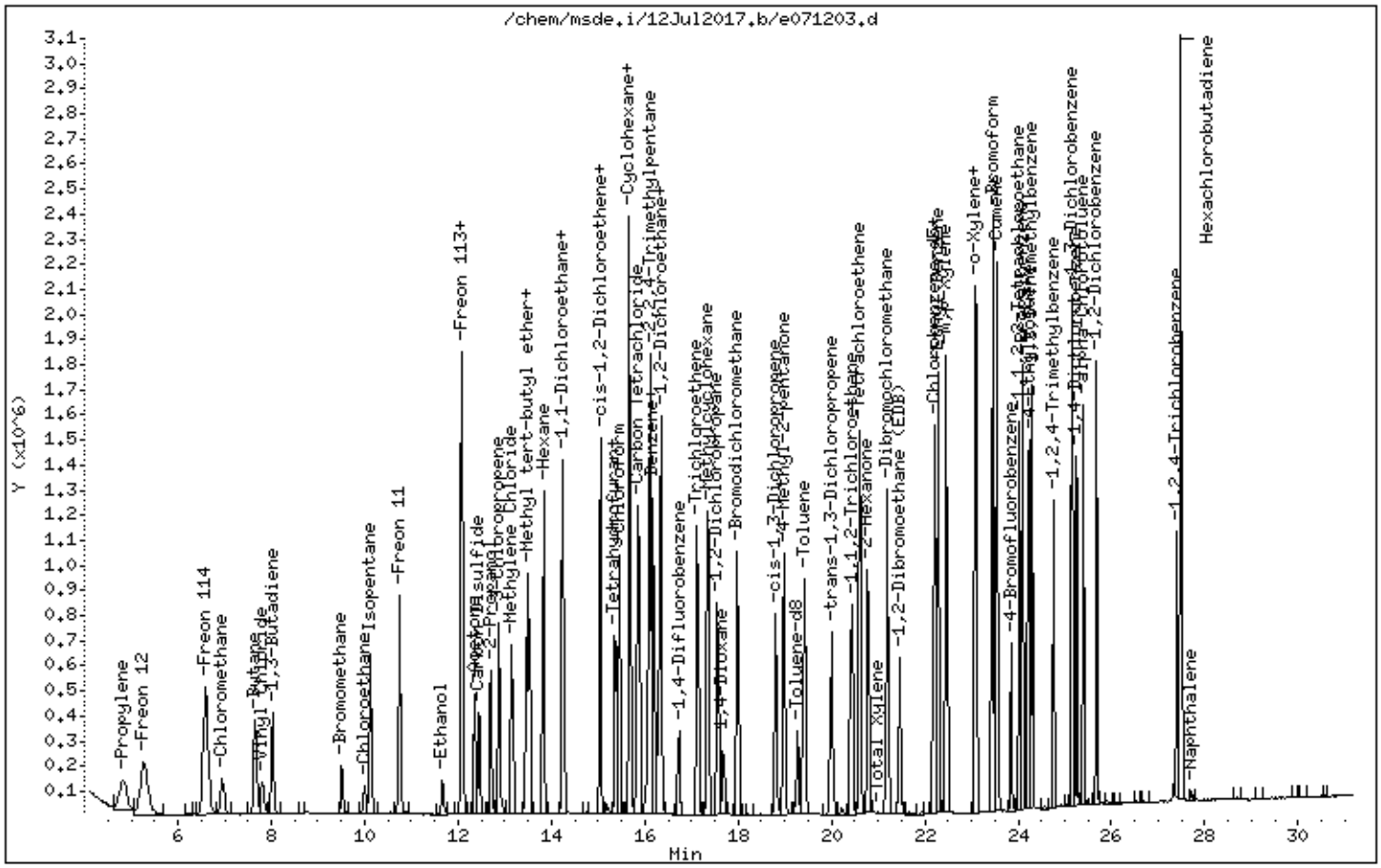
Instrument: msde.i

Sample Info: 50mL# 2850-248

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707045R3-10CC

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 09:10 AM**	

Compound	**%Recovery**	**Method Limits**
Methylene Chloride	104	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

Report Date: 12-Jul-2017 14:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCSD
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	11.430	114.30	60-140
11 Freon 12	10.000	11.683	116.83	70-130
15 Freon 114	10.000	11.622	116.22	70-130
17 Chloromethane	10.000	11.389	113.89	70-130
23 Butane	10.000	10.904	109.04	60-140
25 Vinyl Chloride	10.000	10.961	109.61	70-130
26 1,3-Butadiene	10.000	10.718	107.18	70-130
29 Bromomethane	10.000	10.047	100.47	70-130
30 Chloroethane	10.000	10.988	109.88	70-130
31 Isopentane	10.000	10.740	107.40	60-140
35 Freon 11	10.000	11.882	118.82	70-130
42 Ethanol	10.000	12.249	122.49	70-130
49 Freon 113	10.000	10.575	105.75	70-130
50 1,1-Dichloroethene	10.000	10.868	108.68	70-130
52 Acetone	10.000	10.538	105.38	70-130
56 Carbon Disulfide	10.000	9.146	91.46	70-130
57 2-Propanol	10.000	11.757	117.57	70-130
58 3-Chloropropene	10.000	10.340	103.40	70-130
66 Methylene Chloride	10.000	10.428	104.28	70-130
72 Methyl tert-butyl	10.000	10.610	106.10	70-130
73 trans-1,2-Dichloro	10.000	9.145	91.45	70-130
78 Hexane	10.000	11.247	112.47	70-130
82 1,1-Dichloroethane	10.000	10.742	107.42	70-130
86 Vinyl Acetate	10.000	11.281	112.81	60-140
91 cis-1,2-Dichloroet	10.000	11.777	117.77	70-130
92 2-Butanone	10.000	11.128	111.29	70-130
99 Tetrahydrofuran	10.000	11.475	114.75	70-130
100 Chloroform	10.000	10.929	109.29	70-130
103 1,1,1-Trichloroeth	10.000	11.197	111.97	70-130
106 Carbon Tetrachlori	10.000	12.156	121.56	70-130
102 Cyclohexane	10.000	11.216	112.17	70-130
113 2,2,4-Trimethylpen	10.000	10.683	106.83	70-130
116 Benzene	10.000	10.553	105.53	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	11.231	112.31	70-130
121 Heptane	10.000	10.937	109.37	70-130
125 Trichloroethene	10.000	10.590	105.90	70-130
127 Methylcyclohexane	10.000	11.163	111.63	60-140
132 1,2-Dichloropropan	10.000	10.165	101.65	70-130
136 1,4-Dioxane	10.000	11.009	110.09	70-130
138 Bromodichlorometha	10.000	11.232	112.32	70-130
144 cis-1,3-Dichloropr	10.000	10.370	103.70	70-130
145 4-Methyl-2-pentano	10.000	12.072	120.72	70-130
147 Toluene	10.000	10.816	108.16	70-130
150 trans-1,3-Dichloro	10.000	11.260	112.60	70-130
155 1,1,2-Trichloroeth	10.000	11.372	113.72	70-130
156 Tetrachloroethene	10.000	10.999	109.99	70-130
158 2-Hexanone	10.000	12.354	123.54	70-130
160 Dibromochlorometha	10.000	11.539	115.39	70-130
161 1,2-Dibromoethane	10.000	11.340	113.40	70-130
165 Chlorobenzene	10.000	10.454	104.54	70-130
167 Ethyl Benzene	10.000	11.128	111.28	70-130
169 m,p-Xylene	10.000	11.613	116.13	70-130
171 o-Xylene	10.000	11.700	117.00	70-130
172 Styrene	10.000	11.731	117.31	70-130
174 Bromoform	13.000	14.883	114.48	70-130
175 Cumene	10.000	11.630	116.30	70-130
181 1,1,2,2-Tetrachlor	10.000	10.909	109.09	70-130
182 Propylbenzene	10.000	11.749	117.49	70-130
188 4-Ethyltoluene	10.000	12.249	122.49	70-130
190 1,3,5-Trimethylben	10.000	11.590	115.90	70-130
196 1,2,4-Trimethylben	10.000	11.516	115.16	70-130
208 1,3-Dichlorobenzen	10.000	11.099	110.99	70-130
209 1,4-Dichlorobenzen	10.000	11.061	110.61	70-130
212 alpha-Chlorotoluen	10.000	11.782	117.82	70-130
214 1,2-Dichlorobenzen	10.000	11.114	111.14	70-130
226 1,2,4-Trichloroben	10.000	11.890	118.90	70-130
227 Hexachlorobutadien	10.000	11.466	114.66	70-130
228 Naphthalene	1.000	0.5415	54.15*	60-140
M 239 Total Xylene	20.000	23.314	116.57	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.379	107.58	70-130
$ 146 Toluene-d8	5.000	5.026	100.53	70-130
$ 177 4-Bromofluorobenze	5.000	5.023	100.47	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071204.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 12-JUL-2017 09:10
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-248
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m
Meth Date : 12-Jul-2017 14:52 M86M Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.811	4.811 (0.313)	41	478250	11.4304	11.430	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	298530			36.86- 96.86	62.42
4.835	4.835 (0.314)	39	350446			46.23- 106.23	73.28
11 Freon 12					CAS #: 75-71-8		
5.269	5.293 (0.342)	85	1226475	11.6826	11.683	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	397828			1.93- 61.93	32.44
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	897098	11.6221	11.622	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	287624			1.36- 61.36	32.06
6.594	6.594 (0.428)	85	975821			85.72- 145.72	108.78
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	501362	11.3893	11.389	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	154115			1.40- 61.40	30.74
23 Butane					CAS #: 106-97-8		
7.658	7.658 (0.498)	58	88150	10.9043	10.904	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	905106			939.22- 999.22	1026.78
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.797 (0.508)	62	373971	10.9611	10.961	80.00- 120.00	100.00
7.814	7.814 (0.508)	64	107512			0.00- 59.78	28.75
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	367421	10.7185	10.718	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	455573			90.63- 150.63	123.99
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	245493	10.0474	10.047	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	227723			63.10- 123.10	92.76
30 Chloroethane					CAS #: 75-00-3		
10.005	9.986 (0.650)	64	155381	10.9876	10.988	80.00- 120.00	100.00
10.005	9.986 (0.650)	49	71975			13.74- 73.74	46.32
10.005	9.986 (0.650)	66	47353			0.11- 60.11	30.48
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	337007	10.7397	10.740	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	603546			149.05- 209.05	179.09
10.119	10.119 (0.657)	42	512423			122.74- 182.74	152.05
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1422236	11.8819	11.882	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	916608			35.39- 95.39	64.45
42 Ethanol					CAS #: 64-17-5		
11.661	11.642 (0.758)	45	242445	12.2493	12.249	80.00- 120.00	100.00
11.661	11.661 (0.758)	46	97347			10.30- 70.30	40.15
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	794000	10.5746	10.575	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	506904			33.74- 93.74	63.84
12.080	12.080 (0.785)	101	868751			78.29- 138.29	109.41
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	228761	10.8677	10.868	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	773838			307.46- 367.46	338.27
12.100	12.100 (0.786)	96	354232			127.87- 187.87	154.85
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	216271	10.5384	10.538	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	1014403			407.61- 467.61	469.04

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.442 (0.810)	76	805462	9.14649	9.146	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.709	12.690 (0.826)	45	1119093	11.7567	11.757	80.00- 120.00	100.00
12.709	12.690 (0.826)	43	249498			0.00- 50.43	22.29
12.709	12.690 (0.826)	59	31358			0.00- 33.00	2.80
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.880 (0.837)	76	183212	10.3400	10.340	80.00- 120.00	100.00
12.881	12.880 (0.837)	41	1018560			511.05- 571.05	555.94
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	298176	10.4279	10.428	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	722052			205.99- 265.99	242.16
13.149	13.149 (0.854)	51	207569			40.46- 100.46	69.61
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	1064103	10.6105	10.610	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	324812			0.79- 60.79	30.52
13.478	13.478 (0.876)	41	405415			7.43- 67.43	38.10
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	205274	9.14473	9.145	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	594882			247.42- 307.42	289.80
13.533	13.533 (0.879)	96	325216			122.37- 182.37	158.43
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	754461	11.2473	11.247	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	633416			51.15- 111.15	83.96
13.835	13.835 (0.899)	86	91648			0.00- 41.56	12.15
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.220 (0.926)	63	767644	10.7417	10.742	80.00- 120.00	100.00
14.247	14.220 (0.926)	65	232988			0.00- 59.55	30.35
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	95190	11.2809	11.281	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	162063			118.75- 178.75	170.25
14.247	14.247 (0.926)	43	1803228			1798.00-1858.00	1894.35
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	277040	11.7769	11.777	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	731606			229.72- 289.72	264.08
15.047	15.047 (0.978)	96	437899			126.60- 186.60	158.06

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone					CAS #: 78-93-3		
15.028	15.028 (0.976)	72	159561	11.1286	11.128	80.00- 120.00	100.00
15.028	15.028 (0.976)	43	1290073			750.92- 810.92	808.51
15.047	15.028 (0.978)	57	81387			19.16- 79.16	51.01
99 Tetrahydrofuran					CAS #: 109-99-9		
15.360	15.360 (0.998)	42	720886	11.4747	11.475	80.00- 120.00	100.00
15.360	15.360 (0.998)	71	146402			0.00- 50.51	20.31
15.360	15.360 (0.998)	72	150998			0.00- 51.95	20.95
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	119934	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	92068			46.85- 106.85	76.77
15.391	15.391 (1.000)	49	329978			226.12- 286.12	275.13
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	916984	10.9289	10.929	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	619859			35.38- 95.38	67.60
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	475835	11.2165	11.216	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	861092			148.59- 208.59	180.96
15.669	15.669 (1.018)	41	599886			91.63- 151.63	126.07
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	1159502	11.1967	11.197	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	747888			34.20- 94.20	64.50
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	1295578	12.1559	12.156	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	1353237			73.79- 133.79	104.45
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	1096926	10.6834	10.683	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	3316111			276.72- 336.72	302.31
16.111	16.111 (1.047)	41	1234496			82.40- 142.40	112.54
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	1073681	10.5526	10.553	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	259845			0.00- 53.88	24.20
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	201560	5.37906	5.379	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	95276			17.94- 77.94	47.27
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.303	16.303 (0.974)	62	810789	11.2307	11.231	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
120 1,2-Dichloroethane (continued)							
16.303	16.303 (0.974)	64	245329			0.66- 60.66	30.26
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	480926	10.9368	10.937	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	158173			3.00- 63.00	32.89
16.352	16.352 (0.977)	43	1187581			207.00- 267.00	246.94
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	424597	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	64173			0.00- 44.91	15.11
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	640587	10.5904	10.590	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	563308			58.18- 118.18	87.94
17.123	17.123 (1.023)	97	362631			26.25- 86.25	56.61
127 Methylcyclohexane					CAS #: 108-87-2		
17.339	17.339 (1.036)	83	636999	11.1634	11.163	80.00- 120.00	100.00
17.339	17.339 (1.036)	55	845203			98.42- 158.42	132.69
17.339	17.339 (1.036)	56	253684			9.03- 69.03	39.82
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	440772	10.1653	10.165	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	329997			44.02- 104.02	74.87
17.556	17.556 (1.049)	41	459429			65.46- 125.46	104.23
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	261737	11.0087	11.009	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	249666			62.58- 122.58	95.39
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	1048269	11.2324	11.232	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	701519			36.66- 96.66	66.92
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	633900	10.3703	10.370	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	213123			3.68- 63.68	33.62
18.805	18.805 (1.124)	39	621461			62.50- 122.50	98.04
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1641402	12.0715	12.072	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	455258			0.00- 59.19	27.74
18.984	18.984 (1.134)	85	164479			0.00- 40.34	10.02
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	410615	5.02634	5.026	80.00- 120.00	100.00

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.275  19.275 (1.152)    70     48808                     0.00-  41.31    11.89
 19.275  19.275 (1.152)   100    270332                    38.24-  98.24    65.84
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.410 (1.161)    91   1371720 10.8159   10.816  80.00- 120.00   100.00
 19.432  19.410 (1.161)    92    790495                    28.10-  88.10    57.63
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    683905 11.2605   11.260  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    221369                     3.36-  63.36    32.37
 19.998  19.998 (0.903)    39    578910                    49.78- 109.78    84.65
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    503936 11.3718   11.372  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    302862                    32.24-  92.24    60.10
 20.438  20.438 (0.922)    83    380777                    48.02- 108.02    75.56
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.602  20.602 (0.930)   166    815099 10.9992   10.999  80.00- 120.00   100.00
 20.602  20.602 (0.930)   129    663395                    49.93- 109.93    81.39
 20.602  20.602 (0.930)   131    651235                    47.75- 107.75    79.90
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.767  20.767 (0.937)    58    589102 12.3542   12.354  80.00- 120.00   100.00
 20.767  20.767 (0.937)    43   1539295                   225.15- 285.15   261.29
 20.767  20.767 (0.937)   100    101784                     0.00-  47.79    17.28
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1282140 11.5386   11.539  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    986150                    46.75- 106.75    76.91
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.454  21.454 (0.968)   107    845529 11.3401   11.340  80.00- 120.00   100.00
 21.454  21.454 (0.968)   109    818474                    67.69- 127.69    96.80
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    399901 5.00000            80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    203340                    19.53-  79.53    50.85
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.218  22.218 (1.003)   112   1202003 10.4542   10.454  80.00- 120.00   100.00
 22.218  22.218 (1.003)   114    389038                     1.36-  61.36    32.37
 22.218  22.218 (1.003)    77    659853                    24.91-  84.91    54.90
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.281  22.281 (1.006)   106    594992 11.1277   11.128  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   1845014                  280.28- 340.28   310.09
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    691578 11.6133   11.613  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1418507                  173.14- 233.14   205.11
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.068 (1.041)   106    647125 11.7005   11.700  80.00- 120.00   100.00
 23.069  23.068 (1.041)    91   1379202                  184.94- 244.94   213.13
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104   1082056 11.7315   11.731  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    585286                   23.72-  83.72    54.09
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1475871 14.8828   14.883  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    764625                   22.28-  82.28    51.81
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   2104646 11.6305   11.630  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    577463                    0.00-  57.53    27.44
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    234627 5.02348    5.023  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    268352                   81.42- 141.42   114.37
 23.856  23.856 (1.077)   176    235092                   66.35- 126.35   100.20
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    775356 10.9095   10.909  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    519514                   38.02-  98.02    67.00
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   1893550 11.7493   11.749  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    499077                    0.00-  56.42    26.36
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.094)   105   1521783 12.2494   12.249  80.00- 120.00   100.00
 24.237  24.237 (1.094)   120    461741                    0.46-  60.46    30.34
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1161059 11.5902   11.590  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    568608                   18.43-  78.43    48.97
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105    911439 11.5165   11.516  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  196 1,2,4-Trimethylbenzene (continued)
 24.753  24.753 (1.117)   120    410867                    16.45-  76.45    45.08
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.156  25.156 (1.135)   146    956199 11.0991   11.099  80.00- 120.00   100.00
 25.156  25.156 (1.135)   148    610601                    33.61-  93.61    63.86
 25.156  25.156 (1.135)   111    371016                     9.29-  69.29    38.80
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.268  25.246 (1.140)   146    903086 11.0614   11.061  80.00- 120.00   100.00
 25.268  25.268 (1.140)   148    573841                    34.28-  94.28    63.54
 25.246  25.246 (1.139)   111    332085                     7.48-  67.48    36.77
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.147)    91   1328712 11.7825   11.782  80.00- 120.00   100.00
 25.403  25.403 (1.147)   126    313488                     0.00-  53.55    23.59
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.672  25.672 (1.159)   146    883841 11.1141   11.114  80.00- 120.00   100.00
 25.672  25.672 (1.159)   148    565035                    33.54-  93.54    63.93
 25.672  25.672 (1.159)   111    357281                    10.04-  70.04    40.42
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.237)   180    407087 11.8898   11.890  80.00- 120.00   100.00
 27.398  27.398 (1.237)   182    391220                    66.37- 126.37    96.10
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.241)   225    726273 11.4657   11.466  80.00- 120.00   100.00
 27.488  27.488 (1.241)   223    452102                    32.58-  92.58    62.25
-------------------------------------------------------------------------------
  228 Naphthalene                                  CAS #: 91-20-3
 27.712  27.712 (1.251)   128     37462 0.54152   0.5415  80.00- 120.00   100.00(R)
 27.712  27.712 (1.251)   127      5448                     0.00-  41.67    14.54
-------------------------------------------------------------------------------
M 239 Total Xylene                                 CAS #: 1330-20-7
                                1338704 23.3137   23.314
-------------------------------------------------------------------------------
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QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071204.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	134296	80578	188014	119934	-10.69
123 1,4-Difluorobenze	480550	288330	672770	424597	-11.64
163 Chlorobenzene-d5	431542	258925	604159	399901	-7.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071204.d

Date : 12-JUL-2017 09:10

Client ID: LCSD

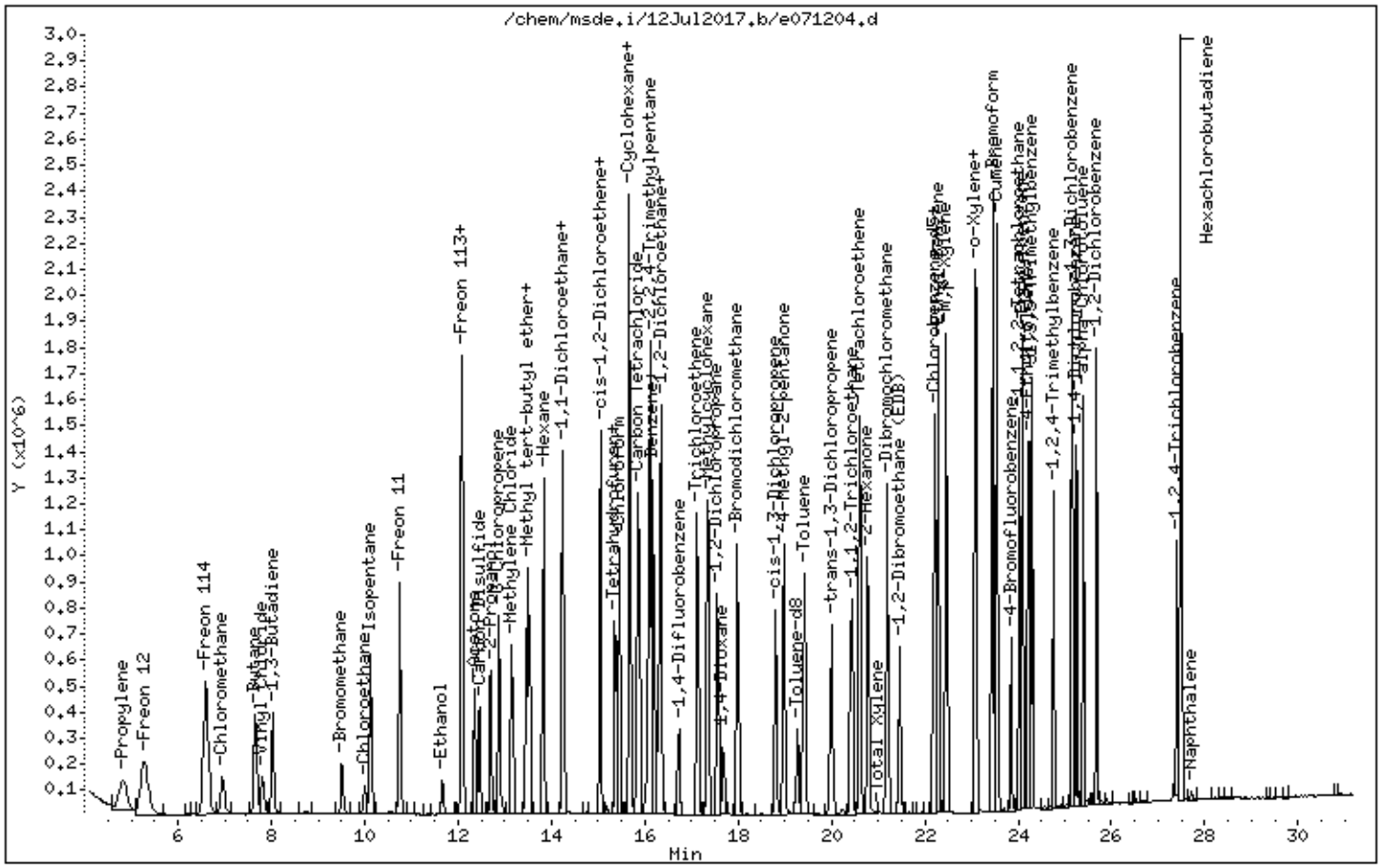
Instrument: msde.i

Sample Info: 50mL# 2850-248

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1707045R3-10D

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071203sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 08:28 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	112	70-130
1,1-Dichloroethene	102	70-130
trans-1,2-Dichloroethene	92	70-130
cis-1,2-Dichloroethene	113	70-130
Benzene	97	70-130
1,2-Dichloroethane	112	70-130
Trichloroethene	100	70-130
Toluene	106	70-130
1,1,2-Trichloroethane	110	70-130
Tetrachloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

Report Date: 13-Jul-2017 10:55

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	11.454	114.54	70-130
2 Freon 114	10.000	11.349	113.49	70-130
3 Chloromethane	10.000	11.227	112.27	70-130
4 Vinyl Chloride	10.000	11.192	111.92	70-130
5 Chloroethane	10.000	10.300	103.00	70-130
8 1,1-Dichloroethene	10.000	10.204	102.04	70-130
9 Methyl tert-butyl	10.000	11.066	110.66	70-130
10 trans-1,2-Dichloro	10.000	9.215	92.15	70-130
11 1,1-Dichloroethane	10.000	10.750	107.50	70-130
12 cis-1,2-Dichloroet	10.000	11.323	113.23	70-130
14 Chloroform	10.000	10.436	104.36	70-130
15 1,1,1-Trichloroeth	10.000	10.836	108.36	70-130
16 Carbon Tetrachlori	10.000	11.280	112.80	60-140
17 Benzene	10.000	9.721	97.21	70-130
19 1,2-Dichloroethane	10.000	11.170	111.70	70-130
21 Trichloroethene	10.000	10.043	100.43	70-130
23 Toluene	10.000	10.618	106.18	70-130
25 1,1,2-Trichloroeth	10.000	10.989	109.89	70-130
26 Tetrachloroethene	10.000	10.705	107.05	70-130
27 1,2-Dibromoethane	10.000	11.028	110.28	70-130
30 Ethyl Benzene	10.000	11.525	115.25	70-130
31 m,p-Xylene	10.000	11.764	117.64	70-130
32 o-Xylene	10.000	12.096	120.96	70-130
34 1,1,2,2-Tetrachlor	10.000	10.823	108.23	70-130
36 1,4-Dichlorobenzen	10.000	11.906	119.06	70-130
38 Naphthalene	1.000	0.6494	64.94	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	4.928	98.57	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.111	102.22	70-130
$ 33 4-Bromofluorobenze	5.000	5.212	104.25	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071203sim.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 12-JUL-2017 08:28
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-248
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 12-Jul-2017 18:02 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1335190	11.4536	11.454	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	432538			2.36- 62.36	32.40
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	1004317	11.3494	11.349	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	324346			2.09- 62.09	32.30
3 Chloromethane					CAS #: 74-87-3		
6.970	6.969 (0.452)	50	563567	11.2269	11.227	80.00- 120.00	100.00
6.970	6.969 (0.452)	52	173759			0.98- 60.98	30.83
4 Vinyl Chloride					CAS #: 75-01-4		
7.811	7.810 (0.507)	62	399053	11.1918	11.192	80.00- 120.00	100.00
7.811	7.810 (0.507)	64	115000			0.00- 58.64	28.82
5 Chloroethane					CAS #: 75-00-3		
10.000	9.999 (0.649)	64	169792	10.2996	10.300	80.00- 120.00	100.00
10.000	9.999 (0.649)	66	51910			0.36- 60.36	30.57

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	244860	10.2040	10.204	80.00- 120.00	100.00
12.094	12.094 (0.785)	61	837095			300.85- 360.85	341.87
12.094	12.113 (0.785)	96	385662			126.45- 186.45	157.50
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	1011077	11.0663	11.066	80.00- 120.00	100.00
13.465	13.465 (0.874)	57	300669			0.00- 59.46	29.74
13.465	13.465 (0.874)	41	366043			3.65- 63.65	36.20
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	228371	9.21470	9.215	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	642147			242.34- 302.34	281.19
13.547	13.547 (0.879)	96	354771			125.09- 185.09	155.35
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.234	14.233 (0.924)	63	839089	10.7502	10.750	80.00- 120.00	100.00
14.234	14.233 (0.924)	65	255620			0.54- 60.54	30.46
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	307457	11.3231	11.323	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	795014			222.17- 282.17	258.58
15.060	15.060 (0.978)	96	478882			125.16- 185.16	155.76
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	129864	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	99878			47.63- 107.63	76.91
15.374	15.374 (1.000)	49	239078			150.43- 210.43	184.10
14 Chloroform					CAS #: 67-66-3		
15.436	15.436 (1.002)	83	988259	10.4359	10.436	80.00- 120.00	100.00
15.467	15.436 (1.004)	85	676148			38.49- 98.49	68.42
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	1253792	10.8362	10.836	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	814923			35.44- 95.44	65.00
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	1392669	11.2804	11.280	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	1431622			72.67- 132.67	102.80
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	1071697	9.72130	9.721	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	254304			0.00- 53.68	23.73
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	205435	4.92830	4.928	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67     97447                    19.71-  79.71    47.43
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    886974 11.1696   11.170  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    272409                     0.82-  60.82    30.71
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    461199 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     67349                     0.00-  44.62    14.60
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    691215 10.0433   10.043  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    611927                   57.80- 117.80    88.53
 17.136  17.136 (1.024)    97    395578                   26.87-  86.87    57.23
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    379101 5.11106    5.111  80.00- 120.00   100.00
 19.289  19.267 (1.153)    70     43540                     0.00-  41.18    11.49
 19.289  19.289 (1.153)   100    245542                   35.44-  95.44    64.77
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.423 (1.161)    91   1343358 10.6177   10.618  80.00- 120.00   100.00
 19.424  19.423 (1.161)    92    782933                   28.44-  88.44    58.28
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    541442 10.9890   10.989  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    339512                   32.77-  92.77    62.71
 20.424  20.424 (0.921)    83    417466                   47.27- 107.27    77.10
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    856313 10.7053   10.705  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    693919                   50.99- 110.99    81.04
 20.616  20.616 (0.930)   131    702816                   51.53- 111.53    82.07
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    907399 11.0277   11.028  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    903861                   69.74- 129.74    99.61
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    425868 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    184410                   12.99-  72.99    43.30
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.295  22.294 (1.006)   106    579577 11.5254   11.525  80.00- 120.00   100.00
 22.295  22.294 (1.006)    91   1815753                  281.21- 341.21   313.29
-------------------------------------------------------------------------------
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   31 m,p-Xylene                                     CAS #: 108-38-3
 22.481  22.481 (1.014)   106    677561 11.7642   11.764  80.00- 120.00   100.00
 22.481  22.481 (1.014)    91   1394214                  173.96- 233.96   205.77
-------------------------------------------------------------------------------
   32 o-Xylene                                       CAS #: 95-47-6
 23.082  23.082 (1.041)   106    632565 12.0964   12.096  80.00- 120.00   100.00
 23.082  23.082 (1.041)    91   1367236                  183.85- 243.85   216.14
-------------------------------------------------------------------------------
$  33 4-Bromofluorobenzene                            CAS #: 460-00-4
 23.869  23.869 (1.077)   174    267452 5.21248    5.212  80.00- 120.00   100.00
 23.847  23.847 (1.076)    95    278913                   73.66- 133.66   104.29
 23.869  23.869 (1.077)   176    258656                   67.29- 127.29    96.71
-------------------------------------------------------------------------------
   34 1,1,2,2-Tetrachloroethane                      CAS #: 79-34-5
 24.027  24.026 (1.084)    83    830466 10.8229   10.823  80.00- 120.00   100.00
 24.049  24.026 (1.085)    85    573512                   38.95-  98.95    69.06
-------------------------------------------------------------------------------
   36 1,4-Dichlorobenzene                            CAS #: 106-46-7
 25.260  25.260 (1.139)   146   1013678 11.9056   11.906  80.00- 120.00   100.00
 25.260  25.260 (1.139)   148    656971                   34.91-  94.91    64.81
 25.260  25.260 (1.139)   111    377674                    6.86-  66.86    37.26
-------------------------------------------------------------------------------
   38 Naphthalene                                    CAS #: 91-20-3
 27.726  27.726 (1.251)   128     44746 0.64938   0.6494  80.00- 120.00   100.00
 27.726  27.726 (1.251)   127      5788                    0.00-  42.71    12.94
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071203sim.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	143363	86018	200708	129864	-9.42
20 1,4-Difluorobenze	516813	310088	723538	461199	-10.76
28 Chlorobenzene-d5	470445	282267	658623	425868	-9.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071203sim.d

Date : 12-JUL-2017 08:28

Client ID: LCS

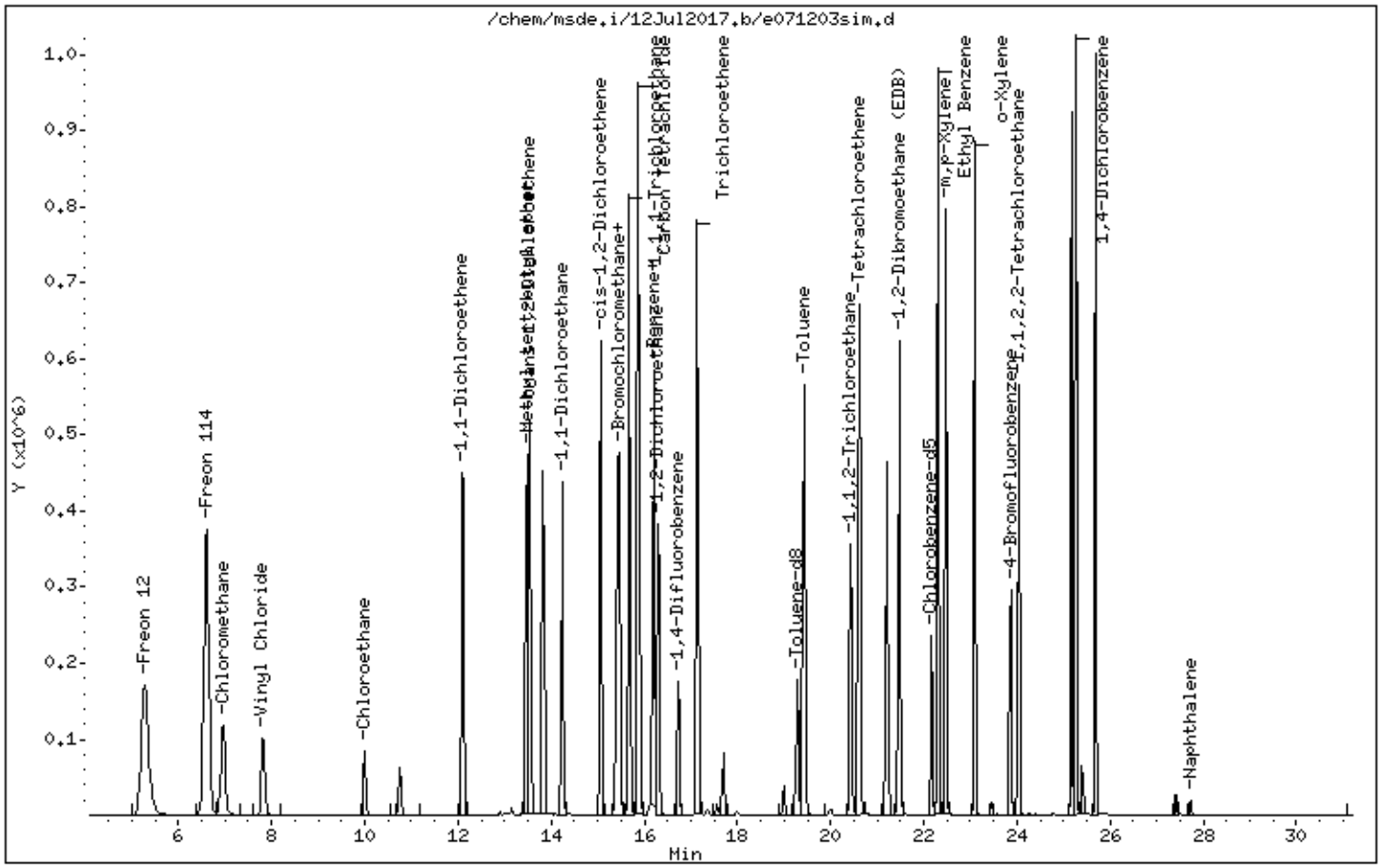
Instrument: msde.i

Sample Info: 50mL# 2850-248

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCSD

Lab ID#: 1707045R3-10DD

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071204sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/12/17 09:10 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	113	70-130
1,1-Dichloroethene	103	70-130
trans-1,2-Dichloroethene	92	70-130
cis-1,2-Dichloroethene	114	70-130
Benzene	96	70-130
1,2-Dichloroethane	110	70-130
Trichloroethene	99	70-130
Toluene	105	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	105	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130

Report Date: 13-Jul-2017 10:55

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 12Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCSD
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	11.576	115.77	70-130
2 Freon 114	10.000	11.380	113.80	70-130
3 Chloromethane	10.000	11.304	113.04	70-130
4 Vinyl Chloride	10.000	11.347	113.47	70-130
5 Chloroethane	10.000	10.334	103.34	70-130
8 1,1-Dichloroethene	10.000	10.260	102.61	70-130
9 Methyl tert-butyl	10.000	11.120	111.21	70-130
10 trans-1,2-Dichloro	10.000	9.229	92.29	70-130
11 1,1-Dichloroethane	10.000	10.720	107.20	70-130
12 cis-1,2-Dichloroet	10.000	11.371	113.71	70-130
14 Chloroform	10.000	10.398	103.98	70-130
15 1,1,1-Trichloroeth	10.000	10.832	108.32	70-130
16 Carbon Tetrachlori	10.000	11.323	113.23	60-140
17 Benzene	10.000	9.579	95.79	70-130
19 1,2-Dichloroethane	10.000	10.954	109.54	70-130
21 Trichloroethene	10.000	9.943	99.43	70-130
23 Toluene	10.000	10.532	105.32	70-130
25 1,1,2-Trichloroeth	10.000	10.812	108.12	70-130
26 Tetrachloroethene	10.000	10.533	105.33	70-130
27 1,2-Dibromoethane	10.000	10.817	108.17	70-130
30 Ethyl Benzene	10.000	11.473	114.73	70-130
31 m,p-Xylene	10.000	11.612	116.13	70-130
32 o-Xylene	10.000	11.939	119.39	70-130
34 1,1,2,2-Tetrachlor	10.000	10.574	105.74	70-130
36 1,4-Dichlorobenzen	10.000	11.531	115.31	70-130
38 Naphthalene	1.000	0.5764	57.64*	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	4.932	98.65	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.107	102.13	70-130
$ 33 4-Bromofluorobenze	5.000	5.178	103.57	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/12Jul2017.b/e071204sim.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 12-JUL-2017 09:10
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-248
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 12-Jul-2017 18:02 ealcan Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1342277	11.5766	11.576	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	434599			2.36- 62.36	32.38
2 Freon 114					CAS #: 76-14-2		
6.608	6.608 (0.429)	135	1001627	11.3801	11.380	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	322711			2.09- 62.09	32.22
3 Chloromethane					CAS #: 74-87-3		
6.970	6.969 (0.452)	50	564394	11.3040	11.304	80.00- 120.00	100.00
6.970	6.969 (0.452)	52	173961			0.98- 60.98	30.82
4 Vinyl Chloride					CAS #: 75-01-4		
7.828	7.810 (0.508)	62	402426	11.3473	11.347	80.00- 120.00	100.00
7.828	7.810 (0.508)	64	116036			0.00- 58.64	28.83
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	169442	10.3339	10.334	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	51573			0.36- 60.36	30.44

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	244894	10.2605	10.260	80.00- 120.00	100.00
12.113	12.094 (0.786)	61	837016			300.85- 360.85	341.79
12.113	12.113 (0.786)	96	385262			126.45- 186.45	157.32
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	1010573	11.1205	11.120	80.00- 120.00	100.00
13.465	13.465 (0.874)	57	299458			0.00- 59.46	29.63
13.465	13.465 (0.874)	41	362360			3.65- 63.65	35.86
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	227503	9.22921	9.229	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	638874			242.34- 302.34	280.82
13.547	13.547 (0.879)	96	355303			125.09- 185.09	156.18
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.233	14.233 (0.924)	63	832219	10.7198	10.720	80.00- 120.00	100.00
14.233	14.233 (0.924)	65	253979			0.54- 60.54	30.52
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	307101	11.3710	11.371	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	794168			222.17- 282.17	258.60
15.060	15.060 (0.978)	96	478925			125.16- 185.16	155.95
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	129167	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	99703			47.63- 107.63	77.19
15.374	15.374 (1.000)	49	239536			150.43- 210.43	185.45
14 Chloroform					CAS #: 67-66-3		
15.436	15.436 (1.002)	83	979432	10.3985	10.398	80.00- 120.00	100.00
15.467	15.436 (1.004)	85	671072			38.49- 98.49	68.52
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	1246563	10.8319	10.832	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	812863			35.44- 95.44	65.21
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	1390476	11.3234	11.323	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	1427063			72.67- 132.67	102.63
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	1071308	9.57903	9.579	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	255188			0.00- 53.68	23.82
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	204505	4.93246	4.932	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67     97044                    19.71-  79.71    47.45
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    882435 10.9538   10.954  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    271678                    0.82-  60.82    30.79
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    467879 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     68770                    0.00-  44.62    14.70
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    694197 9.94264    9.943  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    613169                   57.80- 117.80    88.33
 17.136  17.136 (1.024)    97    396190                   26.87-  86.87    57.07
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    384262 5.10668    5.107  80.00- 120.00   100.00
 19.289  19.267 (1.153)    70     44087                    0.00-  41.18    11.47
 19.289  19.289 (1.153)   100    250745                   35.44-  95.44    65.25
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.423  19.423 (1.161)    91   1351829 10.5321   10.532  80.00- 120.00   100.00
 19.423  19.423 (1.161)    92    784529                   28.44-  88.44    58.03
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    541421 10.8124   10.812  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    339848                   32.77-  92.77    62.77
 20.424  20.424 (0.921)    83    416726                   47.27- 107.27    76.97
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    856239 10.5328   10.533  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    699279                   50.99- 110.99    81.67
 20.616  20.616 (0.930)   131    705197                   51.53- 111.53    82.36
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    904553 10.8169   10.817  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    899065                   69.74- 129.74    99.39
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    432806 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    186393                   12.99-  72.99    43.07
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.294  22.294 (1.006)   106    586330 11.4728   11.473  80.00- 120.00   100.00
 22.294  22.294 (1.006)    91   1830354                  281.21- 341.21   312.17
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	679724	11.6125	11.612	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	1395916			173.96- 233.96	205.37
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	634499	11.9389	11.939	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	1367052			183.85- 243.85	215.45
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	270028	5.17833	5.178	80.00- 120.00	100.00
23.847	23.847 (1.076)	95	282891			73.66- 133.66	104.76
23.869	23.869 (1.077)	176	262689			67.29- 127.29	97.28
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.026	24.026 (1.084)	83	824599	10.5742	10.574	80.00- 120.00	100.00
24.026	24.026 (1.084)	85	570446			38.95- 98.95	69.18
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	997777	11.5310	11.531	80.00- 120.00	100.00
25.260	25.260 (1.139)	148	649454			34.91- 94.91	65.09
25.260	25.260 (1.139)	111	372082			6.86- 66.86	37.29
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	40366	0.57642	0.5764	80.00- 120.00	100.00(R)
27.726	27.726 (1.251)	127	5299			0.00- 42.71	13.13

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071204sim.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/12Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 12-JUL-2017
Calibration Time: 07:45
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	143363	86018	200708	129167	-9.90
20 1,4-Difluorobenze	516813	310088	723538	467879	-9.47
28 Chlorobenzene-d5	470445	282267	658623	432806	-8.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/12Jul2017.b/e071204sim.d

Date : 12-JUL-2017 09:10

Client ID: LCSD

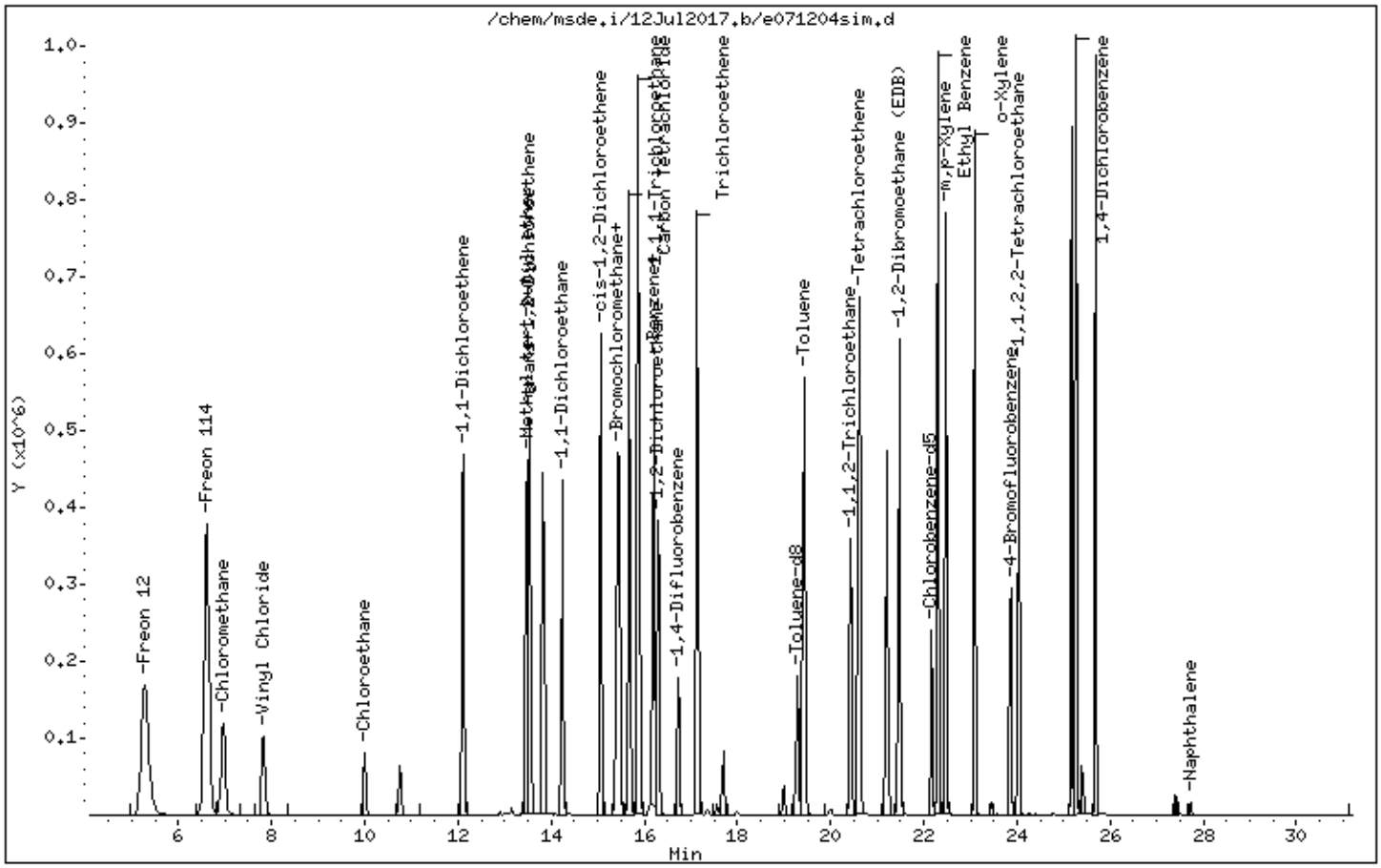
Instrument: msde.i

Sample Info: 50mL# 2850-248

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1707045R3-10E

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 08:40 AM**	

Compound	**%Recovery**	**Method Limits**
Methylene Chloride	84	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	99	70-130

Report Date: 13-Jul-2017 09:12

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	9.021	90.21	60-140
11 Freon 12	10.000	9.579	95.79	70-130
15 Freon 114	10.000	9.777	97.77	70-130
17 Chloromethane	10.000	9.278	92.78	70-130
23 Butane	10.000	9.350	93.50	60-140
25 Vinyl Chloride	10.000	8.752	87.52	70-130
26 1,3-Butadiene	10.000	8.883	88.83	70-130
29 Bromomethane	10.000	7.939	79.39	70-130
30 Chloroethane	10.000	9.071	90.71	70-130
31 Isopentane	10.000	9.129	91.29	60-140
35 Freon 11	10.000	9.979	99.79	70-130
42 Ethanol	10.000	9.986	99.86	70-130
49 Freon 113	10.000	8.840	88.40	70-130
50 1,1-Dichloroethene	10.000	8.702	87.02	70-130
52 Acetone	10.000	8.817	88.17	70-130
56 Carbon Disulfide	10.000	7.618	76.18	70-130
57 2-Propanol	10.000	9.749	97.49	70-130
58 3-Chloropropene	10.000	8.317	83.17	70-130
66 Methylene Chloride	10.000	8.436	84.36	70-130
72 Methyl tert-butyl	10.000	8.890	88.90	70-130
73 trans-1,2-Dichloro	10.000	7.644	76.44	70-130
78 Hexane	10.000	9.315	93.15	70-130
82 1,1-Dichloroethane	10.000	8.766	87.66	70-130
86 Vinyl Acetate	10.000	9.371	93.71	60-140
91 cis-1,2-Dichloroet	10.000	9.942	99.42	70-130
92 2-Butanone	10.000	9.023	90.23	70-130
99 Tetrahydrofuran	10.000	9.555	95.55	70-130
100 Chloroform	10.000	9.129	91.29	70-130
103 1,1,1-Trichloroeth	10.000	9.263	92.63	70-130
106 Carbon Tetrachlori	10.000	7.239	72.39	70-130
102 Cyclohexane	10.000	9.021	90.21	70-130
113 2,2,4-Trimethylpen	10.000	8.734	87.34	70-130
116 Benzene	10.000	8.855	88.55	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	9.600	96.01	70-130
121 Heptane	10.000	9.368	93.68	70-130
125 Trichloroethene	10.000	9.354	93.54	70-130
127 Methylcyclohexane	10.000	9.357	93.57	60-140
132 1,2-Dichloropropan	10.000	8.602	86.02	70-130
136 1,4-Dioxane	10.000	9.273	92.73	70-130
138 Bromodichlorometha	10.000	9.446	94.46	70-130
144 cis-1,3-Dichloropr	10.000	8.788	87.88	70-130
145 4-Methyl-2-pentano	10.000	10.060	100.60	70-130
147 Toluene	10.000	9.155	91.55	70-130
150 trans-1,3-Dichloro	10.000	9.168	91.68	70-130
155 1,1,2-Trichloroeth	10.000	9.094	90.94	70-130
156 Tetrachloroethene	10.000	9.223	92.23	70-130
158 2-Hexanone	10.000	10.095	100.95	70-130
160 Dibromochlorometha	10.000	9.132	91.32	70-130
161 1,2-Dibromoethane	10.000	9.195	91.95	70-130
165 Chlorobenzene	10.000	8.692	86.92	70-130
167 Ethyl Benzene	10.000	9.121	91.21	70-130
169 m,p-Xylene	10.000	9.670	96.70	70-130
171 o-Xylene	10.000	9.576	95.76	70-130
172 Styrene	10.000	9.635	96.35	70-130
174 Bromoform	13.000	11.977	92.13	70-130
175 Cumene	10.000	9.658	96.58	70-130
181 1,1,2,2-Tetrachlor	10.000	8.565	85.65	70-130
182 Propylbenzene	10.000	9.884	98.84	70-130
188 4-Ethyltoluene	10.000	10.177	101.77	70-130
190 1,3,5-Trimethylben	10.000	9.737	97.37	70-130
196 1,2,4-Trimethylben	10.000	9.591	95.91	70-130
208 1,3-Dichlorobenzen	10.000	9.036	90.36	70-130
209 1,4-Dichlorobenzen	10.000	9.011	90.11	70-130
212 alpha-Chlorotoluen	10.000	9.600	96.00	70-130
214 1,2-Dichlorobenzen	10.000	9.089	90.89	70-130
226 1,2,4-Trichloroben	10.000	9.791	97.91	70-130
227 Hexachlorobutadien	10.000	9.468	94.68	70-130
228 Naphthalene	1.000	0.5519	55.19*	60-140
M 239 Total Xylene	20.000	19.246	96.23	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.324	106.48	70-130
$ 146 Toluene-d8	5.000	5.181	103.62	70-130
$ 177 4-Bromofluorobenze	5.000	4.972	99.45	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /var/chem/msde.i/13Jul2017.b/e071303.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 13-JUL-2017 08:40
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:30 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.835	4.811 (0.314)	41	415470	9.02137	9.021	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	279053			36.86- 96.86	67.17
4.835	4.811 (0.314)	39	317391			46.23- 106.23	76.39
11 Freon 12					CAS #: 75-71-8		
5.293	5.269 (0.344)	85	1106909	9.57898	9.579	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	359221			1.93- 61.93	32.45
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	830712	9.77728	9.777	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	259327			1.36- 61.36	31.22
6.594	6.594 (0.428)	85	880676			85.72- 145.72	106.01
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	449548	9.27779	9.278	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	139345			1.40- 61.40	31.00
23 Butane					CAS #: 106-97-8		
7.658	7.640 (0.498)	58	83200	9.35027	9.350	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	828011			939.22- 999.22	995.21
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.797 (0.508)	62	328681	8.75221	8.752	80.00- 120.00	100.00
7.814	7.797 (0.508)	64	94404			0.00- 59.78	28.72
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	335180	8.88325	8.883	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	416493			90.63- 150.63	124.26
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	213516	7.93909	7.939	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	197400			63.10- 123.10	92.45
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	141199	9.07115	9.071	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	67047			13.74- 73.74	47.48
9.986	9.986 (0.649)	66	45143			0.11- 60.11	31.97
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	315302	9.12864	9.129	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	573368			149.05- 209.05	181.85
10.119	10.119 (0.657)	42	493641			122.74- 182.74	156.56
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1314764	9.97898	9.979	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	843427			35.39- 95.39	64.15
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	217565	9.98640	9.986	80.00- 120.00	100.00
11.661	11.661 (0.758)	46	84743			10.30- 70.30	38.95
49 Freon 113					CAS #: 76-13-1		
12.080	12.081 (0.785)	151	730627	8.84028	8.840	80.00- 120.00	100.00
12.080	12.081 (0.785)	153	464864			33.74- 93.74	63.63
12.080	12.081 (0.785)	101	797035			78.29- 138.29	109.09
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	201623	8.70206	8.702	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	704760			307.46- 367.46	349.54
12.100	12.100 (0.786)	96	315202			127.87- 187.87	156.33
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	199172	8.81717	8.817	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	923352			407.61- 467.61	463.60

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.461	12.442 (0.810)	76	738391	7.61764	7.618	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	1021475	9.74928	9.749	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	222127			0.00- 50.43	21.75
12.690	12.690 (0.824)	59	29472			0.00- 33.00	2.89
58 3-Chloropropene					CAS #: 107-05-1		
12.880	12.881 (0.837)	76	162213	8.31719	8.317	80.00- 120.00	100.00
12.880	12.881 (0.837)	41	920134			511.05- 571.05	567.24
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	265518	8.43615	8.436	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	654569			205.99- 265.99	246.53
13.149	13.149 (0.854)	51	195820			40.46- 100.46	73.75
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	981395	8.89039	8.890	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	301048			0.79- 60.79	30.68
13.478	13.478 (0.876)	41	372142			7.43- 67.43	37.92
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	188860	7.64364	7.644	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	543839			247.42- 307.42	287.96
13.533	13.533 (0.879)	96	296664			122.37- 182.37	157.08
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	687763	9.31488	9.315	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	572678			51.15- 111.15	83.27
13.835	13.835 (0.899)	86	81033			0.00- 41.56	11.78
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.220 (0.926)	63	689511	8.76553	8.766	80.00- 120.00	100.00
14.247	14.220 (0.926)	65	211258			0.00- 59.55	30.64
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	87038	9.37099	9.371	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	151765			118.75- 178.75	174.37
14.247	14.247 (0.926)	43	1659785			1798.00-1858.00	1906.97
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	257434	9.94217	9.942	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	672703			229.72- 289.72	261.31
15.047	15.047 (0.978)	96	400279			126.60- 186.60	155.49

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone					CAS #: 78-93-3		
15.027	15.028 (0.976)	72	142396	9.02267	9.023	80.00- 120.00	100.00
15.027	15.028 (0.976)	43	1173810			750.92- 810.92	824.33
15.027	15.028 (0.976)	57	75283			19.16- 79.16	52.87
99 Tetrahydrofuran					CAS #: 109-99-9		
15.360	15.360 (0.998)	42	660740	9.55495	9.555	80.00- 120.00	100.00
15.360	15.360 (0.998)	71	132614			0.00- 50.51	20.07
15.360	15.360 (0.998)	72	137970			0.00- 51.95	20.88
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	132014	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	99660			46.85- 106.85	75.49
15.391	15.391 (1.000)	49	338970			226.12- 286.12	256.77
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	843127	9.12919	9.129	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	565687			35.38- 95.38	67.09
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	421254	9.02133	9.021	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	765304			148.59- 208.59	181.67
15.669	15.669 (1.018)	41	550933			91.63- 151.63	130.78
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	1055826	9.26265	9.263	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	673823			34.20- 94.20	63.82
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	849292	7.23943	7.239	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	880421			73.79- 133.79	103.67
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	987126	8.73431	8.734	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	3023730			276.72- 336.72	306.32
16.111	16.111 (1.047)	41	1125775			82.40- 142.40	114.05
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	965895	8.85535	8.855	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	231802			0.00- 53.88	24.00
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	219598	5.32421	5.324	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	97433			17.94- 77.94	44.37
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.303	16.303 (0.974)	62	743032	9.60057	9.600	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
120 1,2-Dichloroethane (continued)							
16.303	16.303 (0.974)	64	228422			0.66- 60.66	30.74
121 Heptane					CAS #: 142-82-5		
16.352	16.352 (0.977)	57	441628	9.36825	9.368	80.00- 120.00	100.00
16.352	16.352 (0.977)	100	146722			3.00- 63.00	33.22
16.352	16.352 (0.977)	43	1071466			207.00- 267.00	242.62
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	455184	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	69944			0.00- 44.91	15.37
125 Trichloroethene					CAS #: 79-01-6		
17.123	17.123 (1.023)	130	606542	9.35379	9.354	80.00- 120.00	100.00
17.123	17.123 (1.023)	95	528006			58.18- 118.18	87.05
17.123	17.123 (1.023)	97	340716			26.25- 86.25	56.17
127 Methylcyclohexane					CAS #: 108-87-2		
17.339	17.339 (1.036)	83	572406	9.35734	9.357	80.00- 120.00	100.00
17.339	17.339 (1.036)	55	758346			98.42- 158.42	132.48
17.339	17.339 (1.036)	56	225624			9.03- 69.03	39.42
132 1,2-Dichloropropane					CAS #: 78-87-5		
17.556	17.556 (1.049)	63	399878	8.60245	8.602	80.00- 120.00	100.00
17.556	17.556 (1.049)	62	298963			44.02- 104.02	74.76
17.556	17.556 (1.049)	41	415956			65.46- 125.46	104.02
136 1,4-Dioxane					CAS #: 123-91-1		
17.677	17.677 (1.056)	88	236365	9.27345	9.273	80.00- 120.00	100.00
17.677	17.677 (1.056)	58	225265			62.58- 122.58	95.30
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	945028	9.44575	9.446	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	628734			36.66- 96.66	66.53
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	575874	8.78800	8.788	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	193535			3.68- 63.68	33.61
18.805	18.805 (1.124)	39	570996			62.50- 122.50	99.15
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
18.984	18.984 (1.134)	43	1466411	10.0599	10.060	80.00- 120.00	100.00
18.984	18.984 (1.134)	58	416298			0.00- 59.19	28.39
18.984	18.984 (1.134)	85	149143			0.00- 40.34	10.17
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.275	19.275 (1.152)	98	453751	5.18113	5.181	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8 (continued)							
19.275	19.275 (1.152)	70	52724			0.00- 41.31	11.62
19.275	19.275 (1.152)	100	292897			38.24- 98.24	64.55
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	1244731	9.15512	9.155	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	712918			28.10- 88.10	57.27
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
19.998	19.998 (0.903)	75	614857	9.16829	9.168	80.00- 120.00	100.00
19.998	19.998 (0.903)	77	200390			3.36- 63.36	32.59
19.998	19.998 (0.903)	39	525643			49.78- 109.78	85.49
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	444985	9.09399	9.094	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	280927			32.24- 92.24	63.13
20.438	20.438 (0.922)	83	351379			48.02- 108.02	78.96
156 Tetrachloroethene					CAS #: 127-18-4		
20.602	20.603 (0.930)	166	754698	9.22310	9.223	80.00- 120.00	100.00
20.602	20.603 (0.930)	129	615374			49.93- 109.93	81.54
20.602	20.603 (0.930)	131	604179			47.75- 107.75	80.06
158 2-Hexanone					CAS #: 591-78-6		
20.767	20.767 (0.937)	58	531530	10.0950	10.095	80.00- 120.00	100.00
20.767	20.767 (0.937)	43	1398993			225.15- 285.15	263.20
20.795	20.795 (0.939)	100	89776			0.00- 47.79	16.89
160 Dibromochloromethane					CAS #: 124-48-1		
21.207	21.207 (0.957)	129	1120473	9.13217	9.132	80.00- 120.00	100.00
21.207	21.207 (0.957)	127	867759			46.75- 106.75	77.45
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.481	21.454 (0.970)	107	757028	9.19503	9.195	80.00- 120.00	100.00
21.481	21.454 (0.970)	109	742177			67.69- 127.69	98.04
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.156	22.156 (1.000)	117	441569	5.00000		80.00- 120.00	100.00
22.156	22.156 (1.000)	82	209623			19.53- 79.53	47.47
165 Chlorobenzene					CAS #: 108-90-7		
22.218	22.219 (1.003)	112	1103563	8.69235	8.692	80.00- 120.00	100.00
22.218	22.219 (1.003)	114	349718			1.36- 61.36	31.69
22.218	22.219 (1.003)	77	603001			24.91- 84.91	54.64
167 Ethyl Benzene					CAS #: 100-41-4		
22.281	22.281 (1.006)	106	538538	9.12147	9.121	80.00- 120.00	100.00

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   1676179                   280.28- 340.28   311.25
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    635842 9.66979    9.670  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1281397                   173.14- 233.14   201.53
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.068  23.069 (1.041)   106    584833 9.57636    9.576  80.00- 120.00   100.00
 23.068  23.069 (1.041)    91   1268427                   184.94- 244.94   216.89
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104    981289 9.63505    9.635  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    529904                    23.72-  83.72    54.00
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1311424 11.9766   11.977  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    676715                    22.28-  82.28    51.60
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1929855 9.65824    9.658  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    527339                     0.00-  57.53    27.33
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    256440 4.97240    4.972  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    285062                    81.42- 141.42   111.16
 23.856  23.856 (1.077)   176    243930                    66.35- 126.35    95.12
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    672136 8.56475    8.565  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    463904                    38.02-  98.02    69.02
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   1758933 9.88414    9.884  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    451161                     0.00-  56.42    25.65
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.094)   105   1396103 10.1773   10.177  80.00- 120.00   100.00
 24.237  24.237 (1.094)   120    434389                     0.46-  60.46    31.11
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1077104 9.73749    9.737  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    523591                    18.43-  78.43    48.61
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105    838117 9.59072    9.591  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  196 1,2,4-Trimethylbenzene (continued)
 24.753  24.753 (1.117)   120    391022                    16.45-  76.45    46.65
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.156  25.156 (1.135)   146    859554 9.03578    9.036  80.00- 120.00   100.00
 25.156  25.156 (1.135)   148    549689                    33.61-  93.61    63.95
 25.156  25.156 (1.135)   111    339780                     9.29-  69.29    39.53
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.268  25.269 (1.140)   146    812315 9.01070    9.011  80.00- 120.00   100.00
 25.268  25.269 (1.140)   148    530341                    34.28-  94.28    65.29
 25.246  25.246 (1.139)   111    307345                     7.48-  67.48    37.84
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.147)    91   1195374 9.59984    9.600  80.00- 120.00   100.00
 25.403  25.403 (1.147)   126    274980                     0.00-  53.55    23.00
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.672  25.672 (1.159)   146    798124 9.08919    9.089  80.00- 120.00   100.00
 25.672  25.672 (1.159)   148    513262                    33.54-  93.54    64.31
 25.672  25.672 (1.159)   111    330178                    10.04-  70.04    41.37
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.237)   180    370156 9.79097    9.791  80.00- 120.00   100.00
 27.398  27.398 (1.237)   182    349322                    66.37- 126.37    94.37
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.241)   225    662197 9.46761    9.468  80.00- 120.00   100.00
 27.488  27.488 (1.241)   223    422674                    32.58-  92.58    63.83
-------------------------------------------------------------------------------
  228 Naphthalene                                  CAS #: 91-20-3
 27.712  27.712 (1.251)   128     42159 0.55191   0.5519  80.00- 120.00   100.00(R)
 27.712  27.712 (1.251)   127      5573                     0.00-  41.67    13.22
-------------------------------------------------------------------------------
M 239 Total Xylene                                 CAS #: 1330-20-7
                                1220675 19.2461   19.246
-------------------------------------------------------------------------------
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QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071303.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	132014	4.16
123 1,4-Difluorobenze	464912	278947	650877	455184	-2.09
163 Chlorobenzene-d5	425008	255005	595011	441569	3.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/13Jul2017.b/e071303.d

Date : 13-JUL-2017 08:40

Client ID: LCS

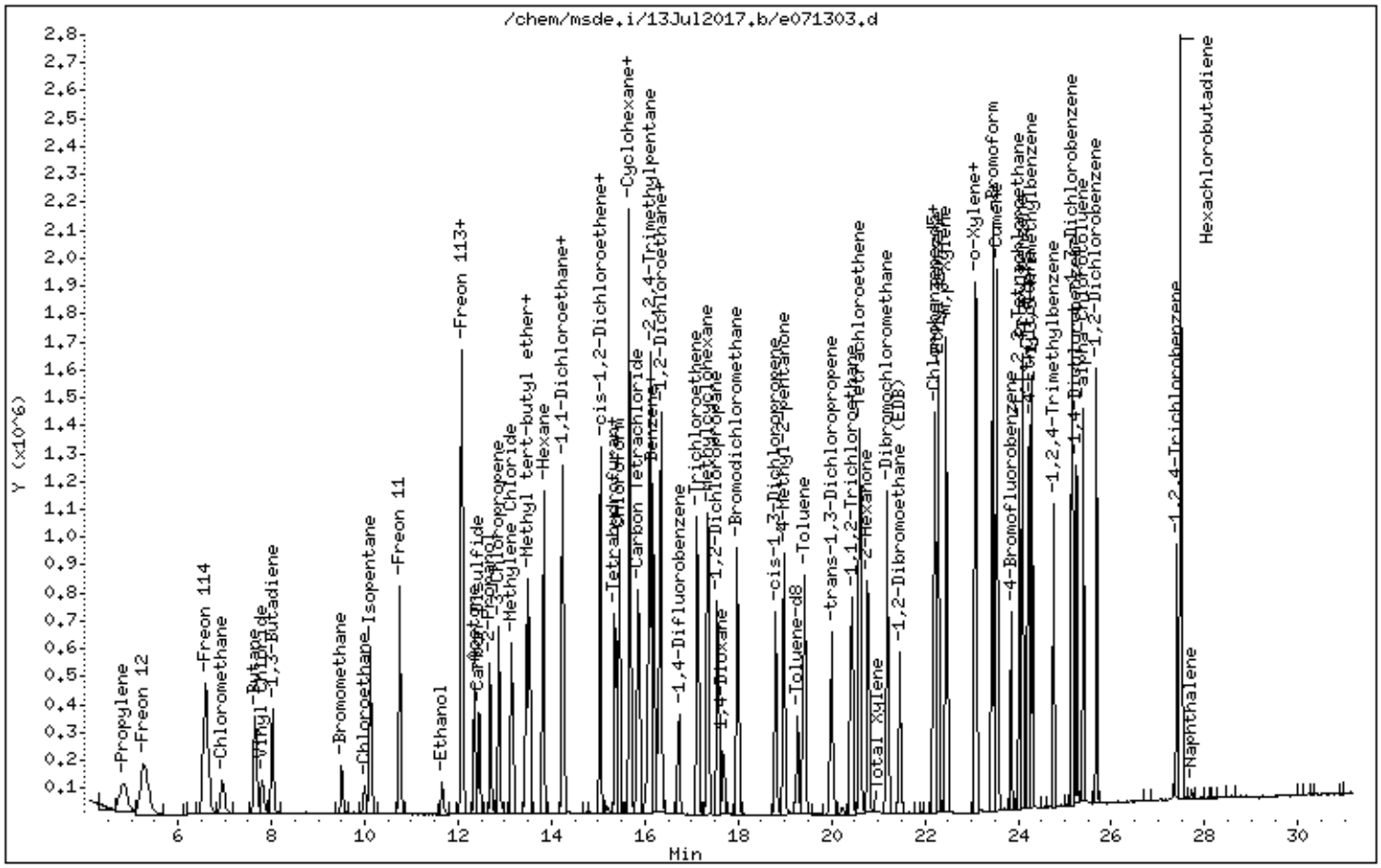
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707045R3-10EE

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 09:22 AM**	

Compound	**%Recovery**	**Method Limits**
Methylene Chloride	86	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

Report Date: 13-Jul-2017 09:54

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCSD
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	9.017	90.17	60-140
11 Freon 12	10.000	9.524	95.24	70-130
15 Freon 114	10.000	9.546	95.46	70-130
17 Chloromethane	10.000	9.910	99.10	70-130
23 Butane	10.000	8.950	89.50	60-140
25 Vinyl Chloride	10.000	8.889	88.89	70-130
26 1,3-Butadiene	10.000	8.900	89.00	70-130
29 Bromomethane	10.000	8.277	82.77	70-130
30 Chloroethane	10.000	9.384	93.84	70-130
31 Isopentane	10.000	9.792	97.92	60-140
35 Freon 11	10.000	9.949	99.49	70-130
42 Ethanol	10.000	9.842	98.42	70-130
49 Freon 113	10.000	8.792	87.92	70-130
50 1,1-Dichloroethene	10.000	8.747	87.47	70-130
52 Acetone	10.000	8.515	85.15	70-130
56 Carbon Disulfide	10.000	7.481	74.81	70-130
57 2-Propanol	10.000	9.629	96.29	70-130
58 3-Chloropropene	10.000	8.308	83.08	70-130
66 Methylene Chloride	10.000	8.646	86.46	70-130
72 Methyl tert-butyl	10.000	8.832	88.33	70-130
73 trans-1,2-Dichloro	10.000	7.682	76.82	70-130
78 Hexane	10.000	9.295	92.95	70-130
82 1,1-Dichloroethane	10.000	8.855	88.55	70-130
86 Vinyl Acetate	10.000	9.495	94.95	60-140
91 cis-1,2-Dichloroet	10.000	10.114	101.14	70-130
92 2-Butanone	10.000	8.994	89.94	70-130
99 Tetrahydrofuran	10.000	9.688	96.88	70-130
100 Chloroform	10.000	9.132	91.32	70-130
103 1,1,1-Trichloroeth	10.000	9.273	92.73	70-130
106 Carbon Tetrachlori	10.000	7.224	72.25	70-130
102 Cyclohexane	10.000	9.377	93.77	70-130
113 2,2,4-Trimethylpen	10.000	8.764	87.64	70-130
116 Benzene	10.000	8.771	87.71	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	9.348	93.48	70-130
121 Heptane	10.000	9.184	91.84	70-130
125 Trichloroethene	10.000	9.134	91.34	70-130
127 Methylcyclohexane	10.000	9.155	91.55	60-140
132 1,2-Dichloropropan	10.000	8.601	86.01	70-130
136 1,4-Dioxane	10.000	9.016	90.16	70-130
138 Bromodichlorometha	10.000	9.384	93.84	70-130
144 cis-1,3-Dichloropr	10.000	8.661	86.61	70-130
145 4-Methyl-2-pentano	10.000	9.903	99.03	70-130
147 Toluene	10.000	8.988	89.88	70-130
150 trans-1,3-Dichloro	10.000	9.430	94.30	70-130
155 1,1,2-Trichloroeth	10.000	9.286	92.86	70-130
156 Tetrachloroethene	10.000	9.469	94.69	70-130
158 2-Hexanone	10.000	10.103	101.03	70-130
160 Dibromochlorometha	10.000	9.332	93.32	70-130
161 1,2-Dibromoethane	10.000	9.307	93.07	70-130
165 Chlorobenzene	10.000	8.764	87.64	70-130
167 Ethyl Benzene	10.000	9.338	93.38	70-130
169 m,p-Xylene	10.000	9.727	97.27	70-130
171 o-Xylene	10.000	9.557	95.57	70-130
172 Styrene	10.000	9.559	95.59	70-130
174 Bromoform	13.000	12.099	93.07	70-130
175 Cumene	10.000	9.880	98.80	70-130
181 1,1,2,2-Tetrachlor	10.000	8.815	88.15	70-130
182 Propylbenzene	10.000	9.858	98.59	70-130
188 4-Ethyltoluene	10.000	10.075	100.75	70-130
190 1,3,5-Trimethylben	10.000	9.638	96.38	70-130
196 1,2,4-Trimethylben	10.000	9.407	94.07	70-130
208 1,3-Dichlorobenzen	10.000	9.154	91.54	70-130
209 1,4-Dichlorobenzen	10.000	9.051	90.51	70-130
212 alpha-Chlorotoluen	10.000	9.680	96.80	70-130
214 1,2-Dichlorobenzen	10.000	9.147	91.47	70-130
226 1,2,4-Trichloroben	10.000	9.593	95.93	70-130
227 Hexachlorobutadien	10.000	9.674	96.74	70-130
228 Naphthalene	1.000	0.5502	55.03*	60-140
M 239 Total Xylene	20.000	19.284	96.42	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.178	103.55	70-130
$ 146 Toluene-d8	5.000	4.952	99.04	70-130
$ 177 4-Bromofluorobenze	5.000	4.957	99.14	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /var/chem/msde.i/13Jul2017.b/e071304.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 13-JUL-2017 09:22
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m
Meth Date : 13-Jul-2017 08:30 M86M Quant Type: ISTD
Cal Date : 12-JUL-2017 16:15 Cal File: e071213.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
9 Propylene					CAS #: 115-07-1		
4.811	4.811 (0.313)	41	414011	9.01729	9.017	80.00- 120.00	100.00
4.835	4.835 (0.314)	42	272799			36.86- 96.86	65.89
4.835	4.811 (0.314)	39	325529			46.23- 106.23	78.63
11 Freon 12					CAS #: 75-71-8		
5.293	5.269 (0.344)	85	1097155	9.52371	9.524	80.00- 120.00	100.00
5.269	5.269 (0.342)	87	353883			1.93- 61.93	32.25
15 Freon 114					CAS #: 76-14-2		
6.594	6.594 (0.428)	135	808614	9.54641	9.546	80.00- 120.00	100.00
6.594	6.594 (0.428)	137	264216			1.36- 61.36	32.68
6.594	6.594 (0.428)	85	892978			85.72- 145.72	110.43
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	478732	9.91042	9.910	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	139760			1.40- 61.40	29.19
23 Butane					CAS #: 106-97-8		
7.658	7.640 (0.498)	58	79391	8.94961	8.950	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
23 Butane (continued)							
7.658	7.658 (0.498)	43	826136			939.22- 999.22	1040.59
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.797 (0.508)	62	332802	8.88916	8.889	80.00- 120.00	100.00
7.814	7.797 (0.508)	64	94586			0.00- 59.78	28.42
26 1,3-Butadiene					CAS #: 106-99-0		
8.022	8.022 (0.521)	54	334788	8.90009	8.900	80.00- 120.00	100.00
8.022	8.022 (0.521)	39	410913			90.63- 150.63	122.74
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	221912	8.27662	8.277	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	205088			63.10- 123.10	92.42
30 Chloroethane					CAS #: 75-00-3		
10.005	9.986 (0.650)	64	145616	9.38363	9.384	80.00- 120.00	100.00
10.005	9.986 (0.650)	49	69902			13.74- 73.74	48.00
10.005	9.986 (0.650)	66	42461			0.11- 60.11	29.16
31 Isopentane					CAS #: 78-78-4		
10.119	10.119 (0.657)	57	337170	9.79172	9.792	80.00- 120.00	100.00
10.119	10.119 (0.657)	43	618978			149.05- 209.05	183.58
10.119	10.119 (0.657)	42	537551			122.74- 182.74	159.43
35 Freon 11					CAS #: 75-69-4		
10.747	10.747 (0.698)	101	1306809	9.94904	9.949	80.00- 120.00	100.00
10.747	10.747 (0.698)	103	829833			35.39- 95.39	63.50
42 Ethanol					CAS #: 64-17-5		
11.662	11.661 (0.758)	45	213761	9.84194	9.842	80.00- 120.00	100.00
11.662	11.661 (0.758)	46	82141			10.30- 70.30	38.43
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	724374	8.79153	8.792	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	466810			33.74- 93.74	64.44
12.081	12.081 (0.785)	101	793134			78.29- 138.29	109.49
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	202040	8.74684	8.747	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	709955			307.46- 367.46	351.39
12.100	12.100 (0.786)	96	324700			127.87- 187.87	160.71
52 Acetone					CAS #: 67-64-1		
12.347	12.347 (0.802)	58	191764	8.51530	8.515	80.00- 120.00	100.00
12.347	12.347 (0.802)	43	919265			407.61- 467.61	479.37

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.442 (0.810)	76	722972	7.48146	7.481	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.690	12.690 (0.824)	45	1005834	9.62946	9.629	80.00- 120.00	100.00
12.690	12.690 (0.824)	43	220356			0.00- 50.43	21.91
12.690	12.690 (0.824)	59	29078			0.00- 33.00	2.89
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	161541	8.30816	8.308	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	926785			511.05- 571.05	573.71
66 Methylene Chloride					CAS #: 75-09-2		
13.149	13.149 (0.854)	84	271288	8.64596	8.646	80.00- 120.00	100.00
13.149	13.149 (0.854)	49	655320			205.99- 265.99	241.56
13.149	13.149 (0.854)	51	188027			40.46- 100.46	69.31
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.479	13.478 (0.876)	73	972023	8.83252	8.832	80.00- 120.00	100.00
13.479	13.478 (0.876)	57	290940			0.79- 60.79	29.93
13.479	13.478 (0.876)	41	370477			7.43- 67.43	38.11
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	189227	7.68202	7.682	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	532770			247.42- 307.42	281.55
13.533	13.533 (0.879)	96	298958			122.37- 182.37	157.99
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	684226	9.29541	9.295	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	567868			51.15- 111.15	82.99
13.835	13.835 (0.899)	86	78360			0.00- 41.56	11.45
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.220	14.220 (0.924)	63	694395	8.85471	8.855	80.00- 120.00	100.00
14.247	14.220 (0.926)	65	216236			0.00- 59.55	31.14
86 Vinyl Acetate					CAS #: 108-05-4		
14.247	14.247 (0.926)	86	87922	9.49528	9.495	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	144372			118.75- 178.75	164.20
14.247	14.247 (0.926)	43	1645984			1798.00-1858.00	1872.08
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.047	15.047 (0.978)	98	261093	10.1144	10.114	80.00- 120.00	100.00
15.047	15.047 (0.978)	61	673701			229.72- 289.72	258.03
15.047	15.047 (0.978)	96	396001			126.60- 186.60	151.67

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone					CAS #: 78-93-3		
15.028	15.028 (0.976)	72	141516	8.99446	8.994	80.00- 120.00	100.00
15.028	15.028 (0.976)	43	1175312			750.92- 810.92	830.51
15.028	15.028 (0.976)	57	74587			19.16- 79.16	52.71
99 Tetrahydrofuran					CAS #: 109-99-9		
15.361	15.360 (0.998)	42	667918	9.68839	9.688	80.00- 120.00	100.00
15.361	15.360 (0.998)	71	132013			0.00- 50.51	19.76
15.361	15.360 (0.998)	72	137395			0.00- 51.95	20.57
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	131610	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	100420			46.85- 106.85	76.30
15.391	15.391 (1.000)	49	336173			226.12- 286.12	255.43
100 Chloroform					CAS #: 67-66-3		
15.453	15.453 (1.004)	83	840814	9.13208	9.132	80.00- 120.00	100.00
15.453	15.453 (1.004)	85	565821			35.38- 95.38	67.29
102 Cyclohexane					CAS #: 110-82-7		
15.669	15.669 (1.018)	84	436544	9.37747	9.377	80.00- 120.00	100.00
15.669	15.669 (1.018)	56	761509			148.59- 208.59	174.44
15.669	15.669 (1.018)	41	541275			91.63- 151.63	123.99
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	1053741	9.27273	9.273	80.00- 120.00	100.00
15.669	15.669 (1.018)	99	674671			34.20- 94.20	64.03
106 Carbon Tetrachloride					CAS #: 56-23-5		
15.854	15.854 (1.030)	119	844948	7.22450	7.224	80.00- 120.00	100.00
15.854	15.854 (1.030)	117	887262			73.79- 133.79	105.01
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
16.111	16.111 (1.047)	56	987474	8.76420	8.764	80.00- 120.00	100.00
16.111	16.111 (1.047)	57	3020796			276.72- 336.72	305.91
16.111	16.111 (1.047)	41	1118416			82.40- 142.40	113.26
116 Benzene					CAS #: 71-43-2		
16.183	16.183 (0.967)	78	974091	8.77088	8.771	80.00- 120.00	100.00
16.183	16.183 (0.967)	77	229269			0.00- 53.88	23.54
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.183	16.183 (1.051)	65	212896	5.17756	5.178	80.00- 120.00	100.00
16.183	16.183 (1.051)	67	100243			17.94- 77.94	47.09
120 1,2-Dichloroethane					CAS #: 107-06-2		
16.304	16.303 (0.974)	62	736681	9.34838	9.348	80.00- 120.00	100.00

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  120 1,2-Dichloroethane (continued)
 16.304  16.303 (0.974)    64    227145                     0.66-  60.66    30.83
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57    440801 9.18358    9.184  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    144550                     3.00-  63.00    32.79
 16.352  16.352 (0.977)    43   1057189                   207.00- 267.00   239.83
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    463468 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69424                     0.00-  44.91    14.98
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.123  17.123 (1.023)   130    603099 9.13447    9.134  80.00- 120.00   100.00
 17.123  17.123 (1.023)    95    521318                   58.18- 118.18    86.44
 17.123  17.123 (1.023)    97    336479                   26.25-  86.25    55.79
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.340  17.339 (1.036)    83    570228 9.15513    9.155  80.00- 120.00   100.00
 17.340  17.339 (1.036)    55    755041                   98.42- 158.42   132.41
 17.340  17.339 (1.036)    56    233967                    9.03-  69.03    41.03
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.556  17.556 (1.049)    63    407089 8.60106    8.601  80.00- 120.00   100.00
 17.556  17.556 (1.049)    62    295041                   44.02- 104.02    72.48
 17.556  17.556 (1.049)    41    412394                   65.46- 125.46   101.30
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.677  17.677 (1.056)    88    233984 9.01597    9.016  80.00- 120.00   100.00
 17.677  17.677 (1.056)    58    219180                   62.58- 122.58    93.67
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83    955896 9.38361    9.384  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    641878                   36.66-  96.66    67.15
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    577890 8.66114    8.661  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    194293                    3.68-  63.68    33.62
 18.805  18.805 (1.124)    39    565153                   62.50- 122.50    97.80
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  18.984 (1.134)    43   1469874 9.90341    9.903  80.00- 120.00   100.00
 18.984  18.984 (1.134)    58    404731                    0.00-  59.19    27.54
 18.984  18.984 (1.134)    85    148282                    0.00-  40.34    10.09
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.276  19.275 (1.152)    98    441580 4.95204    4.952  80.00- 120.00   100.00
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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 146 Toluene-d8 (continued)
 19.276  19.275 (1.152)    70     51413                     0.00-  41.31    11.64
 19.276  19.275 (1.152)   100    299101                    38.24-  98.24    67.73
-------------------------------------------------------------------------------
  147 Toluene                                       CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1244226 8.98784    8.988  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    721149                    28.10-  88.10    57.96
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                     CAS #: 10061-02-6
 19.998  19.998 (0.903)    75    617910 9.43048    9.430  80.00- 120.00   100.00
 19.998  19.998 (0.903)    77    199580                     3.36-  63.36    32.30
 19.998  19.998 (0.903)    39    521852                    49.78- 109.78    84.45
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.438  20.438 (0.922)    97    443921 9.28559    9.286  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    274195                    32.24-  92.24    61.77
 20.438  20.438 (0.922)    83    345921                    48.02- 108.02    77.92
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.603  20.603 (0.930)   166    757054 9.46944    9.469  80.00- 120.00   100.00
 20.603  20.603 (0.930)   129    602409                    49.93- 109.93    79.57
 20.603  20.603 (0.930)   131    588548                    47.75- 107.75    77.74
-------------------------------------------------------------------------------
  158 2-Hexanone                                    CAS #: 591-78-6
 20.767  20.767 (0.937)    58    519721 10.1028   10.103  80.00- 120.00   100.00
 20.767  20.767 (0.937)    43   1358633                   225.15- 285.15   261.42
 20.767  20.795 (0.937)   100     93159                     0.00-  47.79    17.92
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.957)   129   1118737 9.33243    9.332  80.00- 120.00   100.00
 21.207  21.207 (0.957)   127    851986                    46.75- 106.75    76.16
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.454  21.454 (0.968)   107    748612 9.30662    9.307  80.00- 120.00   100.00
 21.482  21.454 (0.970)   109    736103                    67.69- 127.69    98.33
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.156  22.156 (1.000)   117    431424 5.00000            80.00- 120.00   100.00
 22.156  22.156 (1.000)    82    210174                    19.53-  79.53    48.72
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.003)   112   1087134 8.76430    8.764  80.00- 120.00   100.00
 22.219  22.219 (1.003)   114    359797                     1.36-  61.36    33.10
 22.219  22.219 (1.003)    77    612299                    24.91-  84.91    56.32
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.281  22.281 (1.006)   106    538667 9.33820    9.338  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  167 Ethyl Benzene (continued)
 22.281  22.281 (1.006)    91   1674639                   280.28- 340.28   310.89
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.014)   106    624933 9.72737    9.727  80.00- 120.00   100.00
 22.467  22.467 (1.014)    91   1270437                   173.14- 233.14   203.29
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.069 (1.041)   106    570248 9.55711    9.557  80.00- 120.00   100.00
 23.069  23.069 (1.041)    91   1254713                   184.94- 244.94   220.03
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.043)   104    951160 9.55883    9.559  80.00- 120.00   100.00
 23.110  23.110 (1.043)    78    525421                    23.72-  83.72    55.24
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.058)   173   1294405 12.0992   12.099  80.00- 120.00   100.00
 23.452  23.452 (1.058)   171    670504                    22.28-  82.28    51.80
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.542  23.542 (1.063)   105   1928816 9.88002    9.880  80.00- 120.00   100.00
 23.542  23.542 (1.063)   120    522671                     0.00-  57.53    27.10
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.077)   174    249779 4.95715    4.957  80.00- 120.00   100.00
 23.856  23.856 (1.077)    95    284914                    81.42- 141.42   114.07
 23.856  23.856 (1.077)   176    243664                    66.35- 126.35    97.55
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.085)    83    675853 8.81462    8.815  80.00- 120.00   100.00
 24.035  24.035 (1.085)    85    463887                    38.02-  98.02    68.64
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.080  24.080 (1.087)    91   1714066 9.85851    9.858  80.00- 120.00   100.00
 24.080  24.080 (1.087)   120    450507                     0.00-  56.42    26.28
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.094)   105   1350279 10.0747   10.075  80.00- 120.00   100.00
 24.237  24.237 (1.094)   120    423701                     0.46-  60.46    31.38
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.097)   105   1041637 9.63828    9.638  80.00- 120.00   100.00
 24.304  24.304 (1.097)   120    505529                    18.43-  78.43    48.53
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.753 (1.117)   105    803174 9.40699    9.407  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene (continued)							
24.753	24.753 (1.117)	120	364979			16.45- 76.45	45.44
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.156 (1.135)	146	850791	9.15397	9.154	80.00- 120.00	100.00
25.157	25.156 (1.135)	148	544911			33.61- 93.61	64.05
25.157	25.156 (1.135)	111	331873			9.29- 69.29	39.01
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.140)	146	797172	9.05065	9.051	80.00- 120.00	100.00
25.269	25.269 (1.140)	148	512942			34.28- 94.28	64.35
25.246	25.246 (1.139)	111	296756			7.48- 67.48	37.23
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.147)	91	1177668	9.68004	9.680	80.00- 120.00	100.00
25.403	25.403 (1.147)	126	272813			0.00- 53.55	23.17
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.159)	146	784749	9.14702	9.147	80.00- 120.00	100.00
25.672	25.672 (1.159)	148	503080			33.54- 93.54	64.11
25.672	25.672 (1.159)	111	312305			10.04- 70.04	39.80
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.237)	180	354326	9.59266	9.593	80.00- 120.00	100.00
27.398	27.398 (1.237)	182	337289			66.37- 126.37	95.19
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.241)	225	661062	9.67362	9.674	80.00- 120.00	100.00
27.488	27.488 (1.241)	223	426418			32.58- 92.58	64.51
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.251)	128	41066	0.55025	0.5502	80.00- 120.00	100.00(R)
27.712	27.712 (1.251)	127	5961			0.00- 41.67	14.52
M 239 Total Xylene					CAS #: 1330-20-7		
			1195182	19.2845	19.284		

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071304.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	126746	76048	177444	131610	3.84
123 1,4-Difluorobenze	464912	278947	650877	463468	-0.31
163 Chlorobenzene-d5	425008	255005	595011	431424	1.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	15.39	15.06	15.72	15.39	0.00
123 1,4-Difluorobenze	16.74	16.41	17.07	16.74	0.00
163 Chlorobenzene-d5	22.16	21.83	22.49	22.16	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/13Jul2017.b/e071304.d

Date : 13-JUL-2017 09:22

Client ID: LCSD

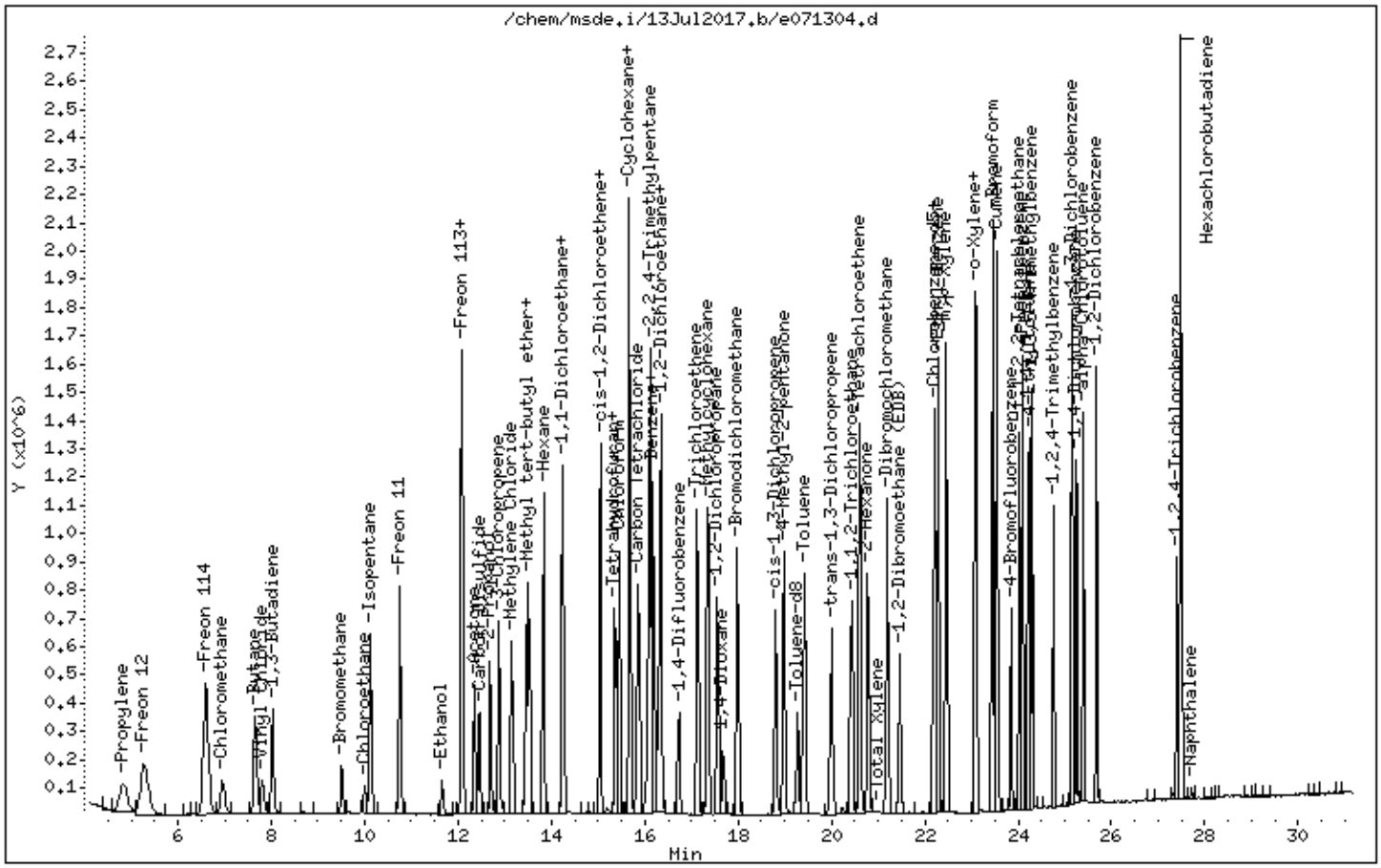
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCS

Lab ID#: 1707045R3-10F

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071303sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 08:40 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	96	70-130
1,1-Dichloroethene	89	70-130
trans-1,2-Dichloroethene	80	70-130
cis-1,2-Dichloroethene	98	70-130
Benzene	80	70-130
1,2-Dichloroethane	93	70-130
Trichloroethene	86	70-130
Toluene	88	70-130
1,1,2-Trichloroethane	92	70-130
Tetrachloroethene	91	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

Report Date: 13-Jul-2017 09:13

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	9.847	98.47	70-130
2 Freon 114	10.000	9.800	98.00	70-130
3 Chloromethane	10.000	9.531	95.31	70-130
4 Vinyl Chloride	10.000	9.582	95.82	70-130
5 Chloroethane	10.000	8.760	87.60	70-130
8 1,1-Dichloroethene	10.000	8.882	88.82	70-130
9 Methyl tert-butyl	10.000	9.666	96.66	70-130
10 trans-1,2-Dichloro	10.000	7.963	79.63	70-130
11 1,1-Dichloroethane	10.000	9.304	93.04	70-130
12 cis-1,2-Dichloroet	10.000	9.855	98.55	70-130
14 Chloroform	10.000	9.003	90.03	70-130
15 1,1,1-Trichloroeth	10.000	9.349	93.49	70-130
16 Carbon Tetrachlori	10.000	7.048	70.48	60-140
17 Benzene	10.000	8.056	80.57	70-130
19 1,2-Dichloroethane	10.000	9.324	93.25	70-130
21 Trichloroethene	10.000	8.587	85.87	70-130
23 Toluene	10.000	8.852	88.52	70-130
25 1,1,2-Trichloroeth	10.000	9.162	91.62	70-130
26 Tetrachloroethene	10.000	9.060	90.60	70-130
27 1,2-Dibromoethane	10.000	9.216	92.16	70-130
30 Ethyl Benzene	10.000	9.727	97.27	70-130
31 m,p-Xylene	10.000	9.924	99.24	70-130
32 o-Xylene	10.000	10.198	101.98	70-130
34 1,1,2,2-Tetrachlor	10.000	8.705	87.05	70-130
36 1,4-Dichlorobenzen	10.000	9.828	98.28	70-130
38 Naphthalene	1.000	0.5709	57.09*	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	5.050	101.01	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.083	101.65	70-130
$ 33 4-Bromofluorobenze	5.000	5.127	102.54	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071303sim.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 13-JUL-2017 08:40
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 13-Jul-2017 08:30 chemist Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1209977	9.84699	9.847	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	391078			2.36- 62.36	32.32
2 Freon 114					CAS #: 76-14-2		
6.608	6.584 (0.429)	135	914135	9.80027	9.800	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	294736			2.09- 62.09	32.24
3 Chloromethane					CAS #: 74-87-3		
6.969	6.945 (0.452)	50	504321	9.53119	9.531	80.00- 120.00	100.00
6.969	6.970 (0.452)	52	155455			0.98- 60.98	30.82
4 Vinyl Chloride					CAS #: 75-01-4		
7.810	7.810 (0.507)	62	360141	9.58231	9.582	80.00- 120.00	100.00
7.810	7.810 (0.507)	64	103953			0.00- 58.64	28.86
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	152222	8.76009	8.760	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	46765			0.36- 60.36	30.72

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
8 1,1-Dichloroethene					CAS #: 75-35-4		
12.113	12.113 (0.786)	98	224663	8.88202	8.882	80.00- 120.00	100.00
12.094	12.094 (0.785)	61	769309			300.85- 360.85	342.43
12.113	12.094 (0.786)	96	351365			126.45- 186.45	156.40
9 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.492	13.492 (0.876)	73	930877	9.66582	9.666	80.00- 120.00	100.00
13.465	13.465 (0.874)	57	272988			0.00- 59.46	29.33
13.465	13.465 (0.874)	41	334171			3.65- 63.65	35.90
10 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.547	13.547 (0.879)	98	208027	7.96318	7.963	80.00- 120.00	100.00
13.547	13.547 (0.879)	61	585396			242.34- 302.34	281.40
13.547	13.547 (0.879)	96	325188			125.09- 185.09	156.32
11 1,1-Dichloroethane					CAS #: 75-34-3		
14.233	14.233 (0.924)	63	765467	9.30387	9.304	80.00- 120.00	100.00
14.233	14.233 (0.924)	65	232708			0.54- 60.54	30.40
12 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.060	15.060 (0.978)	98	282054	9.85464	9.855	80.00- 120.00	100.00
15.060	15.060 (0.978)	61	728949			222.17- 282.17	258.44
15.060	15.060 (0.978)	96	438022			125.16- 185.16	155.30
* 13 Bromochloromethane					CAS #: 74-97-5		
15.405	15.405 (1.000)	130	136887	5.00000		80.00- 120.00	100.00
15.405	15.405 (1.000)	128	106780			47.63- 107.63	78.01
15.374	15.374 (1.000)	49	369245			150.43- 210.43	269.74
14 Chloroform					CAS #: 67-66-3		
15.436	15.436 (1.002)	83	898701	9.00328	9.003	80.00- 120.00	100.00
15.466	15.467 (1.004)	85	613553			38.49- 98.49	68.27
15 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.682	15.682 (1.018)	97	1140261	9.34940	9.349	80.00- 120.00	100.00
15.682	15.682 (1.018)	99	743223			35.44- 95.44	65.18
16 Carbon Tetrachloride					CAS #: 56-23-5		
15.867	15.867 (1.030)	119	917259	7.04845	7.048	80.00- 120.00	100.00
15.867	15.867 (1.030)	117	943666			72.67- 132.67	102.88
17 Benzene					CAS #: 71-43-2		
16.197	16.197 (0.968)	78	970456	8.05658	8.056	80.00- 120.00	100.00
16.197	16.197 (0.968)	77	229739			0.00- 53.68	23.67
$ 18 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.197	16.197 (1.051)	65	221905	5.05029	5.050	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 18 1,2-Dichloroethane-d4 (continued)							
16.197	16.197 (1.051)	67	103584			19.71- 79.71	46.68
19 1,2-Dichloroethane					CAS #: 107-06-2		
16.293	16.293 (0.974)	62	809056	9.32456	9.324	80.00- 120.00	100.00
16.293	16.293 (0.974)	64	248169			0.82- 60.82	30.67
* 20 1,4-Difluorobenzene					CAS #: 540-36-3		
16.727	16.727 (1.000)	114	503925	5.00000		80.00- 120.00	100.00
16.727	16.727 (1.000)	88	73674			0.00- 44.62	14.62
21 Trichloroethene					CAS #: 79-01-6		
17.136	17.136 (1.024)	130	645747	8.58715	8.587	80.00- 120.00	100.00
17.136	17.136 (1.024)	95	569969			57.80- 117.80	88.27
17.136	17.136 (1.024)	97	369102			26.87- 86.87	57.16
$ 22 Toluene-d8					CAS #: 2037-26-5		
19.289	19.289 (1.153)	98	411920	5.08267	5.083	80.00- 120.00	100.00
19.289	19.289 (1.153)	70	46602			0.00- 41.18	11.31
19.289	19.289 (1.153)	100	267951			35.44- 95.44	65.05
23 Toluene					CAS #: 108-88-3		
19.423	19.424 (1.161)	91	1223700	8.85188	8.852	80.00- 120.00	100.00
19.423	19.424 (1.161)	92	712228			28.44- 88.44	58.20
25 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.424	20.424 (0.921)	97	489108	9.16225	9.162	80.00- 120.00	100.00
20.424	20.424 (0.921)	99	307055			32.77- 92.77	62.78
20.424	20.424 (0.921)	83	376548			47.27- 107.27	76.99
26 Tetrachloroethene					CAS #: 127-18-4		
20.616	20.616 (0.930)	166	785208	9.06033	9.060	80.00- 120.00	100.00
20.616	20.616 (0.930)	129	639786			50.99- 110.99	81.48
20.616	20.616 (0.930)	131	645067			51.53- 111.53	82.15
27 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.468	21.468 (0.968)	107	821643	9.21640	9.216	80.00- 120.00	100.00
21.468	21.468 (0.968)	109	819555			69.74- 129.74	99.75
* 28 Chlorobenzene-d5					CAS #: 3114-55-4		
22.170	22.170 (1.000)	117	461407	5.00000		80.00- 120.00	100.00
22.170	22.170 (1.000)	82	200004			12.99- 72.99	43.35
30 Ethyl Benzene					CAS #: 100-41-4		
22.294	22.294 (1.006)	106	529941	9.72669	9.727	80.00- 120.00	100.00
22.294	22.294 (1.006)	91	1659148			281.21- 341.21	313.08

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	619246	9.92355	9.924	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	1273812			173.96- 233.96	205.70
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	577808	10.1982	10.198	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	1255035			183.85- 243.85	217.21
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	285018	5.12698	5.127	80.00- 120.00	100.00
23.847	23.847 (1.076)	95	298171			73.66- 133.66	104.61
23.869	23.869 (1.077)	176	277030			67.29- 127.29	97.20
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.026	24.026 (1.084)	83	723690	8.70495	8.705	80.00- 120.00	100.00
24.049	24.049 (1.085)	85	499718			38.95- 98.95	69.05
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	906623	9.82808	9.828	80.00- 120.00	100.00
25.260	25.260 (1.139)	148	590553			34.91- 94.91	65.14
25.260	25.260 (1.139)	111	336747			6.86- 66.86	37.14
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	42620	0.57088	0.5709	80.00- 120.00	100.00(R)
27.726	27.726 (1.251)	127	5495			0.00- 42.71	12.89

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071303sim.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	136887	-3.62
20 1,4-Difluorobenze	516009	309605	722413	503925	-2.34
28 Chlorobenzene-d5	463677	278206	649148	461407	-0.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.40	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/13Jul2017.b/e071303sim.d

Date : 13-JUL-2017 08:40

Client ID: LCS

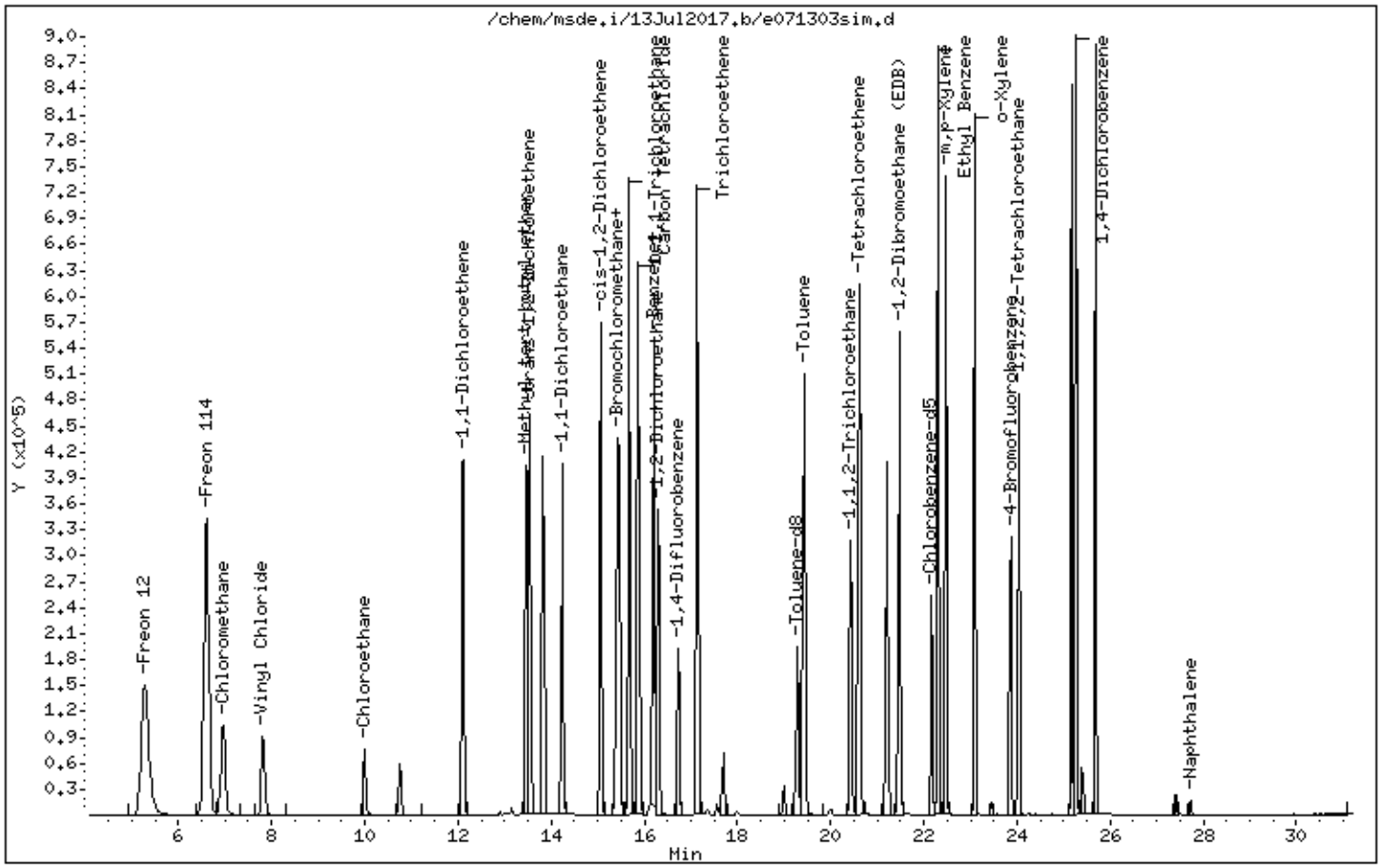
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707045R3-10FF

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**e071304sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/13/17 09:22 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	95	70-130
1,1-Dichloroethene	87	70-130
trans-1,2-Dichloroethene	78	70-130
cis-1,2-Dichloroethene	98	70-130
Benzene	80	70-130
1,2-Dichloroethane	92	70-130
Trichloroethene	85	70-130
Toluene	88	70-130
1,1,2-Trichloroethane	90	70-130
Tetrachloroethene	89	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

Report Date: 13-Jul-2017 09:55

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 13Jul2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: LCSD
SpikeList File: AT09.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
1 Freon 12	10.000	9.708	97.08	70-130
2 Freon 114	10.000	9.666	96.66	70-130
3 Chloromethane	10.000	9.397	93.97	70-130
4 Vinyl Chloride	10.000	9.485	94.85	70-130
5 Chloroethane	10.000	8.688	86.88	70-130
8 1,1-Dichloroethene	10.000	8.699	86.99	70-130
9 Methyl tert-butyl	10.000	9.547	95.47	70-130
10 trans-1,2-Dichloro	10.000	7.826	78.26	70-130
11 1,1-Dichloroethane	10.000	9.174	91.75	70-130
12 cis-1,2-Dichloroet	10.000	9.756	97.56	70-130
14 Chloroform	10.000	8.923	89.23	70-130
15 1,1,1-Trichloroeth	10.000	9.206	92.06	70-130
16 Carbon Tetrachlori	10.000	6.934	69.34	60-140
17 Benzene	10.000	7.950	79.50	70-130
19 1,2-Dichloroethane	10.000	9.189	91.89	70-130
21 Trichloroethene	10.000	8.510	85.10	70-130
23 Toluene	10.000	8.762	87.62	70-130
25 1,1,2-Trichloroeth	10.000	9.048	90.48	70-130
26 Tetrachloroethene	10.000	8.901	89.01	70-130
27 1,2-Dibromoethane	10.000	9.098	90.99	70-130
30 Ethyl Benzene	10.000	9.622	96.22	70-130
31 m,p-Xylene	10.000	9.664	96.64	70-130
32 o-Xylene	10.000	9.970	99.70	70-130
34 1,1,2,2-Tetrachlor	10.000	8.632	86.32	70-130
36 1,4-Dichlorobenzen	10.000	9.500	95.00	70-130
38 Naphthalene	1.000	0.5352	53.52*	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 18 1,2-Dichloroethane	5.000	4.989	99.78	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 22 Toluene-d8	5.000	5.061	101.22	70-130
$ 33 4-Bromofluorobenze	5.000	5.081	101.62	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/13Jul2017.b/e071304sim.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 13-JUL-2017 09:22
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2850-197
Misc Info : 10ppbv (50ppbv)
Comment : SIM - GC/MS
Method : /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Meth Date : 13-Jul-2017 08:30 chemist Quant Type: ISTD
Cal Date : 03-JUL-2017 18:31 Cal File: e070317sim.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT09.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
1 Freon 12					CAS #: 75-71-8		
5.282	5.282 (0.343)	85	1206726	9.70801	9.708	80.00- 120.00	100.00
5.282	5.282 (0.343)	87	391017			2.36- 62.36	32.40
2 Freon 114					CAS #: 76-14-2		
6.608	6.584 (0.429)	135	912064	9.66602	9.666	80.00- 120.00	100.00
6.608	6.608 (0.429)	137	294023			2.09- 62.09	32.24
3 Chloromethane					CAS #: 74-87-3		
6.970	6.945 (0.452)	50	502989	9.39709	9.397	80.00- 120.00	100.00
6.970	6.970 (0.452)	52	155069			0.98- 60.98	30.83
4 Vinyl Chloride					CAS #: 75-01-4		
7.811	7.810 (0.507)	62	360623	9.48519	9.485	80.00- 120.00	100.00
7.828	7.810 (0.508)	64	104221			0.00- 58.64	28.90
5 Chloroethane					CAS #: 75-00-3		
9.999	9.999 (0.649)	64	152718	8.68796	8.688	80.00- 120.00	100.00
9.999	9.999 (0.649)	66	46501			0.36- 60.36	30.45

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

    8 1,1-Dichloroethene                           CAS #: 75-35-4
 12.113  12.113 (0.786)    98    222591 8.69927    8.699  80.00- 120.00   100.00
 12.094  12.094 (0.785)    61    766316                  300.85- 360.85   344.27
 12.113  12.094 (0.786)    96    350580                  126.45- 186.45   157.50
-------------------------------------------------------------------------------
    9 Methyl tert-butyl ether                      CAS #: 1634-04-4
 13.492  13.492 (0.876)    73    930121 9.54730    9.547  80.00- 120.00   100.00
 13.465  13.465 (0.874)    57    272421                    0.00-  59.46    29.29
 13.465  13.465 (0.874)    41    329929                    3.65-  63.65    35.47
-------------------------------------------------------------------------------
   10 trans-1,2-Dichloroethene                     CAS #: 156-60-5
 13.547  13.547 (0.879)    98    206816 7.82610    7.826  80.00- 120.00   100.00
 13.547  13.547 (0.879)    61    583217                  242.34- 302.34   282.00
 13.547  13.547 (0.879)    96    322989                  125.09- 185.09   156.17
-------------------------------------------------------------------------------
   11 1,1-Dichloroethane                           CAS #: 75-34-3
 14.233  14.233 (0.924)    63    763578 9.17456    9.174  80.00- 120.00   100.00
 14.233  14.233 (0.924)    65    232435                    0.54-  60.54    30.44
-------------------------------------------------------------------------------
   12 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.060  15.060 (0.978)    98    282454 9.75555    9.756  80.00- 120.00   100.00
 15.060  15.060 (0.978)    61    727065                  222.17- 282.17   257.41
 15.060  15.060 (0.978)    96    438145                  125.16- 185.16   155.12
-------------------------------------------------------------------------------
*  13 Bromochloromethane                           CAS #: 74-97-5
 15.405  15.405 (1.000)   130    138473 5.00000           80.00- 120.00   100.00
 15.405  15.405 (1.000)   128    107331                   47.63- 107.63    77.51
 15.374  15.374 (1.000)    49    369301                  150.43- 210.43   266.69
-------------------------------------------------------------------------------
   14 Chloroform                                   CAS #: 67-66-3
 15.436  15.436 (1.002)    83    900995 8.92283    8.923  80.00- 120.00   100.00
 15.467  15.467 (1.004)    85    614352                   38.49-  98.49    68.19
-------------------------------------------------------------------------------
   15 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.682  15.682 (1.018)    97   1135807 9.20616    9.206  80.00- 120.00   100.00
 15.682  15.682 (1.018)    99    740517                   35.44-  95.44    65.20
-------------------------------------------------------------------------------
   16 Carbon Tetrachloride                         CAS #: 56-23-5
 15.867  15.867 (1.030)   119    912787 6.93371    6.934  80.00- 120.00   100.00
 15.867  15.867 (1.030)   117    941846                   72.67- 132.67   103.18
-------------------------------------------------------------------------------
   17 Benzene                                      CAS #: 71-43-2
 16.197  16.197 (0.968)    78    966901 7.95023    7.950  80.00- 120.00   100.00
 16.197  16.197 (0.968)    77    229339                    0.00-  53.68    23.72
-------------------------------------------------------------------------------
$  18 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.197  16.197 (1.051)    65    221746 4.98885    4.989  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$  18 1,2-Dichloroethane-d4 (continued)
 16.197  16.197 (1.051)    67    103982                    19.71-  79.71    46.89
-------------------------------------------------------------------------------
   19 1,2-Dichloroethane                            CAS #: 107-06-2
 16.293  16.293 (0.974)    62    804966 9.18861    9.189  80.00- 120.00   100.00
 16.293  16.293 (0.974)    64    247756                     0.82-  60.82    30.78
-------------------------------------------------------------------------------
*  20 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.727  16.727 (1.000)   114    508795 5.00000           80.00- 120.00   100.00
 16.727  16.727 (1.000)    88     74498                     0.00-  44.62    14.64
-------------------------------------------------------------------------------
   21 Trichloroethene                               CAS #: 79-01-6
 17.136  17.136 (1.024)   130    646127 8.50996    8.510  80.00- 120.00   100.00
 17.136  17.136 (1.024)    95    570270                    57.80- 117.80    88.26
 17.136  17.136 (1.024)    97    368094                    26.87-  86.87    56.97
-------------------------------------------------------------------------------
$  22 Toluene-d8                                    CAS #: 2037-26-5
 19.289  19.289 (1.153)    98    414128 5.06100    5.061  80.00- 120.00   100.00
 19.289  19.289 (1.153)    70     46934                     0.00-  41.18    11.33
 19.289  19.289 (1.153)   100    269627                    35.44-  95.44    65.11
-------------------------------------------------------------------------------
   23 Toluene                                       CAS #: 108-88-3
 19.424  19.424 (1.161)    91   1222913 8.76151    8.762  80.00- 120.00   100.00
 19.424  19.424 (1.161)    92    710691                    28.44-  88.44    58.11
-------------------------------------------------------------------------------
   25 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.424  20.424 (0.921)    97    487153 9.04820    9.048  80.00- 120.00   100.00
 20.424  20.424 (0.921)    99    306485                    32.77-  92.77    62.91
 20.424  20.424 (0.921)    83    375034                    47.27- 107.27    76.99
-------------------------------------------------------------------------------
   26 Tetrachloroethene                             CAS #: 127-18-4
 20.616  20.616 (0.930)   166    778019 8.90120    8.901  80.00- 120.00   100.00
 20.616  20.616 (0.930)   129    638845                    50.99- 110.99    82.11
 20.616  20.616 (0.930)   131    640641                    51.53- 111.53    82.34
-------------------------------------------------------------------------------
   27 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.468  21.468 (0.968)   107    818074 9.09851    9.098  80.00- 120.00   100.00
 21.468  21.468 (0.968)   109    814870                    69.74- 129.74    99.61
-------------------------------------------------------------------------------
*  28 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.170  22.170 (1.000)   117    465355 5.00000           80.00- 120.00   100.00
 22.170  22.170 (1.000)    82    200268                    12.99-  72.99    43.04
-------------------------------------------------------------------------------
   30 Ethyl Benzene                                 CAS #: 100-41-4
 22.295  22.294 (1.006)   106    528736 9.62223    9.622  80.00- 120.00   100.00
 22.295  22.294 (1.006)    91   1653779                   281.21- 341.21   312.78
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
31 m,p-Xylene					CAS #: 108-38-3		
22.481	22.481 (1.014)	106	608237	9.66443	9.664	80.00- 120.00	100.00
22.481	22.481 (1.014)	91	1257997			173.96- 233.96	206.83
32 o-Xylene					CAS #: 95-47-6		
23.082	23.082 (1.041)	106	569693	9.96970	9.970	80.00- 120.00	100.00
23.082	23.082 (1.041)	91	1232626			183.85- 243.85	216.37
$ 33 4-Bromofluorobenzene					CAS #: 460-00-4		
23.869	23.869 (1.077)	174	284885	5.08112	5.081	80.00- 120.00	100.00
23.847	23.847 (1.076)	95	299252			73.66- 133.66	105.04
23.869	23.869 (1.077)	176	276825			67.29- 127.29	97.17
34 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.026	24.026 (1.084)	83	723799	8.63239	8.632	80.00- 120.00	100.00
24.049	24.049 (1.085)	85	498678			38.95- 98.95	68.90
36 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.260	25.260 (1.139)	146	883823	9.49963	9.500	80.00- 120.00	100.00
25.260	25.260 (1.139)	148	572297			34.91- 94.91	64.75
25.260	25.260 (1.139)	111	331480			6.86- 66.86	37.51
38 Naphthalene					CAS #: 91-20-3		
27.726	27.726 (1.251)	128	40298	0.53521	0.5352	80.00- 120.00	100.00(R)
27.726	27.726 (1.251)	127	5185			0.00- 42.71	12.87

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e071304sim.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/13Jul2017.b/e17l0703b.m/e17s0703a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 13-JUL-2017
Calibration Time: 07:57
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	142028	85217	198839	138473	-2.50
20 1,4-Difluorobenze	516009	309605	722413	508795	-1.40
28 Chlorobenzene-d5	463677	278206	649148	465355	0.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
13 Bromochloromethan	15.40	15.07	15.73	15.41	0.00
20 1,4-Difluorobenze	16.73	16.40	17.06	16.73	0.00
28 Chlorobenzene-d5	22.17	21.84	22.50	22.17	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msde.i/13Jul2017.b/e071304sim.d

Date : 13-JUL-2017 09:22

Client ID: LCSD

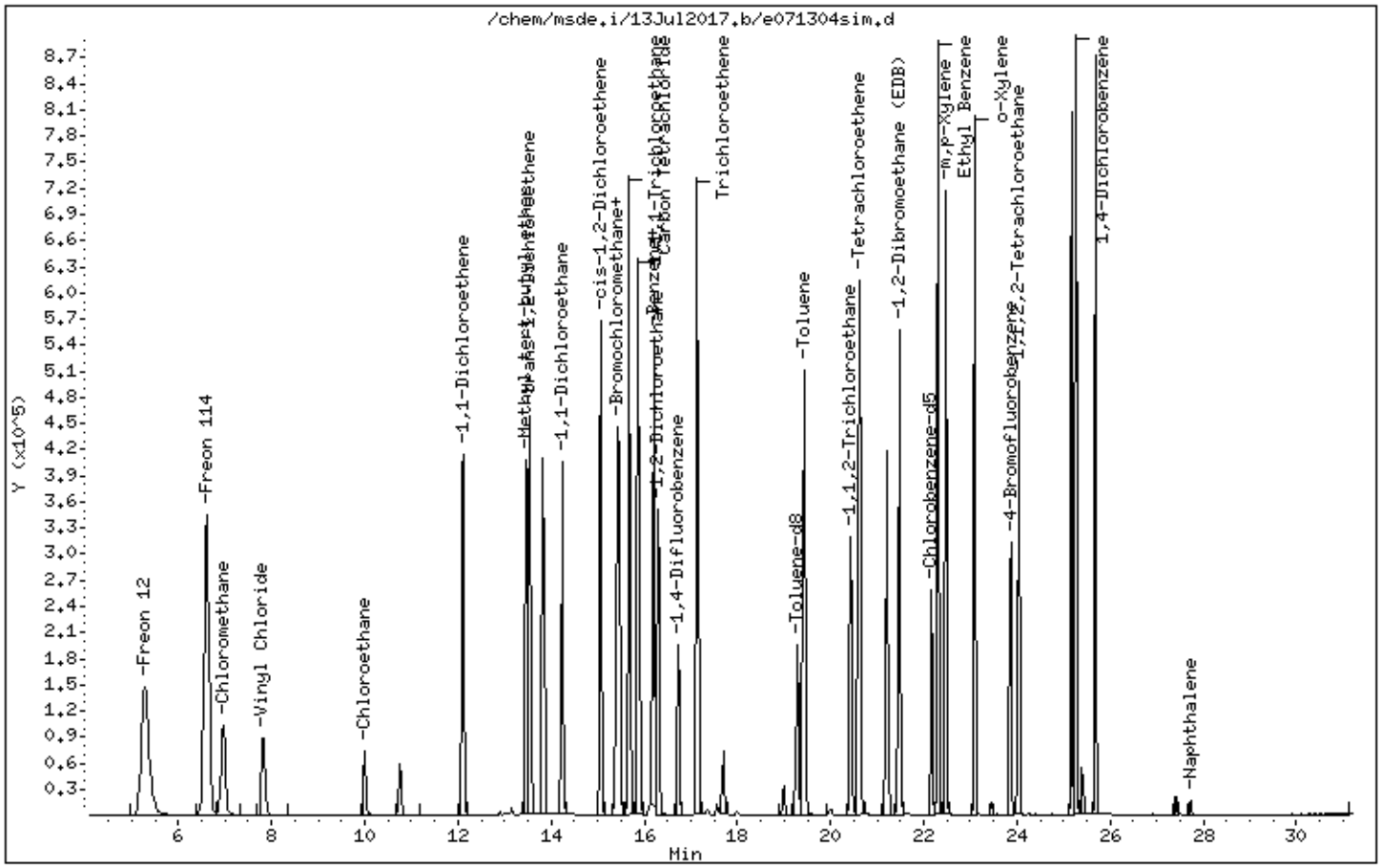
Instrument: msde.i

Sample Info: 50mL# 2850-197

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2847**

BFB Verification of 176/174 m/z Ratio: (279424/291648)x100 95.81	
Method Name: E170703A / E170703A	

IS/S Std. #:	2850-163	Exp. Date:	9/1/17
BCM	1330-13	Sum:	145812
1,4-DFB	476318		526665
CB-d5	449910		479337

Verified CCV IS vs ICAL mid-point (-40%D): ST

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	/	E071101	BKB Tank blank	2810-89	50mg	2.0pL	ST	1.00	ST	7/11/17	0712	ST	
2	/	02	CCV (50ppbv)	2850-222	10ppbv	50mL	ST	1.00	ST		0733	ST	Exp. 9/29/17 ppbv
3	/	03	LCS (50ppbv)	2850-197	10ppbv	50mL	ST	1.00	ST		0819	ST	Exp. 9/19/17 ppbv
4	/	04	LCSD (50ppbv)	2850-197	10ppbv	50mL	ST	1.00	ST		0902	ST	Exp. 9/19/17
5	X	05	LAB Blank	34202	Humid	250mL	ST	1.00	ST		0944	ST	
6	/	06	LAB Blank	34202	Humid	250mL	ST	1.00	ST		1025	ST	
7	/	07	1706562A-02AB	N2855	3.3"Hg 5.1psi	250mL	ST	1.51	ST		1114	ST	
8	/	08	Low CCV	00268	Dry	250mL	ST	1.00	ST		1203	ST	
9	/	09	1706562A-03AB	N0101	5.1"Hg 4.3psi	250mL	ST	1.60	ST		1252	ST	6/1/06
10	/	10	-07AB	N2517	5.3"Hg 4.9psi	250mL	ST	1.62	ST		1336	ST	
11	Vol	11	-04AB	34219	3.9"Hg 4.8psi	~~250mL~~ 125mL	ST	3.04 ~~1.54~~	ST		1424	EA	2d/NTC
12	X	12	-06AB	35166	5.1"Hg 5.1psi	125mL	ST	3.24	ST		1508	EA	overdil
13	X	13	-05AB	N2759	4.1"Hg 5.1psi	25mL	ST	15.6	ST		1551	EA	↓
14	✓	14	-06AB	35166	5.1"Hg 5.1psi	250mL	EA	1.62	EA		1644	EA	
15	✓	15	-05AB	N2759	4.1"Hg 5.1psi	250mL	EA	1.51	EA		1733	EA	
16	X	16	1706588-01AB	N0878	2.8"Hg 5psi	250mL	EA	1.48	EA		1816	EA	Overrange cls 1,2
17	X	17	1707045-01AB	34192	6.5"Hg 5.1psi	250mL	EA	1.72	EA		1901	EA	greenlight 4psi - 3psi possible carryover

Reviewed 7/11/17 Date

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
18	✓	E071113	System Blank	3420L	Humid	250mL	ED	1.00	ED	7/11/17	1952	ED	4RL
19	✓	19	1706588 - 01AB	M087B	2.8"Hg - 3psi	125mL	ED	2.96	EA		2054	ED	dil TC
20	✓	20	1707045 - 01AB	3419L	6.5"Hg - 5.1psi	250mL	EA	1.72	ED		2140	EA	green dot: 3psi - 3psi
21	C	21	1706562A - 01AB	M010T	5.1"Hg - 4.8psi	750mL	EA	1.60	EA		2223	SW	4RL1026
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													SW 7/12/17

Reviewed

7/12/17
Date

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2847**

BFB Verification of 176/174 m/z Ratio: 267008 / 280384 x100 = 95.231.	
Method Name: E17L0703A / E17S0703A	

IS/S Std. #: 2850-163		Exp. Date: 9/1/17	
BCM	LL: 1342916	SM:	143363
1,4-DFB	480560		516813
CB-d5	431542		470445

Verified CCV IS vs ICAL mid-point (-40%D): ~~ES~~

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E071201	BFB tune check	2810-89	50ng	2.0ml	SW	1.00	SW	7/12/17	0719	SW	
2	✓	02	CLN (50ppbv)	2850-222	10ppbv	50mL	SW	1	SW		0745	ES	Exp. 9/27/17
3	✓	03	LCS (50ppbv)	2850-248	10ppbv	50mL	ES	1.00	ES		0828	ES	Exp. 10/2/17
4	✓	04	LCSD (50ppbv)	2850-248	10ppbv	50mL	ES	1.00	ES		0910	ES	Exp. 10/2/17
5	✓	05	ICAL level 7	2804-275	0.5ppbv	25mL	ES	1.00	ES		1032	ES	Expired CCV, Accepted only
6	✓	06	8		1.0ppbv	50mL	ES	1.00	ES		1114	ES	Exp. 9/22/17
7	✓	07	12		5.0ppbv	250mL	ES	1.00	ES		1155	ES	
8	✓	08	7	2850-183	0.5ppbv	25mL	ES	1.00	ES		1240	ES	Exp. 9/9/17 Acc. 4 combo 4/7/14/17
9	✓	09	8		1.0ppbv	50mL	ES	1.00	ES		1323	ES	
10	✓	10	12		5.0ppbv	250mL	ES	1.00	ES		1408	ES	
11	✓	11	7	2850-184	0.5ppbv	25mL	ES	1.00	ES		1450	EA	Exp. 7/9/17 combo
12	✓	12	8		1.0ppbv	50mL	ES	1.00	ES		1533	EA	
13	✓	13	12		5.0ppbv	250mL	ES	1.00	ES		1615	EA	
14	✓	14	Lab Blank	34202	Humid	250ml	EA	1.00	EA		1715	EA	2RL
15	✓	15	1707021-01A	621290	6.9"Hg-4.9psig	25ml	EA	17.2	EA		1810	EA	dil TC Can# 621290
16	✓	16	-03A	00345	6.1"Hg-4.9psig	25ml	EA	16.6	EA		1855	EA	dil TC
17	✗	17	System Blank	34202	Humid	250ml	EA	1.00	EA		1954	EA	7RL

Reviewed: [signature] Date: EA 7/12/17 7/12/17

0765 of 0814

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
18	✓	EA12218	System Blank	34202	Humid	250ml	EA	1.00	EA	7/12/17	2050	EA	<RL
19	✓	19	1-TO15-01AB	33536	5.5"Hg-5psig	↓	EA	1.64	EA		2144	EA	
20	X	↓ 20	↓ -13AB	44244	3.9"Hg-5.4psig	125ml	EA	3.10	EA		2230	SW	over dil
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38												SW 7/13/17	
39													

Reviewed

7/13/17
Date

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2885**

BFB Verification of 176/174 m/z Ratio: 281280 | 288832 x 100 = 97.38%	
Method Name: E17L0703B | E17S0703A	

IS/S Std. #: 2850-163	Exp. Date: 9/1/17
BCM LL: 126746	SIM: 42028
1,4-DFB 464912	516007
CB-d5 425008	463677

Verified CCV IS vs ICAL mid-point (-40%D): [illegible]

0767 of 0814

SOP# (Circle one): 6 / 83 / 38 / 91 / 109 / 132 Method (Circle one): TO-14A/TO-15/TO-17

	Use	File	Lab ID#	Can#/ Standard ID#	Pressure	Amt. Loaded	Verified Vol. Loaded	DF	Loaded By Initials	Date Analyzed	Time Analyzed	Reviewed By Initials	Comments/Standard Expiration Date
1	✓	E071301	BFB time check	2810-89	50ug	2.0ml	SW	1.00	SW	7/13/17	0727	SW	
2	✓	02	CCV (50ppbv)	2850-222	10ppbv	50ml	SW	1	SW		0767	[illegible]	Exp. 9/22/17 [illegible]
3	✓	03	LCS (50ppbv)	2850-197	10ppbv	50ml	[illegible]	1.00	[illegible]		0840	[illegible]	Exp. 9/19/17 [illegible]
4	✓	04	LCSD (50ppbv)	2850-197	10ppbv	50ml	[illegible]	1.00	[illegible]		0922	[illegible]	Exp. 9/19/17
5	✓	05	LAB Blank	3-1202	4 mmHg	250ml	[illegible]	1.00	[illegible]		1013	[illegible]	
6	✓	06	LAB Blank	3-1202	4 mmHg	250ml	[illegible]	1.00	[illegible]		1101	[illegible]	
7	✓	07	1707045 - 03AB	N0069	3.9" Hg · 5.2 psi	250ml	[illegible]	~~1.00~~ 1.55 [illegible] 7/13/17	[illegible]		1153	[illegible]	6-12-24
8	✓	08	- 05AB	N2536	5.5" Hg · 5.1 psi	250ml	[illegible]	1.65	[illegible]		1235	[illegible]	
9	✓	09	- 06AB	N2558	23.5" Hg · 5.1 psi	250ml	[illegible]	6.19	[illegible]		1321	[illegible]	
10	✓	10	- 07AB	N1631	6.7" Hg · 5.2 psi	250ml	[illegible]	1.74	[illegible]		1402	[illegible]	
11	✓	11	- 04AB	21007	5.1" Hg · 5.1 psi	250ml	[illegible]	1.62	[illegible]		1444	[illegible]	
12		12	1707169 - 01A	00409	5.3" Hg · 5.0 psi	250ml	[illegible]	1.63	[illegible]				
13													
14													
15													
16													
17													[illegible] 7/13/17

[illegible] Reviewed

7/13/17 Date

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/03Jul2017.b/e070305.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 03-JUL-2017 10:11
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2810-89; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/03Jul2017.b/bfb60.m
Meth Date : 03-Jul-2017 10:20 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	394308			100.00- 100.00	100.00
6.063	6.235	-0.172	50	118519			8.00- 40.00	30.06
6.063	6.235	-0.172	75	207948			30.00- 66.00	52.74
6.063	6.235	-0.172	96	24641			5.00- 9.00	6.25
6.063	6.235	-0.172	173	0			0.00- 1.99	0.00
6.063	6.235	-0.172	174	362496			50.00- 120.00	91.93
6.063	6.235	-0.172	175	26826			4.00- 9.00	7.40
6.063	6.235	-0.172	176	352046			93.00- 101.00	97.12
6.063	6.235	-0.172	177	23288			5.00- 9.00	6.62

Data File: /var/chem/msde.i/03Jul2017.b/e070305.d

Date : 03-JUL-2017 10:11

Client ID: BFB

Instrument: msde.i

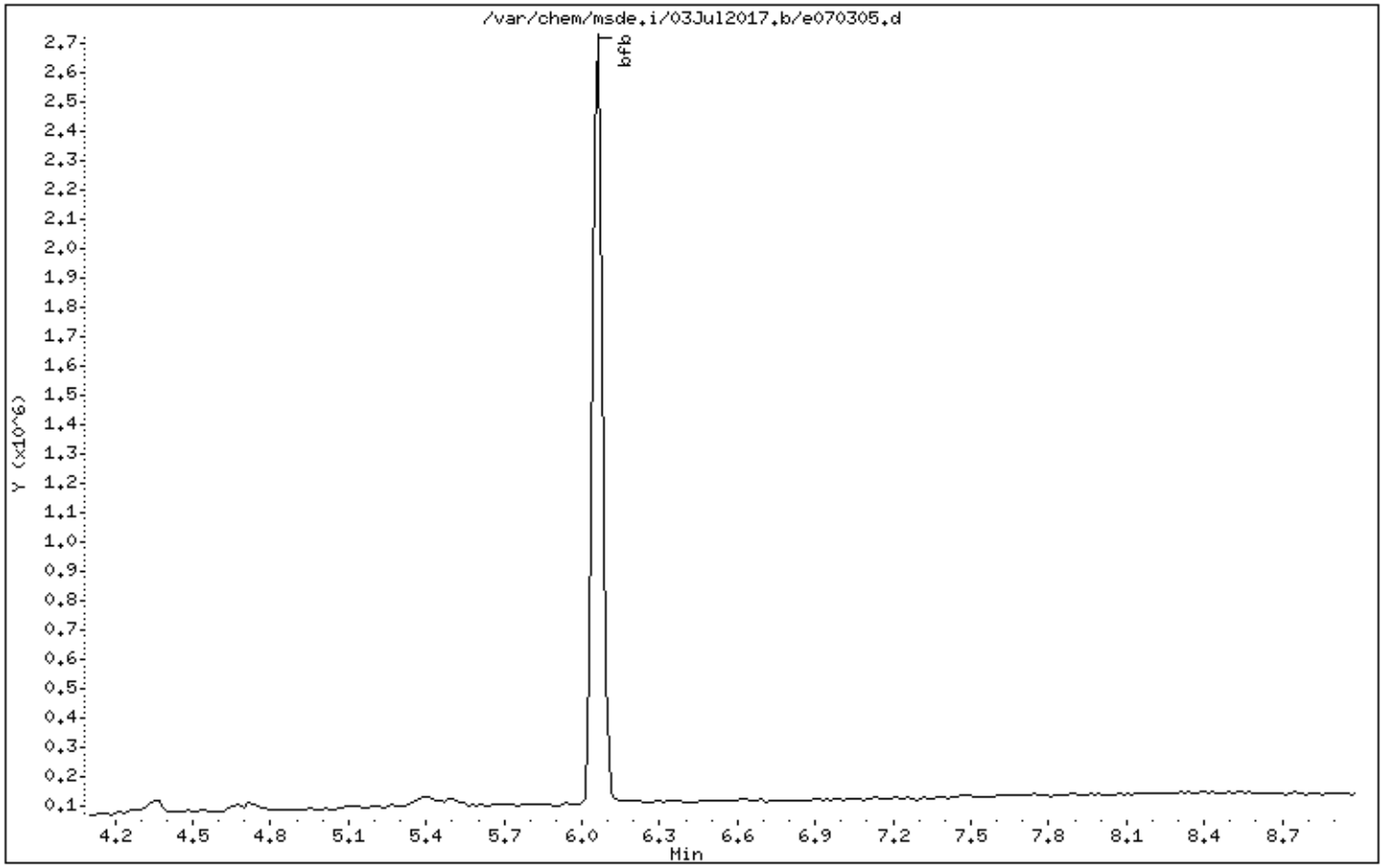
Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /var/chem/msde.i/03Jul2017.b/e070305.d

Date : 03-JUL-2017 10:11

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

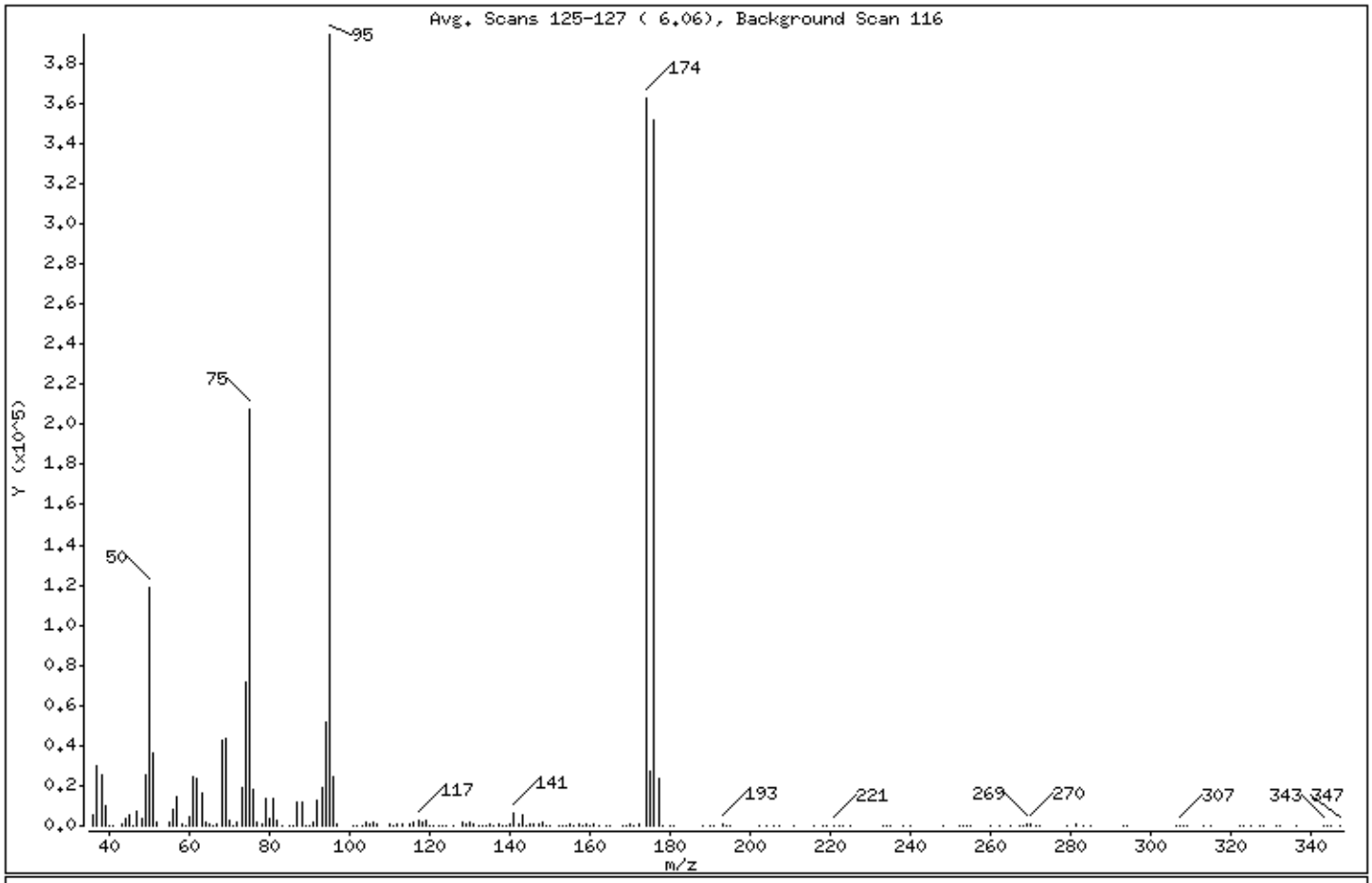
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	30.06
75	30.00 - 66.00% of mass 95	52.74
96	5.00 - 9.00% of mass 95	6.25
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	91.93
175	4.00 - 9.00% of mass 174	6.80 (7.40)
176	93.00 - 101.00% of mass 174	89.28 (97.12)
177	5.00 - 9.00% of mass 176	5.91 (6.62)

Data File: /var/chem/msde.i/03Jul2017.b/e070305.d

Date : 03-JUL-2017 10:11

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e070305.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 116
Location of Maximum: 95.00
Number of points: 189

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5505	88.00	11598	144.00	447	223.00	63
37.00	30016	89.00	188	145.00	521	225.00	64
38.00	25184	90.00	126	146.00	508	233.00	30
39.00	10333	91.00	1767	147.00	537	234.00	85
40.00	260	92.00	12873	148.00	1509	235.00	49
41.00	170	93.00	18856	149.00	135	238.00	45
43.00	564	94.00	51600	150.00	437	240.00	98
44.00	3214	95.00	394304	152.00	308	248.00	39
45.00	5455	96.00	24640	153.00	382	252.00	94
46.00	305	97.00	883	154.00	430	253.00	266
47.00	7027	101.00	33	155.00	1236	254.00	268
48.00	3600	102.00	26	156.00	398	255.00	180
49.00	25176	103.00	131	157.00	1056	260.00	380
50.00	118512	104.00	1841	158.00	161	262.00	203
51.00	36640	105.00	720	159.00	700	265.00	39
52.00	1386	106.00	2194	160.00	87	267.00	332
55.00	1619	107.00	488	161.00	801	268.00	173
56.00	7949	110.00	512	162.00	142	269.00	535
57.00	14954	111.00	229	164.00	152	270.00	632
58.00	544	112.00	541	165.00	367	271.00	256
59.00	75	113.00	459	168.00	179	272.00	202
60.00	4970	115.00	563	169.00	116	279.00	41
61.00	24480	116.00	1815	170.00	455	281.00	492
62.00	23336	117.00	2922	171.00	278	283.00	364
63.00	16320	118.00	1919	172.00	1062	285.00	56
64.00	1699	119.00	2479	174.00	362496	293.00	64
65.00	525	120.00	45	175.00	26824	294.00	182
66.00	207	121.00	183	176.00	352000	306.00	136
67.00	1198	122.00	163	177.00	23288	307.00	143
68.00	42752	123.00	160	178.00	409	308.00	90
69.00	43408	124.00	396	180.00	44	309.00	64
70.00	2657	126.00	348	181.00	60	313.00	76
71.00	200	128.00	1873	188.00	85	315.00	86
72.00	2216	129.00	1132	190.00	110	322.00	80
73.00	19144	130.00	2068	191.00	116	323.00	220

Data File: /var/chem/msde.i/03Jul2017.b/e070305.d

Date : 03-JUL-2017 10:11

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e070305.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 116
Location of Maximum: 95.00
Number of points: 189

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	71912	131.00	713	193.00	719	325.00	160
75.00	207936	132.00	276	194.00	78	327.00	63
76.00	17712	133.00	450	195.00	154	328.00	37
77.00	2140	134.00	177	202.00	174	331.00	215
78.00	959	135.00	994	204.00	209	332.00	195
79.00	13201	136.00	103	206.00	21	336.00	25
80.00	3888	137.00	1036	207.00	451	343.00	258
81.00	13997	138.00	174	211.00	125	344.00	96
82.00	2443	139.00	374	216.00	125	345.00	183
83.00	316	140.00	619	218.00	48	347.00	39
85.00	285	141.00	5972	219.00	60		
86.00	279	142.00	556	221.00	134		
87.00	11341	143.00	5802	222.00	47		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/05Jul2017.b/e070501.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 05-JUL-2017 07:21
Operator : sw Inst ID: msde.i
Smp Info : 2.0uL #2810-89; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/05Jul2017.b/bfb60.m
Meth Date : 05-Jul-2017 07:31 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	382897			100.00- 100.00	100.00
6.063	6.235	-0.172	50	115924			8.00- 40.00	30.28
6.063	6.235	-0.172	75	201305			30.00- 66.00	52.57
6.063	6.235	-0.172	96	25108			5.00- 9.00	6.56
6.063	6.235	-0.172	173	1364			0.00- 1.99	0.41
6.063	6.235	-0.172	174	334250			50.00- 120.00	87.30
6.063	6.235	-0.172	175	25452			4.00- 9.00	7.61
6.063	6.235	-0.172	176	324381			93.00- 101.00	97.05
6.063	6.235	-0.172	177	21873			5.00- 9.00	6.74

Data File: /chem/msde.i/05Jul2017.b/e070501.d

Date : 05-JUL-2017 07:21

Client ID: BFB

Instrument: msde.i

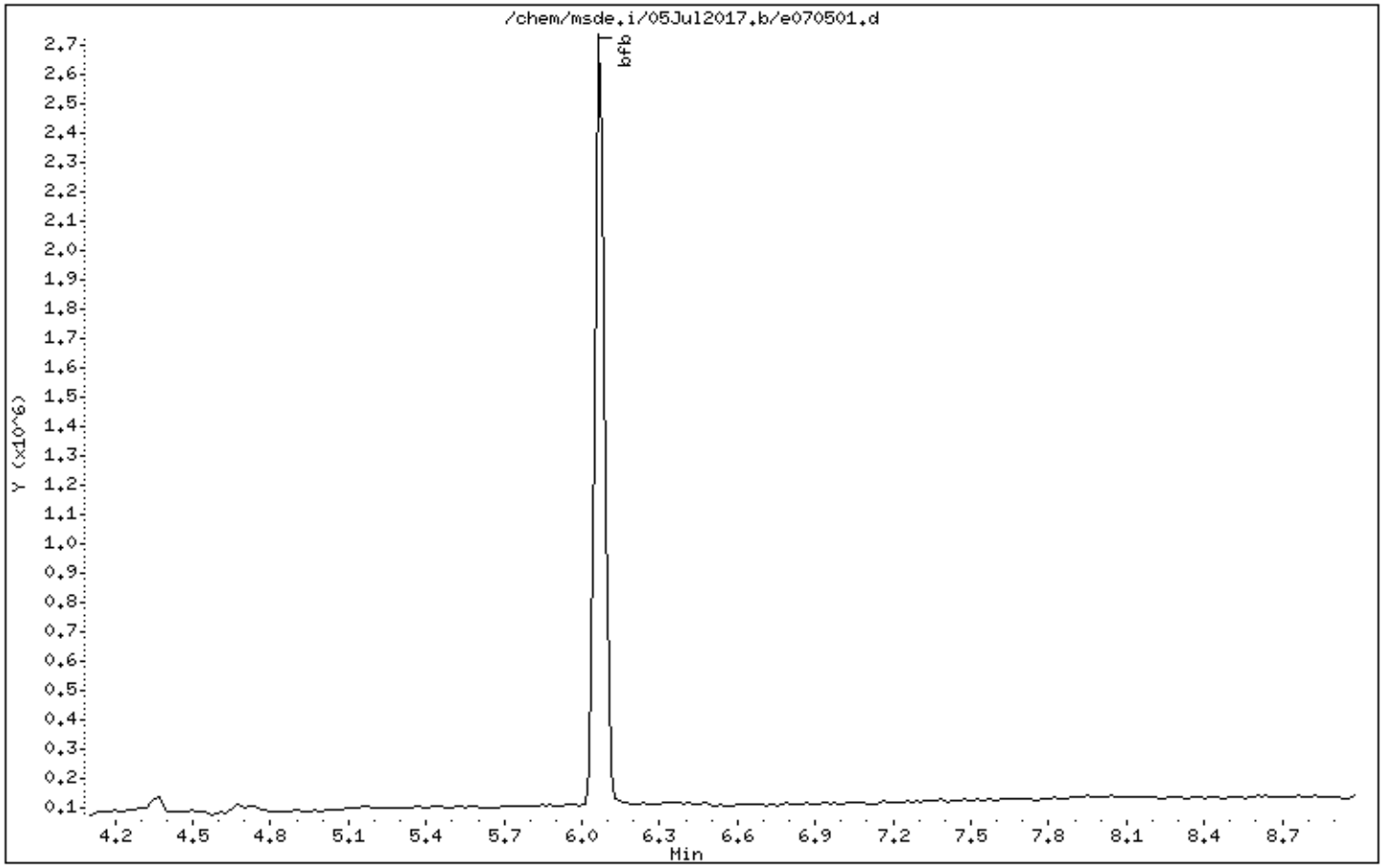
Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/05Jul2017.b/e070501.d

Date : 05-JUL-2017 07:21

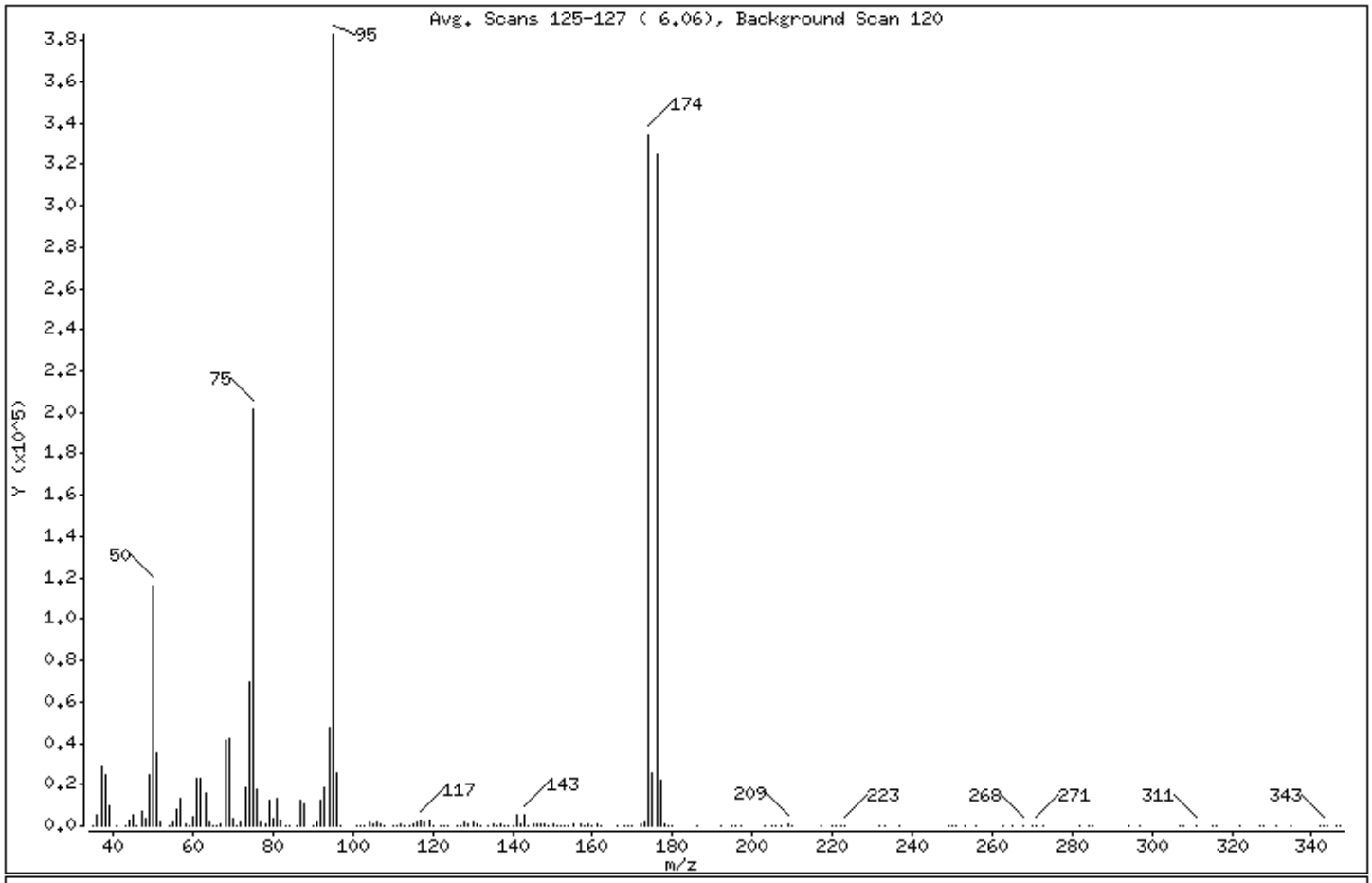
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0 Operator: sw

Column phase: Rtx-624 Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	30.28
75	30.00 - 66.00% of mass 95	52.57
96	5.00 - 9.00% of mass 95	6.56
173	Less than 1.99% of mass 174	0.36 (0.41)
174	50.00 - 120.00% of mass 95	87.30
175	4.00 - 9.00% of mass 174	6.65 (7.61)
176	93.00 - 101.00% of mass 174	84.72 (97.05)
177	5.00 - 9.00% of mass 176	5.71 (6.74)

Data File: /chem/msde.i/05Jul2017.b/e070501.d

Date : 05-JUL-2017 07:21

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e070501.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 178

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	63	83.00	265	137.00	791	206.00	265
36.00	5419	84.00	109	138.00	17	207.00	237
37.00	29216	86.00	253	139.00	205	209.00	463
38.00	24704	87.00	11918	140.00	218	210.00	50
39.00	9844	88.00	10478	141.00	5254	217.00	50
41.00	268	90.00	107	142.00	912	220.00	125
43.00	395	91.00	1756	143.00	5350	221.00	139
44.00	3046	92.00	12320	144.00	435	222.00	43
45.00	5217	93.00	18376	145.00	574	223.00	170
46.00	303	94.00	47848	146.00	844	232.00	35
47.00	6891	95.00	382848	147.00	484	233.00	114
48.00	3350	96.00	25104	148.00	1082	237.00	48
49.00	24872	97.00	404	149.00	381	249.00	42
50.00	115920	101.00	139	150.00	521	250.00	50
51.00	35400	102.00	40	151.00	5	251.00	173
52.00	1449	103.00	219	152.00	287	253.00	31
54.00	22	104.00	1905	153.00	281	256.00	41
55.00	1445	105.00	741	154.00	304	263.00	88
56.00	7985	106.00	1965	155.00	1248	265.00	27
57.00	13507	107.00	645	157.00	954	268.00	309
58.00	605	108.00	164	158.00	136	270.00	57
59.00	119	110.00	404	159.00	457	271.00	196
60.00	4652	111.00	417	160.00	36	273.00	69
61.00	22656	112.00	445	161.00	671	282.00	35
62.00	22552	113.00	360	162.00	84	284.00	156
63.00	16272	114.00	51	166.00	145	285.00	82
64.00	1377	115.00	457	168.00	155	294.00	70
65.00	290	116.00	1654	169.00	141	297.00	3
66.00	14	117.00	3003	170.00	220	307.00	79
67.00	1035	118.00	1455	172.00	640	308.00	45
68.00	41456	119.00	2393	173.00	1364	311.00	151
69.00	42000	120.00	84	174.00	334208	315.00	108
70.00	3096	122.00	148	175.00	25448	316.00	36
71.00	65	123.00	304	176.00	324352	322.00	20
72.00	1796	124.00	322	177.00	21872	327.00	136

Data File: /chem/msde.i/05Jul2017.b/e070501.d

Date : 05-JUL-2017 07:21

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e070501.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 178

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	18536	126.00	257	178.00	599	328.00	98
74.00	69968	127.00	20	179.00	47	331.00	65
75.00	201280	128.00	1793	180.00	95	335.00	185
76.00	17408	129.00	870	186.00	105	342.00	140
77.00	1722	130.00	1887	192.00	206	343.00	326
78.00	463	131.00	622	195.00	290	344.00	102
79.00	12518	132.00	75	196.00	33	346.00	43
80.00	3455	134.00	226	197.00	153	347.00	34
81.00	13048	135.00	843	203.00	31		
82.00	2522	136.00	356	205.00	41		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/11Jul2017.b/e071101.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 11-JUL-2017 07:12
Operator : ef Inst ID: msde.i
Smp Info : 2.0uL #2810-89; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/11Jul2017.b/bfb60.m
Meth Date : 11-Jul-2017 07:21 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	335104			100.00- 100.00	100.00
6.063	6.235	-0.172	50	108839			8.00- 40.00	32.48
6.063	6.235	-0.172	75	186128			30.00- 66.00	55.54
6.063	6.235	-0.172	96	21999			5.00- 9.00	6.56
6.063	6.235	-0.172	173	0			0.00- 1.99	0.00
6.063	6.235	-0.172	174	291661			50.00- 120.00	87.04
6.063	6.235	-0.172	175	21540			4.00- 9.00	7.39
6.063	6.235	-0.172	176	279425			93.00- 101.00	95.80
6.063	6.235	-0.172	177	18648			5.00- 9.00	6.67

Data File: /chem/msde.i/11Jul2017.b/e071101.d

Date : 11-JUL-2017 07:12

Client ID: BFB

Instrument: msde.i

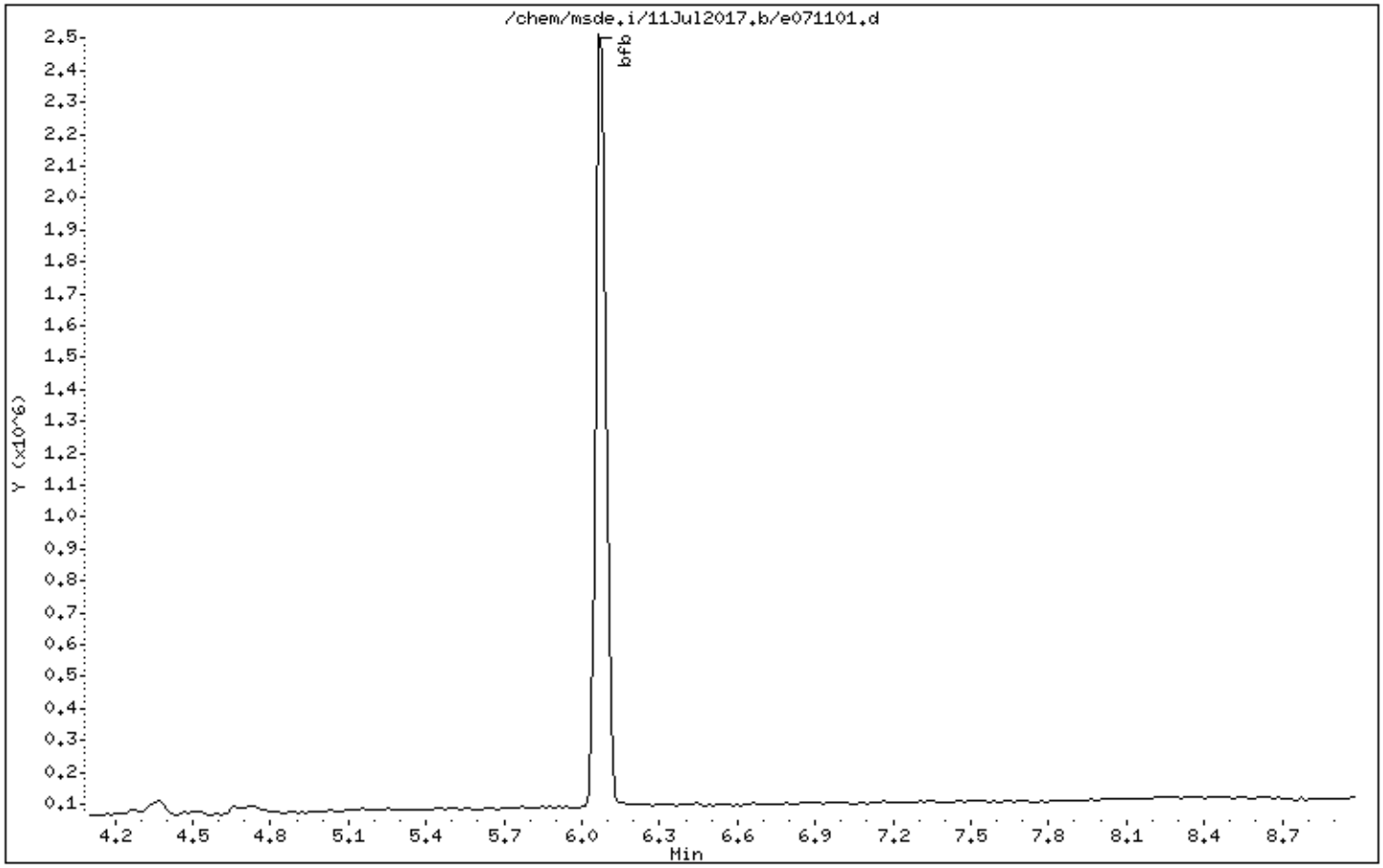
Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/11Jul2017.b/e071101.d

Date : 11-JUL-2017 07:12

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

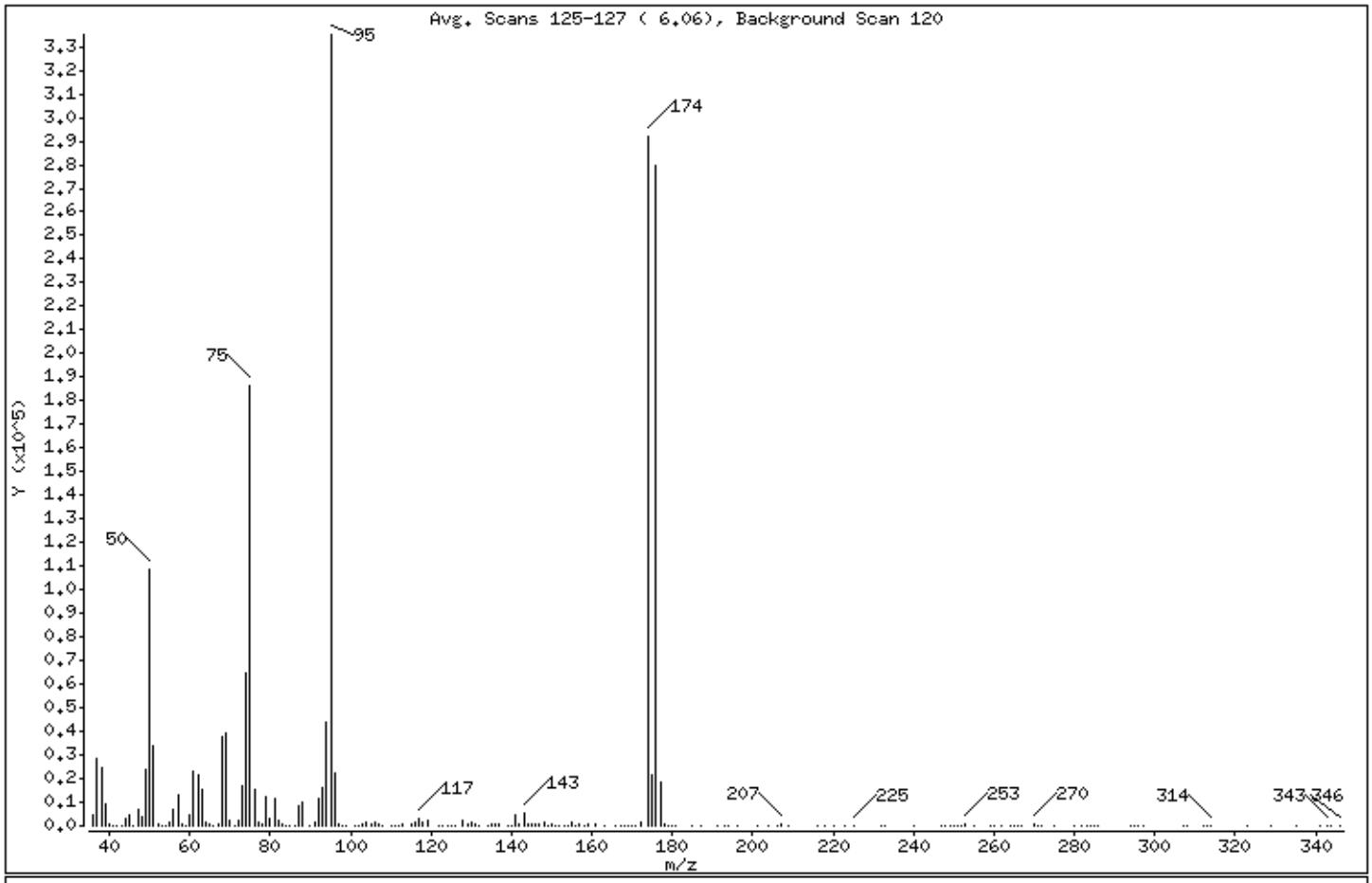
Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	32.48
75	30.00 - 66.00% of mass 95	55.54
96	5.00 - 9.00% of mass 95	6.56
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	87.04
175	4.00 - 9.00% of mass 174	6.43 (7.39)
176	93.00 - 101.00% of mass 174	83.38 (95.80)
177	5.00 - 9.00% of mass 176	5.56 (6.67)

Data File: /chem/msde.i/11Jul2017.b/e071101.d

Date : 11-JUL-2017 07:12

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e071101.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 192

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4663	85.00	35	143.00	5230	225.00	109
37.00	28144	86.00	334	144.00	421	232.00	77
38.00	24272	87.00	8852	145.00	858	233.00	13
39.00	9299	88.00	9840	146.00	625	240.00	84
40.00	726	90.00	95	147.00	395	247.00	81
41.00	220	91.00	1475	148.00	1171	248.00	35
42.00	68	92.00	11482	149.00	274	249.00	147
43.00	365	93.00	16347	150.00	538	250.00	163
44.00	2776	94.00	43800	151.00	40	251.00	3
45.00	4779	95.00	335104	152.00	292	252.00	43
46.00	307	96.00	21992	153.00	348	253.00	500
47.00	6575	97.00	703	154.00	216	255.00	16
48.00	3608	98.00	230	155.00	1230	259.00	48
49.00	24128	99.00	78	156.00	167	260.00	95
50.00	108832	101.00	174	157.00	838	262.00	53
51.00	33552	102.00	89	158.00	125	264.00	115
52.00	1098	103.00	454	159.00	537	265.00	183
53.00	79	104.00	1917	161.00	524	266.00	217
54.00	25	105.00	576	163.00	68	267.00	34
55.00	1296	106.00	1708	166.00	192	270.00	452
56.00	7035	107.00	431	167.00	100	271.00	315
57.00	13407	108.00	61	168.00	51	272.00	17
58.00	484	110.00	351	169.00	322	275.00	40
59.00	126	111.00	373	170.00	199	280.00	43
60.00	4653	112.00	271	171.00	358	282.00	104
61.00	22792	113.00	499	172.00	1562	283.00	111
62.00	21624	115.00	666	174.00	291648	284.00	52
63.00	15341	116.00	1823	175.00	21536	285.00	39
64.00	1263	117.00	2733	176.00	279424	286.00	43
65.00	911	118.00	1557	177.00	18648	294.00	161
66.00	144	119.00	2363	178.00	397	295.00	41
67.00	1126	122.00	200	179.00	41	296.00	42
68.00	37960	123.00	264	180.00	53	297.00	95
69.00	39160	124.00	361	181.00	5	307.00	70
70.00	2568	125.00	22	185.00	70	308.00	60

Data File: /chem/msde.i/11Jul2017.b/e071101.d

Date : 11-JUL-2017 07:12

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: ef

Column phase: Rtx-624

Column diameter: 2.00

Data File: e071101.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 192

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	157	126.00	372	187.00	72	312.00	39
72.00	2262	128.00	1983	191.00	168	313.00	4
73.00	16696	129.00	768	193.00	92	314.00	168
74.00	64696	130.00	1709	194.00	44	323.00	165
75.00	186112	131.00	738	196.00	28	329.00	14
76.00	15420	132.00	336	201.00	42	335.00	173
77.00	1774	134.00	69	204.00	37	341.00	121
78.00	1086	135.00	907	206.00	245	343.00	272
79.00	11969	136.00	416	207.00	1035	344.00	251
80.00	3360	137.00	756	209.00	113	346.00	118
81.00	11789	139.00	365	216.00	41		
82.00	2454	140.00	213	218.00	41		
83.00	510	141.00	4868	220.00	79		
84.00	152	142.00	632	223.00	44		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/12Jul2017.b/e071201.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 12-JUL-2017 07:19
Operator : sw Inst ID: msde.i
Smp Info : 2.0uL #2810-89; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/12Jul2017.b/bfb60.m
Meth Date : 12-Jul-2017 07:28 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	331477			100.00- 100.00	100.00
6.063	6.235	-0.172	50	109439			8.00- 40.00	33.02
6.063	6.235	-0.172	75	182609			30.00- 66.00	55.09
6.063	6.235	-0.172	96	22106			5.00- 9.00	6.67
6.063	6.235	-0.172	173	2469			0.00- 1.99	0.88
6.063	6.235	-0.172	174	280440			50.00- 120.00	84.60
6.063	6.235	-0.172	175	20724			4.00- 9.00	7.39
6.063	6.235	-0.172	176	267048			93.00- 101.00	95.22
6.063	6.235	-0.172	177	17594			5.00- 9.00	6.59

Data File: /chem/msde.i/12Jul2017.b/e071201.d

Date : 12-JUL-2017 07:19

Client ID: BFB

Instrument: msde.i

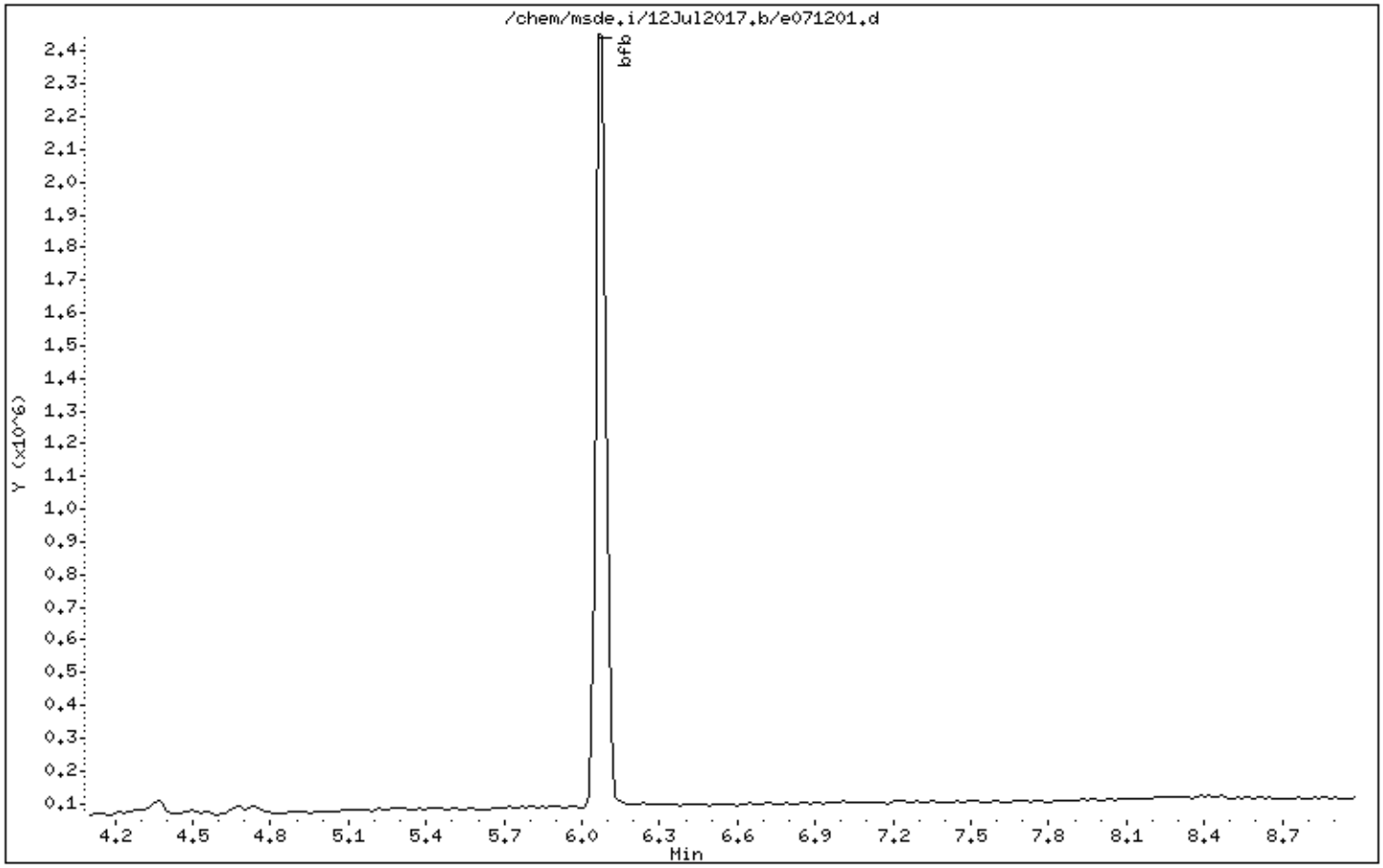
Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/12Jul2017.b/e071201.d

Date : 12-JUL-2017 07:19

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

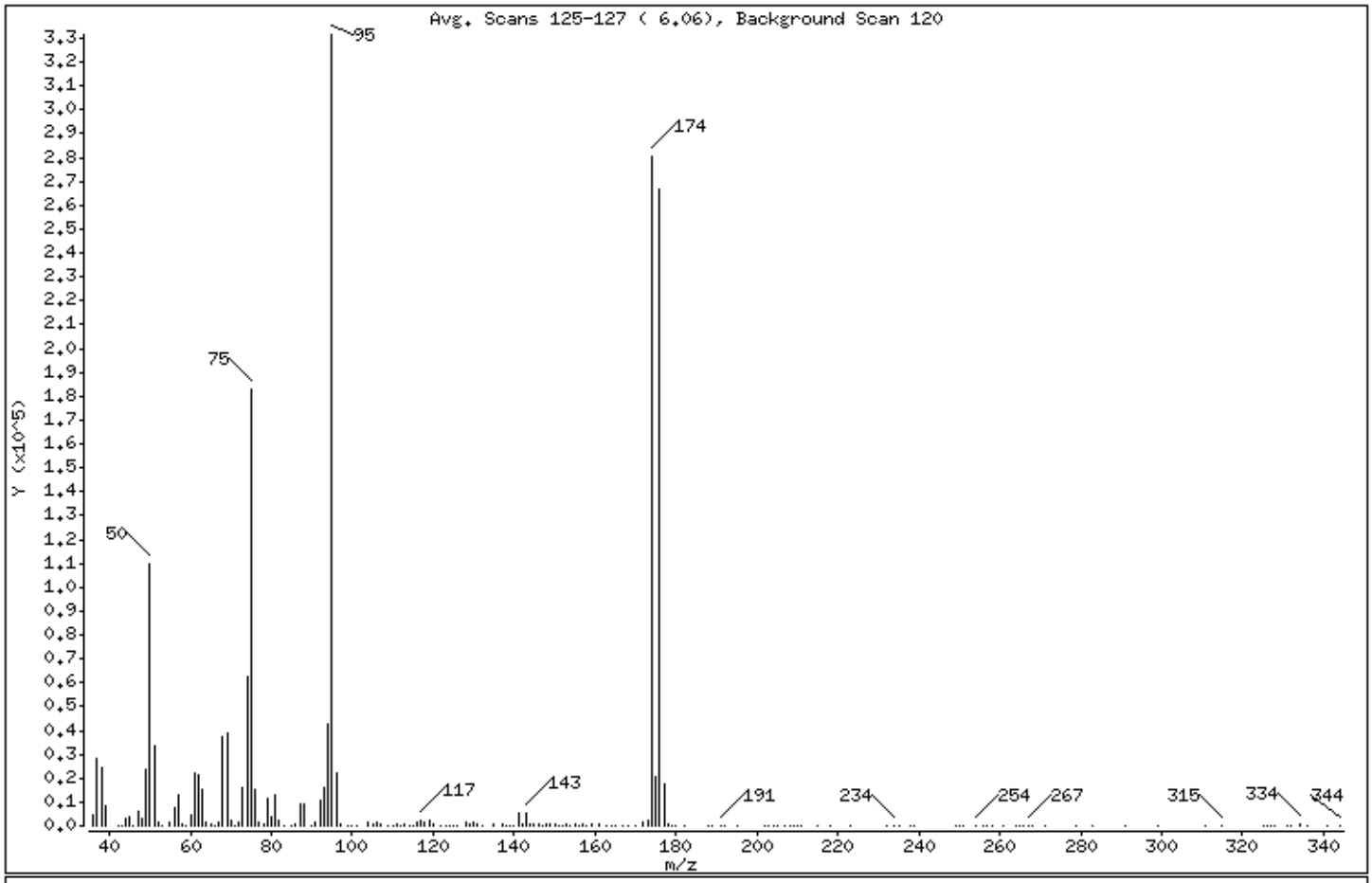
Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	33.02
75	30.00 - 66.00% of mass 95	55.09
96	5.00 - 9.00% of mass 95	6.67
173	Less than 1.99% of mass 174	0.74 (0.88)
174	50.00 - 120.00% of mass 95	84.60
175	4.00 - 9.00% of mass 174	6.25 (7.39)
176	93.00 - 101.00% of mass 174	80.56 (95.22)
177	5.00 - 9.00% of mass 176	5.31 (6.59)

Data File: /chem/msde.i/12Jul2017.b/e071201.d

Date : 12-JUL-2017 07:19

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e071201.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 179

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4707	85.00	14	140.00	310	205.00	62
37.00	27936	86.00	453	141.00	5123	207.00	125
38.00	24544	87.00	9219	142.00	749	208.00	181
39.00	8630	88.00	9011	143.00	5210	209.00	100
42.00	98	90.00	146	144.00	381	210.00	73
43.00	108	91.00	1406	145.00	624	211.00	63
44.00	2771	92.00	10941	146.00	704	215.00	49
45.00	4123	93.00	15789	147.00	86	218.00	58
46.00	208	94.00	42992	148.00	795	223.00	96
47.00	6428	95.00	331456	149.00	445	232.00	14
48.00	3098	96.00	22104	150.00	437	234.00	148
49.00	23544	97.00	616	151.00	41	235.00	105
50.00	109432	99.00	143	152.00	252	238.00	37
51.00	33512	100.00	40	153.00	394	239.00	38
52.00	1489	101.00	174	154.00	338	249.00	92
53.00	102	104.00	1827	155.00	1062	250.00	59
55.00	1271	105.00	620	156.00	42	251.00	129
56.00	7580	106.00	1831	157.00	966	254.00	168
57.00	13000	107.00	564	158.00	143	256.00	35
58.00	595	109.00	259	159.00	787	257.00	108
59.00	85	110.00	280	161.00	422	258.00	43
60.00	4826	111.00	500	163.00	209	261.00	71
61.00	21776	112.00	161	164.00	196	264.00	38
62.00	21152	113.00	444	165.00	77	265.00	66
63.00	15049	114.00	41	167.00	16	266.00	67
64.00	1559	115.00	252	168.00	170	267.00	192
65.00	770	116.00	1362	170.00	320	268.00	50
66.00	128	117.00	2447	172.00	1193	271.00	10
67.00	1193	118.00	1889	173.00	2469	279.00	79
68.00	37488	119.00	2413	174.00	280384	283.00	115
69.00	39160	120.00	391	175.00	20720	291.00	45
70.00	2647	122.00	104	176.00	267008	299.00	36
71.00	289	123.00	245	177.00	17592	311.00	154
72.00	1829	124.00	311	178.00	522	315.00	177
73.00	16149	125.00	362	179.00	114	325.00	116

Data File: /chem/msde.i/12Jul2017.b/e071201.d

Date : 12-JUL-2017 07:19

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e071201.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 120
Location of Maximum: 95.00
Number of points: 179

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	62792	126.00	199	180.00	127	326.00	126
75.00	182592	128.00	1722	182.00	150	327.00	215
76.00	15337	129.00	675	188.00	106	328.00	19
77.00	1705	130.00	1521	189.00	88	331.00	26
78.00	953	131.00	406	191.00	210	332.00	45
79.00	11724	132.00	299	192.00	90	334.00	447
80.00	3695	135.00	637	195.00	25	336.00	159
81.00	12808	137.00	882	202.00	35	341.00	67
82.00	2432	138.00	179	203.00	22	344.00	228
83.00	20	139.00	380	204.00	10		

Eurofins Air Toxics Inc.

Data file : /var/chem/msde.i/13Jul2017.b/e071301.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 13-JUL-2017 07:27
Operator : sw Inst ID: msde.i
Smp Info : 2.0uL #2810-89; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/13Jul2017.b/bfb60.m
Meth Date : 13-Jul-2017 07:36 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
6.063	6.235	-0.172	95	335509			100.00- 100.00	100.00
6.063	6.235	-0.172	50	112528			8.00- 40.00	33.54
6.063	6.235	-0.172	75	188362			30.00- 66.00	56.14
6.063	6.235	-0.172	96	22217			5.00- 9.00	6.62
6.063	6.235	-0.172	173	1806			0.00- 1.99	0.63
6.063	6.235	-0.172	174	288845			50.00- 120.00	86.09
6.063	6.235	-0.172	175	21643			4.00- 9.00	7.49
6.063	6.235	-0.172	176	281321			93.00- 101.00	97.40
6.063	6.235	-0.172	177	16878			5.00- 9.00	6.00

Data File: /chem/msde.i/13Jul2017.b/e071301.d

Date : 13-JUL-2017 07:27

Client ID: BFB

Instrument: msde.i

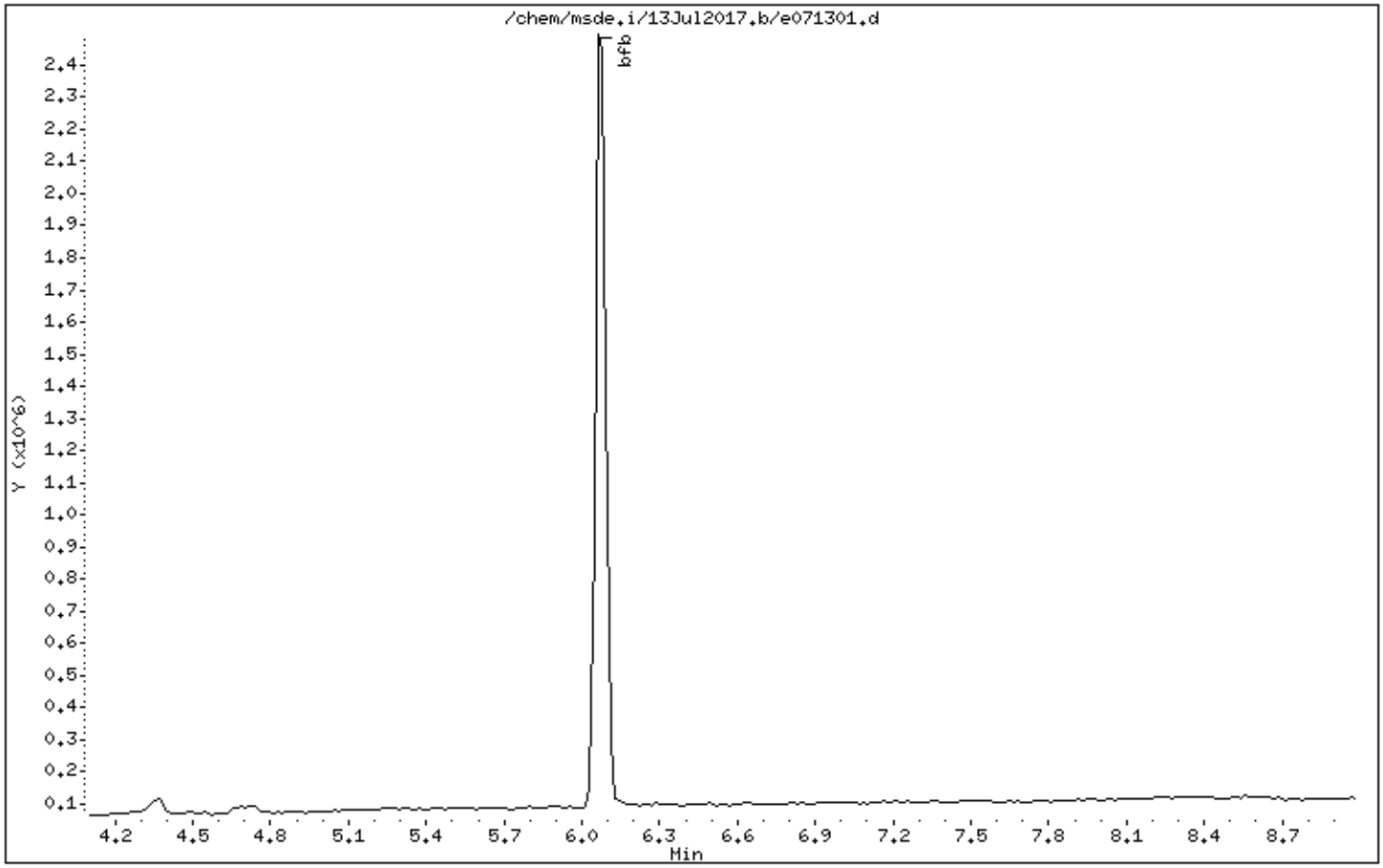
Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/13Jul2017.b/e071301.d

Date : 13-JUL-2017 07:27

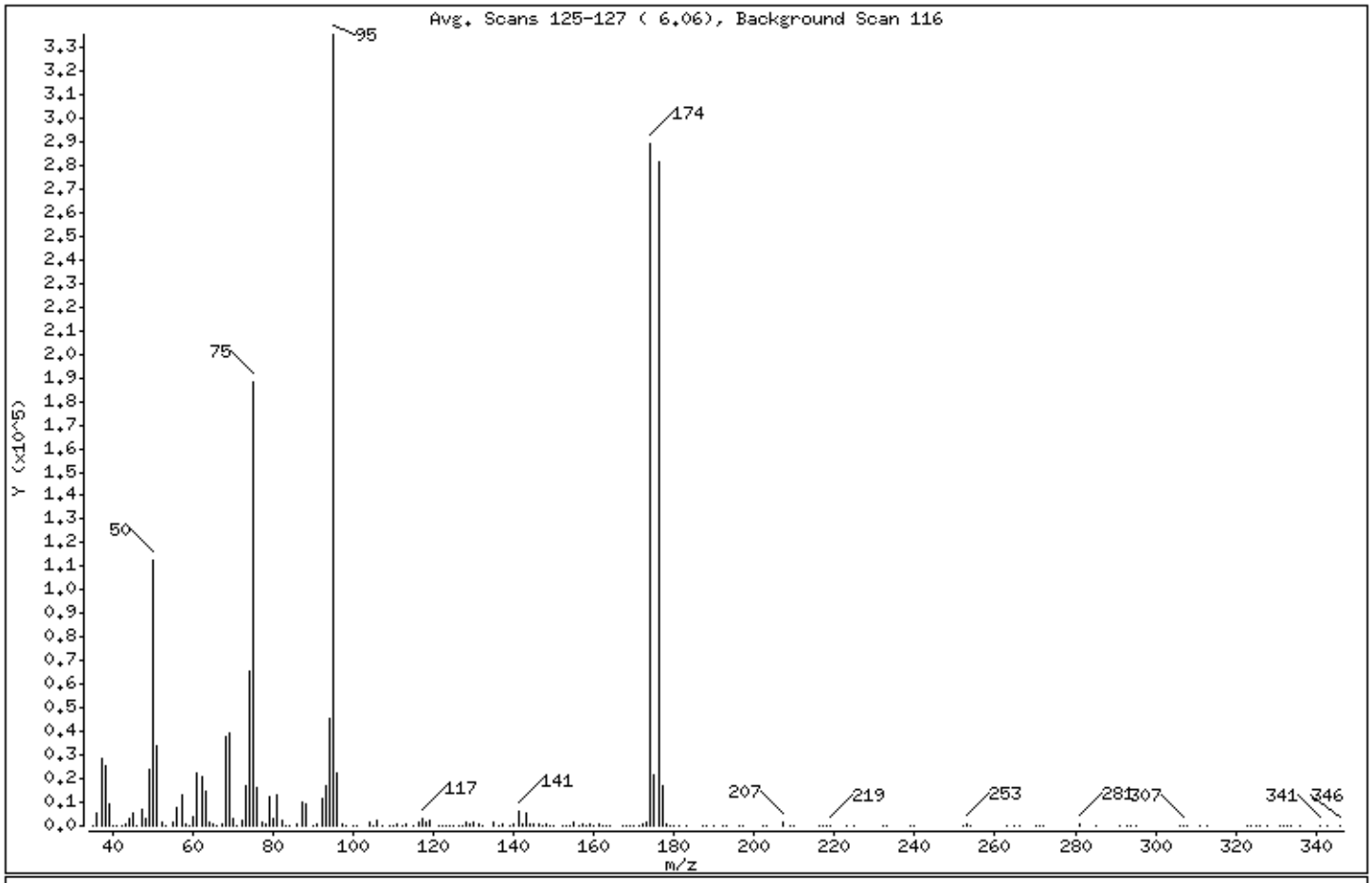
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0 Operator: sw

Column phase: Rtx-624 Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	33.54
75	30.00 - 66.00% of mass 95	56.14
96	5.00 - 9.00% of mass 95	6.62
173	Less than 1.99% of mass 174	0.54 (0.63)
174	50.00 - 120.00% of mass 95	86.09
175	4.00 - 9.00% of mass 174	6.45 (7.49)
176	93.00 - 101.00% of mass 174	83.85 (97.40)
177	5.00 - 9.00% of mass 176	5.03 (6.00)

Data File: /chem/msde.i/13Jul2017.b/e071301.d

Date : 13-JUL-2017 07:27

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e071301.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 116
Location of Maximum: 95.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	81	84.00	38	143.00	5659	210.00	198
36.00	5174	86.00	473	144.00	500	216.00	87
37.00	28600	87.00	9802	145.00	474	217.00	149
38.00	25360	88.00	9465	146.00	739	218.00	76
39.00	9613	90.00	69	147.00	215	219.00	154
40.00	167	91.00	1024	148.00	1103	223.00	77
41.00	103	92.00	11589	149.00	345	225.00	43
42.00	24	93.00	16616	150.00	372	232.00	114
43.00	440	94.00	45144	152.00	239	233.00	63
44.00	2790	95.00	335488	153.00	220	239.00	147
45.00	5443	96.00	22216	154.00	371	240.00	33
46.00	374	97.00	901	155.00	1364	252.00	41
47.00	6777	98.00	85	156.00	99	253.00	840
48.00	2987	100.00	35	157.00	774	254.00	104
49.00	23976	101.00	41	158.00	246	263.00	40
50.00	112528	104.00	1900	159.00	750	265.00	60
51.00	34112	105.00	368	160.00	162	266.00	40
52.00	1432	106.00	2130	161.00	599	270.00	154
53.00	152	107.00	285	162.00	239	271.00	266
55.00	1399	109.00	309	163.00	193	272.00	128
56.00	7738	110.00	275	164.00	249	281.00	953
57.00	13079	111.00	441	167.00	91	285.00	44
58.00	460	112.00	330	168.00	117	291.00	37
59.00	276	113.00	505	169.00	194	293.00	48
60.00	4238	115.00	224	170.00	149	294.00	112
61.00	22656	116.00	1551	171.00	372	295.00	34
62.00	21112	117.00	2961	172.00	1153	306.00	96
63.00	14926	118.00	1685	173.00	1806	307.00	98
64.00	1562	119.00	2516	174.00	288832	308.00	83
65.00	727	121.00	71	175.00	21640	311.00	33
66.00	108	122.00	289	176.00	281280	313.00	17
67.00	1031	123.00	216	177.00	16872	323.00	106
68.00	38048	124.00	289	178.00	428	324.00	71
69.00	39520	125.00	235	179.00	168	325.00	91
70.00	2790	126.00	208	180.00	92	326.00	33

Data File: /chem/msde.i/13Jul2017.b/e071301.d

Date : 13-JUL-2017 07:27

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL #2810-89; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e071301.d
Spectrum: Avg. Scans 125-127 (6.06), Background Scan 116
Location of Maximum: 95.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	231	127.00	89	181.00	300	328.00	62
72.00	2089	128.00	1389	183.00	44	331.00	54
73.00	16648	129.00	838	187.00	36	332.00	97
74.00	65264	130.00	1775	188.00	68	333.00	35
75.00	188352	131.00	705	190.00	48	334.00	199
76.00	15983	132.00	149	192.00	299	336.00	119
77.00	1464	135.00	1176	193.00	119	341.00	205
78.00	912	136.00	141	196.00	72	343.00	190
79.00	12133	137.00	842	197.00	5	346.00	115
80.00	3376	139.00	183	202.00	67		
81.00	12893	140.00	396	203.00	19		
82.00	2296	141.00	5824	207.00	1806		
83.00	123	142.00	674	209.00	99		

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Air Toxics, Ltd. at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Steve Sharp
Collected by: (Print and Sign) Brian Cashin
Company: Arcadis Email: steve.sharp@arcadis.com
Address: 150 W. Market St, Ste 728 City: Indianapolis State: IN Zip: 46204
Phone: (317) 231-6500 Fax: (317) 231-6514

Project Info:
P.O. #: See below
Project #: LA003307.0009
Project Name: Meridian Grenada

Turn Around Time: ☑ Normal ☐ Rush (specify)

Lab Use Only: Pressurized by: Date: Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	B-8-BC (062817)	34192	6/28/17-6/29/17	2046-2327	Tols see projectlist	-30	-8.5		
02A	B-3-BC (062817)	33536		2106-2310			-7.0		
03A	B-9-BC (062817)	6L1244		2131-2147			-5.5		
04A	A-5-BC (062817)	21007		2152-2040			-7.0		
05A	B-6-BC (062817)	6L1597		2224-2155			-7.5		
06A	B-4-BC (062817)	6L1581		2257-2344			-25		
07A	DUP-1-BC (062817)	6L0847		—			-8.5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	6/30/17 1030	[signature] EAT	07/05/17 0850
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Ged Gx		NA	Good	Yes No ~~None~~	1707045

07/05/17

Form 1293 rev.11

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1707045R3

Client

Ms. Sarah Jonker
Arcadis U.S., Inc.
150 W Market St, Ste 728
Indianapolis, IN 46204

Phone

317-231-6500

Fax

317-231-6514

Date Promised: 08/14/17
Date Completed: 8/14/17
Date Received: 7/5/17
PO#: LA003307.0009
Project#: LA003307.0009 Meritor Grenada

Sales Rep: N/A

Total $: $ 0.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	B-8-BC (062817)	Modified TO-15	6/29/2017	6.5 "Hg	$0.00
01B	B-8-BC (062817)	Modified TO-15	6/29/2017	6.5 "Hg	$0.00
02A	B-3-BC (062817)	Modified TO-15	6/29/2017	5.5 "Hg	$0.00
02B	B-3-BC (062817)	Modified TO-15	6/29/2017	5.5 "Hg	$0.00
03A	B-9-BC (062817)	Modified TO-15	6/29/2017	3.9 "Hg	$0.00
03B	B-9-BC (062817)	Modified TO-15	6/29/2017	3.9 "Hg	$0.00
04A	A-5-BC (062817)	Modified TO-15	6/29/2017	5.1 "Hg	$0.00
04B	A-5-BC (062817)	Modified TO-15	6/29/2017	5.1 "Hg	$0.00
05A	B-6-BC (062817)	Modified TO-15	6/29/2017	5.5 "Hg	$0.00
05B	B-6-BC (062817)	Modified TO-15	6/29/2017	5.5 "Hg	$0.00
06A	B-4-BC (062817)	Modified TO-15	6/29/2017	23.5 "Hg	$0.00
06B	B-4-BC (062817)	Modified TO-15	6/29/2017	23.5 "Hg	$0.00
07A	DUP-1-BC (062817)	Modified TO-15	6/29/2017	6.7 "Hg	$0.00
07B	DUP-1-BC (062817)	Modified TO-15	6/29/2017	6.7 "Hg	$0.00
08A	Lab Blank	Modified TO-15	NA	NA	$0.00
08B	Lab Blank	Modified TO-15	NA	NA	$0.00
08C	Lab Blank	Modified TO-15	NA	NA	$0.00
08D	Lab Blank	Modified TO-15	NA	NA	$0.00
08E	Lab Blank	Modified TO-15	NA	NA	$0.00
08F	Lab Blank	Modified TO-15	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Grenada/20635

BILL TO: Accounts Payable
Arcadis U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch, CO 80129

Analysis Code: pptv

REMARKS: A 2% discount is applied per Eurofins/Arcadis MSA

TERMS: PWP-NTE 120

Reporting Method: TO-15 (Sh)-Arcadis (Grenada) v2

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SAMPLE RECEIPT SUMMARY Continued

Client

Ms. Sarah Jonker
Arcadis U.S., Inc.
150 W Market St, Ste 728
Indianapolis, IN 46204

Phone

317-231-6500

Fax

317-231-6514

Date Promised: 08/14/17
Date Completed: 8/14/17
Date Received: 7/5/17
PO#: LA003307.0009
Project#: LA003307.0009 Meritor Grenada

Sales Rep: N/A

Total $: $ 0.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
09A	CCV	Modified TO-15	NA	NA	$0.00
09B	CCV	Modified TO-15	NA	NA	$0.00
09C	CCV	Modified TO-15	NA	NA	$0.00
09D	CCV	Modified TO-15	NA	NA	$0.00
09E	CCV	Modified TO-15	NA	NA	$0.00
09F	CCV	Modified TO-15	NA	NA	$0.00
10A	LCS	Modified TO-15	NA	NA	$0.00
10AA	LCSD	Modified TO-15	NA	NA	$0.00
10B	LCS	Modified TO-15	NA	NA	$0.00
10BB	LCSD	Modified TO-15	NA	NA	$0.00
10C	LCS	Modified TO-15	NA	NA	$0.00
10CC	LCSD	Modified TO-15	NA	NA	$0.00
10D	LCS	Modified TO-15	NA	NA	$0.00
10DD	LCSD	Modified TO-15	NA	NA	$0.00
10E	LCS	Modified TO-15	NA	NA	$0.00
10EE	LCSD	Modified TO-15	NA	NA	$0.00
10F	LCS	Modified TO-15	NA	NA	$0.00
10FF	LCSD	Modified TO-15	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Grenada/20635

BILL TO: Accounts Payable
Arcadis U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch, CO 80129

Analysis Code: pptv

REMARKS: A 2% discount is applied per Eurofins/Arcadis MSA

TERMS: PWP-NTE 120

Reporting Method: TO-15 (Sh)-Arcadis (Grenada) v2

Sample Discrepancy Report

Identification

Initiated By: AB **Project ID:**20635 **PM**: AS **Date:** 7/6/2017 **Discrepancy Type:** ☐ **1.** ☒ **2.** ☐ **3.**

Workorder(s) affected:1707045 **Sample(s) affected:** 06A

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube) was received broken, however sample was intact.

1.2. ☐ No brass cap on canister.

1.3. ☐ Date of Collection noted on first sample, but no arrow down to indicate all samples.

1.4. ☐ Sampling year not documented on COC but noted on sample tag.

1.5. ☐ Sorbent Sample received outside method required temperature of 2°C to 6°C but less than 6°C.

Notify Lab for further determination:

1.6. ☐ Tedlar bag received with minimal volume.

Narration Required in Lab Narrative and Sample Confirmation:

1.7. ☐ COC was not filled out in ink.

1.8. ☐ COC improperly relinquished / received.
☐Signature missing ☐date missing ☐time missing.

1.9. ☐ Sample ID on tags do not match the COC.

1.10. ☐ Can numbers do not match the COC.

1.11. ☐ Sampling date discrepancy.

1.12. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).

1.13. ☐ ID-none on the sample Tag/Blank.

1.14. ☐ Other (describe below).

Initials: _____Date:_____

Describe the Discrepancy: _____

2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

If Section II. is filled out PM must be notified within 24 hrs of initiation

2.1. ☐ COC was not received with samples.

2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC.

2.3. ☐ Incorrect sampling media / container for analysis requested.

2.4. ☐ Number of samples on the COC does not match the number of samples that were received.

2.5. ☐ Samples were received expired.

2.6. ☐ Sampling date is not documented for ☐ *some* / ☐ *any* samples (check one).

2.7. ☐ Sample received with amount of H_2O in the Tedlar Bag.

2.8. ☐ Sample cannot be analyzed. Container was ☐ received broken / ☐ leaking / ☐ flat / ☐ defective.

2.9. ☐ Tedlar bag / canister received emitting a strong odor; Sample ☐ can / ☐ cannot (check one) be analyzed.

2.10. ☐ Sorbent samples -sampling volume was not provided.

2.11. ☐ Flow controller used – canister samples received at ambient or under pressure.

2.12. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):
☐ Canister valve was open.
☐ Brass nut was loose/not present.
☐ Sample can be analyzed.
☐ Sample cannot be analyzed.

2.13. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. and the final recorded vac. on the COC.
☐ Canister passed leak check in lab <2psi, no evidence sample was compromised.
☐ Canister failed lab leak check, canister found to be leaking. Canister sample compromised.

2.14. ☒ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).

2.15. ☐ Canister Trip Blank received at low vacuum (<25"Hg).

2.16. ☐ Sorbent Sample received outside method required temperature of 2°C to 6°C; ☐ ice / ☐ blue ice (check one) was present. A temp. Blank ☐ was / ☐ was not present (check one).

2.17. ☐ Other (describe below).

Initials: **AB** **Date:** **7/6/2017** **Notify Receiving:** ☐ **Notify PM:** ☐

Describe the Discrepancy: 2.14 - Received @ 23.5" Hg. Client final pressure of 25.0" Hg.

3. Lab Discrepancies requiring Team Leader/PM notification

Document in Analytical Notes of Lab Narrative

If Section III. is filled out PM must be notified within 24 hrs of initiation

3.1. ☐ Tedlar Bag found to be leaking at the time of analysis; sample ☐ can / ☐ cannot (check one) be analyzed.

3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed.

3.3. ☐ Samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ Sample loss due to instrument malfunction / broken glassware.

3.6. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.7. ☐ Reporting Limit was raised.

3.8. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.9. ☐ Sample Trip Blank has a reportable level(s) of target compound(s) present. Re-analysis confirmed the initial result.

3.10. ☐ Other (describe below).

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐ _____

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: _____

_____

_____

How Does this Affect Client: _____

_____

_____

Project Manager Use Only

Project Manager Notification ☒ **Section 2 Complete** ☐ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☒ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials:AS Person notified: Sarah Jonker Date: 7/6/2017

☐ Waiting for Client Reply

Comments: **matches final field reading. Narrate and proceed**

_____

☐ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☐

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{14.7\text{psi} + \text{Final Pressure (psi)}}{14.7\text{psi} - [\text{Init. Pressure ("Hg))}*(14.7\text{psi}/30\text{"Hg})]}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{psi} + \text{Final Pressure (psi)}}{14.7\text{psi} + \text{Initial Pressure (psi)}}$$

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
0.0	1.34	2.02
0.2	1.35	2.03
0.4	1.36	2.05
0.5	1.36	2.05
0.6	1.37	2.06
0.8	1.38	2.08
1.0	1.39	2.09
1.2	1.40	2.10
1.4	1.40	2.12
1.5	1.41	2.13
1.6	1.42	2.13
1.8	1.42	2.15
2.0	1.44	2.16
2.2	1.45	2.18
2.4	1.46	2.20
2.5	1.46	2.20
2.6	1.47	2.21
2.8	1.48	2.23
3.0	1.49	2.24
3.2	1.50	2.26
3.4	1.51	2.28
3.5	1.52	2.29
3.6	1.52	2.30
3.8	1.53	2.31
4.0	1.55	2.33
4.2	1.56	2.35
4.4	1.57	2.37
4.5	1.58	2.38
4.6	1.58	2.39
4.8	1.60	2.40
5.0	1.61	2.42
5.2	1.62	2.44
5.4	1.63	2.46
5.5	1.64	2.47
5.6	1.65	2.48
5.8	1.66	2.50
6.0	1.68	2.52
6.2	1.69	2.55
6.4	1.70	2.57
6.5	1.71	2.58
6.6	1.72	2.59
6.8	1.73	2.61
7.0	1.75	2.64
7.2	1.76	2.66
7.4	1.78	2.68
7.5	1.79	2.69
7.6	1.79	2.70

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
7.7	1.80	2.72
7.8	1.81	2.73
8.0	1.83	2.76
8.2	1.84	2.78
8.4	1.86	2.81
8.5	1.87	2.82
8.6	1.88	2.83
8.8	1.90	2.86
9.0	1.91	2.89
9.2	1.93	2.91
9.4	1.95	2.94
9.5	1.96	2.96
9.6	1.97	2.97
9.8	1.99	3.00
10.0	2.01	3.03
10.2	2.03	3.06
10.4	2.05	3.09
10.5	2.06	3.11
10.6	2.07	3.12
10.8	2.09	3.16
11.0	2.12	3.19
11.2	2.14	3.22
11.4	2.16	3.26
11.5	2.17	3.28
11.6	2.18	3.29
11.8	2.21	3.33
12.0	2.23	3.37
12.2	2.26	3.40
12.4	2.28	3.44
12.5	2.30	3.46
12.6	2.31	3.48
12.8	2.34	3.52
13.0	2.36	3.56
13.2	2.39	3.61
13.4	2.42	3.65
13.5	2.44	3.67
13.6	2.45	3.70
13.8	2.48	3.74
14.0	2.51	3.79
14.2	2.54	3.84
14.4	2.58	3.88
14.5	2.59	3.91
14.6	2.61	3.94
14.8	2.64	3.99
15.0	2.68	4.04
15.2	2.72	4.10
15.4	2.75	4.15

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
15.5	2.77	4.18
15.6	2.79	4.21
15.8	2.83	4.27
16.0	2.87	4.33
16.2	2.91	4.39
16.4	2.96	4.46
16.5	2.98	4.49
16.6	3.00	4.52
16.8	3.05	4.59
17.0	3.09	4.66
17.2	3.14	4.74
17.4	3.19	4.81
17.5	3.22	4.85
17.6	3.24	4.89
17.8	3.30	4.97
18.0	3.35	5.05
18.2	3.41	5.14
18.4	3.47	5.22
18.5	3.50	5.27
18.6	3.53	5.32
18.8	3.59	5.41
19.0	3.65	5.51
19.2	3.72	5.61
19.4	3.79	5.72
19.5	3.83	5.77
19.6	3.87	5.83
19.8	3.94	5.94
20.0	4.02	6.06
20.2	4.10	6.18
20.4	4.19	6.31
20.5	4.23	6.38
20.6	4.28	6.45
20.8	4.37	6.59
21.0	4.47	6.73
21.2	4.57	6.89
21.4	4.67	7.05
21.5	4.73	7.13
21.6	4.79	7.22
21.8	4.90	7.39
22.0	5.03	7.58
22.4	5.29	7.98

Initial Vacuum (" of Hg)	5 psi Final Pressure Dilution Factor	15 psi Final Pressure Dilution Factor
22.5	5.36	8.08
22.6	5.43	8.19
22.8	5.58	8.42
23.0	5.74	8.66
23.2	5.91	8.91
23.4	6.09	9.18
23.5	6.19	9.32
23.6	6.28	9.47
23.8	6.48	9.78
24.0	6.70	10.10
24.2	6.93	10.45
24.4	7.18	10.82
24.5	7.31	11.02
24.6	7.45	11.22
24.8	7.73	11.66
25.0	8.04	12.12
25.2	8.38	12.63
25.4	8.74	13.18
25.5	8.93	13.47
25.6	9.14	13.78
25.8	9.57	14.43
26.0	10.05	15.15
26.2	10.58	15.95
26.4	11.17	16.84
26.5	11.49	17.32
26.6	11.82	17.83
26.8	12.56	18.94
27.0	13.40	20.20
27.2	14.36	21.65
27.4	15.46	23.31
27.5	16.08	24.24
27.6	16.75	25.26
27.8	18.27	27.55
28.0	20.10	30.31
28.2	22.34	33.67
28.4	25.13	37.88
28.5	26.80	40.41
28.6	28.72	43.29
28.8	33.50	50.51
29.0	40.20	60.61

Compound List

TO-15 (Sh)-Arcadis (Grenada) v2

CAS Number	Compound	Detection Limit ppbv	Type
75-01-4	Vinyl Chloride	0.50	
75-35-4	1,1-Dichloroethene	0.50	
75-09-2	Methylene Chloride	5.0	
156-60-5	trans-1,2-Dichloroethene	0.50	
156-59-2	cis-1,2-Dichloroethene	0.50	
71-43-2	Benzene	0.50	
107-06-2	1,2-Dichloroethane	0.50	
79-01-6	Trichloroethene	0.50	
108-88-3	Toluene	0.50	
79-00-5	1,1,2-Trichloroethane	0.50	
127-18-4	Tetrachloroethene	0.50	
2037-26-5	Toluene-d8		
17060-07-0	1,2-Dichloroethane-d4		
460-00-4	4-Bromofluorobenzene		

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1-800-985-5955

Media Certification Report

Canister Number: 6L# 34192
Can#: 113908-34192
Date : 06/15/17 4:12
Data File: d061426.d

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	99.00	% Recovery
Toluene-d8	2037-26-5	0.250	100.00	% Recovery

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Media Certification Report

Canister Number: 6L# 33536
Can#: 113908-33536
Date : 06/09/17 1:46
Data File: d060820.d

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		101.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	96.00	% Recovery
Toluene-d8	2037-26-5	0.250	99.00	% Recovery

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Media Certification Report

Canister Number: 6L# 6L1244
Can#: 113908-6L1244
Date : 06/05/17 20:36
Data File: o060518.d

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		100.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	101.00	% Recovery
Toluene-d8	2037-26-5	0.250	92.00	% Recovery

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Media Certification Report

Canister Number: 6L# 21007
Can#: 113908-21007
Date : 06/12/17 22:03
Data File: o061220.d

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		97.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	102.00	% Recovery
Toluene-d8	2037-26-5	0.250	102.00	% Recovery

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Media Certification Report

Canister Number: 6L# 2536
Can#: 113908-2536
Date : 06/02/17 17:31
Data File: o060210.d

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1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		98.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	98.00	% Recovery
Toluene-d8	2037-26-5	0.250	102.00	% Recovery

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Media Certification Report

Canister Number: 6L# 2508w/Batch
Can#: 113908-2508
Date : 05/11/17 12:23
Data File: o051106.d

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1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		96.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	102.00	% Recovery
Toluene-d8	2037-26-5	0.250	99.00	% Recovery

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Media Certification Report

Canister Number: 6L# 1631
Can#: 113908-1631
Date : 06/05/17 19:33
Data File: o060516.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
1,1,2-Trichloroethane	79-00-5	0.250	ND	ppbv
1,1-Dichloroethene	75-35-4	0.250	ND	ppbv
1,2,4-Trimethylbenzene	95-63-6	0.250	ND	ppbv
1,2-Dichloroethane	107-06-2	0.250	ND	ppbv
Benzene	71-43-2	0.250	ND	ppbv
Chloroform	67-66-3	0.250	ND	ppbv
cis-1,2-Dichloroethene	156-59-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
Methylene Chloride	75-09-2	2.500	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Tetrachloroethene	127-18-4	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
trans-1,2-Dichloroethene	156-60-5	0.250	ND	ppbv
Trichloroethene	79-01-6	0.250	ND	ppbv
Vinyl Chloride	75-01-4	0.250	ND	ppbv
1,2-Dichloroethane-d4	17060-07-0		104.00	% Recovery
4-Bromofluorobenzene	460-00-4	0.250	99.00	% Recovery
Toluene-d8	2037-26-5	0.250	98.00	% Recovery

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 05/24/17
Workorder # M070/5	Form F1.27	Revision #14	Revision Date: 05/24/17	Page 1 of 2

S1	S2	S3	S4	D	***Section 1* – Spec Out**				
					Initials/Instrument/Date	**S1:** ES MSE 7/11/17	**S2:** ES MSE 7/11/17	**S3:** ~~VMA 7/12/17~~ Not used	**S4:** ES MSE 7/13/17
✓	✓	✓	✓	■	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓	✓	✓	✓	■	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
n/a	n/a	n/a	n/a	✓	Manual Integrations included and approved				
✓	✓	✓	✓	✓	Chain of Custody verified for special comments (add comments below)				
✓	✓	✓	✓	■	Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

S1: Ø out in QC. S2: Ø out in QC. S3: Ø out QC

S4: Ø out in QC

A1	A2	A3	A4	D	***Section 2* – Sample Analysis**				
					Initials/Date	**A1:** ES 7/11/17	**A2:** SW 7/13/17	**A3:** ES 7/13/17	**A4:**
✓	✓	✓		✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, Canister #s Verified and dilution ranges are met per SOP (ex. Over-ranged/overdiluted)				
NA	NA	NA		N	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
NA	NA	n/a		N	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓	✓	✓		■	12/24 Hr clock time & Hold Time met for all samples				
N	NA			N	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks, samples following bad loads on CIAAs have been verified (system blks, confirmation runs).				
	✓	✓		✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes: 01AB Full loads A2: 02AB Full load

A3: 03AB - 07AB = Full loads.

D1	D2	D3	D4	T	3T	***Section 3* – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date	**D1:** ES 7/14/17	**D2:**	**D3:**	**D4:**
NA					■	CAR # *(if applicable)*				
NA					■	Spectra Verified *(documentation of spectral defense included if applicable)*				
NA					■	TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
						Lab Narrative is correct				
NA					■	TPH/NMOC calculations complete and included in folder				

Special notes:

A	3T	***Section 4*- Atlas Data Entry**	**Lumen verified and included in folder**	**Circle one: Yes/No**
		Initials/Date: ES 7/14/17	**3rd Tier:** *(needed only for DOD or per client request)*	
✓		Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
NA		Manually entered results are checked		
✓		At least one result per sample is verified against Target quant sheets		
✓		Appropriate data qualifier flags are applied		
✓		Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*

Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 05/24/17
Reissued 1707045r1	Form F1.27	Revision #14	Revision Date: 05/24/17	Page 2 of 2

Workorder # :				Reason for Reissue:
				report lab blank with correct DF and to correct sample ID for 05B
W	T	3T	Q	
✓	✓		✓	Reissue Request form Present
✓	✓		N/A	Client or QA or Lab contact present with reason for reissue
✓	✓		✓	Review all affected data
✓	✓		✓	Report header has correct R1, R2 etc
✓	✓		✓	The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
✓	✓		✓	Date for Reissue in Report Header matches date in Lab Narrative
✓	✓		✓	Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
~~A~~	✓		N/A	Corrective Action issued - #
✓			✓	The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	Tech Review (Initials/Date)	*3rd Tier Review * 3rd Tier Report Review is for DoD & Client Specific projects only (Initials/Date)	QA Review (Initials/Date)
EA 7/24/17			ML 07/25/17

Workorder # :				Reason for Reissue:
1707045r2				per client request - remove chloroform and 124-TMB
W	T	3T	Q	
✓	✓		✓	Reissue Request form Present
✓	✓		N/A	Client or QA or Lab contact present with reason for reissue
✓	✓		✓	Review all affected data
✓	✓		✓	Report header has correct R1, R2 etc
✓	✓		✓	The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
✓	✓		✓	Date for Reissue in Report Header matches date in Lab Narrative
✓	✓		✓	Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
~~A~~			N/A	Corrective Action issued - #
			✓	The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	Tech Review (Initials/Date)	*3rd Tier Review * 3rd Tier Report Review is for DoD & Client Specific projects only (Initials/Date)	QA Review (Initials/Date)
EA 8/11/17			SS for ML ~~8/14/17~~

1707045 R3 - Correct ATLAS PDF Report - AS 8/14/17

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable

ARCADIS Design & Consultancy for natural and built assets

Grenada Manufacturing

DATA REVIEW

Grenada, Mississippi

Volatile Organic Compound (VOC) Analyses

SDG #1707320

Analyses Performed By:
Eurofins/Air Toxic
Folsom, California

Report #28194R
Review Level: Tier III
Project: LA003307.0009.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #1707320 for samples collected in association with the Grenada Manufacturing site, located in Grenada, Mississippi. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis			
					VOC	SVOC	MET	MISC
R-B-6 (071317)	1707320-01A	Air	7/20/2017		X			
R-B-4 (071317)	1707320-02A	Air	7/20/2017		X			
Dup-2-BC (071317)	1707320-03A	Air	7/20/2017	R-B-4 (071317)	X			
AMB-7D (071317)	1707320-04A	Air	7/20/2017		X			

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Samples were collected using Radiello cartidges and analysis was performed using the Solvent Panel Scan method. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Solvent Panel Scan (SOP: IH-AN-Solvent Panel)	Air	60 days from collection to analysis	Cool to <6ºC

All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 24-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (30%) and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (30%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts are ± 40% of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

7. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 25% for air matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for air matrices.

Laboratory duplicate analysis was not performed using a sample from this SDG.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for air matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for air matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result (mg/m^3)	Duplicate Result (mg/m^3)	RPD
R-B-4 (071317)/ Dup-2-BC (071317)	Trichloroethene	11	11	0.0%
	Toluene	3.5	3.2	9.0%
	cis-1,2-Dichloroethene	2.4	2.2	8.7%

Note:

AC	Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

To calculate ug/m3 concentrations in the Lab Blank and in sample Amb-1-BC (062817), a sampling duration of 1601 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples. Associated compounds exhibiting an adjusted rate were flagged by the laboratory as “C” (C = Estimated concentration due to calculated sampling rate.) and were qualified as estimated (J/UJ).

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: Solvent Panel Scan	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Dilution Factor		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Todd Church

SIGNATURE:

DATE: August 14, 2017

PEER REVIEW: Dennis Capria

DATE: August 15, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

PASSIVE SAMPLE COLLECTION

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CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

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Project Info:
P.O. #: LA003307.0009
Project #: LA003307.0009
Project Name: GRENADA MANUFACTURING

Turn Around Time: ☒ Normal ☐ Rush ☐ specify

Reporting Units: ☐ ppmv ☐ ppbv ☒ µg/m3 ☐ mg/m3

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Air Temperature	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
01A	R-B-6 (071317)	608XP	07/13/17	19:28	07/20/17	17:40		RAD 130 PROJECT LIST	☒	☐	☐	☐
03A	R-B-4 (071317)	611XP	07/13/17	19:52	07/20/17	17:43		↓	☒	☐	☐	☐
03A	Dup-2-BC (071317)	612XP	07/13/17	19:52	07/20/17	17:43		↓	☒	☐	☐	☐
04A	AMB-7D (071317)	605XP	07/13/17	18:50	07/20/17	18:00		↓	☐	☒	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	7-21-17 / 1500	Andrea Augustin EAL	7/22/17 0915
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: SEE LAB PM FOR "PROJECT LIST"

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex	7797 0426 6809	NA	Good	Yes No (None)	1707320

S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.
C - Estimated concentration due to calculated sampling rate
CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Client Sample ID: R-B-6 (071317)

Lab ID#: 1707320-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072509sim**	**Date of Collection: 7/20/17 5:40:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 11:23 AM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	0.53	Not Detected C	Not Detected C	UJ
cis-1,2-Dichloroethene	0.10	0.16	1.2 C	1.9 C	J
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C	UJ
Benzene	0.40	0.50	Not Detected	Not Detected	
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C	UJ
Trichloroethene	0.10	0.14	4.2	6.1	
Toluene	0.10	0.14	1.1	1.5	
Vinyl Chloride	0.40	0.44	Not Detected C	Not Detected C	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9972 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

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Client Sample ID: R-B-4 (071317)

Lab ID#: 1707320-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072510sim**	**Date of Collection: 7/20/17 5:43:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 11:47 AM**	
		Date of Extraction: 7/25/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	0.53	Not Detected C	Not Detected C	UJ
cis-1,2-Dichloroethene	0.10	0.16	1.5 C	2.4 C	J
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C	UJ
Benzene	0.40	0.50	Not Detected	Not Detected	
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C	UJ
Trichloroethene	0.10	0.14	7.8	11	
Toluene	0.10	0.14	2.6	3.5	
Vinyl Chloride	0.40	0.45	Not Detected C	Not Detected C	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9951 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

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Client Sample ID: Dup-2-BC (071317)

Lab ID#: 1707320-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072511sim**	**Date of Collection: 7/20/17 5:43:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 12:12 PM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
1,1-Dichloroethene	0.40	0.53	Not Detected C	Not Detected ~~C~~ UJ
cis-1,2-Dichloroethene	0.10	0.16	1.4 C	2.2 ~~C~~ J
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected ~~C~~ UJ
Benzene	0.40	0.50	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected ~~C~~ UJ
Trichloroethene	0.10	0.14	7.4	11
Toluene	0.10	0.14	2.4	3.2
Vinyl Chloride	0.40	0.45	Not Detected C	Not Detected ~~C~~ UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 9951 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

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Client Sample ID: AMB-7D (071317)

Lab ID#: 1707320-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072512sim**	**Date of Collection: 7/20/17 6:00:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 12:38 PM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)	
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected	
1,1-Dichloroethene	0.40	0.52	Not Detected C	Not Detected ~~C~~	UJ
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected ~~C~~	UJ
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected ~~C~~	UJ
Benzene	0.40	0.50	Not Detected	Not Detected	
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected	
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected ~~C~~	UJ
Trichloroethene	0.10	0.14	Not Detected	Not Detected	
Toluene	0.10	0.13	0.42	0.57	
Vinyl Chloride	0.40	0.44	Not Detected C	Not Detected ~~C~~	UJ

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 10030 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Passive S.E. RAD130/SKC

INVENTORY SHEET

Work Order #: 1707320

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Comments:

Completed by:

Amanda Whittaker	Amanda Whittaker / Document Control	8/9/17
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1707320

Work Order Summary

CLIENT:	Ms. Sarah Jonker Arcadis U.S., Inc. 150 W Market St, Ste 728 Indianapolis, IN 46204	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	317-231-6500	**P.O. #**	LA003307.0009
FAX:	317-231-6514	**PROJECT #**	LA003307.0009 Grenada Manufacturing
DATE RECEIVED:	07/22/2017	**CONTACT:**	Ausha Scott
DATE COMPLETED:	08/03/2017		

FRACTION #	NAME	TEST
01A	R-B-6 (071317)	Passive S.E. RAD130/SKC
02A	R-B-4 (071317)	Passive S.E. RAD130/SKC
03A	Dup-2-BC (071317)	Passive S.E. RAD130/SKC
04A	AMB-7D (071317)	Passive S.E. RAD130/SKC
05A	Lab Blank	Passive S.E. RAD130/SKC
06A	LCS	Passive S.E. RAD130/SKC
06AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 08/03/17

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LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
Arcadis U.S., Inc.
Workorder# 1707320

Four Radiello 130 (Solvent) samples were received on July 22, 2017. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 10030 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.
C - Estimated concentration due to calculated sampling rate
CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
R-B-6 (071317)	1707320-01A	7/20/2017	7/22/2017	7/25/2017	5	7/25/2017	0	Good
R-B-4 (071317)	1707320-02A	7/20/2017	7/22/2017	7/25/2017	5	7/25/2017	0	Good
Dup-2-BC (071317)	1707320-03A	7/20/2017	7/22/2017	7/25/2017	5	7/25/2017	0	Good
AMB-7D (071317)	1707320-04A	7/20/2017	7/22/2017	7/25/2017	5	7/25/2017	0	Good
Lab Blank	1707320-05A	NA	NA	7/25/2017	NA	7/25/2017	0	Good
LCS	1707320-06A	NA	NA	7/25/2017	NA	7/25/2017	0	Good
LCSD	1707320-06AA	NA	NA	7/25/2017	NA	7/25/2017	0	Good

Sample Results and Raw Data

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: R-B-6 (071317)

Lab ID#: 1707320-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	0.16	1.2 C	1.9 C
Trichloroethene	0.10	0.14	4.2	6.1
Toluene	0.10	0.14	1.1	1.5

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Client Sample ID: R-B-6 (071317)

Lab ID#: 1707320-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072509sim**	**Date of Collection: 7/20/17 5:40:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 11:23 AM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
1,1-Dichloroethene	0.40	0.53	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.16	1.2 C	1.9 C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C
Benzene	0.40	0.50	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C
Trichloroethene	0.10	0.14	4.2	6.1
Toluene	0.10	0.14	1.1	1.5
Vinyl Chloride	0.40	0.44	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072509sim.d
Lab Smp Id: 1707320-01A
Inj Date : 25-JUL-2017 11:23
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320-01A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 13:24 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	243174	5.23494	10.4699
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	259673	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	6649	0.59938	1.19876
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	29376	2.09130	4.18260
26 Toluene-CCC	92	10.680	10.680	(0.976)	17100	0.55395	1.10791
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 03-Aug-2017 10:49

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072509sim.d
Lab Smp Id: 1707320-01A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	259673	-7.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 03-Aug-2017 10:49

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320-01A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.4699	104.70	70-130

Data File: /chem/msdc.i/25Jul2017.b/c072509sim.d

Date : 25-JUL-2017 11:23

Client ID:

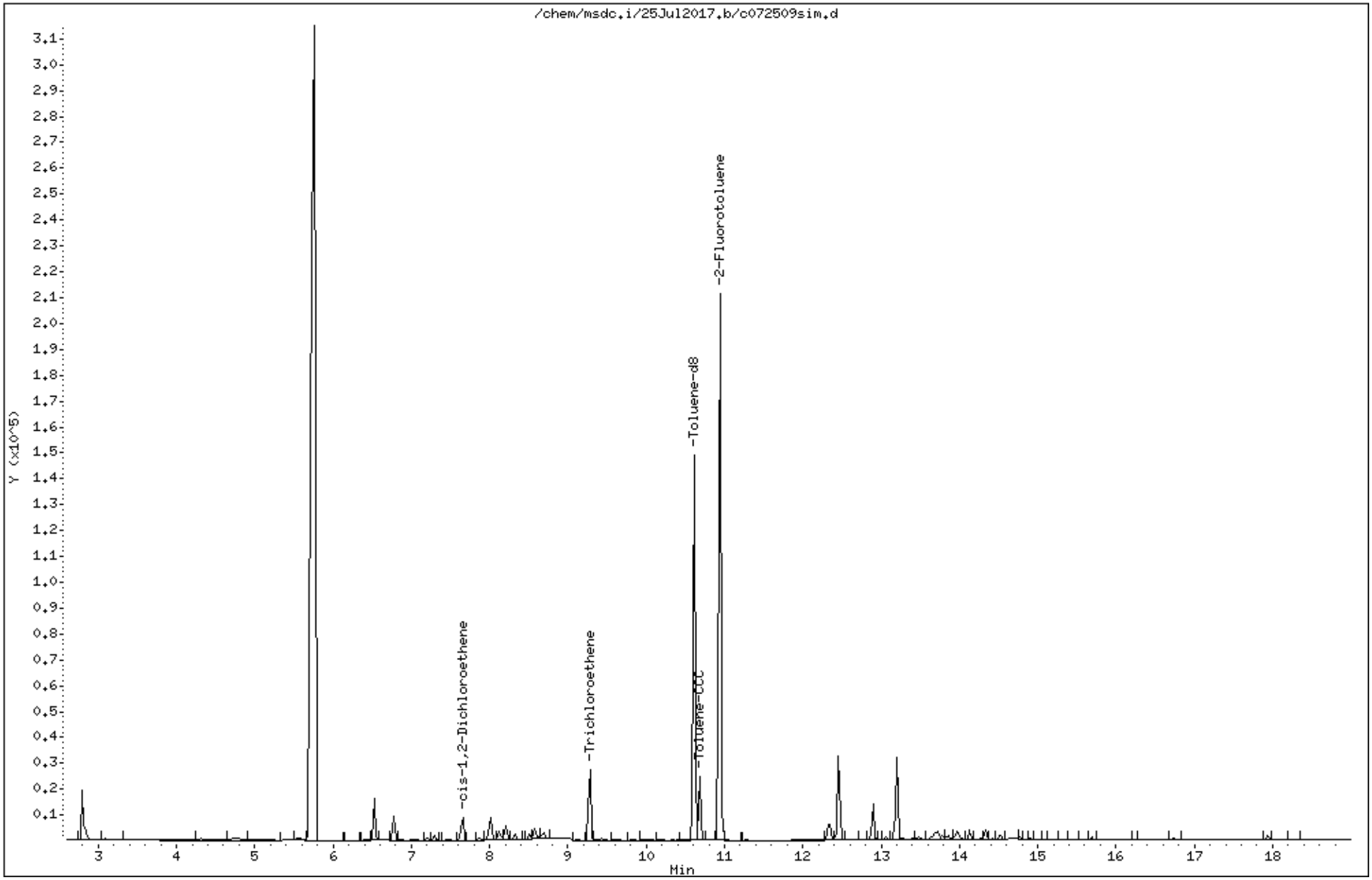
Instrument: msdc.i

Sample Info: ;1707320-01A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/25Jul2017.b/c072509sim.d

Date : 25-JUL-2017 11:23

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-01A;

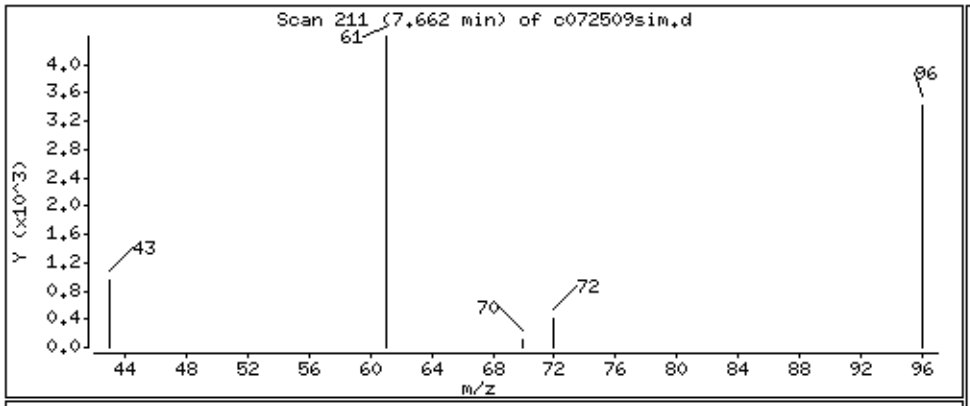
Operator: gm

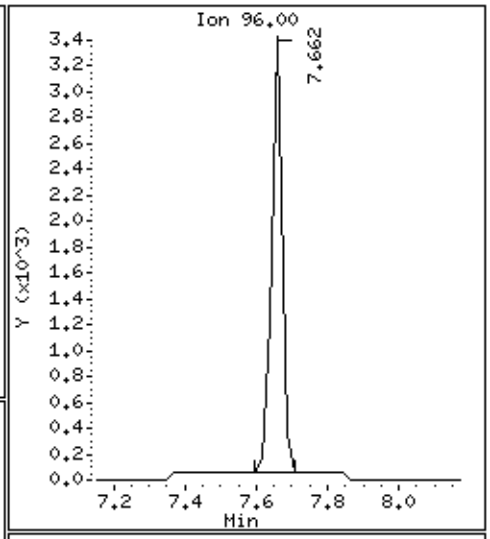
Column phase: DB-5.625

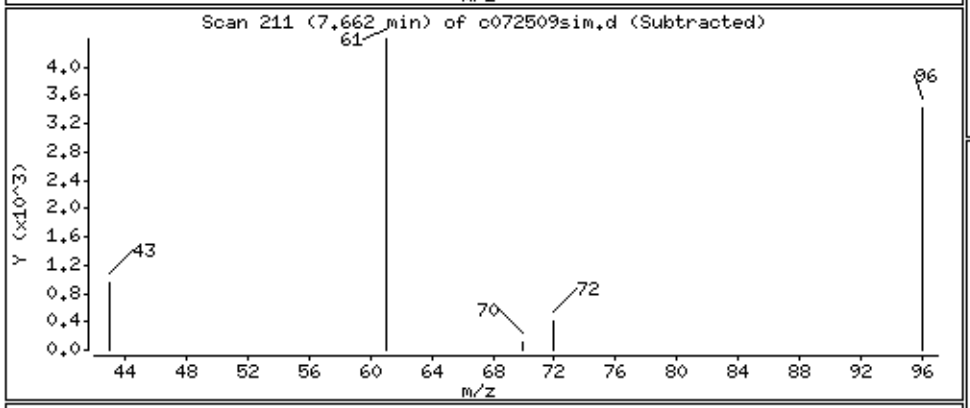
Column diameter: 0.25

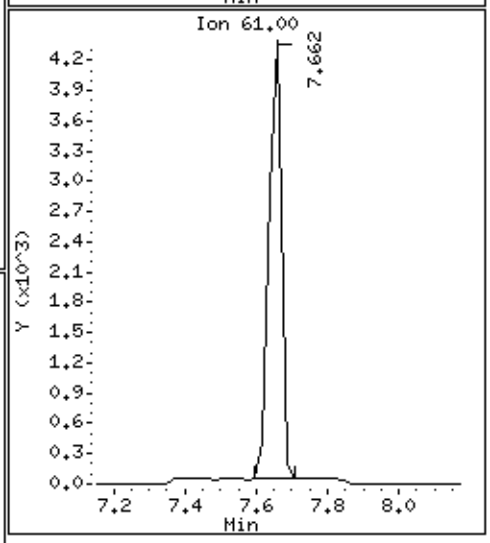
14 cis-1,2-Dichloroethene

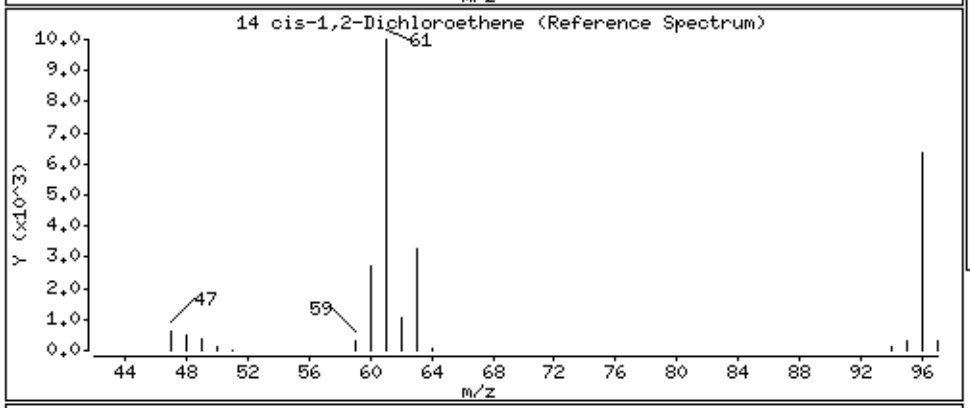
Concentration: 1.19876 ug

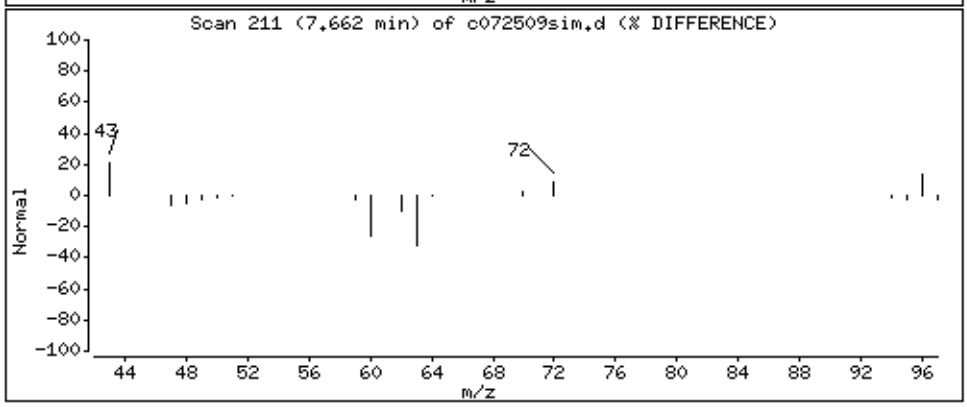












Data File: /chem/msdc.i/25Jul2017.b/c072509sim.d

Date : 25-JUL-2017 11:23

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-01A;

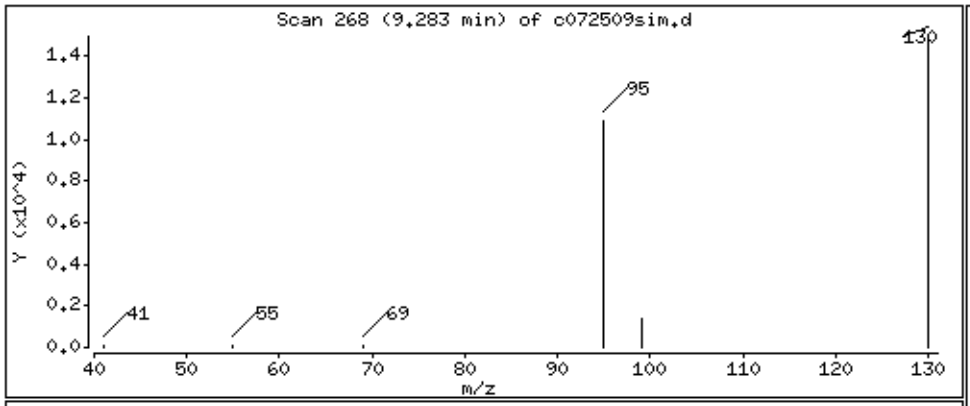
Operator: gm

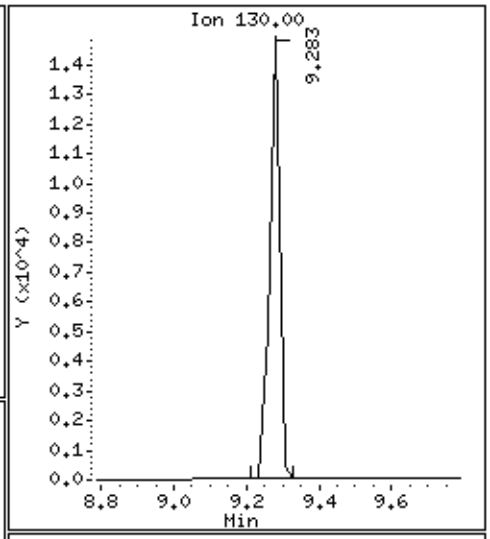
Column phase: DB-5.625

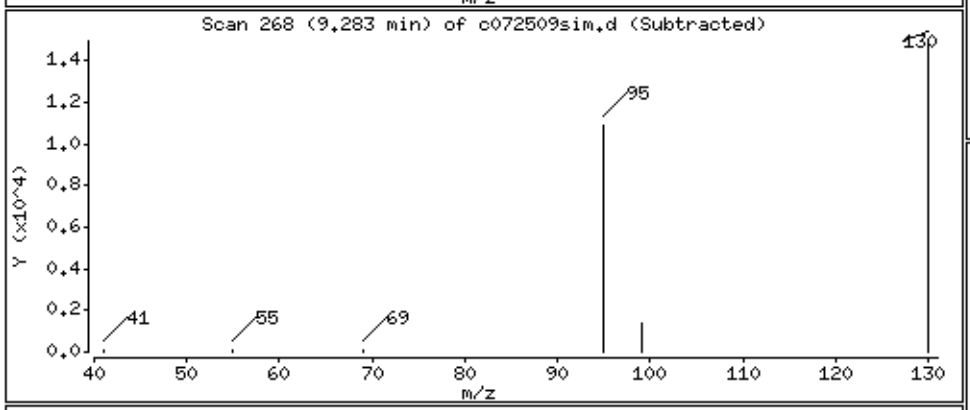
Column diameter: 0.25

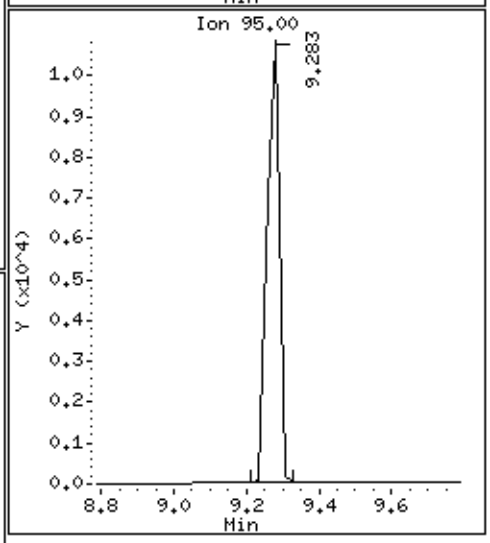
22 Trichloroethene

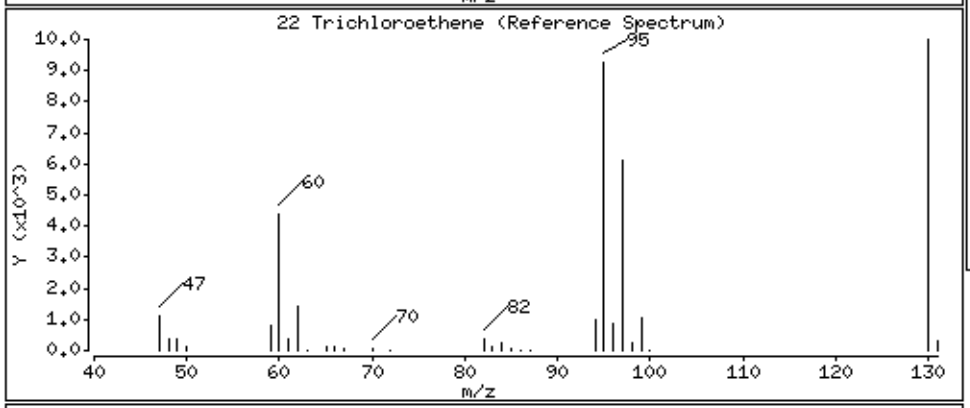
Concentration: 4.18260 ug

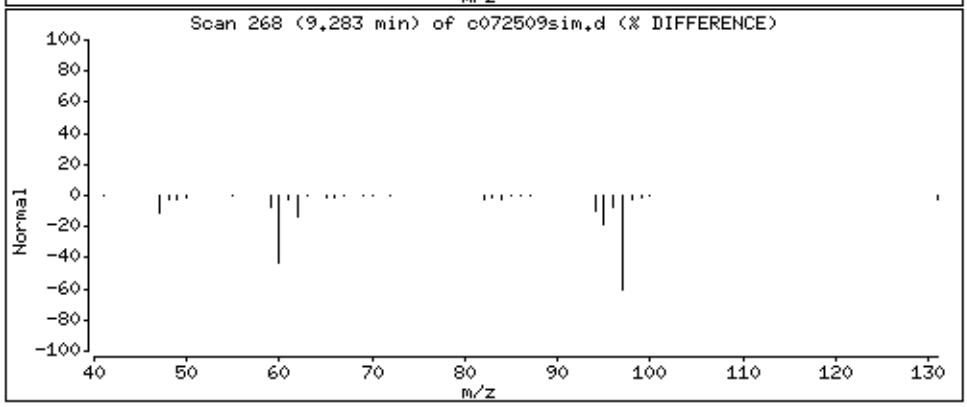












Data File: /chem/msdc.i/25Jul2017.b/c072509sim.d

Date : 25-JUL-2017 11:23

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-01A;

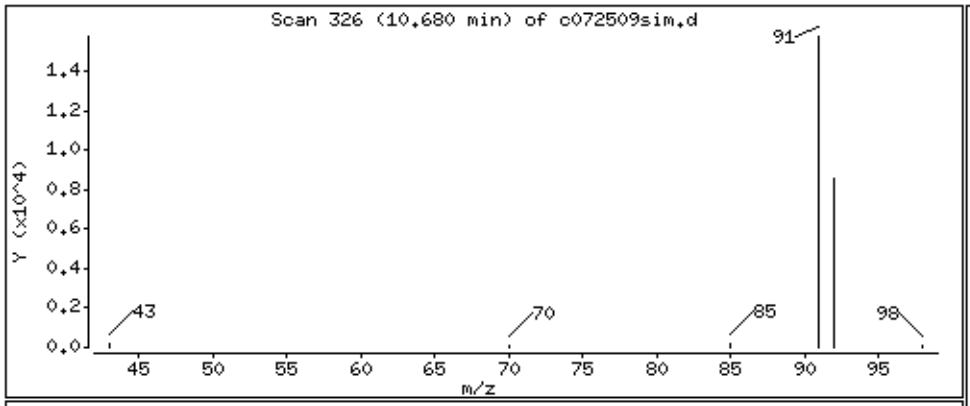
Operator: gm

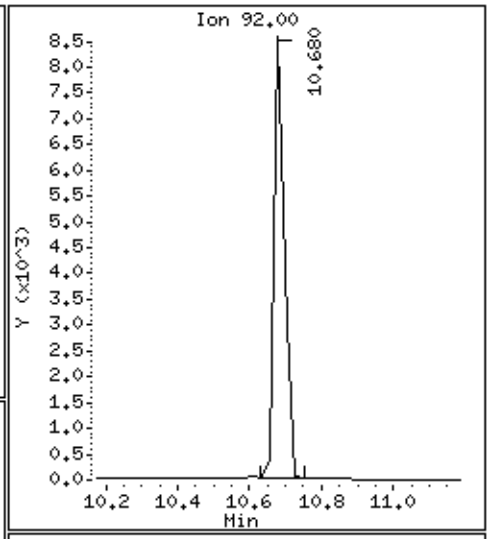
Column phase: DB-5.625

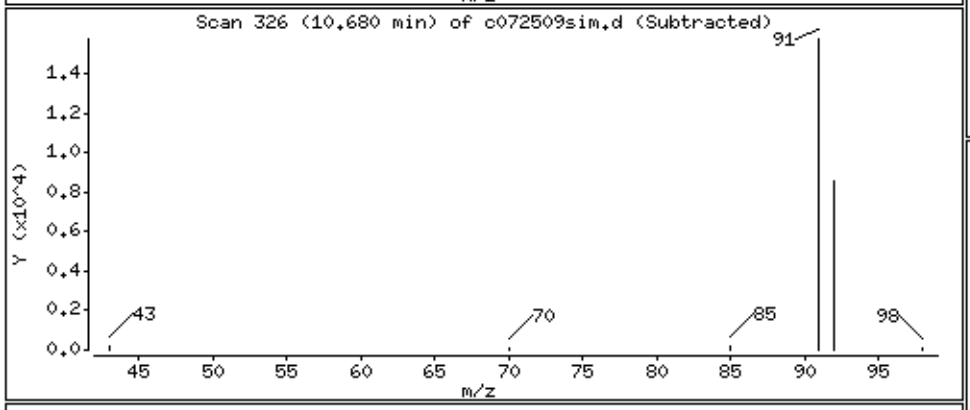
Column diameter: 0.25

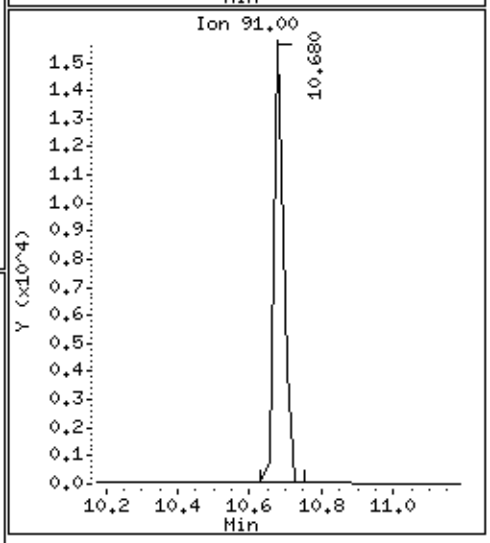
26 Toluene-CCC

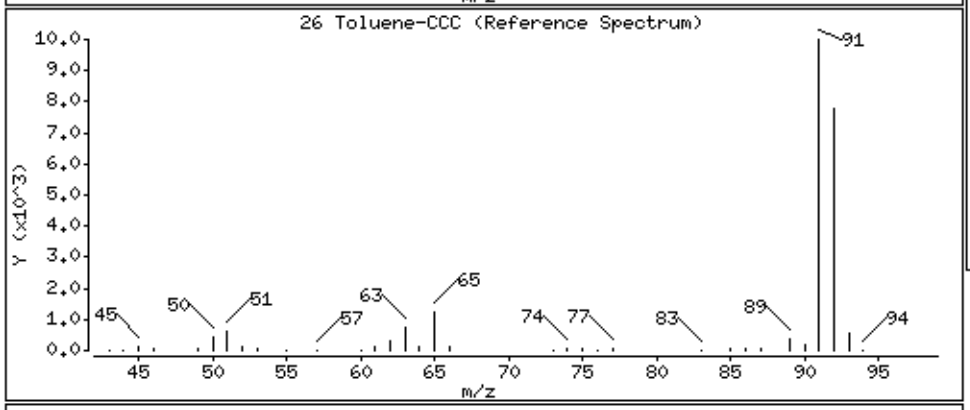
Concentration: 1.10791 ug

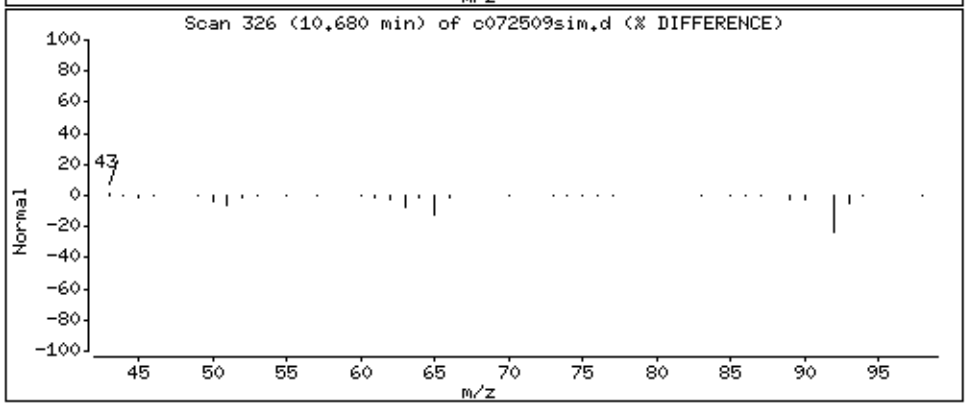












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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: R-B-4 (071317)

Lab ID#: 1707320-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	0.16	1.5 C	2.4 C
Trichloroethene	0.10	0.14	7.8	11
Toluene	0.10	0.14	2.6	3.5

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Client Sample ID: R-B-4 (071317)

Lab ID#: 1707320-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072510sim**	**Date of Collection: 7/20/17 5:43:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 11:47 AM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
1,1-Dichloroethene	0.40	0.53	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.16	1.5 C	2.4 C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C
Benzene	0.40	0.50	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C
Trichloroethene	0.10	0.14	7.8	11
Toluene	0.10	0.14	2.6	3.5
Vinyl Chloride	0.40	0.45	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072510sim.d
Lab Smp Id: 1707320-02A
Inj Date : 25-JUL-2017 11:47
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320-02A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 13:24 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	245692	5.26006	10.5201
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	261109	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	8383	0.75154	1.50308
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	55388	3.92143	7.84286
26 Toluene-CCC	92	10.680	10.680	(0.976)	39714	1.27946	2.55891
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 03-Aug-2017 10:49

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072510sim.d
Lab Smp Id: 1707320-02A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	261109	-6.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 03-Aug-2017 10:49

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320-02A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.5201	105.20	70-130

Data File: /chem/msdc.i/25Jul2017.b/c072510sim.d

Date : 25-JUL-2017 11:47

Client ID:

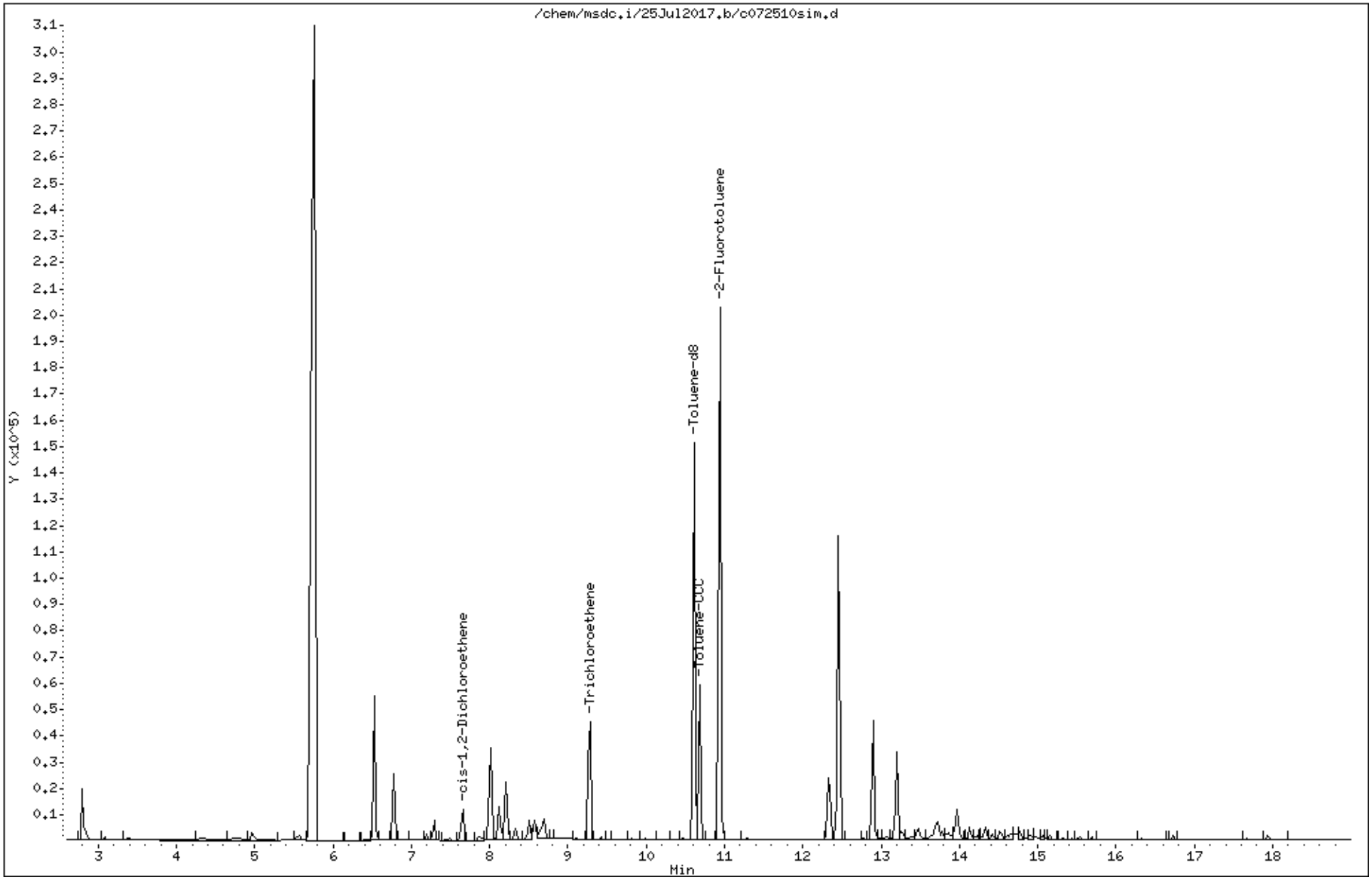
Instrument: msdc.i

Sample Info: ;1707320-02A;

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/25Jul2017.b/c072510sim.d

Date : 25-JUL-2017 11:47

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-02A;

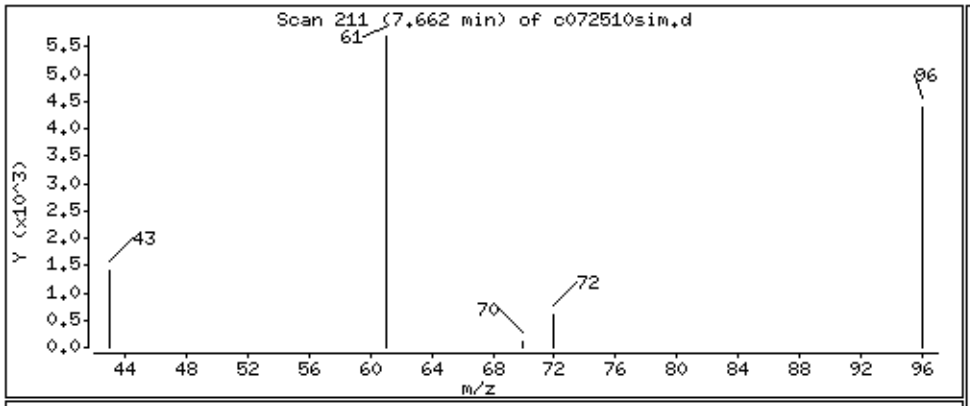
Operator: gm

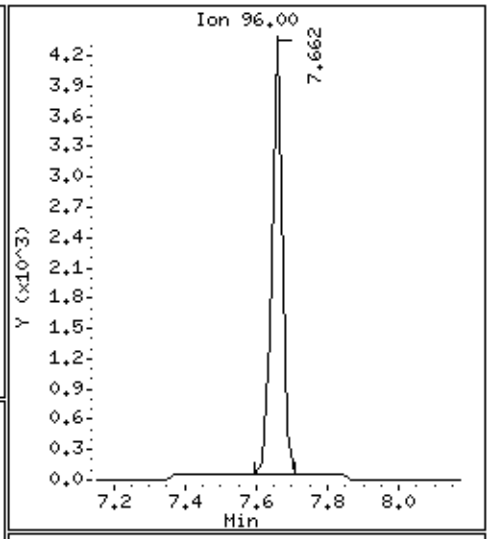
Column phase: DB-5.625

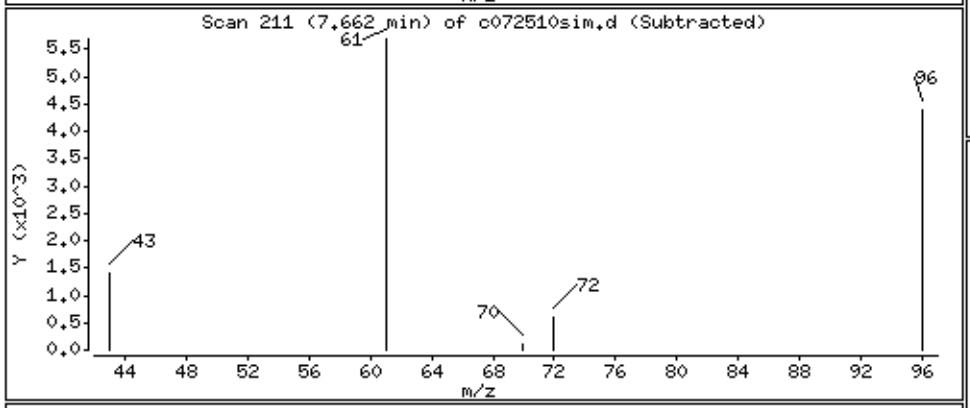
Column diameter: 0.25

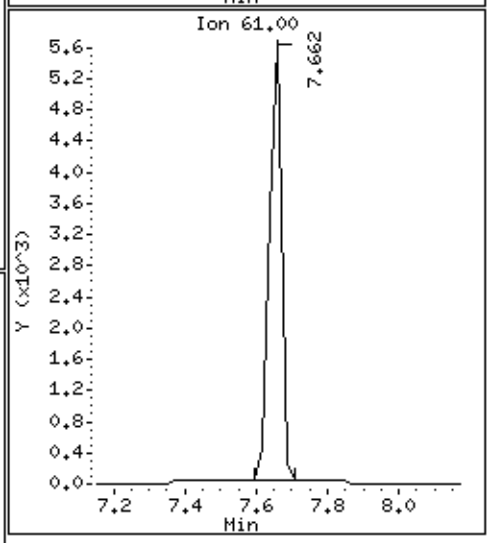
14 cis-1,2-Dichloroethene

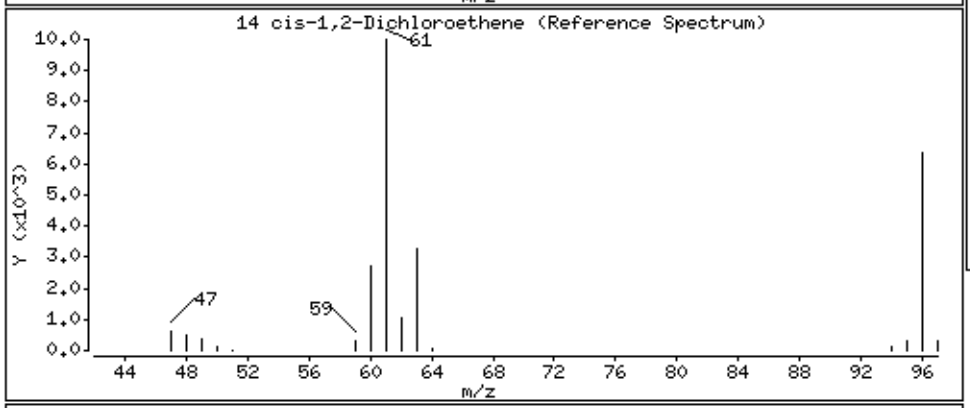
Concentration: 1.50308 ug

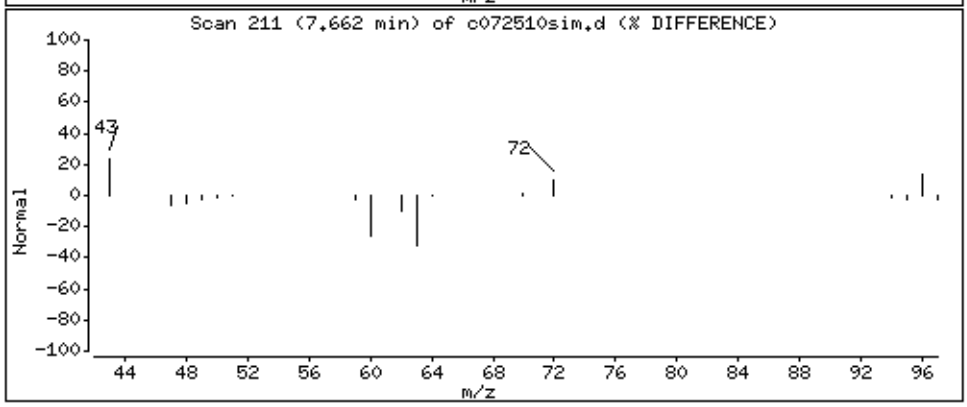












Data File: /chem/msdc.i/25Jul2017.b/c072510sim.d

Date : 25-JUL-2017 11:47

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-02A;

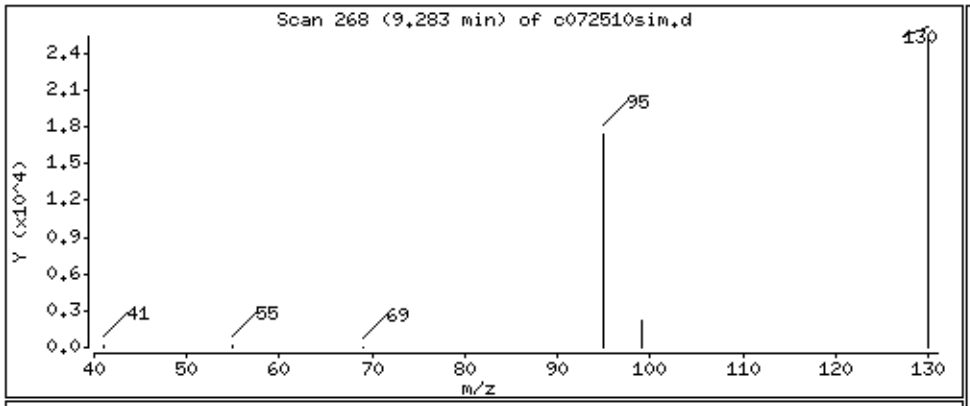
Operator: gm

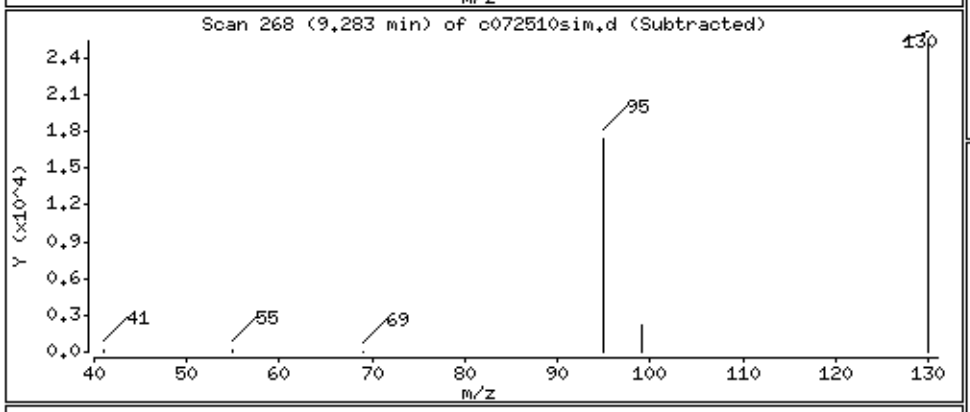
Column phase: DB-5.625

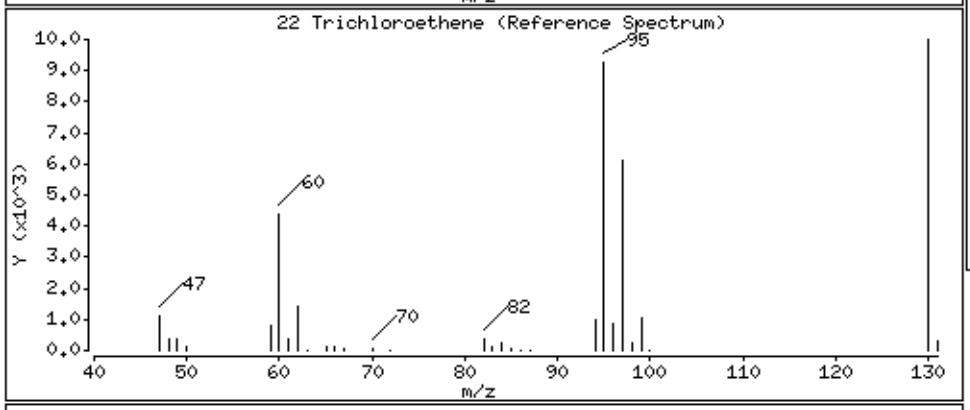
Column diameter: 0.25

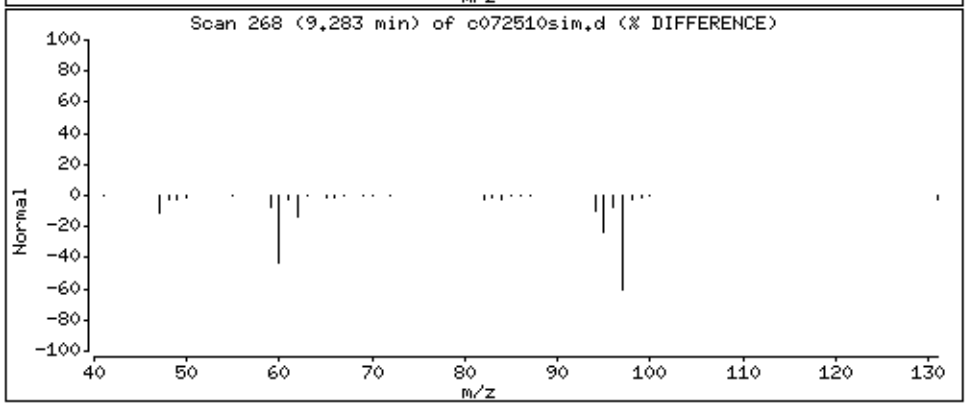
22 Trichloroethene

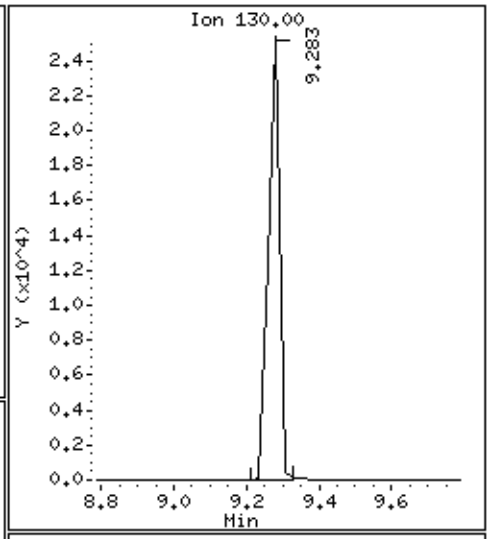
Concentration: 7.84286 ug

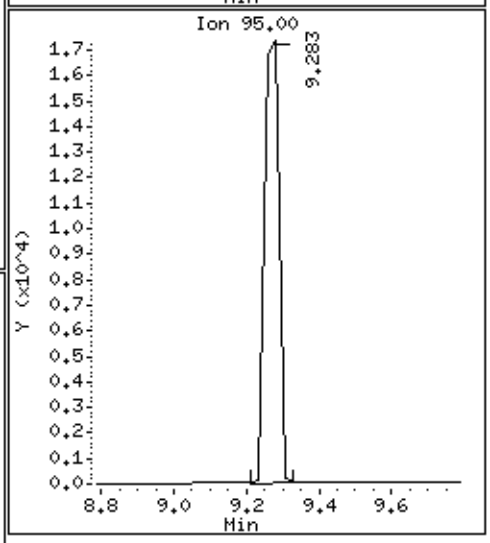












Data File: /chem/msdc.i/25Jul2017.b/c072510sim.d

Date : 25-JUL-2017 11:47

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-02A;

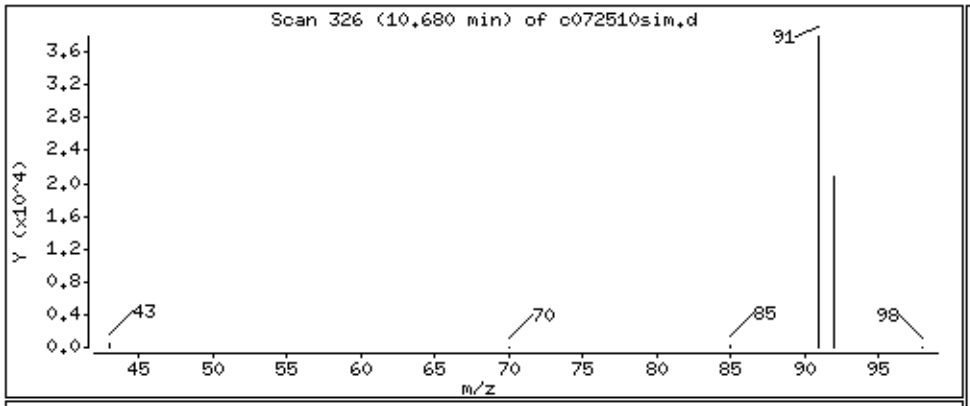
Operator: gm

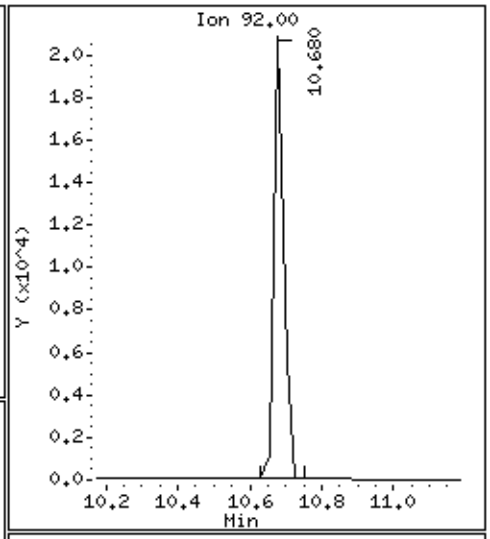
Column phase: DB-5.625

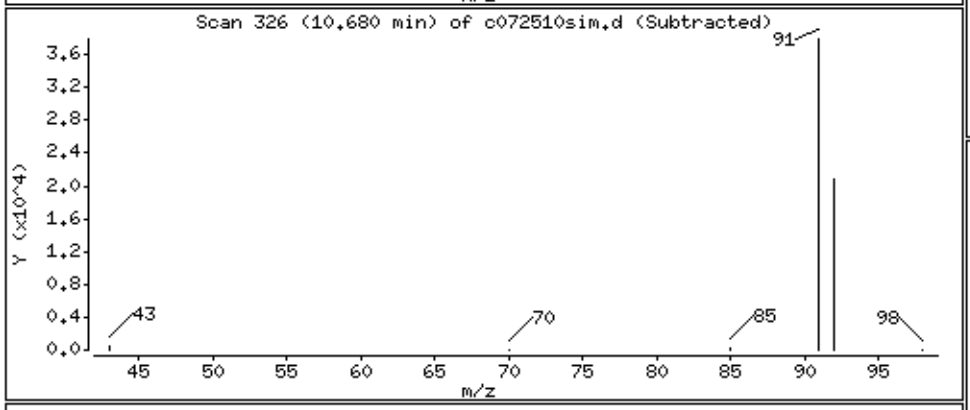
Column diameter: 0.25

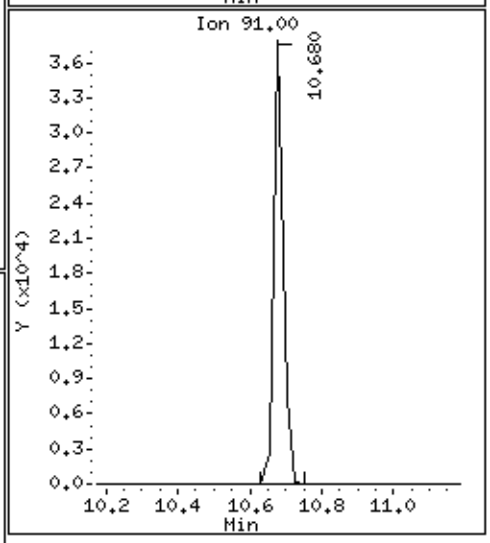
26 Toluene-CCC

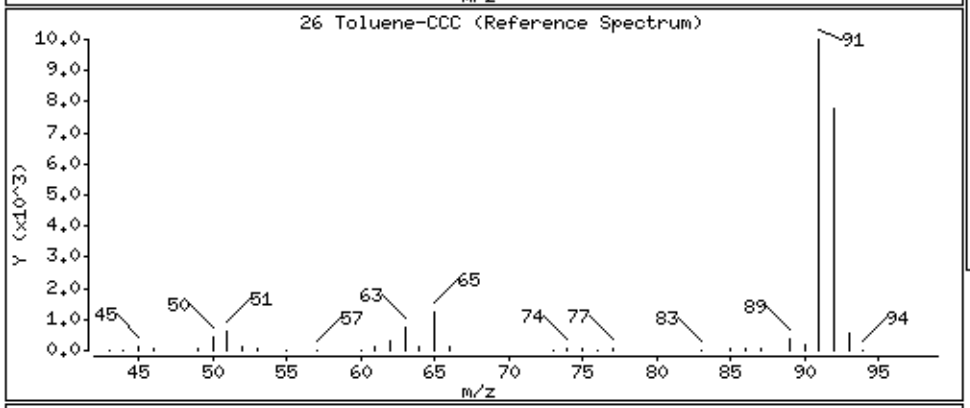
Concentration: 2.55891 ug

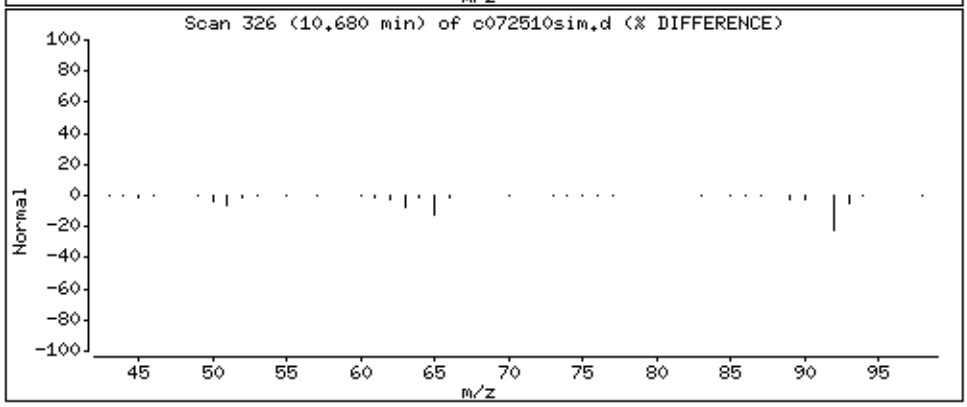












Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: Dup-2-BC (071317)

Lab ID#: 1707320-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.10	0.16	1.4 C	2.2 C
Trichloroethene	0.10	0.14	7.4	11
Toluene	0.10	0.14	2.4	3.2

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Client Sample ID: Dup-2-BC (071317)

Lab ID#: 1707320-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072511sim**	**Date of Collection: 7/20/17 5:43:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 12:12 PM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
1,1-Dichloroethene	0.40	0.53	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.16	1.4 C	2.2 C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C
Benzene	0.40	0.50	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C
Trichloroethene	0.10	0.14	7.4	11
Toluene	0.10	0.14	2.4	3.2
Vinyl Chloride	0.40	0.45	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072511sim.d
Lab Smp Id: 1707320-03A
Inj Date : 25-JUL-2017 12:12
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320-03A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 13:24 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	266228	5.19197	10.3839
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	286644	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	8281	0.67626	1.35252
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	9.283	9.283	(0.848)	57238	3.69141	7.38282
26 Toluene-CCC	92	10.680	10.680	(0.976)	40813	1.19773	2.39546
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 03-Aug-2017 10:49

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072511sim.d
Lab Smp Id: 1707320-03A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	286644	2.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 03-Aug-2017 10:49

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320-03A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.3839	103.84	70-130

Data File: /chem/msdc.i/25Jul2017.b/c072511sim.d

Date : 25-JUL-2017 12:12

Client ID:

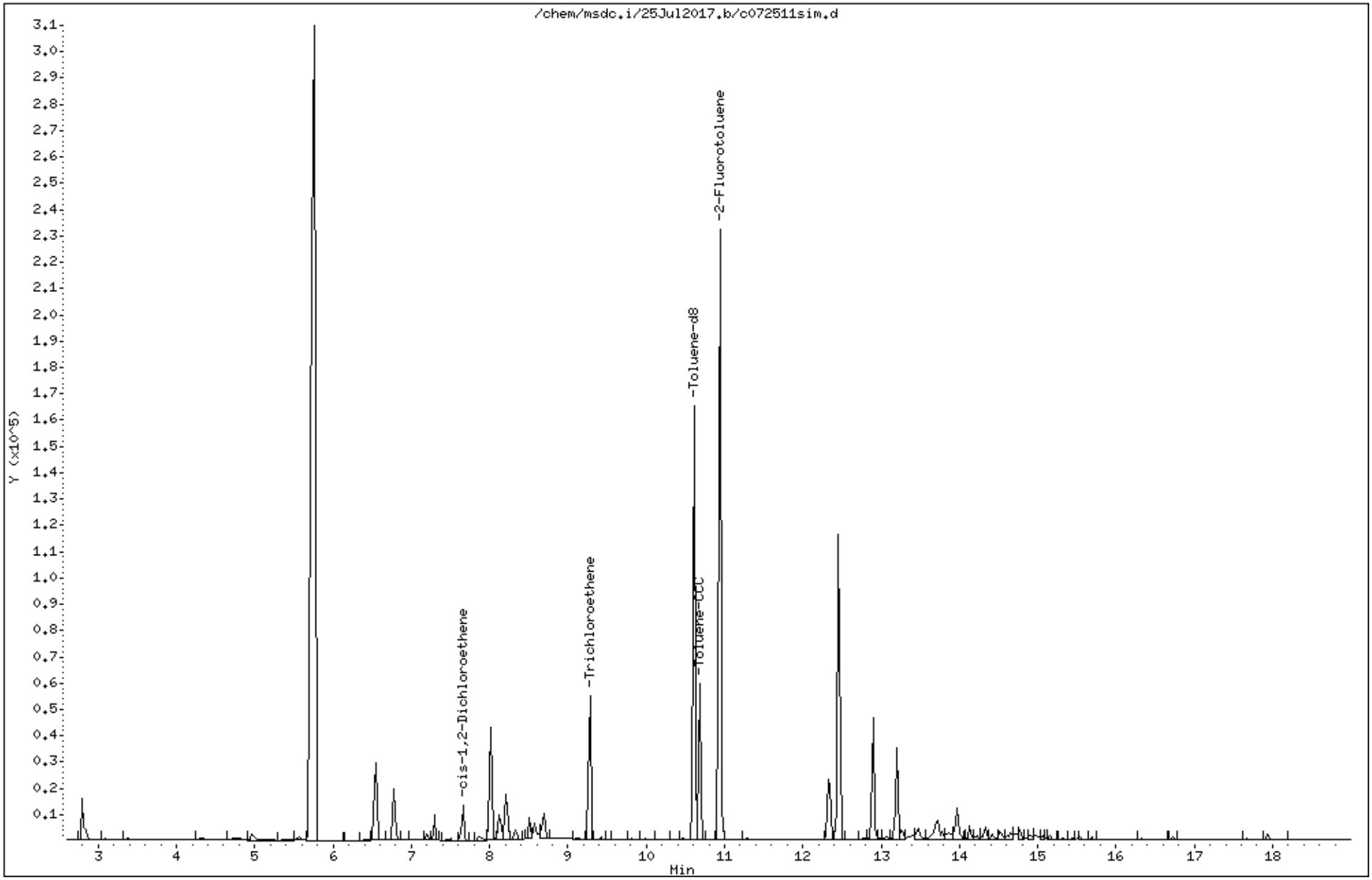
Instrument: msdc.i

Sample Info: :1707320-03A:

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/25Jul2017.b/c072511sim.d

Date : 25-JUL-2017 12:12

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-03A;

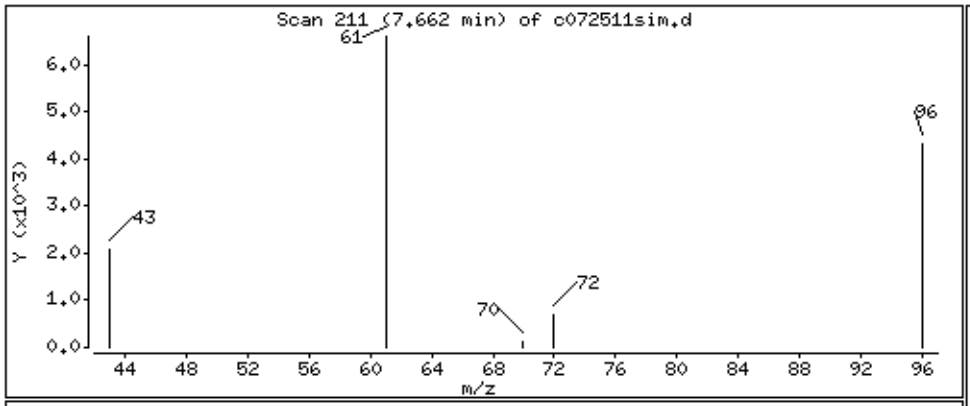
Operator: gm

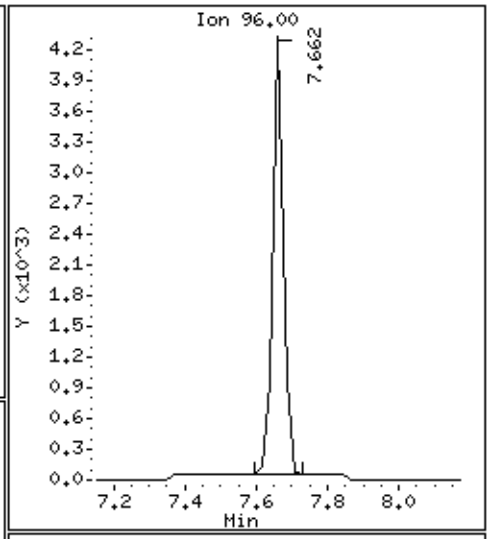
Column phase: DB-5.625

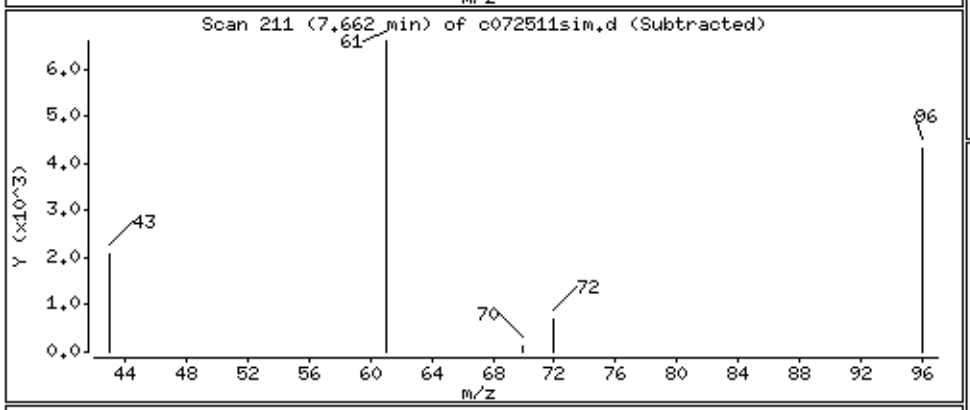
Column diameter: 0.25

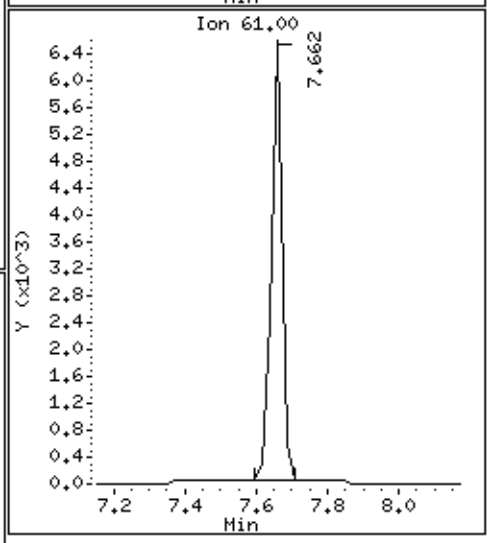
14 cis-1,2-Dichloroethene

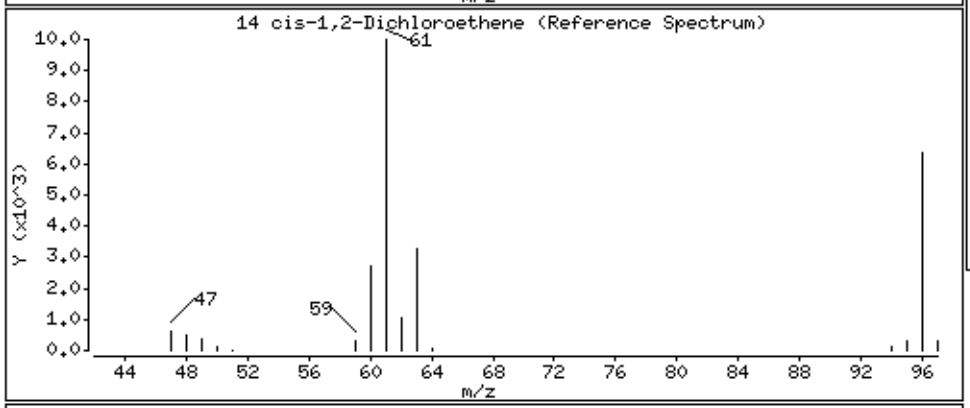
Concentration: 1.35252 ug

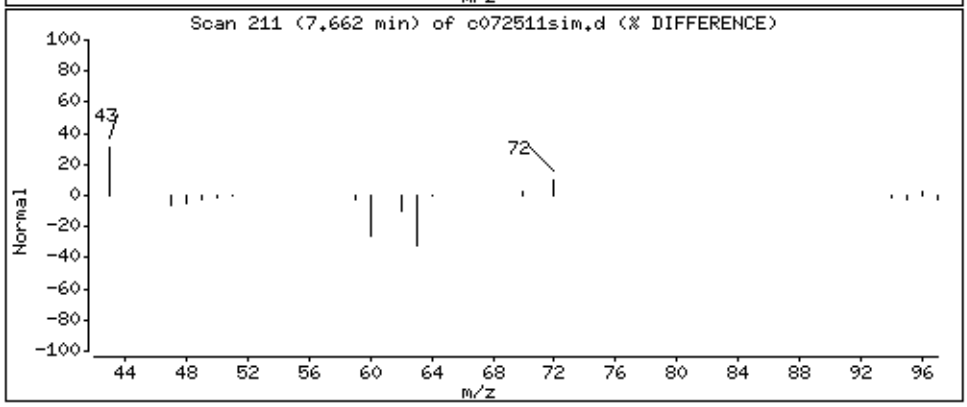












Data File: /chem/msdc.i/25Jul2017.b/c072511sim.d

Date : 25-JUL-2017 12:12

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-03A;

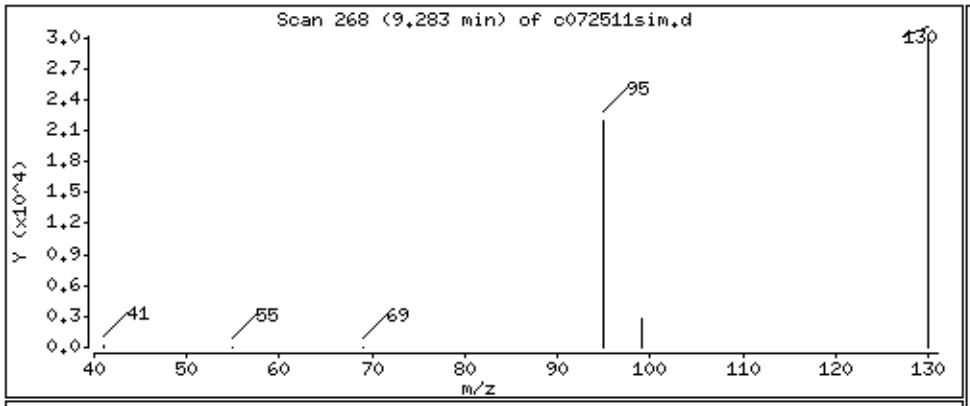
Operator: gm

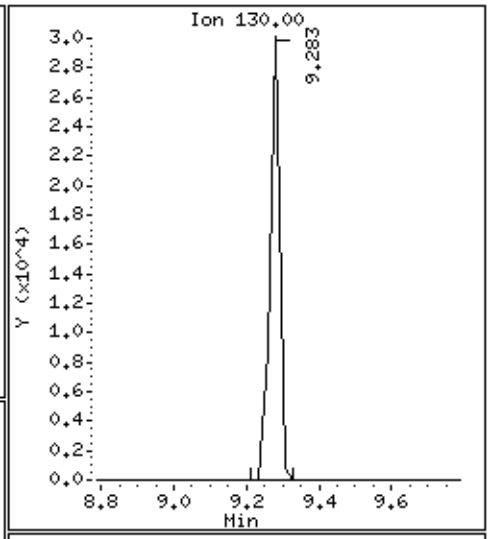
Column phase: DB-5.625

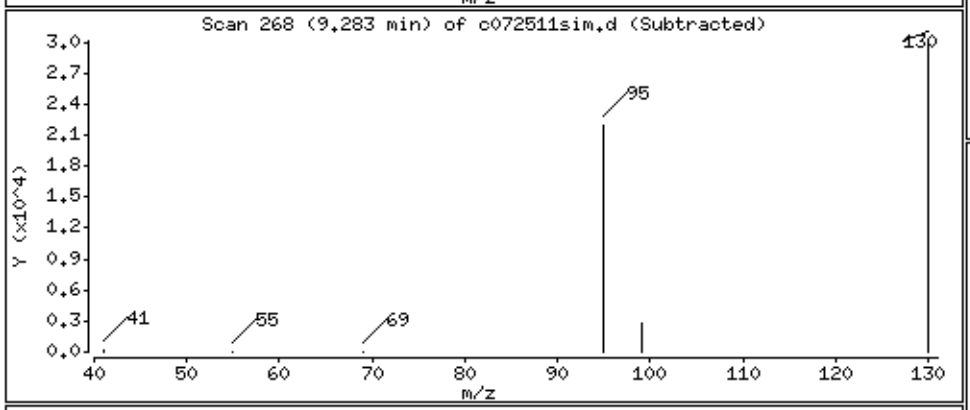
Column diameter: 0.25

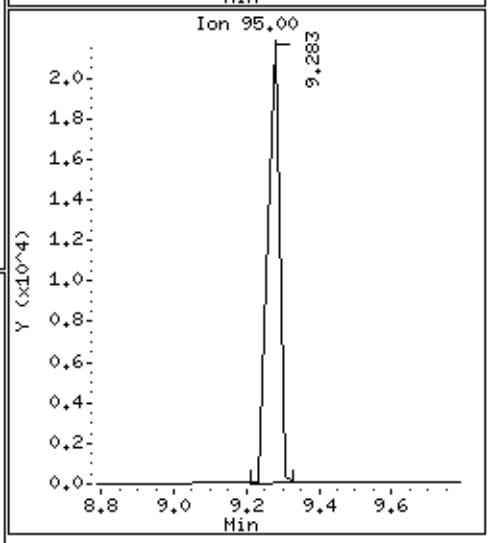
22 Trichloroethene

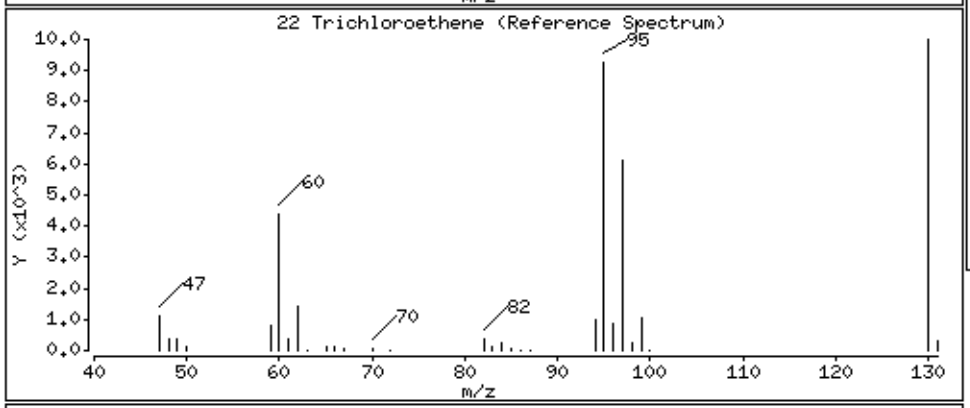
Concentration: 7.38282 ug

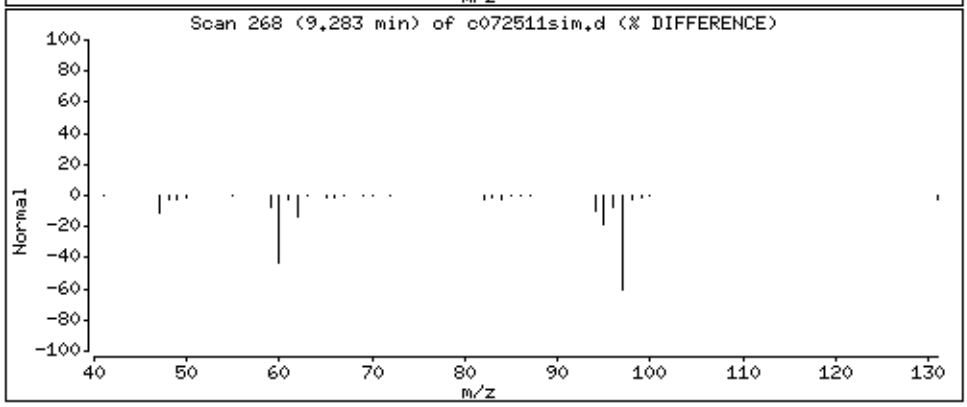












Data File: /chem/msdc.i/25Jul2017.b/c072511sim.d

Date : 25-JUL-2017 12:12

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-03A;

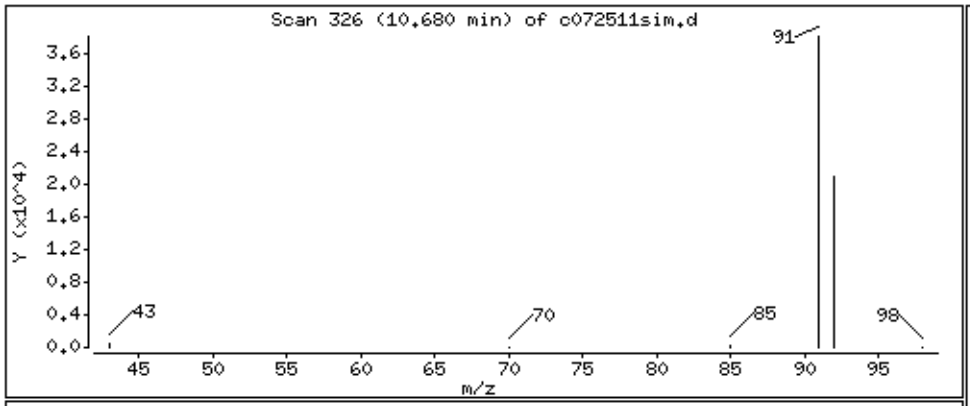
Operator: gm

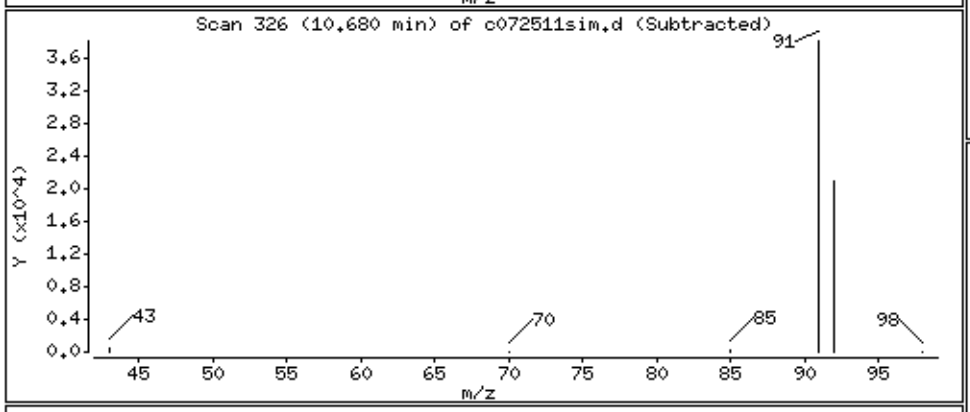
Column phase: DB-5.625

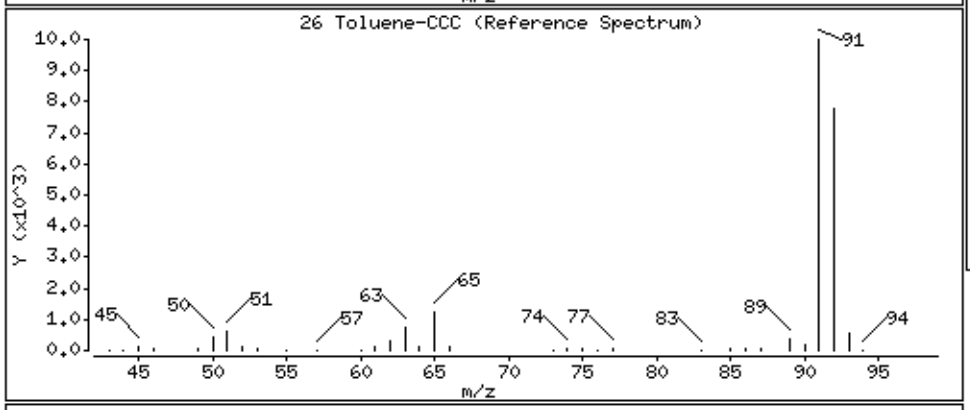
Column diameter: 0.25

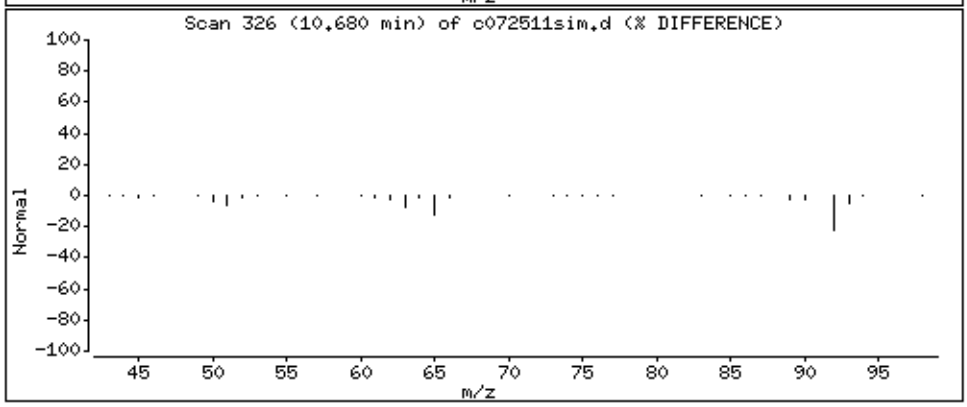
26 Toluene-CCC

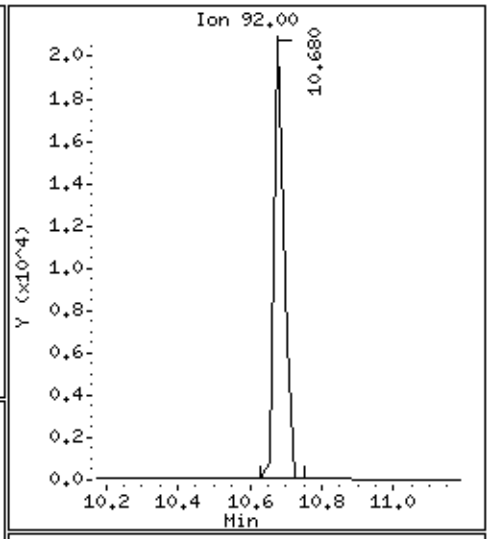
Concentration: 2.39546 ug

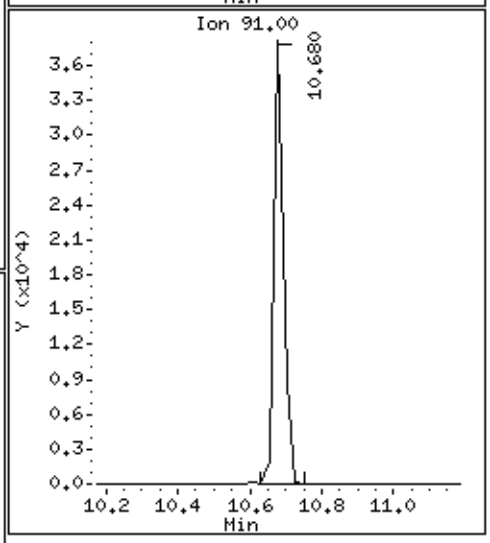












Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: AMB-7D (071317)

Lab ID#: 1707320-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Toluene	0.10	0.13	0.42	0.57

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Client Sample ID: AMB-7D (071317)

Lab ID#: 1707320-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072512sim**	**Date of Collection: 7/20/17 6:00:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 12:38 PM**
		Date of Extraction: 7/25/17

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
1,1-Dichloroethene	0.40	0.52	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C
Benzene	0.40	0.50	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C
Trichloroethene	0.10	0.14	Not Detected	Not Detected
Toluene	0.10	0.13	0.42	0.57
Vinyl Chloride	0.40	0.44	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072512sim.d
Lab Smp Id: 1707320-04A
Inj Date : 25-JUL-2017 12:38
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320-04A;
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 13:24 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Arc20635.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	264406	5.12373	10.2475
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	288474	5.00000	
2 Vinyl Chloride	62	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	Compound Not Detected.					
19 Benzene	78	Compound Not Detected.					
20 1,2-Dichloroethane	62	Compound Not Detected.					
22 Trichloroethene	130	Compound Not Detected.					
26 Toluene-CCC	92	10.680	10.680	(0.976)	7298	0.21281	0.425629
28 1,1,2-Trichloroethane	97	Compound Not Detected.					
29 Tetrachloroethene	164	Compound Not Detected.					

Report Date: 03-Aug-2017 10:50

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072512sim.d
Lab Smp Id: 1707320-04A
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32

Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	288474	2.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 03-Aug-2017 10:50

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320-04A
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: Arc20635.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.2475	102.47	70-130

Data File: /chem/msdc.i/25Jul2017.b/c072512sim.d

Page 1

Date : 25-JUL-2017 12:38

Client ID:

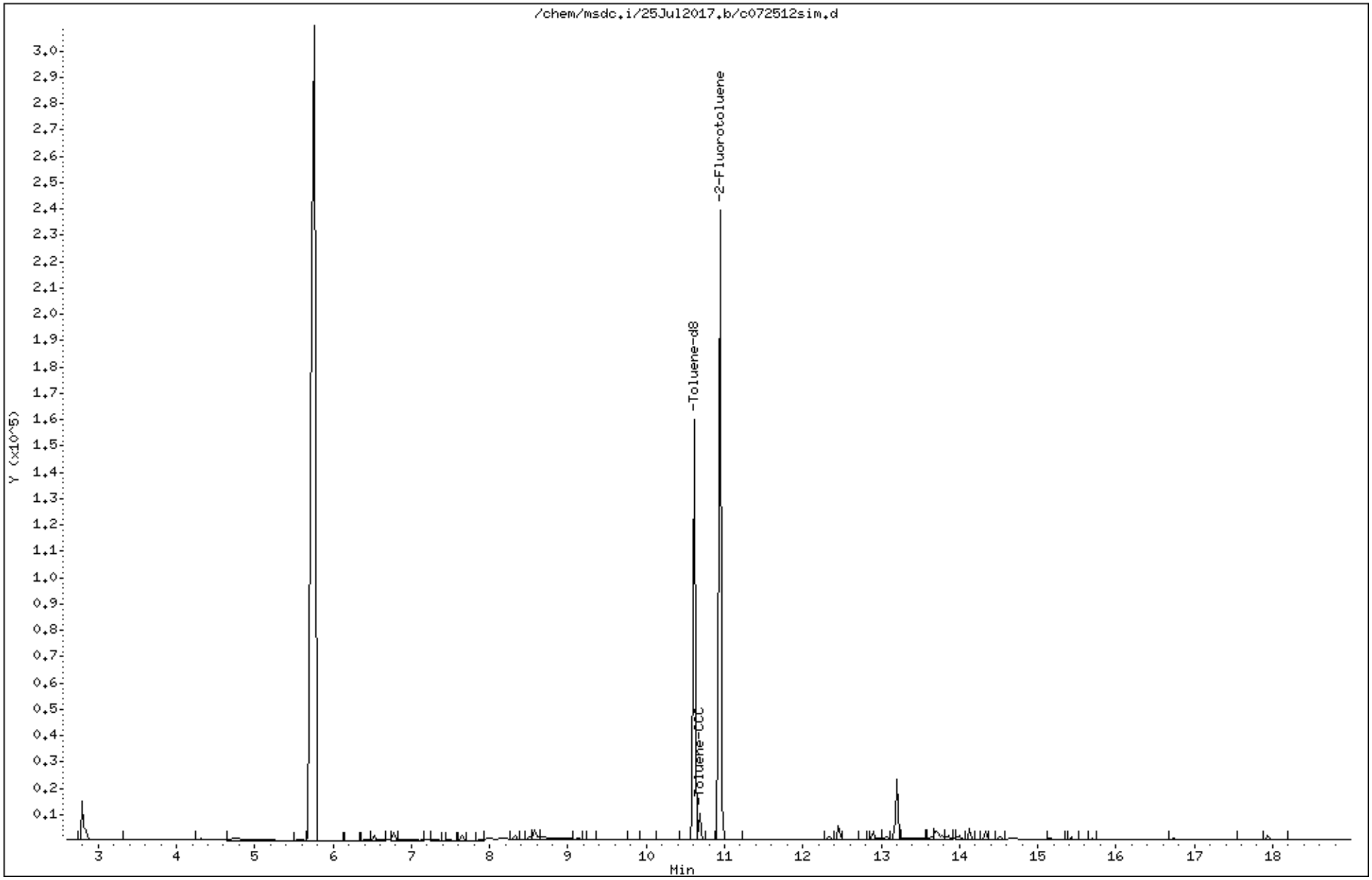
Instrument: msdc.i

Sample Info: :1707320-04A:

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/25Jul2017.b/c072512sim.d

Date : 25-JUL-2017 12:38

Client ID:

Instrument: msdc.i

Sample Info: ;1707320-04A;

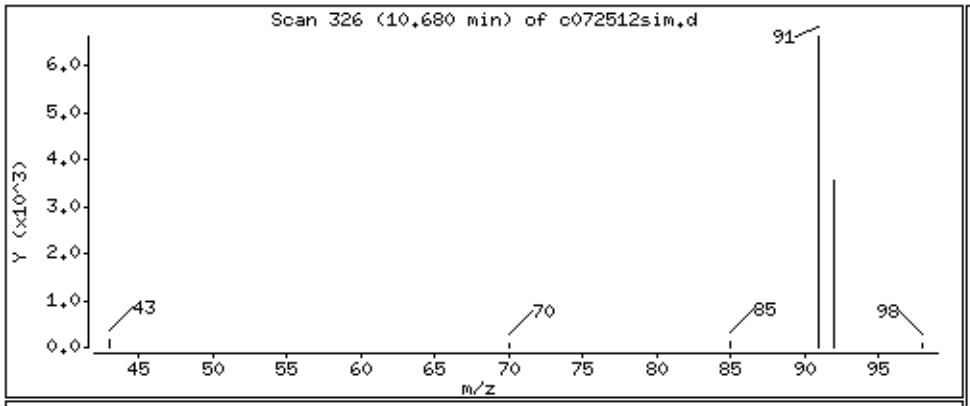
Operator: gm

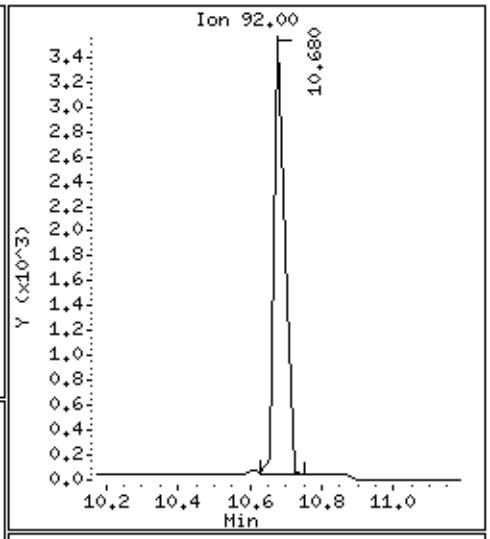
Column phase: DB-5.625

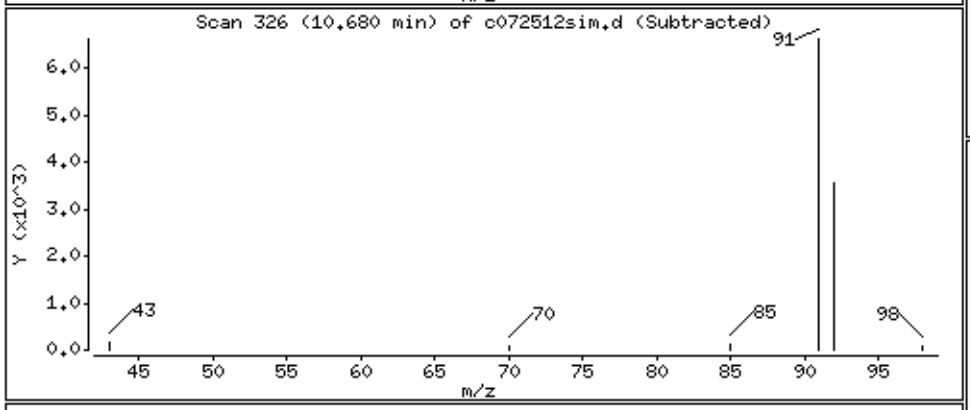
Column diameter: 0.25

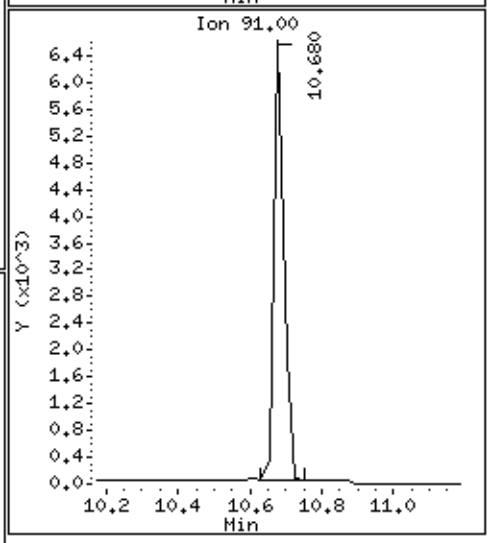
26 Toluene-CCC

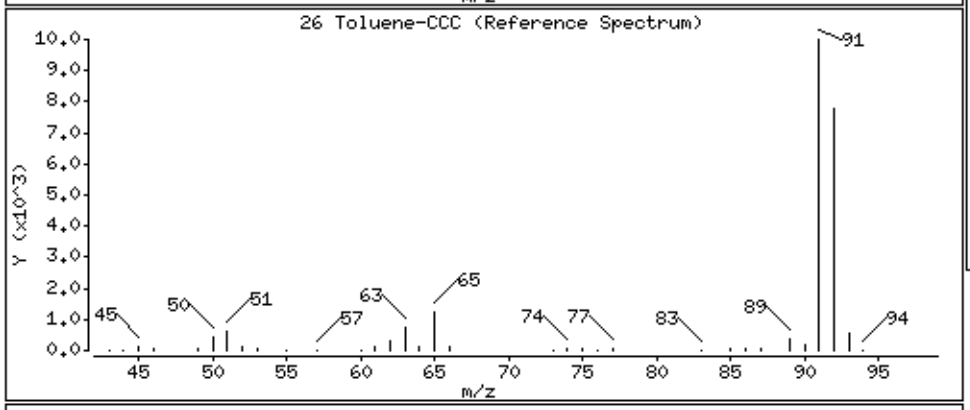
Concentration: 0.425629 ug

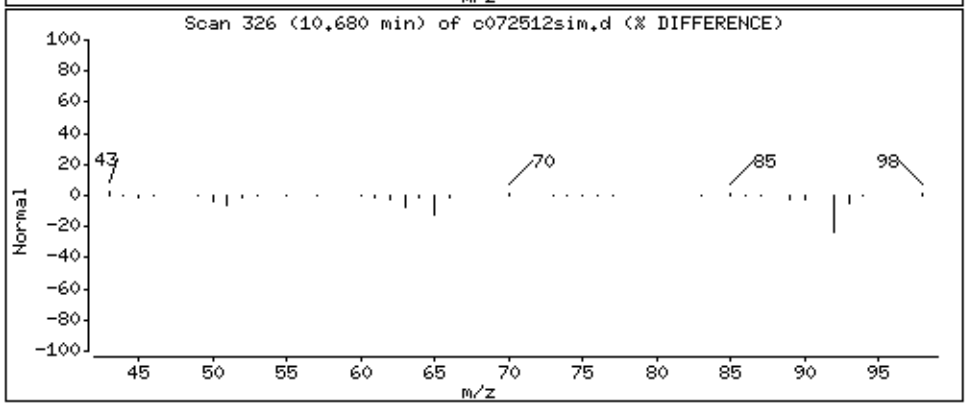












QC Results and Raw Data

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1707320-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072508sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 10:50 AM**	
		Date of Extraction: 7/25/17	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
1,1-Dichloroethene	0.40	0.52	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	0.10	0.16	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	0.20	0.33	Not Detected C	Not Detected C
Benzene	0.40	0.50	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
1,1,2-Trichloroethane	0.10	0.15	Not Detected C	Not Detected C
Trichloroethene	0.10	0.14	Not Detected	Not Detected
Toluene	0.10	0.13	Not Detected	Not Detected
Vinyl Chloride	0.40	0.44	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072508sim.d
Lab Smp Id: 1707320/328 Client Smp ID: LAB BLANK
Inj Date : 25-JUL-2017 10:50
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320/328;LAB BLANK
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 09:55 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: allRL.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
1 Chloromethane	50	Compound Not Detected.					
2 Vinyl Chloride	62	Compound Not Detected.					
3 Ethanol	45	Compound Not Detected.					
4 1,1-Dichloroethene-CCC	96	Compound Not Detected.					
5 Acetone	58	Compound Not Detected.					
7 MTBE	73	Compound Not Detected.					
8 trans-1,2-Dichloroethene	96	Compound Not Detected.					
9 Hexane	57	Compound Not Detected.					
10 Halothane	117	Compound Not Detected.					
11 1,1-Dichloroethane-SPCC	63	Compound Not Detected.					
12 Ethyl Acetate	70	Compound Not Detected.					
13 2-Butanone	72	Compound Not Detected.					
14 cis-1,2-Dichloroethene	96	Compound Not Detected.					
15 Chloroform-CCC	83	Compound Not Detected.					
16 Cyclohexane	84	Compound Not Detected.					
17 1,1,1-Trichloroethane	97	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	18 Carbon Tetrachloride	117	Compound Not Detected.					
	19 Benzene	78	Compound Not Detected.					
	20 1,2-Dichloroethane	62	Compound Not Detected.					
	21 Heptane	71	Compound Not Detected.					
	22 Trichloroethene	130	Compound Not Detected.					
	23 Methyl Methacrylate	69	Compound Not Detected.					
	24 4-Methyl-2-pentanone	85	Compound Not Detected.					
$	25 Toluene-d8	98	10.608	10.608	(0.969)	268900	5.16039	10.3208
	26 Toluene-CCC	92	Compound Not Detected.					
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	291293	5.00000	
	28 1,1,2-Trichloroethane	97	Compound Not Detected.					
	29 Tetrachloroethene	164	Compound Not Detected.					
	30 Chlorobenzene	112	Compound Not Detected.					
	31 Ethylbenzene-CCC	106	Compound Not Detected.					
	33 m,p-Xylene	106	Compound Not Detected.					
	34 o-Xylene	106	Compound Not Detected.					
	35 Styrene	104	Compound Not Detected.					
	36 a-Pinene	93	Compound Not Detected.					
	37 1,1,2,2-Tetrachloroethane-SPC	83	Compound Not Detected.					
	38 Propylbenzene	91	Compound Not Detected.					
	40 1,3,5-Trimethylbenzene	105	Compound Not Detected.					
	41 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	42 R-(+)-Limonene	68	Compound Not Detected.					
	43 1,3-Dichlorobenzene	146	Compound Not Detected.					
	44 1,4-Dichlorobenzene	146	Compound Not Detected.					
	45 1,2-Dichlorobenzene	146	Compound Not Detected.					
	46 1,4-Dithiane	120	Compound Not Detected.					
	47 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
	48 Naphthalene	128	Compound Not Detected.					
	49 1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Report Date: 25-Jul-2017 11:17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072508sim.d
Lab Smp Id: 1707320/328
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32
Client Smp ID: LAB BLANK
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	291293	4.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 25-Jul-2017 11:17

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320/328
Client Smp ID: LAB BLANK
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: LCS-CM.spk
Quant Type: ISTD
Sublist File: allRL.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.3208	103.21	0-130

Data File: /chem/msdc.i/25Jul2017.b/c072508sim.d

Page 1

Date : 25-JUL-2017 10:50

Client ID: LAB BLANK

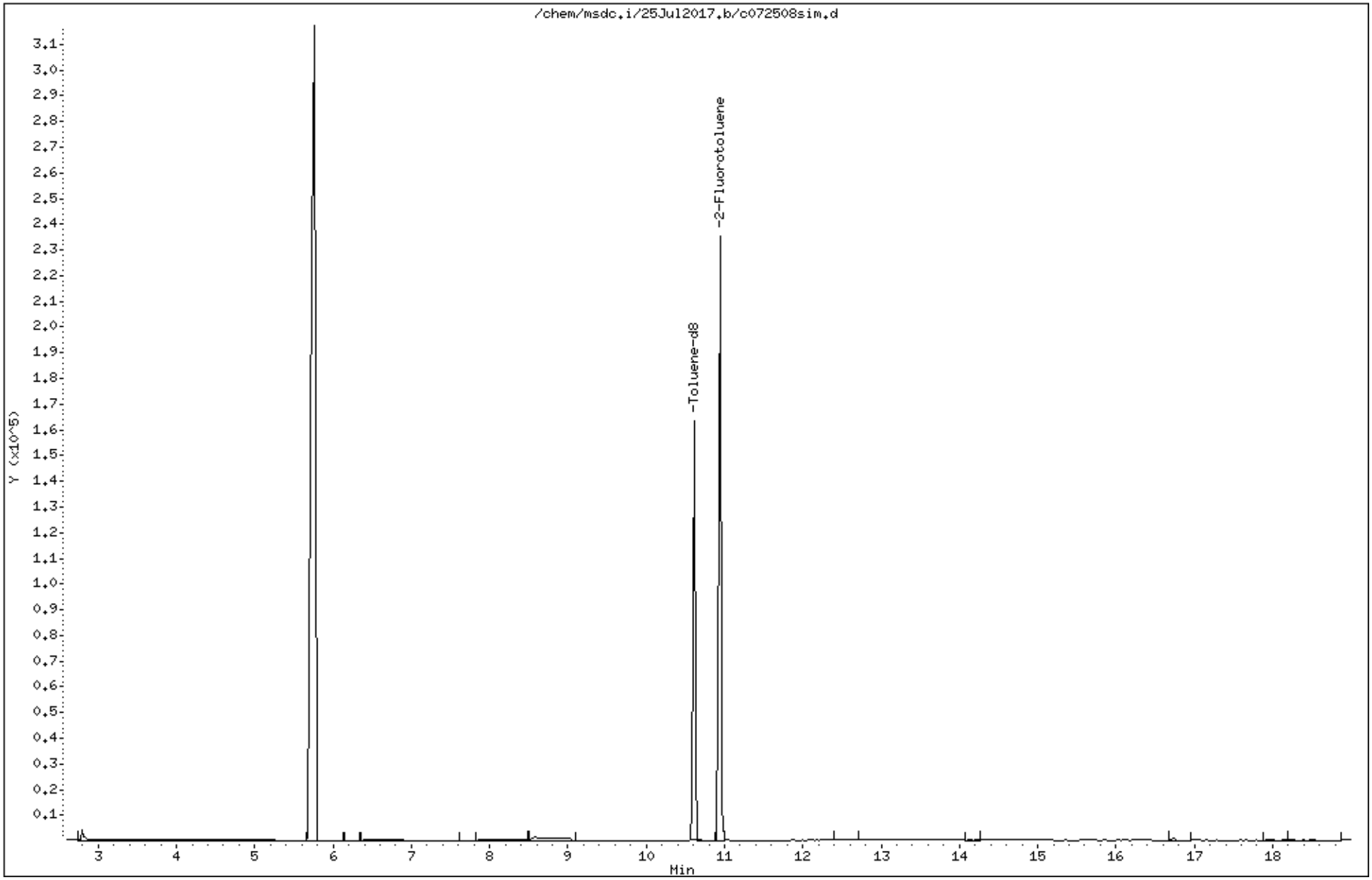
Instrument: msdc.i

Sample Info: ;1707320/328;LAB BLANK

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



LEVEL-IV VALIDATABLE

VOCS BY PASSIVE SAMPLER - GC/MS

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1707320

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY									
		Toluene-d8	#		#		#		#	TOTAL OUT
01	R-B-6 (071317)	105								0
02	R-B-4 (071317)	105								0
03	Dup-2-BC (071317)	104								0
04	AMB-7D (071317)	102								0
05	Lab Blank	103								0
06	LCS	104								0
07	LCSD	104								0
08										0
09										0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

Toluene-d8 70 - 130

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: c072507sim.d & c072506sim.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 7/25/17 & 7/25/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
79-00-5	1,1,2-Trichloroethane	95		95		0	
75-35-4	1,1-Dichloroethene	90		96		6.4	
107-06-2	1,2-Dichloroethane	88		89		1.1	
71-43-2	Benzene	93		96		3.2	
156-59-2	cis-1,2-Dichloroethene	91		94		3.2	
127-18-4	Tetrachloroethene	97		97		0	
108-88-3	Toluene	95		95		0	
156-60-5	trans-1,2-Dichloroethene	86		89		3.4	
79-01-6	Trichloroethene	97		98		1.0	
75-01-4	Vinyl Chloride	85		88		3.5	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Calibration File Names:
Level 1: /chem/msdc.i/21Jun2017.b/c062103sim.d
Level 2: /chem/msdc.i/21Jun2017.b/c062104sim.d
Level 3: /chem/msdc.i/21Jun2017.b/c062105sim.d
Level 4: /chem/msdc.i/21Jun2017.b/c062106sim.d
Level 5: /chem/msdc.i/21Jun2017.b/c062107sim.d
Level 6: /chem/msdc.i/21Jun2017.b/c062108sim.d
Level 7: /chem/msdc.i/21Jun2017.b/c062109sim.d
Level 8: /chem/msdc.i/21Jun2017.b/c062110sim.d
Level 9: /chem/msdc.i/21Jun2017.b/c062111sim.d
Level 10: /chem/msdc.i/21Jun2017.b/c062112sim.d
Level 11: /chem/msdc.i/21Jun2017.b/c062113sim.d

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
1 Chloromethane	+++++	+++++	0.02863	0.05216	0.05098	0.05616		
	0.04989	0.02871	+++++	+++++	+++++		0.04442	27.874
2 Vinyl Chloride	+++++	+++++	0.12497	0.23249	0.23184	0.24842		
	0.21245	0.13443	0.15198	0.18345	0.16582		0.18732	24.463
3 Ethanol	+++++	+++++	0.04800	0.07602	0.08304	0.08676		
	0.07280	0.05065	0.04950	0.06094	0.05591		0.06485	23.228
4 1,1-Dichloroethene-CCC	+++++	+++++	0.12050	0.17802	0.20056	0.19822		
	0.17039	0.12873	0.13028	0.14707	0.14032		0.15712	19.410
5 Acetone	+++++	+++++	0.09881	0.14436	0.15589	0.16110		
	0.13449	0.09603	0.09766	0.11567	0.10877		0.12364	20.873
7 MTBE	+++++	0.54987	0.49242	0.57493	0.68651	0.66038		
	0.55779	0.49624	0.46107	0.48933	0.48861		0.54571	14.047

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
8 trans-1,2-Dichloroethene	+++++	+++++	0.18836	0.20132	0.24053	0.23132		
	0.20074	0.16355	0.16447	0.17039	0.17474		0.19283	14.673
9 Hexane	+++++	0.58186	0.53495	0.48014	0.61245	0.59193		
	0.53146	0.42191	0.46239	0.41308	0.44432		0.50745	14.394
10 Halothane	+++++	0.14031	0.10891	0.15360	0.17659	0.17529		
	0.14637	0.11132	0.11386	0.13085	0.12407		0.13812	18.035
11 1,1-Dichloroethane-SPCC	+++++	0.45668	0.35156	0.42197	0.49977	0.47894		
	0.39918	0.34459	0.32656	0.35597	0.34206		0.39773	15.887
12 Ethyl Acetate	+++++	+++++	0.04999	0.05974	0.07349	0.07205		
	0.06100	0.05206	0.05085	0.05397	0.05231		0.05839	15.406
13 2-Butanone	+++++	0.14684	0.11123	0.13455	0.16284	0.15666		
	0.13007	0.11006	0.10650	0.11664	0.11165		0.12870	16.161
14 cis-1,2-Dichloroethene	+++++	0.22834	0.18935	0.22139	0.26939	0.25906		
	0.21733	0.18813	0.18231	0.19299	0.18768		0.21360	14.625
15 Chloroform-CCC	+++++	0.36383	0.31614	0.31627	0.36707	0.35472		
	0.30613	0.31042	0.26553	0.26633	0.26671		0.31331	12.542
16 Cyclohexane	+++++	0.36830	0.30919	0.32441	0.43183	0.37461		
	0.30817	0.29239	0.28288	0.29605	0.29216		0.32800	14.709
17 1,1,1-Trichloroethane	+++++	0.36624	0.32425	0.36297	0.46521	0.42414		
	0.35019	0.30571	0.31018	0.32396	0.31470		0.35476	14.889

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
18 Carbon Tetrachloride	+++++	0.36108	0.31399	0.33856	0.43269	0.39119		
	0.32270	0.29337	0.29526	0.30446	0.29883		0.33521	13.900
19 Benzene	+++++	+++++	+++++	0.84884	0.96284	0.90438		
	0.79706	0.82846	0.70634	0.68064	0.66350		0.79901	13.567
20 1,2-Dichloroethane	+++++	0.42057	0.34312	0.36750	0.45089	0.41637		
	0.34250	0.30694	0.30100	0.31874	0.31252		0.35802	15.004
21 Heptane	+++++	0.30571	0.29959	0.28640	0.36279	0.31757		
	0.26501	0.26370	0.25657	0.25316	0.24758		0.28581	12.683
22 Trichloroethene	+++++	0.28714	0.27062	0.26374	0.34847	0.30818		
	0.25700	0.25747	0.23918	0.23566	0.23722		0.27047	13.203
23 Methyl Methacrylate	+++++	0.25551	0.23520	0.23905	0.32051	0.27981		
	0.23446	0.23358	0.21662	0.21673	0.22146		0.24529	13.283
24 4-Methyl-2-pentanone	+++++	+++++	0.09451	0.09072	0.12105	0.11002		
	0.09599	0.09867	0.08970	0.08756	0.08518		0.09704	11.969
26 Toluene-CCC	+++++	0.66783	0.61010	0.56772	0.74639	0.64509		
	0.56493	0.59280	0.53457	0.50698	0.50742		0.59438	12.749
28 1,1,2-Trichloroethane	+++++	0.25516	0.23967	0.22740	0.29742	0.26619		
	0.22831	0.23797	0.21467	0.20623	0.20665		0.23797	12.022
29 Tetrachloroethene	+++++	0.26686	0.25424	0.23230	0.31513	0.26910		
	0.23225	0.25311	0.22950	0.21182	0.21202		0.24763	12.635

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
30 Chlorobenzene	+++++	0.80022	0.78472	0.71124	0.97293	0.81556		
	0.70162	0.77169	0.70372	0.64343	0.65364		0.75588	12.817
31 Ethylbenzene-CCC	+++++	0.39444	0.40237	0.35779	0.49172	0.40868		
	0.35122	0.39766	0.36364	0.32914	0.33750		0.38341	12.353
33 m,p-Xylene	0.45122	0.48075	0.46072	0.41938	0.56206	0.47142		
	0.41636	0.46062	0.42161	0.38893	0.40535		0.44895	10.631
34 o-Xylene	+++++	0.50517	0.42124	0.38933	0.51794	0.45110		
	0.40693	0.43487	0.37880	0.34271	0.34086		0.41889	14.471
35 Styrene	+++++	0.93159	0.85093	0.76848	1.04834	0.88634		
	0.79379	0.89572	0.79855	0.69224	+++++		0.85178	12.223
36 a-Pinene	+++++	0.59699	0.58676	0.51019	0.69623	0.58347		
	0.51372	0.59067	0.51896	0.45800	0.44883		0.55038	13.581
37 1,1,2,2-Tetrachloroethane-SPC	+++++	0.55710	0.51410	0.45665	0.61754	0.50511		
	0.43526	0.49341	0.45150	0.40802	0.40891		0.48476	13.787
38 Propylbenzene	+++++	1.49384	1.64955	1.41527	2.00923	1.64482		
	1.39896	1.68100	1.57911	1.40540	+++++		1.58635	12.226
40 1,3,5-Trimethylbenzene	+++++	1.02409	0.82279	0.78161	1.00477	0.86195		
	0.78304	0.85919	0.76820	0.72790	0.79817		0.84317	11.741
41 1,2,4-Trimethylbenzene	+++++	1.00208	0.90505	0.83026	1.09708	0.92483		
	0.84594	0.94903	0.86536	0.79756	0.85480		0.90720	9.949

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
42 R-(+)-Limonene	+++++	+++++	+++++	+++++	0.50568	0.41756		
	0.37148	0.45592	0.42540	0.37348	0.37445		0.41771	12.059
43 1,3-Dichlorobenzene	+++++	0.69362	0.60166	0.56864	0.74928	0.65233		
	0.57807	0.63531	0.53944	0.47886	0.49496		0.59922	14.277
44 1,4-Dichlorobenzene	+++++	0.74967	0.75741	0.66907	0.89733	0.74338		
	0.64491	0.74476	0.69855	0.63119	0.64731		0.71836	11.051
45 1,2-Dichlorobenzene	+++++	0.70737	0.66820	0.58649	0.81340	0.68373		
	0.60796	0.68894	0.57948	0.51126	0.50122		0.63481	15.112
46 1,4-Dithiane	+++++	0.47387	0.46742	0.40264	0.55210	0.45551		
	0.40934	0.48695	0.42698	0.36964	0.37199		0.44165	12.845
47 1,2,4-Trichlorobenzene	+++++	0.47216	0.44111	0.39127	0.54266	0.46495		
	0.40270	0.47900	0.41065	0.35421	0.35970		0.43184	13.697
48 Naphthalene	+++++	1.43676	1.27151	1.19757	1.61024	1.43023		
	1.22870	1.49861	1.30564	1.12403	1.14661		1.32499	12.222
49 1,2,3-Trichlorobenzene	+++++	0.46459	0.41975	0.38239	0.51968	0.44657		
	0.39140	0.46250	0.40681	0.35072	0.36207		0.42065	12.528
$ 25 Toluene-d8	0.88624	0.90871	0.88372	0.89845	0.88042	0.88409		
	0.91239	0.90097	0.88899	0.89842	0.89635		0.89443	1.183

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:49 gmash
Curve Type : Average

```
|Average %RSD Results.                              |
|==================================================|
|Calculated Average %RSD = 14.2441120               |
|Maximun Average %RSD    =         30               |
|* Passed Average %RSD Test.                        |
|__________________________________________________|
```

Calibration History

Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Start Cal Date: 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.02500		
21-JUN-2017 08:04	mpxylene	/chem/msdc.i/21Jun2017.b/c062103sim.d
Cal Level: 2 , Cal Amount: 0.05000		
21-JUN-2017 08:30	0.05	/chem/msdc.i/21Jun2017.b/c062104sim.d
Cal Level: 3 , Cal Amount: 0.10000		
21-JUN-2017 08:56	0.1	/chem/msdc.i/21Jun2017.b/c062105sim.d
Cal Level: 4 , Cal Amount: 0.20000		
21-JUN-2017 09:21	0.2	/chem/msdc.i/21Jun2017.b/c062106sim.d
Cal Level: 5 , Cal Amount: 0.50000		
21-JUN-2017 09:46	all	/chem/msdc.i/21Jun2017.b/c062107sim.d
Cal Level: 6 , Cal Amount: 1.00000		
21-JUN-2017 10:12	all	/chem/msdc.i/21Jun2017.b/c062108sim.d
Cal Level: 7 , Cal Amount: 5.00000		
21-JUN-2017 10:39	all	/chem/msdc.i/21Jun2017.b/c062109sim.d
Cal Level: 8 , Cal Amount: 20.00000		
21-JUN-2017 11:06	all	/chem/msdc.i/21Jun2017.b/c062110sim.d

```
+-------------------+-----------------+----------------------------------------+

+-------------------+-----------------+----------------------------------------+
| Cal Level: 9 , Cal Amount: 50.00000                                          |
+==============================================================================+
|21-JUN-2017 11:39 |all-cm           |/chem/msdc.i/21Jun2017.b/c062111sim.d   |
+-------------------+-----------------+----------------------------------------+

+-------------------+-----------------+----------------------------------------+
| Cal Level: 10, Cal Amount: 100.00000                                         |
+==============================================================================+
|21-JUN-2017 12:06 |100              |/chem/msdc.i/21Jun2017.b/c062112sim.d   |
+-------------------+-----------------+----------------------------------------+

+-------------------+-----------------+----------------------------------------+
| Cal Level: 11, Cal Amount: 200.00000                                         |
+==============================================================================+
|21-JUN-2017 12:33 |200              |/chem/msdc.i/21Jun2017.b/c062113sim.d   |
+-------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 7
+-------------------+-----------------+----------------------------------------+
| Ccal Level: 7 , Ccal Amount: 5.00000                                         |
+==============================================================================+
|21-JUN-2017 10:39 |all              |/chem/msdc.i/21Jun2017.b/c062109sima.d  |
+-------------------+-----------------+----------------------------------------+
| Ccal Level: 7 , Ccal Amount: 5.00000                                         |
+==============================================================================+
|21-JUN-2017 10:39 |all              |/chem/msdc.i/21Jun2017.b/c062109sim.d   |
+-------------------+-----------------+----------------------------------------+
```

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUN-2017 08:04
End Cal Date : 21-JUN-2017 12:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Cal Date : 21-Jun-2017 13:12 gmash
Curve Type : Average

Calibration File Names:
Level 1: /chem/msdc.i/21Jun2017.b/c062103sim.d
Level 2: /chem/msdc.i/21Jun2017.b/c062104sim.d
Level 3: /chem/msdc.i/21Jun2017.b/c062105sim.d
Level 4: /chem/msdc.i/21Jun2017.b/c062106sim.d
Level 5: /chem/msdc.i/21Jun2017.b/c062107sim.d
Level 6: /chem/msdc.i/21Jun2017.b/c062108sim.d
Level 7: /chem/msdc.i/21Jun2017.b/c062109sim.d
Level 8: /chem/msdc.i/21Jun2017.b/c062110sim.d
Level 9: /chem/msdc.i/21Jun2017.b/c062111sim.d
Level 10: /chem/msdc.i/21Jun2017.b/c062112sim.d
Level 11: /chem/msdc.i/21Jun2017.b/c062113sim.d

gm 6/21/17

Compound	0.02500 Level 1	0.05000 Level 2	0.10000 Level 3	0.20000 Level 4	0.50000 Level 5	1.000 Level 6	___ RRF	% RSD
	5.000 Level 7	20.000 Level 8	50.000 Level 9	100.000 Level 10	200.000 Level 11			
1 Chloromethane	+++++	+++++	0.02863	0.05216	0.05098	0.05616		
	0.04989	0.02871	+++++	+++++	+++++		0.04442	27.874
2 Vinyl Chloride	+++++	+++++	0.12497	0.23249	0.23184	0.24842		
	0.21245	0.13443	0.15198	0.18345	0.16582		0.18732	24.463
3 Ethanol	+++++	+++++	0.04800	0.07602	0.08304	0.08676		
	0.07280	0.05065	0.04950	0.06094	0.05591		0.06485	23.228
4 1,1-Dichloroethene-CCC	+++++	+++++	0.12050	0.17802	0.20056	0.19822		
	0.17039	0.12873	0.13028	0.14707	0.14032		0.15712	19.410
5 Acetone	+++++	+++++	0.09881	0.14436	0.15589	0.16110		
	0.13449	0.09603	0.09766	0.11567	0.10877		0.12364	20.873
7 MTBE	+++++	0.54987	0.49242	0.57493	0.68651	0.66038		
	0.55779	0.49624	0.46107	0.48933	0.48861		0.54571	14.047

Initial Calibration Narrative

An 11 point initial calibration was analyzed on MSD-C on 6/21/2017. The curve passed for SOP 100.

ICV - file ID: C062115sim (1 out; Chloromethane at 173%), STD # 2848-5-5.0

Tune file: C062101

All compounds were curved from 0.05ug/mL to 200ug/mL, but there are exceptions. Please refer to ICAL summary for calibration ranges for each compound.

2-Propanol was not included in the ICAL.

Unit: ug/mL

The analysis based on 2uL injection in slow mode.

Eurofins Air Toxics, Inc. **MSD-C** **Logbook #: 2821**

BFB Injection Date: 6/21/17
BFB Injection Time: 0724
BFB File ID: C062101

IS/S Std.#: 2744-196-125	Exp. Date: 10/3/17
2-Fluorotoluene SIM: 266829	

Verified CCV IS vs ICAL mid-point (-50% to +100% D) gm
initials

Calculation Check:

µg/L of compound $= \frac{Area_{Sample}}{Area_{IS}} \times \frac{Conc._{IS}}{RRF} \times DF = \frac{(141610)}{(251495)} \times \frac{(5.0)}{(0.54571)} \times 1.00 = 5.16 \mu g$

File ID:	C062115SIM
Compound:	MTBE
Initials:	gm

Reported Result 5.16 µg

	Use	File #	Sample / Client Name	Vial #	DF	Date Analyzed	Time Analyzed	Initial	Comments
1	✓	C062101	2810-101 BFB	1	1.00	6/21/17	0724	gm	
2	✓	02	CS_2 Blank	2			0735		
3	✓	03	2848-4-0.025	3			0804		Level 1
4	✓	04	-0.05	4			0830		Level 2
5	✓	05	-0.10	5			0856		Level 3.
6	✓	06	-0.20	6			0921		Level 4.
7	✓	07	-0.50	7			0946		Level 5.
8	✓	08	-1.0	8			1012		Level 6.
9	✓	09	-5.0	9			1039		Level 7. /CCV
10	✓	10	-20	10			1106		Level 8.
11	✓	11	-50	11			1139		Level 9.
12	✓	12	-100	12			1206		Level 10.
13	✓	13	-200	13			1233		Level 11.
14	✓	14	CS_2 Blank	14			1259		
15	✓	15	2848-5-5.0	15			1325		ICV

Reviewed: gm Date: 6/22/17

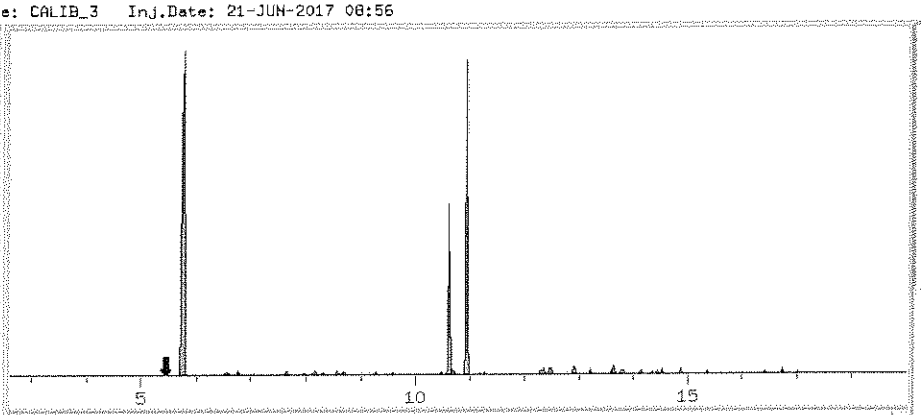
TargetReview: eeyore: 2848-4-0.10: /chem/msdc.i/21Jun2017.b/c062105sim.d

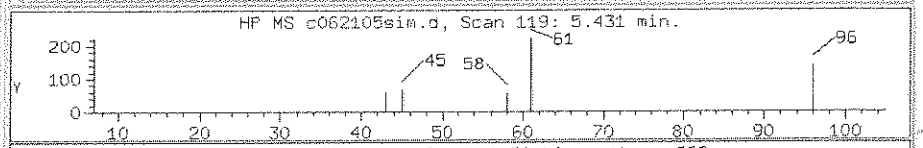
File Properties Edit Display Process Spectra Help

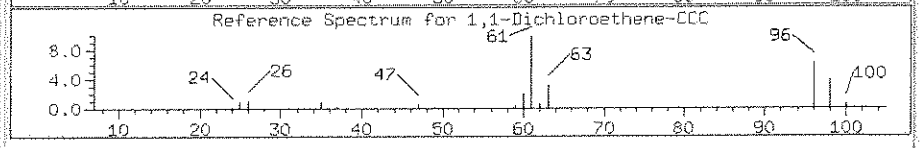
Sample: 2848-4-0.10 Type: CALIB_3 Inj.Date: 21-JUN-2017 08:56

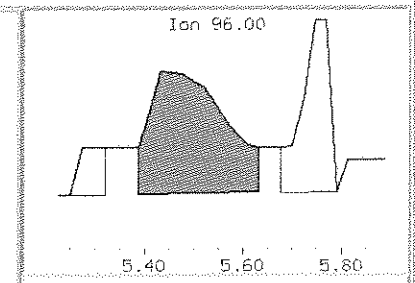
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeti
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

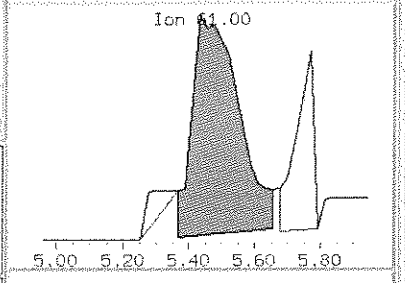
c062105sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.297	224	0.0141828	0.0141828	100	a	
	5.297	129			58		
2	5.431	1534	0.100000	0.100000	100		
	5.431	2208			139		
3	5.768	1525	0.0962701	0.0962701	100	a	
	5.768	668			44		

Before
gmv
6/21/17

TargetReview: eeyore: 2048-4-0.10: /chem/msdc.i/21Jun2017.b/c062105sim.d

File Security Edit Display Process Spectra Help

Sample: 2048-4-0.10 Type: CALIB_3 Inj.Date: 21-JUN-2017 08:56

+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeth
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeth
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

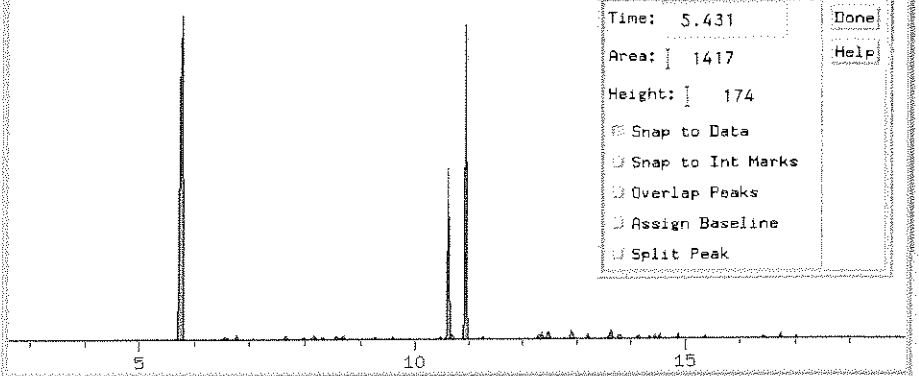
c062105sim.d

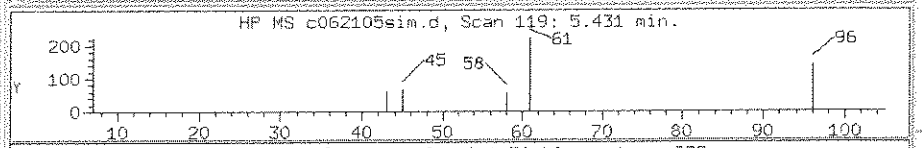
Manual Int

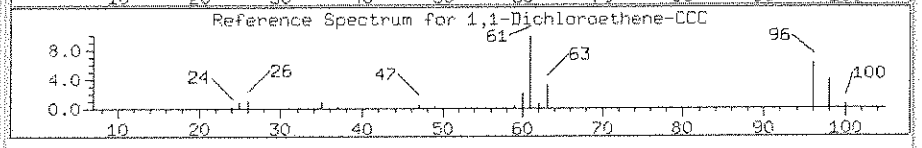
Time: 5.431
Area: 1417
Height: 174

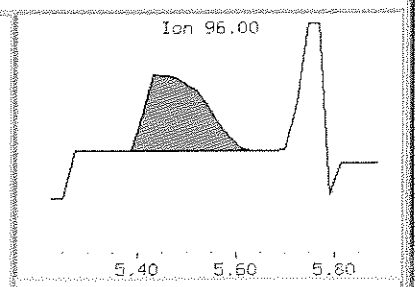
Done
Help

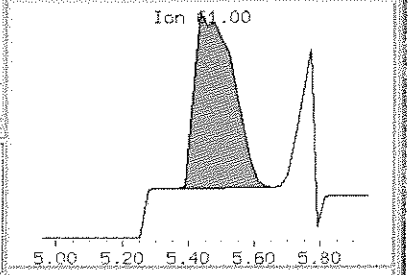
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.431	299	0.100000	0.100000	100	M	
	5.431	1417			194		

- Mark 1,1-Dichloroethena-CCC Undetected.

6/21/17
AC

gm
6/21/17

After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zero In	
Change Parameter	
Subtract Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

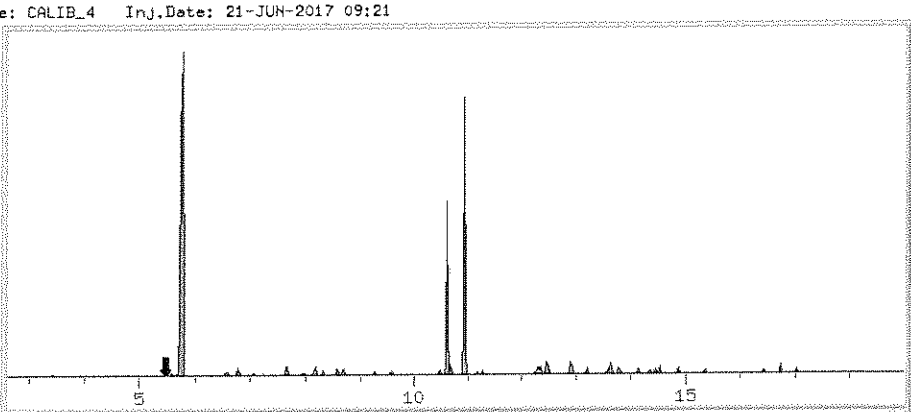
TargetReview: eeyore: 2848-4-0.20: /chem/msdc.i/21Jun2017.b/c062106sim.d

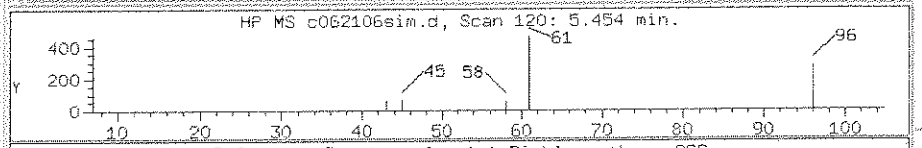
File Connect Edit Display Process Spectra Help

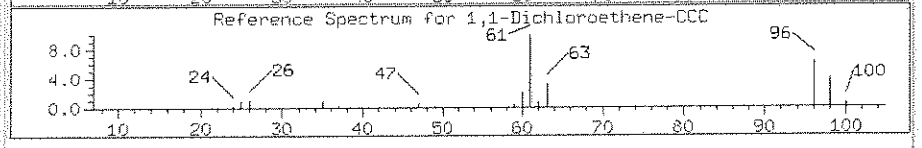
Sample: 2848-4-0.20 Type: CALIB_4 Inj.Date: 21-JUN-2017 09:21

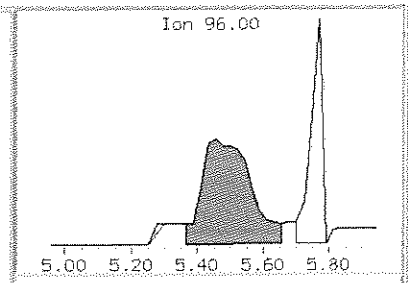
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeth
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeth
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

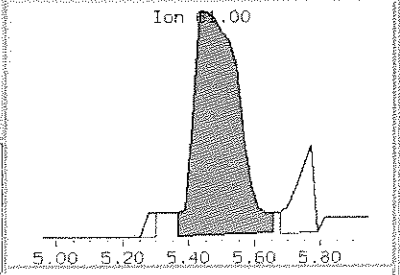
c062106sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.275	37	0.00355685	0.00355685	100	a	
	5.275	138			367		
2	5.454	2963	0.276963	0.276963	100		
	5.431	4372			149		
3	5.768	1465	0.138355	0.138355	100		
	5.768	673			46		

Before

JM
6/21/17

Targetreview eeyore: 2846-4-0.20: /chem/msdc.i/21jun2017.b/c062106sim.d

File Searching Edit Display Report Spectra Help

Sample: 2846-4-0.20 Type: CALIB_4 Inj.Date: 21-JUN-2017 09:21

1 Chloromethane
2 Vinyl Chloride
3 Ethanol
4 1,1-Dichloroet
5 Acetone
7 MTBE
8 trans-1,2-Dich.
9 Hexane
10 Halothane
11 1,1-Dichloroeti
12 Ethyl Acetate
13 2-Butanone
14 cis-1,2-Dichlo
15 Chloroform-CCC
16 Cyclohexane
17 1,1,1-Trichlor
18 Carbon Tetrach.
19 Benzene
20 1,2-Dichloroeti
21 Heptane
22 Trichloroethen
23 Methyl Methacr
24 4-Methyl-2-pen
25 Toluene-d8
26 Toluene-CCC

c062106sim.d

Manual Int
Time: 5.431
Area: 3562
Height: 410
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak
Done
Help

Ion 96.00

HP MS c062106sim.d, Scan 120: 5.454 min.

Reference Spectrum for 1,1-Dichloroethene-CCC

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	1926	0.238672	0.238672	100	M	
	5.431	3562			185		

- Mark 1,1-Dichloroethene-CCC Undetected.

Calc'd 17
AG

Gm 6/21/17

After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Mismatched	
Corrected Peak Integration	

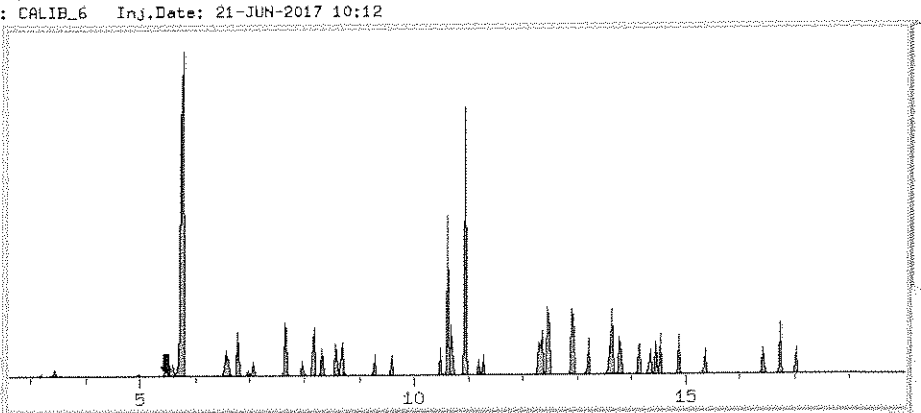
TargetReview: eeyore: 2848-4-1.0: /chem/msdc.i/21Jun2017.b/c062108sim.d

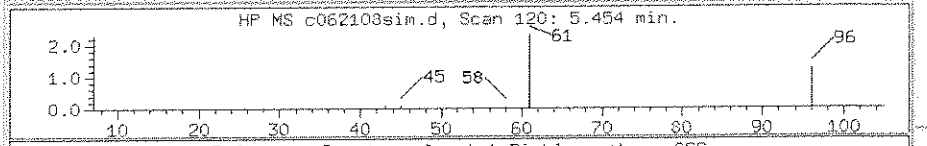
File Security Edit Display Process Spectra Help

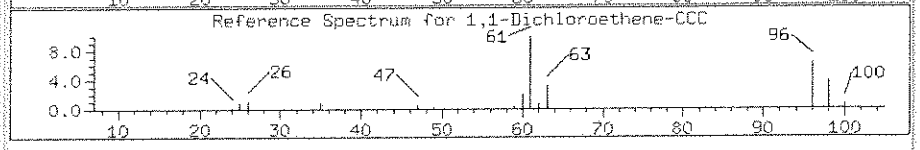
Sample: 2848-4-1.0 Type: CALIB_6 Inj.Date: 21-JUN-2017 10:12

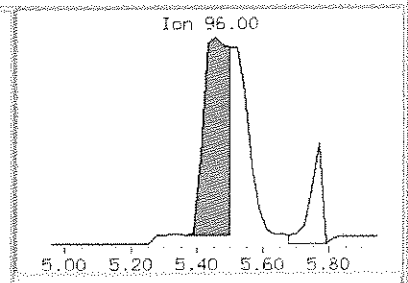
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
* 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroeti
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroeti
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

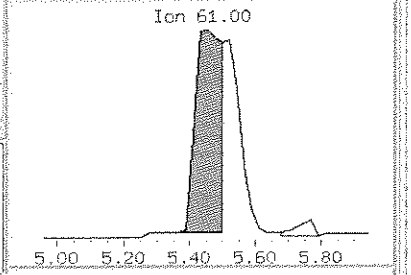
c062107sim.d
c062108sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	6890	1.04828	1.04828	100		
	5.454	13290			193		
2	5.768	1540	0.234440	0.234440	100		
	5.768	666			43		

- Mark 1,1-Dichloroethene-CCC Undetected.

Before
gw
6/21/17

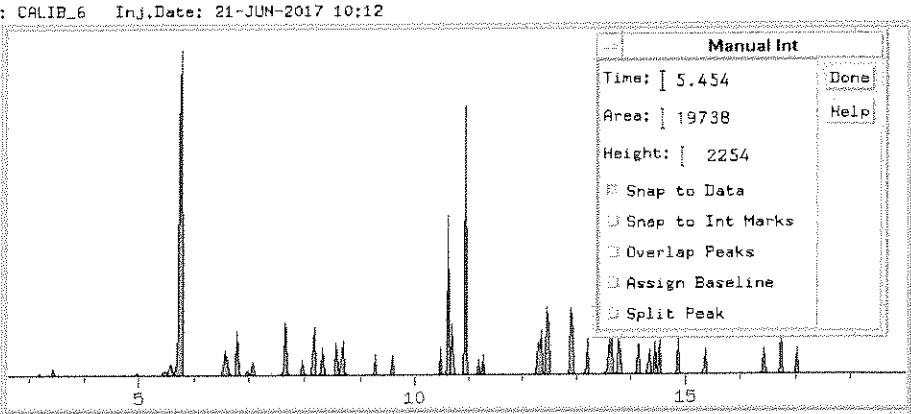
TargetReview: eeyore 2040-4-1.D:/Chem/msdc1/21Jun2017.b/c062108sim.d

File Security Edit Display Process Spectra Help

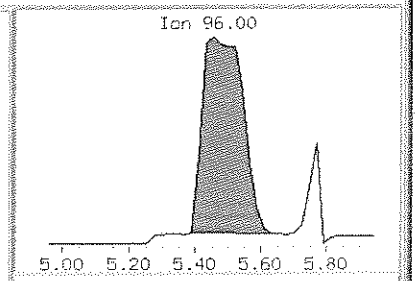
Sample: 2040-4-1.0 Type: CALIB_6 Inj.Date: 21-JUN-2017 10:12

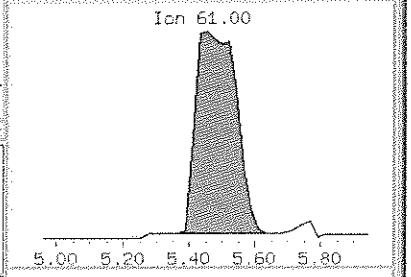
1 Chloromethane
2 Vinyl Chloride
3 Ethanol
4 1,1-Dichloroet
5 Acetone
7 MTBE
8 trans-1,2-Dich.
9 Hexane
10 Halothane
11 1,1-Dichloroetl
12 Ethyl Acetate
13 2-Butanone
14 cis-1,2-Dichlo
15 Chloroform-CCC
16 Cyclohexane
17 1,1,1-Trichlor
18 Carbon Tetrach.
19 Benzene
20 1,2-Dichloroetl
21 Heptane
22 Trichloroethen
23 Methyl Methacr
24 4-Methyl-2-pen
25 Toluene-d8
26 Toluene-CCC

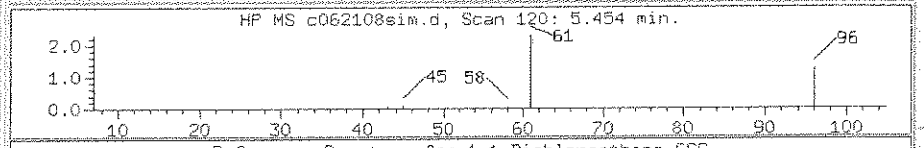
c062107sim.d
c062108sim.d

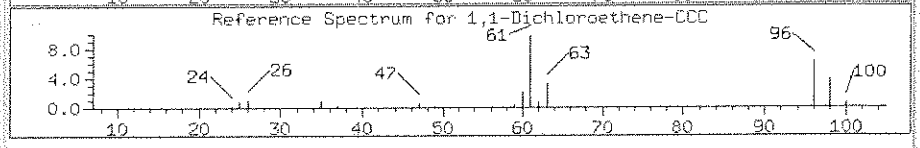


Manual Int
Time: 5.454
Area: 19738
Height: 2254
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	10302	1.13715	1.13715	100	M	
	5.454	19738			192		

- Mark 1,1-Dichloroethene-CCC Undetected.

6/21/17
AC

Jm
6/21/17

After

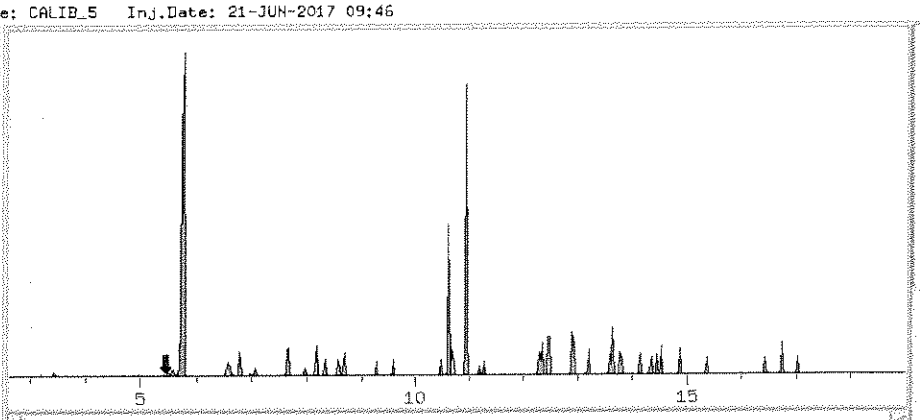
Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

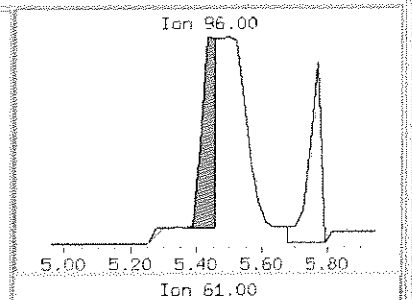
TargetReview: eeyore: 2848-4-0.50: /chem/msdc.i/21Jun2017.b/c062107sim.d

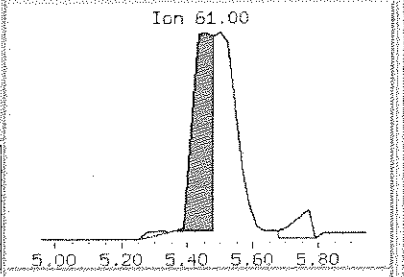
File Security Edit Display Process Spectra Help

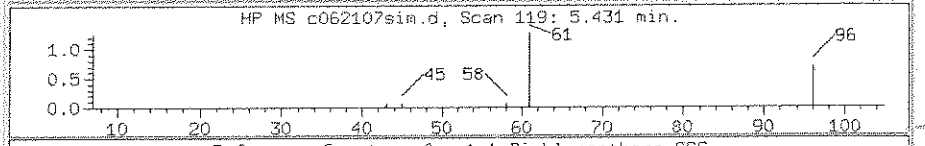
Sample: 2848-4-0.50 Type: CALIB_5 Inj.Date: 21-JUN-2017 09:46

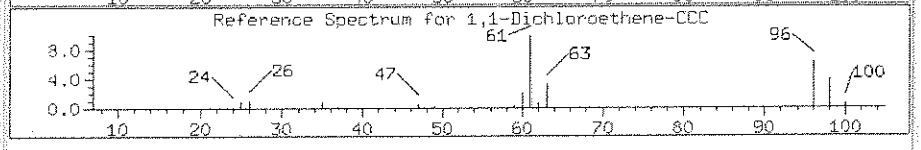
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroetl
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroetl
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC







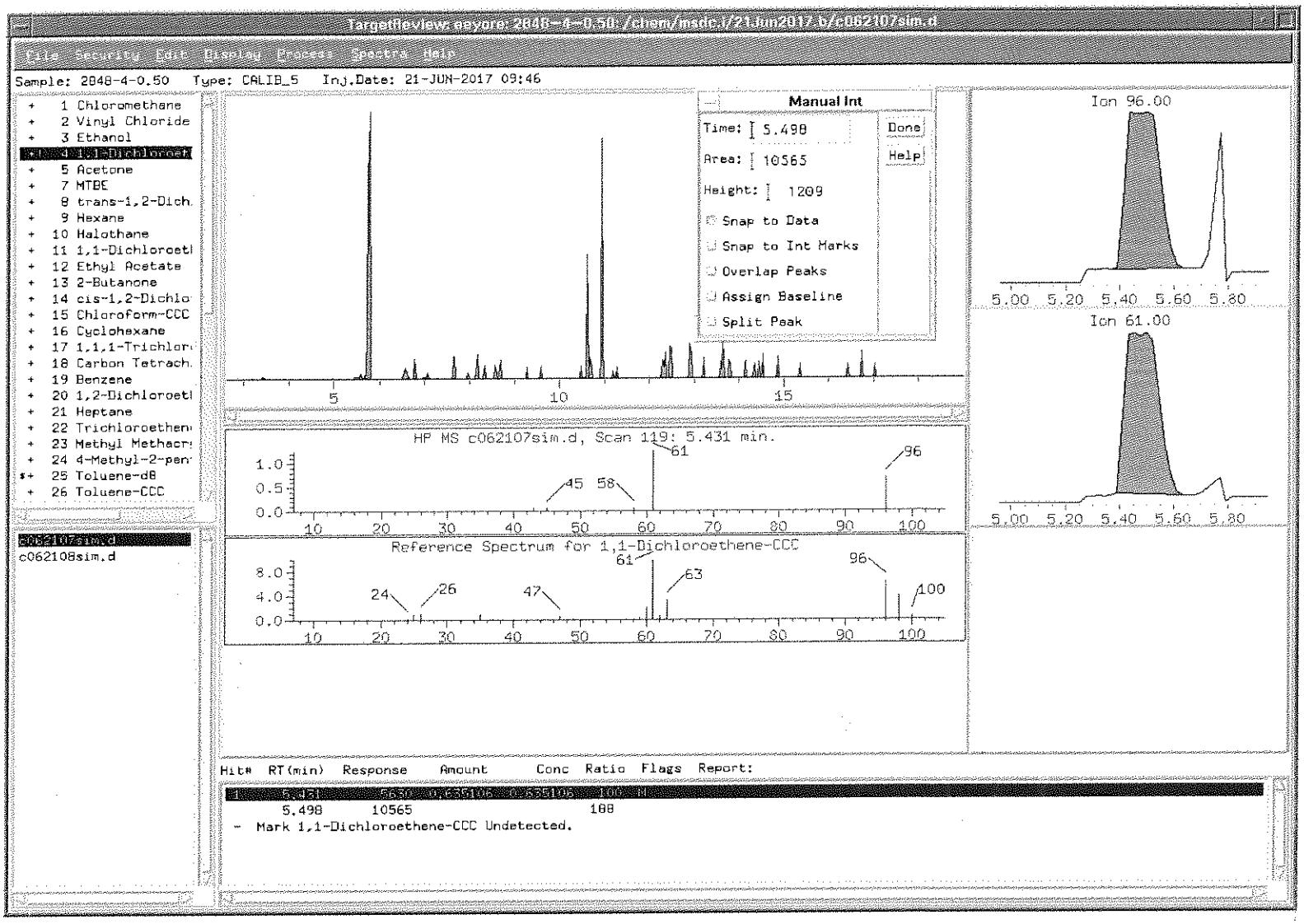




c062107sim.d
c062108sim.d

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.274	37	0.00539369	0.00539369	100	a	
	5.319	129			344		
2	5.431	5055	0.200024	0.200024	100		
	5.454	5693			272		
3	5.767	1548	0.221816	0.221816	100		
	5.767	657			42		

Before
gm
6/21/17



After

Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

gm 6/24/17

6/28/17 AF

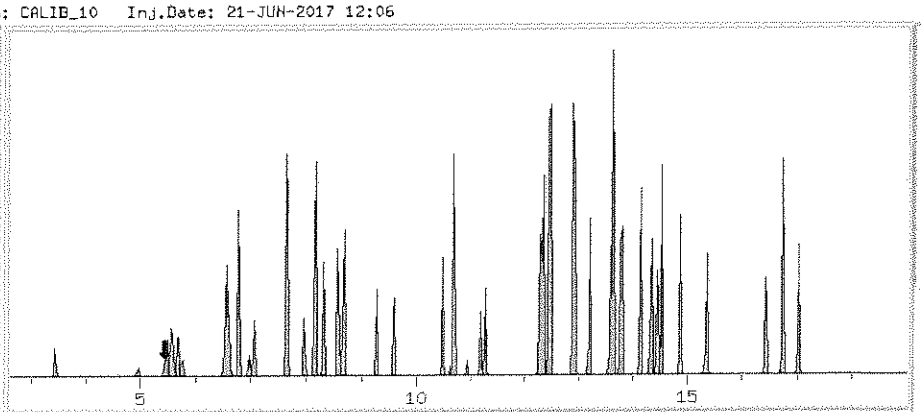
TargetReview: eeyore: 2848-4-100: /chem/msdc.i/21Jun2017.b/c062112sim.d

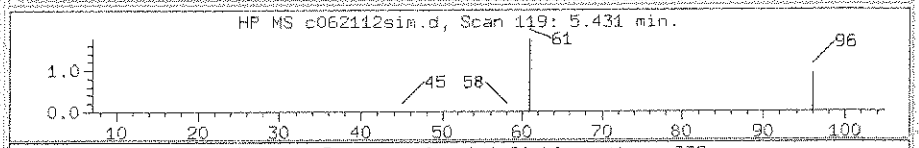
File Security Edit Display Process Spectra Help

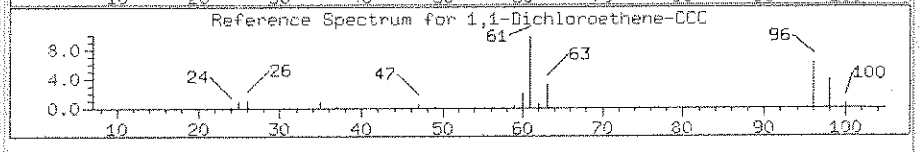
Sample: 2848-4-100 Type: CALIB_10 Inj.Date: 21-JUN-2017 12:06

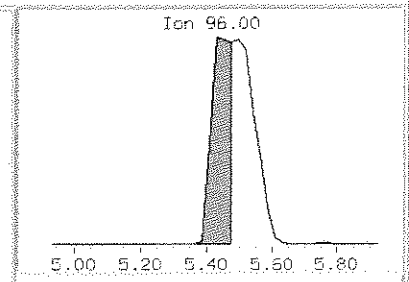
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroet
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach
+ 19 Benzene
+ 20 1,2-Dichloroet
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
*+ 25 Toluene-d8
+ 26 Toluene-CCC
*+ 27 2-Fluorotolue

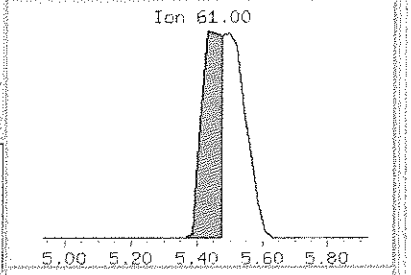
c062112sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.274	372	0.0435883	0.0435883	100	aQ	
	5.431	841071			225736		
2	5.431	434044	50.7777	50.7777	100		
	5.431	841071			194		
3	5.767	1738	0.203400	0.203400	100		
	5.767	537			31		

Before
gm
6/21/17

TargetReview: peyora: 2848-4-100: /chem/msdc.i/21-Jun2017.b/c062112sim.d

File Required Edit Display Process Spectra Help

Sample: 2848-4-100 Type: CALIB_10 Inj.Date: 21-JUN-2017 12:06

+	2	Vinyl Chloride
+	3	Ethanol
+)	4	1,1-Dichloroet
+	5	Acetone
+	7	MTBE
+	8	trans-1,2-Dich.
+	9	Hexane
+	10	Halothane
+	11	1,1-Dichloroet
+	12	Ethyl Acetate
+	13	2-Butanone
+	14	cis-1,2-Dichlo
+	15	Chloroform-CCC
+	16	Cyclohexane
+	17	1,1,1-Trichlor
+	18	Carbon Tetrach.
+	19	Benzene
+	20	1,2-Dichloroet
+	21	Heptane
+	22	Trichloroethen
+	23	Methyl Methacr
+	24	4-Methyl-2-pen
$+	25	Toluene-d8
+	26	Toluene-CCC
*+	27	2-Fluorotoluen

c062112sim.d

Manual Int

Time: 5.431 Done

Area: 1585335 Help

Height: 177112

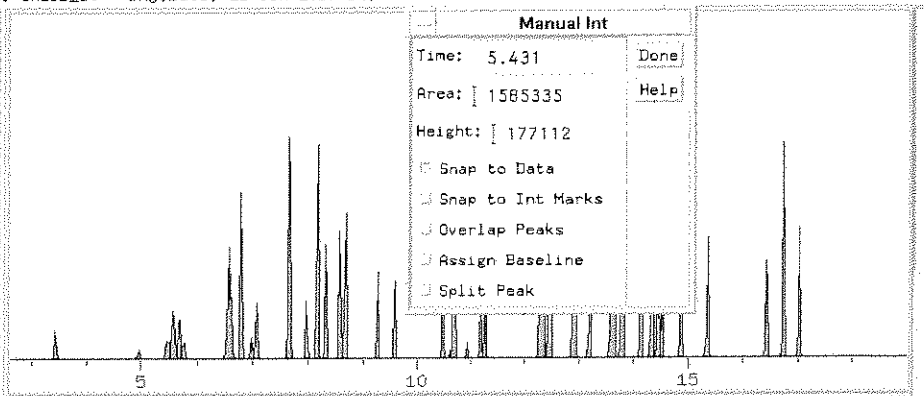
Snap to Data

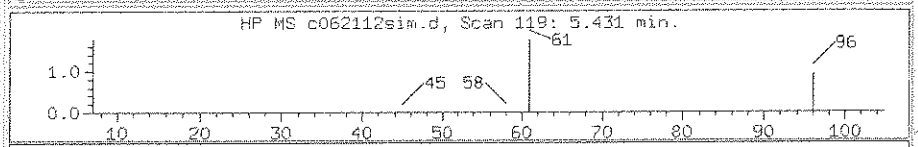
Snap to Int Marks

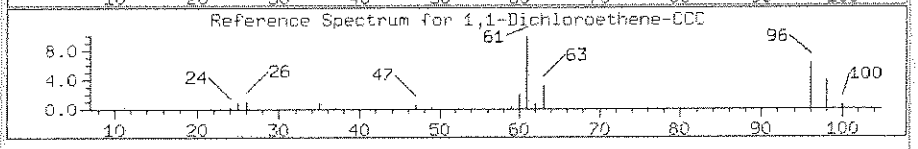
Overlap Peaks

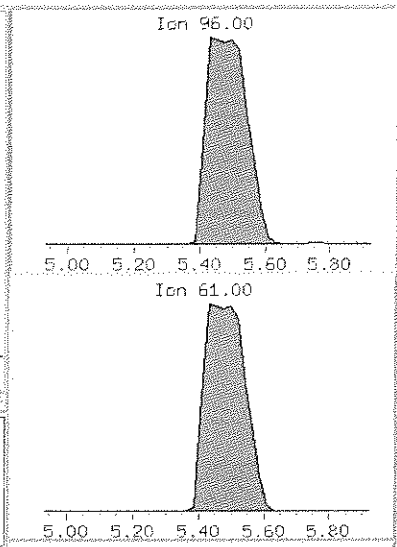
Assign Baseline

Split Peak









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.431	835991	92.3709	92.3709	100	M	
	5.431	1585335			190		

- Mark 1,1-Dichloroethene-CCC Undetected.

6/21/17
Act

After

Correct Baseline	
Split Peak	
Merge Peak	✓
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

gm
6/21/17

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062115sim.d
Lab Smp Id: 2848-5-5.0 Client Smp ID: ICV
Inj Date : 21-JUN-2017 13:25
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-5-5.0;ICV
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 13:16 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 15 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
1 Chloromethane	50	3.203	3.203	(0.293)	19332	8.65244	8.65244(R)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	58785	6.23931	6.23931
3 Ethanol	45	4.961	4.961	(0.453)	19645	6.02285	6.02285
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	43071	5.45002	5.45002
5 Acetone	58	5.566	5.566	(0.508)	35091	5.64259	5.64259
7 MTBE	73	6.555	6.555	(0.599)	141610	5.15904	5.15904
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	50270	5.18311	5.18310
9 Hexane	57	6.775	6.775	(0.619)	134265	5.26032	5.26032
10 Halothane	117	6.961	6.961	(0.636)	37856	5.44914	5.44914
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	100654	5.03135	5.03135
12 Ethyl Acetate	70	7.640	7.640	(0.698)	15201	5.17633	5.17633
13 2-Butanone	72	7.662	7.662	(0.700)	33235	5.13398	5.13398
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	54791	5.09981	5.09981
15 Chloroform-CCC	83	7.956	7.956	(0.727)	75211	4.77250	4.77250
16 Cyclohexane	84	8.172	8.172	(0.747)	78293	4.74560	4.74560
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	88705	4.97121	4.97121

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	81834	4.85353	4.85353
	19 Benzene	78	8.572	8.573	(0.783)	193822	4.82273	4.82273
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	86622	4.81027	4.81027
	21 Heptane	71	8.696	8.696	(0.794)	68899	4.79270	4.79270
	22 Trichloroethene	130	9.283	9.283	(0.848)	65107	4.78580	4.78580
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	58271	4.72295	4.72295
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	23856	4.88743	4.88743
$	25 Toluene-d8	98	10.608	10.608	(0.969)	225432	5.01081	5.01081(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	140228	4.69041	4.69041
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	251495	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	57247	4.78278	4.78278
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	58543	4.70016	4.70016
	30 Chlorobenzene	112	12.300	12.300	(1.124)	175166	4.60722	4.60722
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	88900	4.60970	4.60970
	33 m,p-Xylene	106	12.454	12.454	(1.138)	203561	9.01448	9.01448
	34 o-Xylene	106	12.901	12.901	(1.179)	93778	4.45079	4.45079
	35 Styrene	104	12.928	12.928	(1.181)	196729	4.59180	4.59180
	36 a-Pinene	93	13.203	13.203	(1.206)	145589	5.25902	5.25902
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	109644	4.49676	4.49676
	38 Propylbenzene	91	13.642	13.642	(1.246)	345823	4.33405	4.33404
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	182318	4.29887	4.29887
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	201775	4.42186	4.42186
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	96619	4.59865	4.59865
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	137361	4.55746	4.55746
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	159428	4.41230	4.41230
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	146284	4.58139	4.58139
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	100420	4.52051	4.52051
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	97628	4.49463	4.49463
	48 Naphthalene	128	16.730	16.730	(1.529)	296977	4.45606	4.45606
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	94972	4.48866	4.48866

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Report Date: 21-Jun-2017 13:42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062115sim.d
Lab Smp Id: 2848-5-5.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: ICV
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	251495	-5.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Report Date: 21-Jun-2017 13:42

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 21Jun2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 2848-5-5.0
Client Smp ID: ICV
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: LCS
SpikeList File: ICV.spk
Quant Type: ISTD
Sublist File: all.sub
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
1 Chloromethane	5.00000	8.65244	173.05*	70-130
2 Vinyl Chloride	5.00000	6.23931	124.79	50-140
3 Ethanol	5.00000	6.02285	120.46	70-130
4 1,1-Dichloroethene	5.00000	5.45002	109.00	70-130
5 Acetone	5.00000	5.64259	112.85	70-130
7 MTBE	5.00000	5.15904	103.18	70-130
8 trans-1,2-Dichloro	5.00000	5.18310	103.66	70-130
9 Hexane	5.00000	5.26032	105.21	70-130
10 Halothane	5.00000	5.44914	108.98	70-130
11 1,1-Dichloroethane	5.00000	5.03135	100.63	80-120
12 Ethyl Acetate	5.00000	5.17633	103.53	70-130
13 2-Butanone	5.00000	5.13398	102.68	70-130
14 cis-1,2-Dichloroet	5.00000	5.09981	102.00	80-120
15 Chloroform-CCC	5.00000	4.77250	95.45	80-120
16 Cyclohexane	5.00000	4.74560	94.91	70-130
17 1,1,1-Trichloroeth	5.00000	4.97121	99.42	80-120
18 Carbon Tetrachlori	5.00000	4.85353	97.07	80-120
19 Benzene	5.00000	4.82273	96.45	70-130
20 1,2-Dichloroethane	5.00000	4.81027	96.21	80-120
21 Heptane	5.00000	4.79270	95.85	80-120
22 Trichloroethene	5.00000	4.78580	95.72	80-120
23 Methyl Methacrylat	5.00000	4.72295	94.46	70-130
24 4-Methyl-2-pentano	5.00000	4.88743	97.75	70-130
26 Toluene-CCC	5.00000	4.69041	93.81	80-120
28 1,1,2-Trichloroeth	5.00000	4.78278	95.66	80-120
29 Tetrachloroethene	5.00000	4.70016	94.00	80-120
30 Chlorobenzene	5.00000	4.60722	92.14	80-120
31 Ethylbenzene-CCC	5.00000	4.60970	92.19	80-120
33 m,p-Xylene	10.0000	9.01448	90.14	80-120
34 o-Xylene	5.00000	4.45079	89.02	70-130
35 Styrene	5.00000	4.59180	91.84	70-130
36 a-Pinene	5.00000	5.25902	105.18	70-130
37 1,1,2,2-Tetrachlor	5.00000	4.49676	89.94	70-130

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
38 Propylbenzene	5.00000	4.33404	86.68	80-120
40 1,3,5-Trimethylben	5.00000	4.29887	85.98	80-120
41 1,2,4-Trimethylben	5.00000	4.42186	88.44	80-120
42 R-(+)-Limonene	5.00000	4.59865	91.97	70-130
43 1,3-Dichlorobenzen	5.00000	4.55746	91.15	70-130
44 1,4-Dichlorobenzen	5.00000	4.41230	88.25	70-130
45 1,2-Dichlorobenzen	5.00000	4.58139	91.63	70-130
46 1,4-Dithiane	5.00000	4.52051	90.41	70-130
47 1,2,4-Trichloroben	5.00000	4.49463	89.89	70-130
48 Naphthalene	5.00000	4.45606	89.12	70-130
49 1,2,3-Trichloroben	5.00000	4.48866	89.77	70-130

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	5.00000	5.01081	100.22	70-130

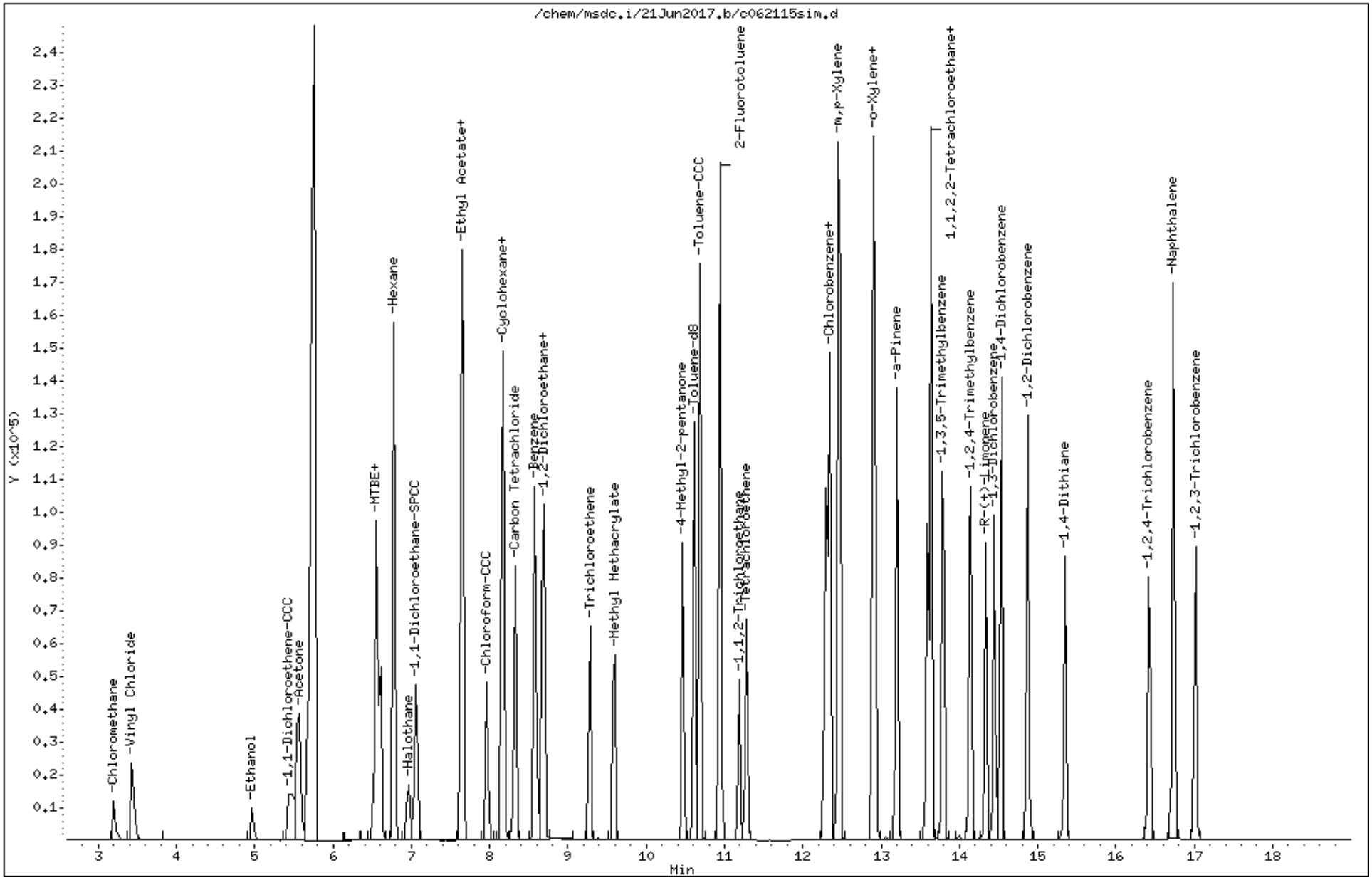
Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d
Date : 21-JUN-2017 13:25
Client ID: ICV
Sample Info: ;2848-5-5.0;ICV

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

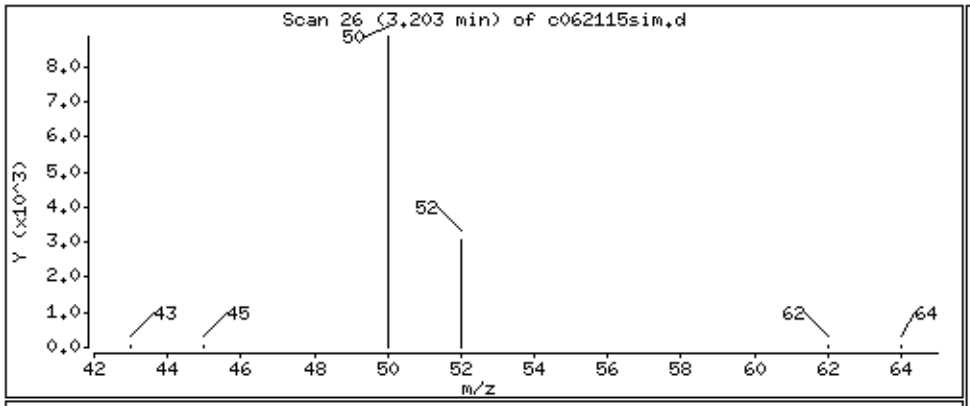
Operator: gm

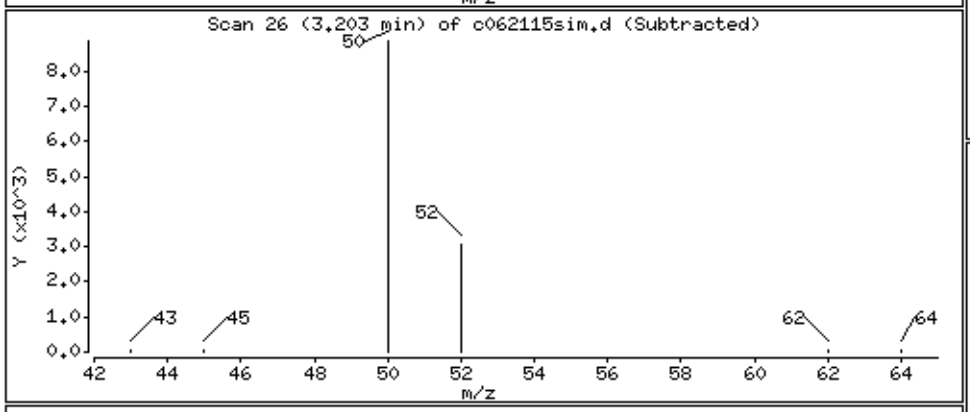
Column phase: DB-5.625

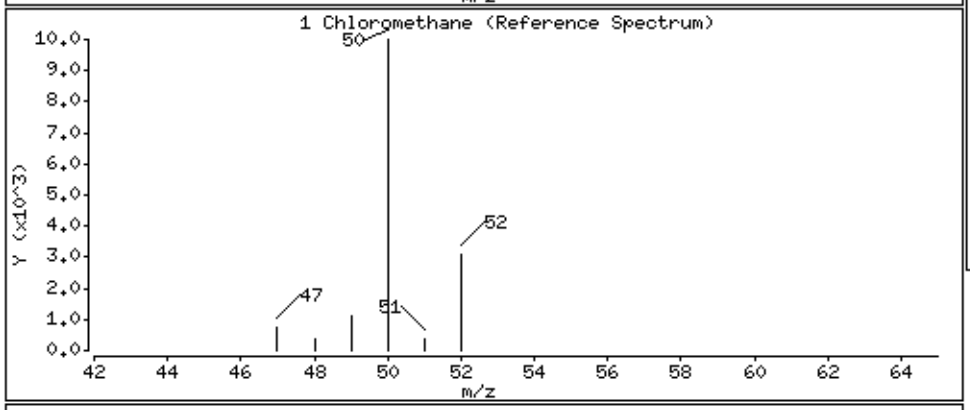
Column diameter: 0.25

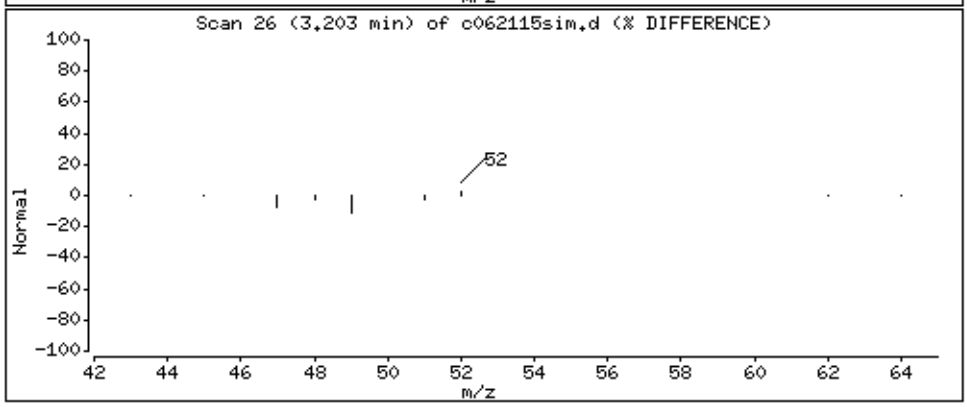
1 Chloromethane

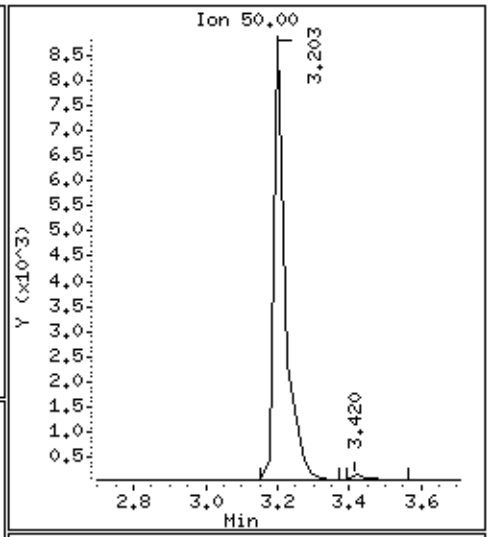
Concentration: 8.65244 ug

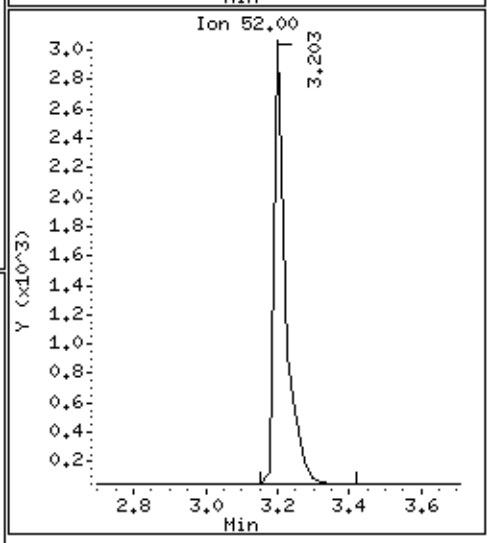












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

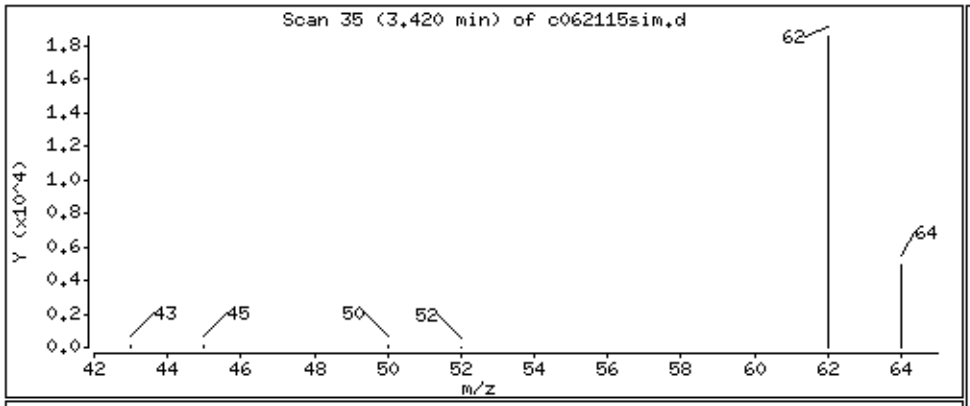
Operator: gm

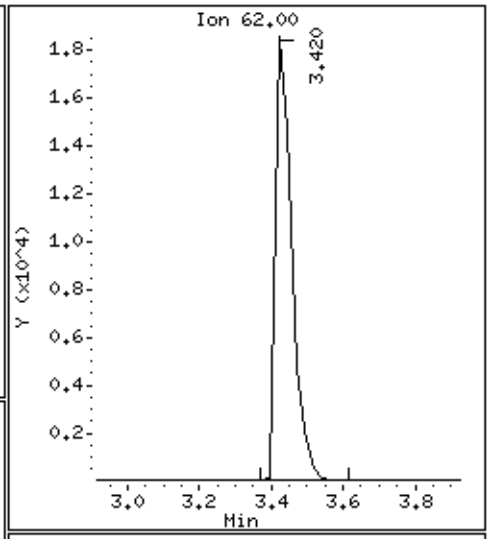
Column phase: DB-5.625

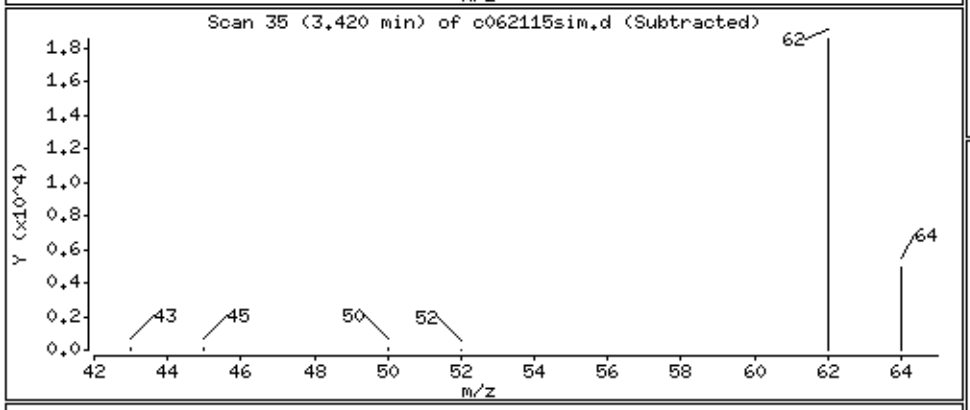
Column diameter: 0.25

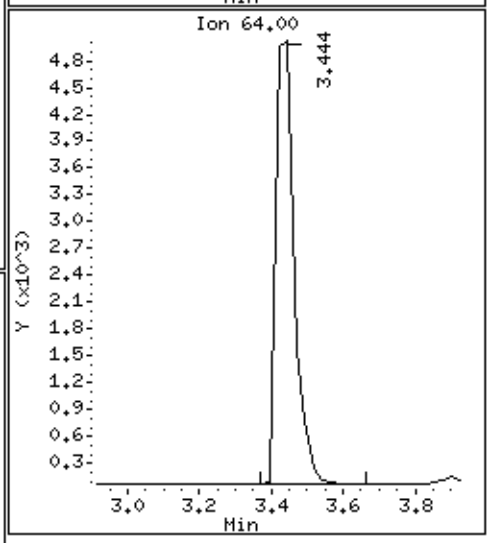
2 Vinyl Chloride

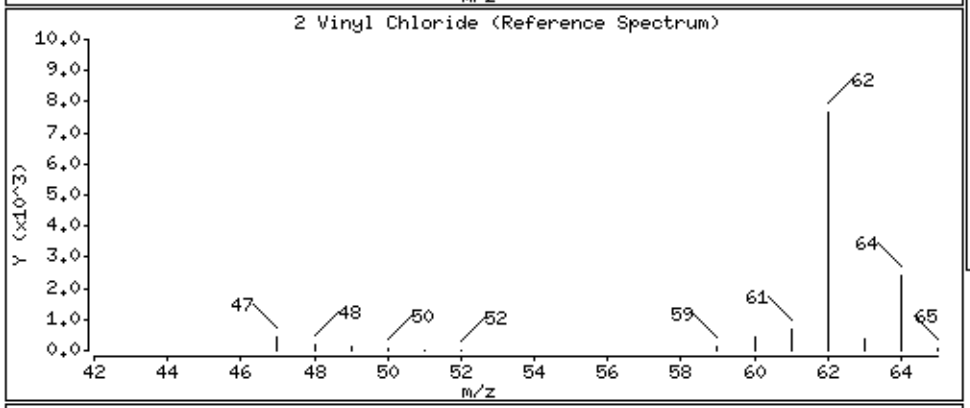
Concentration: 6.23931 ug

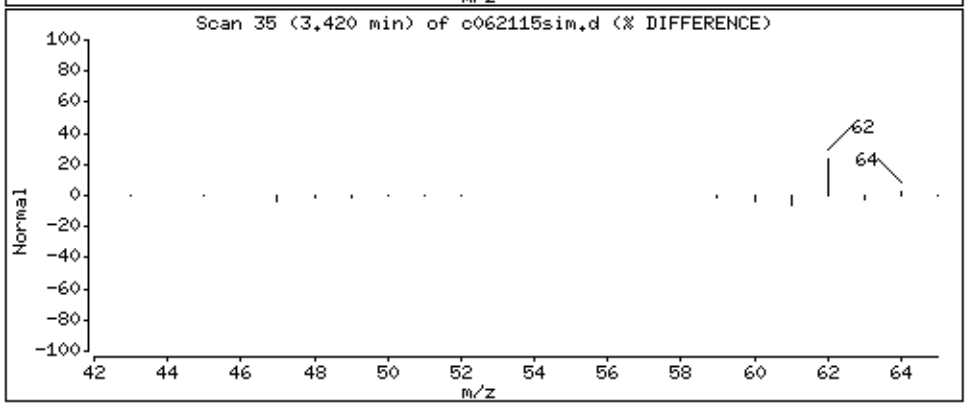












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

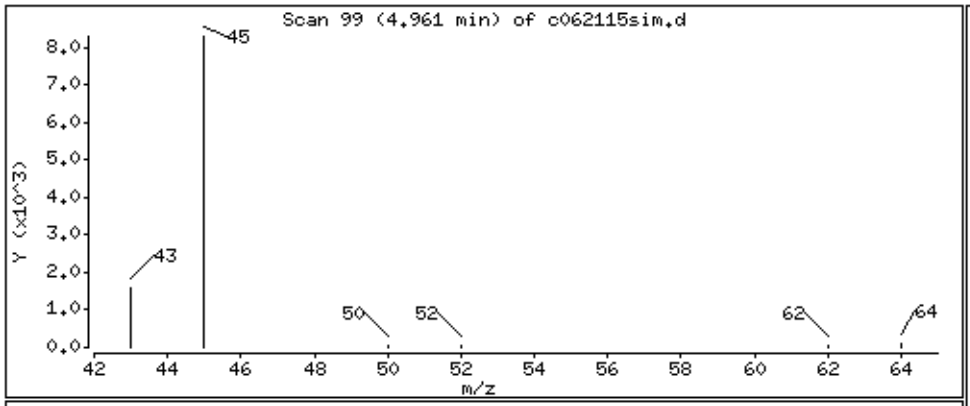
Operator: gm

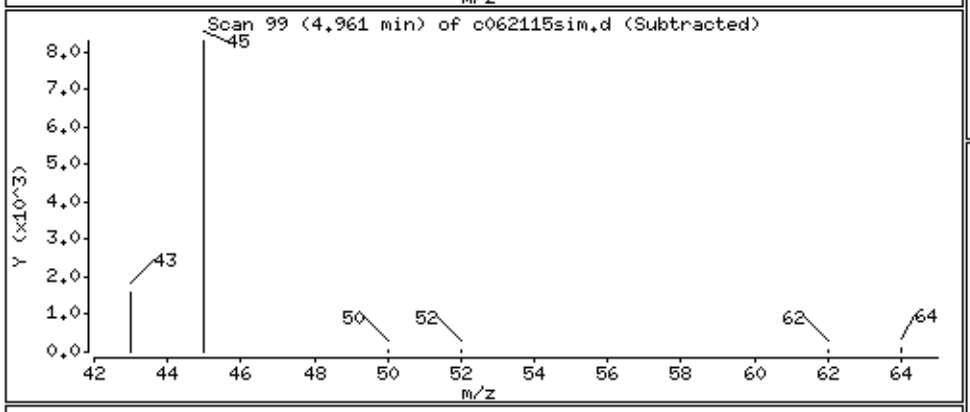
Column phase: DB-5.625

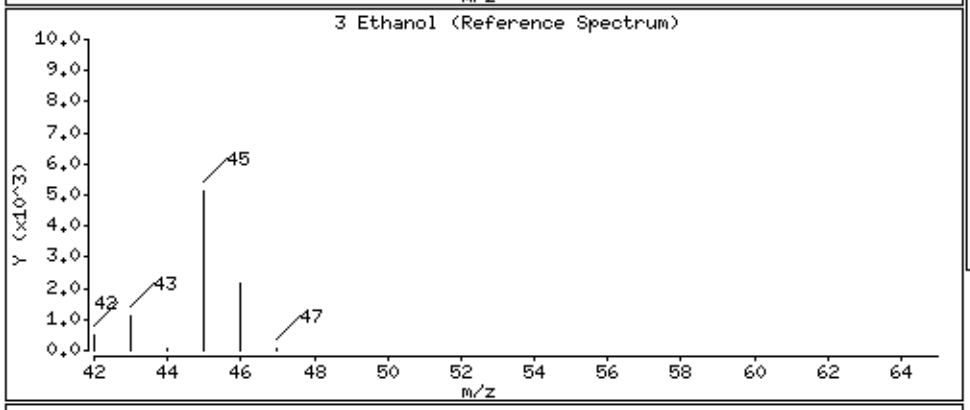
Column diameter: 0.25

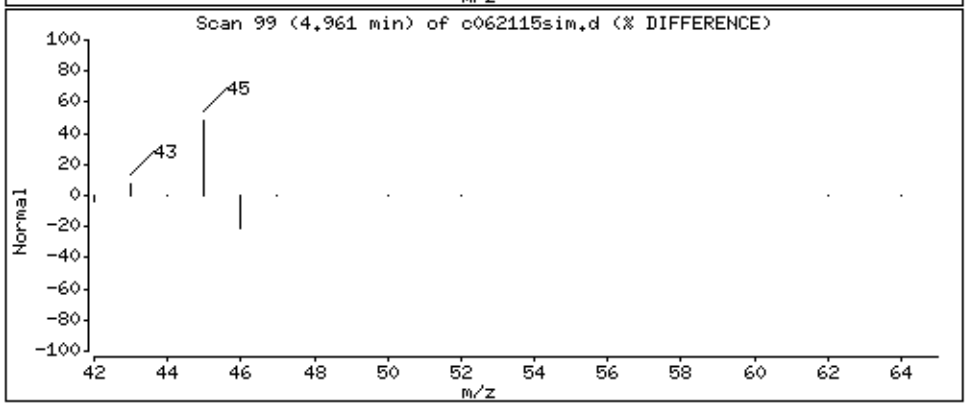
3 Ethanol

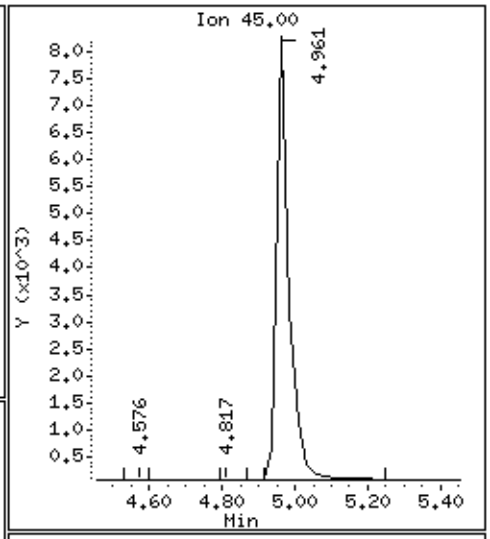
Concentration: 6.02285 ug

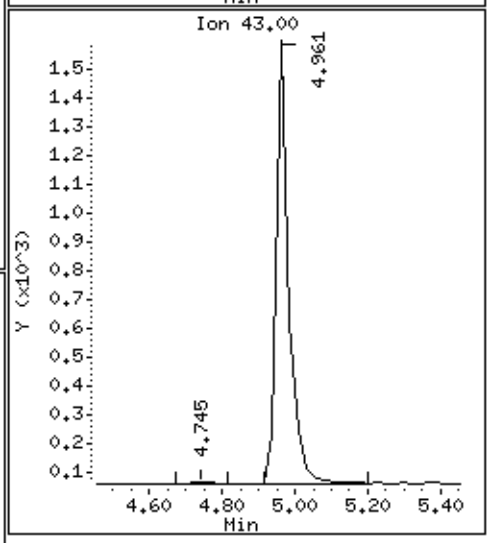












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

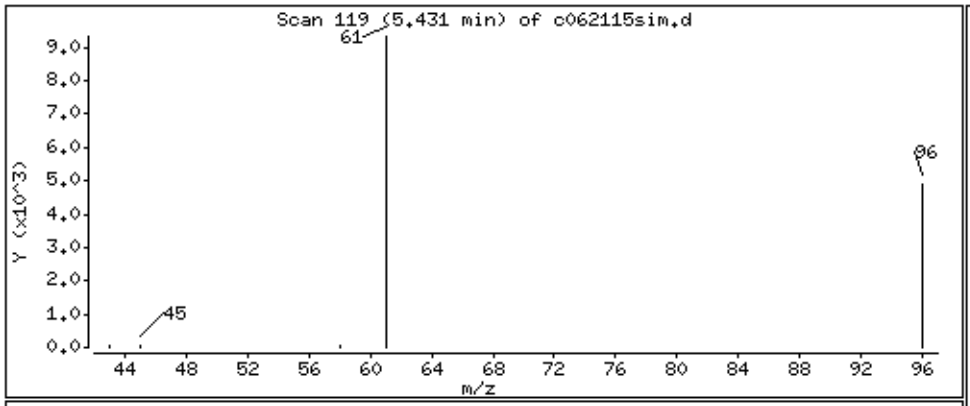
Operator: gm

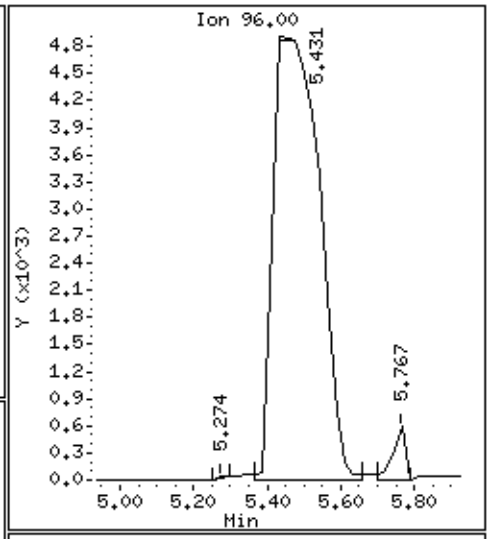
Column phase: DB-5.625

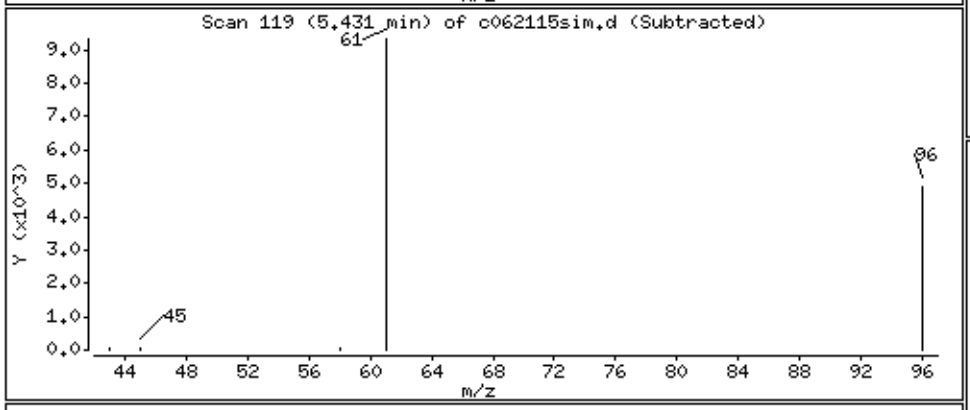
Column diameter: 0.25

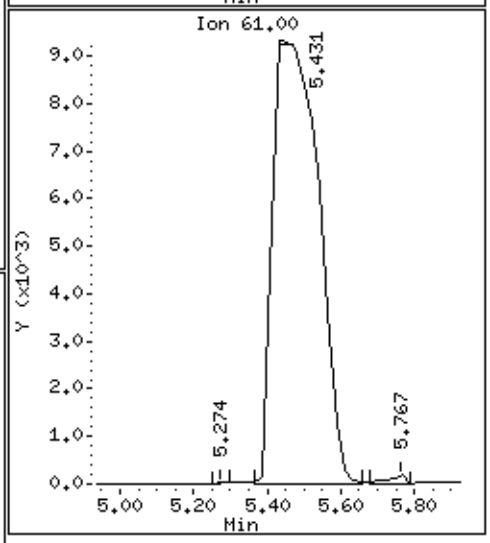
4 1,1-Dichloroethene-CCC

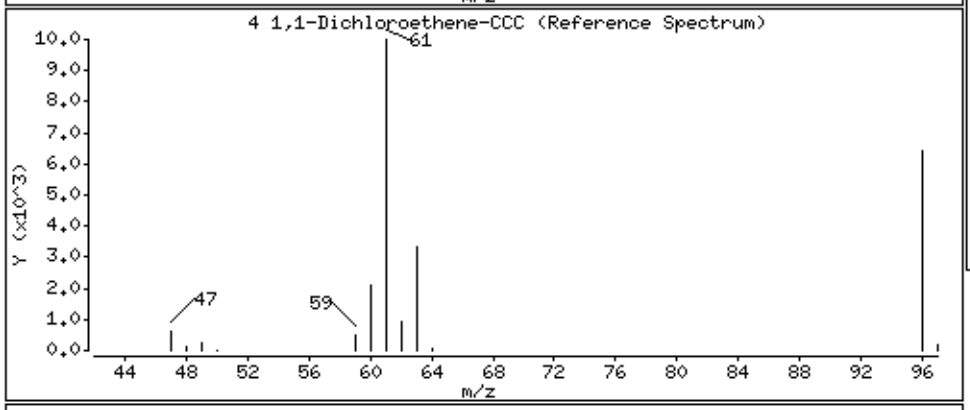
Concentration: 5.45002 ug

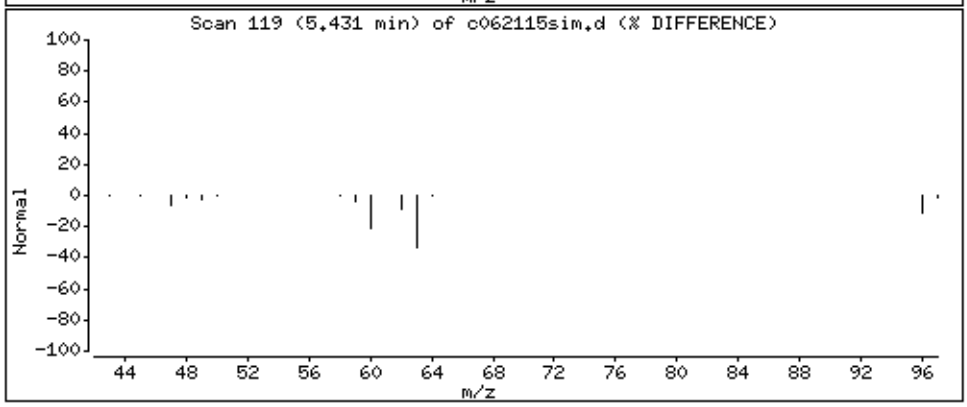












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

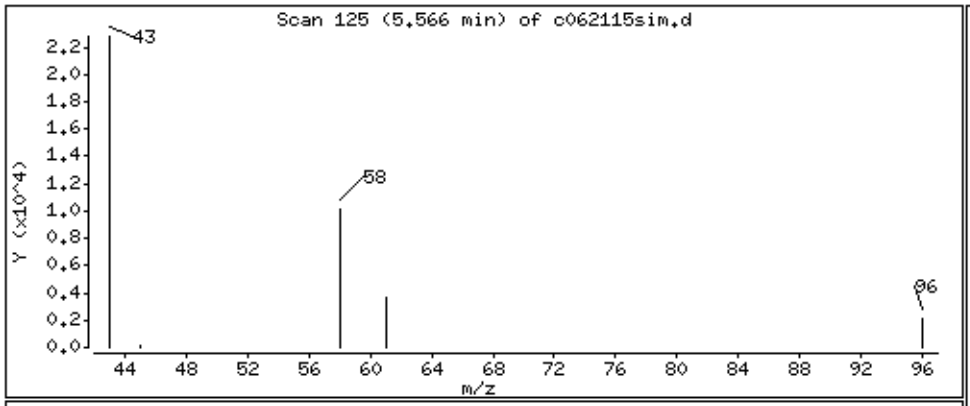
Operator: gm

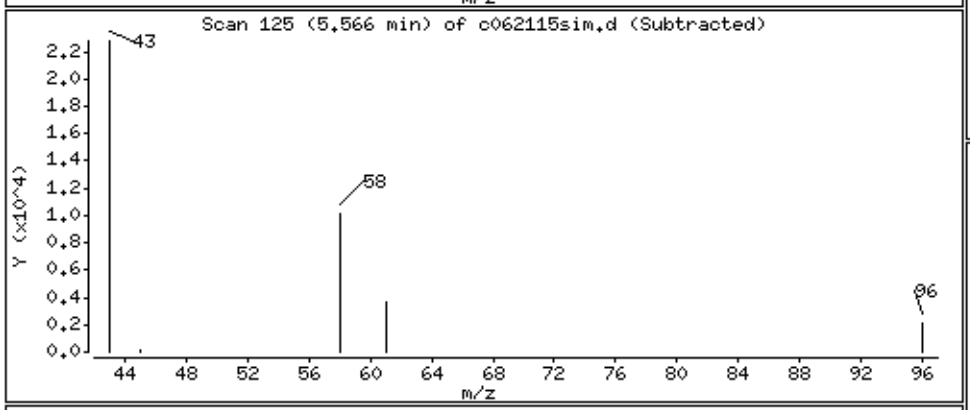
Column phase: DB-5.625

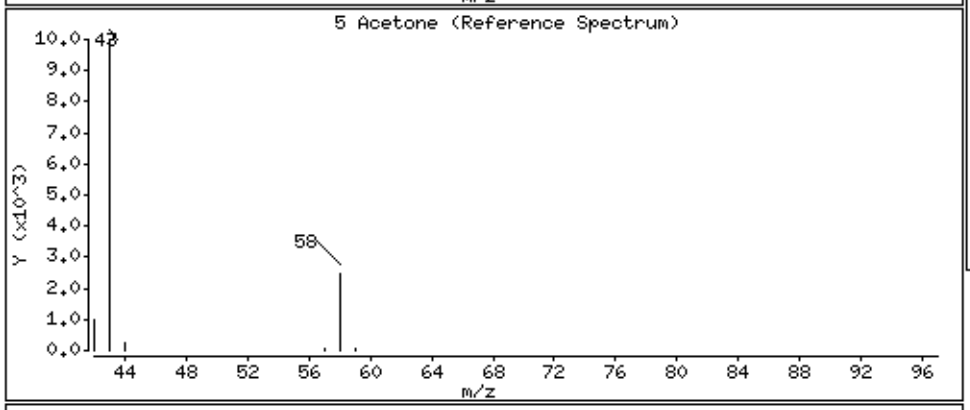
Column diameter: 0.25

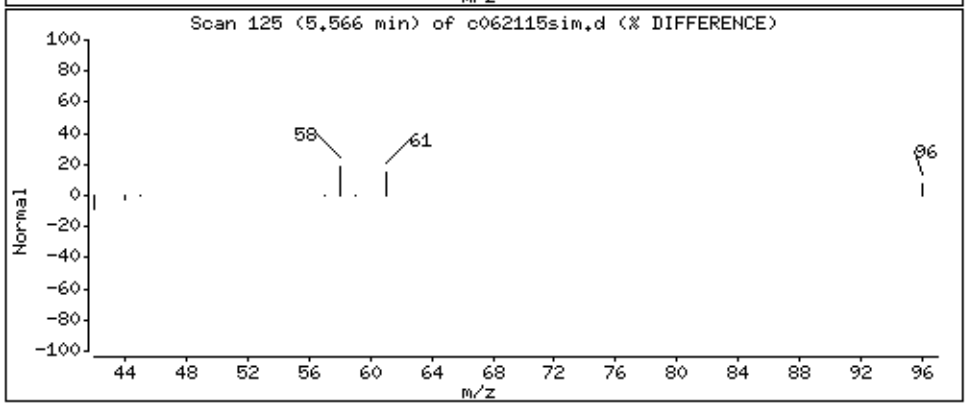
5 Acetone

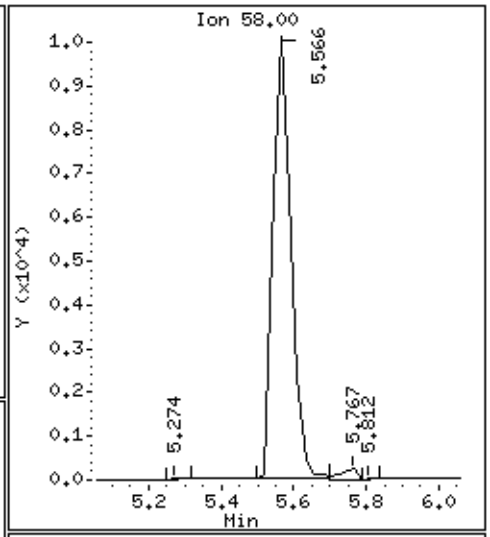
Concentration: 5.64259 ug

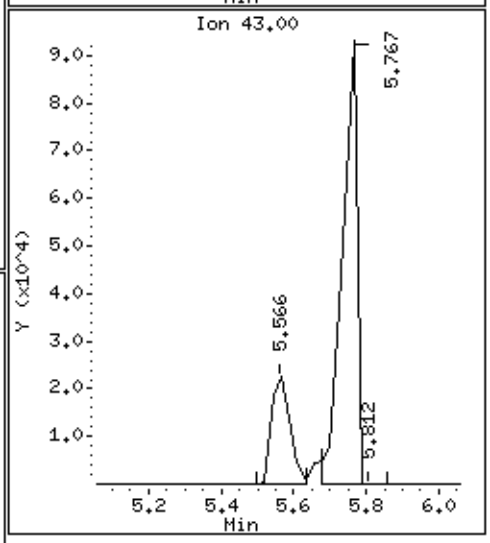












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

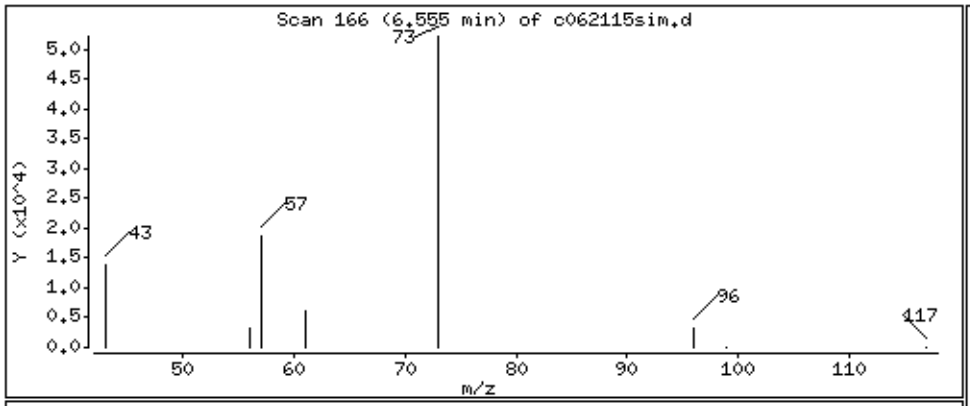
Operator: gm

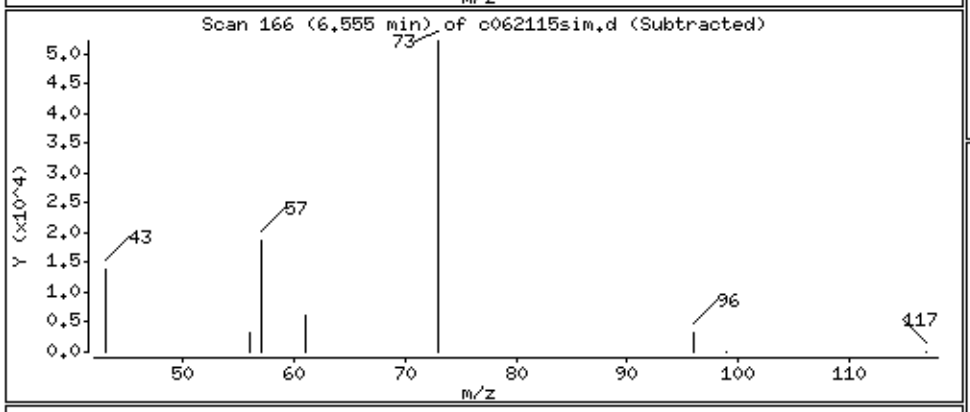
Column phase: DB-5.625

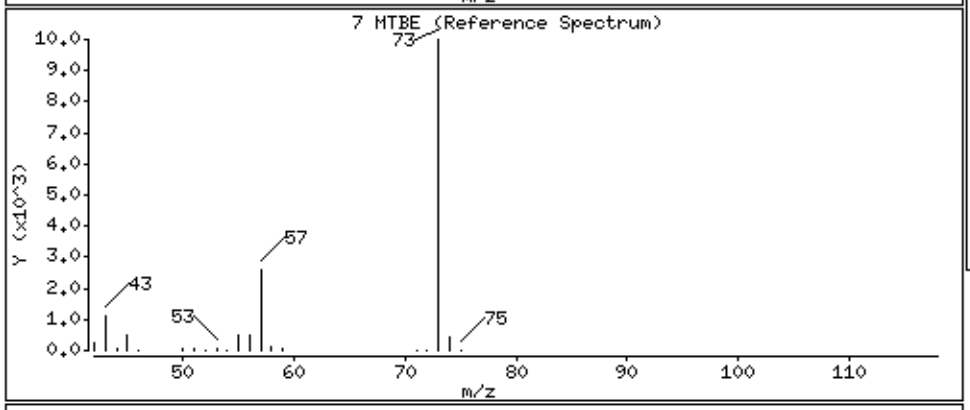
Column diameter: 0.25

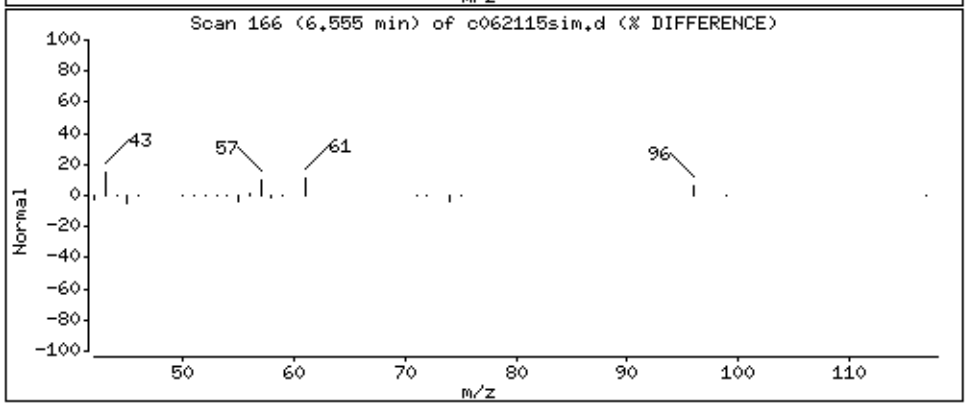
7 MTBE

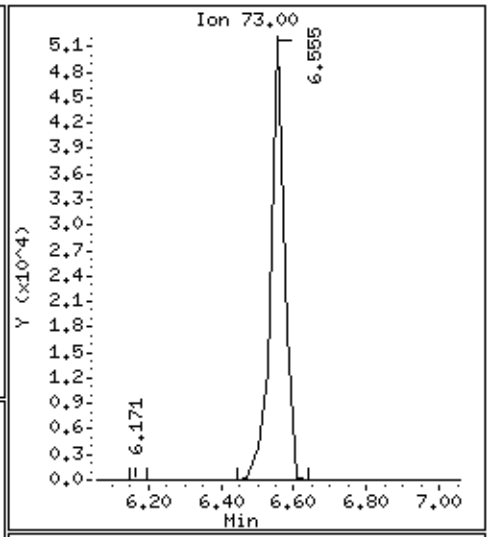
Concentration: 5.15904 ug

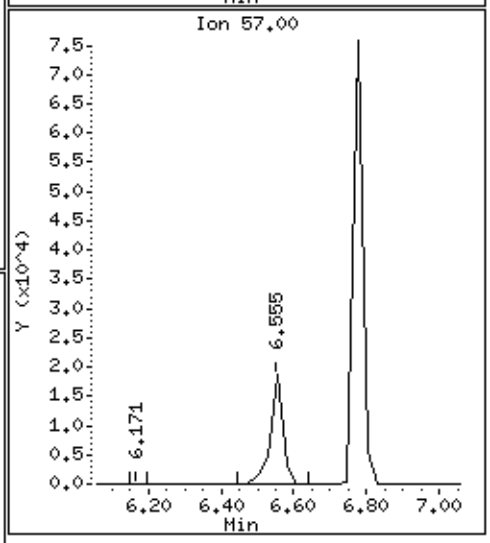












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

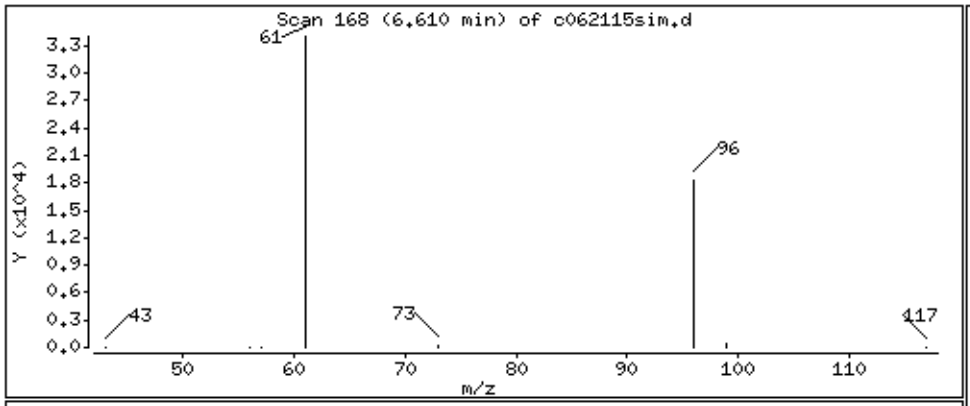
Operator: gm

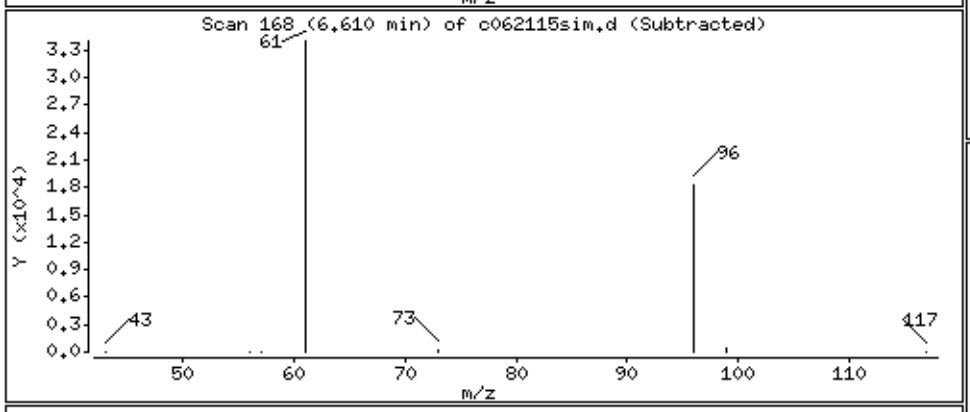
Column phase: DB-5.625

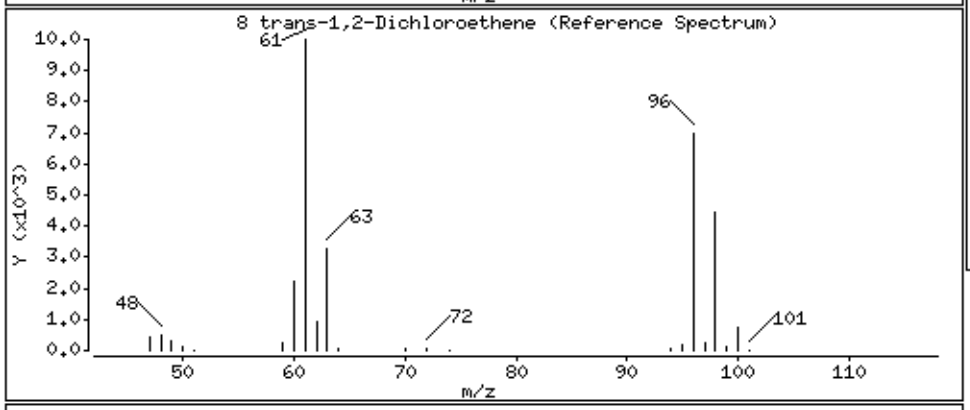
Column diameter: 0.25

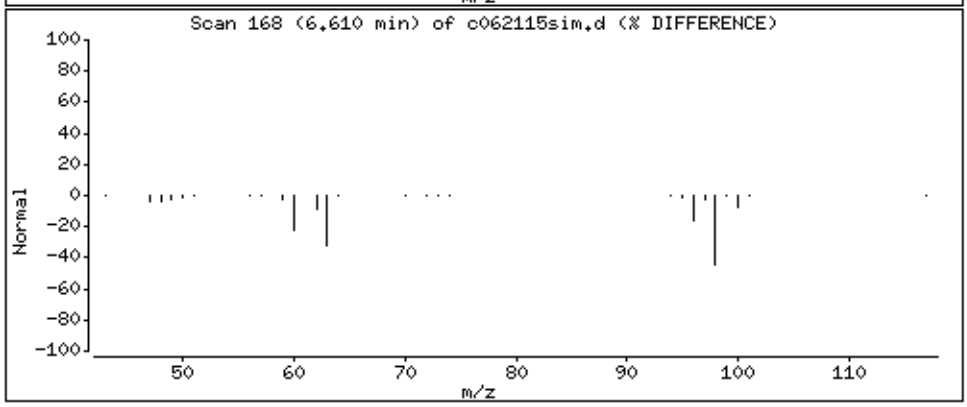
8 trans-1,2-Dichloroethene

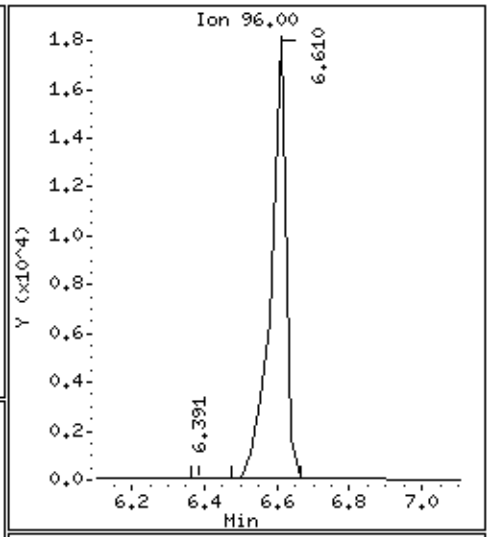
Concentration: 5.18310 ug

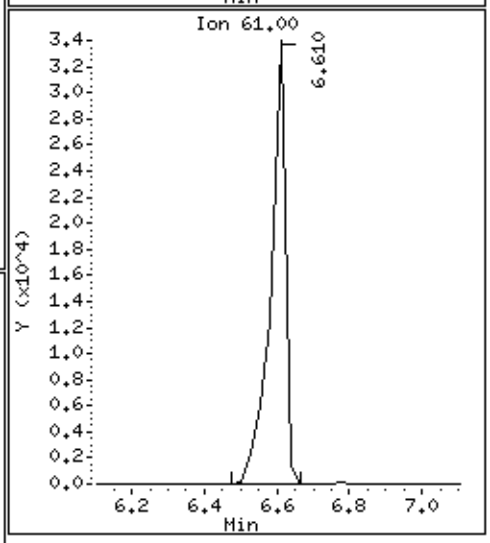












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

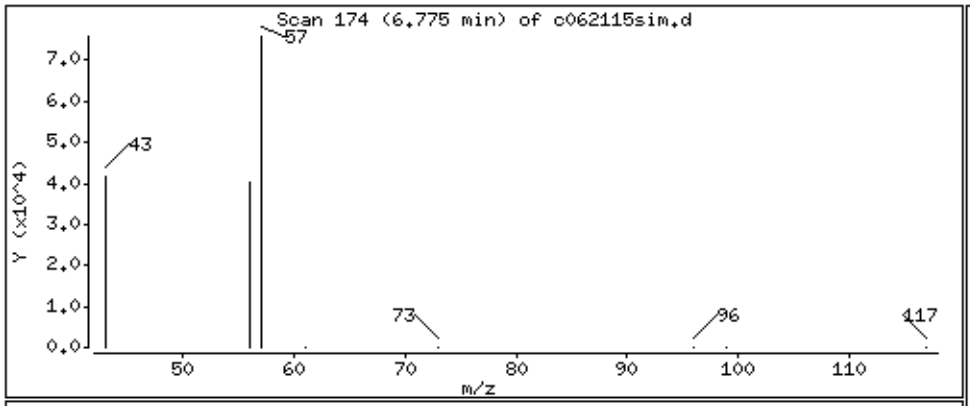
Operator: gm

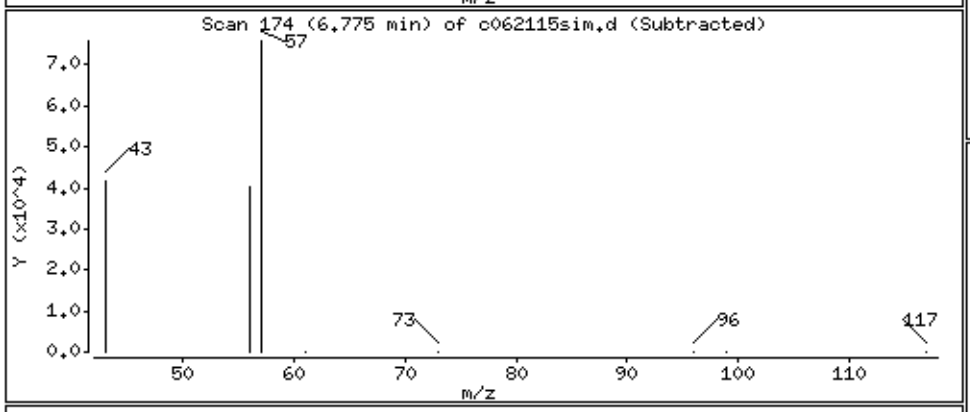
Column phase: DB-5.625

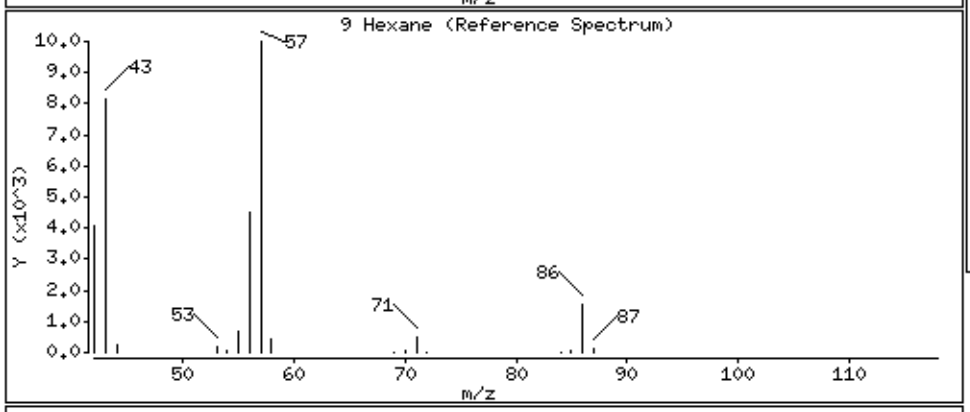
Column diameter: 0.25

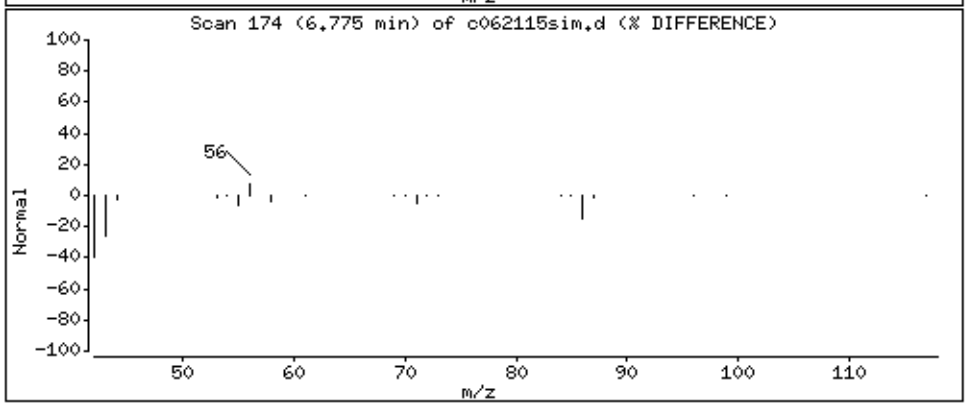
9 Hexane

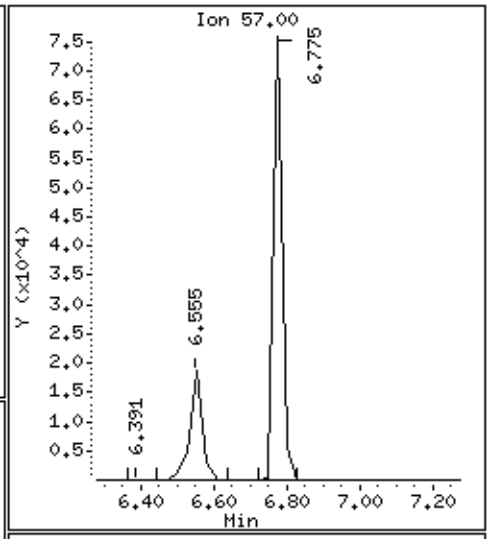
Concentration: 5.26032 ug

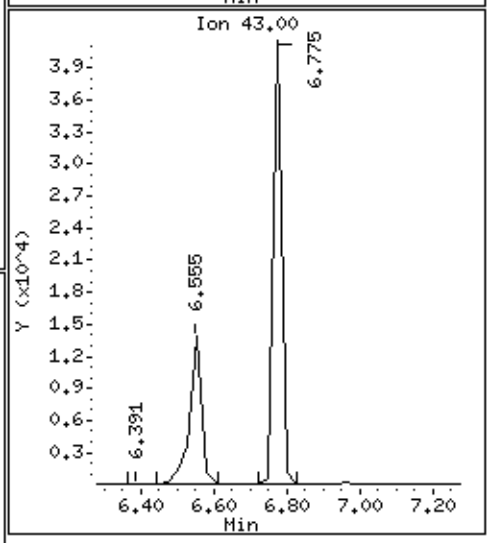












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

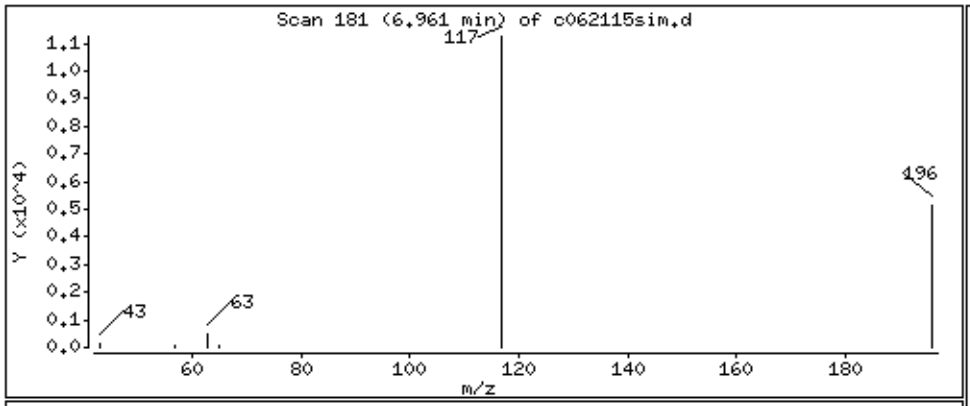
Operator: gm

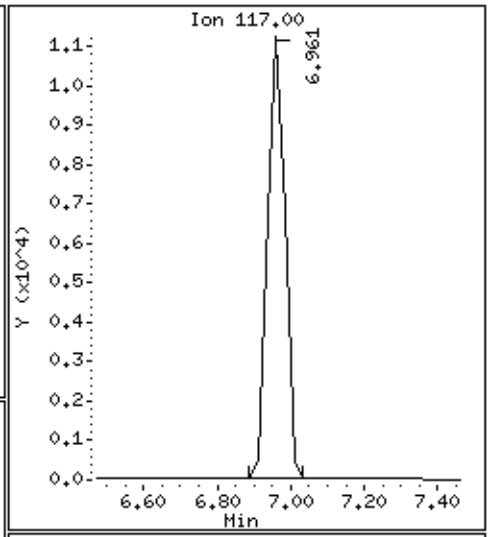
Column phase: DB-5.625

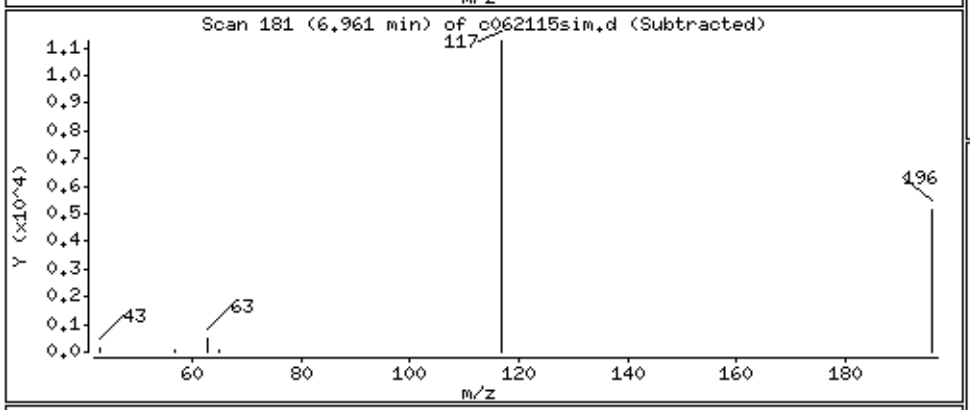
Column diameter: 0.25

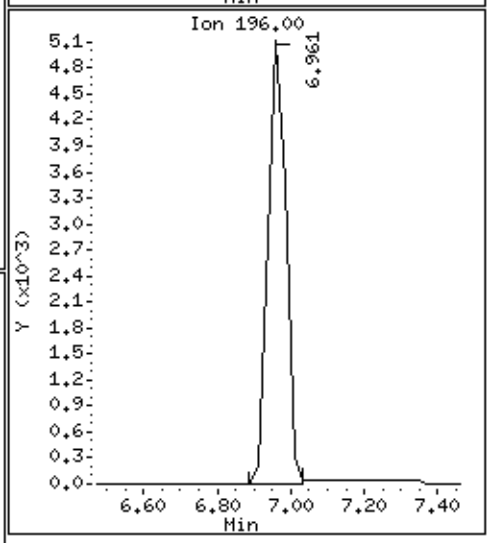
10 Halothane

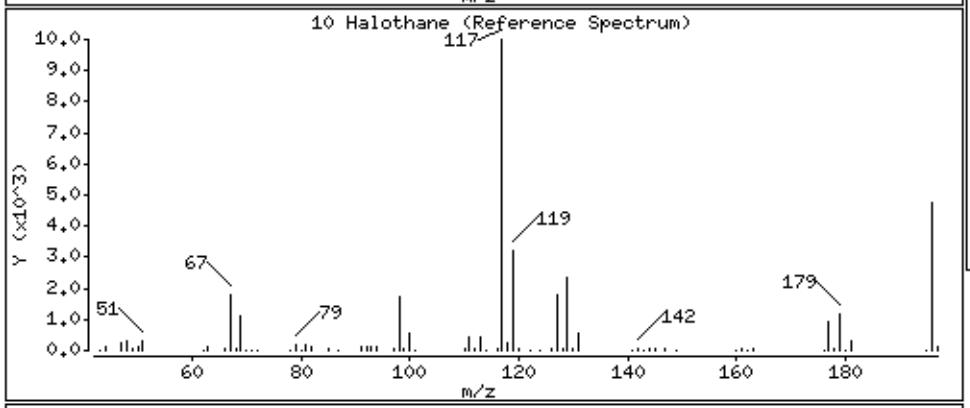
Concentration: 5.44914 ug

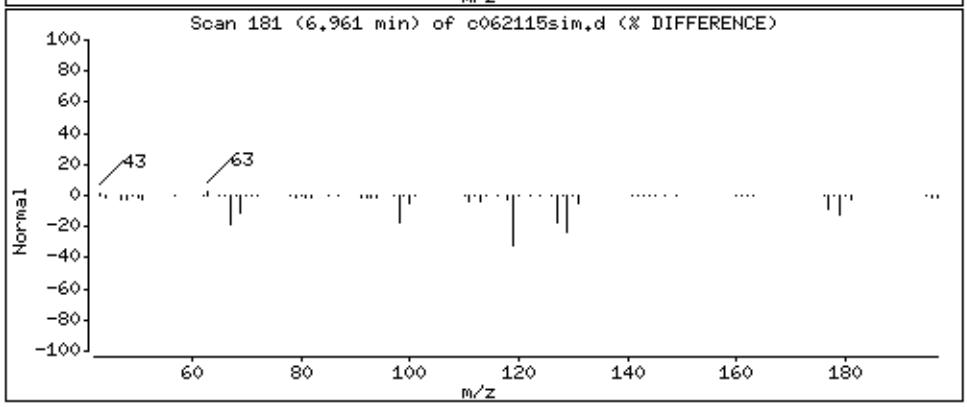












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

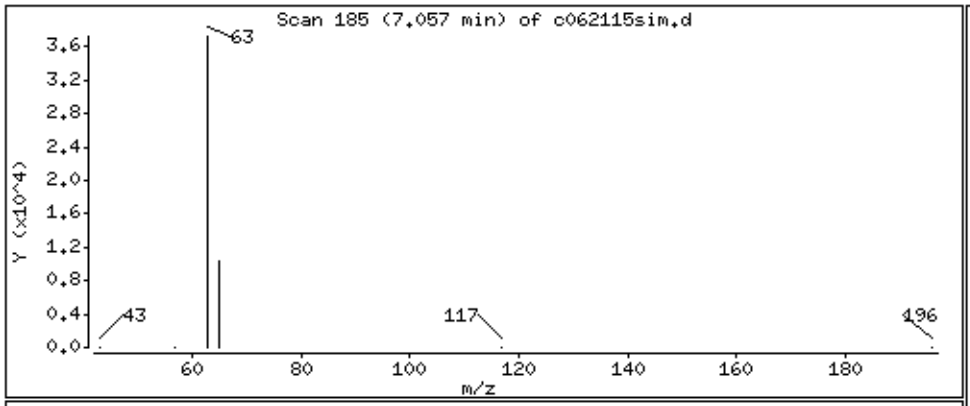
Operator: gm

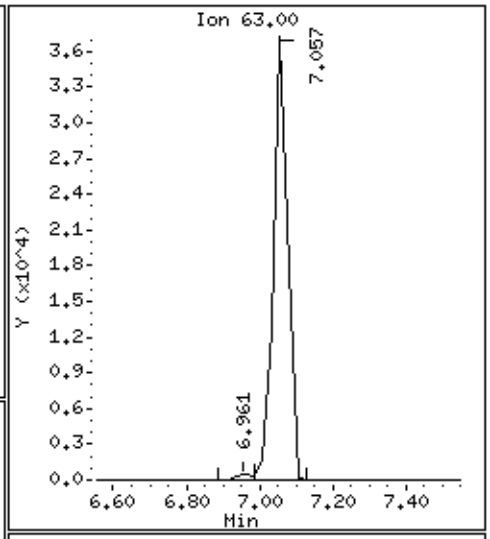
Column phase: DB-5.625

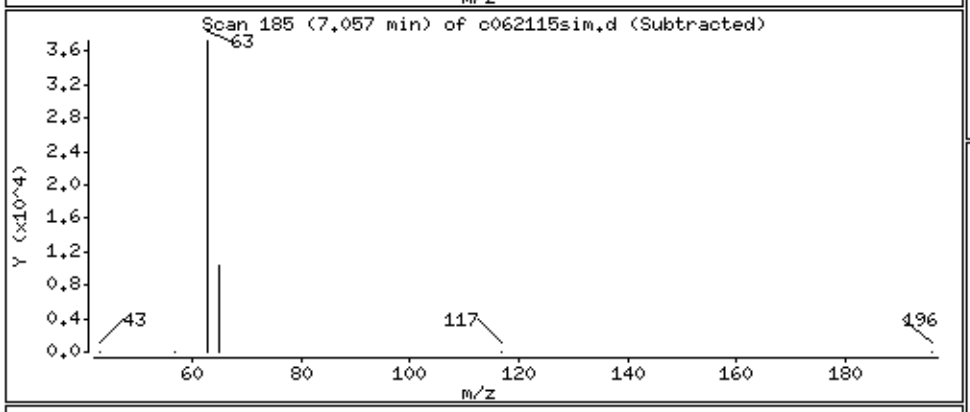
Column diameter: 0.25

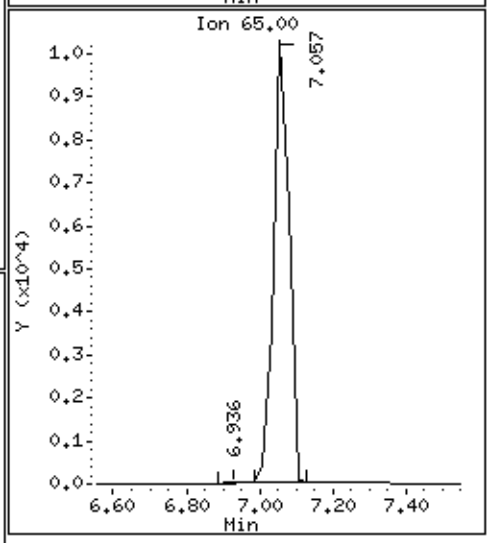
11 1,1-Dichloroethane-SPCC

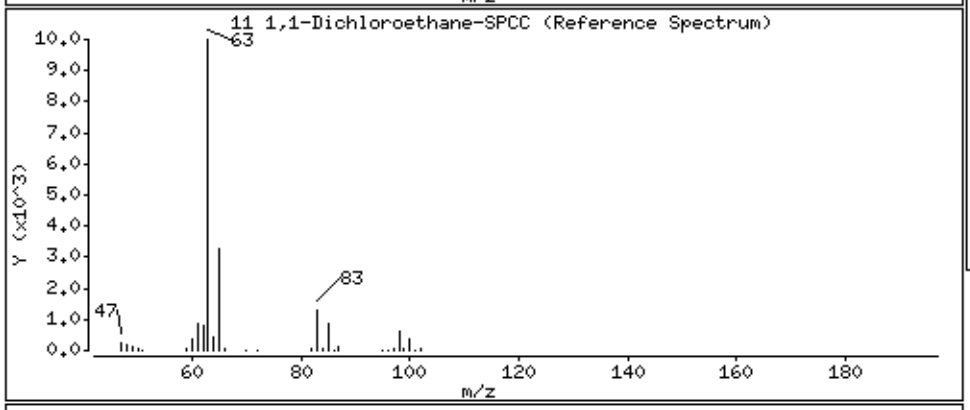
Concentration: 5.03135 ug

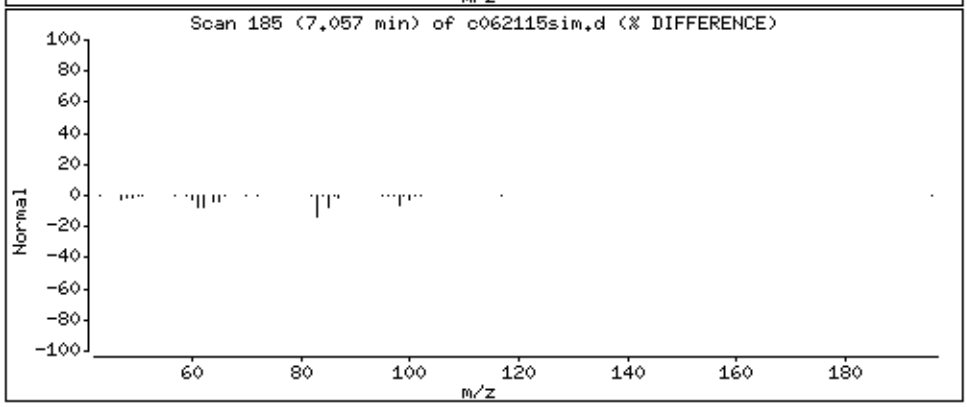












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

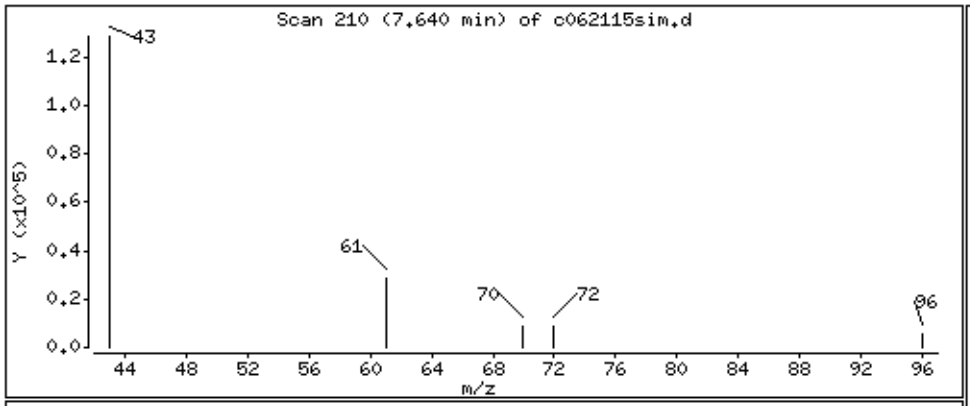
Operator: gm

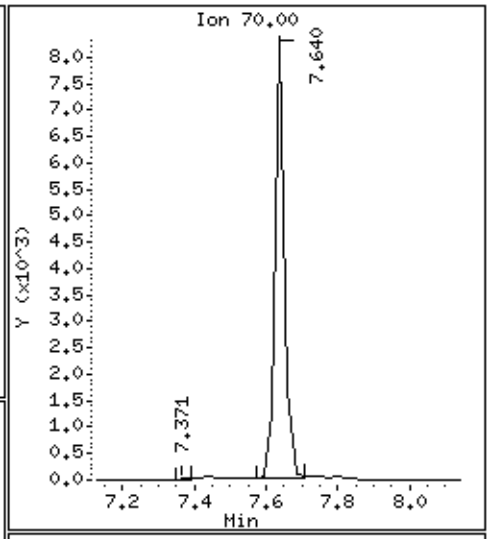
Column phase: DB-5.625

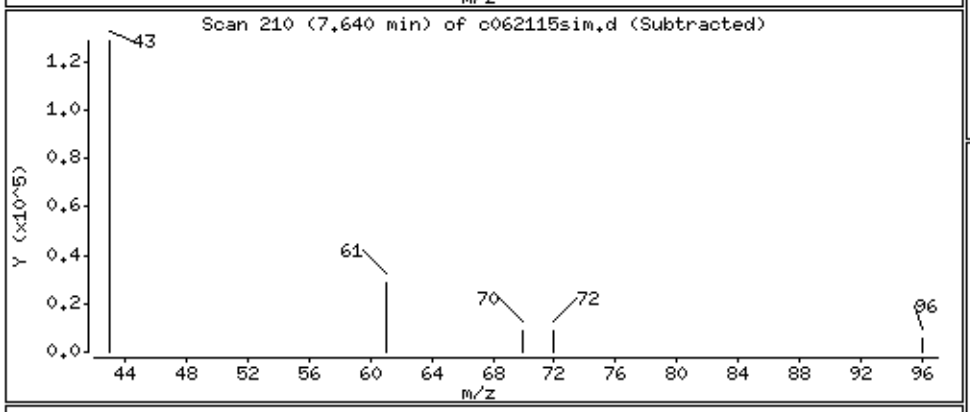
Column diameter: 0.25

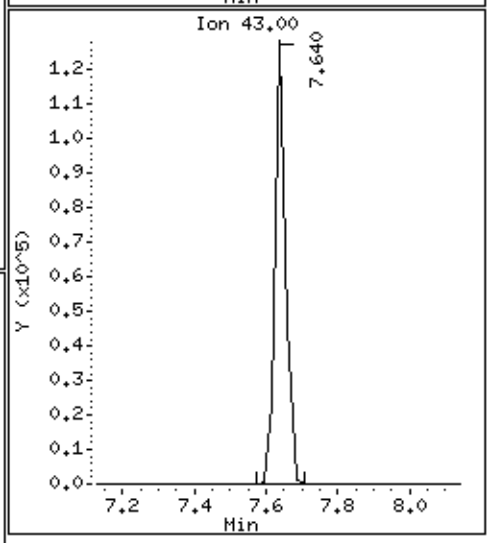
12 Ethyl Acetate

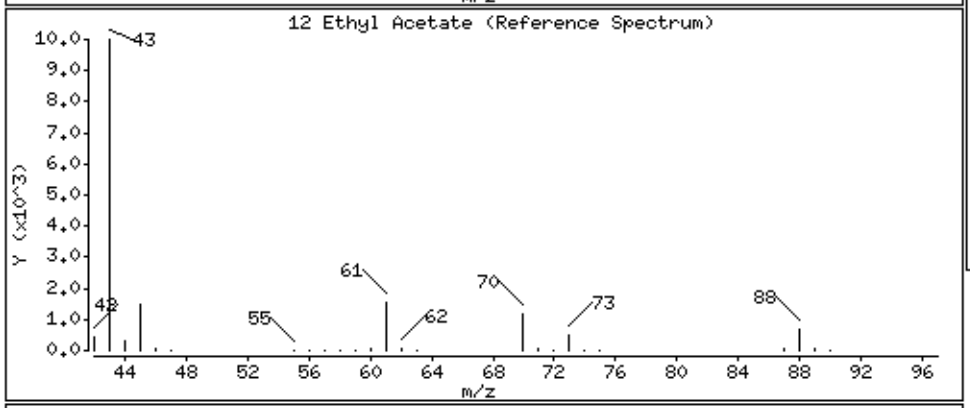
Concentration: 5.17633 ug

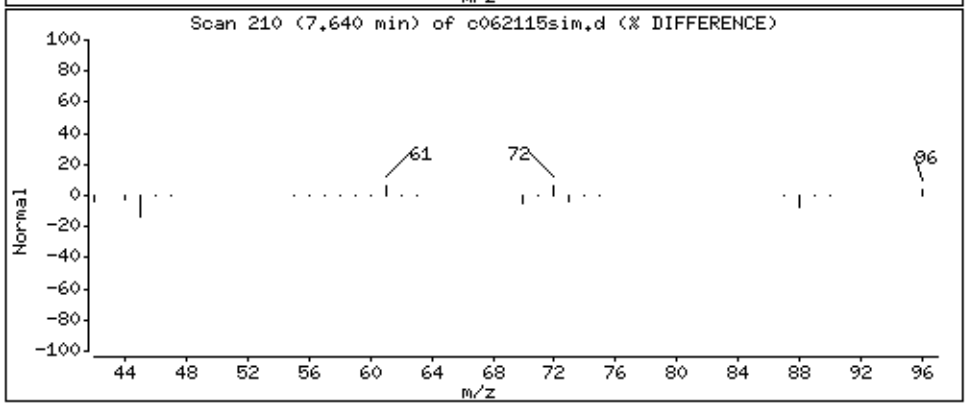












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

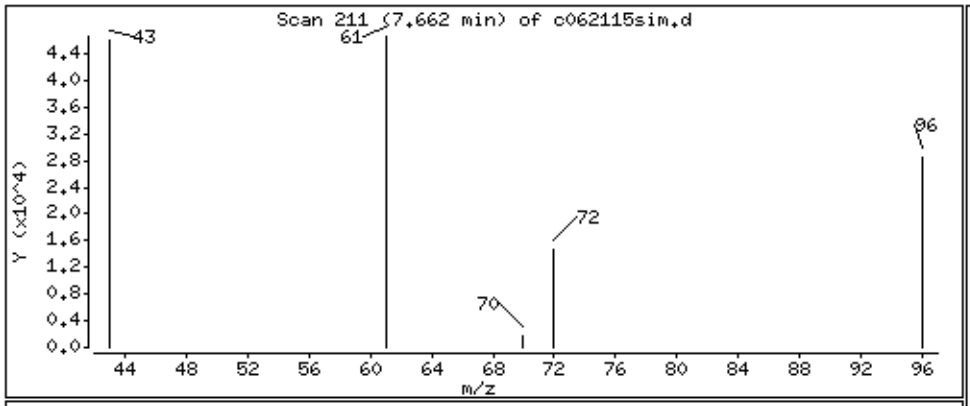
Operator: gm

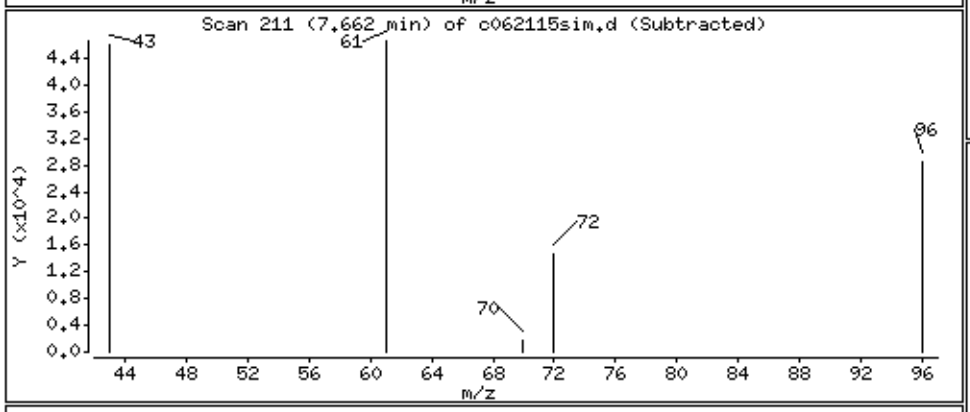
Column phase: DB-5.625

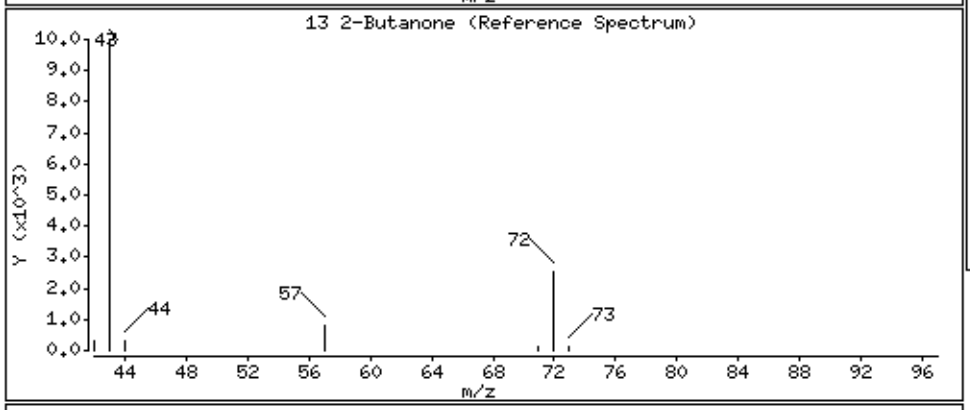
Column diameter: 0.25

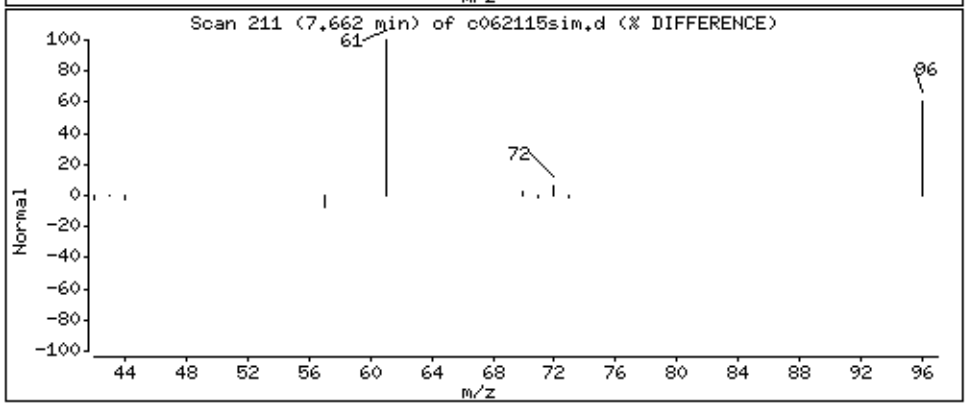
13 2-Butanone

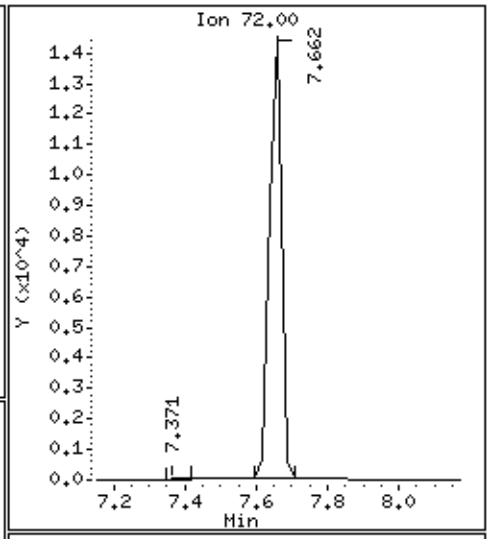
Concentration: 5.13398 ug

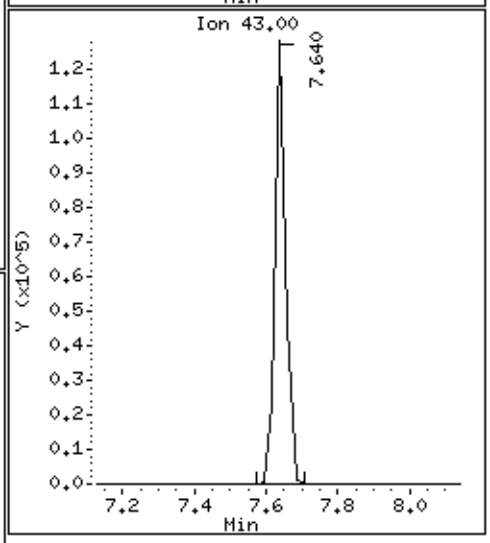












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

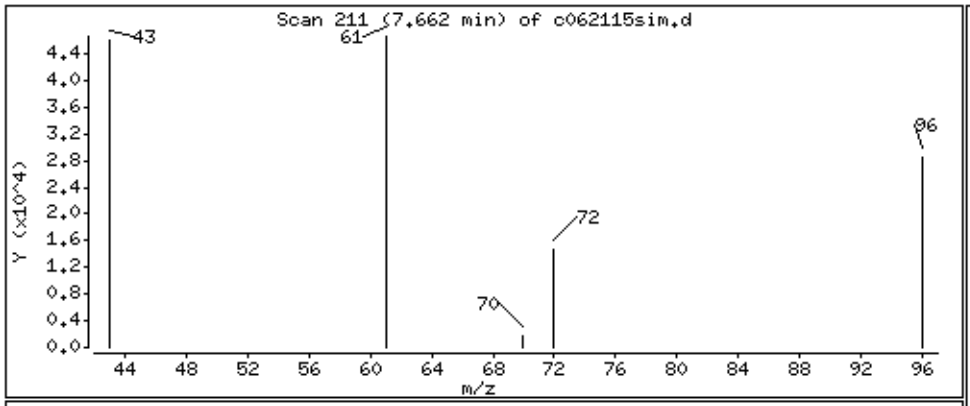
Operator: gm

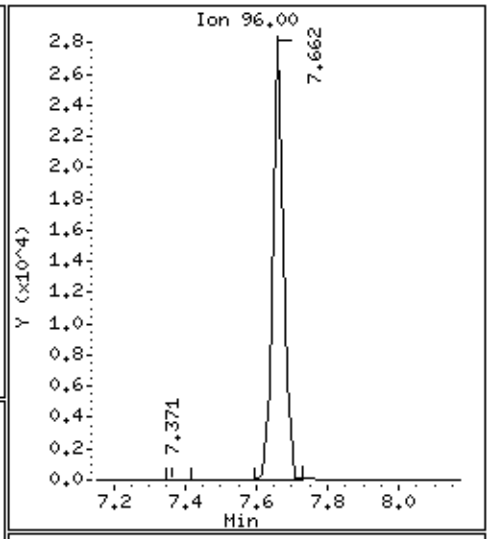
Column phase: DB-5.625

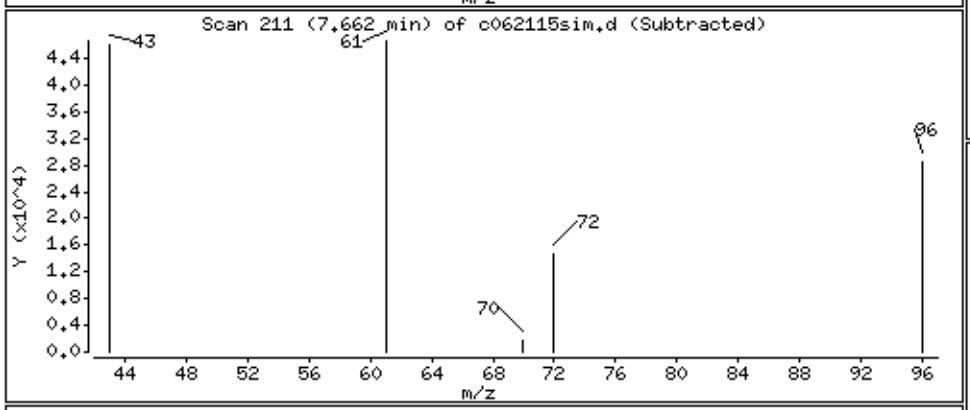
Column diameter: 0.25

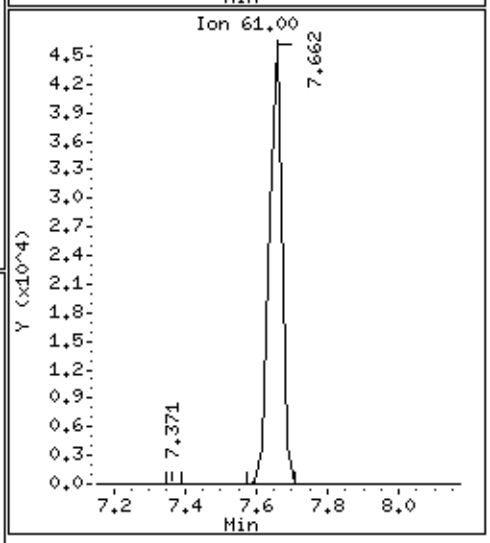
14 cis-1,2-Dichloroethene

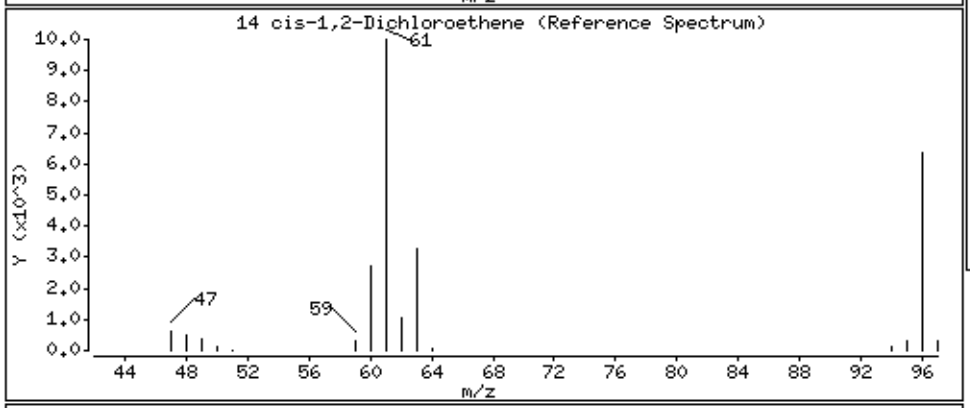
Concentration: 5.09981 ug

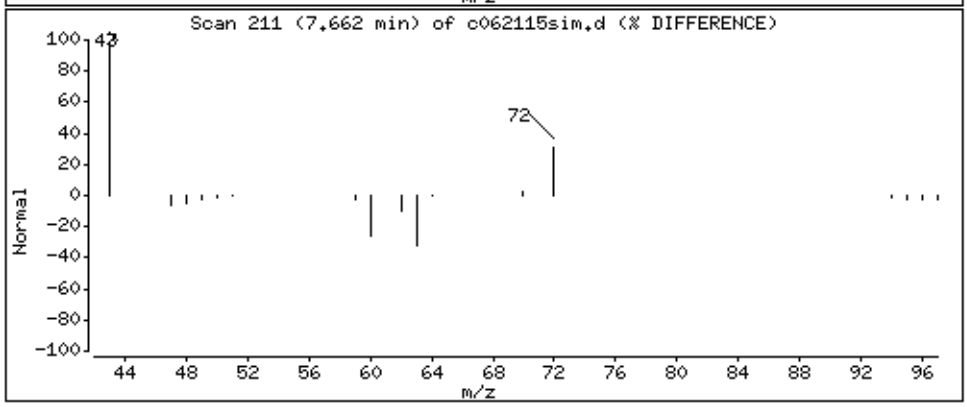












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

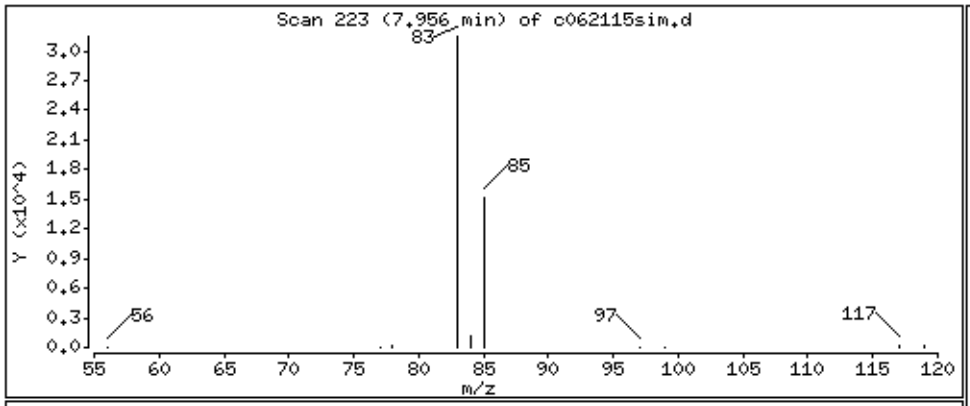
Operator: gm

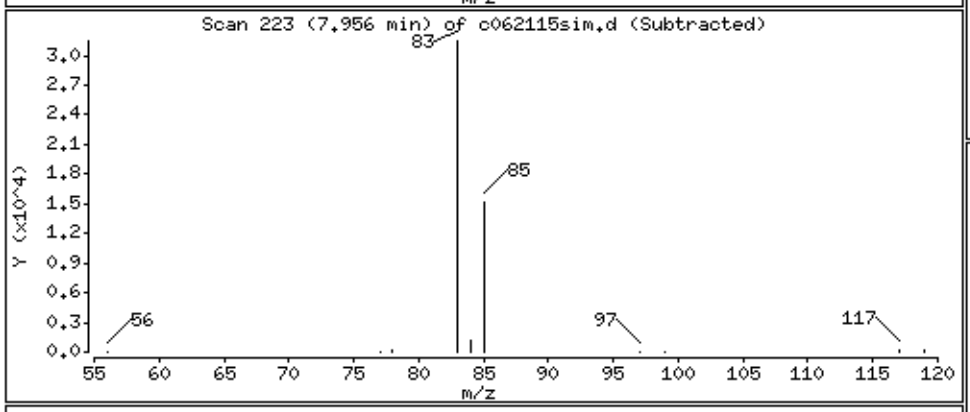
Column phase: DB-5.625

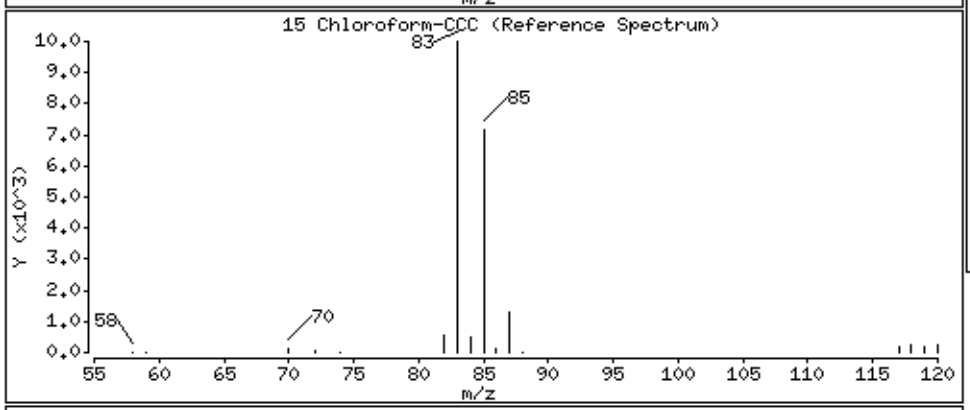
Column diameter: 0.25

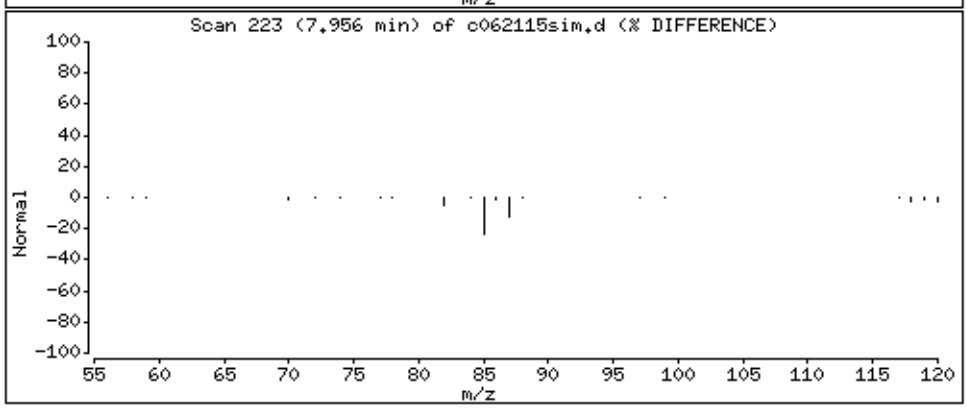
15 Chloroform-CCC

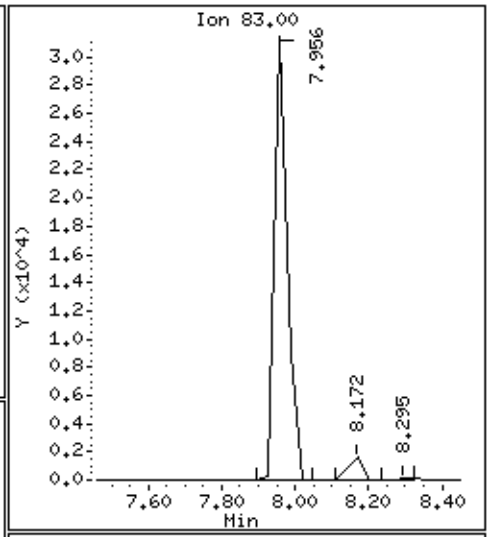
Concentration: 4.77250 ug

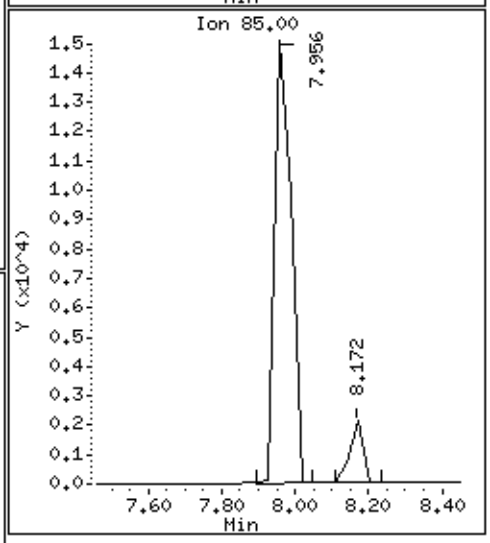












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

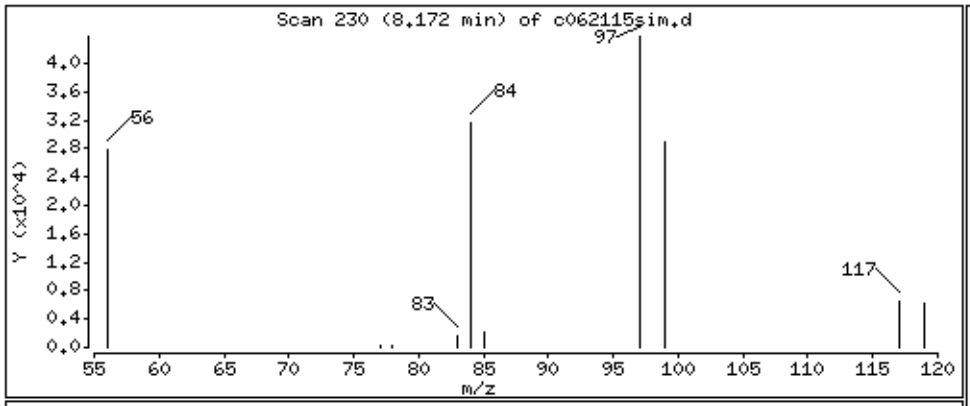
Operator: gm

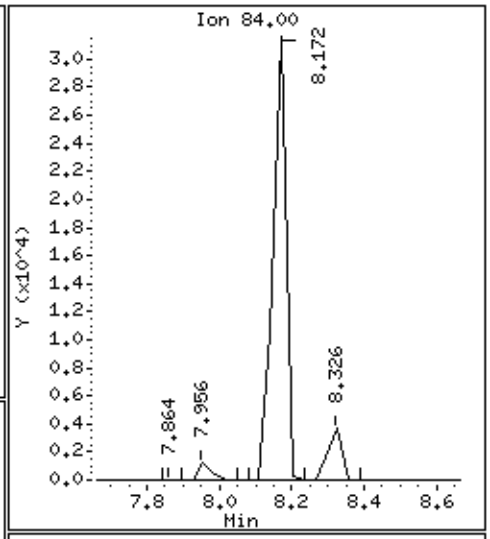
Column phase: DB-5.625

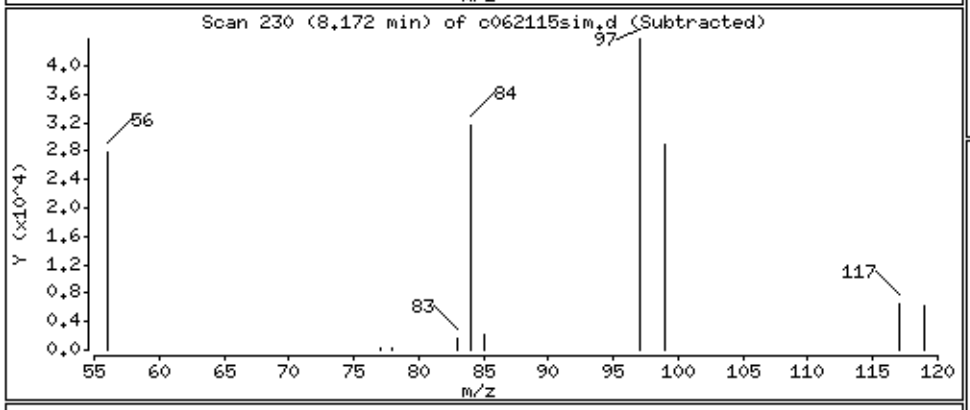
Column diameter: 0.25

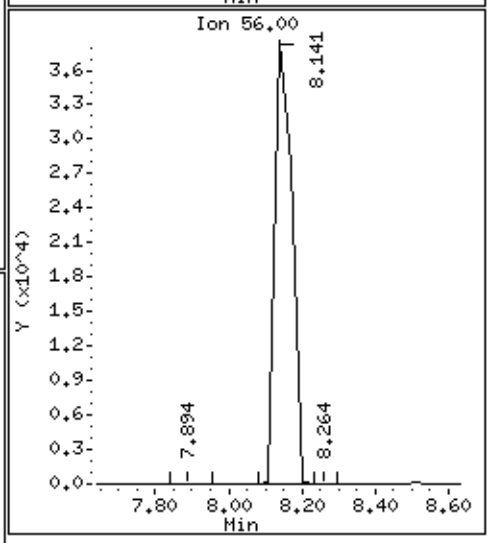
16 Cyclohexane

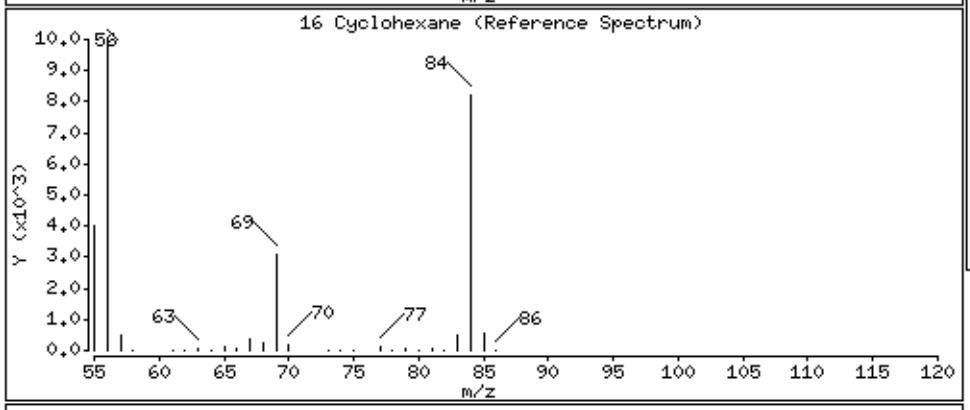
Concentration: 4.74560 ug

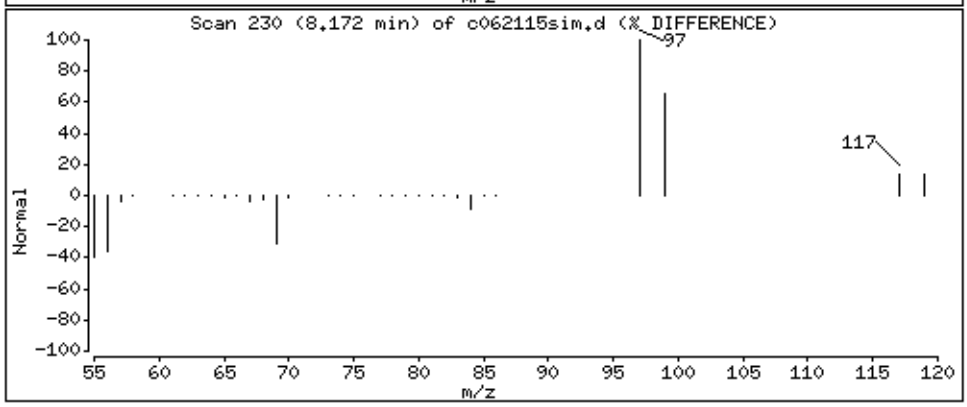












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

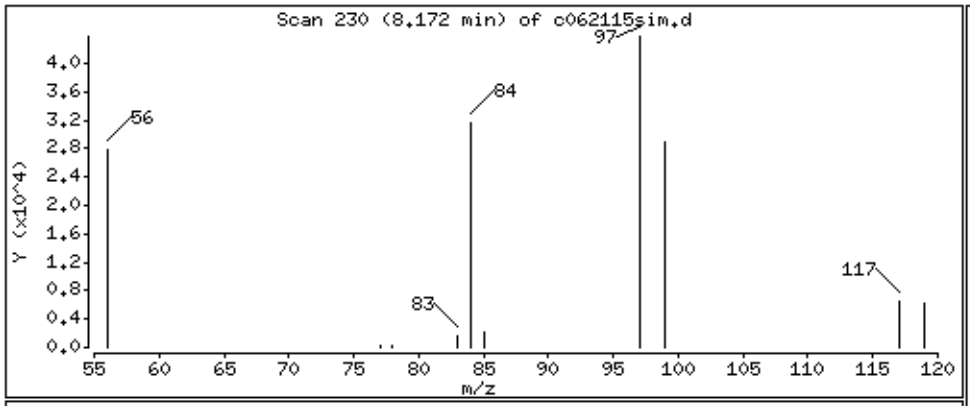
Operator: gm

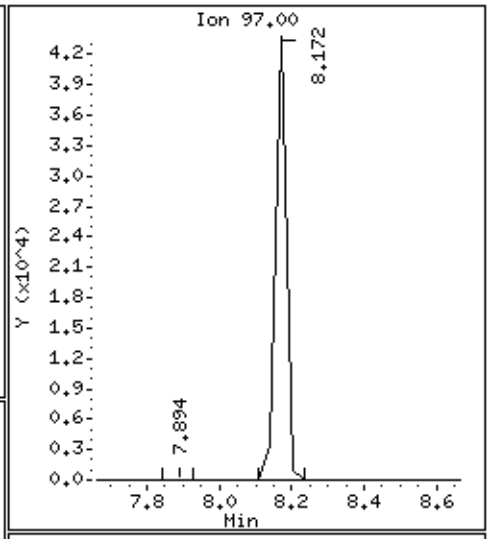
Column phase: DB-5.625

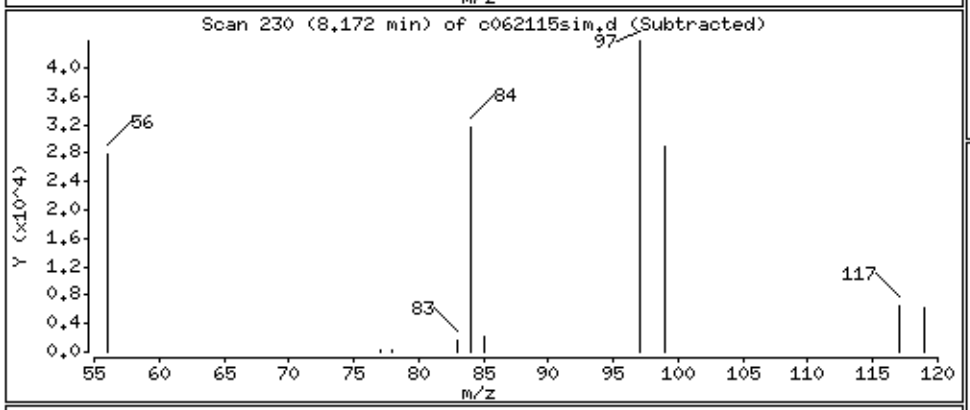
Column diameter: 0.25

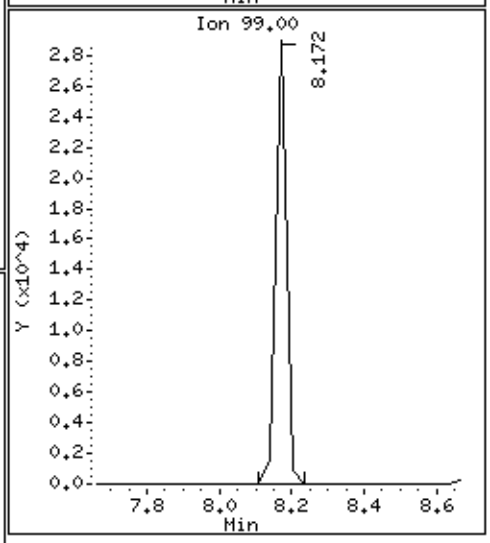
17 1,1,1-Trichloroethane

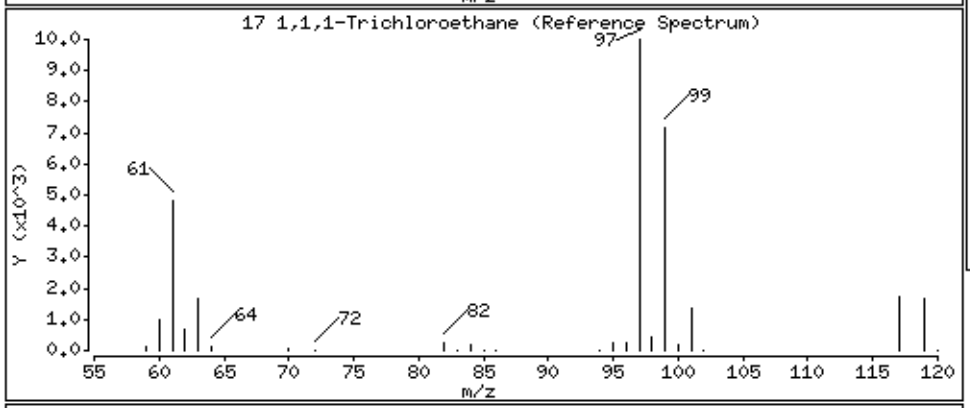
Concentration: 4.97121 ug

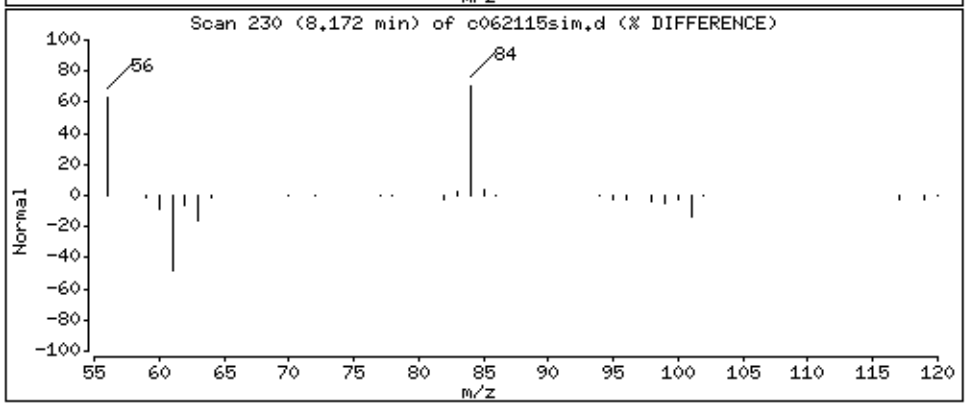












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

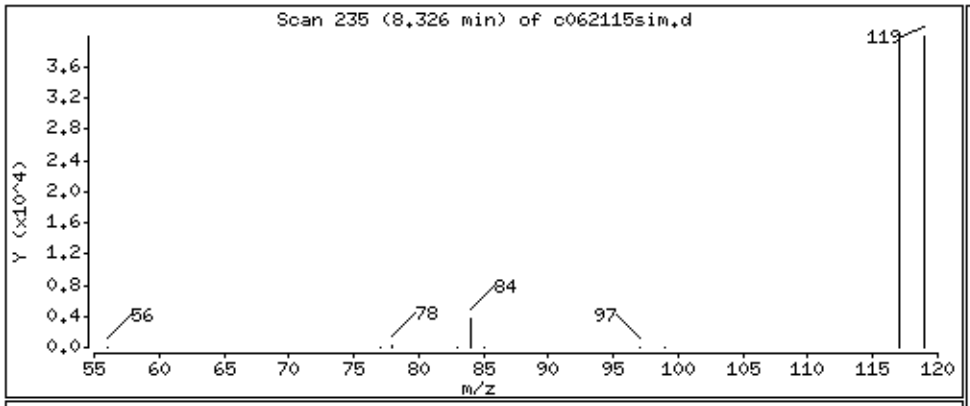
Operator: gm

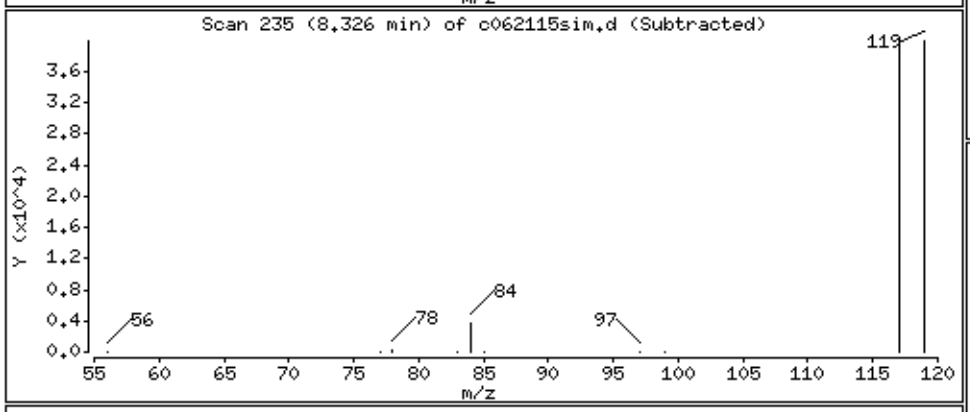
Column phase: DB-5.625

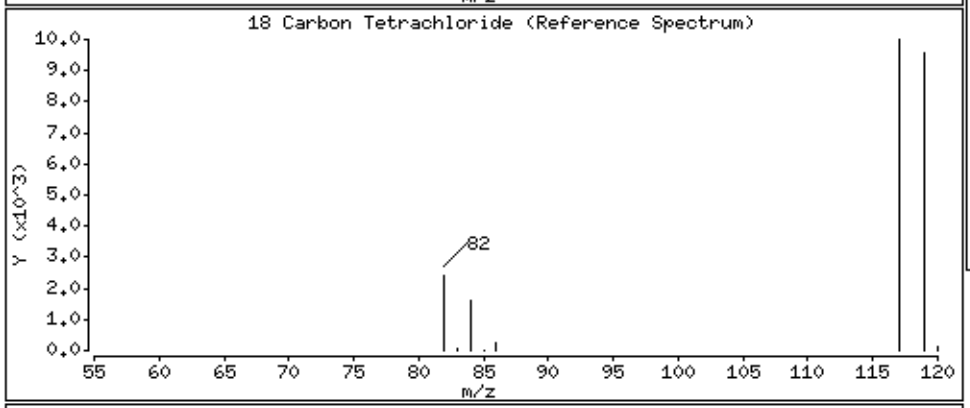
Column diameter: 0.25

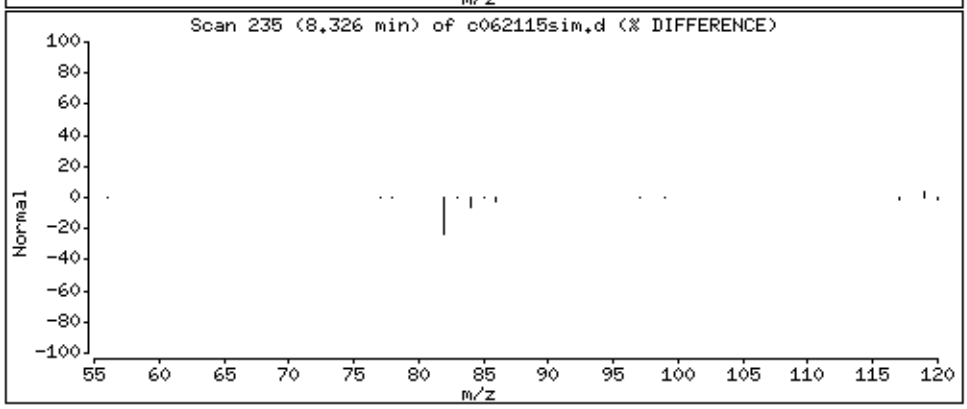
18 Carbon Tetrachloride

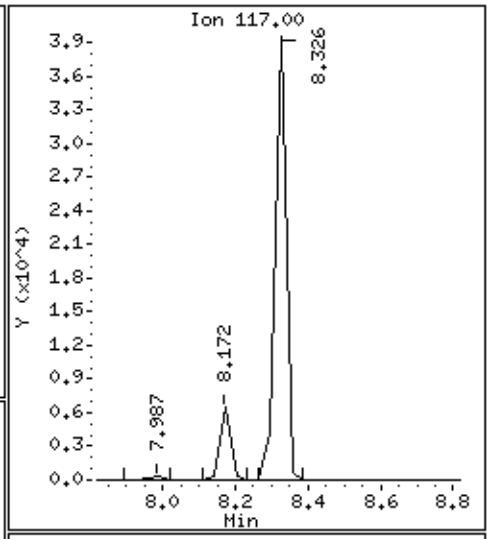
Concentration: 4.85353 ug

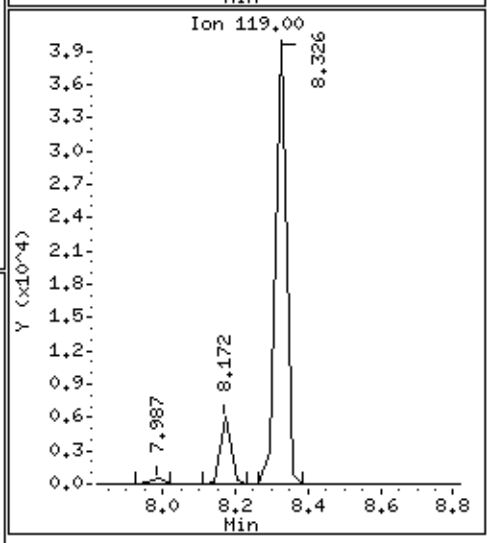












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

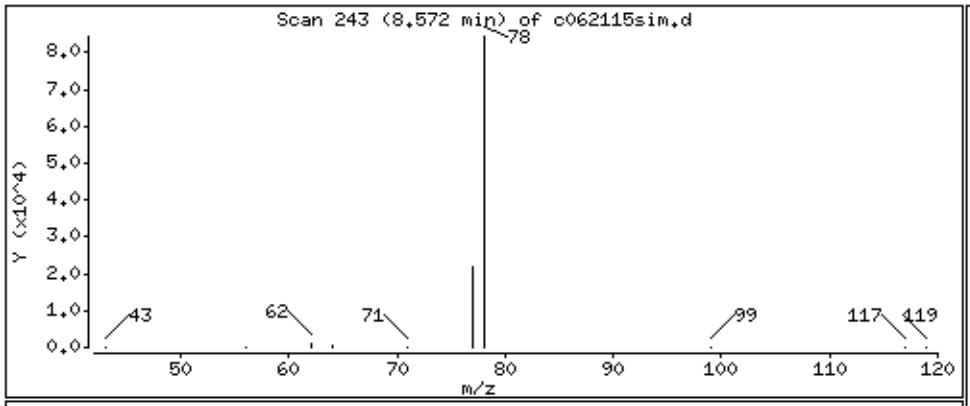
Operator: gm

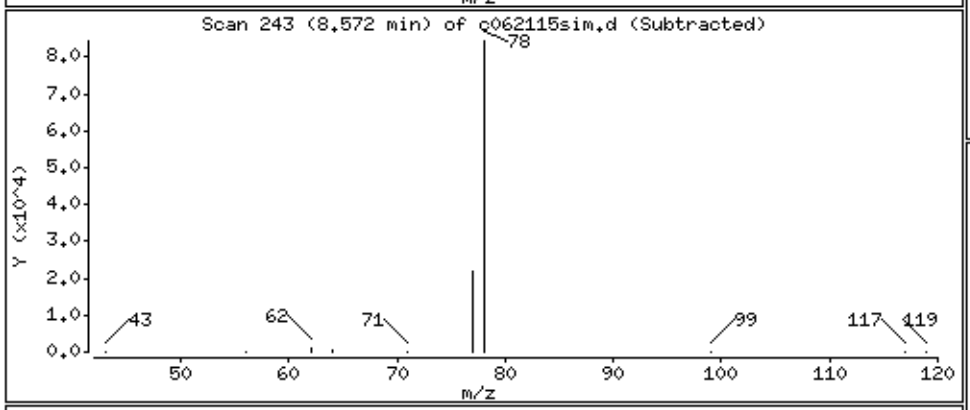
Column phase: DB-5.625

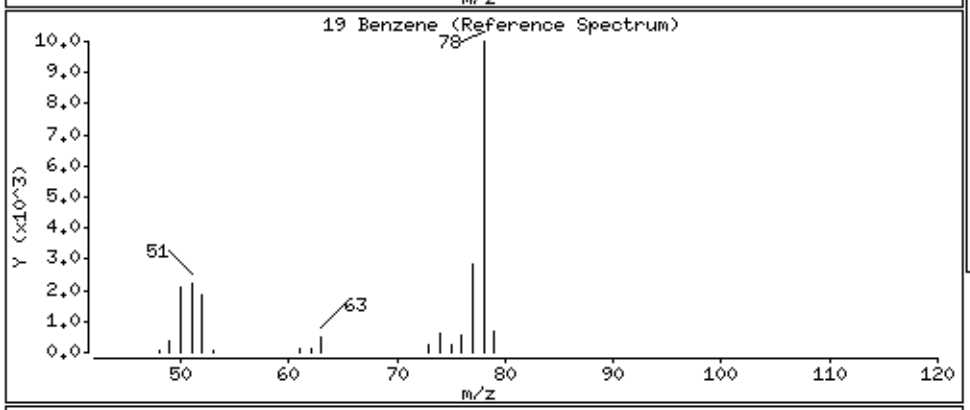
Column diameter: 0.25

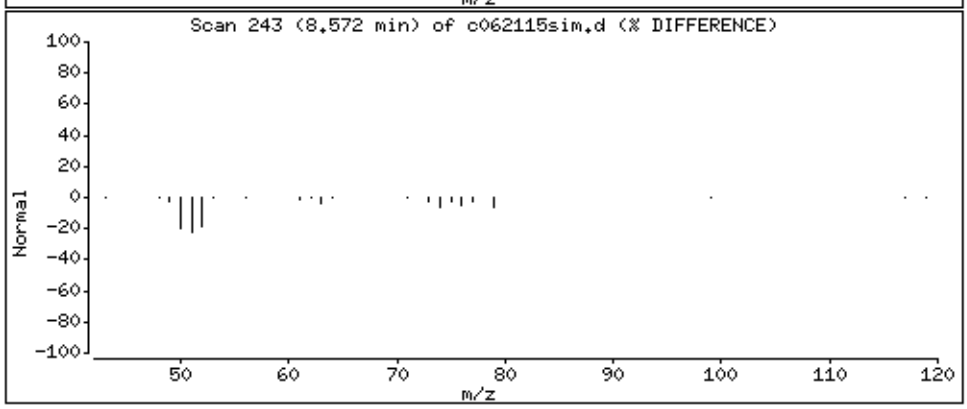
19 Benzene

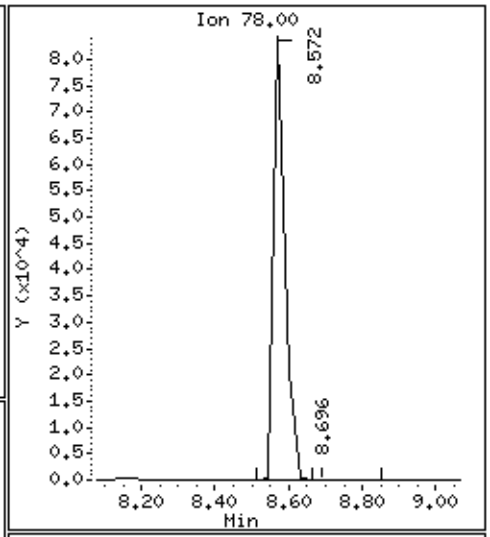
Concentration: 4.82273 ug

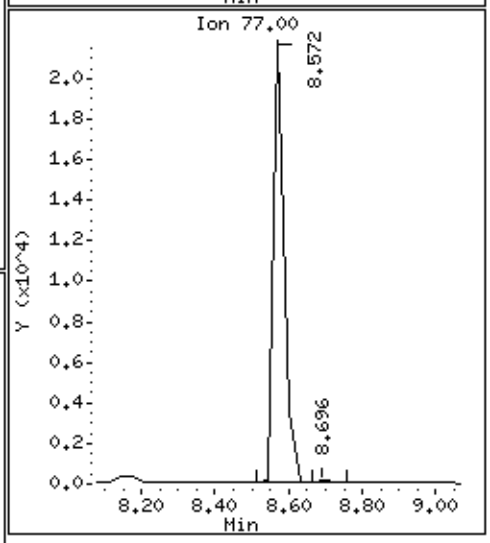












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

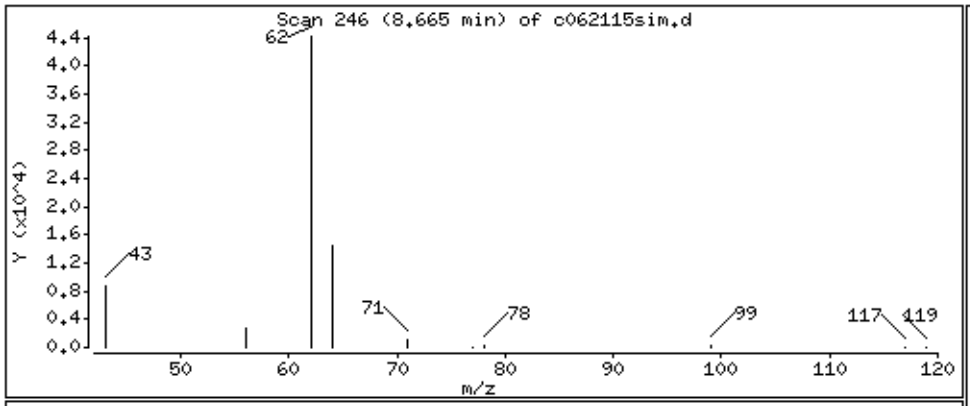
Operator: gm

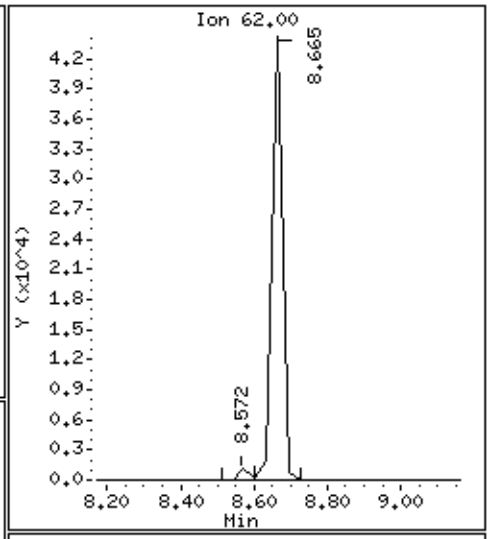
Column phase: DB-5.625

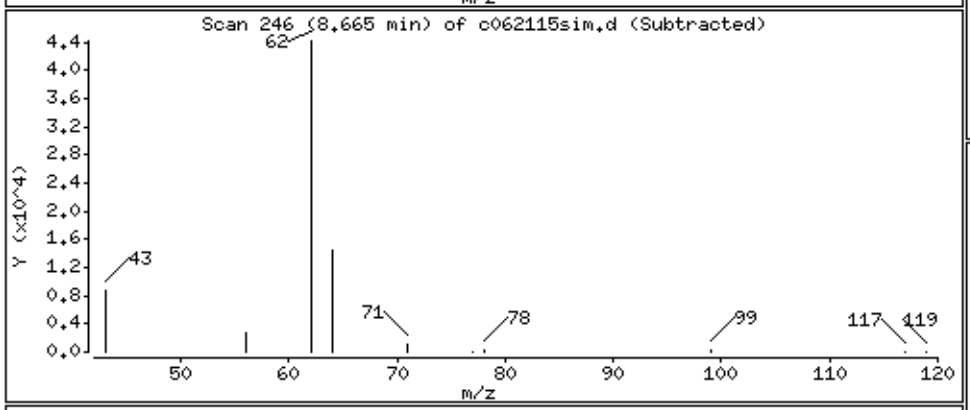
Column diameter: 0.25

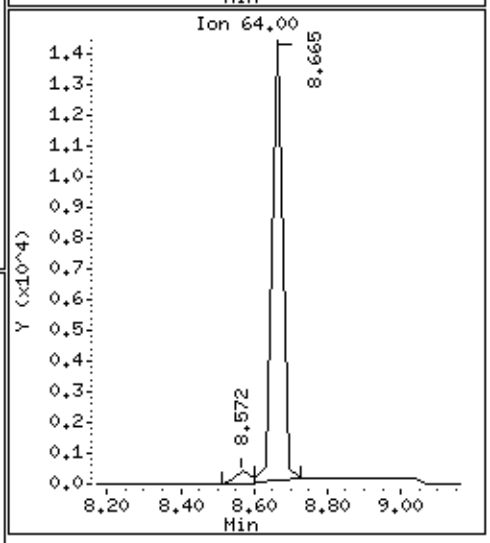
20 1,2-Dichloroethane

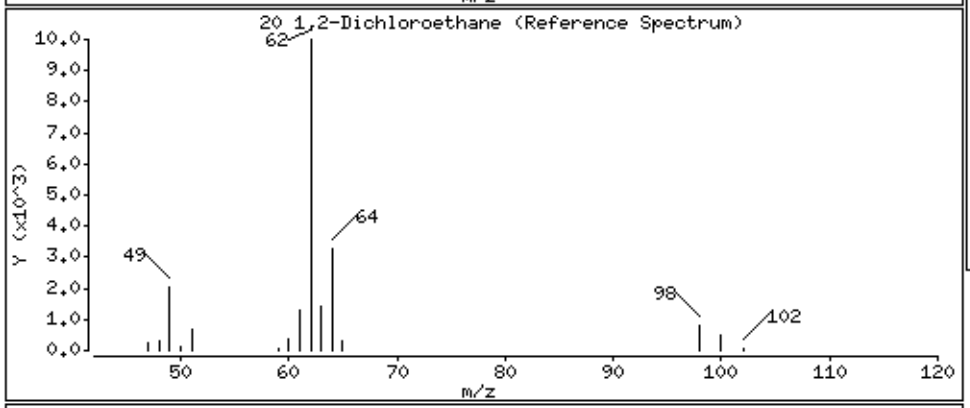
Concentration: 4.81027 ug

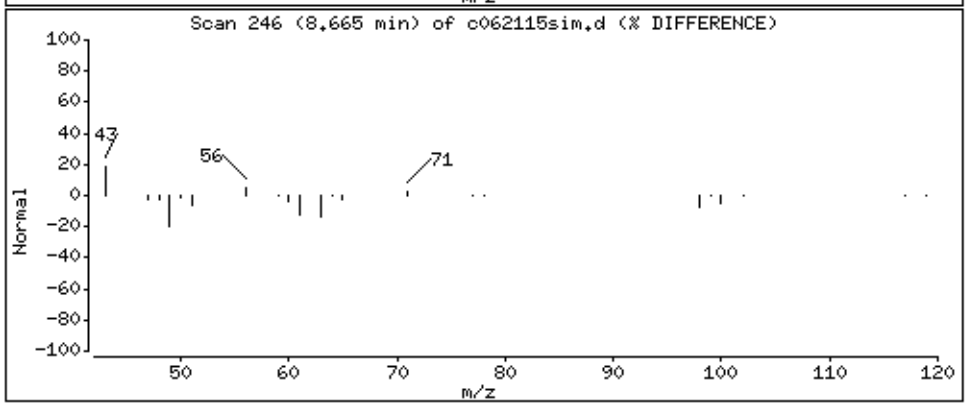












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

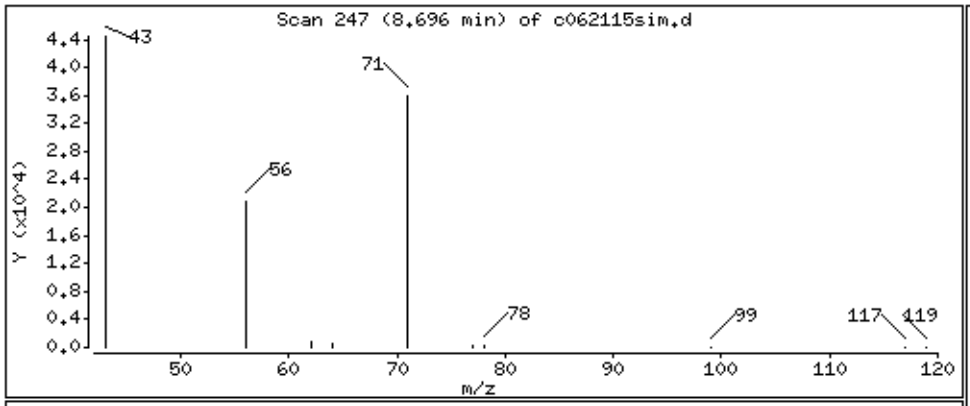
Operator: gm

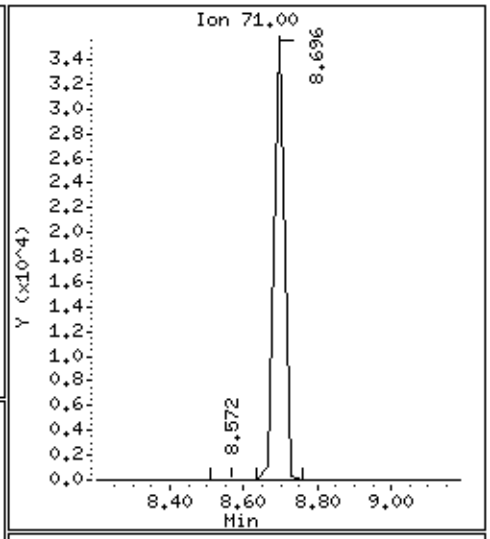
Column phase: DB-5.625

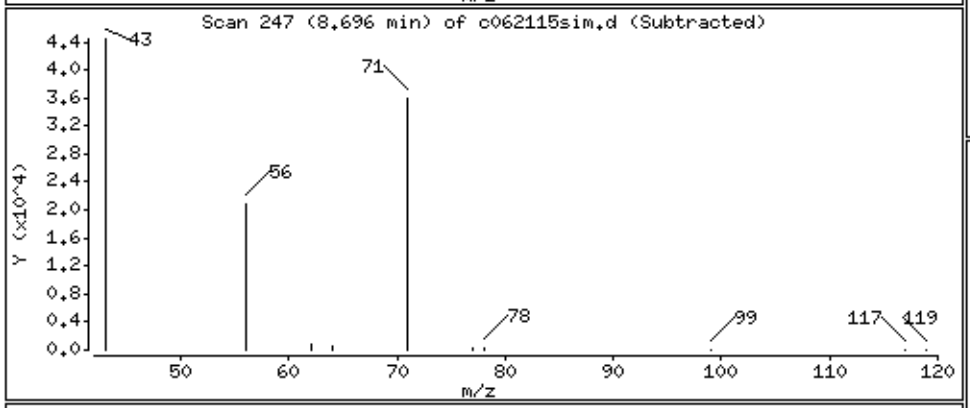
Column diameter: 0.25

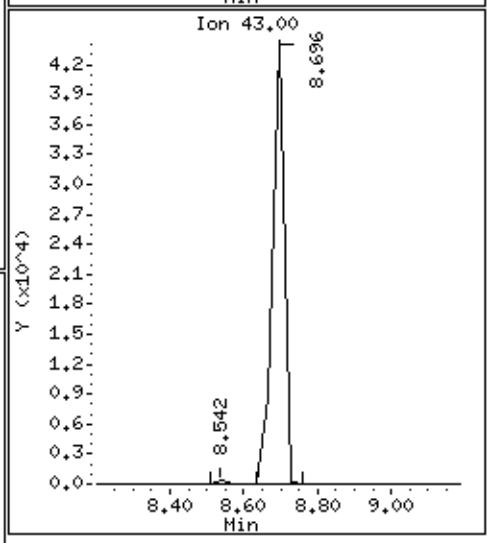
21 Heptane

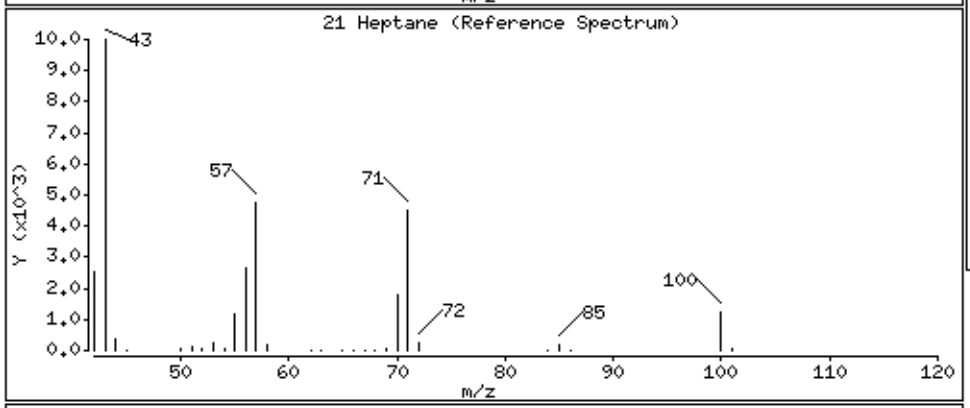
Concentration: 4.79270 ug

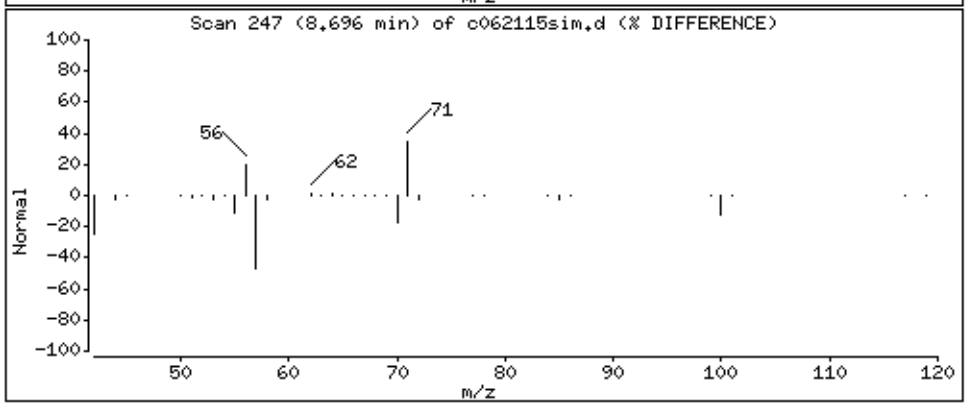












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

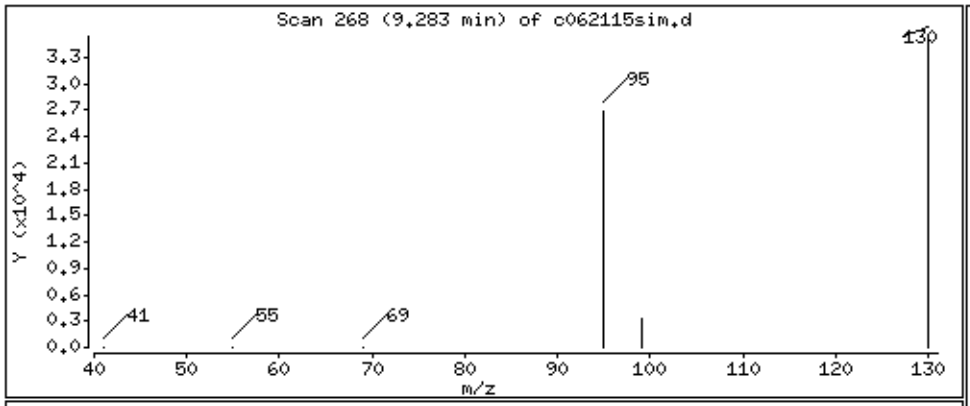
Operator: gm

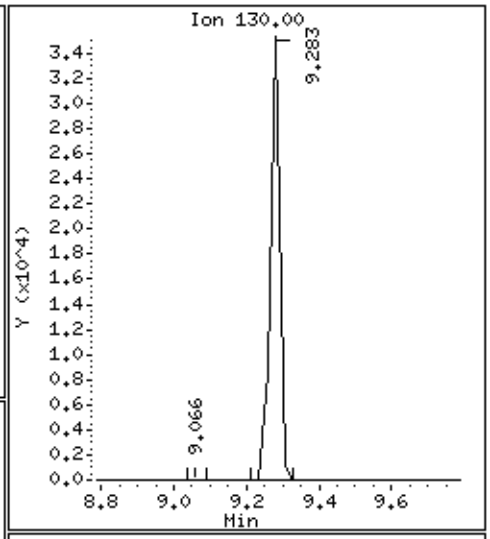
Column phase: DB-5.625

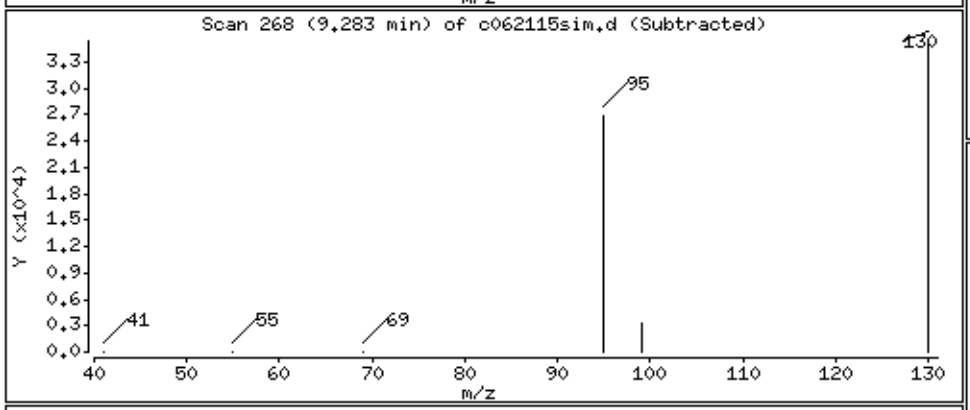
Column diameter: 0.25

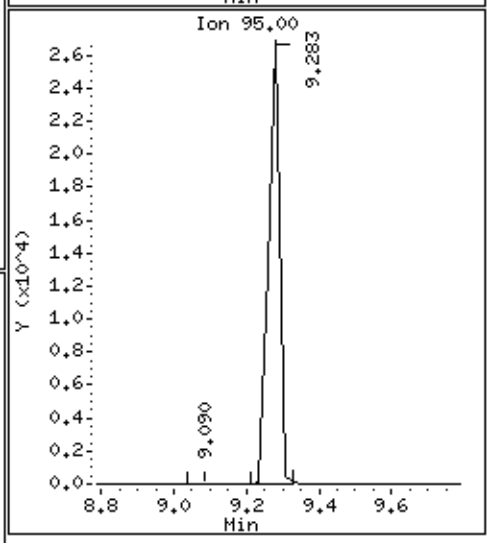
22 Trichloroethene

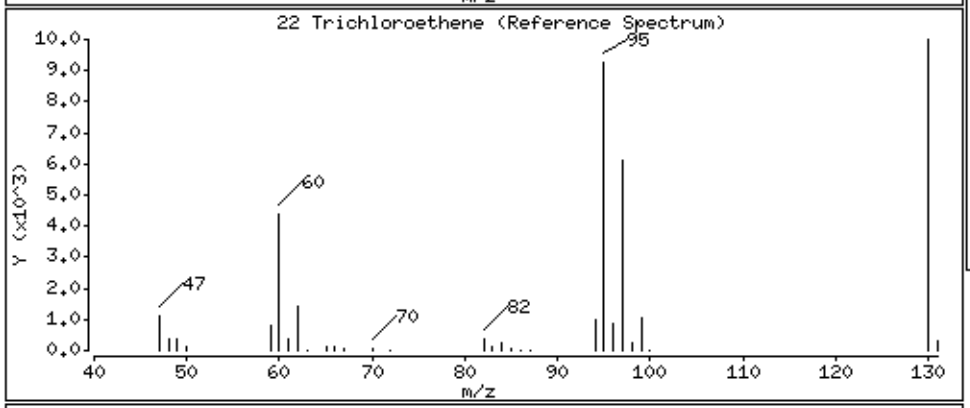
Concentration: 4.78580 ug

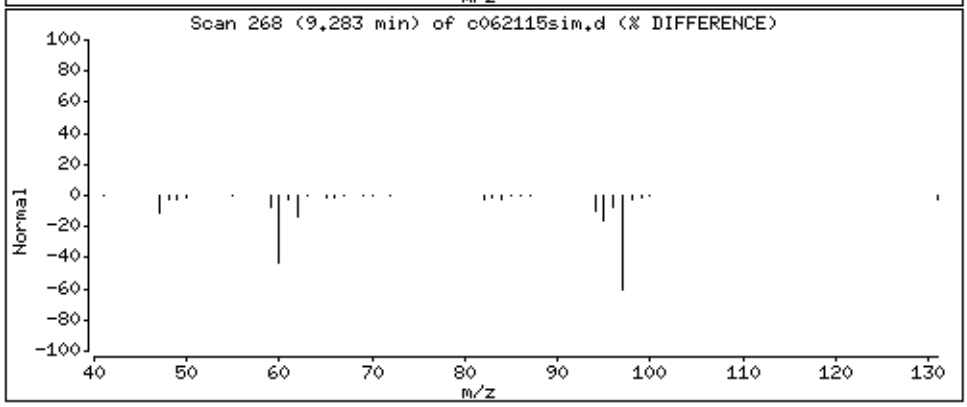












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

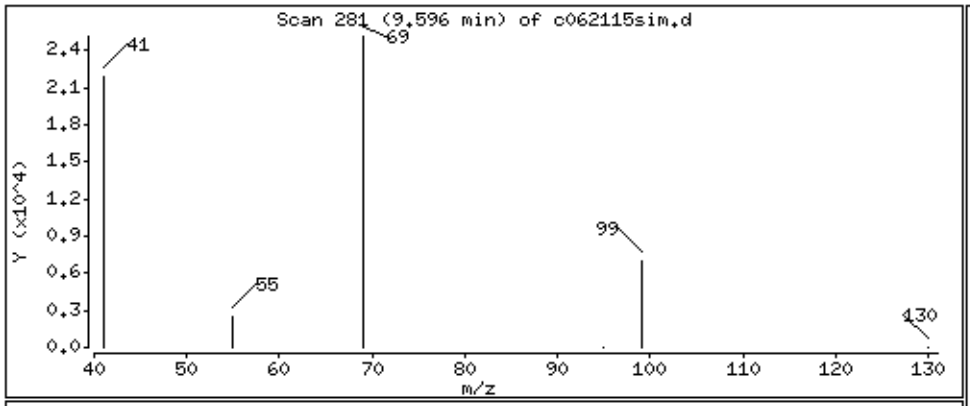
Operator: gm

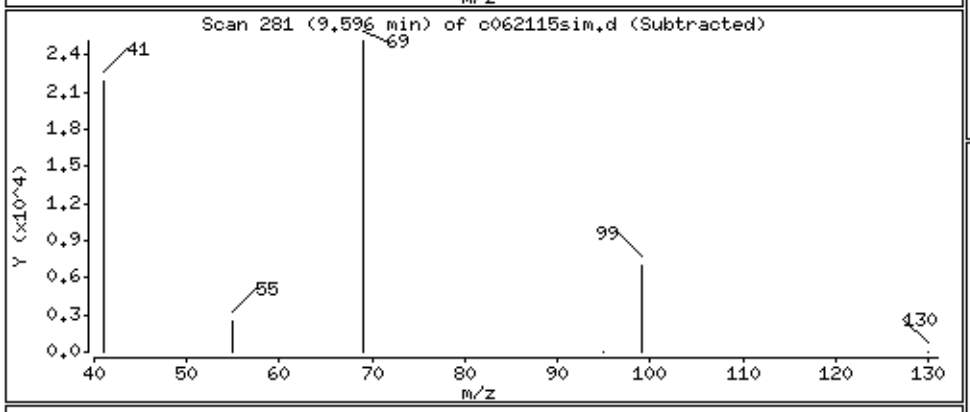
Column phase: DB-5.625

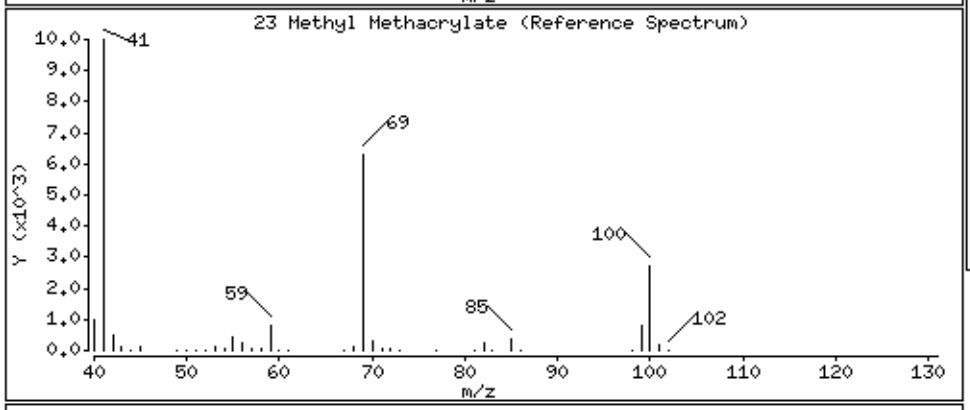
Column diameter: 0.25

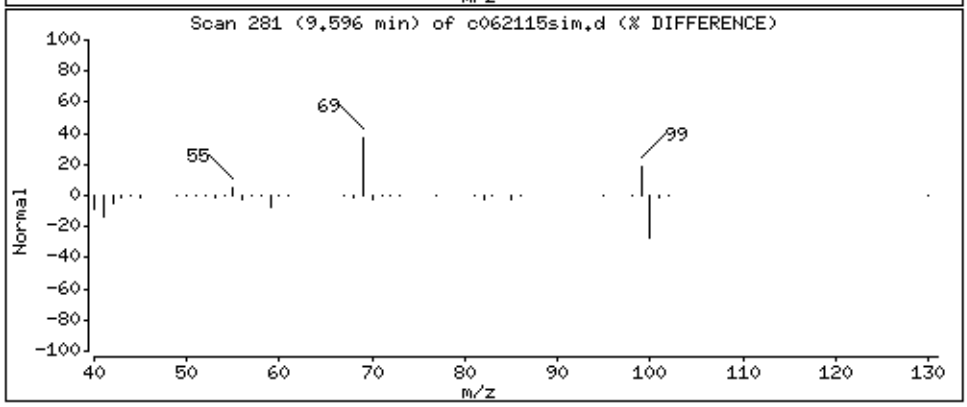
23 Methyl Methacrylate

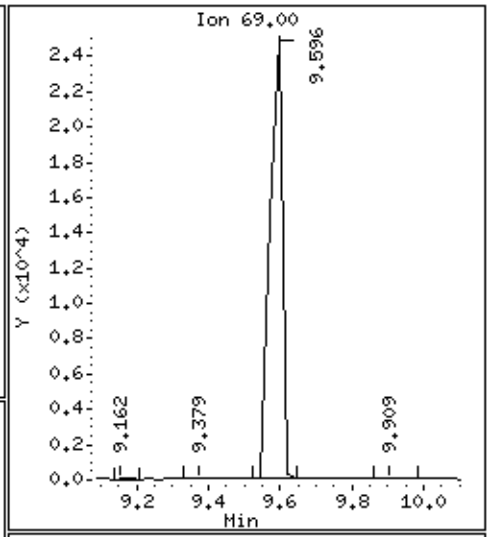
Concentration: 4.72295 ug

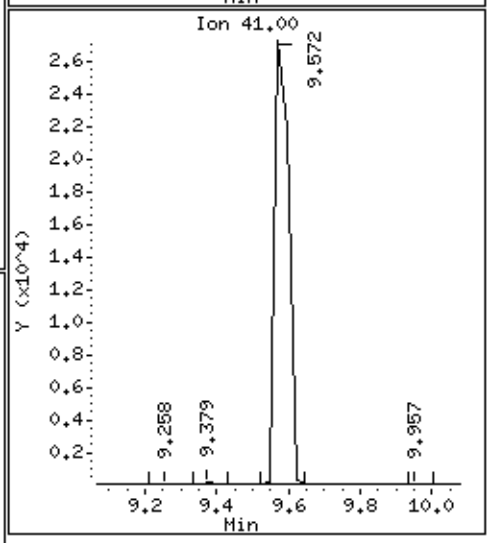












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

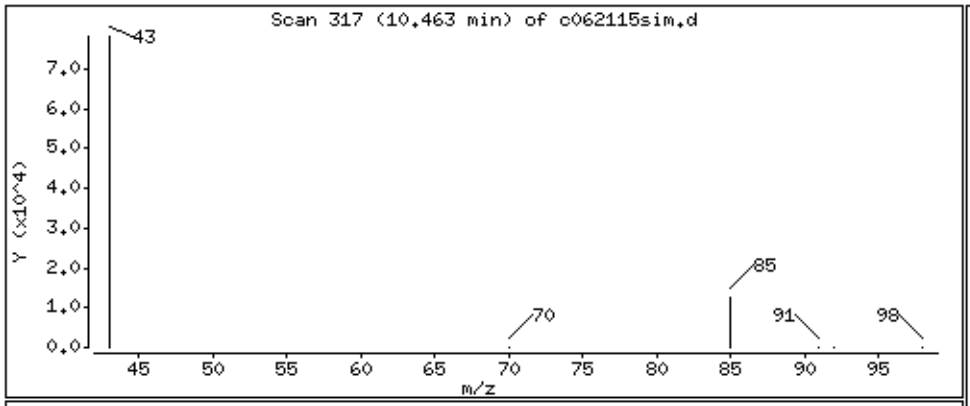
Operator: gm

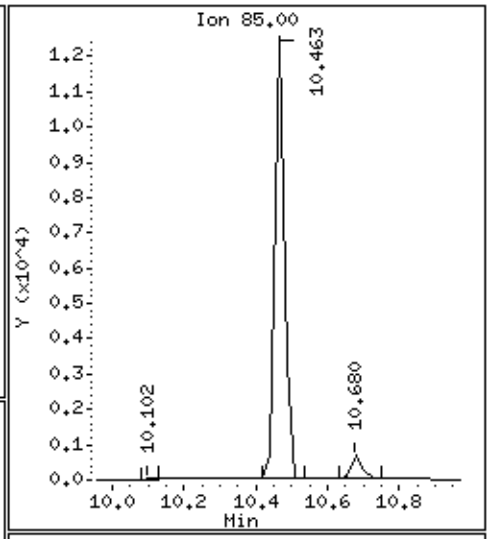
Column phase: DB-5.625

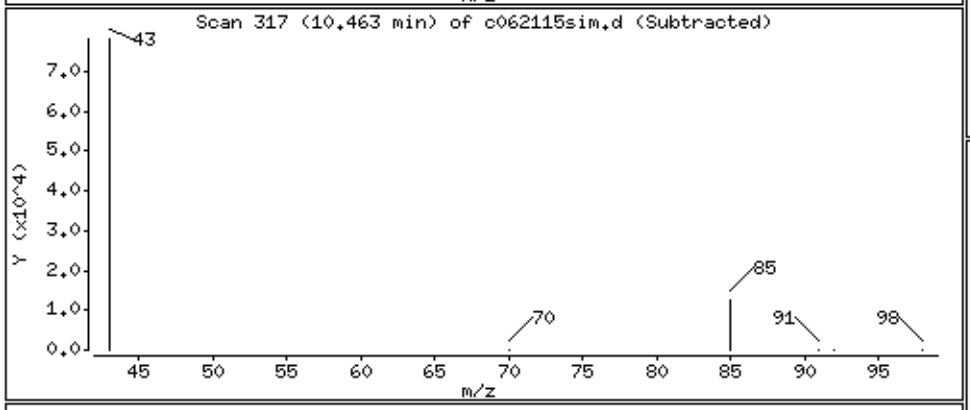
Column diameter: 0.25

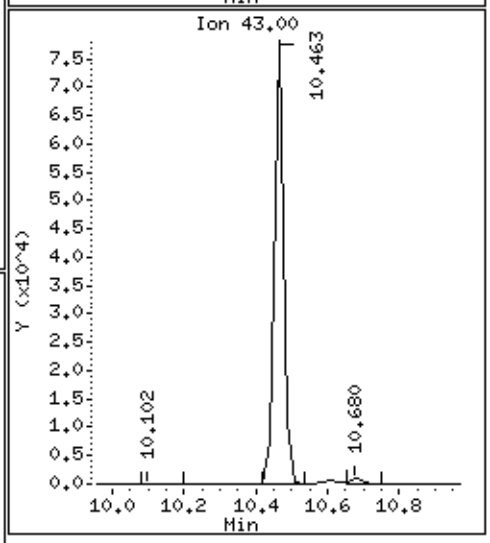
24 4-Methyl-2-pentanone

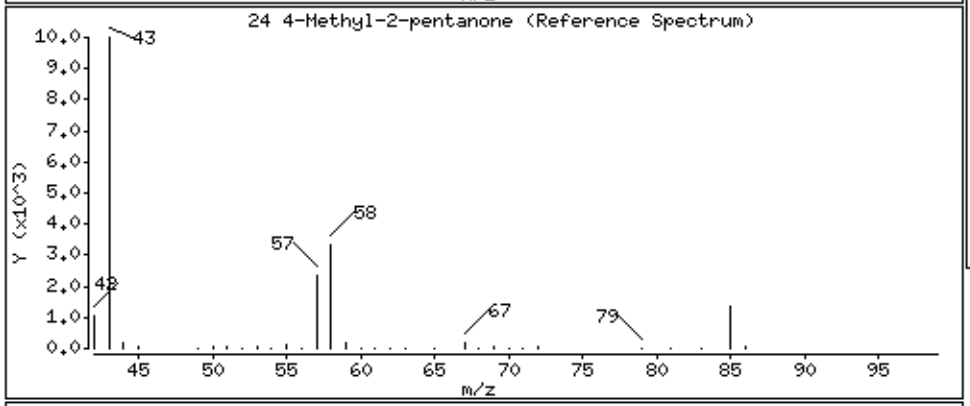
Concentration: 4.88743 ug

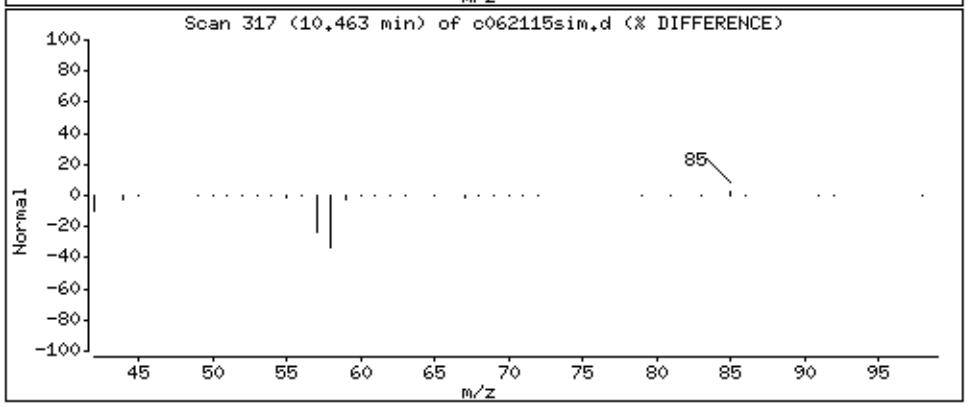












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

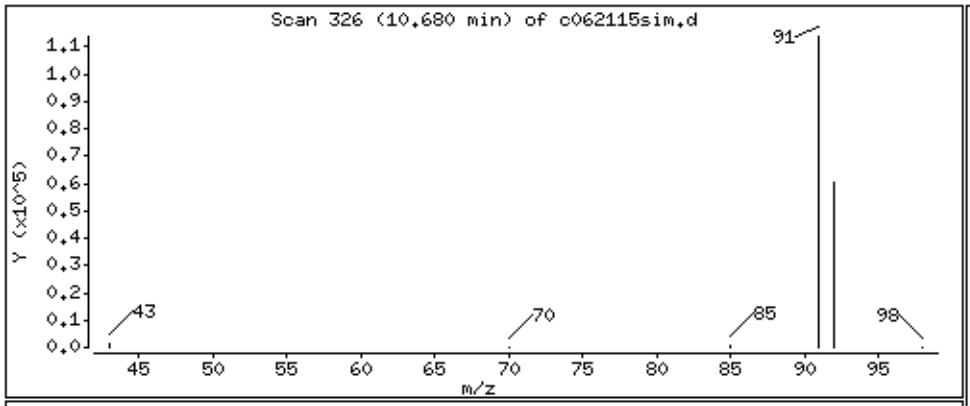
Operator: gm

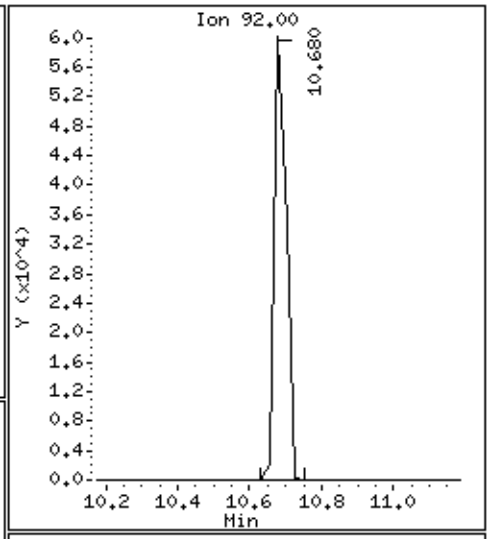
Column phase: DB-5.625

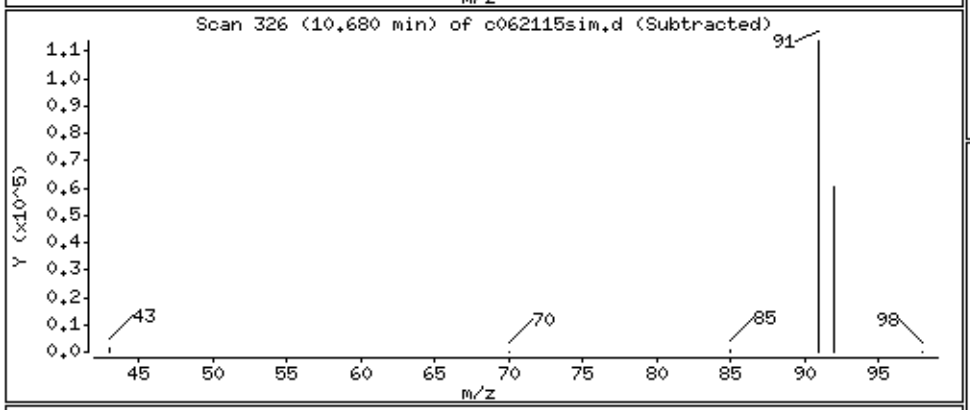
Column diameter: 0.25

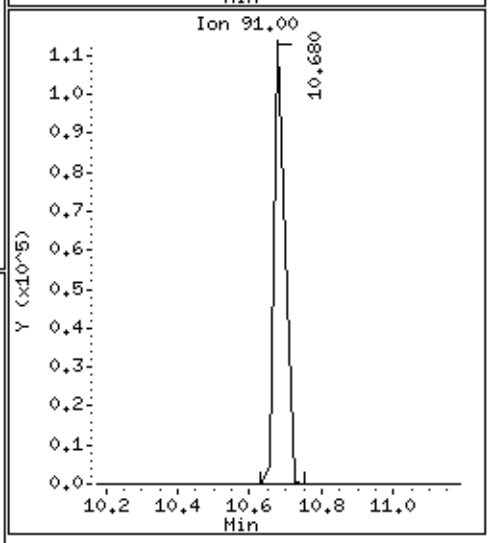
26 Toluene-CCC

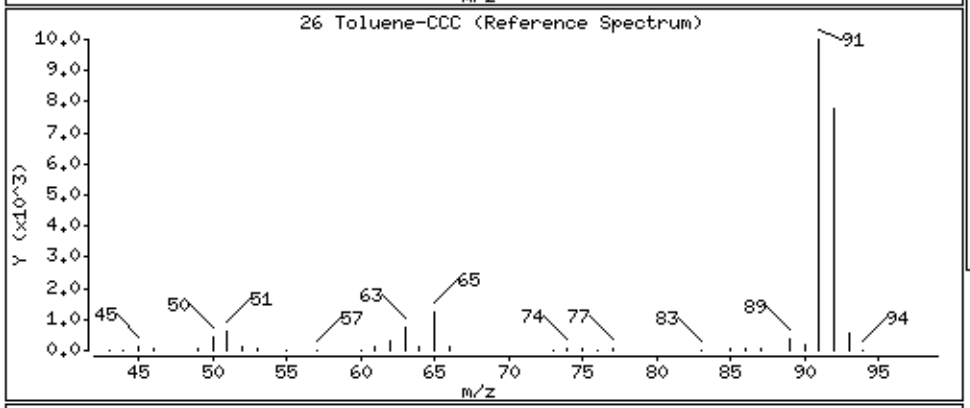
Concentration: 4.69041 ug

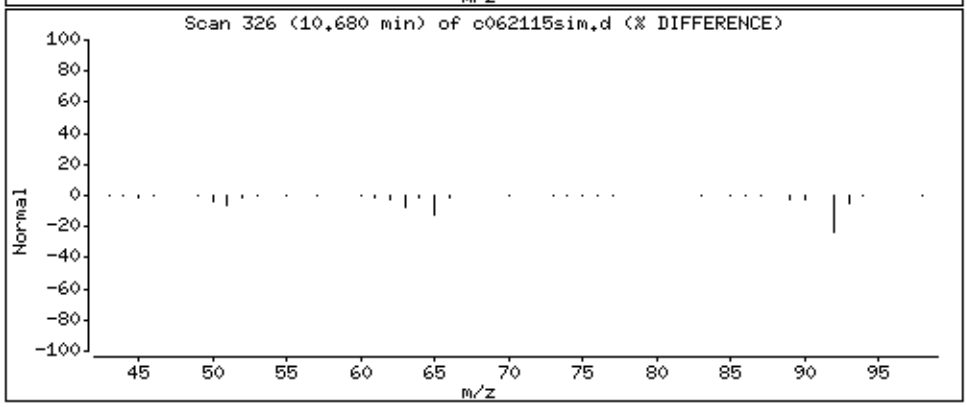












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

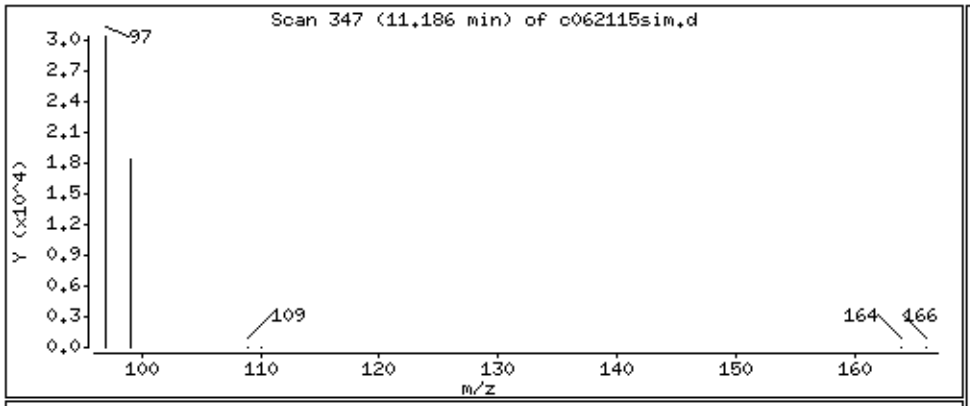
Operator: gm

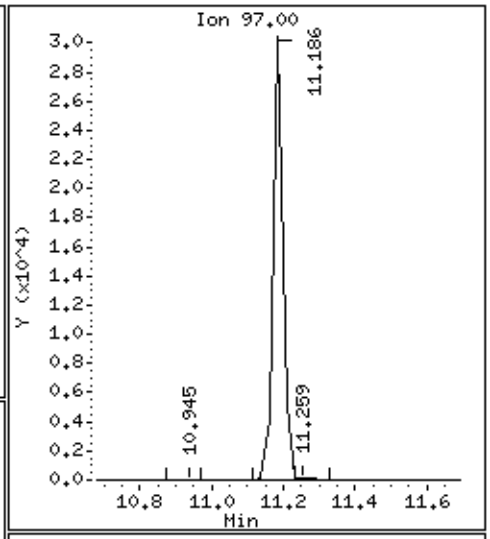
Column phase: DB-5.625

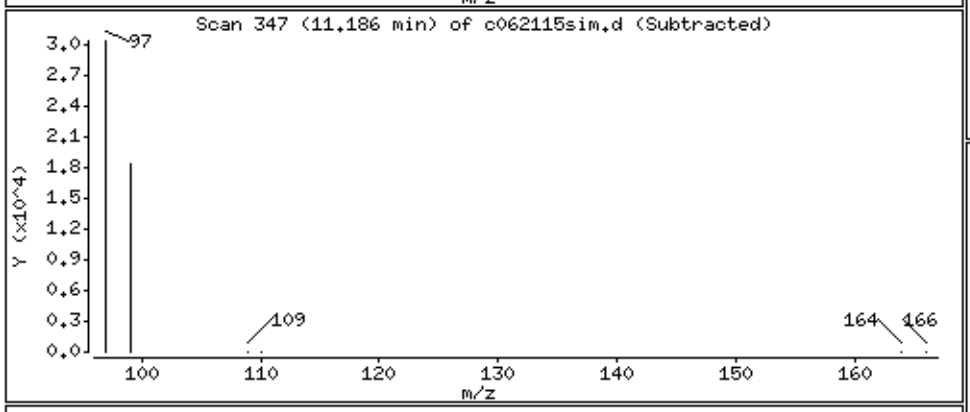
Column diameter: 0.25

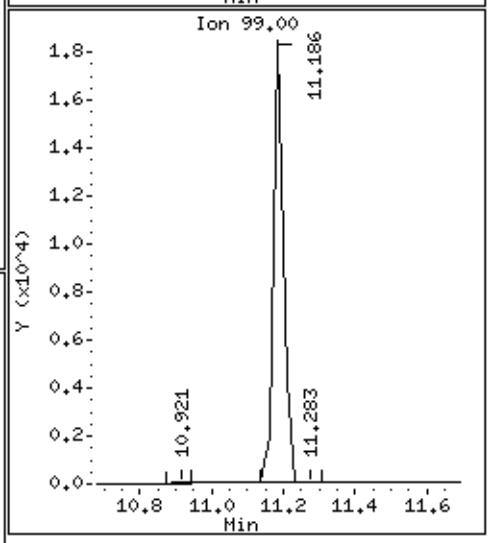
28 1,1,2-Trichloroethane

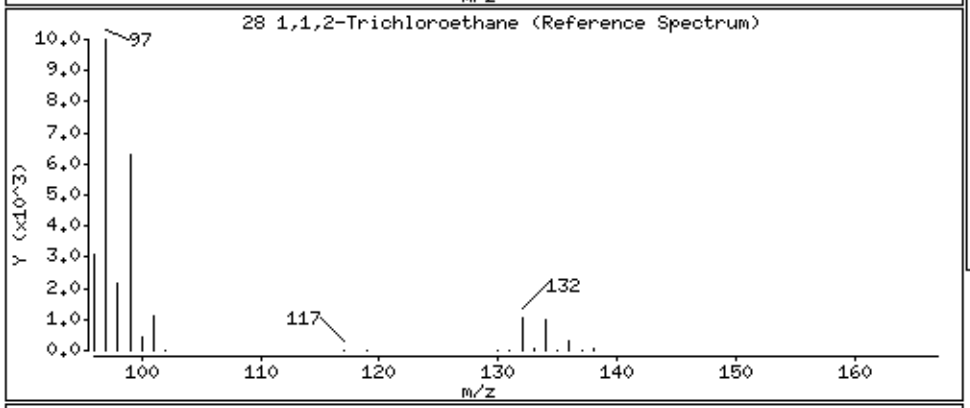
Concentration: 4.78278 ug

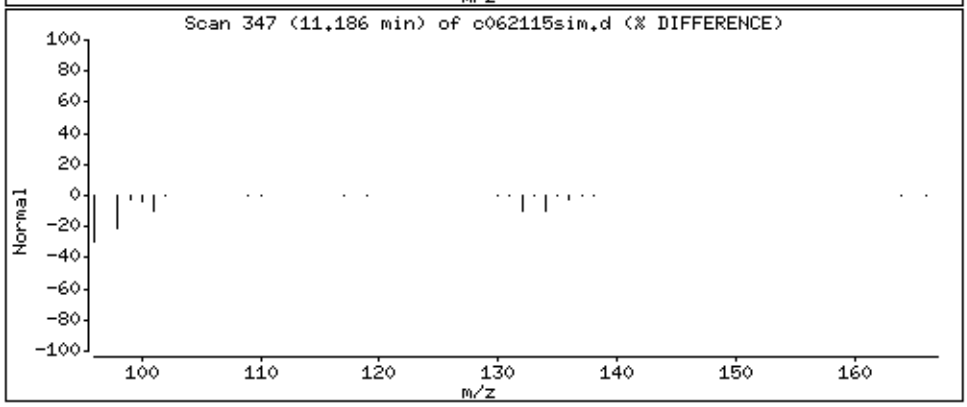












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

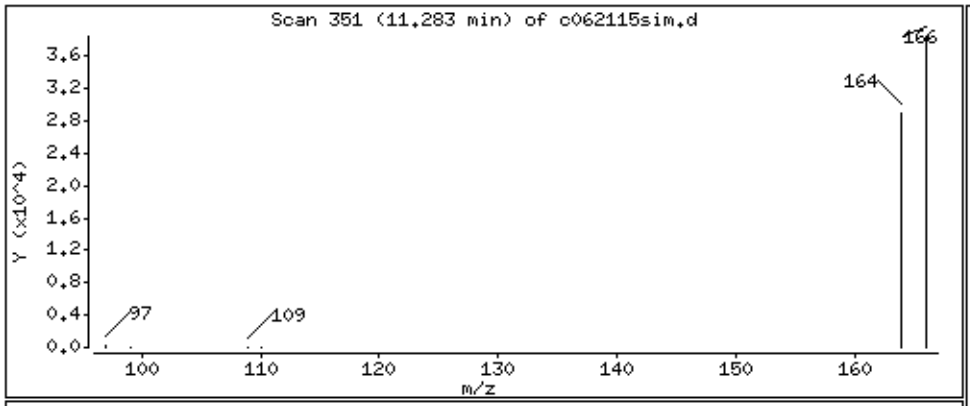
Operator: gm

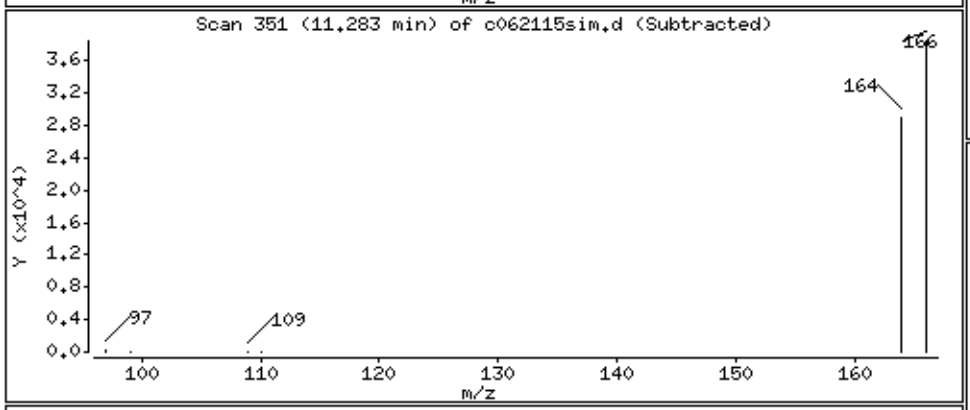
Column phase: DB-5.625

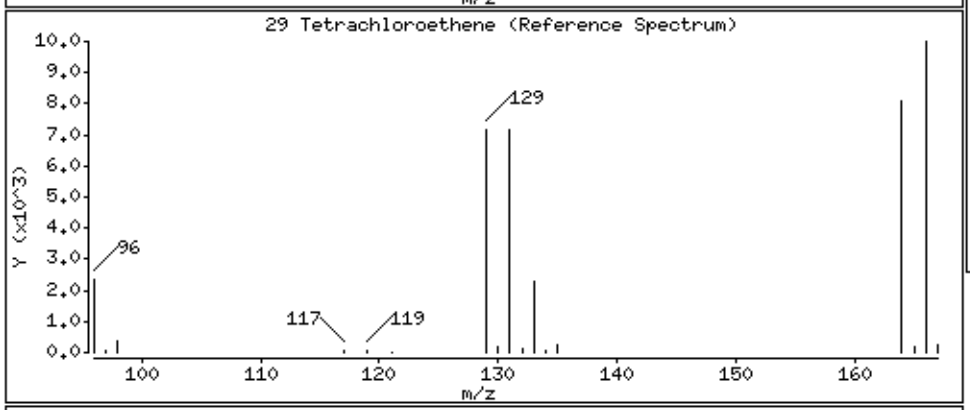
Column diameter: 0.25

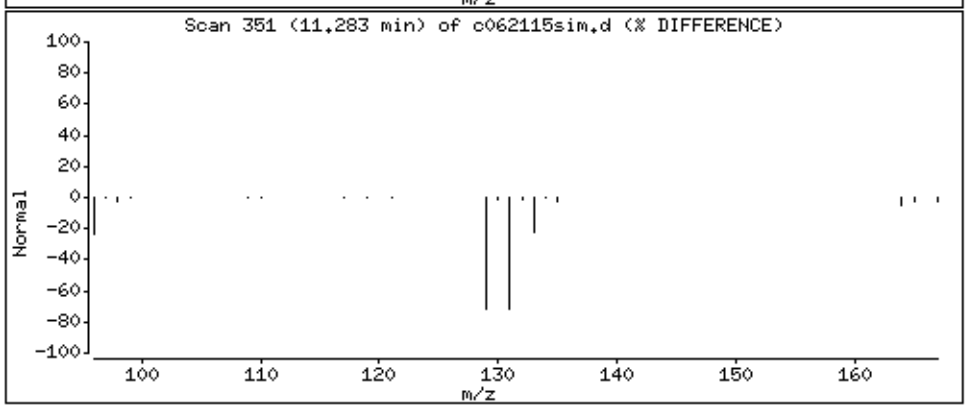
29 Tetrachloroethene

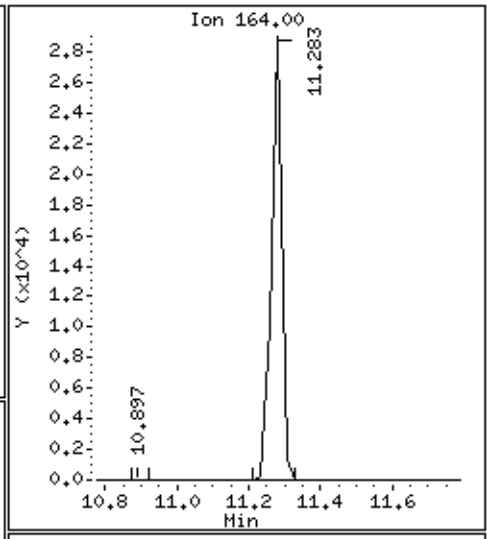
Concentration: 4.70016 ug

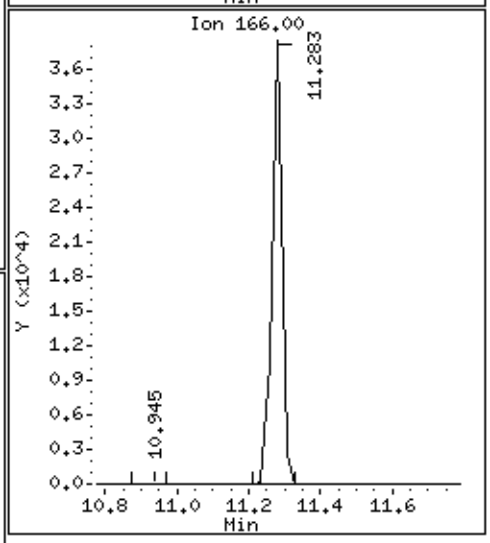












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

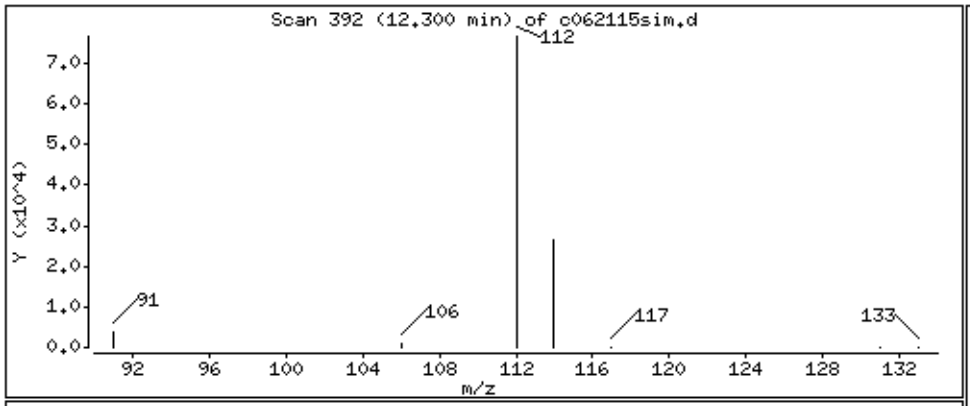
Operator: gm

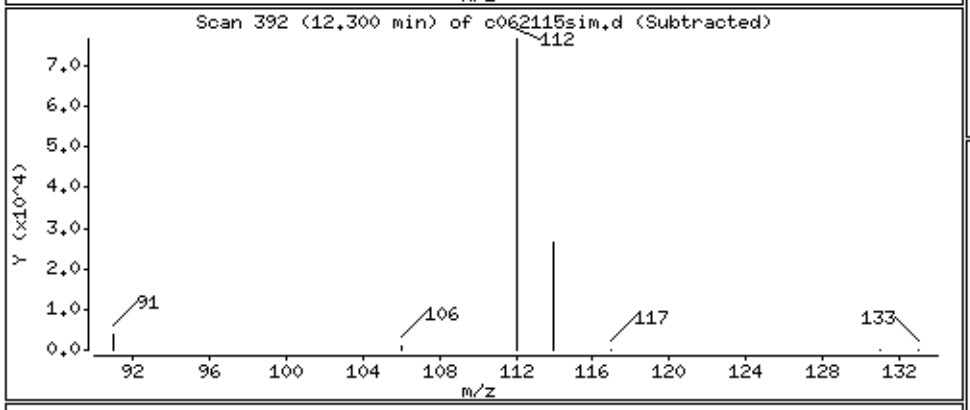
Column phase: DB-5.625

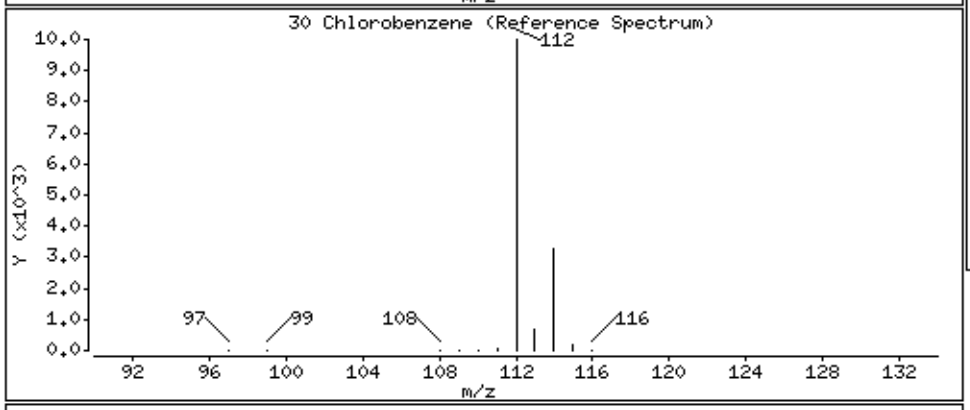
Column diameter: 0.25

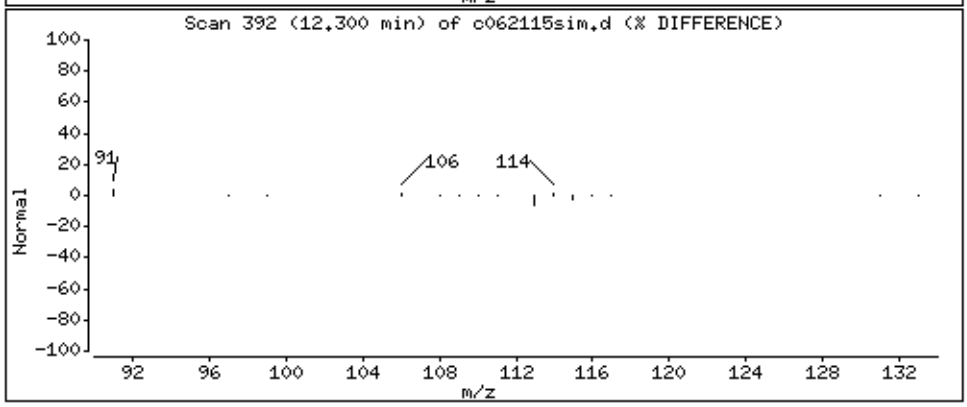
30 Chlorobenzene

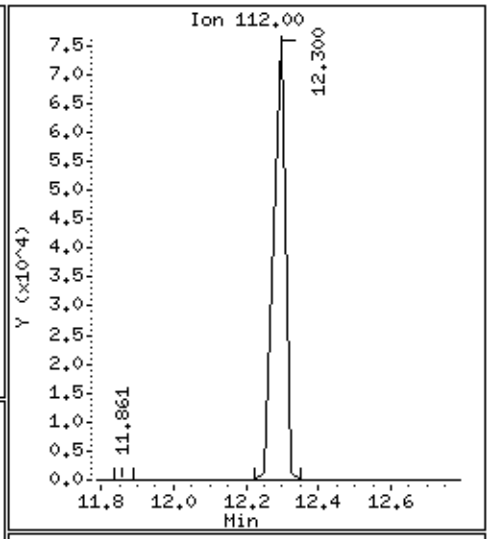
Concentration: 4.60722 ug

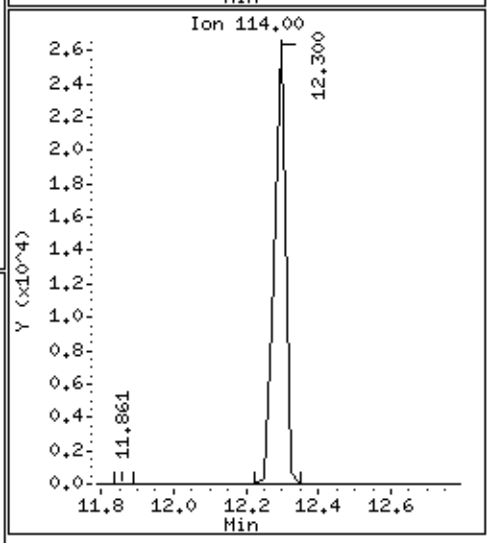












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

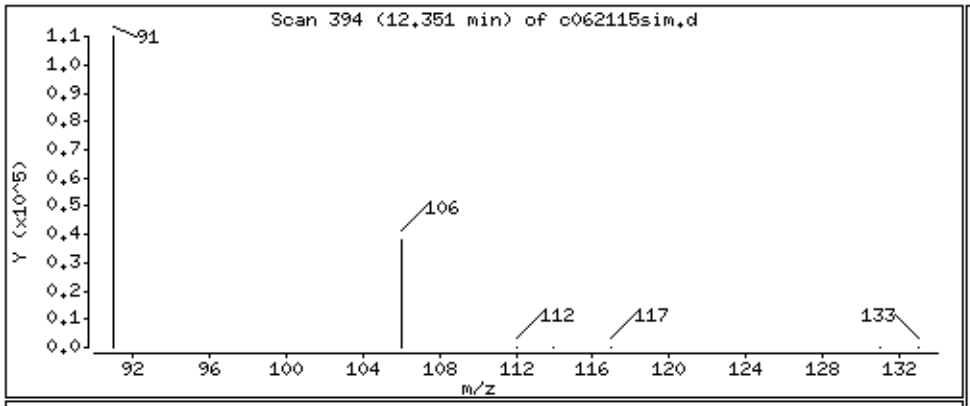
Operator: gm

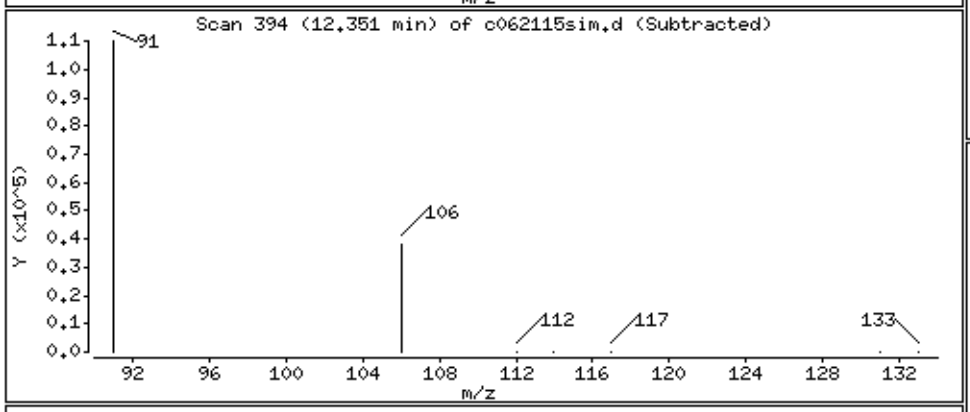
Column phase: DB-5.625

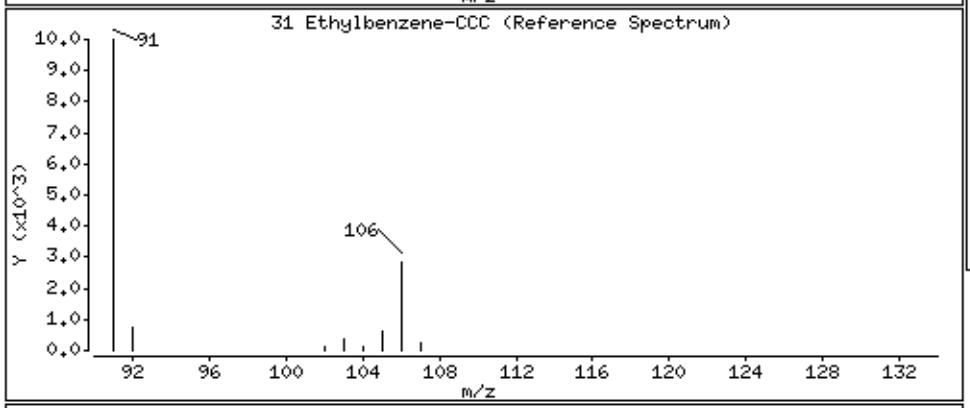
Column diameter: 0.25

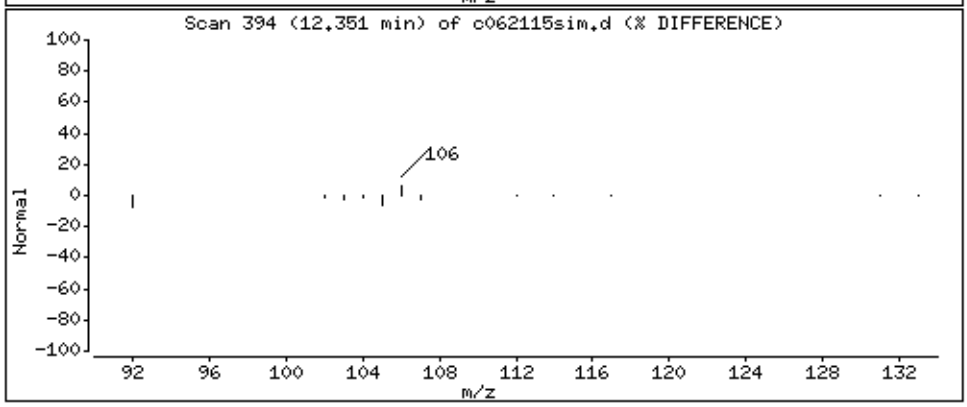
31 Ethylbenzene-CCC

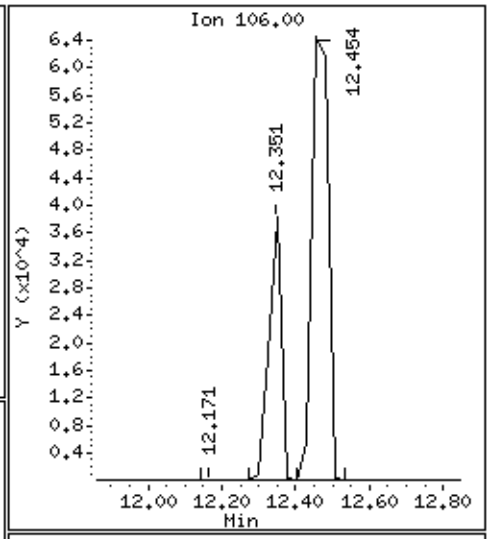
Concentration: 4.60970 ug

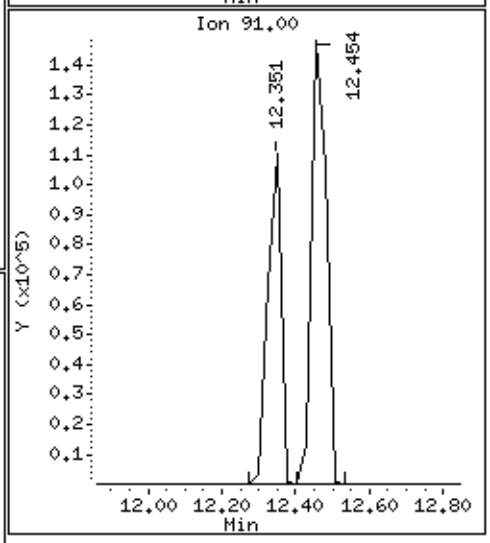












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

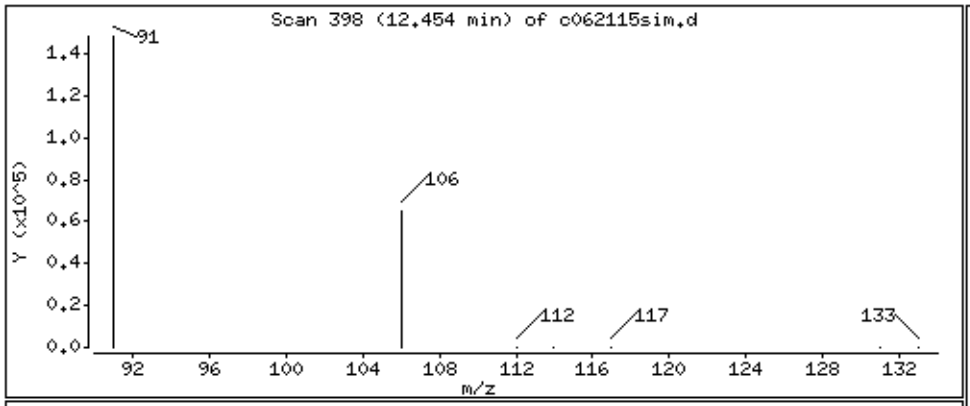
Operator: gm

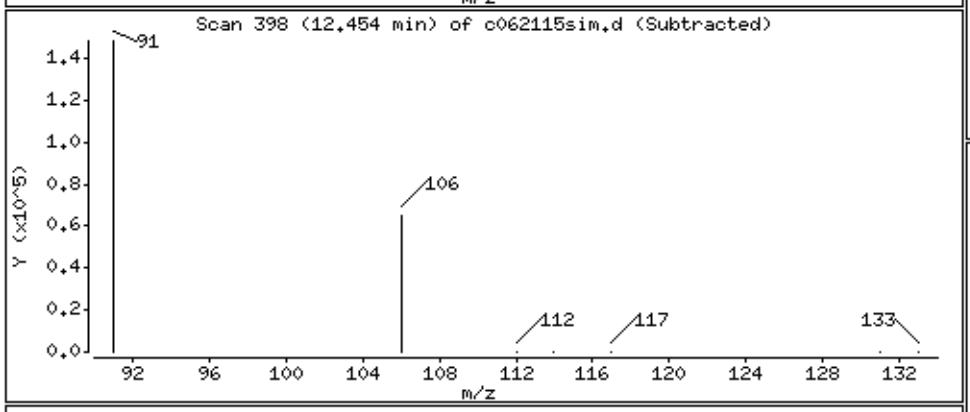
Column phase: DB-5.625

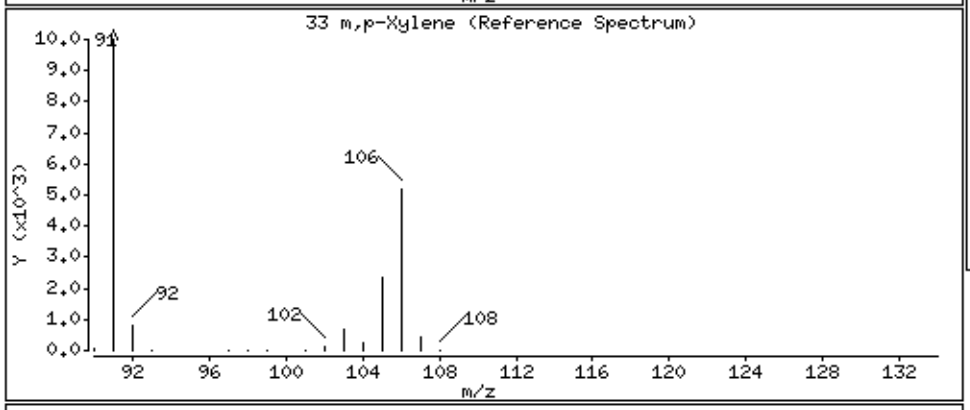
Column diameter: 0.25

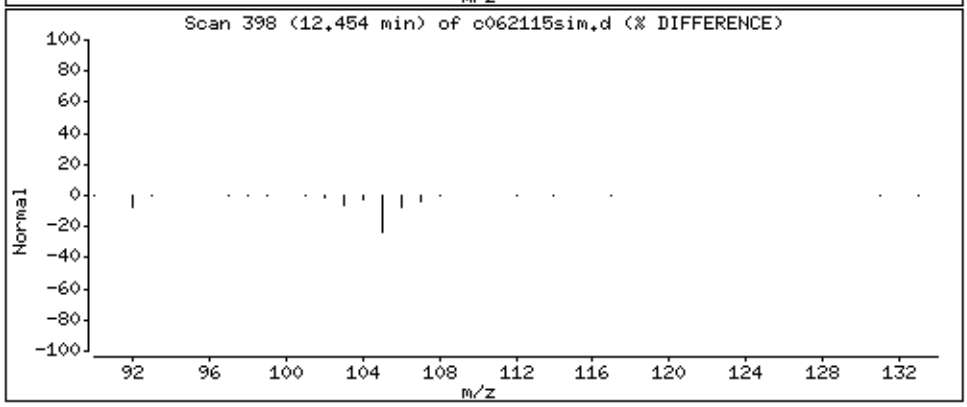
33 m,p-Xylene

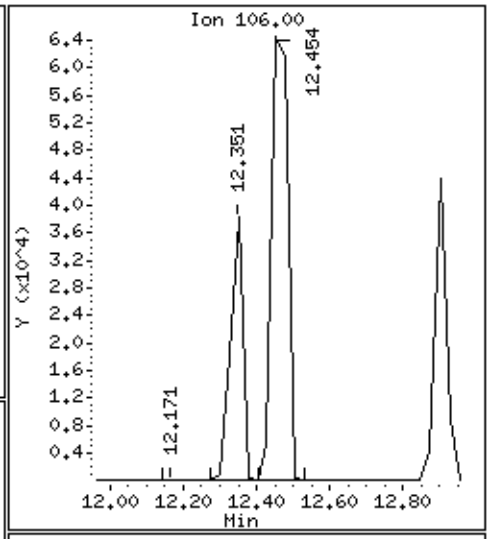
Concentration: 9.01448 ug

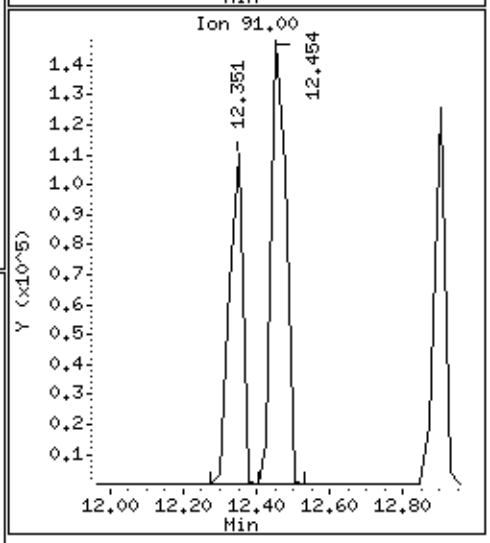












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

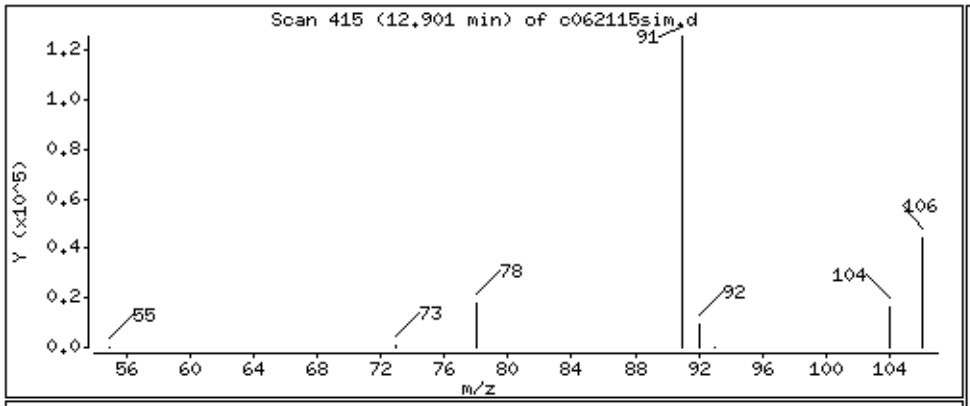
Operator: gm

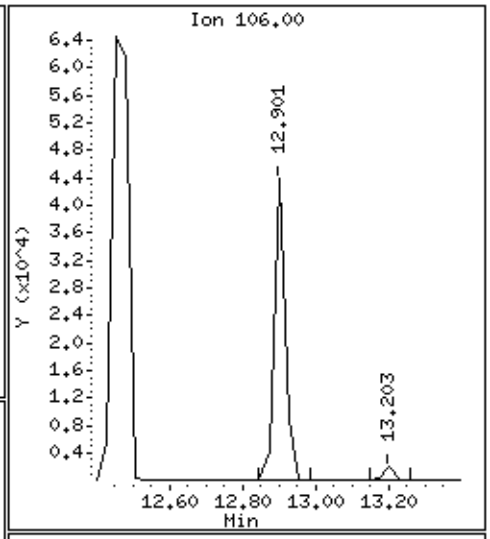
Column phase: DB-5.625

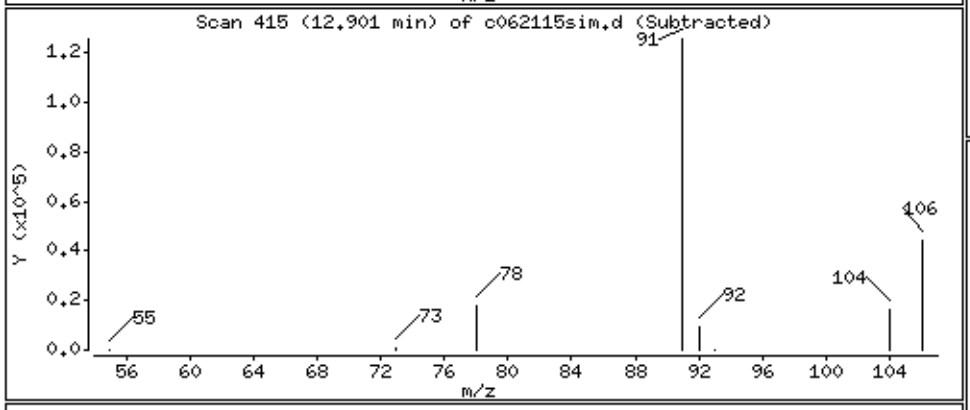
Column diameter: 0.25

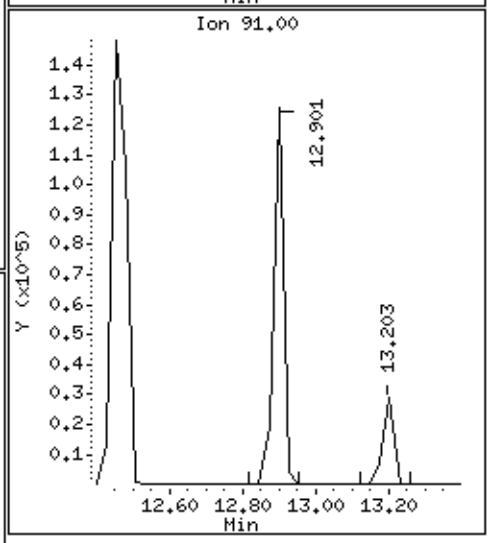
34 o-Xylene

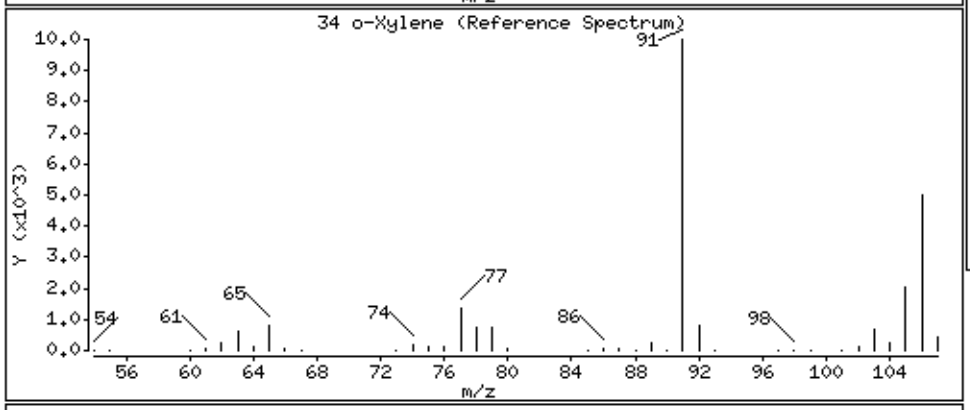
Concentration: 4.45079 ug

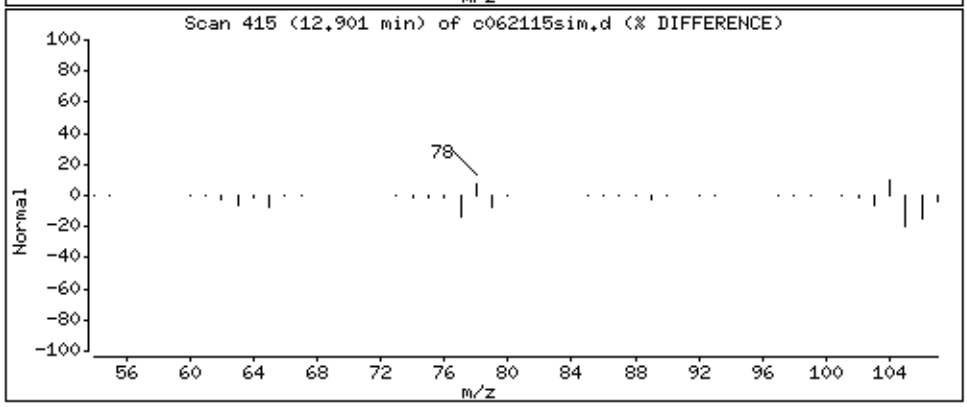












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

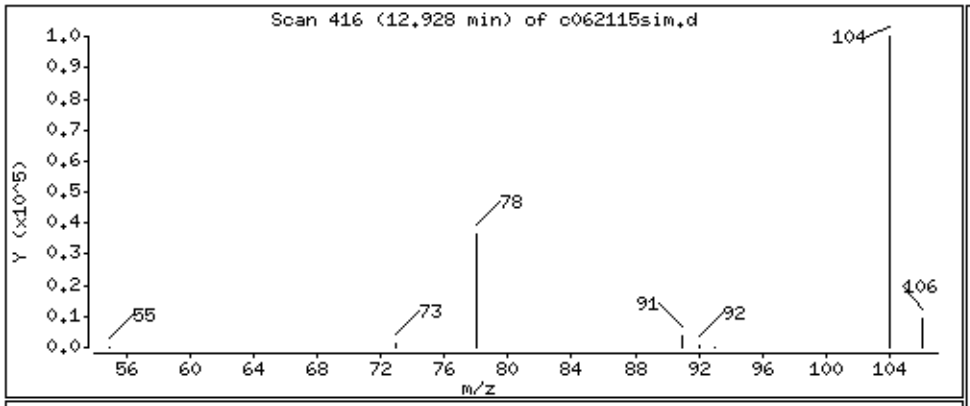
Operator: gm

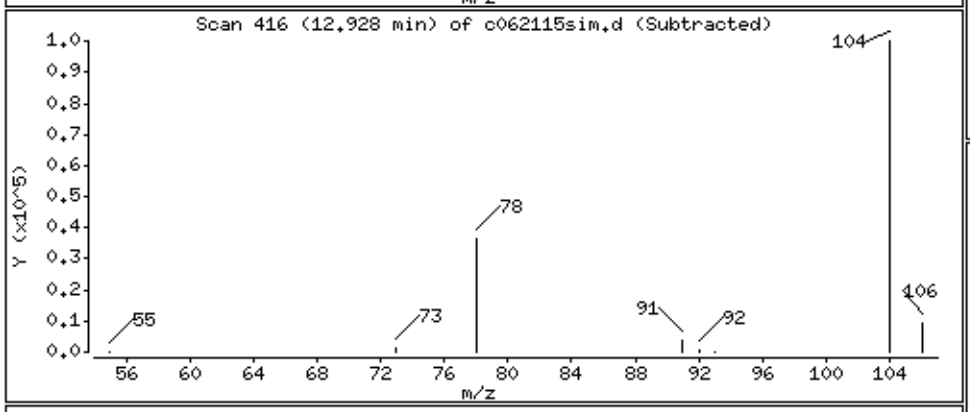
Column phase: DB-5.625

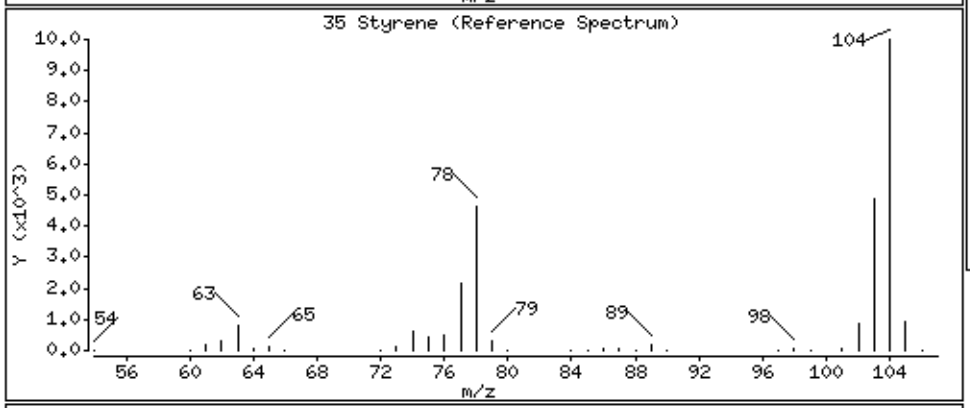
Column diameter: 0.25

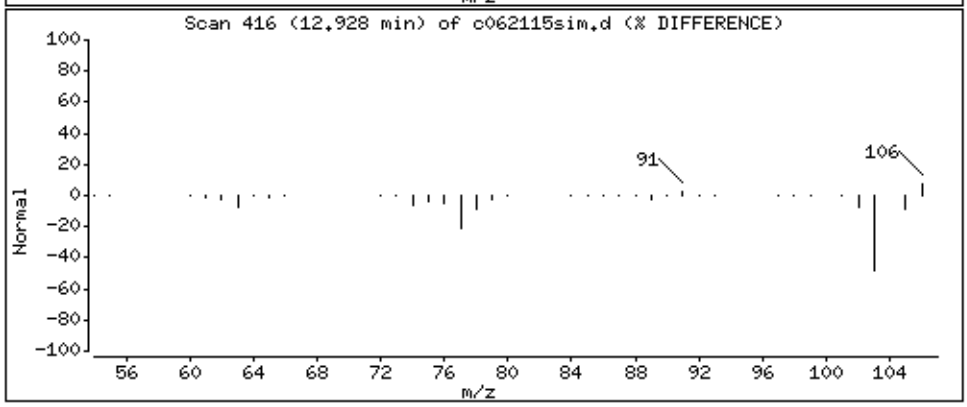
35 Styrene

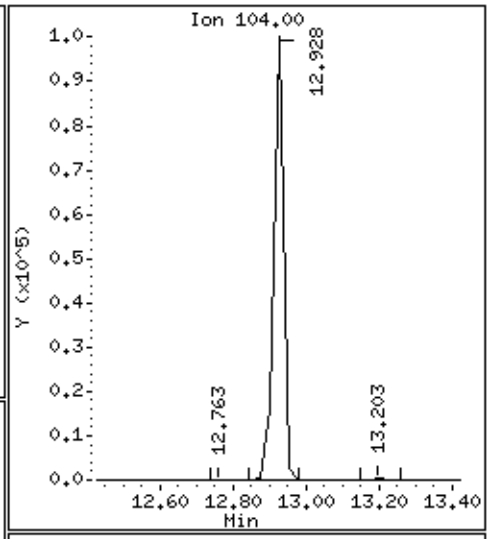
Concentration: 4.59180 ug

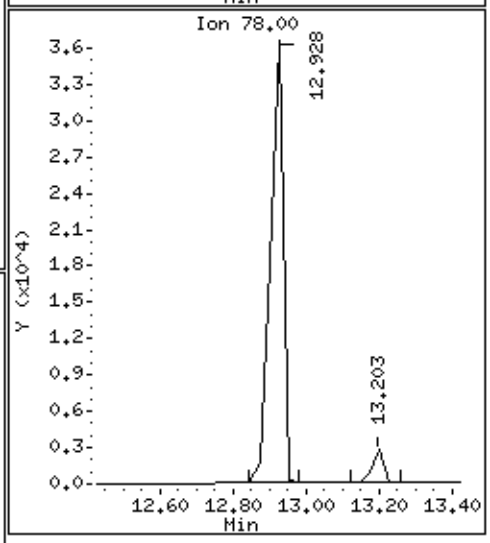












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

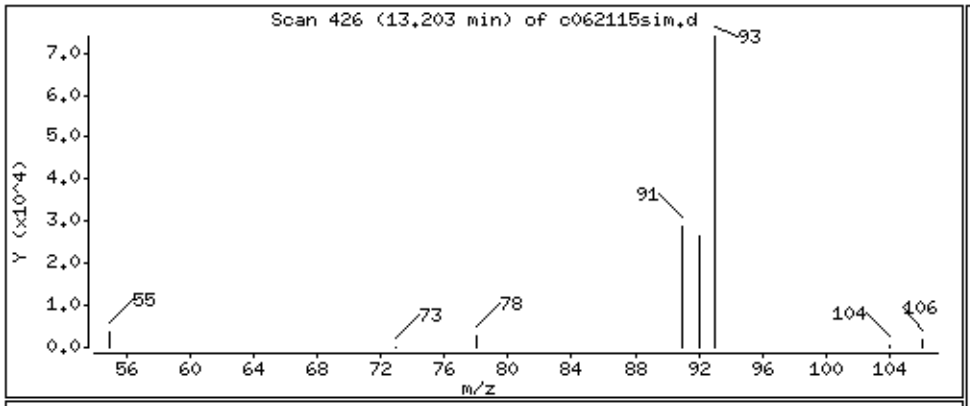
Operator: gm

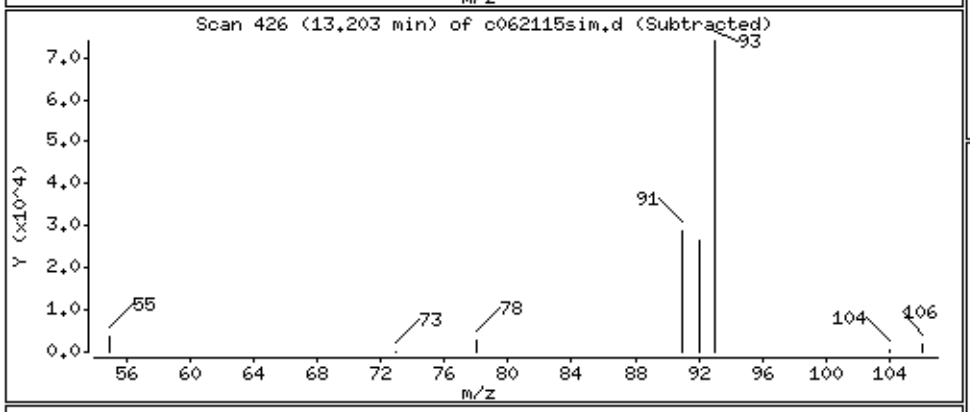
Column phase: DB-5.625

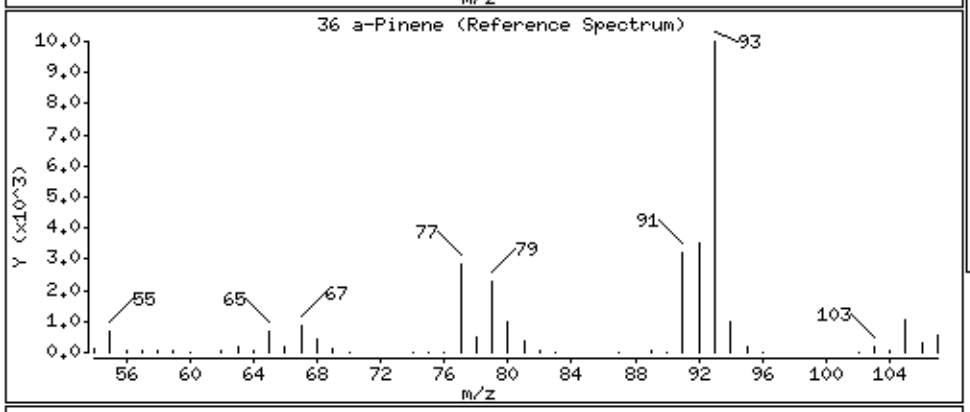
Column diameter: 0.25

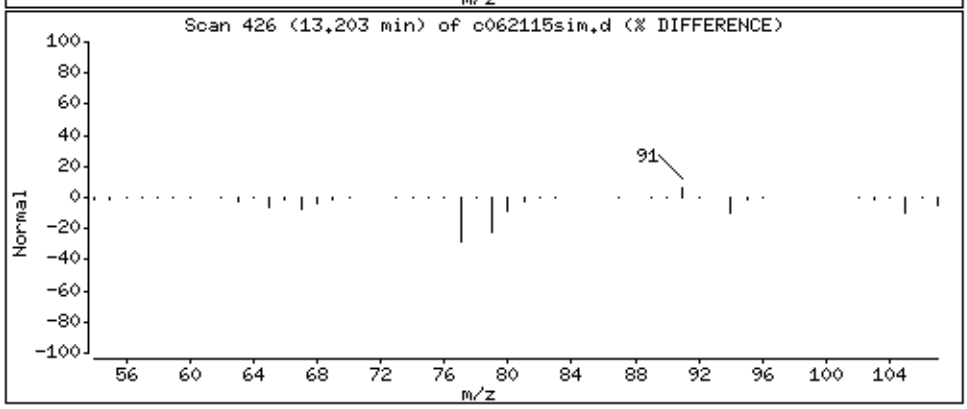
36 a-Pinene

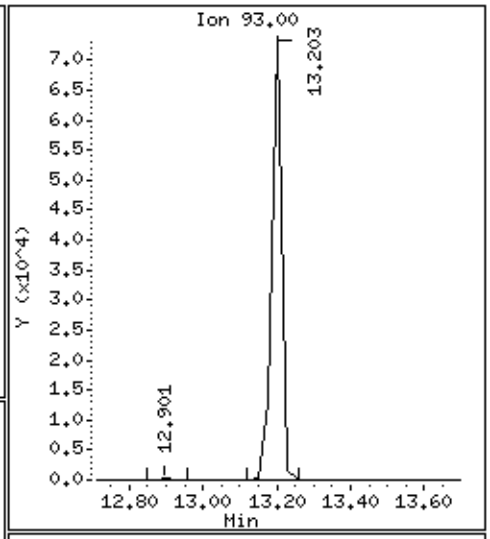
Concentration: 5.25902 ug

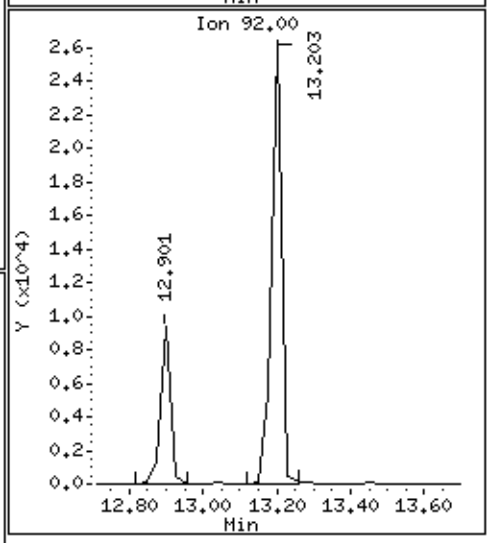












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

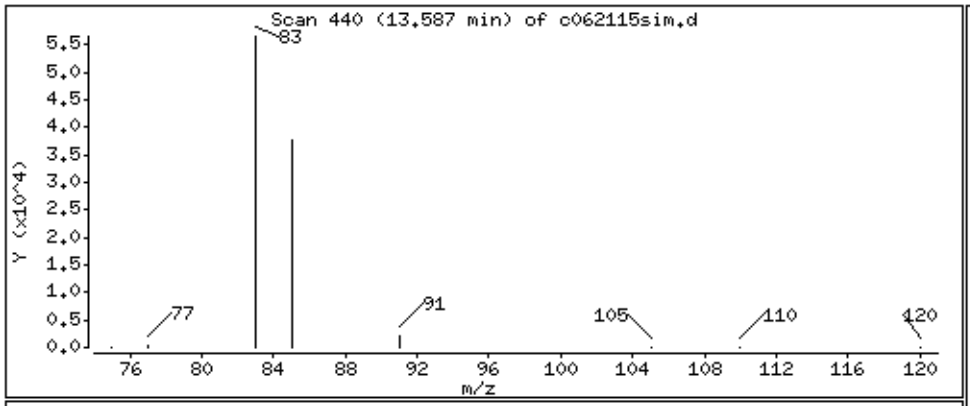
Operator: gm

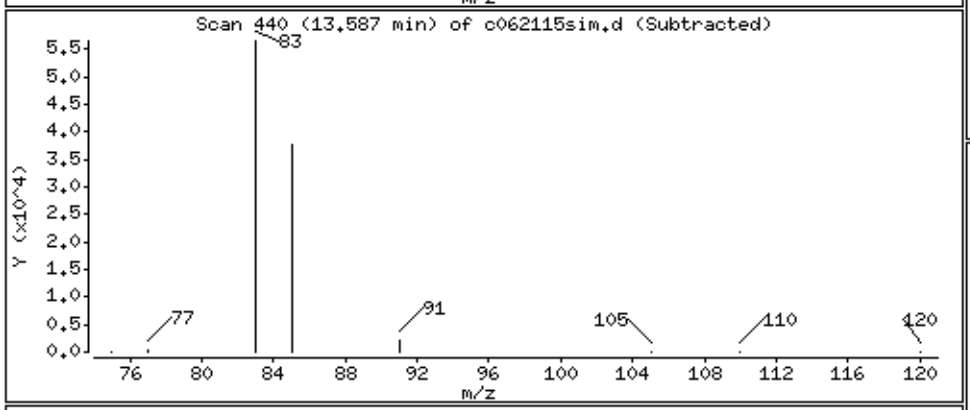
Column phase: DB-5.625

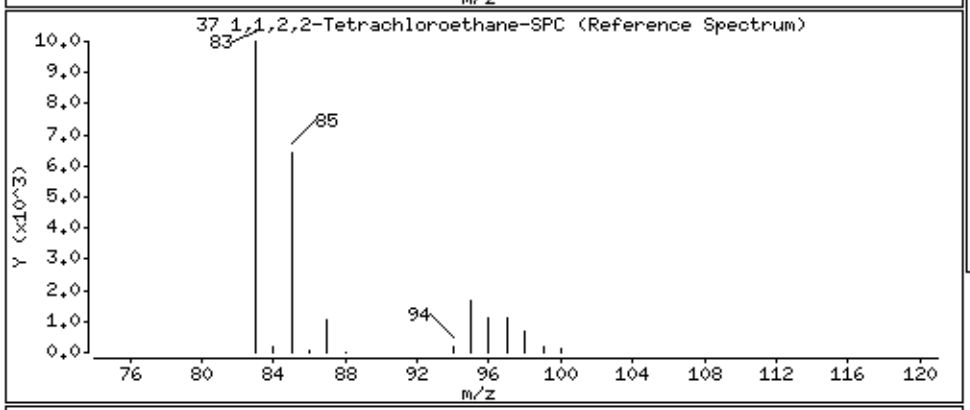
Column diameter: 0.25

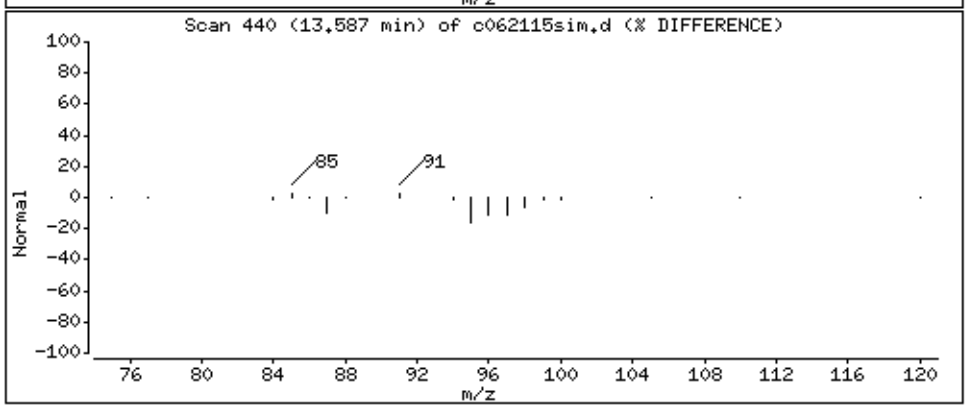
37 1,1,2,2-Tetrachloroethane-SPC

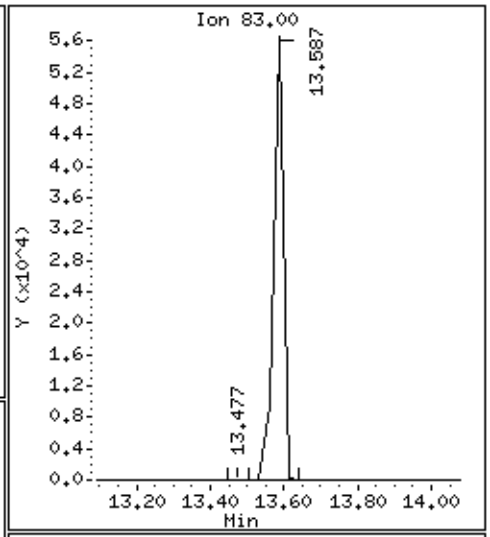
Concentration: 4.49676 ug

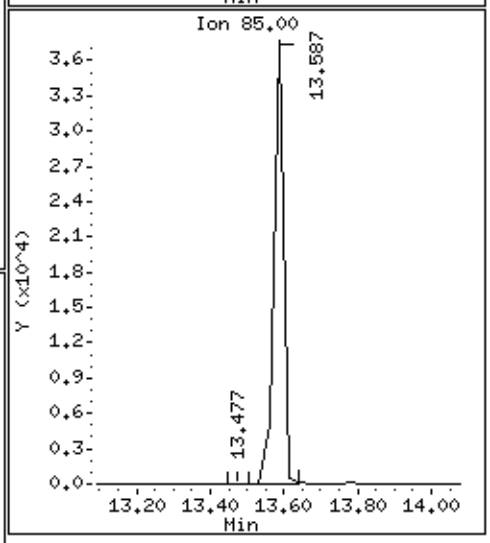












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

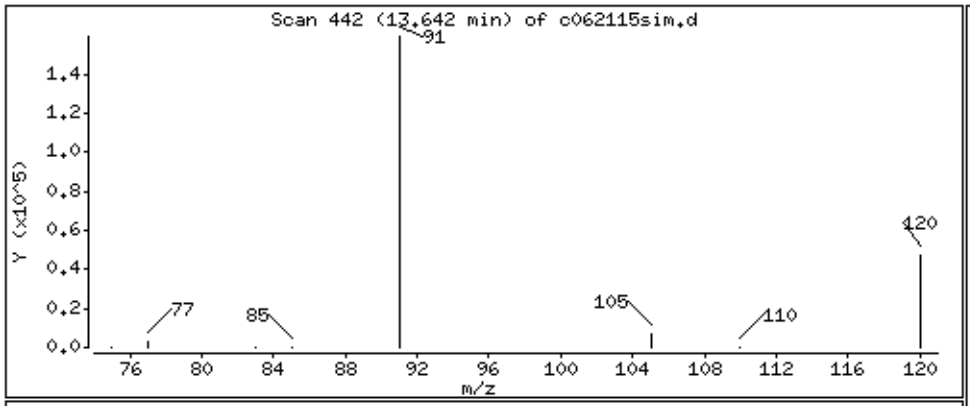
Operator: gm

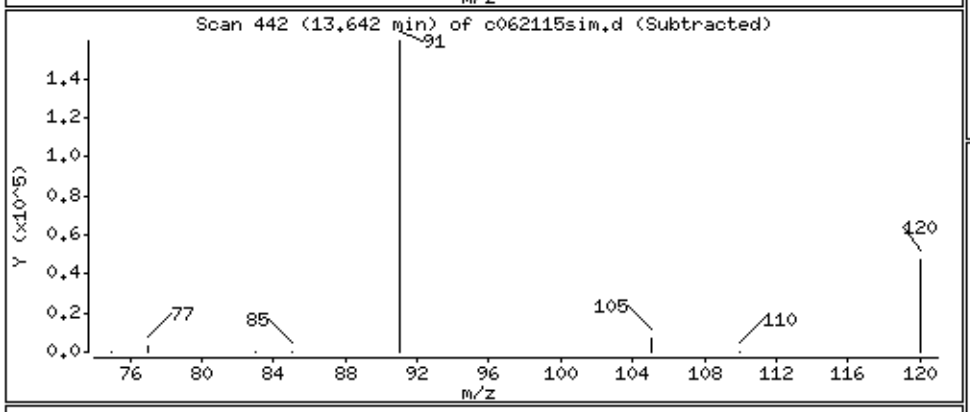
Column phase: DB-5.625

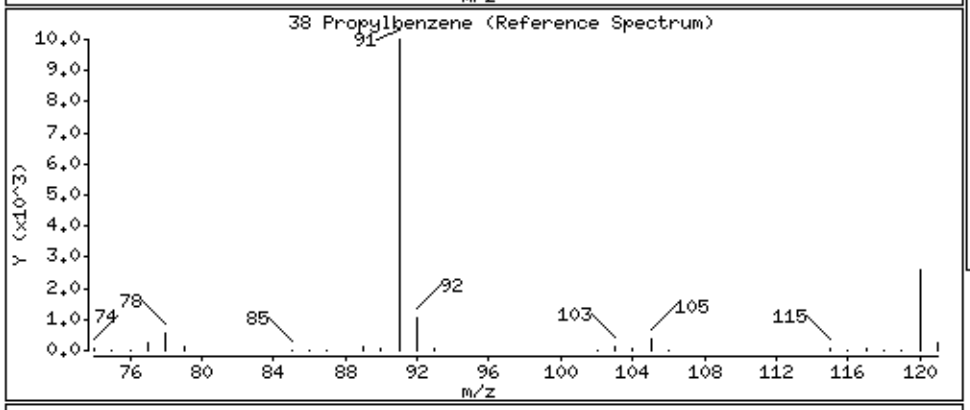
Column diameter: 0.25

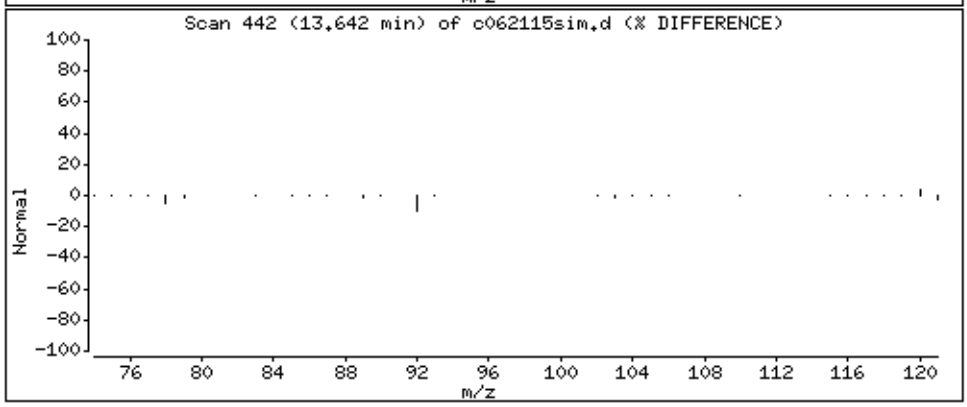
38 Propylbenzene

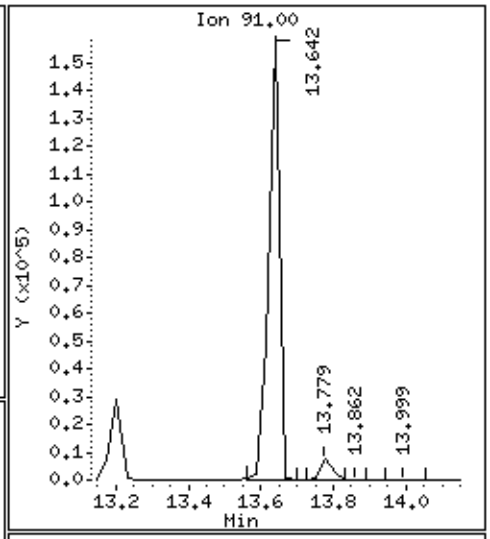
Concentration: 4.33404 ug

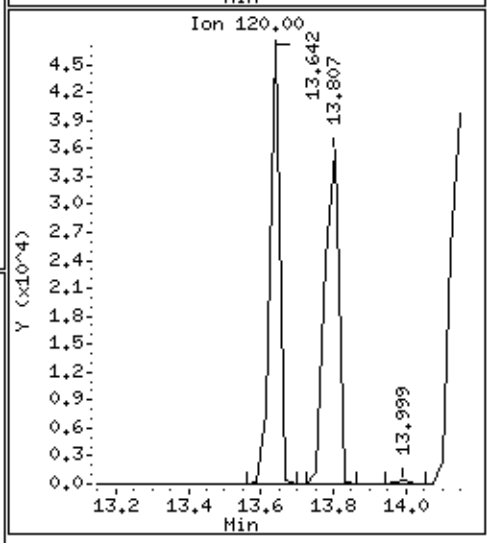












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

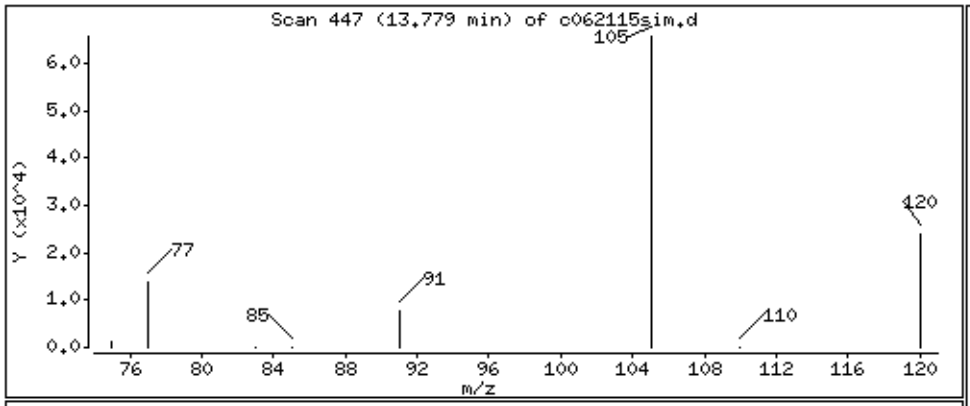
Operator: gm

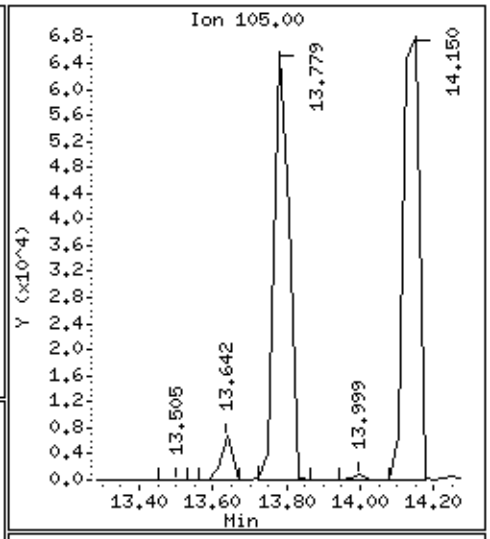
Column phase: DB-5.625

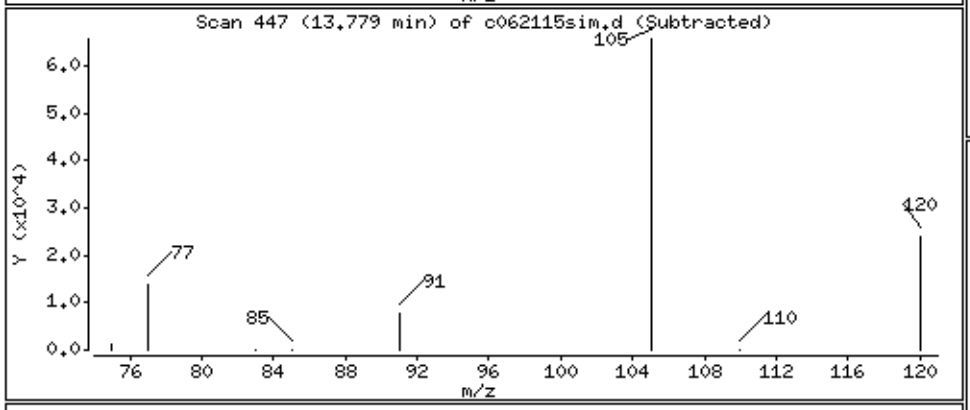
Column diameter: 0.25

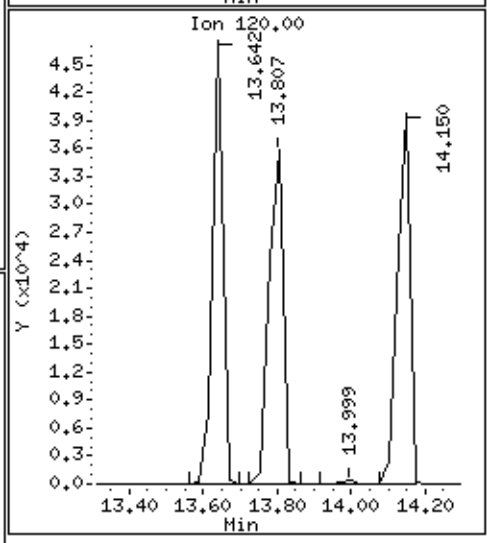
40 1,3,5-Trimethylbenzene

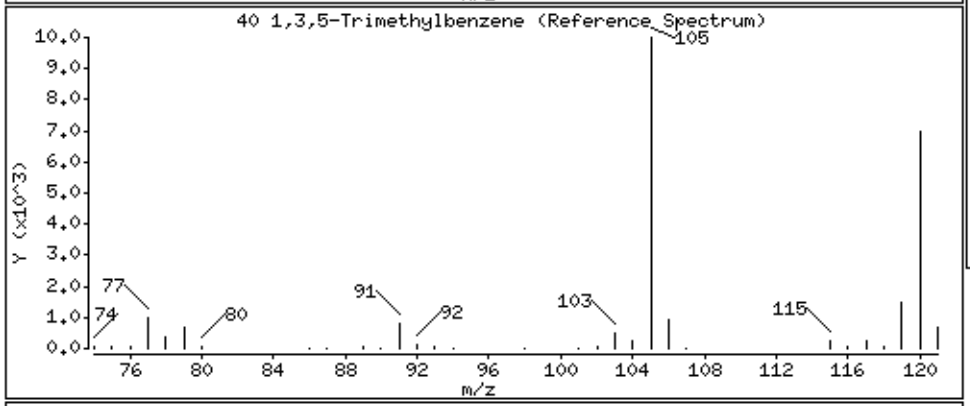
Concentration: 4.29887 ug

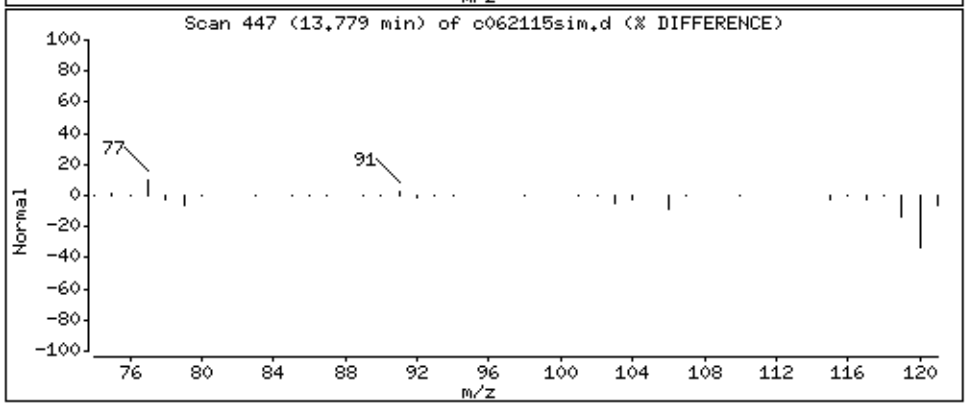












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

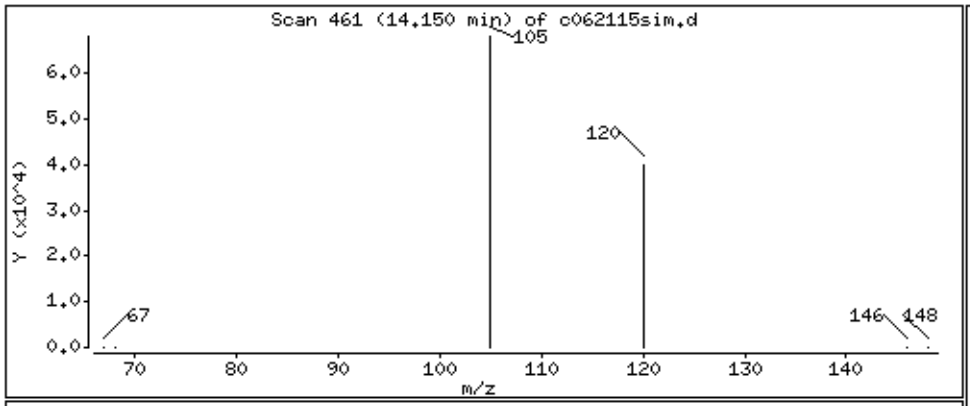
Operator: gm

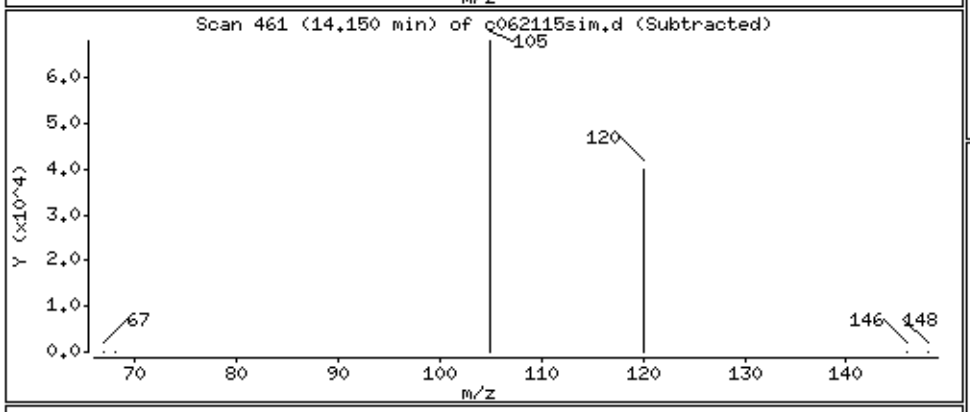
Column phase: DB-5.625

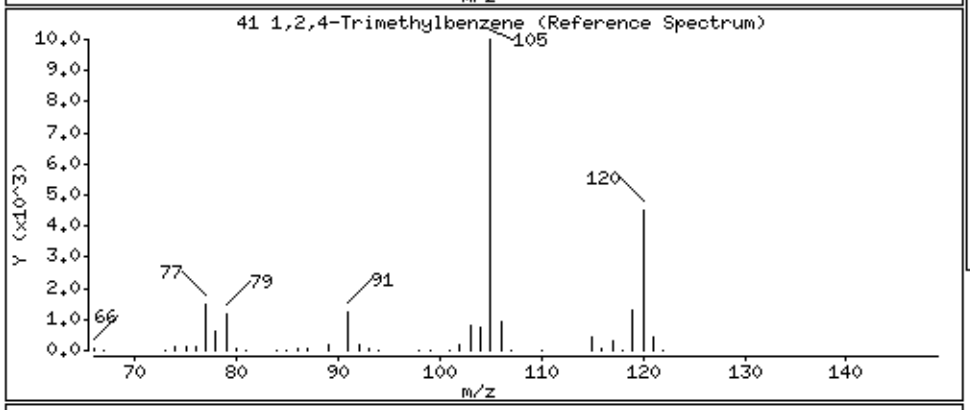
Column diameter: 0.25

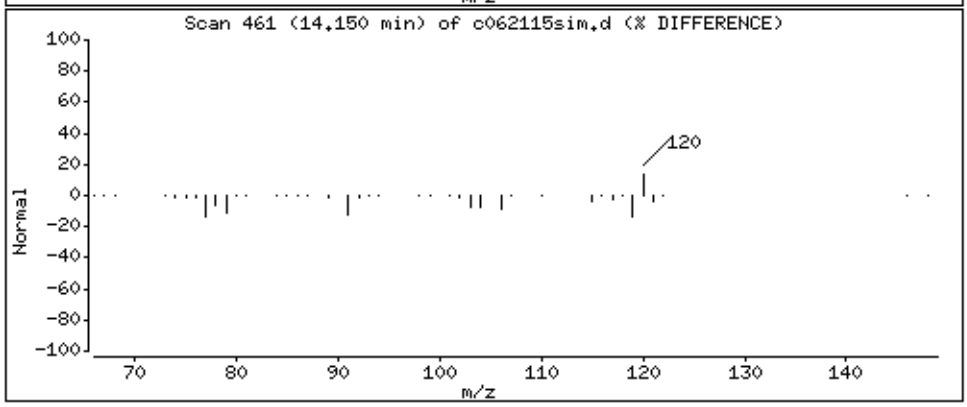
41 1,2,4-Trimethylbenzene

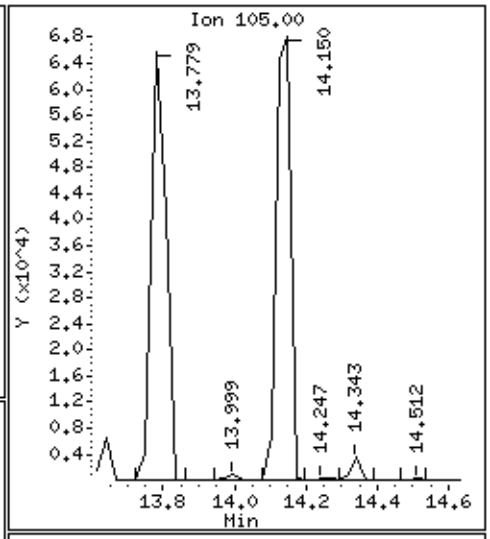
Concentration: 4.42186 ug

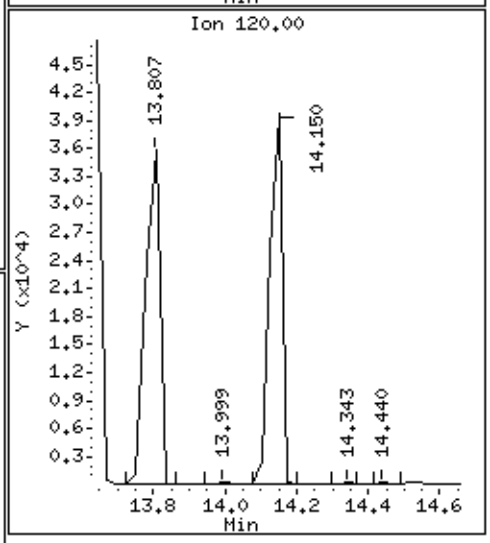












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

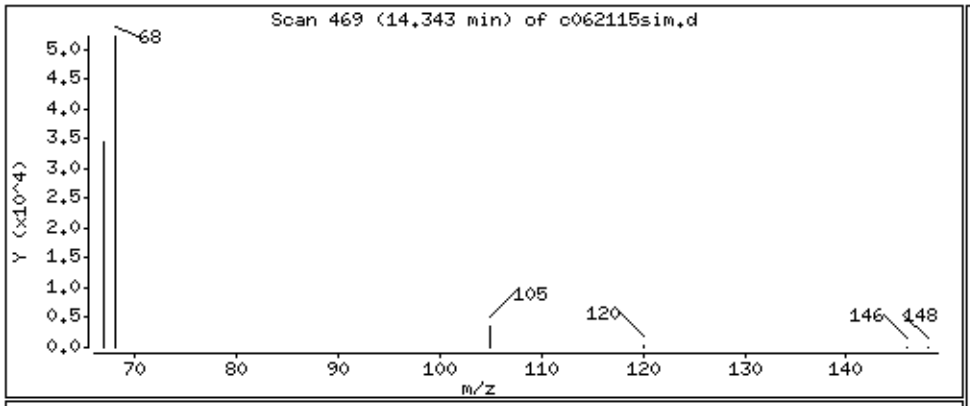
Operator: gm

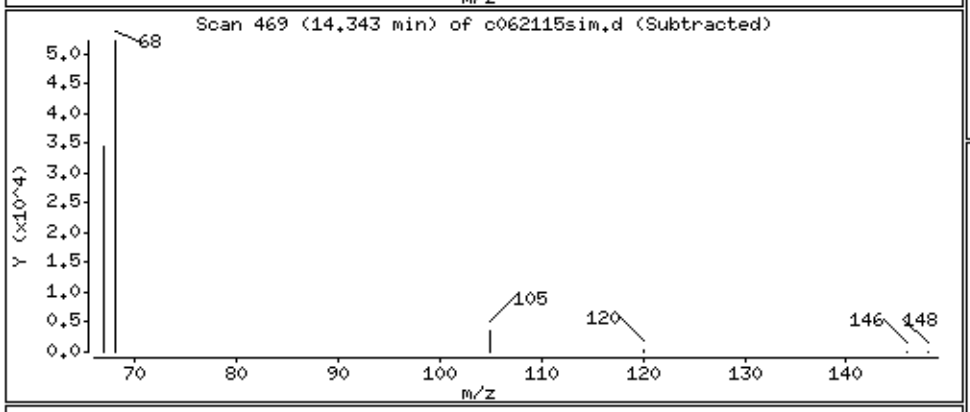
Column phase: DB-5.625

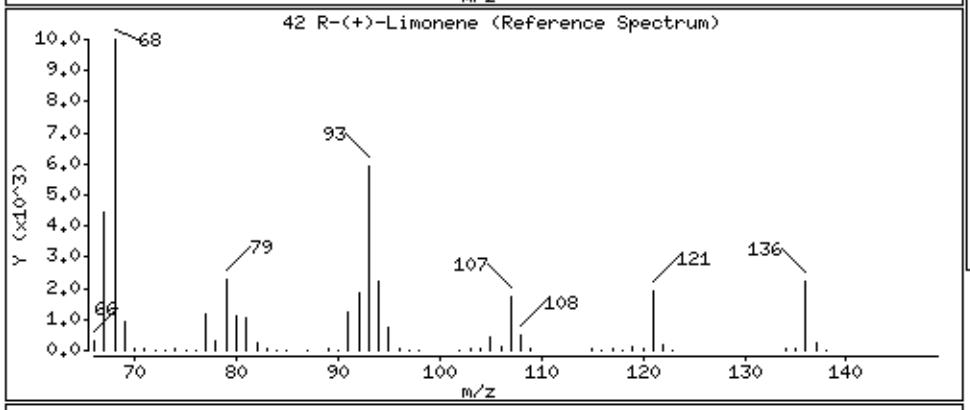
Column diameter: 0.25

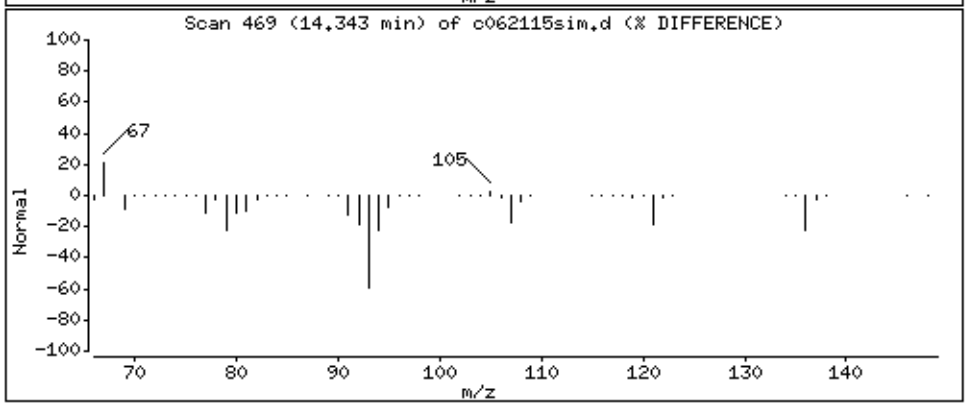
42 R-(+)-Limonene

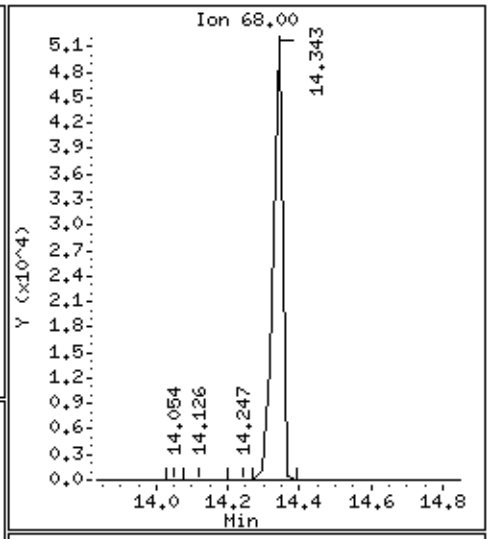
Concentration: 4.59865 ug

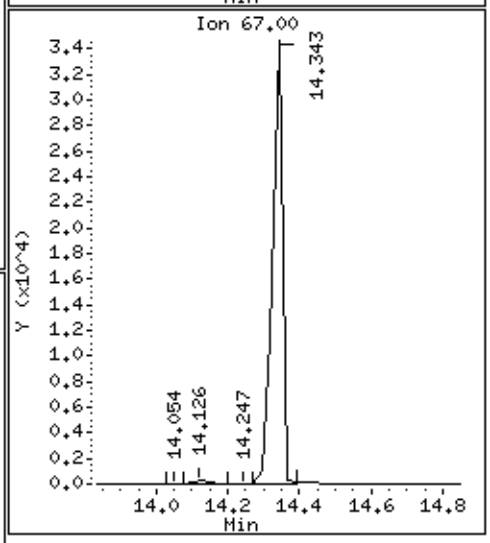












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

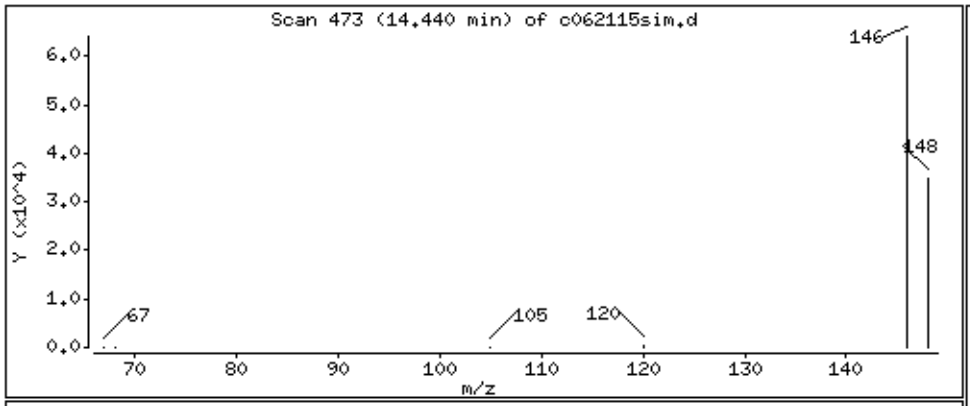
Operator: gm

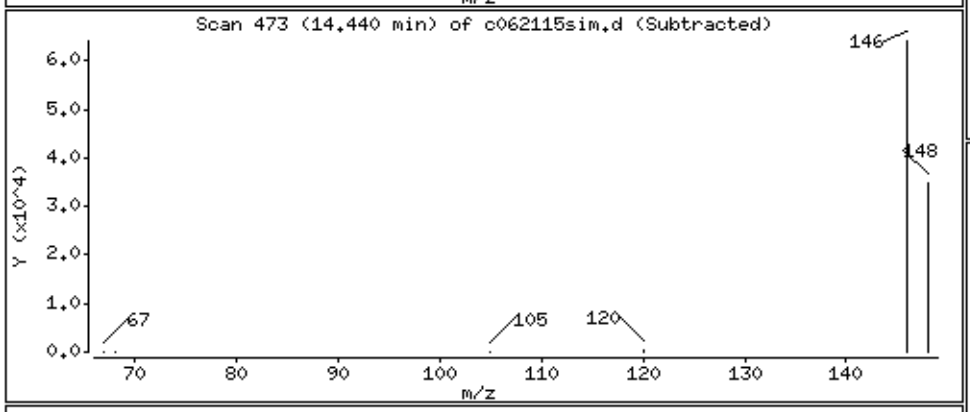
Column phase: DB-5.625

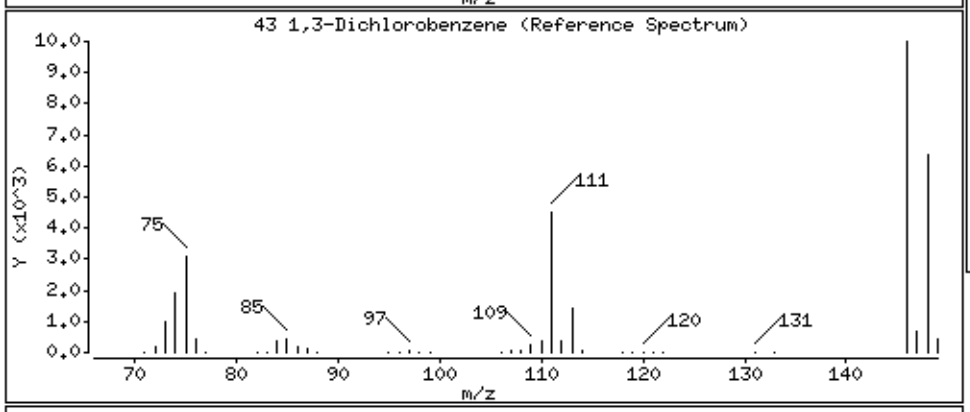
Column diameter: 0.25

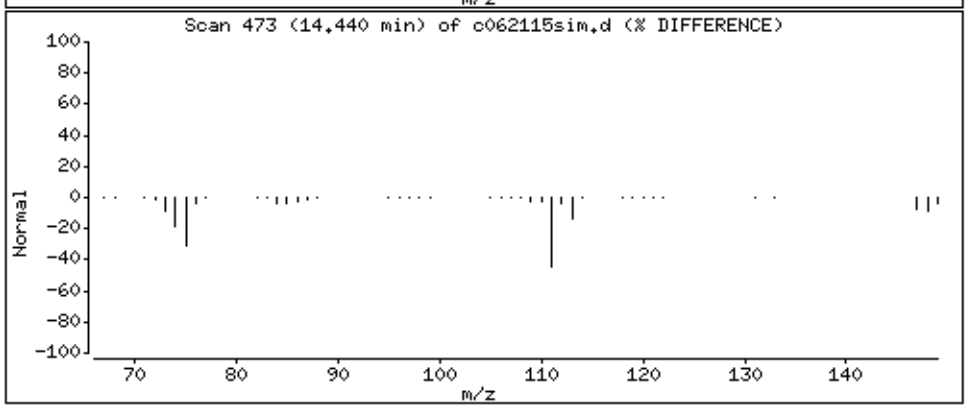
43 1,3-Dichlorobenzene

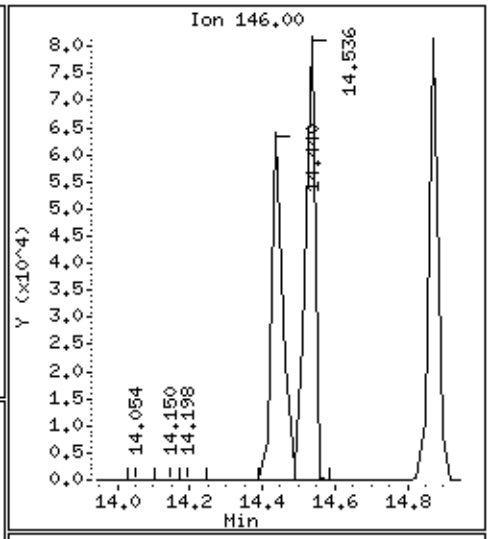
Concentration: 4.55746 ug

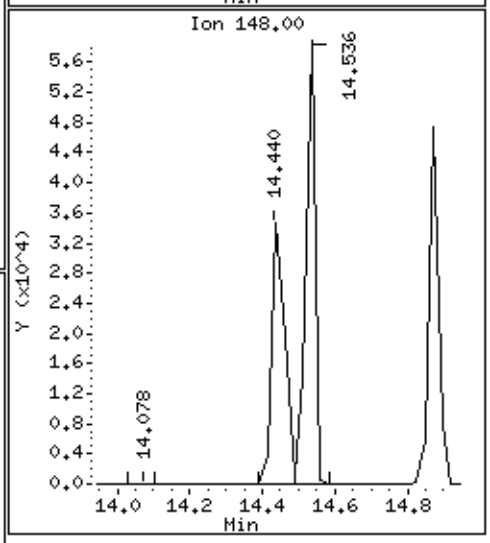












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

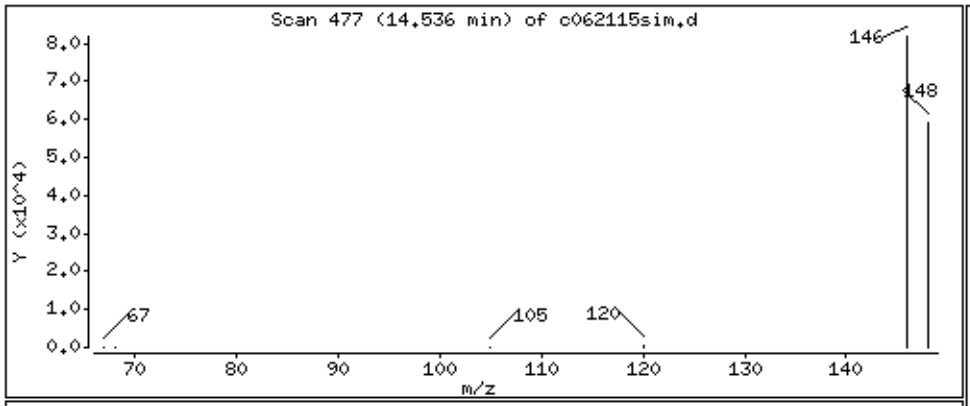
Operator: gm

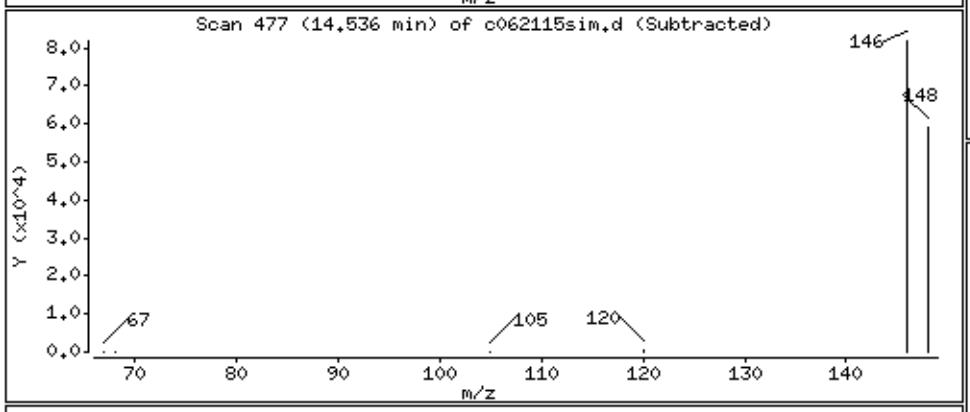
Column phase: DB-5.625

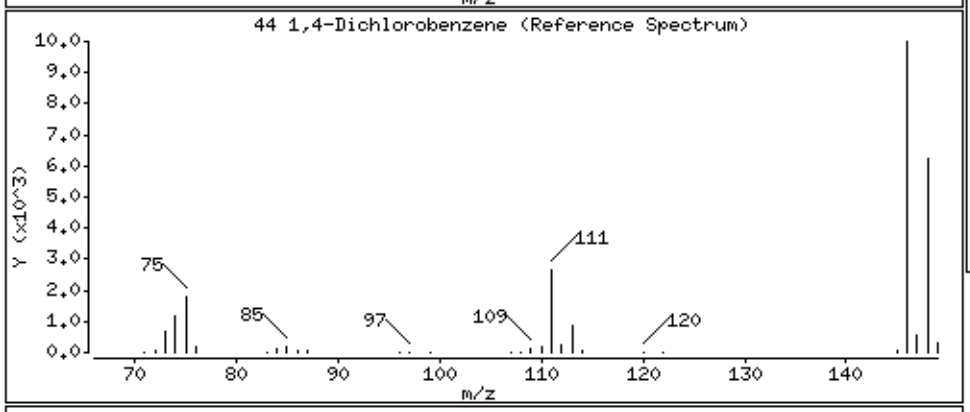
Column diameter: 0.25

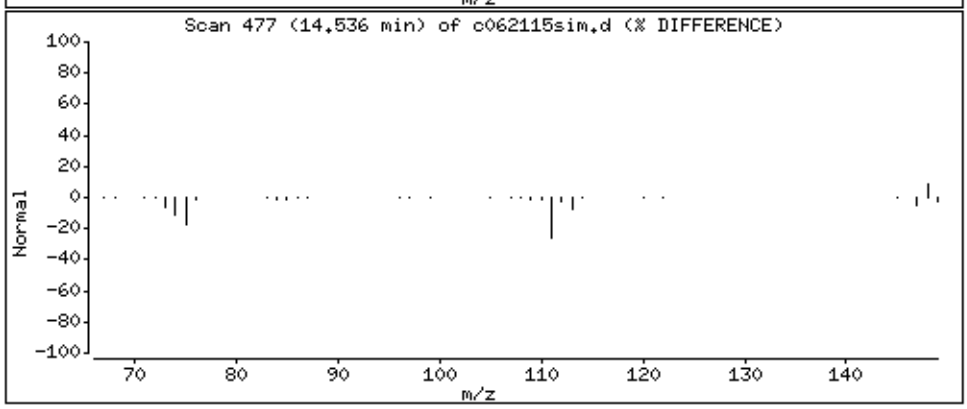
44 1,4-Dichlorobenzene

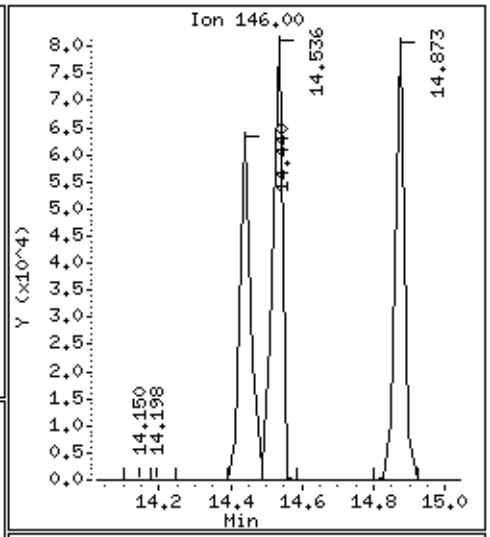
Concentration: 4.41230 ug

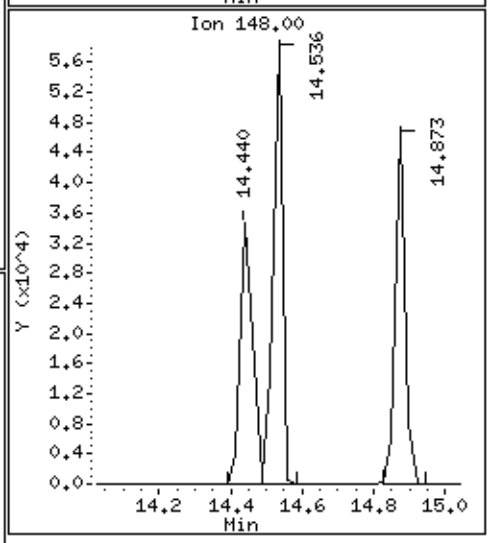












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

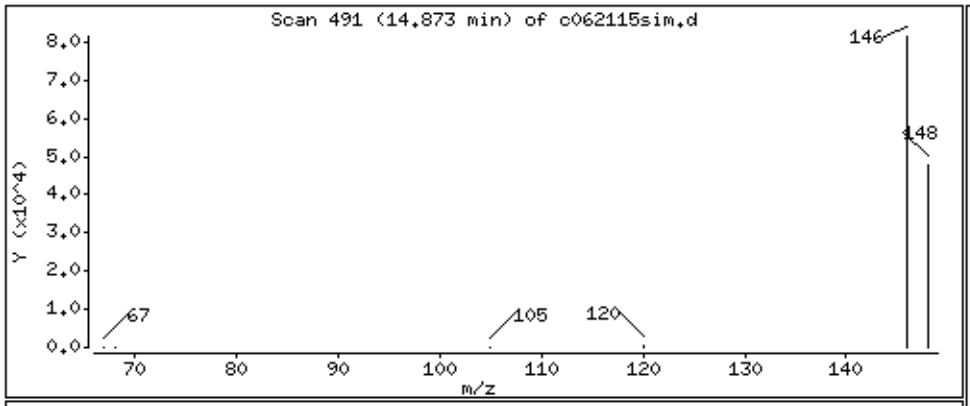
Operator: gm

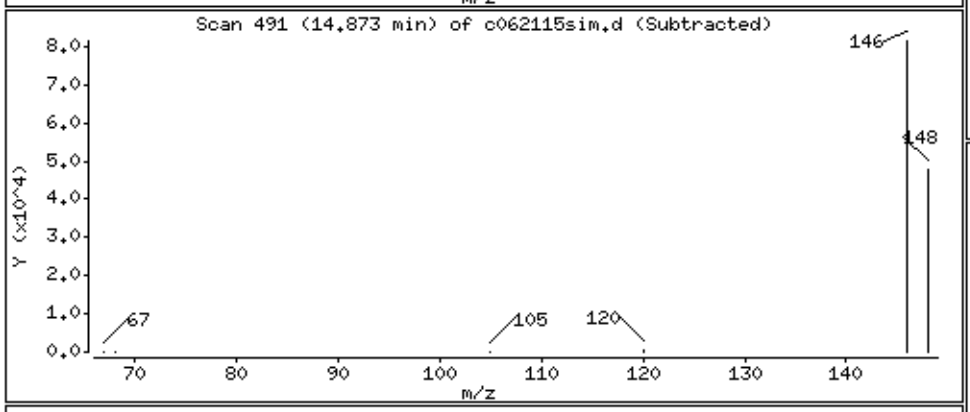
Column phase: DB-5.625

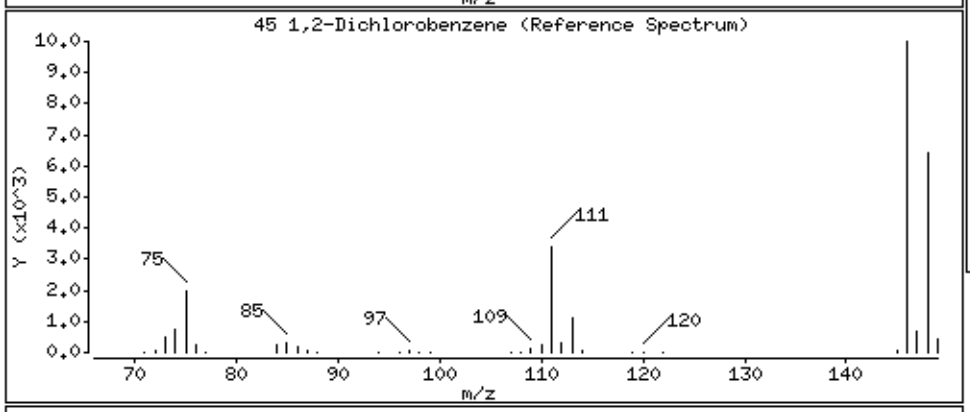
Column diameter: 0.25

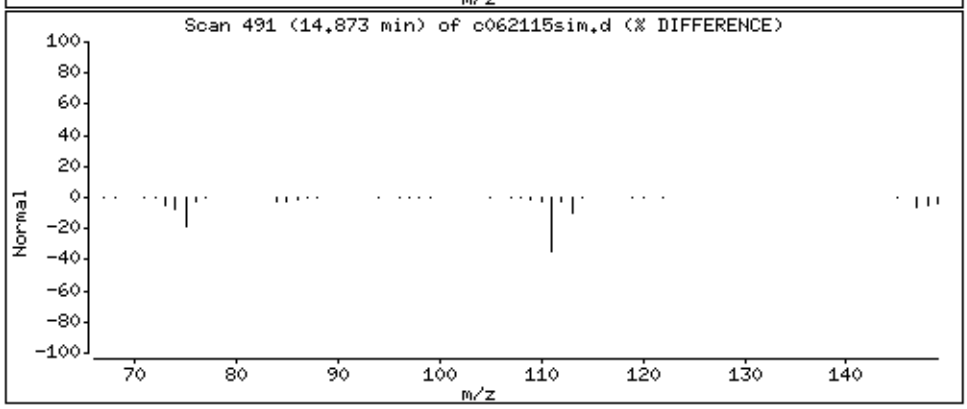
45 1,2-Dichlorobenzene

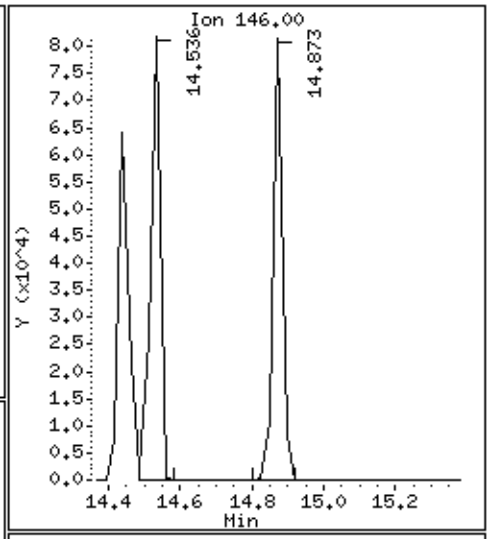
Concentration: 4.58139 ug

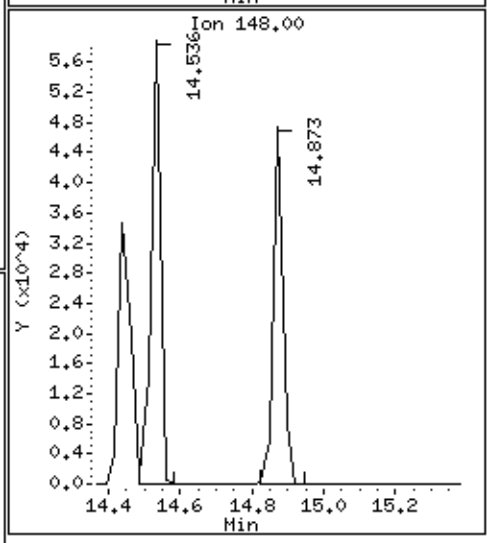












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

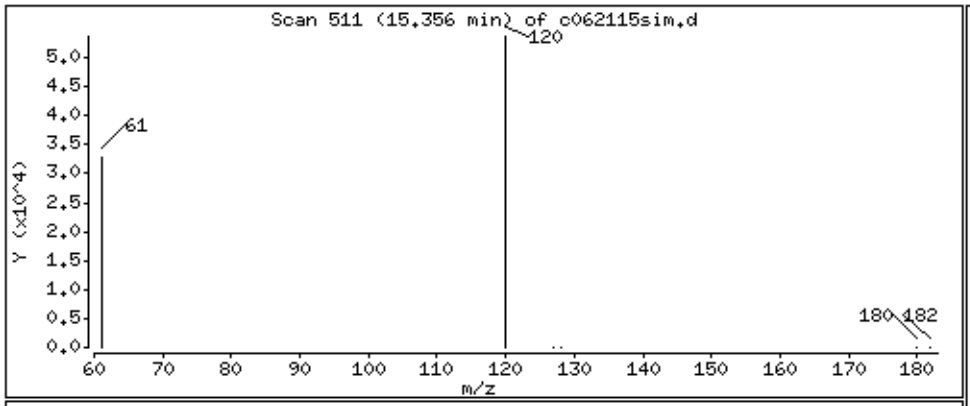
Operator: gm

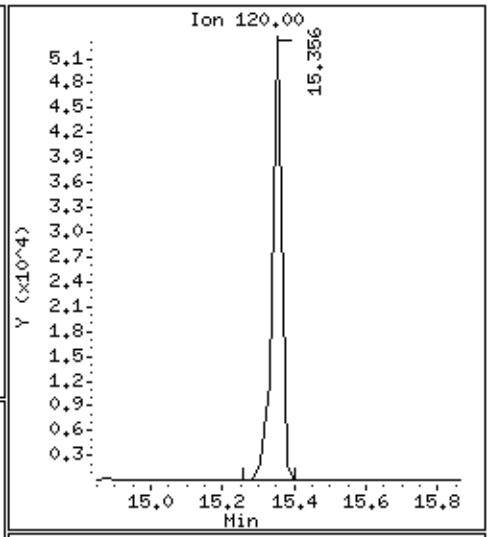
Column phase: DB-5.625

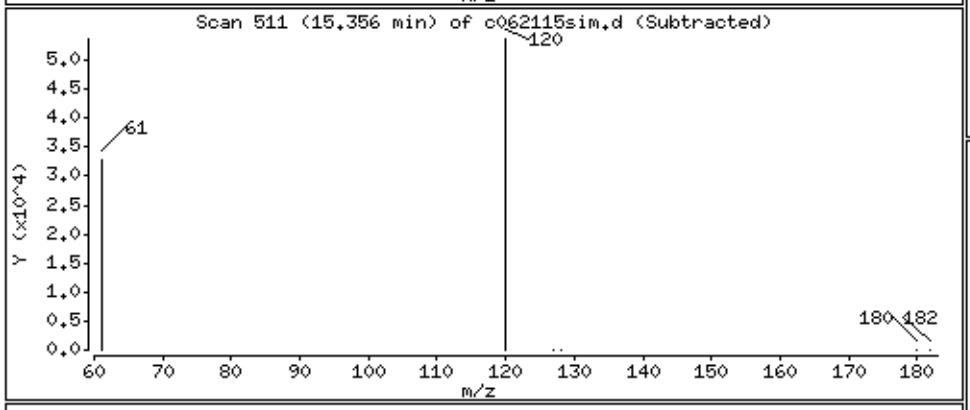
Column diameter: 0.25

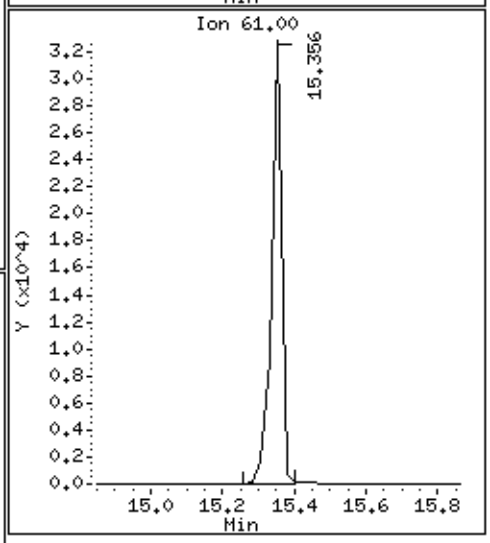
46 1,4-Dithiane

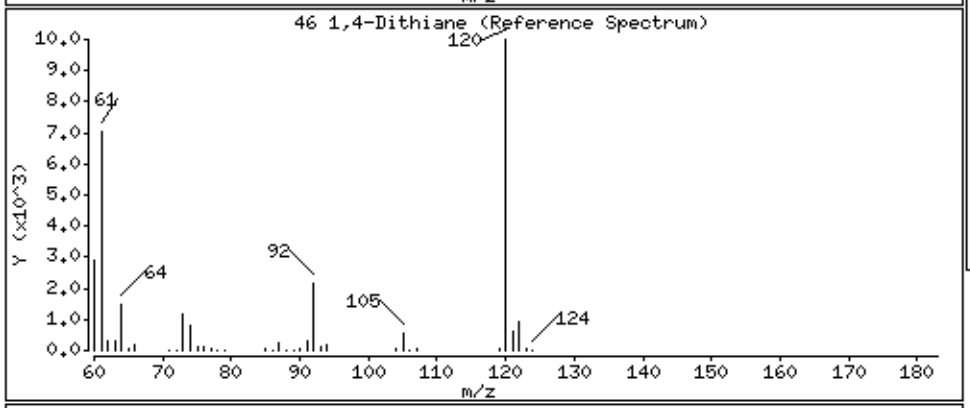
Concentration: 4.52051 ug

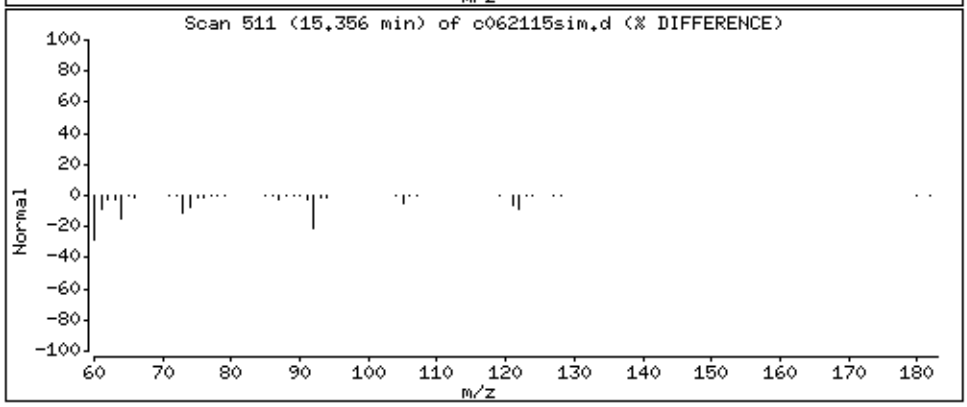












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

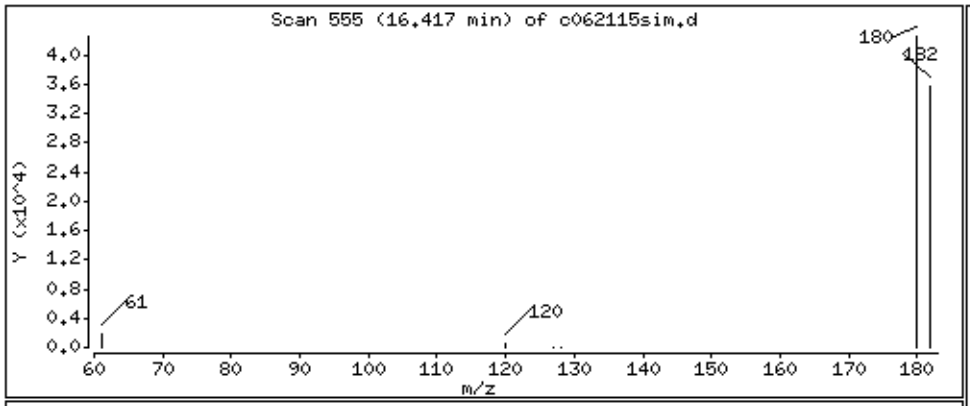
Operator: gm

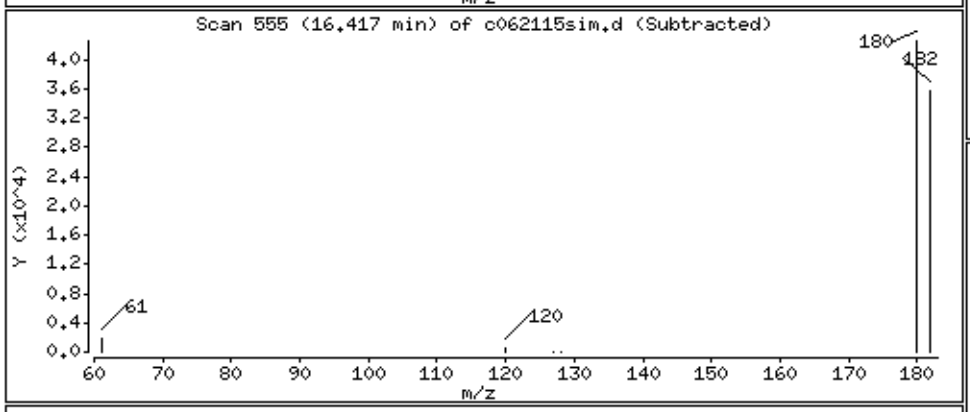
Column phase: DB-5.625

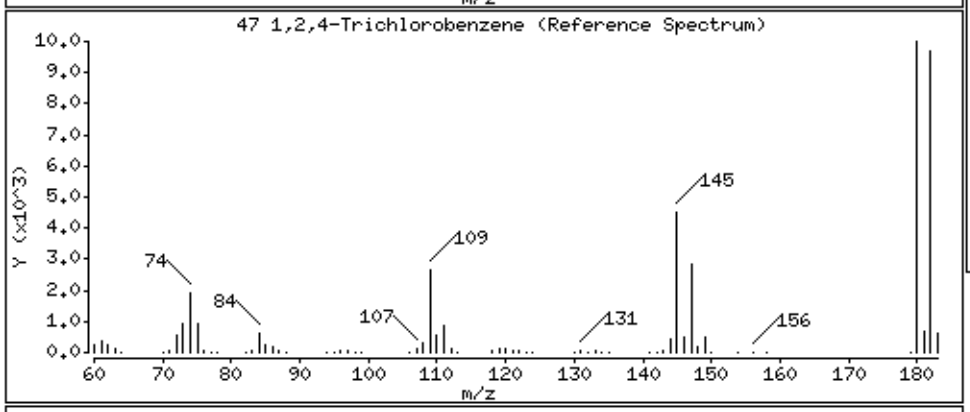
Column diameter: 0.25

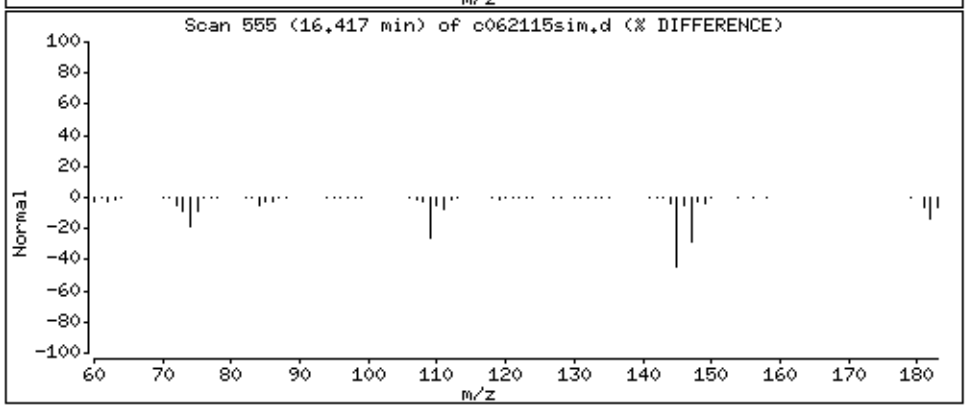
47 1,2,4-Trichlorobenzene

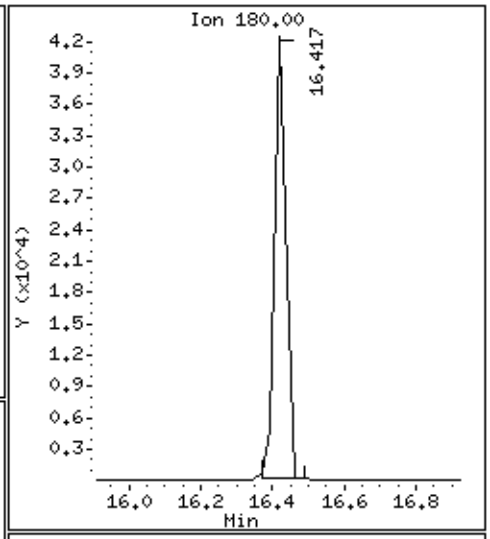
Concentration: 4.49463 ug

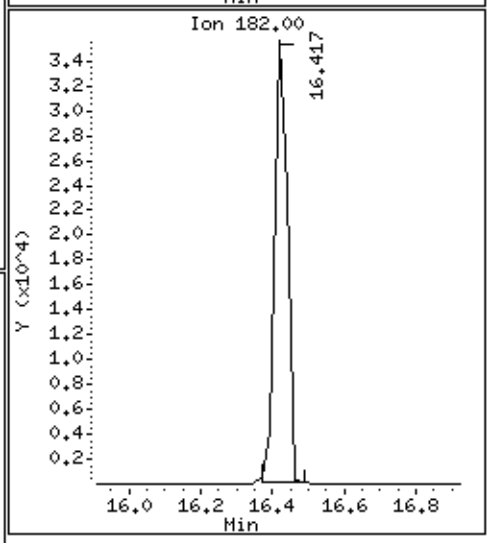












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

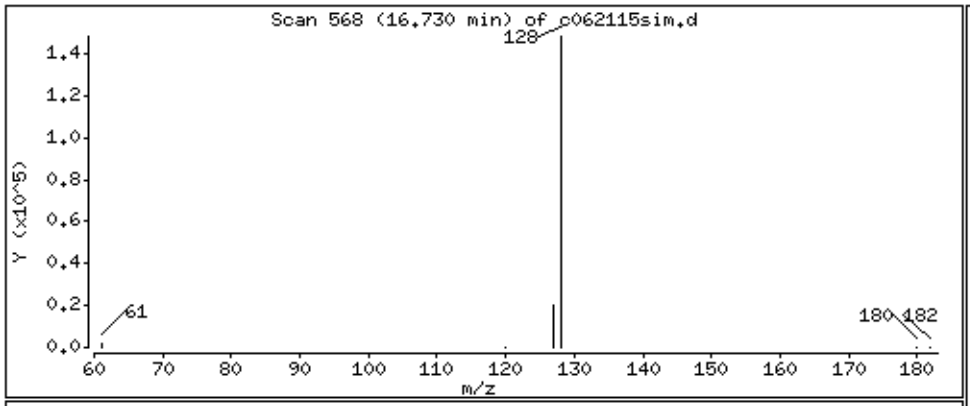
Operator: gm

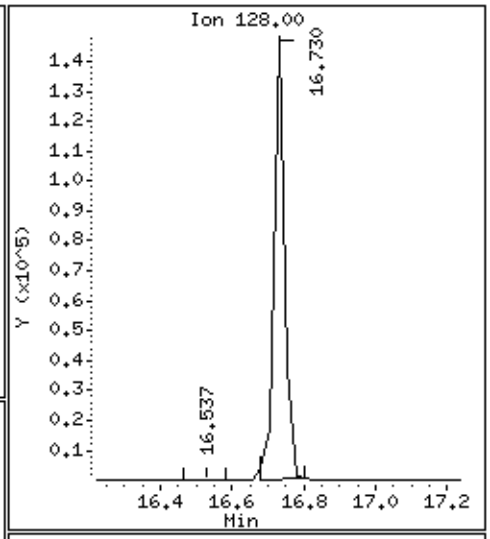
Column phase: DB-5.625

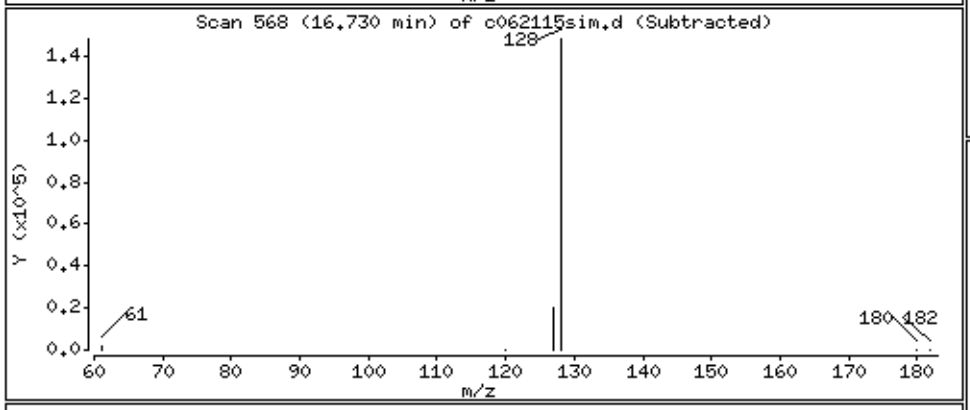
Column diameter: 0.25

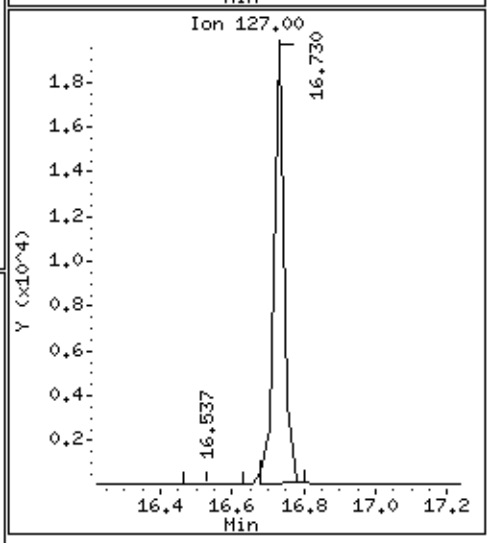
48 Naphthalene

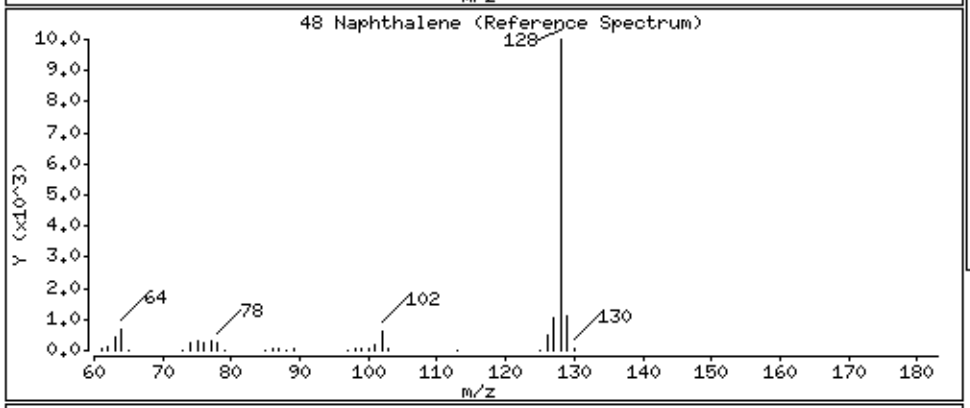
Concentration: 4.45606 ug

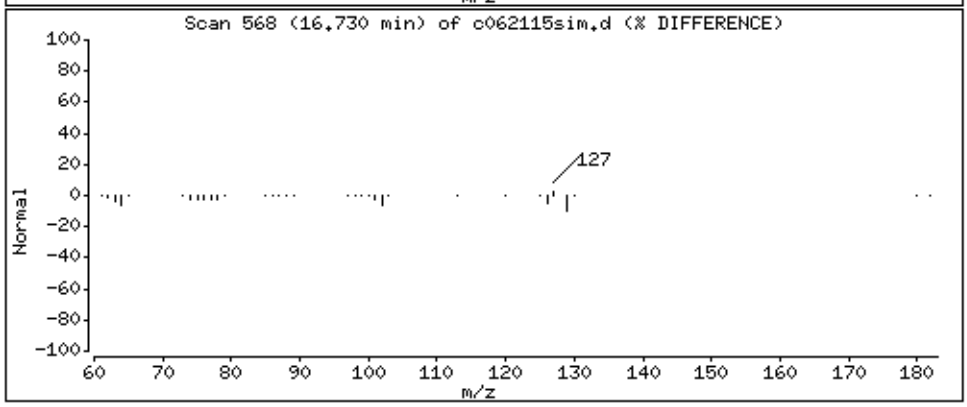












Data File: /chem/msdc.i/21Jun2017.b/c062115sim.d

Date : 21-JUN-2017 13:25

Client ID: ICV

Instrument: msdc.i

Sample Info: ;2848-5-5.0;ICV

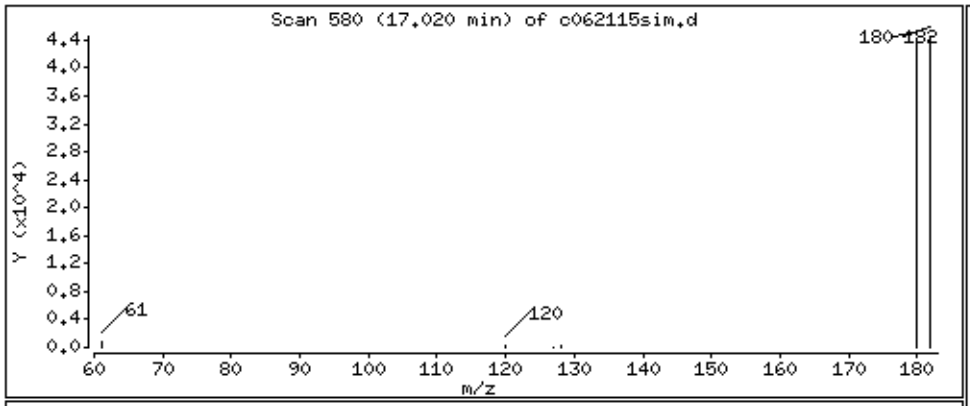
Operator: gm

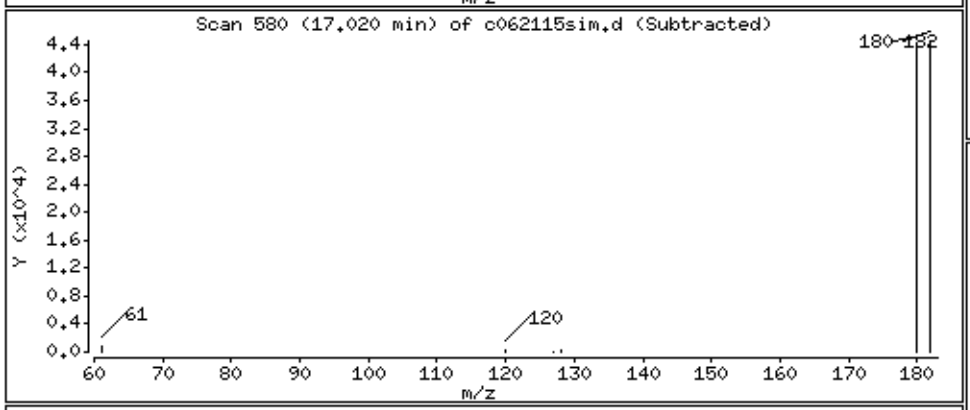
Column phase: DB-5.625

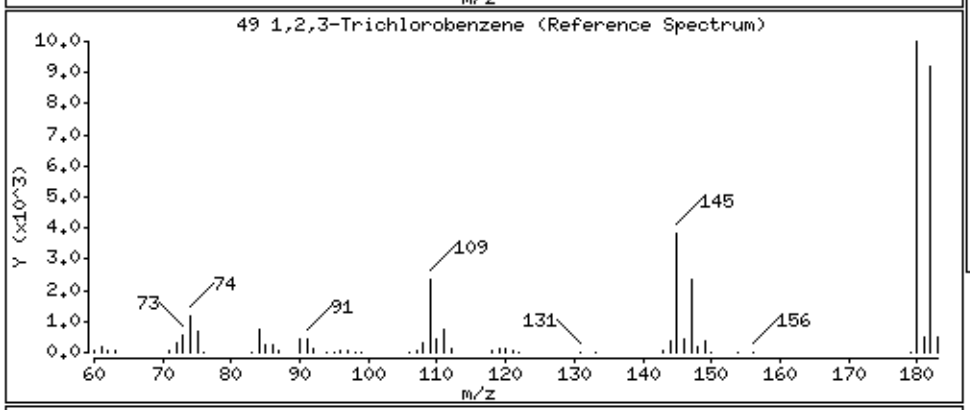
Column diameter: 0.25

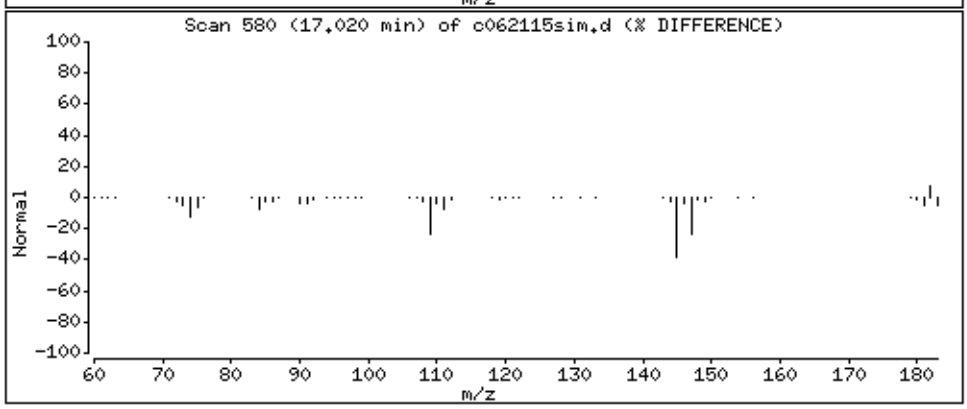
49 1,2,3-Trichlorobenzene

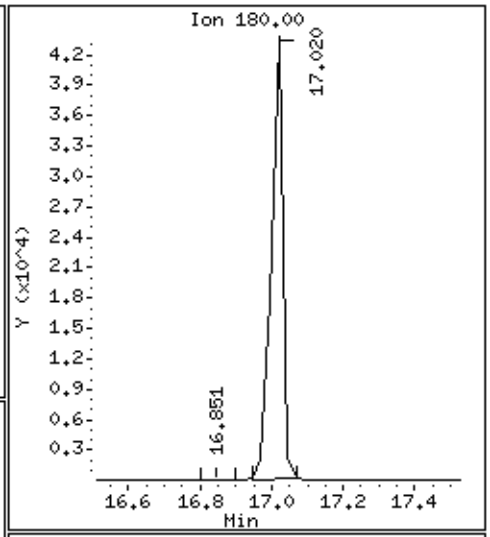
Concentration: 4.48866 ug

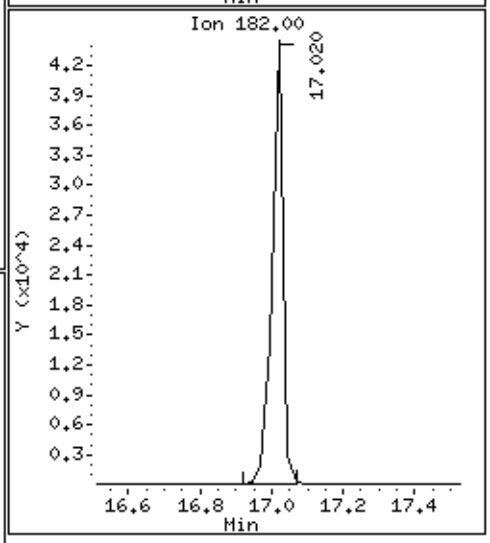












Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062103sim.d
Lab Smp Id: 2848-4-0.025 Client Smp ID: Level 1
Inj Date : 21-JUN-2017 08:04
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.025;Level 1
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 08:04 Cal File: c062103sim.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: mpxylene.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	298080	5.00000	
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	264171	5.00000	4.95975
33 m,p-Xylene	106	12.480	12.454	(1.140)	1345	0.05000	0.0484156

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062103sim.d
Lab Smp Id: 2848-4-0.025
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 1
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	298080	11.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062103sim.d

Date : 21-JUN-2017 08:04

Client ID: Level 1

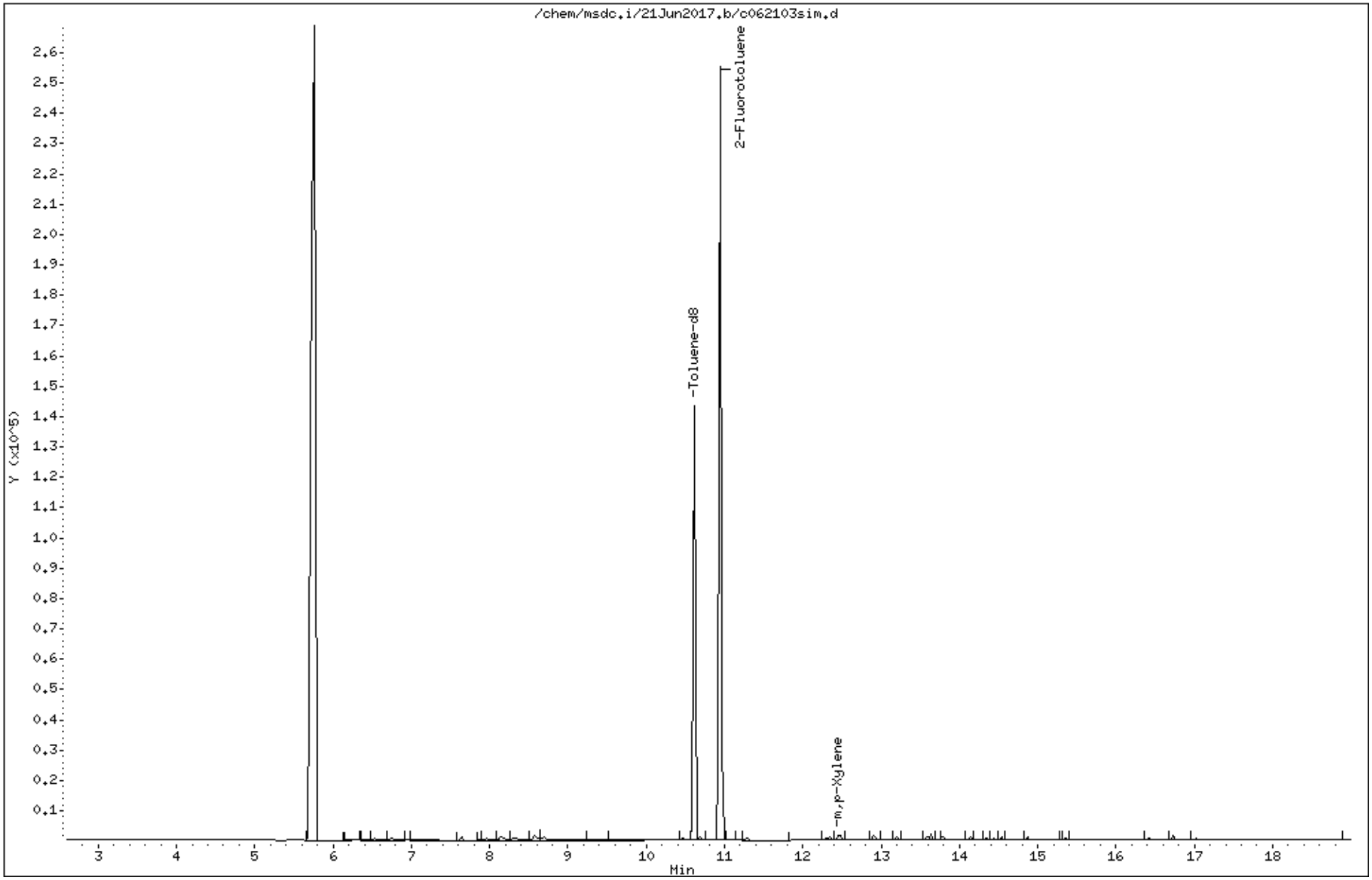
Sample Info: ;2848-4-0.025;Level 1

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062104sim.d
Lab Smp Id: 2848-4-0.05 Client Smp ID: Level 2
Inj Date : 21-JUN-2017 08:30
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.05;Level 2
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 08:30 Cal File: c062104sim.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0.05.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
7 MTBE	73	6.555	6.555	(0.599)	1599	0.05000	0.0468389
9 Hexane	57	6.775	6.775	(0.619)	1692	0.05000	0.0523755
10 Halothane	117	6.960	6.961	(0.636)	408	0.05000	0.0467130
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	1328	0.05000	0.0525302
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	664	0.05000	0.0494651
13 2-Butanone	72	7.662	7.662	(0.700)	427	0.05000	0.0523066
15 Chloroform-CCC	83	7.956	7.956	(0.727)	1058	0.05000	0.0539232
16 Cyclohexane	84	8.172	8.172	(0.747)	1071	0.05000	0.0522041
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	1065	0.05000	0.0479161
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	1050	0.05000	0.0501453
20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	1223	0.05000	0.0538976
21 Heptane	71	8.696	8.696	(0.794)	889	0.05000	0.0499241
22 Trichloroethene	130	9.283	9.283	(0.848)	835	0.05000	0.0496456
23 Methyl Methacrylate	69	9.596	9.596	(0.877)	743	0.05000	0.0489933
$ 25 Toluene-d8	98	10.608	10.608	(0.969)	264248	5.00000	5.08550
26 Toluene-CCC	92	10.680	10.680	(0.976)	1942	0.05000	0.0526946

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 27 2-Fluorotoluene	109	10.945	10.945	(1.000)	290794	5.00000	
28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	742	0.05000	0.0505555
29 Tetrachloroethene	164	11.283	11.283	(1.031)	776	0.05000	0.0509956
30 Chlorobenzene	112	12.299	12.300	(1.124)	2327	0.05000	0.0501572
31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	1147	0.05000	0.0491772
33 m,p-Xylene	106	12.454	12.454	(1.138)	2796	0.10000	0.103168
34 o-Xylene	106	12.901	12.901	(1.179)	1469	0.05000	0.0563027
35 Styrene	104	12.928	12.928	(1.181)	2709	0.05000	0.0529364(a)
36 a-Pinene	93	13.203	13.203	(1.206)	1736	0.05000	0.0513556
37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	1620	0.05000	0.0541613
38 Propylbenzene	91	13.642	13.642	(1.246)	4344	0.05000	0.0466259
40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	2978	0.05000	0.0582062
41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	2914	0.05000	0.0536330
42 R-(+)-Limonene	68	14.343	14.343	(1.310)	1304	0.05000	0.0519526
43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	2017	0.05000	0.0541383
44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	2180	0.05000	0.0504063
45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	2057	0.05000	0.0521770
46 1,4-Dithiane	120	15.356	15.356	(1.403)	1378	0.05000	0.0514915
47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	1373	0.05000	0.0521750
48 Naphthalene	128	16.730	16.730	(1.529)	4178	0.05000	0.0527250
49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	1351	0.05000	0.0531085

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062104sim.d
Lab Smp Id: 2848-4-0.05
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 2
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	290794	8.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062104sim.d

Date : 21-JUN-2017 08:30

Client ID: Level 2

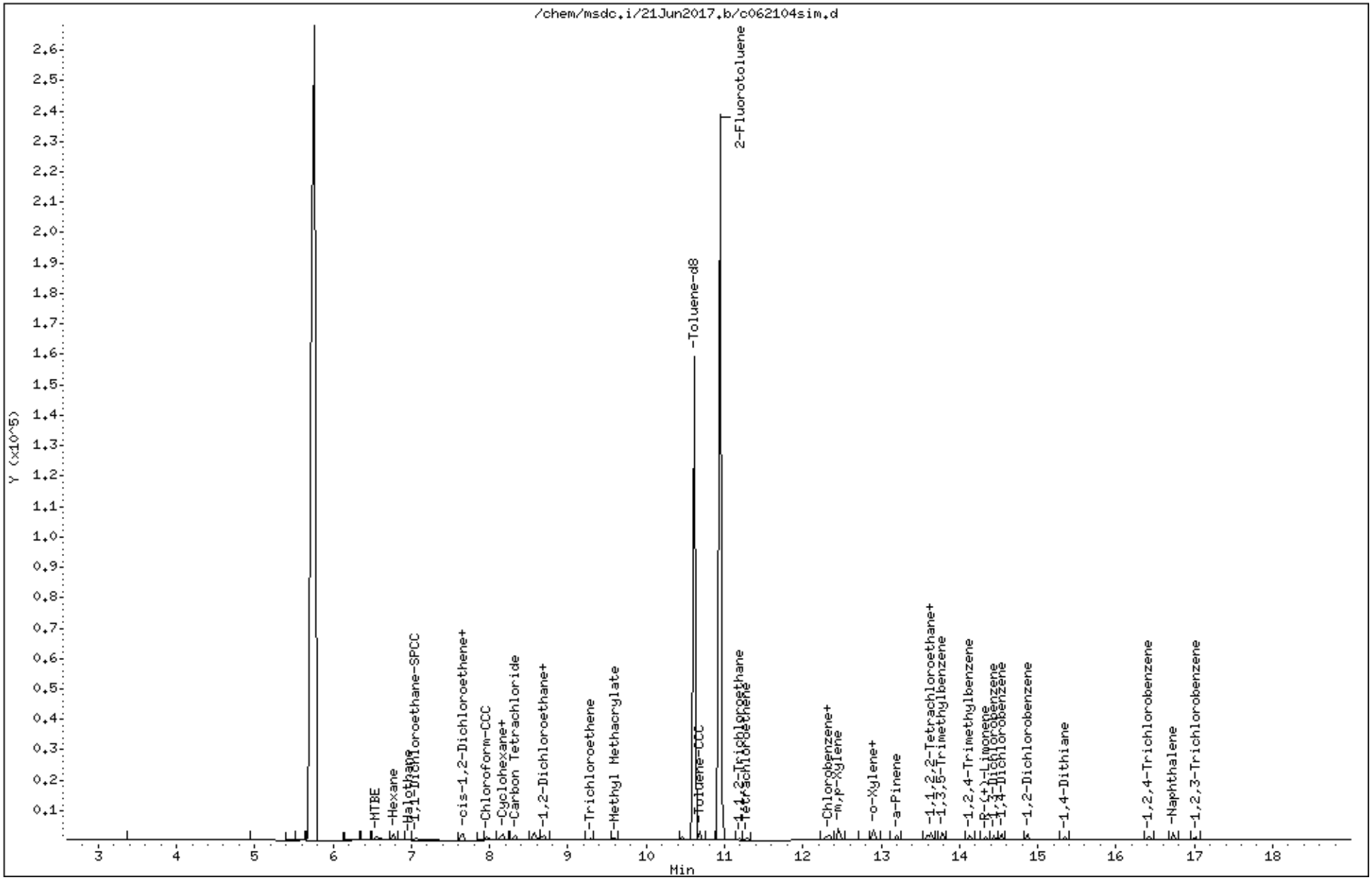
Sample Info: ;2848-4-0.05;Level 2

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062105sim.d
Lab Smp Id: 2848-4-0.10 Client Smp ID: Level 3
Inj Date : 21-JUN-2017 08:56
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.10;Level 3
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 08:56 Cal File: c062105sim.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0.1.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	173	0.10000	0.0602029(a)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	755	0.10000	0.0594985(a)
3 Ethanol	45	4.986	4.961	(0.455)	290	0.10000	0.0654629(a)
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	728	0.10000	0.0694356(aM)
5 Acetone	58	5.566	5.566	(0.508)	597	0.10000	0.0711246(a)
7 MTBE	73	6.555	6.555	(0.599)	2975	0.10000	0.0838892(a)
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	1138	0.10000	0.0886581(a)
9 Hexane	57	6.775	6.775	(0.619)	3232	0.10000	0.0963074
10 Halothane	117	6.961	6.961	(0.636)	658	0.10000	0.0725210
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	2124	0.10000	0.0808773
12 Ethyl Acetate	70	7.640	7.640	(0.698)	302	0.10000	0.0790251(a)
13 2-Butanone	72	7.662	7.662	(0.700)	672	0.10000	0.0792426(a)
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	1144	0.10000	0.0820384
15 Chloroform-CCC	83	7.956	7.956	(0.727)	1910	0.10000	0.0937096
16 Cyclohexane	84	8.172	8.172	(0.747)	1868	0.10000	0.0876501
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	1959	0.10000	0.0848451

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	1897	0.10000	0.0872106
	19 Benzene	78	8.573	8.573	(0.783)	5492	0.10000	0.103500
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	2073	0.10000	0.0879434
	21 Heptane	71	8.696	8.696	(0.794)	1810	0.10000	0.0978471
	22 Trichloroethene	130	9.283	9.283	(0.848)	1635	0.10000	0.0935778
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	1421	0.10000	0.0901992
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	571	0.10000	0.0922439(a)
$	25 Toluene-d8	98	10.608	10.608	(0.969)	266957	5.00000	4.94565
	26 Toluene-CCC	92	10.680	10.680	(0.976)	3686	0.10000	0.0962794
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	302082	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	1448	0.10000	0.0949716
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	1536	0.10000	0.0971680
	30 Chlorobenzene	112	12.300	12.300	(1.124)	4741	0.10000	0.0983710
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	2431	0.10000	0.100334
	33 m,p-Xylene	106	12.480	12.454	(1.140)	5567	0.20000	0.197739
	34 o-Xylene	106	12.901	12.901	(1.179)	2545	0.10000	0.0938979
	35 Styrene	104	12.928	12.928	(1.181)	5141	0.10000	0.0967061(a)
	36 a-Pinene	93	13.203	13.203	(1.206)	3545	0.10000	0.100952
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	3106	0.10000	0.0999622
	38 Propylbenzene	91	13.642	13.642	(1.246)	9966	0.10000	0.102972
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	4971	0.10000	0.0935296
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	5468	0.10000	0.0968794
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	2553	0.10000	0.0979132
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	3635	0.10000	0.0939212
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	4576	0.10000	0.101853
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	4037	0.10000	0.0985744
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	2824	0.10000	0.101581
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	2665	0.10000	0.0974876
	48 Naphthalene	128	16.730	16.730	(1.529)	7682	0.10000	0.0933217
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	2536	0.10000	0.0959662

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062105sim.d
Lab Smp Id: 2848-4-0.10
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 3
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	302082	13.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062105sim.d

Date : 21-JUN-2017 08:56

Client ID: Level 3

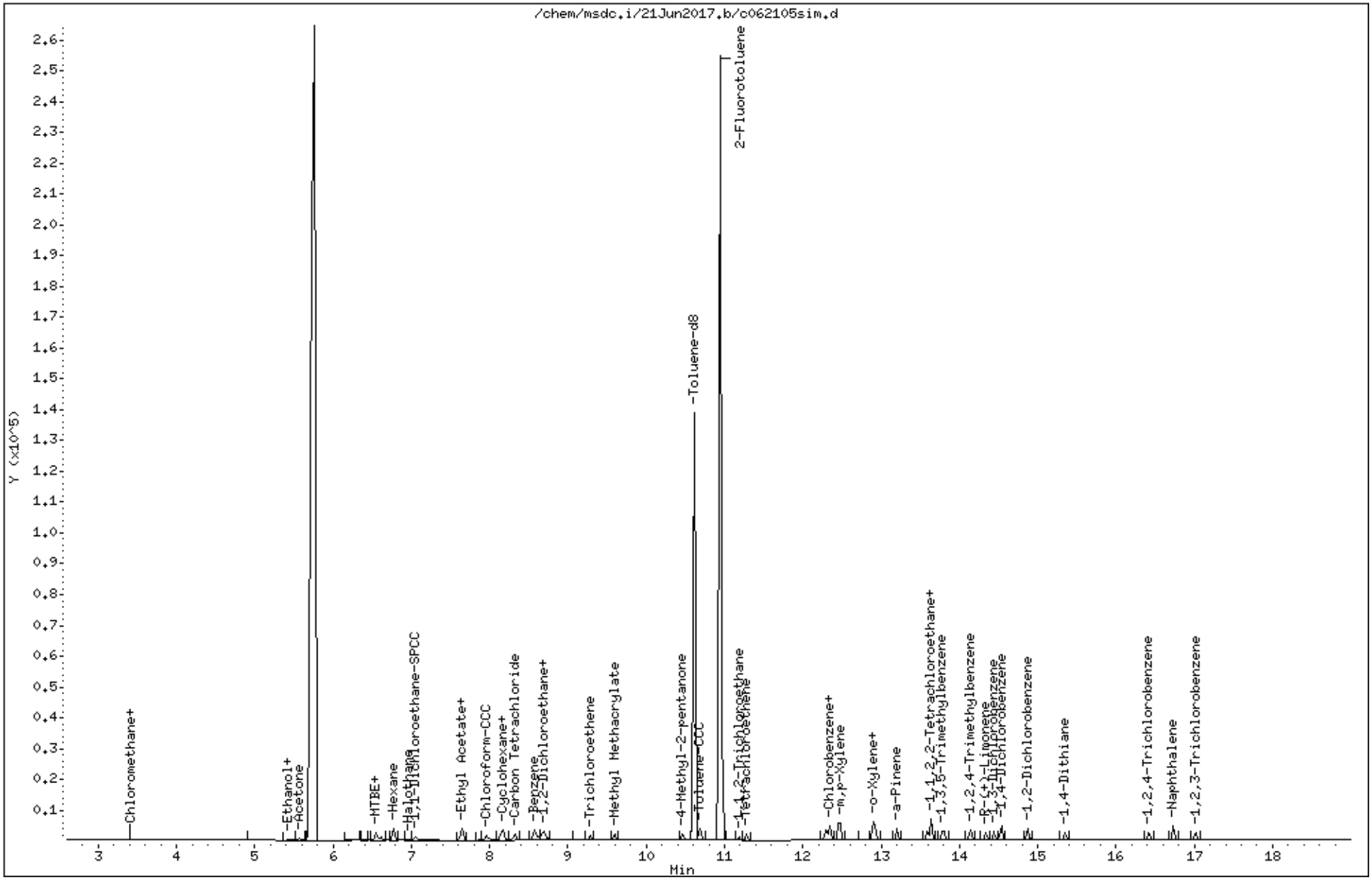
Sample Info: ;2848-4-0.10;Level 3

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062106sim.d
Lab Smp Id: 2848-4-0.20 Client Smp ID: Level 4
Inj Date : 21-JUN-2017 09:21
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.20;Level 4
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 09:21 Cal File: c062106sim.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0.2.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	564	0.20000	0.219315
2 Vinyl Chloride	62	3.420	3.420	(0.312)	2514	0.20000	0.221382
3 Ethanol	45	4.961	4.961	(0.453)	822	0.20000	0.207342
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	1925	0.20000	0.205163(M)
5 Acetone	58	5.566	5.566	(0.508)	1561	0.20000	0.207810
7 MTBE	73	6.583	6.555	(0.601)	6217	0.20000	0.195892
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	2177	0.20000	0.189519
9 Hexane	57	6.775	6.775	(0.619)	5192	0.20000	0.172878
10 Halothane	117	6.961	6.961	(0.636)	1661	0.20000	0.204562
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	4563	0.20000	0.194151
12 Ethyl Acetate	70	7.640	7.640	(0.698)	646	0.20000	0.188890
13 2-Butanone	72	7.662	7.662	(0.700)	1455	0.20000	0.191721
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	2394	0.20000	0.191837
15 Chloroform-CCC	83	7.956	7.956	(0.727)	3420	0.20000	0.187497
16 Cyclohexane	84	8.172	8.172	(0.747)	3508	0.20000	0.183930
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	3925	0.20000	0.189955

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	3661	0.20000	0.188070
	19 Benzene	78	8.573	8.573	(0.783)	9179	0.20000	0.193297
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	3974	0.20000	0.188386
	21 Heptane	71	8.696	8.696	(0.794)	3097	0.20000	0.187080
	22 Trichloroethene	130	9.283	9.283	(0.848)	2852	0.20000	0.182399
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	2585	0.20000	0.183352
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	981	0.20000	0.177088
$	25 Toluene-d8	98	10.608	10.608	(0.969)	242886	5.00000	5.02808
	26 Toluene-CCC	92	10.680	10.680	(0.976)	6139	0.20000	0.179182
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	270338	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	2459	0.20000	0.180219
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	2512	0.20000	0.177570
	30 Chlorobenzene	112	12.300	12.300	(1.124)	7691	0.20000	0.178319
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	3869	0.20000	0.178434
	33 m,p-Xylene	106	12.454	12.454	(1.138)	9070	0.40000	0.359994
	34 o-Xylene	106	12.901	12.901	(1.179)	4210	0.20000	0.173567
	35 Styrene	104	12.928	12.928	(1.181)	8310	0.20000	0.174673
	36 a-Pinene	93	13.203	13.203	(1.206)	5517	0.20000	0.175558
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	4938	0.20000	0.177584
	38 Propylbenzene	91	13.642	13.642	(1.246)	15304	0.20000	0.176693
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	8452	0.20000	0.177698
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	8978	0.20000	0.177746
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	3971	0.20000	0.170180
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	6149	0.20000	0.177534
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	7235	0.20000	0.179947
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	6342	0.20000	0.173041
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	4354	0.20000	0.175006
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	4231	0.20000	0.172947
	48 Naphthalene	128	16.730	16.730	(1.529)	12950	0.20000	0.175791
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	4135	0.20000	0.174849

QC Flag Legend

M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062106sim.d
Lab Smp Id: 2848-4-0.20
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 4
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	270338	1.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

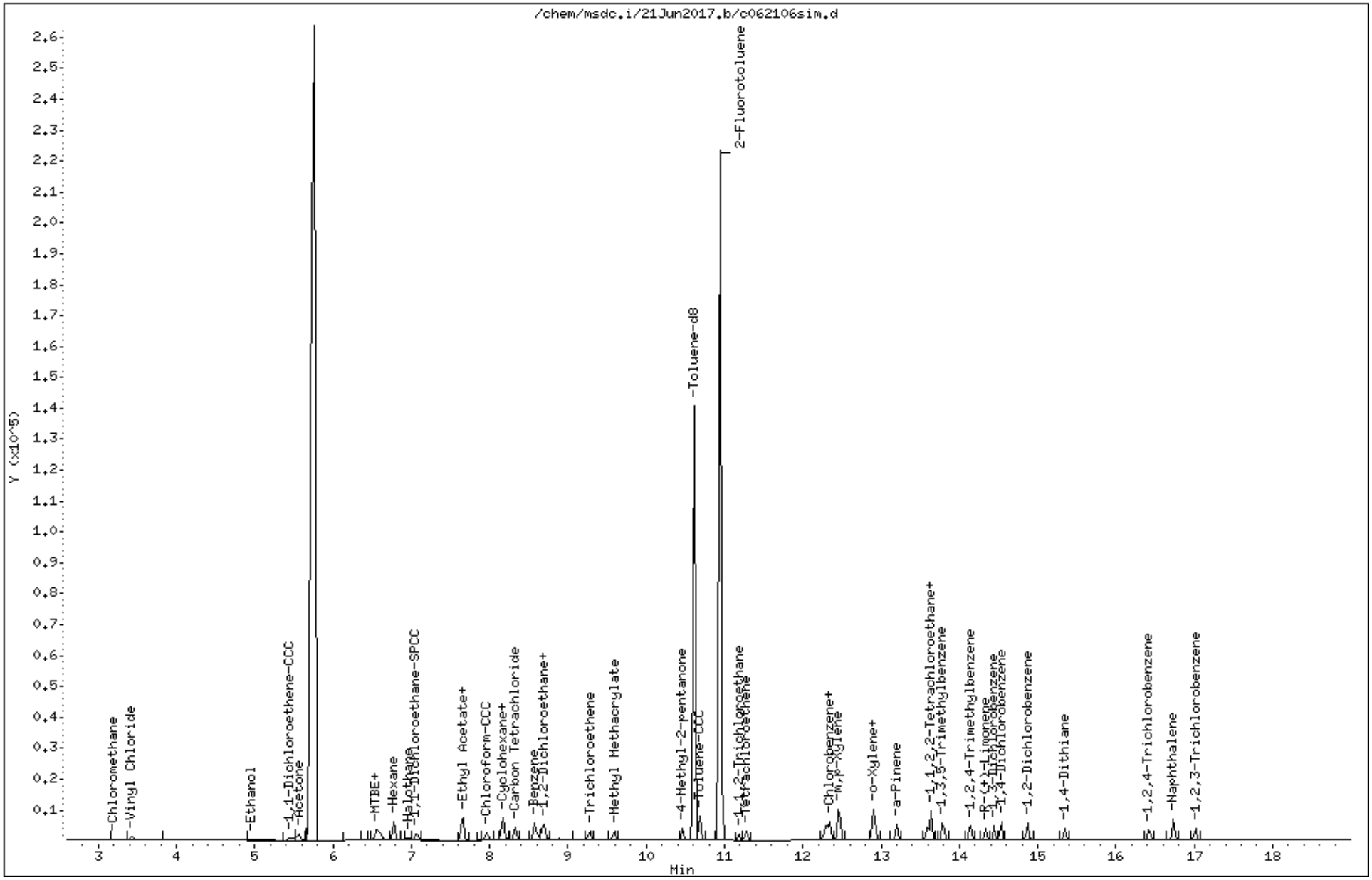
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062106sim.d
Date : 21-JUN-2017 09:21
Client ID: Level 4
Sample Info: ;2848-4-0.20;Level 4

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062107sim.d
Lab Smp Id: 2848-4-0.50 Client Smp ID: Level 5
Inj Date : 21-JUN-2017 09:46
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-0.50;Level 5
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 09:46 Cal File: c062107sim.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	1431	0.50000	0.535893
2 Vinyl Chloride	62	3.420	3.420	(0.312)	6508	0.50000	0.551917
3 Ethanol	45	4.961	4.961	(0.453)	2331	0.50000	0.566248
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	5630	0.50000	0.577865(M)
5 Acetone	58	5.566	5.566	(0.508)	4376	0.50000	0.561035
7 MTBE	73	6.555	6.555	(0.599)	19271	0.50000	0.584777
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	6752	0.50000	0.566077
9 Hexane	57	6.775	6.775	(0.619)	17192	0.50000	0.551292
10 Halothane	117	6.960	6.961	(0.636)	4957	0.50000	0.587927
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	14029	0.50000	0.574865
12 Ethyl Acetate	70	7.639	7.640	(0.698)	2063	0.50000	0.580931
13 2-Butanone	72	7.662	7.662	(0.700)	4571	0.50000	0.580053
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	7562	0.50000	0.583572
15 Chloroform-CCC	83	7.956	7.956	(0.727)	10304	0.50000	0.544031
16 Cyclohexane	84	8.172	8.172	(0.747)	12122	0.50000	0.612092
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	13059	0.50000	0.608652

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	12146	0.50000	0.600900
	19 Benzene	78	8.572	8.573	(0.783)	27028	0.50000	0.548141
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	12657	0.50000	0.577832
	21 Heptane	71	8.696	8.696	(0.794)	10184	0.50000	0.592454
	22 Trichloroethene	130	9.282	9.283	(0.848)	9782	0.50000	0.602490
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	8997	0.50000	0.614572
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	3398	0.50000	0.590734
$	25 Toluene-d8	98	10.608	10.608	(0.969)	247144	5.00000	4.92719
	26 Toluene-CCC	92	10.704	10.680	(0.978)	20952	0.50000	0.588939
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	280710	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	8349	0.50000	0.589286
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	8846	0.50000	0.602207
	30 Chlorobenzene	112	12.299	12.300	(1.124)	27311	0.50000	0.609820
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	13803	0.50000	0.613058
	33 m,p-Xylene	106	12.480	12.454	(1.140)	31555	1.00000	1.20616
	34 o-Xylene	106	12.901	12.901	(1.179)	14539	0.50000	0.577257
	35 Styrene	104	12.928	12.928	(1.181)	29428	0.50000	0.595708
	36 a-Pinene	93	13.203	13.203	(1.206)	19544	0.50000	0.598935
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	17335	0.50000	0.600379
	38 Propylbenzene	91	13.642	13.642	(1.246)	56401	0.50000	0.627121
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	28205	0.50000	0.571082
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	30796	0.50000	0.587170
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	14195	0.50000	0.585858
	43 1,3-Dichlorobenzene	146	14.439	14.440	(1.319)	21033	0.50000	0.584827
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	25189	0.50000	0.603346
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	22833	0.50000	0.599978
	46 1,4-Dithiane	120	15.355	15.356	(1.403)	15498	0.50000	0.599915
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	15233	0.50000	0.599660
	48 Naphthalene	128	16.730	16.730	(1.529)	45201	0.50000	0.590913
	49 1,2,3-Trichlorobenzene	180	17.019	17.020	(1.555)	14588	0.50000	0.594062

QC Flag Legend

M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062107sim.d
Lab Smp Id: 2848-4-0.50
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 5
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	280710	5.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

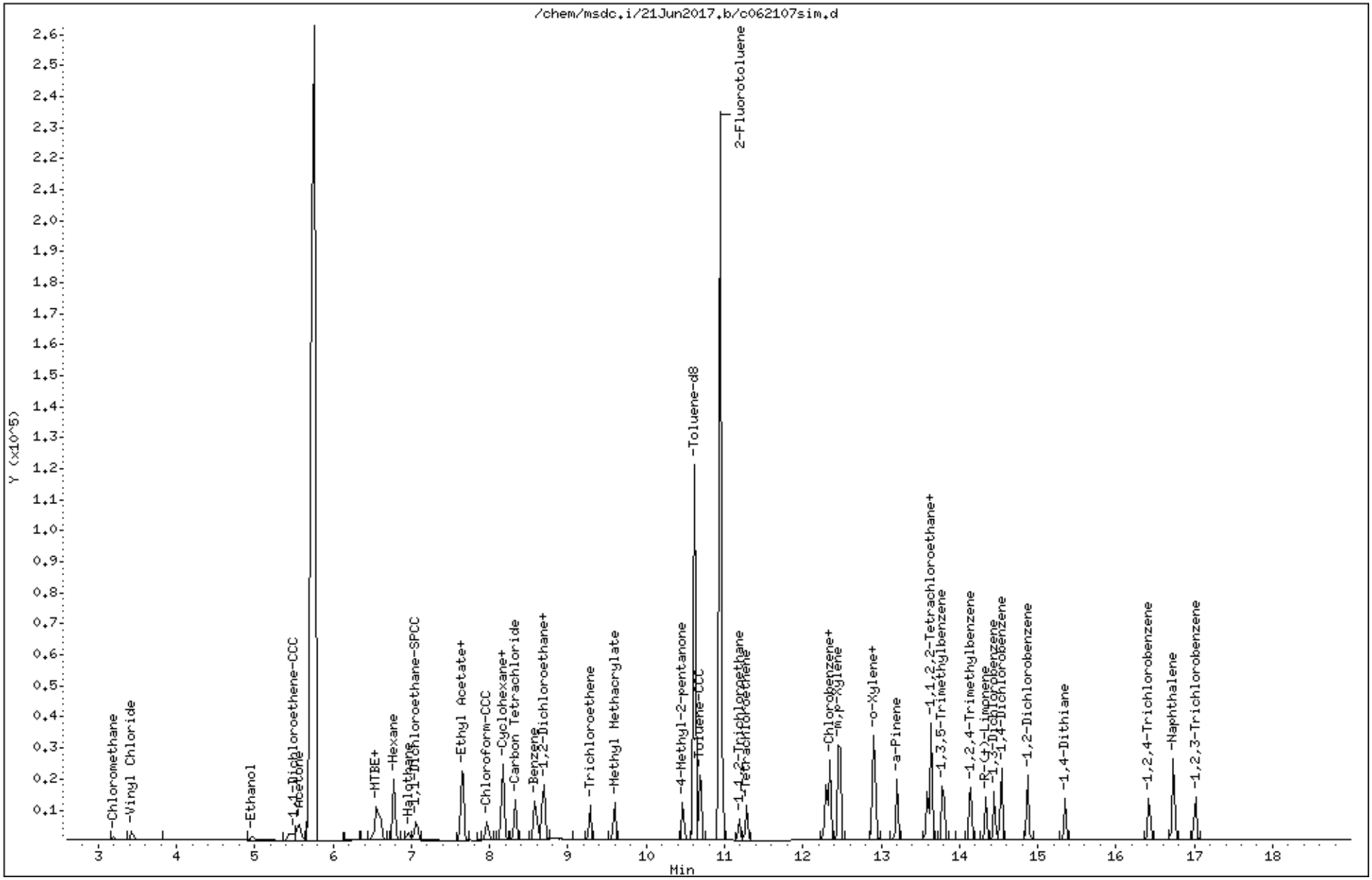
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062107sim.d
Date : 21-JUN-2017 09:46
Client ID: Level 5
Sample Info: ;2848-4-0.50;Level 5

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062108sim.d
Lab Smp Id: 2848-4-1.0 Client Smp ID: Level 6
Inj Date : 21-JUN-2017 10:12
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-1.0;Level 6
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:07 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:12 Cal File: c062108sim.d
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	2920	1.00000	1.18078
2 Vinyl Chloride	62	3.420	3.420	(0.312)	12916	1.00000	1.18278
3 Ethanol	45	4.961	4.961	(0.453)	4511	1.00000	1.18327
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	10306	1.00000	1.14224(M)
5 Acetone	58	5.566	5.566	(0.508)	8376	1.00000	1.15957
7 MTBE	73	6.555	6.555	(0.599)	34335	1.00000	1.12505
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	12027	1.00000	1.08880
9 Hexane	57	6.775	6.775	(0.619)	30776	1.00000	1.06565
10 Halothane	117	6.961	6.961	(0.636)	9114	1.00000	1.16724
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	24901	1.00000	1.10180
12 Ethyl Acetate	70	7.640	7.640	(0.698)	3746	1.00000	1.13904
13 2-Butanone	72	7.662	7.662	(0.700)	8145	1.00000	1.11608
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	13469	1.00000	1.12238
15 Chloroform-CCC	83	7.956	7.956	(0.727)	18443	1.00000	1.05147
16 Cyclohexane	84	8.172	8.172	(0.747)	19477	1.00000	1.06197
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	22052	1.00000	1.10983

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	20339	1.00000	1.08654
	19 Benzene	78	8.573	8.573	(0.783)	47021	1.00000	1.02972
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	21648	1.00000	1.06718
	21 Heptane	71	8.696	8.696	(0.794)	16511	1.00000	1.03719
	22 Trichloroethene	130	9.283	9.283	(0.848)	16023	1.00000	1.06565
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	14548	1.00000	1.07307
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	5720	1.00000	1.07377
$	25 Toluene-d8	98	10.608	10.608	(0.969)	229831	5.00000	4.94773
	26 Toluene-CCC	92	10.680	10.680	(0.976)	33540	1.00000	1.01802
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	259962	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	13840	1.00000	1.05481
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	13991	1.00000	1.02848
	30 Chlorobenzene	112	12.300	12.300	(1.124)	42403	1.00000	1.02237
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	21248	1.00000	1.01905
	33 m,p-Xylene	106	12.454	12.454	(1.138)	49021	2.00000	2.02334
	34 o-Xylene	106	12.901	12.901	(1.179)	23454	1.00000	1.00554
	35 Styrene	104	12.928	12.928	(1.181)	46083	1.00000	1.00731
	36 a-Pinene	93	13.203	13.203	(1.206)	30336	1.00000	1.00386
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	26262	1.00000	0.982149
	38 Propylbenzene	91	13.642	13.642	(1.246)	85518	1.00000	1.02676
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	44815	1.00000	0.979814
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	48084	1.00000	0.989962
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	21710	1.00000	0.967532
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	33916	1.00000	1.01831
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	38650	1.00000	0.999662
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	35549	1.00000	1.00867
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	23683	1.00000	0.989917
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	24174	1.00000	1.02758
	48 Naphthalene	128	16.730	16.730	(1.529)	74361	1.00000	1.04971
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	23218	1.00000	1.02096

QC Flag Legend

M - Compound response manually integrated.

Report Date: 21-Jun-2017 11:07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062108sim.d
Lab Smp Id: 2848-4-1.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 6
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	259962	-2.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

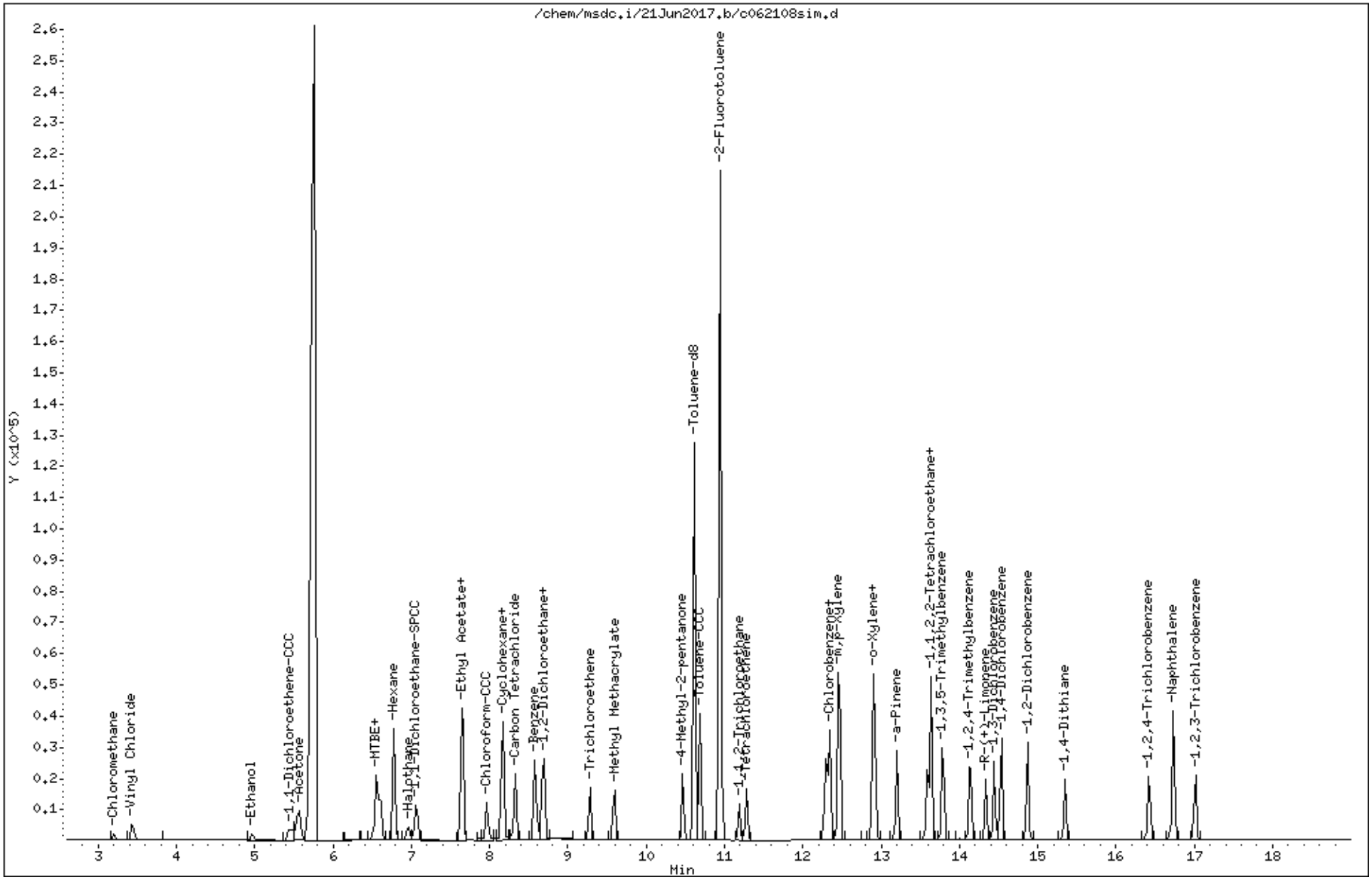
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062108sim.d
Date : 21-JUN-2017 10:12
Client ID: Level 6
Sample Info: ;2848-4-1.0;Level 6

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062109sim.d
Lab Smp Id: 2848-4-5.0 Client Smp ID: Level 7
Inj Date : 21-JUN-2017 10:39
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-5.0;Level 7
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 13:16 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	13311	5.00000	5.61507
2 Vinyl Chloride	62	3.420	3.420	(0.312)	56687	5.00000	5.67084
3 Ethanol	45	4.961	4.961	(0.453)	19426	5.00000	5.61340
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	45465	5.00000	5.42225
5 Acetone	58	5.566	5.566	(0.508)	35887	5.00000	5.43883
7 MTBE	73	6.555	6.555	(0.599)	148835	5.00000	5.11065
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	53564	5.00000	5.20530
9 Hexane	57	6.775	6.775	(0.619)	141810	5.00000	5.23664
10 Halothane	117	6.961	6.961	(0.636)	39055	5.00000	5.29867
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	106514	5.00000	5.01831
12 Ethyl Acetate	70	7.640	7.640	(0.698)	16277	5.00000	5.22406
13 2-Butanone	72	7.662	7.662	(0.700)	34706	5.00000	5.05301
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	57990	5.00000	5.08738
15 Chloroform-CCC	83	7.956	7.956	(0.727)	81684	5.00000	4.88533
16 Cyclohexane	84	8.172	8.172	(0.747)	82228	5.00000	4.69768
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	93440	5.00000	4.93561

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	86105	5.00000	4.81332
	19 Benzene	78	8.573	8.573	(0.783)	212678	5.00000	4.98779
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	91388	5.00000	4.78327
	21 Heptane	71	8.696	8.696	(0.794)	70713	5.00000	4.63620
	22 Trichloroethene	130	9.283	9.283	(0.848)	68576	5.00000	4.75105
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	62562	5.00000	4.77929
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	25613	5.00000	4.94569
$	25 Toluene-d8	98	10.608	10.608	(0.969)	243453	5.00000	5.10039(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	150739	5.00000	4.75222
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	266829	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	60919	5.00000	4.79702
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	61972	5.00000	4.68950
	30 Chlorobenzene	112	12.300	12.300	(1.124)	187213	5.00000	4.64111
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	93716	5.00000	4.58017
	33 m,p-Xylene	106	12.454	12.454	(1.138)	222192	10.0000	9.27406
	34 o-Xylene	106	12.901	12.901	(1.179)	108581	5.00000	4.85720
	35 Styrene	104	12.928	12.928	(1.181)	211806	5.00000	4.65961
	36 a-Pinene	93	13.203	13.203	(1.206)	137075	5.00000	4.66692
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	116140	5.00000	4.48944
	38 Propylbenzene	91	13.642	13.642	(1.246)	373284	5.00000	4.40937
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	208938	5.00000	4.64342
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	225720	5.00000	4.66235
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	99121	5.00000	4.44660
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	154246	5.00000	4.82356
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	172082	5.00000	4.48881
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	162222	5.00000	4.78857
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	109224	5.00000	4.63427
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	107451	5.00000	4.66256
	48 Naphthalene	128	16.730	16.730	(1.529)	327852	5.00000	4.63663
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	104437	5.00000	4.65234

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 21-Jun-2017 13:16

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062109sim.d
Lab Smp Id: 2848-4-5.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 7
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	266829	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062109sim.d

Date : 21-JUN-2017 10:39

Client ID: Level 7

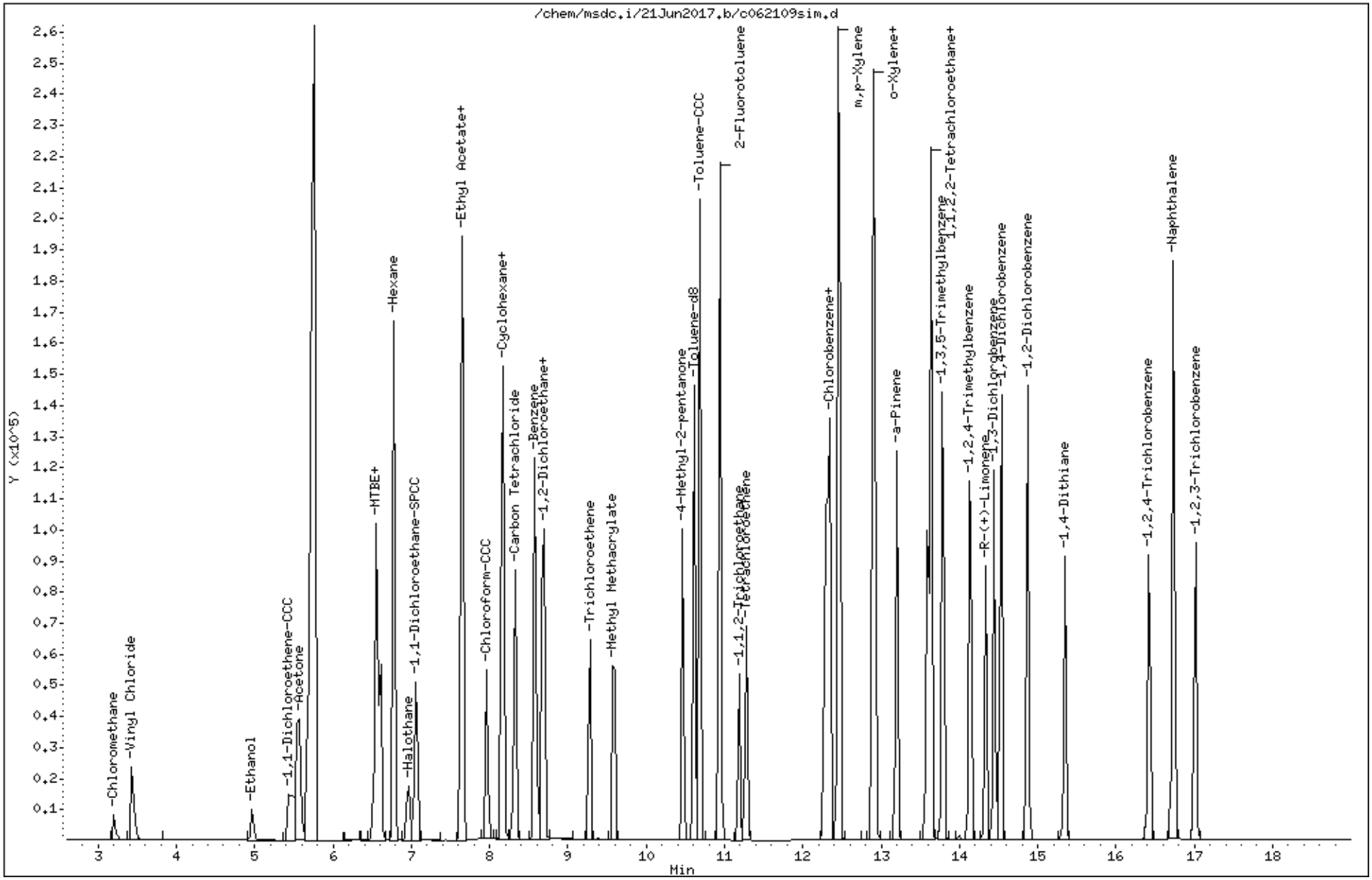
Sample Info: ;2848-4-5.0;Level 7

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062110sim.d
Lab Smp Id: 2848-4-20 Client Smp ID: Level 8
Inj Date : 21-JUN-2017 11:06
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-20;Level 8
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 11:42 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 11:06 Cal File: c062110sim.d
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	33204	20.0000	12.9270
2 Vinyl Chloride	62	3.420	3.420	(0.312)	155470	20.0000	13.6182
3 Ethanol	45	4.961	4.961	(0.453)	58580	20.0000	14.5671
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	148877	20.0000	15.5034
5 Acetone	58	5.566	5.566	(0.508)	111055	20.0000	14.5740
7 MTBE	73	6.555	6.555	(0.599)	573887	20.0000	17.2898
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	189142	20.0000	16.0104
9 Hexane	57	6.775	6.775	(0.619)	487928	20.0000	15.7315
10 Halothane	117	6.961	6.961	(0.636)	128740	20.0000	15.3941
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	398514	20.0000	16.3386
12 Ethyl Acetate	70	7.640	7.640	(0.698)	60212	20.0000	16.9624
13 2-Butanone	72	7.640	7.662	(0.698)	127283	20.0000	16.1813
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	217564	20.0000	16.7437
15 Chloroform-CCC	83	7.956	7.956	(0.727)	358990	20.0000	18.6150
16 Cyclohexane	84	8.141	8.172	(0.744)	338148	20.0000	16.9932
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	353548	20.0000	16.4695

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	339281	20.0000	16.7398
	19 Benzene	78	8.573	8.573	(0.783)	958094	20.0000	19.0819
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	354965	20.0000	16.2284
	21 Heptane	71	8.696	8.696	(0.794)	304960	20.0000	17.5733
	22 Trichloroethene	130	9.283	9.283	(0.848)	297756	20.0000	18.0893
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	270125	20.0000	18.1859
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	114112	20.0000	19.3804
$	25 Toluene-d8	98	10.608	10.608	(0.969)	260488	5.00000	5.03685(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	685567	20.0000	18.8840
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	289120	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	275212	20.0000	19.0147
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	292713	20.0000	19.4379
	30 Chlorobenzene	112	12.300	12.300	(1.124)	892442	20.0000	19.4380
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	459881	20.0000	19.8553
	33 m,p-Xylene	106	12.480	12.454	(1.140)	1065398	40.0000	39.5962
	34 o-Xylene	106	12.901	12.901	(1.179)	502916	20.0000	19.4722
	35 Styrene	104	12.928	12.928	(1.181)	1035884	20.0000	20.3072
	36 a-Pinene	93	13.203	13.203	(1.206)	683103	20.0000	20.2779
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	570616	20.0000	19.2997
	38 Propylbenzene	91	13.642	13.642	(1.246)	1944045	20.0000	20.8400
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	993635	20.0000	19.5987
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	1097535	20.0000	20.2714
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	527257	20.0000	20.8342
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	734726	20.0000	19.8583
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	861295	20.0000	20.0259
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	796742	20.0000	20.2794
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	563152	20.0000	20.9903
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	553958	20.0000	20.9968
	48 Naphthalene	128	16.730	16.730	(1.529)	1733112	20.0000	21.6884
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	534876	20.0000	20.9759

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Report Date: 21-Jun-2017 11:42

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062110sim.d
Lab Smp Id: 2848-4-20
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 8
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	289120	8.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

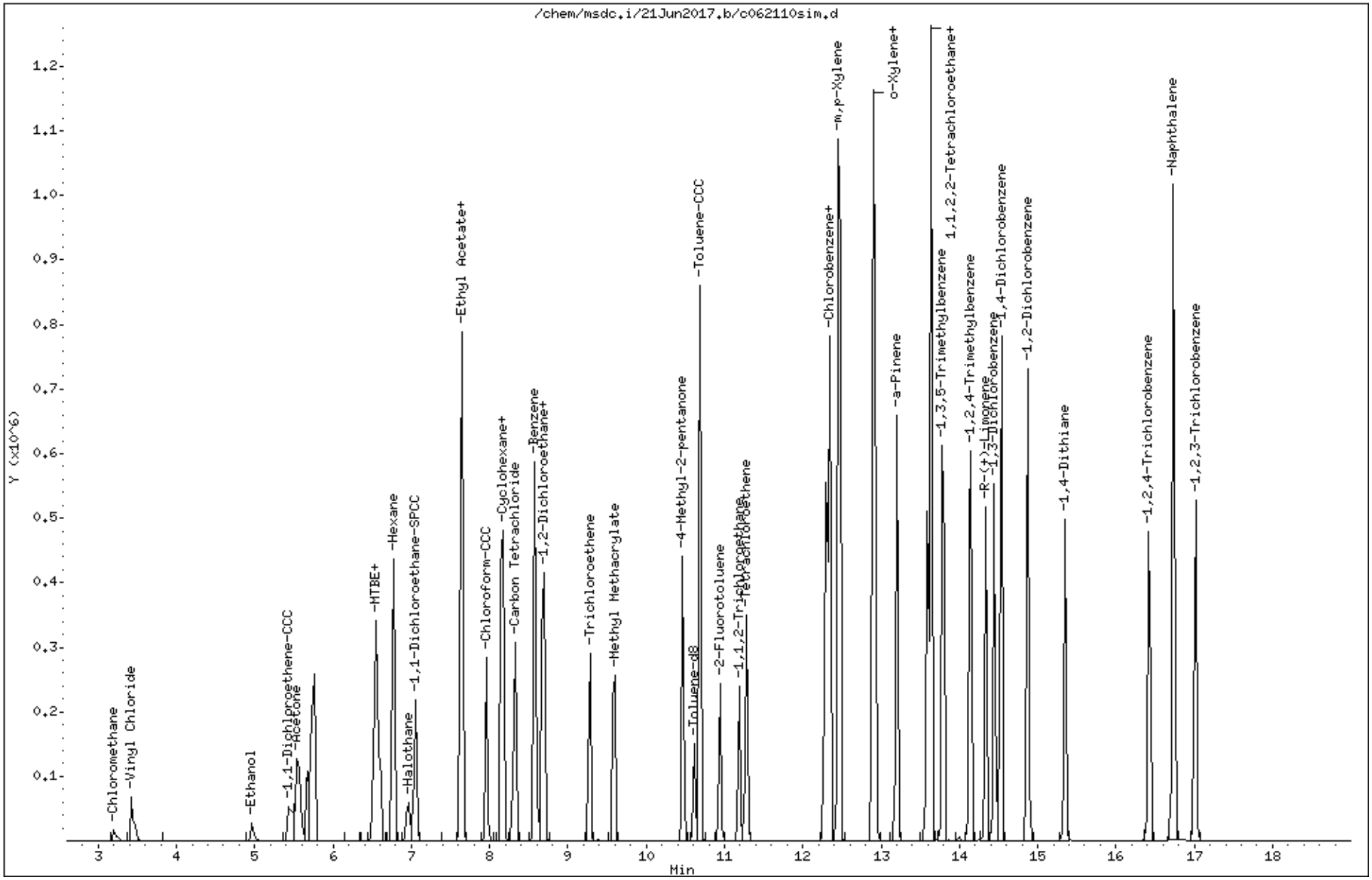
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062110sim.d
Date : 21-JUN-2017 11:06
Client ID: Level 8
Sample Info: ;2848-4-20;Level 8

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062111sim.d
Lab Smp Id: 2848-4-50 Client Smp ID: Level 9
Inj Date : 21-JUN-2017 11:39
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-50;Level 9
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 12:08 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 11:39 Cal File: c062111sim.d
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all-cm.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	450910	50.0000	39.7981
3 Ethanol	45	4.961	4.961	(0.453)	146867	50.0000	37.1177
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	386515	50.0000	40.4692
5 Acetone	58	5.566	5.566	(0.508)	289757	50.0000	38.4784
7 MTBE	73	6.555	6.555	(0.599)	1367948	50.0000	41.1742
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	487967	50.0000	41.4045
9 Hexane	57	6.775	6.775	(0.619)	1371853	50.0000	43.8584
10 Halothane	117	6.960	6.961	(0.636)	337812	50.0000	40.4387
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	968857	50.0000	39.8330
12 Ethyl Acetate	70	7.639	7.640	(0.698)	150870	50.0000	42.4583
13 2-Butanone	72	7.662	7.662	(0.700)	315967	50.0000	40.2355
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	540894	50.0000	41.5451
15 Chloroform-CCC	83	7.956	7.956	(0.727)	787785	50.0000	40.8483
16 Cyclohexane	84	8.172	8.172	(0.747)	839272	50.0000	42.0358
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	920284	50.0000	42.6532
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	875997	50.0000	42.9647

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	19 Benzene	78	8.572	8.573	(0.783)	2095626	50.0000	41.9778
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	893040	50.0000	40.8291
	21 Heptane	71	8.696	8.696	(0.794)	761215	50.0000	43.5354
	22 Trichloroethene	130	9.282	9.283	(0.848)	709631	50.0000	42.8678
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	642688	50.0000	43.0070
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	266122	50.0000	44.8066
$	25 Toluene-d8	98	10.608	10.608	(0.969)	263754	5.00000	4.97321
	26 Toluene-CCC	92	10.680	10.680	(0.976)	1586018	50.0000	43.3779
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	296689	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	636915	50.0000	43.6593
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	680901	50.0000	44.7263
	30 Chlorobenzene	112	12.299	12.300	(1.124)	2087866	50.0000	44.9539
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	1078878	50.0000	45.9210
	33 m,p-Xylene	106	12.480	12.454	(1.140)	2501726	100.000	91.5619
	34 o-Xylene	106	12.901	12.901	(1.179)	1123849	50.0000	43.2246
	35 Styrene	104	12.928	12.928	(1.181)	2369205	50.0000	45.8030
	36 a-Pinene	93	13.203	13.203	(1.206)	1539683	50.0000	45.1559
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	1339544	50.0000	44.8062
	38 Propylbenzene	91	13.642	13.642	(1.246)	4685047	50.0000	49.0719
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	2279161	50.0000	44.4967
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	2567427	50.0000	46.6524
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	1262104	50.0000	48.8728
	43 1,3-Dichlorobenzene	146	14.439	14.440	(1.319)	1600446	50.0000	42.9970
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	2072523	50.0000	47.3185
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	1719268	50.0000	43.4430
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	1266792	50.0000	46.4758
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	1218352	50.0000	45.5708
	48 Naphthalene	128	16.730	16.730	(1.529)	3873678	50.0000	47.5673
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	1206974	50.0000	46.5768

Report Date: 21-Jun-2017 12:08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062111sim.d
Lab Smp Id: 2848-4-50
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 9
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	296689	11.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062111sim.d

Date : 21-JUN-2017 11:39

Client ID: Level 9

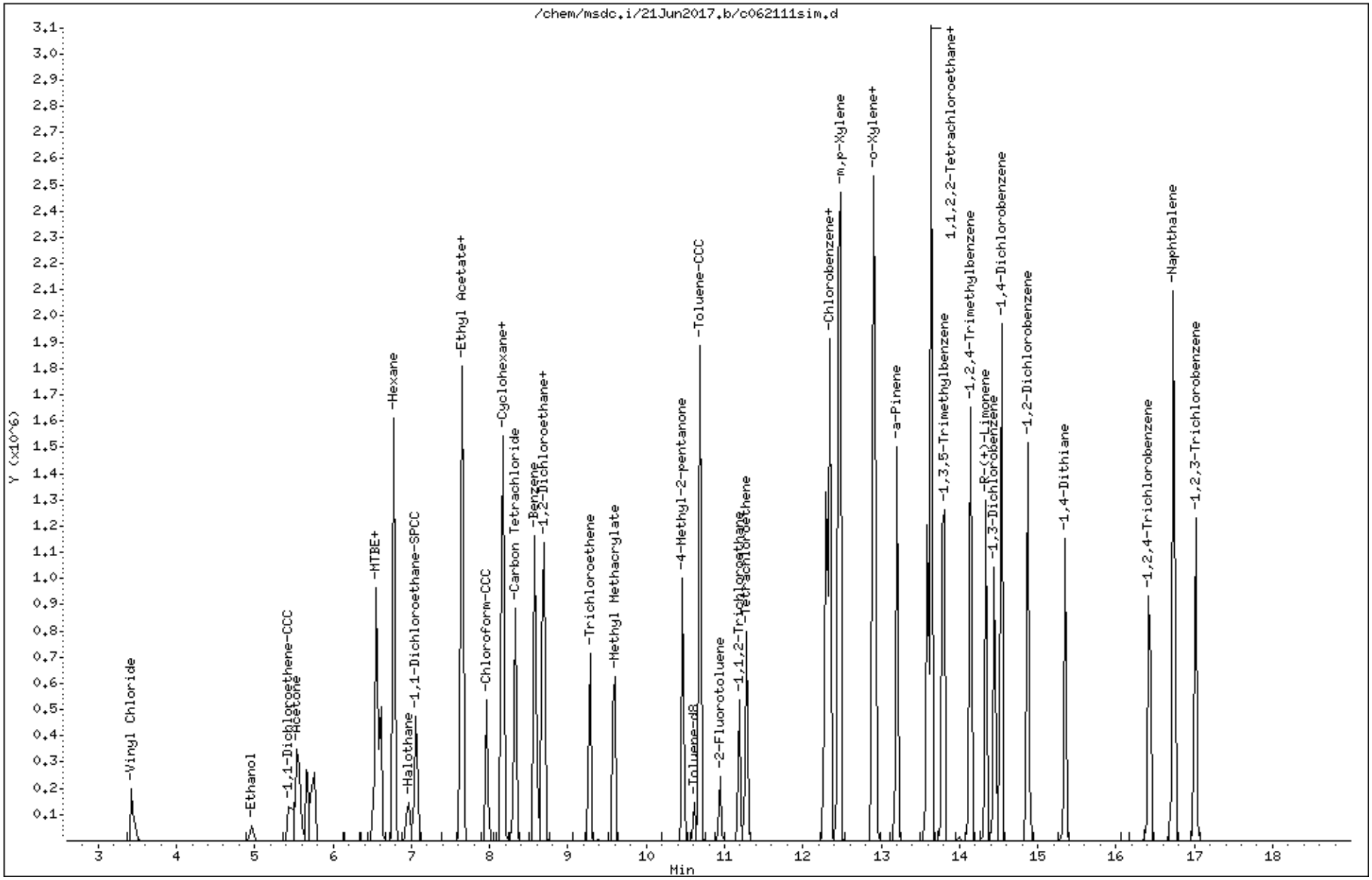
Sample Info: ;2848-4-50;Level 9

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062112sim.d
Lab Smp Id: 2848-4-100 Client Smp ID: Level 10
Inj Date : 21-JUN-2017 12:06
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-100;Level 10
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 12:33 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 12:06 Cal File: c062112sim.d
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 100.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	1042734	100.000	96.5492
3 Ethanol	45	4.961	4.961	(0.453)	346409	100.000	92.3869
4 1,1-Dichloroethene-CCC	96	5.431	5.431	(0.496)	835991	100.000	92.3708(M)
5 Acetone	58	5.543	5.566	(0.506)	657492	100.000	92.1666
7 MTBE	73	6.555	6.555	(0.599)	2781418	100.000	88.6370
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	968533	100.000	87.3418
9 Hexane	57	6.775	6.775	(0.619)	2347978	100.000	80.2926
10 Halothane	117	6.961	6.961	(0.636)	743763	100.000	93.6790
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	2023396	100.000	88.1308
12 Ethyl Acetate	70	7.640	7.640	(0.698)	306760	100.000	91.2478
13 2-Butanone	72	7.662	7.662	(0.700)	663017	100.000	89.3145
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	1097009	100.000	89.1527
15 Chloroform-CCC	83	7.956	7.956	(0.727)	1513829	100.000	83.6206
16 Cyclohexane	84	8.172	8.172	(0.747)	1682797	100.000	89.1770
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	1841431	100.000	90.1877
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	1730599	100.000	89.7440

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	19 Benzene	78	8.573	8.573	(0.783)	3868859	100.000	83.1707
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	1811779	100.000	87.7910
	21 Heptane	71	8.696	8.696	(0.794)	1439005	100.000	87.2802
	22 Trichloroethene	130	9.283	9.283	(0.848)	1339533	100.000	85.9563
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	1231922	100.000	87.4118
	24 4-Methyl-2-pentanone	85	10.463	10.464	(0.956)	497696	100.000	88.8678
$	25 Toluene-d8	98	10.608	10.608	(0.969)	255338	5.00000	5.02337(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	2881735	100.000	83.9304
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	284207	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.187	(1.022)	1172213	100.000	85.4119
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	1204010	100.000	84.1926
	30 Chlorobenzene	112	12.300	12.300	(1.124)	3657368	100.000	83.8637
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	1870875	100.000	84.7169
	33 m,p-Xylene	106	12.480	12.454	(1.140)	4421474	200.000	171.597
	34 o-Xylene	106	12.901	12.901	(1.179)	1948026	100.000	80.1544
	35 Styrene	104	12.928	12.928	(1.181)	3934811	100.000	81.2706
	36 a-Pinene	93	13.203	13.203	(1.206)	2603320	100.000	81.5426
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	2319239	100.000	82.7312
	38 Propylbenzene	91	13.642	13.642	(1.246)	7988517	100.000	88.5934
	40 1,3,5-Trimethylbenzene	105	13.807	13.779	(1.261)	4137489	100.000	85.8199
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	4533460	100.000	87.3543
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	2122923	100.000	87.8948
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	2721898	100.000	78.3986
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	3587768	100.000	86.9104
	45 1,2-Dichlorobenzene	146	14.873	14.874	(1.359)	2906055	100.000	78.6975
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	2101108	100.000	82.2555
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	2013378	100.000	80.5286
	48 Naphthalene	128	16.730	16.730	(1.529)	6389153	100.000	83.5830(A)
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	1993534	100.000	82.1052

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Report Date: 21-Jun-2017 12:33

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062112sim.d
Lab Smp Id: 2848-4-100
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 10
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	284207	6.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062112sim.d

Date : 21-JUN-2017 12:06

Client ID: Level 10

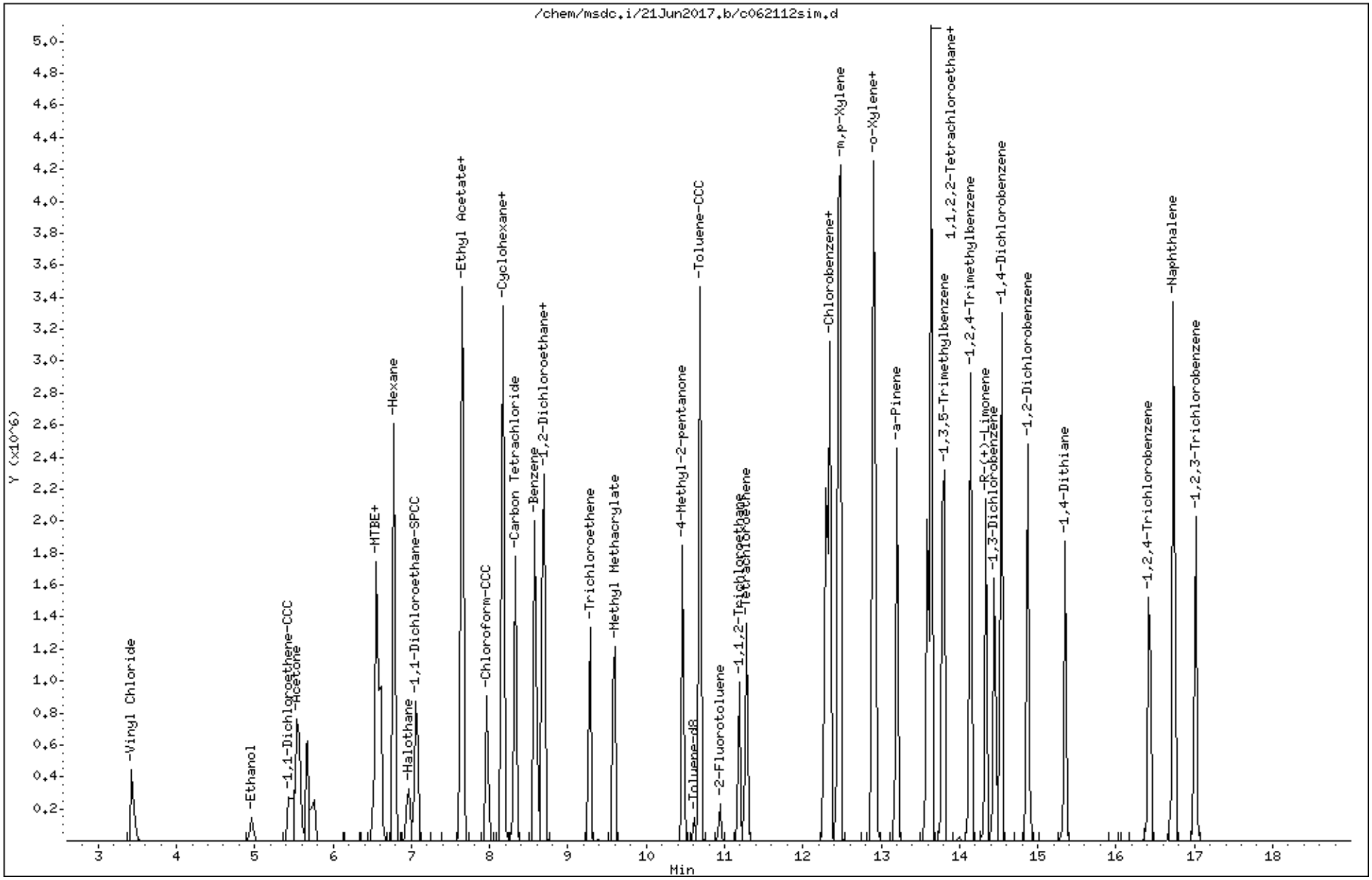
Sample Info: ;2848-4-100;Level 10

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm

Column diameter: 0.25



Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/21Jun2017.b/c062113sim.d
Lab Smp Id: 2848-4-200 Client Smp ID: Level 11
Inj Date : 21-JUN-2017 12:33
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-200;Level 11
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Meth Date : 21-Jun-2017 13:12 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 12:33 Cal File: c062113sim.d
Als bottle: 13 Calibration Sample, Level: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 200.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	1796582	200.000	177.044
3 Ethanol	45	4.961	4.961	(0.453)	605768	200.000	172.432(A)
4 1,1-Dichloroethene-CCC	96	5.454	5.431	(0.498)	1520326	200.000	178.611
5 Acetone	58	5.543	5.566	(0.506)	1178454	200.000	175.934
7 MTBE	73	6.555	6.555	(0.599)	5293988	200.000	179.070
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	1893249	200.000	181.238
9 Hexane	57	6.775	6.775	(0.619)	4814092	200.000	175.117
10 Halothane	117	6.961	6.961	(0.636)	1344254	200.000	179.656
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	3706157	200.000	172.006
12 Ethyl Acetate	70	7.640	7.640	(0.698)	566812	200.000	179.202
13 2-Butanone	72	7.662	7.662	(0.700)	1209740	200.000	173.503
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	2033517	200.000	175.735
15 Chloroform-CCC	83	7.956	7.956	(0.727)	2889741	200.000	170.249
16 Cyclohexane	84	8.172	8.172	(0.747)	3165501	200.000	178.146
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	3409722	200.000	177.418
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	3237774	200.000	178.292

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	19 Benzene	78	8.573	8.573	(0.783)	7188961	200.000	166.081
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	3386083	200.000	174.583
	21 Heptane	71	8.696	8.696	(0.794)	2682449	200.000	173.246
	22 Trichloroethene	130	9.283	9.283	(0.848)	2570257	200.000	175.414
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	2399441	200.000	180.564
	24 4-Methyl-2-pentanone	85	10.464	10.464	(0.956)	922957	200.000	175.557
$	25 Toluene-d8	98	10.608	10.608	(0.969)	242795	5.00000	5.01070(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	5497778	200.000	170.737
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	270871	5.00000	
	28 1,1,2-Trichloroethane	97	11.187	11.187	(1.022)	2238990	200.000	173.676
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	2297182	200.000	171.236
	30 Chlorobenzene	112	12.300	12.300	(1.124)	7082066	200.000	172.948(A)
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	3656722	200.000	176.047
	33 m,p-Xylene	106	12.480	12.454	(1.140)	8783739	400.000	361.152
	34 o-Xylene	106	12.901	12.901	(1.179)	3693119	200.000	162.740(A)
	35 Styrene	104	12.928	12.928	(1.181)	7206047	200.000	156.163(A)
	36 a-Pinene	93	13.203	13.203	(1.206)	4863016	200.000	163.098(A)
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	4430473	200.000	168.706
	40 1,3,5-Trimethylbenzene	105	13.807	13.779	(1.261)	8648064	200.000	189.325(A)
	41 1,2,4-Trimethylbenzene	105	14.150	14.126	(1.293)	9261631	200.000	188.448(A)
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	4057126	200.000	179.288
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	5362814	200.000	165.202
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	7013537	200.000	180.220
	45 1,2-Dichlorobenzene	146	14.874	14.874	(1.359)	5430654	200.000	157.913
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	4030443	200.000	168.456
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	3897251	200.000	166.587
	48 Naphthalene	128	16.730	16.730	(1.529)	12423361	200.000	173.074(A)
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	3923001	200.000	172.149

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c062113sim.d
Lab Smp Id: 2848-4-200
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/21Jun2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 21-JUN-2017
Calibration Time: 10:39
Client Smp ID: Level 11
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	266829	133414	533658	270871	1.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

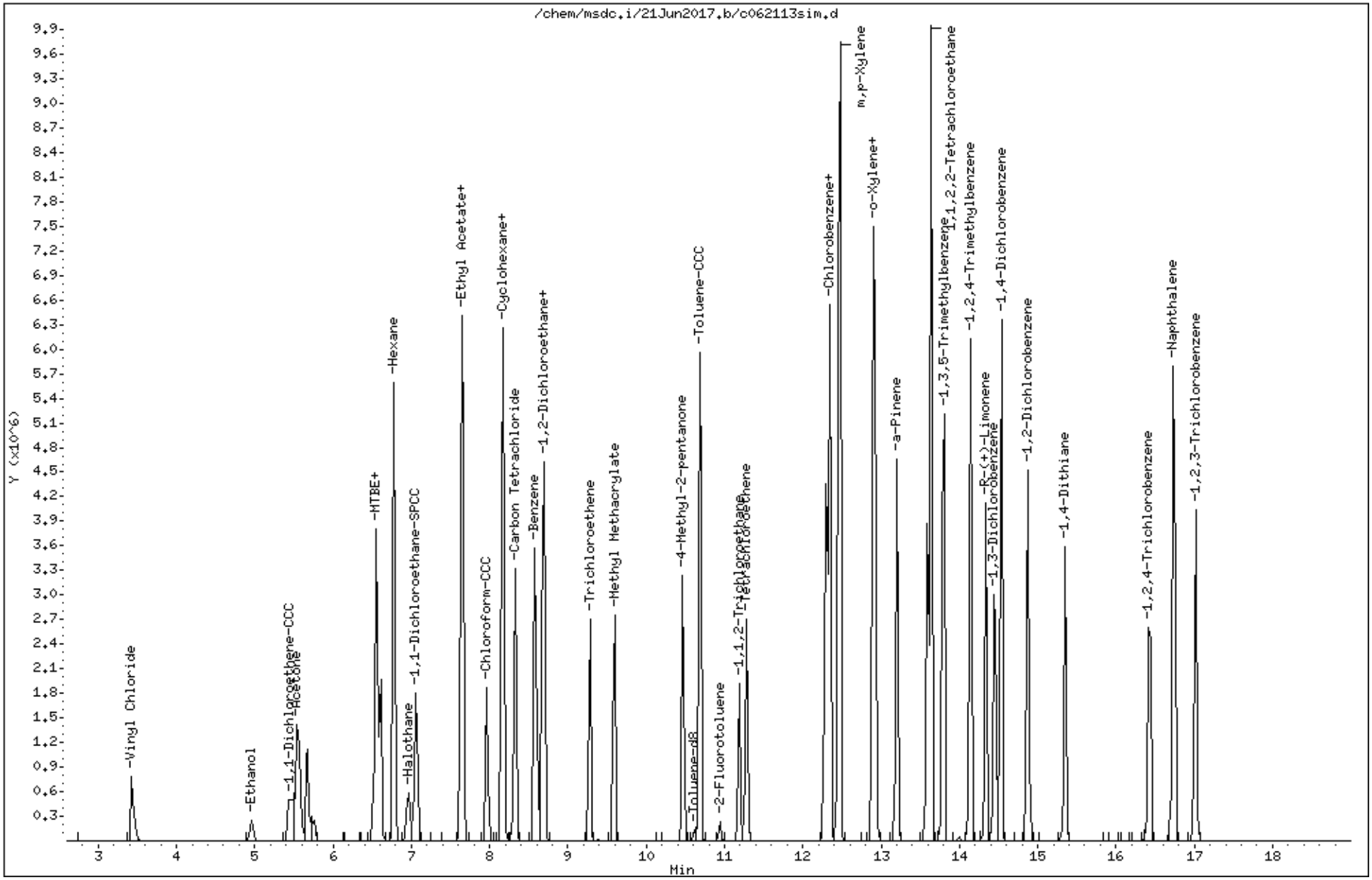
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/msdc.i/21Jun2017.b/c062113sim.d
Date : 21-JUN-2017 12:33
Client ID: Level 11
Sample Info: ;2848-4-200;Level 11

Column phase: DB-5.625

Instrument: msdc.i

Operator: gm
Column diameter: 0.25



Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msdc.i Injection Date: 25-JUL-2017 09:32
Lab File ID: c072505sim.d Init. Cal. Date(s): 21-JUN-2017 21-JUN-2017
Analysis Type: AIR Init. Cal. Times: 08:04 12:33
Lab Sample ID: 2848-4-5.0 Quant Type: ISTD
Method: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m

	COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	1 Chloromethane	0.04442	0.04011	0.020	9.71292	40.00000	Averaged	
	2 Vinyl Chloride	0.18732	0.18956	0.050	-1.20002	40.00000	Averaged	
	3 Ethanol	0.06485	0.04807	0.030	25.86976	30.00000	Averaged	
	4 1,1-Dichloroethene-CCC	0.15712	0.14910	0.050	5.10557	30.00000	Averaged	
	5 Acetone	0.12364	0.11361	0.040	8.11540	30.00000	Averaged	
	7 MTBE	0.54571	0.52190	0.050	4.36413	30.00000	Averaged	
	8 trans-1,2-Dichloroethene	0.19283	0.19152	0.050	0.67543	30.00000	Averaged	
	9 Hexane	0.50745	0.50752	0.020	-0.01394	30.00000	Averaged	
	10 Halothane	0.13812	0.13370	0.050	3.19694	30.00000	Averaged	
	11 1,1-Dichloroethane-SPCC	0.39773	0.35774	0.050	10.05295	20.00000	Averaged	
	12 Ethyl Acetate	0.05839	0.05401	0.050	7.50171	30.00000	Averaged	
	13 2-Butanone	0.12870	0.11213	0.050	12.87984	30.00000	Averaged	
	14 cis-1,2-Dichloroethene	0.21360	0.19943	0.050	6.63391	20.00000	Averaged	
	15 Chloroform-CCC	0.31331	0.30593	0.050	2.35741	20.00000	Averaged	
	16 Cyclohexane	0.32800	0.27119	0.050	17.32096	30.00000	Averaged	
	17 1,1,1-Trichloroethane	0.35476	0.31563	0.050	11.02841	20.00000	Averaged	
	18 Carbon Tetrachloride	0.33521	0.28937	0.050	13.67686	20.00000	Averaged	
	19 Benzene	0.79901	0.77481	0.050	3.02805	30.00000	Averaged	
	20 1,2-Dichloroethane	0.35802	0.30273	0.050	15.44238	20.00000	Averaged	
	21 Heptane	0.28581	0.22446	0.050	21.46437	20.00000	Averaged	<-
	22 Trichloroethene	0.27047	0.24188	0.050	10.57195	20.00000	Averaged	
	23 Methyl Methacrylate	0.24529	0.20771	0.050	15.32150	30.00000	Averaged	
	24 4-Methyl-2-pentanone	0.09704	0.08972	0.050	7.55019	30.00000	Averaged	
$	25 Toluene-d8	0.89443	0.90770	0.050	-1.48333	30.00000	Averaged	
	26 Toluene-CCC	0.59438	0.53024	0.050	10.79227	20.00000	Averaged	
	28 1,1,2-Trichloroethane	0.23797	0.21697	0.050	8.82193	20.00000	Averaged	
	29 Tetrachloroethene	0.24763	0.22244	0.050	10.17434	20.00000	Averaged	
	30 Chlorobenzene	0.75588	0.65391	0.050	13.48970	20.00000	Averaged	
	31 Ethylbenzene-CCC	0.38341	0.32179	0.050	16.07174	20.00000	Averaged	
	33 m,p-Xylene	0.44895	0.39264	0.050	12.54226	20.00000	Averaged	
	34 o-Xylene	0.41889	0.41404	0.050	1.15839	30.00000	Averaged	
	35 Styrene	0.85178	0.76840	0.050	9.78822	30.00000	Averaged	
	36 a-Pinene	0.55038	0.48621	0.050	11.66049	30.00000	Averaged	
	37 1,1,2,2-Tetrachloroethane-S	0.48476	0.38356	0.050	20.87687	30.00000	Averaged	
	38 Propylbenzene	1.58635	1.20862	0.050	23.81141	20.00000	Averaged	<-
	40 1,3,5-Trimethylbenzene	0.84317	0.82409	0.050	2.26285	20.00000	Averaged	

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msdc.i Injection Date: 25-JUL-2017 09:32
Lab File ID: c072505sim.d Init. Cal. Date(s): 21-JUN-2017 21-JUN-2017
Analysis Type: AIR Init. Cal. Times: 08:04 12:33
Lab Sample ID: 2848-4-5.0 Quant Type: ISTD
Method: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m

COMPOUND	RRF / AMOUNT	RF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
41 1,2,4-Trimethylbenzene	0.90720	0.83630	0.050	7.81562	20.00000	Averaged
42 R-(+)-Limonene	0.41771	0.32488	0.050	22.22305	30.00000	Averaged
43 1,3-Dichlorobenzene	0.59922	0.64378	0.050	-7.43705	30.00000	Averaged
44 1,4-Dichlorobenzene	0.71836	0.60931	0.050	15.18021	30.00000	Averaged
45 1,2-Dichlorobenzene	0.63481	0.65933	0.050	-3.86292	30.00000	Averaged
46 1,4-Dithiane	0.44165	0.41366	0.050	6.33663	30.00000	Averaged
47 1,2,4-Trichlorobenzene	0.43184	0.51211	0.050	-18.58876	30.00000	Averaged
48 Naphthalene	1.32499	1.62038	0.050	-22.29364	30.00000	Averaged
49 1,2,3-Trichlorobenzene	0.42065	0.48055	0.050	-14.24005	30.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 10.53325
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072505sim.d
Lab Smp Id: 2848-4-5.0 Client Smp ID: CCV
Inj Date : 25-JUL-2017 09:32
Operator : gm Inst ID: msdc.i
Smp Info : ;2848-4-5.0;CCV
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 09:55 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 Chloromethane	50	3.203	3.203	(0.293)	11234	5.00000	4.51435
2 Vinyl Chloride	62	3.420	3.420	(0.312)	53097	5.00000	5.06000
3 Ethanol	45	4.961	4.961	(0.453)	13465	5.00000	3.70651
4 1,1-Dichloroethene-CCC	96	5.454	5.454	(0.498)	41763	5.00000	4.74472(M)
5 Acetone	58	5.566	5.566	(0.508)	31822	5.00000	4.59423
7 MTBE	73	6.555	6.555	(0.599)	146185	5.00000	4.78179
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	53646	5.00000	4.96623
9 Hexane	57	6.775	6.775	(0.619)	142157	5.00000	5.00070
10 Halothane	117	6.961	6.961	(0.636)	37450	5.00000	4.84015
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	100205	5.00000	4.49735
12 Ethyl Acetate	70	7.640	7.640	(0.698)	15127	5.00000	4.62491
13 2-Butanone	72	7.640	7.640	(0.698)	31407	5.00000	4.35601
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	55860	5.00000	4.66830
15 Chloroform-CCC	83	7.956	7.956	(0.727)	85691	5.00000	4.88213
16 Cyclohexane	84	8.172	8.172	(0.747)	75960	5.00000	4.13395
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	88409	5.00000	4.44858

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	81052	5.00000	4.31616
	19 Benzene	78	8.572	8.572	(0.783)	217027	5.00000	4.84860
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	84795	5.00000	4.22788
	21 Heptane	71	8.696	8.696	(0.794)	62872	5.00000	3.92678
	22 Trichloroethene	130	9.283	9.283	(0.848)	67750	5.00000	4.47140
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	58180	5.00000	4.23392
	24 4-Methyl-2-pentanone	85	10.463	10.463	(0.956)	25130	5.00000	4.62249
$	25 Toluene-d8	98	10.608	10.608	(0.969)	254249	5.00000	5.07417(A)
	26 Toluene-CCC	92	10.680	10.680	(0.976)	148520	5.00000	4.46039
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	280102	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.186	(1.022)	60775	5.00000	4.55890
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	62305	5.00000	4.49128
	30 Chlorobenzene	112	12.300	12.300	(1.124)	183162	5.00000	4.32551
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	90135	5.00000	4.19641
	33 m,p-Xylene	106	12.454	12.454	(1.138)	219958	10.0000	8.74577
	34 o-Xylene	106	12.901	12.901	(1.179)	115974	5.00000	4.94208
	35 Styrene	104	12.928	12.928	(1.181)	215231	5.00000	4.51059
	36 a-Pinene	93	13.203	13.203	(1.206)	136187	5.00000	4.41698
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	107435	5.00000	3.95616
	38 Propylbenzene	91	13.642	13.642	(1.246)	338537	5.00000	3.80943
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	230830	5.00000	4.88686
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	234248	5.00000	4.60922
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	91000	5.00000	3.88885
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	180324	5.00000	5.37185
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	170669	5.00000	4.24099
	45 1,2-Dichlorobenzene	146	14.873	14.873	(1.359)	184679	5.00000	5.19314
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	115867	5.00000	4.68317
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	143444	5.00000	5.92944
	48 Naphthalene	128	16.730	16.730	(1.529)	453871	5.00000	6.11468
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	134603	5.00000	5.71200

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Report Date: 25-Jul-2017 09:55

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072505sim.d
Lab Smp Id: 2848-4-5.0
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32
Client Smp ID: CCV
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	280102	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

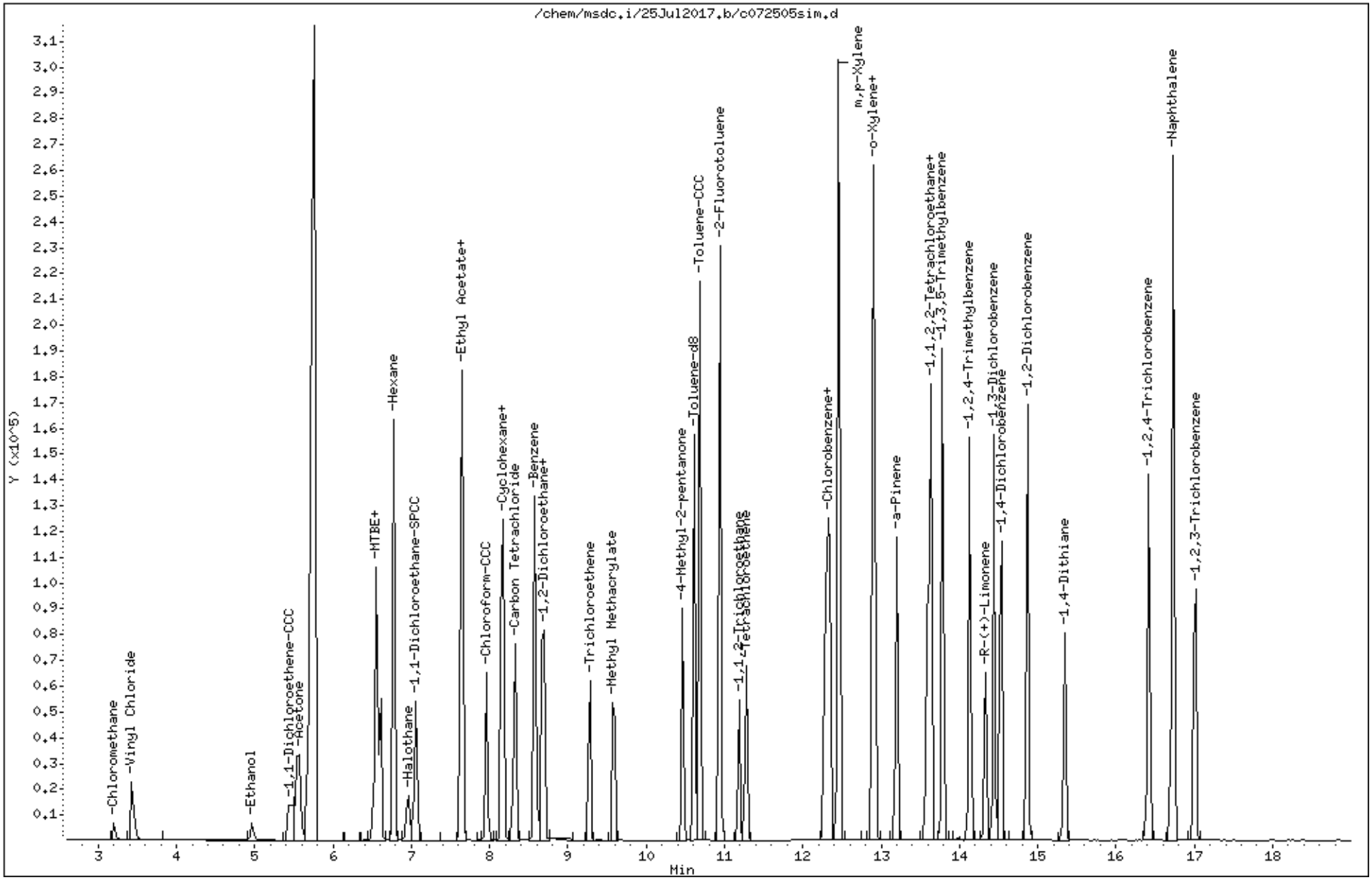
Data File: /chem/msdc.i/25Jul2017.b/c072505sim.d
Date : 25-JUL-2017 09:32
Client ID: CCV
Sample Info: ;2848-4-5.0;CCV

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



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Client Sample ID: LCS

Lab ID#: 1707320-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072506sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 09:57 AM**
		Date of Extraction: 7/25/17

Compound	%Recovery	Method Limits
1,2-Dichloroethane	88	70-130
1,1-Dichloroethene	90	70-130
cis-1,2-Dichloroethene	91	70-130
trans-1,2-Dichloroethene	86	70-130
Benzene	93	70-130
Tetrachloroethene	97	70-130
1,1,2-Trichloroethane	95	70-130
Trichloroethene	97	70-130
Toluene	95	70-130
Vinyl Chloride	85	50-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130

Report Date: 25-Jul-2017 10:25

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320/328
Client Smp ID: LCS
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: LCS
SpikeList File: RadLCS-CM.spk
Quant Type: ISTD
Sublist File: all-cm.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 Vinyl Chloride	10.0000	8.47620	84.76	50-140
3 Ethanol	10.0000	4.24192	42.42*	50-130
4 1,1-Dichloroethene	10.0000	8.95845	89.58	70-130
5 Acetone	10.0000	7.34095	73.41	70-130
7 MTBE	10.0000	9.22646	92.26	70-130
8 trans-1,2-Dichloro	10.0000	8.58336	85.83	70-130
9 Hexane	10.0000	8.59255	85.93	70-130
10 Halothane	10.0000	9.41366	94.14	70-130
11 1,1-Dichloroethane	10.0000	8.83176	88.32	70-130
12 Ethyl Acetate	10.0000	8.91164	89.12	70-130
13 2-Butanone	10.0000	8.06329	80.63	70-130
14 cis-1,2-Dichloroet	10.0000	9.12257	91.23	70-130
15 Chloroform-CCC	10.0000	9.20087	92.01	70-130
16 Cyclohexane	10.0000	9.30044	93.00	70-130
17 1,1,1-Trichloroeth	10.0000	9.81964	98.20	70-130
18 Carbon Tetrachlori	10.0000	9.68226	96.82	70-130
19 Benzene	10.0000	9.32099	93.21	70-130
20 1,2-Dichloroethane	10.0000	8.77213	87.72	70-130
21 Heptane	10.0000	9.19691	91.97	70-130
22 Trichloroethene	10.0000	9.66465	96.65	70-130
23 Methyl Methacrylat	10.0000	8.37023	83.70	70-130
24 4-Methyl-2-pentano	10.0000	9.46528	94.65	70-130
26 Toluene-CCC	10.0000	9.48228	94.82	70-130
28 1,1,2-Trichloroeth	10.0000	9.47671	94.77	70-130
29 Tetrachloroethene	10.0000	9.74429	97.44	70-130
30 Chlorobenzene	10.0000	8.69361	86.94	70-130
31 Ethylbenzene-CCC	10.0000	9.37668	93.77	70-130
33 m,p-Xylene	20.0000	18.8349	94.17	70-130
34 o-Xylene	10.0000	9.80257	98.03	70-130
35 Styrene	10.0000	5.59337	55.93	20-100
36 a-Pinene	10.0000	11.8036	118.04	70-130
37 1,1,2,2-Tetrachlor	10.0000	7.63158	76.32	70-130
38 Propylbenzene	10.0000	8.24550	82.46	70-130

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
40 1,3,5-Trimethylben	10.0000	10.6755	106.76	70-130
41 1,2,4-Trimethylben	10.0000	9.51632	95.16	70-130
42 R-(+)-Limonene	10.0000	9.13869	91.39	70-130
43 1,3-Dichlorobenzen	10.0000	10.0130	100.13	50-110
44 1,4-Dichlorobenzen	10.0000	7.53023	75.30	50-110
45 1,2-Dichlorobenzen	10.0000	8.75463	87.55	50-110
46 1,4-Dithiane	10.0000	9.08189	90.82	50-110
47 1,2,4-Trichloroben	10.0000	8.69024	86.90	20-110
48 Naphthalene	10.0000	2.62409	26.24	5-80
49 1,2,3-Trichloroben	10.0000	7.05875	70.59	20-110

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.3556	103.56	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072506sim.d
Lab Smp Id: 1707320/328 Client Smp ID: LCS
Inj Date : 25-JUL-2017 09:57
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320/328;LCS
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 09:55 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all-cm.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	44732	4.23810	8.47620
3 Ethanol	45	4.961	4.961	(0.453)	7750	2.12096	4.24192(R)
4 1,1-Dichloroethene-CCC	96	5.499	5.454	(0.502)	39656	4.47922	8.95845(M)
5 Acetone	58	5.566	5.566	(0.508)	25572	3.67048	7.34095
7 MTBE	73	6.555	6.555	(0.599)	141855	4.61323	9.22646
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	46630	4.29168	8.58336
9 Hexane	57	6.775	6.775	(0.619)	122845	4.29628	8.59255
10 Halothane	117	6.961	6.961	(0.636)	36631	4.70683	9.41366
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	98964	4.41588	8.83176
12 Ethyl Acetate	70	7.640	7.640	(0.698)	14659	4.45582	8.91164
13 2-Butanone	72	7.662	7.640	(0.700)	29238	4.03164	8.06329
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	54898	4.56128	9.12257
15 Chloroform-CCC	83	7.956	7.956	(0.727)	81218	4.60043	9.20087
16 Cyclohexane	84	8.172	8.172	(0.747)	85945	4.65022	9.30044
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	98145	4.90982	9.81964
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	91441	4.84113	9.68226

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	19 Benzene	78	8.573	8.572	(0.783)	209825	4.66049	9.32099
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	88481	4.38606	8.77213
	21 Heptane	71	8.696	8.696	(0.794)	74056	4.59846	9.19691
	22 Trichloroethene	130	9.283	9.283	(0.848)	73646	4.83232	9.66465
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	57845	4.18512	8.37023
	24 4-Methyl-2-pentanone	85	10.464	10.463	(0.956)	25879	4.73264	9.46528
$	25 Toluene-d8	98	10.608	10.608	(0.969)	260956	5.17780	10.3556
	26 Toluene-CCC	92	10.680	10.680	(0.976)	158790	4.74114	9.48228
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	281737	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.186	(1.022)	63536	4.73836	9.47671
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	67983	4.87214	9.74429
	30 Chlorobenzene	112	12.300	12.300	(1.124)	185138	4.34681	8.69361
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	101289	4.68834	9.37668
	33 m,p-Xylene	106	12.454	12.454	(1.138)	238233	9.41744	18.8349
	34 o-Xylene	106	12.901	12.901	(1.179)	115688	4.90128	9.80257
	35 Styrene	104	12.928	12.928	(1.181)	134228	2.79669	5.59337
	36 a-Pinene	93	13.203	13.203	(1.206)	183031	5.90182	11.8036
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	104228	3.81579	7.63158
	38 Propylbenzene	91	13.642	13.642	(1.246)	368520	4.12275	8.24550
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	253600	5.33776	10.6755
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	243229	4.75816	9.51632
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	107548	4.56935	9.13869
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	169040	5.00648	10.0130
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	152403	3.76512	7.53023
	45 1,2-Dichlorobenzene	146	14.874	14.873	(1.359)	156575	4.37731	8.75463
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	113004	4.54094	9.08189
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	105730	4.34512	8.69024
	48 Naphthalene	128	16.730	16.730	(1.529)	97957	1.31205	2.62409
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	83655	3.52938	7.05875

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Report Date: 25-Jul-2017 10:25

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072506sim.d
Lab Smp Id: 1707320/328
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32
Client Smp ID: LCS
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	281737	0.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

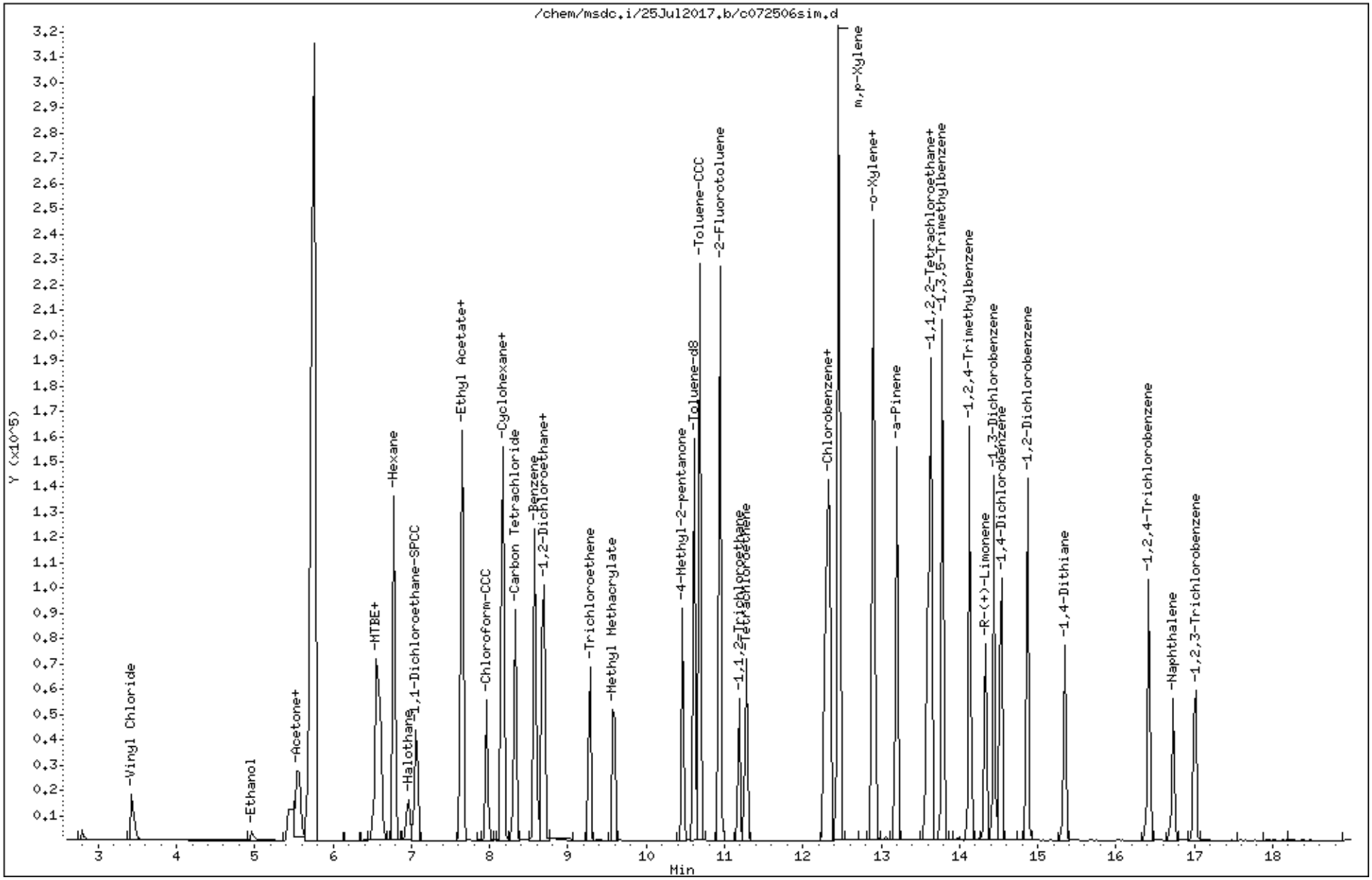
Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d
Date : 25-JUL-2017 09:57
Client ID: LCS
Sample Info: ;1707320/328;LCS

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

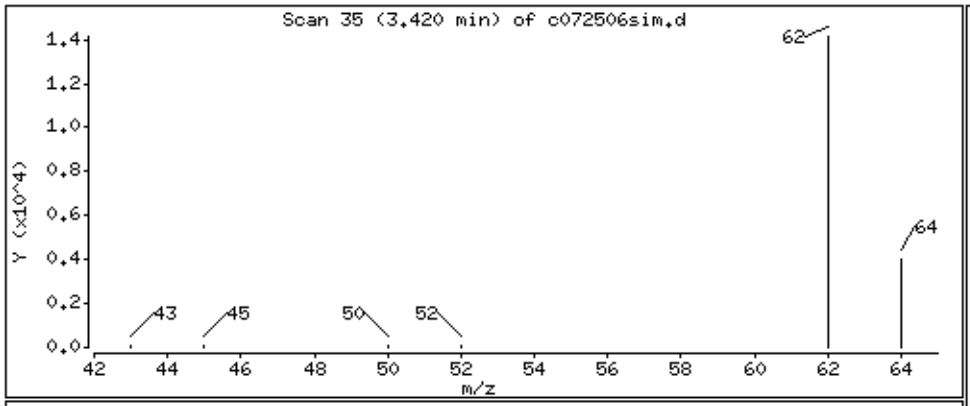
Operator: gm

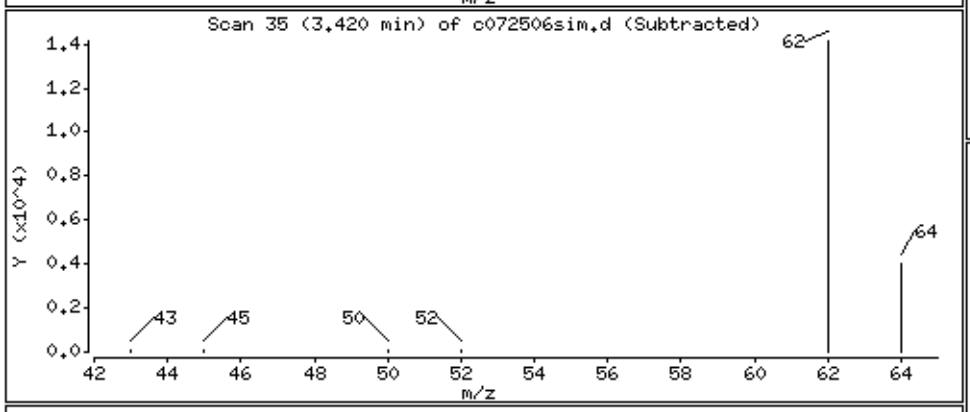
Column phase: DB-5.625

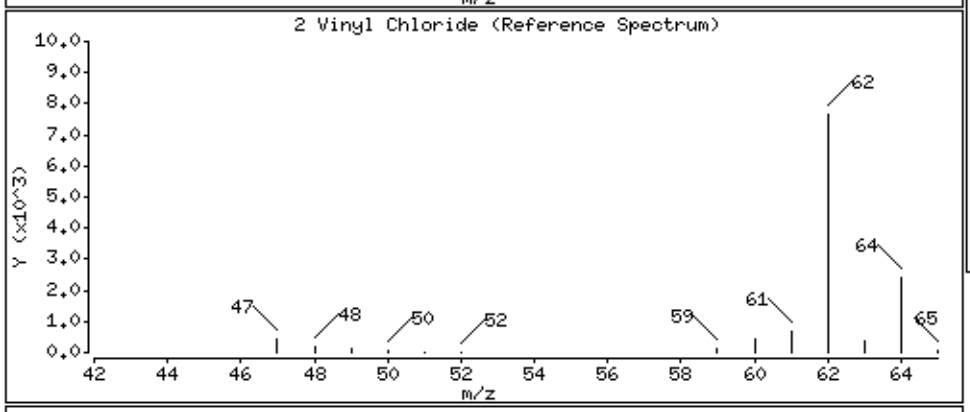
Column diameter: 0.25

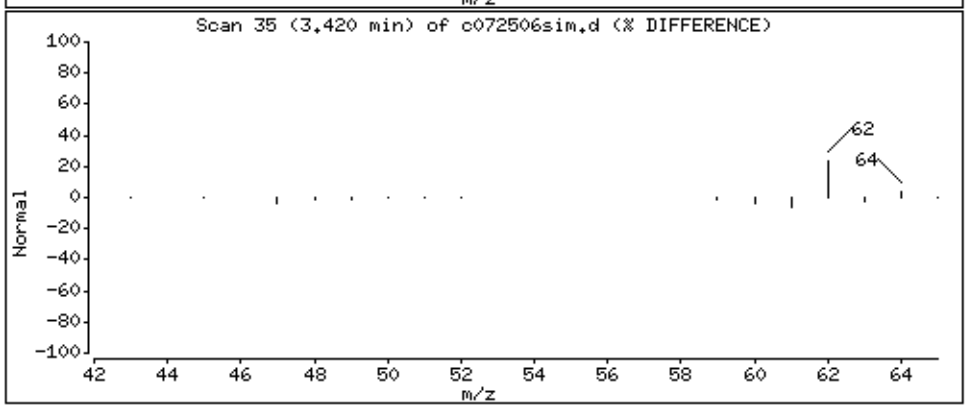
2 Vinyl Chloride

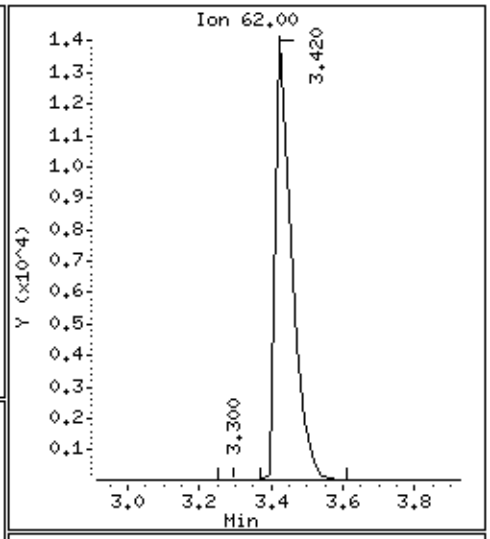
Concentration: 8.47620 ug

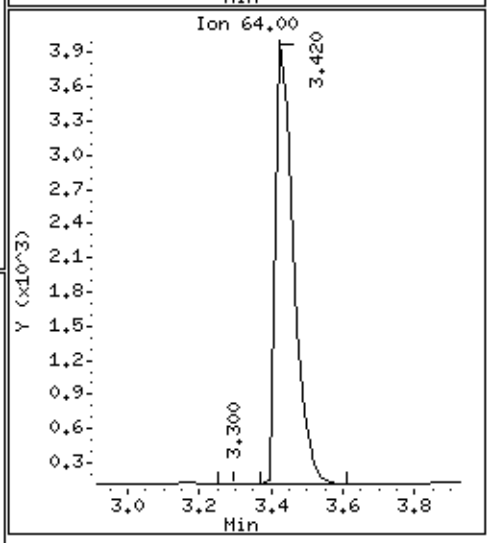












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

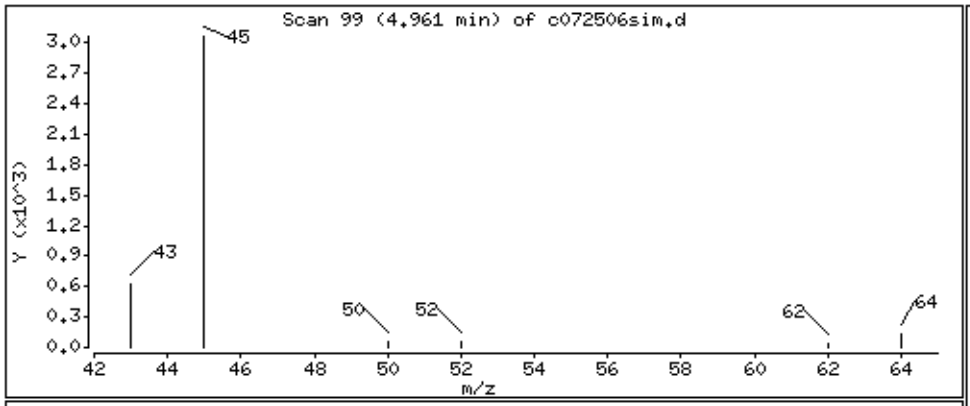
Operator: gm

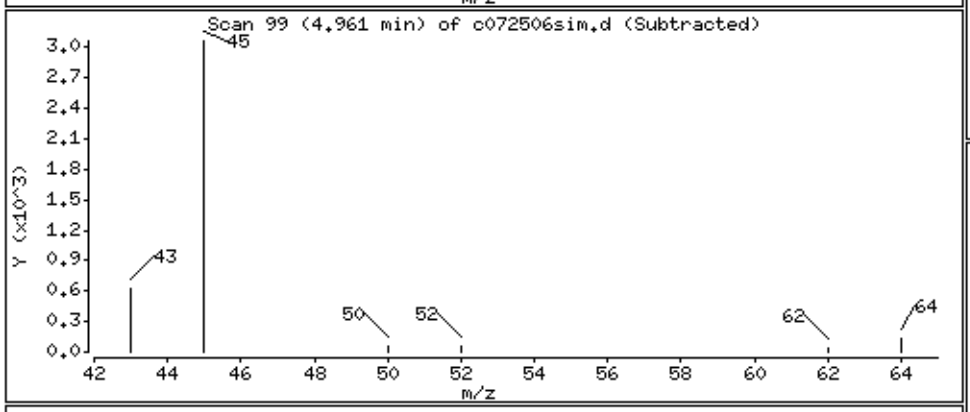
Column phase: DB-5.625

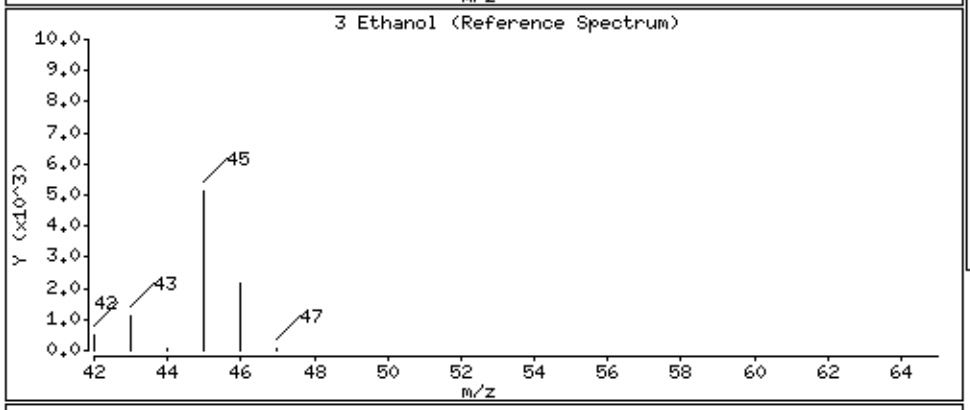
Column diameter: 0.25

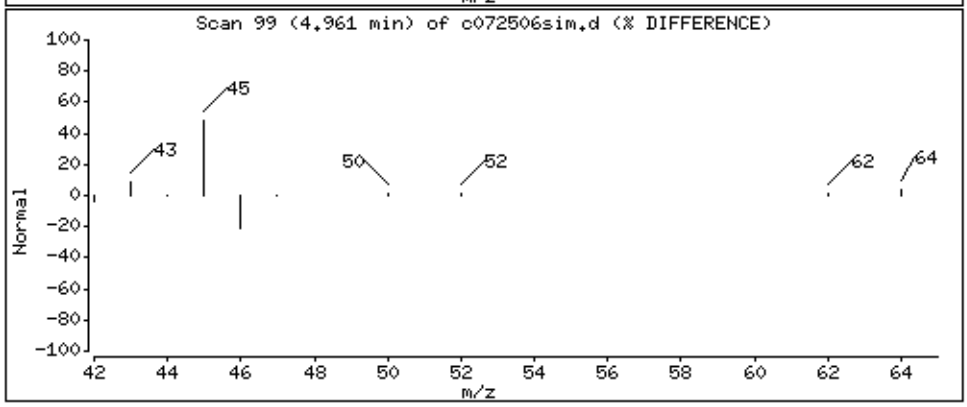
3 Ethanol

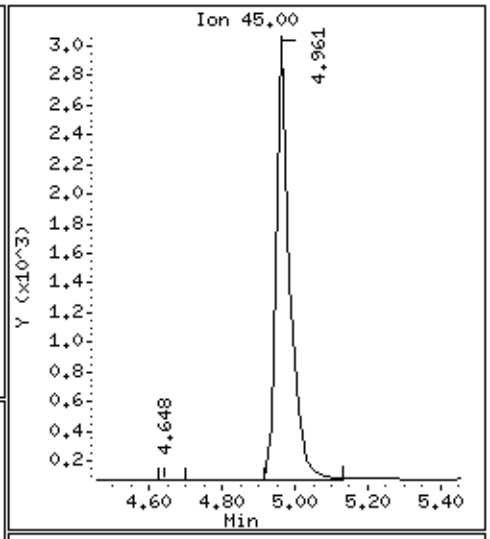
Concentration: 4.24192 ug

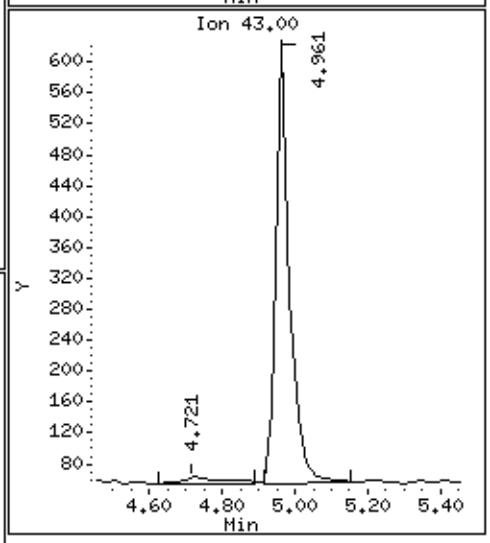












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

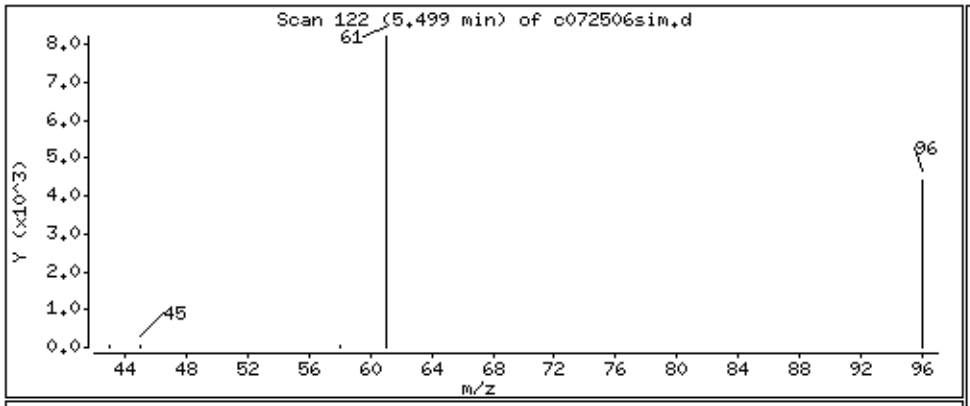
Operator: gm

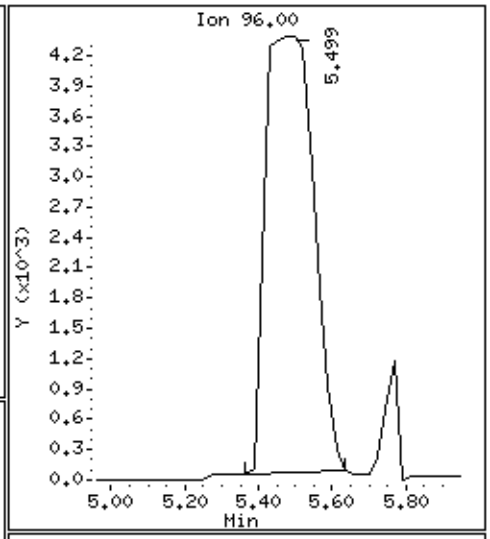
Column phase: DB-5.625

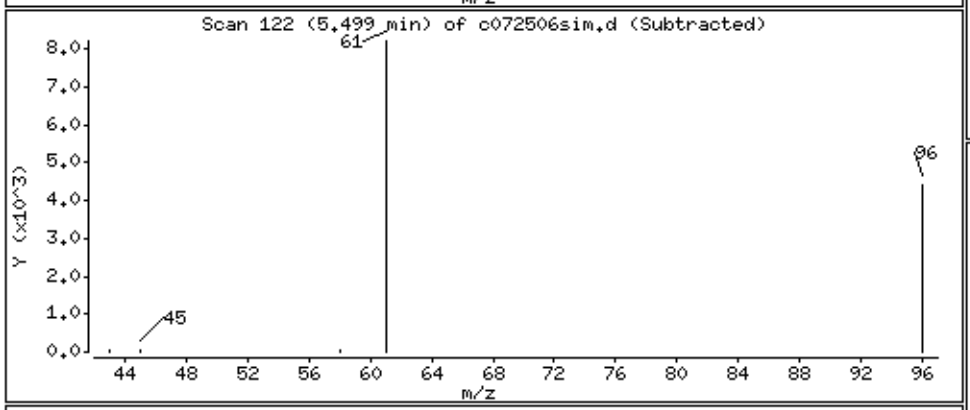
Column diameter: 0.25

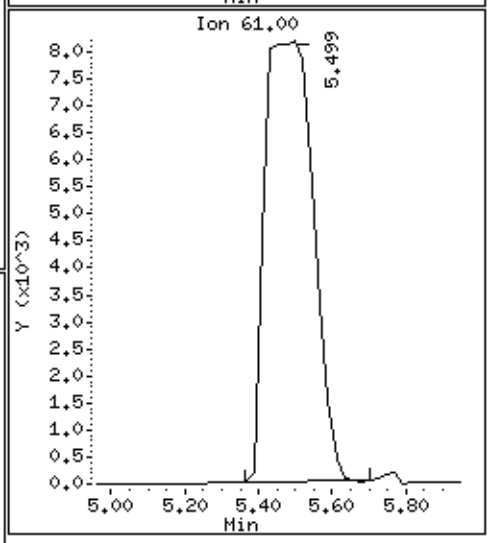
4 1,1-Dichloroethene-CCC

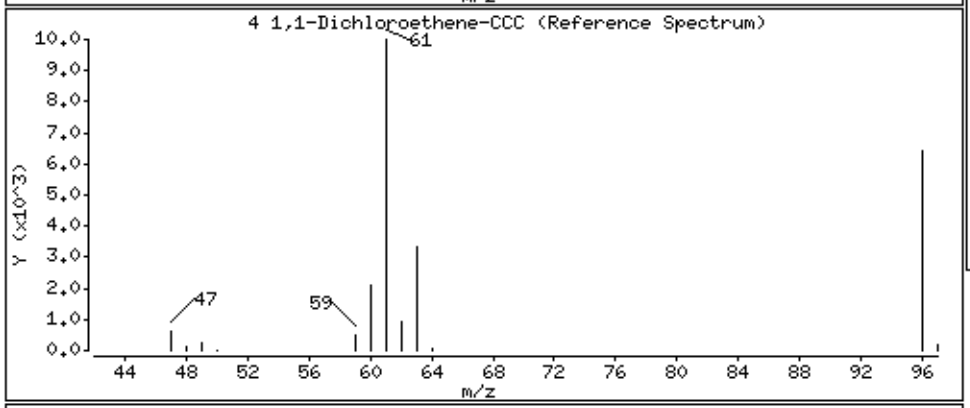
Concentration: 8.95845 ug

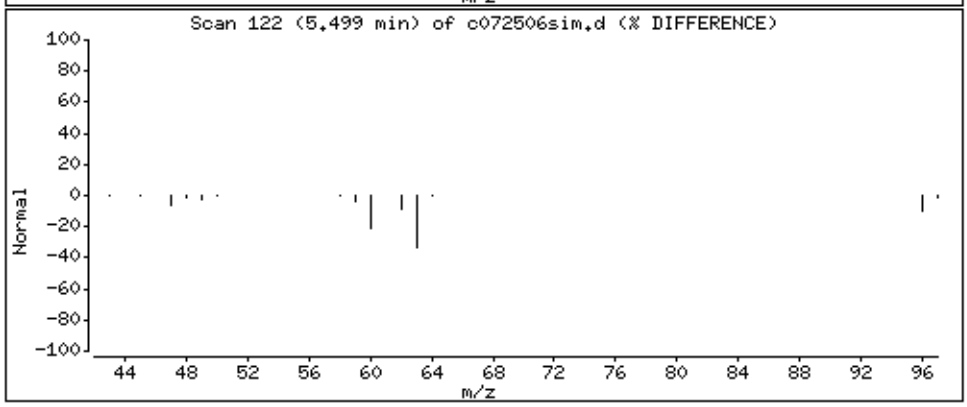












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

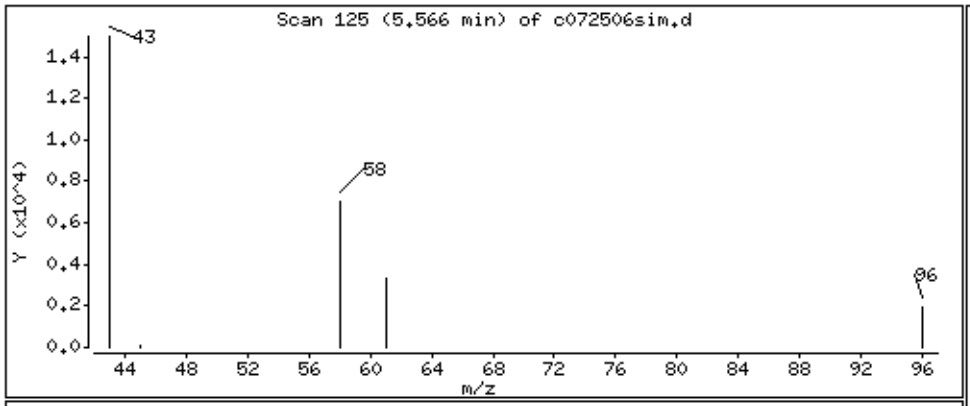
Operator: gm

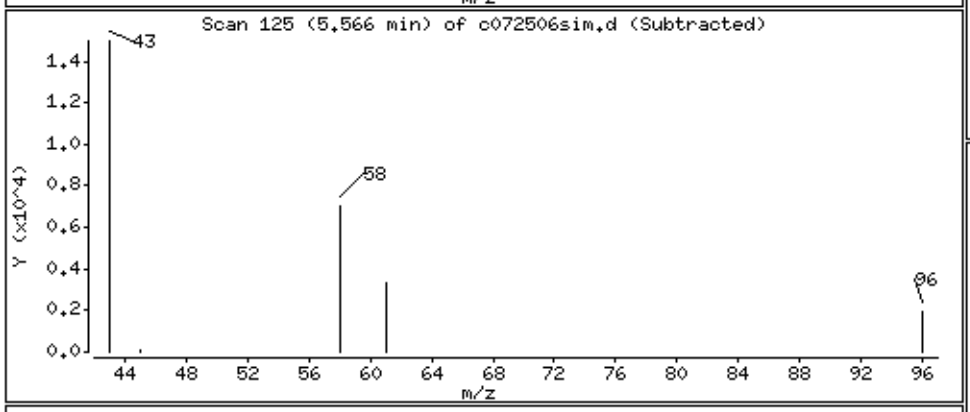
Column phase: DB-5.625

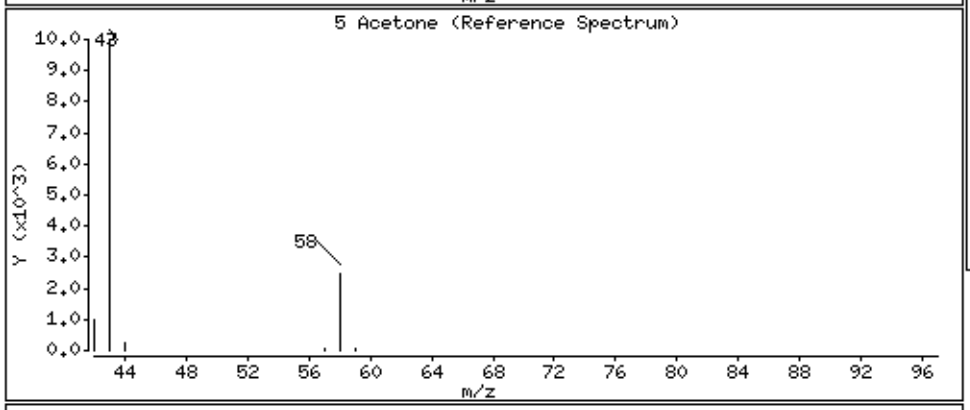
Column diameter: 0.25

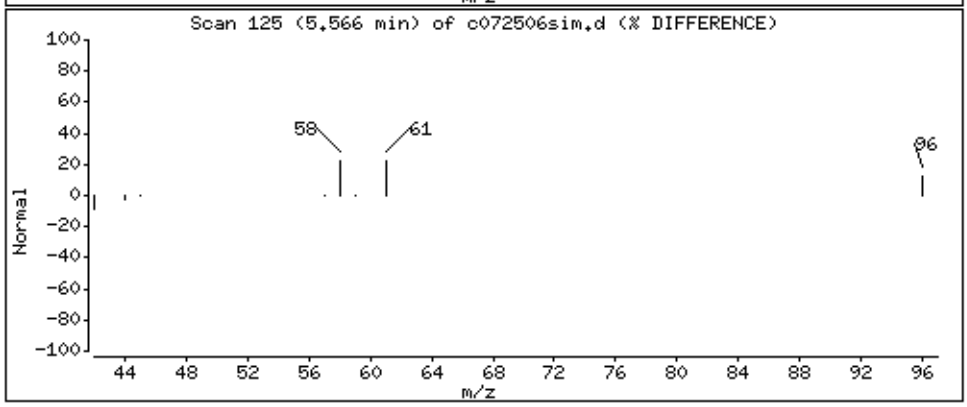
5 Acetone

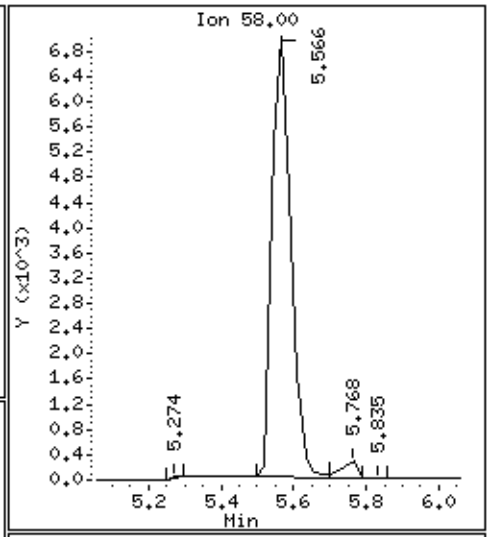
Concentration: 7.34095 ug

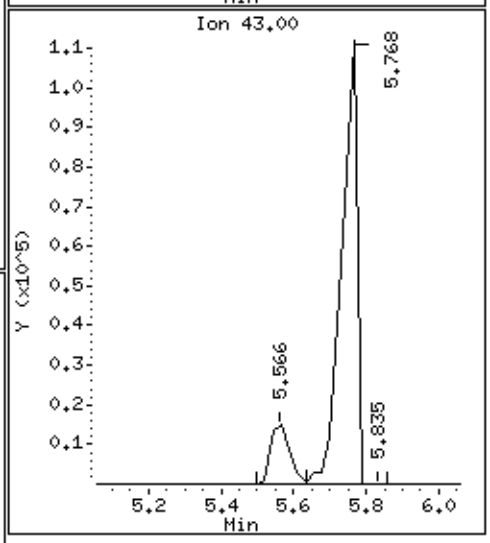












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

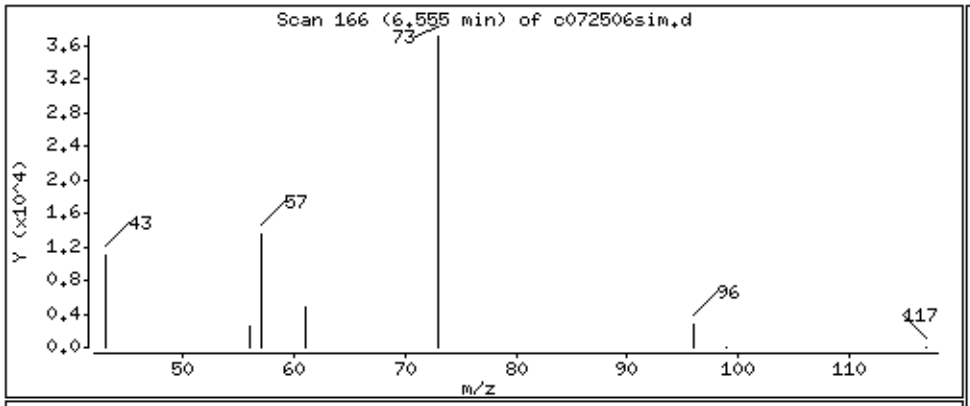
Operator: gm

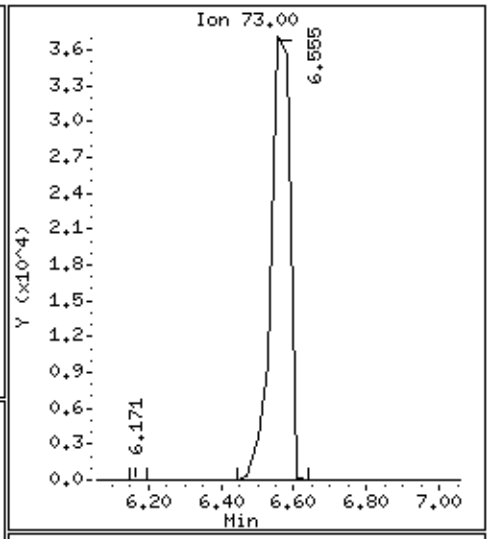
Column phase: DB-5.625

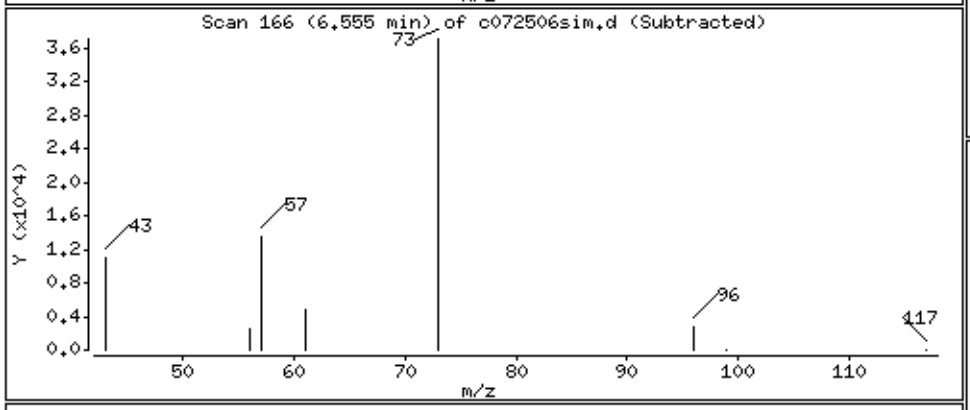
Column diameter: 0.25

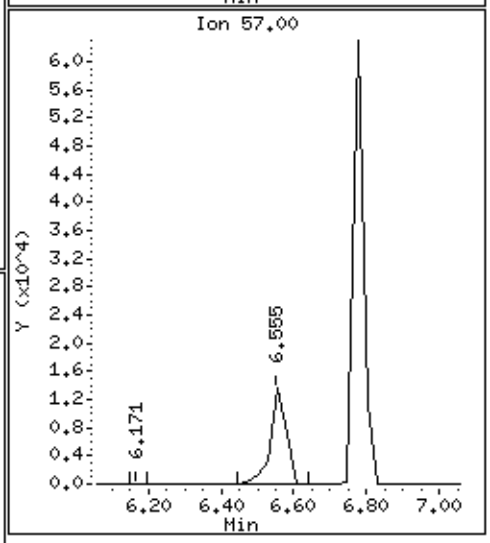
7 MTBE

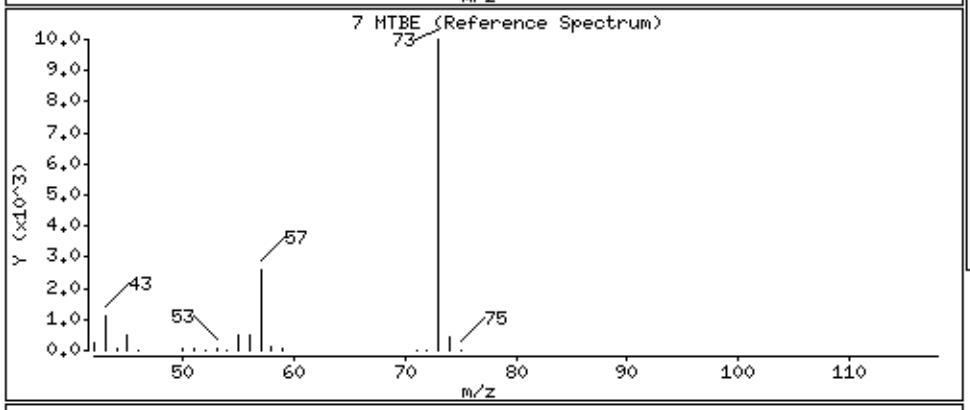
Concentration: 9.22646 ug

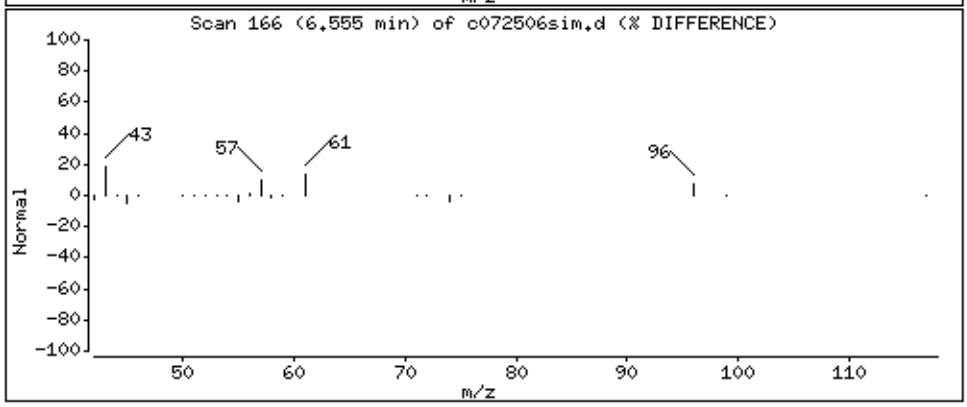












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

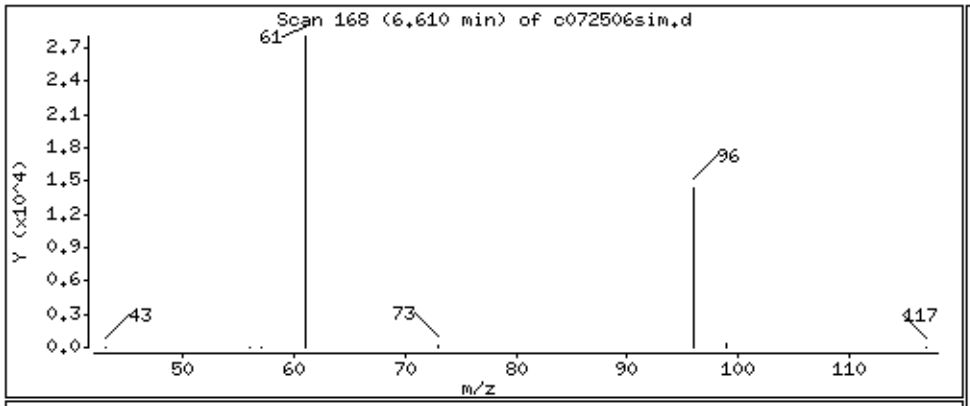
Operator: gm

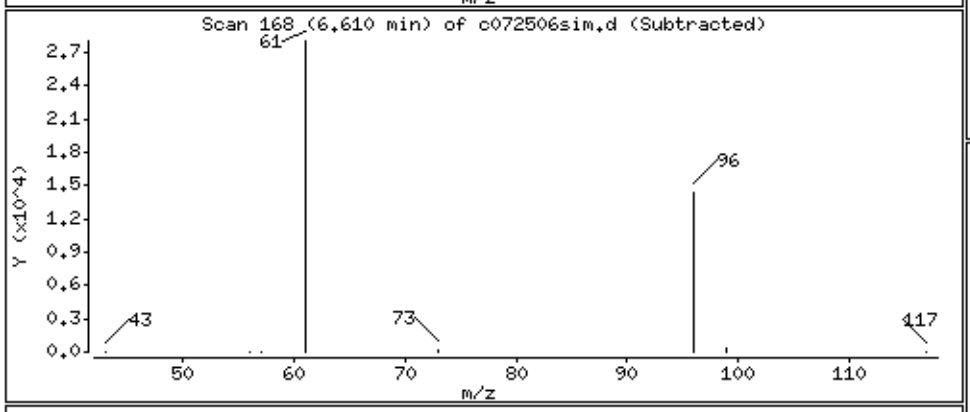
Column phase: DB-5.625

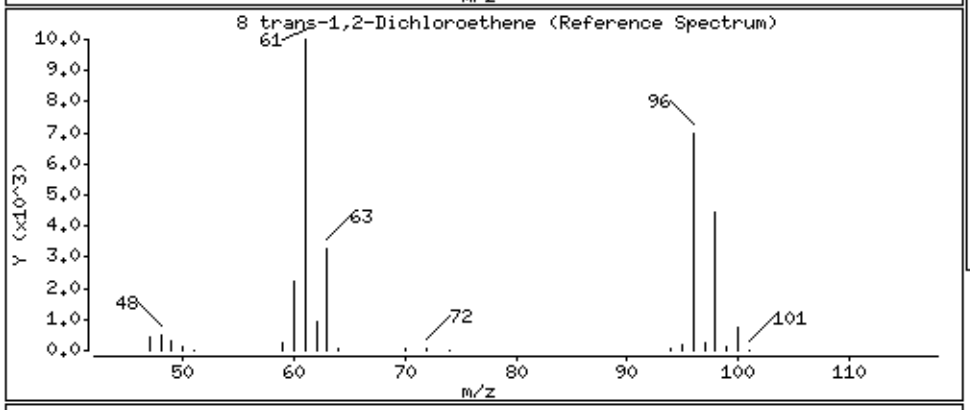
Column diameter: 0.25

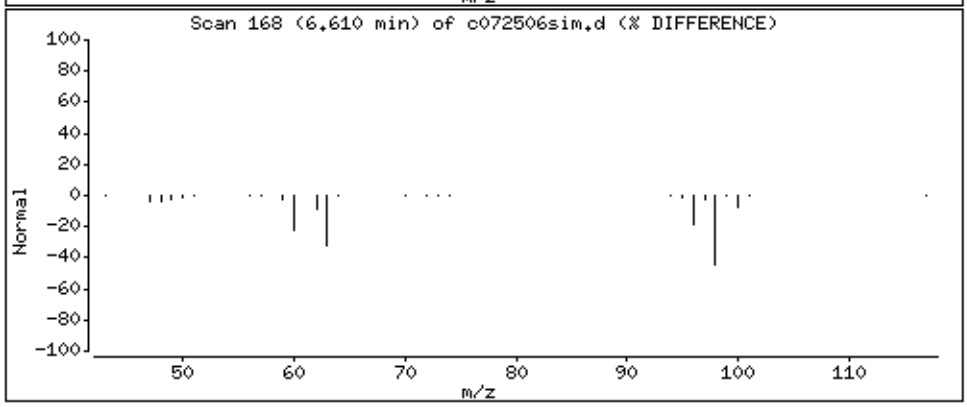
8 trans-1,2-Dichloroethene

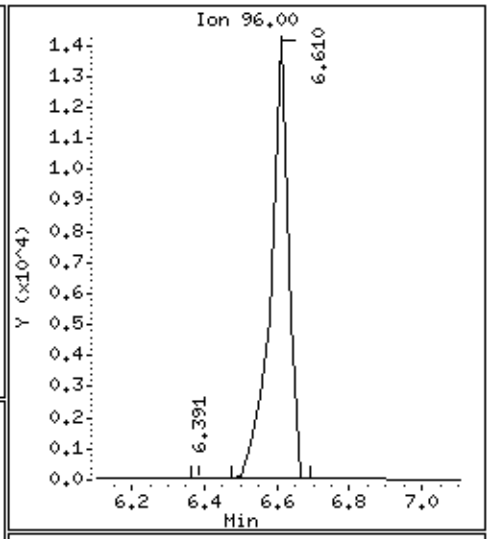
Concentration: 8.58336 ug

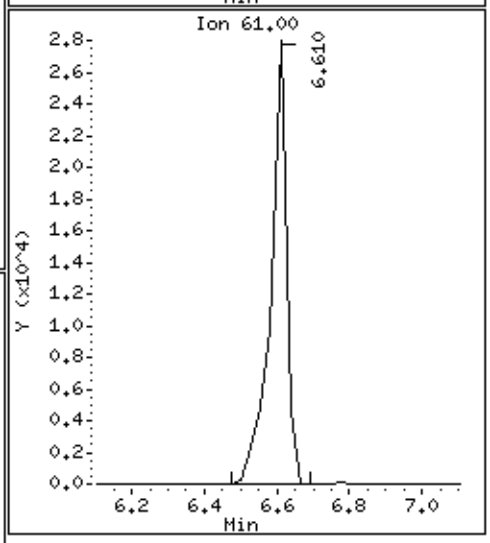












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

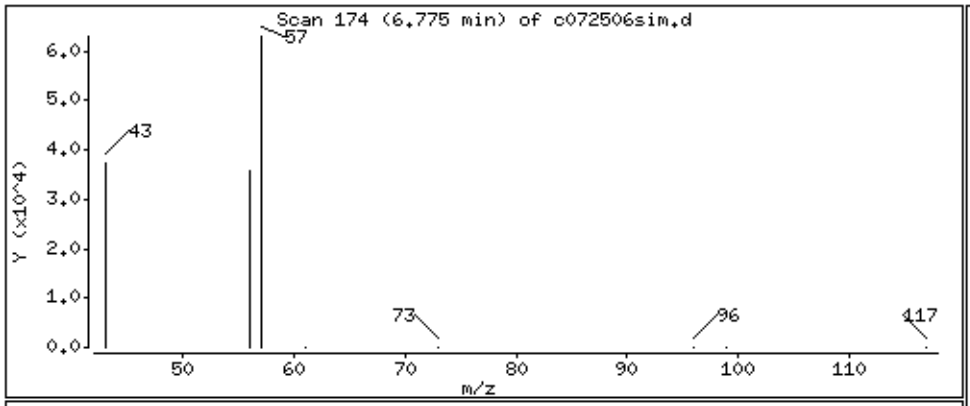
Operator: gm

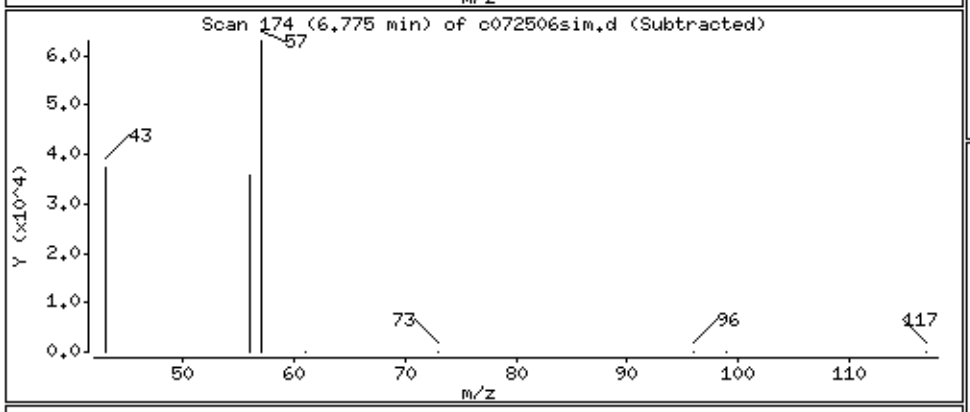
Column phase: DB-5.625

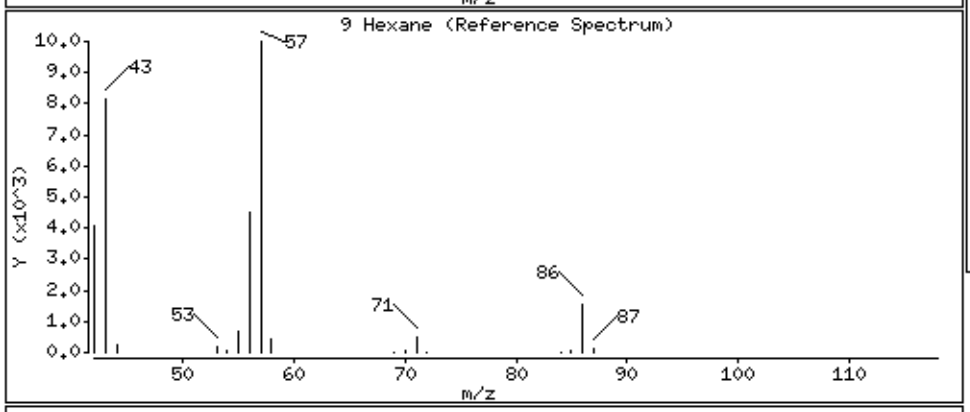
Column diameter: 0.25

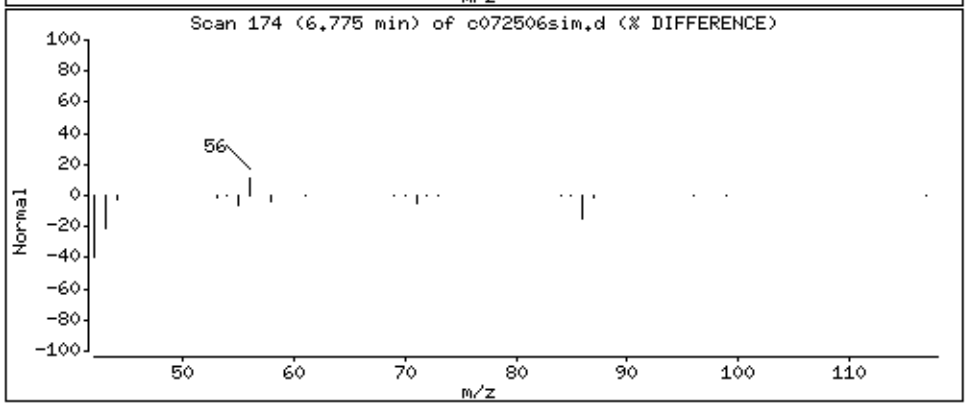
9 Hexane

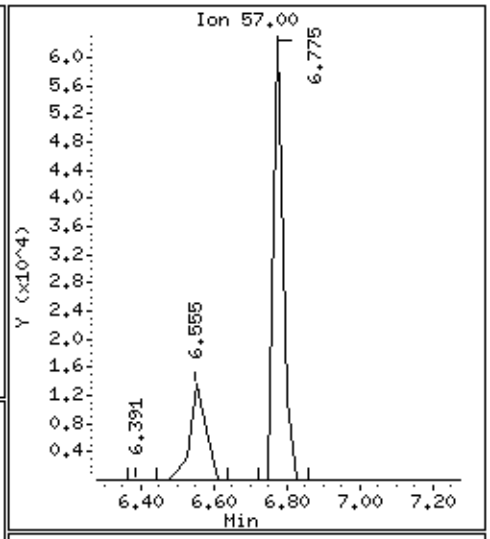
Concentration: 8.59255 ug

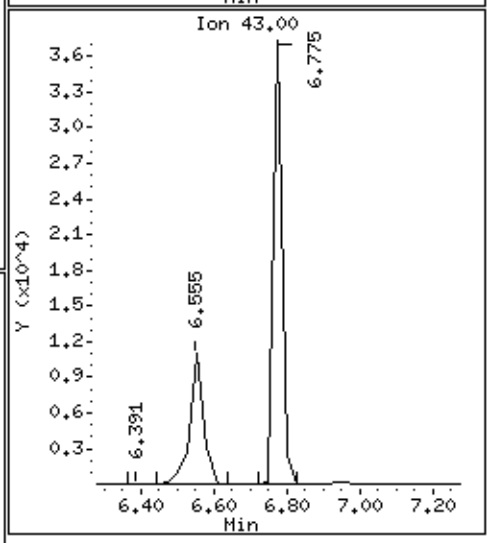












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

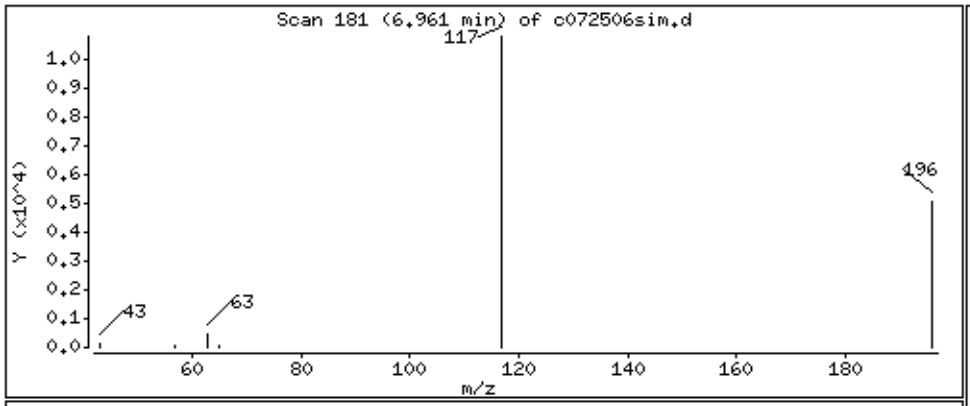
Operator: gm

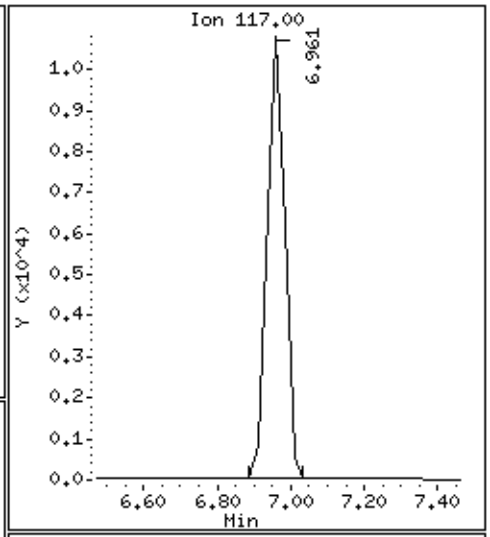
Column phase: DB-5.625

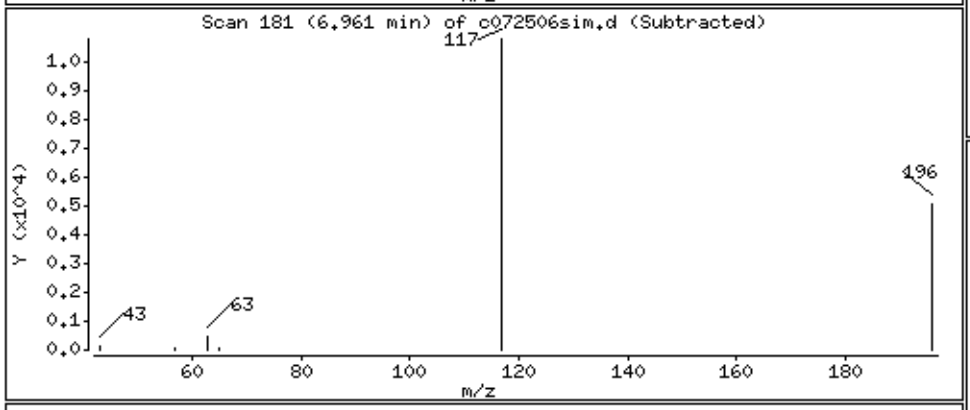
Column diameter: 0.25

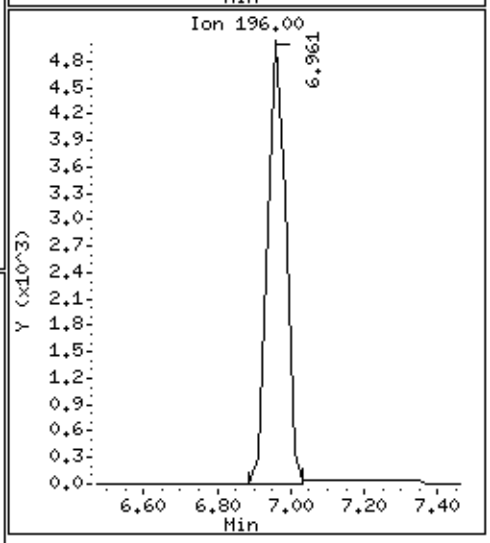
10 Halothane

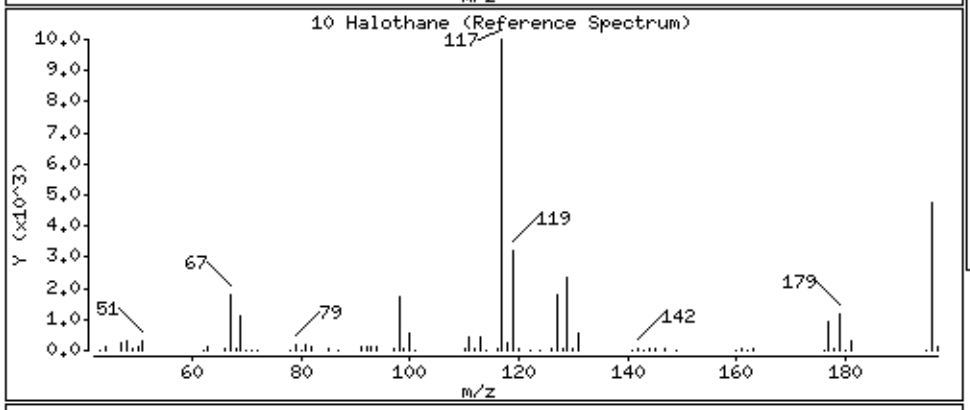
Concentration: 9.41366 ug

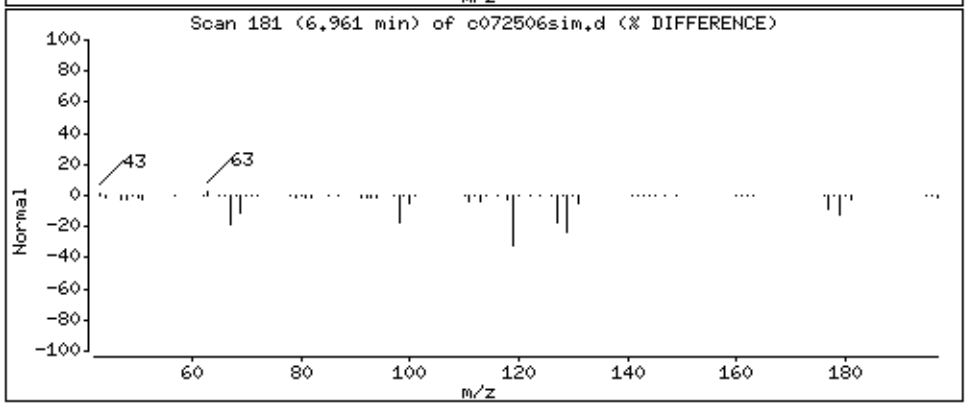












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

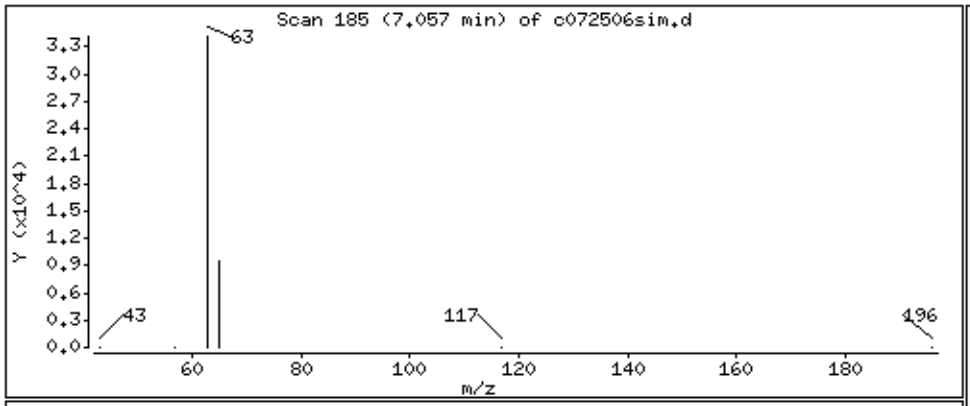
Operator: gm

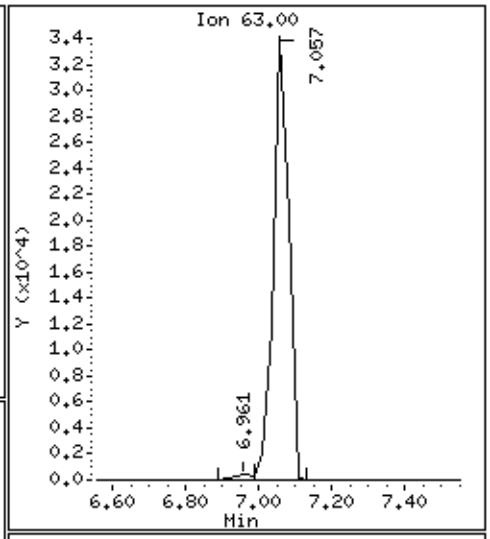
Column phase: DB-5.625

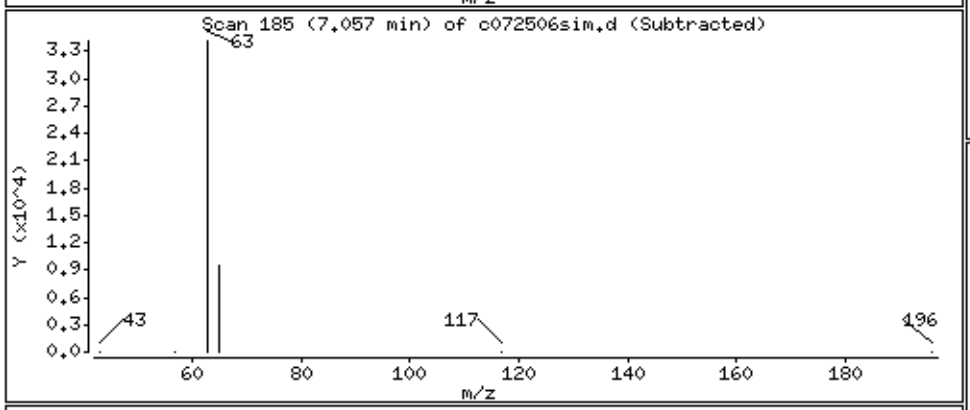
Column diameter: 0.25

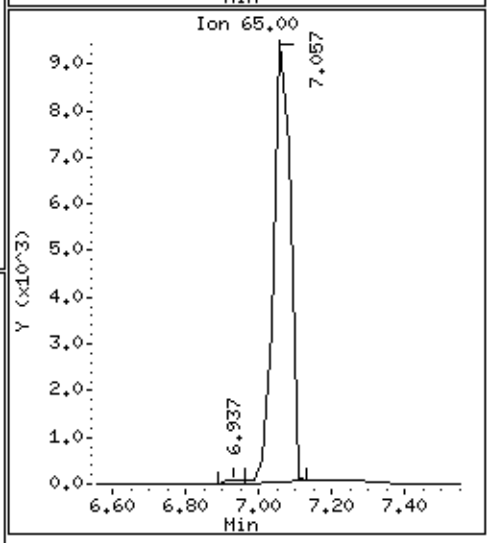
11 1,1-Dichloroethane-SPCC

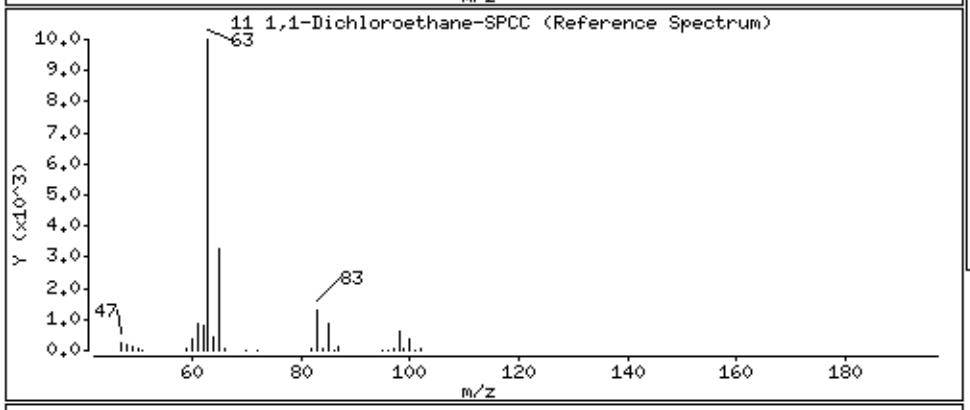
Concentration: 8.83176 ug

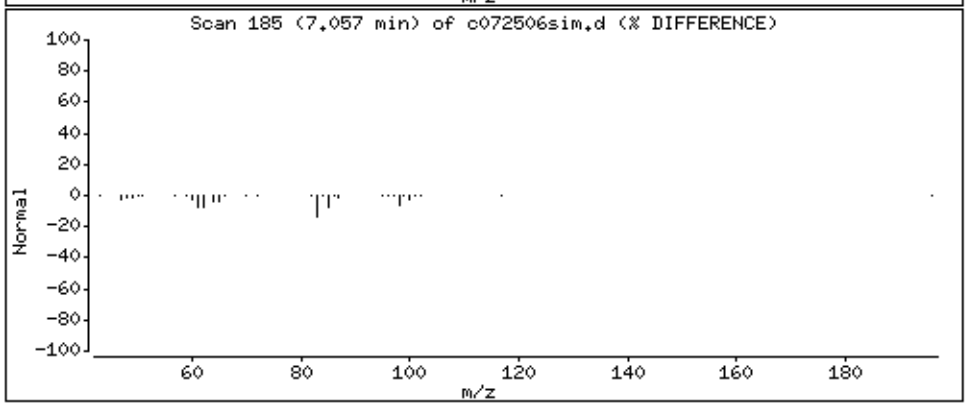












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

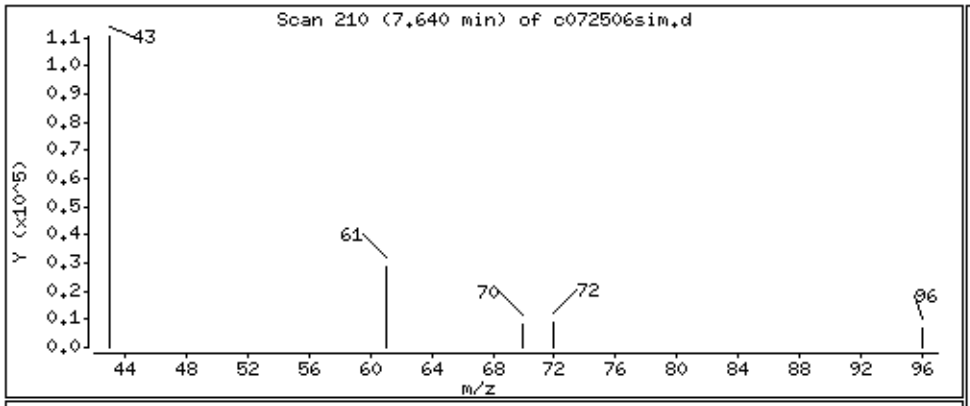
Operator: gm

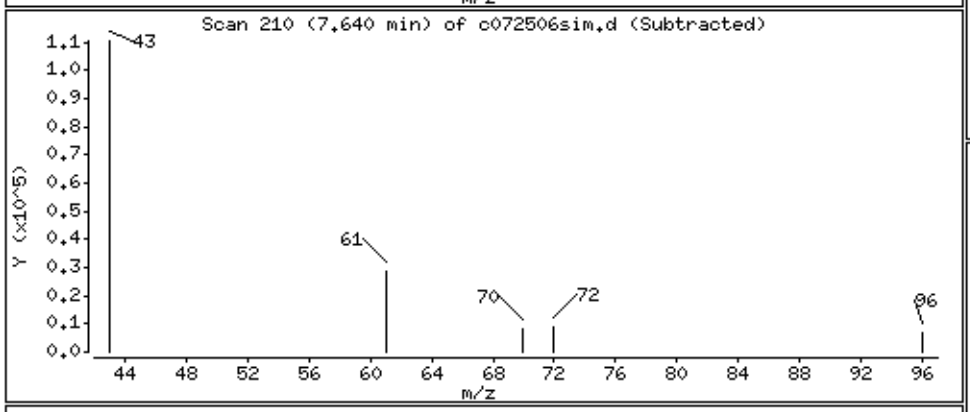
Column phase: DB-5.625

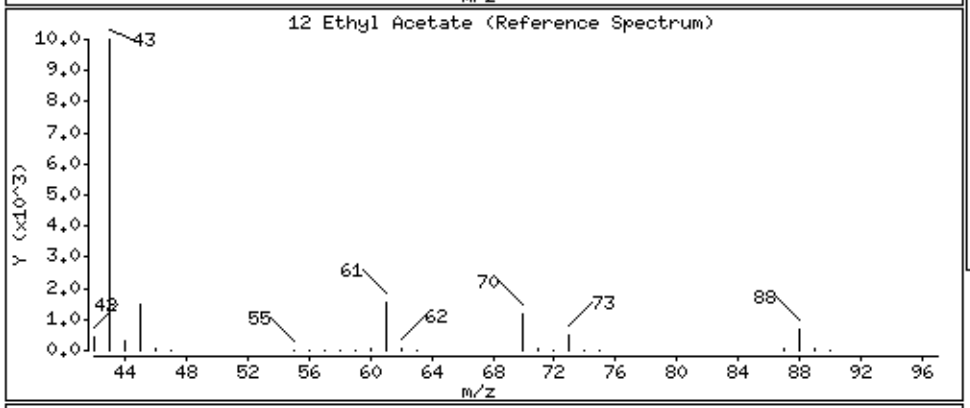
Column diameter: 0.25

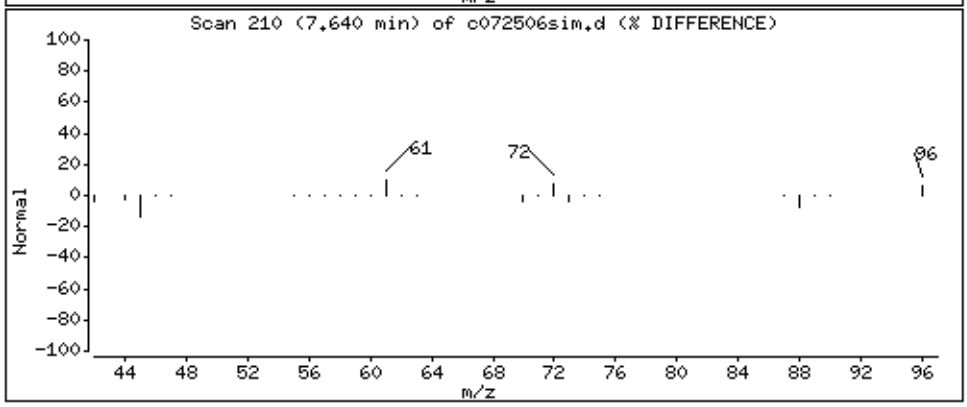
12 Ethyl Acetate

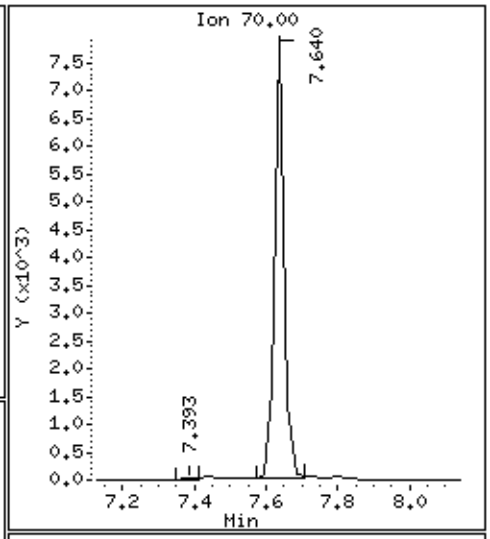
Concentration: 8.91164 ug

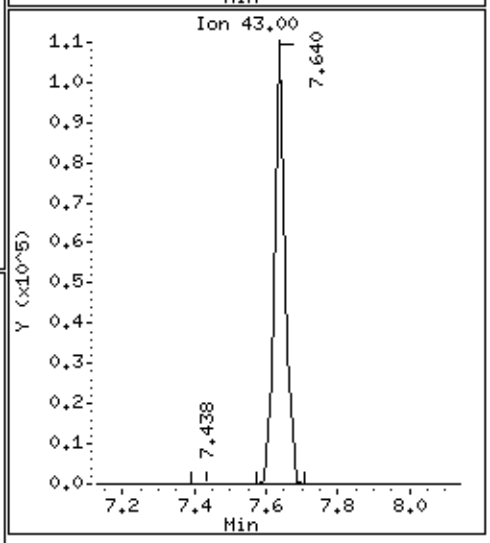












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

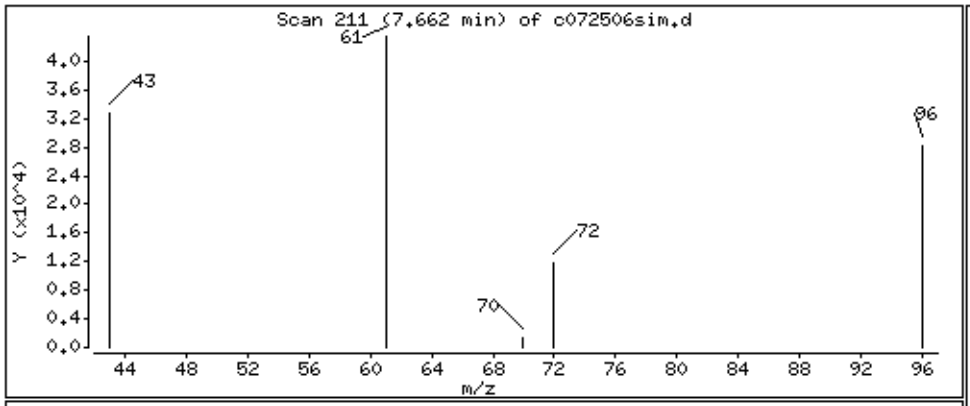
Operator: gm

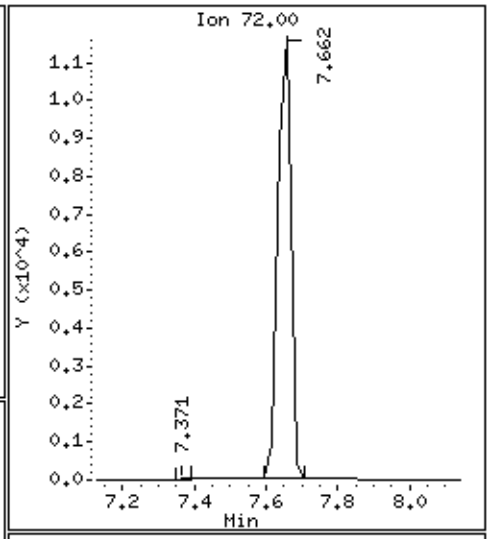
Column phase: DB-5.625

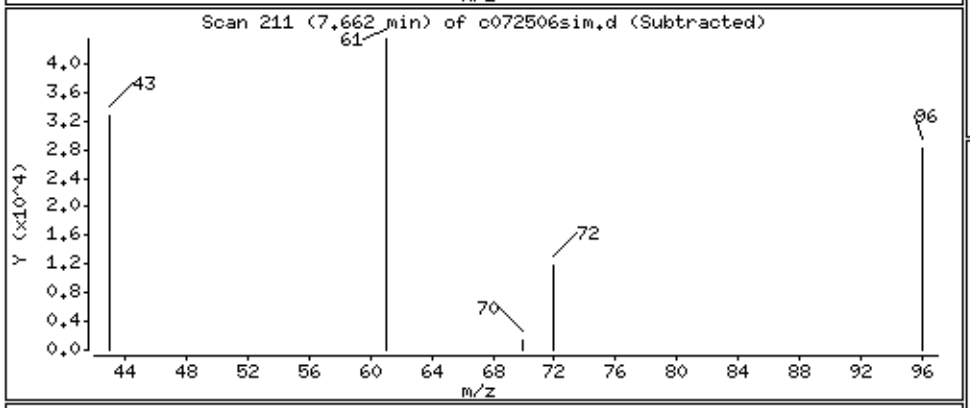
Column diameter: 0.25

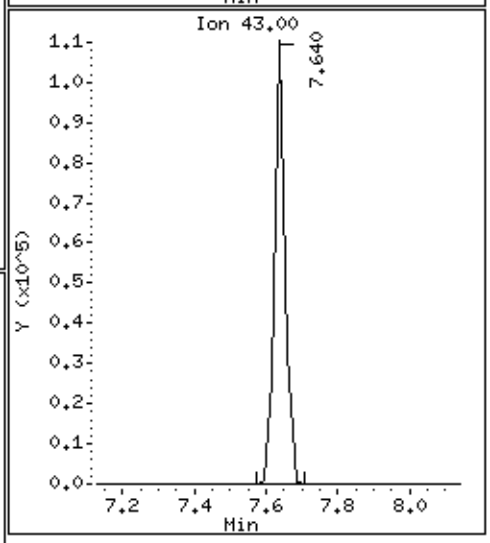
13 2-Butanone

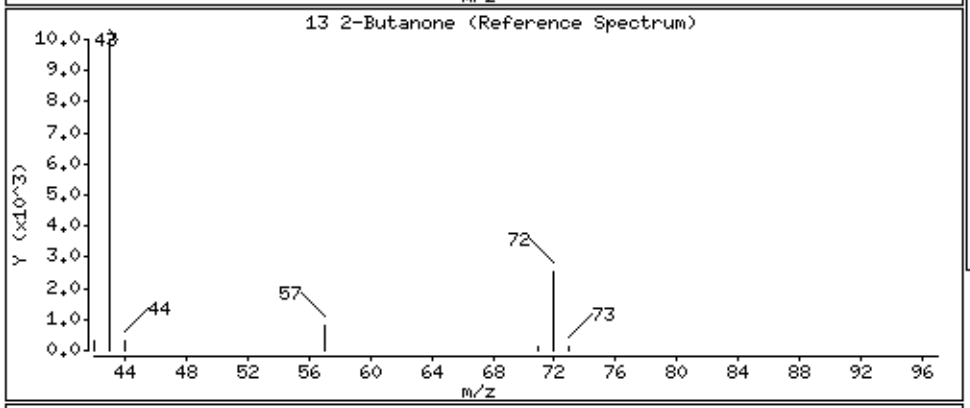
Concentration: 8.06329 ug

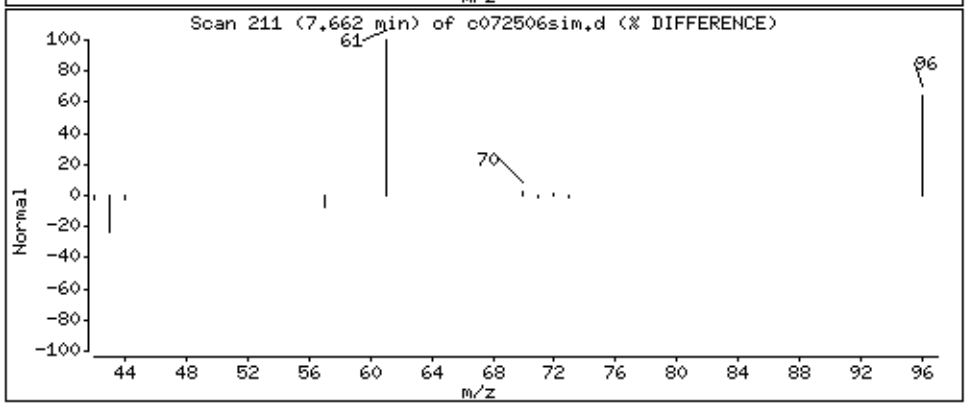












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

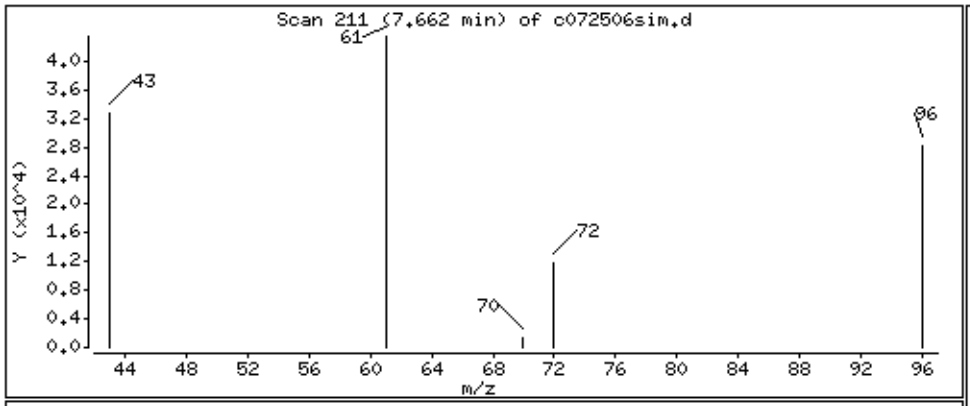
Operator: gm

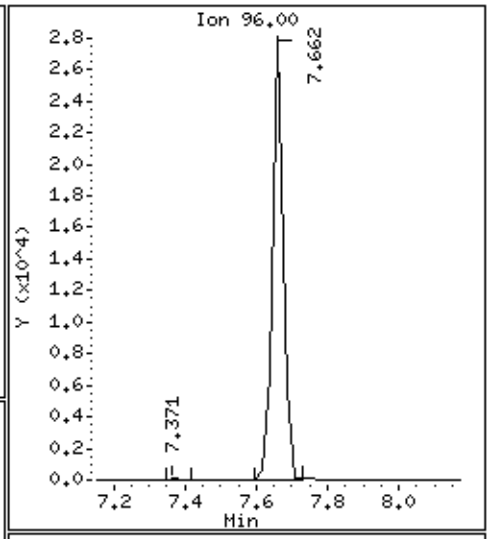
Column phase: DB-5.625

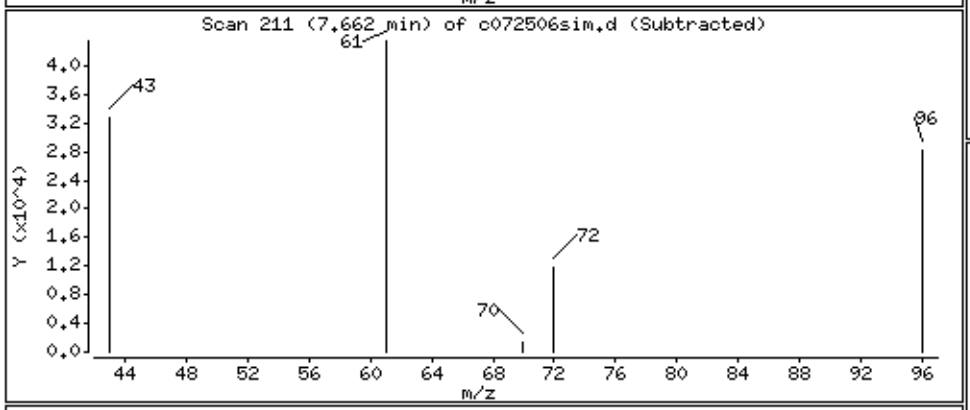
Column diameter: 0.25

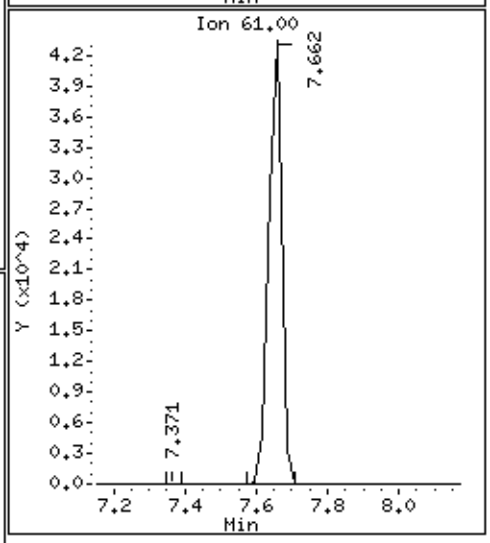
14 cis-1,2-Dichloroethene

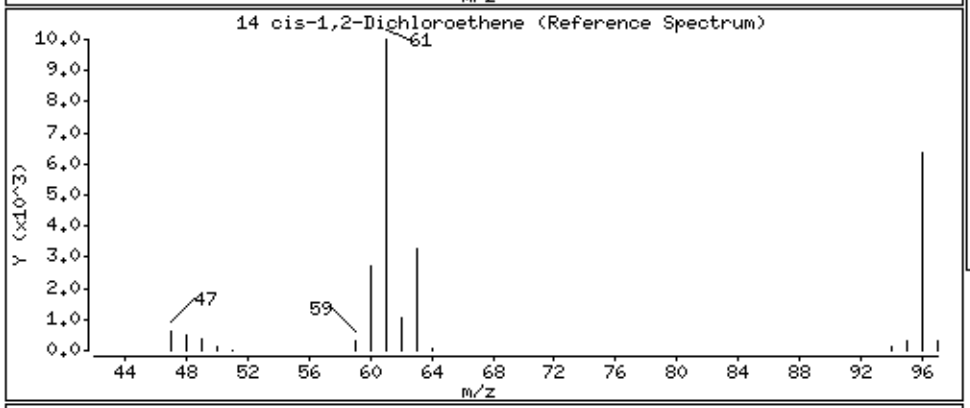
Concentration: 9.12257 ug

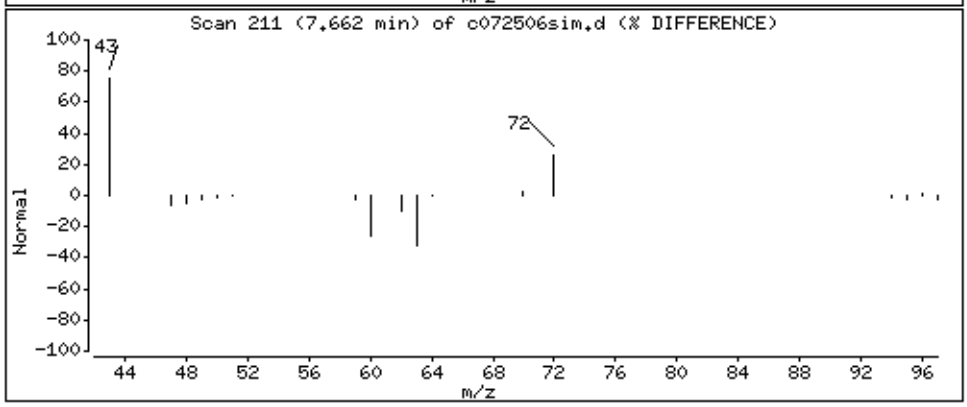












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

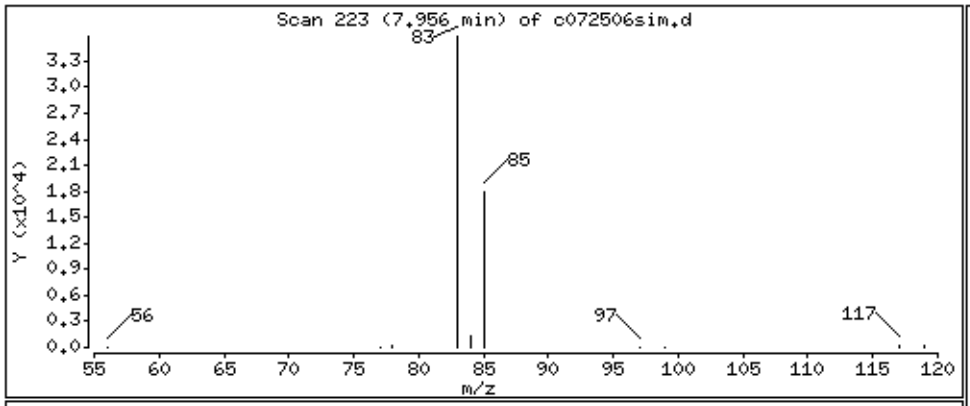
Operator: gm

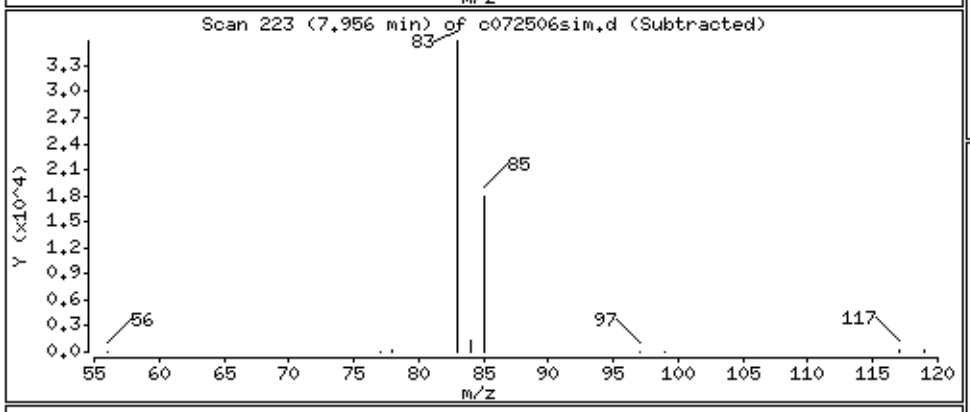
Column phase: DB-5.625

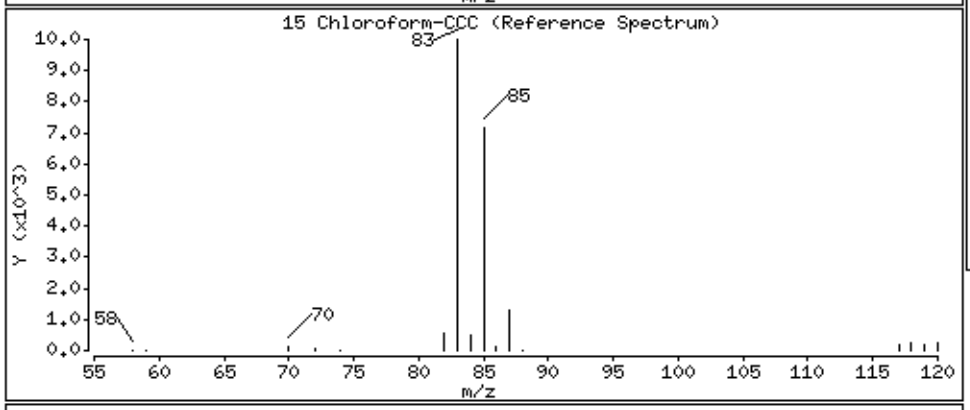
Column diameter: 0.25

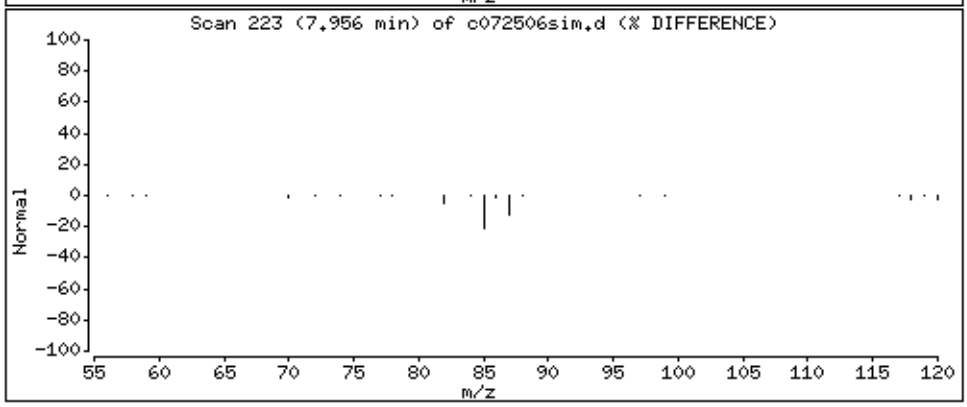
15 Chloroform-CCC

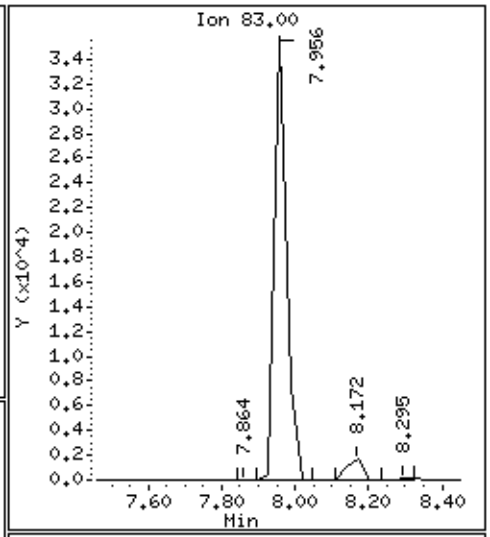
Concentration: 9.20087 ug

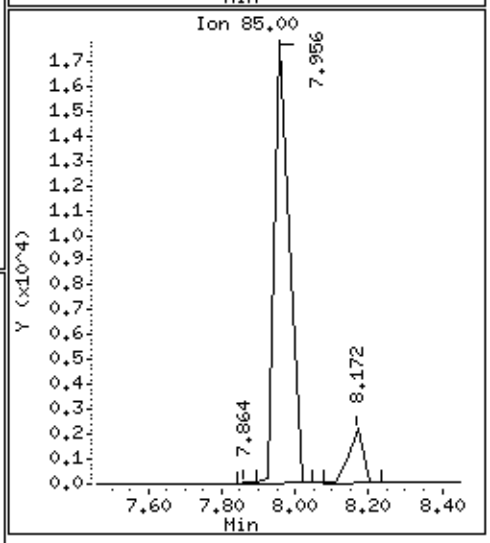












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

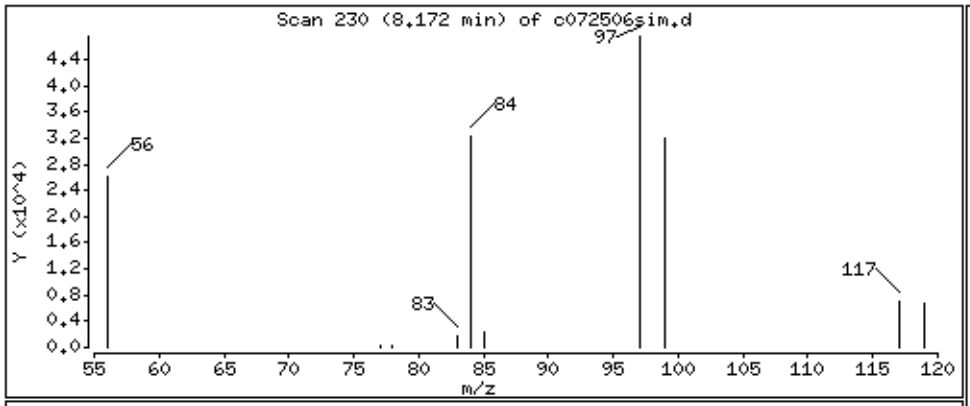
Operator: gm

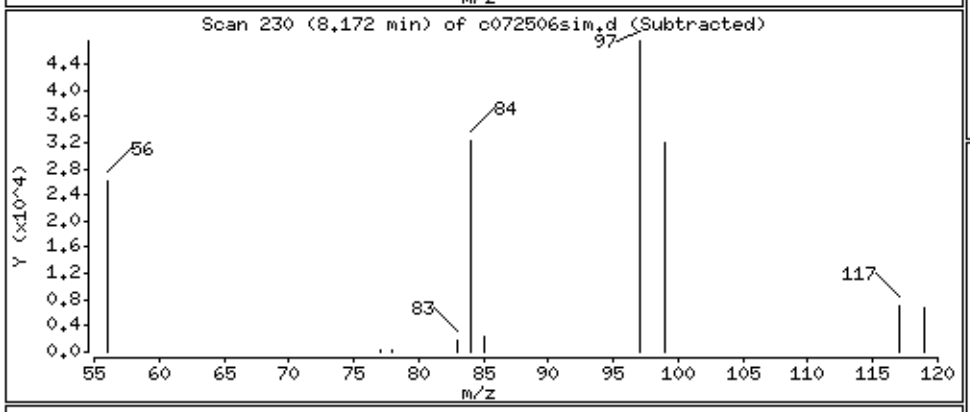
Column phase: DB-5.625

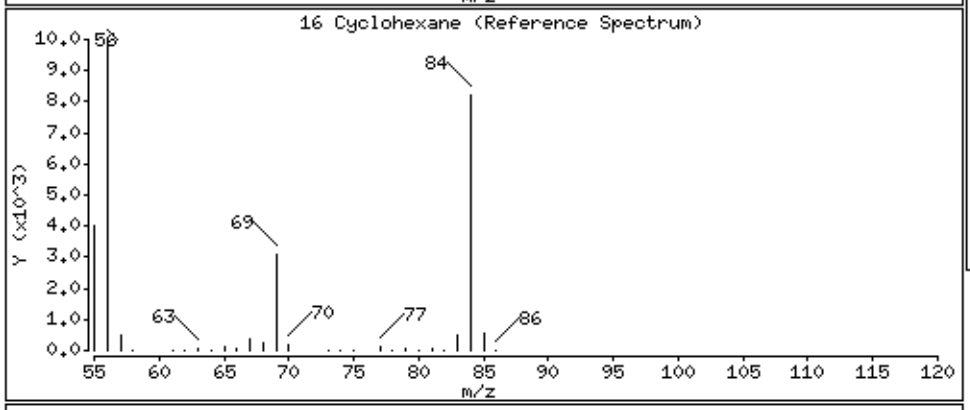
Column diameter: 0.25

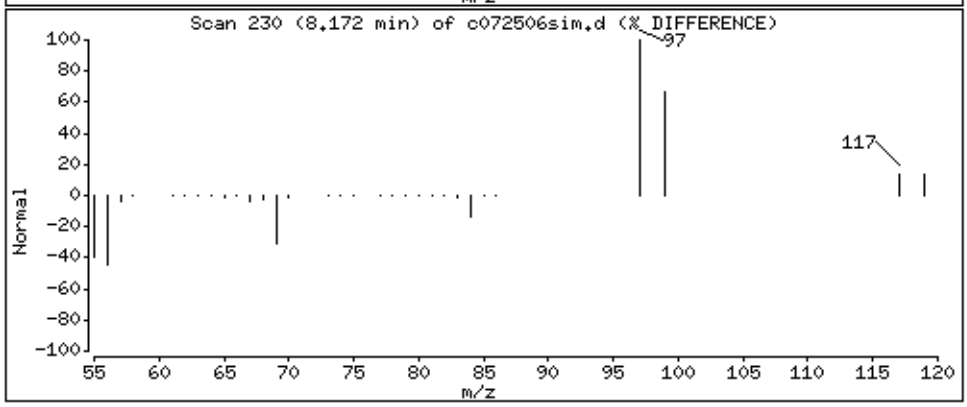
16 Cyclohexane

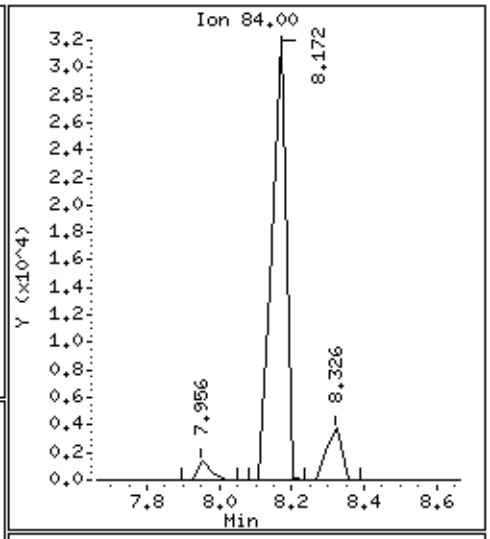
Concentration: 9.30044 ug

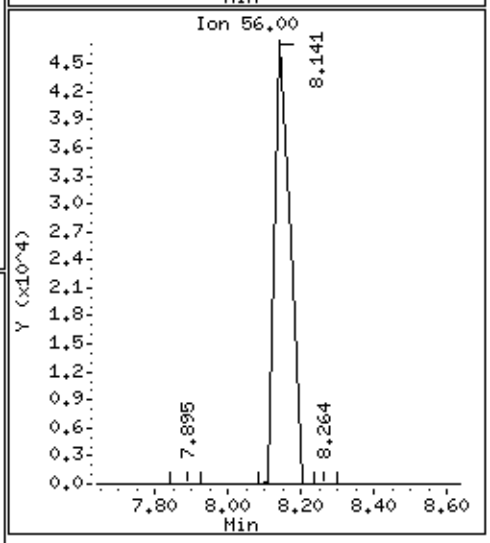












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

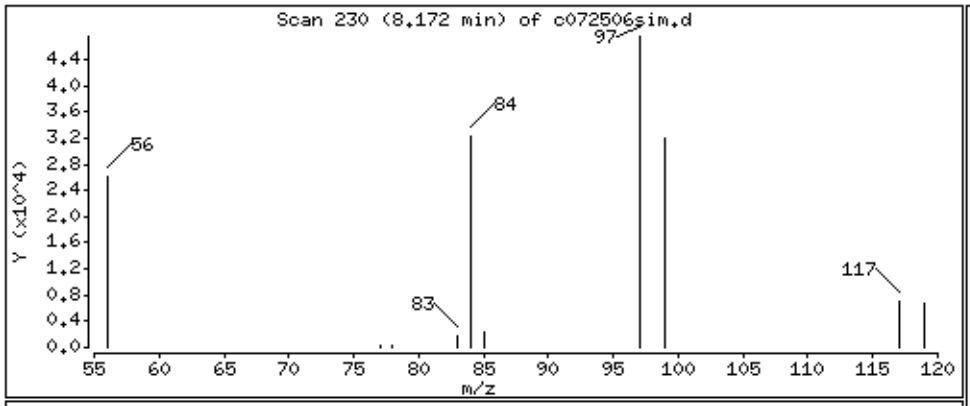
Operator: gm

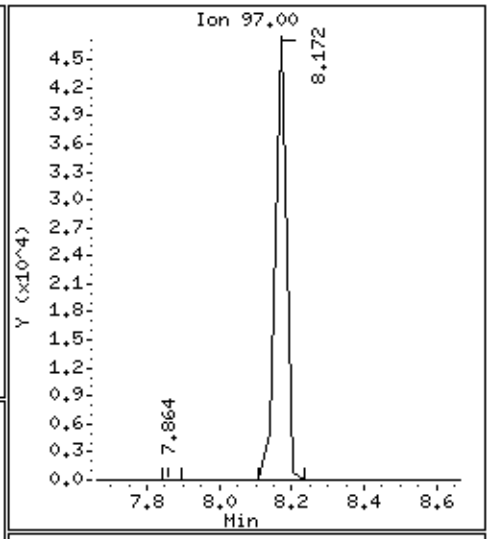
Column phase: DB-5.625

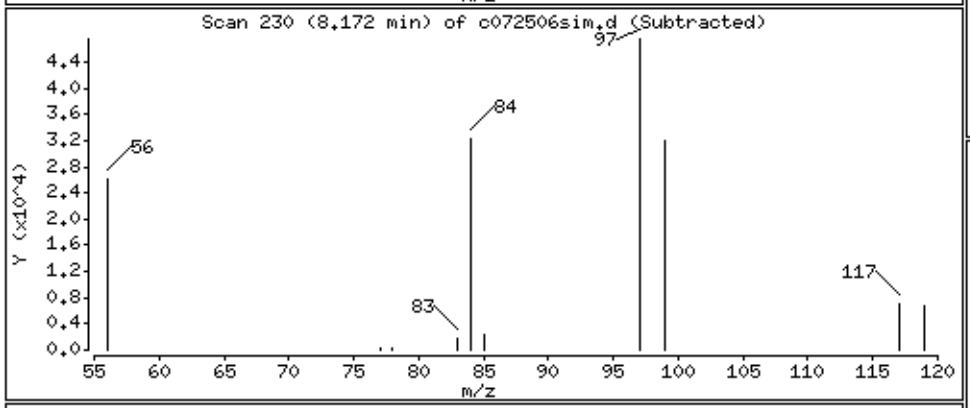
Column diameter: 0.25

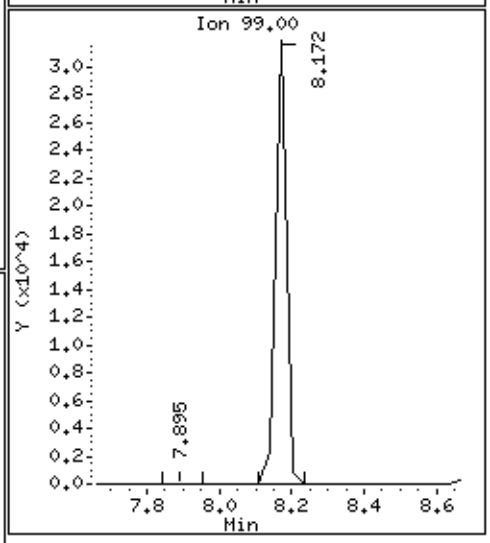
17 1,1,1-Trichloroethane

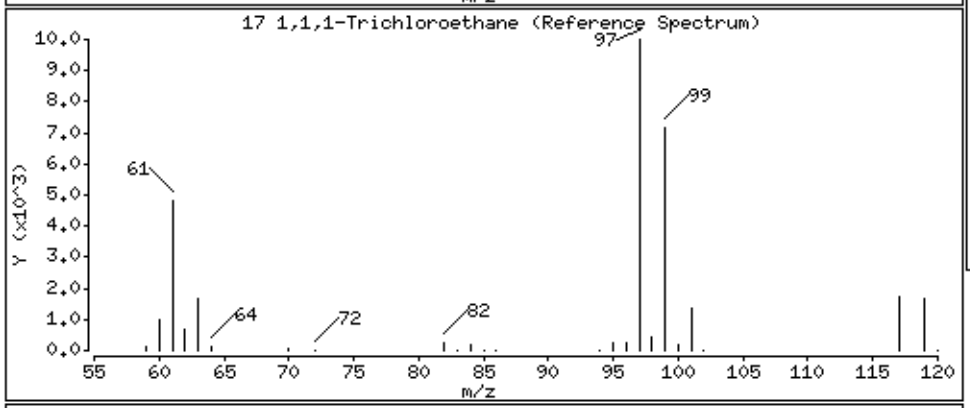
Concentration: 9.81964 ug

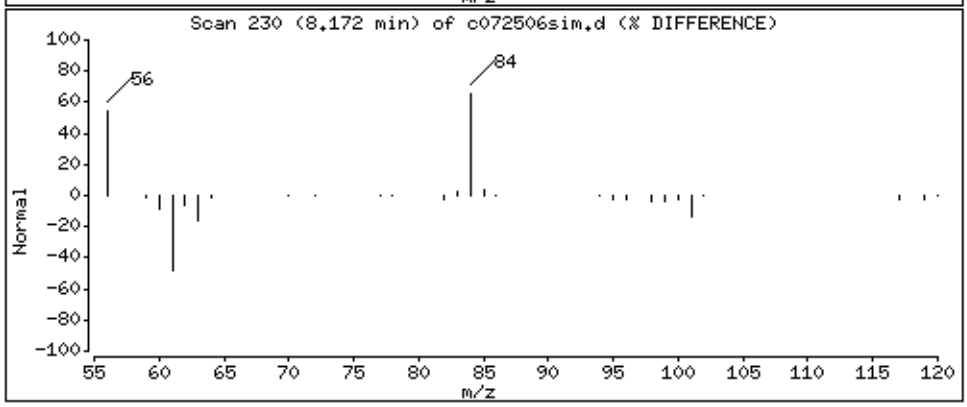












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

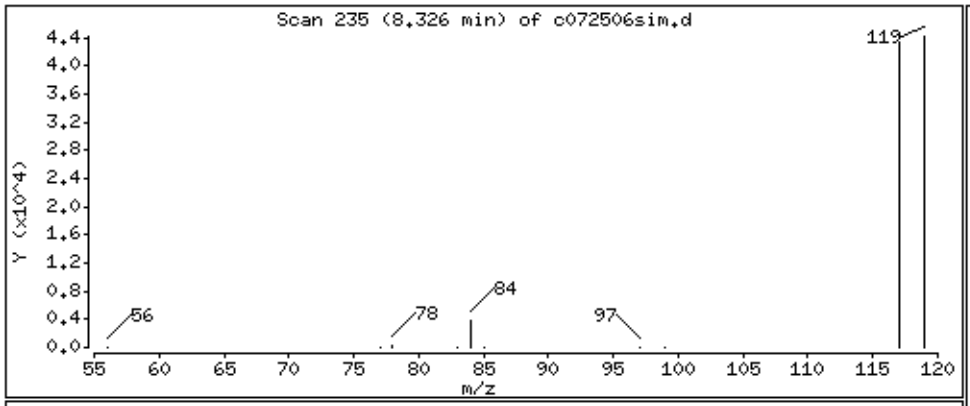
Operator: gm

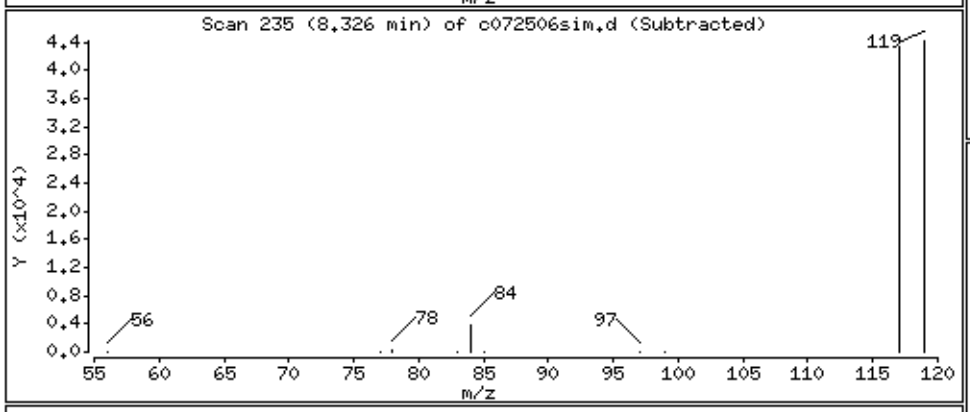
Column phase: DB-5.625

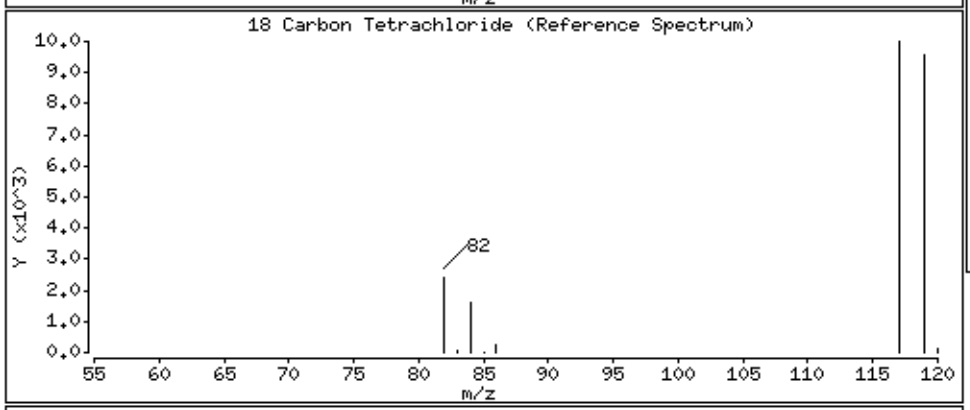
Column diameter: 0.25

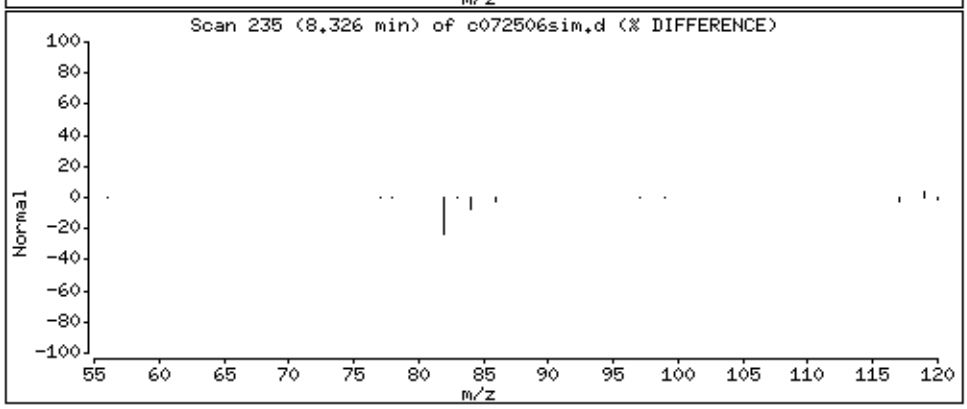
18 Carbon Tetrachloride

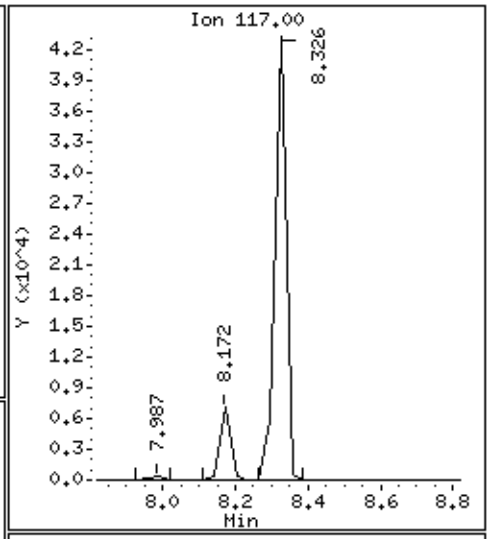
Concentration: 9.68226 ug

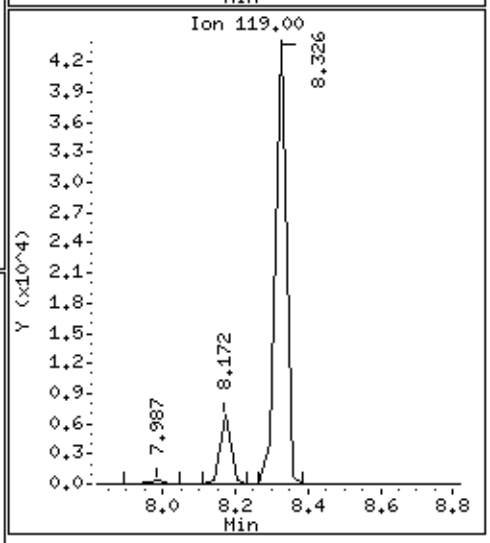












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

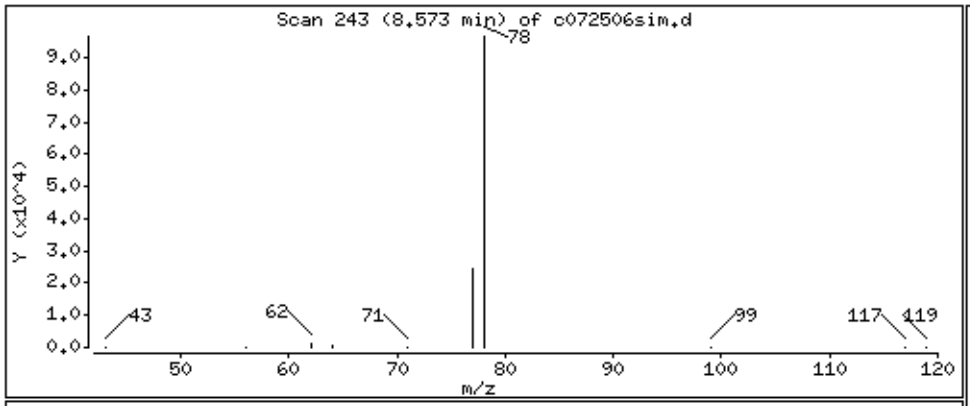
Operator: gm

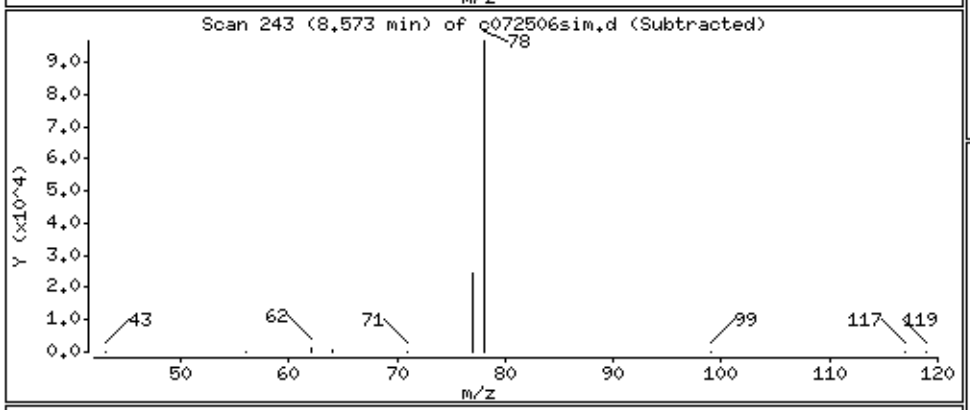
Column phase: DB-5.625

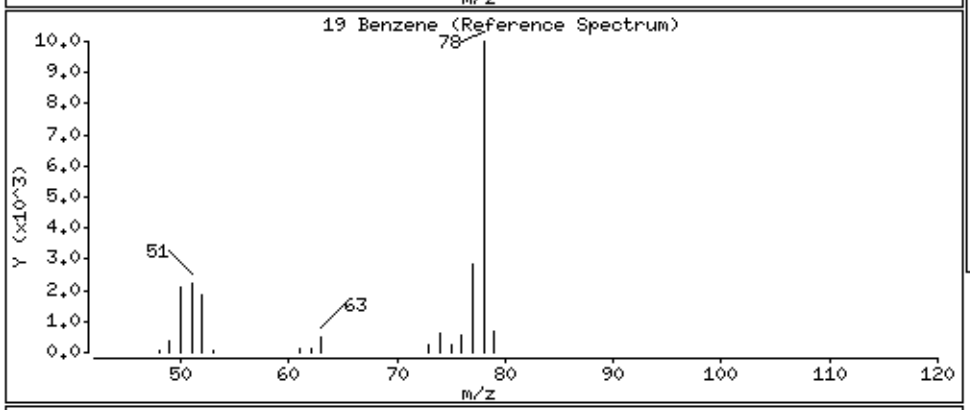
Column diameter: 0.25

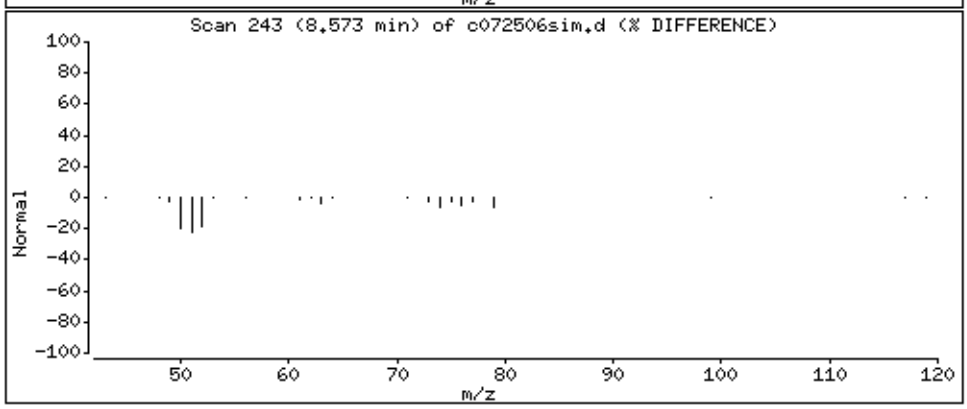
19 Benzene

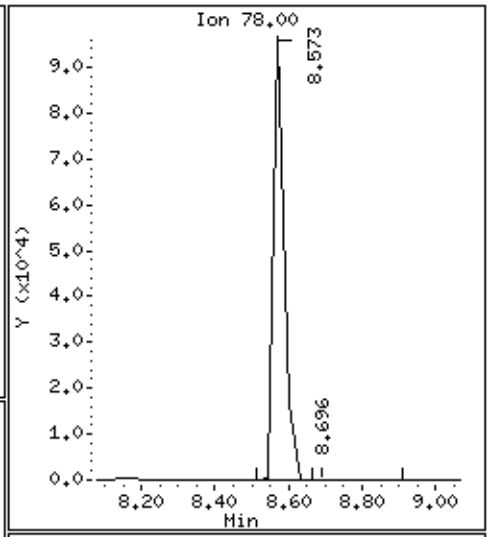
Concentration: 9.32099 ug

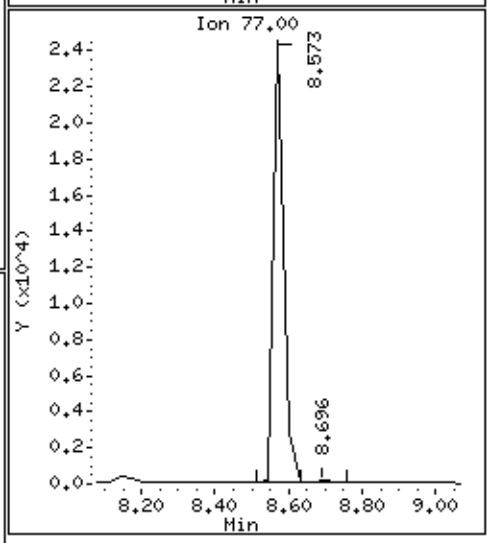












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

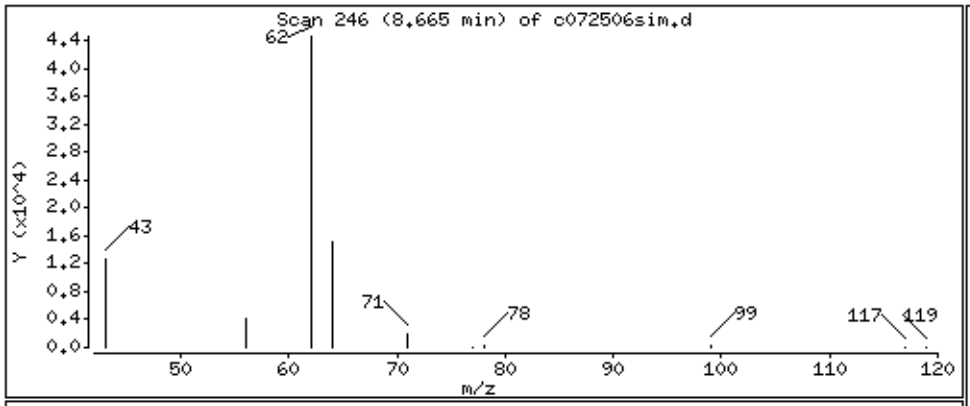
Operator: gm

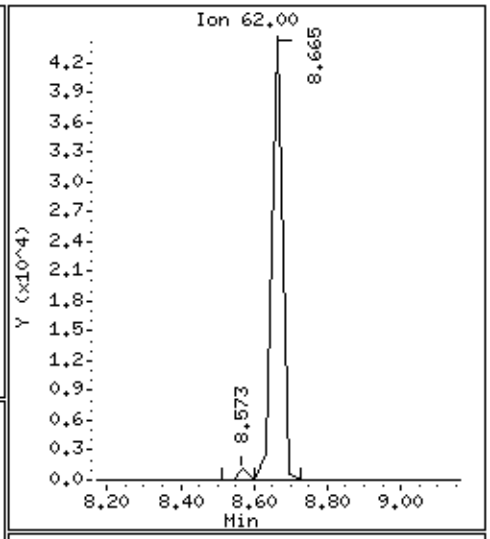
Column phase: DB-5.625

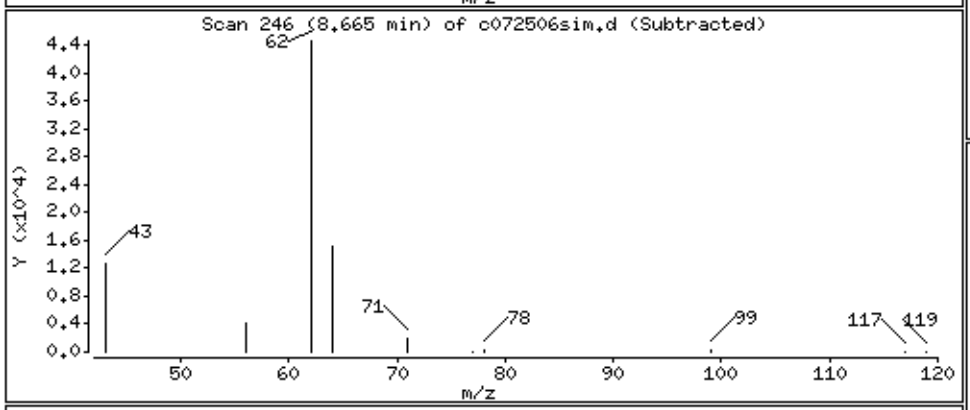
Column diameter: 0.25

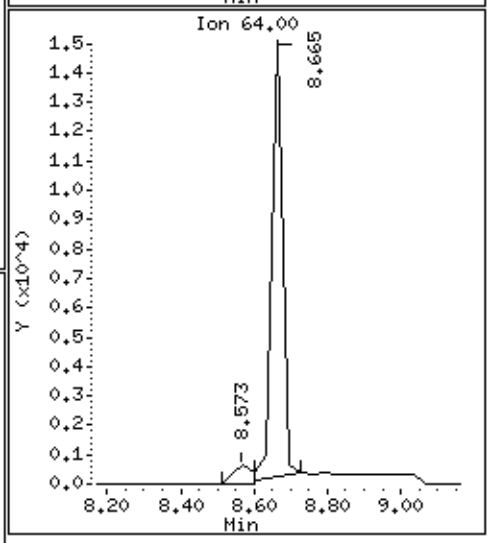
20 1,2-Dichloroethane

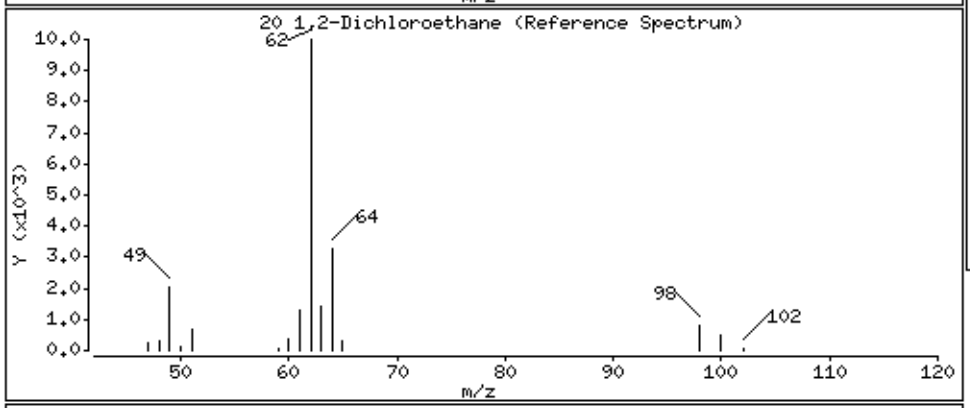
Concentration: 8.77213 ug

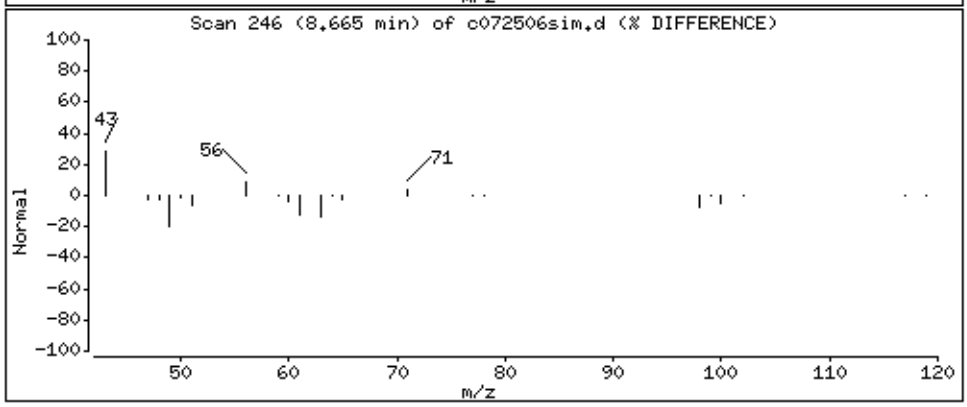












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

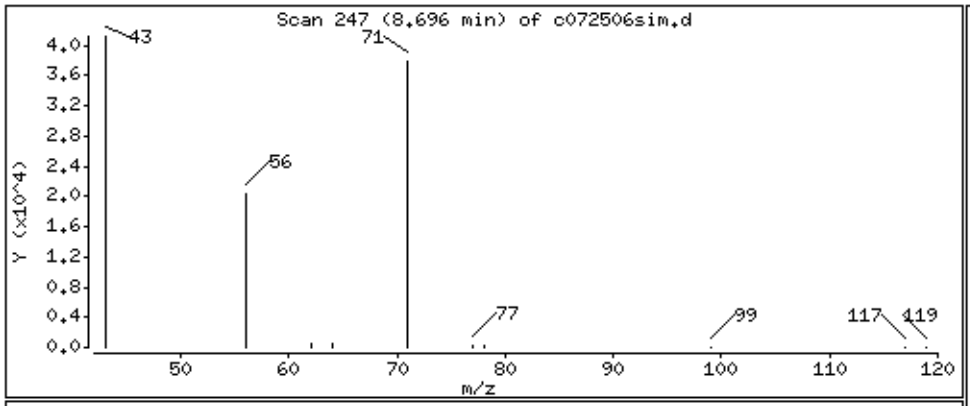
Operator: gm

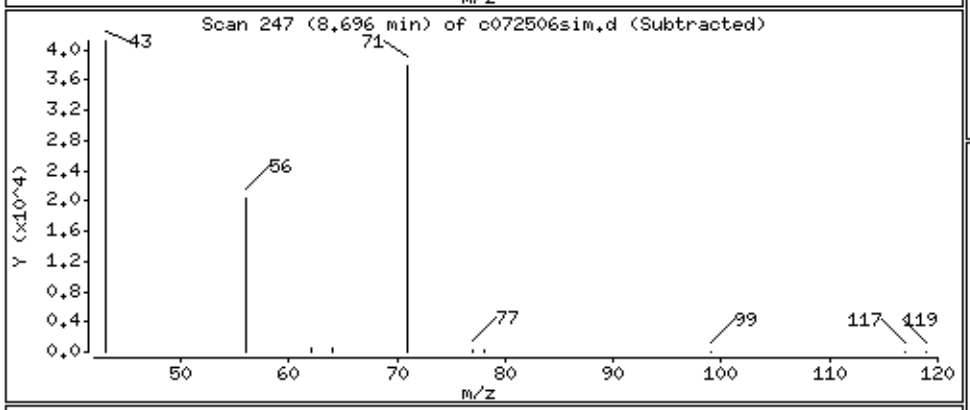
Column phase: DB-5.625

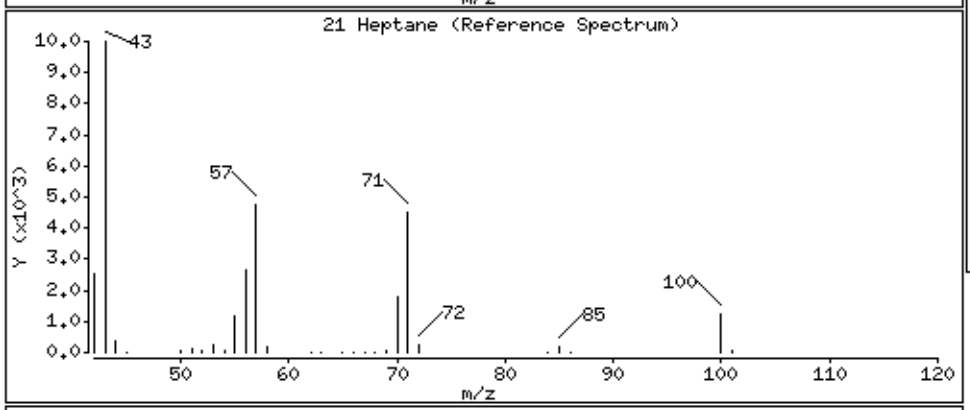
Column diameter: 0.25

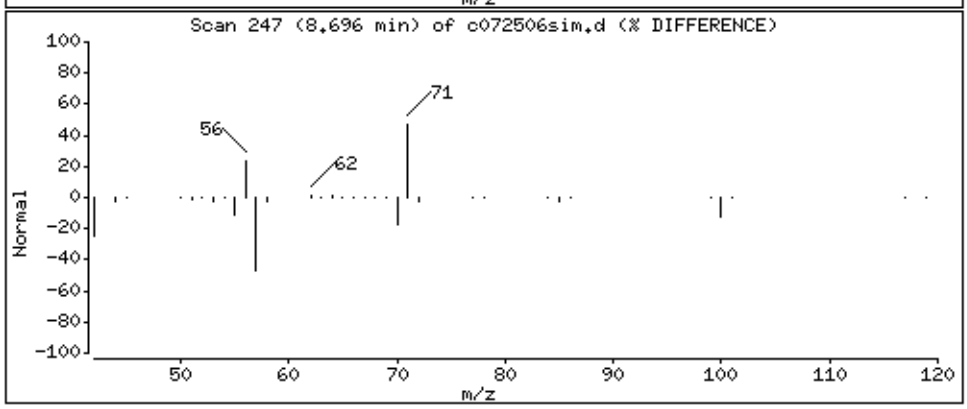
21 Heptane

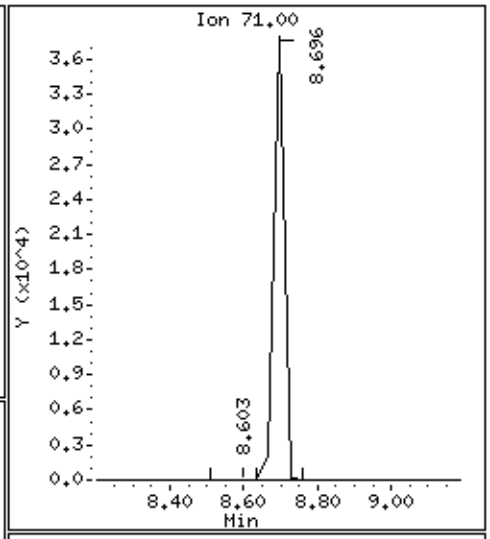
Concentration: 9.19691 ug

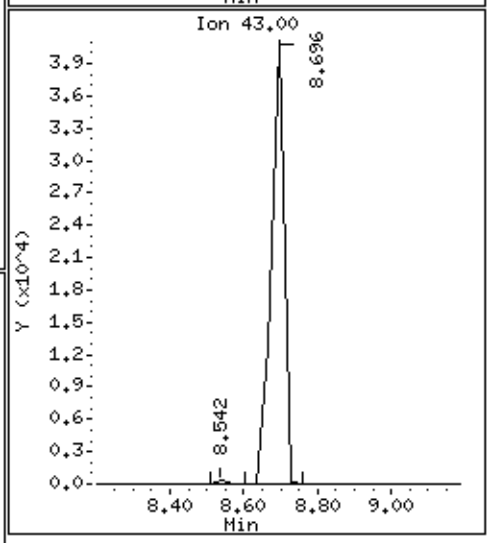












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

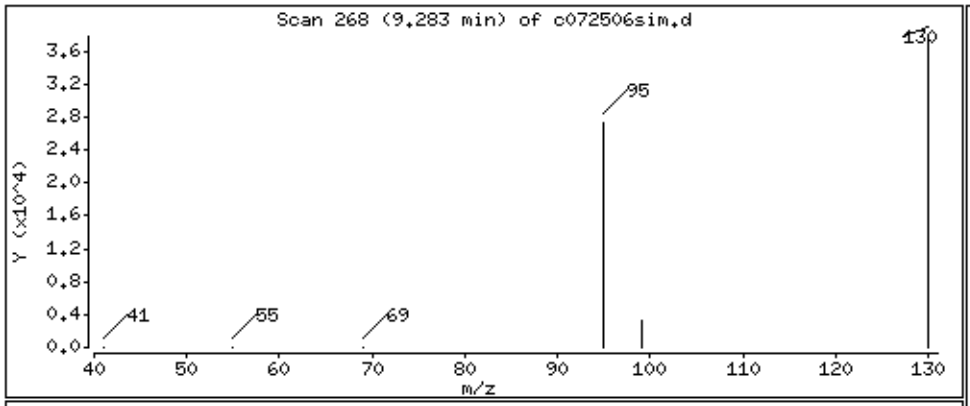
Operator: gm

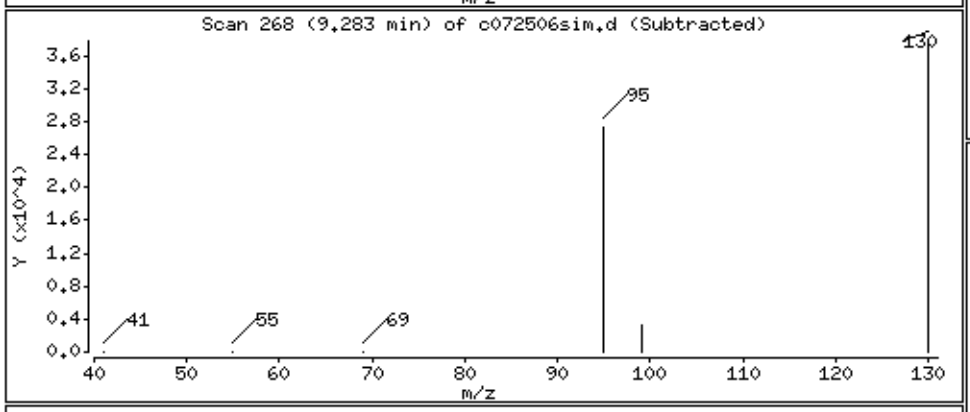
Column phase: DB-5.625

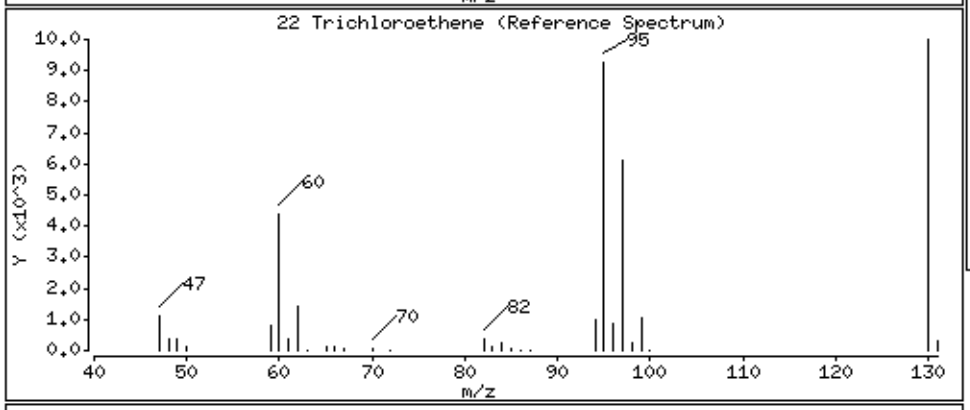
Column diameter: 0.25

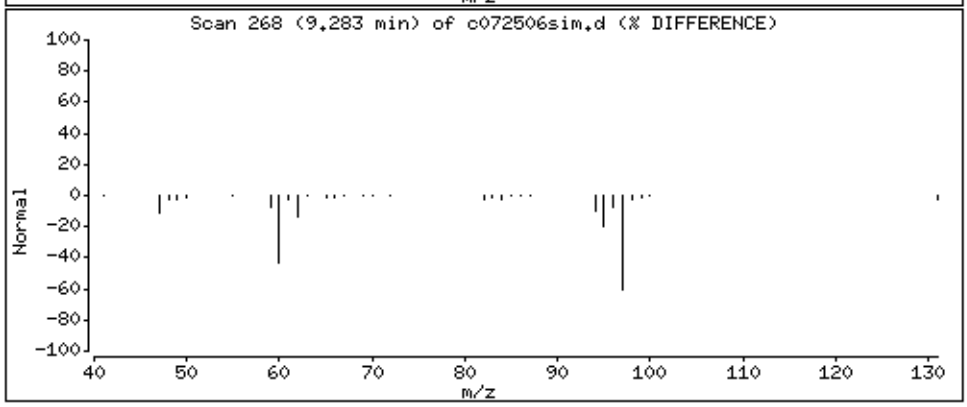
22 Trichloroethene

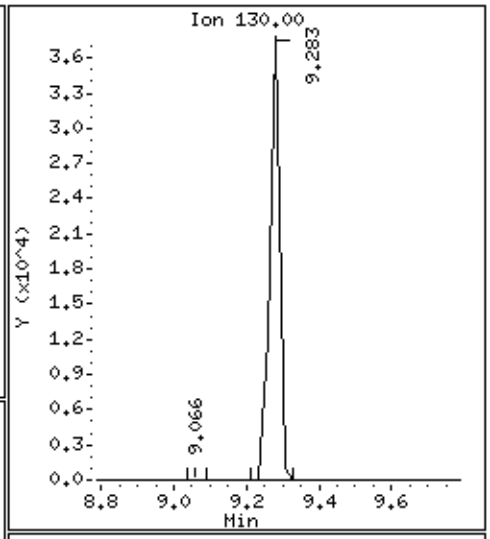
Concentration: 9.66465 ug

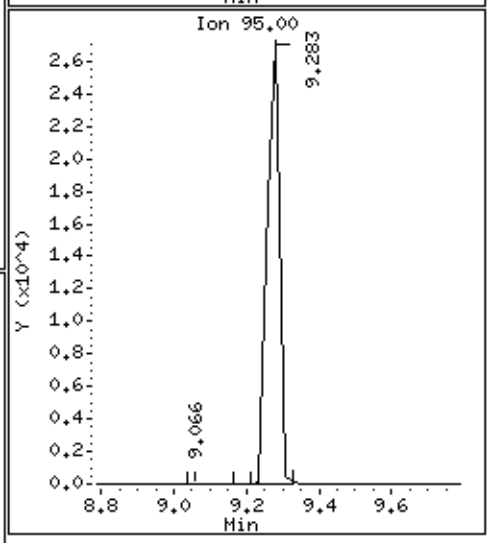












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

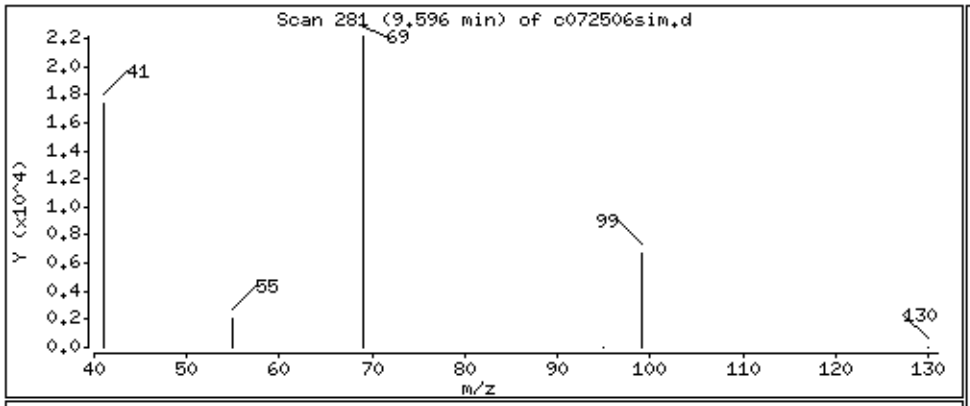
Operator: gm

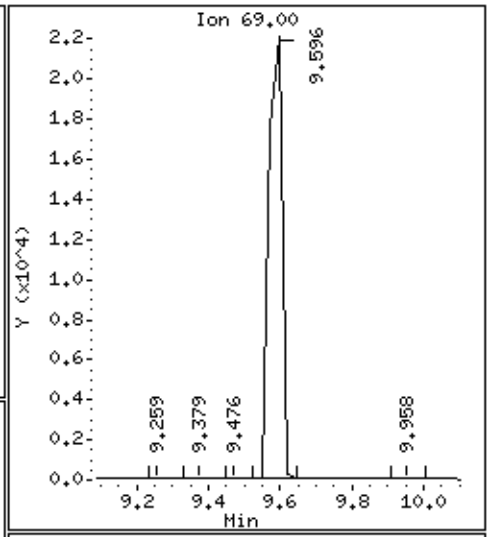
Column phase: DB-5.625

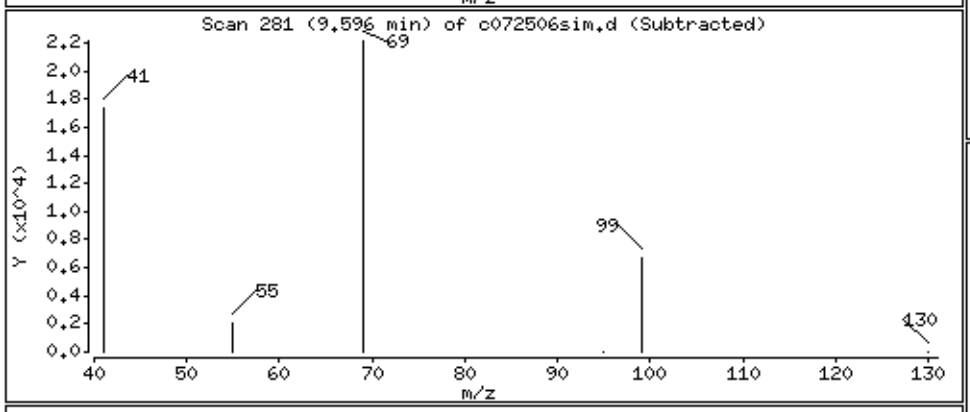
Column diameter: 0.25

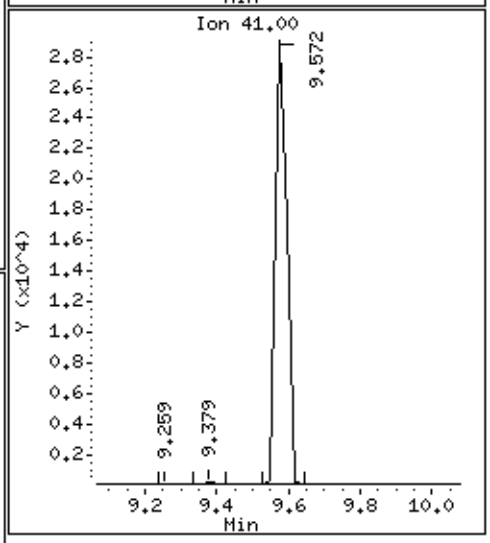
23 Methyl Methacrylate

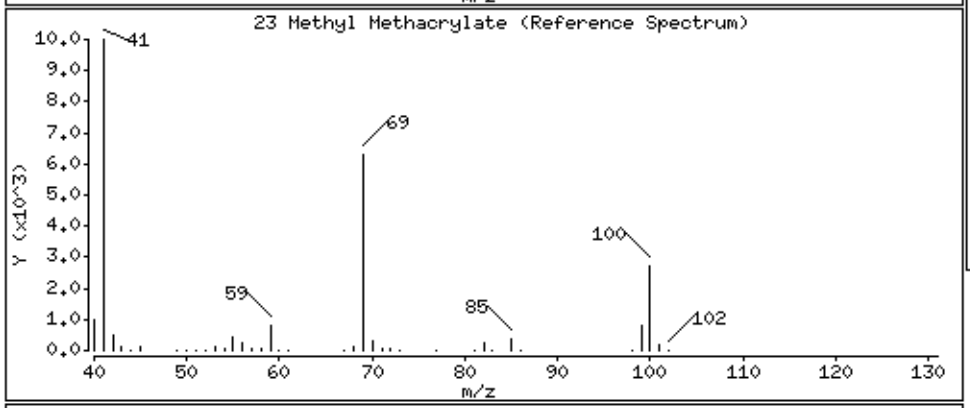
Concentration: 8.37023 ug

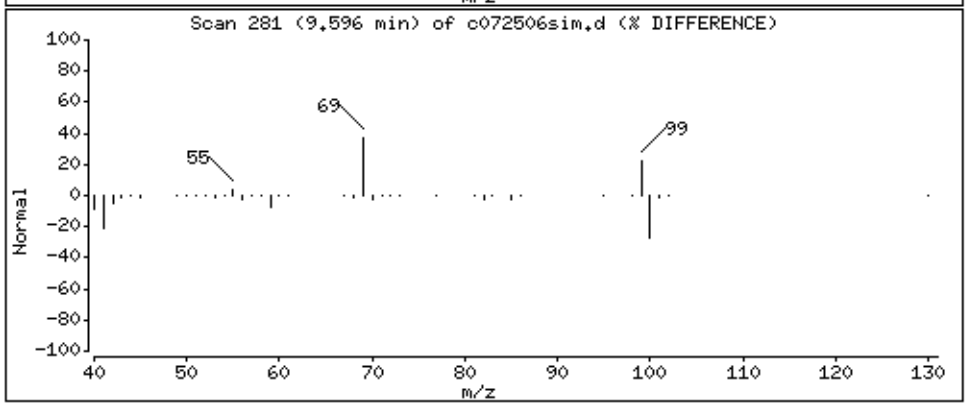












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

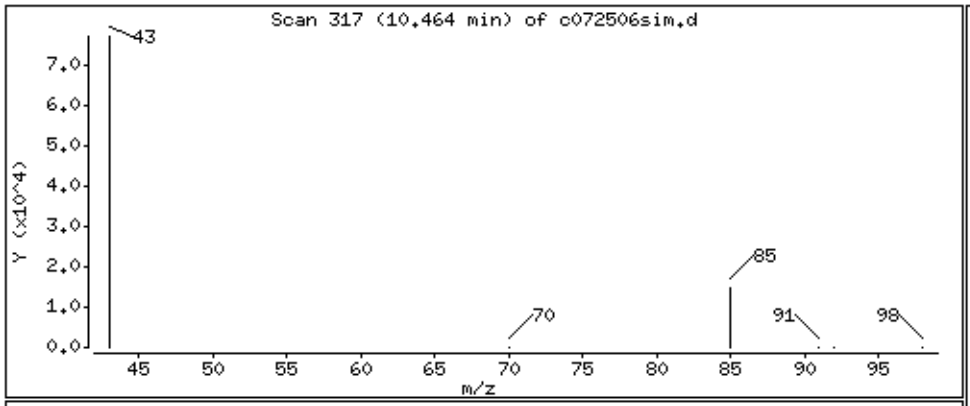
Operator: gm

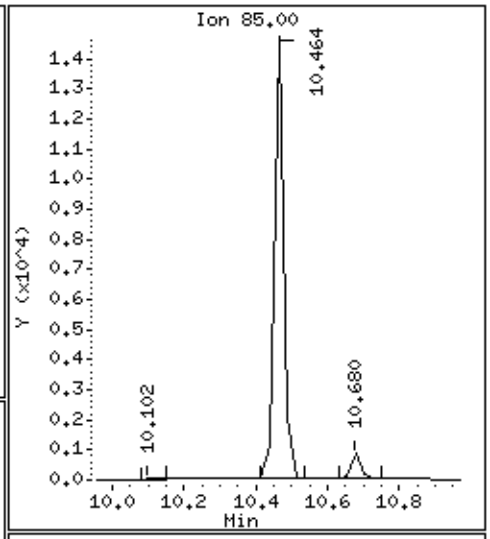
Column phase: DB-5.625

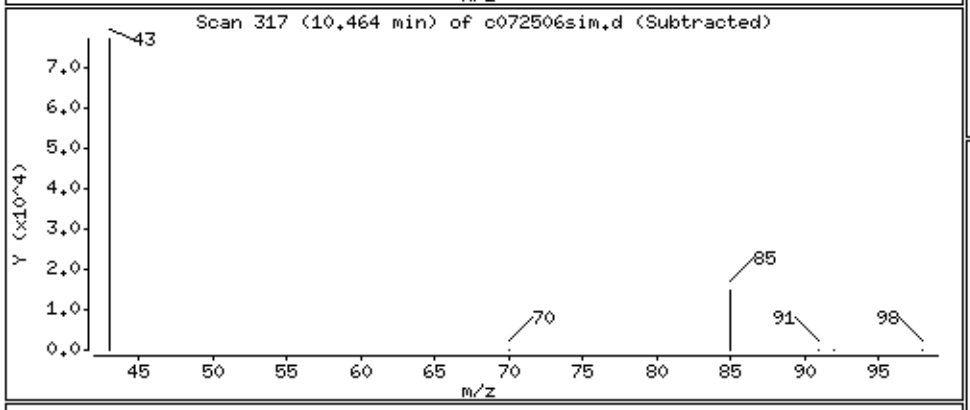
Column diameter: 0.25

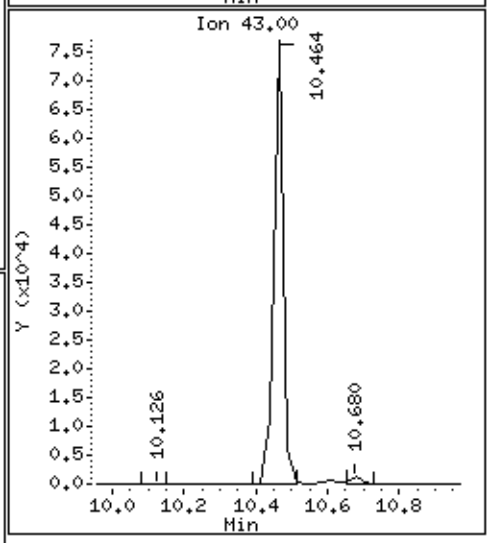
24 4-Methyl-2-pentanone

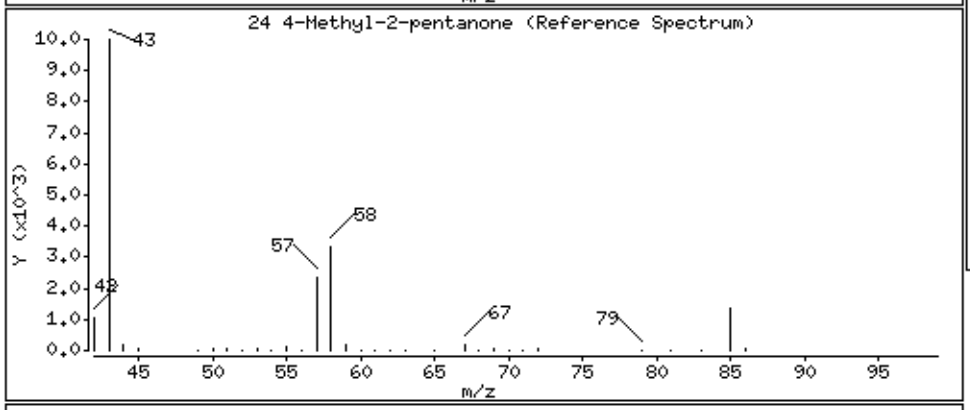
Concentration: 9.46528 ug

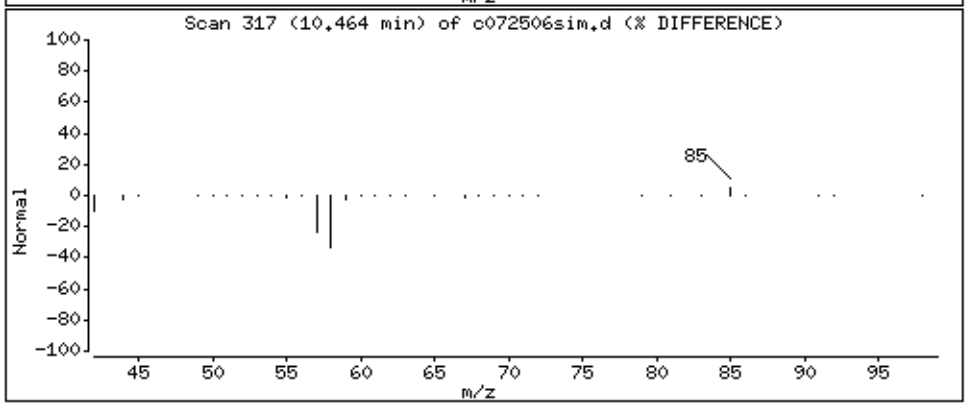












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

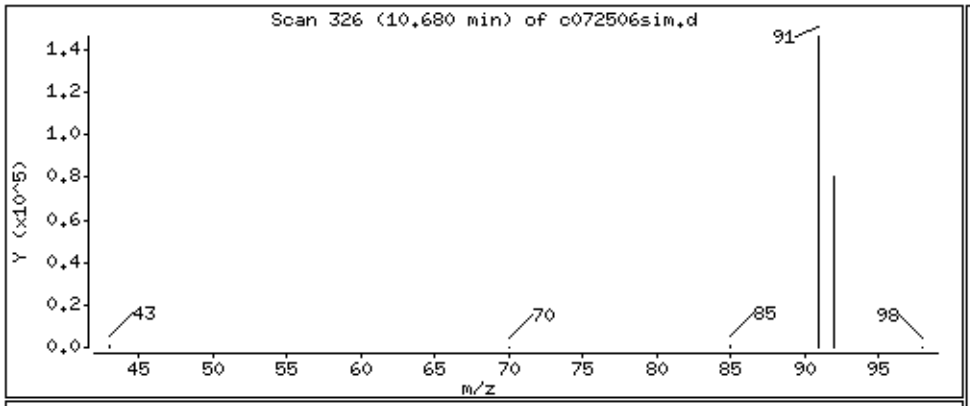
Operator: gm

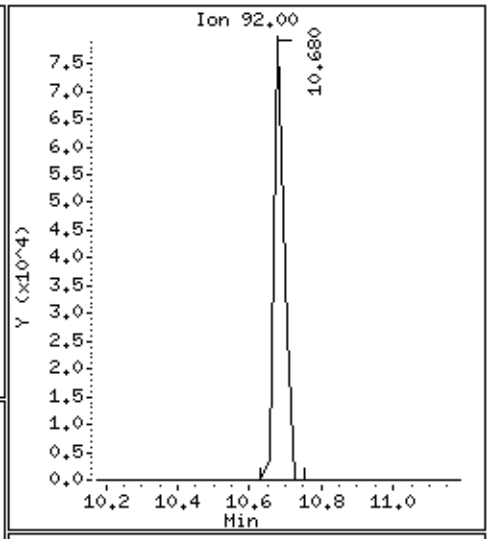
Column phase: DB-5.625

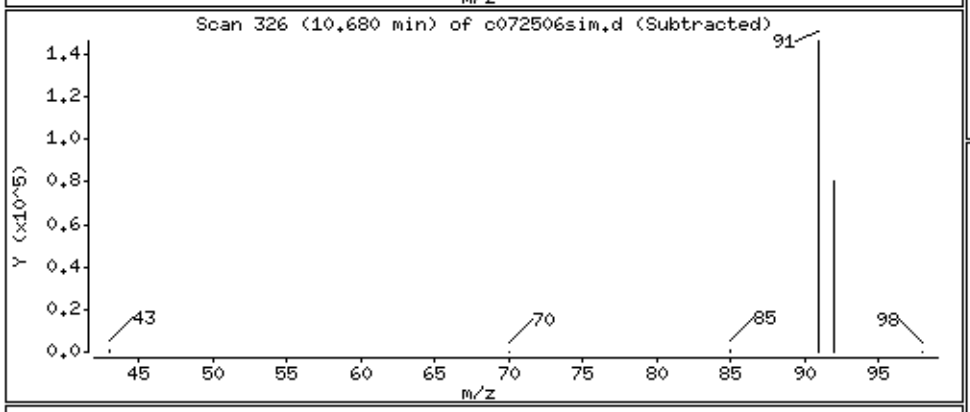
Column diameter: 0.25

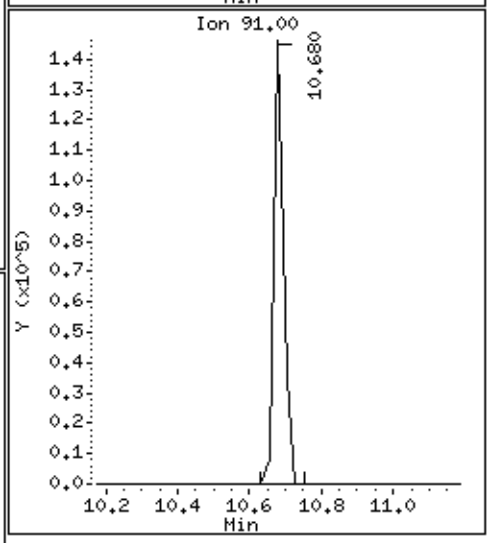
26 Toluene-CCC

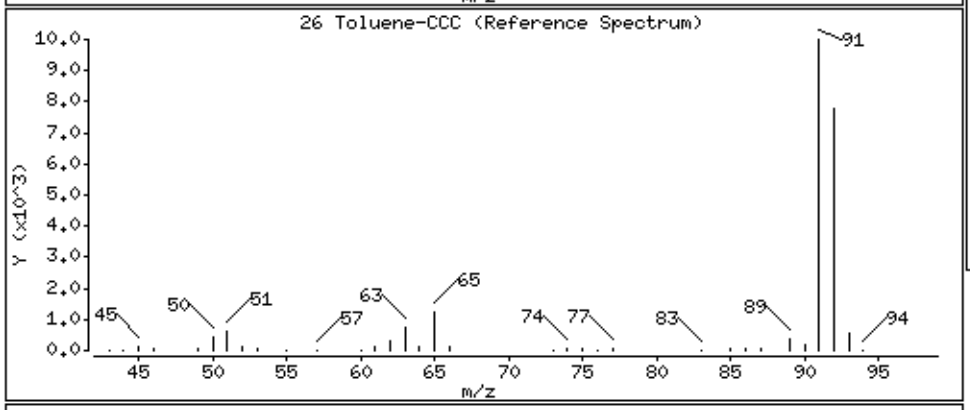
Concentration: 9.48228 ug

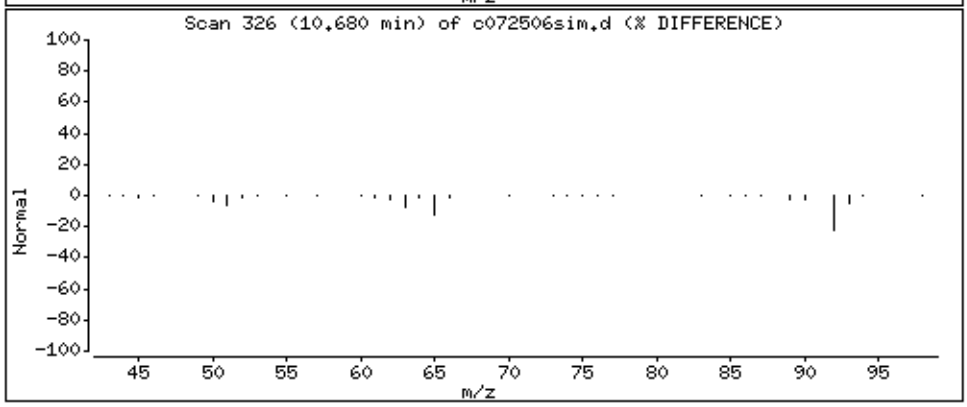












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

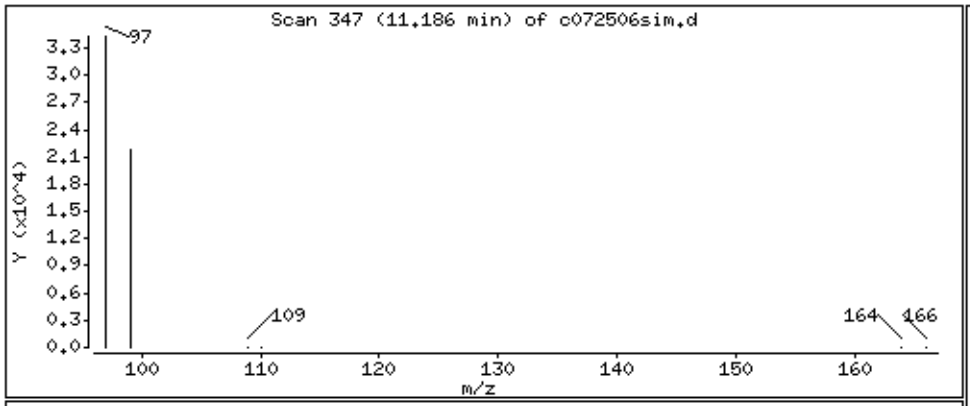
Operator: gm

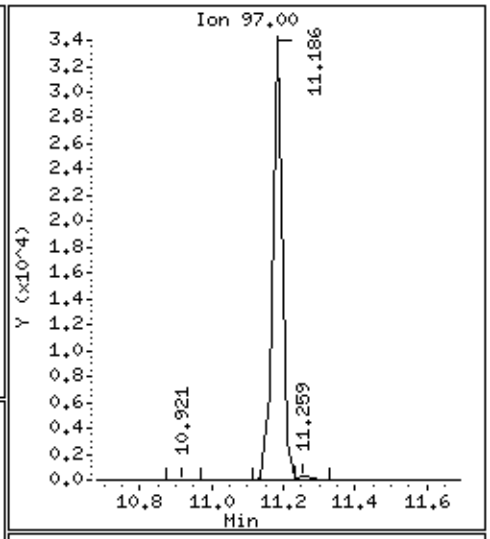
Column phase: DB-5.625

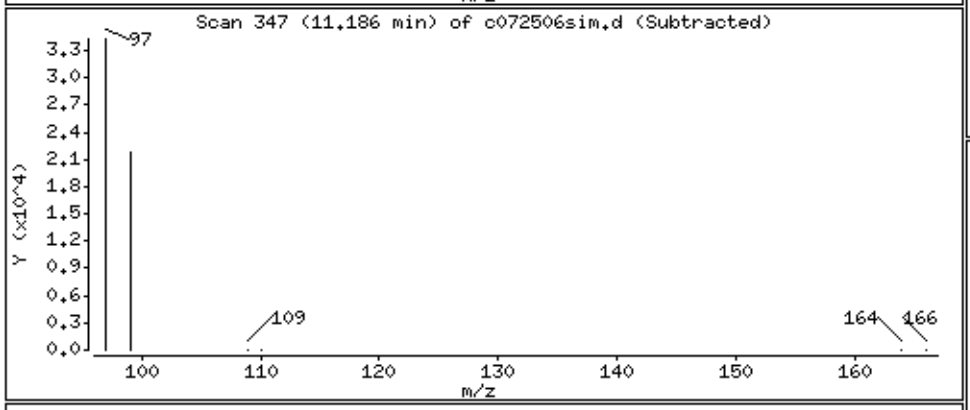
Column diameter: 0.25

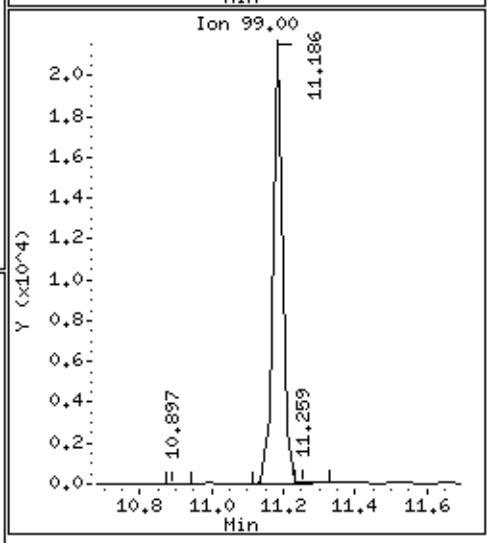
28 1,1,2-Trichloroethane

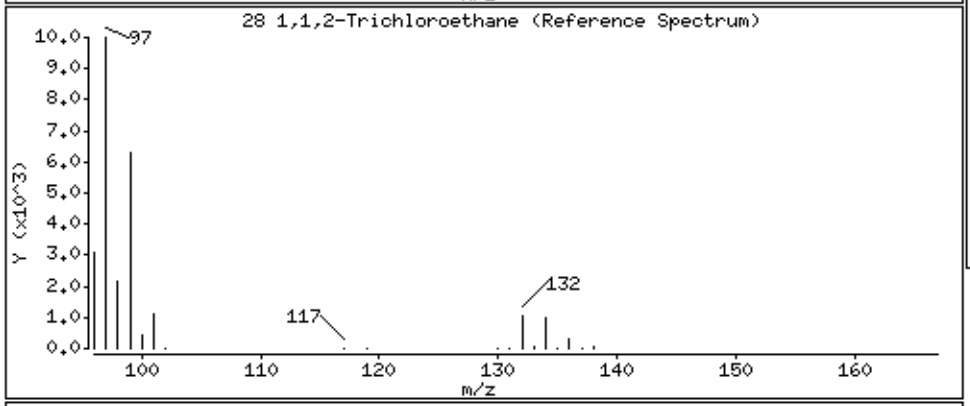
Concentration: 9.47671 ug

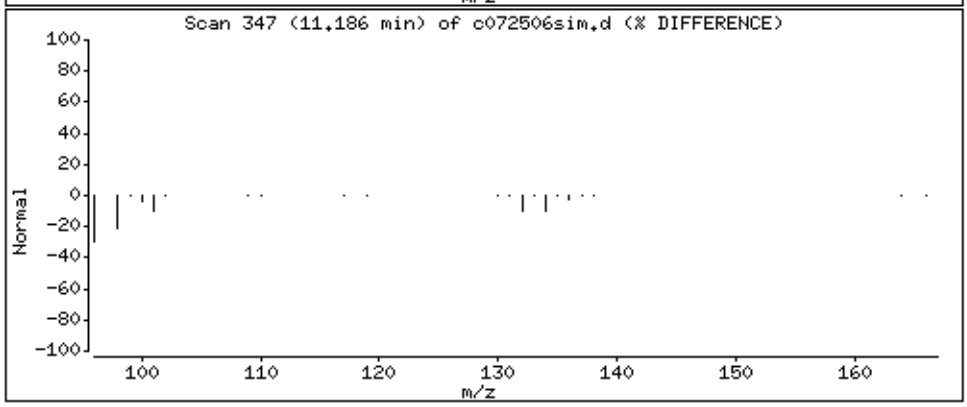












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

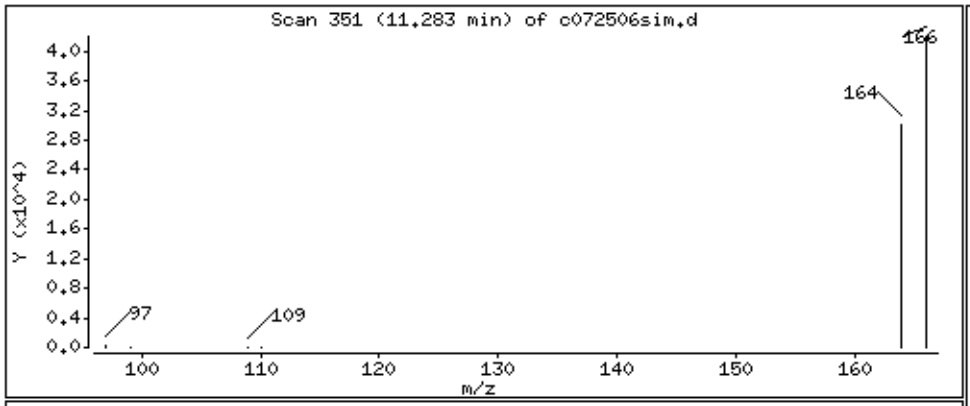
Operator: gm

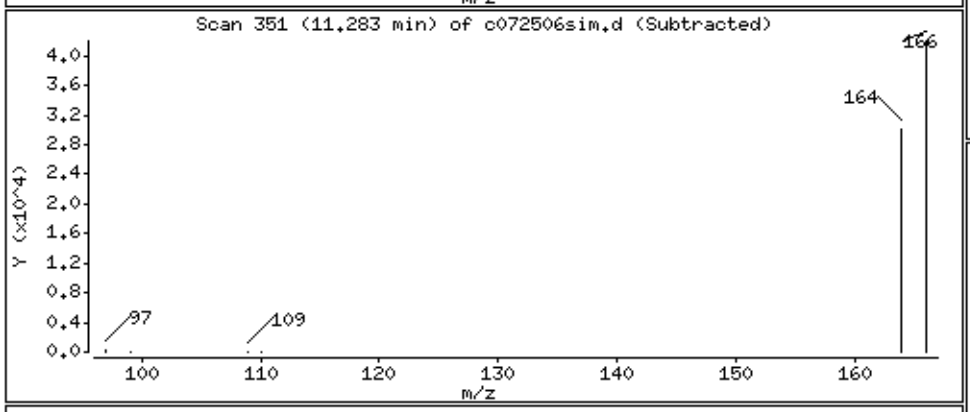
Column phase: DB-5.625

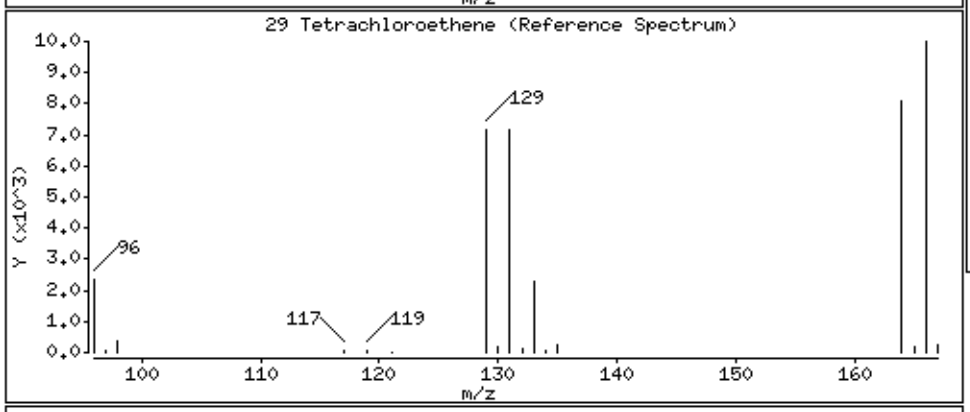
Column diameter: 0.25

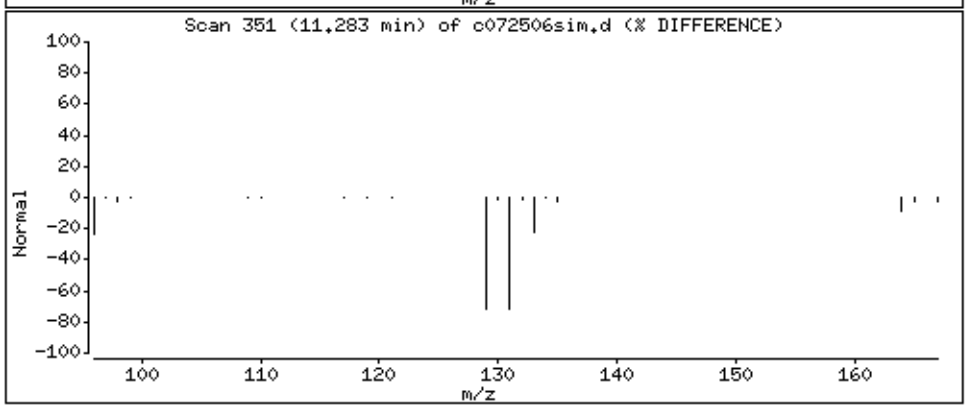
29 Tetrachloroethene

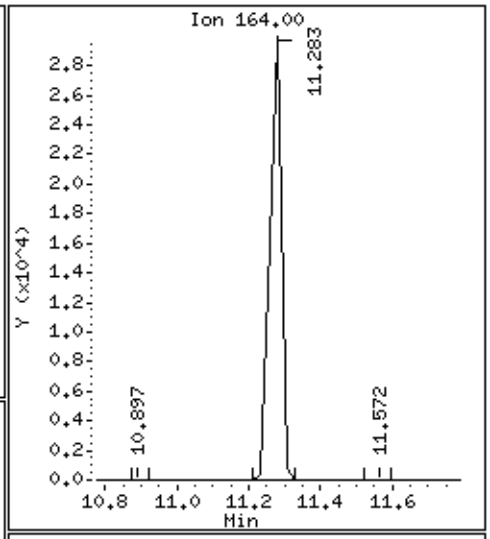
Concentration: 9.74429 ug

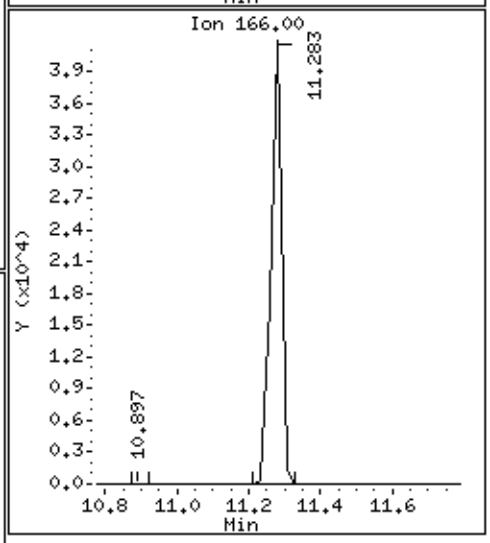












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

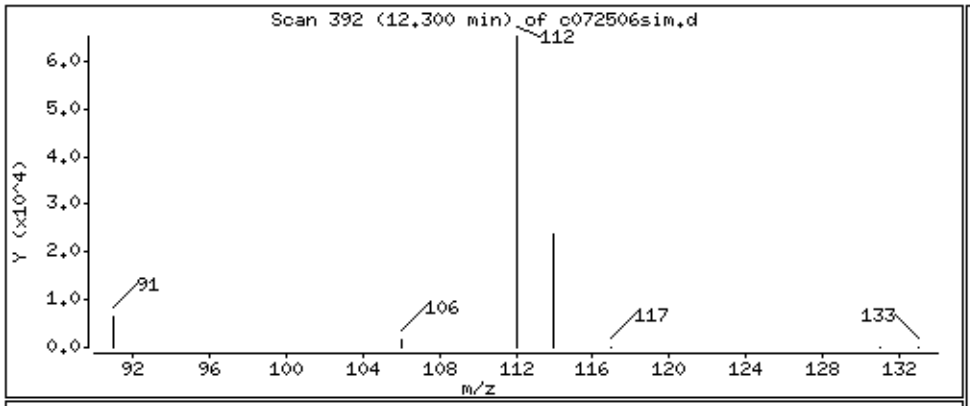
Operator: gm

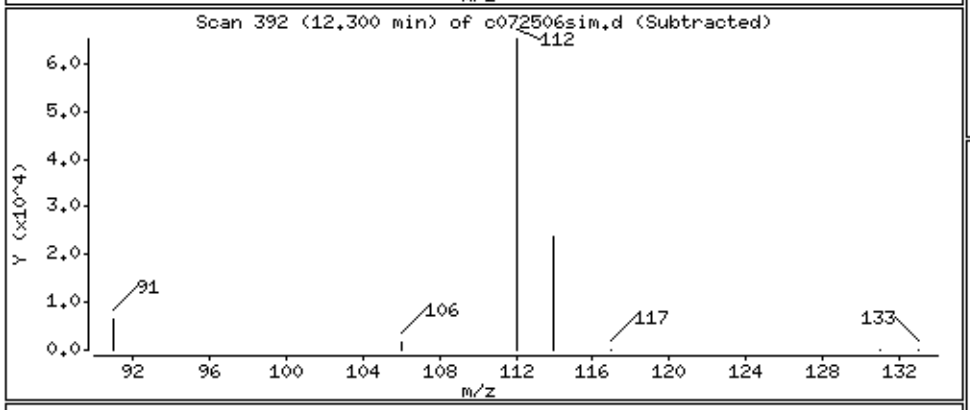
Column phase: DB-5.625

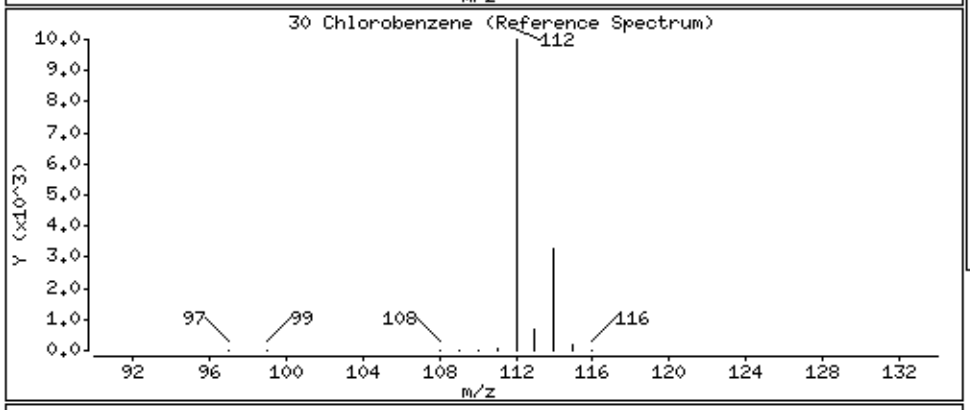
Column diameter: 0.25

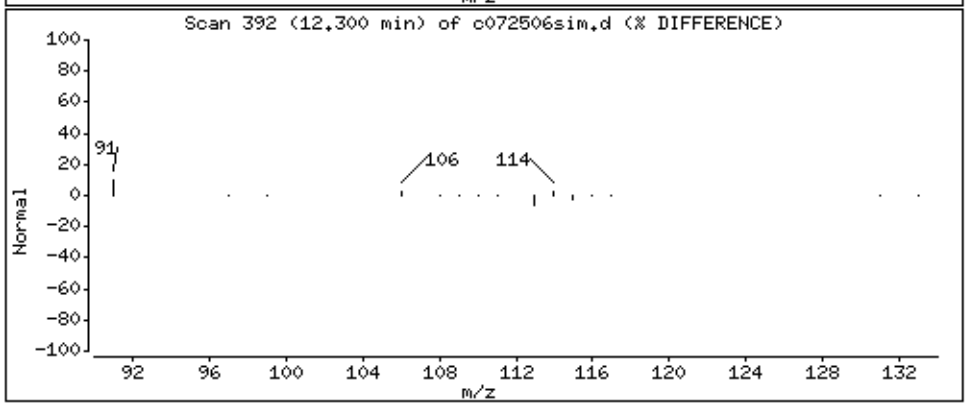
30 Chlorobenzene

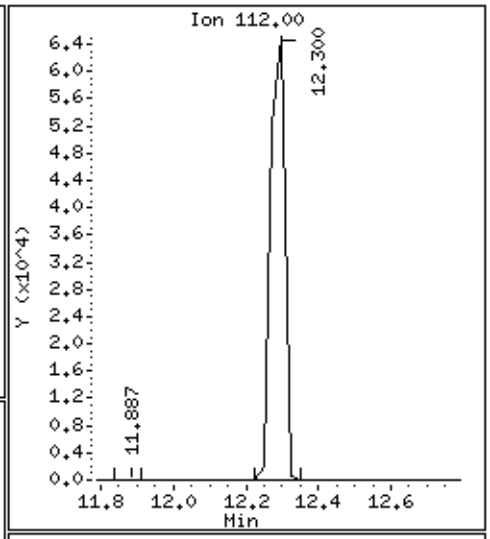
Concentration: 8.69361 ug

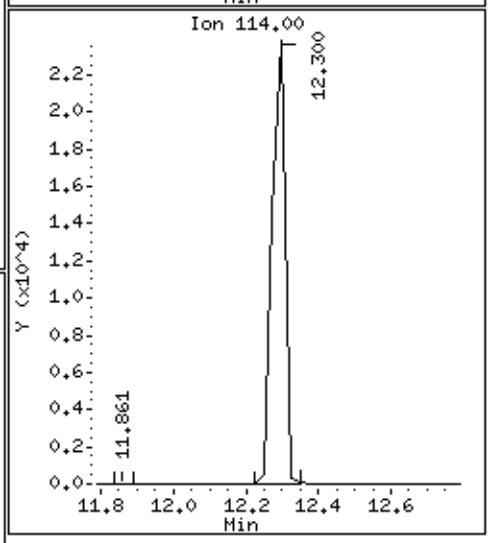












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

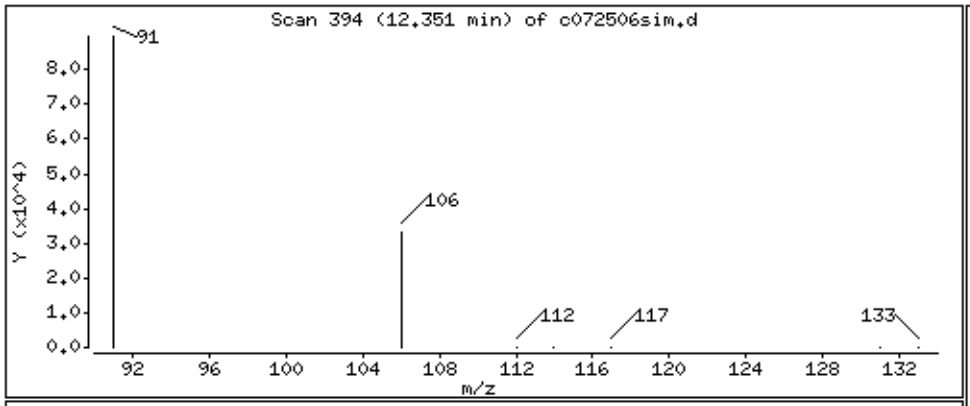
Operator: gm

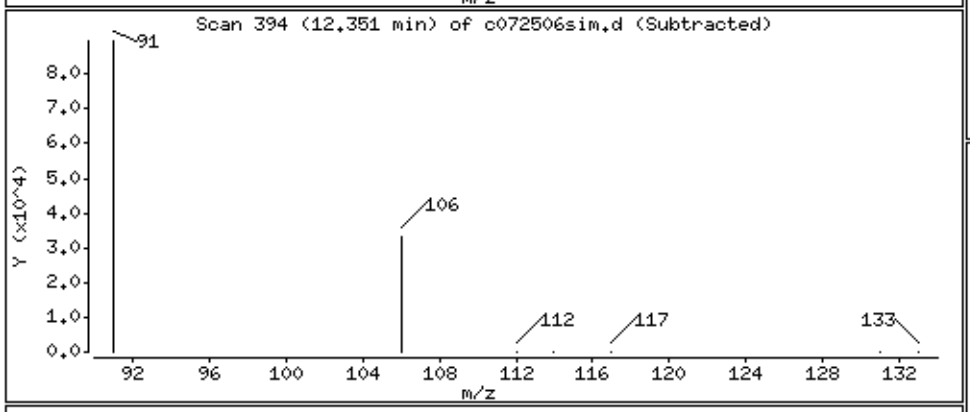
Column phase: DB-5.625

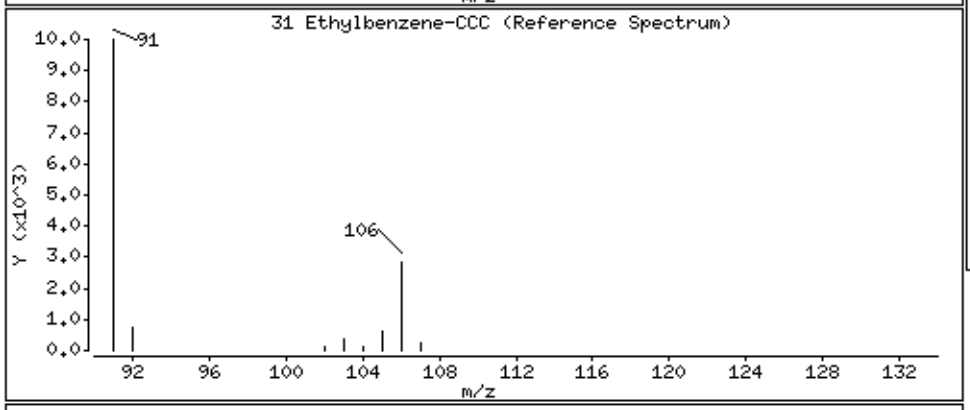
Column diameter: 0.25

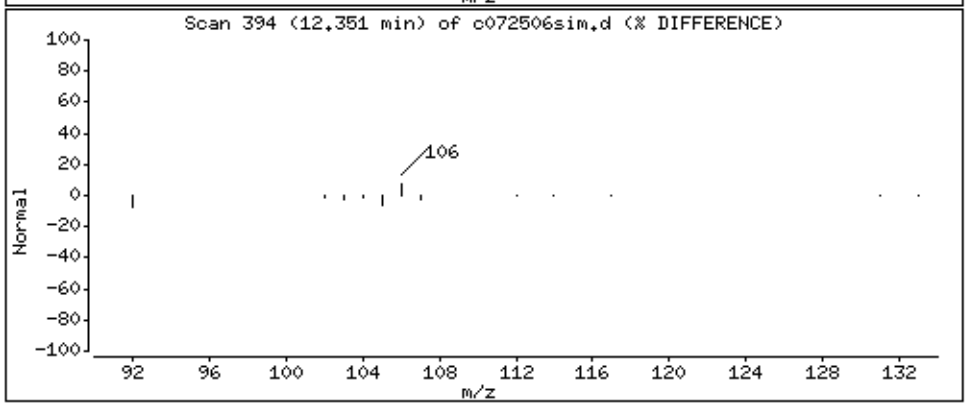
31 Ethylbenzene-CCC

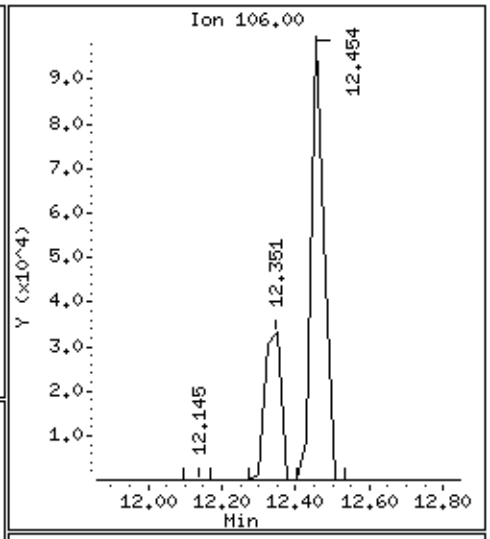
Concentration: 9.37668 ug

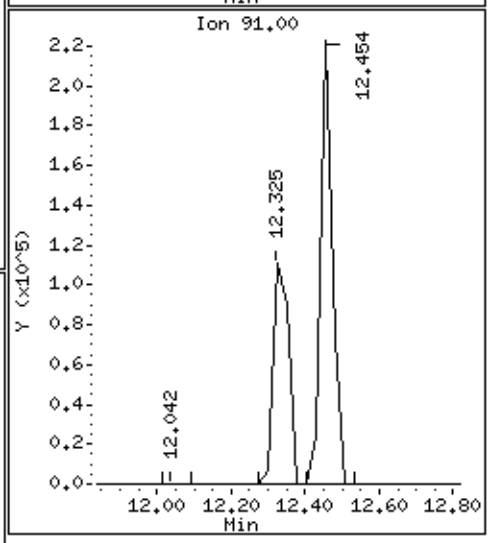












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

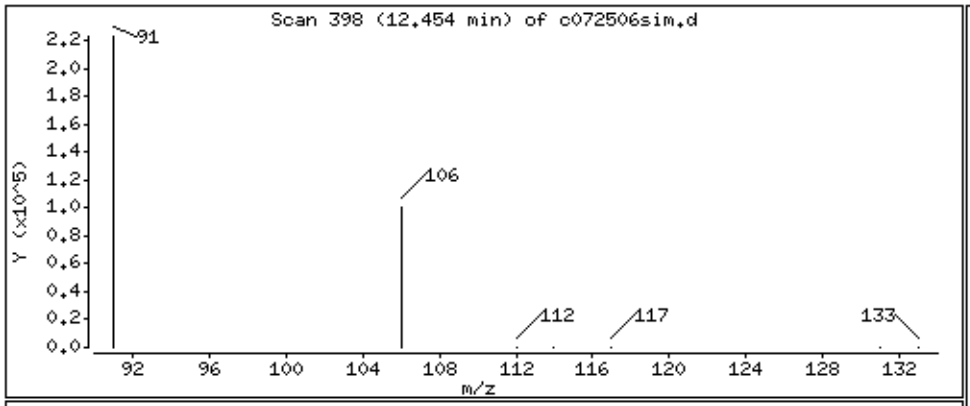
Operator: gm

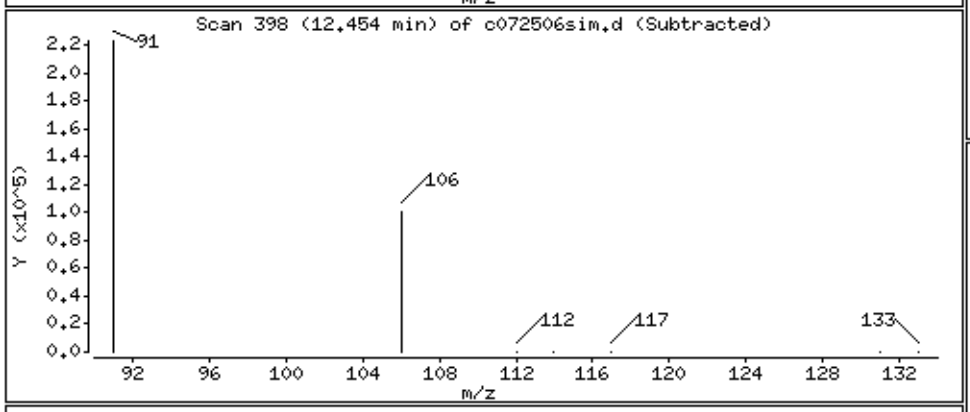
Column phase: DB-5.625

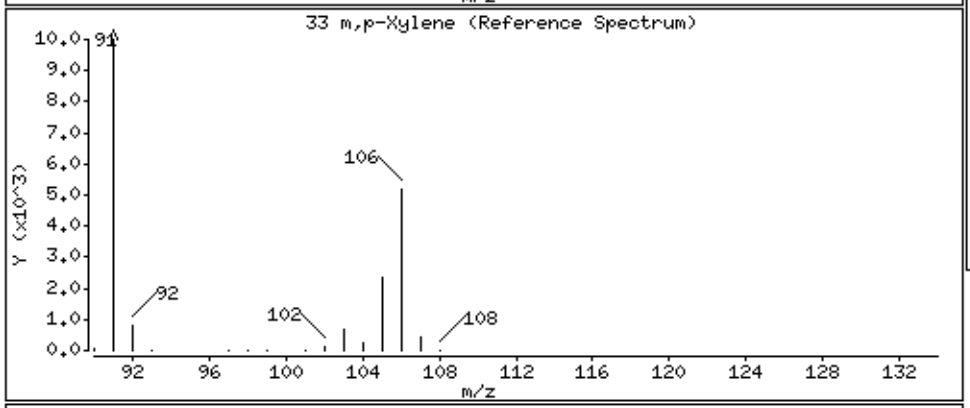
Column diameter: 0.25

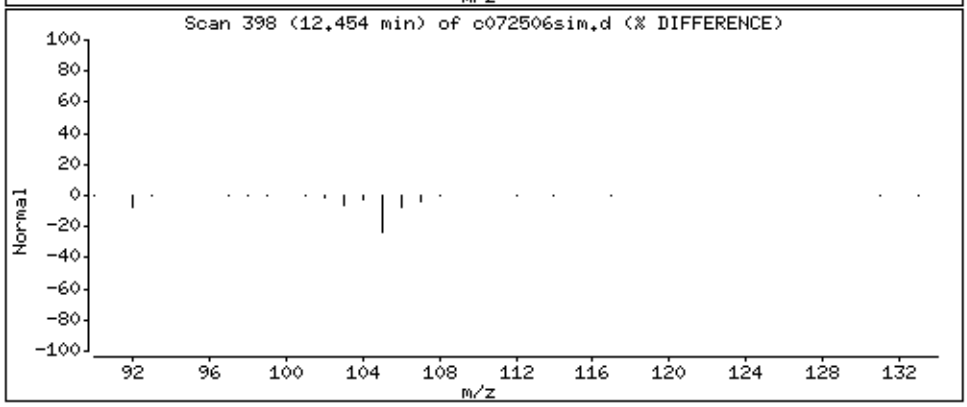
33 m,p-Xylene

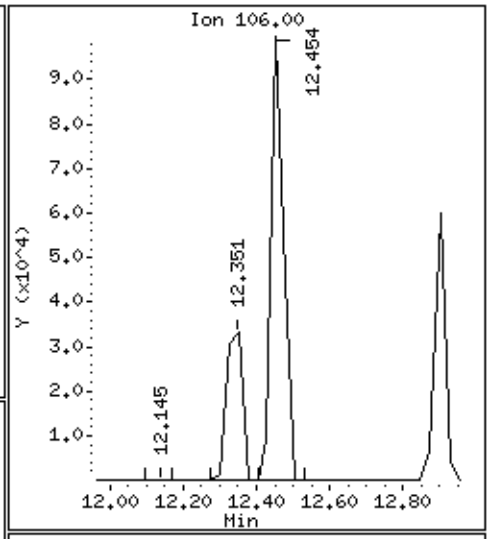
Concentration: 18.8349 ug

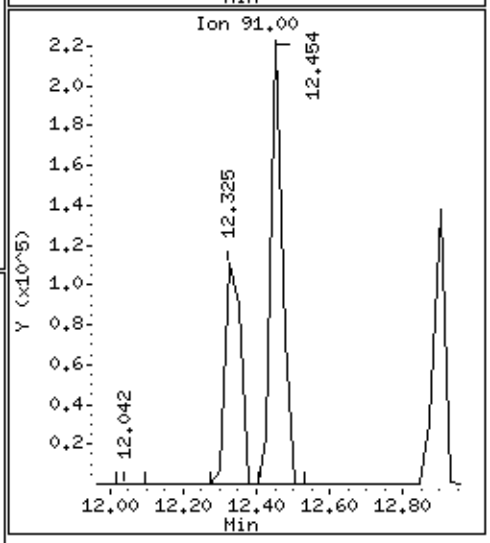












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

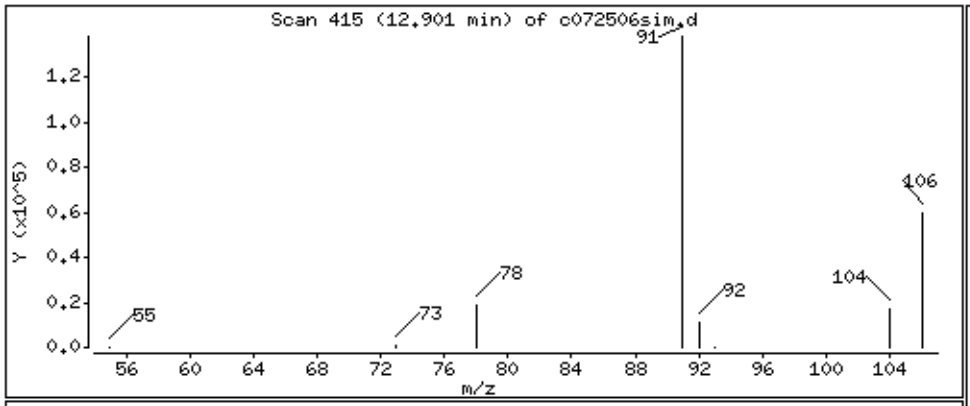
Operator: gm

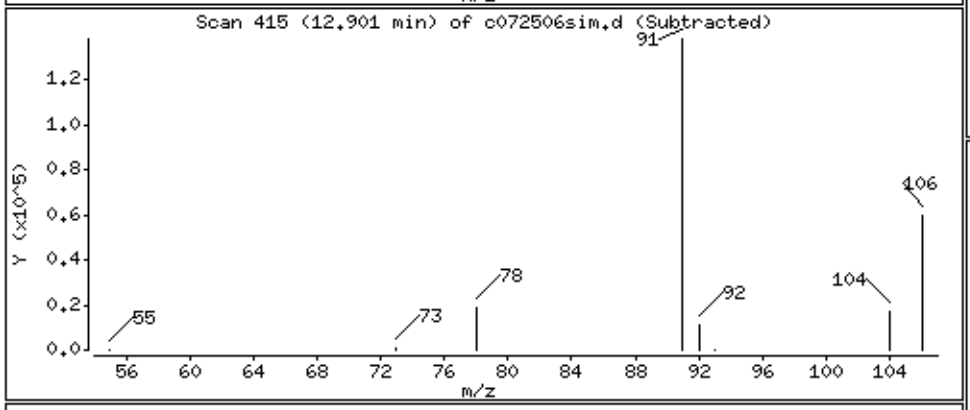
Column phase: DB-5.625

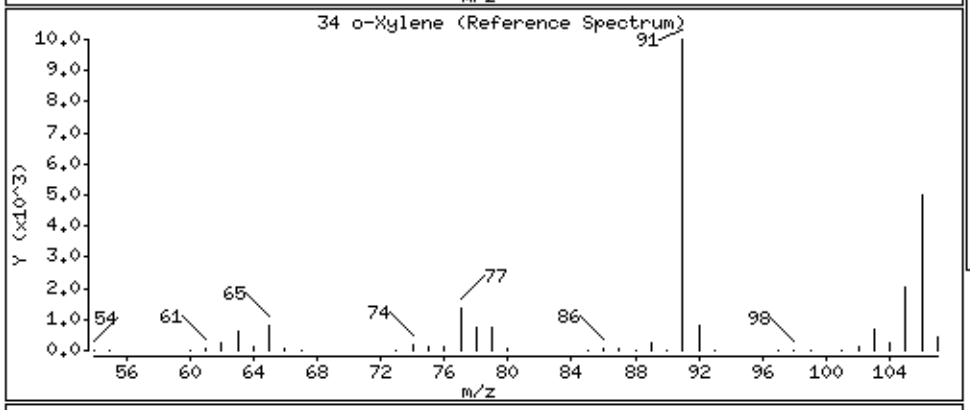
Column diameter: 0.25

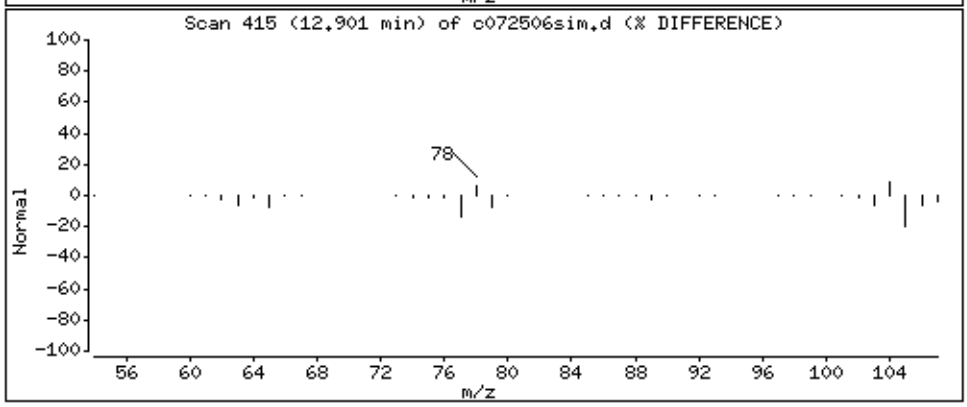
34 o-Xylene

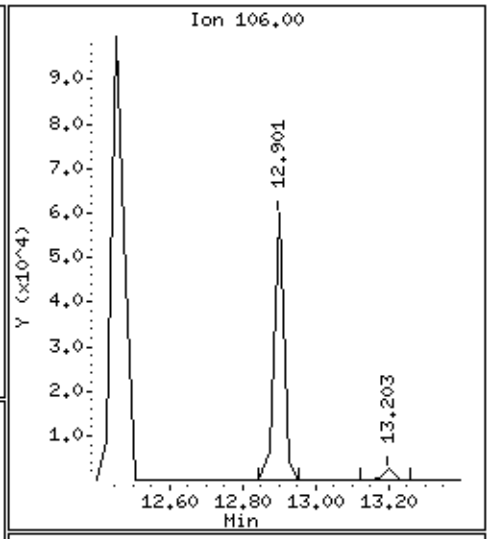
Concentration: 9.80257 ug

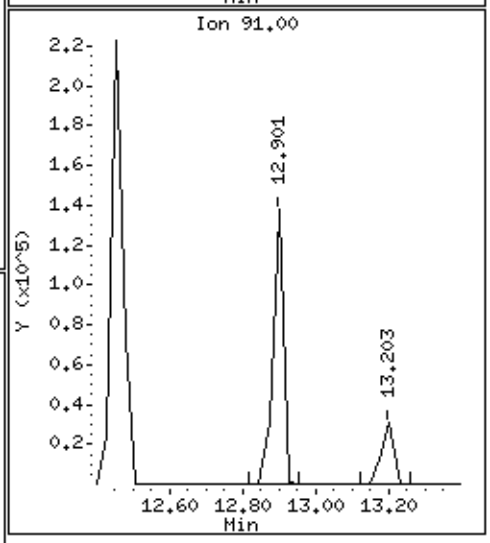












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

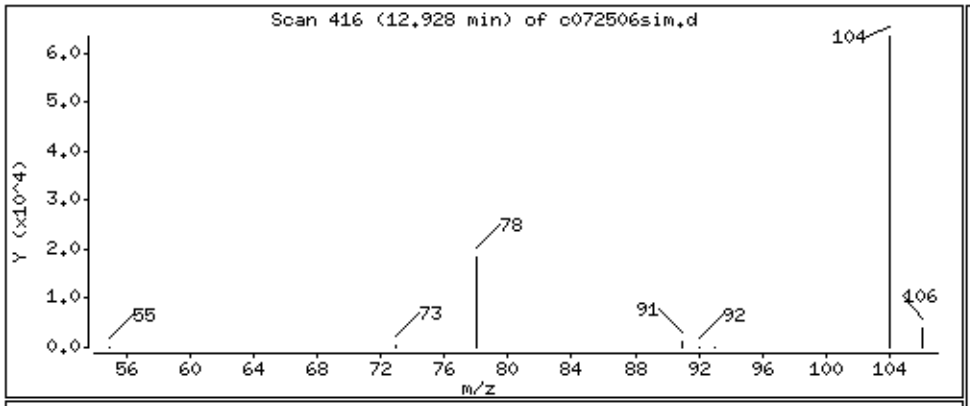
Operator: gm

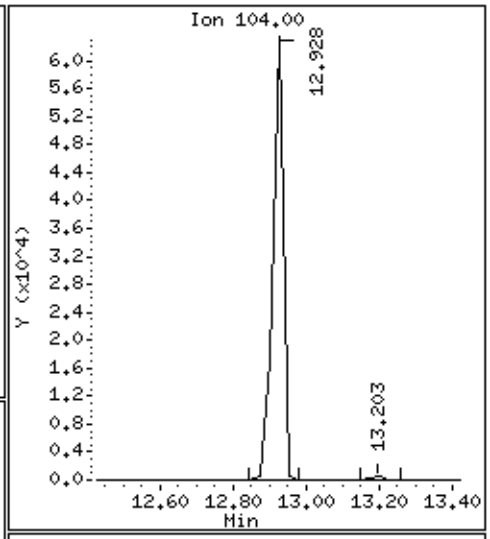
Column phase: DB-5.625

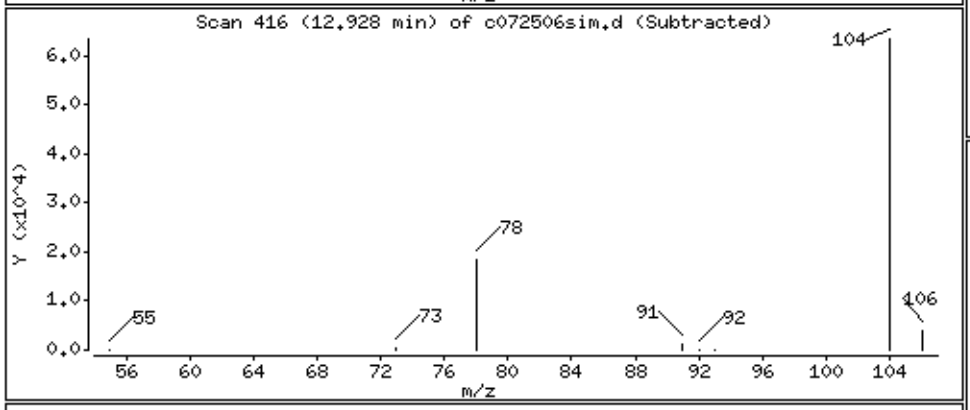
Column diameter: 0.25

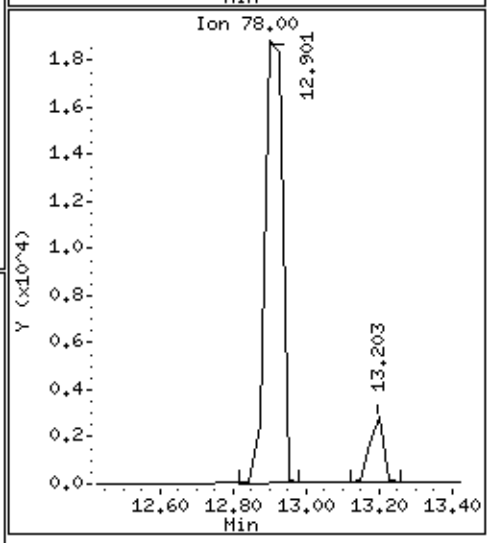
35 Styrene

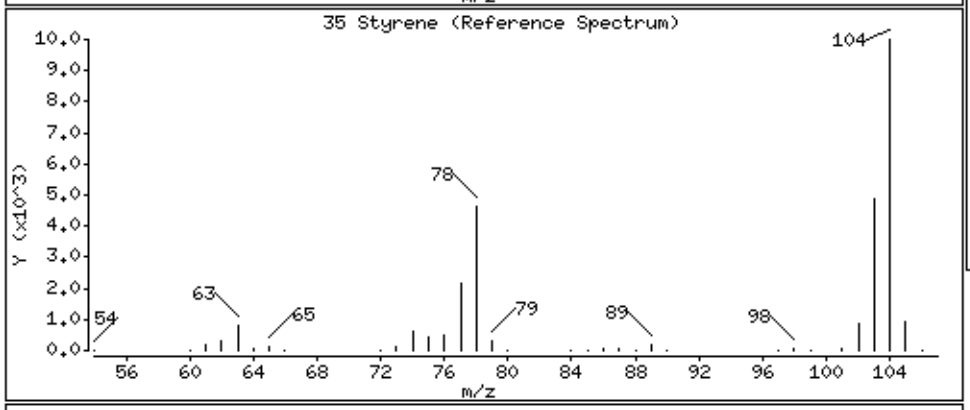
Concentration: 5.59337 ug

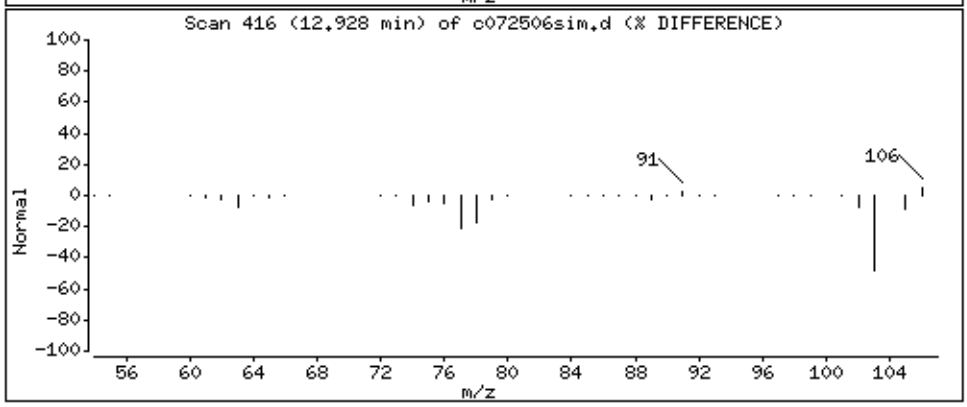












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

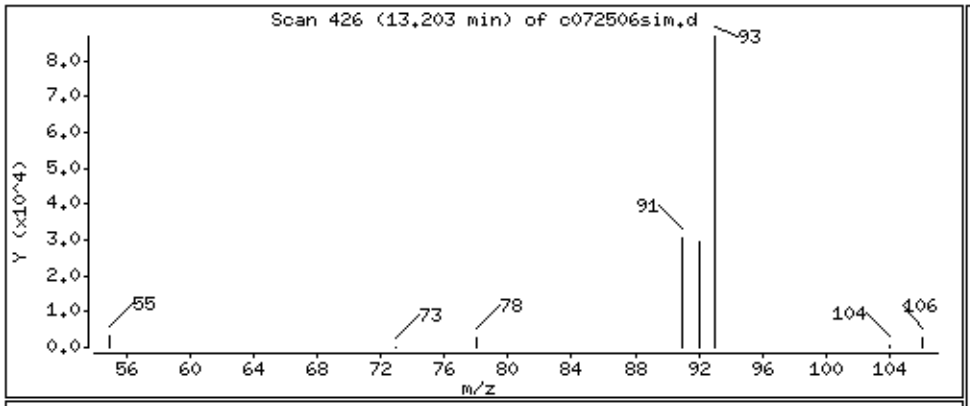
Operator: gm

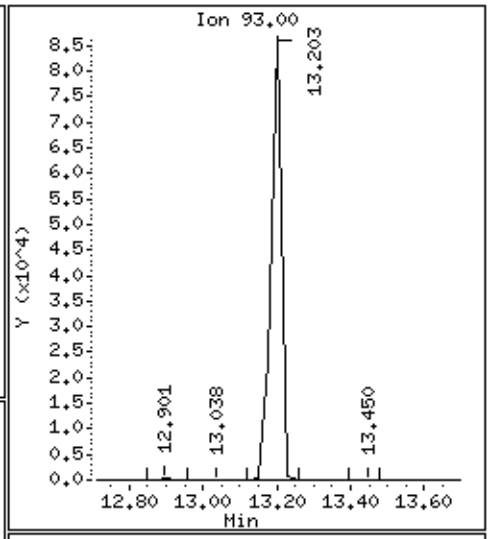
Column phase: DB-5.625

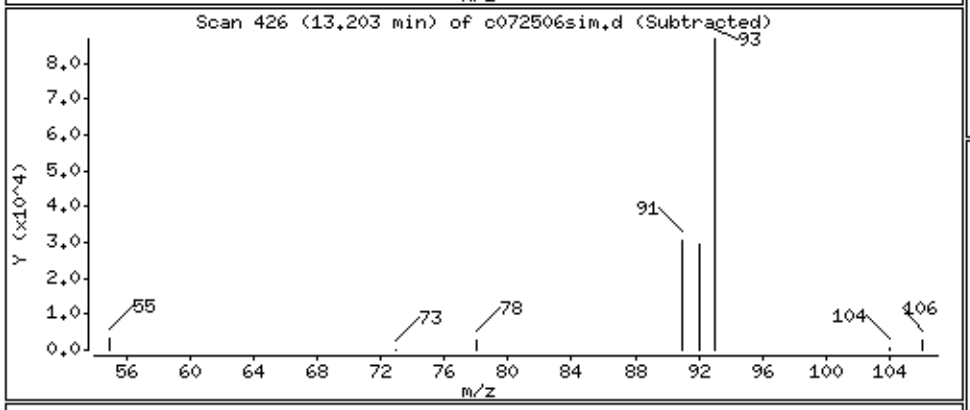
Column diameter: 0.25

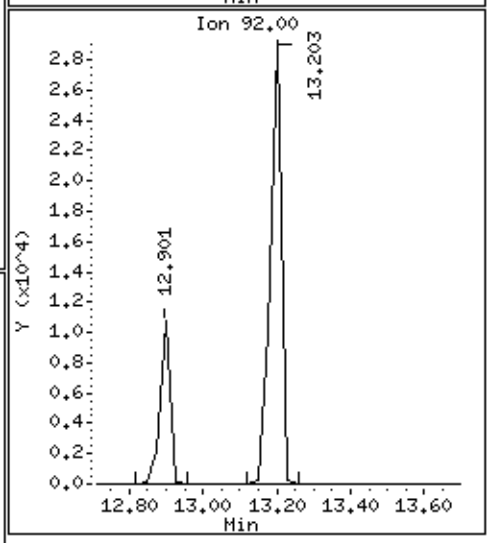
36 a-Pinene

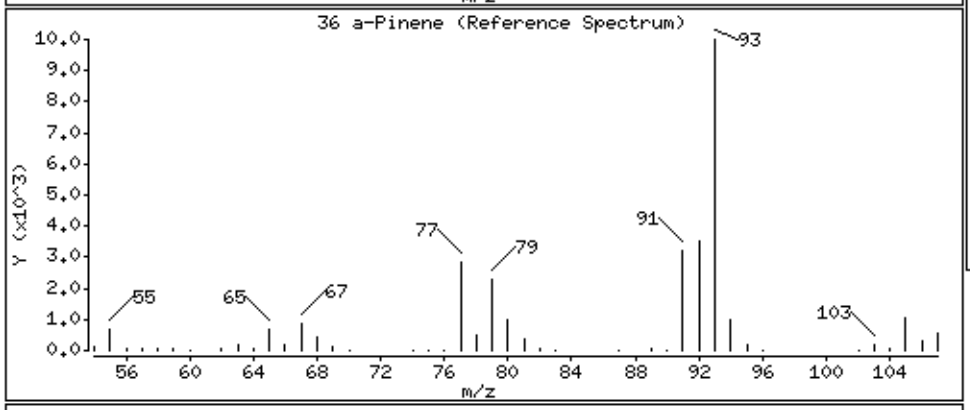
Concentration: 11.8036 ug

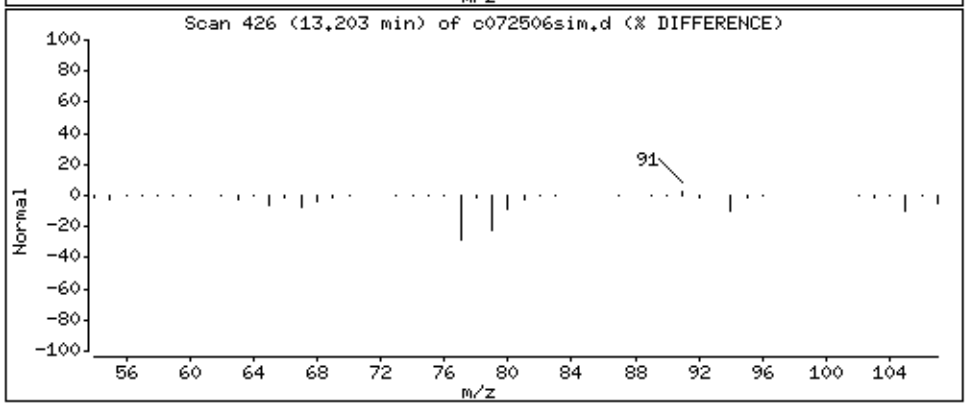












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

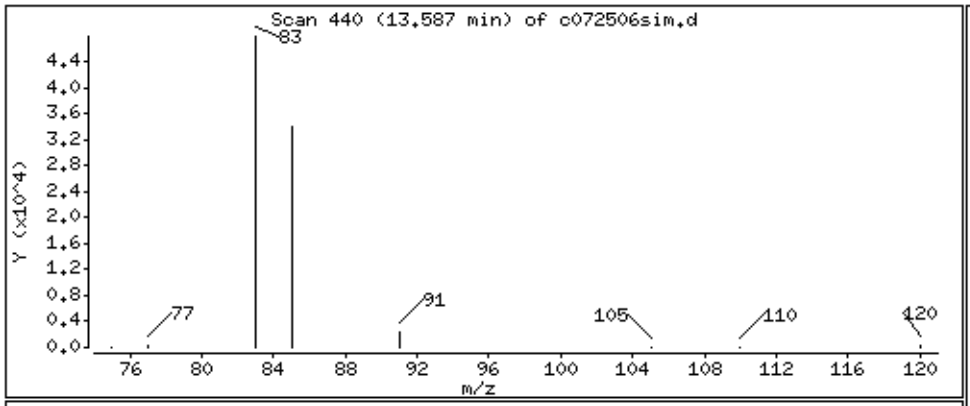
Operator: gm

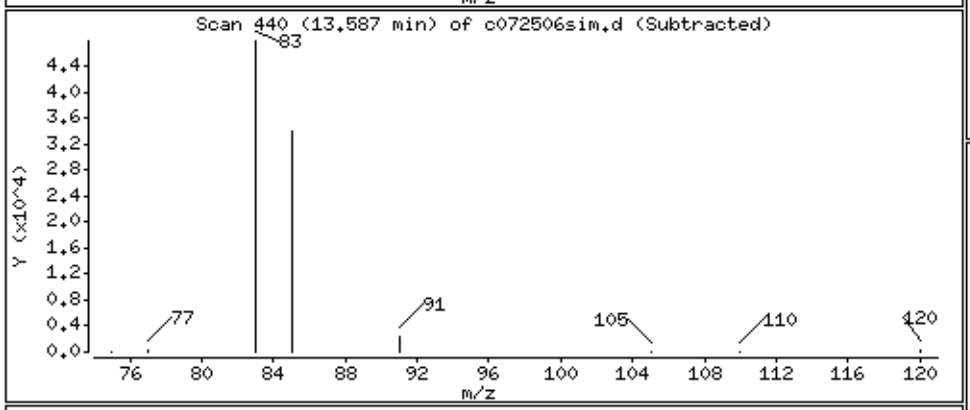
Column phase: DB-5.625

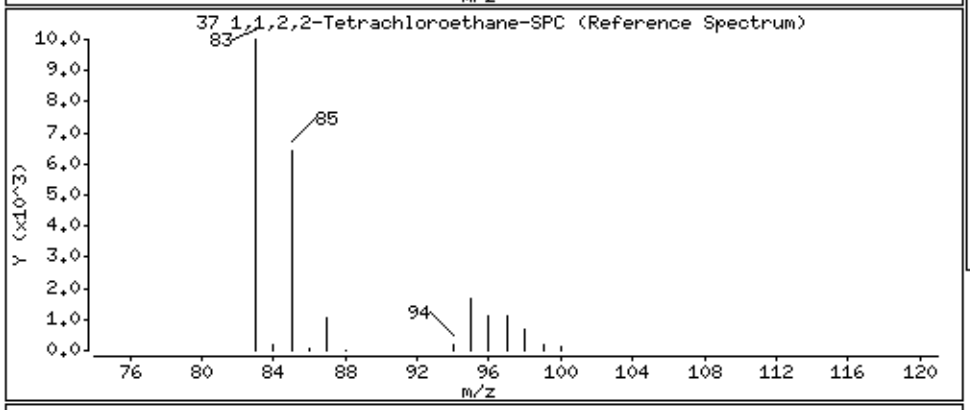
Column diameter: 0.25

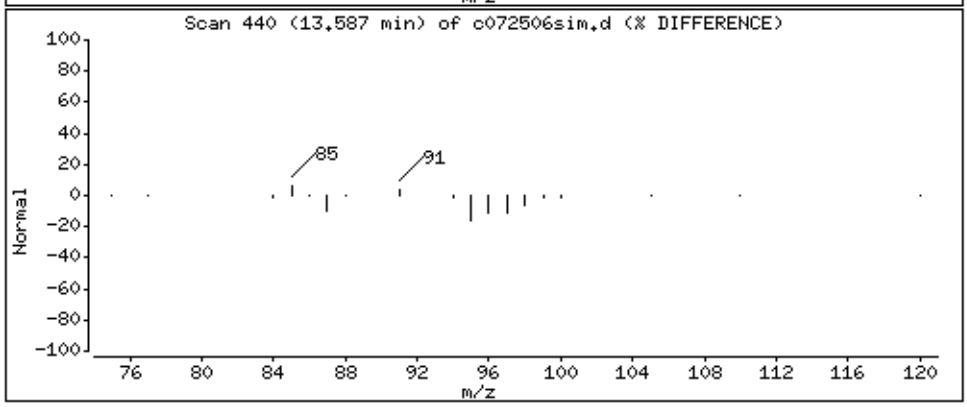
37 1,1,2,2-Tetrachloroethane-SPC

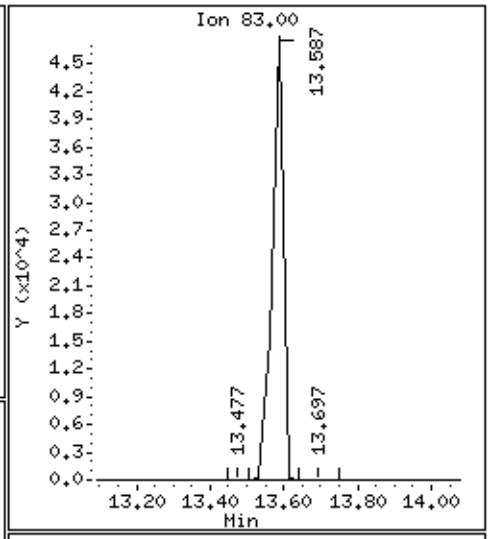
Concentration: 7.63158 ug

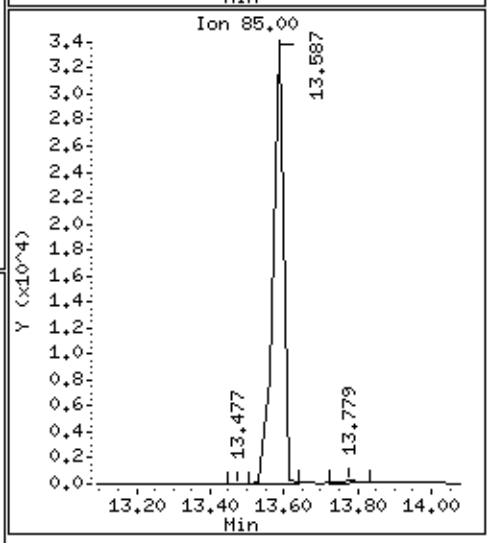












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

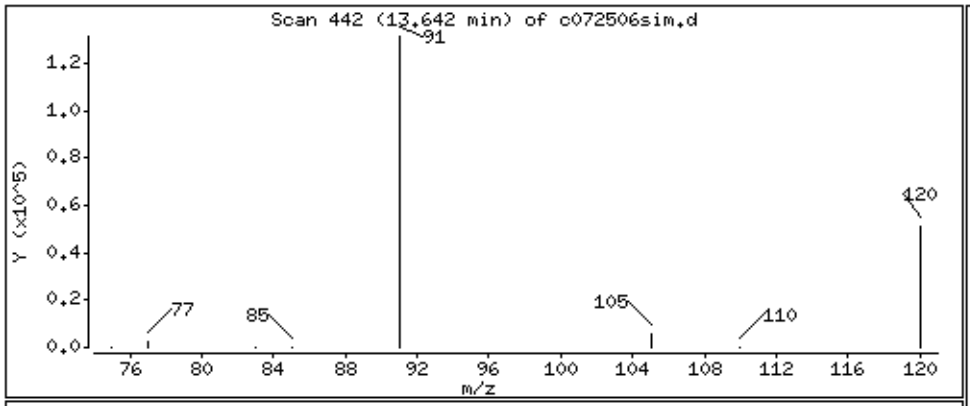
Operator: gm

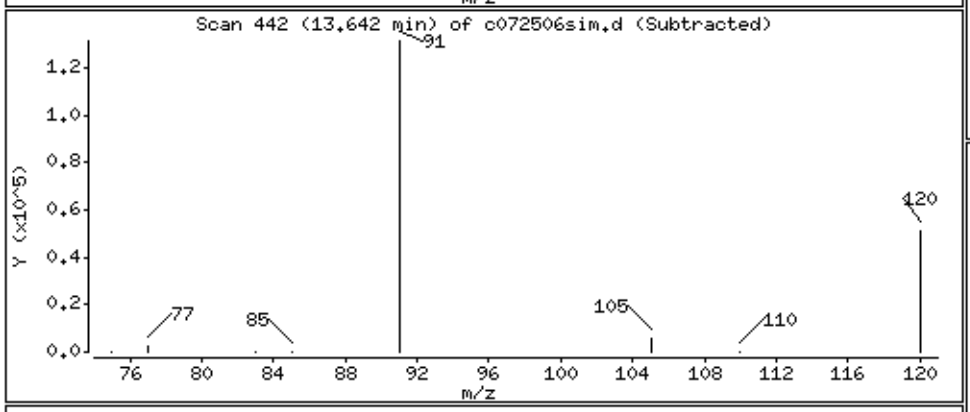
Column phase: DB-5.625

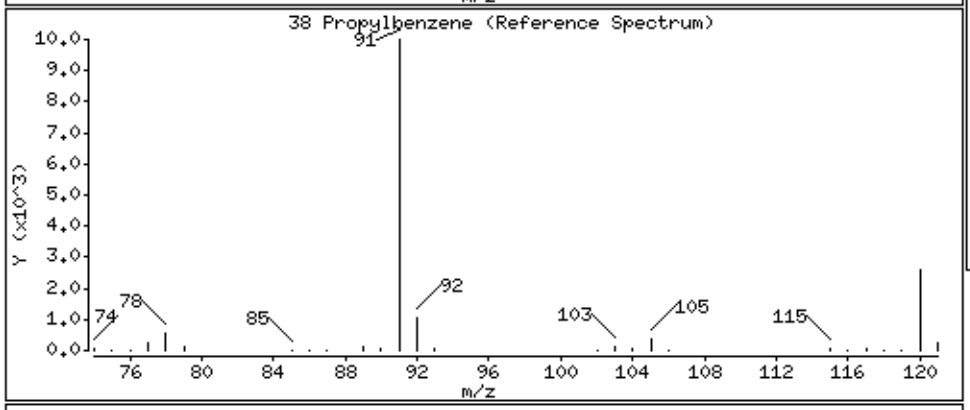
Column diameter: 0.25

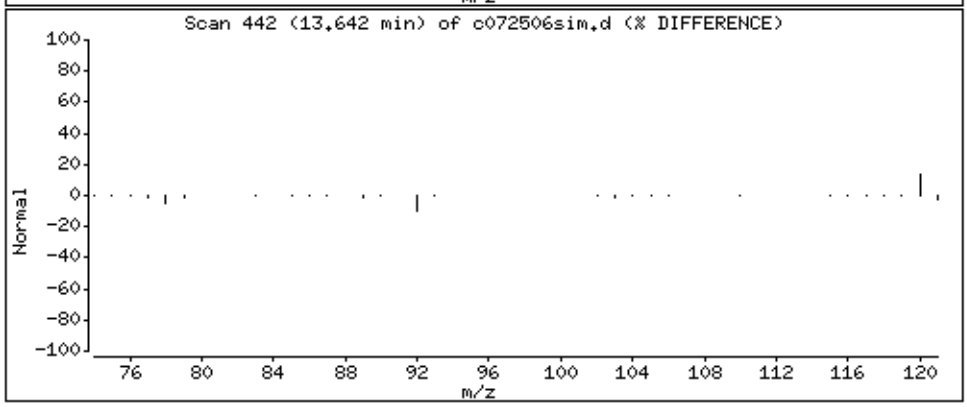
38 Propylbenzene

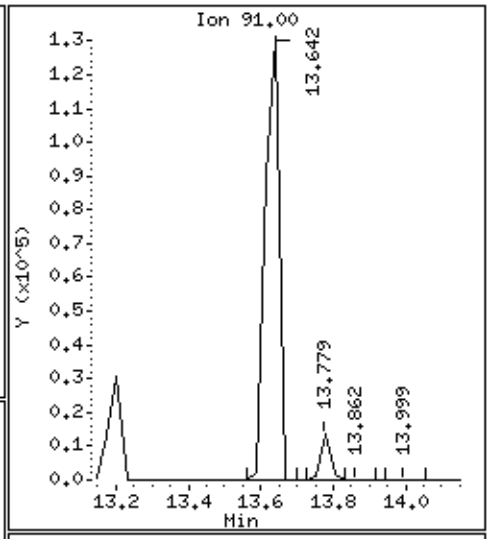
Concentration: 8.24550 ug

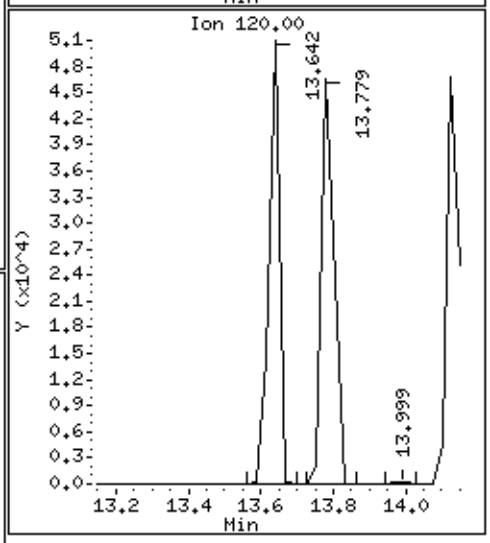












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

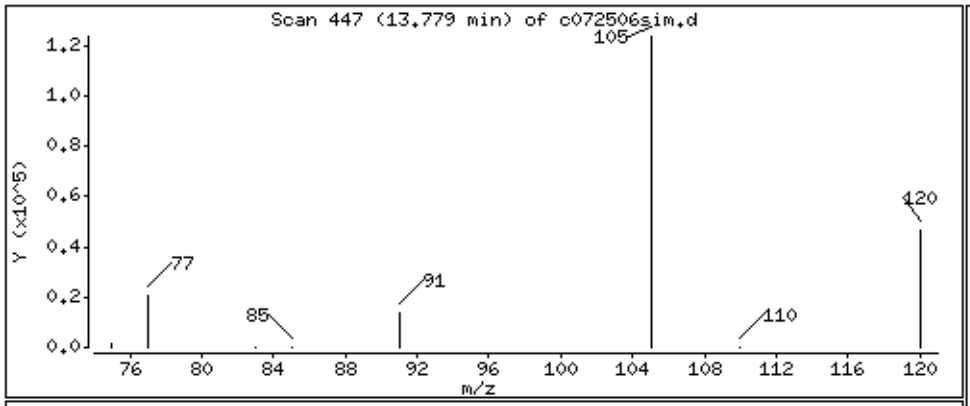
Operator: gm

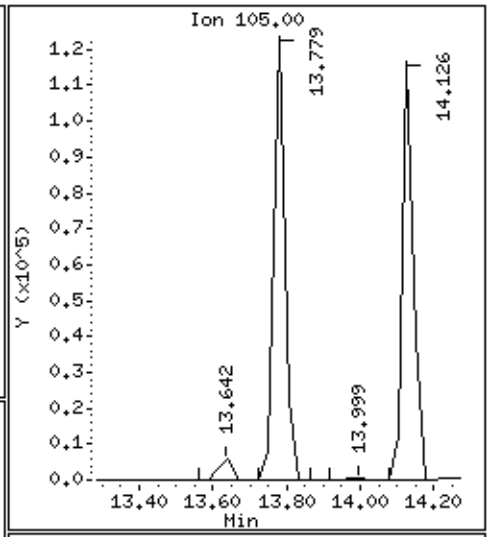
Column phase: DB-5.625

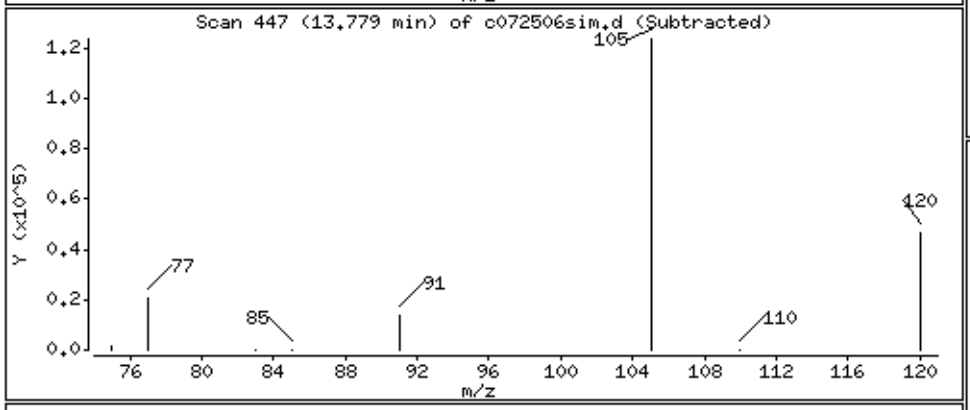
Column diameter: 0.25

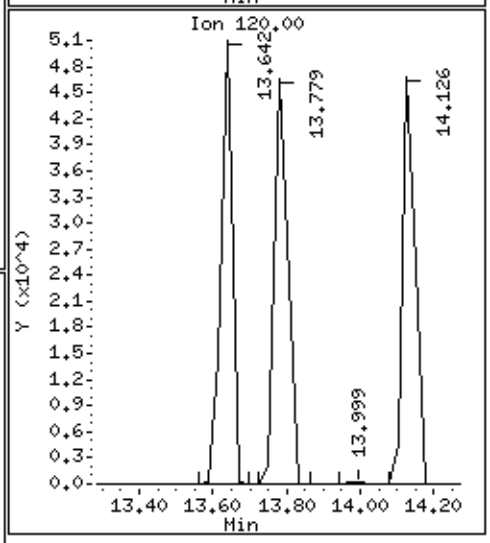
40 1,3,5-Trimethylbenzene

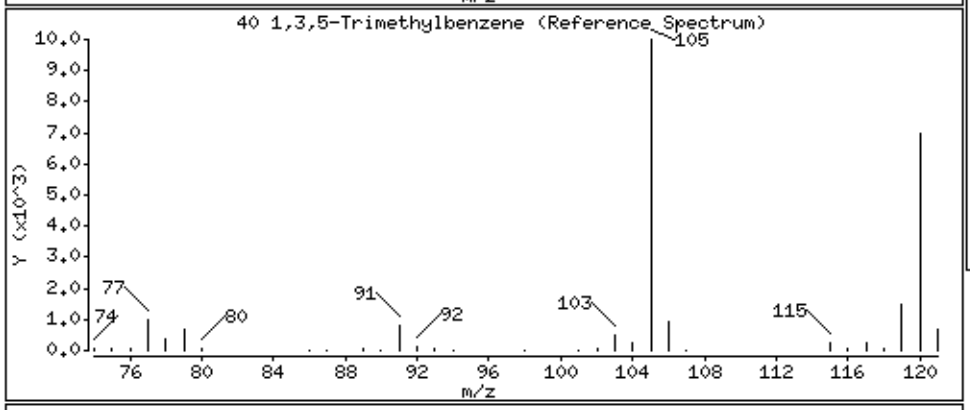
Concentration: 10.6755 ug

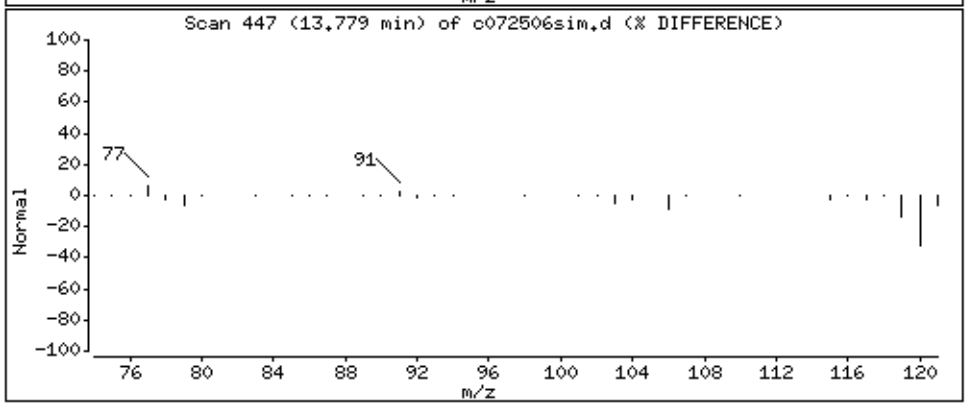












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

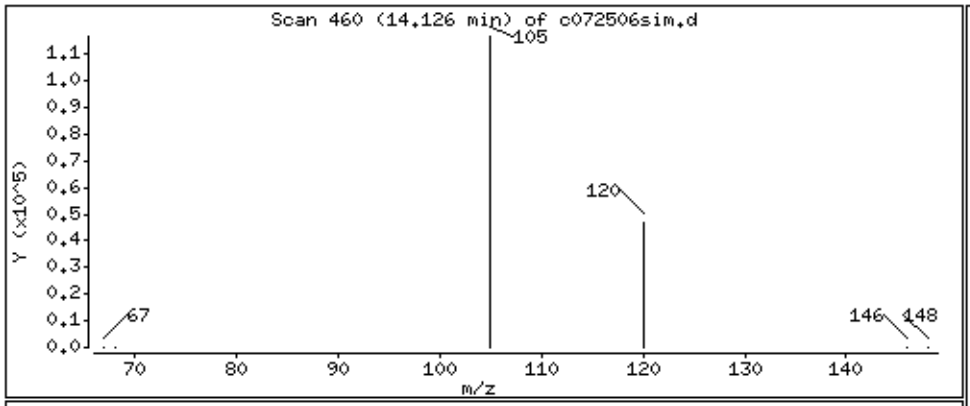
Operator: gm

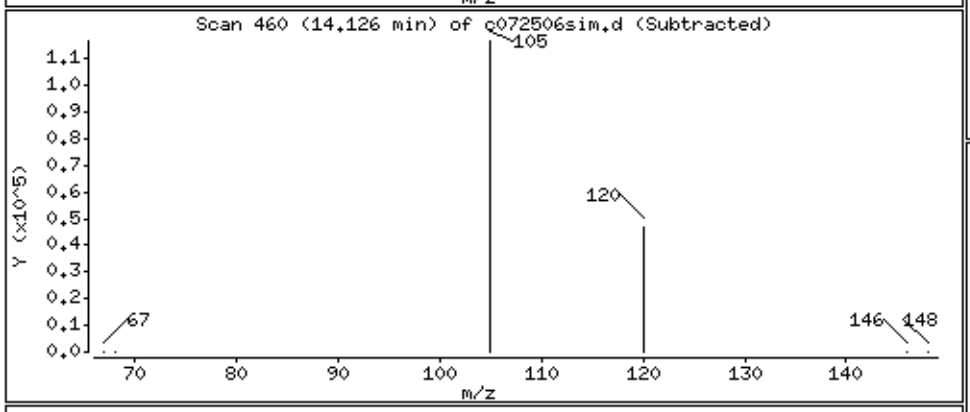
Column phase: DB-5.625

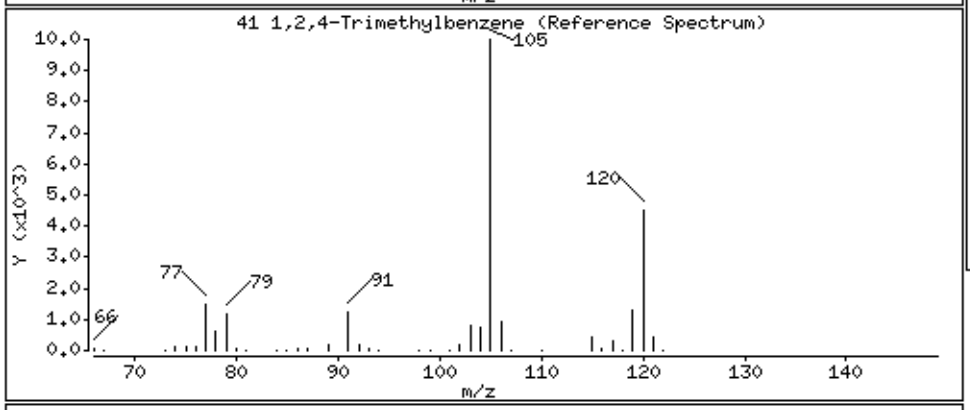
Column diameter: 0.25

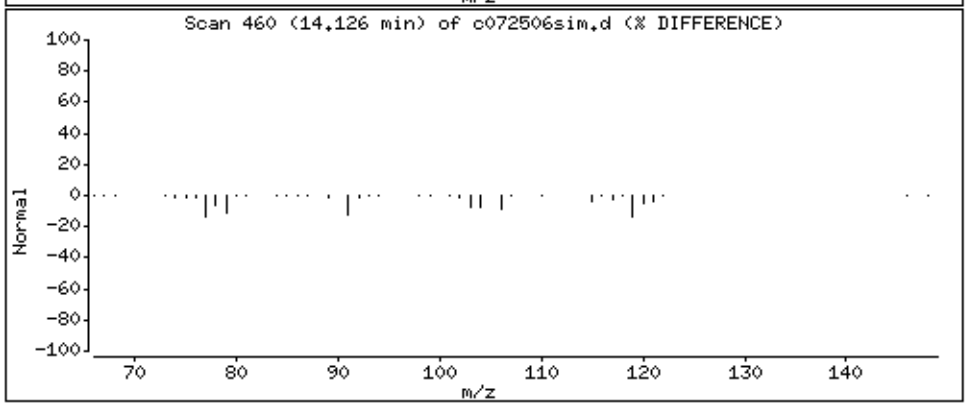
41 1,2,4-Trimethylbenzene

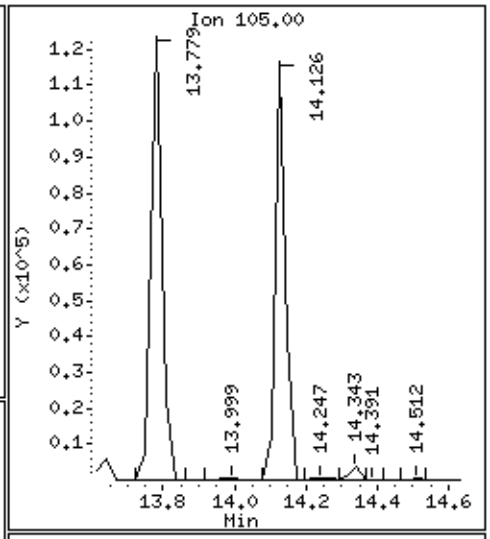
Concentration: 9.51632 ug

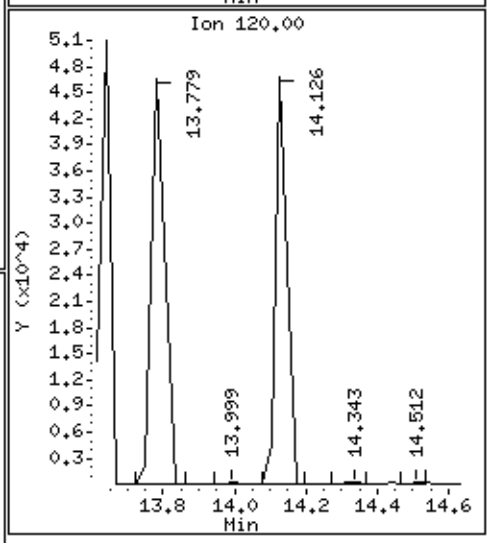












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

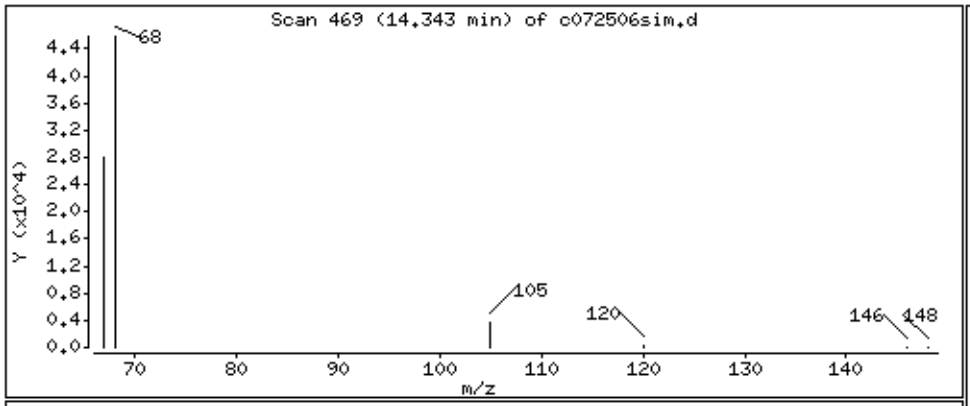
Operator: gm

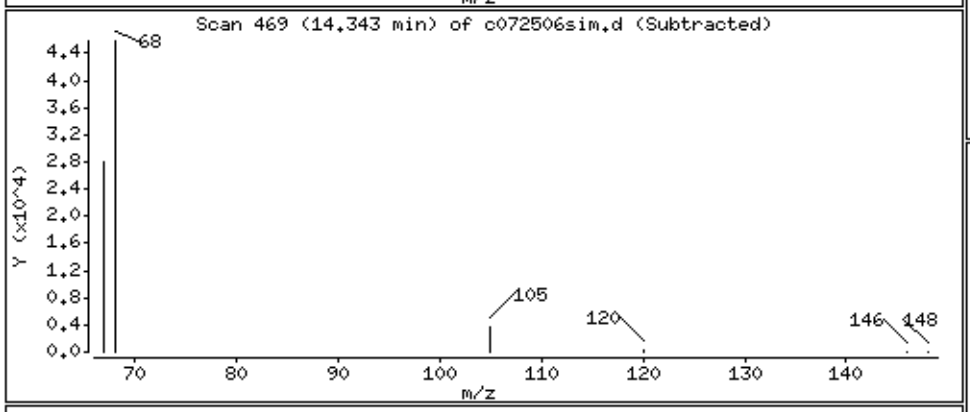
Column phase: DB-5.625

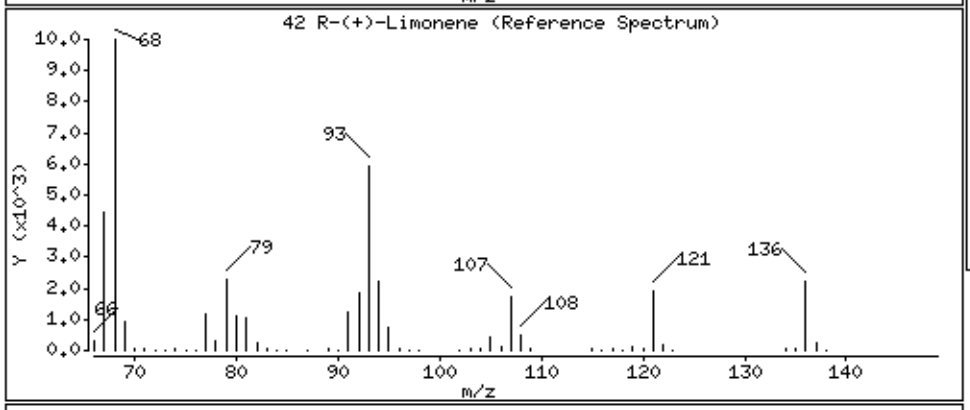
Column diameter: 0.25

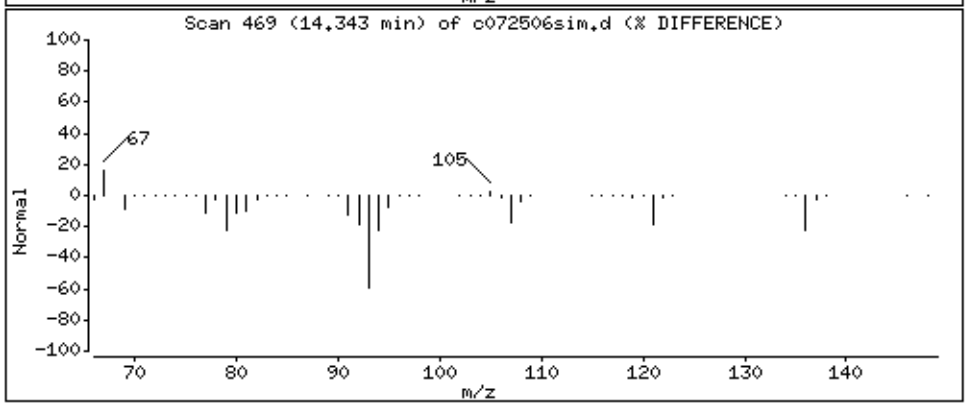
42 R-(+)-Limonene

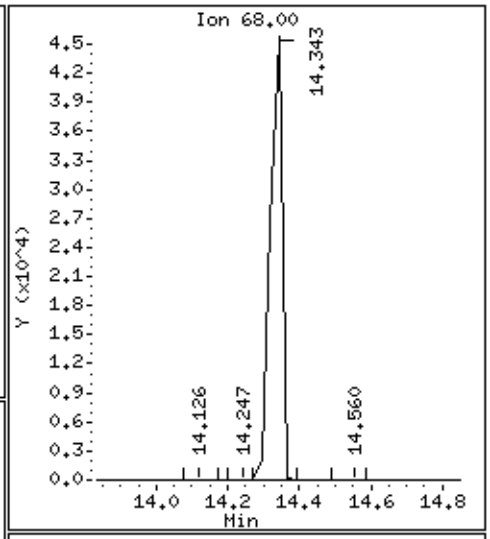
Concentration: 9.13869 ug

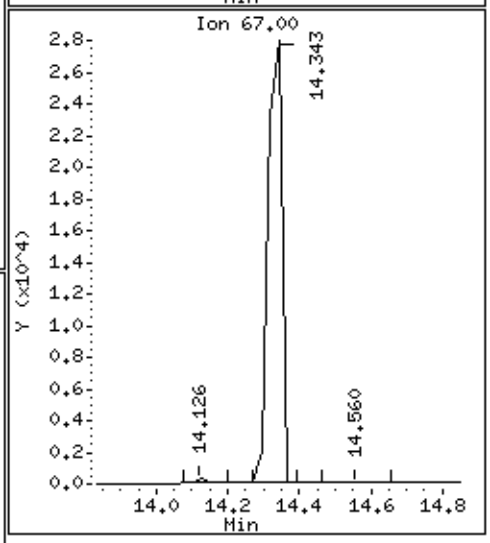












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

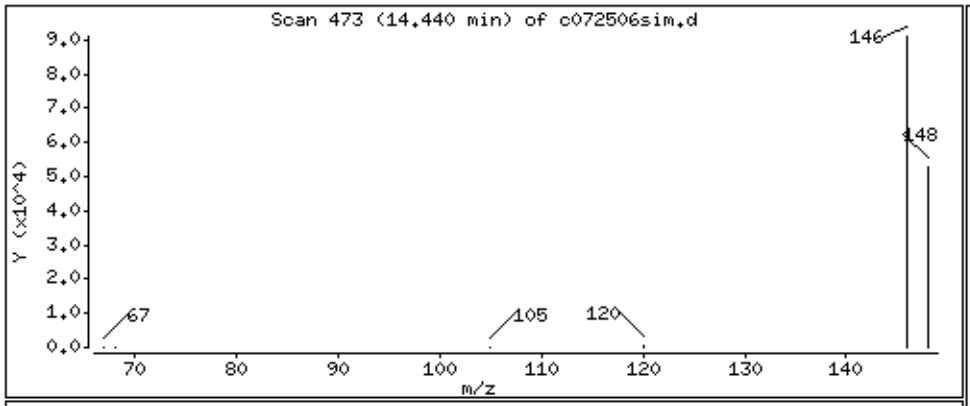
Operator: gm

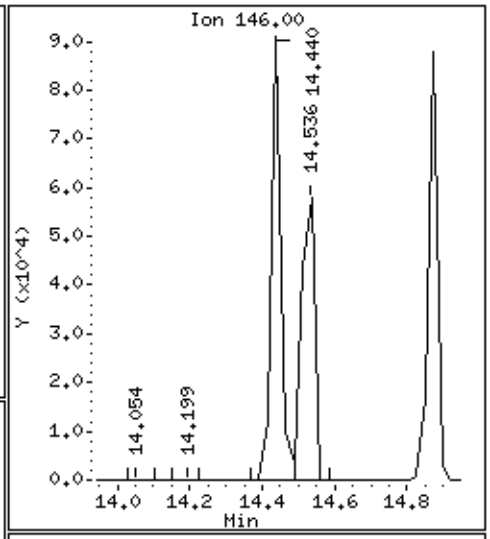
Column phase: DB-5.625

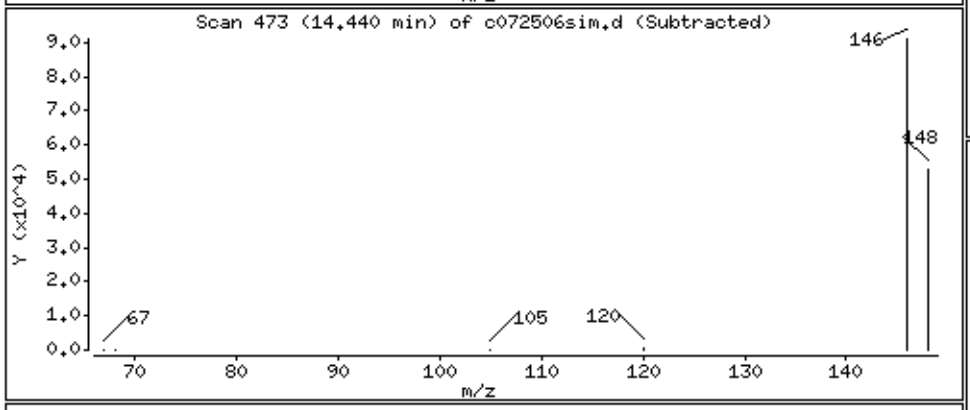
Column diameter: 0.25

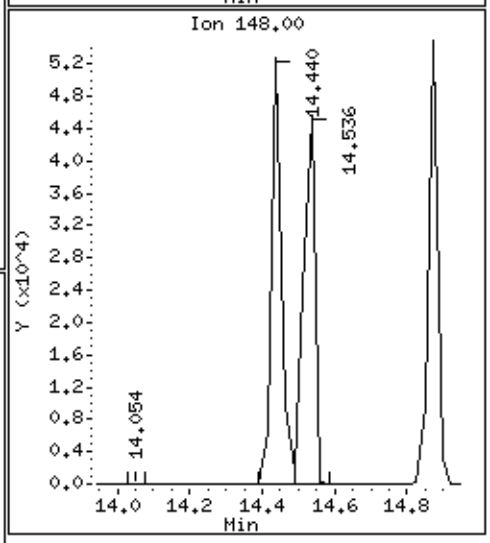
43 1,3-Dichlorobenzene

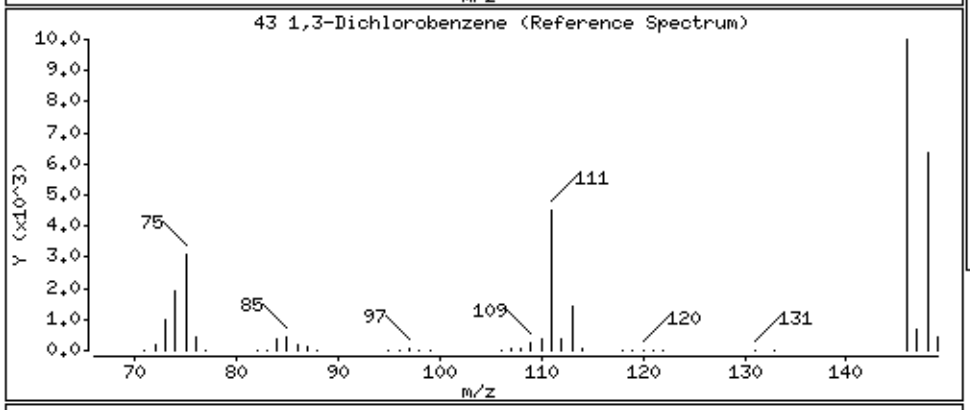
Concentration: 10.0130 ug

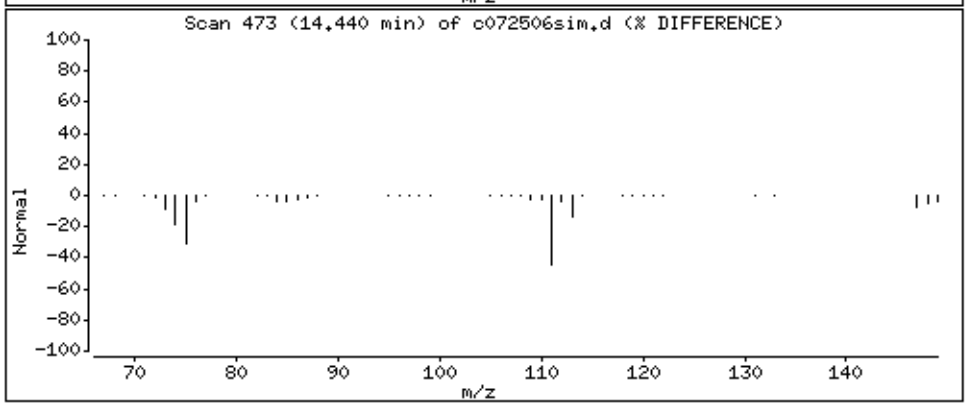












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

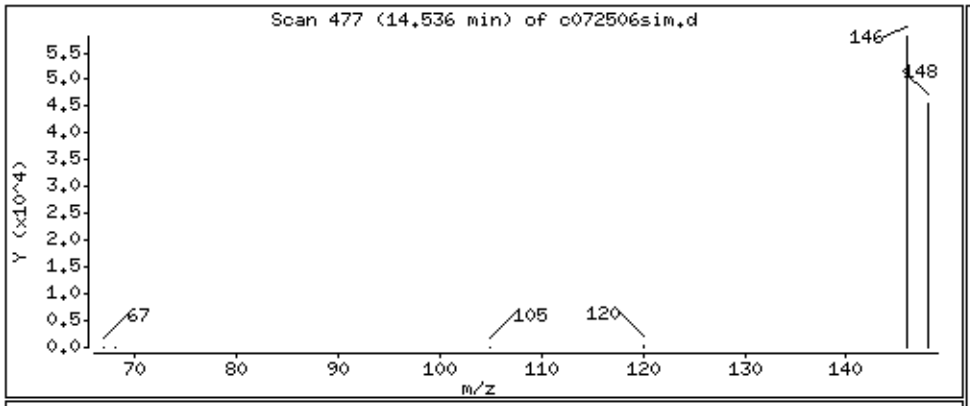
Operator: gm

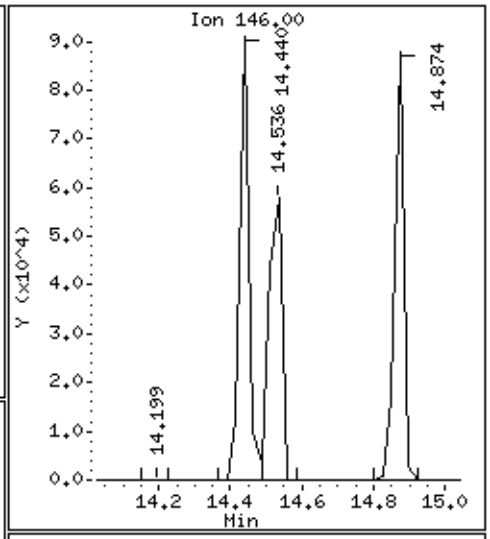
Column phase: DB-5.625

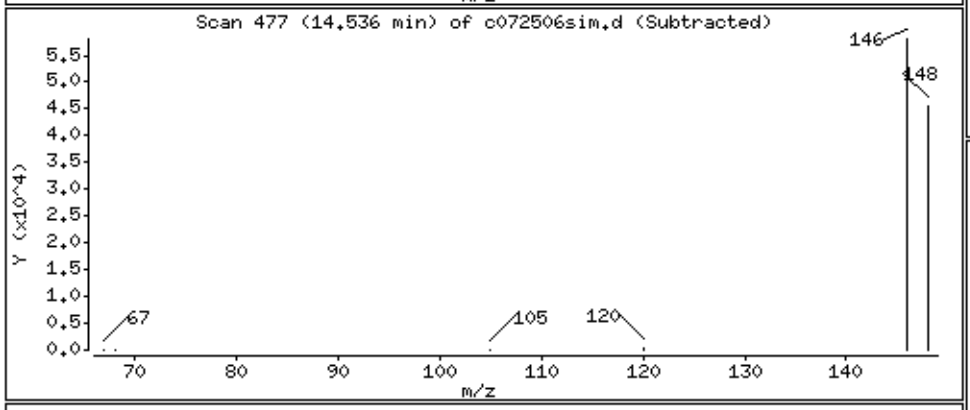
Column diameter: 0.25

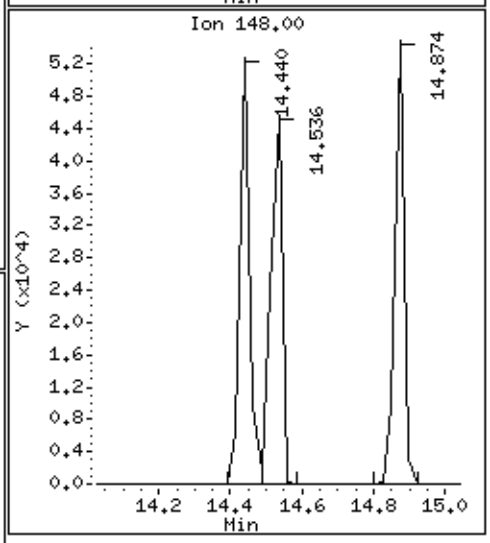
44 1,4-Dichlorobenzene

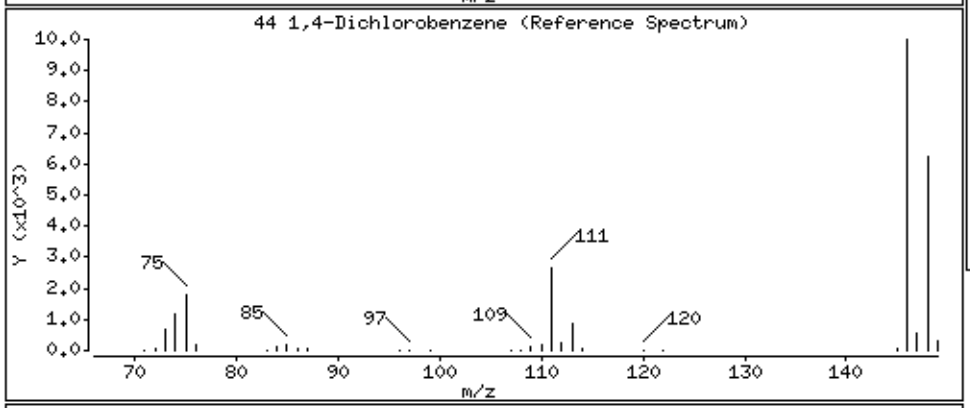
Concentration: 7.53023 ug

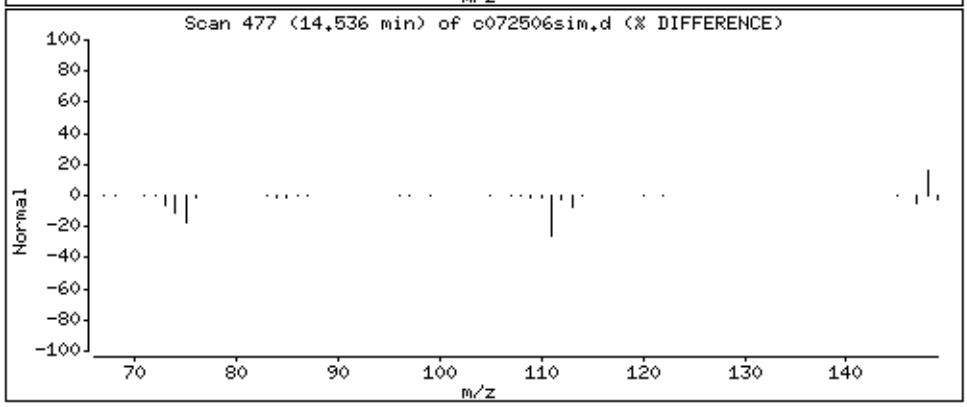












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

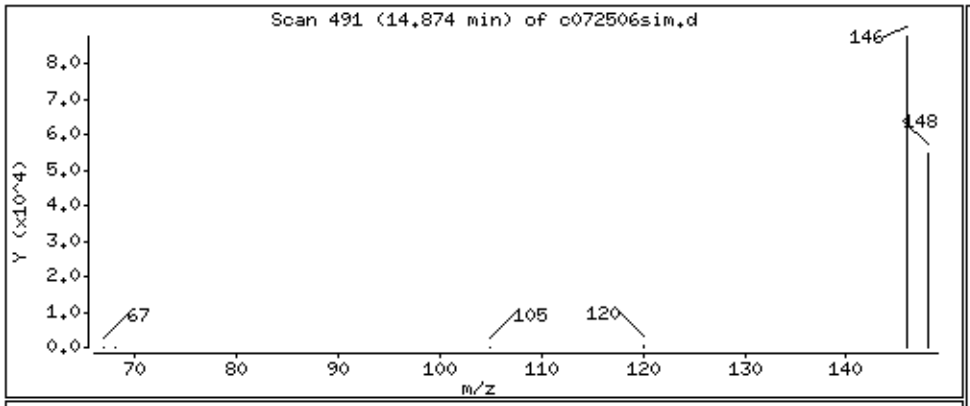
Operator: gm

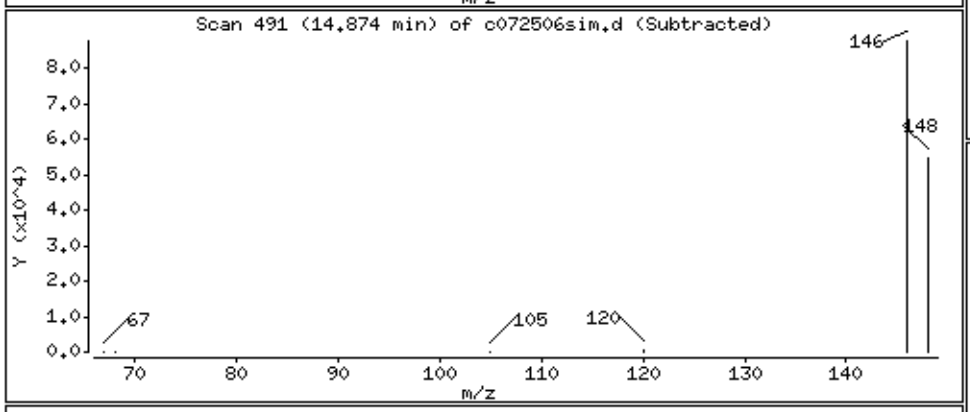
Column phase: DB-5.625

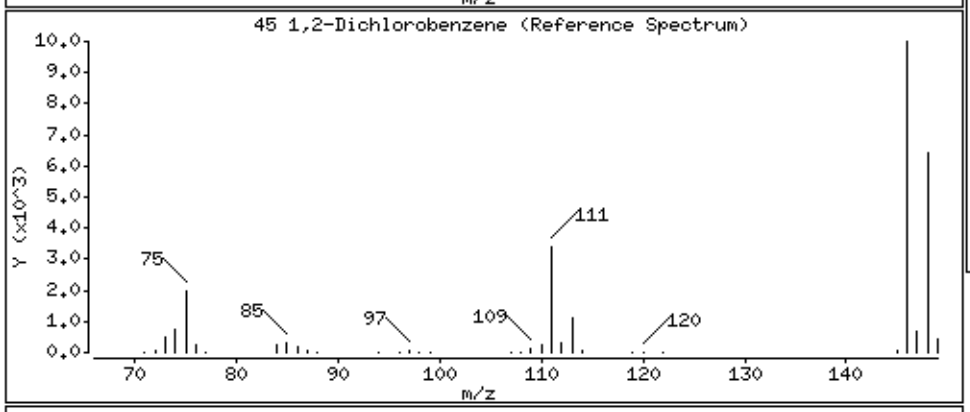
Column diameter: 0.25

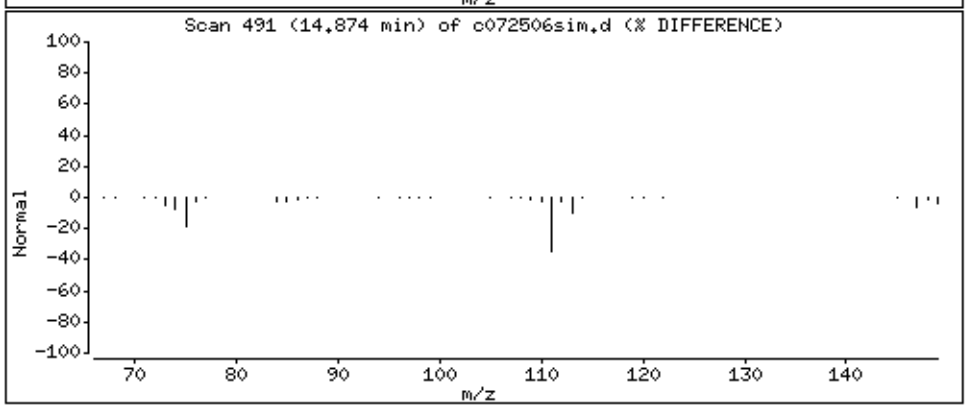
45 1,2-Dichlorobenzene

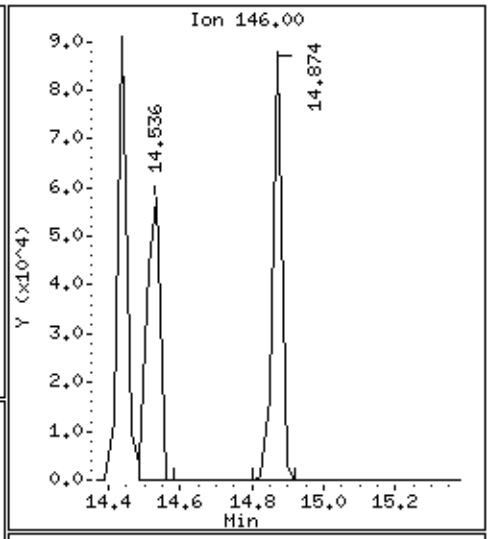
Concentration: 8.75463 ug

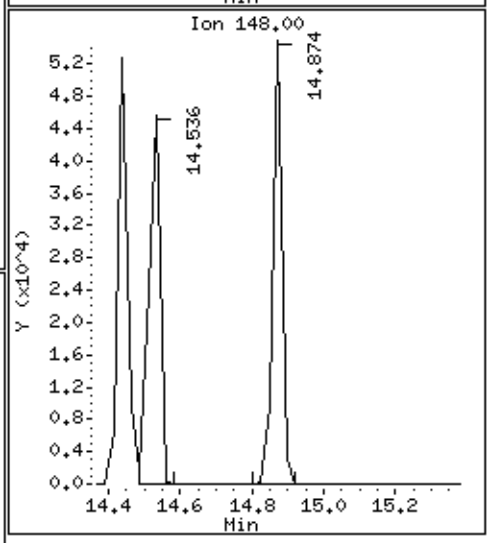












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

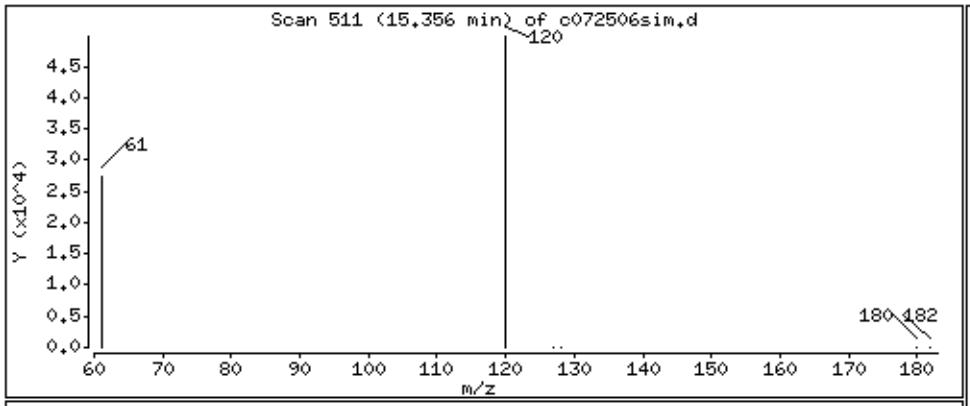
Operator: gm

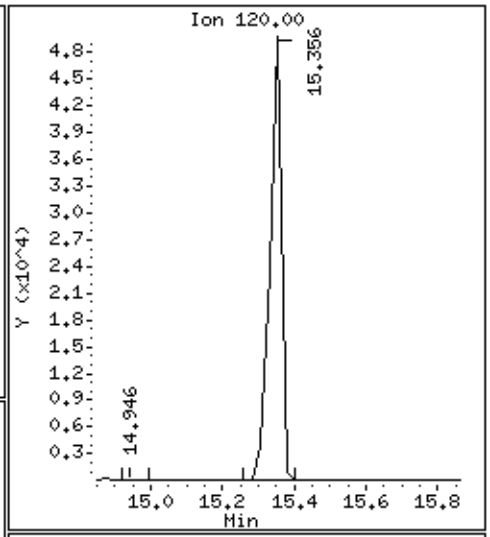
Column phase: DB-5.625

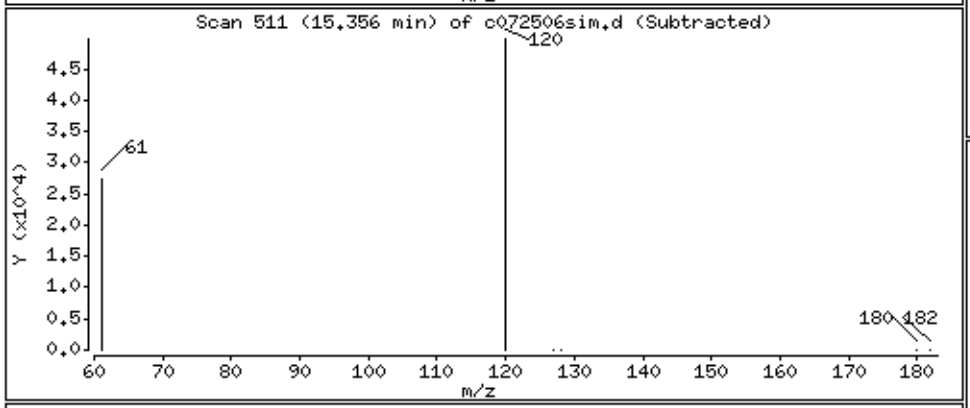
Column diameter: 0.25

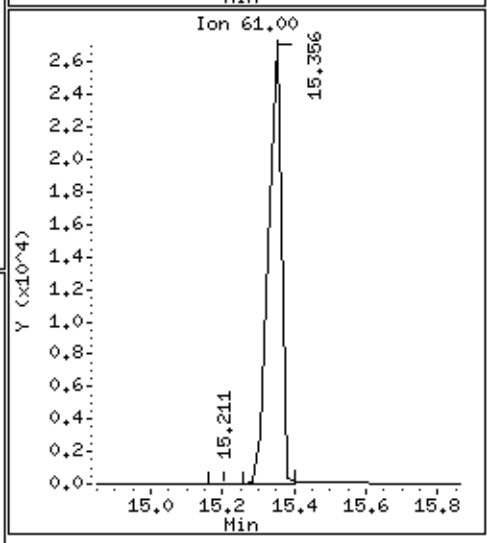
46 1,4-Dithiane

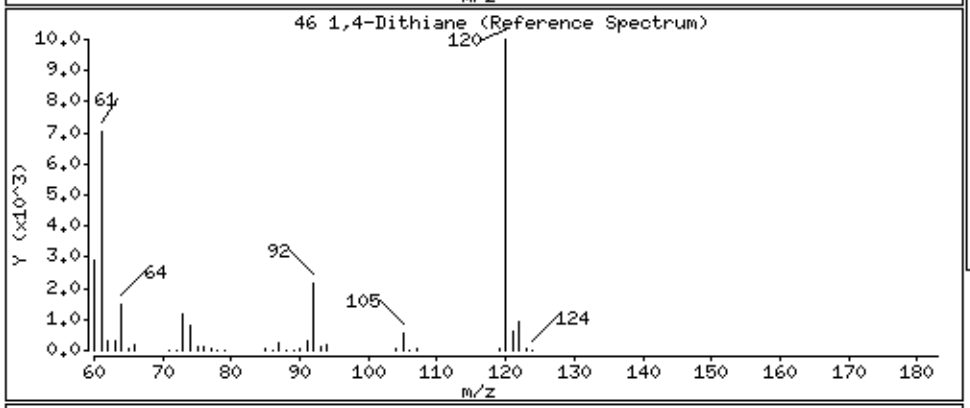
Concentration: 9.08189 ug

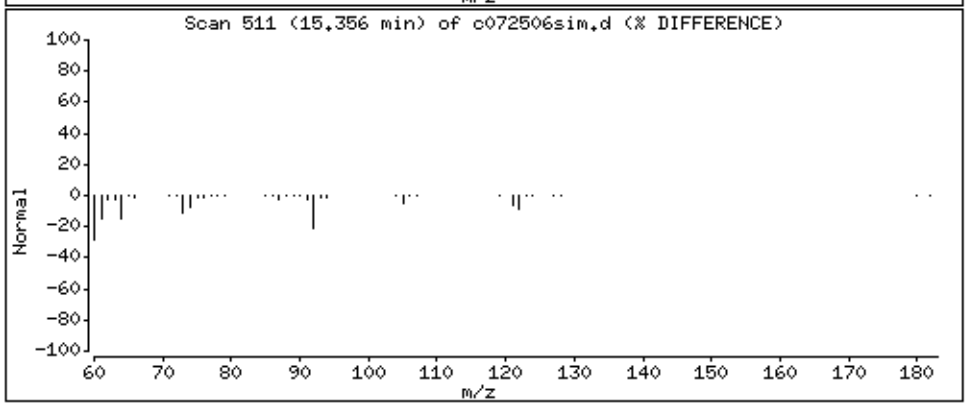












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

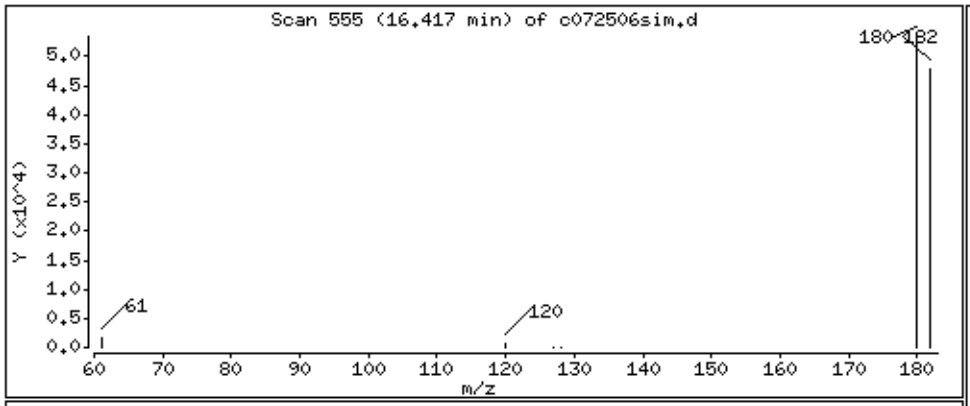
Operator: gm

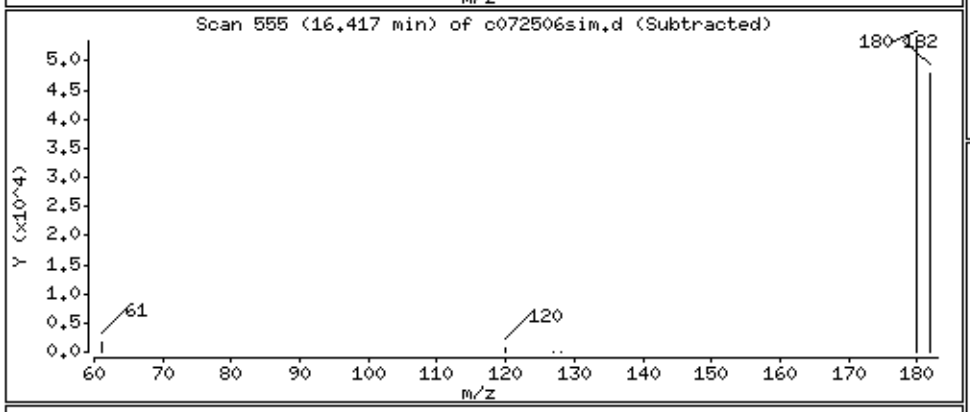
Column phase: DB-5.625

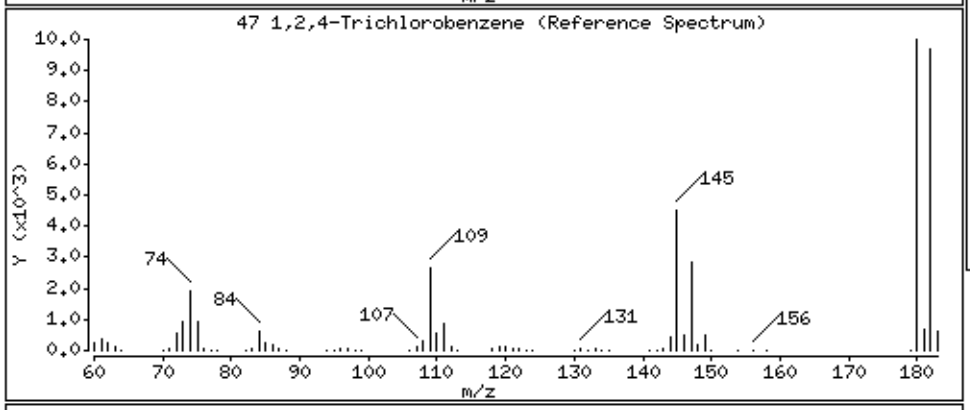
Column diameter: 0.25

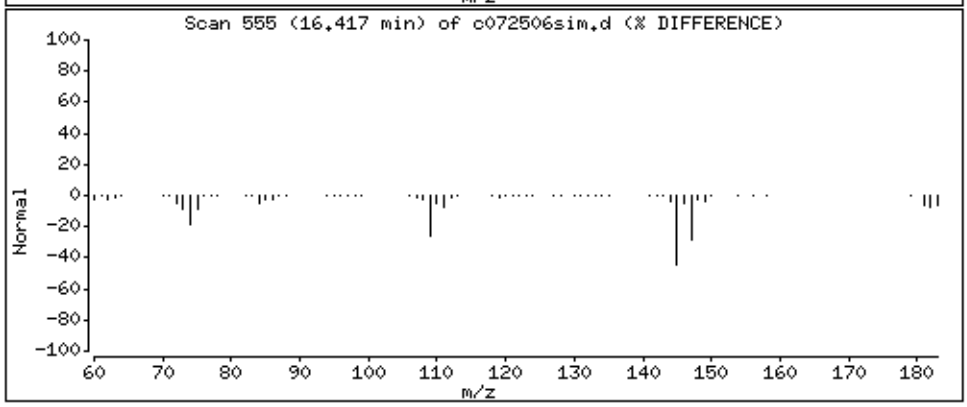
47 1,2,4-Trichlorobenzene

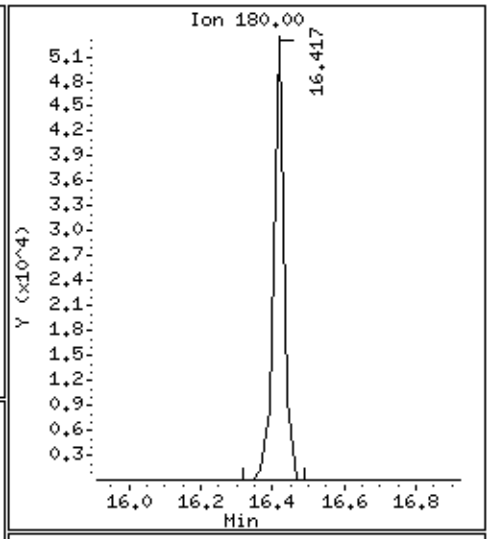
Concentration: 8.69024 ug

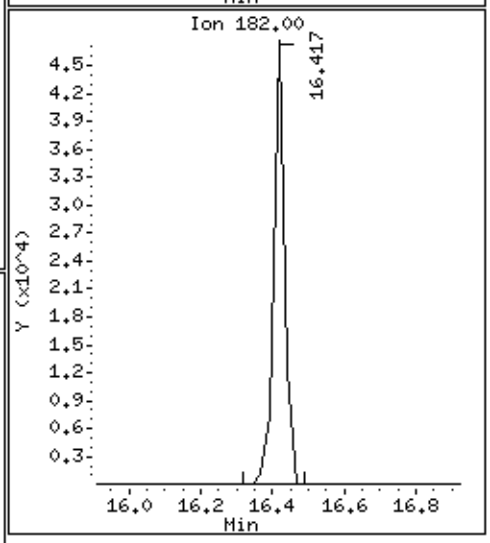












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

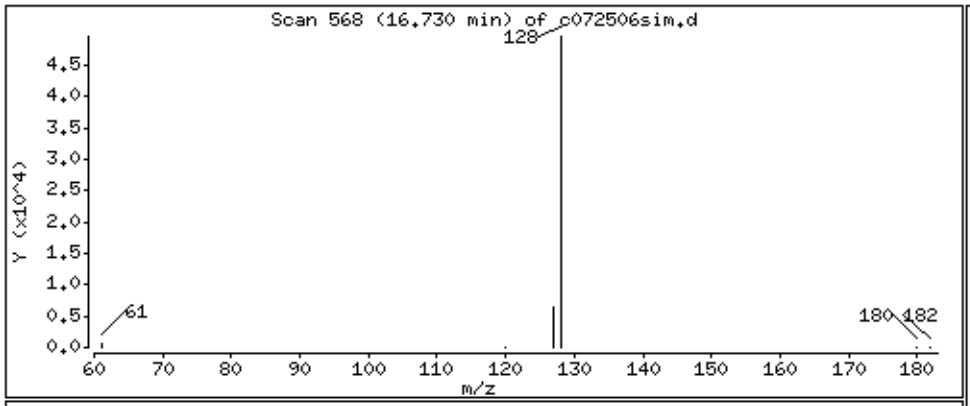
Operator: gm

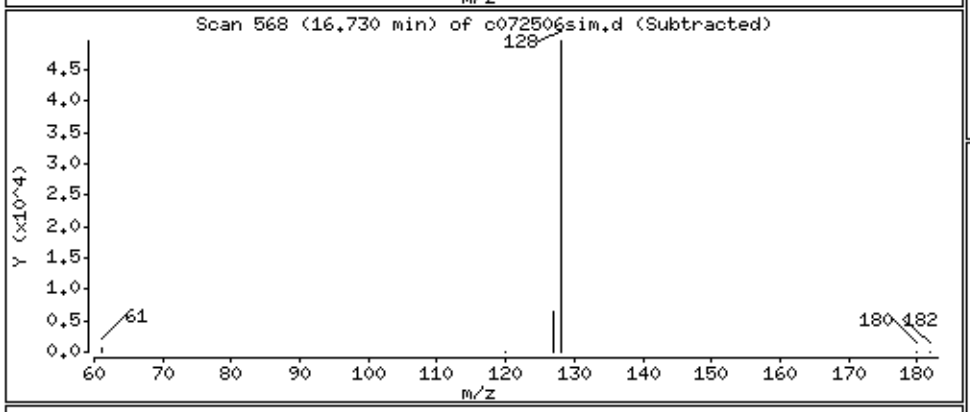
Column phase: DB-5.625

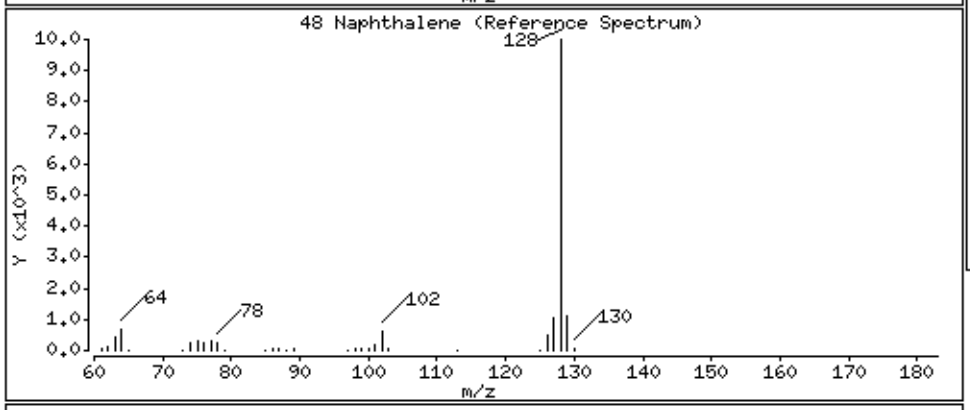
Column diameter: 0.25

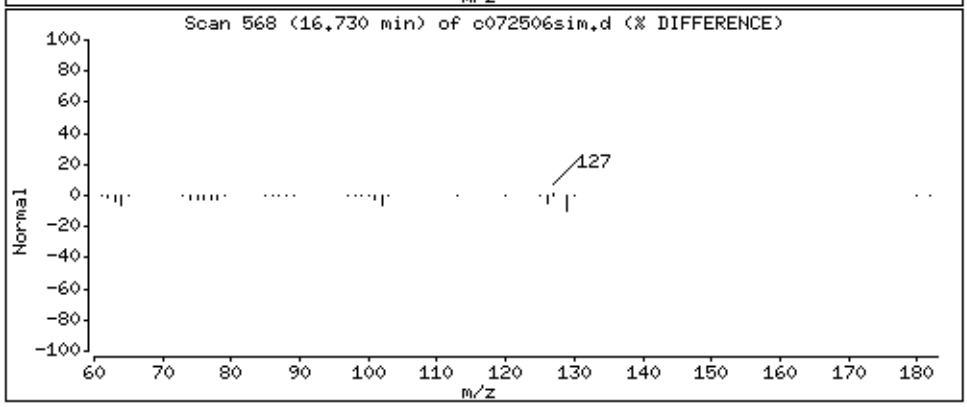
48 Naphthalene

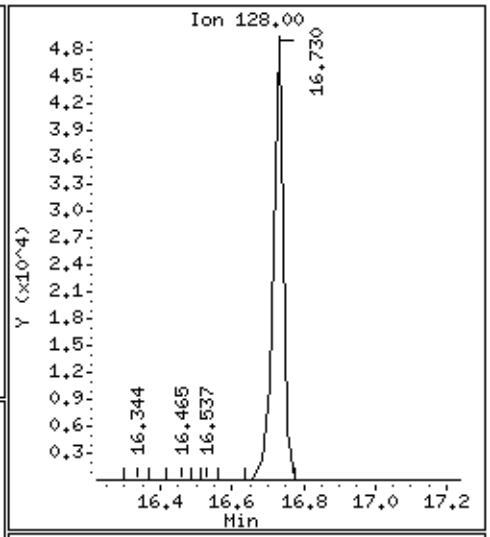
Concentration: 2.62409 ug

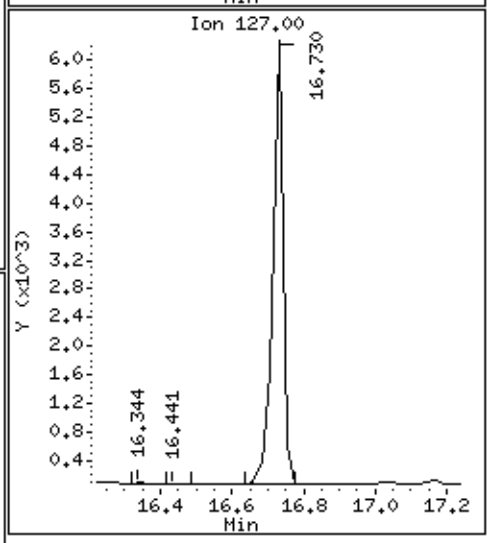












Data File: /chem/msdc.i/25Jul2017.b/c072506sim.d

Date : 25-JUL-2017 09:57

Client ID: LCS

Instrument: msdc.i

Sample Info: ;1707320/328;LCS

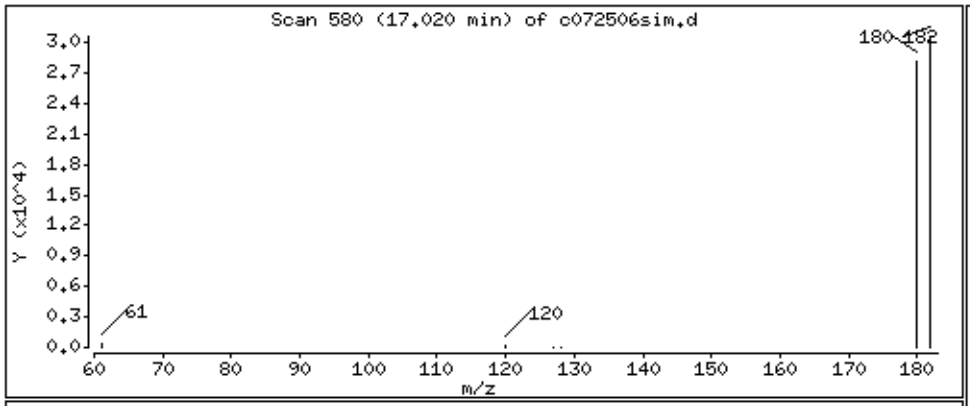
Operator: gm

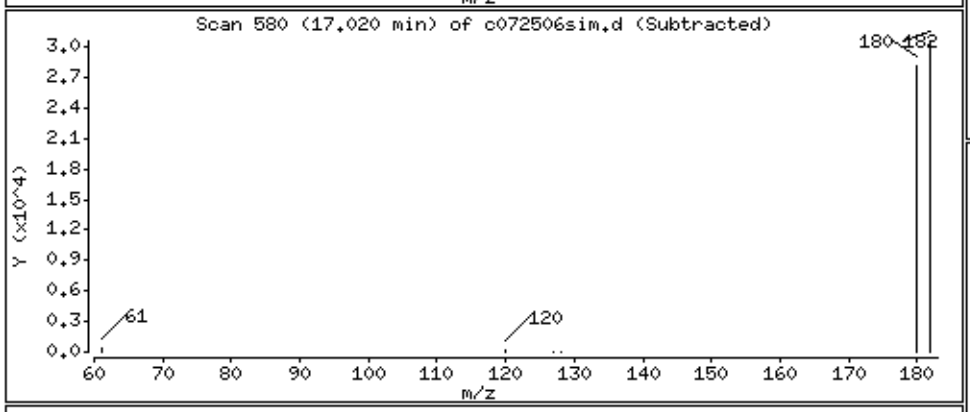
Column phase: DB-5.625

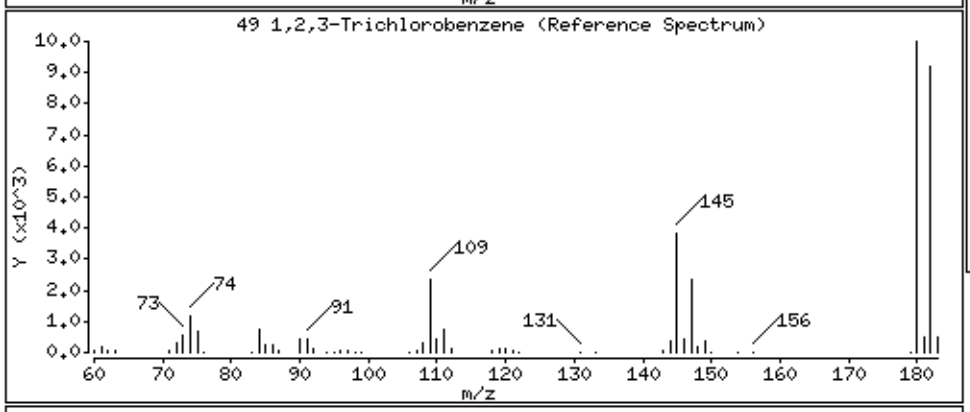
Column diameter: 0.25

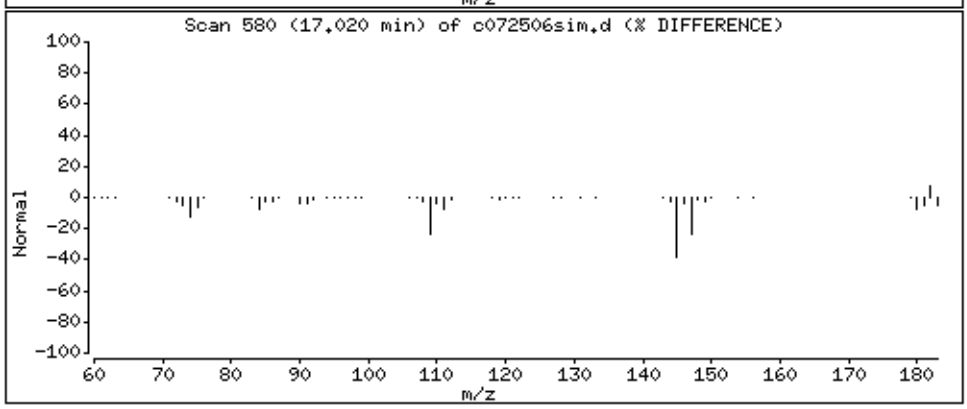
49 1,2,3-Trichlorobenzene

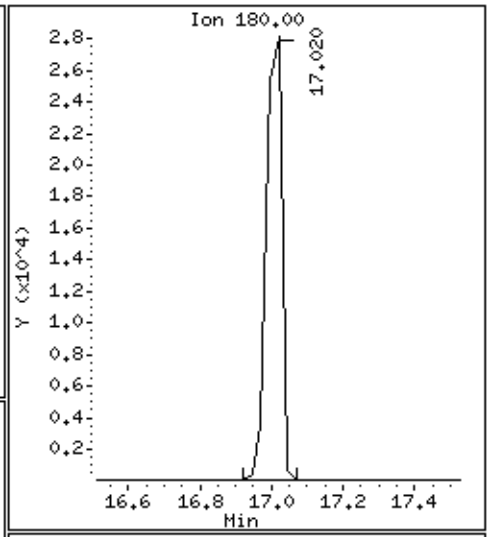
Concentration: 7.05875 ug

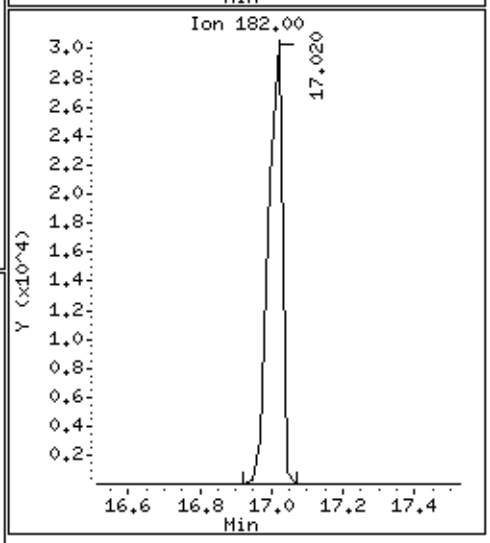












eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1707320-06AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**c072507sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/25/17 10:22 AM**	
		Date of Extraction: 7/25/17	

Compound	**%Recovery**	**Method Limits**
1,2-Dichloroethane	89	70-130
1,1-Dichloroethene	96	70-130
cis-1,2-Dichloroethene	94	70-130
trans-1,2-Dichloroethene	89	70-130
Benzene	96	70-130
Tetrachloroethene	97	70-130
1,1,2-Trichloroethane	95	70-130
Trichloroethene	98	70-130
Toluene	95	70-130
Vinyl Chloride	88	50-140

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	104	70-130

Report Date: 25-Jul-2017 10:45

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 25Jul2017
Sample Matrix: GAS
Fraction: SV
Lab Smp Id: 1707320/328
Client Smp ID: LCSD
Level: MED
Operator: gm
Data Type: MS DATA
SampleType: LCSD
SpikeList File: RadLCS-CM.spk
Quant Type: ISTD
Sublist File: all-cm.sub
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 Vinyl Chloride	10.0000	8.85462	88.55	50-140
3 Ethanol	10.0000	4.49289	44.93*	50-130
4 1,1-Dichloroethene	10.0000	9.62705	96.27	70-130
5 Acetone	10.0000	7.65873	76.59	70-130
7 MTBE	10.0000	9.39553	93.96	70-130
8 trans-1,2-Dichloro	10.0000	8.92642	89.26	70-130
9 Hexane	10.0000	9.37332	93.73	70-130
10 Halothane	10.0000	9.74625	97.46	70-130
11 1,1-Dichloroethane	10.0000	9.05898	90.59	70-130
12 Ethyl Acetate	10.0000	9.22871	92.29	70-130
13 2-Butanone	10.0000	8.26731	82.67	70-130
14 cis-1,2-Dichloroet	10.0000	9.36364	93.64	70-130
15 Chloroform-CCC	10.0000	9.50213	95.02	70-130
16 Cyclohexane	10.0000	9.39367	93.94	70-130
17 1,1,1-Trichloroeth	10.0000	9.94522	99.45	70-130
18 Carbon Tetrachlori	10.0000	9.71199	97.12	70-130
19 Benzene	10.0000	9.57004	95.70	70-130
20 1,2-Dichloroethane	10.0000	8.89735	88.97	70-130
21 Heptane	10.0000	9.31702	93.17	70-130
22 Trichloroethene	10.0000	9.83452	98.35	70-130
23 Methyl Methacrylat	10.0000	8.48943	84.89	70-130
24 4-Methyl-2-pentano	10.0000	9.63120	96.31	70-130
26 Toluene-CCC	10.0000	9.51780	95.18	70-130
28 1,1,2-Trichloroeth	10.0000	9.48740	94.87	70-130
29 Tetrachloroethene	10.0000	9.68076	96.81	70-130
30 Chlorobenzene	10.0000	8.54592	85.46	70-130
31 Ethylbenzene-CCC	10.0000	9.36049	93.60	70-130
33 m,p-Xylene	20.0000	18.4904	92.45	70-130
34 o-Xylene	10.0000	9.71809	97.18	70-130
35 Styrene	10.0000	5.64982	56.50	20-100
36 a-Pinene	10.0000	11.8129	118.13	70-130
37 1,1,2,2-Tetrachlor	10.0000	7.65134	76.51	70-130
38 Propylbenzene	10.0000	8.23335	82.33	70-130

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
40 1,3,5-Trimethylben	10.0000	10.4496	104.50	70-130
41 1,2,4-Trimethylben	10.0000	9.40199	94.02	70-130
42 R-(+)-Limonene	10.0000	9.20234	92.02	70-130
43 1,3-Dichlorobenzen	10.0000	9.84232	98.42	50-110
44 1,4-Dichlorobenzen	10.0000	7.55886	75.59	50-110
45 1,2-Dichlorobenzen	10.0000	8.61651	86.17	50-110
46 1,4-Dithiane	10.0000	9.11634	91.16	50-110
47 1,2,4-Trichloroben	10.0000	8.50509	85.05	20-110
48 Naphthalene	10.0000	2.52950	25.29	5-80
49 1,2,3-Trichloroben	10.0000	6.88504	68.85	20-110

SURROGATE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 25 Toluene-d8	10.0000	10.4393	104.39	70-130

Eurofins Air Toxics Inc.

Passive SE GC/MS

Data file : /chem/msdc.i/25Jul2017.b/c072507sim.d
Lab Smp Id: 1707320/328 Client Smp ID: LCSD
Inj Date : 25-JUL-2017 10:22
Operator : gm Inst ID: msdc.i
Smp Info : ;1707320/328;LCSD
Misc Info : ,NOTICS
Comment : GC/MS
Method : /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Meth Date : 25-Jul-2017 09:55 gmash Quant Type: ISTD
Cal Date : 21-JUN-2017 10:39 Cal File: c062109sim.d
Als bottle: 3 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all-cm.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vt * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	2.00000	Volume of final extract (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
2 Vinyl Chloride	62	3.420	3.420	(0.312)	44897	4.42731	8.85462
3 Ethanol	45	4.961	4.961	(0.453)	7886	2.24645	4.49289(R)
4 1,1-Dichloroethene-CCC	96	5.454	5.454	(0.498)	40945	4.81352	9.62705
5 Acetone	58	5.566	5.566	(0.508)	25633	3.82937	7.65873
7 MTBE	73	6.555	6.555	(0.599)	138793	4.69777	9.39553
8 trans-1,2-Dichloroethene	96	6.610	6.610	(0.604)	46593	4.46321	8.92642
9 Hexane	57	6.775	6.775	(0.619)	128755	4.68666	9.37332
10 Halothane	117	6.960	6.961	(0.636)	36438	4.87313	9.74625
11 1,1-Dichloroethane-SPCC	63	7.057	7.057	(0.645)	97531	4.52949	9.05898
12 Ethyl Acetate	70	7.640	7.640	(0.698)	14585	4.61435	9.22871
13 2-Butanone	72	7.662	7.640	(0.700)	28802	4.13366	8.26731
14 cis-1,2-Dichloroethene	96	7.662	7.662	(0.700)	54140	4.68182	9.36364
15 Chloroform-CCC	83	7.956	7.956	(0.727)	80589	4.75106	9.50213
16 Cyclohexane	84	8.172	8.172	(0.747)	83404	4.69684	9.39367
17 1,1,1-Trichloroethane	97	8.172	8.172	(0.747)	95504	4.97261	9.94522
18 Carbon Tetrachloride	117	8.326	8.326	(0.761)	88127	4.85600	9.71199

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug)
	19 Benzene	78	8.572	8.572	(0.783)	206988	4.78502	9.57004
	20 1,2-Dichloroethane	62	8.665	8.665	(0.792)	86226	4.44867	8.89735
	21 Heptane	71	8.696	8.696	(0.794)	72082	4.65851	9.31702
	22 Trichloroethene	130	9.283	9.283	(0.848)	72003	4.91726	9.83452
	23 Methyl Methacrylate	69	9.596	9.596	(0.877)	56369	4.24472	8.48943
	24 4-Methyl-2-pentanone	85	10.463	10.463	(0.956)	25300	4.81560	9.63120
$	25 Toluene-d8	98	10.608	10.608	(0.969)	252754	5.21963	10.4393
	26 Toluene-CCC	92	10.680	10.680	(0.976)	153138	4.75890	9.51780
*	27 2-Fluorotoluene	109	10.945	10.945	(1.000)	270695	5.00000	
	28 1,1,2-Trichloroethane	97	11.186	11.186	(1.022)	61114	4.74370	9.48740
	29 Tetrachloroethene	164	11.283	11.283	(1.031)	64892	4.84038	9.68076
	30 Chlorobenzene	112	12.299	12.300	(1.124)	174860	4.27296	8.54592
	31 Ethylbenzene-CCC	106	12.351	12.351	(1.128)	97151	4.68025	9.36049
	33 m,p-Xylene	106	12.454	12.454	(1.138)	224710	9.24521	18.4904
	34 o-Xylene	106	12.901	12.901	(1.179)	110196	4.85905	9.71809
	35 Styrene	104	12.928	12.928	(1.181)	130268	2.82491	5.64982
	36 a-Pinene	93	13.203	13.203	(1.206)	175995	5.90643	11.8129
	37 1,1,2,2-Tetrachloroethane-SPC	83	13.587	13.587	(1.241)	100402	3.82567	7.65134
	38 Propylbenzene	91	13.642	13.642	(1.246)	353555	4.11667	8.23335
	40 1,3,5-Trimethylbenzene	105	13.779	13.779	(1.259)	238505	5.22482	10.4496
	41 1,2,4-Trimethylbenzene	105	14.126	14.126	(1.291)	230888	4.70100	9.40199
	42 R-(+)-Limonene	68	14.343	14.343	(1.310)	104052	4.60117	9.20234
	43 1,3-Dichlorobenzene	146	14.440	14.440	(1.319)	159647	4.92116	9.84232
	44 1,4-Dichlorobenzene	146	14.536	14.536	(1.328)	146986	3.77943	7.55886
	45 1,2-Dichlorobenzene	146	14.873	14.873	(1.359)	148065	4.30825	8.61651
	46 1,4-Dithiane	120	15.356	15.356	(1.403)	108987	4.55817	9.11634
	47 1,2,4-Trichlorobenzene	180	16.417	16.417	(1.500)	99421	4.25255	8.50509
	48 Naphthalene	128	16.730	16.730	(1.529)	90725	1.26475	2.52950
	49 1,2,3-Trichlorobenzene	180	17.020	17.020	(1.555)	78398	3.44252	6.88504

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Report Date: 25-Jul-2017 10:45

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msdc.i
Lab File ID: c072507sim.d
Lab Smp Id: 1707320/328
Analysis Type: SV
Quant Type: ISTD
Operator: gm
Method File: /chem/msdc.i/25Jul2017.b/C17r0621.m/C17r0621b.m
Misc Info: ,NOTICS

Calibration Date: 25-JUL-2017
Calibration Time: 09:32
Client Smp ID: LCSD
Level: MED
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	280102	140051	560204	270695	-3.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 2-Fluorotoluene	10.95	10.45	11.45	10.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

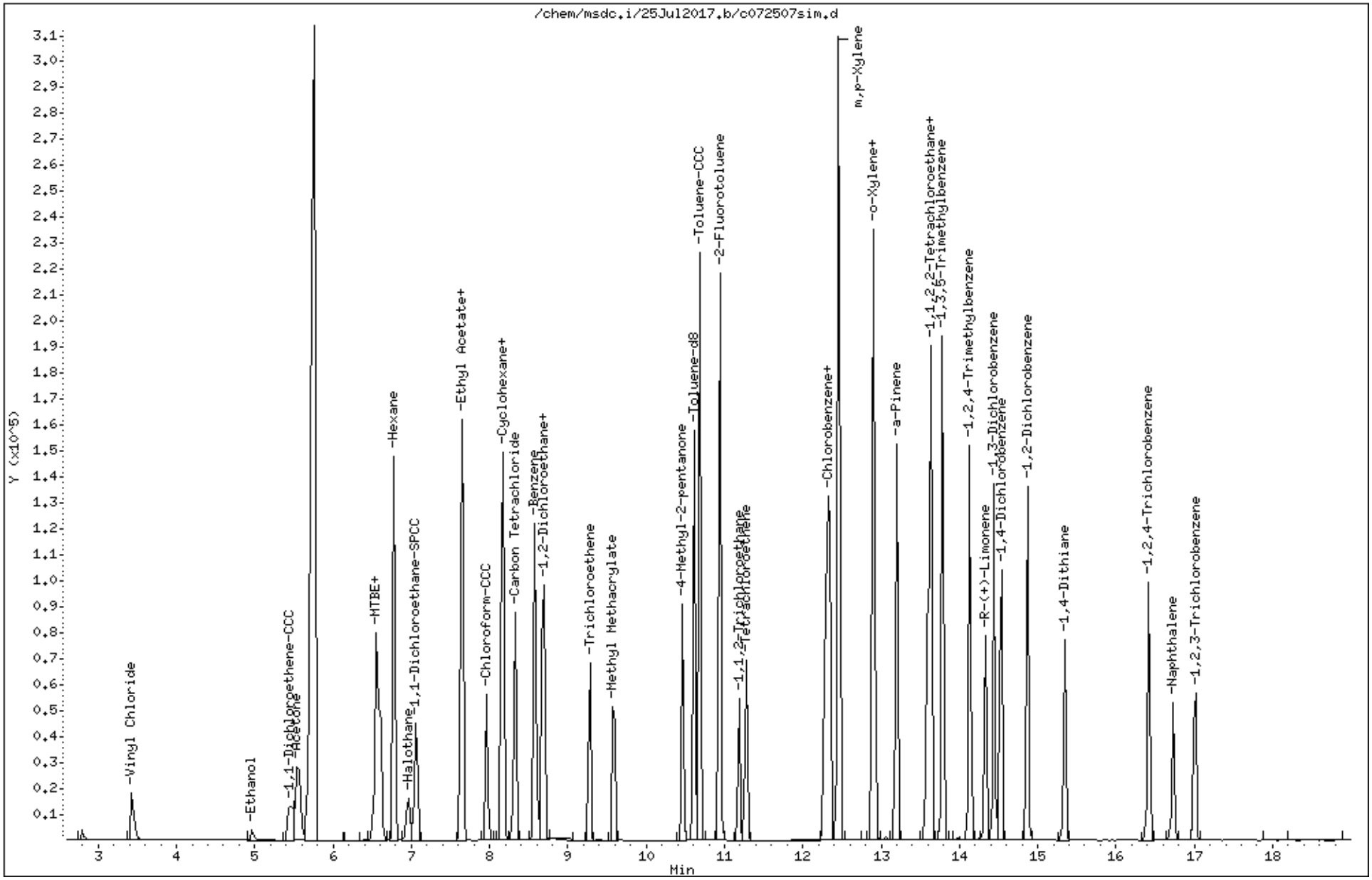
Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d
Date : 25-JUL-2017 10:22
Client ID: LCSD
Sample Info: ;1707320/328;LCSD

Instrument: msdc.i

Operator: gm

Column phase: DB-5.625

Column diameter: 0.25



Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

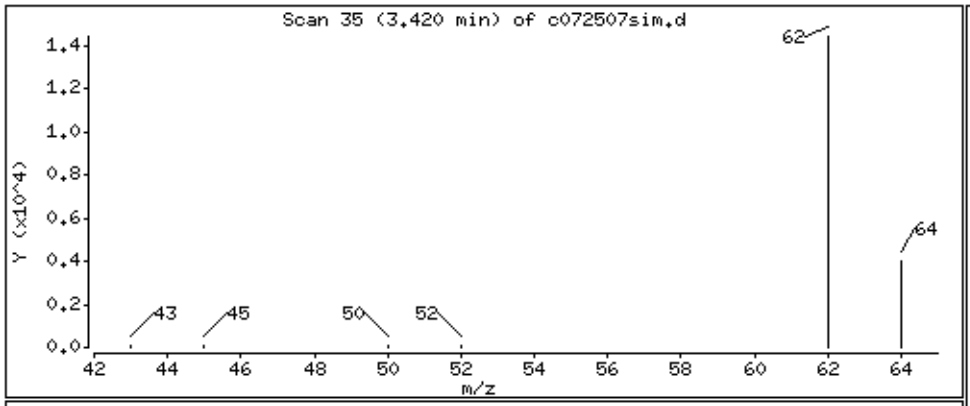
Operator: gm

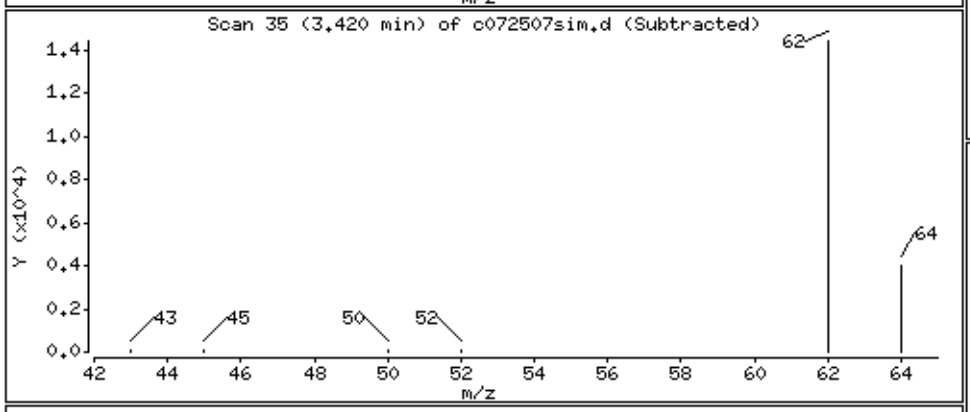
Column phase: DB-5.625

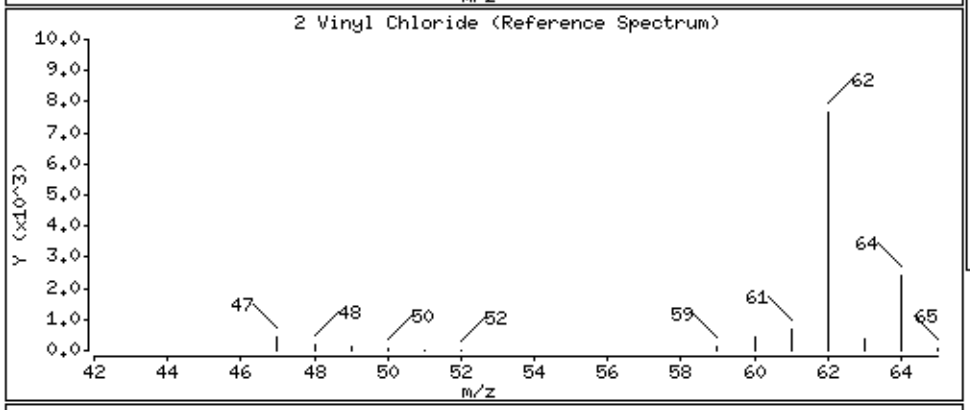
Column diameter: 0.25

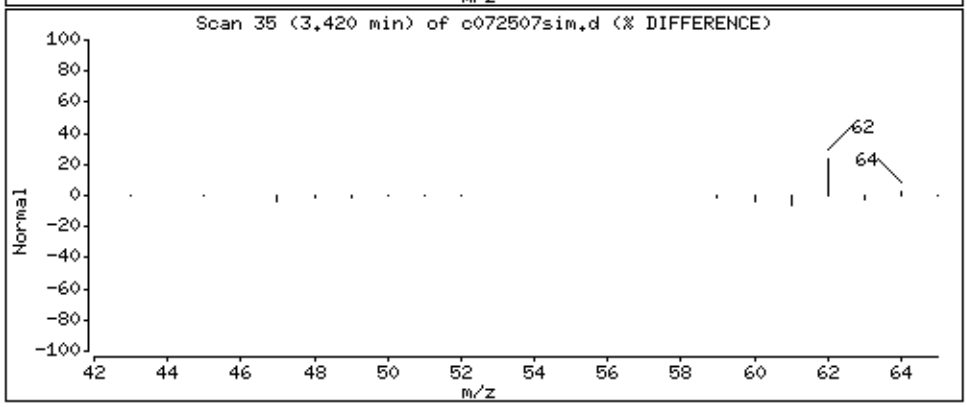
2 Vinyl Chloride

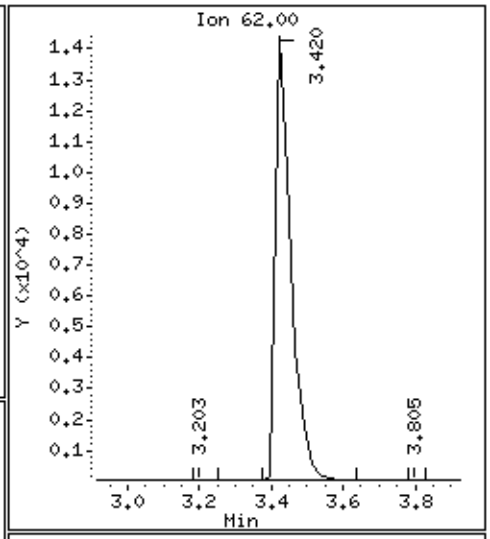
Concentration: 8.85462 ug

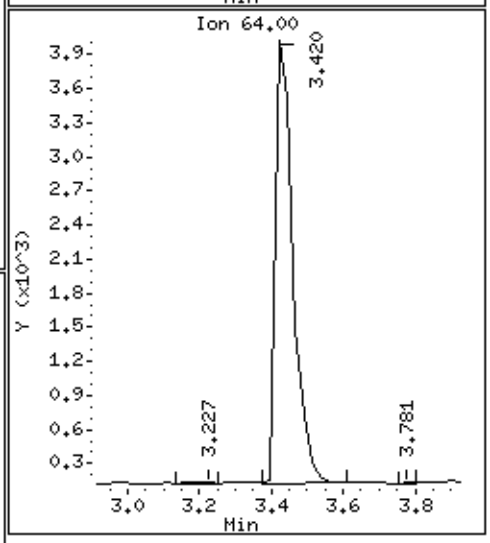












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

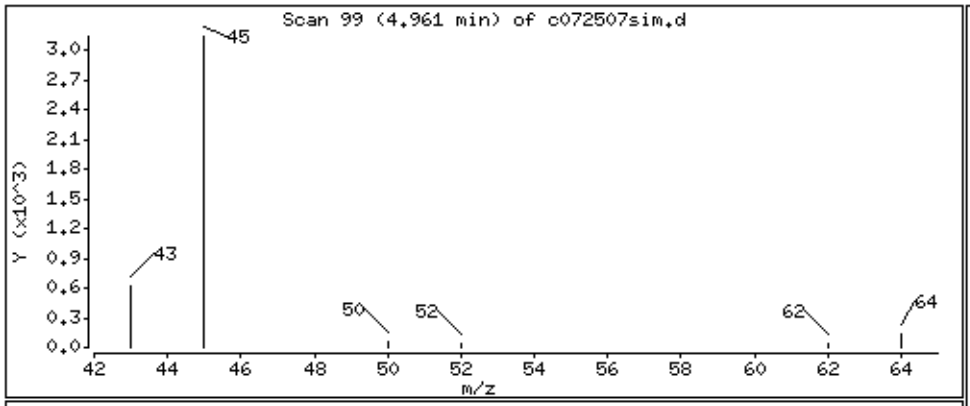
Operator: gm

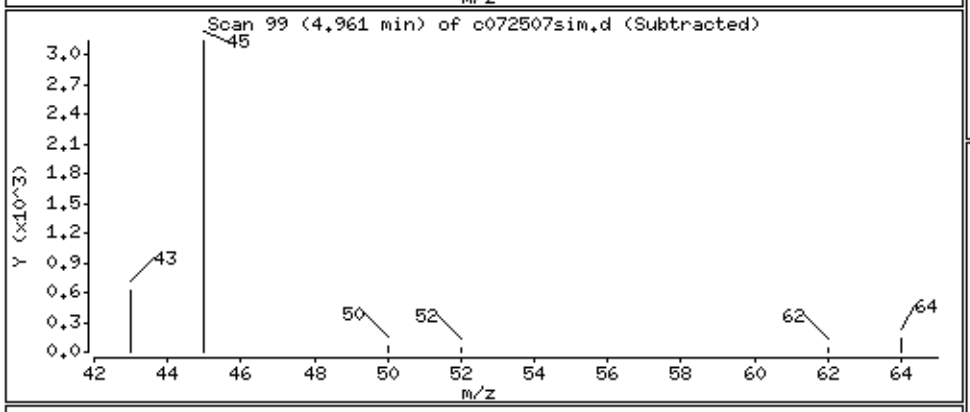
Column phase: DB-5.625

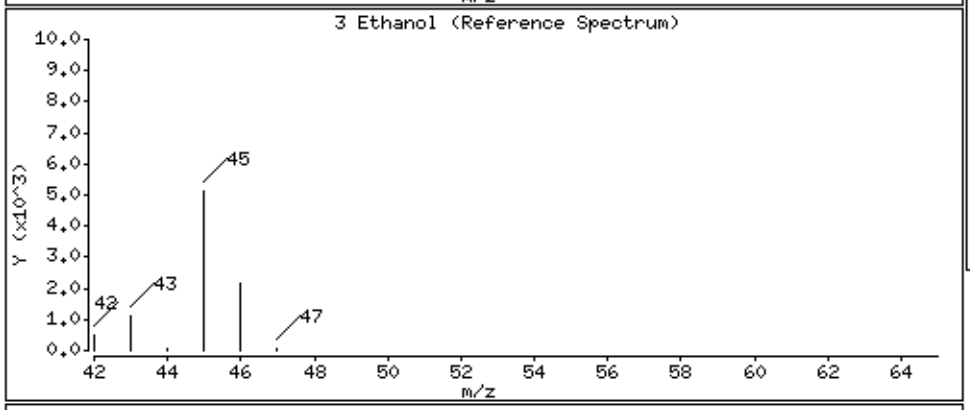
Column diameter: 0.25

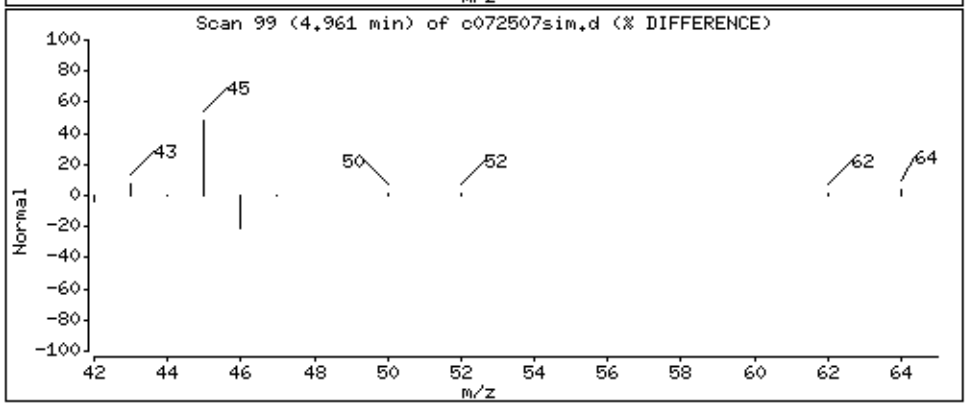
3 Ethanol

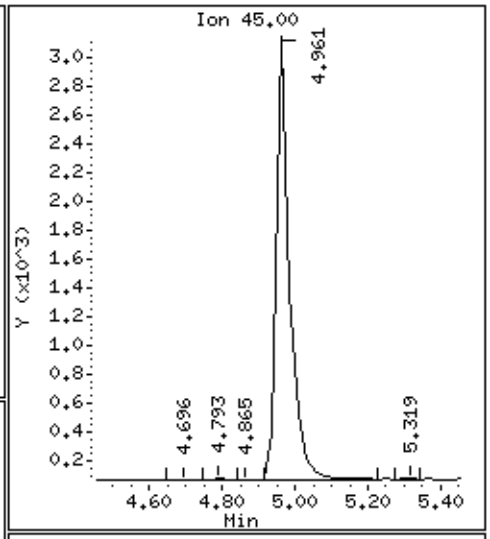
Concentration: 4.49289 ug

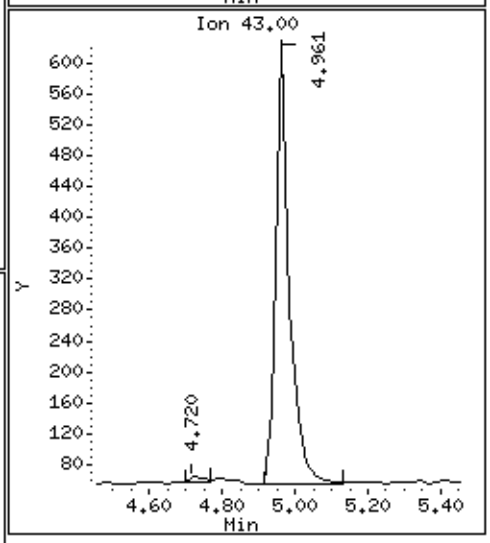












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

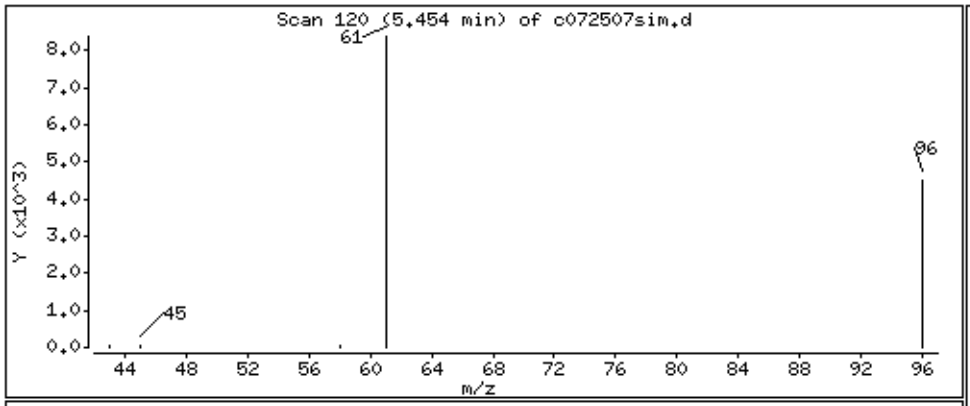
Operator: gm

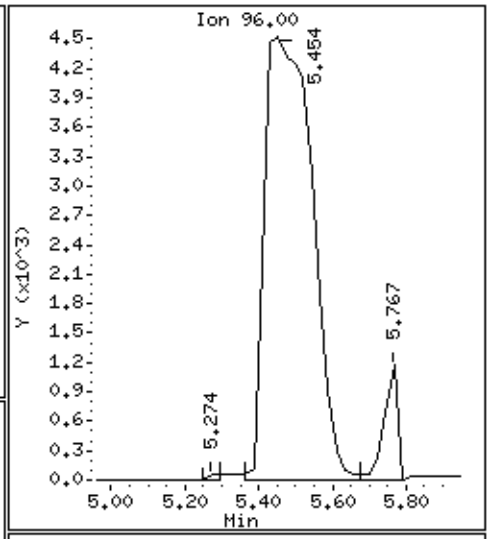
Column phase: DB-5.625

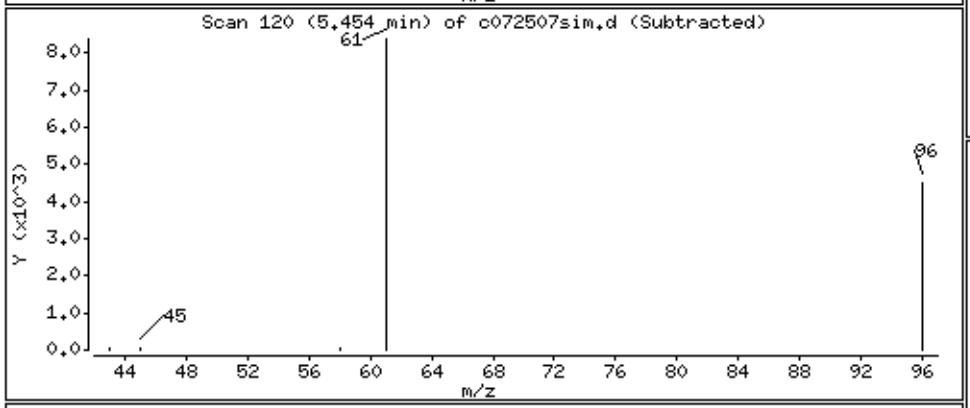
Column diameter: 0.25

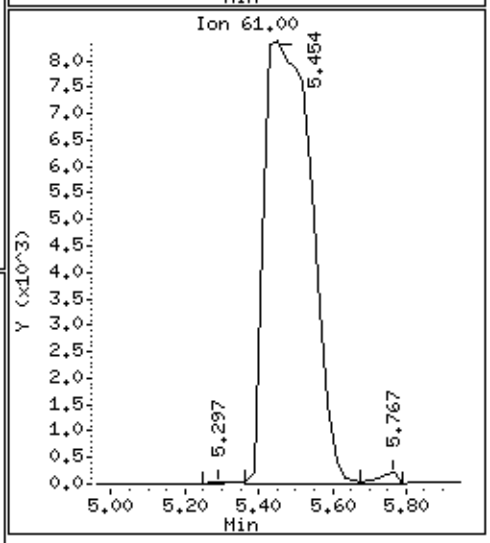
4 1,1-Dichloroethene-CCC

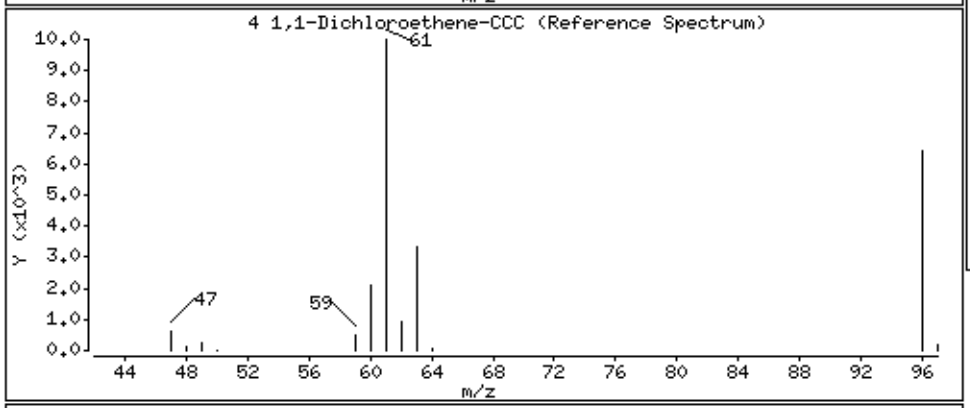
Concentration: 9.62705 ug

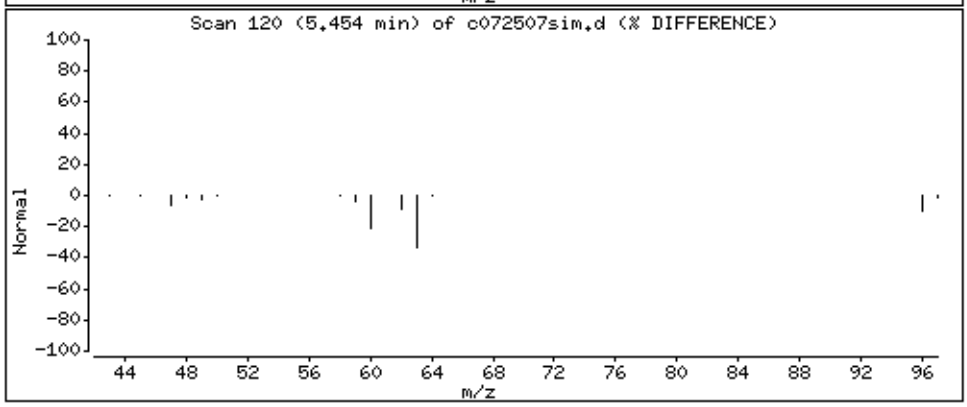












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

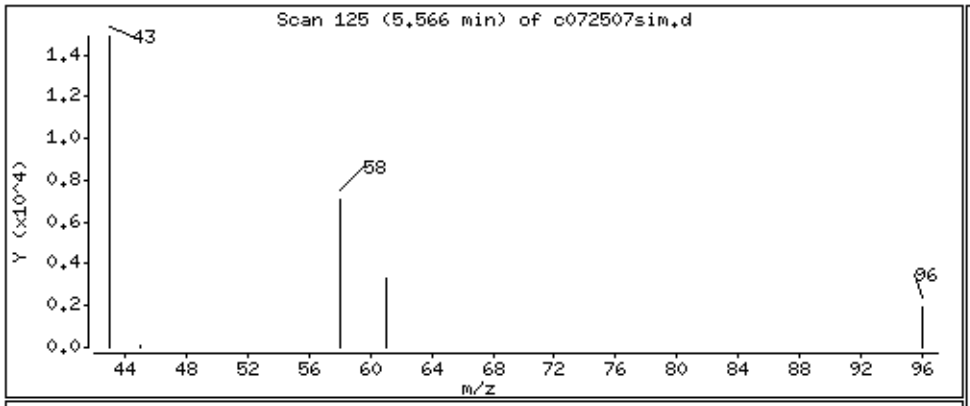
Operator: gm

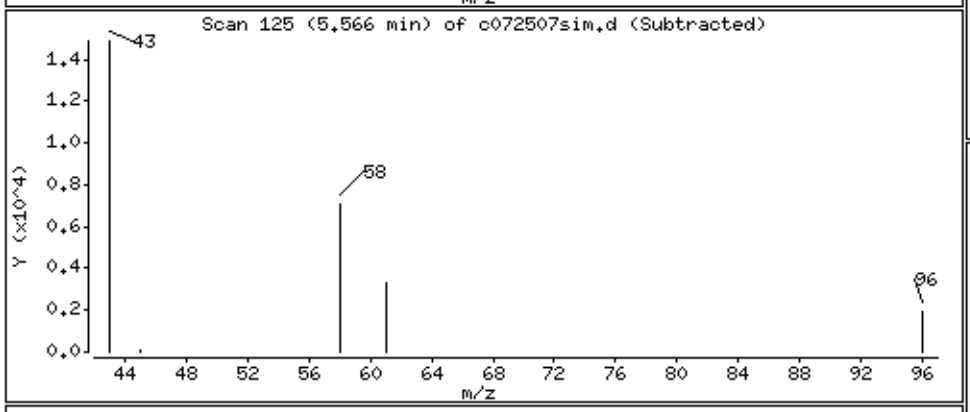
Column phase: DB-5.625

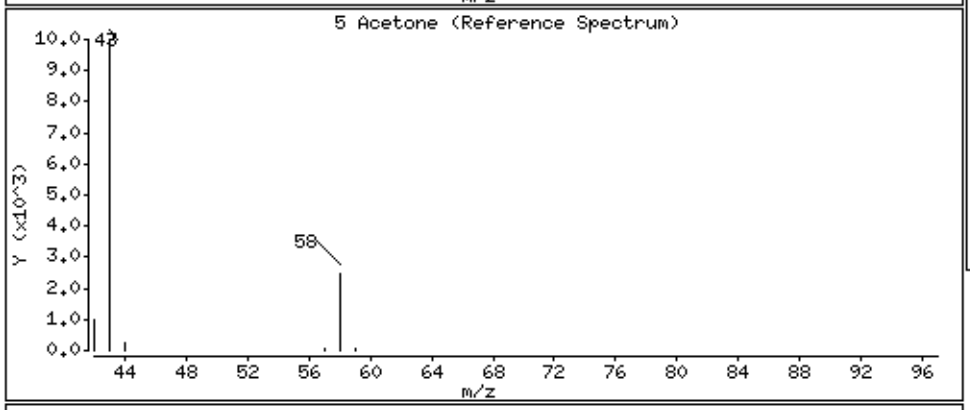
Column diameter: 0.25

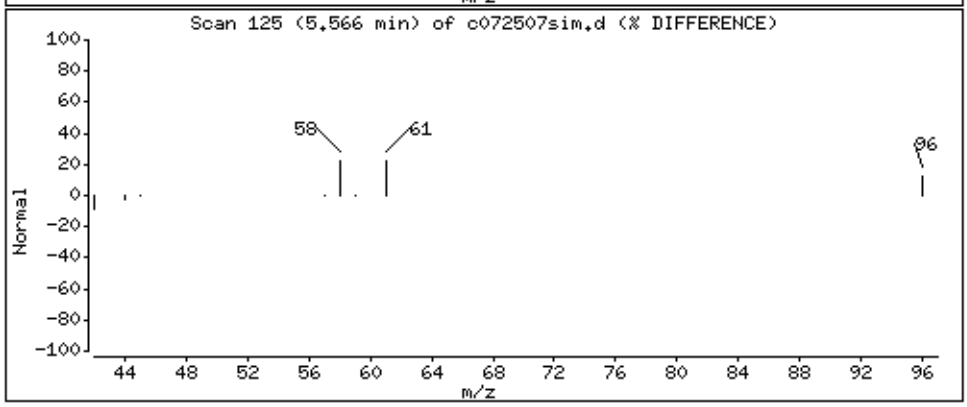
5 Acetone

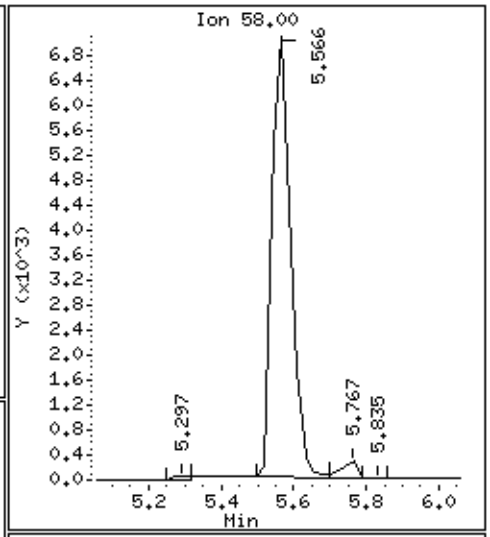
Concentration: 7.65873 ug

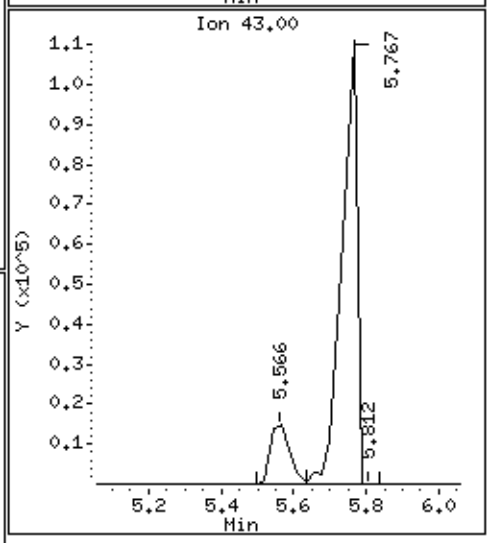












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

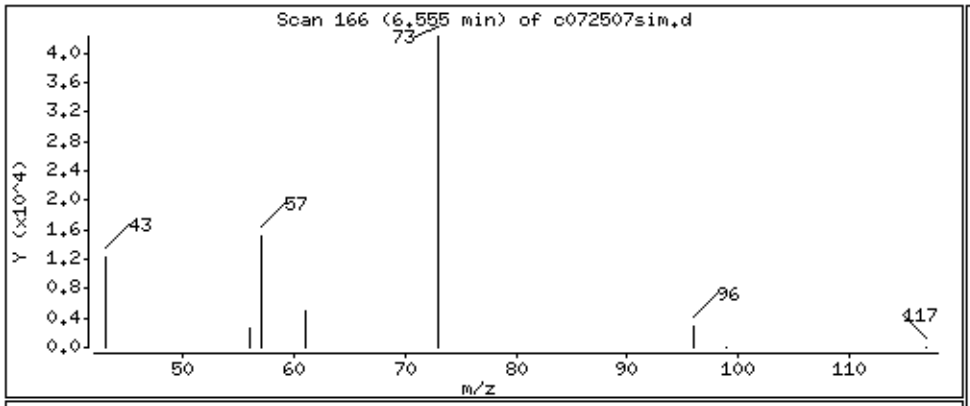
Operator: gm

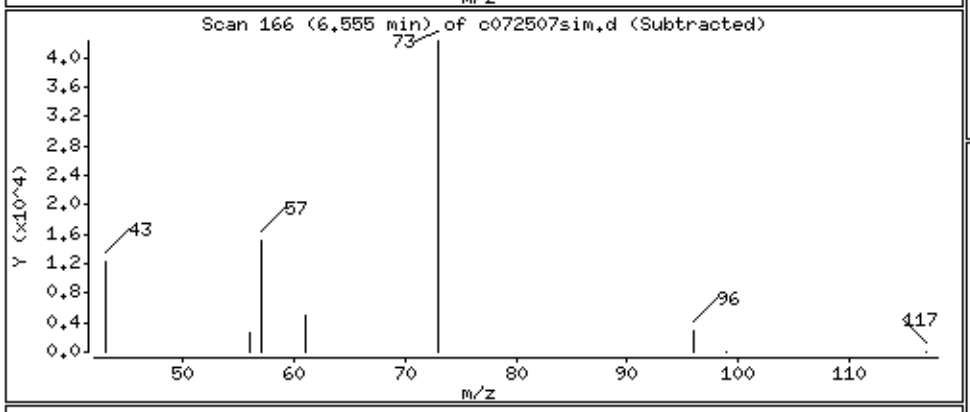
Column phase: DB-5.625

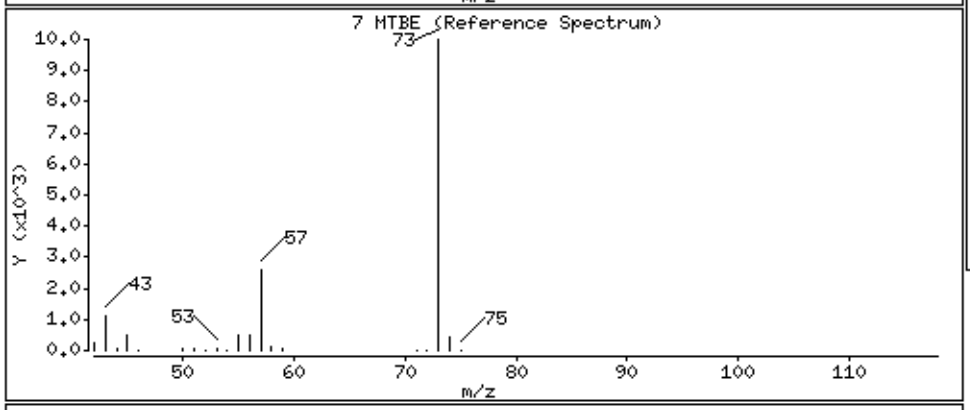
Column diameter: 0.25

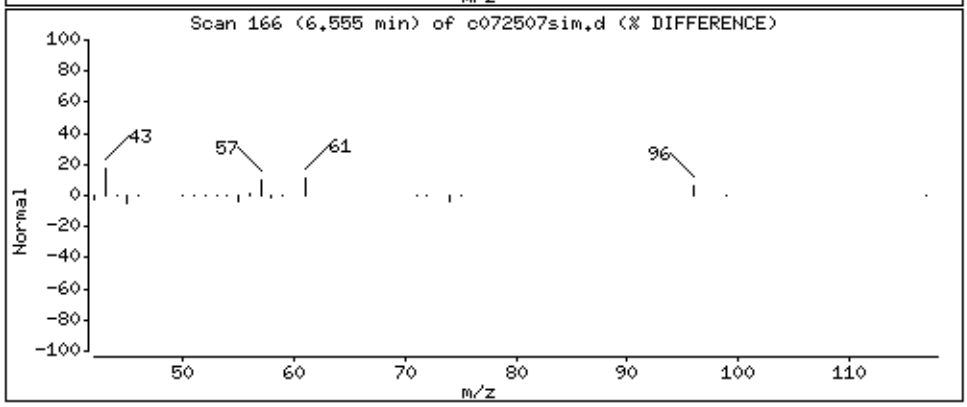
7 MTBE

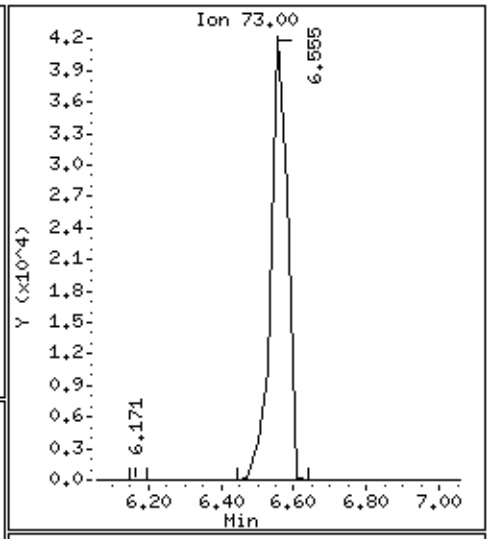
Concentration: 9.39553 ug

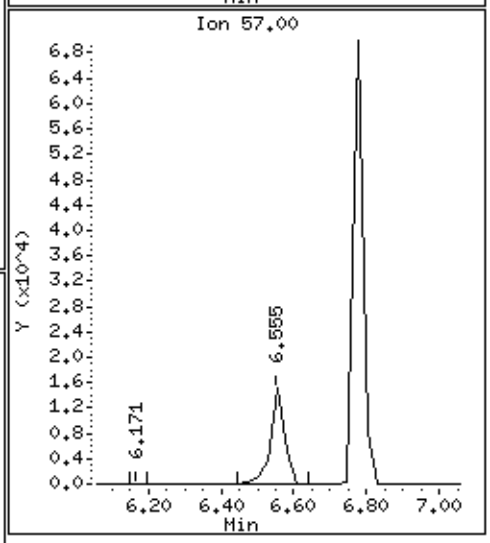












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

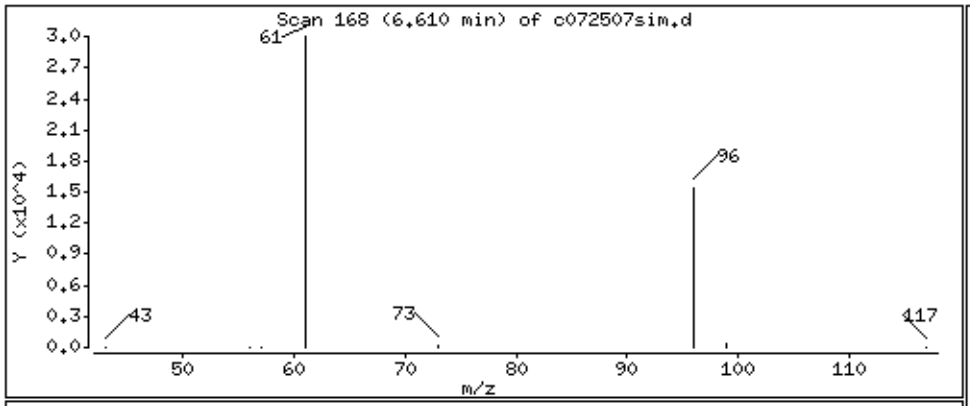
Operator: gm

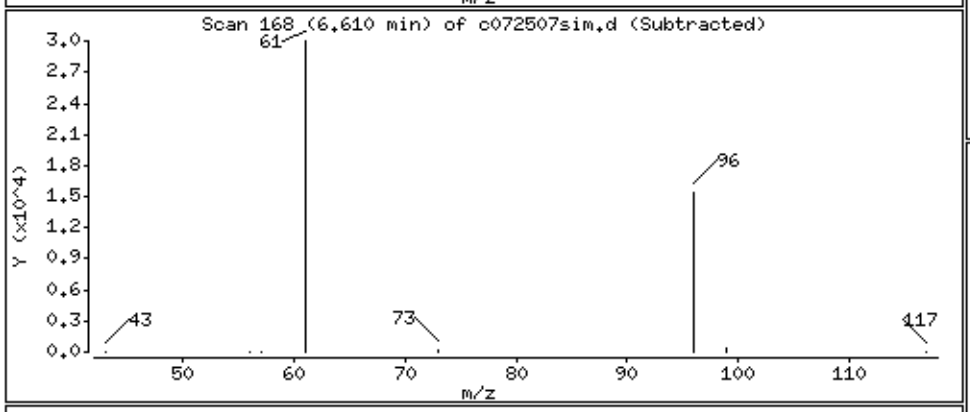
Column phase: DB-5.625

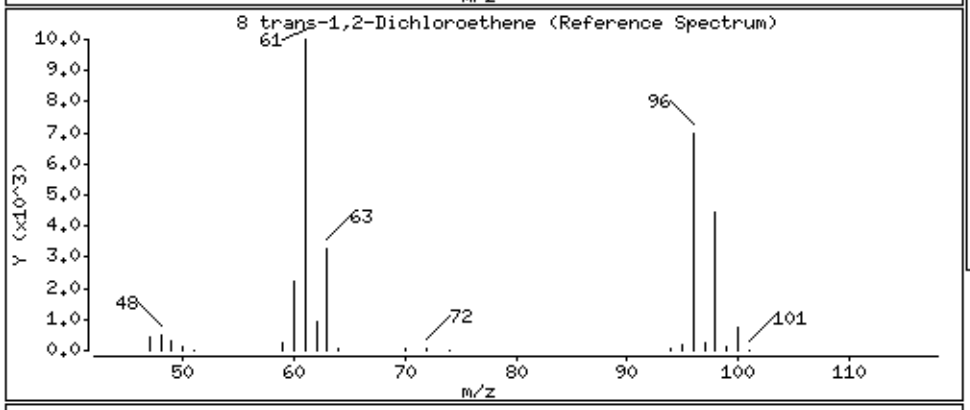
Column diameter: 0.25

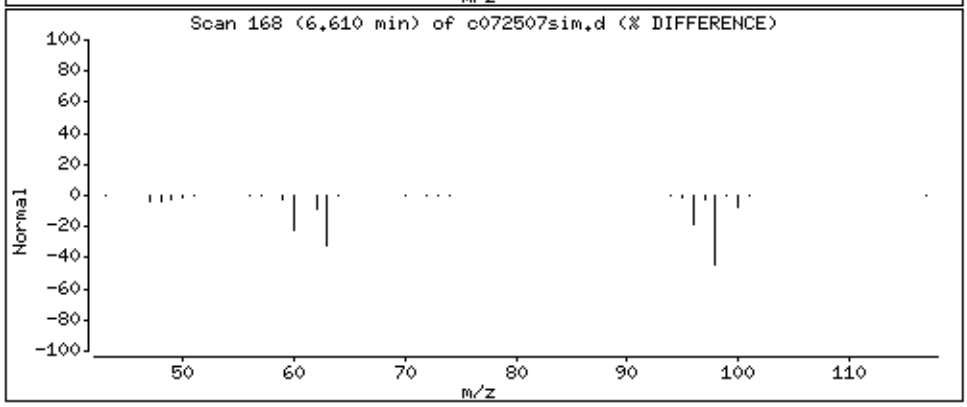
8 trans-1,2-Dichloroethene

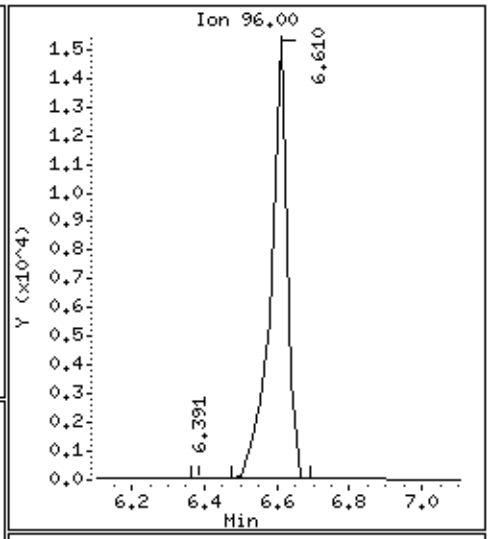
Concentration: 8.92642 ug

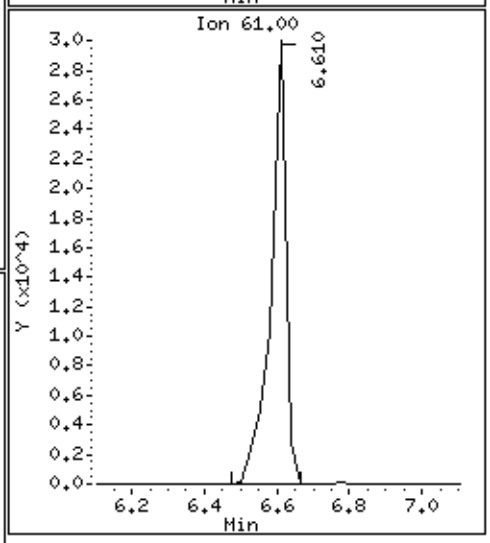












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

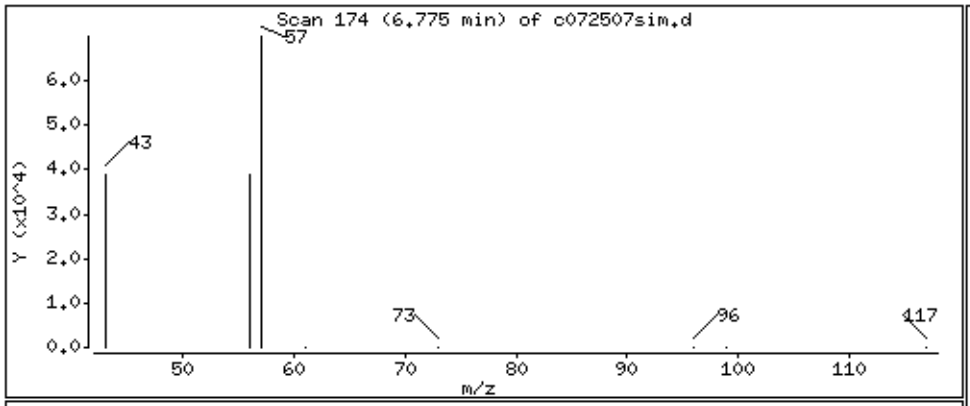
Operator: gm

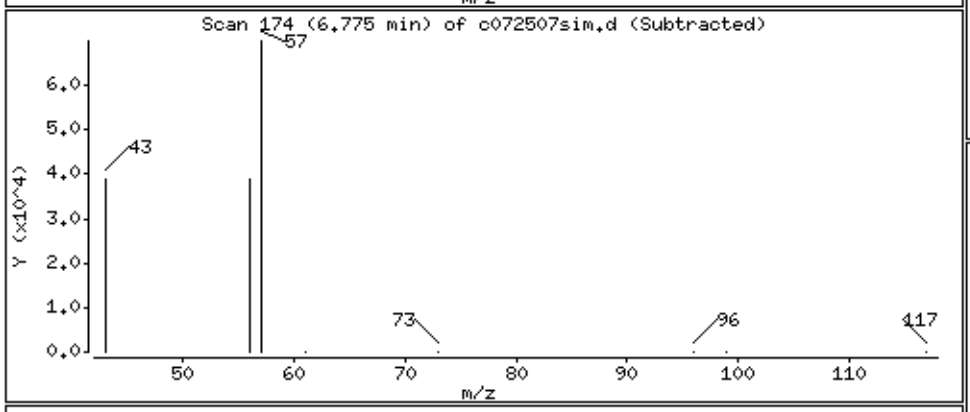
Column phase: DB-5.625

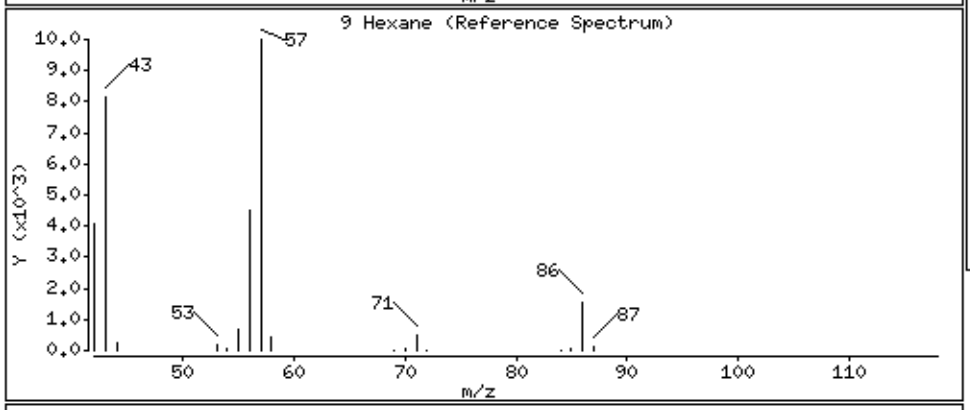
Column diameter: 0.25

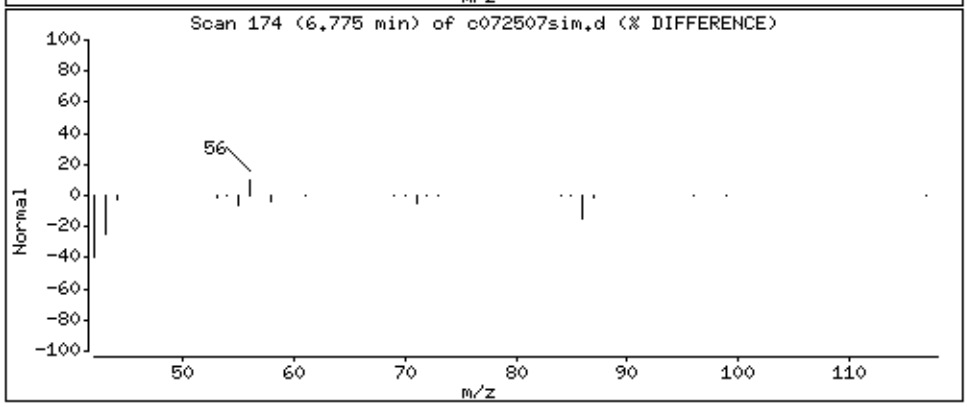
9 Hexane

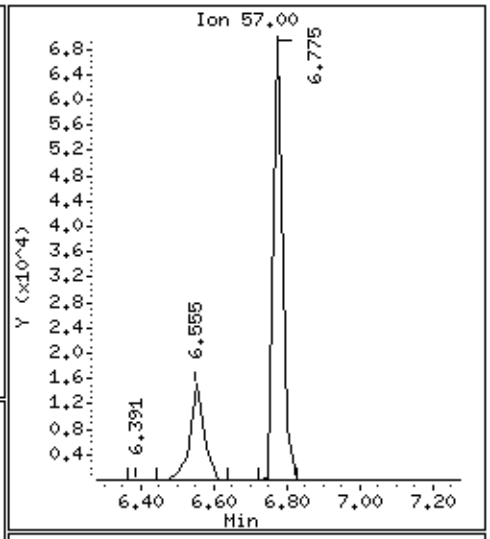
Concentration: 9.37332 ug

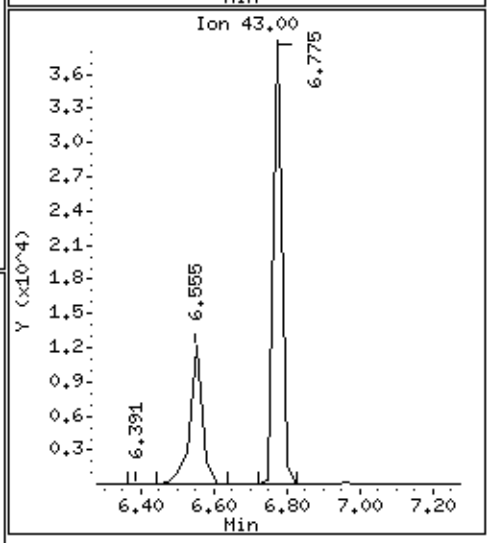












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

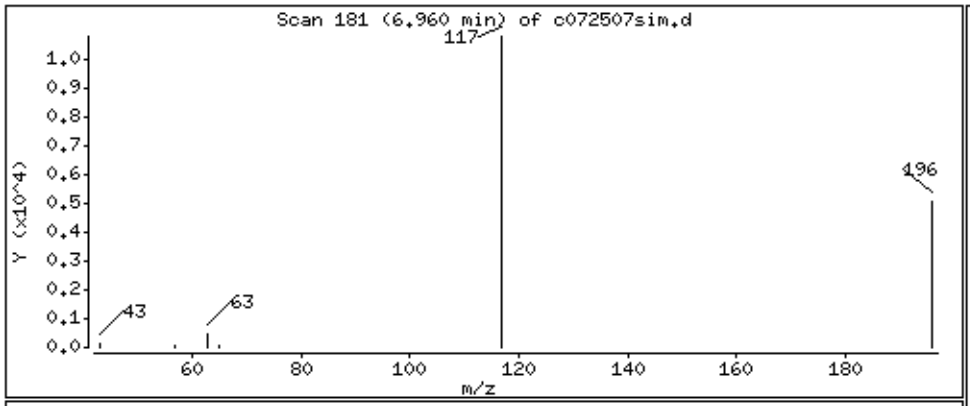
Operator: gm

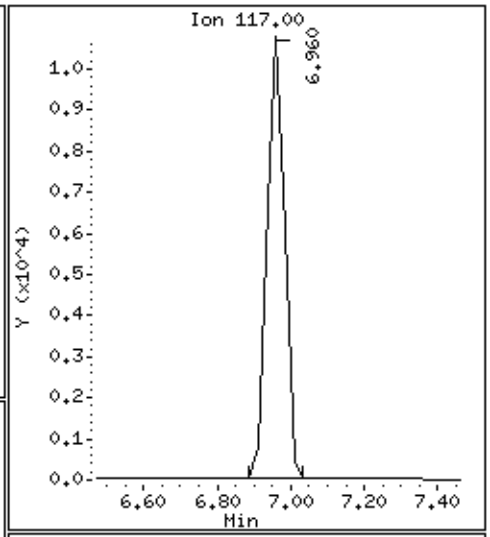
Column phase: DB-5.625

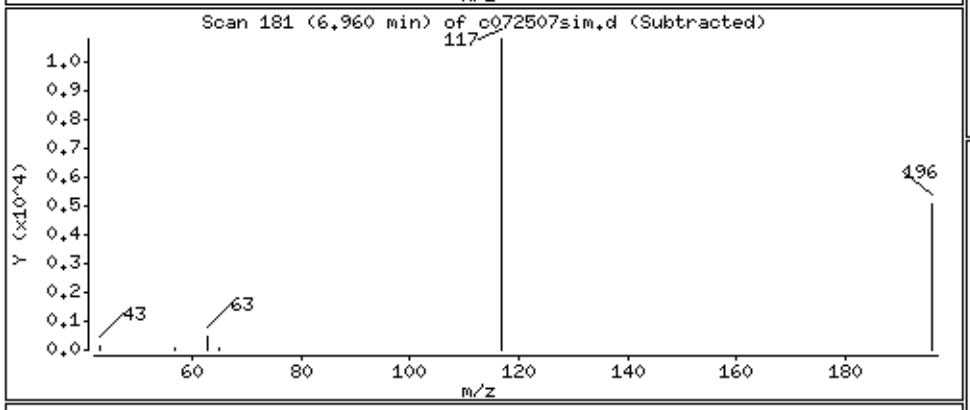
Column diameter: 0.25

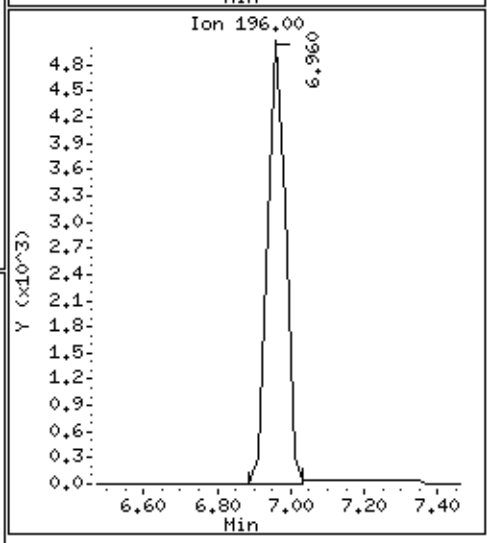
10 Halothane

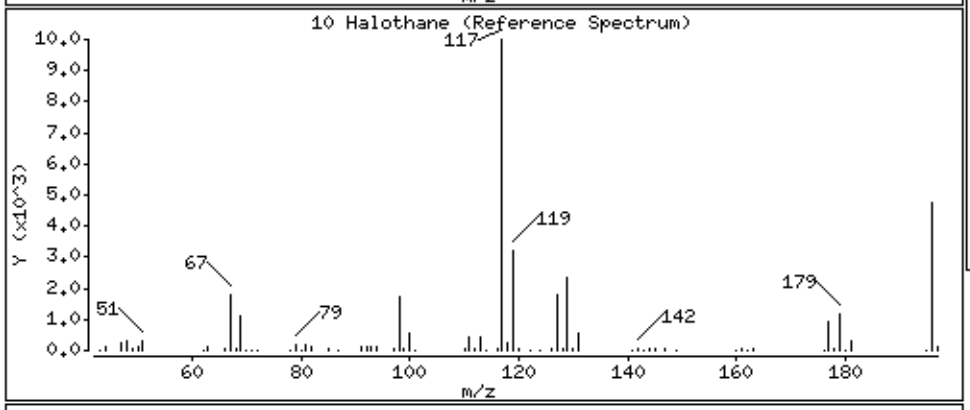
Concentration: 9.74625 ug

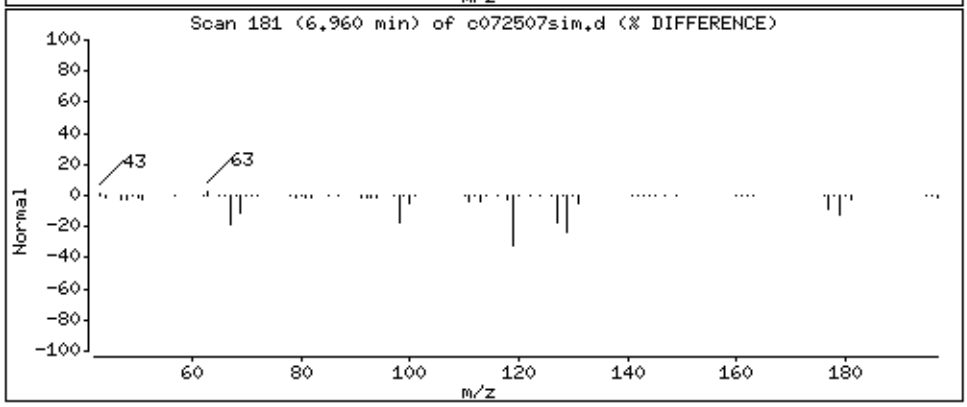












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

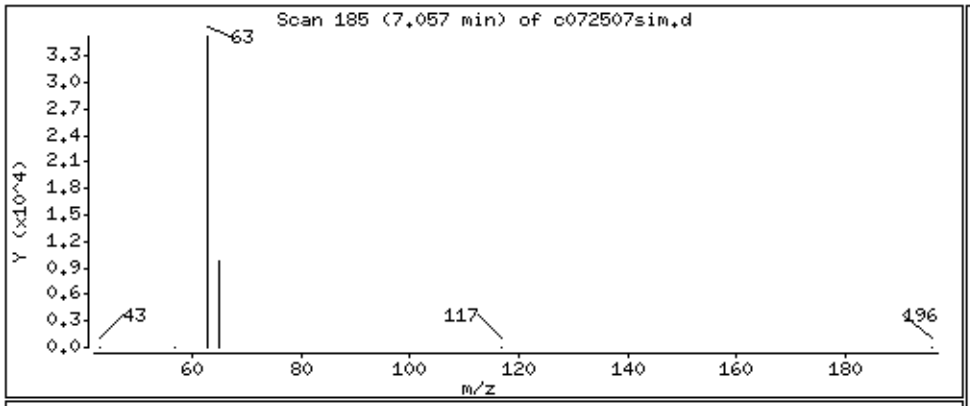
Operator: gm

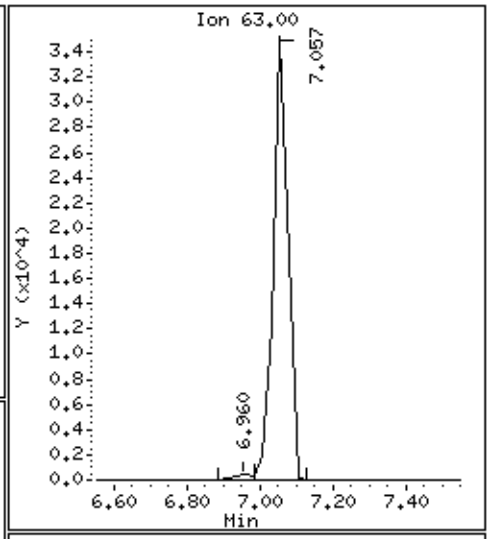
Column phase: DB-5.625

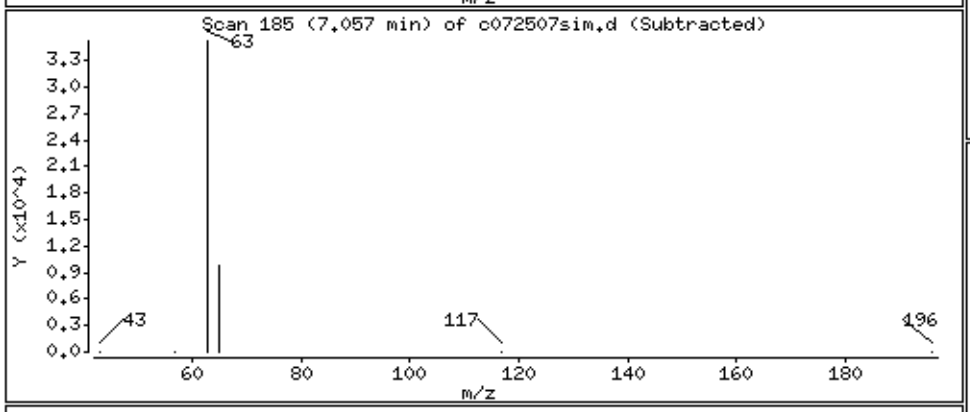
Column diameter: 0.25

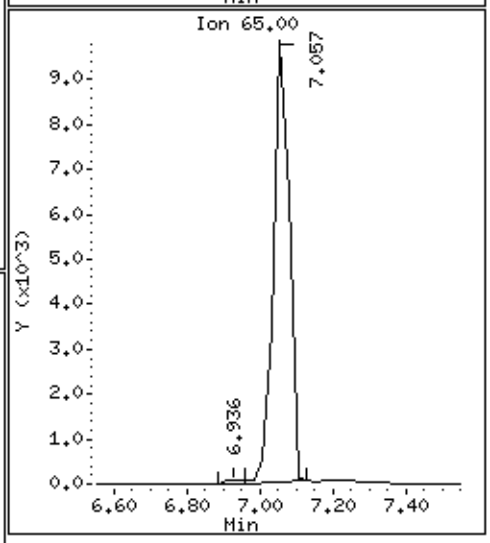
11 1,1-Dichloroethane-SPCC

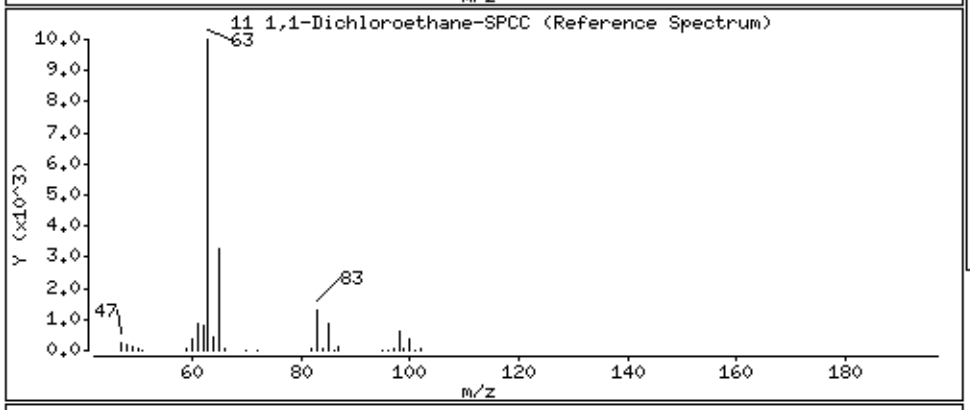
Concentration: 9.05898 ug

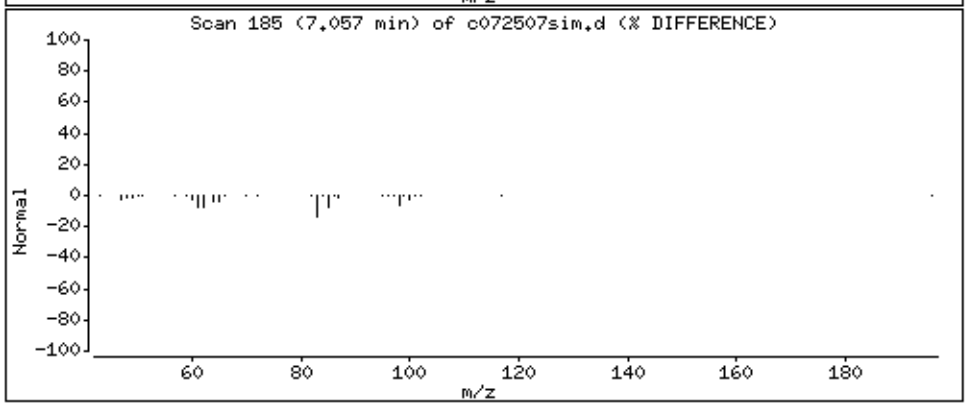












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

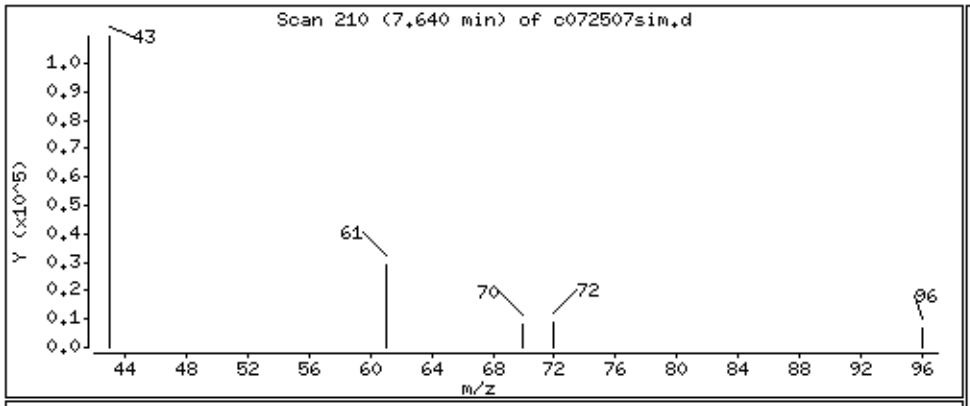
Operator: gm

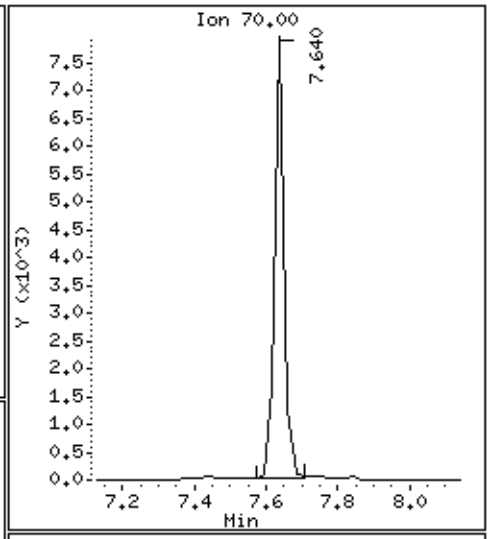
Column phase: DB-5.625

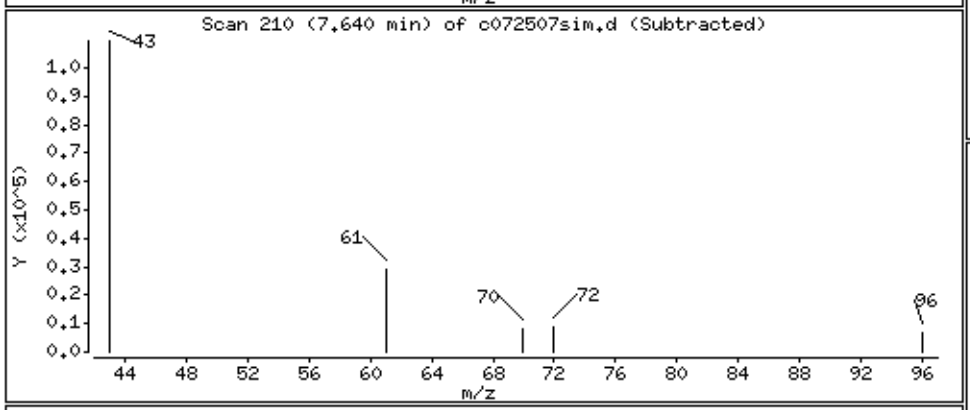
Column diameter: 0.25

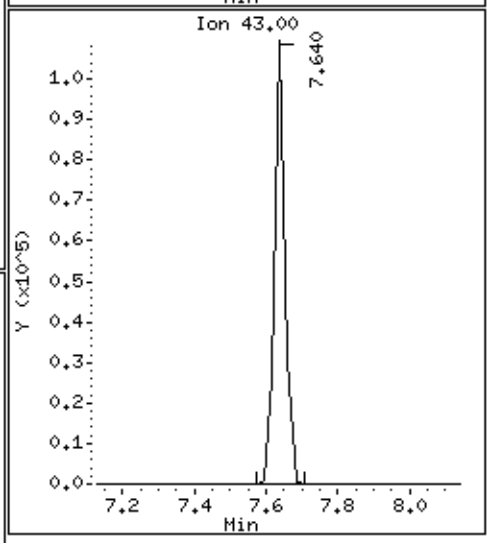
12 Ethyl Acetate

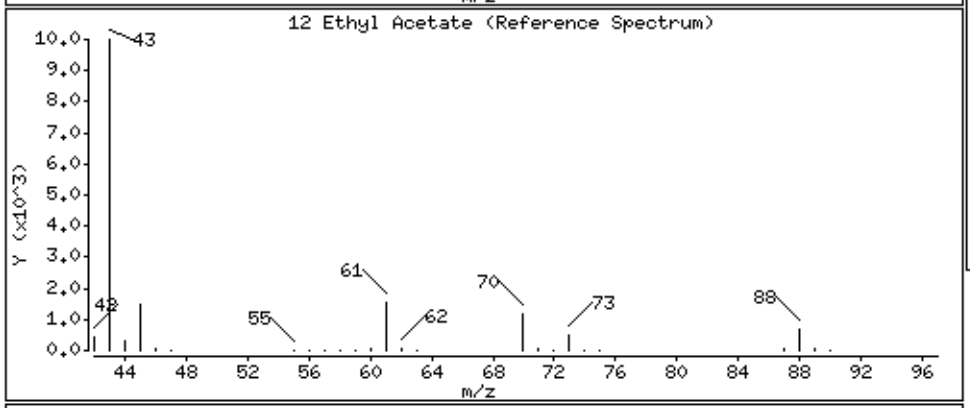
Concentration: 9.22871 ug

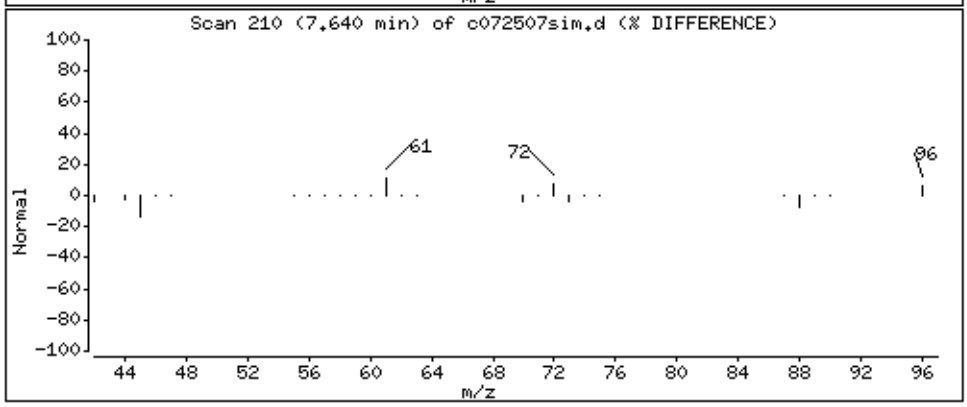












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

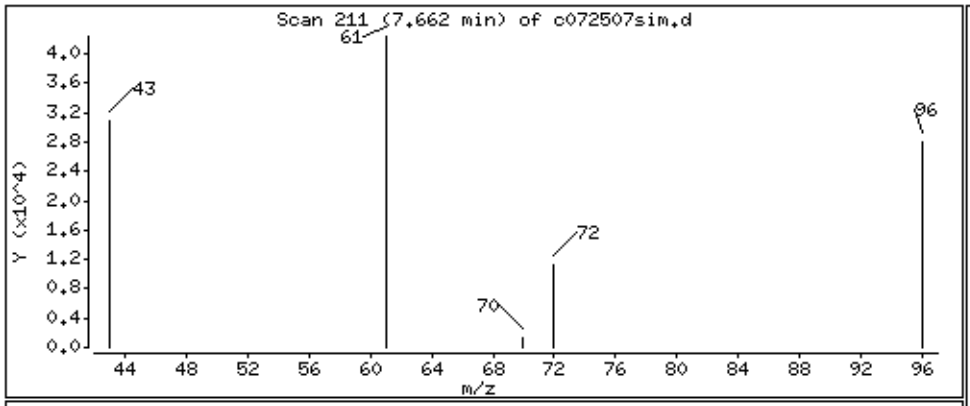
Operator: gm

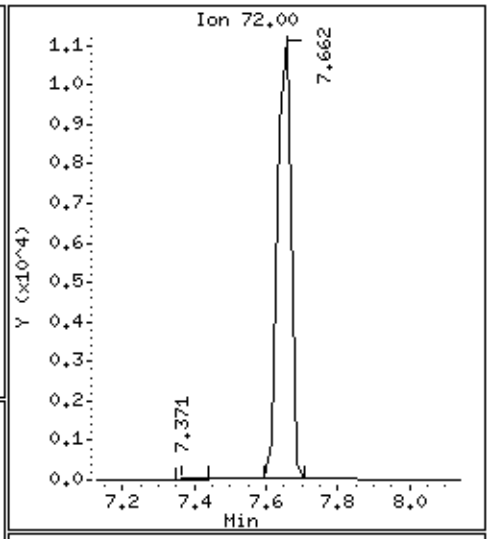
Column phase: DB-5.625

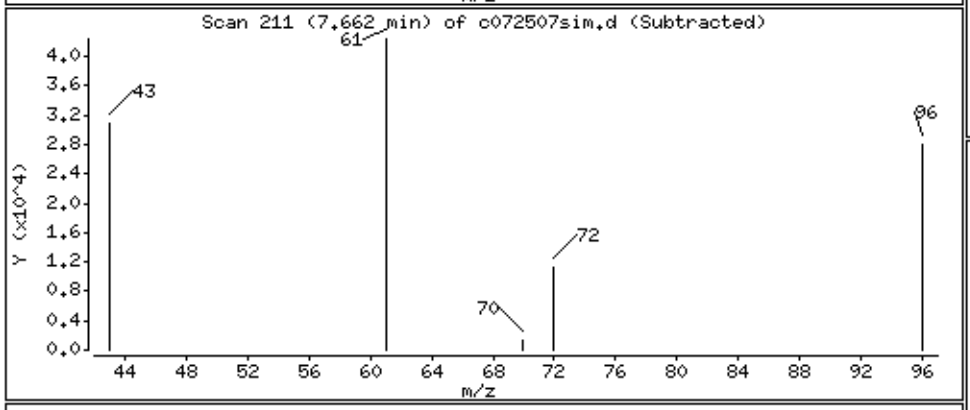
Column diameter: 0.25

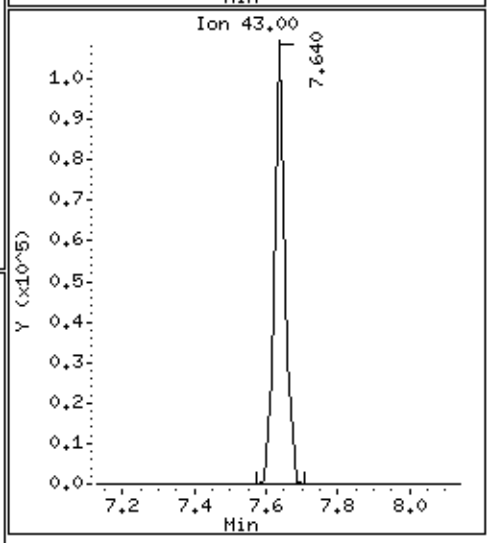
13 2-Butanone

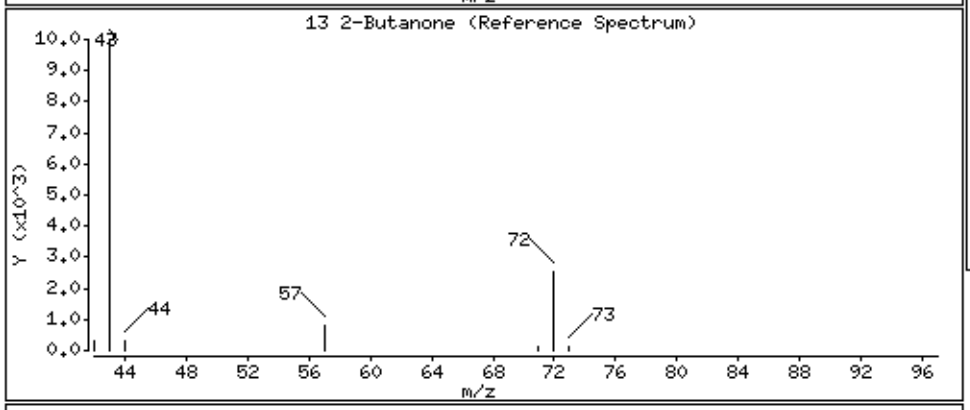
Concentration: 8.26731 ug

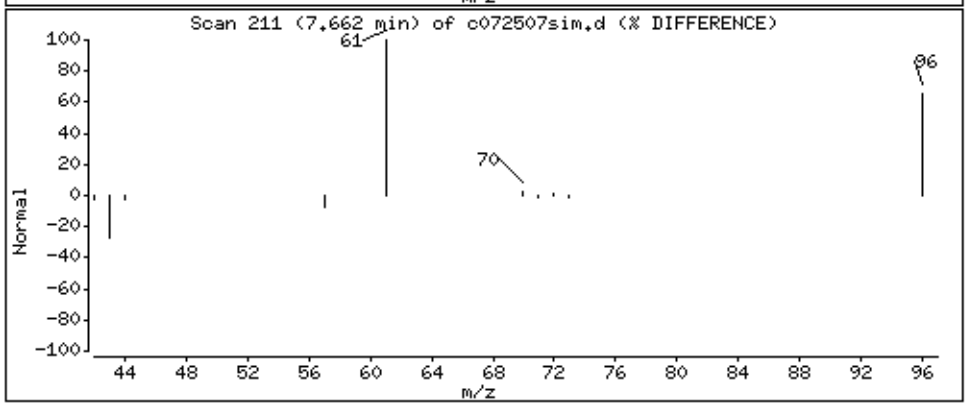












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

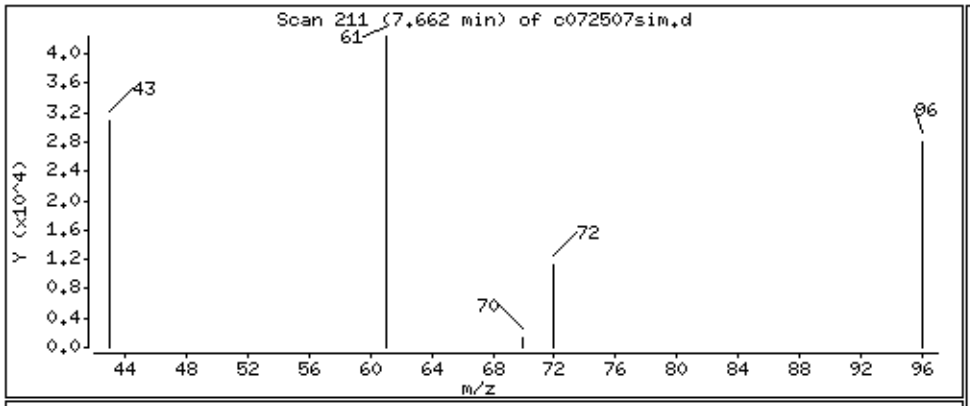
Operator: gm

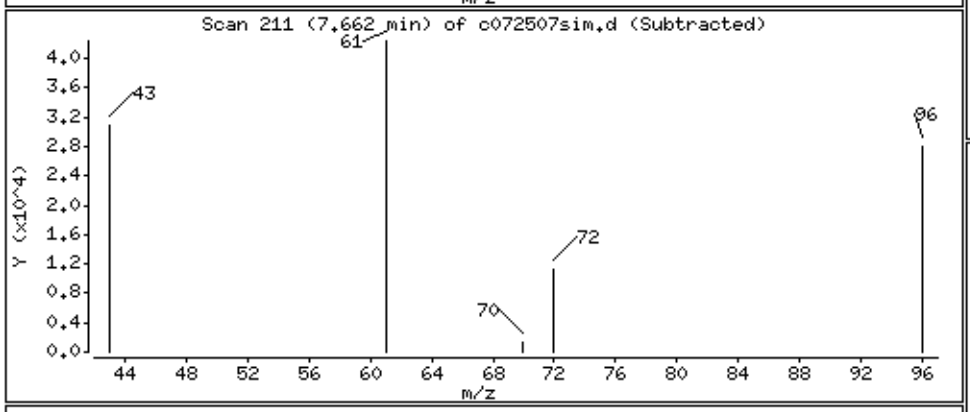
Column phase: DB-5.625

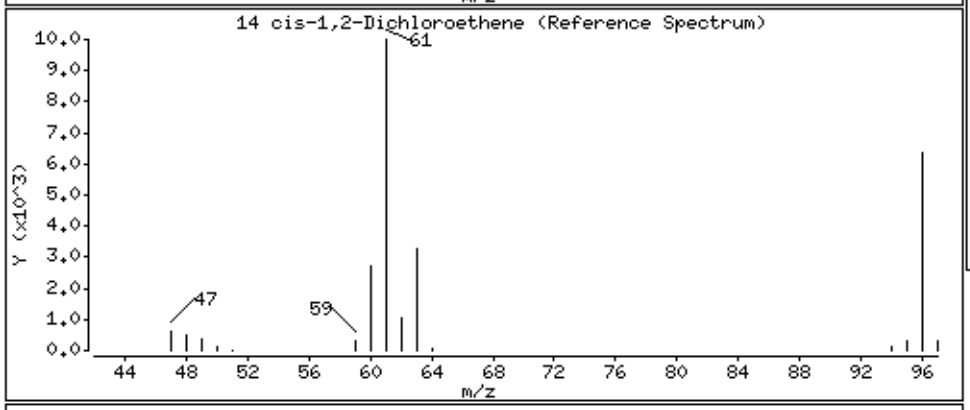
Column diameter: 0.25

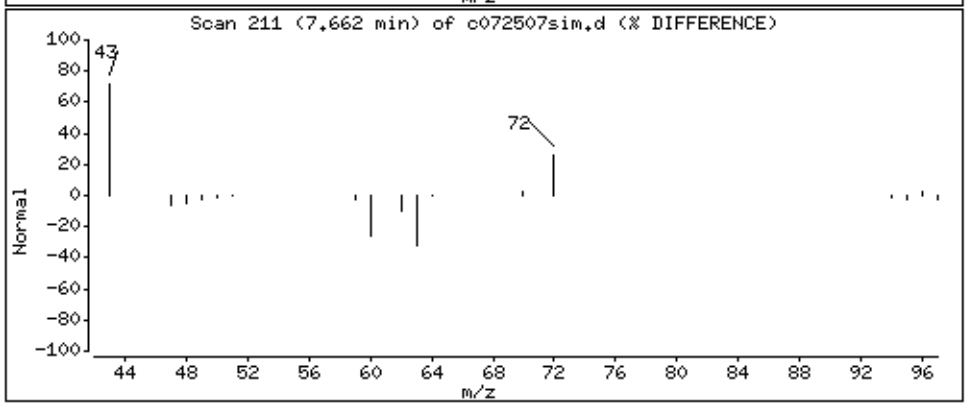
14 cis-1,2-Dichloroethene

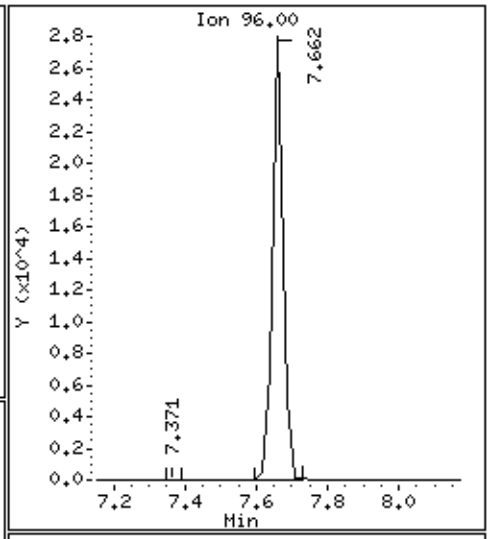
Concentration: 9.36364 ug

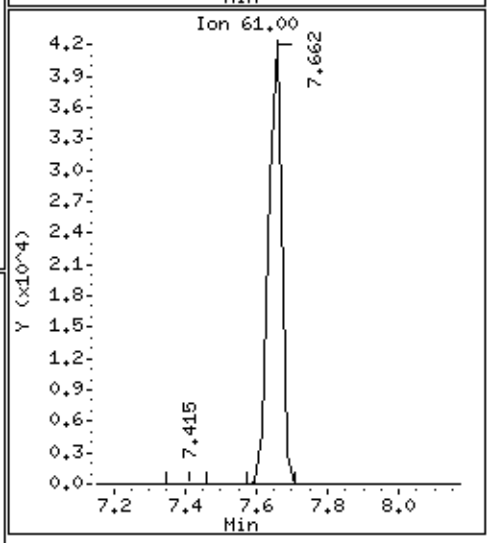












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

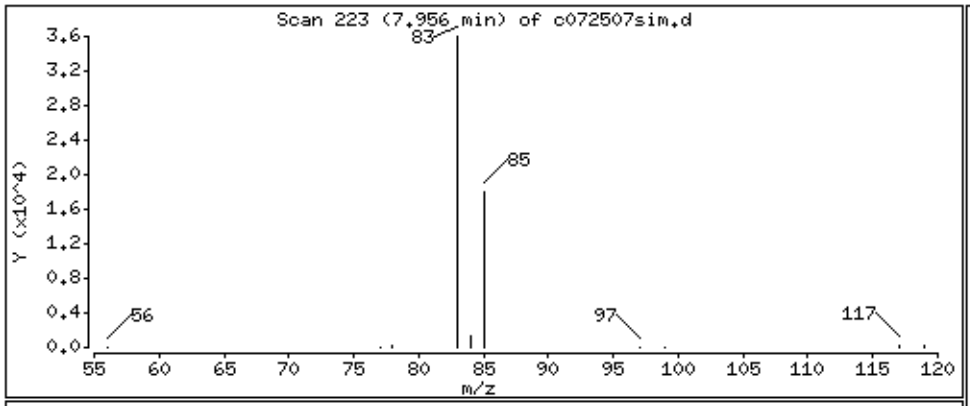
Operator: gm

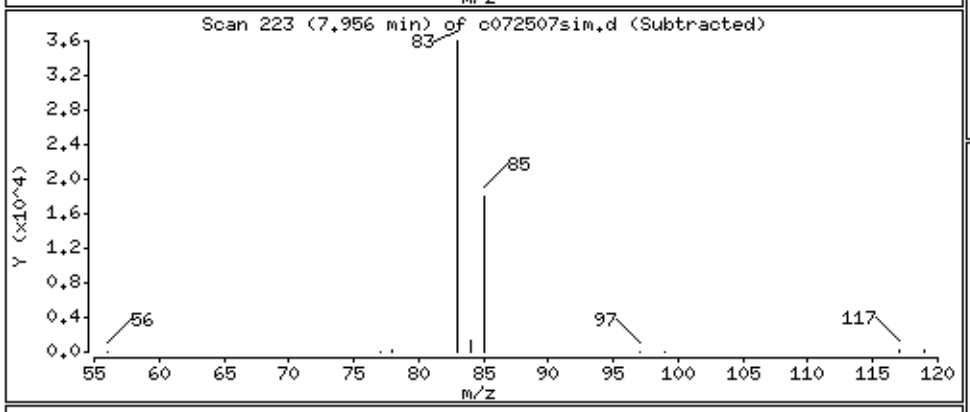
Column phase: DB-5.625

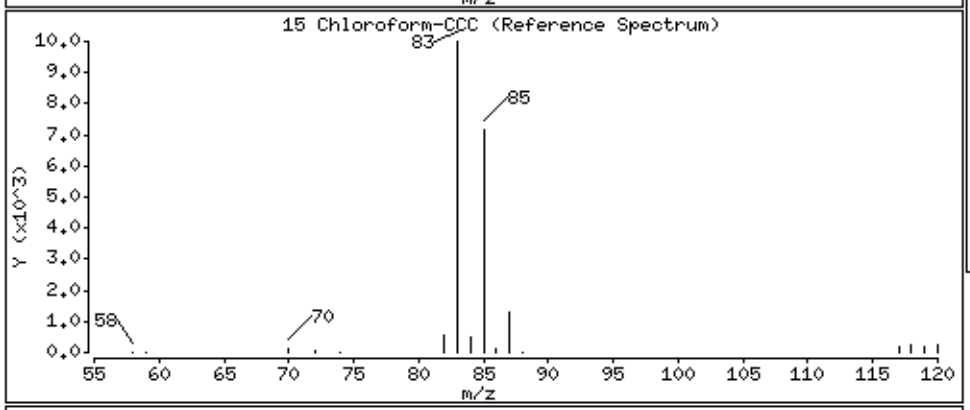
Column diameter: 0.25

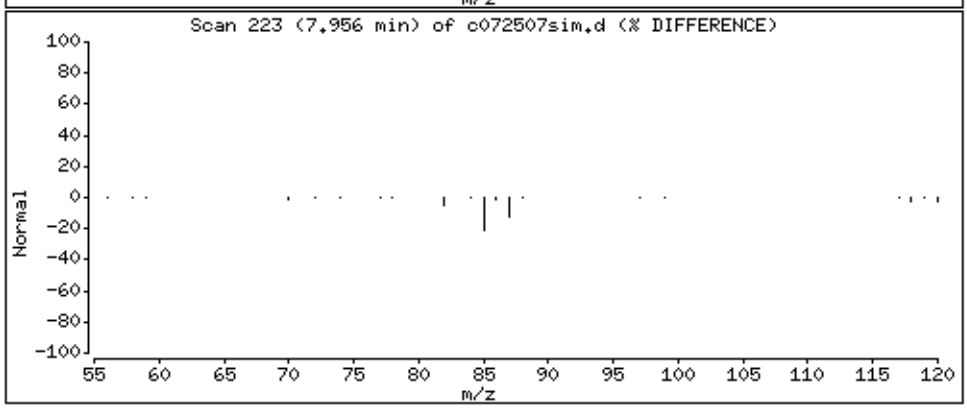
15 Chloroform-CCC

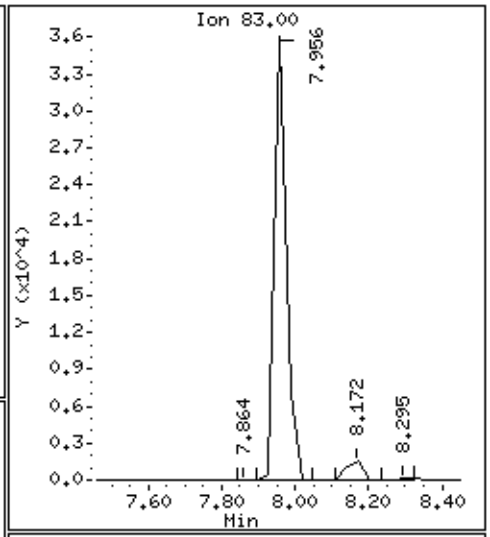
Concentration: 9.50213 ug

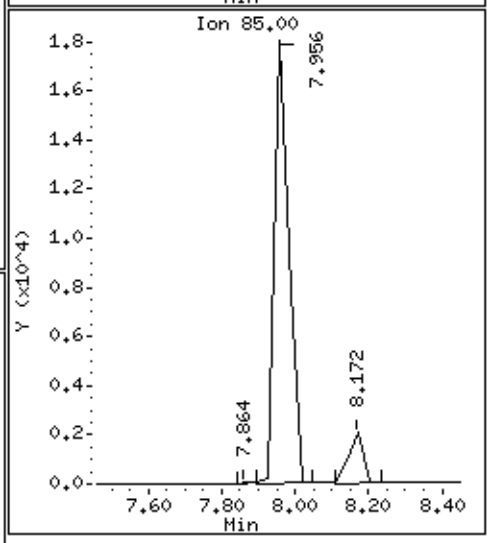












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

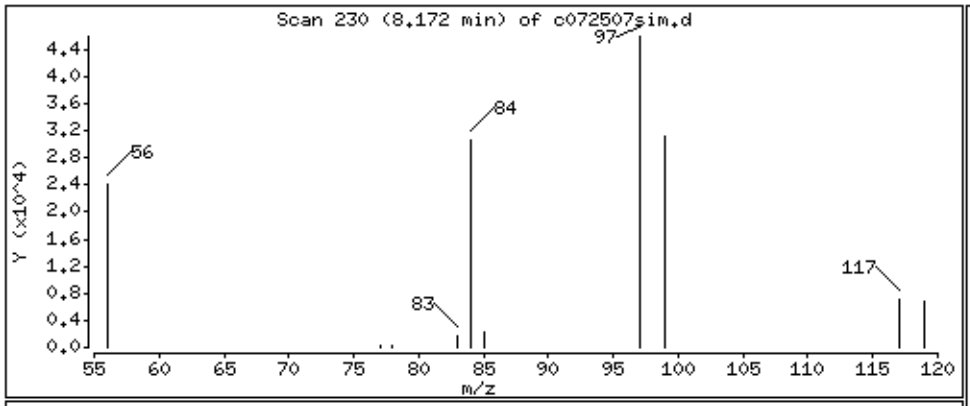
Operator: gm

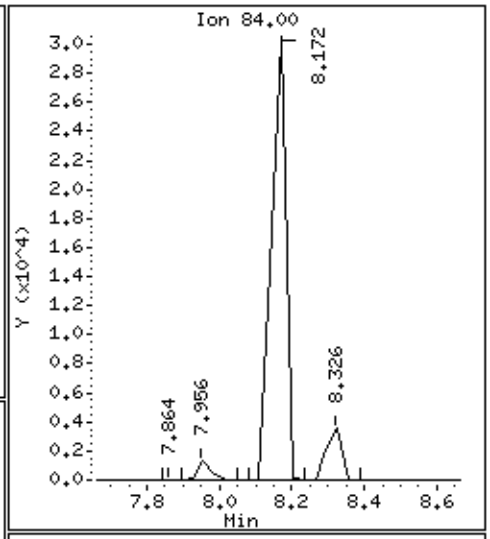
Column phase: DB-5.625

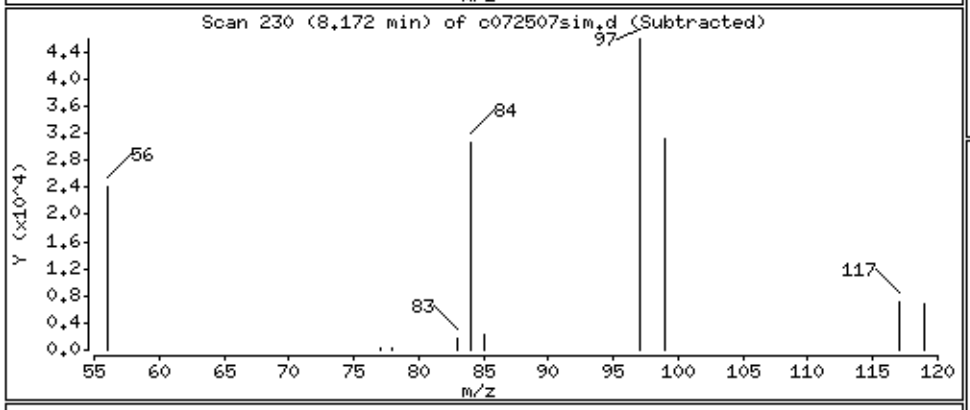
Column diameter: 0.25

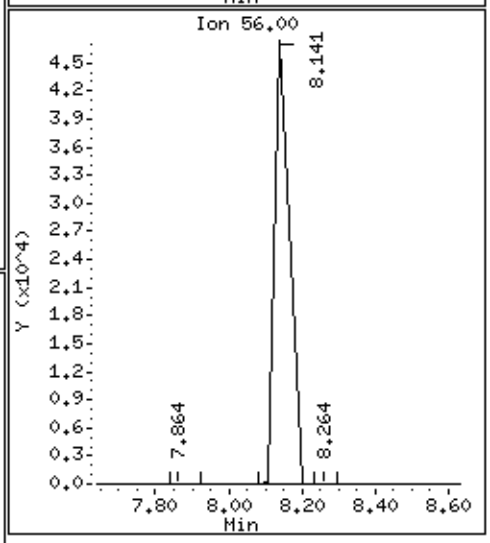
16 Cyclohexane

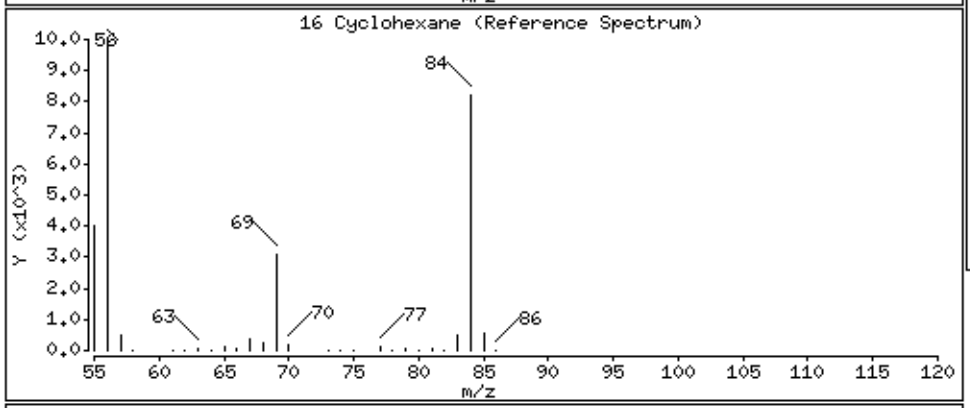
Concentration: 9.39367 ug

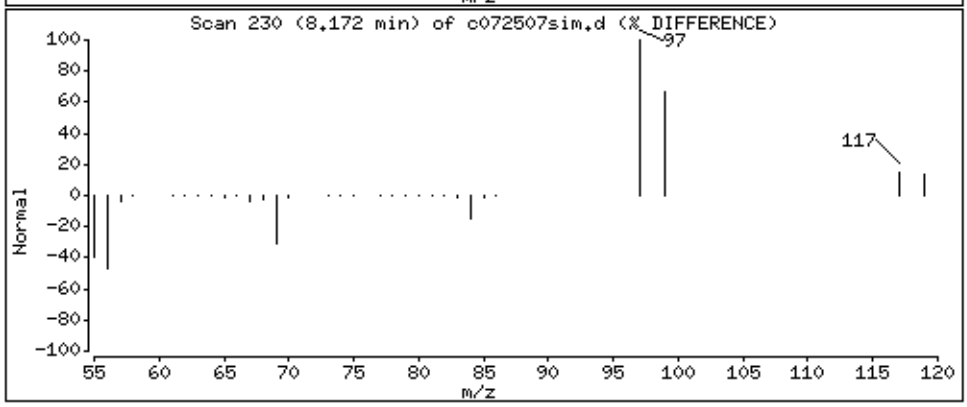












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

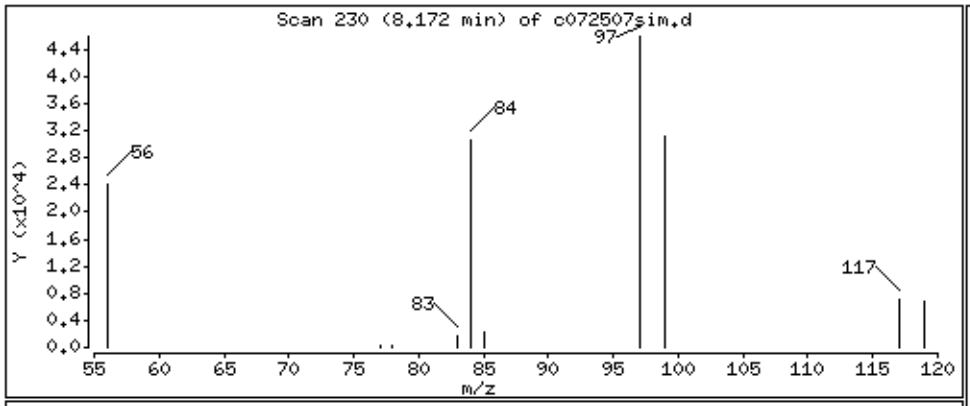
Operator: gm

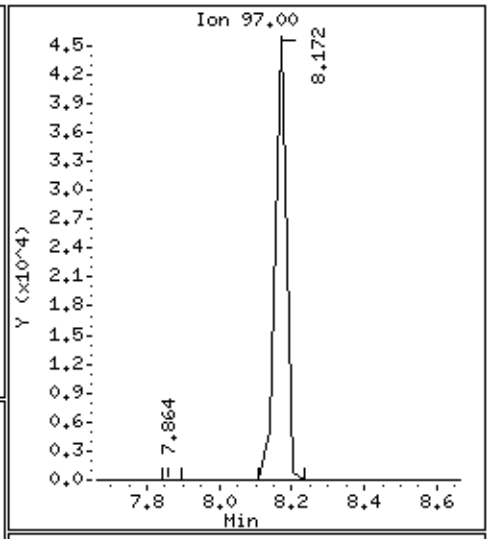
Column phase: DB-5.625

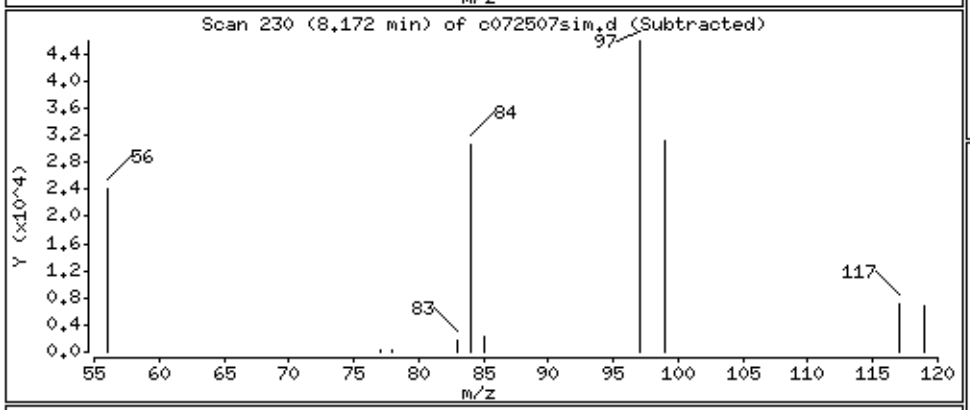
Column diameter: 0.25

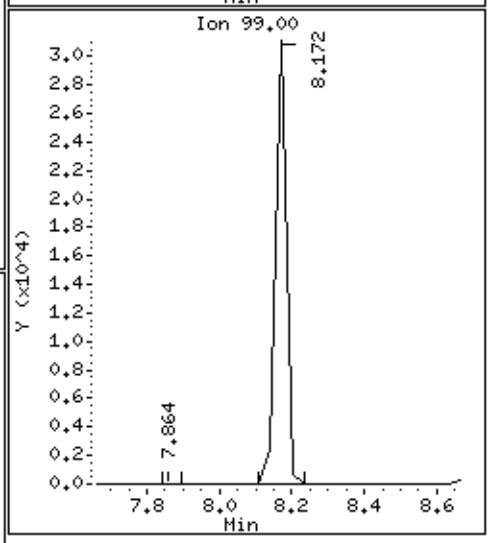
17 1,1,1-Trichloroethane

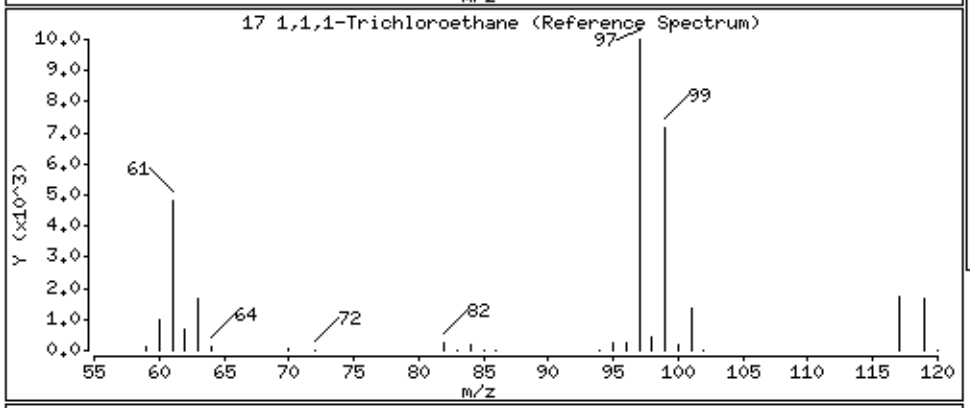
Concentration: 9.94522 ug

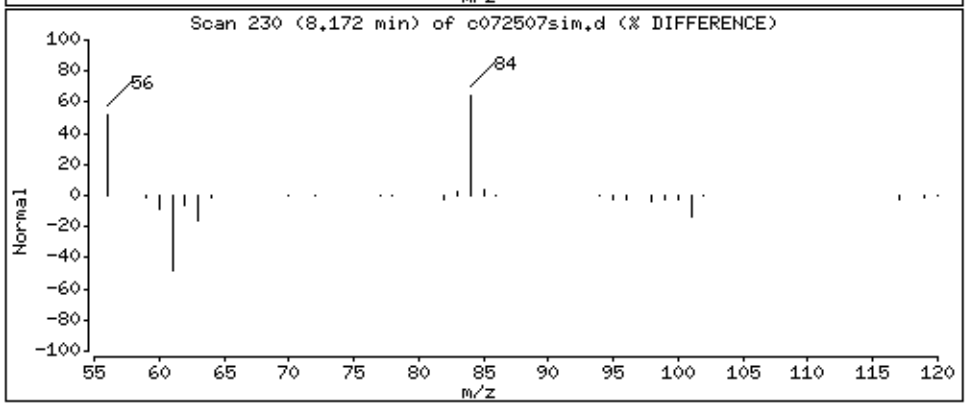












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

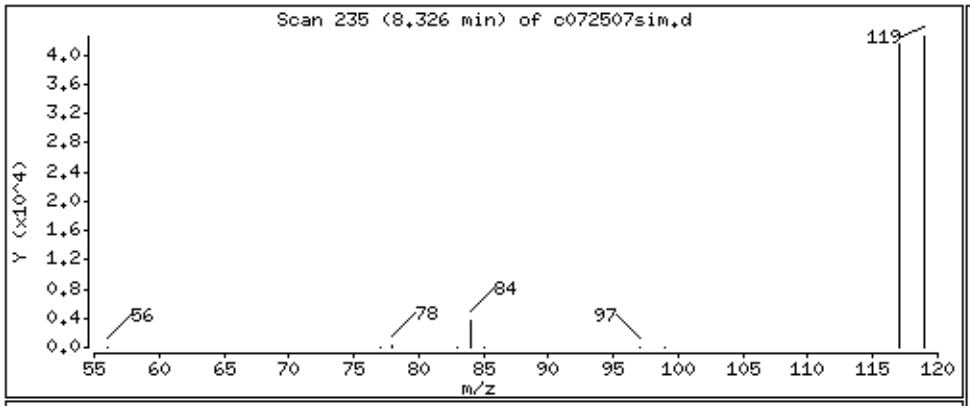
Operator: gm

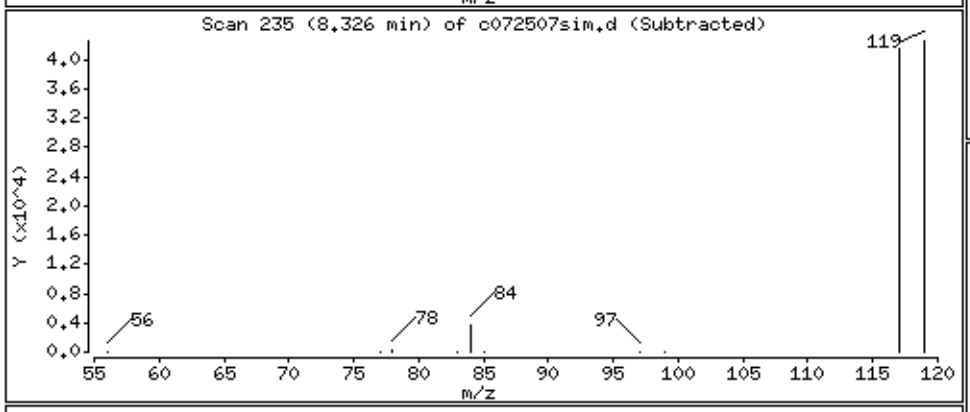
Column phase: DB-5.625

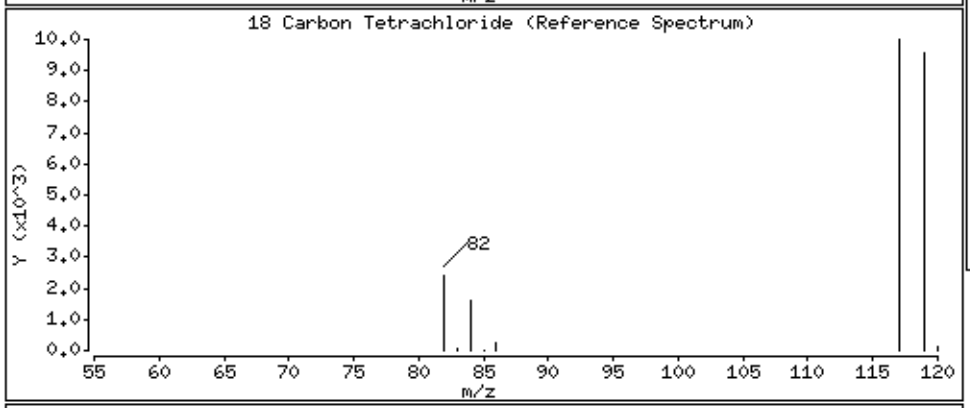
Column diameter: 0.25

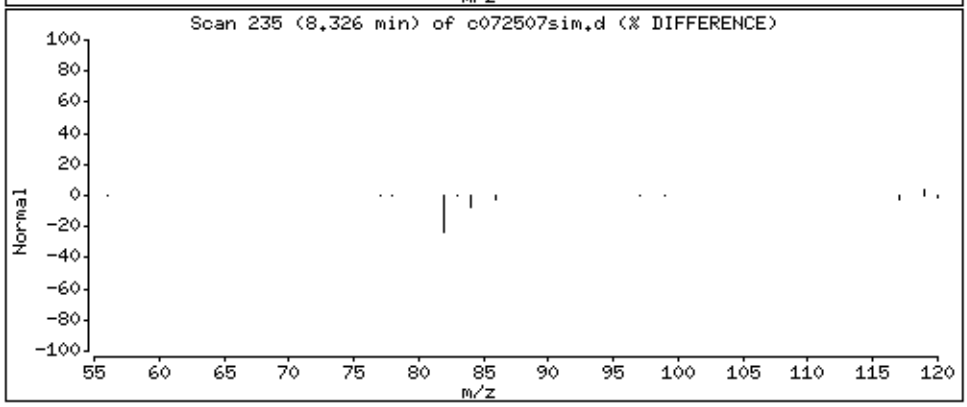
18 Carbon Tetrachloride

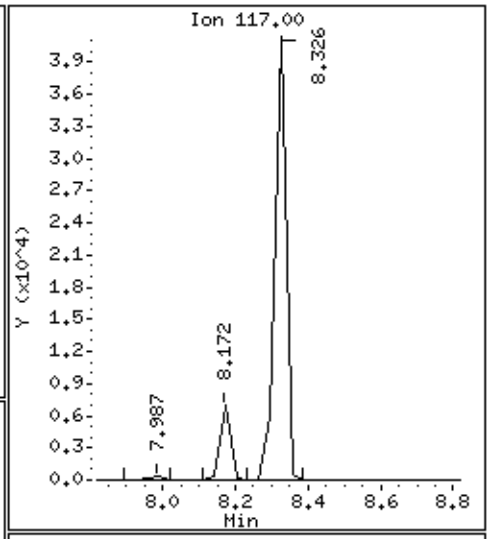
Concentration: 9.71199 ug

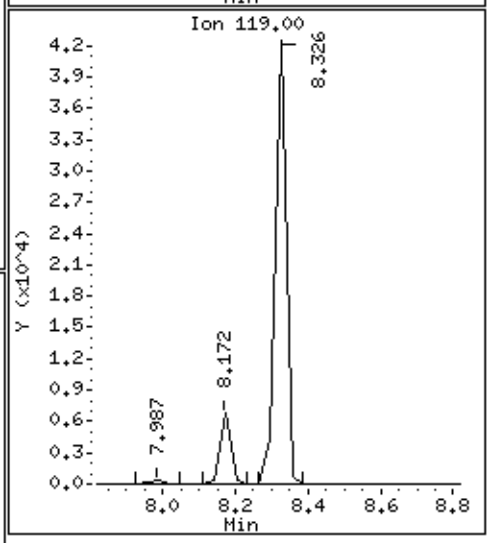












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

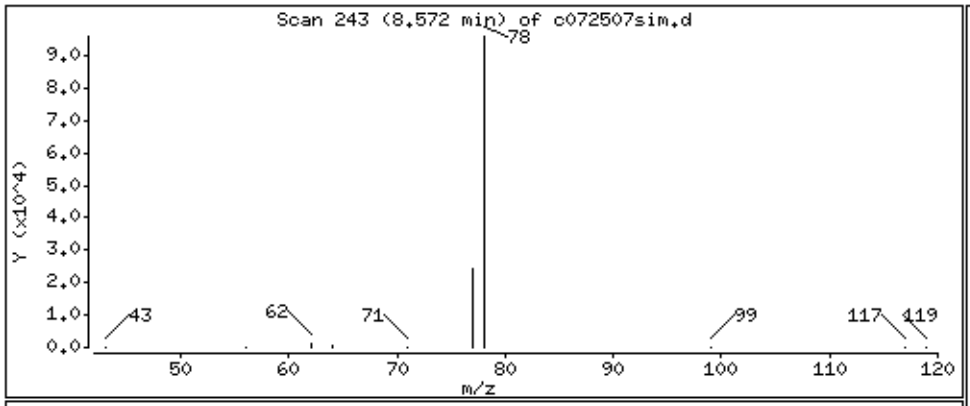
Operator: gm

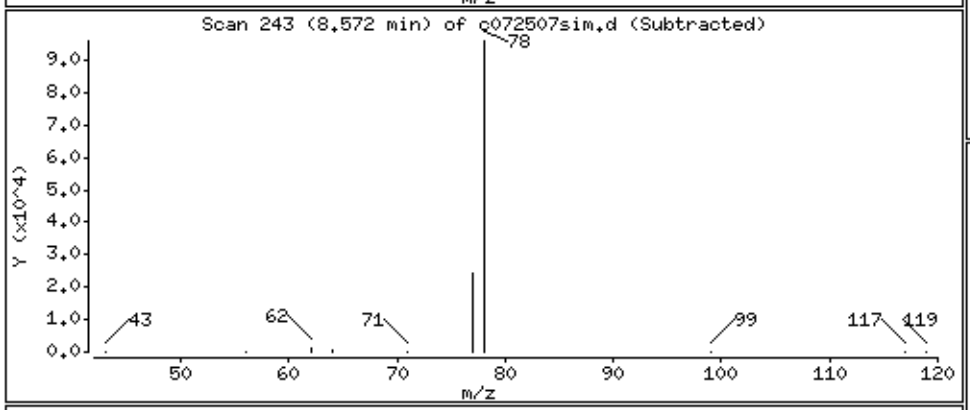
Column phase: DB-5.625

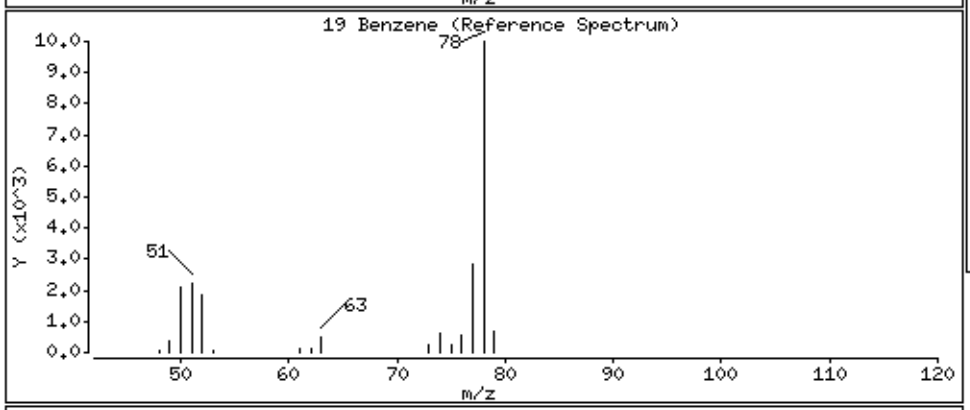
Column diameter: 0.25

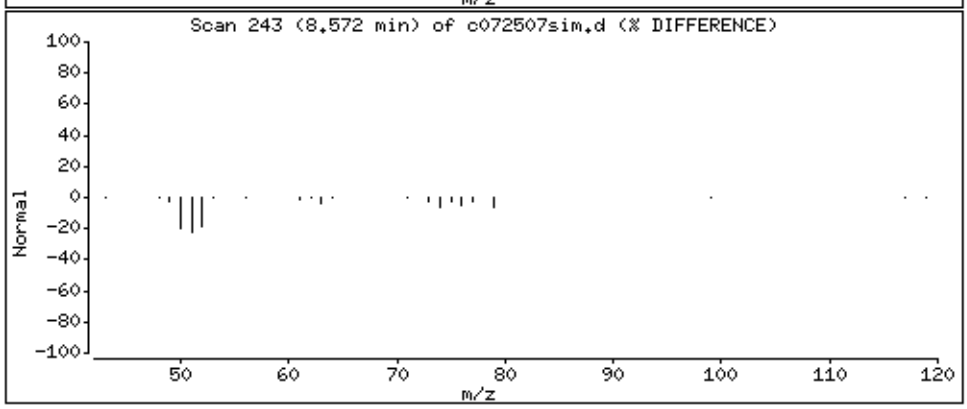
19 Benzene

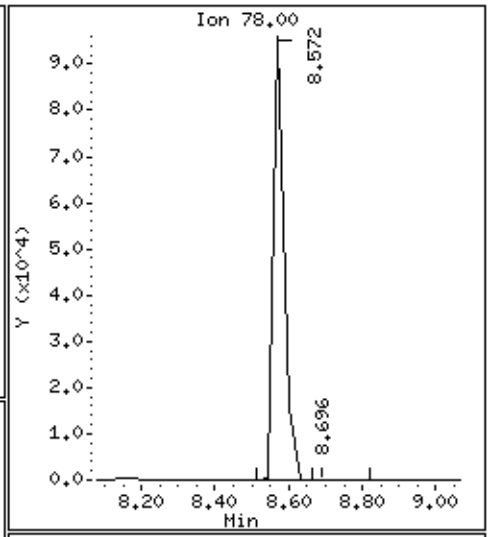
Concentration: 9.57004 ug

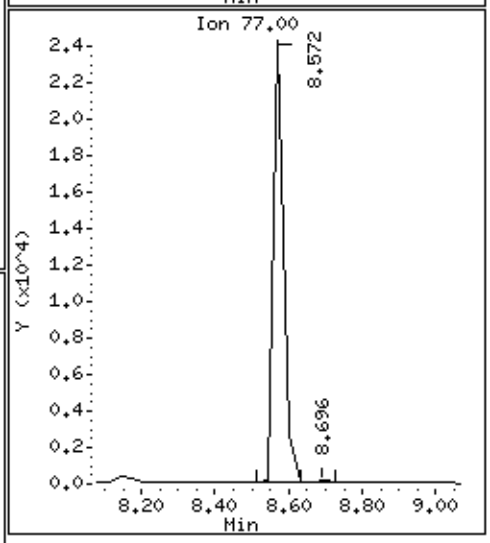












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

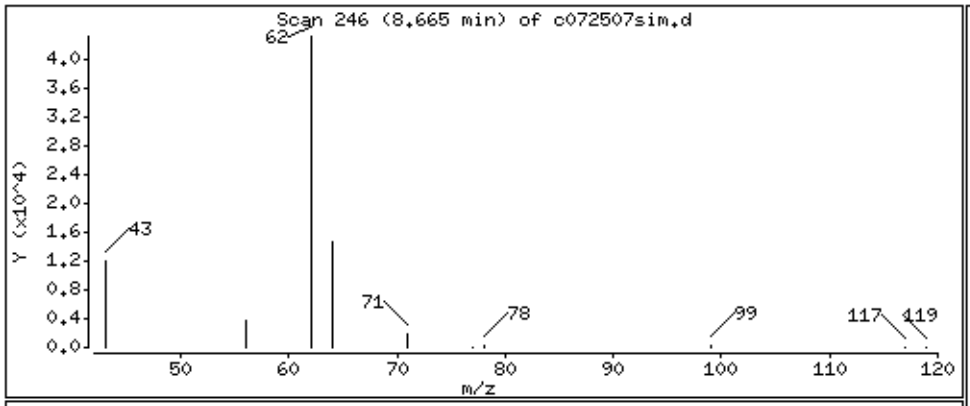
Operator: gm

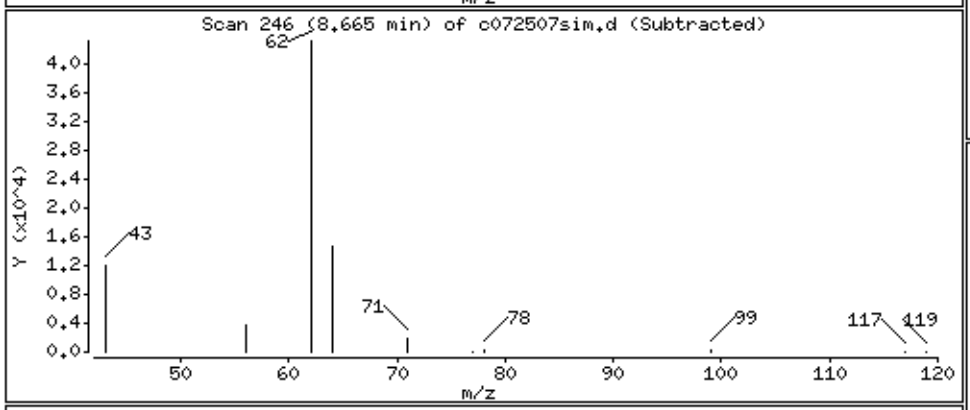
Column phase: DB-5.625

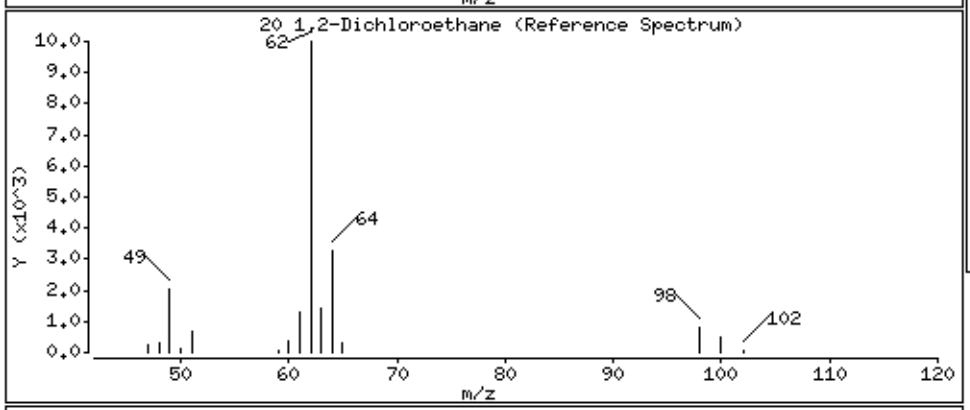
Column diameter: 0.25

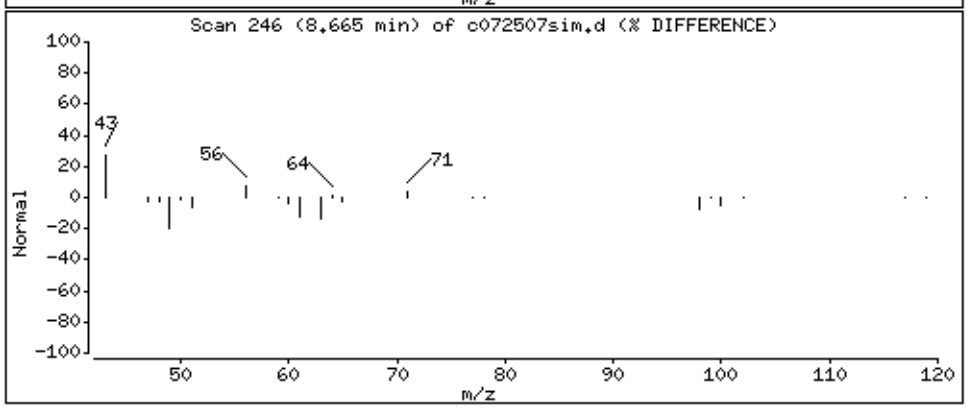
20 1,2-Dichloroethane

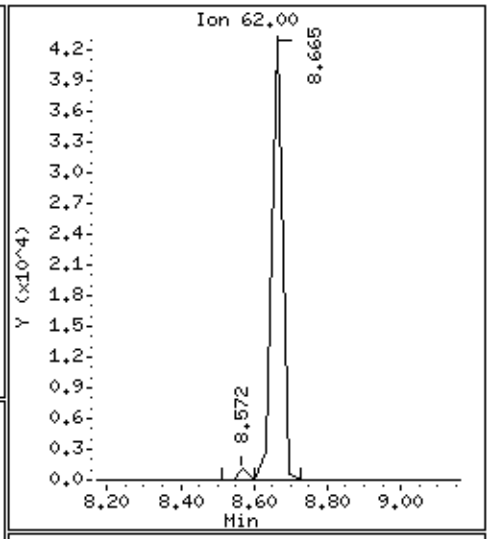
Concentration: 8.89735 ug

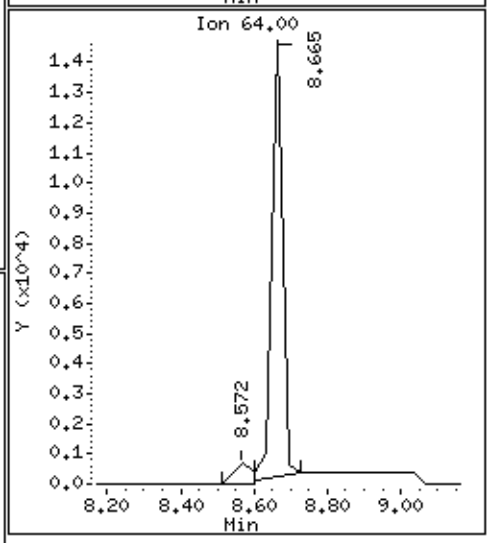












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

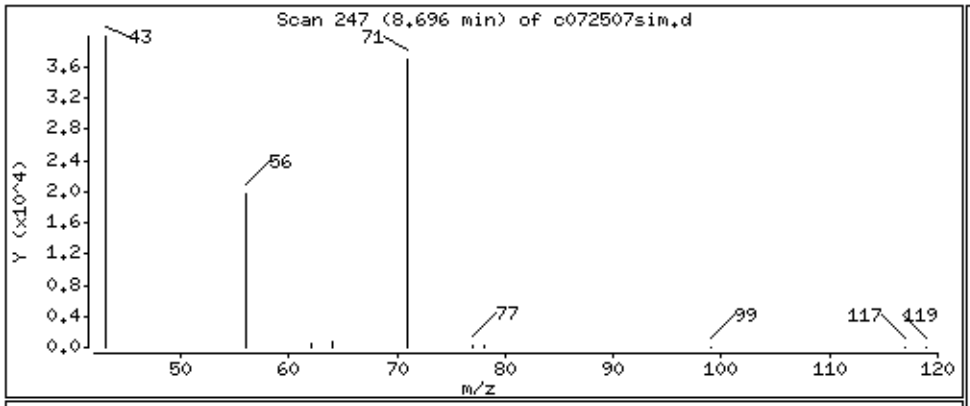
Operator: gm

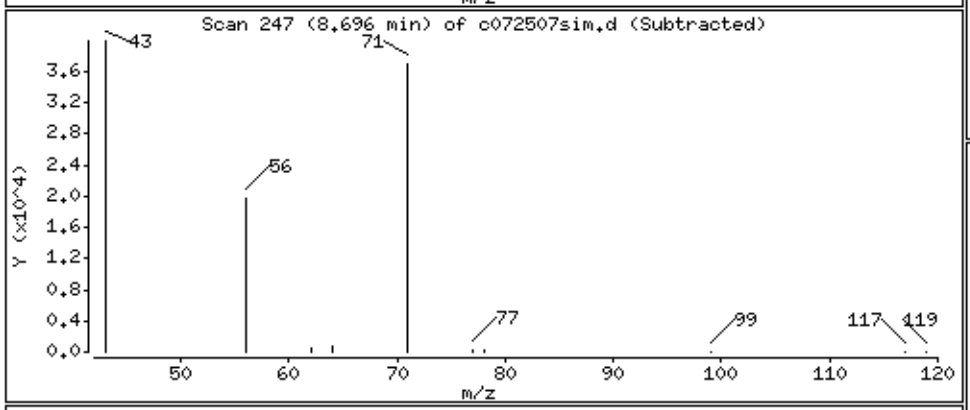
Column phase: DB-5.625

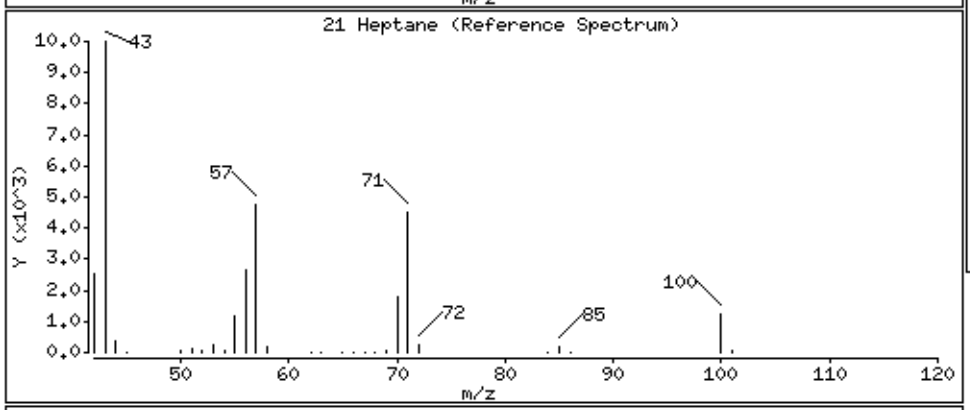
Column diameter: 0.25

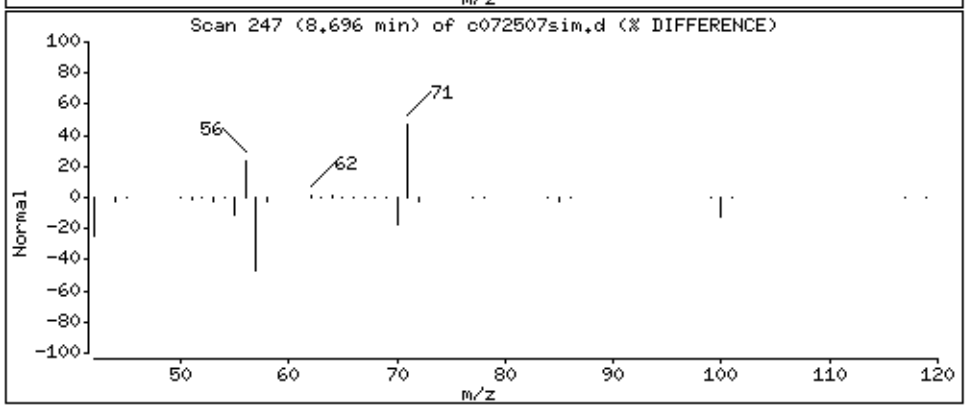
21 Heptane

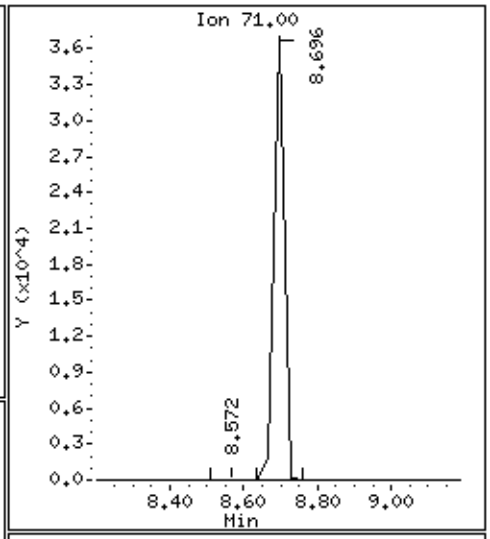
Concentration: 9.31702 ug

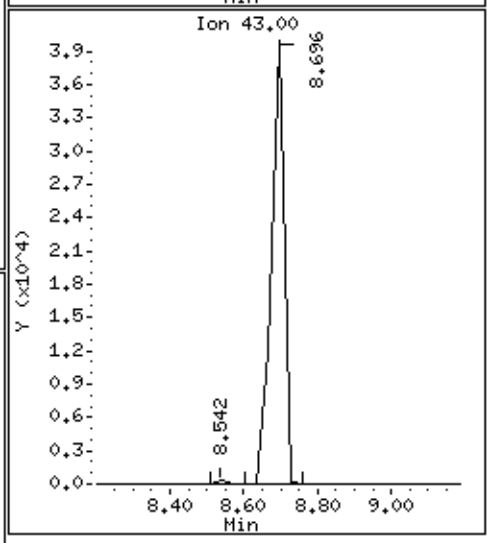












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

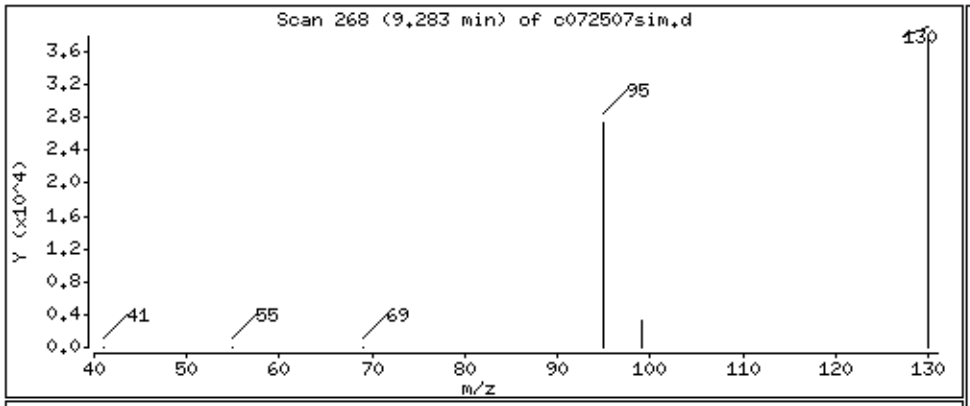
Operator: gm

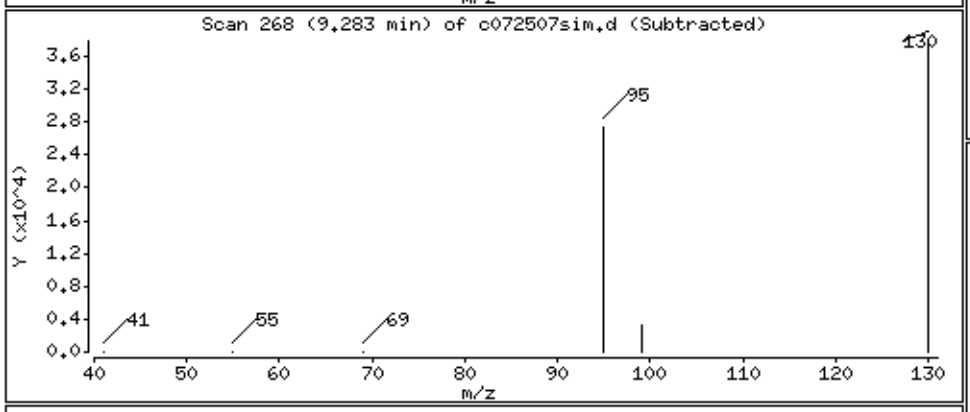
Column phase: DB-5.625

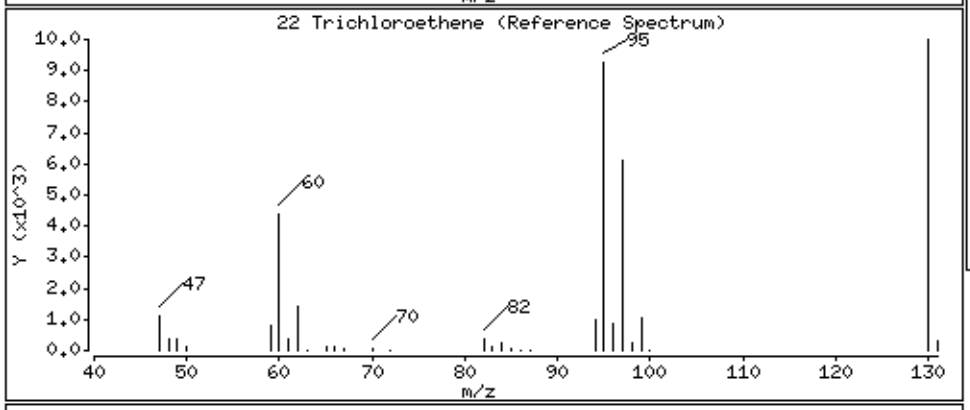
Column diameter: 0.25

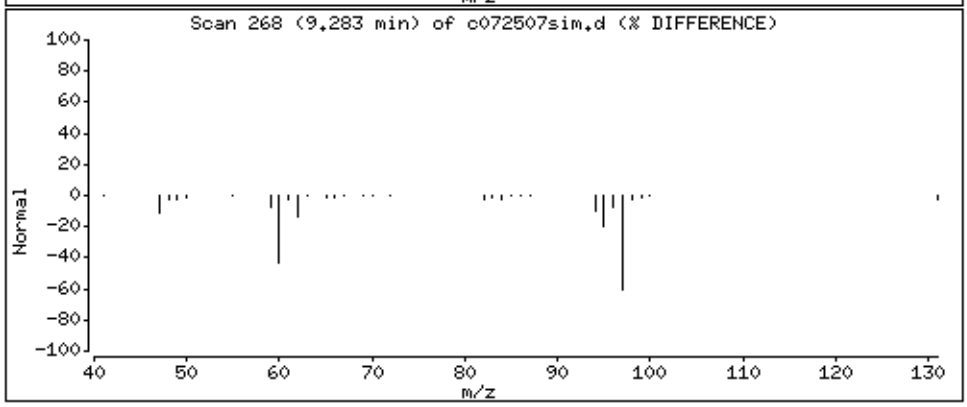
22 Trichloroethene

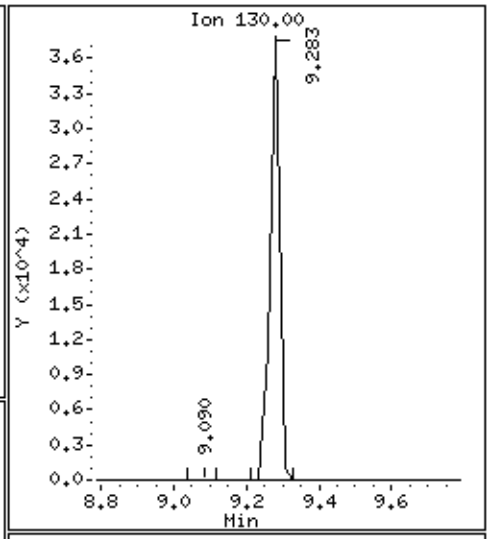
Concentration: 9.83452 ug

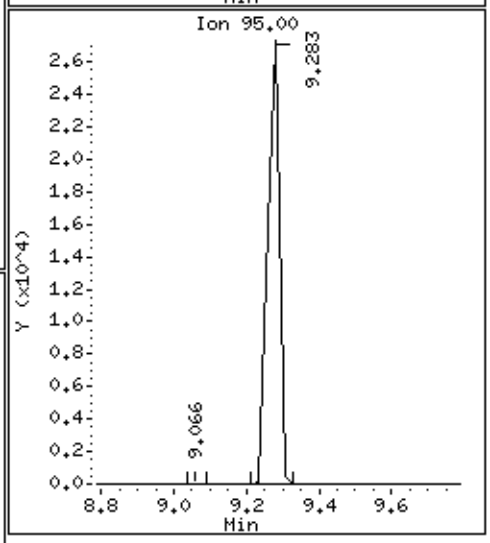












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

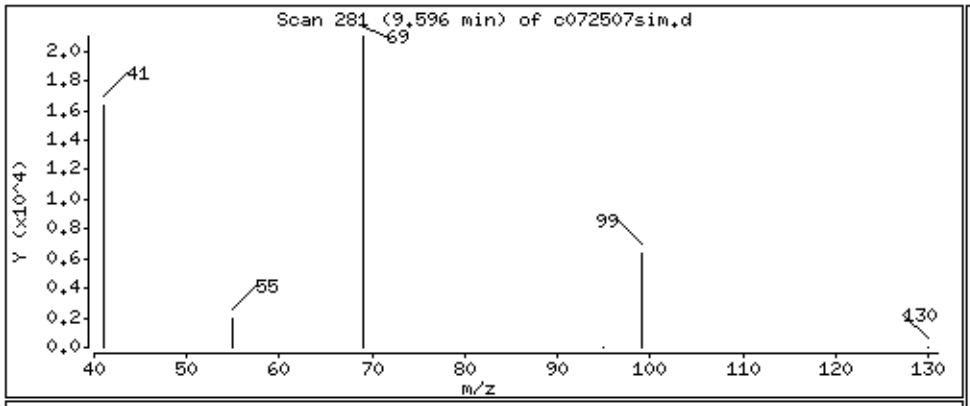
Operator: gm

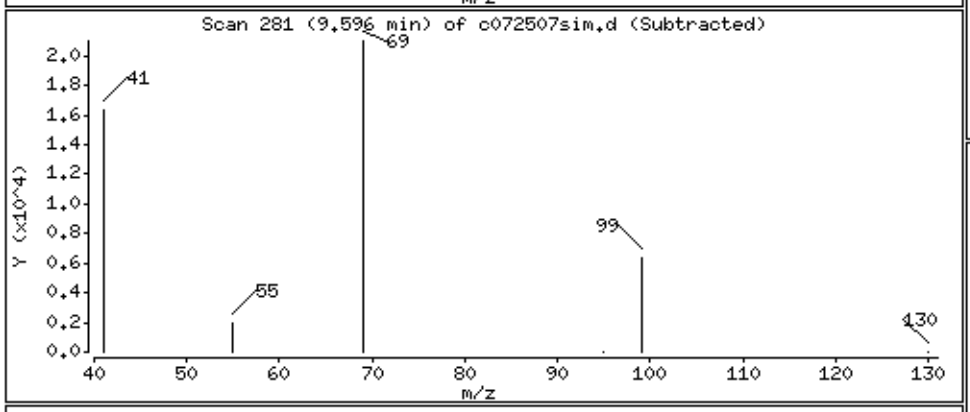
Column phase: DB-5.625

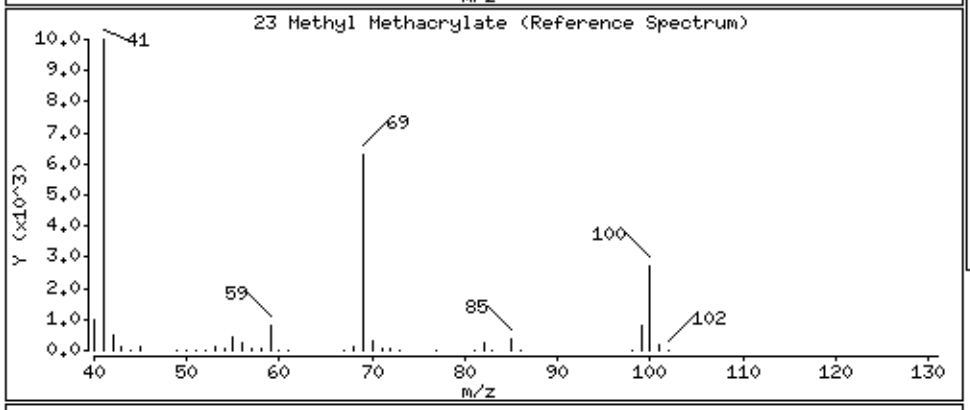
Column diameter: 0.25

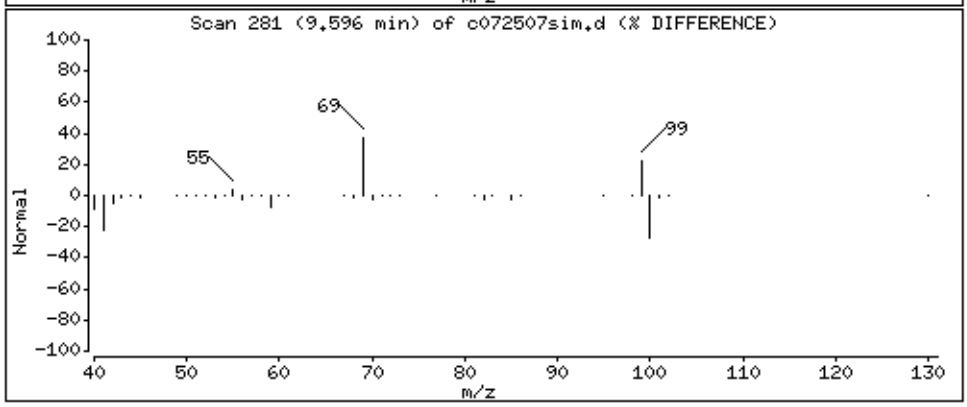
23 Methyl Methacrylate

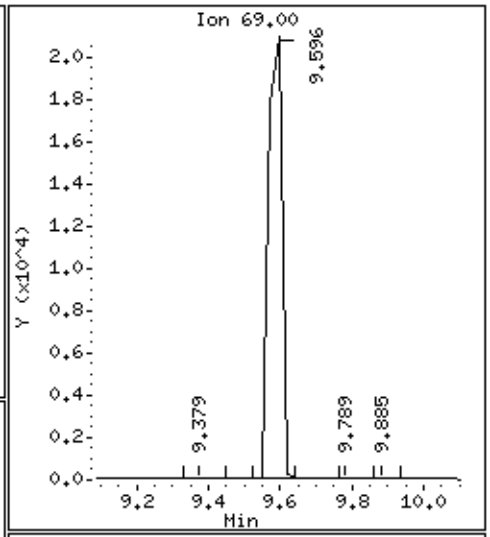
Concentration: 8.48943 ug

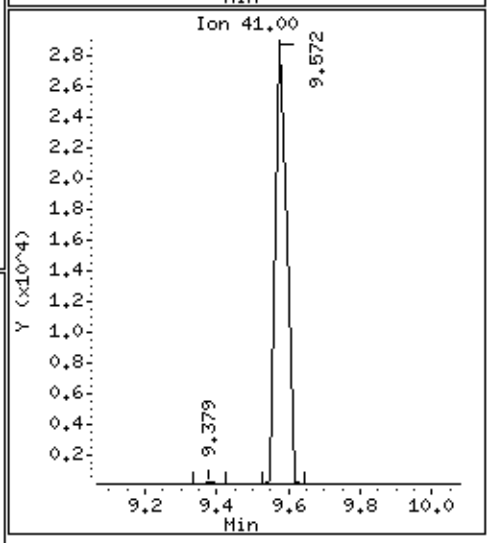












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

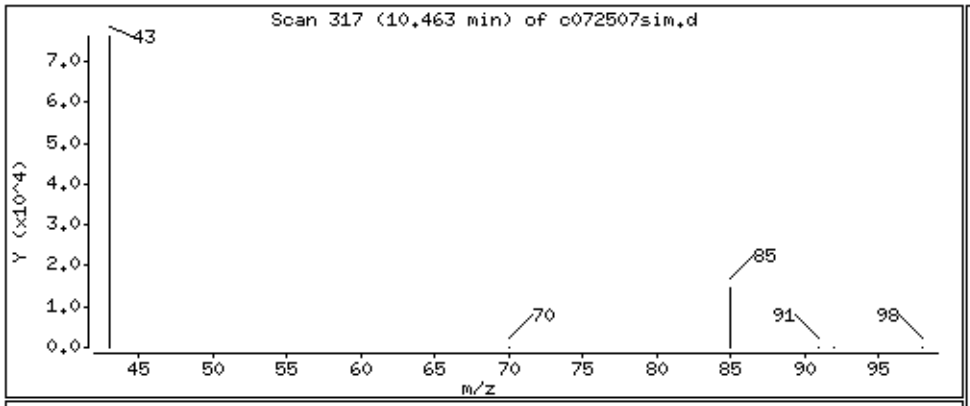
Operator: gm

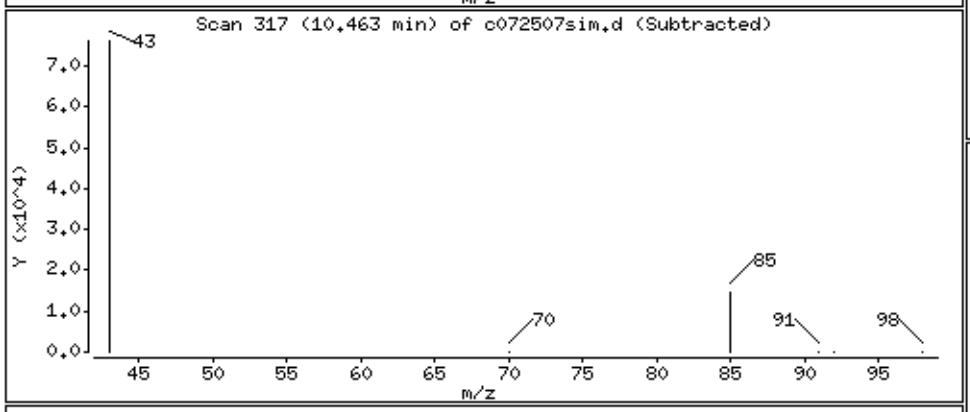
Column phase: DB-5.625

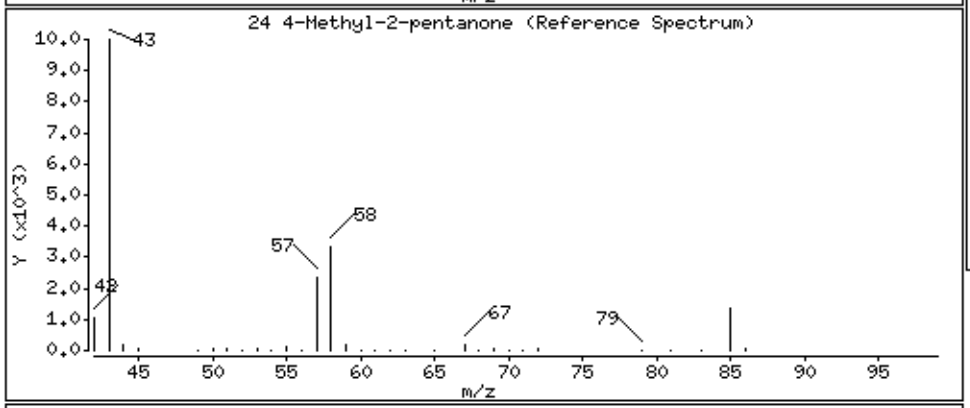
Column diameter: 0.25

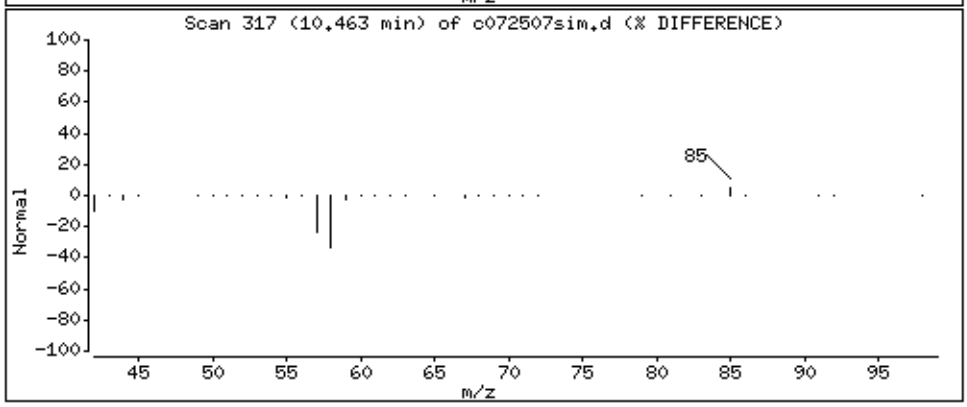
24 4-Methyl-2-pentanone

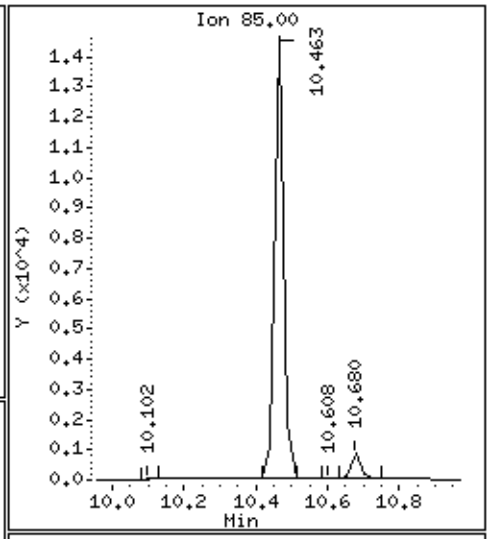
Concentration: 9.63120 ug

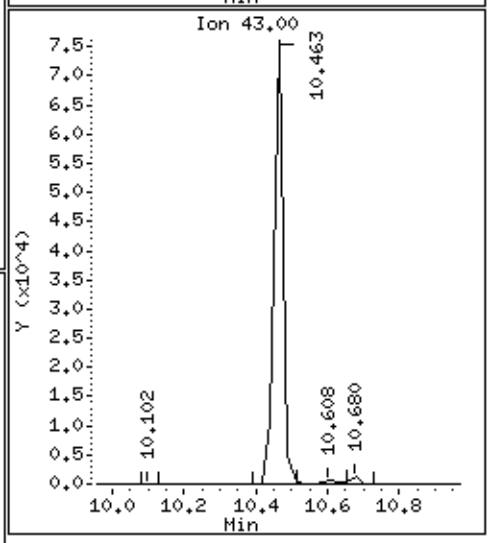












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

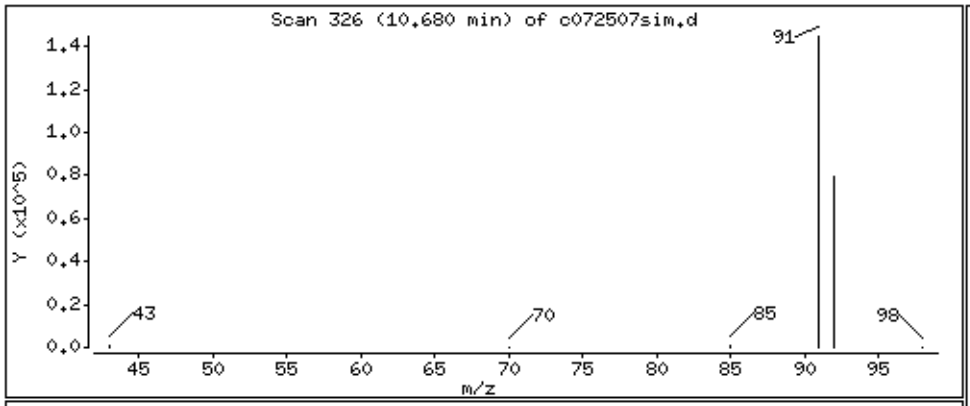
Operator: gm

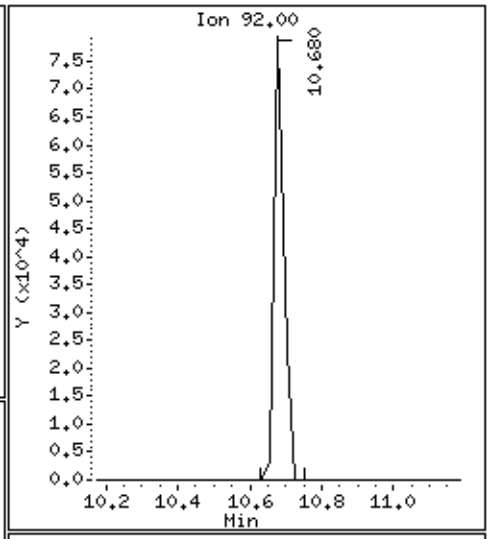
Column phase: DB-5.625

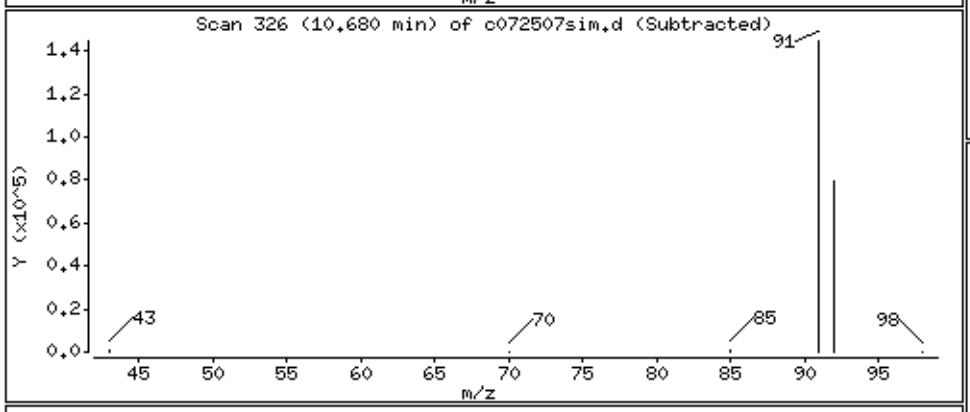
Column diameter: 0.25

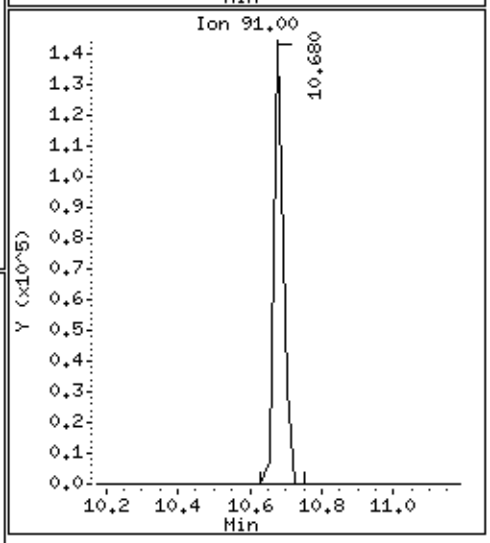
26 Toluene-CCC

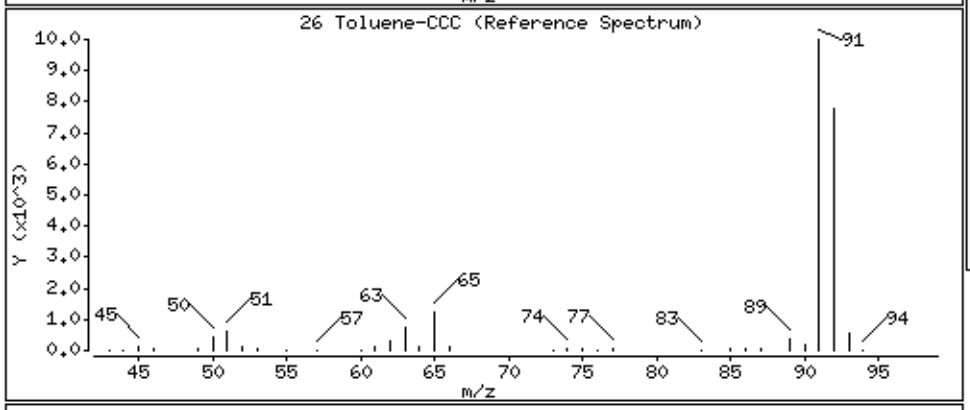
Concentration: 9.51780 ug

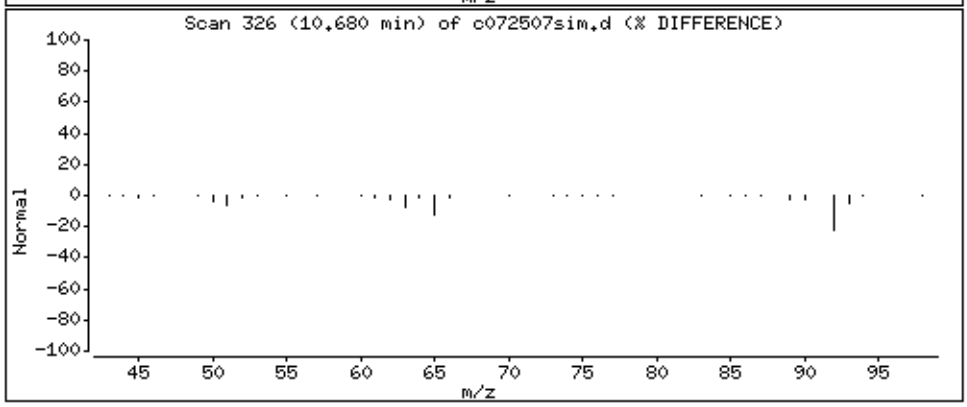












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

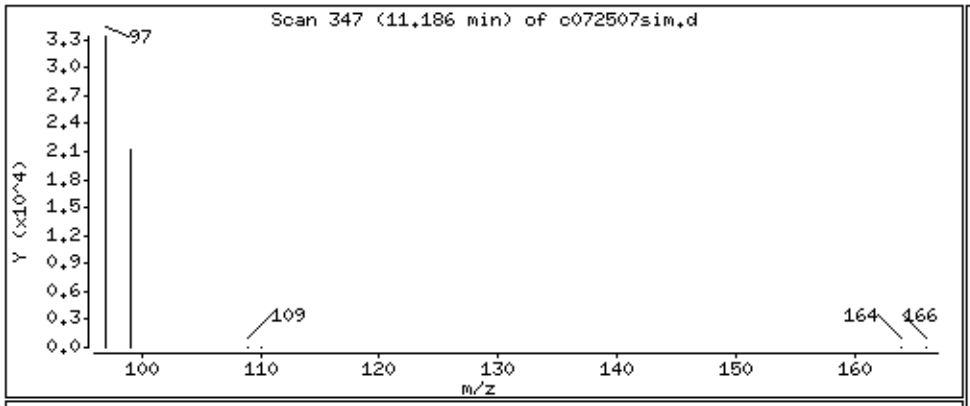
Operator: gm

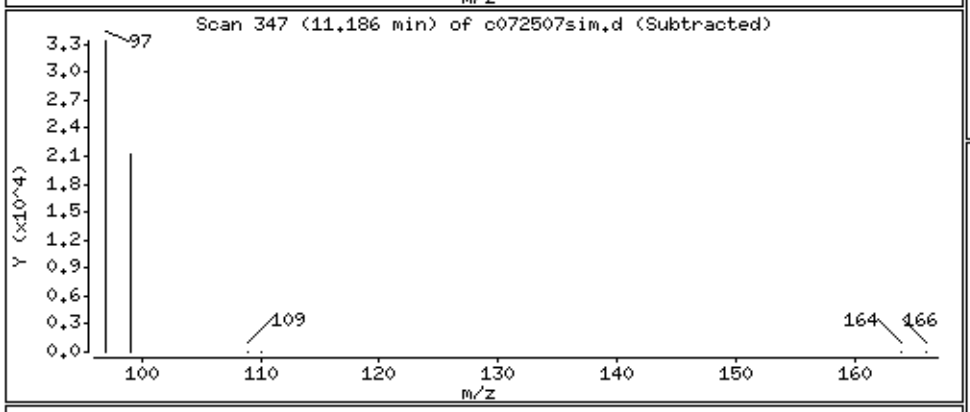
Column phase: DB-5.625

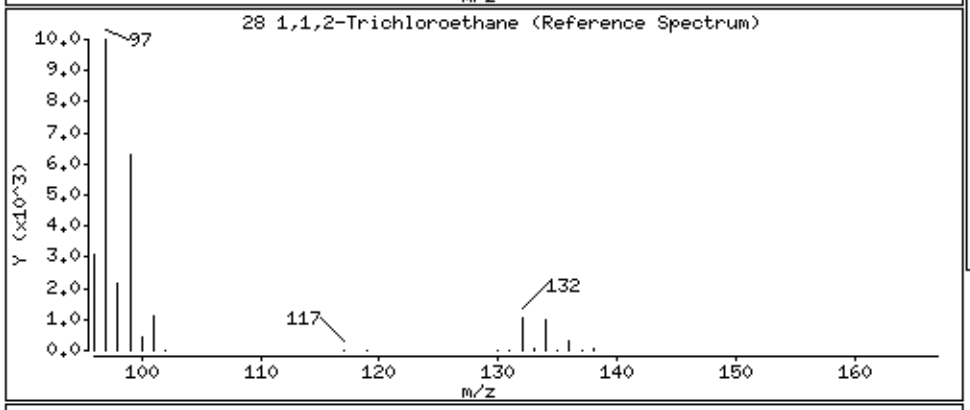
Column diameter: 0.25

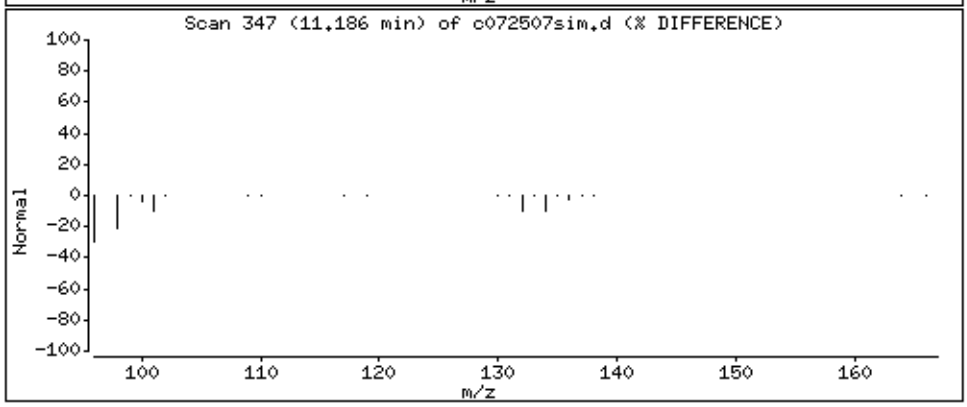
28 1,1,2-Trichloroethane

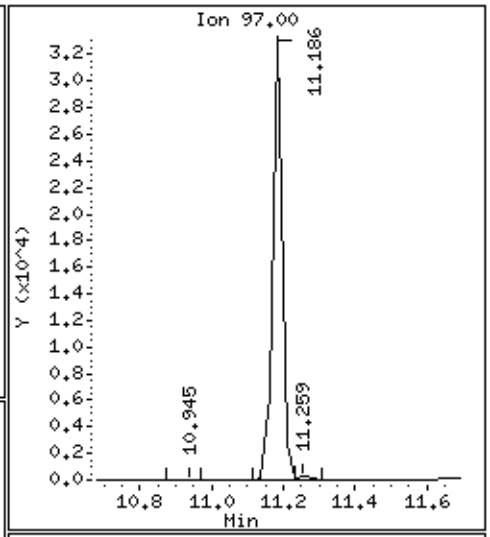
Concentration: 9.48740 ug

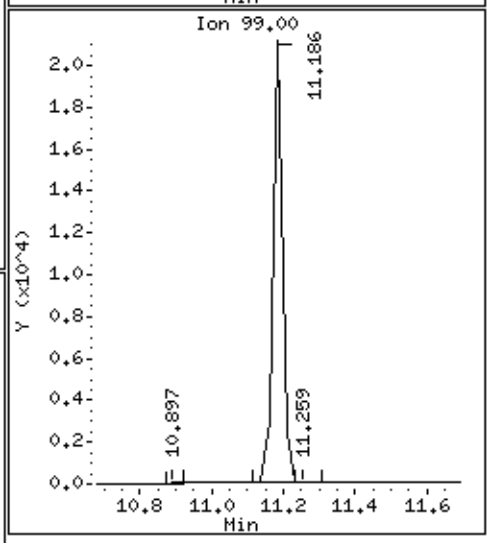












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

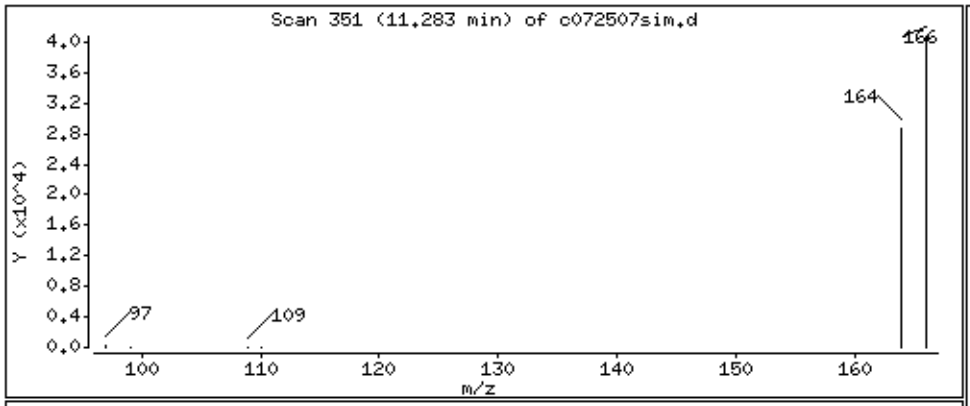
Operator: gm

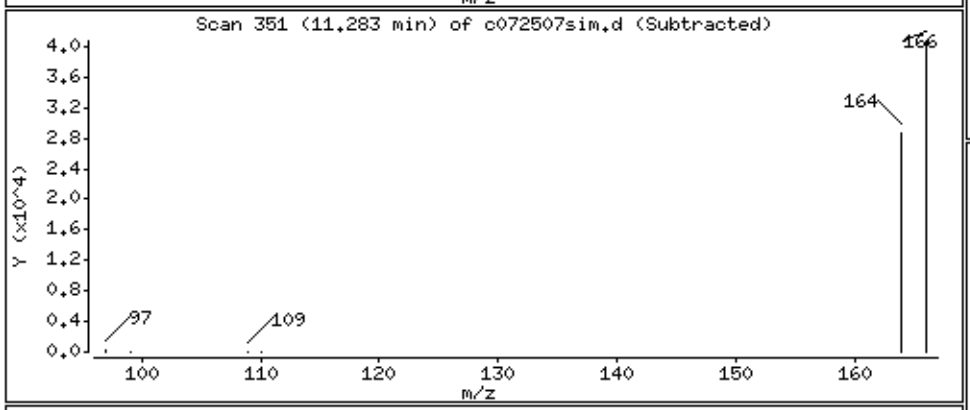
Column phase: DB-5.625

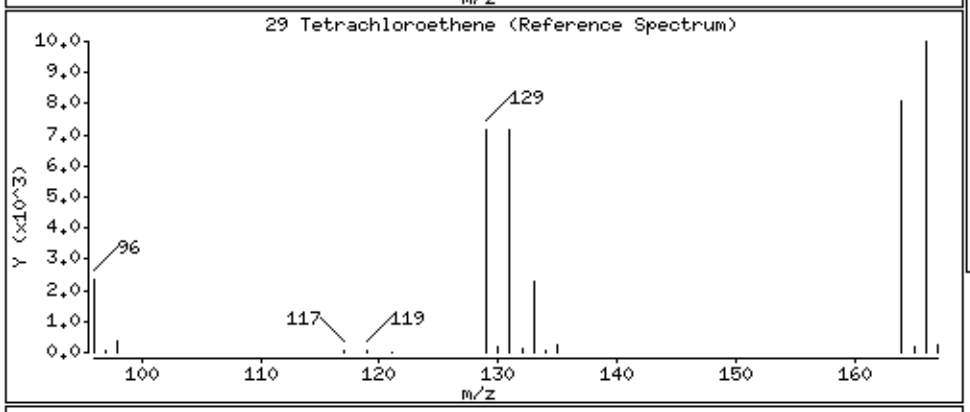
Column diameter: 0.25

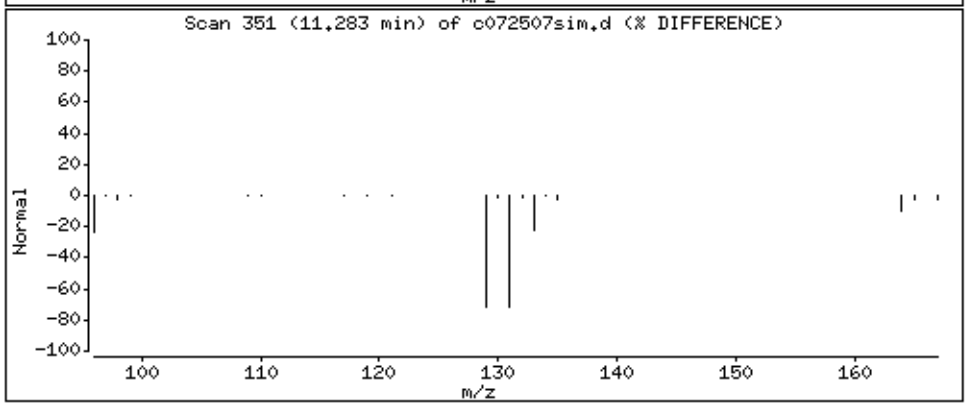
29 Tetrachloroethene

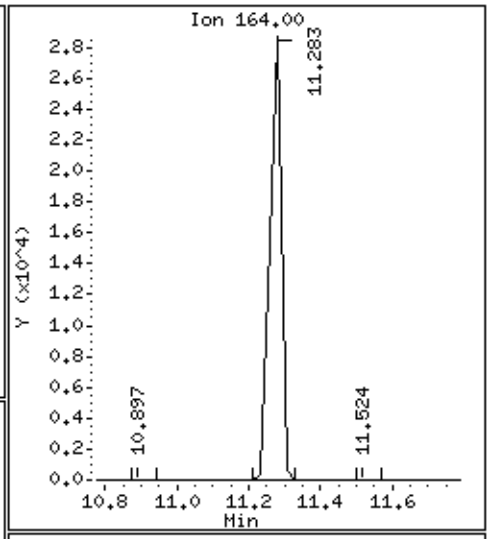
Concentration: 9.68076 ug

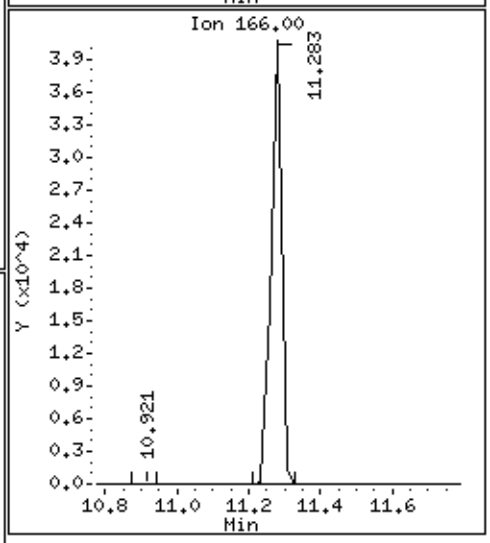












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

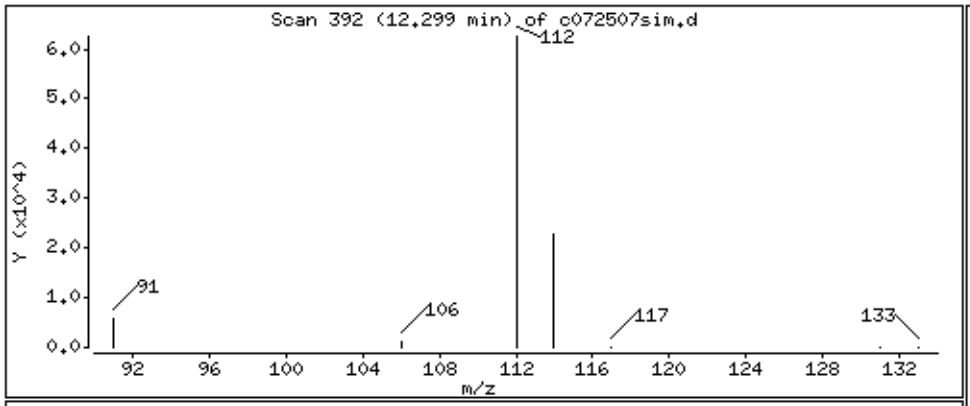
Operator: gm

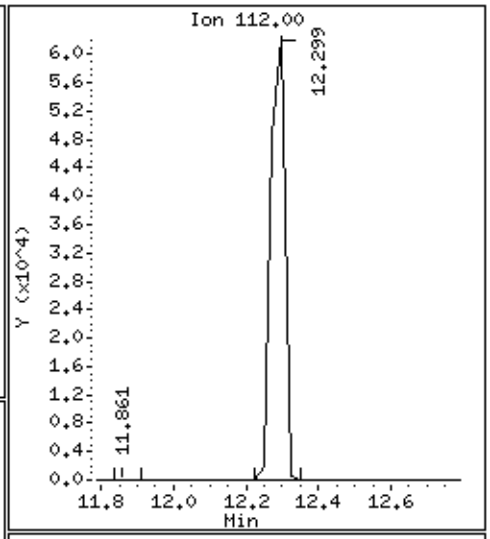
Column phase: DB-5.625

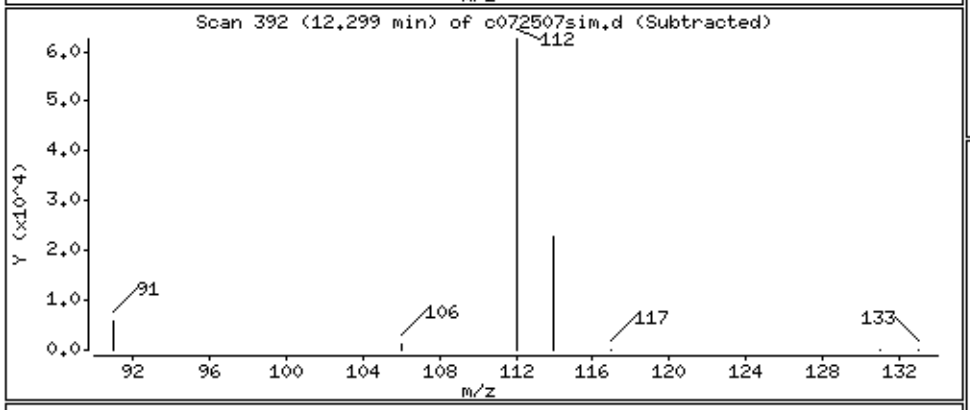
Column diameter: 0.25

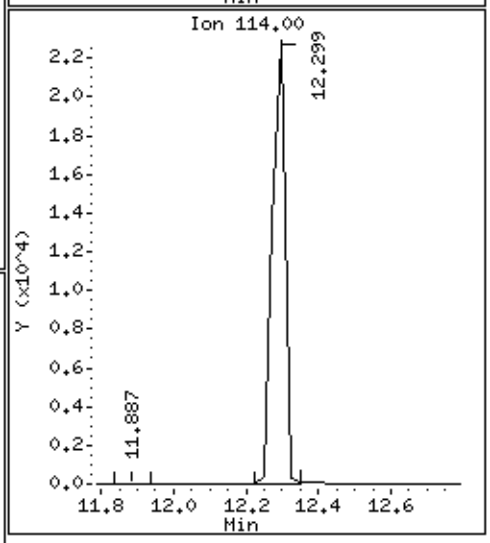
30 Chlorobenzene

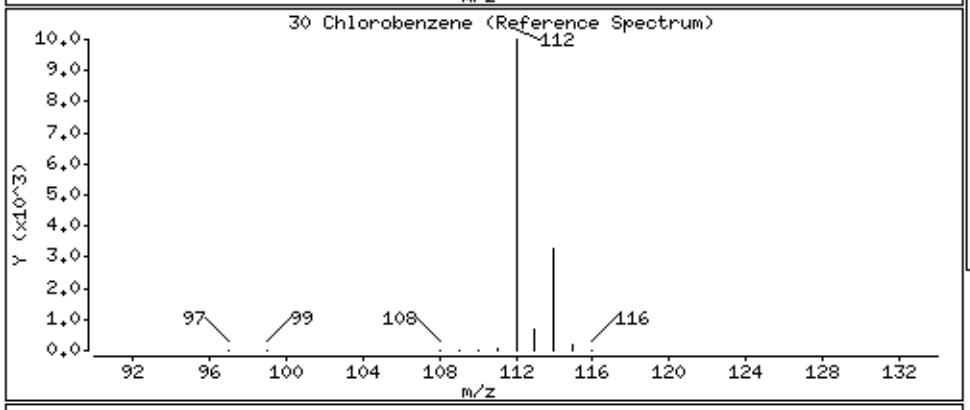
Concentration: 8.54592 ug

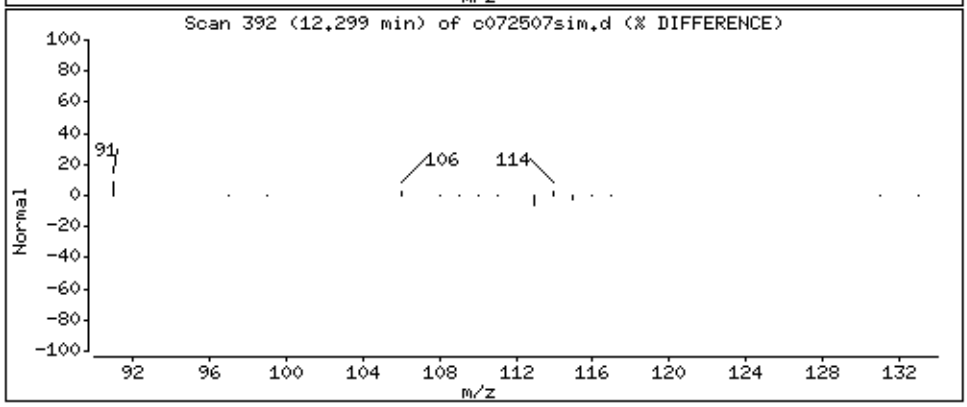












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

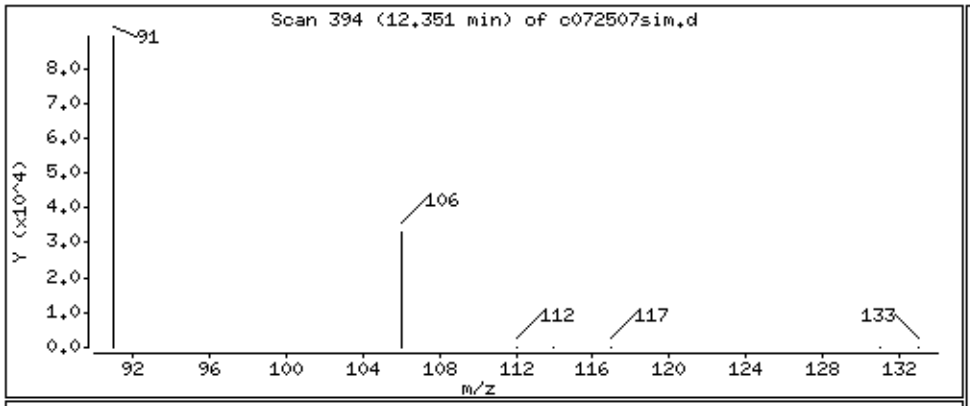
Operator: gm

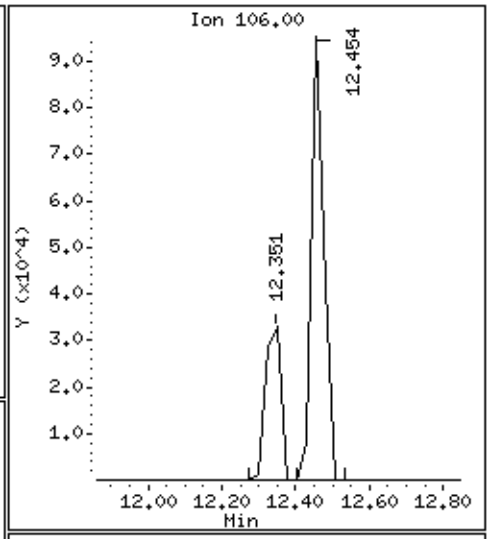
Column phase: DB-5.625

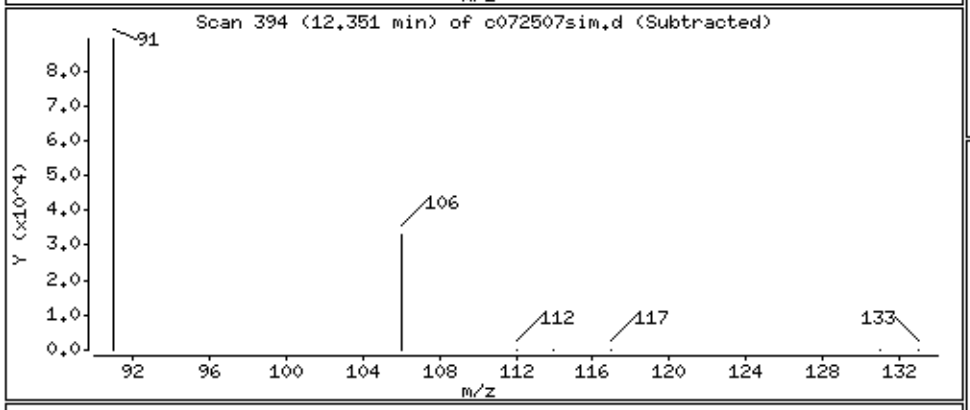
Column diameter: 0.25

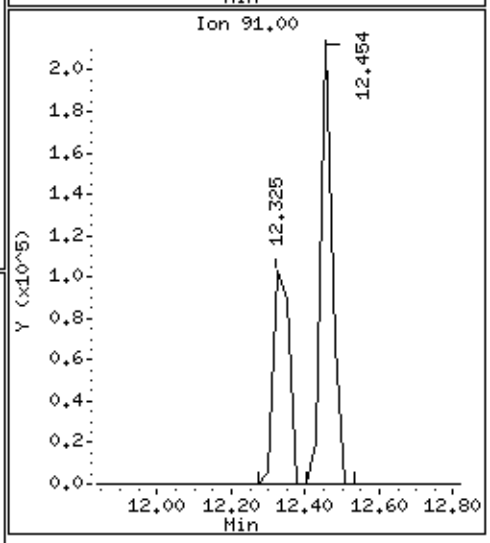
31 Ethylbenzene-CCC

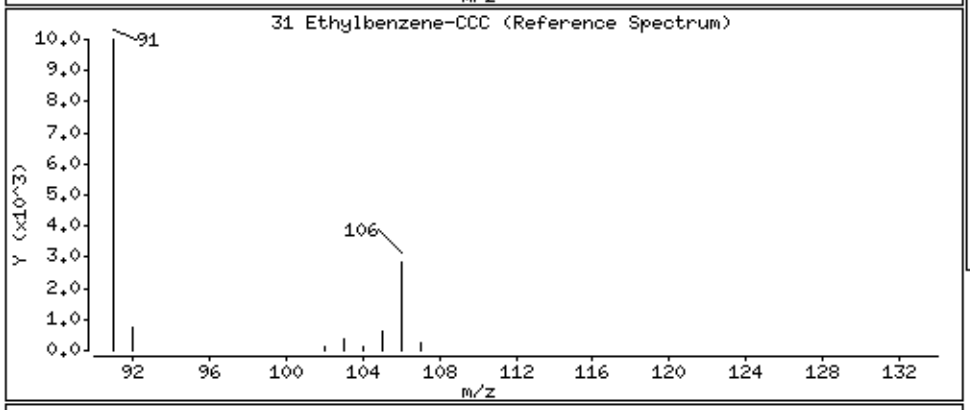
Concentration: 9.36049 ug

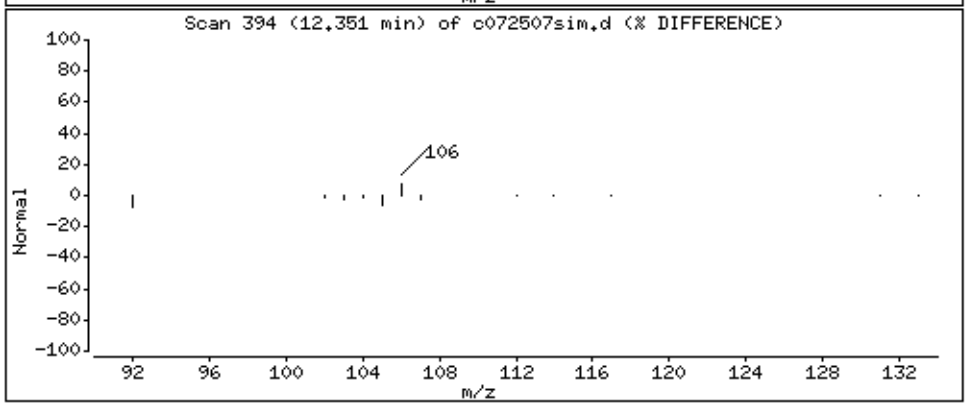












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

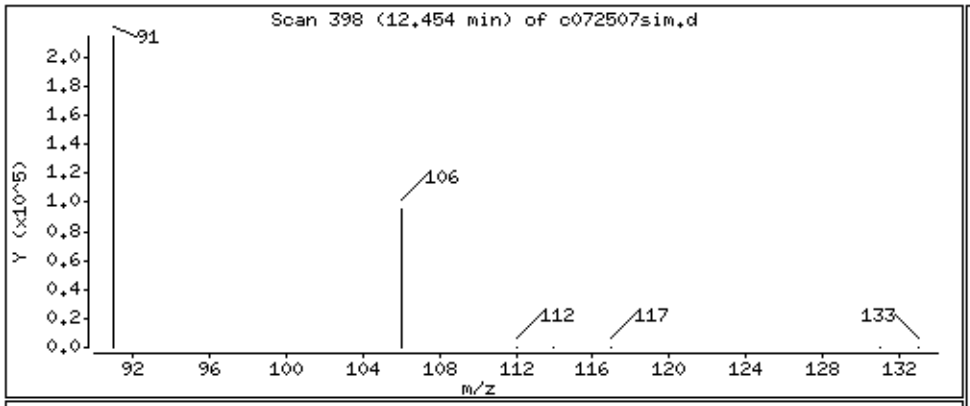
Operator: gm

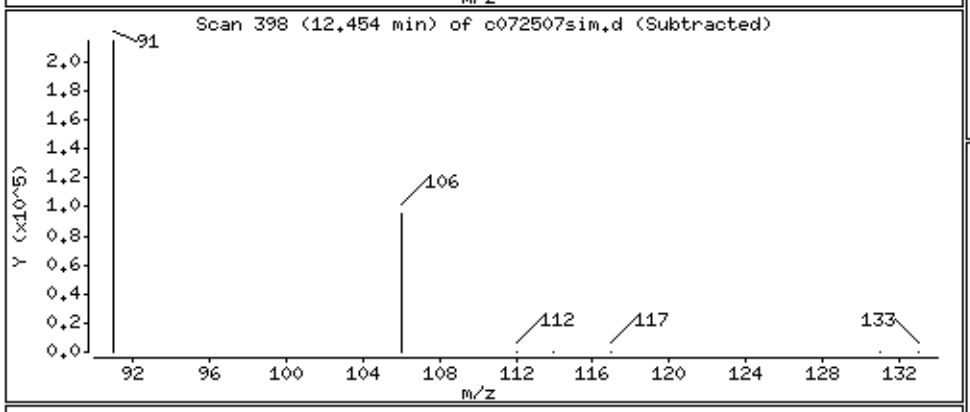
Column phase: DB-5.625

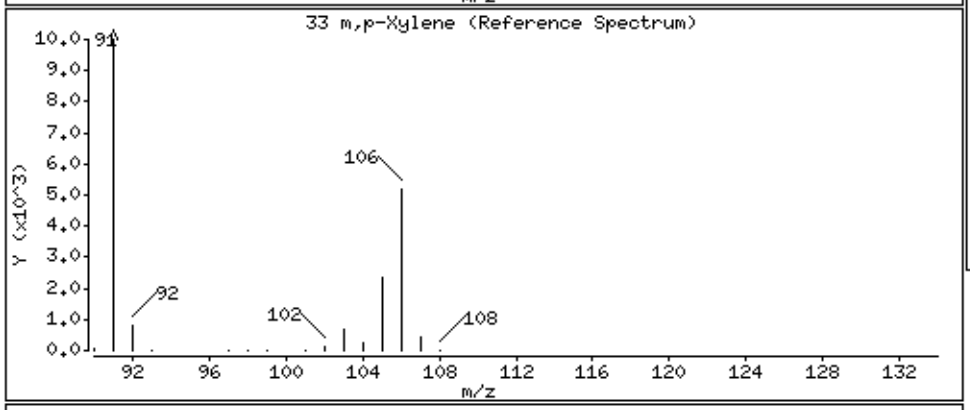
Column diameter: 0.25

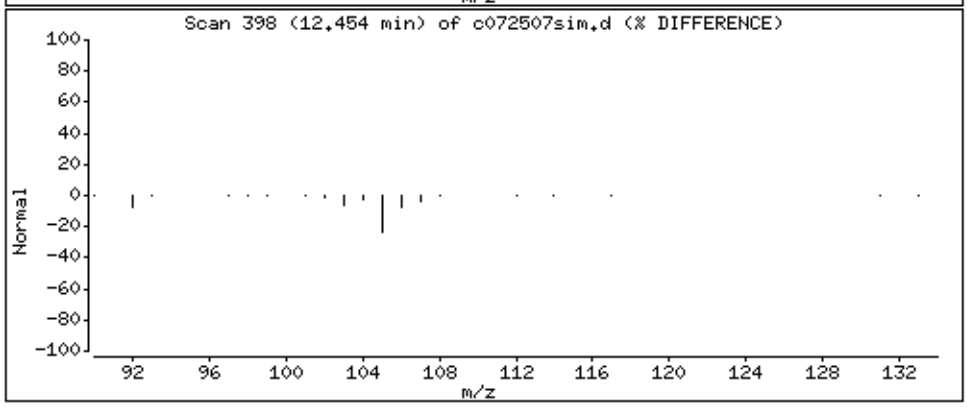
33 m,p-Xylene

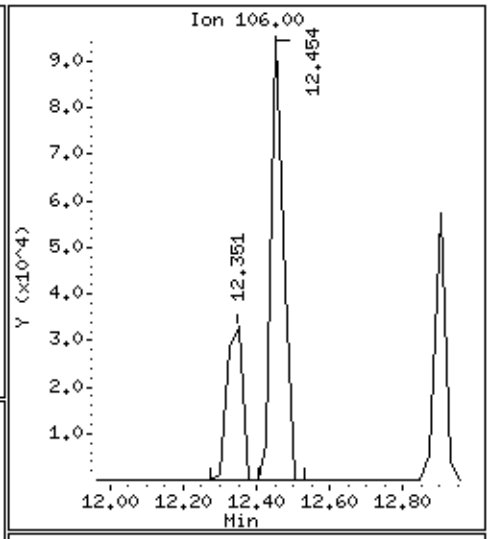
Concentration: 18.4904 ug

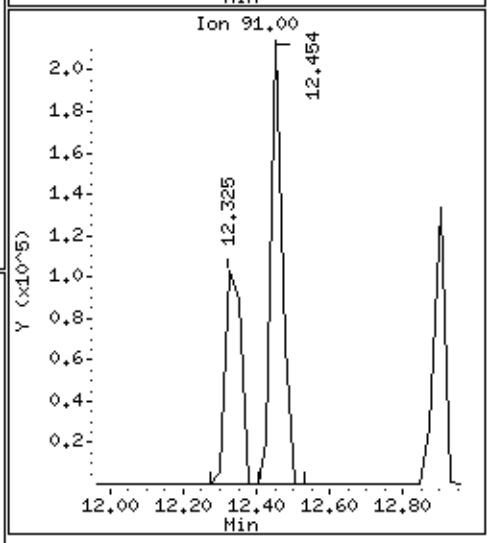












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

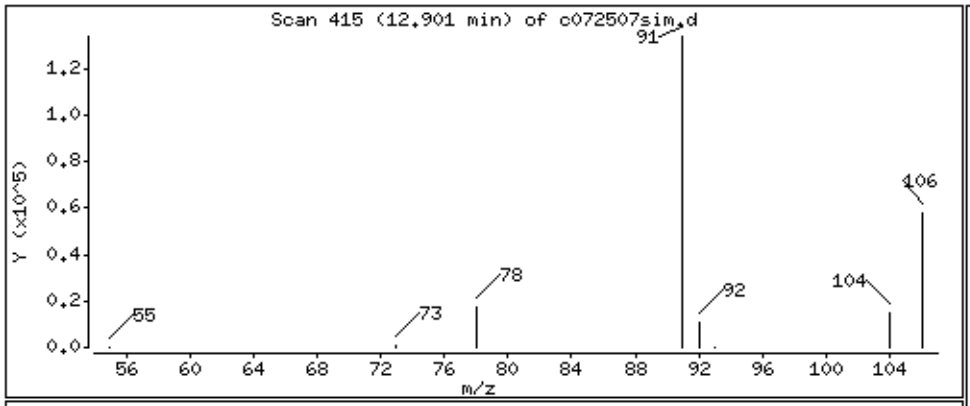
Operator: gm

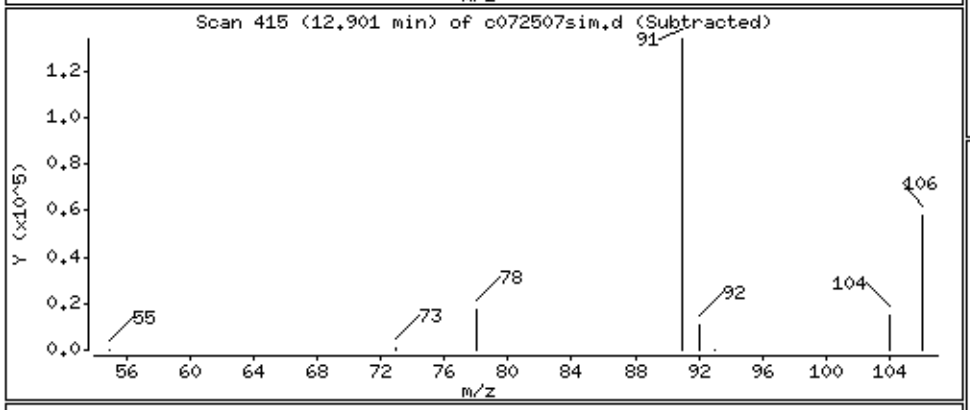
Column phase: DB-5.625

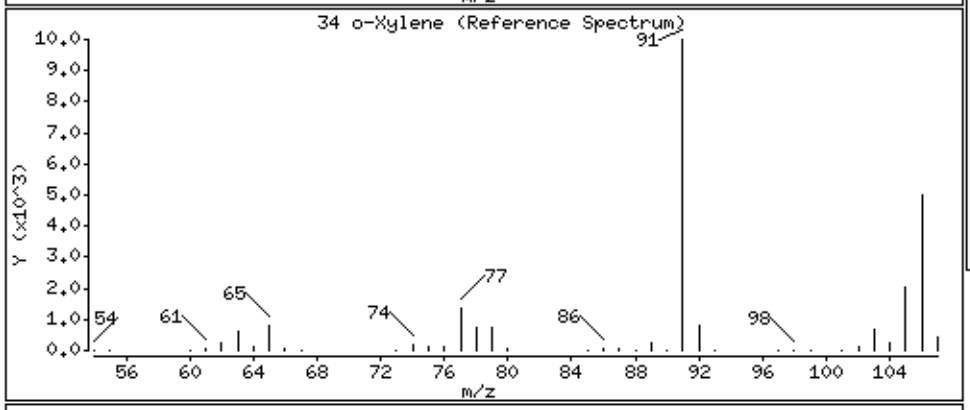
Column diameter: 0.25

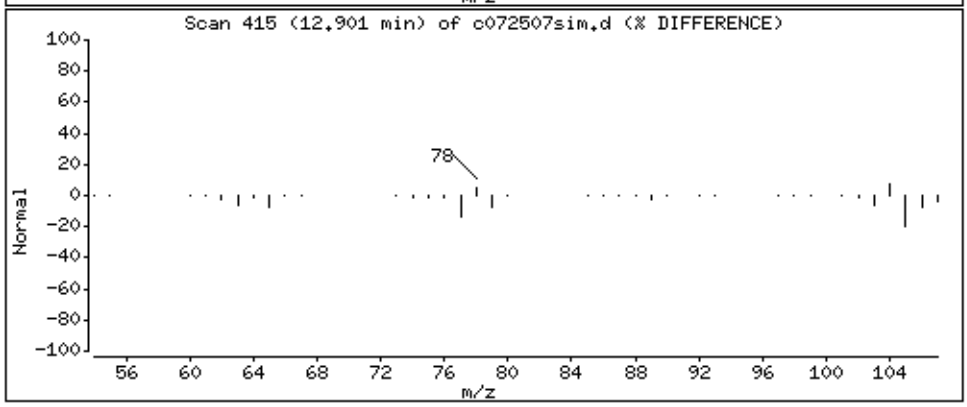
34 o-Xylene

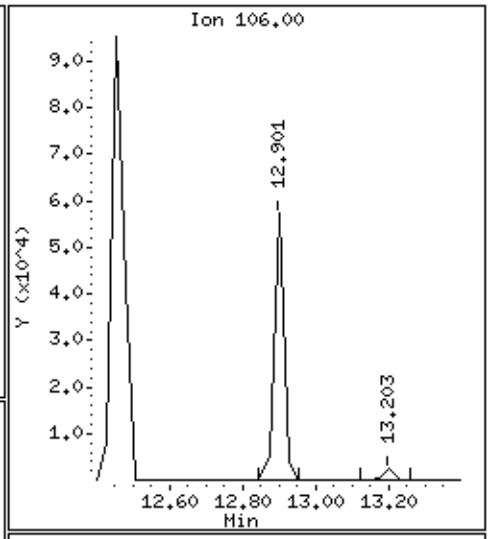
Concentration: 9.71809 ug

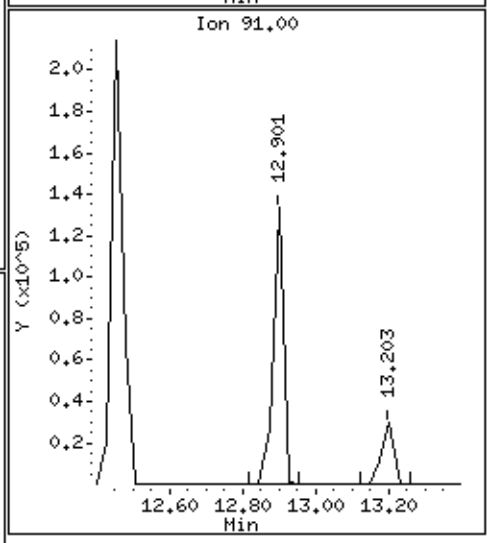












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

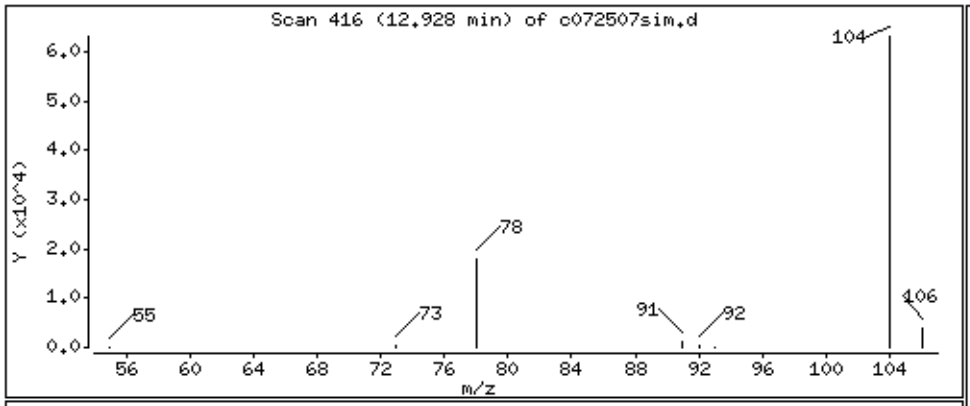
Operator: gm

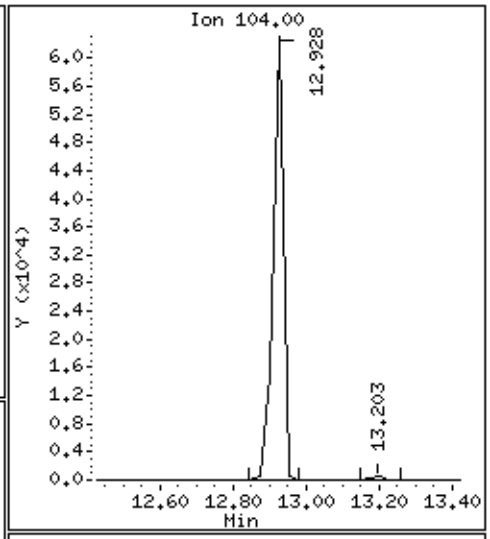
Column phase: DB-5.625

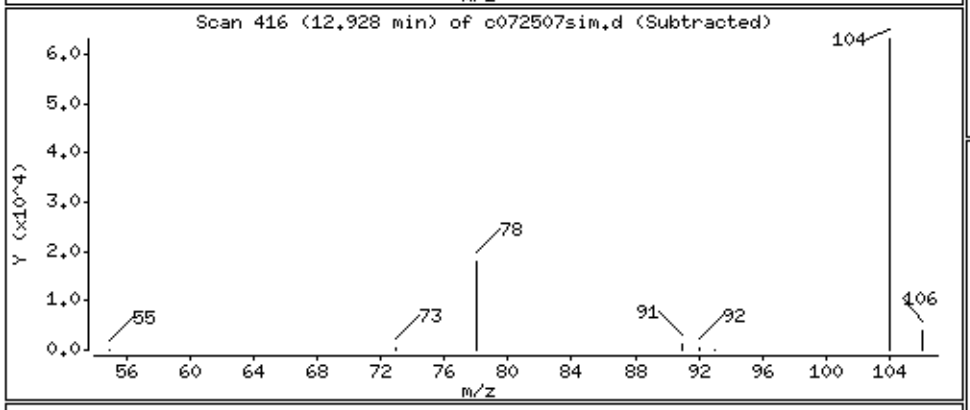
Column diameter: 0.25

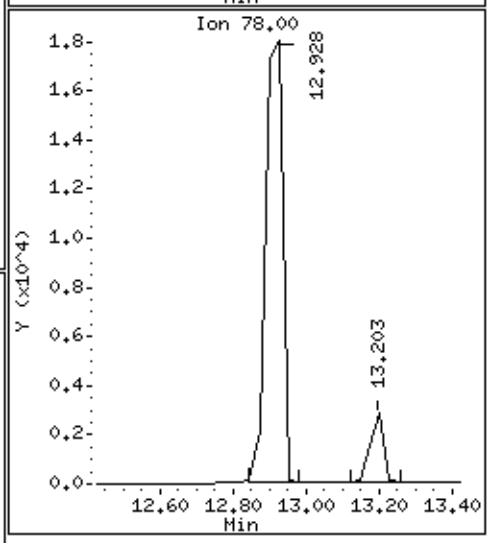
35 Styrene

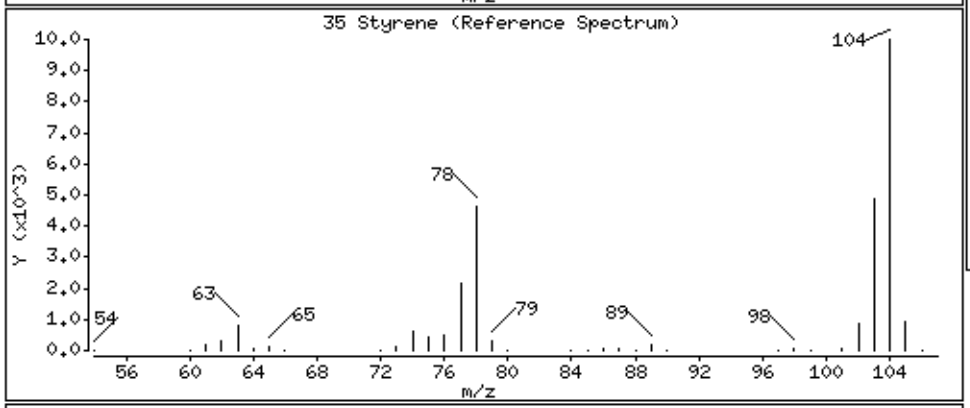
Concentration: 5.64982 ug

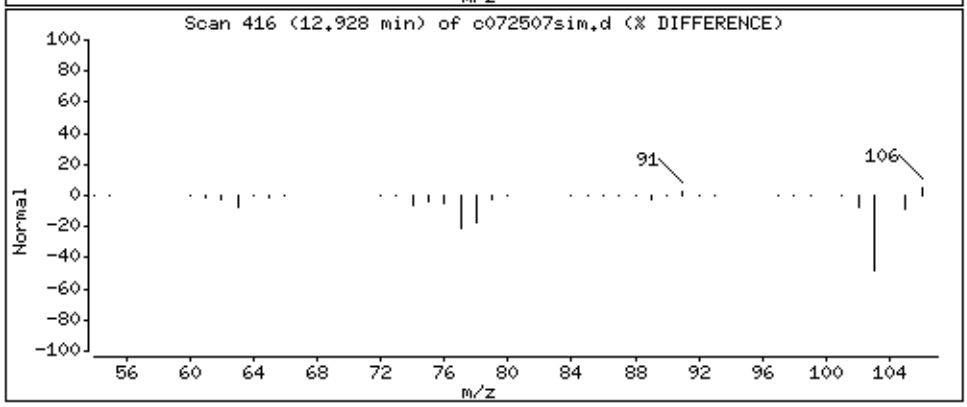












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

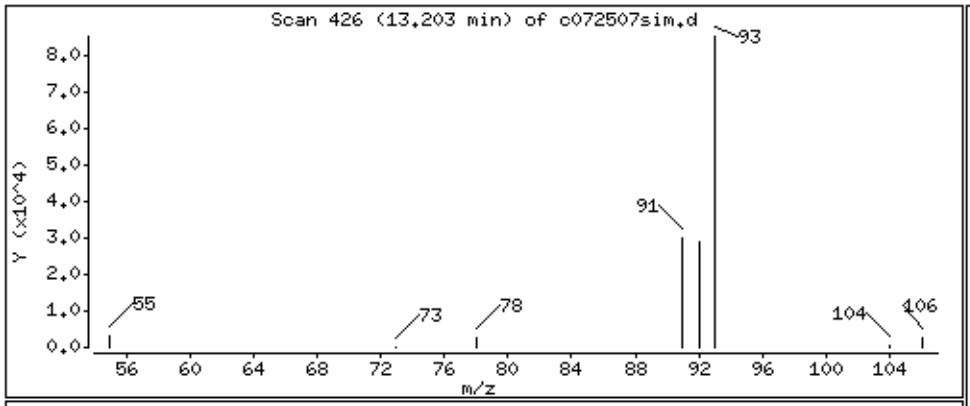
Operator: gm

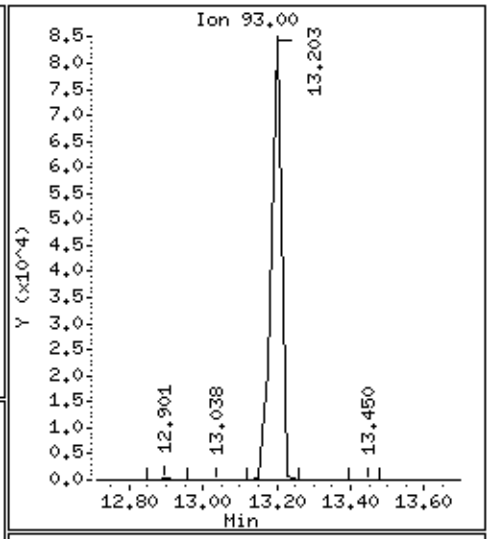
Column phase: DB-5.625

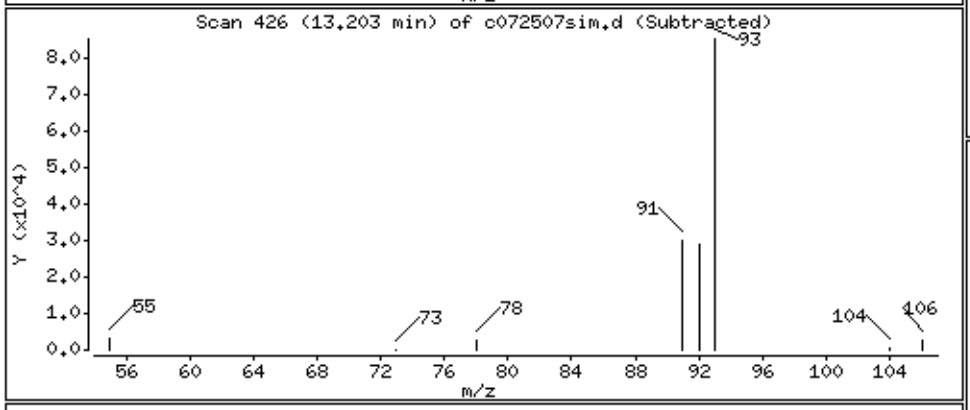
Column diameter: 0.25

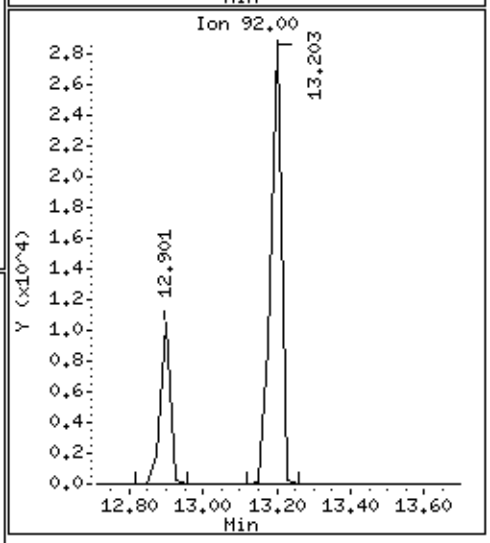
36 a-Pinene

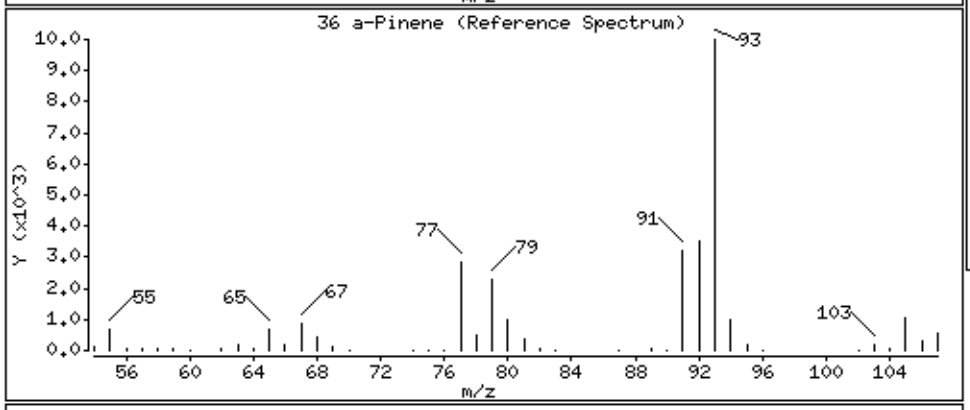
Concentration: 11.8129 ug

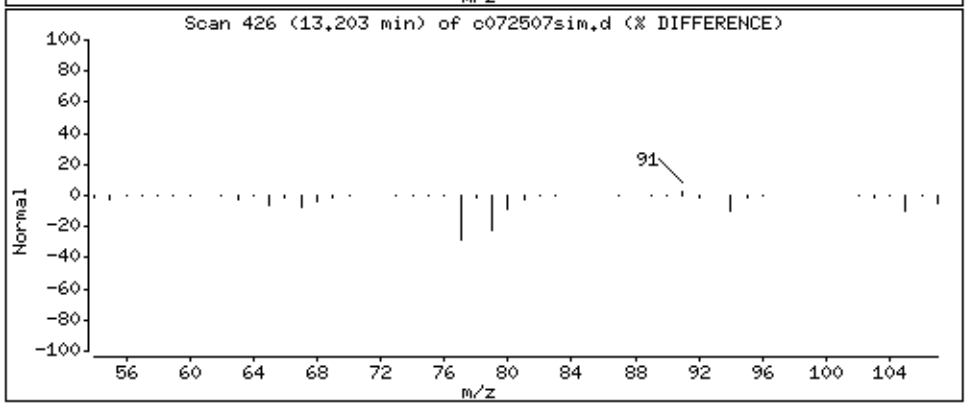












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

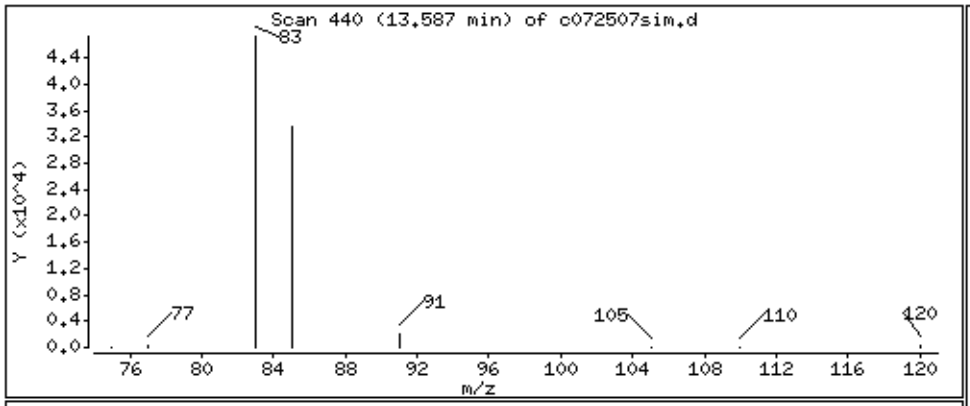
Operator: gm

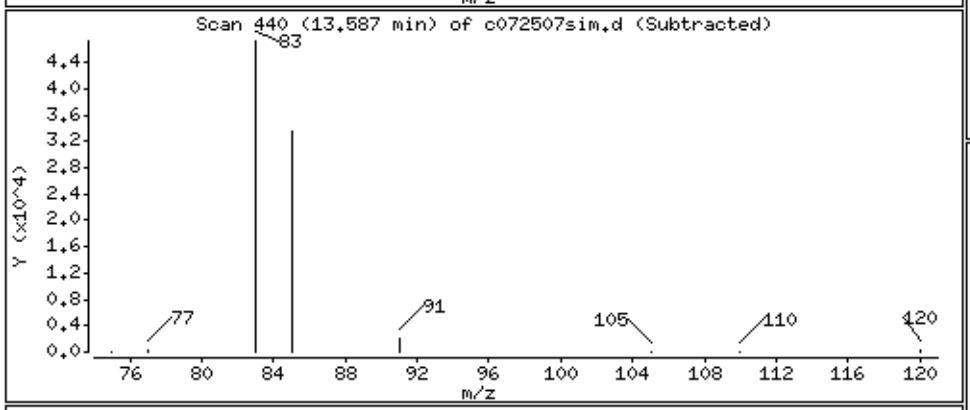
Column phase: DB-5.625

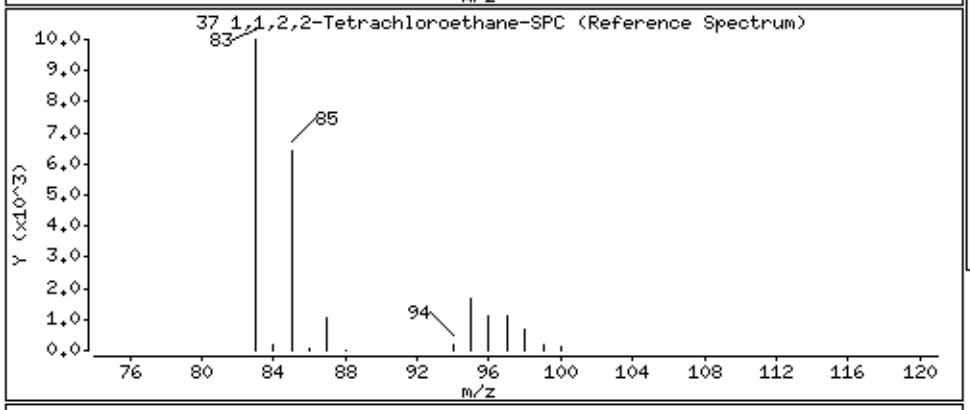
Column diameter: 0.25

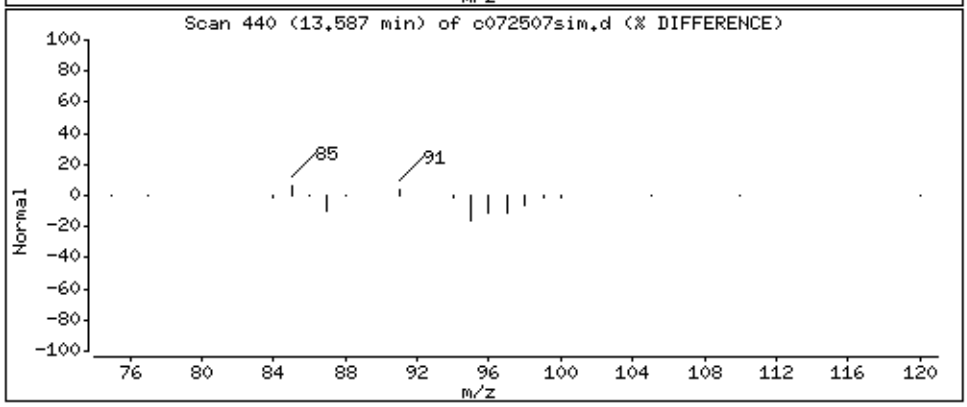
37 1,1,2,2-Tetrachloroethane-SPC

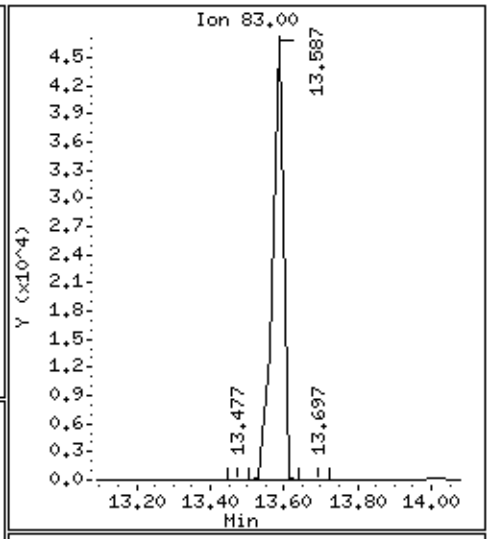
Concentration: 7.65134 ug

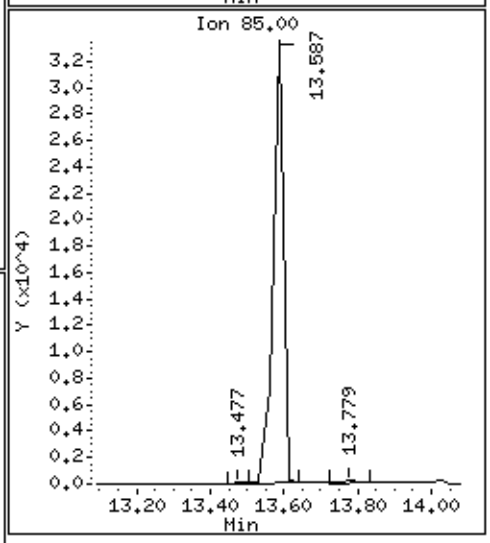












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

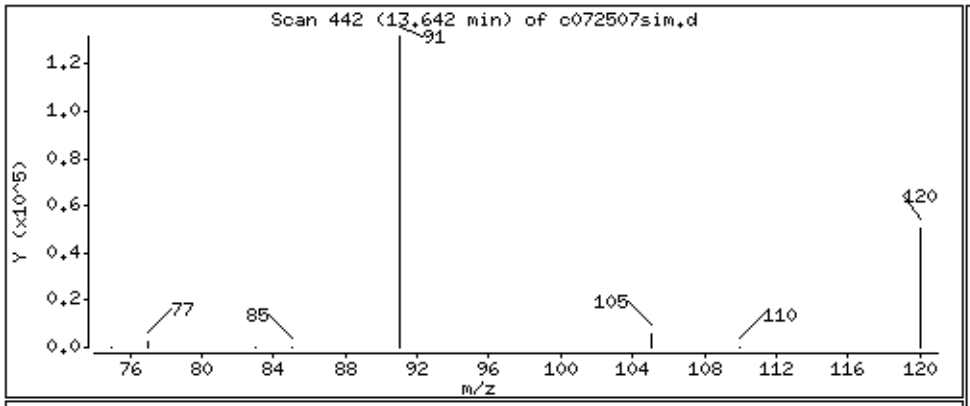
Operator: gm

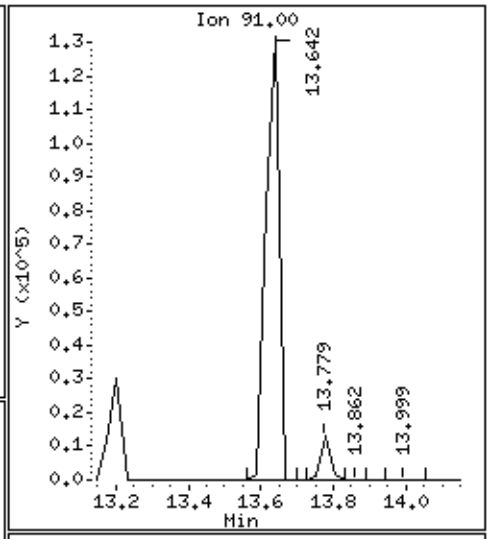
Column phase: DB-5.625

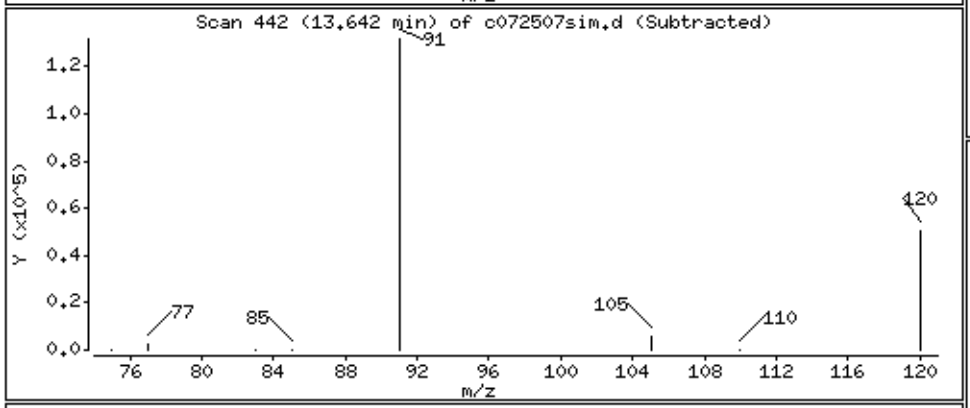
Column diameter: 0.25

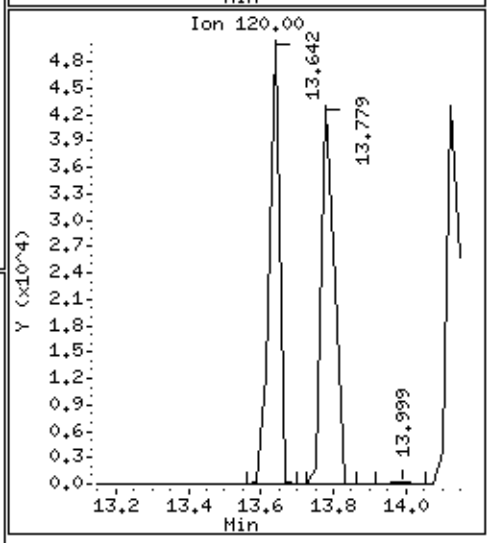
38 Propylbenzene

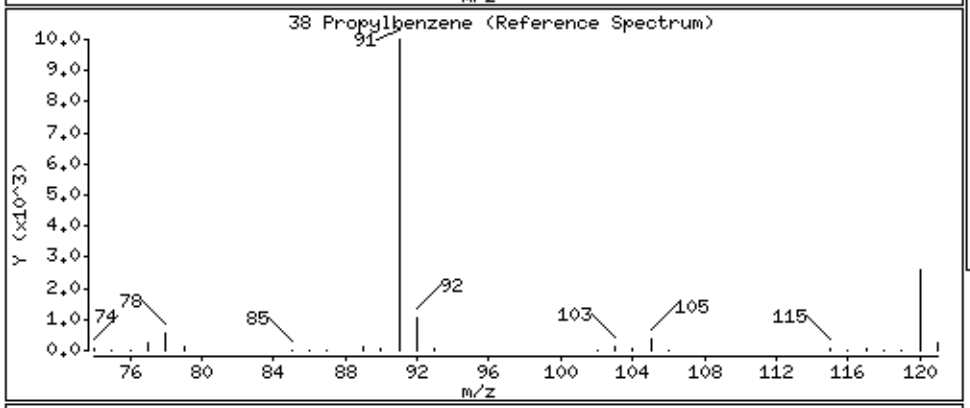
Concentration: 8.23335 ug

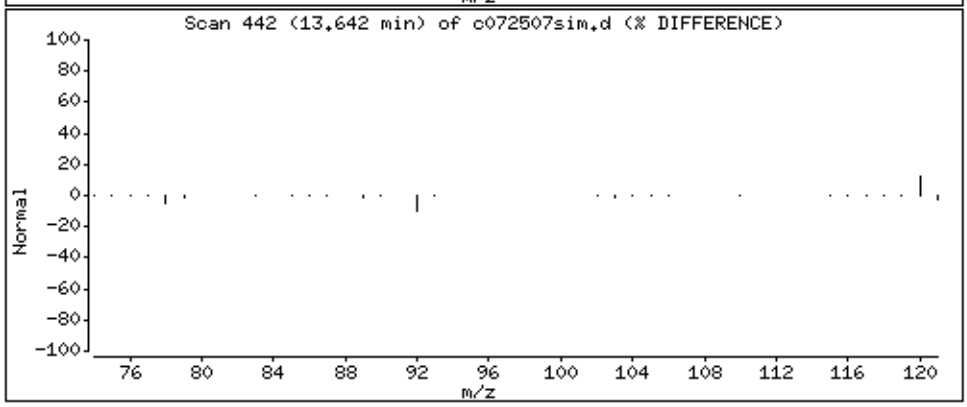












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

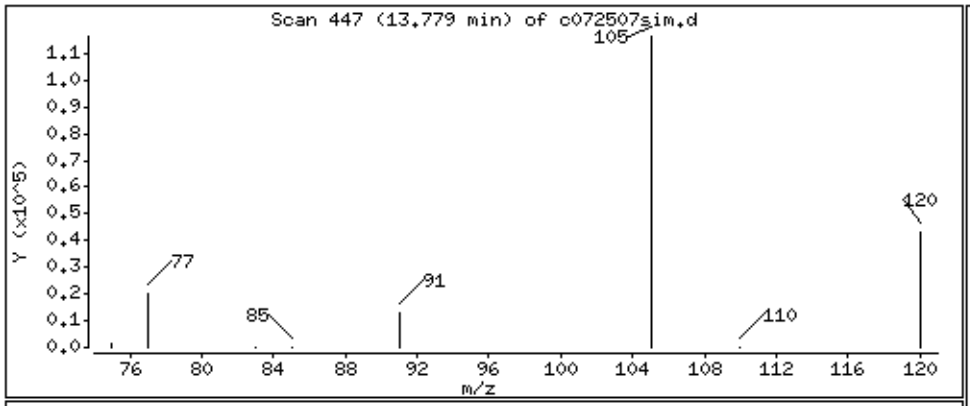
Operator: gm

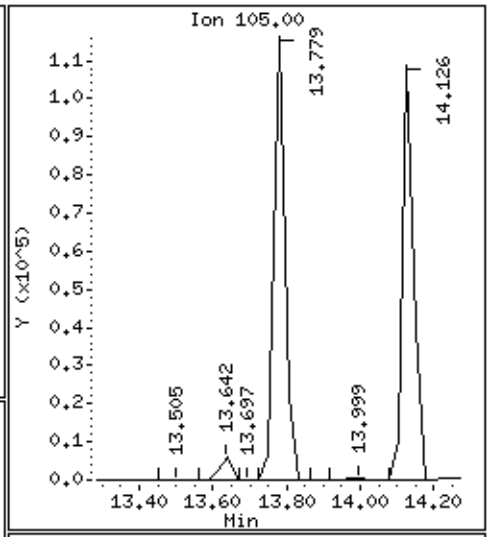
Column phase: DB-5.625

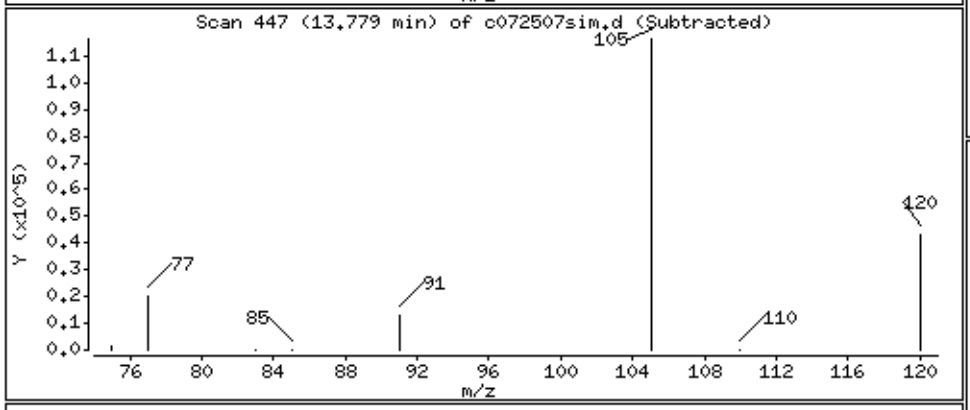
Column diameter: 0.25

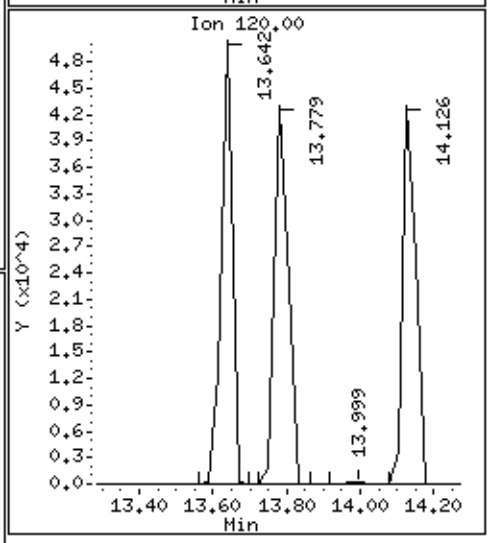
40 1,3,5-Trimethylbenzene

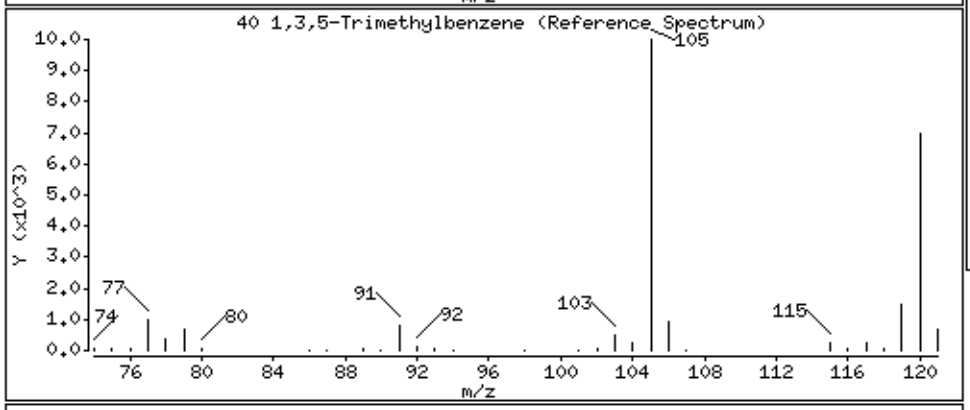
Concentration: 10.4496 ug

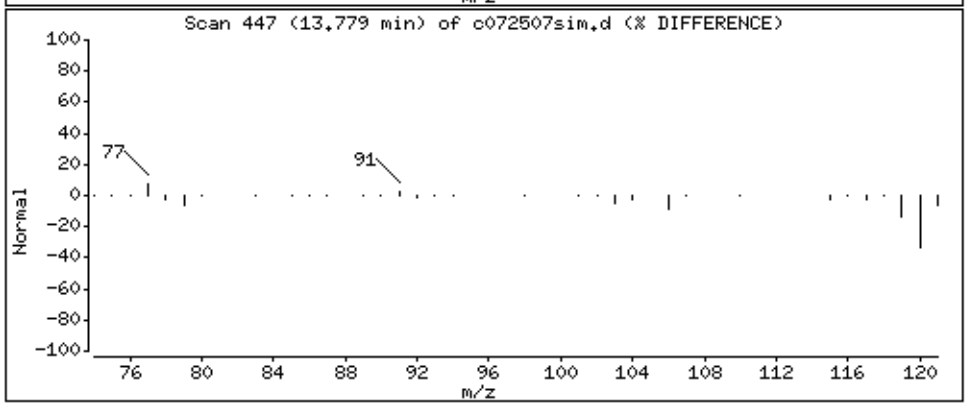












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

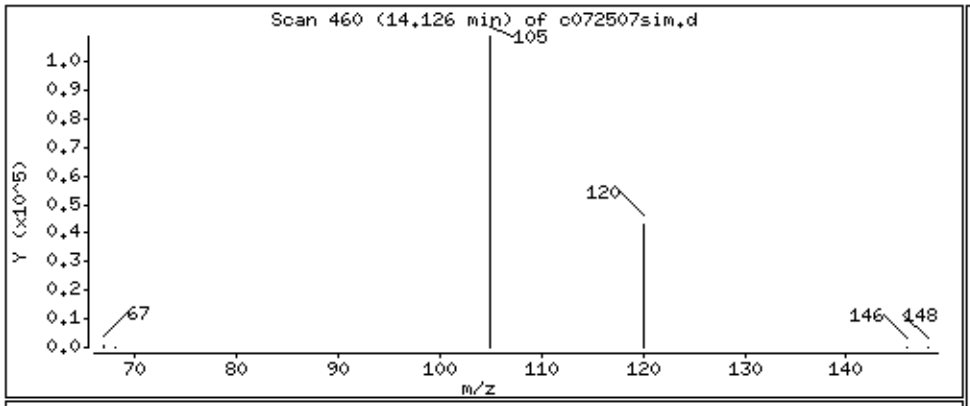
Operator: gm

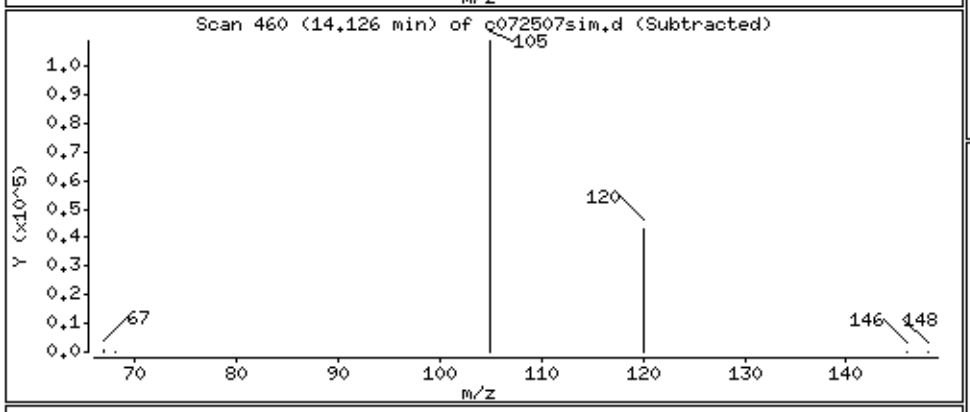
Column phase: DB-5.625

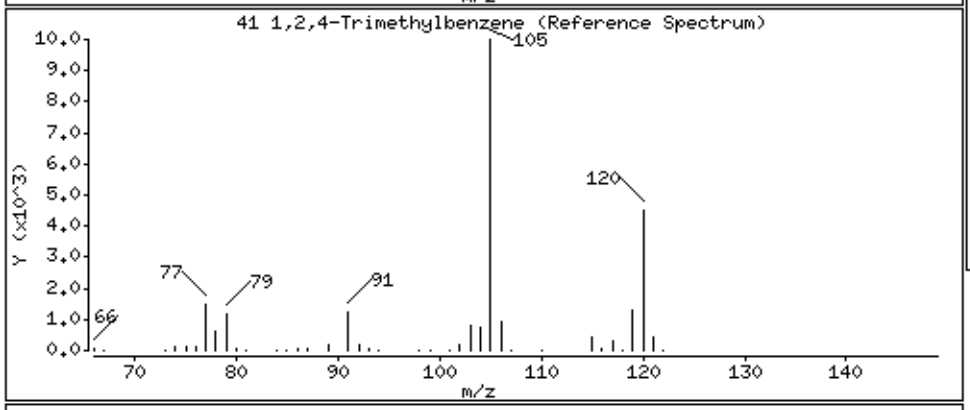
Column diameter: 0.25

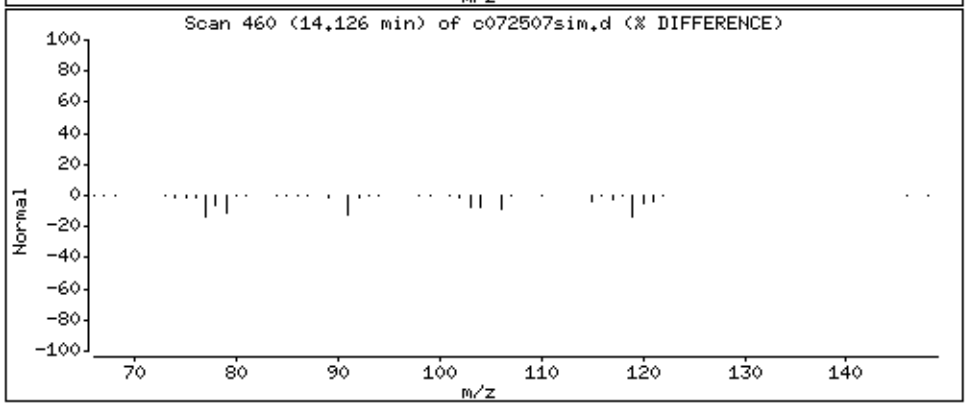
41 1,2,4-Trimethylbenzene

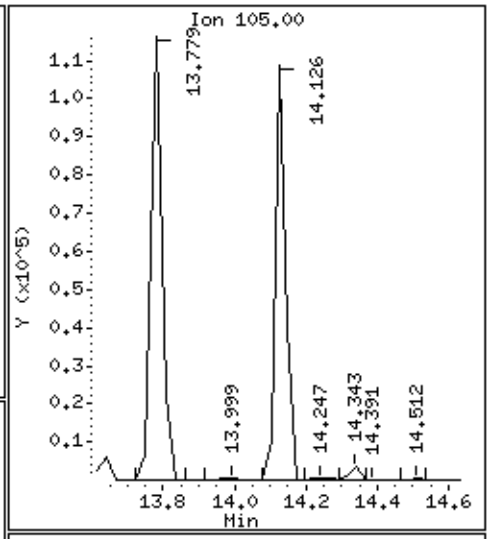
Concentration: 9.40199 ug

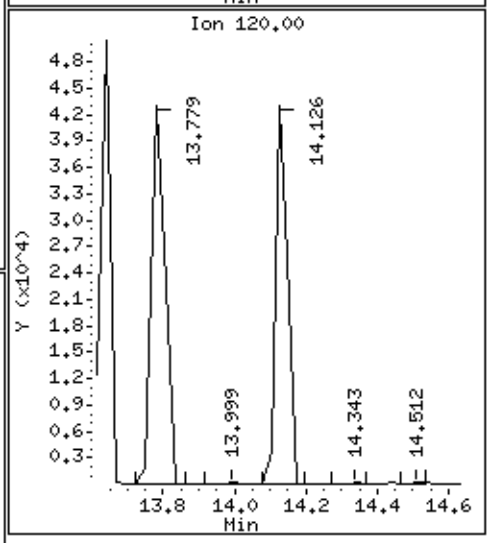












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

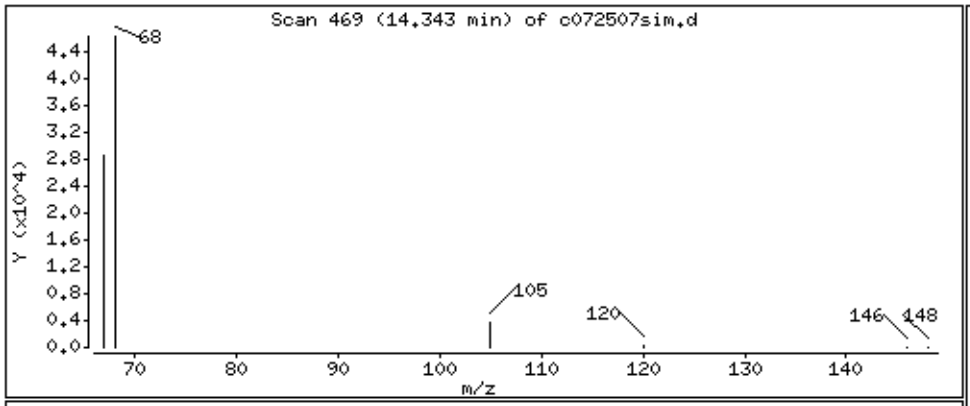
Operator: gm

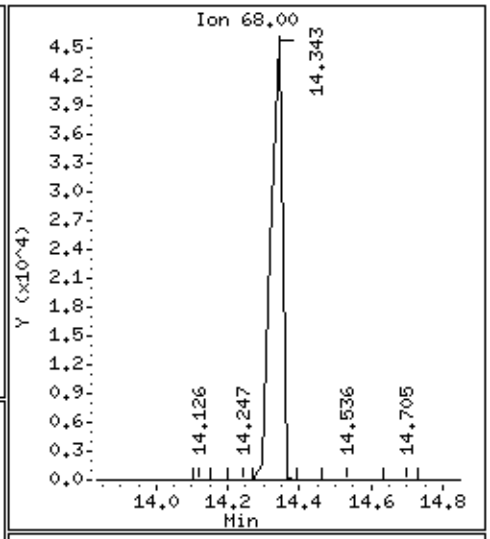
Column phase: DB-5.625

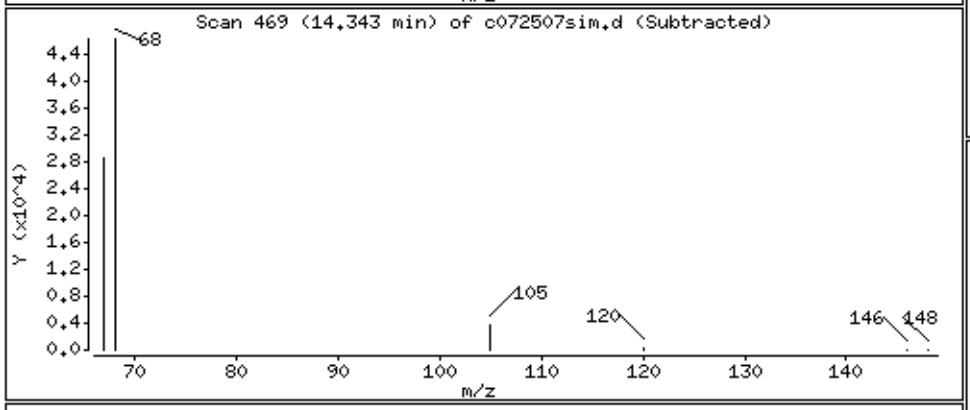
Column diameter: 0.25

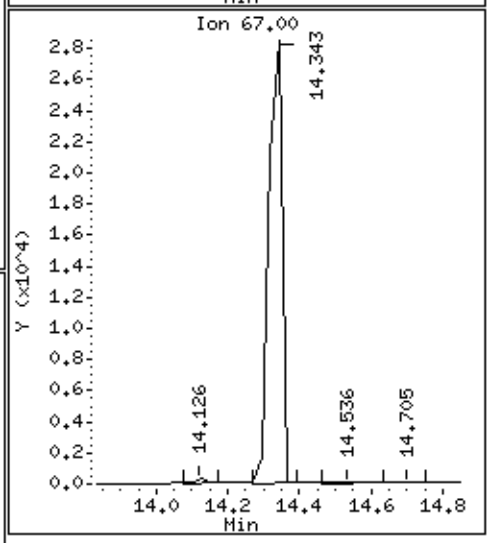
42 R-(+)-Limonene

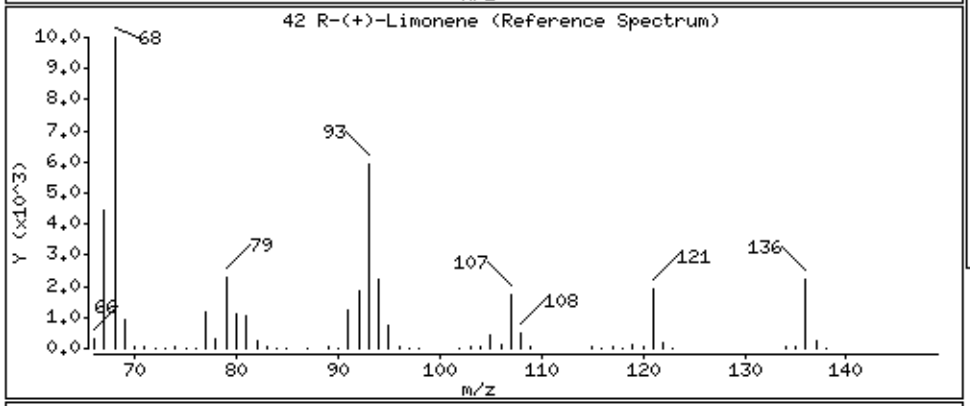
Concentration: 9.20234 ug

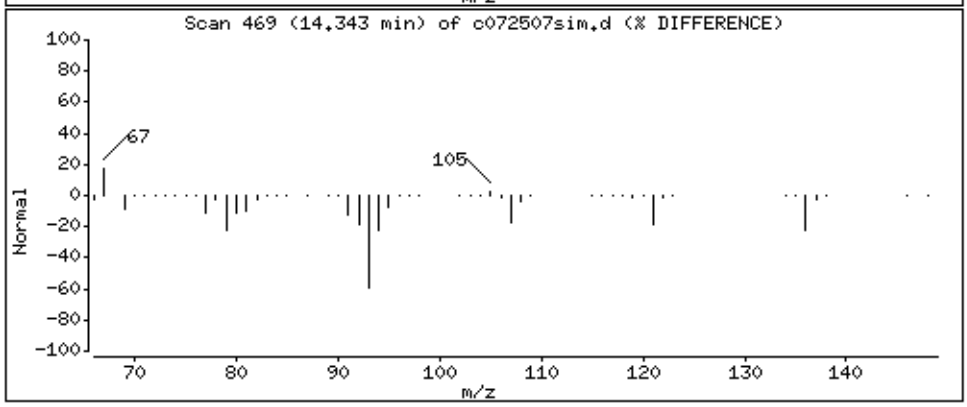












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

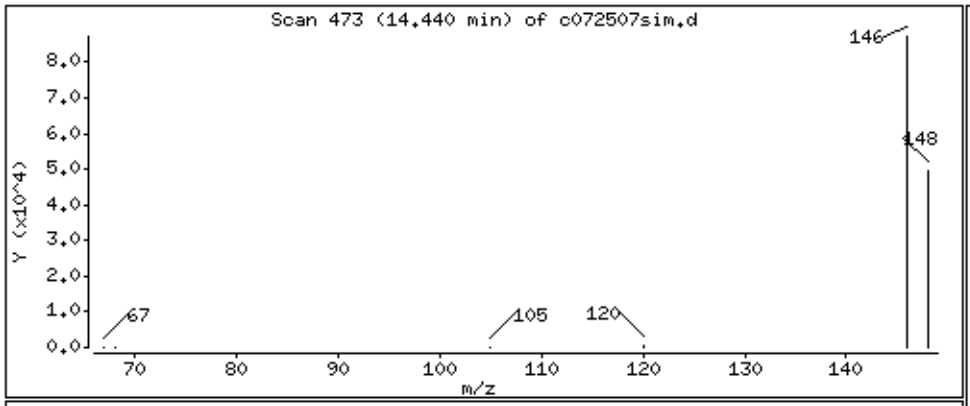
Operator: gm

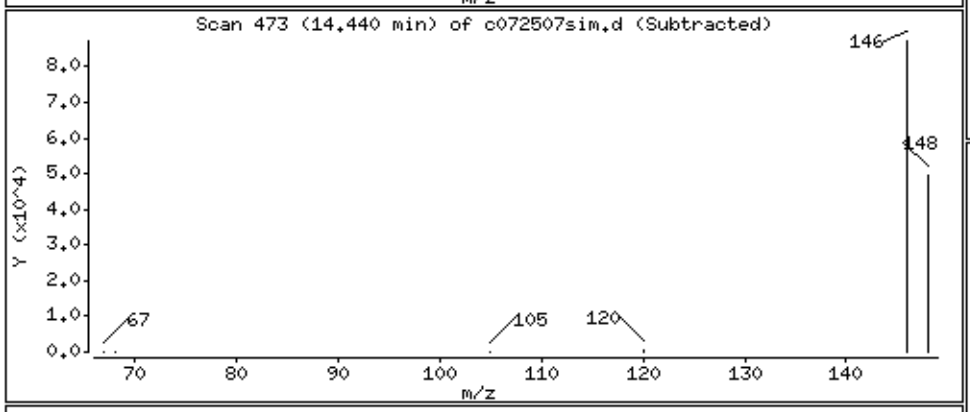
Column phase: DB-5.625

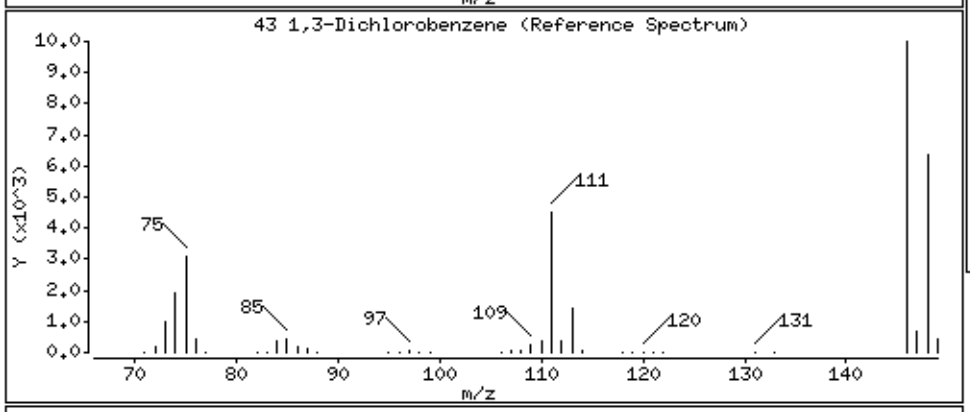
Column diameter: 0.25

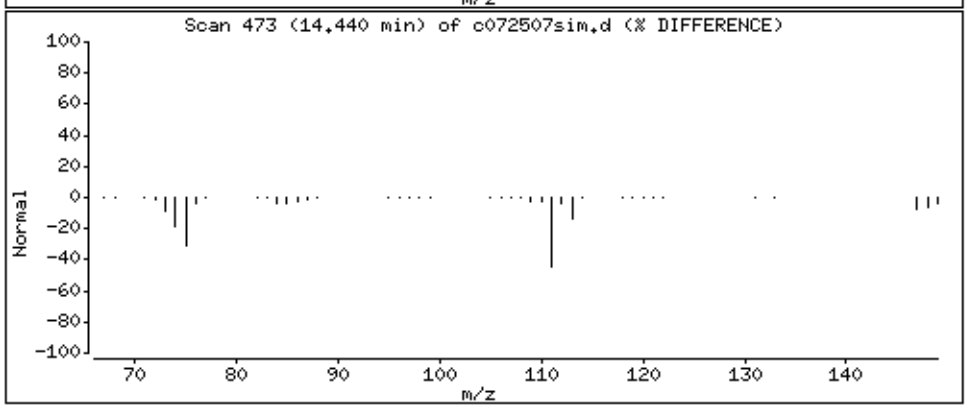
43 1,3-Dichlorobenzene

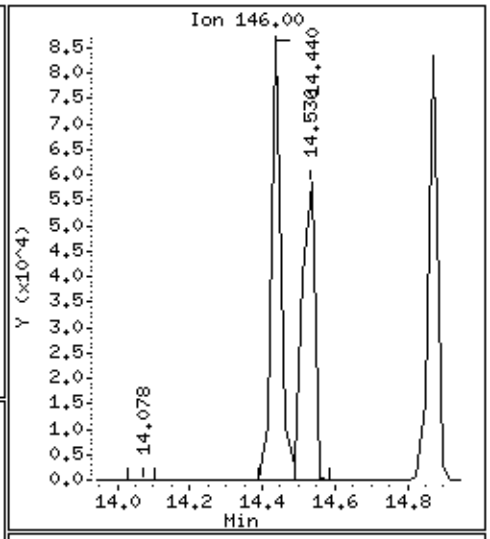
Concentration: 9.84232 ug

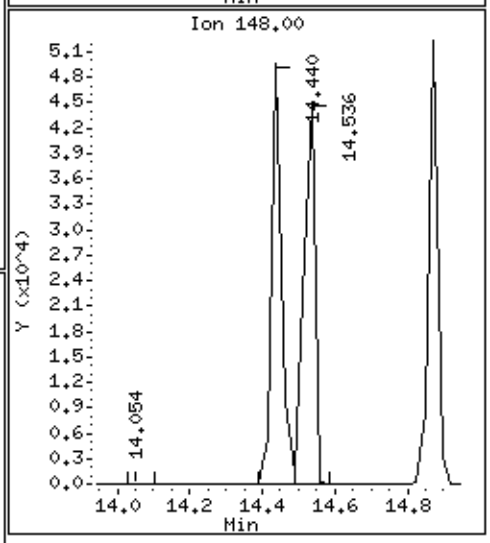












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

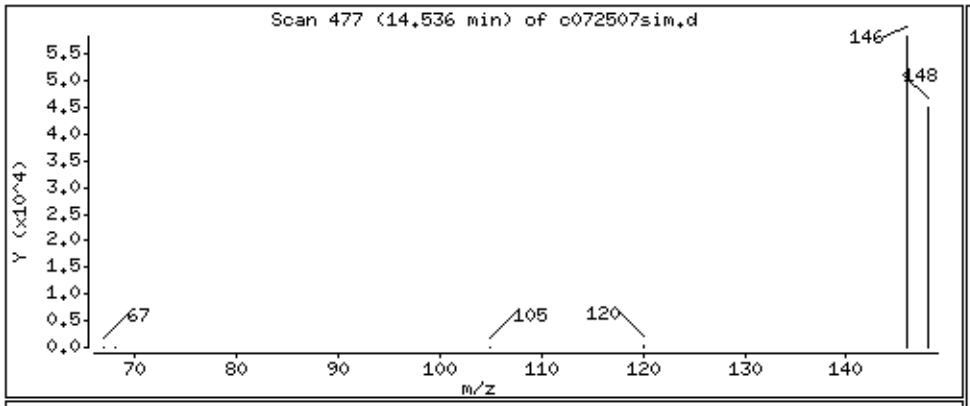
Operator: gm

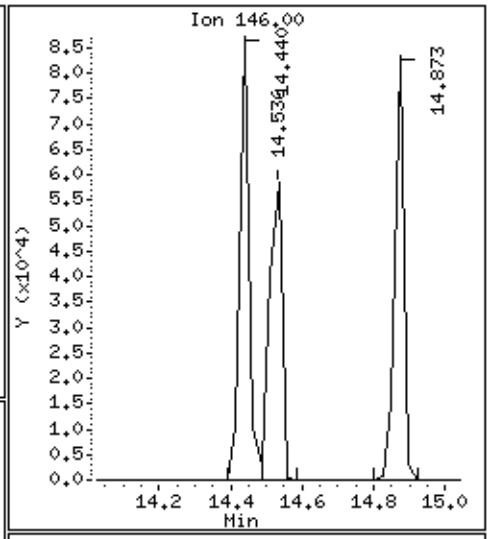
Column phase: DB-5.625

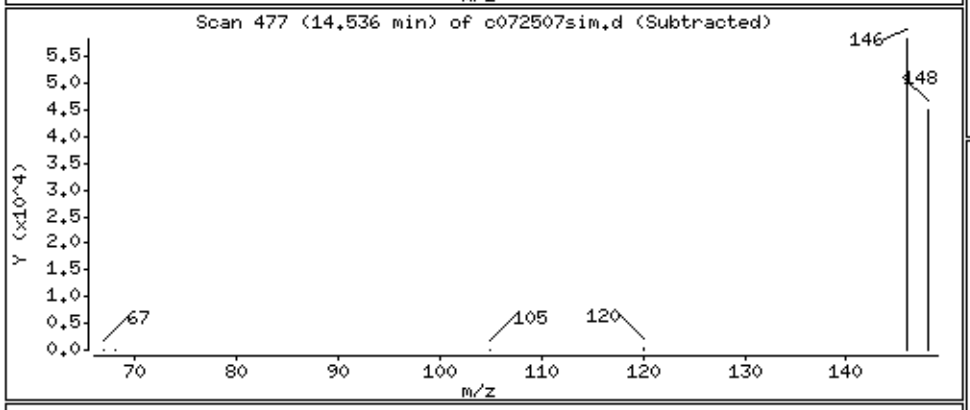
Column diameter: 0.25

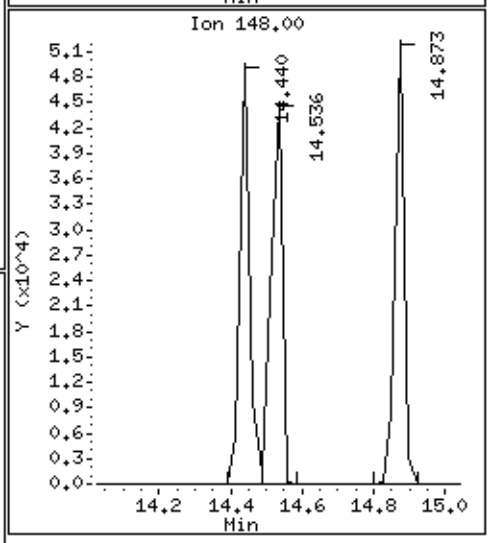
44 1,4-Dichlorobenzene

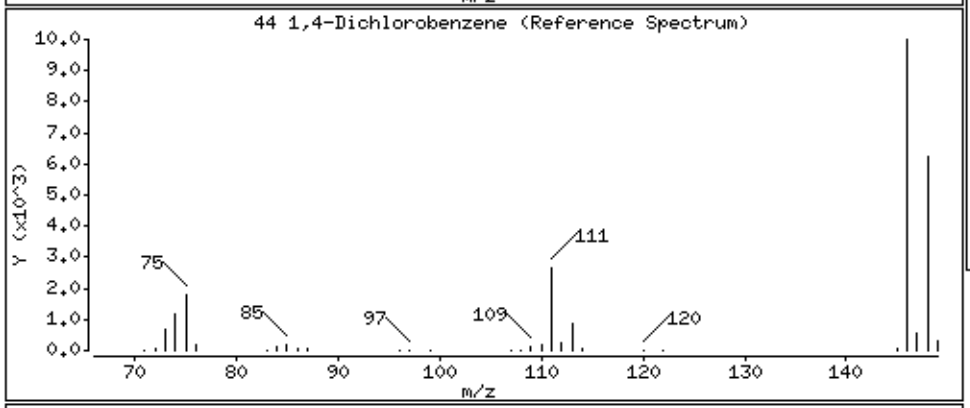
Concentration: 7.55886 ug

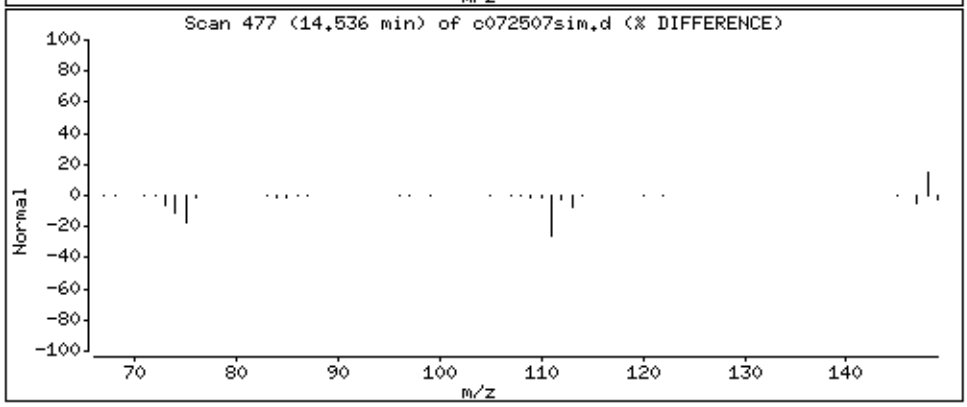












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

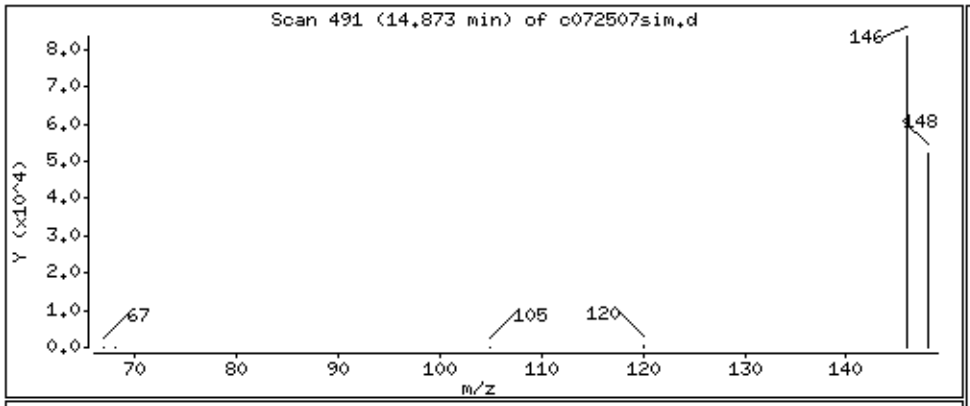
Operator: gm

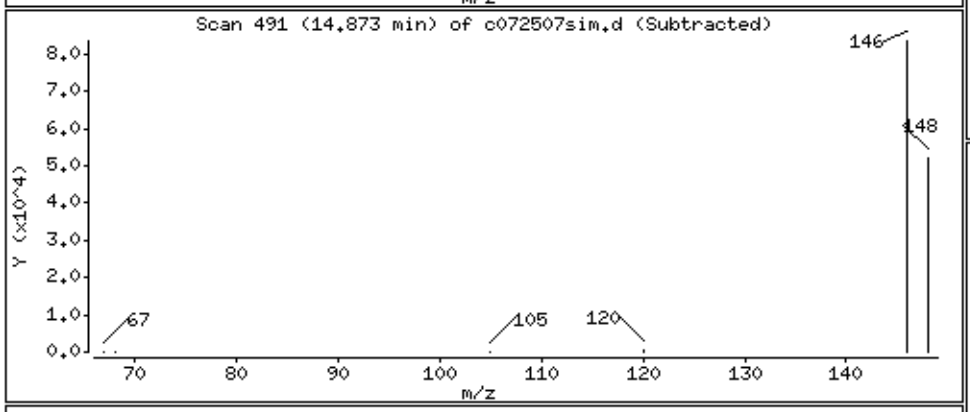
Column phase: DB-5.625

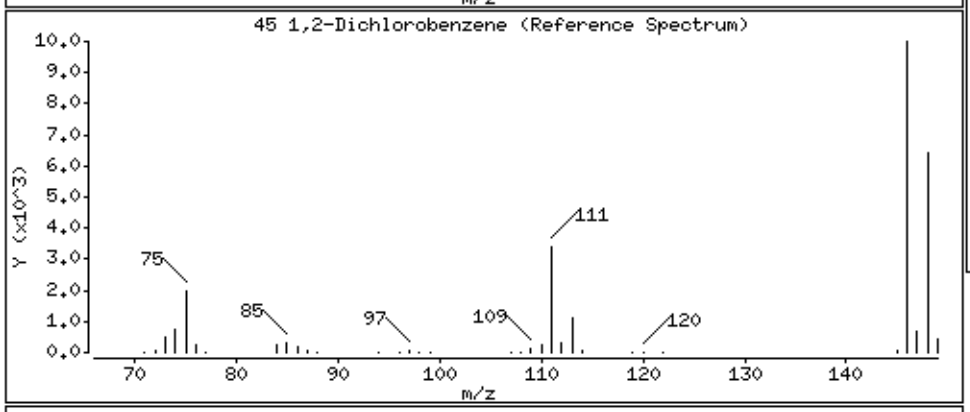
Column diameter: 0.25

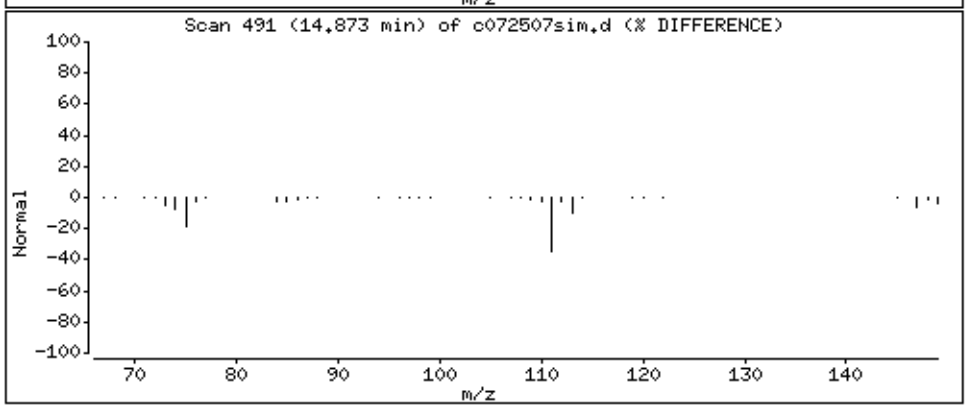
45 1,2-Dichlorobenzene

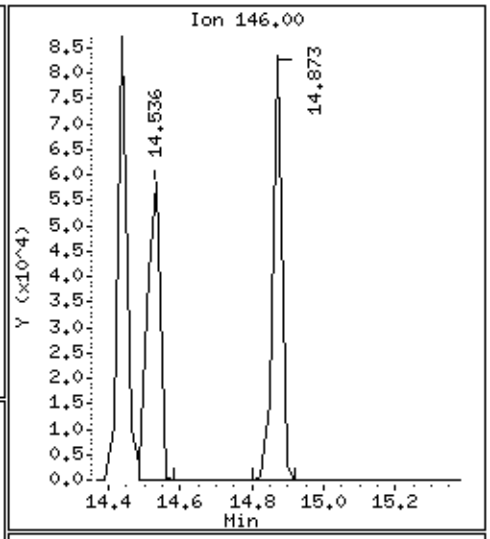
Concentration: 8.61651 ug

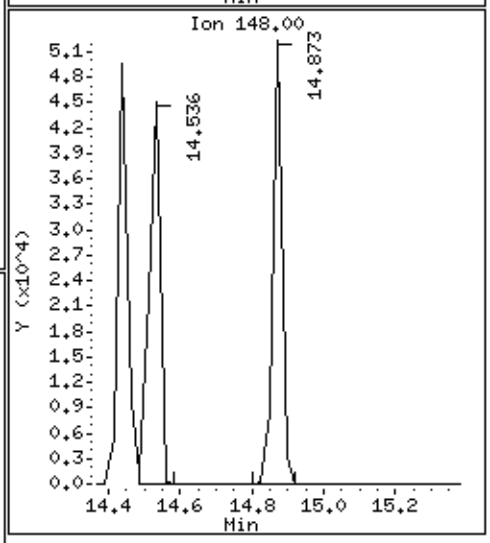












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

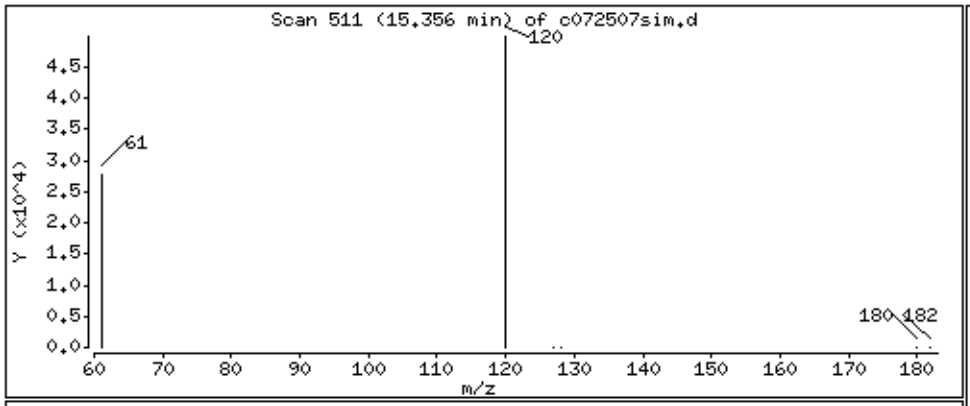
Operator: gm

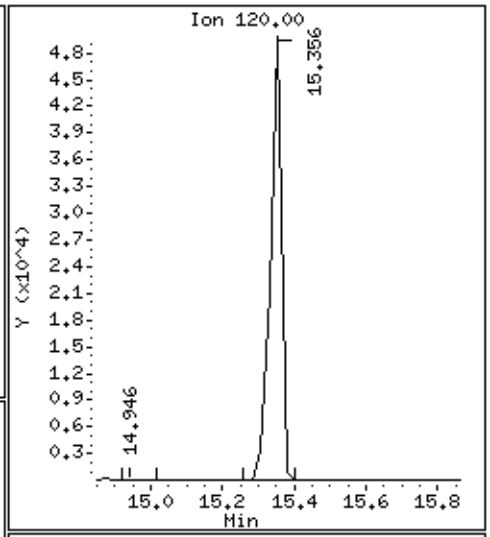
Column phase: DB-5.625

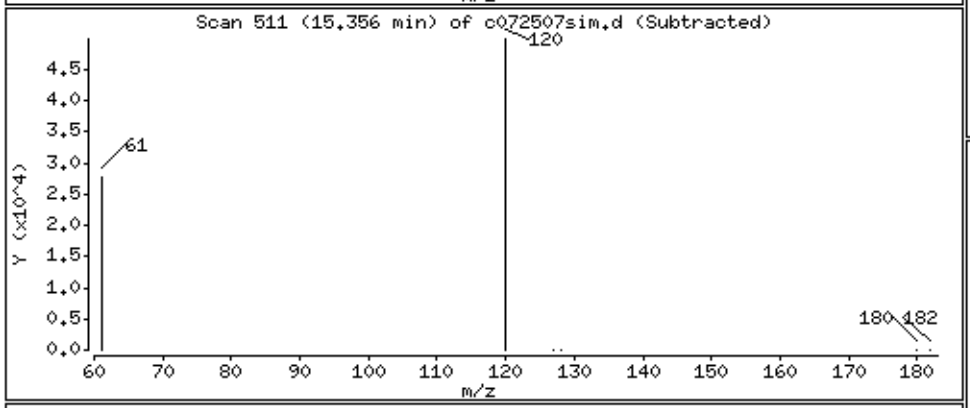
Column diameter: 0.25

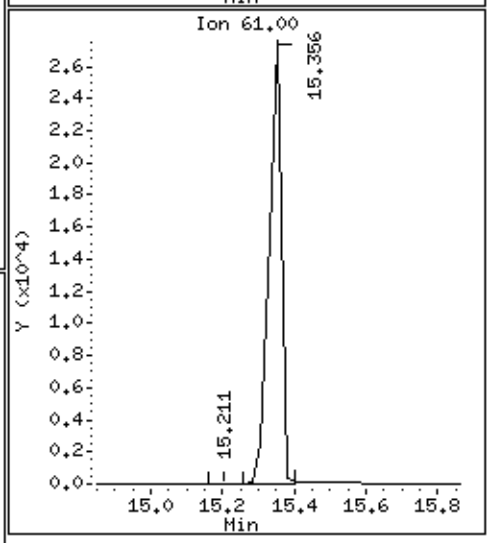
46 1,4-Dithiane

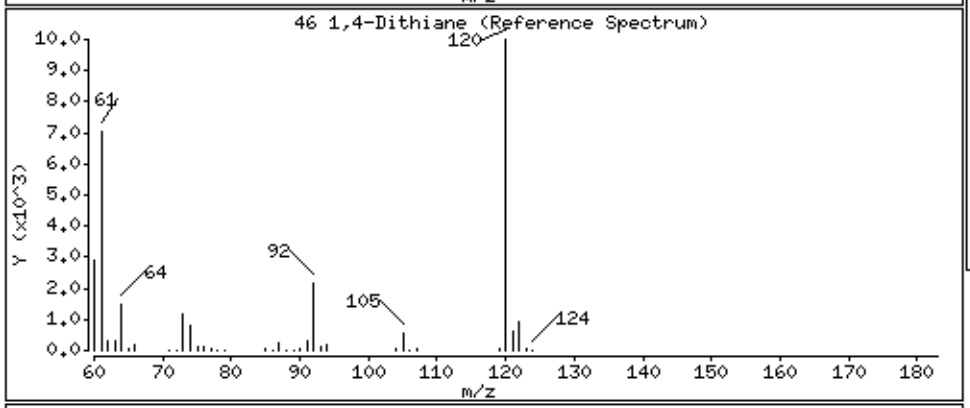
Concentration: 9.11634 ug

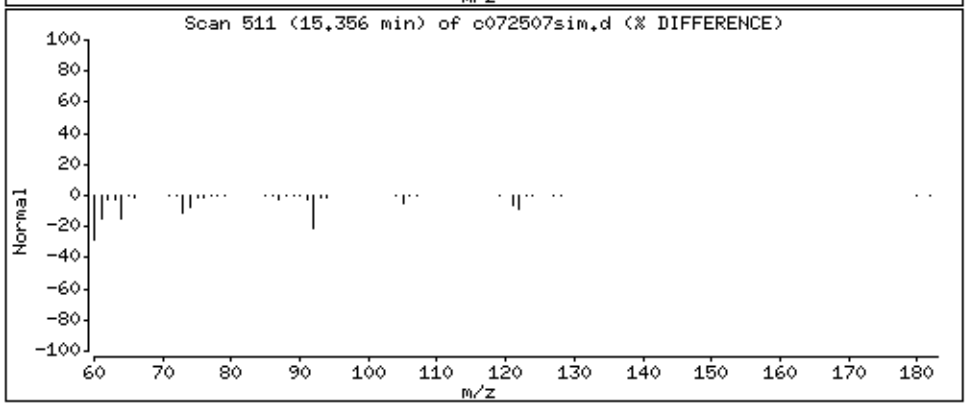












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

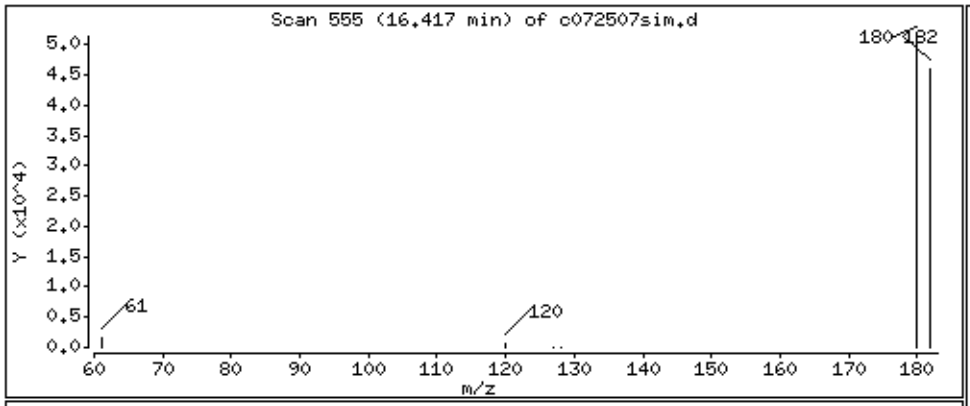
Operator: gm

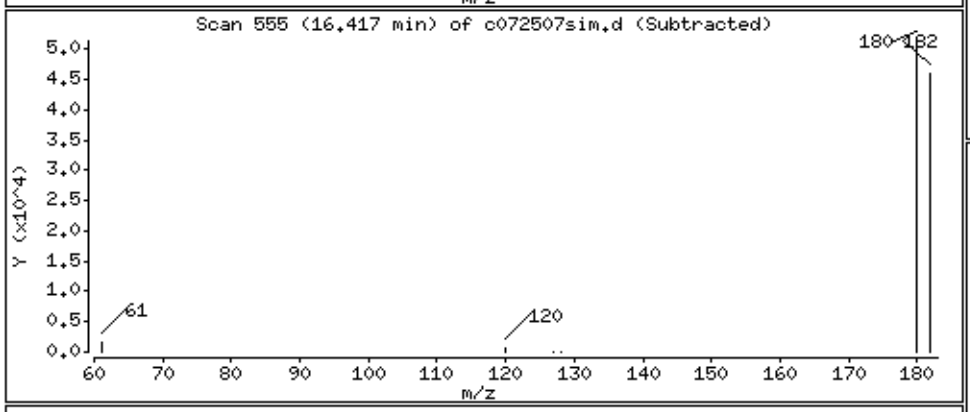
Column phase: DB-5.625

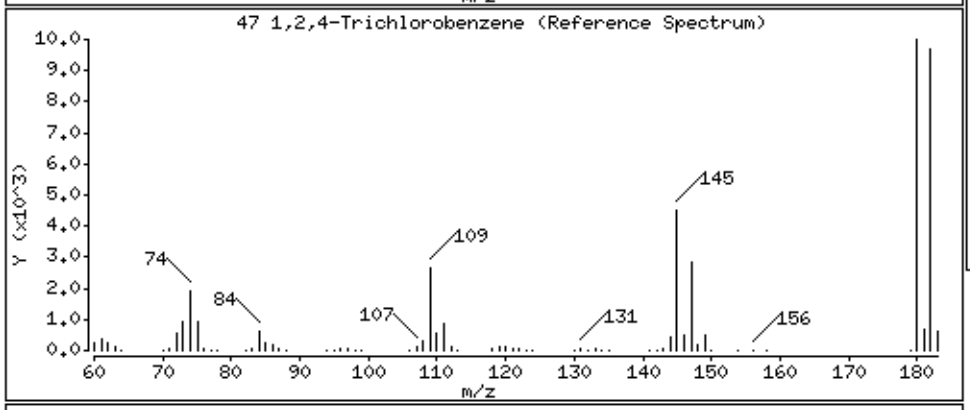
Column diameter: 0.25

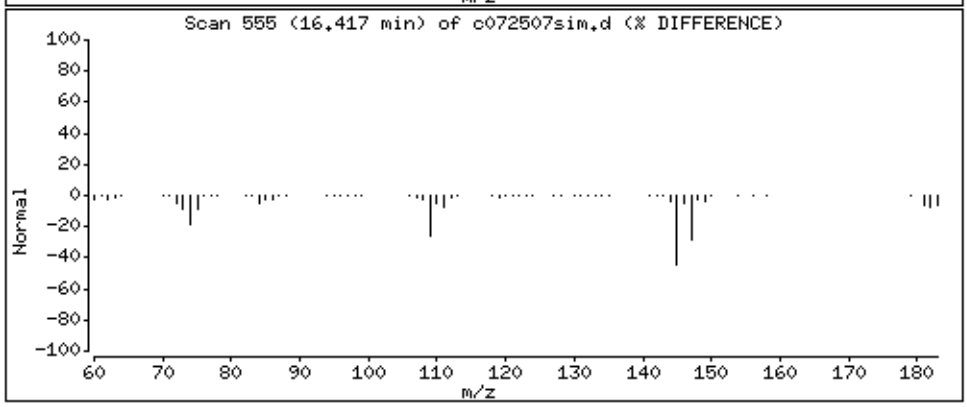
47 1,2,4-Trichlorobenzene

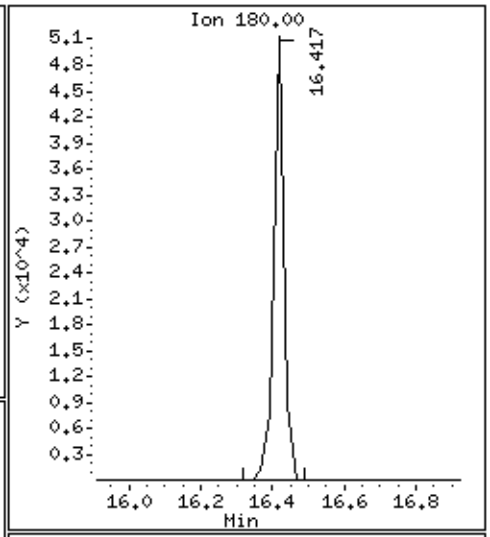
Concentration: 8.50509 ug

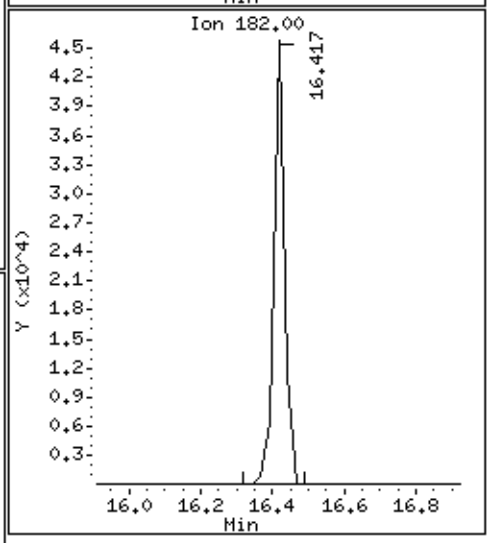












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

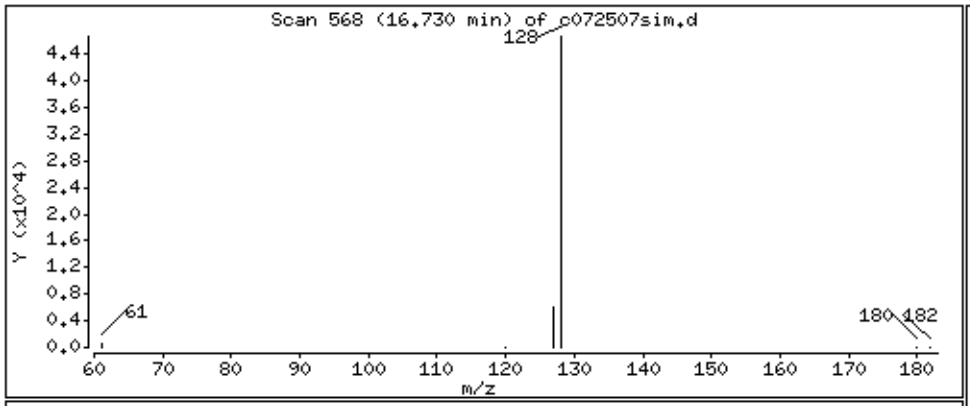
Operator: gm

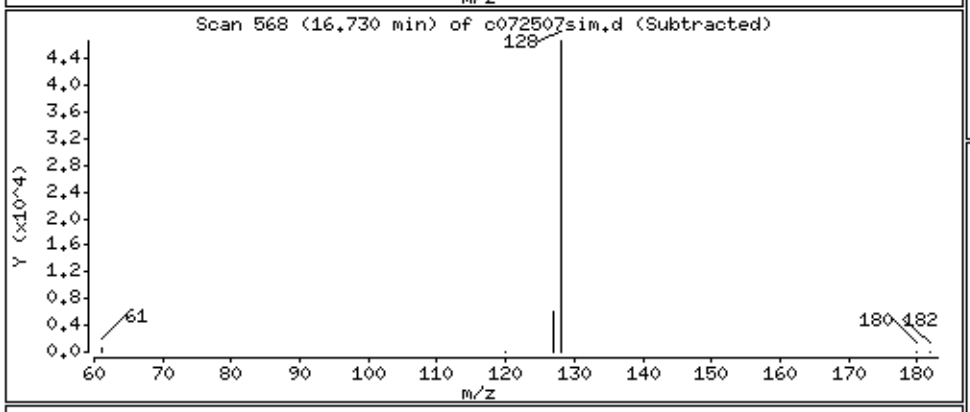
Column phase: DB-5.625

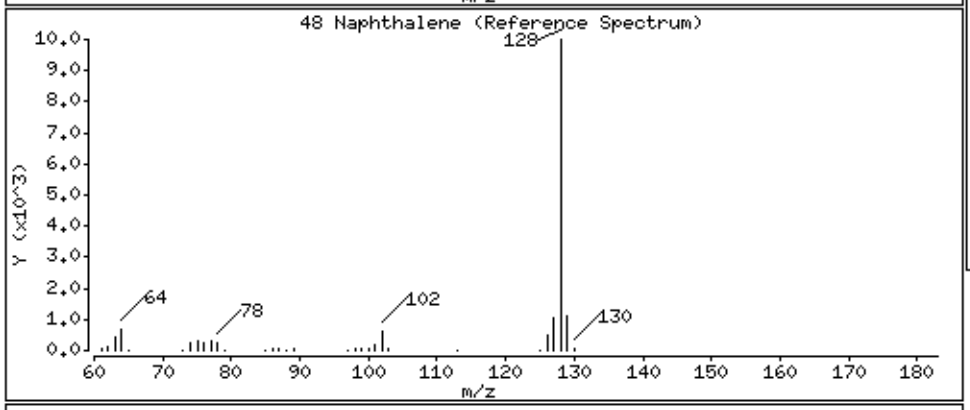
Column diameter: 0.25

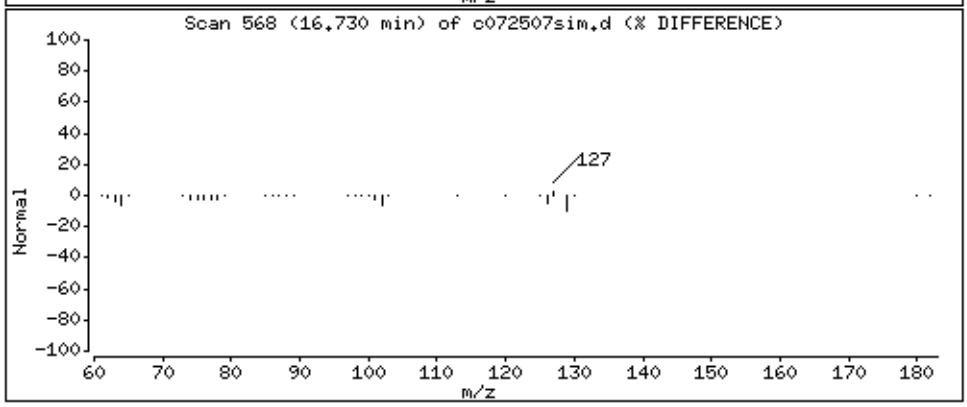
48 Naphthalene

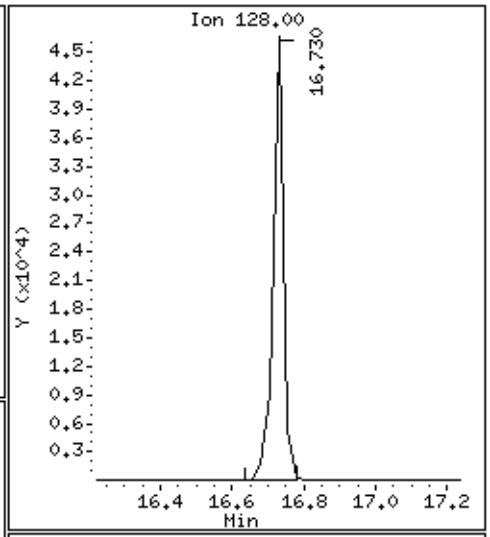
Concentration: 2.52950 ug

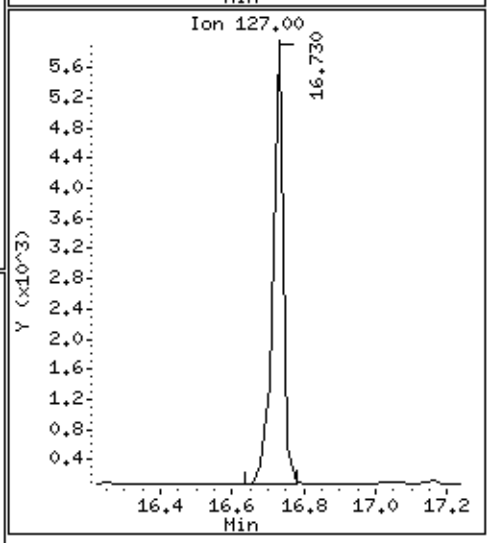












Data File: /chem/msdc.i/25Jul2017.b/c072507sim.d

Date : 25-JUL-2017 10:22

Client ID: LCSD

Instrument: msdc.i

Sample Info: ;1707320/328;LCSD

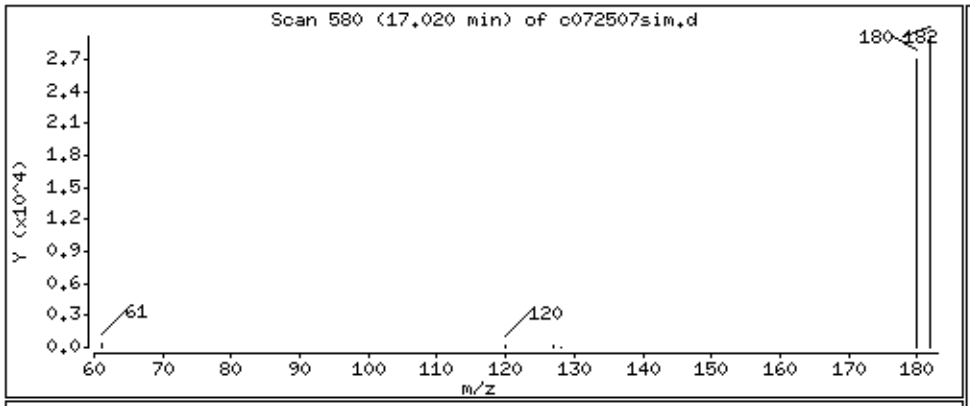
Operator: gm

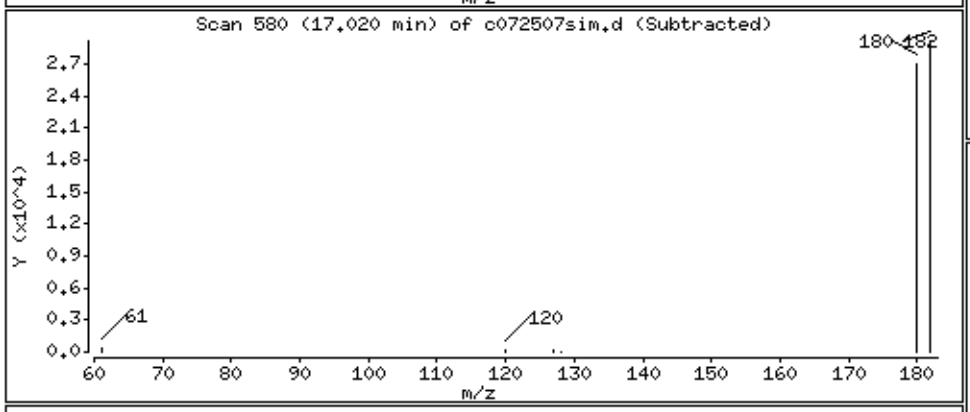
Column phase: DB-5.625

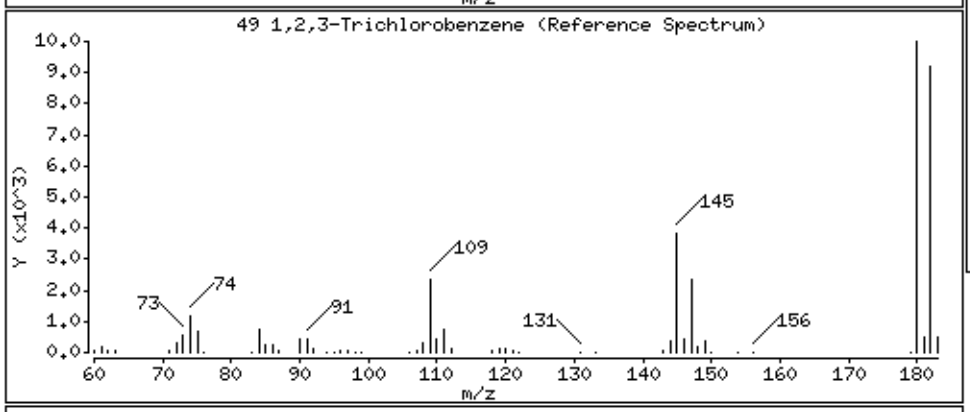
Column diameter: 0.25

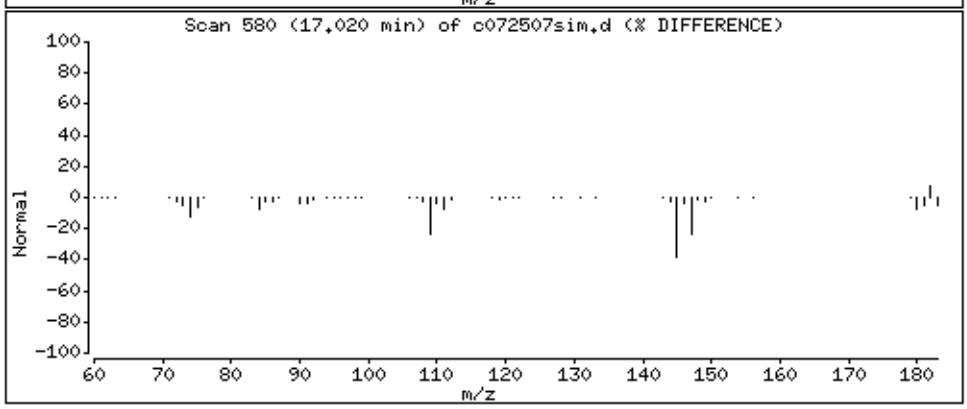
49 1,2,3-Trichlorobenzene

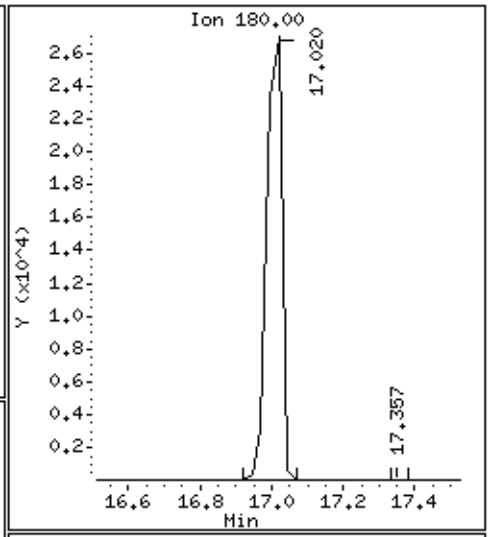
Concentration: 6.88504 ug

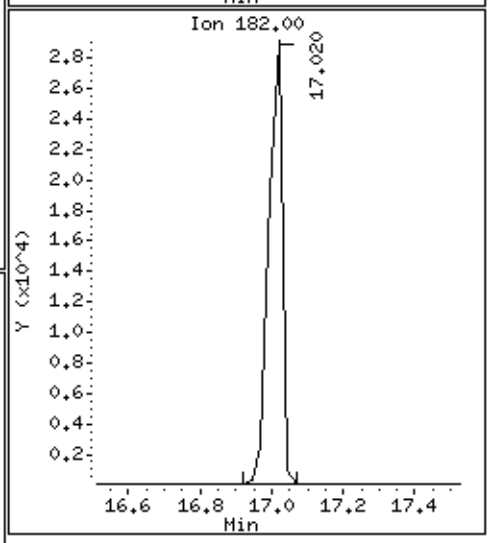












Eurofins Air Toxics, Inc.

Application Sample Preparation Logbook **Logbook #: 2837**

Work Order # 1707320/328 **Solvent:** CS_2 **Lot #:** 56181

GC/GCMS Application # 48 **Spike I.D.:** 2848-5-500 **Exp.:** 12/20/17

Date Prepared 7/25/17 **N2/Zero Air** NA

Matrix type Rad 130 **IS + Surr ID** 2744-196-125 **Exp.:** 10/3/17

Fraction	Clients I.D. #	Sample Weight or Cartridge type & size	Final Volume (mL)	Spike Amount (µL or mL)	IS +Surr (µL)	Comments
LCS	NA	Rad 130 lot # gm ~~Unknown~~ 7/25/17	2.0 mL	20 µL	80 µL	
Lab Blank	↓	↓ 17015	↓	NA	↓	
1707320-01A	R-B-6 (071317)	Unknown	↓	↓	↓	608 XP ✓
-02A	R-B-4	↓	↓	↓	↓	611 XP ✓
-03A	Dup-2-BC	↓	↓	↓	↓	612 XP ✓
-04A	AMB-TD	↓	↓	↓	↓	605 XP ✓
1707328-01A	072017-0P2	↓	↓	↓	↓	548 WW ✓
					gm 7/25/17	

Procedure:

Procedure for Radiello Extraction

1. Add 80uL of a internal standard and surrogate STD mix (2744-196-125) to all samples, lab Blank and desorption levels
2. Add spike standard (2848-5-500, 20uL) to LCS
3. Add 2mL Carbon Disulfide to all samples, Lab Blank and all desorption levels and shake for 30 minutes.
4. Transfer the extracts to 2mL vials and analyze them.

gm 7/25/17

Reviewed by: gm Date: 7/25/17

Eurofins Air Toxics, Inc. **MSD-C** **Logbook #: 2821**

BFB Injection Date: 7/25/17
BFB Injection Time: 0920
BFB File ID: C072504

IS/S Std.#: 2744-196-125	Exp. Date: 10/3/17
2-Fluorotoluene	Sim: 280102

0271 of 0328

Verified CCV IS vs ICAL mid-point (-50% to +100% D) gm
initials

Calculation Check:

µg/L of compound $= \frac{Area_{Sample}}{Area_{IS}} \times \frac{Conc._{IS}}{RRF} \times DF = \frac{(29376)}{(259673)} \times \frac{(5.0)}{(0.27047)} \times 2.00 =$ 4.2 µg

Reported Result 4.2 µg

File ID:	C072509SIM
Compound:	TCE
Initials:	gm

	Use	File #	Sample / Client Name	Vial #	DF	Date Analyzed	Time Analyzed	Initial	Comments
1	✓	C072504	2810-102 BFB	1	1.00	7/25/17	0920	gm	
2	✓	05	2848-4-5.0 CCV	2			0932		
3	✓	06	1707320/328-LCS	3			0957		
4	✓	07	-LCSD	3			1022		
5	✓	08	-BLK	4			1050		
6	✓	09	1707320-01A	5			1123		
7	✓	10	-02A	6			1147		
8	✓	11	-03A	7			1212		
9	✓	12	-04A	8			1238		
10	✓	13	1707328-01A	9			1303		
11									
12									
13									
14									
15									gm 7/25/17

Reviewed: gm Date: 7/25/17

Eurofins Air Toxics Inc.

Data file : /var/chem/msdc.i/21Jun2017.b/c062101.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 21-JUN-2017 07:24
Operator : gm Inst ID: msdc.i
Smp Info : ;2810-101;BFB
Misc Info :
Comment :
Method : /var/chem/msdc.i/21Jun2017.b/bfbr.m
Meth Date : 21-Jun-2017 07:37 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
6.339	6.490	-0.151	95	124285			100.00- 100.00	100.00
6.339	6.490	-0.151	50	19680			8.00- 40.00	15.83
6.339	6.490	-0.151	75	52245			30.00- 66.00	42.04
6.339	6.490	-0.151	96	7962			5.00- 9.00	6.41
6.339	6.490	-0.151	173	1002			0.00- 2.00	0.98
6.339	6.490	-0.151	174	102194			50.00- 120.00	82.23
6.339	6.490	-0.151	175	7862			4.00- 9.00	7.69
6.339	6.490	-0.151	176	98837			93.00- 101.00	96.72
6.339	6.490	-0.151	177	6484			5.00- 9.00	6.56

Data File: /var/chem/msdc.i/21Jun2017.b/c062101.d

Date : 21-JUN-2017 07:24

Client ID: BFB

Instrument: msdc.i

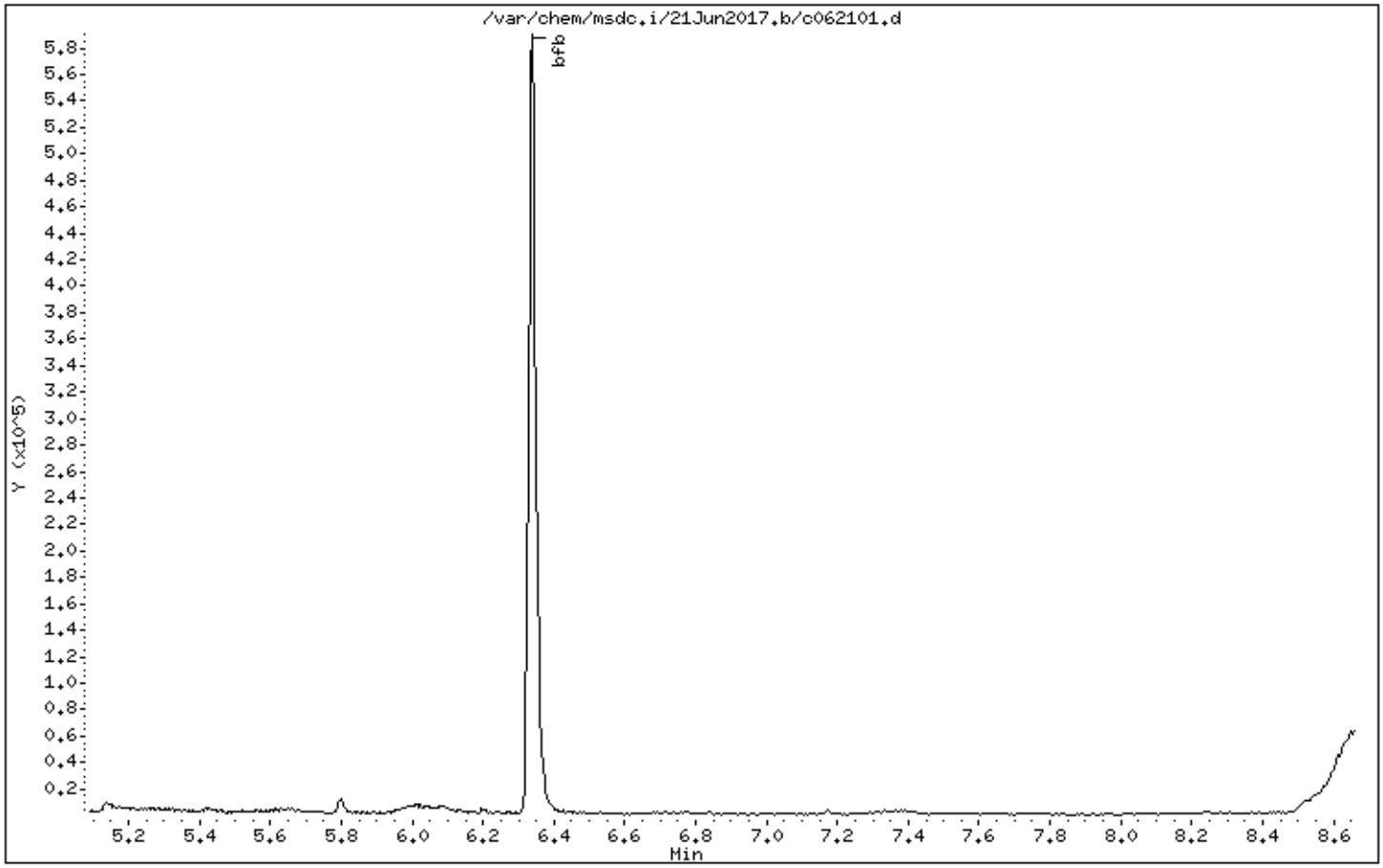
Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00



Data File: /var/chem/msdc.i/21Jun2017.b/c062101.d

Date : 21-JUN-2017 07:24

Client ID: BFB

Instrument: msdc.i

Sample Info: ;2810-101;BFB

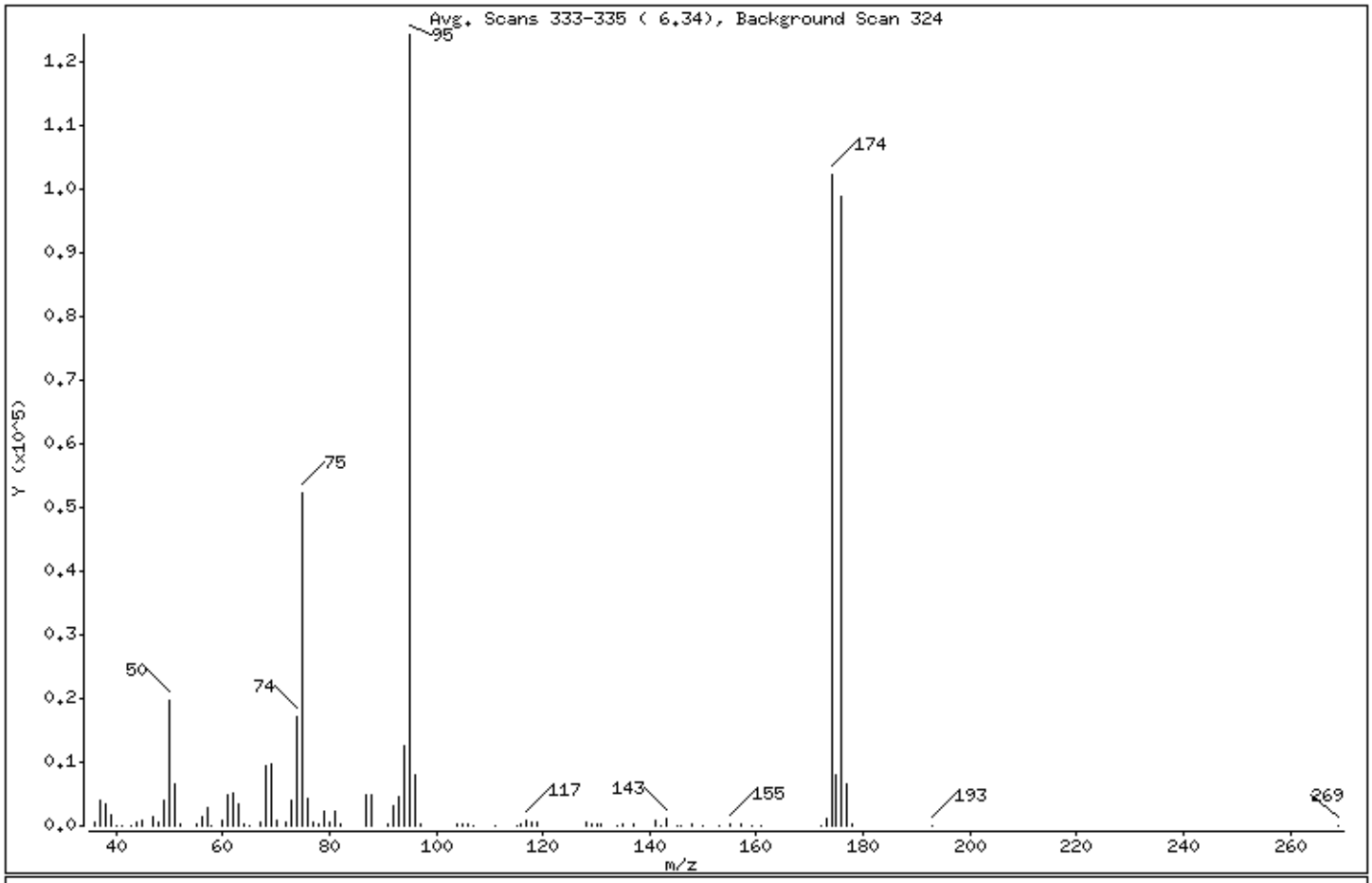
Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	15.83
75	30.00 - 66.00% of mass 95	42.04
96	5.00 - 9.00% of mass 95	6.41
173	Less than 2.00% of mass 174	0.81 (0.98)
174	50.00 - 120.00% of mass 95	82.23
175	4.00 - 9.00% of mass 174	6.33 (7.69)
176	93.00 - 101.00% of mass 174	79.52 (96.72)
177	5.00 - 9.00% of mass 176	5.22 (6.56)

Data File: /var/chem/msdc.i/21Jun2017.b/c062101.d

Date : 21-JUN-2017 07:24

Client ID: BFB

Instrument: msdc.i

Sample Info: ;2810-101;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00

Data File: c062101.d
Spectrum: Avg. Scans 333-335 (6.34), Background Scan 324
Location of Maximum: 95.00
Number of points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	586	63.00	3553	93.00	4655	141.00	959
37.00	3916	64.00	406	94.00	12603	142.00	60
38.00	3325	65.00	55	95.00	124280	143.00	1025
39.00	1677	67.00	455	96.00	7962	145.00	69
40.00	113	68.00	9502	97.00	240	146.00	101
41.00	55	69.00	9672	104.00	364	148.00	289
43.00	87	70.00	755	105.00	220	150.00	52
44.00	644	72.00	539	106.00	419	153.00	83
45.00	786	73.00	4096	107.00	125	155.00	319
47.00	1559	74.00	17080	111.00	50	157.00	150
48.00	573	75.00	52240	115.00	82	159.00	53
49.00	3964	76.00	4333	116.00	403	161.00	139
50.00	19680	77.00	598	117.00	749	172.00	58
51.00	6709	78.00	413	118.00	446	173.00	1002
52.00	321	79.00	2201	119.00	611	174.00	102192
55.00	370	80.00	711	128.00	442	175.00	7862
56.00	1533	81.00	2320	129.00	204	176.00	98832
57.00	2899	82.00	405	130.00	400	177.00	6484
58.00	60	87.00	4911	131.00	144	178.00	153
60.00	979	88.00	4749	134.00	59	193.00	58
61.00	4843	91.00	257	135.00	280	269.00	57
62.00	5015	92.00	3023	137.00	195		

Eurofins Air Toxics Inc.

Data file : /var/chem/msdc.i/25Jul2017.b/c072504.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 25-JUL-2017 09:20
Operator : gm Inst ID: msdc.i
Smp Info : ;2810-102;BFB
Misc Info :
Comment :
Method : /var/chem/msdc.i/25Jul2017.b/bfbr.m
Meth Date : 25-Jul-2017 09:24 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
6.316	6.490	-0.174	95	469056			100.00- 100.00	100.00
6.316	6.490	-0.174	50	68864			8.00- 40.00	14.68
6.316	6.490	-0.174	75	204672			30.00- 66.00	43.63
6.316	6.490	-0.174	96	29626			5.00- 9.00	6.32
6.316	6.490	-0.174	173	2506			0.00- 2.00	0.61
6.316	6.490	-0.174	174	413973			50.00- 120.00	88.26
6.316	6.490	-0.174	175	30549			4.00- 9.00	7.38
6.316	6.490	-0.174	176	392554			93.00- 101.00	94.83
6.316	6.490	-0.174	177	26109			5.00- 9.00	6.65

Data File: /var/chem/msdc.i/25Jul2017.b/c072504.d

Date : 25-JUL-2017 09:20

Client ID: BFB

Instrument: msdc.i

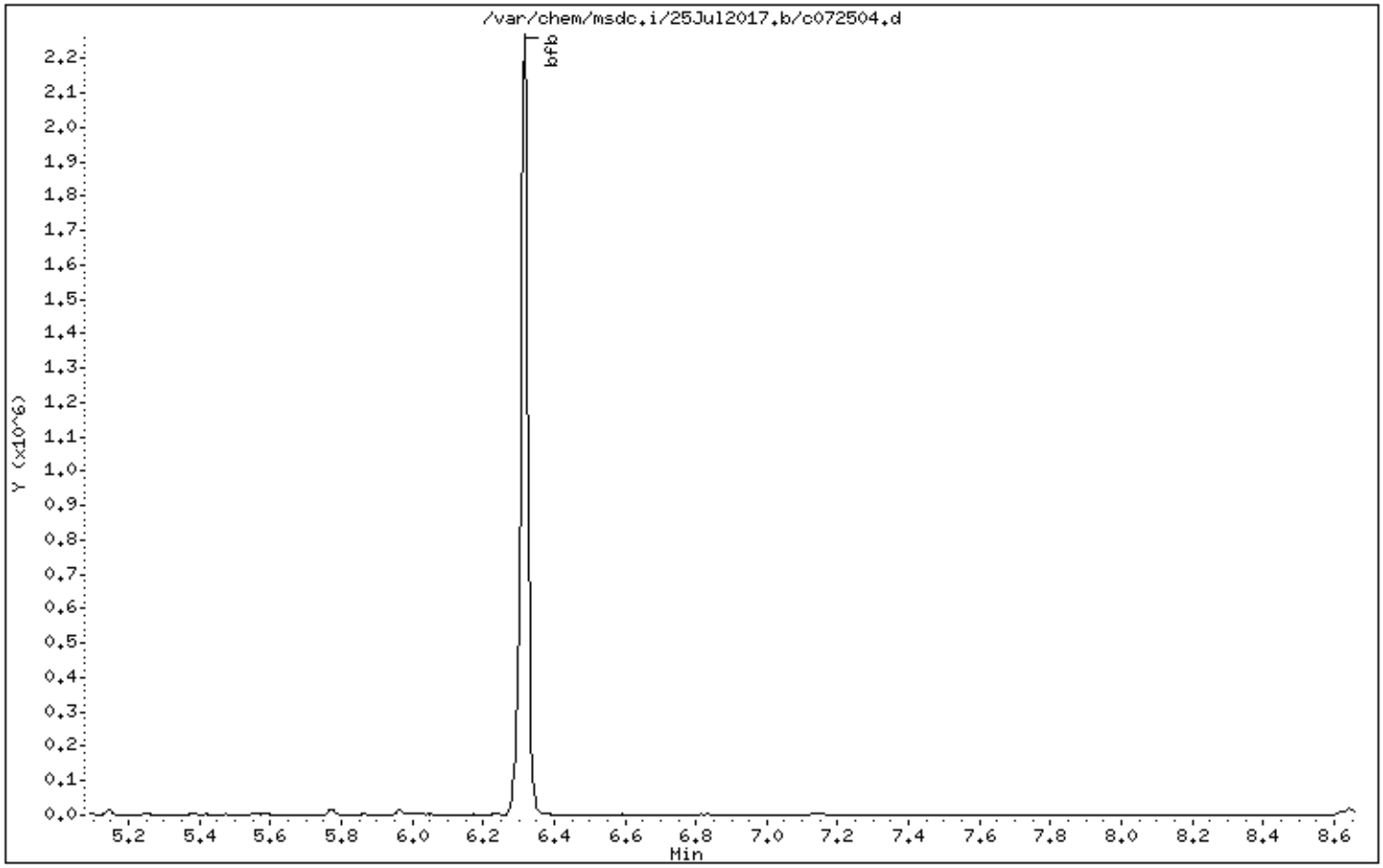
Sample Info: ;2810-102;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00



Data File: /var/chem/msdc.i/25Jul2017.b/c072504.d

Date : 25-JUL-2017 09:20

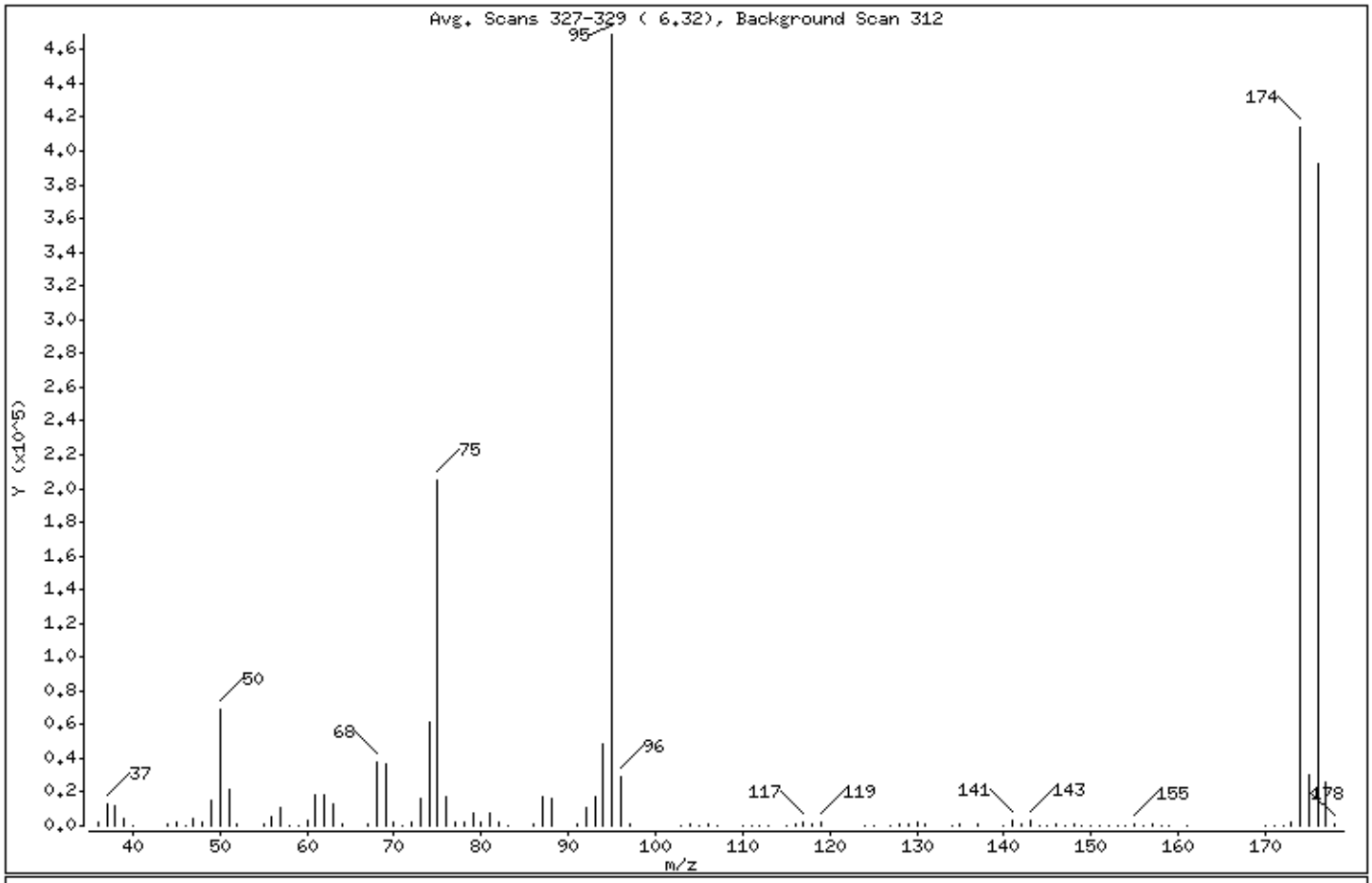
Client ID: BFB Instrument: msdc.i

Sample Info: ;2810-102;BFB

Volume Injected (uL): 1.0 Operator: gm

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	14.68
75	30.00 - 66.00% of mass 95	43.63
96	5.00 - 9.00% of mass 95	6.32
173	Less than 2.00% of mass 174	0.53 (0.61)
174	50.00 - 120.00% of mass 95	88.26
175	4.00 - 9.00% of mass 174	6.51 (7.38)
176	93.00 - 101.00% of mass 174	83.69 (94.83)
177	5.00 - 9.00% of mass 176	5.57 (6.65)

Data File: /var/chem/msdc.i/25Jul2017.b/c072504.d

Date : 25-JUL-2017 09:20

Client ID: BFB

Instrument: msdc.i

Sample Info: ;2810-102;BFB

Volume Injected (uL): 1.0

Operator: gm

Column phase:

Column diameter: 2.00

Data File: c072504.d
Spectrum: Avg. Scans 327-329 (6.32), Background Scan 312
Location of Maximum: 95.00
Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2239	70.00	2569	106.00	1590	146.00	675
37.00	12788	71.00	55	107.00	371	147.00	267
38.00	11619	72.00	2048	110.00	130	148.00	1099
39.00	4340	73.00	15943	111.00	288	149.00	304
40.00	95	74.00	61824	112.00	208	150.00	394
44.00	1537	75.00	204672	113.00	200	151.00	58
45.00	2653	76.00	17576	115.00	521	152.00	168
46.00	156	77.00	2216	116.00	1333	153.00	327
47.00	4745	78.00	1682	117.00	2241	154.00	285
48.00	1841	79.00	7014	118.00	1220	155.00	1028
49.00	14839	80.00	2339	119.00	1937	156.00	86
50.00	68864	81.00	8087	124.00	153	157.00	729
51.00	21816	82.00	1701	125.00	109	158.00	56
52.00	983	83.00	154	127.00	208	159.00	480
55.00	917	86.00	543	128.00	1616	161.00	536
56.00	5392	87.00	17312	129.00	846	170.00	70
57.00	10387	88.00	16166	130.00	1747	171.00	130
58.00	449	91.00	1199	131.00	554	172.00	480
59.00	60	92.00	10559	134.00	80	173.00	2506
60.00	3656	93.00	16856	135.00	831	174.00	413952
61.00	18584	94.00	48704	137.00	553	175.00	30544
62.00	18608	95.00	469056	140.00	300	176.00	392512
63.00	12728	96.00	29624	141.00	3476	177.00	26104
64.00	1309	97.00	1017	142.00	541	178.00	735
67.00	959	103.00	180	143.00	3764		
68.00	37232	104.00	1315	144.00	278		
69.00	36320	105.00	527	145.00	201		

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Air Toxics, Ltd. at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

PASSIVE SAMPLE COLLECTION

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and International laws, regulations and ordinances of any kind. Eurofins assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630
(916) 985-1000 FAX (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Project Manager: Sarah Junker
Collected by: (Print and Sign) Randall Wonder
Company: ARCADIS Email: Sarah.Junker@arcadis.com
Address: 150 W. Market St Suite 728 City: Indianapolis State: IN Zip: 46204
Phone: 317-231-6500 Fax: 317-231-6574

Project Info:
P.O. #: LA003307.0009
Project #: LA003307.0009
Project Name: Greenea Manufacturing

Turn Around Time: ☒ Normal ☐ Rush

Reporting Units: ☐ ppmv ☐ ppbv ☒ µg/m3 ☐ mg/m3

Lab I.D	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Air Temperature	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other
01A	R-B-6 (07/13/17)	608XP	07/13/17	19:28	07/20/17	17:40		Rad 135 Project List	☒	☐	☐	☐
02A	R-B-4 (07/13/17)	611XP	07/13/17	19:52	07/20/17	17:43		↓	☒	☐	☐	☐
03A	Dup-2-BL (07/13/17)	612XP	07/13/17	19:52	07/20/17	17:43			☒	☐	☐	☐
04A	AMG-7D (07/13/17)	605XP	07/13/17	18:50	07/20/17	18:00			☐	☒	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	7-21-17 / 1500	Andrew Ringstad EAL	7/22/17 0815
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: SEE Lab PM FOR "PROJECT LIST"

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex	77797 07216 6809	NA	Good	Yes No (None)	1707320

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1707320

Client

Ms. Sarah Jonker
Arcadis U.S., Inc.
150 W Market St, Ste 728
Indianapolis, IN 46204

Phone

317-231-6500

Fax

317-231-6514

Date Promised: 08/07/17
Date Completed: 8/3/17
Date Received: 7/22/17
PO#: LA003307.0009
Project#: LA003307.0009 Grenada Manufacturing

Sales Rep: N/A

Total $: $ 548.80
Logged By: AA

Fraction	Sample #	Analysis	Collected	Amount$
01A	R-B-6 (071317)	Passive S.E. RAD130/SKC	7/20/2017	$132.30
02A	R-B-4 (071317)	Passive S.E. RAD130/SKC	7/20/2017	$132.30
03A	Dup-2-BC (071317)	Passive S.E. RAD130/SKC	7/20/2017	$132.30
04A	AMB-7D (071317)	Passive S.E. RAD130/SKC	7/20/2017	$132.30
05A	Lab Blank	Passive S.E. RAD130/SKC	NA	$0.00
06A	LCS	Passive S.E. RAD130/SKC	NA	$0.00
06AA	LCSD	Passive S.E. RAD130/SKC	NA	$0.00

Misc. Charges eCVP (4) @ $4.90 each. $19.60

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Grenada/20635

BILL TO: Accounts Payable
Arcadis U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch, CO 80129

Analysis Code: Other GC

TERMS:

Reporting Method: Passive SE GC/MS (Sh)-Arcadis (Grenada) v1

Other Records

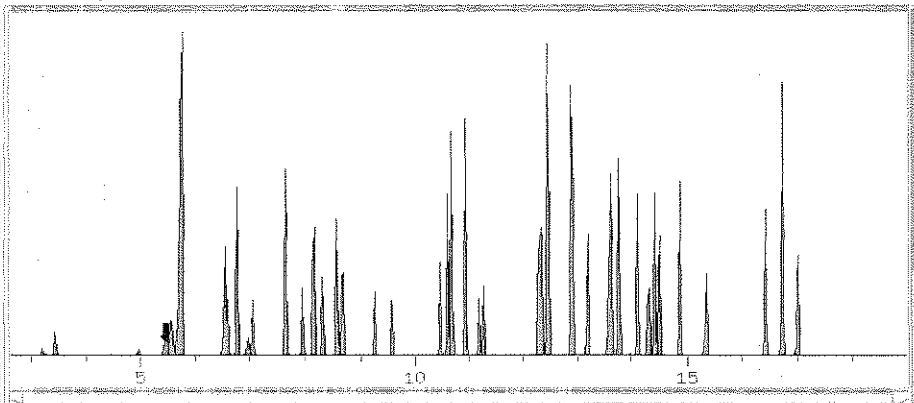
TargetReview: eeyore: 2848-4-5.0: /chem/msdc.i/25Jul2017.b/c072505sim.d

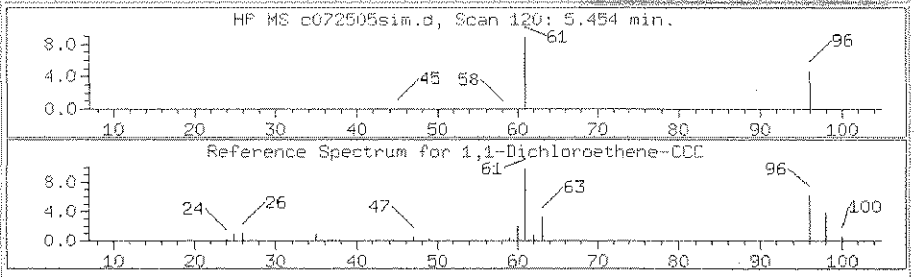
File Security Edit Display Process Spectra Help

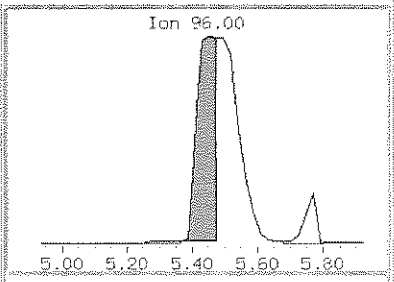
Sample: 2848-4-5.0 Type: LCS Inj.Date: 25-JUL-2017 09:32

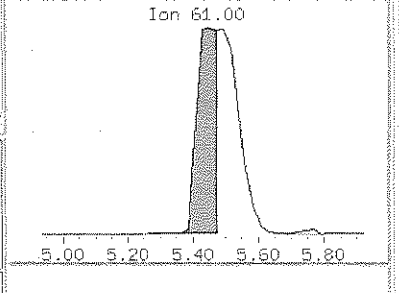
+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+ 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroetl
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroetl
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

c072505sim.d









Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.274	349	0.0396942	0.0793883	100	aR	
	5.274	136			39		
2	5.454	22442	2.54964	5.09929	100	R	
	5.454	42744			190		
3	5.767	2904	0.330011	0.660023	100	R	
	5.767	800			28		

Before

gm
7/25/17

TargetReview: eeyore: 2848-4-5.0: /chem/msdc.i/25Jul2017.b/c072505sim.d

File Security Edit Display Process Spectra Help

Sample: 2848-4-5.0 Type: LCS Inj.Date: 25-JUL-2017 09:32

+ 1 Chloromethane
+ 2 Vinyl Chloride
+ 3 Ethanol
+! 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroetl
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroetl
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
$+ 25 Toluene-d8
+ 26 Toluene-CCC

c072505sim.d

Manual Int
Time: 5.454
Done
Area: 41763
Help
Height: 4810
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak

Ion 96.00

Ion 61.00

HP MS c072505sim.d, Scan 120: 5.454 min.

Reference Spectrum for 1,1-Dichloroethene-CCC

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.454	41763	4.74477	9.48954	100	M	
	5.454	77465			185		

- Mark 1,1-Dichloroethene-CCC Undetected.

7/25/17

7/25/17

After

Correct Baseline	
Split Peak	
Merge Peak	
Zoom In	✓
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

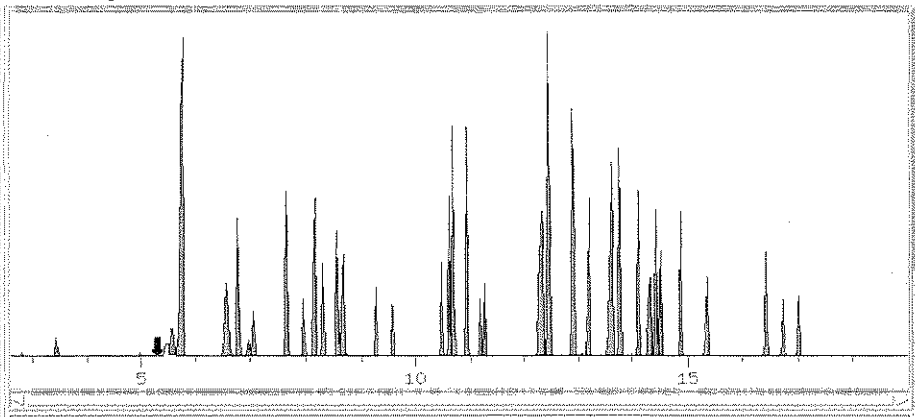
TargetReview: eeyore: 1707320/328: /chem/msdc.i/25Jul2017.b/c072506sim.d

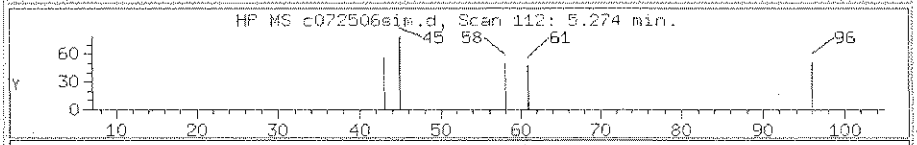
File Security Edit Display Process Spectra Help

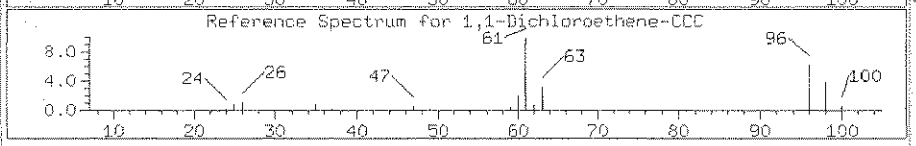
Sample: 1707320/328 Type: LCS Inj.Date: 25-JUL-2017 09:57

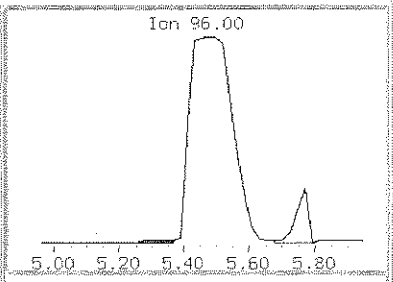
+	2	Vinyl Chloride
+	3	Ethanol
+	4	1,1-Dichloroet
+	5	Acetone
+	7	MTBE
+	8	trans-1,2-Dich.
+	9	Hexane
+	10	Halothane
+	11	1,1-Dichloroet
+	12	Ethyl Acetate
+	13	2-Butanone
+	14	cis-1,2-Dichlo
+	15	Chloroform-CCC
+	16	Cyclohexane
+	17	1,1,1-Trichlor
+	18	Carbon Tetrach.
+	19	Benzene
+	20	1,2-Dichloroet
+	21	Heptane
+	22	Trichloroethen
+	23	Methyl Methacr
+	24	4-Methyl-2-pen
s+	25	Toluene-d8
+	26	Toluene-CCC
*+	27	2-Fluorotoluen

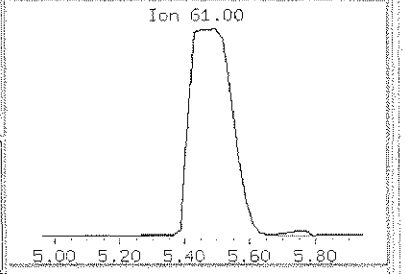
c072506sim.d











Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.274	343	0.0388473	0.0776946	100	R	
	5.297	327			95		
2	5.768	2958	0.334124	0.668247	100	R	
	5.768	798			27		

- Mark 1,1-Dichloroethene-CCC Undetected.

Before
gm
7/25/17

TargetReview: eeyore: 1707320/328: /chem/msdc.i/25Jul2017.b/c072506sim.d

File Security Edit Display Process Spectra Help

Sample: 1707320/328 Type: LCS Inj.Date: 25-JUL-2017 09:57

+ 2 Vinyl Chloride
+ 3 Ethanol
+! 4 1,1-Dichloroet
+ 5 Acetone
+ 7 MTBE
+ 8 trans-1,2-Dich.
+ 9 Hexane
+ 10 Halothane
+ 11 1,1-Dichloroetl
+ 12 Ethyl Acetate
+ 13 2-Butanone
+ 14 cis-1,2-Dichlo
+ 15 Chloroform-CCC
+ 16 Cyclohexane
+ 17 1,1,1-Trichlor
+ 18 Carbon Tetrach.
+ 19 Benzene
+ 20 1,2-Dichloroetl
+ 21 Heptane
+ 22 Trichloroethen
+ 23 Methyl Methacr
+ 24 4-Methyl-2-pen
*+ 25 Toluene-d8
+ 26 Toluene-CCC
*+ 27 2-Fluorotoluen

c072506sim.d

Manual Int
Time: 5.499
Area: 74727
Height: 8152
Done
Help
Snap to Data
Snap to Int Marks
Overlap Peaks
Assign Baseline
Split Peak

Ion 96.00

Ion 61.00

HP MS c072506sim.d, Scan 112: 5.274 min.

Reference Spectrum for 1,1-Dichloroethene-CCC

Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	5.499	38656	4.47922	8.95845	100	M	
	5.499	74727			188		

- Mark 1,1-Dichloroethene-CCC Undetected.

ES 7/25/17

gm 7/25/17

After

Correct Baseline	
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	✓

Compound Listing

Passive SE GC/MS (Sh)-Arcadis (Grenada) v1

CAS Number	Compound	Detection Limit ug	Type
71-43-2	Benzene	0.40	
107-06-2	1,2-Dichloroethane	0.10	
79-01-6	Trichloroethene	0.10	
108-88-3	Toluene	0.10	
127-18-4	Tetrachloroethene	0.10	
2037-26-5	Toluene-d8		
75-35-4	1,1-Dichloroethene	0.40	
156-59-2	cis-1,2-Dichloroethene	0.10	
156-60-5	trans-1,2-Dichloroethene	0.20	
79-00-5	1,1,2-Trichloroethane	0.10	
75-01-4	Vinyl Chloride	0.40	

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 05/24/17
Workorder # 1707820	Form F1.27	Revision #14	Revision Date: 05/24/17	Page 1 of 2

S1	S2	S3	S4	D	***Section 1* – Spec Out**				
					Initials/Instrument/Date	**S1:** MSD-C gm 7/25/17	**S2:**	**S3:**	**S4:**
✓				■	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓	✓			■	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
✓	✓			■	Manual Integrations included and approved				
✓				✓	Chain of Custody verified for special comments (add comments below)				
✓				■	Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

A1	A2	A3	A4	D	***Section 2* – Sample Analysis**				
					Initials/Date	**A1:** gm 7/25/17	**A2:**	**A3:**	**A4:**
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, Canister #s Verified and dilution ranges are met per SOP (ex. Over-ranged/overdiluted)				
✓				✓	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
✓				✓	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓				■	12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks, samples following bad loads on CIAAs have been verified (system blks, confirmation runs).				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes:

D1	D2	D3	D4	T	3T	***Section 3* – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date	**D1:** gm 8/3/17	**D2:**	**D3:**	**D4:**
✓					■	CAR # *(if applicable)*				
✓					■	Spectra Verified *(documentation of spectral defense included if applicable)*				
✓					■	TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
✓						Lab Narrative is correct				
✓					■	TPH/NMOC calculations complete and included in folder				

Special notes:

A	3T	***Section 4*- Atlas Data Entry**	**Lumen verified and included in folder**	**Circle one: Yes/No**
		Initials/Date: gm 8/3/17	**3rd Tier:** *(needed only for DOD or per client request)*	
✓		Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
✓		Manually entered results are checked		
✓		At least one result per sample is verified against Target quant sheets		
✓		Appropriate data qualifier flags are applied		
✓		Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
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				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
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Not Applicable