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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-15

INVENTORY SHEET

Work Order #: 1701477B

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Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	2/20/17
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1701477B

Work Order Summary

CLIENT:	Mr. Terry Taylor Anderson Mulholland & Associates, Inc. 2700 Westchester Avenue Suite 417 Purchase, NY 10577	**BILL TO:**	Accounts Payable Anderson Mulholland & Associates, Inc. 2700 Westchester Avenue Suite 417 Purchase, NY 10577
PHONE:	(914) 251-0400	**P.O. #**	
FAX:		**PROJECT #**	BMS VI Invest. Buildings 8, 13, 15, 30
DATE RECEIVED:	01/31/2017	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	02/11/2017		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
11A	B13IA-1-012817	Modified TO-15	5.5 "Hg	5 psi
12A	B13IA-2-012817	Modified TO-15	5.0 "Hg	5 psi
13A	B13IA-2DUP-012817	Modified TO-15	4.0 "Hg	5 psi
14A	B13IA-3-012817	Modified TO-15	5.5 "Hg	5 psi
15A	B18IA-5-012817	Modified TO-15	5.0 "Hg	5.4 psi
16A	B15IA-1-012817	Modified TO-15	5.0 "Hg	5 psi
17A	B15IA-1DUP-012817	Modified TO-15	4.0 "Hg	5 psi
18A	B1315AA-012817	Modified TO-15	6.5 "Hg	5 psi
19A	Lab Blank	Modified TO-15	NA	NA
20A	CCV	Modified TO-15	NA	NA
21A	LCS	Modified TO-15	NA	NA
21AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 02/11/17

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
Anderson Mulholland & Associates, Inc.
Workorder# 1701477B

Eight 6 Liter Summa Canister (100% Certified) samples were received on January 31, 2017. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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***
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Dilution was performed on sample B15IA-1-012817 due to the presence of high level target species.

The Relative Percent Difference (RPD) of the LCS/LCSD exceeded acceptance limits for Bromomethane.

Definition of Data Qualifying Flags

Eight 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, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

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
B13IA-1-012817	1701477B-11A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B13IA-2-012817	1701477B-12A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B13IA-2DUP-012817	1701477B-13A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B13IA-3-012817	1701477B-14A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B18IA-5-012817	1701477B-15A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B15IA-1-012817	1701477B-16A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B15IA-1DUP-012817	1701477B-17A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
B1315AA-012817	1701477B-18A	1/29/2017	1/31/2017	NA	5	2/ 3/2017	NA	Good
Lab Blank	1701477B-19A	NA	NA	NA	NA	2/ 3/2017	NA	Good
CCV	1701477B-20A	NA	NA	NA	NA	2/ 3/2017	NA	Good
LCS	1701477B-21A	NA	NA	NA	NA	2/ 3/2017	NA	Good
LCSD	1701477B-21AA	NA	NA	NA	NA	2/ 3/2017	NA	Good

Sample Results and Raw Data

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B13IA-1-012817

Lab ID#: 1701477B-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Chloromethane	0.82	0.57 J	1.7	1.2 J
Freon 11	0.16	0.20	0.92	1.1
Ethanol	0.82	1.6	1.5	2.9
Freon 113	0.16	0.059 J	1.2	0.45 J
Acetone	0.82	3.2	1.9	7.6
2-Propanol	0.82	0.40 J	2.0	0.98 J
Carbon Disulfide	0.82	0.15 J	2.6	0.46 J
2-Butanone (Methyl Ethyl Ketone)	0.82	0.73 J	2.4	2.1 J
Tetrahydrofuran	0.82	0.66 J	2.4	1.9 J
Benzene	0.16	0.064 J	0.52	0.21 J
Toluene	0.16	0.15 J	0.62	0.56 J
Styrene	0.16	0.080 J	0.70	0.34 J
1,2,4-Trichlorobenzene	0.82	0.061 J	6.1	0.45 J
Naphthalene	0.82	0.029 J	4.3	0.15 J

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Client Sample ID: B13IA-1-012817

Lab ID#: 1701477B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020309**	**Date of Collection:**	**1/29/17 2:45:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**2/3/17 01:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.40	0.81	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	0.57 J	1.7	1.2 J
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.20	0.92	1.1
Ethanol	0.82	1.6	1.5	2.9
Freon 113	0.16	0.059 J	1.2	0.45 J
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	3.2	1.9	7.6
2-Propanol	0.82	0.40 J	2.0	0.98 J
Carbon Disulfide	0.82	0.15 J	2.6	0.46 J
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	0.73 J	2.4	2.1 J
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	0.66 J	2.4	1.9 J
Chloroform	0.16	Not Detected	0.80	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.064 J	0.52	0.21 J
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
Toluene	0.16	0.15 J	0.62	0.56 J
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected

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Client Sample ID: B13IA-1-012817

Lab ID#: 1701477B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020309**	**Date of Collection:**	**1/29/17 2:45:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**2/3/17 01:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	0.080 J	0.70	0.34 J
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	0.061 J	6.1	0.45 J
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected
Naphthalene	0.82	0.029 J	4.3	0.15 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	101	70-130

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EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020309.d
Lab Smp Id: 1701477B-11A
Inj Date : 03-FEB-2017 13:19
Operator : ef Inst ID: msde.i
Smp Info : 250mL# O0124
Misc Info : 5.5"Hg -> 5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.64000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	32162	0.24256	0.3978	80.00- 120.00	100.00
5.244	5.220 (0.341)	87	9030			1.91- 61.91	28.08
17 Chloromethane					CAS #: 74-87-3		
6.980	6.932 (0.453)	50	8652	0.34987	0.5738	80.00- 120.00	100.00(a)
6.956	6.932 (0.452)	52	2660			3.31- 63.31	30.75
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	18940	0.12244	0.2008	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	9996			33.74- 93.74	52.78
42 Ethanol					CAS #: 64-17-5		
11.680	11.661 (0.759)	45	12759	0.94632	1.552	80.00- 120.00	100.00
11.680	11.661 (0.759)	46	4458			9.60- 69.60	34.95
11.699	11.661 (0.760)	43	5545			0.00- 59.21	43.47
49 Freon 113					CAS #: 76-13-1		
12.099	12.080 (0.786)	151	3712	0.03594	0.05894	80.00- 120.00	100.00(a)
12.080	12.080 (0.785)	153	2006			34.83- 94.83	54.06

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113 (continued)
 12.080  12.080 (0.785)   101      3898                    77.16- 137.16   105.02
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.385  12.366 (0.805)    58     32874 1.93925    3.180  80.00- 120.00   100.00
 12.385  12.366 (0.805)    43    138036                  344.13- 404.13   419.88
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.461  12.461 (0.810)    76     10687 0.09114   0.1495  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.747  12.728 (0.828)    45     13227 0.24236   0.3975  80.00- 120.00   100.00(a)
 12.728  12.728 (0.827)    43      4027                    0.00-  55.65    30.45
 12.766  12.728 (0.829)    59       851                    0.00-  34.42     6.44
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.047  15.047 (0.978)    72      8145 0.44309   0.7267  80.00- 120.00   100.00(a)
 15.047  15.047 (0.978)    43     32403                  325.72- 385.72   397.83
 15.047  15.047 (0.978)    57      3176                    1.13-  61.13    39.00
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                             CAS #: 109-99-9
 15.391  15.391 (1.000)    42     13353 0.40130   0.6581  80.00- 120.00   100.00(a)
 15.391  15.391 (1.000)    71      7778                   20.32-  80.32    58.25
 15.391  15.391 (1.000)    72      7632                   21.98-  81.98    57.16
-------------------------------------------------------------------------------
*  98 Bromochloromethane                         CAS #: 74-97-5
 15.391  15.391 (1.000)   130    149346 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    109789                   46.73- 106.73    73.51
 15.391  15.391 (1.000)    49    123256                   55.35- 115.35    82.53
-------------------------------------------------------------------------------
  116 Benzene                                    CAS #: 71-43-2
 16.207  16.207 (0.968)    78      4726 0.03932  0.06449  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      1783                    0.00-  53.00    37.73
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    217627 5.07435    5.074  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67     99222                   22.67-  82.67    45.59
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 16.737  16.737 (1.000)   114    486781 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     72654                    0.00-  45.16    14.93
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                  CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    455308 4.82196    4.822  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     50596                    0.00-  40.89    11.11
 19.298  19.298 (1.153)   100    300084                   40.09- 100.09    65.91
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	13057	0.08981	0.1473	80.00- 120.00	100.00(a)
19.432	19.432 (1.161)	92	5889			27.79- 87.79	45.10
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	460540	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	225324			17.27- 77.27	48.93
172 Styrene					CAS #: 100-42-5		
23.131	23.110 (1.043)	104	5372	0.04867	0.07982	80.00- 120.00	100.00(a)
23.131	23.110 (1.043)	78	2980			20.21- 80.21	55.48
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	324454	5.04354	5.044	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	311199			66.74- 126.74	95.91
23.856	23.856 (1.076)	176	312282			67.47- 127.47	96.25
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.421	27.398 (1.236)	180	2993	0.03710	0.06084	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	1094			63.70- 123.70	36.57
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	1955	0.01769	0.02901	80.00- 120.00	100.00(a)
27.734	27.712 (1.251)	127	1402			0.00- 42.30	71.72

QC Flag Legend

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

Report Date: 09-Feb-2017 10:32

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e020309.d
Lab Smp Id: 1701477B-11A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.5"Hg -> 5.0psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	149346	5.52
123 1,4-Difluorobenze	499834	299900	699768	486781	-2.61
163 Chlorobenzene-d5	467575	280545	654605	460540	-1.50

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	22.18	21.85	22.51	22.18	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: 09-Feb-2017 10:32

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-11A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.074	101.49	70-130
$ 146 Toluene-d8	5.000	4.822	96.44	70-130
$ 177 4-Bromofluorobenze	5.000	5.044	100.87	70-130

Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

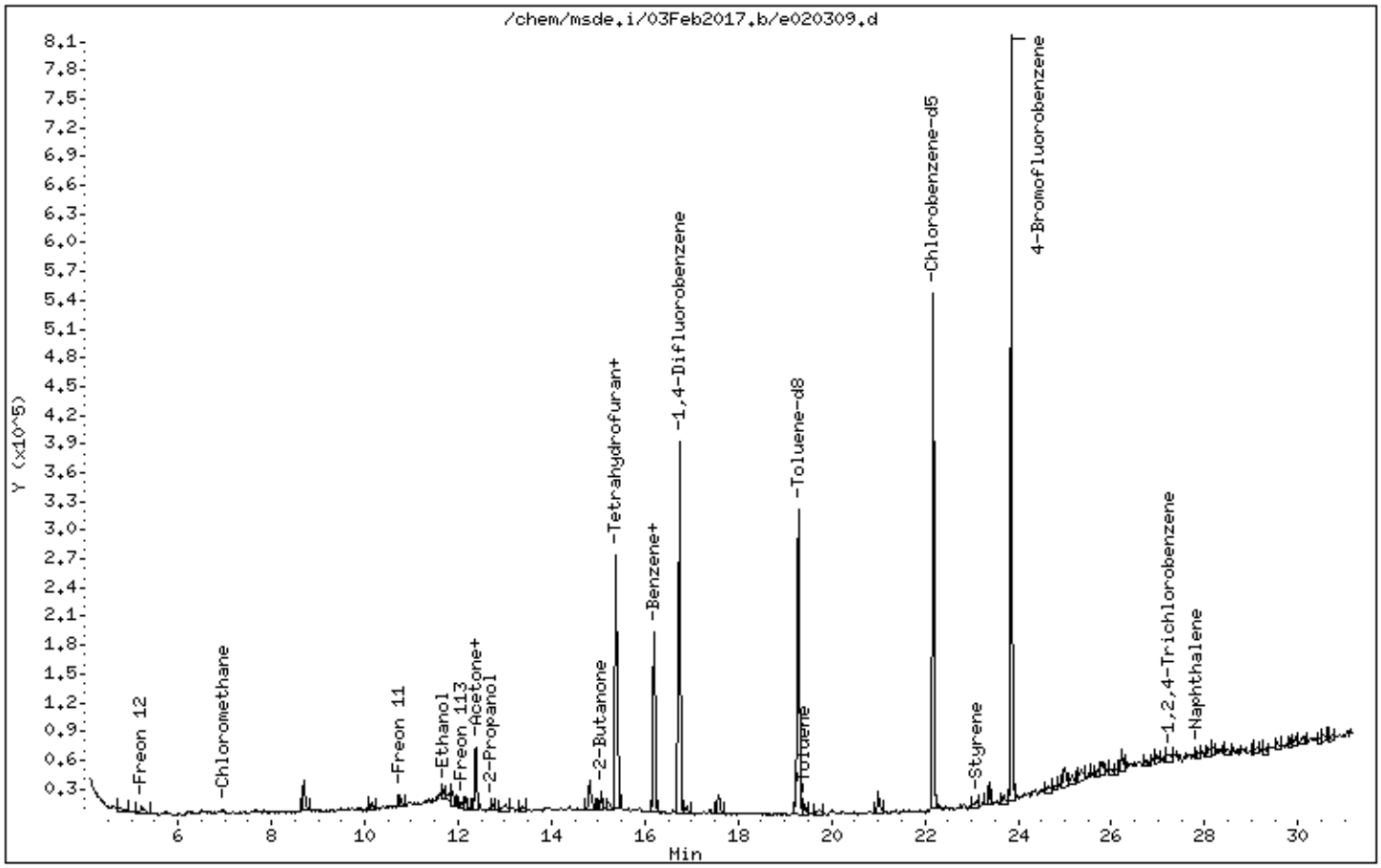
Instrument: msde.i

Sample Info: 250mL# 00124

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

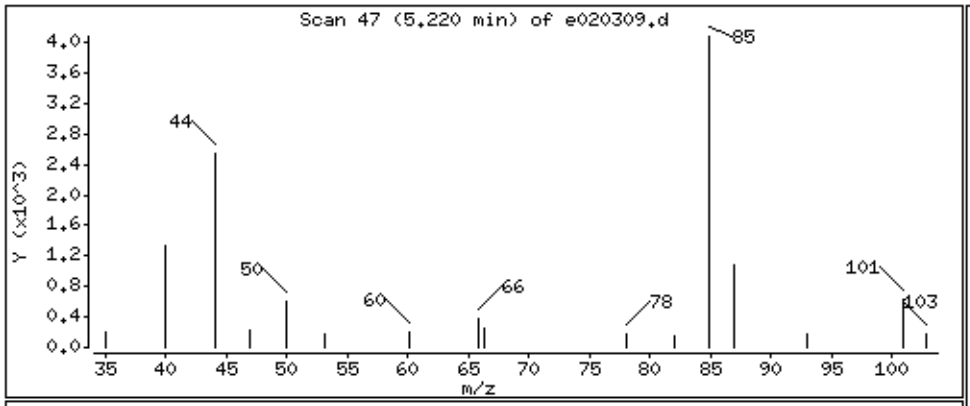
Operator: ef

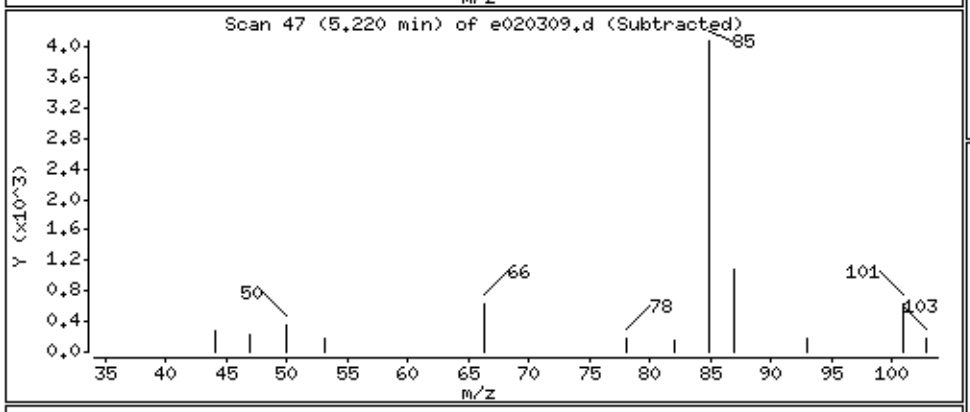
Column phase: RTX-624

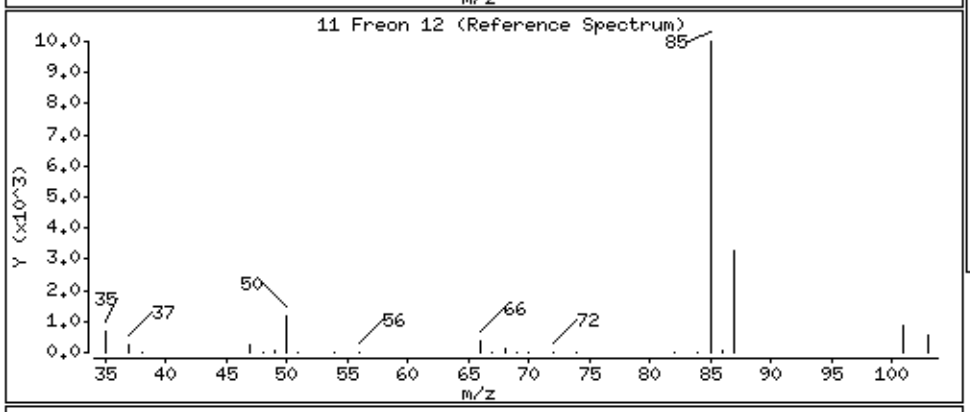
Column diameter: 0.32

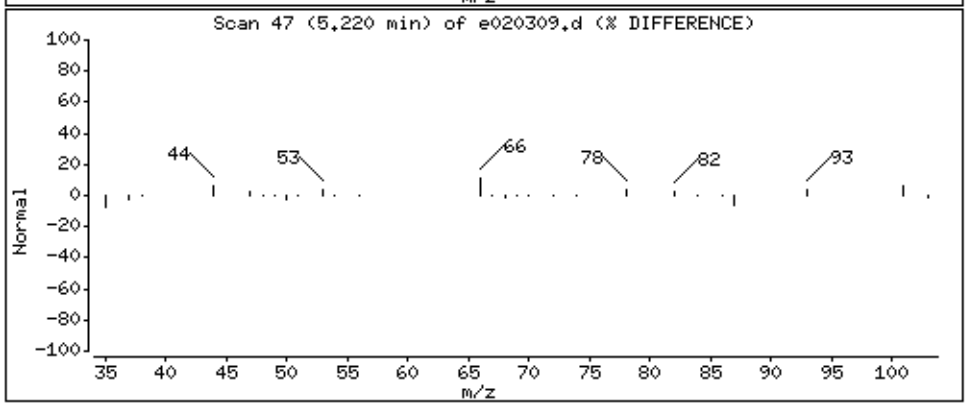
11 Freon 12

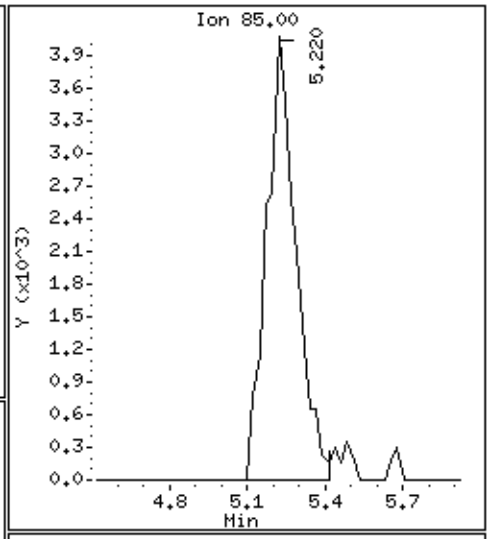
Concentration: 0.3978 PPBV

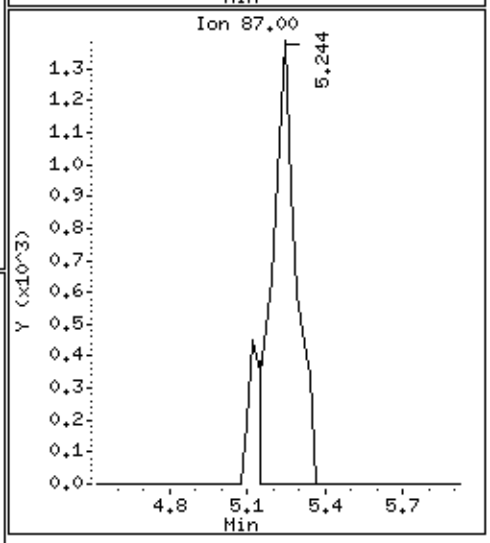












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

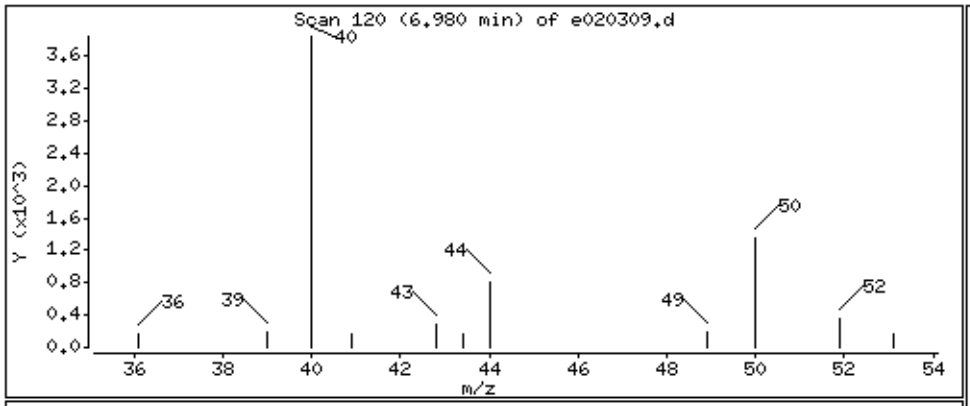
Operator: ef

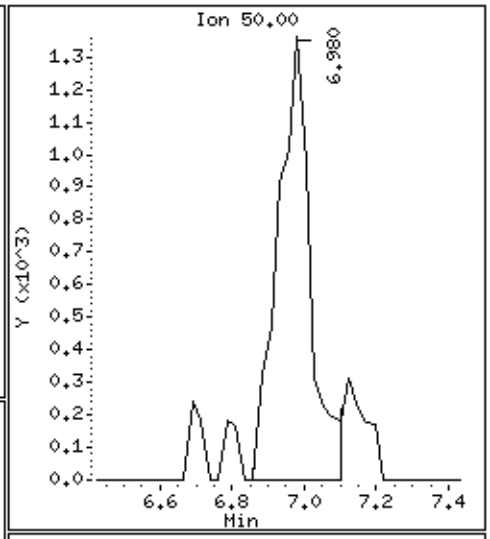
Column phase: RTX-624

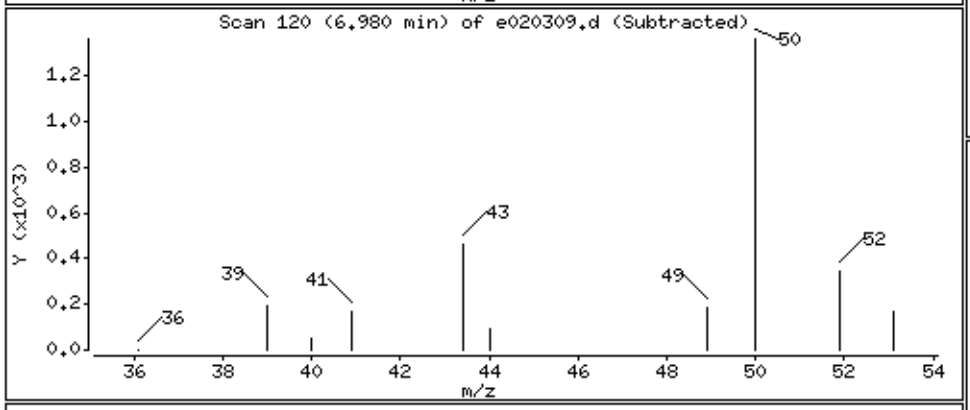
Column diameter: 0.32

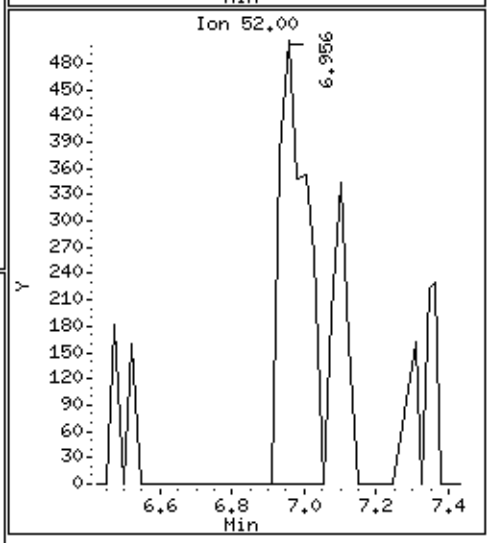
17 Chloromethane

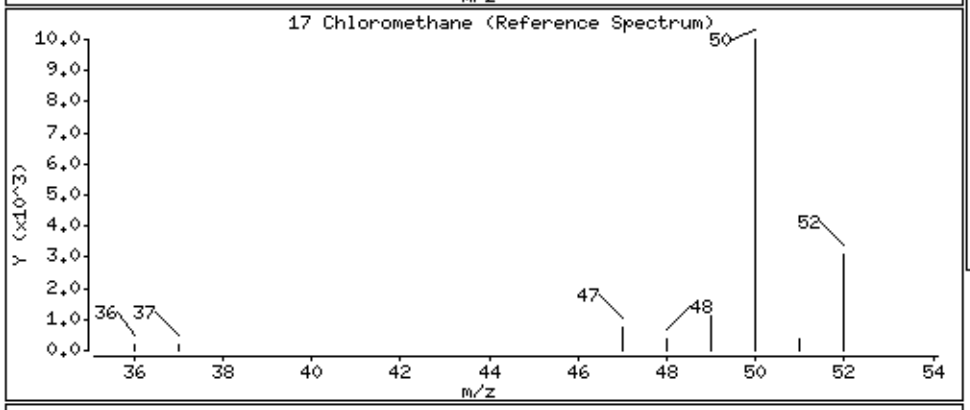
Concentration: 0.5738 PPBV

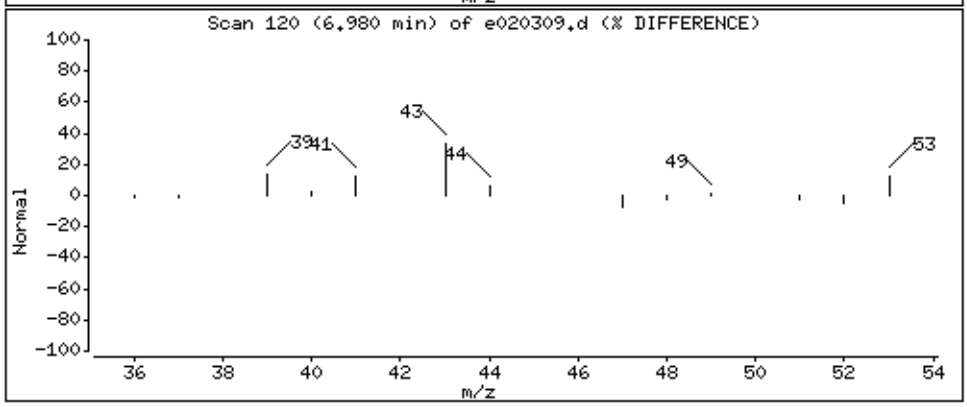












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

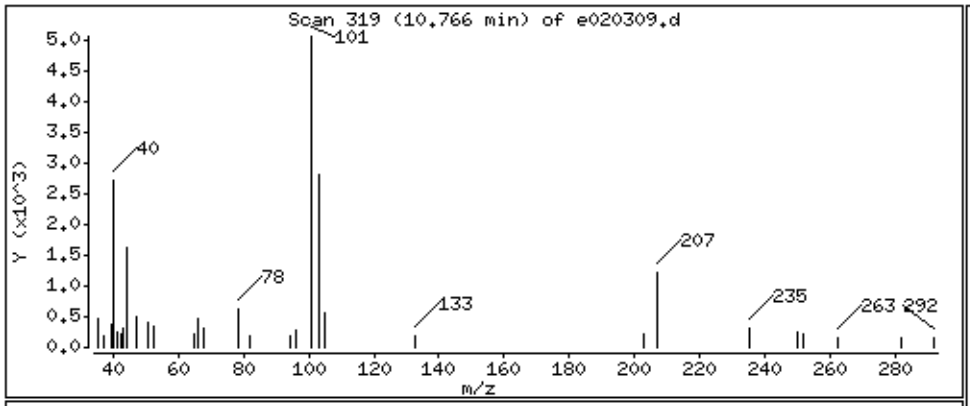
Operator: ef

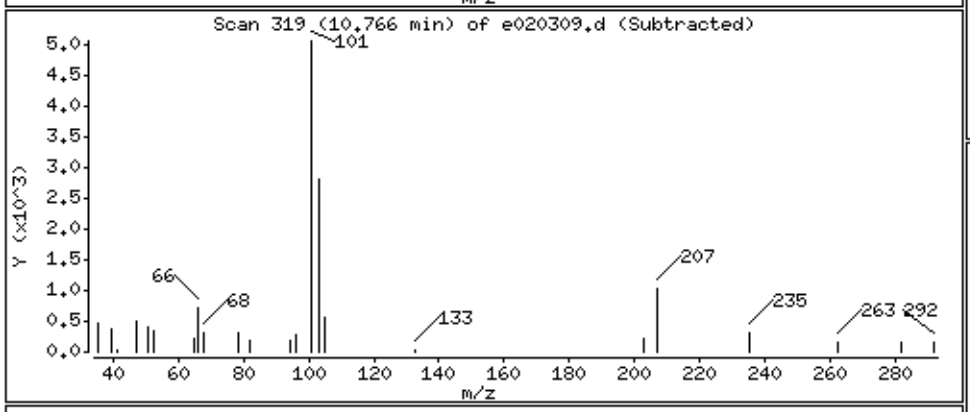
Column phase: RTX-624

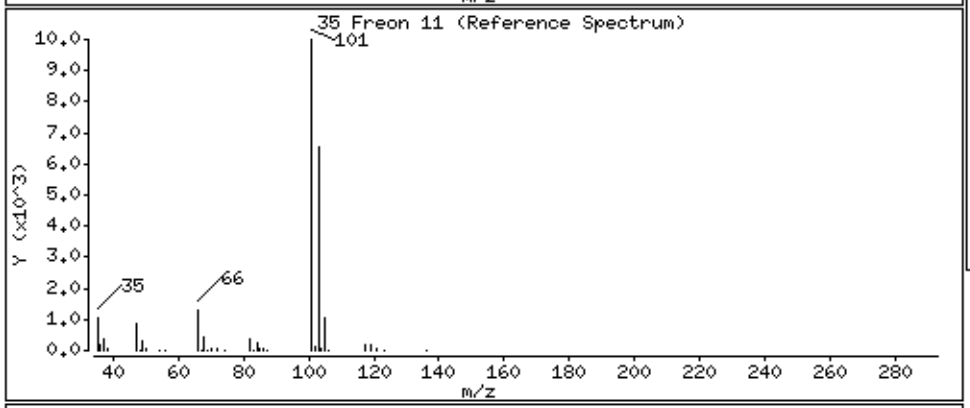
Column diameter: 0.32

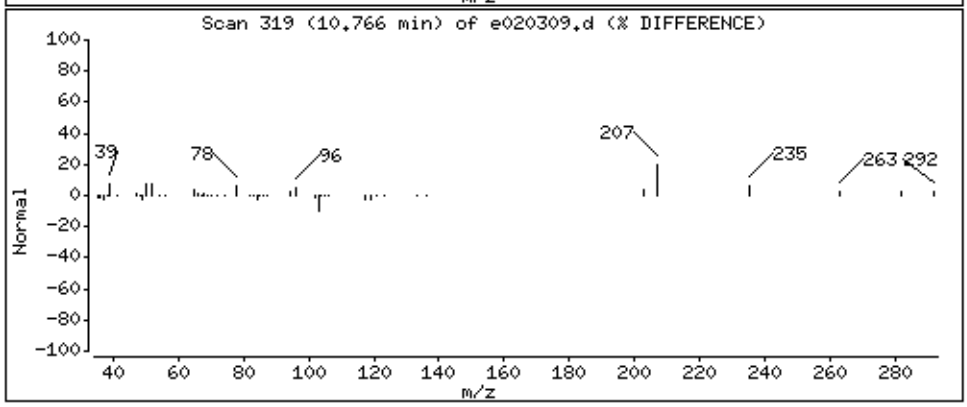
35 Freon 11

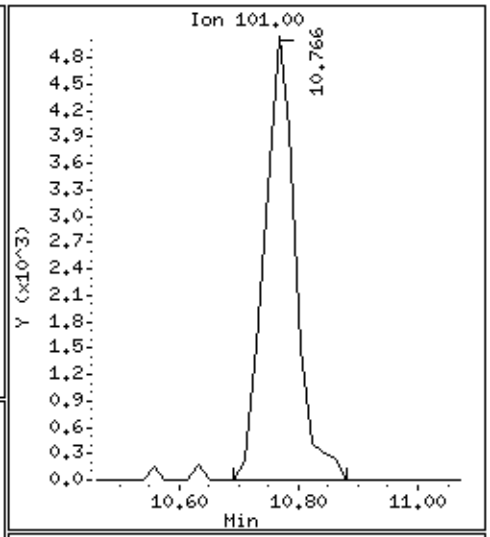
Concentration: 0.2008 PPBV

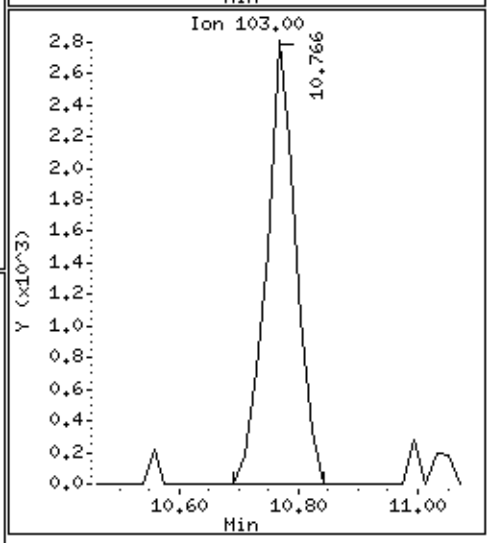












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

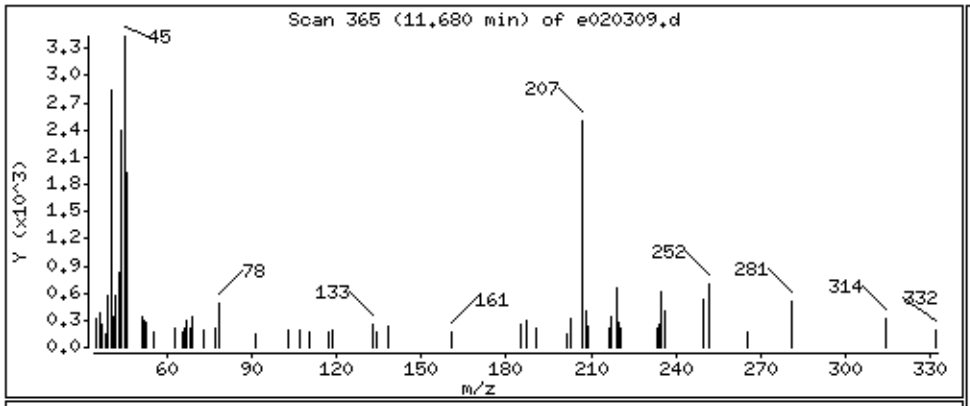
Operator: ef

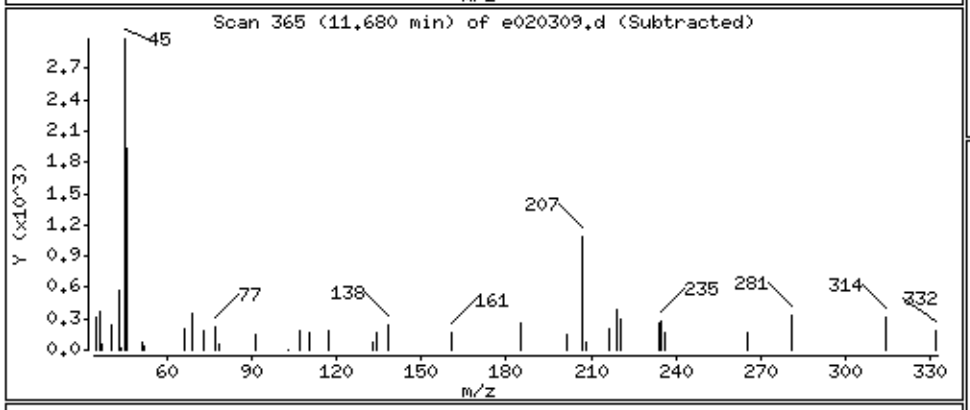
Column phase: RTX-624

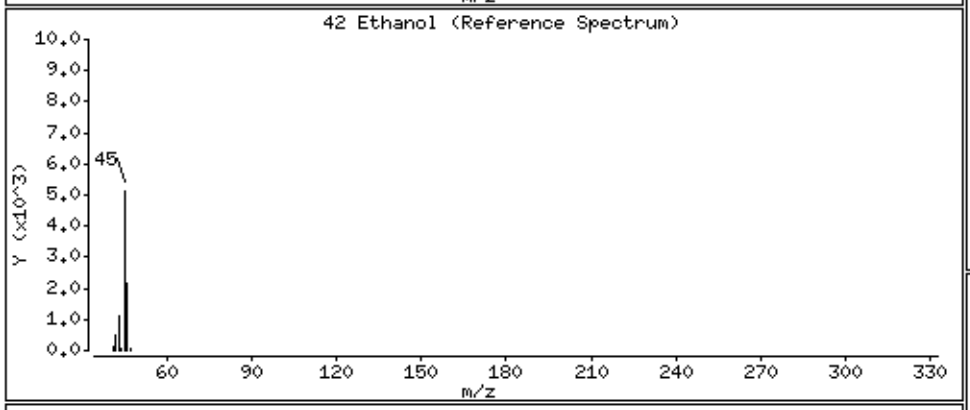
Column diameter: 0.32

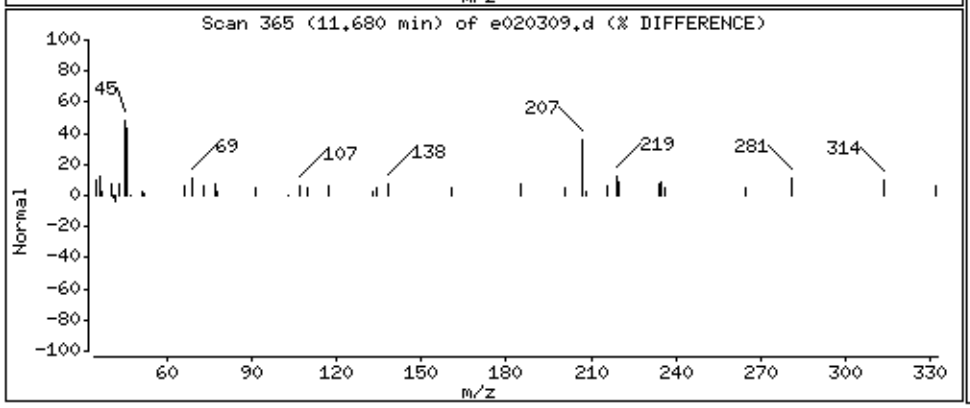
42 Ethanol

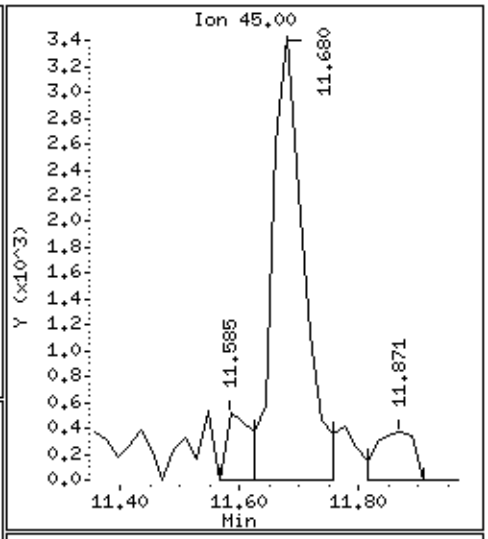
Concentration: 1.552 PPBV

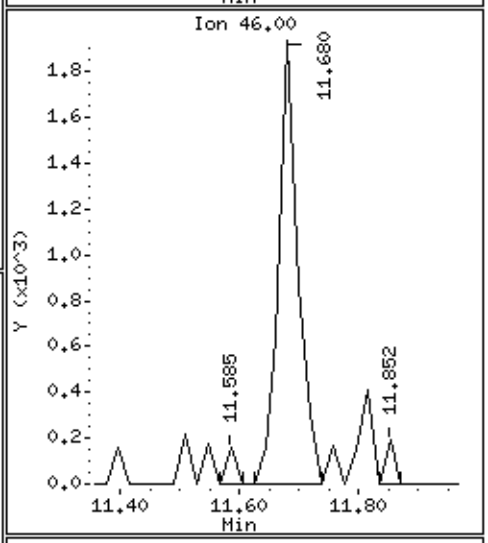


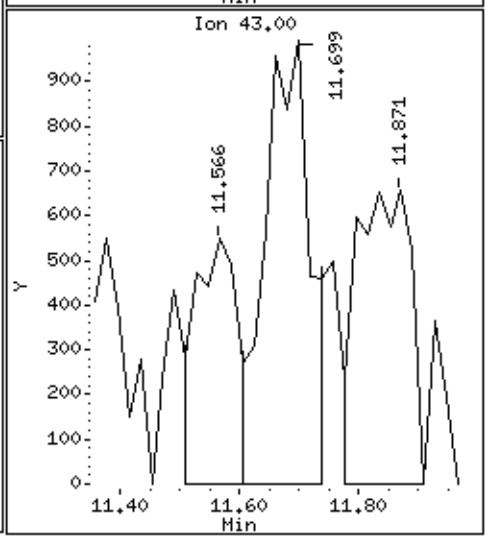












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

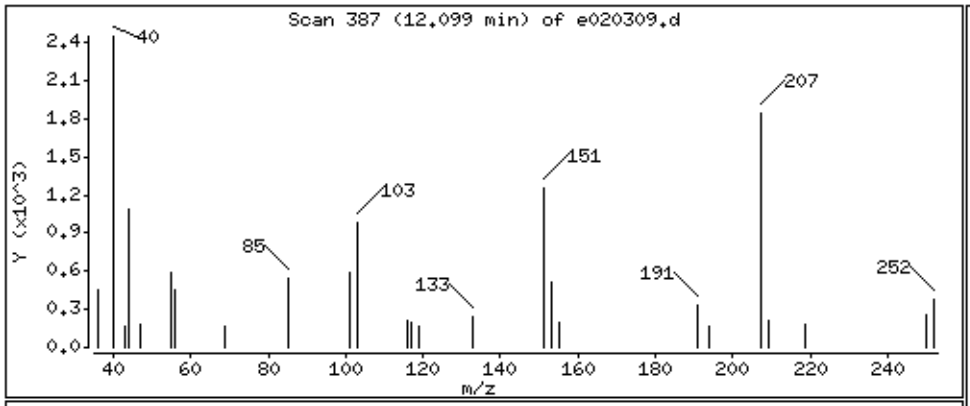
Operator: ef

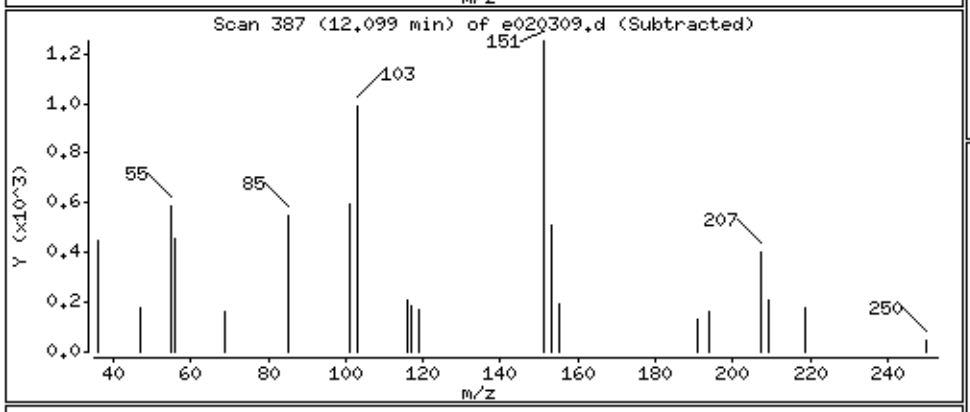
Column phase: RTX-624

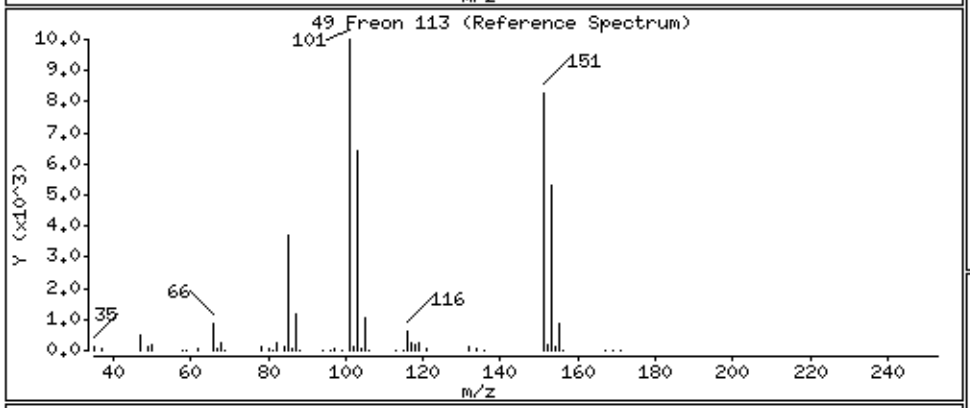
Column diameter: 0.32

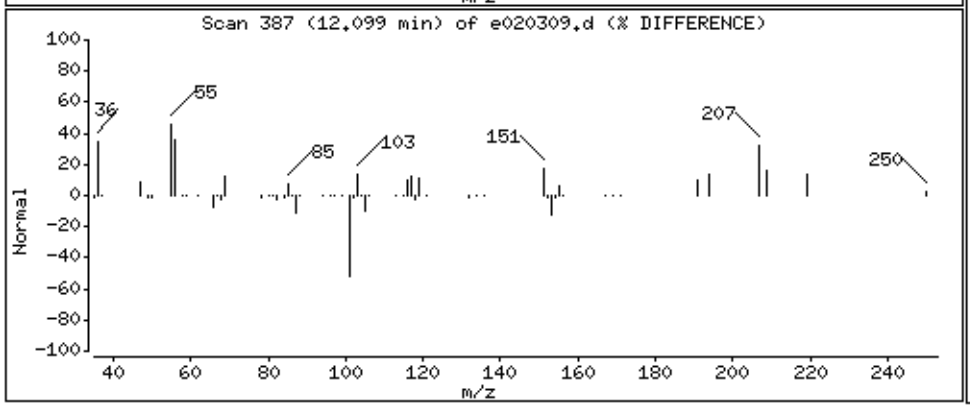
49 Freon 113

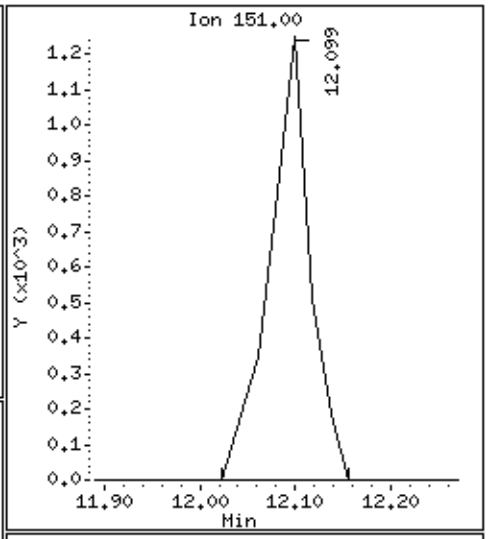
Concentration: 0.05894 PPBV

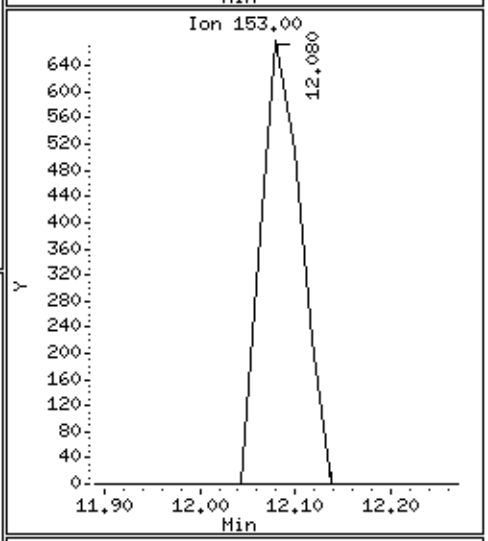


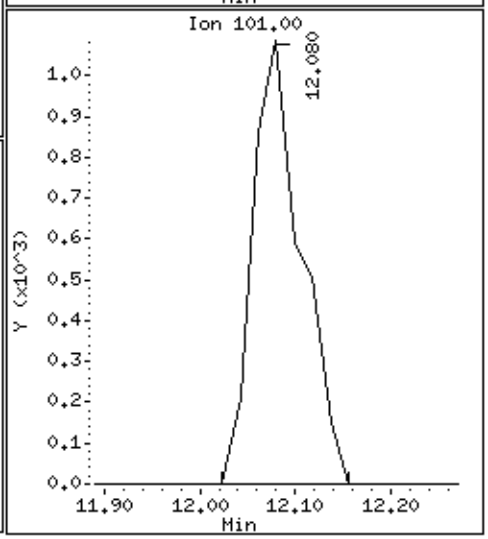












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

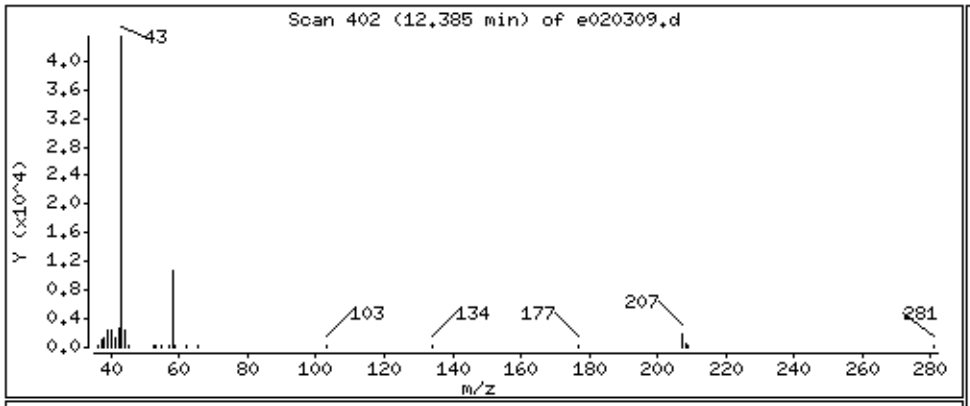
Operator: ef

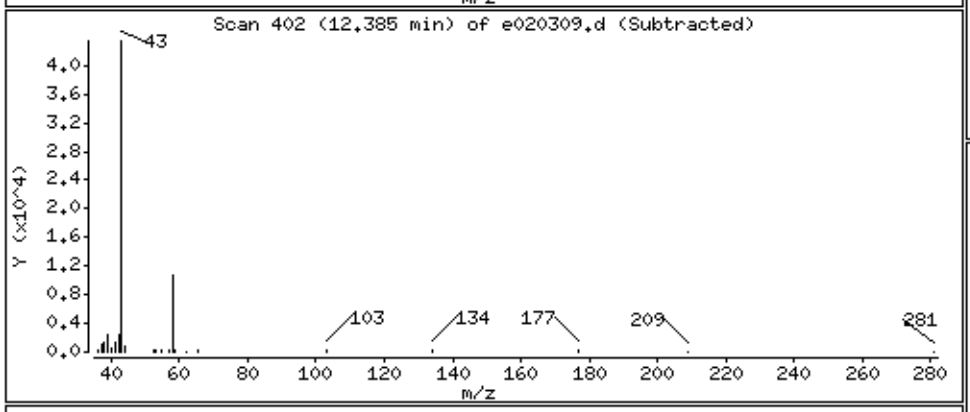
Column phase: RTX-624

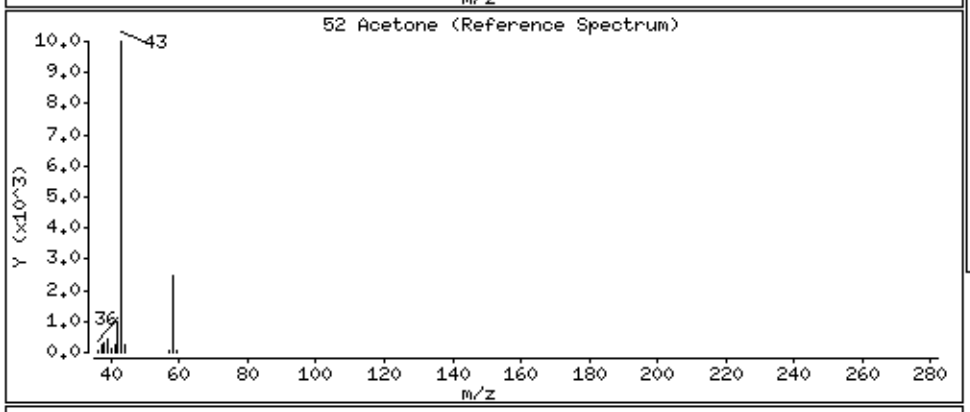
Column diameter: 0.32

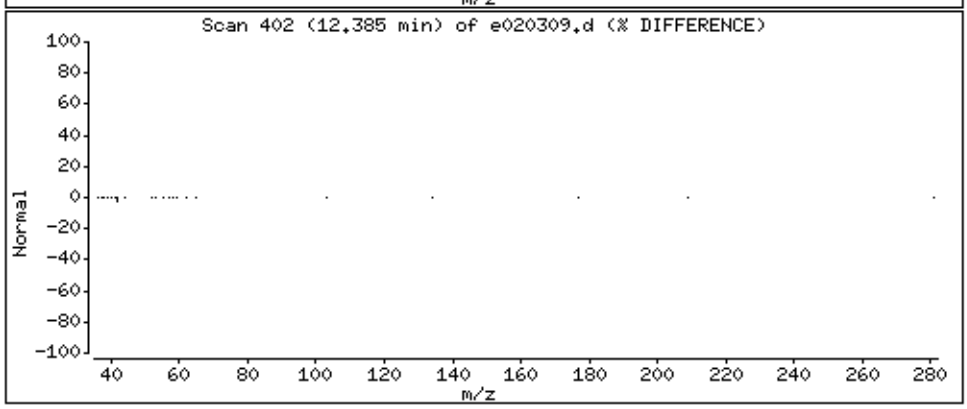
52 Acetone

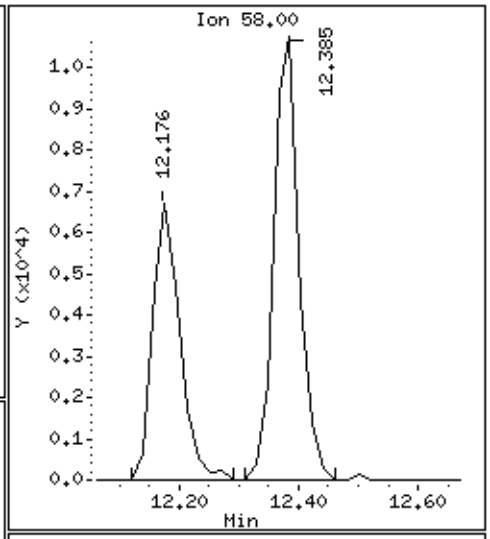
Concentration: 3.180 PPBV

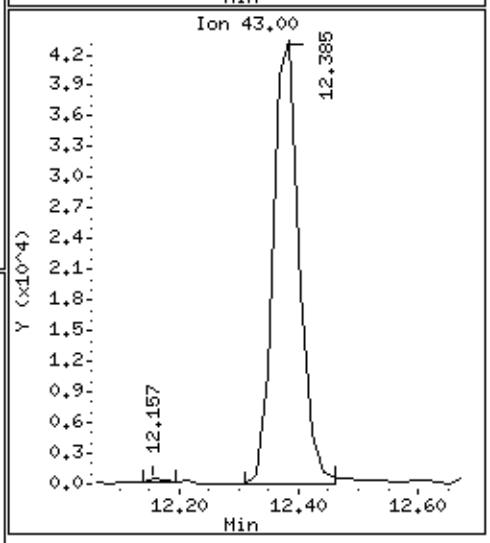












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

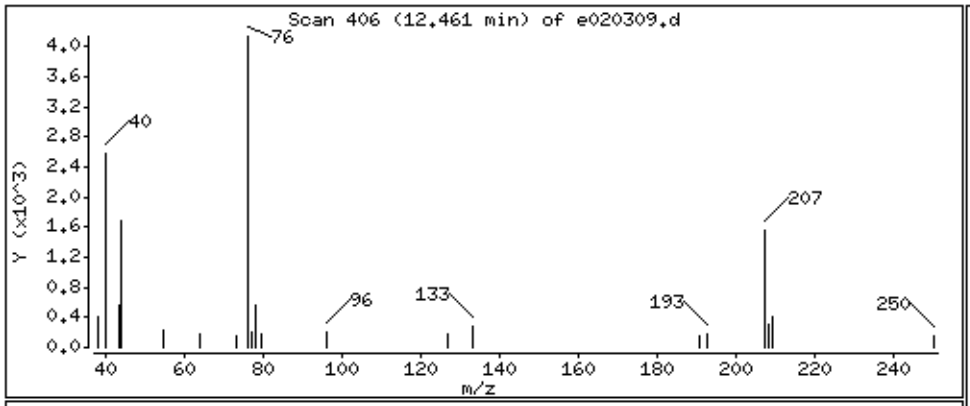
Operator: ef

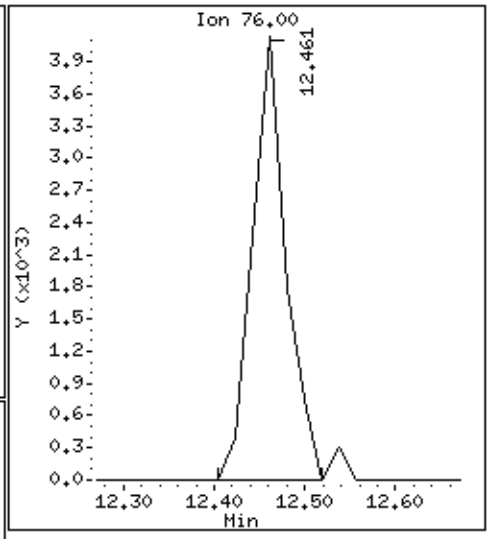
Column phase: RTX-624

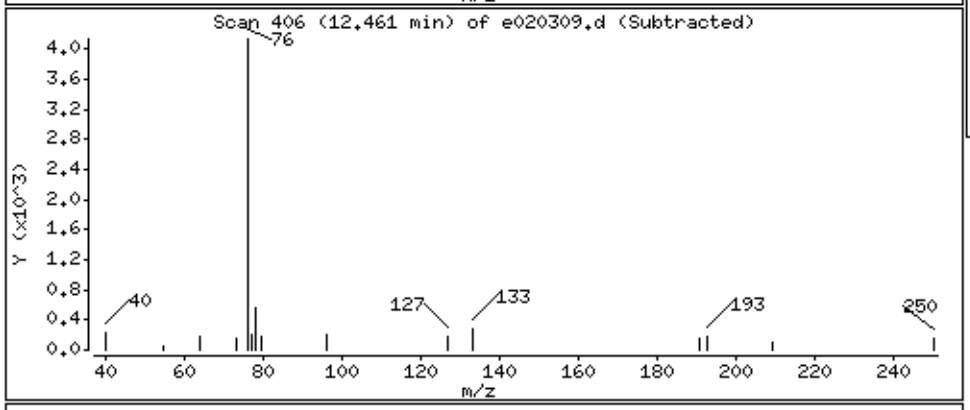
Column diameter: 0.32

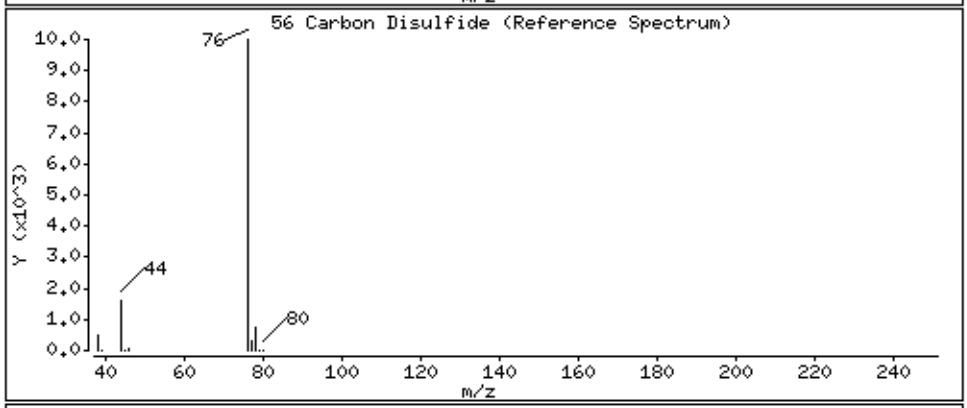
56 Carbon Disulfide

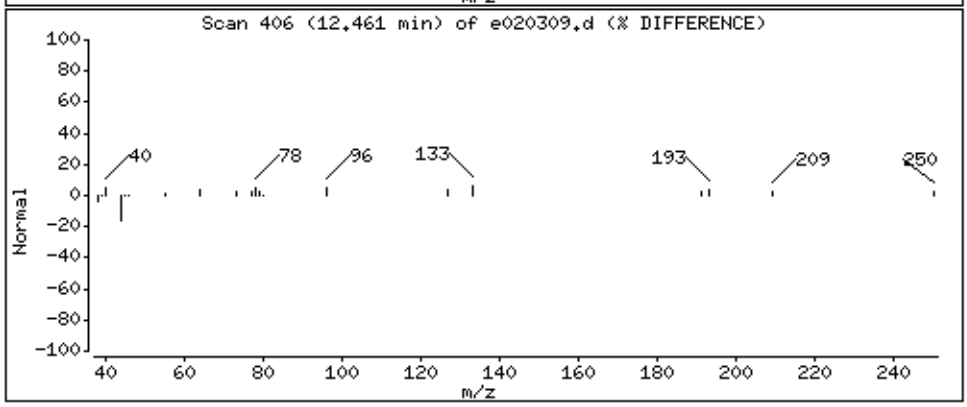
Concentration: 0.1495 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

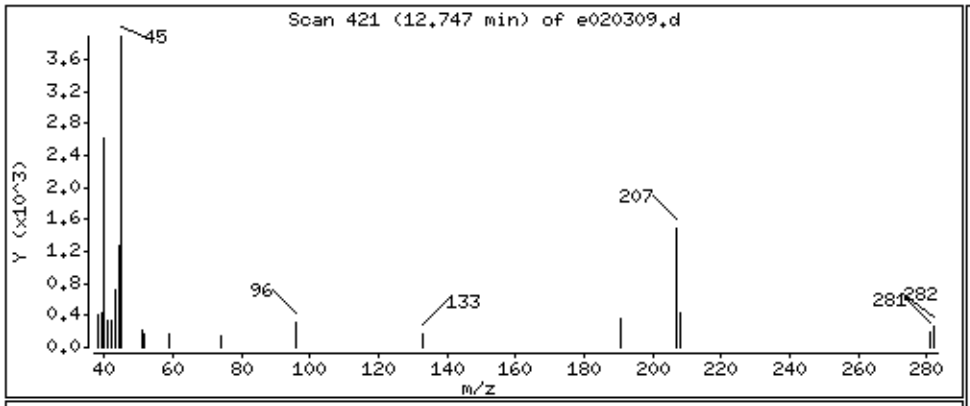
Operator: ef

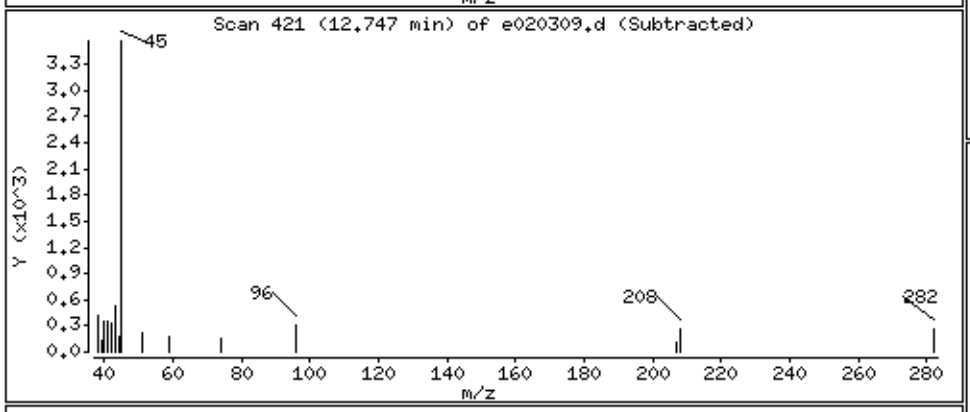
Column phase: RTX-624

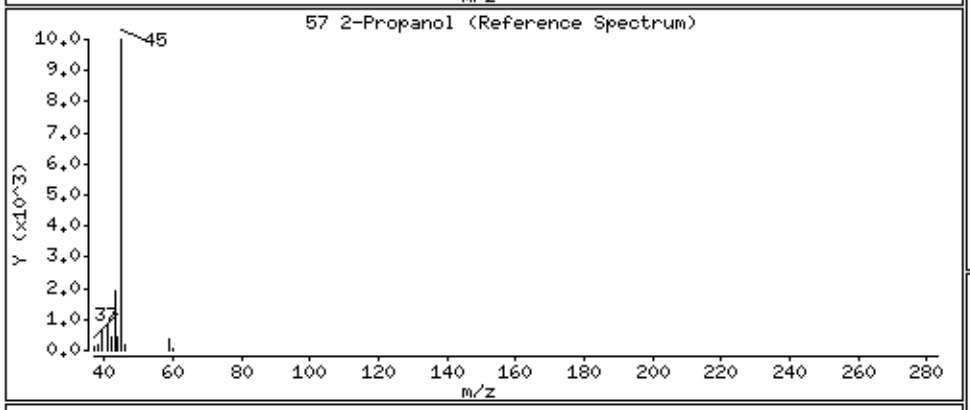
Column diameter: 0.32

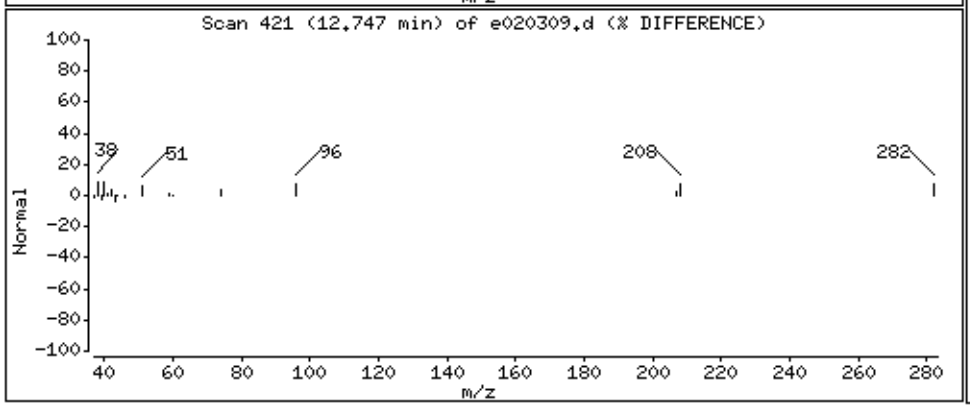
57 2-Propanol

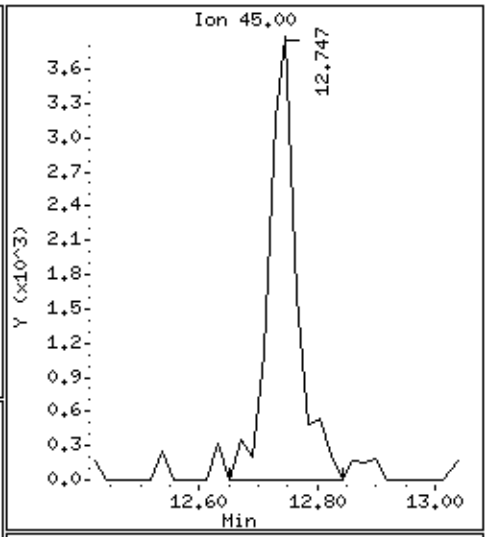
Concentration: 0.3975 PPBV

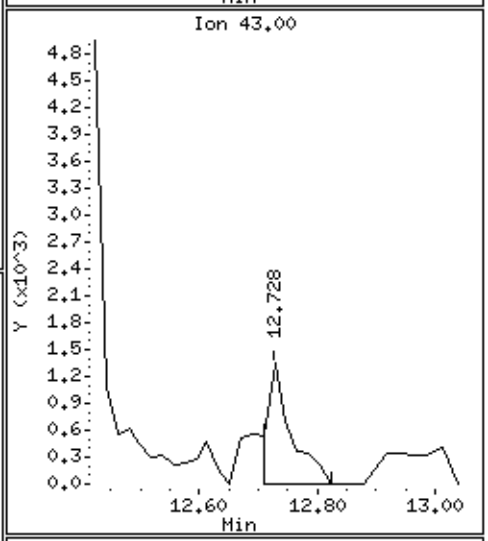


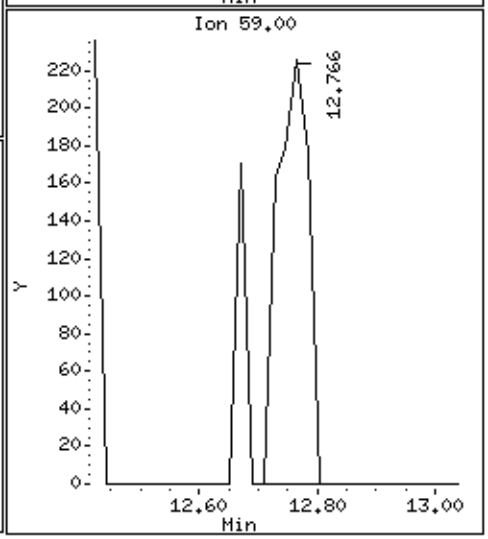












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

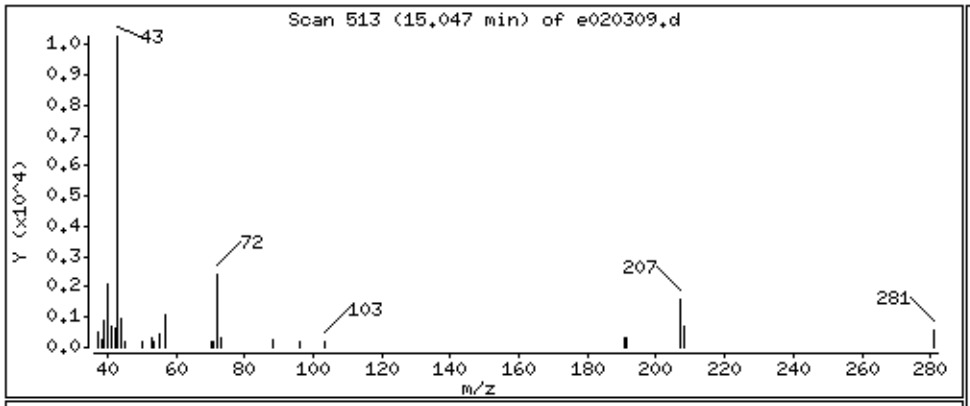
Operator: ef

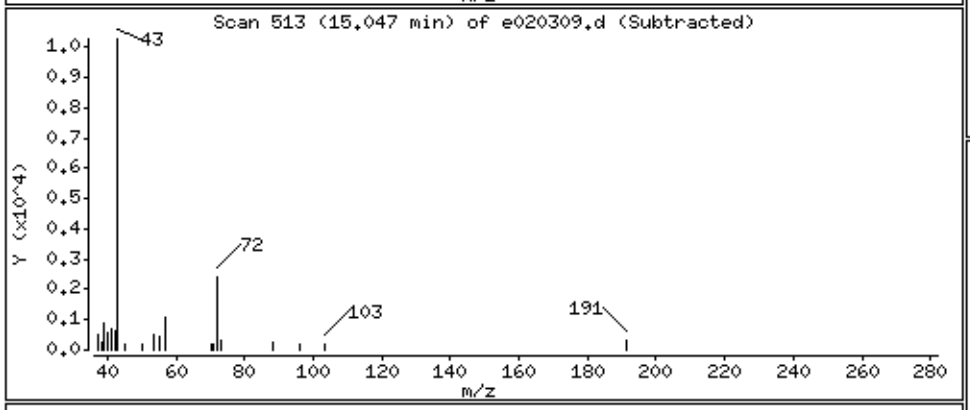
Column phase: RTX-624

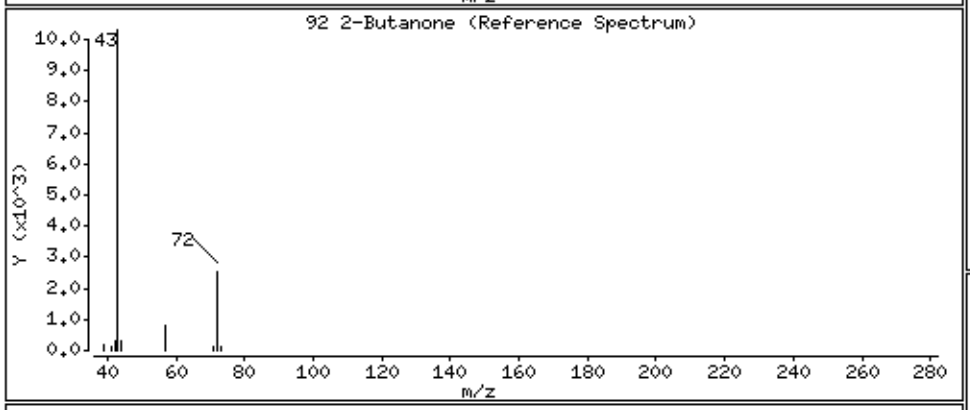
Column diameter: 0.32

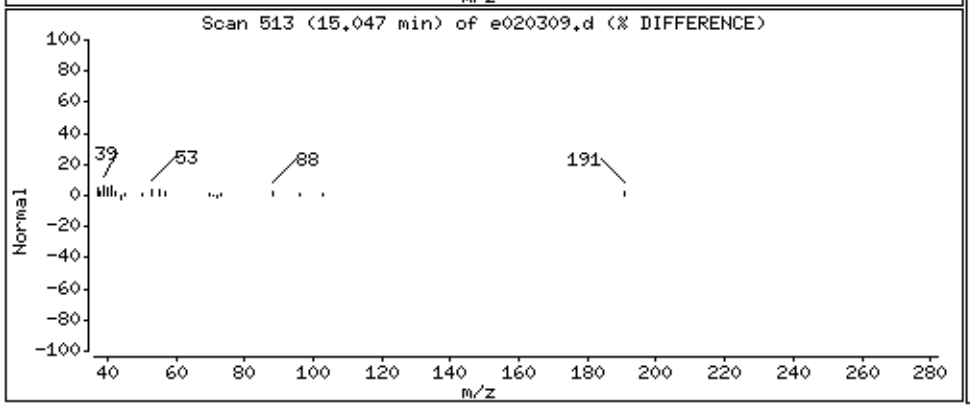
92 2-Butanone

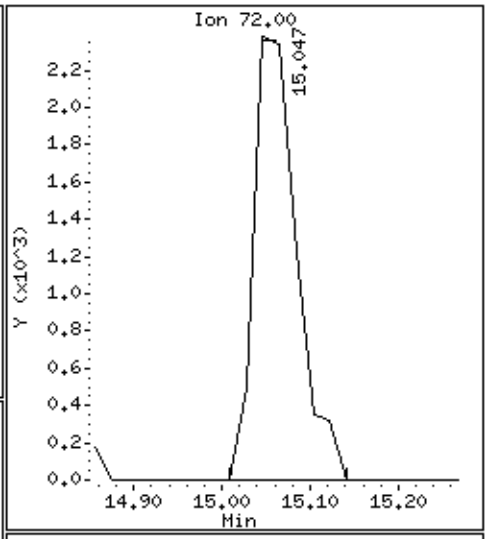
Concentration: 0.7267 PPBV

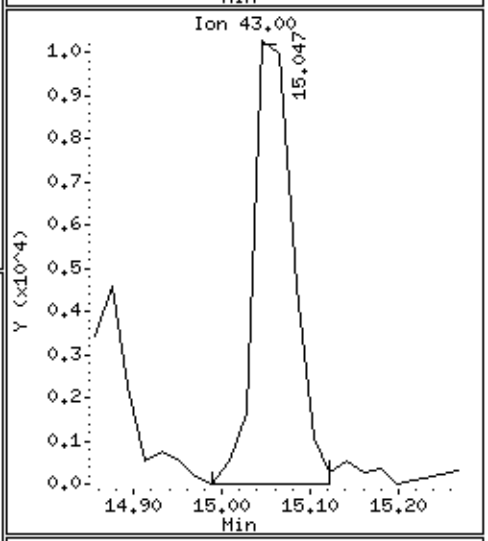


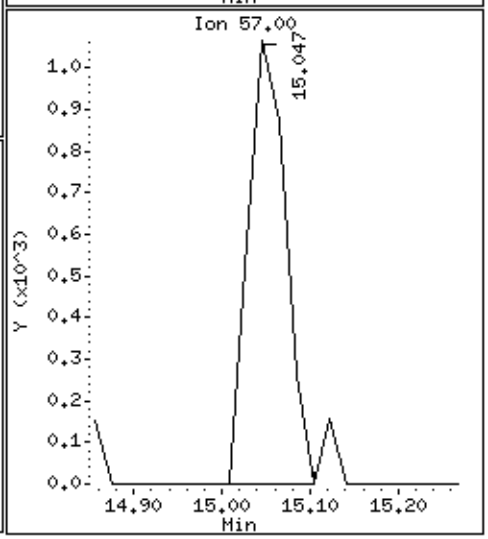












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

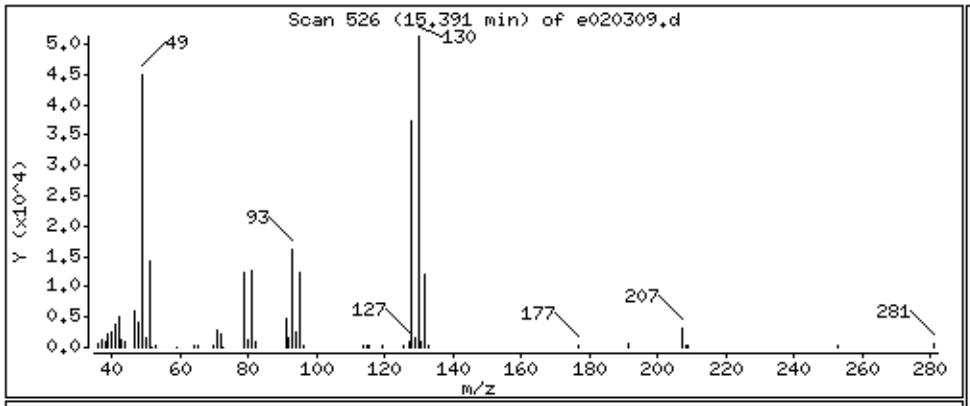
Operator: ef

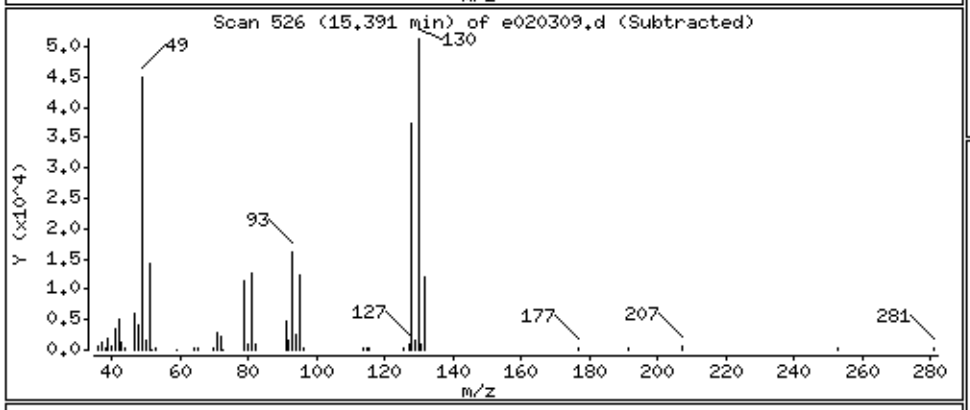
Column phase: RTX-624

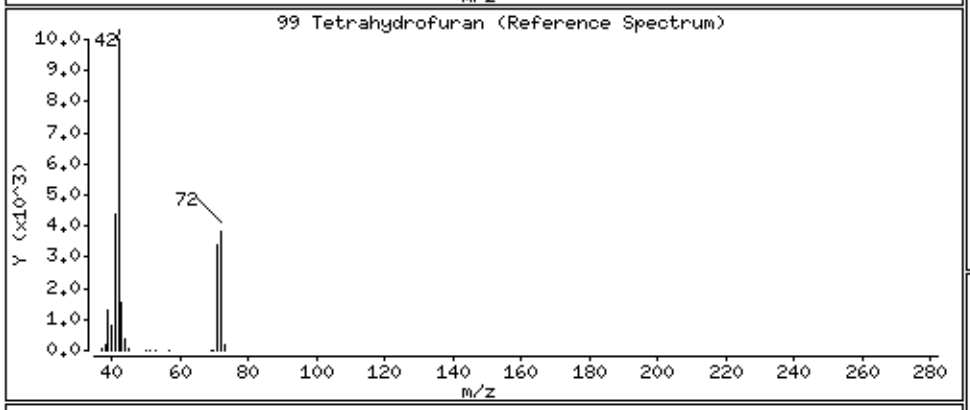
Column diameter: 0.32

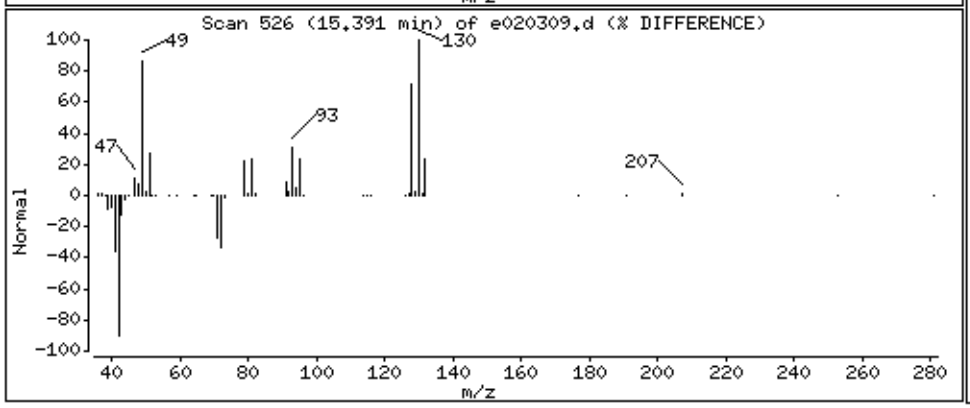
99 Tetrahydrofuran

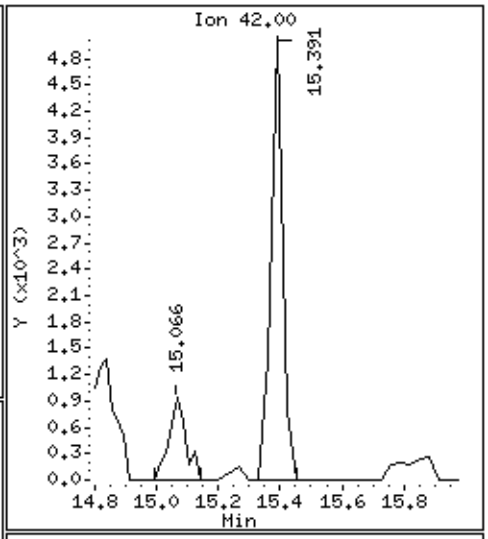
Concentration: 0.6581 PPBV

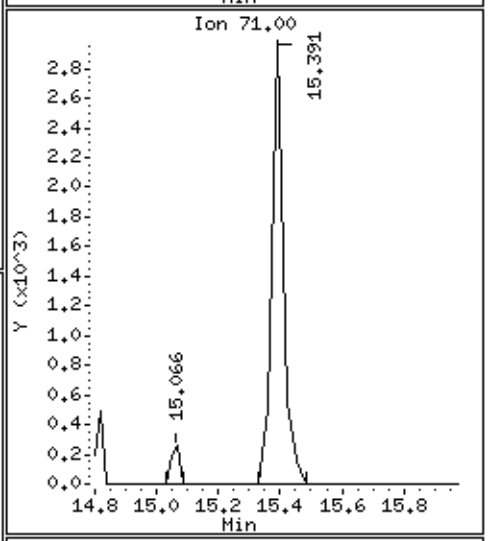


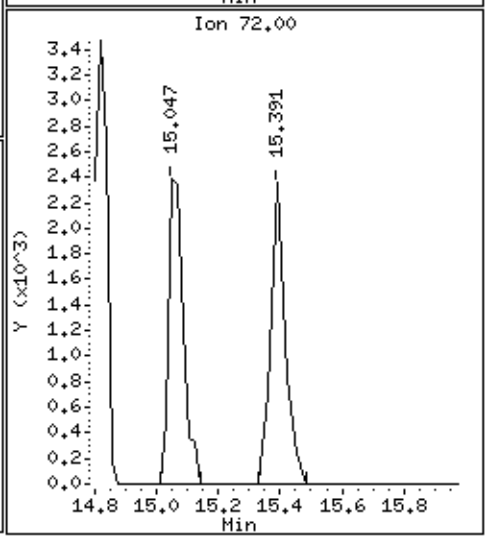












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

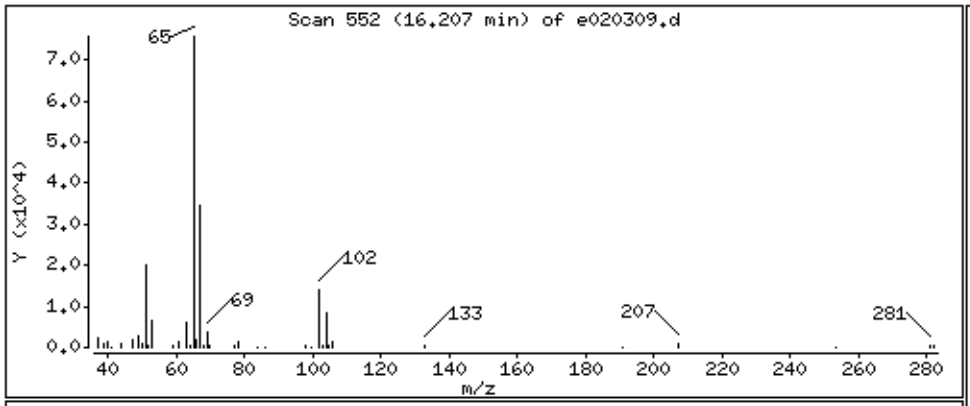
Operator: ef

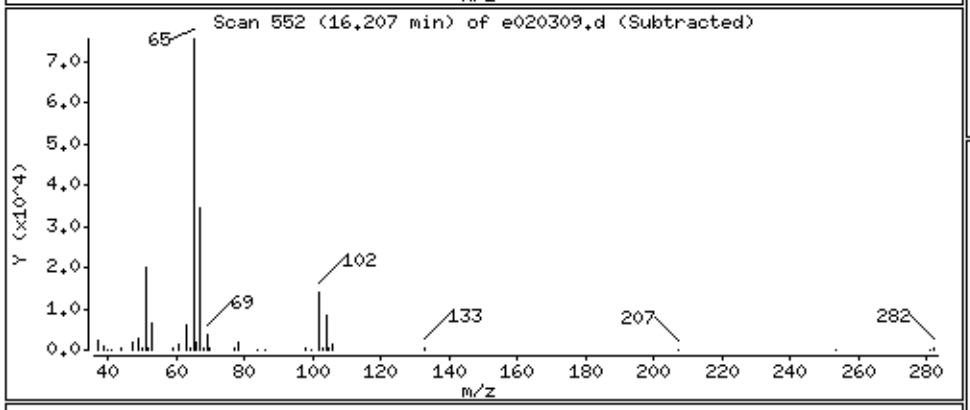
Column phase: RTX-624

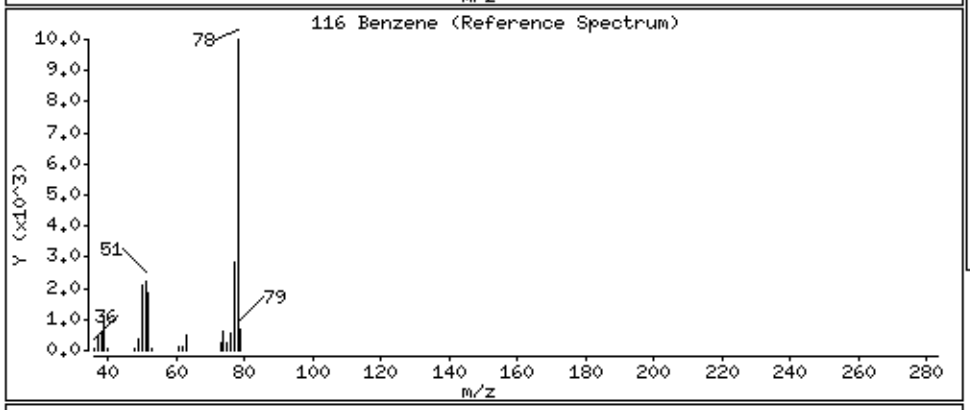
Column diameter: 0.32

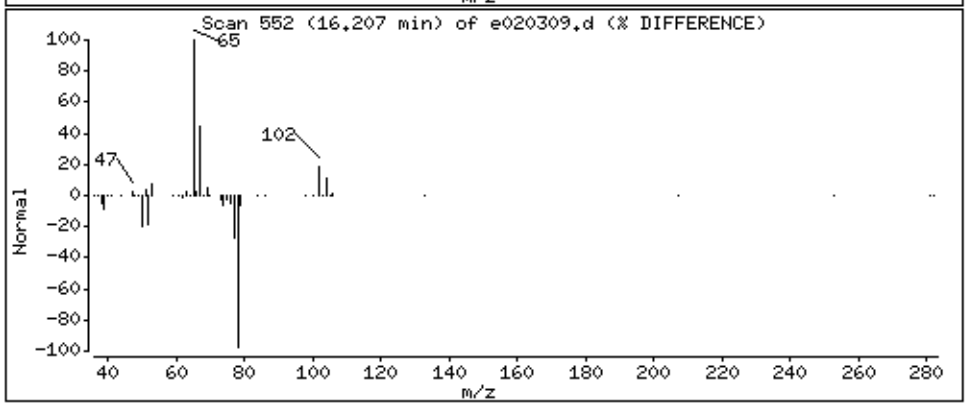
116 Benzene

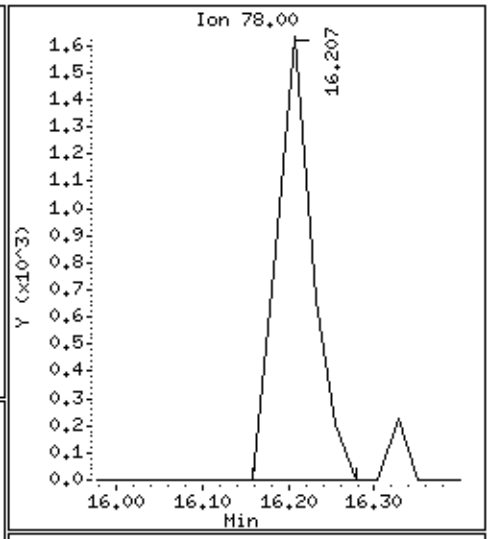
Concentration: 0.06449 PPBV

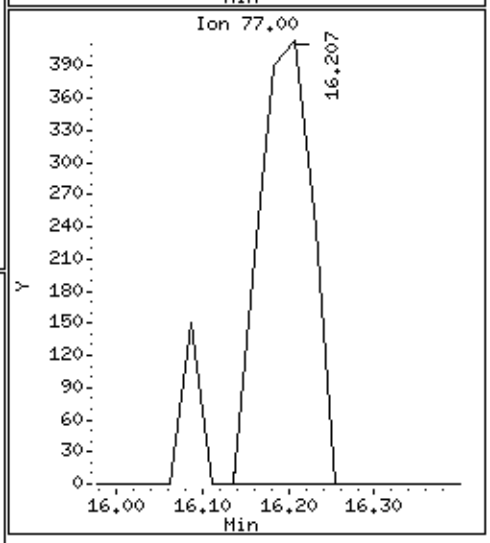












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

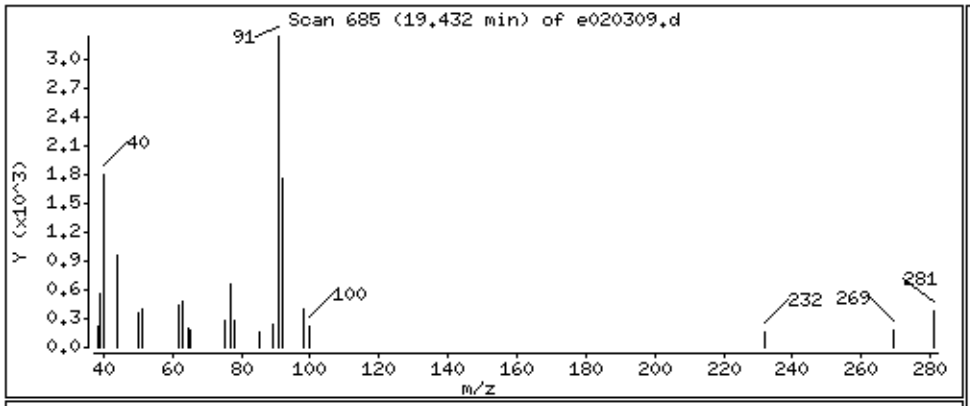
Operator: ef

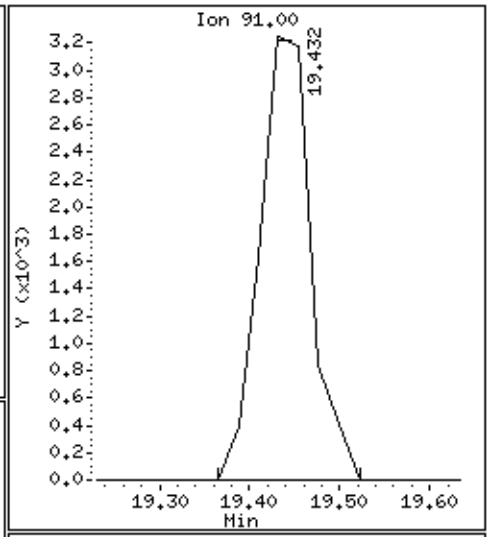
Column phase: RTX-624

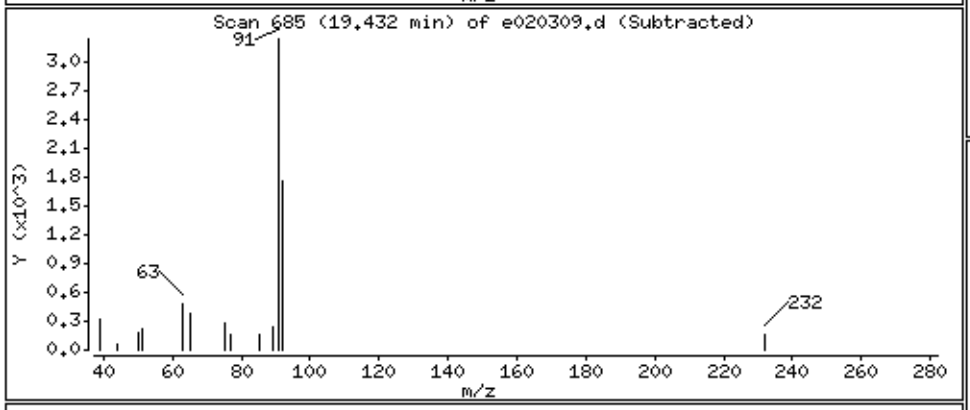
Column diameter: 0.32

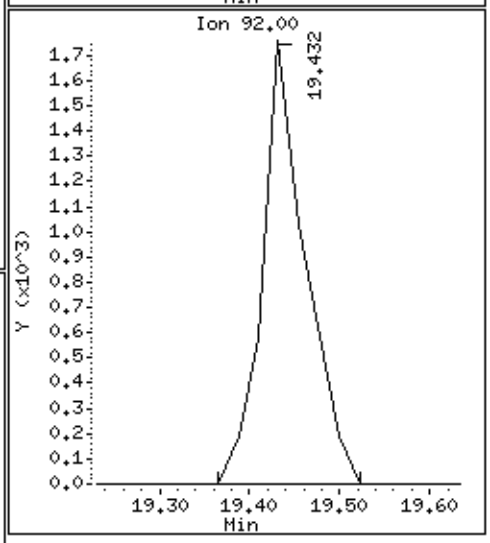
147 Toluene

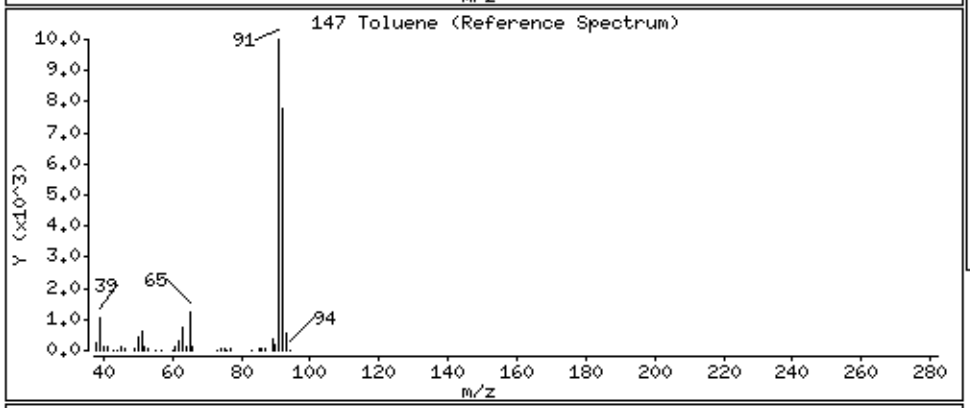
Concentration: 0.1473 PPBV

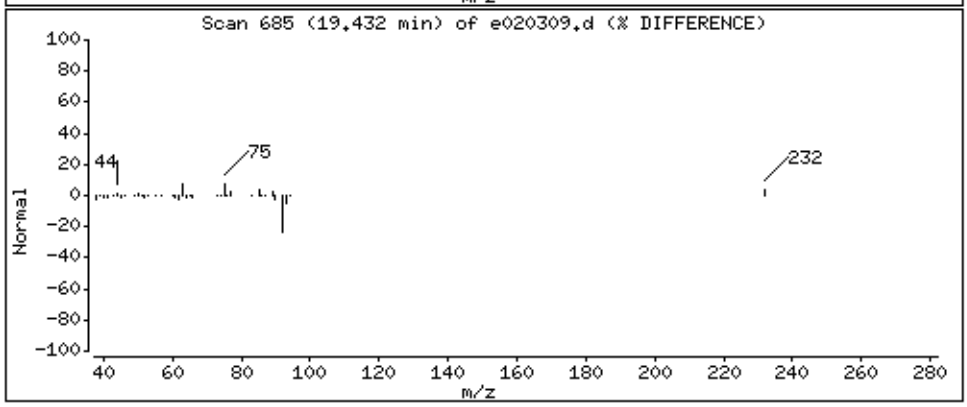












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

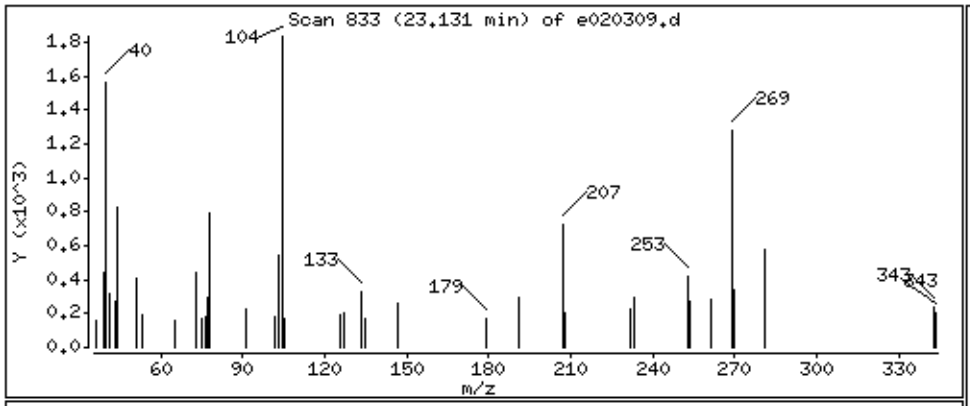
Operator: ef

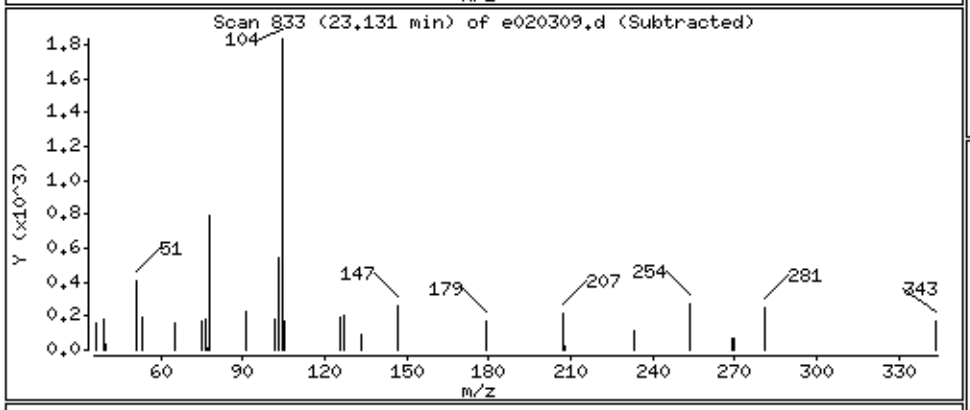
Column phase: RTX-624

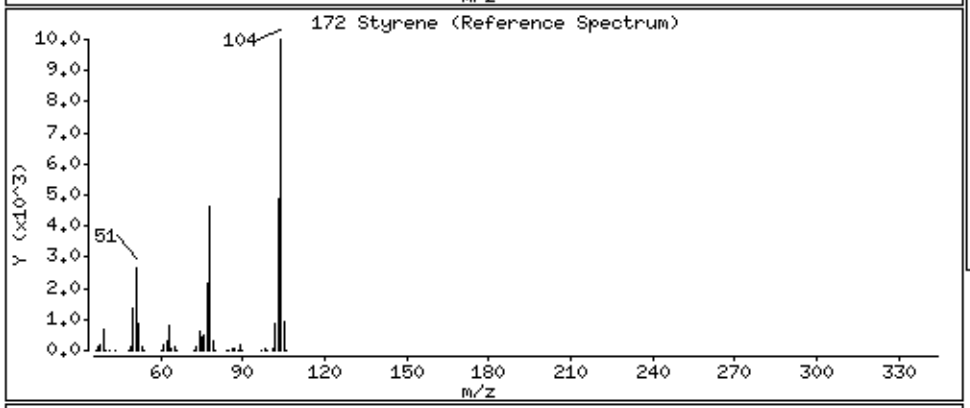
Column diameter: 0.32

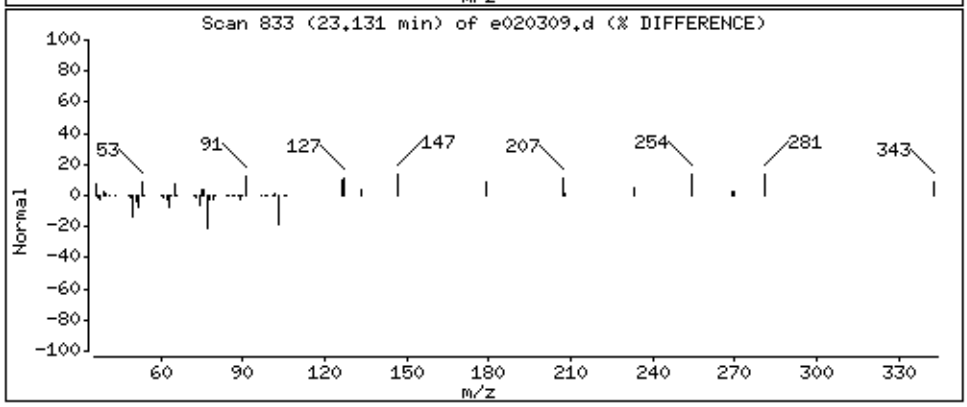
172 Styrene

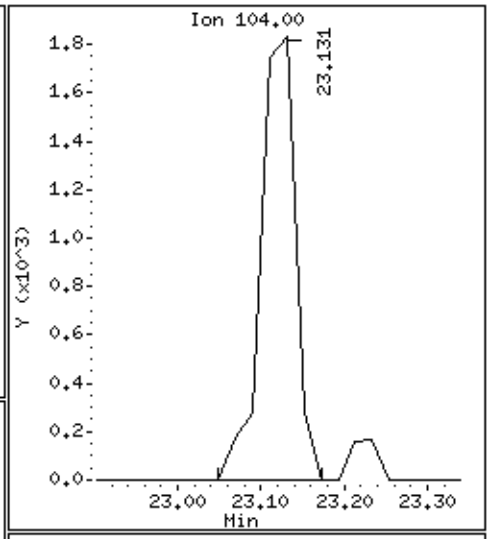
Concentration: 0.07982 PPBV

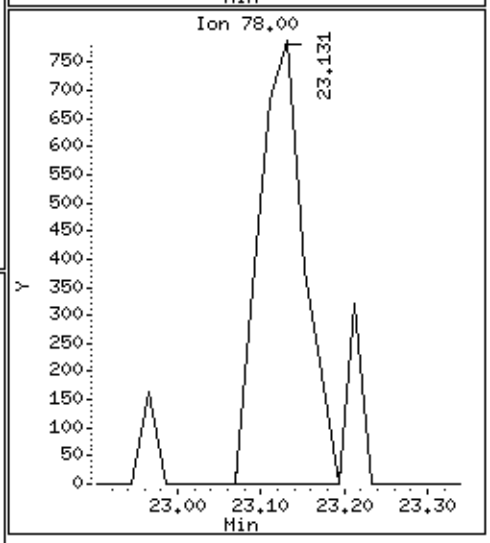












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

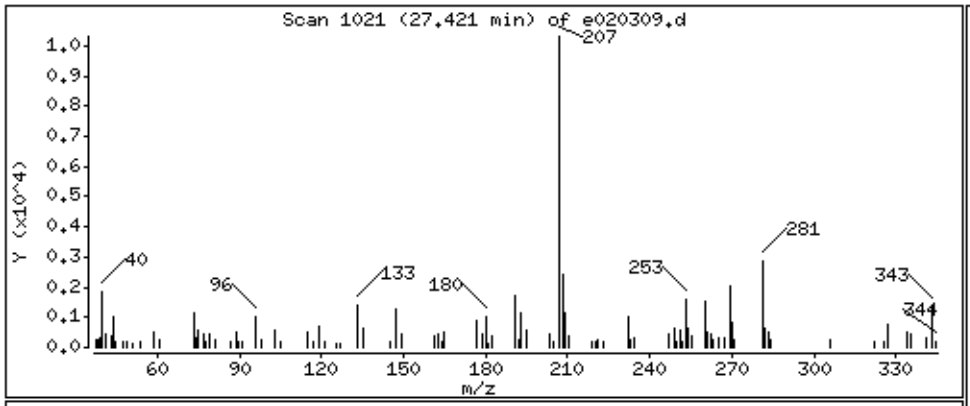
Operator: ef

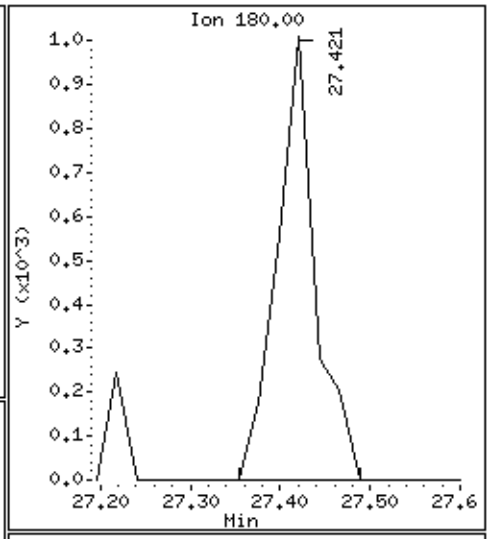
Column phase: RTX-624

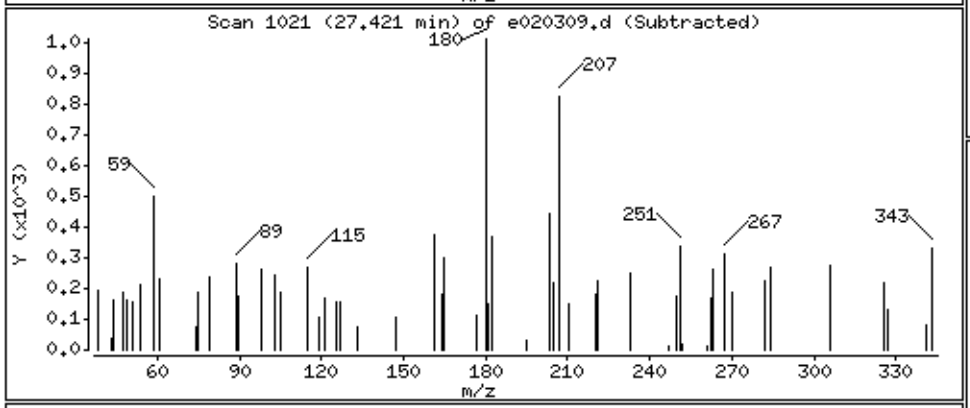
Column diameter: 0.32

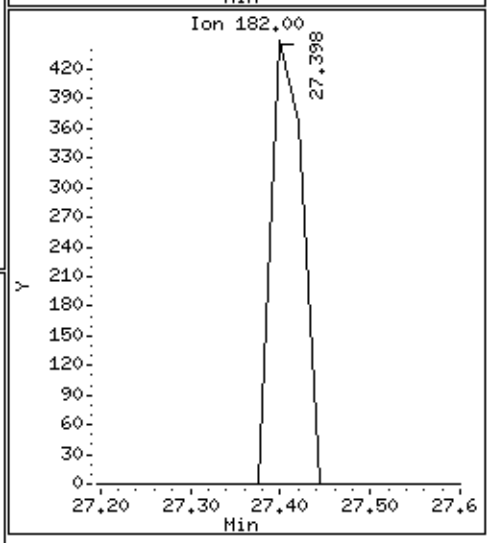
226 1,2,4-Trichlorobenzene

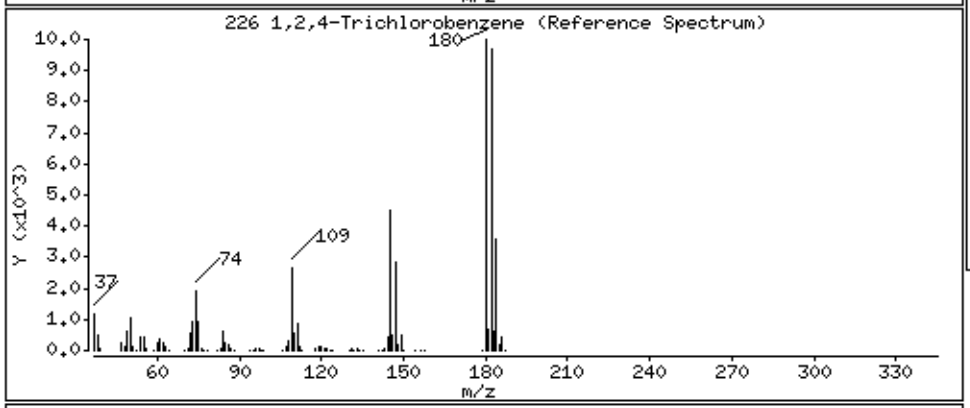
Concentration: 0.06084 PPBV

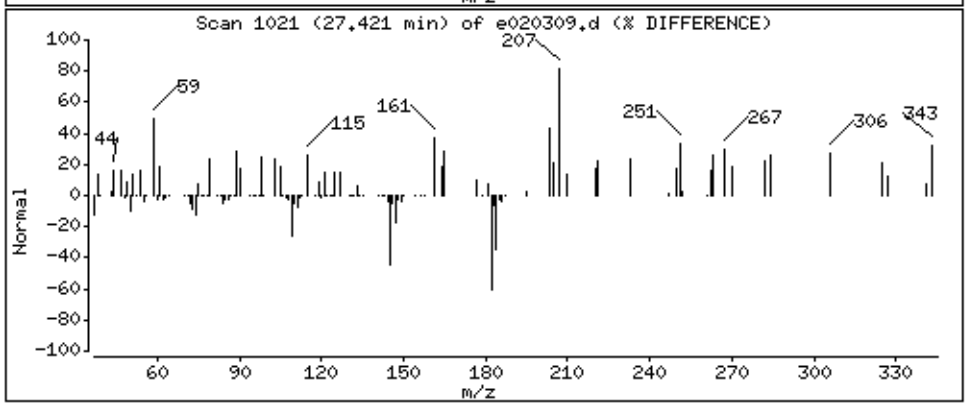












Data File: /chem/msde.i/03Feb2017.b/e020309.d

Date : 03-FEB-2017 13:19

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00124

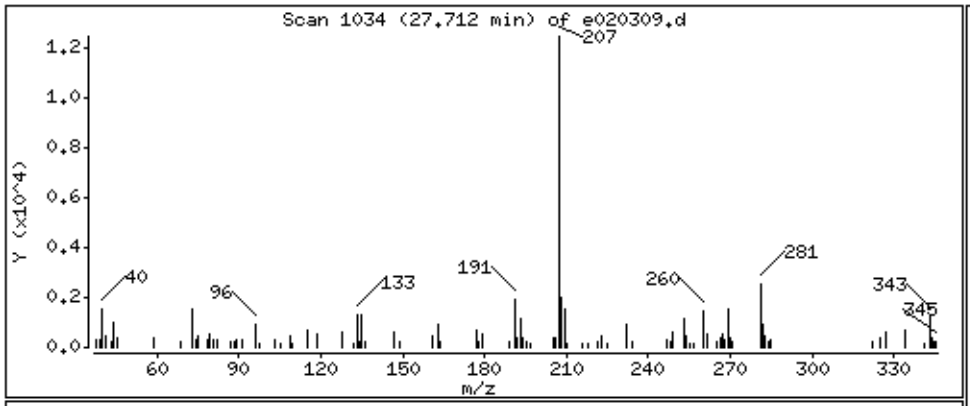
Operator: ef

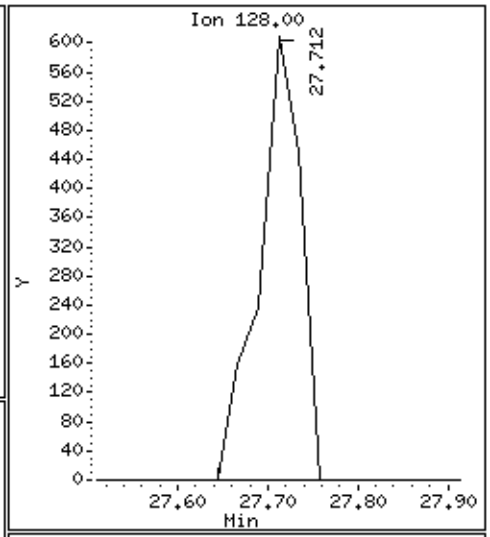
Column phase: RTX-624

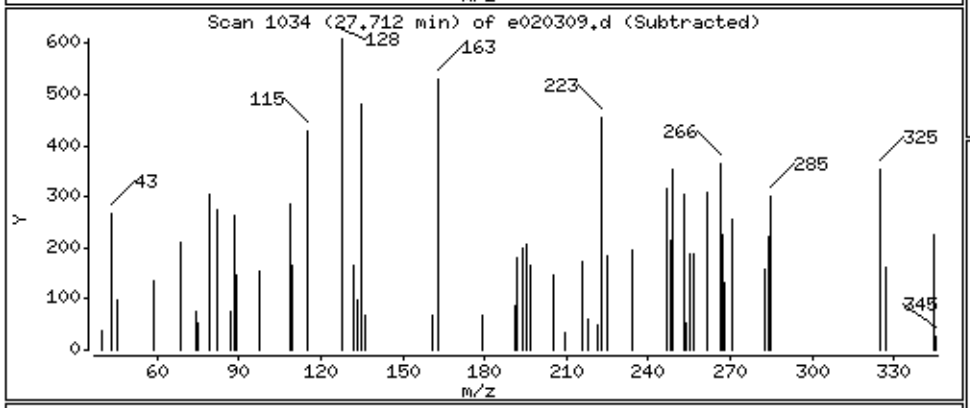
Column diameter: 0.32

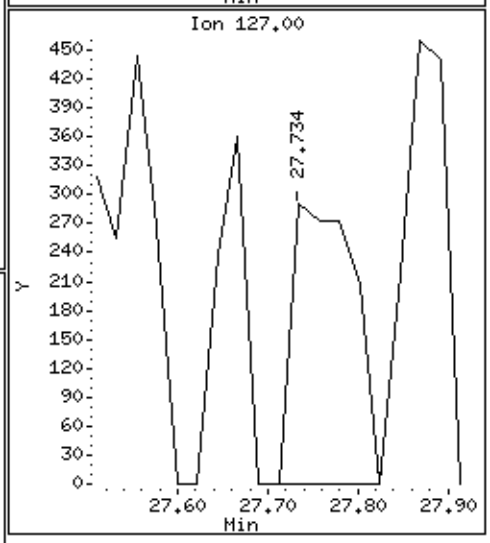
228 Naphthalene

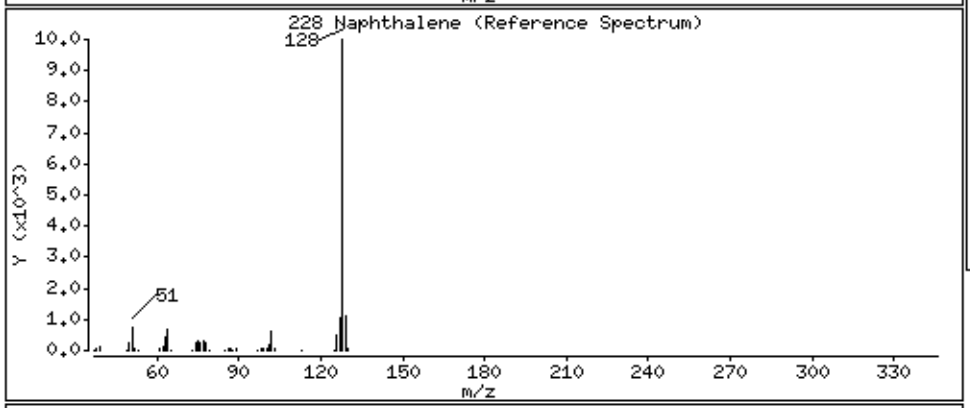
Concentration: 0.02901 PPBV

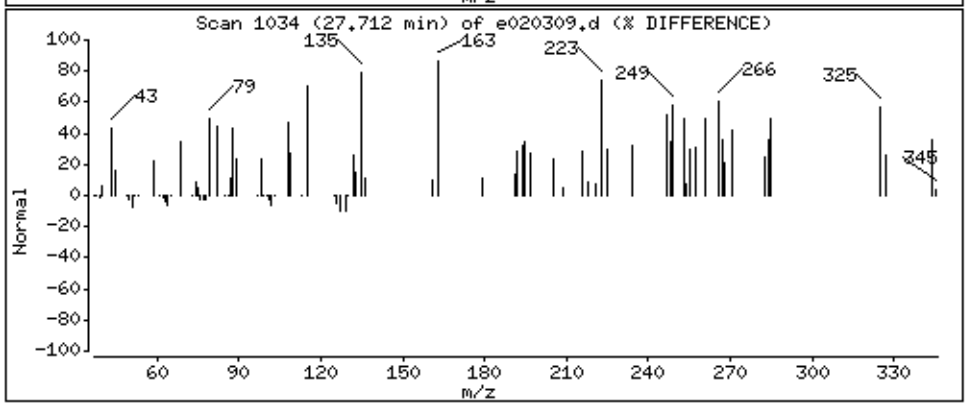












eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B13IA-2-012817

Lab ID#: 1701477B-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.80	2.0
Chloromethane	0.80	0.68 J	1.7	1.4 J
Freon 11	0.16	0.22	0.90	1.2
Ethanol	0.80	2.0	1.5	3.7
Freon 113	0.16	0.049 J	1.2	0.38 J
Acetone	0.80	6.2	1.9	15
2-Propanol	0.80	0.67 J	2.0	1.6 J
Carbon Disulfide	0.80	0.83	2.5	2.6
2-Butanone (Methyl Ethyl Ketone)	0.80	0.92	2.4	2.7
Tetrahydrofuran	0.80	0.56 J	2.4	1.6 J
Carbon Tetrachloride	0.16	0.067 J	1.0	0.42 J
Benzene	0.16	0.16	0.51	0.51
Heptane	0.16	0.072 J	0.66	0.30 J
1,4-Dioxane	0.16	0.49	0.58	1.8
Toluene	0.16	0.45	0.61	1.7
trans-1,3-Dichloropropene	0.16	0.042 J	0.73	0.19 J
m,p-Xylene	0.16	0.057 J	0.70	0.25 J
Styrene	0.16	0.054 J	0.68	0.23 J
Bromoform	0.16	0.018 J	1.7	0.19 J

eurofins | Air Toxics

Client Sample ID: B13IA-2-012817

Lab ID#: 1701477B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020308**	**Date of Collection:**	**1/29/17 3:08:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**2/3/17 12:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.41	0.80	2.0
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.80	0.68 J	1.7	1.4 J
Vinyl Chloride	0.16	Not Detected	0.41	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.80	Not Detected	3.1	Not Detected
Chloroethane	0.80	Not Detected	2.1	Not Detected
Freon 11	0.16	0.22	0.90	1.2
Ethanol	0.80	2.0	1.5	3.7
Freon 113	0.16	0.049 J	1.2	0.38 J
1,1-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Acetone	0.80	6.2	1.9	15
2-Propanol	0.80	0.67 J	2.0	1.6 J
Carbon Disulfide	0.80	0.83	2.5	2.6
3-Chloropropene	0.80	Not Detected	2.5	Not Detected
Methylene Chloride	0.32	Not Detected	1.1	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Hexane	0.16	Not Detected	0.57	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	0.92	2.4	2.7
cis-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Tetrahydrofuran	0.80	0.56 J	2.4	1.6 J
Chloroform	0.16	Not Detected	0.79	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Cyclohexane	0.16	Not Detected	0.55	Not Detected
Carbon Tetrachloride	0.16	0.067 J	1.0	0.42 J
2,2,4-Trimethylpentane	0.80	Not Detected	3.8	Not Detected
Benzene	0.16	0.16	0.51	0.51
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Heptane	0.16	0.072 J	0.66	0.30 J
Trichloroethene	0.16	Not Detected	0.86	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.74	Not Detected
1,4-Dioxane	0.16	0.49	0.58	1.8
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.73	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	0.45	0.61	1.7
trans-1,3-Dichloropropene	0.16	0.042 J	0.73	0.19 J
1,1,2-Trichloroethane	0.16	Not Detected	0.88	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.80	Not Detected	3.3	Not Detected

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Client Sample ID: B13IA-2-012817

Lab ID#: 1701477B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020308**	**Date of Collection:**	**1/29/17 3:08:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**2/3/17 12:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.74	Not Detected
Ethyl Benzene	0.16	Not Detected	0.70	Not Detected
m,p-Xylene	0.16	0.057 J	0.70	0.25 J
o-Xylene	0.16	Not Detected	0.70	Not Detected
Styrene	0.16	0.054 J	0.68	0.23 J
Bromoform	0.16	0.018 J	1.7	0.19 J
Cumene	0.16	Not Detected	0.79	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.79	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.79	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.79	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.83	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.97	Not Detected
1,2,4-Trichlorobenzene	0.80	Not Detected	6.0	Not Detected
Hexachlorobutadiene	0.80	Not Detected	8.6	Not Detected
Naphthalene	0.80	Not Detected	4.2	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020308.d
Lab Smp Id: 1701477B-12A
Inj Date : 03-FEB-2017 12:37
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 6L0046
Misc Info : 5.0"Hg -> 5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.61000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12						CAS #: 75-71-8		
5.245	5.220	(0.341)	85	33059	0.25638	0.4128	80.00- 120.00	100.00
5.245	5.220	(0.341)	87	11848			1.91- 61.91	35.84
17 Chloromethane						CAS #: 74-87-3		
6.980	6.932	(0.454)	50	10220	0.42498	0.6842	80.00- 120.00	100.00(a)
6.980	6.932	(0.454)	52	4424			3.31- 63.31	43.29
35 Freon 11						CAS #: 75-69-4		
10.766	10.766	(0.700)	101	20398	0.13560	0.2183	80.00- 120.00	100.00
10.766	10.766	(0.700)	103	14046			33.74- 93.74	68.86
42 Ethanol						CAS #: 64-17-5		
11.681	11.661	(0.759)	45	16132	1.23037	1.981	80.00- 120.00	100.00
11.681	11.661	(0.759)	46	6841			9.60- 69.60	42.41
11.700	11.661	(0.760)	43	5770			0.00- 59.21	35.77
49 Freon 113						CAS #: 76-13-1		
12.081	12.080	(0.785)	151	3076	0.03063	0.04931	80.00- 120.00	100.00(a)
12.100	12.080	(0.786)	153	1907			34.83- 94.83	62.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113 (continued)
 12.062  12.080 (0.784)   101      2229                    77.16- 137.16    72.47
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.385  12.366 (0.805)    58     63566 3.85596    6.208  80.00- 120.00   100.00
 12.385  12.366 (0.805)    43    238502                   344.13- 404.13   375.20
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.462  12.461 (0.810)    76     59058 0.51790   0.8338  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.747  12.728 (0.828)    45     22029 0.41508   0.6683  80.00- 120.00   100.00(a)
 12.747  12.728 (0.828)    43      8429                     0.00-  55.65    38.26
 12.728  12.728 (0.827)    59      1338                     0.00-  34.42     6.08
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.047  15.047 (0.978)    72     10202 0.57070   0.9188  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     34762                   325.72- 385.72   340.72
 15.047  15.047 (0.978)    57      3814                     1.13-  61.13    37.39
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                             CAS #: 109-99-9
 15.391  15.391 (1.000)    42     11277 0.34851   0.5611  80.00- 120.00   100.00(a)
 15.391  15.391 (1.000)    71      5644                    20.32-  80.32    50.05
 15.391  15.391 (1.000)    72      6951                    21.98-  81.98    61.65
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    145234 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    103583                   46.73- 106.73    71.32
 15.391  15.391 (1.000)    49    123610                   55.35- 115.35    85.11
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.885  15.884 (1.032)   119      5032 0.04175  0.06721  80.00- 120.00   100.00(a)
 15.885  15.884 (1.032)   117      4995                    74.11- 134.11    99.27
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.207  16.207 (0.968)    78     11506 0.09981   0.1607  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      4394                     0.00-  53.00    38.19
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    209927 5.03340    5.033  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67     99830                    22.67-  82.67    47.55
-------------------------------------------------------------------------------
  121 Heptane                                     CAS #: 142-82-5
 16.352  16.352 (0.977)    57      1306 0.04474  0.07203  80.00- 120.00   100.00(a)
  0.000  16.352 (0.000)   100         0                    23.08-  83.08     0.00
 16.352  16.352 (0.977)    43      1742                   136.91- 196.91   133.41
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 123 1,4-Difluorobenzene						CAS #: 540-36-3	
16.737	16.737 (1.000)	114	466914	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	76848			0.00- 45.16	16.46
136 1,4-Dioxane						CAS #: 123-91-1	
17.701	17.701 (1.058)	88	8511	0.30542	0.4917	80.00- 120.00	100.00
17.725	17.701 (1.059)	58	4198			30.17- 90.17	49.32
17.677	17.701 (1.056)	57	3495			0.00- 51.30	41.07
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.298	19.298 (1.153)	98	460720	5.08688	5.087	80.00- 120.00	100.00
19.298	19.298 (1.153)	70	51221			0.00- 40.89	11.12
19.298	19.298 (1.153)	100	306566			40.09- 100.09	66.54
147 Toluene						CAS #: 108-88-3	
19.455	19.432 (1.162)	91	39039	0.27994	0.4507	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	22088			27.79- 87.79	56.58
150 trans-1,3-Dichloropropene						CAS #: 10061-02-6	
20.026	20.026 (0.903)	75	1834	0.02629	0.04232	80.00- 120.00	100.00(a)
19.806	20.026 (0.893)	77	2622			1.55- 61.55	142.96
20.026	20.026 (0.903)	39	1921			18.82- 78.82	104.76
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	473749	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	218317			17.27- 77.27	46.08
169 m,p-Xylene						CAS #: 108-38-3	
22.509	22.467 (1.015)	106	2606	0.03548	0.05712	80.00- 120.00	100.00(a)
22.467	22.467 (1.013)	91	5956			170.01- 230.01	228.50
172 Styrene						CAS #: 100-42-5	
23.131	23.110 (1.043)	104	3796	0.03343	0.05383	80.00- 120.00	100.00(a)
23.110	23.110 (1.042)	78	2129			20.21- 80.21	56.09
174 Bromoform						CAS #: 75-25-2	
23.452	23.452 (1.057)	173	1489	0.01124	0.01809	80.00- 120.00	100.00(a)
0.000	23.452 (0.000)	171	0			21.47- 81.47	0.00
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4	
23.856	23.856 (1.076)	174	332832	5.02951	5.030	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	304353			66.74- 126.74	91.44
23.856	23.856 (1.076)	176	317277			67.47- 127.47	95.33

QC Flag Legend

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

Report Date: 09-Feb-2017 10:46

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e020308.d
Lab Smp Id: 1701477B-12A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.0"Hg -> 5.0psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	145234	2.62
123 1,4-Difluorobenze	499834	299900	699768	466914	-6.59
163 Chlorobenzene-d5	467575	280545	654605	473749	1.32

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	22.18	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: 09-Feb-2017 10:46

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-12A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.0"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.033	100.67	70-130
$ 146 Toluene-d8	5.000	5.087	101.74	70-130
$ 177 4-Bromofluorobenze	5.000	5.030	100.59	70-130

Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

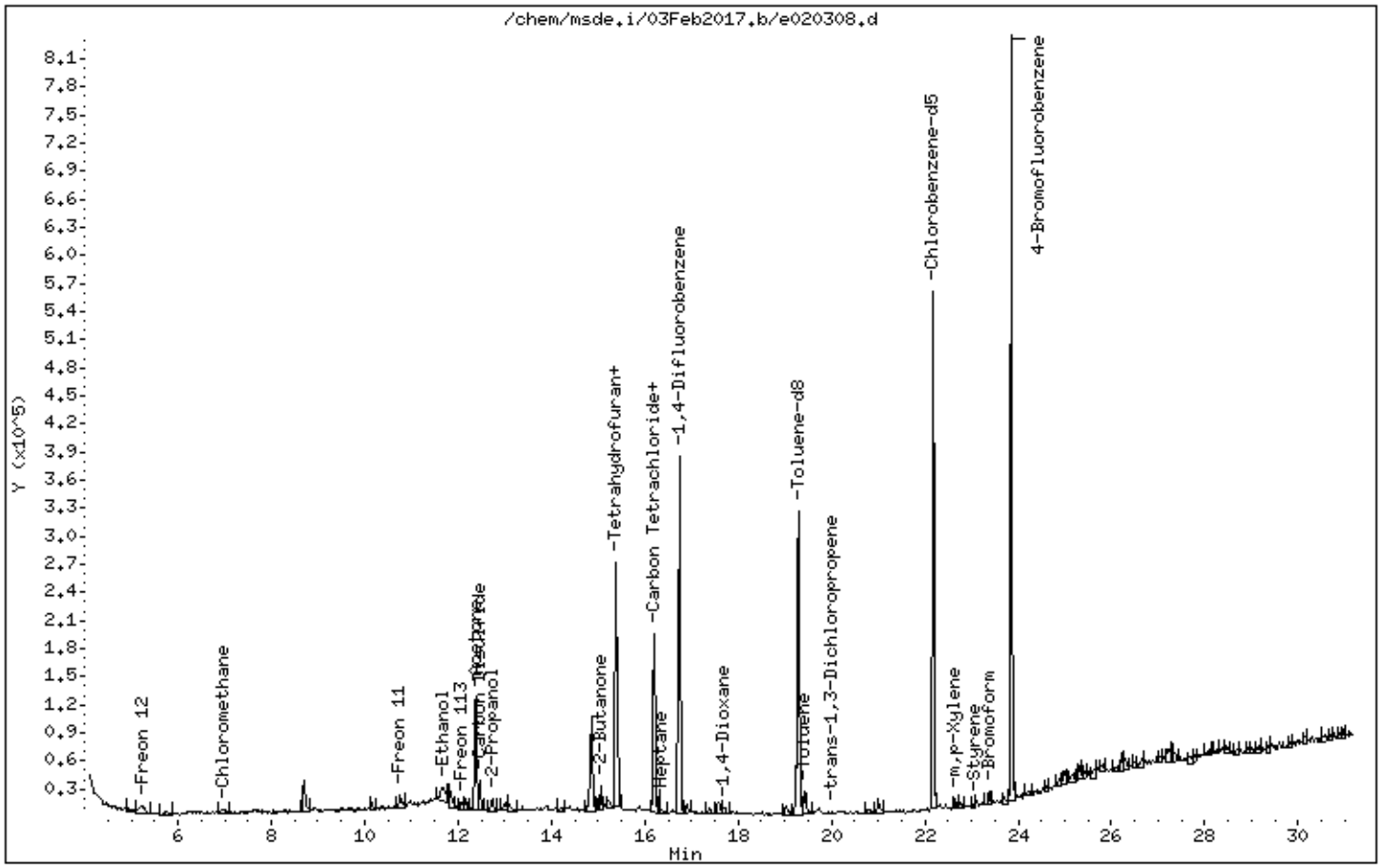
Instrument: msde.i

Sample Info: 250mL# 6L0046

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

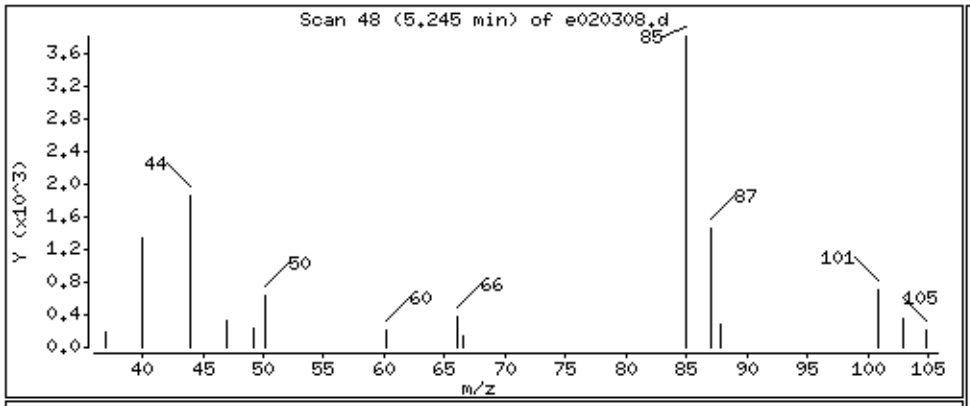
Operator: ef

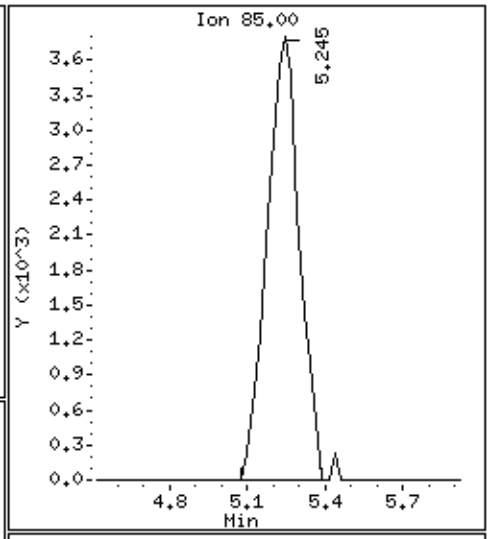
Column phase: RTX-624

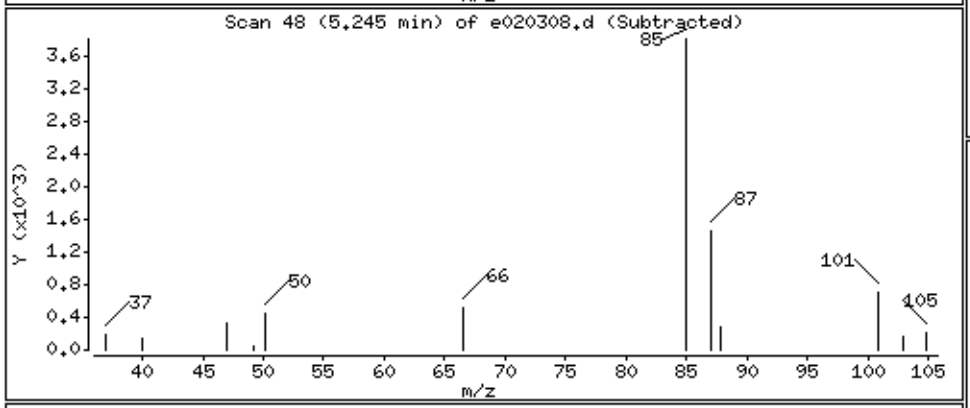
Column diameter: 0.32

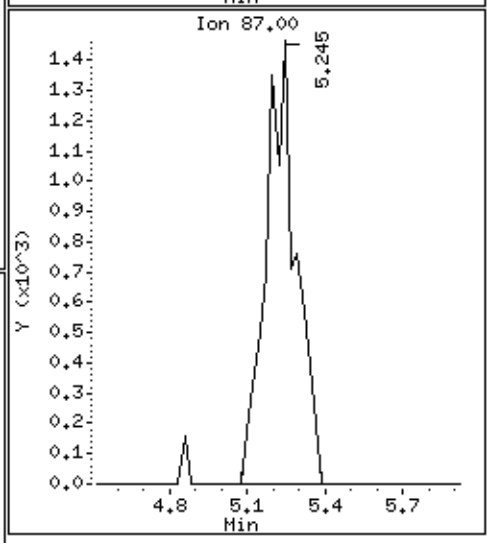
11 Freon 12

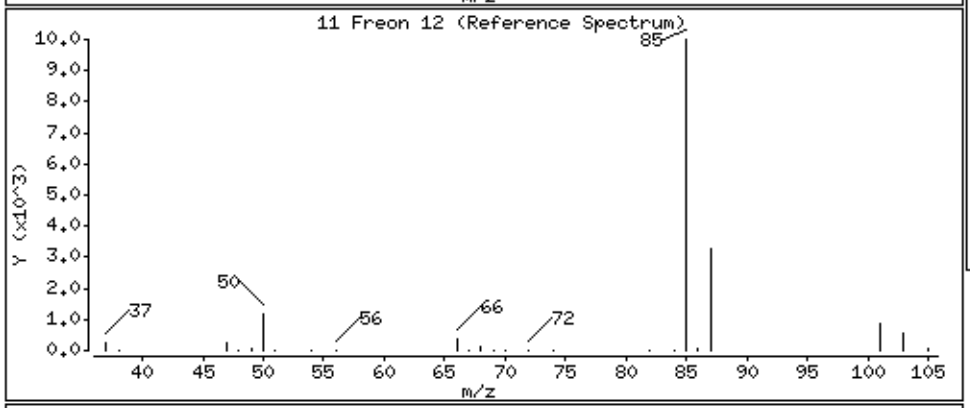
Concentration: 0.4128 PPBV

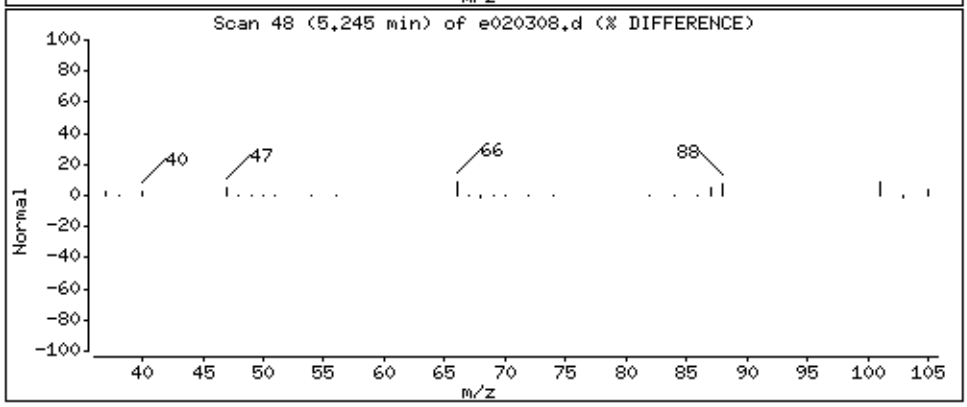












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

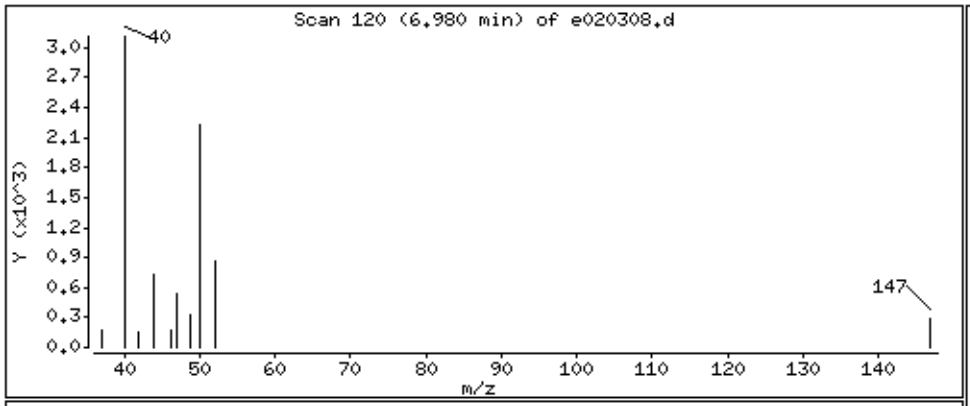
Operator: ef

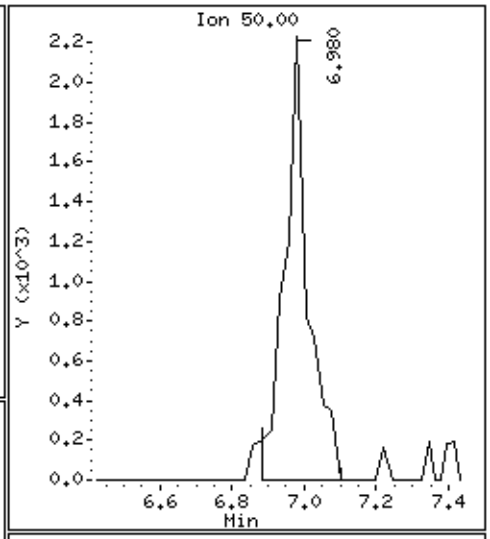
Column phase: RTX-624

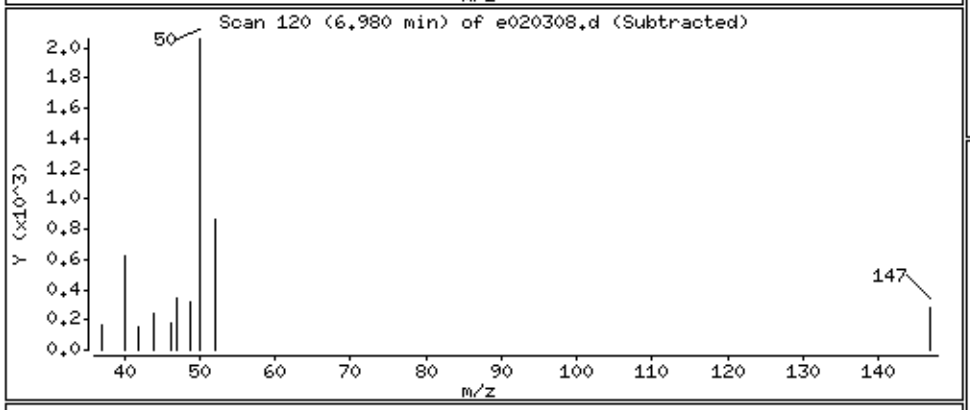
Column diameter: 0.32

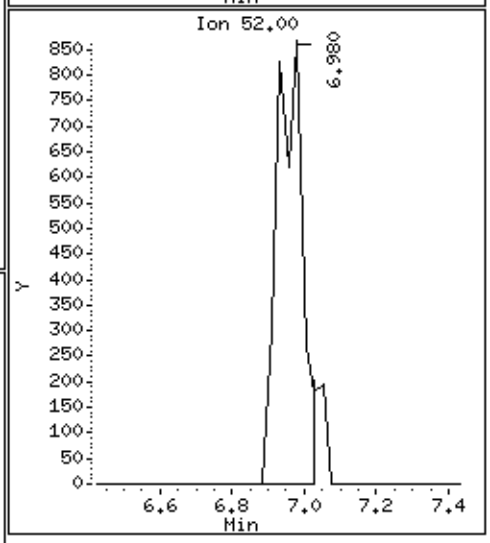
17 Chloromethane

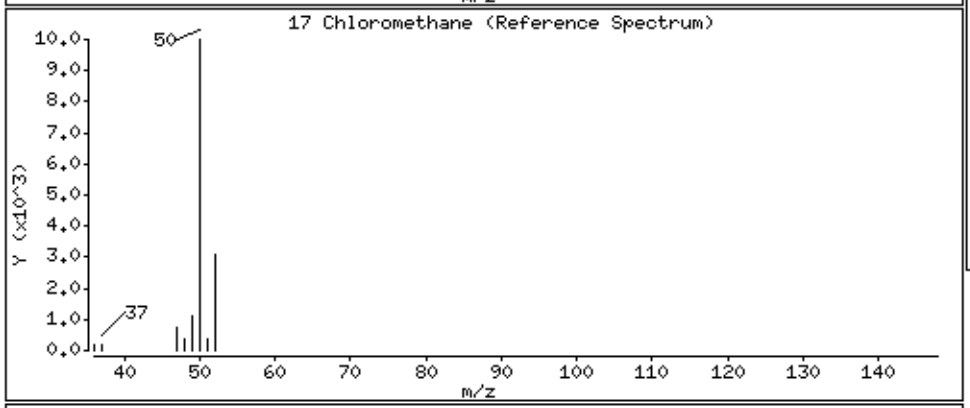
Concentration: 0.6842 PPBV

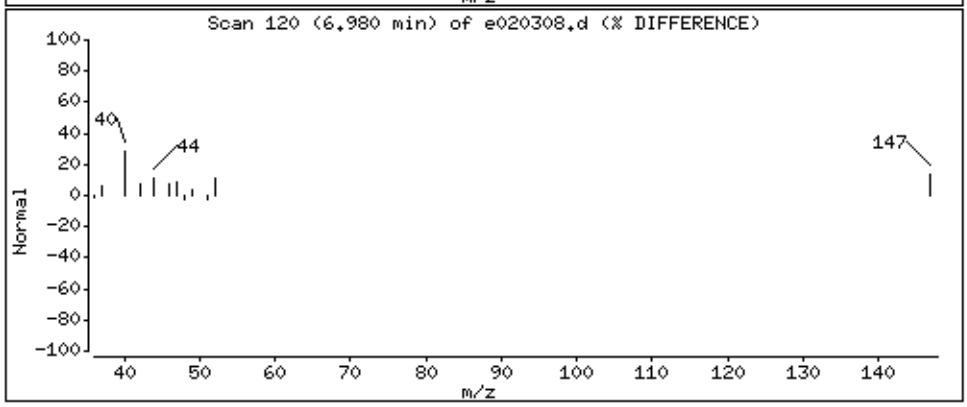












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

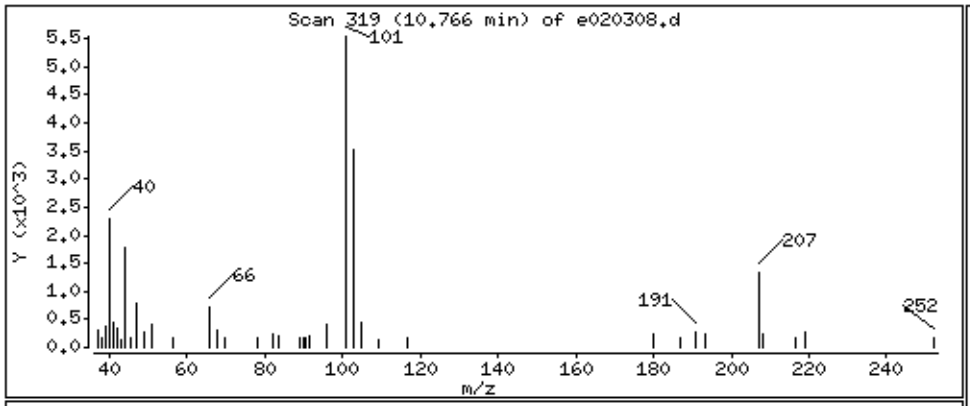
Operator: ef

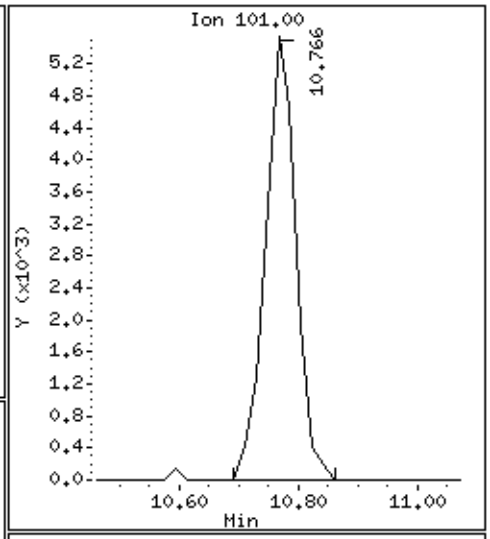
Column phase: RTX-624

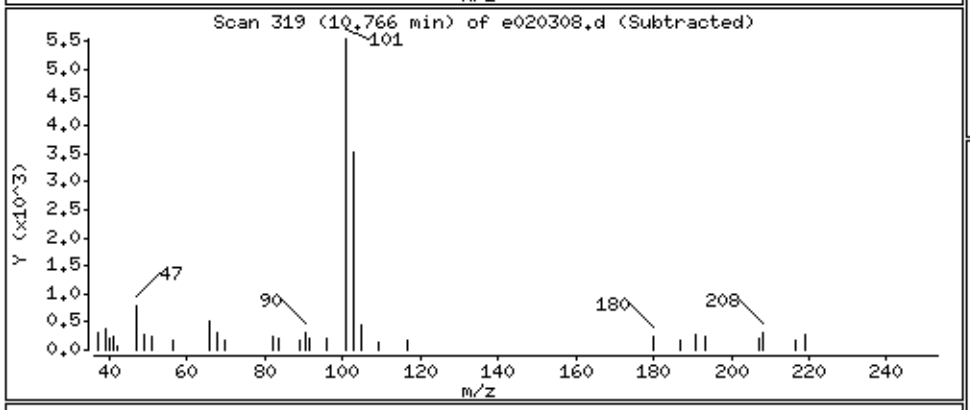
Column diameter: 0.32

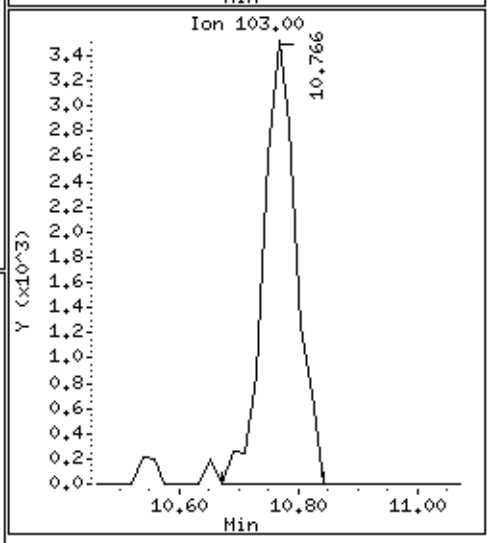
35 Freon 11

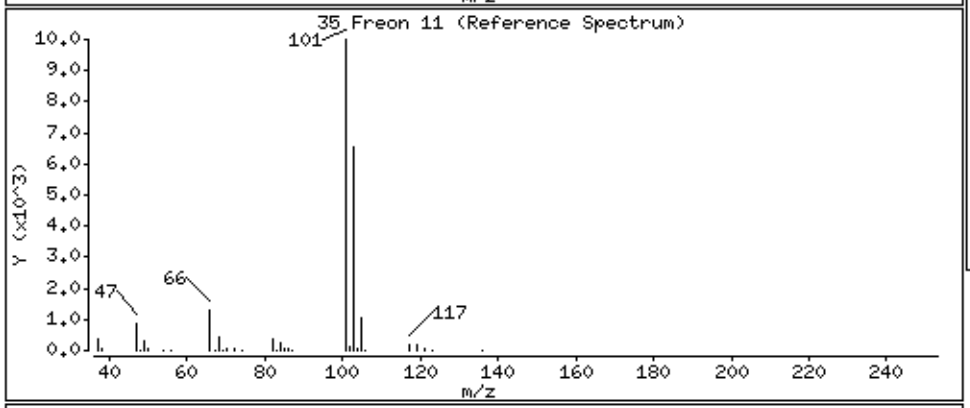
Concentration: 0.2183 PPBV

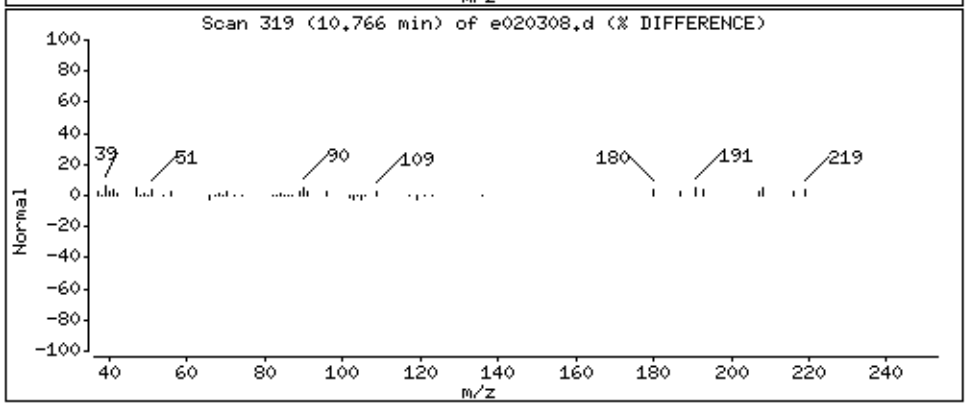












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

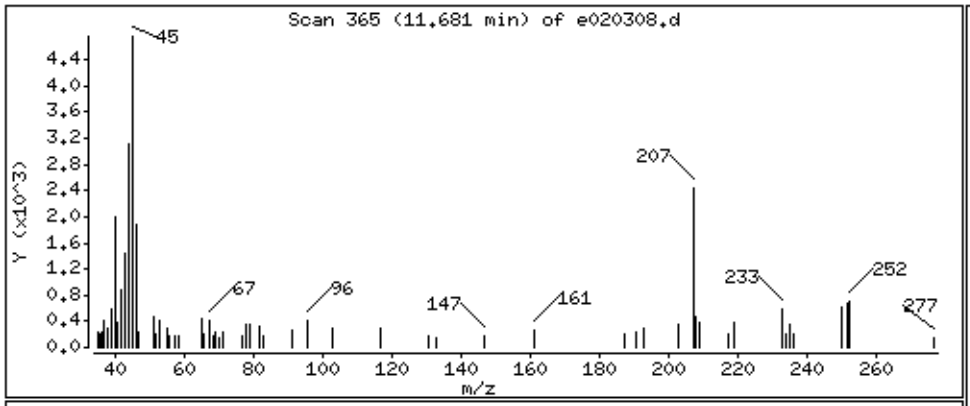
Operator: ef

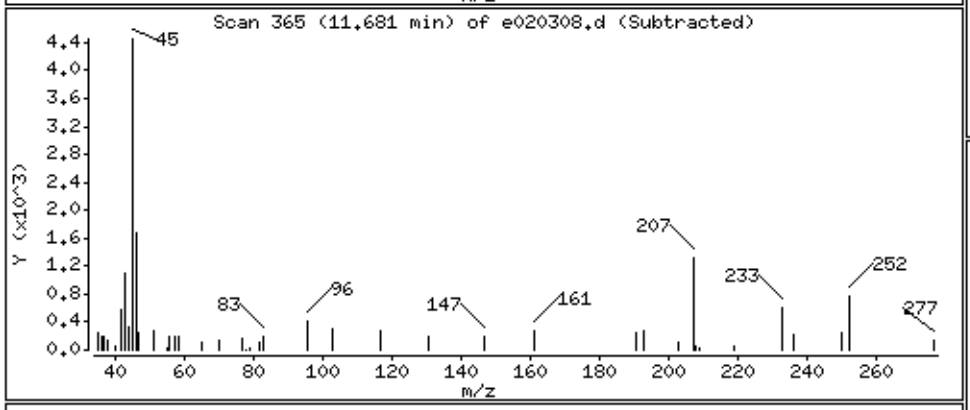
Column phase: RTX-624

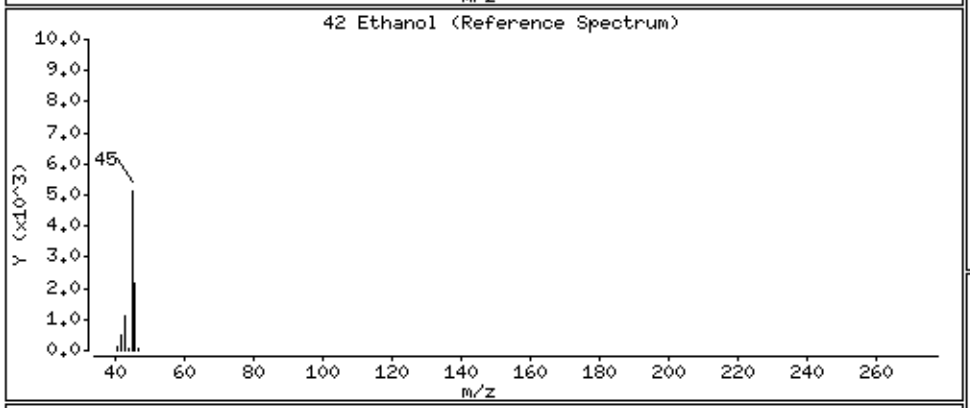
Column diameter: 0.32

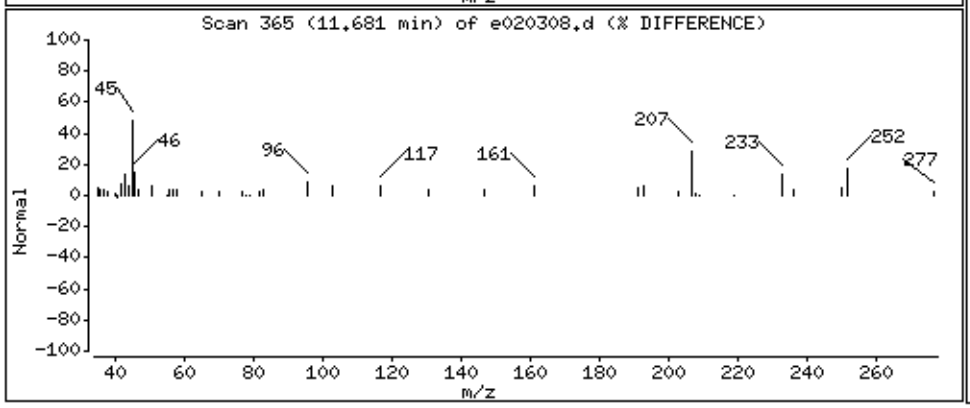
42 Ethanol

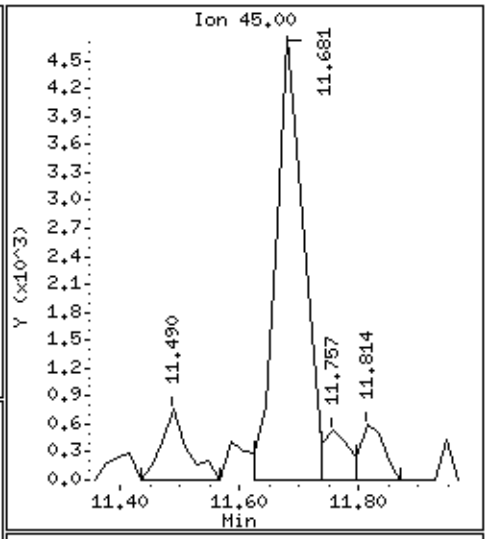
Concentration: 1.981 PPBV

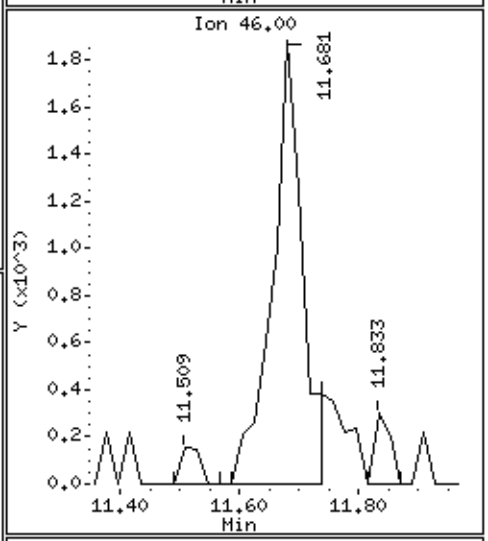


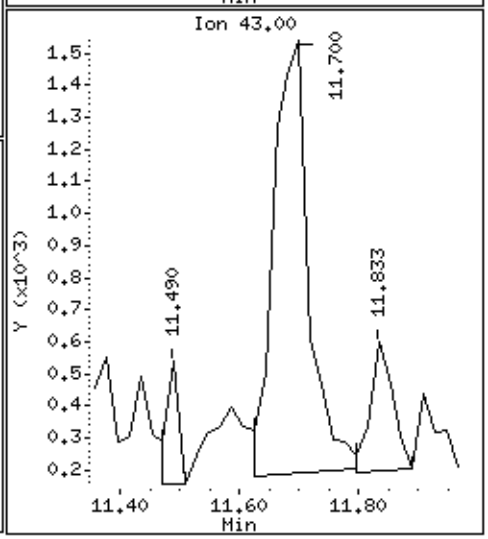












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

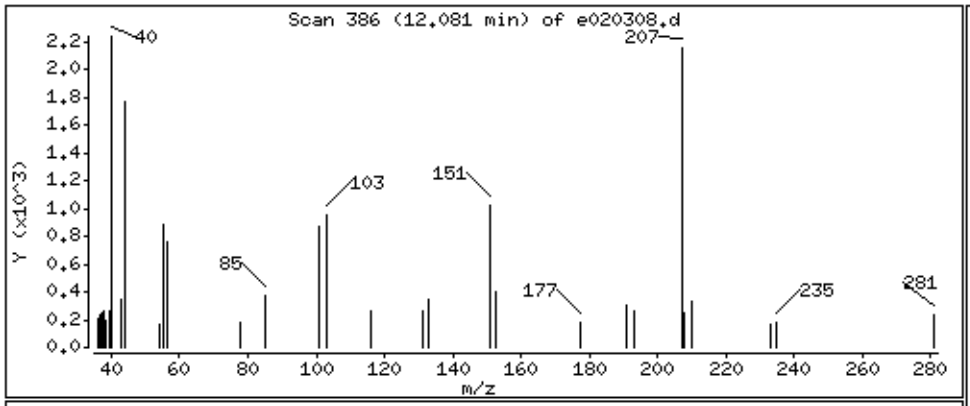
Operator: ef

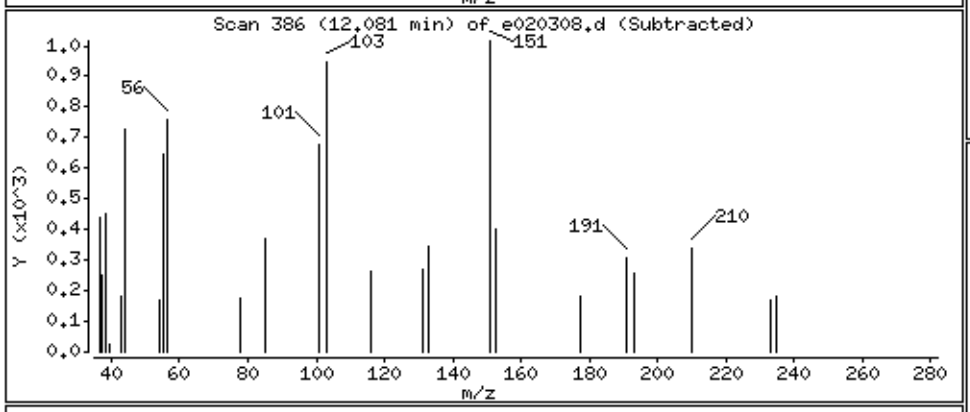
Column phase: RTX-624

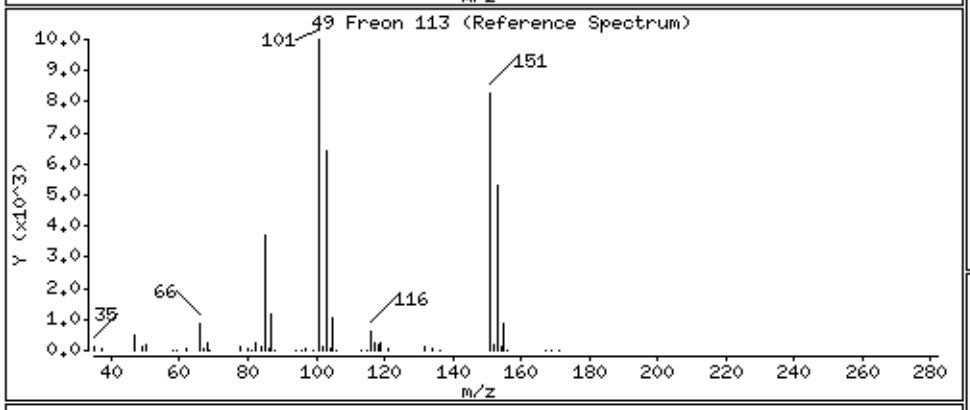
Column diameter: 0.32

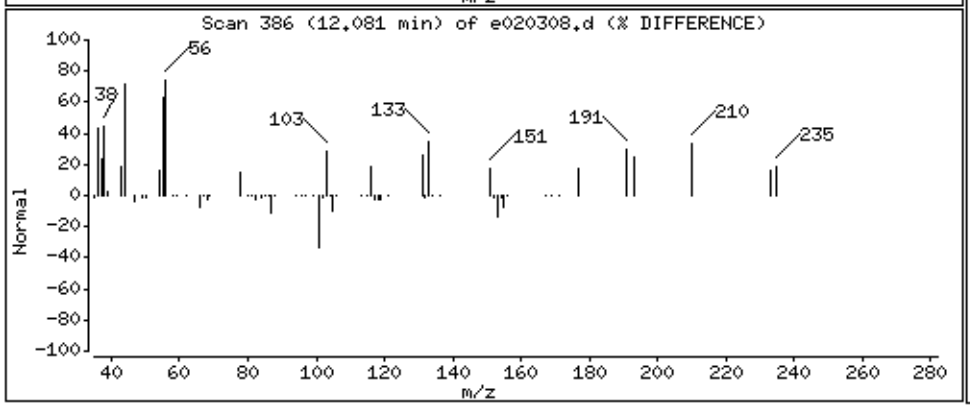
49 Freon 113

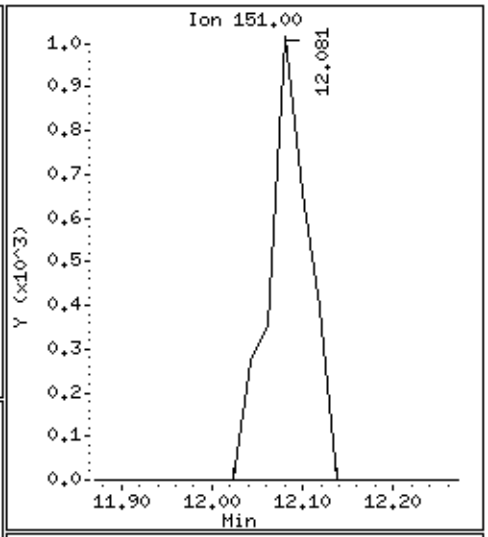
Concentration: 0.04931 PPBV

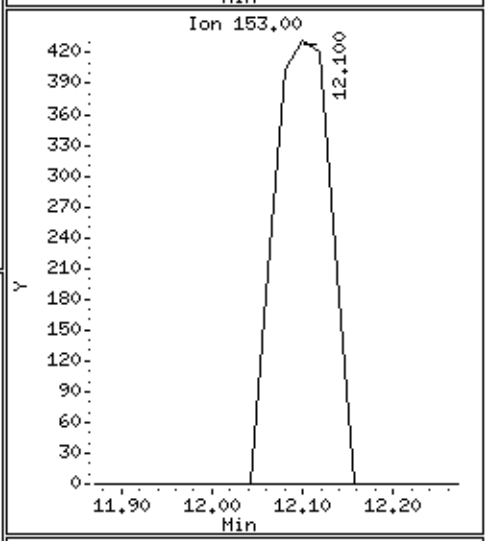


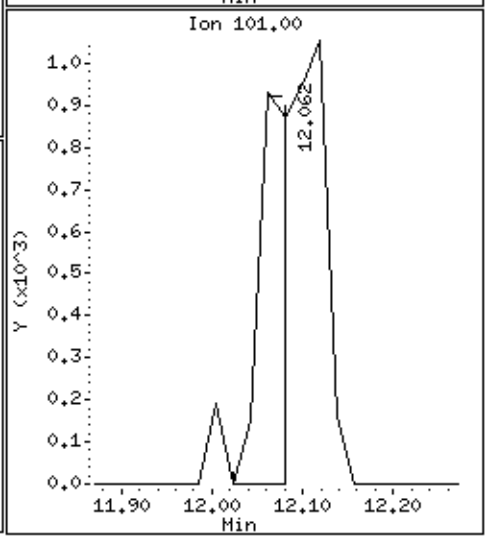












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

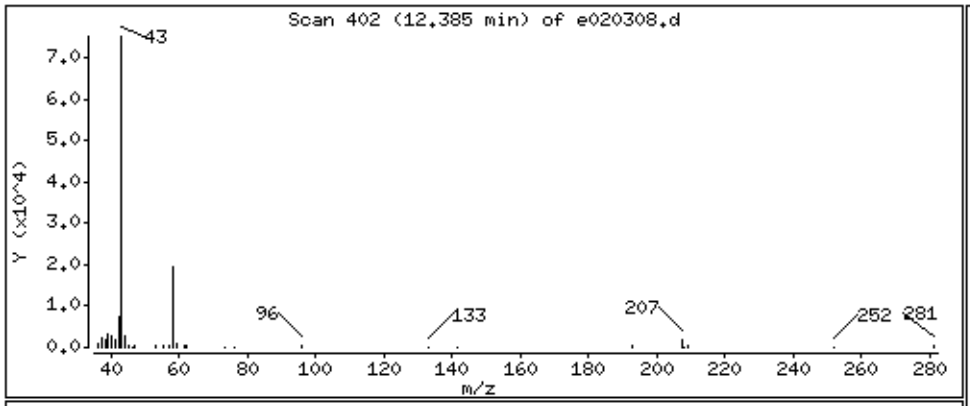
Operator: ef

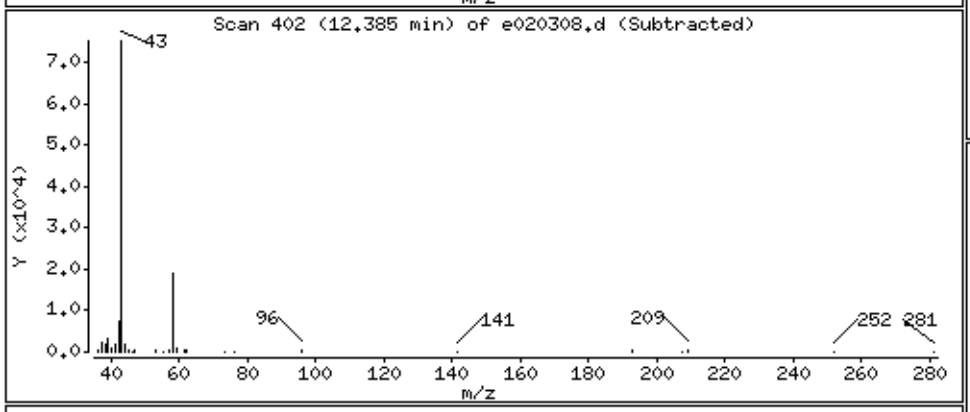
Column phase: RTX-624

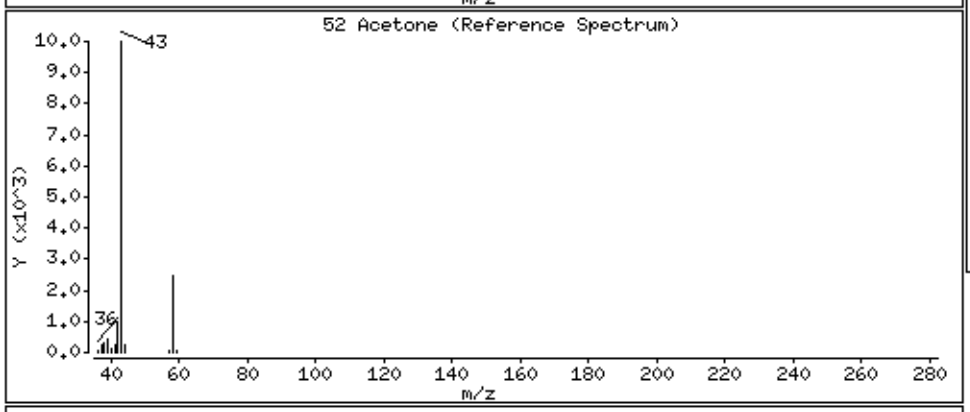
Column diameter: 0.32

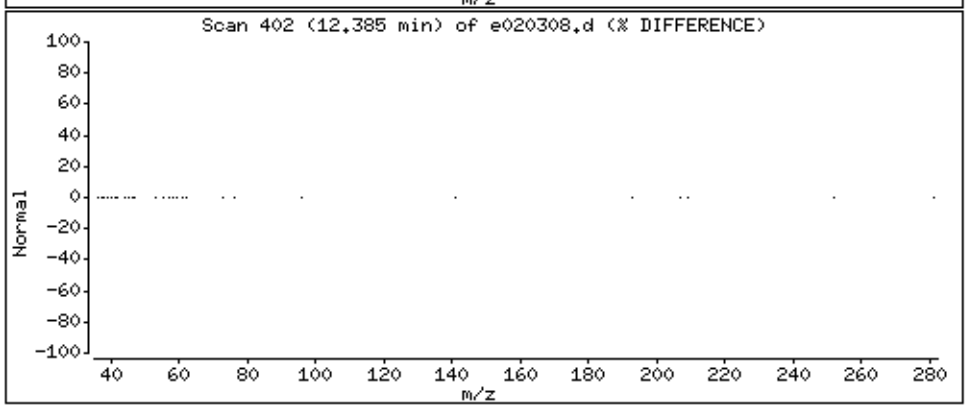
52 Acetone

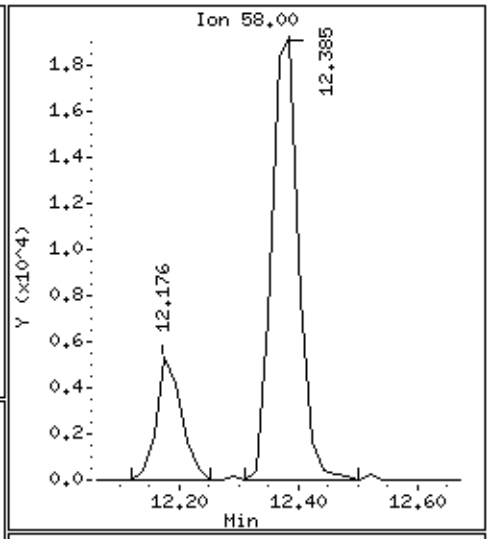
Concentration: 6.208 PPBV

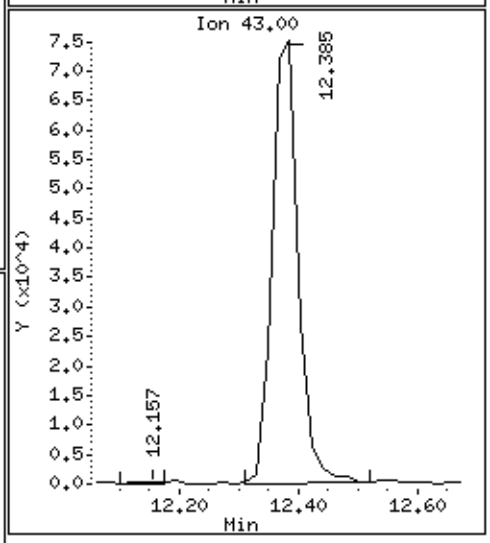












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

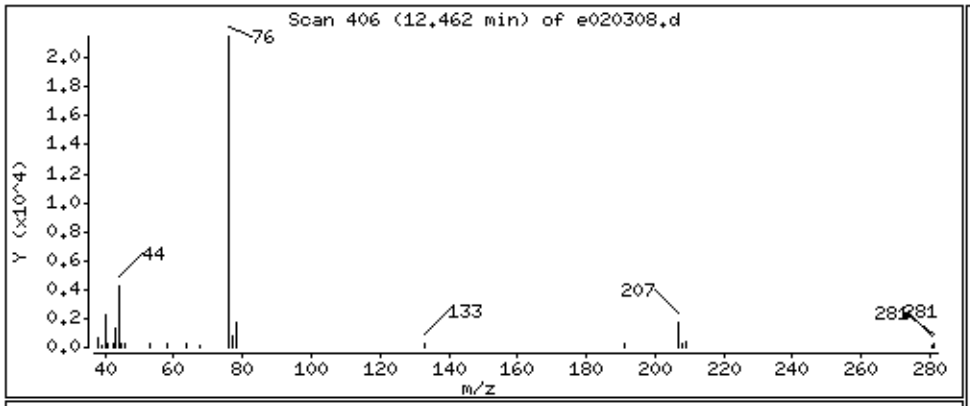
Operator: ef

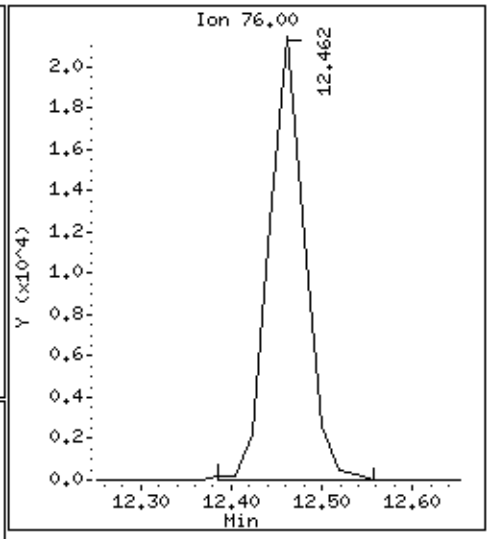
Column phase: RTX-624

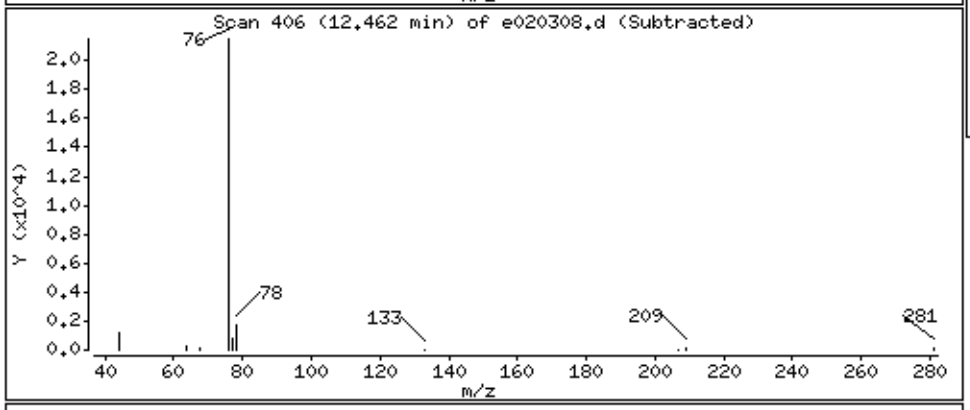
Column diameter: 0.32

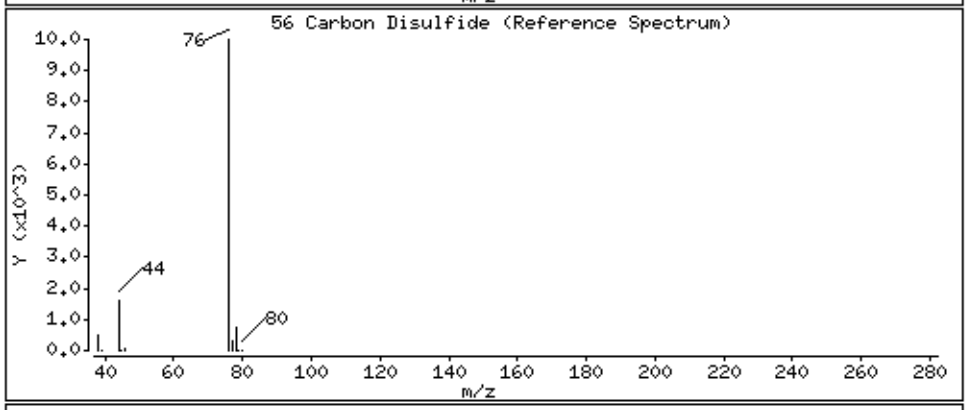
56 Carbon Disulfide

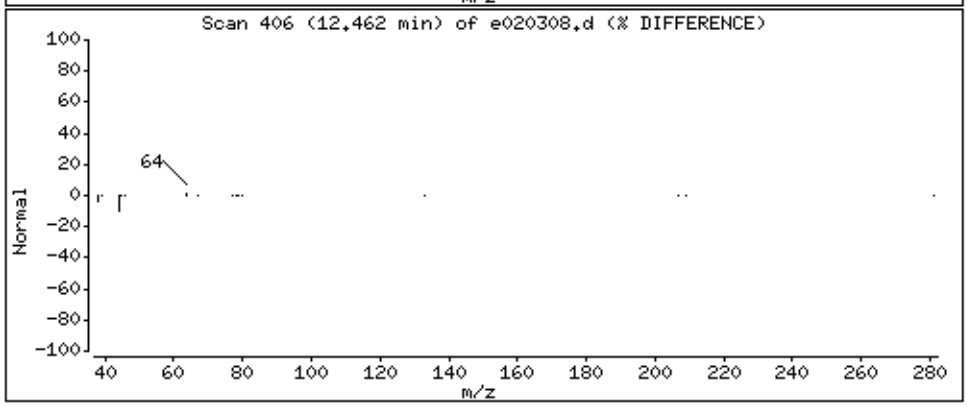
Concentration: 0.8338 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

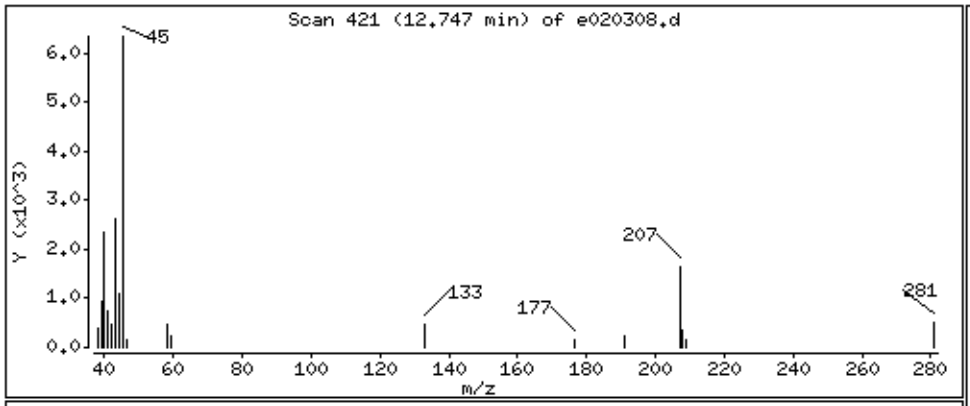
Operator: ef

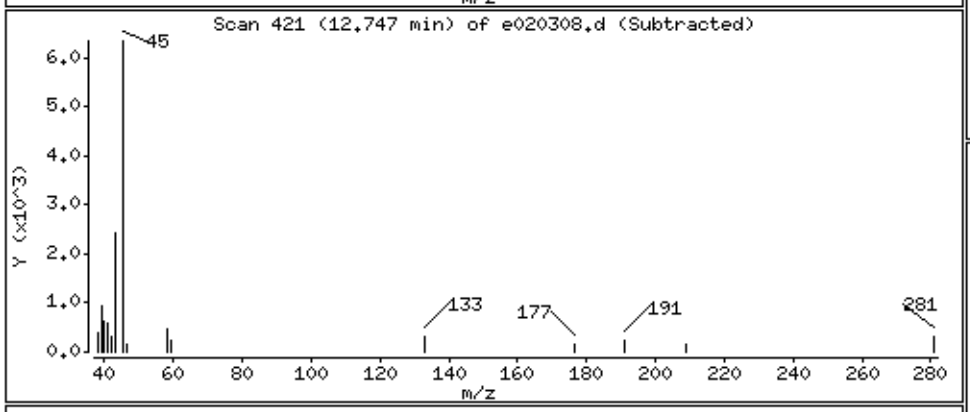
Column phase: RTX-624

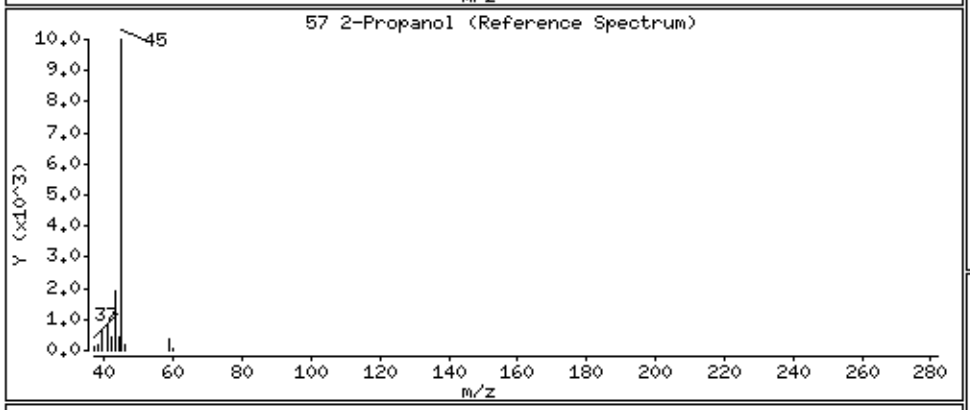
Column diameter: 0.32

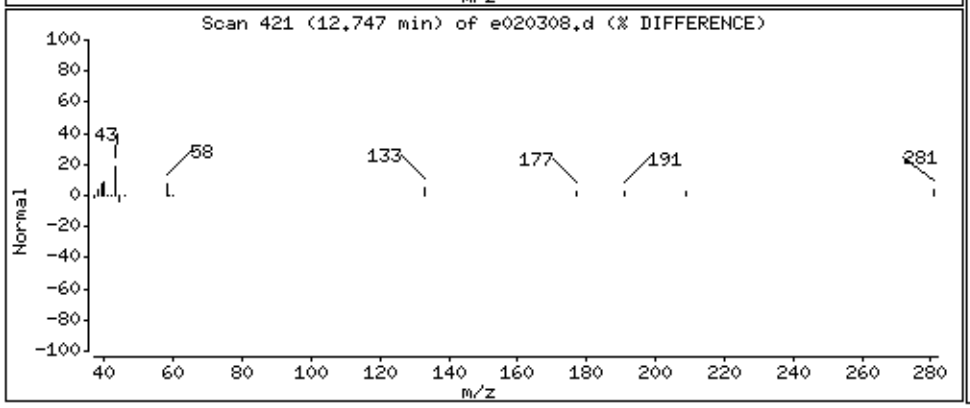
57 2-Propanol

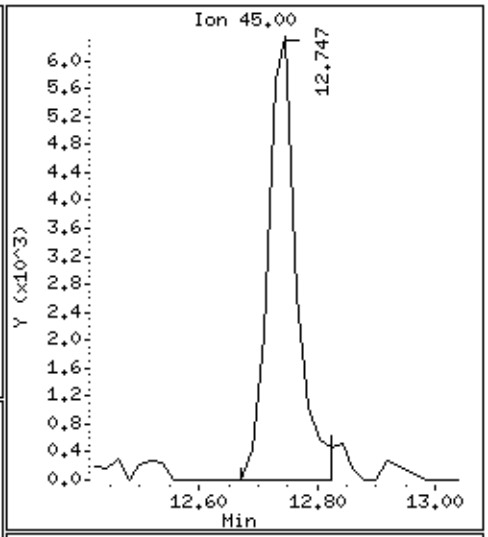
Concentration: 0.6683 PPBV

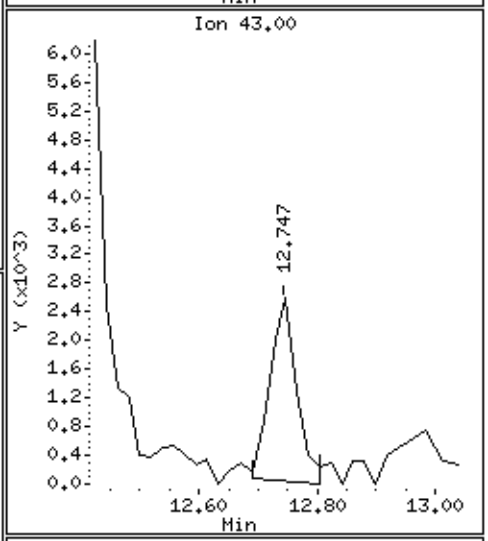


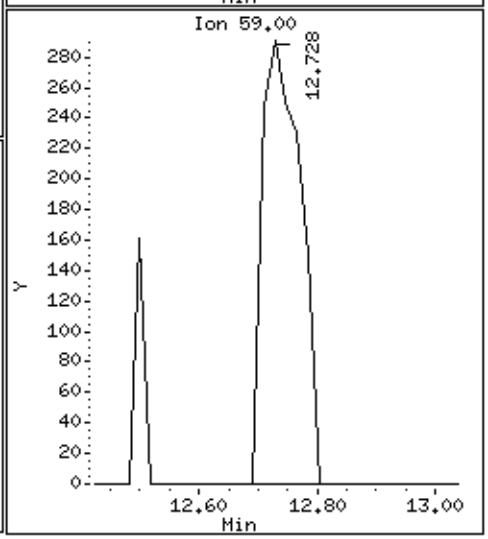












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

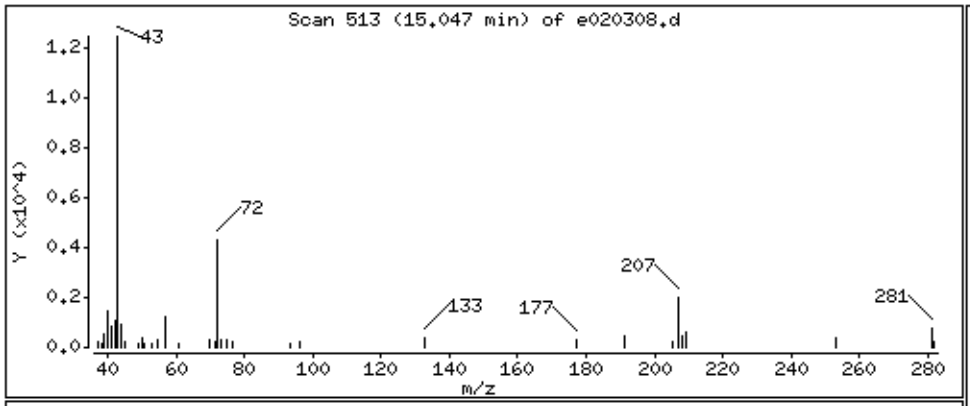
Operator: ef

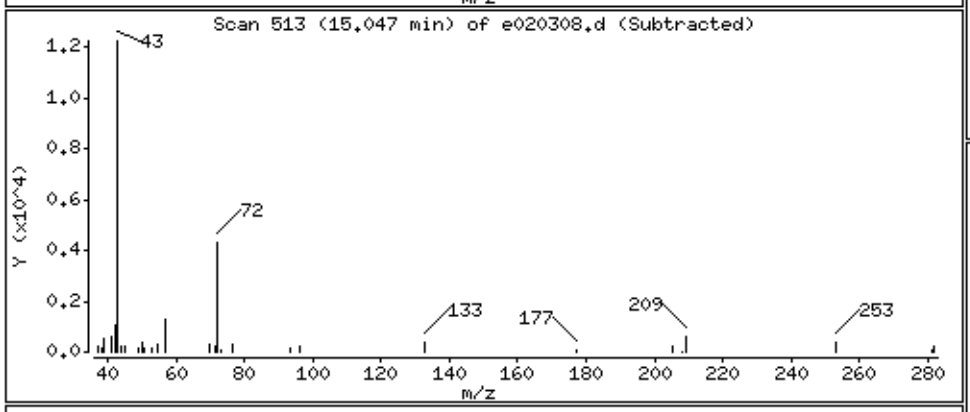
Column phase: RTX-624

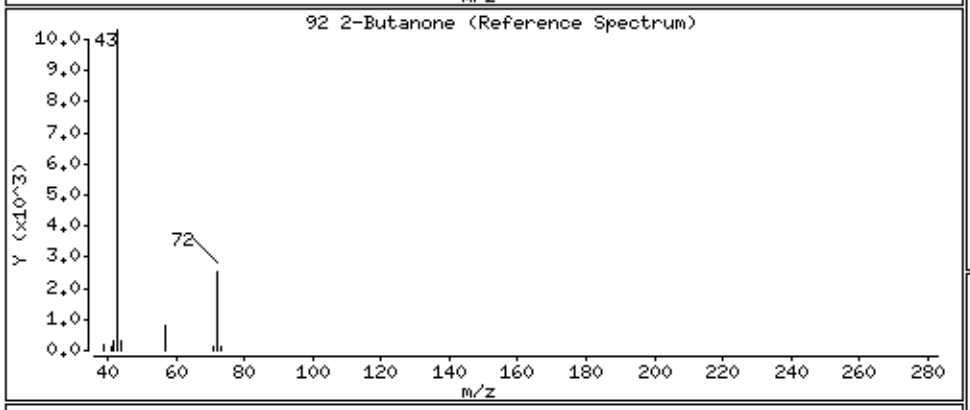
Column diameter: 0.32

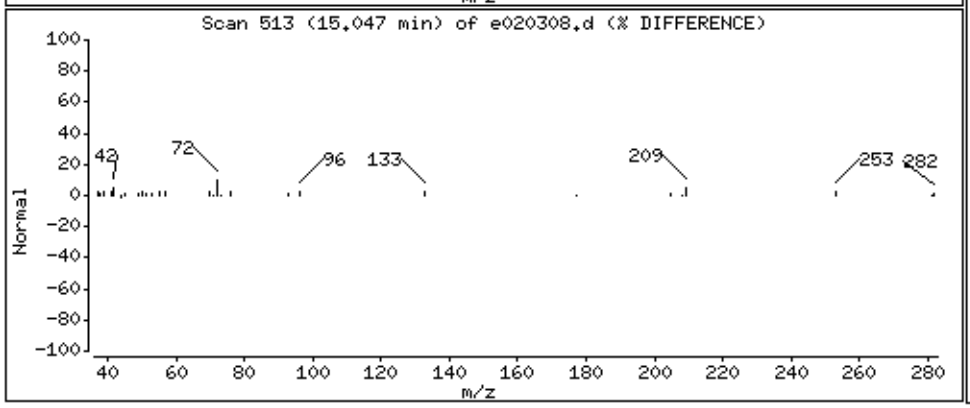
92 2-Butanone

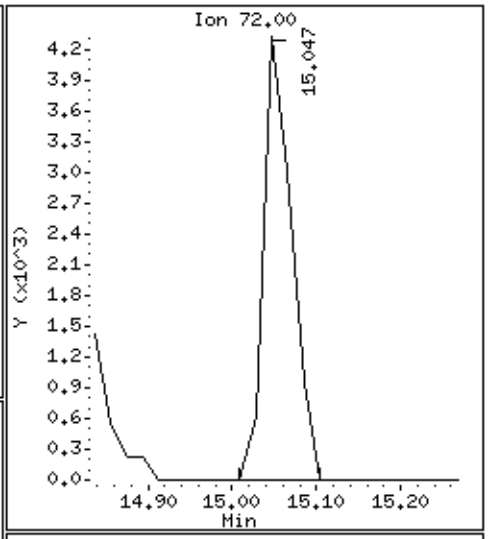
Concentration: 0.9188 PPBV

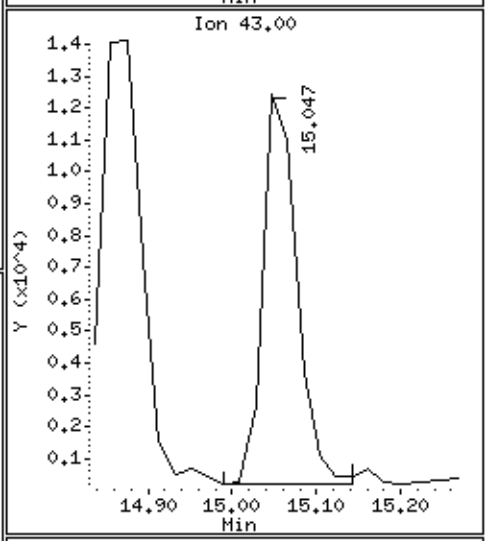


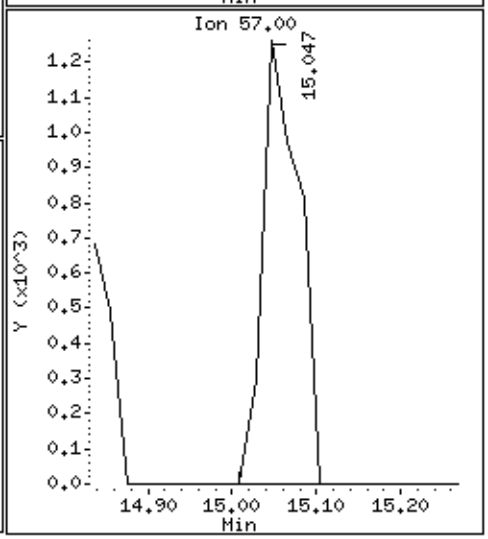












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

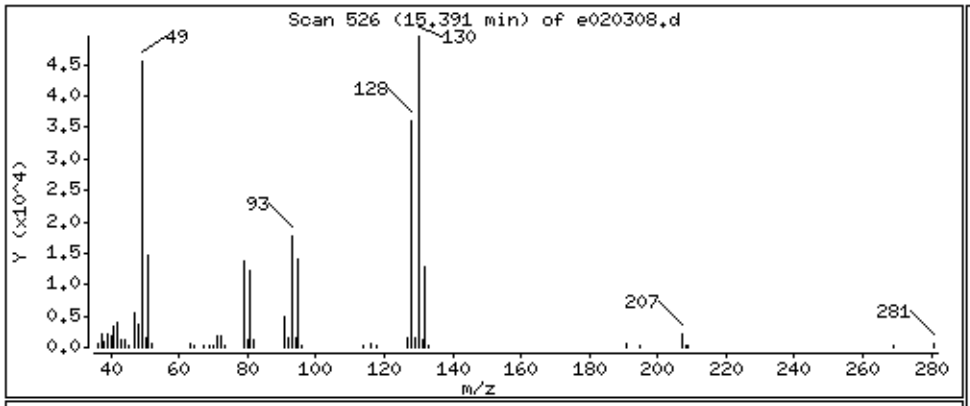
Operator: ef

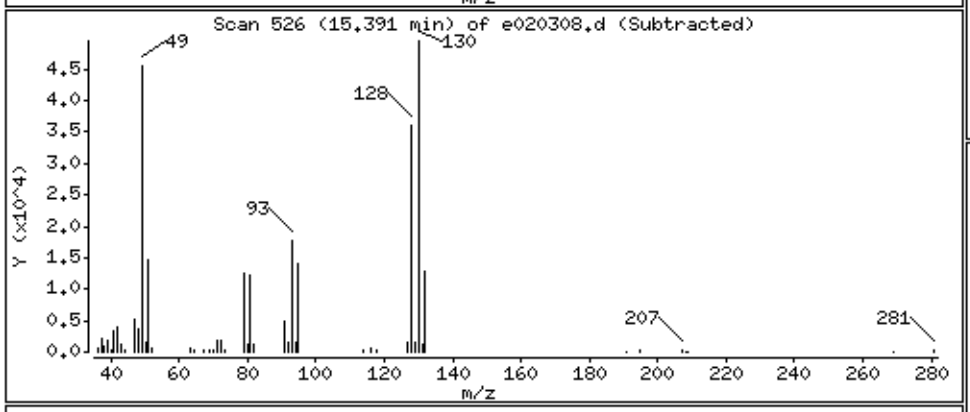
Column phase: RTX-624

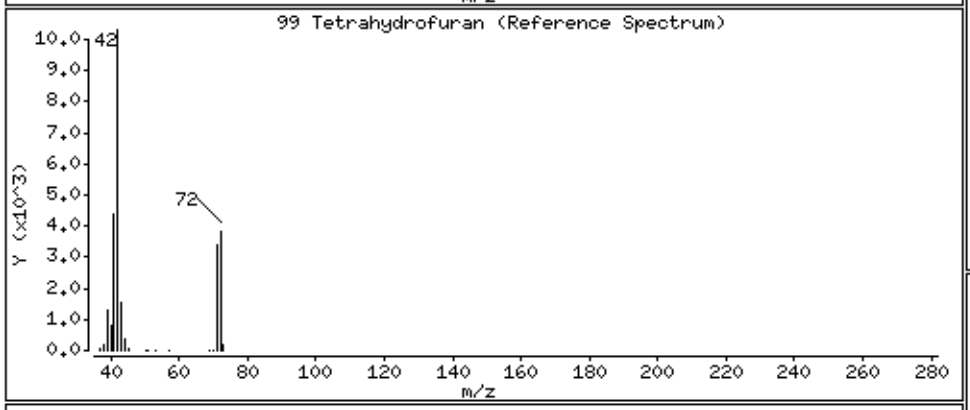
Column diameter: 0.32

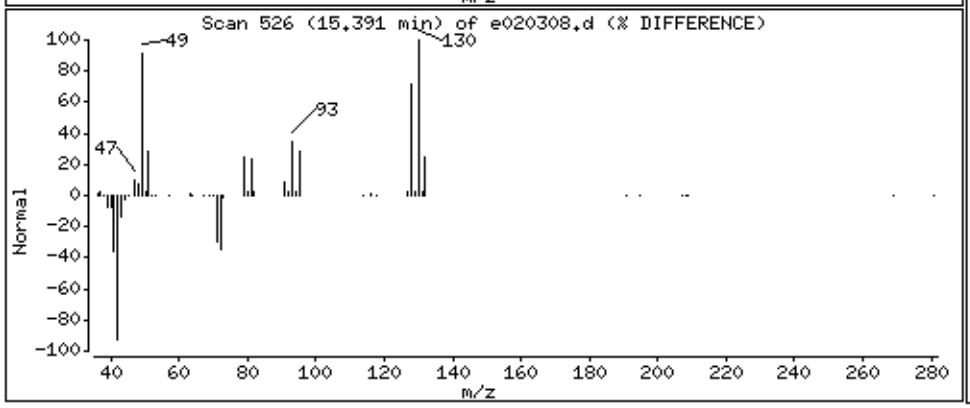
99 Tetrahydrofuran

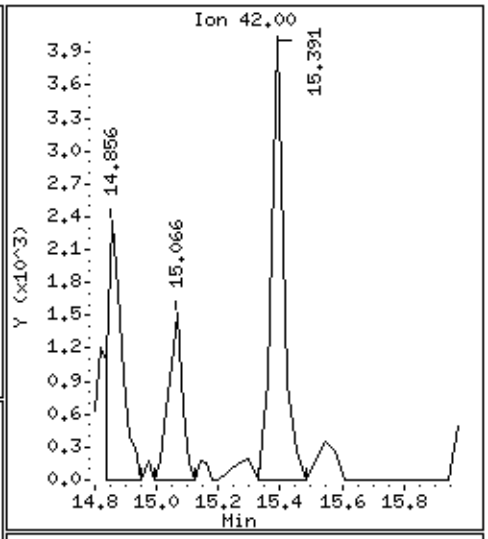
Concentration: 0.5611 PPBV

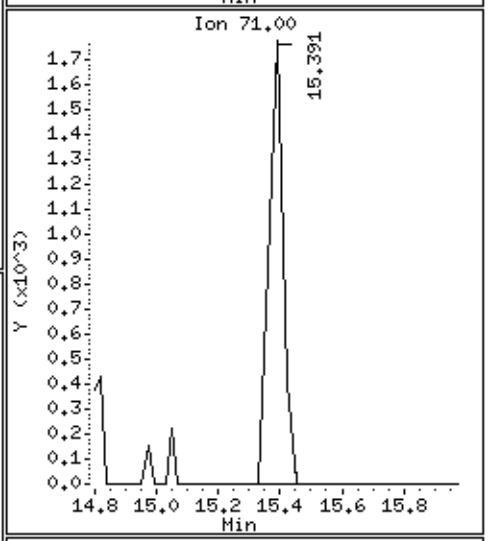


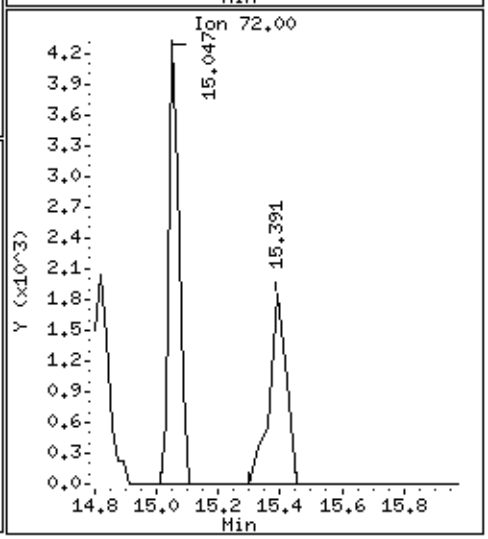












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

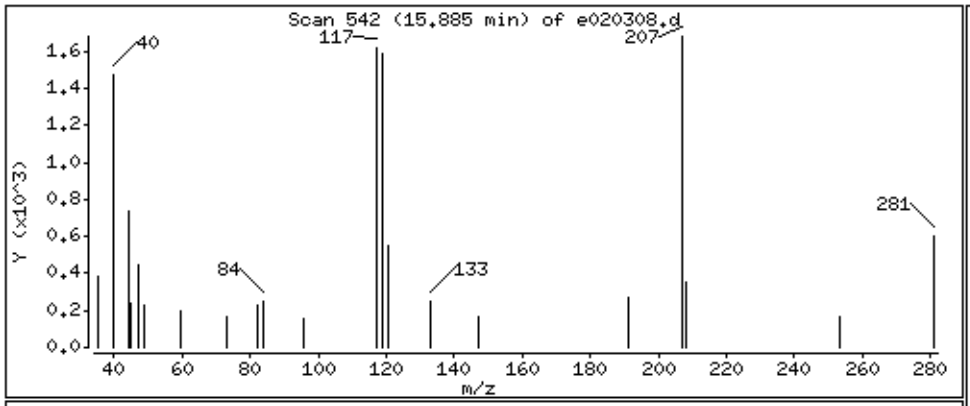
Operator: ef

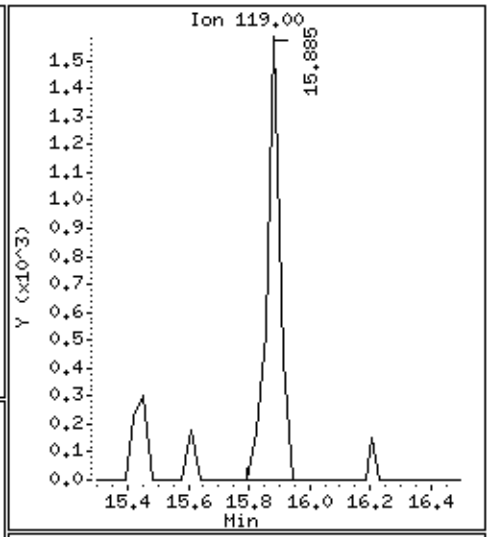
Column phase: RTX-624

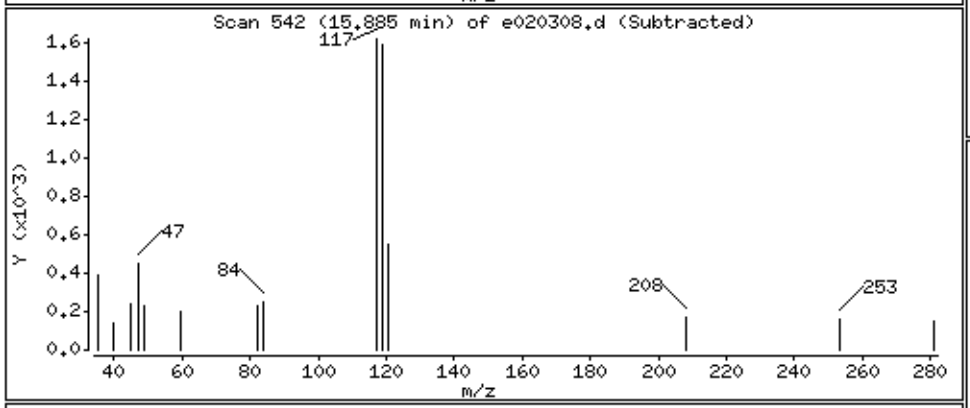
Column diameter: 0.32

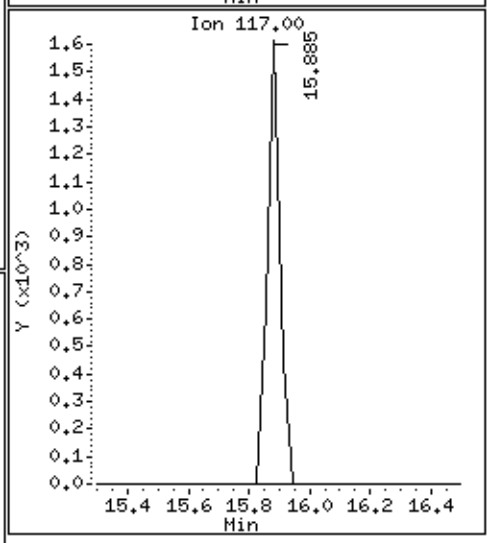
106 Carbon Tetrachloride

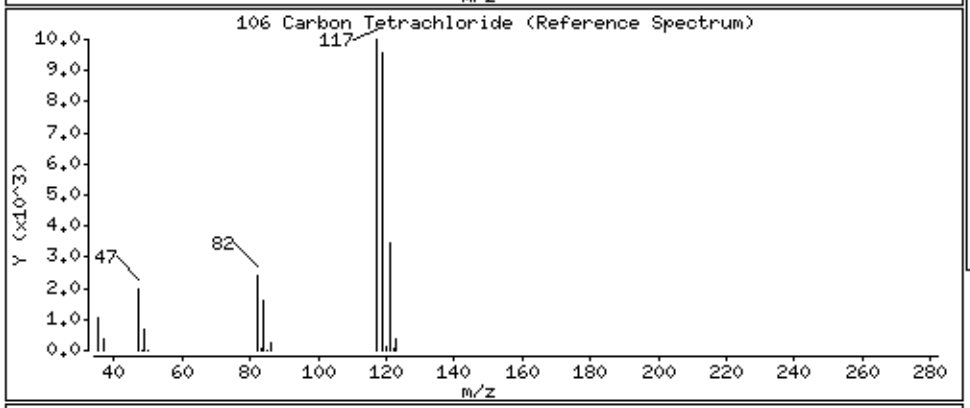
Concentration: 0.06721 PPBV

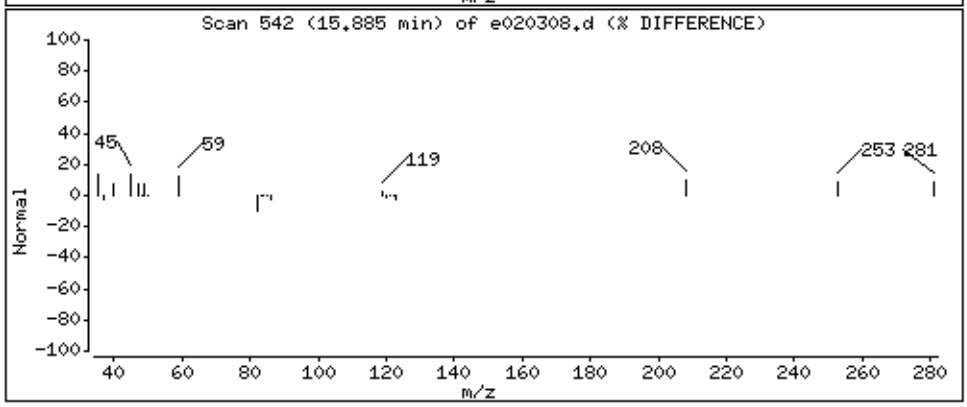












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

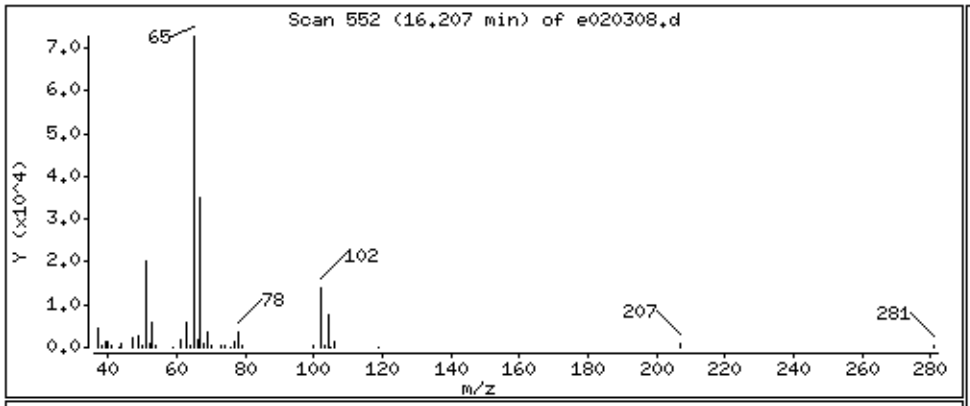
Operator: ef

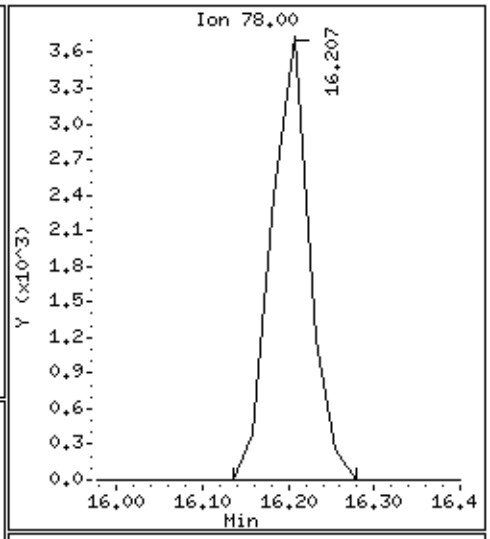
Column phase: RTX-624

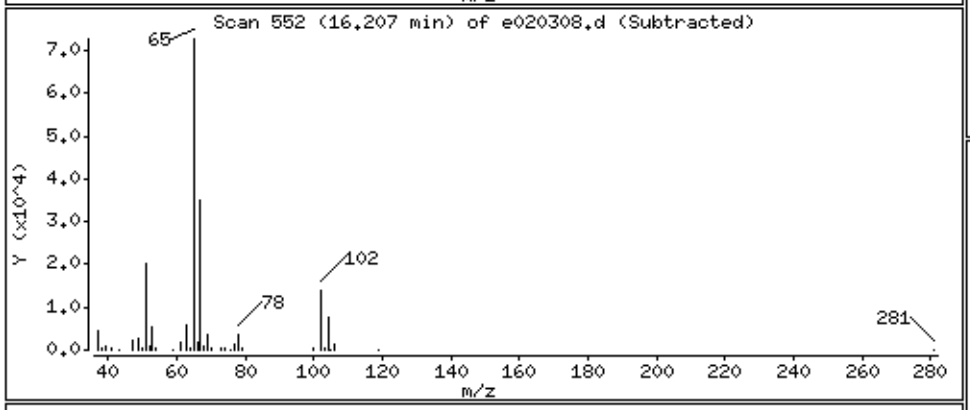
Column diameter: 0.32

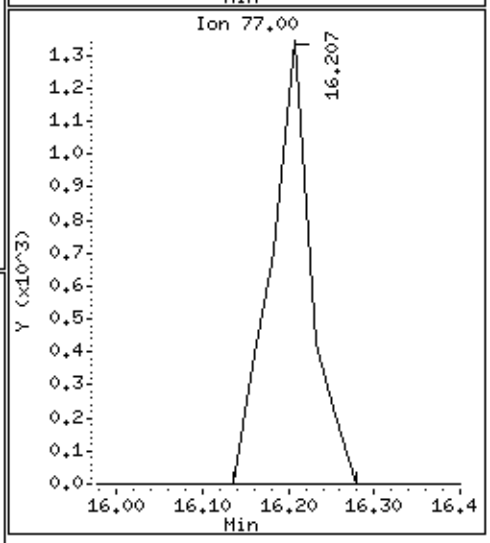
116 Benzene

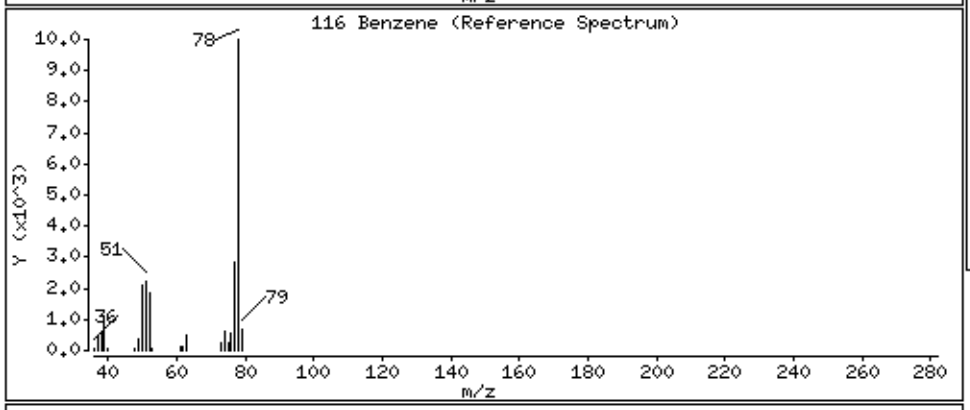
Concentration: 0.1607 PPBV

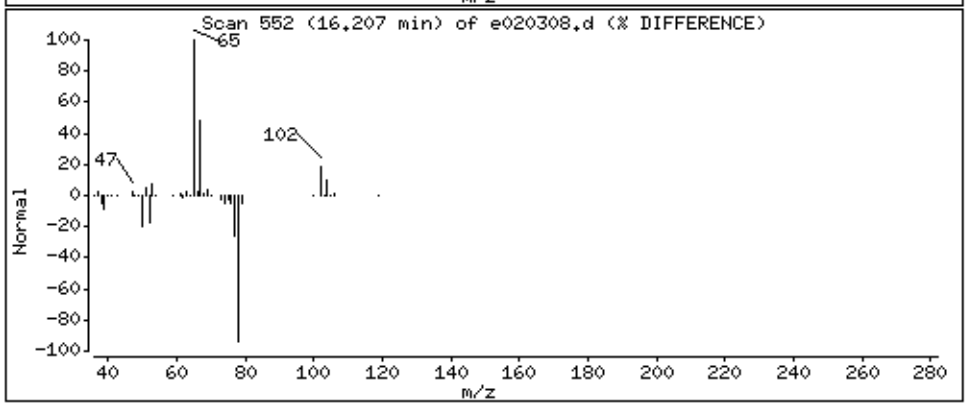












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

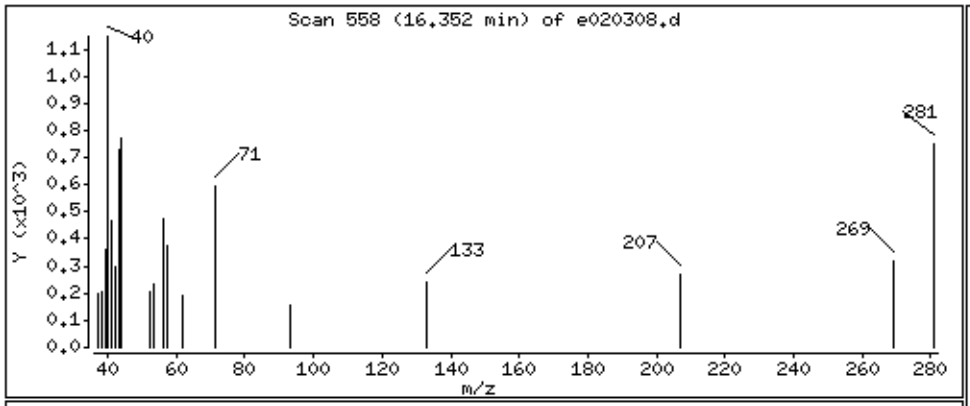
Operator: ef

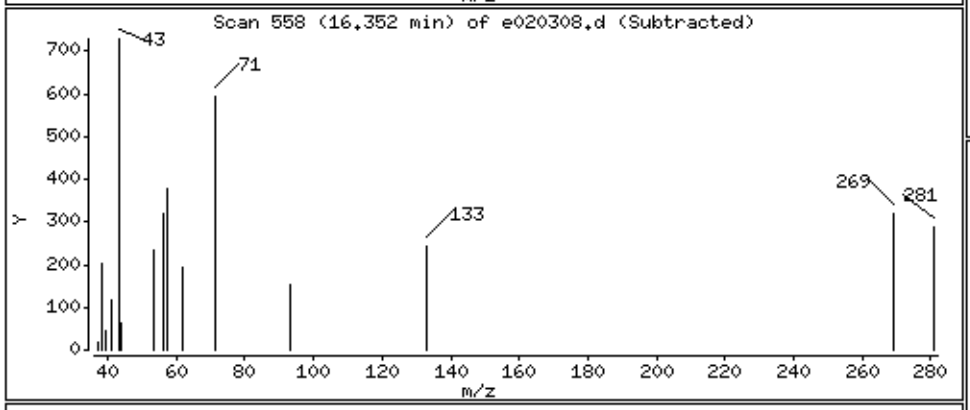
Column phase: RTX-624

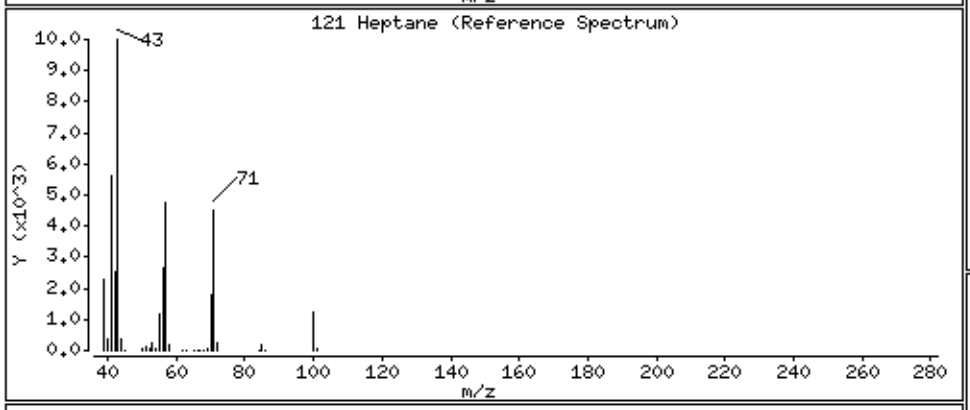
Column diameter: 0.32

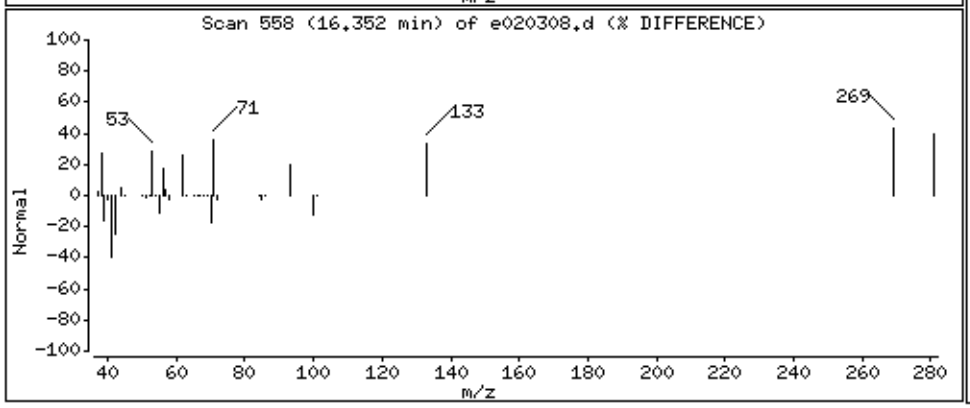
121 Heptane

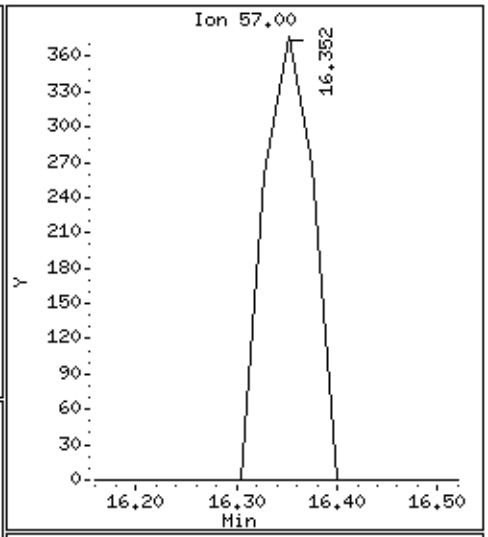
Concentration: 0.07203 PPBV

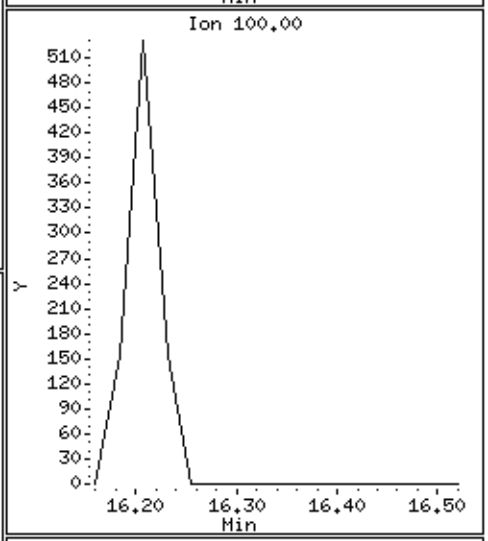


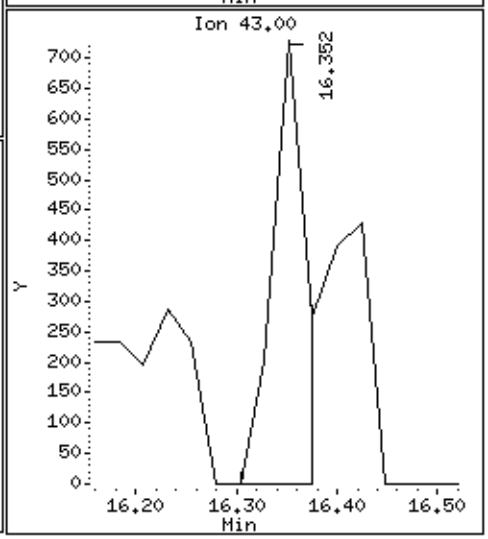












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

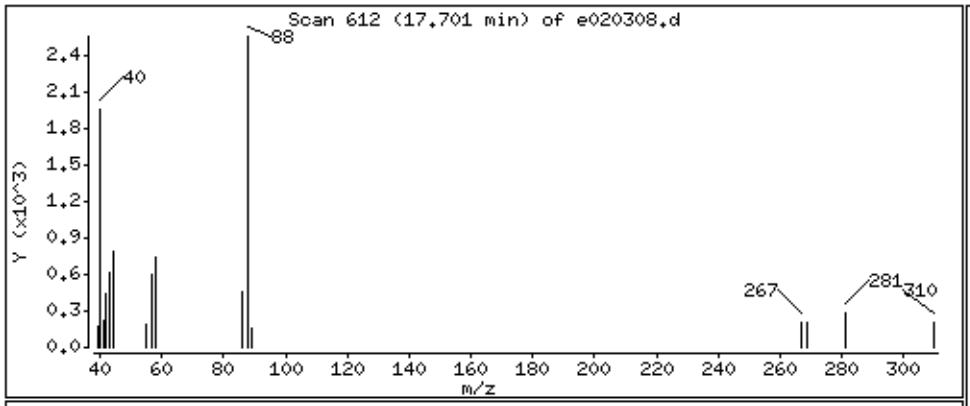
Operator: ef

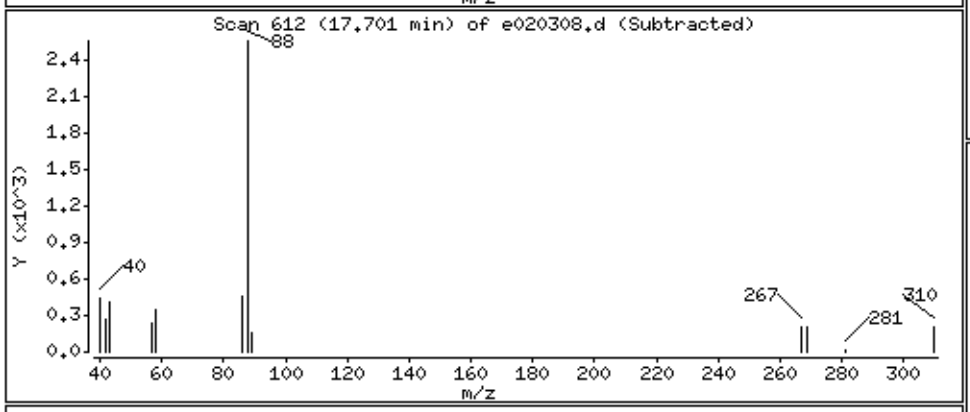
Column phase: RTX-624

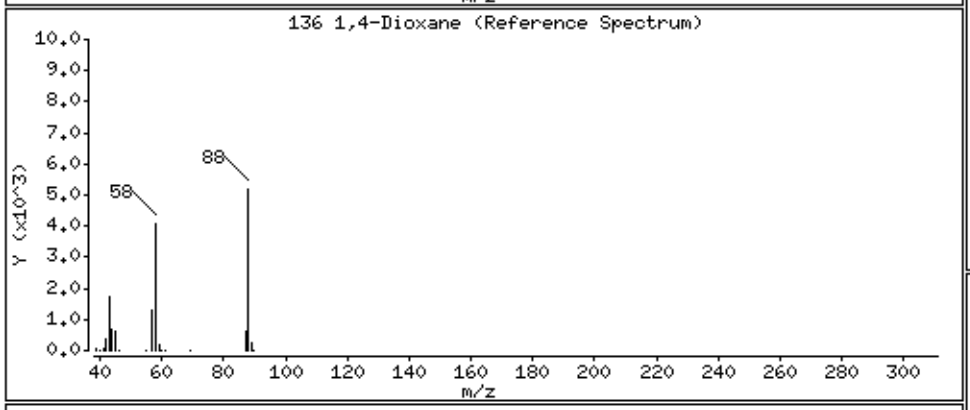
Column diameter: 0.32

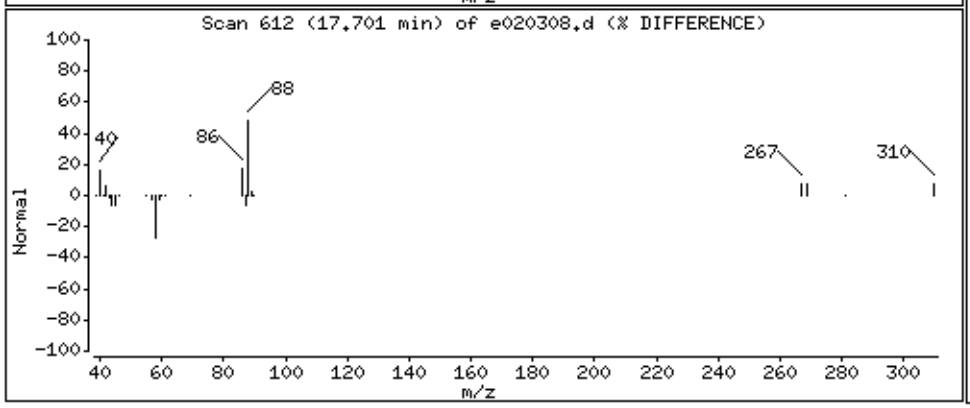
136 1,4-Dioxane

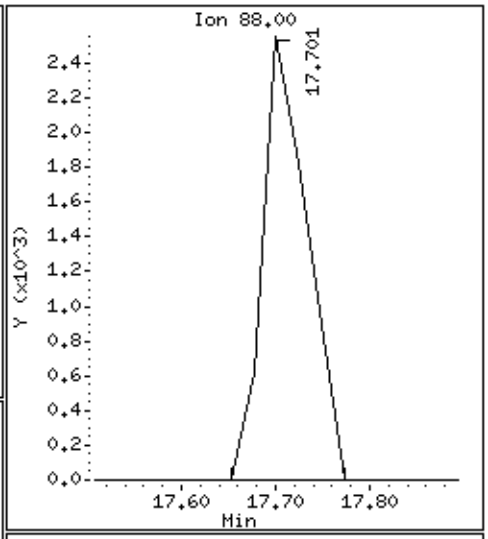
Concentration: 0.4917 PPBV

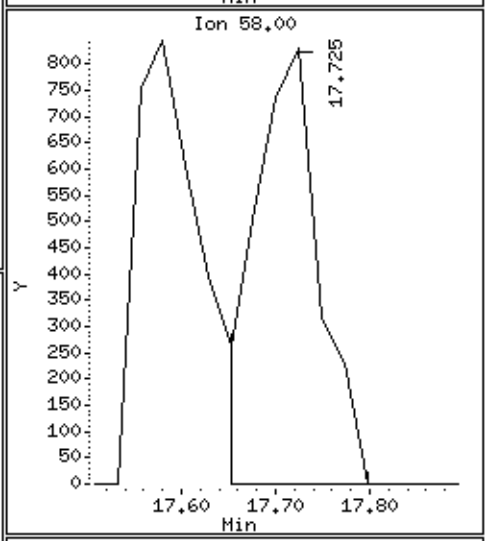


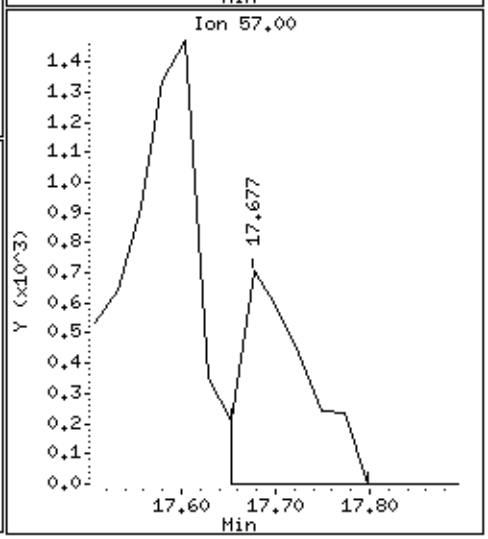












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

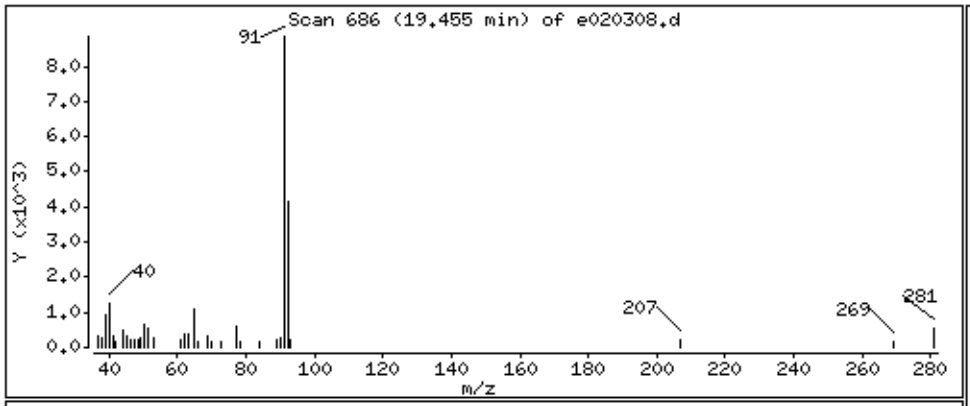
Operator: ef

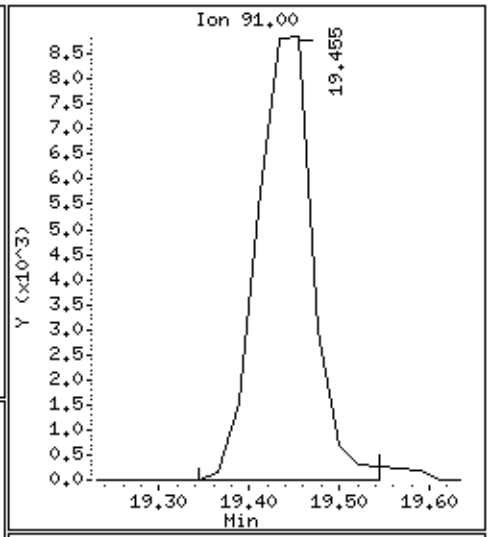
Column phase: RTX-624

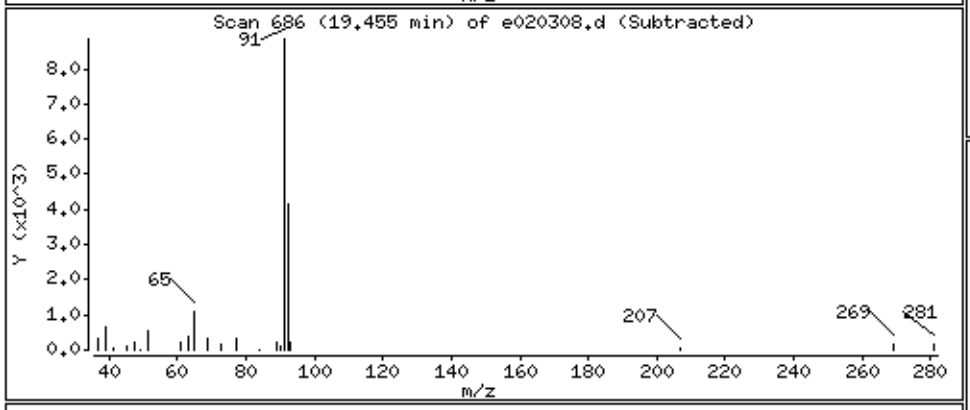
Column diameter: 0.32

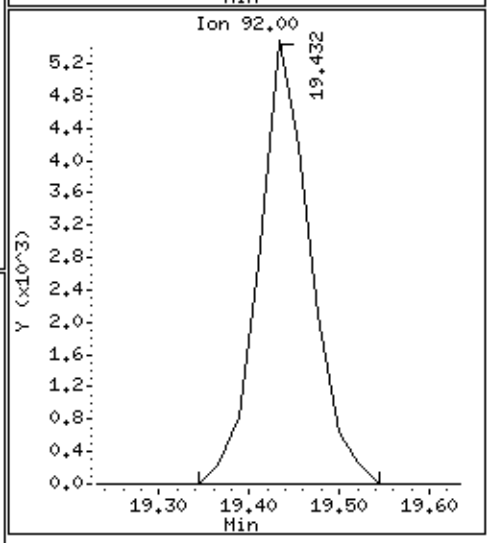
147 Toluene

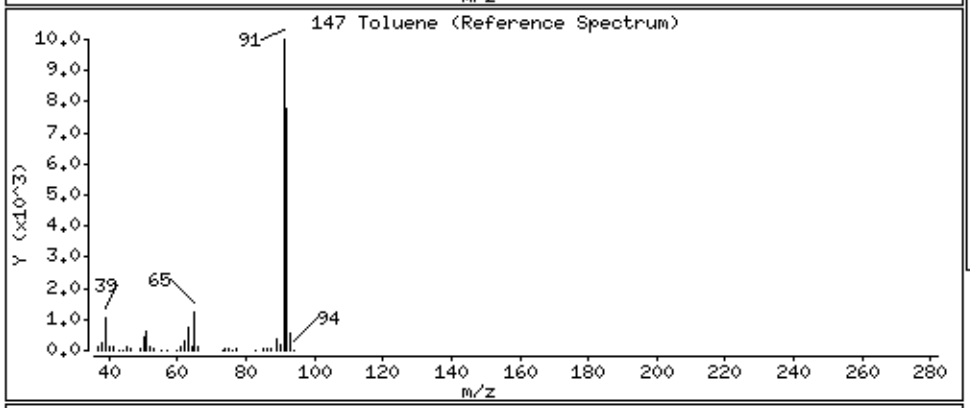
Concentration: 0.4507 PPBV

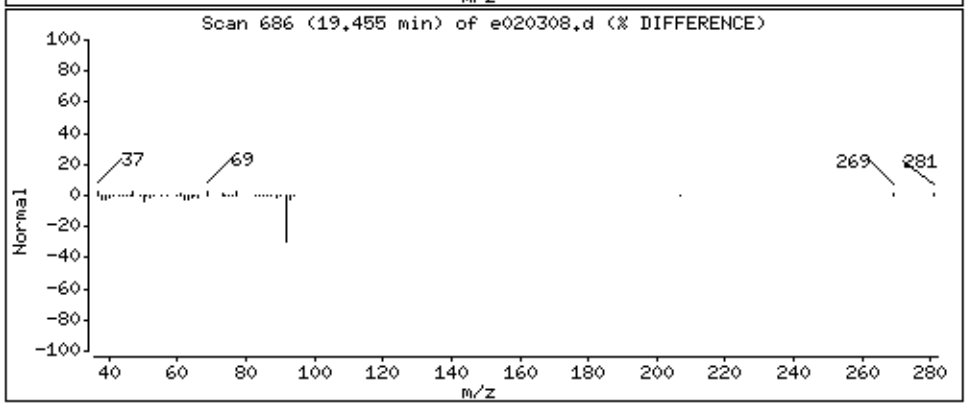












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

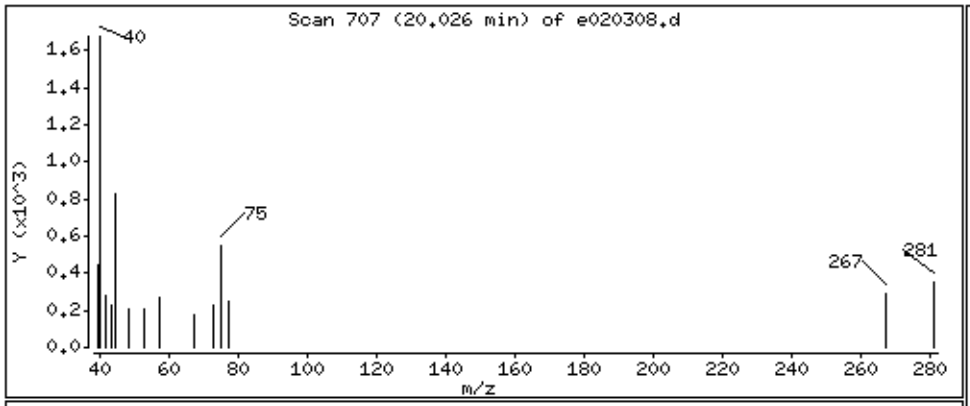
Operator: ef

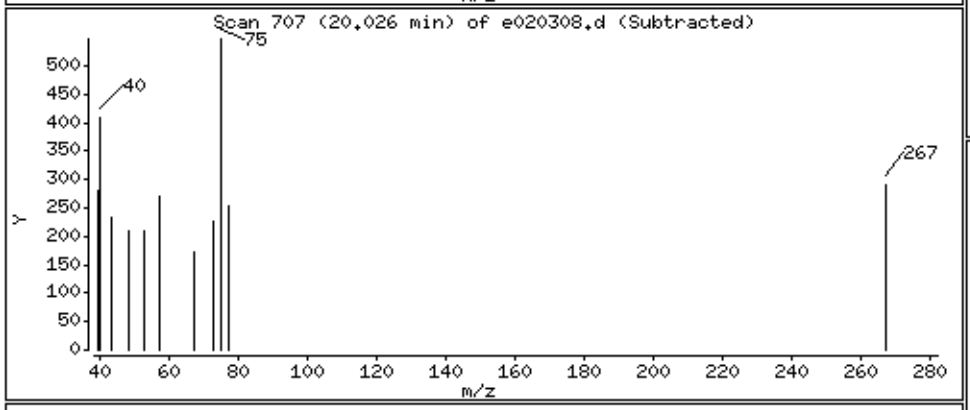
Column phase: RTX-624

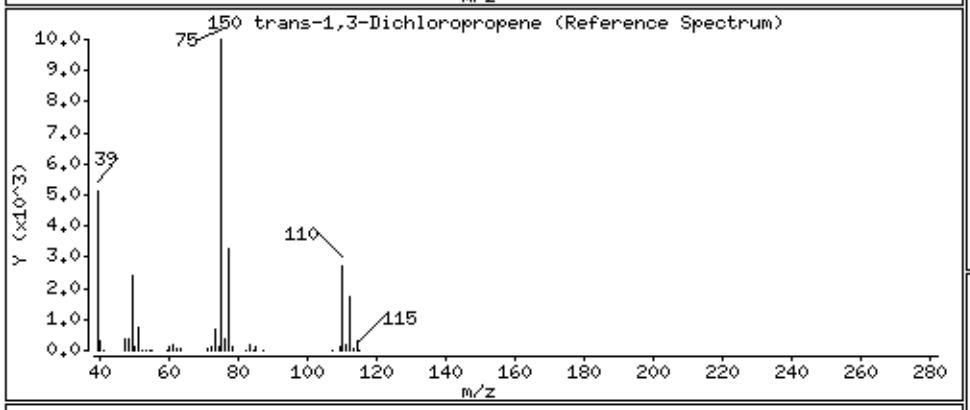
Column diameter: 0.32

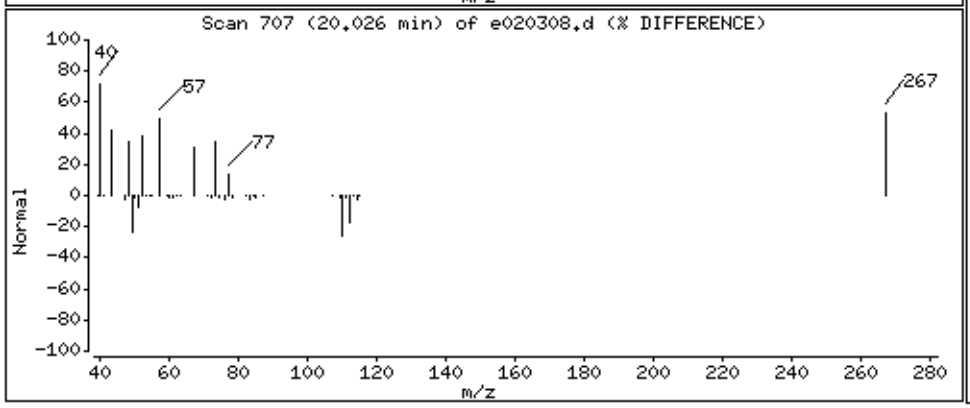
150 trans-1,3-Dichloropropene

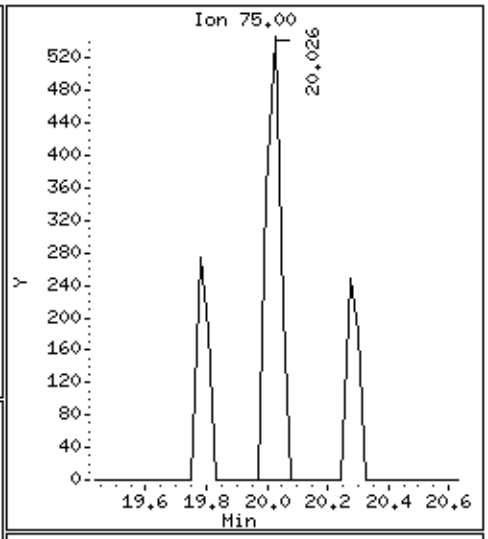
Concentration: 0.04232 PPBV

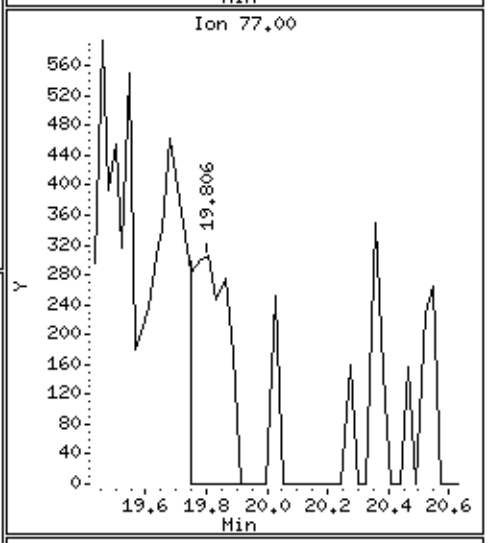


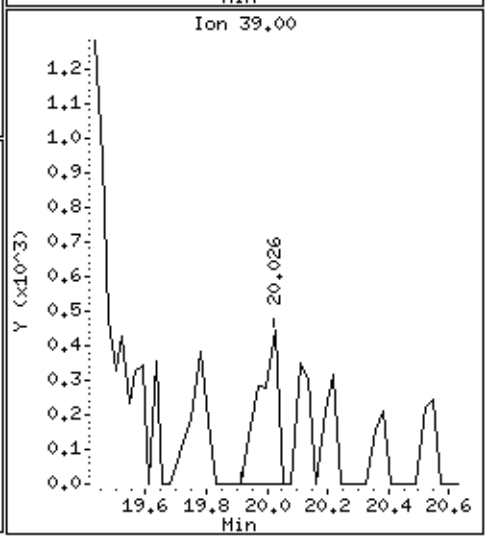












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

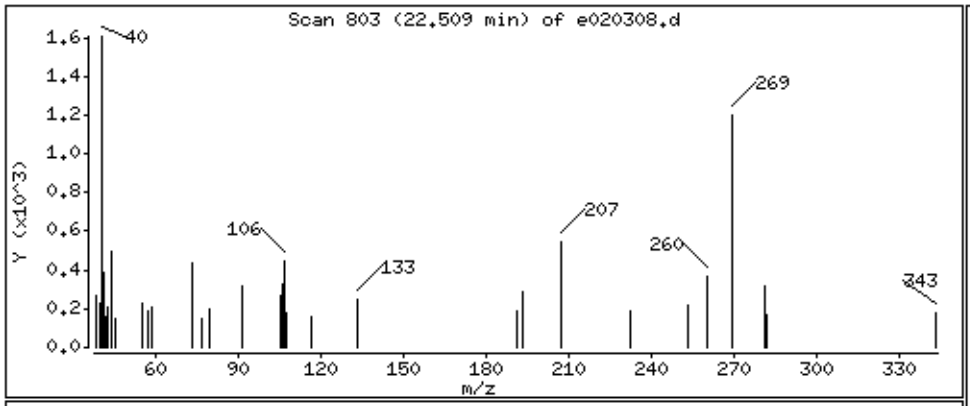
Operator: ef

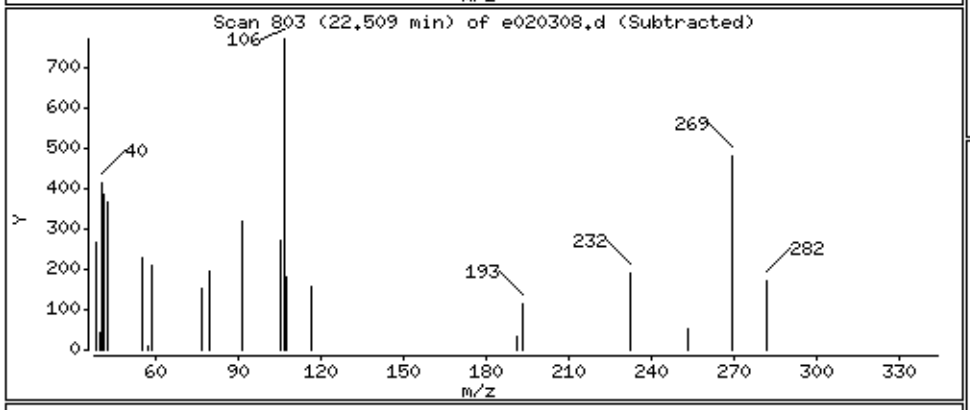
Column phase: RTX-624

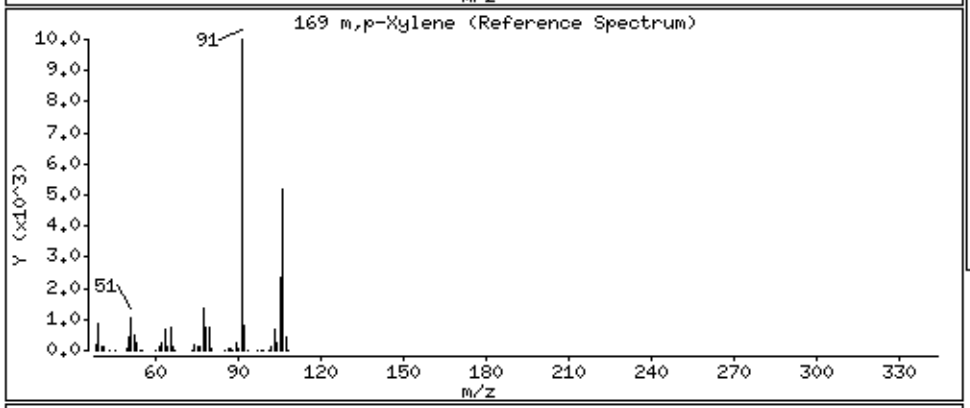
Column diameter: 0.32

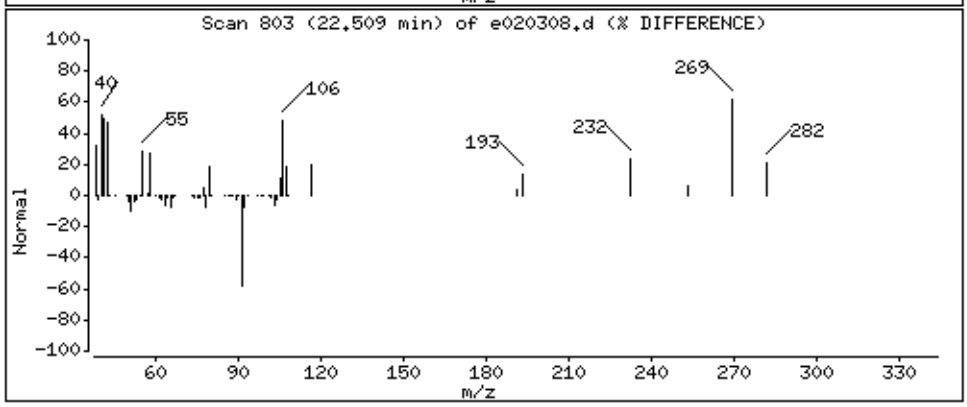
169 m,p-Xylene

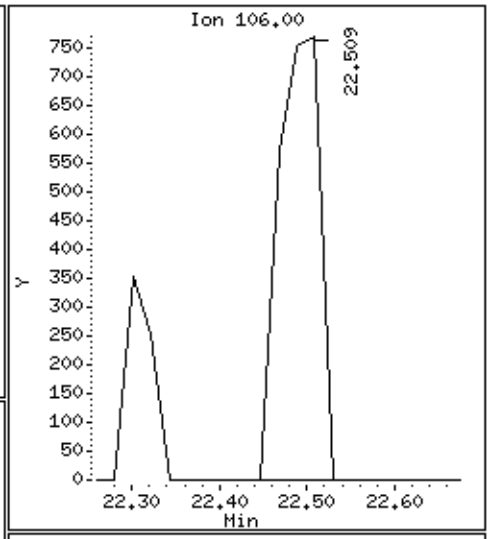
Concentration: 0.05712 PPBV

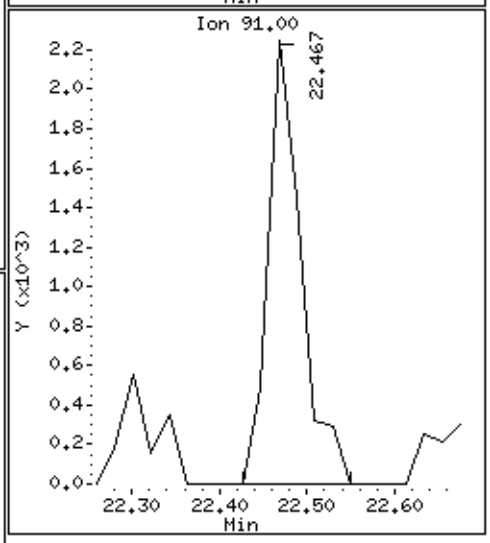












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

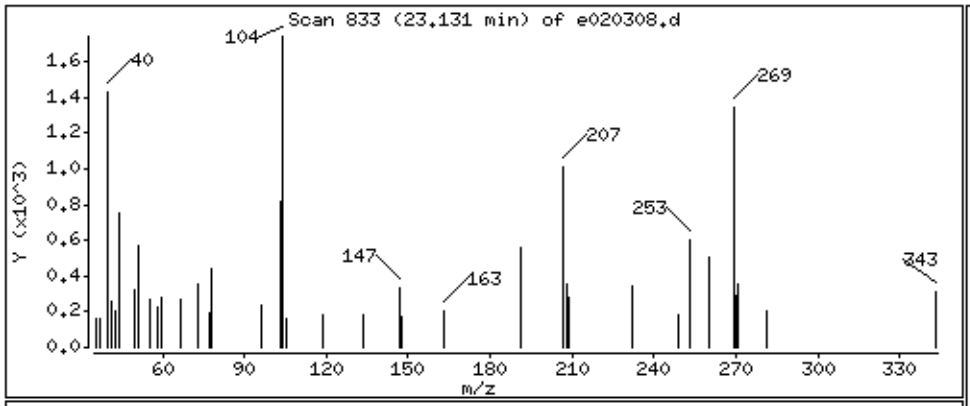
Operator: ef

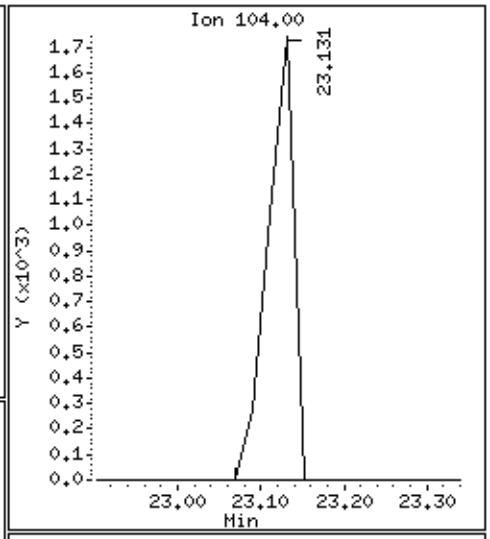
Column phase: RTX-624

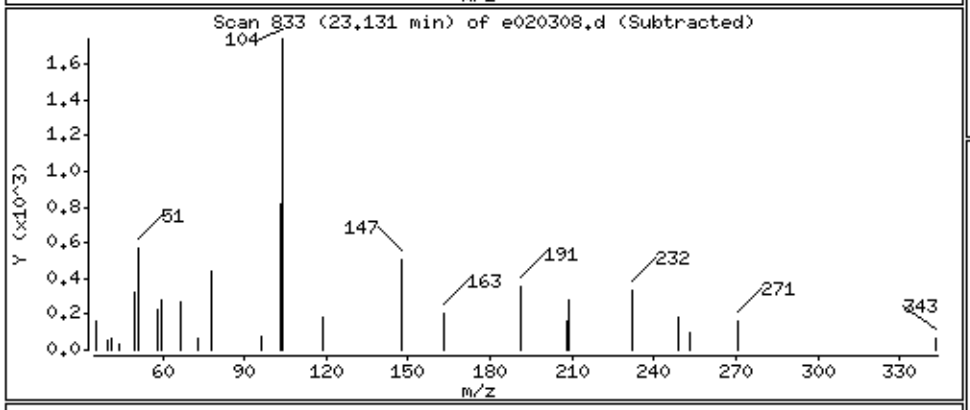
Column diameter: 0.32

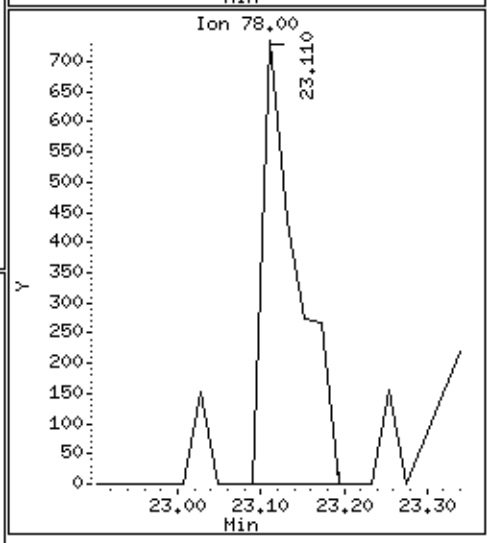
172 Styrene

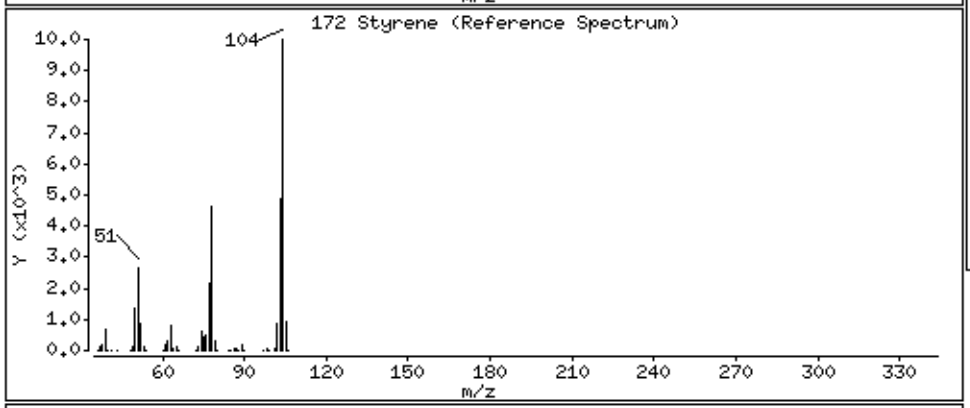
Concentration: 0.05383 PPBV

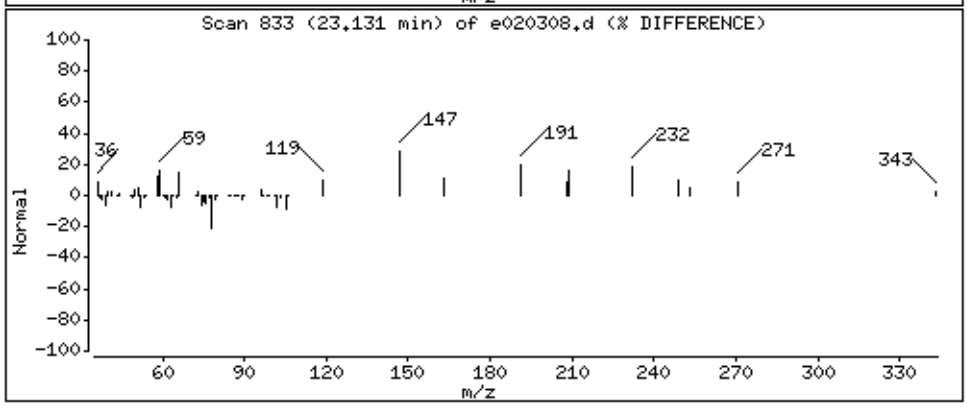












Data File: /chem/msde.i/03Feb2017.b/e020308.d

Date : 03-FEB-2017 12:37

Client ID:

Instrument: msde.i

Sample Info: 250mL# 6L0046

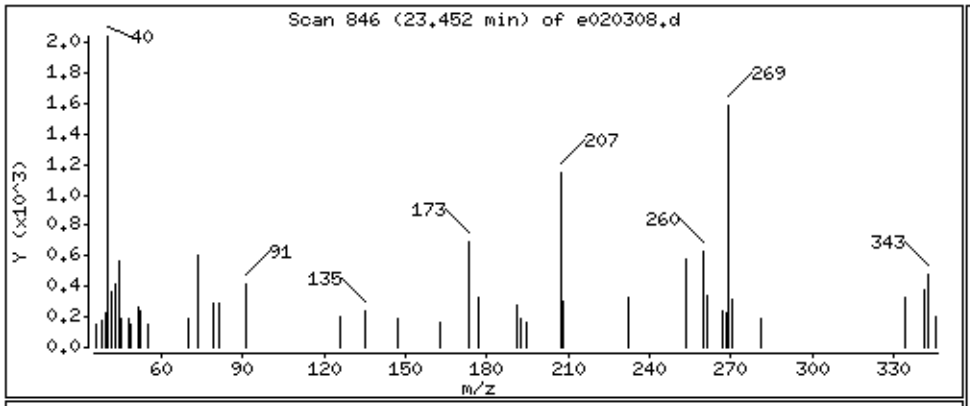
Operator: ef

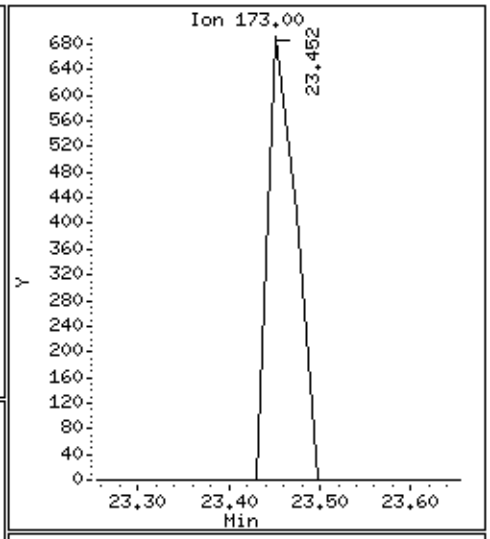
Column phase: RTX-624

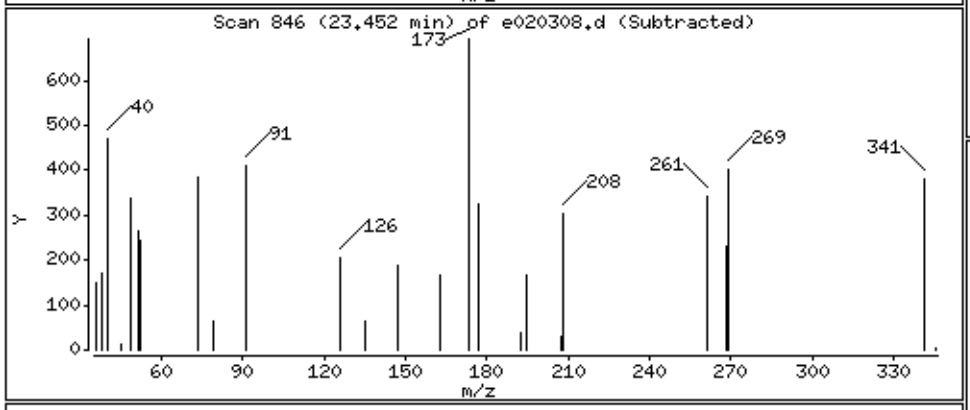
Column diameter: 0.32

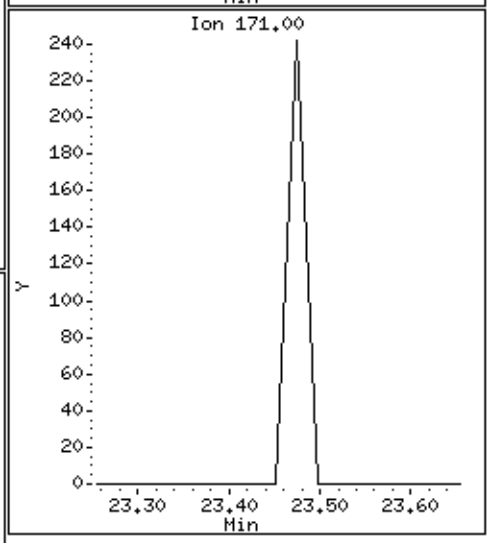
174 Bromoform

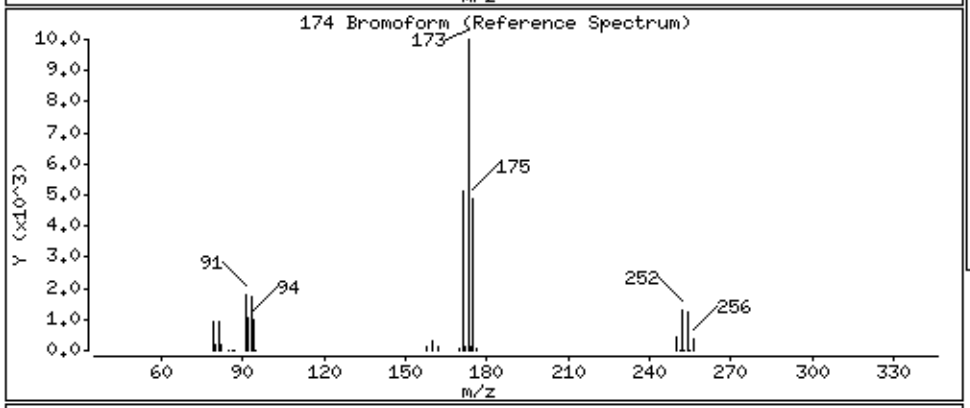
Concentration: 0.01809 PPBV

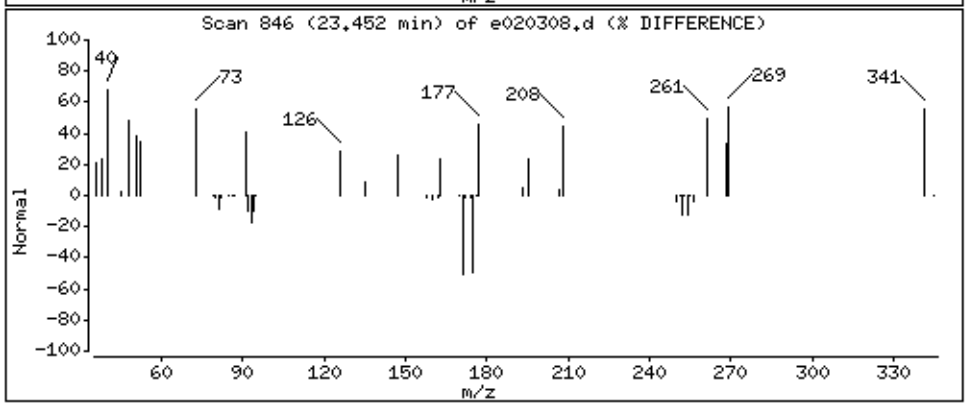












eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B13IA-2DUP-012817

Lab ID#: 1701477B-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.77	2.1
Chloromethane	0.78	0.64 J	1.6	1.3 J
Bromomethane	0.78	0.11 J	3.0	0.41 J
Freon 11	0.16	0.20	0.87	1.1
Ethanol	0.78	1.7	1.5	3.1
Freon 113	0.16	0.053 J	1.2	0.41 J
Acetone	0.78	4.8	1.8	11
2-Propanol	0.78	0.60 J	1.9	1.5 J
Carbon Disulfide	0.78	0.17 J	2.4	0.52 J
Methylene Chloride	0.31	0.051 J	1.1	0.18 J
2-Butanone (Methyl Ethyl Ketone)	0.78	1.0	2.3	3.1
Tetrahydrofuran	0.78	0.49 J	2.3	1.4 J
Carbon Tetrachloride	0.16	0.085 J	0.98	0.54 J
Benzene	0.16	0.10 J	0.50	0.32 J
4-Methyl-2-pentanone	0.16	0.054 J	0.63	0.22 J
Toluene	0.16	0.39	0.58	1.5
m,p-Xylene	0.16	0.046 J	0.67	0.20 J
o-Xylene	0.16	0.024 J	0.67	0.11 J
Styrene	0.16	0.043 J	0.66	0.18 J

eurofins | Air Toxics

Client Sample ID: B13IA-2DUP-012817

Lab ID#: 1701477B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020310**	**Date of Collection:**	**1/29/17 3:10:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**2/3/17 02:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.43	0.77	2.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	0.64 J	1.6	1.3 J
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.34	Not Detected
Bromomethane	0.78	0.11 J	3.0	0.41 J
Chloroethane	0.78	Not Detected	2.0	Not Detected
Freon 11	0.16	0.20	0.87	1.1
Ethanol	0.78	1.7	1.5	3.1
Freon 113	0.16	0.053 J	1.2	0.41 J
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Acetone	0.78	4.8	1.8	11
2-Propanol	0.78	0.60 J	1.9	1.5 J
Carbon Disulfide	0.78	0.17 J	2.4	0.52 J
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	0.051 J	1.1	0.18 J
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Hexane	0.16	Not Detected	0.55	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	1.0	2.3	3.1
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.78	0.49 J	2.3	1.4 J
Chloroform	0.16	Not Detected	0.76	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Cyclohexane	0.16	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.16	0.085 J	0.98	0.54 J
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Benzene	0.16	0.10 J	0.50	0.32 J
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.16	0.054 J	0.63	0.22 J
Toluene	0.16	0.39	0.58	1.5
trans-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected

eurofins | Air Toxics

Client Sample ID: B13IA-2DUP-012817

Lab ID#: 1701477B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020310**	**Date of Collection:**	**1/29/17 3:10:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**2/3/17 02:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	Not Detected	0.67	Not Detected
m,p-Xylene	0.16	0.046 J	0.67	0.20 J
o-Xylene	0.16	0.024 J	0.67	0.11 J
Styrene	0.16	0.043 J	0.66	0.18 J
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.76	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.3	Not Detected
Naphthalene	0.78	Not Detected	4.1	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020310.d
Lab Smp Id: 1701477B-13A
Inj Date : 03-FEB-2017 14:02
Operator : ef Inst ID: msde.i
Smp Info : 250mL# O0401
Misc Info : 4.0"Hg -> 5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.55000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	36927	0.27735	0.4299	80.00- 120.00	100.00
5.220	5.220 (0.339)	87	10343			1.91- 61.91	28.01
17 Chloromethane					CAS #: 74-87-3		
6.956	6.932 (0.452)	50	10343	0.41654	0.6456	80.00- 120.00	100.00(a)
6.932	6.932 (0.450)	52	1311			3.31- 63.31	12.68
29 Bromomethane					CAS #: 74-83-9		
9.586	9.510 (0.623)	94	2509	0.06875	0.1066	80.00- 120.00	100.00(a)
9.586	9.510 (0.623)	96	1671			64.26- 124.26	66.59
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	19558	0.12592	0.1952	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	13167			33.74- 93.74	67.32
42 Ethanol					CAS #: 64-17-5		
11.680	11.661 (0.759)	45	14598	1.07829	1.671	80.00- 120.00	100.00
11.680	11.661 (0.759)	46	5249			9.60- 69.60	35.96
11.680	11.661 (0.759)	43	5873			0.00- 59.21	40.23

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113                                     CAS #: 76-13-1
 12.099  12.080 (0.786)   151      3554 0.03427  0.05312  80.00- 120.00   100.00(a)
 12.099  12.080 (0.786)   153      3686                   34.83-  94.83   103.70
 12.080  12.080 (0.785)   101      4561                   77.16- 137.16   128.31
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 12.366  12.366 (0.803)    58     52990 3.11311    4.825  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    196390                  344.13- 404.13   370.61
-------------------------------------------------------------------------------
   56 Carbon Disulfide                              CAS #: 75-15-0
 12.461  12.461 (0.810)    76     12806 0.10876   0.1686  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 12.728  12.728 (0.827)    45     21387 0.39028   0.6049  80.00- 120.00   100.00(a)
 12.728  12.728 (0.827)    43      8206                    0.00-  55.65    38.37
 12.709  12.728 (0.826)    59       891                    0.00-  34.42     4.17
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 13.176  13.176 (0.856)    84      1377 0.03306  0.05124  80.00- 120.00   100.00(a)
 13.176  13.176 (0.856)    49      2419                   83.76- 143.76   175.71
 13.176  13.176 (0.856)    51      1039                    2.61-  62.61    75.47
-------------------------------------------------------------------------------
   92 2-Butanone                                    CAS #: 78-93-3
 15.066  15.047 (0.979)    72     12477 0.67597    1.048  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     44268                  325.72- 385.72   354.78
 15.066  15.047 (0.979)    57      3818                    1.13-  61.13    30.60
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 15.391  15.391 (1.000)    42     10643 0.31855   0.4937  80.00- 120.00   100.00(a)
 15.391  15.391 (1.000)    71      6867                   20.32-  80.32    64.52
 15.391  15.391 (1.000)    72      6164                   21.98-  81.98    57.91
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    149960 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    111452                   46.73- 106.73    74.32
 15.391  15.391 (1.000)    49    119151                   55.35- 115.35    79.46
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.884  15.884 (1.032)   119      6846 0.05501  0.08526  80.00- 120.00   100.00(a)
 15.884  15.884 (1.032)   117      4802                   74.11- 134.11    70.15
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 16.207  16.207 (0.968)    78      7803 0.06531   0.1012  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      1907                    0.00-  53.00    24.44
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    214144 4.97270    4.973  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 117 1,2-Dichloroethane-d4 (continued)
 16.207  16.207 (1.053)    67    100264                    22.67-  82.67    46.82
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    483958 5.00000            80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     70750                     0.00-  45.16    14.62
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 18.984  19.006 (1.134)    43      2475 0.03482  0.05397  80.00- 120.00   100.00(a)
 19.006  19.006 (1.136)    58      1679                    10.02-  70.02    67.85
  0.000  19.006 (0.000)    85         0                     0.00-  52.01     0.00
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    457136 4.86956    4.870  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     55487                     0.00-  40.89    12.14
 19.298  19.298 (1.153)   100    307333                    40.09- 100.09    67.23
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91     36618 0.25333   0.3927  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92     19986                    27.79-  87.79    54.58
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    462471 5.00000            80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    229118                    17.27-  77.27    49.54
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.013)   106      2130 0.02971  0.04605  80.00- 120.00   100.00(a)
 22.488  22.467 (1.014)    91      4587                   170.01- 230.01   215.29
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.110  23.089 (1.042)   106      1047 0.01576  0.02442  80.00- 120.00   100.00(a)
 23.089  23.089 (1.041)    91      4045                   175.84- 235.84   386.26
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.131  23.110 (1.043)   104      3072 0.02772  0.04296  80.00- 120.00   100.00(a)
 23.110  23.110 (1.042)    78      1097                    20.21-  80.21    35.71
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    332839 5.15227    5.152  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    299660                    66.74- 126.74    90.03
 23.856  23.856 (1.076)   176    309209                    67.47- 127.47    92.90
-------------------------------------------------------------------------------
```

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: e020310.d
Lab Smp Id: 1701477B-13A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 4.0"Hg -> 5.0psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	149960	5.96
123 1,4-Difluorobenze	499834	299900	699768	483958	-3.18
163 Chlorobenzene-d5	467575	280545	654605	462471	-1.09

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	22.18	21.85	22.51	22.18	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: 09-Feb-2017 10:46

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-13A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 4.0"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.973	99.45	70-130
$ 146 Toluene-d8	5.000	4.870	97.39	70-130
$ 177 4-Bromofluorobenze	5.000	5.152	103.05	70-130

Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

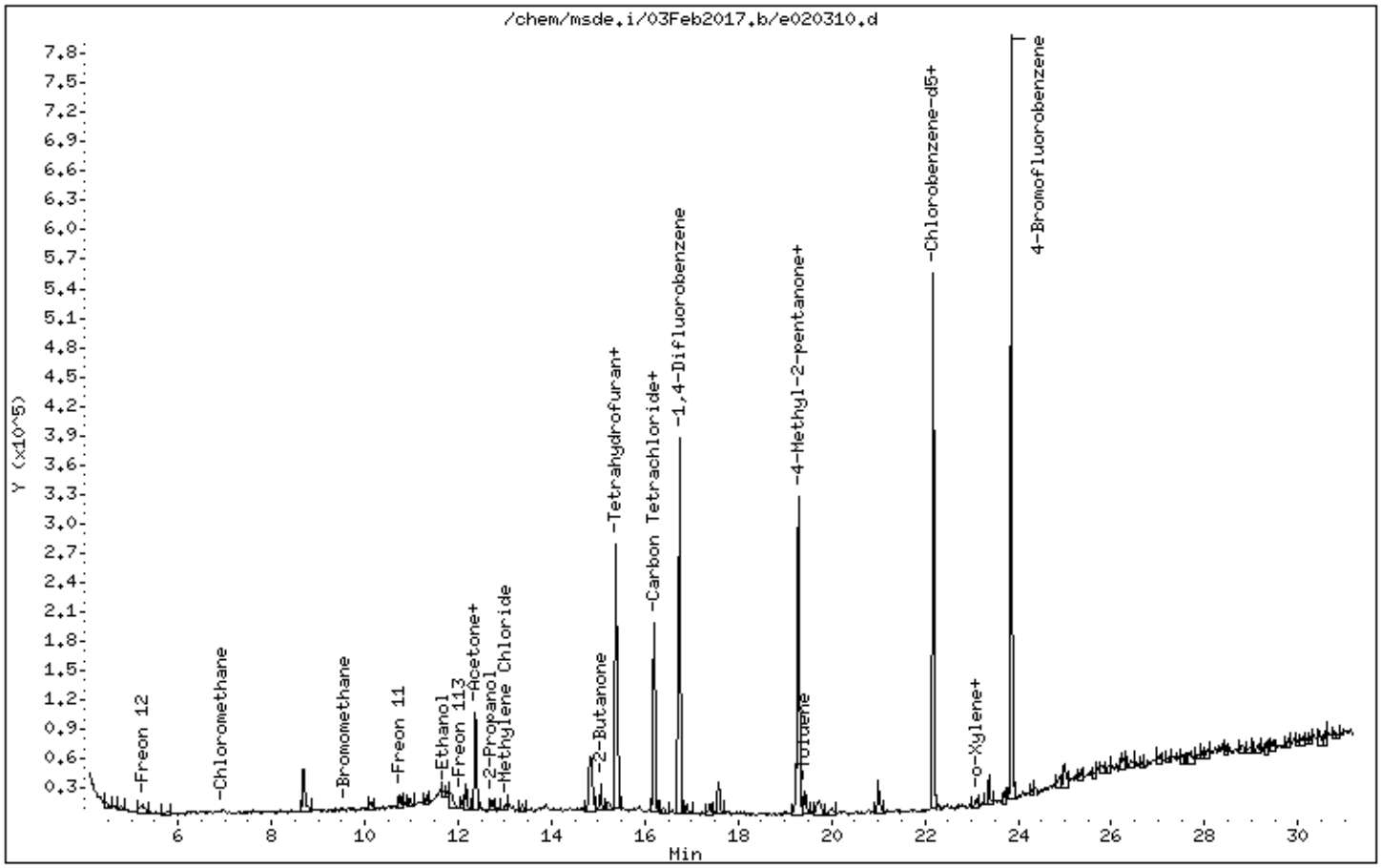
Instrument: msde.i

Sample Info: 250mL# 00401

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

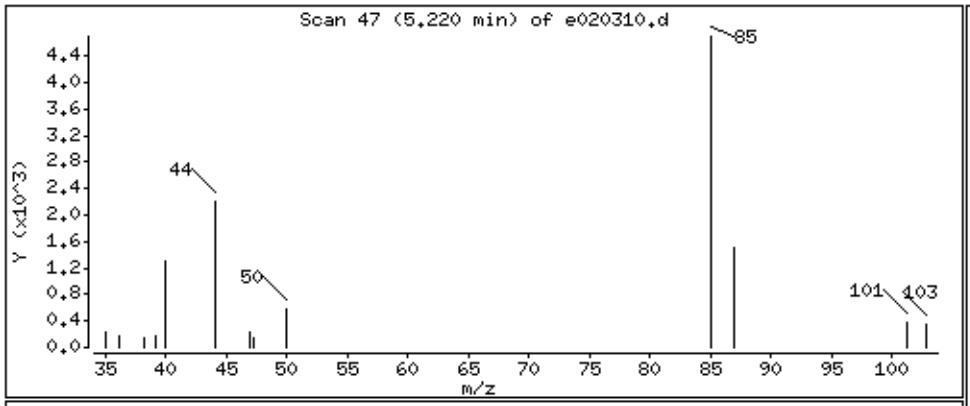
Operator: ef

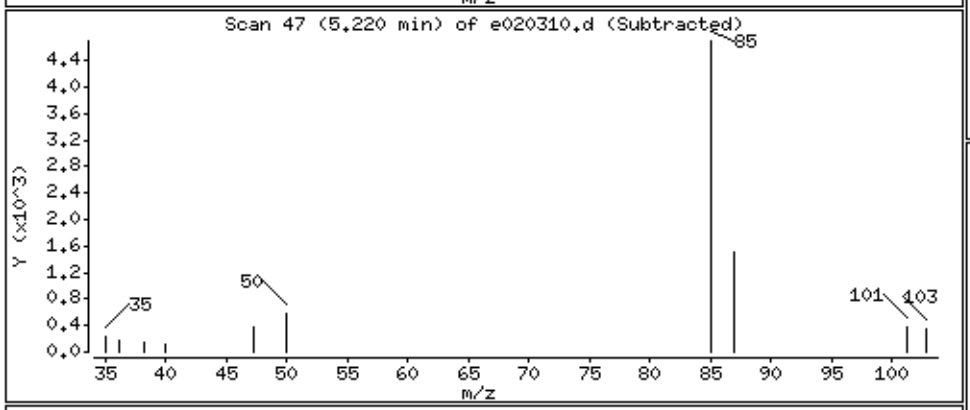
Column phase: RTX-624

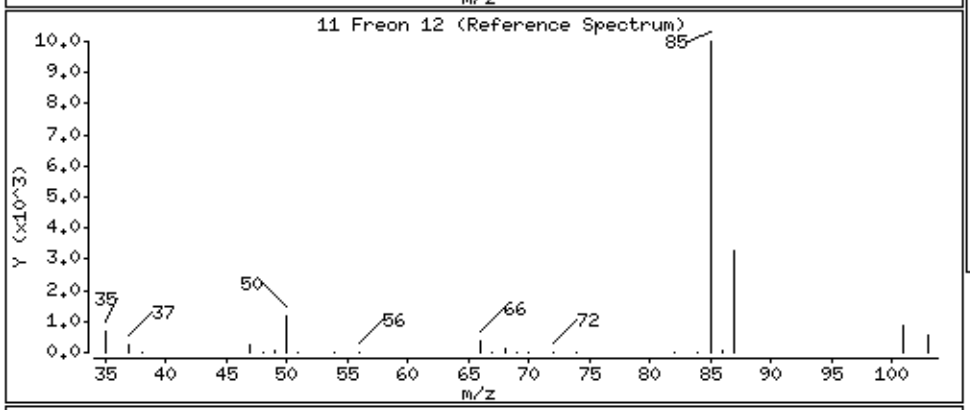
Column diameter: 0.32

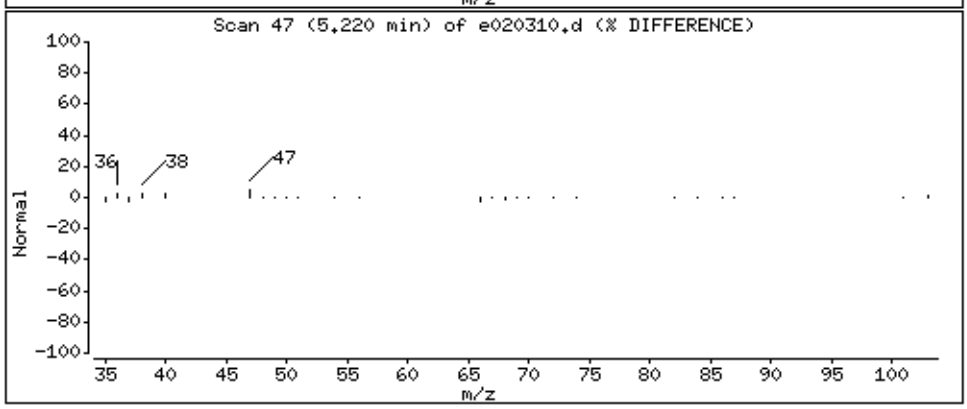
11 Freon 12

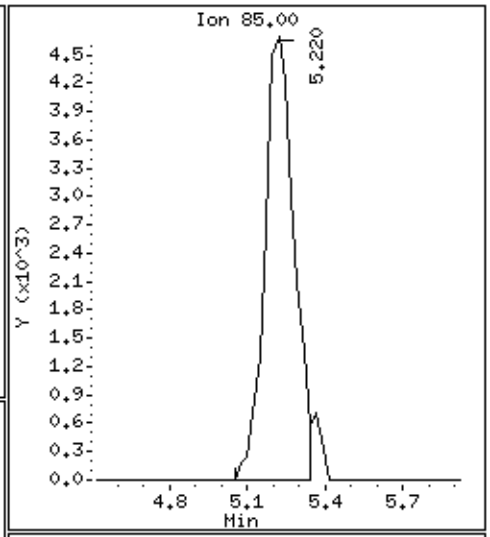
Concentration: 0.4299 PPBV

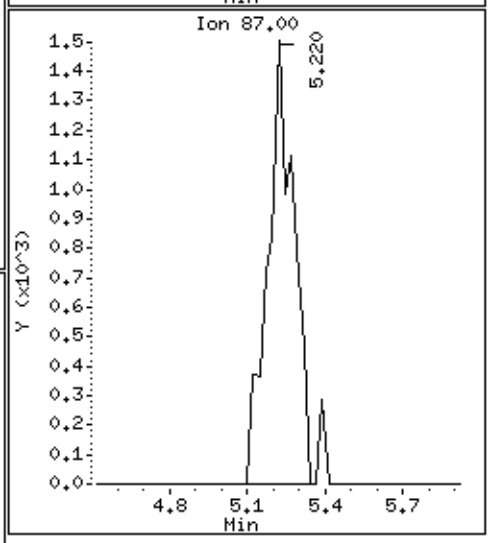












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

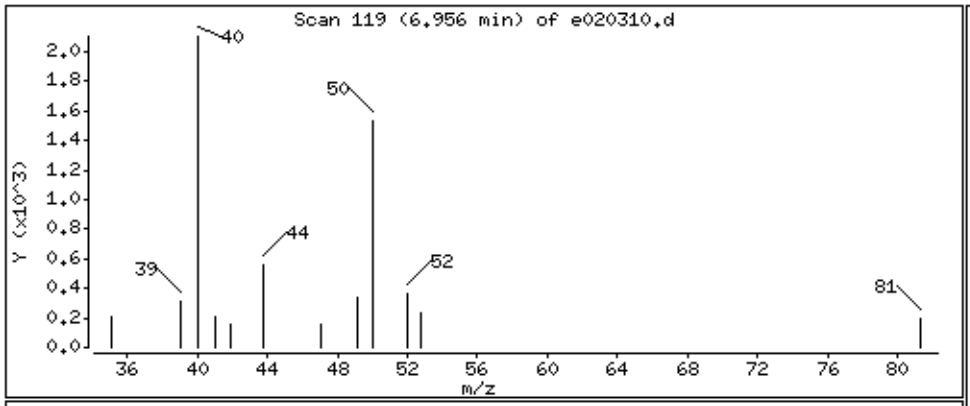
Operator: ef

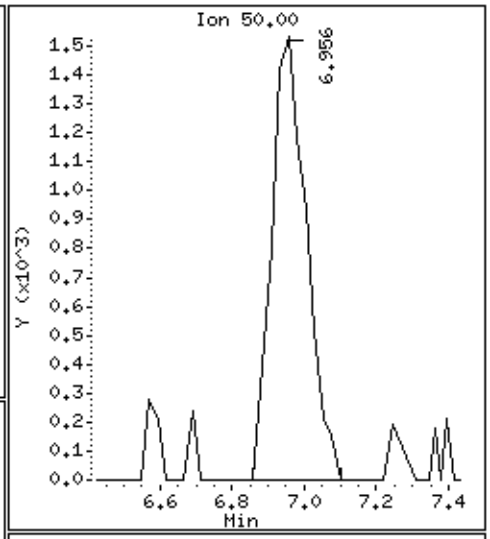
Column phase: RTX-624

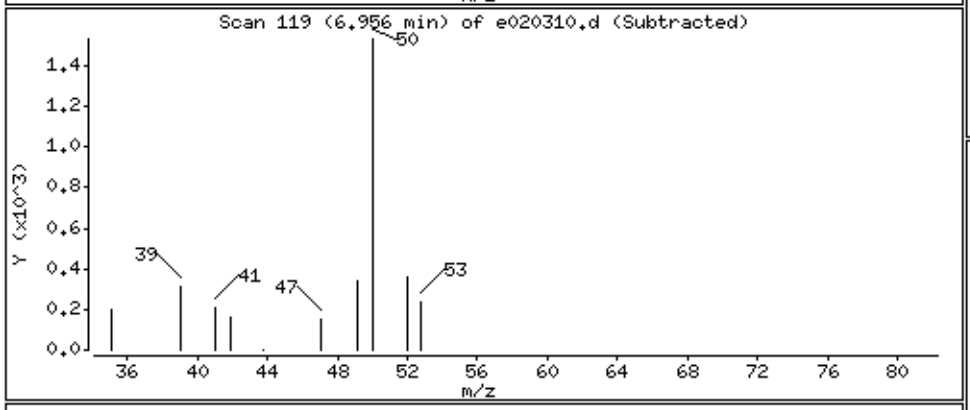
Column diameter: 0.32

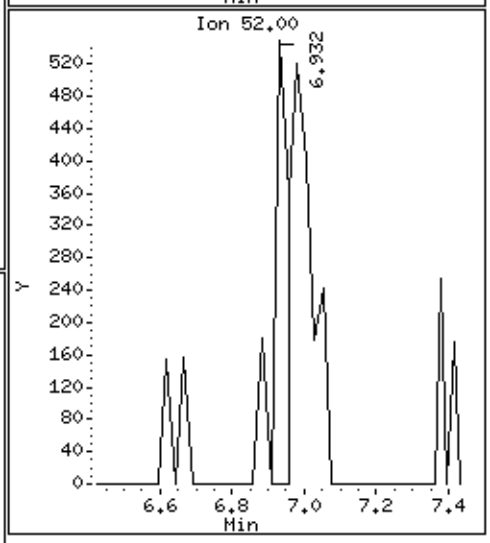
17 Chloromethane

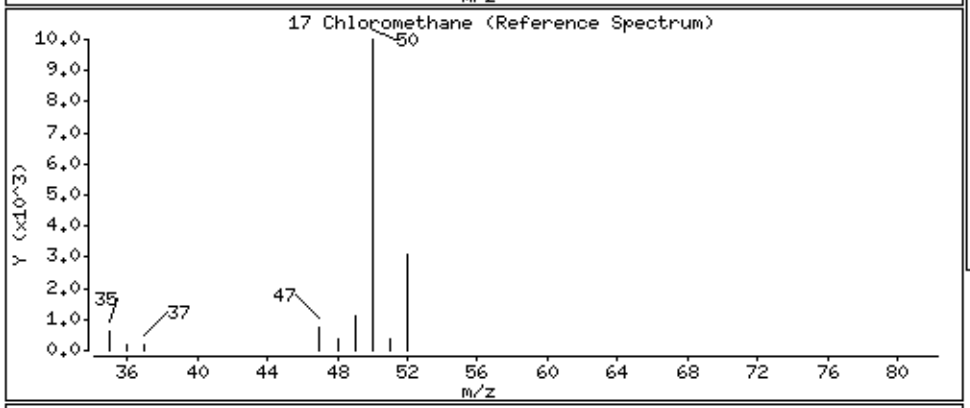
Concentration: 0.6456 PPBV

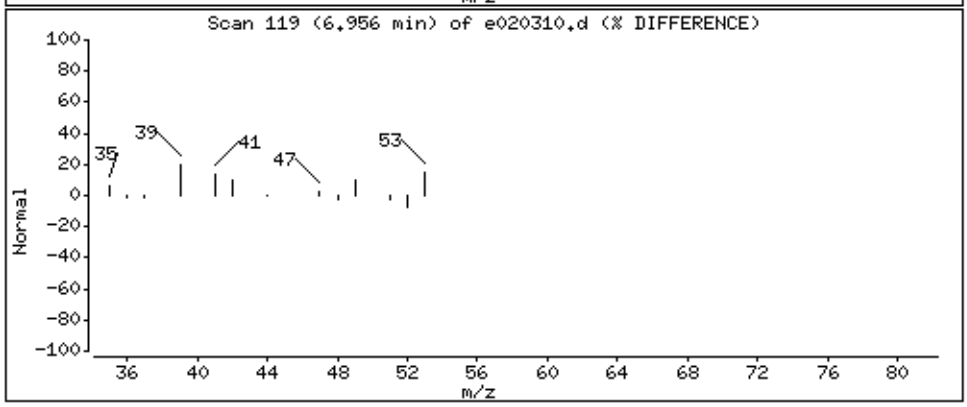












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

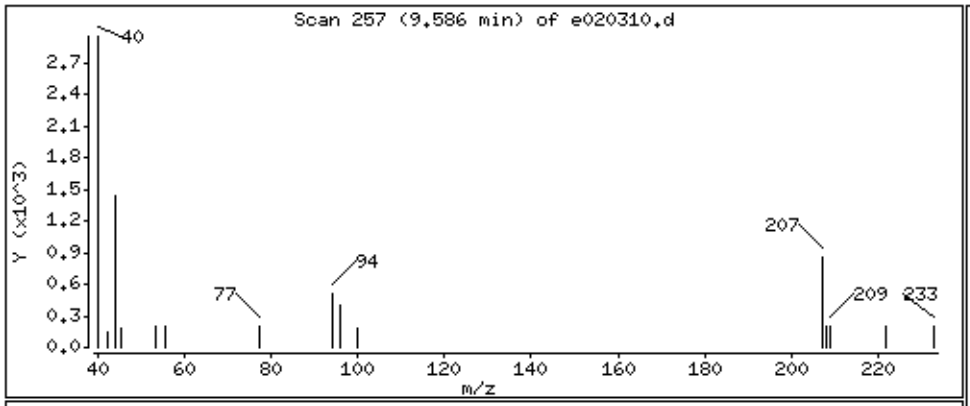
Operator: ef

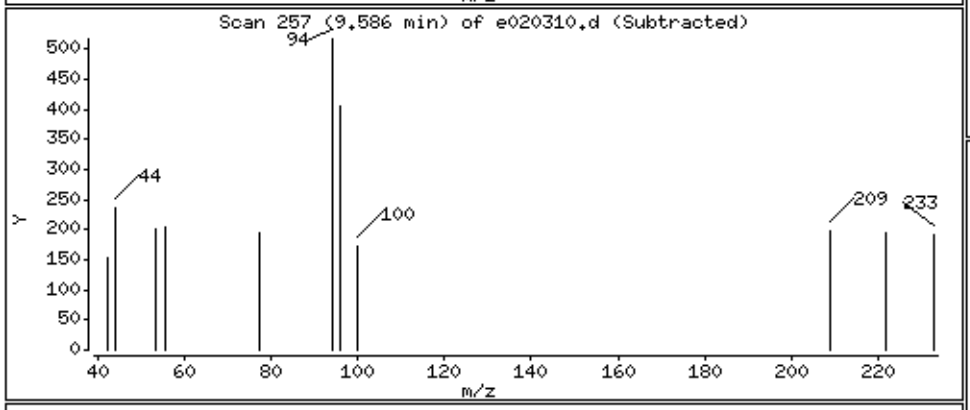
Column phase: RTX-624

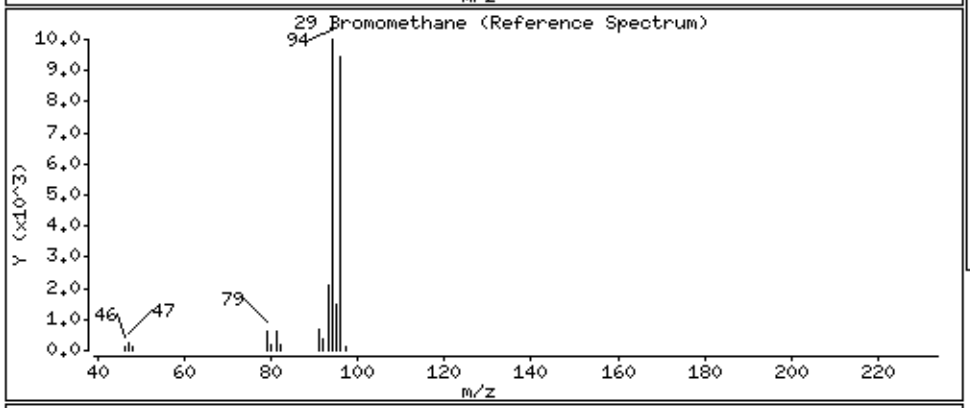
Column diameter: 0.32

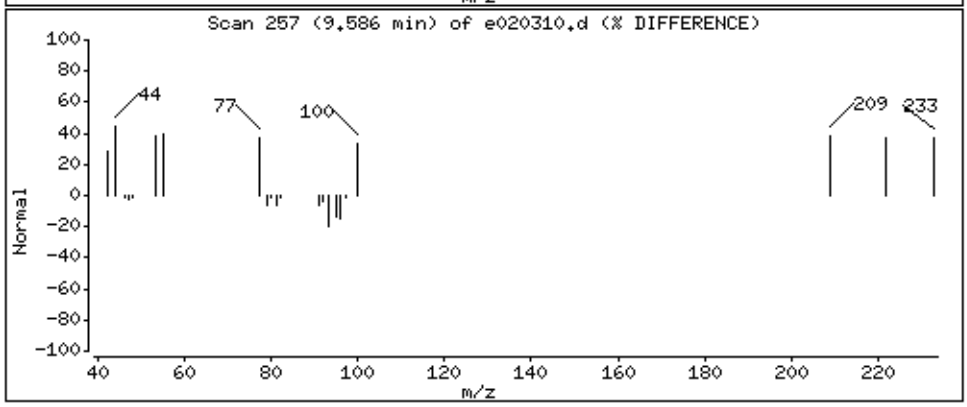
29 Bromomethane

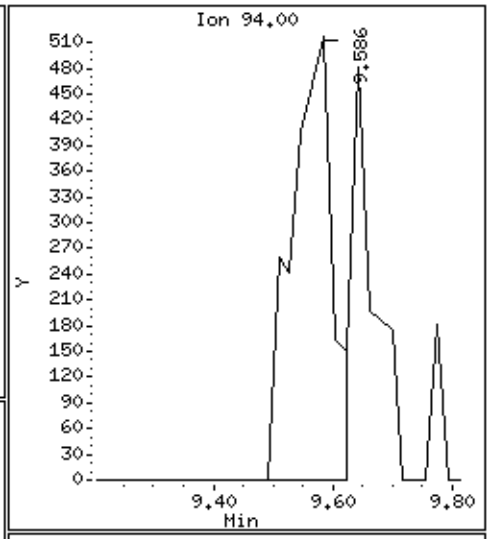
Concentration: 0.1066 PPBV

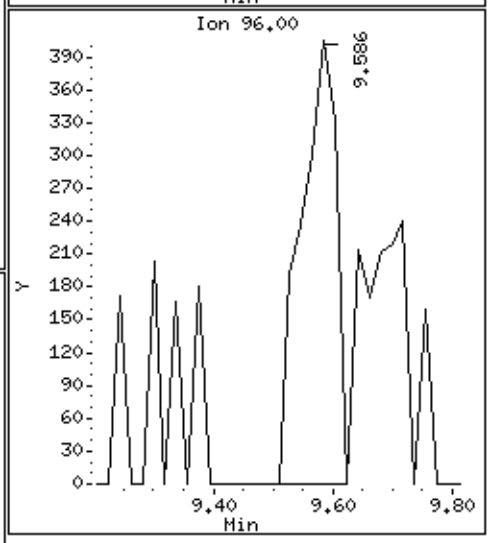












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

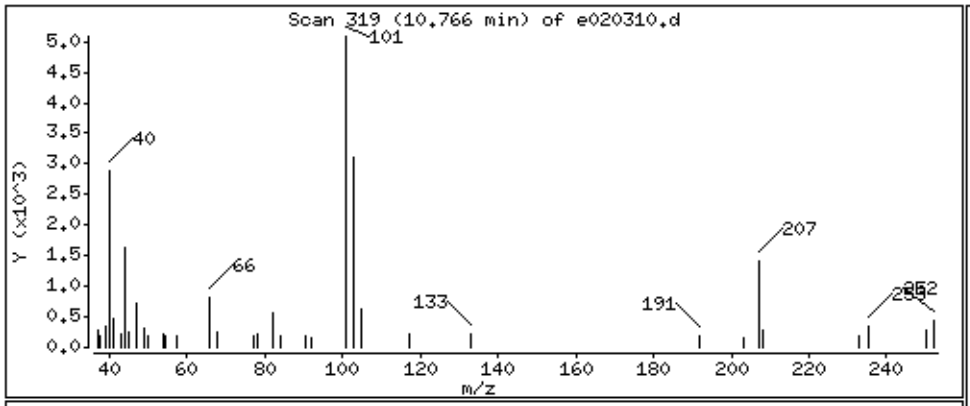
Operator: ef

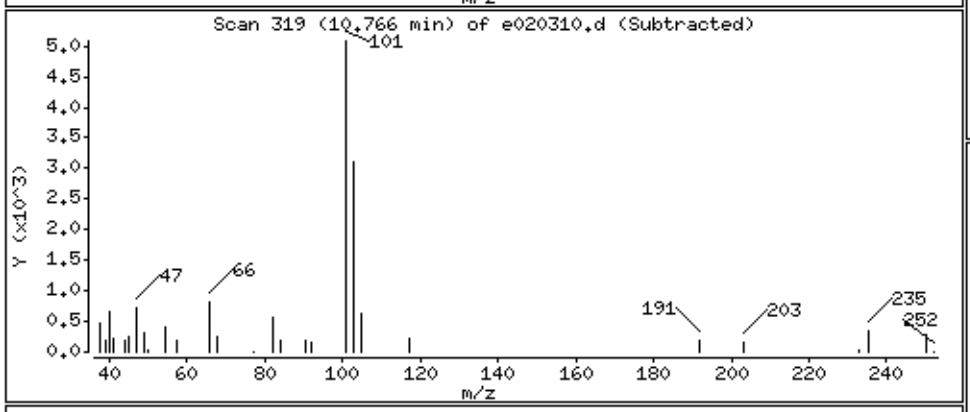
Column phase: RTX-624

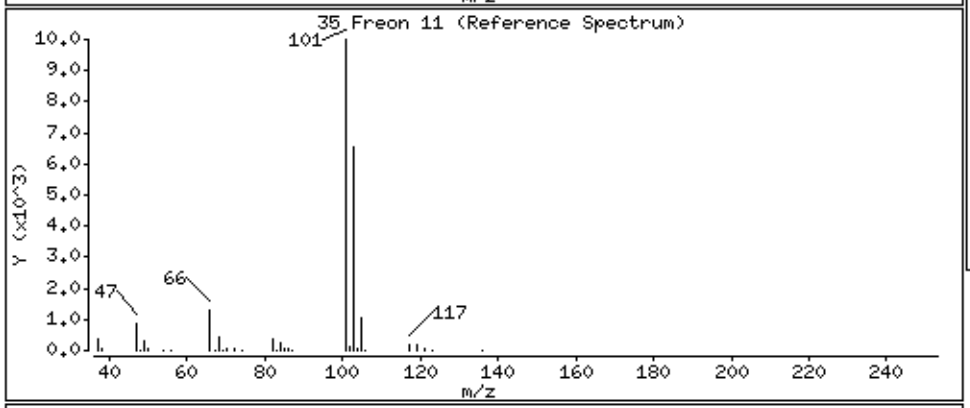
Column diameter: 0.32

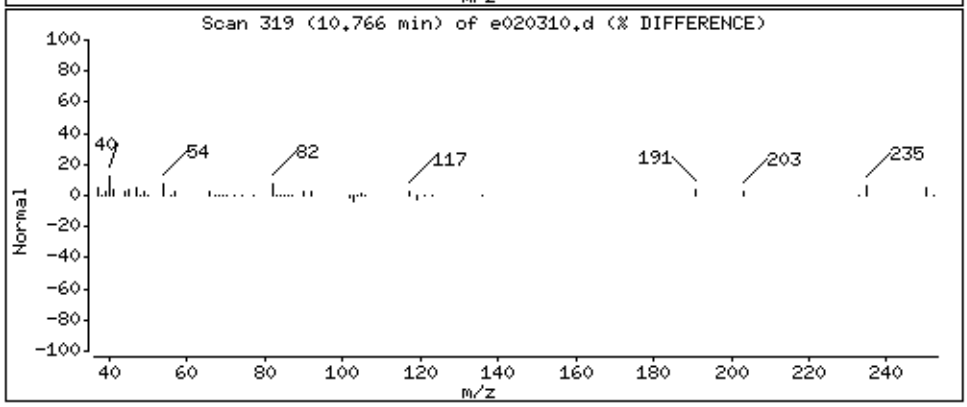
35 Freon 11

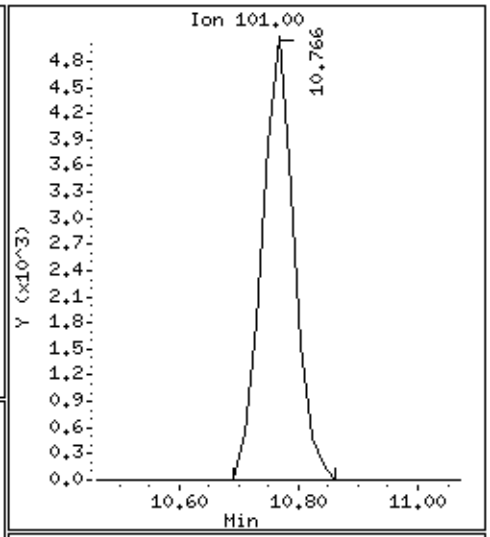
Concentration: 0.1952 PPBV

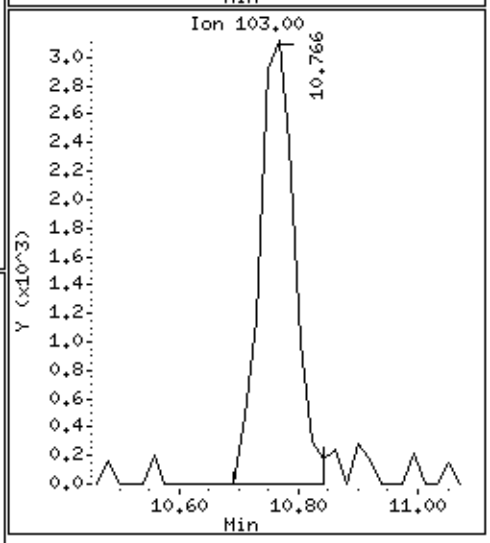












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

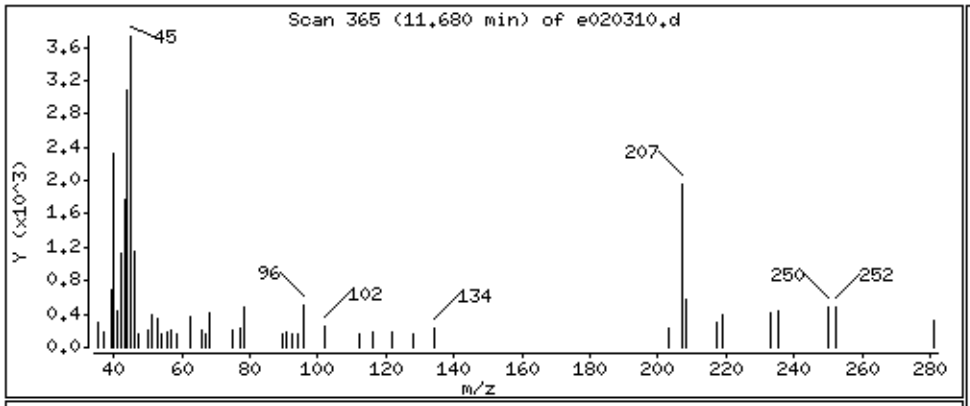
Operator: ef

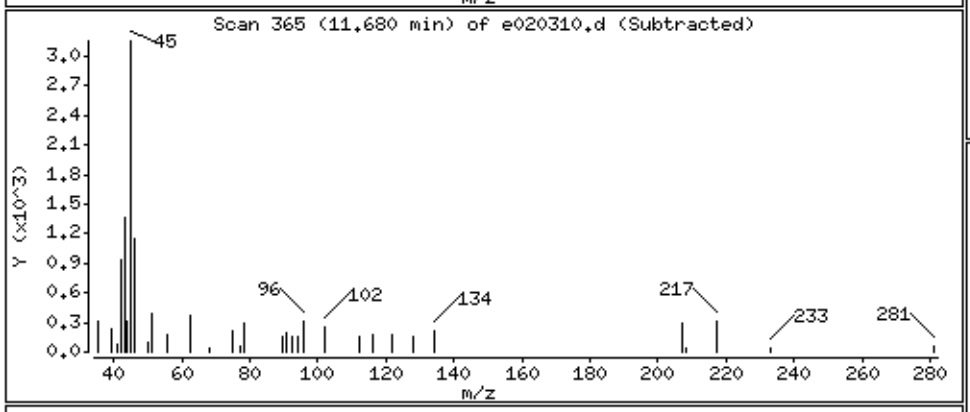
Column phase: RTX-624

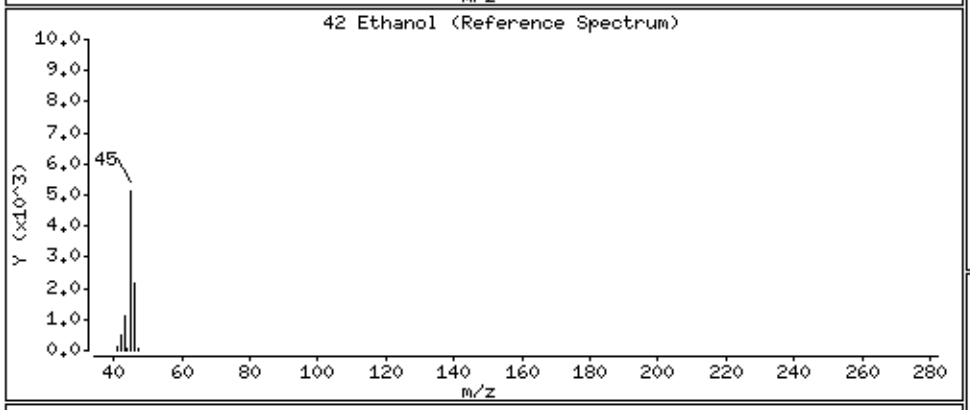
Column diameter: 0.32

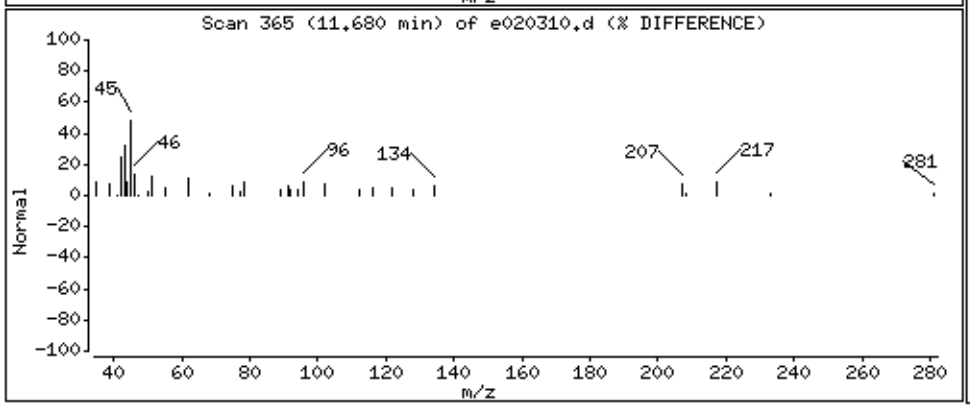
42 Ethanol

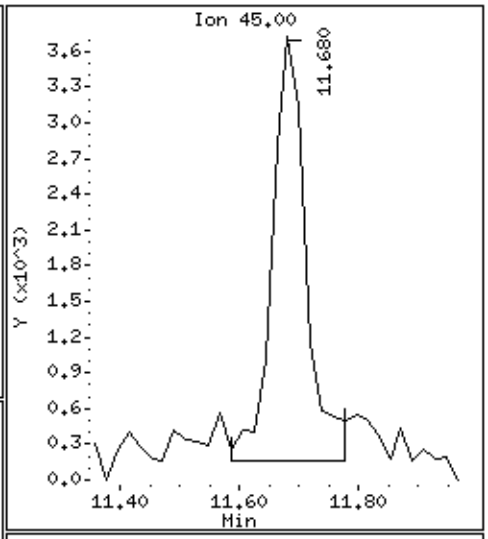
Concentration: 1.671 PPBV

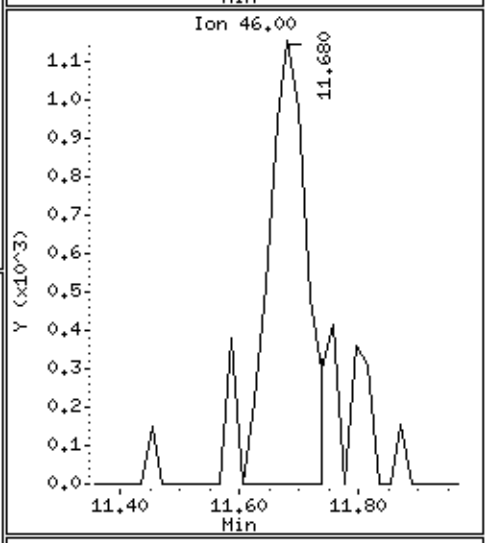


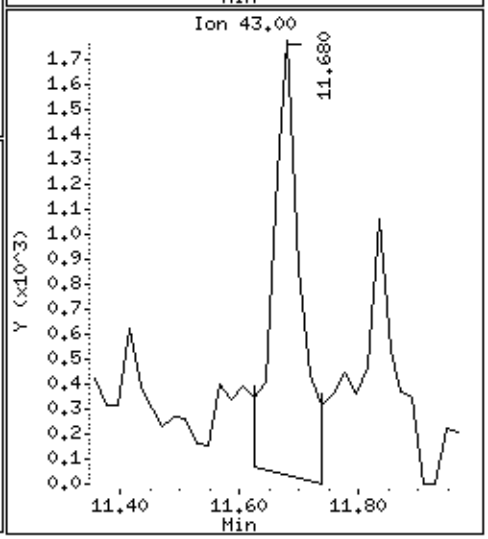












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

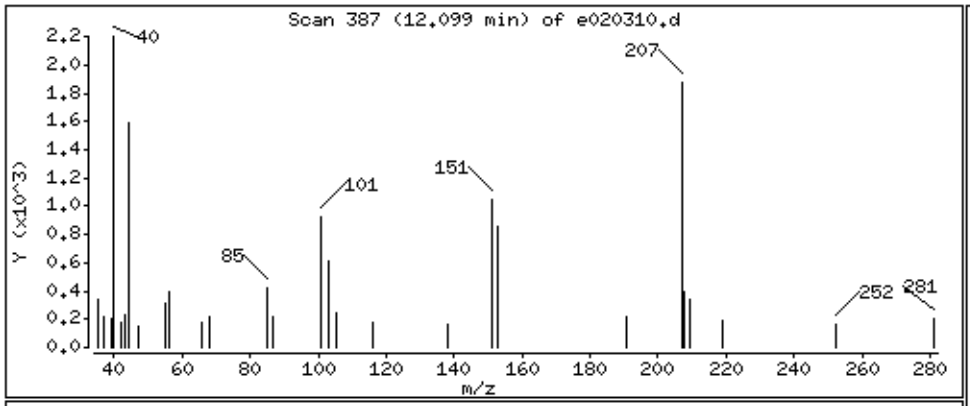
Operator: ef

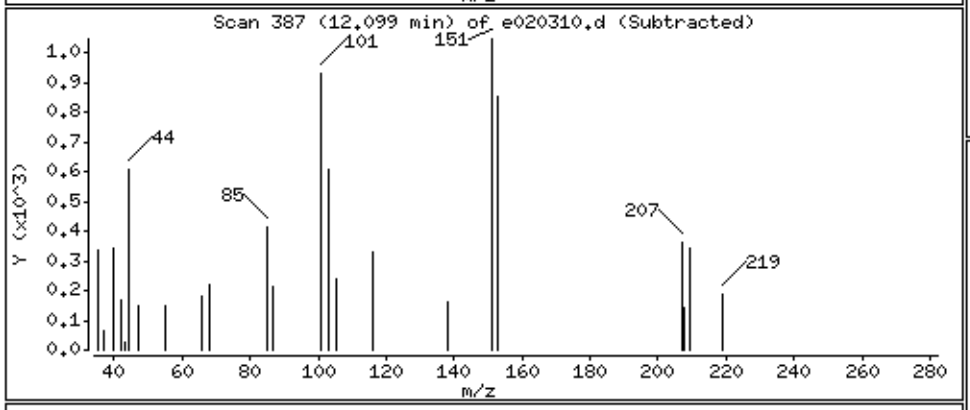
Column phase: RTX-624

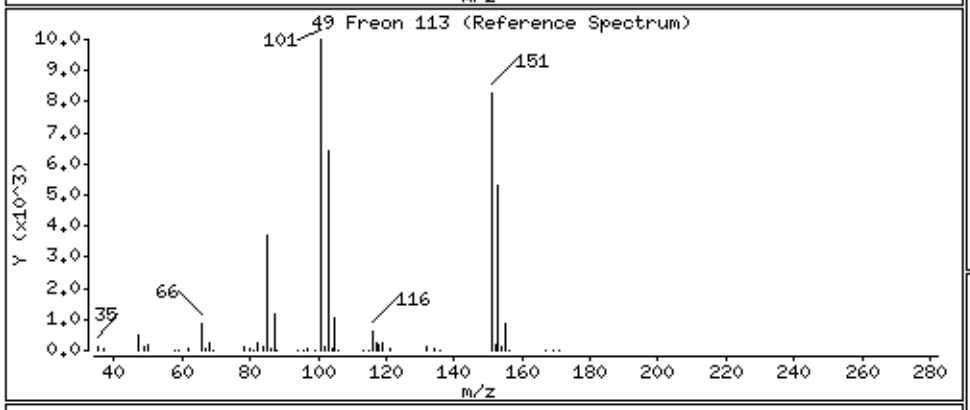
Column diameter: 0.32

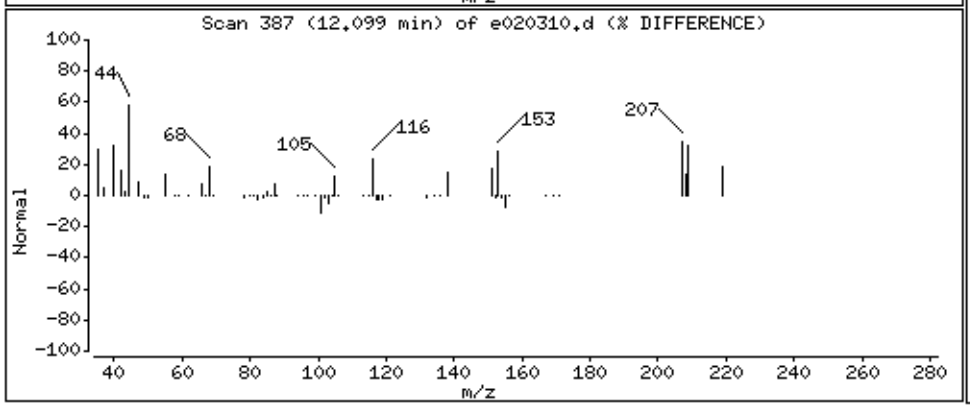
49 Freon 113

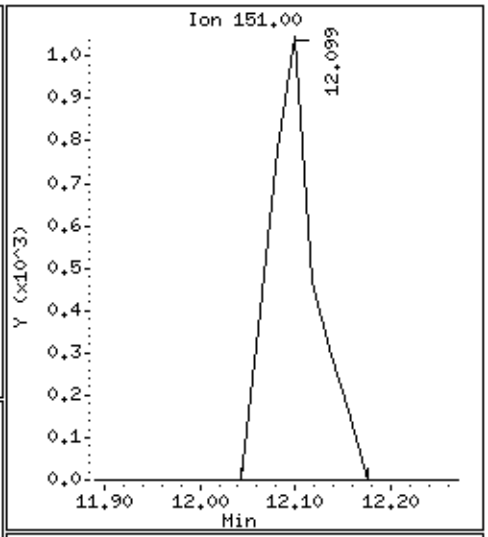
Concentration: 0.05312 PPBV

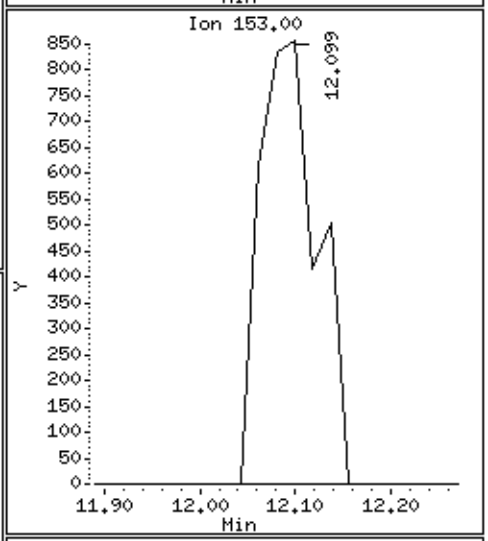


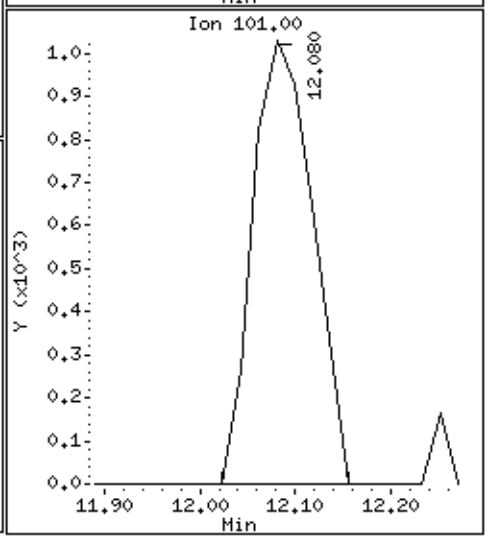












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

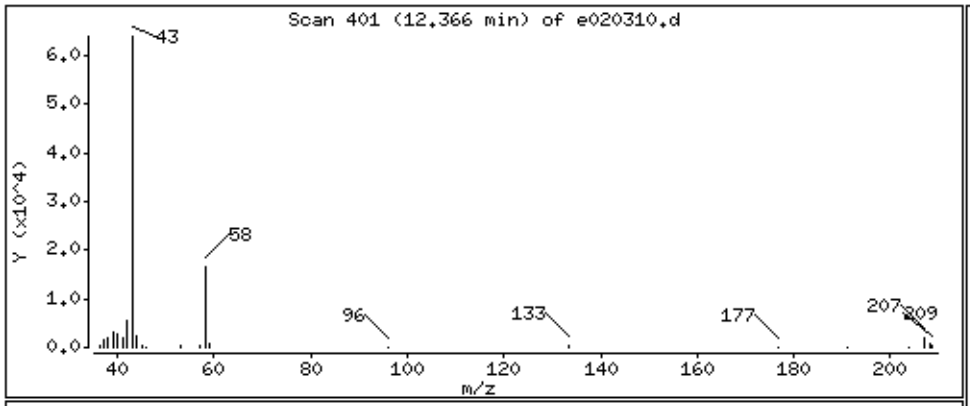
Operator: ef

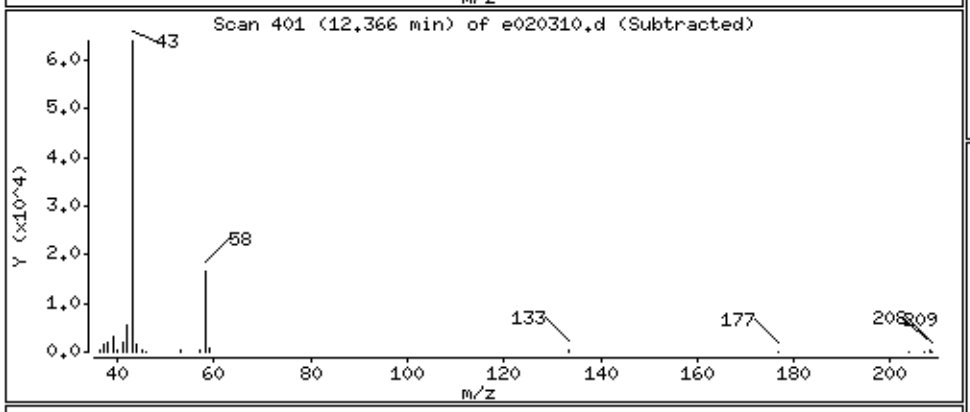
Column phase: RTX-624

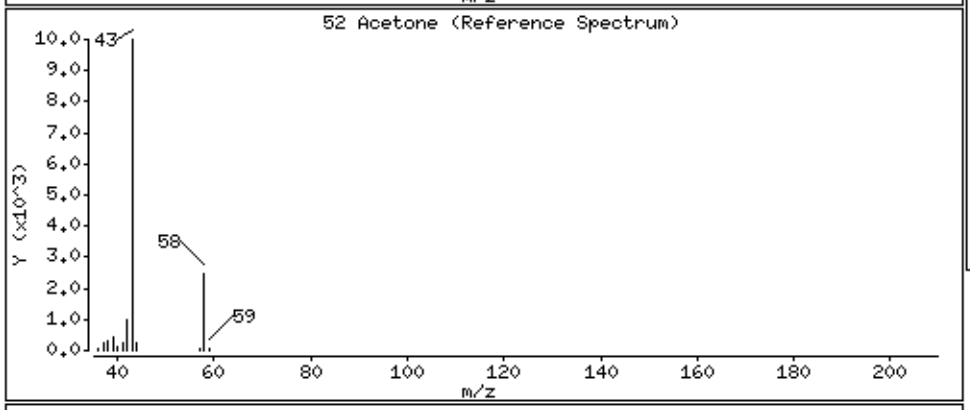
Column diameter: 0.32

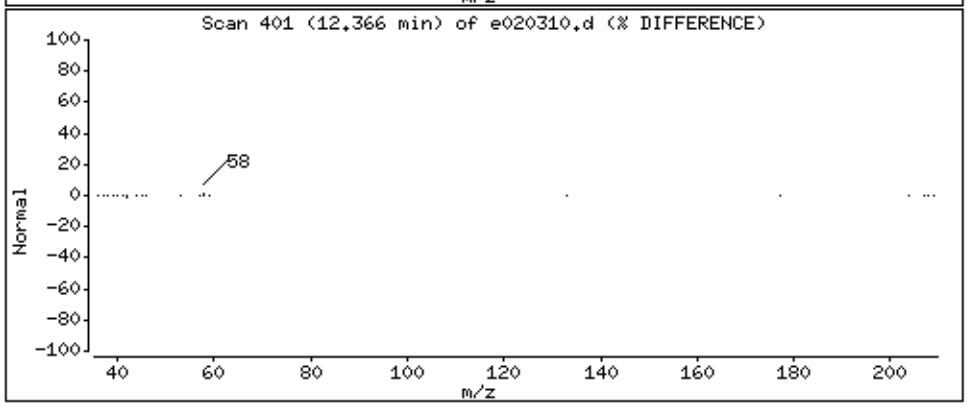
52 Acetone

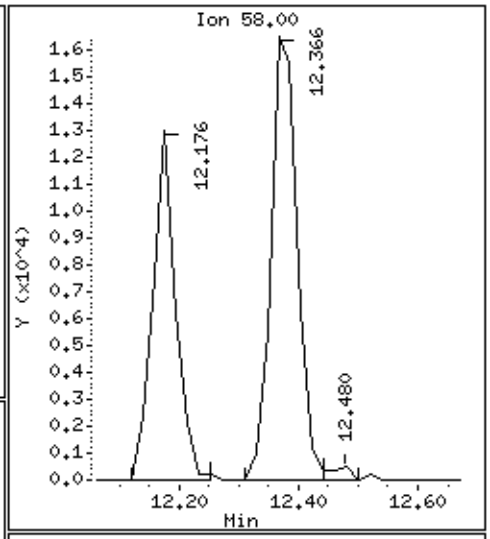
Concentration: 4.825 PPBV

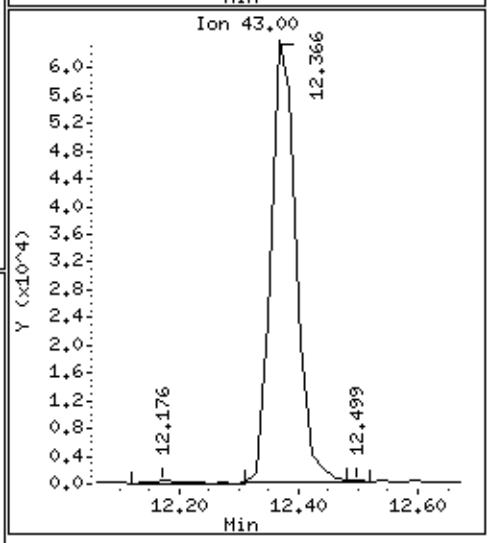












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

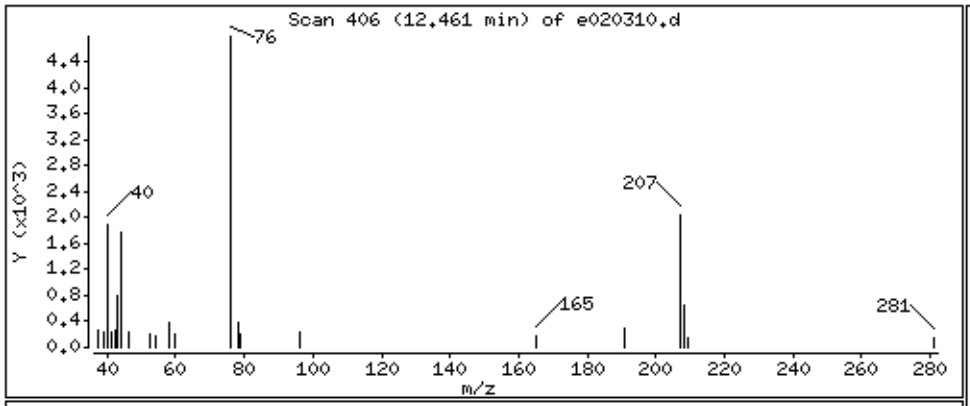
Operator: ef

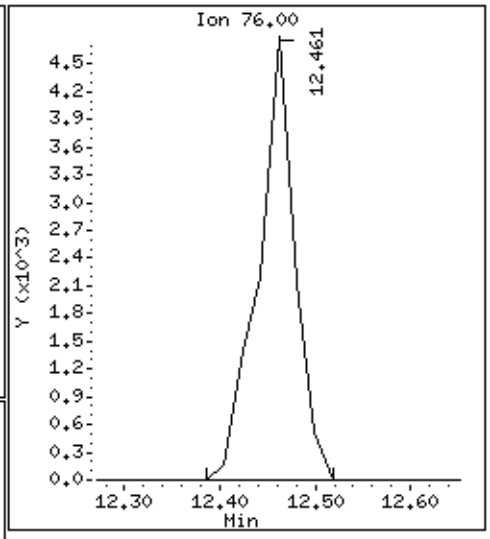
Column phase: RTX-624

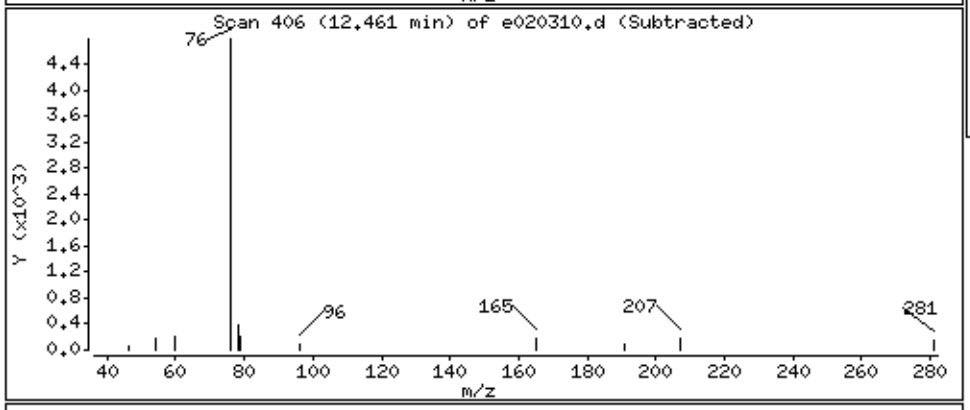
Column diameter: 0.32

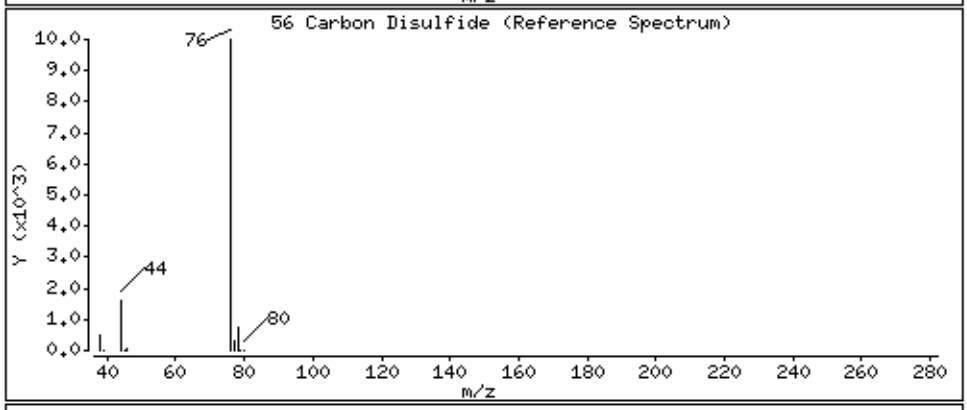
56 Carbon Disulfide

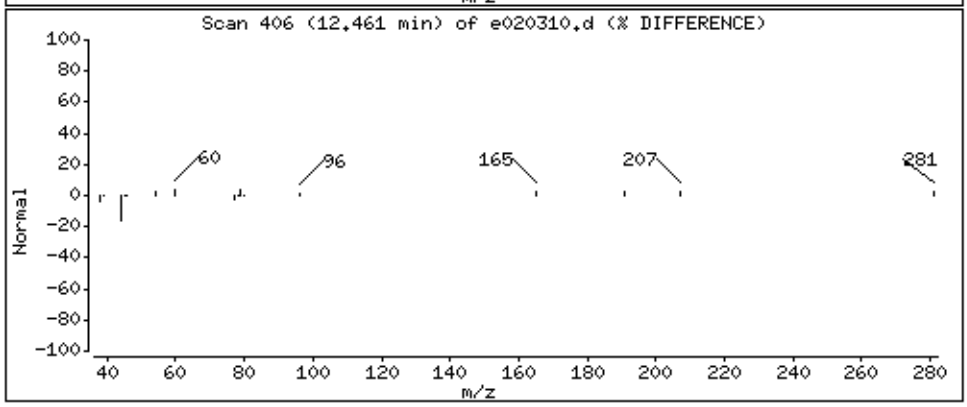
Concentration: 0.1686 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

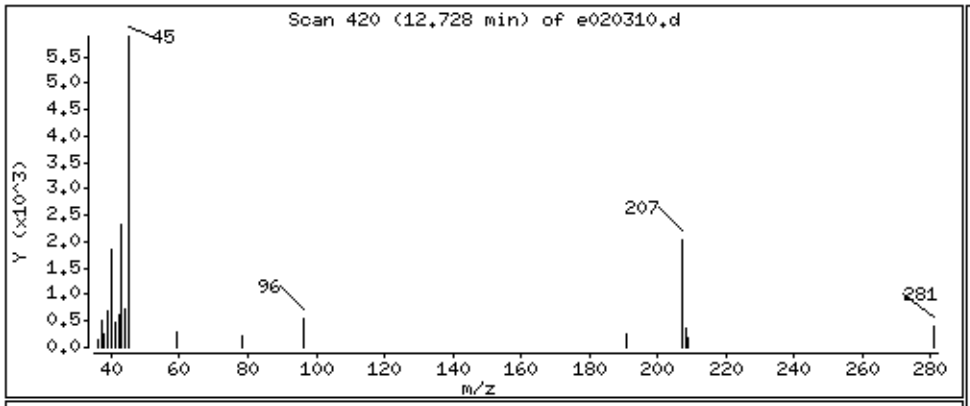
Operator: ef

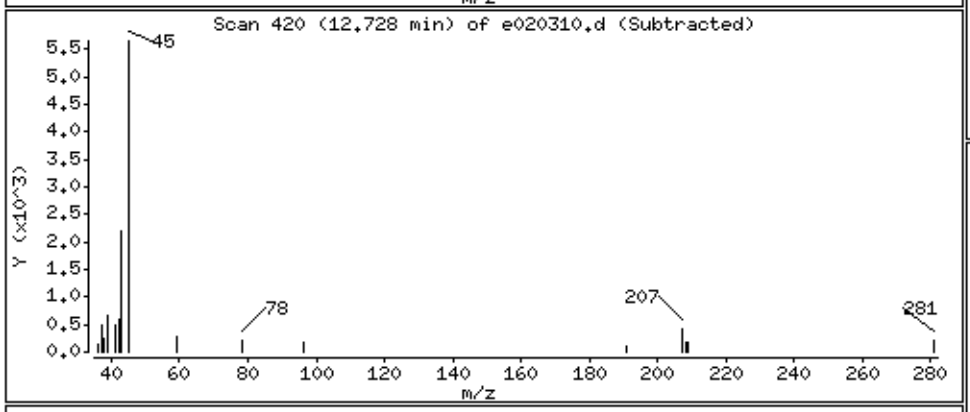
Column phase: RTX-624

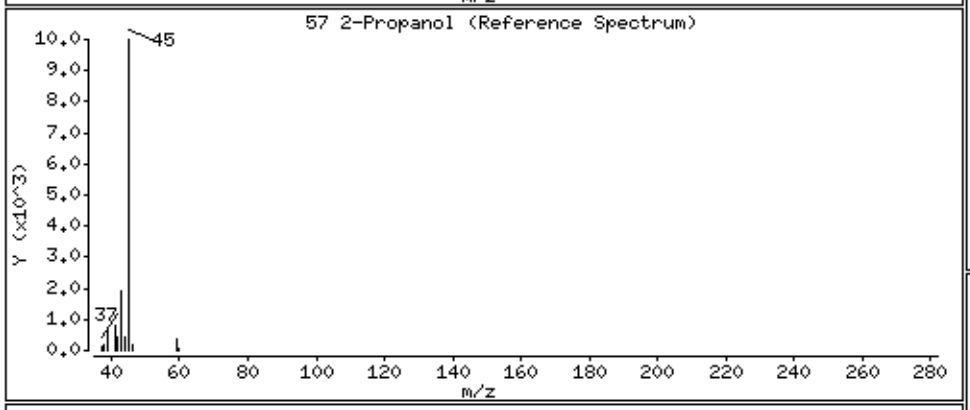
Column diameter: 0.32

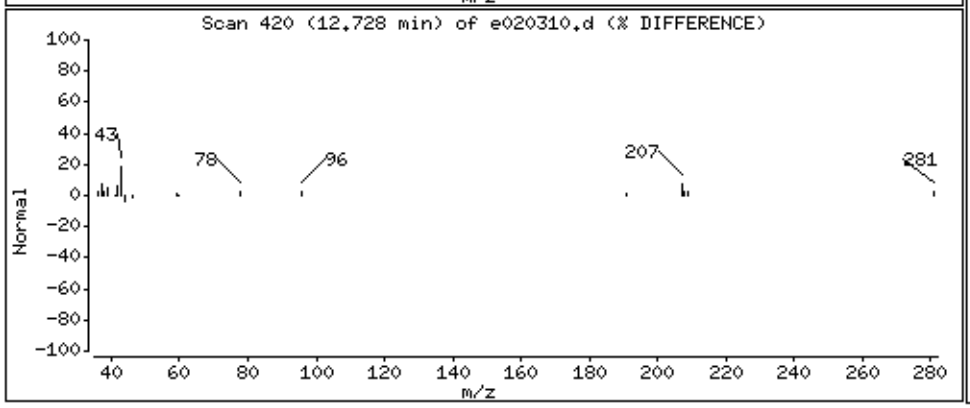
57 2-Propanol

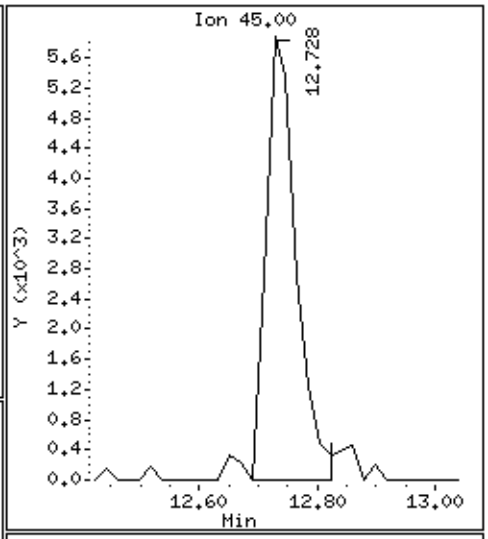
Concentration: 0.6049 PPBV

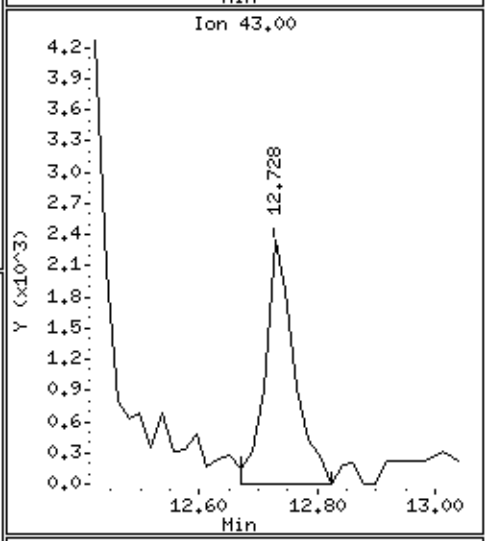


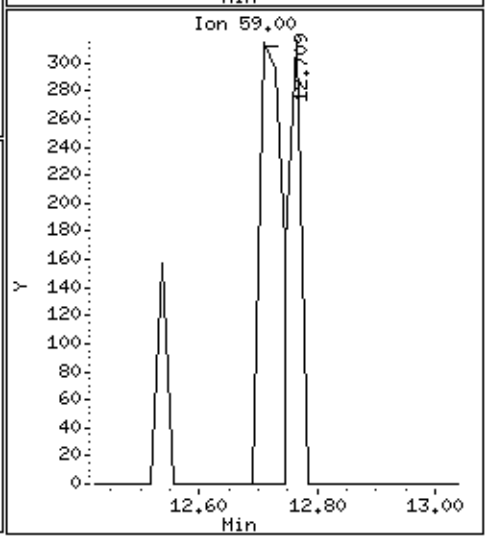












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

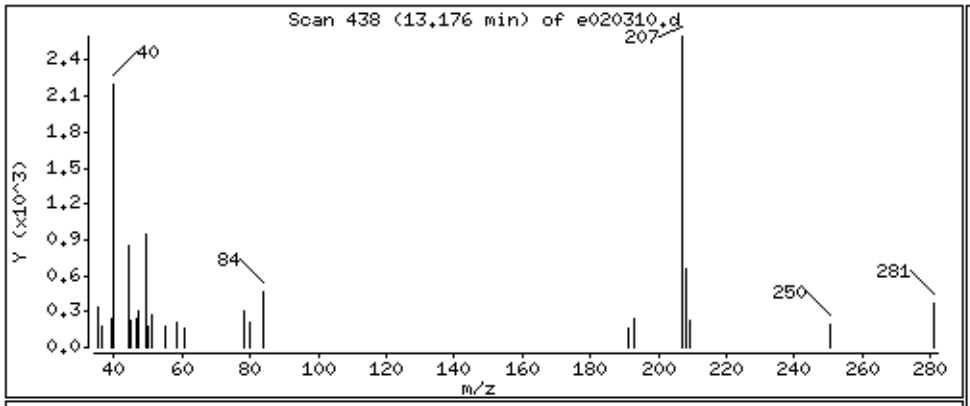
Operator: ef

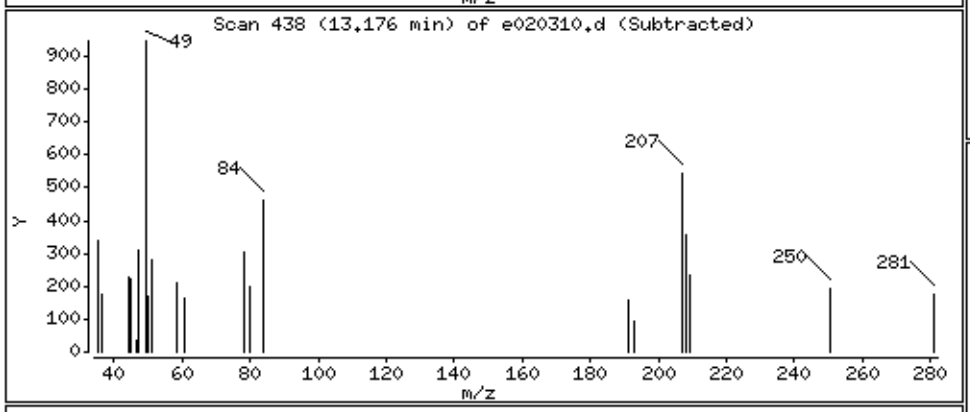
Column phase: RTX-624

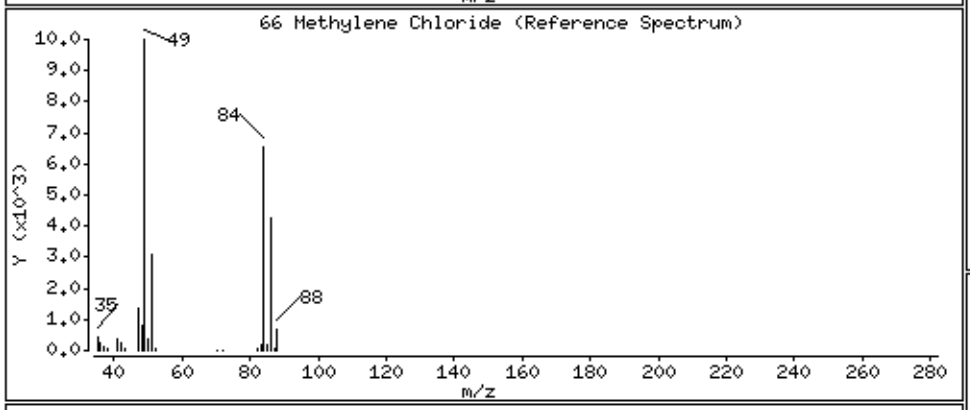
Column diameter: 0.32

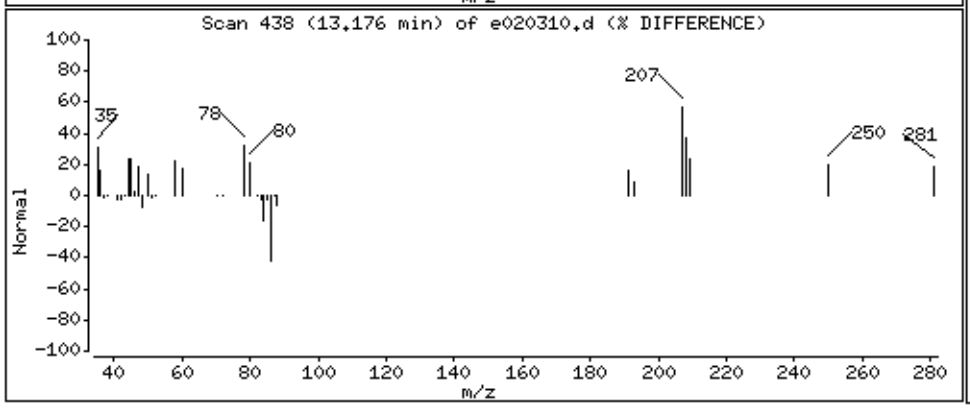
66 Methylene Chloride

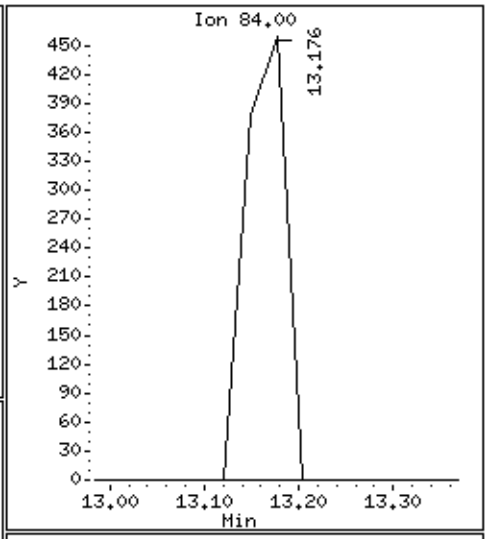
Concentration: 0.05124 PPBV

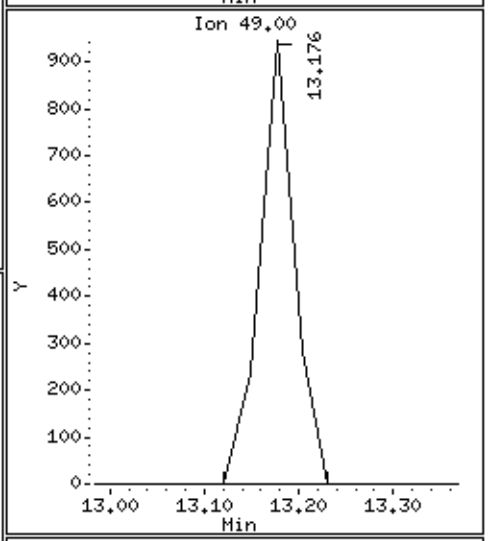


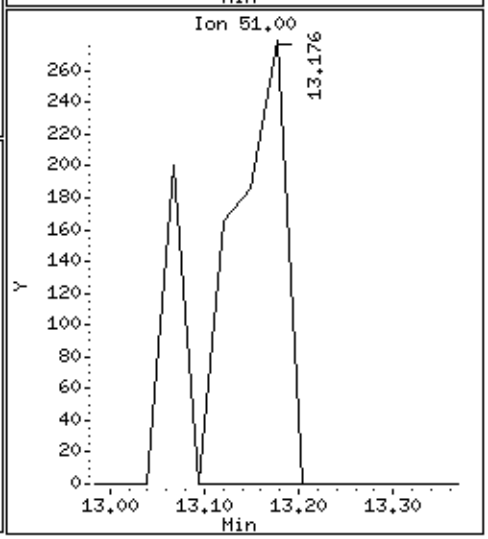












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

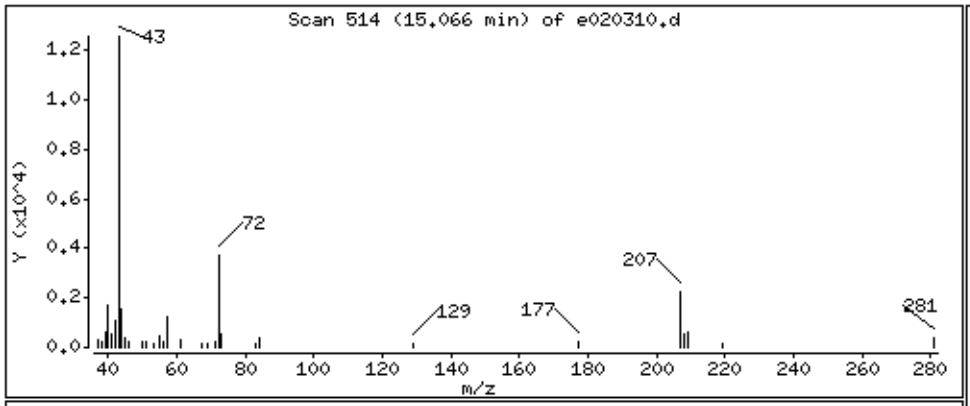
Operator: ef

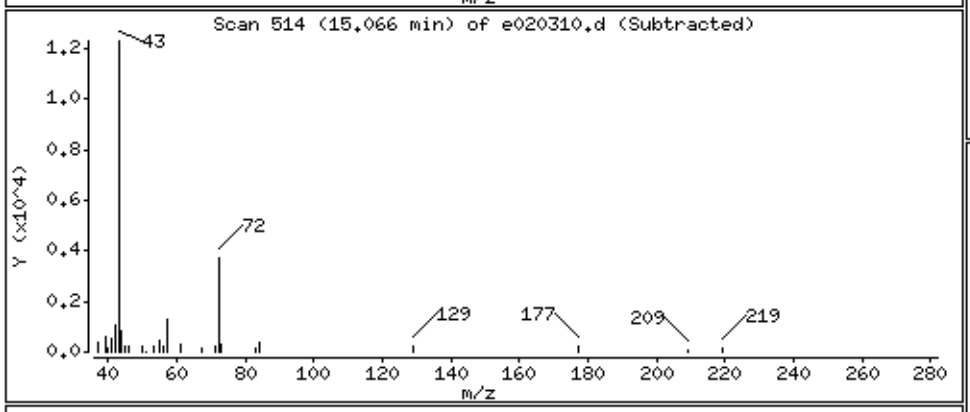
Column phase: RTX-624

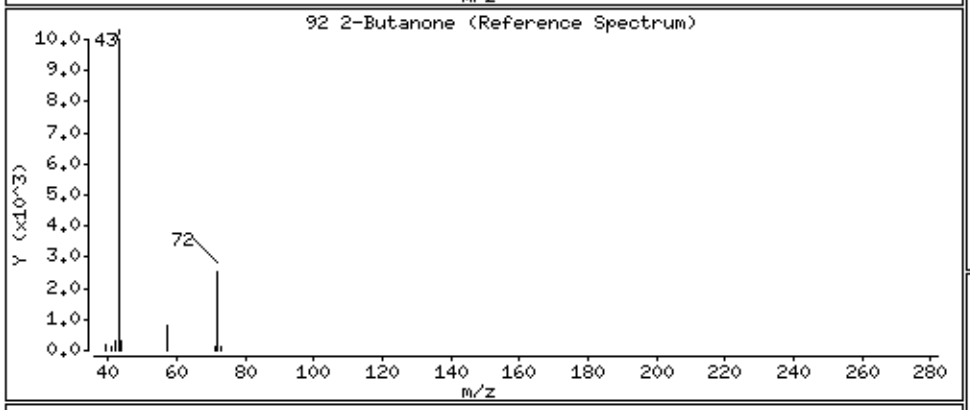
Column diameter: 0.32

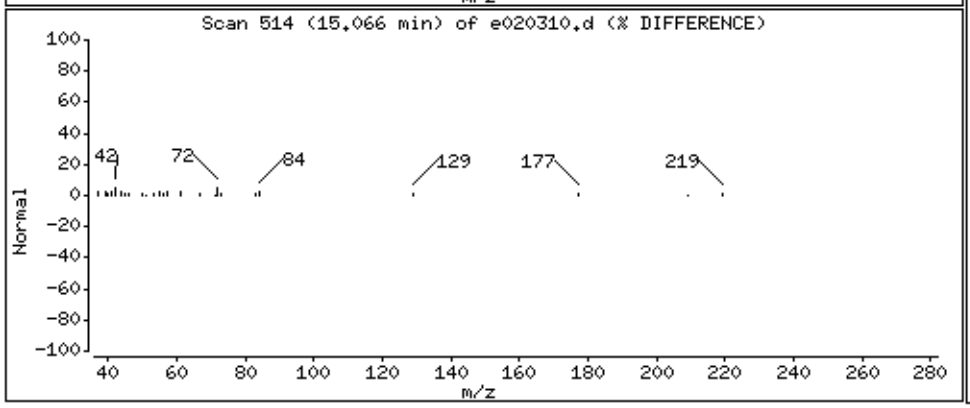
92 2-Butanone

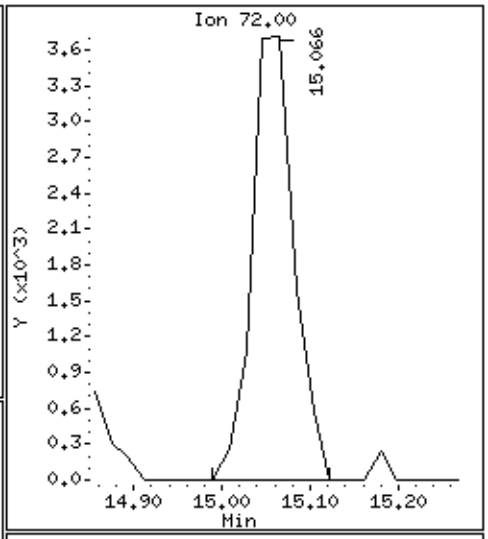
Concentration: 1.048 PPBV

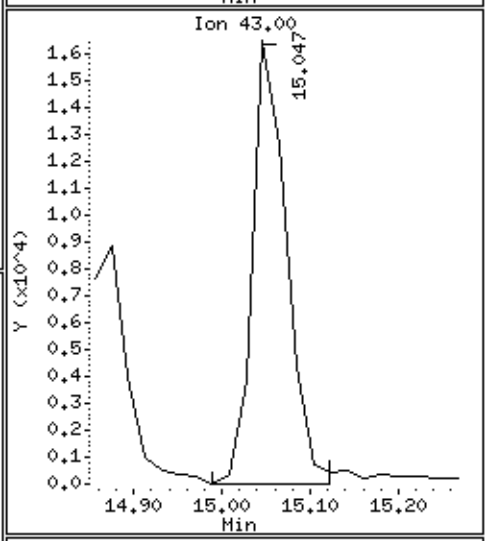


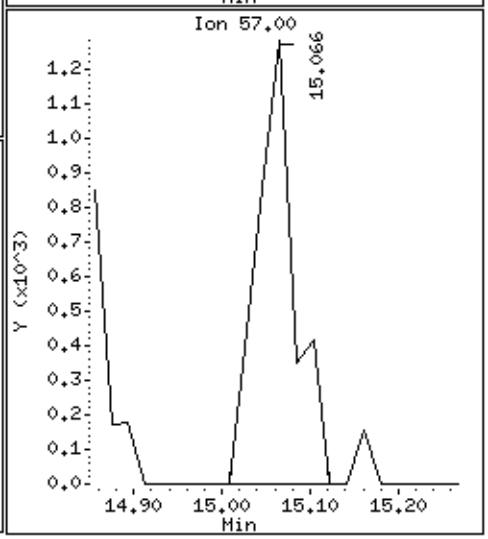












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

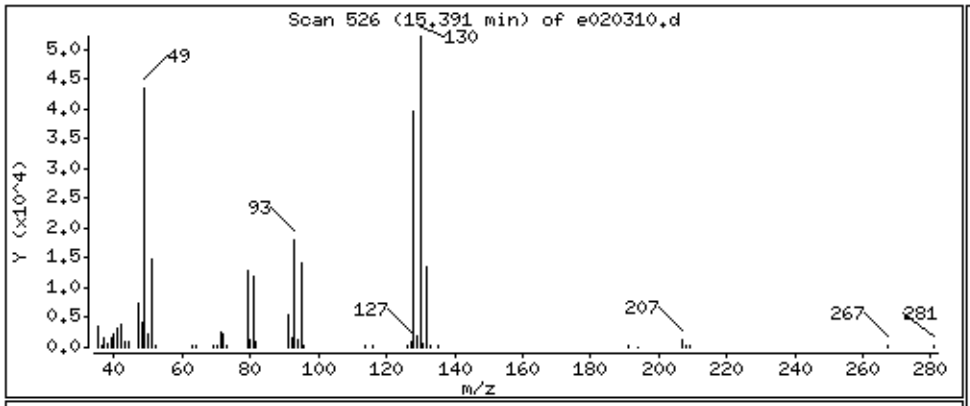
Operator: ef

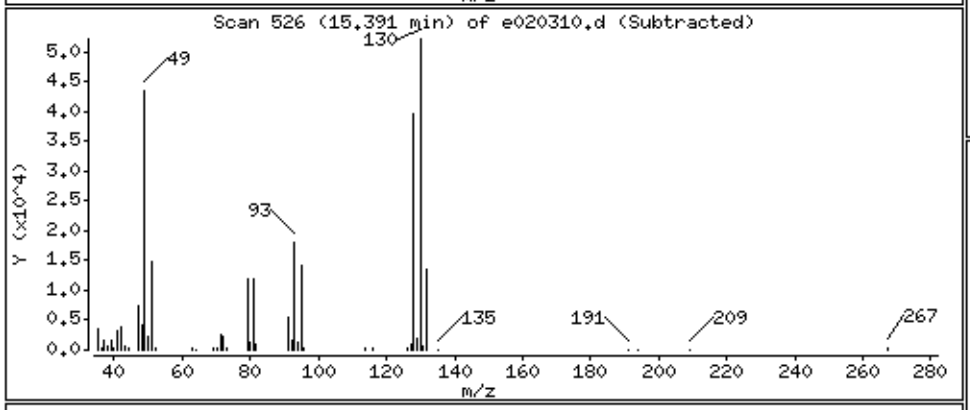
Column phase: RTX-624

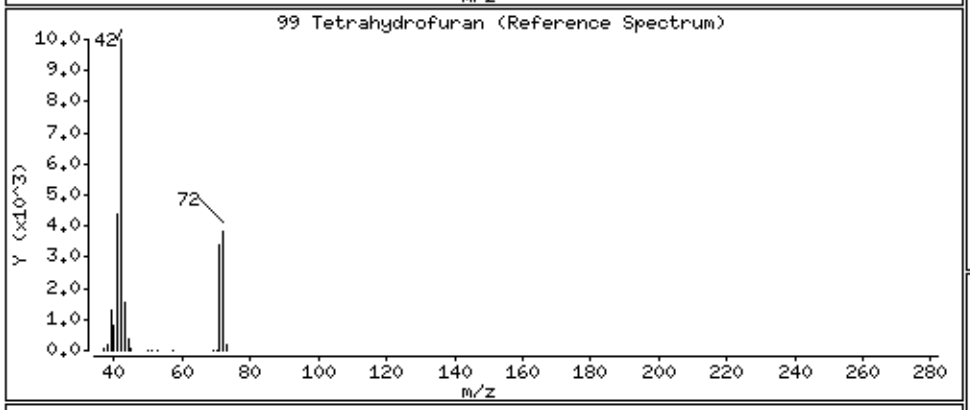
Column diameter: 0.32

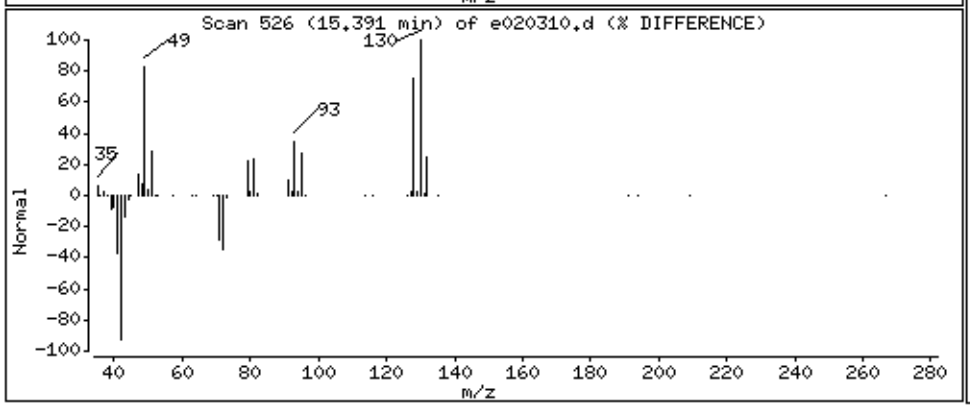
99 Tetrahydrofuran

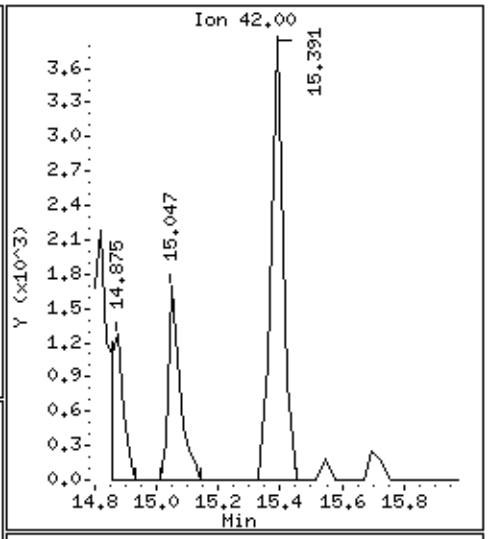
Concentration: 0.4937 PPBV

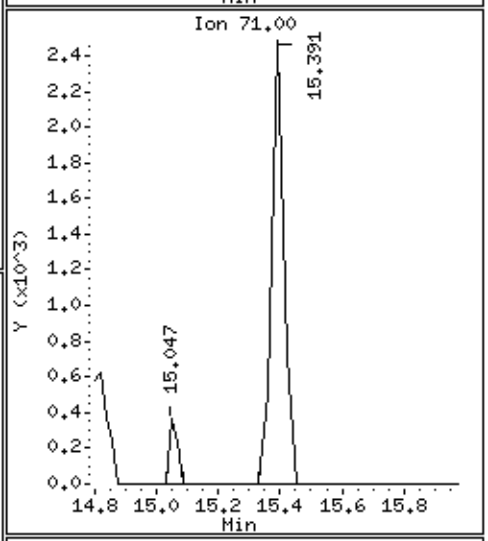


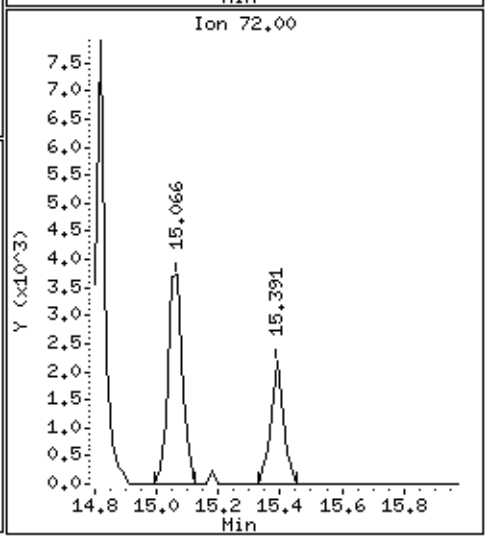












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

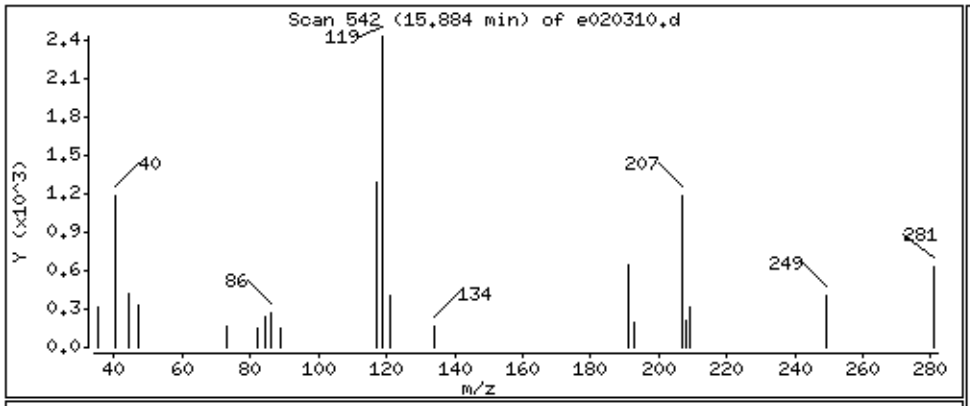
Operator: ef

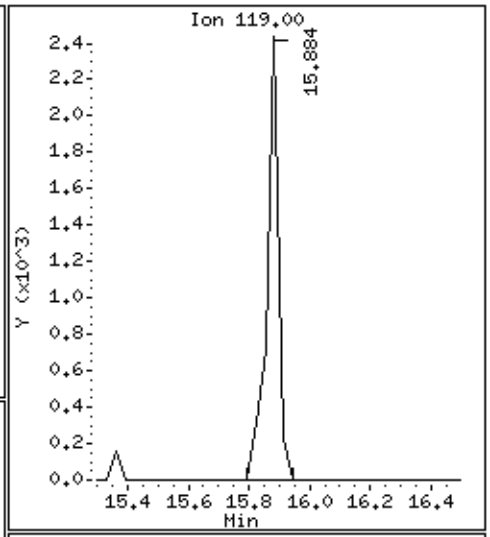
Column phase: RTX-624

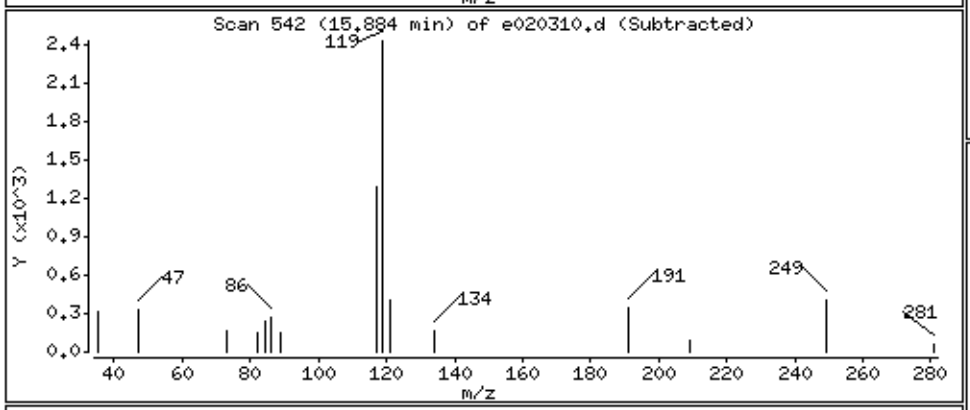
Column diameter: 0.32

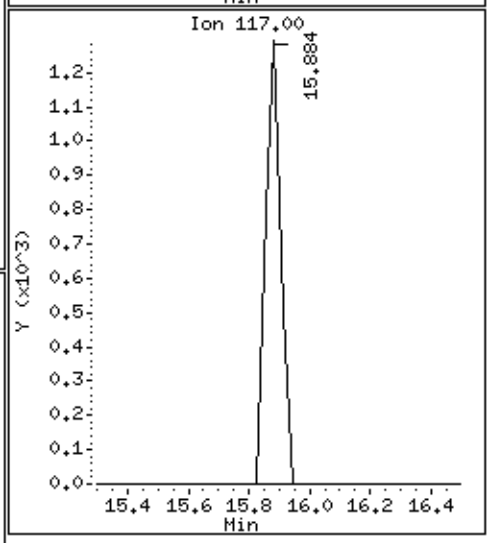
106 Carbon Tetrachloride

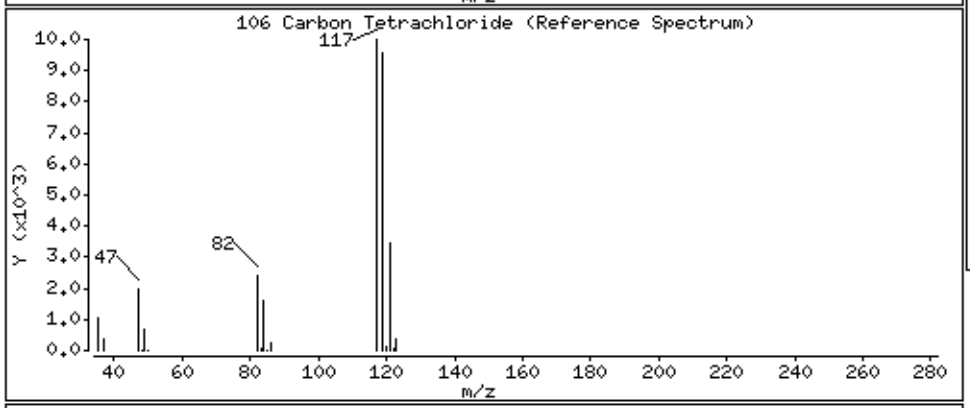
Concentration: 0.08526 PPBV

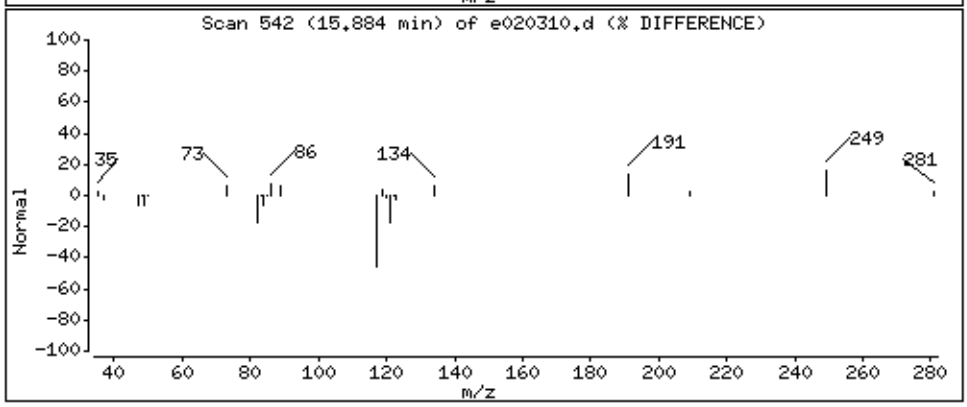












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

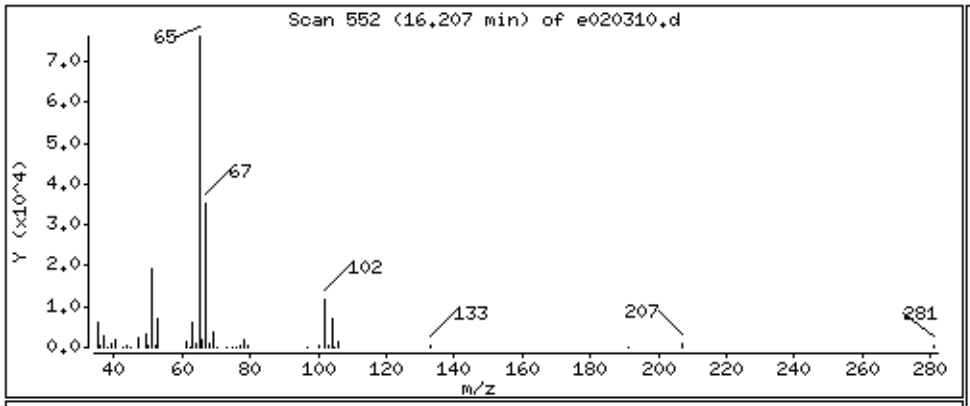
Operator: ef

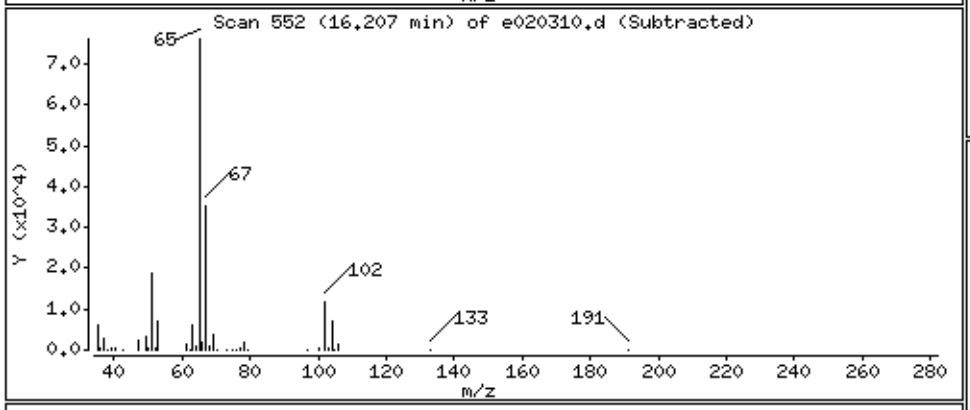
Column phase: RTX-624

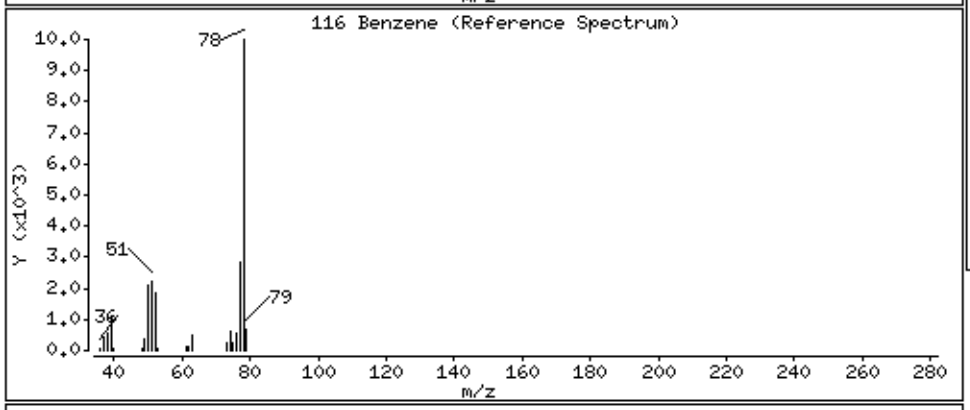
Column diameter: 0.32

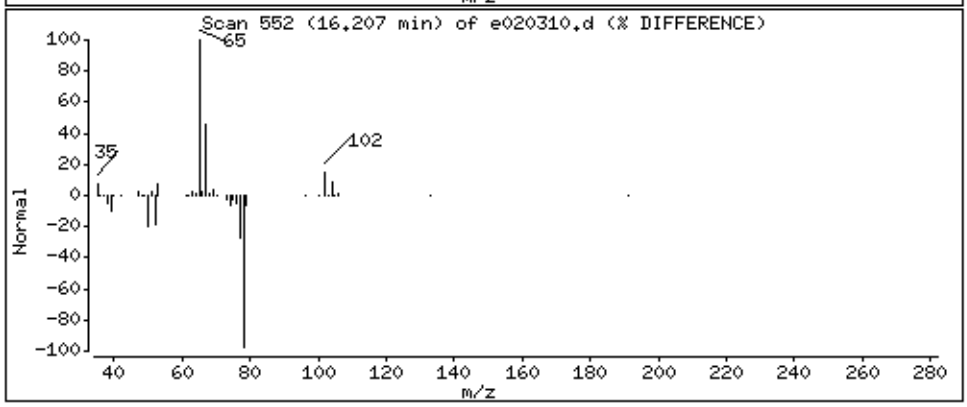
116 Benzene

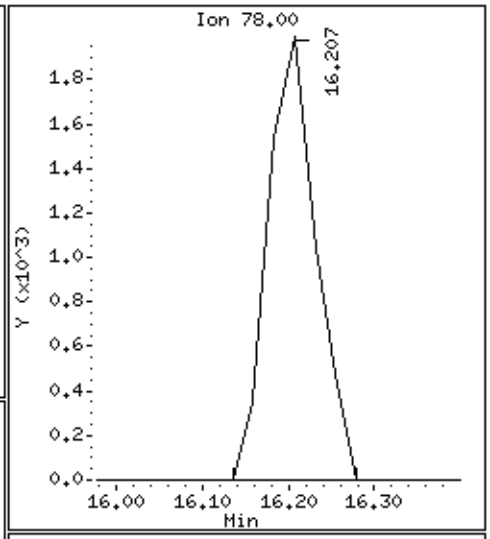
Concentration: 0.1012 PPBV

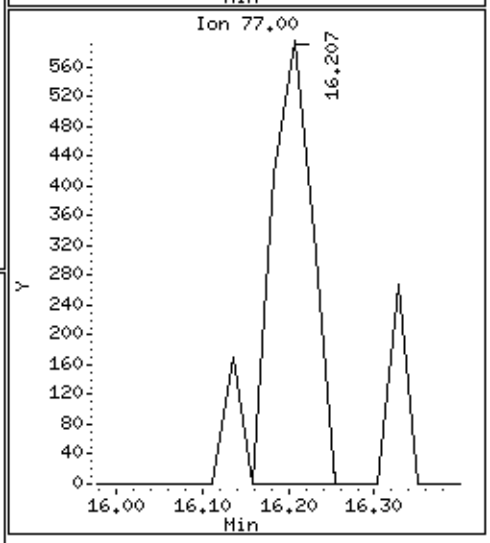












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

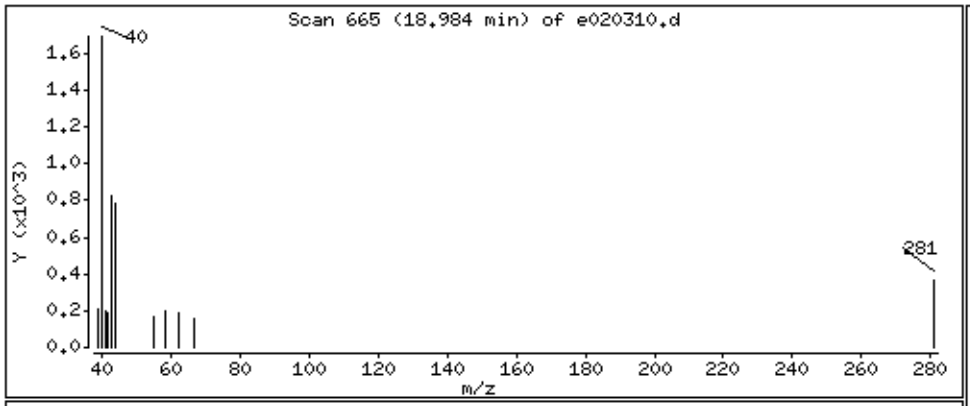
Operator: ef

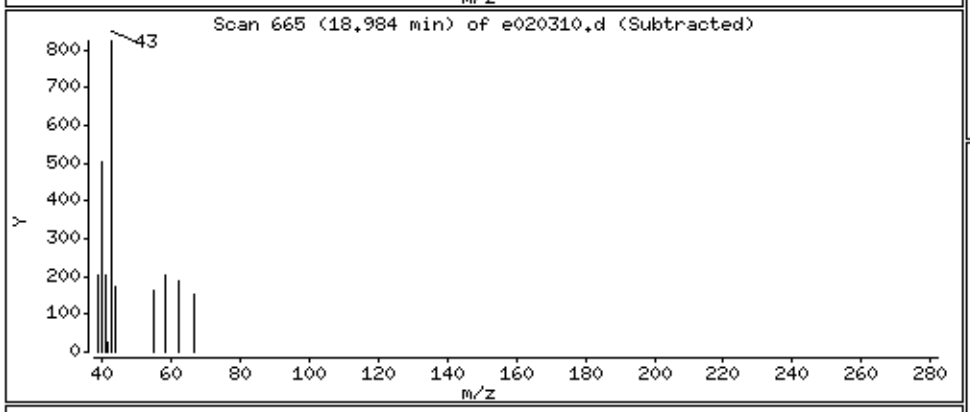
Column phase: RTX-624

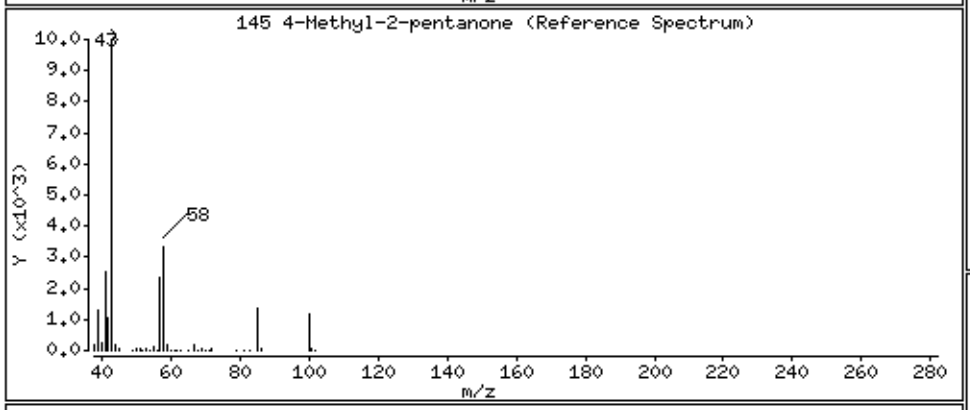
Column diameter: 0.32

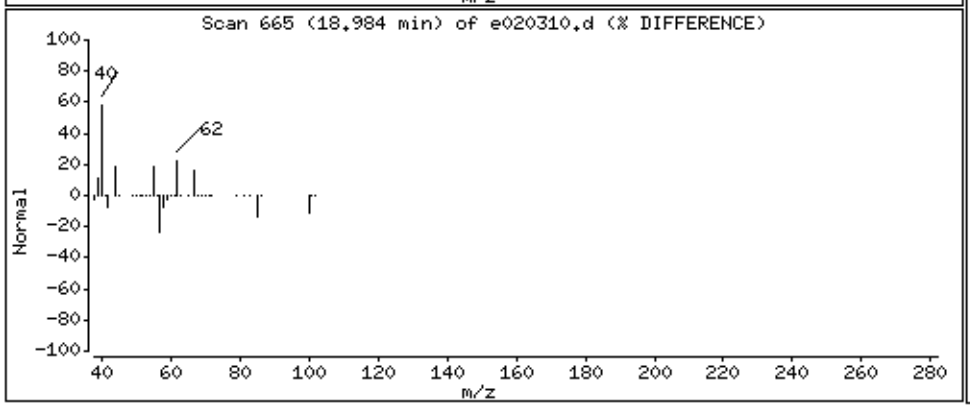
145 4-Methyl-2-pentanone

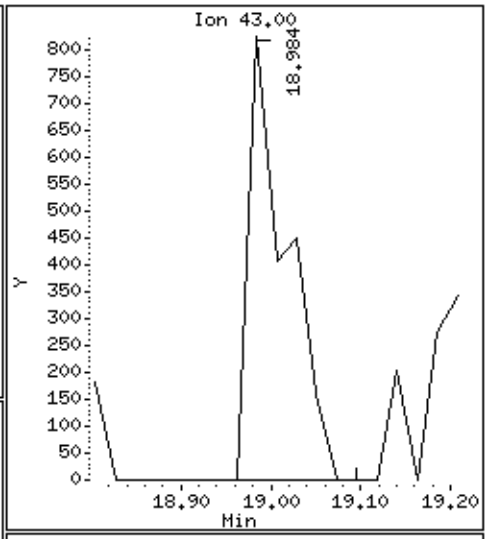
Concentration: 0.05397 PPBV

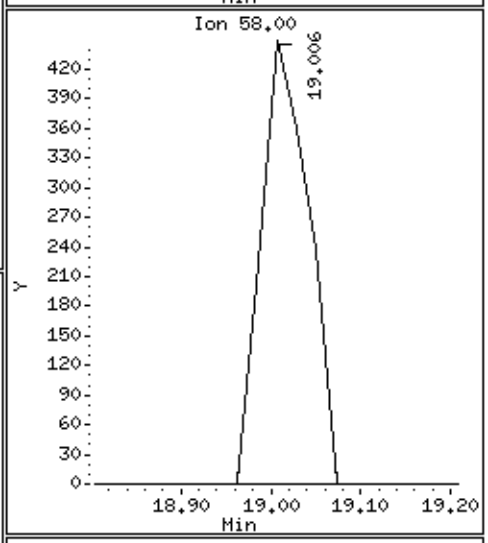


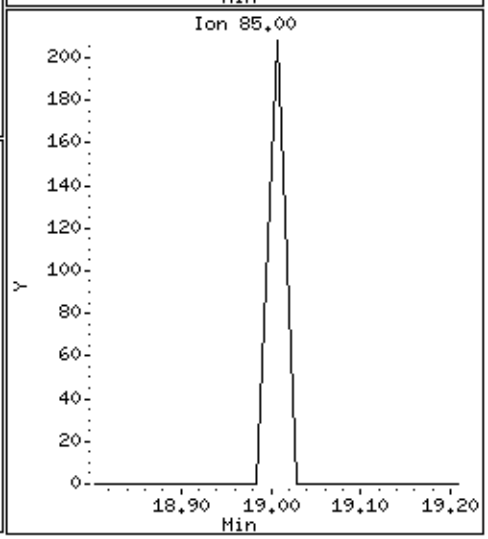












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

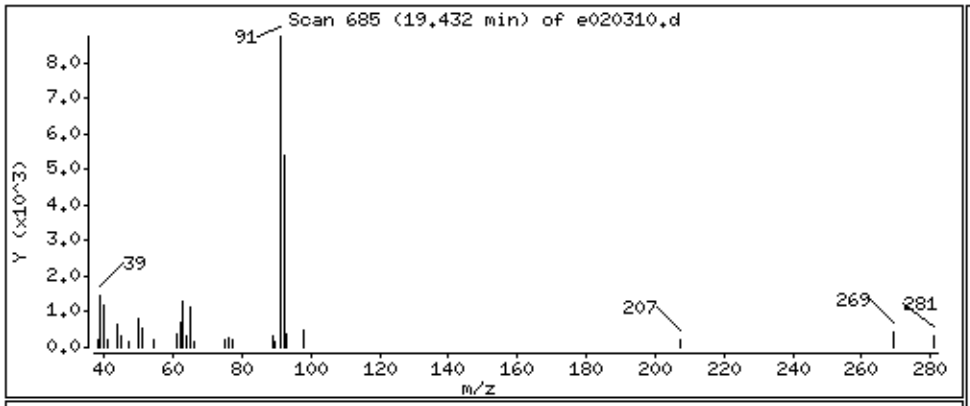
Operator: ef

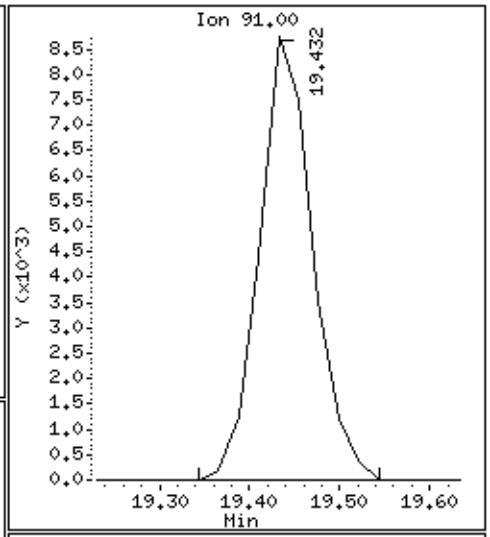
Column phase: RTX-624

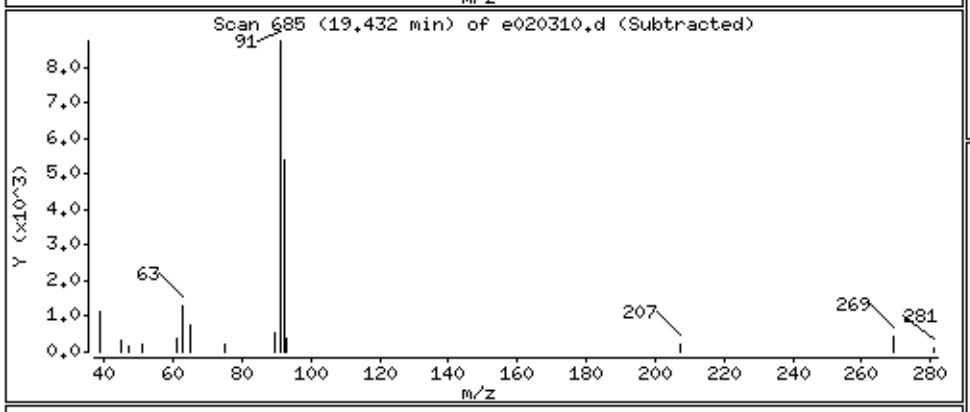
Column diameter: 0.32

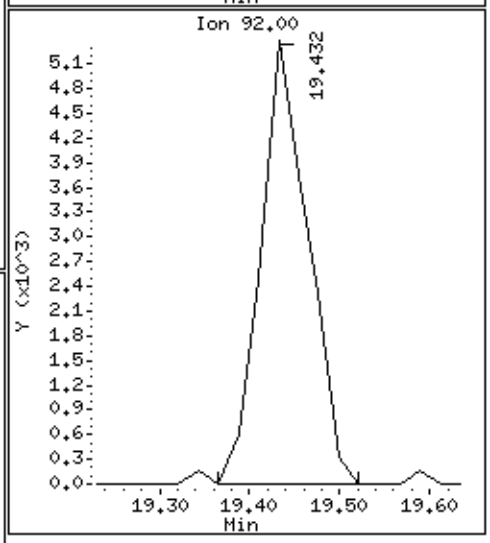
147 Toluene

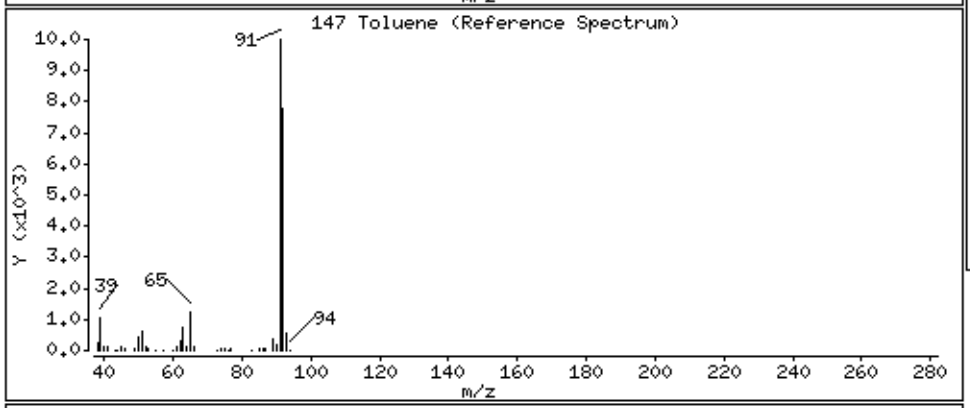
Concentration: 0.3927 PPBV

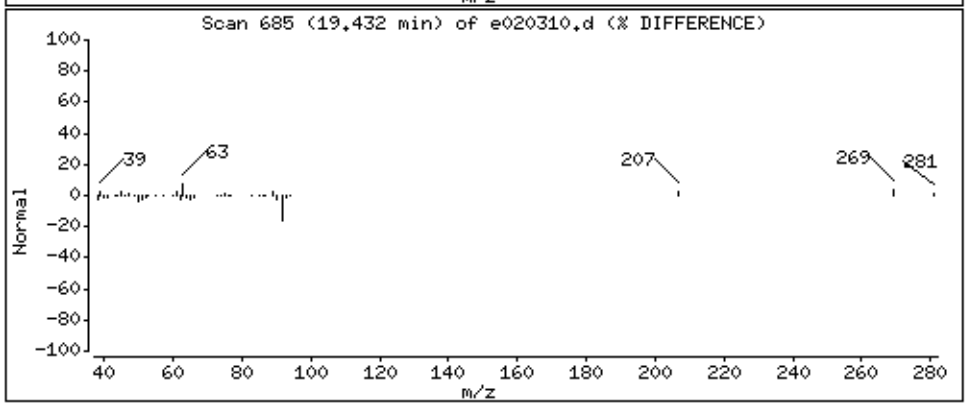












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

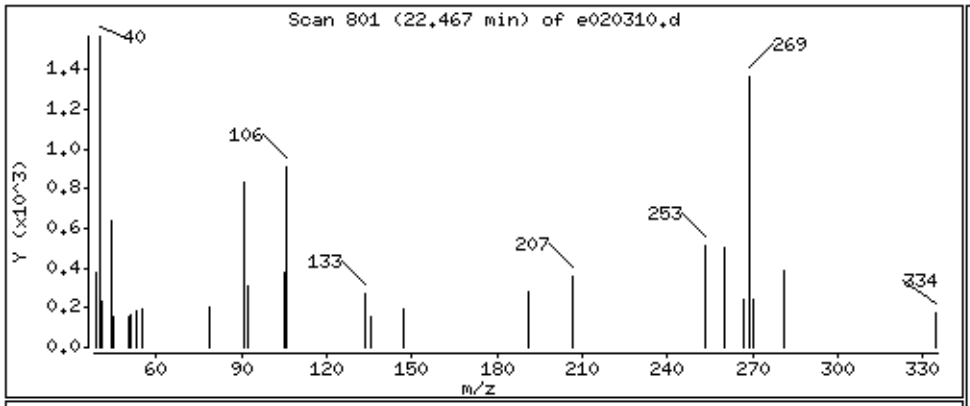
Operator: ef

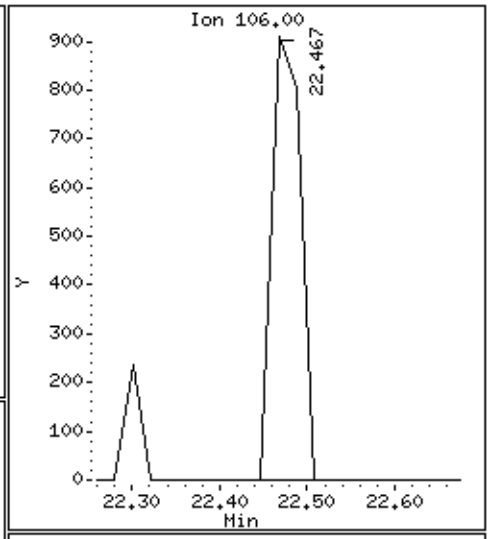
Column phase: RTX-624

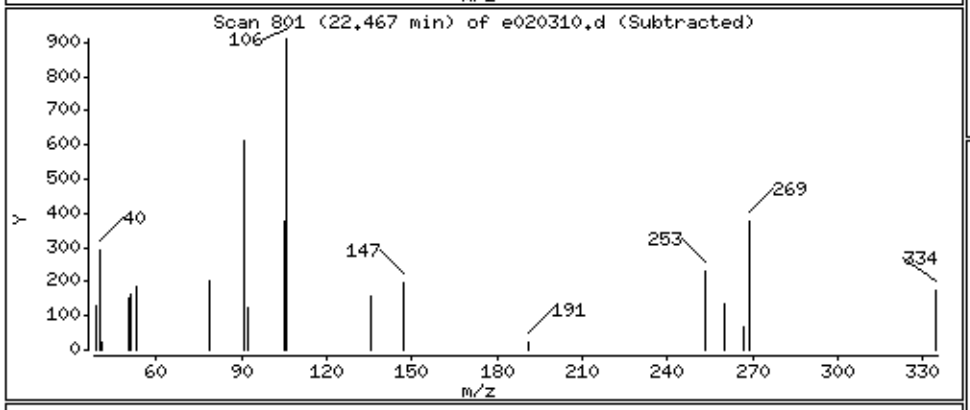
Column diameter: 0.32

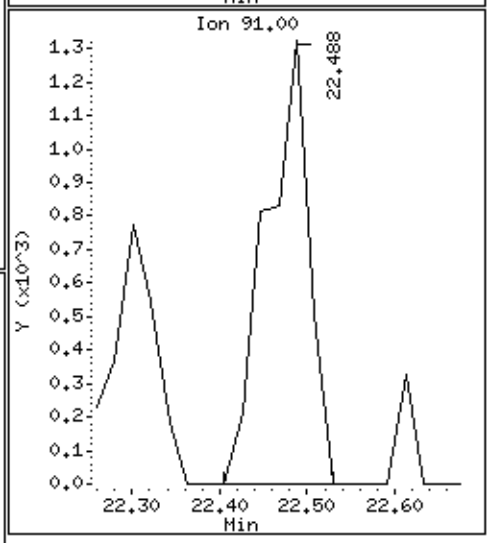
169 m,p-Xylene

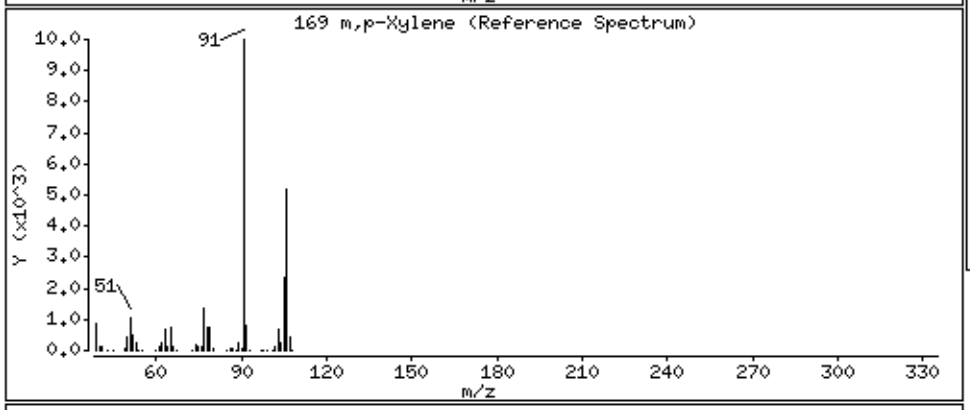
Concentration: 0.04605 PPBV

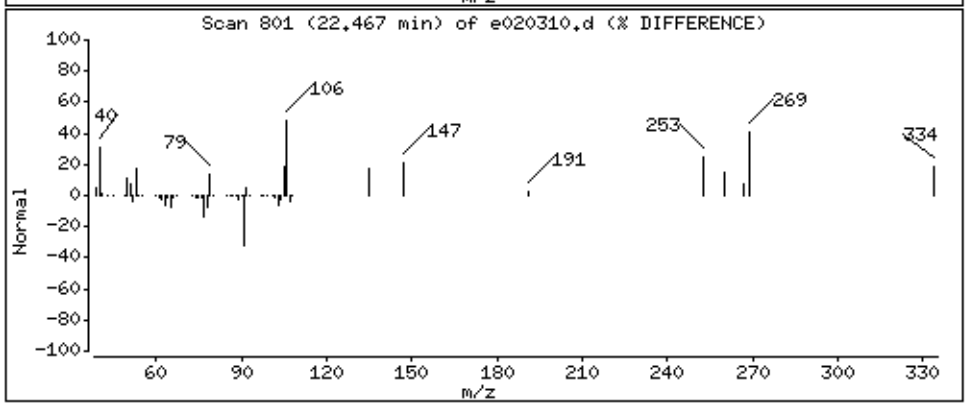












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

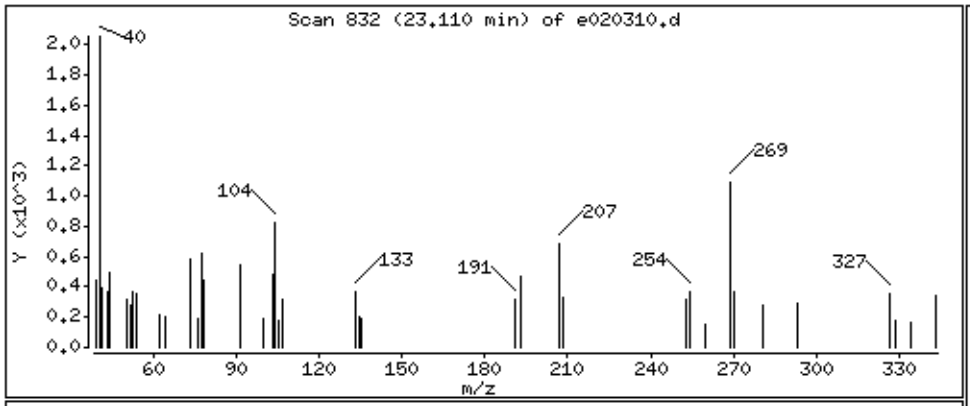
Operator: ef

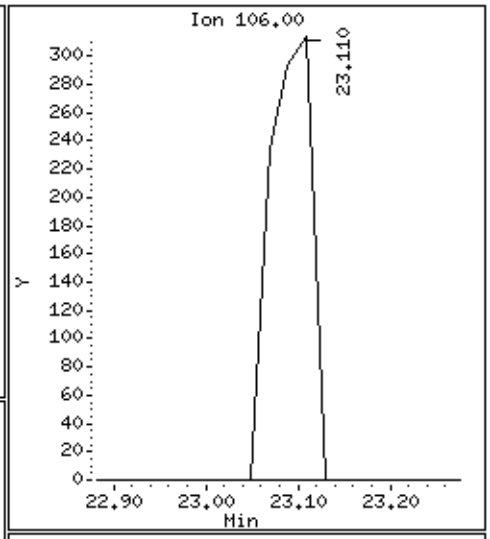
Column phase: RTX-624

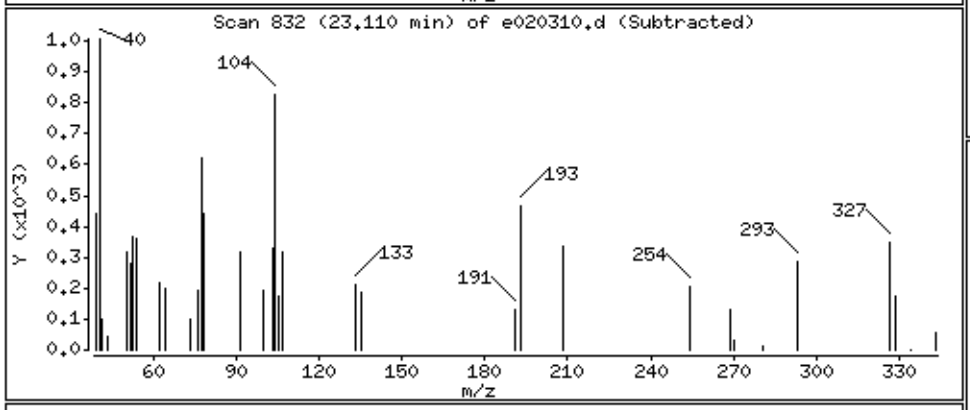
Column diameter: 0.32

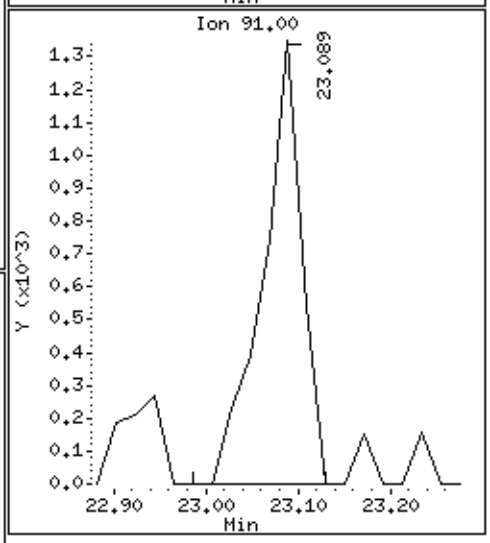
171 o-Xylene

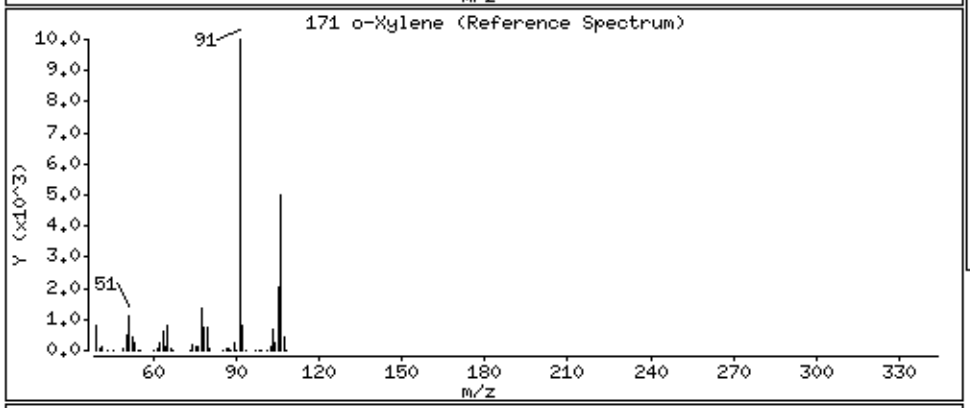
Concentration: 0.02442 PPBV

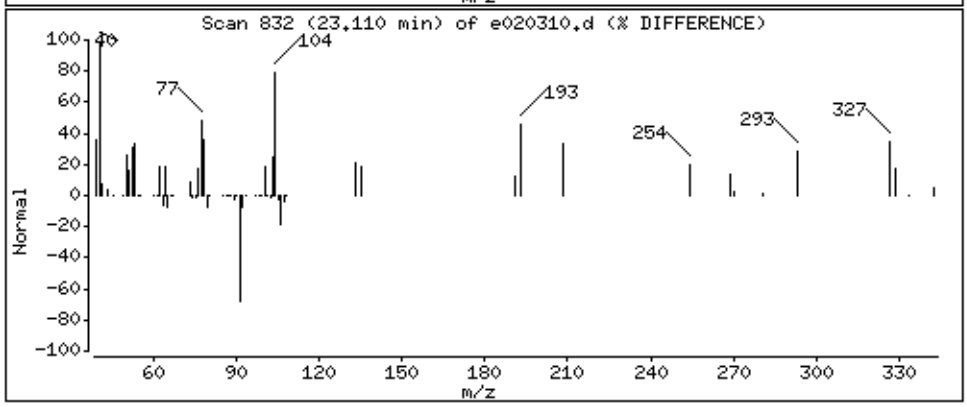












Data File: /chem/msde.i/03Feb2017.b/e020310.d

Date : 03-FEB-2017 14:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00401

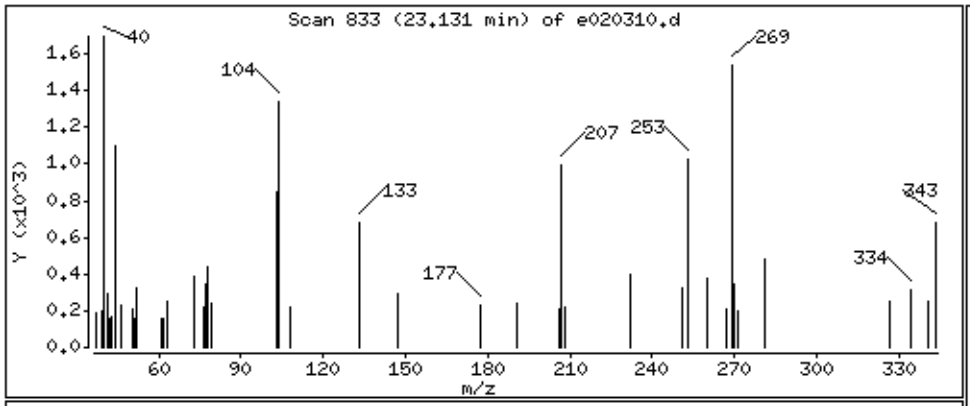
Operator: ef

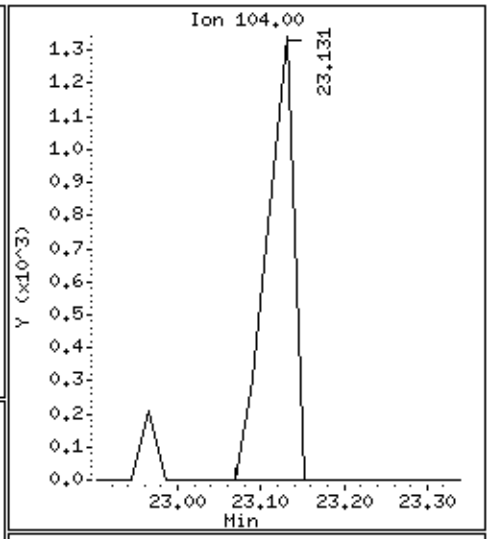
Column phase: RTX-624

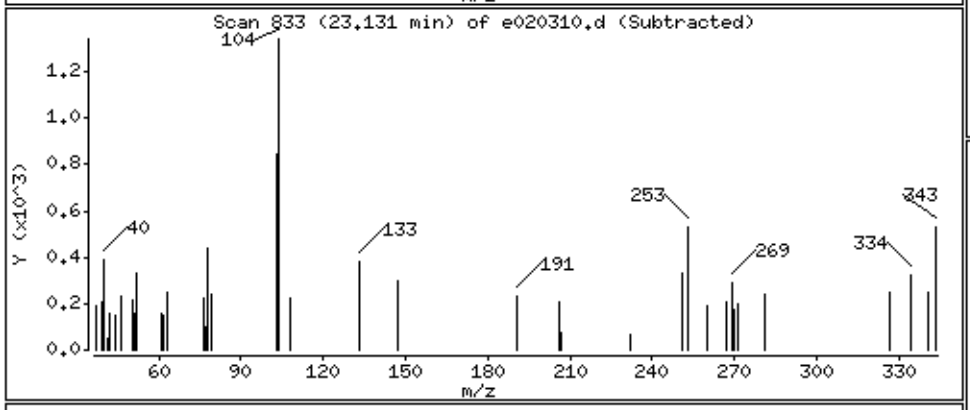
Column diameter: 0.32

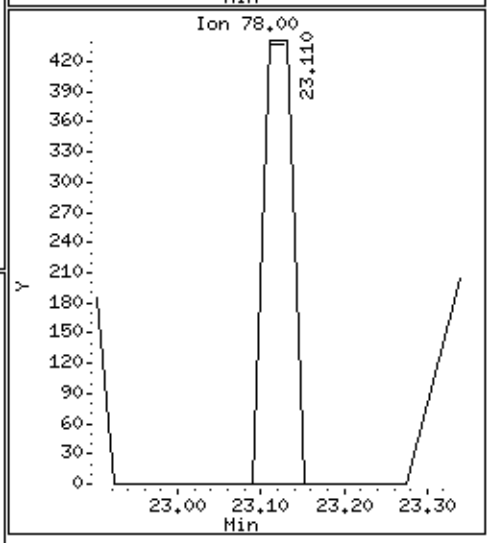
172 Styrene

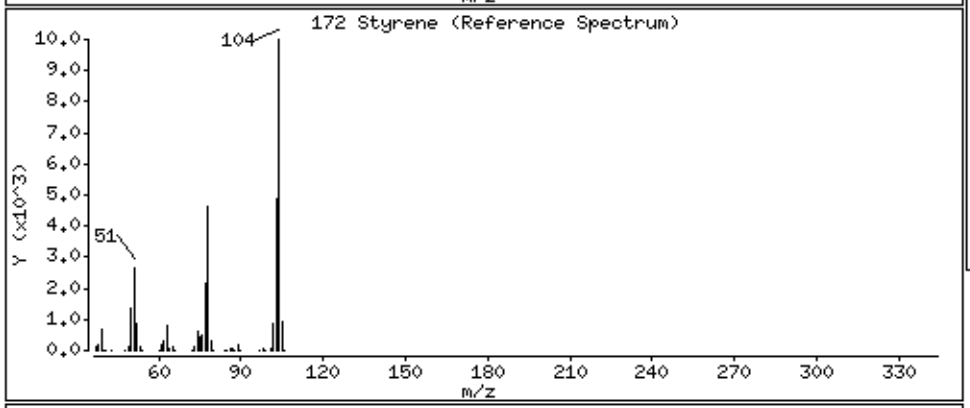
Concentration: 0.04296 PPBV

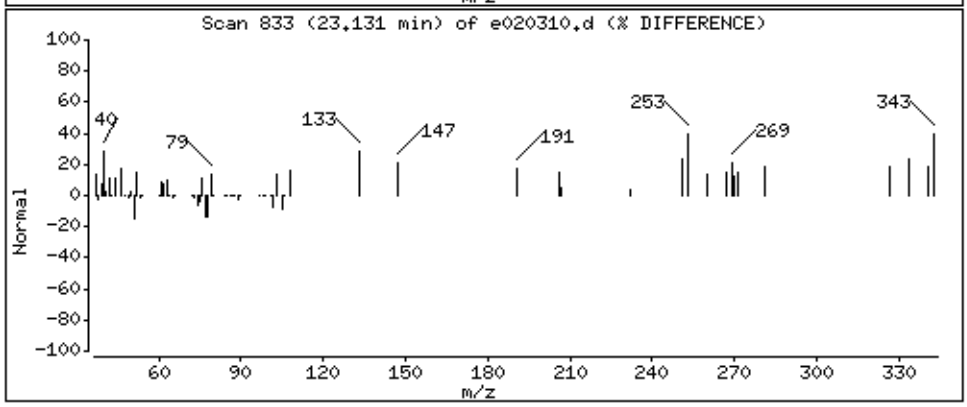












eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B13IA-3-012817

Lab ID#: 1701477B-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.81	2.1
Chloromethane	0.82	0.57 J	1.7	1.2 J
Freon 11	0.16	0.19	0.92	1.1
Ethanol	0.82	1.4	1.5	2.7
Freon 113	0.16	0.052 J	1.2	0.40 J
Acetone	0.82	4.1	1.9	9.8
2-Propanol	0.82	0.36 J	2.0	0.88 J
Carbon Disulfide	0.82	0.15 J	2.6	0.46 J
Methylene Chloride	0.33	0.089 J	1.1	0.31 J
2-Butanone (Methyl Ethyl Ketone)	0.82	1.0	2.4	2.9
Tetrahydrofuran	0.82	0.81 J	2.4	2.4 J
Chloroform	0.16	0.037 J	0.80	0.18 J
Benzene	0.16	0.069 J	0.52	0.22 J
4-Methyl-2-pentanone	0.16	0.044 J	0.67	0.18 J
Toluene	0.16	0.13 J	0.62	0.50 J
2-Hexanone	0.82	0.17 J	3.4	0.70 J
Styrene	0.16	0.10 J	0.70	0.43 J

eurofins | Air Toxics

Client Sample ID: B13IA-3-012817

Lab ID#: 1701477B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020311**	**Date of Collection:**	**1/29/17 2:52:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**2/3/17 02:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.81	2.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	0.57 J	1.7	1.2 J
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	0.19	0.92	1.1
Ethanol	0.82	1.4	1.5	2.7
Freon 113	0.16	0.052 J	1.2	0.40 J
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	4.1	1.9	9.8
2-Propanol	0.82	0.36 J	2.0	0.88 J
Carbon Disulfide	0.82	0.15 J	2.6	0.46 J
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.089 J	1.1	0.31 J
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	Not Detected	0.58	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	1.0	2.4	2.9
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	0.81 J	2.4	2.4 J
Chloroform	0.16	0.037 J	0.80	0.18 J
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	Not Detected	0.56	Not Detected
Carbon Tetrachloride	0.16	Not Detected	1.0	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.069 J	0.52	0.22 J
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Heptane	0.16	Not Detected	0.67	Not Detected
Trichloroethene	0.16	Not Detected	0.88	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	0.044 J	0.67	0.18 J
Toluene	0.16	0.13 J	0.62	0.50 J
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	0.17 J	3.4	0.70 J

eurofins | Air Toxics

Client Sample ID: B13IA-3-012817

Lab ID#: 1701477B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020311**	**Date of Collection:**	**1/29/17 2:52:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**2/3/17 02:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	Not Detected	0.71	Not Detected
m,p-Xylene	0.16	Not Detected	0.71	Not Detected
o-Xylene	0.16	Not Detected	0.71	Not Detected
Styrene	0.16	0.10 J	0.70	0.43 J
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected
Naphthalene	0.82	Not Detected	4.3	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	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/03Feb2017.b/e020311.d
Lab Smp Id: 1701477B-14A
Inj Date : 03-FEB-2017 14:44
Operator : ef Inst ID: msde.i
Smp Info : 250mL# N1639
Misc Info : 5.5"Hg -> 5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.64000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	33476	0.25571	0.4194	80.00- 120.00	100.00
5.220	5.220 (0.339)	87	6920			1.91- 61.91	20.67
17 Chloromethane					CAS #: 74-87-3		
6.980	6.932 (0.454)	50	8470	0.34691	0.5689	80.00- 120.00	100.00(a)
6.956	6.932 (0.452)	52	3664			3.31- 63.31	43.27
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	17747	0.11620	0.1906	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	14458			33.74- 93.74	81.47
42 Ethanol					CAS #: 64-17-5		
11.681	11.661 (0.759)	45	11764	0.88373	1.449	80.00- 120.00	100.00
11.681	11.661 (0.759)	46	6747			9.60- 69.60	57.35
11.681	11.661 (0.759)	43	6186			0.00- 59.21	52.58
49 Freon 113					CAS #: 76-13-1		
12.081	12.080 (0.785)	151	3244	0.03181	0.05217	80.00- 120.00	100.00(a)
12.081	12.080 (0.785)	153	2099			34.83- 94.83	64.70

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113 (continued)
 12.081  12.080 (0.785)   101      4444                    77.16- 137.16   136.99
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.385  12.366 (0.805)    58     42145 2.51809    4.130  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    147557                   344.13- 404.13   350.11
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.462  12.461 (0.810)    76     10448 0.09024   0.1480  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.747  12.728 (0.828)    45     11815 0.21927   0.3596  80.00- 120.00   100.00(a)
 12.728  12.728 (0.827)    43      5914                     0.00-  55.65    50.06
  0.000  12.728 (0.000)    59         0                     0.00-  34.42     0.00
-------------------------------------------------------------------------------
   66 Methylene Chloride                          CAS #: 75-09-2
 13.176  13.176 (0.856)    84      2232 0.05449  0.08937  80.00- 120.00   100.00(a)
 13.176  13.176 (0.856)    49      1563                    83.76- 143.76    70.03
 13.176  13.176 (0.856)    51       759                     2.61-  62.61    34.02
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.066  15.047 (0.979)    72     11015 0.60691   0.9953  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     39498                   325.72- 385.72   358.56
 15.047  15.047 (0.978)    57      4908                     1.13-  61.13    44.56
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                             CAS #: 109-99-9
 15.391  15.391 (1.000)    42     16191 0.49284   0.8082  80.00- 120.00   100.00(a)
 15.391  15.391 (1.000)    71      7020                    20.32-  80.32    43.36
 15.391  15.391 (1.000)    72      7669                    21.98-  81.98    47.37
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    147452 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    113122                   46.73- 106.73    76.72
 15.391  15.391 (1.000)    49    126070                   55.35- 115.35    85.50
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.484  15.453 (1.006)    83      2421 0.02266  0.03716  80.00- 120.00   100.00(a)
 15.484  15.453 (1.006)    85       808                    36.62-  96.62    33.38
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.207  16.207 (0.968)    78      5095 0.04191  0.06874  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      1414                     0.00-  53.00    27.77
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    209379 4.94474    4.945  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    108519                   22.67-  82.67    51.83
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	492369	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	77129			0.00- 45.16	15.66
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
19.007	19.006 (1.136)	43	1926	0.02663	0.04368	80.00- 120.00	100.00(a)
0.000	19.006 (0.000)	58	0			10.02- 70.02	0.00
0.000	19.006 (0.000)	85	0			0.00- 52.01	0.00
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.298	19.298 (1.153)	98	459045	4.80636	4.806	80.00- 120.00	100.00
19.298	19.298 (1.153)	70	60780			0.00- 40.89	13.24
19.298	19.298 (1.153)	100	310825			40.09- 100.09	67.71
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	11833	0.08046	0.1320	80.00- 120.00	100.00(a)
19.455	19.432 (1.162)	92	7509			27.79- 87.79	63.46
158 2-Hexanone					CAS #: 591-78-6		
20.795	20.795 (0.938)	58	3772	0.10457	0.1715	80.00- 120.00	100.00(a)
20.795	20.795 (0.938)	43	8949			162.96- 222.96	237.22
20.767	20.795 (0.936)	100	1433			0.00- 59.39	38.01
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	470727	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	233001			17.27- 77.27	49.50
172 Styrene					CAS #: 100-42-5		
23.110	23.110 (1.042)	104	6929	0.06142	0.1007	80.00- 120.00	100.00(a)
23.110	23.110 (1.042)	78	3110			20.21- 80.21	44.89
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	340300	5.17538	5.175	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	310600			66.74- 126.74	91.27
23.856	23.856 (1.076)	176	328525			67.47- 127.47	96.54

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: e020311.d
Lab Smp Id: 1701477B-14A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.5"Hg -> 5.0psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	147452	4.19
123 1,4-Difluorobenze	499834	299900	699768	492369	-1.49
163 Chlorobenzene-d5	467575	280545	654605	470727	0.67

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	22.18	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: 09-Feb-2017 10:46

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 03Feb2017
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1701477B-14A
Level: LOW Operator: ef
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT09EtOH.spk Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.5"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.945	98.89	70-130
$ 146 Toluene-d8	5.000	4.806	96.13	70-130
$ 177 4-Bromofluorobenze	5.000	5.175	103.51	70-130

Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

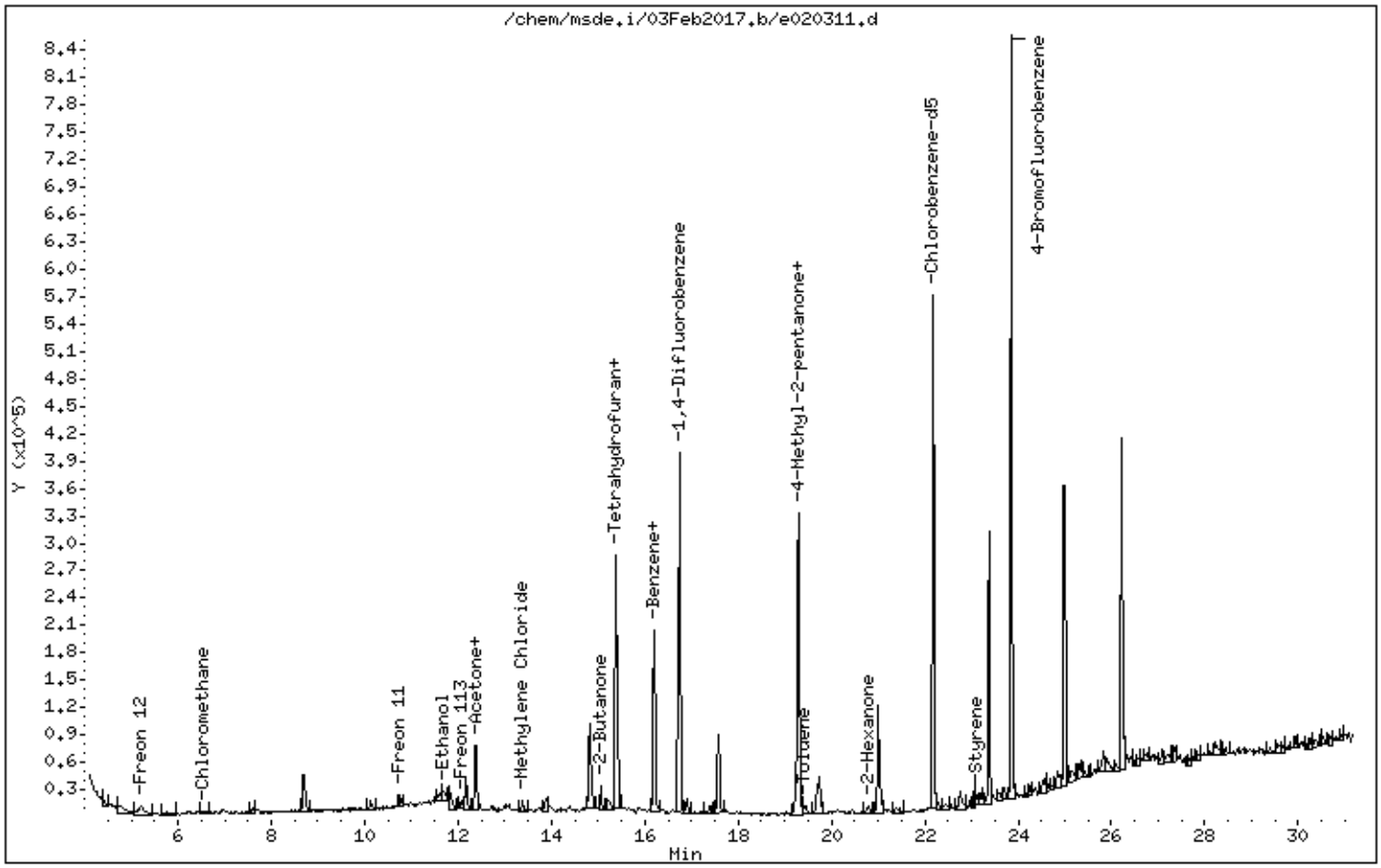
Instrument: msde.i

Sample Info: 250mL# N1639

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

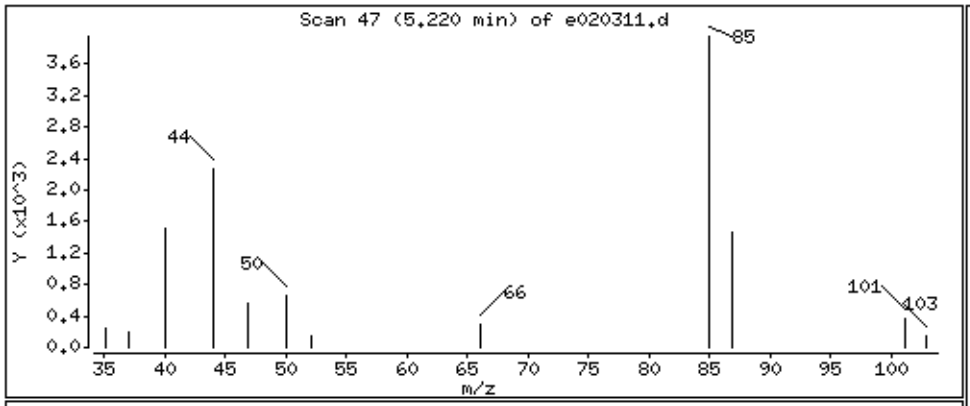
Operator: ef

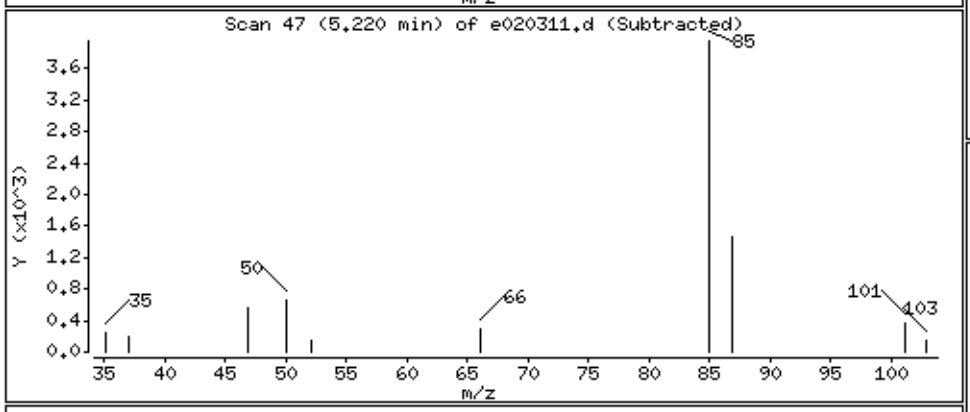
Column phase: RTX-624

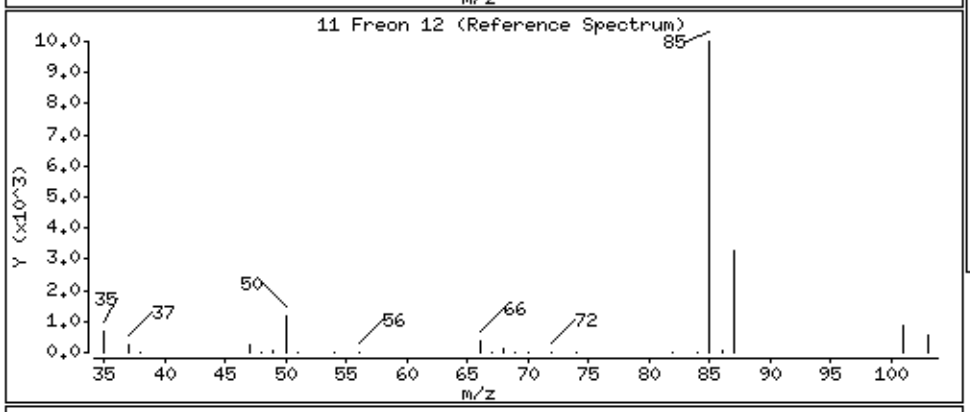
Column diameter: 0.32

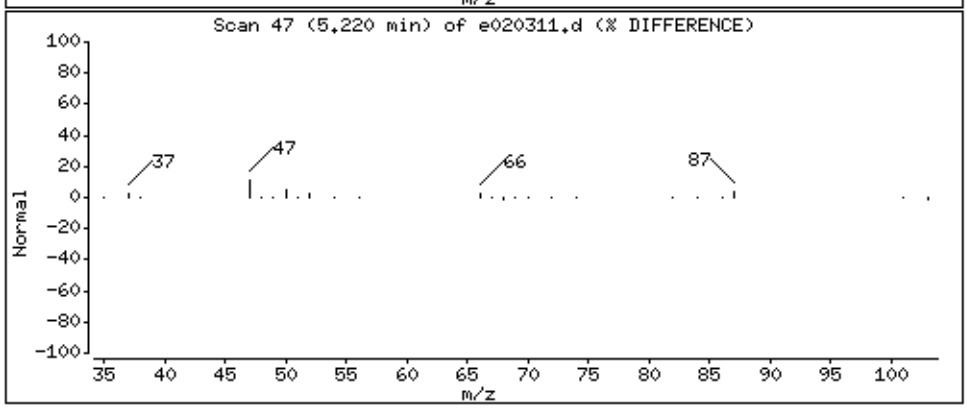
11 Freon 12

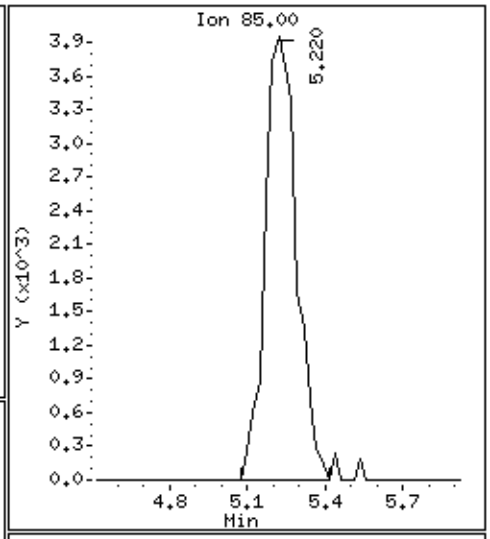
Concentration: 0.4194 PPBV

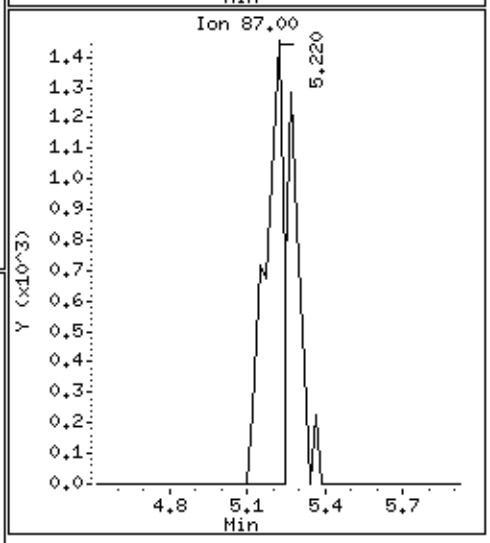












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

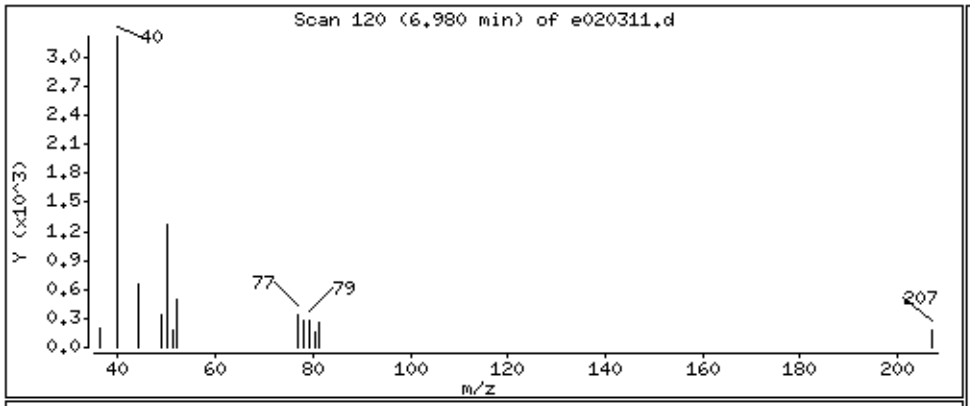
Operator: ef

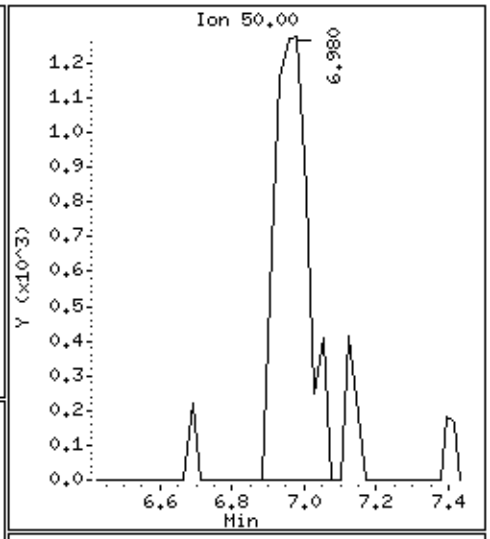
Column phase: RTX-624

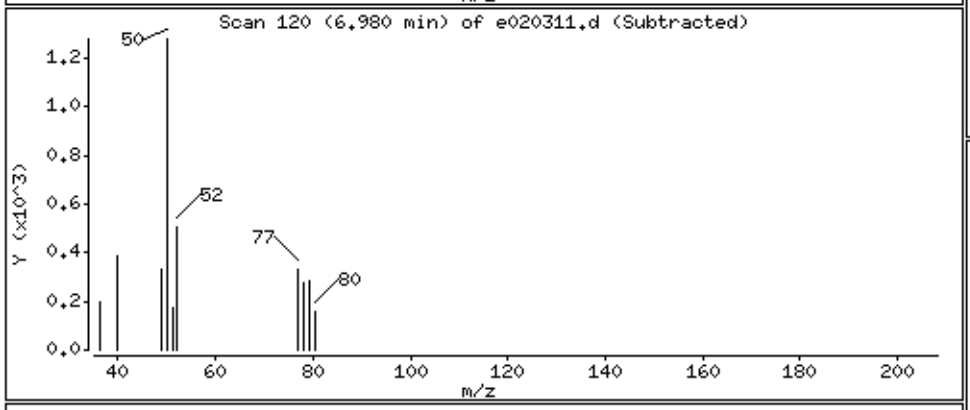
Column diameter: 0.32

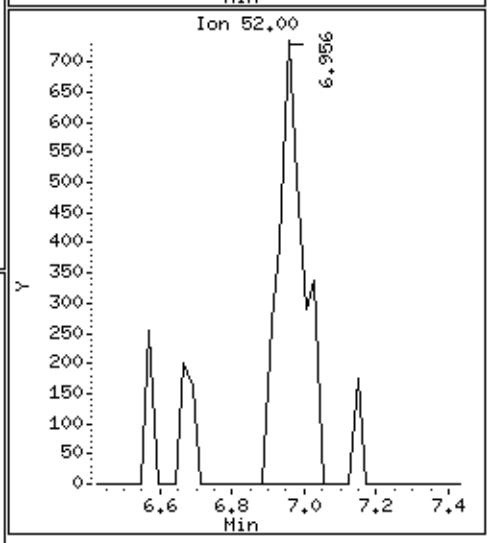
17 Chloromethane

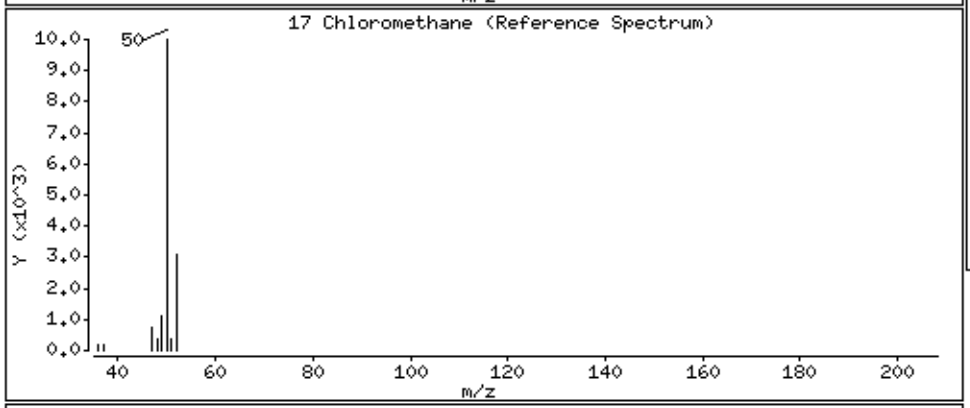
Concentration: 0.5689 PPBV

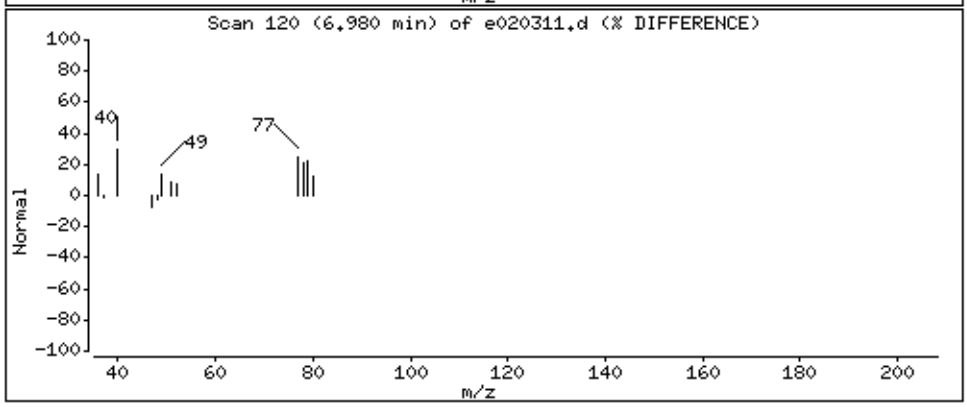












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

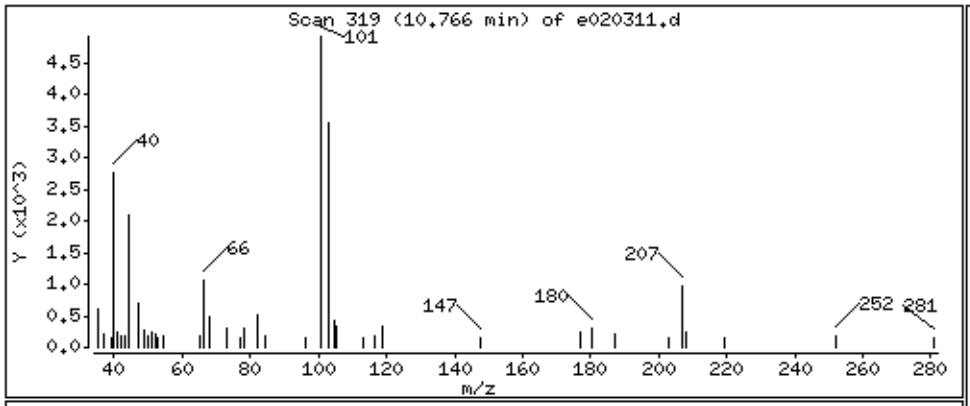
Operator: ef

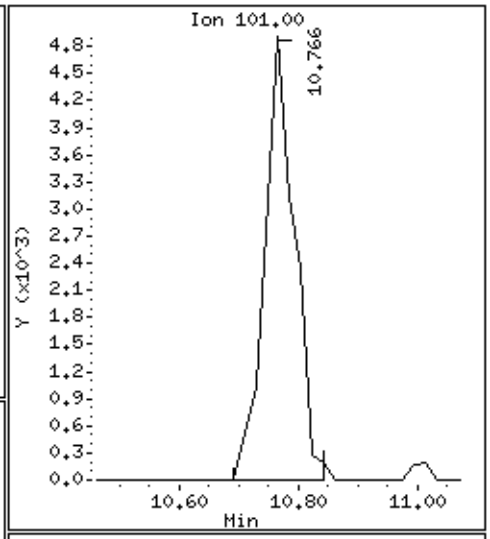
Column phase: RTX-624

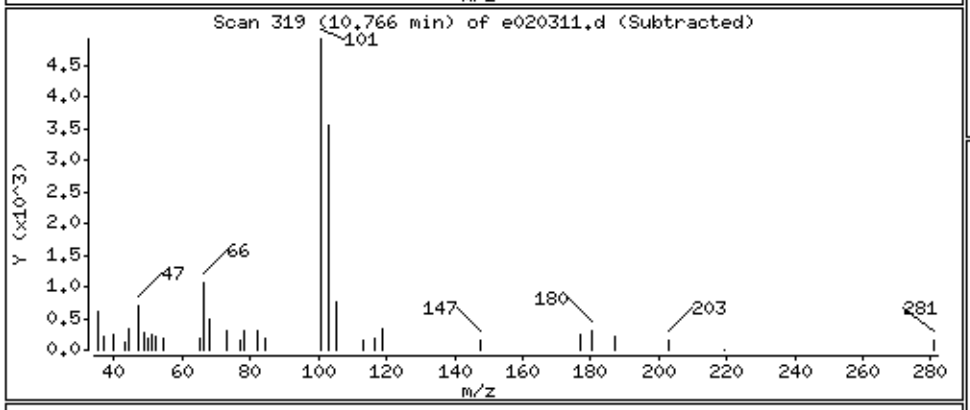
Column diameter: 0.32

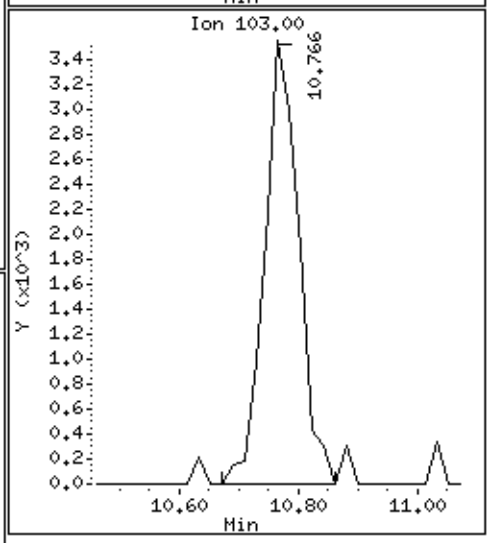
35 Freon 11

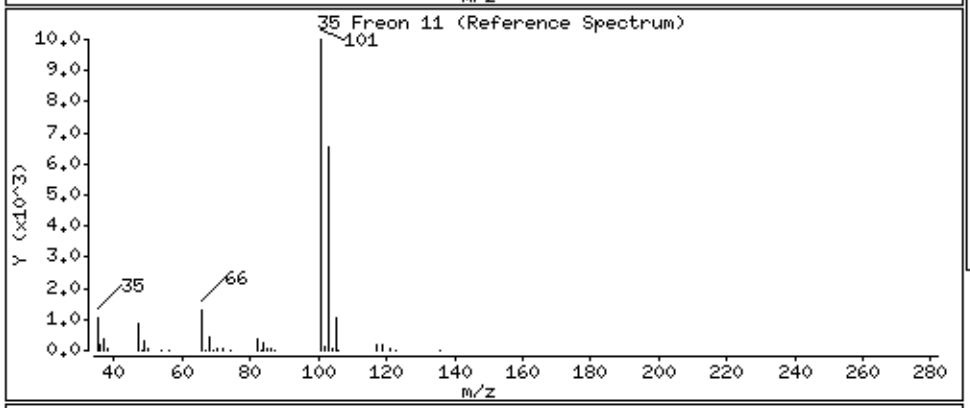
Concentration: 0.1906 PPBV

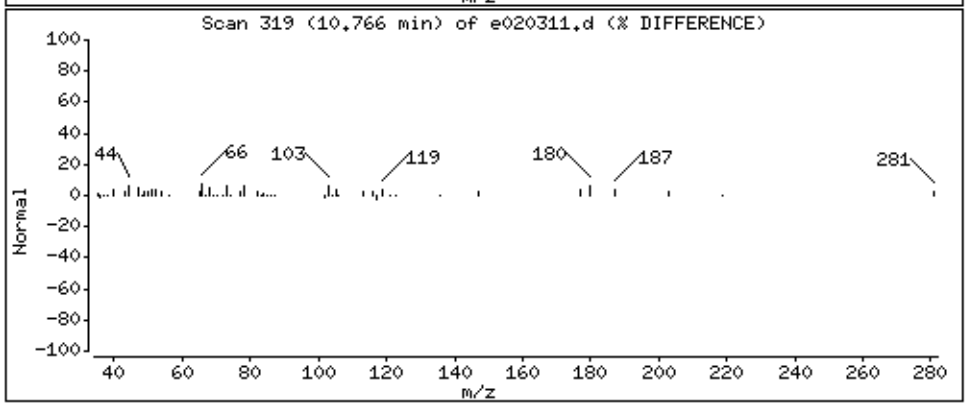












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

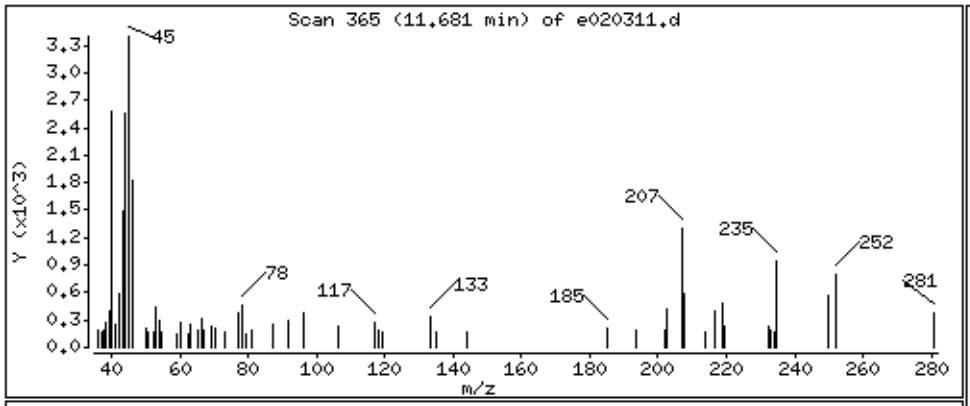
Operator: ef

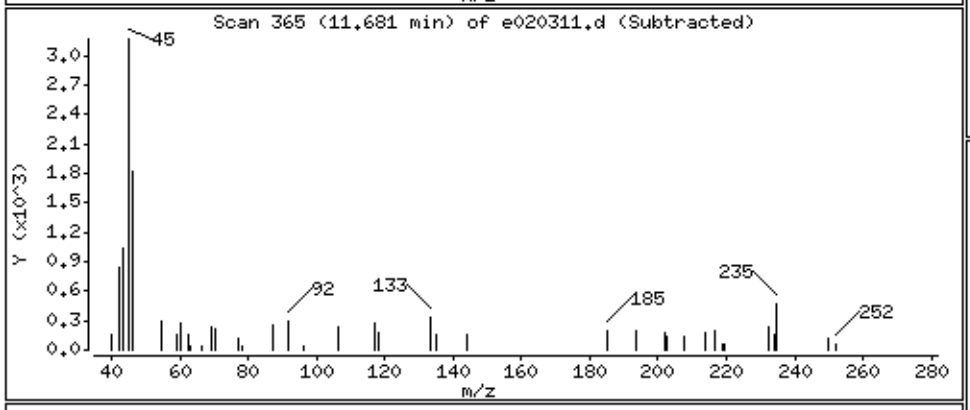
Column phase: RTX-624

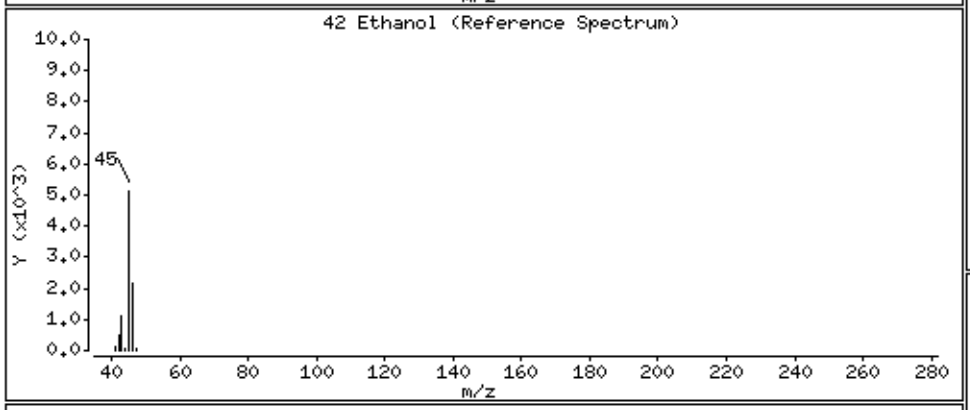
Column diameter: 0.32

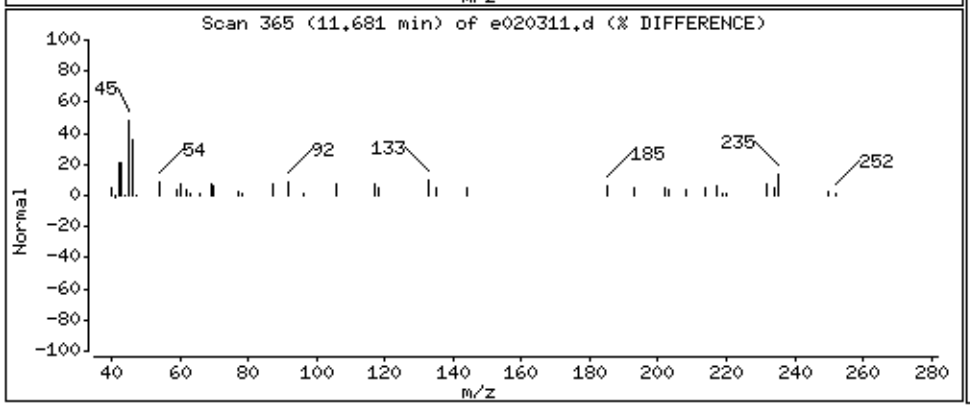
42 Ethanol

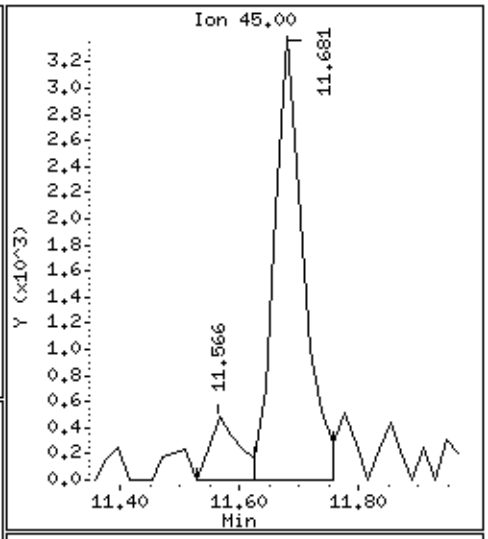
Concentration: 1.449 PPBV

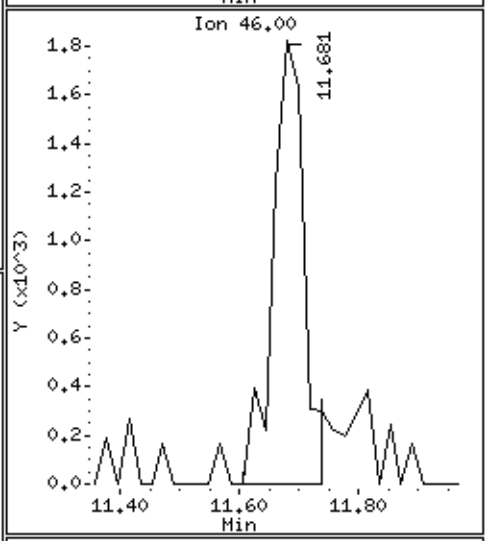


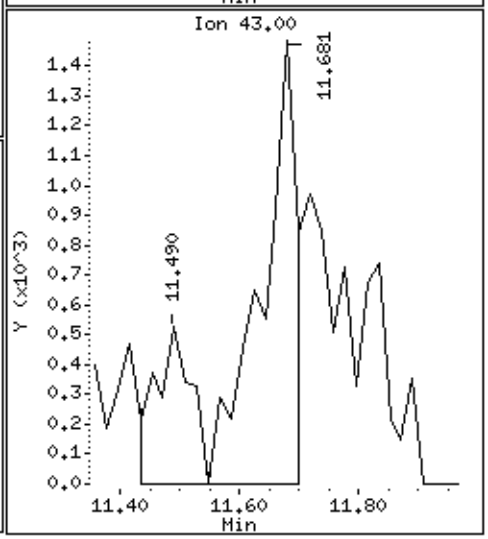












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

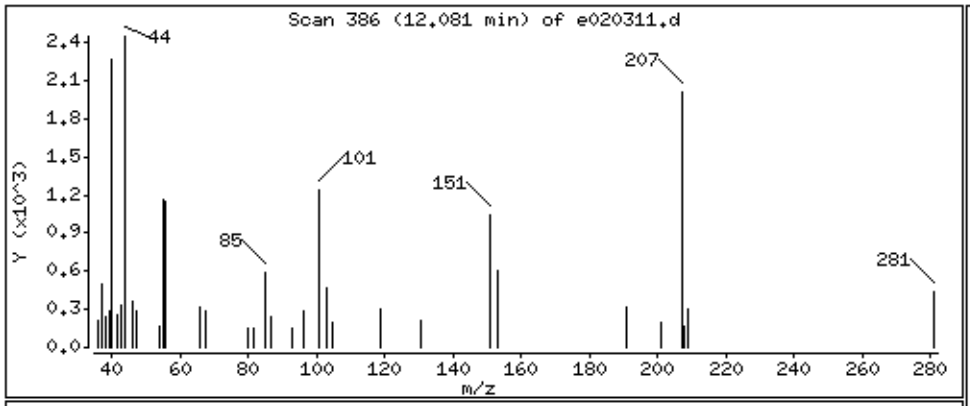
Operator: ef

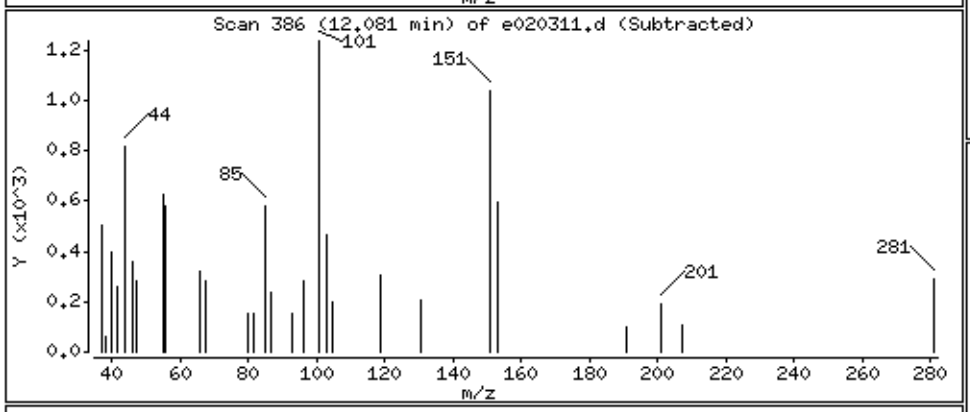
Column phase: RTX-624

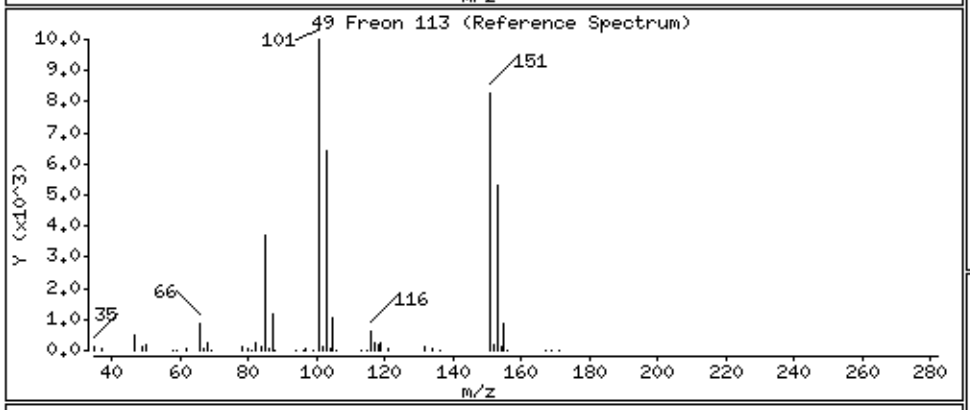
Column diameter: 0.32

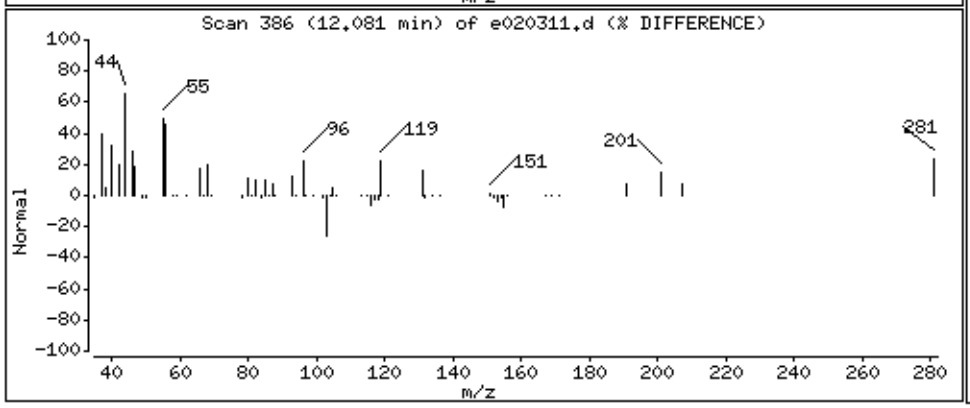
49 Freon 113

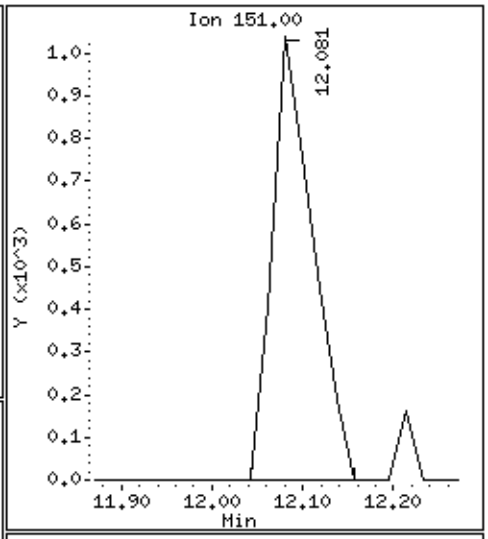
Concentration: 0.05217 PPBV

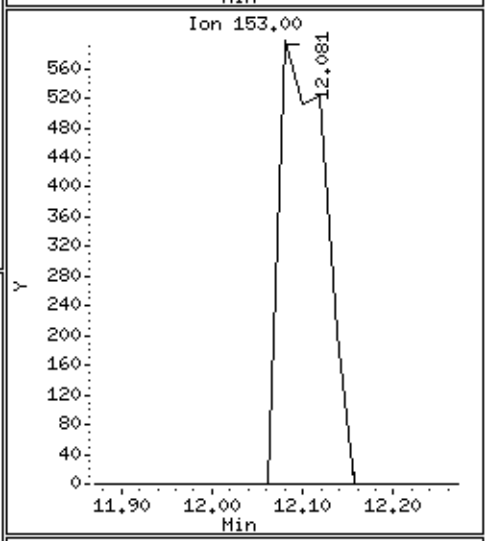


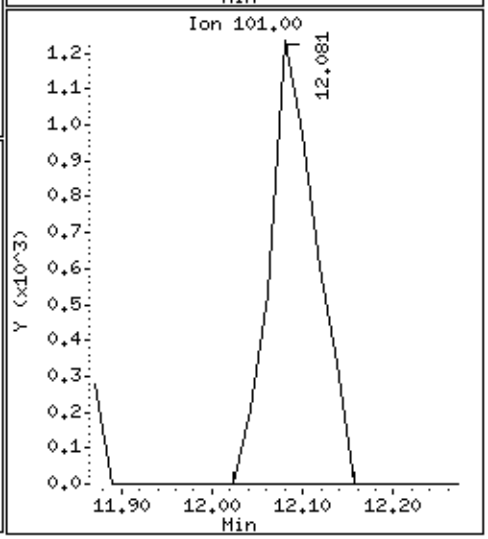












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

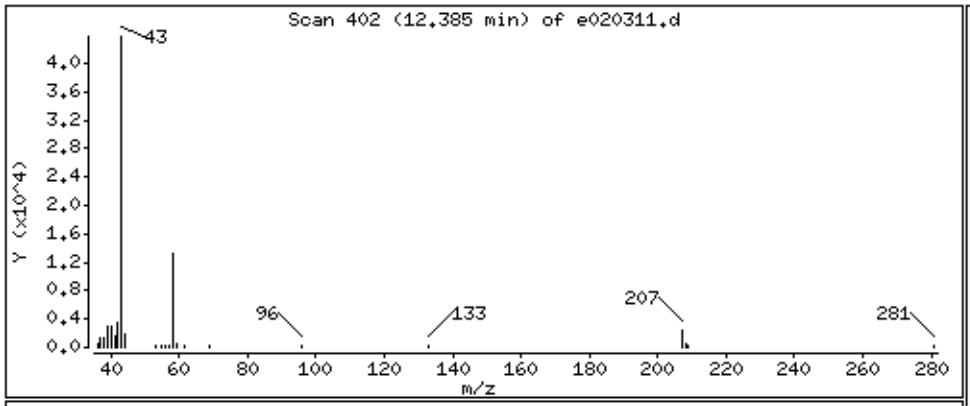
Operator: ef

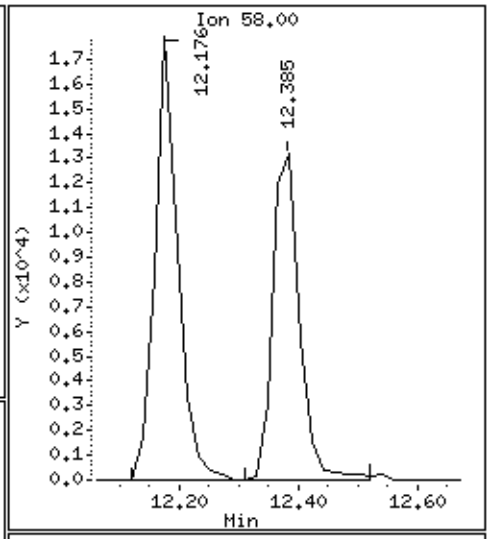
Column phase: RTX-624

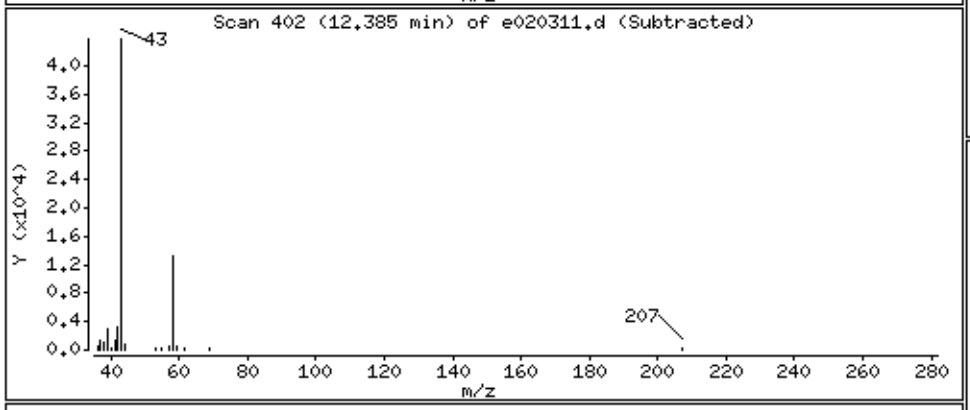
Column diameter: 0.32

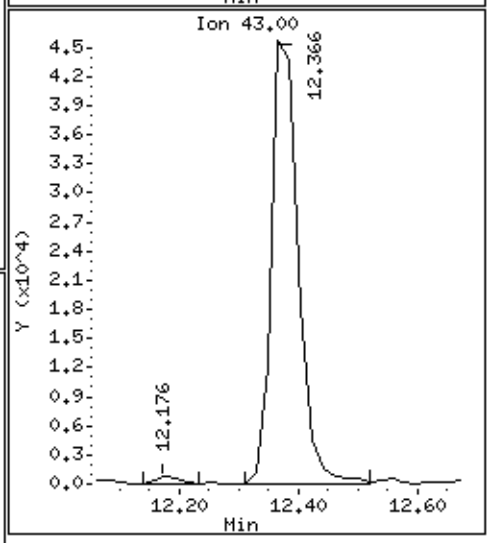
52 Acetone

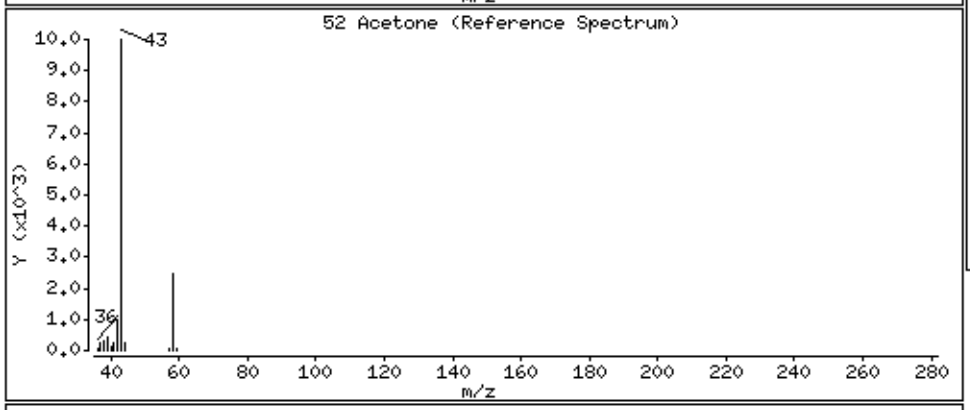
Concentration: 4.130 PPBV

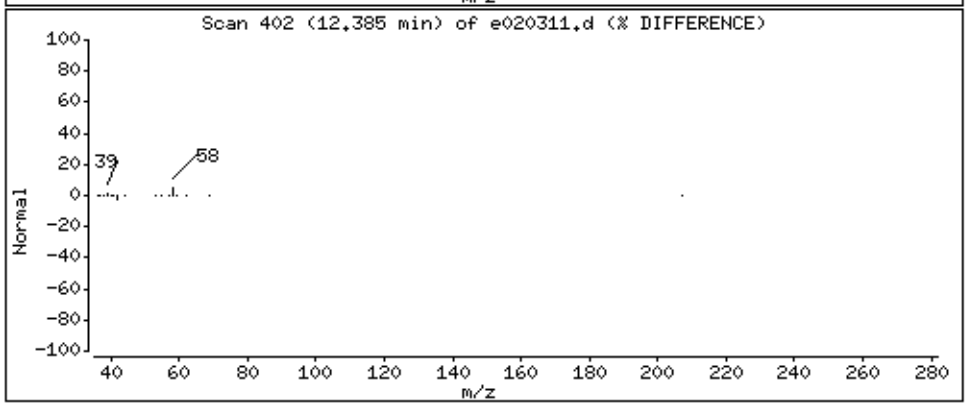












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

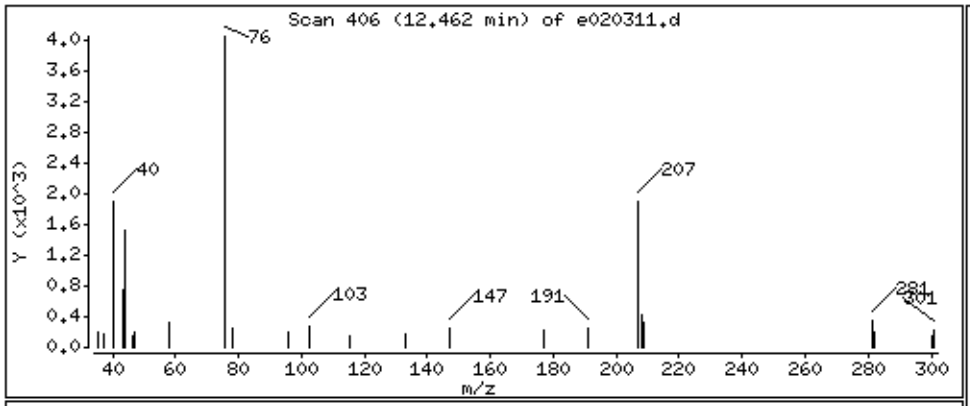
Operator: ef

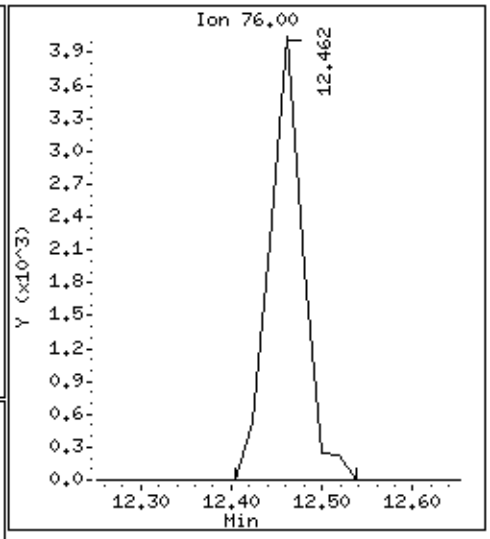
Column phase: RTX-624

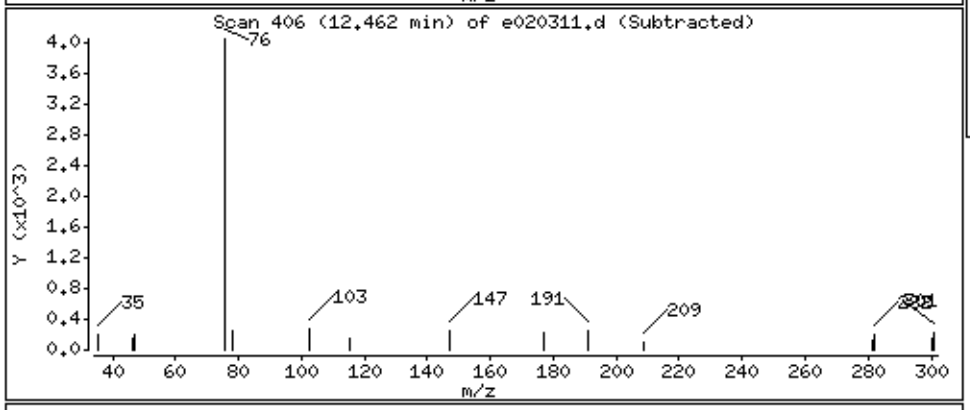
Column diameter: 0.32

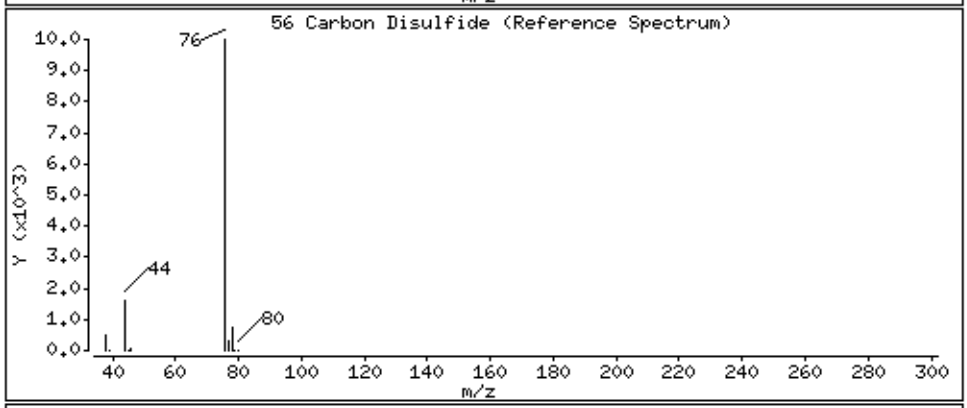
56 Carbon Disulfide

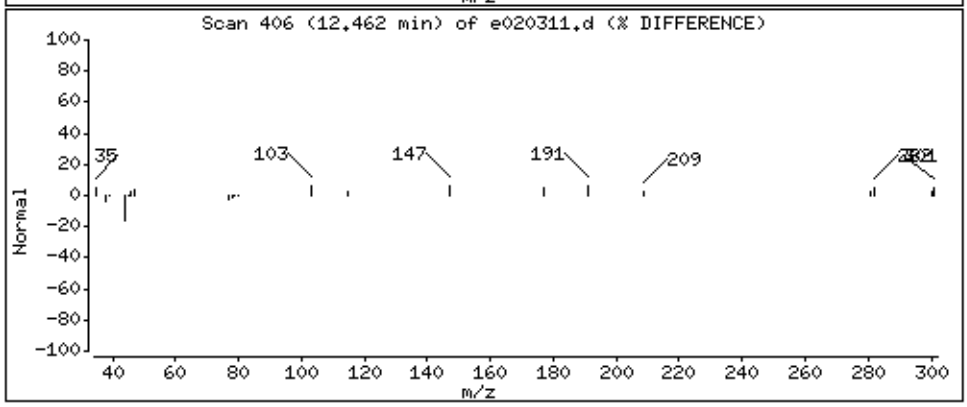
Concentration: 0.1480 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

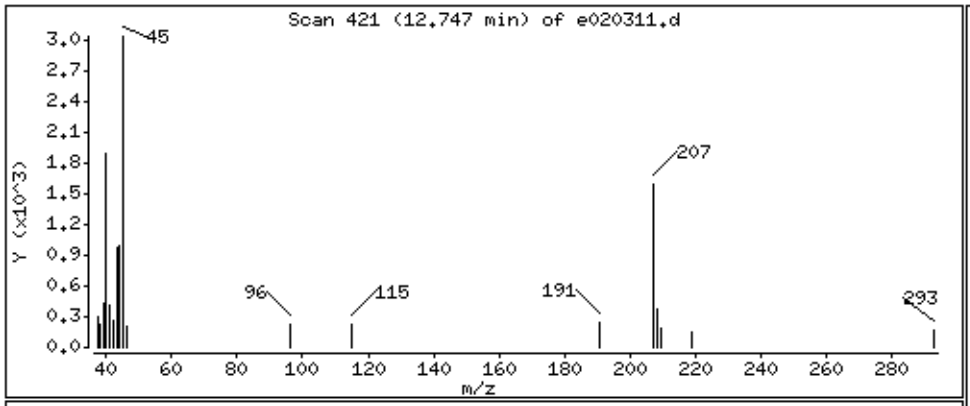
Operator: ef

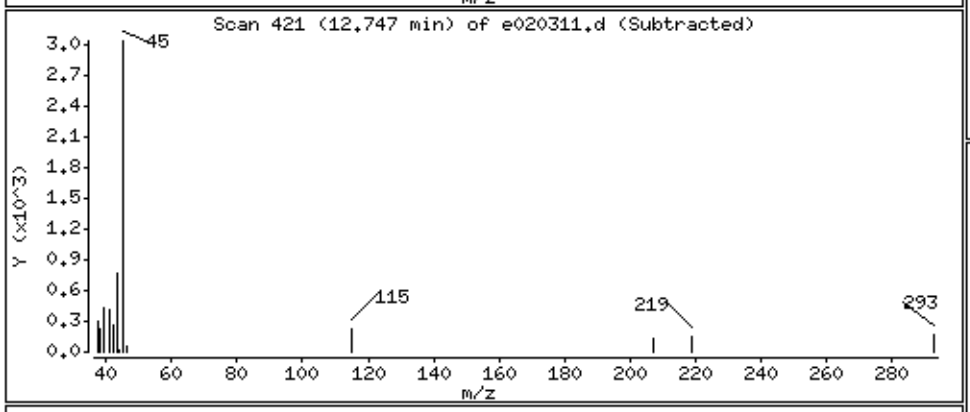
Column phase: RTX-624

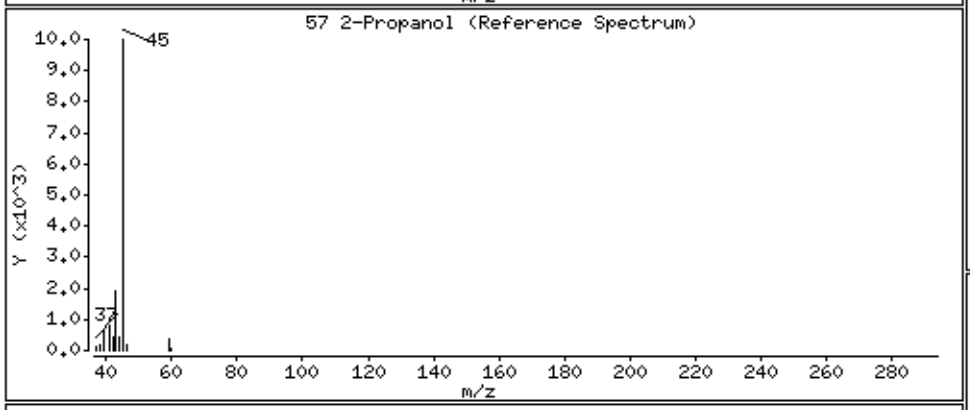
Column diameter: 0.32

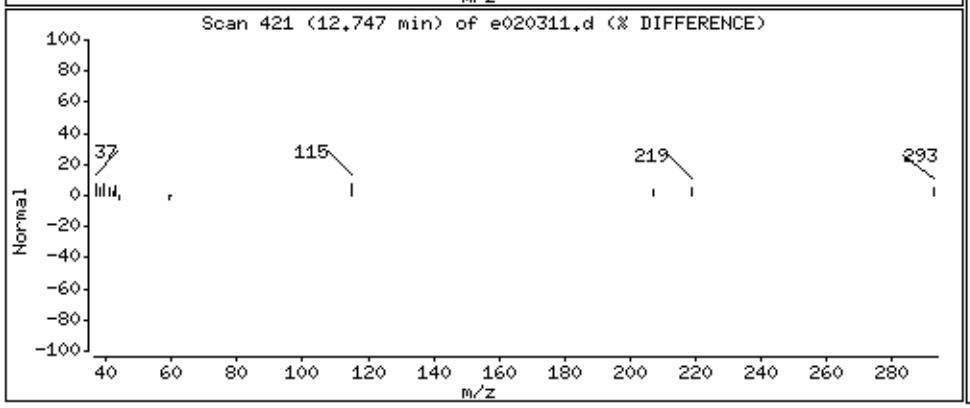
57 2-Propanol

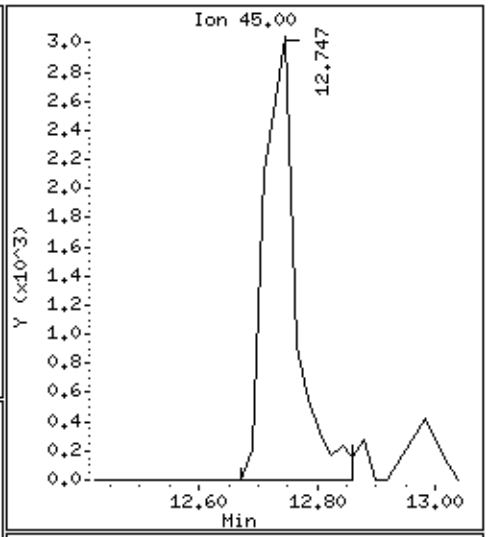
Concentration: 0.3596 PPBV

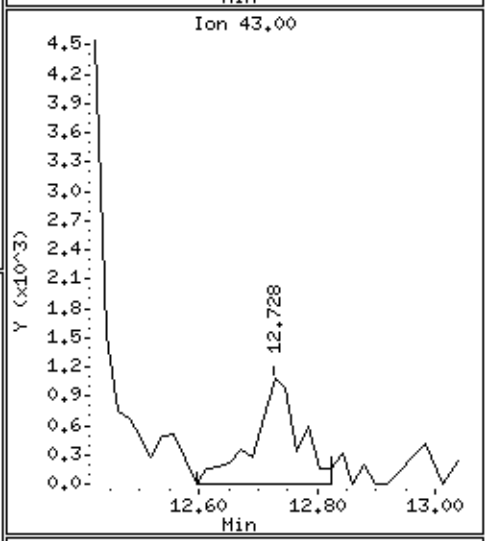


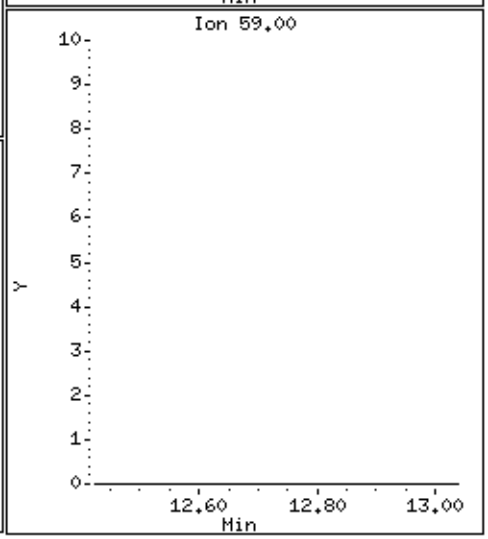












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

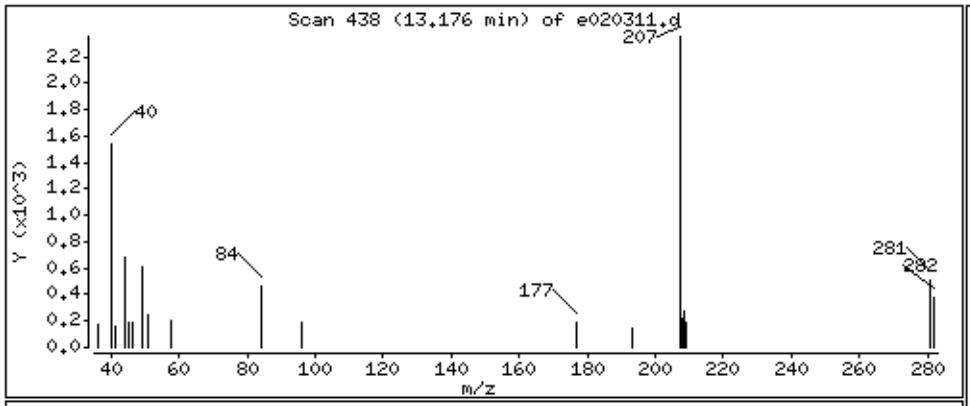
Operator: ef

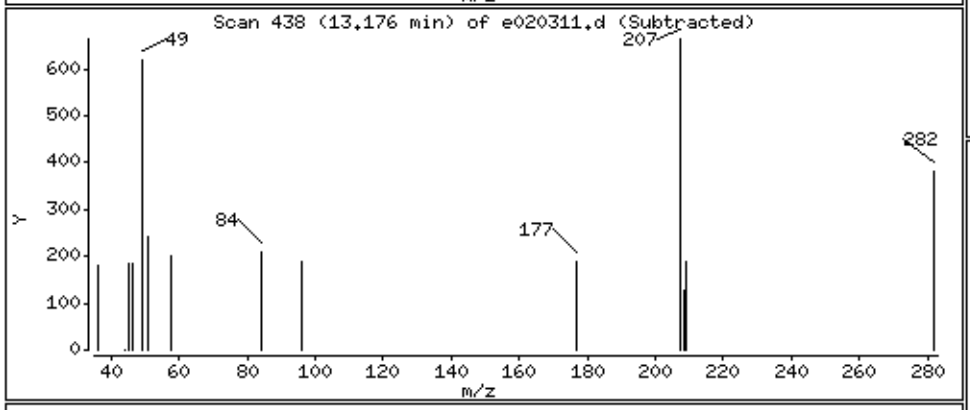
Column phase: RTX-624

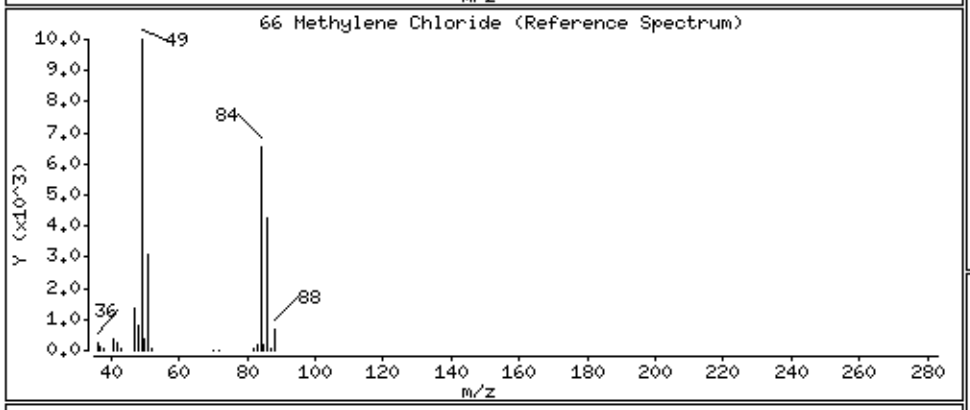
Column diameter: 0.32

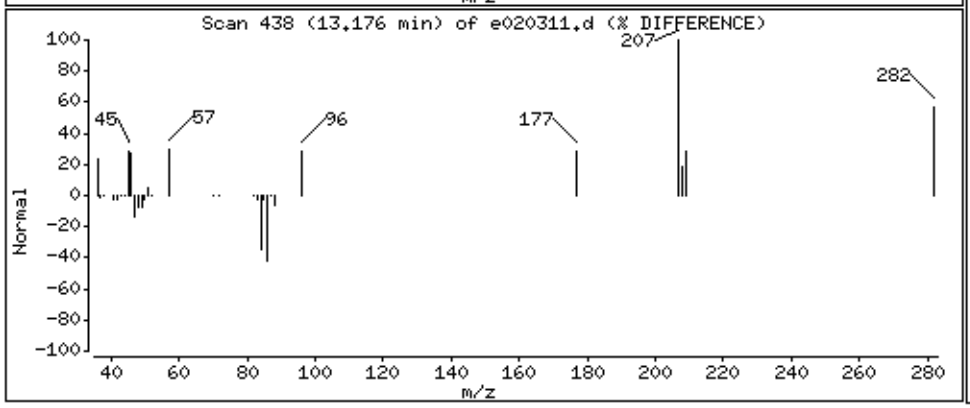
66 Methylene Chloride

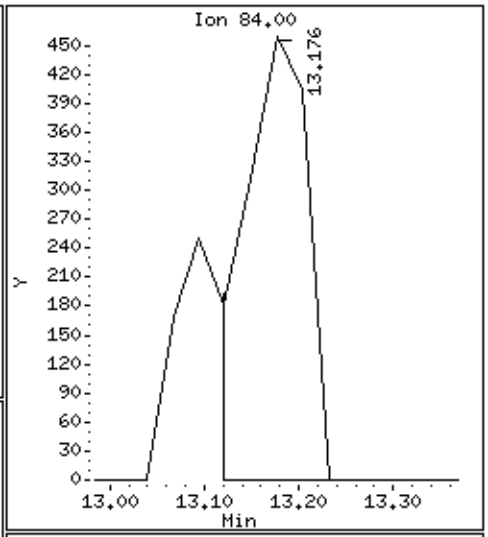
Concentration: 0.08937 PPBV

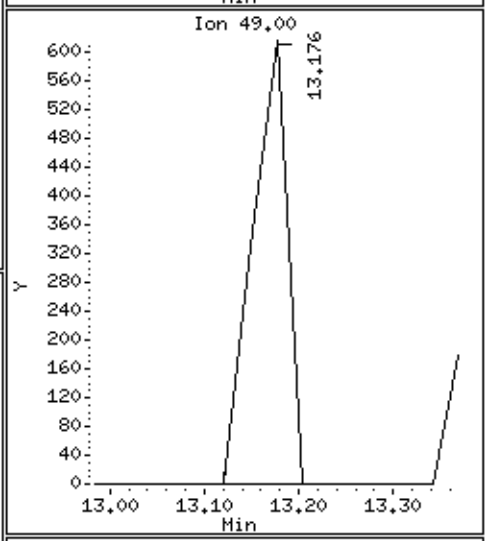


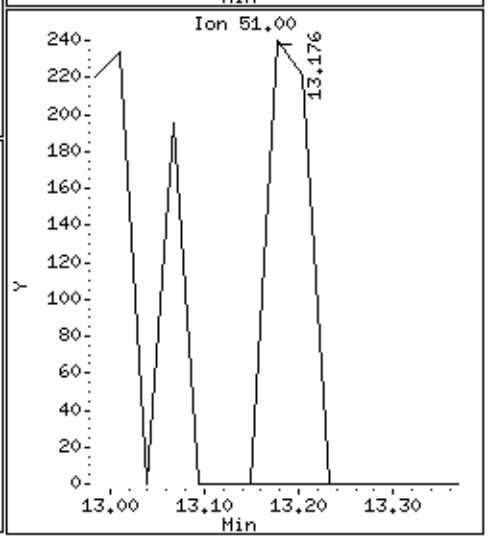












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

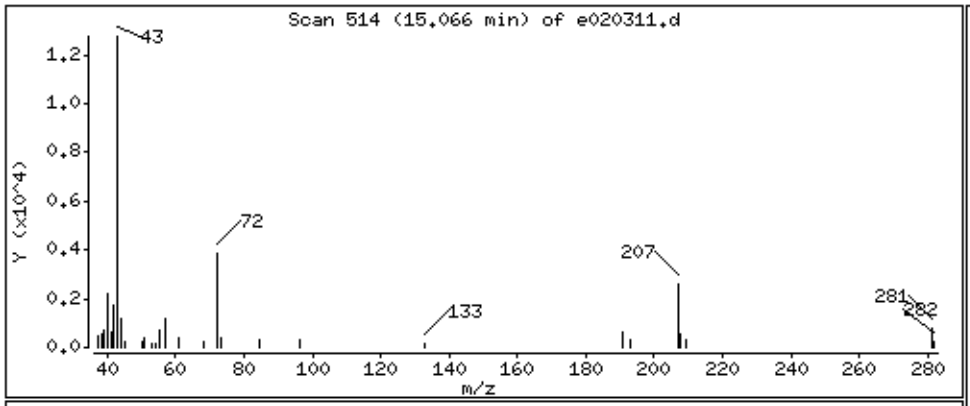
Operator: ef

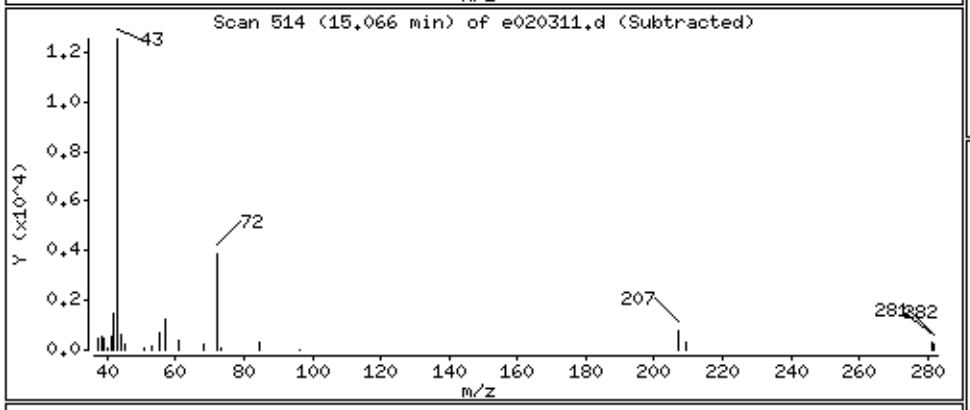
Column phase: RTX-624

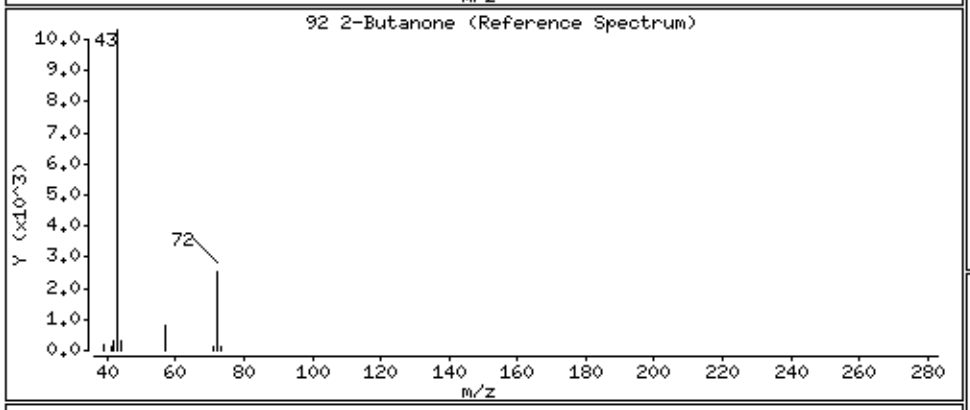
Column diameter: 0.32

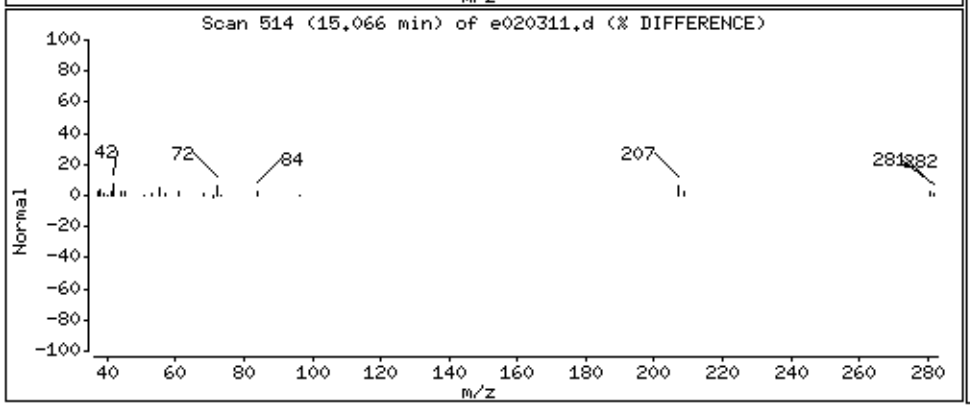
92 2-Butanone

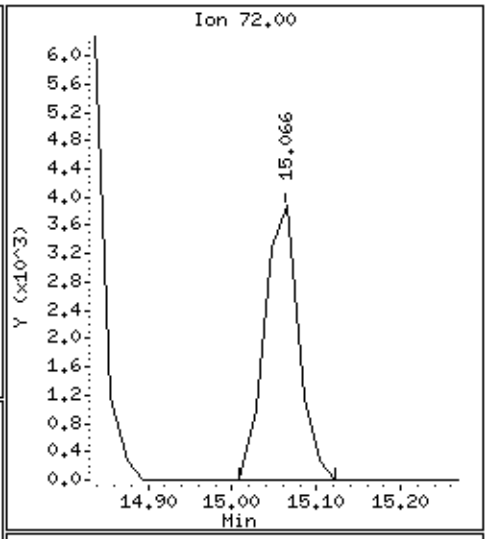
Concentration: 0.9953 PPBV

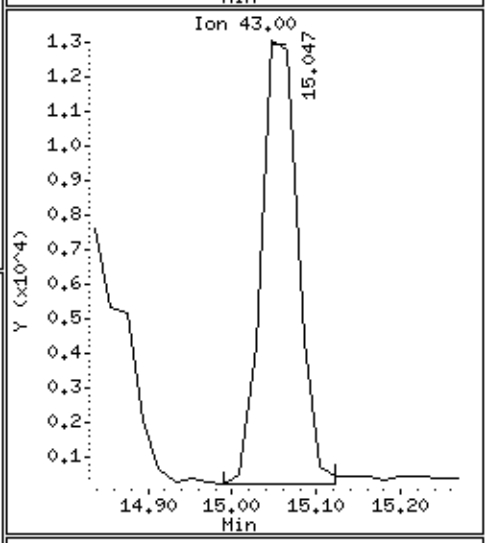


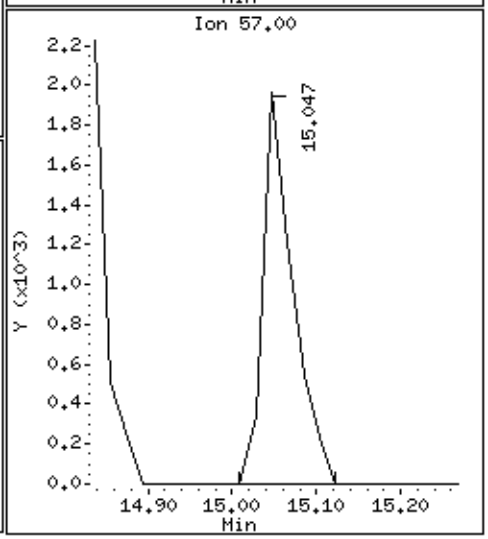












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

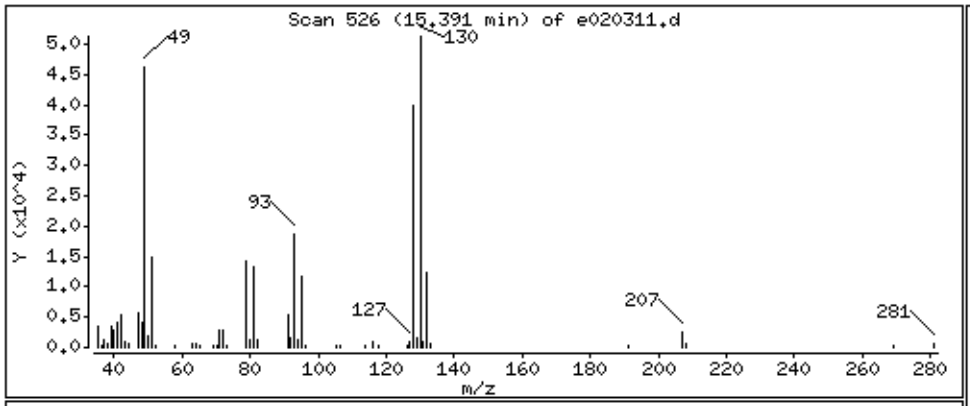
Operator: ef

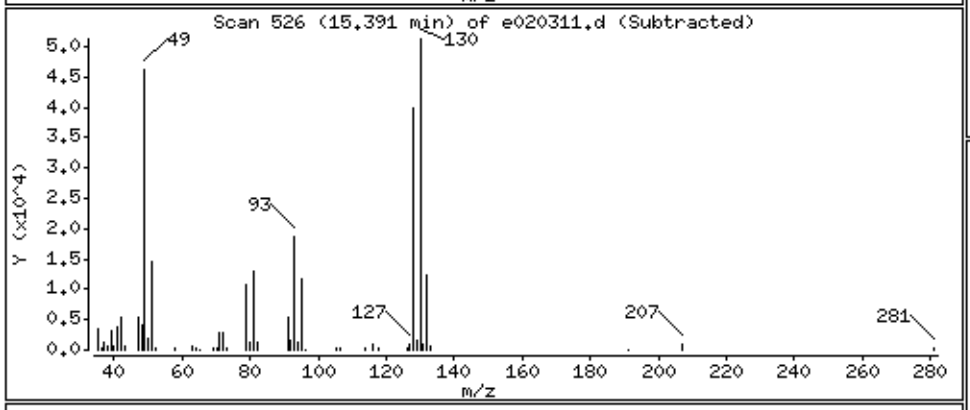
Column phase: RTX-624

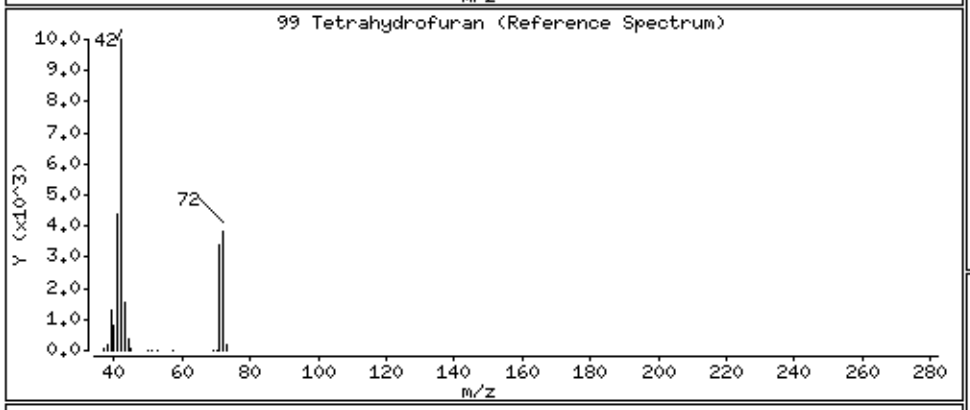
Column diameter: 0.32

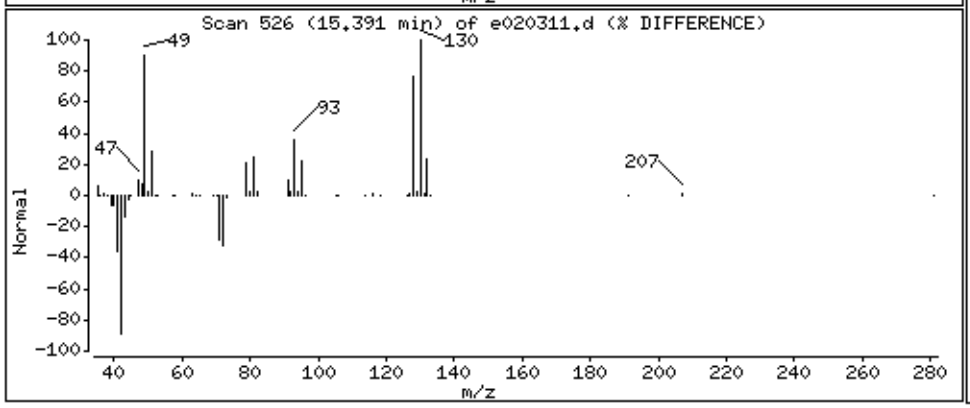
99 Tetrahydrofuran

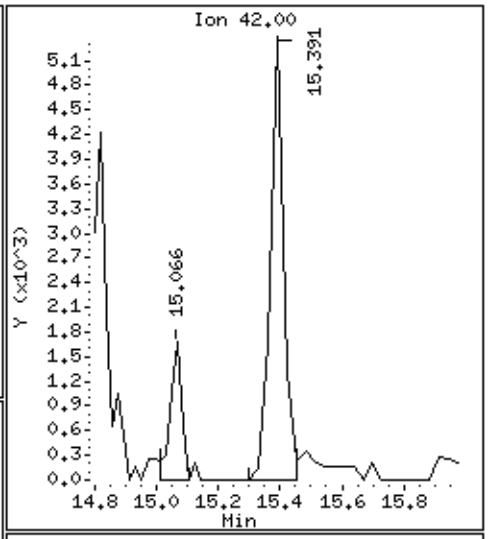
Concentration: 0.8082 PPBV

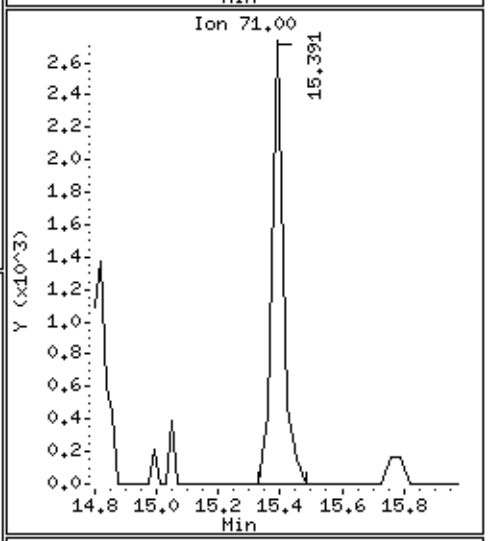


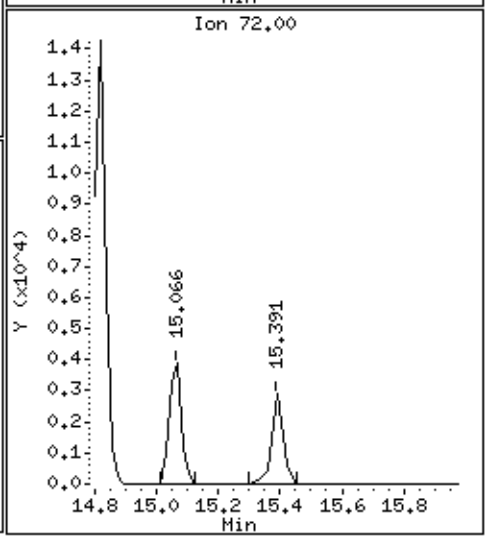












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

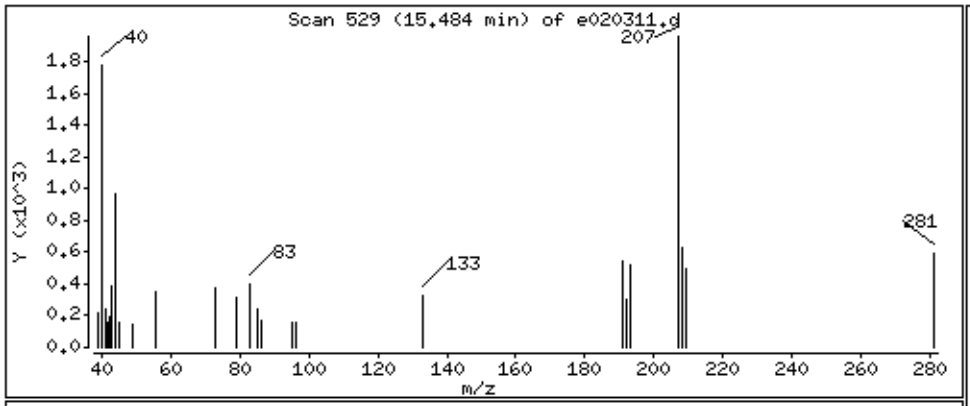
Operator: ef

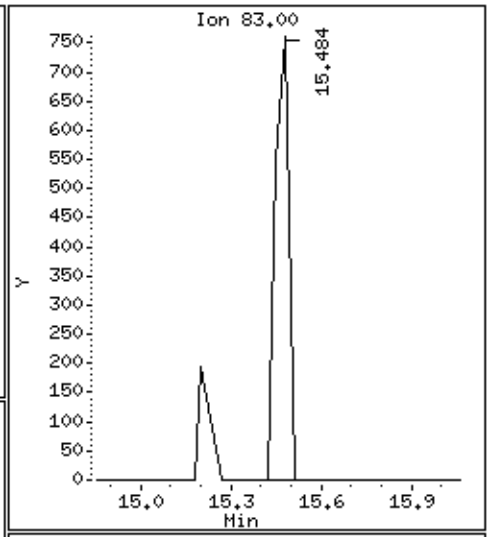
Column phase: RTX-624

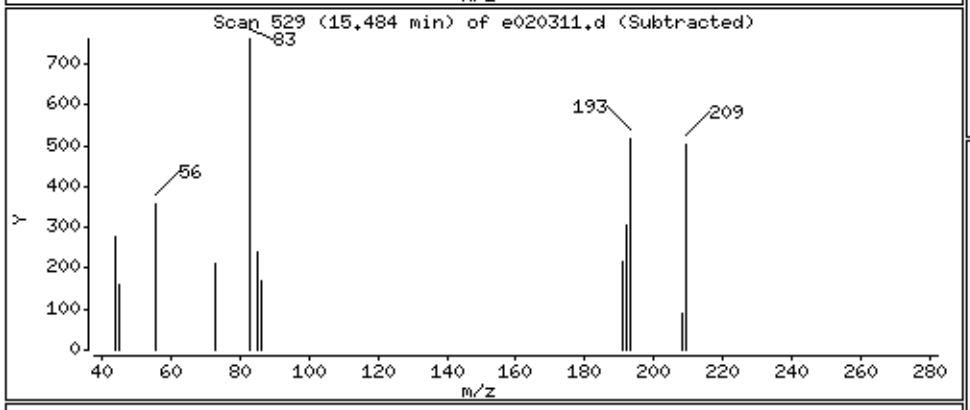
Column diameter: 0.32

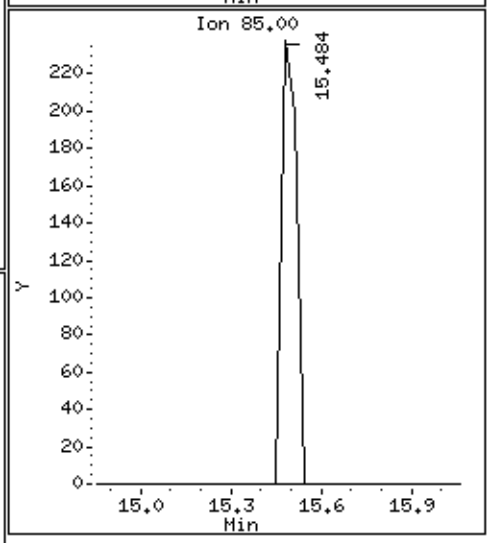
100 Chloroform

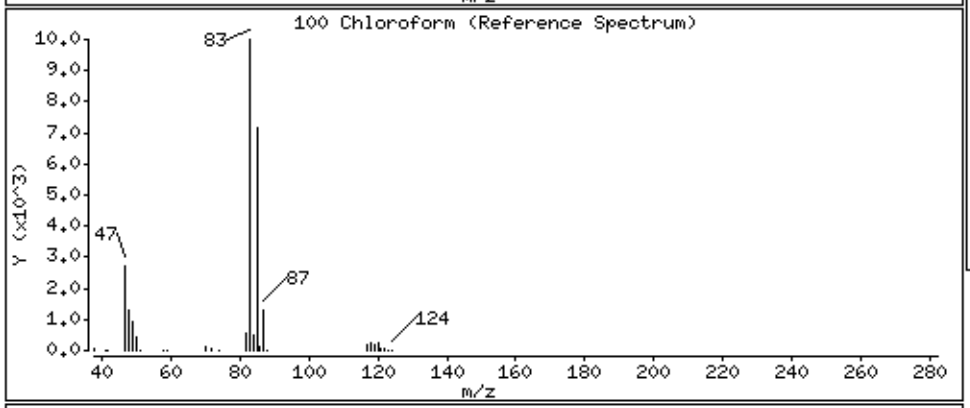
Concentration: 0.03716 PPBV

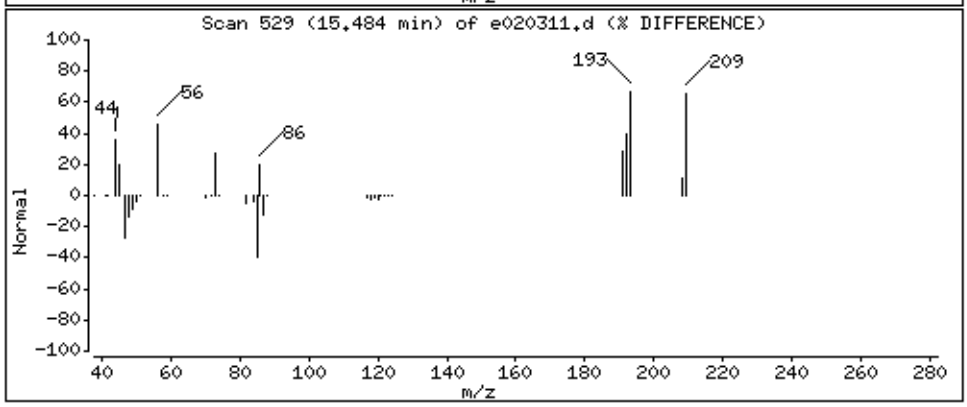












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

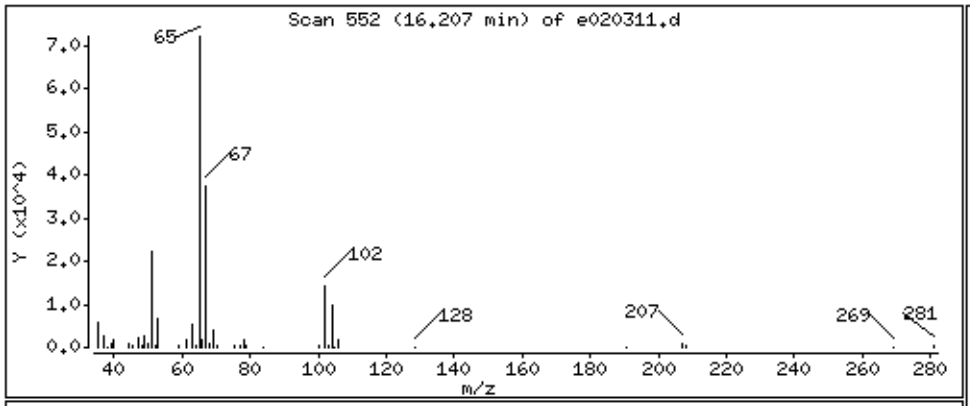
Operator: ef

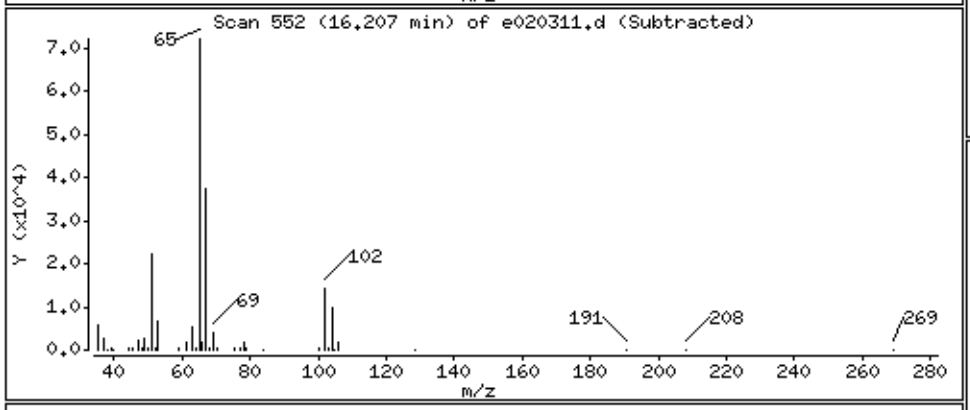
Column phase: RTX-624

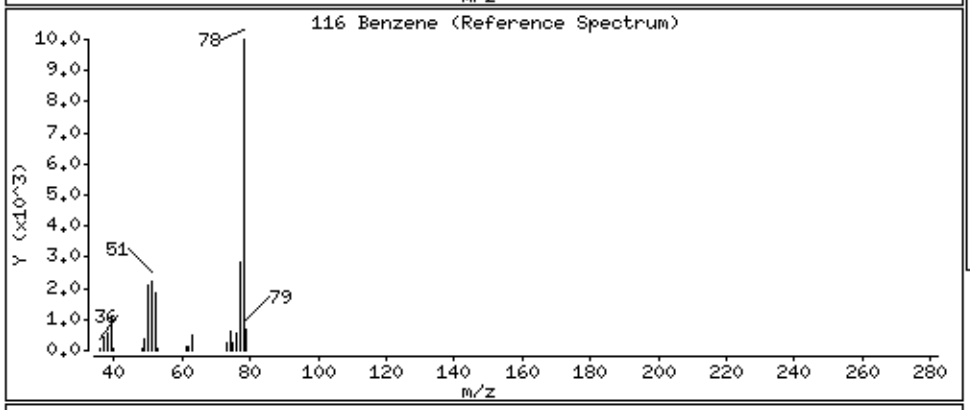
Column diameter: 0.32

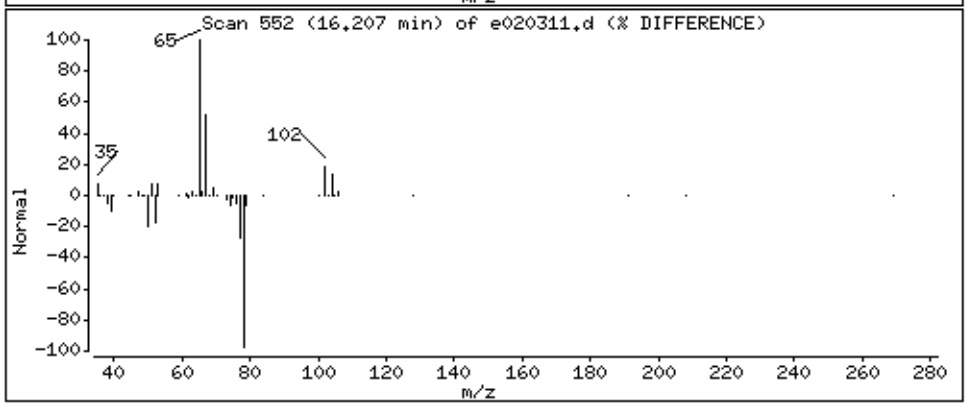
116 Benzene

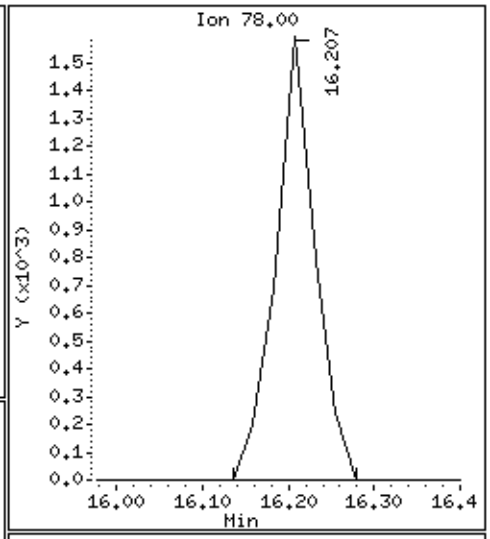
Concentration: 0.06874 PPBV

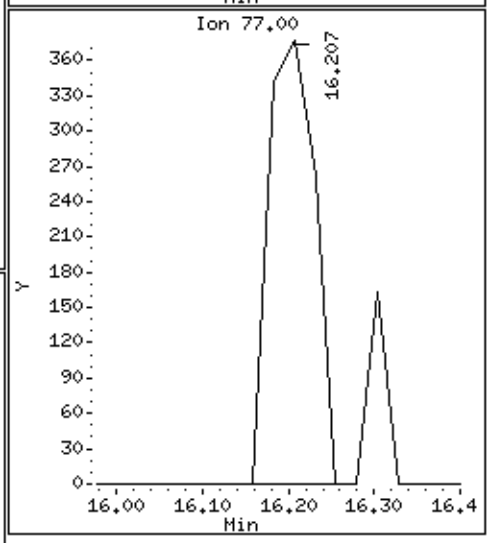












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

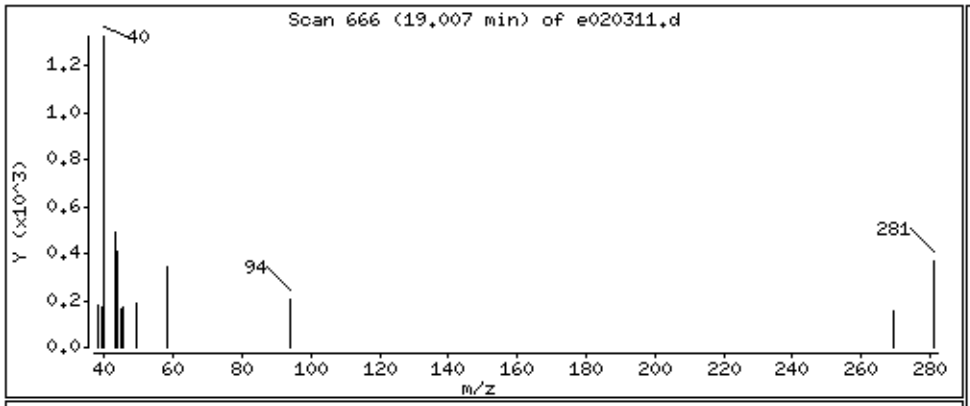
Operator: ef

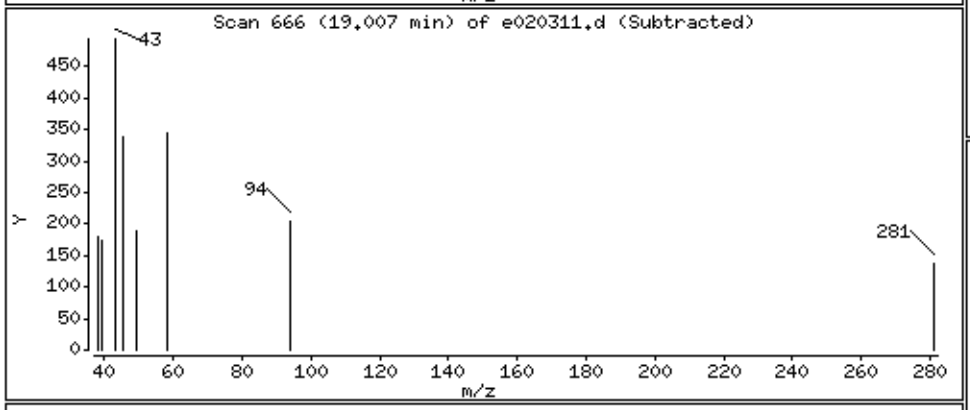
Column phase: RTX-624

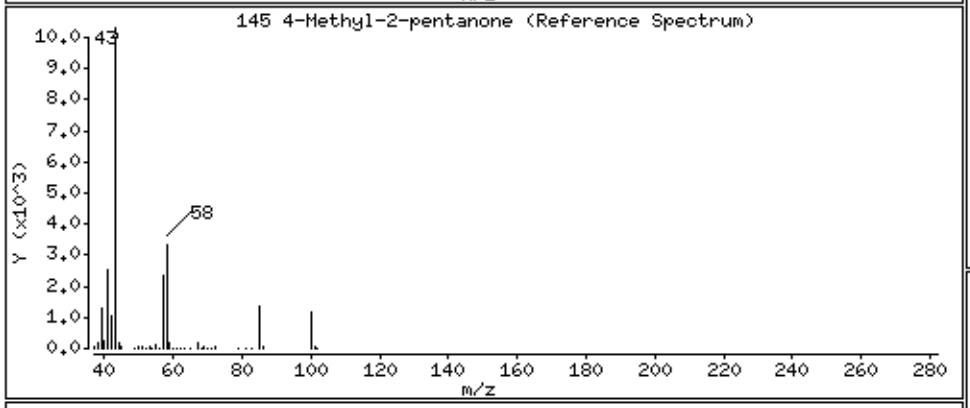
Column diameter: 0.32

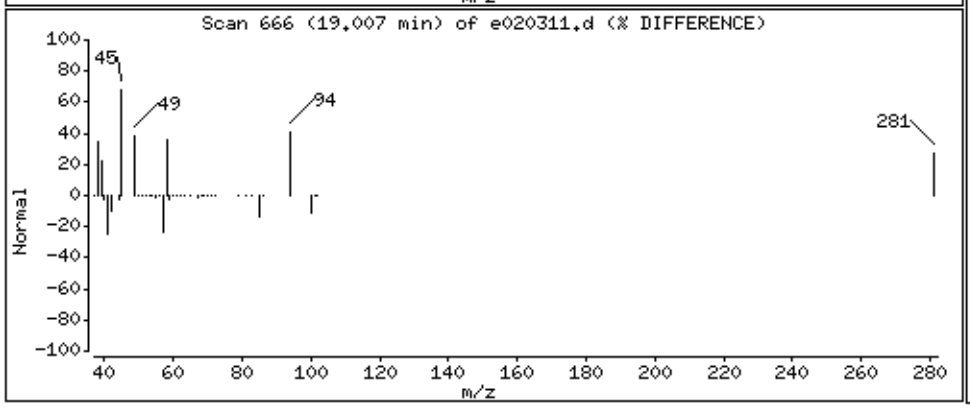
145 4-Methyl-2-pentanone

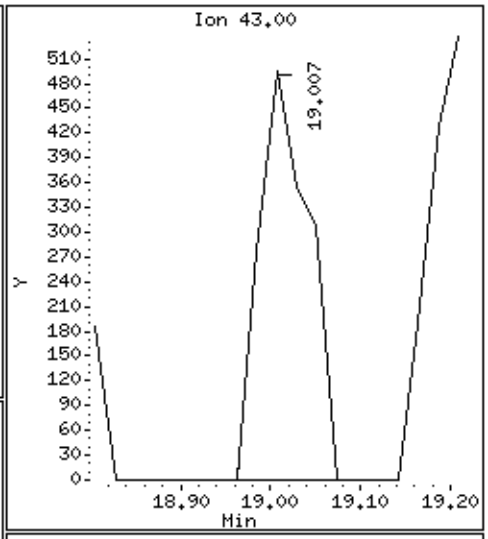
Concentration: 0.04368 PPBV

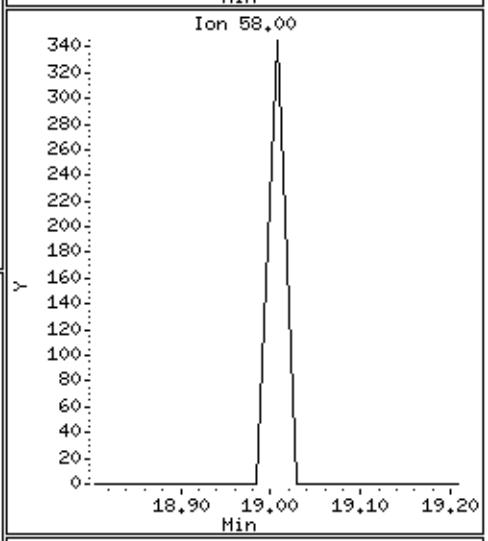


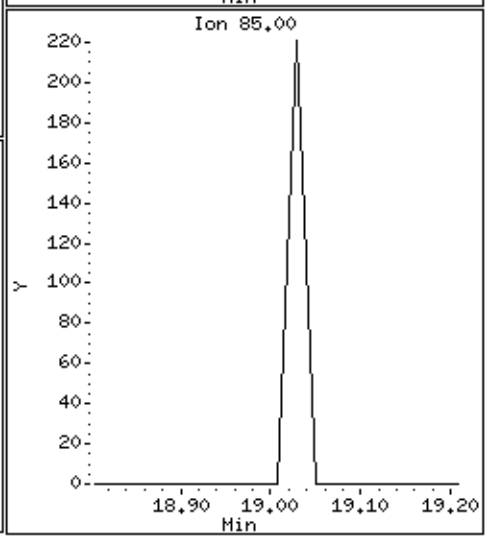












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

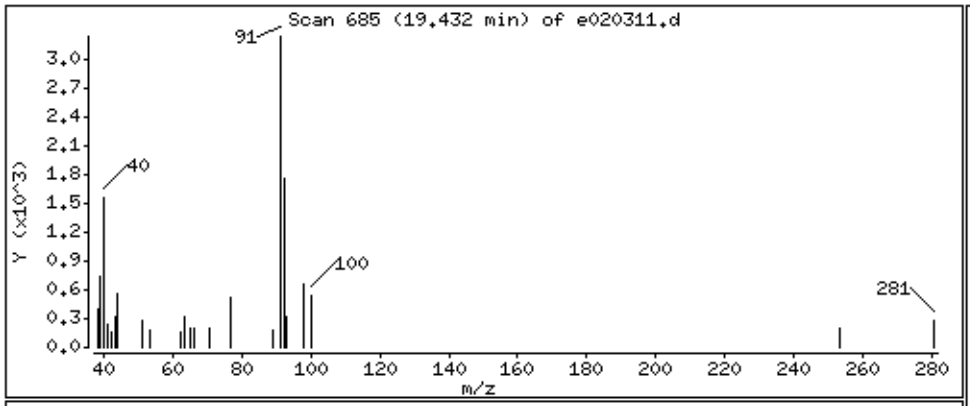
Operator: ef

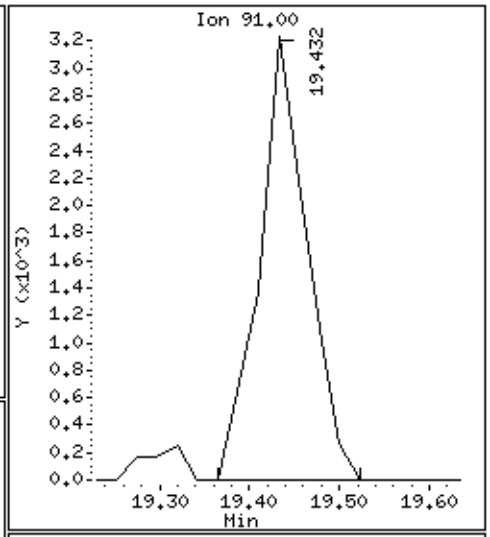
Column phase: RTX-624

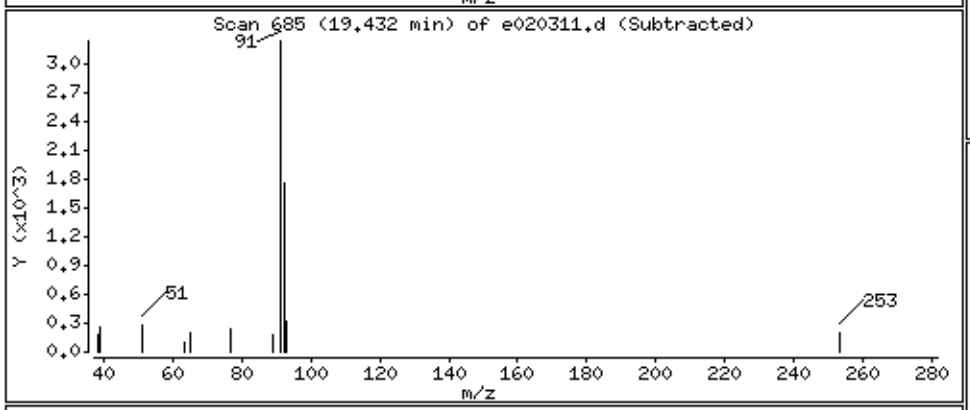
Column diameter: 0.32

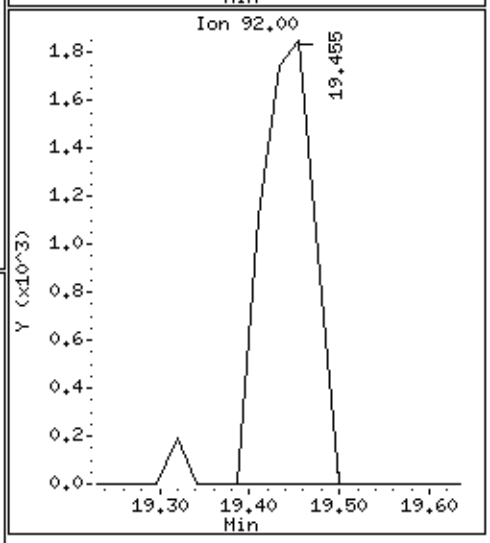
147 Toluene

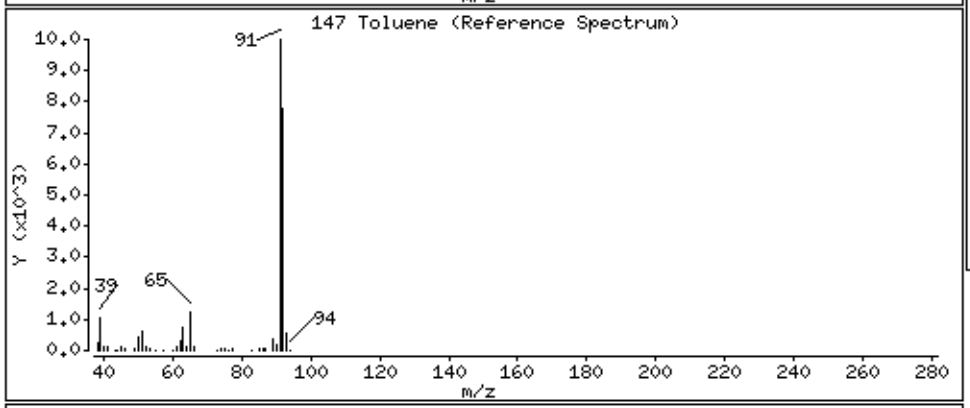
Concentration: 0.1320 PPBV

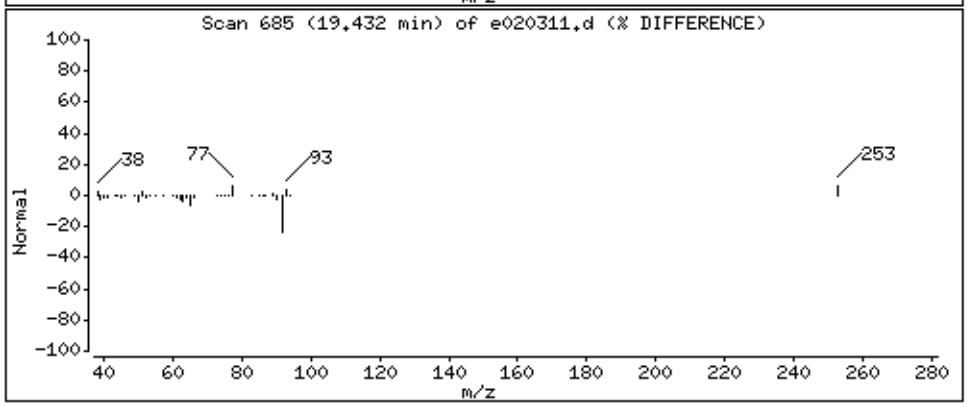












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

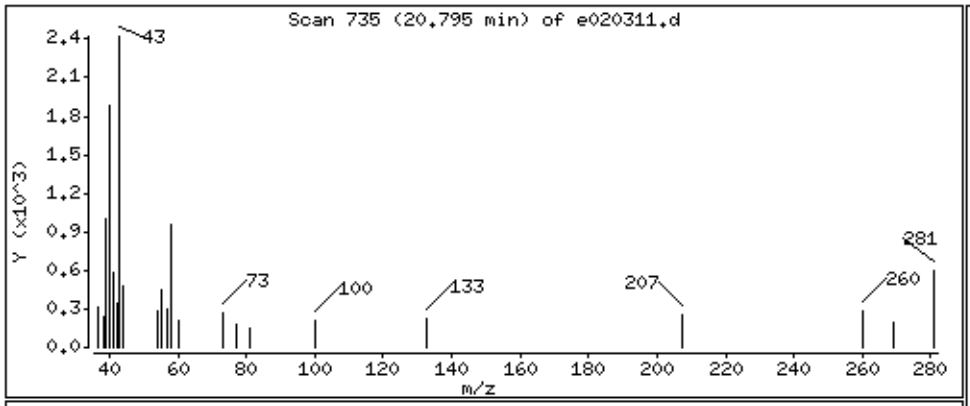
Operator: ef

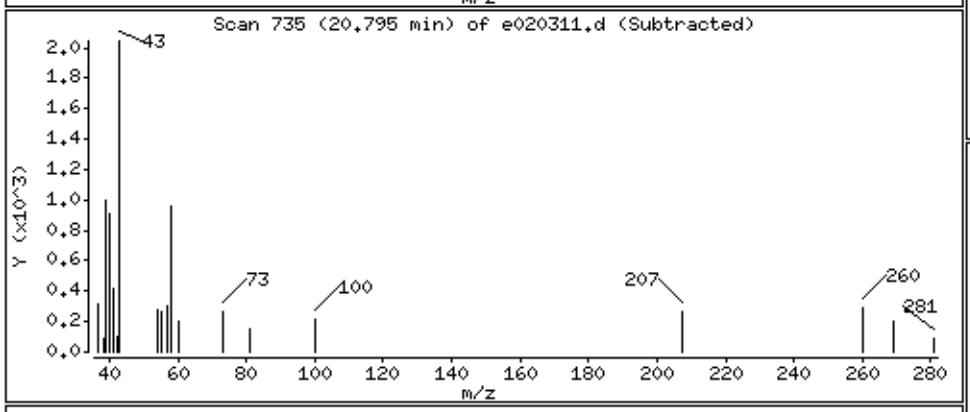
Column phase: RTX-624

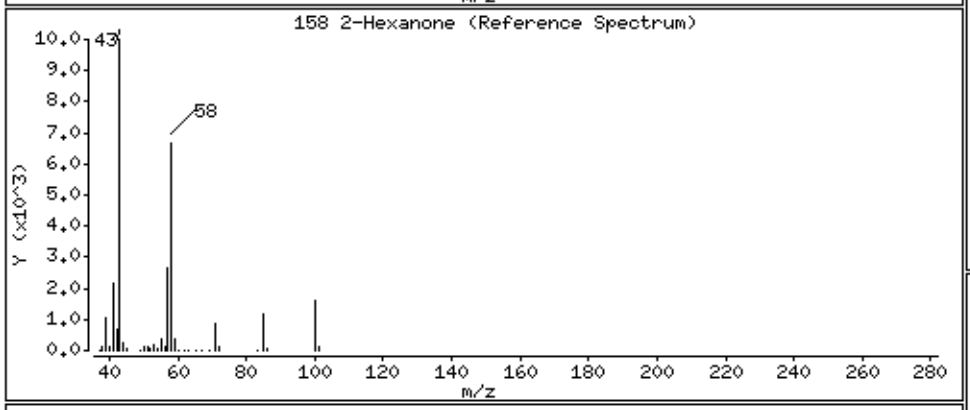
Column diameter: 0.32

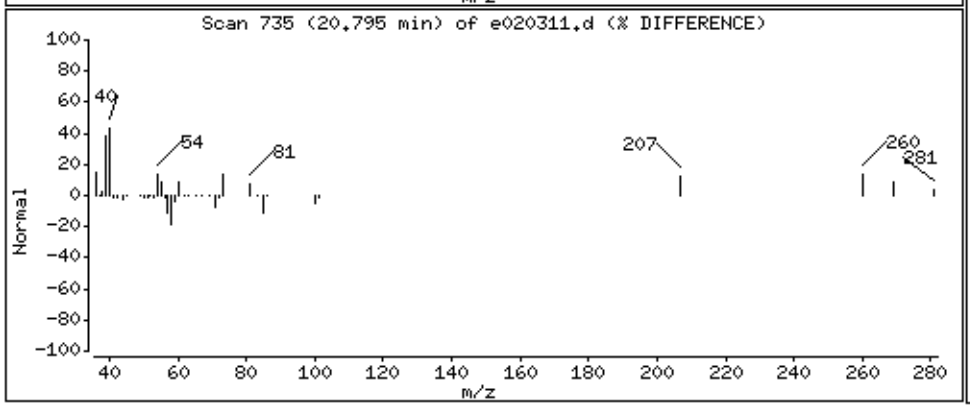
158 2-Hexanone

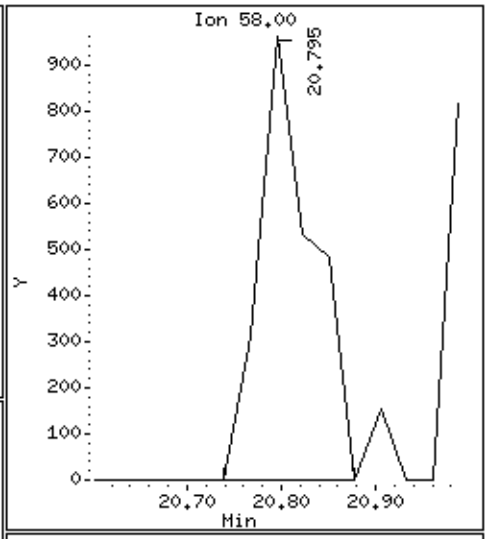
Concentration: 0.1715 PPBV

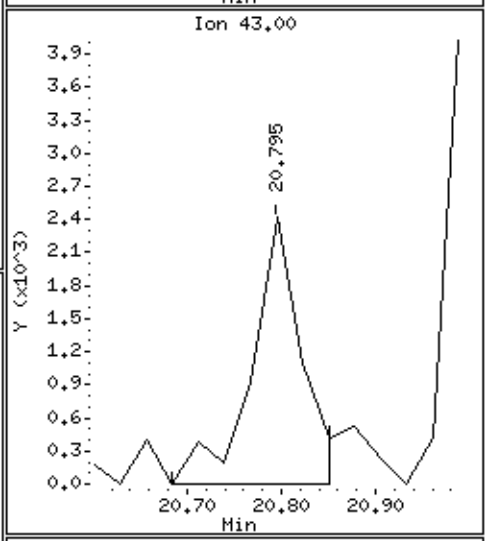


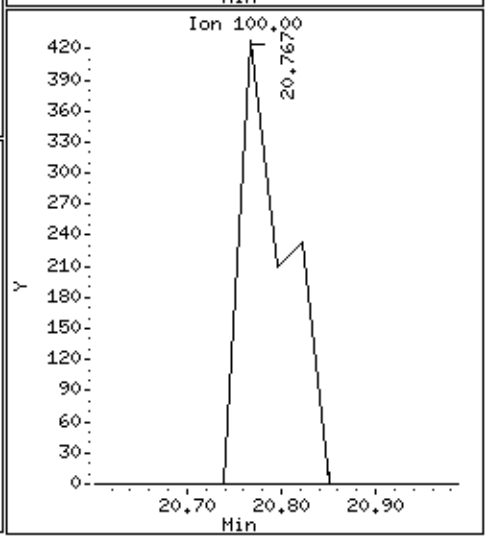












Data File: /chem/msde.i/03Feb2017.b/e020311.d

Date : 03-FEB-2017 14:44

Client ID:

Instrument: msde.i

Sample Info: 250mL# N1639

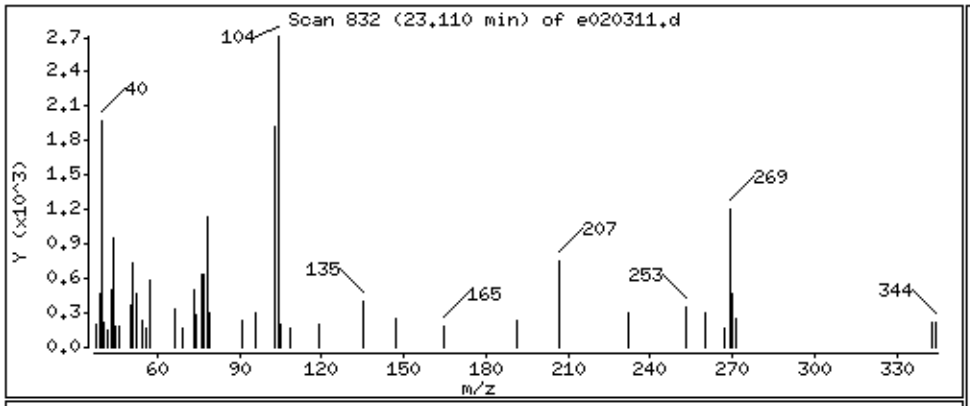
Operator: ef

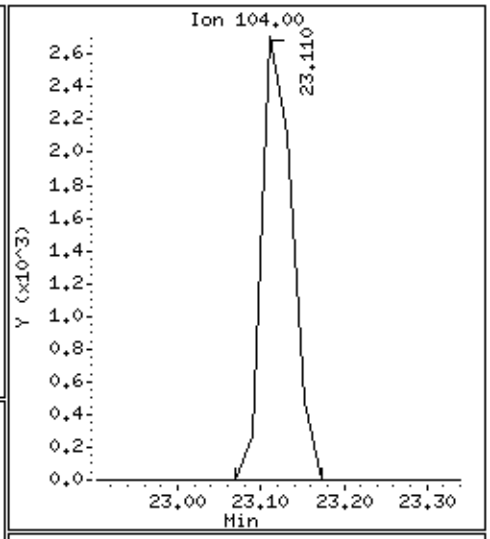
Column phase: RTX-624

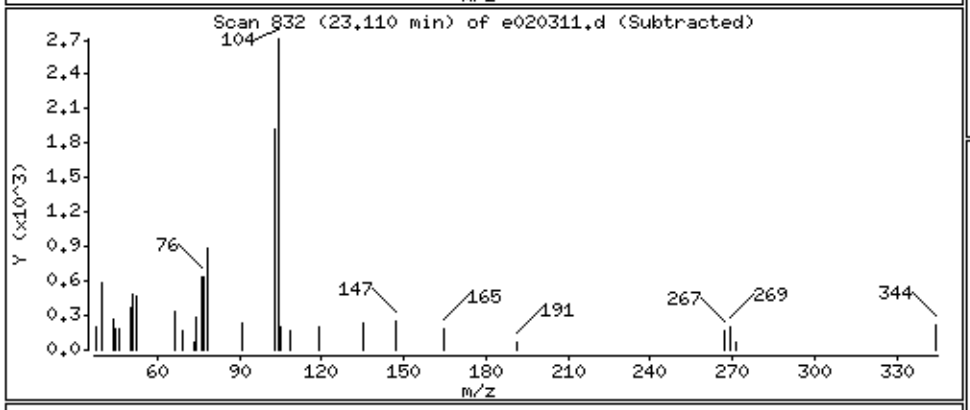
Column diameter: 0.32

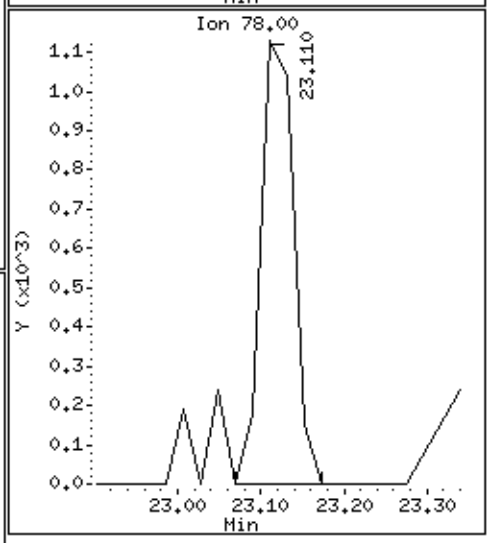
172 Styrene

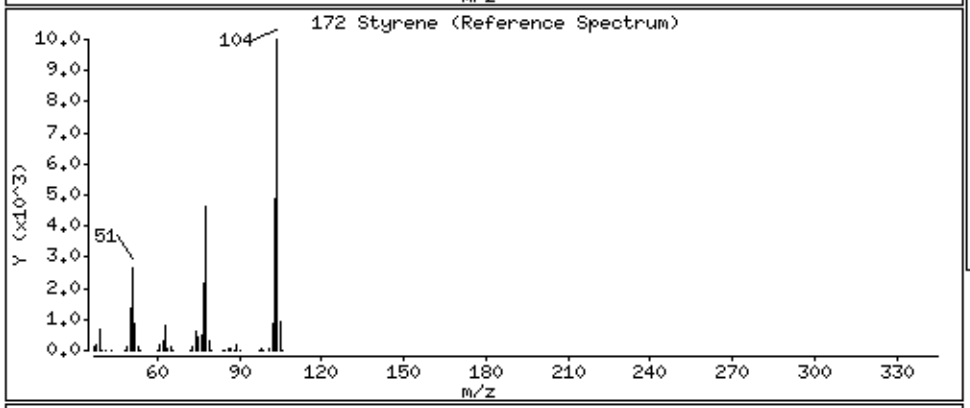
Concentration: 0.1007 PPBV

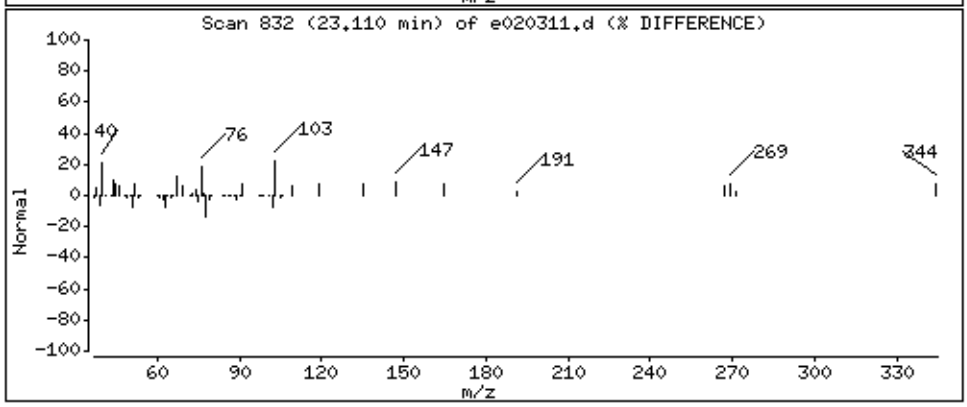












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B18IA-5-012817

Lab ID#: 1701477B-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.39	0.81	1.9
Chloromethane	0.82	0.55 J	1.7	1.1 J
Freon 11	0.16	3.0	0.92	17
Ethanol	0.82	20	1.5	38
Freon 113	0.16	0.048 J	1.2	0.37 J
Acetone	0.82	14	1.9	33
2-Propanol	0.82	3.7	2.0	9.1
Carbon Disulfide	0.82	0.26 J	2.6	0.81 J
Methylene Chloride	0.33	0.14 J	1.1	0.49 J
Hexane	0.16	0.17	0.58	0.62
2-Butanone (Methyl Ethyl Ketone)	0.82	1.5	2.4	4.6
Tetrahydrofuran	0.82	0.40 J	2.4	1.2 J
Chloroform	0.16	0.044 J	0.80	0.22 J
Cyclohexane	0.16	0.076 J	0.56	0.26 J
Carbon Tetrachloride	0.16	0.076 J	1.0	0.48 J
Benzene	0.16	0.19	0.52	0.62
1,2-Dichloroethane	0.16	0.64	0.66	2.6
Heptane	0.16	0.19	0.67	0.76
Trichloroethene	0.16	0.40	0.88	2.1
1,4-Dioxane	0.16	0.10 J	0.59	0.38 J
4-Methyl-2-pentanone	0.16	0.20	0.67	0.84
Toluene	0.16	4.4	0.62	17
2-Hexanone	0.82	0.15 J	3.4	0.61 J
Ethyl Benzene	0.16	0.38	0.71	1.6
m,p-Xylene	0.16	1.1	0.71	4.8
o-Xylene	0.16	0.53	0.71	2.3
Styrene	0.16	0.10 J	0.70	0.43 J
Cumene	0.16	0.054 J	0.81	0.26 J
Propylbenzene	0.16	0.030 J	0.81	0.15 J
4-Ethyltoluene	0.16	0.11 J	0.81	0.55 J
1,3,5-Trimethylbenzene	0.16	0.052 J	0.81	0.25 J
1,2,4-Trimethylbenzene	0.16	0.15 J	0.81	0.76 J
Naphthalene	0.82	0.14 J	4.3	0.74 J

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Client Sample ID: B18IA-5-012817

Lab ID#: 1701477B-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020312**	**Date of Collection:**	**1/29/17 4:25:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**2/3/17 03:36 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.39	0.81	1.9
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.82	0.55 J	1.7	1.1 J
Vinyl Chloride	0.16	Not Detected	0.42	Not Detected
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.16	3.0	0.92	17
Ethanol	0.82	20	1.5	38
Freon 113	0.16	0.048 J	1.2	0.37 J
1,1-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Acetone	0.82	14	1.9	33
2-Propanol	0.82	3.7	2.0	9.1
Carbon Disulfide	0.82	0.26 J	2.6	0.81 J
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	0.14 J	1.1	0.49 J
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Hexane	0.16	0.17	0.58	0.62
1,1-Dichloroethane	0.16	Not Detected	0.66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	1.5	2.4	4.6
cis-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Tetrahydrofuran	0.82	0.40 J	2.4	1.2 J
Chloroform	0.16	0.044 J	0.80	0.22 J
1,1,1-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Cyclohexane	0.16	0.076 J	0.56	0.26 J
Carbon Tetrachloride	0.16	0.076 J	1.0	0.48 J
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.16	0.19	0.52	0.62
1,2-Dichloroethane	0.16	0.64	0.66	2.6
Heptane	0.16	0.19	0.67	0.76
Trichloroethene	0.16	0.40	0.88	2.1
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	0.10 J	0.59	0.38 J
Bromodichloromethane	0.16	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	0.20	0.67	0.84
Toluene	0.16	4.4	0.62	17
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.89	Not Detected
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected
2-Hexanone	0.82	0.15 J	3.4	0.61 J

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Client Sample ID: B18IA-5-012817

Lab ID#: 1701477B-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020312**	**Date of Collection:**	**1/29/17 4:25:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**2/3/17 03:36 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Ethyl Benzene	0.16	0.38	0.71	1.6
m,p-Xylene	0.16	1.1	0.71	4.8
o-Xylene	0.16	0.53	0.71	2.3
Styrene	0.16	0.10 J	0.70	0.43 J
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	0.054 J	0.81	0.26 J
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	0.030 J	0.81	0.15 J
4-Ethyltoluene	0.16	0.11 J	0.81	0.55 J
1,3,5-Trimethylbenzene	0.16	0.052 J	0.81	0.25 J
1,2,4-Trimethylbenzene	0.16	0.15 J	0.81	0.76 J
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,4-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected
Naphthalene	0.82	0.14 J	4.3	0.74 J

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	105	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020312.d
Lab Smp Id: 1701477B-15A
Inj Date : 03-FEB-2017 15:36
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 907
Misc Info : 5.0"Hg -> 5.4psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.64000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.269	5.220 (0.342)	85	30140	0.23896	0.3919	80.00- 120.00	100.00(M)
5.293	5.220 (0.344)	87	9801			1.91- 61.91	32.52
17 Chloromethane					CAS #: 74-87-3		
6.980	6.932 (0.454)	50	7889	0.33537	0.5500	80.00- 120.00	100.00(a)
6.956	6.932 (0.452)	52	3229			3.31- 63.31	40.93
35 Freon 11					CAS #: 75-69-4		
10.747	10.766 (0.698)	101	271628	1.84602	3.027	80.00- 120.00	100.00
10.747	10.766 (0.698)	103	181996			33.74- 93.74	67.00
42 Ethanol					CAS #: 64-17-5		
11.662	11.661 (0.758)	45	157579	12.2865	20.150	80.00- 120.00	100.00
11.662	11.661 (0.758)	46	54303			9.60- 69.60	34.46
11.662	11.661 (0.758)	43	40071			0.00- 59.21	25.43
49 Freon 113					CAS #: 76-13-1		
12.100	12.080 (0.786)	151	2864	0.02915	0.04781	80.00- 120.00	100.00(a)
12.100	12.080 (0.786)	153	2009			34.83- 94.83	70.15

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113 (continued)
 12.081  12.080 (0.785)   101      3814                    77.16- 137.16   133.16
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.366  12.366 (0.803)    58    137200 8.50829   13.954  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    532907                  344.13- 404.13   388.42
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.443  12.461 (0.808)    76     17803 0.15960   0.2617  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.728  12.728 (0.827)    45    117029 2.25428    3.697  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43     36554                     0.00-  55.65    31.23
 12.728  12.728 (0.827)    59      4045                     0.00-  34.42     3.46
-------------------------------------------------------------------------------
   66 Methylene Chloride                          CAS #: 75-09-2
 13.149  13.176 (0.854)    84      3426 0.08682   0.1424  80.00- 120.00   100.00(a)
 13.149  13.176 (0.854)    49      3024                    83.76- 143.76    88.28
 13.149  13.176 (0.854)    51      1377                     2.61-  62.61    40.19
-------------------------------------------------------------------------------
   78 Hexane                                      CAS #: 110-54-3
 13.835  13.835 (0.899)    57      5009 0.10658   0.1748  80.00- 120.00   100.00
 13.890  13.835 (0.902)    43      9347                    27.83-  87.83   186.61
 13.835  13.835 (0.899)    86       850                     0.00-  50.45    16.97
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.047  15.047 (0.978)    72     16455 0.94103    1.543  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     67335                   325.72- 385.72   409.20
 15.047  15.047 (0.978)    57      4266                     1.13-  61.13    25.93
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                             CAS #: 109-99-9
 15.391  15.391 (1.000)    42      7666 0.24220   0.3972  80.00- 120.00   100.00(a)
 15.391  15.391 (1.000)    71      4198                    20.32-  80.32    54.76
 15.391  15.391 (1.000)    72      3490                    21.98-  81.98    45.52
-------------------------------------------------------------------------------
*  98 Bromochloromethane                          CAS #: 74-97-5
 15.391  15.391 (1.000)   130    142065 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    105267                    46.73- 106.73    74.10
 15.391  15.391 (1.000)    49    115986                    55.35- 115.35    81.64
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83      2772 0.02692  0.04416  80.00- 120.00   100.00(a)
 15.453  15.453 (1.004)    85      4686                    36.62-  96.62   169.05
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84      2281 0.04621  0.07578  80.00- 120.00   100.00(a)
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  102 Cyclohexane (continued)
 15.669  15.669 (1.018)    56      5096                    68.83- 128.83   223.34
 15.669  15.669 (1.018)    41      5960                    29.98-  89.98   261.20
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.884  15.884 (1.032)   119      5459 0.04630  0.07593  80.00- 120.00   100.00(a)
 15.884  15.884 (1.032)   117      4434                    74.11- 134.11    81.23
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78     13886 0.11768   0.1930  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77      3939                     0.00-  53.00    28.37
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    206494 5.06153    5.062  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67     95757                    22.67-  82.67    46.37
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.303 (0.974)    62     28463 0.39153   0.6421  80.00- 120.00   100.00
 16.304  16.303 (0.974)    64      8685                     1.95-  61.95    30.52
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.376  16.352 (0.978)    57      3391 0.11349   0.1861  80.00- 120.00   100.00
 16.328  16.352 (0.976)   100      2379                    23.08-  83.08    70.17
 16.376  16.352 (0.978)    43      6164                   136.91- 196.91   181.76
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    477927 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     68487                     0.00-  45.16    14.33
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130     15909 0.24164   0.3963  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95     15058                    61.87- 121.87    94.65
 17.147  17.147 (1.024)    97     10452                    29.29-  89.29    65.70
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                   CAS #: 123-91-1
 17.701  17.701 (1.058)    88      1821 0.06384   0.1047  80.00- 120.00   100.00(a)
 17.725  17.701 (1.059)    58      2191                    30.17-  90.17   120.32
 17.773  17.701 (1.062)    57       899                     0.00-  51.30    49.37
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                          CAS #: 108-10-1
 19.007  19.006 (1.136)    43      8812 0.12554   0.2059  80.00- 120.00   100.00
 18.984  19.006 (1.134)    58      1994                    10.02-  70.02    22.63
 19.029  19.006 (1.137)    85       658                     0.00-  52.01     7.48
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    440668 4.75337    4.753  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)
 19.298  19.298 (1.153)    70     55207                     0.00-  40.89    12.53
 19.298  19.298 (1.153)   100    306598                    40.09- 100.09    69.58
-------------------------------------------------------------------------------
  147 Toluene                                       CAS #: 108-88-3
 19.432  19.432 (1.161)    91    387820 2.71688    4.456  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    226134                    27.79-  87.79    58.31
-------------------------------------------------------------------------------
  158 2-Hexanone                                    CAS #: 591-78-6
 20.795  20.795 (0.938)    58      3261 0.09137   0.1498  80.00- 120.00   100.00(a)
 20.795  20.795 (0.938)    43      6250                  162.96- 222.96   191.61
  0.000  20.795 (0.000)   100         0                     0.00-  59.39     0.00
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    465742 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    216102                    17.27-  77.27    46.40
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.302  22.301 (1.006)   106     14031 0.23000   0.3772  80.00- 120.00   100.00
 22.302  22.301 (1.006)    91     40074                  278.11- 338.11   285.61
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106     49149 0.68067    1.116  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91    105837                  170.01- 230.01   215.34
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.089  23.089 (1.041)   106     21544 0.32198   0.5280  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91     39594                  175.84- 235.84   183.78
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.110  23.110 (1.042)   104      6837 0.06125   0.1004  80.00- 120.00   100.00(a)
 23.089  23.110 (1.041)    78      5436                    20.21-  80.21    79.51
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.564  23.564 (1.063)   105      6892 0.03284  0.05385  80.00- 120.00   100.00(a)
 23.564  23.564 (1.063)   120       897                     0.00-  56.99    13.02
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    342271 5.26107    5.261  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    310968                    66.74- 126.74    90.85
 23.856  23.856 (1.076)   176    322211                    67.47- 127.47    94.14
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 24.102  24.102 (1.087)    91      3784 0.01811  0.02970  80.00- 120.00   100.00(a)
 24.102  24.102 (1.087)   120      1405                     0.00-  55.73    37.12
-------------------------------------------------------------------------------
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
188 4-Ethyltoluene						CAS #: 622-96-8		
24.192	24.237	(1.091)	105	11760	0.06790	0.1114	80.00- 120.00	100.00(a)
24.192	24.237	(1.091)	120	3777			1.00- 61.00	32.12
190 1,3,5-Trimethylbenzene						CAS #: 108-67-8		
24.304	24.304	(1.096)	105	4038	0.03145	0.05157	80.00- 120.00	100.00(a)
24.327	24.304	(1.097)	120	1831			19.17- 79.17	45.36
196 1,2,4-Trimethylbenzene						CAS #: 95-63-6		
24.775	24.775	(1.117)	105	10095	0.09367	0.1536	80.00- 120.00	100.00(a)
24.775	24.775	(1.117)	120	4460			16.84- 76.84	44.18
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.250)	128	9645	0.08630	0.1415	80.00- 120.00	100.00(a)
27.735	27.712	(1.251)	127	3180			0.00- 42.30	32.97

QC Flag Legend

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

Report Date: 09-Feb-2017 10:41

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Calibration Date: 03-FEB-2017
Lab File ID: e020312.d
Calibration Time: 07:59
Lab Smp Id: 1701477B-15A
Analysis Type: VOA
Level: LOW
Quant Type: ISTD
Sample Type: AIR
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.0"Hg -> 5.4psi

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	142065	0.38
123 1,4-Difluorobenze	499834	299900	699768	477927	-4.38
163 Chlorobenzene-d5	467575	280545	654605	465742	-0.39

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	22.18	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: 09-Feb-2017 10:41

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-15A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.0"Hg -> 5.4psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.062	101.23	70-130
$ 146 Toluene-d8	5.000	4.753	95.07	70-130
$ 177 4-Bromofluorobenze	5.000	5.261	105.22	70-130

Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

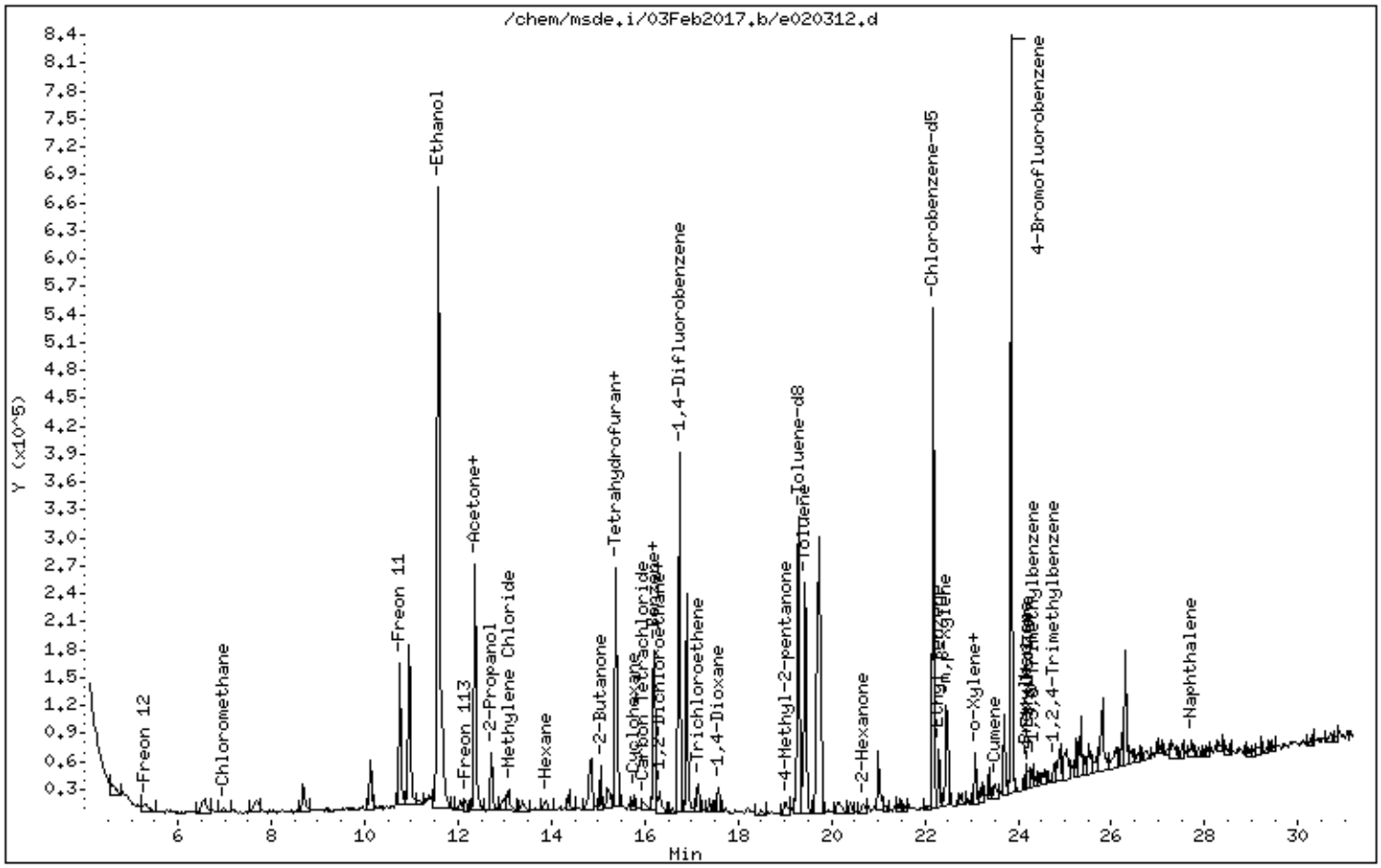
Instrument: msde.i

Sample Info: 250mL# 907

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

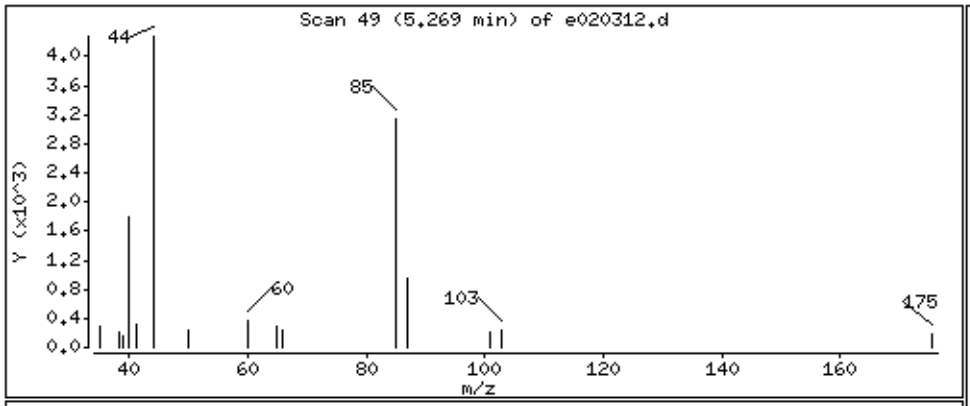
Operator: ef

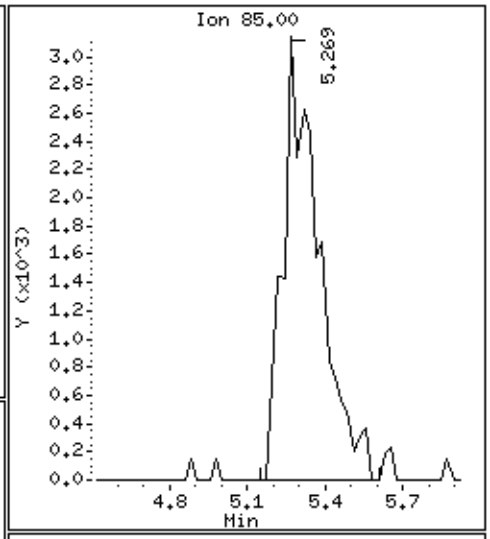
Column phase: RTX-624

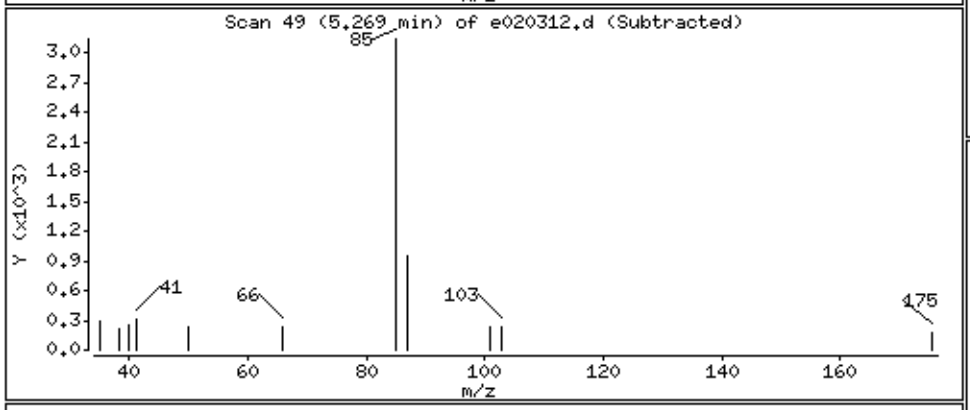
Column diameter: 0.32

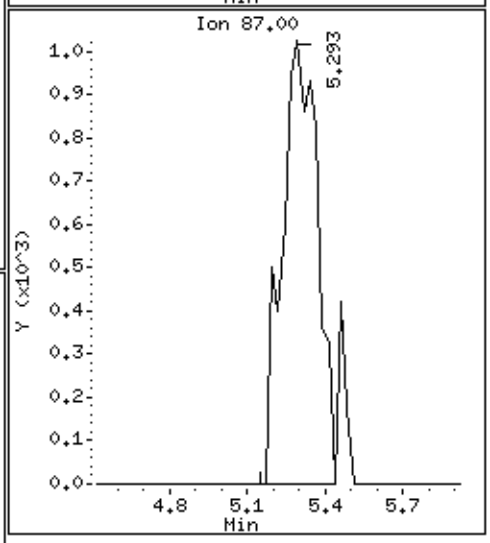
11 Freon 12

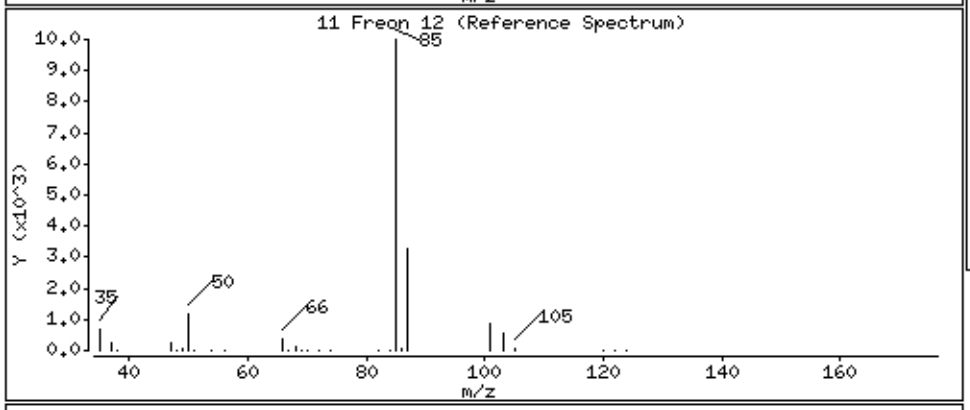
Concentration: 0.3919 PPBV

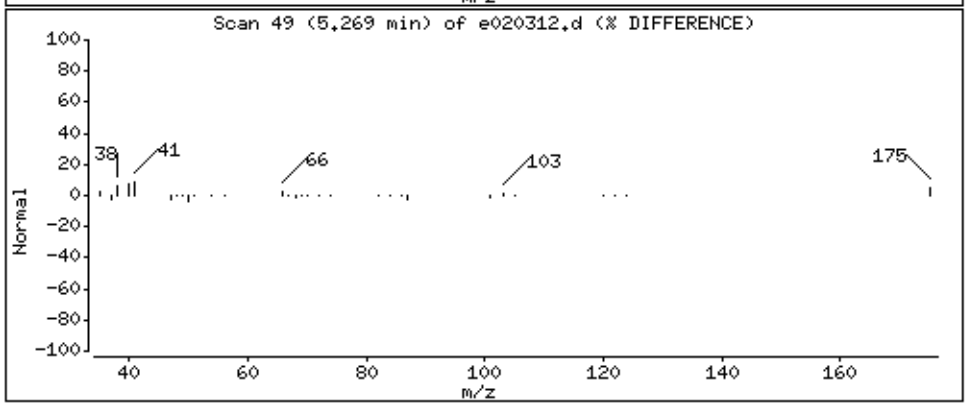












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

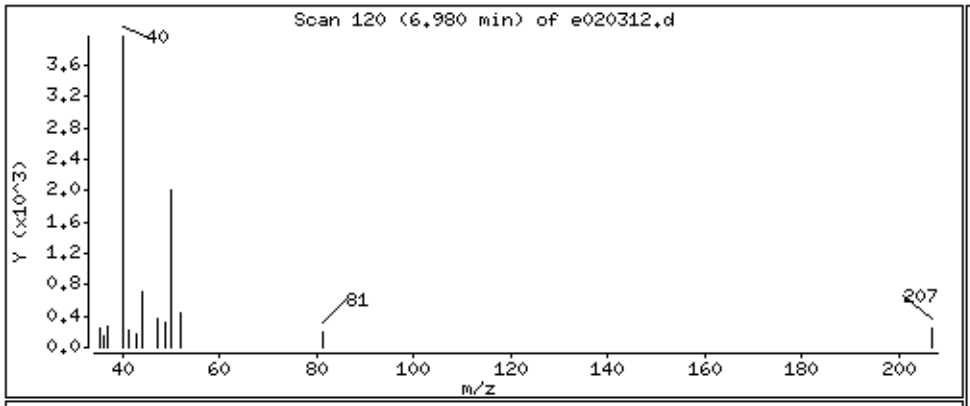
Operator: ef

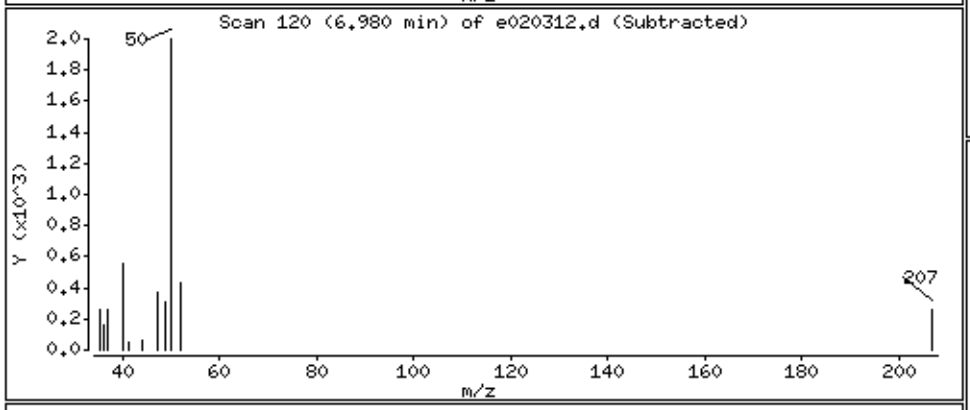
Column phase: RTX-624

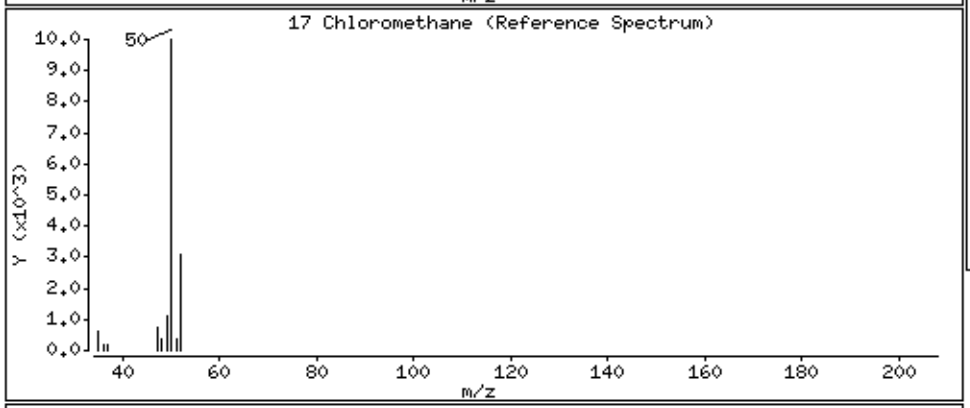
Column diameter: 0.32

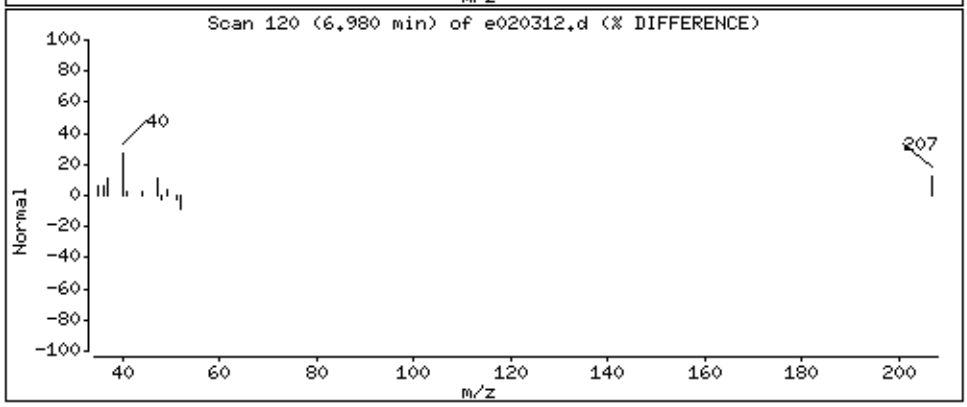
17 Chloromethane

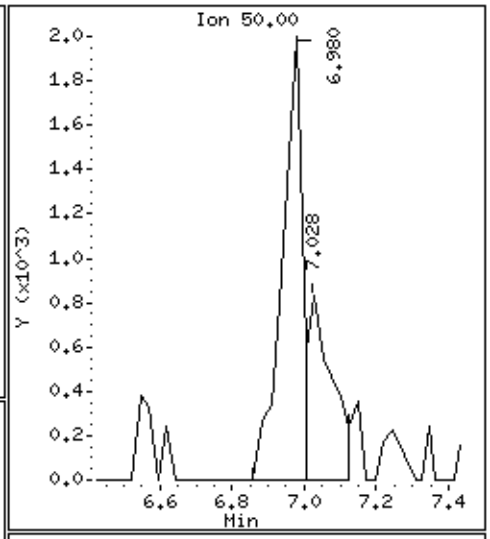
Concentration: 0.5500 PPBV

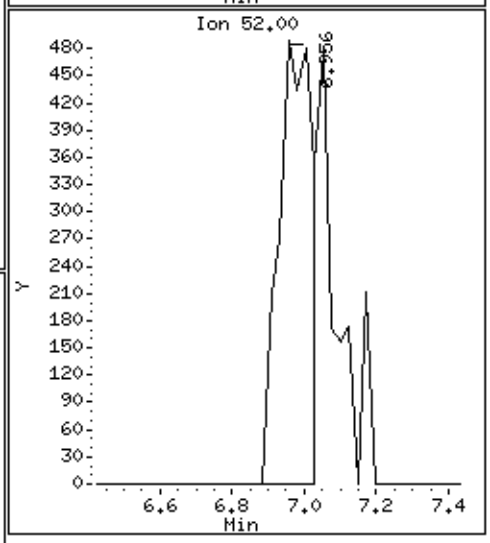












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

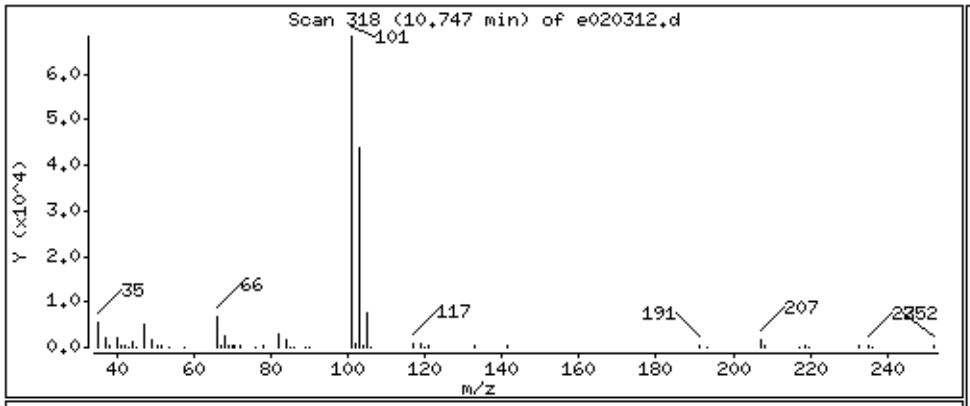
Operator: ef

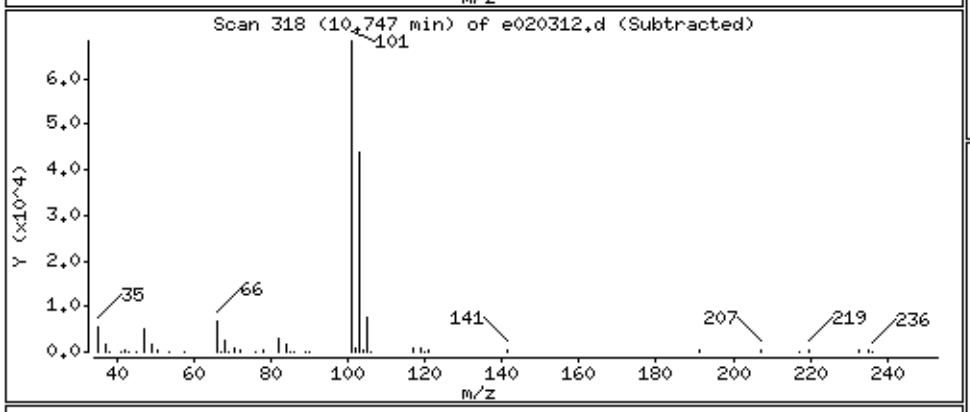
Column phase: RTX-624

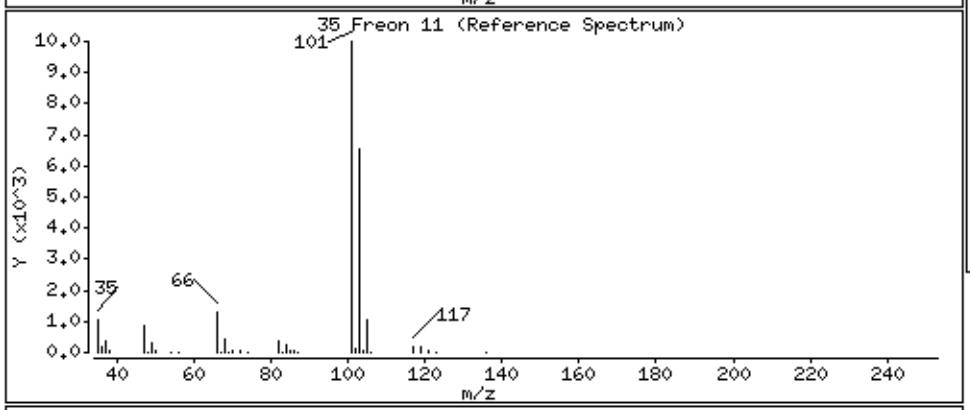
Column diameter: 0.32

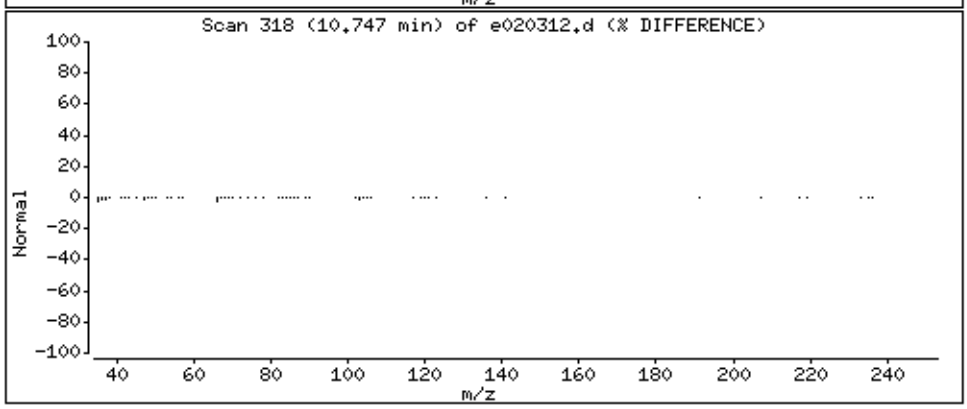
35 Freon 11

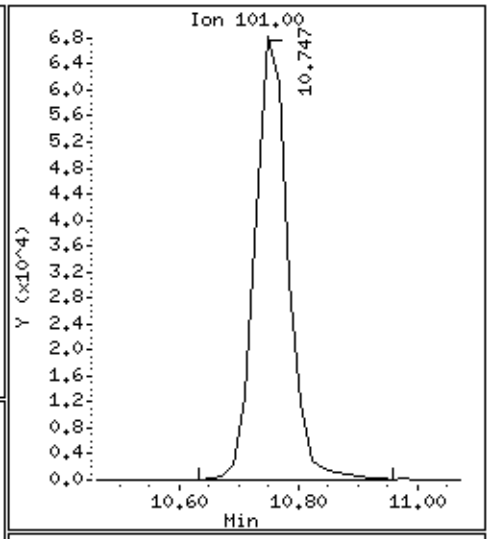
Concentration: 3.027 PPBV

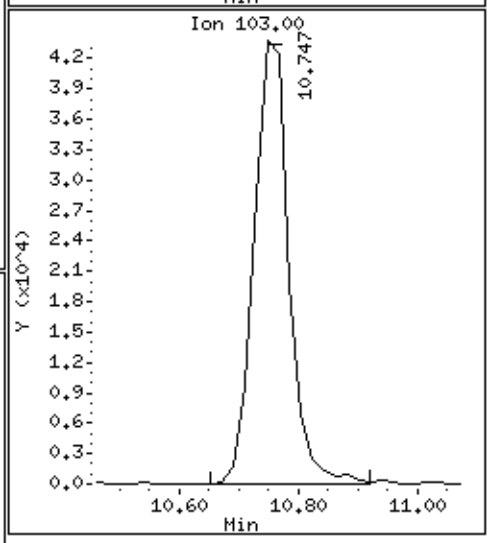












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

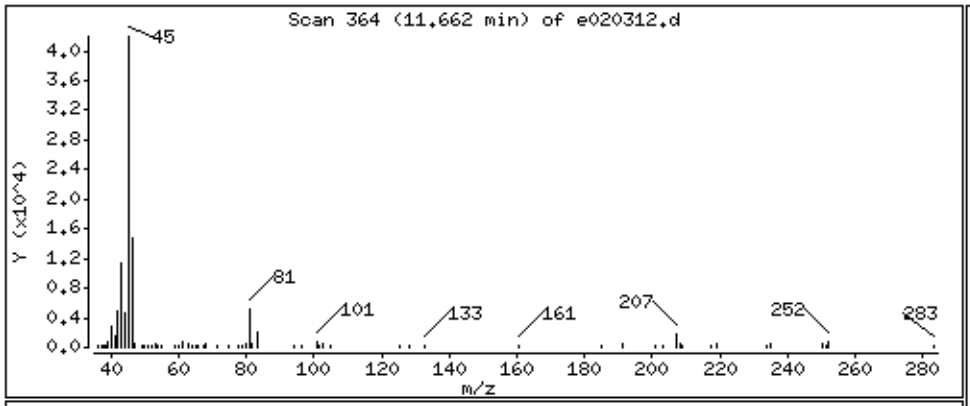
Operator: ef

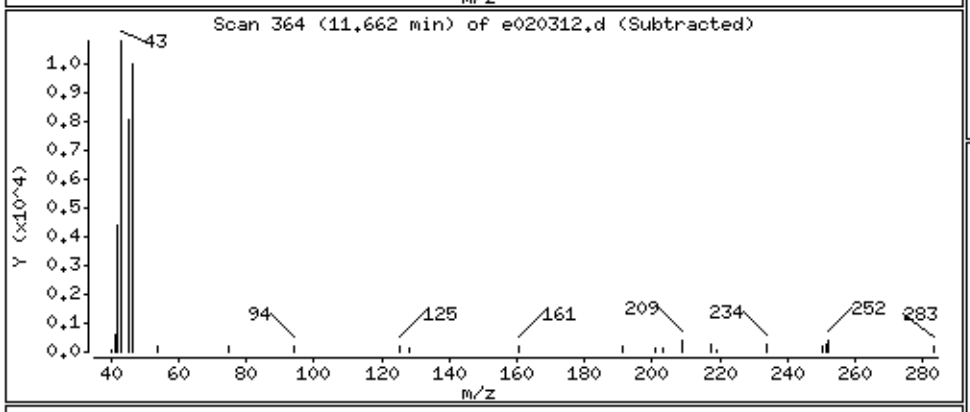
Column phase: RTX-624

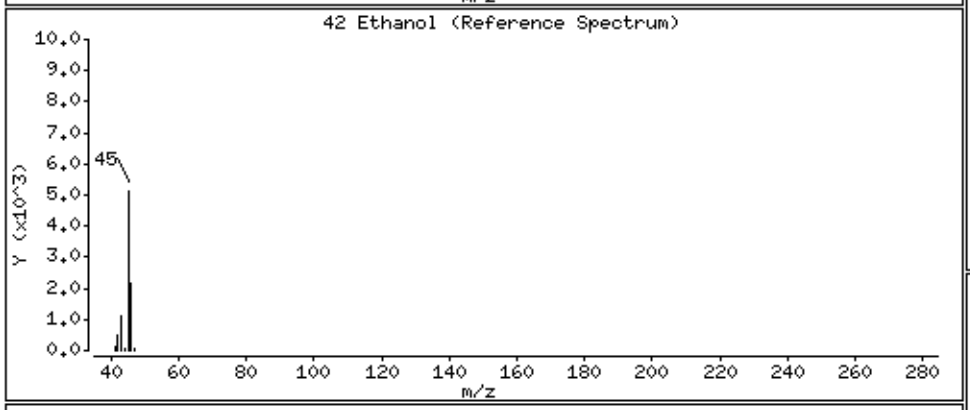
Column diameter: 0.32

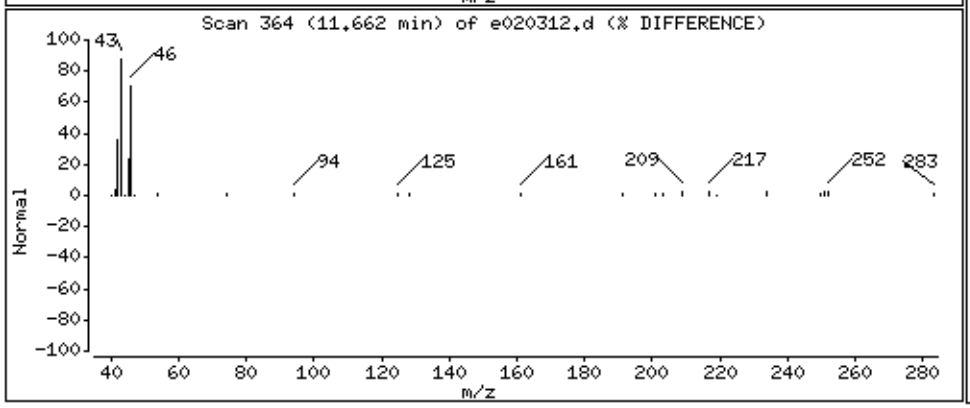
42 Ethanol

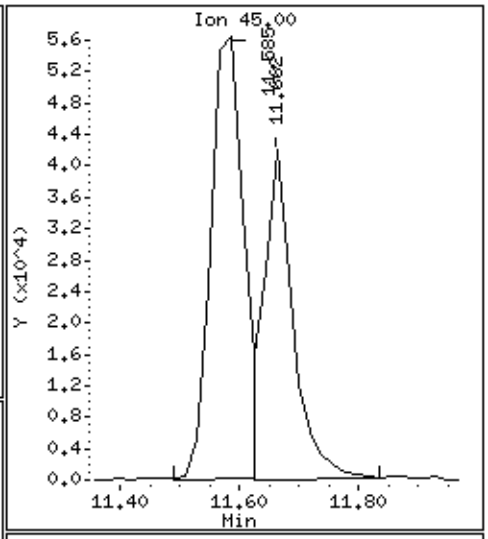
Concentration: 20.150 PPBV

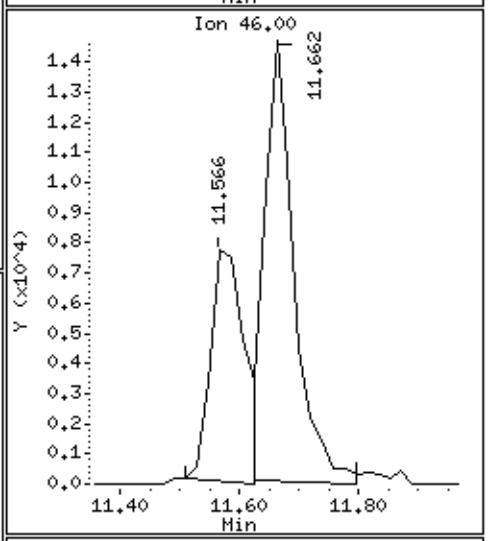


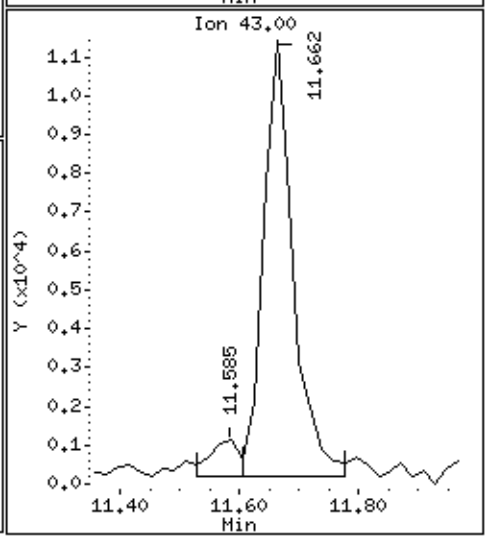












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

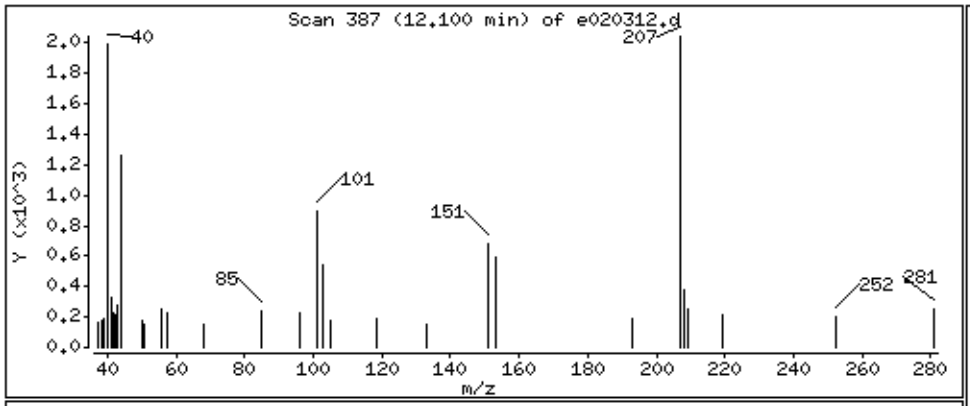
Operator: ef

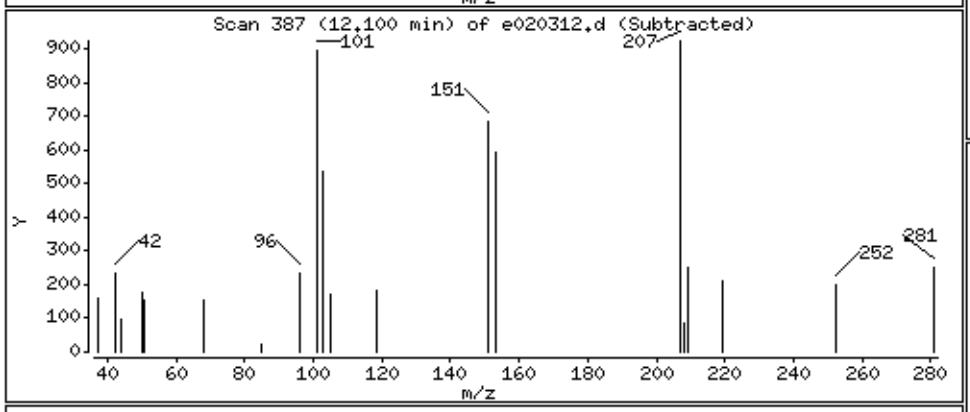
Column phase: RTX-624

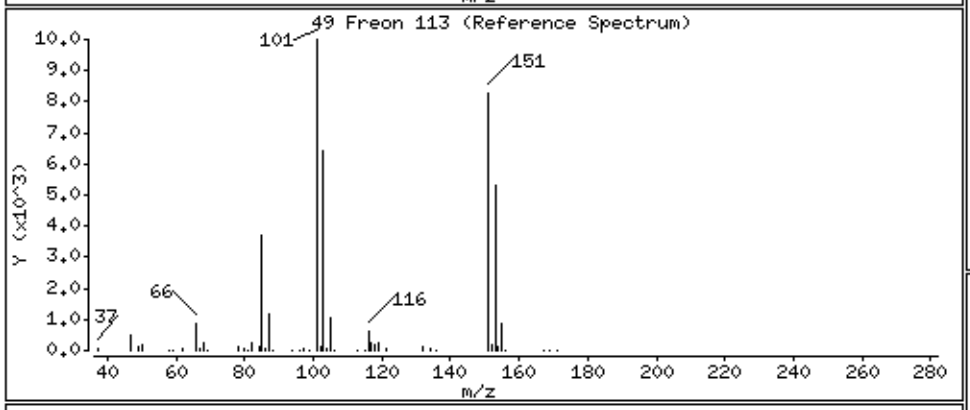
Column diameter: 0.32

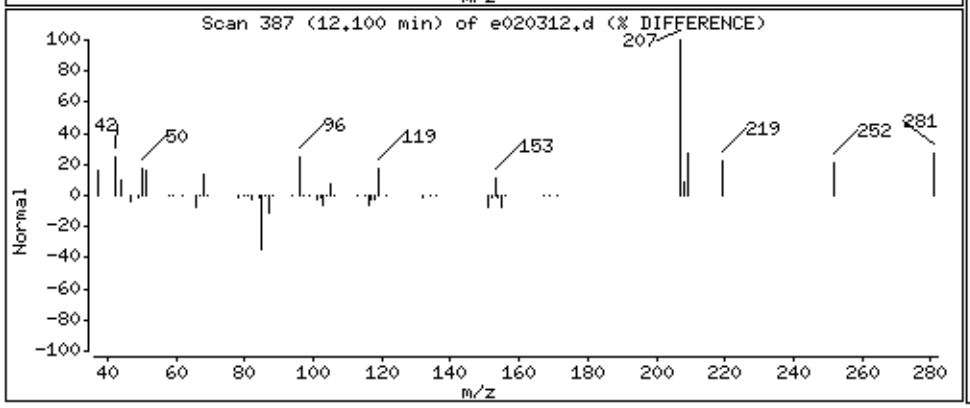
49 Freon 113

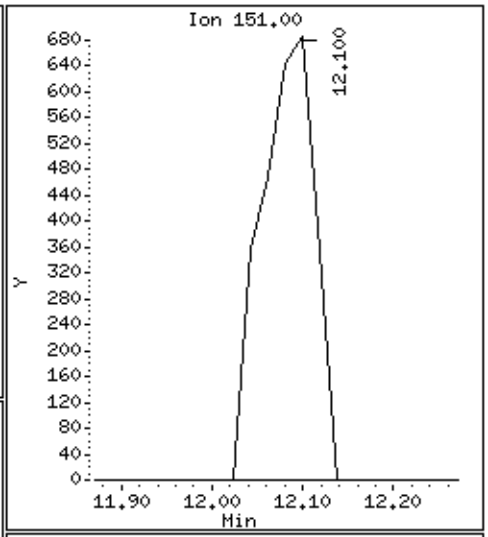
Concentration: 0.04781 PPBV

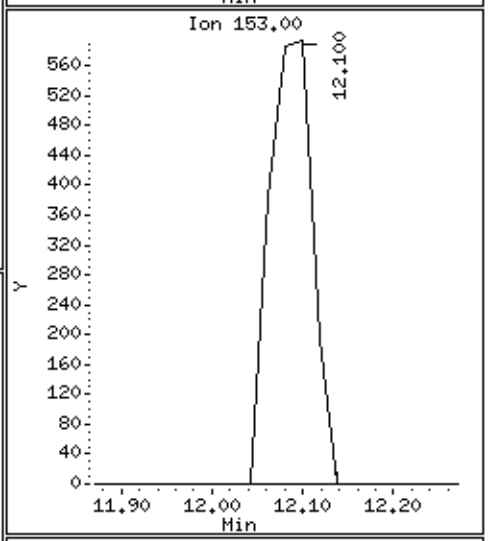


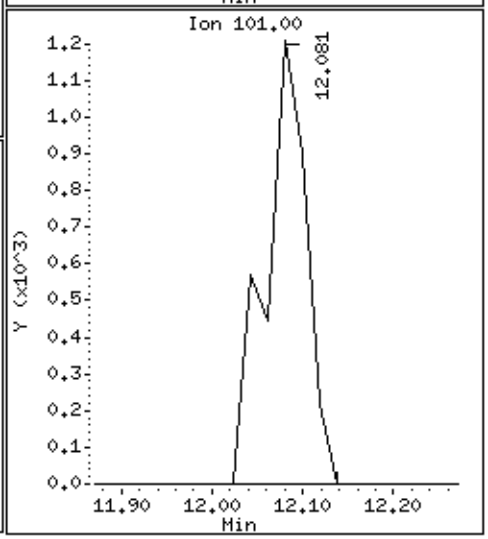












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

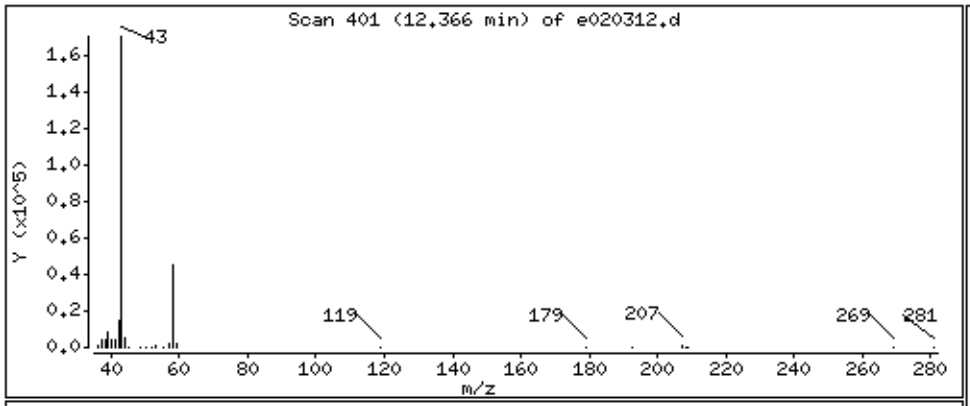
Operator: ef

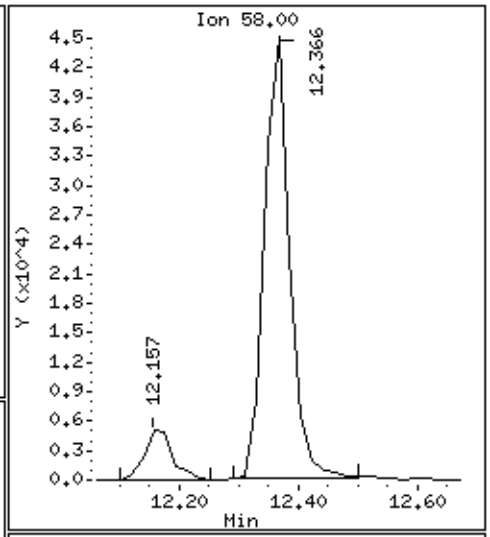
Column phase: RTX-624

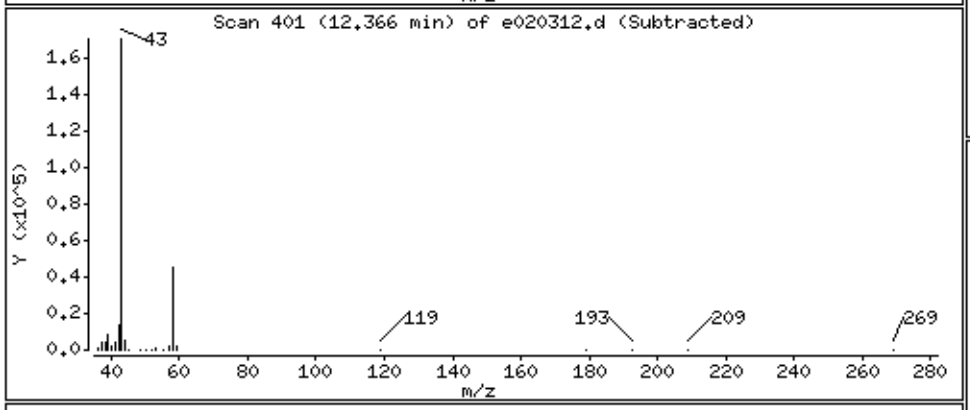
Column diameter: 0.32

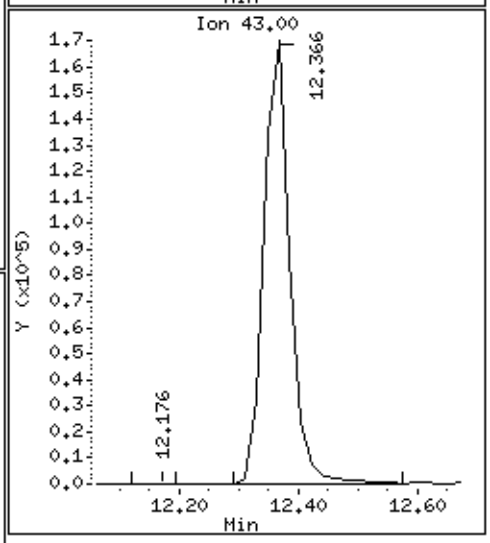
52 Acetone

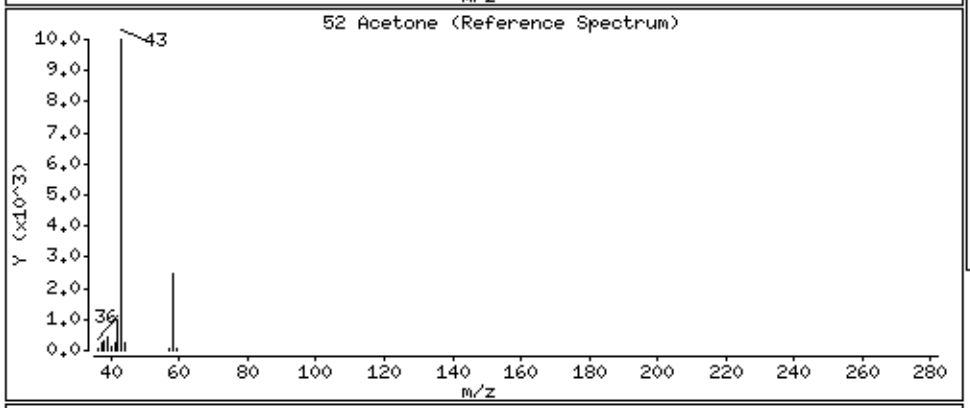
Concentration: 13.954 PPBV

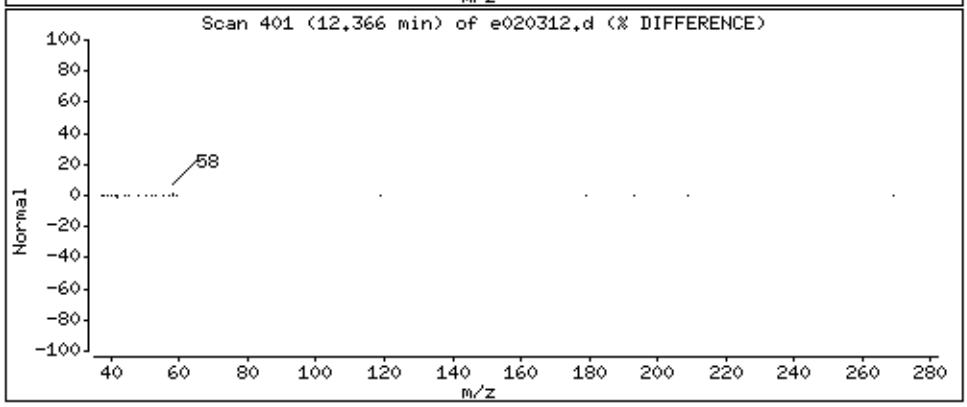












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

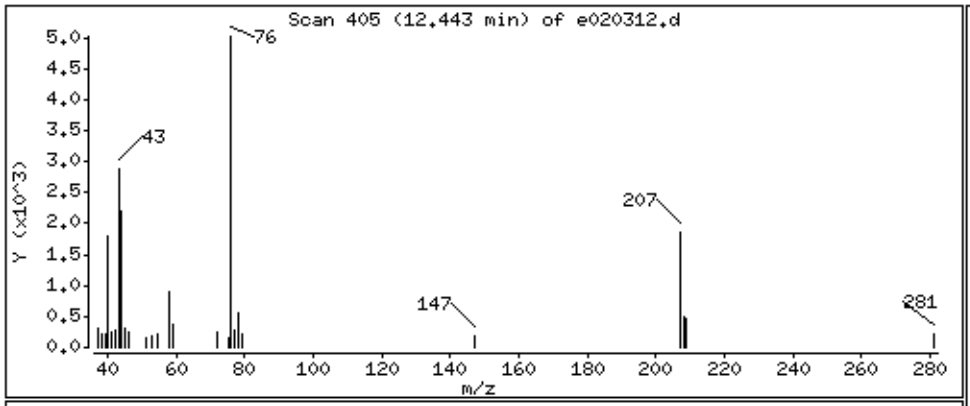
Operator: ef

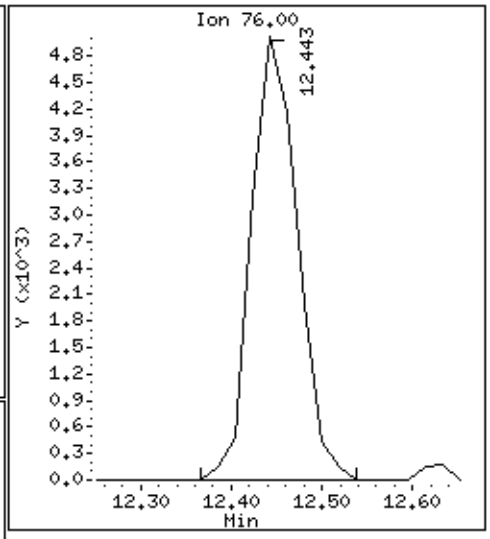
Column phase: RTX-624

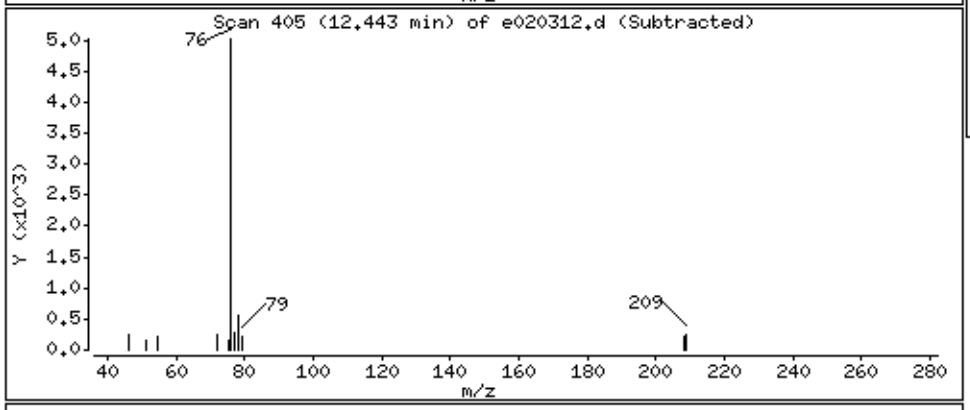
Column diameter: 0.32

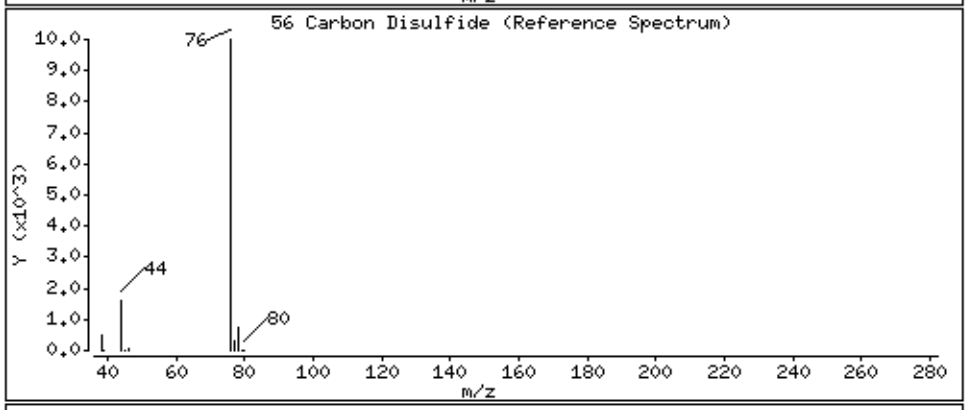
56 Carbon Disulfide

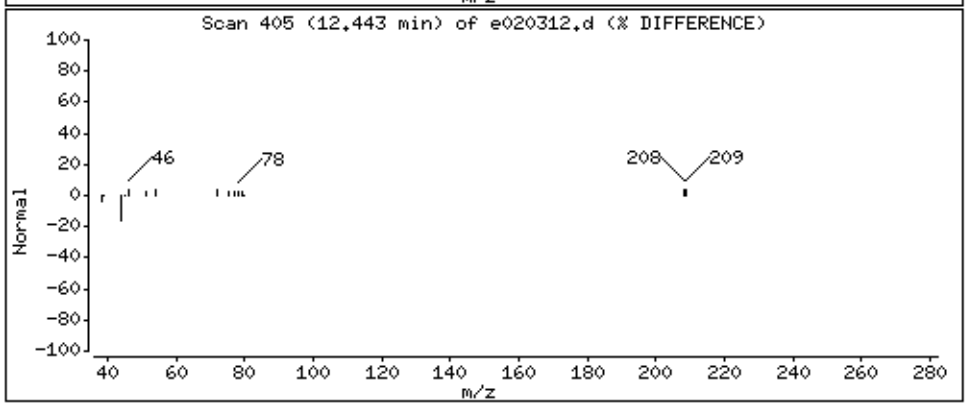
Concentration: 0.2617 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

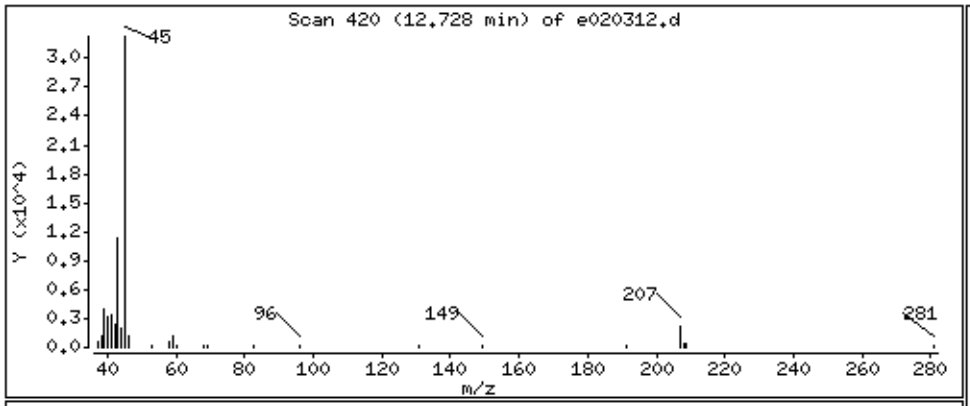
Operator: ef

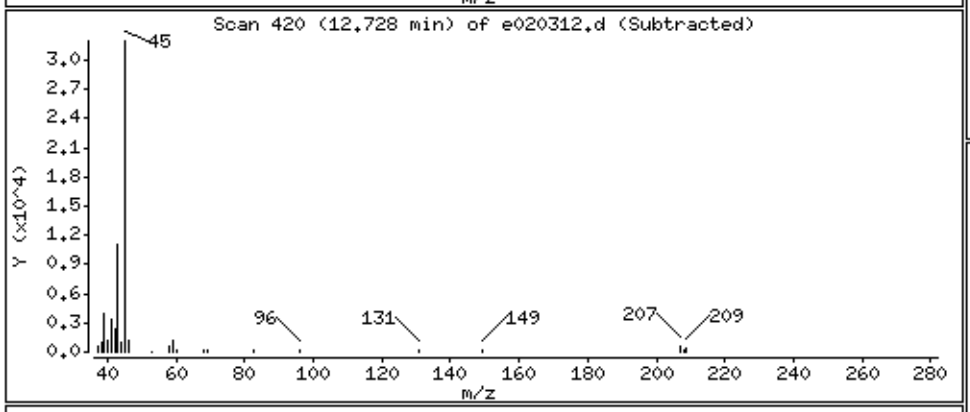
Column phase: RTX-624

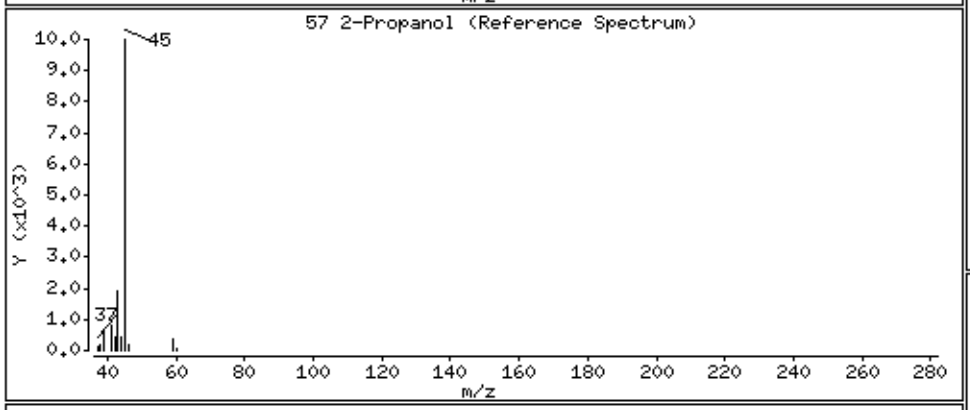
Column diameter: 0.32

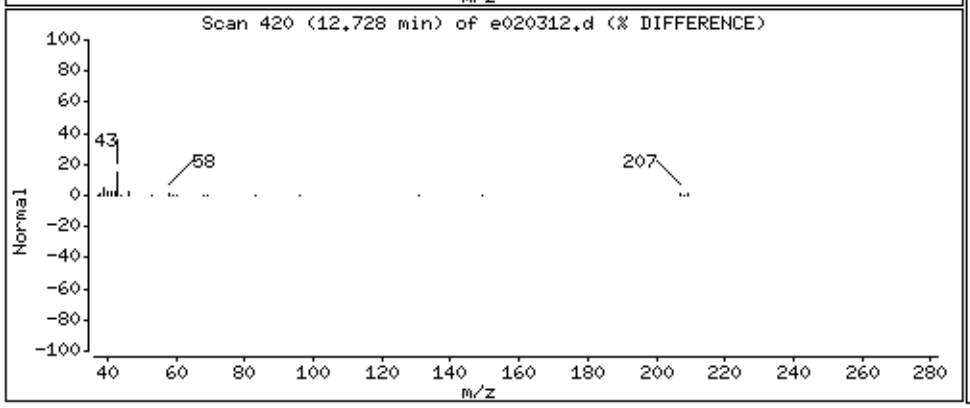
57 2-Propanol

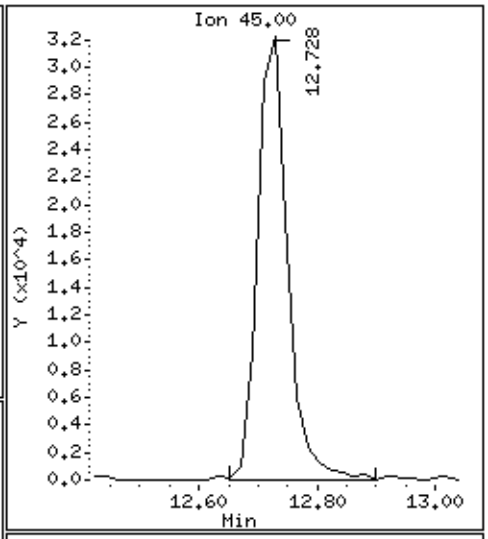
Concentration: 3.697 PPBV

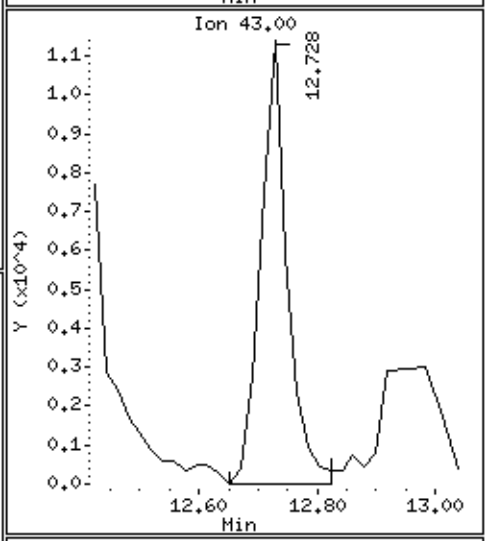


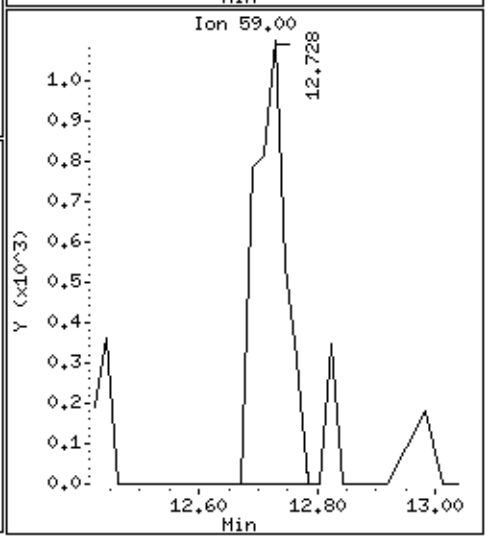












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

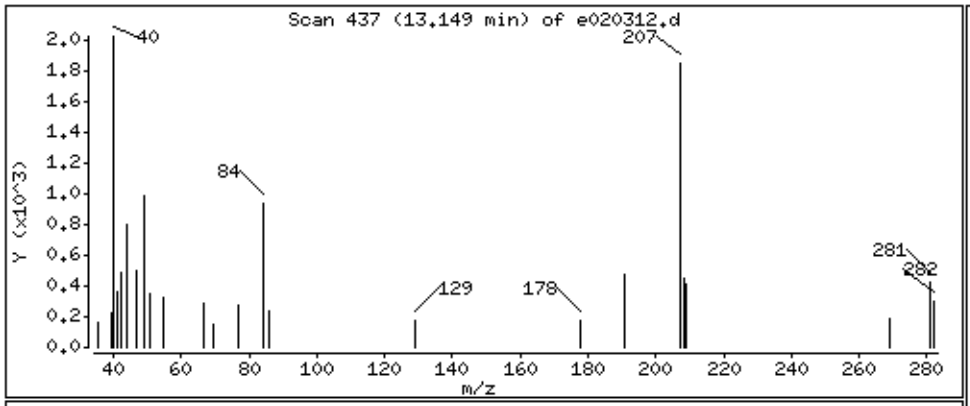
Operator: ef

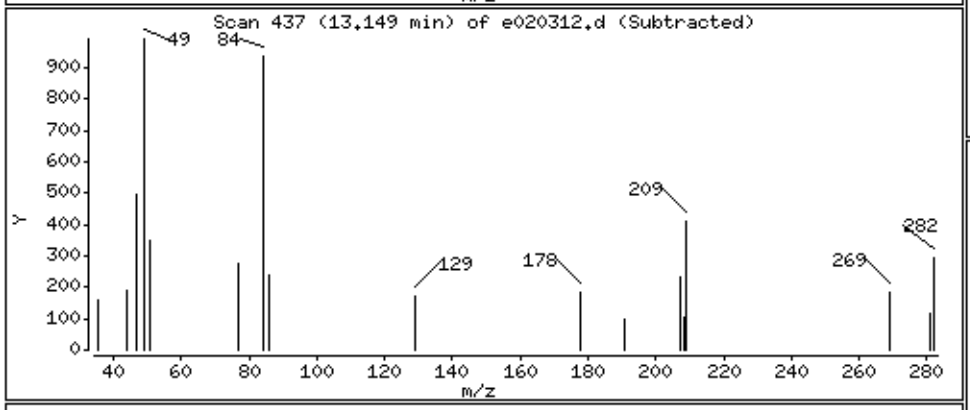
Column phase: RTX-624

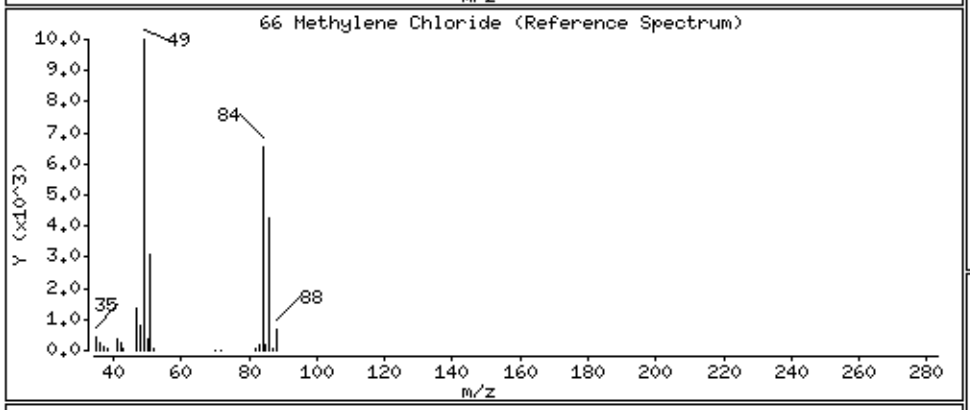
Column diameter: 0.32

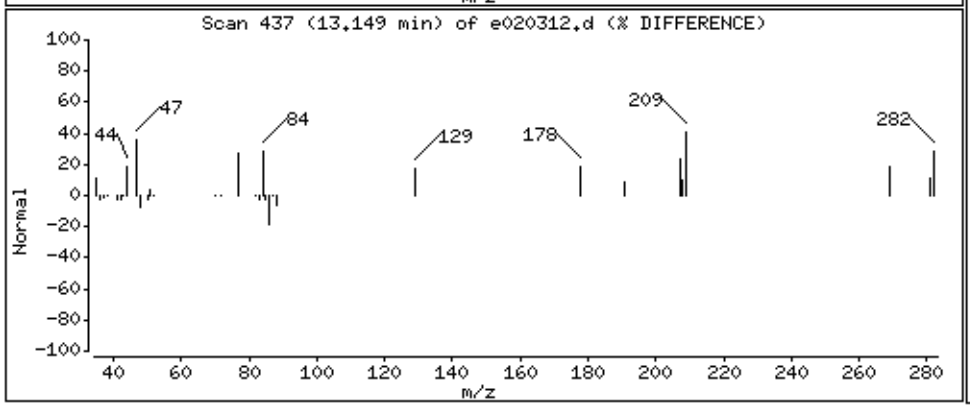
66 Methylene Chloride

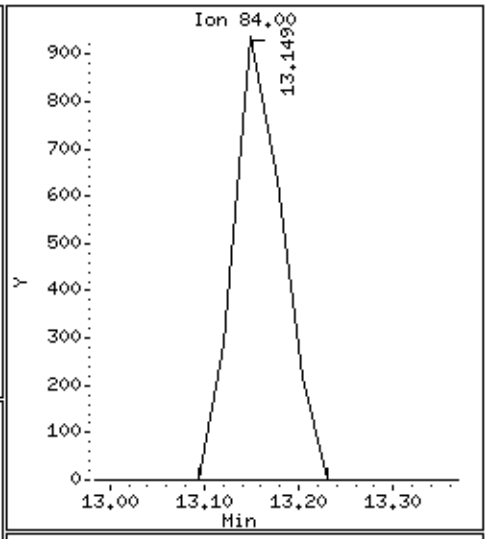
Concentration: 0.1424 PPBV

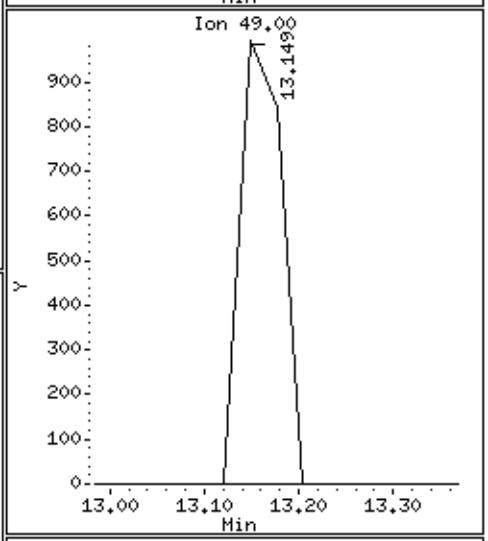


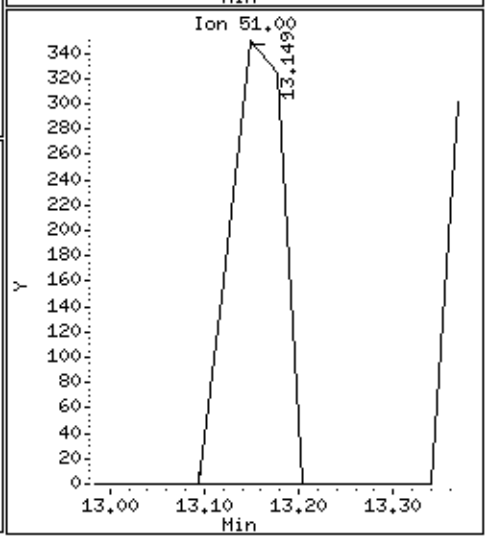












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

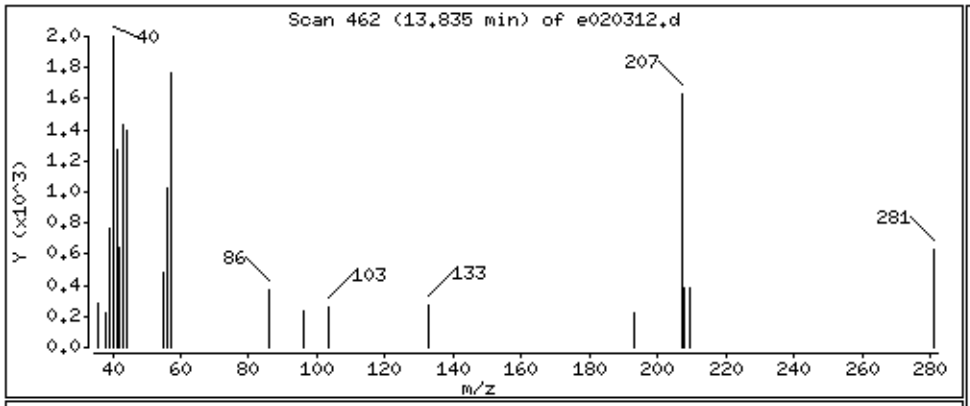
Operator: ef

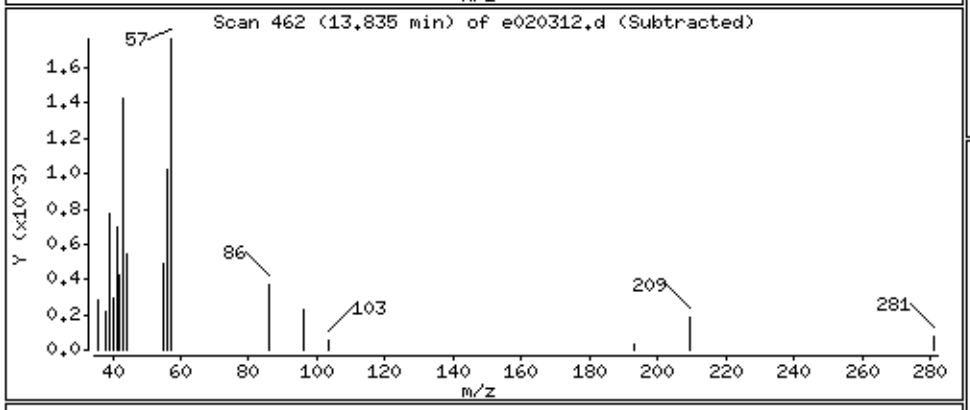
Column phase: RTX-624

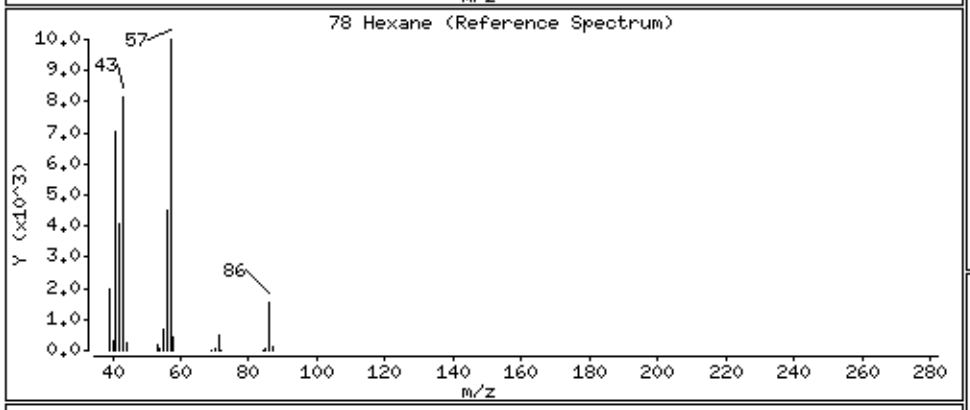
Column diameter: 0.32

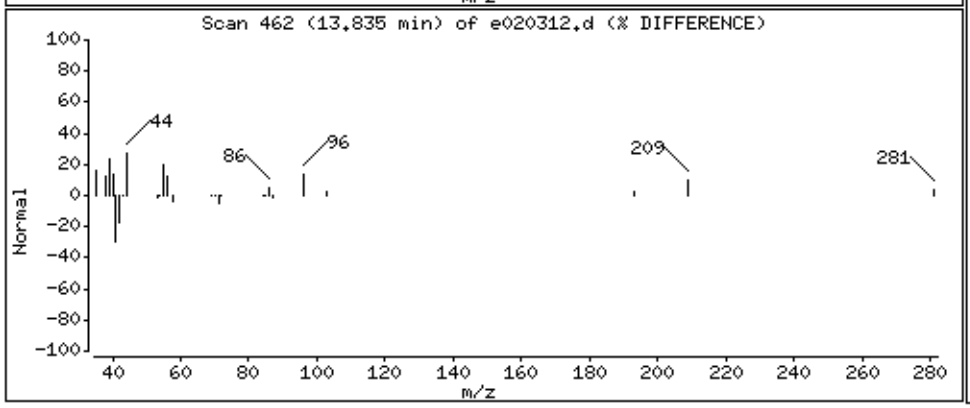
78 Hexane

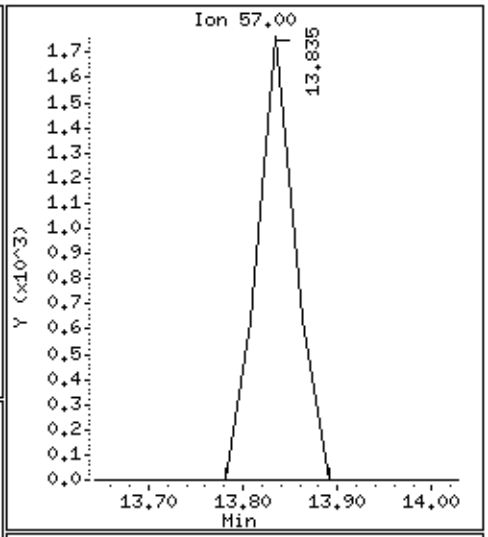
Concentration: 0.1748 PPBV

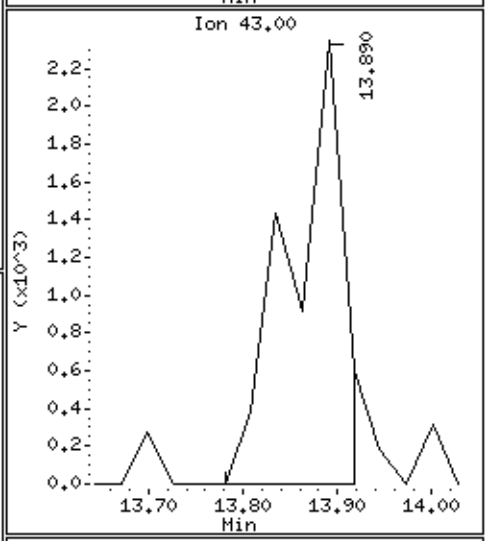


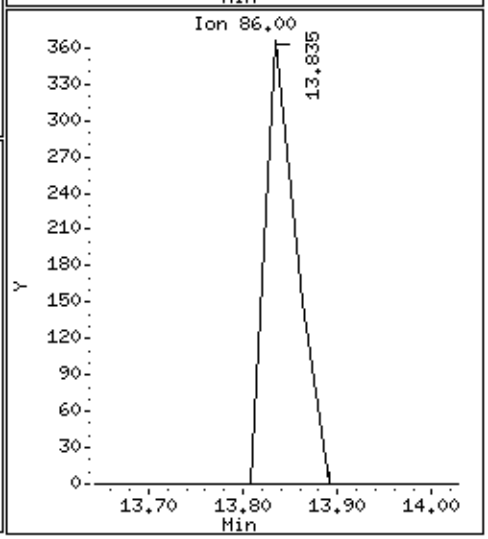












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

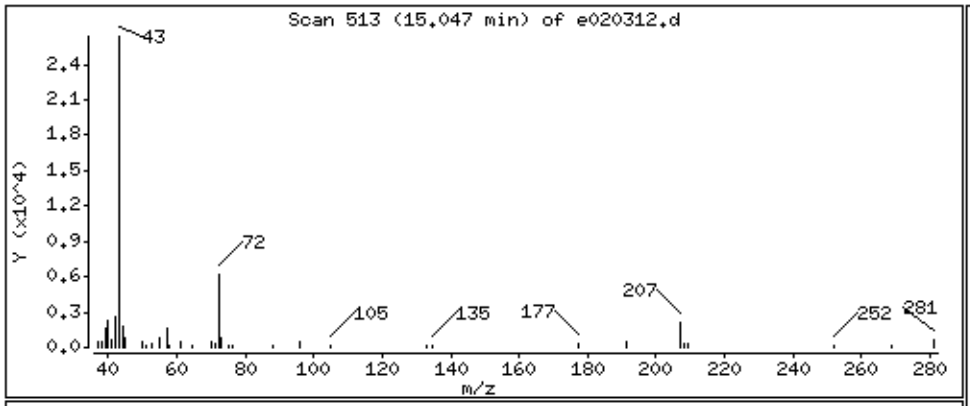
Operator: ef

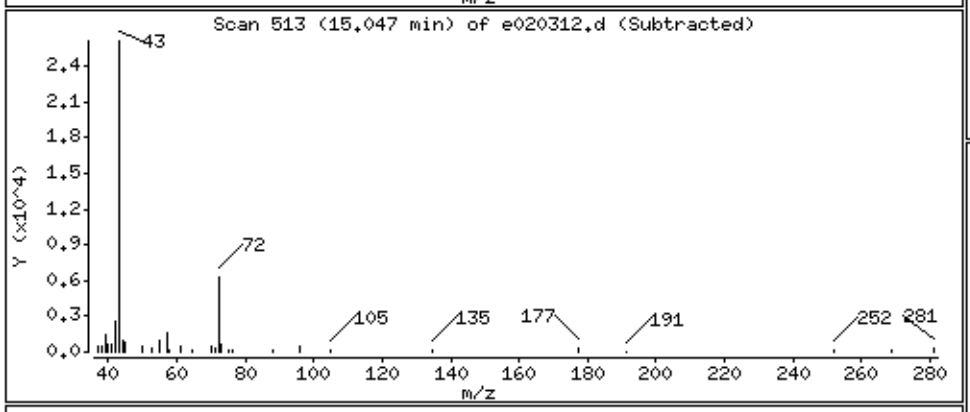
Column phase: RTX-624

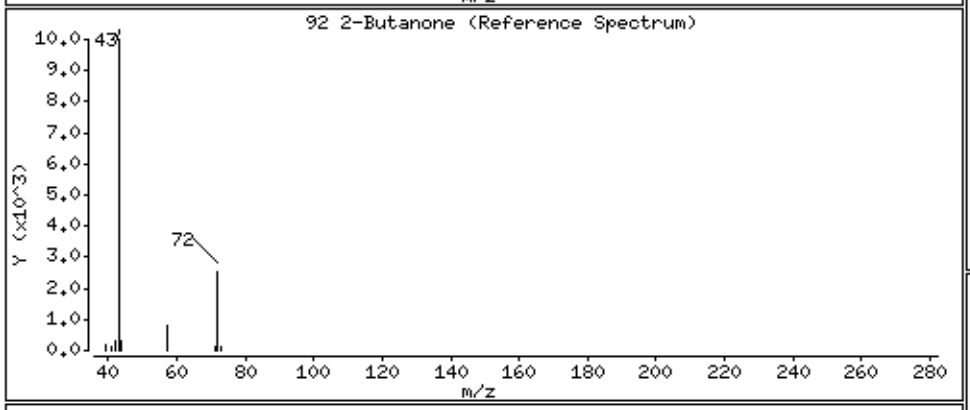
Column diameter: 0.32

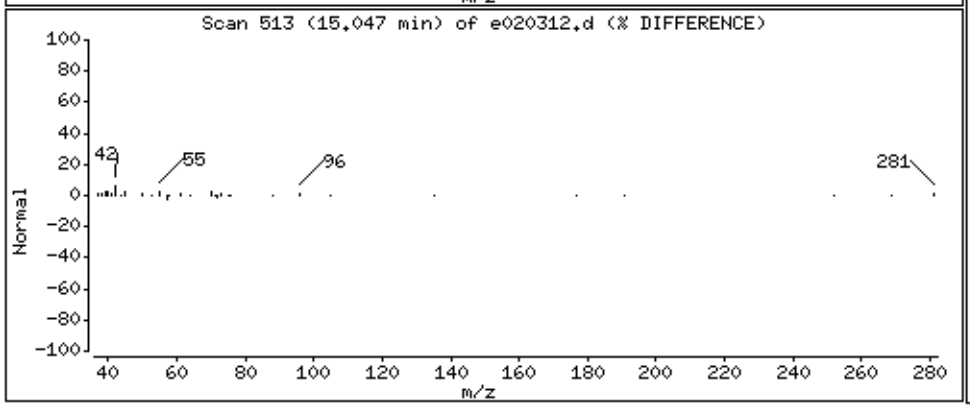
92 2-Butanone

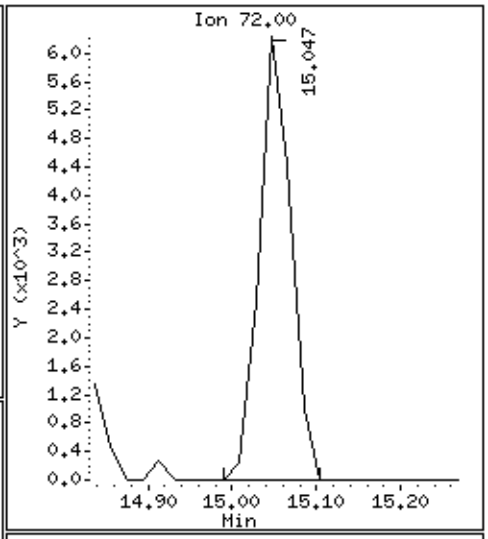
Concentration: 1.543 PPBV

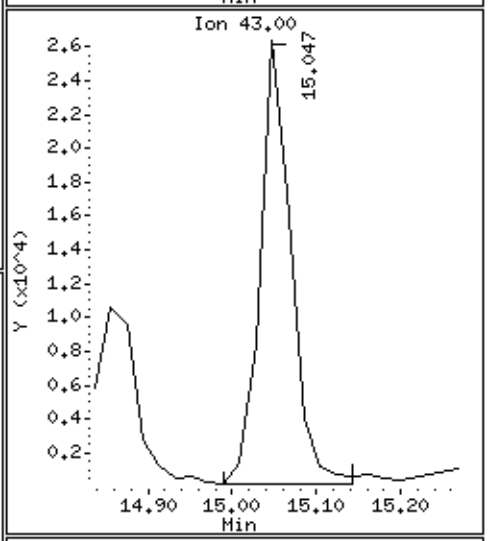


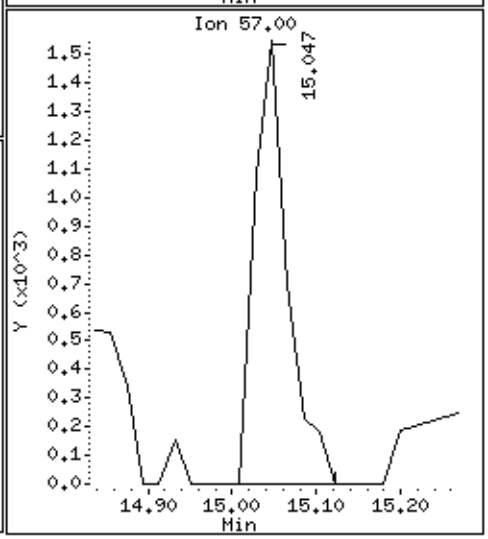












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

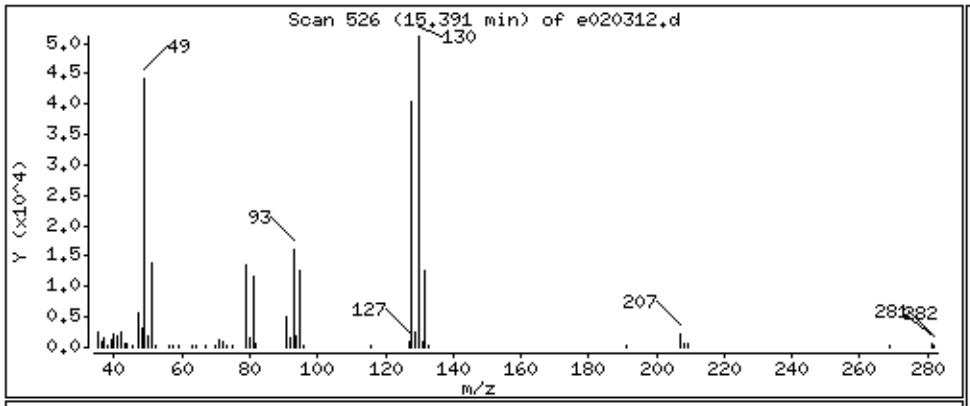
Operator: ef

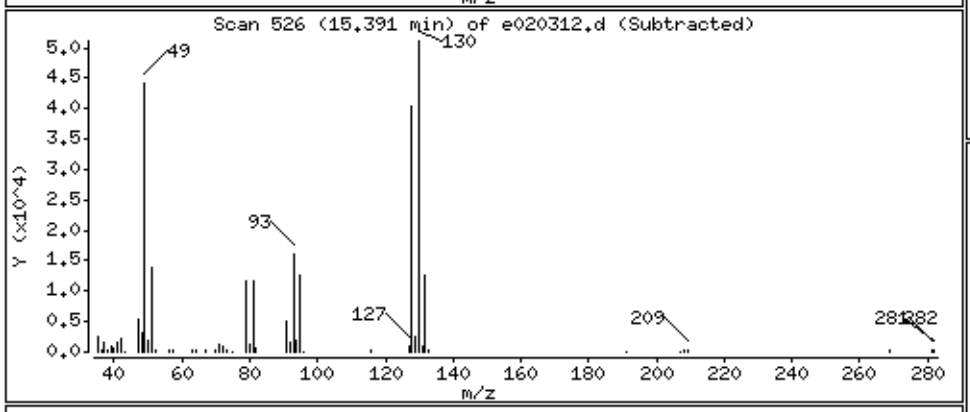
Column phase: RTX-624

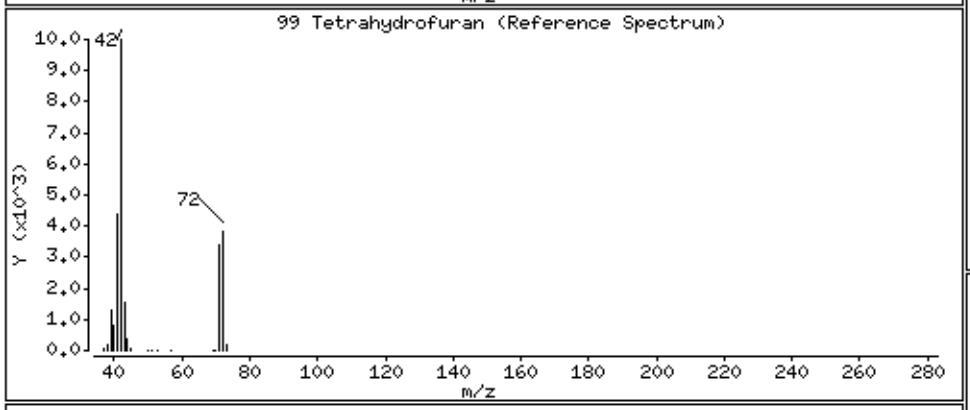
Column diameter: 0.32

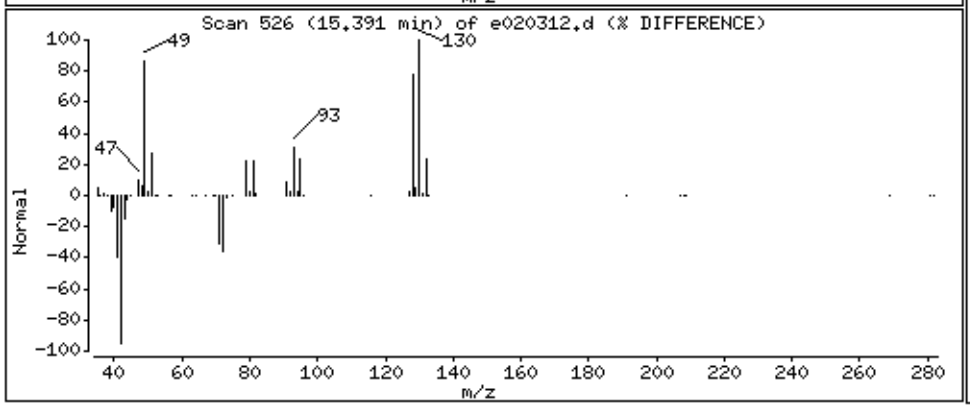
99 Tetrahydrofuran

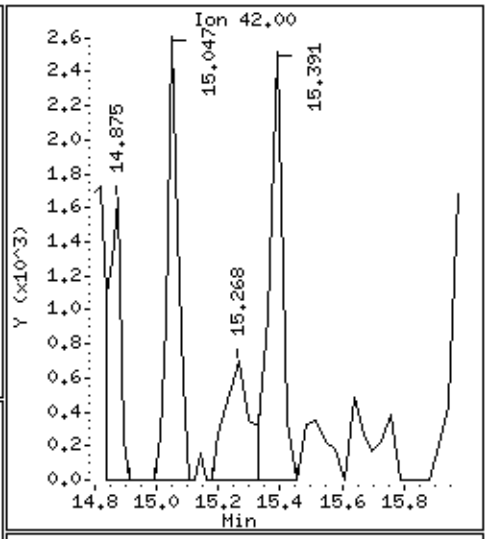
Concentration: 0.3972 PPBV

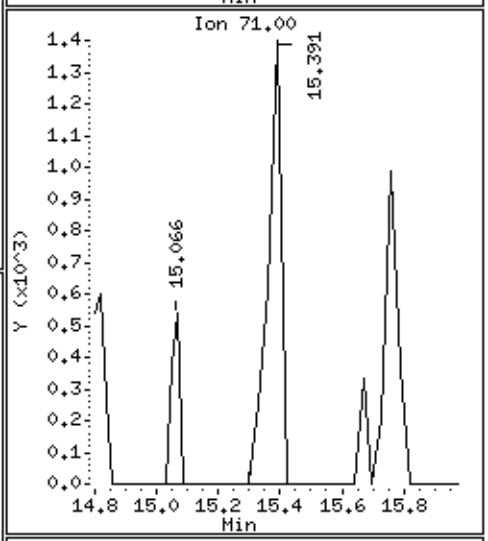


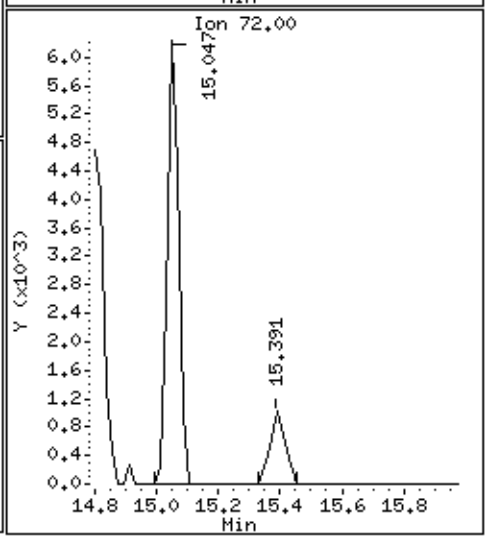












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

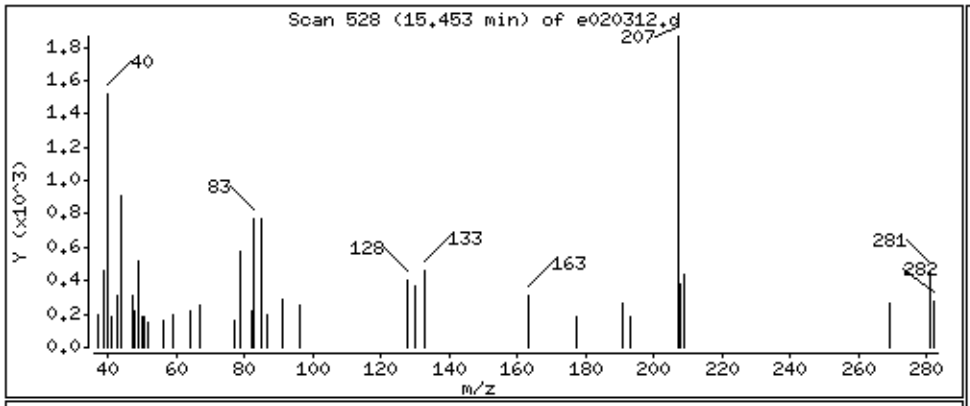
Operator: ef

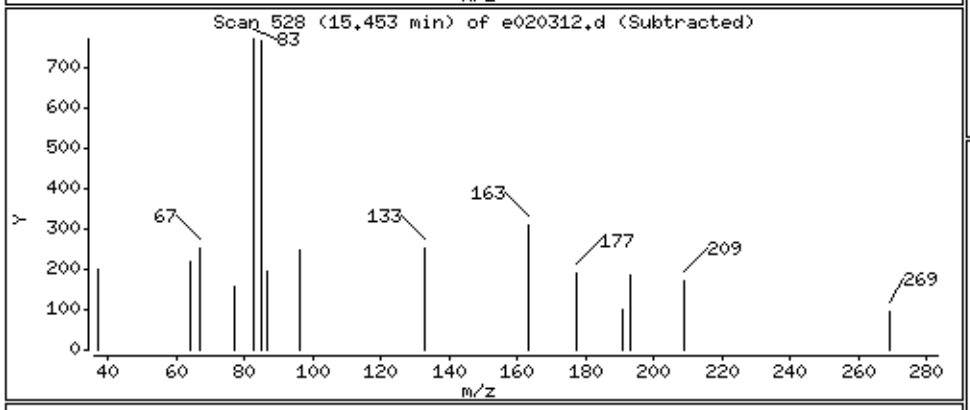
Column phase: RTX-624

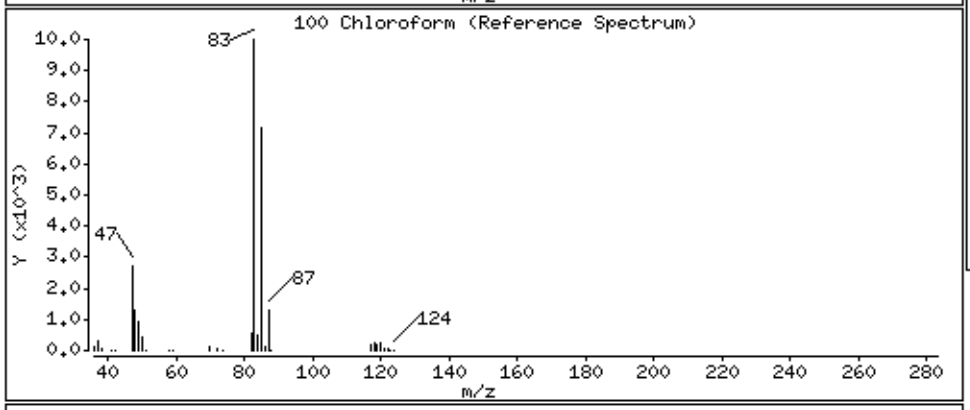
Column diameter: 0.32

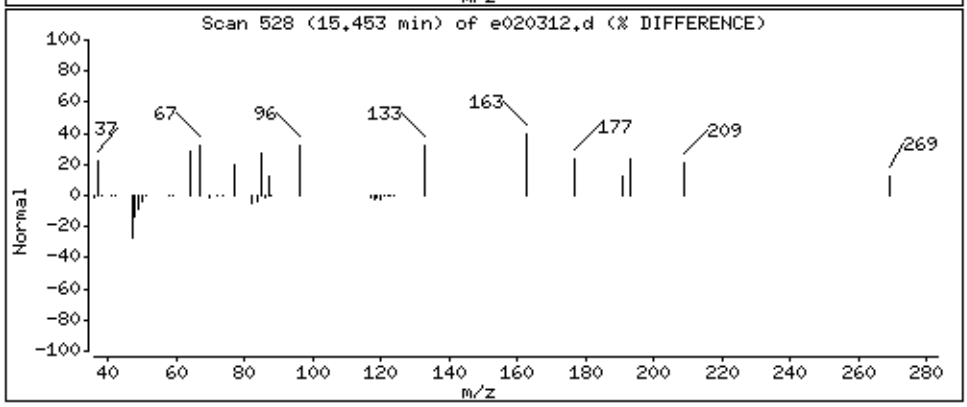
100 Chloroform

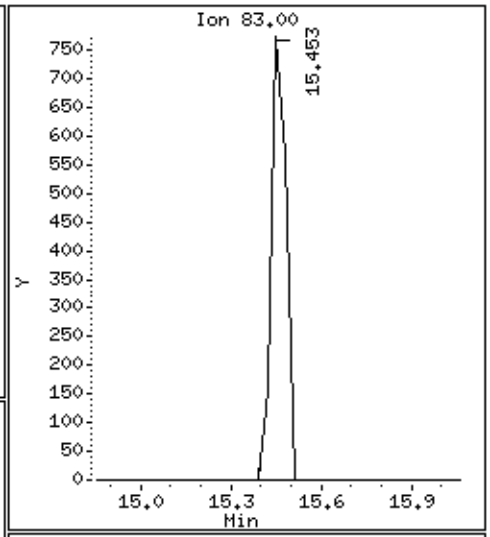
Concentration: 0.04416 PPBV

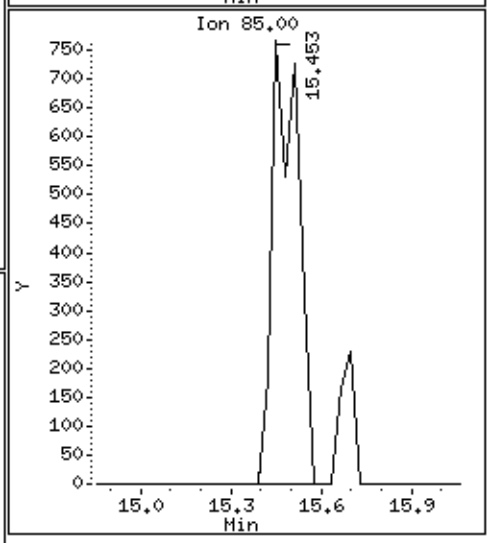












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

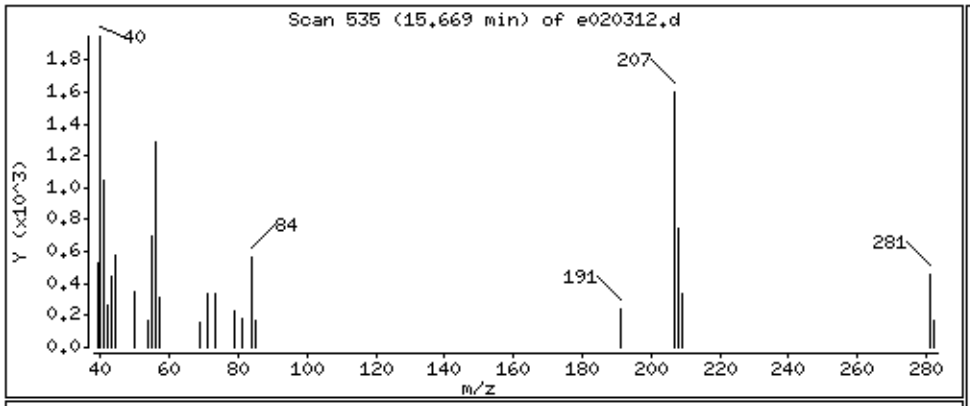
Operator: ef

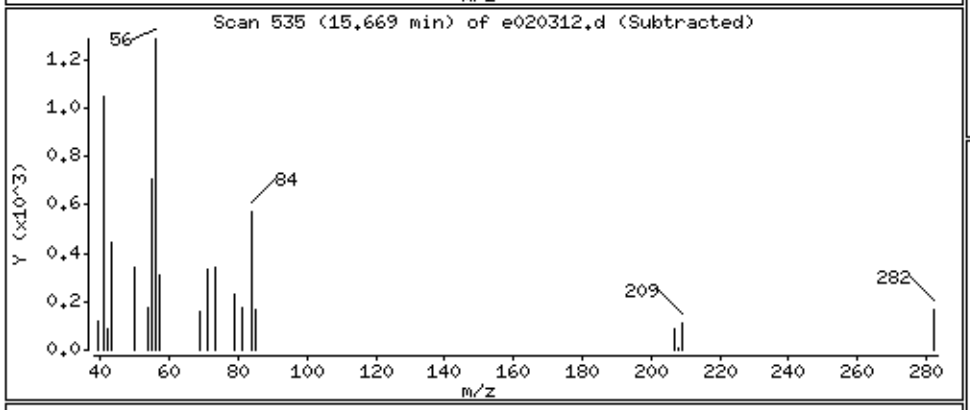
Column phase: RTX-624

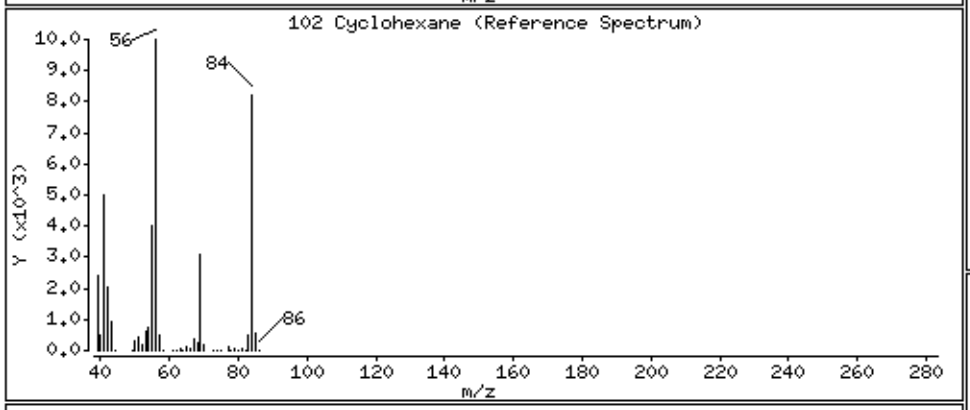
Column diameter: 0.32

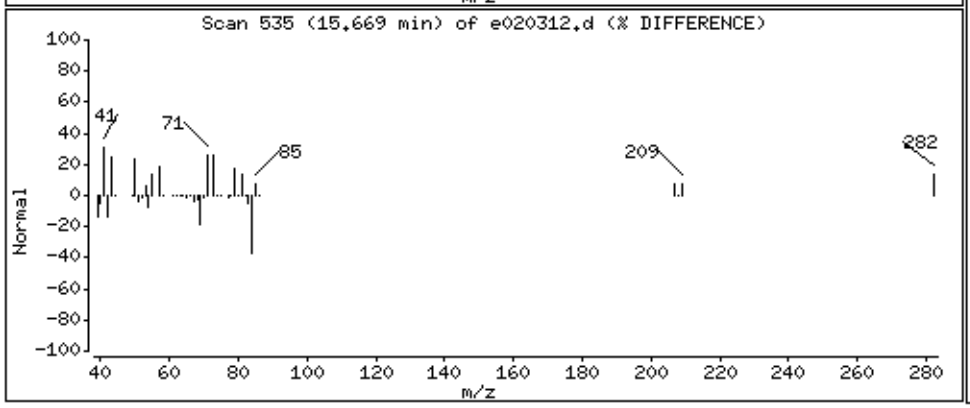
102 Cyclohexane

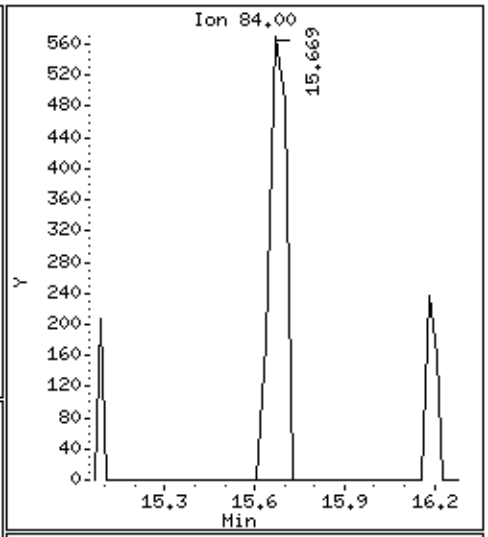
Concentration: 0.07578 PPBV

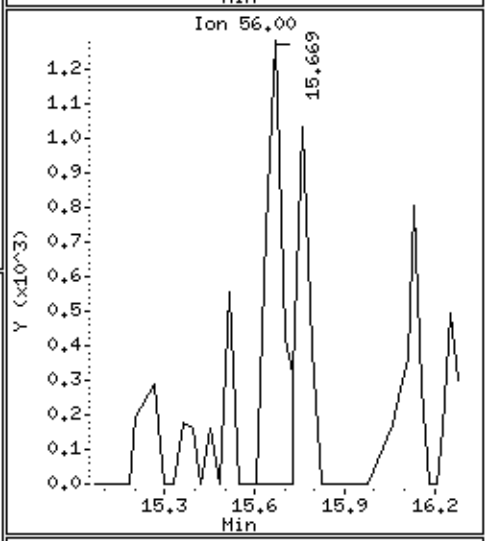


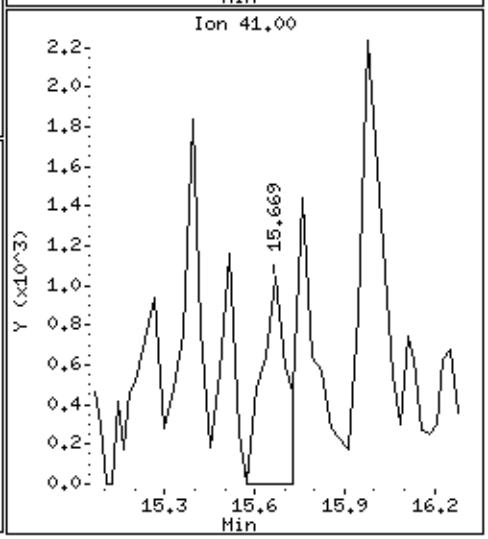












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

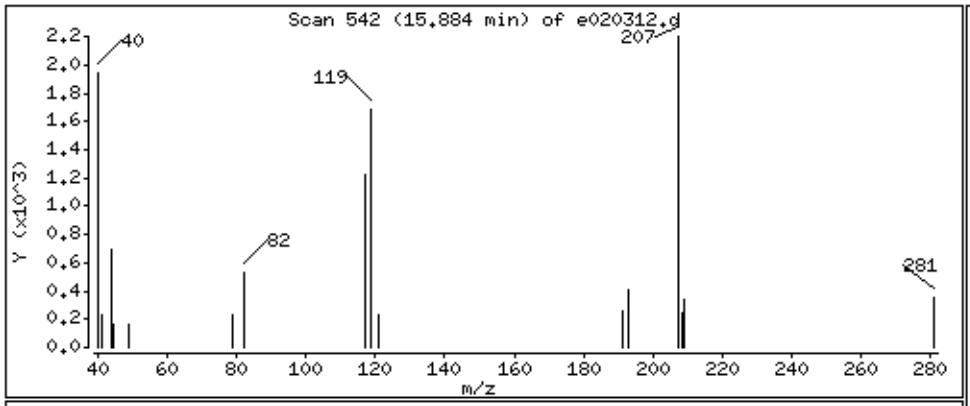
Operator: ef

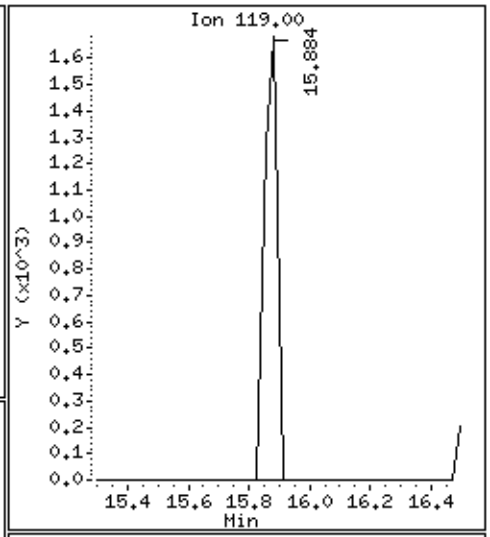
Column phase: RTX-624

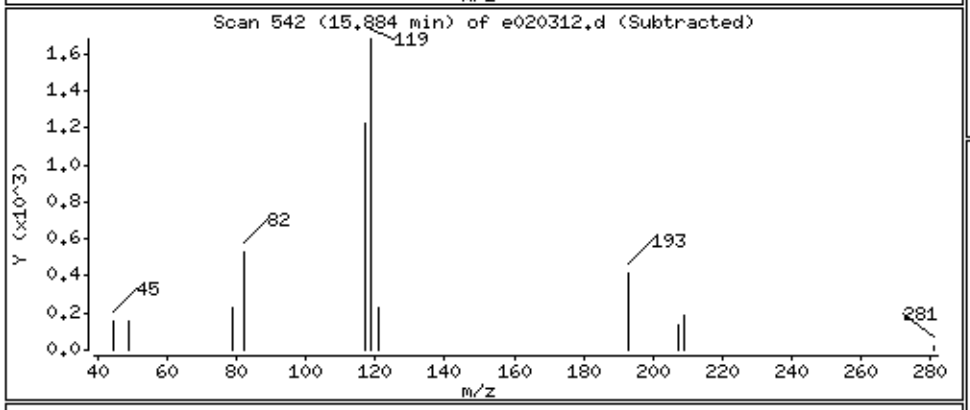
Column diameter: 0.32

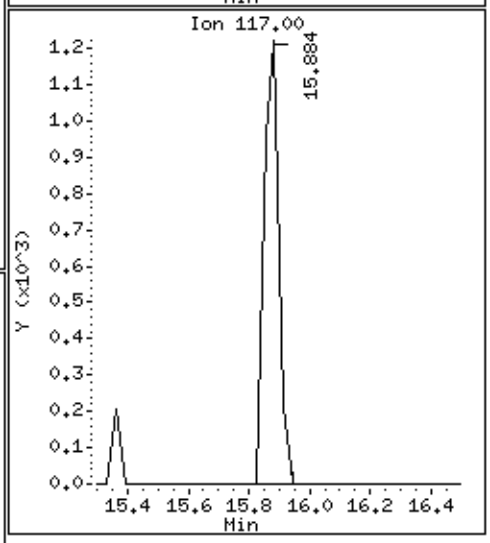
106 Carbon Tetrachloride

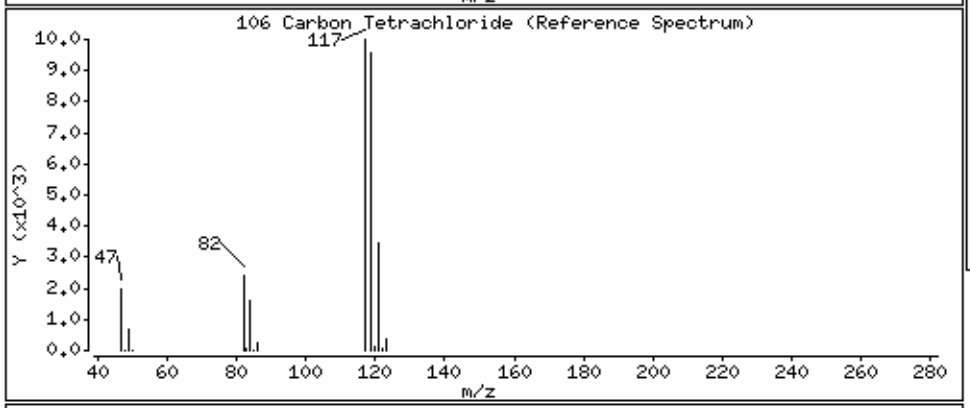
Concentration: 0.07593 PPBV

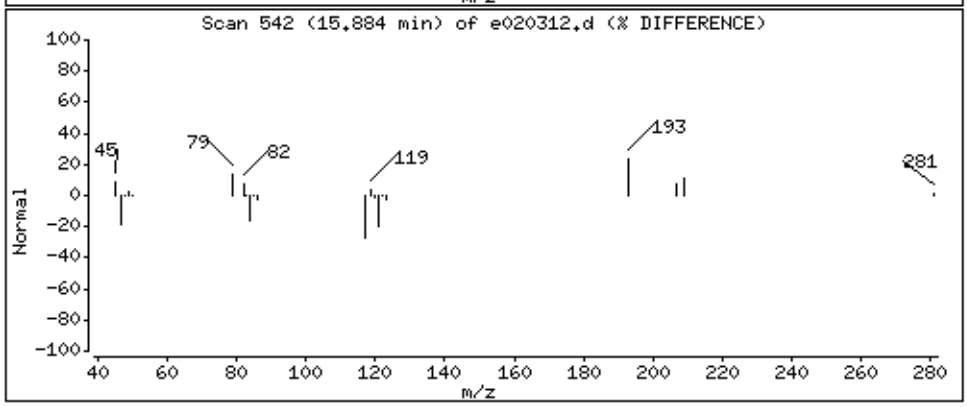












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

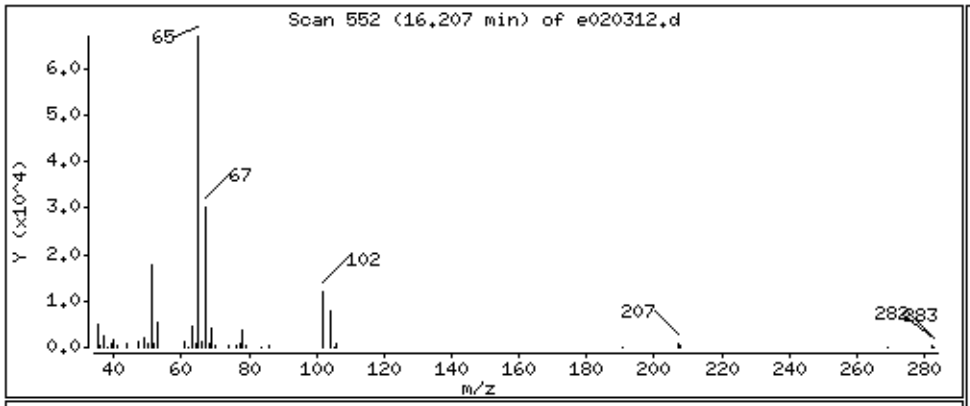
Operator: ef

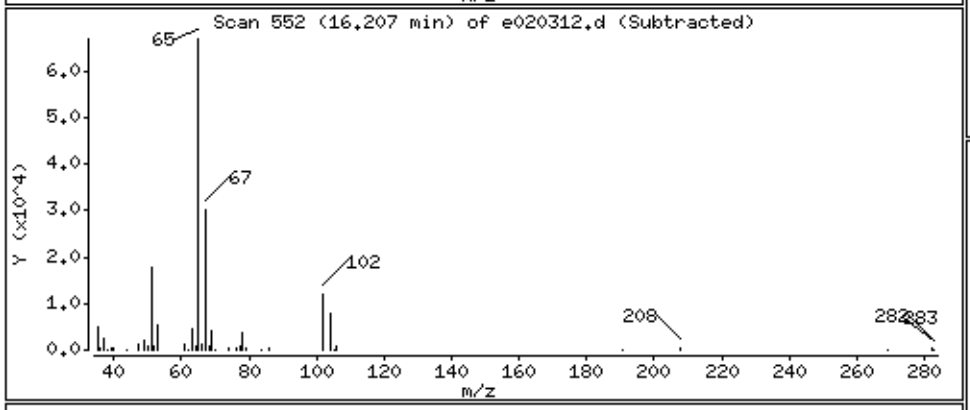
Column phase: RTX-624

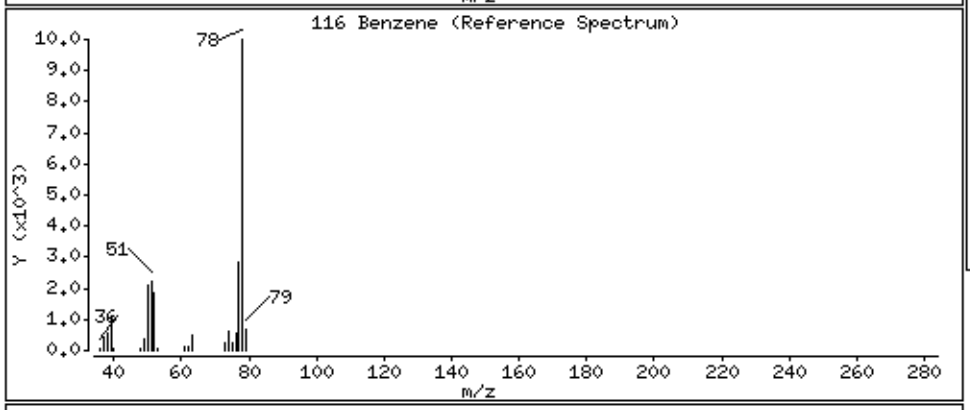
Column diameter: 0.32

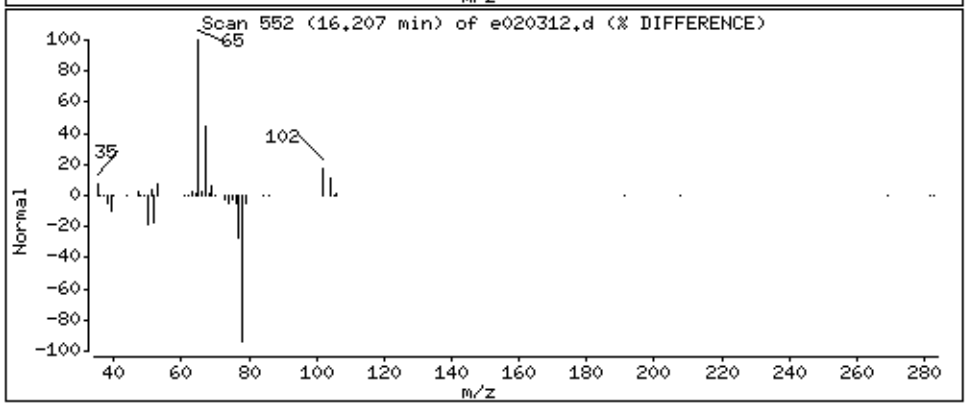
116 Benzene

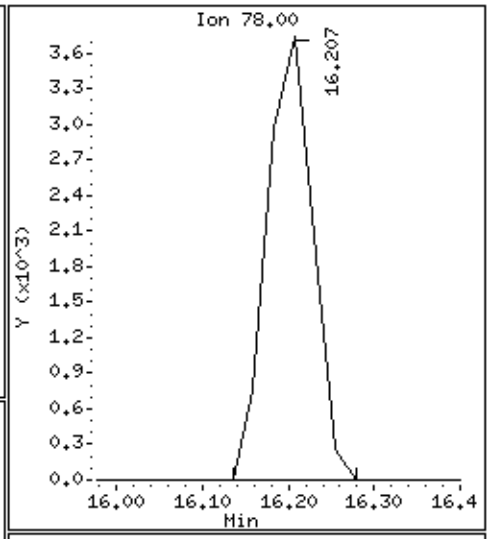
Concentration: 0.1930 PPBV

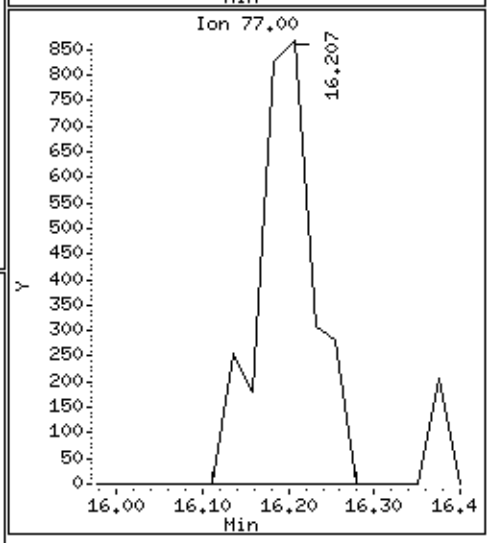












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

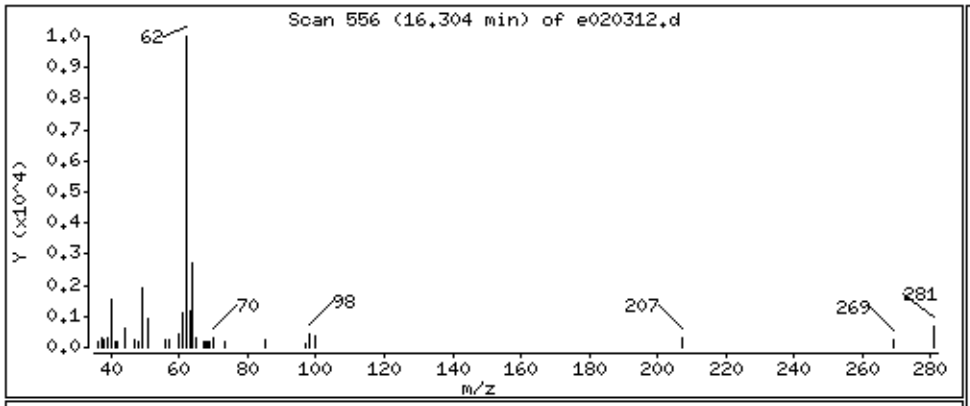
Operator: ef

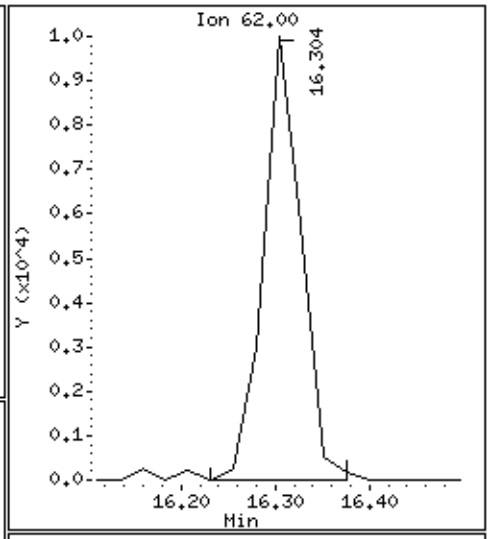
Column phase: RTX-624

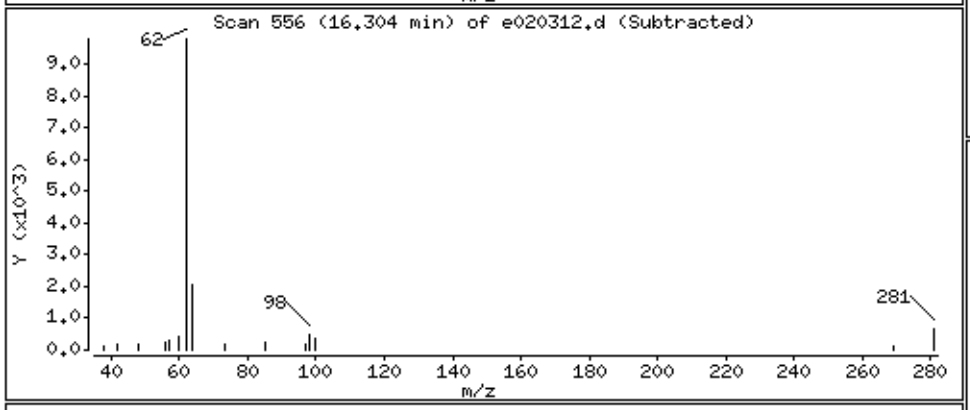
Column diameter: 0.32

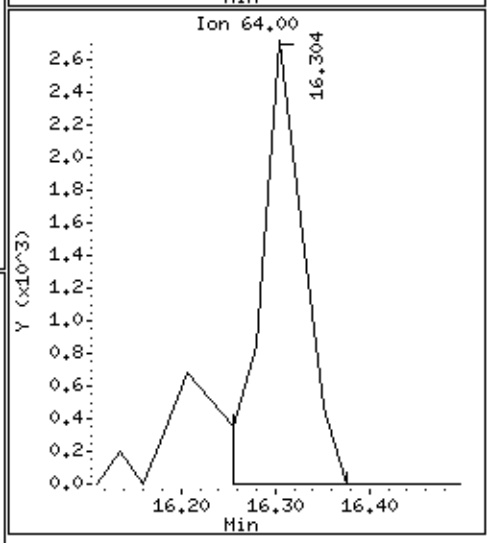
120 1,2-Dichloroethane

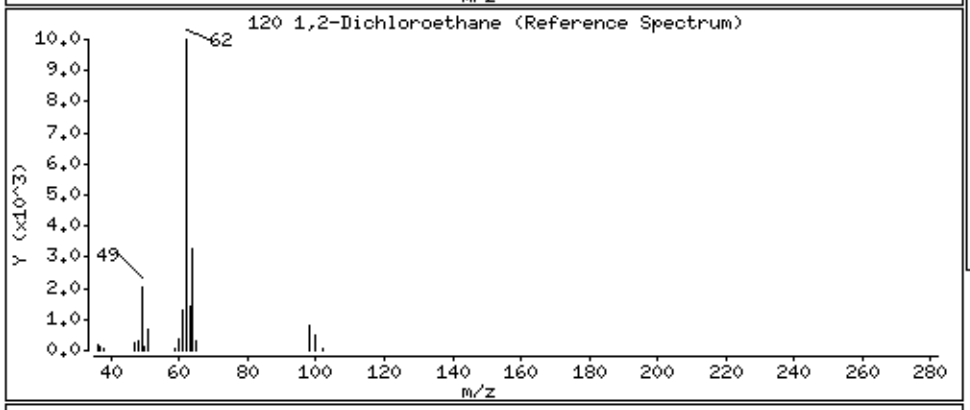
Concentration: 0.6421 PPBV

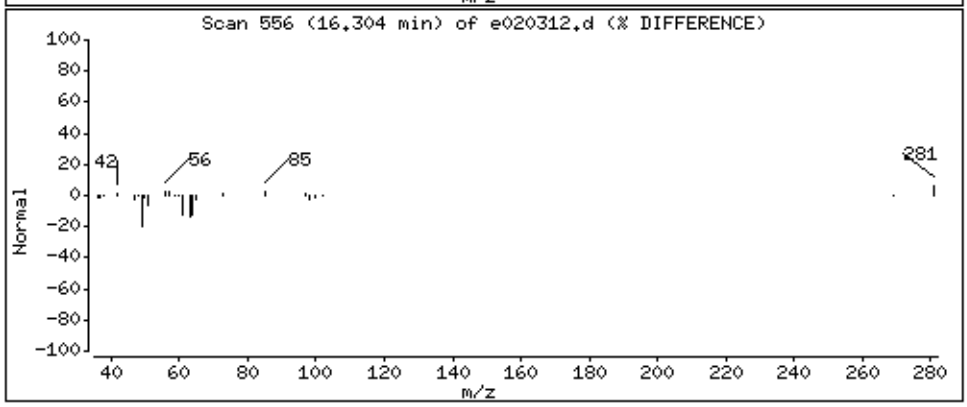












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

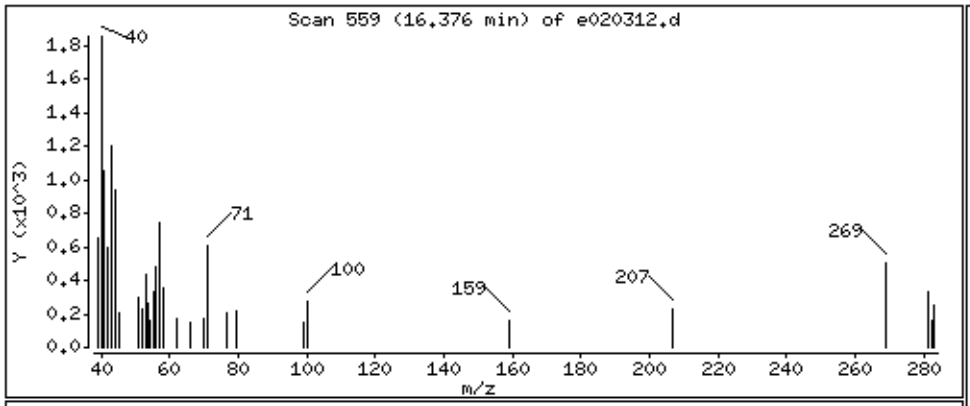
Operator: ef

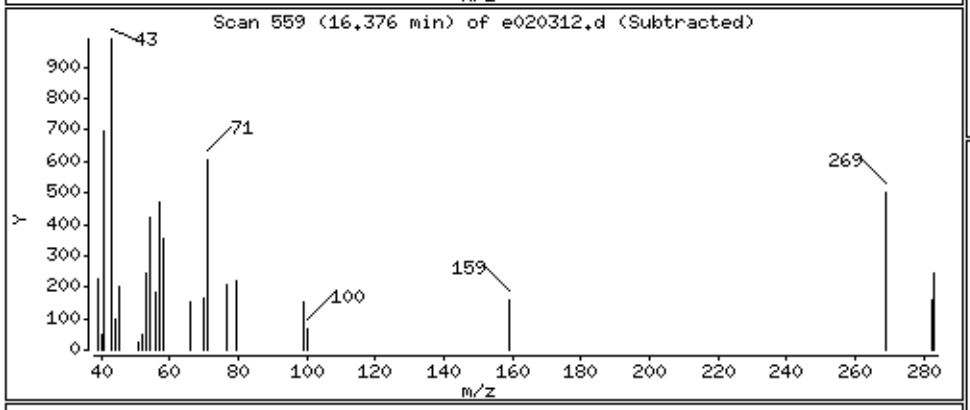
Column phase: RTX-624

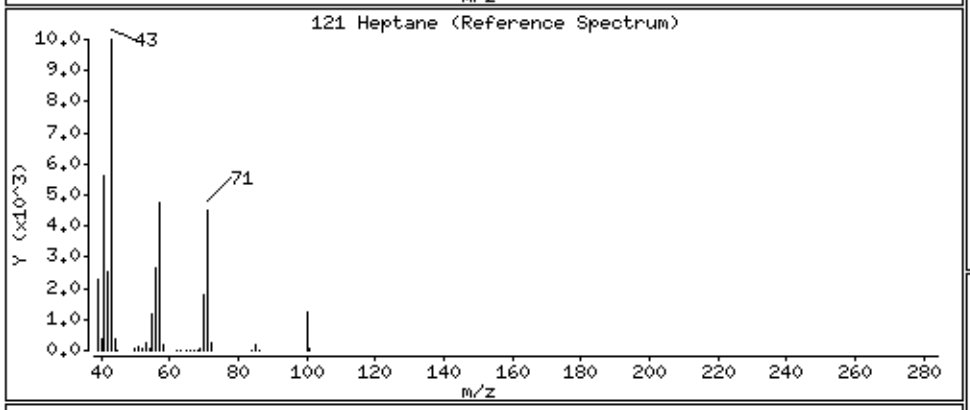
Column diameter: 0.32

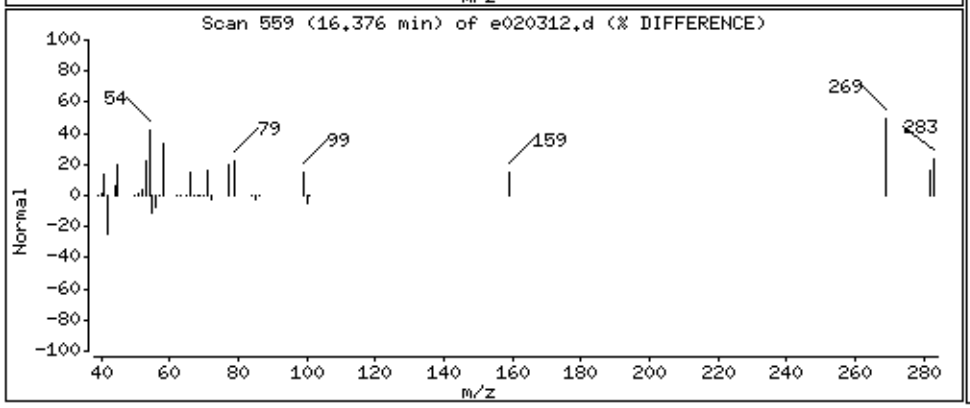
121 Heptane

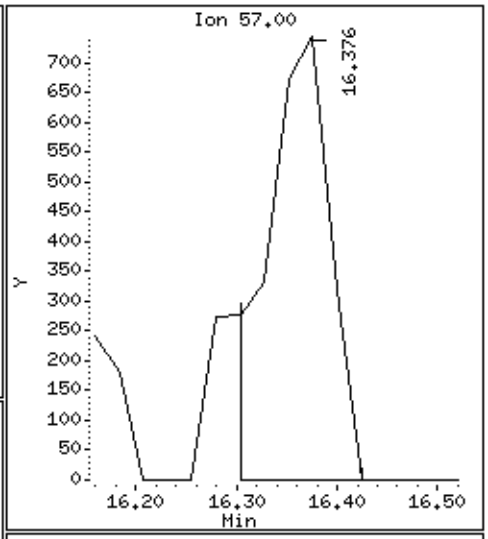
Concentration: 0.1861 PPBV

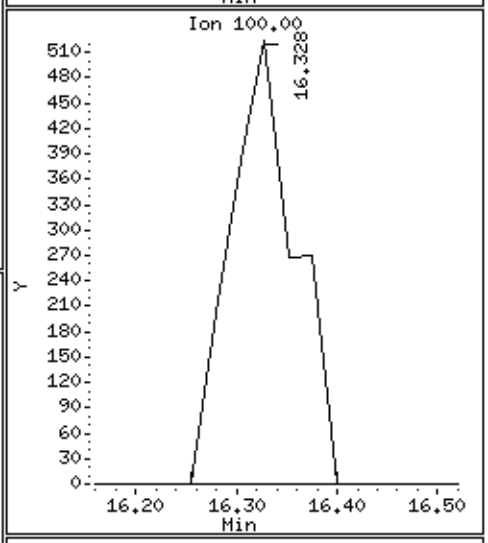


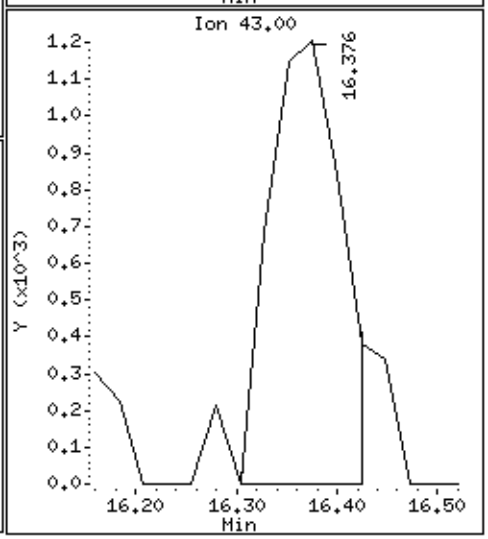












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

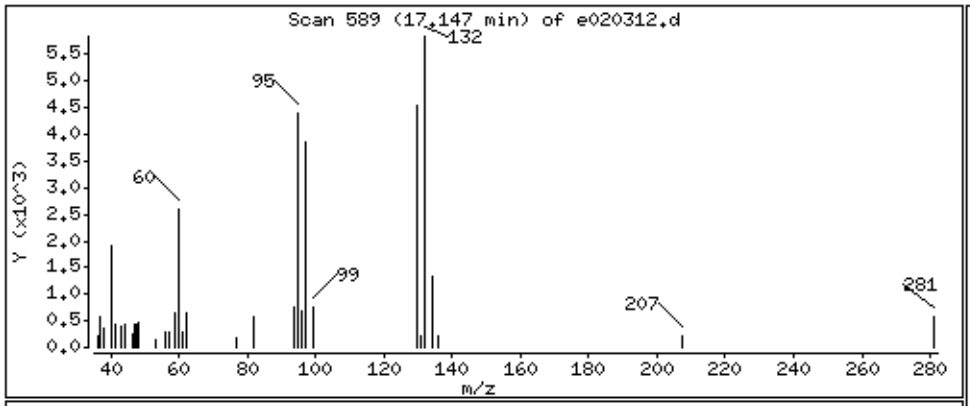
Operator: ef

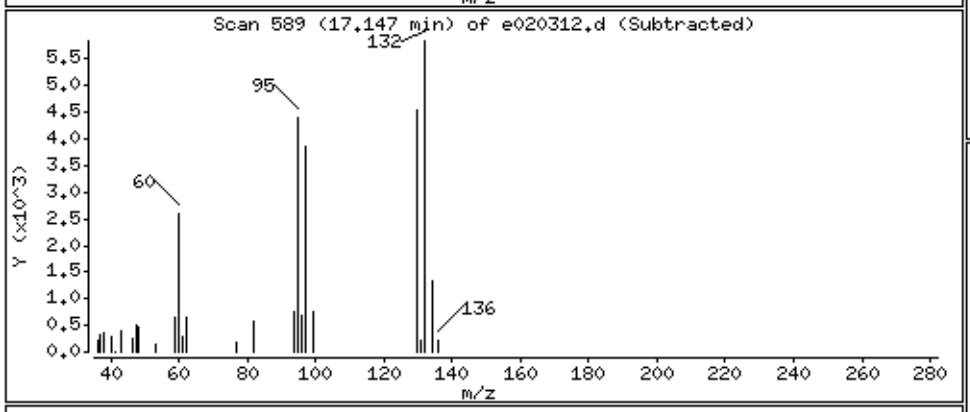
Column phase: RTX-624

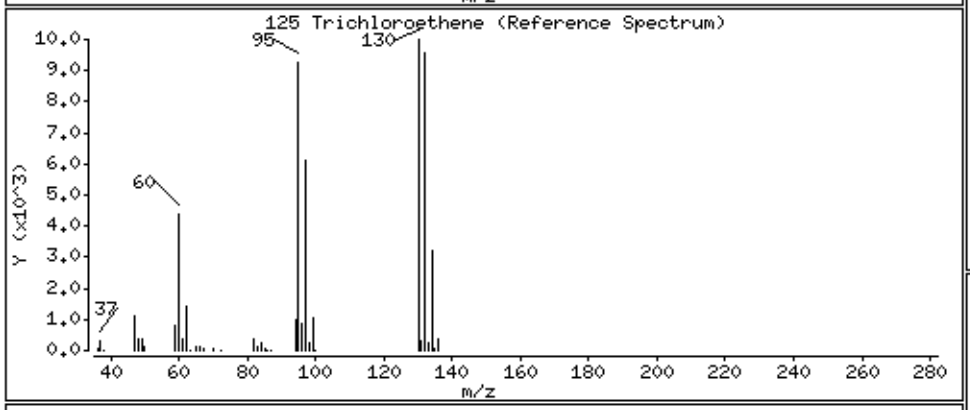
Column diameter: 0.32

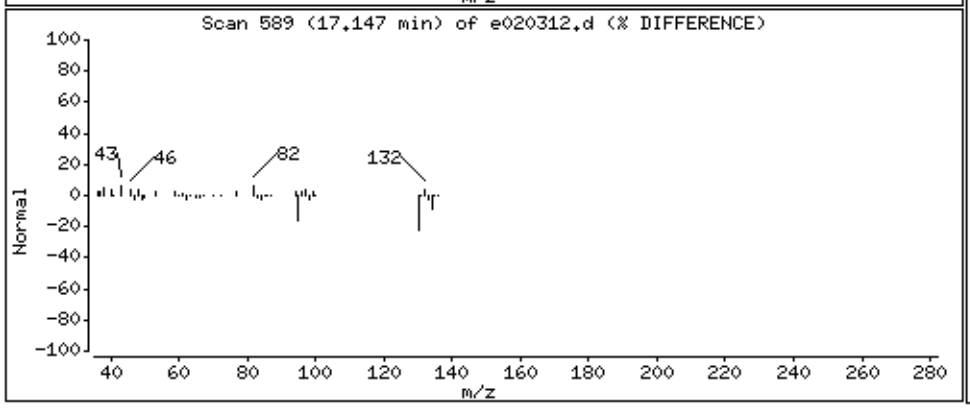
125 Trichloroethene

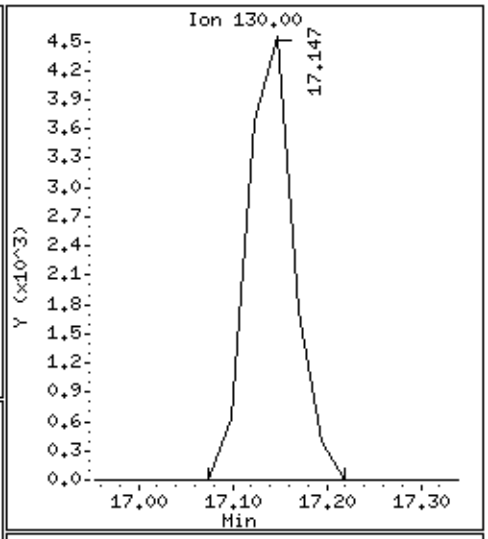
Concentration: 0.3963 PPBV

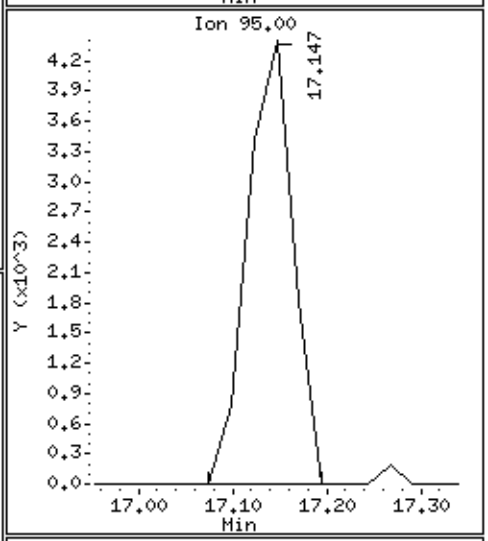


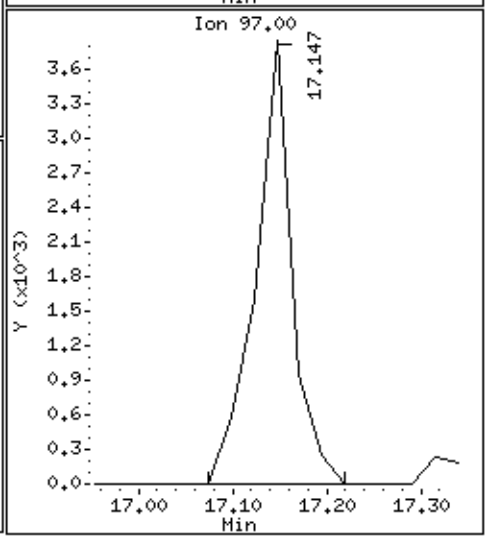












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

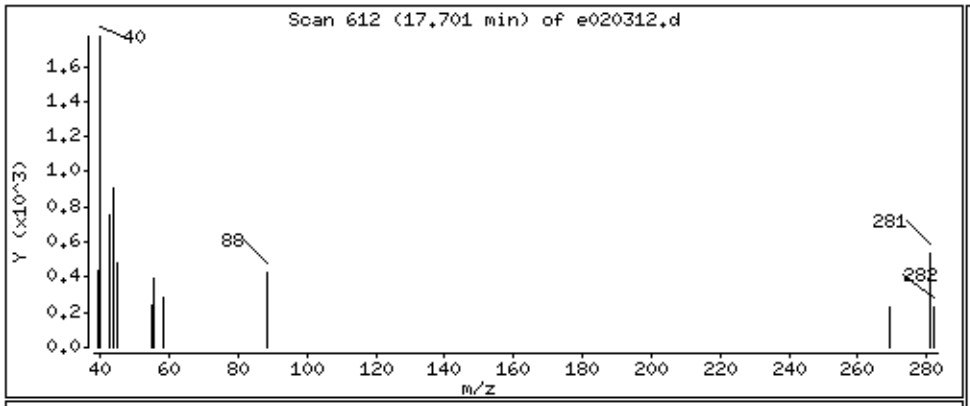
Operator: ef

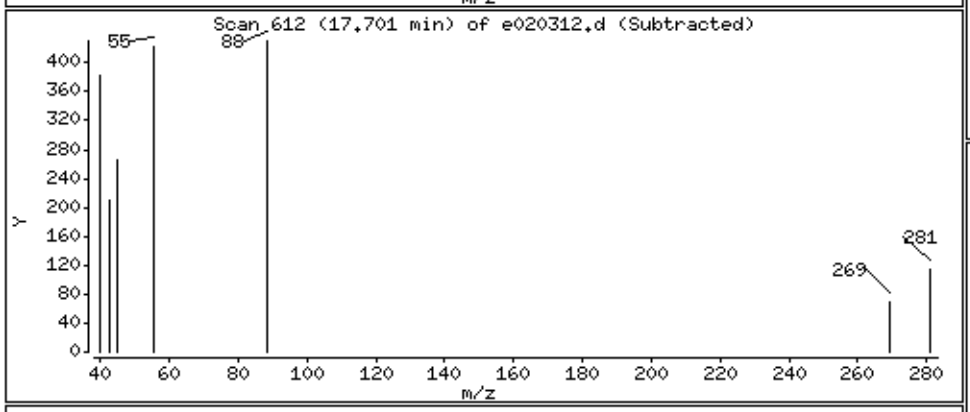
Column phase: RTX-624

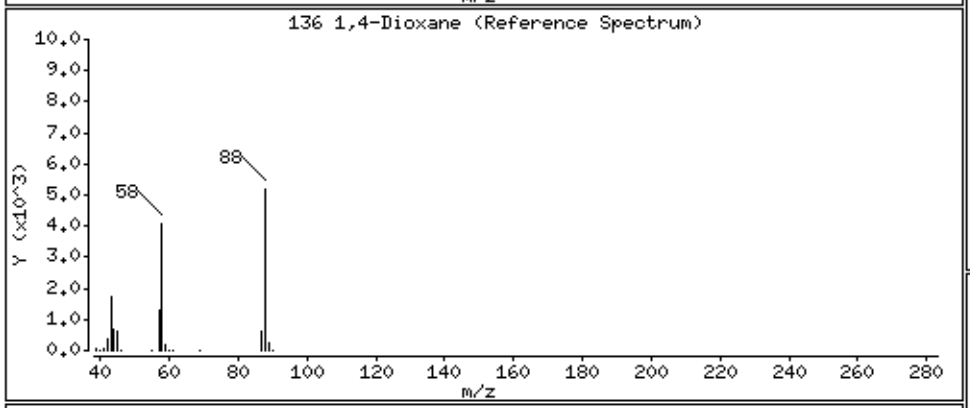
Column diameter: 0.32

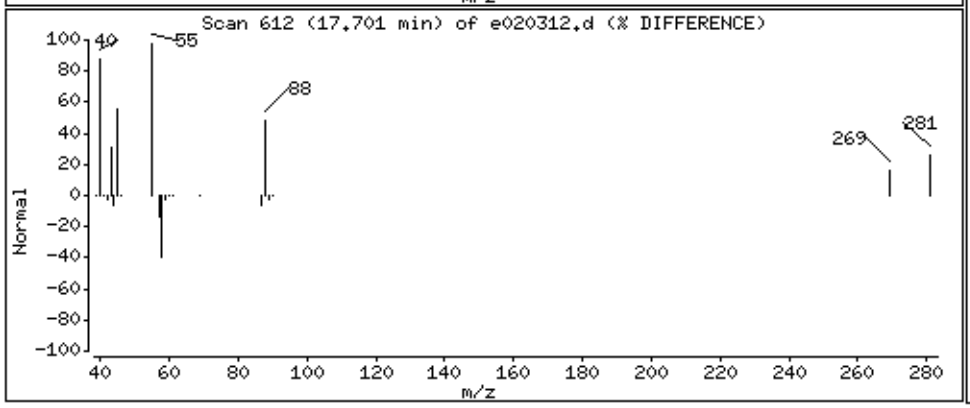
136 1,4-Dioxane

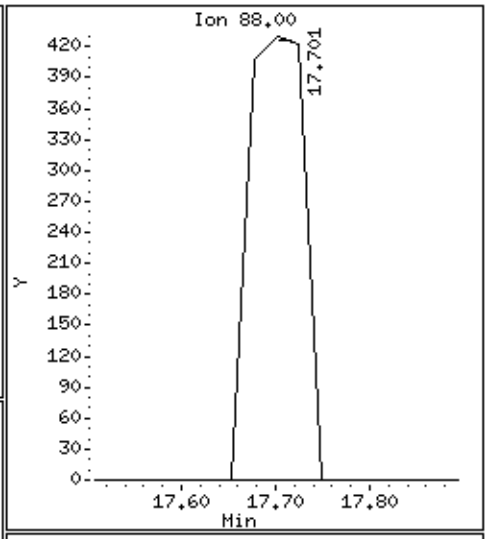
Concentration: 0.1047 PPBV

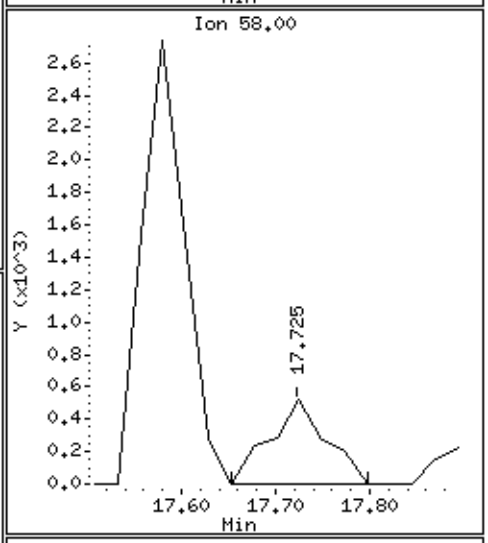


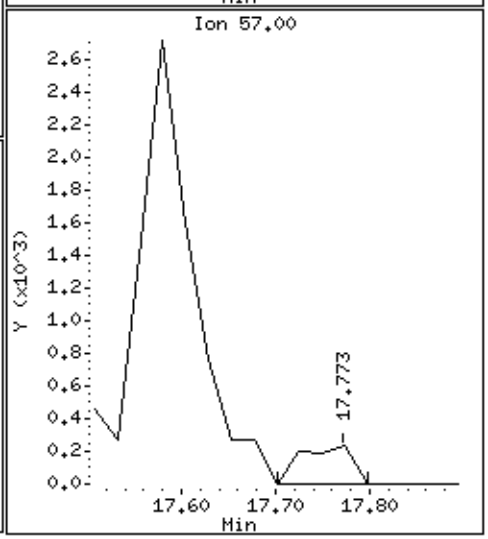












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

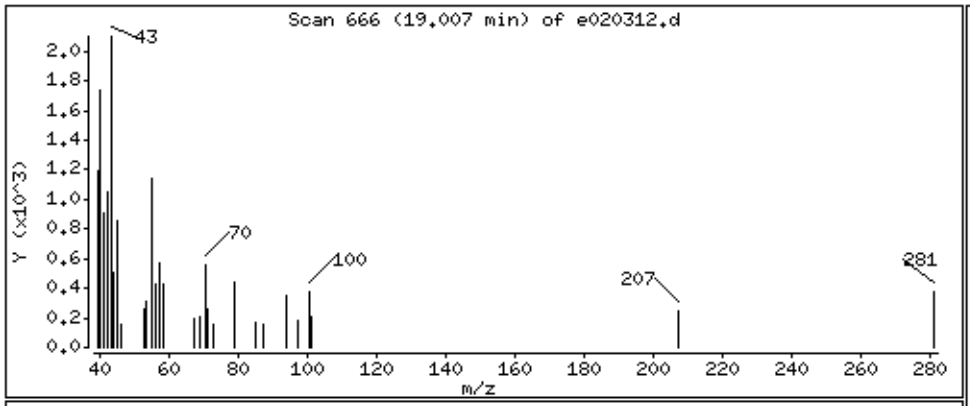
Operator: ef

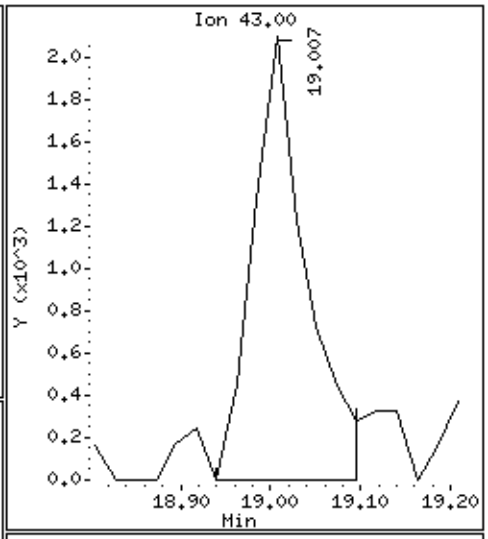
Column phase: RTX-624

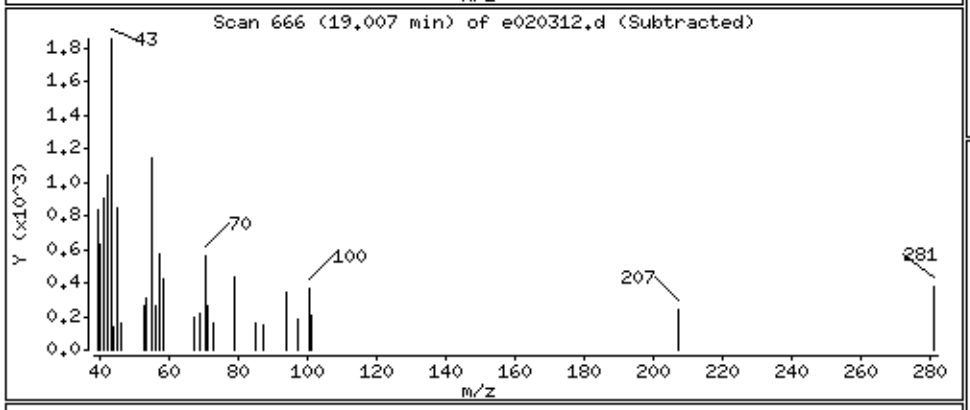
Column diameter: 0.32

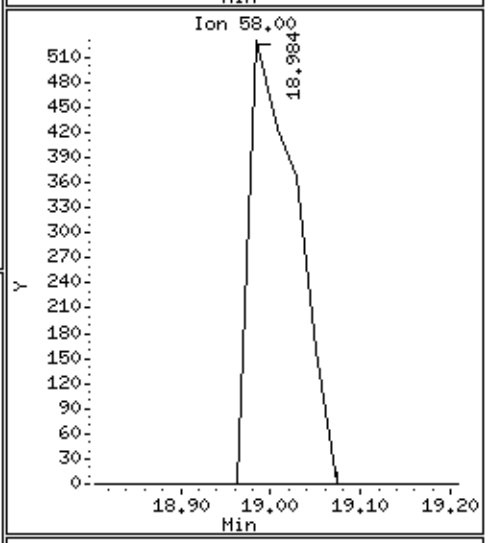
145 4-Methyl-2-pentanone

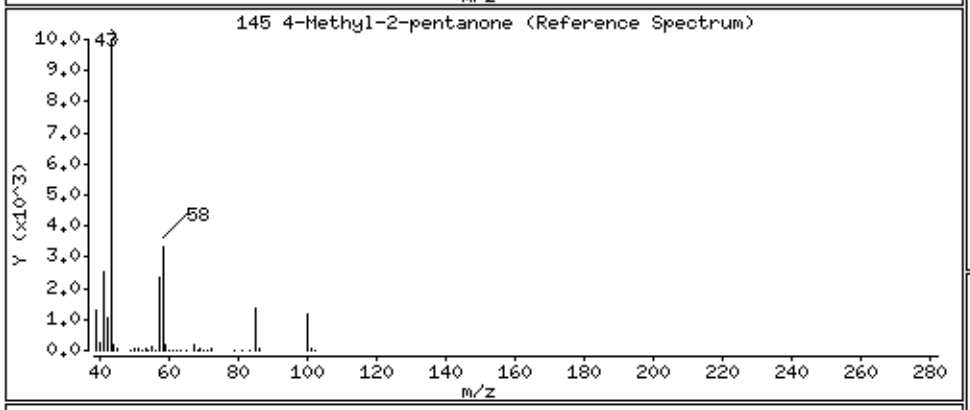
Concentration: 0.2059 PPBV

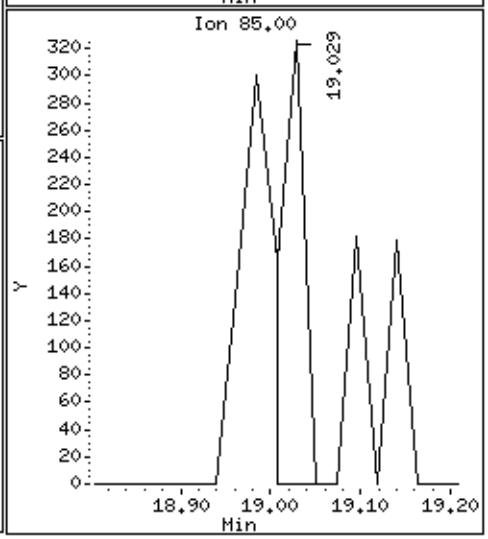


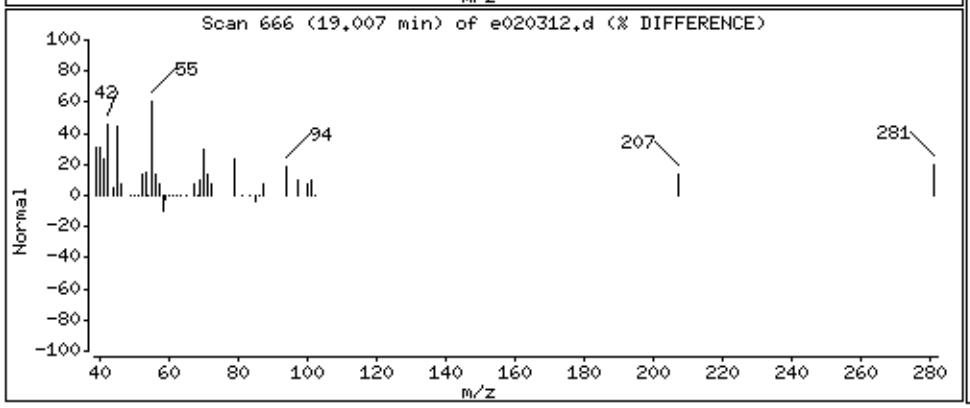












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

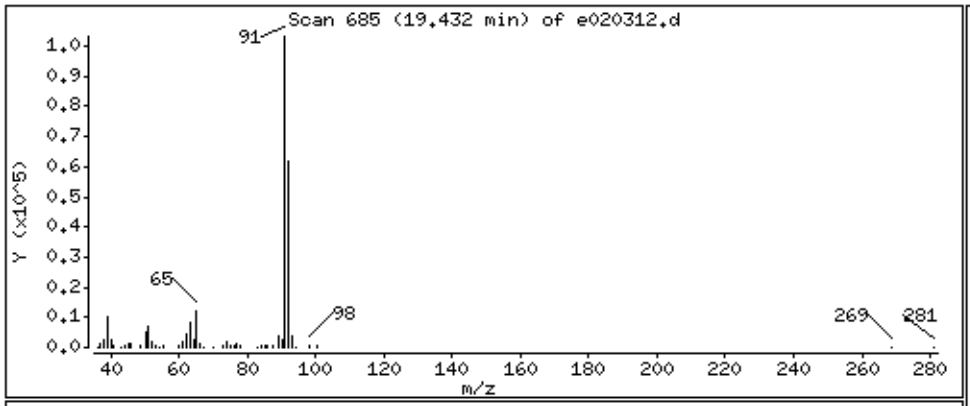
Operator: ef

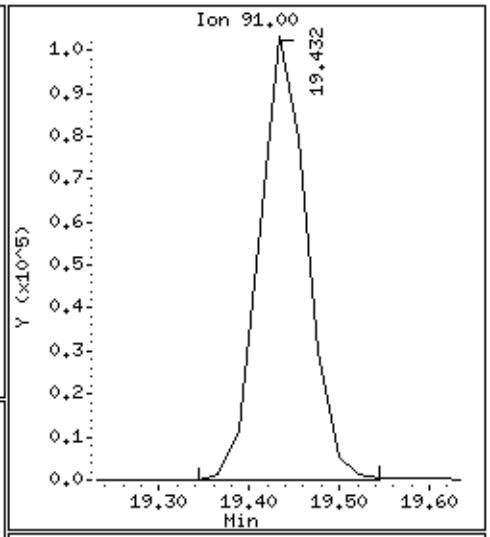
Column phase: RTX-624

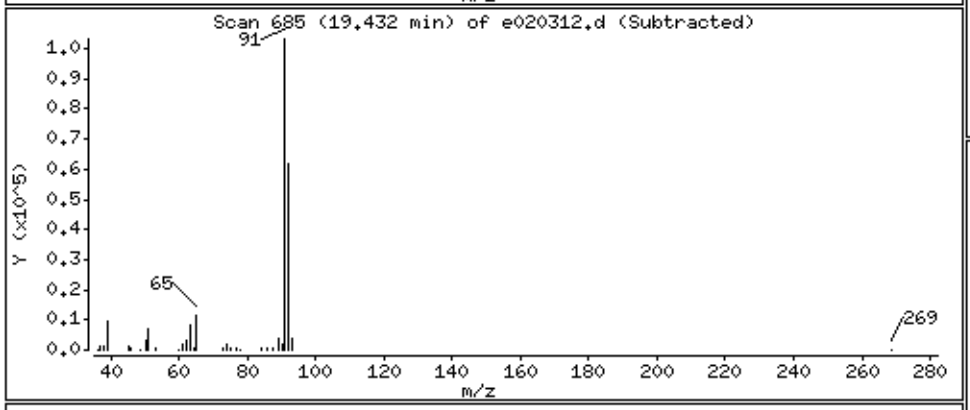
Column diameter: 0.32

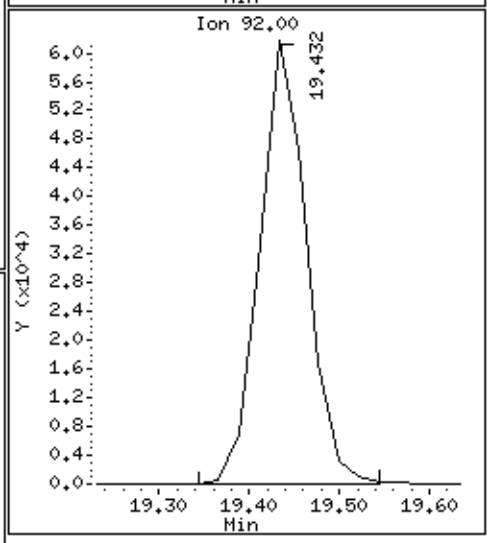
147 Toluene

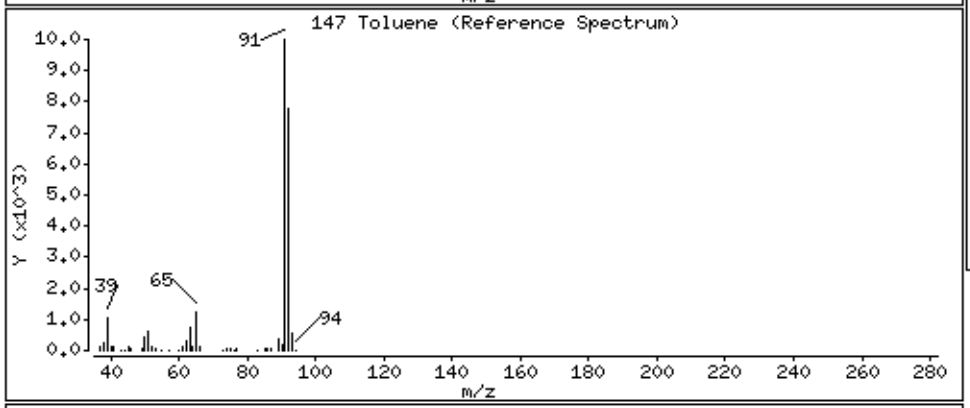
Concentration: 4.456 PPBV

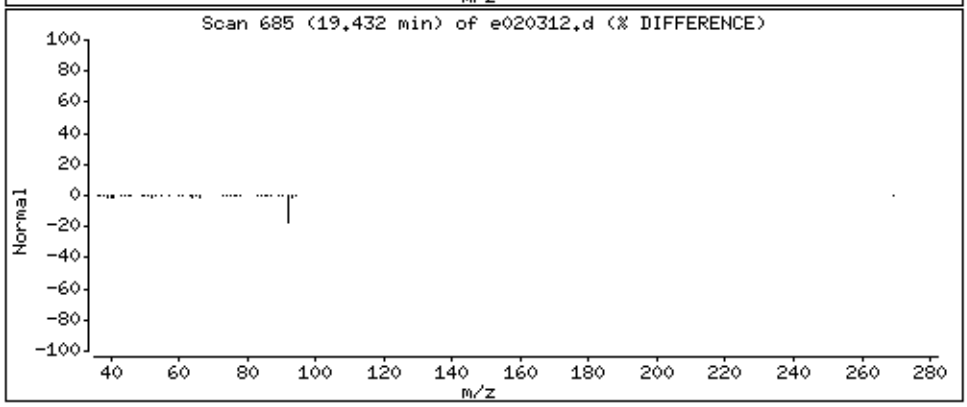












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

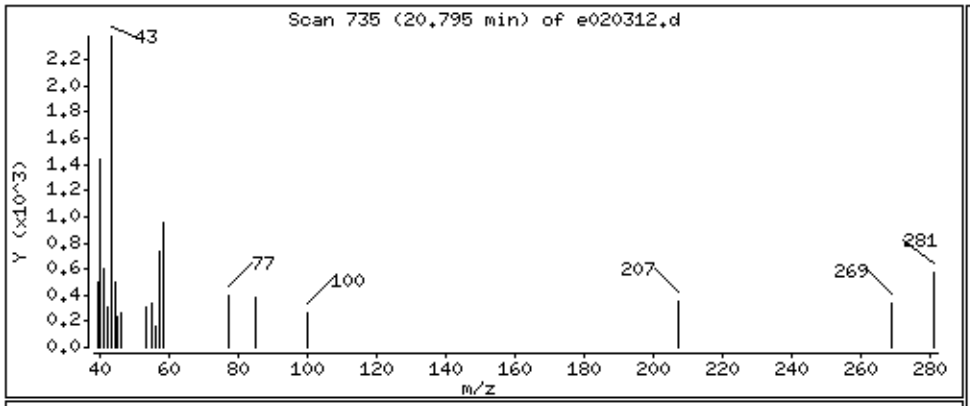
Operator: ef

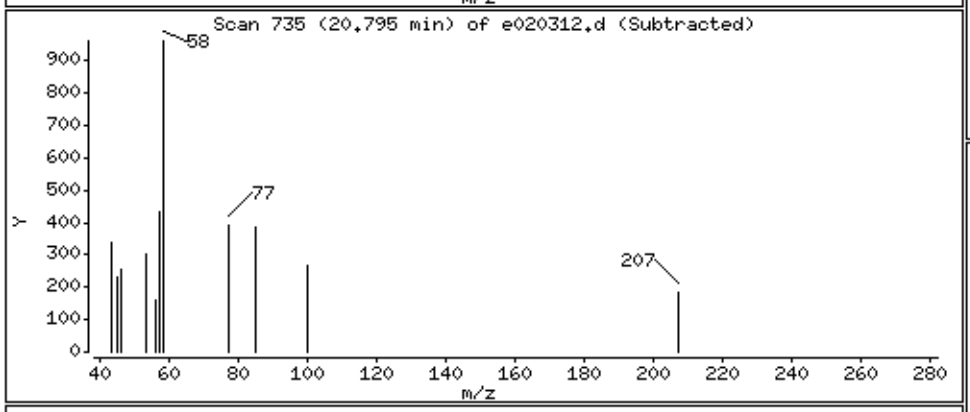
Column phase: RTX-624

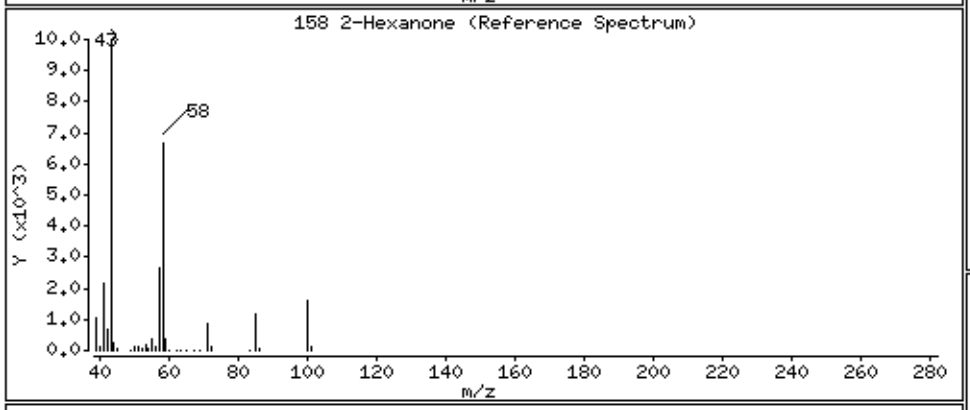
Column diameter: 0.32

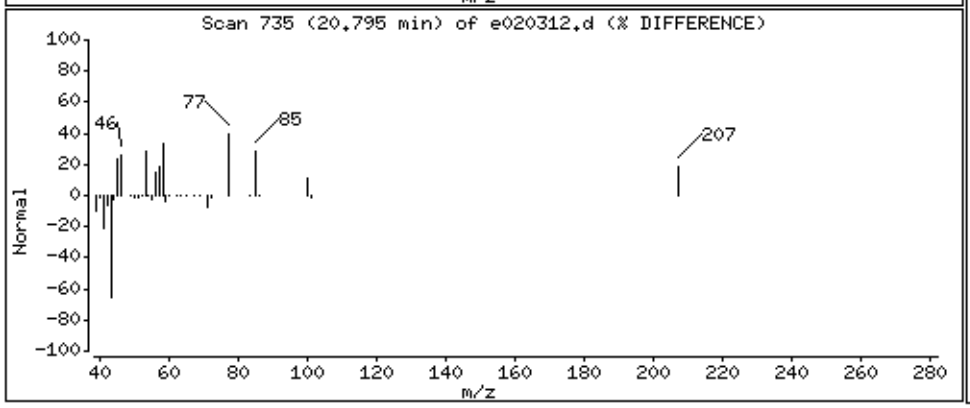
158 2-Hexanone

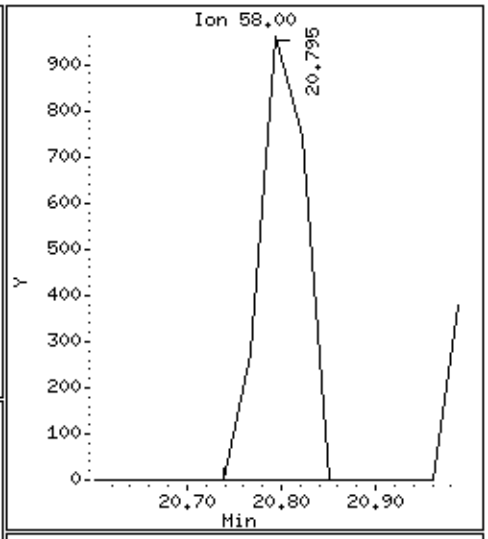
Concentration: 0.1498 PPBV

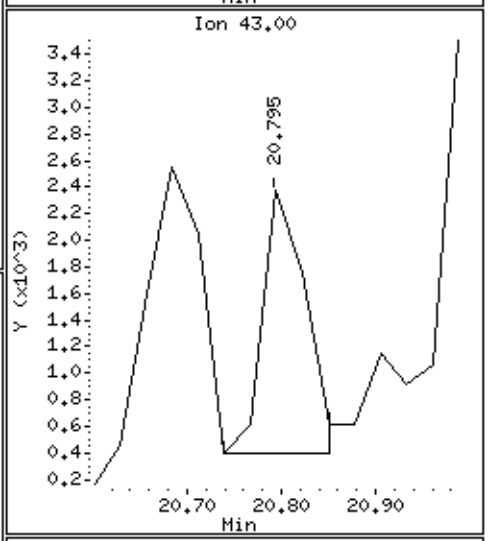


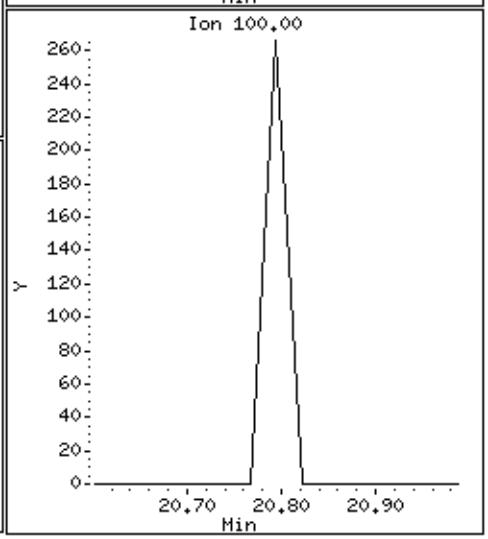












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

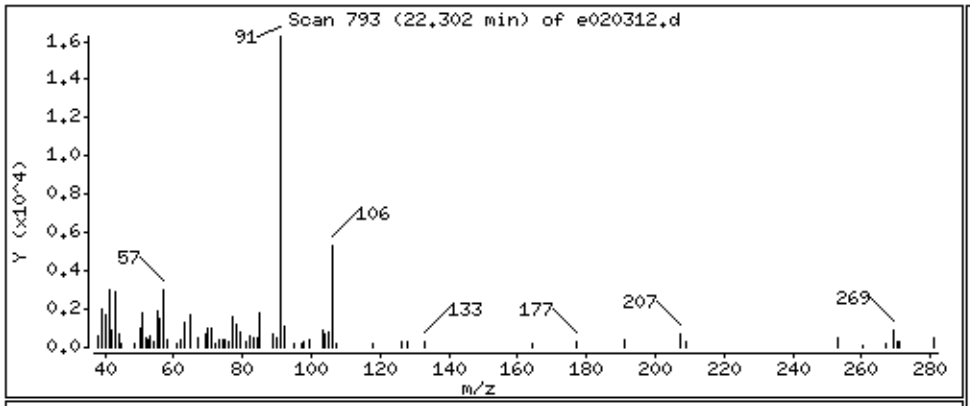
Operator: ef

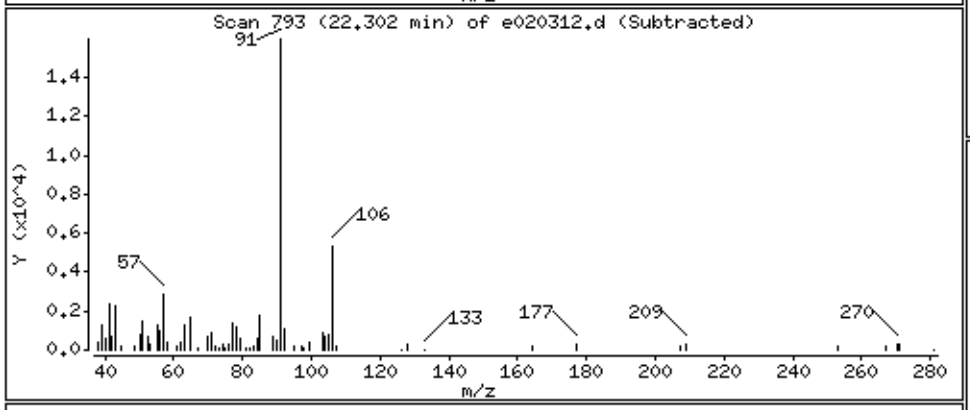
Column phase: RTX-624

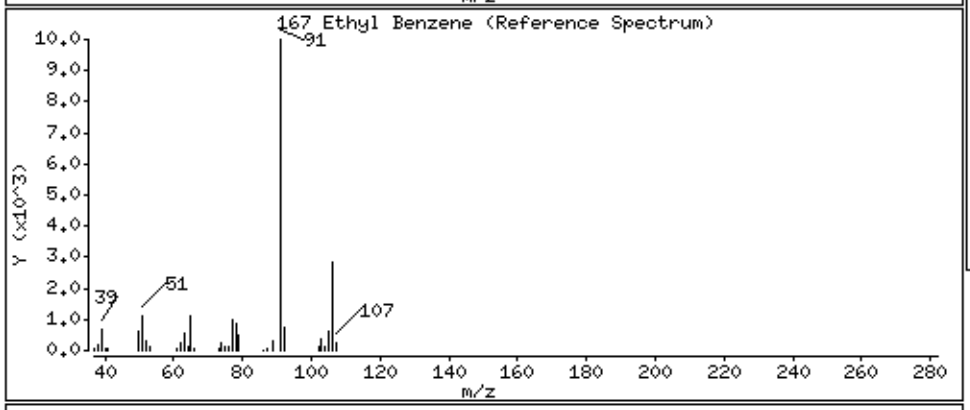
Column diameter: 0.32

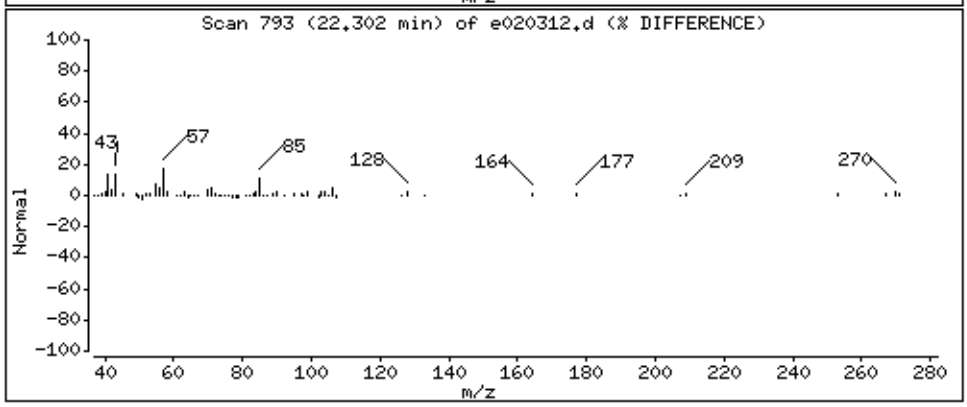
167 Ethyl Benzene

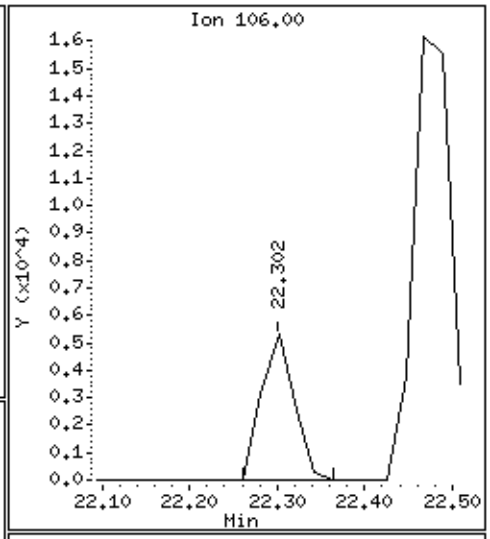
Concentration: 0.3772 PPBV

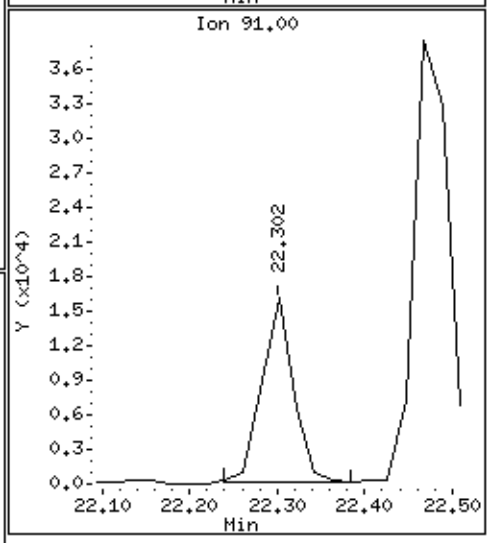












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

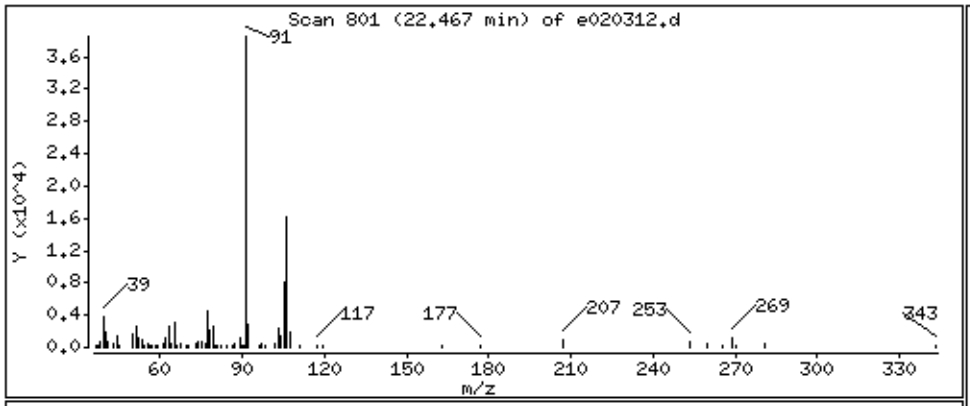
Operator: ef

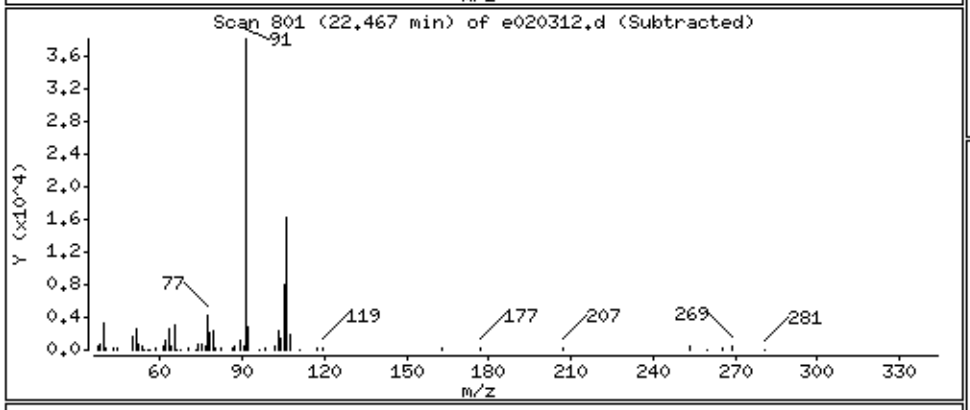
Column phase: RTX-624

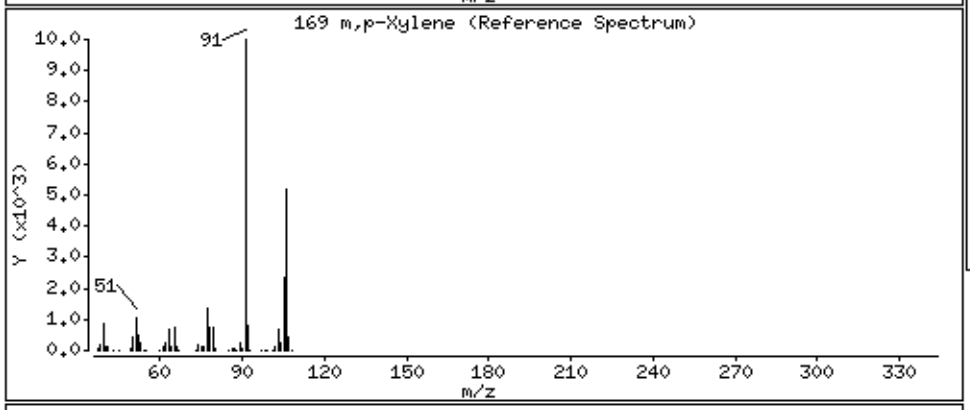
Column diameter: 0.32

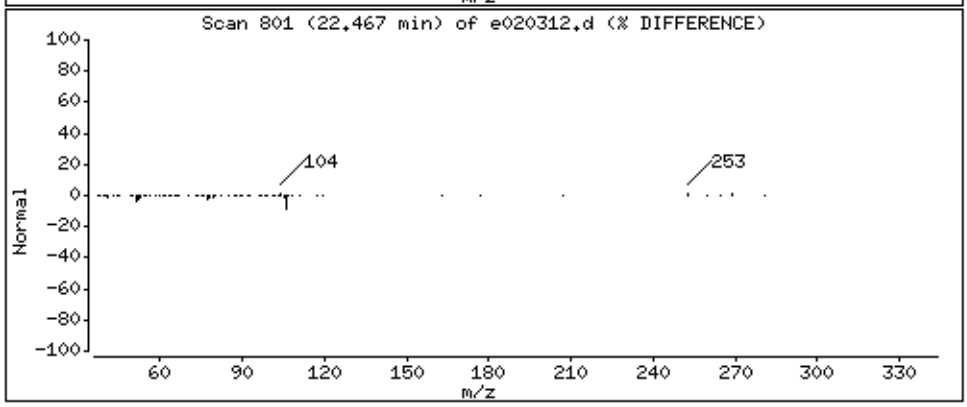
169 m,p-Xylene

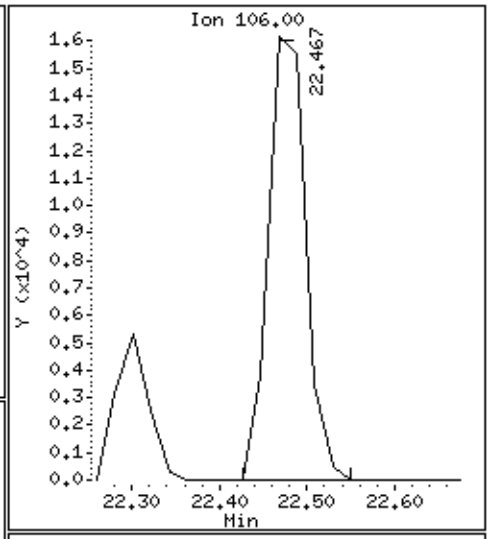
Concentration: 1.116 PPBV

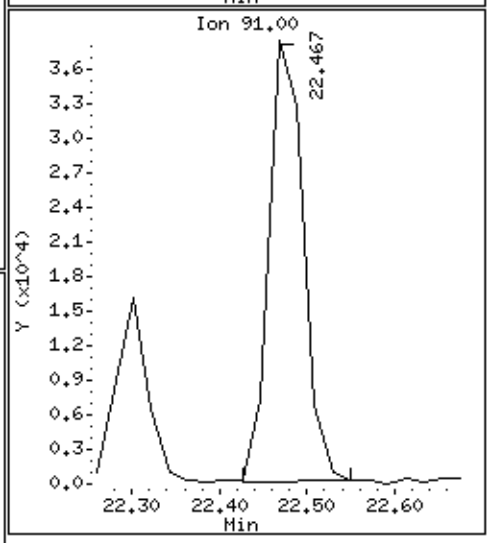












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

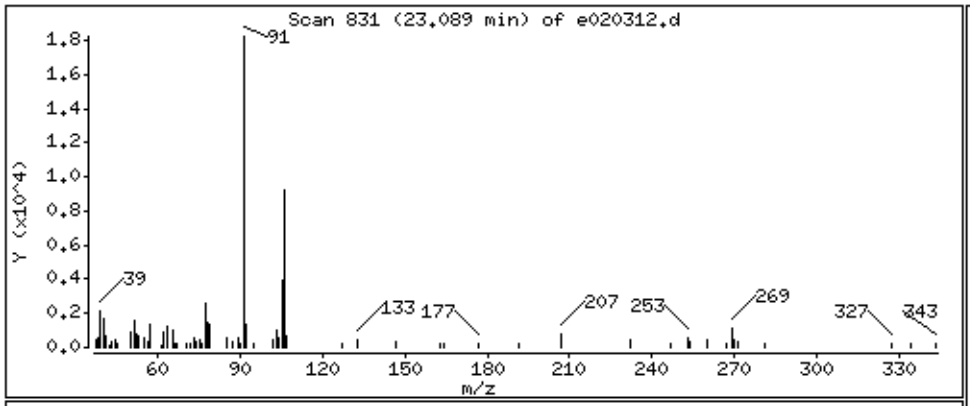
Operator: ef

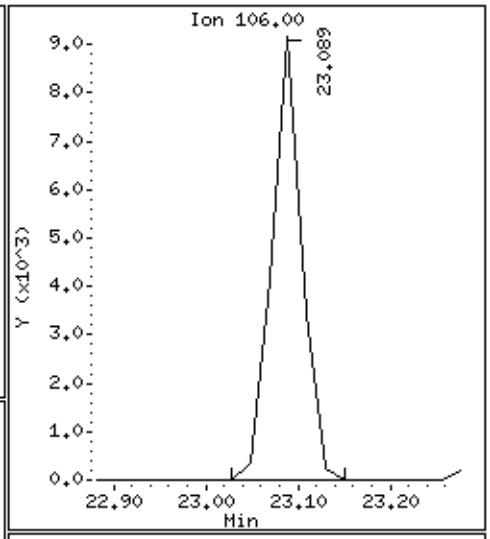
Column phase: RTX-624

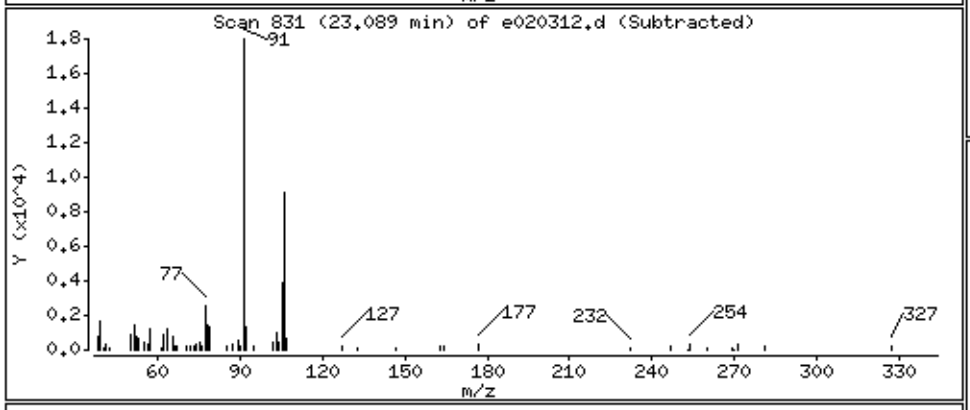
Column diameter: 0.32

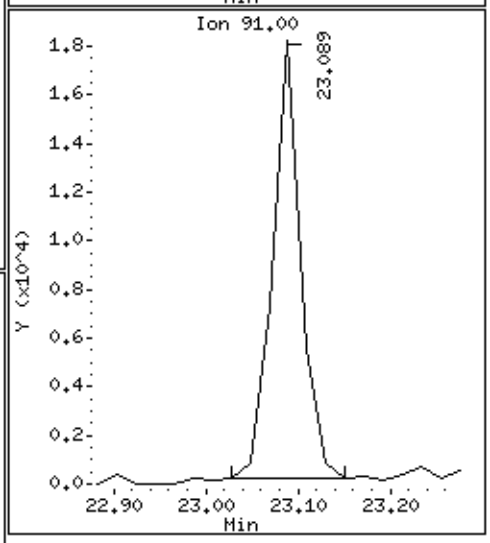
171 o-Xylene

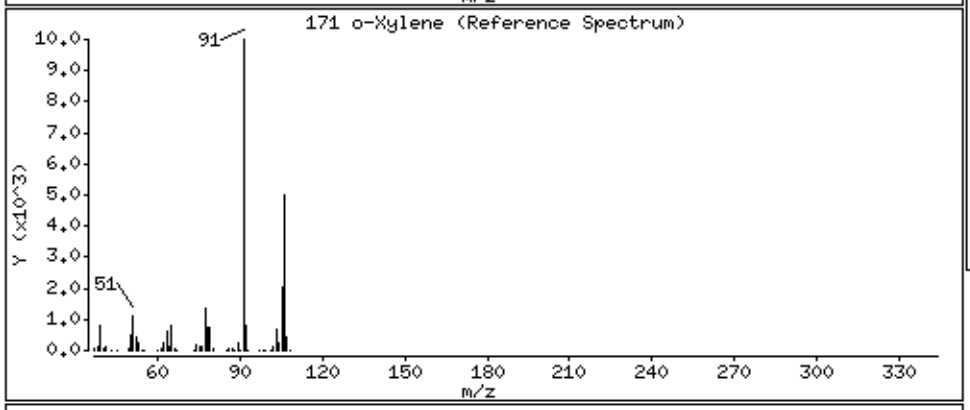
Concentration: 0.5280 PPBV

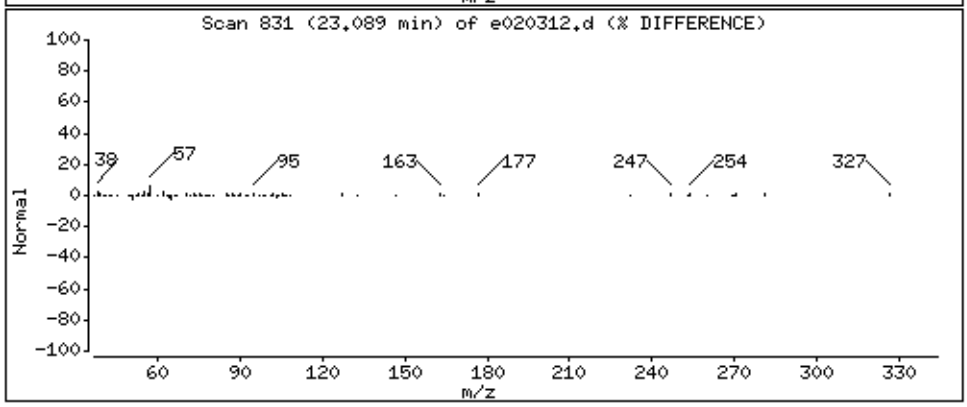












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

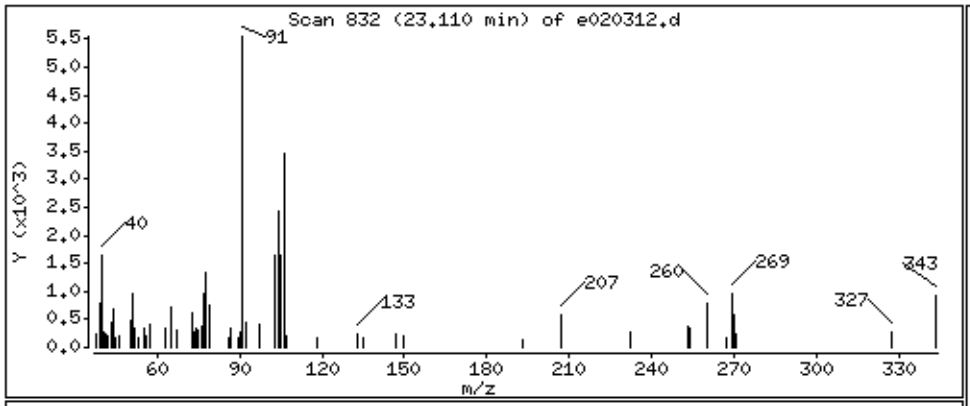
Operator: ef

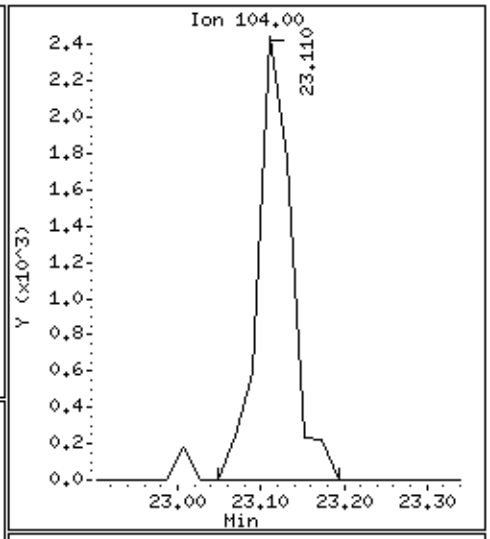
Column phase: RTX-624

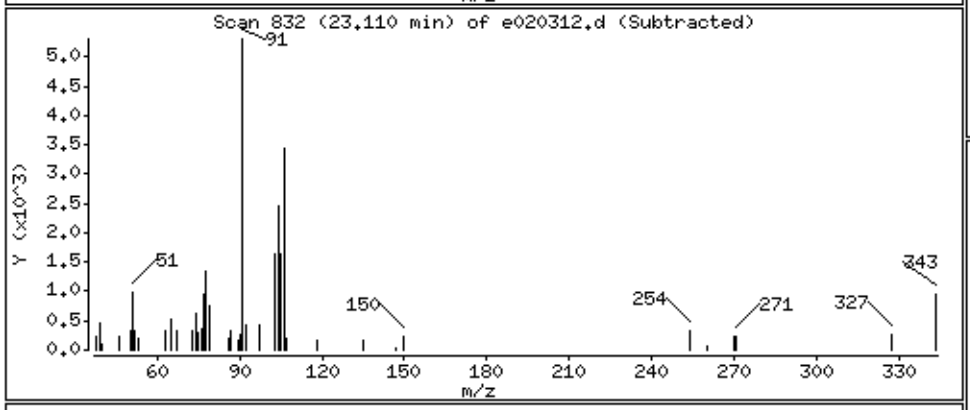
Column diameter: 0.32

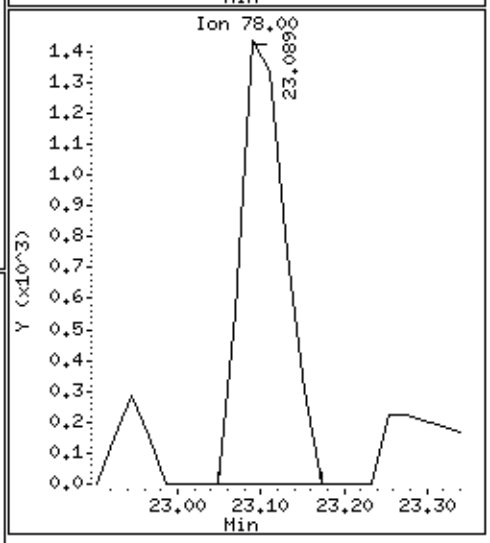
172 Styrene

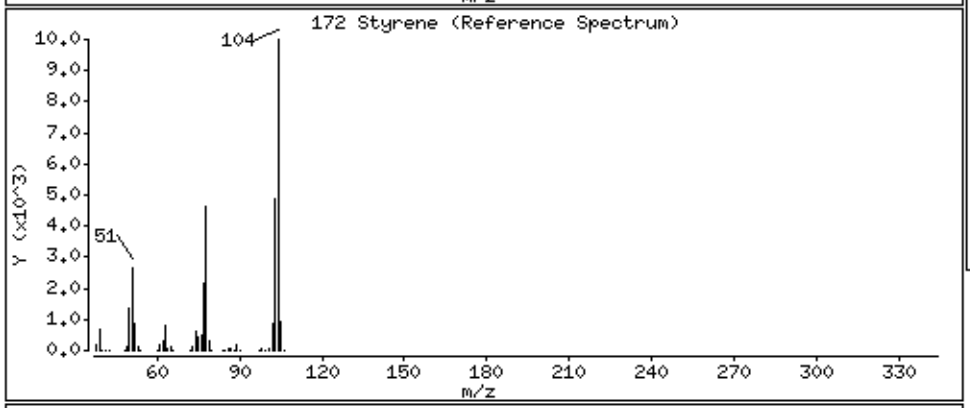
Concentration: 0.1004 PPBV

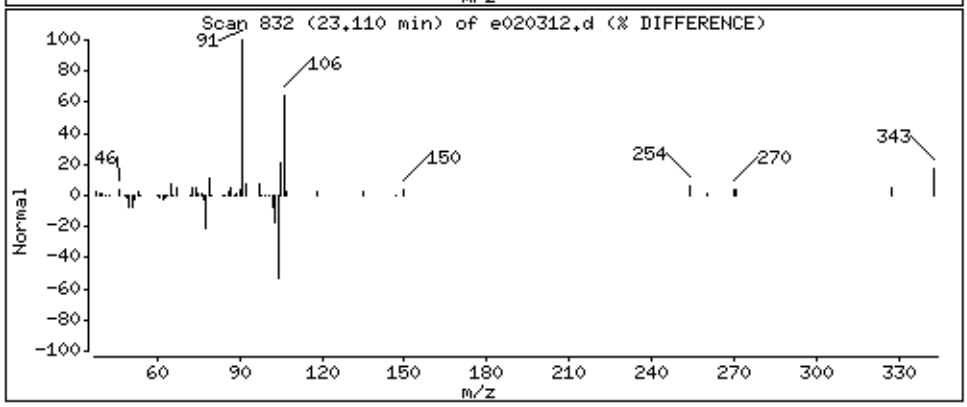












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

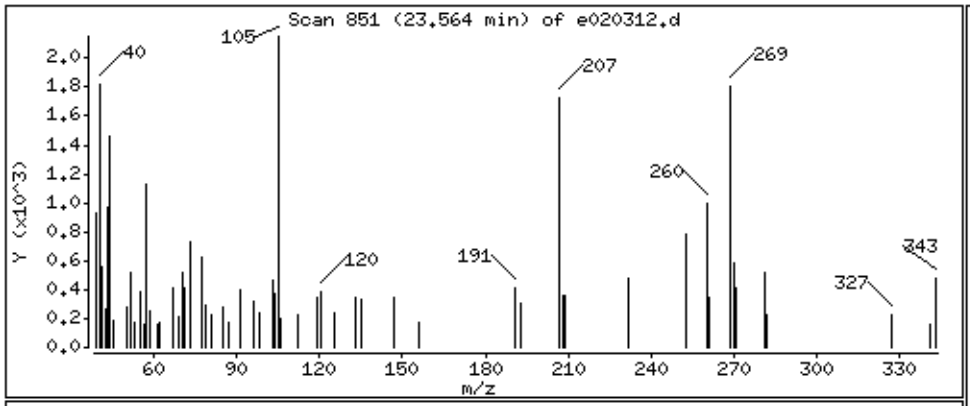
Operator: ef

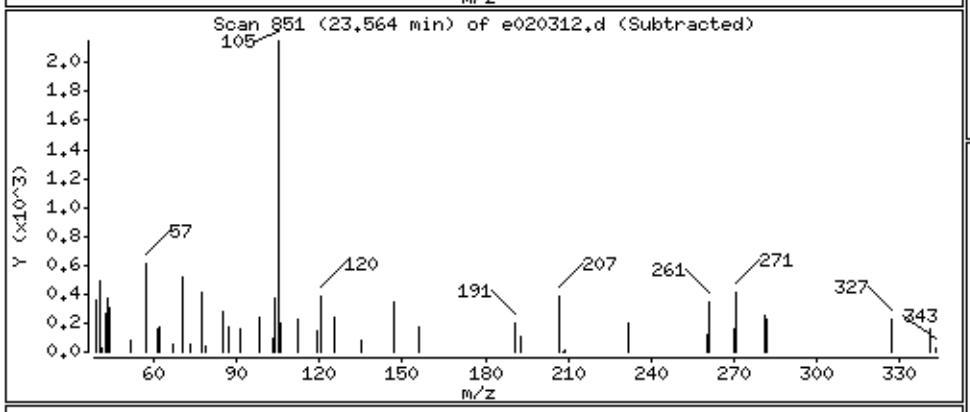
Column phase: RTX-624

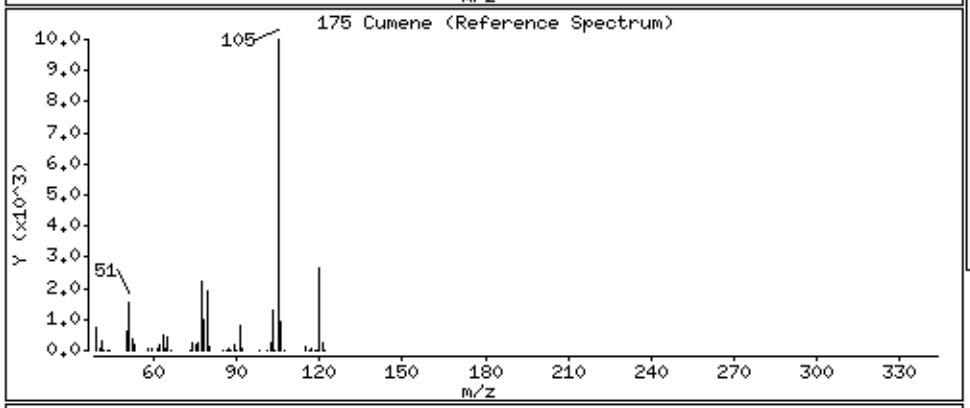
Column diameter: 0.32

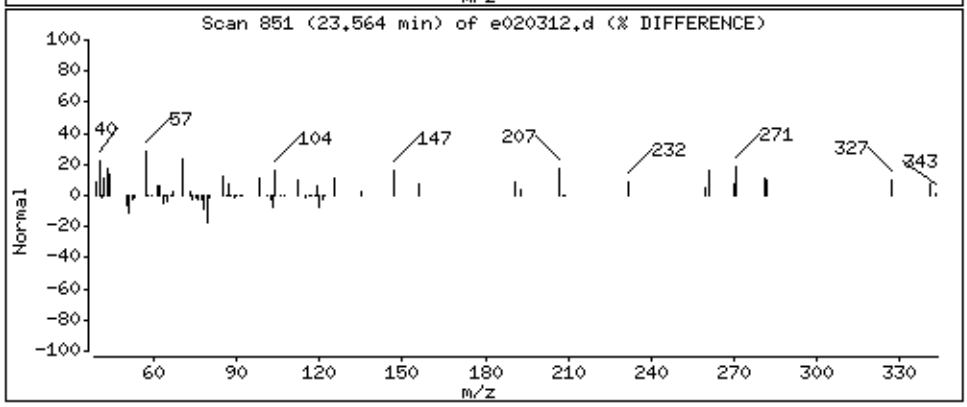
175 Cumene

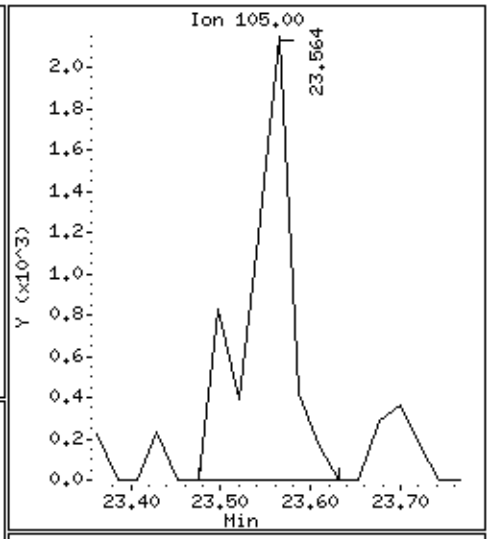
Concentration: 0.05385 PPBV

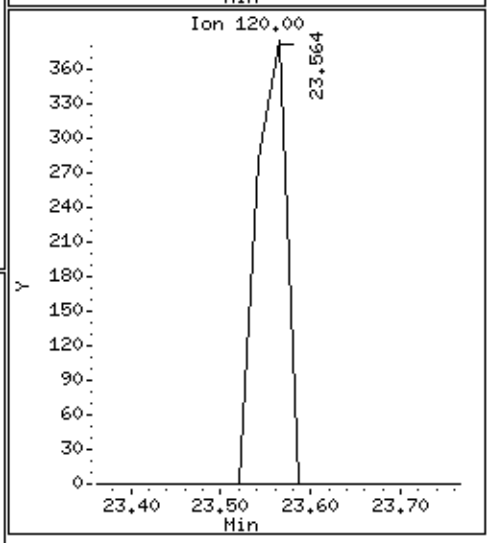












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

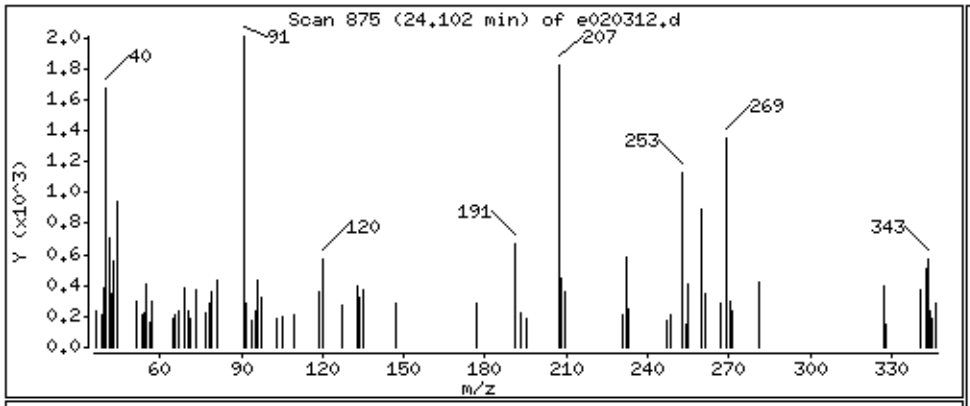
Operator: ef

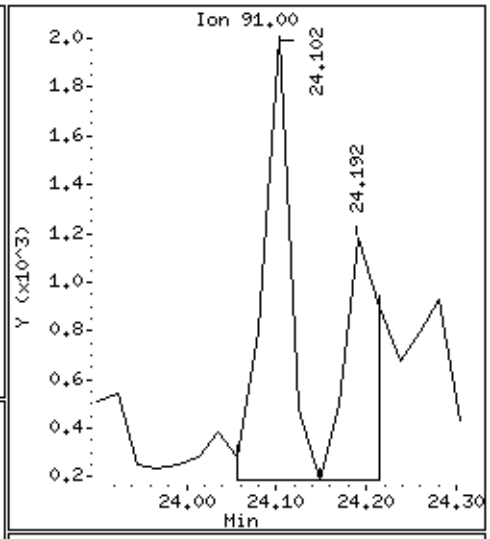
Column phase: RTX-624

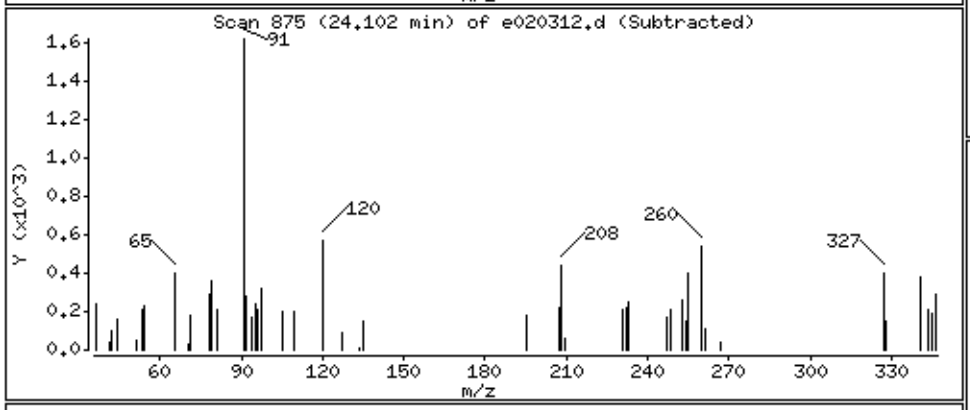
Column diameter: 0.32

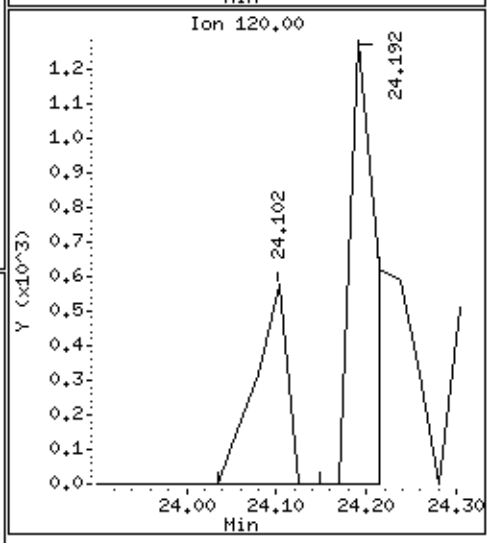
182 Propylbenzene

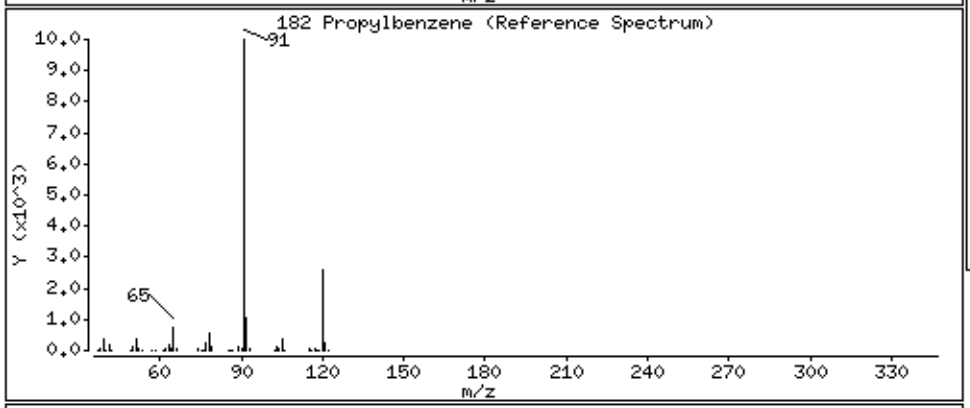
Concentration: 0.02970 PPBV

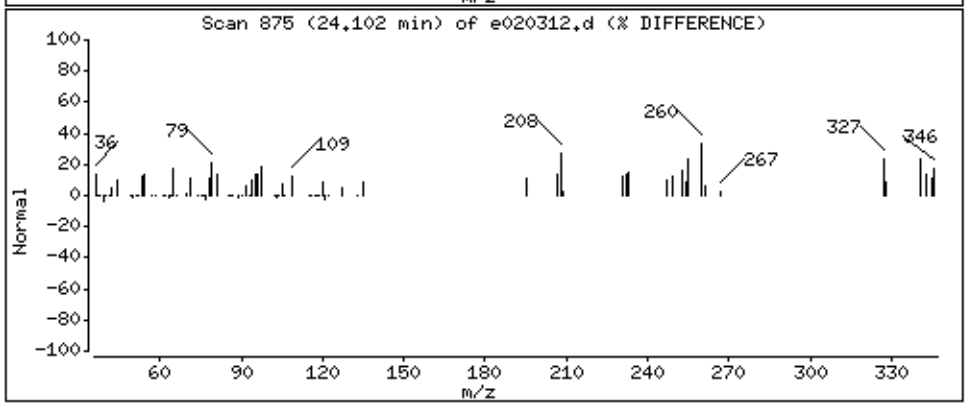












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

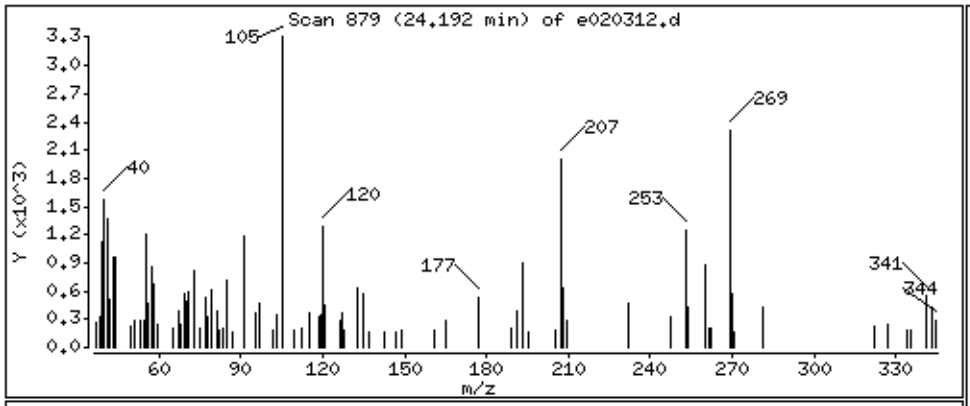
Operator: ef

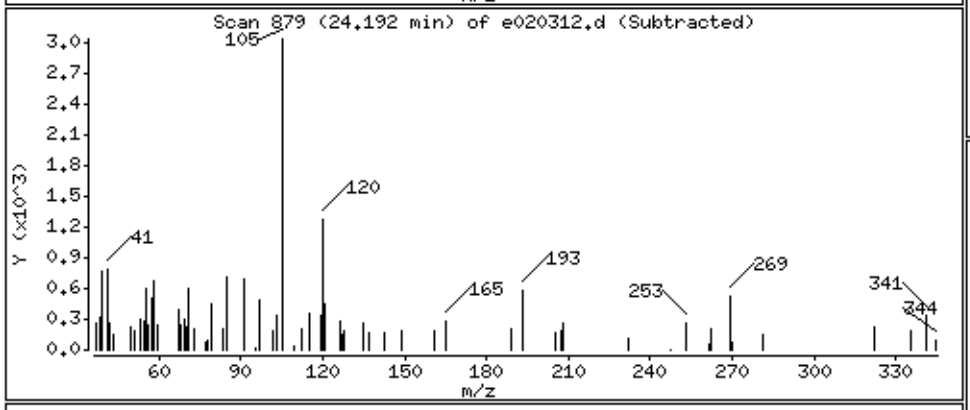
Column phase: RTX-624

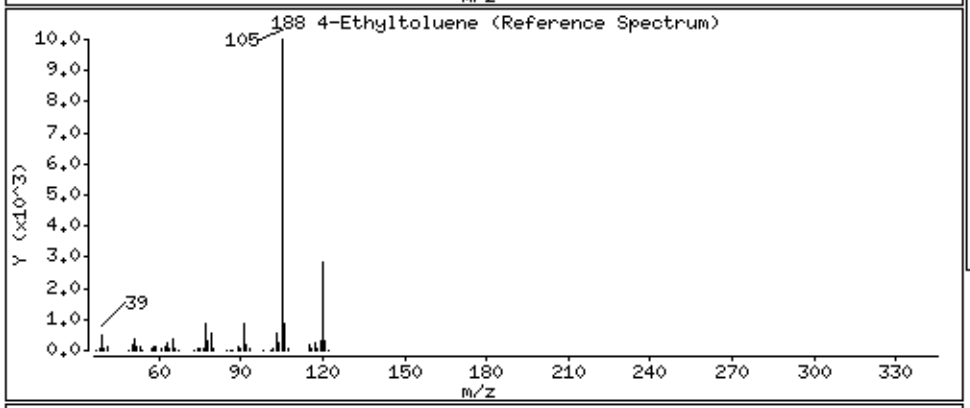
Column diameter: 0.32

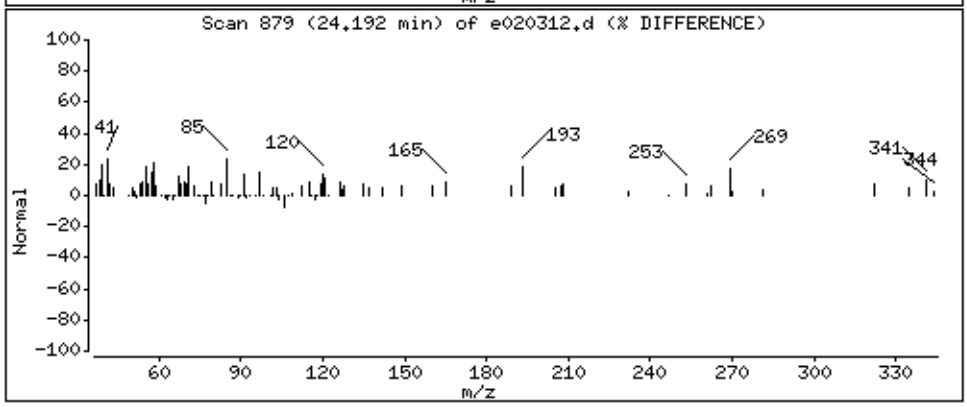
188 4-Ethyltoluene

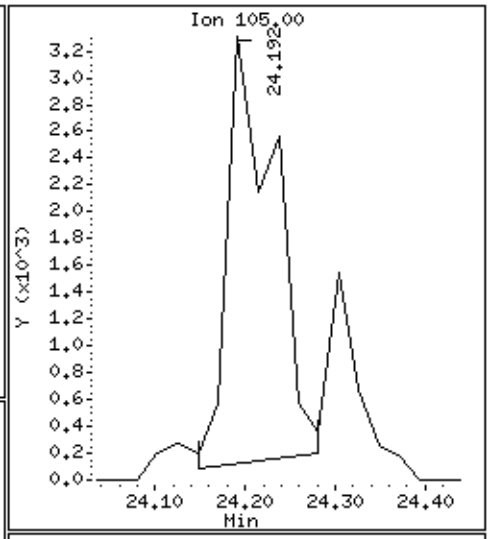
Concentration: 0.1114 PPBV

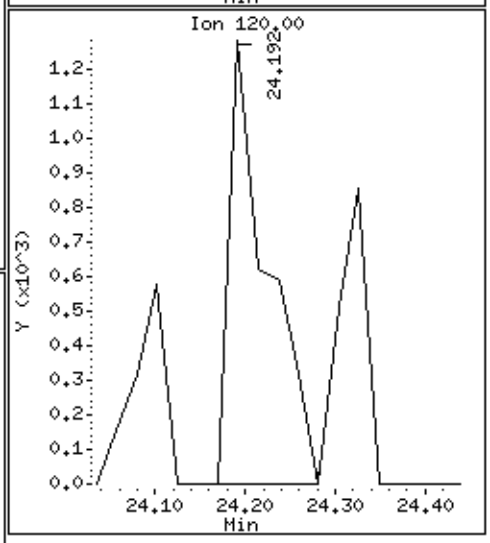












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

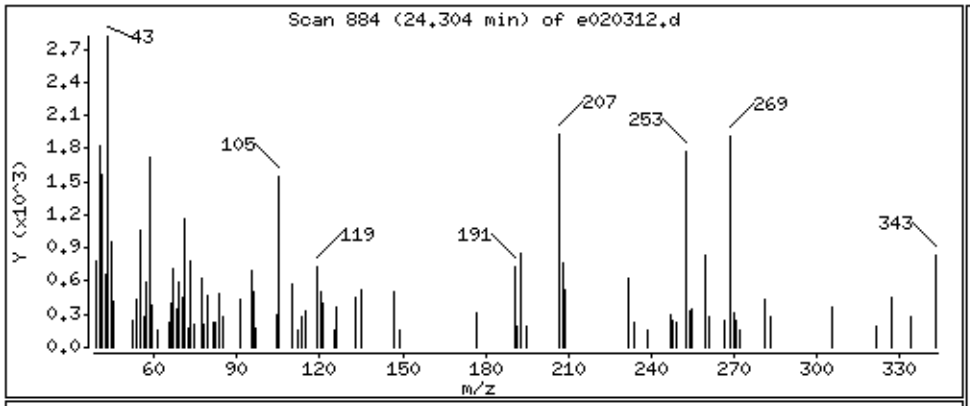
Operator: ef

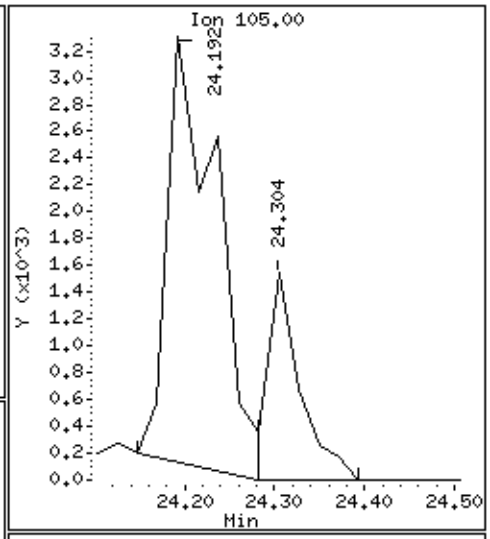
Column phase: RTX-624

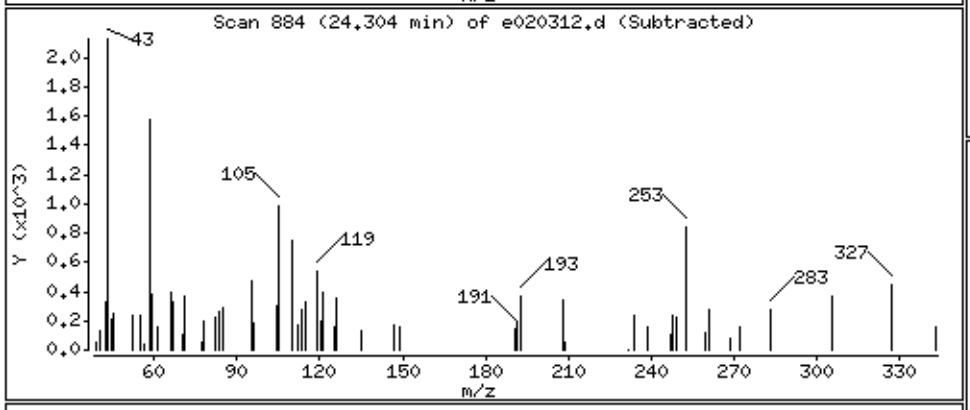
Column diameter: 0.32

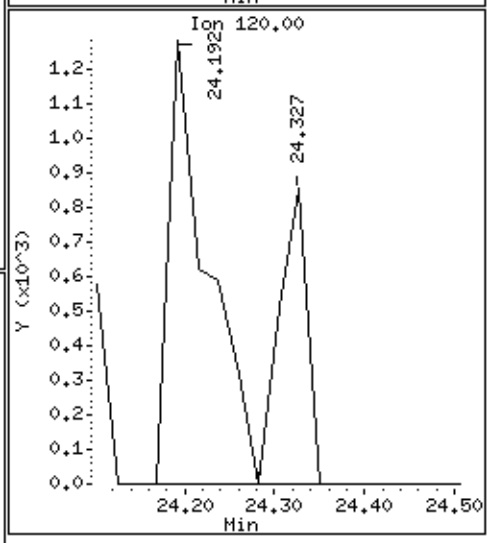
190 1,3,5-Trimethylbenzene

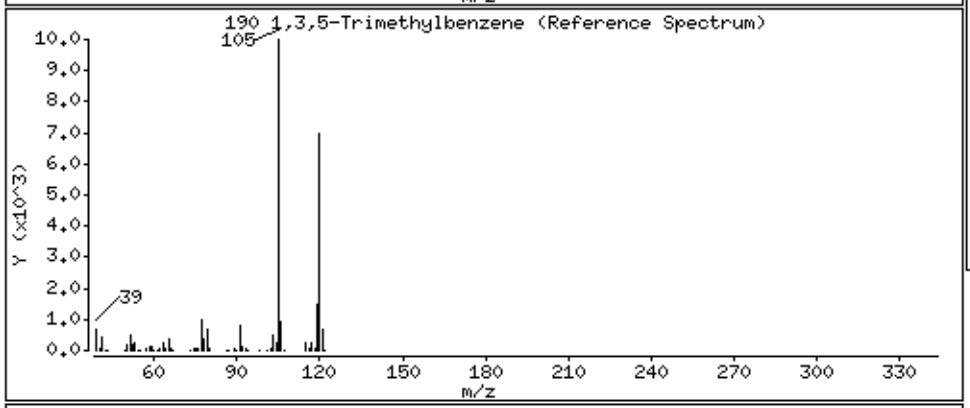
Concentration: 0.05157 PPBV

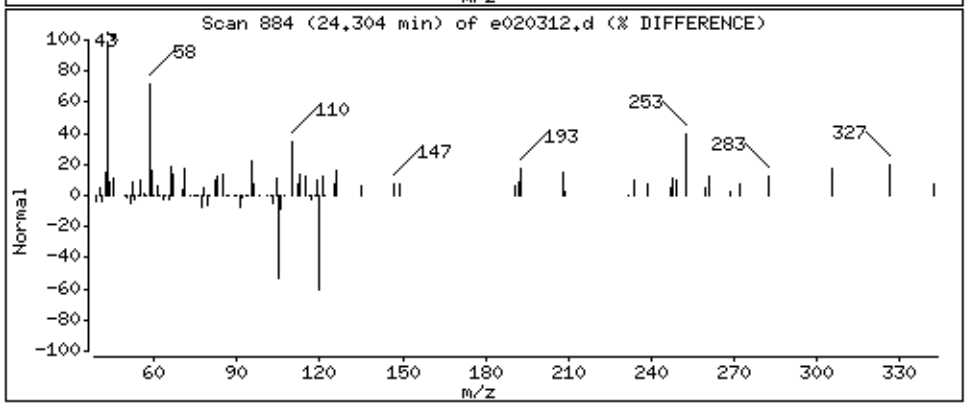












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

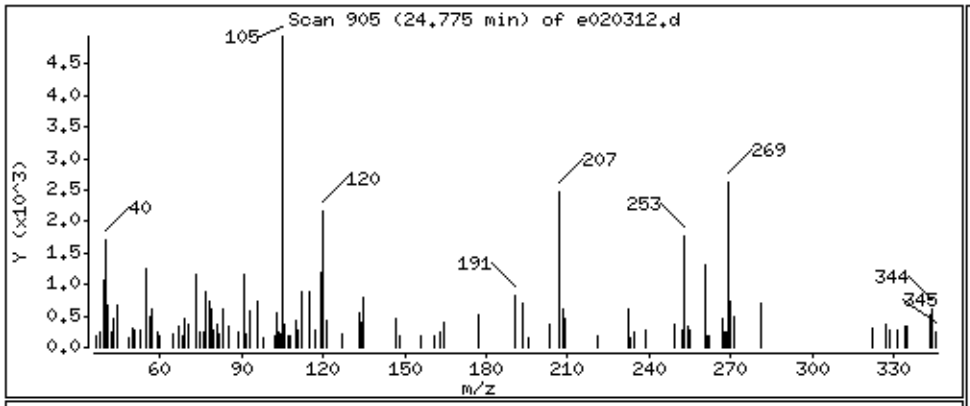
Operator: ef

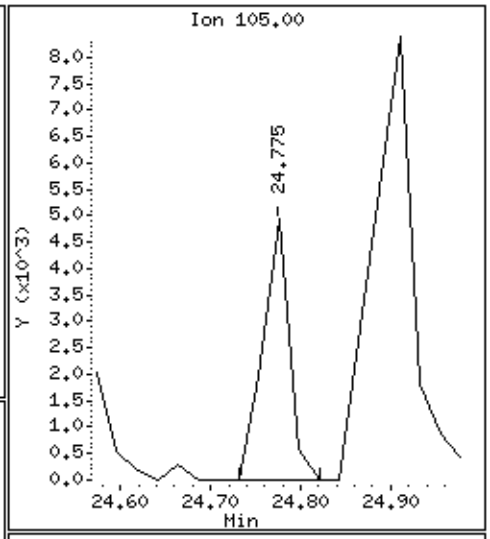
Column phase: RTX-624

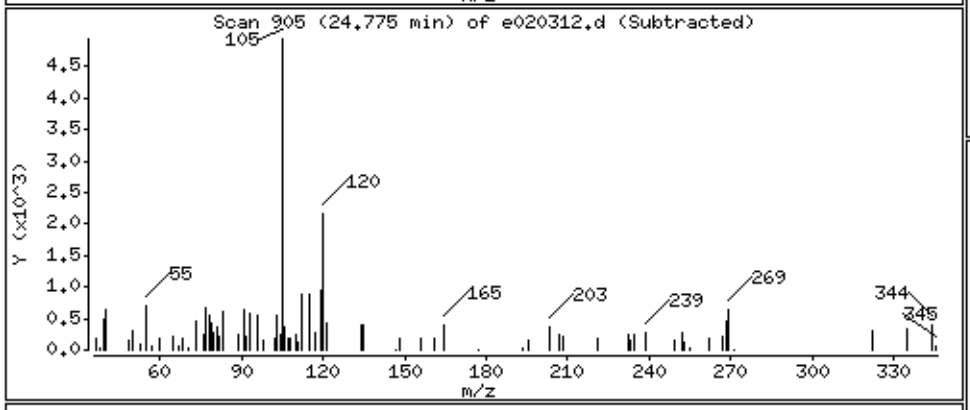
Column diameter: 0.32

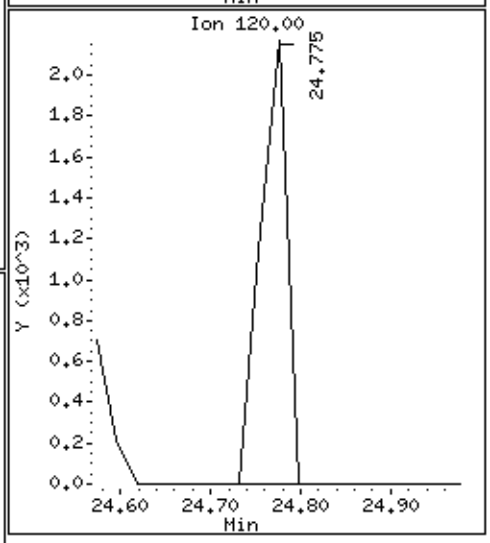
196 1,2,4-Trimethylbenzene

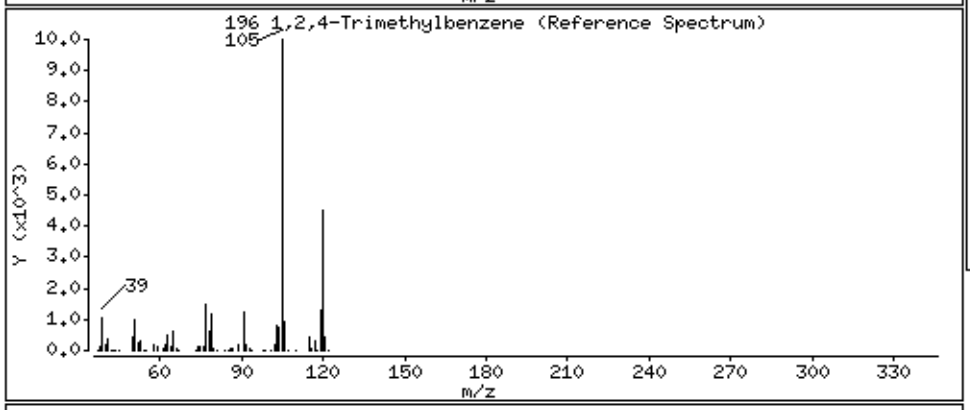
Concentration: 0.1536 PPBV

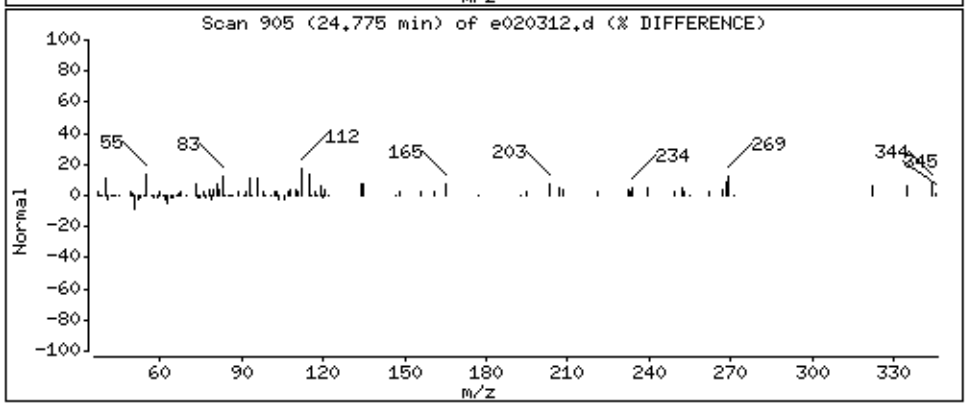












Data File: /chem/msde.i/03Feb2017.b/e020312.d

Date : 03-FEB-2017 15:36

Client ID:

Instrument: msde.i

Sample Info: 250mL# 907

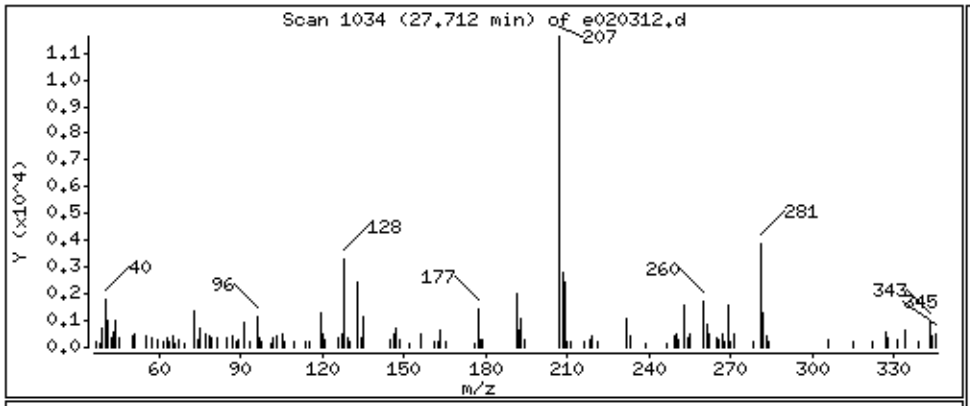
Operator: ef

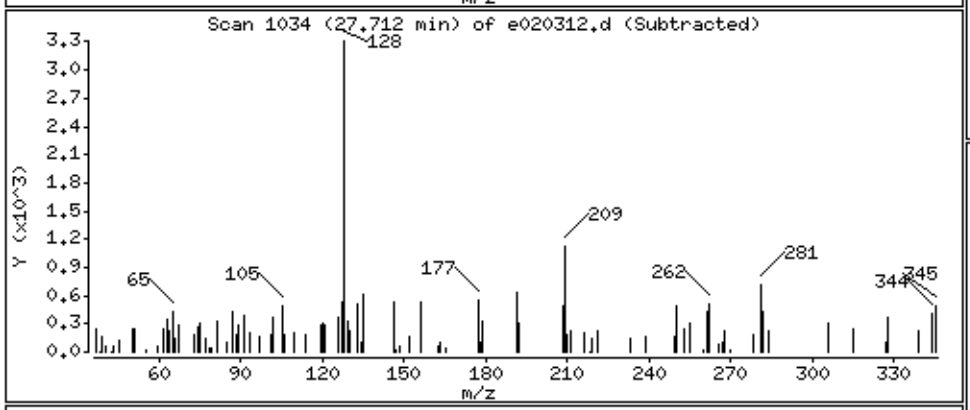
Column phase: RTX-624

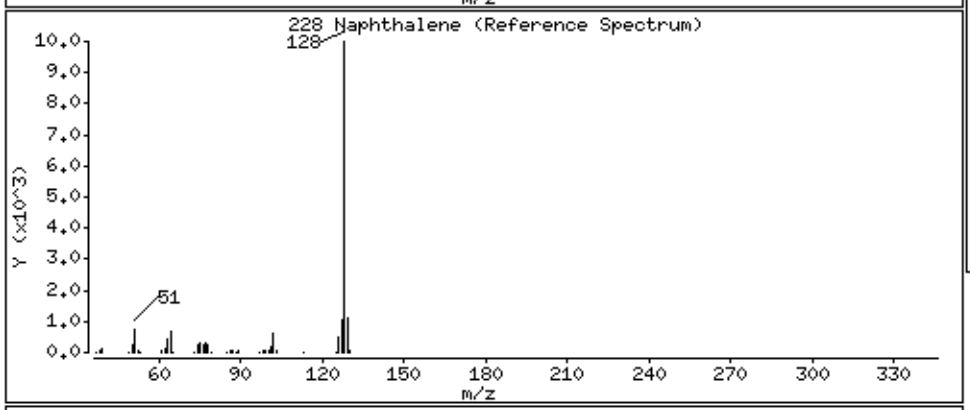
Column diameter: 0.32

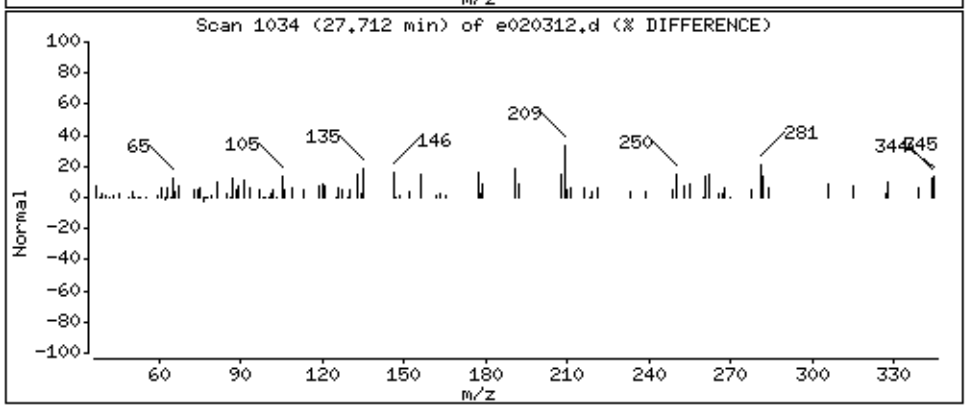
228 Naphthalene

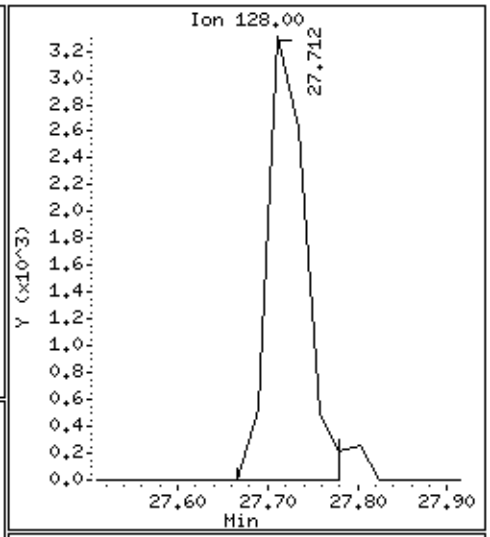
Concentration: 0.1415 PPBV

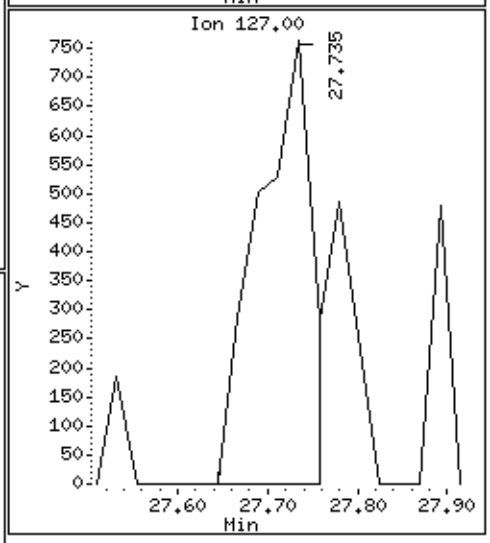












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B15IA-1-012817

Lab ID#: 1701477B-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.27	0.47	1.3	2.3
Chloromethane	1.3	0.53 J	2.8	1.1 J
Freon 11	0.27	0.20 J	1.5	1.1 J
Ethanol	1.3	250 E	2.5	480 E
Freon 113	0.27	0.062 J	2.0	0.47 J
Acetone	1.3	6.2	3.2	15
2-Propanol	1.3	13	3.3	33
Carbon Disulfide	1.3	0.26 J	4.2	0.83 J
2-Butanone (Methyl Ethyl Ketone)	1.3	0.74 J	4.0	2.2 J
Benzene	0.27	0.13 J	0.86	0.42 J
Toluene	0.27	0.24 J	1.0	0.89 J
m,p-Xylene	0.27	0.085 J	1.2	0.37 J
o-Xylene	0.27	0.044 J	1.2	0.19 J

eurofins | Air Toxics

Client Sample ID: B15IA-1-012817

Lab ID#: 1701477B-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020313**	**Date of Collection:**	**1/29/17 3:44:00 PM**
Dil. Factor:	**2.68**	**Date of Analysis:**	**2/3/17 04:20 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.27	0.47	1.3	2.3
Freon 114	0.27	Not Detected	1.9	Not Detected
Chloromethane	1.3	0.53 J	2.8	1.1 J
Vinyl Chloride	0.27	Not Detected	0.68	Not Detected
1,3-Butadiene	0.27	Not Detected	0.59	Not Detected
Bromomethane	1.3	Not Detected	5.2	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	0.27	0.20 J	1.5	1.1 J
Ethanol	1.3	250 E	2.5	480 E
Freon 113	0.27	0.062 J	2.0	0.47 J
1,1-Dichloroethene	0.27	Not Detected	1.1	Not Detected
Acetone	1.3	6.2	3.2	15
2-Propanol	1.3	13	3.3	33
Carbon Disulfide	1.3	0.26 J	4.2	0.83 J
3-Chloropropene	1.3	Not Detected	4.2	Not Detected
Methylene Chloride	0.54	Not Detected	1.9	Not Detected
Methyl tert-butyl ether	0.27	Not Detected	0.97	Not Detected
trans-1,2-Dichloroethene	0.27	Not Detected	1.1	Not Detected
Hexane	0.27	Not Detected	0.94	Not Detected
1,1-Dichloroethane	0.27	Not Detected	1.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	0.74 J	4.0	2.2 J
cis-1,2-Dichloroethene	0.27	Not Detected	1.1	Not Detected
Tetrahydrofuran	1.3	Not Detected	4.0	Not Detected
Chloroform	0.27	Not Detected	1.3	Not Detected
1,1,1-Trichloroethane	0.27	Not Detected	1.5	Not Detected
Cyclohexane	0.27	Not Detected	0.92	Not Detected
Carbon Tetrachloride	0.27	Not Detected	1.7	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	0.27	0.13 J	0.86	0.42 J
1,2-Dichloroethane	0.27	Not Detected	1.1	Not Detected
Heptane	0.27	Not Detected	1.1	Not Detected
Trichloroethene	0.27	Not Detected	1.4	Not Detected
1,2-Dichloropropane	0.27	Not Detected	1.2	Not Detected
1,4-Dioxane	0.27	Not Detected	0.96	Not Detected
Bromodichloromethane	0.27	Not Detected	1.8	Not Detected
cis-1,3-Dichloropropene	0.27	Not Detected	1.2	Not Detected
4-Methyl-2-pentanone	0.27	Not Detected	1.1	Not Detected
Toluene	0.27	0.24 J	1.0	0.89 J
trans-1,3-Dichloropropene	0.27	Not Detected	1.2	Not Detected
1,1,2-Trichloroethane	0.27	Not Detected	1.5	Not Detected
Tetrachloroethene	0.27	Not Detected	1.8	Not Detected
2-Hexanone	1.3	Not Detected	5.5	Not Detected

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Client Sample ID: B15IA-1-012817

Lab ID#: 1701477B-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020313**	**Date of Collection:**	**1/29/17 3:44:00 PM**
Dil. Factor:	**2.68**	**Date of Analysis:**	**2/3/17 04:20 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.27	Not Detected	2.3	Not Detected
1,2-Dibromoethane (EDB)	0.27	Not Detected	2.0	Not Detected
Chlorobenzene	0.27	Not Detected	1.2	Not Detected
Ethyl Benzene	0.27	Not Detected	1.2	Not Detected
m,p-Xylene	0.27	0.085 J	1.2	0.37 J
o-Xylene	0.27	0.044 J	1.2	0.19 J
Styrene	0.27	Not Detected	1.1	Not Detected
Bromoform	0.27	Not Detected	2.8	Not Detected
Cumene	0.27	Not Detected	1.3	Not Detected
1,1,2,2-Tetrachloroethane	0.27	Not Detected	1.8	Not Detected
Propylbenzene	0.27	Not Detected	1.3	Not Detected
4-Ethyltoluene	0.27	Not Detected	1.3	Not Detected
1,3,5-Trimethylbenzene	0.27	Not Detected	1.3	Not Detected
1,2,4-Trimethylbenzene	0.27	Not Detected	1.3	Not Detected
1,3-Dichlorobenzene	0.27	Not Detected	1.6	Not Detected
1,4-Dichlorobenzene	0.27	Not Detected	1.6	Not Detected
alpha-Chlorotoluene	0.27	Not Detected	1.4	Not Detected
1,2-Dichlorobenzene	0.27	Not Detected	1.6	Not Detected
1,2,4-Trichlorobenzene	1.3	Not Detected	9.9	Not Detected
Hexachlorobutadiene	1.3	Not Detected	14	Not Detected
Naphthalene	1.3	Not Detected	7.0	Not Detected

J = Estimated value.
E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	99	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020313.d
Lab Smp Id: 1701477B-16A
Inj Date : 03-FEB-2017 16:20
Operator : ef Inst ID: msde.i
Smp Info : 150mL# N0597
Misc Info : 5.0"Hg -> 5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 2.68000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.221	5.220 (0.339)	85	23547	0.17599	0.4717	80.00- 120.00	100.00
5.245	5.220 (0.341)	87	5776			1.91- 61.91	24.53
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	4960	0.19877	0.5327	80.00- 120.00	100.00(a)
6.884	6.932 (0.447)	52	924			3.31- 63.31	18.63
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	11587	0.07424	0.1990	80.00- 120.00	100.00(a)
10.766	10.766 (0.700)	103	7582			33.74- 93.74	65.44
42 Ethanol					CAS #: 64-17-5		
11.681	11.661 (0.759)	45	1289332	94.7706	253.98	80.00- 120.00	100.00(A)
11.681	11.661 (0.759)	46	484281			9.60- 69.60	37.56
11.681	11.661 (0.759)	43	331728			0.00- 59.21	25.73
49 Freon 113					CAS #: 76-13-1		
12.100	12.080 (0.786)	151	2404	0.02307	0.06182	80.00- 120.00	100.00(a)
12.100	12.080 (0.786)	153	1673			34.83- 94.83	69.58

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113 (continued)
 12.119  12.080 (0.787)   101      2684                    77.16- 137.16   111.64
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.385  12.366 (0.805)    58     39793 2.32635    6.235  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    151510                   344.13- 404.13   380.74
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.462  12.461 (0.810)    76     11728 0.09912   0.2656  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.728  12.728 (0.827)    45    274930 4.99247   13.380  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43     80810                     0.00-  55.65    29.39
 12.728  12.728 (0.827)    59     13265                     0.00-  34.42     4.82
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.047  15.047 (0.978)    72      5132 0.27668   0.7415  80.00- 120.00   100.00(a)
 15.066  15.047 (0.979)    43     18416                   325.72- 385.72   358.82
 15.066  15.047 (0.979)    57      1052                     1.13-  61.13    20.51
-------------------------------------------------------------------------------
*  98 Bromochloromethane                         CAS #: 74-97-5
 15.391  15.391 (1.000)   130    150698 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    108630                   46.73- 106.73    72.08
 15.391  15.391 (1.000)    49    123671                   55.35- 115.35    82.07
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.207  16.207 (0.968)    78      5774 0.04921   0.1319  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      1601                     0.00-  53.00    27.73
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    220652 5.09873    5.099  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    104086                   22.67-  82.67    47.17
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                         CAS #: 540-36-3
 16.737  16.737 (1.000)   114    475236 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69517                     0.00-  45.16    14.63
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                  CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    439870 4.77163    4.772  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     53098                     0.00-  40.89    12.07
 19.298  19.298 (1.153)   100    302105                   40.09- 100.09    68.68
-------------------------------------------------------------------------------
  147 Toluene                                     CAS #: 108-88-3
 19.455  19.432 (1.162)    91     12487 0.08797   0.2358  80.00- 120.00   100.00(a)
 19.432  19.432 (1.161)    92      6727                   27.79-  87.79    53.87
-------------------------------------------------------------------------------
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
22.177	22.177	(1.000)	117	471285	5.00000		80.00- 120.00	100.00
22.177	22.177	(1.000)	82	213299			17.27- 77.27	45.26
169 m,p-Xylene						CAS #: 108-38-3		
22.488	22.467	(1.014)	106	2330	0.03189	0.08546	80.00- 120.00	100.00(a)
22.488	22.467	(1.014)	91	4635			170.01- 230.01	198.93
171 o-Xylene						CAS #: 95-47-6		
23.089	23.089	(1.041)	106	1106	0.01633	0.04378	80.00- 120.00	100.00(a)
23.110	23.089	(1.042)	91	2914			175.84- 235.84	263.28
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	327235	4.97079	4.971	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	293689			66.74- 126.74	89.75
23.856	23.856	(1.076)	176	314008			67.47- 127.47	95.96

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
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: e020313.d
Lab Smp Id: 1701477B-16A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.0"Hg -> 5.0psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	150698	6.48
123 1,4-Difluorobenze	499834	299900	699768	475236	-4.92
163 Chlorobenzene-d5	467575	280545	654605	471285	0.79

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	22.18	21.85	22.51	22.18	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: 09-Feb-2017 10:42

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-16A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 5.0"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.099	101.97	70-130
$ 146 Toluene-d8	5.000	4.772	95.43	70-130
$ 177 4-Bromofluorobenze	5.000	4.971	99.42	70-130

Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

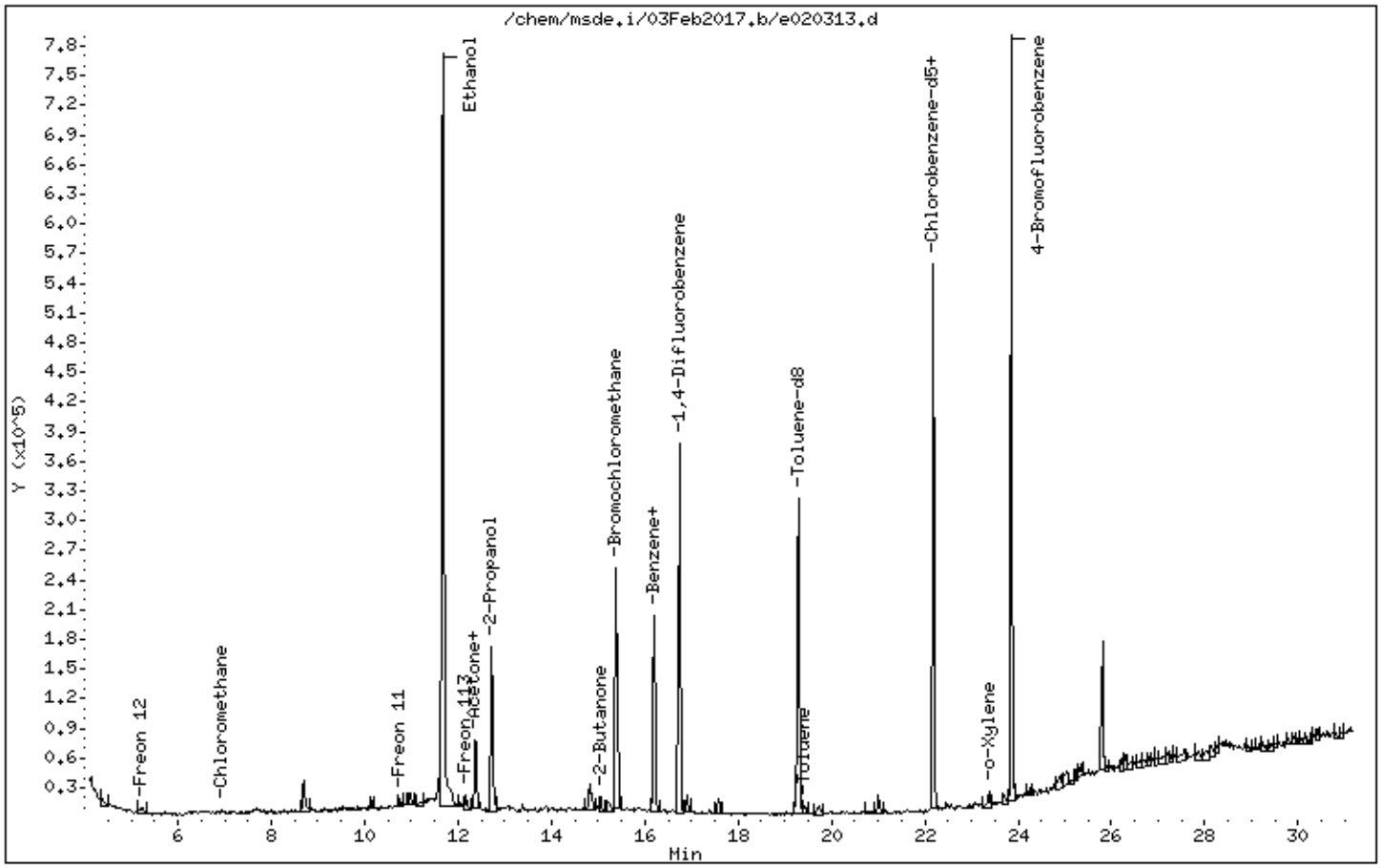
Instrument: msde.i

Sample Info: 150mL# N0597

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

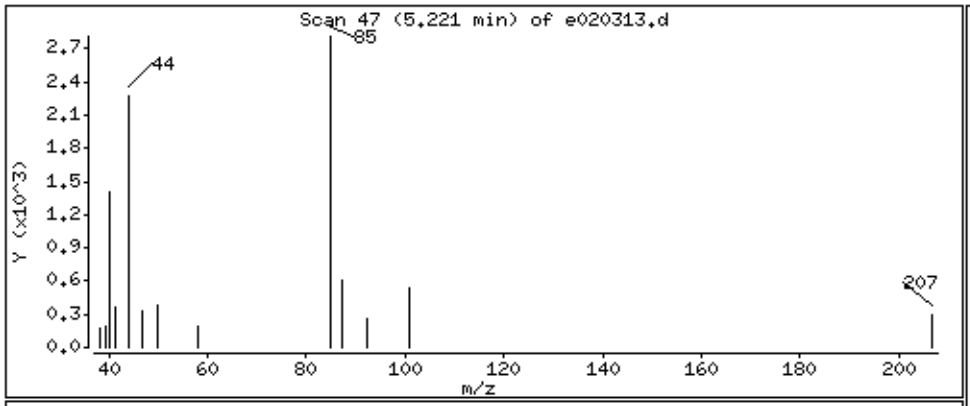
Operator: ef

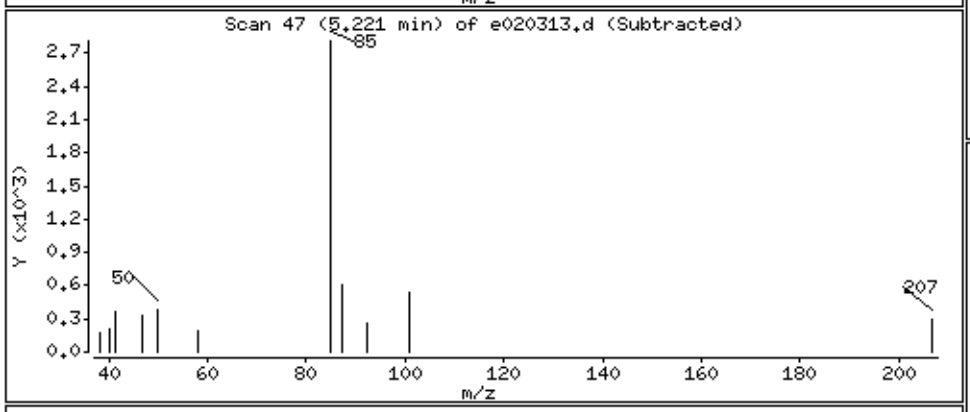
Column phase: RTX-624

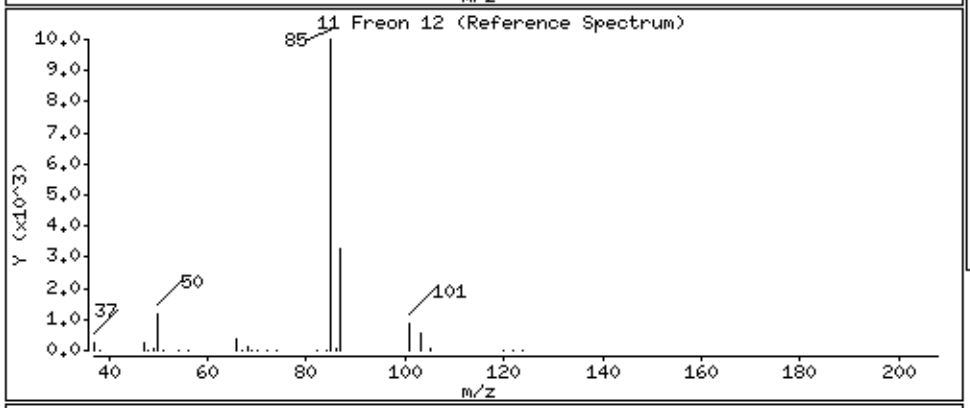
Column diameter: 0.32

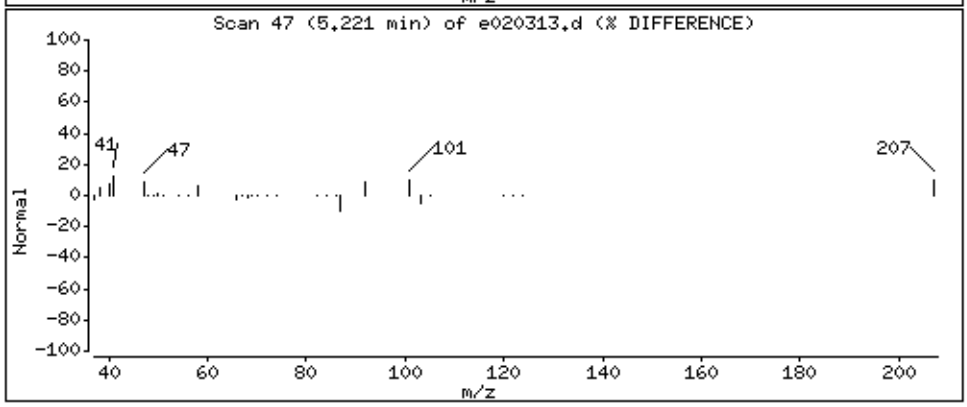
11 Freon 12

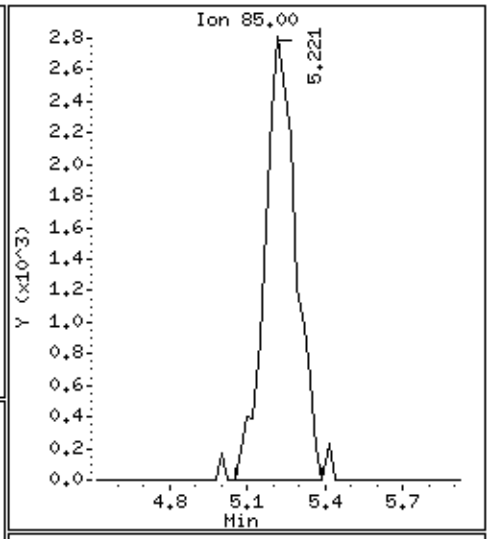
Concentration: 0.4717 PPBV

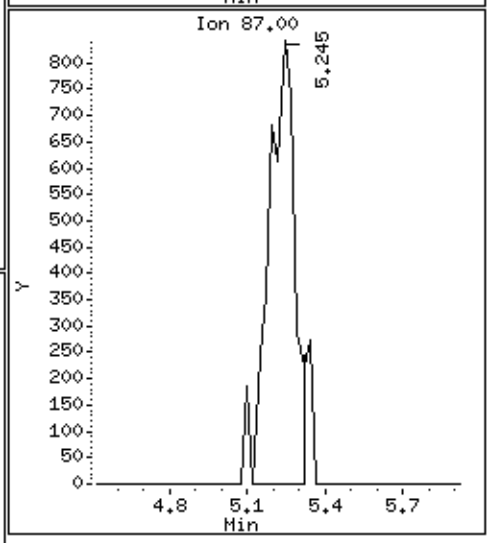












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

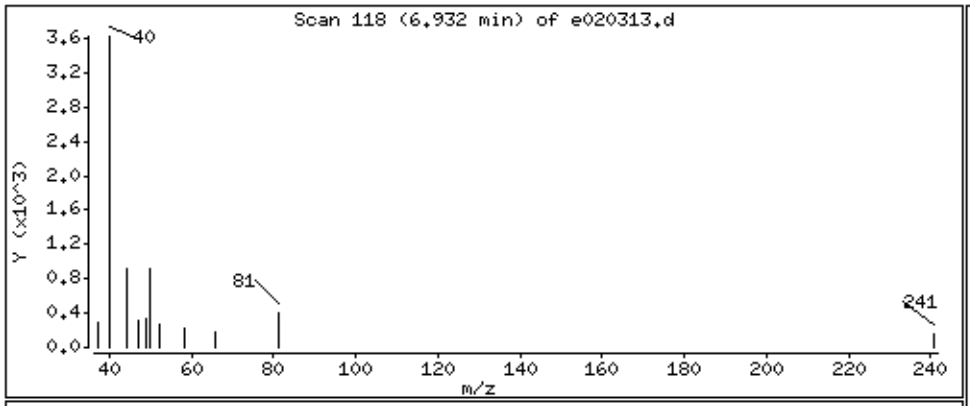
Operator: ef

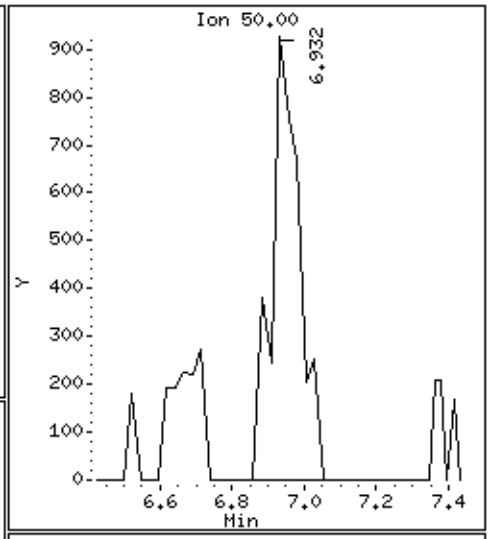
Column phase: RTX-624

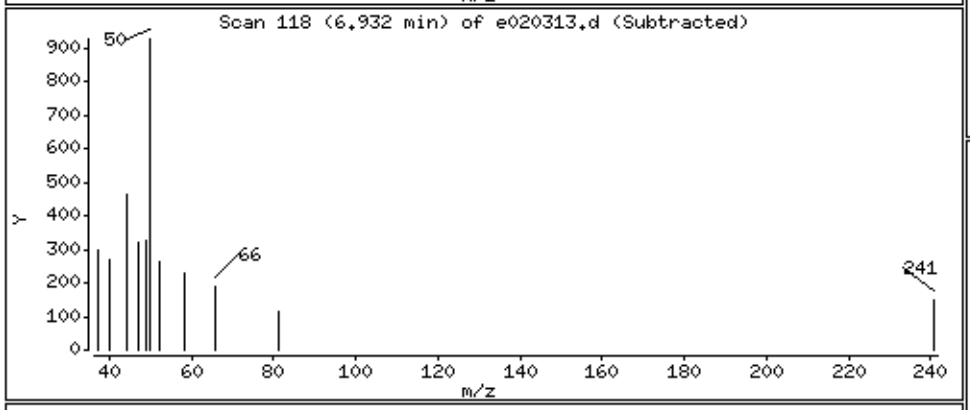
Column diameter: 0.32

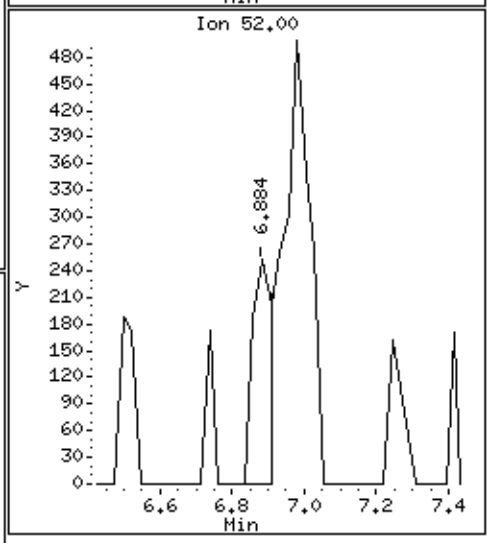
17 Chloromethane

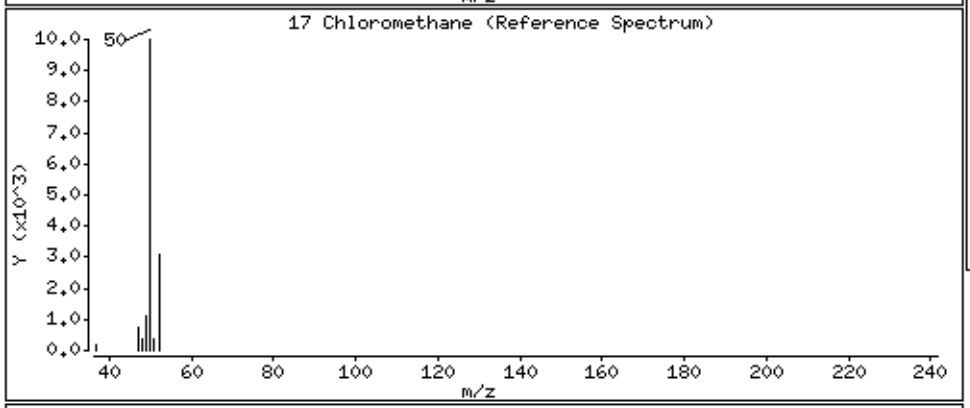
Concentration: 0.5327 PPBV

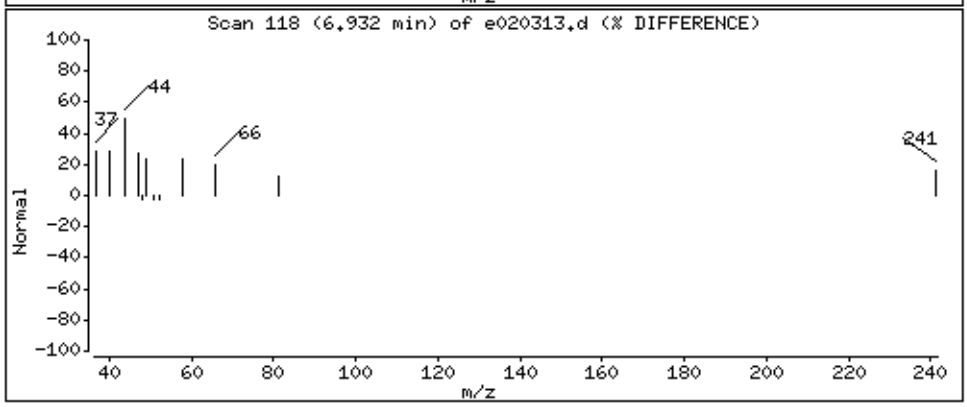












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

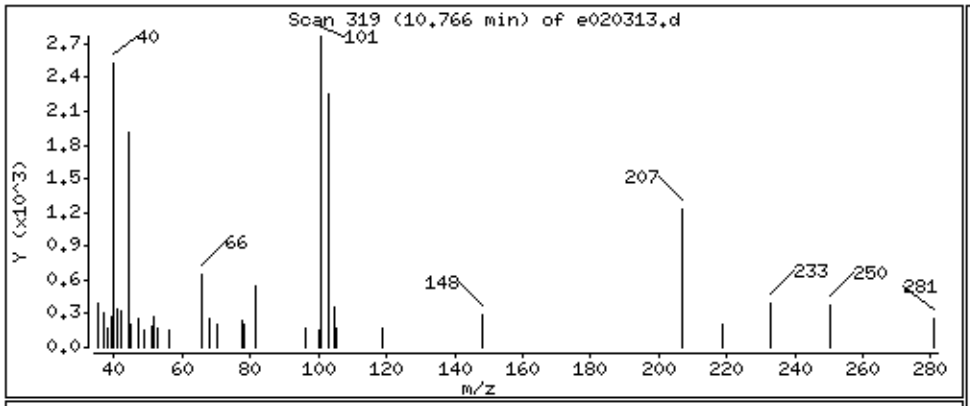
Operator: ef

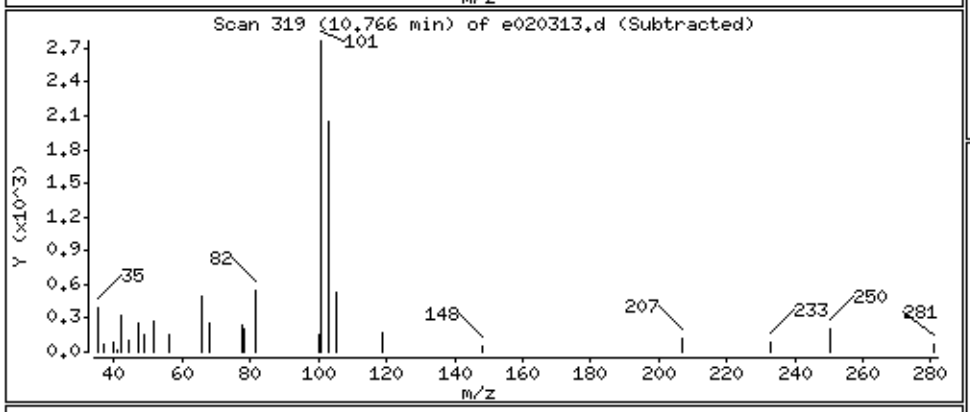
Column phase: RTX-624

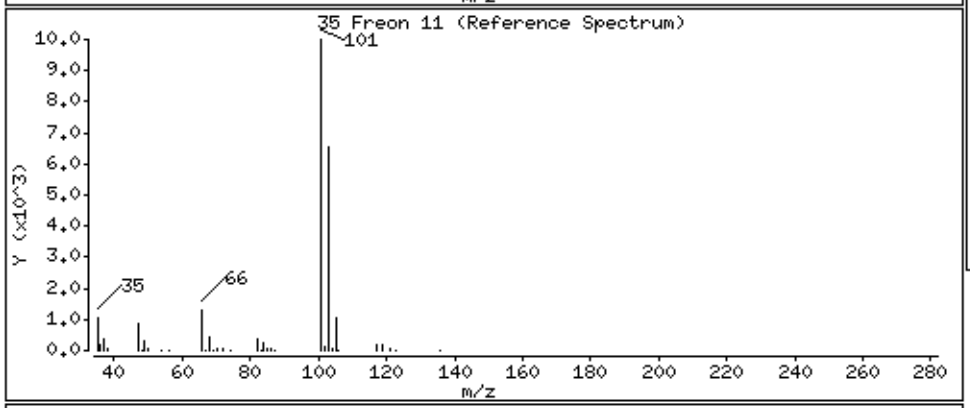
Column diameter: 0.32

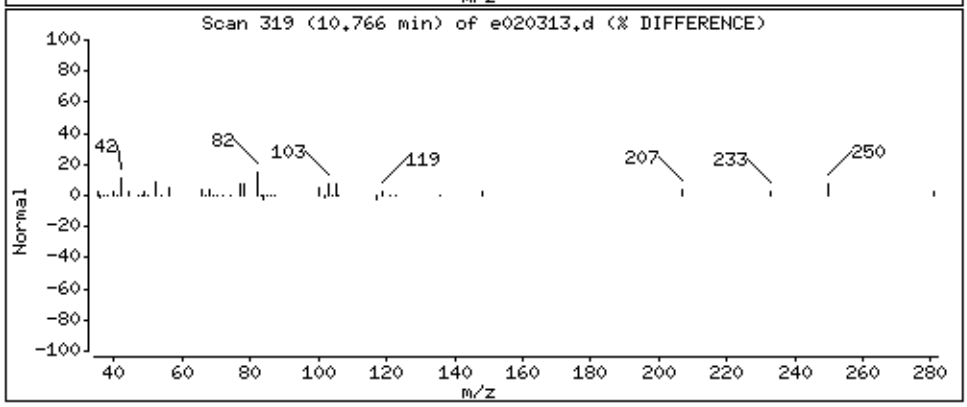
35 Freon 11

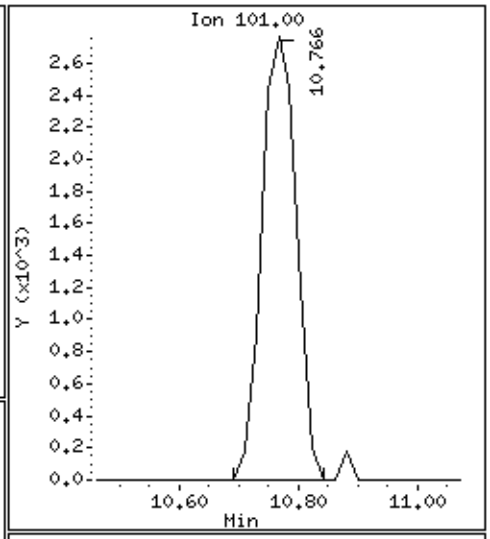
Concentration: 0.1990 PPBV

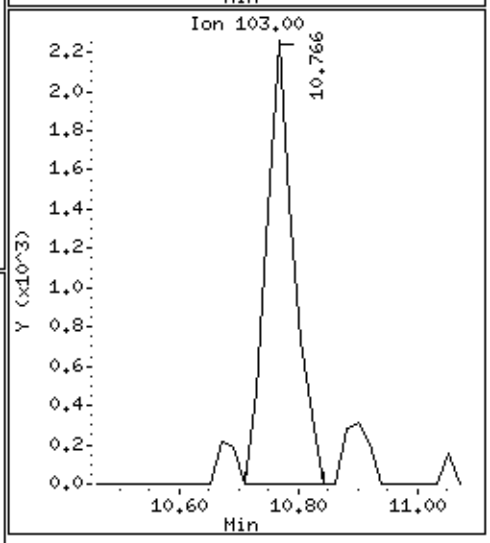












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

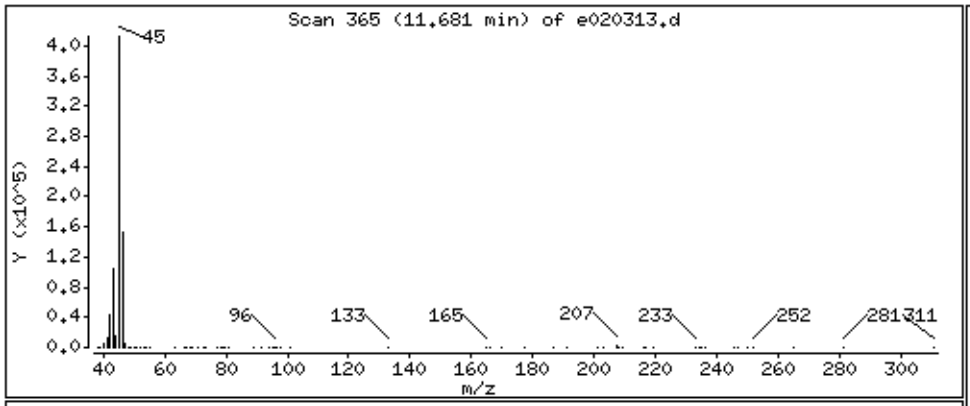
Operator: ef

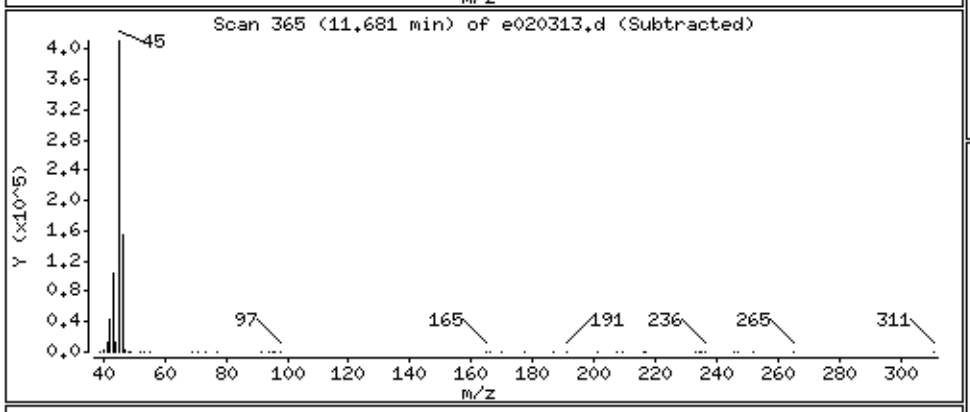
Column phase: RTX-624

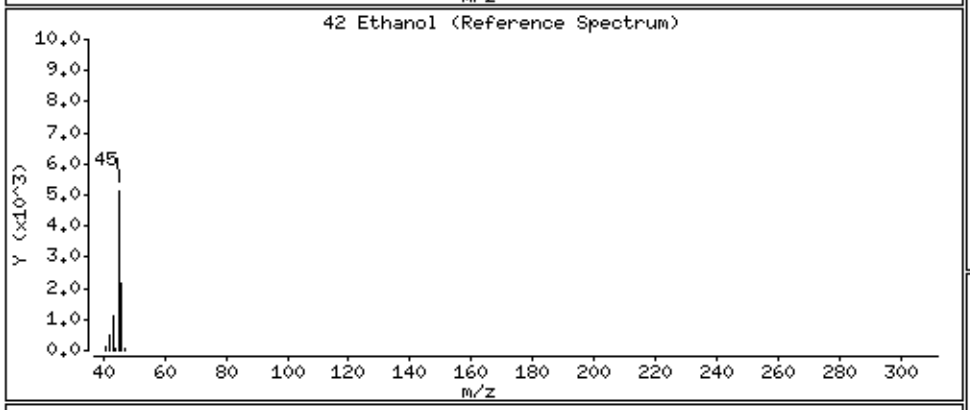
Column diameter: 0.32

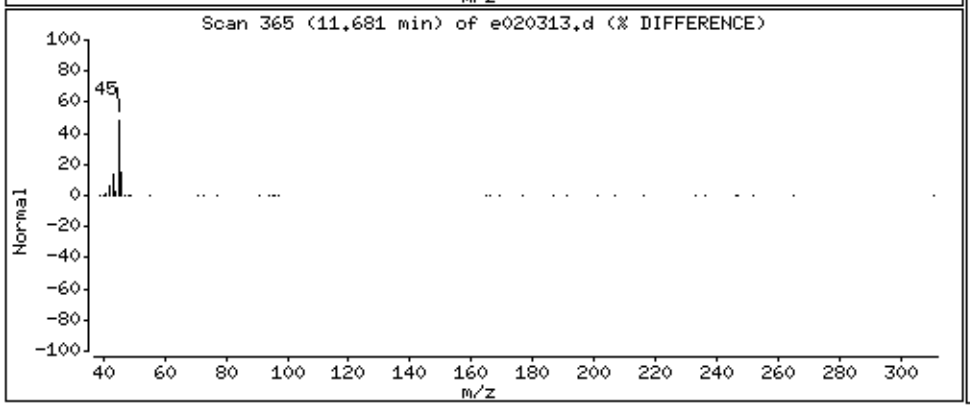
42 Ethanol

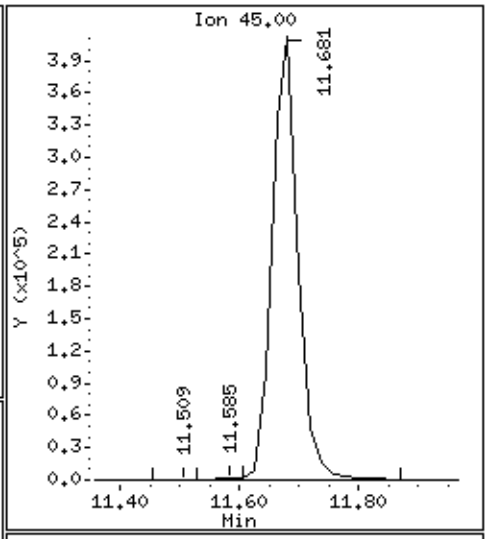
Concentration: 253.98 PPBV

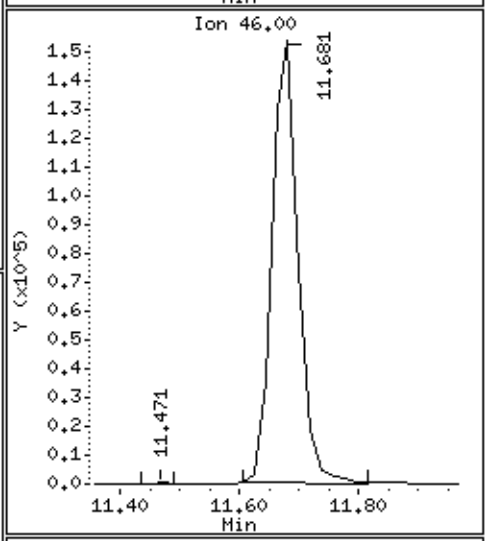


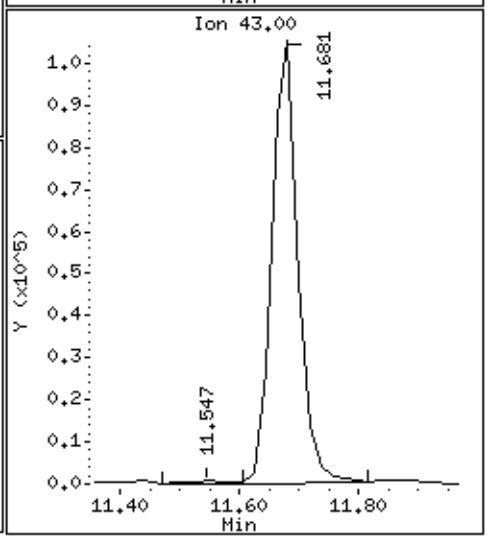












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

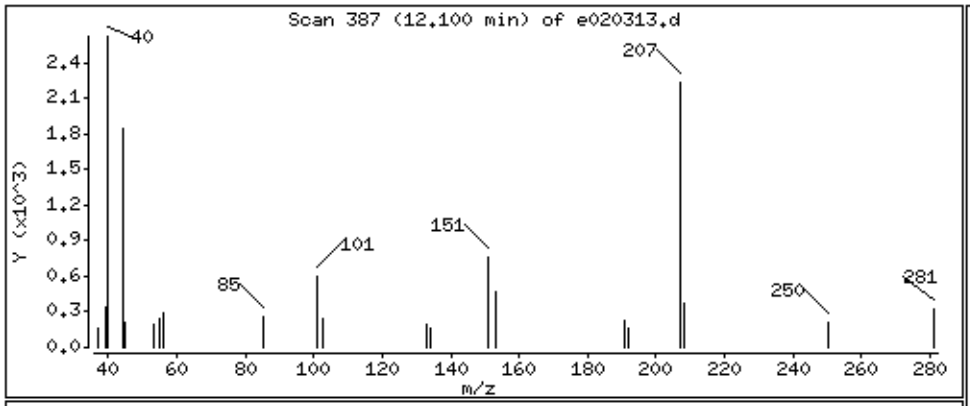
Operator: ef

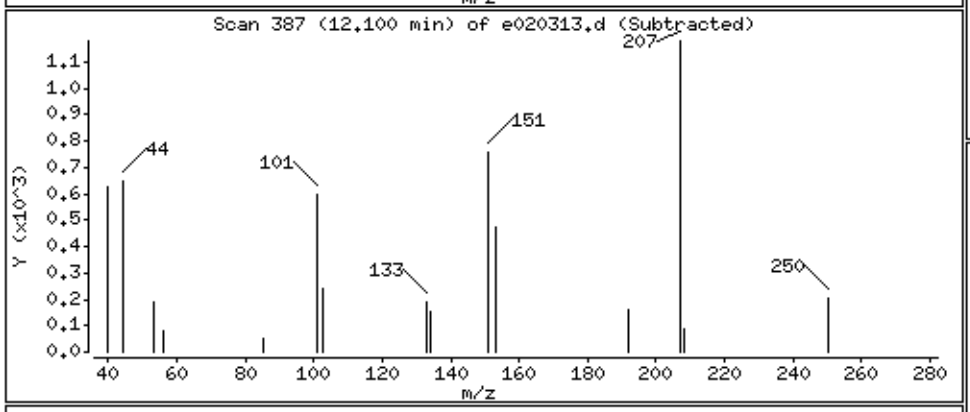
Column phase: RTX-624

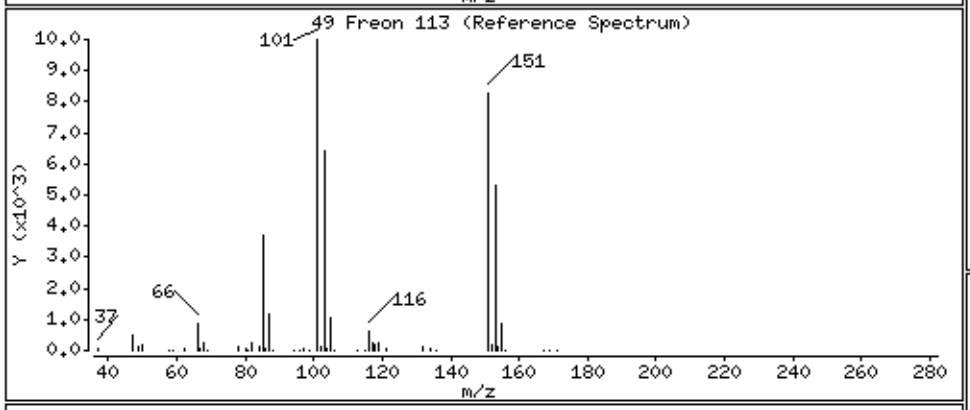
Column diameter: 0.32

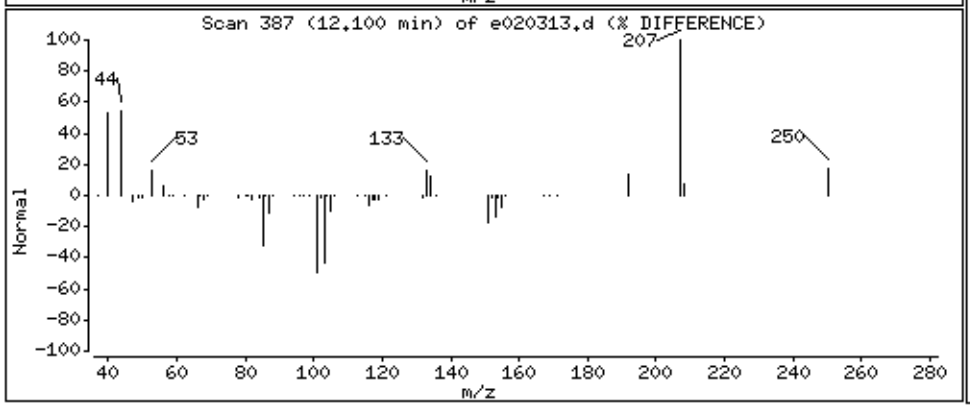
49 Freon 113

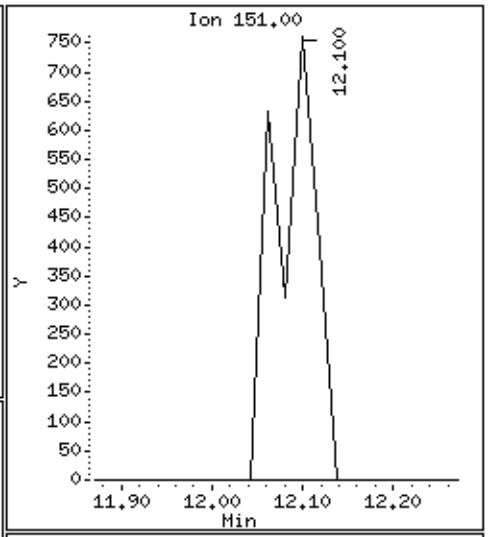
Concentration: 0.06182 PPBV

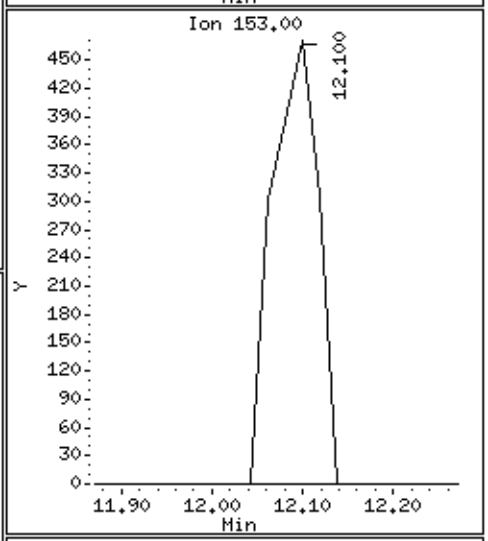


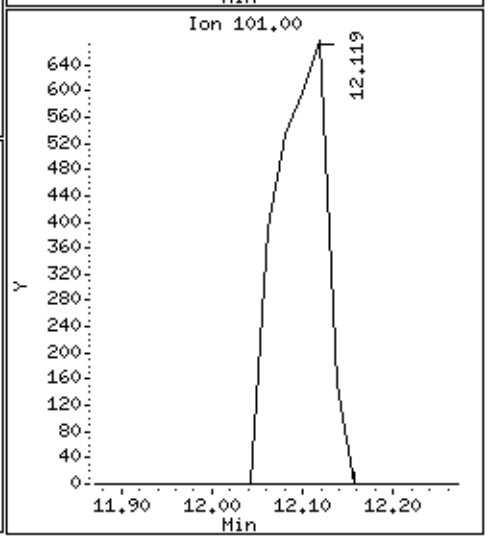












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

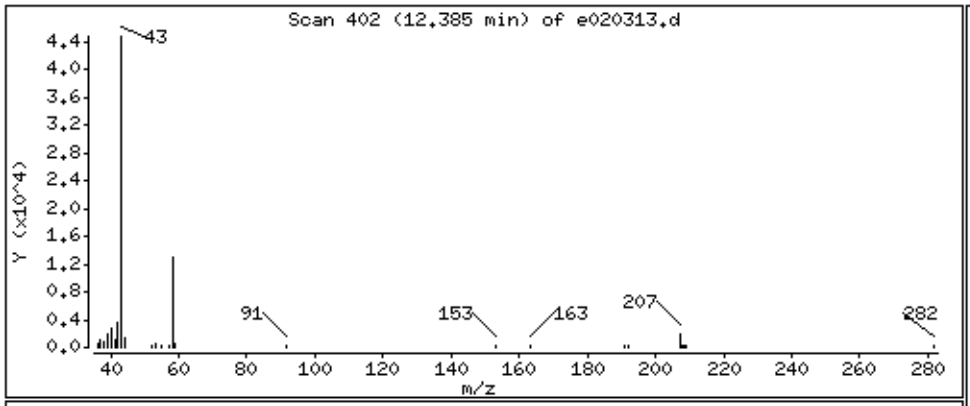
Operator: ef

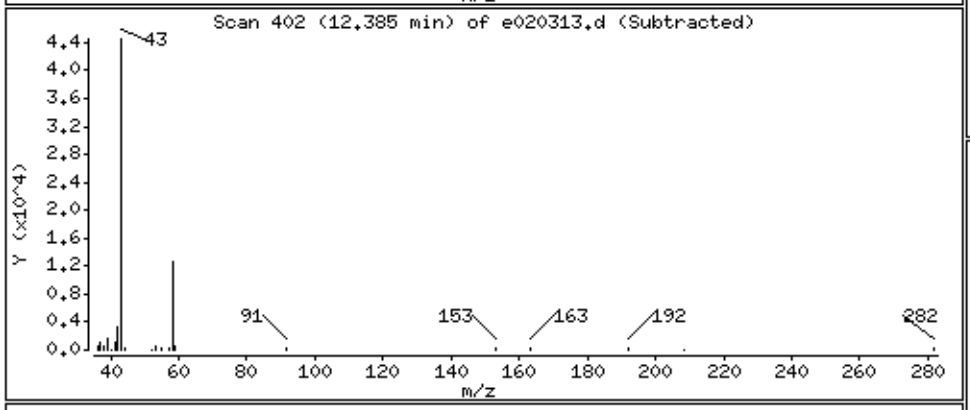
Column phase: RTX-624

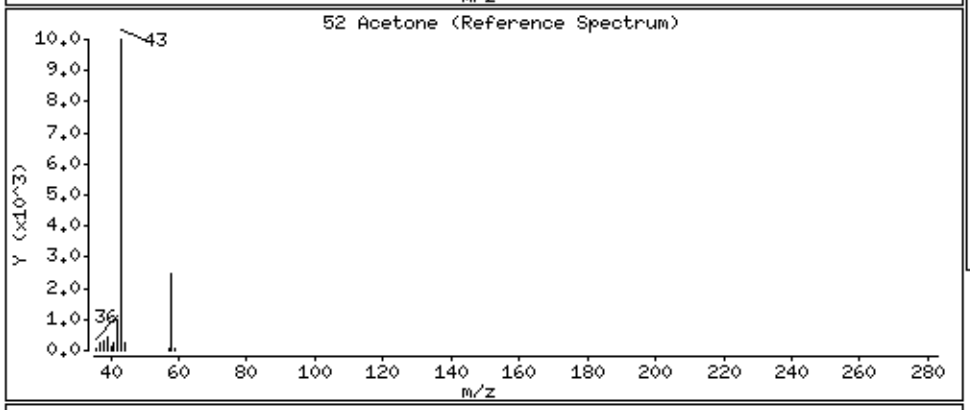
Column diameter: 0.32

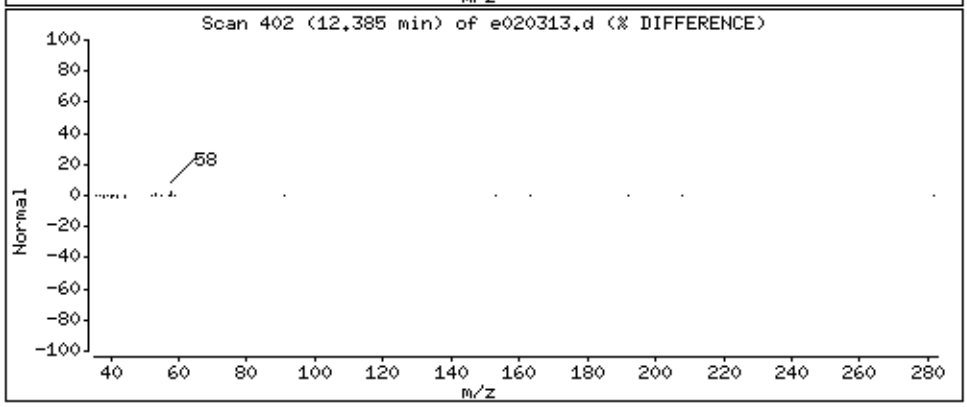
52 Acetone

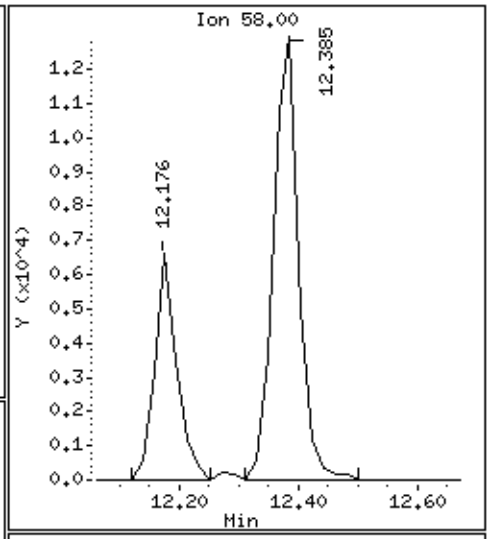
Concentration: 6.235 PPBV

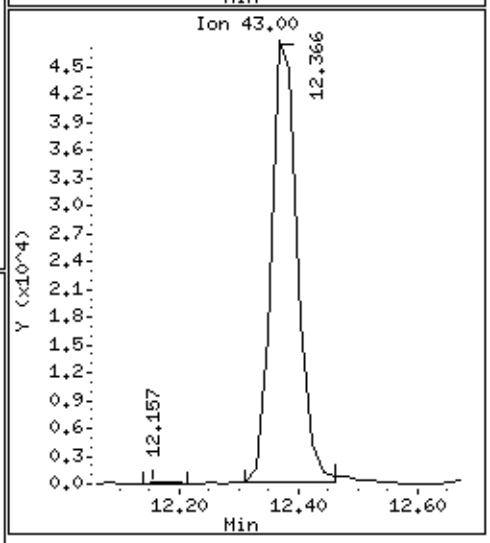












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

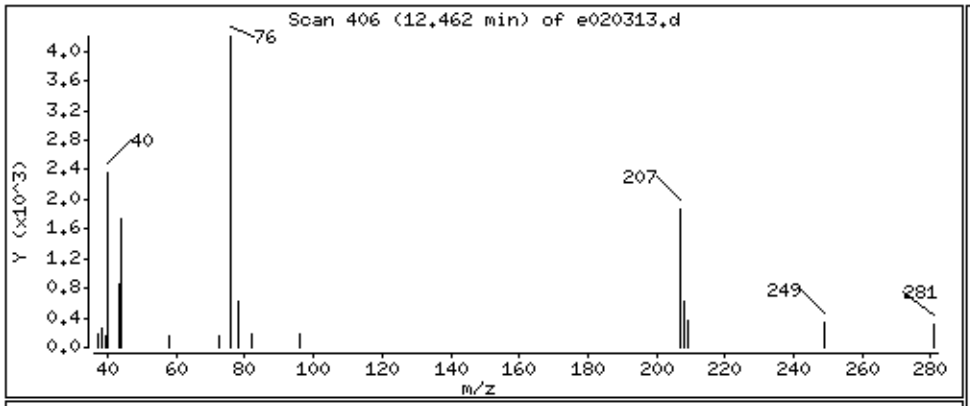
Operator: ef

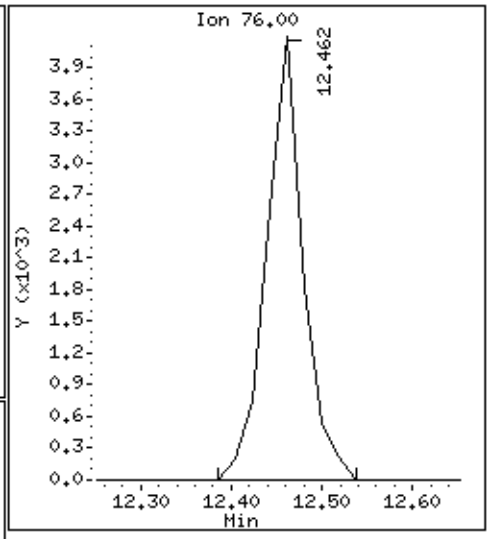
Column phase: RTX-624

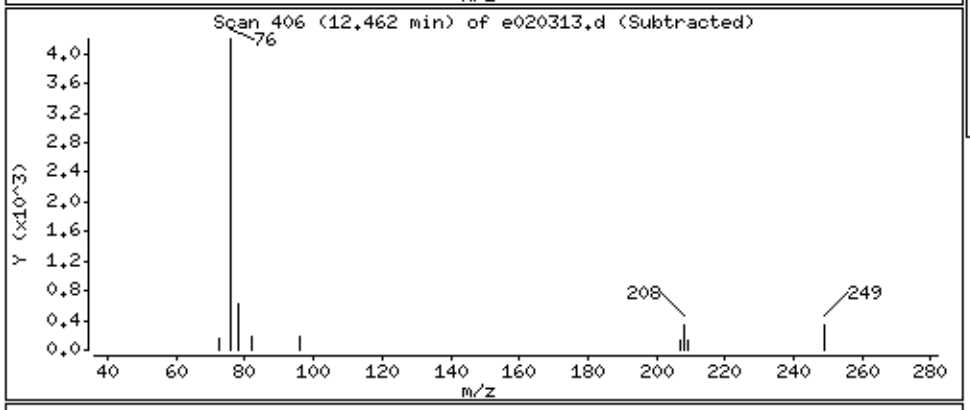
Column diameter: 0.32

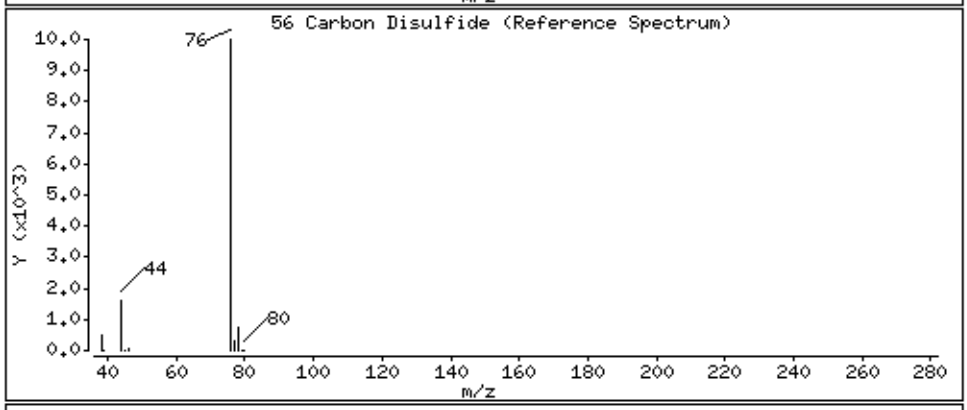
56 Carbon Disulfide

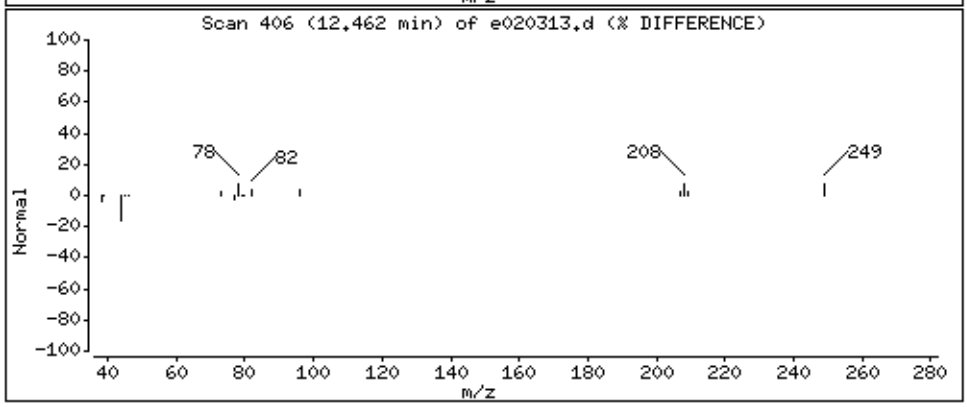
Concentration: 0.2656 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

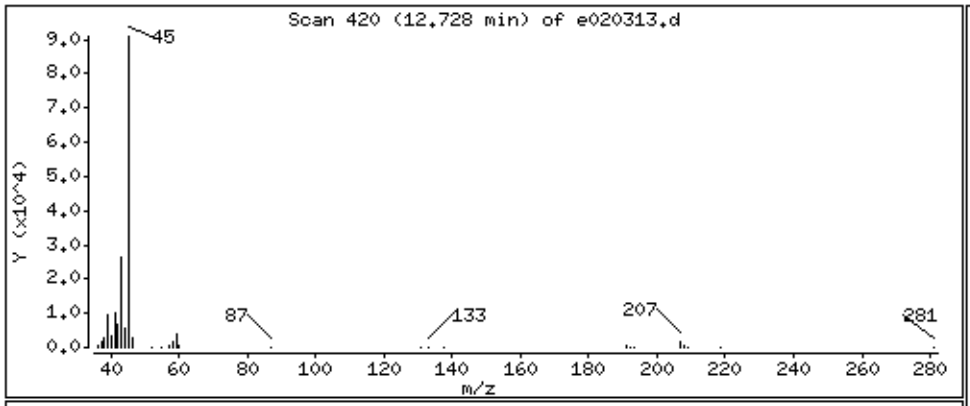
Operator: ef

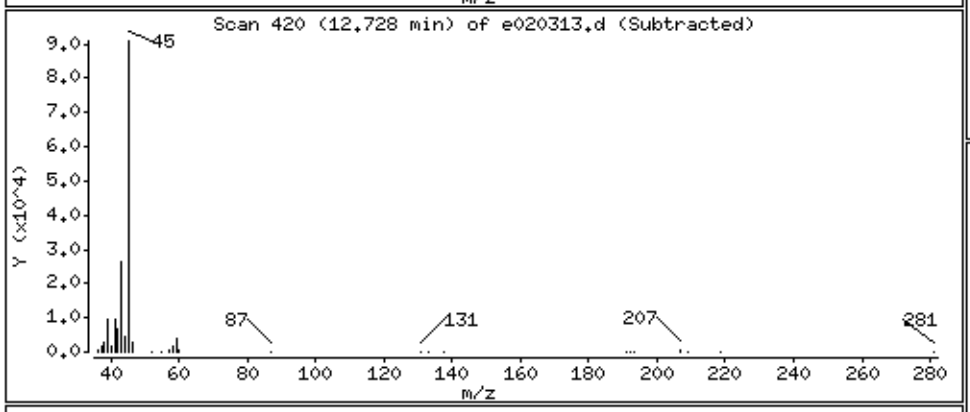
Column phase: RTX-624

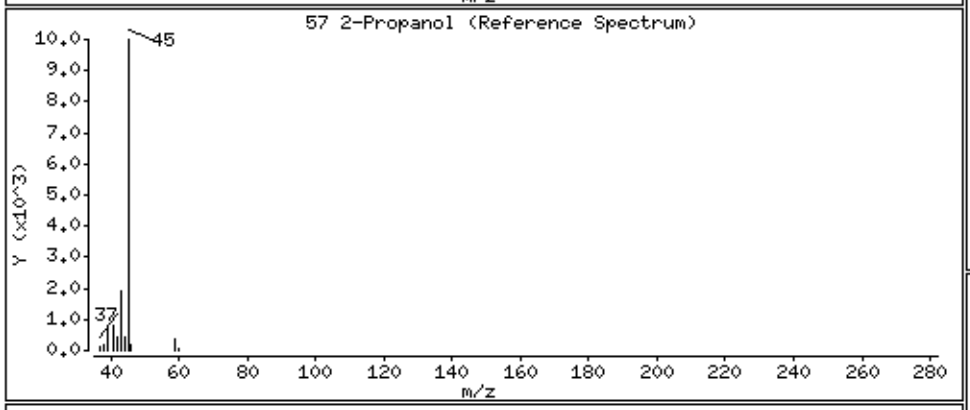
Column diameter: 0.32

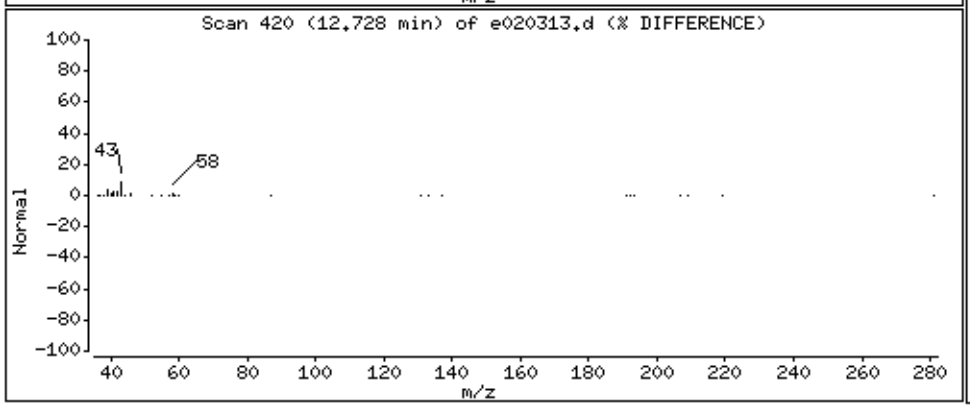
57 2-Propanol

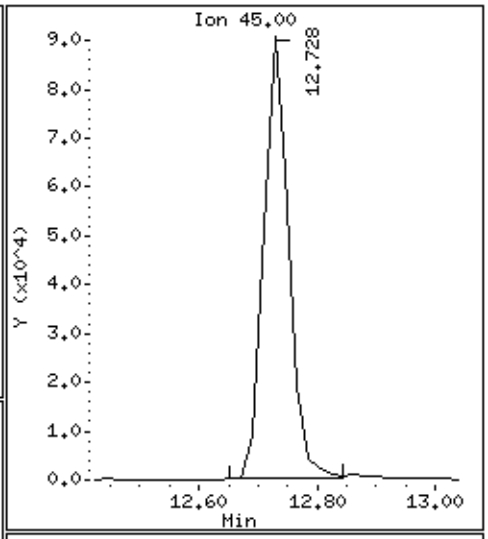
Concentration: 13.380 PPBV

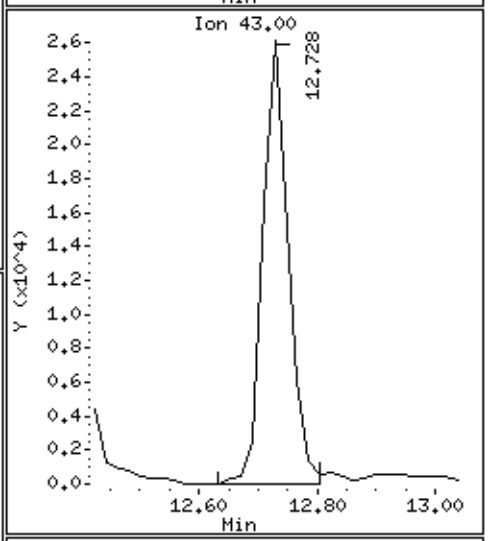


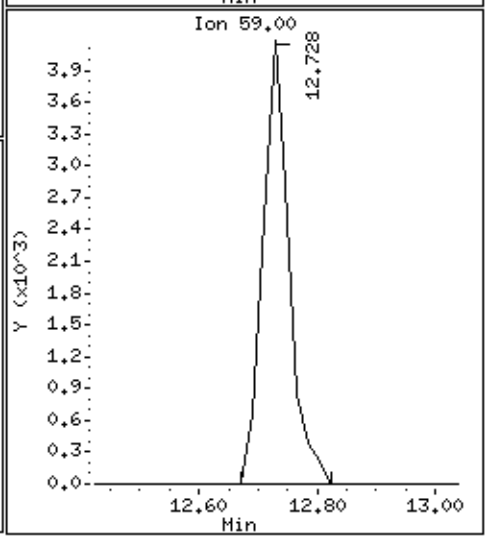












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

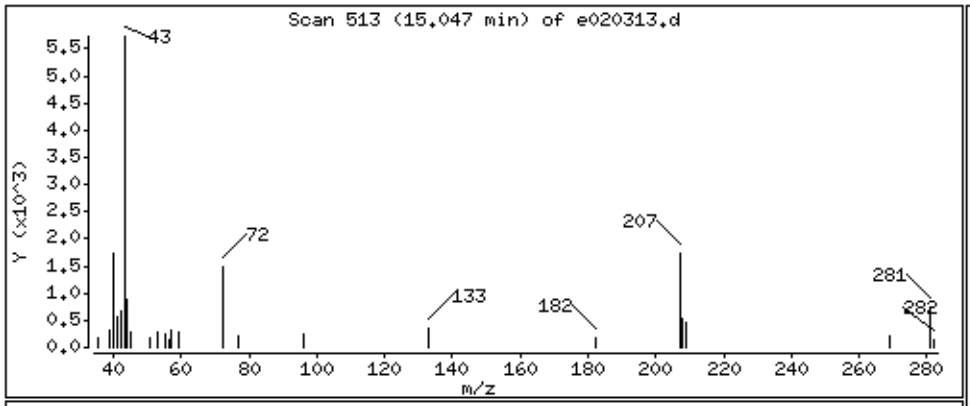
Operator: ef

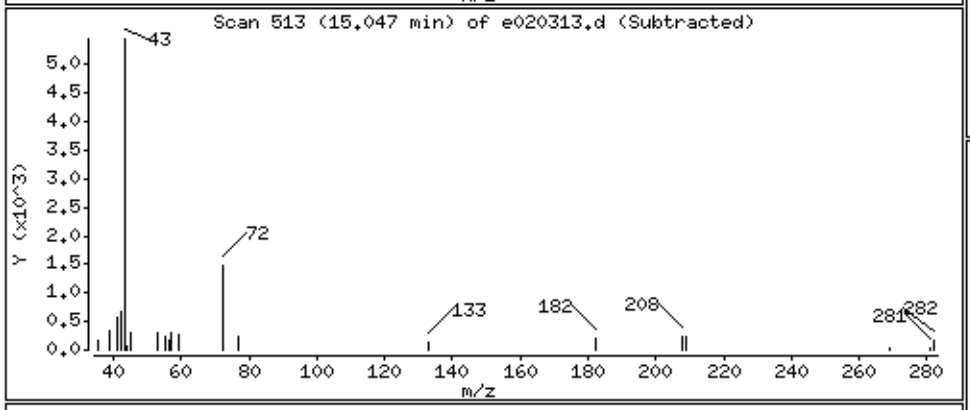
Column phase: RTX-624

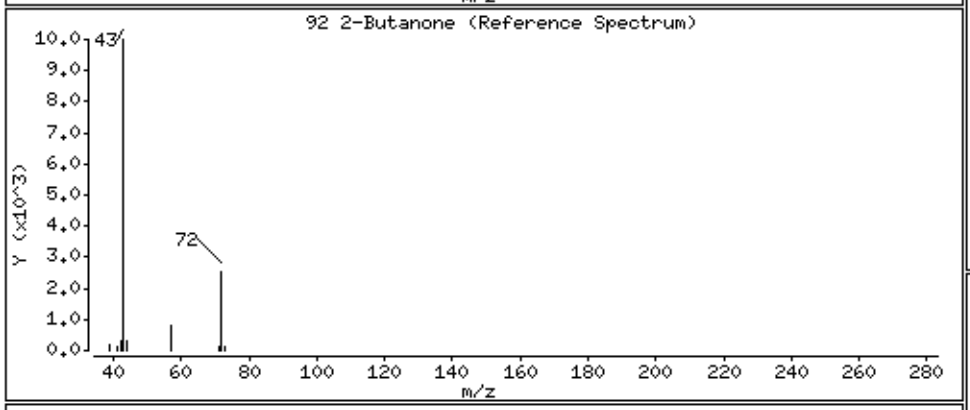
Column diameter: 0.32

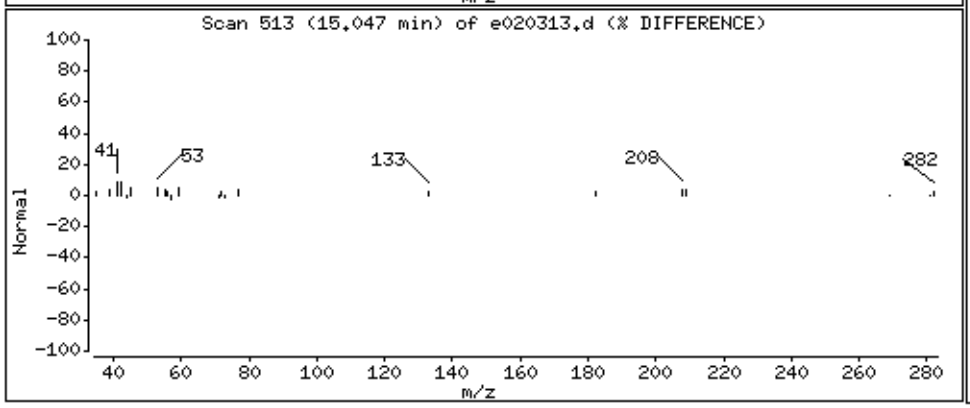
92 2-Butanone

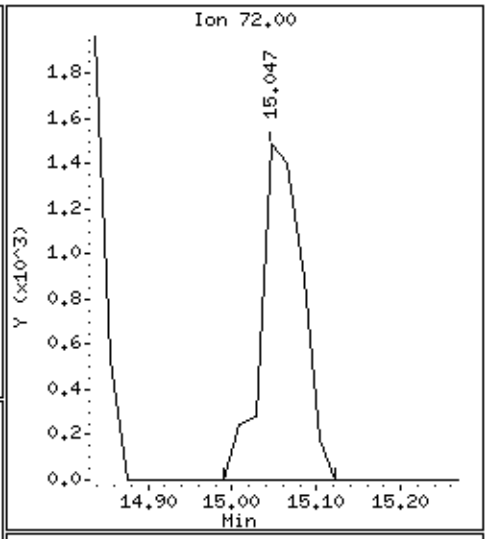
Concentration: 0.7415 PPBV

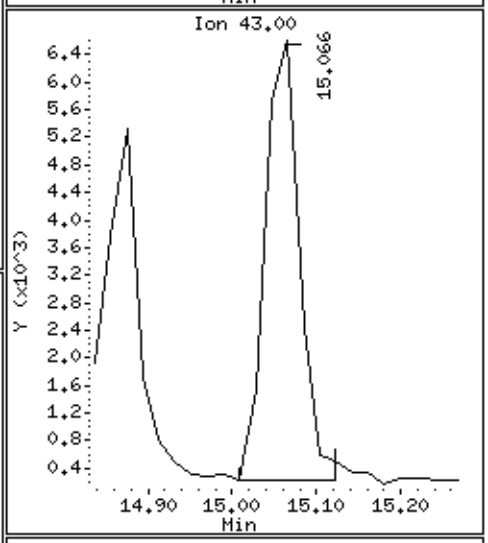


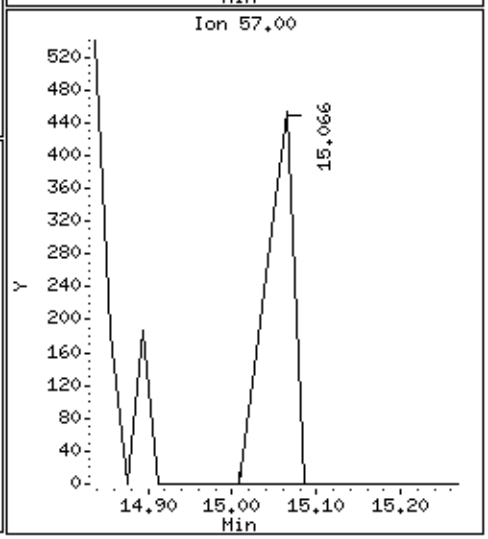












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

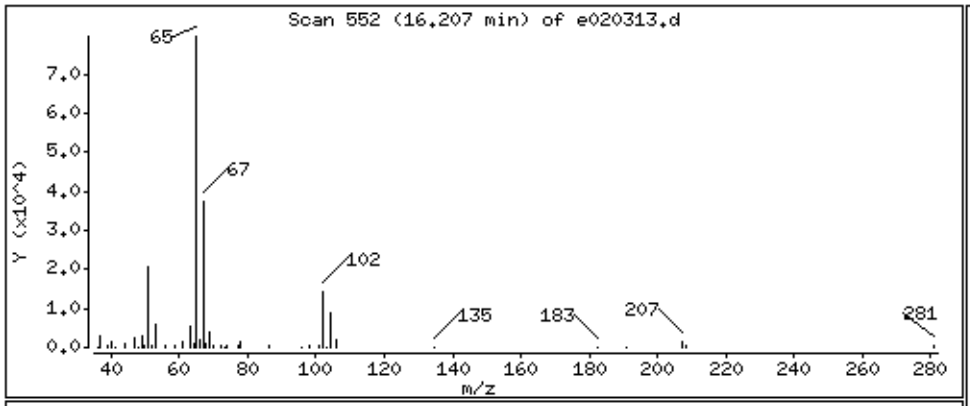
Operator: ef

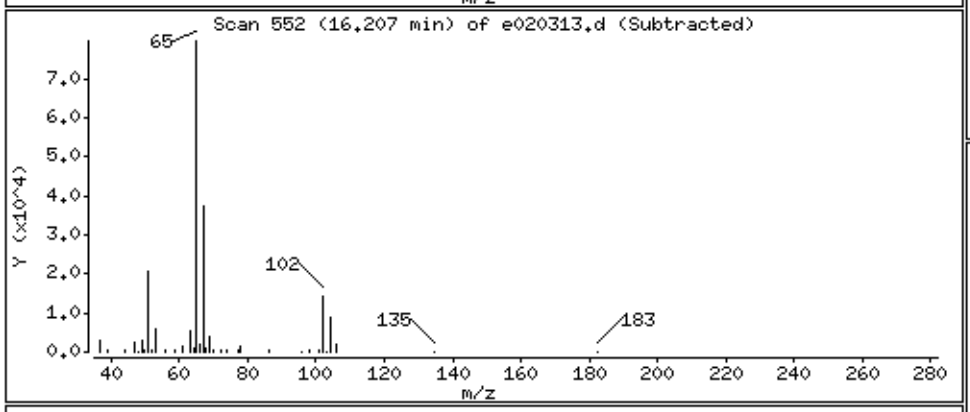
Column phase: RTX-624

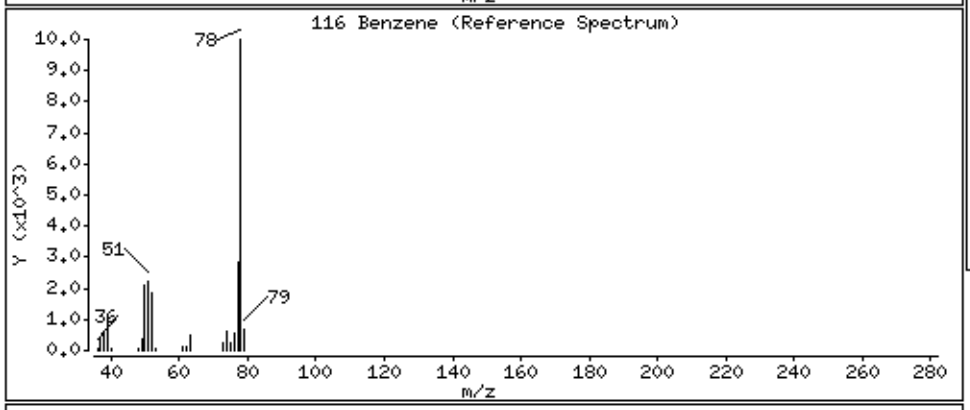
Column diameter: 0.32

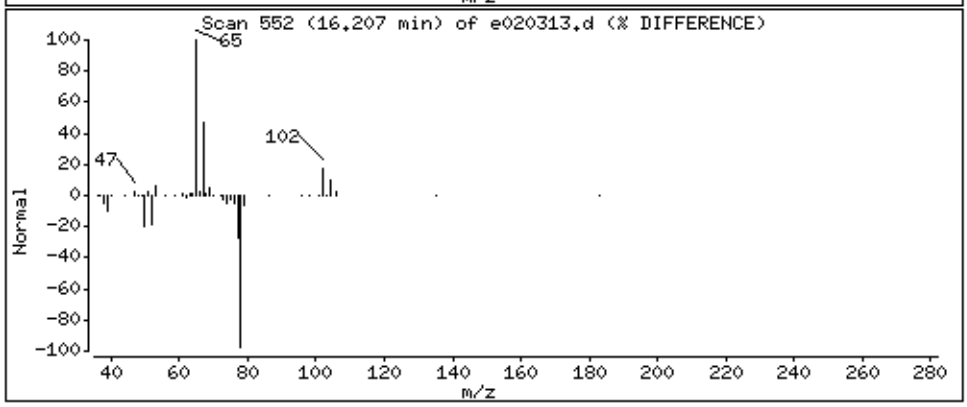
116 Benzene

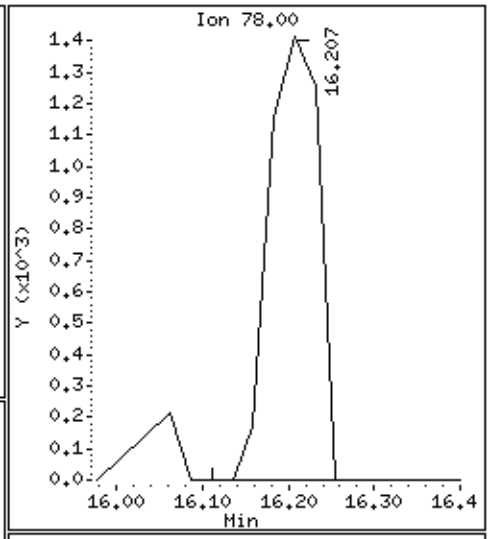
Concentration: 0.1319 PPBV

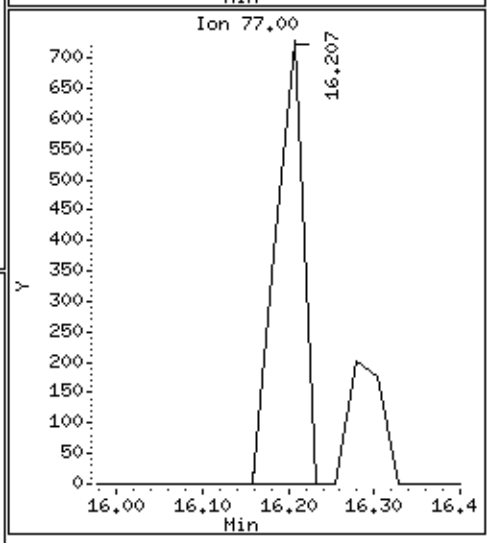












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

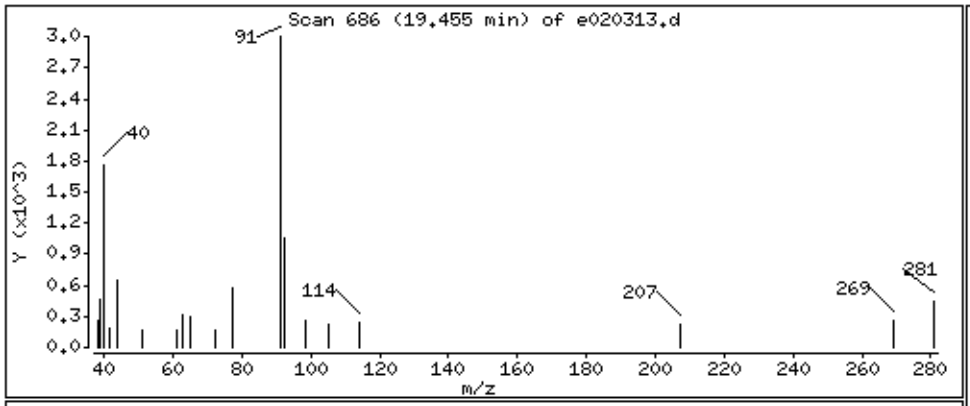
Operator: ef

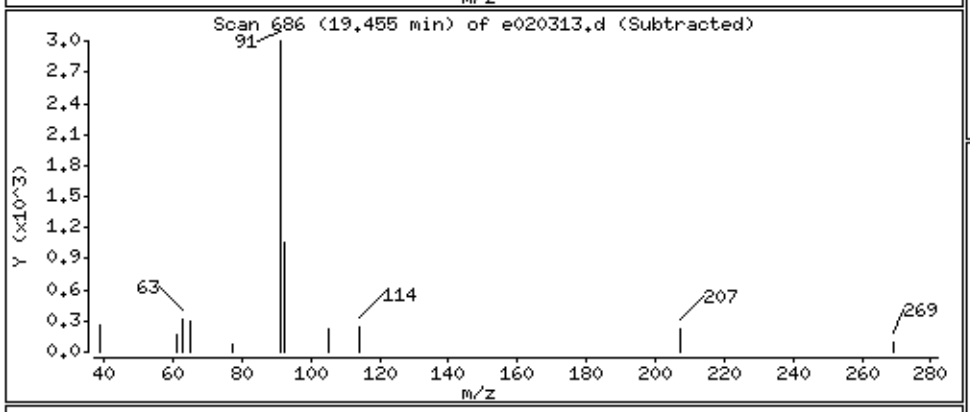
Column phase: RTX-624

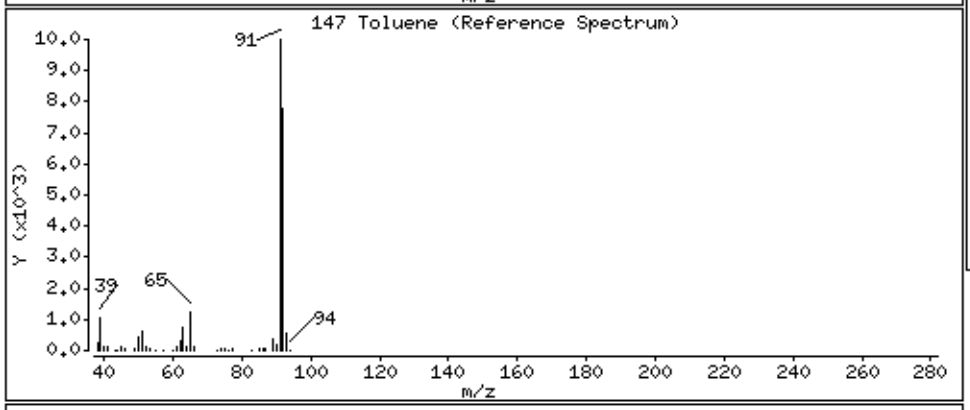
Column diameter: 0.32

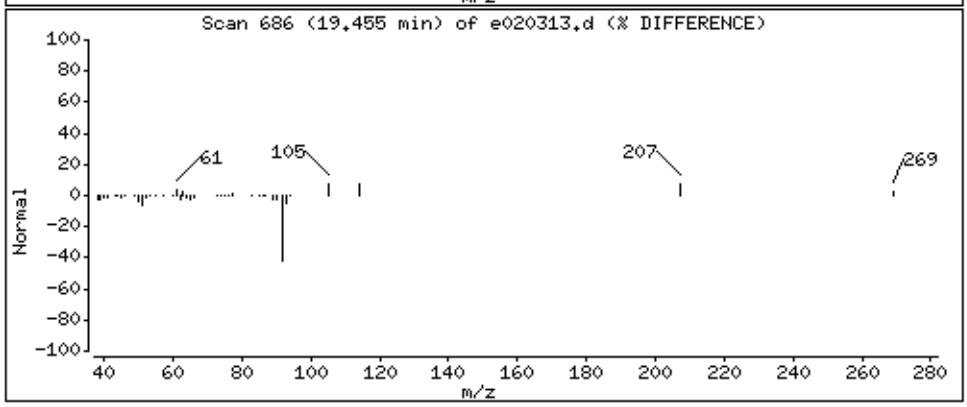
147 Toluene

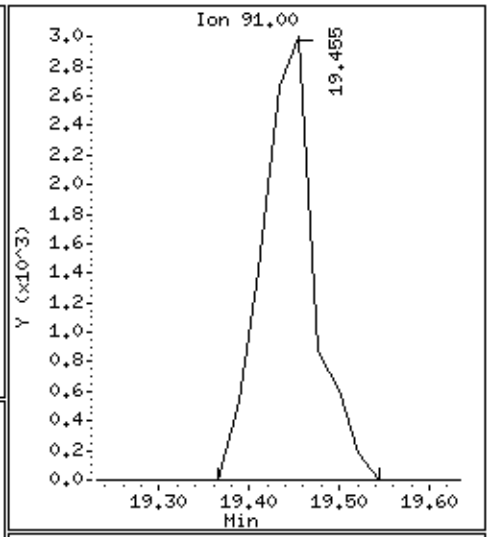
Concentration: 0.2358 PPBV

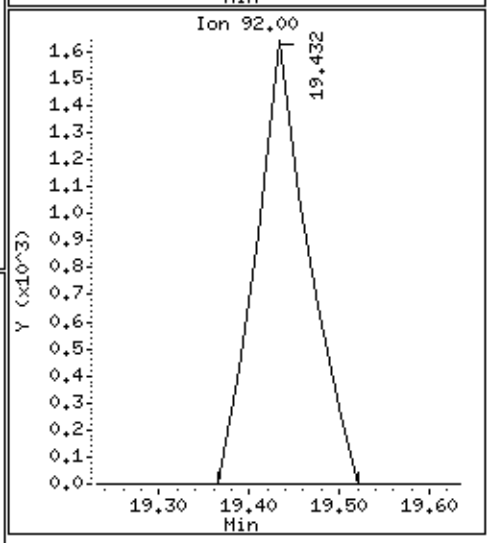












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

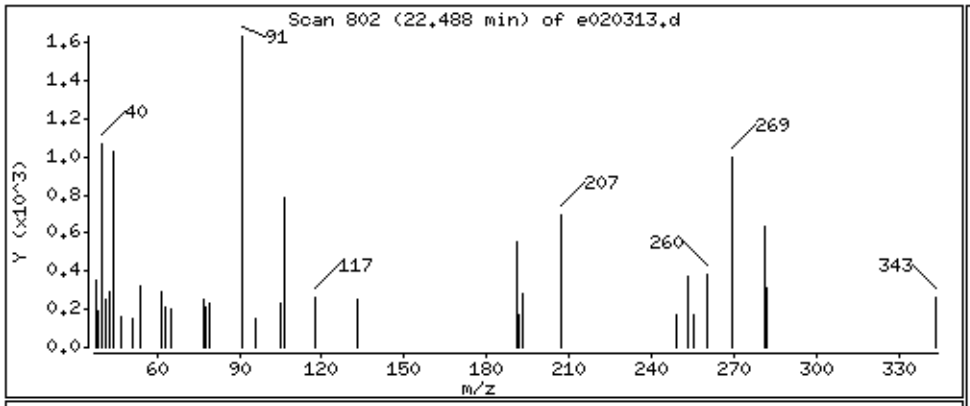
Operator: ef

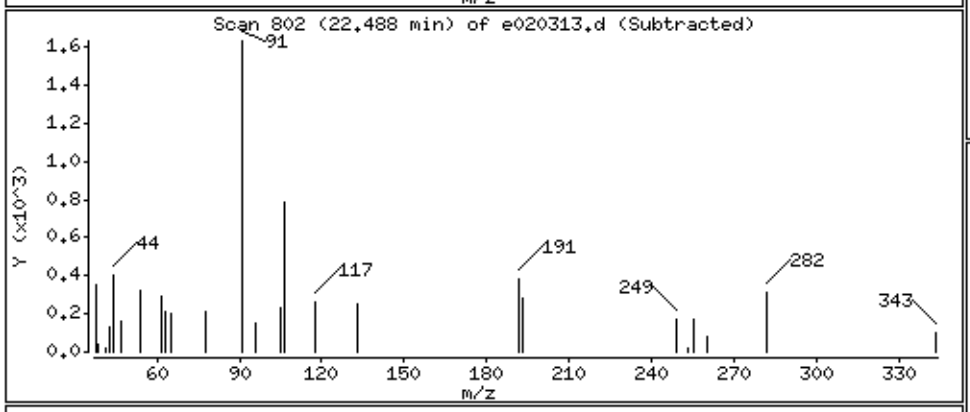
Column phase: RTX-624

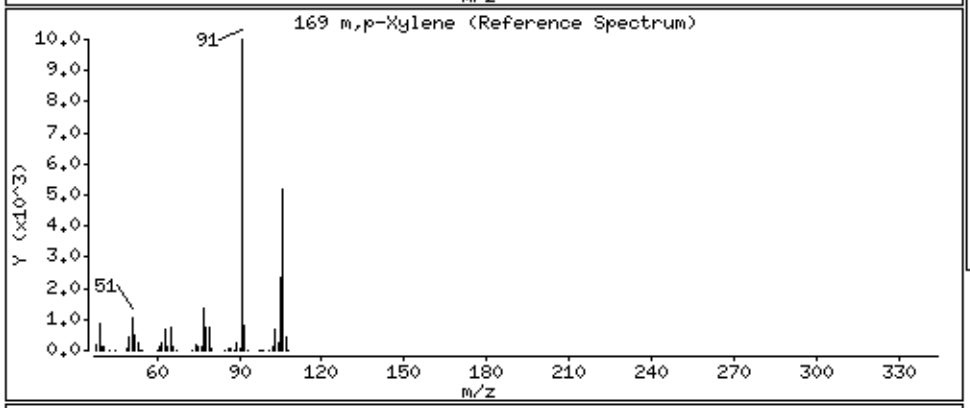
Column diameter: 0.32

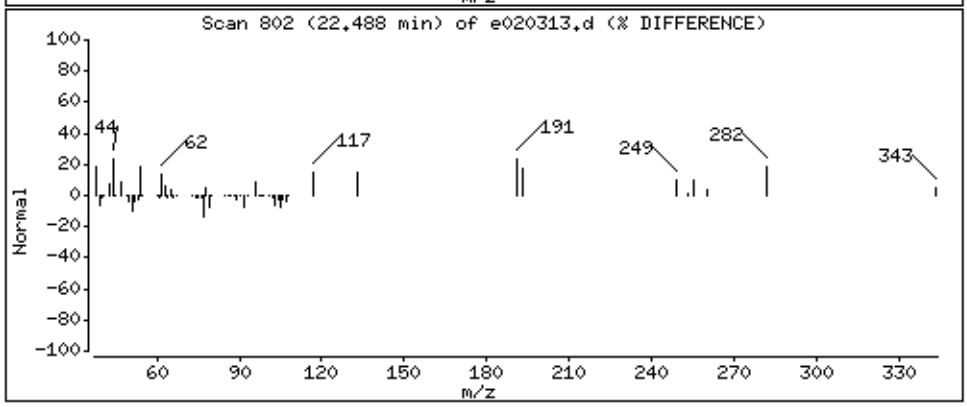
169 m,p-Xylene

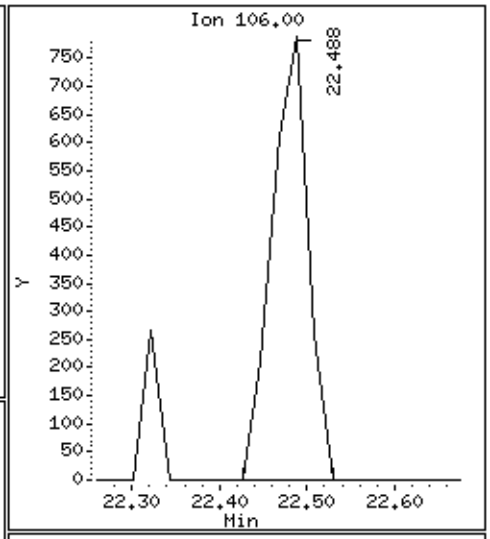
Concentration: 0.08546 PPBV

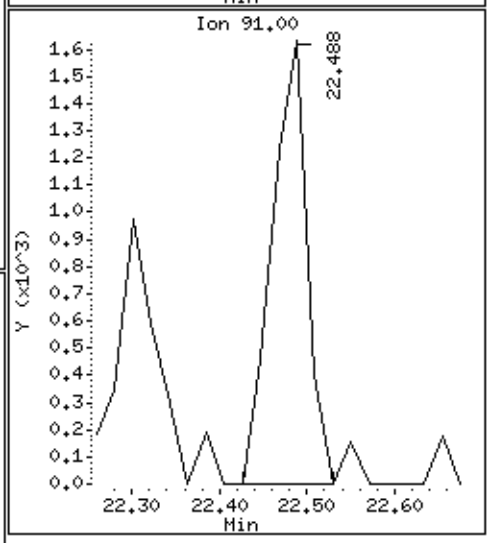












Data File: /chem/msde.i/03Feb2017.b/e020313.d

Date : 03-FEB-2017 16:20

Client ID:

Instrument: msde.i

Sample Info: 150mL# N0597

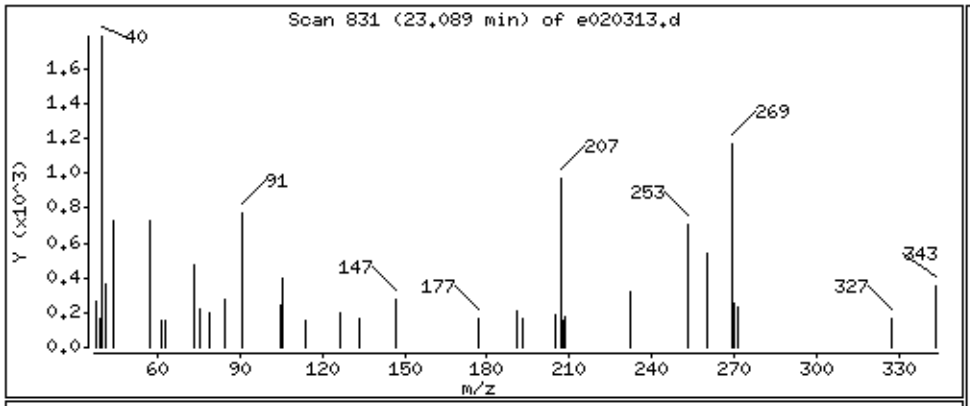
Operator: ef

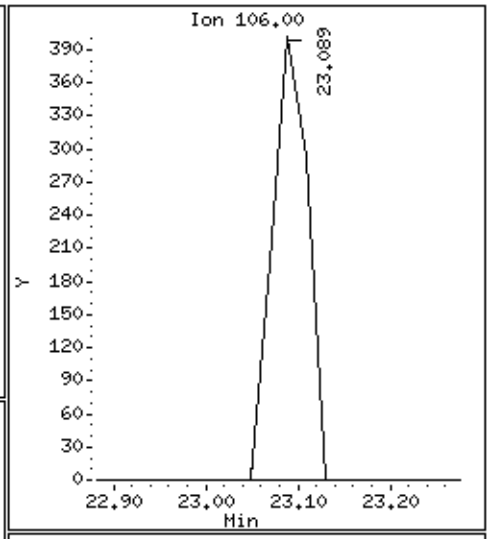
Column phase: RTX-624

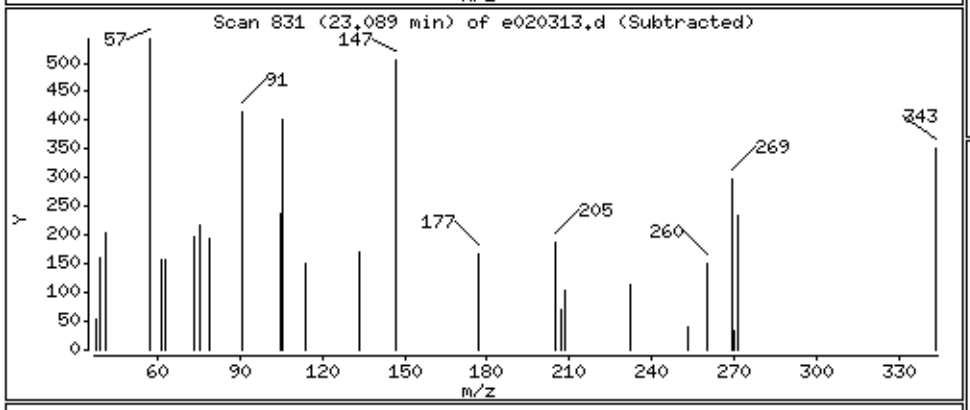
Column diameter: 0.32

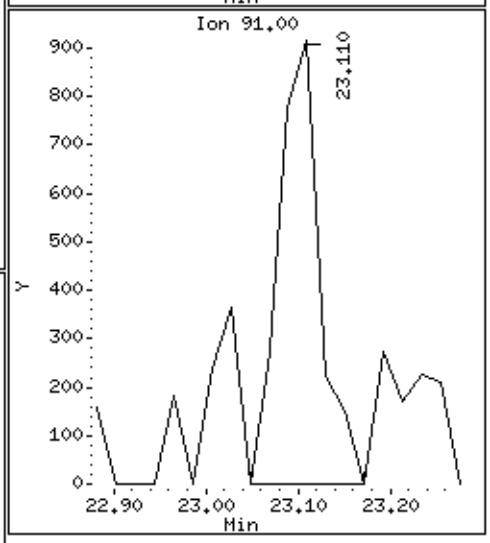
171 o-Xylene

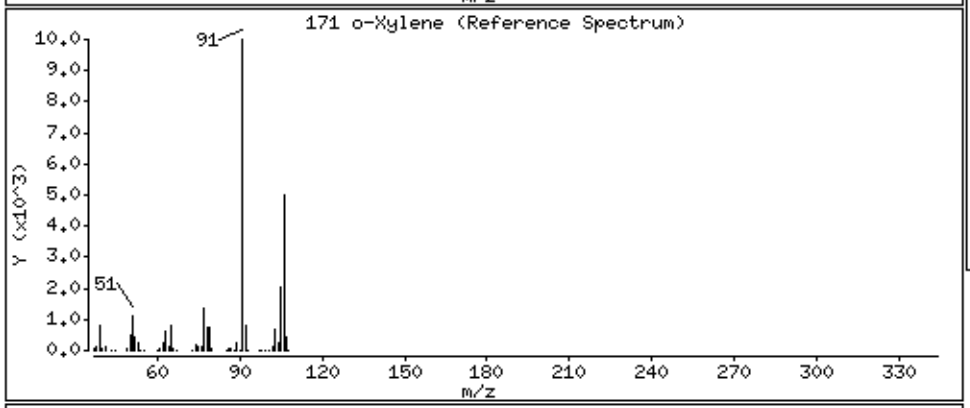
Concentration: 0.04378 PPBV

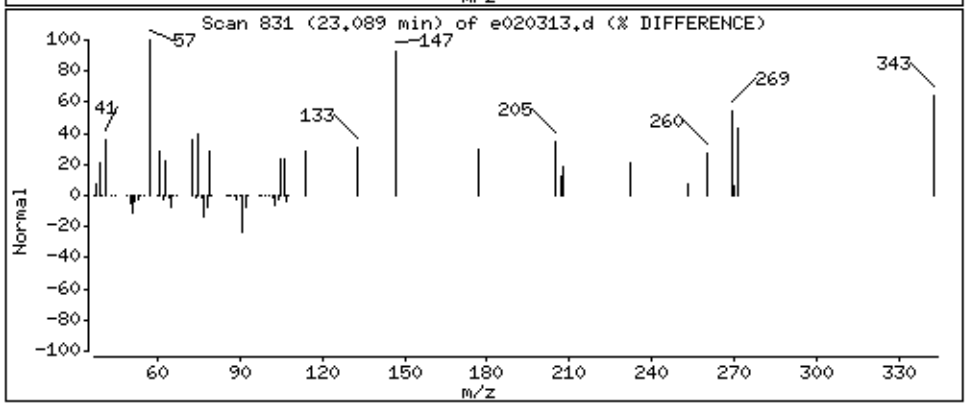












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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B15IA-1DUP-012817

Lab ID#: 1701477B-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.77	2.1
Chloromethane	0.78	0.58 J	1.6	1.2 J
Bromomethane	0.78	0.12 J	3.0	0.48 J
Freon 11	0.16	0.17	0.87	0.94
Ethanol	0.78	250 E	1.5	470 E
Freon 113	0.16	0.057 J	1.2	0.43 J
Acetone	0.78	9.4	1.8	22
2-Propanol	0.78	14	1.9	34
Carbon Disulfide	0.78	0.14 J	2.4	0.44 J
Methylene Chloride	0.31	0.091 J	1.1	0.32 J
2-Butanone (Methyl Ethyl Ketone)	0.78	1.4	2.3	4.2
Chloroform	0.16	0.039 J	0.76	0.19 J
Carbon Tetrachloride	0.16	0.065 J	0.98	0.41 J
Benzene	0.16	0.093 J	0.50	0.30 J
Toluene	0.16	0.24	0.58	0.89
m,p-Xylene	0.16	0.094 J	0.67	0.41 J
o-Xylene	0.16	0.046 J	0.67	0.20 J
Styrene	0.16	0.045 J	0.66	0.19 J
4-Ethyltoluene	0.16	0.032 J	0.76	0.16 J
1,2,4-Trimethylbenzene	0.16	0.043 J	0.76	0.21 J
1,4-Dichlorobenzene	0.16	0.050 J	0.93	0.30 J

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Client Sample ID: B15IA-1DUP-012817

Lab ID#: 1701477B-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020314**	**Date of Collection:**	**1/29/17 3:44:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**2/3/17 05:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.16	0.42	0.77	2.1
Freon 114	0.16	Not Detected	1.1	Not Detected
Chloromethane	0.78	0.58 J	1.6	1.2 J
Vinyl Chloride	0.16	Not Detected	0.40	Not Detected
1,3-Butadiene	0.16	Not Detected	0.34	Not Detected
Bromomethane	0.78	0.12 J	3.0	0.48 J
Chloroethane	0.78	Not Detected	2.0	Not Detected
Freon 11	0.16	0.17	0.87	0.94
Ethanol	0.78	250 E	1.5	470 E
Freon 113	0.16	0.057 J	1.2	0.43 J
1,1-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Acetone	0.78	9.4	1.8	22
2-Propanol	0.78	14	1.9	34
Carbon Disulfide	0.78	0.14 J	2.4	0.44 J
3-Chloropropene	0.78	Not Detected	2.4	Not Detected
Methylene Chloride	0.31	0.091 J	1.1	0.32 J
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Hexane	0.16	Not Detected	0.55	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.63	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	1.4	2.3	4.2
cis-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Tetrahydrofuran	0.78	Not Detected	2.3	Not Detected
Chloroform	0.16	0.039 J	0.76	0.19 J
1,1,1-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Cyclohexane	0.16	Not Detected	0.53	Not Detected
Carbon Tetrachloride	0.16	0.065 J	0.98	0.41 J
2,2,4-Trimethylpentane	0.78	Not Detected	3.6	Not Detected
Benzene	0.16	0.093 J	0.50	0.30 J
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Heptane	0.16	Not Detected	0.64	Not Detected
Trichloroethene	0.16	Not Detected	0.83	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.72	Not Detected
1,4-Dioxane	0.16	Not Detected	0.56	Not Detected
Bromodichloromethane	0.16	Not Detected	1.0	Not Detected
cis-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.63	Not Detected
Toluene	0.16	0.24	0.58	0.89
trans-1,3-Dichloropropene	0.16	Not Detected	0.70	Not Detected
1,1,2-Trichloroethane	0.16	Not Detected	0.84	Not Detected
Tetrachloroethene	0.16	Not Detected	1.0	Not Detected
2-Hexanone	0.78	Not Detected	3.2	Not Detected

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Client Sample ID: B15IA-1DUP-012817

Lab ID#: 1701477B-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020314**	**Date of Collection:**	**1/29/17 3:44:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**2/3/17 05:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.16	Not Detected	1.3	Not Detected
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Chlorobenzene	0.16	Not Detected	0.71	Not Detected
Ethyl Benzene	0.16	Not Detected	0.67	Not Detected
m,p-Xylene	0.16	0.094 J	0.67	0.41 J
o-Xylene	0.16	0.046 J	0.67	0.20 J
Styrene	0.16	0.045 J	0.66	0.19 J
Bromoform	0.16	Not Detected	1.6	Not Detected
Cumene	0.16	Not Detected	0.76	Not Detected
1,1,2,2-Tetrachloroethane	0.16	Not Detected	1.1	Not Detected
Propylbenzene	0.16	Not Detected	0.76	Not Detected
4-Ethyltoluene	0.16	0.032 J	0.76	0.16 J
1,3,5-Trimethylbenzene	0.16	Not Detected	0.76	Not Detected
1,2,4-Trimethylbenzene	0.16	0.043 J	0.76	0.21 J
1,3-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,4-Dichlorobenzene	0.16	0.050 J	0.93	0.30 J
alpha-Chlorotoluene	0.16	Not Detected	0.80	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.93	Not Detected
1,2,4-Trichlorobenzene	0.78	Not Detected	5.8	Not Detected
Hexachlorobutadiene	0.78	Not Detected	8.3	Not Detected
Naphthalene	0.78	Not Detected	4.1	Not Detected

J = Estimated value.
E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020314.d
Lab Smp Id: 1701477B-17A
Inj Date : 03-FEB-2017 17:02
Operator : ef Inst ID: msde.i
Smp Info : 250mL# O0937
Misc Info : 4.0"Hg -> 5.0psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.55000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.269	5.220 (0.342)	85	36164	0.27360	0.4241	80.00- 120.00	100.00
5.196	5.220 (0.338)	87	9967			1.91- 61.91	27.56
17 Chloromethane					CAS #: 74-87-3		
6.980	6.932 (0.454)	50	9271	0.37608	0.5829	80.00- 120.00	100.00(a)
6.956	6.932 (0.452)	52	3668			3.31- 63.31	39.57
29 Bromomethane					CAS #: 74-83-9		
9.567	9.510 (0.622)	94	2901	0.08006	0.1241	80.00- 120.00	100.00(a)
9.548	9.510 (0.620)	96	1463			64.26- 124.26	50.44
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	16672	0.10812	0.1676	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	13587			33.74- 93.74	81.50
42 Ethanol					CAS #: 64-17-5		
11.681	11.661 (0.759)	45	2185762	162.628	252.07	80.00- 120.00	100.00(A)
11.681	11.661 (0.759)	46	827663			9.60- 69.60	37.87
11.681	11.661 (0.759)	43	575089			0.00- 59.21	26.31

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113                                     CAS #: 76-13-1
 12.100  12.080 (0.786)   151      3763 0.03655  0.05665  80.00- 120.00   100.00(a)
 12.100  12.080 (0.786)   153      2345                   34.83-  94.83    62.31
 12.100  12.080 (0.786)   101      3671                   77.16- 137.16    97.57
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 12.366  12.366 (0.803)    58    102055 6.03928    9.361  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43    360183                  344.13- 404.13   352.93
-------------------------------------------------------------------------------
   56 Carbon Disulfide                              CAS #: 75-15-0
 12.462  12.461 (0.810)    76     10760 0.09205   0.1427  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                    CAS #: 67-63-0
 12.728  12.728 (0.827)    45    492165 9.04663   14.022  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43    136930                    0.00-  55.65    27.82
 12.728  12.728 (0.827)    59     19954                    0.00-  34.42     4.05
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 13.176  13.176 (0.856)    84      2426 0.05866  0.09093  80.00- 120.00   100.00(a)
 13.176  13.176 (0.856)    49      2141                   83.76- 143.76    88.26
  0.000  13.176 (0.000)    51         0                    2.61-  62.61     0.00
-------------------------------------------------------------------------------
   92 2-Butanone                                    CAS #: 78-93-3
 15.047  15.047 (0.978)    72     16901 0.92232    1.430  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     60118                  325.72- 385.72   355.70
 15.066  15.047 (0.979)    57      5991                    1.13-  61.13    35.45
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    148876 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    115128                   46.73- 106.73    77.33
 15.391  15.391 (1.000)    49    129474                   55.35- 115.35    86.97
-------------------------------------------------------------------------------
  100 Chloroform                                    CAS #: 67-66-3
 15.453  15.453 (1.004)    83      2706 0.02508  0.03887  80.00- 120.00   100.00(a)
 15.484  15.453 (1.006)    85      1879                   36.62-  96.62    69.45
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.884  15.884 (1.032)   119      5178 0.04191  0.06496  80.00- 120.00   100.00(a)
 15.884  15.884 (1.032)   117      4631                   74.11- 134.11    89.43
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78      7097 0.06005  0.09307  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      2548                    0.00-  53.00    35.91
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    212098 4.96105    4.961  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 117 1,2-Dichloroethane-d4 (continued)
 16.207  16.207 (1.053)    67    101157                    22.67-  82.67    47.69
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    478731 5.00000            80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69832                     0.00-  45.16    14.59
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    458527 4.93770    4.938  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     60397                     0.00-  40.89    13.17
 19.298  19.298 (1.153)   100    308573                    40.09- 100.09    67.30
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91     21724 0.15193   0.2355  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92     13231                    27.79-  87.79    60.90
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    455985 5.00000            80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    229806                    17.27-  77.27    50.40
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.488  22.467 (1.014)   106      4278 0.06051  0.09380  80.00- 120.00   100.00(a)
 22.488  22.467 (1.014)    91      8811                   170.01- 230.01   205.96
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.069  23.089 (1.040)   106      1924 0.02937  0.04552  80.00- 120.00   100.00(a)
 23.089  23.089 (1.041)    91      4847                   175.84- 235.84   251.91
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.131  23.110 (1.043)   104      3166 0.02897  0.04490  80.00- 120.00   100.00(a)
 23.110  23.110 (1.042)    78      1767                    20.21-  80.21    55.81
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    327242 5.13769    5.138  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    304035                    66.74- 126.74    92.91
 23.856  23.856 (1.076)   176    310605                    67.47- 127.47    94.92
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.192  24.237 (1.091)   105      3457 0.02039  0.03160  80.00- 120.00   100.00(a)
 24.192  24.237 (1.091)   120      1103                     1.00-  61.00    31.92
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.753  24.775 (1.116)   105      2900 0.02749  0.04260  80.00- 120.00   100.00(a)
  0.000  24.775 (0.000)   120         0                    16.84-  76.84     0.00
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.269  25.268 (1.139)   146      3776 0.03239  0.05021  80.00- 120.00   100.00(a)
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
209 1,4-Dichlorobenzene (continued)								
25.269	25.268	(1.139)	148	2407			35.10- 95.10	63.75
25.269	25.268	(1.139)	111	1361			4.80- 64.80	36.04

QC Flag Legend

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

Report Date: 09-Feb-2017 10:51

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e020314.d
Lab Smp Id: 1701477B-17A
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 4.0"Hg -> 5.0psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	148876	5.19
123 1,4-Difluorobenze	499834	299900	699768	478731	-4.22
163 Chlorobenzene-d5	467575	280545	654605	455985	-2.48

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	22.18	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: 09-Feb-2017 10:51

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-17A
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 4.0"Hg -> 5.0psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.961	99.22	70-130
$ 146 Toluene-d8	5.000	4.938	98.75	70-130
$ 177 4-Bromofluorobenze	5.000	5.138	102.75	70-130

Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

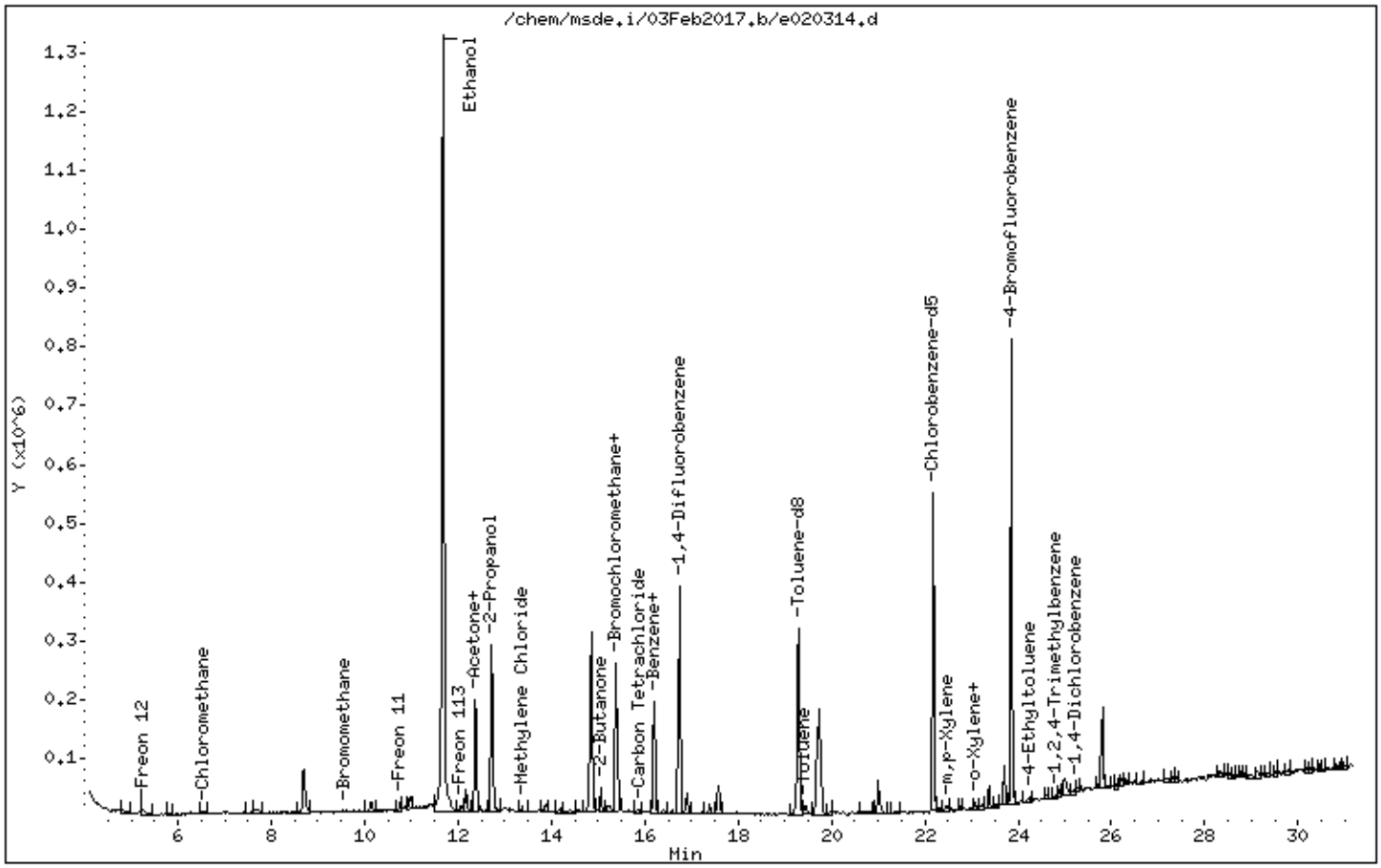
Instrument: msde.i

Sample Info: 250mL# 00937

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

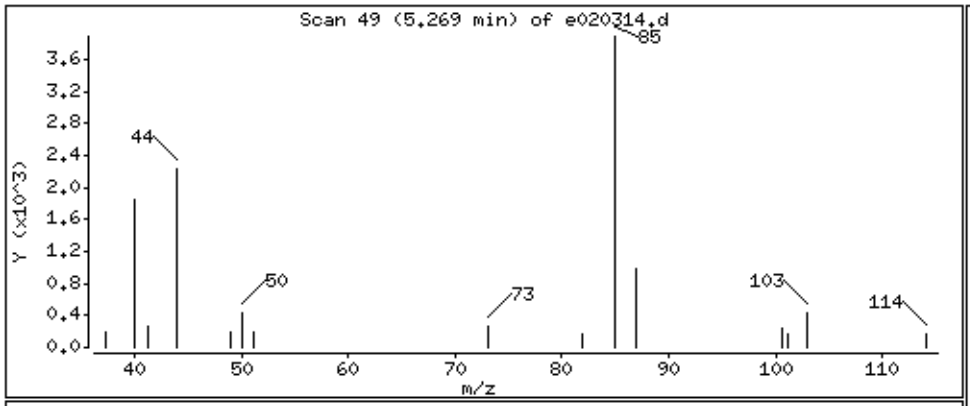
Operator: ef

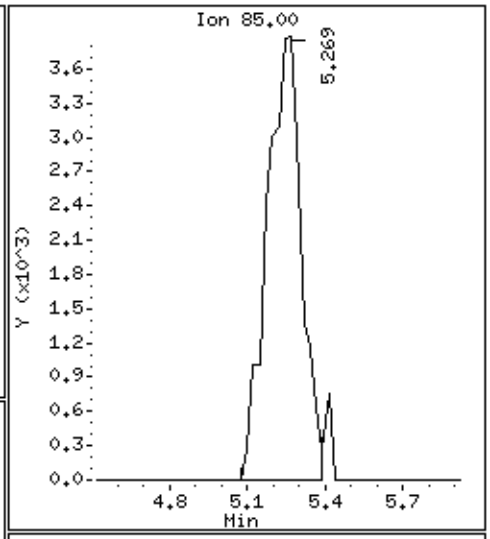
Column phase: RTX-624

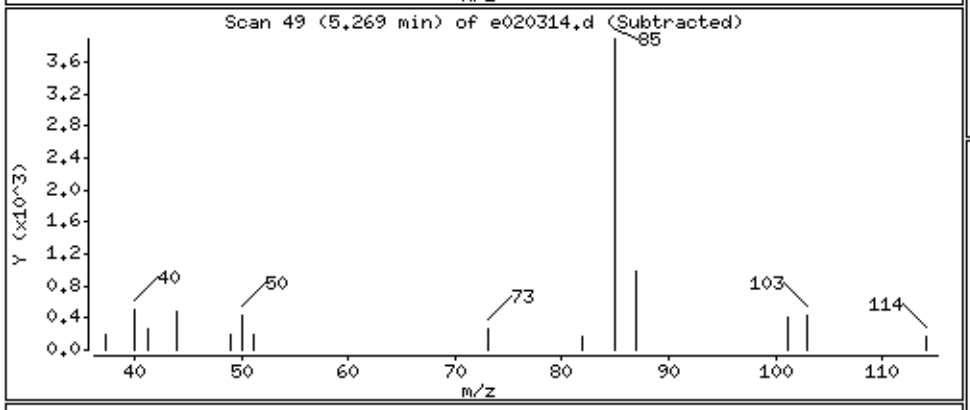
Column diameter: 0.32

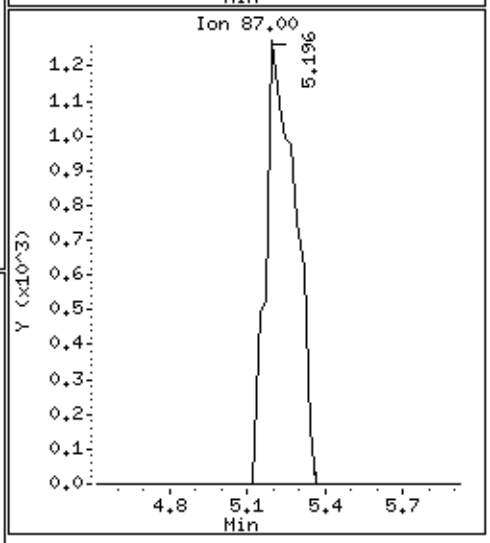
11 Freon 12

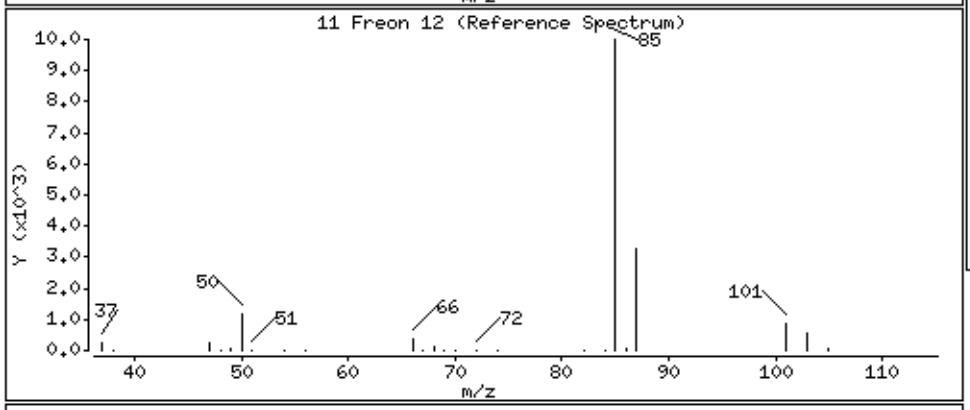
Concentration: 0.4241 PPBV

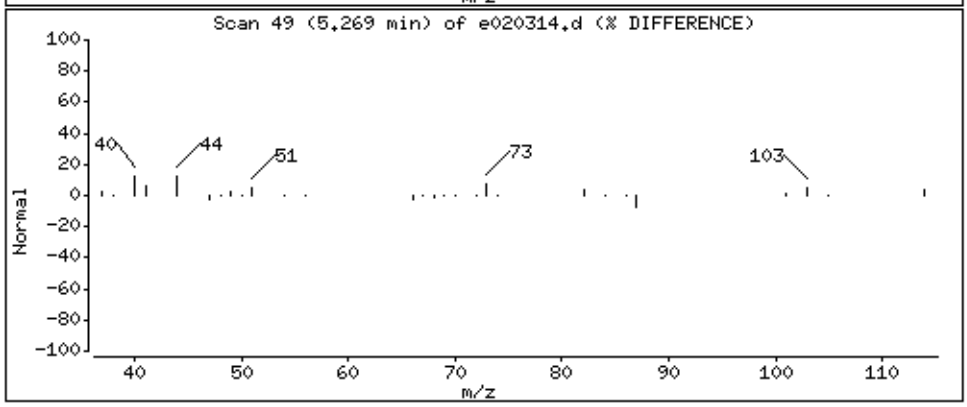












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

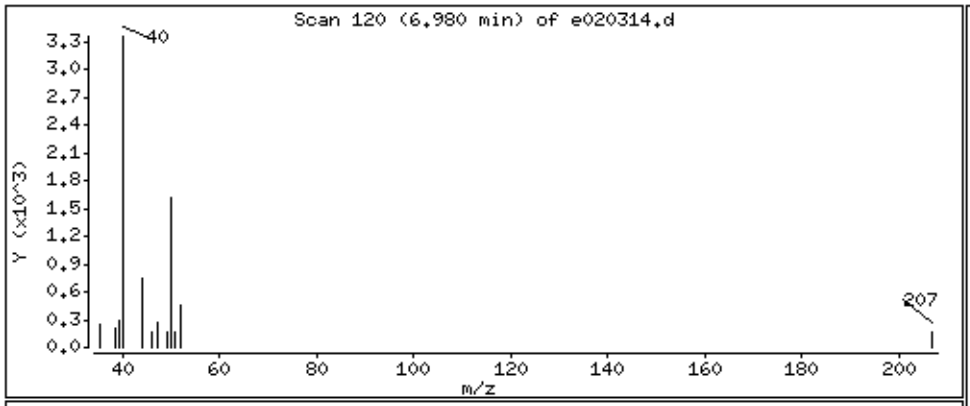
Operator: ef

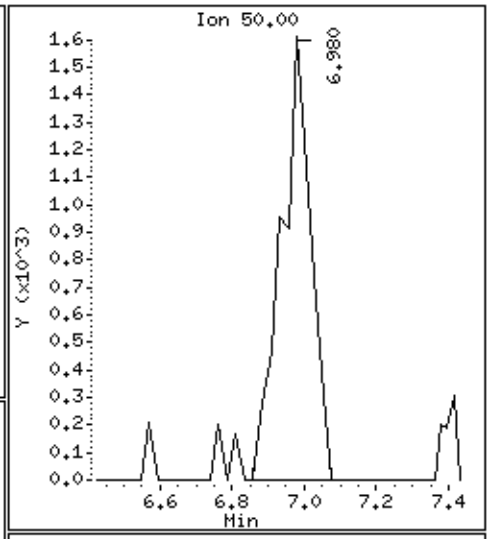
Column phase: RTX-624

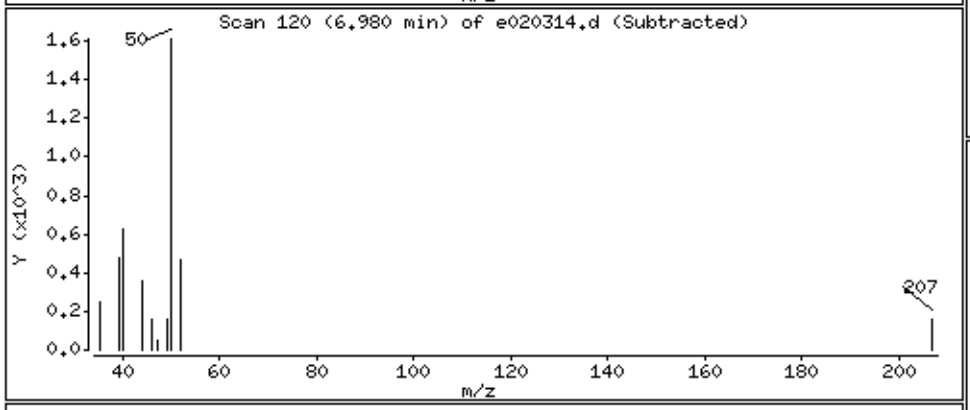
Column diameter: 0.32

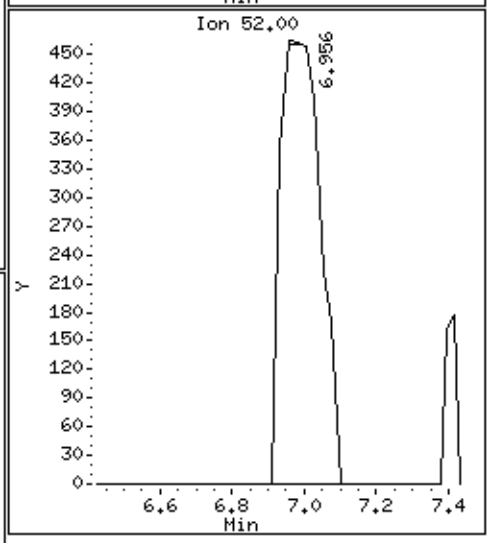
17 Chloromethane

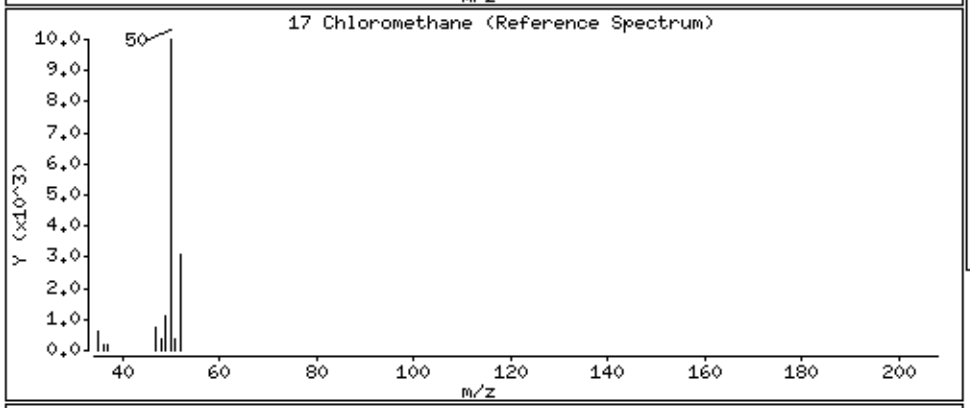
Concentration: 0.5829 PPBV

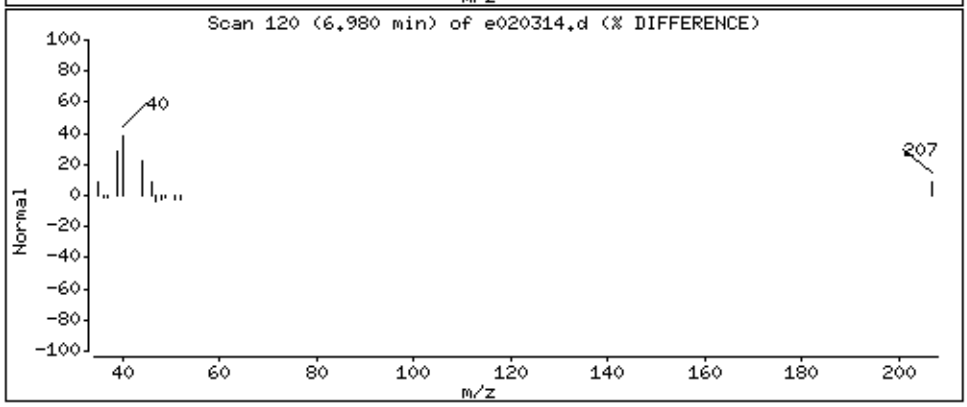












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

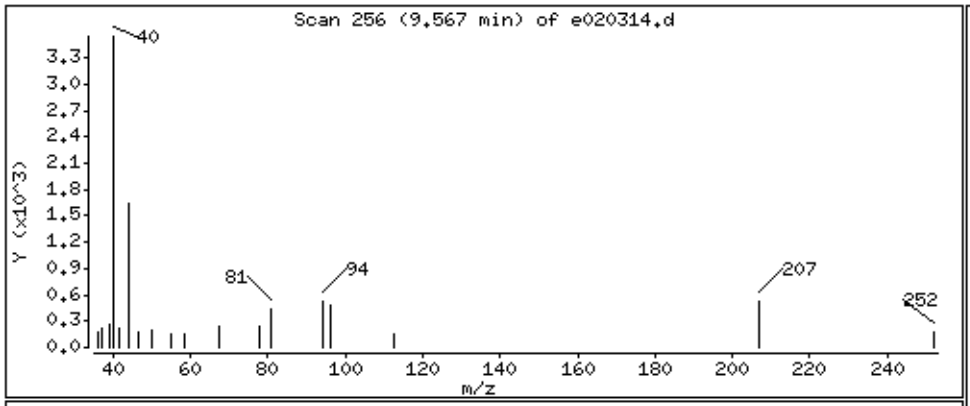
Operator: ef

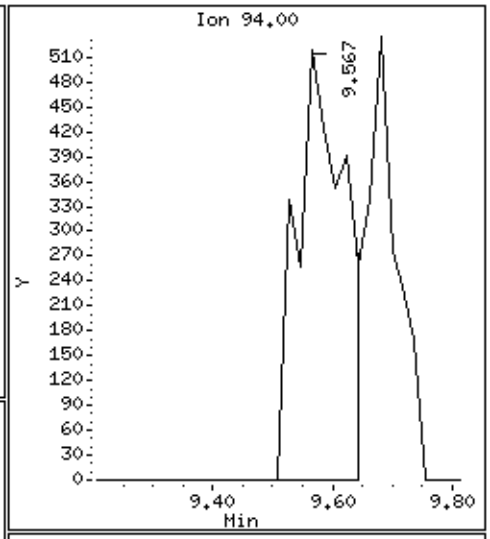
Column phase: RTX-624

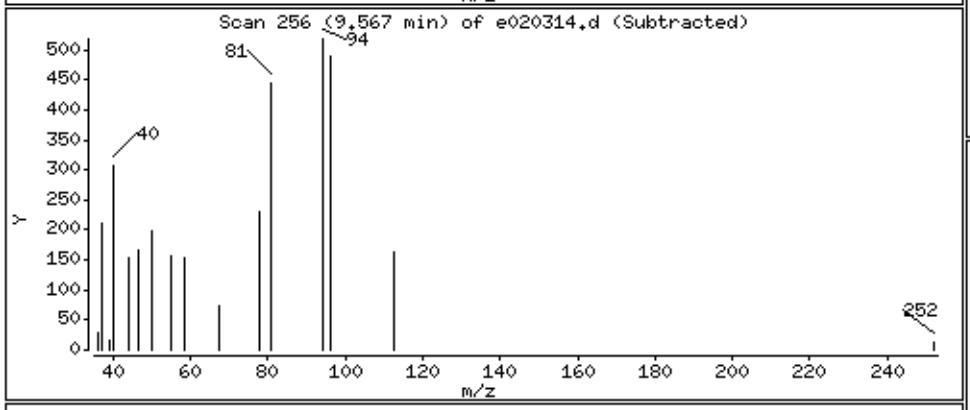
Column diameter: 0.32

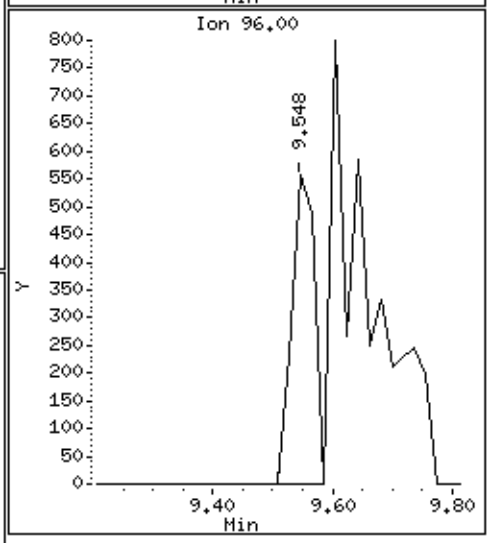
29 Bromomethane

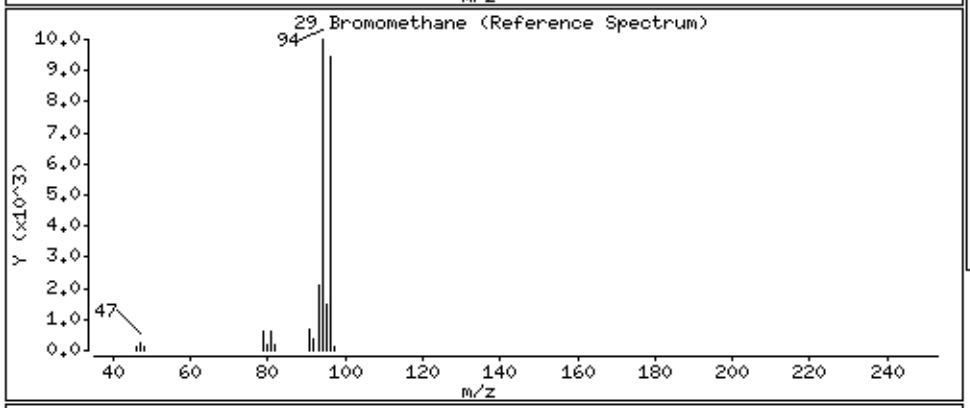
Concentration: 0.1241 PPBV

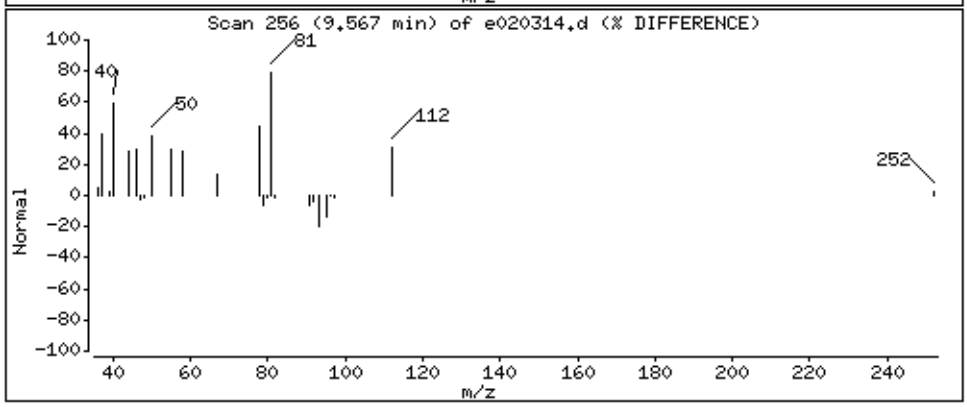












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

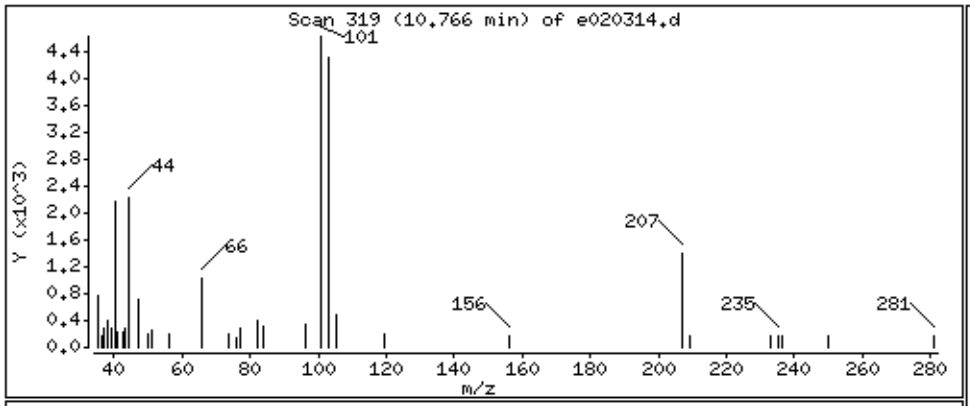
Operator: ef

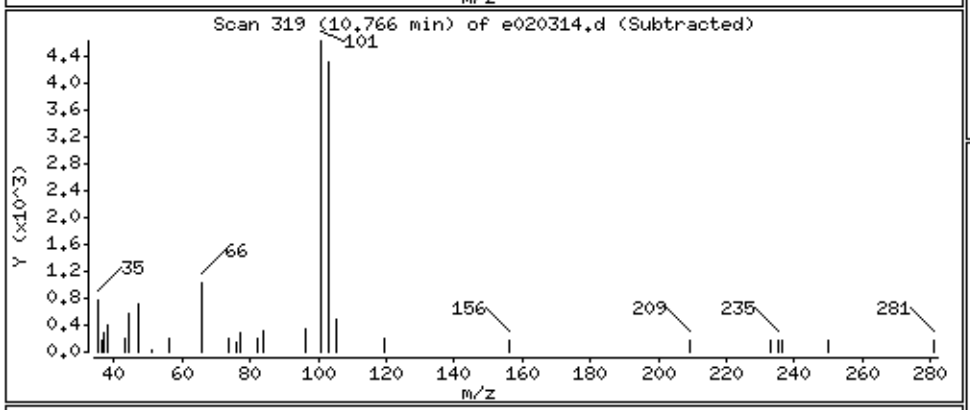
Column phase: RTX-624

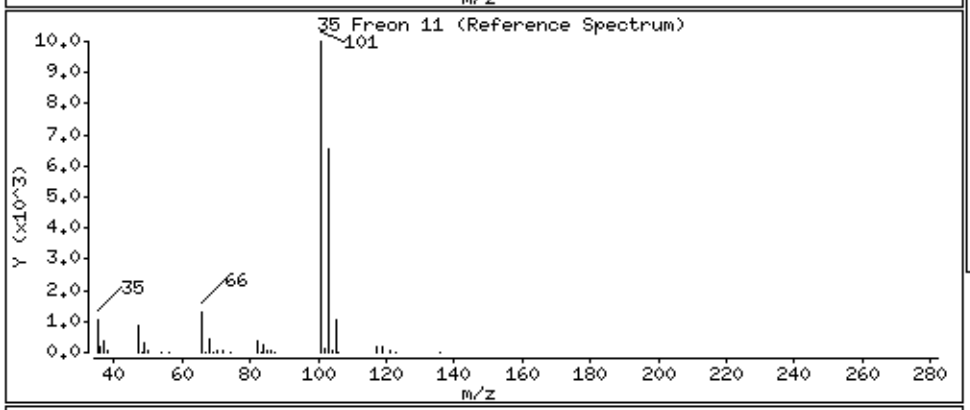
Column diameter: 0.32

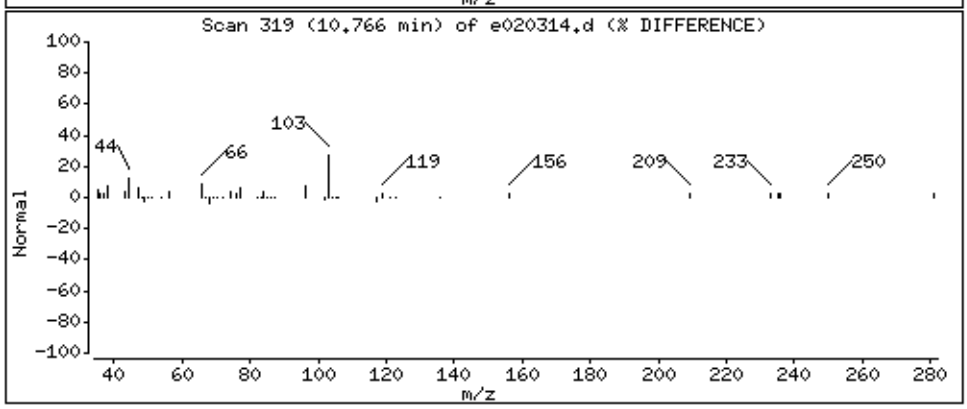
35 Freon 11

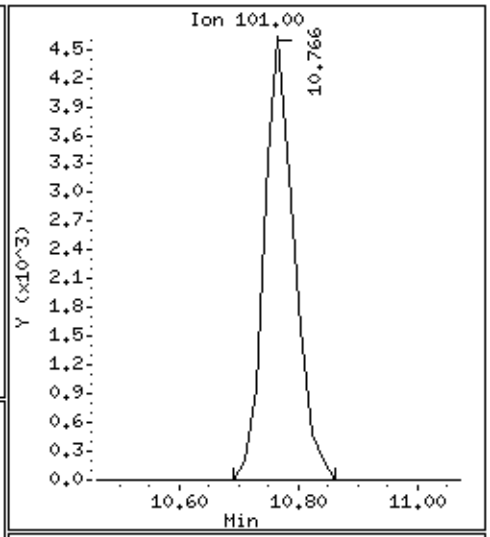
Concentration: 0.1676 PPBV

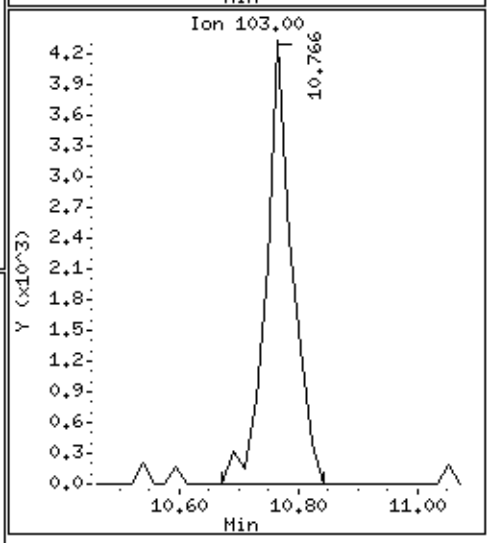












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

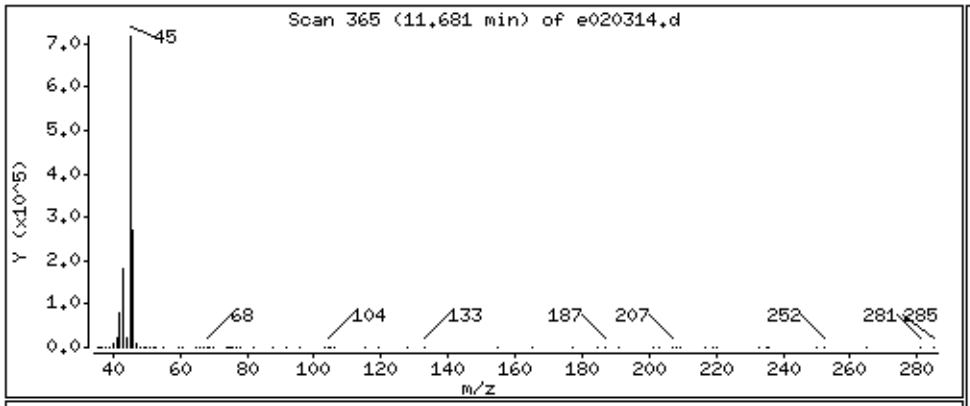
Operator: ef

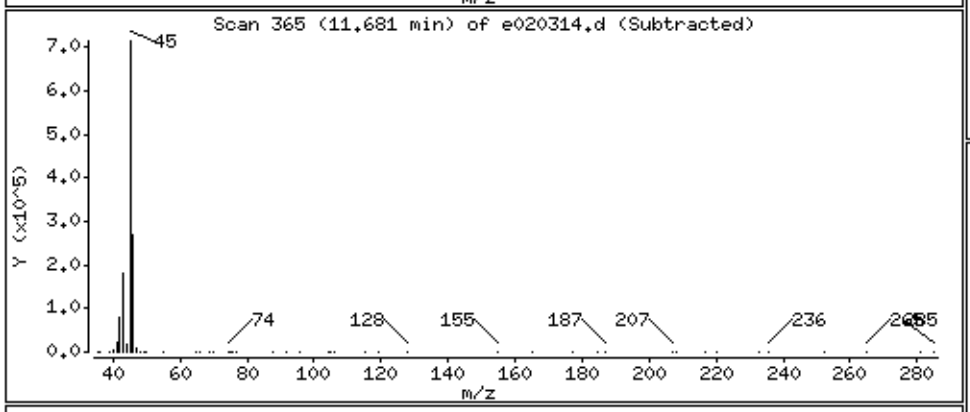
Column phase: RTX-624

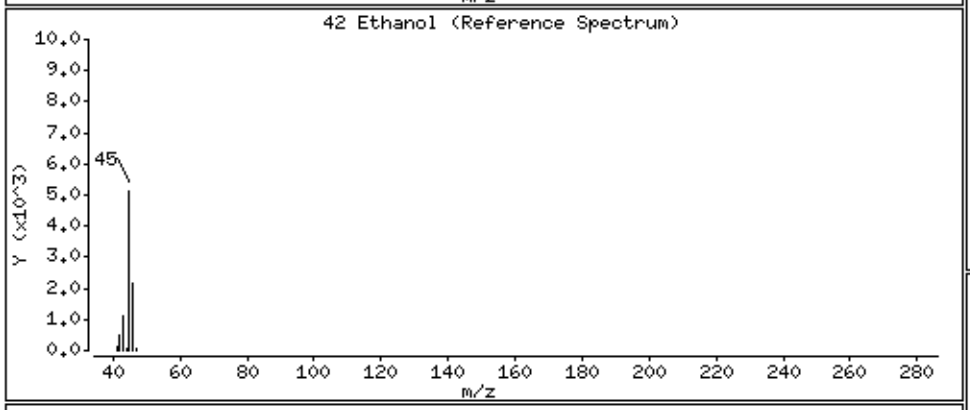
Column diameter: 0.32

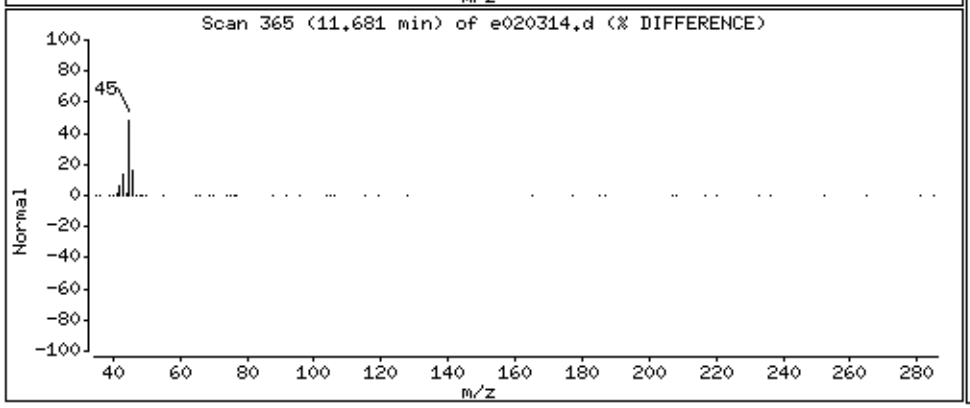
42 Ethanol

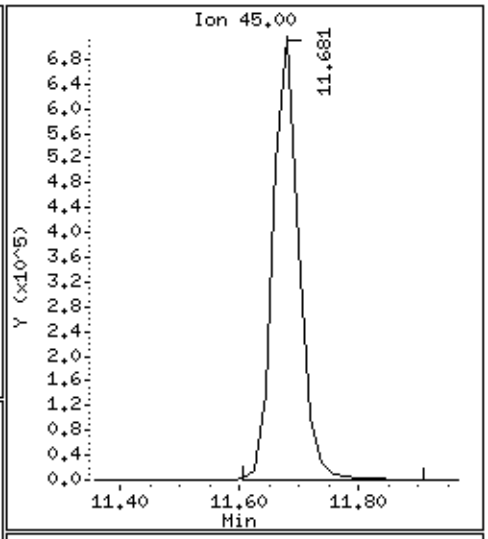
Concentration: 252.07 PPBV

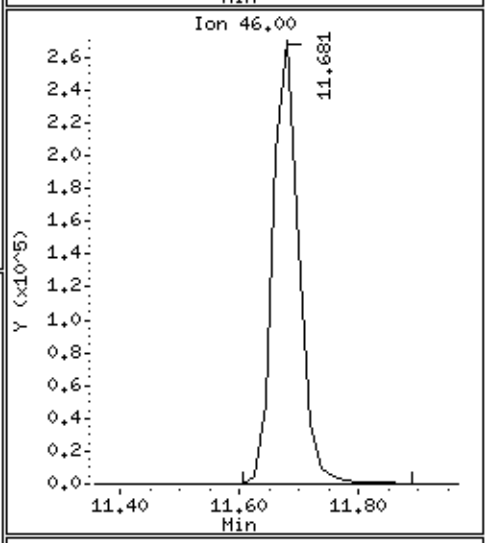


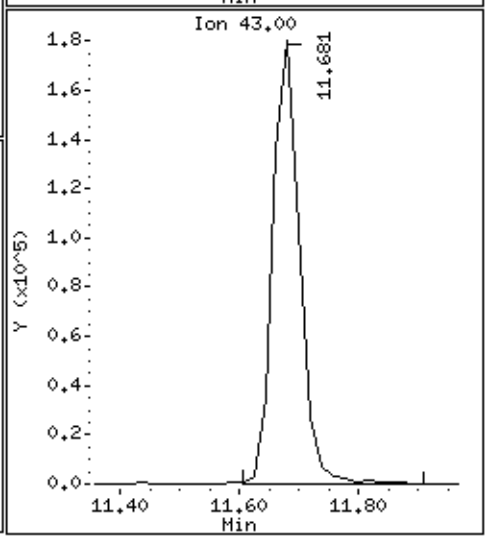












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

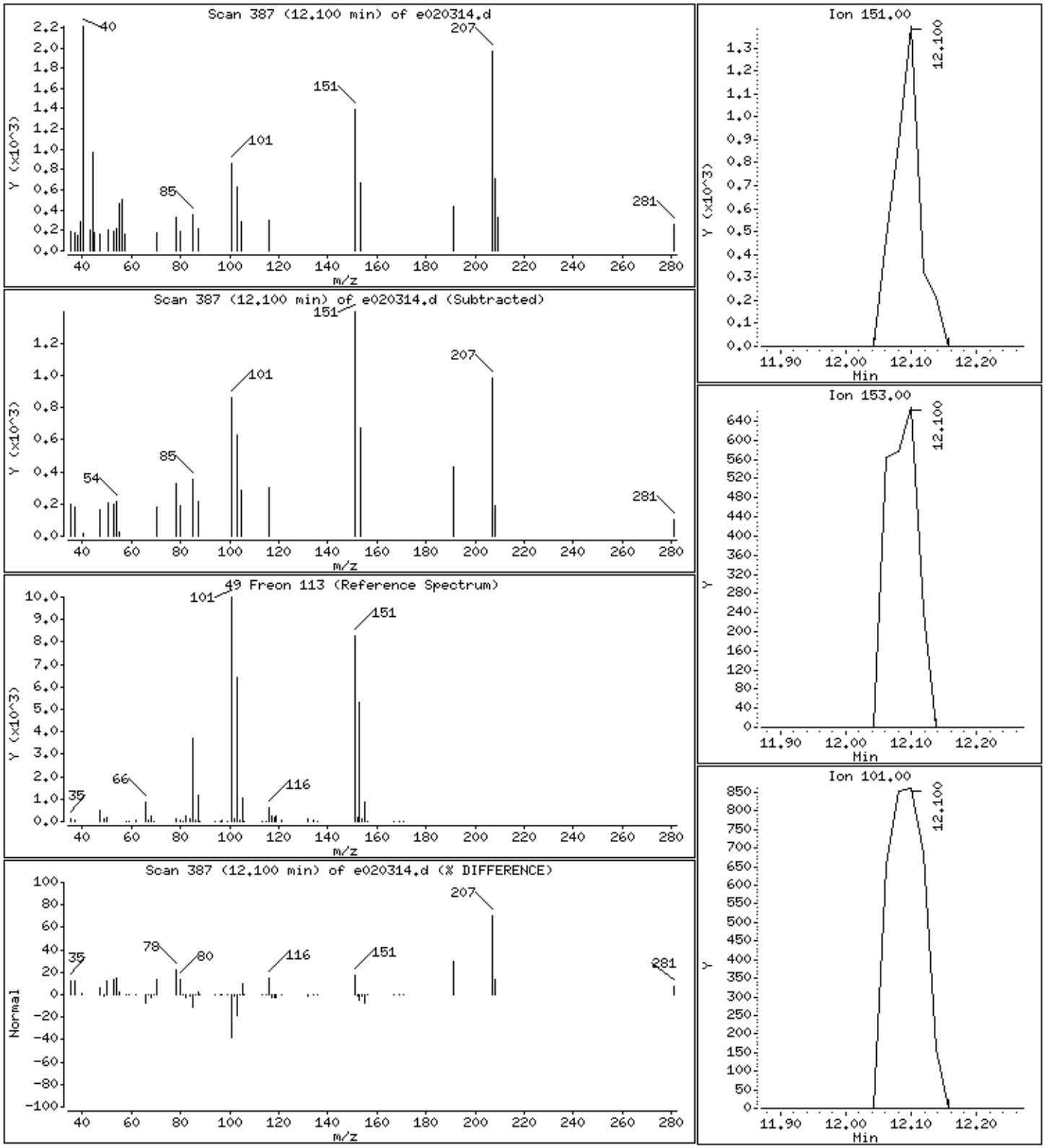
Operator: ef

Column phase: RTX-624

Column diameter: 0.32

49 Freon 113

Concentration: 0.05665 PPBV



Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

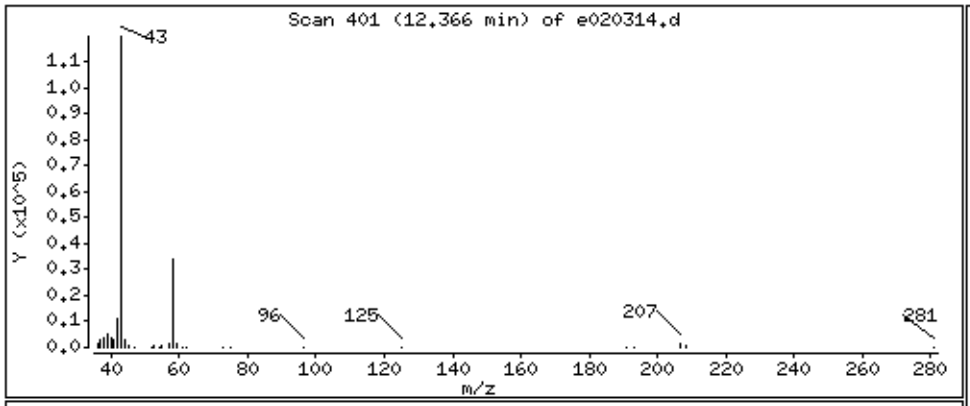
Operator: ef

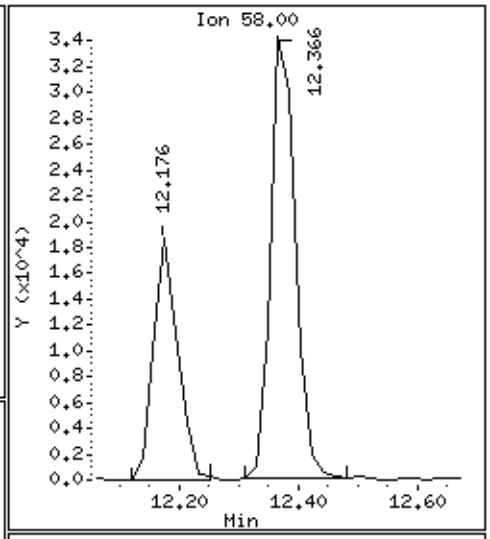
Column phase: RTX-624

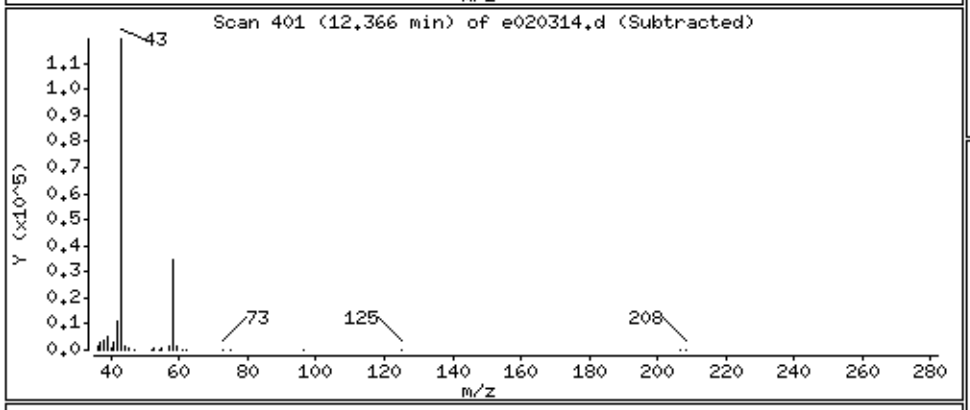
Column diameter: 0.32

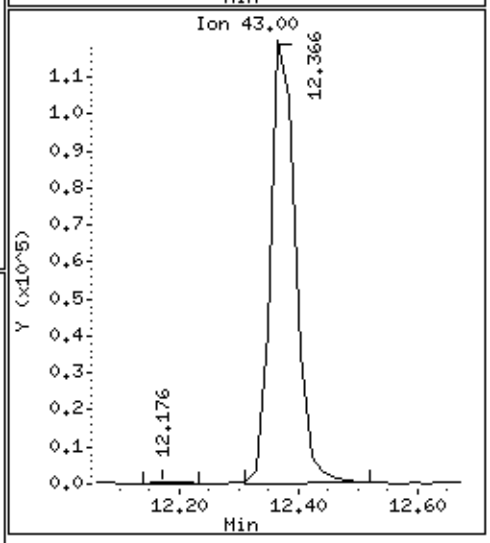
52 Acetone

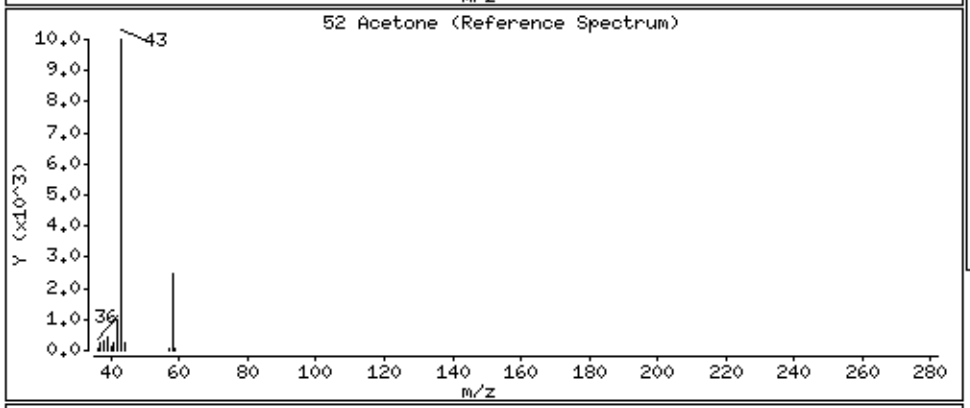
Concentration: 9.361 PPBV

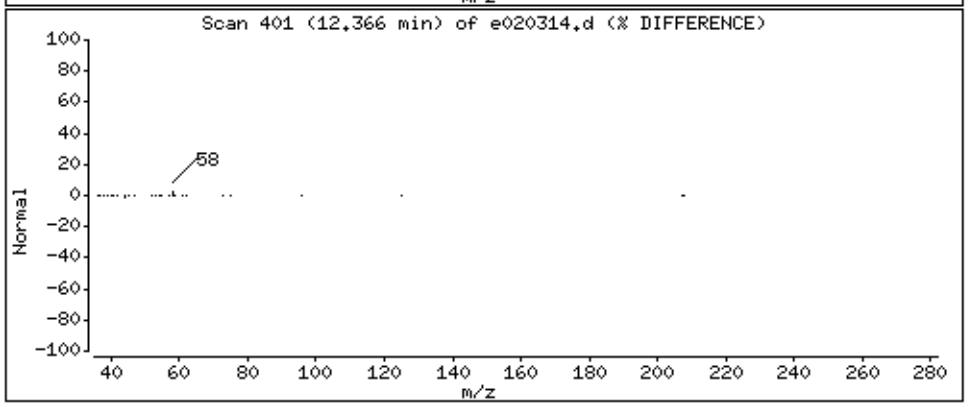












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

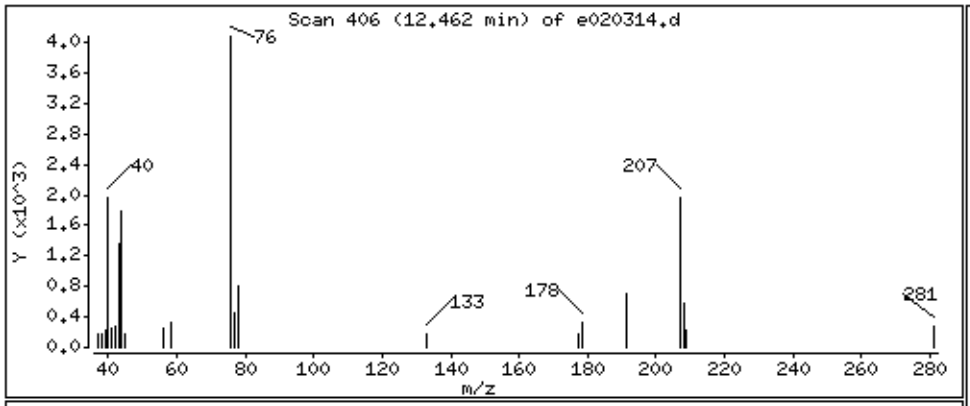
Operator: ef

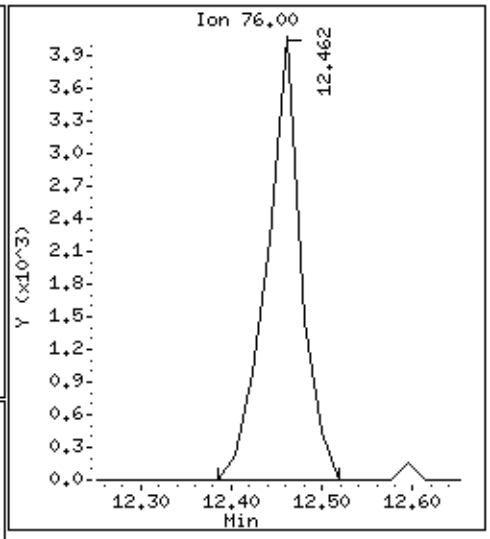
Column phase: RTX-624

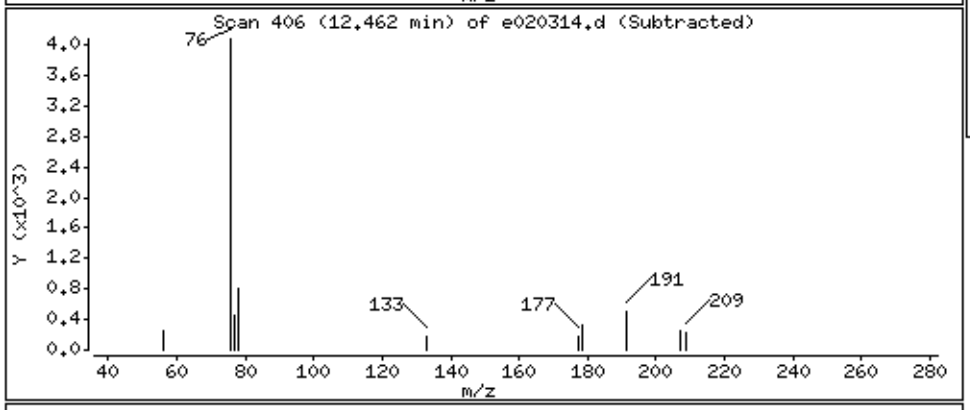
Column diameter: 0.32

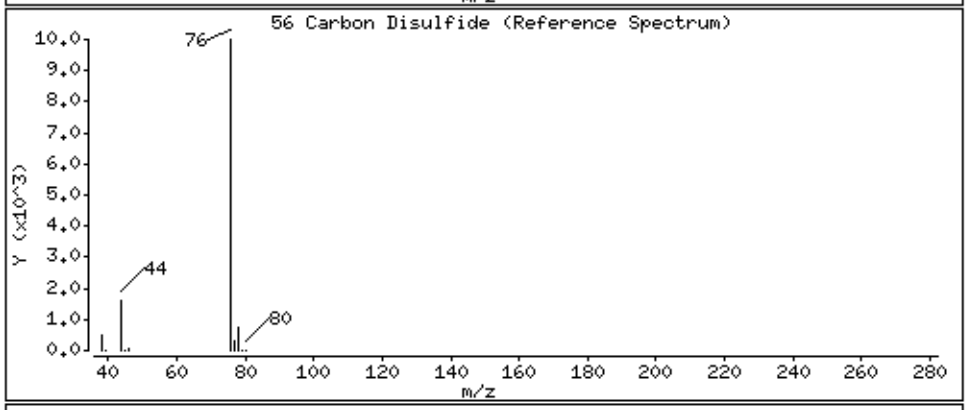
56 Carbon Disulfide

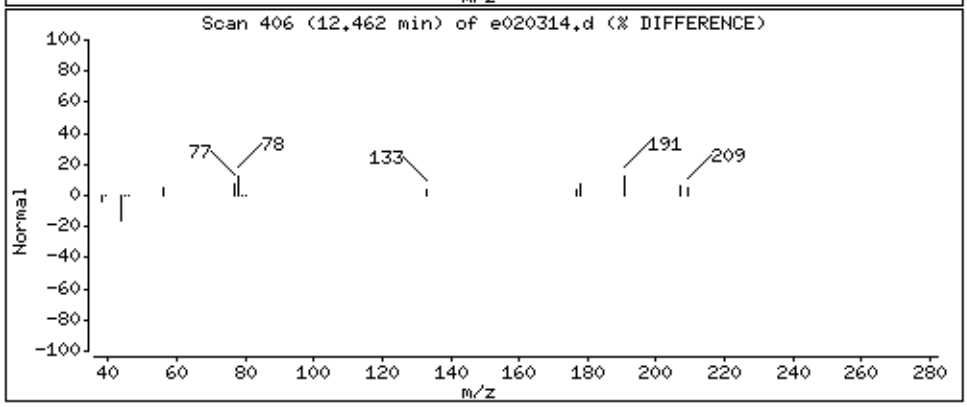
Concentration: 0.1427 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

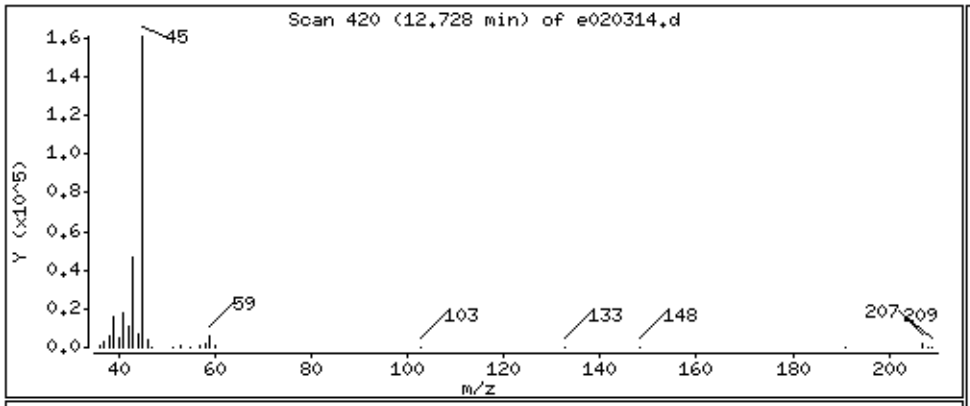
Operator: ef

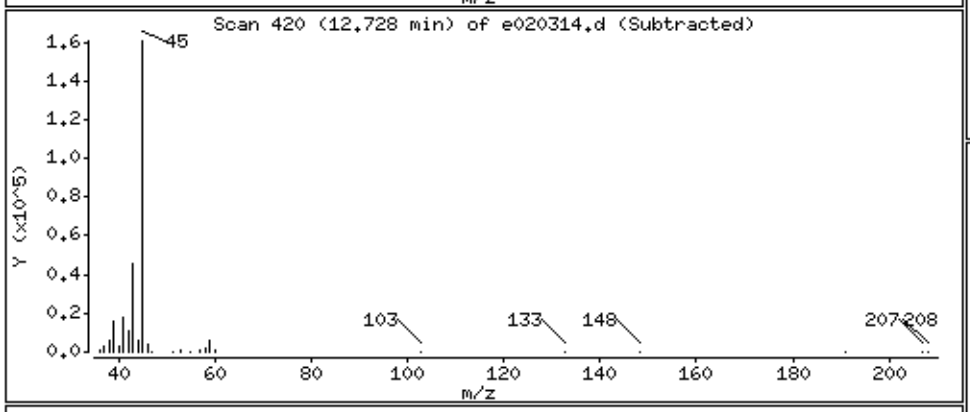
Column phase: RTX-624

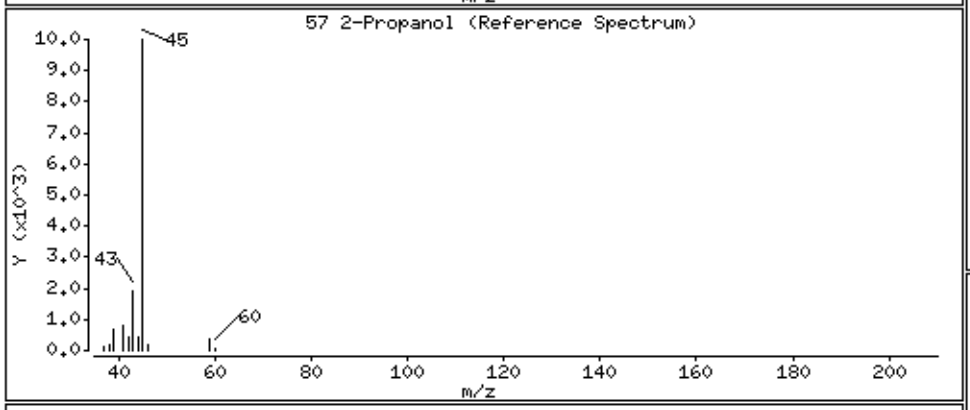
Column diameter: 0.32

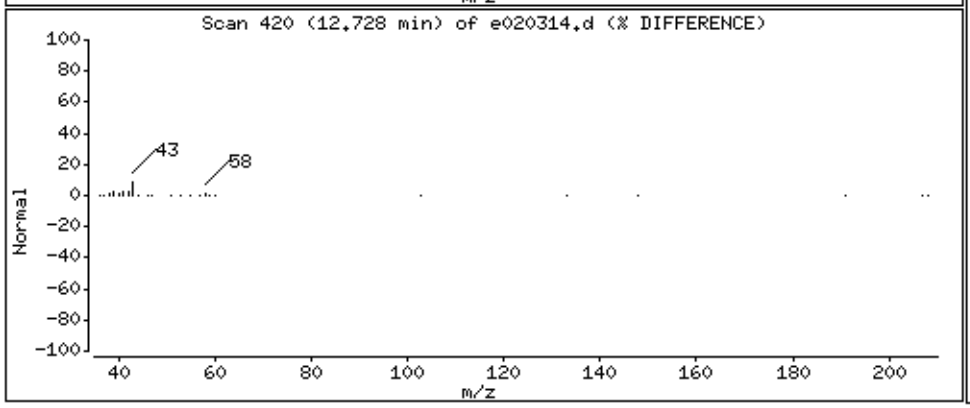
57 2-Propanol

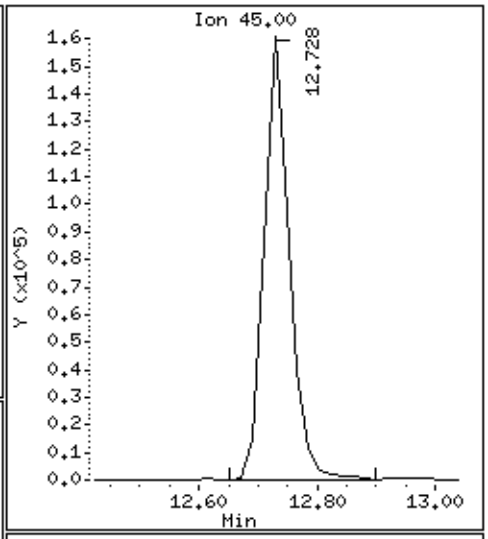
Concentration: 14.022 PPBV

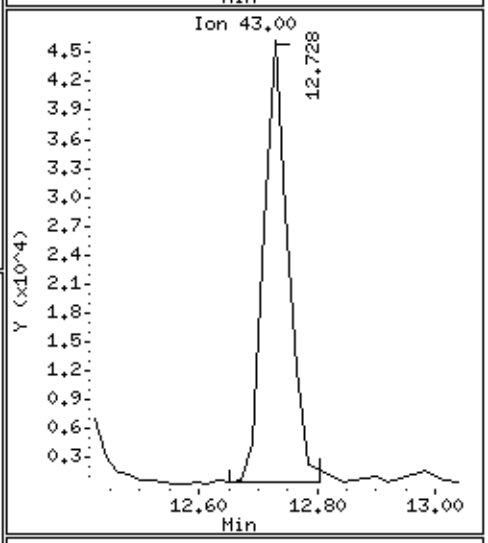


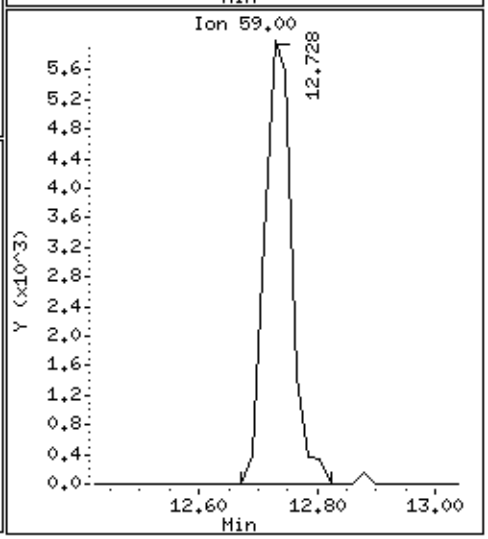












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

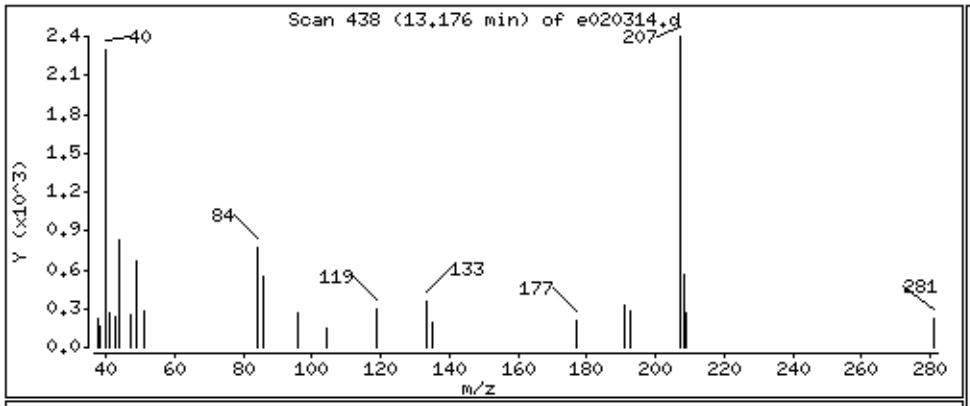
Operator: ef

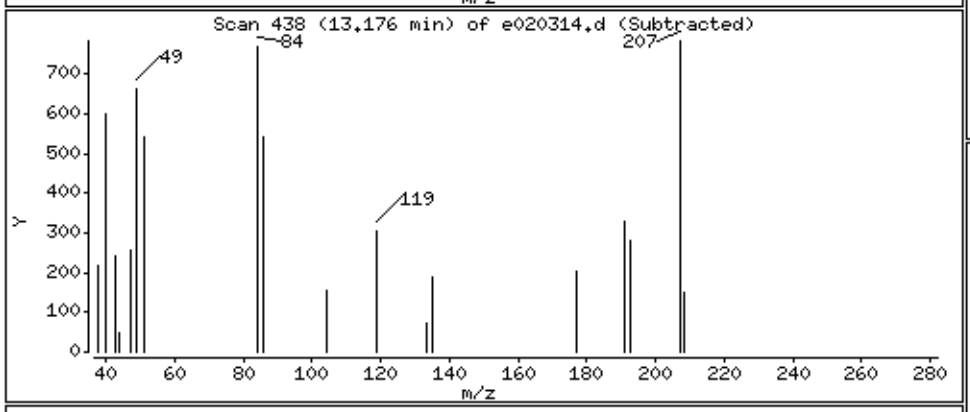
Column phase: RTX-624

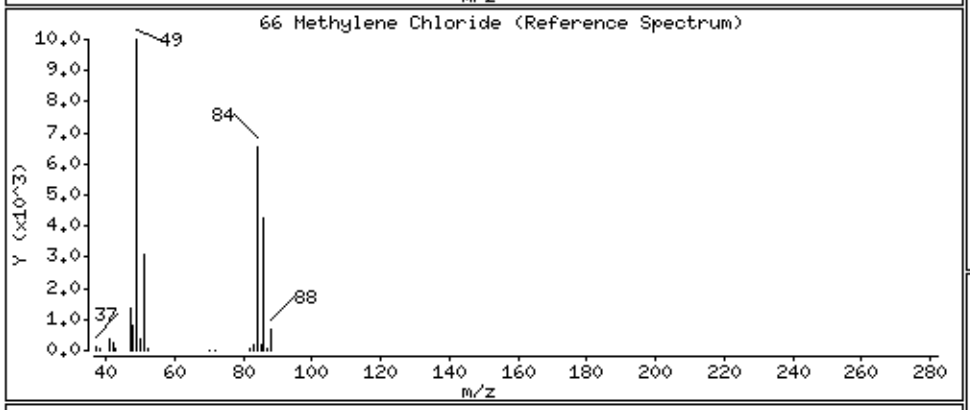
Column diameter: 0.32

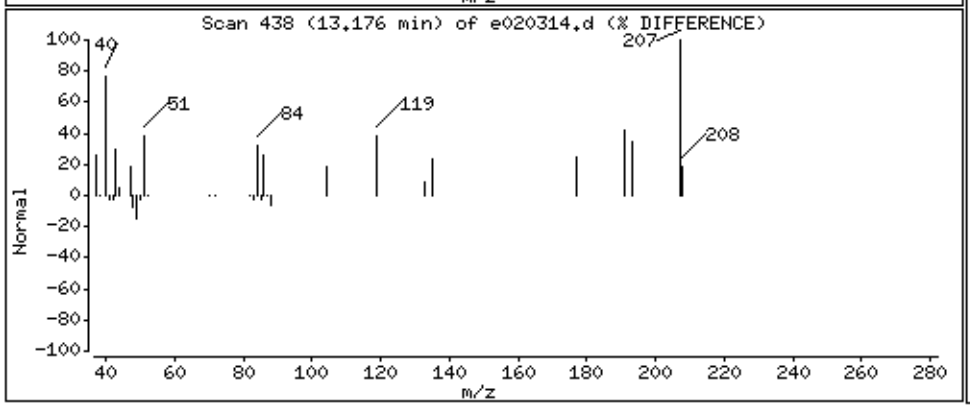
66 Methylene Chloride

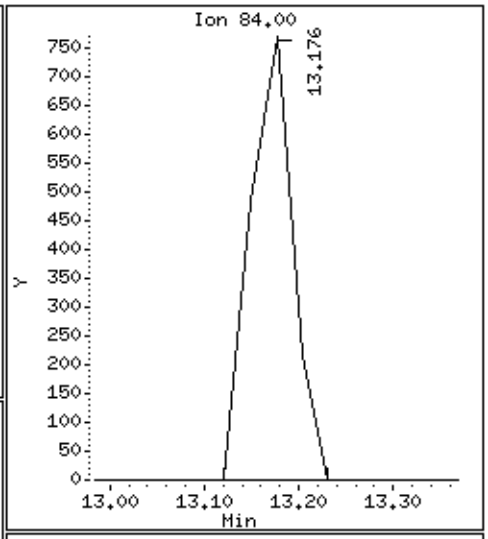
Concentration: 0.09093 PPBV

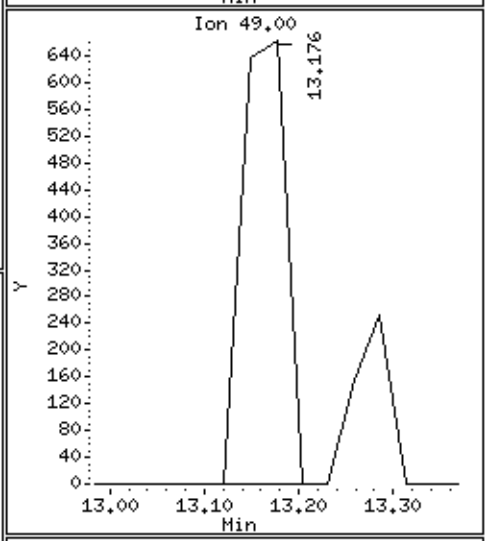


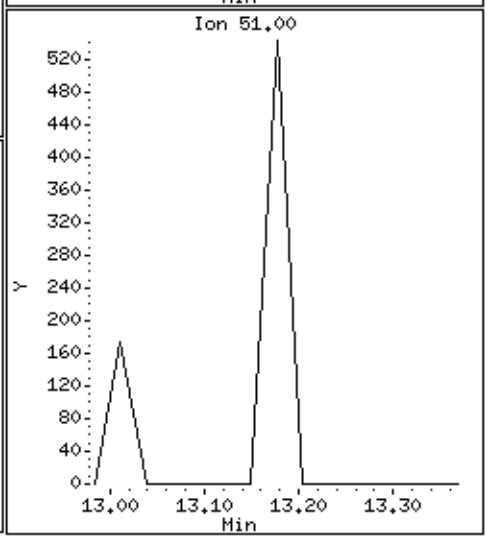












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

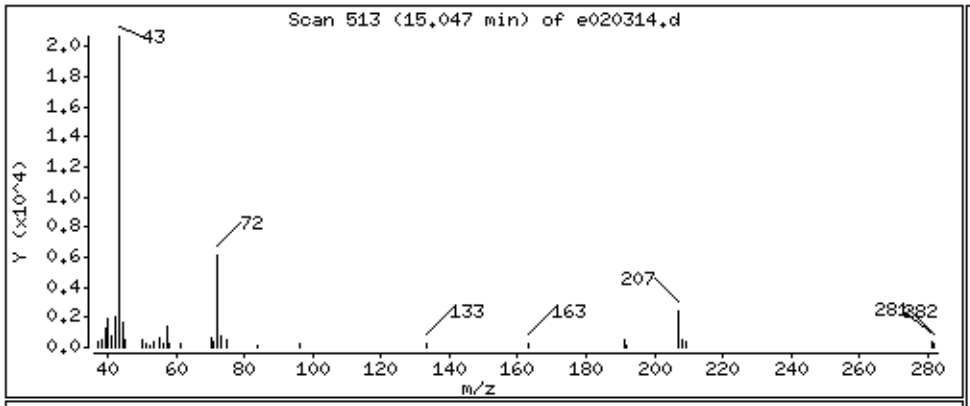
Operator: ef

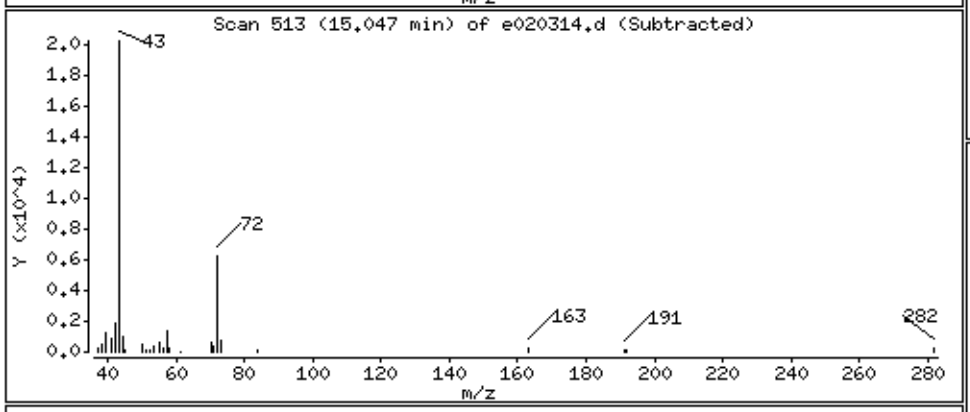
Column phase: RTX-624

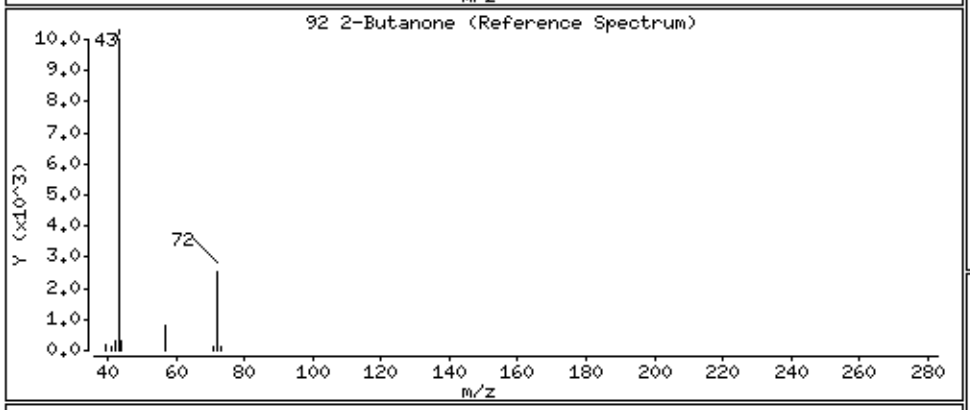
Column diameter: 0.32

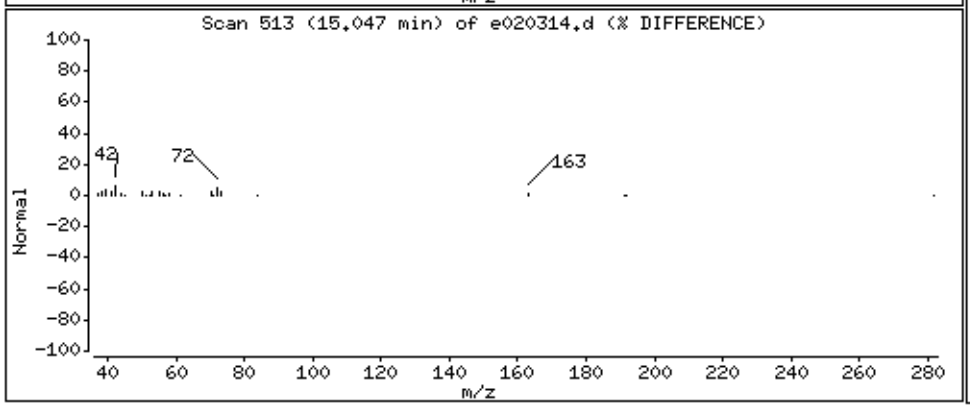
92 2-Butanone

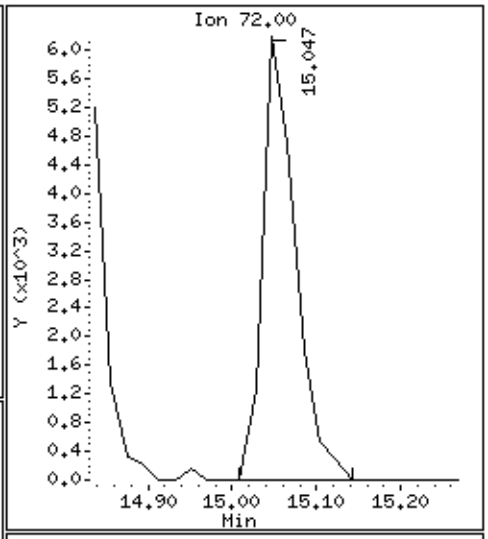
Concentration: 1.430 PPBV

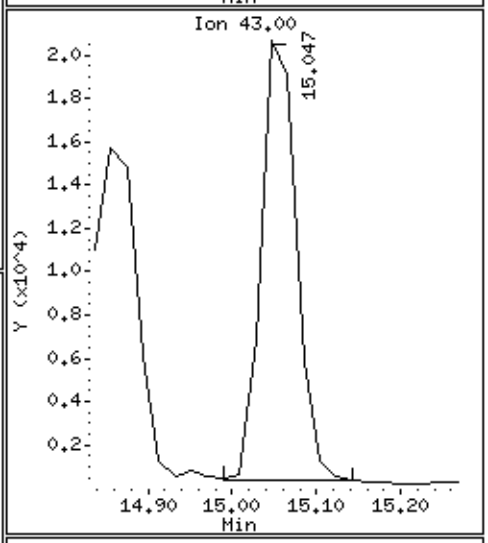


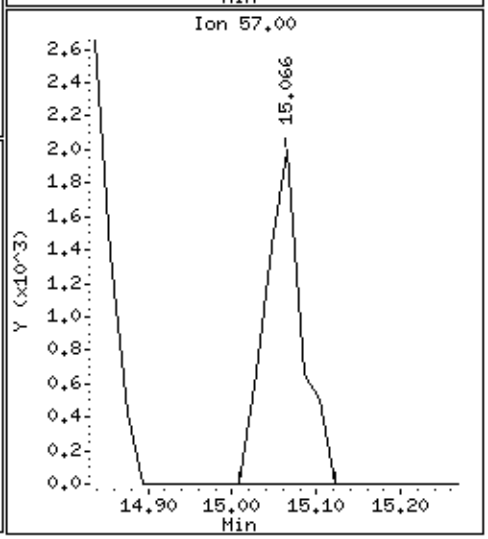












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

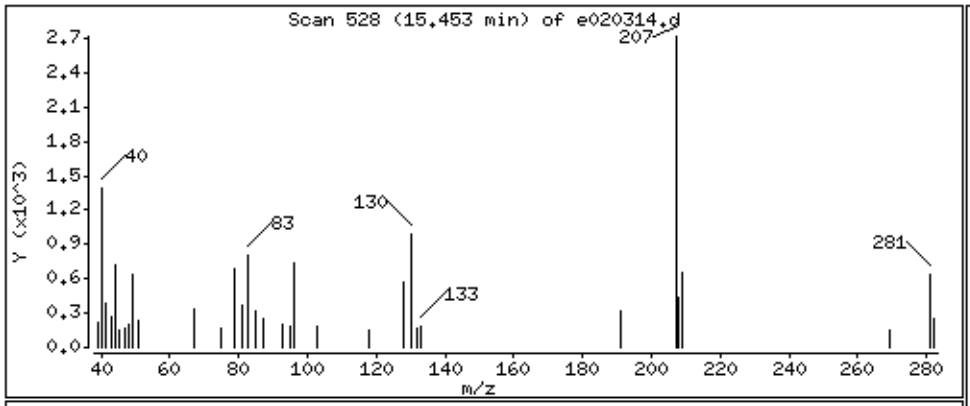
Operator: ef

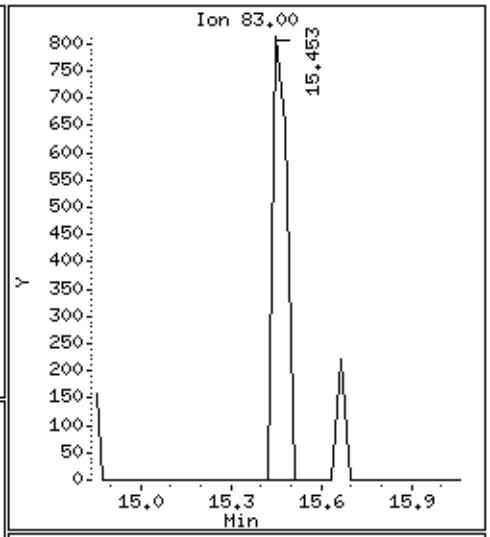
Column phase: RTX-624

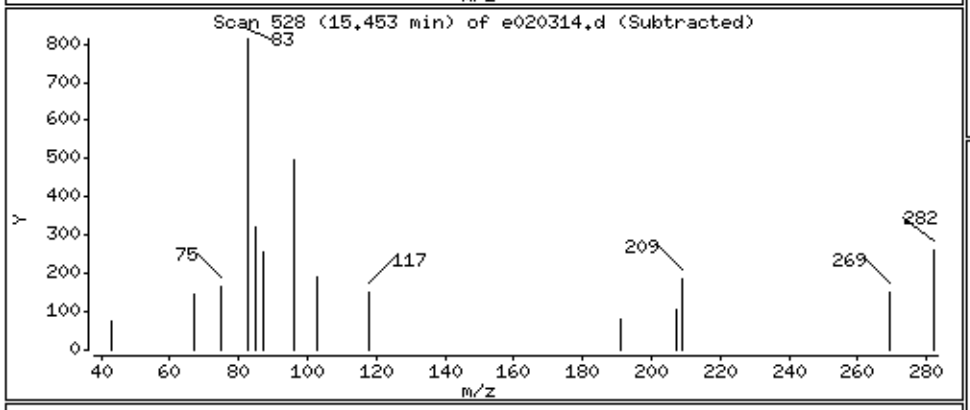
Column diameter: 0.32

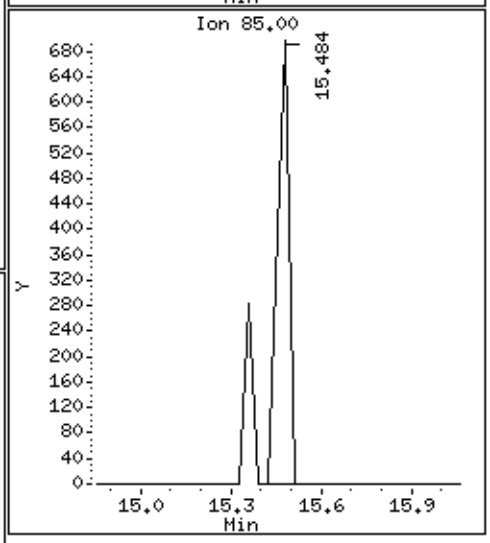
100 Chloroform

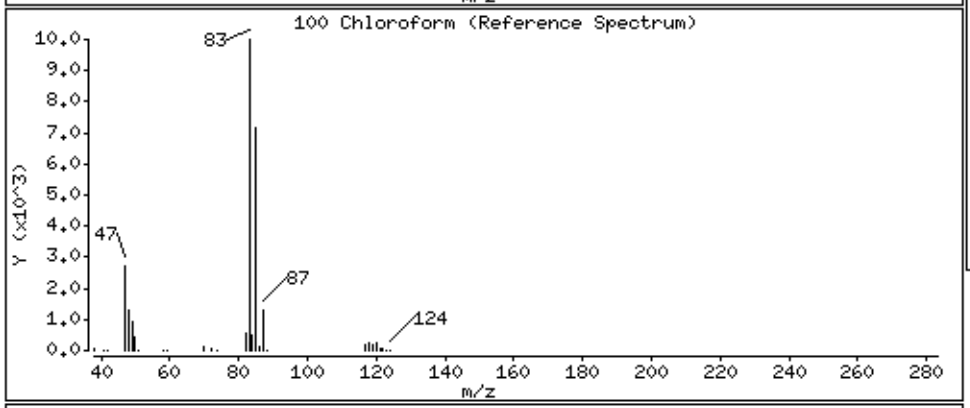
Concentration: 0.03887 PPBV

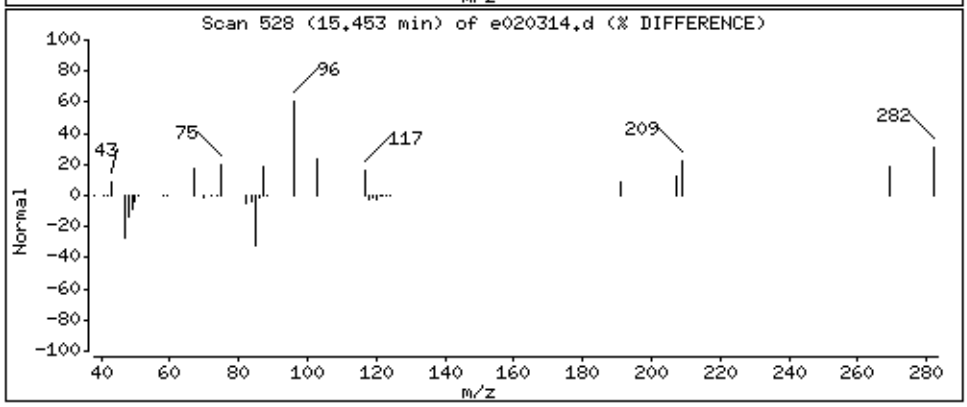












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

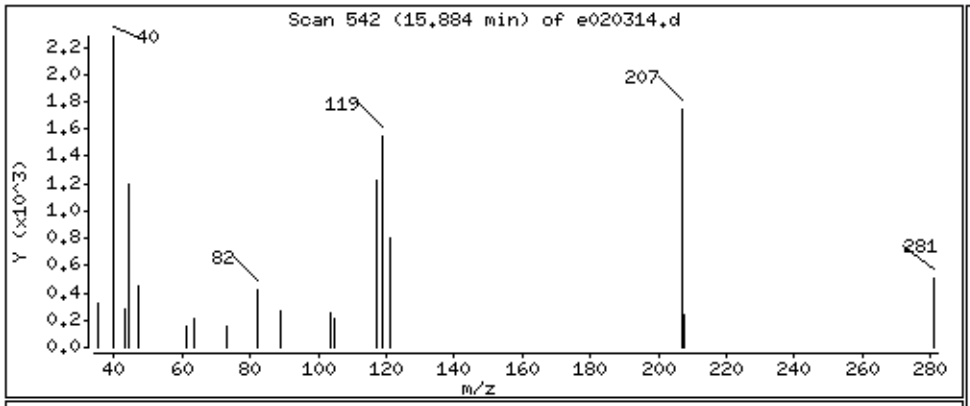
Operator: ef

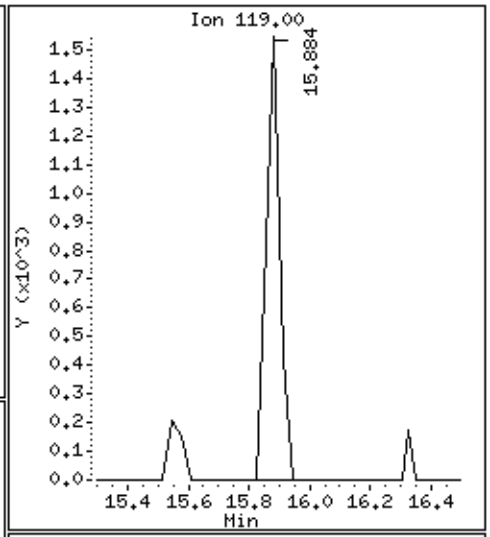
Column phase: RTX-624

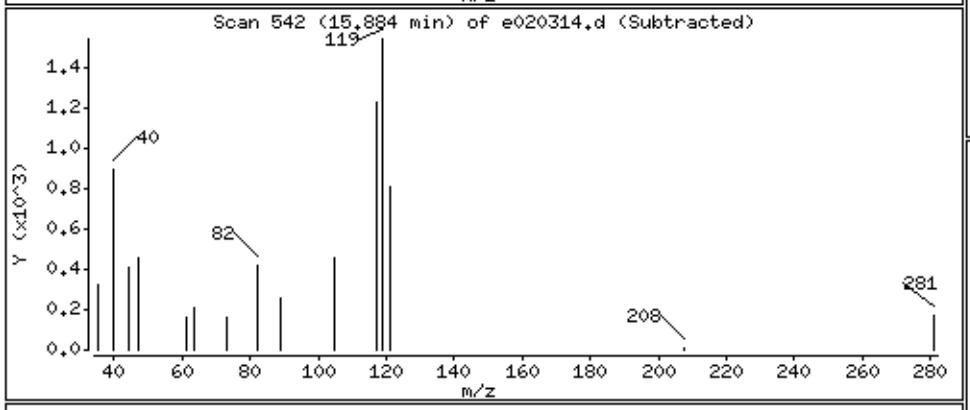
Column diameter: 0.32

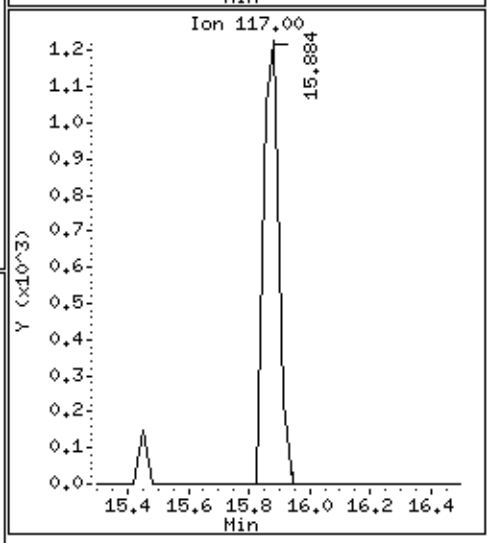
106 Carbon Tetrachloride

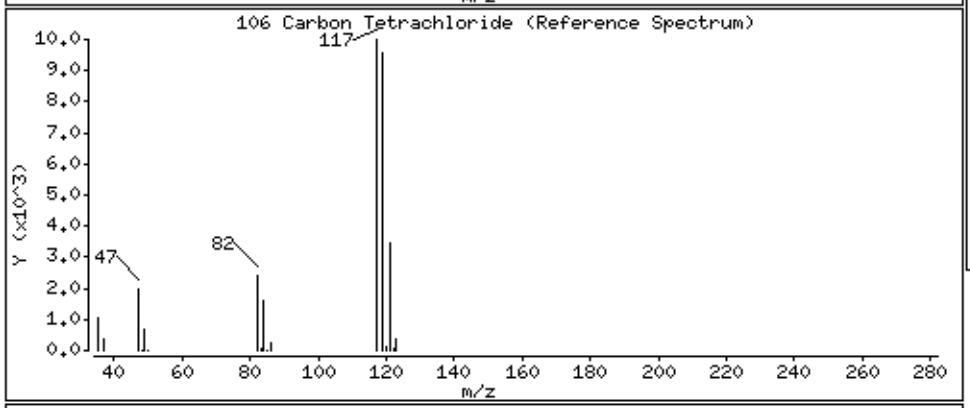
Concentration: 0.06496 PPBV

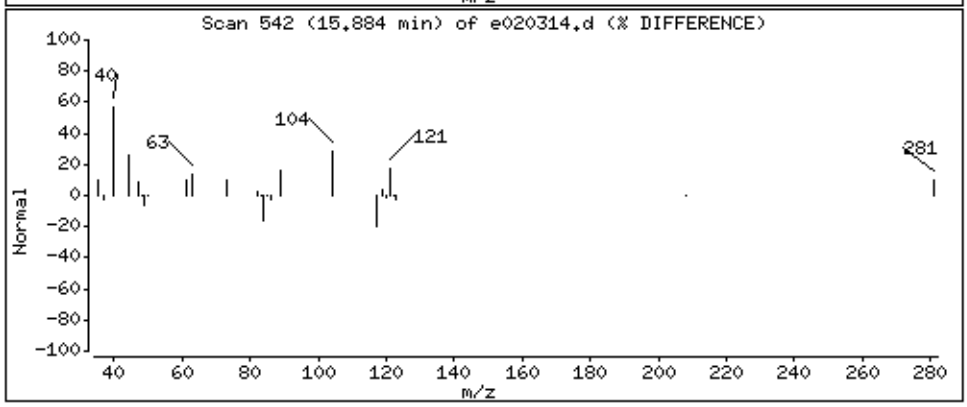












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

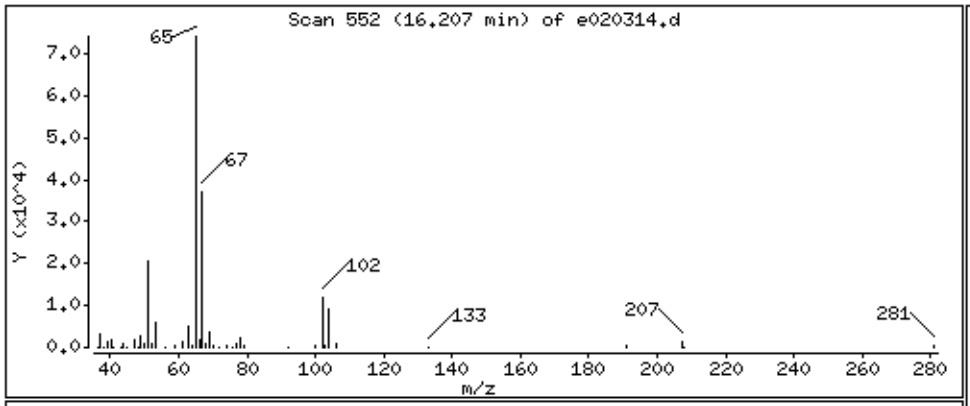
Operator: ef

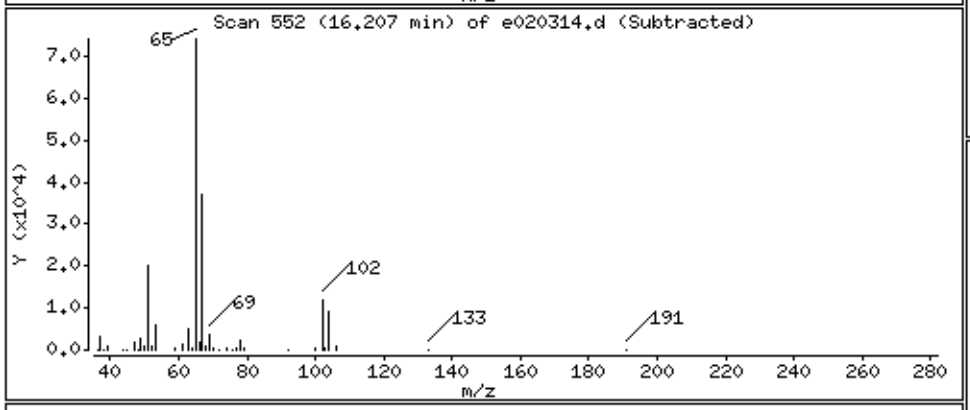
Column phase: RTX-624

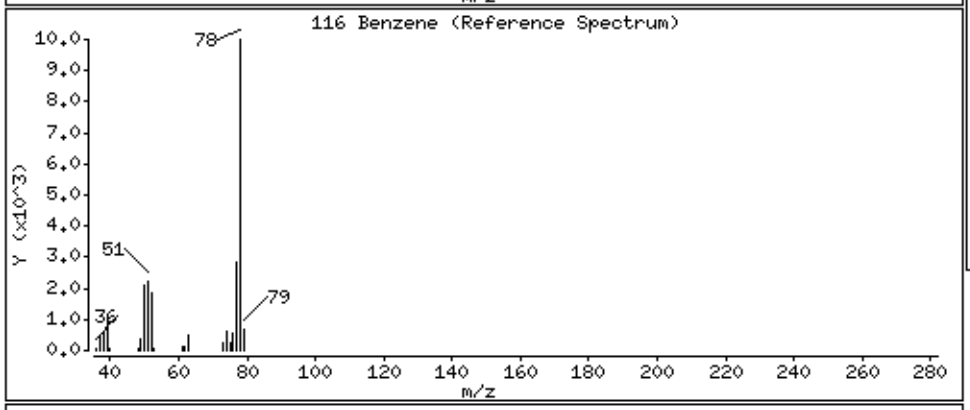
Column diameter: 0.32

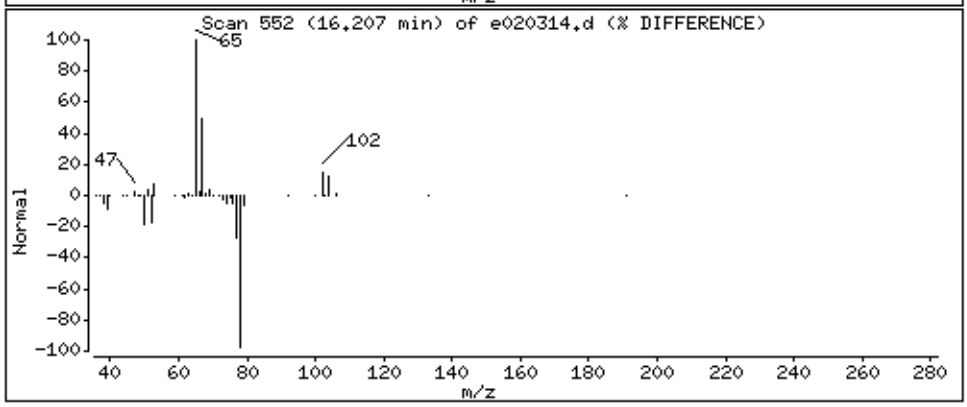
116 Benzene

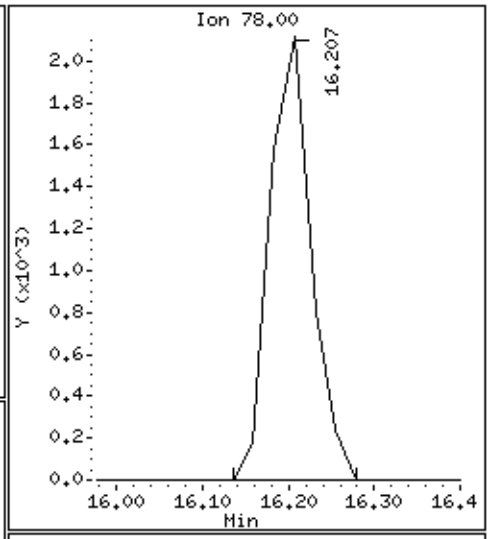
Concentration: 0.09307 PPBV

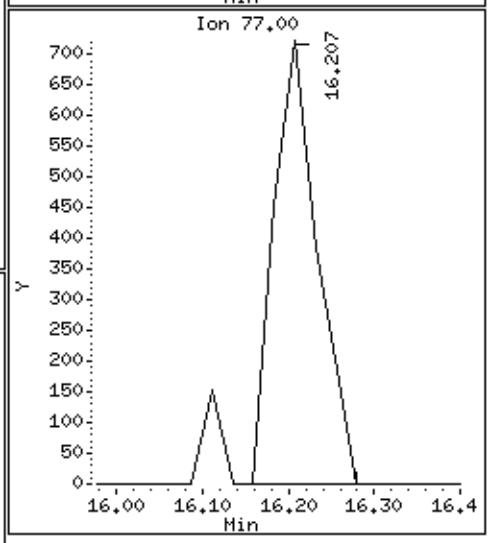












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

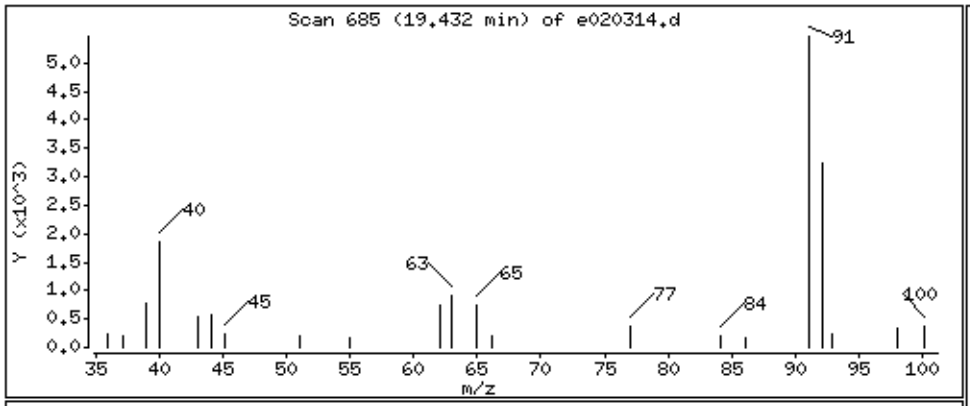
Operator: ef

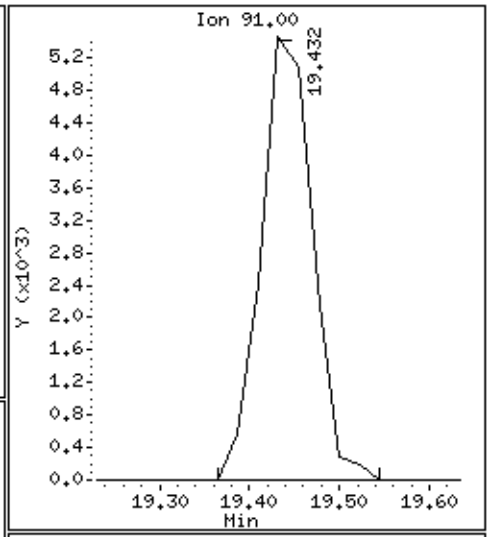
Column phase: RTX-624

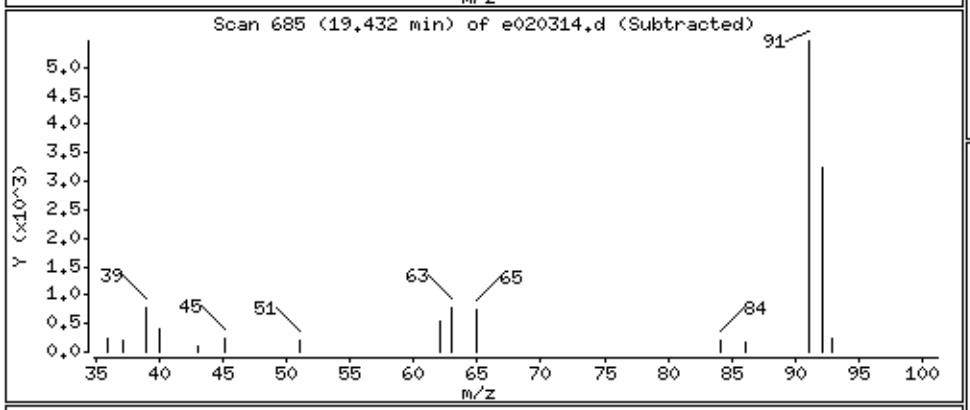
Column diameter: 0.32

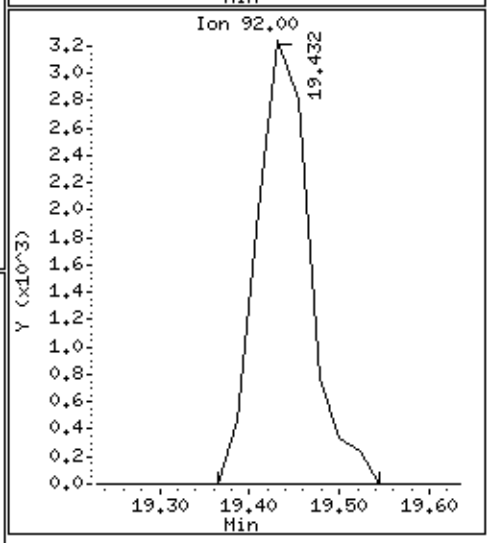
147 Toluene

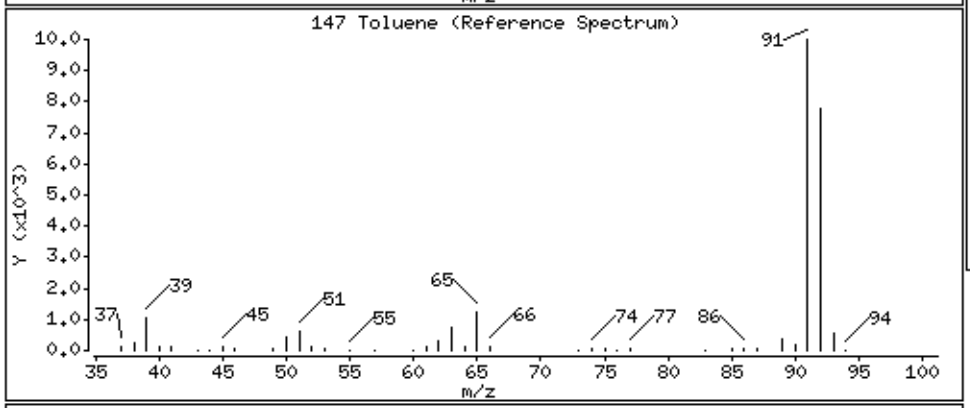
Concentration: 0.2355 PPBV

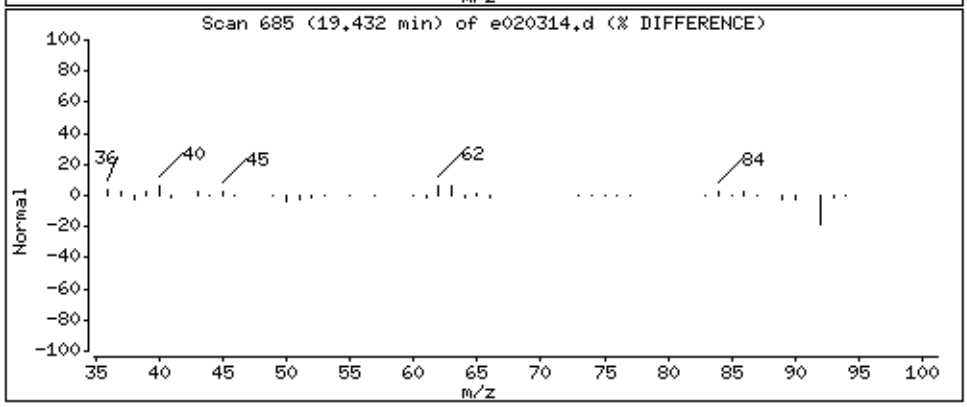












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

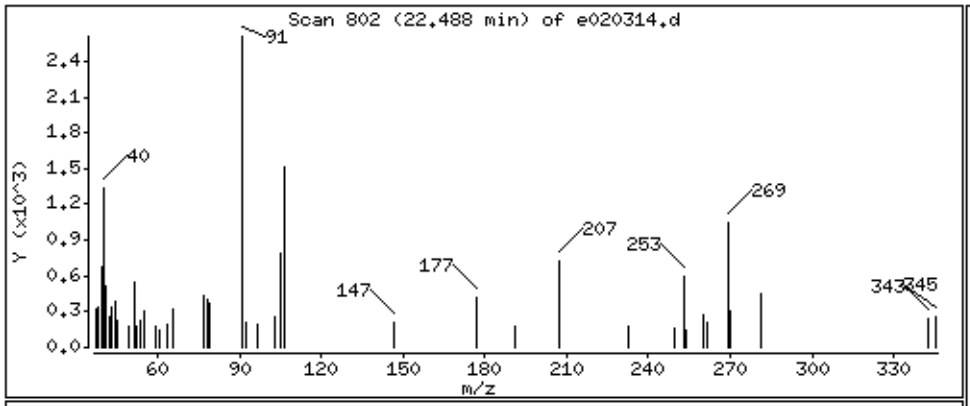
Operator: ef

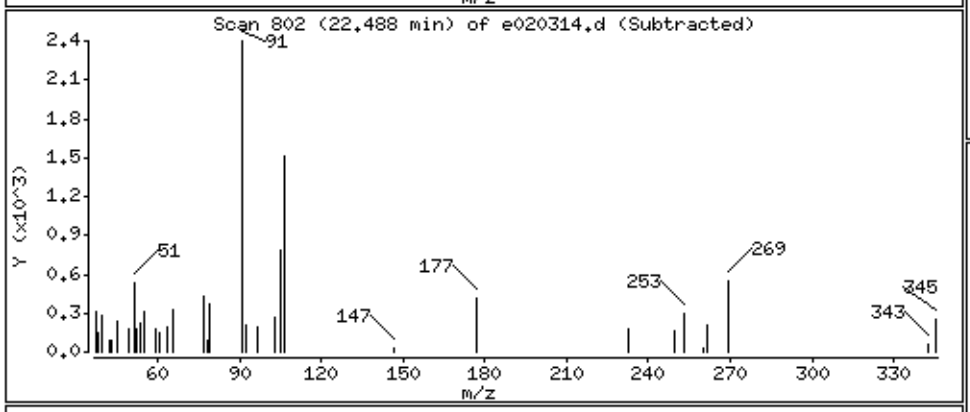
Column phase: RTX-624

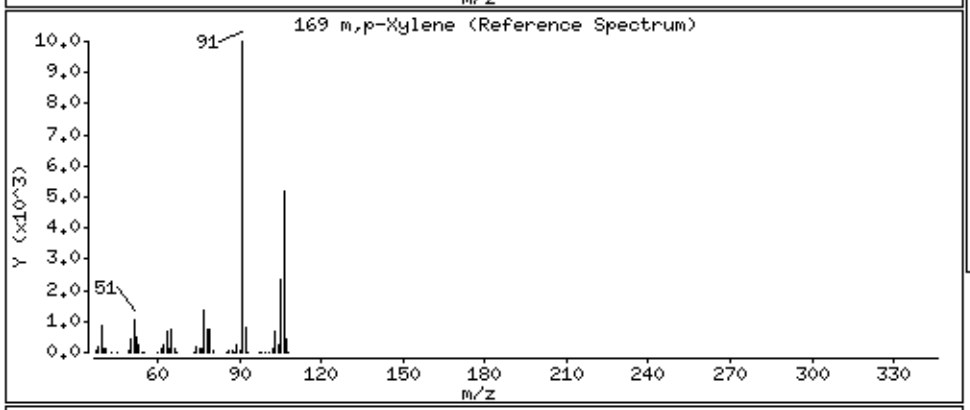
Column diameter: 0.32

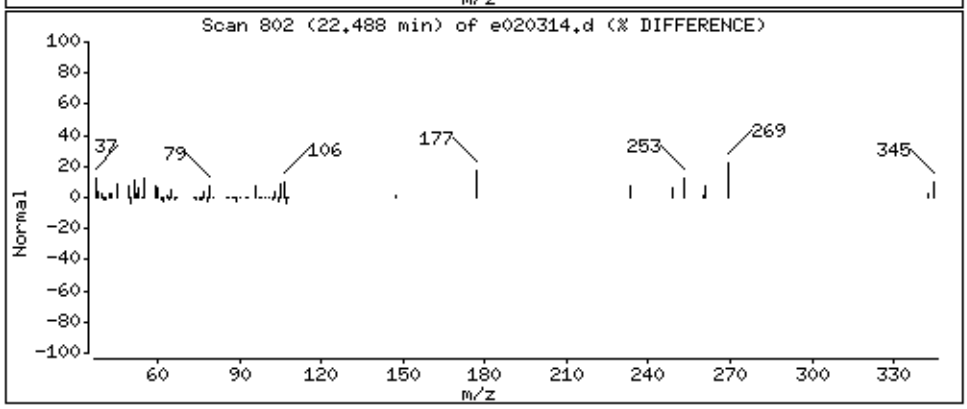
169 m,p-Xylene

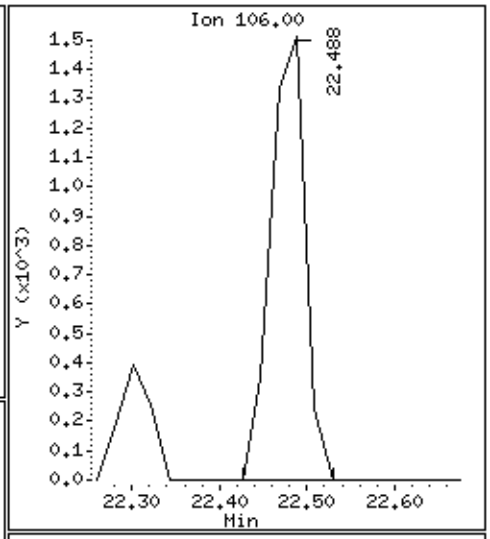
Concentration: 0.09380 PPBV

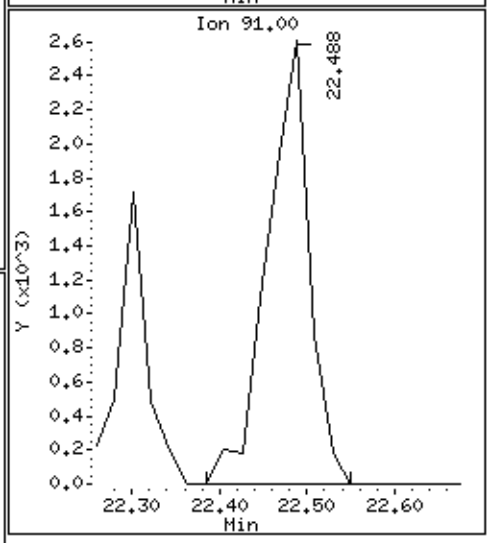












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

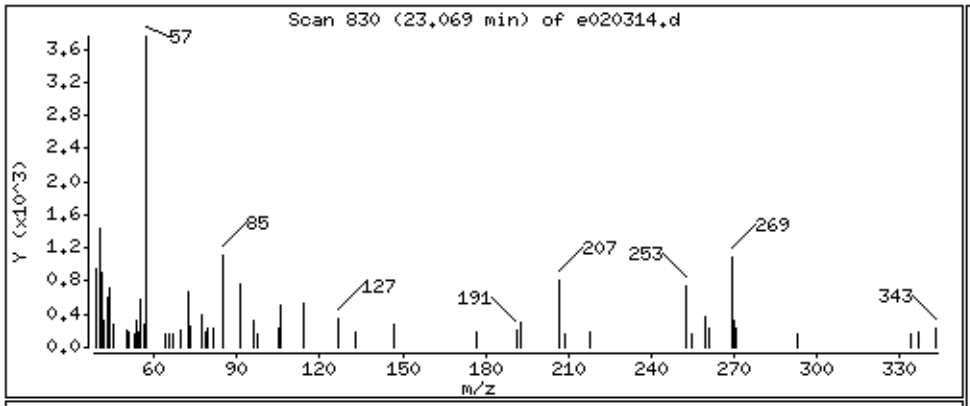
Operator: ef

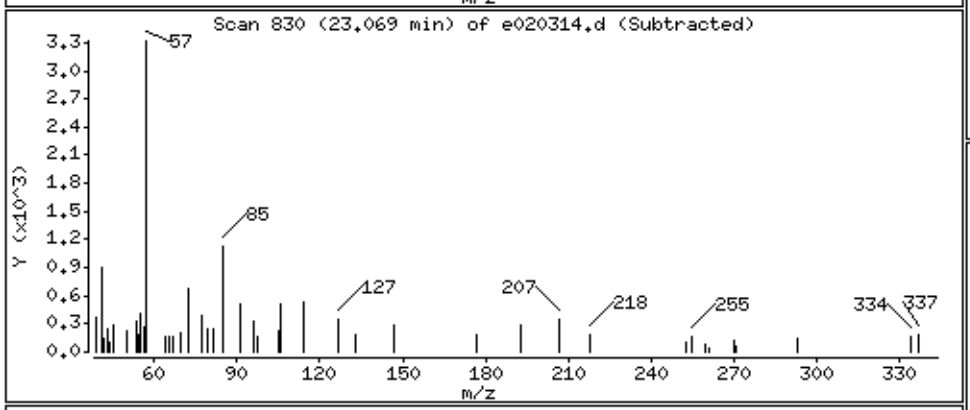
Column phase: RTX-624

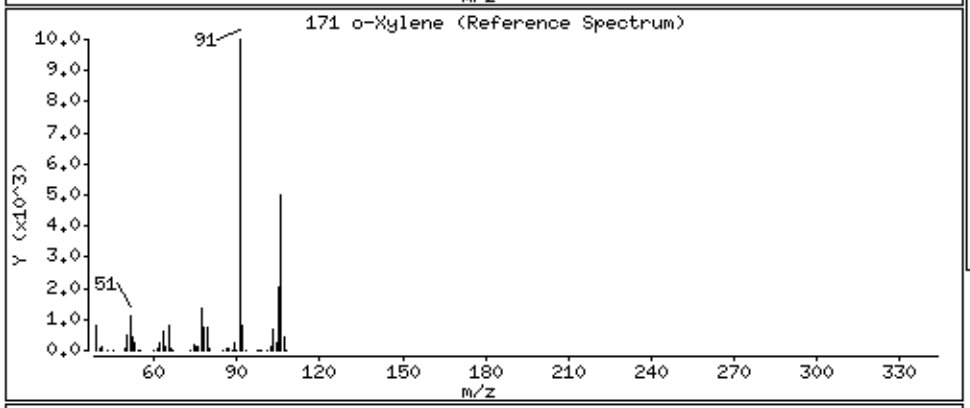
Column diameter: 0.32

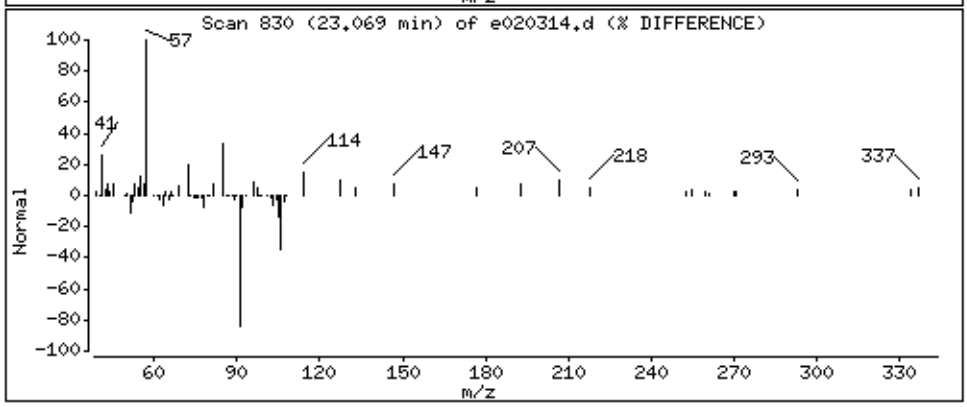
171 o-Xylene

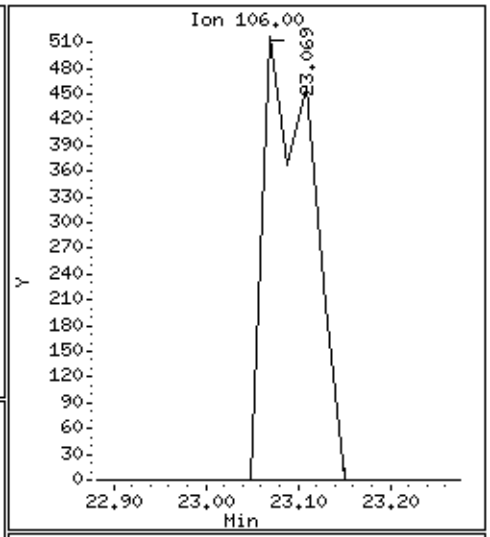
Concentration: 0.04552 PPBV

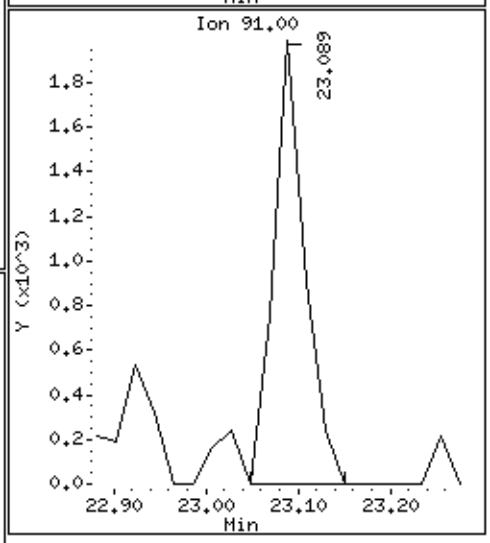












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

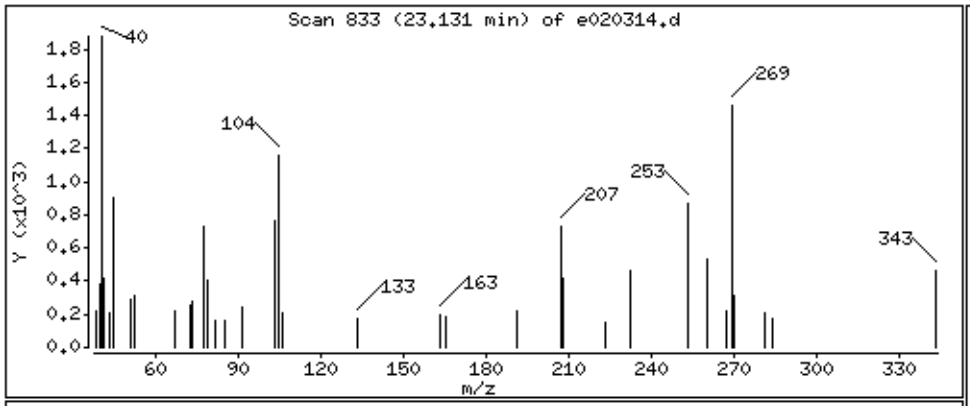
Operator: ef

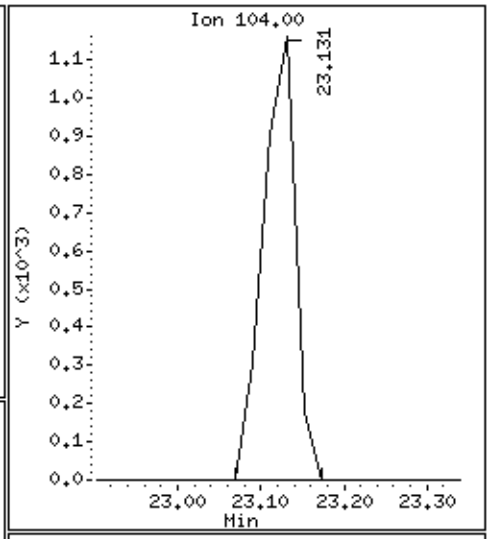
Column phase: RTX-624

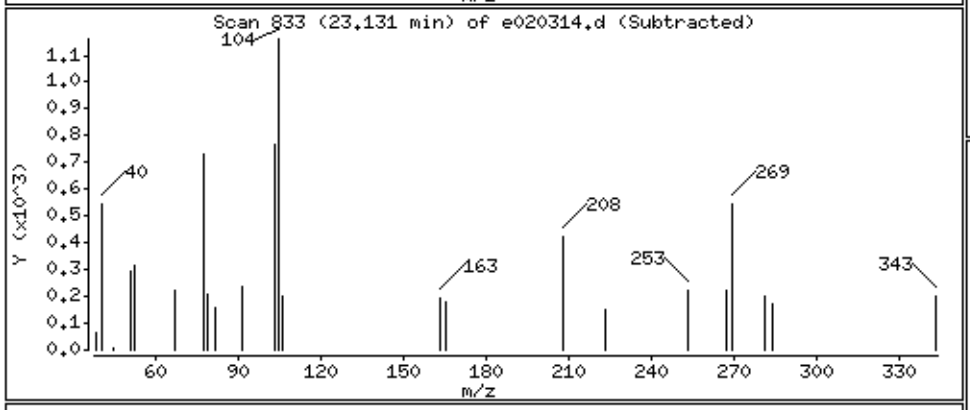
Column diameter: 0.32

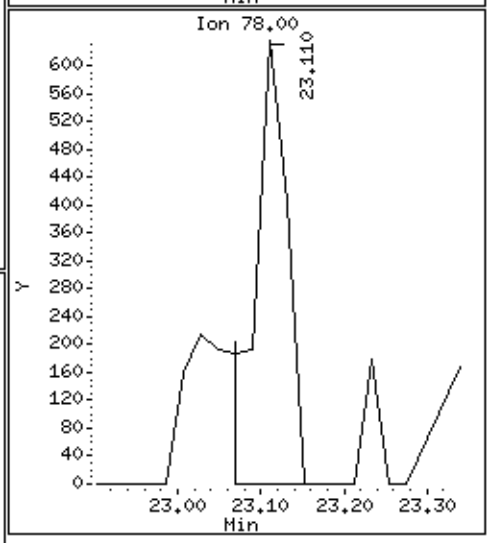
172 Styrene

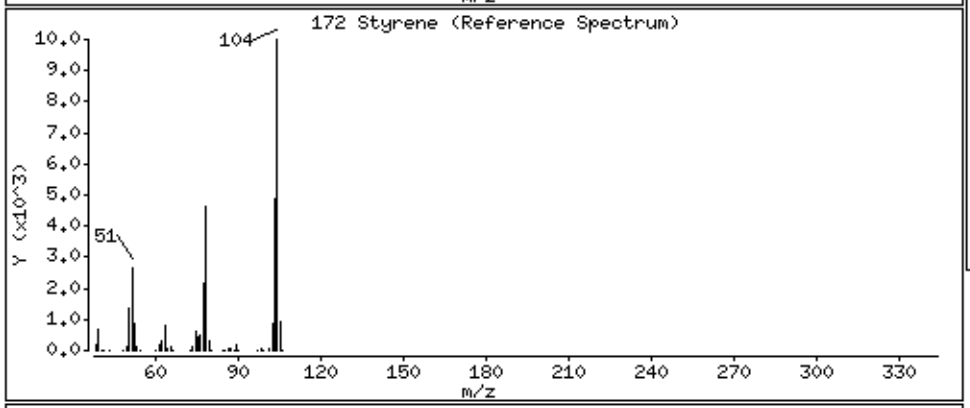
Concentration: 0.04490 PPBV

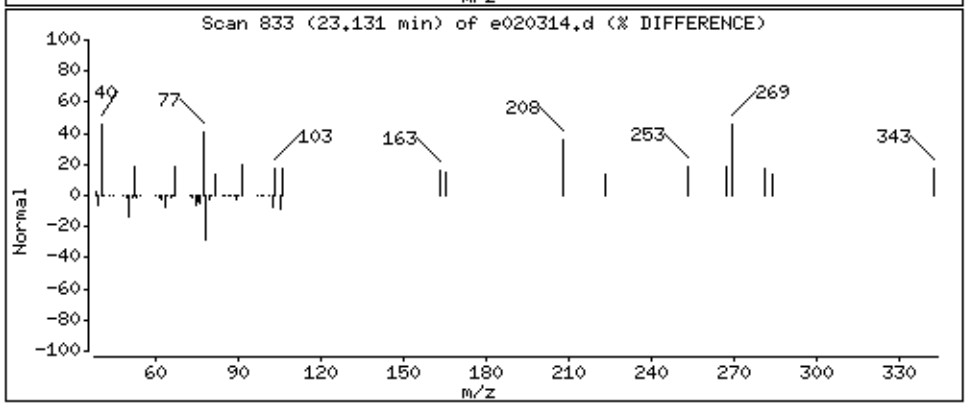












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

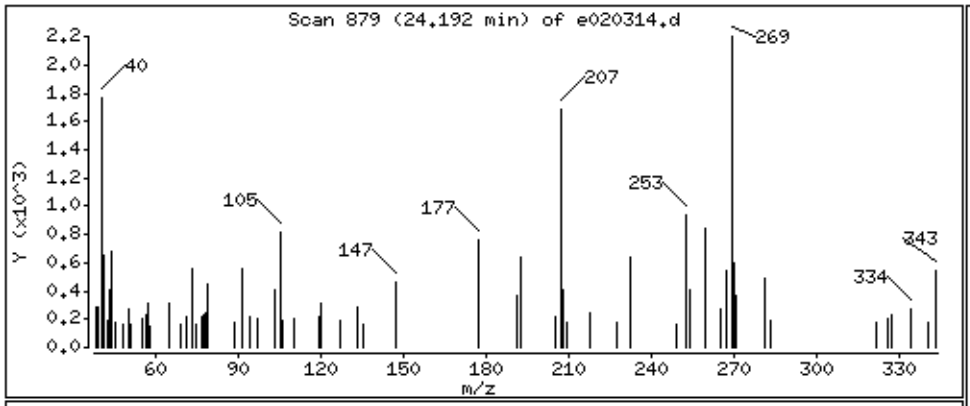
Operator: ef

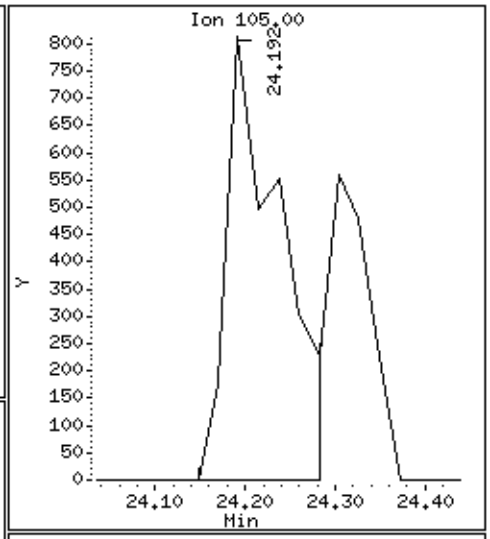
Column phase: RTX-624

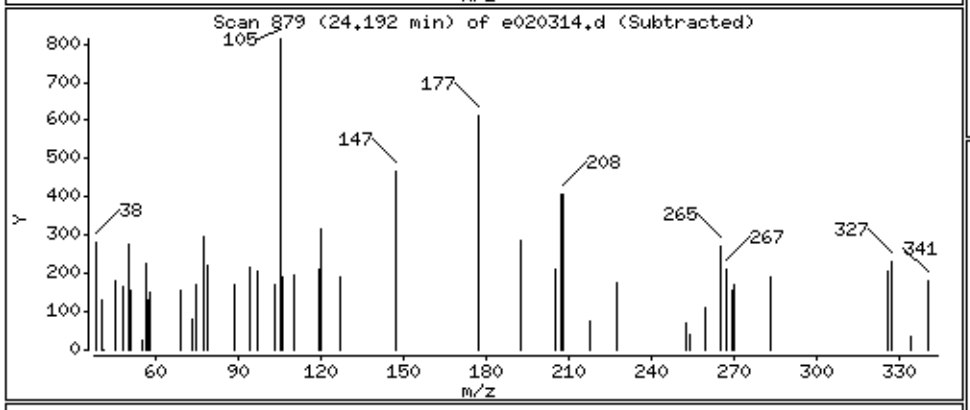
Column diameter: 0.32

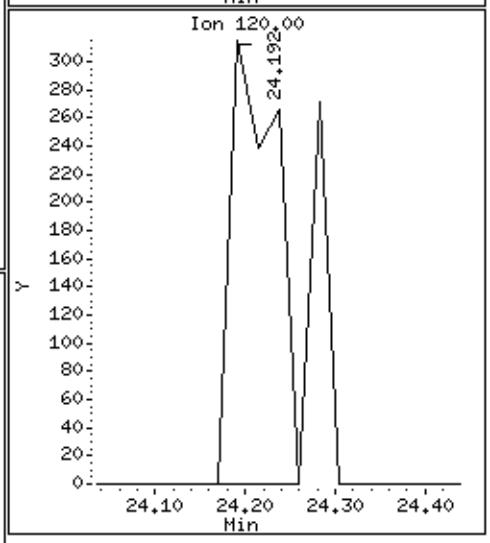
188 4-Ethyltoluene

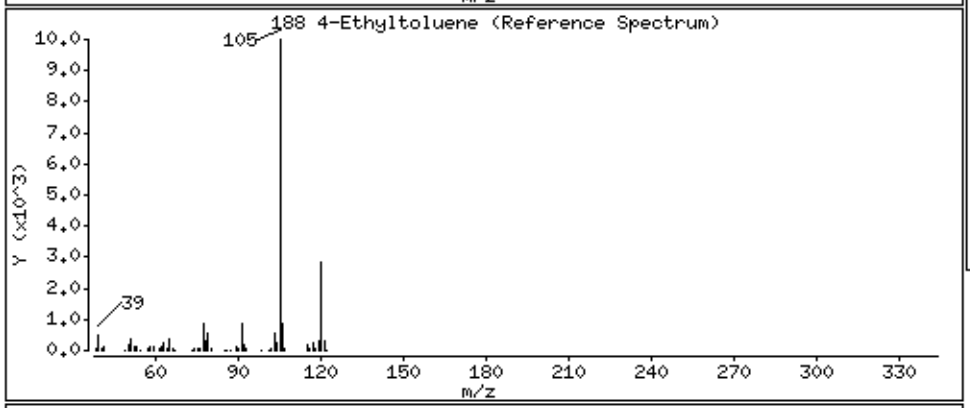
Concentration: 0.03160 PPBV

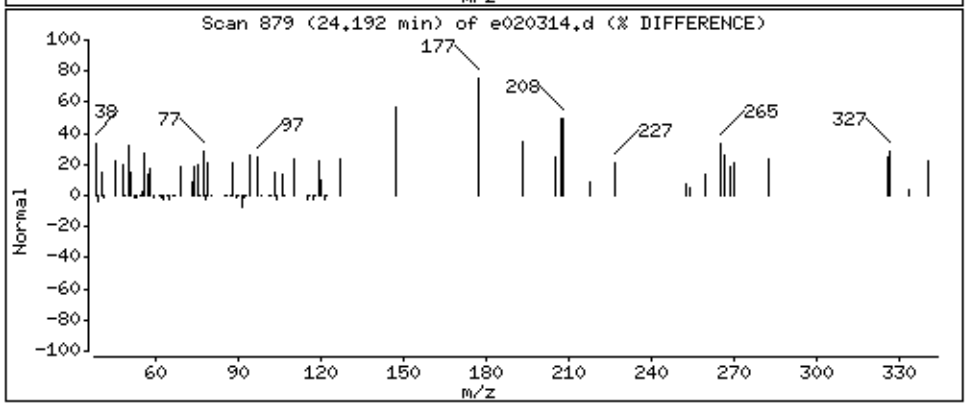












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

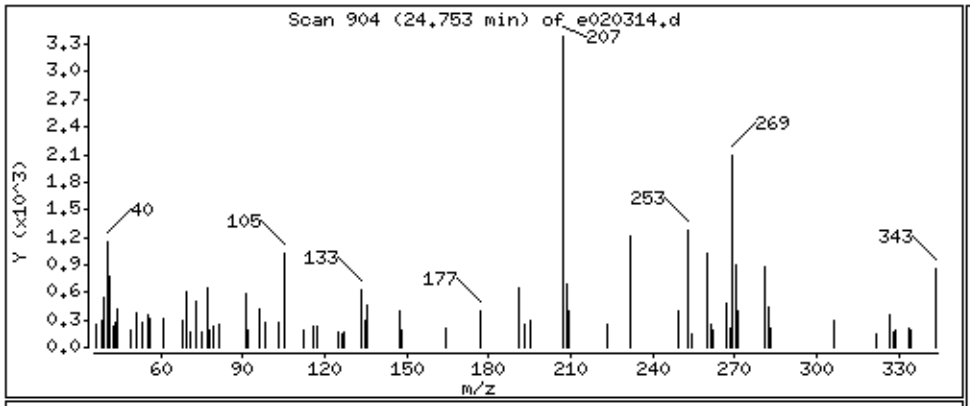
Operator: ef

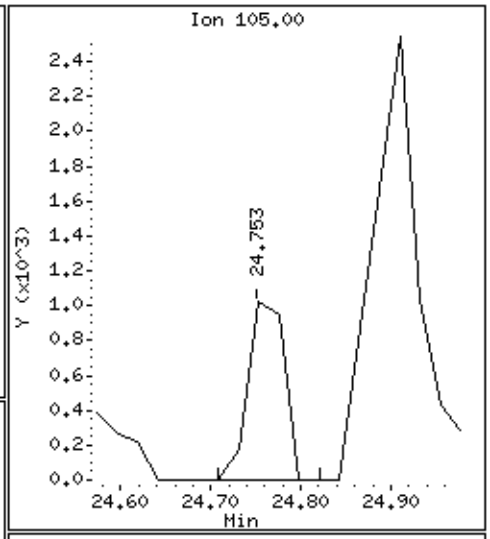
Column phase: RTX-624

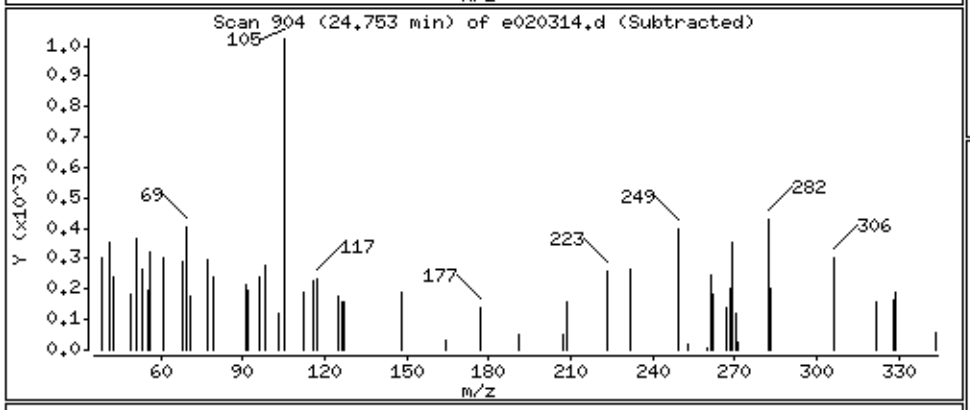
Column diameter: 0.32

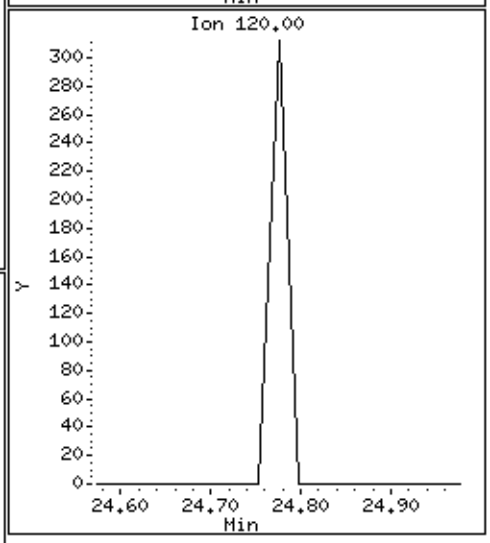
196 1,2,4-Trimethylbenzene

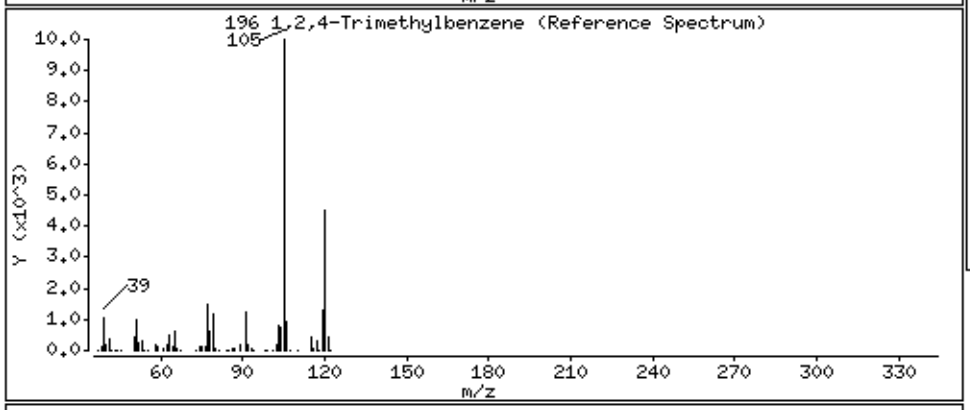
Concentration: 0.04260 PPBV

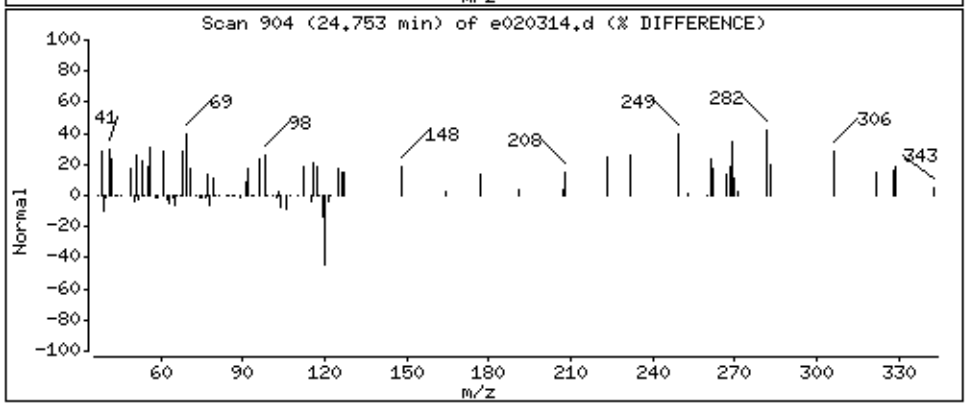












Data File: /chem/msde.i/03Feb2017.b/e020314.d

Date : 03-FEB-2017 17:02

Client ID:

Instrument: msde.i

Sample Info: 250mL# 00937

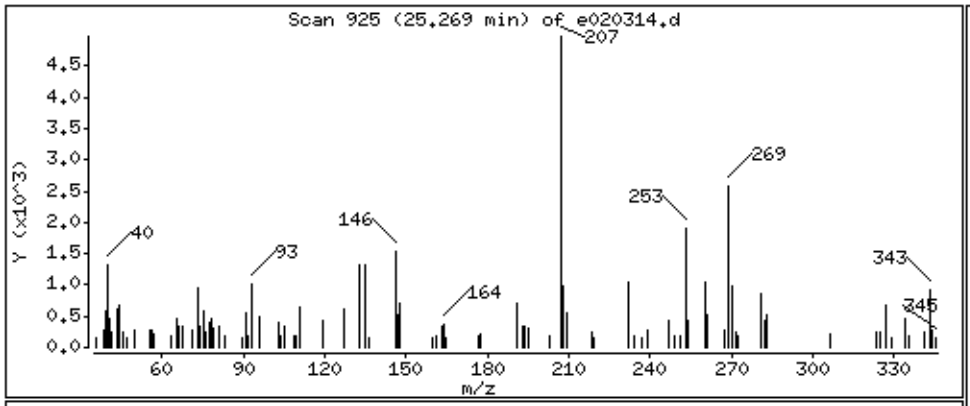
Operator: ef

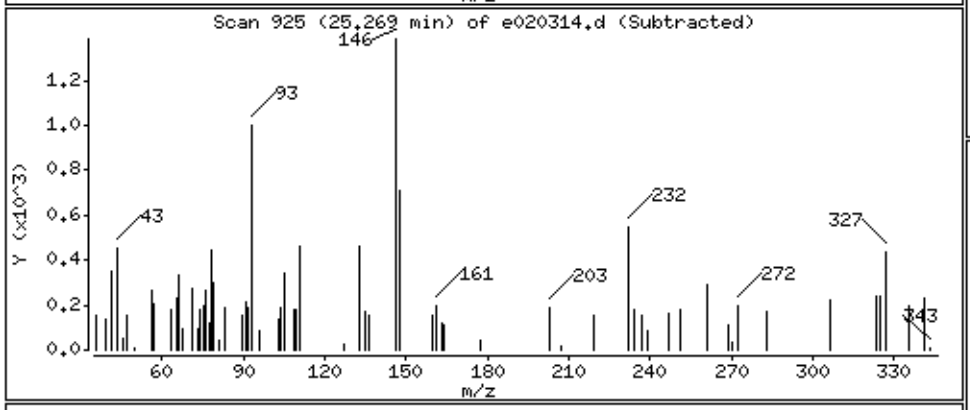
Column phase: RTX-624

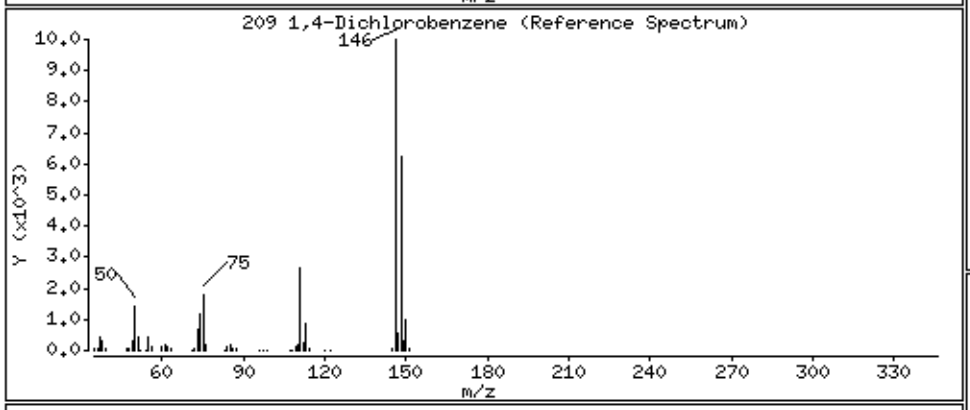
Column diameter: 0.32

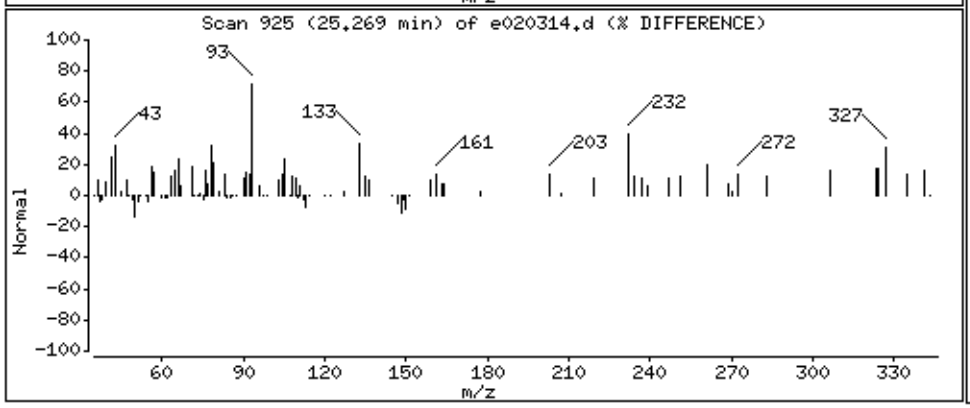
209 1,4-Dichlorobenzene

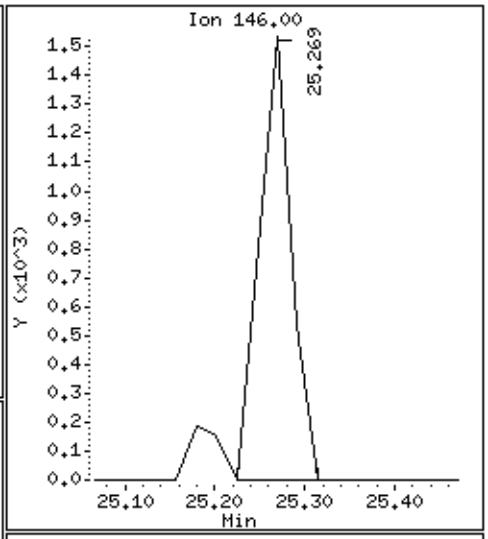
Concentration: 0.05021 PPBV

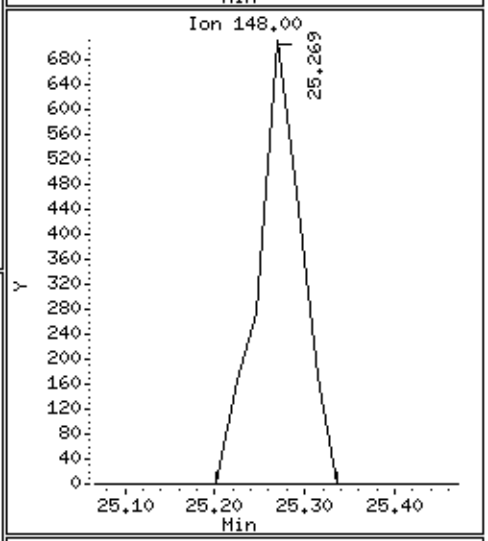


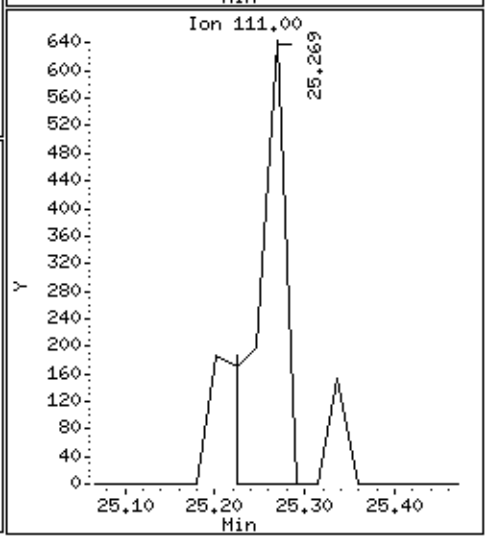












eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: B1315AA-012817

Lab ID#: 1701477B-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.40	0.84	2.0
Chloromethane	0.86	0.55 J	1.8	1.1 J
Freon 11	0.17	0.20	0.96	1.1
Ethanol	0.86	1.0	1.6	1.9
Freon 113	0.17	0.051 J	1.3	0.39 J
Acetone	0.86	2.8	2.0	6.6
2-Propanol	0.86	0.26 J	2.1	0.63 J
Carbon Disulfide	0.86	0.27 J	2.7	0.85 J
Methylene Chloride	0.34	0.057 J	1.2	0.20 J
2-Butanone (Methyl Ethyl Ketone)	0.86	0.35 J	2.5	1.0 J
Carbon Tetrachloride	0.17	0.080 J	1.1	0.51 J
Benzene	0.17	0.093 J	0.55	0.30 J
Toluene	0.17	0.061 J	0.64	0.23 J

eurofins | Air Toxics

Client Sample ID: B1315AA-012817

Lab ID#: 1701477B-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020320**	**Date of Collection:**	**1/29/17 4:12:00 PM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**2/3/17 09:48 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.40	0.84	2.0
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.86	0.55 J	1.8	1.1 J
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.86	Not Detected	3.3	Not Detected
Chloroethane	0.86	Not Detected	2.2	Not Detected
Freon 11	0.17	0.20	0.96	1.1
Ethanol	0.86	1.0	1.6	1.9
Freon 113	0.17	0.051 J	1.3	0.39 J
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	2.8	2.0	6.6
2-Propanol	0.86	0.26 J	2.1	0.63 J
Carbon Disulfide	0.86	0.27 J	2.7	0.85 J
3-Chloropropene	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.34	0.057 J	1.2	0.20 J
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	0.35 J	2.5	1.0 J
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.17	Not Detected	0.83	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Cyclohexane	0.17	Not Detected	0.59	Not Detected
Carbon Tetrachloride	0.17	0.080 J	1.1	0.51 J
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.17	0.093 J	0.55	0.30 J
1,2-Dichloroethane	0.17	Not Detected	0.69	Not Detected
Heptane	0.17	Not Detected	0.70	Not Detected
Trichloroethene	0.17	Not Detected	0.92	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.79	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.1	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	Not Detected	0.70	Not Detected
Toluene	0.17	0.061 J	0.64	0.23 J
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected
2-Hexanone	0.86	Not Detected	3.5	Not Detected

eurofins | Air Toxics

Client Sample ID: B1315AA-012817

Lab ID#: 1701477B-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020320**	**Date of Collection:**	**1/29/17 4:12:00 PM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**2/3/17 09:48 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.17	Not Detected	1.4	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.79	Not Detected
Ethyl Benzene	0.17	Not Detected	0.74	Not Detected
m,p-Xylene	0.17	Not Detected	0.74	Not Detected
o-Xylene	0.17	Not Detected	0.74	Not Detected
Styrene	0.17	Not Detected	0.73	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.84	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.84	Not Detected
4-Ethyltoluene	0.17	Not Detected	0.84	Not Detected
1,3,5-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,2,4-Trimethylbenzene	0.17	Not Detected	0.84	Not Detected
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.88	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.3	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.1	Not Detected
Naphthalene	0.86	Not Detected	4.5	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020320.d
Lab Smp Id: 1701477B-18A
Inj Date : 03-FEB-2017 21:48
Operator : ea Inst ID: msde.i
Smp Info : 250mL#34744
Misc Info : 6.5"Hg-5psi
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1
Dil Factor: 1.71000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	29621	0.23384	0.3999	80.00- 120.00	100.00
5.220	5.220 (0.339)	87	9752			1.91- 61.91	32.92
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	7639	0.32335	0.5529	80.00- 120.00	100.00(a)
6.956	6.932 (0.452)	52	2663			3.31- 63.31	34.86
35 Freon 11					CAS #: 75-69-4		
10.747	10.766 (0.698)	101	17239	0.11666	0.1995	80.00- 120.00	100.00
10.747	10.766 (0.698)	103	11771			33.74- 93.74	68.28
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	7635	0.59275	1.014	80.00- 120.00	100.00
11.680	11.661 (0.759)	46	1721			9.60- 69.60	22.54
11.661	11.661 (0.758)	43	2500			0.00- 59.21	32.74
49 Freon 113					CAS #: 76-13-1		
12.099	12.080 (0.786)	151	2926	0.02965	0.05071	80.00- 120.00	100.00(a)
12.080	12.080 (0.785)	153	2645			34.83- 94.83	90.40

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   49 Freon 113 (continued)
 12.099  12.080 (0.786)   101      3450                    77.16- 137.16   117.91
-------------------------------------------------------------------------------
   52 Acetone                                     CAS #: 67-64-1
 12.366  12.366 (0.803)    58     26533 1.63835    2.802  80.00- 120.00   100.00
 12.366  12.366 (0.803)    43     93795                  344.13- 404.13   353.50
-------------------------------------------------------------------------------
   56 Carbon Disulfide                            CAS #: 75-15-0
 12.442  12.461 (0.808)    76     17828 0.15914   0.2721  80.00- 120.00   100.00(a)
-------------------------------------------------------------------------------
   57 2-Propanol                                  CAS #: 67-63-0
 12.728  12.728 (0.827)    45      7779 0.14920   0.2551  80.00- 120.00   100.00(a)
 12.728  12.728 (0.827)    43      2211                    0.00-  55.65    28.42
 12.728  12.728 (0.827)    59       248                    0.00-  34.42     3.19
-------------------------------------------------------------------------------
   66 Methylene Chloride                          CAS #: 75-09-2
 13.149  13.176 (0.854)    84      1327 0.03348  0.05726  80.00- 120.00   100.00(a)
 13.149  13.176 (0.854)    49      1793                   83.76- 143.76   135.12
 13.176  13.176 (0.856)    51       627                    2.61-  62.61    47.25
-------------------------------------------------------------------------------
   92 2-Butanone                                  CAS #: 78-93-3
 15.047  15.047 (0.978)    72      3597 0.20482   0.3502  80.00- 120.00   100.00(a)
 15.047  15.047 (0.978)    43     15746                  325.72- 385.72   437.75
 15.047  15.047 (0.978)    57      1098                    1.13-  61.13    30.53
-------------------------------------------------------------------------------
*  98 Bromochloromethane                         CAS #: 74-97-5
 15.391  15.391 (1.000)   130    142677 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    110030                   46.73- 106.73    77.12
 15.391  15.391 (1.000)    49    120258                   55.35- 115.35    84.29
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                       CAS #: 56-23-5
 15.884  15.884 (1.032)   119      5577 0.04710  0.08054  80.00- 120.00   100.00(a)
 15.884  15.884 (1.032)   117      4268                   74.11- 134.11    76.53
-------------------------------------------------------------------------------
  116 Benzene                                    CAS #: 71-43-2
 16.207  16.207 (0.968)    78      6385 0.05428  0.09282  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      2726                    0.00-  53.00    42.69
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                      CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    219658 5.36111    5.361  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    104349                   22.67-  82.67    47.51
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                        CAS #: 540-36-3
 16.737  16.737 (1.000)   114    476422 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     73389                    0.00-  45.16    15.40
-------------------------------------------------------------------------------
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
19.298	19.298	(1.153)	98	462986	5.00988	5.010	80.00- 120.00	100.00
19.275	19.298	(1.152)	70	50536			0.00- 40.89	10.92
19.298	19.298	(1.153)	100	314043			40.09- 100.09	67.83
147 Toluene						CAS #: 108-88-3		
19.455	19.432	(1.162)	91	5115	0.03595	0.06147	80.00- 120.00	100.00(a)
19.410	19.432	(1.160)	92	2964			27.79- 87.79	57.95
* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
22.177	22.177	(1.000)	117	459756	5.00000		80.00- 120.00	100.00
22.177	22.177	(1.000)	82	225754			17.27- 77.27	49.10
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
23.856	23.856	(1.076)	174	322407	5.02026	5.020	80.00- 120.00	100.00
23.856	23.856	(1.076)	95	308436			66.74- 126.74	95.67
23.856	23.856	(1.076)	176	303778			67.47- 127.47	94.22

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: e020320.d
Lab Smp Id: 1701477B-18A
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 6.5"Hg-5psi

Calibration Date: 03-FEB-2017
Calibration Time: 07:59

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	142677	0.81
123 1,4-Difluorobenze	499834	299900	699768	476422	-4.68
163 Chlorobenzene-d5	467575	280545	654605	459756	-1.67

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	22.18	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-Feb-2017 09:16

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1701477B-18A
Level: LOW
Operator: ea
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 6.5"Hg-5psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.361	107.22	70-130
$ 146 Toluene-d8	5.000	5.010	100.20	70-130
$ 177 4-Bromofluorobenze	5.000	5.020	100.41	70-130

Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

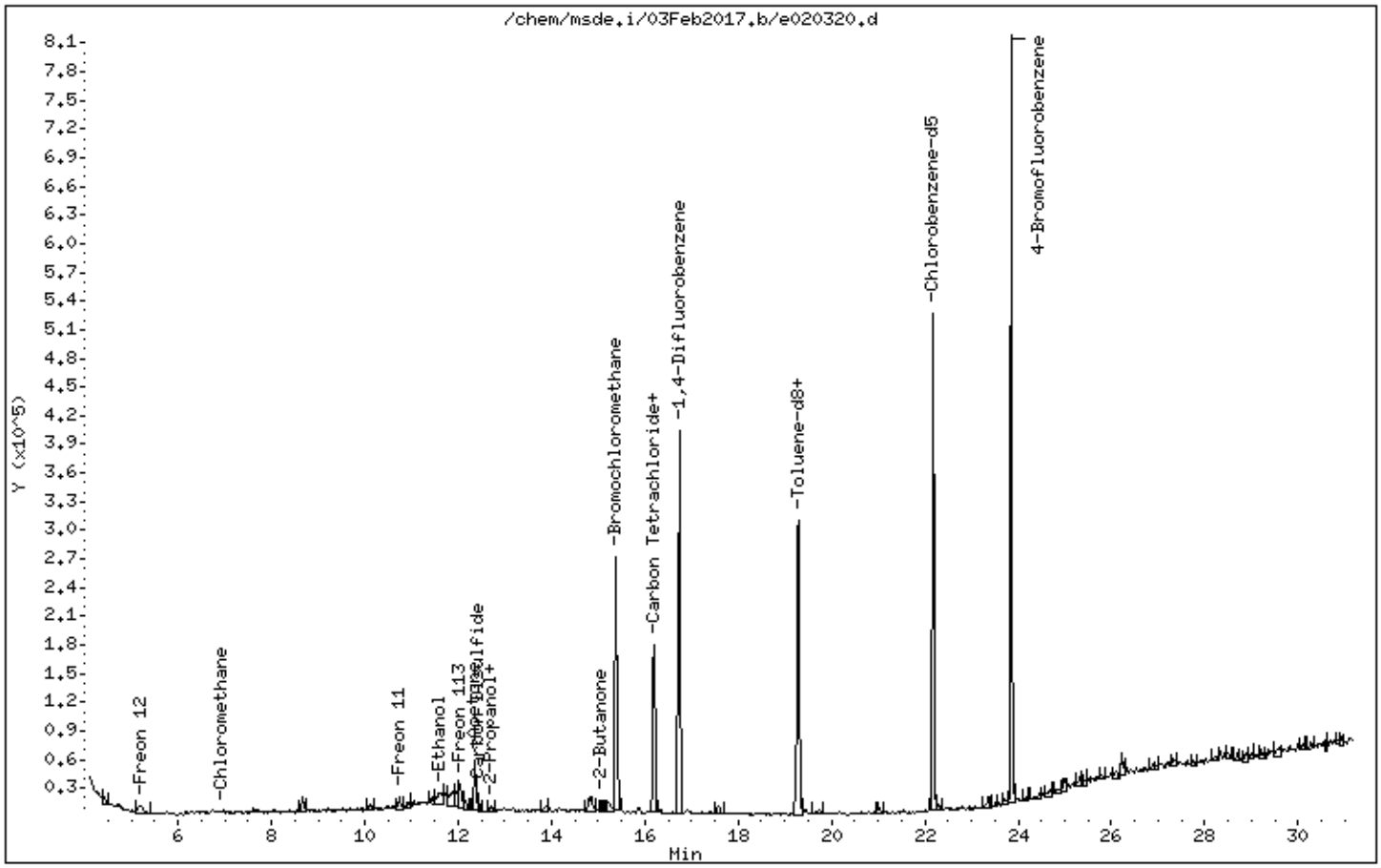
Instrument: msde.i

Sample Info: 250mL#34744

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

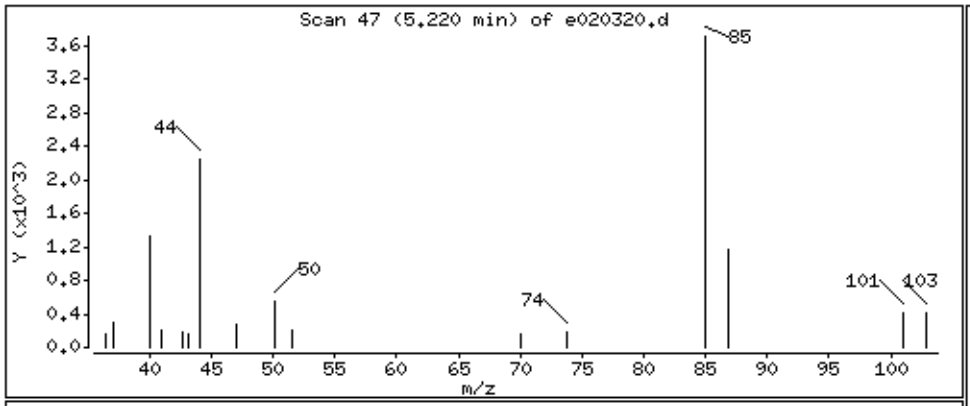
Operator: ea

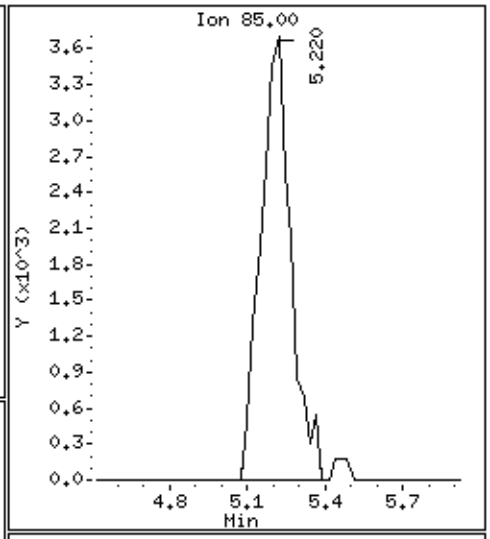
Column phase: RTX-624

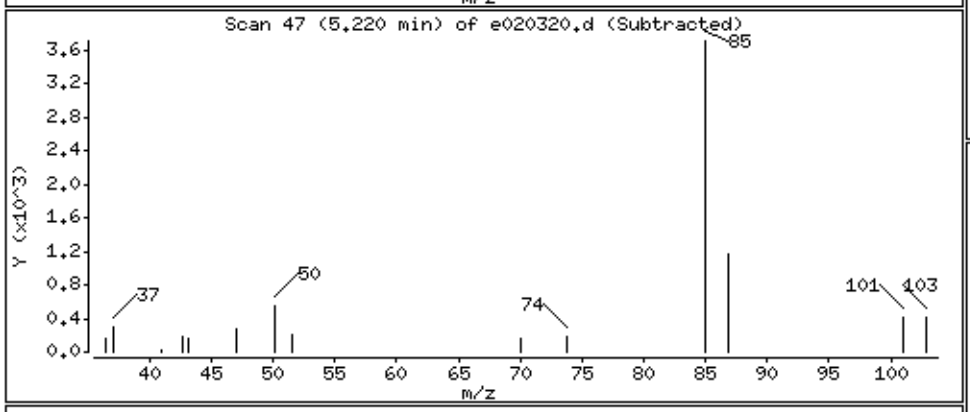
Column diameter: 0.32

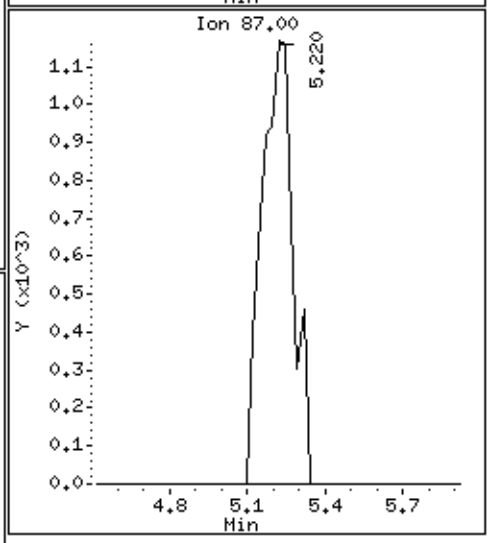
11 Freon 12

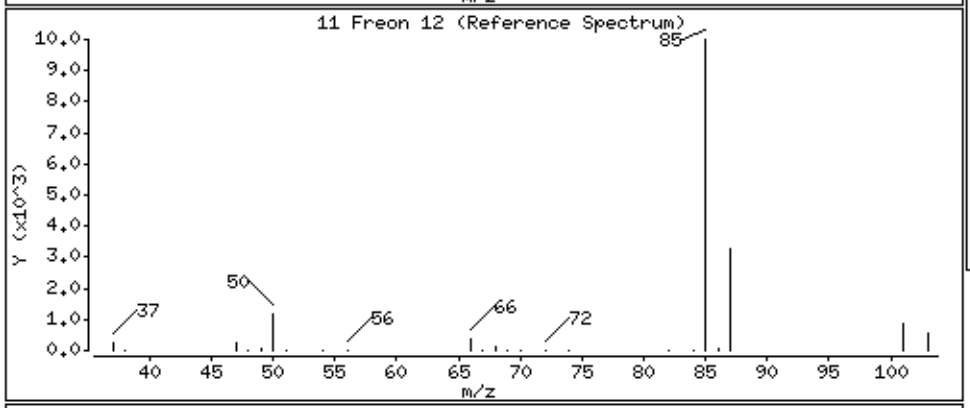
Concentration: 0.3999 PPBV

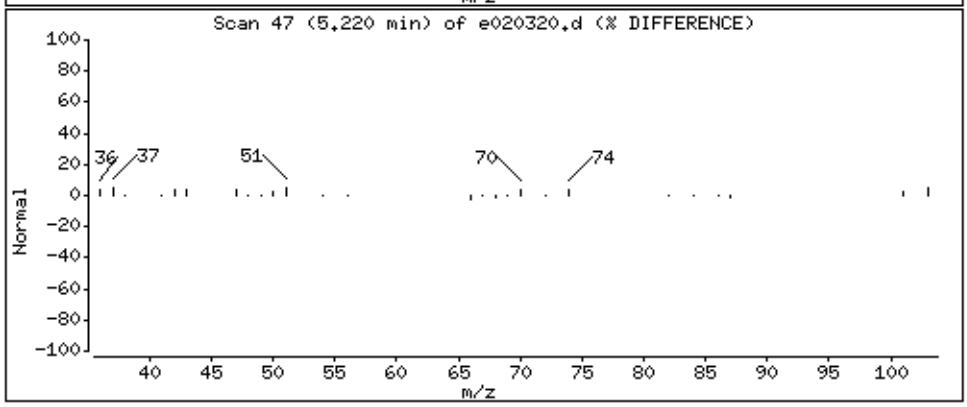












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

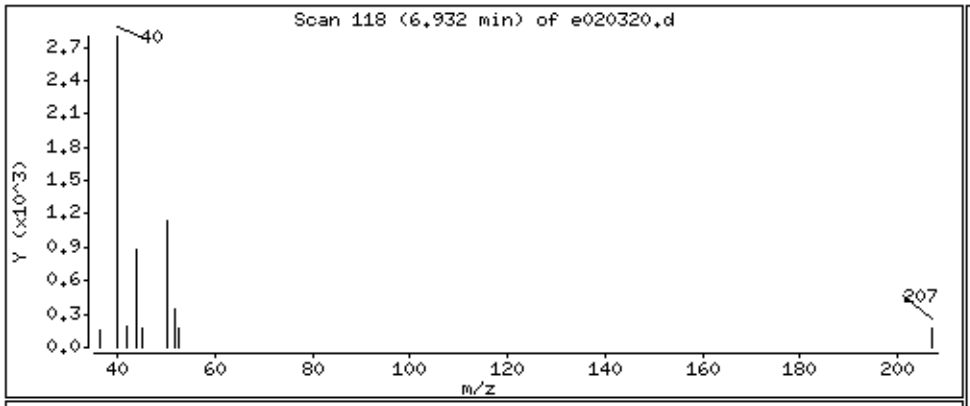
Operator: ea

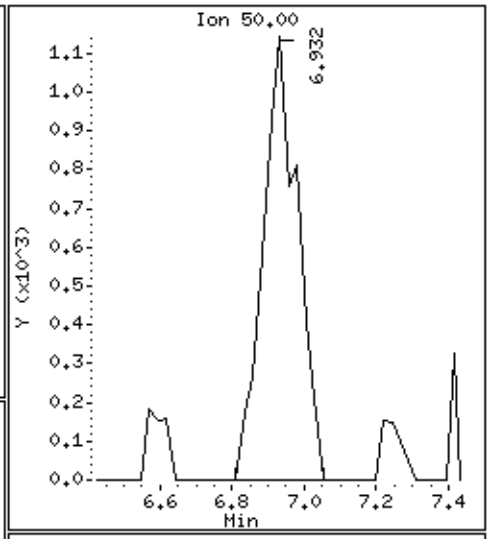
Column phase: RTX-624

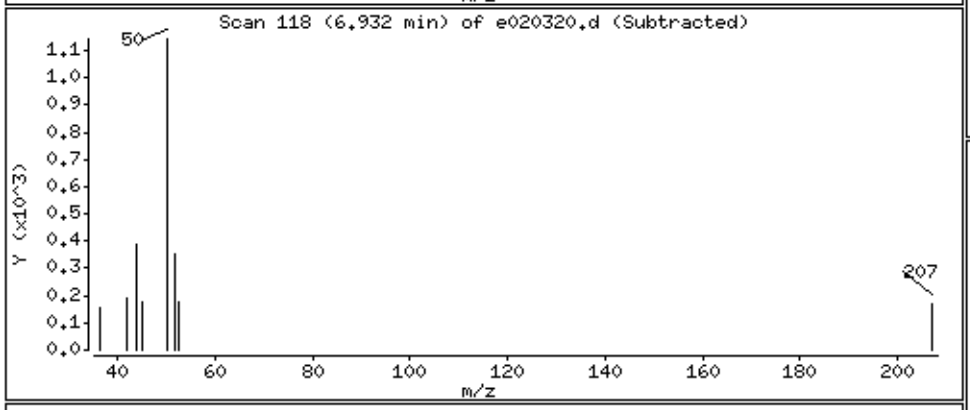
Column diameter: 0.32

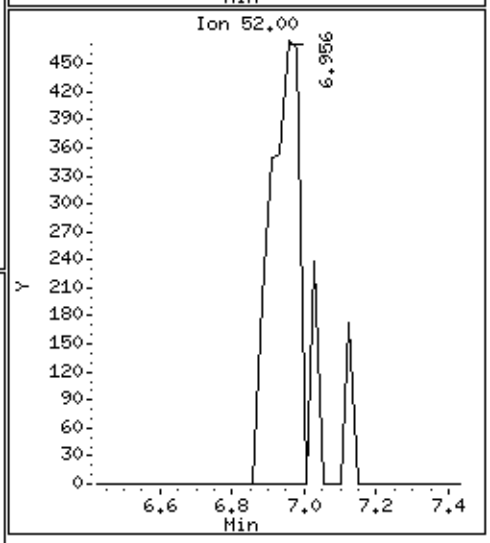
17 Chloromethane

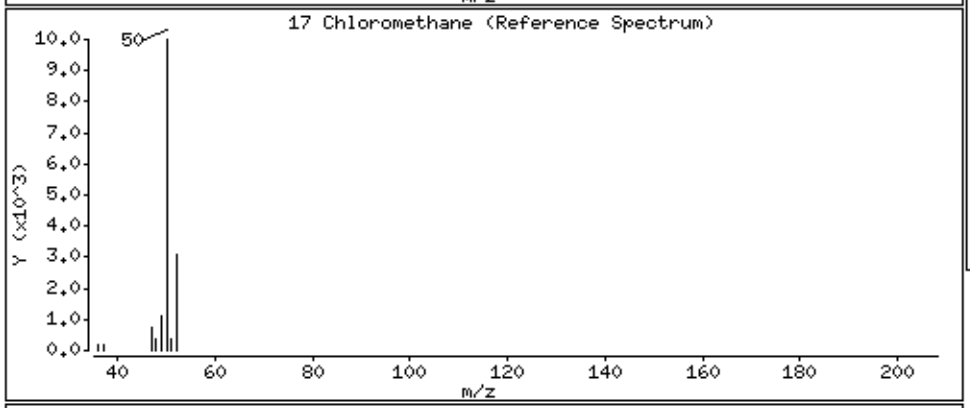
Concentration: 0.5529 PPBV

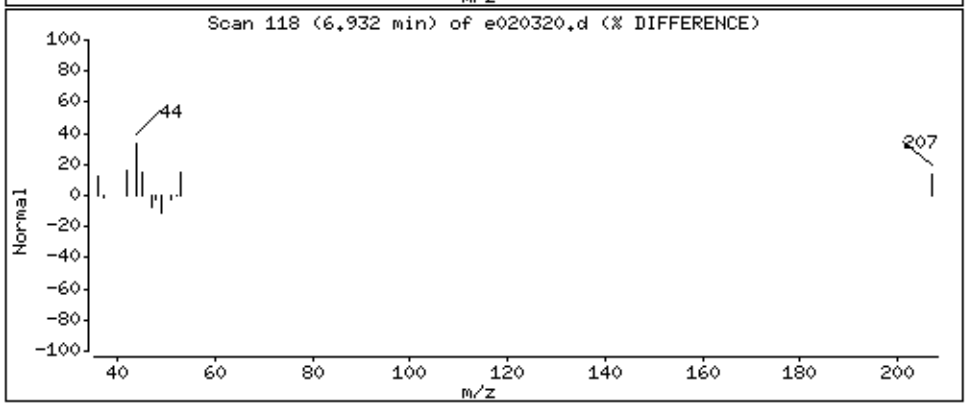












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

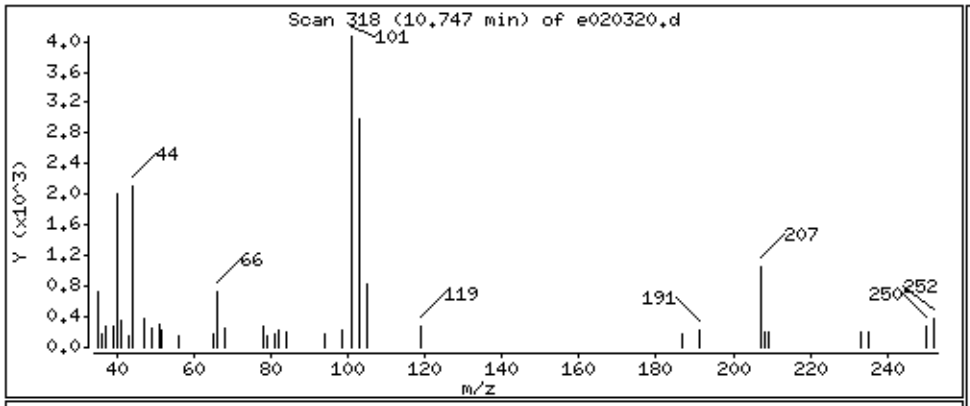
Operator: ea

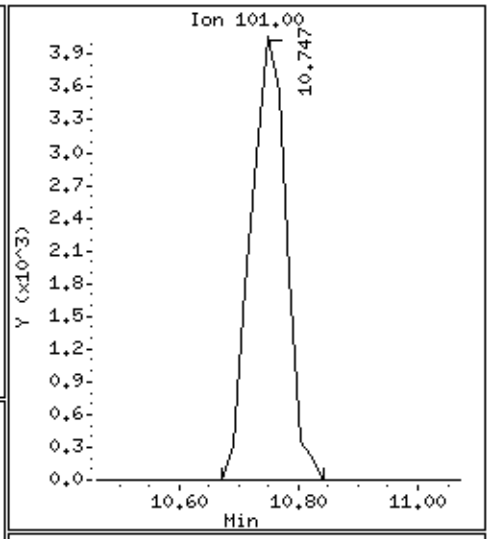
Column phase: RTX-624

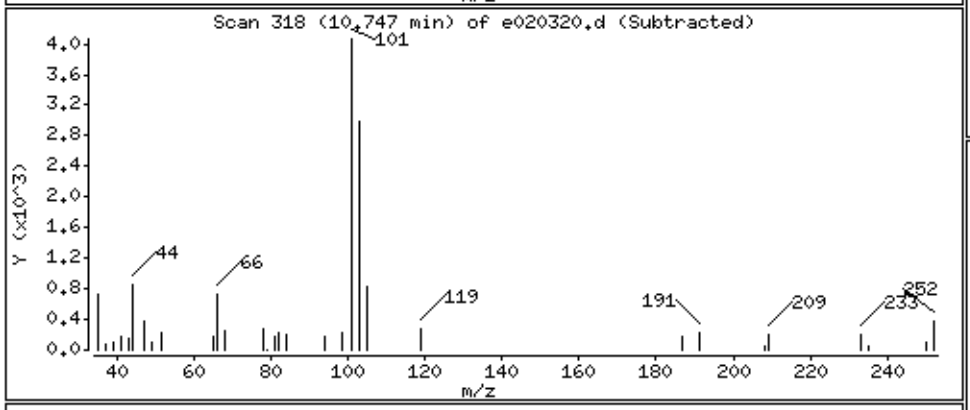
Column diameter: 0.32

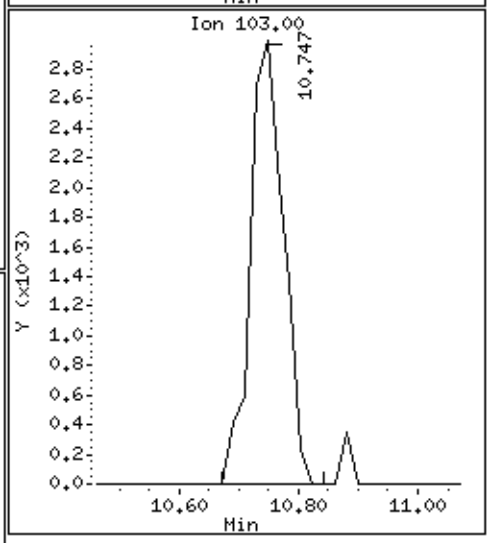
35 Freon 11

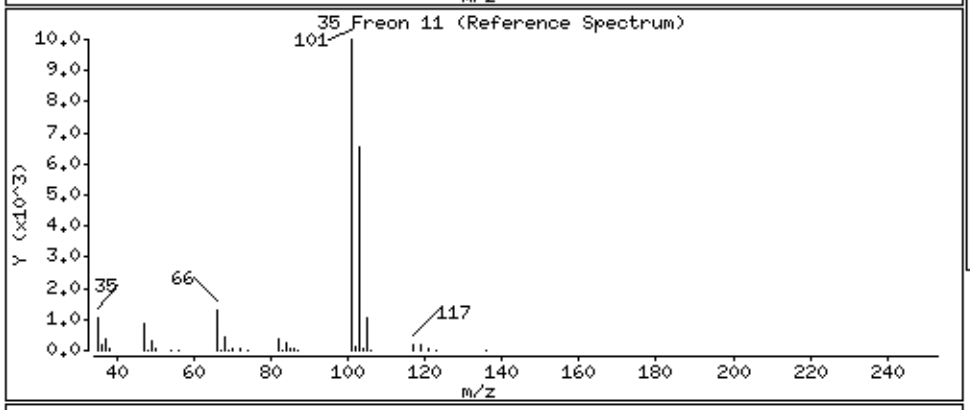
Concentration: 0.1995 PPBV

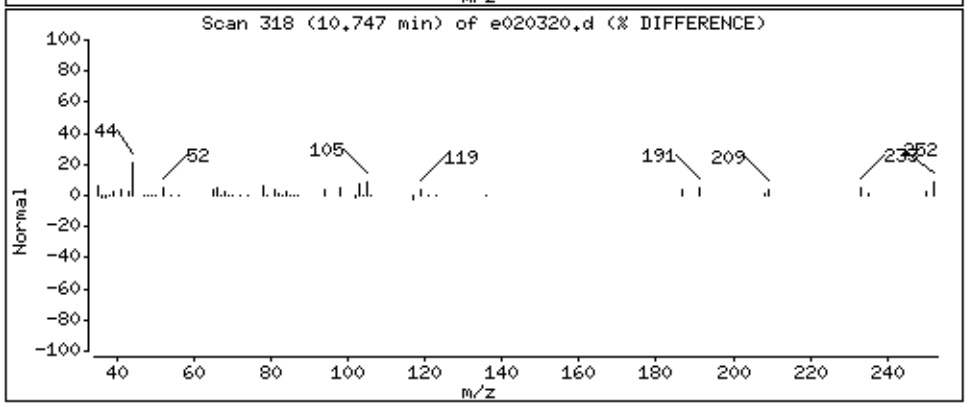












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

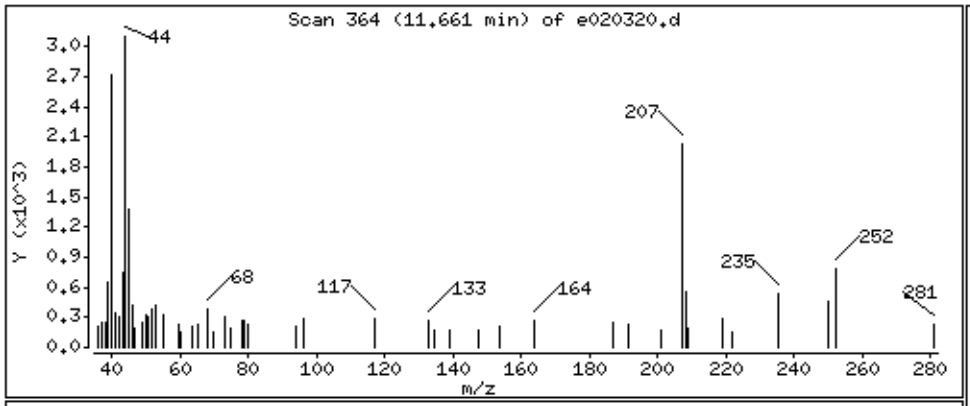
Operator: ea

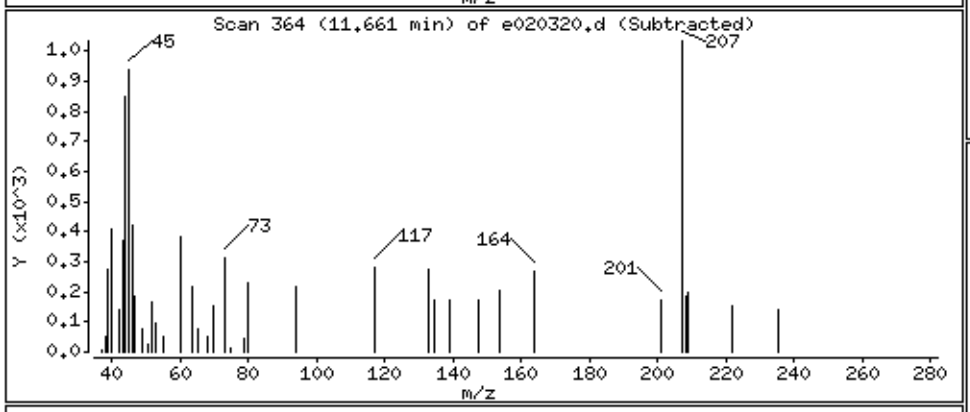
Column phase: RTX-624

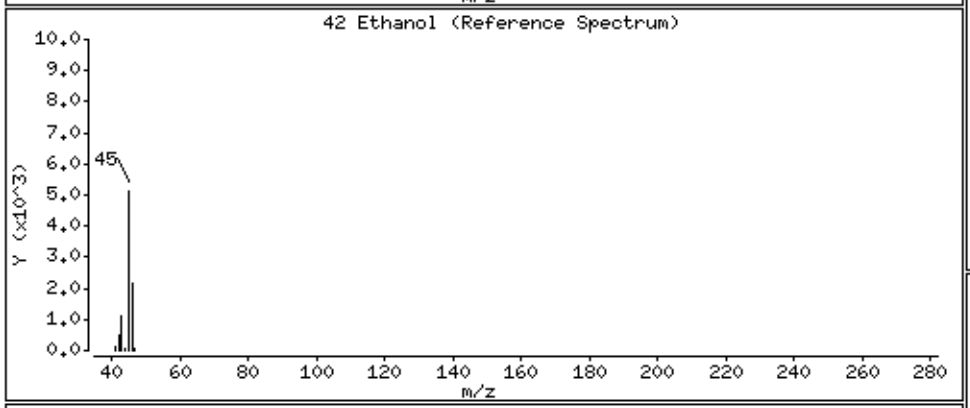
Column diameter: 0.32

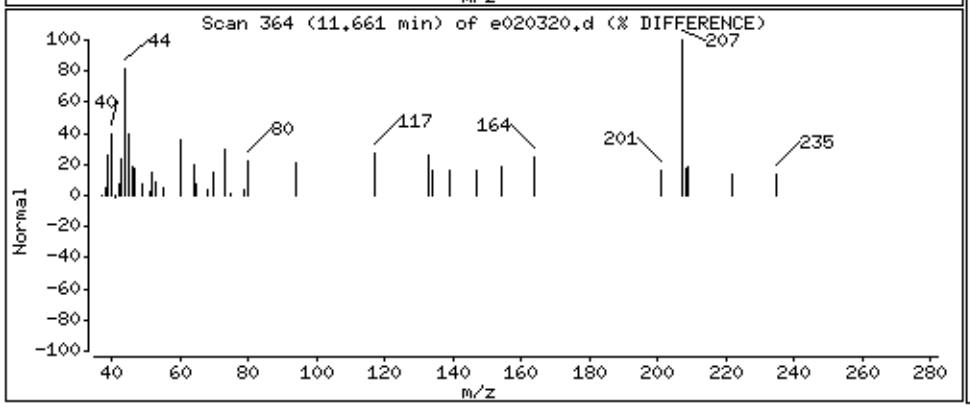
42 Ethanol

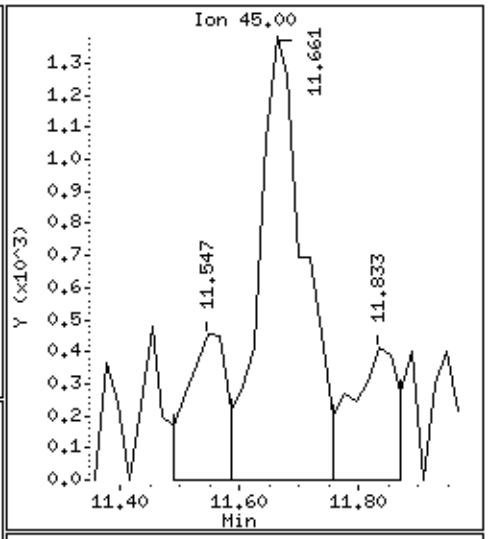
Concentration: 1.014 PPBV

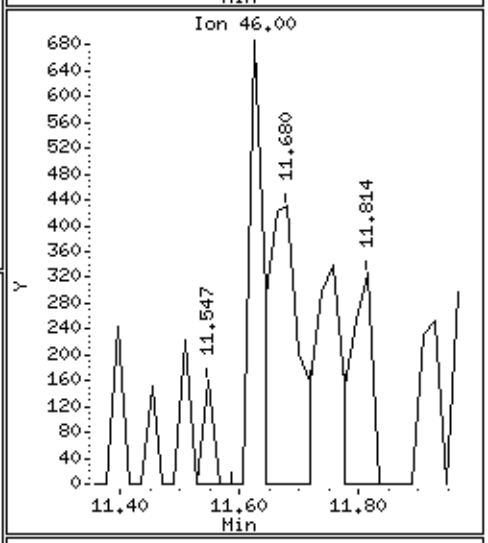


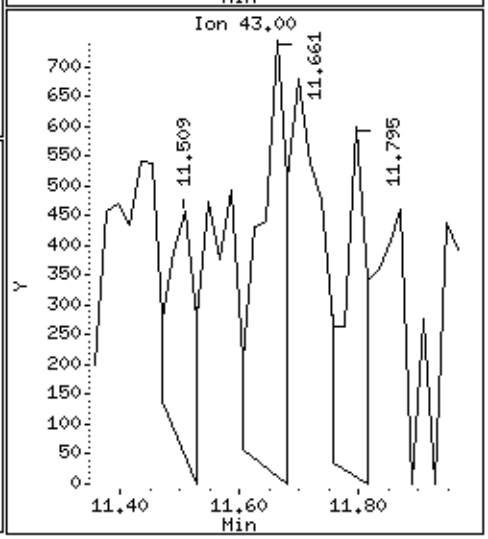












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

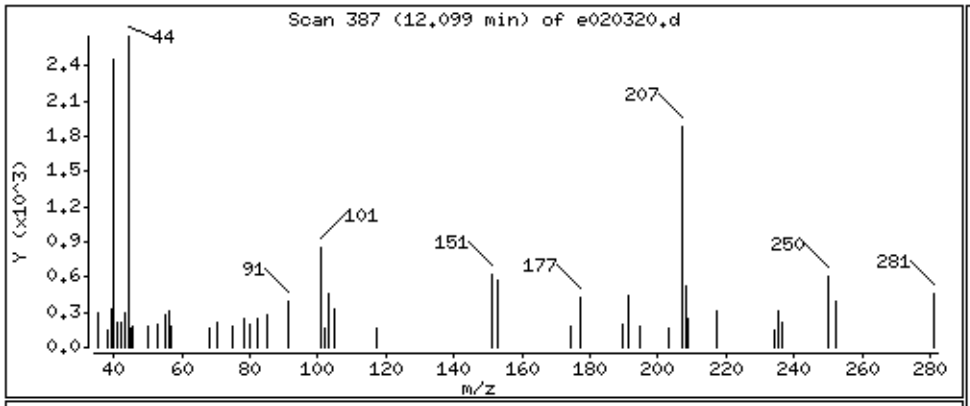
Operator: ea

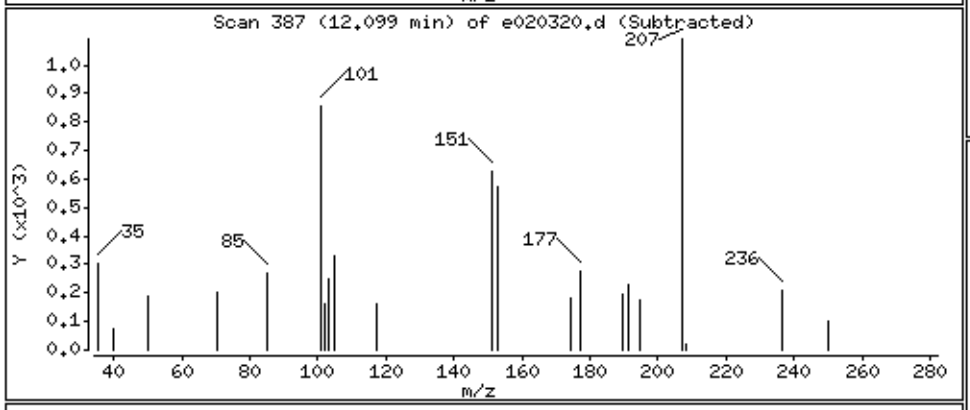
Column phase: RTX-624

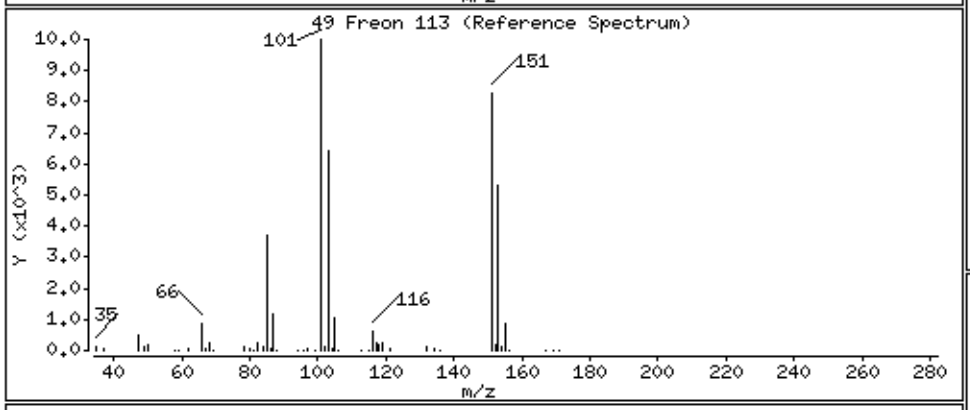
Column diameter: 0.32

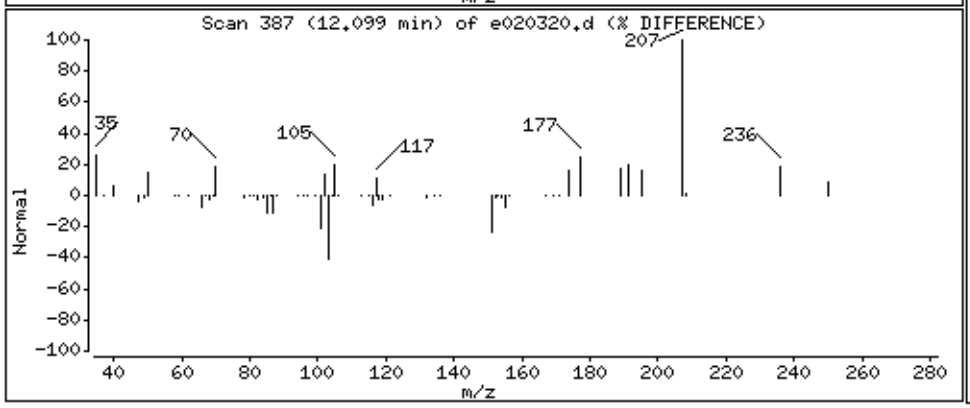
49 Freon 113

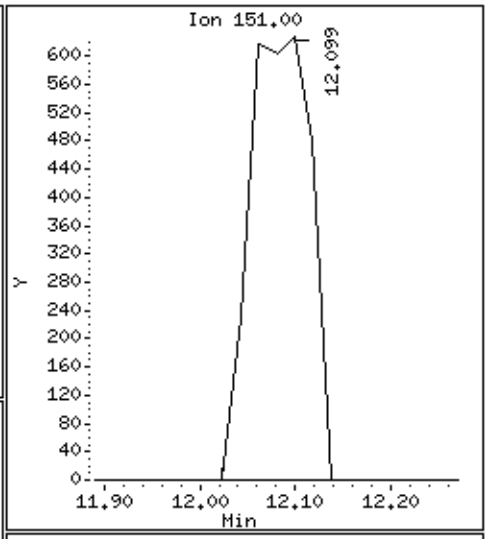
Concentration: 0.05071 PPBV

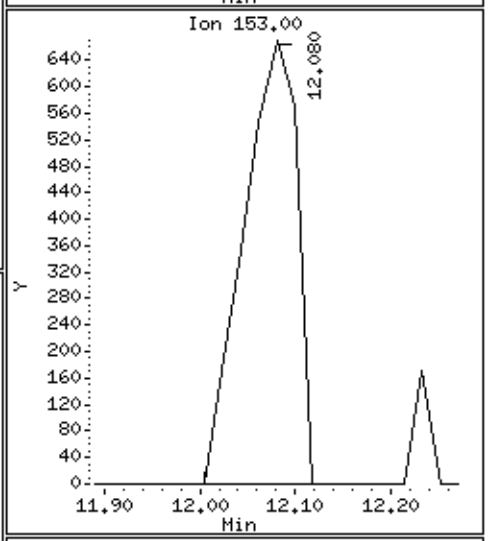


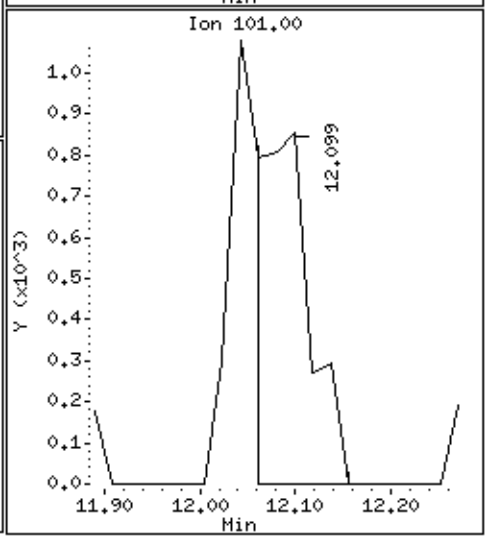












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

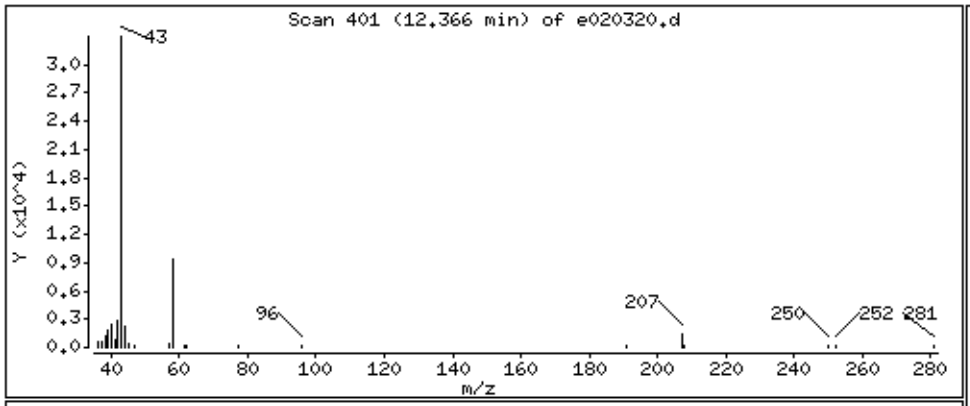
Operator: ea

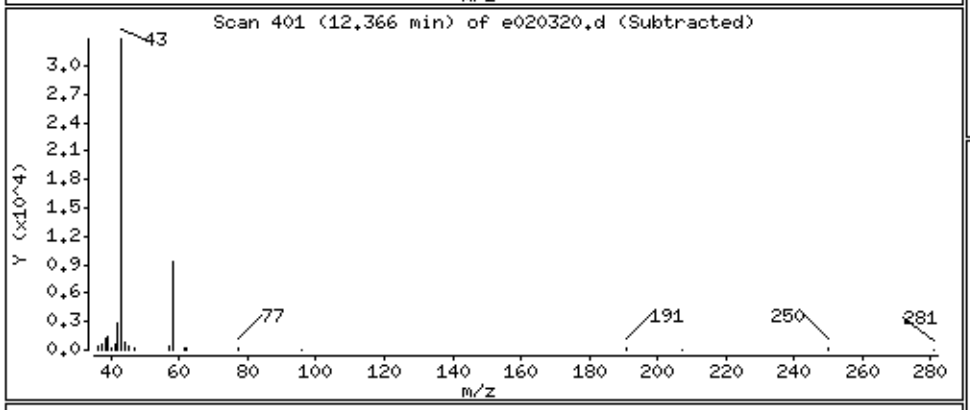
Column phase: RTX-624

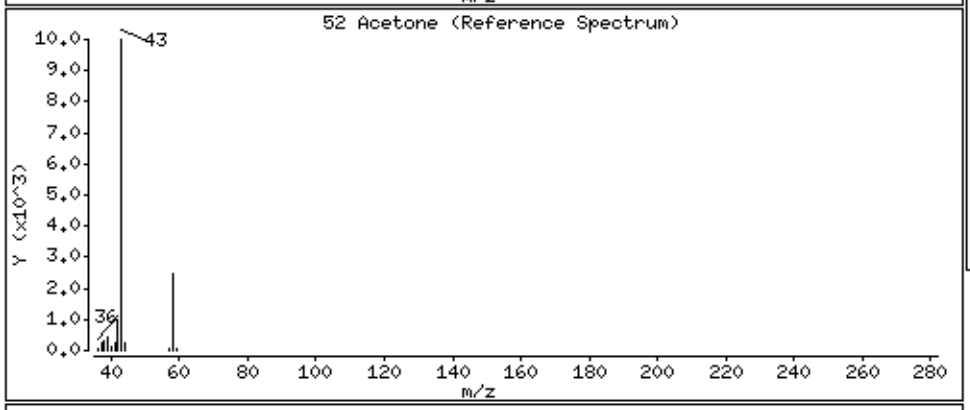
Column diameter: 0.32

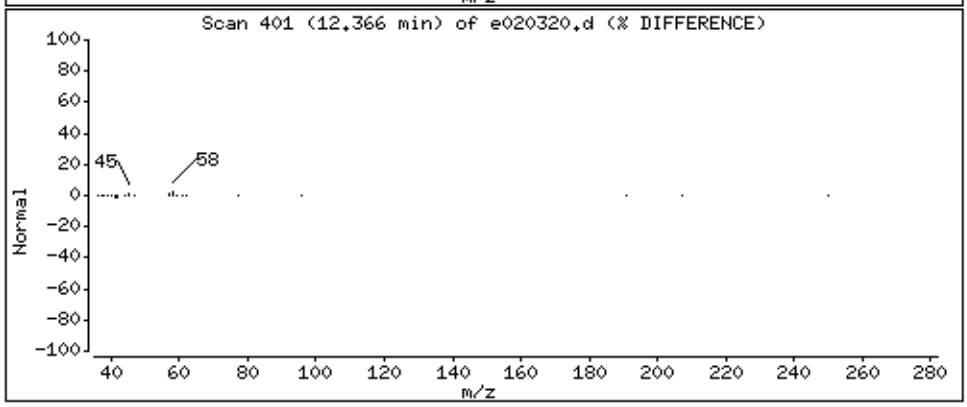
52 Acetone

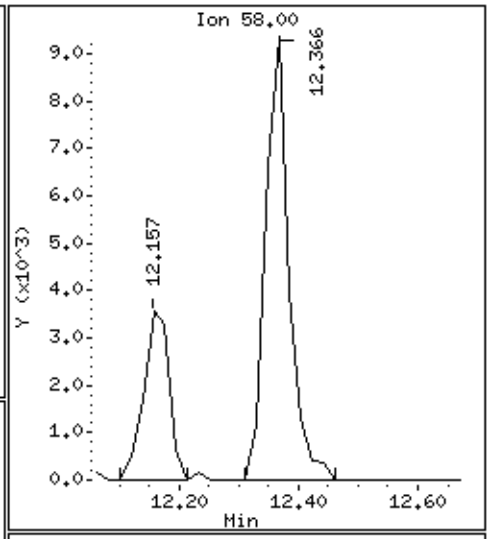
Concentration: 2.802 PPBV

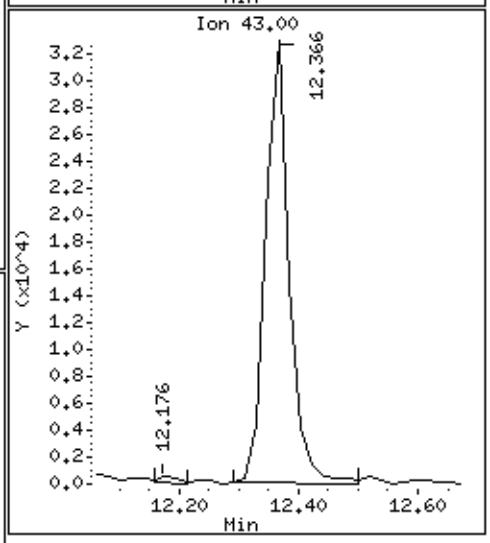












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

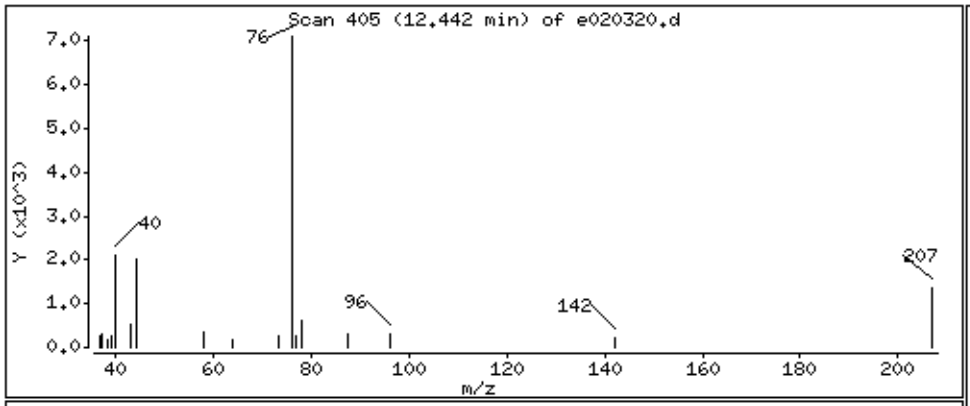
Operator: ea

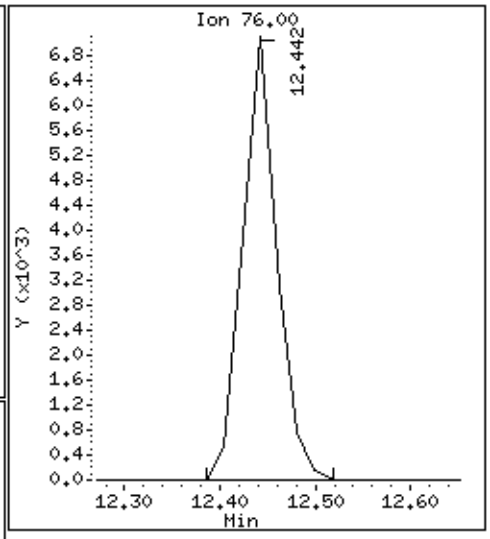
Column phase: RTX-624

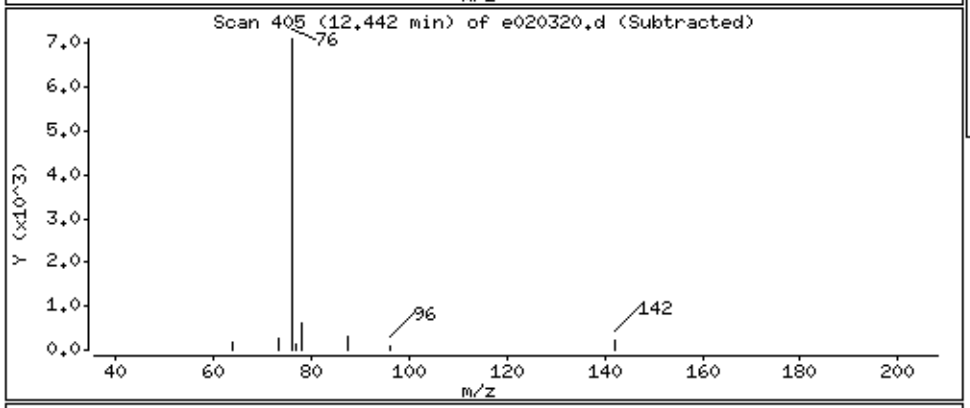
Column diameter: 0.32

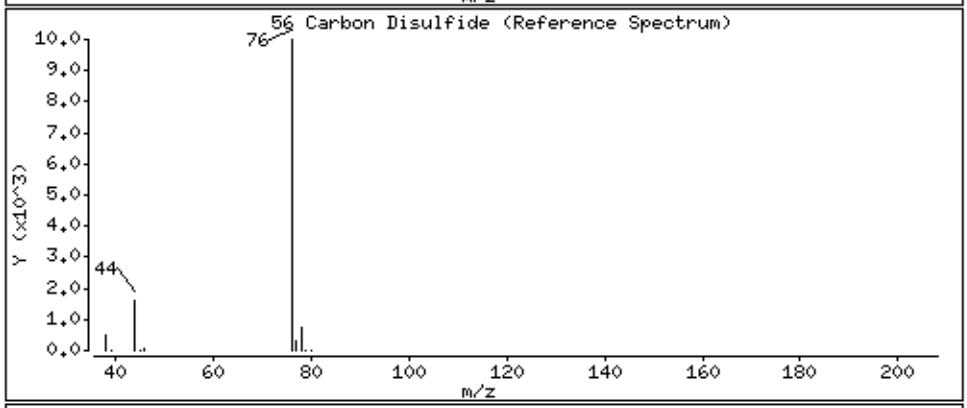
56 Carbon Disulfide

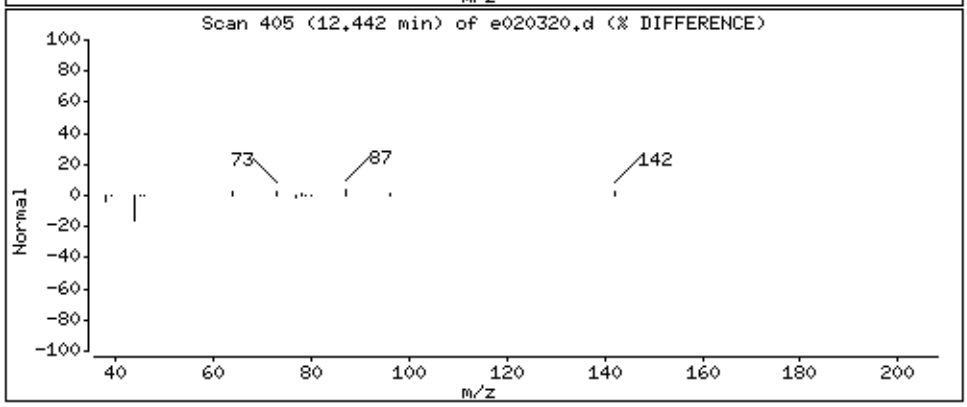
Concentration: 0.2721 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

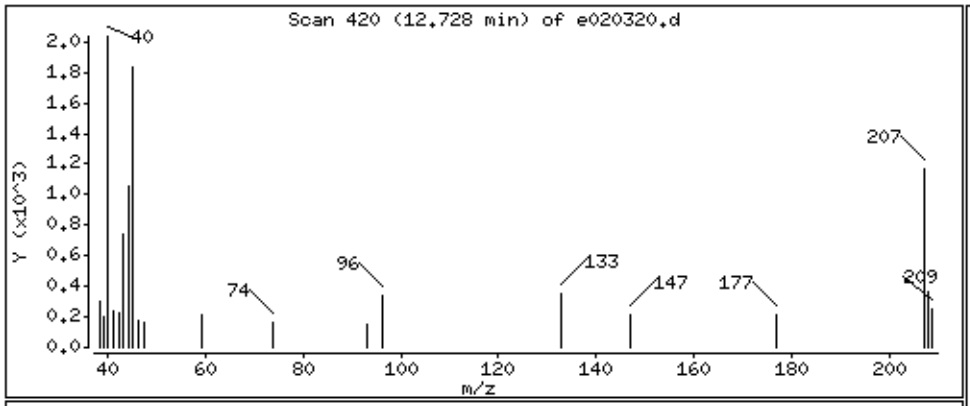
Operator: ea

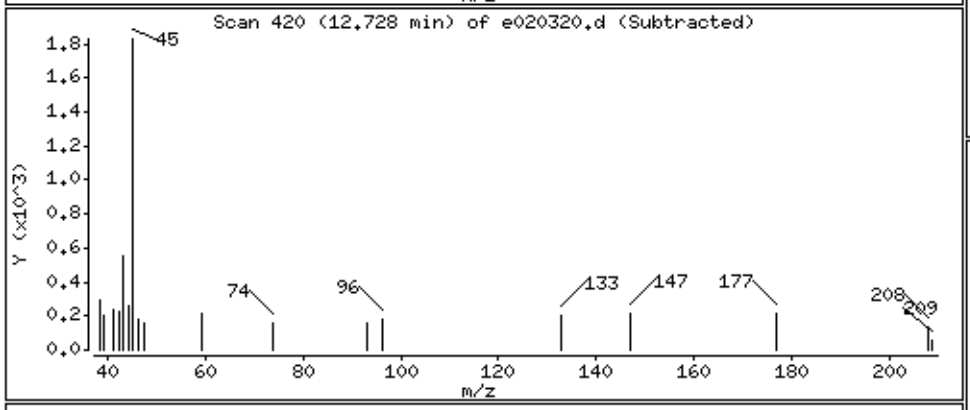
Column phase: RTX-624

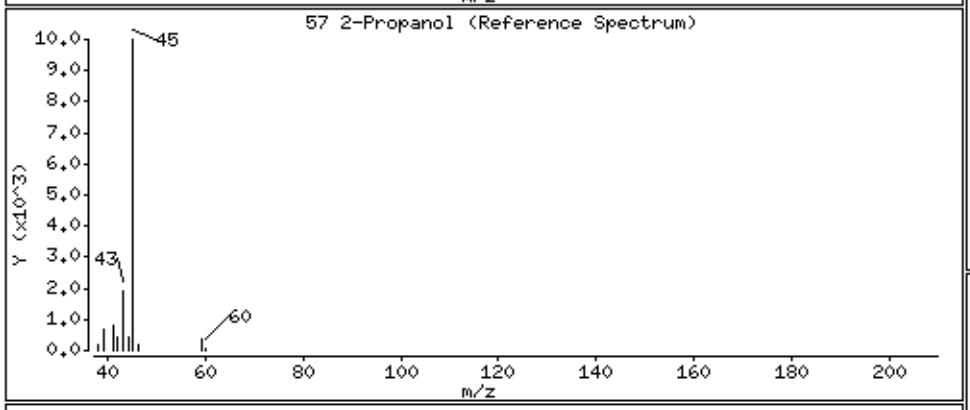
Column diameter: 0.32

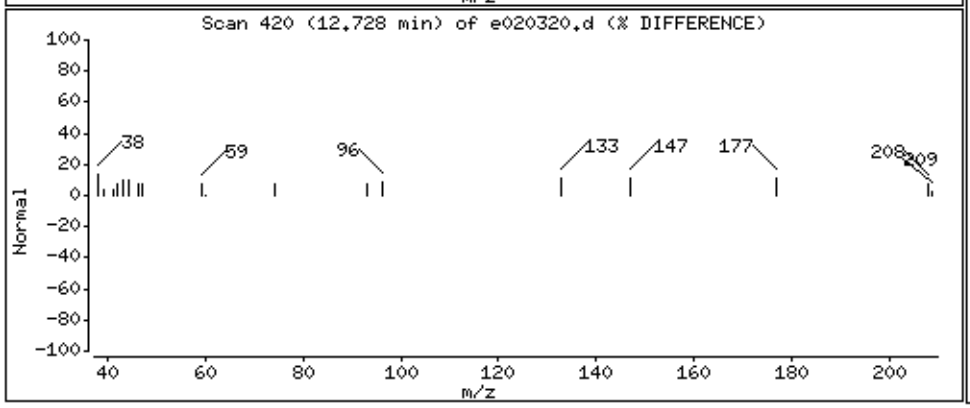
57 2-Propanol

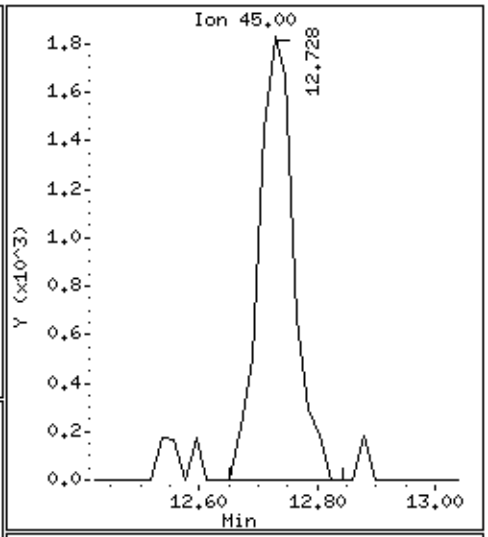
Concentration: 0.2551 PPBV

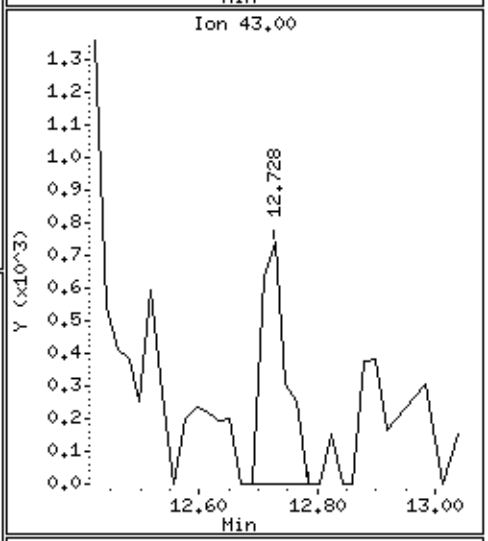


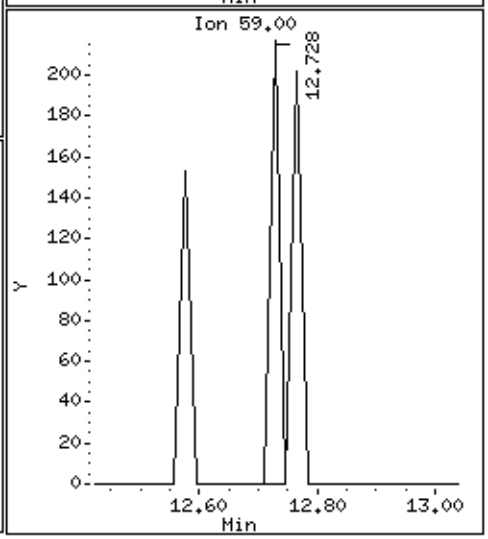












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

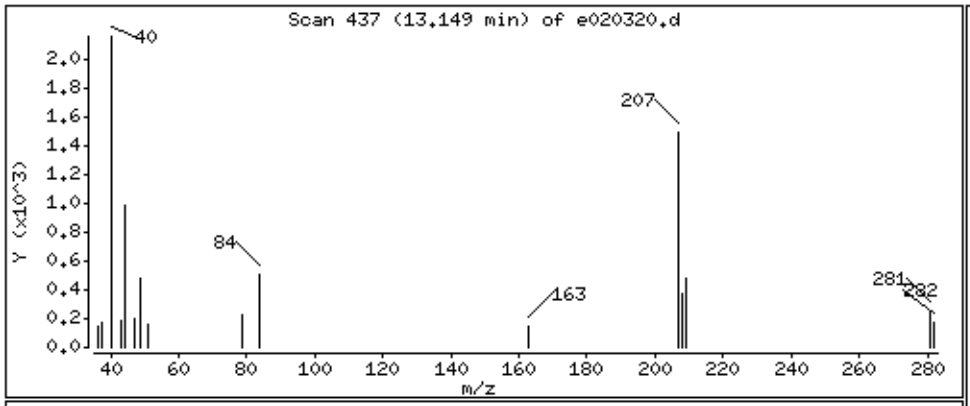
Operator: ea

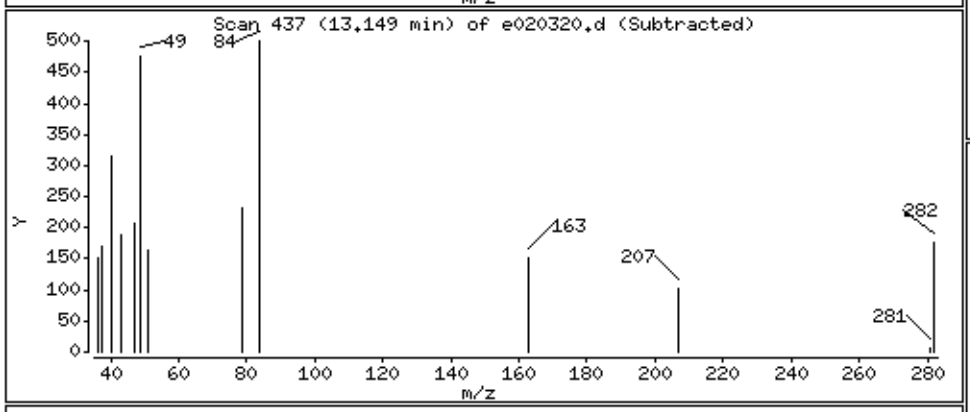
Column phase: RTX-624

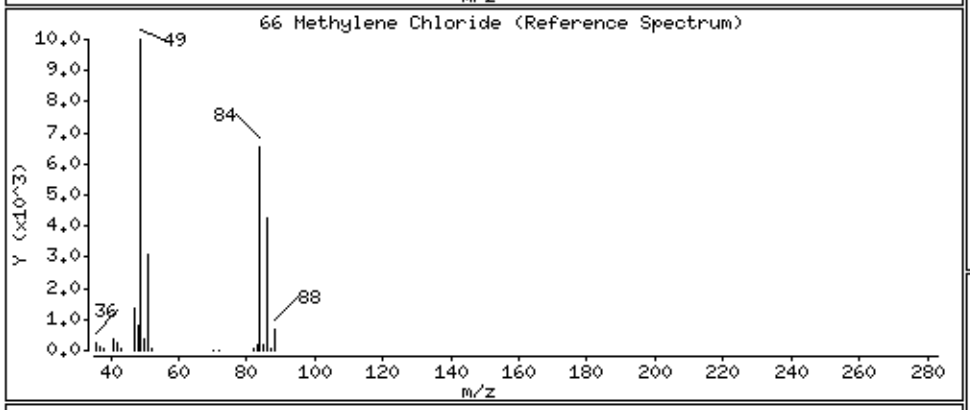
Column diameter: 0.32

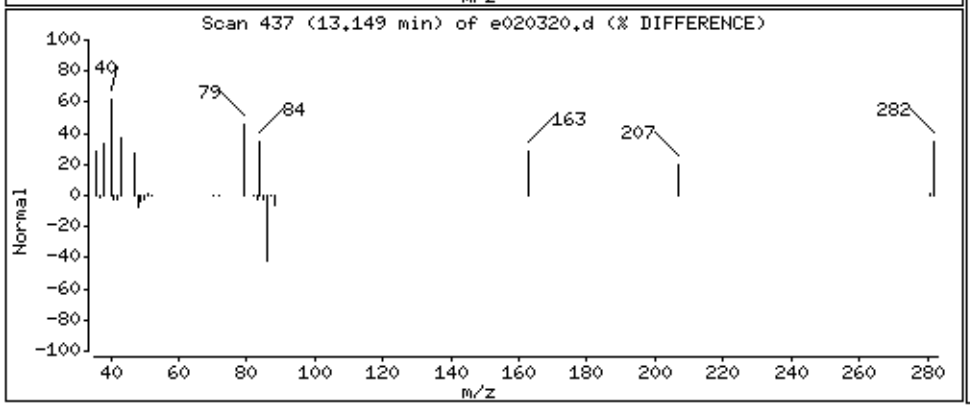
66 Methylene Chloride

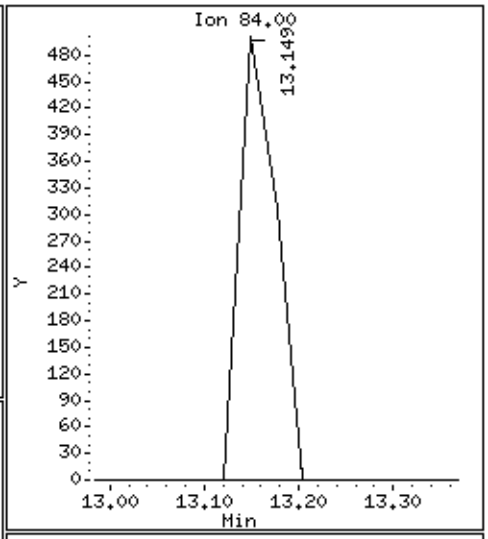
Concentration: 0.05726 PPBV

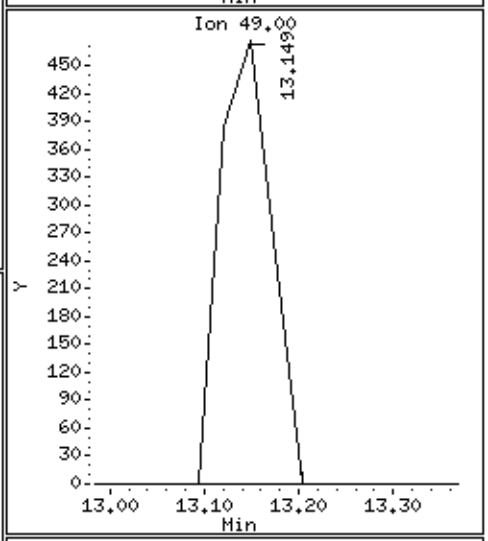


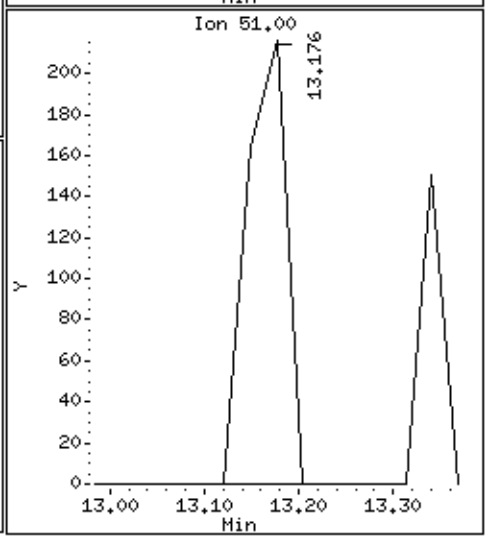












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

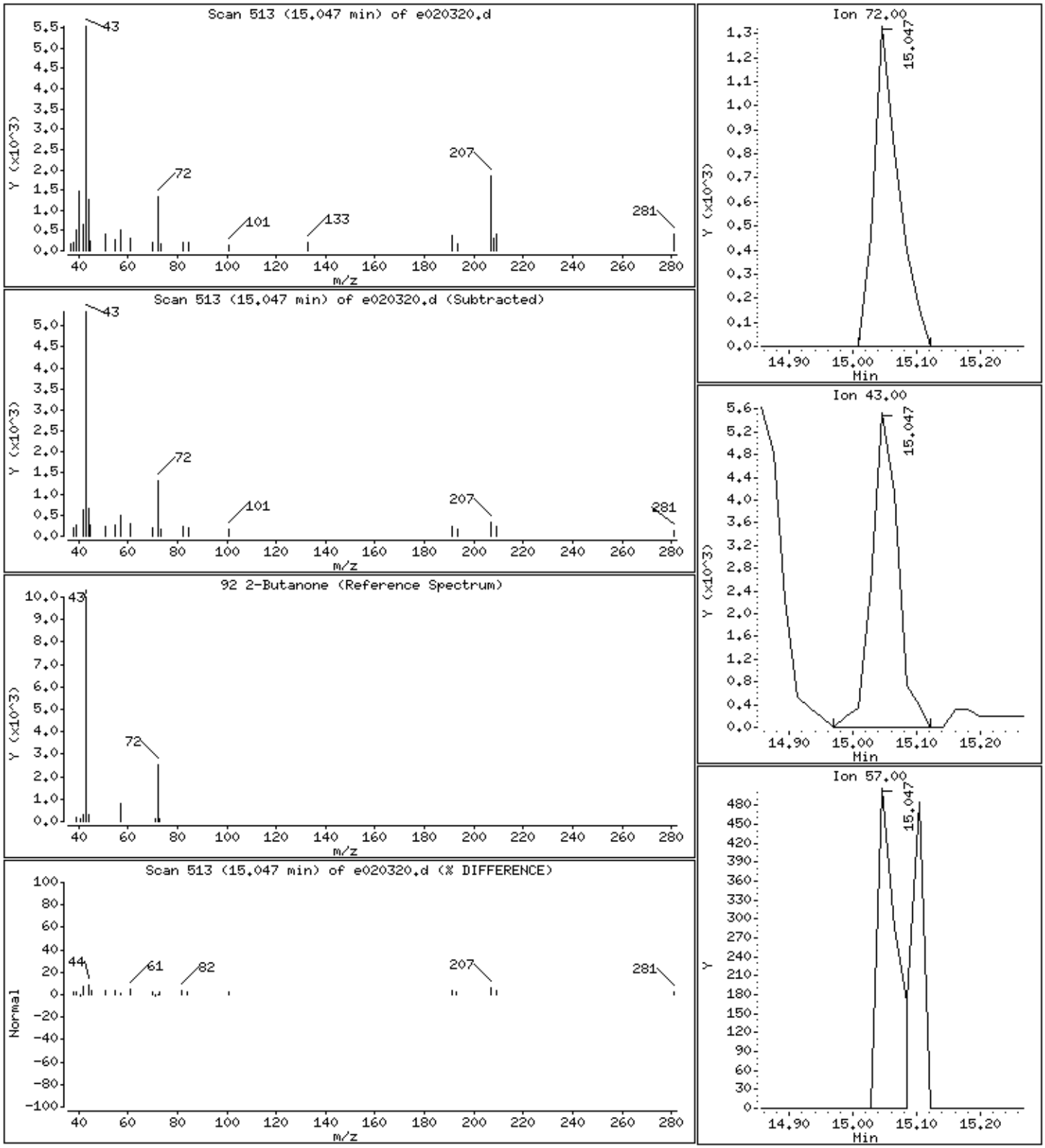
Operator: ea

Column phase: RTX-624

Column diameter: 0.32

92 2-Butanone

Concentration: 0.3502 PPBV



Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

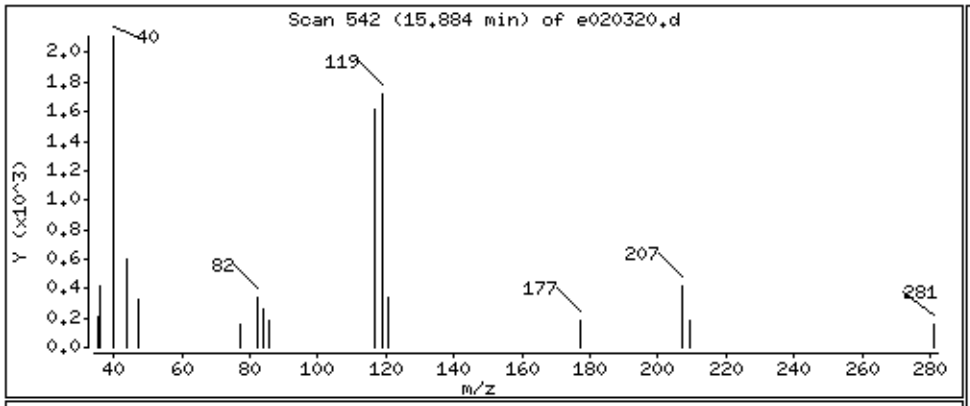
Operator: ea

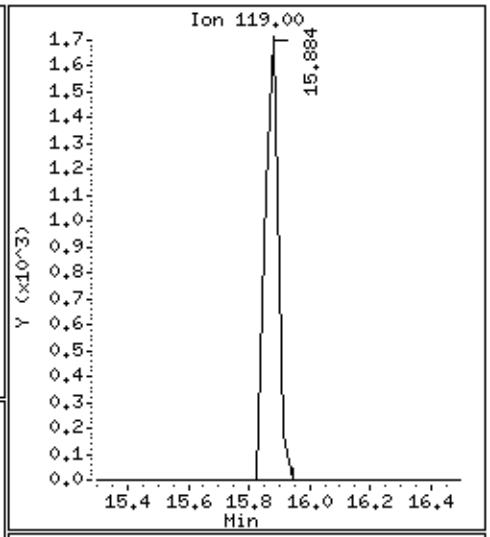
Column phase: RTX-624

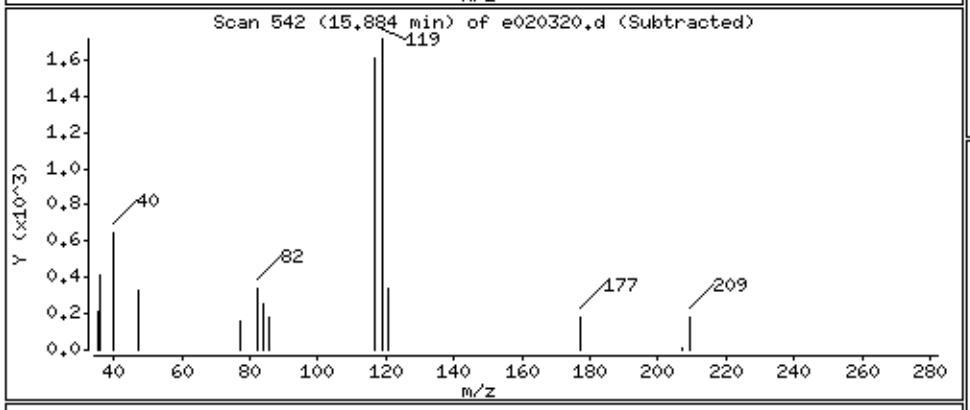
Column diameter: 0.32

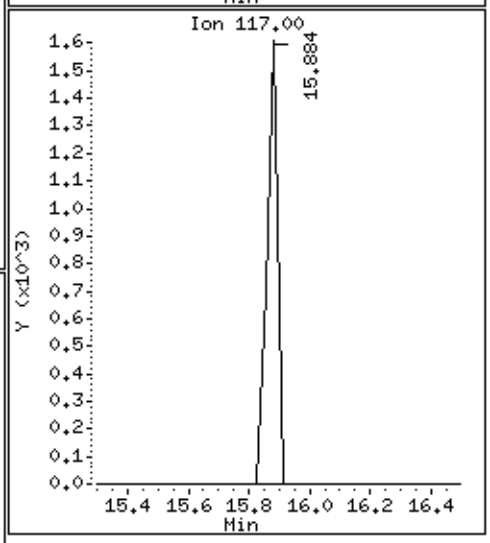
106 Carbon Tetrachloride

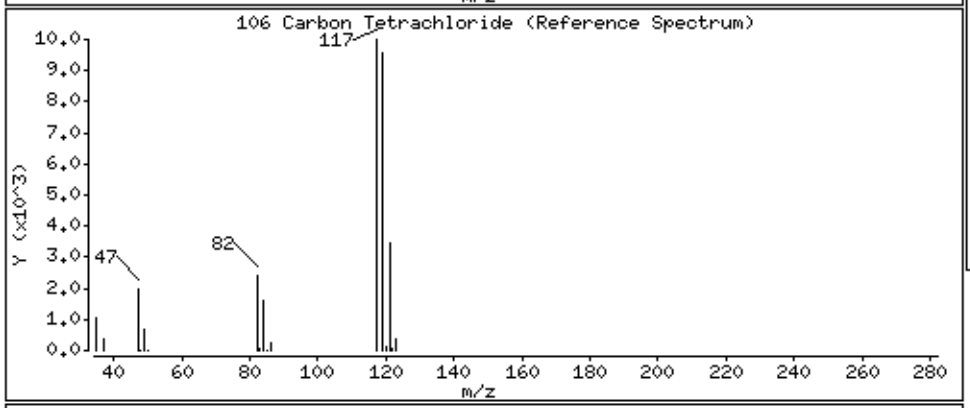
Concentration: 0.08054 PPBV

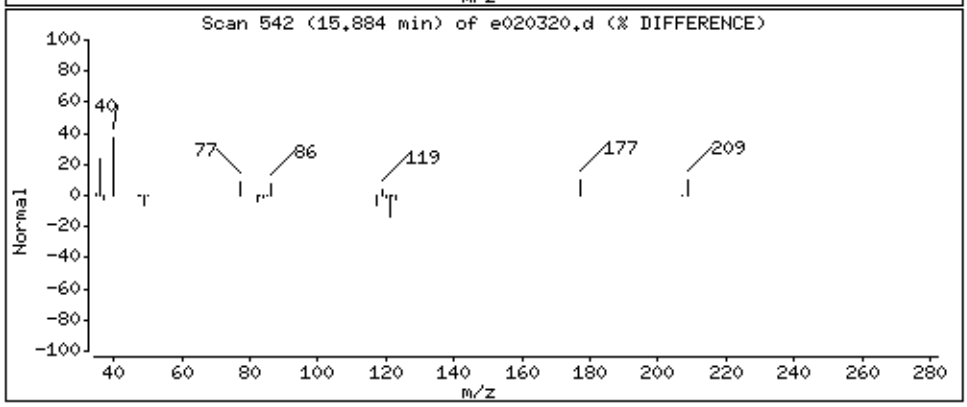












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

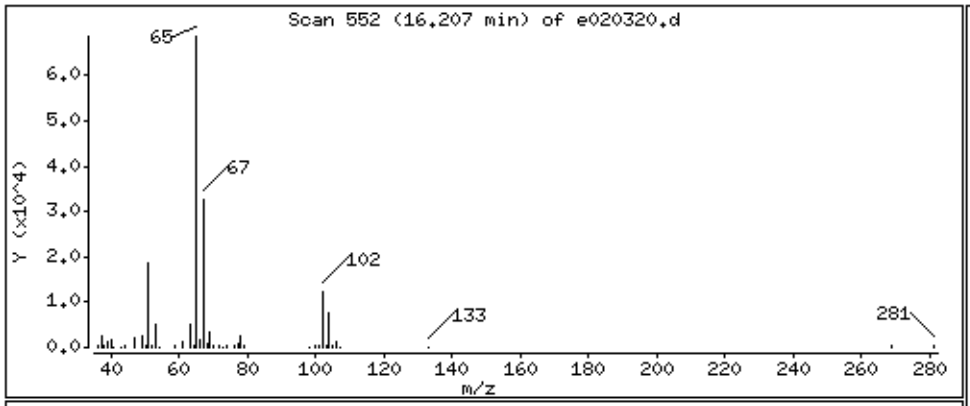
Operator: ea

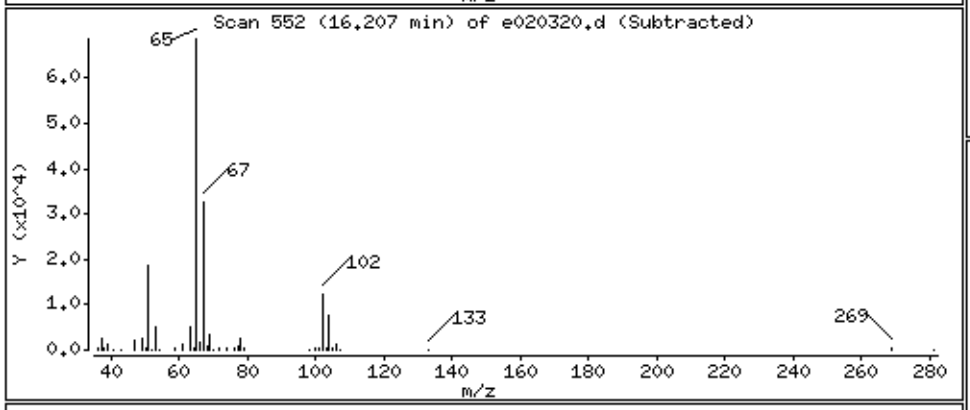
Column phase: RTX-624

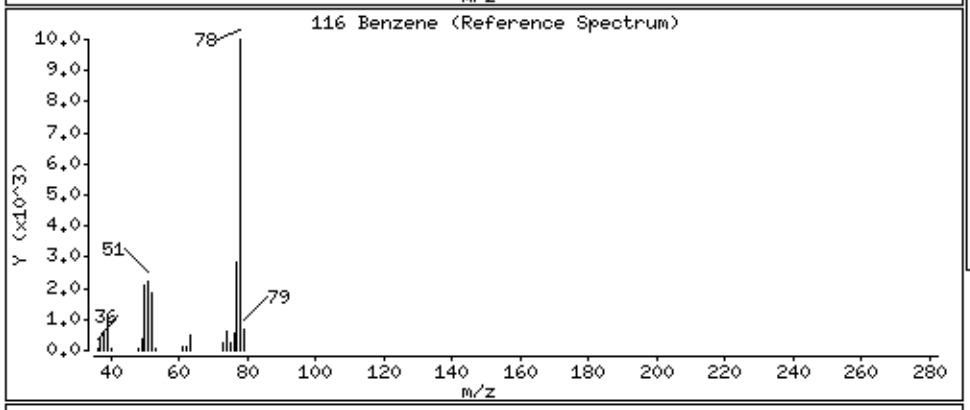
Column diameter: 0.32

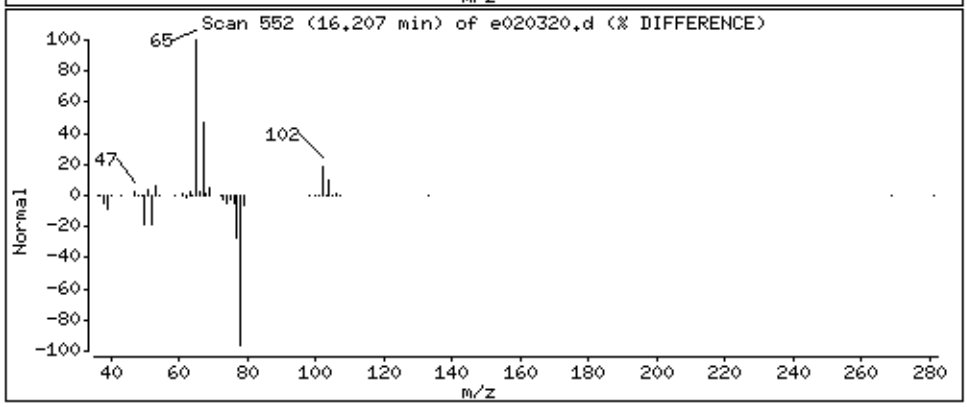
116 Benzene

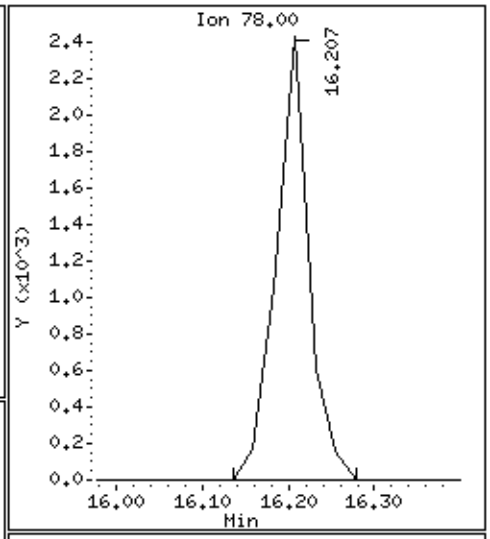
Concentration: 0.09282 PPBV

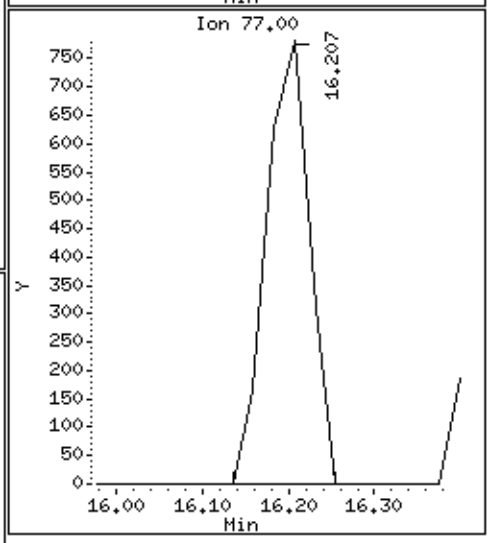












Data File: /chem/msde.i/03Feb2017.b/e020320.d

Date : 03-FEB-2017 21:48

Client ID:

Instrument: msde.i

Sample Info: 250mL#34744

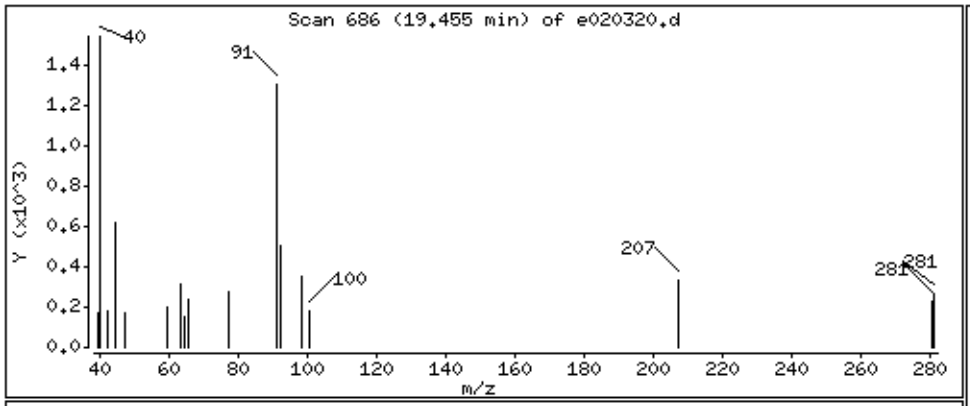
Operator: ea

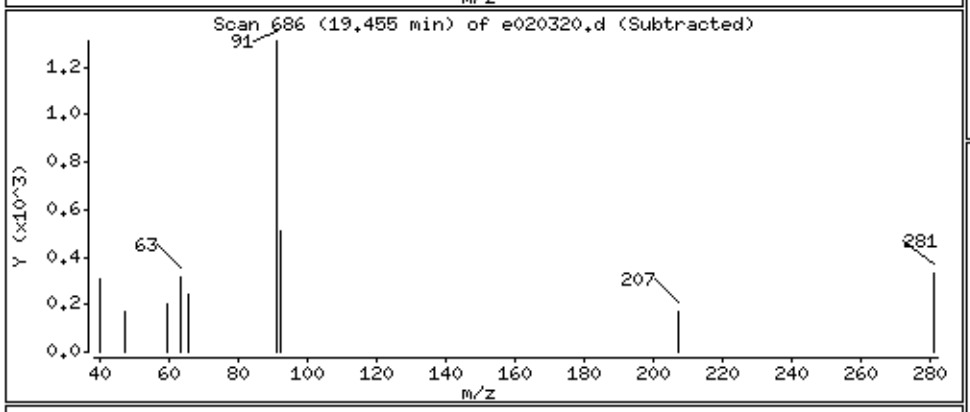
Column phase: RTX-624

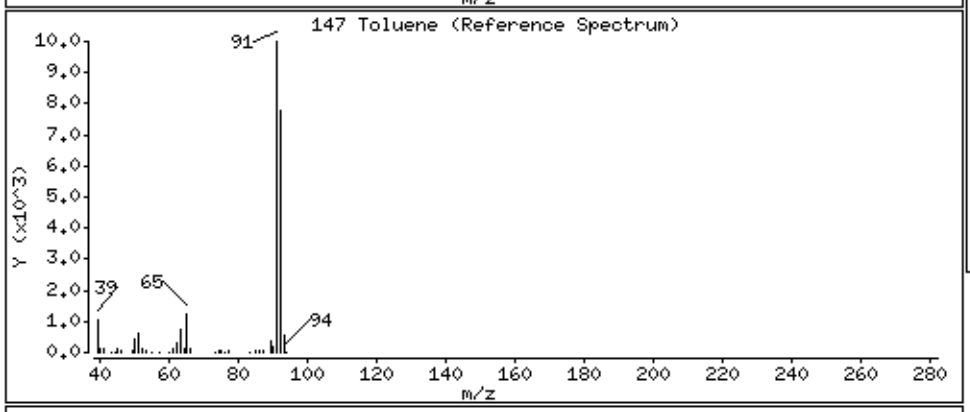
Column diameter: 0.32

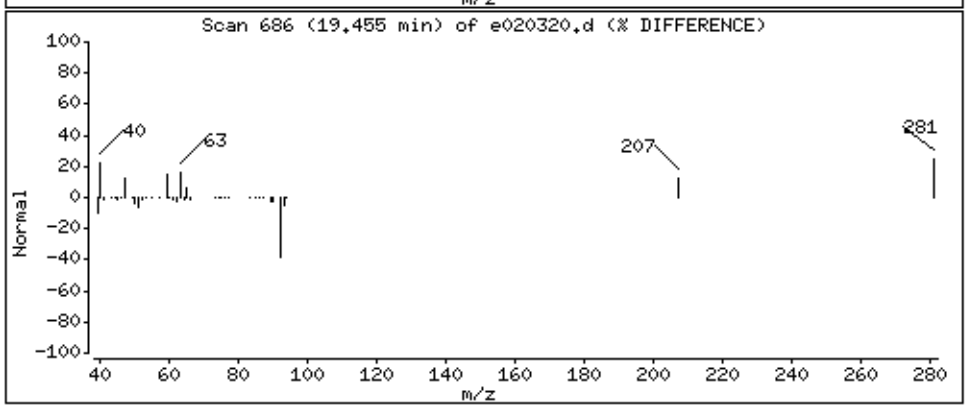
147 Toluene

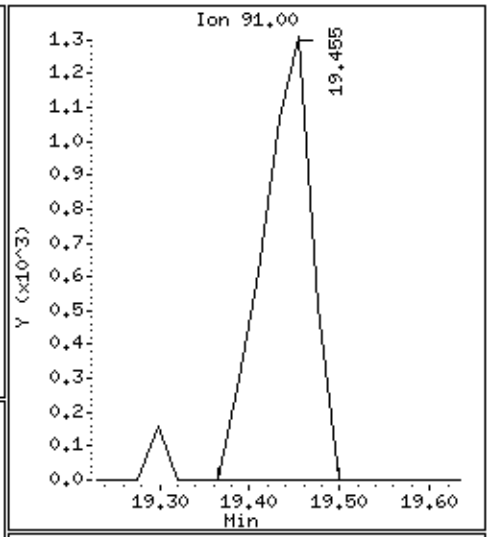
Concentration: 0.06147 PPBV

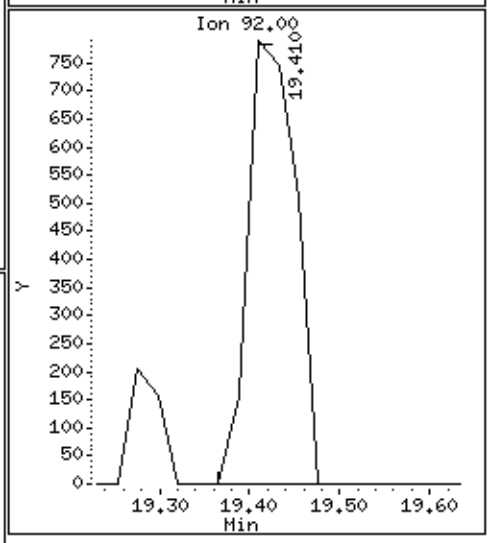












QC Results and Raw Data

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1701477B-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020306a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 11:08 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	0.079 J	1.9	0.31 J
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	0.19 J	1.2	0.45 J
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	0.13 J	1.6	0.42 J
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	0.034 J	0.32	0.11 J
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1701477B-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020306a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 11:08 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	0.038 J	3.7	0.28 J
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected
Naphthalene	0.50	Not Detected	2.6	Not Detected

J = Estimated value.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020306a.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 03-FEB-2017 11:08
Operator : ef Inst ID: msde.i
Smp Info : 250mL# 34764
Misc Info : Humid
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 15:24 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO15NMDL.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
29 Bromomethane						CAS #: 74-83-9	
9.586	9.510 (0.623)	94	2431	0.07900	0.07900	80.00- 120.00	100.00(a)
9.586	9.510 (0.623)	96	3149			64.26- 124.26	129.55
52 Acetone						CAS #: 67-64-1	
12.366	12.366 (0.803)	58	2733	0.19042	0.1904	80.00- 120.00	100.00(a)
12.385	12.366 (0.805)	43	11129			344.13- 404.13	407.14
56 Carbon Disulfide						CAS #: 75-15-0	
12.461	12.461 (0.810)	76	13303	0.13400	0.1340	80.00- 120.00	100.00(a)
* 98 Bromochloromethane						CAS #: 74-97-5	
15.391	15.391 (1.000)	130	126442	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	99728			46.73- 106.73	78.87
15.391	15.391 (1.000)	49	102504			55.35- 115.35	81.07
116 Benzene						CAS #: 71-43-2	
16.207	16.207 (0.968)	78	3656	0.03402	0.03402	80.00- 120.00	100.00(a)
16.207	16.207 (0.968)	77	1416			0.00- 53.00	38.74

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
16.207	16.207 (1.053)	65	194179	5.34777	5.348	80.00- 120.00	100.00
16.207	16.207 (1.053)	67	98704			22.67- 82.67	50.83
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
16.737	16.737 (1.000)	114	435247	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	68344			0.00- 45.16	15.70
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.298	19.298 (1.153)	98	410302	4.85981	4.860	80.00- 120.00	100.00
19.298	19.298 (1.153)	70	47543			0.00- 40.89	11.59
19.298	19.298 (1.153)	100	271822			40.09- 100.09	66.25
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	422412	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	209859			17.27- 77.27	49.68
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	288783	4.89423	4.894	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	270267			66.74- 126.74	93.59
23.856	23.856 (1.076)	176	278996			67.47- 127.47	96.61
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	2835	0.03831	0.03831	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	2644			63.70- 123.70	93.26

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: e020306a.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: Humid

Calibration Date: 03-FEB-2017
Calibration Time: 07:59
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	126442	-10.66
123 1,4-Difluorobenze	499834	299900	699768	435247	-12.92
163 Chlorobenzene-d5	467575	280545	654605	422412	-9.66

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	22.18	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: 03-Feb-2017 15:25

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ef
Data Type: MS DATA
SampleType: BLANK
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: TO15NMDL.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	5.348	106.96	70-130
$ 146 Toluene-d8	5.000	4.860	97.20	70-130
$ 177 4-Bromofluorobenze	5.000	4.894	97.88	70-130

Data File: /chem/msde.i/03Feb2017.b/e020306a.d

Date : 03-FEB-2017 11:08

Client ID: Lab Blank

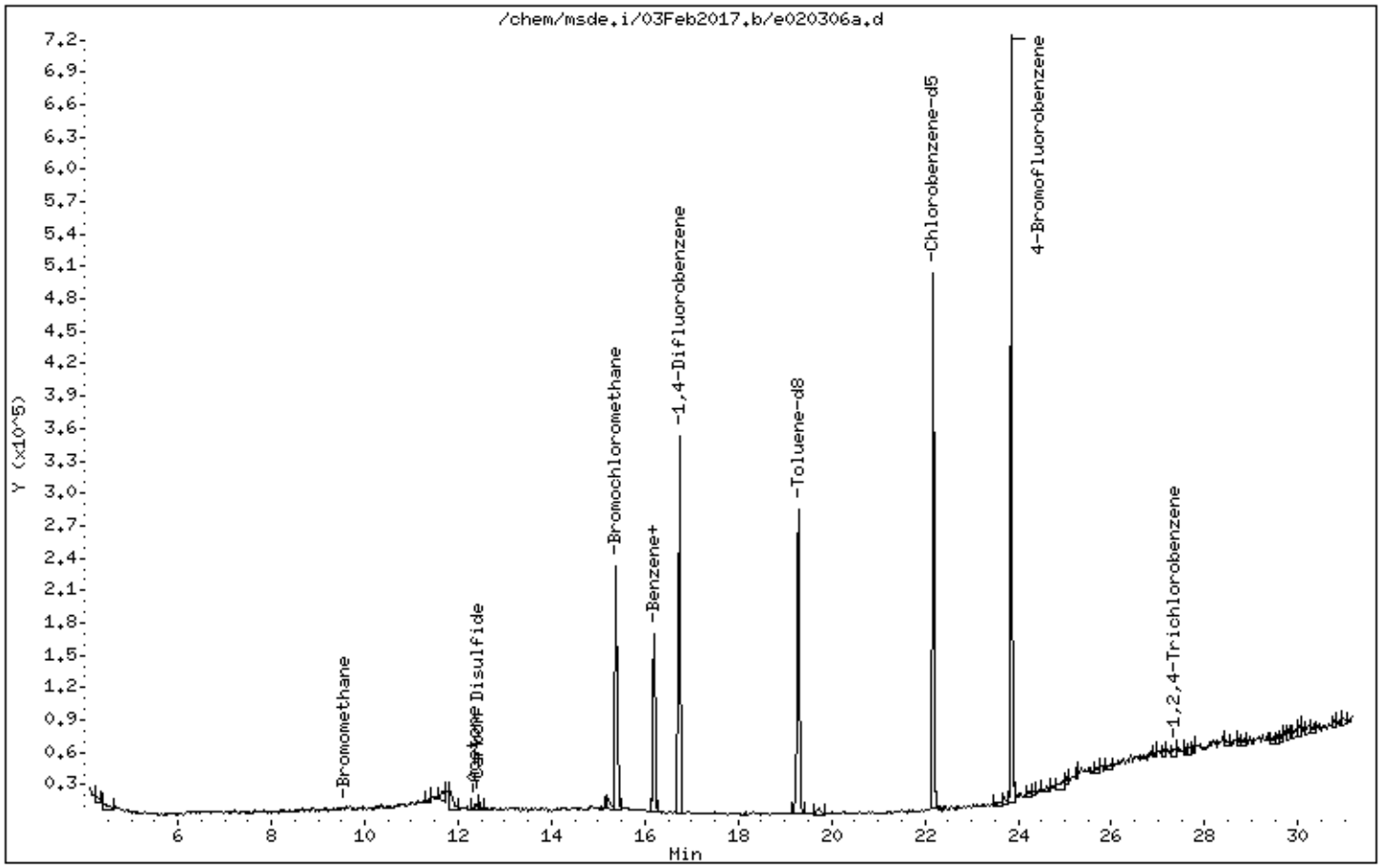
Instrument: msde.i

Sample Info: 250mL# 34764

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Data File: /chem/msde.i/03Feb2017.b/e020306a.d

Date : 03-FEB-2017 11:08

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 34764

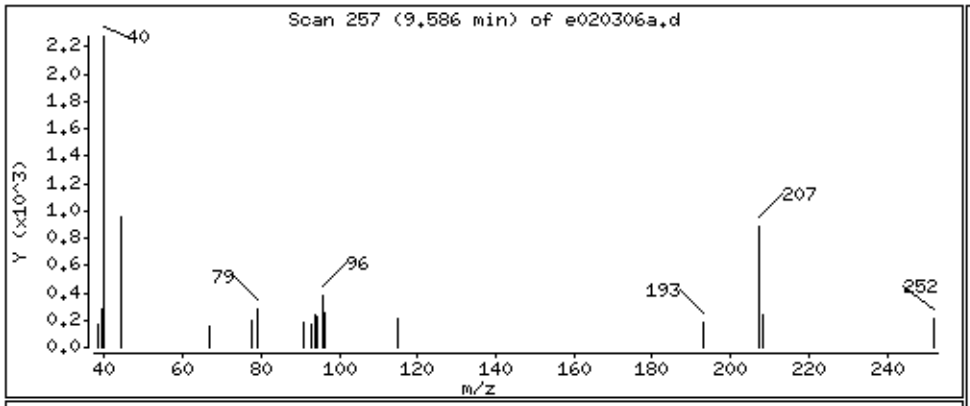
Operator: ef

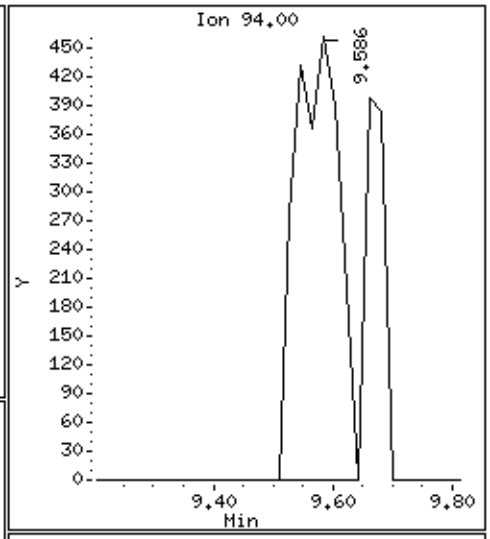
Column phase: RTX-624

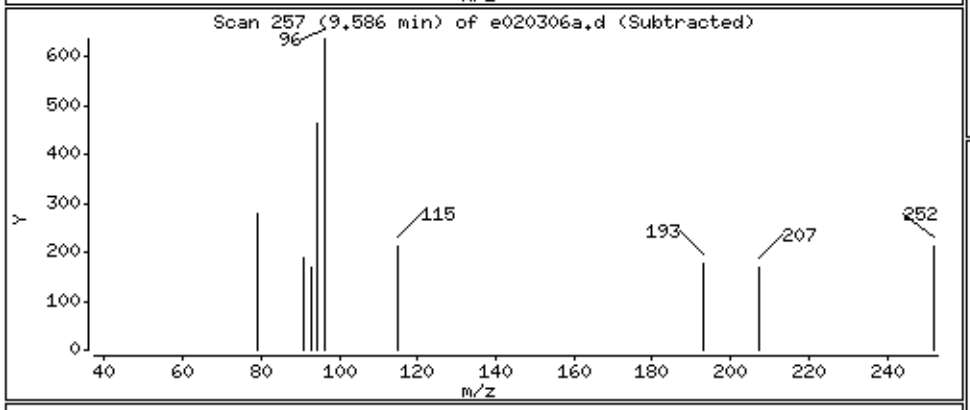
Column diameter: 0.32

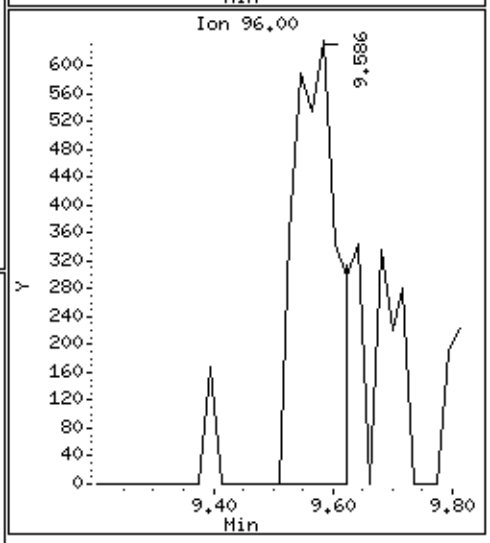
29 Bromomethane

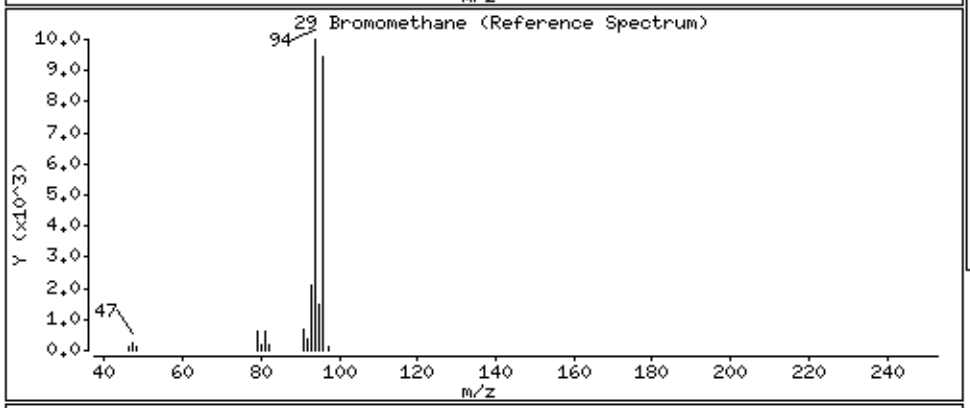
Concentration: 0.07900 PPBV

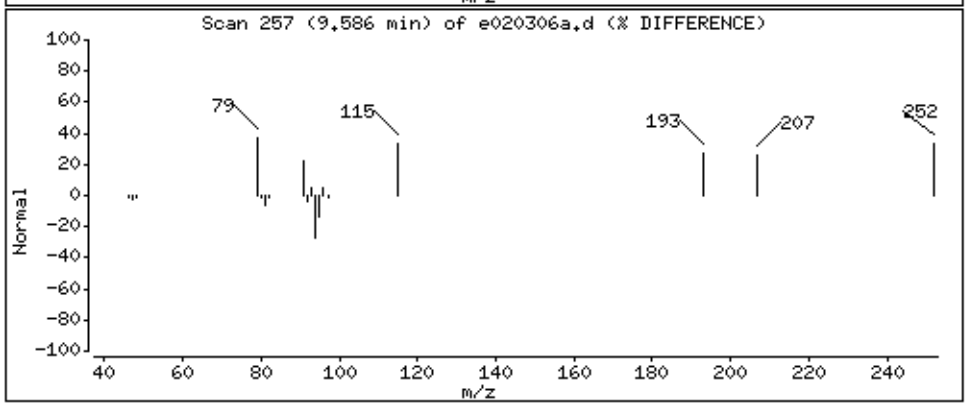












Data File: /chem/msde.i/03Feb2017.b/e020306a.d

Date : 03-FEB-2017 11:08

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 34764

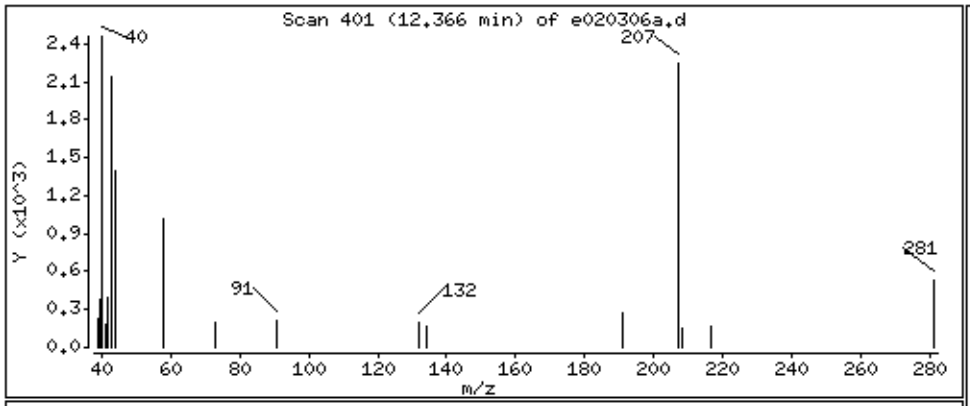
Operator: ef

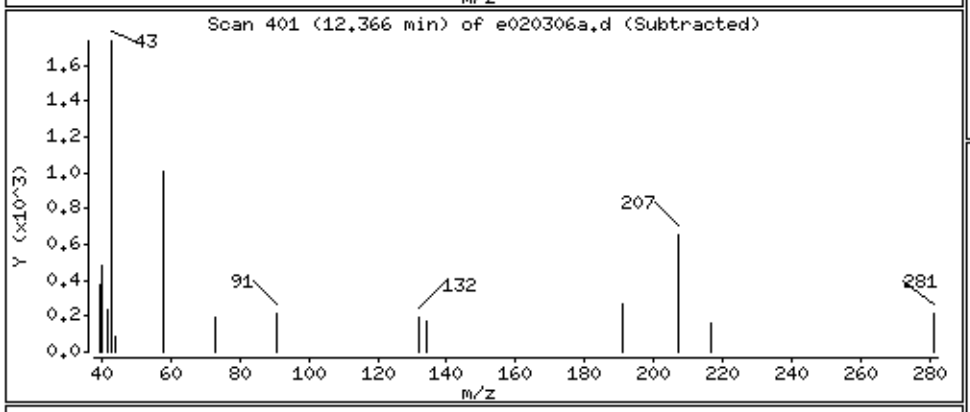
Column phase: RTX-624

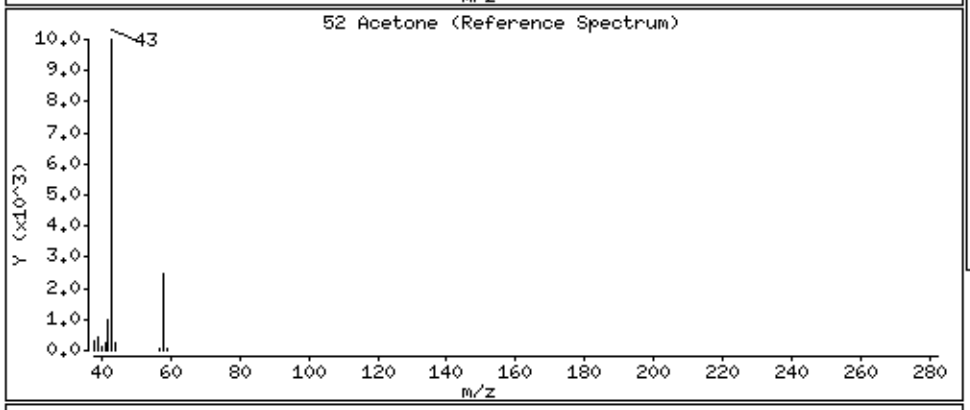
Column diameter: 0.32

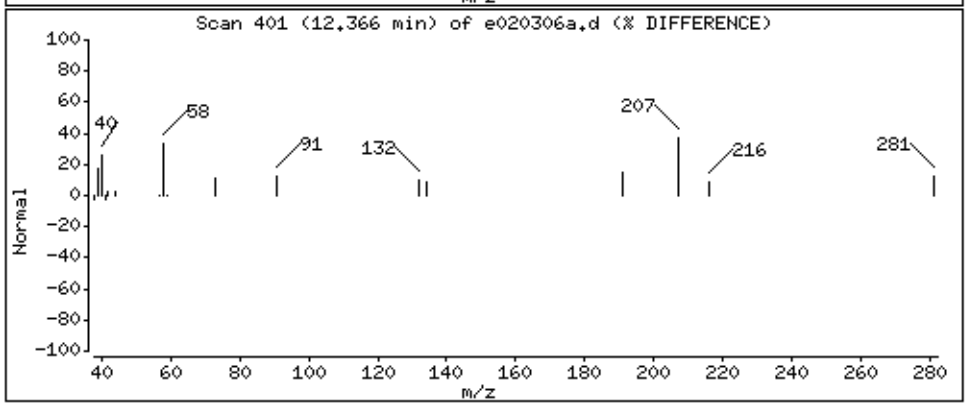
52 Acetone

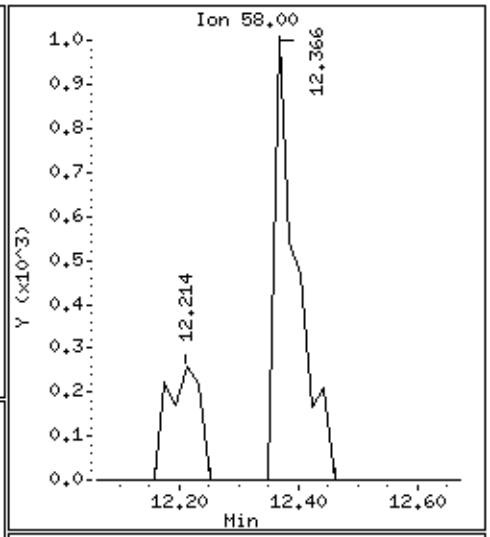
Concentration: 0.1904 PPBV

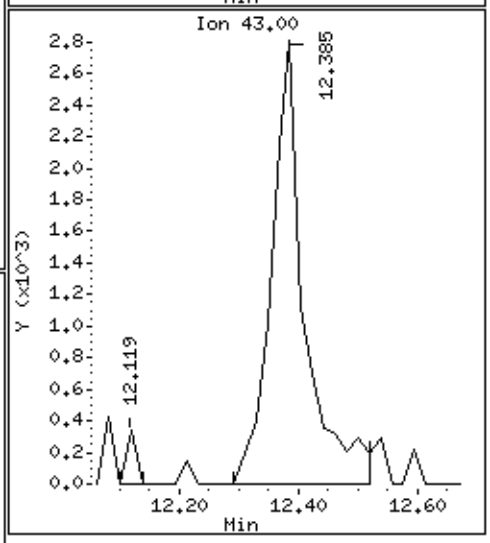












Data File: /chem/msde.i/03Feb2017.b/e020306a.d

Date : 03-FEB-2017 11:08

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 34764

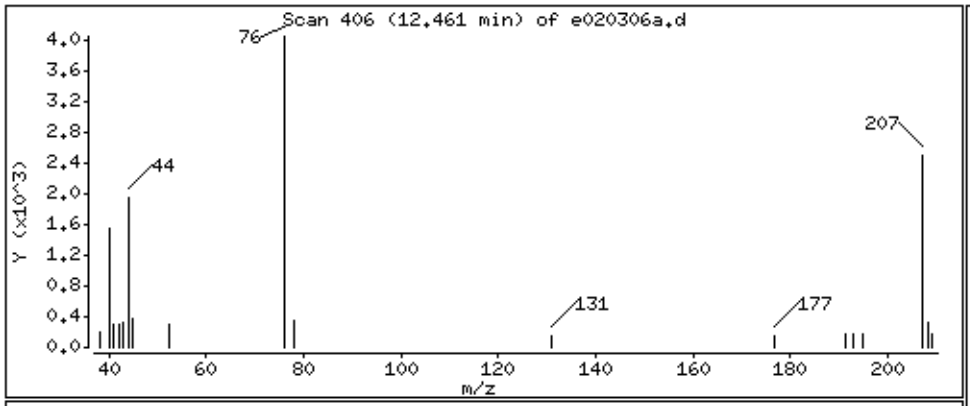
Operator: ef

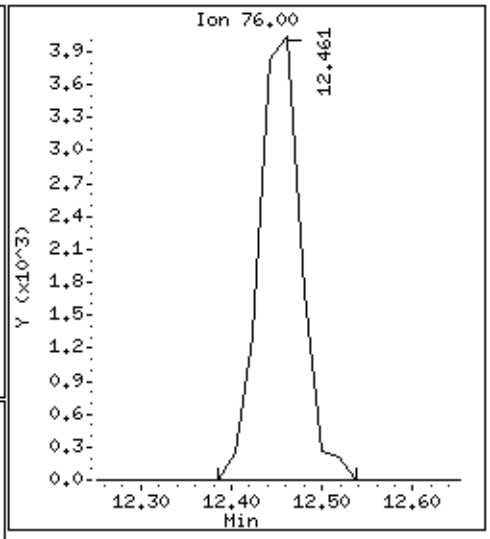
Column phase: RTX-624

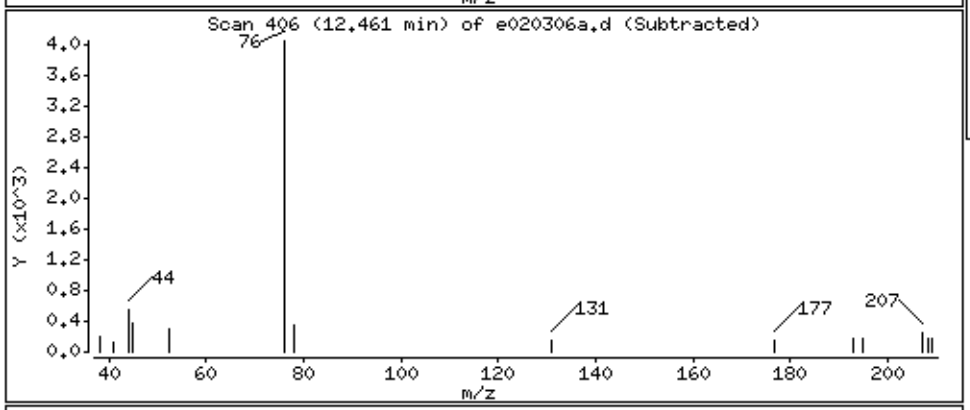
Column diameter: 0.32

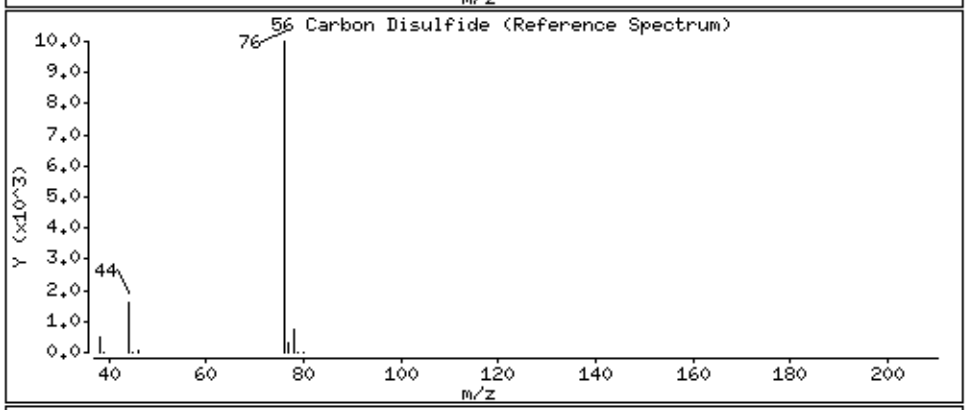
56 Carbon Disulfide

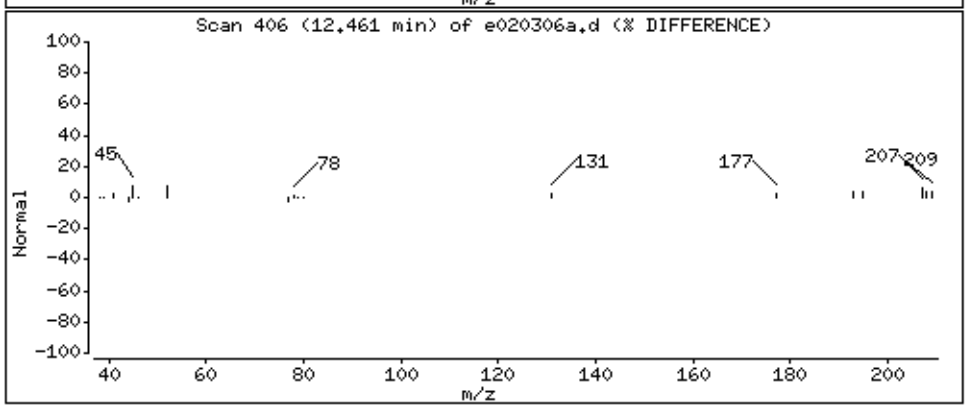
Concentration: 0.1340 PPBV











Data File: /chem/msde.i/03Feb2017.b/e020306a.d

Date : 03-FEB-2017 11:08

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 34764

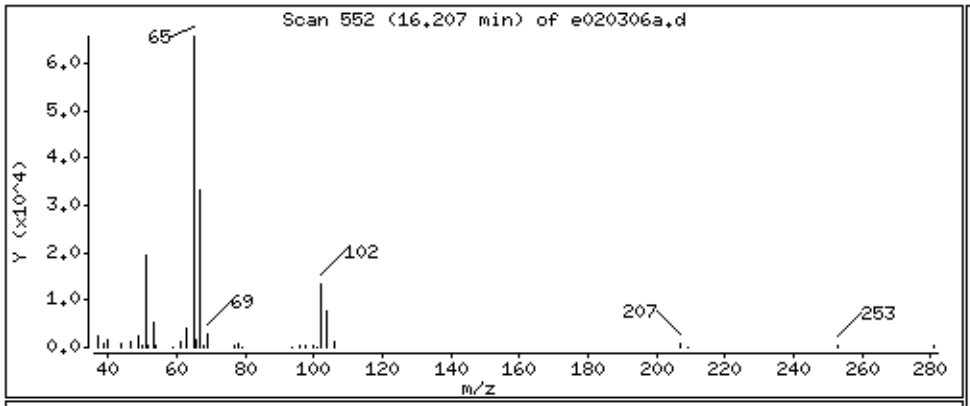
Operator: ef

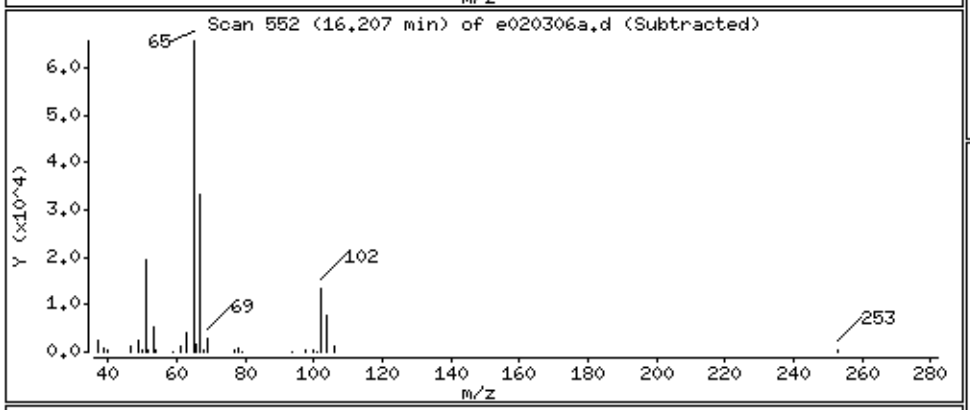
Column phase: RTX-624

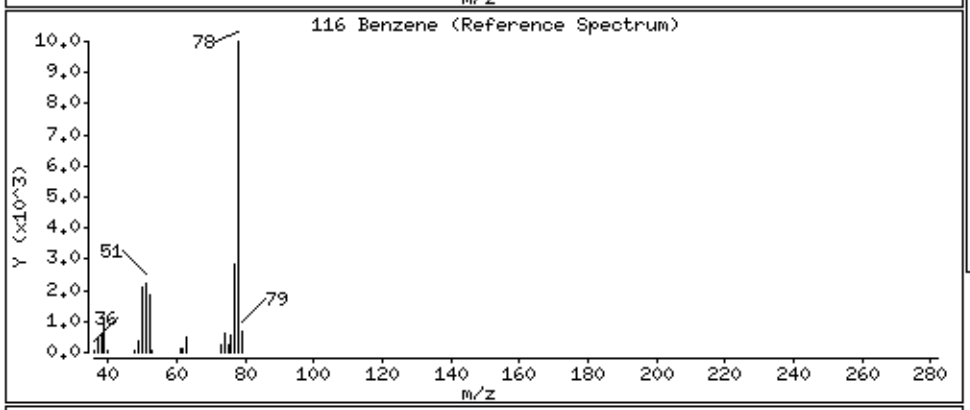
Column diameter: 0.32

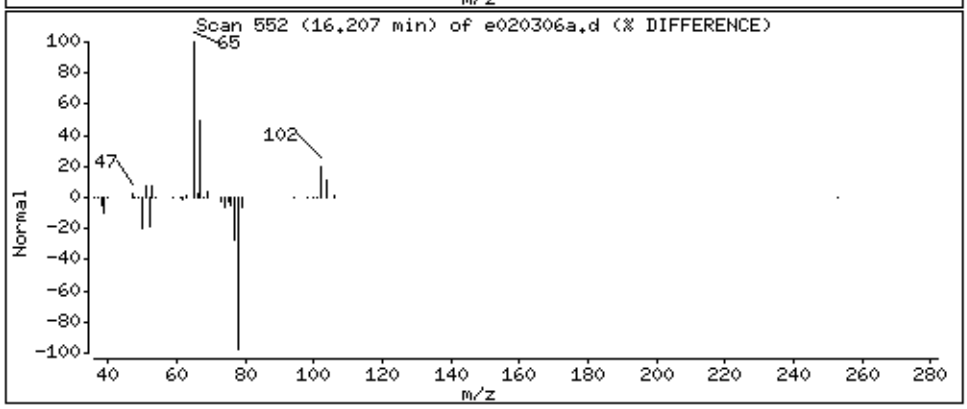
116 Benzene

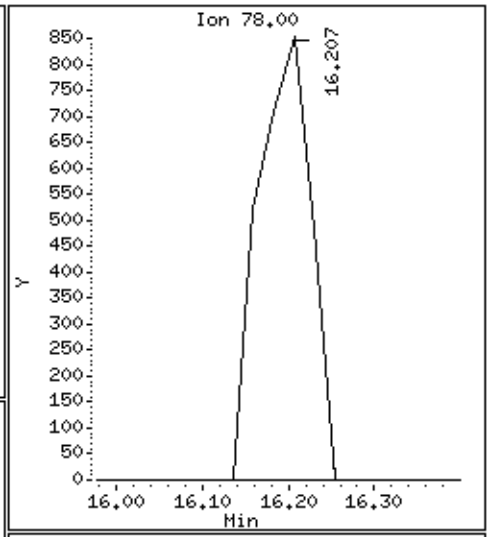
Concentration: 0.03402 PPBV

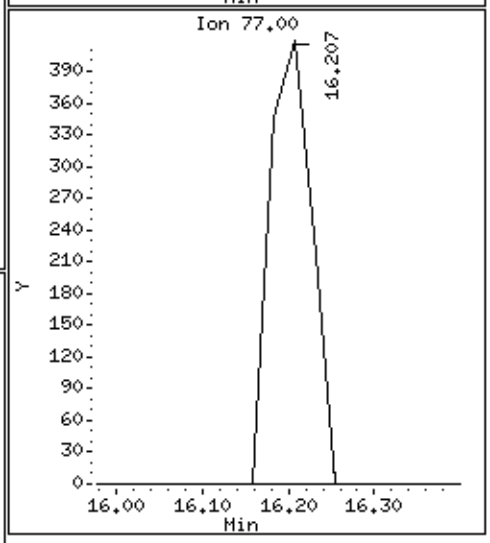












Data File: /chem/msde.i/03Feb2017.b/e020306a.d

Date : 03-FEB-2017 11:08

Client ID: Lab Blank

Instrument: msde.i

Sample Info: 250mL# 34764

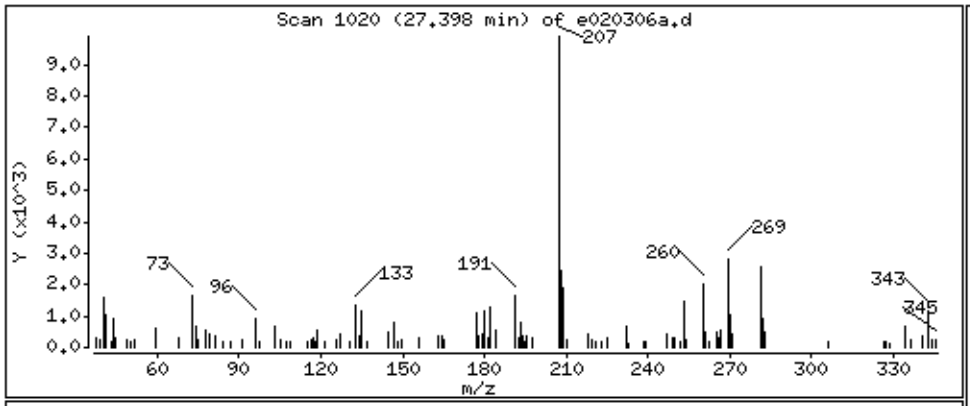
Operator: ef

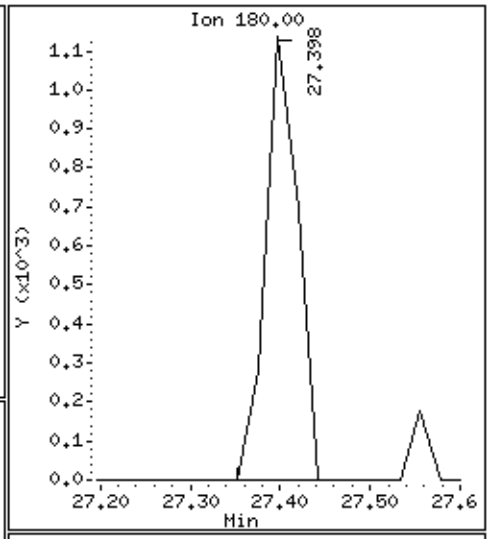
Column phase: RTX-624

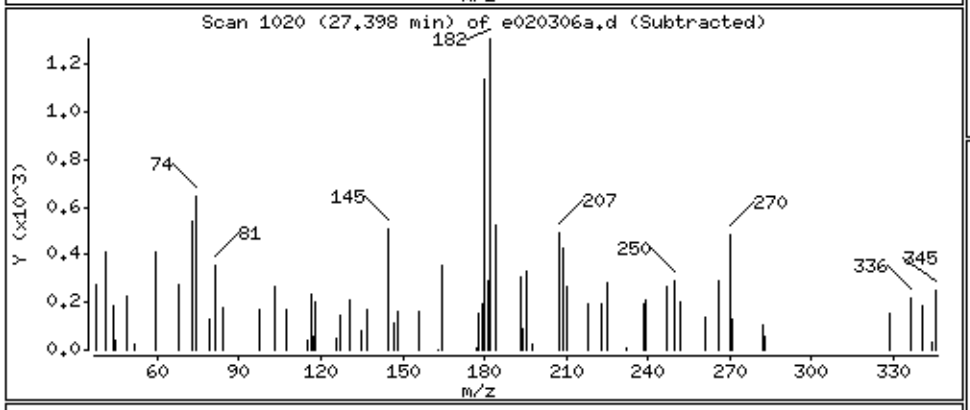
Column diameter: 0.32

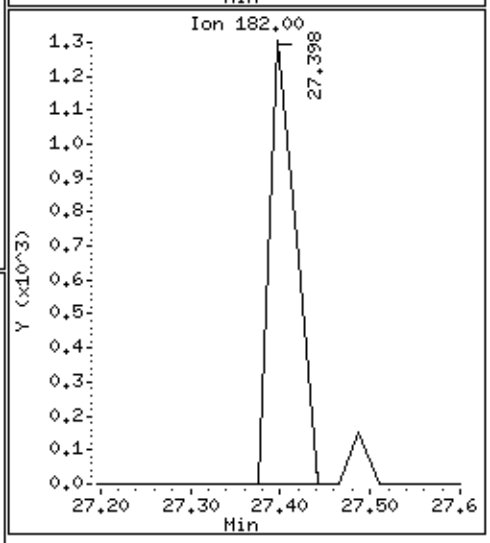
226 1,2,4-Trichlorobenzene

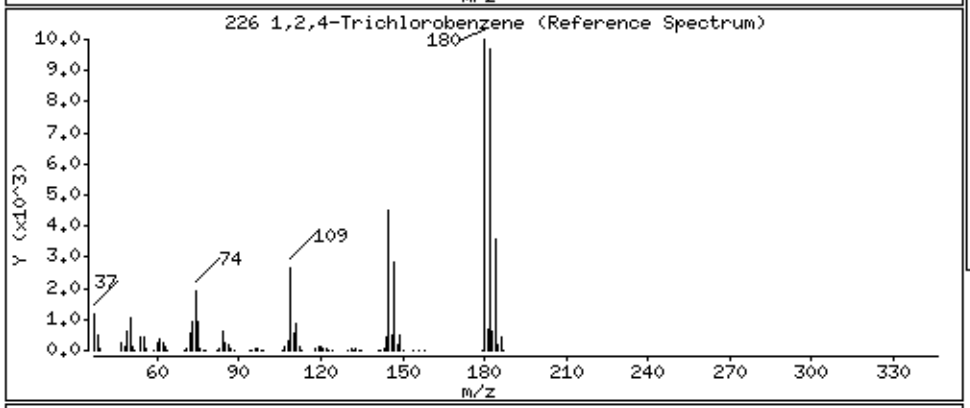
Concentration: 0.03831 PPBV

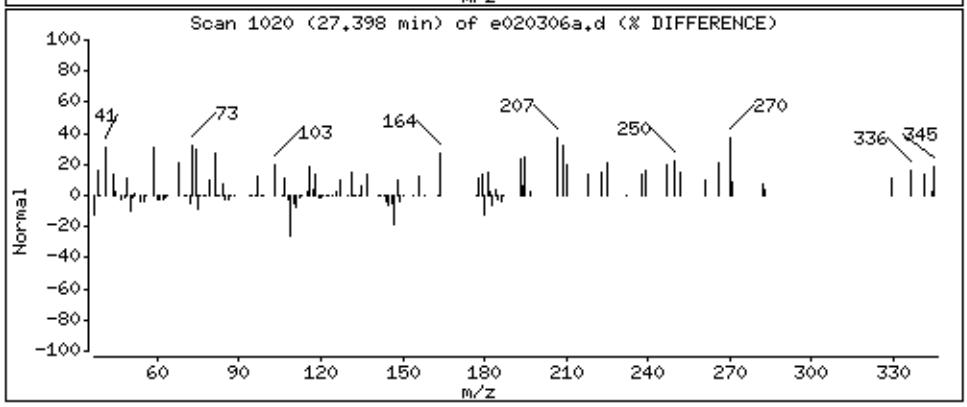












LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1701477B

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	B13IA-1-012817	101		96		101				0
02	B13IA-2-012817	101		102		101				0
03	B13IA-2DUP-012817	99		97		103				0
04	B13IA-3-012817	99		96		104				0
05	B18IA-5-012817	101		95		105				0
06	B15IA-1-012817	102		95		99				0
07	B15IA-1DUP-012817	99		99		103				0
08	B1315AA-012817	107		100		100				0
09	Lab Blank	107		97		98				0
10	CCV	101		102		107				0
11	LCS	99		103		102				0
12	LCSD	100		97		102				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

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 Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AIR TOXICS, LTD

SDG No: 1701477B

Lab File ID: e020302.d

Date Analyzed: 02/03/2017

Instrument ID: msde.i

Time Analyzed: 07:59 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	467575		22.18		499834		16.74		141527		15.39	
	UPPER LIMIT	654605		22.51		699768		17.07		198138		15.72	
	LOWER LIMIT	280545		21.85		299900		16.41		84916		15.06	
	CLIENT SAMPLE NO												
01	B13IA-1-012817	460540		22.18		486781		16.74		149346		15.39	
02	B13IA-2-012817	473749		22.18		466914		16.74		145234		15.39	
03	B13IA-2DUP-012817	462471		22.18		483958		16.74		149960		15.39	
04	B13IA-3-012817	470727		22.18		492369		16.74		147452		15.39	
05	B18IA-5-012817	465742		22.18		477927		16.74		142065		15.39	
06	B15IA-1-012817	471285		22.18		475236		16.74		150698		15.39	
07	B15IA-1DUP-012817	455985		22.18		478731		16.74		148876		15.39	
08	B1315AA-012817	459756		22.18		476422		16.74		142677		15.39	
09	Lab Blank	422412		22.18		435247		16.74		126442		15.39	
10	CCV	467575		22.18		499834		16.74		141527		15.39	
11	LCS	441987		22.18		458751		16.74		136226		15.39	
12	LCSD	439150		22.18		465185		16.74		132243		15.39	
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

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: e020304.d & e020303.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 2/3/17 & 2/3/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
71-55-6	1,1,1-Trichloroethane	113		115		1.8	
79-34-5	1,1,2,2-Tetrachloroethane	104		105		0.96	
79-00-5	1,1,2-Trichloroethane	116		115		0.86	
75-34-3	1,1-Dichloroethane	114		114		0	
75-35-4	1,1-Dichloroethene	111		108		2.7	
120-82-1	1,2,4-Trichlorobenzene	94		102		8.2	
95-63-6	1,2,4-Trimethylbenzene	125		128		2.4	
106-93-4	1,2-Dibromoethane (EDB)	111		111		0	
95-50-1	1,2-Dichlorobenzene	116		115		0.86	
107-06-2	1,2-Dichloroethane	110		106		3.7	
78-87-5	1,2-Dichloropropane	116		112		3.5	
108-67-8	1,3,5-Trimethylbenzene	134		137		2.2	
106-99-0	1,3-Butadiene	109		111		1.8	
541-73-1	1,3-Dichlorobenzene	115		117		1.7	
106-46-7	1,4-Dichlorobenzene	109		112		2.7	
123-91-1	1,4-Dioxane	116		118		1.7	
540-84-1	2,2,4-Trimethylpentane	118		118		0	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	120		116		3.4	
591-78-6	2-Hexanone	126		128		1.6	
67-63-0	2-Propanol	116		114		1.7	
107-05-1	3-Chloropropene	129		122		5.6	
622-96-8	4-Ethyltoluene	124		125		0.80	
108-10-1	4-Methyl-2-pentanone	125		121		3.2	
67-64-1	Acetone	110		104		5.6	
100-44-7	alpha-Chlorotoluene	122		125		2.4	
71-43-2	Benzene	112		110		1.8	
75-27-4	Bromodichloromethane	120		116		3.4	
75-25-2	Bromoform	126		124		1.6	
74-83-9	Bromomethane	87		114		-->27<--	
75-15-0	Carbon Disulfide	114		113		0.88	
56-23-5	Carbon Tetrachloride	128		131		2.3	
108-90-7	Chlorobenzene	114		112		1.8	
75-00-3	Chloroethane	112		113		0.89	
67-66-3	Chloroform	110		112		1.8	
74-87-3	Chloromethane	116		115		0.86	
156-59-2	cis-1,2-Dichloroethene	104		104		0	
10061-01-5	cis-1,3-Dichloropropene	131		127		3.1	
98-82-8	Cumene	124		124		0	
110-82-7	Cyclohexane	121		120		0.83	
124-48-1	Dibromochloromethane	119		116		2.6	
64-17-5	Ethanol	90		88		2.2	
100-41-4	Ethyl Benzene	123		122		0.82	
75-69-4	Freon 11	117		118		0.85	
76-13-1	Freon 113	112		109		2.7	
76-14-2	Freon 114	112		112		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: e020304.d & e020303.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 2/3/17 & 2/3/17

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
75-71-8	Freon 12	116		116		0	
142-82-5	Heptane	120		116		3.4	
87-68-3	Hexachlorobutadiene	99		106		6.8	
110-54-3	Hexane	121		119		1.7	
108-38-3	m,p-Xylene	125		123		1.6	
1634-04-4	Methyl tert-butyl ether	117		119		1.7	
75-09-2	Methylene Chloride	96		96		0	
91-20-3	Naphthalene	102		104		1.9	
95-47-6	o-Xylene	123		123		0	
103-65-1	Propylbenzene	121		121		0	
100-42-5	Styrene	129		130		0.77	
127-18-4	Tetrachloroethene	110		115		4.4	
109-99-9	Tetrahydrofuran	120		118		1.7	
108-88-3	Toluene	119		117		1.7	
156-60-5	trans-1,2-Dichloroethene	121		125		3.2	
10061-02-6	trans-1,3-Dichloropropene	119		116		2.6	
79-01-6	Trichloroethene	117		117		0	
75-01-4	Vinyl Chloride	114		112		1.8	

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 : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/27Jan2017.b/e17l0126a.m
Cal Date : 30-Jan-2017 10:49 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/26Jan2017.b/e012610.d
Level 6: /chem/msde.i/26Jan2017.b/e012624.d
Level 7: /chem/msde.i/27Jan2017.b/e012705.d
Level 8: /chem/msde.i/27Jan2017.b/e012706.d
Level 9: /chem/msde.i/27Jan2017.b/e012707.d
Level 11: /chem/msde.i/27Jan2017.b/e012708.d
Level 12: /chem/msde.i/27Jan2017.b/e012709.d
Level 13: /chem/msde.i/26Jan2017.b/e012615.d
Level 15: /chem/msde.i/26Jan2017.b/e012616.d
Level 16: /chem/msde.i/26Jan2017.b/e012617.d

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
36 1-Pentene	+++++	+++++	0.99112	0.84991	0.78838	0.83259		
	0.78388	+++++	+++++	+++++			0.84917	9.920
34 Pentane	+++++	+++++	0.49407	0.45499	0.35030	0.38894		
	0.32480	+++++	+++++	+++++			0.40262	17.601
44 Ethyl Ether	+++++	+++++	0.65042	0.54565	0.58307	0.52534		
	0.49221	+++++	+++++	+++++			0.55934	10.842
53 Iodomethane	+++++	+++++	3.52503	3.14359	3.04851	3.18352		
	3.20895	+++++	+++++	+++++			3.22192	5.589
59 Cyclopentene	+++++	+++++	2.57632	2.15024	2.06279	2.34565		
	2.30070	+++++	+++++	+++++			2.28714	8.643
64 Cyclopentane	+++++	+++++	0.65382	0.60201	0.65037	0.58650		
	0.64585	+++++	+++++	+++++			0.62771	4.963

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/27Jan2017.b/e17l0126a.m
Cal Date : 30-Jan-2017 10:49 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
74 Acrylonitrile	+++++	+++++	0.80529	0.73128	0.75163	0.81387		
	0.74723	+++++	+++++	+++++			0.76986	4.828
76 1-Hexene	+++++	+++++	0.63198	0.69273	0.60998	0.67600		
	0.66546	+++++	+++++	+++++			0.65523	5.137
84 1-Propanol	+++++	+++++	0.23969	0.28610	0.29243	0.24913		
	0.28301	+++++	+++++	+++++			0.27007	8.852
90 2,2-Dichloropropane	+++++	+++++	3.22279	3.00758	2.82334	2.96100		
	2.82316	+++++	+++++	+++++			2.96757	5.548
93 Methyl Acrylate	+++++	+++++	2.15993	1.90402	1.99192	2.16098		
	2.08511	+++++	+++++	+++++			2.06039	5.414
107 1,1-Dichloropropene	+++++	+++++	0.91435	0.81351	0.75550	0.79505		
	0.72831	+++++	+++++	+++++			0.80134	8.911
115 Isobutanol	+++++	+++++	0.76832	0.73683	0.80935	0.76490		
	0.82345	+++++	+++++	+++++			0.78057	4.518
124 n-Butanol	+++++	+++++	0.44473	0.34961	0.43005	0.39483		
	0.43177	+++++	+++++	+++++			0.41020	9.409
128 Ethyl acrylate	+++++	+++++	0.07429	0.07651	0.05998	0.05973		
	0.04964	+++++	+++++	+++++			0.06403	17.516
131 2-Pentanone	+++++	+++++	0.87806	0.84280	0.79926	0.77743		
	0.80218	+++++	+++++	+++++			0.81995	4.898

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/27Jan2017.b/e17l0126a.m
Cal Date : 30-Jan-2017 10:49 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
134 Methyl Methacrylate	+++++	+++++	0.45942	0.38444	0.41135	0.40850		
	0.41998	+++++	+++++	+++++			0.41674	6.541
137 Dibromomethane	+++++	+++++	0.82091	0.74586	0.68561	0.64853		
	0.71730	+++++	+++++	+++++			0.72364	9.031
148 Octane	+++++	+++++	0.26514	0.20349	0.23442	0.21640		
	0.21847	+++++	+++++	+++++			0.22758	10.413
157 1,3-Dichloropropane	+++++	+++++	0.73331	0.60050	0.63257	0.65353		
	0.63508	+++++	+++++	+++++			0.65100	7.651
159 Butyl Acetate	+++++	+++++	+++++	0.07670	0.05640	0.07141		
	0.06542	+++++	+++++	+++++			0.06748	12.904
168 1,1,1,2-Tetrachloroethane	+++++	+++++	0.99974	0.92340	0.90742	0.87199		
	0.86139	+++++	+++++	+++++			0.91279	6.003
170 Nonane	+++++	+++++	0.45030	0.44801	0.47110	0.49788		
	0.47598	+++++	+++++	+++++			0.46865	4.369
173 2-Heptanone	+++++	+++++	0.33749	0.36923	0.41668	0.45888		
	0.44796	+++++	+++++	+++++			0.40605	12.747
176 Cyclohexanone	+++++	+++++	0.41329	0.33806	0.35164	0.38362		
	0.37190	+++++	+++++	+++++			0.37170	7.851
180 Bromobenzene	+++++	+++++	1.04513	0.83760	0.85211	0.89903		
	0.82904	+++++	+++++	+++++			0.89258	10.023

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/27Jan2017.b/e17l0126a.m
Cal Date : 30-Jan-2017 10:49 efinn
Curve Type : Average

Compound	0.05000 Level 5 / 5.000 Level 12	0.10000 Level 6 / 10.000 Level 13	0.50000 Level 7 / 20.000 Level 15	1.000 Level 8 / 40.000 Level 16	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
185 1,2,3-Trichloropropane	+++++	+++++	0.41612	0.34095	0.35926	0.33715		
	0.33268	+++++	+++++	+++++			0.35723	9.639
187 Decane	+++++	+++++	0.35729	0.31944	0.37110	0.40687		
	0.38533	+++++	+++++	+++++			0.36801	8.903
189 2-Chlorotoluene	+++++	+++++	0.62451	0.55661	0.52685	0.53381		
	0.52199	+++++	+++++	+++++			0.55276	7.644
191 4-Chlorotoluene	+++++	+++++	0.53689	0.50104	0.50114	0.51126		
	0.49601	+++++	+++++	+++++			0.50927	3.221
195 tert-Butylbenzene	+++++	+++++	1.62567	1.44349	1.45213	1.50917		
	1.45684	+++++	+++++	+++++			1.49746	5.085
197 Pentachloroethane	+++++	+++++	0.92035	0.81324	0.92576	0.89318		
	0.77296	+++++	+++++	+++++			0.86510	7.904
203 sec-Butylbenzene	+++++	+++++	2.92113	2.60860	2.80175	2.84361		
	2.70163	+++++	+++++	+++++			2.77535	4.407
206 bis(2-Chloroethyl) Ether	+++++	+++++	0.82705	0.74313	0.81442	0.81712		
	0.83396	+++++	+++++	+++++			0.80714	4.538
207 p-Cymene	+++++	+++++	1.67875	1.56239	1.75198	1.79601		
	1.65486	+++++	+++++	+++++			1.68880	5.355
210 1,2,3-Trimethylbenzene	+++++	+++++	0.53514	0.46405	0.50830	0.52322		
	0.52849	+++++	+++++	+++++			0.51184	5.565

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/27Jan2017.b/e17l0126a.m
Cal Date : 30-Jan-2017 10:49 efinn
Curve Type : Average

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	___ RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
213 Butylbenzene	+++++	+++++	0.41360	0.39547	0.40260	0.44615		
	0.41466	+++++	+++++	+++++			0.41450	4.681
215 Undecane	+++++	+++++	0.27994	0.25274	0.25934	0.26245		
	0.24457	+++++	+++++	+++++			0.25981	5.072
221 1,2-Dibromo-3-chloropropane	+++++	+++++	0.73115	0.61597	0.70263	0.65893		
	0.63597	+++++	+++++	+++++			0.66893	7.090
225 Dodecane	+++++	+++++	0.13925	0.10631	0.11057	0.06189		
	0.06792	+++++	+++++	+++++			0.09719	33.079 <-

Calibration History

Method : /chem/msde.i/27Jan2017.b/e17l0126a.m
Start Cal Date: 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 0.05000		
26-JAN-2017 14:02	Level5	/chem/msde.i/26Jan2017.b/e012610.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 0.10000		
27-JAN-2017 09:14	Level6	/chem/msde.i/26Jan2017.b/e012624.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 0.50000		
27-JAN-2017 16:20	ComboICAL-VB	/chem/msde.i/27Jan2017.b/e012705.d
26-JAN-2017 15:22	HILOcrvFULL	/chem/msde.i/26Jan2017.b/e012612.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 1.00000		
27-JAN-2017 17:06	ComboICAL-VB	/chem/msde.i/27Jan2017.b/e012706.d
26-JAN-2017 16:19	HILOcrvFULL	/chem/msde.i/26Jan2017.b/e012613.d

Injection Date	Sublist	Calibration File
Cal Level: 9 , Cal Amount: 2.00000		
27-JAN-2017 18:04	ComboICAL-VB	/chem/msde.i/27Jan2017.b/e012707.d

Injection Date	Sublist	Calibration File
Cal Level: 11, Cal Amount: 4.00000		
27-JAN-2017 18:48	ComboICAL-VB	/chem/msde.i/27Jan2017.b/e012708.d

Injection Date	Sublist	Calibration File
Cal Level: 12, Cal Amount: 5.00000		
27-JAN-2017 19:31	ComboICAL-VB	/chem/msde.i/27Jan2017.b/e012709.d
26-JAN-2017 17:08	HILOcrvFULL	/chem/msde.i/26Jan2017.b/e012614.d

Cal Level: 13, Cal Amount: 10.00000		
26-JAN-2017 17:51	HILOcrvFULL	/chem/msde.i/26Jan2017.b/e012615.d

Cal Level: 15, Cal Amount: 20.00000		
26-JAN-2017 19:09	HILOcrvFULL	/chem/msde.i/26Jan2017.b/e012616.d

Cal Level: 16, Cal Amount: 40.00000		
26-JAN-2017 19:53	HILOcrvFULL	/chem/msde.i/26Jan2017.b/e012617.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 13

Ccal Level: 13, Ccal Amount: 10.000		
27-JAN-2017 12:13	AT09-Oxy	/chem/msde.i/27Jan2017.b/e012702.d

Ccal Level: 8 , Ccal Amount: 1.000		
27-JAN-2017 17:06	ComboCCV-VB	/chem/msde.i/27Jan2017.b/e012706a.d

Curve Name: E17$_L$0126A

Initial Calibration Narrative

A TO-15 initial calibration was analyzed on 1/26/17 on MSD-E.

The instrument was set up to do Full Scan and Selective Ion Monitoring (SIM) simultaneously.

Tune Files: E012606, E012701.
ICAL: One (1) out; Ethanol @ 32%.
ICV: One (1) out; Ethanol @ 66%.
DOD 5.0 ICV: File E012625a; One (1) out; Ethanol @ 66%.
DOD 4.2 ICV: File E012625c; zero (0) out.
BTEX RL Spike: Zero (0) out 50-150. File E012624x.

The 0.1ppbv calibration point (global level 6) was rerun due to non-linearity.

Naphthalene was calibrated from 0.1ppbv-4.0ppbv.*

The following compounds were calibrated down to a special RL of 0.05ppbv:

Vinyl Chloride	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 0.05ppbv. 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 five (5) point initial calibration for the Combination special was analyzed on 1/27/17 and included in the "A" curve. Levels 0.5ppbv, 1.0ppbv, 2.0ppbv, 4.0ppbv, and 5.0ppbv. Acetonitrile and trans-1,4-Dichloro-2-butene were not included in the ICAL due to interference from co-eluting compounds. Ethyl Acetate was not included due to poor performance. Butyl Acetate was calibrated from 1.0ppbv 5.0ppbv due to poor peak quality at 0.5ppbv level.

TO-15 MDL was analyzed on 10/18/16.
MDL for AT-1 was analyzed on 2/11/16.
MDL for 1,2,3-TCP at 0.05ppbv was analyzed on 10/12/16.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 09:14
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/26Jan2017.b/e1710126a.m
Cal Date : 30-Jan-2017 10:34 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/26Jan2017.b/e012610.d
Level 6: /chem/msde.i/26Jan2017.b/e012624.d
Level 7: /chem/msde.i/26Jan2017.b/e012612.d
Level 8: /chem/msde.i/26Jan2017.b/e012613.d
Level 12: /chem/msde.i/26Jan2017.b/e012614.d
Level 13: /chem/msde.i/26Jan2017.b/e012615.d
Level 15: /chem/msde.i/26Jan2017.b/e012616.d
Level 16: /chem/msde.i/26Jan2017.b/e012617.d

1/30/17

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
9 Propylene	+++++	+++++	+++++	0.85563	0.73376	0.65555		
	0.68311	0.67994					0.72160	11.106
11 Freon 12	+++++	4.97640	4.60943	4.90185	4.47393	3.97662		
	4.01835	4.11773					4.43919	9.321
15 Freon 114	+++++	4.10317	3.85963	3.52778	3.41429	3.03642		
	2.92292	2.98762					3.40740	13.405
17 Chloromethane	+++++	+++++	0.99737	0.89397	0.88340	0.75347		
	0.70881	0.73048					0.82792	13.812
23 Butane	+++++	+++++	0.22435	0.20311	0.19859	0.18233		
	0.20031	0.19728					0.20100	6.743
25 Vinyl Chloride	1.50484	1.37979	1.08643	1.13859	1.10136	1.02599		
	1.03017	1.04009					1.16341	15.432
26 1,3-Butadiene	+++++	0.87685	0.87558	0.81960	0.78634	0.75506		
	0.74417	0.77312					0.80439	6.793

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-JAN-2017 14:02
End Cal Date : 27-JAN-2017 19:31
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msde.i/27Jan2017.b/e1710126a.m
Cal Date : 30-Jan-2017 10:49 efinn
Curve Type : Average

Calibration File Names:
Level 5: /chem/msde.i/26Jan2017.b/e012610.d
Level 6: /chem/msde.i/26Jan2017.b/e012624.d
Level 7: /chem/msde.i/27Jan2017.b/e012705.d
Level 8: /chem/msde.i/27Jan2017.b/e012706.d
Level 9: /chem/msde.i/27Jan2017.b/e012707.d
Level 11: /chem/msde.i/27Jan2017.b/e012708.d
Level 12: /chem/msde.i/27Jan2017.b/e012709.d
Level 13: /chem/msde.i/26Jan2017.b/e012615.d
Level 15: /chem/msde.i/26Jan2017.b/e012616.d
Level 16: /chem/msde.i/26Jan2017.b/e012617.d

1/30/17

Please see Calibration History page(s) for all the calibration files.

Compound	0.05000 Level 5	0.10000 Level 6	0.50000 Level 7	1.000 Level 8	2.000 Level 9	4.000 Level 11	RRF	% RSD
	5.000 Level 12	10.000 Level 13	20.000 Level 15	40.000 Level 16				
36 1-Pentene	+++++	+++++	0.99112	0.84991	0.78838	0.83259		
	0.78388	+++++	+++++	+++++			0.84917	9.920
34 Pentane	+++++	+++++	0.49407	0.45499	0.35030	0.38894		
	0.32480	+++++	+++++	+++++			0.40262	17.601
44 Ethyl Ether	+++++	+++++	0.65042	0.54565	0.58307	0.52534		
	0.49221	+++++	+++++	+++++			0.55934	10.842
53 Iodomethane	+++++	+++++	3.52503	3.14359	3.04851	3.18352		
	3.20895	+++++	+++++	+++++			3.22192	5.589
59 Cyclopentene	+++++	+++++	2.57632	2.15024	2.06279	2.34565		
	2.30070	+++++	+++++	+++++			2.28714	8.643
64 Cyclopentane	+++++	+++++	0.65382	0.60201	0.65037	0.58650		
	0.64585	+++++	+++++	+++++			0.62771	4.963

Eurofins Air Toxics, Inc. **MSD-E** **Logbook #2806**

BFB Verification of 176/174 m/z Ratio: 611520/636608 × 100 = 96.06%	
Method Name: E17L0126A / E17S0126A	

IS/S Std. #: 2619-179	Exp. Date: 3/14/17
BCM LL: SW 1/27/17 ~~143288~~ 161788	Sum: SW 1/27/17 ~~2419484~~ 1981168
1,4-DFB SW 1/27/17 ~~6148109~~ 5988820	SW 1/27/17 ~~7520666~~ 6142668
CB-d5 SW 1/27/17 ~~1600289~~ 6268188	SW 1/27/17 ~~6824401~~ 5586091

Verified CCV IS vs ICAL mid-point (-40%D): SW

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	✓	E012606	BFB tune Check	2810-94	50ng	2.0ml	SW	1.00	SW	1/26/17	1125	SW/ES	exp: 12/1/17
2	✓	07	ICAL Level 2	2819-239	0.005ppbv	25mL	SW	1.00	SW		1145	SW/ES	exp: 4/5/17
3	✓	08	3		0.01ppbv	50mL	SW	1.00	SW		1233	SW/ES	
4	✓	09	4		0.02ppbv	100mL	SW	1.00	SW		1320	SW/ES	
5	✓	10	5		0.05ppbv	250mL	SW	1.00	SW		1402	ES	
6	✓	11	6	2819-240	0.10ppbv	25mL	SW	1.00	SW		1442	ES	exp: 4/5/17 RERUN
7	✓	12	7		0.50ppbv	125mL	SW	1.00	SW		1522	ES	
8	✓	13	8		1.0ppbv	250mL	TD	1.00	TD		1619	ES	
9	✓	14	12	2819-218	5.0ppbv	25mL	TD	1.00	TA		1708	ES	exp: 4/5/17
10	✓	15	13		10ppbv	50mL	TD	1.00	TA		1751	ES	
11	✓	16	15		20ppbv	100mL	TD	1.00	TA		1909	ES	
12	✓	17	16		40ppbv	200mL	TD	1.00	TA		1953	ES	
13	✓	18	System Blank	34764	Humid	250mL	TD	1.00	TD		2106	ES	
14	✓	19	System Blank				TD	1.00	TD		2154	ES	
15	✓	20	System Blank				TD	1.00	TD		2249	ES	
16	✓	21	ICV (50ppbv)	2819-156	10ppbv	50mL	SW	1.00	SW	1/27/17	0638	ES	
17	✓	22	System Blank	34764	humid	250mL	SW	1.00	SW		0727	ES	

Reviewed 1/27/16 Date

0261 of 0501

	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	/	E012623	System Blank	34764	humid	250mL	SW	1.00	SW	1/27/17	0829	[illegible]	
19	/	24	ICAL level 6	2819-240	0.10ppbv	25mL	SW	1.00	SW		0914	[illegible]	
20	/	25	ICV (50ppbv)	2819-156	10ppbv	50mL	SW	1.00	SW		1109	[illegible]	
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39												[illegible]	

[illegible] Reviewed

1/27/17 Date

Eurofins Air Toxics, Inc.

MSD-E

Logbook #2806

BFB Verification of 176/174 m/z Ratio: 703104/725888 x100 = 96.86%	
Method Name: E17L0126A / E17S0126A	

IS/S Std. #: 2619-179		Exp. Date: 3/14/17
BCM	LL: 170744	Std: 191666
1,4-DFB	602830	609849
CB-d5	541524	546001

Verified CCV IS vs ICAL mid-point (-40%D): SW

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	✓	E012701	BFB tune check	2810-94	50ng	20µl	SW	1.00	SW	1/27/17	1151	SW/EA	exp: 12/1/17
2	✓	02	CCV (50ppbv)	2819-218	10ppbv	50ml	SW	1.00	SW		1213	SW/EA	exp: 4/5/17 ØOut
3	✓	03	LCS (50ppbv)	2819-188	10ppbv	50ml	SW	1.00	SW		1336	EA	20 out on LL grnt sing
4	✓	04	LCSD (50ppbv)	2819-188	10ppbv	50ml	ED	1.00	ED		1449	EA	
5	✓	05	ICAL level 7	2819-242	0.5ppbv	25ml	ES	1.00	ES		1620	ES	Exp. 2/19/17 COMBO
6	✓	06	8		1.0ppbv	50ml	ED		ED		1706	ES	
7	✓	07	9		2.0ppbv	100ml	ED		ED		1804	ES	
8	✓	08	11		4.0ppbv	200ml	ED		ED		1848	ES	
9	✓	09	12		5.0ppbv	250ml	ED		EA		1931	ES	
10		10	Lab Blank	3477/04	Humid	250ml	ED		ED		~~2024~~	ES	
11		11	1701369-01A	N1092	7psi-7psi	250mL	GH	1.00	GH		0637		
12		12	-02A	N1671	13psi-13psi	250mL	GH	1.00	GH		0718		
13		13	1701395-01AB	5066	5.9"Hg-5.7psi	250mL	GH	1.69	GH		0800		
14		14	-02AB	14111	6.3"Hg-4.7psi	250mL	GH	1.67	GH		0846		
15		15	-03AB	N0415	5.3"Hg-5.1psi	25mL	GH	16.4	GH		0930		E Acetone, 2prep
16		16	~~-04AB~~	00900	5.3"Hg-4.8psi	100mL	GH	4.02	GH				E Acetone 2prep
17		17	-05AB	N0727	6.9"Hg-4.9psi	125mL	GH	3.44	GH				

Reviewed

1/30/17
Date

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/26Jan2017.b/e012625.d
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 27-JAN-2017 11:09
Operator : sw Inst ID: msde.i
Smp Info : 50mL #2819-156
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:30 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 19:53 Cal File: e012617.d
Als bottle: 1 QC Sample: ICV
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		
4.762	4.786 (0.309)	41	225509	8.77226	8.772	80.00- 120.00	100.00
4.787	4.762 (0.311)	42	149412			35.53- 95.53	66.26
4.762	4.762 (0.309)	39	196012			53.16- 113.16	86.92
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	1439705	9.10359	9.104	80.00- 120.00	100.00
5.245	5.244 (0.341)	87	461184			1.91- 61.91	32.03
15 Freon 114					CAS #: 76-14-2		
6.618	6.642 (0.430)	135	1058080	8.71641	8.716	80.00- 120.00	100.00
6.643	6.618 (0.432)	137	335558			0.98- 60.98	31.71
6.618	6.618 (0.430)	85	1260645			86.82- 146.82	119.14
17 Chloromethane					CAS #: 74-87-3		
6.932	6.956 (0.450)	50	263175	8.92280	8.923	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	90328			3.31- 63.31	34.32
23 Butane					CAS #: 106-97-8		
7.675	7.692 (0.499)	58	69629	9.72402	9.724	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   23 Butane (continued)
  7.675   7.692 (0.499)    43    442169                   667.48- 727.48   635.04
-------------------------------------------------------------------------------
   25 Vinyl Chloride                                CAS #: 75-01-4
  7.797   7.814 (0.507)    62    356706 8.60638    8.606  80.00- 120.00   100.00
  7.797   7.797 (0.507)    64    119975                     1.95-  61.95    33.63
-------------------------------------------------------------------------------
   26 1,3-Butadiene                                 CAS #: 106-99-0
  8.040   8.057 (0.522)    54    249481 8.70591    8.706  80.00- 120.00   100.00
  8.057   8.057 (0.523)    39    269274                    76.10- 136.10   107.93
-------------------------------------------------------------------------------
   29 Bromomethane                                  CAS #: 74-83-9
  9.510   9.529 (0.618)    94    402408 9.28236    9.282  80.00- 120.00   100.00
  9.510   9.529 (0.618)    96    385794                    64.26- 124.26    95.87
-------------------------------------------------------------------------------
   30 Chloroethane                                  CAS #: 75-00-3
 10.005  10.005 (0.650)    64    193274 9.01969    9.020  80.00- 120.00   100.00
 10.005  10.005 (0.650)    49     56460                     0.00-  57.48    29.21
 10.005  10.005 (0.650)    66     62241                     1.33-  61.33    32.20
-------------------------------------------------------------------------------
   31 Isopentane                                    CAS #: 78-78-4
 10.138  10.138 (0.659)    57    287665 9.29538    9.295  80.00- 120.00   100.00
 10.138  10.157 (0.659)    43    353782                    96.48- 156.48   122.98
 10.138  10.138 (0.659)    42    298715                    76.93- 136.93   103.84
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 10.766  10.766 (0.700)   101   1683418 9.12462    9.125  80.00- 120.00   100.00
 10.766  10.766 (0.700)   103   1083459                    33.74-  93.74    64.36
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 11.662  11.680 (0.758)    45    123000 7.64882    7.649  80.00- 120.00   100.00(R)
 11.662  11.680 (0.758)    46     47251                     9.60-  69.60    38.42
 11.681  11.680 (0.759)    43     33347                     0.00-  59.21    27.11
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.081  12.099 (0.785)   151   1093282 8.87505    8.875  80.00- 120.00   100.00
 12.081  12.099 (0.785)   153    679443                    34.83-  94.83    62.15
 12.081  12.080 (0.785)   101   1148426                    77.16- 137.16   105.04
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.100  12.099 (0.786)    98    293188 8.90873    8.909  80.00- 120.00   100.00
 12.100  12.099 (0.786)    61    734143                   219.47- 279.47   250.40
 12.100  12.099 (0.786)    96    458222                   126.81- 186.81   156.29
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 12.366  12.366 (0.803)    58    176251 8.71726    8.717  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   52 Acetone (continued)
 12.366  12.366 (0.803)    43    640832                   344.13- 404.13   363.59
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.462  12.461 (0.810)    76   1271502 9.09121    9.091  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.728 (0.827)    45    589658 9.05887    9.059  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43    149324                    0.00-  55.65    25.32
 12.728  12.728 (0.827)    59     26569                    0.00-  34.42     4.51
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.900  12.900 (0.838)    76    251775 9.16231    9.162  80.00- 120.00   100.00
 12.900  12.900 (0.838)    41    576006                  198.88- 258.88   228.78
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.176  13.176 (0.856)    84    383486 7.75041    7.750  80.00- 120.00   100.00
 13.176  13.176 (0.856)    49    426298                   83.76- 143.76   111.16
 13.176  13.176 (0.856)    51    133242                    2.61-  62.61    34.74
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.478  13.506 (0.876)    73   1346071 9.40089    9.401  80.00- 120.00   100.00
 13.478  13.478 (0.876)    57    256009                    0.00-  49.77    19.02
 13.478  13.478 (0.876)    41    258853                    0.00-  49.98    19.23
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.561 (0.879)    98    321471 10.2978   10.298  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61    653187                  174.76- 234.76   203.19
 13.533  13.561 (0.879)    96    487472                  123.28- 183.28   151.64
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57    576130 9.77701    9.777  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43    340782                   27.83-  87.83    59.15
 13.835  13.835 (0.899)    86    114960                    0.00-  50.45    19.95
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63    795284 9.25315    9.253  80.00- 120.00   100.00
 14.247  14.247 (0.926)    65    255526                    1.87-  61.87    32.13
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                   CAS #: 108-05-4
 14.275  14.274 (0.927)    86    112510 8.64901    8.649  80.00- 120.00   100.00
 14.275  14.274 (0.927)    42     98746                   71.31- 131.31    87.77
 14.275  14.274 (0.927)    43    950134                  931.28- 991.28   844.49
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                          CAS #: 156-59-2
 15.066  15.066 (0.979)    98    310953 8.20479    8.205  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   91 cis-1,2-Dichloroethene (continued)
 15.066  15.066 (0.979)    61    601954                  154.54- 214.54   193.58
 15.066  15.066 (0.979)    96    494162                  117.78- 177.78   158.92
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    210685 9.60948    9.609  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    732204                  325.72- 385.72   347.53
 15.047  15.047 (0.978)    57     65317                    1.13-  61.13    31.00
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    379254 9.55624    9.556  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71    198270                   20.32-  80.32    52.28
 15.391  15.391 (1.000)    72    199193                   21.98-  81.98    52.52
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    178126 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    133027                   46.73- 106.73    74.68
 15.391  15.391 (1.000)    49    150946                   55.35- 115.35    84.74
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1140509 8.83491    8.835  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    752383                   36.62-  96.62    65.97
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.700  15.699 (1.020)    84    591115 9.55079    9.551  80.00- 120.00   100.00
 15.700  15.699 (1.020)    56    594951                   68.83- 128.83   100.65
 15.669  15.699 (1.018)    41    352171                   29.98-  89.98    59.58
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.700  15.699 (1.020)    97   1365818 8.99525    8.995  80.00- 120.00   100.00
 15.700  15.699 (1.020)    99    880973                   34.65-  94.65    64.50
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.884  15.884 (1.032)   119   1324977 8.96273    8.963  80.00- 120.00   100.00
 15.884  15.884 (1.032)   117   1382964                   74.11- 134.11   104.38
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56    773965 9.33681    9.337  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   2488371                  277.67- 337.67   321.51
 16.111  16.111 (1.047)    41    819912                   73.43- 133.43   105.94
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.207  16.207 (0.968)    78   1326665 9.03109    9.031  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    310653                    0.00-  53.00    23.42
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    237668 4.64627    4.646  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 117 1,2-Dichloroethane-d4 (continued)
 16.207  16.207 (1.053)    67    112780                    22.67-  82.67    47.45
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.304  16.303 (0.974)    62    803253 8.87526    8.875  80.00- 120.00   100.00
 16.304  16.303 (0.974)    64    259929                     1.95-  61.95    32.36
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57    386687 10.3955   10.396  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    203508                    23.08-  83.08    52.63
 16.352  16.352 (0.977)    43    634425                   136.91- 196.91   164.07
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    595003 5.00000            80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     95725                     0.00-  45.16    16.09
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.147  17.147 (1.024)   130    795399 9.70412    9.704  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95    692532                    61.87- 121.87    87.07
 17.147  17.147 (1.024)    97    436777                    29.29-  89.29    54.91
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.364  17.363 (1.037)    83    794583 10.3689   10.369  80.00- 120.00   100.00
 17.364  17.363 (1.037)    55    609062                    45.72- 105.72    76.65
 17.364  17.363 (1.037)    56    173228                     0.00-  52.26    21.80
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.581  17.580 (1.050)    63    433278 9.38861    9.389  80.00- 120.00   100.00
 17.581  17.580 (1.050)    62    305690                    41.22- 101.22    70.55
 17.581  17.580 (1.050)    41    302565                    40.14- 100.14    69.83
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88    332583 9.36553    9.366  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    204581                    30.17-  90.17    61.51
 17.701  17.701 (1.058)    57     68970                     0.00-  51.30    20.74
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.014  18.014 (1.076)    83   1228605 9.63258    9.632  80.00- 120.00   100.00
 18.014  18.014 (1.076)    85    825855                    36.87-  96.87    67.22
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.827  18.827 (1.125)    75    808144 10.2727   10.273  80.00- 120.00   100.00
 18.827  18.827 (1.125)    77    261206                     1.38-  61.38    32.32
 18.827  18.827 (1.125)    39    457398                    23.65-  83.65    56.60
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.007  19.006 (1.136)    43    893262 10.2217   10.222  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
145 4-Methyl-2-pentanone (continued)							
19.007	19.006 (1.136)	58	363749			10.02- 70.02	40.72
19.007	19.006 (1.136)	85	197253			0.00- 52.01	22.08
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.298	19.298 (1.153)	98	591663	5.12633	5.126	80.00- 120.00	100.00
19.298	19.298 (1.153)	70	66240			0.00- 40.89	11.20
19.298	19.298 (1.153)	100	400258			40.09- 100.09	67.65
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	1694224	9.53352	9.534	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	1007394			27.79- 87.79	59.46
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
20.026	20.026 (0.903)	75	794451	9.83427	9.834	80.00- 120.00	100.00
20.026	20.026 (0.903)	77	254512			1.55- 61.55	32.04
20.026	20.026 (0.903)	39	385152			18.82- 78.82	48.48
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	591110	9.54050	9.540	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	381041			32.59- 92.59	64.46
20.438	20.438 (0.922)	83	476859			50.07- 110.07	80.67
156 Tetrachloroethene					CAS #: 127-18-4		
20.630	20.630 (0.930)	166	1145653	9.48358	9.484	80.00- 120.00	100.00
20.630	20.630 (0.930)	129	769545			37.12- 97.12	67.17
20.630	20.630 (0.930)	131	750184			36.18- 96.18	65.48
158 2-Hexanone					CAS #: 591-78-6		
20.795	20.795 (0.938)	58	450950	10.7279	10.728	80.00- 120.00	100.00
20.795	20.795 (0.938)	43	826051			162.96- 222.96	183.18
20.795	20.795 (0.938)	100	121015			0.00- 59.39	26.84
160 Dibromochloromethane					CAS #: 124-48-1		
21.207	21.207 (0.956)	129	1437712	9.71395	9.714	80.00- 120.00	100.00
21.207	21.207 (0.956)	127	1103592			46.76- 106.76	76.76
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.482	21.481 (0.969)	107	1047930	9.49440	9.494	80.00- 120.00	100.00
21.482	21.481 (0.969)	109	966803			63.39- 123.39	92.26
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	548531	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	267866			17.27- 77.27	48.83
165 Chlorobenzene					CAS #: 108-90-7		
22.219	22.218 (1.002)	112	1462484	9.59603	9.596	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  165 Chlorobenzene (continued)
 22.219  22.218 (1.002)   114    472424                     2.22-  62.22    32.30
 22.219  22.218 (1.002)    77    778002                    23.48-  83.48    53.20
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.302  22.301 (1.006)   106    742265 10.3310   10.331  80.00- 120.00   100.00
 22.302  22.301 (1.006)    91   2316041                  278.11- 338.11   312.02
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.488  22.488 (1.014)   106    911254 10.7153   10.715  80.00- 120.00   100.00
 22.488  22.488 (1.014)    91   1804888                  170.01- 230.01   198.07
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106    837465 10.6269   10.627  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91   1774319                  175.84- 235.84   211.87
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104   1422109 10.8176   10.818  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78    708648                   20.21-  80.21    49.83
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.057)   173   1525499 9.94357    9.944  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    774720                   21.47-  81.47    50.78
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.564  23.564 (1.063)   105   2629101 10.6361   10.636  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    711480                    0.00-  56.99    27.06
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    386676 5.04656    5.046  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    367847                   66.74- 126.74    95.13
 23.856  23.856 (1.076)   176    381756                   67.47- 127.47    98.73
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83    947262 8.80139    8.801  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85    653842                   39.76-  99.76    69.02
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.102  24.102 (1.087)    91   2510781 10.2038   10.204  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120    633739                    0.00-  55.73    25.24
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105   2196643 10.7682   10.768  80.00- 120.00   100.00
 24.237  24.237 (1.093)   120    686384                    1.00-  61.00    31.25
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105   1514543 10.0150   10.015  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene (continued)							
24.304	24.304 (1.096)	120	783062			19.17- 79.17	51.70
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	1278321	10.0716	10.072	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	588043			16.84- 76.84	46.00
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	1299635	9.62715	9.627	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	836795			33.96- 93.96	64.39
25.156	25.156 (1.134)	111	461197			6.94- 66.94	35.49
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.268 (1.139)	146	1291092	9.20679	9.207	80.00- 120.00	100.00
25.269	25.268 (1.139)	148	829427			35.10- 95.10	64.24
25.269	25.268 (1.139)	111	451923			4.80- 64.80	35.00
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	1614430	9.98225	9.982	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	360496			0.00- 52.64	22.33
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.695	25.694 (1.159)	146	1212840	9.57612	9.576	80.00- 120.00	100.00
25.695	25.694 (1.159)	148	777483			33.88- 93.88	64.10
25.695	25.672 (1.159)	111	447694			7.58- 67.58	36.91
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	782625	8.14388	8.144	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	769761			63.70- 123.70	98.36
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	1213102	9.00028	9.000	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	759653			34.33- 94.33	62.62
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	128559	0.97669	0.9767	80.00- 120.00	100.00
27.712	27.712 (1.250)	127	15920			0.00- 42.30	12.38
M 239 Total Xylene					CAS #: 1330-20-7		
			1748719	21.3423	21.342		

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: e012625.d
Lab Smp Id: ICV
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: ICV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	178126	-2.01
123 1,4-Difluorobenze	598820	359292	838348	595003	-0.64
163 Chlorobenzene-d5	568188	340913	795463	548531	-3.46

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	22.18	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: 30-Jan-2017 10:33

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 27Jan2017
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: ICV
Client Smp ID: ICV
Level: LOW
Operator: sw
Data Type: MS DATA
SampleType: ICV
SpikeList File: AT09EtOH.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	8.772	87.72	60-140
11 Freon 12	10.000	9.104	91.04	70-130
15 Freon 114	10.000	8.716	87.16	70-130
17 Chloromethane	10.000	8.923	89.23	70-130
23 Butane	10.000	9.724	97.24	60-140
25 Vinyl Chloride	10.000	8.606	86.06	70-130
26 1,3-Butadiene	10.000	8.706	87.06	70-130
29 Bromomethane	10.000	9.282	92.82	70-130
30 Chloroethane	10.000	9.020	90.20	70-130
31 Isopentane	10.000	9.295	92.95	60-140
35 Freon 11	10.000	9.125	91.25	70-130
42 Ethanol	11.500	7.649	66.51*	70-130
49 Freon 113	10.000	8.875	88.75	70-130
50 1,1-Dichloroethene	10.000	8.909	89.09	70-130
52 Acetone	10.000	8.717	87.17	70-130
56 Carbon Disulfide	10.000	9.091	90.91	70-130
57 2-Propanol	10.000	9.059	90.59	70-130
58 3-Chloropropene	10.000	9.162	91.62	70-130
66 Methylene Chloride	10.000	7.750	77.50	70-130
72 Methyl tert-butyl	10.000	9.401	94.01	70-130
73 trans-1,2-Dichloro	10.000	10.298	102.98	70-130
78 Hexane	10.000	9.777	97.77	70-130
82 1,1-Dichloroethane	10.000	9.253	92.53	70-130
86 Vinyl Acetate	10.000	8.649	86.49	60-140
91 cis-1,2-Dichloroet	10.000	8.205	82.05	70-130
92 2-Butanone	10.000	9.609	96.09	70-130
99 Tetrahydrofuran	10.000	9.556	95.56	70-130
100 Chloroform	10.000	8.835	88.35	70-130
103 1,1,1-Trichloroeth	10.000	8.995	89.95	70-130
106 Carbon Tetrachlori	10.000	8.963	89.63	70-130
102 Cyclohexane	10.000	9.551	95.51	70-130
113 2,2,4-Trimethylpen	10.000	9.337	93.37	70-130
116 Benzene	10.000	9.031	90.31	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	8.875	88.75	70-130
121 Heptane	10.000	10.396	103.96	70-130
125 Trichloroethene	10.000	9.704	97.04	70-130
127 Methylcyclohexane	10.000	10.369	103.69	60-140
132 1,2-Dichloropropan	10.000	9.389	93.89	70-130
136 1,4-Dioxane	10.000	9.366	93.66	70-130
138 Bromodichlorometha	10.000	9.632	96.33	70-130
144 cis-1,3-Dichloropr	10.000	10.273	102.73	70-130
145 4-Methyl-2-pentano	10.000	10.222	102.22	70-130
147 Toluene	10.000	9.534	95.34	70-130
150 trans-1,3-Dichloro	10.000	9.834	98.34	70-130
155 1,1,2-Trichloroeth	10.000	9.540	95.40	70-130
156 Tetrachloroethene	10.000	9.484	94.84	70-130
158 2-Hexanone	10.000	10.728	107.28	70-130
160 Dibromochlorometha	10.000	9.714	97.14	70-130
161 1,2-Dibromoethane	10.000	9.494	94.94	70-130
165 Chlorobenzene	10.000	9.596	95.96	70-130
167 Ethyl Benzene	10.000	10.331	103.31	70-130
169 m,p-Xylene	10.000	10.715	107.15	70-130
171 o-Xylene	10.000	10.627	106.27	70-130
172 Styrene	10.000	10.818	108.18	70-130
174 Bromoform	10.000	9.944	99.44	70-130
175 Cumene	10.000	10.636	106.36	70-130
181 1,1,2,2-Tetrachlor	10.000	8.801	88.01	70-130
182 Propylbenzene	10.000	10.204	102.04	70-130
188 4-Ethyltoluene	10.000	10.768	107.68	70-130
190 1,3,5-Trimethylben	10.000	10.015	100.15	70-130
196 1,2,4-Trimethylben	10.000	10.072	100.72	70-130
208 1,3-Dichlorobenzen	10.000	9.627	96.27	70-130
209 1,4-Dichlorobenzen	10.000	9.207	92.07	70-130
212 alpha-Chlorotoluen	10.000	9.982	99.82	70-130
214 1,2-Dichlorobenzen	10.000	9.576	95.76	70-130
226 1,2,4-Trichloroben	10.000	8.144	81.44	70-130
227 Hexachlorobutadien	10.000	9.000	90.00	70-130
228 Naphthalene	1.000	0.9767	97.67	60-140
M 239 Total Xylene	20.000	21.342	106.71	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.646	92.93	70-130
$ 146 Toluene-d8	5.000	5.126	102.53	70-130
$ 177 4-Bromofluorobenze	5.000	5.046	100.93	70-130

Data File: /chem/msde.i/26Jan2017.b/e012625.d

Date : 27-JAN-2017 11:09

Client ID: ICV

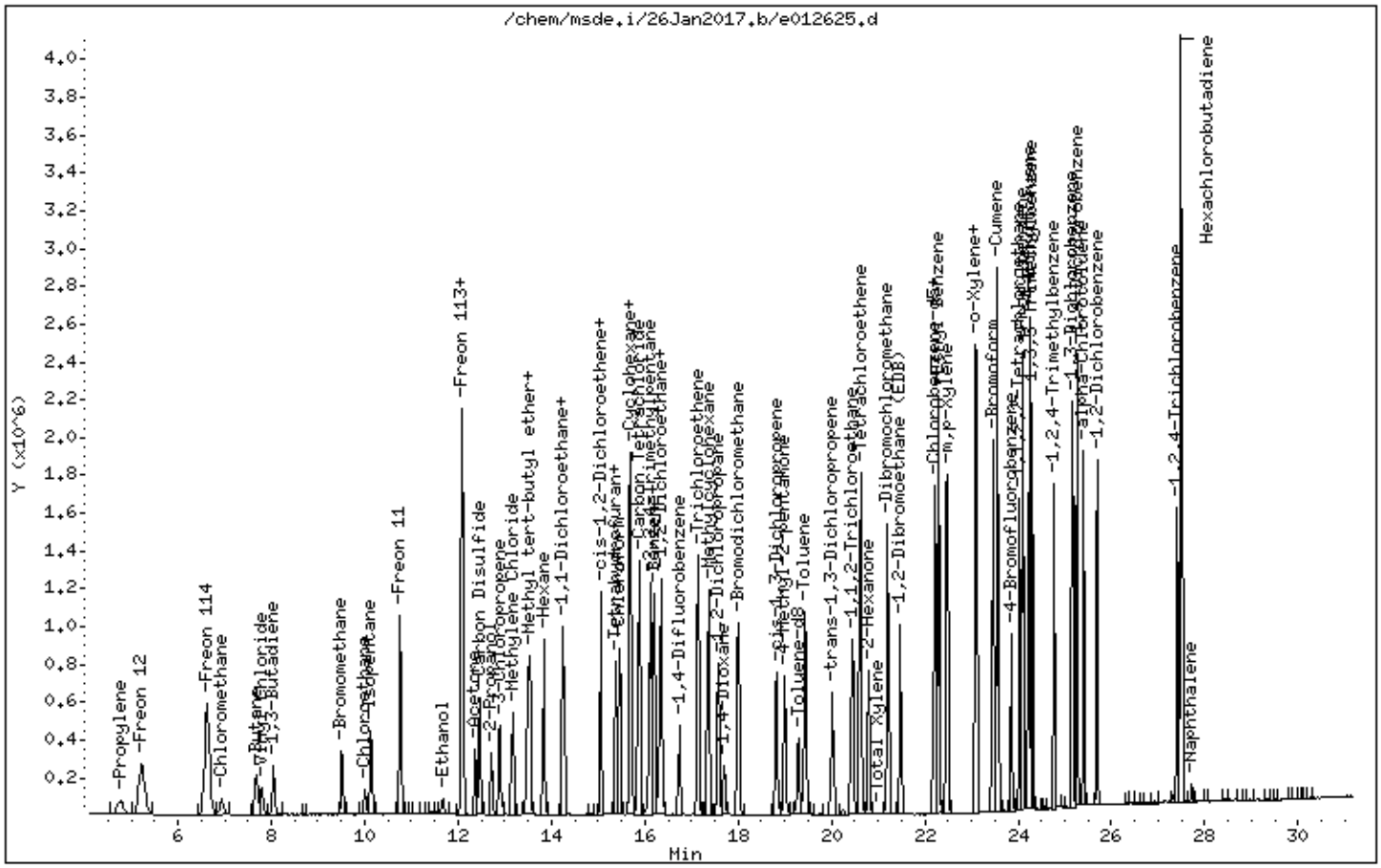
Instrument: msde.i

Sample Info: 50mL #2819-156

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012610.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 26-JAN-2017 14:02
Operator : sw Inst ID: msde.i
Smp Info : 250mL# 2819-239
Misc Info : 0.05ppbv (0.05ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 14:02 Cal File: e012610.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
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	2280	0.05000	0.06467	80.00- 120.00	100.00(a)
7.797	7.797 (0.507)	64	1319			1.95- 61.95	57.85
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	7463	0.05000	0.04756	80.00- 120.00	100.00(a)
10.766	10.766 (0.700)	103	6825			33.74- 93.74	91.45
49 Freon 113					CAS #: 76-13-1		
12.100	12.100 (0.786)	151	5477	0.05000	0.05227	80.00- 120.00	100.00(a)
12.100	12.100 (0.786)	153	4077			34.83- 94.83	74.44
12.100	12.100 (0.786)	101	6381			77.16- 137.16	116.51
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	151511	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	119861			46.73- 106.73	79.11
15.391	15.391 (1.000)	49	127465			55.35- 115.35	84.13
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
15.669	15.669 (1.018)	97	8109	0.05000	0.06279	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)
 15.700  15.700 (1.020)    99      4532                    34.65-  94.65    55.89
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.885  15.885 (1.032)   119      7168 0.05000  0.05700  80.00- 120.00   100.00(a)
 15.885  15.885 (1.032)   117      6648                    74.11- 134.11    92.75
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    233364 5.00000    5.364  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    106748                    22.67-  82.67    45.74
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62      4931 0.05000  0.06348  80.00- 120.00   100.00(a)
 16.328  16.328 (0.976)    64      2197                     1.95-  61.95    44.55
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    510653 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     73699                     0.00-  45.16    14.43
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130      3600 0.05000  0.05118  80.00- 120.00   100.00(a)
 17.147  17.147 (1.024)    95      3543                    61.87- 121.87    98.42
 17.123  17.123 (1.023)    97      2256                    29.29-  89.29    62.67
-------------------------------------------------------------------------------
  138 Bromodichloromethane                          CAS #: 75-27-4
 18.014  18.014 (1.076)    83      4643 0.05000  0.04242  80.00- 120.00   100.00(a)
 18.014  18.014 (1.076)    85      4408                    36.87-  96.87    94.94
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                    CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    493312 5.00000    4.980  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     59634                     0.00-  40.89    12.09
 19.298  19.298 (1.153)   100    323750                    40.09- 100.09    65.63
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                         CAS #: 79-00-5
 20.438  20.438 (0.922)    97      2350 0.05000  0.04205  80.00- 120.00   100.00(a)
 20.465  20.465 (0.923)    99      2160                    32.59-  92.59    91.91
 20.438  20.438 (0.922)    83      2515                    50.07- 110.07   107.02
-------------------------------------------------------------------------------
  156 Tetrachloroethene                             CAS #: 127-18-4
 20.603  20.603 (0.929)   166      4870 0.05000  0.04470  80.00- 120.00   100.00(a)
 20.630  20.630 (0.930)   129      2396                    37.12-  97.12    49.20
 20.630  20.630 (0.930)   131      4840                    36.18-  96.18    99.38
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129      6403 0.05000  0.04797  80.00- 120.00   100.00(a)
 21.207  21.207 (0.956)   127      6409                    46.76- 106.76   100.09
-------------------------------------------------------------------------------
```

```
                                          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      5516 0.05000  0.05541  80.00- 120.00   100.00(a)
 21.482  21.482 (0.969)   109      5966                   63.39- 123.39   108.16
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    494732 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    234016                   17.27-  77.27    47.30
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 23.452  23.452 (1.057)   173      7119 0.05000  0.05145  80.00- 120.00   100.00(a)
 23.452  23.452 (1.057)   171      3210                   21.47-  81.47    45.09
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.856  23.856 (1.076)   174    329501 5.00000    4.768  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    315834                   66.74- 126.74    95.85
 23.856  23.856 (1.076)   176    322046                   67.47- 127.47    97.74
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 24.035  24.035 (1.084)    83      6384 0.05000  0.06577  80.00- 120.00   100.00(a)
 24.035  24.035 (1.084)    85      4482                   39.76-  99.76    70.21
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                   CAS #: 622-96-8
 24.237  24.237 (1.093)   105      7639 0.05000  0.04152  80.00- 120.00   100.00(a)
 24.237  24.237 (1.093)   120      3633                    1.00-  61.00    47.56
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                           CAS #: 108-67-8
 24.304  24.304 (1.096)   105      6132 0.05000  0.04496  80.00- 120.00   100.00(a)
 24.304  24.304 (1.096)   120      4321                   19.17-  79.17    70.47
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                           CAS #: 95-63-6
 24.775  24.775 (1.117)   105      6170 0.05000  0.05390  80.00- 120.00   100.00(a)
 24.775  24.775 (1.117)   120      3018                   16.84-  76.84    48.91
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                              CAS #: 541-73-1
 25.157  25.157 (1.134)   146      6074 0.05000  0.04989  80.00- 120.00   100.00(a)
 25.157  25.157 (1.134)   148      4000                   33.96-  93.96    65.85
 25.157  25.157 (1.134)   111      1928                    6.94-  66.94    31.74
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                              CAS #: 106-46-7
 25.269  25.269 (1.139)   146      7482 0.05000  0.05916  80.00- 120.00   100.00(a)
 25.269  25.269 (1.139)   148      5111                   35.10-  95.10    68.31
 25.269  25.269 (1.139)   111      2224                    4.80-  64.80    29.72
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                              CAS #: 95-50-1
 25.695  25.695 (1.159)   146      5681 0.05000  0.04973  80.00- 120.00   100.00(a)
 25.672  25.672 (1.158)   148      5406                   33.88-  93.88    95.16
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
25.672	25.672 (1.158)	111	1975			7.58- 67.58	34.77
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	5158	0.05000	0.05951	80.00- 120.00	100.00(a)
27.398	27.398 (1.235)	182	5665			63.70- 123.70	109.83

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: e012610.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 0.05ppbv (0.05ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	151511	-16.66
123 1,4-Difluorobenze	598820	359292	838348	510653	-14.72
163 Chlorobenzene-d5	568188	340913	795463	494732	-12.93

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	22.18	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/26Jan2017.b/e012610.d

Date : 26-JAN-2017 14:02

Client ID: Level 5

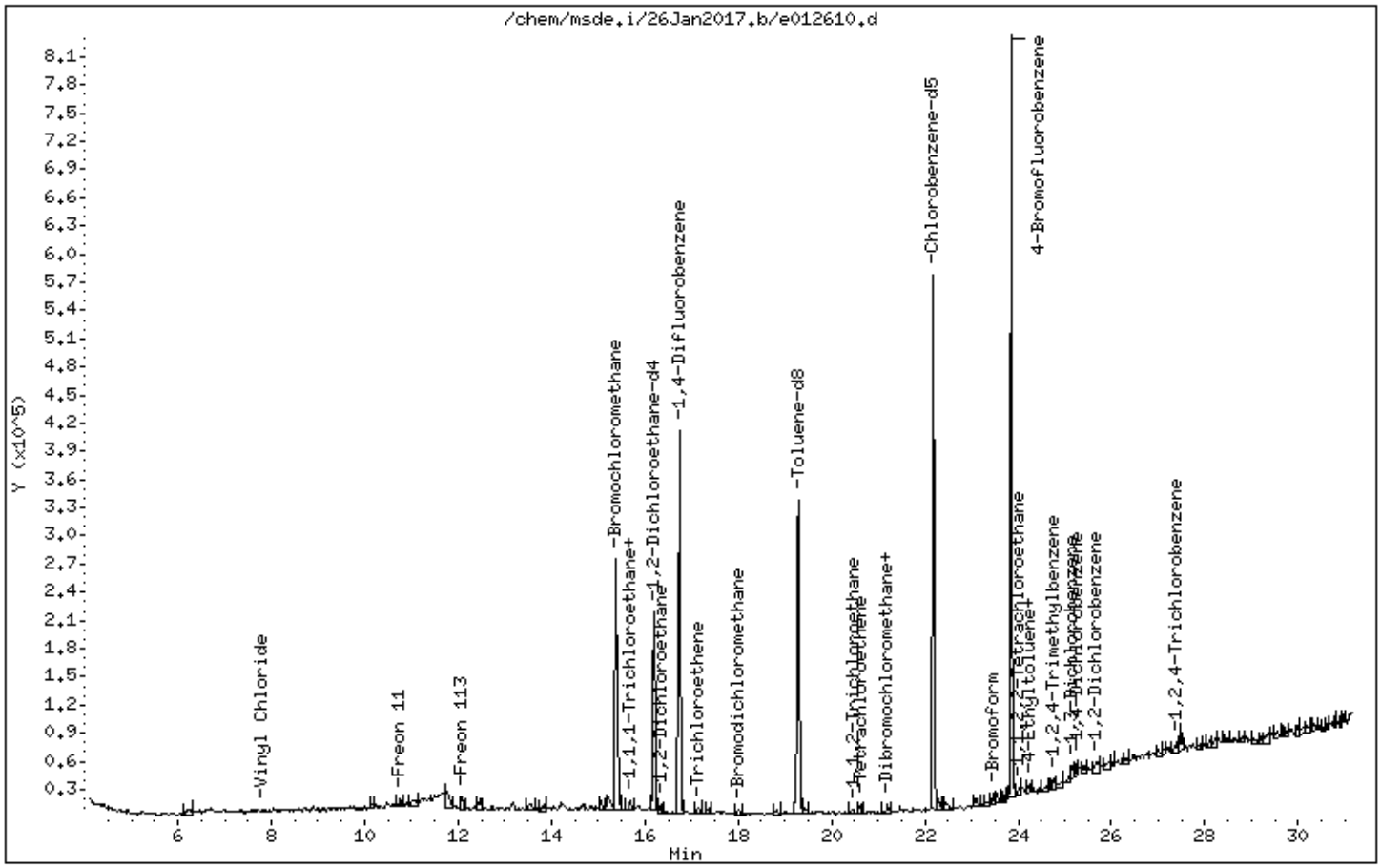
Instrument: msde.i

Sample Info: 250mL# 2819-239

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012624.d
Lab Smp Id: Level 6
Inj Date : 27-JAN-2017 09:14
Operator : sw Inst ID: msde.i
Smp Info : 25mL# 2819-240
Misc Info : 0.10ppbv(1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 09:14 Cal File: e012624.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		
5.196	5.196 (0.338)	85	15119	0.10000	0.1121	80.00- 120.00	100.00(a)
5.196	5.196 (0.338)	87	2338			1.91- 61.91	15.46
15 Freon 114					CAS #: 76-14-2		
6.643	6.643 (0.432)	135	12466	0.10000	0.1204	80.00- 120.00	100.00(a)
6.643	6.643 (0.432)	137	2695			0.98- 60.98	21.62
6.643	6.643 (0.432)	85	16106			86.82- 146.82	129.20
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	4192	0.10000	0.1186	80.00- 120.00	100.00(a)
7.831	7.831 (0.509)	64	950			1.95- 61.95	22.66
26 1,3-Butadiene					CAS #: 106-99-0		
8.057	8.057 (0.523)	54	2664	0.10000	0.1090	80.00- 120.00	100.00(a)
8.057	8.057 (0.523)	39	3597			76.10- 136.10	135.02
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	19507	0.10000	0.1240	80.00- 120.00	100.00(a)
10.766	10.766 (0.700)	103	14790			33.74- 93.74	75.82

```
                                        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     12016 0.10000   0.1144  80.00- 120.00   100.00(a)
 12.100  12.100 (0.786)   153      7247                   34.83-  94.83    60.31
 12.081  12.081 (0.785)   101     12195                   77.16- 137.16   101.49
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.119  12.119 (0.787)    98      2810 0.10000   0.1001  80.00- 120.00   100.00(a)
 12.100  12.100 (0.786)    61      8876                  219.47- 279.47   315.87
 12.100  12.100 (0.786)    96      7461                  126.81- 186.81   265.52
-------------------------------------------------------------------------------
   66 Methylene Chloride                            CAS #: 75-09-2
 13.176  13.176 (0.856)    84      5841 0.10000   0.1384  80.00- 120.00   100.00(a)
 13.176  13.176 (0.856)    49      4528                   83.76- 143.76    77.52
 13.149  13.149 (0.854)    51      1947                    2.61-  62.61    33.33
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                       CAS #: 1634-04-4
 13.506  13.506 (0.878)    73     12880 0.10000   0.1055  80.00- 120.00   100.00(a)
 13.506  13.506 (0.878)    57      3315                    0.00-  49.77    25.74
 13.506  13.506 (0.878)    41      3783                    0.00-  49.98    29.37
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                      CAS #: 156-60-5
 13.561  13.561 (0.881)    98      2601 0.10000  0.09770  80.00- 120.00   100.00(a)
 13.561  13.561 (0.881)    61      6171                  174.76- 234.76   237.25
 13.561  13.561 (0.881)    96      3989                  123.28- 183.28   153.36
-------------------------------------------------------------------------------
   78 Hexane                                        CAS #: 110-54-3
 13.835  13.835 (0.899)    57      5001 0.10000  0.09952  80.00- 120.00   100.00(a)
 13.835  13.835 (0.899)    43      4568                   27.83-  87.83    91.34
 13.835  13.835 (0.899)    86       886                    0.00-  50.45    17.72
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                            CAS #: 75-34-3
 14.247  14.247 (0.926)    63      6791 0.10000  0.09265  80.00- 120.00   100.00(a)
 14.247  14.247 (0.926)    65      2614                    1.87-  61.87    38.49
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.066  15.066 (0.979)    98      3495 0.10000   0.1081  80.00- 120.00   100.00(a)
 15.066  15.066 (0.979)    61      5911                  154.54- 214.54   169.13
 15.066  15.066 (0.979)    96      6343                  117.78- 177.78   181.49
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    151907 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    110825                   46.73- 106.73    72.96
 15.391  15.391 (1.000)    49    131004                   55.35- 115.35    86.24
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83     13149 0.10000   0.1194  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      8027                    36.62-  96.62    61.05
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.700  15.700 (1.020)    84      5646 0.10000   0.1070  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56      4211                   68.83- 128.83    74.58
 15.700  15.700 (1.020)    41      5019                   29.98-  89.98    88.89
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.700  15.700 (1.020)    97     12566 0.10000  0.09704  80.00- 120.00   100.00(a)
 15.700  15.700 (1.020)    99      9806                   34.65-  94.65    78.04
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.884  15.884 (1.032)   119     14443 0.10000   0.1146  80.00- 120.00   100.00(a)
 15.884  15.884 (1.032)   117     12950                   74.11- 134.11    89.66
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                       CAS #: 540-84-1
 16.111  16.111 (1.047)    56      6091 0.10000  0.08616  80.00- 120.00   100.00(a)
 16.111  16.111 (1.047)    57     21609                  277.67- 337.67   354.77
 16.111  16.111 (1.047)    41      5808                   73.43- 133.43    95.35
-------------------------------------------------------------------------------
  116 Benzene                                      CAS #: 71-43-2
 16.207  16.207 (0.968)    78     15718 0.10000   0.1230  80.00- 120.00   100.00(a)
 16.207  16.207 (0.968)    77      5498                    0.00-  53.00    34.98
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                        CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    216821 5.00000    4.970  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    101394                   22.67-  82.67    46.76
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.303  16.303 (0.974)    62      9193 0.10000   0.1168  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64      3522                    1.95-  61.95    38.31
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57      3684 0.10000   0.1139  80.00- 120.00   100.00(a)
 16.352  16.352 (0.977)   100      2879                   23.08-  83.08    78.15
 16.352  16.352 (0.977)    43      4813                  136.91- 196.91   130.65
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    517534 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     74428                    0.00-  45.16    14.38
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.147  17.147 (1.024)   130      7923 0.10000   0.1111  80.00- 120.00   100.00(a)
 17.147  17.147 (1.024)    95      7866                   61.87- 121.87    99.28
 17.147  17.147 (1.024)    97      5494                   29.29-  89.29    69.34
-------------------------------------------------------------------------------
```

```
                                          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
 17.580  17.580 (1.050)    63      4372 0.10000   0.1089  80.00- 120.00   100.00(a)
 17.605  17.605 (1.052)    62      2564                   41.22- 101.22    58.65
 17.580  17.580 (1.050)    41      4411                   40.14- 100.14   100.89
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.725  17.725 (1.059)    88      3602 0.10000   0.1166  80.00- 120.00   100.00(a)
 17.701  17.701 (1.058)    58      2379                   30.17-  90.17    66.05
 17.725  17.725 (1.059)    57       584                    0.00-  51.30    16.21
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.014  18.014 (1.076)    83     13557 0.10000   0.1222  80.00- 120.00   100.00(a)
 17.990  17.990 (1.075)    85      9007                   36.87-  96.87    66.44
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.827  18.827 (1.125)    75      7211 0.10000   0.1054  80.00- 120.00   100.00(a)
 18.850  18.850 (1.126)    77      2403                    1.38-  61.38    33.32
 18.805  18.805 (1.124)    39      4555                   23.65-  83.65    63.17
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.029  19.029 (1.137)    43      8401 0.10000   0.1105  80.00- 120.00   100.00(a)
 19.007  19.007 (1.136)    58      3693                   10.02-  70.02    43.96
 19.007  19.007 (1.136)    85      1675                    0.00-  52.01    19.94
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    485129 5.00000    4.832  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     53976                    0.00-  40.89    11.13
 19.298  19.298 (1.153)   100    320417                   40.09- 100.09    66.05
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91     16070 0.10000   0.1040  80.00- 120.00   100.00(a)
 19.432  19.432 (1.161)    92      9398                   27.79-  87.79    58.48
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75      7688 0.10000   0.1076  80.00- 120.00   100.00(a)
 20.026  20.026 (0.903)    77      3545                    1.55-  61.55    46.11
 20.026  20.026 (0.903)    39      4812                   18.82-  78.82    62.59
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.465  20.465 (0.923)    97      6321 0.10000   0.1154  80.00- 120.00   100.00(a)
 20.438  20.438 (0.922)    99      4688                   32.59-  92.59    74.17
 20.438  20.438 (0.922)    83      5367                   50.07- 110.07    84.91
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.630  20.630 (0.930)   166     12279 0.10000   0.1150  80.00- 120.00   100.00(a)
 20.630  20.630 (0.930)   129      7883                   37.12-  97.12    64.20
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  156 Tetrachloroethene (continued)
 20.630  20.630 (0.930)   131      8852                    36.18-  96.18    72.09
-------------------------------------------------------------------------------
  160 Dibromochloromethane                          CAS #: 124-48-1
 21.207  21.207 (0.956)   129     14484 0.10000   0.1107  80.00- 120.00   100.00(a)
 21.207  21.207 (0.956)   127     12540                   46.76- 106.76    86.58
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                       CAS #: 106-93-4
 21.482  21.482 (0.969)   107     10899 0.10000   0.1117  80.00- 120.00   100.00(a)
 21.482  21.482 (0.969)   109     10741                   63.39- 123.39    98.55
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                              CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    484941 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    230169                   17.27-  77.27    47.46
-------------------------------------------------------------------------------
  165 Chlorobenzene                                 CAS #: 108-90-7
 22.219  22.219 (1.002)   112     14465 0.10000   0.1074  80.00- 120.00   100.00(a)
 22.219  22.219 (1.002)   114      6081                    2.22-  62.22    42.04
 22.219  22.219 (1.002)    77     14610                   23.48-  83.48   101.00
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                 CAS #: 100-41-4
 22.302  22.302 (1.006)   106      5120 0.10000  0.08060  80.00- 120.00   100.00(a)
 22.302  22.302 (1.006)    91     21021                  278.11- 338.11   410.57
-------------------------------------------------------------------------------
  169 m,p-Xylene                                    CAS #: 108-38-3
 22.467  22.467 (1.013)   106      7317 0.10000  0.09732  80.00- 120.00   100.00(a)
 22.488  22.488 (1.014)    91     13298                  170.01- 230.01   181.74
-------------------------------------------------------------------------------
  171 o-Xylene                                      CAS #: 95-47-6
 23.089  23.089 (1.041)   106      6208 0.10000  0.08910  80.00- 120.00   100.00(a)
 23.089  23.089 (1.041)    91     15314                  175.84- 235.84   246.68
-------------------------------------------------------------------------------
  172 Styrene                                       CAS #: 100-42-5
 23.131  23.131 (1.043)   104     10322 0.10000  0.08881  80.00- 120.00   100.00(a)
 23.131  23.131 (1.043)    78      4707                   20.21-  80.21    45.60
-------------------------------------------------------------------------------
  174 Bromoform                                     CAS #: 75-25-2
 23.452  23.452 (1.057)   173     13410 0.10000  0.09887  80.00- 120.00   100.00(a)
 23.452  23.452 (1.057)   171      7377                   21.47-  81.47    55.01
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
 23.564  23.564 (1.063)   105     20971 0.10000  0.09596  80.00- 120.00   100.00(a)
 23.564  23.564 (1.063)   120      5305                    0.00-  56.99    25.30
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    329914 5.00000    4.870  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 177 4-Bromofluorobenzene (continued)
 23.856  23.856 (1.076)    95    311305                    66.74- 126.74    94.36
 23.856  23.856 (1.076)   176    316437                    67.47- 127.47    95.91
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83     10144 0.10000   0.1066  80.00- 120.00   100.00(a)
 24.035  24.035 (1.084)    85      7083                    39.76-  99.76    69.82
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.102  24.102 (1.087)    91     23044 0.10000   0.1059  80.00- 120.00   100.00(a)
 24.102  24.102 (1.087)   120      5834                     0.00-  55.73    25.32
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105     19898 0.10000   0.1103  80.00- 120.00   100.00(a)
 24.237  24.237 (1.093)   120      4926                     1.00-  61.00    24.76
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105     12294 0.10000  0.09195  80.00- 120.00   100.00(a)
 24.304  24.304 (1.096)   120      6661                    19.17-  79.17    54.18
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                       CAS #: 95-63-6
 24.775  24.775 (1.117)   105     12148 0.10000   0.1083  80.00- 120.00   100.00(a)
 24.775  24.775 (1.117)   120      5792                    16.84-  76.84    47.68
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                          CAS #: 541-73-1
 25.156  25.156 (1.134)   146     13328 0.10000   0.1117  80.00- 120.00   100.00(a)
 25.156  25.156 (1.134)   148      8392                    33.96-  93.96    62.97
 25.156  25.156 (1.134)   111      4605                     6.94-  66.94    34.55
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                          CAS #: 106-46-7
 25.269  25.269 (1.139)   146     14366 0.10000   0.1159  80.00- 120.00   100.00(a)
 25.269  25.269 (1.139)   148      8379                    35.10-  95.10    58.33
 25.269  25.269 (1.139)   111      4472                     4.80-  64.80    31.13
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                          CAS #: 100-44-7
 25.403  25.403 (1.145)    91     14622 0.10000   0.1023  80.00- 120.00   100.00(a)
 25.403  25.403 (1.145)   126      4768                     0.00-  52.64    32.61
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                          CAS #: 95-50-1
 25.694  25.694 (1.159)   146     11946 0.10000   0.1067  80.00- 120.00   100.00(a)
 25.694  25.694 (1.159)   148      9140                    33.88-  93.88    76.51
 25.694  25.694 (1.159)   111      3810                     7.58-  67.58    31.89
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                       CAS #: 120-82-1
 27.398  27.398 (1.235)   180      9648 0.10000   0.1136  80.00- 120.00   100.00(a)
 27.398  27.398 (1.235)   182     11832                    63.70- 123.70   122.64
-------------------------------------------------------------------------------
```

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
227 Hexachlorobutadiene						CAS #: 87-68-3		
27.488	27.488	(1.239)	225	13035	0.10000	0.1094	80.00- 120.00	100.00(a)
27.488	27.488	(1.239)	223	9731			34.33- 94.33	74.65

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: e012624.d
Lab Smp Id: Level 6
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 0.10ppbv(1.0ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	151907	-16.44
123 1,4-Difluorobenze	598820	359292	838348	517534	-13.57
163 Chlorobenzene-d5	568188	340913	795463	484941	-14.65

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	22.18	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/26Jan2017.b/e012624.d

Date : 27-JAN-2017 09:14

Client ID:

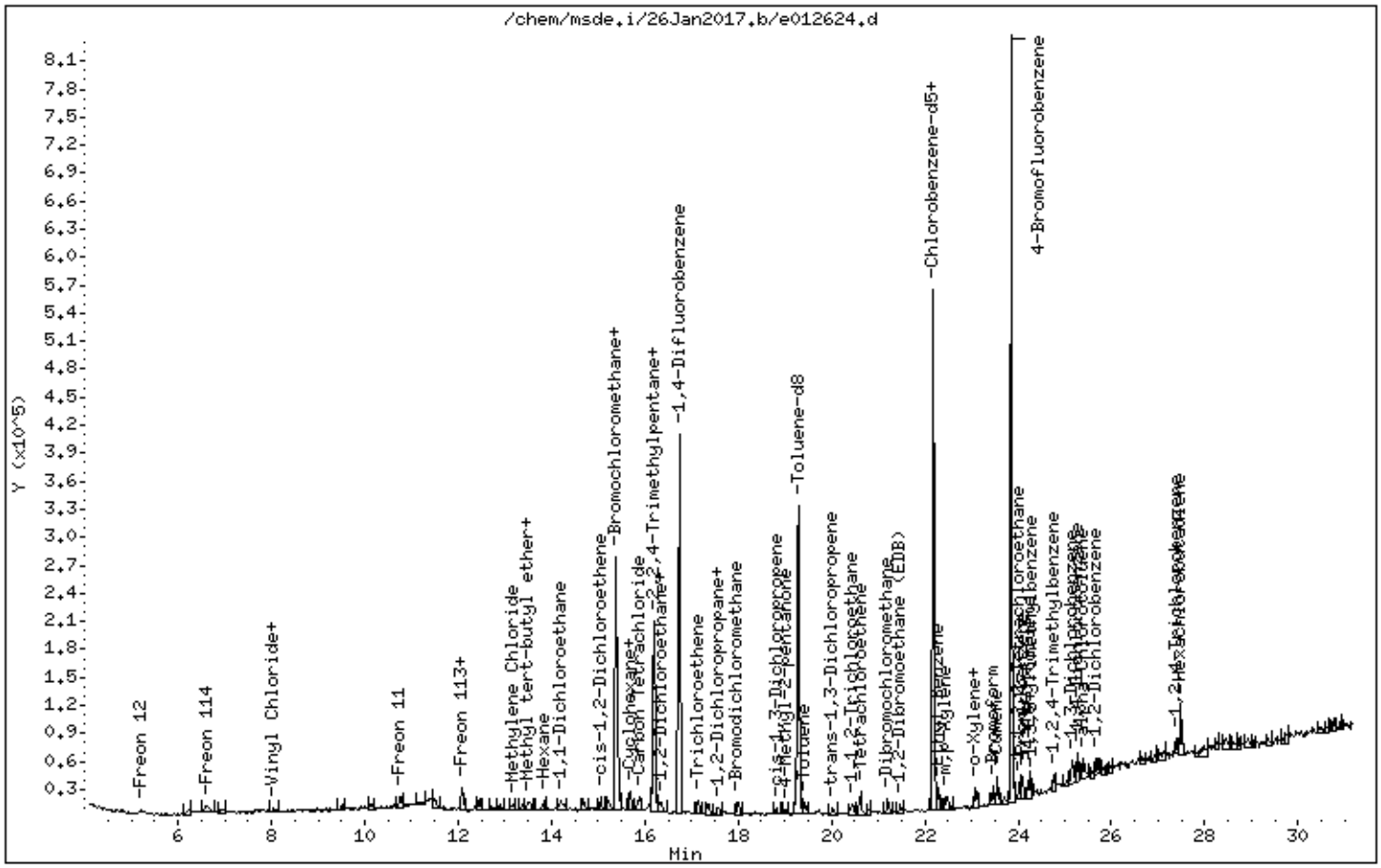
Instrument: msde.i

Sample Info: 25mL# 2819-240

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/27Jan2017.b/e012705.d
Lab Smp Id: Level 7
Inj Date : 27-JAN-2017 16:20
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2819-242
Misc Info : 0.5ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/27Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:45 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 16:20 Cal File: e012705.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.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		
10.842	10.842 (0.704)	55	14022	0.50000	0.5836	0.00- 0.00	100.00
10.842	10.842 (0.704)	42	16235			0.00- 0.00	115.78
34 Pentane					CAS #: 109-66-0		
10.976	10.976 (0.713)	43	6990	0.50000	0.6136	0.00- 0.00	100.00
10.995	10.995 (0.714)	57	743			0.00- 0.00	10.63
10.976	10.976 (0.713)	72	1317			0.00- 0.00	18.84
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	9202	0.50000	0.5814	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	13410			0.00- 0.00	145.73
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.423	12.423 (0.807)	142	49871	0.50000	0.5470	0.00- 0.00	100.00
12.423	12.423 (0.807)	127	27611			0.00- 0.00	55.36
59 Cyclopentene					CAS #: 142-29-0		
12.919	12.919 (0.839)	67	36449	0.50000	0.5632	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	14898			0.00- 0.00	40.87
12.919	12.919 (0.839)	53	6414			0.00- 0.00	17.60
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	9250	0.50000	0.5208	0.00- 0.00	100.00
13.094	13.094 (0.851)	55	12100			0.00- 0.00	130.81
74 Acrylonitrile					CAS #: 107-13-1		
13.671	13.671 (0.888)	53	11393	0.50000	0.5230	0.00- 0.00	100.00
13.671	13.671 (0.888)	52	11062			0.00- 0.00	97.09
76 1-Hexene					CAS #: 592-41-6		
13.725	13.725 (0.892)	55	8941	0.50000	0.4822	0.00- 0.00	100.00(a)
13.725	13.725 (0.892)	41	15029			0.00- 0.00	168.09
13.753	13.753 (0.894)	84	5544			0.00- 0.00	62.01
84 1-Propanol					CAS #: 71-23-8		
14.384	14.384 (0.935)	59	3391	0.50000	0.4437	80.00- 120.00	100.00(a)
14.384	14.384 (0.935)	42	4205			0.00- 0.00	124.00
14.384	14.384 (0.935)	41	2699			0.00- 0.00	79.59
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.008	15.008 (0.975)	77	45595	0.50000	0.5430	80.00- 120.00	100.00
15.028	15.028 (0.976)	79	16147			0.00- 0.00	35.41
15.008	15.008 (0.975)	97	8709			0.00- 0.00	19.10
93 Methyl Acrylate					CAS #: 96-33-3		
15.142	15.142 (0.984)	55	30558	0.50000	0.5242	0.00- 0.00	100.00
15.142	15.142 (0.984)	85	5405			0.00- 0.00	17.69
15.142	15.142 (0.984)	58	3240			0.00- 0.00	10.60
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	141477	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	107860			46.73- 106.73	76.24
15.391	15.391 (1.000)	49	116072			55.35- 115.35	82.04
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.915	15.915 (1.034)	110	12936	0.50000	0.5705	80.00- 120.00	100.00
15.915	15.915 (1.034)	75	28560			0.00- 0.00	220.78
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	10870	0.50000	0.4922	80.00- 120.00	100.00(Ta)
15.977	15.977 (1.038)	41	11451			0.00- 0.00	105.34
0.000	1.000 (0.000)	55	0			0.00- 0.00	0.00

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	476083	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	67410			0.00- 45.16	14.16
124 n-Butanol						CAS #: 71-36-3	
16.906	16.906 (1.010)	56	21173	0.50000	0.5421	80.00- 120.00	100.00
16.906	16.906 (1.010)	41	13677			0.00- 0.00	64.60
16.906	16.906 (1.010)	43	13249			0.00- 0.00	62.57
128 Ethyl acrylate						CAS #: 140-88-5	
17.195	17.195 (1.027)	99	3537	0.50000	0.5802	0.00- 0.00	100.00
17.195	17.195 (1.027)	45	3079			0.00- 0.00	87.05
17.195	17.195 (1.027)	55	30244			0.00- 0.00	855.07
131 2-Pentanone						CAS #: 107-87-9	
17.388	17.388 (1.039)	43	41803	0.50000	0.5354	0.00- 0.00	100.00
17.388	17.388 (1.039)	58	4189			0.00- 0.00	10.02
17.388	17.388 (1.039)	86	10684			0.00- 0.00	25.56
134 Methyl Methacrylate						CAS #: 80-62-6	
17.556	17.556 (1.049)	41	21872	0.50000	0.5512	0.00- 0.00	100.00
17.556	17.556 (1.049)	69	18310			0.00- 0.00	83.71
17.556	17.556 (1.049)	100	7760			0.00- 0.00	35.48
137 Dibromomethane						CAS #: 74-95-3	
17.821	17.821 (1.065)	174	39082	0.50000	0.5672	0.00- 0.00	100.00
17.821	17.821 (1.065)	93	29266			0.00- 0.00	74.88
17.797	17.797 (1.063)	95	24874			0.00- 0.00	63.65
148 Octane						CAS #: 111-65-9	
19.343	19.343 (1.156)	57	12623	0.50000	0.5825	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	15742			0.00- 0.00	124.71
19.343	19.343 (1.156)	43	26120			0.00- 0.00	206.92
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.822	20.822 (0.939)	76	32697	0.50000	0.5632	80.00- 120.00	100.00
20.822	20.822 (0.939)	41	20751			0.00- 0.00	63.46
20.822	20.822 (0.939)	78	14003			0.00- 0.00	42.83
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	445885	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	216685			17.27- 77.27	48.60
168 1,1,1,2-Tetrachloroethane						CAS #: 630-20-6	
22.343	22.343 (1.007)	131	44577	0.50000	0.5476	80.00- 120.00	100.00
22.343	22.343 (1.007)	117	27432			0.00- 0.00	61.54

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  168 1,1,1,2-Tetrachloroethane (continued)
 22.343  22.343 (1.007)    95     17402                     0.00-   0.00    39.04
-------------------------------------------------------------------------------
  170 Nonane                                        CAS #: 111-84-2
 22.301  22.301 (1.006)    43     20078 0.50000   0.4804   0.00-   0.00   100.00(a)
 22.301  22.301 (1.006)    57     19018                     0.00-   0.00    94.72
 22.301  22.301 (1.006)    85      8512                     0.00-   0.00    42.39
-------------------------------------------------------------------------------
  173 2-Heptanone                                   CAS #: 110-43-0
 23.214  23.214 (1.047)    58     15048 0.50000   0.4156  80.00- 120.00   100.00(a)
 23.214  23.214 (1.047)    43     28547                     0.00-   0.00   189.71
-------------------------------------------------------------------------------
  176 Cyclohexanone                                 CAS #: 108-94-1
 23.811  23.811 (1.074)    55     18428 0.50000   0.5559  80.00- 120.00   100.00
 23.811  23.811 (1.074)    98      8895                     0.00-   0.00    48.27
 23.811  23.811 (1.074)    42     14024                     0.00-   0.00    76.10
-------------------------------------------------------------------------------
  180 Bromobenzene                                  CAS #: 108-86-1
 24.080  24.080 (1.086)   156     46601 0.50000   0.5854  80.00- 120.00   100.00
 24.080  24.080 (1.086)   158     41067                     0.00-   0.00    88.12
 24.080  24.080 (1.086)    77     54541                     0.00-   0.00   117.04
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                        CAS #: 96-18-4
 24.125  24.125 (1.088)   110     18554 0.50000   0.5824  80.00- 120.00   100.00
 24.125  24.125 (1.088)    75     51587                     0.00-   0.00   278.04
 24.125  24.125 (1.088)    61     11307                     0.00-   0.00    60.94
-------------------------------------------------------------------------------
  187 Decane                                        CAS #: 124-18-5
 24.170  24.170 (1.090)    57     15931 0.50000   0.4854   0.00-   0.00   100.00(Ta)
  0.000   1.000 (0.000)    71         0                     0.00-   0.00     0.00
 24.439  24.439 (1.102)   142      5300                     0.00-   0.00    33.27
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                               CAS #: 95-49-8
 24.282  24.282 (1.095)   126     27846 0.50000   0.5649  80.00- 120.00   100.00
 24.282  24.282 (1.095)    91     68062                     0.00-   0.00   244.42
 24.282  24.282 (1.095)    65      5703                     0.00-   0.00    20.48
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                               CAS #: 106-43-4
 24.416  24.416 (1.101)   126     23939 0.50000   0.5271  80.00- 120.00   100.00
 24.416  24.416 (1.101)    91     57603                     0.00-   0.00   240.62
 24.416  24.416 (1.101)    63      8984                     0.00-   0.00    37.53
-------------------------------------------------------------------------------
  195 tert-Butylbenzene                             CAS #: 98-06-6
 24.708  24.708 (1.114)   119     72486 0.50000   0.5428  80.00- 120.00   100.00
 24.685  24.685 (1.113)   134     15883                     0.00-   0.00    21.91
 24.708  24.708 (1.114)    91     41973                     0.00-   0.00    57.90
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.118)	167	41037	0.50000	0.5319	80.00- 120.00	100.00
24.798	24.798 (1.118)	117	35016			0.00- 0.00	85.33
24.798	24.798 (1.118)	169	15924			0.00- 0.00	38.80
203 sec-Butylbenzene					CAS #: 135-98-8		
24.955	24.955 (1.125)	105	130249	0.50000	0.5263	80.00- 120.00	100.00
24.955	24.955 (1.125)	134	30822			0.00- 0.00	23.66
24.955	24.955 (1.125)	91	13599			0.00- 0.00	10.44
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.129)	93	36877	0.50000	0.5123	0.00- 0.00	100.00
25.044	25.044 (1.129)	95	11106			0.00- 0.00	30.12
25.044	25.044 (1.129)	63	23966			0.00- 0.00	64.99
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	74853	0.50000	0.4970	80.00- 120.00	100.00(a)
25.089	25.089 (1.131)	134	22298			0.00- 0.00	29.79
25.089	25.089 (1.131)	91	19749			0.00- 0.00	26.38
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.268	25.268 (1.139)	120	23861	0.50000	0.5228	80.00- 120.00	100.00
25.268	25.268 (1.139)	105	50952			0.00- 0.00	213.54
25.268	25.268 (1.139)	77	8885			0.00- 0.00	37.24
213 Butylbenzene					CAS #: 104-51-8		
25.537	25.537 (1.152)	134	18442	0.50000	0.4989	80.00- 120.00	100.00(a)
25.537	25.537 (1.152)	91	62617			0.00- 0.00	339.53
25.537	25.537 (1.152)	92	31844			0.00- 0.00	172.67
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	12482	0.50000	0.5387	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	11311			0.00- 0.00	90.62
25.515	25.515 (1.151)	85	5268			0.00- 0.00	42.20
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	32601	0.50000	0.5465	80.00- 120.00	100.00
26.546	26.546 (1.197)	75	22938			0.00- 0.00	70.36
26.546	26.546 (1.197)	155	25497			0.00- 0.00	78.21
225 Dodecane					CAS #: 112-40-3		
26.613	26.613 (1.200)	85	6209	0.50000	0.7164	0.00- 0.00	100.00
26.613	26.613 (1.200)	57	13821			0.00- 0.00	222.60
26.613	26.613 (1.200)	43	11525			0.00- 0.00	185.62

QC Flag Legend

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

Report Date: 30-Jan-2017 10:45

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012705.d
Lab Smp Id: Level 7
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/27Jan2017.b/e17l0126a.m
Misc Info: 0.5ppbv (5.0ppbv) Combo

Calibration Date: 27-JAN-2017
Calibration Time: 12:13

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	170744	102446	239042	141477	-17.14
123 1,4-Difluorobenze	602830	361698	843962	476083	-21.03
163 Chlorobenzene-d5	541524	324914	758134	445885	-17.66

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	22.18	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/27Jan2017.b/e012705.d

Date : 27-JAN-2017 16:20

Client ID:

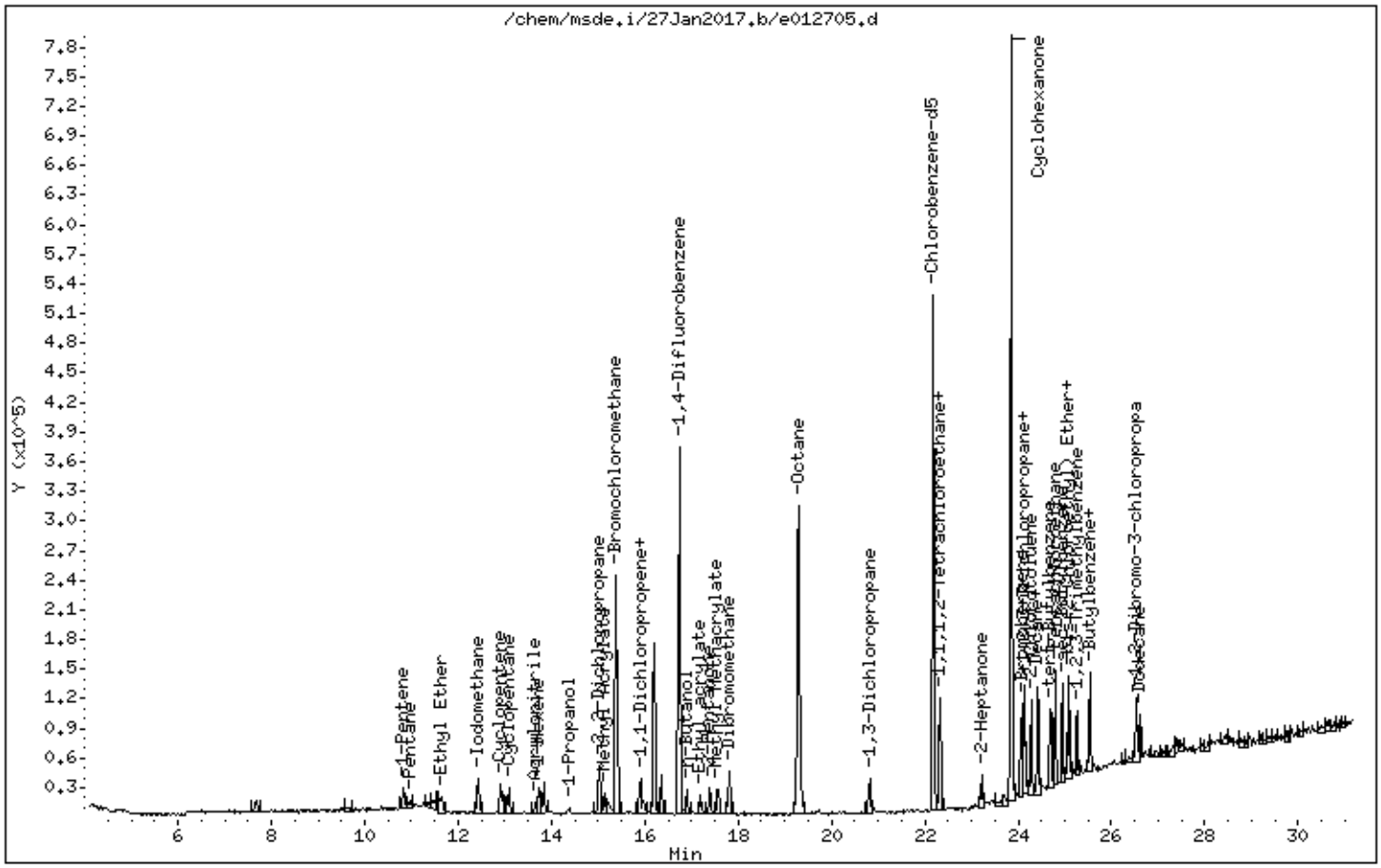
Instrument: msde.i

Sample Info: 50mL# 2819-242

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012612.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 26-JAN-2017 15:22
Operator : sw Inst ID: msde.i
Smp Info : 125mL# 2819-240
Misc Info : 0.50ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 15:22 Cal File: e012612.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		
5.245	5.245 (0.341)	85	69301	0.50000	0.5192	80.00- 120.00	100.00
5.221	5.221 (0.339)	87	22771			1.91- 61.91	32.86
15 Freon 114					CAS #: 76-14-2		
6.643	6.643 (0.432)	135	58028	0.50000	0.5664	80.00- 120.00	100.00
6.619	6.619 (0.430)	137	9744			0.98- 60.98	16.79
6.643	6.643 (0.432)	85	63193			86.82- 146.82	108.90
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	14995	0.50000	0.6023	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	5504			3.31- 63.31	36.71
23 Butane					CAS #: 106-97-8		
7.693	7.693 (0.500)	58	3373	0.50000	0.5581	80.00- 120.00	100.00
7.693	7.693 (0.500)	43	24356			667.48- 727.48	722.09
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	16334	0.50000	0.4669	80.00- 120.00	100.00
7.832	7.832 (0.509)	64	6649			1.95- 61.95	40.71

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		
8.075	8.075 (0.525)	54	13164	0.50000	0.5442	80.00- 120.00	100.00
8.057	8.057 (0.523)	39	14030			76.10- 136.10	106.58
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	19975	0.50000	0.5459	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	20440			64.26- 124.26	102.33
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	10299	0.50000	0.5694	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	3520			0.00- 57.48	34.18
10.005	10.005 (0.650)	66	3630			1.33- 61.33	35.25
31 Isopentane					CAS #: 78-78-4		
10.157	10.157 (0.660)	57	15786	0.50000	0.6043	80.00- 120.00	100.00
10.157	10.157 (0.660)	43	18391			96.48- 156.48	116.50
10.138	10.138 (0.659)	42	15433			76.93- 136.93	97.76
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	81211	0.50000	0.5215	80.00- 120.00	100.00
10.786	10.786 (0.701)	103	60364			33.74- 93.74	74.33
42 Ethanol					CAS #: 64-17-5		
11.681	11.681 (0.759)	45	10783	0.50000	0.7944	80.00- 120.00	100.00
11.681	11.681 (0.759)	46	4249			9.60- 69.60	39.40
11.681	11.681 (0.759)	43	4760			0.00- 59.21	44.14
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	55770	0.50000	0.5364	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	37408			34.83- 94.83	67.08
12.100	12.100 (0.786)	101	60116			77.16- 137.16	107.79
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	16144	0.50000	0.5812	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	38588			219.47- 279.47	239.02
12.100	12.100 (0.786)	96	25703			126.81- 186.81	159.21
52 Acetone					CAS #: 67-64-1		
12.385	12.385 (0.805)	58	10697	0.50000	0.6268	80.00- 120.00	100.00
12.385	12.385 (0.805)	43	38605			344.13- 404.13	360.90
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.462 (0.810)	76	73808	0.50000	0.6252	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.728	12.728 (0.827)	45	28981	0.50000	0.5275	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
57 2-Propanol (continued)							
12.728	12.728 (0.827)	43	9372			0.00- 55.65	32.34
12.728	12.728 (0.827)	59	1477			0.00- 34.42	5.10
58 3-Chloropropene					CAS #: 107-05-1		
12.900	12.900 (0.838)	76	13087	0.50000	0.5642	80.00- 120.00	100.00
12.900	12.900 (0.838)	41	27455			198.88- 258.88	209.79
66 Methylene Chloride					CAS #: 75-09-2		
13.177	13.177 (0.856)	84	25548	0.50000	0.6117	80.00- 120.00	100.00
13.177	13.177 (0.856)	49	27098			83.76- 143.76	106.07
13.177	13.177 (0.856)	51	8386			2.61- 62.61	32.82
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.396	13.396 (0.870)	59	38303	0.50000	0.4826	80.00- 120.00	100.00
13.396	13.396 (0.870)	41	11579			0.00- 51.13	30.23
13.369	13.369 (0.869)	57	4898			0.00- 41.40	12.79
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.506	13.506 (0.878)	73	58779	0.50000	0.4864	80.00- 120.00	100.00
13.506	13.506 (0.878)	57	10692			0.00- 49.77	18.19
13.479	13.479 (0.876)	41	11466			0.00- 49.98	19.51
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	14212	0.50000	0.5394	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	28195			174.76- 234.76	198.39
13.533	13.533 (0.879)	96	23155			123.28- 183.28	162.93
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	25958	0.50000	0.5219	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	15205			27.83- 87.83	58.58
13.835	13.835 (0.899)	86	5141			0.00- 50.45	19.81
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	48088	0.50000	0.4874	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	15379			6.11- 66.11	31.98
14.192	14.192 (0.922)	59	7792			0.00- 42.83	16.20
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	39975	0.50000	0.5510	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	14184			1.87- 61.87	35.48
86 Vinyl Acetate					CAS #: 108-05-4		
14.275	14.275 (0.927)	86	5757	0.50000	0.5243	80.00- 120.00	100.00
14.275	14.275 (0.927)	42	3208			71.31- 131.31	55.72
14.275	14.275 (0.927)	43	41247			931.28- 991.28	716.47

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   88 Ethyl-tert-butyl ether                        CAS #: 637-92-3
 14.685  14.685 (0.954)    59     55092 0.50000   0.4700  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87     24715                   16.65-  76.65    44.86
 14.704  14.704 (0.955)    41     12053                    0.00-  49.22    21.88
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.066  15.066 (0.979)    98     16252 0.50000   0.5081  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61     28824                  154.54- 214.54   177.36
 15.066  15.066 (0.979)    96     27674                  117.78- 177.78   170.28
-------------------------------------------------------------------------------
   92 2-Butanone                                    CAS #: 78-93-3
 15.066  15.066 (0.979)    72      9097 0.50000   0.4916  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     35621                  325.72- 385.72   391.57
 15.066  15.066 (0.979)    57      3105                    1.13-  61.13    34.13
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 15.391  15.391 (1.000)    42     15977 0.50000   0.4770  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71      9820                   20.32-  80.32    61.46
 15.391  15.391 (1.000)    72      9855                   21.98-  81.98    61.68
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    150346 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    112724                   46.73- 106.73    74.98
 15.391  15.391 (1.000)    49    141675                   55.35- 115.35    94.23
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83     55831 0.50000   0.5124  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85     40059                   36.62-  96.62    71.75
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.700  15.700 (1.020)    84     25565 0.50000   0.4894  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56     26708                   68.83- 128.83   104.47
 15.669  15.669 (1.018)    41     16929                   29.98-  89.98    66.22
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.700  15.700 (1.020)    97     67297 0.50000   0.5251  80.00- 120.00   100.00
 15.700  15.700 (1.020)    99     38216                   34.65-  94.65    56.79
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                         CAS #: 56-23-5
 15.885  15.885 (1.032)   119     65235 0.50000   0.5228  80.00- 120.00   100.00
 15.885  15.885 (1.032)   117     60700                   74.11- 134.11    93.05
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                       CAS #: 540-84-1
 16.111  16.111 (1.047)    56     36609 0.50000   0.5232  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57    109687                  277.67- 337.67   299.62
 16.111  16.111 (1.047)    41     26200                   73.43- 133.43    71.57
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  116 Benzene                                        CAS #: 71-43-2
 16.207  16.207 (0.968)    78     66621 0.50000   0.5158  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77     15766                    0.00-  53.00    23.67
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                          CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    215933 5.00000    5.001  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    111082                   22.67-  82.67    51.44
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                         CAS #: 994-05-8
 16.231  16.231 (0.970)    87     14844 0.50000   0.4402  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73     59736                  335.49- 395.49   402.43
 16.231  16.231 (0.970)    55     15806                   60.31- 120.31   106.48
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                             CAS #: 107-06-2
 16.304  16.304 (0.974)    62     39899 0.50000   0.5014  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64     14601                    1.95-  61.95    36.59
-------------------------------------------------------------------------------
  121 Heptane                                        CAS #: 142-82-5
 16.352  16.352 (0.977)    57     15094 0.50000   0.4615  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100      8817                   23.08-  83.08    58.41
 16.352  16.352 (0.977)    43     21913                  136.91- 196.91   145.18
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                            CAS #: 540-36-3
 16.737  16.737 (1.000)   114    523120 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     81969                    0.00-  45.16    15.67
-------------------------------------------------------------------------------
  125 Trichloroethene                                CAS #: 79-01-6
 17.147  17.147 (1.024)   130     39228 0.50000   0.5444  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95     35220                   61.87- 121.87    89.78
 17.147  17.147 (1.024)    97     21486                   29.29-  89.29    54.77
-------------------------------------------------------------------------------
  127 Methylcyclohexane                              CAS #: 108-87-2
 17.364  17.364 (1.037)    83     32145 0.50000   0.4771  80.00- 120.00   100.00
 17.364  17.364 (1.037)    55     22998                   45.72- 105.72    71.54
 17.364  17.364 (1.037)    56      8263                    0.00-  52.26    25.71
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                            CAS #: 78-87-5
 17.581  17.581 (1.050)    63     21429 0.50000   0.5281  80.00- 120.00   100.00
 17.581  17.581 (1.050)    62     13334                   41.22- 101.22    62.22
 17.581  17.581 (1.050)    41     14300                   40.14- 100.14    66.73
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                    CAS #: 123-91-1
 17.701  17.701 (1.058)    88     15146 0.50000   0.4851  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58      9355                   30.17-  90.17    61.77
 17.701  17.701 (1.058)    57      3647                    0.00-  51.30    24.08
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane						CAS #: 75-27-4	
18.014	18.014 (1.076)	83	60143	0.50000	0.5363	80.00- 120.00	100.00
18.014	18.014 (1.076)	85	39586			36.87- 96.87	65.82
144 cis-1,3-Dichloropropene						CAS #: 10061-01-5	
18.827	18.827 (1.125)	75	33618	0.50000	0.4860	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	12780			1.38- 61.38	38.02
18.827	18.827 (1.125)	39	20040			23.65- 83.65	59.61
145 4-Methyl-2-pentanone						CAS #: 108-10-1	
19.007	19.007 (1.136)	43	35516	0.50000	0.4623	80.00- 120.00	100.00
19.007	19.007 (1.136)	58	15677			10.02- 70.02	44.14
19.007	19.007 (1.136)	85	7935			0.00- 52.01	22.34
$ 146 Toluene-d8						CAS #: 2037-26-5	
19.298	19.298 (1.153)	98	482218	5.00000	4.752	80.00- 120.00	100.00
19.298	19.298 (1.153)	70	57459			0.00- 40.89	11.92
19.298	19.298 (1.153)	100	341788			40.09- 100.09	70.88
147 Toluene						CAS #: 108-88-3	
19.432	19.432 (1.161)	91	78726	0.50000	0.5039	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	42639			27.79- 87.79	54.16
150 trans-1,3-Dichloropropene						CAS #: 10061-02-6	
20.026	20.026 (0.903)	75	35513	0.50000	0.5068	80.00- 120.00	100.00
20.026	20.026 (0.903)	77	13179			1.55- 61.55	37.11
20.026	20.026 (0.903)	39	18772			18.82- 78.82	52.86
155 1,1,2-Trichloroethane						CAS #: 79-00-5	
20.438	20.438 (0.922)	97	28086	0.50000	0.5226	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	18264			32.59- 92.59	65.03
20.438	20.438 (0.922)	83	22988			50.07- 110.07	81.85
156 Tetrachloroethene						CAS #: 127-18-4	
20.630	20.630 (0.930)	166	55659	0.50000	0.5312	80.00- 120.00	100.00
20.630	20.630 (0.930)	129	35989			37.12- 97.12	64.66
20.630	20.630 (0.930)	131	36619			36.18- 96.18	65.79
158 2-Hexanone						CAS #: 591-78-6	
20.795	20.795 (0.938)	58	15702	0.50000	0.4306	80.00- 120.00	100.00
20.795	20.795 (0.938)	43	26424			162.96- 222.96	168.28
20.795	20.795 (0.938)	100	5056			0.00- 59.39	32.20
160 Dibromochloromethane						CAS #: 124-48-1	
21.207	21.207 (0.956)	129	69755	0.50000	0.5433	80.00- 120.00	100.00
21.207	21.207 (0.956)	127	57448			46.76- 106.76	82.36

```
                                          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     52014 0.50000   0.5433  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109     42654                   63.39- 123.39    82.00
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                                 CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    475808 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    232277                   17.27-  77.27    48.82
-------------------------------------------------------------------------------
  165 Chlorobenzene                                    CAS #: 108-90-7
 22.219  22.219 (1.002)   112     70285 0.50000   0.5316  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114     19825                    2.22-  62.22    28.21
 22.219  22.219 (1.002)    77     42256                   23.48-  83.48    60.12
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                    CAS #: 100-41-4
 22.302  22.302 (1.006)   106     32916 0.50000   0.5282  80.00- 120.00   100.00
 22.302  22.302 (1.006)    91     95480                  278.11- 338.11   290.07
-------------------------------------------------------------------------------
  169 m,p-Xylene                                       CAS #: 108-38-3
 22.488  22.488 (1.014)   106     33029 0.50000   0.4477  80.00- 120.00   100.00
 22.488  22.488 (1.014)    91     74849                  170.01- 230.01   226.62
-------------------------------------------------------------------------------
  171 o-Xylene                                         CAS #: 95-47-6
 23.089  23.089 (1.041)   106     33937 0.50000   0.4965  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91     66295                  175.84- 235.84   195.35
-------------------------------------------------------------------------------
  172 Styrene                                          CAS #: 100-42-5
 23.110  23.110 (1.042)   104     48571 0.50000   0.4259  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78     30190                   20.21-  80.21    62.16
-------------------------------------------------------------------------------
  174 Bromoform                                        CAS #: 75-25-2
 23.452  23.452 (1.057)   173     69280 0.50000   0.5206  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171     38708                   21.47-  81.47    55.87
-------------------------------------------------------------------------------
  175 Cumene                                           CAS #: 98-82-8
 23.564  23.564 (1.063)   105     99036 0.50000   0.4619  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120     27335                    0.00-  56.99    27.60
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                             CAS #: 460-00-4
 23.856  23.856 (1.076)   174    341618 5.00000    5.140  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    311781                   66.74- 126.74    91.27
 23.856  23.856 (1.076)   176    329729                   67.47- 127.47    96.52
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                        CAS #: 79-34-5
 24.035  24.035 (1.084)    83     50567 0.50000   0.5416  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85     33143                   39.76-  99.76    65.54
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
182 Propylbenzene					CAS #: 103-65-1		
24.102	24.102 (1.087)	91	108225	0.50000	0.5070	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	25815			0.00- 55.73	23.85
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	85257	0.50000	0.4818	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	25617			1.00- 61.00	30.05
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	65440	0.50000	0.4989	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	31949			19.17- 79.17	48.82
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	47249	0.50000	0.4292	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	21372			16.84- 76.84	45.23
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.134)	146	60479	0.50000	0.5165	80.00- 120.00	100.00
25.157	25.157 (1.134)	148	37000			33.96- 93.96	61.18
25.157	25.157 (1.134)	111	21622			6.94- 66.94	35.75
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	63289	0.50000	0.5203	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	40138			35.10- 95.10	63.42
25.269	25.269 (1.139)	111	22299			4.80- 64.80	35.23
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	69048	0.50000	0.4922	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	15246			0.00- 52.64	22.08
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.695	25.695 (1.159)	146	57585	0.50000	0.5242	80.00- 120.00	100.00
25.695	25.695 (1.159)	148	38414			33.88- 93.88	66.71
25.672	25.672 (1.158)	111	21450			7.58- 67.58	37.25
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	42852	0.50000	0.5141	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	36995			63.70- 123.70	86.33
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	66464	0.50000	0.5685	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	41313			34.33- 94.33	62.16

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012612.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 0.50ppbv (1.0ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	150346	-17.30
123 1,4-Difluorobenze	598820	359292	838348	523120	-12.64
163 Chlorobenzene-d5	568188	340913	795463	475808	-16.26

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	22.18	21.85	22.51	22.18	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/26Jan2017.b/e012612.d

Date : 26-JAN-2017 15:22

Client ID: Level 7

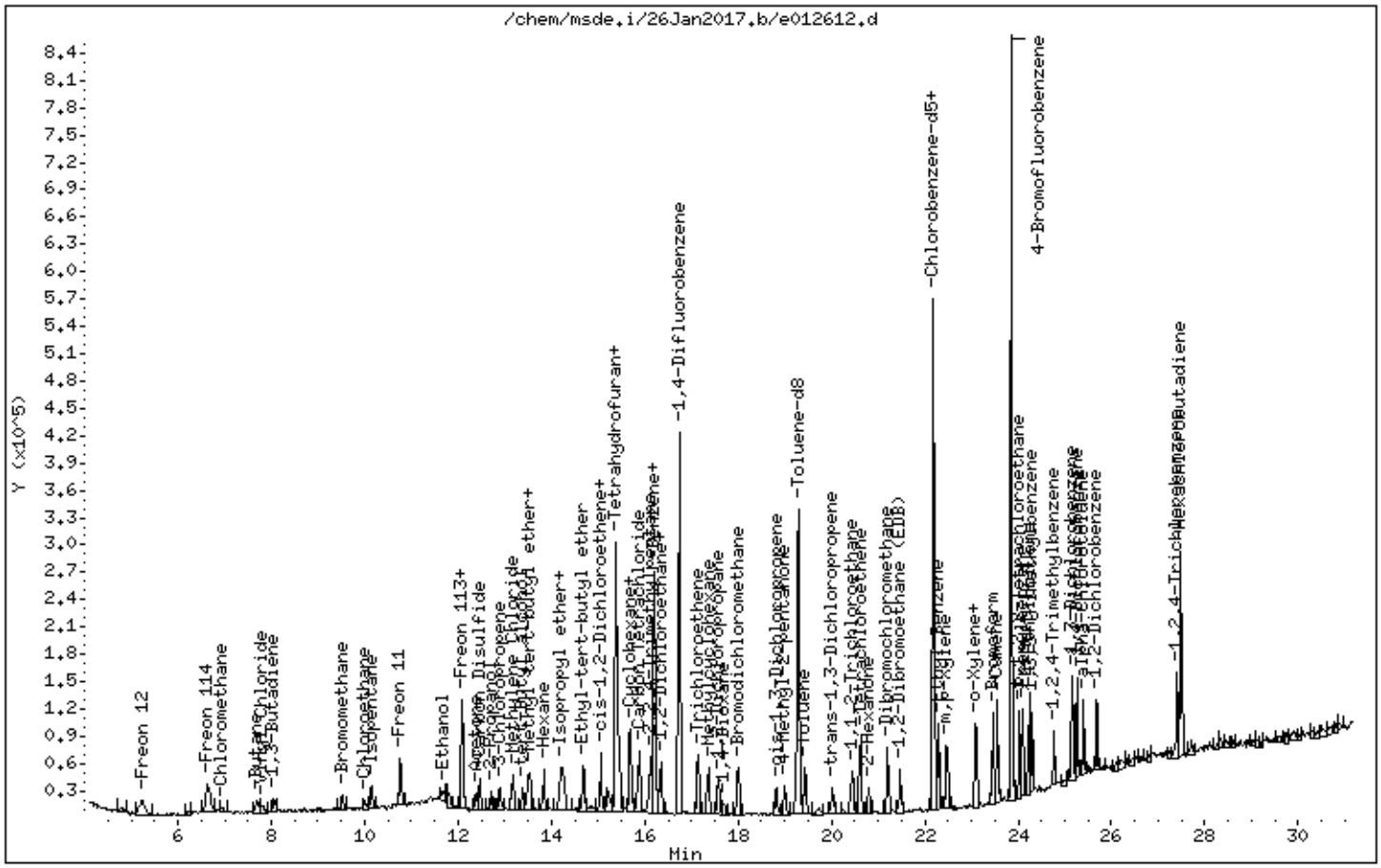
Instrument: msde.i

Sample Info: 125mL# 2819-240

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/27Jan2017.b/e012706.d
Lab Smp Id: Level 8
Inj Date : 27-JAN-2017 17:06
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2819-242
Misc Info : 1.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/27Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:49 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.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		
10.842	10.842 (0.704)	55	24939	1.00000	1.001	0.00- 0.00	100.00
10.823	10.823 (0.703)	42	25613			0.00- 0.00	102.70
34 Pentane					CAS #: 109-66-0		
10.957	10.957 (0.712)	43	13351	1.00000	1.130	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	3364			0.00- 0.00	25.20
10.976	10.976 (0.713)	72	1876			0.00- 0.00	14.05
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	16011	1.00000	0.9755	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	20113			0.00- 0.00	125.62
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.423	12.423 (0.807)	142	92243	1.00000	0.9757	0.00- 0.00	100.00
12.423	12.423 (0.807)	127	46128			0.00- 0.00	50.01
59 Cyclopentene					CAS #: 142-29-0		
12.919	12.919 (0.839)	67	63095	1.00000	0.9401	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	24829			0.00- 0.00	39.35
12.919	12.919 (0.839)	53	12682			0.00- 0.00	20.10
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	17665	1.00000	0.9591	0.00- 0.00	100.00
13.094	13.094 (0.851)	55	20395			0.00- 0.00	115.45
74 Acrylonitrile					CAS #: 107-13-1		
13.671	13.671 (0.888)	53	21458	1.00000	0.9499	0.00- 0.00	100.00
13.671	13.671 (0.888)	52	17210			0.00- 0.00	80.20
76 1-Hexene					CAS #: 592-41-6		
13.725	13.725 (0.892)	55	20327	1.00000	1.057	0.00- 0.00	100.00
13.725	13.725 (0.892)	41	28350			0.00- 0.00	139.47
13.753	13.753 (0.894)	84	8265			0.00- 0.00	40.66
84 1-Propanol					CAS #: 71-23-8		
14.384	14.384 (0.935)	59	8395	1.00000	1.059	80.00- 120.00	100.00
14.384	14.384 (0.935)	42	7843			0.00- 0.00	93.42
14.384	14.384 (0.935)	41	3975			0.00- 0.00	47.35
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.008	15.008 (0.975)	77	88252	1.00000	1.013	80.00- 120.00	100.00
15.008	15.008 (0.975)	79	27400			0.00- 0.00	31.05
15.008	15.008 (0.975)	97	16125			0.00- 0.00	18.27
93 Methyl Acrylate					CAS #: 96-33-3		
15.142	15.142 (0.984)	55	55870	1.00000	0.9241	0.00- 0.00	100.00
15.142	15.142 (0.984)	85	12055			0.00- 0.00	21.58
15.142	15.142 (0.984)	58	5053			0.00- 0.00	9.04
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	146716	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	110116			46.73- 106.73	75.05
15.391	15.391 (1.000)	49	118156			55.35- 115.35	80.53
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.915	15.915 (1.034)	110	23871	1.00000	1.015	80.00- 120.00	100.00
15.915	15.915 (1.034)	75	60513			0.00- 0.00	253.50
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	21621	1.00000	0.9440	80.00- 120.00	100.00
15.977	15.977 (1.038)	41	16683			0.00- 0.00	77.16
15.977	15.977 (1.038)	55	2936			0.00- 0.00	13.58

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	491656	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	75950			0.00- 45.16	15.45
124 n-Butanol						CAS #: 71-36-3	
16.906	16.906 (1.010)	56	34378	1.00000	0.8523	80.00- 120.00	100.00
16.906	16.906 (1.010)	41	27884			0.00- 0.00	81.11
16.906	16.906 (1.010)	43	20780			0.00- 0.00	60.45
128 Ethyl acrylate						CAS #: 140-88-5	
17.195	17.195 (1.027)	99	7523	1.00000	1.195	0.00- 0.00	100.00
17.195	17.195 (1.027)	45	4755			0.00- 0.00	63.21
17.195	17.195 (1.027)	55	55303			0.00- 0.00	735.12
131 2-Pentanone						CAS #: 107-87-9	
17.388	17.388 (1.039)	43	82874	1.00000	1.028	0.00- 0.00	100.00
17.388	17.388 (1.039)	58	6420			0.00- 0.00	7.75
17.388	17.388 (1.039)	86	18131			0.00- 0.00	21.88
134 Methyl Methacrylate						CAS #: 80-62-6	
17.556	17.556 (1.049)	41	37802	1.00000	0.9225	0.00- 0.00	100.00
17.580	17.580 (1.050)	69	35130			0.00- 0.00	92.93
17.580	17.580 (1.050)	100	17884			0.00- 0.00	47.31
137 Dibromomethane						CAS #: 74-95-3	
17.821	17.821 (1.065)	174	73341	1.00000	1.031	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	56282			0.00- 0.00	76.74
17.797	17.797 (1.063)	95	44228			0.00- 0.00	60.30
148 Octane						CAS #: 111-65-9	
19.343	19.343 (1.156)	57	20009	1.00000	0.8941	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	30360			0.00- 0.00	151.73
19.343	19.343 (1.156)	43	50764			0.00- 0.00	253.71
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.822	20.822 (0.939)	76	55444	1.00000	0.9224	80.00- 120.00	100.00
20.822	20.822 (0.939)	41	38877			0.00- 0.00	70.12
20.822	20.822 (0.939)	78	18927			0.00- 0.00	34.14
159 Butyl Acetate						CAS #: 123-86-4	
20.905	20.905 (0.943)	56	7082	1.00000	1.137	80.00- 120.00	100.00
20.932	20.932 (0.944)	73	2263			0.00- 0.00	31.95
20.905	20.905 (0.943)	43	12722			0.00- 0.00	179.64
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	461648	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)							
22.177	22.177 (1.000)	82	219523			17.27- 77.27	47.55
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.343	22.343 (1.007)	131	85257	1.00000	1.012	80.00- 120.00	100.00
22.343	22.343 (1.007)	117	57482			0.00- 0.00	67.42
22.343	22.343 (1.007)	95	30450			0.00- 0.00	35.72
170 Nonane					CAS #: 111-84-2		
22.301	22.301 (1.006)	43	41365	1.00000	0.9560	0.00- 0.00	100.00
22.301	22.301 (1.006)	57	38836			0.00- 0.00	93.89
22.301	22.301 (1.006)	85	18674			0.00- 0.00	45.14
173 2-Heptanone					CAS #: 110-43-0		
23.214	23.214 (1.047)	58	34091	1.00000	0.9093	80.00- 120.00	100.00
23.214	23.214 (1.047)	43	54510			0.00- 0.00	159.90
176 Cyclohexanone					CAS #: 108-94-1		
23.811	23.811 (1.074)	55	31213	1.00000	0.9095	80.00- 120.00	100.00
23.811	23.811 (1.074)	98	17555			0.00- 0.00	56.24
23.811	23.811 (1.074)	42	22603			0.00- 0.00	72.42
180 Bromobenzene					CAS #: 108-86-1		
24.080	24.080 (1.086)	156	77335	1.00000	0.9384	80.00- 120.00	100.00
24.080	24.080 (1.086)	158	80714			0.00- 0.00	104.37
24.080	24.080 (1.086)	77	99362			0.00- 0.00	128.48
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.125	24.125 (1.088)	110	31480	1.00000	0.9544	80.00- 120.00	100.00
24.125	24.125 (1.088)	75	105169			0.00- 0.00	334.08
24.125	24.125 (1.088)	61	23467			0.00- 0.00	74.55
187 Decane					CAS #: 124-18-5		
24.170	24.170 (1.090)	57	29494	1.00000	0.8680	0.00- 0.00	100.00
24.439	24.439 (1.102)	71	838			0.00- 0.00	2.84
24.439	24.439 (1.102)	142	9721			0.00- 0.00	32.96
189 2-Chlorotoluene					CAS #: 95-49-8		
24.282	24.282 (1.095)	126	51392	1.00000	1.007	80.00- 120.00	100.00
24.282	24.282 (1.095)	91	133437			0.00- 0.00	259.65
24.282	24.282 (1.095)	65	12205			0.00- 0.00	23.75
191 4-Chlorotoluene					CAS #: 106-43-4		
24.416	24.416 (1.101)	126	46261	1.00000	0.9838	80.00- 120.00	100.00
24.416	24.416 (1.101)	91	124138			0.00- 0.00	268.34
24.416	24.416 (1.101)	63	15325			0.00- 0.00	33.13

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		
24.685	24.685 (1.113)	119	133277	1.00000	0.9640	80.00- 120.00	100.00
24.685	24.685 (1.113)	134	31253			0.00- 0.00	23.45
24.685	24.685 (1.113)	91	85509			0.00- 0.00	64.16
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.118)	167	75086	1.00000	0.9400	80.00- 120.00	100.00
24.798	24.798 (1.118)	117	65291			0.00- 0.00	86.95
24.798	24.798 (1.118)	169	26306			0.00- 0.00	35.03
203 sec-Butylbenzene					CAS #: 135-98-8		
24.955	24.955 (1.125)	105	240851	1.00000	0.9399	80.00- 120.00	100.00
24.955	24.955 (1.125)	134	52247			0.00- 0.00	21.69
24.955	24.955 (1.125)	91	38794			0.00- 0.00	16.11
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.129)	93	68613	1.00000	0.9207	0.00- 0.00	100.00
25.044	25.044 (1.129)	95	22312			0.00- 0.00	32.52
25.044	25.044 (1.129)	63	45775			0.00- 0.00	66.71
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	144255	1.00000	0.9251	80.00- 120.00	100.00
25.089	25.089 (1.131)	134	40933			0.00- 0.00	28.38
25.089	25.089 (1.131)	91	35146			0.00- 0.00	24.36
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.268	25.268 (1.139)	120	42846	1.00000	0.9066	80.00- 120.00	100.00
25.268	25.268 (1.139)	105	103033			0.00- 0.00	240.47
25.246	25.246 (1.138)	77	11814			0.00- 0.00	27.57
213 Butylbenzene					CAS #: 104-51-8		
25.537	25.537 (1.152)	134	36514	1.00000	0.9541	80.00- 120.00	100.00
25.537	25.537 (1.152)	91	118787			0.00- 0.00	325.32
25.537	25.537 (1.152)	92	60457			0.00- 0.00	165.57
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	23335	1.00000	0.9728	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	18509			0.00- 0.00	79.32
25.515	25.515 (1.151)	85	5507			0.00- 0.00	23.60
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	56872	1.00000	0.9208	80.00- 120.00	100.00
26.546	26.546 (1.197)	75	47855			0.00- 0.00	84.15
26.546	26.546 (1.197)	155	49713			0.00- 0.00	87.41
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	9816	1.00000	1.094	0.00- 0.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
225 Dodecane (continued)								
26.614	26.614	(1.200)	57	25713			0.00- 0.00	261.95
26.614	26.614	(1.200)	43	21412			0.00- 0.00	218.13

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: e012706.d
Lab Smp Id: Level 8
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/27Jan2017.b/e17l0126a.m
Misc Info: 1.0ppbv (5.0ppbv) Combo

Calibration Date: 27-JAN-2017
Calibration Time: 12:13

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	170744	102446	239042	146716	-14.07
123 1,4-Difluorobenze	602830	361698	843962	491656	-18.44
163 Chlorobenzene-d5	541524	324914	758134	461648	-14.75

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	22.18	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/27Jan2017.b/e012706.d

Date : 27-JAN-2017 17:06

Client ID:

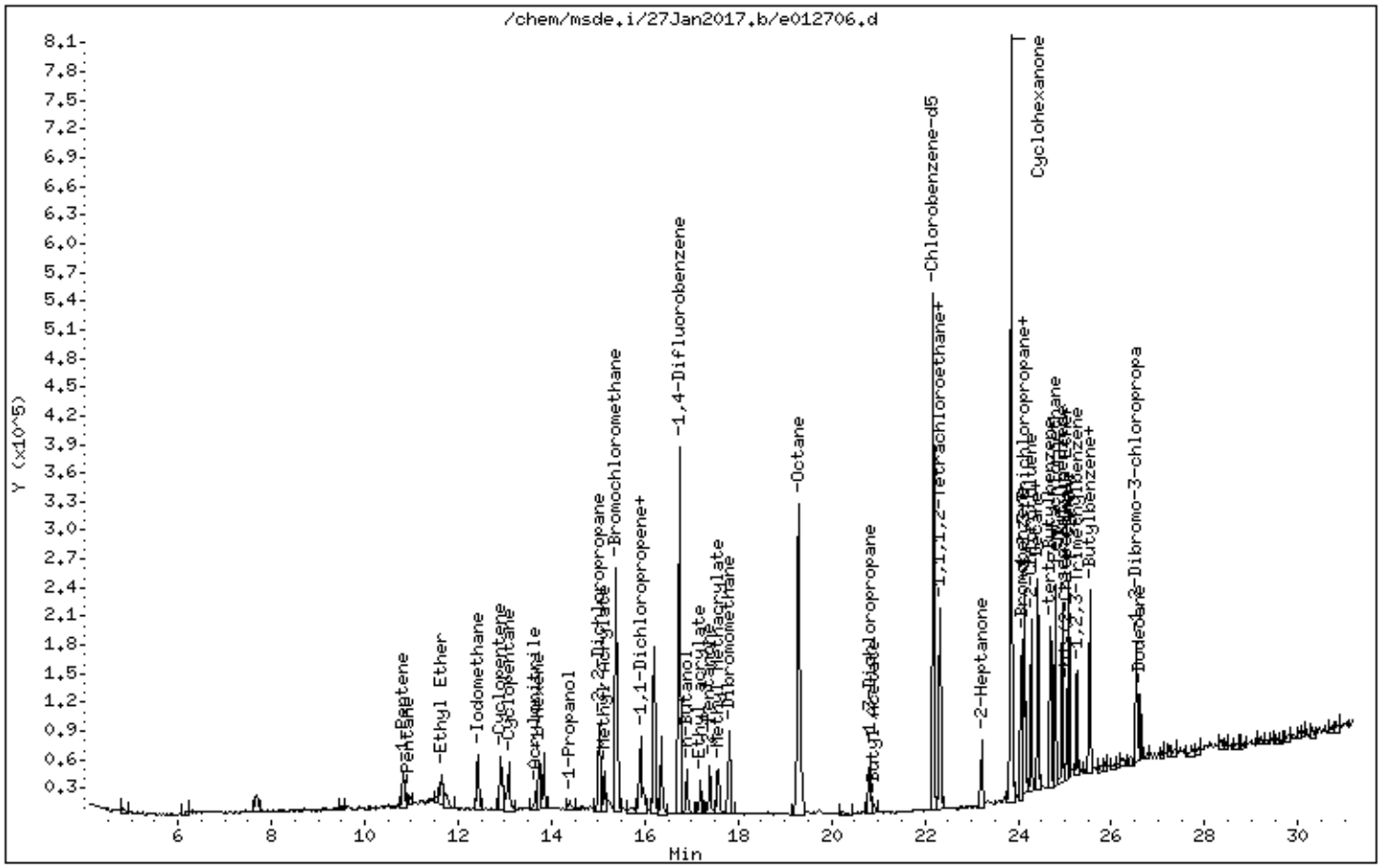
Instrument: msde.i

Sample Info: 50mL# 2819-242

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012613.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 26-JAN-2017 16:19
Operator : ea Inst ID: msde.i
Smp Info : 250mL# 2819-240
Misc Info : 1.0ppbv (1.0ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 16:19 Cal File: e012613.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		
4.811	4.811 (0.313)	41	25149	1.00000	1.186	80.00- 120.00	100.00
4.787	4.787 (0.311)	42	13941			35.53- 95.53	55.43
4.787	4.787 (0.311)	39	23923			53.16- 113.16	95.13
11 Freon 12					CAS #: 75-71-8		
5.221	5.221 (0.339)	85	144077	1.00000	1.104	80.00- 120.00	100.00
5.221	5.221 (0.339)	87	27859			1.91- 61.91	19.34
15 Freon 114					CAS #: 76-14-2		
6.619	6.619 (0.430)	135	103690	1.00000	1.035	80.00- 120.00	100.00
6.643	6.643 (0.432)	137	32620			0.98- 60.98	31.46
6.619	6.619 (0.430)	85	123098			86.82- 146.82	118.72
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	26276	1.00000	1.080	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	9897			3.31- 63.31	37.67
23 Butane					CAS #: 106-97-8		
7.675	7.675 (0.499)	58	5970	1.00000	1.010	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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   23 Butane (continued)
  7.675   7.675 (0.499)    43     43064                  667.48- 727.48   721.34
-------------------------------------------------------------------------------
   25 Vinyl Chloride                                CAS #: 75-01-4
  7.797   7.797 (0.507)    62     33466 1.00000   0.9787  80.00- 120.00   100.00
  7.797   7.797 (0.507)    64     10800                    1.95-  61.95    32.27
-------------------------------------------------------------------------------
   26 1,3-Butadiene                                 CAS #: 106-99-0
  8.057   8.057 (0.523)    54     24090 1.00000    1.019  80.00- 120.00   100.00
  8.057   8.057 (0.523)    39     26444                   76.10- 136.10   109.77
-------------------------------------------------------------------------------
   29 Bromomethane                                  CAS #: 74-83-9
  9.510   9.510 (0.618)    94     37731 1.00000    1.055  80.00- 120.00   100.00
  9.510   9.510 (0.618)    96     39425                   64.26- 124.26   104.49
-------------------------------------------------------------------------------
   30 Chloroethane                                  CAS #: 75-00-3
 10.005  10.005 (0.650)    64     20910 1.00000    1.183  80.00- 120.00   100.00
 10.005  10.005 (0.650)    49      6399                    0.00-  57.48    30.60
  9.986   9.986 (0.649)    66      6899                    1.33-  61.33    32.99
-------------------------------------------------------------------------------
   31 Isopentane                                    CAS #: 78-78-4
 10.138  10.138 (0.659)    57     26590 1.00000    1.041  80.00- 120.00   100.00
 10.138  10.138 (0.659)    43     39317                   96.48- 156.48   147.86
 10.138  10.138 (0.659)    42     31735                   76.93- 136.93   119.35
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 10.767  10.767 (0.700)   101    162139 1.00000    1.065  80.00- 120.00   100.00
 10.767  10.767 (0.700)   103    102066                   33.74-  93.74    62.95
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 11.681  11.681 (0.759)    45     15409 1.00000    1.161  80.00- 120.00   100.00
 11.681  11.681 (0.759)    46      6160                    9.60-  69.60    39.98
 11.662  11.662 (0.758)    43      6039                    0.00-  59.21    39.19
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.081  12.081 (0.785)   151    107791 1.00000    1.060  80.00- 120.00   100.00
 12.081  12.081 (0.785)   153     66881                   34.83-  94.83    62.05
 12.081  12.081 (0.785)   101    118663                   77.16- 137.16   110.09
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.100  12.100 (0.786)    98     28214 1.00000    1.039  80.00- 120.00   100.00
 12.100  12.100 (0.786)    61     71777                  219.47- 279.47   254.40
 12.100  12.100 (0.786)    96     45586                  126.81- 186.81   161.57
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 12.385  12.385 (0.805)    58     18636 1.00000    1.117  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   52 Acetone (continued)
 12.366  12.366 (0.803)    43     71478                   344.13- 404.13   383.55
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.462  12.462 (0.810)    76    131648 1.00000    1.141  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.728 (0.827)    45     54282 1.00000    1.011  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43     17481                    0.00-  55.65    32.20
 12.728  12.728 (0.827)    59      2386                    0.00-  34.42     4.40
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.900  12.900 (0.838)    76     23250 1.00000    1.026  80.00- 120.00   100.00
 12.881  12.881 (0.837)    41     49847                  198.88- 258.88   214.40
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.177  13.177 (0.856)    84     46910 1.00000    1.149  80.00- 120.00   100.00
 13.177  13.177 (0.856)    49     51759                   83.76- 143.76   110.34
 13.177  13.177 (0.856)    51     14842                    2.61-  62.61    31.64
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.369  13.369 (0.869)    59     76404 1.00000   0.9848  80.00- 120.00   100.00
 13.369  13.369 (0.869)    41     15470                    0.00-  51.13    20.25
 13.396  13.396 (0.870)    57     10028                    0.00-  41.40    13.12
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.479  13.479 (0.876)    73    115975 1.00000   0.9817  80.00- 120.00   100.00
 13.479  13.479 (0.876)    57     22391                    0.00-  49.77    19.31
 13.506  13.506 (0.878)    41     21057                    0.00-  49.98    18.16
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.533 (0.879)    98     29025 1.00000    1.127  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61     56337                  174.76- 234.76   194.10
 13.533  13.533 (0.879)    96     44146                  123.28- 183.28   152.10
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57     44823 1.00000   0.9220  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43     29366                   27.83-  87.83    65.52
 13.835  13.835 (0.899)    86      9687                    0.00-  50.45    21.61
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.192  14.192 (0.922)    45     88264 1.00000   0.9152  80.00- 120.00   100.00
 14.192  14.192 (0.922)    87     34132                    6.11-  66.11    38.67
 14.192  14.192 (0.922)    59     11963                    0.00-  42.83    13.55
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63     75387 1.00000    1.063  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65     23021                     1.87-  61.87    30.54
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                 CAS #: 108-05-4
 14.275  14.275 (0.927)    86     10733 1.00000    1.000  80.00- 120.00   100.00
 14.275  14.275 (0.927)    42     11538                    71.31- 131.31   107.50
 14.275  14.275 (0.927)    43     91395                   931.28- 991.28   851.53
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                        CAS #: 637-92-3
 14.685  14.685 (0.954)    59    109087 1.00000   0.9520  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87     51315                    16.65-  76.65    47.04
 14.685  14.685 (0.954)    41     26515                     0.00-  49.22    24.31
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                        CAS #: 156-59-2
 15.066  15.066 (0.979)    98     32915 1.00000    1.053  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61     60282                   154.54- 214.54   183.14
 15.066  15.066 (0.979)    96     49994                   117.78- 177.78   151.89
-------------------------------------------------------------------------------
   92 2-Butanone                                    CAS #: 78-93-3
 15.047  15.047 (0.978)    72     18466 1.00000    1.021  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43     65261                   325.72- 385.72   353.41
 15.047  15.047 (0.978)    57      6988                     1.13-  61.13    37.84
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                               CAS #: 109-99-9
 15.391  15.391 (1.000)    42     35185 1.00000    1.074  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71     15523                    20.32-  80.32    44.12
 15.391  15.391 (1.000)    72     16831                    21.98-  81.98    47.84
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    146962 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    111409                    46.73- 106.73    75.81
 15.391  15.391 (1.000)    49    140279                    55.35- 115.35    95.45
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83    118200 1.00000    1.110  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85     73770                    36.62-  96.62    62.41
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84     49996 1.00000   0.9791  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56     46795                    68.83- 128.83    93.60
 15.669  15.669 (1.018)    41     29952                    29.98-  89.98    59.91
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.700  15.700 (1.020)    97    129833 1.00000    1.036  80.00- 120.00   100.00
 15.700  15.700 (1.020)    99     82658                    34.65-  94.65    63.66
-------------------------------------------------------------------------------
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.885  15.885 (1.032)   119    121637 1.00000   0.9973  80.00- 120.00   100.00
 15.885  15.885 (1.032)   117    129433                   74.11- 134.11   106.41
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56     66963 1.00000   0.9791  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57    205345                  277.67- 337.67   306.65
 16.111  16.111 (1.047)    41     77314                   73.43- 133.43   115.46
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78    126730 1.00000   0.9772  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77     28791                    0.00-  53.00    22.72
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    228583 5.00000    5.416  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    109213                   22.67-  82.67    47.78
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87     30924 1.00000   0.9133  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73    116628                  335.49- 395.49   377.14
 16.231  16.231 (0.970)    55     30635                   60.31- 120.31    99.07
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62     71161 1.00000   0.8906  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64     26858                    1.95-  61.95    37.74
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57     29323 1.00000   0.8929  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100     17505                   23.08-  83.08    59.70
 16.352  16.352 (0.977)    43     50999                  136.91- 196.91   173.92
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    525275 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     73786                    0.00-  45.16    14.05
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130     72305 1.00000   0.9992  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95     60609                   61.87- 121.87    83.82
 17.147  17.147 (1.024)    97     44027                   29.29-  89.29    60.89
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.364  17.364 (1.037)    83     57740 1.00000   0.8535  80.00- 120.00   100.00
 17.364  17.364 (1.037)    55     48274                   45.72- 105.72    83.61
 17.364  17.364 (1.037)    56     14268                    0.00-  52.26    24.71
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.581  17.581 (1.050)    63     39890 1.00000   0.9791  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
132 1,2-Dichloropropane (continued)							
17.581	17.581 (1.050)	62	31792			41.22- 101.22	79.70
17.581	17.581 (1.050)	41	33624			40.14- 100.14	84.29
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	27649	1.00000	0.8820	80.00- 120.00	100.00
17.701	17.701 (1.058)	58	17941			30.17- 90.17	64.89
17.701	17.701 (1.058)	57	6564			0.00- 51.30	23.74
138 Bromodichloromethane					CAS #: 75-27-4		
18.014	18.014 (1.076)	83	114934	1.00000	1.021	80.00- 120.00	100.00
18.014	18.014 (1.076)	85	73435			36.87- 96.87	63.89
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.827	18.827 (1.125)	75	63815	1.00000	0.9189	80.00- 120.00	100.00
18.827	18.827 (1.125)	77	21837			1.38- 61.38	34.22
18.805	18.805 (1.124)	39	37839			23.65- 83.65	59.29
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
19.007	19.007 (1.136)	43	62869	1.00000	0.8149	80.00- 120.00	100.00
19.007	19.007 (1.136)	58	27962			10.02- 70.02	44.48
19.007	19.007 (1.136)	85	13996			0.00- 52.01	22.26
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.298	19.298 (1.153)	98	496018	5.00000	4.868	80.00- 120.00	100.00
19.298	19.298 (1.153)	70	57288			0.00- 40.89	11.55
19.298	19.298 (1.153)	100	326437			40.09- 100.09	65.81
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	147167	1.00000	0.9380	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	83830			27.79- 87.79	56.96
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
20.026	20.026 (0.903)	75	65372	1.00000	0.9187	80.00- 120.00	100.00
20.026	20.026 (0.903)	77	23518			1.55- 61.55	35.98
20.026	20.026 (0.903)	39	31755			18.82- 78.82	48.58
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	60133	1.00000	1.102	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	34590			32.59- 92.59	57.52
20.438	20.438 (0.922)	83	46077			50.07- 110.07	76.63
156 Tetrachloroethene					CAS #: 127-18-4		
20.630	20.630 (0.930)	166	113458	1.00000	1.066	80.00- 120.00	100.00
20.630	20.630 (0.930)	129	70636			37.12- 97.12	62.26
20.630	20.630 (0.930)	131	78670			36.18- 96.18	69.34

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  158 2-Hexanone                                     CAS #: 591-78-6
 20.795  20.795 (0.938)    58     28922 1.00000   0.7811  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43     60677                  162.96- 222.96   209.80
 20.795  20.795 (0.938)   100      7649                    0.00-  59.39    26.45
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 21.207  21.207 (0.956)   129    126703 1.00000   0.9719  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127     97212                   46.76- 106.76    76.72
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 21.482  21.482 (0.969)   107     93174 1.00000   0.9584  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109     87799                   63.39- 123.39    94.23
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    483167 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    231634                   17.27-  77.27    47.94
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 22.219  22.219 (1.002)   112    137855 1.00000    1.027  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114     45897                    2.22-  62.22    33.29
 22.219  22.219 (1.002)    77     79910                   23.48-  83.48    57.97
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 22.302  22.302 (1.006)   106     63478 1.00000    1.003  80.00- 120.00   100.00
 22.302  22.302 (1.006)    91    177083                  278.11- 338.11   278.97
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 22.488  22.488 (1.014)   106     68104 1.00000   0.9092  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91    144374                  170.01- 230.01   211.99
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 23.089  23.089 (1.041)   106     64528 1.00000   0.9296  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91    134790                  175.84- 235.84   208.89
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 23.110  23.110 (1.042)   104    106301 1.00000   0.9180  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78     53146                   20.21-  80.21    50.00
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 23.452  23.452 (1.057)   173    134180 1.00000   0.9929  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171     64911                   21.47-  81.47    48.38
-------------------------------------------------------------------------------
  175 Cumene                                         CAS #: 98-82-8
 23.564  23.564 (1.063)   105    204313 1.00000   0.9384  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120     55222                    0.00-  56.99    27.03
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	345790	5.00000	5.123	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	310917			66.74- 126.74	89.91
23.856	23.856 (1.076)	176	323271			67.47- 127.47	93.49
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	94830	1.00000	1.000	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	60307			39.76- 99.76	63.59
182 Propylbenzene					CAS #: 103-65-1		
24.103	24.103 (1.087)	91	198206	1.00000	0.9145	80.00- 120.00	100.00
24.103	24.103 (1.087)	120	54973			0.00- 55.73	27.74
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	177333	1.00000	0.9869	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	59618			1.00- 61.00	33.62
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	127313	1.00000	0.9558	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	60468			19.17- 79.17	47.50
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	102319	1.00000	0.9152	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	47280			16.84- 76.84	46.21
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.134)	146	126409	1.00000	1.063	80.00- 120.00	100.00
25.157	25.157 (1.134)	148	78555			33.96- 93.96	62.14
25.157	25.157 (1.134)	111	41591			6.94- 66.94	32.90
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	120841	1.00000	0.9783	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	72246			35.10- 95.10	59.79
25.269	25.269 (1.139)	111	40736			4.80- 64.80	33.71
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	142005	1.00000	0.9968	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	30359			0.00- 52.64	21.38
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.695	25.695 (1.159)	146	111671	1.00000	1.001	80.00- 120.00	100.00
25.695	25.695 (1.159)	148	74400			33.88- 93.88	66.62
25.672	25.672 (1.158)	111	44992			7.58- 67.58	40.29
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	77260	1.00000	0.9127	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.398	27.398 (1.235)	182	79207			63.70- 123.70	102.52
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	120610	1.00000	1.016	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	77544			34.33- 94.33	64.29
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	12847	0.10000	0.1108	80.00- 120.00	100.00
27.712	27.712 (1.250)	127	2033			0.00- 42.30	15.82

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012613.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 1.0ppbv (1.0ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	146962	-19.16
123 1,4-Difluorobenze	598820	359292	838348	525275	-12.28
163 Chlorobenzene-d5	568188	340913	795463	483167	-14.96

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	22.18	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/26Jan2017.b/e012613.d

Date : 26-JAN-2017 16:19

Client ID: Level 8

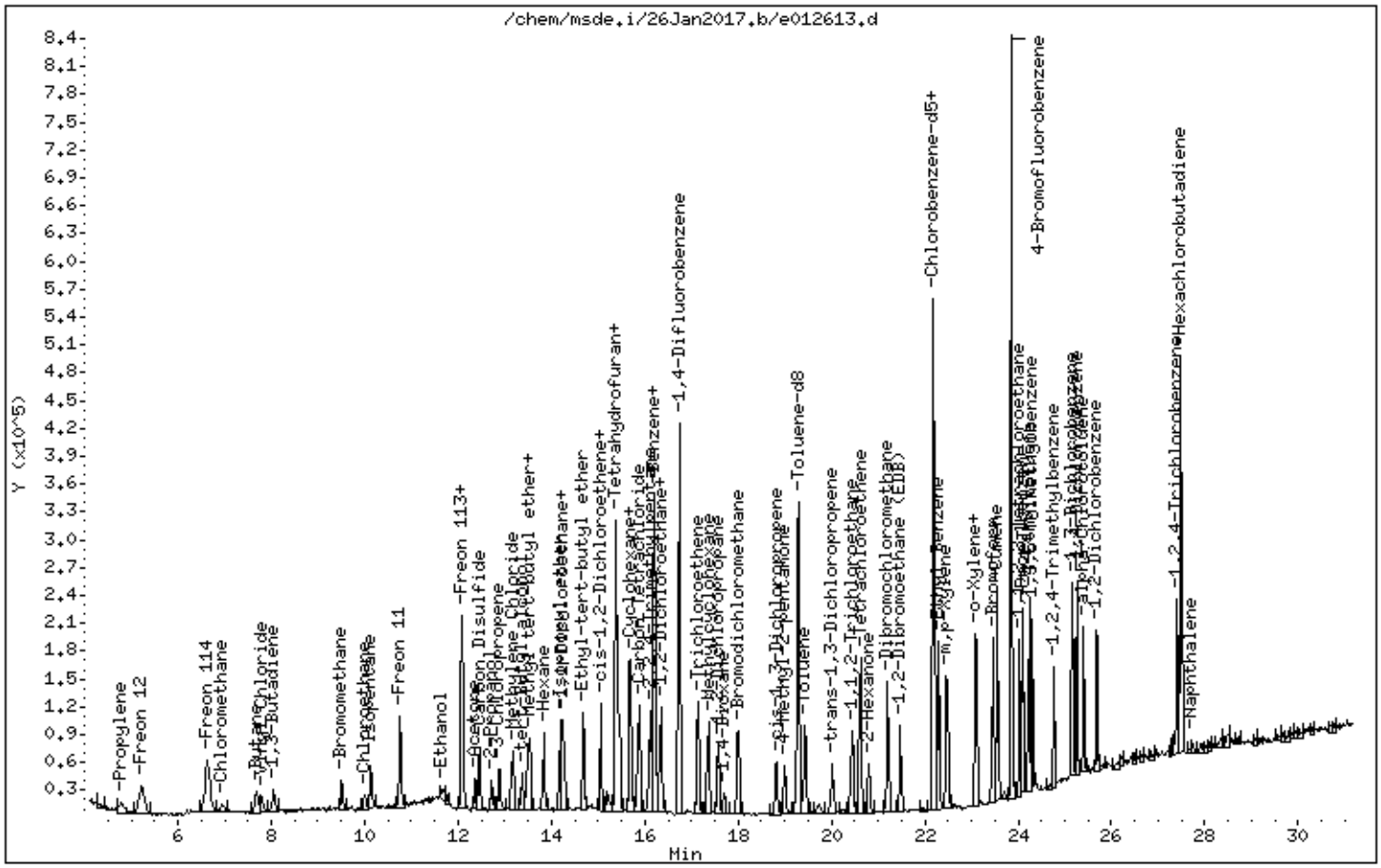
Instrument: msde.i

Sample Info: 250mL# 2819-240

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/27Jan2017.b/e012707.d
Lab Smp Id: Level 9
Inj Date : 27-JAN-2017 18:04
Operator : ea Inst ID: msde.i
Smp Info : 100mL# 2819-242
Misc Info : 2.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/27Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:45 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 18:04 Cal File: e012707.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.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		
10.843	10.843 (0.704)	55	44620	2.00000	1.857	0.00- 0.00	100.00
10.843	10.843 (0.704)	42	53344			0.00- 0.00	119.55
34 Pentane					CAS #: 109-66-0		
10.976	10.976 (0.713)	43	19826	2.00000	1.740	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	3879			0.00- 0.00	19.57
10.976	10.976 (0.713)	72	3154			0.00- 0.00	15.91
44 Ethyl Ether					CAS #: 60-29-7		
11.643	11.643 (0.756)	74	33000	2.00000	2.085	0.00- 0.00	100.00(T)
11.643	11.643 (0.756)	59	41386			0.00- 0.00	125.41
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	172537	2.00000	1.892	0.00- 0.00	100.00
12.424	12.424 (0.807)	127	87063			0.00- 0.00	50.46
59 Cyclopentene					CAS #: 142-29-0		
12.919	12.919 (0.839)	67	116748	2.00000	1.804	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	49146			0.00- 0.00	42.10
12.919	12.919 (0.839)	53	25554			0.00- 0.00	21.89
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	36809	2.00000	2.072	0.00- 0.00	100.00
13.094	13.094 (0.851)	55	39052			0.00- 0.00	106.09
74 Acrylonitrile					CAS #: 107-13-1		
13.671	13.671 (0.888)	53	42540	2.00000	1.953	0.00- 0.00	100.00
13.671	13.671 (0.888)	52	37699			0.00- 0.00	88.62
76 1-Hexene					CAS #: 592-41-6		
13.726	13.726 (0.892)	55	34523	2.00000	1.862	0.00- 0.00	100.00
13.726	13.726 (0.892)	41	55261			0.00- 0.00	160.07
13.726	13.726 (0.892)	84	18328			0.00- 0.00	53.09
84 1-Propanol					CAS #: 71-23-8		
14.384	14.384 (0.935)	59	16551	2.00000	2.166	80.00- 120.00	100.00
14.384	14.384 (0.935)	42	14522			0.00- 0.00	87.74
14.384	14.384 (0.935)	41	9527			0.00- 0.00	57.56
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.009	15.009 (0.975)	77	159793	2.00000	1.903	80.00- 120.00	100.00
15.028	15.028 (0.976)	79	51140			0.00- 0.00	32.00
15.009	15.009 (0.975)	97	32964			0.00- 0.00	20.63
93 Methyl Acrylate					CAS #: 96-33-3		
15.142	15.142 (0.984)	55	112737	2.00000	1.934	0.00- 0.00	100.00
15.142	15.142 (0.984)	85	24224			0.00- 0.00	21.49
15.142	15.142 (0.984)	58	12773			0.00- 0.00	11.33
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	141493	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	110603			46.73- 106.73	78.17
15.391	15.391 (1.000)	49	115519			55.35- 115.35	81.64
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.915	15.915 (1.034)	110	42759	2.00000	1.886	80.00- 120.00	100.00
15.915	15.915 (1.034)	75	107163			0.00- 0.00	250.62
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	45807	2.00000	2.074	80.00- 120.00	100.00
15.977	15.977 (1.038)	41	46033			0.00- 0.00	100.49
15.977	15.977 (1.038)	55	3890			0.00- 0.00	8.49

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	500927	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	74833			0.00- 45.16	14.94
124 n-Butanol						CAS #: 71-36-3	
16.906	16.906 (1.010)	56	86170	2.00000	2.097	80.00- 120.00	100.00
16.906	16.906 (1.010)	41	60582			0.00- 0.00	70.31
16.906	16.906 (1.010)	43	43908			0.00- 0.00	50.96
128 Ethyl acrylate						CAS #: 140-88-5	
17.195	17.195 (1.027)	99	12018	2.00000	1.873	0.00- 0.00	100.00
17.195	17.195 (1.027)	45	9454			0.00- 0.00	78.67
17.195	17.195 (1.027)	55	113112			0.00- 0.00	941.19
131 2-Pentanone						CAS #: 107-87-9	
17.388	17.388 (1.039)	43	160148	2.00000	1.950	0.00- 0.00	100.00
17.388	17.388 (1.039)	58	15429			0.00- 0.00	9.63
17.388	17.388 (1.039)	86	36319			0.00- 0.00	22.68
134 Methyl Methacrylate						CAS #: 80-62-6	
17.556	17.556 (1.049)	41	82422	2.00000	1.974	0.00- 0.00	100.00
17.556	17.556 (1.049)	69	66738			0.00- 0.00	80.97
17.581	17.581 (1.050)	100	30876			0.00- 0.00	37.46
137 Dibromomethane						CAS #: 74-95-3	
17.822	17.822 (1.065)	174	137376	2.00000	1.895	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	106138			0.00- 0.00	77.26
17.822	17.822 (1.065)	95	84699			0.00- 0.00	61.65
148 Octane						CAS #: 111-65-9	
19.343	19.343 (1.156)	57	46971	2.00000	2.060	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	59327			0.00- 0.00	126.31
19.343	19.343 (1.156)	43	97017			0.00- 0.00	206.55
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.822	20.822 (0.939)	76	115620	2.00000	1.943	80.00- 120.00	100.00
20.822	20.822 (0.939)	41	71976			0.00- 0.00	62.25
20.822	20.822 (0.939)	78	36604			0.00- 0.00	31.66
159 Butyl Acetate						CAS #: 123-86-4	
20.932	20.932 (0.944)	56	10309	2.00000	1.672	80.00- 120.00	100.00
20.905	20.905 (0.943)	73	5616			0.00- 0.00	54.48
20.932	20.932 (0.944)	43	31209			0.00- 0.00	302.74
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	456942	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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

* 163 Chlorobenzene-d5 (continued)
 22.177  22.177 (1.000)    82    227853                   17.27-  77.27    49.86
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                    CAS #: 630-20-6
 22.343  22.343 (1.007)   131    165855 2.00000    1.988  80.00- 120.00   100.00
 22.343  22.343 (1.007)   117     97711                    0.00-   0.00    58.91
 22.343  22.343 (1.007)    95     61852                    0.00-   0.00    37.29
-------------------------------------------------------------------------------
  170 Nonane                                       CAS #: 111-84-2
 22.302  22.302 (1.006)    43     86106 2.00000    2.010   0.00-   0.00   100.00
 22.302  22.302 (1.006)    57     81023                    0.00-   0.00    94.10
 22.302  22.302 (1.006)    85     40841                    0.00-   0.00    47.43
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 23.214  23.214 (1.047)    58     76160 2.00000    2.052  80.00- 120.00   100.00
 23.214  23.214 (1.047)    43    122973                    0.00-   0.00   161.47
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 23.811  23.811 (1.074)    55     64271 2.00000    1.892  80.00- 120.00   100.00
 23.811  23.811 (1.074)    98     40018                    0.00-   0.00    62.26
 23.811  23.811 (1.074)    42     48692                    0.00-   0.00    75.76
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 24.080  24.080 (1.086)   156    155746 2.00000    1.909  80.00- 120.00   100.00
 24.080  24.080 (1.086)   158    161851                    0.00-   0.00   103.92
 24.080  24.080 (1.086)    77    196514                    0.00-   0.00   126.18
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 24.125  24.125 (1.088)   110     65664 2.00000    2.011  80.00- 120.00   100.00
 24.125  24.125 (1.088)    75    201090                    0.00-   0.00   306.24
 24.125  24.125 (1.088)    61     42750                    0.00-   0.00    65.10
-------------------------------------------------------------------------------
  187 Decane                                       CAS #: 124-18-5
 24.170  24.170 (1.090)    57     67829 2.00000    2.017   0.00-   0.00   100.00
 24.237  24.237 (1.093)    71       597                    0.00-   0.00     0.88
 24.439  24.439 (1.102)   142     24300                    0.00-   0.00    35.83
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 24.282  24.282 (1.095)   126     96296 2.00000    1.906  80.00- 120.00   100.00
 24.282  24.282 (1.095)    91    268408                    0.00-   0.00   278.73
 24.282  24.282 (1.095)    65     25482                    0.00-   0.00    26.46
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 24.416  24.416 (1.101)   126     91596 2.00000    1.968  80.00- 120.00   100.00
 24.416  24.416 (1.101)    91    253821                    0.00-   0.00   277.11
 24.416  24.416 (1.101)    63     37129                    0.00-   0.00    40.54
-------------------------------------------------------------------------------
```

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		
24.708	24.708 (1.114)	119	265415	2.00000	1.939	80.00- 120.00	100.00
24.708	24.708 (1.114)	134	65317			0.00- 0.00	24.61
24.686	24.686 (1.113)	91	175478			0.00- 0.00	66.11
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.118)	167	169207	2.00000	2.140	80.00- 120.00	100.00
24.798	24.798 (1.118)	117	135077			0.00- 0.00	79.83
24.798	24.798 (1.118)	169	76415			0.00- 0.00	45.16
203 sec-Butylbenzene					CAS #: 135-98-8		
24.955	24.955 (1.125)	105	512094	2.00000	2.019	80.00- 120.00	100.00
24.955	24.955 (1.125)	134	115375			0.00- 0.00	22.53
24.955	24.955 (1.125)	91	85272			0.00- 0.00	16.65
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.129)	93	148857	2.00000	2.018	0.00- 0.00	100.00
25.044	25.044 (1.129)	95	50594			0.00- 0.00	33.99
25.044	25.044 (1.129)	63	100082			0.00- 0.00	67.23
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	320221	2.00000	2.075	80.00- 120.00	100.00
25.089	25.089 (1.131)	134	83481			0.00- 0.00	26.07
25.089	25.089 (1.131)	91	74113			0.00- 0.00	23.14
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.269	25.269 (1.139)	120	92906	2.00000	1.986	80.00- 120.00	100.00
25.269	25.269 (1.139)	105	218839			0.00- 0.00	235.55
25.246	25.246 (1.138)	77	32004			0.00- 0.00	34.45
213 Butylbenzene					CAS #: 104-51-8		
25.538	25.538 (1.152)	134	73586	2.00000	1.942	80.00- 120.00	100.00
25.538	25.538 (1.152)	91	251246			0.00- 0.00	341.43
25.538	25.538 (1.152)	92	135327			0.00- 0.00	183.90
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	47401	2.00000	1.996	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	37685			0.00- 0.00	79.50
25.515	25.515 (1.151)	85	15064			0.00- 0.00	31.78
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	128424	2.00000	2.101	80.00- 120.00	100.00
26.546	26.546 (1.197)	75	98320			0.00- 0.00	76.56
26.546	26.546 (1.197)	155	96207			0.00- 0.00	74.91
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	20209	2.00000	2.275	0.00- 0.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
225 Dodecane (continued)							
26.614	26.614 (1.200)	57	47818			0.00- 0.00	236.62
26.614	26.614 (1.200)	43	35961			0.00- 0.00	177.95

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: e012707.d
Lab Smp Id: Level 9
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/27Jan2017.b/e17l0126a.m
Misc Info: 2.0ppbv (5.0ppbv) Combo

Calibration Date: 27-JAN-2017
Calibration Time: 12:13

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	170744	102446	239042	141493	-17.13
123 1,4-Difluorobenze	602830	361698	843962	500927	-16.90
163 Chlorobenzene-d5	541524	324914	758134	456942	-15.62

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	22.18	21.85	22.51	22.18	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/27Jan2017.b/e012707.d

Date : 27-JAN-2017 18:04

Client ID:

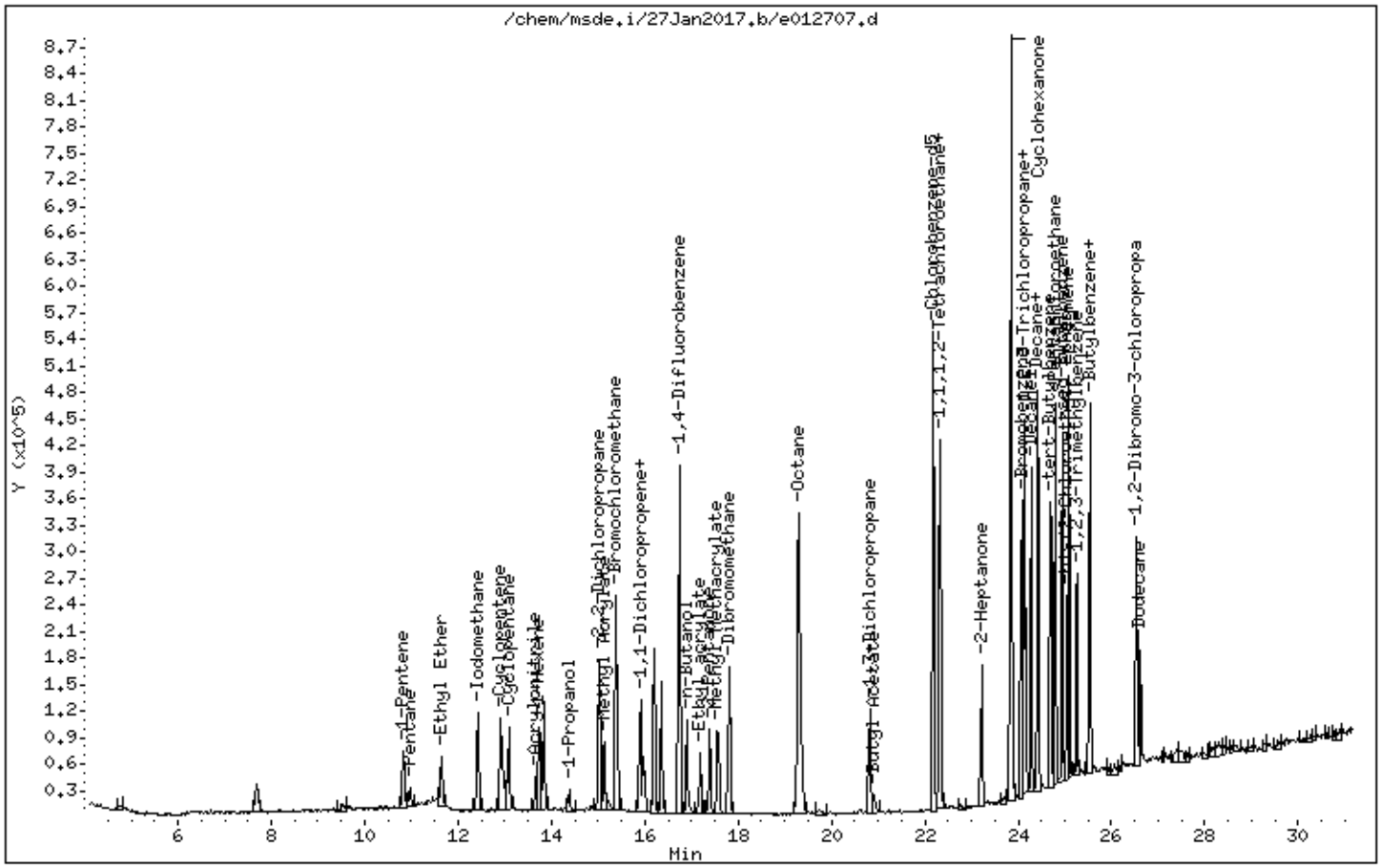
Instrument: msde.i

Sample Info: 100mL# 2819-242

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/27Jan2017.b/e012708.d
Lab Smp Id: Level 11
Inj Date : 27-JAN-2017 18:48
Operator : ea Inst ID: msde.i
Smp Info : 200mL# 2819-242
Misc Info : 4.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/27Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:45 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 18:48 Cal File: e012708.d
Als bottle: 1 Calibration Sample, Level: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.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		
10.843	10.843 (0.704)	55	92858	4.00000	3.922	0.00- 0.00	100.00
10.824	10.824 (0.703)	42	103124			0.00- 0.00	111.06
34 Pentane					CAS #: 109-66-0		
10.976	10.976 (0.713)	43	43378	4.00000	3.864	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	7639			0.00- 0.00	17.61
10.976	10.976 (0.713)	72	7224			0.00- 0.00	16.65
44 Ethyl Ether					CAS #: 60-29-7		
11.643	11.643 (0.756)	74	58590	4.00000	3.757	0.00- 0.00	100.00(T)
11.643	11.643 (0.756)	59	77138			0.00- 0.00	131.66
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	355054	4.00000	3.952	0.00- 0.00	100.00
12.424	12.424 (0.807)	127	179676			0.00- 0.00	50.61
59 Cyclopentene					CAS #: 142-29-0		
12.919	12.919 (0.839)	67	261608	4.00000	4.102	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	95885			0.00- 0.00	36.65
12.919	12.919 (0.839)	53	51596			0.00- 0.00	19.72
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	65412	4.00000	3.737	0.00- 0.00	100.00
13.094	13.094 (0.851)	55	76019			0.00- 0.00	116.22
74 Acrylonitrile					CAS #: 107-13-1		
13.671	13.671 (0.888)	53	90770	4.00000	4.229	0.00- 0.00	100.00
13.671	13.671 (0.888)	52	72596			0.00- 0.00	79.98
76 1-Hexene					CAS #: 592-41-6		
13.726	13.726 (0.892)	55	75394	4.00000	4.127	0.00- 0.00	100.00
13.726	13.726 (0.892)	41	118941			0.00- 0.00	157.76
13.726	13.726 (0.892)	84	36539			0.00- 0.00	48.46
84 1-Propanol					CAS #: 71-23-8		
14.384	14.384 (0.935)	59	27785	4.00000	3.690	80.00- 120.00	100.00
14.384	14.384 (0.935)	42	24874			0.00- 0.00	89.52
14.384	14.384 (0.935)	41	14699			0.00- 0.00	52.90
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.009	15.009 (0.975)	77	330237	4.00000	3.991	80.00- 120.00	100.00
15.009	15.009 (0.975)	79	101017			0.00- 0.00	30.59
15.009	15.009 (0.975)	97	63493			0.00- 0.00	19.23
93 Methyl Acrylate					CAS #: 96-33-3		
15.142	15.142 (0.984)	55	241012	4.00000	4.195	0.00- 0.00	100.00
15.142	15.142 (0.984)	85	48277			0.00- 0.00	20.03
15.142	15.142 (0.984)	58	22008			0.00- 0.00	9.13
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	139411	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	110268			46.73- 106.73	79.10
15.391	15.391 (1.000)	49	112739			55.35- 115.35	80.87
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.915	15.915 (1.034)	110	88671	4.00000	3.968	80.00- 120.00	100.00
15.915	15.915 (1.034)	75	214421			0.00- 0.00	241.82
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	85308	4.00000	3.920	80.00- 120.00	100.00
15.977	15.977 (1.038)	41	75336			0.00- 0.00	88.31
15.977	15.977 (1.038)	55	10594			0.00- 0.00	12.42

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	511284	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	77667			0.00- 45.16	15.19
124 n-Butanol						CAS #: 71-36-3	
16.906	16.906 (1.010)	56	161498	4.00000	3.850	80.00- 120.00	100.00
16.906	16.906 (1.010)	41	123971			0.00- 0.00	76.76
16.906	16.906 (1.010)	43	88483			0.00- 0.00	54.79
128 Ethyl acrylate						CAS #: 140-88-5	
17.195	17.195 (1.027)	99	24431	4.00000	3.731	0.00- 0.00	100.00
17.195	17.195 (1.027)	45	20667			0.00- 0.00	84.59
17.195	17.195 (1.027)	55	229320			0.00- 0.00	938.64
131 2-Pentanone						CAS #: 107-87-9	
17.388	17.388 (1.039)	43	317991	4.00000	3.792	0.00- 0.00	100.00
17.388	17.388 (1.039)	58	28769			0.00- 0.00	9.05
17.388	17.388 (1.039)	86	78734			0.00- 0.00	24.76
134 Methyl Methacrylate						CAS #: 80-62-6	
17.556	17.556 (1.049)	41	167086	4.00000	3.921	0.00- 0.00	100.00
17.556	17.556 (1.049)	69	141236			0.00- 0.00	84.53
17.581	17.581 (1.050)	100	64114			0.00- 0.00	38.37
137 Dibromomethane						CAS #: 74-95-3	
17.822	17.822 (1.065)	174	265266	4.00000	3.585	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	212434			0.00- 0.00	80.08
17.797	17.797 (1.063)	95	174914			0.00- 0.00	65.94
148 Octane						CAS #: 111-65-9	
19.343	19.343 (1.156)	57	88512	4.00000	3.803	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	120290			0.00- 0.00	135.90
19.343	19.343 (1.156)	43	209985			0.00- 0.00	237.24
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.822	20.822 (0.939)	76	240335	4.00000	4.016	80.00- 120.00	100.00
20.822	20.822 (0.939)	41	152170			0.00- 0.00	63.32
20.822	20.822 (0.939)	78	81959			0.00- 0.00	34.10
159 Butyl Acetate						CAS #: 123-86-4	
20.905	20.905 (0.943)	56	26260	4.00000	4.233	80.00- 120.00	100.00
20.905	20.905 (0.943)	73	9162			0.00- 0.00	34.89
20.905	20.905 (0.943)	43	56798			0.00- 0.00	216.29
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	459686	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)							
22.177	22.177 (1.000)	82	231715			17.27- 77.27	50.41
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
22.343	22.343 (1.007)	131	320674	4.00000	3.821	80.00- 120.00	100.00
22.343	22.343 (1.007)	117	196958			0.00- 0.00	61.42
22.343	22.343 (1.007)	95	125352			0.00- 0.00	39.09
170 Nonane					CAS #: 111-84-2		
22.302	22.302 (1.006)	43	183095	4.00000	4.249	0.00- 0.00	100.00
22.302	22.302 (1.006)	57	171283			0.00- 0.00	93.55
22.302	22.302 (1.006)	85	84650			0.00- 0.00	46.23
173 2-Heptanone					CAS #: 110-43-0		
23.214	23.214 (1.047)	58	168751	4.00000	4.520	80.00- 120.00	100.00
23.214	23.214 (1.047)	43	258825			0.00- 0.00	153.38
176 Cyclohexanone					CAS #: 108-94-1		
23.811	23.811 (1.074)	55	141076	4.00000	4.128	80.00- 120.00	100.00
23.811	23.811 (1.074)	98	74445			0.00- 0.00	52.77
23.811	23.811 (1.074)	42	101958			0.00- 0.00	72.27
180 Bromobenzene					CAS #: 108-86-1		
24.080	24.080 (1.086)	156	330617	4.00000	4.029	80.00- 120.00	100.00
24.080	24.080 (1.086)	158	303966			0.00- 0.00	91.94
24.058	24.058 (1.085)	77	397255			0.00- 0.00	120.16
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
24.125	24.125 (1.088)	110	123987	4.00000	3.775	80.00- 120.00	100.00
24.125	24.125 (1.088)	75	404878			0.00- 0.00	326.55
24.125	24.125 (1.088)	61	81052			0.00- 0.00	65.37
187 Decane					CAS #: 124-18-5		
24.170	24.170 (1.090)	57	149627	4.00000	4.422	0.00- 0.00	100.00
24.282	24.282 (1.095)	71	1904			0.00- 0.00	1.27
24.439	24.439 (1.102)	142	55226			0.00- 0.00	36.91
189 2-Chlorotoluene					CAS #: 95-49-8		
24.282	24.282 (1.095)	126	196307	4.00000	3.863	80.00- 120.00	100.00
24.282	24.282 (1.095)	91	547204			0.00- 0.00	278.75
24.282	24.282 (1.095)	65	52315			0.00- 0.00	26.65
191 4-Chlorotoluene					CAS #: 106-43-4		
24.416	24.416 (1.101)	126	188015	4.00000	4.016	80.00- 120.00	100.00
24.416	24.416 (1.101)	91	492494			0.00- 0.00	261.94
24.416	24.416 (1.101)	63	70611			0.00- 0.00	37.56

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 (1.113)	119	554994	4.00000	4.031	80.00- 120.00	100.00
24.686	24.686 (1.113)	134	129896			0.00- 0.00	23.40
24.686	24.686 (1.113)	91	352045			0.00- 0.00	63.43
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.118)	167	328465	4.00000	4.130	80.00- 120.00	100.00
24.798	24.798 (1.118)	117	255764			0.00- 0.00	77.87
24.798	24.798 (1.118)	169	148747			0.00- 0.00	45.29
203 sec-Butylbenzene					CAS #: 135-98-8		
24.955	24.955 (1.125)	105	1045735	4.00000	4.098	80.00- 120.00	100.00
24.955	24.955 (1.125)	134	220259			0.00- 0.00	21.06
24.955	24.955 (1.125)	91	160868			0.00- 0.00	15.38
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.129)	93	300496	4.00000	4.049	0.00- 0.00	100.00
25.044	25.044 (1.129)	95	99758			0.00- 0.00	33.20
25.044	25.044 (1.129)	63	187858			0.00- 0.00	62.52
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	660482	4.00000	4.254	80.00- 120.00	100.00
25.089	25.089 (1.131)	134	176683			0.00- 0.00	26.75
25.089	25.089 (1.131)	91	147864			0.00- 0.00	22.39
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.246	25.246 (1.138)	120	192413	4.00000	4.089	80.00- 120.00	100.00
25.246	25.246 (1.138)	105	452737			0.00- 0.00	235.29
25.246	25.246 (1.138)	77	51961			0.00- 0.00	27.00
213 Butylbenzene					CAS #: 104-51-8		
25.538	25.538 (1.152)	134	164071	4.00000	4.305	80.00- 120.00	100.00
25.538	25.538 (1.152)	91	528537			0.00- 0.00	322.14
25.538	25.538 (1.152)	92	277337			0.00- 0.00	169.03
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	96516	4.00000	4.041	0.00- 0.00	100.00
25.515	25.515 (1.151)	43	88841			0.00- 0.00	92.05
25.515	25.515 (1.151)	85	33261			0.00- 0.00	34.46
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	242320	4.00000	3.940	80.00- 120.00	100.00
26.524	26.524 (1.196)	75	194512			0.00- 0.00	80.27
26.546	26.546 (1.197)	155	188651			0.00- 0.00	77.85
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	22761	4.00000	2.547	0.00- 0.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
225 Dodecane (continued)								
26.614	26.614	(1.200)	57	69228			0.00- 0.00	304.15
26.614	26.614	(1.200)	43	54698			0.00- 0.00	240.31

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: e012708.d
Lab Smp Id: Level 11
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/27Jan2017.b/e17l0126a.m
Misc Info: 4.0ppbv (5.0ppbv) Combo

Calibration Date: 27-JAN-2017
Calibration Time: 12:13

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	170744	102446	239042	139411	-18.35
123 1,4-Difluorobenze	602830	361698	843962	511284	-15.19
163 Chlorobenzene-d5	541524	324914	758134	459686	-15.11

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	22.18	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/27Jan2017.b/e012708.d

Date : 27-JAN-2017 18:48

Client ID:

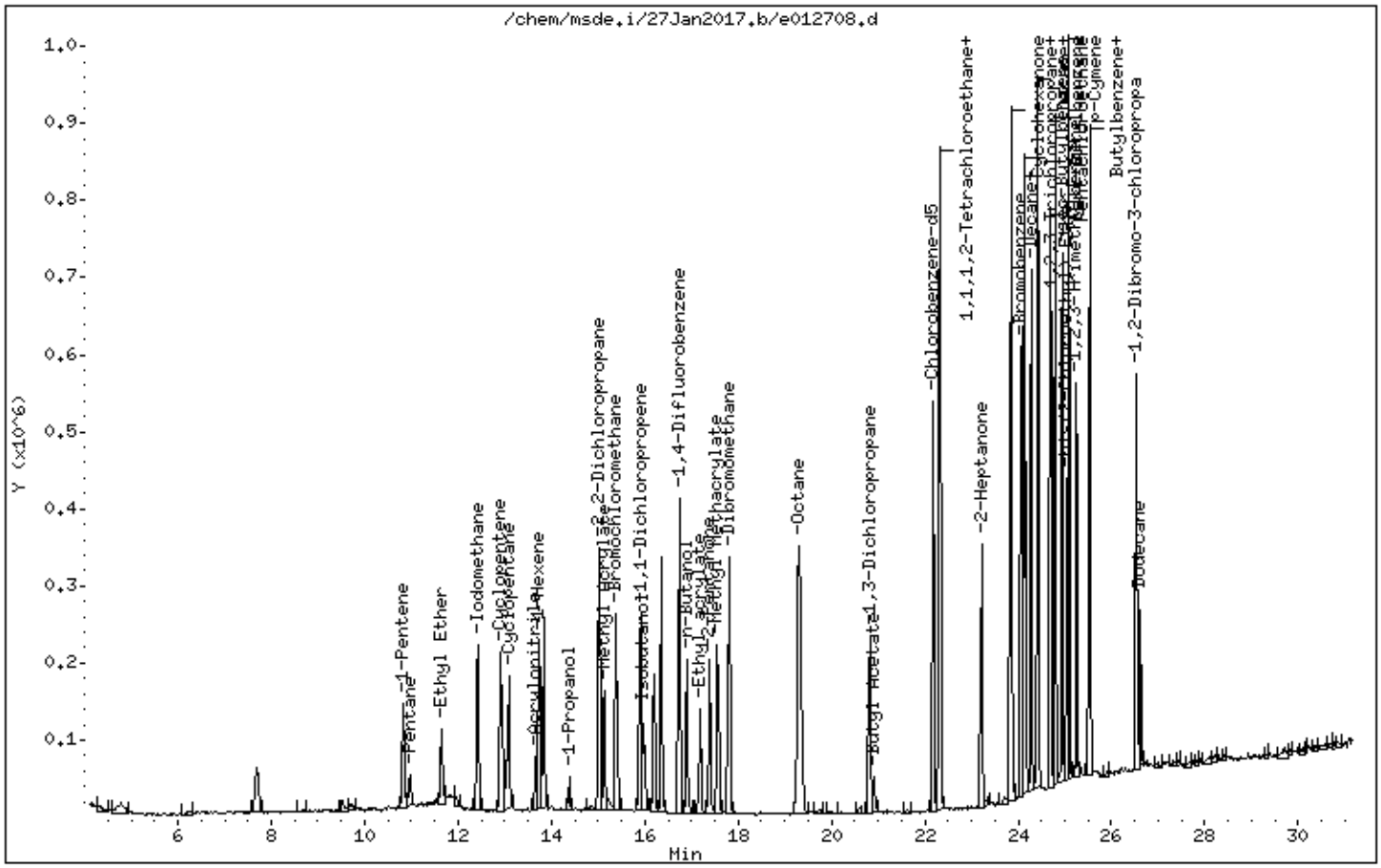
Instrument: msde.i

Sample Info: 200mL# 2819-242

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/27Jan2017.b/e012709.d
Lab Smp Id: Level 12
Inj Date : 27-JAN-2017 19:31
Operator : ea Inst ID: msde.i
Smp Info : 250mL# 2819-242
Misc Info : 5.0ppbv (5.0ppbv) Combo
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/27Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:45 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 19:31 Cal File: e012709.d
Als bottle: 1 Calibration Sample, Level: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ComboICAL-VB.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		
10.843	10.843 (0.704)	55	112029	5.00000	4.616	0.00- 0.00	100.00
10.843	10.843 (0.704)	42	126310			0.00- 0.00	112.75
34 Pentane					CAS #: 109-66-0		
10.976	10.976 (0.713)	43	46419	5.00000	4.034	0.00- 0.00	100.00
10.976	10.976 (0.713)	57	11195			0.00- 0.00	24.12
10.976	10.976 (0.713)	72	6617			0.00- 0.00	14.25
44 Ethyl Ether					CAS #: 60-29-7		
11.642	11.642 (0.756)	74	70345	5.00000	4.400	0.00- 0.00	100.00(T)
11.642	11.642 (0.756)	59	96350			0.00- 0.00	136.97
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
12.423	12.423 (0.807)	142	458610	5.00000	4.980	0.00- 0.00	100.00
12.423	12.423 (0.807)	127	231379			0.00- 0.00	50.45
59 Cyclopentene					CAS #: 142-29-0		
12.919	12.919 (0.839)	67	328807	5.00000	5.030	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	129043			0.00- 0.00	39.25
12.919	12.919 (0.839)	53	59727			0.00- 0.00	18.16
64 Cyclopentane					CAS #: 287-92-3		
13.094	13.094 (0.851)	70	92302	5.00000	5.144	0.00- 0.00	100.00
13.094	13.094 (0.851)	55	106082			0.00- 0.00	114.93
74 Acrylonitrile					CAS #: 107-13-1		
13.671	13.671 (0.888)	53	106791	5.00000	4.853	0.00- 0.00	100.00
13.671	13.671 (0.888)	52	90911			0.00- 0.00	85.13
76 1-Hexene					CAS #: 592-41-6		
13.726	13.726 (0.892)	55	95105	5.00000	5.078	0.00- 0.00	100.00
13.726	13.726 (0.892)	41	150616			0.00- 0.00	158.37
13.726	13.726 (0.892)	84	47647			0.00- 0.00	50.10
84 1-Propanol					CAS #: 71-23-8		
14.384	14.384 (0.935)	59	40447	5.00000	5.240	80.00- 120.00	100.00
14.384	14.384 (0.935)	42	34914			0.00- 0.00	86.32
14.384	14.384 (0.935)	41	23313			0.00- 0.00	57.64
90 2,2-Dichloropropane					CAS #: 594-20-7		
15.009	15.009 (0.975)	77	403475	5.00000	4.757	80.00- 120.00	100.00
15.009	15.009 (0.975)	79	123853			0.00- 0.00	30.70
15.009	15.009 (0.975)	97	78711			0.00- 0.00	19.51
93 Methyl Acrylate					CAS #: 96-33-3		
15.142	15.142 (0.984)	55	297996	5.00000	5.060	0.00- 0.00	100.00
15.142	15.142 (0.984)	85	63445			0.00- 0.00	21.29
15.142	15.142 (0.984)	58	28477			0.00- 0.00	9.56
* 98 Bromochloromethane					CAS #: 74-97-5		
15.391	15.391 (1.000)	130	142916	5.00000		80.00- 120.00	100.00
15.391	15.391 (1.000)	128	112064			46.73- 106.73	78.41
15.391	15.391 (1.000)	49	122136			55.35- 115.35	85.46
107 1,1-Dichloropropene					CAS #: 563-58-6		
15.915	15.915 (1.034)	110	104087	5.00000	4.544	80.00- 120.00	100.00
15.915	15.915 (1.034)	75	271197			0.00- 0.00	260.55
115 Isobutanol					CAS #: 78-83-1		
15.977	15.977 (1.038)	43	117684	5.00000	5.275	80.00- 120.00	100.00
15.977	15.977 (1.038)	41	104337			0.00- 0.00	88.66
15.977	15.977 (1.038)	55	12742			0.00- 0.00	10.83

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	506234	5.00000		80.00- 120.00	100.00
16.737	16.737 (1.000)	88	80856			0.00- 45.16	15.97
124 n-Butanol						CAS #: 71-36-3	
16.906	16.906 (1.010)	56	218578	5.00000	5.263	80.00- 120.00	100.00
16.906	16.906 (1.010)	41	163221			0.00- 0.00	74.67
16.906	16.906 (1.010)	43	111923			0.00- 0.00	51.21
128 Ethyl acrylate						CAS #: 140-88-5	
17.195	17.195 (1.027)	99	25127	5.00000	3.876	0.00- 0.00	100.00
17.195	17.195 (1.027)	45	25404			0.00- 0.00	101.10
17.195	17.195 (1.027)	55	289022			0.00- 0.00	1150.24
131 2-Pentanone						CAS #: 107-87-9	
17.388	17.388 (1.039)	43	406092	5.00000	4.892	0.00- 0.00	100.00
17.388	17.388 (1.039)	58	35458			0.00- 0.00	8.73
17.388	17.388 (1.039)	86	90406			0.00- 0.00	22.26
134 Methyl Methacrylate						CAS #: 80-62-6	
17.556	17.556 (1.049)	41	212610	5.00000	5.039	0.00- 0.00	100.00
17.556	17.556 (1.049)	69	176692			0.00- 0.00	83.11
17.556	17.556 (1.049)	100	90432			0.00- 0.00	42.53
137 Dibromomethane						CAS #: 74-95-3	
17.797	17.797 (1.063)	174	363121	5.00000	4.956	0.00- 0.00	100.00
17.797	17.797 (1.063)	93	263451			0.00- 0.00	72.55
17.797	17.797 (1.063)	95	215126			0.00- 0.00	59.24
148 Octane						CAS #: 111-65-9	
19.343	19.343 (1.156)	57	110599	5.00000	4.800	0.00- 0.00	100.00
19.343	19.343 (1.156)	85	155393			0.00- 0.00	140.50
19.343	19.343 (1.156)	43	246993			0.00- 0.00	223.32
157 1,3-Dichloropropane						CAS #: 142-28-9	
20.822	20.822 (0.939)	76	305059	5.00000	4.878	80.00- 120.00	100.00
20.822	20.822 (0.939)	41	184173			0.00- 0.00	60.37
20.822	20.822 (0.939)	78	101060			0.00- 0.00	33.13
159 Butyl Acetate						CAS #: 123-86-4	
20.905	20.905 (0.943)	56	31422	5.00000	4.847	80.00- 120.00	100.00
20.905	20.905 (0.943)	73	12559			0.00- 0.00	39.97
20.905	20.905 (0.943)	43	73514			0.00- 0.00	233.96
* 163 Chlorobenzene-d5						CAS #: 3114-55-4	
22.177	22.177 (1.000)	117	480346	5.00000		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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

* 163 Chlorobenzene-d5 (continued)
 22.177  22.177 (1.000)    82    231651                   17.27-  77.27    48.23
-------------------------------------------------------------------------------
  168 1,1,1,2-Tetrachloroethane                    CAS #: 630-20-6
 22.343  22.343 (1.007)   131    413764 5.00000    4.718  80.00- 120.00   100.00
 22.343  22.343 (1.007)   117    247052                    0.00-   0.00    59.71
 22.343  22.343 (1.007)    95    148630                    0.00-   0.00    35.92
-------------------------------------------------------------------------------
  170 Nonane                                       CAS #: 111-84-2
 22.301  22.301 (1.006)    43    228636 5.00000    5.078   0.00-   0.00   100.00
 22.301  22.301 (1.006)    57    220745                    0.00-   0.00    96.55
 22.301  22.301 (1.006)    85    105967                    0.00-   0.00    46.35
-------------------------------------------------------------------------------
  173 2-Heptanone                                  CAS #: 110-43-0
 23.214  23.214 (1.047)    58    215174 5.00000    5.516  80.00- 120.00   100.00
 23.214  23.214 (1.047)    43    341789                    0.00-   0.00   158.84
-------------------------------------------------------------------------------
  176 Cyclohexanone                                CAS #: 108-94-1
 23.811  23.811 (1.074)    55    178640 5.00000    5.003  80.00- 120.00   100.00
 23.811  23.811 (1.074)    98    100549                    0.00-   0.00    56.29
 23.811  23.811 (1.074)    42    127993                    0.00-   0.00    71.65
-------------------------------------------------------------------------------
  180 Bromobenzene                                 CAS #: 108-86-1
 24.080  24.080 (1.086)   156    398224 5.00000    4.644  80.00- 120.00   100.00
 24.080  24.080 (1.086)   158    404157                    0.00-   0.00   101.49
 24.058  24.058 (1.085)    77    616718                    0.00-   0.00   154.87
-------------------------------------------------------------------------------
  185 1,2,3-Trichloropropane                       CAS #: 96-18-4
 24.125  24.125 (1.088)   110    159802 5.00000    4.656  80.00- 120.00   100.00
 24.125  24.125 (1.088)    75    505421                    0.00-   0.00   316.28
 24.125  24.125 (1.088)    61    103656                    0.00-   0.00    64.87
-------------------------------------------------------------------------------
  187 Decane                                       CAS #: 124-18-5
 24.170  24.170 (1.090)    57    185094 5.00000    5.235   0.00-   0.00   100.00
 24.282  24.282 (1.095)    71       530                    0.00-   0.00     0.29
 24.439  24.439 (1.102)   142     63862                    0.00-   0.00    34.50
-------------------------------------------------------------------------------
  189 2-Chlorotoluene                              CAS #: 95-49-8
 24.282  24.282 (1.095)   126    250737 5.00000    4.722  80.00- 120.00   100.00
 24.282  24.282 (1.095)    91    665835                    0.00-   0.00   265.55
 24.282  24.282 (1.095)    65     64734                    0.00-   0.00    25.82
-------------------------------------------------------------------------------
  191 4-Chlorotoluene                              CAS #: 106-43-4
 24.416  24.416 (1.101)   126    238257 5.00000    4.870  80.00- 120.00   100.00
 24.416  24.416 (1.101)    91    646238                    0.00-   0.00   271.24
 24.416  24.416 (1.101)    63     81640                    0.00-   0.00    34.27
-------------------------------------------------------------------------------
```

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 (1.113)	119	699785	5.00000	4.864	80.00- 120.00	100.00
24.686	24.686 (1.113)	134	164588			0.00- 0.00	23.52
24.686	24.686 (1.113)	91	436235			0.00- 0.00	62.34
197 Pentachloroethane					CAS #: 76-01-7		
24.798	24.798 (1.118)	167	371288	5.00000	4.467	80.00- 120.00	100.00
24.798	24.798 (1.118)	117	320598			0.00- 0.00	86.35
24.798	24.798 (1.118)	169	179619			0.00- 0.00	48.38
203 sec-Butylbenzene					CAS #: 135-98-8		
24.955	24.955 (1.125)	105	1297719	5.00000	4.867	80.00- 120.00	100.00
24.955	24.955 (1.125)	134	280764			0.00- 0.00	21.64
24.955	24.955 (1.125)	91	210343			0.00- 0.00	16.21
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
25.044	25.044 (1.129)	93	400589	5.00000	5.166	0.00- 0.00	100.00
25.044	25.044 (1.129)	95	129565			0.00- 0.00	32.34
25.044	25.044 (1.129)	63	246323			0.00- 0.00	61.49
207 p-Cymene					CAS #: 99-87-6		
25.089	25.089 (1.131)	119	794904	5.00000	4.900	80.00- 120.00	100.00
25.089	25.089 (1.131)	134	219189			0.00- 0.00	27.57
25.089	25.089 (1.131)	91	198348			0.00- 0.00	24.95
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
25.246	25.246 (1.138)	120	253859	5.00000	5.163	80.00- 120.00	100.00
25.246	25.246 (1.138)	105	570121			0.00- 0.00	224.58
25.246	25.246 (1.138)	77	73307			0.00- 0.00	28.88
213 Butylbenzene					CAS #: 104-51-8		
25.538	25.538 (1.152)	134	199180	5.00000	5.002	80.00- 120.00	100.00
25.538	25.538 (1.152)	91	670017			0.00- 0.00	336.39
25.538	25.538 (1.152)	92	346792			0.00- 0.00	174.11
215 Undecane					CAS #: 1120-21-4		
25.515	25.515 (1.151)	57	117477	5.00000	4.707	0.00- 0.00	100.00
25.493	25.493 (1.149)	43	106408			0.00- 0.00	90.58
25.515	25.515 (1.151)	85	40749			0.00- 0.00	34.69
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
26.546	26.546 (1.197)	157	305488	5.00000	4.754	80.00- 120.00	100.00
26.524	26.524 (1.196)	75	243415			0.00- 0.00	79.68
26.546	26.546 (1.197)	155	239385			0.00- 0.00	78.36
225 Dodecane					CAS #: 112-40-3		
26.614	26.614 (1.200)	85	32623	5.00000	3.494	0.00- 0.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
225 Dodecane (continued)								
26.614	26.614	(1.200)	57	84872			0.00- 0.00	260.16
26.614	26.614	(1.200)	43	71430			0.00- 0.00	218.96

QC Flag Legend

T - Target compound detected outside RT window.

Report Date: 30-Jan-2017 10:45

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012709.d
Lab Smp Id: Level 12
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/27Jan2017.b/e17l0126a.m
Misc Info: 5.0ppbv (5.0ppbv) Combo

Calibration Date: 27-JAN-2017
Calibration Time: 12:13

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	170744	102446	239042	142916	-16.30
123 1,4-Difluorobenze	602830	361698	843962	506234	-16.02
163 Chlorobenzene-d5	541524	324914	758134	480346	-11.30

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	22.18	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/27Jan2017.b/e012709.d

Date : 27-JAN-2017 19:31

Client ID:

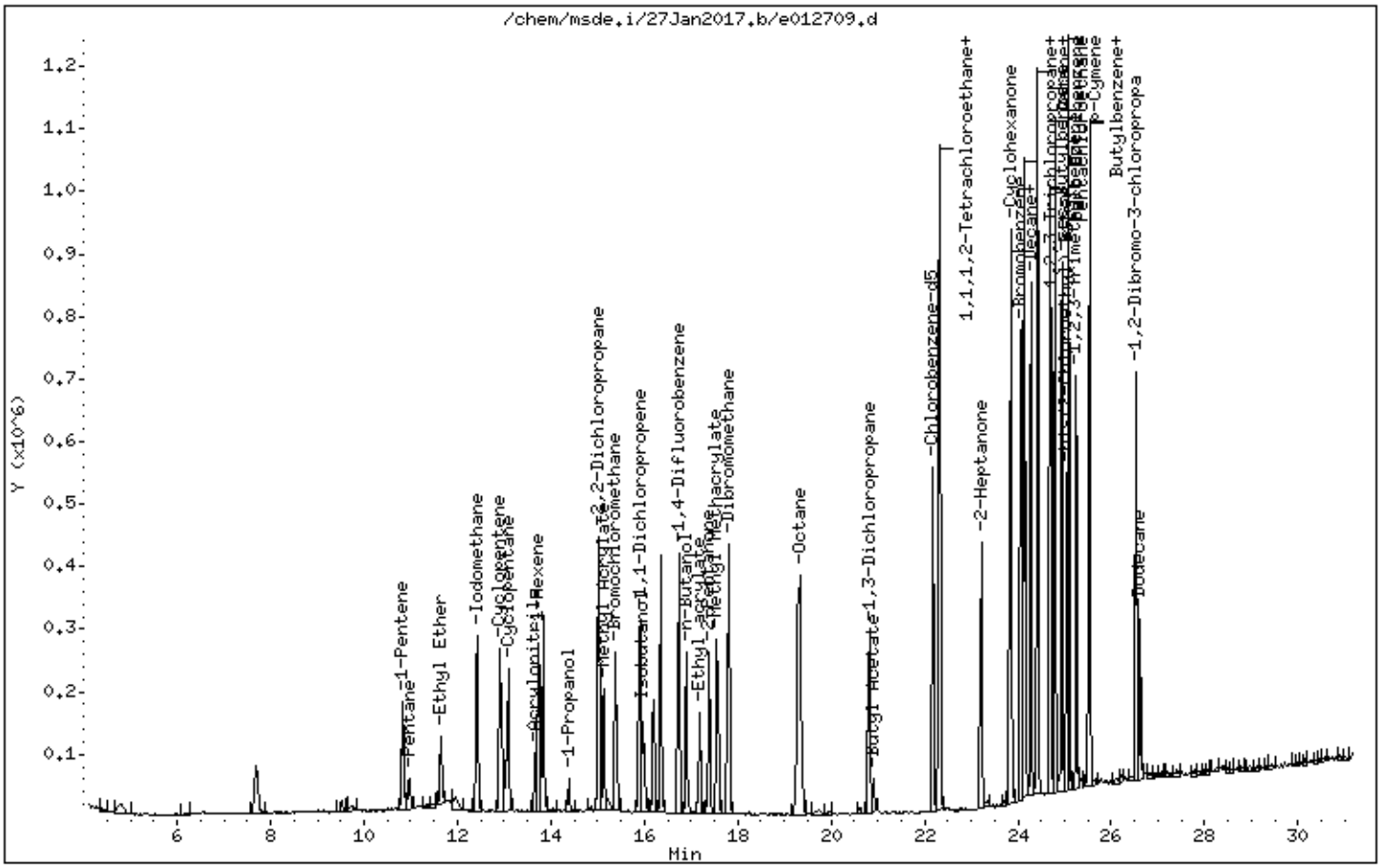
Instrument: msde.i

Sample Info: 250mL# 2819-242

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012614.d
Lab Smp Id: ICAL Client Smp ID: Level 12
Inj Date : 26-JAN-2017 17:08
Operator : ea Inst ID: msde.i
Smp Info : 25mL# 2819-240
Misc Info : 5.0ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 17:08 Cal File: e012614.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		
4.787	4.787 (0.311)	41	127208	5.00000	5.084	80.00- 120.00	100.00
4.738	4.738 (0.308)	42	79767			35.53- 95.53	62.71
4.738	4.738 (0.308)	39	107098			53.16- 113.16	84.19
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	775619	5.00000	5.039	80.00- 120.00	100.00
5.245	5.245 (0.341)	87	252628			1.91- 61.91	32.57
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	591915	5.00000	5.010	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	184960			0.98- 60.98	31.25
6.618	6.618 (0.430)	85	691803			86.82- 146.82	116.88
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	153150	5.00000	5.335	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	53288			3.31- 63.31	34.79
23 Butane					CAS #: 106-97-8		
7.675	7.675 (0.499)	58	34429	5.00000	4.940	80.00- 120.00	100.00

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   23 Butane (continued)
  7.675   7.675 (0.499)    43    238568                   667.48- 727.48   692.93
-------------------------------------------------------------------------------
   25 Vinyl Chloride                                CAS #: 75-01-4
  7.797   7.797 (0.507)    62    190937 5.00000    4.733  80.00- 120.00   100.00
  7.797   7.797 (0.507)    64     61921                     1.95-  61.95    32.43
-------------------------------------------------------------------------------
   26 1,3-Butadiene                                 CAS #: 106-99-0
  8.040   8.040 (0.522)    54    136323 5.00000    4.888  80.00- 120.00   100.00
  8.040   8.040 (0.522)    39    143912                    76.10- 136.10   105.57
-------------------------------------------------------------------------------
   29 Bromomethane                                  CAS #: 74-83-9
  9.510   9.510 (0.618)    94    215519 5.00000    5.108  80.00- 120.00   100.00
  9.510   9.510 (0.618)    96    211038                    64.26- 124.26    97.92
-------------------------------------------------------------------------------
   30 Chloroethane                                  CAS #: 75-00-3
 10.005  10.005 (0.650)    64    107333 5.00000    5.146  80.00- 120.00   100.00
 10.005  10.005 (0.650)    49     30596                     0.00-  57.48    28.51
 10.005  10.005 (0.650)    66     35417                     1.33-  61.33    33.00
-------------------------------------------------------------------------------
   31 Isopentane                                    CAS #: 78-78-4
 10.138  10.138 (0.659)    57    149407 5.00000    4.960  80.00- 120.00   100.00
 10.138  10.138 (0.659)    43    197402                    96.48- 156.48   132.12
 10.138  10.138 (0.659)    42    164071                    76.93- 136.93   109.81
-------------------------------------------------------------------------------
   35 Freon 11                                      CAS #: 75-69-4
 10.766  10.766 (0.700)   101    895948 5.00000    4.990  80.00- 120.00   100.00
 10.766  10.766 (0.700)   103    590649                    33.74-  93.74    65.92
-------------------------------------------------------------------------------
   42 Ethanol                                       CAS #: 64-17-5
 11.661  11.661 (0.758)    45     69233 5.00000    4.424  80.00- 120.00   100.00
 11.661  11.661 (0.758)    46     24400                     9.60-  69.60    35.24
 11.681  11.681 (0.759)    43     22512                     0.00-  59.21    32.52
-------------------------------------------------------------------------------
   49 Freon 113                                     CAS #: 76-13-1
 12.081  12.081 (0.785)   151    588729 5.00000    4.910  80.00- 120.00   100.00
 12.081  12.081 (0.785)   153    382391                    34.83-  94.83    64.95
 12.081  12.081 (0.785)   101    632671                    77.16- 137.16   107.46
-------------------------------------------------------------------------------
   50 1,1-Dichloroethene                            CAS #: 75-35-4
 12.100  12.100 (0.786)    98    165339 5.00000    5.162  80.00- 120.00   100.00
 12.100  12.100 (0.786)    61    395263                   219.47- 279.47   239.06
 12.100  12.100 (0.786)    96    254296                   126.81- 186.81   153.80
-------------------------------------------------------------------------------
   52 Acetone                                       CAS #: 67-64-1
 12.366  12.366 (0.803)    58     95865 5.00000    4.872  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
52 Acetone (continued)							
12.366	12.366 (0.803)	43	351319			344.13- 404.13	366.47
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.462 (0.810)	76	665617	5.00000	4.890	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.728	12.728 (0.827)	45	318023	5.00000	5.020	80.00- 120.00	100.00
12.728	12.728 (0.827)	43	87547			0.00- 55.65	27.53
12.728	12.728 (0.827)	59	14695			0.00- 34.42	4.62
58 3-Chloropropene					CAS #: 107-05-1		
12.900	12.900 (0.838)	76	134727	5.00000	5.038	80.00- 120.00	100.00
12.900	12.900 (0.838)	41	306131			198.88- 258.88	227.22
66 Methylene Chloride					CAS #: 75-09-2		
13.176	13.176 (0.856)	84	210452	5.00000	4.370	80.00- 120.00	100.00
13.176	13.176 (0.856)	49	237546			83.76- 143.76	112.87
13.176	13.176 (0.856)	51	76960			2.61- 62.61	36.57
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	468202	5.00000	5.116	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	103605			0.00- 51.13	22.13
13.369	13.369 (0.869)	57	49852			0.00- 41.40	10.65
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	731114	5.00000	5.246	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	130166			0.00- 49.77	17.80
13.478	13.478 (0.876)	41	152825			0.00- 49.98	20.90
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	152504	5.00000	5.019	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	328344			174.76- 234.76	215.30
13.533	13.533 (0.879)	96	256836			123.28- 183.28	168.41
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	305735	5.00000	5.331	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	173146			27.83- 87.83	56.63
13.835	13.835 (0.899)	86	61795			0.00- 50.45	20.21
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	614651	5.00000	5.403	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	221122			6.11- 66.11	35.98
14.192	14.192 (0.922)	59	80304			0.00- 42.83	13.06
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	446213	5.00000	5.334	80.00- 120.00	100.00

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65    144492                     1.87-  61.87    32.38
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.275  14.275 (0.927)    86     66469 5.00000    5.250  80.00- 120.00   100.00
 14.275  14.275 (0.927)    42     64110                    71.31- 131.31    96.45
 14.275  14.275 (0.927)    43    594037                   931.28- 991.28   893.71
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59    710545 5.00000    5.256  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87    341713                    16.65-  76.65    48.09
 14.685  14.685 (0.954)    41    140140                     0.00-  49.22    19.72
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.066  15.066 (0.979)    98    183164 5.00000    4.966  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61    359003                   154.54- 214.54   196.00
 15.066  15.066 (0.979)    96    296567                   117.78- 177.78   161.91
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    112870 5.00000    5.289  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    376883                   325.72- 385.72   333.91
 15.047  15.047 (0.978)    57     36555                     1.13-  61.13    32.39
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    193327 5.00000    5.005  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71     97254                    20.32-  80.32    50.31
 15.391  15.391 (1.000)    72    111339                    21.98-  81.98    57.59
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    173364 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    132339                    46.73- 106.73    76.34
 15.391  15.391 (1.000)    49    202494                    55.35- 115.35   116.80
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83    624005 5.00000    4.967  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    427616                    36.62-  96.62    68.53
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.700  15.700 (1.020)    84    314530 5.00000    5.222  80.00- 120.00   100.00
 15.700  15.700 (1.020)    56    307066                    68.83- 128.83    97.63
 15.669  15.669 (1.018)    41    191224                    29.98-  89.98    60.80
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.700  15.700 (1.020)    97    736839 5.00000    4.986  80.00- 120.00   100.00
 15.700  15.700 (1.020)    99    472639                    34.65-  94.65    64.14
-------------------------------------------------------------------------------
```

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.884  15.884 (1.032)   119    721858 5.00000    5.017  80.00- 120.00   100.00
 15.884  15.884 (1.032)   117    731392                   74.11- 134.11   101.32
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56    441191 5.00000    5.468  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   1342957                  277.67- 337.67   304.39
 16.111  16.111 (1.047)    41    456141                   73.43- 133.43   103.39
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78    750161 5.00000    5.059  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    186136                    0.00-  53.00    24.81
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    241760 5.00000    4.856  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    125610                   22.67-  82.67    51.96
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87    208824 5.00000    5.394  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73    745578                  335.49- 395.49   357.04
 16.231  16.231 (0.970)    55    199071                   60.31- 120.31    95.33
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.303  16.303 (0.974)    62    444890 5.00000    4.870  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    144079                    1.95-  61.95    32.39
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    197295 5.00000    5.255  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    109833                   23.08-  83.08    55.67
 16.352  16.352 (0.977)    43    331433                  136.91- 196.91   167.99
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    600563 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     90128                    0.00-  45.16    15.01
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130    410779 5.00000    4.965  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95    359636                   61.87- 121.87    87.55
 17.147  17.147 (1.024)    97    232528                   29.29-  89.29    56.61
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.364  17.364 (1.037)    83    412403 5.00000    5.332  80.00- 120.00   100.00
 17.364  17.364 (1.037)    55    313172                   45.72- 105.72    75.94
 17.364  17.364 (1.037)    56     91958                    0.00-  52.26    22.30
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.580  17.580 (1.050)    63    234875 5.00000    5.042  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.580  17.580 (1.050)    62    169114                   41.22- 101.22    72.00
 17.580  17.580 (1.050)    41    172231                   40.14- 100.14    73.33
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88    181653 5.00000    5.068  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    110667                   30.17-  90.17    60.92
 17.701  17.701 (1.058)    57     37471                    0.00-  51.30    20.63
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.014  18.014 (1.076)    83    647502 5.00000    5.030  80.00- 120.00   100.00
 18.014  18.014 (1.076)    85    431182                   36.87-  96.87    66.59
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.827  18.827 (1.125)    75    405463 5.00000    5.106  80.00- 120.00   100.00
 18.827  18.827 (1.125)    77    124331                    1.38-  61.38    30.66
 18.827  18.827 (1.125)    39    211134                   23.65-  83.65    52.07
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.006  19.006 (1.136)    43    459154 5.00000    5.206  80.00- 120.00   100.00
 19.006  19.006 (1.136)    58    181622                   10.02-  70.02    39.56
 19.006  19.006 (1.136)    85     99640                    0.00-  52.01    21.70
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    575438 5.00000    4.940  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     67449                    0.00-  40.89    11.72
 19.298  19.298 (1.153)   100    388573                   40.09- 100.09    67.53
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91    944995 5.00000    5.268  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    536836                   27.79-  87.79    56.81
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75    415036 5.00000    5.094  80.00- 120.00   100.00
 20.026  20.026 (0.903)    77    134199                    1.55-  61.55    32.33
 20.026  20.026 (0.903)    39    205903                   18.82-  78.82    49.61
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    324624 5.00000    5.195  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    215054                   32.59-  92.59    66.25
 20.438  20.438 (0.922)    83    259050                   50.07- 110.07    79.80
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.630  20.630 (0.930)   166    630728 5.00000    5.177  80.00- 120.00   100.00
 20.630  20.630 (0.930)   129    440665                   37.12-  97.12    69.87
 20.630  20.630 (0.930)   131    411024                   36.18-  96.18    65.17
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  158 2-Hexanone                                     CAS #: 591-78-6
 20.795  20.795 (0.938)    58    229698 5.00000    5.418  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43    419312                  162.96- 222.96   182.55
 20.795  20.795 (0.938)   100     64115                    0.00-  59.39    27.91
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 21.207  21.207 (0.956)   129    778593 5.00000    5.216  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127    597254                   46.76- 106.76    76.71
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 21.482  21.482 (0.969)   107    560375 5.00000    5.034  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109    520385                   63.39- 123.39    92.86
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    553178 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    269833                   17.27-  77.27    48.78
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 22.219  22.219 (1.002)   112    792870 5.00000    5.159  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114    246578                    2.22-  62.22    31.10
 22.219  22.219 (1.002)    77    418717                   23.48-  83.48    52.81
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 22.301  22.301 (1.006)   106    390331 5.00000    5.387  80.00- 120.00   100.00
 22.301  22.301 (1.006)    91   1210315                  278.11- 338.11   310.07
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 22.488  22.488 (1.014)   106    472907 5.00000    5.514  80.00- 120.00   100.00
 22.488  22.488 (1.014)    91    913711                  170.01- 230.01   193.21
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 23.089  23.089 (1.041)   106    430115 5.00000    5.412  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91    915106                  175.84- 235.84   212.76
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 23.110  23.110 (1.042)   104    748693 5.00000    5.647  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78    375134                   20.21-  80.21    50.11
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 23.452  23.452 (1.057)   173    817430 5.00000    5.283  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    424264                   21.47-  81.47    51.90
-------------------------------------------------------------------------------
  175 Cumene                                         CAS #: 98-82-8
 23.564  23.564 (1.063)   105   1357118 5.00000    5.444  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    374830                    0.00-  56.99    27.62
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	389033	5.00000	5.035	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	372786			66.74- 126.74	95.82
23.856	23.856 (1.076)	176	373148			67.47- 127.47	95.92
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	531644	5.00000	4.898	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	365870			39.76- 99.76	68.82
182 Propylbenzene					CAS #: 103-65-1		
24.102	24.102 (1.087)	91	1323956	5.00000	5.335	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	324372			0.00- 55.73	24.50
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	1157412	5.00000	5.626	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	364201			1.00- 61.00	31.47
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	833348	5.00000	5.464	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	408242			19.17- 79.17	48.99
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	678483	5.00000	5.301	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	308905			16.84- 76.84	45.53
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	696661	5.00000	5.117	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	452775			33.96- 93.96	64.99
25.156	25.156 (1.134)	111	250946			6.94- 66.94	36.02
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	684315	5.00000	4.839	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	445149			35.10- 95.10	65.05
25.269	25.269 (1.139)	111	240529			4.80- 64.80	35.15
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	838898	5.00000	5.143	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	185019			0.00- 52.64	22.06
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.694	25.694 (1.159)	146	659995	5.00000	5.167	80.00- 120.00	100.00
25.694	25.694 (1.159)	148	427472			33.88- 93.88	64.77
25.672	25.672 (1.158)	111	247695			7.58- 67.58	37.53
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	459434	5.00000	4.741	80.00- 120.00	100.00

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)								
27.398	27.398	(1.235)	182	428759			63.70- 123.70	93.32
227 Hexachlorobutadiene						CAS #: 87-68-3		
27.488	27.488	(1.239)	225	656498	5.00000	4.830	80.00- 120.00	100.00
27.488	27.488	(1.239)	223	422156			34.33- 94.33	64.30
228 Naphthalene						CAS #: 91-20-3		
27.712	27.712	(1.250)	128	63882	0.50000	0.4812	80.00- 120.00	100.00
27.712	27.712	(1.250)	127	11140			0.00- 42.30	17.44

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012614.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 5.0ppbv (50ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	173364	-4.63
123 1,4-Difluorobenze	598820	359292	838348	600563	0.29
163 Chlorobenzene-d5	568188	340913	795463	553178	-2.64

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	22.18	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/26Jan2017.b/e012614.d

Date : 26-JAN-2017 17:08

Client ID: Level 12

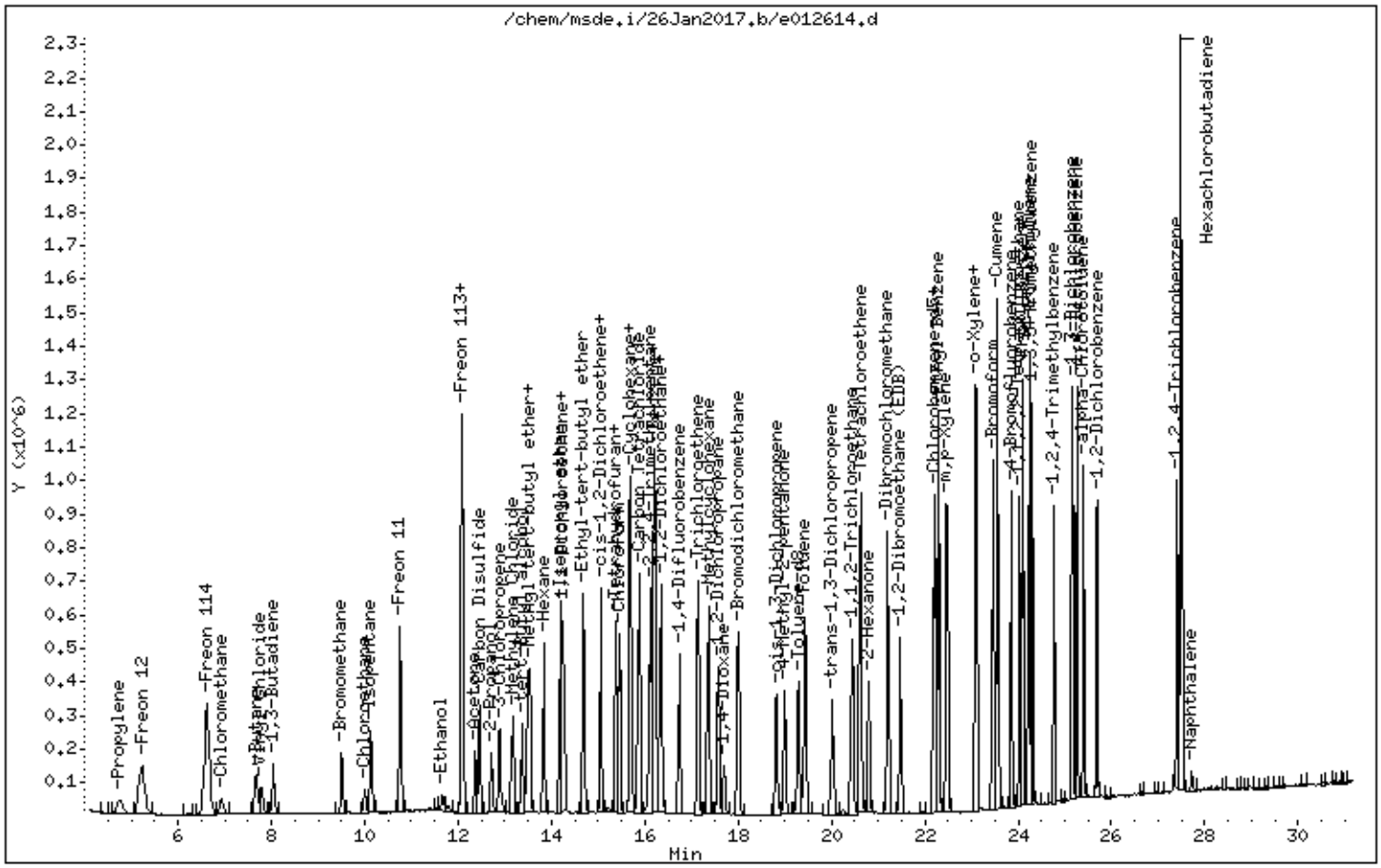
Instrument: msde.i

Sample Info: 25mL# 2819-240

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012615.d
Lab Smp Id: ICAL Client Smp ID: Level 13
Inj Date : 26-JAN-2017 17:51
Operator : ea Inst ID: msde.i
Smp Info : 50mL# 2819-240
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:34 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 17:51 Cal File: e012615.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		
4.786	4.786 (0.311)	41	238341	10.0000	9.085	80.00- 120.00	100.00
4.762	4.762 (0.309)	42	156187			35.53- 95.53	65.53
4.762	4.762 (0.309)	39	198201			53.16- 113.16	83.16
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	1445805	10.0000	8.958	80.00- 120.00	100.00
5.244	5.244 (0.341)	87	461336			1.91- 61.91	31.91
15 Freon 114					CAS #: 76-14-2		
6.642	6.642 (0.432)	135	1103969	10.0000	8.911	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	342043			0.98- 60.98	30.98
6.618	6.618 (0.430)	85	1289635			86.82- 146.82	116.82
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	273943	10.0000	9.101	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	91246			3.31- 63.31	33.31
23 Butane					CAS #: 106-97-8		
7.692	7.692 (0.500)	58	66290	10.0000	9.071	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)							
7.692	7.692 (0.500)	43	462362			667.48- 727.48	697.48
25 Vinyl Chloride					CAS #: 75-01-4		
7.814	7.814 (0.508)	62	373027	10.0000	8.819	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	119187			1.95- 61.95	31.95
26 1,3-Butadiene					CAS #: 106-99-0		
8.057	8.057 (0.523)	54	274523	10.0000	9.387	80.00- 120.00	100.00
8.057	8.057 (0.523)	39	291256			76.10- 136.10	106.10
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	419648	10.0000	9.485	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	395563			64.26- 124.26	94.26
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	194412	10.0000	8.890	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	53422			0.00- 57.48	27.48
10.005	10.005 (0.650)	66	60911			1.33- 61.33	31.33
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	291669	10.0000	9.235	80.00- 120.00	100.00
10.157	10.157 (0.660)	43	368908			96.48- 156.48	126.48
10.138	10.138 (0.659)	42	311879			76.93- 136.93	106.93
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	1727774	10.0000	9.176	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	1101309			33.74- 93.74	63.74
42 Ethanol					CAS #: 64-17-5		
11.680	11.680 (0.759)	45	124572	10.0000	7.590	80.00- 120.00	100.00
11.680	11.680 (0.759)	46	49336			9.60- 69.60	39.60
11.680	11.680 (0.759)	43	36386			0.00- 59.21	29.21
49 Freon 113					CAS #: 76-13-1		
12.099	12.099 (0.786)	151	1122194	10.0000	8.926	80.00- 120.00	100.00
12.099	12.099 (0.786)	153	727543			34.83- 94.83	64.83
12.080	12.080 (0.785)	101	1202577			77.16- 137.16	107.16
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.099	12.099 (0.786)	98	306982	10.0000	9.140	80.00- 120.00	100.00
12.099	12.099 (0.786)	61	765838			219.47- 279.47	249.47
12.099	12.099 (0.786)	96	481377			126.81- 186.81	156.81
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	174449	10.0000	8.454	80.00- 120.00	100.00

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   52 Acetone (continued)
 12.366  12.366 (0.803)    43    652664                   344.13- 404.13   374.13
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.461  12.461 (0.810)    76   1261952 10.0000    8.841  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.728 (0.827)    45    616400 10.0000    9.279  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43    158091                    0.00-  55.65    25.65
 12.728  12.728 (0.827)    59     27241                    0.00-  34.42     4.42
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.900  12.900 (0.838)    76    262239 10.0000    9.351  80.00- 120.00   100.00
 12.900  12.900 (0.838)    41    600214                  198.88- 258.88   228.88
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.176  13.176 (0.856)    84    405924 10.0000    8.039  80.00- 120.00   100.00
 13.176  13.176 (0.856)    49    461759                   83.76- 143.76   113.76
 13.176  13.176 (0.856)    51    132368                    2.61-  62.61    32.61
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.368  13.368 (0.869)    59    910028 10.0000    9.482  80.00- 120.00   100.00
 13.368  13.368 (0.869)    41    192330                    0.00-  51.13    21.13
 13.368  13.368 (0.869)    57    103720                    0.00-  41.40    11.40
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.506  13.506 (0.878)    73   1403976 10.0000    9.608  80.00- 120.00   100.00
 13.478  13.478 (0.876)    57    277621                    0.00-  49.77    19.77
 13.478  13.478 (0.876)    41    280540                    0.00-  49.98    19.98
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.561  13.561 (0.881)    98    303116 10.0000    9.514  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61    620660                  174.76- 234.76   204.76
 13.561  13.561 (0.881)    96    464612                  123.28- 183.28   153.28
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57    583297 10.0000    9.699  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43    337295                   27.83-  87.83    57.83
 13.835  13.835 (0.899)    86    119306                    0.00-  50.45    20.45
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.192  14.192 (0.922)    45   1190035 10.0000    9.976  80.00- 120.00   100.00
 14.192  14.192 (0.922)    87    429678                    6.11-  66.11    36.11
 14.192  14.192 (0.922)    59    152641                    0.00-  42.83    12.83
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63    842054 10.0000    9.600  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65    268348                     1.87-  61.87    31.87
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.274  14.274 (0.927)    86    123958 10.0000    9.337  80.00- 120.00   100.00
 14.274  14.274 (0.927)    42    125576                   71.31- 131.31   101.31
 14.274  14.274 (0.927)    43   1191582                  931.28- 991.28   961.28
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   1406259 10.0000    9.921  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87    656000                   16.65-  76.65    46.65
 14.685  14.685 (0.954)    41    270247                    0.00-  49.22    19.22
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.066  15.066 (0.979)    98    369682 10.0000    9.558  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61    682222                  154.54- 214.54   184.54
 15.066  15.066 (0.979)    96    546299                  117.78- 177.78   147.78
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    213555 10.0000    9.544  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    759661                  325.72- 385.72   355.72
 15.047  15.047 (0.978)    57     66472                    1.13-  61.13    31.13
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    396330 10.0000    9.785  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71    199422                   20.32-  80.32    50.32
 15.391  15.391 (1.000)    72    206020                   21.98-  81.98    51.98
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    181788 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    139489                   46.73- 106.73    76.73
 15.391  15.391 (1.000)    49    155157                   55.35- 115.35    85.35
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1180353 10.0000    8.959  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    786338                   36.62-  96.62    66.62
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.699  15.699 (1.020)    84    606532 10.0000    9.602  80.00- 120.00   100.00
 15.699  15.699 (1.020)    56    599412                   68.83- 128.83    98.83
 15.699  15.699 (1.020)    41    363786                   29.98-  89.98    59.98
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.699  15.699 (1.020)    97   1373850 10.0000    8.866  80.00- 120.00   100.00
 15.699  15.699 (1.020)    99    888157                   34.65-  94.65    64.65
-------------------------------------------------------------------------------
```

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.884  15.884 (1.032)   119   1332064 10.0000    8.829  80.00- 120.00   100.00
 15.884  15.884 (1.032)   117   1386793                   74.11- 134.11   104.11
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56    850727 10.0000   10.056  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   2617455                  277.67- 337.67   307.67
 16.111  16.111 (1.047)    41    879899                   73.43- 133.43   103.43
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78   1403324 10.0000    9.492  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    322827                    0.00-  53.00    23.00
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    241973 5.00000    4.635  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    127456                   22.67-  82.67    52.67
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87    402094 10.0000   10.416  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73   1469622                  335.49- 395.49   365.49
 16.231  16.231 (0.970)    55    363147                   60.31- 120.31    90.31
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.303  16.303 (0.974)    62    851963 10.0000    9.353  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    272191                    1.95-  61.95    31.95
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    384242 10.0000   10.264  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    203957                   23.08-  83.08    53.08
 16.352  16.352 (0.977)    43    641350                  136.91- 196.91   166.91
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    598820 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     90793                    0.00-  45.16    15.16
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130    771373 10.0000    9.351  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95    708630                   61.87- 121.87    91.87
 17.147  17.147 (1.024)    97    457313                   29.29-  89.29    59.29
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.363  17.363 (1.037)    83    804415 10.0000   10.430  80.00- 120.00   100.00
 17.363  17.363 (1.037)    55    609091                   45.72- 105.72    75.72
 17.363  17.363 (1.037)    56    179076                    0.00-  52.26    22.26
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.580  17.580 (1.050)    63    454217 10.0000    9.780  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.580  17.580 (1.050)    62    323513                    41.22- 101.22    71.22
 17.580  17.580 (1.050)    41    318574                    40.14- 100.14    70.14
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88    356919 10.0000    9.987  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    214753                    30.17-  90.17    60.17
 17.701  17.701 (1.058)    57     76016                     0.00-  51.30    21.30
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 18.014  18.014 (1.076)    83   1238457 10.0000    9.648  80.00- 120.00   100.00
 18.014  18.014 (1.076)    85    828188                    36.87-  96.87    66.87
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.827  18.827 (1.125)    75    790723 10.0000    9.987  80.00- 120.00   100.00
 18.827  18.827 (1.125)    77    248095                     1.38-  61.38    31.38
 18.827  18.827 (1.125)    39    424201                    23.65-  83.65    53.65
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.006  19.006 (1.136)    43    917543 10.0000   10.433  80.00- 120.00   100.00
 19.006  19.006 (1.136)    58    367177                    10.02-  70.02    40.02
 19.006  19.006 (1.136)    85    201943                     0.00-  52.01    22.01
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    586622 5.00000    5.050  80.00- 120.00   100.00
 19.298  19.298 (1.153)    70     63878                     0.00-  40.89    10.89
 19.298  19.298 (1.153)   100    411181                    40.09- 100.09    70.09
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1807347 10.0000   10.105  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92   1044511                    27.79-  87.79    57.79
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75    831496 10.0000    9.937  80.00- 120.00   100.00
 20.026  20.026 (0.903)    77    262349                     1.55-  61.55    31.55
 20.026  20.026 (0.903)    39    405962                    18.82-  78.82    48.82
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    628458 10.0000    9.792  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    393372                    32.59-  92.59    62.59
 20.438  20.438 (0.922)    83    503210                    50.07- 110.07    80.07
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.630  20.630 (0.930)   166   1185277 10.0000    9.472  80.00- 120.00   100.00
 20.630  20.630 (0.930)   129    795528                    37.12-  97.12    67.12
 20.630  20.630 (0.930)   131    784425                    36.18-  96.18    66.18
-------------------------------------------------------------------------------
```

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  158 2-Hexanone                                     CAS #: 591-78-6
 20.795  20.795 (0.938)    58    457920 10.0000   10.517  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43    883590                  162.96- 222.96   192.96
 20.795  20.795 (0.938)   100    134589                    0.00-  59.39    29.39
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 21.207  21.207 (0.956)   129   1494839 10.0000    9.750  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   1147393                   46.76- 106.76    76.76
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 21.481  21.481 (0.969)   107   1071748 10.0000    9.374  80.00- 120.00   100.00
 21.481  21.481 (0.969)   109   1000874                   63.39- 123.39    93.39
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    568188 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    268569                   17.27-  77.27    47.27
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 22.218  22.218 (1.002)   112   1499855 10.0000    9.501  80.00- 120.00   100.00
 22.218  22.218 (1.002)   114    483303                    2.22-  62.22    32.22
 22.218  22.218 (1.002)    77    802137                   23.48-  83.48    53.48
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 22.301  22.301 (1.006)   106    768043 10.0000   10.320  80.00- 120.00   100.00
 22.301  22.301 (1.006)    91   2366402                  278.11- 338.11   308.11
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 22.488  22.488 (1.014)   106    926756 10.0000   10.520  80.00- 120.00   100.00
 22.488  22.488 (1.014)    91   1853611                  170.01- 230.01   200.01
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 23.089  23.089 (1.041)   106    866273 10.0000   10.612  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91   1783140                  175.84- 235.84   205.84
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 23.110  23.110 (1.042)   104   1485006 10.0000   10.905  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78    745556                   20.21-  80.21    50.21
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 23.452  23.452 (1.057)   173   1573385 10.0000    9.901  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    809890                   21.47-  81.47    51.47
-------------------------------------------------------------------------------
  175 Cumene                                         CAS #: 98-82-8
 23.564  23.564 (1.063)   105   2689711 10.0000   10.505  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    725868                    0.00-  56.99    26.99
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	389816	5.00000	4.912	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	377117			66.74- 126.74	96.74
23.856	23.856 (1.076)	176	379971			67.47- 127.47	97.47
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	993035	10.0000	8.907	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	692715			39.76- 99.76	69.76
182 Propylbenzene					CAS #: 103-65-1		
24.102	24.102 (1.087)	91	2560410	10.0000	10.046	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	658898			0.00- 55.73	25.73
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	2254585	10.0000	10.670	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	698900			1.00- 61.00	31.00
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	1599540	10.0000	10.211	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	786503			19.17- 79.17	49.17
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	1301610	10.0000	9.900	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	609620			16.84- 76.84	46.84
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	1330771	10.0000	9.517	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	851116			33.96- 93.96	63.96
25.156	25.156 (1.134)	111	491526			6.94- 66.94	36.94
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.268	25.268 (1.139)	146	1311302	10.0000	9.027	80.00- 120.00	100.00
25.268	25.268 (1.139)	148	853629			35.10- 95.10	65.10
25.268	25.268 (1.139)	111	456351			4.80- 64.80	34.80
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	1653825	10.0000	9.872	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	374351			0.00- 52.64	22.64
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.694	25.694 (1.159)	146	1261982	10.0000	9.619	80.00- 120.00	100.00
25.694	25.694 (1.159)	148	806127			33.88- 93.88	63.88
25.672	25.672 (1.158)	111	474298			7.58- 67.58	37.58
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	888626	10.0000	8.927	80.00- 120.00	100.00

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  226 1,2,4-Trichlorobenzene (continued)
 27.398  27.398 (1.235)   182    832643                   63.70- 123.70    93.70
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.239)   225   1276821 10.0000    9.145  80.00- 120.00   100.00
 27.488  27.488 (1.239)   223    821394                   34.33-  94.33    64.33
-------------------------------------------------------------------------------
  228 Naphthalene                                  CAS #: 91-20-3
 27.712  27.712 (1.250)   128    132913 1.00000   0.9748  80.00- 120.00   100.00
 27.712  27.712 (1.250)   127     16350                    0.00-  42.30    12.30
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012615.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 13
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	181788	0.00
123 1,4-Difluorobenze	598820	359292	838348	598820	0.00
163 Chlorobenzene-d5	568188	340913	795463	568188	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	22.18	21.85	22.51	22.18	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/26Jan2017.b/e012615.d

Date : 26-JAN-2017 17:51

Client ID: Level 13

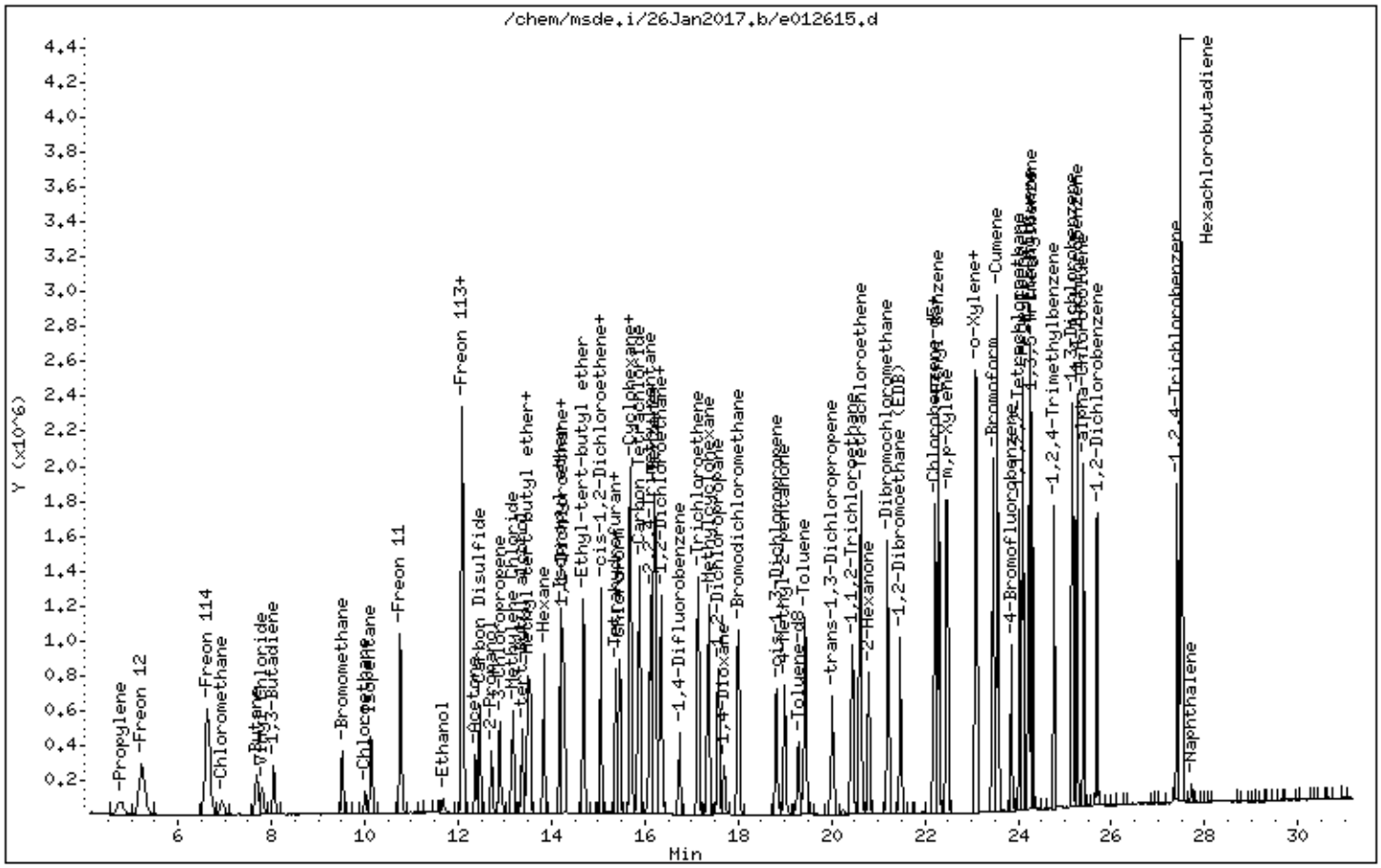
Instrument: msde.i

Sample Info: 50mL# 2819-240

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012616.d
Lab Smp Id: ICAL Client Smp ID: Level 15
Inj Date : 26-JAN-2017 19:09
Operator : ea Inst ID: msde.i
Smp Info : 100mL# 2819-240
Misc Info : 20ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 19:09 Cal File: e012616.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		
4.787	4.787 (0.311)	41	480943	20.0000	18.933	80.00- 120.00	100.00
4.763	4.763 (0.309)	42	298917			35.53- 95.53	62.15
4.763	4.763 (0.309)	39	408583			53.16- 113.16	84.95
11 Freon 12					CAS #: 75-71-8		
5.221	5.221 (0.339)	85	2829094	20.0000	18.104	80.00- 120.00	100.00
5.221	5.221 (0.339)	87	908013			1.91- 61.91	32.10
15 Freon 114					CAS #: 76-14-2		
6.619	6.619 (0.430)	135	2057865	20.0000	17.156	80.00- 120.00	100.00
6.619	6.619 (0.430)	137	649782			0.98- 60.98	31.58
6.619	6.619 (0.430)	85	2405661			86.82- 146.82	116.90
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	499032	20.0000	17.123	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	180026			3.31- 63.31	36.08
23 Butane					CAS #: 106-97-8		
7.675	7.675 (0.499)	58	141024	20.0000	19.931	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	901377			667.48- 727.48	639.17
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	725288	20.0000	17.710	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	227942			1.95- 61.95	31.43
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	523929	20.0000	18.503	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	548790			76.10- 136.10	104.75
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	804736	20.0000	18.786	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	756490			64.26- 124.26	94.00
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	368567	20.0000	17.407	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	106639			0.00- 57.48	28.93
9.986	9.986 (0.649)	66	115317			1.33- 61.33	31.29
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	559010	20.0000	18.280	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	693247			96.48- 156.48	124.01
10.138	10.138 (0.659)	42	598341			76.93- 136.93	107.04
35 Freon 11					CAS #: 75-69-4		
10.767	10.767 (0.700)	101	3227862	20.0000	17.706	80.00- 120.00	100.00
10.767	10.767 (0.700)	103	2099117			33.74- 93.74	65.03
42 Ethanol					CAS #: 64-17-5		
11.662	11.662 (0.758)	45	248242	20.0000	15.622	80.00- 120.00	100.00
11.662	11.662 (0.758)	46	92961			9.60- 69.60	37.45
11.662	11.662 (0.758)	43	69288			0.00- 59.21	27.91
49 Freon 113					CAS #: 76-13-1		
12.081	12.081 (0.785)	151	2193483	20.0000	18.020	80.00- 120.00	100.00
12.081	12.081 (0.785)	153	1417760			34.83- 94.83	64.64
12.081	12.081 (0.785)	101	2326012			77.16- 137.16	106.04
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	603093	20.0000	18.546	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	1533665			219.47- 279.47	254.30
12.100	12.100 (0.786)	96	925497			126.81- 186.81	153.46
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	356585	20.0000	17.848	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
52 Acetone (continued)							
12.366	12.366 (0.803)	43	1297683			344.13- 404.13	363.92
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.462 (0.810)	76	2408299	20.0000	17.426	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.728	12.728 (0.827)	45	1259861	20.0000	19.588	80.00- 120.00	100.00
12.728	12.728 (0.827)	43	311667			0.00- 55.65	24.74
12.728	12.728 (0.827)	59	50309			0.00- 34.42	3.99
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.881 (0.837)	76	505858	20.0000	18.630	80.00- 120.00	100.00
12.881	12.881 (0.837)	41	1186373			198.88- 258.88	234.53
66 Methylene Chloride					CAS #: 75-09-2		
13.177	13.177 (0.856)	84	749227	20.0000	15.324	80.00- 120.00	100.00
13.177	13.177 (0.856)	49	845368			83.76- 143.76	112.83
13.177	13.177 (0.856)	51	271712			2.61- 62.61	36.27
71 tert-Butyl alcohol					CAS #: 75-65-0		
13.369	13.369 (0.869)	59	1873892	20.0000	20.167	80.00- 120.00	100.00
13.369	13.369 (0.869)	41	379865			0.00- 51.13	20.27
13.369	13.369 (0.869)	57	210489			0.00- 41.40	11.23
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.479	13.479 (0.876)	73	2767979	20.0000	19.564	80.00- 120.00	100.00
13.479	13.479 (0.876)	57	535542			0.00- 49.77	19.35
13.479	13.479 (0.876)	41	526940			0.00- 49.98	19.04
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	568186	20.0000	18.420	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	1204314			174.76- 234.76	211.96
13.533	13.533 (0.879)	96	905221			123.28- 183.28	159.32
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	1160936	20.0000	19.938	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	658923			27.83- 87.83	56.76
13.835	13.835 (0.899)	86	226766			0.00- 50.45	19.53
83 Isopropyl ether					CAS #: 108-20-3		
14.192	14.192 (0.922)	45	2313084	20.0000	20.026	80.00- 120.00	100.00
14.192	14.192 (0.922)	87	835362			6.11- 66.11	36.11
14.192	14.192 (0.922)	59	291803			0.00- 42.83	12.62
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	1596676	20.0000	18.801	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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65    505706                     1.87-  61.87    31.67
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    246126 20.0000   19.148  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    245368                   71.31- 131.31    99.69
 14.247  14.247 (0.926)    43   2290368                  931.28- 991.28   930.57
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   2772863 20.0000   20.205  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87   1297957                   16.65-  76.65    46.81
 14.685  14.685 (0.954)    41    514384                    0.00-  49.22    18.55
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.066  15.066 (0.979)    98    705866 20.0000   18.849  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61   1327177                  154.54- 214.54   188.02
 15.066  15.066 (0.979)    96   1094069                  117.78- 177.78   155.00
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    426301 20.0000   19.678  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43   1446929                  325.72- 385.72   339.41
 15.047  15.047 (0.978)    57    132123                    1.13-  61.13    30.99
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    758303 20.0000   19.337  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71    392727                   20.32-  80.32    51.79
 15.391  15.391 (1.000)    72    412608                   21.98-  81.98    54.41
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    176011 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    141265                   46.73- 106.73    80.26
 15.453  15.453 (1.000)    49    318417                   55.35- 115.35   180.91
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83   2261477 20.0000   17.729  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85   1525349                   36.62-  96.62    67.45
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84   1179386 20.0000   19.285  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56   1206115                   68.83- 128.83   102.27
 15.669  15.669 (1.018)    41    703972                   29.98-  89.98    59.69
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.669  15.669 (1.018)    97   2693314 20.0000   17.951  80.00- 120.00   100.00
 15.669  15.669 (1.018)    99   1714567                   34.65-  94.65    63.66
-------------------------------------------------------------------------------
```

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.885  15.885 (1.032)   119   2587748 20.0000   17.715  80.00- 120.00   100.00
 15.885  15.885 (1.032)   117   2615003                   74.11- 134.11   101.05
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   1616902 20.0000   19.740  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   5221227                  277.67- 337.67   322.92
 16.111  16.111 (1.047)    41   1683105                   73.43- 133.43   104.09
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78   2651647 20.0000   18.205  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    638787                    0.00-  53.00    24.09
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    245305 5.00000    4.853  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    125433                   22.67-  82.67    51.13
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87    798788 20.0000   21.004  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73   2872500                  335.49- 395.49   359.61
 16.231  16.231 (0.970)    55    664541                   60.31- 120.31    83.19
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.304  16.304 (0.974)    62   1588893 20.0000   17.706  80.00- 120.00   100.00
 16.304  16.304 (0.974)    64    499431                    1.95-  61.95    31.43
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    719637 20.0000   19.511  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    411080                   23.08-  83.08    57.12
 16.352  16.352 (0.977)    43   1254391                  136.91- 196.91   174.31
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    589970 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     88953                    0.00-  45.16    15.08
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130   1527850 20.0000   18.799  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95   1332700                   61.87- 121.87    87.23
 17.147  17.147 (1.024)    97    899602                   29.29-  89.29    58.88
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.364  17.364 (1.037)    83   1588500 20.0000   20.906  80.00- 120.00   100.00
 17.364  17.364 (1.037)    55   1196210                   45.72- 105.72    75.30
 17.364  17.364 (1.037)    56    351203                    0.00-  52.26    22.11
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.581  17.581 (1.050)    63    887118 20.0000   19.387  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
132 1,2-Dichloropropane (continued)							
17.581	17.581 (1.050)	62	602968			41.22- 101.22	67.97
17.581	17.581 (1.050)	41	612758			40.14- 100.14	69.07
136 1,4-Dioxane					CAS #: 123-91-1		
17.701	17.701 (1.058)	88	699686	20.0000	19.871	80.00- 120.00	100.00
17.701	17.701 (1.058)	58	400867			30.17- 90.17	57.29
17.701	17.701 (1.058)	57	149213			0.00- 51.30	21.33
138 Bromodichloromethane					CAS #: 75-27-4		
17.990	17.990 (1.075)	83	2396058	20.0000	18.946	80.00- 120.00	100.00
17.990	17.990 (1.075)	85	1606970			36.87- 96.87	67.07
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
18.805	18.805 (1.124)	75	1580581	20.0000	20.263	80.00- 120.00	100.00
18.805	18.805 (1.124)	77	508560			1.38- 61.38	32.18
18.805	18.805 (1.124)	39	864553			23.65- 83.65	54.70
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
19.007	19.007 (1.136)	43	1802078	20.0000	20.797	80.00- 120.00	100.00
19.007	19.007 (1.136)	58	730999			10.02- 70.02	40.56
19.007	19.007 (1.136)	85	395085			0.00- 52.01	21.92
$ 146 Toluene-d8					CAS #: 2037-26-5		
19.276	19.276 (1.152)	98	600962	5.00000	5.251	80.00- 120.00	100.00
19.276	19.276 (1.152)	70	69240			0.00- 40.89	11.52
19.276	19.276 (1.152)	100	382807			40.09- 100.09	63.70
147 Toluene					CAS #: 108-88-3		
19.432	19.432 (1.161)	91	3452915	20.0000	19.596	80.00- 120.00	100.00
19.432	19.432 (1.161)	92	2022202			27.79- 87.79	58.57
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
20.026	20.026 (0.903)	75	1656254	20.0000	19.960	80.00- 120.00	100.00
19.998	19.998 (0.902)	77	521738			1.55- 61.55	31.50
19.998	19.998 (0.902)	39	813621			18.82- 78.82	49.12
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
20.438	20.438 (0.922)	97	1190624	20.0000	18.709	80.00- 120.00	100.00
20.438	20.438 (0.922)	99	729646			32.59- 92.59	61.28
20.438	20.438 (0.922)	83	933645			50.07- 110.07	78.42
156 Tetrachloroethene					CAS #: 127-18-4		
20.630	20.630 (0.930)	166	2335572	20.0000	18.822	80.00- 120.00	100.00
20.630	20.630 (0.930)	129	1558242			37.12- 97.12	66.72
20.630	20.630 (0.930)	131	1551714			36.18- 96.18	66.44

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  158 2-Hexanone                                     CAS #: 591-78-6
 20.795  20.795 (0.938)    58    955848 20.0000   22.138  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43   1750932                  162.96- 222.96   183.18
 20.795  20.795 (0.938)   100    267646                    0.00-  59.39    28.00
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
 21.207  21.207 (0.956)   129   2864858 20.0000   18.845  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   2204846                   46.76- 106.76    76.96
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
 21.482  21.482 (0.969)   107   2049261 20.0000   18.076  80.00- 120.00   100.00
 21.482  21.482 (0.969)   109   1924824                   63.39- 123.39    93.93
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                               CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    563426 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    268304                   17.27-  77.27    47.62
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
 22.219  22.219 (1.002)   112   2910527 20.0000   18.592  80.00- 120.00   100.00
 22.219  22.219 (1.002)   114    954123                    2.22-  62.22    32.78
 22.219  22.219 (1.002)    77   1547466                   23.48-  83.48    53.17
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
 22.302  22.302 (1.006)   106   1498957 20.0000   20.311  80.00- 120.00   100.00
 22.302  22.302 (1.006)    91   4626635                  278.11- 338.11   308.66
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
 22.467  22.467 (1.013)   106   1824768 20.0000   20.890  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91   3616707                  170.01- 230.01   198.20
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
 23.089  23.089 (1.041)   106   1641547 20.0000   20.280  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91   3532566                  175.84- 235.84   215.20
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
 23.110  23.110 (1.042)   104   2899179 20.0000   21.470  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78   1482959                   20.21-  80.21    51.15
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
 23.452  23.452 (1.057)   173   3026734 20.0000   19.207  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171   1552241                   21.47-  81.47    51.28
-------------------------------------------------------------------------------
  175 Cumene                                         CAS #: 98-82-8
 23.564  23.564 (1.063)   105   5226749 20.0000   20.586  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120   1428771                    0.00-  56.99    27.34
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	401680	5.00000	5.104	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	377892			66.74- 126.74	94.08
23.856	23.856 (1.076)	176	379971			67.47- 127.47	94.60
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	1902331	20.0000	17.208	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	1317589			39.76- 99.76	69.26
182 Propylbenzene					CAS #: 103-65-1		
24.103	24.103 (1.087)	91	5026254	20.0000	19.887	80.00- 120.00	100.00
24.103	24.103 (1.087)	120	1282769			0.00- 55.73	25.52
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	4150729	20.0000	19.810	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	1258829			1.00- 61.00	30.33
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	3387283	20.0000	21.806	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	1640702			19.17- 79.17	48.44
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	2693092	20.0000	20.657	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	1232859			16.84- 76.84	45.78
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.157	25.157 (1.134)	146	2577111	20.0000	18.585	80.00- 120.00	100.00
25.157	25.157 (1.134)	148	1691045			33.96- 93.96	65.62
25.157	25.157 (1.134)	111	949910			6.94- 66.94	36.86
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.269 (1.139)	146	2612842	20.0000	18.140	80.00- 120.00	100.00
25.269	25.269 (1.139)	148	1672473			35.10- 95.10	64.01
25.269	25.269 (1.139)	111	911505			4.80- 64.80	34.89
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	3314822	20.0000	19.954	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	721351			0.00- 52.64	21.76
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	2518839	20.0000	19.362	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	1611877			33.88- 93.88	63.99
25.672	25.672 (1.158)	111	964932			7.58- 67.58	38.31
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	1891221	20.0000	19.159	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.398	27.398 (1.235)	182	1787971			63.70- 123.70	94.54
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	2608732	20.0000	18.843	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	1630965			34.33- 94.33	62.52
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	264846	2.00000	1.959	80.00- 120.00	100.00
27.712	27.712 (1.250)	127	34982			0.00- 42.30	13.21

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e012616.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 20ppbv (50ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 15
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	176011	-3.18
123 1,4-Difluorobenze	598820	359292	838348	589970	-1.48
163 Chlorobenzene-d5	568188	340913	795463	563426	-0.84

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	22.18	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/26Jan2017.b/e012616.d

Date : 26-JAN-2017 19:09

Client ID: Level 15

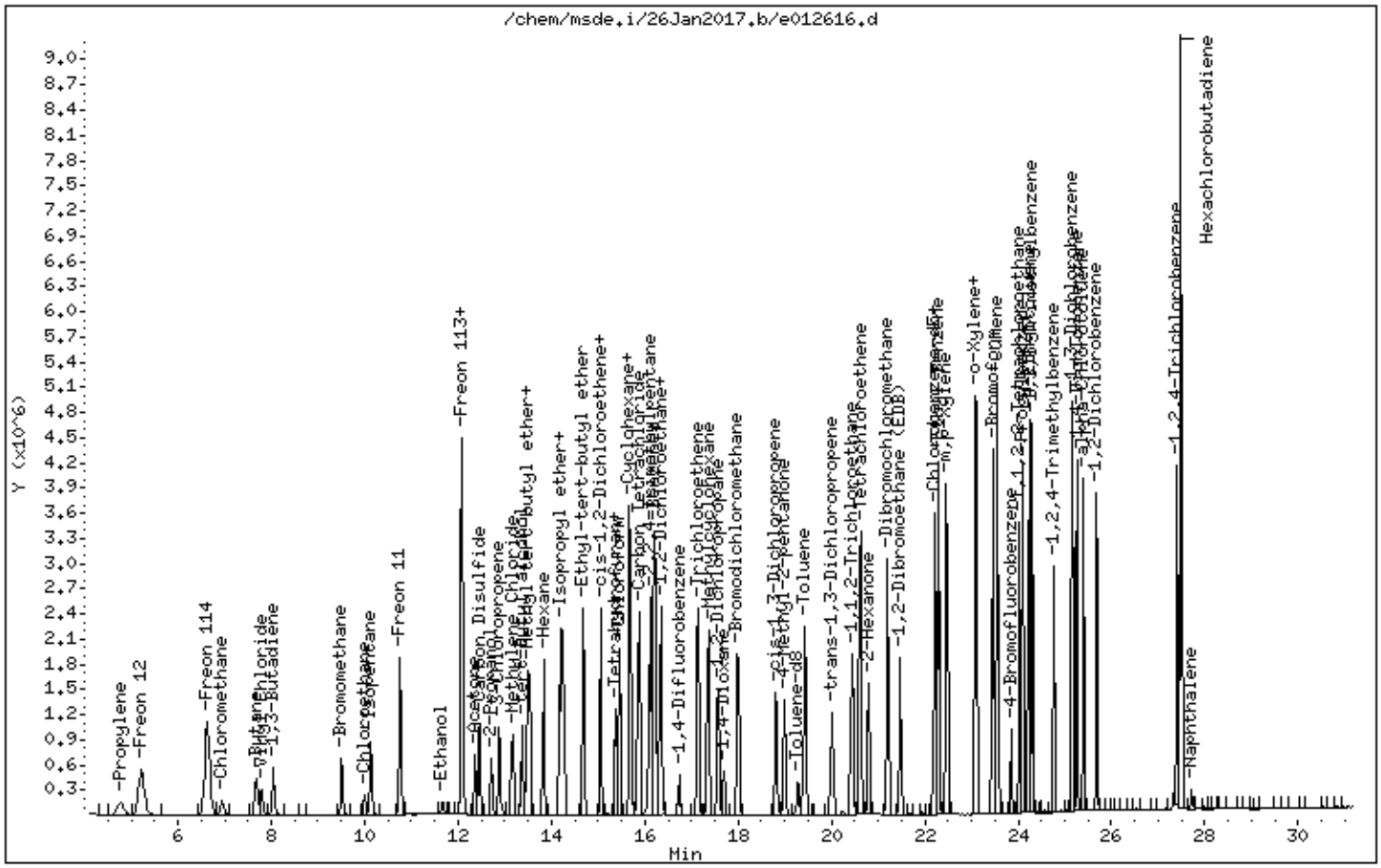
Instrument: msde.i

Sample Info: 100mL# 2819-240

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/26Jan2017.b/e012617.d
Lab Smp Id: ICAL Client Smp ID: Level 16
Inj Date : 26-JAN-2017 19:53
Operator : ea Inst ID: msde.i
Smp Info : 200mL# 2819-240
Misc Info : 40ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/26Jan2017.b/e17l0126a.m
Meth Date : 30-Jan-2017 10:28 efinn Quant Type: ISTD
Cal Date : 26-JAN-2017 19:53 Cal File: e012617.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		
4.786	4.786 (0.311)	41	906022	40.0000	37.690	80.00- 120.00	100.00
4.786	4.786 (0.311)	42	579014			35.53- 95.53	63.91
4.811	4.811 (0.313)	39	749001			53.16- 113.16	82.67
11 Freon 12					CAS #: 75-71-8		
5.244	5.244 (0.341)	85	5486922	40.0000	37.103	80.00- 120.00	100.00
5.244	5.244 (0.341)	87	1770020			1.91- 61.91	32.26
15 Freon 114					CAS #: 76-14-2		
6.642	6.642 (0.432)	135	3981038	40.0000	35.072	80.00- 120.00	100.00
6.642	6.642 (0.432)	137	1304512			0.98- 60.98	32.77
6.642	6.642 (0.432)	85	4661716			86.82- 146.82	117.10
17 Chloromethane					CAS #: 74-87-3		
6.956	6.956 (0.452)	50	973369	40.0000	35.292	80.00- 120.00	100.00
6.956	6.956 (0.452)	52	322559			3.31- 63.31	33.14
23 Butane					CAS #: 106-97-8		
7.692	7.692 (0.500)	58	262884	40.0000	39.261	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)							
7.692	7.692 (0.500)	43	1764252			667.48- 727.48	671.11
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.797 (0.507)	62	1385928	40.0000	35.760	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	451324			1.95- 61.95	32.56
26 1,3-Butadiene					CAS #: 106-99-0		
8.057	8.057 (0.523)	54	1030186	40.0000	38.445	80.00- 120.00	100.00
8.057	8.057 (0.523)	39	1061006			76.10- 136.10	102.99
29 Bromomethane					CAS #: 74-83-9		
9.529	9.529 (0.619)	94	1530563	40.0000	37.756	80.00- 120.00	100.00
9.529	9.529 (0.619)	96	1464946			64.26- 124.26	95.71
30 Chloroethane					CAS #: 75-00-3		
10.005	10.005 (0.650)	64	713078	40.0000	35.588	80.00- 120.00	100.00
10.005	10.005 (0.650)	49	204136			0.00- 57.48	28.63
10.005	10.005 (0.650)	66	232916			1.33- 61.33	32.66
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	1065273	40.0000	36.812	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	1358068			96.48- 156.48	127.49
10.138	10.138 (0.659)	42	1146523			76.93- 136.93	107.63
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	6209791	40.0000	35.995	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	4000126			33.74- 93.74	64.42
42 Ethanol					CAS #: 64-17-5		
11.680	11.680 (0.759)	45	496109	40.0000	32.992	80.00- 120.00	100.00
11.680	11.680 (0.759)	46	180127			9.60- 69.60	36.31
11.680	11.680 (0.759)	43	126273			0.00- 59.21	25.45
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	4154688	40.0000	36.068	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	2680874			34.83- 94.83	64.53
12.080	12.080 (0.785)	101	4403231			77.16- 137.16	105.98
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.100 (0.786)	98	1136976	40.0000	36.946	80.00- 120.00	100.00
12.100	12.100 (0.786)	61	2918725			219.47- 279.47	256.71
12.100	12.100 (0.786)	96	1809196			126.81- 186.81	159.12
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	693474	40.0000	36.680	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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   52 Acetone (continued)
 12.366  12.366 (0.803)    43   2491321                   344.13- 404.13   359.25
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.461  12.461 (0.810)    76   4578651 40.0000   35.010  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.728 (0.827)    45   2490568 40.0000   40.918  80.00- 120.00   100.00(A)
 12.728  12.728 (0.827)    43    584637                    0.00-  55.65    23.47
 12.728  12.728 (0.827)    59    103767                    0.00-  34.42     4.17
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.900  12.900 (0.838)    76    998979 40.0000   38.877  80.00- 120.00   100.00
 12.880  12.880 (0.837)    41   2311697                   198.88- 258.88   231.41
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.176  13.176 (0.856)    84   1478839 40.0000   31.962  80.00- 120.00   100.00
 13.176  13.176 (0.856)    49   1680055                   83.76- 143.76   113.61
 13.176  13.176 (0.856)    51    510475                    2.61-  62.61    34.52
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.369  13.369 (0.869)    59   3764757 40.0000   42.814  80.00- 120.00   100.00(A)
 13.369  13.369 (0.869)    41    766102                    0.00-  51.13    20.35
 13.369  13.369 (0.869)    57    427066                    0.00-  41.40    11.34
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.478  13.478 (0.876)    73   5369249 40.0000   40.102  80.00- 120.00   100.00(A)
 13.478  13.478 (0.876)    57   1044367                    0.00-  49.77    19.45
 13.478  13.478 (0.876)    41   1040428                    0.00-  49.98    19.38
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.533 (0.879)    98   1098791 40.0000   37.641  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61   2337342                   174.76- 234.76   212.72
 13.533  13.533 (0.879)    96   1734911                   123.28- 183.28   157.89
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57   2217478 40.0000   40.243  80.00- 120.00   100.00(A)
 13.835  13.835 (0.899)    43   1301531                   27.83-  87.83    58.69
 13.835  13.835 (0.899)    86    439500                    0.00-  50.45    19.82
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.192  14.192 (0.922)    45   4505257 40.0000   41.218  80.00- 120.00   100.00(A)
 14.192  14.192 (0.922)    87   1613427                    6.11-  66.11    35.81
 14.192  14.192 (0.922)    59    562440                    0.00-  42.83    12.48
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63   3026261 40.0000   37.655  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65    966662                     1.87-  61.87    31.94
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    491516 40.0000   40.407  80.00- 120.00   100.00(A)
 14.247  14.247 (0.926)    42    464979                    71.31- 131.31    94.60
 14.247  14.247 (0.926)    43   4465126                   931.28- 991.28   908.44
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   5477826 40.0000   42.178  80.00- 120.00   100.00(A)
 14.685  14.685 (0.954)    87   2525876                    16.65-  76.65    46.11
 14.685  14.685 (0.954)    41    978475                     0.00-  49.22    17.86
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.066  15.066 (0.979)    98   1358710 40.0000   38.339  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61   2574218                   154.54- 214.54   189.46
 15.066  15.066 (0.979)    96   2101115                   117.78- 177.78   154.64
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    819890 40.0000   39.992  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43   2874005                   325.72- 385.72   350.54
 15.047  15.047 (0.978)    57    253364                     1.13-  61.13    30.90
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42   1521656 40.0000   41.003  80.00- 120.00   100.00(A)
 15.391  15.391 (1.000)    71    746001                    20.32-  80.32    49.03
 15.391  15.391 (1.000)    72    800429                    21.98-  81.98    52.60
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    166564 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    121720                    46.73- 106.73    73.08
 15.453  15.453 (1.000)    49    489019                    55.35- 115.35   293.59
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   4322905 40.0000   35.812  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85   2885160                    36.62-  96.62    66.74
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84   2323458 40.0000   40.146  80.00- 120.00   100.00(A)
 15.669  15.669 (1.018)    56   2326563                    68.83- 128.83   100.13
 15.669  15.669 (1.018)    41   1379053                    29.98-  89.98    59.35
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.699  15.699 (1.020)    97   5144457 40.0000   36.233  80.00- 120.00   100.00
 15.699  15.699 (1.020)    99   3341875                    34.65-  94.65    64.96
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.884  15.884 (1.032)   119   4972558 40.0000   35.971  80.00- 120.00   100.00
 15.884  15.884 (1.032)   117   5135458                   74.11- 134.11   103.28
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56   3182591 40.0000   41.058  80.00- 120.00   100.00(A)
 16.111  16.111 (1.047)    57   9716104                  277.67- 337.67   305.29
 16.111  16.111 (1.047)    41   3342582                   73.43- 133.43   105.03
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78   5166613 40.0000   35.587  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77   1221130                    0.00-  53.00    23.64
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    234572 5.00000    4.904  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    138969                   22.67-  82.67    59.24
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87   1570382 40.0000   41.427  80.00- 120.00   100.00(A)
 16.231  16.231 (0.970)    73   5656884                  335.49- 395.49   360.22
 16.231  16.231 (0.970)    55   1347774                   60.31- 120.31    85.82
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.303  16.303 (0.974)    62   3128466 40.0000   34.975  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    997412                    1.95-  61.95    31.88
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57   1459335 40.0000   39.696  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    800983                   23.08-  83.08    54.89
 16.352  16.352 (0.977)    43   2506040                  136.91- 196.91   171.72
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    588052 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     90480                    0.00-  45.16    15.39
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130   2945693 40.0000   36.363  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95   2635532                   61.87- 121.87    89.47
 17.147  17.147 (1.024)    97   1722198                   29.29-  89.29    58.46
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.363  17.363 (1.037)    83   3143247 40.0000   41.503  80.00- 120.00   100.00(A)
 17.363  17.363 (1.037)    55   2307210                   45.72- 105.72    73.40
 17.363  17.363 (1.037)    56    716785                    0.00-  52.26    22.80
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.580  17.580 (1.050)    63   1677839 40.0000   36.786  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.580  17.580 (1.050)    62   1150824                    41.22- 101.22    68.59
 17.580  17.580 (1.050)    41   1165675                    40.14- 100.14    69.47
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88   1369914 40.0000   39.033  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    808600                    30.17-  90.17    59.03
 17.701  17.701 (1.058)    57    279690                     0.00-  51.30    20.42
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   4630231 40.0000   36.731  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85   3080268                    36.87-  96.87    66.53
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75   3178669 40.0000   40.883  80.00- 120.00   100.00(A)
 18.805  18.805 (1.124)    77   1009821                     1.38-  61.38    31.77
 18.805  18.805 (1.124)    39   1725172                    23.65-  83.65    54.27
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.006  19.006 (1.136)    43   3562071 40.0000   41.243  80.00- 120.00   100.00(A)
 19.006  19.006 (1.136)    58   1417817                    10.02-  70.02    39.80
 19.006  19.006 (1.136)    85    782386                     0.00-  52.01    21.96
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.275  19.275 (1.152)    98    607506 5.00000    5.326  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     64376                     0.00-  40.89    10.60
 19.298  19.298 (1.153)   100    391113                    40.09- 100.09    64.38
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   6819019 40.0000   38.825  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92   3936225                    27.79-  87.79    57.72
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75   3268212 40.0000   39.227  80.00- 120.00   100.00
 20.026  20.026 (0.903)    77   1036561                     1.55-  61.55    31.72
 19.998  19.998 (0.902)    39   1609510                    18.82-  78.82    49.25
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97   2311039 40.0000   36.167  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99   1467184                    32.59-  92.59    63.49
 20.438  20.438 (0.922)    83   1809312                    50.07- 110.07    78.29
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.630  20.630 (0.930)   166   4505048 40.0000   36.159  80.00- 120.00   100.00
 20.630  20.630 (0.930)   129   3024145                    37.12-  97.12    67.13
 20.630  20.630 (0.930)   131   2993061                    36.18-  96.18    66.44
-------------------------------------------------------------------------------
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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  158 2-Hexanone                                   CAS #: 591-78-6
 20.795  20.795 (0.938)    58   1934092 40.0000   44.613  80.00- 120.00   100.00(A)
 20.795  20.795 (0.938)    43   3519116                  162.96- 222.96   181.95
 20.795  20.795 (0.938)   100    545703                    0.00-  59.39    28.21
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.956)   129   5584249 40.0000   36.584  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   4355954                   46.76- 106.76    78.00
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.481  21.481 (0.969)   107   4015097 40.0000   35.272  80.00- 120.00   100.00
 21.481  21.481 (0.969)   109   3793433                   63.39- 123.39    94.48
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    565719 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    278767                   17.27-  77.27    49.28
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.218  22.218 (1.002)   112   5814286 40.0000   36.991  80.00- 120.00   100.00
 22.218  22.218 (1.002)   114   1870383                    2.22-  62.22    32.17
 22.218  22.218 (1.002)    77   3039248                   23.48-  83.48    52.27
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.301  22.301 (1.006)   106   2992596 40.0000   40.386  80.00- 120.00   100.00(A)
 22.301  22.301 (1.006)    91   9212704                  278.11- 338.11   307.85
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.013)   106   3588046 40.0000   40.910  80.00- 120.00   100.00(A)
 22.467  22.467 (1.013)    91   7234076                  170.01- 230.01   201.62
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106   3344690 40.0000   41.153  80.00- 120.00   100.00(A)
 23.089  23.089 (1.041)    91   7084033                  175.84- 235.84   211.80
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104   5686296 40.0000   41.940  80.00- 120.00   100.00(A)
 23.110  23.110 (1.042)    78   2907333                   20.21-  80.21    51.13
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.057)   173   5955484 40.0000   37.640  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171   3036758                   21.47-  81.47    50.99
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.564  23.564 (1.063)   105  10295464 40.0000   40.385  80.00- 120.00   100.00(A)
 23.564  23.564 (1.063)   120   2811803                    0.00-  56.99    27.31
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 177 4-Bromofluorobenzene                          CAS #: 460-00-4
 23.856  23.856 (1.076)   174    398925 5.00000    5.048  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    372418                   66.74- 126.74    93.36
 23.856  23.856 (1.076)   176    361513                   67.47- 127.47    90.62
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 24.035  24.035 (1.084)    83   3570449 40.0000   32.166  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85   2428239                   39.76-  99.76    68.01
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 24.102  24.102 (1.087)    91   9604137 40.0000   37.845  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120   2435116                    0.00-  55.73    25.35
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 24.237  24.237 (1.093)   105   7851767 40.0000   37.321  80.00- 120.00   100.00
 24.237  24.237 (1.093)   120   2371335                    1.00-  61.00    30.20
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 24.304  24.304 (1.096)   105   6385543 40.0000   40.942  80.00- 120.00   100.00(A)
 24.304  24.304 (1.096)   120   3108975                   19.17-  79.17    48.69
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 24.775  24.775 (1.117)   105   5146215 40.0000   39.314  80.00- 120.00   100.00
 24.775  24.775 (1.117)   120   2348184                   16.84-  76.84    45.63
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 25.156  25.156 (1.134)   146   4929325 40.0000   35.405  80.00- 120.00   100.00
 25.156  25.156 (1.134)   148   3164819                   33.96-  93.96    64.20
 25.156  25.156 (1.134)   111   1830689                    6.94-  66.94    37.14
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 25.268  25.268 (1.139)   146   4985124 40.0000   34.469  80.00- 120.00   100.00
 25.268  25.268 (1.139)   148   3169866                   35.10-  95.10    63.59
 25.268  25.268 (1.139)   111   1760763                    4.80-  64.80    35.32
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 25.403  25.403 (1.145)    91   6555460 40.0000   39.302  80.00- 120.00   100.00
 25.403  25.403 (1.145)   126   1481100                    0.00-  52.64    22.59
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 25.672  25.672 (1.158)   146   4836320 40.0000   37.026  80.00- 120.00   100.00
 25.672  25.672 (1.158)   148   3129102                   33.88-  93.88    64.70
 25.672  25.672 (1.158)   111   1825101                    7.58-  67.58    37.74
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 27.398  27.398 (1.235)   180   3704950 40.0000   37.382  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
226 1,2,4-Trichlorobenzene (continued)							
27.398	27.398 (1.235)	182	3534031			63.70- 123.70	95.39
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	5174435	40.0000	37.224	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	3238215			34.33- 94.33	62.58
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	529513	4.00000	3.901	80.00- 120.00	100.00
27.712	27.712 (1.250)	127	70872			0.00- 42.30	13.38

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: e012617.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: ea
Method File: /chem/msde.i/26Jan2017.b/e17l0126a.m
Misc Info: 40ppbv (50ppbv)

Calibration Date: 26-JAN-2017
Calibration Time: 17:51
Client Smp ID: Level 16
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	181788	109073	254503	166564	-8.37
123 1,4-Difluorobenze	598820	359292	838348	588052	-1.80
163 Chlorobenzene-d5	568188	340913	795463	565719	-0.43

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	22.18	21.85	22.51	22.18	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/26Jan2017.b/e012617.d

Date : 26-JAN-2017 19:53

Client ID: Level 16

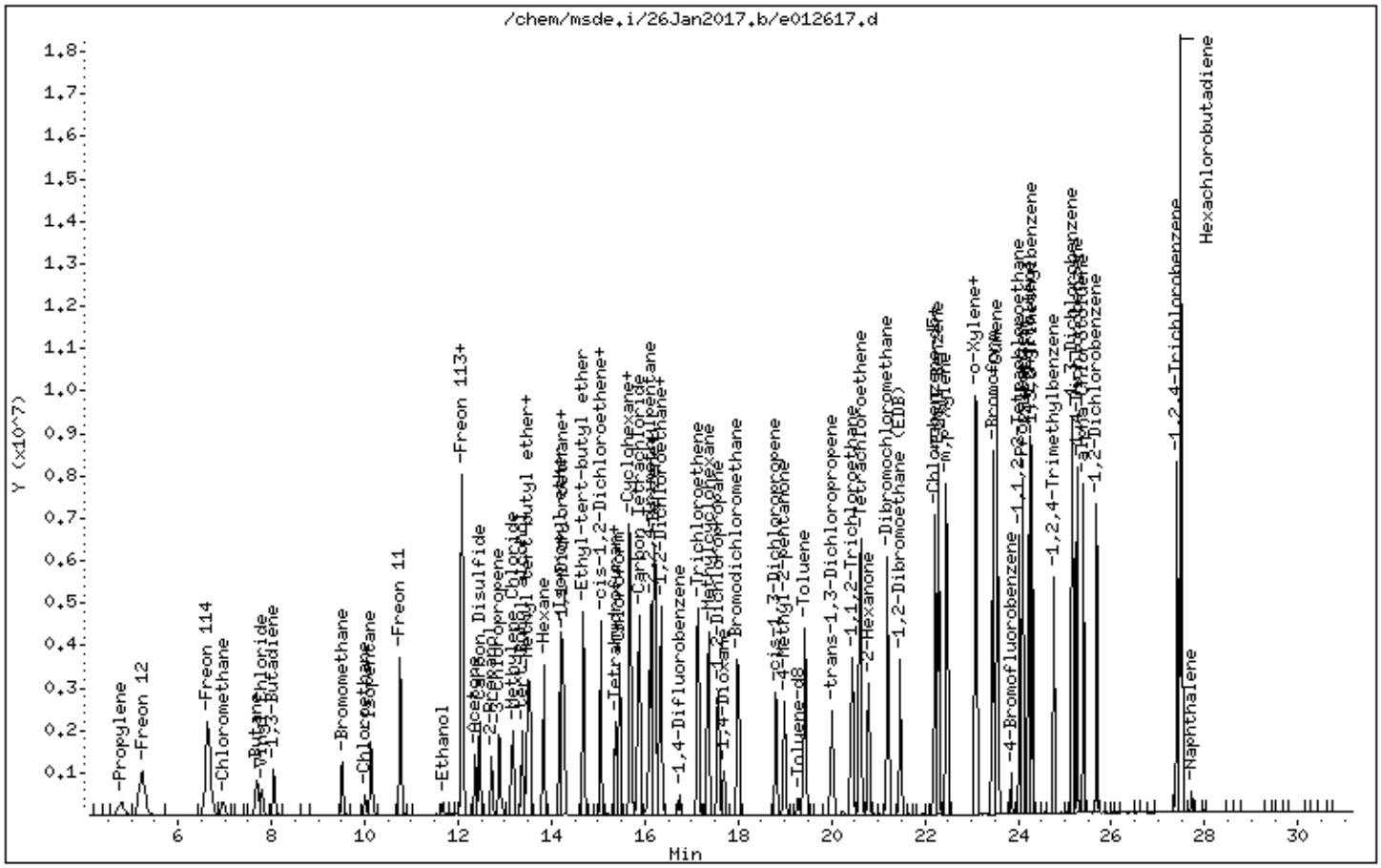
Instrument: msde.i

Sample Info: 200mL# 2819-240

Operator: ea

Column phase: RTX-624

Column diameter: 0.32



Report Date : 19-Oct-2016 09:39

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

0.1ppbv LL MDL
 # 2819-82 (1.0ppbv); 25mL load.
Includes special RLs for 1,2,4-Trichlorobenzene and Hexachlorobutadiene.

0.5ppbv LL MDL
 # 2819-82 (1.0ppbv); 125mL load.
Includes 0.05ppbv Naphthalene MDL.

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	e101805	e101806	e101807	e101808	e101809	e101810	e101811	e101812
INJ.DATE:	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016
INJ.TIME:	12:42	13:25	14:08	15:03	15:49	16:34	18:01	18:47

pb(ppbv)

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
9 Propylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	111.71	111.16	110.97	98.58	100.65	110.46	99.95	96.40	104.98	6.63	19.89	160
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	116.56	100.46	107.92	93.62	97.31	106.53	112.25	97.67	104.04	8.04	24.11	160
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

MDL Verification
0.1ppbv: 2819-82 (1.0ppbv); 20mL load (0.08ppbv).
0.5ppbv: 2819-82 (1.0ppbv); 75mL load (0.3ppbv).

Reviewer 1 _____ Date: 10/19/16
Reviewer 2 _____ Date: 10/20/16

$\bar{x}$ = 0.024
$2\bar{x}$ = 0.048
$3\bar{x}$ = 0.073
$4\bar{x}$ = 0.097

All 0.1ppbv compounds: The ratio of the mean recovered concentration and the MDL value is between 1 and 20.

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
23 Butane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	101.74	122.18	95.36	91.52	106.92	108.44	85.22	103.81	101.90	11.41	34.21	.00
26 1,3-Butadiene	128.18	112.17	114.12	112.38	107.45	93.40	102.07	96.83	108.33	11.04	33.11	.00
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
30 Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
31 Isopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	111.13	106.07	114.46	99.30	96.86	102.42	102.53	103.95	104.59	5.85	17.54	.00
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
42 Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
43 1,2-Dichloro-1-fluoroe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Freon 113	101.48	102.50	107.60	95.32	98.55	107.33	96.43	93.10	100.29	5.39	16.17	100
50 1,1-Dichloroethene	121.93	110.28	108.74	114.95	92.09	97.84	117.58	93.11	107.06	11.40	34.19	100
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
52 Acetone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
56 Carbon Disulfide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
57 2-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
58 3-Chloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	113.86	133.69	109.62	101.52	110.30	99.78	113.72	119.20	112.71	10.64	31.89	200
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
71 tert-Butyl alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
72 Methyl tert-butyl ethe	108.35	102.25	90.51	97.15	105.09	109.47	98.98	110.01	102.73	6.87	20.60	100
73 trans-1,2-Dichloroethe	127.71	115.24	114.16	103.94	107.96	76.18	110.58	123.81	109.95	15.74	47.19	100
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	117.18	111.42	111.37	95.21	113.72	108.36	105.95	98.64	107.73	7.51	22.52	100
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	102.97	118.28	98.66	96.12	109.88	107.20	106.64	85.97	103.22	9.77	29.28	100
83 Isopropyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	125.26	116.65	93.56	107.07	103.49	101.47	95.90	88.16	103.94	12.27	36.78	100
92 2-Butanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 98 Bromochloromethane	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00	
99 Tetrahydrofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
100 Chloroform	101.68	105.75	88.89	111.01	106.50	100.63	101.48	98.40	101.79	6.57	19.70	100
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	100.19	120.25	93.77	104.43	106.64	100.24	89.05	80.04	99.33	12.12	36.32	100
103 1,1,1-Trichloroethane	103.14	120.01	109.26	98.02	93.19	101.23	102.63	87.59	101.89	9.86	29.56	100
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	116.85	110.08	103.73	93.28	104.38	129.29	89.89	105.38	106.61	12.56	37.64	100
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
113 2,2,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
116 Benzene	121.51	121.31	119.53	116.97	118.53	125.25	113.31	131.74	121.02	5.57	16.71	100
$ 117 1,2-Dichloroethane-d4	5207.66	5058.27	5048.13	4844.68	5058.80	5054.78	5055.09	5067.42	5049.35	98.21	294.42	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
119 tert-Amyl methyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
120 1,2-Dichloroethane	111.64	116.33	100.86	107.56	97.77	104.08	91.12	119.57	106.12	9.59	28.76	100
121 Heptane	94.27	111.47	112.06	103.22	95.34	108.87	111.66	94.06	103.87	8.21	24.62	100
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 123 1,4-Difluorobenzene	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00	
124 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
125 Trichloroethene	97.68	108.05	100.99	105.97	108.45	109.56	104.00	108.23	105.37	4.19	12.56	100
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
127 Methylcyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
132 1,2-Dichloropropane	97.58	108.67	117.53	105.28	110.67	101.32	94.03	100.63	104.46	7.64	22.90	100
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
136 1,4-Dioxane	86.38	108.38	107.72	109.43	96.32	91.78	101.81	97.70	99.94	8.40	25.18	100
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
138 Bromodichloromethane	102.47	106.73	88.03	97.75	94.47	99.52	102.34	97.50	98.60	5.69	17.06	100
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
144 cis-1,3-Dichloropropen	106.86	109.46	98.38	108.01	110.84	97.72	86.14	95.99	101.67	8.55	25.63	100
145 4-Methyl-2-pentanone	96.79	95.23	98.37	105.33	98.83	107.01	97.43	89.45	98.56	5.55	16.65	100
$ 146 Toluene-d8	4850.65	4972.96	4873.65	4998.87	5019.98	4914.23	4887.96	5008.87	4940.89	67.02	200.93	
147 Toluene	109.10	103.89	106.01	116.22	107.03	107.49	101.03	115.64	108.30	5.30	15.90	100
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
150 trans-1,3-Dichloroprop	104.28	110.58	99.92	93.91	108.50	100.96	104.59	84.22	100.87	8.49	25.46	100
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
155 1,1,2-Trichloroethane	94.83	101.64	109.50	113.72	110.96	105.38	125.49	108.36	108.73	8.99	26.96	100
156 Tetrachloroethene	134.01	114.41	110.76	104.48	82.35	109.12	95.86	90.24	105.15	16.01	48.00	100
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
158 2-Hexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
160 Dibromochloromethane	100.01	101.68	110.94	92.93	93.41	98.47	89.39	88.93	96.97	7.37	22.08	100
161 1,2-Dibromoethane (EDB	102.43	99.91	114.57	104.54	105.77	101.43	85.78	98.88	101.66	8.07	24.18	100
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 163 Chlorobenzene-d5	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00	
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
165 Chlorobenzene	106.19	110.20	98.92	105.93	100.60	109.66	103.46	96.19	103.89	5.04	15.10	100
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
167 Ethyl Benzene	120.04	108.35	103.90	109.87	99.98	101.94	98.34	87.49	103.74	9.53	28.56	100
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
169 m,p-Xylene	95.62	111.53	113.60	96.27	89.43	88.66	95.98	91.32	97.80	9.59	28.76	100
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
171 o-Xylene	99.18	97.39	94.07	104.33	89.87	100.40	97.55	95.42	97.28	4.34	13.01	100
172 Styrene	100.91	109.58	96.46	83.78	90.86	94.51	89.46	90.29	94.48	7.96	23.86	100
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
174 Bromoform	98.04	101.99	99.98	100.01	92.72	102.08	98.18	95.81	98.60	3.17	9.50	100
175 Cumene	106.73	107.16	98.56	103.04	90.85	95.14	100.07	100.88	100.30	5.55	16.63	100
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 177 4-Bromofluorobenzene	5022.36	5159.73	5040.11	5013.85	4979.62	4944.43	5120.45	4974.48	5031.88	74.01	221.89	
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
181 1,1,2,2-Tetrachloroeth	95.81	109.82	99.30	111.79	98.62	116.50	112.03	112.11	107.00	7.81	23.42	100
182 Propylbenzene	102.76	98.69	93.96	98.78	94.13	92.58	104.41	97.42	97.84	4.24	12.70	100

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
184 trans-1,4-Dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
185 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
188 4-Ethyltoluene	102.70	99.50	97.21	103.50	97.08	90.30	87.63	103.46	97.67	6.00	17.98	100
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
190 1,3,5-Trimethylbenzene	102.47	104.83	105.51	109.94	99.60	108.63	119.57	101.28	106.48	6.35	19.04	100
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
196 1,2,4-Trimethylbenzene	112.47	105.53	103.63	111.74	93.55	110.67	102.84	100.90	105.17	6.41	19.23	100
197 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
203 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
208 1,3-Dichlorobenzene	99.75	108.05	100.09	86.75	100.04	91.92	104.39	105.22	99.52	7.07	21.21	100
209 1,4-Dichlorobenzene	104.38	109.23	105.96	90.58	95.99	111.69	104.49	97.50	102.48	7.16	21.46	100
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
212 alpha-Chlorotoluene	95.54	98.00	92.84	87.45	92.56	101.50	84.48	94.70	93.38	5.46	16.38	100
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
214 1,2-Dichlorobenzene	105.11	106.32	98.22	98.03	107.49	91.03	112.03	97.76	102.00	6.84	20.50	100
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
221 1,2-Dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
226 1,2,4-Trichlorobenzene	99.81	114.33	98.39	92.80	91.30	98.16	120.86	96.46	101.51	10.48	31.41	500
227 Hexachlorobutadiene	109.25	117.18	89.41	110.63	96.19	96.25	110.72	113.08	105.34	9.94	29.82	500
228 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 237 ~~1,2-Dichloroethene (To~~	~~252.97~~	~~231.89~~	~~207.72~~	~~211.03~~	~~214.45~~	~~177.64~~	~~206.48~~	~~211.97~~	~~213.89~~	~~21.63~~	~~64.95~~
M 238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M ~~239 Total Xylene~~	~~194.80~~	~~208.92~~	~~207.67~~	~~200.60~~	~~179.30~~	~~189.06~~	~~193.53~~	~~186.74~~	~~195.08~~	~~10.27~~	~~30.78~~
M 240 3 and 4-Ethyltoluene	103.70	99.50	97.21	103.50	97.08	90.30	87.63	103.46	97.67	6.00	17.98
241 Total Volatile Hydroca	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
242 TPH reference to Hexan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
243 TPH reference to Hepta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
244 TPH reference to Gasol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
245 TPH reference MineralS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
246 TPH reference to Stodd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
247 TVOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
248 TVOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
249 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
250 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251 NMOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
252 NMOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
253 NMOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

N/A

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Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref He	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref D	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
265 C10-C12 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Report Date : 19-Oct-2016 09:45

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	e101813	e101814	e101815	e101816	e101817	e101818	e101819	e101820
INJ.DATE:	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016	18-OCT-2016	19-OCT-2016	19-OCT-2016	19-OCT-2016
INJ.TIME:	19:40	20:36	21:21	22:07	22:52	06:03	06:44	07:25

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Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
9 Propylene	493.25	467.87	381.45	421.09	416.80	450.41	418.76	424.17	434.23	34.80	104.34	1600
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	473.02	463.16	413.00	432.75	466.04	429.47	459.43	429.83	445.84	22.06	66.13	500

Reviewer 1 _____ Date: 10/19/16
Reviewer 2 _____ Date: 10/20/16

$\bar{x} = 0.080$
$2\bar{x} = 0.16$
$3\bar{x} = 0.24$
$4\bar{x} = 0.32$

All 0.5ppbv compounds: The ratio of the mean recovered concentration and the MDL value is between 1 and 20.

Report Date : 19-Oct-2016 09:45

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

ul (ppbv)

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
23 Butane	511.21	516.75	403.36	437.19	441.55	450.98	388.55	427.13	447.09	46.05	138.06	500
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
26 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	501.35	470.84	471.73	480.40	441.51	440.74	440.98	444.35	461.49	22.94	68.77	500
30 Chloroethane	487.18	521.05	415.82	467.04	454.42	431.81	448.76	433.43	457.44	33.96	101.82	500
31 Isopentane	523.63	502.04	463.66	447.03	475.71	454.87	436.60	424.56	466.01	33.35	99.98	500
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
42 Ethanol	497.93	553.06	495.20	455.36	499.78	463.87	505.74	428.46	487.42	37.85	113.46	500
43 1,2-Dichloro-1-fluoroe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Freon 113	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
50 1,1-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
52 Acetone	498.58	439.54	468.15	470.49	458.37	479.49	438.91	472.85	465.80	20.02	60.03	500
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
56 Carbon Disulfide	587.10	557.84	495.14	521.15	557.44	548.28	571.48	543.99	547.80	28.78	86.27	500
57 2-Propanol	451.20	450.47	417.19	451.12	435.93	427.23	391.81	395.00	427.49	24.36	73.04	500
58 3-Chloropropene	438.70	434.69	401.01	409.08	406.90	402.78	434.00	422.54	418.71	15.60	46.76	500
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
71 tert-Butyl alcohol	413.84	420.06	410.50	393.50	402.67	383.66	376.72	384.28	398.15	15.96	47.84	500
72 Methyl tert-butyl ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
73 trans-1,2-Dichloroethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
83 Isopropyl ether	419.92	428.80	406.42	390.99	410.52	388.25	417.20	399.37	407.68	14.25	42.72	500
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	420.61	520.65	331.45	411.88	418.79	348.27	366.42	400.85	402.37	58.47	175.30	500

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	453.78	412.83	395.77	387.71	406.90	380.44	393.19	376.76	400.92	24.60	73.74	500
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
92 2-Butanone	456.37	372.54	376.93	367.88	417.01	402.63	364.74	425.72	397.98	33.09	99.20	500
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 98 Bromochloromethane	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00	
99 Tetrahydrofuran	483.01	411.55	435.73	400.43	407.91	427.72	440.93	394.36	425.20	28.68	85.98	500
100 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
103 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
113 2,2,4-Trimethylpentane	419.47	422.77	396.93	385.44	403.43	366.10	405.95	379.72	397.48	19.55	58.62	500
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
116 Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 117 1,2-Dichloroethane-d4	5261.78	5161.08	4937.82	5076.46	5146.15	5000.63	5025.68	5053.28	5082.86	102.90	308.49	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
119 tert-Amyl methyl ether	447.55	403.74	452.93	415.20	421.14	385.35	401.23	429.56	419.59	23.22	69.62	500
120 1,2-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
121 Heptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 123 1,4-Difluorobenzene	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00	
124 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
125 Trichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
127 Methylcyclohexane	423.95	428.84	396.39	384.03	397.74	408.25	385.21	411.07	404.43	16.61	49.79	500
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
132 1,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
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Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
136 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
138 Bromodichloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
144 cis-1,3-Dichloropropen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
145 4-Methyl-2-pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 146 Toluene-d8	4993.55	4984.89	4937.84	4999.36	4942.94	4883.37	4885.73	5034.79	4957.81	54.80	164.28
147 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
150 trans-1,3-Dichloroprop	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
155 1,1,2-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
156 Tetrachloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
158 2-Hexanone	423.66	411.11	391.25	379.95	376.90	361.60	347.98	357.88	381.29	26.32	78.91

500

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
160 Dibromochloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
161 1,2-Dibromoethane (EDB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 163 Chlorobenzene-d5	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00	0.00	0.00
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 Ethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
169 m,p-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
171 o-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
172 Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
174 Bromoform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
175 Cumene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 177 4-Bromofluorobenzene	5040.96	4942.23	5008.24	4863.04	5122.93	4932.87	4965.54	5031.28	4988.39	79.77	239.16
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
181 1,1,2,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
182 Propylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
184 trans-1,4-Dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
185 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
188 4-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
190 1,3,5-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
196 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
197 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
203 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e16l1011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
208 1,3-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
209 1,4-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
212 alpha-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
214 1,2-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
221 1,2-Dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
226 1,2,4-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
227 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
228 Naphthalene	53.33	40.05	41.20	53.92	43.87	41.92	46.50	42.49	45.41	5.43	16.26
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

500

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 237 1,2-Dichloroethene (To	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 239 Total Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 240 3 and 4-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
241 Total Volatile Hydroca	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
242 TPH reference to Hexan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
243 TPH reference to Hepta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
244 TPH reference to Gasol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
245 TPH reference MineralS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
246 TPH reference to Stodd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
247 TVOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
248 TVOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
249 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
250 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251 NMOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
252 NMOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
253 NMOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msde.i/18Oct2016.b/e1611011a.m
Batch File: /chem/msde.i/18Oct2016.b
Inst ID: msde.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref He	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref D	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
265 C10-C12 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1701477B-20A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020302**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 07:59 AM**

Compound	%Recovery
Freon 12	103
Freon 114	100
Chloromethane	100
Vinyl Chloride	99
1,3-Butadiene	102
Bromomethane	103
Chloroethane	99
Freon 11	105
Ethanol	86
Freon 113	102
1,1-Dichloroethene	100
Acetone	99
2-Propanol	105
Carbon Disulfide	108
3-Chloropropene	105
Methylene Chloride	86
Methyl tert-butyl ether	110
trans-1,2-Dichloroethene	106
Hexane	106
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	101
Tetrahydrofuran	105
Chloroform	100
1,1,1-Trichloroethane	100
Cyclohexane	108
Carbon Tetrachloride	110
2,2,4-Trimethylpentane	110
Benzene	97
1,2-Dichloroethane	96
Heptane	102
Trichloroethene	101
1,2-Dichloropropane	100
1,4-Dioxane	101
Bromodichloromethane	102
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	103
Toluene	102
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	101
Tetrachloroethene	100
2-Hexanone	110

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1701477B-20A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 07:59 AM**	

Compound	**%Recovery**
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	98
Chlorobenzene	100
Ethyl Benzene	108
m,p-Xylene	108
o-Xylene	108
Styrene	112
Bromoform	106
Cumene	111
1,1,2,2-Tetrachloroethane	93
Propylbenzene	105
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	120
1,2,4-Trimethylbenzene	107
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	105
1,2-Dichlorobenzene	103
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	99
Naphthalene	89

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 03-FEB-2017 07:59
Lab File ID: e020302.d Init. Cal. Date(s): 26-JAN-2017 27-JAN-2017
Analysis Type: AIR Init. Cal. Times: 14:02 19:31
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/03Feb2017.b/e17l0126a.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	%D / %DRIFT	MAX	CURVE TYPE
9 Propylene	0.72160	0.70505	0.010	2.29381	40.00000		Averaged
11 Freon 12	4.43919	4.56098	0.010	-2.74352	30.00000		Averaged
15 Freon 114	3.40740	3.39702	0.010	0.30466	30.00000		Averaged
17 Chloromethane	0.82792	0.83286	0.010	-0.59664	30.00000		Averaged
23 Butane	0.20100	0.20119	0.010	-0.09904	40.00000		Averaged
25 Vinyl Chloride	1.16341	1.15177	0.010	1.00078	30.00000		Averaged
26 1,3-Butadiene	0.80439	0.82464	0.010	-2.51773	30.00000		Averaged
29 Bromomethane	1.21689	1.25855	0.010	-3.42398	30.00000		Averaged
30 Chloroethane	0.60148	0.59539	0.010	1.01356	30.00000		Averaged
31 Isopentane	0.86869	0.86155	0.010	0.82149	40.00000		Averaged
35 Freon 11	5.17869	5.43380	0.010	-4.92614	30.00000		Averaged
42 Ethanol	0.45139	0.38639	0.010	14.39966	30.00000		Averaged
49 Freon 113	3.45783	3.53643	0.010	-2.27294	30.00000		Averaged
50 1,1-Dichloroethene	0.92379	0.92824	0.010	-0.48213	30.00000		Averaged
52 Acetone	0.56754	0.56419	0.010	0.58997	30.00000		Averaged
56 Carbon Disulfide	3.92589	4.23344	0.010	-7.83405	30.00000		Averaged
57 2-Propanol	1.82713	1.91342	0.010	-4.72257	30.00000		Averaged
58 3-Chloropropene	0.77135	0.80762	0.010	-4.70280	30.00000		Averaged
66 Methylene Chloride	1.38889	1.19586	0.010	13.89810	30.00000		Averaged
71 tert-Butyl alcohol	2.63962	2.79821	0.010	-6.00823	40.00000		Averaged
72 Methyl tert-butyl ether	4.01922	4.41073	0.010	-9.74112	30.00000		Averaged
73 trans-1,2-Dichloroethene	0.87627	0.92820	0.010	-5.92548	30.00000		Averaged
78 Hexane	1.65408	1.76293	0.010	-6.58027	30.00000		Averaged
83 Isopropyl ether	3.28108	3.55031	0.010	-8.20554	40.00000		Averaged
82 1,1-Dichloroethane	2.41254	2.55339	0.010	-5.83791	30.00000		Averaged
86 Vinyl Acetate	0.36515	0.36352	0.010	0.44434	40.00000		Averaged
88 Ethyl-tert-butyl ether	3.89859	4.35061	0.010	-11.59431	40.00000		Averaged
91 cis-1,2-Dichloroethene	1.06382	1.07727	0.010	-1.26409	30.00000		Averaged
92 2-Butanone	0.61543	0.65437	0.010	-6.32726	30.00000		Averaged
99 Tetrahydrofuran	1.11400	1.17378	0.010	-5.36633	30.00000		Averaged
100 Chloroform	3.62359	3.60913	0.010	0.39911	30.00000		Averaged
102 Cyclohexane	1.73730	1.87818	0.010	-8.10896	30.00000		Averaged
103 1,1,1-Trichloroethane	4.26209	4.27417	0.010	-0.28346	30.00000		Averaged
106 Carbon Tetrachloride	4.14964	4.58467	0.010	-10.48342	30.00000		Averaged
113 2,2,4-Trimethylpentane	2.32684	2.55077	0.010	-9.62390	30.00000		Averaged
116 Benzene	1.23445	1.19599	0.010	3.11523	30.00000		Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 03-FEB-2017 07:59
Lab File ID: e020302.d Init. Cal. Date(s): 26-JAN-2017 27-JAN-2017
Analysis Type: AIR Init. Cal. Times: 14:02 19:31
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/03Feb2017.b/e17l0126a.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.43585	1.45642	0.010	-1.43284	30.00000	Averaged
119 tert-Amyl methyl ether	0.32231	0.34216	0.010	-6.15840	40.00000	Averaged
120 1,2-Dichloroethane	0.76054	0.73373	0.010	3.52450	30.00000	Averaged
121 Heptane	0.31258	0.31847	0.010	-1.88274	30.00000	Averaged
125 Trichloroethene	0.68878	0.69405	0.010	-0.76493	30.00000	Averaged
127 Methylcyclohexane	0.64396	0.68925	0.010	-7.03359	40.00000	Averaged
132 1,2-Dichloropropane	0.38781	0.38991	0.010	-0.54307	30.00000	Averaged
136 1,4-Dioxane	0.29841	0.30129	0.010	-0.96363	30.00000	Averaged
138 Bromodichloromethane	1.07182	1.09064	0.010	-1.75604	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.66108	0.70094	0.010	-6.02844	30.00000	Averaged
145 4-Methyl-2-pentanone	0.73435	0.76000	0.010	-3.49269	30.00000	Averaged
$ 146 Toluene-d8	0.96988	0.98972	0.010	-2.04536	30.00000	Averaged
147 Toluene	1.49337	1.52506	0.010	-2.12201	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.73637	0.77499	0.010	-5.24473	30.00000	Averaged
155 1,1,2-Trichloroethane	0.56476	0.56942	0.010	-0.82497	30.00000	Averaged
156 Tetrachloroethene	1.10116	1.10562	0.010	-0.40538	30.00000	Averaged
158 2-Hexanone	0.38316	0.41959	0.010	-9.50566	30.00000	Averaged
160 Dibromochloromethane	1.34910	1.39584	0.010	-3.46410	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	1.00608	0.98625	0.010	1.97096	30.00000	Averaged
165 Chlorobenzene	1.38921	1.38445	0.010	0.34268	30.00000	Averaged
167 Ethyl Benzene	0.65492	0.70745	0.010	-8.02203	30.00000	Averaged
169 m,p-Xylene	0.77518	0.83398	0.010	-7.58478	30.00000	Averaged
171 o-Xylene	0.71834	0.77868	0.010	-8.40083	30.00000	Averaged
172 Styrene	1.19831	1.33811	0.010	-11.66603	30.00000	Averaged
174 Bromoform	1.39842	1.48935	0.010	-6.50252	30.00000	Averaged
175 Cumene	2.25318	2.49810	0.010	-10.87008	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.69843	0.74493	0.010	-6.65844	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	0.98104	0.91209	0.010	7.02835	30.00000	Averaged
182 Propylbenzene	2.24292	2.35852	0.010	-5.15397	30.00000	Averaged
188 4-Ethyltoluene	1.85944	1.98006	0.010	-6.48638	30.00000	Averaged
190 1,3,5-Trimethylbenzene	1.37848	1.65166	0.010	-19.81766	30.00000	Averaged
196 1,2,4-Trimethylbenzene	1.15694	1.23674	0.010	-6.89797	30.00000	Averaged
208 1,3-Dichlorobenzene	1.23053	1.27230	0.010	-3.39477	30.00000	Averaged
209 1,4-Dichlorobenzene	1.27826	1.26244	0.010	1.23724	30.00000	Averaged
212 alpha-Chlorotoluene	1.47421	1.54231	0.010	-4.61954	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msde.i Injection Date: 03-FEB-2017 07:59
Lab File ID: e020302.d Init. Cal. Date(s): 26-JAN-2017 27-JAN-2017
Analysis Type: AIR Init. Cal. Times: 14:02 19:31
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msde.i/03Feb2017.b/e17l0126a.m

	COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	214 1,2-Dichlorobenzene	1.15447	1.18458	0.010	-2.60847	30.00000	Averaged	
	226 1,2,4-Trichlorobenzene	0.87597	0.80748	0.010	7.81968	30.00000	Averaged	
	227 Hexachlorobutadiene	1.22860	1.21649	0.010	0.98537	30.00000	Averaged	
	228 Naphthalene	1.19981	1.06595	0.010	11.15714	40.00000	Averaged	
M	239 Total Xylene	++++	1.61266	0.010	++++	30.00000	Averaged	<-

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020302.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 03-FEB-2017 07:59
Operator : sw Inst ID: msde.i
Smp Info : 50mL# 2819-215
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 08:46 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.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		
4.762	4.762 (0.309)	41	199566	10.0000	9.771	80.00- 120.00	100.00
4.738	4.738 (0.308)	42	132134			35.53- 95.53	66.21
4.738	4.738 (0.308)	39	182368			53.16- 113.16	91.38
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	1291003	10.0000	10.274	80.00- 120.00	100.00
5.220	5.220 (0.339)	87	415203			1.91- 61.91	32.16
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	961541	10.0000	9.970	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	307372			0.98- 60.98	31.97
6.618	6.618 (0.430)	85	1125872			86.82- 146.82	117.09
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	235743	10.0000	10.060	80.00- 120.00	100.00
6.932	6.932 (0.450)	52	82912			3.31- 63.31	35.17
23 Butane					CAS #: 106-97-8		
7.675	7.675 (0.499)	58	56949	10.0000	10.010	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	408929			667.48- 727.48	718.06
25 Vinyl Chloride					CAS #: 75-01-4		
7.779	7.779 (0.505)	62	326012	10.0000	9.900	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	102021			1.95- 61.95	31.29
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	233418	10.0000	10.252	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	238434			76.10- 136.10	102.15
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	356239	10.0000	10.342	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	333856			64.26- 124.26	93.72
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	168527	10.0000	9.899	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	53915			0.00- 57.48	31.99
9.986	9.986 (0.649)	66	54880			1.33- 61.33	32.56
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	243865	10.0000	9.918	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	311017			96.48- 156.48	127.54
10.138	10.138 (0.659)	42	272395			76.93- 136.93	111.70
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	1538059	10.0000	10.493	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	975595			33.74- 93.74	63.43
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	109370	10.0000	8.560	80.00- 120.00	100.00
11.680	11.680 (0.759)	46	41034			9.60- 69.60	37.52
11.661	11.661 (0.758)	43	28369			0.00- 59.21	25.94
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	1001000	10.0000	10.227	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	642013			34.83- 94.83	64.14
12.080	12.080 (0.785)	101	1051475			77.16- 137.16	105.04
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.099	12.099 (0.786)	98	262743	10.0000	10.048	80.00- 120.00	100.00
12.099	12.099 (0.786)	61	683448			219.47- 279.47	260.12
12.099	12.099 (0.786)	96	411818			126.81- 186.81	156.74
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	159696	10.0000	9.941	80.00- 120.00	100.00

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   52 Acetone (continued)
 12.366  12.366 (0.803)    43    582778                   344.13- 404.13   364.93
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.461  12.461 (0.810)    76   1198293 10.0000   10.783  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.728 (0.827)    45    541600 10.0000   10.472  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43    140714                    0.00-  55.65    25.98
 12.728  12.728 (0.827)    59     22439                    0.00-  34.42     4.14
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.880  12.880 (0.837)    76    228601 10.0000   10.470  80.00- 120.00   100.00
 12.880  12.880 (0.837)    41    523947                  198.88- 258.88   229.20
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.176  13.176 (0.856)    84    338493 10.0000    8.610  80.00- 120.00   100.00
 13.176  13.176 (0.856)    49    393311                   83.76- 143.76   116.19
 13.176  13.176 (0.856)    51    116924                    2.61-  62.61    34.54
-------------------------------------------------------------------------------
   71 tert-Butyl alcohol                              CAS #: 75-65-0
 13.368  13.368 (0.869)    59    792045 10.0000   10.601  80.00- 120.00   100.00
 13.368  13.368 (0.869)    41    164563                    0.00-  51.13    20.78
 13.368  13.368 (0.869)    57     89072                    0.00-  41.40    11.25
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.478  13.478 (0.876)    73   1248476 10.0000   10.974  80.00- 120.00   100.00
 13.478  13.478 (0.876)    57    233225                    0.00-  49.77    18.68
 13.478  13.478 (0.876)    41    241486                    0.00-  49.98    19.34
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.533 (0.879)    98    262730 10.0000   10.592  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61    529731                  174.76- 234.76   201.63
 13.533  13.533 (0.879)    96    396229                  123.28- 183.28   150.81
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57    499003 10.0000   10.658  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43    304697                   27.83-  87.83    61.06
 13.835  13.835 (0.899)    86     99411                    0.00-  50.45    19.92
-------------------------------------------------------------------------------
   83 Isopropyl ether                                 CAS #: 108-20-3
 14.192  14.192 (0.922)    45   1004929 10.0000   10.820  80.00- 120.00   100.00
 14.192  14.192 (0.922)    87    369022                    6.11-  66.11    36.72
 14.192  14.192 (0.922)    59    127047                    0.00-  42.83    12.64
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63    722746 10.0000   10.584  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   82 1,1-Dichloroethane (continued)
 14.247  14.247 (0.926)    65    230330                     1.87-  61.87    31.87
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                CAS #: 108-05-4
 14.247  14.247 (0.926)    86    102897 10.0000    9.956  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42    104623                   71.31- 131.31   101.68
 14.247  14.247 (0.926)    43    972665                  931.28- 991.28   945.28
-------------------------------------------------------------------------------
   88 Ethyl-tert-butyl ether                       CAS #: 637-92-3
 14.685  14.685 (0.954)    59   1231457 10.0000   11.159  80.00- 120.00   100.00
 14.685  14.685 (0.954)    87    554230                   16.65-  76.65    45.01
 14.685  14.685 (0.954)    41    229691                    0.00-  49.22    18.65
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                       CAS #: 156-59-2
 15.066  15.066 (0.979)    98    304926 10.0000   10.126  80.00- 120.00   100.00
 15.066  15.066 (0.979)    61    594429                  154.54- 214.54   194.94
 15.066  15.066 (0.979)    96    483028                  117.78- 177.78   158.41
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    185221 10.0000   10.633  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    633593                  325.72- 385.72   342.07
 15.047  15.047 (0.978)    57     53137                    1.13-  61.13    28.69
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    332244 10.0000   10.537  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71    161463                   20.32-  80.32    48.60
 15.391  15.391 (1.000)    72    179539                   21.98-  81.98    54.04
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    141527 5.00000           80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    117385                   46.73- 106.73    82.94
 15.391  15.391 (1.000)    49    131847                   55.35- 115.35    93.16
-------------------------------------------------------------------------------
  100 Chloroform                                   CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1021578 10.0000    9.960  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    692677                   36.62-  96.62    67.80
-------------------------------------------------------------------------------
  102 Cyclohexane                                  CAS #: 110-82-7
 15.669  15.669 (1.018)    84    531626 10.0000   10.811  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    515623                   68.83- 128.83    96.99
 15.669  15.669 (1.018)    41    311255                   29.98-  89.98    58.55
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                        CAS #: 71-55-6
 15.699  15.699 (1.020)    97   1209821 10.0000   10.028  80.00- 120.00   100.00
 15.699  15.699 (1.020)    99    788680                   34.65-  94.65    65.19
-------------------------------------------------------------------------------
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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  106 Carbon Tetrachloride                          CAS #: 56-23-5
 15.884  15.884 (1.032)   119   1297709 10.0000   11.048  80.00- 120.00   100.00
 15.884  15.884 (1.032)   117   1381943                   74.11- 134.11   106.49
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                        CAS #: 540-84-1
 16.111  16.111 (1.047)    56    722005 10.0000   10.962  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   2183077                  277.67- 337.67   302.36
 16.111  16.111 (1.047)    41    782328                   73.43- 133.43   108.35
-------------------------------------------------------------------------------
  116 Benzene                                       CAS #: 71-43-2
 16.207  16.207 (0.968)    78   1195593 10.0000    9.688  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    286391                    0.00-  53.00    23.95
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                         CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    206123 5.00000    5.072  80.00- 120.00   100.00
 16.207  16.207 (1.053)    67    101353                   22.67-  82.67    49.17
-------------------------------------------------------------------------------
  119 tert-Amyl methyl ether                        CAS #: 994-05-8
 16.231  16.231 (0.970)    87    342047 10.0000   10.616  80.00- 120.00   100.00
 16.231  16.231 (0.970)    73   1267488                  335.49- 395.49   370.56
 16.231  16.231 (0.970)    55    313697                   60.31- 120.31    91.71
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                            CAS #: 107-06-2
 16.303  16.303 (0.974)    62    733491 10.0000    9.648  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    229878                    1.95-  61.95    31.34
-------------------------------------------------------------------------------
  121 Heptane                                       CAS #: 142-82-5
 16.352  16.352 (0.977)    57    318362 10.0000   10.188  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    182051                   23.08-  83.08    57.18
 16.352  16.352 (0.977)    43    559664                  136.91- 196.91   175.79
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                           CAS #: 540-36-3
 16.737  16.737 (1.000)   114    499834 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     75987                    0.00-  45.16    15.20
-------------------------------------------------------------------------------
  125 Trichloroethene                               CAS #: 79-01-6
 17.147  17.147 (1.024)   130    693817 10.0000   10.076  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95    601169                   61.87- 121.87    86.65
 17.147  17.147 (1.024)    97    382622                   29.29-  89.29    55.15
-------------------------------------------------------------------------------
  127 Methylcyclohexane                             CAS #: 108-87-2
 17.363  17.363 (1.037)    83    689021 10.0000   10.703  80.00- 120.00   100.00
 17.363  17.363 (1.037)    55    523158                   45.72- 105.72    75.93
 17.363  17.363 (1.037)    56    165653                    0.00-  52.26    24.04
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                           CAS #: 78-87-5
 17.580  17.580 (1.050)    63    389784 10.0000   10.054  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  132 1,2-Dichloropropane (continued)
 17.580  17.580 (1.050)    62    263185                    41.22- 101.22    67.52
 17.580  17.580 (1.050)    41    281330                    40.14- 100.14    72.18
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88    301189 10.0000   10.096  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    175959                    30.17-  90.17    58.42
 17.701  17.701 (1.058)    57     62406                     0.00-  51.30    20.72
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   1090276 10.0000   10.176  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    737474                    36.87-  96.87    67.64
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    700703 10.0000   10.603  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    215417                     1.38-  61.38    30.74
 18.805  18.805 (1.124)    39    384669                    23.65-  83.65    54.90
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.006  19.006 (1.136)    43    759750 10.0000   10.349  80.00- 120.00   100.00
 19.006  19.006 (1.136)    58    299033                    10.02-  70.02    39.36
 19.006  19.006 (1.136)    85    169721                     0.00-  52.01    22.34
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    494695 5.00000    5.102  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     59515                     0.00-  40.89    12.03
 19.298  19.298 (1.153)   100    333453                    40.09- 100.09    67.41
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1524557 10.0000   10.212  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    893921                    27.79-  87.79    58.63
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75    724729 10.0000   10.524  80.00- 120.00   100.00
 20.026  20.026 (0.903)    77    242267                     1.55-  61.55    33.43
 20.026  20.026 (0.903)    39    350212                    18.82-  78.82    48.32
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    532495 10.0000   10.082  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    340999                    32.59-  92.59    64.04
 20.438  20.438 (0.922)    83    423389                    50.07- 110.07    79.51
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.630  20.630 (0.930)   166   1033922 10.0000   10.040  80.00- 120.00   100.00
 20.630  20.630 (0.930)   129    697782                    37.12-  97.12    67.49
 20.630  20.630 (0.930)   131    684297                    36.18-  96.18    66.18
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
158 2-Hexanone					CAS #: 591-78-6		
20.795	20.795 (0.938)	58	392375	10.0000	10.950	80.00- 120.00	100.00
20.795	20.795 (0.938)	43	730976			162.96- 222.96	186.30
20.795	20.795 (0.938)	100	110000			0.00- 59.39	28.03
160 Dibromochloromethane					CAS #: 124-48-1		
21.207	21.207 (0.956)	129	1305316	10.0000	10.346	80.00- 120.00	100.00
21.207	21.207 (0.956)	127	1016588			46.76- 106.76	77.88
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
21.481	21.481 (0.969)	107	922294	10.0000	9.803	80.00- 120.00	100.00
21.481	21.481 (0.969)	109	864202			63.39- 123.39	93.70
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
22.177	22.177 (1.000)	117	467575	5.00000		80.00- 120.00	100.00
22.177	22.177 (1.000)	82	228200			17.27- 77.27	48.81
165 Chlorobenzene					CAS #: 108-90-7		
22.218	22.218 (1.002)	112	1294669	10.0000	9.966	80.00- 120.00	100.00
22.218	22.218 (1.002)	114	410648			2.22- 62.22	31.72
22.218	22.218 (1.002)	77	670360			23.48- 83.48	51.78
167 Ethyl Benzene					CAS #: 100-41-4		
22.301	22.301 (1.006)	106	661576	10.0000	10.802	80.00- 120.00	100.00
22.301	22.301 (1.006)	91	2045656			278.11- 338.11	309.21
169 m,p-Xylene					CAS #: 108-38-3		
22.467	22.467 (1.013)	106	779893	10.0000	10.758	80.00- 120.00	100.00
22.467	22.467 (1.013)	91	1577969			170.01- 230.01	202.33
171 o-Xylene					CAS #: 95-47-6		
23.089	23.089 (1.041)	106	728184	10.0000	10.840	80.00- 120.00	100.00
23.089	23.089 (1.041)	91	1562609			175.84- 235.84	214.59
172 Styrene					CAS #: 100-42-5		
23.110	23.110 (1.042)	104	1251330	10.0000	11.167	80.00- 120.00	100.00
23.110	23.110 (1.042)	78	634393			20.21- 80.21	50.70
174 Bromoform					CAS #: 75-25-2		
23.452	23.452 (1.057)	173	1392770	10.0000	10.650	80.00- 120.00	100.00
23.452	23.452 (1.057)	171	715961			21.47- 81.47	51.41
175 Cumene					CAS #: 98-82-8		
23.564	23.564 (1.063)	105	2336097	10.0000	11.087	80.00- 120.00	100.00
23.564	23.564 (1.063)	120	617401			0.00- 56.99	26.43

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
23.856	23.856 (1.076)	174	348311	5.00000	5.333	80.00- 120.00	100.00
23.856	23.856 (1.076)	95	319456			66.74- 126.74	91.72
23.856	23.856 (1.076)	176	338388			67.47- 127.47	97.15
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
24.035	24.035 (1.084)	83	852942	10.0000	9.297	80.00- 120.00	100.00
24.035	24.035 (1.084)	85	583276			39.76- 99.76	68.38
182 Propylbenzene					CAS #: 103-65-1		
24.102	24.102 (1.087)	91	2205571	10.0000	10.515	80.00- 120.00	100.00
24.102	24.102 (1.087)	120	563970			0.00- 55.73	25.57
188 4-Ethyltoluene					CAS #: 622-96-8		
24.237	24.237 (1.093)	105	1851649	10.0000	10.649	80.00- 120.00	100.00
24.237	24.237 (1.093)	120	568434			1.00- 61.00	30.70
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
24.304	24.304 (1.096)	105	1544552	10.0000	11.982	80.00- 120.00	100.00
24.304	24.304 (1.096)	120	754374			19.17- 79.17	48.84
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	1156541	10.0000	10.690	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	557548			16.84- 76.84	48.21
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	1189796	10.0000	10.339	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	742800			33.96- 93.96	62.43
25.156	25.156 (1.134)	111	432011			6.94- 66.94	36.31
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.268	25.268 (1.139)	146	1180571	10.0000	9.876	80.00- 120.00	100.00
25.268	25.268 (1.139)	148	750714			35.10- 95.10	63.59
25.268	25.268 (1.139)	111	404307			4.80- 64.80	34.25
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	1442293	10.0000	10.462	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	325305			0.00- 52.64	22.55
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	1107764	10.0000	10.261	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	719540			33.88- 93.88	64.95
25.672	25.672 (1.158)	111	425290			7.58- 67.58	38.39
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	755111	10.0000	9.218	80.00- 120.00	100.00

```
                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  226 1,2,4-Trichlorobenzene (continued)
 27.398  27.398 (1.235)   182    725342                   63.70- 123.70    96.06
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                          CAS #: 87-68-3
 27.488  27.488 (1.239)   225   1137603 10.0000    9.901  80.00- 120.00   100.00
 27.488  27.488 (1.239)   223    692314                   34.33-  94.33    60.86
-------------------------------------------------------------------------------
  228 Naphthalene                                  CAS #: 91-20-3
 27.712  27.712 (1.250)   128     99682 1.00000   0.8884  80.00- 120.00   100.00
 27.712  27.712 (1.250)   127     14051                    0.00-  42.30    14.10
-------------------------------------------------------------------------------
M 239 Total Xylene                                 CAS #: 1330-20-7
                                1508077 10.0000   21.598
-------------------------------------------------------------------------------
```

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msde.i
Lab File ID: e020302.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: sw
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-FEB-2017
Calibration Time: 07:59
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	141527	0.00
123 1,4-Difluorobenze	499834	299900	699768	499834	0.00
163 Chlorobenzene-d5	467575	280545	654605	467575	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	22.18	21.85	22.51	22.18	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/03Feb2017.b/e020302.d

Date : 03-FEB-2017 07:59

Client ID: CCV

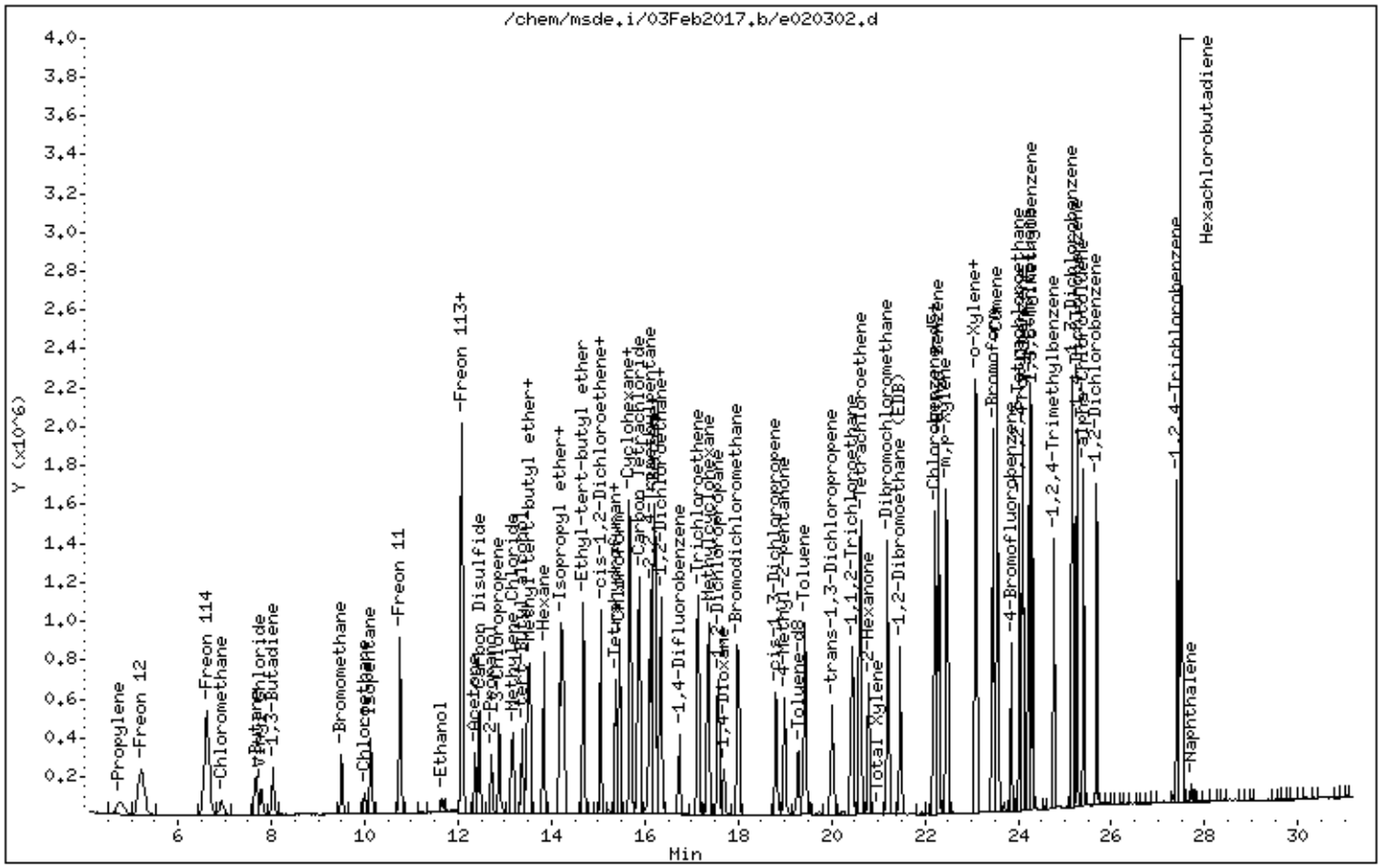
Instrument: msde.i

Sample Info: 50mL# 2819-215

Operator: sw

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCS

Lab ID#: 1701477B-21A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 08:50 AM**	

Compound	%Recovery	Method Limits
Freon 12	116	70-130
Freon 114	112	70-130
Chloromethane	116	70-130
Vinyl Chloride	114	70-130
1,3-Butadiene	109	70-130
Bromomethane	87	70-130
Chloroethane	112	70-130
Freon 11	117	70-130
Ethanol	90	70-130
Freon 113	112	70-130
1,1-Dichloroethene	111	70-130
Acetone	110	70-130
2-Propanol	116	70-130
Carbon Disulfide	114	70-130
3-Chloropropene	129	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	117	70-130
trans-1,2-Dichloroethene	121	70-130
Hexane	121	70-130
1,1-Dichloroethane	114	70-130
2-Butanone (Methyl Ethyl Ketone)	120	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	120	70-130
Chloroform	110	70-130
1,1,1-Trichloroethane	113	70-130
Cyclohexane	121	70-130
Carbon Tetrachloride	128	70-130
2,2,4-Trimethylpentane	118	70-130
Benzene	112	70-130
1,2-Dichloroethane	110	70-130
Heptane	120	70-130
Trichloroethene	117	70-130
1,2-Dichloropropane	116	70-130
1,4-Dioxane	116	70-130
Bromodichloromethane	120	70-130
cis-1,3-Dichloropropene	131 Q	70-130
4-Methyl-2-pentanone	125	70-130
Toluene	119	70-130
trans-1,3-Dichloropropene	119	70-130
1,1,2-Trichloroethane	116	70-130
Tetrachloroethene	110	70-130
2-Hexanone	126	70-130

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Client Sample ID: LCS

Lab ID#: 1701477B-21A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 08:50 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	119	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	114	70-130
Ethyl Benzene	123	70-130
m,p-Xylene	125	70-130
o-Xylene	123	70-130
Styrene	129	70-130
Bromoform	126	70-130
Cumene	124	70-130
1,1,2,2-Tetrachloroethane	104	70-130
Propylbenzene	121	70-130
4-Ethyltoluene	124	70-130
1,3,5-Trimethylbenzene	134 Q	70-130
1,2,4-Trimethylbenzene	125	70-130
1,3-Dichlorobenzene	115	70-130
1,4-Dichlorobenzene	109	70-130
alpha-Chlorotoluene	122	70-130
1,2-Dichlorobenzene	116	70-130
1,2,4-Trichlorobenzene	94	70-130
Hexachlorobutadiene	99	70-130
Naphthalene	102	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

Report Date: 03-Feb-2017 09:31

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
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: AT09EtOH.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	11.274	112.74	60-140
11 Freon 12	10.000	11.573	115.73	70-130
15 Freon 114	10.000	11.219	112.19	70-130
17 Chloromethane	10.000	11.642	116.42	70-130
23 Butane	10.000	12.171	121.71	60-140
25 Vinyl Chloride	10.000	11.412	114.12	70-130
26 1,3-Butadiene	10.000	10.931	109.31	70-130
29 Bromomethane	10.000	8.711	87.11	70-130
30 Chloroethane	10.000	11.150	111.50	70-130
31 Isopentane	10.000	11.156	111.56	60-140
35 Freon 11	10.000	11.702	117.02	70-130
42 Ethanol	11.500	10.316	89.70	70-130
49 Freon 113	10.000	11.225	112.25	70-130
50 1,1-Dichloroethene	10.000	11.119	111.19	70-130
52 Acetone	10.000	10.962	109.62	70-130
56 Carbon Disulfide	10.000	11.389	113.89	70-130
57 2-Propanol	10.000	11.564	115.64	70-130
58 3-Chloropropene	10.000	12.942	129.42	70-130
66 Methylene Chloride	10.000	9.578	95.78	70-130
72 Methyl tert-butyl	10.000	11.697	116.97	70-130
73 trans-1,2-Dichloro	10.000	12.136	121.36	70-130
78 Hexane	10.000	12.136	121.36	70-130
82 1,1-Dichloroethane	10.000	11.385	113.85	70-130
86 Vinyl Acetate	10.000	10.483	104.83	60-140
91 cis-1,2-Dichloroet	10.000	10.396	103.96	70-130
92 2-Butanone	10.000	12.045	120.45	70-130
99 Tetrahydrofuran	10.000	11.962	119.62	70-130
100 Chloroform	10.000	10.994	109.94	70-130
103 1,1,1-Trichloroeth	10.000	11.297	112.97	70-130
106 Carbon Tetrachlori	10.000	12.777	127.77	70-130
102 Cyclohexane	10.000	12.062	120.62	70-130
113 2,2,4-Trimethylpen	10.000	11.850	118.50	70-130
116 Benzene	10.000	11.221	112.21	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	11.040	110.41	70-130
121 Heptane	10.000	12.033	120.33	70-130
125 Trichloroethene	10.000	11.667	116.67	70-130
127 Methylcyclohexane	10.000	12.776	127.76	60-140
132 1,2-Dichloropropan	10.000	11.624	116.24	70-130
136 1,4-Dioxane	10.000	11.593	115.93	70-130
138 Bromodichlorometha	10.000	12.010	120.10	70-130
144 cis-1,3-Dichloropr	10.000	13.082	130.82*	70-130
145 4-Methyl-2-pentano	10.000	12.486	124.87	70-130
147 Toluene	10.000	11.912	119.12	70-130
150 trans-1,3-Dichloro	10.000	11.905	119.05	70-130
155 1,1,2-Trichloroeth	10.000	11.632	116.32	70-130
156 Tetrachloroethene	10.000	11.030	110.30	70-130
158 2-Hexanone	10.000	12.583	125.83	70-130
160 Dibromochlorometha	10.000	11.896	118.96	70-130
161 1,2-Dibromoethane	10.000	11.078	110.78	70-130
165 Chlorobenzene	10.000	11.374	113.74	70-130
167 Ethyl Benzene	10.000	12.329	123.29	70-130
169 m,p-Xylene	10.000	12.476	124.76	70-130
171 o-Xylene	10.000	12.280	122.80	70-130
172 Styrene	10.000	12.934	129.34	70-130
174 Bromoform	10.000	12.592	125.92	70-130
175 Cumene	10.000	12.400	124.00	70-130
181 1,1,2,2-Tetrachlor	10.000	10.445	104.45	70-130
182 Propylbenzene	10.000	12.063	120.63	70-130
188 4-Ethyltoluene	10.000	12.391	123.91	70-130
190 1,3,5-Trimethylben	10.000	13.385	133.85*	70-130
196 1,2,4-Trimethylben	10.000	12.508	125.08	70-130
208 1,3-Dichlorobenzen	10.000	11.530	115.30	70-130
209 1,4-Dichlorobenzen	10.000	10.888	108.88	70-130
212 alpha-Chlorotoluen	10.000	12.175	121.75	70-130
214 1,2-Dichlorobenzen	10.000	11.615	116.15	70-130
226 1,2,4-Trichloroben	10.000	9.390	93.90	70-130
227 Hexachlorobutadien	10.000	9.892	98.92	70-130
228 Naphthalene	1.000	1.025	102.54	60-140
M 239 Total Xylene	20.000	24.756	123.78	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.954	99.07	70-130
$ 146 Toluene-d8	5.000	5.142	102.85	70-130
$ 177 4-Bromofluorobenze	5.000	5.121	102.42	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020303.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 03-FEB-2017 08:50
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2819-258
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 08:46 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.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		
4.762	4.762 (0.309)	41	221656	11.2744	11.274	80.00- 120.00	100.00
4.762	4.738 (0.309)	42	142767			35.53- 95.53	64.41
4.762	4.738 (0.309)	39	185187			53.16- 113.16	83.55
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	1399673	11.5727	11.573	80.00- 120.00	100.00
5.220	5.220 (0.339)	87	444127			1.91- 61.91	31.73
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	1041563	11.2195	11.219	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	331602			0.98- 60.98	31.84
6.618	6.618 (0.430)	85	1200115			86.82- 146.82	115.22
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	262600	11.6418	11.642	80.00- 120.00	100.00
6.932	6.932 (0.450)	52	86913			3.31- 63.31	33.10
23 Butane					CAS #: 106-97-8		
7.675	7.675 (0.499)	58	66653	12.1715	12.171	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)							
7.675	7.675 (0.499)	43	427135			667.48- 727.48	640.83
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.779 (0.507)	62	361716	11.4116	11.412	80.00- 120.00	100.00
7.779	7.797 (0.505)	64	113677			1.95- 61.95	31.43
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	239566	10.9312	10.931	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	253284			76.10- 136.10	105.73
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	288805	8.71092	8.711	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	269386			64.26- 124.26	93.28
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	182728	11.1504	11.150	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	54899			0.00- 57.48	30.04
9.986	9.986 (0.649)	66	61760			1.33- 61.33	33.80
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	264037	11.1561	11.156	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	333533			96.48- 156.48	126.32
10.138	10.138 (0.659)	42	288336			76.93- 136.93	109.20
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	1651045	11.7017	11.702	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	1079186			33.74- 93.74	65.36
42 Ethanol					CAS #: 64-17-5		
11.661	11.661 (0.758)	45	126868	10.3159	10.316	80.00- 120.00	100.00
11.661	11.680 (0.758)	46	46934			9.60- 69.60	36.99
11.661	11.661 (0.758)	43	33507			0.00- 59.21	26.41
49 Freon 113					CAS #: 76-13-1		
12.080	12.080 (0.785)	151	1057535	11.2254	11.225	80.00- 120.00	100.00
12.080	12.080 (0.785)	153	681517			34.83- 94.83	64.44
12.080	12.080 (0.785)	101	1117475			77.16- 137.16	105.67
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.099	12.099 (0.786)	98	279845	11.1187	11.119	80.00- 120.00	100.00
12.099	12.099 (0.786)	61	727821			219.47- 279.47	260.08
12.099	12.099 (0.786)	96	457795			126.81- 186.81	163.59
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	169503	10.9621	10.962	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   52 Acetone (continued)
 12.366  12.366 (0.803)    43    636015                   344.13- 404.13   375.22
-------------------------------------------------------------------------------
   56 Carbon Disulfide                                CAS #: 75-15-0
 12.461  12.461 (0.810)    76   1218152 11.3887   11.389  80.00- 120.00   100.00
-------------------------------------------------------------------------------
   57 2-Propanol                                      CAS #: 67-63-0
 12.728  12.728 (0.827)    45    575640 11.5636   11.564  80.00- 120.00   100.00
 12.728  12.728 (0.827)    43    148645                    0.00-  55.65    25.82
 12.728  12.728 (0.827)    59     24831                    0.00-  34.42     4.31
-------------------------------------------------------------------------------
   58 3-Chloropropene                                 CAS #: 107-05-1
 12.880  12.880 (0.837)    76    271975 12.9416   12.942  80.00- 120.00   100.00
 12.880  12.880 (0.837)    41    590332                  198.88- 258.88   217.05
-------------------------------------------------------------------------------
   66 Methylene Chloride                              CAS #: 75-09-2
 13.176  13.176 (0.856)    84    362430 9.57782    9.578  80.00- 120.00   100.00
 13.176  13.176 (0.856)    49    409867                   83.76- 143.76   113.09
 13.176  13.176 (0.856)    51    129843                    2.61-  62.61    35.83
-------------------------------------------------------------------------------
   72 Methyl tert-butyl ether                         CAS #: 1634-04-4
 13.478  13.478 (0.876)    73   1280849 11.6968   11.697  80.00- 120.00   100.00
 13.478  13.478 (0.876)    57    253390                    0.00-  49.77    19.78
 13.478  13.478 (0.876)    41    254841                    0.00-  49.98    19.90
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                        CAS #: 156-60-5
 13.533  13.533 (0.879)    98    289739 12.1360   12.136  80.00- 120.00   100.00
 13.533  13.533 (0.879)    61    630664                  174.76- 234.76   217.67
 13.533  13.533 (0.879)    96    476405                  123.28- 183.28   164.43
-------------------------------------------------------------------------------
   78 Hexane                                          CAS #: 110-54-3
 13.835  13.835 (0.899)    57    546896 12.1355   12.136  80.00- 120.00   100.00
 13.835  13.835 (0.899)    43    310604                   27.83-  87.83    56.79
 13.835  13.835 (0.899)    86    109181                    0.00-  50.45    19.96
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                              CAS #: 75-34-3
 14.247  14.247 (0.926)    63    748337 11.3850   11.385  80.00- 120.00   100.00
 14.247  14.247 (0.926)    65    231313                    1.87-  61.87    30.91
-------------------------------------------------------------------------------
   86 Vinyl Acetate                                   CAS #: 108-05-4
 14.274  14.247 (0.927)    86    104290 10.4830   10.483  80.00- 120.00   100.00
 14.247  14.247 (0.926)    42     96127                   71.31- 131.31    92.17
 14.247  14.247 (0.926)    43    912214                  931.28- 991.28   874.69
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                          CAS #: 156-59-2
 15.066  15.066 (0.979)    98    301333 10.3965   10.396  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   91 cis-1,2-Dichloroethene (continued)
 15.066  15.066 (0.979)    61    586684                   154.54- 214.54   194.70
 15.066  15.066 (0.979)    96    466496                   117.78- 177.78   154.81
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    201957 12.0446   12.045  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    683295                   325.72- 385.72   338.34
 15.047  15.047 (0.978)    57     61655                     1.13-  61.13    30.53
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    363047 11.9615   11.962  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71    184783                    20.32-  80.32    50.90
 15.391  15.391 (1.000)    72    195890                    21.98-  81.98    53.96
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    136226 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    105293                    46.73- 106.73    77.29
 15.391  15.391 (1.000)    49    122830                    55.35- 115.35    90.17
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1085348 10.9936   10.994  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    741830                    36.62-  96.62    68.35
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    570928 12.0619   12.062  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    555730                    68.83- 128.83    97.34
 15.669  15.669 (1.018)    41    346846                    29.98-  89.98    60.75
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.699  15.699 (1.020)    97   1311823 11.2970   11.297  80.00- 120.00   100.00
 15.699  15.699 (1.020)    99    848156                    34.65-  94.65    64.65
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.884  15.884 (1.032)   119   1444540 12.7770   12.777  80.00- 120.00   100.00
 15.884  15.884 (1.032)   117   1517544                   74.11- 134.11   105.05
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56    751258 11.8504   11.850  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   2326658                   277.67- 337.67   309.70
 16.111  16.111 (1.047)    41    793223                    73.43- 133.43   105.59
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.207  16.207 (0.968)    78   1270871 11.2208   11.221  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    310638                     0.00-  53.00    24.44
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    193787 4.95366    4.954  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 117 1,2-Dichloroethane-d4 (continued)
 16.207  16.207 (1.053)    67     96723                    22.67-  82.67    49.91
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.303  16.303 (0.974)    62    770407 11.0406   11.040  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    253652                    1.95-  61.95    32.92
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57    345106 12.0332   12.033  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    195150                   23.08-  83.08    56.55
 16.352  16.352 (0.977)    43    584058                  136.91- 196.91   169.24
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    458751 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     66889                    0.00-  45.16    14.58
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.147  17.147 (1.024)   130    737309 11.6671   11.667  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95    663505                   61.87- 121.87    89.99
 17.147  17.147 (1.024)    97    436598                   29.29-  89.29    59.22
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.363  17.363 (1.037)    83    754862 12.7763   12.776  80.00- 120.00   100.00
 17.363  17.363 (1.037)    55    565739                   45.72- 105.72    74.95
 17.363  17.363 (1.037)    56    161432                    0.00-  52.26    21.39
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.580  17.580 (1.050)    63    413614 11.6244   11.624  80.00- 120.00   100.00
 17.580  17.580 (1.050)    62    286732                   41.22- 101.22    69.32
 17.580  17.580 (1.050)    41    292907                   40.14- 100.14    70.82
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88    317405 11.5928   11.593  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    200709                   30.17-  90.17    63.23
 17.701  17.701 (1.058)    57     64754                    0.00-  51.30    20.40
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   1181048 12.0099   12.010  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    789602                   36.87-  96.87    66.86
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    793478 13.0819   13.082  80.00- 120.00   100.00(R)
 18.805  18.805 (1.124)    77    249041                    1.38-  61.38    31.39
 18.805  18.805 (1.124)    39    436809                   23.65-  83.65    55.05
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.006  19.006 (1.136)    43    841309 12.4866   12.486  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
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  145 4-Methyl-2-pentanone (continued)
 19.006  19.006 (1.136)    58    336024                    10.02-  70.02    39.94
 19.006  19.006 (1.136)    85    191560                     0.00-  52.01    22.77
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                   CAS #: 2037-26-5
 19.298  19.298 (1.153)    98    457620 5.14256    5.142  80.00- 120.00   100.00
 19.298  19.275 (1.153)    70     53927                     0.00-  40.89    11.78
 19.275  19.298 (1.152)   100    304051                    40.09- 100.09    66.44
-------------------------------------------------------------------------------
  147 Toluene                                      CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1632165 11.9121   11.912  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    933256                    27.79-  87.79    57.18
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                    CAS #: 10061-02-6
 20.026  20.026 (0.903)    75    774963 11.9055   11.905  80.00- 120.00   100.00
 20.026  20.026 (0.903)    77    244704                     1.55-  61.55    31.58
 20.026  20.026 (0.903)    39    377431                    18.82-  78.82    48.70
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                        CAS #: 79-00-5
 20.438  20.438 (0.922)    97    580693 11.6316   11.632  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    353666                    32.59-  92.59    60.90
 20.438  20.438 (0.922)    83    443699                    50.07- 110.07    76.41
-------------------------------------------------------------------------------
  156 Tetrachloroethene                            CAS #: 127-18-4
 20.630  20.630 (0.930)   166   1073681 11.0303   11.030  80.00- 120.00   100.00
 20.630  20.630 (0.930)   129    732154                    37.12-  97.12    68.19
 20.630  20.630 (0.930)   131    721777                    36.18-  96.18    67.22
-------------------------------------------------------------------------------
  158 2-Hexanone                                   CAS #: 591-78-6
 20.795  20.795 (0.938)    58    426202 12.5832   12.583  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43    811972                   162.96- 222.96   190.51
 20.795  20.795 (0.938)   100    122324                     0.00-  59.39    28.70
-------------------------------------------------------------------------------
  160 Dibromochloromethane                         CAS #: 124-48-1
 21.207  21.207 (0.956)   129   1418682 11.8960   11.896  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   1098770                    46.76- 106.76    77.45
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                      CAS #: 106-93-4
 21.481  21.481 (0.969)   107    985255 11.0784   11.078  80.00- 120.00   100.00
 21.481  21.481 (0.969)   109    928076                    63.39- 123.39    94.20
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                             CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    441987 5.00000            80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    210626                    17.27-  77.27    47.65
-------------------------------------------------------------------------------
  165 Chlorobenzene                                CAS #: 108-90-7
 22.218  22.218 (1.002)   112   1396802 11.3744   11.374  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  165 Chlorobenzene (continued)
 22.218  22.218 (1.002)   114    456092                     2.22-  62.22    32.65
 22.218  22.218 (1.002)    77    734667                    23.48-  83.48    52.60
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.301  22.301 (1.006)   106    713756 12.3289   12.329  80.00- 120.00   100.00
 22.301  22.301 (1.006)    91   2218625                  278.11- 338.11   310.84
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.013)   106    854935 12.4764   12.476  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91   1745116                  170.01- 230.01   204.12
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106    779766 12.2800   12.280  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91   1681257                  175.84- 235.84   215.61
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104   1370049 12.9338   12.934  80.00- 120.00   100.00
 23.110  23.110 (1.042)    78    685926                    20.21-  80.21    50.07
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.057)   173   1556633 12.5924   12.592  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    799591                    21.47-  81.47    51.37
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.564  23.564 (1.063)   105   2469802 12.4002   12.400  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    684967                     0.00-  56.99    27.73
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    316176 5.12116    5.121  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    304097                    66.74- 126.74    96.18
 23.856  23.856 (1.076)   176    307268                    67.47- 127.47    97.18
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83    905790 10.4448   10.445  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85    614281                    39.76-  99.76    67.82
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.102  24.102 (1.087)    91   2391701 12.0629   12.063  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120    592772                     0.00-  55.73    24.78
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105   2036787 12.3915   12.391  80.00- 120.00   100.00
 24.237  24.237 (1.093)   120    614266                     1.00-  61.00    30.16
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105   1630985 13.3847   13.385  80.00- 120.00   100.00(R)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene (continued)							
24.304	24.304 (1.096)	120	789545			19.17- 79.17	48.41
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	1279169	12.5077	12.508	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	572218			16.84- 76.84	44.73
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	1254173	11.5299	11.530	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	797025			33.96- 93.96	63.55
25.156	25.156 (1.134)	111	453625			6.94- 66.94	36.17
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.268	25.268 (1.139)	146	1230235	10.8876	10.888	80.00- 120.00	100.00
25.268	25.268 (1.139)	148	797548			35.10- 95.10	64.83
25.268	25.268 (1.139)	111	435625			4.80- 64.80	35.41
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	1586553	12.1746	12.175	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	366980			0.00- 52.64	23.13
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	1185374	11.6154	11.615	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	747805			33.88- 93.88	63.09
25.672	25.672 (1.158)	111	426751			7.58- 67.58	36.00
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	727086	9.38977	9.390	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	707474			63.70- 123.70	97.30
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	1074351	9.89229	9.892	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	676797			34.33- 94.33	63.00
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	108755	1.02541	1.025	80.00- 120.00	100.00
27.712	27.712 (1.250)	127	16293			0.00- 42.30	14.98
M 239 Total Xylene					CAS #: 1330-20-7		
			1634701	24.7564	24.756		

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: e020303.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-FEB-2017
Calibration Time: 07:59
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	136226	-3.75
123 1,4-Difluorobenze	499834	299900	699768	458751	-8.22
163 Chlorobenzene-d5	467575	280545	654605	441987	-5.47

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	22.18	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/03Feb2017.b/e020303.d

Date : 03-FEB-2017 08:50

Client ID: LCS

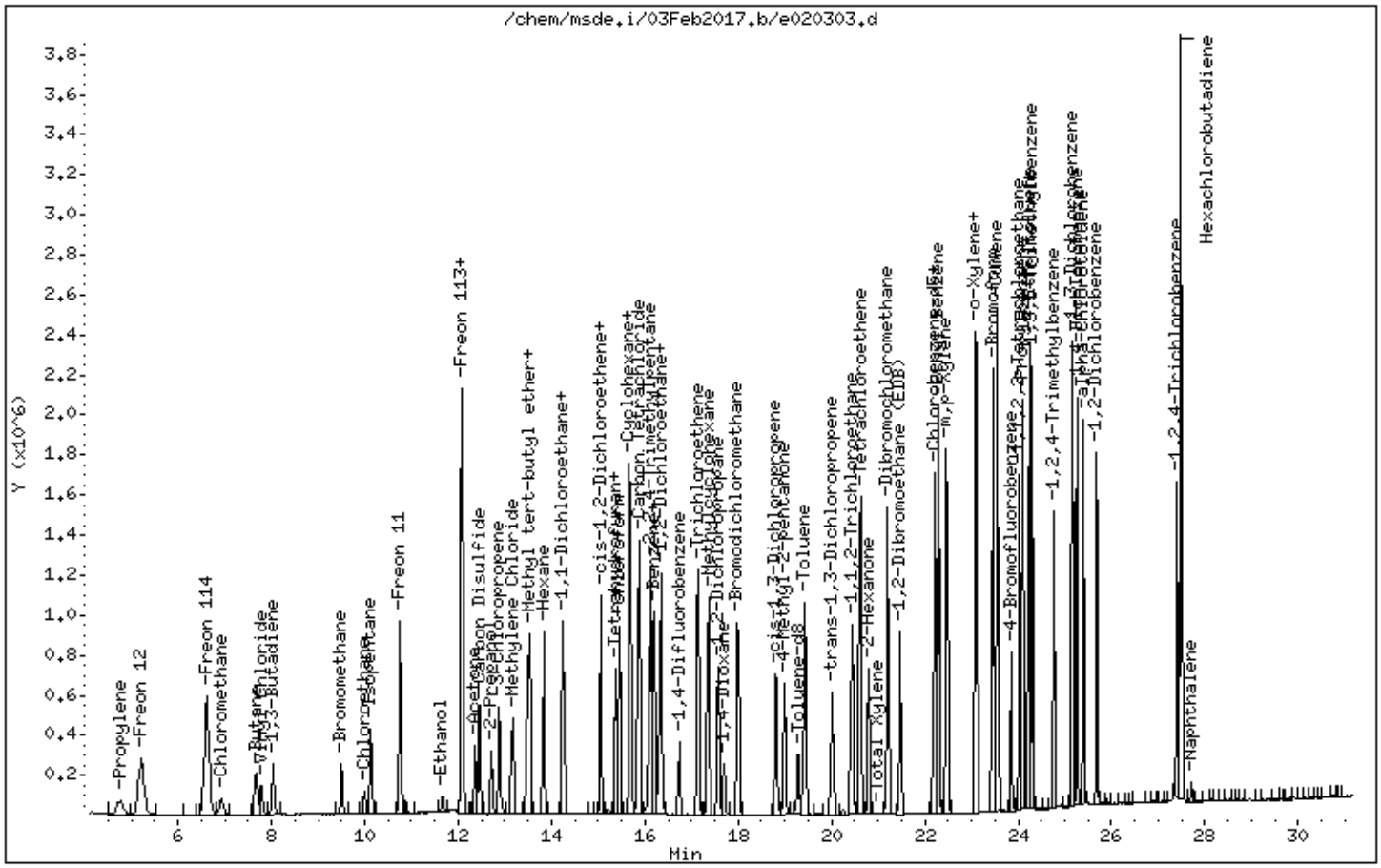
Instrument: msde.i

Sample Info: 50mL# 2819-258

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



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Client Sample ID: LCSD

Lab ID#: 1701477B-21AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 09:31 AM**	

Compound	%Recovery	Method Limits
Freon 12	116	70-130
Freon 114	112	70-130
Chloromethane	115	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	111	70-130
Bromomethane	114	70-130
Chloroethane	113	70-130
Freon 11	118	70-130
Ethanol	88	70-130
Freon 113	109	70-130
1,1-Dichloroethene	108	70-130
Acetone	104	70-130
2-Propanol	114	70-130
Carbon Disulfide	113	70-130
3-Chloropropene	122	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	119	70-130
trans-1,2-Dichloroethene	125	70-130
Hexane	119	70-130
1,1-Dichloroethane	114	70-130
2-Butanone (Methyl Ethyl Ketone)	116	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	118	70-130
Chloroform	112	70-130
1,1,1-Trichloroethane	115	70-130
Cyclohexane	120	70-130
Carbon Tetrachloride	131 Q	70-130
2,2,4-Trimethylpentane	118	70-130
Benzene	110	70-130
1,2-Dichloroethane	106	70-130
Heptane	116	70-130
Trichloroethene	117	70-130
1,2-Dichloropropane	112	70-130
1,4-Dioxane	118	70-130
Bromodichloromethane	116	70-130
cis-1,3-Dichloropropene	127	70-130
4-Methyl-2-pentanone	121	70-130
Toluene	117	70-130
trans-1,3-Dichloropropene	116	70-130
1,1,2-Trichloroethane	115	70-130
Tetrachloroethene	115	70-130
2-Hexanone	128	70-130

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Client Sample ID: LCSD

Lab ID#: 1701477B-21AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e020304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/17 09:31 AM**	

Compound	**%Recovery**	**Method Limits**
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	111	70-130
Chlorobenzene	112	70-130
Ethyl Benzene	122	70-130
m,p-Xylene	123	70-130
o-Xylene	123	70-130
Styrene	130	70-130
Bromoform	124	70-130
Cumene	124	70-130
1,1,2,2-Tetrachloroethane	105	70-130
Propylbenzene	121	70-130
4-Ethyltoluene	125	70-130
1,3,5-Trimethylbenzene	137 Q	70-130
1,2,4-Trimethylbenzene	128	70-130
1,3-Dichlorobenzene	117	70-130
1,4-Dichlorobenzene	112	70-130
alpha-Chlorotoluene	125	70-130
1,2-Dichlorobenzene	115	70-130
1,2,4-Trichlorobenzene	102	70-130
Hexachlorobutadiene	106	70-130
Naphthalene	104	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

Report Date: 03-Feb-2017 10:13

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 03Feb2017
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: AT09EtOH.spk
Quant Type: ISTD
Sublist File: AT09.sub
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	10.000	10.958	109.58	60-140
11 Freon 12	10.000	11.603	116.03	70-130
15 Freon 114	10.000	11.226	112.26	70-130
17 Chloromethane	10.000	11.528	115.28	70-130
23 Butane	10.000	11.504	115.04	60-140
25 Vinyl Chloride	10.000	11.230	112.30	70-130
26 1,3-Butadiene	10.000	11.106	111.06	70-130
29 Bromomethane	10.000	11.428	114.28	70-130
30 Chloroethane	10.000	11.269	112.69	70-130
31 Isopentane	10.000	11.412	114.12	60-140
35 Freon 11	10.000	11.818	118.18	70-130
42 Ethanol	11.500	10.110	87.92	70-130
49 Freon 113	10.000	10.926	109.26	70-130
50 1,1-Dichloroethene	10.000	10.846	108.46	70-130
52 Acetone	10.000	10.421	104.21	70-130
56 Carbon Disulfide	10.000	11.348	113.48	70-130
57 2-Propanol	10.000	11.428	114.29	70-130
58 3-Chloropropene	10.000	12.157	121.57	70-130
66 Methylene Chloride	10.000	9.602	96.02	70-130
72 Methyl tert-butyl	10.000	11.918	119.18	70-130
73 trans-1,2-Dichloro	10.000	12.490	124.90	70-130
78 Hexane	10.000	11.892	118.93	70-130
82 1,1-Dichloroethane	10.000	11.457	114.57	70-130
86 Vinyl Acetate	10.000	11.558	115.58	60-140
91 cis-1,2-Dichloroet	10.000	10.380	103.80	70-130
92 2-Butanone	10.000	11.644	116.44	70-130
99 Tetrahydrofuran	10.000	11.766	117.66	70-130
100 Chloroform	10.000	11.188	111.88	70-130
103 1,1,1-Trichloroeth	10.000	11.512	115.12	70-130
106 Carbon Tetrachlori	10.000	13.091	130.91*	70-130
102 Cyclohexane	10.000	12.038	120.39	70-130
113 2,2,4-Trimethylpen	10.000	11.837	118.37	70-130
116 Benzene	10.000	10.990	109.90	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	10.000	10.651	106.51	70-130
121 Heptane	10.000	11.571	115.71	70-130
125 Trichloroethene	10.000	11.706	117.06	70-130
127 Methylcyclohexane	10.000	12.571	125.71	60-140
132 1,2-Dichloropropan	10.000	11.207	112.07	70-130
136 1,4-Dioxane	10.000	11.789	117.89	70-130
138 Bromodichlorometha	10.000	11.550	115.50	70-130
144 cis-1,3-Dichloropr	10.000	12.684	126.84	70-130
145 4-Methyl-2-pentano	10.000	12.099	120.99	70-130
147 Toluene	10.000	11.742	117.42	70-130
150 trans-1,3-Dichloro	10.000	11.593	115.93	70-130
155 1,1,2-Trichloroeth	10.000	11.462	114.62	70-130
156 Tetrachloroethene	10.000	11.505	115.05	70-130
158 2-Hexanone	10.000	12.832	128.32	70-130
160 Dibromochlorometha	10.000	11.652	116.52	70-130
161 1,2-Dibromoethane	10.000	11.066	110.66	70-130
165 Chlorobenzene	10.000	11.158	111.58	70-130
167 Ethyl Benzene	10.000	12.256	122.56	70-130
169 m,p-Xylene	10.000	12.340	123.40	70-130
171 o-Xylene	10.000	12.338	123.38	70-130
172 Styrene	10.000	13.004	130.04*	70-130
174 Bromoform	10.000	12.420	124.20	70-130
175 Cumene	10.000	12.451	124.51	70-130
181 1,1,2,2-Tetrachlor	10.000	10.478	104.78	70-130
182 Propylbenzene	10.000	12.101	121.01	70-130
188 4-Ethyltoluene	10.000	12.509	125.09	70-130
190 1,3,5-Trimethylben	10.000	13.748	137.48*	70-130
196 1,2,4-Trimethylben	10.000	12.805	128.05	70-130
208 1,3-Dichlorobenzen	10.000	11.716	117.16	70-130
209 1,4-Dichlorobenzen	10.000	11.188	111.88	70-130
212 alpha-Chlorotoluen	10.000	12.461	124.61	70-130
214 1,2-Dichlorobenzen	10.000	11.511	115.11	70-130
226 1,2,4-Trichloroben	10.000	10.151	101.51	70-130
227 Hexachlorobutadien	10.000	10.606	106.06	70-130
228 Naphthalene	1.000	1.043	104.27	60-140
M 239 Total Xylene	20.000	24.678	123.39	70-130

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	5.000	4.982	99.64	70-130
$ 146 Toluene-d8	5.000	4.830	96.61	70-130
$ 177 4-Bromofluorobenze	5.000	5.085	101.70	70-130

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msde.i/03Feb2017.b/e020304.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 03-FEB-2017 09:31
Operator : ef Inst ID: msde.i
Smp Info : 50mL# 2819-258
Misc Info : 10ppbv (50ppbv)
Comment : LOW LEVEL - GC/MS
Method : /chem/msde.i/03Feb2017.b/e17l0126a.m
Meth Date : 03-Feb-2017 08:46 efinn Quant Type: ISTD
Cal Date : 27-JAN-2017 17:06 Cal File: e012706.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		
4.738	4.762 (0.308)	41	209145	10.9585	10.958	80.00- 120.00	100.00
4.738	4.738 (0.308)	42	136358			35.53- 95.53	65.20
4.738	4.738 (0.308)	39	183096			53.16- 113.16	87.55
11 Freon 12					CAS #: 75-71-8		
5.220	5.220 (0.339)	85	1362351	11.6033	11.603	80.00- 120.00	100.00
5.220	5.220 (0.339)	87	440798			1.91- 61.91	32.36
15 Freon 114					CAS #: 76-14-2		
6.618	6.618 (0.430)	135	1011735	11.2264	11.226	80.00- 120.00	100.00
6.618	6.618 (0.430)	137	328028			0.98- 60.98	32.42
6.618	6.618 (0.430)	85	1193554			86.82- 146.82	117.97
17 Chloromethane					CAS #: 74-87-3		
6.932	6.932 (0.450)	50	252440	11.5284	11.528	80.00- 120.00	100.00
6.932	6.932 (0.450)	52	83929			3.31- 63.31	33.25
23 Butane					CAS #: 106-97-8		
7.675	7.675 (0.499)	58	61158	11.5044	11.504	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)							
7.675	7.675 (0.499)	43	428393			667.48- 727.48	700.47
25 Vinyl Chloride					CAS #: 75-01-4		
7.797	7.779 (0.507)	62	345540	11.2296	11.230	80.00- 120.00	100.00
7.797	7.797 (0.507)	64	107639			1.95- 61.95	31.15
26 1,3-Butadiene					CAS #: 106-99-0		
8.040	8.040 (0.522)	54	236280	11.1060	11.106	80.00- 120.00	100.00
8.040	8.040 (0.522)	39	251090			76.10- 136.10	106.27
29 Bromomethane					CAS #: 74-83-9		
9.510	9.510 (0.618)	94	367820	11.4283	11.428	80.00- 120.00	100.00
9.510	9.510 (0.618)	96	357435			64.26- 124.26	97.18
30 Chloroethane					CAS #: 75-00-3		
9.986	9.986 (0.649)	64	179276	11.2692	11.269	80.00- 120.00	100.00
9.986	9.986 (0.649)	49	51506			0.00- 57.48	28.73
9.986	9.986 (0.649)	66	57187			1.33- 61.33	31.90
31 Isopentane					CAS #: 78-78-4		
10.138	10.138 (0.659)	57	262192	11.4118	11.412	80.00- 120.00	100.00
10.138	10.138 (0.659)	43	322433			96.48- 156.48	122.98
10.138	10.138 (0.659)	42	288369			76.93- 136.93	109.98
35 Freon 11					CAS #: 75-69-4		
10.766	10.766 (0.700)	101	1618734	11.8182	11.818	80.00- 120.00	100.00
10.766	10.766 (0.700)	103	1030320			33.74- 93.74	63.65
42 Ethanol					CAS #: 64-17-5		
11.662	11.661 (0.758)	45	120706	10.1105	10.110	80.00- 120.00	100.00
11.662	11.680 (0.758)	46	43780			9.60- 69.60	36.27
11.662	11.661 (0.758)	43	34057			0.00- 59.21	28.21
49 Freon 113					CAS #: 76-13-1		
12.081	12.080 (0.785)	151	999237	10.9260	10.926	80.00- 120.00	100.00
12.081	12.080 (0.785)	153	649538			34.83- 94.83	65.00
12.081	12.080 (0.785)	101	1071037			77.16- 137.16	107.19
50 1,1-Dichloroethene					CAS #: 75-35-4		
12.100	12.099 (0.786)	98	265011	10.8465	10.846	80.00- 120.00	100.00
12.100	12.099 (0.786)	61	690527			219.47- 279.47	260.57
12.100	12.099 (0.786)	96	432511			126.81- 186.81	163.20
52 Acetone					CAS #: 67-64-1		
12.366	12.366 (0.803)	58	156422	10.4208	10.421	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
52 Acetone (continued)							
12.366	12.366 (0.803)	43	584486			344.13- 404.13	373.66
56 Carbon Disulfide					CAS #: 75-15-0		
12.462	12.461 (0.810)	76	1178318	11.3481	11.348	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
12.728	12.728 (0.827)	45	552285	11.4286	11.428	80.00- 120.00	100.00
12.728	12.728 (0.827)	43	144671			0.00- 55.65	26.19
12.709	12.728 (0.826)	59	22651			0.00- 34.42	4.10
58 3-Chloropropene					CAS #: 107-05-1		
12.881	12.880 (0.837)	76	248008	12.1566	12.157	80.00- 120.00	100.00
12.881	12.880 (0.837)	41	565149			198.88- 258.88	227.88
66 Methylene Chloride					CAS #: 75-09-2		
13.176	13.176 (0.856)	84	352726	9.60212	9.602	80.00- 120.00	100.00
13.176	13.176 (0.856)	49	408411			83.76- 143.76	115.79
13.176	13.176 (0.856)	51	123062			2.61- 62.61	34.89
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
13.478	13.478 (0.876)	73	1266873	11.9176	11.918	80.00- 120.00	100.00
13.478	13.478 (0.876)	57	234635			0.00- 49.77	18.52
13.478	13.478 (0.876)	41	239628			0.00- 49.98	18.91
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
13.533	13.533 (0.879)	98	289464	12.4897	12.490	80.00- 120.00	100.00
13.533	13.533 (0.879)	61	599638			174.76- 234.76	207.15
13.533	13.533 (0.879)	96	449891			123.28- 183.28	155.42
78 Hexane					CAS #: 110-54-3		
13.835	13.835 (0.899)	57	520277	11.8925	11.892	80.00- 120.00	100.00
13.835	13.835 (0.899)	43	317477			27.83- 87.83	61.02
13.835	13.835 (0.899)	86	105770			0.00- 50.45	20.33
82 1,1-Dichloroethane					CAS #: 75-34-3		
14.247	14.247 (0.926)	63	731030	11.4566	11.457	80.00- 120.00	100.00
14.247	14.247 (0.926)	65	236828			1.87- 61.87	32.40
86 Vinyl Acetate					CAS #: 108-05-4		
14.275	14.247 (0.927)	86	111622	11.5579	11.558	80.00- 120.00	100.00
14.247	14.247 (0.926)	42	99849			71.31- 131.31	89.45
14.247	14.247 (0.926)	43	888825			931.28- 991.28	796.28
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
15.066	15.066 (0.979)	98	292054	10.3798	10.380	80.00- 120.00	100.00

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   91 cis-1,2-Dichloroethene (continued)
 15.066  15.066 (0.979)    61    580166                   154.54- 214.54   198.65
 15.066  15.066 (0.979)    96    458836                   117.78- 177.78   157.11
-------------------------------------------------------------------------------
   92 2-Butanone                                   CAS #: 78-93-3
 15.047  15.047 (0.978)    72    189533 11.6441   11.644  80.00- 120.00   100.00
 15.047  15.047 (0.978)    43    665452                   325.72- 385.72   351.10
 15.047  15.047 (0.978)    57     60606                     1.13-  61.13    31.98
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                              CAS #: 109-99-9
 15.391  15.391 (1.000)    42    346684 11.7664   11.766  80.00- 120.00   100.00
 15.391  15.391 (1.000)    71    164411                    20.32-  80.32    47.42
 15.391  15.391 (1.000)    72    180203                    21.98-  81.98    51.98
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
 15.391  15.391 (1.000)   130    132243 5.00000            80.00- 120.00   100.00
 15.391  15.391 (1.000)   128    101219                    46.73- 106.73    76.54
 15.391  15.391 (1.000)    49    120565                    55.35- 115.35    91.17
-------------------------------------------------------------------------------
  100 Chloroform                                  CAS #: 67-66-3
 15.453  15.453 (1.004)    83   1072269 11.1882   11.188  80.00- 120.00   100.00
 15.453  15.453 (1.004)    85    727725                    36.62-  96.62    67.87
-------------------------------------------------------------------------------
  102 Cyclohexane                                 CAS #: 110-82-7
 15.669  15.669 (1.018)    84    553161 12.0385   12.038  80.00- 120.00   100.00
 15.669  15.669 (1.018)    56    552399                    68.83- 128.83    99.86
 15.669  15.669 (1.018)    41    328706                    29.98-  89.98    59.42
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                       CAS #: 71-55-6
 15.669  15.699 (1.018)    97   1297701 11.5120   11.512  80.00- 120.00   100.00
 15.669  15.699 (1.018)    99    826093                    34.65-  94.65    63.66
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                        CAS #: 56-23-5
 15.884  15.884 (1.032)   119   1436819 13.0915   13.091  80.00- 120.00   100.00(R)
 15.884  15.884 (1.032)   117   1491385                    74.11- 134.11   103.80
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                      CAS #: 540-84-1
 16.111  16.111 (1.047)    56    728457 11.8368   11.837  80.00- 120.00   100.00
 16.111  16.111 (1.047)    57   2311271                   277.67- 337.67   317.28
 16.111  16.111 (1.047)    41    767626                    73.43- 133.43   105.38
-------------------------------------------------------------------------------
  116 Benzene                                     CAS #: 71-43-2
 16.207  16.207 (0.968)    78   1262167 10.9898   10.990  80.00- 120.00   100.00
 16.207  16.207 (0.968)    77    298431                     0.00-  53.00    23.64
-------------------------------------------------------------------------------
$ 117 1,2-Dichloroethane-d4                       CAS #: 17060-07-0
 16.207  16.207 (1.053)    65    189206 4.98223    4.982  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

$ 117 1,2-Dichloroethane-d4 (continued)
 16.207  16.207 (1.053)    67     91761                    22.67-  82.67    48.50
-------------------------------------------------------------------------------
  120 1,2-Dichloroethane                           CAS #: 107-06-2
 16.303  16.303 (0.974)    62    753646 10.6510   10.651  80.00- 120.00   100.00
 16.303  16.303 (0.974)    64    254911                     1.95-  61.95    33.82
-------------------------------------------------------------------------------
  121 Heptane                                      CAS #: 142-82-5
 16.352  16.352 (0.977)    57    336504 11.5710   11.571  80.00- 120.00   100.00
 16.352  16.352 (0.977)   100    191225                    23.08-  83.08    56.83
 16.352  16.352 (0.977)    43    582619                   136.91- 196.91   173.14
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
 16.737  16.737 (1.000)   114    465185 5.00000           80.00- 120.00   100.00
 16.737  16.737 (1.000)    88     69973                     0.00-  45.16    15.04
-------------------------------------------------------------------------------
  125 Trichloroethene                              CAS #: 79-01-6
 17.147  17.147 (1.024)   130    750121 11.7057   11.706  80.00- 120.00   100.00
 17.147  17.147 (1.024)    95    650792                    61.87- 121.87    86.76
 17.147  17.147 (1.024)    97    407035                    29.29-  89.29    54.26
-------------------------------------------------------------------------------
  127 Methylcyclohexane                            CAS #: 108-87-2
 17.364  17.363 (1.037)    83    753174 12.5714   12.571  80.00- 120.00   100.00
 17.364  17.363 (1.037)    55    542083                    45.72- 105.72    71.97
 17.364  17.363 (1.037)    56    160328                     0.00-  52.26    21.29
-------------------------------------------------------------------------------
  132 1,2-Dichloropropane                          CAS #: 78-87-5
 17.580  17.580 (1.050)    63    404357 11.2071   11.207  80.00- 120.00   100.00
 17.580  17.580 (1.050)    62    281616                    41.22- 101.22    69.65
 17.580  17.580 (1.050)    41    300629                    40.14- 100.14    74.35
-------------------------------------------------------------------------------
  136 1,4-Dioxane                                  CAS #: 123-91-1
 17.701  17.701 (1.058)    88    327302 11.7889   11.789  80.00- 120.00   100.00
 17.701  17.701 (1.058)    58    187663                    30.17-  90.17    57.34
 17.701  17.701 (1.058)    57     65419                     0.00-  51.30    19.99
-------------------------------------------------------------------------------
  138 Bromodichloromethane                         CAS #: 75-27-4
 17.990  17.990 (1.075)    83   1151799 11.5505   11.550  80.00- 120.00   100.00
 17.990  17.990 (1.075)    85    775995                    36.87-  96.87    67.37
-------------------------------------------------------------------------------
  144 cis-1,3-Dichloropropene                      CAS #: 10061-01-5
 18.805  18.805 (1.124)    75    780160 12.6845   12.684  80.00- 120.00   100.00
 18.805  18.805 (1.124)    77    248547                     1.38-  61.38    31.86
 18.805  18.805 (1.124)    39    426198                    23.65-  83.65    54.63
-------------------------------------------------------------------------------
  145 4-Methyl-2-pentanone                         CAS #: 108-10-1
 19.007  19.006 (1.136)    43    826630 12.0990   12.099  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  145 4-Methyl-2-pentanone (continued)
 19.007  19.006 (1.136)    58    329421                   10.02-  70.02    39.85
 19.007  19.006 (1.136)    85    187108                    0.00-  52.01    22.64
-------------------------------------------------------------------------------
$ 146 Toluene-d8                                  CAS #: 2037-26-5
 19.275  19.298 (1.152)    98    435878 4.83049    4.830  80.00- 120.00   100.00
 19.275  19.275 (1.152)    70     50734                    0.00-  40.89    11.64
 19.275  19.298 (1.152)   100    309851                   40.09- 100.09    71.09
-------------------------------------------------------------------------------
  147 Toluene                                     CAS #: 108-88-3
 19.432  19.432 (1.161)    91   1631386 11.7417   11.742  80.00- 120.00   100.00
 19.432  19.432 (1.161)    92    948044                   27.79-  87.79    58.11
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                   CAS #: 10061-02-6
 20.026  20.026 (0.903)    75    749786 11.5931   11.593  80.00- 120.00   100.00
 19.998  20.026 (0.902)    77    248067                    1.55-  61.55    33.09
 20.026  20.026 (0.903)    39    370044                   18.82-  78.82    49.35
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                       CAS #: 79-00-5
 20.438  20.438 (0.922)    97    568545 11.4619   11.462  80.00- 120.00   100.00
 20.438  20.438 (0.922)    99    348291                   32.59-  92.59    61.26
 20.438  20.438 (0.922)    83    445423                   50.07- 110.07    78.34
-------------------------------------------------------------------------------
  156 Tetrachloroethene                           CAS #: 127-18-4
 20.630  20.630 (0.930)   166   1112704 11.5050   11.505  80.00- 120.00   100.00
 20.630  20.630 (0.930)   129    728683                   37.12-  97.12    65.49
 20.630  20.630 (0.930)   131    730496                   36.18-  96.18    65.65
-------------------------------------------------------------------------------
  158 2-Hexanone                                  CAS #: 591-78-6
 20.795  20.795 (0.938)    58    431829 12.8317   12.832  80.00- 120.00   100.00
 20.795  20.795 (0.938)    43    803377                  162.96- 222.96   186.04
 20.795  20.795 (0.938)   100    121082                    0.00-  59.39    28.04
-------------------------------------------------------------------------------
  160 Dibromochloromethane                        CAS #: 124-48-1
 21.207  21.207 (0.956)   129   1380621 11.6516   11.652  80.00- 120.00   100.00
 21.207  21.207 (0.956)   127   1070715                   46.76- 106.76    77.55
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                     CAS #: 106-93-4
 21.482  21.481 (0.969)   107    977860 11.0662   11.066  80.00- 120.00   100.00
 21.482  21.481 (0.969)   109    917044                   63.39- 123.39    93.78
-------------------------------------------------------------------------------
* 163 Chlorobenzene-d5                            CAS #: 3114-55-4
 22.177  22.177 (1.000)   117    439150 5.00000           80.00- 120.00   100.00
 22.177  22.177 (1.000)    82    205011                   17.27-  77.27    46.68
-------------------------------------------------------------------------------
  165 Chlorobenzene                               CAS #: 108-90-7
 22.219  22.218 (1.002)   112   1361403 11.1577   11.158  80.00- 120.00   100.00
```

```
                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  165 Chlorobenzene (continued)
 22.219  22.218 (1.002)   114    447154                     2.22-  62.22    32.85
 22.219  22.218 (1.002)    77    715893                    23.48-  83.48    52.58
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                CAS #: 100-41-4
 22.302  22.301 (1.006)   106    704967 12.2557   12.256  80.00- 120.00   100.00
 22.302  22.301 (1.006)    91   2182219                  278.11- 338.11   309.55
-------------------------------------------------------------------------------
  169 m,p-Xylene                                   CAS #: 108-38-3
 22.467  22.467 (1.013)   106    840141 12.3398   12.340  80.00- 120.00   100.00
 22.467  22.467 (1.013)    91   1693740                  170.01- 230.01   201.60
-------------------------------------------------------------------------------
  171 o-Xylene                                     CAS #: 95-47-6
 23.089  23.089 (1.041)   106    778414 12.3379   12.338  80.00- 120.00   100.00
 23.089  23.089 (1.041)    91   1670259                  175.84- 235.84   214.57
-------------------------------------------------------------------------------
  172 Styrene                                      CAS #: 100-42-5
 23.110  23.110 (1.042)   104   1368638 13.0040   13.004  80.00- 120.00   100.00(R)
 23.110  23.110 (1.042)    78    681136                    20.21-  80.21    49.77
-------------------------------------------------------------------------------
  174 Bromoform                                    CAS #: 75-25-2
 23.452  23.452 (1.057)   173   1525457 12.4199   12.420  80.00- 120.00   100.00
 23.452  23.452 (1.057)   171    792685                    21.47-  81.47    51.96
-------------------------------------------------------------------------------
  175 Cumene                                       CAS #: 98-82-8
 23.564  23.564 (1.063)   105   2464021 12.4511   12.451  80.00- 120.00   100.00
 23.564  23.564 (1.063)   120    674606                     0.00-  56.99    27.38
-------------------------------------------------------------------------------
$ 177 4-Bromofluorobenzene                         CAS #: 460-00-4
 23.856  23.856 (1.076)   174    311930 5.08503    5.085  80.00- 120.00   100.00
 23.856  23.856 (1.076)    95    282707                    66.74- 126.74    90.63
 23.856  23.856 (1.076)   176    306563                    67.47- 127.47    98.28
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                    CAS #: 79-34-5
 24.035  24.035 (1.084)    83    902798 10.4776   10.478  80.00- 120.00   100.00
 24.035  24.035 (1.084)    85    624505                    39.76-  99.76    69.17
-------------------------------------------------------------------------------
  182 Propylbenzene                                CAS #: 103-65-1
 24.102  24.102 (1.087)    91   2383884 12.1012   12.101  80.00- 120.00   100.00
 24.102  24.102 (1.087)   120    620211                     0.00-  55.73    26.02
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                               CAS #: 622-96-8
 24.237  24.237 (1.093)   105   2042967 12.5094   12.509  80.00- 120.00   100.00
 24.237  24.237 (1.093)   120    618894                     1.00-  61.00    30.29
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                       CAS #: 108-67-8
 24.304  24.304 (1.096)   105   1664481 13.7479   13.748  80.00- 120.00   100.00(R)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
190 1,3,5-Trimethylbenzene (continued)							
24.304	24.304 (1.096)	120	790147			19.17- 79.17	47.47
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
24.775	24.775 (1.117)	105	1301159	12.8049	12.805	80.00- 120.00	100.00
24.775	24.775 (1.117)	120	592978			16.84- 76.84	45.57
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
25.156	25.156 (1.134)	146	1266228	11.7159	11.716	80.00- 120.00	100.00
25.156	25.156 (1.134)	148	790293			33.96- 93.96	62.41
25.156	25.156 (1.134)	111	449084			6.94- 66.94	35.47
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
25.269	25.268 (1.139)	146	1256083	11.1881	11.188	80.00- 120.00	100.00
25.269	25.268 (1.139)	148	798491			35.10- 95.10	63.57
25.269	25.268 (1.139)	111	441066			4.80- 64.80	35.11
212 alpha-Chlorotoluene					CAS #: 100-44-7		
25.403	25.403 (1.145)	91	1613503	12.4614	12.461	80.00- 120.00	100.00
25.403	25.403 (1.145)	126	358511			0.00- 52.64	22.22
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
25.672	25.672 (1.158)	146	1167201	11.5112	11.511	80.00- 120.00	100.00
25.672	25.672 (1.158)	148	752176			33.88- 93.88	64.44
25.672	25.672 (1.158)	111	447691			7.58- 67.58	38.36
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
27.398	27.398 (1.235)	180	781021	10.1515	10.151	80.00- 120.00	100.00
27.398	27.398 (1.235)	182	739804			63.70- 123.70	94.72
227 Hexachlorobutadiene					CAS #: 87-68-3		
27.488	27.488 (1.239)	225	1144507	10.6063	10.606	80.00- 120.00	100.00
27.488	27.488 (1.239)	223	721679			34.33- 94.33	63.06
228 Naphthalene					CAS #: 91-20-3		
27.712	27.712 (1.250)	128	109875	1.04266	1.043	80.00- 120.00	100.00
27.712	27.712 (1.250)	127	16491			0.00- 42.30	15.01
M 239 Total Xylene					CAS #: 1330-20-7		
			1618555	24.6776	24.678		

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: e020304.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: ef
Method File: /chem/msde.i/03Feb2017.b/e17l0126a.m
Misc Info: 10ppbv (50ppbv)

Calibration Date: 03-FEB-2017
Calibration Time: 07:59
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	141527	84916	198138	132243	-6.56
123 1,4-Difluorobenze	499834	299900	699768	465185	-6.93
163 Chlorobenzene-d5	467575	280545	654605	439150	-6.08

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	22.18	21.85	22.51	22.18	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/03Feb2017.b/e020304.d

Date : 03-FEB-2017 09:31

Client ID: LCSD

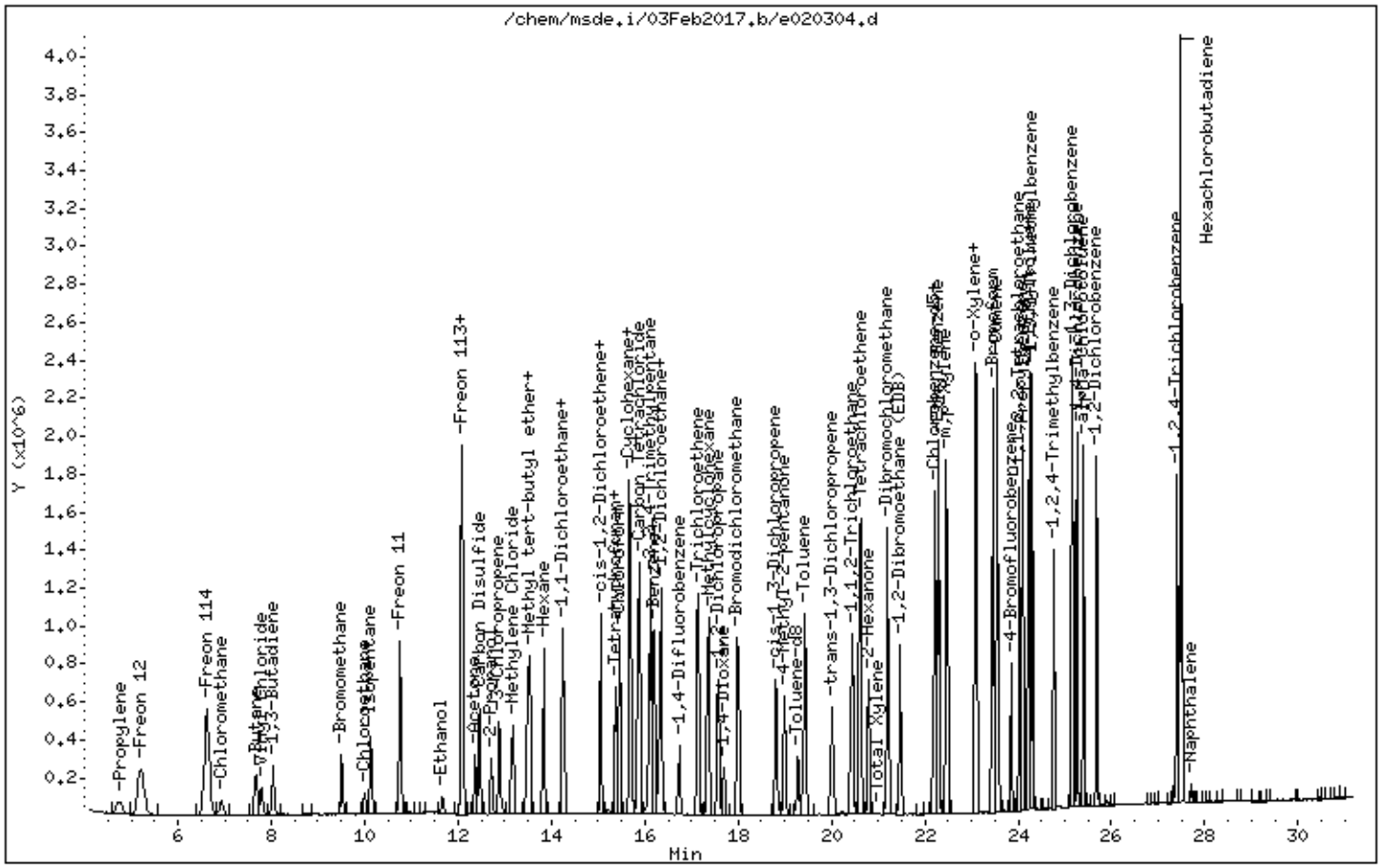
Instrument: msde.i

Sample Info: 50mL# 2819-258

Operator: ef

Column phase: RTX-624

Column diameter: 0.32



Eurofins Air Toxics, Inc.

MSD-E

Logbook #2806

BFB Verification of 176/174 m/z Ratio: 637824/654400 x100 = 97.47%	
Method Name: E17L0126A / E17S0126A	

IS/S Std. #: 2819 - 179	Exp. Date: 3/14/17
BCM LL: 141527	Sim: 167826
1,4-DFB 499834	523260
CB-d5 469575	476218

Verified CCV IS vs ICAL mid-point (-40%D): SS

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	✓	E020301	BFB tune check	2810-94	50ng	2.0mL	SW	1.00	SW	2/3/17	0739	SW	exp: 12/1/17
2	/	02	CCV (50ppbv)	2819-215	10ppbv	50mL	SW	1	SW		0759	SS	exp: 4/5/17
3	/	03	LCS (50ppbv)	2819-258	10ppbv	50mL	SS	1.00	SS		0850	SS	exp. 5/2/17
4	/	04	LCSD (50ppbv)	2819-258	10ppbv	50mL	SS	1.00	SS		0931	SS	exp. 6/2/17
5	X	05	LAB BLANK	34764	Humid	250mL	SS	1.00	SS		1024	SS	
6	/	06	LAB BLANK	34764	Humid	250mL	SS	1.00	SS		1108	SS	
7	X	07	1701477B-11A	00124	5.5"Hg - 5.0psi	~~250mL~~ 150mL SS 2/3/17	SS	1.64	SS		1156	SS	overpurge
8	/	08	-12A	6w0046	5.0"Hg - 5.0psi	250mL	SS	1.61	SS		1237	SS	
9	/	09	-11A	00124	5.5"Hg - 5.0psi	250mL	SS	1.64	SS		1319	SS	
10	/	16	-13A	00401	4.0"Hg - 5.0psi	250mL	SS	~~1.64~~ 1.55 SS 2/3/17	SS		1402	SS	
11	/	11	-14A	N1639	5.5"Hg - 5.0psi	250mL	SS	1.64	SS		1444	SS	
12	/	12	-15A	907	5.0"Hg - 5.0psi	250mL	SS	1.64	SS		1536	SS	
13	/	13	-16A	N0597	5.0"Hg - 5.0psi	150mL	SS	~~1.64~~ 2.68 SS 2/3/17	SS		1670	EA	dil to "t" EtOH
14	/	14	-17A	00937	4.0"Hg - 5.0psi	250mL	EA	1.55	EA		1702	EA	"t" EtOH
15	X	15	18A	34744	6.5"Hg - 5.0psi		EA	1.64	EA		—		Front inlet shutdown
16	X	16	18A				EA	1	EA		—		↓
17	X	17	Dewar Cert	Compression	N/A		EA	1.00	EA		—		cryo change of Front inlet shutdown

Reviewed

2/3/17 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	X	E020318	Test	NA	DRY	250ml	ED	1.00	ED	2/3/17	2001	ED	IS/surr out - ~~ok~~ test
19	✓	19	Dewar Cert	NA	COMPOSITE	250ml	ED	1.00	EA		2057	EA	
20	✓	20	1701477B-18A	34744	6.5"Hg-Spec	250ml	EA	~~EA~~	EA		2148	ED	
21	C	21	1 - 17A	00937	4.0"Hg-Spec	250ml	EA	1.55	ED		2233	SB	
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													

Reviewed

2/6/17
Date

Eurofins Air Toxics Inc.

Data file : /chem/msde.i/26Jan2017.b/e012606.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 26-JAN-2017 11:25
Operator : sw Inst ID: msde.i
Smp Info : 2.0uL# 2810-94; BFB; BFB
Misc Info : 50ng
Comment :
Method : /chem/msde.i/26Jan2017.b/bfb60.m
Meth Date : 03-Oct-2014 15:46 ejakob 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	
6.047	6.235	-0.188	95	561664			100.00- 100.00	88.23
6.047	6.235	-0.188	50	101688			8.00- 40.00	18.10
6.047	6.235	-0.188	75	290576			30.00- 66.00	51.73
6.047	6.235	-0.188	96	36654			5.00- 9.00	6.53
6.047	6.235	-0.188	173	2126			0.00- 1.99	0.33
6.047	6.235	-0.188	174	636608			50.00- 120.00	113.34
6.047	6.235	-0.188	175	50141			4.00- 9.00	7.88
6.047	6.235	-0.188	176	611571			93.00- 101.00	96.07
6.047	6.235	-0.188	177	40220			5.00- 9.00	6.58

Data File: /chem/msde.i/26Jan2017.b/e012606.d

Date : 26-JAN-2017 11:25

Client ID: BFB

Instrument: msde.i

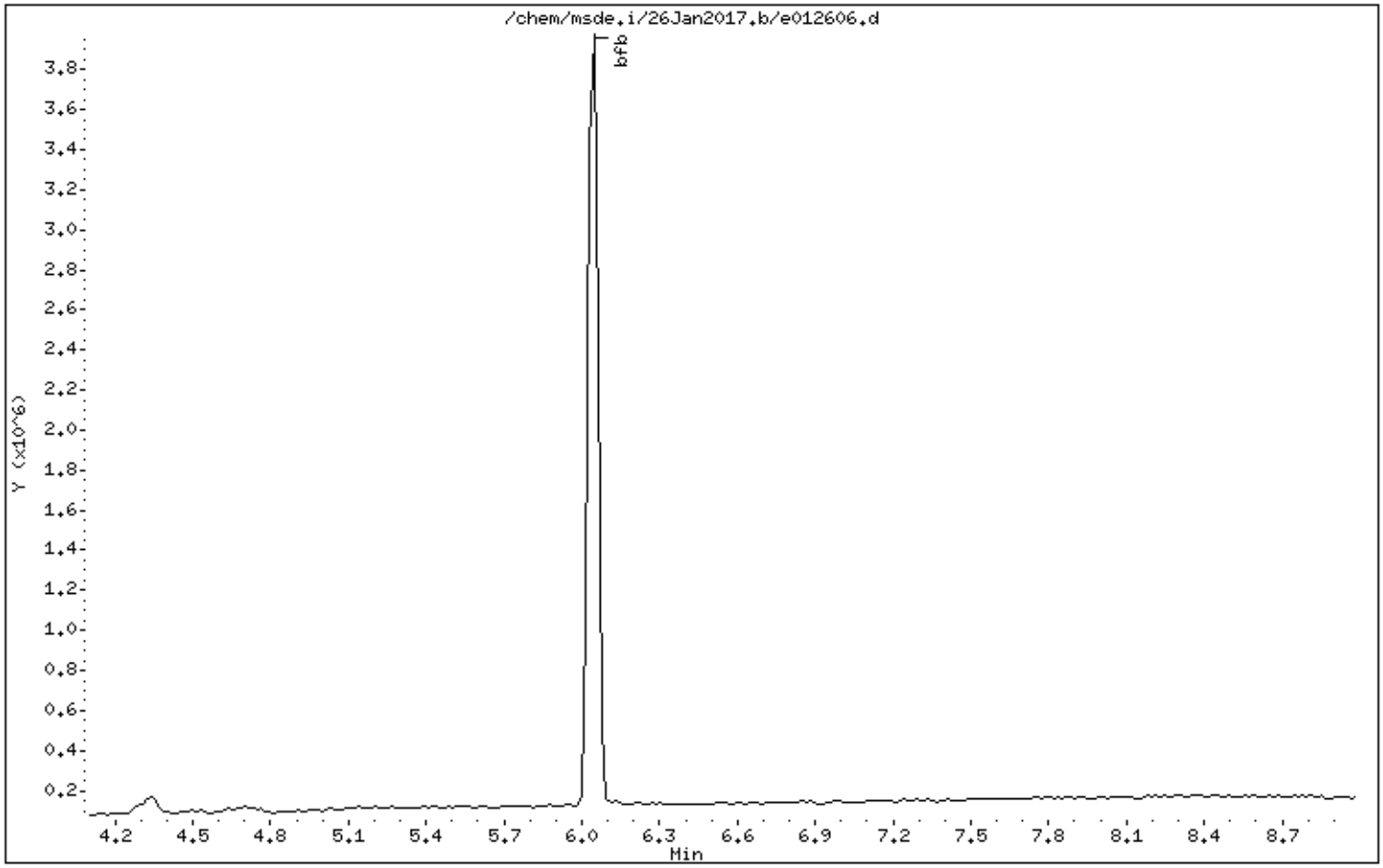
Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/26Jan2017.b/e012606.d

Date : 26-JAN-2017 11:25

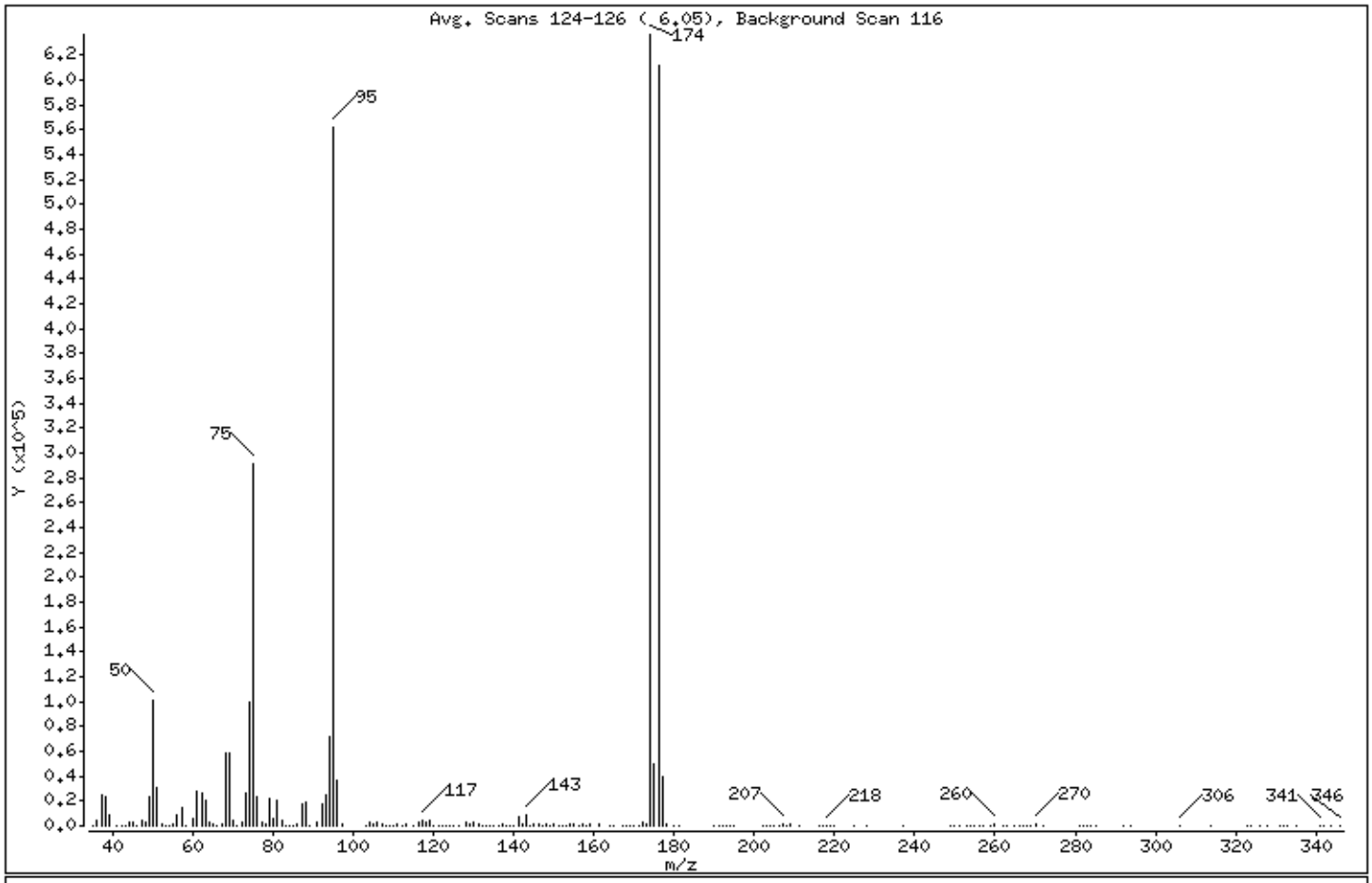
Client ID: BFB | Instrument: msde.i

Sample Info: 2.0uL# 2810-94; 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	18.10
75	30.00 - 66.00% of mass 95	51.73
96	5.00 - 9.00% of mass 95	6.53
173	Less than 1.99% of mass 174	0.38 (0.33)
174	50.00 - 120.00% of mass 95	113.34
175	4.00 - 9.00% of mass 174	8.93 (7.88)
176	93.00 - 101.00% of mass 174	108.89 (96.07)
177	5.00 - 9.00% of mass 176	7.16 (6.58)

Data File: /chem/msde.i/26Jan2017.b/e012606.d

Date : 26-JAN-2017 11:25

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e012606.d
Spectrum: Avg. Scans 124-126 (6.05), Background Scan 116
Location of Maximum: 174.00
Number of points: 195

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	94	86.00	869	143.00	9041	216.00	161
36.00	5107	87.00	17232	144.00	726	217.00	179
37.00	25280	88.00	18448	145.00	1487	218.00	506
38.00	22760	89.00	8	146.00	1270	219.00	204
39.00	8319	91.00	2917	147.00	531	220.00	227
41.00	427	92.00	17944	148.00	1479	225.00	47
42.00	12	93.00	25552	149.00	251	228.00	40
43.00	150	94.00	72376	150.00	772	237.00	97
44.00	2237	95.00	561664	151.00	223	249.00	148
45.00	3592	96.00	36648	152.00	480	250.00	61
46.00	456	97.00	991	153.00	690	251.00	282
47.00	3962	103.00	81	154.00	775	253.00	392
48.00	3231	104.00	3237	155.00	2100	254.00	4
49.00	23616	105.00	968	156.00	52	255.00	170
50.00	101688	106.00	3080	157.00	1344	256.00	33
51.00	30392	107.00	838	158.00	383	257.00	59
52.00	1463	108.00	401	159.00	1285	259.00	138
53.00	154	109.00	285	161.00	1232	260.00	736
54.00	264	110.00	361	164.00	203	262.00	158
55.00	1508	111.00	910	165.00	219	263.00	140
56.00	8389	112.00	270	167.00	262	265.00	109
57.00	14564	113.00	771	168.00	110	266.00	212
58.00	491	115.00	551	169.00	428	267.00	129
60.00	5439	116.00	2742	170.00	305	268.00	91
61.00	27944	117.00	4604	171.00	288	269.00	239
62.00	26720	118.00	2382	172.00	3046	270.00	919
63.00	20368	119.00	3669	173.00	2126	272.00	229
64.00	2275	120.00	187	174.00	636608	281.00	285
65.00	1088	121.00	17	175.00	50136	282.00	300
66.00	266	122.00	221	176.00	611520	283.00	47
67.00	1880	123.00	487	177.00	40216	284.00	42
68.00	58416	124.00	438	178.00	1044	285.00	137
69.00	57920	125.00	394	180.00	60	292.00	99
70.00	4320	126.00	274	181.00	145	294.00	55
71.00	189	128.00	3057	190.00	177	306.00	249

Data File: /chem/msde.i/26Jan2017.b/e012606.d

Date : 26-JAN-2017 11:25

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e012606.d
Spectrum: Avg. Scans 124-126 (6.05), Background Scan 116
Location of Maximum: 174.00
Number of points: 195

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	2800	129.00	1144	191.00	198	314.00	41
73.00	26504	130.00	2531	192.00	278	323.00	99
74.00	99640	131.00	1225	193.00	309	324.00	92
75.00	290560	132.00	235	194.00	167	326.00	186
76.00	24008	133.00	616	195.00	278	328.00	191
77.00	2594	134.00	486	202.00	7	331.00	73
78.00	1661	135.00	359	203.00	80	332.00	222
79.00	21600	136.00	271	204.00	181	333.00	123
80.00	6086	137.00	962	205.00	406	335.00	64
81.00	20976	138.00	208	206.00	40	341.00	418
82.00	4889	139.00	332	207.00	2090	342.00	289
83.00	441	140.00	614	208.00	180	344.00	410
84.00	55	141.00	8039	209.00	827	346.00	214
85.00	37	142.00	931	211.00	35		

Eurofins Air Toxics Inc.

Data file : /chem/msde.i/27Jan2017.b/e012701.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 27-JAN-2017 11:51
Operator : sw Inst ID: msde.i
Smp Info : 2.0uL# 2810-94; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/27Jan2017.b/bfb60.m
Meth Date : 27-Jan-2017 12:08 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	
6.032	6.235	-0.203	95	666009			100.00- 100.00	91.75
6.032	6.235	-0.203	50	127694			8.00- 40.00	19.17
6.032	6.235	-0.203	75	357189			30.00- 66.00	53.63
6.032	6.235	-0.203	96	44547			5.00- 9.00	6.69
6.032	6.235	-0.203	173	0			0.00- 1.99	0.00
6.032	6.235	-0.203	174	725930			50.00- 120.00	109.00
6.032	6.235	-0.203	175	56975			4.00- 9.00	7.85
6.032	6.235	-0.203	176	703155			93.00- 101.00	96.86
6.032	6.235	-0.203	177	45352			5.00- 9.00	6.45

Data File: /chem/msde.i/27Jan2017.b/e012701.d

Date : 27-JAN-2017 11:51

Client ID: BFB

Instrument: msde.i

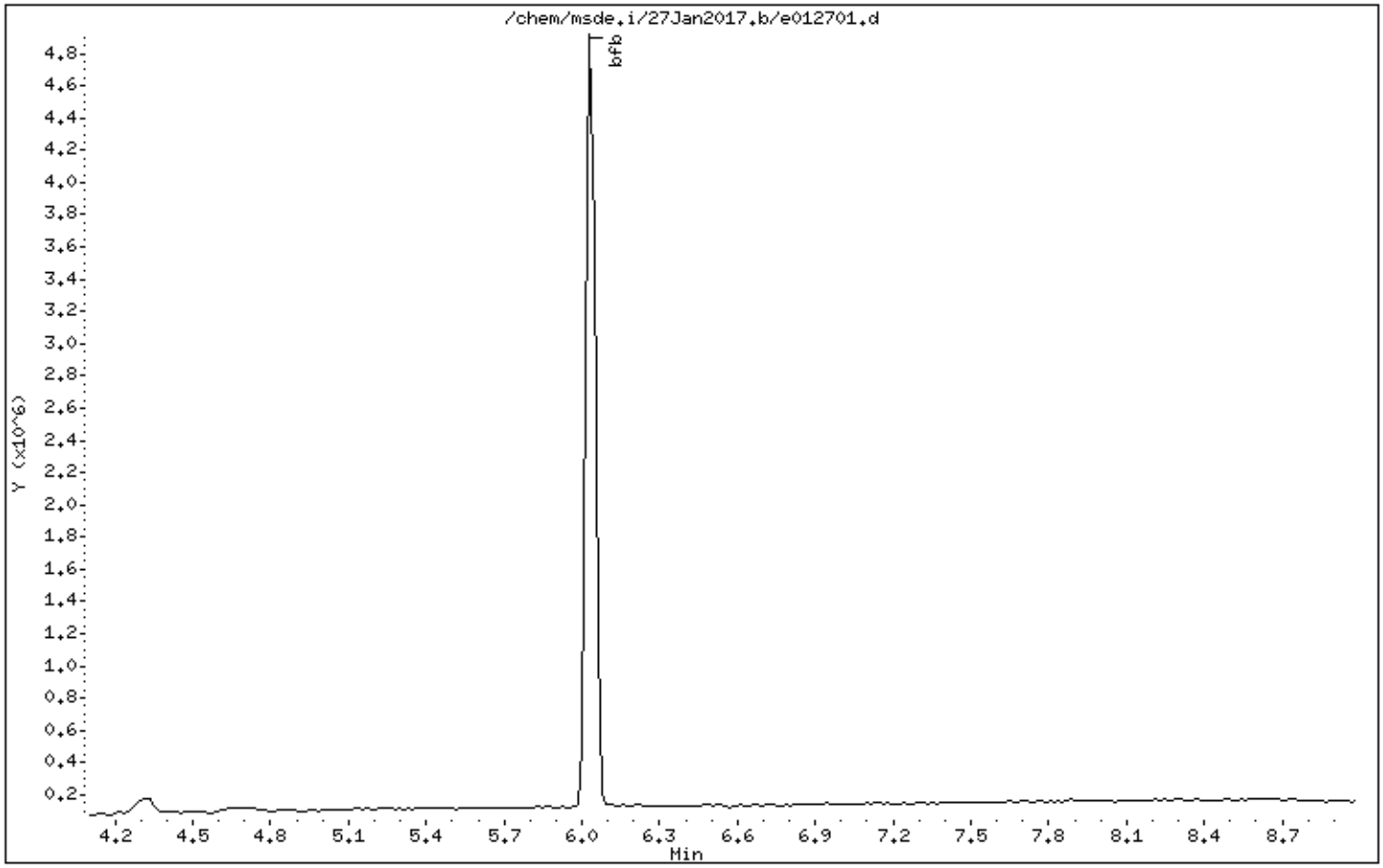
Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/27Jan2017.b/e012701.d

Date : 27-JAN-2017 11:51

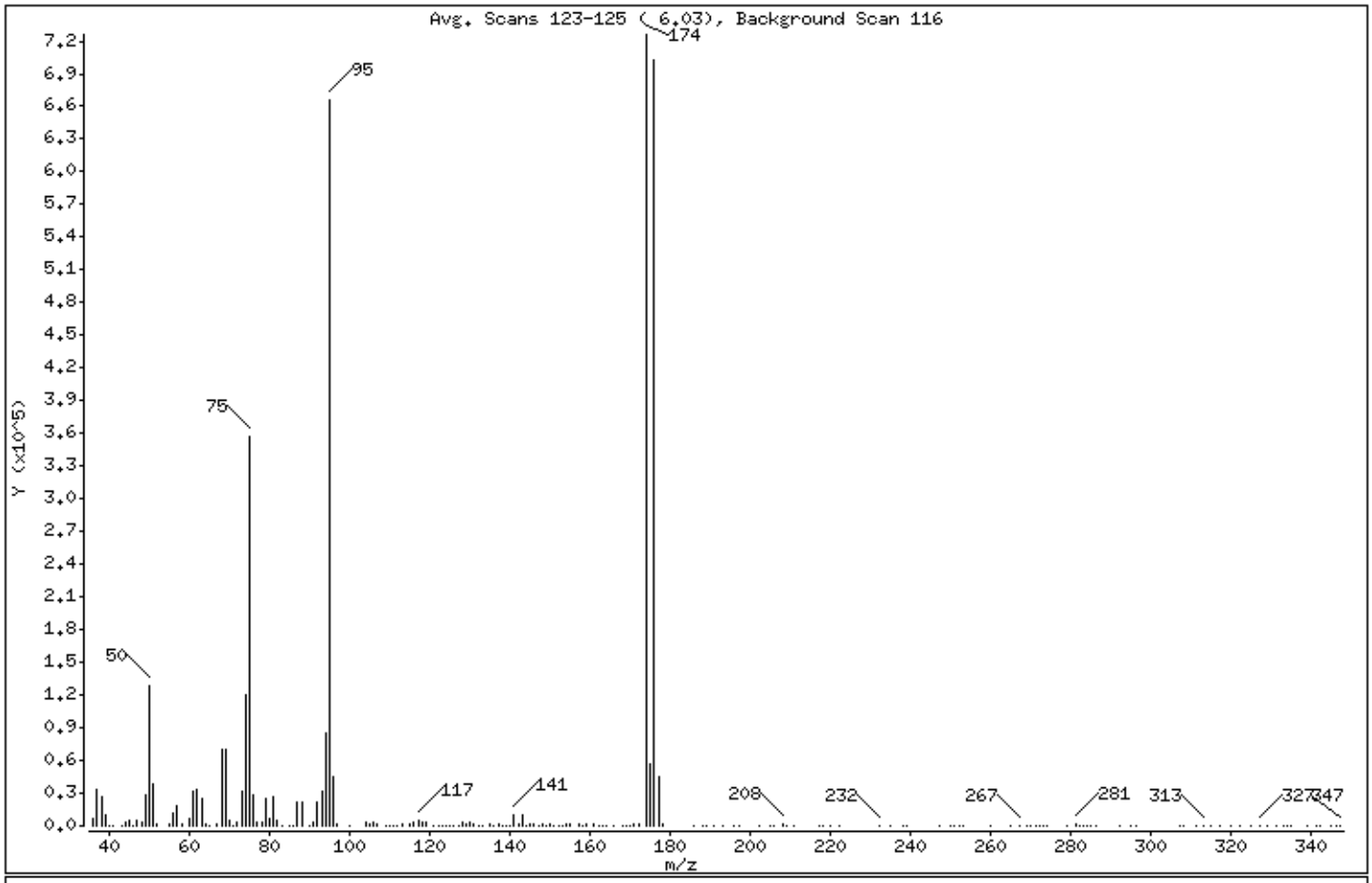
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL# 2810-94; 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	19.17
75	30.00 - 66.00% of mass 95	53.63
96	5.00 - 9.00% of mass 95	6.69
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	109.00
175	4.00 - 9.00% of mass 174	8.55 (7.85)
176	93.00 - 101.00% of mass 174	105.58 (96.86)
177	5.00 - 9.00% of mass 176	6.81 (6.45)

Data File: /chem/msde.i/27Jan2017.b/e012701.d

Date : 27-JAN-2017 11:51

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e012701.d
Spectrum: Avg. Scans 123-125 (6.03), Background Scan 116
Location of Maximum: 174.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5935	91.00	2553	148.00	1792	250.00	1
37.00	32800	92.00	22296	149.00	467	251.00	109
38.00	26632	93.00	32000	150.00	1083	252.00	78
39.00	9205	94.00	85688	151.00	250	253.00	482
40.00	82	95.00	665984	152.00	342	260.00	235
41.00	14	96.00	44544	153.00	684	265.00	169
43.00	360	97.00	1246	154.00	836	267.00	523
44.00	3740	100.00	41	155.00	2194	269.00	145
45.00	4508	104.00	3761	157.00	1384	270.00	415
46.00	322	105.00	1117	158.00	270	271.00	352
47.00	4686	106.00	3572	159.00	1279	272.00	85
48.00	3778	107.00	905	161.00	916	273.00	36
49.00	28288	109.00	193	162.00	63	274.00	37
50.00	127688	110.00	722	163.00	102	279.00	89
51.00	39152	111.00	536	164.00	232	281.00	1051
52.00	1667	112.00	766	166.00	192	282.00	222
55.00	1893	113.00	985	168.00	82	283.00	554
56.00	11396	115.00	1027	169.00	333	284.00	61
57.00	18280	116.00	3025	170.00	485	285.00	29
58.00	891	117.00	4892	171.00	1222	286.00	57
60.00	7036	118.00	2767	172.00	2271	292.00	59
61.00	32496	119.00	3384	174.00	725888	295.00	46
62.00	34048	121.00	98	175.00	56968	296.00	41
63.00	25368	122.00	429	176.00	703104	307.00	41
64.00	2367	123.00	365	177.00	45352	308.00	56
65.00	792	124.00	552	178.00	1168	311.00	81
67.00	1995	125.00	111	186.00	35	313.00	233
68.00	70400	126.00	391	188.00	101	315.00	207
69.00	70016	127.00	13	189.00	139	317.00	38
70.00	5247	128.00	3235	191.00	43	320.00	37
71.00	125	129.00	1861	193.00	503	322.00	10
72.00	3723	130.00	3082	196.00	158	325.00	159
73.00	31712	131.00	967	197.00	180	327.00	478
74.00	120384	132.00	408	202.00	6	329.00	97
75.00	357184	133.00	385	205.00	94	331.00	347

Data File: /chem/msde.i/27Jan2017.b/e012701.d

Date : 27-JAN-2017 11:51

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e012701.d
Spectrum: Avg. Scans 123-125 (6.03), Background Scan 116
Location of Maximum: 174.00
Number of points: 188

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	28728	135.00	1734	206.00	234	333.00	51
77.00	3840	136.00	12	208.00	1258	334.00	60
78.00	2506	137.00	1509	209.00	108	335.00	113
79.00	25000	138.00	143	211.00	147	339.00	33
80.00	6945	139.00	493	217.00	246	341.00	232
81.00	26704	140.00	724	218.00	137	342.00	306
82.00	4967	141.00	10575	220.00	37	345.00	232
83.00	581	142.00	871	222.00	74	346.00	48
85.00	267	143.00	9717	232.00	162	347.00	82
86.00	620	144.00	696	235.00	51		
87.00	22096	145.00	1003	238.00	44		
88.00	21304	146.00	1269	239.00	67		
90.00	125	147.00	789	247.00	72		

Eurofins Air Toxics Inc.

Data file : /chem/msde.i/03Feb2017.b/e020301.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 03-FEB-2017 07:39
Operator : sw Inst ID: msde.i
Smp Info : 2.0uL# 2810-94; BFB; BFB
Misc Info : 50ng
Comment :
Method : /var/chem/msde.i/03Feb2017.b/bfb60.m
Meth Date : 03-Feb-2017 07:56 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	
6.079	6.235	-0.156	95	602773			100.00- 100.00	92.10
6.079	6.235	-0.156	50	113403			8.00- 40.00	18.81
6.079	6.235	-0.156	75	322503			30.00- 66.00	53.50
6.079	6.235	-0.156	96	39063			5.00- 9.00	6.48
6.079	6.235	-0.156	173	0			0.00- 1.99	0.00
6.079	6.235	-0.156	174	654442			50.00- 120.00	108.57
6.079	6.235	-0.156	175	50442			4.00- 9.00	7.71
6.079	6.235	-0.156	176	637862			93.00- 101.00	97.47
6.079	6.235	-0.156	177	42675			5.00- 9.00	6.69

Data File: /chem/msde.i/03Feb2017.b/e020301.d

Date : 03-FEB-2017 07:39

Client ID: BFB

Instrument: msde.i

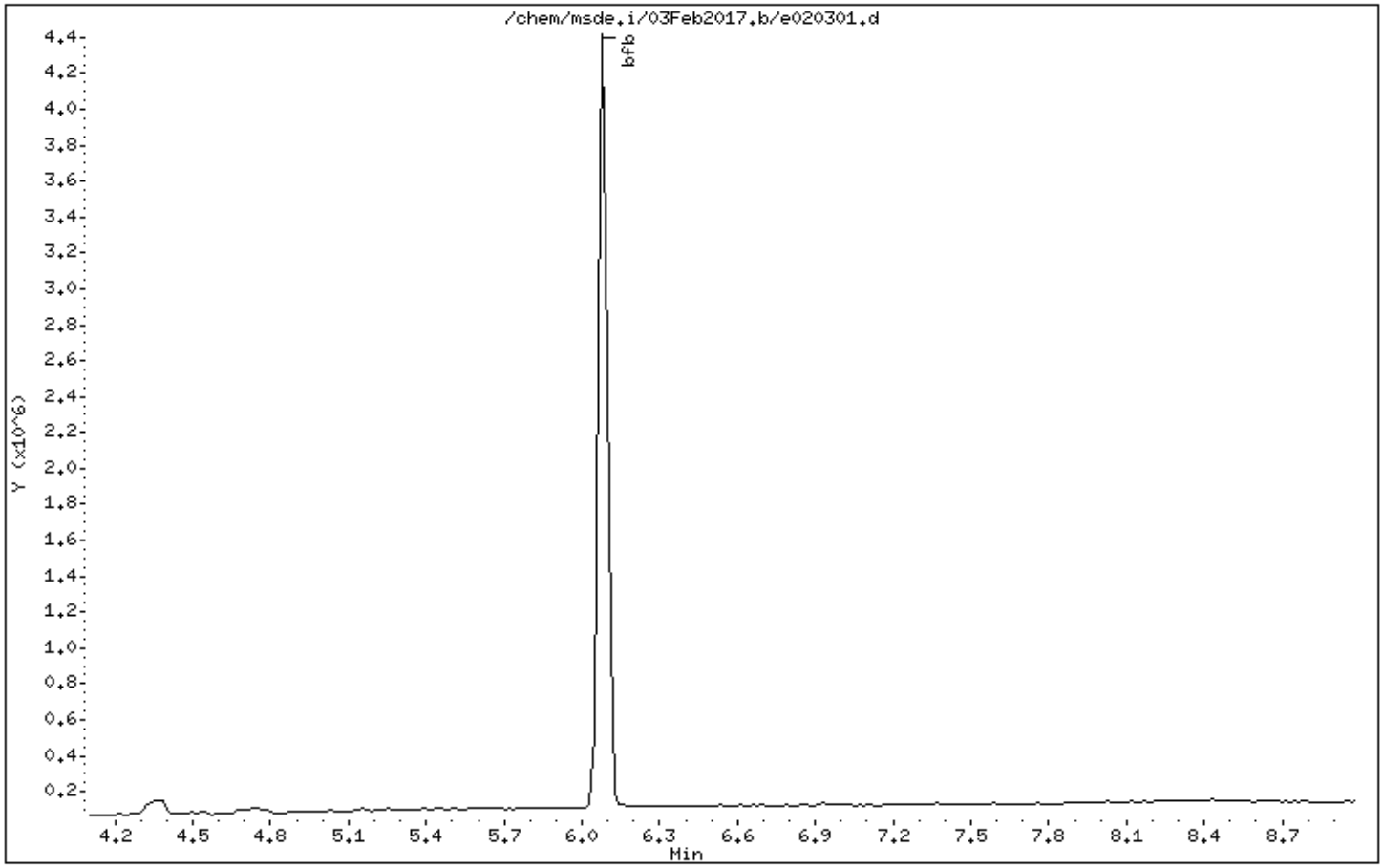
Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00



Data File: /chem/msde.i/03Feb2017.b/e020301.d

Date : 03-FEB-2017 07:39

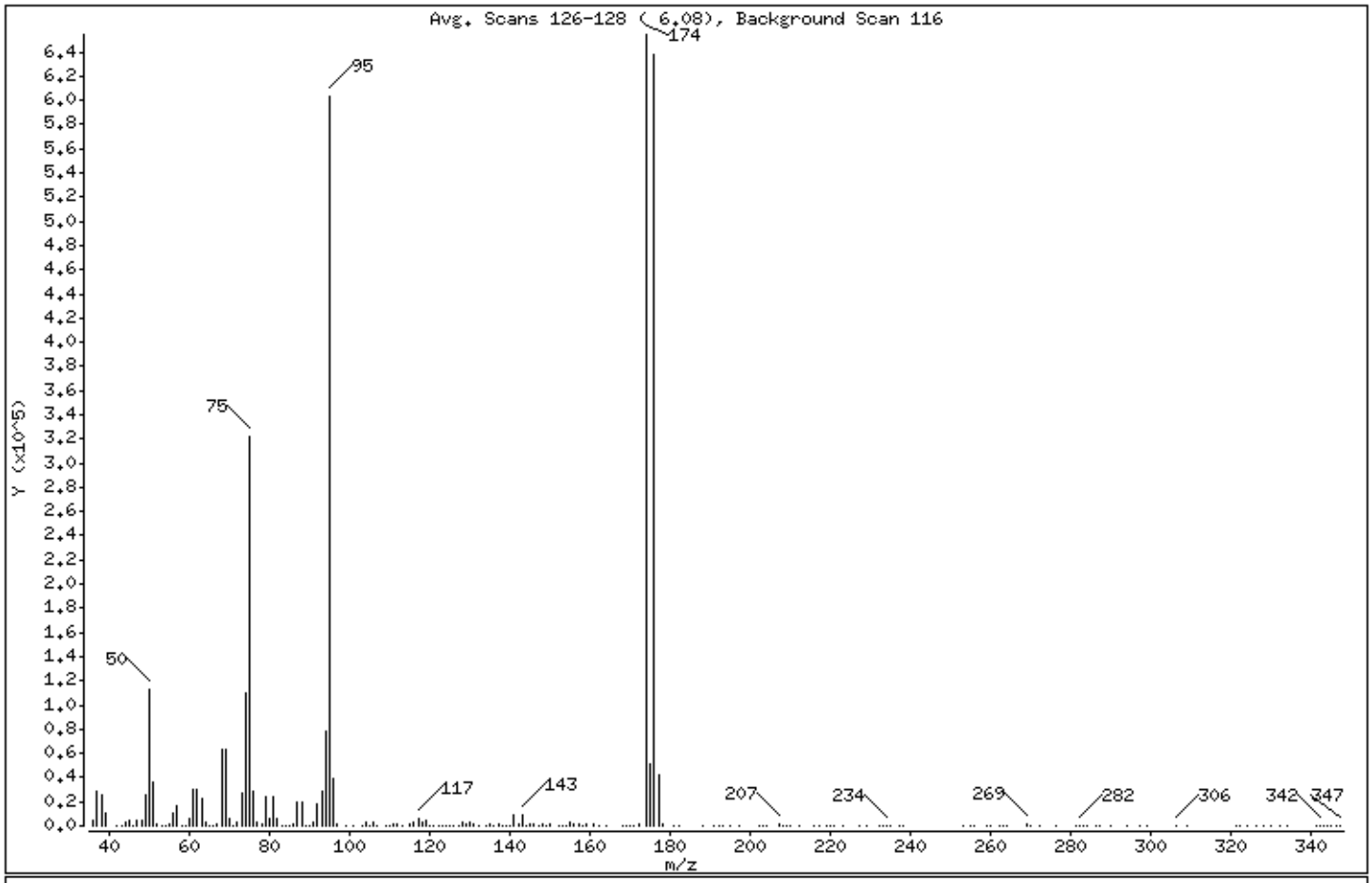
Client ID: BFB Instrument: msde.i

Sample Info: 2.0uL# 2810-94; 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	18.81
75	30.00 - 66.00% of mass 95	53.50
96	5.00 - 9.00% of mass 95	6.48
173	Less than 1.99% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	108.57
175	4.00 - 9.00% of mass 174	8.37 (7.71)
176	93.00 - 101.00% of mass 174	105.82 (97.47)
177	5.00 - 9.00% of mass 176	7.08 (6.69)

Data File: /chem/msde.i/03Feb2017.b/e020301.d

Date : 03-FEB-2017 07:39

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e020301.d
Spectrum: Avg. Scans 126-128 (6.08), Background Scan 116
Location of Maximum: 174.00
Number of points: 197

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5019	88.00	19872	144.00	482	227.00	42
37.00	28720	89.00	86	145.00	1393	229.00	47
38.00	25808	90.00	15	146.00	833	232.00	367
39.00	9946	91.00	2444	147.00	629	233.00	186
42.00	107	92.00	18424	148.00	1828	234.00	384
43.00	539	93.00	28024	149.00	398	235.00	61
44.00	3498	94.00	77584	150.00	1267	237.00	103
45.00	4099	95.00	602752	152.00	574	238.00	50
46.00	568	96.00	39056	153.00	461	253.00	167
47.00	4514	97.00	1603	154.00	591	255.00	81
48.00	3918	99.00	37	155.00	2571	256.00	112
49.00	26168	101.00	133	156.00	803	259.00	33
50.00	113400	103.00	201	157.00	1821	260.00	37
51.00	35456	104.00	3268	158.00	146	262.00	78
52.00	1548	105.00	735	159.00	1183	263.00	83
53.00	307	106.00	3734	161.00	1457	264.00	58
54.00	202	107.00	625	162.00	225	269.00	758
55.00	1930	109.00	233	164.00	15	270.00	241
56.00	10282	110.00	528	168.00	72	272.00	226
57.00	16744	111.00	762	169.00	384	276.00	78
58.00	645	112.00	801	170.00	265	281.00	17
59.00	434	113.00	678	171.00	263	282.00	397
60.00	6184	115.00	971	172.00	2234	283.00	234
61.00	29664	116.00	3202	174.00	654400	284.00	131
62.00	30776	117.00	5409	175.00	50440	286.00	83
63.00	22824	118.00	3458	176.00	637824	287.00	100
64.00	2364	119.00	4485	177.00	42672	290.00	58
65.00	601	120.00	209	178.00	1328	294.00	218
66.00	137	121.00	158	181.00	112	297.00	26
67.00	1800	122.00	139	182.00	49	299.00	36
68.00	63456	123.00	229	188.00	185	306.00	365
69.00	62488	124.00	615	191.00	486	309.00	55
70.00	5314	125.00	174	192.00	327	321.00	47
71.00	45	126.00	392	193.00	515	322.00	19
72.00	3320	127.00	325	195.00	453	324.00	118

Data File: /chem/msde.i/03Feb2017.b/e020301.d

Date : 03-FEB-2017 07:39

Client ID: BFB

Instrument: msde.i

Sample Info: 2.0uL# 2810-94; BFB; BFB

Volume Injected (uL): 1.0

Operator: sw

Column phase: Rtx-624

Column diameter: 2.00

Data File: e020301.d
Spectrum: Avg. Scans 126-128 (6.08), Background Scan 116
Location of Maximum: 174.00
Number of points: 197

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	27488	128.00	2954	197.00	203	326.00	70
74.00	109680	129.00	1512	202.00	196	328.00	248
75.00	322496	130.00	2972	203.00	15	330.00	50
76.00	28344	131.00	1126	204.00	185	332.00	35
77.00	3221	132.00	197	207.00	1411	334.00	40
78.00	1382	134.00	399	208.00	164	341.00	134
79.00	23648	135.00	933	209.00	36	342.00	336
80.00	6747	136.00	579	210.00	299	343.00	212
81.00	23840	137.00	1668	212.00	54	344.00	155
82.00	5559	138.00	103	216.00	166	345.00	136
83.00	516	139.00	354	217.00	357	346.00	105
84.00	94	140.00	272	219.00	82	347.00	36
85.00	174	141.00	9175	220.00	5		
86.00	792	142.00	1222	221.00	8		
87.00	19936	143.00	9327	223.00	68		

Shipping/ Receiving Documents

eurofins | Air Toxics

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: **Brian Whittaker 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

Air Toxics LTD.

TO-15

Chain-of-Custody Record

Contact Person Terry Taylor
Company Anderson Mulholland & Associates, Inc.
Address 2700 Winchester, Suite 417 City Purchase State NY Zip 10577
Phone 914-251-0400, x 309 FAX
Collected By: (Signature)

Project Information:
P.O. #
Project #
Project Name BMS VI Invest.
Buildings 8,13, 15, 18, and 30

Turn Around Time:
[X] Normal
[ ] Rush
Specify

Pressurized by: V.V
Date: 2/2/17
Press. Gas: N2 He

Lab I.D.	Field Sample I.D.	Canister I.D.	Date & Time	Analysis Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
11A	B13IA-1-012817	00124	1/28-29/17:1445	TO-15, MeOH, CH_4	30 "Hg	6.5	5.5"Hg	5psi
12A	B13IA-2-012817	6L0046	1/28-29/17:1508	TO-15, MeOH, CH_4	30 "Hg	5	5.0"Hg	5psi
13A	B13IA-2DUP-012817	00401	1/28-29/:1516	TO-15, MeOH, CH_4	30 "Hg	6	4.0"Hg	5psi
14A	B13IA-3-012817	N1639	1/28-29/17:1452	TO-15, MeOH, CH_4	30 "Hg	6	5.5"Hg	5psi
15A	B18IA-5-012817	907CMT	1/28-29/17:1625	TO-15, MeOH, CH_4	29 "Hg	5	5.0"Hg	5.4psi
16A	B15IA-1-012817	N0597	1/28-29/17:1544	TO-15, MeOH, CH_4	28 "Hg	6	5.0"Hg	5psi
17A	B15IA-1DUP-012817	00937	1/28-29/17:1544	TO-15, MeOH, CH_4	30 "Hg	5	4.0"Hg	5psi
18A	B13SAA-012817	34744	1/28-29/:1612	TO-15, MeOH, CH_4	30 "Hg	7	4.65"Hg	5psi
					"Hg		V.V 2/2/17	
					"Hg			

Relinquished By: (Signature) Date/Time: Jan. 30, 2017 1200
Received By: (Signature) Date/Time: Fed EX
Relinquished By: (Signature) Date/Time
Received By: (Signature) Date/Time: 1/31/17 1020 Andrea Anderson
Relinquished By: (Signature) Date/Time
Received By: (Signature) Date/Time

Notes: Do not analyze Can N0627, 0443, and 0908. Canisters not used. for sampling. Do not analyze 36459. Also not used

Shipper Name	Air Bill #	Opened By	Temp ©	Condition	Custody Seals	Work Order #
Fed Ex		AB	NA	Good	Yes No None	1701477

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1701477B

Client

Mr. Terry Taylor
Anderson Mulholland &
Associates, Inc.
2700 Westchester Avenue
Suite 417
Purchase, NY 10577

Sales Rep: N/A

Phone

(914) 251-0400

Fax

Date Promised: 02/13/17
Date Completed: 2/11/17
Date Received: 1/31/17
PO#:
Project#: BMS VI Invest. Buildings 8, 13, 15, 30

Total $: $ 1,120.00
Logged By: AB

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
11A	B13IA-1-012817	Modified TO-15	1/29/2017	5.5 "Hg	$135.00
12A	B13IA-2-012817	Modified TO-15	1/29/2017	5.0 "Hg	$135.00
13A	B13IA-2DUP-012817	Modified TO-15	1/29/2017	4.0 "Hg	$135.00
14A	B13IA-3-012817	Modified TO-15	1/29/2017	5.5 "Hg	$135.00
15A	B18IA-5-012817	Modified TO-15	1/29/2017	5.0 "Hg	$135.00
16A	B15IA-1-012817	Modified TO-15	1/29/2017	5.0 "Hg	$135.00
17A	B15IA-1DUP-012817	Modified TO-15	1/29/2017	4.0 "Hg	$135.00
18A	B1315AA-012817	Modified TO-15	1/29/2017	6.5 "Hg	$135.00
19A	Lab Blank	Modified TO-15	NA	NA	$0.00
20A	CCV	Modified TO-15	NA	NA	$0.00
21A	LCS	Modified TO-15	NA	NA	$0.00
21AA	LCSD	Modified TO-15	NA	NA	$0.00

Misc. ChargeseCVP (8) @ $5.00 each. $40.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: BMS/19256

BILL TO: Accounts Payable
Anderson Mulholland & Associates, Inc.
2700 Westchester Avenue
Suite 417
Purchase, NY 10577

Analysis Code: pptv

TERMS:

Reporting Method: Modified TO-15-LL + Naph

Sample Discrepancy Report

Identification

Initiated By: AB **Project ID:**19256 **PM**: BSW **Date:** 2/1/2017 **Discrepancy Type:** ☒ **1.** ☐ **2.** ☐ **3.**

Workorder(s) affected:1701477B **Sample(s) affected:** 13A, 18A

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.

Initials: _____Date:_____

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).

Describe the Discrepancy: 1.4 - 13A, 18A

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: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐ _____

Describe the Discrepancy:

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. ☐ 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:_____ Person notified: _____ Date: _____

☐ Waiting for Client Reply

Comments: _____

_____

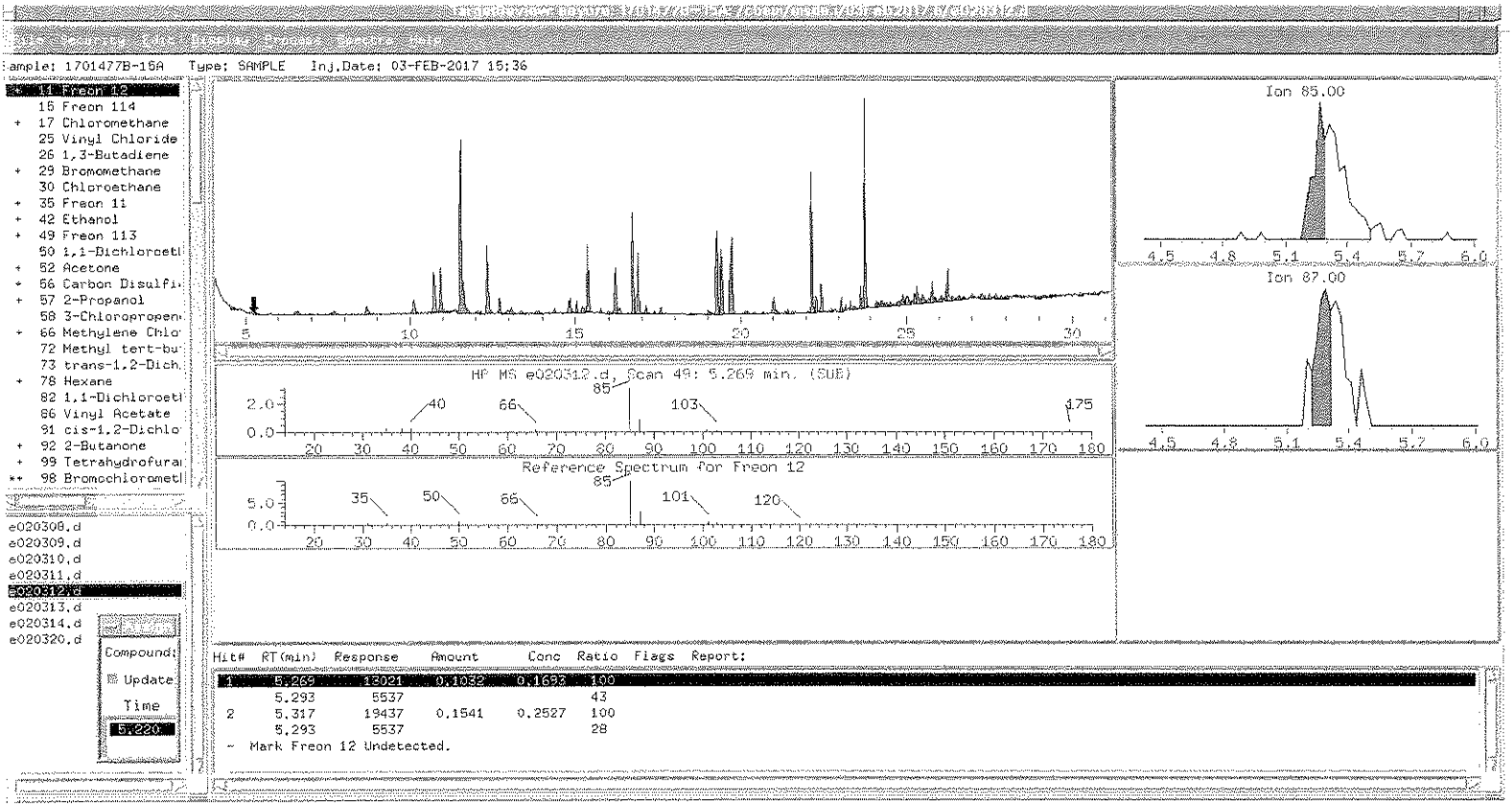
☐ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☐ _____

☐ **Additional notifications attached.**

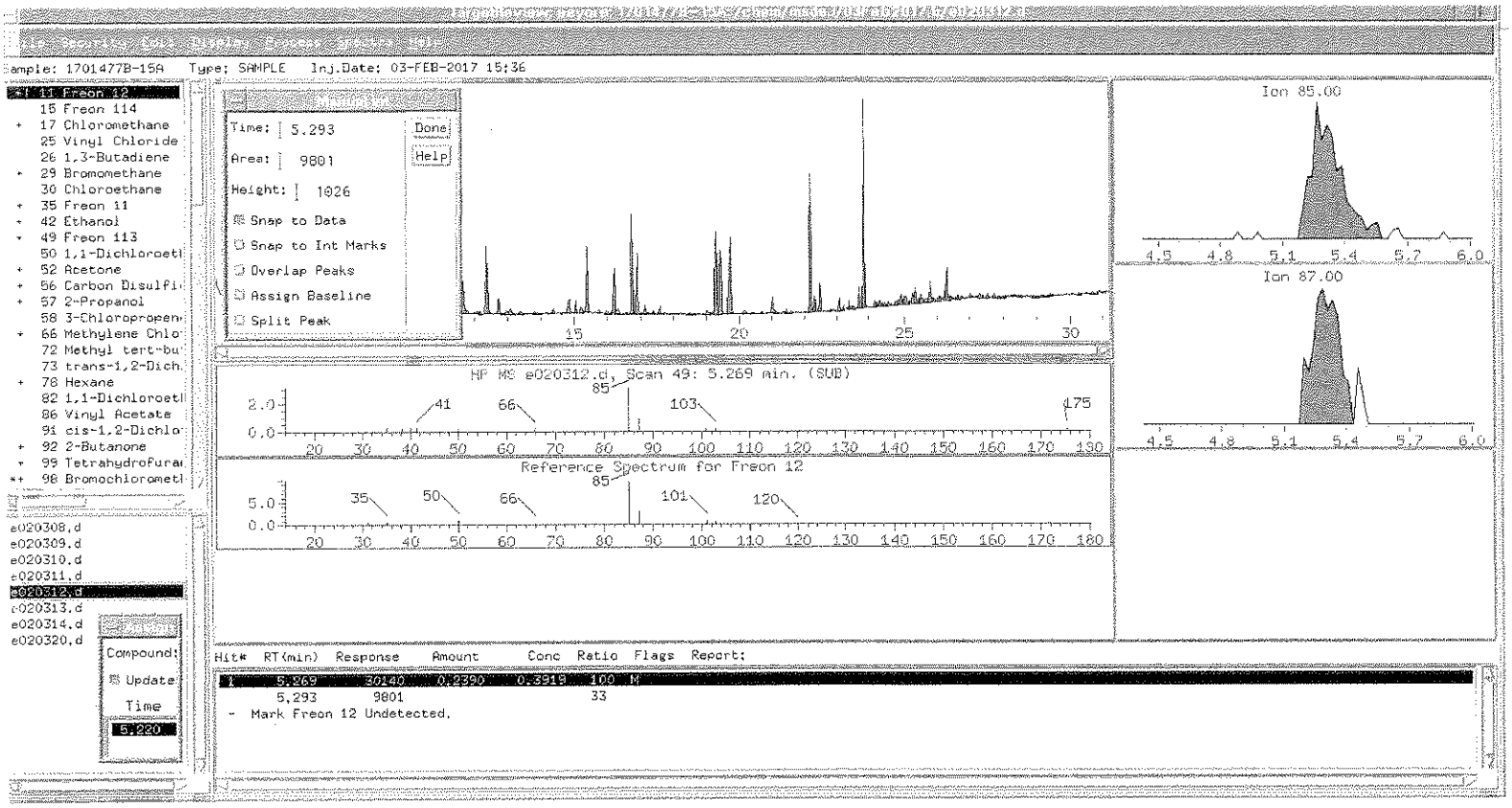
Additional Comments:

_____

Other Records


ample: 1701477B-16A Type: SAMPLE Inj.Date: 03-FEB-2017 15:36
11 Freon 12
16 Freon 114
17 Chloromethane
25 Vinyl Chloride
26 1,3-Butadiene
29 Bromomethane
30 Chloroethane
35 Freon 11
42 Ethanol
49 Freon 113
50 1,1-Dichloroeti
52 Acetone
56 Carbon Disulfi
57 2-Propanol
58 3-Chloropropen
66 Methylene Chlo
72 Methyl tert-bu
73 trans-1,2-Dich
78 Hexane
82 1,1-Dichloroeti
86 Vinyl Acetate
91 cis-1,2-Dichlo
92 2-Butanone
99 Tetrahydrofura
98 Bromochlorometh
e020308.d
e020309.d
e020310.d
e020311.d
e020312.d
e020313.d
e020314.d
e020320.d
Compound
Update
Time
5.220
Ion 85.00
Ion 87.00
HP MS e020312.d, Scan 49: 5.269 min. (SUB)
Reference Spectrum for Freon 12
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 5.269 13021 0.1032 0.1693 100
5.293 5537 43
2 5.317 19437 0.1541 0.2527 100
5.293 5537 28
~ Mark Freon 12 Undetected.

Before



After

Correct Baseline	
Split Peak	2/9/17 AG
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{14.7\text{psi} + \text{Final Pressure (psi)}}{14.7\text{psi} - [\text{Init. Pressure ("Hg)})*(14.7\text{psi}/30\text{"Hg})]}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{psi} + \text{Final Pressure (psi)}}{14.7\text{psi} + \text{Initial Pressure (psi)}}$$

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

Modified TO-15-LL + Naph

CAS Number	Compound	Detection Limit ppbv	Type
75-71-8	Freon 12	0.10	
76-14-2	Freon 114	0.10	
75-35-4	1,1-Dichloroethene	0.10	
67-64-1	Acetone	0.50	
67-63-0	2-Propanol	0.50	
75-15-0	Carbon Disulfide	0.50	
75-09-2	Methylene Chloride	0.20	
1634-04-4	Methyl tert-butyl ether	0.10	
156-60-5	trans-1,2-Dichloroethene	0.10	
110-54-3	Hexane	0.10	
75-34-3	1,1-Dichloroethane	0.10	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	0.50	
156-59-2	cis-1,2-Dichloroethene	0.10	
109-99-9	Tetrahydrofuran	0.50	
67-66-3	Chloroform	0.10	
71-55-6	1,1,1-Trichloroethane	0.10	
110-82-7	Cyclohexane	0.10	
56-23-5	Carbon Tetrachloride	0.10	
71-43-2	Benzene	0.10	
107-06-2	1,2-Dichloroethane	0.10	
142-82-5	Heptane	0.10	
79-01-6	Trichloroethene	0.10	
78-87-5	1,2-Dichloropropane	0.10	
123-91-1	1,4-Dioxane	0.10	
75-27-4	Bromodichloromethane	0.10	
10061-01-5	cis-1,3-Dichloropropene	0.10	
108-10-1	4-Methyl-2-pentanone	0.10	
108-88-3	Toluene	0.10	
10061-02-6	trans-1,3-Dichloropropene	0.10	
79-00-5	1,1,2-Trichloroethane	0.10	
127-18-4	Tetrachloroethene	0.10	
591-78-6	2-Hexanone	0.50	
124-48-1	Dibromochloromethane	0.10	
106-93-4	1,2-Dibromoethane (EDB)	0.10	
108-90-7	Chlorobenzene	0.10	
100-41-4	Ethyl Benzene	0.10	
108-38-3	m,p-Xylene	0.10	
95-47-6	o-Xylene	0.10	
100-42-5	Styrene	0.10	
75-25-2	Bromoform	0.10	
98-82-8	Cumene	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	0.10	
103-65-1	Propylbenzene	0.10	
622-96-8	4-Ethyltoluene	0.10	
108-67-8	1,3,5-Trimethylbenzene	0.10	
95-63-6	1,2,4-Trimethylbenzene	0.10	

Compound List

Modified TO-15-LL + Naph

CAS Number	Compound	Detection Limit ppbv	Type
541-73-1	1,3-Dichlorobenzene	0.10	
106-46-7	1,4-Dichlorobenzene	0.10	
100-44-7	alpha-Chlorotoluene	0.10	
95-50-1	1,2-Dichlorobenzene	0.10	
120-82-1	1,2,4-Trichlorobenzene	0.50	
87-68-3	Hexachlorobutadiene	0.50	
91-20-3	Naphthalene	0.50	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		
107-05-1	3-Chloropropene	0.50	
540-84-1	2,2,4-Trimethylpentane	0.50	
74-87-3	Chloromethane	0.50	
75-01-4	Vinyl Chloride	0.10	
106-99-0	1,3-Butadiene	0.10	
74-83-9	Bromomethane	0.50	
75-00-3	Chloroethane	0.50	
75-69-4	Freon 11	0.10	
64-17-5	Ethanol	0.50	
76-13-1	Freon 113	0.10	

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 02/23/16
Workorder # 1701477B	Form F1.27	Revision #13	Revision Date: 02/23/16	Page 1 of 2

S1	S2	S3	S4	D	Section 1 – Spec Out				
					Initials/Instrument/Date	S1: [illegible] 2/3/17	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				
NA					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:

J flag to MDL. 2 out in LCS, 1 out <40% in LCS/LCSD RPD criteria.

A1	A2	A3	A4	D	Section 2 – Sample Analysis				
					Initials/Date	A1: [illegible] 2/3/17	A2: ED 2/3/17	A3: SB 2/6/17	A4:
✓	✓	✓		✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
NA	NA	NA		NA	a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
NA	NA	✓		✓	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: A1: 11A-15A: Fm loads. 12A, 13A: Field Dup.
A2 16A-18A Full load 16A & 17A FD - Confirmation
Vial TC "E" 09:44 A3 17A Failed FD - confirmed PM Note

D1	D2	D3	D4	T	3T	Section 3 – Target Data Reduction	Technical Review Needed? Circle one: Yes/No		T:	
						Initials/Instrument/ Date	D1: [illegible] 2/9/17	D2:	D3:	D4:
NA						CAR # (if applicable)				
✓						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:

Narrate FD's None duplication Per - BW
<5x RL - no need to narrate

A	3T	Section 4- Atlas Data Entry	Lumen verified and included in folder	Circle one: Yes/No
		Initials/Date: [illegible] 2/11/17	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

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
				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